SALDA

AIR HANDLING UNITS

ORO TIEKIMO ĮRENGINIAI

CENTRALE WENTYLACYJNE

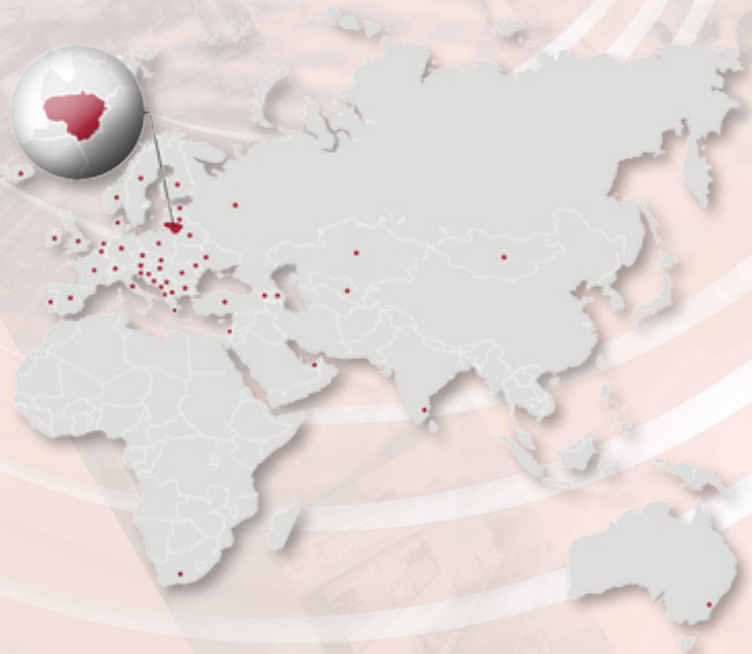
АГРЕГАТЫ ПОДАЧИ ВОЗДУХА

Issue 2014 ver. A

SALDA

Constantly growing and developing company SALDA with over 400 employees is European leader in production of air ventilation and heating systems. The company produces a wide range of modern ventilation equipment for industry, offices, cafes, hotels as well as individual homes.

SALDA from its very foundation has been focused on high-quality customer service and meeting of their expectations. The most important goal of the company is to ensure that SALDA products meet the needs of company's customers and provide them the desired comfort.



More than 23 years SALDA exports and communicates with business partners, customers and clients in:

Austria, Belarus, Brazil since 2012, Belgium, Bulgaria, Chile since 2013, Croatia, Czech Republic, Denmark, Estonia, Faroe Islands, France,Georgia, Germany, Greece, Hungary, Iceland, India since 2010, Ireland, Italy, Latvia, Moldova, Netherlands, Norway, Poland, Romania, Russia since 1997, SAR, Slovenia, Spain, Sweden since 1999, Switzerland, Turkey, Ukraine.

Under the roof of 40 000 sq/m manufacturing and warehouse area:
- modern laser cutting machinery lines,
- automatic punching and bending systems (night train),
- nitrogen production line,
- other most advanced production technologies.

Over 50 people team in research and development department together with the rest of the employees are working to meet high management quality standards:
- EN ISO 9001:1994 Quality Management Standard,
- Implementation of LEAN programme –Methodology for manufacturing management.

Investment in research and development is targeted towards the certification of SALDA production by:
- Eurovent
- Pasive House
- DIBt

ErP Directive

By adopting the Kyoto Protocol, the European Union committed itself to reducing CO2 emissions by at least 20% by 2020. One of the measures taken to help achieve this was the EuP (Energy using Products) Directive adopted by the EU in 2005, which was renamed ErP (Energy related Products) Directive in 2009, and is also known as the „Eco-design Directive".The ErP implementation measure for fans defines minimum efficiency levels for fans in the power range from 125 Watt to 500 kW, which will prevent from being brought into circulation in Europe in the future. The ErP Directive is being implemented in two stages: Stage 1 in 2013 and Stage 2 in 2015. This gives energy efficiency the same standing as compliance with the Low Voltage or EMC Directive. The system efficiency requirement is a prereq-uisite for CE certification and is thus essential for a product to be used in EU member states.

The catalogue contains relevant ErP rating marking that is a part of the fans' description. SALDA products that comply ErP 2015, are labeled with special mark.

Choosing SALDA products assures your safety and readiness for the future requirements!

CERTIFICATE

TIC
TÜV Interational Certification
TÜV CERT

for the management system according to ISO 9001:2008

The proof of the conforming application with the regulation was furnished and in accordance with certification procedure it is certified for the company

SALDA

UAB „Salda“
Ragainės g. 100
LT-78109 Šiauliai
Lithuania (Lietuva)

Scope

Designing, manufacturing and sales of ventilation, heating, air conditioning and dust extraction systems. Metal working services.

Certificate Registration No.: TIC 15 100 11029
Valid until: 2016-01-08
Valid from: 2013-01-09

Audit Report No.: 3330 245F M0
Initial certification: 2001

This certification was conducted in accordance with the TIC auditing and certification procedures and is subject to regular surveillance audits.

TÜV Thüringen e.V.
Certification body for systems and personnel

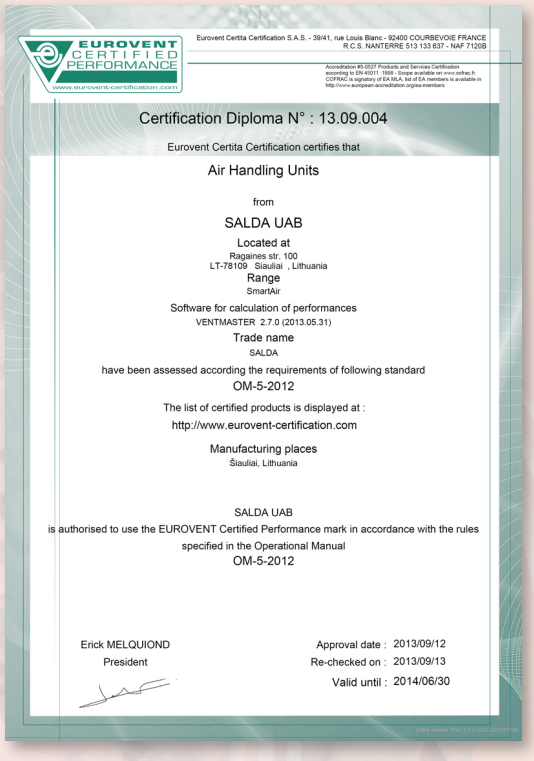
TÜV THÜRINGEN

Jena, 2013-01-09

DGA-ZM-03-06-00

Original certificates are branded with a hologram.

The current validity can be demanded at our homepage www.tuev-thueringen.de
Zertifizierungsstelle des TÜV Thüringen e.V. • Ernst-Ruska-Ring 6 • D-07745 Jena • ☎ +49 3641 398740 • ... zertifizierung@tuev-thueringen.de



EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Eurovent Certita Certification S.A.S. - 39/41, rue Louis Blanc - 92400 COURBEVOIE FRANCE
R.C.S. NANTERRE 513 133 637 - NAF 7120B

Accreditation #5-0027 Products and Services Certification according to EN 45011 : 1998 - Scope available on www.cofrac.fr
COFRAC is signatory of EA MLA, list of EA members is available in http://www.european-accreditation.org/ea-members

Certification Diploma N° : 13.09.004

Eurovent Certita Certification certifies that

Air Handling Units

from

SALDA UAB

Located at

Ragaines str. 100
LT-78109 Siauliai , Lithuania

Range

SmartAir

Software for calculation of performances

VENTMASTER 2.7.0 (2013.05.31)

Trade name

SALDA

have been assessed according the requirements of following standard

OM-5-2012

The list of certified products is displayed at :

http://www.eurovent-certification.com

Manufacturing places

Šiauliai, Lithuania

SALDA UAB

is authorised to use the EUROVENT Certified Performance mark in accordance with the rules specified in the Operational Manual

OM-5-2012

Erick MELQUIOND
President

Approval date : 2013/09/12
Re-checked on : 2013/09/13
Valid until : 2014/06/30

РОССИЙСКАЯ ФЕДЕРАЦИЯ

СЕРТИФИКАТ СООТВЕТСТВИЯ

(обязательная сертификация)

№ C-LT.АГ23.В.00926 (номер сертификата соответствия) ТР 0952745 (учетный номер бланка)

ЗАЯВИТЕЛЬ (наименование и место-нахождение заявителя): UAB "SALDA" Ragaines 100 LT-78109 Siauliai, Lithuania, Литва тел. + 370 41 500 871

ИЗГОТОВИТЕЛЬ (наименование и место-нахождение изготовителя продукции): UAB "SALDA", Литва Адрес производства: Ragaines 100 LT-78109 Siauliai, Lithuania.

ОРГАН ПО СЕРТИФИКАЦИИ (наименование и местонахождение органа по сертификации, выдавшего сертификат соответствия): продукции "ТЕСТМАКС" (ООО "Бизнес аспект") Юридический адрес: РФ, 125212, г. Москва, ул. Адмирала Макарова, д. 39 Фактический адрес: РФ, 125212, г. Москва, ул. Адмирала Макарова, д. 39 тел.(495) 508-79-39, факс: (495)988-99-32 ОГРН: 1107746427898, Аттестат рег. № РОСС RU.0001.11АГ23 Федеральным агентством по техническому регулированию и метрологии от 08.04.2011 г.

ПОДТВЕРЖДАЕТ, ЧТО ПРОДУКЦИЯ (информация об объекте сертификации, позволяющая идентифицировать объект): Оборудование воздухообрабатывающее т.м. "SALDA", комплектующие и запасные части по приложениям (см. бланки №№ 0249157, 0249158) Серийный выпуск

код ОК 005 (ОКП) 48 6000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ ТЕХНИЧЕСКОГО РЕГЛАМЕНТА (ТЕХНИЧЕСКИХ РЕГЛАМЕНТОВ) (наименование технического регламента (технических регламентов), на соответствие требованиям которого (которых) проводилась сертификация): Технический регламент "О безопасности машин и оборудования" (Постановление Правительства РФ от 15.09.2009г. N 753), с изменениями, принятыми постановлением Правительства РФ от 24.03.2011 № 205

код ЕКПС

код ТН ВЭД России по приложению

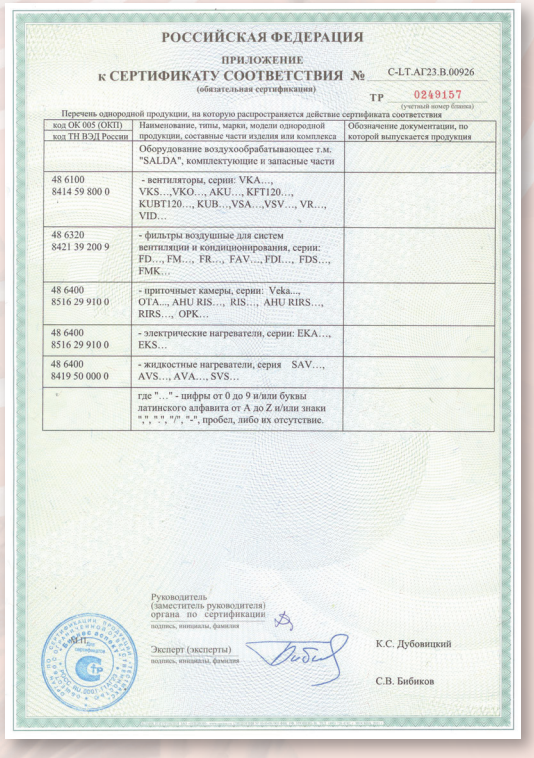
ПРОВЕДЕННЫЕ ИССЛЕДОВАНИЯ (ИСПЫТАНИЯ) И ИЗМЕРЕНИЯ: Протоколы испытаний №№ 16-152-03/12, 17-152-03/12, 18-152-03/12, 19-152-03/12, 20-152-03/12 от 01.03.2012 г. ИЦ АНО "Машэлтест", рег. № РОСС RU.0001.21АЮ54

ПРЕДСТАВЛЕННЫЕ ДОКУМЕНТЫ (документы, представленные заявителем в орган по сертификации в качестве доказательств соответствия продукции требованиям технического регламента (технических регламентов))

СРОК ДЕЙСТВИЯ СЕРТИФИКАТА СООТВЕТСТВИЯ с 01.03.2012 по 28.02.2017

Руководитель (заместитель руководителя) органа по сертификации (подпись, инициалы, фамилия) К.С. Дубовицкий

Эксперт (эксперты) (подпись, инициалы, фамилия) С.В. Бибиков



РОССИЙСКАЯ ФЕДЕРАЦИЯ

ПРИЛОЖЕНИЕ

к СЕРТИФИКАТУ СООТВЕТСТВИЯ № C-LT.АГ23.В.00926

(обязательная сертификация)

ТР 0249157 (учетный номер бланка)

Перечень однородной продукции, на которую распространяется действие сертификата соответствия

код ОК 005 (ОКП) код ТН ВЭД России	Наименование, типы, марки, модели однородной продукции, составные части изделия или комплекса	Обозначение документации, по которой выпускается продукция
	Оборудование воздухообрабатывающее т.м. "SALDA", комплектующие и запасные части	
48 6100 8414 59 800 0	- вентиляторы, серии: VKA…, VKS…,VKO…, AKU…, KFT120…, KUBT120…, KUB…,VSA…,VSV…, VR…, VID…	
48 6320 8421 39 200 9	- фильтры воздушные для систем вентиляции и кондиционирования, серии: FD…, FM…, FR…, FAV…, FDI…, FDS…, FMK…	
48 6400 8516 29 910 0	- приточныенет камеры, серии: Veka…, OTA…, AHU RIS…, RIS…, AHU RIRS…, RIRS…, OPK…	
48 6400 8516 29 910 0	- электрические нагреватели, серии: EKA…, EKS…	
48 6400 8419 50 000 0	- жидкостные нагреватели, серия SAV…, AVS…, AVA…, SVS…	
	где "…" - цифры от 0 до 9 и/или буквы латинского алфавита от A до Z и/или знаки "-","*","/","+","-", пробел, либо их отсутствие.	

Руководитель (заместитель руководителя) органа по сертификации (подпись, инициалы, фамилия) К.С. Дубовицкий

Эксперт (эксперты) (подпись, инициалы, фамилия) С.В. Бибиков

CONTENTS • TURINYS
SPIS TREŚCI • СОДЕРЖАНИЕ

AIR HANDLING UNITS
ORO TIEKIMO ĮRENGINIAI
CENTRALE WENTYLACYJNE
АГРЕГАТЫ ПОДАЧИ ВОЗДУХА

EUROVENT CERTIFIED PERFORMANCE
AHU N°: 13.09.004
Range: SmartAir
www.eurovent-certification.com

General:
- All AHU's components are made in EU.
- Indoor and outdoor (roof, outdoor grills, net with branch) versions.
- Sections are made of aluminum profile.
- Panels and inspection doors are of double-skin design.
- 25 mm or 50 mm mineral wool insulation.
- Aluminum and stainless panels available as an option.
- Two types of sections connections: internal or external.
- Inspection doors with hinges and handles.
- Supplied with complete control equipment or without.
- Painted panels available as an option.
- Inspection windows and lighting available as an option.
- Adjustable and not adjustable support frame.
- Right and left maintenance side.

Bendra informacija:
- Visi agregato komponentai pagaminti EU.
- Vidaus ir lauko versijos (stogas, lauko grotelės, antvamzdis su tinkleliu).
- Sekcijų profiliai pagaminti iš aliuminio.
- Sekcijų sienelės ir apžiūros durelės pagamintos iš dvigubos izoliacijos.
- 25mm ir 50mm mineralinės vatos izoliacija.
- Papildomai užsakomos panelės iš nerūdijančios arba aliuminio skardos.
- Dveji galimi sekcijų sujungimo tipai: vidinis ir išorinis.
- Apžiūros durelės su rankenomis ir vyriais.
- Tiekiama su valdymo įranga arba be jos.
- Papildomai užsakomas panelių dažymas.
- Papildoma užsakomas sekcijų apšvietimas ir apžiūros langeliai.
- Reguliuojamas arba nereguliuojamas padas.
- Pasirenkama aptarnavimo pusė – kairinė arba dešininė.

With the SALDA SmartAir modular air handling units, we guarantee complete supply of modern and energy-saving ventilation systems for Your comfort. SmartAir units are equiped with a large range of components, which definitely meet specific demands and requirements for each individual ventilation system. Highest quality and technical performance - SmartAir Your best choice!

Simple and safe

Special design provides easy assembling on site and comfortable transportation from the factory. Every part is compact and without projection parts. Finished air handling units are delivered to the customer in packages that are ready to be installed.

Reliable and attractive

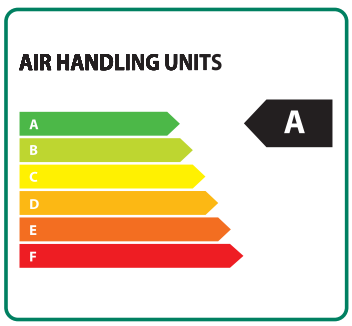
SmartAir offers doors mounted with strong and esthetic-looking hinges, which are locked with convenient and elegant locks. Door seals are covered with elastic rubbers with air gap. They are mechanically fastened to the door and are long lasting and hermetic. Panels on SmartAir units are made of galvanized steel sheets with 25 or 50 mm thickness insulation. This assures not only effective heat and noise insulation, but also high level of fire resistance.

User friendly

Filters, fans, heat exchangers, coolers and other components are easily accessible during use; if necessary, they can be easily serviced.

TOP features

- Flexibility.
- Quality .
- Tightness.
- Energy efficient.
- Easy installation and service-friendly.
- Customized functions.
- Integrated controls and components.
- Wide range of components.
- Short delivery term.



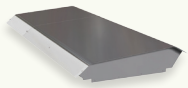
Standards

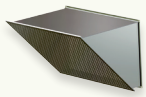
The design is based on the demands in following CEN and ISO standards:
EN 308 Heat exchangers. Test procedures.
EN 779 Particulate air filters for general ventilation.
EN 1751 Aerodynamic testing of dampers and valves.
EN 1886 Air handling units. Mechanical performance.
EN 13053 Ratings and performance for units and components.
EN 13779 Ventilation for non-residential buildings. Performance requirements.
EN 60204. Electrical equipment of machines.
EN ISO 3741 Determination of sound power level in reverberation rooms.
EN ISO 5136 Determination of sound power level in a duct.
EN ISO 9001 Quality management systems.
EN ISO 12100 Safety of machinery.
ISO 9001:2008 SmartAir units tested **TÜV SÜD** Industrie Service GmbH Center of Competence for Refrigeration and Air Conditioning.

Ogólne:
- Wszystkie podzespoły centrali wykonane są w UE.
- Wewnątrz i na zewnątrz (dach, zewnętrzne kraty, siatka z oddziału) wersje.
- Sekcje są wykonane z profilu aluminiowego.
- Panele i drzwi inspekcyjne z wzorem podwójnej skóry.
- 25 mm lub 50 mm, wełna mineralna.
- Aluminium i stali panele dostępne jako opcja.
- Dwa rodzaje sekcji połączeń: wewnętrzne lub zewnętrzne.
- Drzwi rewizyjne z zawiasów i uchwytów.
- Dostarczane z kompletnym wyposażeniem sterującym lub bez.
- Malowane panele dostępne jako opcja.
- Okienka kontrolne i oświetlenie dostępne jako opcja.
- Regulowany i nie regulowane ramie nośnej.
- Prawa i lewa strona konserwacji.

Общая информация:
- Все компоненты приточных установок изготовлены в Европе.
- Внутренняя и наружная (крыша, наружная решетка, патрубок с сеткой) версии.
- Секции изготовлены из алюминиевых профилей.
- Стенки и дверца для обслуживания изготовлены из двойного слоя жести.
- Стандартная толщина изоляции из минеральной ваты 25 мм или 50 мм.
- Имеется возможность заказать стенки из алюминия или нержавеющей стали.
- Соединение секций двух типов: внутреннее и внешнее.
- Дверца для обслуживания с петлями и ручками.
- На выбор можно заказать с полной автоматикой или без нее.
- Стенки можно красить.
- Имеется возможность заказать дверца для обслуживания с обзорными оконцами и освещением.
- Регулируемая или нерегулируемая основа.

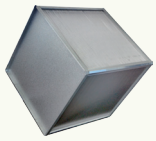
Левая или правая сторона обслуживания.





ROOF BRANCH WITH NET OUTDOOR GRILLES

- Safe and easy outdoor installation.

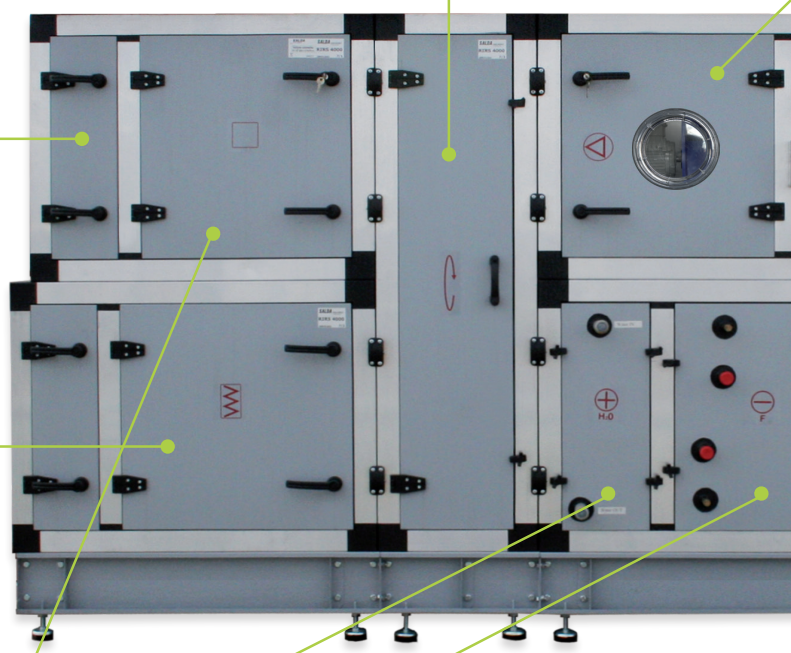


HEAT EXCHANGER

- Wide range rotor heat exchanger
  Plates gap 1,5/1,7/2,0/2,5mm.
  Hybrid (moisture transfer) or absorption coating (increased cooling).
  RHX2 rotor drive and control (0-10V).
- Cross flow plate heat exchanger + drop eliminator + double drip tray.
  Plates gap 2/3,2/4,3/5,3/6,3mm.
  Epoxy coating.
- Heat recovery coil (Run-around Coil Heat Exchangers).
  Ethylen Glycol or propylene glycol.

DAMPER / MIXING SECTION

- One – storey two dampers section or two – storey three dampers section.
- Built in or duct mounted dampers.
- Counter - rotating aerodynamically formed aluminum blades.
- Blades sealing rubber gaskets.
- Palm driving gear made of glass.

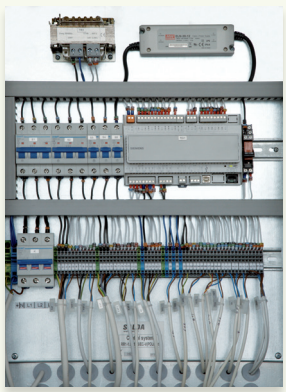


FILTER

- Filter class G4, M5, F7, F9, Hepa filter, Carbon filter.
- Panel or pocket filter.
- Pre-filter and filter.
- Synthetic or glass fibre – low SFPv.

HEATER / COOLER

- Water or evaporative refrigerant cooler.
- Hot water or steam heater.
- Electric heater.
- Gas heater.

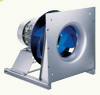


Smart control equipment

Control equipment customized according to every special customer need. Smart Air units factory configured and tested, together with all the necessary field components. The control system conforms to EU directives (MD, EMC and LVD) and is CE marked. Smart Air is the perfect solution for both small installations with straight forward control functions, and also for large installations with data communication requirements. Units is self-contained and requires no major onsite electrical installation. The control equipment is ready to go as soon as the unit is installed. Controls section can be built in section, built on the doors or mounted on particular distance from the unit if it is necessary. Siemens (with POL871; POL822; POL 895 remote controller) or Regin (ED9100; E-DSP) control systems available.

Features of SmartAir controls:

- Indoor/outdoor operation possible (up to IP65).
- PC control via Modbus (RS485); TCP/IP; LON; BACNet MSTP; Mbus; BACNet IP; Web.
- Air quality control: CO2; Humidity; Constant pressure.
- One or two remote controllers can be plugged in.
- Plug and play – all components connected and tested.
- Water heater/cooler actuator.
- Filter contamination control (PS 600B).
- Air supply, exhaust and mixing motorized dampers.
- Sensors of different parameters.
- Fire thermostats.
- External switches.
- Duct/room sensors for night cooling.
- Frost protector for heating coil.
- Smoke detector and fire damper with accompanying control unit.



FAN

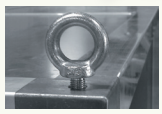
- Direct driven Centrifugal fan with EI2 class motors (ERP 2013).
- Direct driven centrifugal fan with EC motor (ERP 2015).
- Centrifugal fan forward/backward curved impeller with EI2 class motors (ERP 2013).
- Direct driven Centrifugal fan explosion proof.

CONSTRUCTION

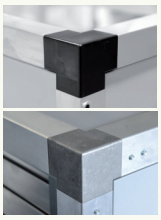
INSPECTION WINDOW
- Lightning inside available.
- Easy monitoring of the section.

JOINT BRACKETS & HINGES
- Supreme air-tightness.
- Low thermal losses.
- Perfect adjusting section to each other.
- Easy mounting.
- Extremely strong and reliable.

LOCKS AND ERGONOMIC HANDLES
- Prevention from accident opening with lock.
- Easy and safe maintenance.



TRANSPORT LUGS
- Easy transportation.
- Quick instalation.



CORNER CONNECTIONS
- Plastic covers available.
- Exclusive esthetic look.

BASE FRAME

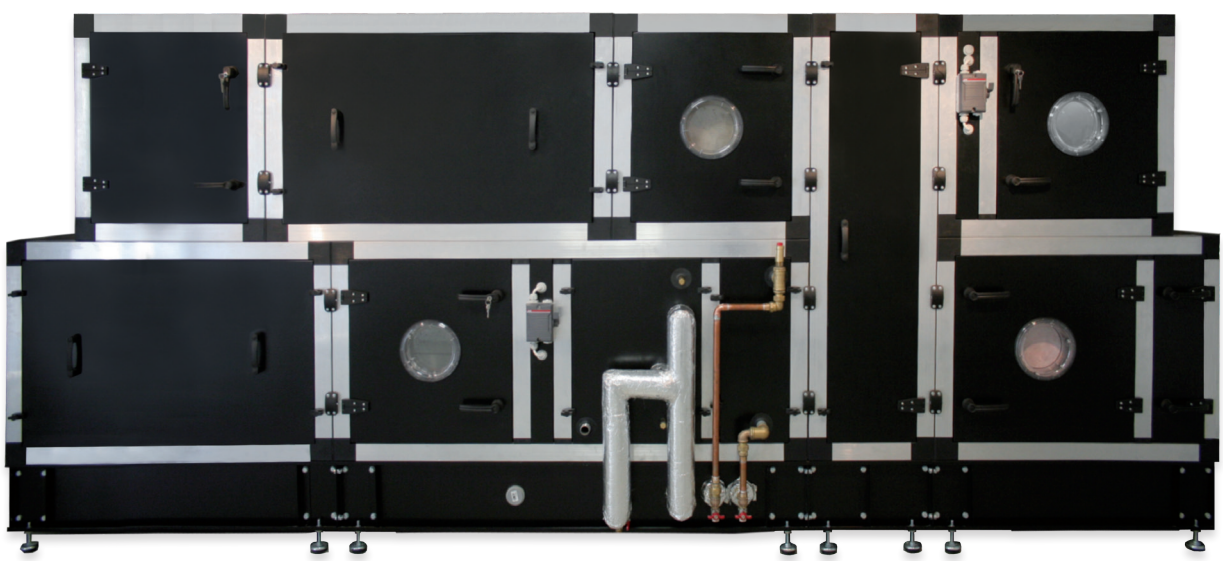
- Rigid frame for lifting the unit.
- Optional height available.

ADJUSTABLE LEGS

- Perfect for levelling the unit on site.
- Antivibration.

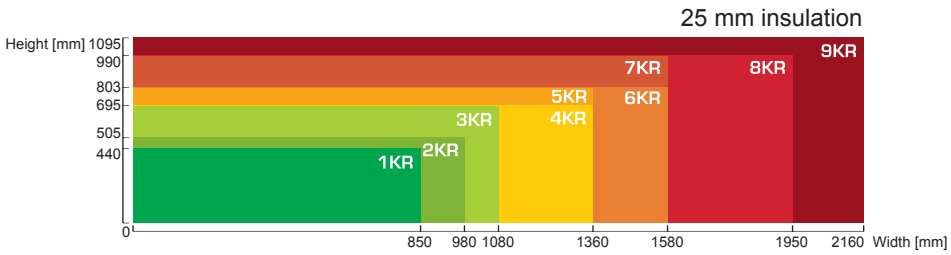
SILENCER

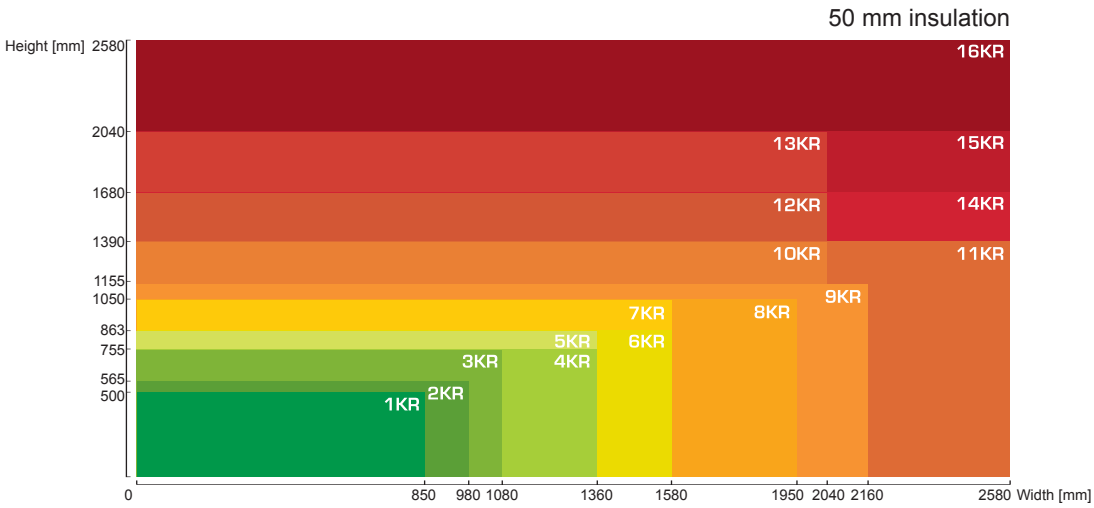
- 600 - 2000mm length available.
- Built-in section or prepared for mounting in duct.



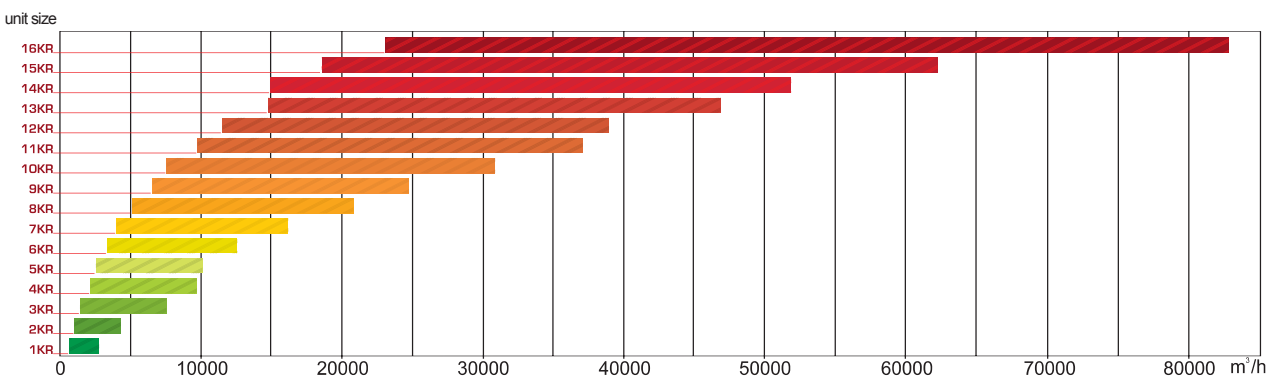
SALDA

Sizes of units
Įrenginių dydžiai
Wielkości central
Размеры агрегатов





Supply air flow volume
Tiekiamo oro srautų kiekiai
Wydajności powietrza
Объем потоков приточного воздуха



Types of air handling unit
Oro tiekimo įrenginių tipai
Typoszeregi central wentylacyjnych
Типы приточных агрегатов

Air handling unit consists of appropriate size and function modules. It depends on air flow and pressure of air handling unit. OPK-RIS-RIRS can supply, exhaust air in different directions. Also air can be heated, cooled, filtered (depends on function of modules) saving warmth and electricity. Air handling can be all-in-one (depends on configuration and size of unit) or made from modules.

Priklausomai nuo oro kiekio ir slėgio įrenginys gali būti sudarytas iš atitinkamo dydžio ir funkcijų sekcijų. Įrenginys gali tiekti ir ištraukti orą įvairiomis kryptimis, jį maišyti, šildyti ir aušinti, išvalyti, taupant šiluminę bei elektros energiją. Oro tiekimo įrenginiai OPK-RIS-RIRS gali būti vientisi - monoblokai (tam tikro dydžio ir konfigūracijos) arba sudaryti iš sekcijų.

Centrala wentylacyjna składa się z odpowiednich wielkości modułów o różnych funkcjach. Zależy to od strumienia i ciśnienia powietrza w centrali wentylacyjnej. OPK - RIS - RIRS mogą dostarczać, wyciągać powietrze w różnych kierunkach. Powietrze może zostać ogrzewane, chłodzone, filtrowane (zależy od funkcji modułów) oraz oszczędzać ciepło i energię elektryczną poprzez odzysk ciepła. Centrala wentylacyjna może być dostarczana jako całość (zależy od konfi guracji i wielkość części) albo zbudowana z połączonych modułów.

В зависимости от количества и давления воздуха агрегат может быть составлен из секций соответствующего размера и функций. Агрегат может подавать и вытягивать воздух в различных направлениях, перемешивать, нагревать и охлаждать, очищать его, экономить тепло- и электроэнергию. Приточные агрегаты OPK-RIS-RIRS могут быть монолитными или собранными из секций (определённого размера и конфигурации).

OIK

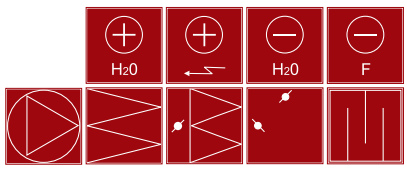
Air exhaust unit, may consist of fan, filters and silencer section, also a damper can be added.

Oro ištraukimo agregatas gali susidėti iš ventiliatoriaus, filtrų, slopintuvo sekcijos bei gali būti pridedama sklendė.

Centrala wyciągowa, może składać się z sekcji wentylatora, fi ltrów, tłumika, może być dodana również przepust-nica.

Агрегат для вытяжки воздуха, может состоять из вентилятора, фильтров, секции глушителя, может прилагаться заслонка.

OPK



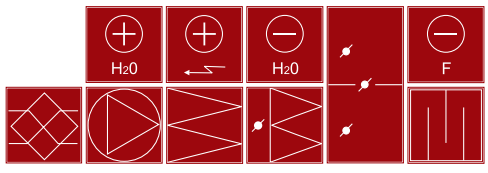
Air supply unit, intended for supply of fresh air into premises. The unit may consist of fan, heater (water or electric), cooler (water of freon), filters, recirculation and silencer sections, also a damper can be added.

Zasilacz powietrza, przeznaczony do dostarczania świeżego powietrza do pomieszczeń. Jednostka może składać się z wentylatora, nagrzewnicy (wodna lub elektryczna), chłodzenie (woda freon), filtry, recyrkulacja i sekcje wyciszające, przepustnica również mogą być dodawane.

Oro vėdinimo įrenginys, skirtas tiekti šviežią orą į patalpas. Agregatas gali susidėti iš ventiliatoriaus, šildytuvo (vandeninio arba elektrinio), aušintuvo (vandeninio arba freoninio), filtrų, recirkuliacinės, slopintuvo sekcijų, taip pat gali būti pridedama sklendė.

Установка кондиционирования воздуха для подачи свежего воздуха в помещения. Агрегат может состоять из вентилятора, нагревателя (водяного или электрического), охладителя (водяного или фреонового), фильтров, рециркуляционной секции, секции глушителя, может прилагаться заслонка.

RIS



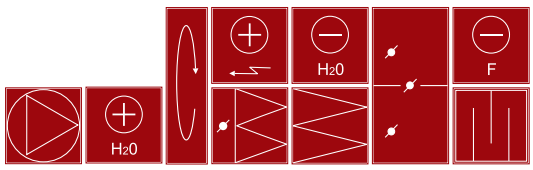
Air supply unit with heat recuperation. It uses plate-type heat-exchanger. The unit may consist of fan, heater (water or electric), cooler (water or freon), filters, recirculation and silencer sections, also a damper can be added.

Centrala klimatyzacyjna z odzyskiem ciepła. Wbudowany płytowy wymiennik ciepła. Centrala może składać się z wentylatora, nagrzewnicy (wodnej lub elektrycznej), chłodnicy (wodnej albo freonowej), filtra, recyrkulacji, tłumika czy też przepustnicy.

Oro vėdinimo įrenginys su šilumos rekuperacija. Naudojamas plokštelinis šilumokaitis. Agregatas gali susidėti iš ventiliatoriaus, šildytuvo (vandeninio arba elektrinio), aušintuvo (vandeninio arba freoninio), filtrų, recirkuliacinės, slopintuvo sekcijų, taip pat gali būti pridedama sklendė.

Установка кондиционирования воздуха с рекуперацией тепла. Используется пластинчатый теплообменник. Агрегат может состоять из вентилятора, нагревателя (водяного или электрического), охладителя (водяного или фреонового), фильтров, рециркуляционной секции, секции глушителя, может прилагаться заслонка.

RIRS



Air supply unit with heat recuperation. It uses rotor heat-exchanger. The unit may consist of fan, heater (water or electric), cooler (water or freon), filters, recirculation and silencer sections, also a damper can be added.

Zasilacz powietrza z odzyskiem ciepła. Wykorzystuje wirnika heatexchanger. Jednostka może składać się z wentylatora, grzałki (woda lub elektryczna), chłodzenie (woda lub freon), filtry, recyrkulacja i działy wyciszające, również tłumik mogą być dodawane.

Oro vėdinimo įrenginys su šilumos rekuperacija. Naudojamas rotorinis šilumokaitis. Agregatas gali susidėti iš ventiliatoriaus, šildytuvo (vandeninio arba elektrinio), aušintuvo (vandeninio arba freoninio), filtrų, recirkuliacinės, slopintuvo sekcijų, taip pat gali būti pridedama sklendė.

Установка кондиционирования воздуха с рекуперацией тепла. Используется роторный теплообменник. Агрегат может состоять из вентилятора, нагревателя (водяного или электрического), охладителя (водяного или фреонового), фильтров, рециркуляционной секции, секции глушителя, может прилагаться заслонка.

For production of the units, raw materials and components from the most prominent and advanced European manufacturers only are used.
Optionally, housing of the units may have 25 or 50 mm insulation thickness.
There is also a possibility to select direction of air flow fed or exhausted by fan.

Do produkcji jednostek, surowców i komponentów z najbardziej znanych i zaawansowanych europejskich producentów tylko są używane.
Ewentualnie, obudowa może jednostek 25 lub 50 mm Izolacja grubość.
Istnieje również możliwość wyboru kierunku przepływu powietrza doprowadzanego lub wyczerpany przez wentylator.

Agregatų gamyboje naudojamos tik žinomiausių, pažangiausių Europos gamintojų žaliavos ir sudėtinės dalys. Pasirinktinai agregatų korpusas gali būti 25 arba 50mm izoliacijos storio. Taip pat yra galimybė pasirinkti ventiliatoriaus paduodamo ar ištraukiamo oro srauto kryptį.

В производстве агрегатов используется сырье и комплектующие детали только самых известных и прогрессивных европейских изготовителей.
По выбору корпус агрегатов может оснащаться изоляцией толщиной 25 или 50 мм.
Имеется также возможность выбора направления воздушного потока, подаваемого или вытягиваемого вентилятором.





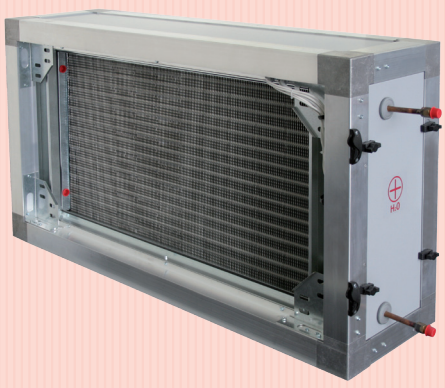
Functional components
Sudėtinių dalių funkcijų apžvalga
Sekcje i ich funkcje
Обзор функций комплектующих частей

Filter section
• Variuos filter could be designed with Ventmaster.
• Prefilter - basic panel filters G3. It is short built-in length. Panel filters have low pressure loss and long lifetime.
• The pocket filters G3, G4, F5, F7 and F9. Pockets have large filter area, which ensures a long lifetime and makes it economical.
• Filtering material is Synthetic or glass fibre. Glass fibre filter is for lower pressure drop, which ensures energy-saving.
• The filter frame are held in place by using a simple but effective system of lateral locking rails, making filter changing quick and easy.
• Filters frame are made from galvanised steel.

Sekcja filtrów
• Variuos filtr może być zaprojektowane z Ventmaster.
• Filtr wstępny - podstawowy panel filtry G3. Jest to krótki zabudowy długość. Filtry panelowe ma niskie straty ciśnienia i długi żywotność.
• Kieszeń na filtry G3, G4, F5, F7 i F9. kieszenie mają duży obszar filtra, co zapewnia długą żywotność i sprawia, że ekonomiczne.
• Filtrowanie materiał syntetyczny lub włókno szklane szkło Filtr z włókna jest niższy spadek ciśnienia, który zapewnia oszczędność energii.
• Ramkę filtra są utrzymywane na miejscu za pomocą prostego ale skuteczny system bocznych szynach blokujących, co filtrować zmiany szybkie i łatwe.
• Filtry ramki wykonane są z ocynkowanej blachy stalowej.

Filtrų sekcija
• Įvairius filtrų tipus galima parinkti Ventmaster programa.
• Priešfiltris – paprastas G3 panelinis filtras. Kompaktiškas filtro ilgis. Žemas slėgio kritimas ir ilgas tarnavimo laikas.
• Kišeniniai filtrai G3, G4, F5, F7 ir F9. Kišeniniai filtrai pasižymi didelių filtravimo plotu, kas užtikrina ilgą tarnavimo laiką ir garantuoja ekonominę naudą.
• Filtravimo medžiaga sintetinė arba stiklo pluošto. Stiklo pluoštas pasižymi mažais slėgio nuostoliais – mažina energijos sąnaudas.
• Specialus filtrų tvirtinimo mechanizmo bėgelis užtikrina filtro sandarumą ir palengvina greitą jų pakeitimą.
• Filtrų rėmeliai pagaminti iš cinkuotos skardos.

Секция фильтров
• Фильтры разных типов может быть подобраны с VentMaster.
• Предфильтр – базовый панельный фильтр G3 – короткий и компактный. Панельные фильтры гарантируют низкое падение давления и долговечность.
• Карманные фильтры – G3, G4, F5, F7 и F9. Карманы обладают большой площадью фильтрования, что гарантирует долговечность и экономичность фильтров.
• Фильтрующий материал синтетический или из стекловолокна. Стекловолокно обеспечивает меньшее падение давления и таким образом позволяет экономить энергию.
• Для крепления рамы фильтров используется простая, но эффективная система замков боковых рельсов, позволяющая легко и быстро менять фильтры.
• Рамы фильтров изготовлены из оцинкованной жести.

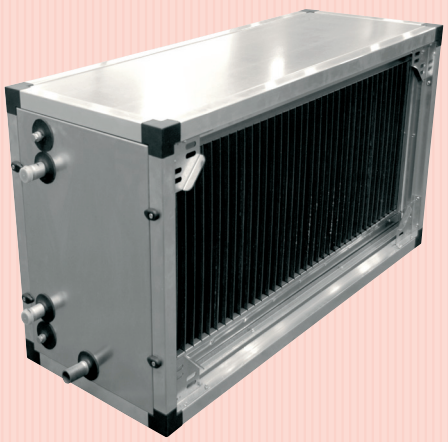


Water/steam heating section
• It is used for heating of the air supplied to premises, when there is a possibility for connection to hot water/steam supply.
• Consists of water/steam heater coil, and housing.
• The heater consists of copper pipes and aluminum plates.
• Max. operating pressure: 16 bar at a max. operating temperature 100 °C.
• Max. operating pressure: 10 bar at a max. operating temperature of 150 °C.
• Wide range of heaters, which can match special requirements of most applications.
• Special coil options available.

Sekcja nagrzewnicy wodnej
Składa się z nagrzewnicy wodnej lub parowej i obudowy. Nagrzewnica zbudowana jest z miedzianych rurek i aluminiowych lameli. Używane do ogrzewania powietrza nawiewanego, poprzez możliwość podłączenia gorącej wody.

Vandens/ garų šildytuvo sekcija
• Naudojama patalpoms šildyti/pašildyti, kai yra galimybė karšto vandens/garų pajungimui.
• Susideda iš vandens/garų šilumokaičio ir rėmo.
• Šildytuvo šilumokaitis susideda iš varinių vamzdelių ir aliuminių plokštelių.
• Maksimalus darbinis slėgis 16bar prie 100°C darbo temperatūros.
• Maksimalus darbinis slėgis 10bar prie 150°C darbo temperatūros.
• Didelis ir įvairus šildytuvų pasirinkimas – gali išpildyti įvairius techninius sprendimus.
• Specialių šilumokaičių galimybė.

Секция нагревателя воды/пара
• Секция нагревателя воды/пара используется для подогрева подаваемого в помещение воздуха, когда есть возможность подключить воду/пар.
• Секция состоит из нагревателя воды/пара и рамы.
• Нагреватель состоит из медных трубок и алюминиевых пластинок.
• Максимальное рабочее давление: 16 бар, когда максимальная температура 100ºC.
• Максимальное рабочее давление: 10 бар, когда максимальная температура 150ºC.
• Широкий выбор нагревателей, удовлетворяющий специальные потребности.
• Возможны специальные модели нагревателей по заказу.



Section of cooler
• The cooler can be two types: with water or evaporative refrigerant.
• Water cooler is used when it is possible to connect cold water, and the cooling energy is transmitted via water.
• Evaporative refrigerant cooler is used when cooling energy is transmitted via cooling refrigerant.
• The cooler consists of copper pipes and aluminum plates.
• Cooling section has a drop eliminator and stainless steel drip tray for water draining.
• Wide range of coolers, which can match special requirements of most applications.
• Special coil options available.

Sekcja chłodnicy
• Chłodnica może być dwóch rodzajów: z wodą lub par czynnika chłodniczego.
• Chłodzenie wody, gdy jest stosowany do łączenia można zimna woda, a chłodzenie jest nadawany poprzez energii woda.
• Chłodnica czynnika par jest używany podczas chłodzenia energia jest przekazywana za pośrednictwem czynnika chłodzącego.
• Cooler składa się z rur miedzianych i aluminiowych talerze.
• Chłodzenie sekcja ma odkraplacza i stal taca ociekowa ze stali do wody opróżniania.
• Szeroki zakres chłodnic, które można dopasować do specjalnych wymagania większości zastosowań.
• Specjalne opcje dostępne cewki.

Aušinimo sekcija
• Galimi dviejų tipų aušintuvai: vandeniniai ir freoniniai.
• Naudojama patalpoms vėsinti, kai yra galimybė šalto vandens/freono pajungimui.
• Aušintuvo šilumokaitis susideda iš varinių vamzdelių ir aliuminių plokštelių.
• Į aušinimo sekcija integruotas lašelių gaudytuvas ir nerūdijančio plieno kondensato vonelė.
• Didelis ir įvairus aušintuvų pasirinkimas – gali išpildyti įvairius techninius sprendimus.
• Specialių šilumokaičių galimybė.

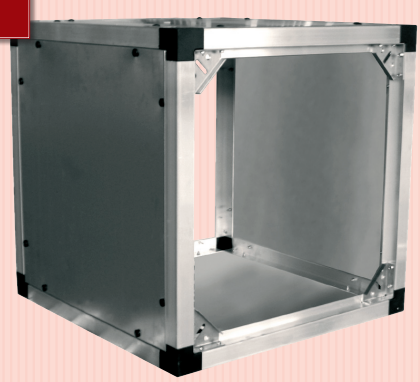
Секция охладителя
• Охладители могут быть двух типов: водяные или испарительные с хладоносителем.
• Водяные охладители используются, когда есть возможность подключения холодной воды, и энергия охлаждения забирается из воды.
• Испарительные охладители с хладоносителем используются, когда энергия охлаждения забирается из холодильного регента.
• Охладитель состоит из медных трубок и алюминиевых пластинок.
• Секция охлаждения поставляется с каплеотделителем и ванночкой из нержавеющей стали для сбора конденсата.
• Широкий выбор охладителей, удовлетворяющий специальные требования.
• Возможны специальные модели охладителя по заказу.

Section of electrical heater
• It consists of electrical heating elements and housing.
• It is used for heating air supplied to premises, when there is no possibility to supply hot water.
• Long life three phase (3 x 230V, 3 x 400V) heating elements.
• Two thermo-protections (50°C and 100°C).
• Heating by steps.
• Air can be heated up to 90°C.
• Aluminium profile.

Sekcja nagrzewnicy elektrycznej
• Składa się z elektrycznych elementów grzejnych i mieszkań.
• To jest stosowane do ogrzewania powietrza dostarczanego do pomieszczeń, przy nie ma możliwości dostarczenia gorącej wody.
• Długa żywotność trójfazowe (3 x 230 V, 3 x 400V) ogrzewanie elementy.
• Dwa termo-zabezpieczenia (50°C i 100°C).
• Ogrzewanie przez kroki.
Air • może być podgrzewana do 90°C.
• Profil aluminiowy.

Elektrinio šildytuvo sekcija
• Susideda iš elektros kaitinimo elementų ir rėmo.
• Naudojama patalpoms šildyti/pašildyti, kai nėra galimybės karšto vandens/garų pajungimui.
• Ilgaamžiai trifaziai (3x230V, 3x400V) kaitinimo elementai.
• Dvi termo apsaugos (50°C ir 100°C).
• Šildymas pakopomis
• Oras gali būti pašildytas iki 90°C.
• Aliuminis profilis.

Секция электрического нагревателя
• Состоит из электрических нагревательных элементов и корпуса.
• Используется для подогрева воздуха, подаваемого в помещения.
• Используется, когда нет возможности подавать горячую воду.
• Долговечные трехфазные нагревательные элементы 3x230V, 3x400V.
• Две термозащиты (50ºC и 100ºC).
• Ступенчатая работа нагревательных элементов.
• Может нагреть подаваемый воздух до 90ºC.
• Алюминиевый профиль.



Empty Section
• For inspection and maintenance work.
• It can be used for integrating special components into the unit.
• With/without inspection window.
• With/without lighting.
• Section length from 300 up to 2000 mm.

Pusta sekcja
• Do prac kontrolnych i konserwacji.
• Może być stosowany do integracji specjalnych elementów do urządzenia.
• Z / bez wziernika.
• Z / bez oświetlenia.
• Długość odcinka od 300 do 2000 mm.

Tuščia sekcija
• Naudojama apžiūrai ir aptarnavimo darbams atlikti.
• Naudojama specialių komponentų montavimui.
• Tiekiama su apžiūros langeliu arba be jo.
• Tiekiama su apšvietimu arba be jo.
• Pasirenkamas sekcijos ilgis nuo 300mm iki 2000mm.

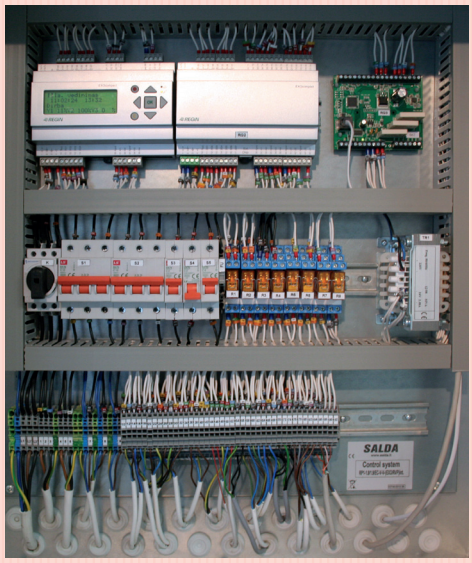
Пустая секция
• Для проверки и работ по обслуживанию.
• Может использоваться при интегрировании специальных компонентов (ящик для автоматики, увлажнитель, охладитель).
• Может быть с проверочным оконцем или без него.
• Может быть с освещением или без него.
• Длина секций от 300 до 2000 мм.

Supply and exhaust fan section
• Consist of a fan and motor.
• Centrifugal fans are used.
• Fan and motor are built on a stable base.
• Frame that is fitted to rubber shock-absorbers.
• Forward and backword impellers.
Fan types:
• Belt drive centrifugal fan.
• Direct drive centrifugal fan.
• Direct drive centrifugal fan with EC motor.

Zasilanie i rozdział wentylator wyciągowy
• Składa się z wentylatora i silnika.
• Wentylatory promieniowe są wykorzystywane.
• Wentylator i silnik zbudowany na stabilnej podstawie.
• Ramka, że jest zamontowany gumowymi amortyzatorami.
• Obroty wirniki backword.
Typy wentylatorów:
• Napęd taśmowy wentylator promieniowy.
• Bezpośredni napęd wentylator promieniowy.
• Bezpośredni napęd wentylator promieniowy z silnikiem EC.

Tiekiamo ir ištraukiamo ventiliatoriaus sekcija
• Susideda iš ventiliatoriaus ir variklio.
• Naudojami centrifūginiai ventiliatoriai.
• Ventiliatorius ir variklis pritvirtinti ant stabilaus rėmo.
• Rėmas sumontuotas su antivibracinėmis kojelėmis.
• Sparnuotės į priekį lenktais sparneliais arba atgal.
Ventiliatorių tipai:
• Ventiliatorius su diržine pavara.
• Ventiliatorius su tiesiogine pavara.
• Ventiliatorius su tiesiogine pavara ir EC varikliu.

Секции вентиляторов подачи и вытяжки воздуха
Секция вентилятора:
• Состоит из вентилятора и двигателя.
• Используются центробежные вентиляторы.
• Вентилятор и двигатель смонтированы на устойчивой к вибрации раме с резиновыми амортизаторами.
• Вентиляторы с крыльчатками, загнутыми вперед и назад.
Типы вентиляторов:
• центробежные вентиляторы с ременным приводом.
• центробежные вентиляторы с прямым приводом.
• центробежные вентиляторы с прямым приводом и двигателями EC.

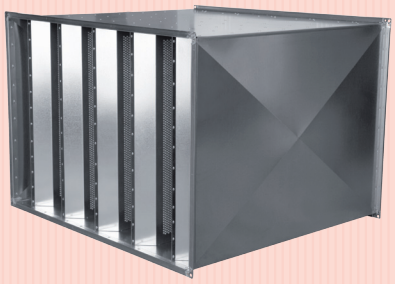


Control equipment section
The AHU with integrated control equipment is supplied programmed, configured and tested, together with all the necessary field components.
• Siemens or Regin control system can be supplied.
• External SALDA controllers UNI/PRO/TPC can be connected to SIEMENS or REGIN control system.
• Control cabinet integrated into a fixed panel/ceiling.
• Field components mounted and connected as damper actuator, sensors, valve actuator, external controller, power/safety switches if possible.
• The integrated unit is equipped with internal quick connectors to facilitate quick and easy AHU installation/assemble in construction place.
• Possible wide range supports communication protocols, which allows its simple and cost effective integration with building automation systems.
• The integrated control equipment inside version can operate in 0-50°C and relative humidity < 85 % RF.
• The AHU with integrated control equipments can be prepared for outside version < 0°C.

Valdymo sekcija
• Vėdinimo įrenginys su integruota valdymo automatika ir elementais tiekiamas su gamykliniais arba kliento nustatymais, sukonfiguruotas ir patikrintas kartu su visais sumontuotas komponentais.
• Galimybė tiekti su Siemens arba Regin valdikliais.
• Galimybė prijungti UNI/PRO/TPC valdymo pultelius
• Valdymo blokas integruotas į elektros spintą arba tuščia įrenginio sekciją.
• Pagalbiniai komponentai (pavaros, jutikliai, valdikliai, valdymo pulteliai, maitinimo kabeliai, saugos kirtikliai ir kiti suprojektuoti priedai) sumontuojami ir prijungiami prie valdymo sistemos.
• Montavimo ir pajungimo patogumui naudojamos specialios jungtys.
• Pastatų automatizavimui galimybė integruoti įvairius BMS protokolus, kad užtikrinti efektyvų ir patogų įrenginio valdymą
• Įrenginio valdymo sistema gali būti paruošta laukiniam variantui <0°C.

Sekcja urządzenia sterowania
Centrale wentylacyjne z urządzeń zintegrowanego sterowania dostarczany jest zaprogramowane, skonfigurowane i przetestowane wraz wszystkie elementy niezbędne pola.
• Siemens lub system kontroli Regin może być dostarczony.
• Zewnętrzne kontrolery Salda UNI / PRO / TPC może być podłączony do SIEMENS lub układu kontroli Regin.
• Szafa sterownicza zintegrowany panel stały / sufitu.
• Elementy polowe zamontowane i podłączone jako amortyzator Siłownik, czujniki, siłowniki zaworów, zewnętrznego kontrolera, zasilania / wyłączniki bezpieczeństwa, jeśli to możliwe.
• Urządzenie jest wyposażone w zintegrowany z wewnętrznym quick złącza ułatwiające szybki i łatwy montaż centrali / montaż na miejscu budowy.
• Możliwa wspiera szeroki zakres protokołów komunikacyjnych, co umożliwia jego łatwe i oszczędne integracji z systemem automatyki budynku.
• Zintegrowane urządzenia sterowania wewnątrz wersji może pracować w 0-50°C i przy względnej wilgotności <85% RF.
• Centrala wentylacyjna z zintegrowanych urządzeń kontroli może być przygotowane poza wersji <0°C.

Секция автоматики управления
Агрегаты приточных установок с интегрированной автоматикой управления являются запрограммированными, налаженными, все их компоненты проверены.
• Возможна автоматика управления Siemens или Regin
• Пульты дистанционного управления «SALDA» UNI/PRO/TPC могут использоваться с автоматикой управления Siemens или Regin.
• Ящик автоматики может быть прикреплен к стенке секции агрегата.
• Внешние компоненты, такие как приводы, датчики, внешние контроллеры, рубильники On/OFF интегрированы и подключены, если это возможно.
• Провода интегрированных компонентов должны соединяться между секциями агрегата, что обеспечивает быстрое и легкое инсталлирование АПУ.
• Широкий спектр коммуникационных протоколов обеспечивает легкое и материально экономичное подключение агрегата к общей системе управления здания.
• Автоматика управления, интегрированная в агрегат приточной установки, может работать в следующих условиях: температура 0-50ºC и влажность <85 %.
• АПУ с интегрированной автоматикой управления может быть приспособлен для установки и эксплуатации в полевых условиях при температуре <0ºC.



Silencer Section
- Provided to reduce noise in ducts.
- Consists of housing and perforated division walls.
- Walls filled with mineral wool.
- Length of section from 600mm to 1800mm.

Slopintuvo sekcija
- Tiekiama triukšmui slopinti.
- Susideda iš rėmo ir perforuotų perskyrimo sienelių.
- Perskirimo sienelės užpildytos mineraline vata.
- Galimas slopintuvo ilgis nuo 600mm iki 1800mm.

Sekcja Silencer
- Zapewnione w celu zmniejszenia hałasu w kanałach.
- Składa się z obudowy i perforowane ścianki działowe.
- Ściany wypełnione wełną mineralną.
- Długość odcinka od 600mm do 1800mm.

Секция глушения
- Секция предназначена для глушения шума в воздуховодах.
- Состоит из корпуса и стенки из перфорированной жести.
- Для изоляции стенок используется минеральная вата.
- Длина секции: от 600 мм до 1800 мм.

Isolated silencer section
- Provided to suppress noise in ducts.
- Consists of empty section and perforated division walls.
- Housig: walls contain an isolation layer of mineral wool, 25 or 50 mm thickness.
- Length of section from 600mm to 1800mm.

Izoliuota slopintuvo sekcija
- Tiekiama triukšmui slopinti.
- Susideda iš tuščios sekcijos ir perforuotų perskyrimo sienelių.
- Perskirimo sienelės užpildytos mineraline vata.
- Galimas slopintuvo ilgis nuo 600mm iki 1800mm.

Izolowane sekcja tłumika
- Zapewnione do tłumienia hałasu w kanałach.
- Składa się z pustej sekcji i działu perforowanej ściany.
- Housig: ściany zawierają warstwę izolacji mineralnej wełna, 25 lub 50 mm grubości.
- Długość odcinka od 600mm do 1800mm.

Изолированная секция глушения
- Секция предназначена для глушения шума в воздуховодах.
- Состоит из пустой секции и стенки из перфорированной жести.
- Корпус: стенки изолированы минеральной ватой толщ. 25-50 мм.
- Длина секции: от 600 мм до 1800 мм.

Mixing section
- Intended for mixing air flows.
- Perfect for low-energy operation with recirculation.
- Transfer of heat energy by mixing removed air with air supplied into.
- Shut off or recirculation.
- One – storey two dampers section or two – storey three dampers section.

Damper:
- Used for closing or regulatig air flow.
- Palm driving gear made of glass – fibre material.
- Aluminium damper blades with sealing rubber gaskets.
- Counter - rotating damper blades of double-skin design.
- Suitable to use from – 40°C to 80°C temperature ranges.

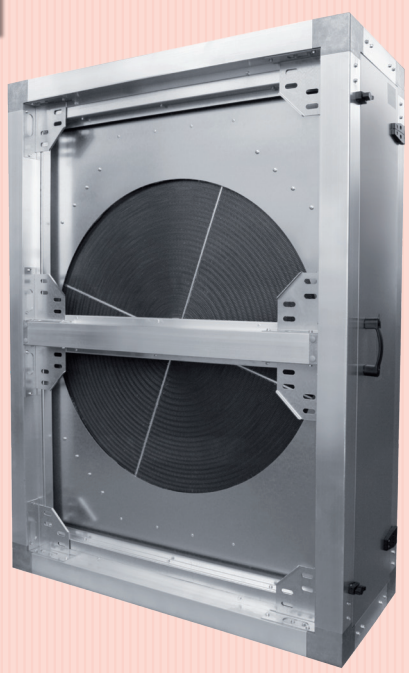
Pamaišymo sekcija
- Skirta oro srautam maišyti.
- Puikiai tinka energijos taupymui, kai galima oro recirkuliacija.
- Ištraukiamas oras perduoda tiekiamui orui šilumos energiją.
- Recirkuliacinės sekcijos uždarymas.
- Galimybė pasirinkti vieno aukšto (dvi sklendės) arba dviejų (trys sklendės) aukštų recirkuliacinę sekciją.

Sekcja mieszania
- Przeznaczona do mieszania przepływów powietrza.
- Idealny do niskoenergetycznego pracy z recyrkulacji.
- Transfer energii cieplnej przez zmieszanie usuwanego powietrza z powietrze dostarczane do.
- Wyłącz lub recyrkulacji.
- Jedno - piętrowy dwa tłumiki lub dwóch sekcji - piętrowy trzy sekcja klapy.

Damper:
- Używany do zamykania lub regulatig przepływ powietrza.
- Palm bieg jazdy szklane - włókna materiału.
- Łopatki przepustnicy z aluminium uszczelki gumowe.
- Licznik - wirujące łopatki przepustnicy z podwójną skórą design.
- Nadaje się do użycia od - 40ºC do 80ºC Temperatura
zakresy.

Секция смешивания
- Используется для смешивания воздушных потоков.
- Идеальна для эффективного использования энергии при использовании рециркуляции.
- Тепловая энергия передается путем смешиваний вытягиваемого из помещения воздуха с воздухом, подаваемым в помещение.
- Заслонки или рециркуляционная функция.
- Одноэтажная секция двух заслонок, или двухэтажная секция трех заслонок.

Заслонки:
- Используются для регулировки или перекрытия воздушного потока.
- Механизм управления лопастями изготавливается из стекловолокна.
- Лопасти заслонок изготавливаются из алюминия и уплотняются резиновыми полосками.
- Одна против другой закрывающиеся лопасти заслонки из двух слоев алюминия.
- Для эксплуатации при температуре от -40ºC до +80ºC.



Rotor heat-exchanger section
• Frame made of galvanized sheet steel.
• Corrugated plates of aluminum strips efficiency up to 85%.
• Special coating for various applications.
• Epoxy coating for moisture transfer.
• Hygroscopic rotor for increased cooling recovery.
• Can be equipped with variable control (0-10V signal).
• Freeze resistant and no condensate.
• Humidity transfer.

Rotor wymiennika ciepła sekcji
• Rama wykonana z ocynkowanej blachy stalowej.
• Płyty faliste z aluminium listwy efektywności aż do 85%.
• Specjalna powłoka dla różnych zastosowań.
• Powłoka epoksydowa do transferu wilgoci.
• Rotor higroskopijny dla zwiększenia chłodzenia odzysku.
• Może być wyposażona z regulacją (0 -10V).
• Mrozoodporny i nie kondensat.
• Transfer wilgotności.

Rotorinio šilumokaičio sekcija
• Rėmas pagamintas is cinkuotos skardos.
• Gofruotų aliuminio plokštelių efektyvumas iki 85%.
• Papildomai pasirenkamas specialus rotoriaus plokštelių padengimas.
• Papildomai pasirenkamas epoksidinis padengimas geresniam drėgmės perdavimui.
• Papildomai pasirenkamas hydroskopinis padengimas geresnei šalčio rekuperacijai.
• Papildomai tiekiamas kintamo greičio rotoriaus dažnio keitiklis (0-10V).

Секция роторного теплообменника
• Рама изготовлена из оцинкованной жести.
• Эффективность гофрированных пластинок алюминиевой ленты до 85 %.
• Специальное покрытие в зависимости от потребностей.
• Эпоксидное покрытие для защиты от влаги.
• Гигроскопический ротор с увеличенным возвратом холода.
• Может поставляться с контролем переменной скорости (сигнал 0-10V).
• Не замерзающая и без образования конденсата.
• Перенос влаги.

Plate Heat-exchanger section
• Aluminium heat exchanger.
• Aliuminium or epoxy coated plates.
• Separated supply and exhaust air.
• Efficiency up to 75%.
• Built in full by-pass.
• Stainless steel drip tray.
• The heat exchanger is equipped with large inspection door that give access for inspection and service.

Plate sekcja wymiennika ciepła
• Wymiennik ciepła z aluminium.
• Aliuminium lub epoksydowane talerze.
• Separacji podaż i powietrza wywiewanego.
• Sprawność do 75%.
• Wbudowany w pełni by-pass.
• Stal skropliny ze stali.
• Wymiennik ciepła jest wyposażona w duże drzwiczki kontrolne, które umożliwiają dostęp do kontroli i obsługi.

Plokštelinio šilumokaičio sekcija
• Aliuminis šilumokaitis ir šilumokaičio rėmas.
• Papildomai pasirenkamas epoksidinis padengimas.
• Atskirtas tiekiamas ir ištraukiamas oro srautas
• Efektyvumas iki 75%.
• Integruota šimtaprocentinė apėjimo sklendė (by-pass).
• Kondensato vonelė iš nerūdijančio plieno.
• Iššimamas šilumokaitis aptarnavimui.

Секция пластинчатого теплообменника
• Алюминиевый теплообменник.
• Пластинки, покрытые алюминием или эпоксидом.
• Отдельные потоки приточного и вытяжного воздуха.
• Эффективность до 75%.
• Интегрированная обходная заслонка.
• Ванночка из нержавеющей стали для сбора конденсата.
• Секцию теплообменника легко обслуживать, так как ее стенки большие, легко снимаются и ставятся обратно.

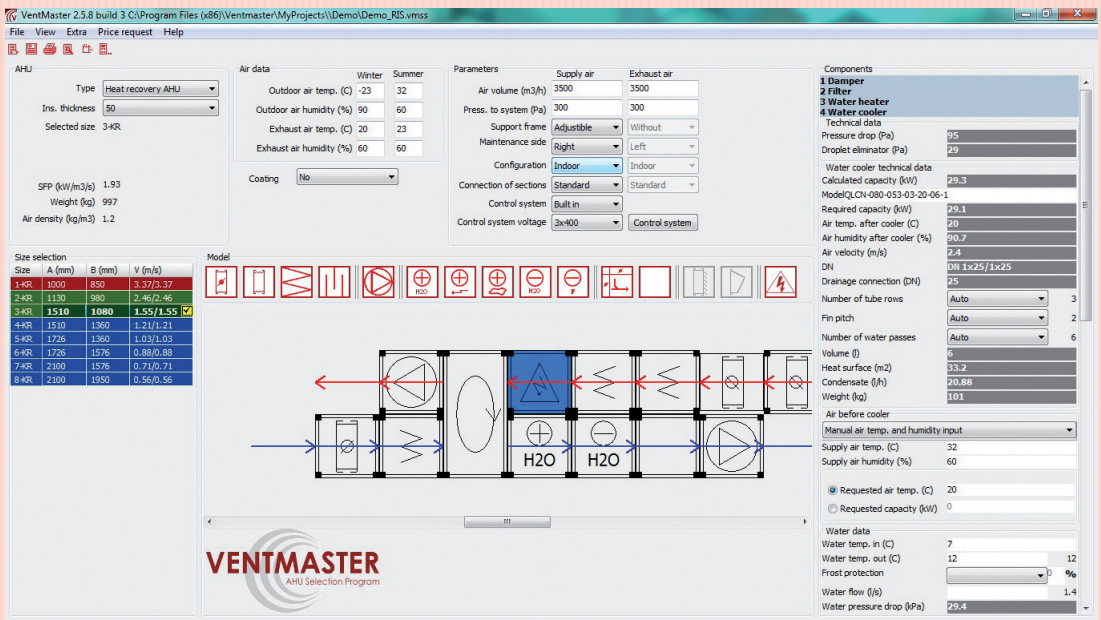
Smart selection software Ventmaster

Ventmaster is easy and powerful selection and planning tool for custom needs based air handling units. Software gives you all the information and support required for good designing.

- Software update without the user having to download it.
- Online price calculation.
- Easy product dimension selection.
- Flexible product design.
- All the necessary data for correct air handling unit selection:
- Sound power level of the fans.
- Fan efficiency and energy consumption, SFPv.
- Attenuation of the silencers.
- Heat exchanger efficiency.
- Air heater and air cooler capacities.
- Water flow resistance in the air heater and air cooler.
- Air resistance in each unit section.
- Air temperatures and humidity.
- All data autonomously obtain data sheets to pdf.
- Dxf and Dwg files can be exported to CAD software.
- Support is available for Help topics.

Software is free to use, which could be found in Internet page http://www.salda.lt

Be smart and save Energy, Economy and Environment with SmartAir.



PRV V2.2

FUNCTIONS				
Descriptions of the functions	ECO		PRV V2.2	
	E	W	E	W
Main functions and control of functional units				
User and servicing control level			●	●
Week timer + Holidays + Digital timer channels 8 events for each day or weekday group* per week. *1-7 entire week, 1-5 working days, 6-7 weekend.	●	●	●	●
START/STOP function ,,START/STOP“ function for starting or stopping operation of the heat recovery unit. „STOP“ sign is indicated on a remote control (Flex). It can be used with door lock, motion sensor (PIR), outside switch or other external digital signal (potential-free contacts). On a position ,,START“ heat recovery unit operates according to the last remote controller settings.			●	●
Year-round optimization of recovery unit regulation Winter –heat recovery; Summer – cold recovery; Autumn and spring – low rotor speed/half by-pass opened.			●	●
Free Cooling function The premises are cooled down by supplying fresh air, when exhaust air temperature is higher then fresh air. (Night cooling function)			●	●
Cool recovery The heat exchanger recovers cold air from exhaust air when premises temperature is lower than outside.			●	●
ON/OFF rotor motor control	●	●	●	●
0-10V DC rotor motor speed control			●	●
By-pass ON/OFF	●	●		
By-pass three-positional control			●	●
Minimum and maximum limits for supply air temperature By activating temperature control according to extracted air sensor (Min. -15°C, Max. +40°C adjustable in service menu).			●	●
ON/OFF control of electric post-heater	●			
Pulse-width modulation (PWM) control of electrical heater Accuracy of 0,5 °C for supply air temperature.	●	●	●	●
Electric heater’s control by stages For the bigger capacity electric heaters.	●	●	●	●
ON/OFF control of DX coolers	●		●	●
Water cooler control with three-positional valve actuator	●	●	●	●
ON/OFF control of circulation pump		●		●
Fans’ speed synchronous 0-10V control	●	●	●	●
Separate fans’ speed asynchronous 0-10V control			●	●
4 speeds for easy end-user control. “Stop” – the unit is stopped; “Low”, “Medium”, and “High”. Service menu allows adjusting each speed individually.			●	●
BOOST function Fans operate at high speed (set in service menu). Operation time is also set in service menu. „Boost“ function is reflected in FLEX remote.			●	●
CO2, constant pressure Fan speed control only.	●	●	●	●
CO2, constant pressure control Possibility to connect CO2 or two pressure transmitters.			●	●
Supply air temperature control according to the extract air sensor			●	●
Exhaust air damper control	●	●	●	●
Supply air damper control	●	●	●	●
Remote control ModBus input Web-based software control.			●	●
Remote controller input	●	●	●	●

FUNCTIONS				
Descriptions of the functions	ECO		PRV V2.2	
	E	W	E	W
Safety/emergency signal indications				
General emergency signal	●	●		
Overheat protection Additional electrical heater overheat protection (software).			●	●
Rotor fail alarm signal In case of rotor belt break-up or rotor operation stopping indication „RotorFail“ appears on FLEX remote controller.			●	●
Fire alarm signal			●	●
Fire and smoke alarm input The AHU stops till service is restored in FLEX remote controller.			●	●
Fans' overheating alarm signal			●	●
Filter pollution indicator by pressure drop transmitter	●	●	●	●
Filter pollution indicator by working hours A possibility to choose period of time after which indication informs about necessity to change the filters. (Min. 168 h, Max. 6482 h) Number of working hours set as default -2160h.			●	●
Other indications				
FanRun function Unit in operation signal.			●	●
FanFail function Unit off operation signal.			●	●
Extracted air temperature sensor			●	●
Exhaust air temperature sensor			●	●
Returning water temperature sensor		●		●
Extracted air relative humidity converter	●	●	●	●
Fresh air temperature sensor	●	●	●	●
Supplied air temperature sensor	●	●	●	●
Controllers				
FLEX controller  Adjustment of the new controller with control automatics – Full control (service control included).			●	●
TPC* *Absent control functions:* *• Boost configuration menu (time, fan speed, night cooling), temperature and time configuration of water heater);* *• Service menu- PI configuration;* *• Review of separate alarms at one time;* *• DX cooling configuration possibility;* *• Night cooling fast button setting;* *• Supply and extract air fans' speed control (3 speed can be configured);* *• Functional components' type choice.* *• Filter timer reset* **TPC** 	●	●	●	●
Stouch *Absent control functions:* *• Configuration menu time, night cooling, temperature and time configuration of water heater;* *• Service menu- PI configuration;* *• DX cooling configuration possibility;* *• Night cooling fast button setting;* *• Functional components' type choice;* *• Operation schedule;* *• Sensor preview, (only supply air temperature available).* 	●	●	●	●
DCV systems control Demand-Controlled Ventilation for extracted air. Using one pressure or one CO2 transmitter.	●	●		
DCV systems control Demand-Controlled Ventilation for extracted and supplied air. Two pressure or one CO2 transmitter.			●	●

PRV V1.1

FUNCTIONS				
Descriptions of the functions	PRV		PRV V1.1	
	E	W	E	W
Main functions and control of functional components				
User and servicing control level				
Week timer + Holidays + Digital timer channels 8 events for each day or weekday group* per week. *1-7 entire week, 1-5 working days, 6-7 weekend.	●	●	●	●
START/STOP function ,,START/STOP“ function for starting or stopping operation of the heat recovery unit. „STOP“ sign is indicated on a remote control (Flex). It can be used with door lock, motion sensor (PIR), outside switch or other external digital signal (potential-free contacts). On a position ,,START“ heat recovery unit operates according to the last remote controller settings.			●	●
Year-round optimization of recovery unit regulation Winter –heat recovery; Summer – cold recovery; Autumn and spring – low rotor speed/half by-pass opened.			●	●
Free Cooling function The premises are cooled down by supplying fresh air, when exhaust air temperature is higher then fresh air. (Night cooling function)			●	●
Cool recovery The heat exchanger recovers cold air from exhaust air when premises temperature is lower than outside.			●	●
ON/OFF rotor motor control	●	●	●	●
0-10V DC rotor motor speed control				
By-pass ON/OFF				
By-pass three-positional control	●	●	●	●
Minimum and maximum limits for supply air temperature By activating temperature control according to extracted air sensor (Min. -15°C, Max. +40°C adjustable in service menu).			●	●
ON/OFF control of electric post-heater	●		●1	
Pulse-width modulation (PWM) control of electrical heater Accuracy of 0,5 °C for supply air temperature.			●2	
Electric heater’s control by stages For the bigger capacity electric heaters.				
ON/OFF control of DX coolers			●	●
Water cooler control with three-positional valve actuator			●	●
ON/OFF control of circulation pump		●		●
Fans’ speed synchronous 0-10V control			●	●
Separate fans’ speed asynchronous 0-10V control			●	●
4 speeds for easy end-user control. “Stop” – the unit is stopped; “Low”, “Medium”, and “High”. Service menu allows adjusting each speed individually.	●	●	●	●
BOOST function Fans operate at high speed (set in service menu). Operation time is also set in service menu. „Boost“ function is reflected in FLEX remote.			●	●
CO2, constant pressure Fan speed control only.			●	●
CO2, constant pressure control Possibility to connect CO2 or two pressure transmitters.			●	●
Supply air temperature control according to the extract air sensor			●	●
Exhaust air damper control	●	●	●	●
Supply air damper control	●	●	●	●
Remote control ModBus input Web-based software control.			●	●
Remote controller input	●	●	●	●

[1]Only for one phase AHU
[2]Only for one phase AHU

Safety/emergency signal indications				
General emergency signal [3]				
Overheat protection Additional electrical heater overheat protection (software).			●	●
Rotor fail alarm signal In case of rotor belt break-up or rotor operation stopping indication „RotorFail“ appears on FLEX remote controller.				
Fire alarm signal	●	●	●	●
Fire and smoke alarm input The AHU stops till service is restored in FLEX remote controller.	●	●	●	●
Fans' overheating alarm signal [4]	●	●	●	●
Filter pollution indicator by pressure drop transmitter				
Filter pollution indicator by working hours A possibility to choose period of time after which indication informs about necessity to change the filters. (Min. 168 h, Max. 6482 h) Number of working hours set as default -2160h.			●	●
Other indications				
FanRun function Unit in operation signal.			●	●
FanFail function Unit off operation signal.			●	●
Extracted air temperature sensor	●	●	●	●
Exhaust air temperature sensor	●	●	●	●
Returning water temperature sensor		●		●
Extracted air relative humidity converter	●	●	●	●
Fresh air temperature sensor	●	●	●	●
Supplied air temperature sensor	●	●	●	●
Controllers				
FLEX controller  Adjustment of the new controller with control automatics – Full control (service control included).			●	●
TPC* *Absent control functions:* *• Boost configuration menu (time, fan speed, night cooling), temperature and time configuration of water heater);* *• Service menu- PI configuration;* *• Review of separate alarms at one time;* *• DX cooling configuration possibility;* *• Night cooling fast button setting;* *• Supply and extract air fans' speed control (3 speed can be configured);* *• Functional components' type choice.* *• Filter timer reset* **TPC** 			●	●
Stouch *Absent control functions:* *• Configuration menu time, night cooling, temperature and time configuration of water heater;* *• Service menu- PI configuration;* *• DX cooling configuration possibility;* *• Night cooling fast button setting;* *• Functional components' type choice;* *• Operation schedule;* *• Sensor preview, (only supply air temperature available).* 			●	●
DCV systems control Demand-Controlled Ventilation for extracted air. Using one pressure or one CO2 transmitter.			●	●
DCV systems control Demand-Controlled Ventilation for extracted and supplied air. Two pressure or one CO2 transmitter.			●	●

[3] Light indication if additional light separately connected to “FanFail”
[4] Autotransformer protection

RIS V EKO

NEW!

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

ErP 2015

AHU with cross-counterflow plate heat exchanger. Air handling units RIS V EKO have high efficiency counterflow heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of heat exchanger up to 94%.
- Integrated electrical heater (optional for RIS 200V, 400V EKO).
- Optional water heater.
- Controlled air flow.
- Supply air temperature control.
- Motorized by-pass damper
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- Acoustic insulation of the walls – RIS 200-700V - 30mm and RIS 1200-1900V-50 mm.
- RIS 200V - 1900V EKO all versions can be controlled with UNI, PRO and TPC remote control devices.
- Powder coated painting RAL 7040.
- Easy mounting.
- RIS 400V - 1900V EKO full integrated plug & play control system.
- Integrated pressure switch for filter pollution (RIS V 700-1900 EKO).
- Electrical heater control 0 - 10V.
- Optional CO_2, pressure or airflow transmitter.

Urządzenia wentylacyjne RIS V EKO wyposażone w wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych, zwracający do 94% ciepła.
- Zintegrowany grzejnik elektryczny.
- Opcjonalny kanałowy grzejnik wody (zamawiany dodatkowo RIS 200V, 400V).
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Zasuwa obejściowa z silnikiem.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Izolacja przeciwhałasowa ścianek – RIS 200-700V - 30mm and RIS 1200-1900V-50 mm.
- RIS 200V - 1900V EKO można sterować za pomocą pilotów UNI, PRO i TPC.
- Obudowa malowana metodą proszkową – kolor RAL 7040.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play“ i całkowicie zintegrowana automatyka sterowania.
- Zintegrowany miernik zanieczyszczenia filtrów (RIS V 700-1900 EKO).
- Sterowanie grzejnikiem elektrycznym 0-10V.
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności.

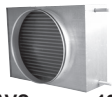
Vėdinimo įrenginiai RIS V EKO pagaminiti su efektyviu priešpriešinių srautų plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus priešpriešinių srautų plokštelinis šilumokaitis, kurio gražinama šiluma iki 94%.
- Integruotas elektrinis šildytuvas (RIS 700-1900V EKO).
- Papildomai komplektuojamas kanalinis vandeninis šildytuvas.
- Keičiamas oro srautas.
- Tiekiamos oro temperatūros valdymas.
- Motorizuota apėjimo sklendė.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Sienelių triukšmo izoliacija – RIS 200-700V - 30mm ir RIS 1200-1900V-50 mm.
- RIS 200V - 1900V EKO galima valdyti su UNI, PRO ir TPC pulteliais.
- Miltelinių būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas motavimas.
- „Plug & play“ paruošimas ir pilnai integruota valdymo automatika.
- Integruotas filtrų užterštumo matuoklis (RIS V 700-1900 EKO).
- Elektrinio šildytuvo valdymas 0-10V.
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis.

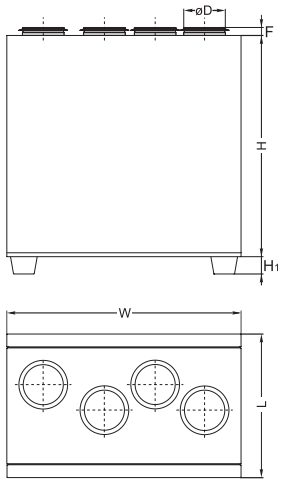
Установки с рекуперацией тепла RIS V EKO очищают, нагревают и подают свежий воздух. Установки RIS V EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 94%.
- Встроенные электрический или водянной нагреватели (опция для RIS 200V, 400V).
- Опция водяной нагреватель.
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Акустическая изоляция стенок - RIS 200-700V - 30мм, RIS 1200- 1900V - 50мм.
- RIS 200 V – 1900 V EKO с интегрированными возможнастями упровления с помощью пультов UNI, PRO и TPC.
- Корпус: окрашекнный RAL 7040.
- Легко монтируються.
- RIS 400 V – 1900 V EKO - интегрированная полная система управления агрегата “plug & play”.
- Установлен датчик давления для фильтра загрязнения (RIS 700 V – 1900 V EKO).
- Контроль электрического нагревателя 0 -10 V.
- Опциональная контроль: уровень CO_2 в помещение и охлаждения приточного воздуха.
- Опциональная контроль: CO_2, давление в системе и трансмитер приточного воздуха.

Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Circular duct silencer	Heating coil
							
Flex p. 178	**Stouch** p. 179	**TPC** p. 180	**1141** p. 181	**RC02-F2** p. 182	**KFF-U** p. 183	**AKS** p. 230	**AVS** p. 192

RIS 200V - 1900V EKO 3.0



RIS 200 V E L EKO 3.0

	Equipped with new PRV V2.2 control board
	AHU with EC motors and efficient cross - counter flow heat exchanger
L	Air intake side (L - left; R - right)
E	Heater type (E - integrated electrical heater; W - optional water heater)
V	Housing type (V - vertical, H - horozontal, P - under - ceiling)
200	AHU size according to air flow range m³/h
RIS	AHU with plate heat-exchanger

Type	Dimensions [mm]					
	L	W	H	øD	H_1	F
RIS 200VE/VW EKO 3.0	410	595	716	125	-	30
RIS 400VE/VW EKO 3.0	596	640	800	160	50	30
RIS 700VE/VW EKO 3.0	670	1000	980	250	126	40
RIS 1200VE/VW EKO 3.0	760	1350	1200	315	126	40
RIS 1900VE/VW EKO 3.0	800	2000	1600	400	140	70

Type	Accessories														
	Flex Stouch TPC	1141 RC02-F2 KFF-U	AKS	AVS	AVA	EKA	EKA NV PH	AP SKG	SP	SSB *Heating*	SSB *Cooling*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 200VE EKO 3.0	+	+	125	-	125	125	125	125	LM230A-TP	-	-	-	-	-	-
RIS 200VW EKO 3.0	+	+	125	125	125	-	125	125	TF230	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 400VE EKO 3.0	+	+	160	-	160	160	160	160	LM230A-TP	-	-	-	-	-	-
RIS 400VW EKO 3.0	+	+	160	160	160	-	160	160	TF230	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 700VE EKO 3.0	+	+	250	-	250	-	250	250	LM230A-TP	-	-	-	-	-	-
RIS 700VW EKO 3.0	+	+	250	250	250	-	250	250	TF230	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1200VE EKO 3.0	+	+	315	-	315	-	315	315	LM230A-TP	-	-	-	-	-	-
RIS 1200VW EKO 3.0	+	+	315	315	315	-	315	315	LF230	61	81	3-0,63-4	3-0,63-4	45.10-0.63	45.10-0.63
RIS 1900VE EKO 3.0	+	+	400	-	400	-	400	400	SM230A-TP	-	-	Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***			
RIS 1900VW EKO 3.0	+	+	400	400	400	-	400	400	SF230A	61	81				

Accessories

Circular duct water cooler —  AVA p. 202

Mounting clamp —  AP p. 229

Shuft-off damper —  SKG p. 226

Electrical duct heater —  EKA p. 1206

Actuator for dampers —  SP p. 188

Thermic water valve actuator —  SSB p. 184

Mixing point —  RMG p. 185

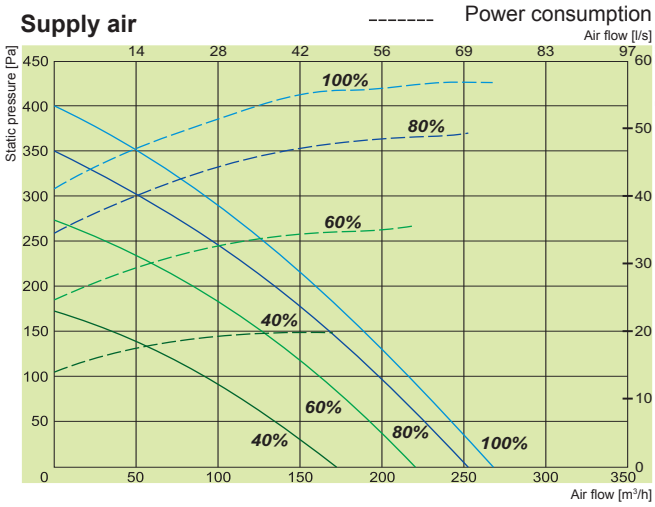
2 and 3 way valves —  VVP/VXP p. 186

RIS V EKO

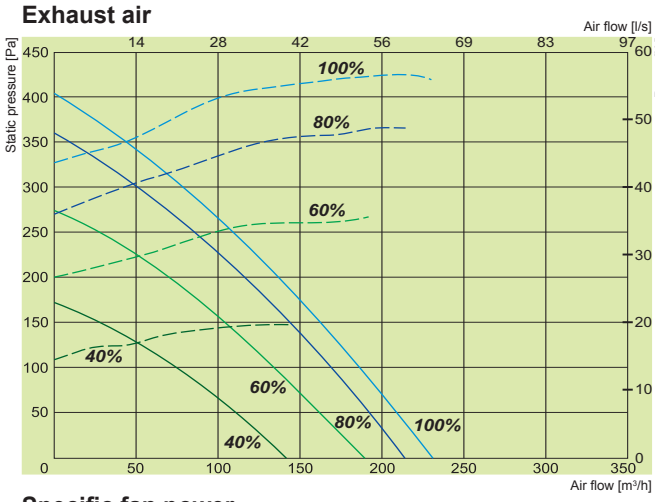
RIS 200V EKO 3.0

Performance
Power consumption

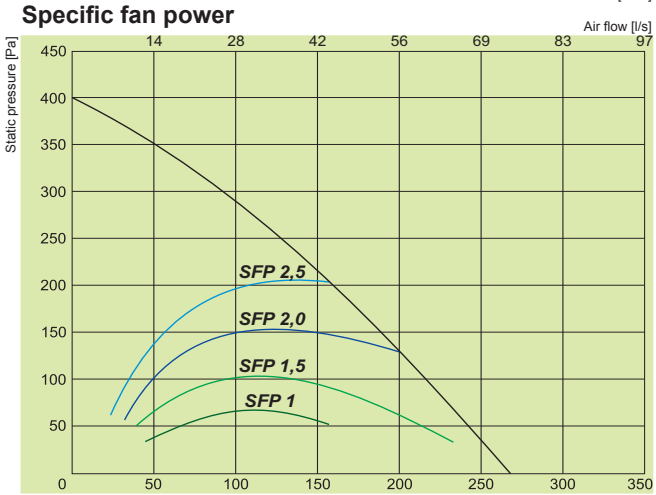
Supply air



Exhaust air

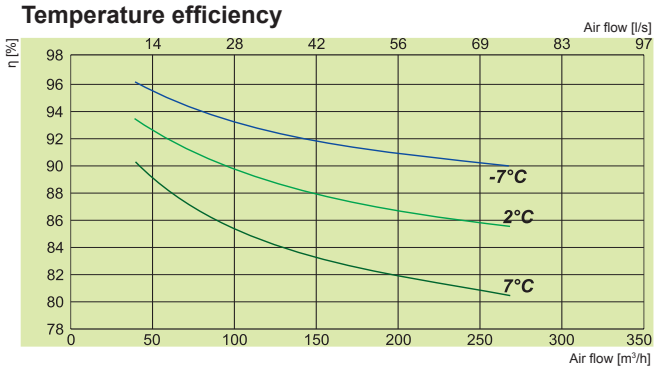


Specific fan power



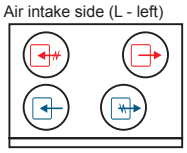
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 200VL EKO 3.0

Air intake side (L - left)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1799_0034A	200VEL EKO 3.0	Left-hand maintenace version prepared for optional electrical heater.
GAGRIS1799_0035A	200VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.

200V EKO 3.0			
Water heater (optional)	200VW EKO 3.0		AVS 125
Electrical heater (optional)	200VE EKO 3.0		EKA NIS 125-0,9-1f
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,057/0,470
	fan speed	[min⁻¹]	4480
supply	power/current	[kW/A]	0,057/0,470
	fan speed	[min⁻¹]	4480
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,12/0,5
Control board			PRV V2.2
Filter class	exhaust/supply		G4/M5
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	50
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

200V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	59	61	63	62	60	53	43
Extract	59	50	52	56	50	44	38	29
Surrounding	50	41	42	44	42	40	34	30
Measured at 218 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

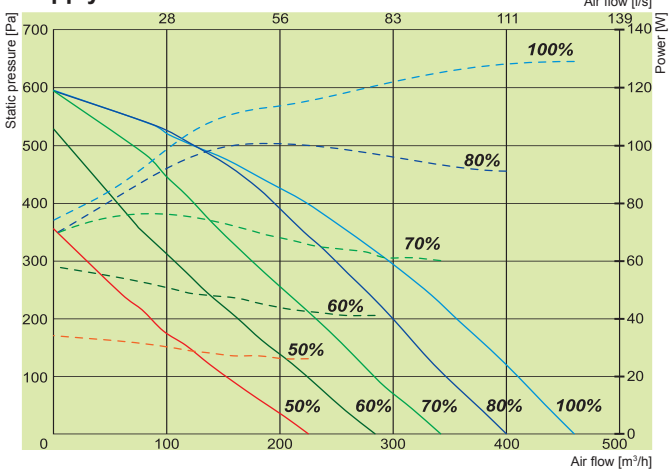
Certifications

EUROVENT certified counter flow heat exchanger performance

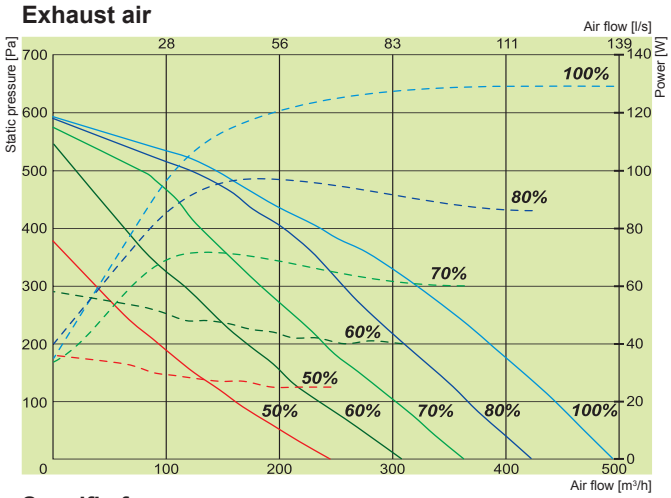
RIS 400V EKO 3.0

Performance
Power consumption

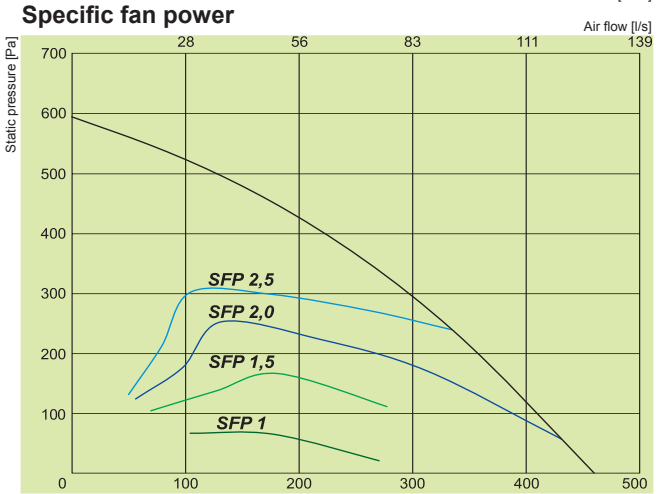
Supply air



Exhaust air

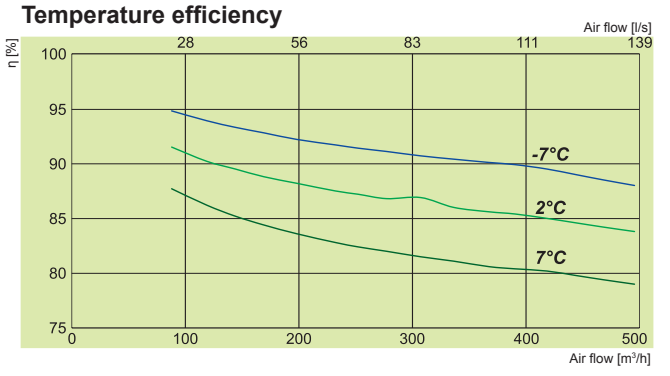


Specific fan power

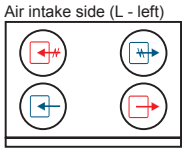


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

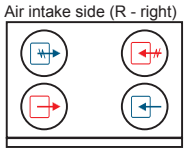


RIS 400VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 400VR EKO 3.0
Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1796_0011A	400VEL EKO 3.0	Left-hand maintenace version prepared for optional electrical heater.
GAGRIS1798_0013A	400VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIS1795_0010A	400VER EKO 3.0	Right-hand maintenace version prepared for optional electrical heater.
GAGRIS1797_0012A	400VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

			400V EKO 3.0
Water heater (optional)	400VW EKO 3.0		AVS 160
Electrical heater (optional)	400VE EKO 3.0		EKA NIS 160-0,9-1f
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,130/1,17
	fan speed	[min^{-1}]	3490
supply	power/current	[kW/A]	0,130/1,17
	fan speed	[min^{-1}]	3490
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,27/245
Control board			PRV V2.2
Filter class	exhaust/supply		G4/M5
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	55
Comply with ERP			2013; 2015
Operation	indoors		indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

400V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	69	58	60	63	65	61	57	47
Extract	59	55	53	54	49	47	38	30
Surrounding	52	44	45	47	43	42	36	29
Measured at 410 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

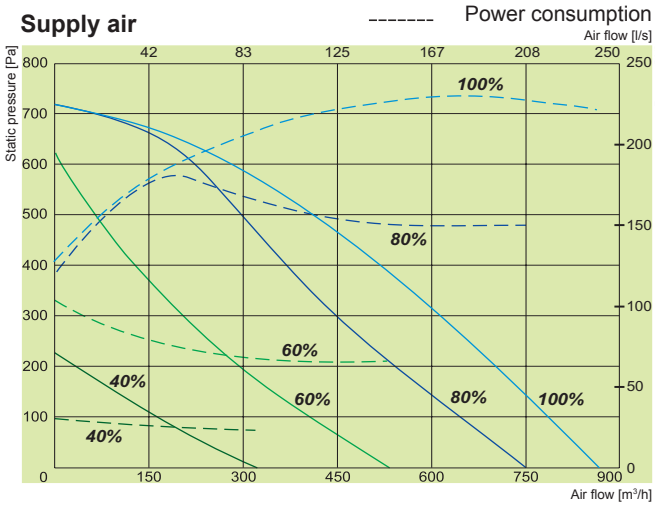
EUROVENT certified counter flow heat exchanger performance

RIS V EKO

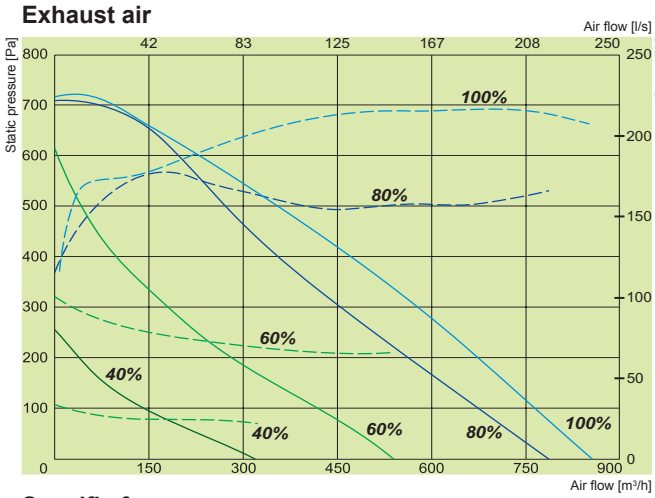
RIS 700V EKO 3.0

Performance
Power consumption

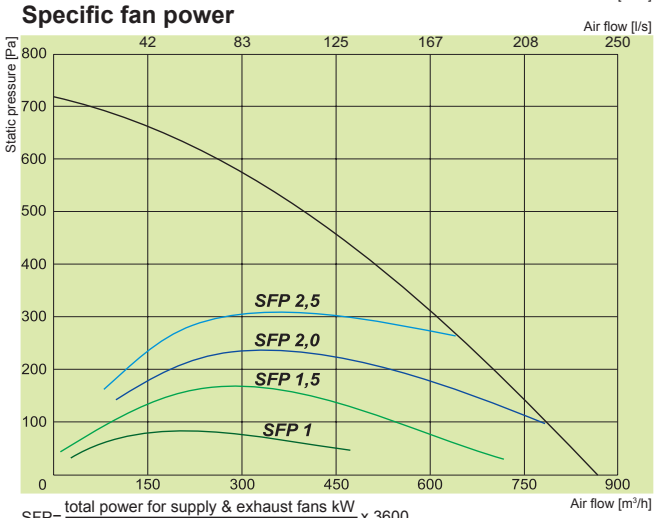
Supply air



Exhaust air



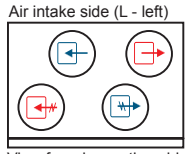
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

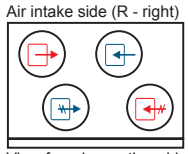
Temperature efficiency

RIS 700VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 700VR EKO 3.0
Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1778_0039A	700VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIS1780_0041A	700VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIS1777_0038A	700VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1779_0040A	700VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

700VE / VW EKO 3.0				
Water heater (optional) VW ver.				AVS 250
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		1,2
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,173/1,35
	fan speed	[min^{-1}]		2930
supply	power/current	[kW/A]		0,170/1,31
	fan speed	[min^{-1}]		2930
Thermal efficiency up to*				90%
Motorized by-pass				+
Max power consumption VE / VW		[kW/A]	1,6/7,8	0,4/2,6
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		30
Colour	RAL	white		9016
Weight (net, without packing)		[kg]		110
Comply with ERP				2013; 2015
Operation				indoors
Fresh air temperature limits**		°C		-5 – +40
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

700V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	74	68	65	67	66	65	58	56
Extract	60	45	57	53	52	47	42	38
Surrounding	56	51	50	49	45	44	41	37
Measured at 768 m³/h, 125 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

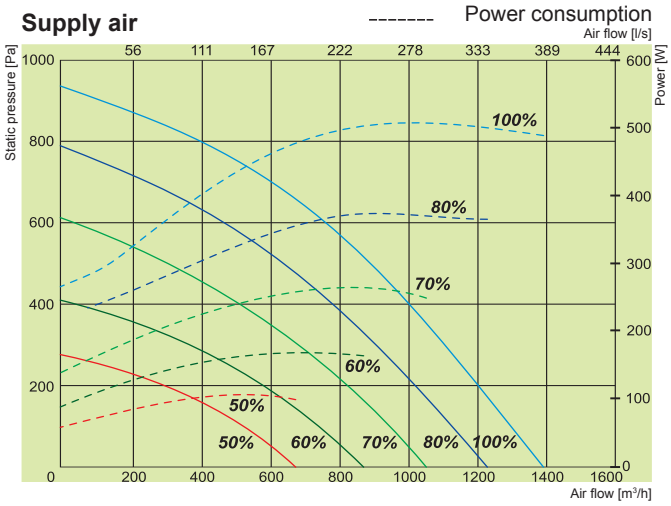
Certifications

EUROVENT certified counter flow heat exchanger performance

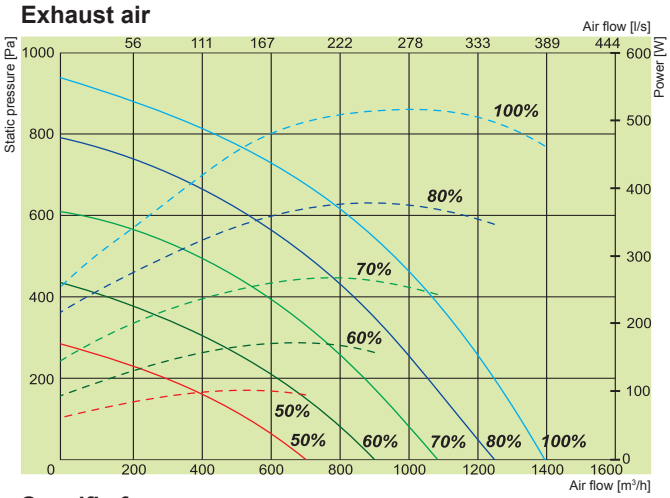
RIS 1200V EKO 3.0

Performance
Power consumption

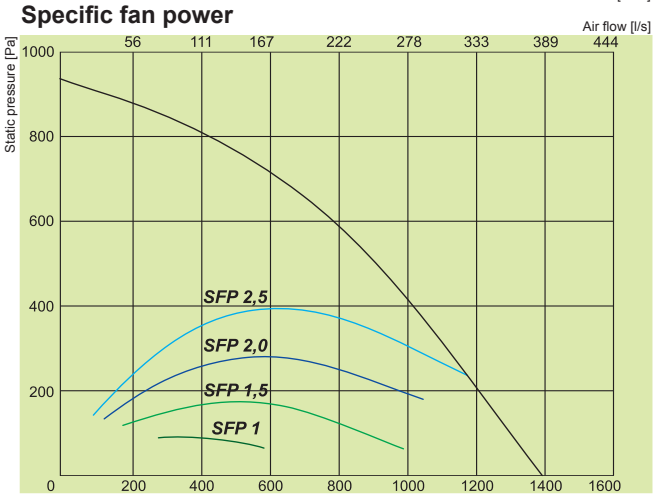
Supply air



Exhaust air

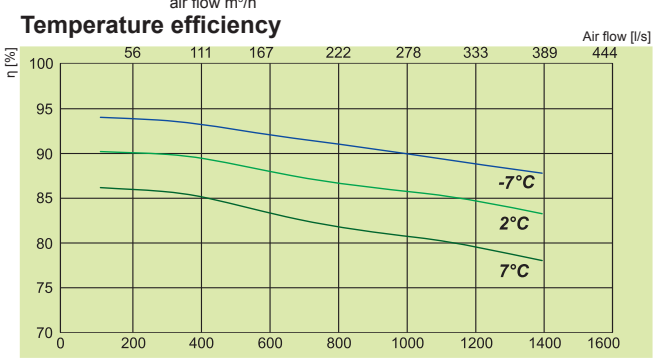


Specific fan power

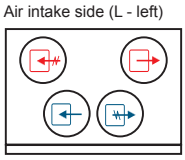


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

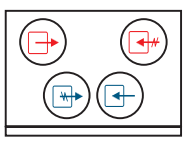


RIS 1200VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 1200VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air Extract air Fresh air Supply air

Article No.		Version
GAGRIS1776_0043A	1200VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIS1784_0045A	1200VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIS1775_0042A	1200VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1783_0044A	1200VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

1200VE / VW EKO 3.0

Water heater (optional) VW ver.			AVS/AVA 315
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]	~1, 230
		[kW]	2,0
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,435/2,9
	fan speed	[min⁻¹]	3400
supply	power/current	[kW/A]	0,430/2,95
	fan speed	[min⁻¹]	3400
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption VE / VW		[kW/A]	2,87/14,6 0,87/6,0
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	152
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1200V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	66	75	73	72	70	67	58
Extract	68	62	63	64	58	53	48	43
Surrounding	58	51	52	53	50	49	45	40
Measured at 1300 m³/h, 120 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

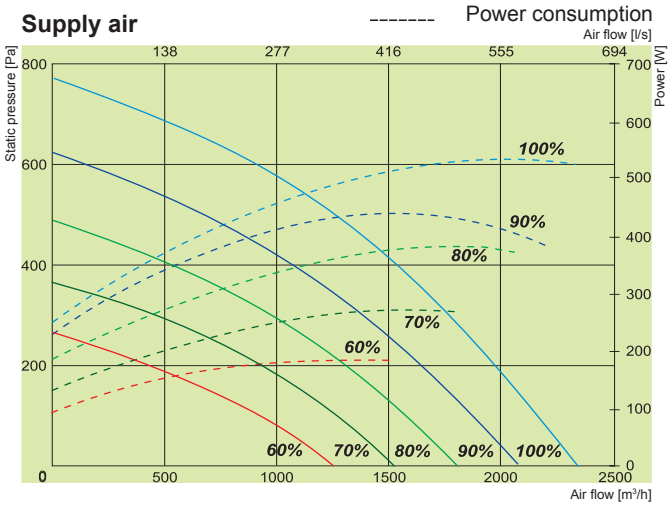
EUROVENT certified counter flow heat exchanger performance

RIS V EKO

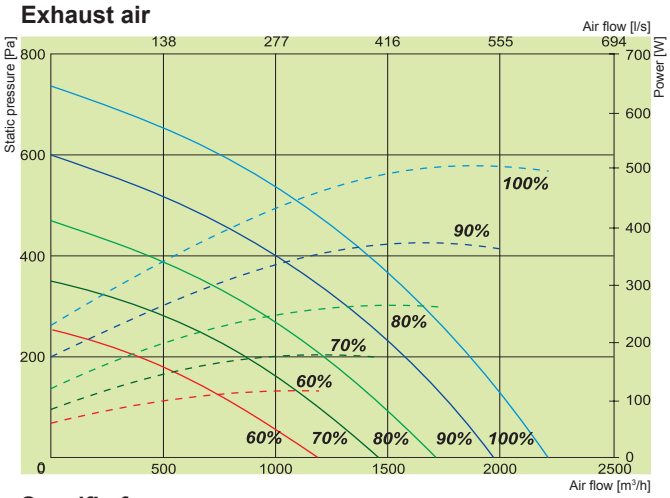
RIS 1900V EKO 3.0

Performance
Power consumption

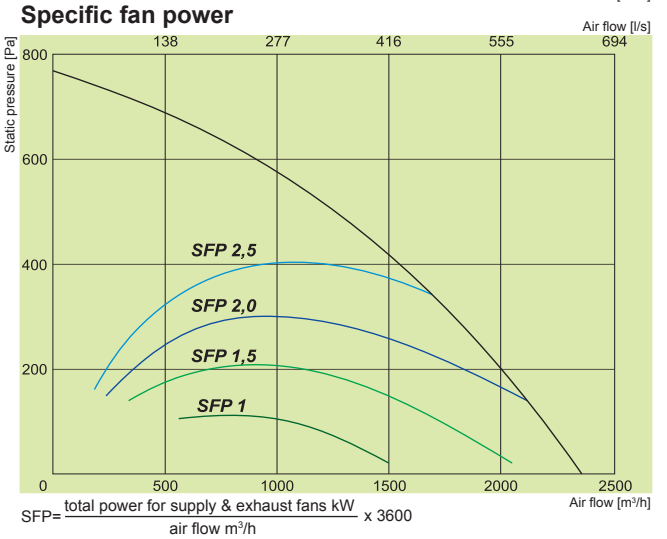
Supply air



Exhaust air

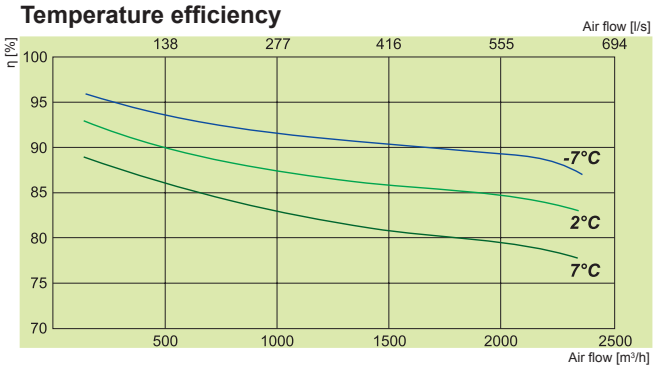


Specific fan power

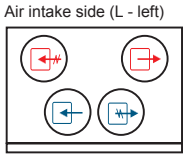


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3\text{/h}} \times 3600$$

Temperature efficiency

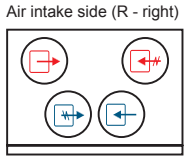


RIS 1900VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 1900VR EKO 3.0
Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1786_0049A	1900VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIS1788_0051A	1900VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIS1785_0048A	1900VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1787_0050A	1900VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

1900VE / VW EKO 3.0			
Water heater (optional) VW ver.			AVS / AVA / Comfort Box 250
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]	~1, 230
		[kW]	3,0
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,49/3,2
	fan speed	[min⁻¹]	2540
supply	power/current	[kW/A]	0,49/3,1
	fan speed	[min⁻¹]	2540
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption VE / VW		[kW/A]	4,25/14,9 1,25/5,5
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	290
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

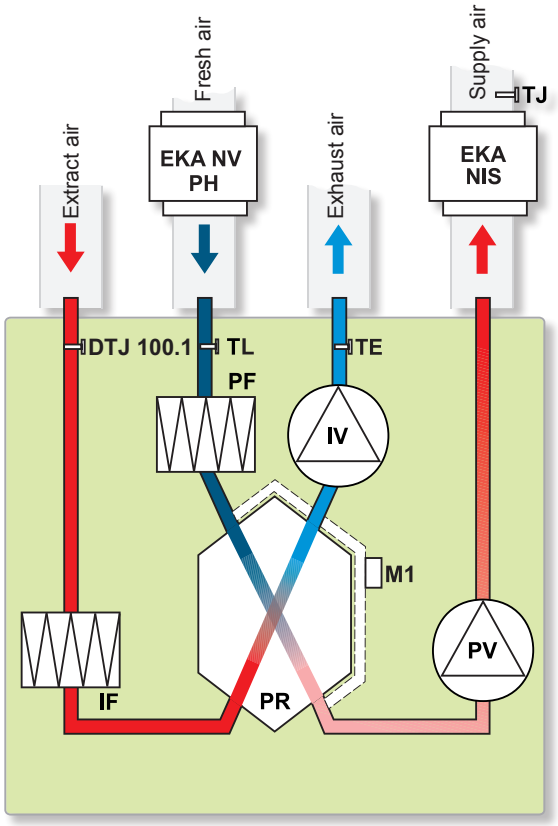
1900V EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	64	73	70	71	68	65	59
Extract	66	57	62	60	55	58	56	45
Surrounding	59	48	53	52	50	51	49	42
Measured at 2077 m³/h, 150 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

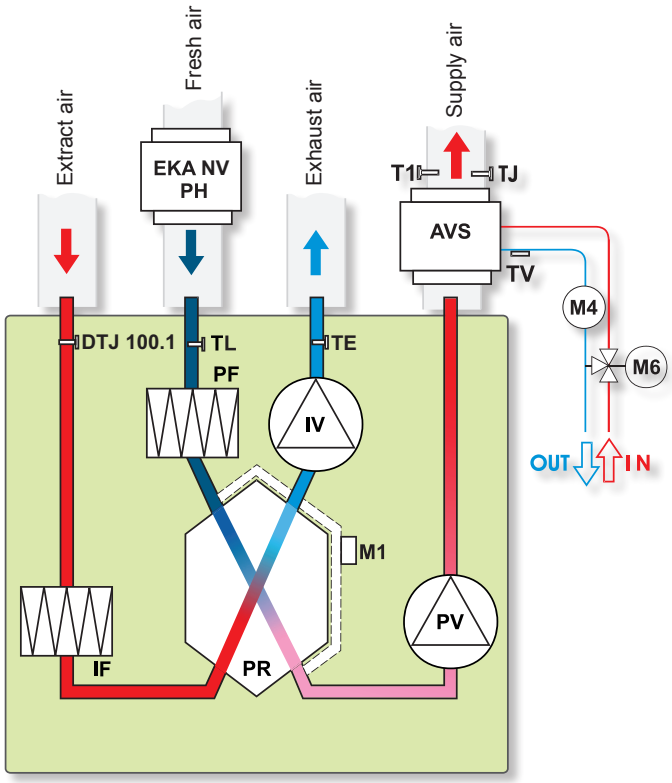
EUROVENT certified counter flow heat exchanger performance

RIS 200VE EKO 3.0; 400VE EKO 3.0 (vertical) versions with electrical heater



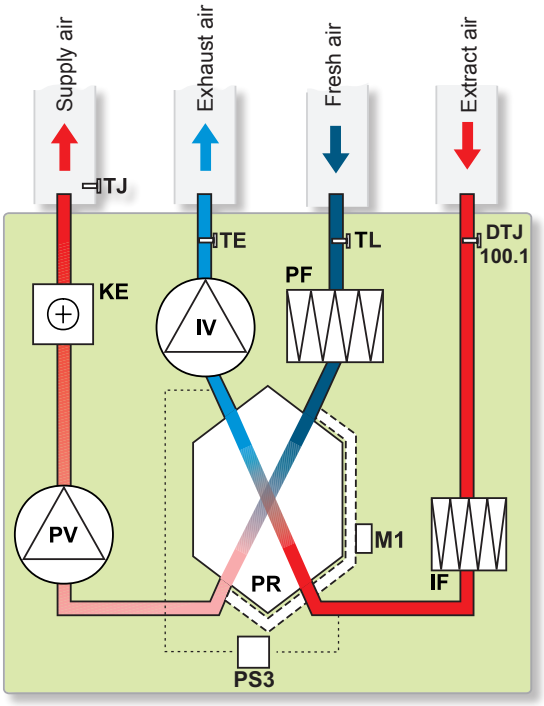
EKA NIS - optionally supply electrical heater (RIS 400VE EKO 3.0)
EKA NV PH - optionally fresh air pre-heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class M5 for RIS 200VE EKO, class F7 for RIS 400VE EKO 3.0)
IF - filter for extract air (class G4)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TL - temperature sensor for exhaust air
DTJ 100.1 - temperature and humidity sensor for extract air
M1 - actuator of by-pass damper

RIS 200VW EKO 3.0; 400VW EKO 3.0 (vertical) version with water heater



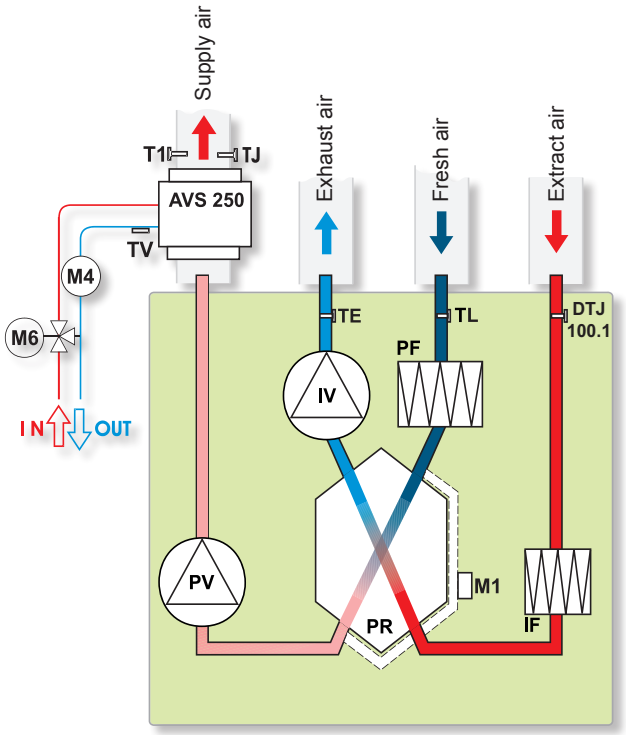
AVS - optionally supplied water heater
EKA NV PH - optionally supplied fresh air pre-heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class M5 for RIS 200VE EKO, class F7 for RIS 400 VE EKO 3.0)
IF - filter for extract air (class G4)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
DTJ 100.1 - temperature and humidity sensor for extract air
M1 - actuator of by-pass damper
M6 - optionally supply mixing valve and motor
TV - antifrost sensor
T1 - antifrost thermostat

RIS 700VE EKO 3.0; 1200VE EKO 3.0 (vertical) versions with electrical heater



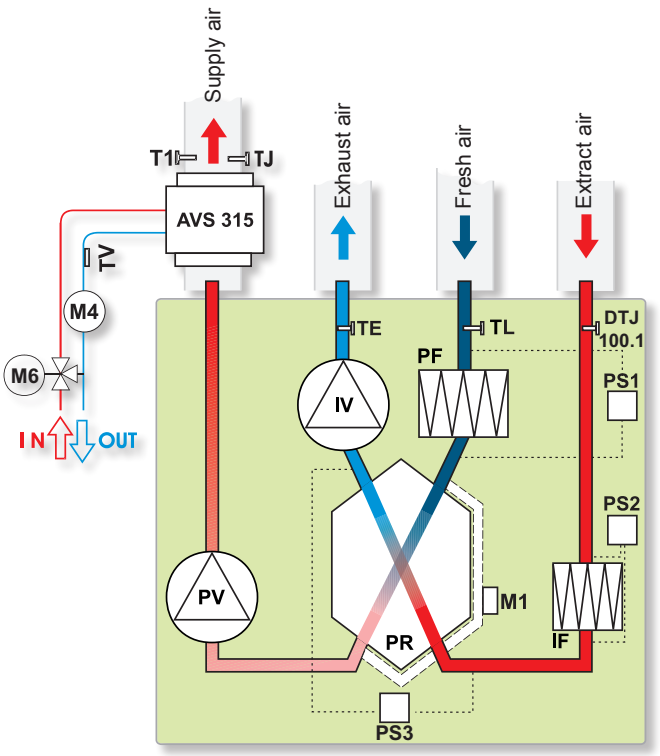
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for fresh air (class F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
TE - temperature sensor for exhaust air
DTJ 100.1 - humidity + temperature sensor
PS3 - heat exchanger antifrost pressure switch (RIS 1200VE EKO 3.0)

RIS 700VW EKO 3.0 (vertical) version with water heater



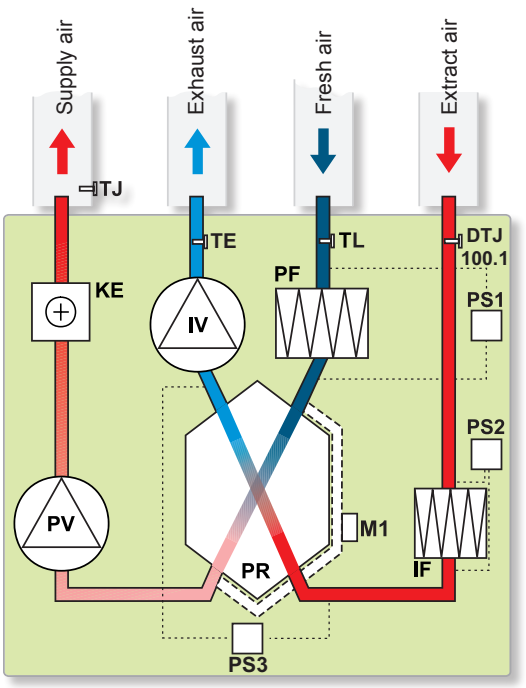
AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for fresh air (class F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
M6 - optionally supplied mixing valve and motor
M4 - water heater circulatory pump
TJ - temperature sensor for supply air
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
DTJ 100.1 -humidity + temperature sensor
TV - antifrost sensor
T1 - antifrost thermostat

RIS 1200VW EKO 3.0 (vertical) **version with water heater**



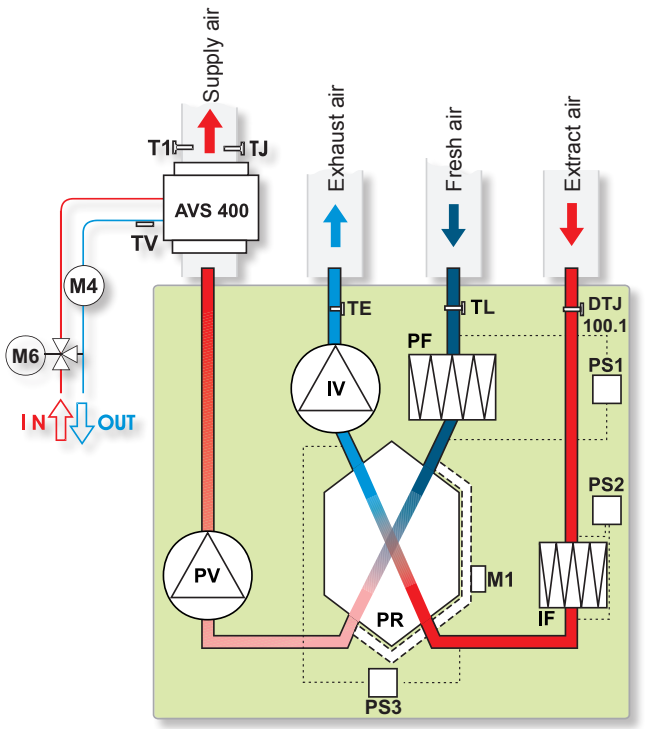
AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
M4 - optionally supplied water heater circulatory pump
M6 - optionally supplied mixing valve and motor
TJ - temperature sensor for supply air
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TV - antifrost sensor
T1 - antifrost thermostat
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS 1900VE EKO 3.0 (vertical) **versions with electrical heater**



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for fresh air (class F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS 1900VW EKO 3.0 (vertical) version with water heater



AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
M1 - actuator of by-pass damper
M6 - optionally supplied mixing valve and motor
M4 - optionally supplied water heater circulator pump
TJ - temperature sensor for supply air
TV - antifrost sensor
T1 - antifrost thermostat
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

Notes

RIS H EKO

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

NEW!

Вентиляционные агрегаты с рекуперацией тепла

AHU with cross-counterflow plate heat exchanger. Air handling units RIS H EKO have high efficiency counterflow heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of heat exchanger up to 94%.
- Integrated electrical heater or optional water/DX heating/cooling.
- Controlled air flow.
- Supply air temperature control.
- Motorizes by-pass damper.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- Acoustic insulation of the walls – RIS 700 H - 30mm and RIS 1200-5500 - 50 mm.
- RIS 700 - 5500 H EKO all versions can be controlled with UNI, PRO and TPC remote control devices.
- Powder coated painting RAL 7040.
- Easy mounting.
- Full integrated plug & play control system.
- RIS 1900H - 5500H EKO optional SIEMENS Climatix controller.
- Integrated pressure switch for filter pollution.
- Electrical heater control 0 - 10V.
- Optional CO_2, pressure or airflow transmitter.
- RIS 1900H - 5500H EKO optional roof and outlet cover.
- RIS 3500H - delivered in three sections and RIS 5500H in two sections.

Urządzenia wentylacyjne RIS H EKO wyposażone w wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych, zwracający do 94% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodno-freonowy grzejnik/schładzacz.
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Zasuwa obejściowa z silnikiem.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Izolacja przeciwhałasowa ścianek – RIS 700 H - 30 mm i RIS 1200 - 5500 -50 mm.
- RIS 200V - 1900V EKO można sterować za pomocą pilotów UNI, PRO i TPC.
- Obudowa malowana metodą proszkową – kolor RAL 7035.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play" i całkowicie zintegrowana automatyka sterowania
- RIS 1900H - 5500H EKO opcjonalnie możliwość zamówienia sterownika SIEMENS Climatix.
- Zintegrowany miernik zanieczyszczenia filtrów (RIS V 700-1900 EKO).
- Sterowanie grzejnikiem elektrycznym 0-10V.
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności
- RIS 1900H - 5500H EKO opcjonalnie zamawiany okap i króciec.
- RIS 3500H – dostarczany jest w dwóch, a RIS 5500H – w trzech sekcjach.

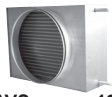
Vėdinimo įrenginiai RIS H EKO pagaminiti su efektyviu priešpriešinių srautų plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus priešpriešinių srautų plokštelinis šilumokaitis, kurio gražinama šiluma iki 94%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis/freoninis šildytuvas/aušintuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Motorizuota apėjimo sklendė.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Sienelių triukšmo izoliacija – RIS 700 H - 30mm and RIS 1200 - 5500 - 50 mm.
- RIS 700 - 5500 H EKO galima valdyti su UNI, PRO ir TPC pulteliais.
- Milteliniu būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.
- „Plug & play" paruošimas ir pilnai integruota valdymo automatika.
- RIS 1900H - 5500H EKO galimybė papildomai užsakyti SIEMENS Climatix valdiklį.
- Integruotas filtrų užterštumo matuoklis (RIS V 700 - 1900 EKO).
- Elektrinio šildytuvo valdymas 0-10V.
- Papildomai komplektuojamas CO_2, slėgio arba drėgmės keitiklis.
- RIS 1900H - 5500H EKO papildomai užsakomas stogas ir atvamzdis.
- RIS 3500H - tiekiamas trijomis, RIS 5500H dvejomis sekcijomis.

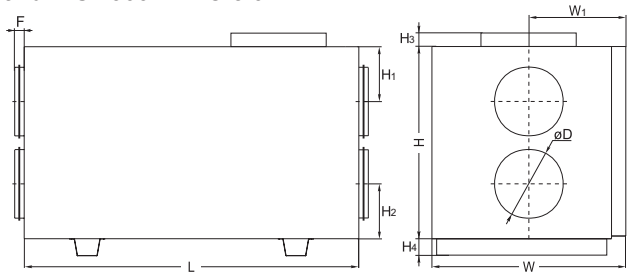
Установки с рекуперацией тепла RIS H EKO очищают, нагревают и подают свежий воздух. Установки RIS EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 94%.
- Встроенные электрический нагреватель или как опция водяной/DX отопление/охлождение.
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Акустическая изоляция стенок - RIS 500 H - 30мм, RIS 1200 - 5500 - 50мм.
- RIS 700 – 5500 H EKO с интегрированными возможнастями. упровления с помощью пультов UNI, PRO и TPC.
- Корпус: окрашекнный RAL 7040.
- Легко и быстро монтируються.
- Интегрированная полная система управления агрегата "plug & play".
- RIS 1900 H – 5500H EKO – опция SIEMENS Climatic контроллер.
- Установлен датчик давления для фильтра загрязнения.
- Контроль электрического нагревателя 0 -10 V.
- Опциональная контроль: CO_2, давление в системе и трансмитер приточного воздуха.
- RIS 1900H – 5500H EKO опция козырька и крышка розетки.
- RIS 3500H – разделян на 3 секции и RIS 5500H на 2 секции.

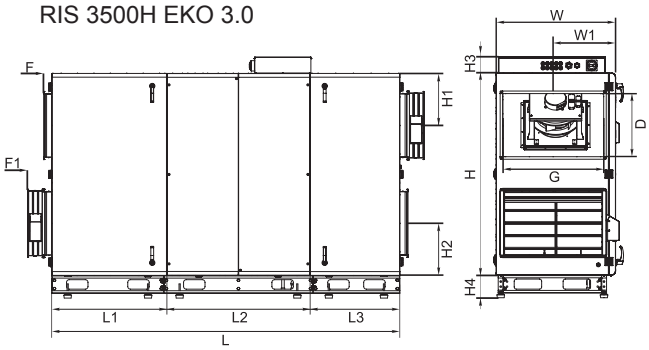
Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Circular duct silencer	Heating coil
							
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**1141** **p. 181**	**RC02-F2** **p. 182**	**KFF-U** **p. 183**	**AKS** **p. 230**	**AVS** **p. 192**

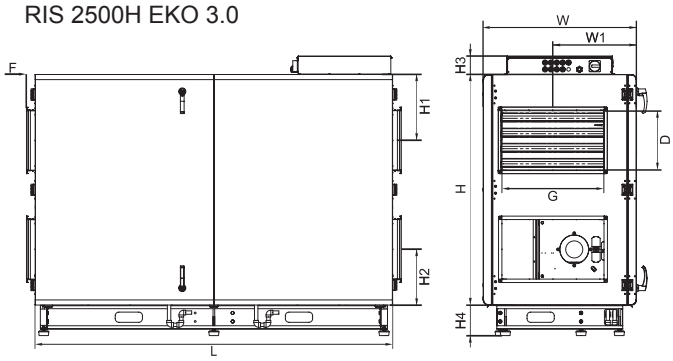
RIS 700H EKO 3.0 - RIS 1200H EKO 3.0
and RIS 1900H EKO 3.0



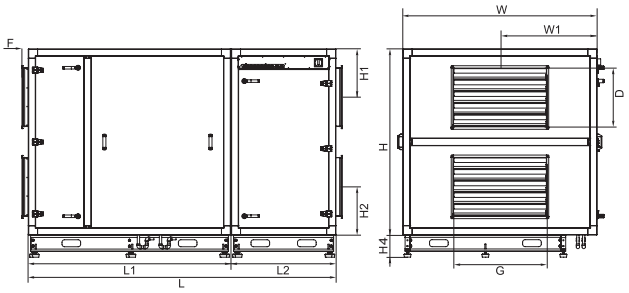
RIS 3500H EKO 3.0



RIS 2500H EKO 3.0



RIS 5500H EKO 3.0



RIS 1200 H W EKO 3.0

RIS	Equipped with new PRV V2.2 control board
1200	AHU with EC motors and efficient cross - counter flow heat exchanger
H	Heater type (E - integrated electrical heater; W - optional water heater)
W	Housing type (V - vertical, H - horozontal, P - under - ceiling)
EKO 3.0	AHU size according to air flow range m³/h
	AHU with plate heat-exchanger

Type	Dimensions [mm]															
	L	L_1	L_2	L_3	W	W_1	øD	G	D	H	H_1	H_2	H_3	H_4	F	F_1
RIS 700HE/HW EKO 3.0	1200	-	-	-	670	335	250	-	-	780	210	210	65	126	40	-
RIS 1200HE/HW EKO 3.0	1500	-	-	-	760	380	315	-	-	1000	269	269	70	141	40	-
RIS 1900HE/HW EKO 3.0	1800	-	-	-	800	400	400	-	-	1245	331	331	106	141	70	-
RIS 2500HE/HW EKO 3.0	2100	-	-	-	900	490	-	600	350	1355	387	327	108	180	50	-
RIS 3500HE/HW EKO 3.0	2756	909	1132	709	946	494	-	800	500	1600	413	413	129	180	65	192
RIS 5500HE/HW EKO 3.0	2644	1740	900	-	1670	835	-	800	500	1600	415	415	-	180	55	-

Accessories

Circular duct water cooler

AVA p. 202

Mounting clamp

AP p. 229

Shuft-off damper

SKG p. 226

Actuator for dampers

SP p. 188

Thermic water valve actuator

SSB p. 184

Mixing point

RMG p. 185

2 and 3 way valves

VVP/VXP p. 186

Water heater coil

SVS p. 198

RIS H EKO

Type	Accessories						
	Flex Stouch TPC	1141 RC02-F2 KFF-U	AKS SKG AP	SKS SVS	AVA	AVS	SP
RIS 700HE EKO 3.0	+	+	250	-	250	250	LM230A-TP
RIS 700HW EKO 3.0	+	+	250	-	250	250	TF230
RIS 1200HE EKO 3.0	+	+	315	-	315	315	LM230A-TP
RIS 1200HW EKO 3.0	+	+	315	-	315	315	LF230
RIS 1900HE EKO 3.0	+	+	400	-	400	400	SM230A-TP
RIS 1900HW EKO 3.0	+	+	400	-	400	400	SF230A
RIS 2500HE EKO 3.0	+	+	-	600x350	-	-	int
RIS 2500HW EKO 3.0	+	+	-	600x350	-	-	int
RIS 3500HE EKO 3.0	+	+	-	800x500	-	-	int
RIS 3500HW EKO 3.0	+	+	-	800x500	-	-	int
RIS 5500HE EKO 3.0	+	+	-	800x500	-	-	int
RIS 5500HW EKO 3.0	+	+	-	800x500	-	-	int

If ordering RIS 1900-5500HW EKO 3.0 and SVS/AVS must be ordered water sensor (TJP 10K) and duct thermostat (C04C)
int - already integrated into the unit

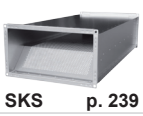
Type	Accessories							
	SSB *Heating*	SSB *Cooling*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C	Comfort Box	Roof Outlet cover
RIS 700HE EKO 3.0	-	81	-	-	-	-	-	-
RIS 700HW EKO 3.0	61	81	3-1,0-4	3-0,63-4	45.10-1,1	45.10-0,63	-	-
RIS 1200HE EKO 3.0	-	81	-	-	-	-	-	-
RIS 1200HW EKO 3.0	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63	-	-
RIS 1900HE EKO 3.0	-	81	Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***				400	+
RIS 1900HW EKO 3.0	61	81					400	+
RIS 2500HE EKO 3.0	-	81					600x350	+
RIS 2500HW EKO 3.0	61	81					600x350	+
RIS 3500HE EKO 3.0	-	81					800x500	+
RIS 3500HW EKO 3.0	61	81					800x500	+
RIS 5500HE EKO 3.0	-	81					800x500	+
RIS 5500HW EKO 3.0	61	81					800x500	+

Accessories

Comfort Box

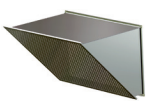
CB p. 200

Rectangular duct silencer

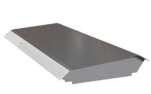


SKS p. 239

Outlet cover



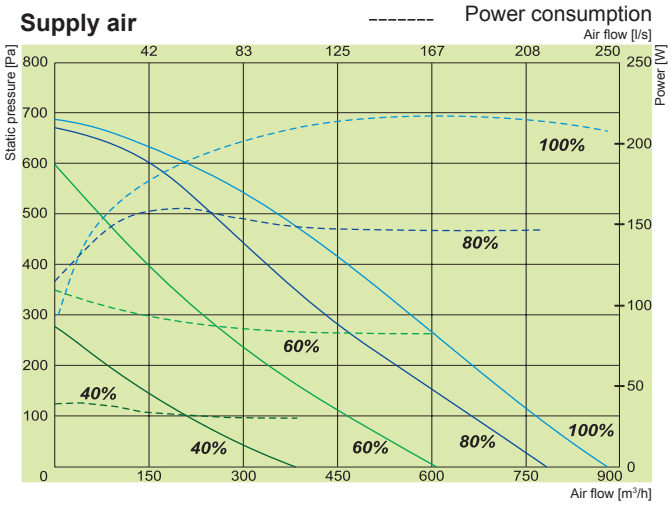
Roof



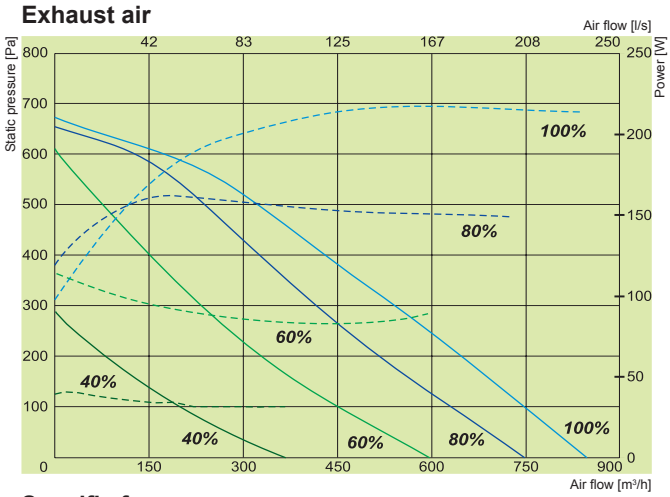
RIS 700H EKO 3.0

Performance
Power consumption

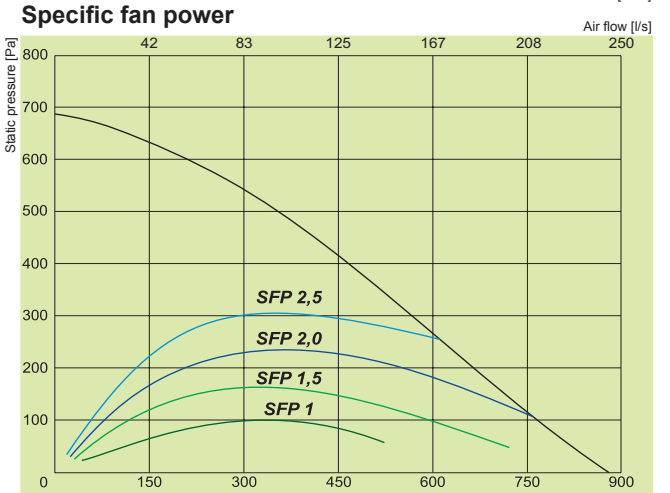
Supply air



Exhaust air



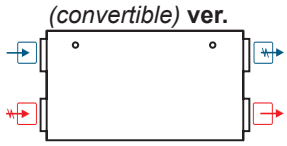
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIS 700H EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1791_0036A	700HE EKO 3.0	Integrated electrical heater.
GAGRIS1972_0037A	700HW EKO 3.0	Optional water heater.

			700HE / HW EKO 3.0	
Water heater (optional) HW ver.				AVS 315
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		1,2
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,173/1,35
	fan speed	[min⁻¹]		2930
supply	power/current	[kW/A]		0,172/1,35
	fan speed	[min⁻¹]		2930
Thermal efficiency up to*				90%
Motorized by-pass				+
Max power consumption		[kW/A]	1,6/7,8	0,4/2,6
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	white		9016
Weight (net, without packing)		[kg]		105
Comply with ERP				2013; 2015
Operation				indoors
Fresh air temperature limits**		°C		-5 – +40
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

700HE EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	73	65	67	65	64	66	63	54
Extract	61	54	55	57	49	46	41	40
Surrounding	56	45	49	54	45	43	40	37
Measured at 760 m³/h, 101 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

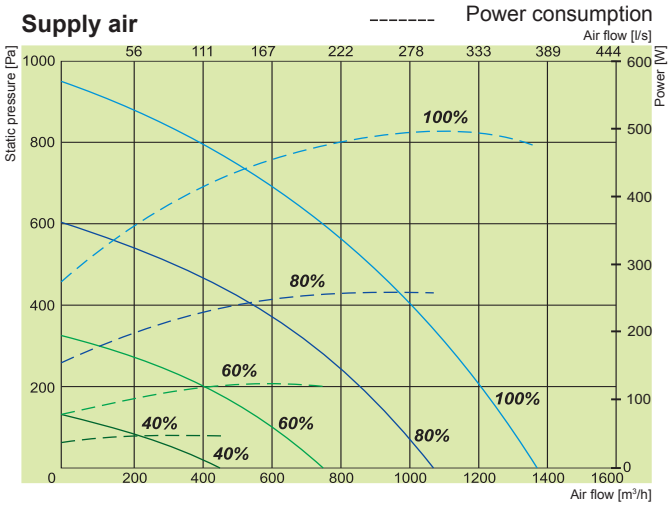
EUROVENT certified counter flow heat exchanger performance

RIS H EKO

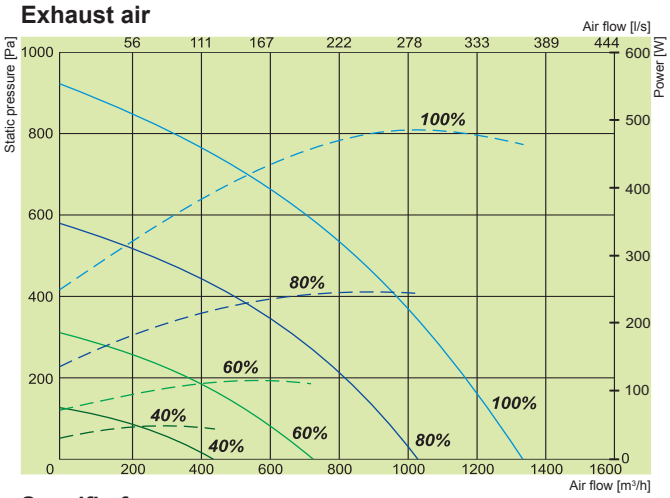
RIS 1200H EKO 3.0

Performance
Power consumption

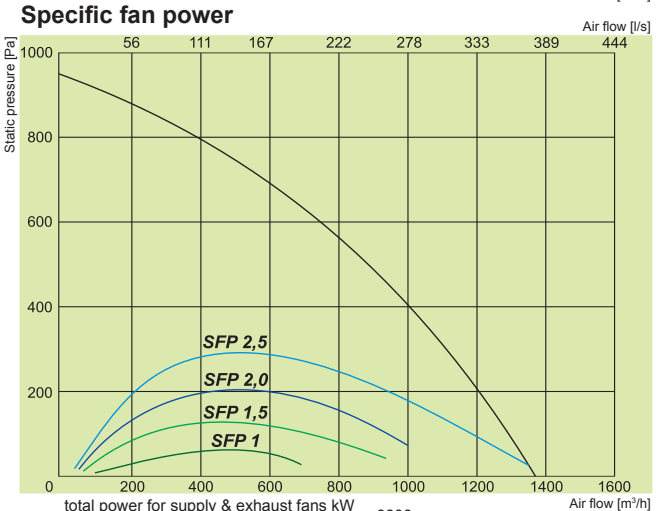
Supply air



Exhaust air

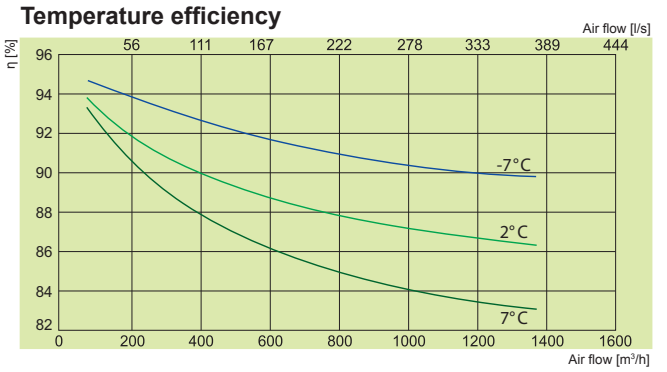


Specific fan power

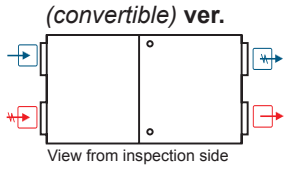


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1200H EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version
GAGRIS1740_0006A 1200HE EKO 3.0	Integrated electrical heater.
GAGRIS1767_0030A 1200HW EKO 3.0	Optional water heater.

1200HE / HW EKO 3.0				
Water heater (optional) HW ver.				AVS 315
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		2,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,418/2,72
	fan speed	[min^{-1}]		3400
supply	power/current	[kW/A]		0,400/2,61
	fan speed	[min^{-1}]		3400
Thermal efficiency up to*				90%
Motorized by-pass				+
Max power consumption HE/HW		[kW/A]	4,25/18,5	0,85/5,5
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing) HE/HW		[kg]	172	174
Comply with ERP				2013; 2015
Operation				indoors/outdoors
Fresh air temperature limits**		°C		-5 – +40
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1200H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	62	65	71	70	65	63	53
Extract	57	51	49	52	51	45	40	32
Surrounding	53	44	43	48	47	43	40	33
Measured at 1271 m³/h, 119 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

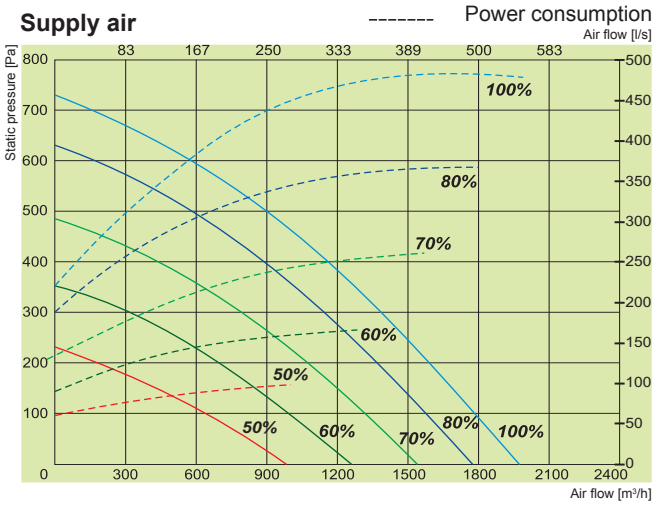
Certifications

EUROVENT certified counter flow heat exchanger performance

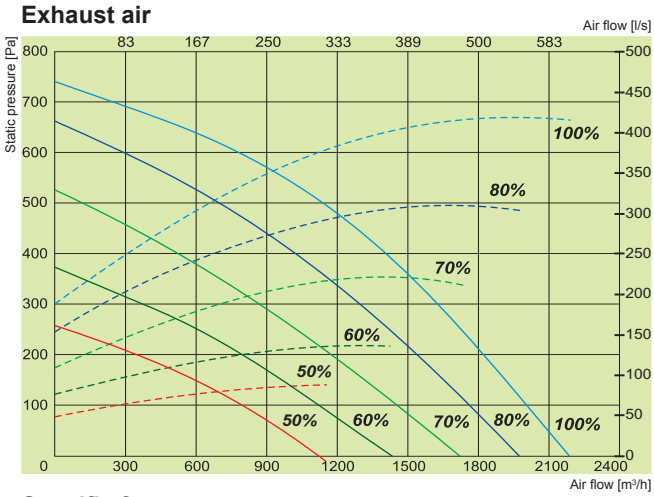
RIS 1900H EKO 3.0

Performance
Power consumption

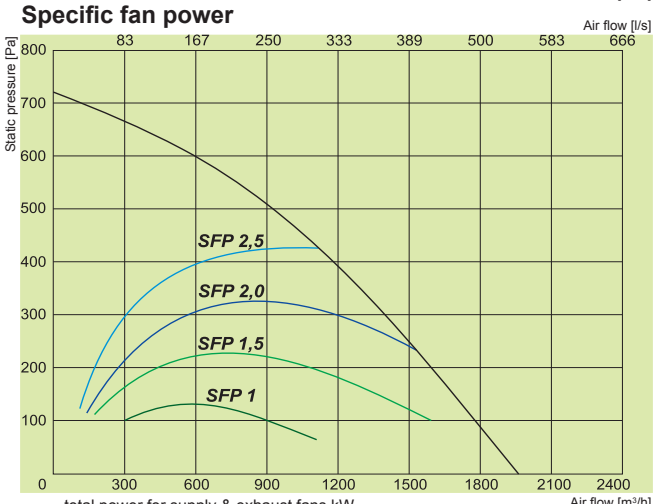
Supply air



Exhaust air

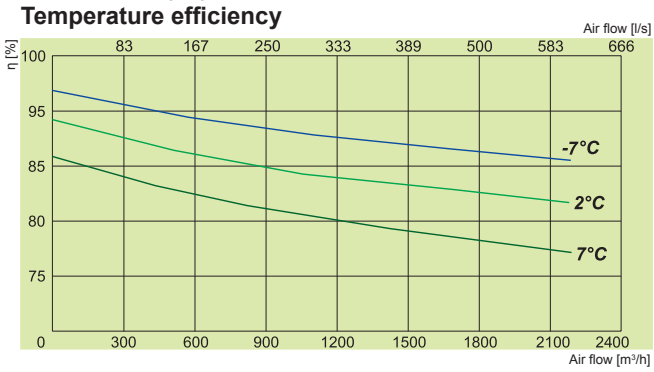


Specific fan power

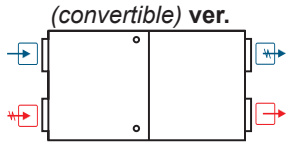


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1900HE EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1789_0046A	1900HE EKO 3.0	Integrated electrical heater.
GAGRIS1790_0047A	1900HW EKO 3.0	Optional water heater.

1900HE / HW EKO 3.0				
Water heater (optional) HW ver.			AVS / Comfort Box 400	
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~1, 230	
		[kW]	3,0	
EC fans	phase/voltage	[50Hz/VAC]	~1, 230	
exhaust	power/current	[kW/A]	0,547/2,47	
	fan speed	[min^{-1}]	2600	
supply	power/current	[kW/A]	0,549/2,47	
	fan speed	[min^{-1}]	2600	
Thermal efficiency up to*			90%	
Motorized by-pass			+	
Max power consumption		[kW/A]	4,25/18,5	1,25/5,5
Control board			PRV V2.2	
Filter class	exhaust/supply		M5/F7	
Housing insulation, mineral wool		[mm]	50	
Colour	RAL	grey	7040	
Weight (net, without packing)		[kg]	260	
Comply with ERP			2013; 2015	
Operation			indoors/outdoors	
Fresh air temperature limits**		°C	-5 – +40	
Housing protection class	IP		34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1900H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	58	71	72	73	71	65	62
Extract	67	49	58	60	59	58	57	44
Surrounding	60	41	51	55	53	52	49	42
Measured at 2016 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

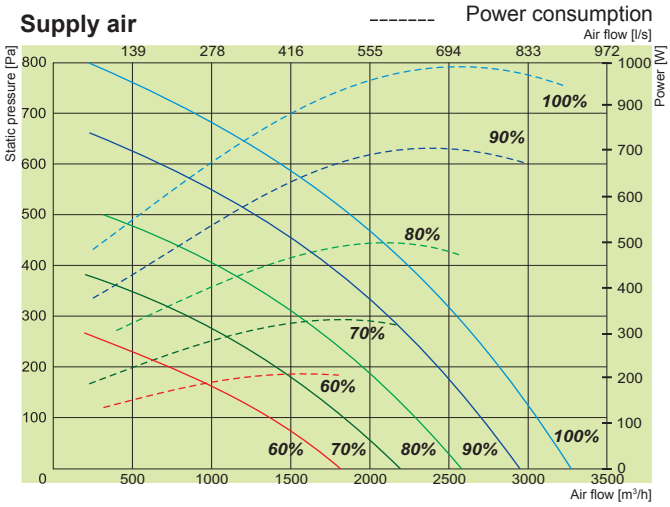
EUROVENT certified counter flow heat exchanger performance

RIS H EKO

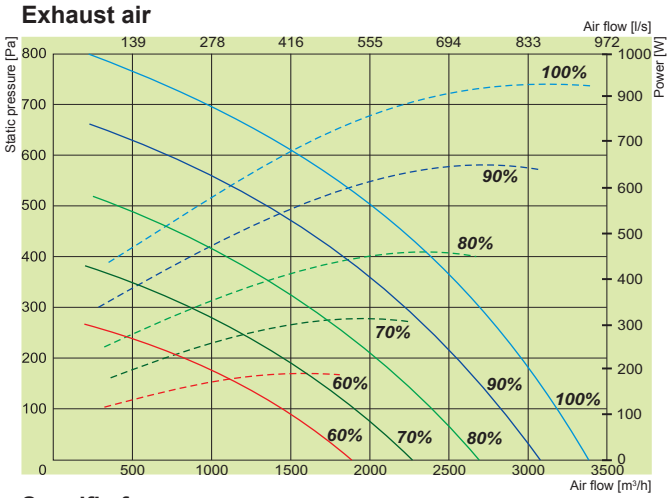
RIS 2500H EKO 3.0

Performance
Power consumption

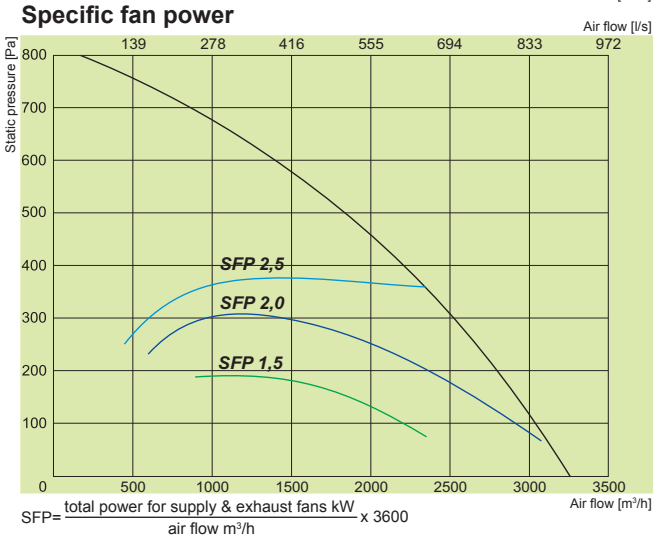
Supply air



Exhaust air

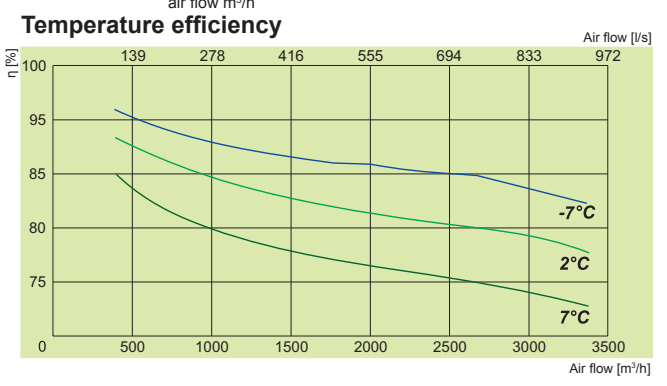


Specific fan power



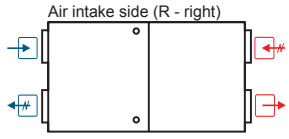
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500HR EKO

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1793_0031B	2500HER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1794_0032A	2500HWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

2500HE / HW EKO 3.0			
Water heater (optional) HW ver.			SVS / Comfort Box 600x350
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~3, 400
		[kW]	3,6
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,996/4,47
	fan speed	[min⁻¹]	2200
supply	power/current	[kW/A]	0,882/3,92
	fan speed	[min⁻¹]	2200
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption HE/HW		[kW/A]	5,5/13,2 1,9/8,0
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	390
Comply with ERP			2013; 2015
Operation			indoors/outdoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

2500H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	83	65	73	75	78	79	71	61
Extract	65	57	61	59	56	54	49	39
Surrounding	62	45	57	58	55	52	44	36
Measured at 2976 m³/h, 121 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

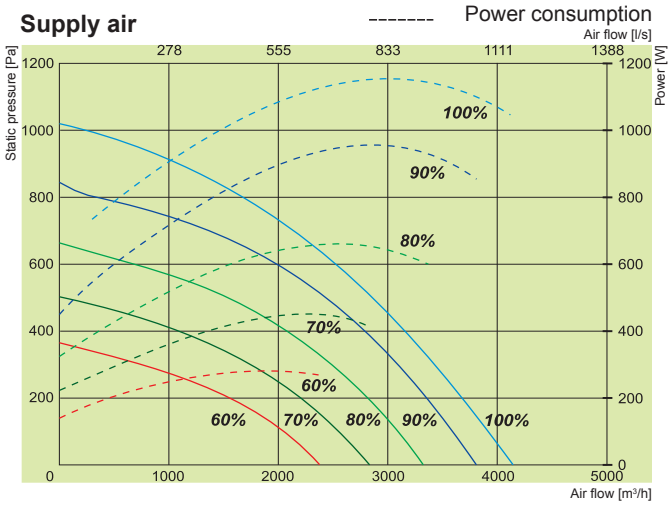
Certifications

EUROVENT certified counter flow heat exchanger performance

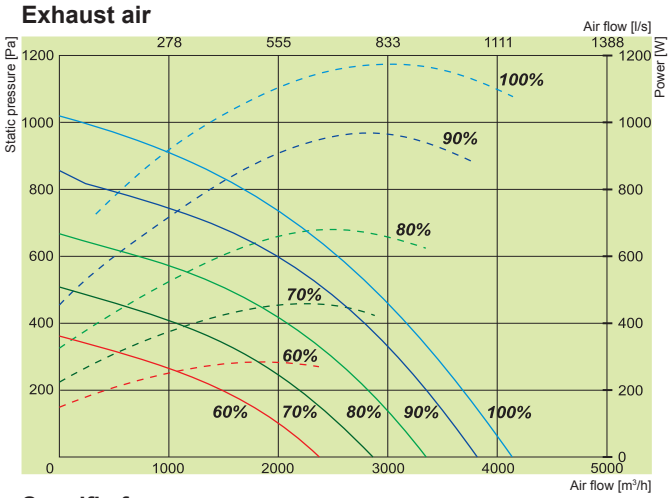
RIS 3500H EKO 3.0

Performance
Power consumption

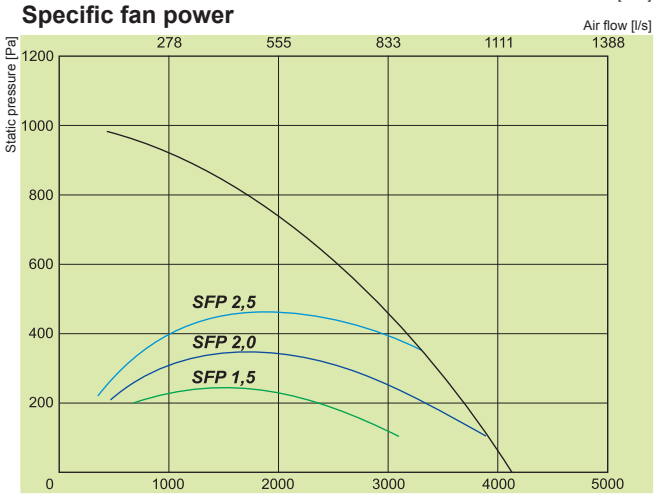
Supply air



Exhaust air

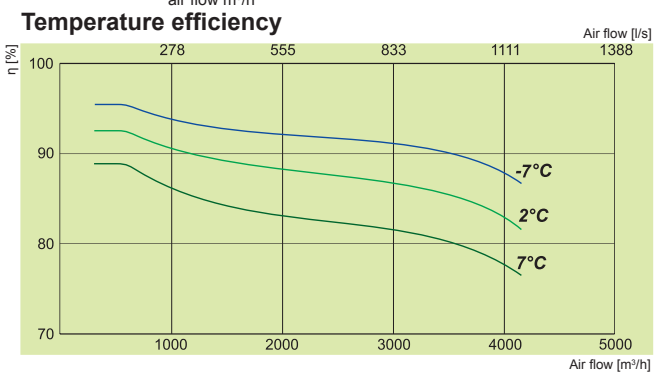


Specific fan power



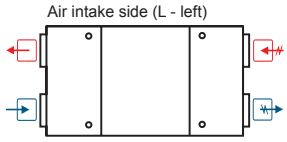
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 3500HL EKO

Air intake side (L - left)



View from inspection side

Exhaust air Extract air Fresh air Supply air

Article No.	Version
GAGRIS1781_0052B	3500HEL EKO 3.0 — Left-hand maintenace version with integrated electrical heater.
GAGRIS1782_0053A	3500HWL EKO 3.0 — Left-hand maintenace version prepared for optional water heater.

3500HE / HW EKO 3.0			
Water heater (optional) HW ver.			SVS / Comfort Box 800x500
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~3, 400
		[kW]	6,0
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	1,173/5,43
	fan speed	[min⁻¹]	2390
supply	power/current	[kW/A]	1,160/5,4
	fan speed	[min⁻¹]	2390
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption HE / HW		[kW/A]	8,3/19,7 2,3/12,1
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	627
Comply with ERP			2013; 2015
Operation			indoors/outdoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

3500H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	86	68	82	78	80	77	70	68
Extract	72	66	66	65	64	58	49	45
Surrounding	69	59	65	62	62	59	52	58
Measured at 3746 m³/h, 181 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

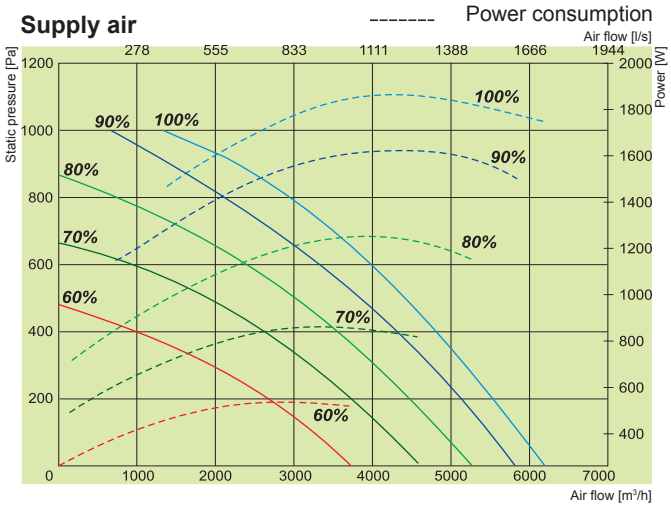
EUROVENT certified counter flow heat exchanger performance

RIS H EKO

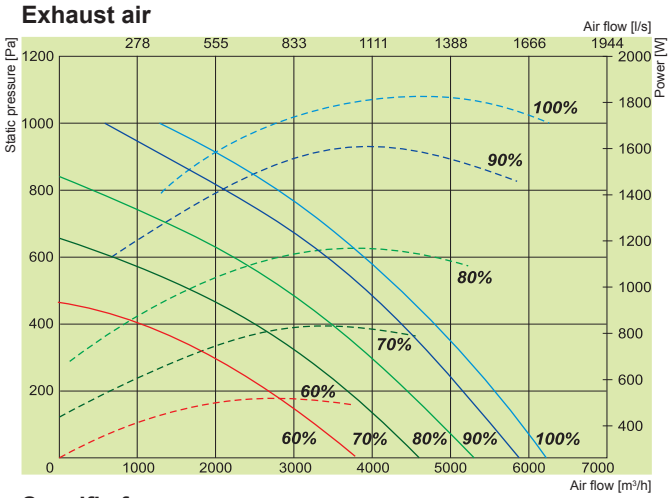
RIS 5500H EKO 3.0

Performance
Power consumption

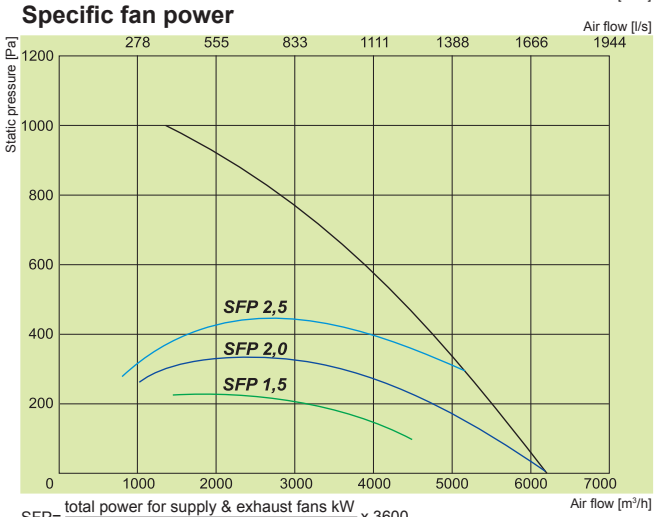
Supply air



Exhaust air

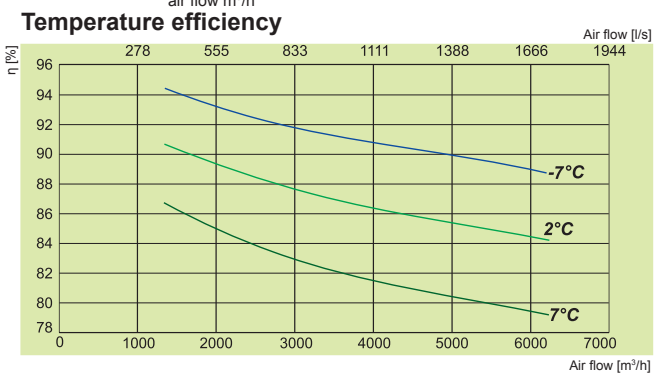


Specific fan power



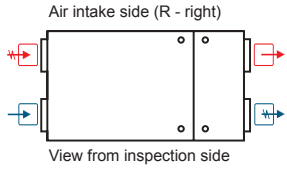
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 5500HR EKO

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1773_0054B	5500HER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1774_0055B	5500HWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

5500HE / HW EKO 3.0				
Water heater (optional) HW ver.			SVS / Comfort Box 800x500	
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~3, 400	
		[kW]	12	
EC fans	phase/voltage	[50Hz/VAC]	~3, 400	
exhaust	power/current	[kW/A]	1,835/2,88	
	fan speed	[min^{-1}]	2180	
supply	power/current	[kW/A]	1,865/3,06	
	fan speed	[min^{-1}]	2180	
Thermal efficiency up to*			90%	
Motorized by-pass			+	
Max power consumption HE/HW		[kW/A]	15,8/23,0	3,8/8,0
Control board			PRV V2.2	
Filter class	exhaust/supply		M5/F7	
Housing insulation, mineral wool		[mm]	70	
Colour	RAL	grey	7040	
Weight (net, without packing) HE / HW		[kg]	788	768
Comply with ERP			2013; 2015	
Operation			indoors/outdoors	
Fresh air temperature limits**		°C	-5 – +40	
Housing protection class	IP		34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

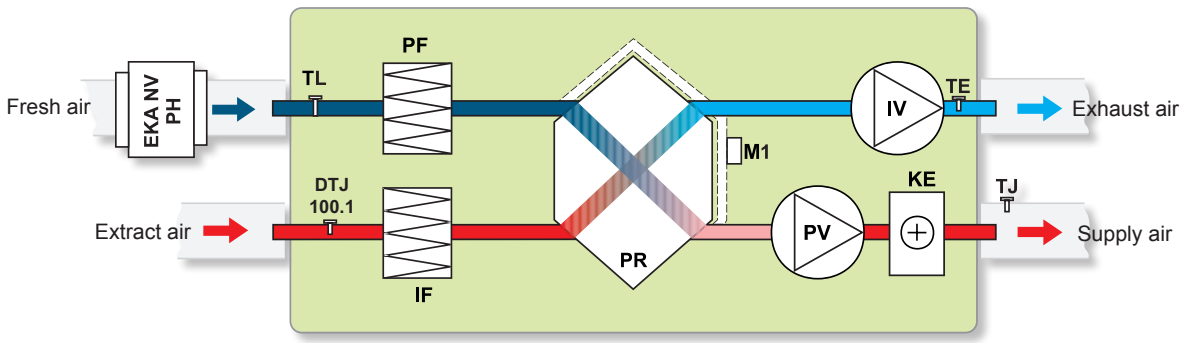
5500HW EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	88	65	82	81	83	81	78	69
Extract	75	64	72	70	66	60	55	50
Surrounding	77	54	71	72	71	68	65	58
Measured at 5819 m³/h, 120 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

EUROVENT certified counter flow heat exchanger performance

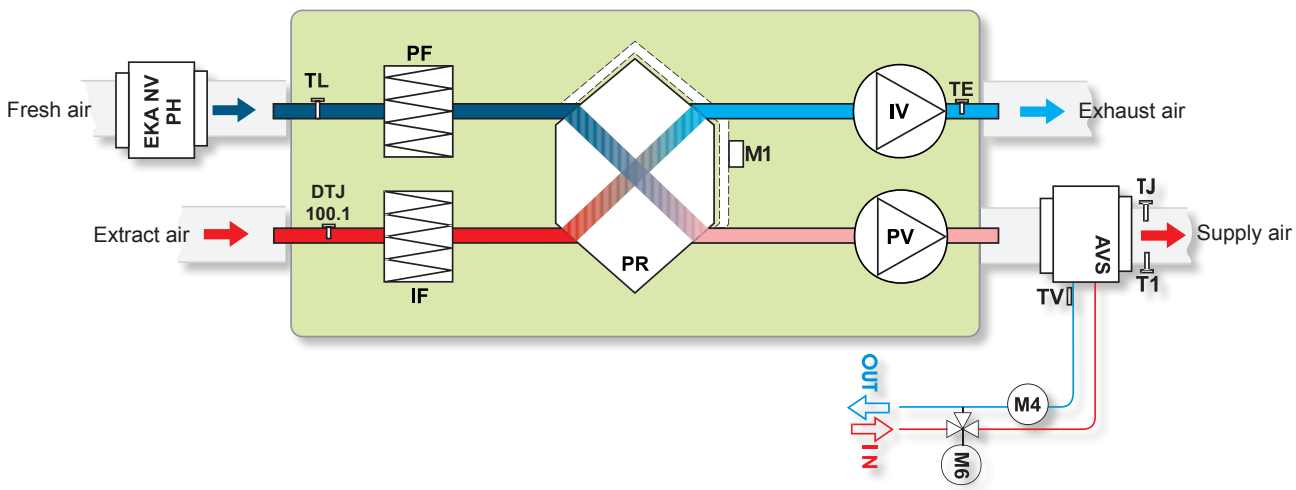
RIS 700HE EKO 3.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
M1 - actuator of by-pass damper
DTJ 100.1 - humidity + temperature sensorr
EKA NV PH - fresh air pre-heater

RIS 700HW EKO 3.0 version with optional water heater

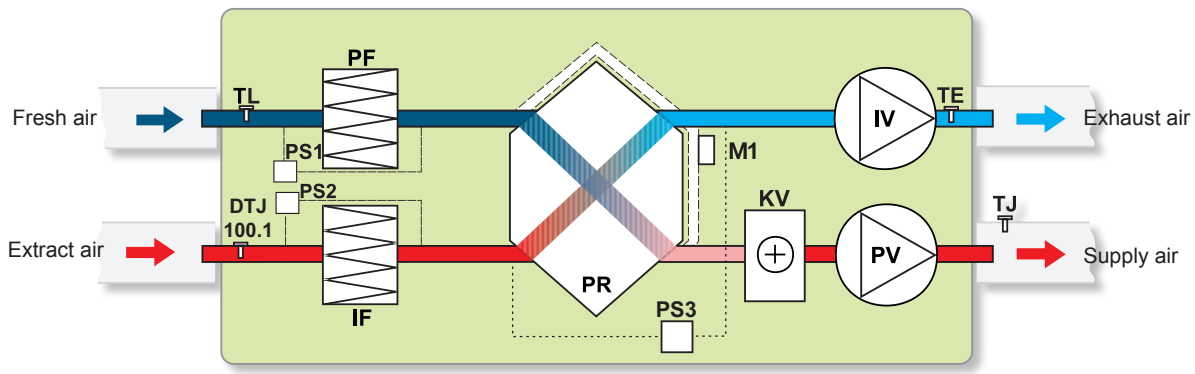


AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air

TV - antifrost sensor
T1 - antifrost thermostat
DTJ 100.1 - humidity + temperature sensor
M1 - actuator of by-pass damper
M6 - optionally supplied mixing valve and motor
M4 - water heater circulator pump
EKA NV PH - fresh air pre-heater

RIS H EKO

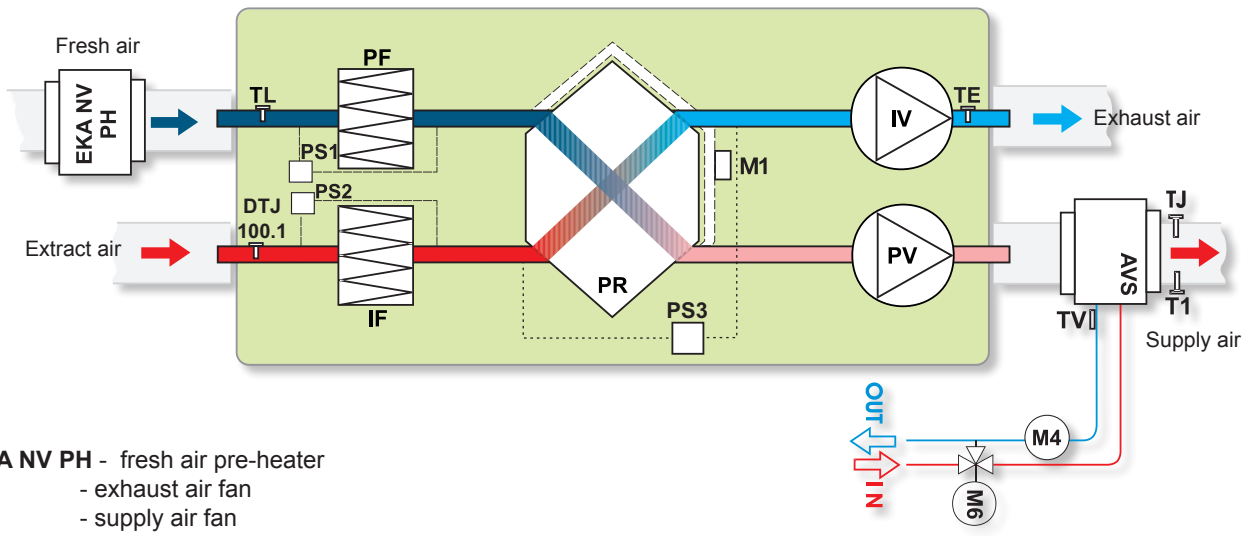
RIS 1200HE EKO 3.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
TE - temperature sensor for exhaust air
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
DTJ 100.1 - humidity + temperature sensor

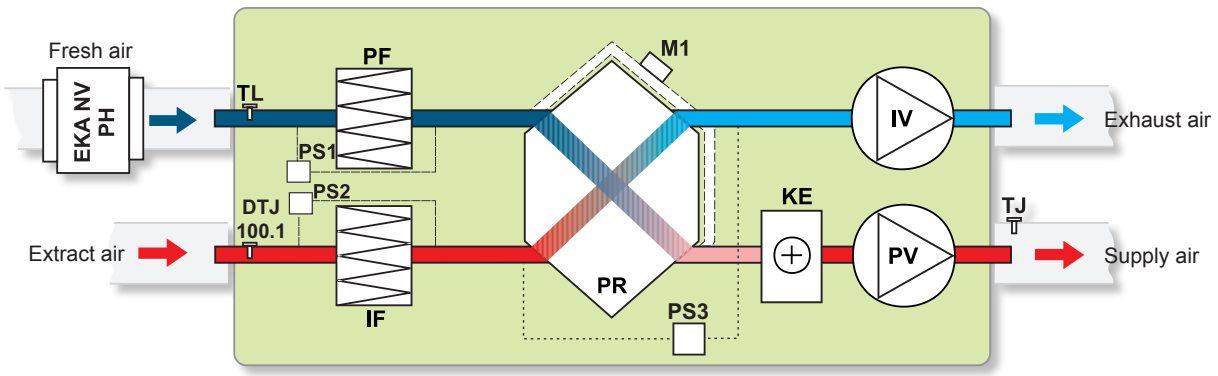
RIS 1200HW EKO 3.0 version with water heater



EKA NV PH - fresh air pre-heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
AVS - water heater
PF - filter for supply air (class M5)
IF - filter for extract air (class M5)
TJ - temperature sensor for supply air
M6 - optionally supplied mixing valve and motor
M4 - water heater circulator pump
TE - temperature sensor for extract air

TL - temperature sensor for fresh air
TV - antifrost sensor
T1 - antifrost thermostat
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
DTJ 100.1 - humidity + temperature sensor

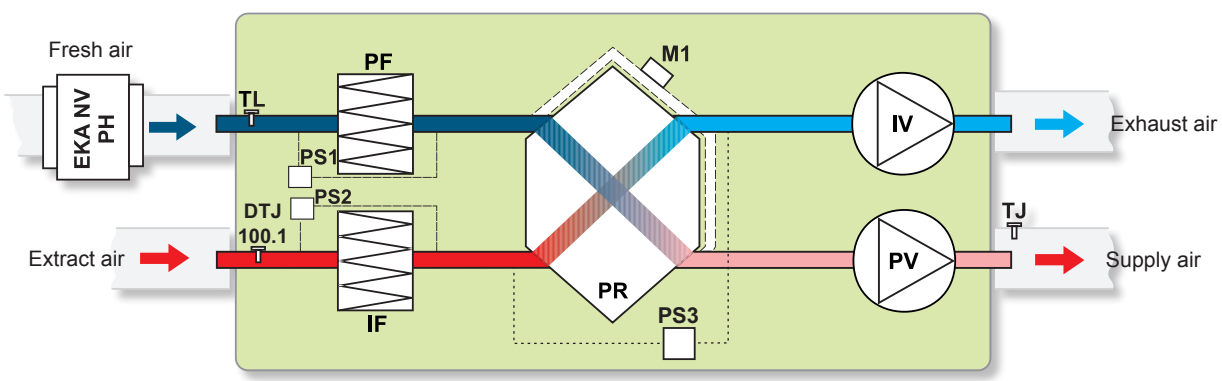
RIS 1900HE EKO 3.0 version with electrical heater



EKA NV PH - fresh air pre-heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)

TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
DTJ 100.1 - humidity + temperature sensor

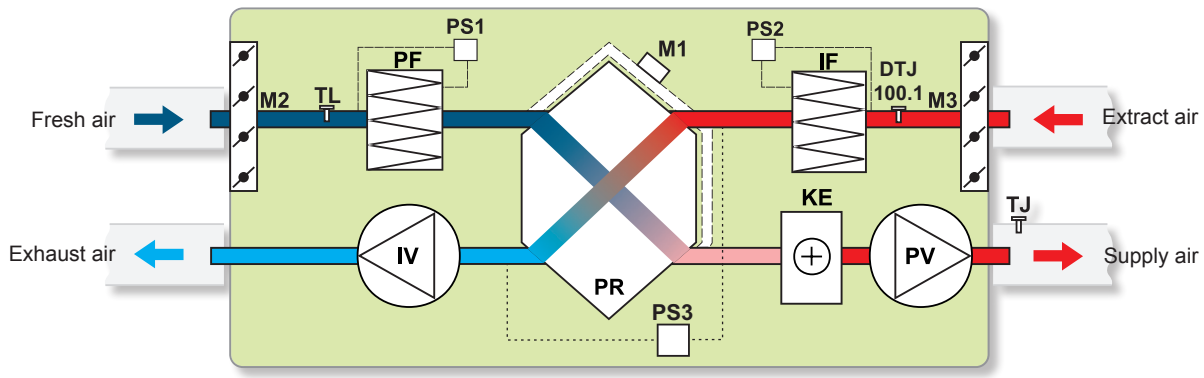
RIS 1900HW EKO 3.0 version with optional water heater



EKA NV PH - fresh air pre-heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)

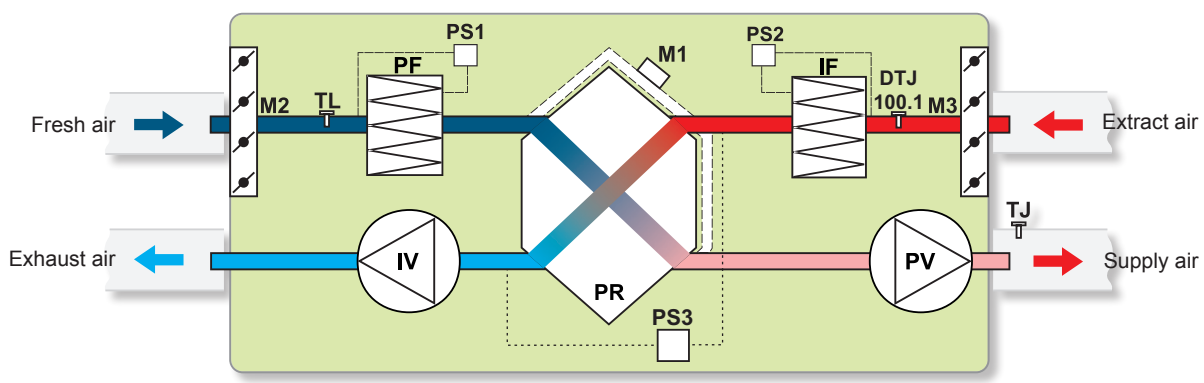
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
DTJ 100.1 - humidity + temperature sensor

RIS 2500HE EKO 3.0 version with electrical heater



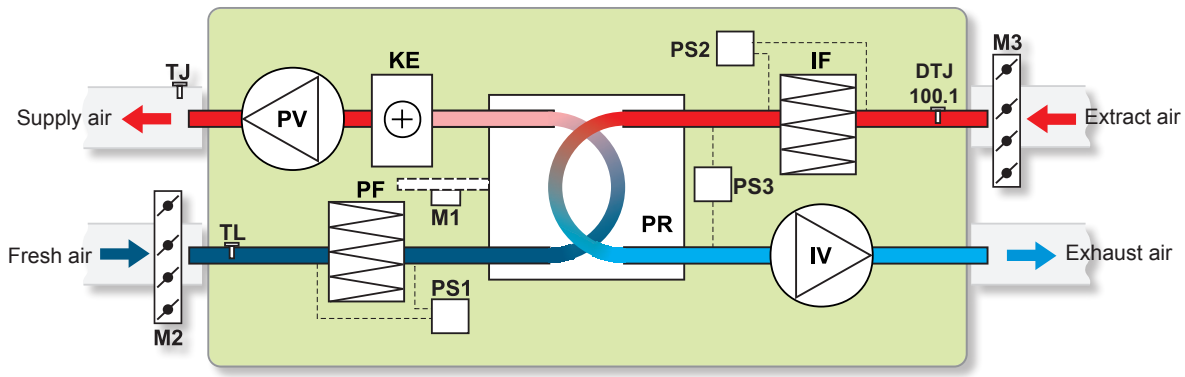
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PF	- filter for supply air (class F7)
IF	- filter for extract air (class M5)
DTJ 100.1	- humidity + temperature sensor
TL	- temperature sensor for fresh air
TJ	- temperature sensor for supply air
M1	- actuator of by-pass damper
M2	- actuator of fresh air damper
M3	- actuator of extract air damper
PS1	- supply air differential pressure switch
PS2	- extract air differential pressure switch
PS3	- heat exchanger antifrost pressure switch

RIS 2500HW EKO 3.0 version with optional water heater



IV	- exhaust air fan
PV	- supply air fan
PF	- filter for supply air (class F7)
IF	- filter for extract air (class M5)
PR	- plate heat exchanger
DTJ 100.1	- humidity + temperature sensor
TL	- temperature sensor for fresh air
TJ	- temperature sensor for supply air
M1	- actuator of by-pass damper
M2	- actuator of fresh air damper
M3	- actuator of extract air damper
PS1	- supply air differential pressure switch
PS2	- extract air differential pressure switch
PS3	- heat exchanger antifrost pressure switch

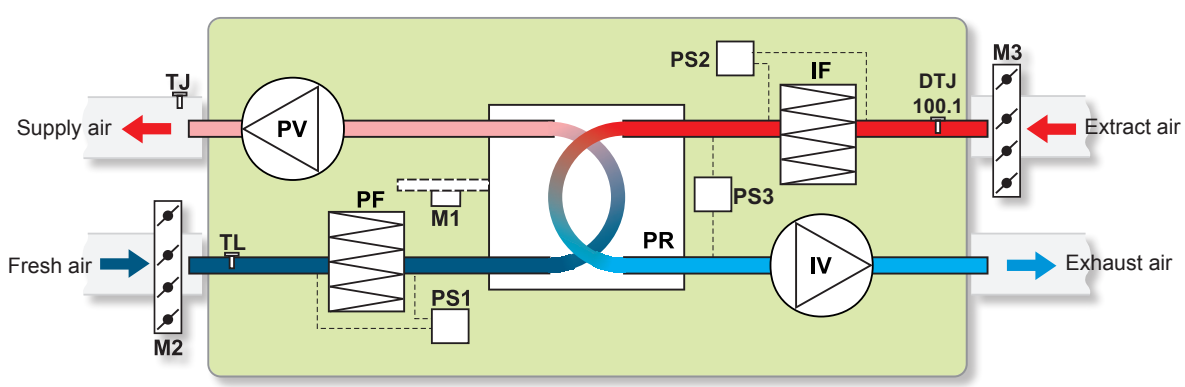
RIS 3500HE EKO 3.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for fresh air (class F7)
IF - filter for extract air (class M5)
DTJ 100.1 - humidity + temperature sensor
TL - temperature sensor for fresh air

TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
M2 - actuator of fresh air damper
M3 - actuator of extract air damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS 3500HW EKO 3.0 version with optional water heater

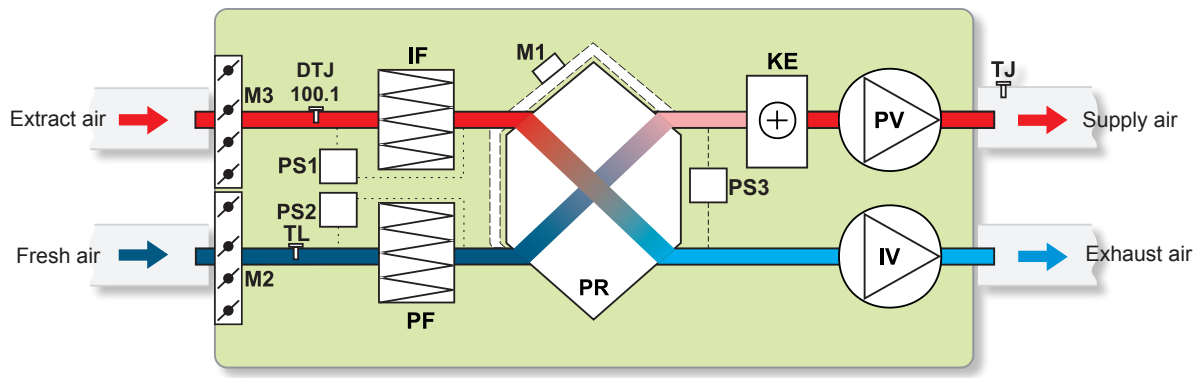


IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
DTJ 100.1 - humidity + temperature sensor
TL - temperature sensor for fresh air

TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
M2 - actuator of fresh air damper
M3 - actuator of extract air damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS H EKO

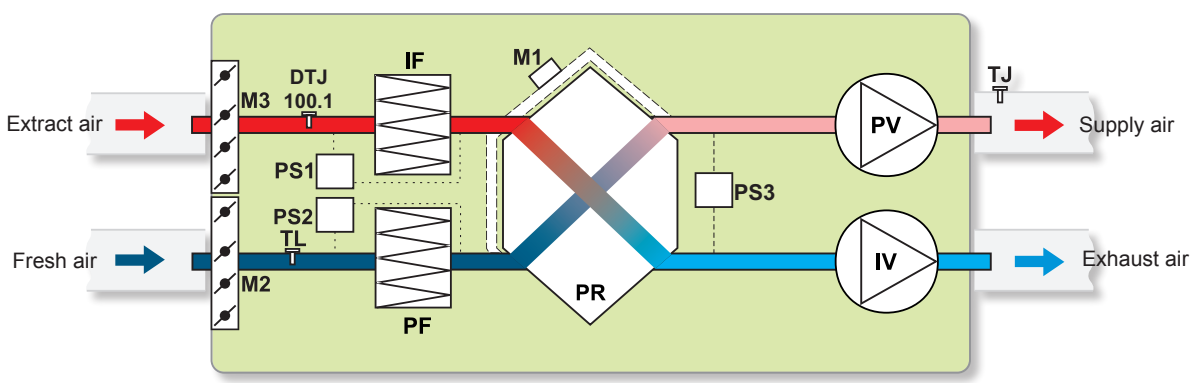
RIS 5500HE EKO 3.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
DTJ 100.1 - humidity + temperature sensor
TL - temperature sensor for fresh air

TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
M2 - actuator of fresh air damper
M3 - actuator of extract air damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS 5500HW EKO 3.0 version with optional water heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
DTJ 100.1 - humidity + temperature sensor
TL - temperature sensor for fresh air

TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
M2 - actuator of fresh air damper
M3 - actuator of extract air damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

Notes

RIS P EKO

NEW!

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

AHU with cross-counterflow plate heat exchanger. Air handling units RIS P EKO have high efficiency counterflow heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of heat exchanger up to 94%.
- Integrated electrical heater (RIS 700 – 1200 P EKO) or optional water heating/cooling.
- Integrated electrical pre-heater 0-10V (RIS 400 P EKO).
- Controlled air flow.
- Supply air temperature control.
- Motorized by-pass damper (RIS 400 – 1200 P EKO).
- Anti-freeze protection of the heat exchanger (RIS 400 – 1200 P EKO).
- Low noise level.
- Acoustic insulation of the walls - 150 P EKO - 20 mm, RIS 400 - 1200 P EKO - 30/50 mm.
- RIS 400 - 1200 P EKO versions can be controlled with UNI, PRO and TPC. remote control devices.
- RIS 150P - 700P EKO housing: powder coated painting RAL 9016, RIS 1200P EKO - RAL 7040.
- Easy mounting.
- Full integrated plug & play control system (RIS 400 – 1200 P EKO).
- Integrated pressure switch for filter pollution (RIS 700 – 1200 P EKO).
- Electrical heater control 0 - 10V (RIS 700 - 1200 P EKO).
- Optional CO_2, pressure or airflow transmitter (RIS 700 – 1200 P EKO).
- Extremely low height!

Urządzenia wentylacyjne RIS P EKO wyposażone w wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła, zwracający do 94% ciepła.
- Zintegrowany grzejnik elektryczny (RIS 700 – 1200 P EKO) i opcjonalny kanałowy wodny grzejnik/schładzacz.
- Zintegrowany elektryczny podgrzewacz 0-10V (RIS 400 P EKO).
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Zasuwa obejściowa z silnikiem (RIS 400 – 1200 P EKO).
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Izolacja przeciwhałasowa ścianek – 150 P EKO - 20 mm, RIS 400 - 1200 P EKO – 30/50 mm.
- RIS 200V - 1900V EKO można sterować za pomocą pilotów UNI, PRO i TPC.
- Ochrona przeciwzamarzaniowa wymiennika ciepła (RIS 700 – 1200 P EKO).
- Obudowa malowana metodą proszkową – kolor RAL 9016 150P - 700P EKO, RIS 1200P EKO - RAL 7040.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play“ i całkowicie zintegrowana automatyka sterowania.
- Zintegrowany miernik zanieczyszczenia filtrów (RIS 400 – 1200 P EKO).
- Sterowanie grzejnikiem elektrycznym 0-10V. (RIS 700 - 1200 P EKO).
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności.
- Szczególnie niska wysokość!

Vėdinimo įrenginiai RIS P EKO pagaminti su efektyviu priešpriešinių srautų plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio gražinama šiluma iki 94%.
- Integruotas elektrinis šildytuvas (RIS 700 – 1200 P EKO) ir papildomai komplektuojamas kanalinis vandeninis šildytuvas/aušintuvas.
- Integruotas elektrinis pašildytuvas 0-10V (RIS 400 P EKO).
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Motorizuota apėjimo sklendė (RIS 400 – 1200 P EKO).
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Sienelių triukšmo izoliacija – 150 P EKO - 20 mm, RIS 400 - 1200 P EKO – 30/50 mm.
- RIS 400V - 1200P EKO galima valdyti su UNI, PRO and TPC pulteliais.
- Priešužšaliminė šilumokaičio apsauga (RIS 400 – 1200 P EKO).
- Miltelinių būdu dažytas korpusas - spalva RAL 9016 150P - 700P EKO, RIS 1200P EKO - RAL 7040.
- Greitas ir lengvas montavimas.
- „Plug & play“ paruošimas ir pilnai integruota valdymo automatika.
- Integruotas filtrų užterštumo matuoklis (RIS 400 – 1200 P EKO).
- Elektrinio šildytuvo valdymas 0-10V (RIS 700 - 1200 P EKO).
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis.
- Ypatingai žemas aukštis!

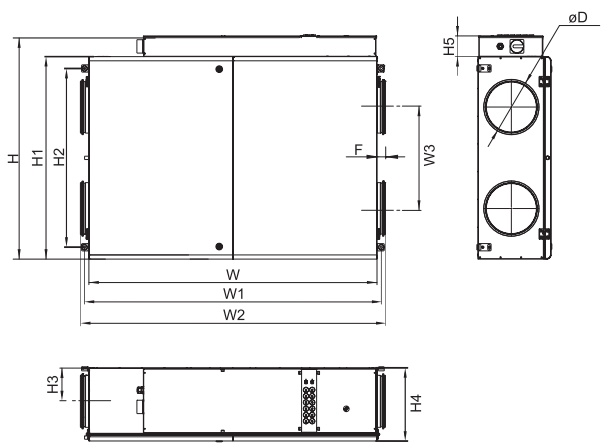
Установки с рекуперацией тепла RIS P EKO очищают, нагревают и подают свежий воздух. Установки RIS P EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 94%.
- Встроенный электрический нагреватель (RIS 700 – 1200 P EKO) или опция водянные охлодители/нагреватели.
- Интегрирован электрический подогреватель 0-10 V (RIS 400 P EKO).
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Моторизованый by-pass клапон (RIS 400 – 1200 P EKO).
- Низкий уровень шума.
- Акустическая изоляция стенок - RIS 150 P EKO - 20мм, RIS 400- 1200 P EKO – 30/50мм.
- RIS 400 – 1200 P EKO версии с интегрированными возможнастями управления с помощью пультов UNI, PRO и TPC.
- Корпус RIS 150P – 700 P EKO окрашекнн порошковым методом - RAL 9016, RIS 1200P EKO – RAL 7040.
- Легко и быстро монтируються.
- Интегрированная полная система управления агрегата “plug & play” для RIS 400- 1200 P EKO.
- Установлен датчик давления для фильтра загрязнения в RIS 400- 1200 P EKO.
- Контроль электрического нагревателя 0 -10 V (RIS 700 - 1200 P EKO).
- Опциональная контроль: CO_2, давление в системе и трансмитер приточного воздуха для RIS 700- 1200 P EKO.
- Очень удобная высота!

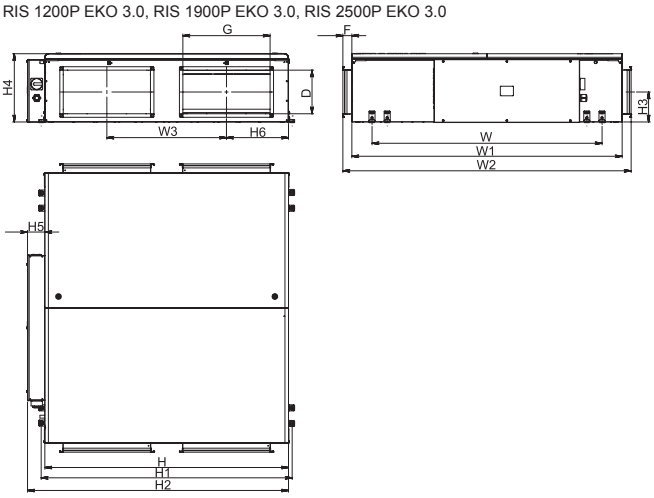
Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Actuator for dampers	Water heater coil
							
Flex p. 178	**Stouch** p. 179	**TPC** p. 180	**1141** p. 181	**RC02-F2** p. 182	**KFF-U** p. 183	**SP** p. 188	**SVS** p. 198

RIS 150P EKO - RIS 700P EKO 3.0



RIS 1200P EKO 3.0, RIS 1900P EKO 3.0, RIS 2500P EKO 3.0



RIS 400 P E 0.9 EKO 3.0

- RIS — Equipped with new PRV V2.2 control board
- 400 — AHU with EC motors and efficient cross - counter flow heat exchanger
- P — Electrical heater power in kW
- E — Heater type (E - integrated electrical heater; W - optional water heater)
- 0.9 — Housing type (V - vertical, H - horozontal, P - under - ceiling)
- EKO 3.0 — AHU size according to air flow range m³/h
- AHU with plate heat-exchanger

Type	Dimensions [mm]														
	W	W1	W2	W3	H	H1	H2	H3	H4	H5	H6	F	øD	G	D
RIS 150P EKO	850	604	911	240	548	500	548	122	263	48	-	31	160	-	-
RIS 400PE/PW EKO 3.0	1300	1014	1361	304	768	670	712	670	157	330	-	31	200		
RIS 700PE/PW EKO 3.0	1380	1422	1461	487	1074	970	857	160	350	104	-	40	250	-	-
RIS 1200PE/PW EKO 3.0	1550	1320	1655	685	1400	1440	1500	175	390	100	-	52	-	500	250
RIS 1900PE/PW EKO 3.0	1710	1750	1870	861	1850	1892	1955	194	399	105	495	60	-	700	300
RIS 2500PE/PW EKO 3.0	1810	1850	1970	961	1950	1992	2055	244	499	105	-	60	-	700	400

Type	Accessories											
	Flex Stouch TPC	1141 RC02-F2 KFF-U	SSB	Supply SP	Exhaust SP	SVS	SSK	SKS	RMG	VVP/ VXP	SKG AKS AP	AVS AVA EKA
RIS 150P EKO	-	-	-	-	-	-	-	-	-	-	160	160
RIS 400PE EKO 3.0	+	+	-	LM230A-TP	LM230A-TP	-	-	-	-	-	200	200
RIS 400PW EKO 3.0	+	+	61	NF230A	LM230A-TP	-	-	-	+	+	200	200
RIS 700PE EKO 3.0	+	+	-	LM230A-TP	LM230A-TP	-	-	-	-	-	250	250
RIS 700PW EKO 3.0	+	+	61	NF230A	LM230A-TP	-	-	-	+	+	250	250
RIS 1200PE EKO 3.0	+	+	-	LM230A-TP	LM230A-TP	-	500x250	500x250	-	-	-	-
RIS 1200PW EKO 3.0	+	+	61	NF230A	LM230A-TP	500x250	500x250	500x250	+	+	-	-
RIS 1900PE EKO 3.0	+	+	-	LM230A-TP	LM230A-TP	-	700x400*	700x400*	-	-	-	-
RIS 1900PW EKO 3.0	+	+	61	NF230A	LM230A-TP	700x400*	700x400*	700x400*	+	+	-	-
RIS 2500PE EKO 3.0	+	+	-	LM230A-TP	LM230A-TP	-	700x400	700x400	-	-	-	-
RIS 2500PW EKO 3.0	+	+	61	NF230A	LM230A-TP	700x400	700x400	700x400	+	+	-	-

*necessary to order reducer STP 700x400-700x300

Accessories

Damper for rectangular duct — **SSK** p. 228

Rectangular duct silencer — **SKS** p. 233

Shut-off damper — **SKG** p. 226

Circular duct silencer — **AKS** p. 230

Mounting clips — **AP** p. 229

Heating coil — **AVS** p. 192

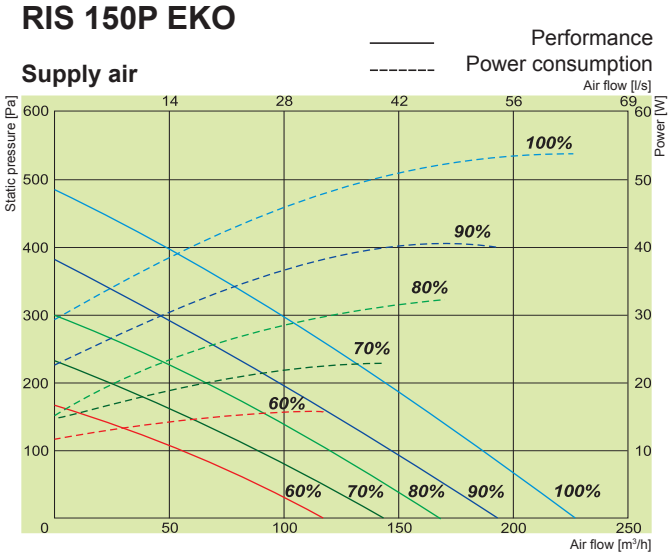
Circular duct water cooler — **AVA** p. 202

Flange adapter — **STP** p. 234

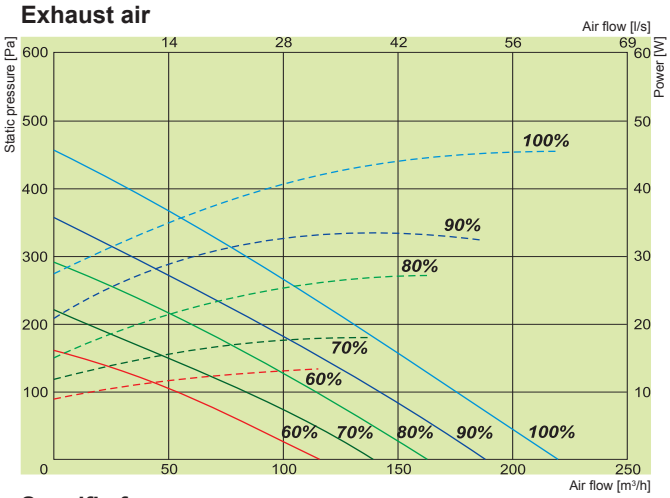
RIS P EKO

RIS 150P EKO

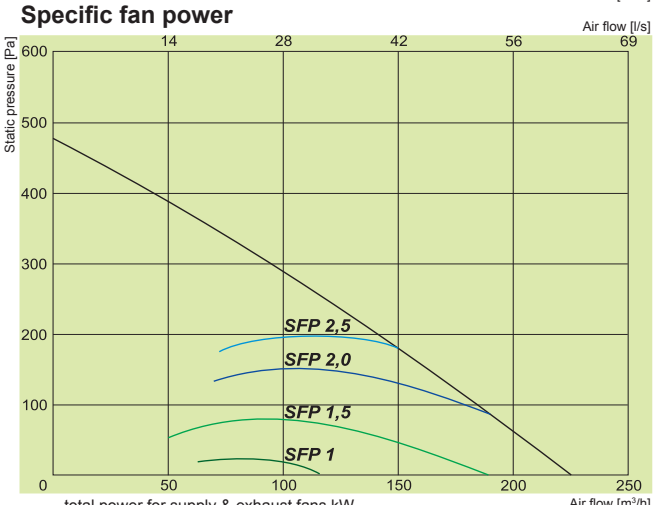
Supply air



Exhaust air

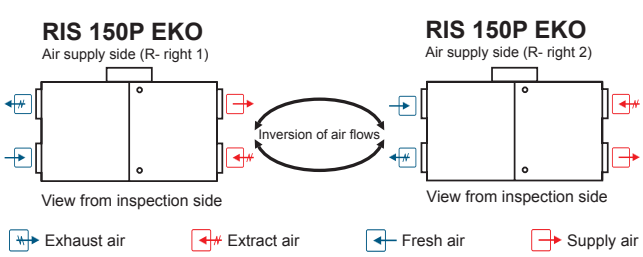


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



Article No.		Version
GRERIS240	150P EKO	Optional controls and heater.

			150P EKO
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,055/0,52
	fan speed	[min⁻¹]	4480
supply	power/current	[kW/A]	0,055/0,52
	fan speed	[min⁻¹]	4480
Thermal efficiency up to*			90%
Motorized by-pass			-
Max power consumption		[kW/A]	0,11/1,04
Control board			-
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	20
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	33
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

150P EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	62	50	54	58	55	52	48	43
Extract	54	42	48	50	47	38	27	22
Surrounding	43	33	36	39	37	33	26	23
Measured at 203 m³/h, 59 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

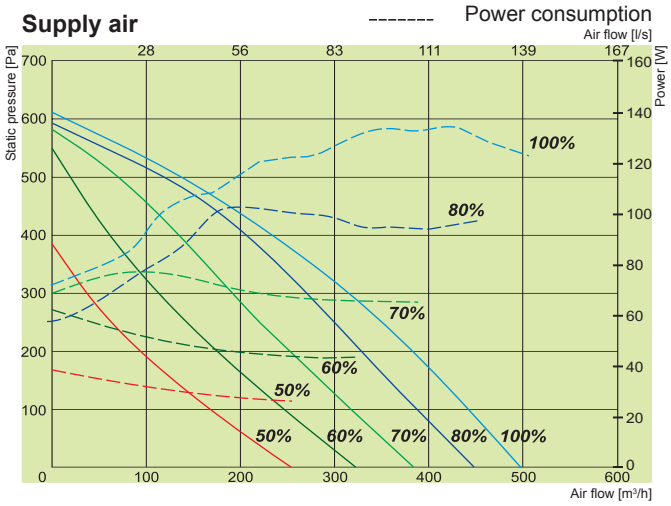
Certifications

EUROVENT certified counter flow heat exchanger performance

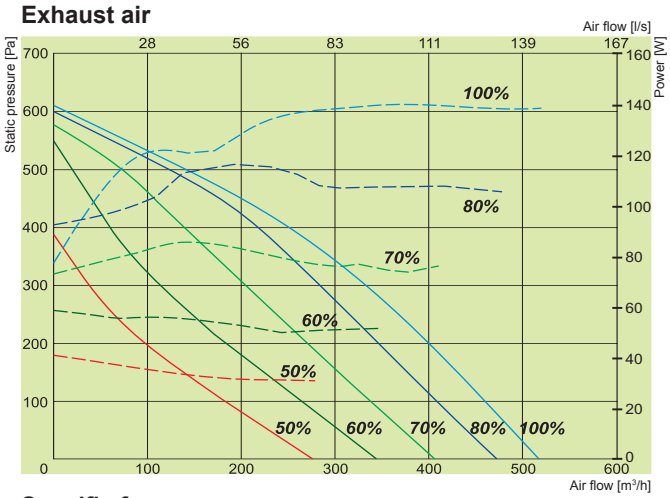
RIS 400PE EKO 3.0

Performance
Power consumption

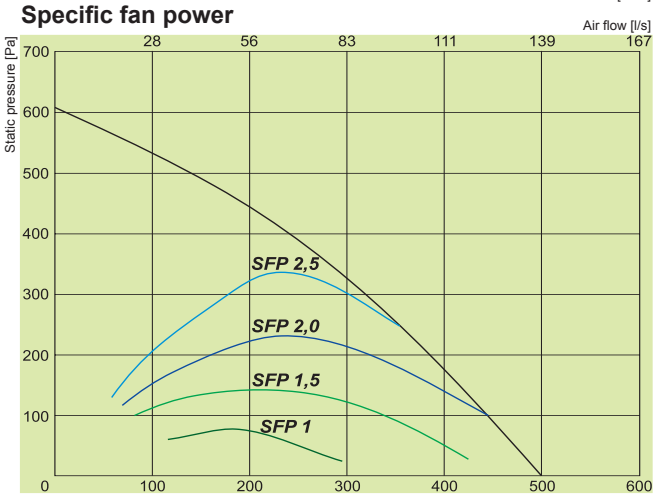
Supply air



Exhaust air



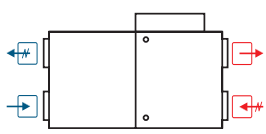
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIS 400PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version
GAGRIS1747_0017A	400PE 0.9 EKO 3.0 Integrated electrical heater.
GAGRIS1746_0017A	400PE 1.6 EKO 3.0 Integrated electrical heater.
GAGRIS1692_0016A	400PE 3.0 EKO 3.0 Integrated electrical heater.

			0.9 EKO 3.0	1.6 EKO 3.0	3.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
		[kW]	0,9	1,6	3,0
EC fans	phase/voltage	[50Hz/VAC]	~1, 230		
exhaust	power/current	[kW/A]	0,125/1,17		
	fan speed	[min⁻¹]	3490		
supply	power/current	[kW/A]	0,134/1,18		
	fan speed	[min⁻¹]	3490		
Thermal efficiency up to*			90%		
Motorized by-pass			+		
Max power consumption		[kW/A]	1,16/6,39	1,86/9,39	3,26/15,39
Control board			PRV V2.2		
Filter class	exhaust/supply		M5/F7		
Housing insulation, mineral wool		[mm]	30		
Colour	RAL	white	9016		
Weight (net, without packing)		[kg]	74		
Comply with ERP			2013; 2015		
Operation			indoors		
Fresh air temperature limits**		°C	-5 – +40		
Housing protection class	IP		34		

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 400PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	67	54	59	64	58	57	54	47
Extract	58	48	50	53	51	48	46	41
Surrounding	51	40	43	46	45	40	39	36
Measured at 443 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

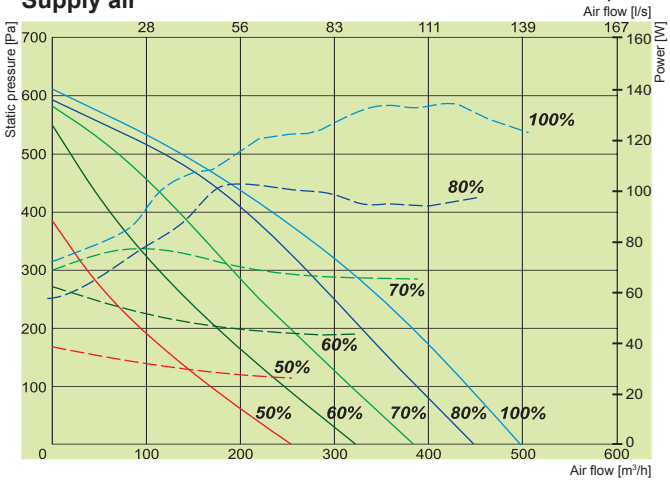
EUROVENT certified counter flow heat exchanger performance

RIS P EKO

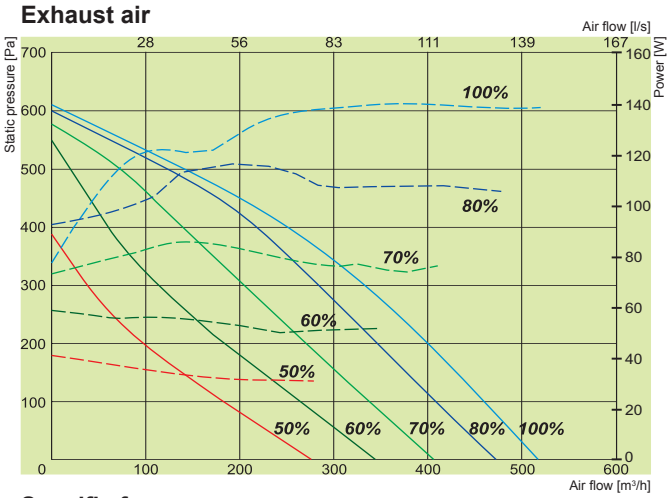
RIS 400PW EKO 3.0

Performance
Power consumption

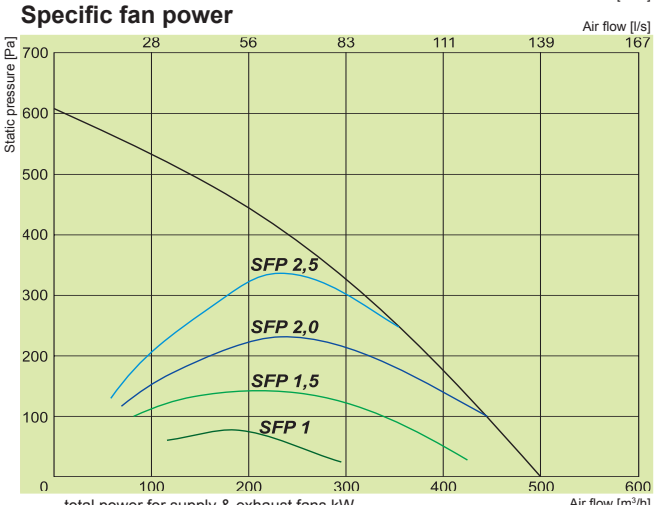
Supply air



Exhaust air

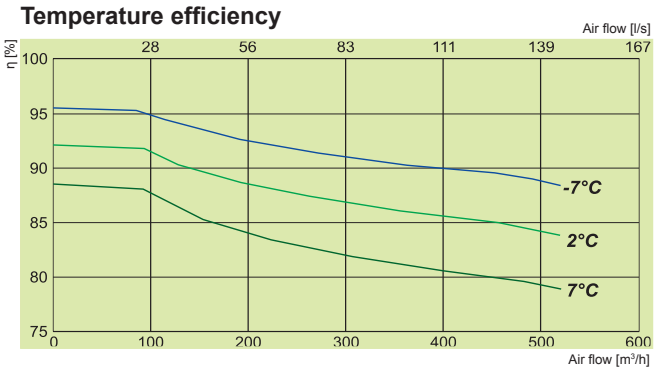


Specific fan power

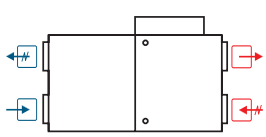


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 400PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1748_0019A	400PW EKO 3.0	Optional water heater.

			400PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	AVS 200
	power consumption	[kW]	
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,125/1,17
	fan speed	[min⁻¹]	3490
supply	power/current	[kW/A]	0,055/0,52
	fan speed	[min⁻¹]	3490
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,26/2,39
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	73
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 400PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	67	54	59	64	58	57	54	47
Extract	58	48	50	53	51	48	46	41
Surrounding	51	40	43	46	45	40	39	36
Measured at 443 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

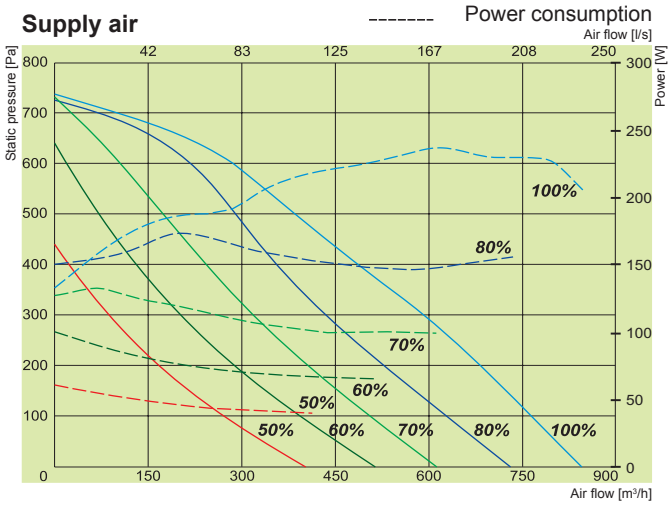
Certifications

EUROVENT certified counter flow heat exchanger performance

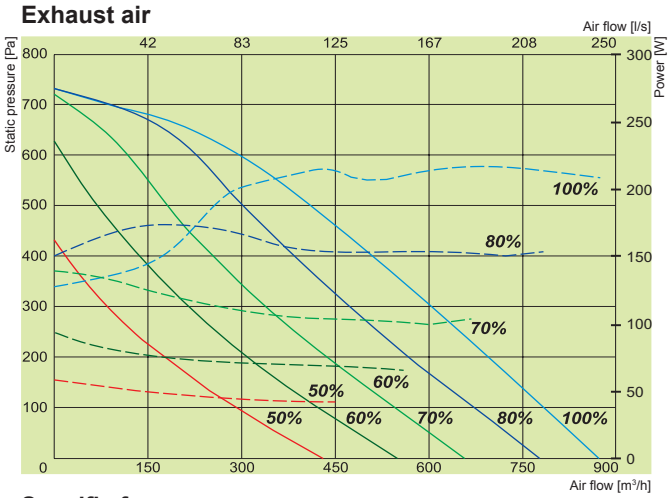
RIS 700PE EKO 3.0

Performance
Power consumption

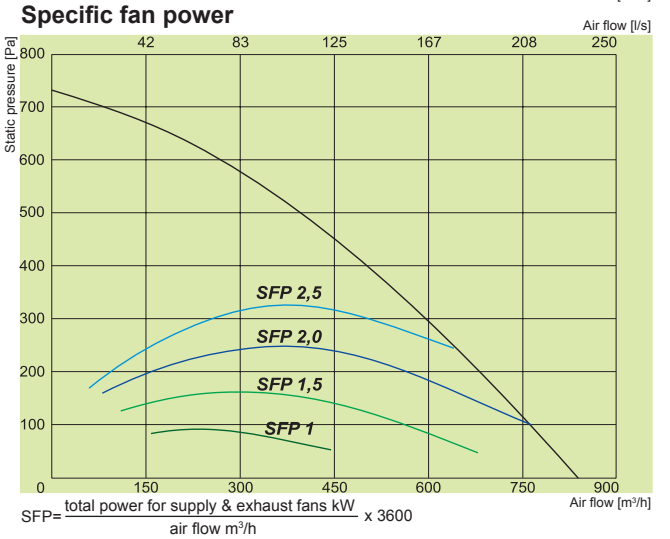
Supply air



Exhaust air

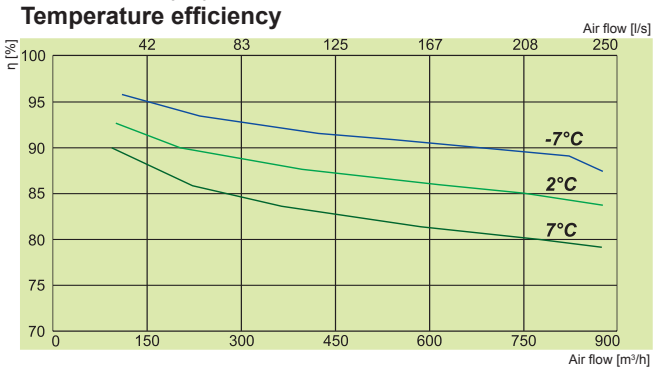


Specific fan power

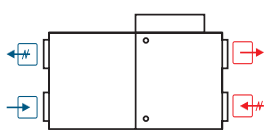


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 700PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1737_0008A	700PE 1.2 EKO 3.0	Integrated electrical heater.
GAGRIS1736_0007A	700PE 3.0 EKO 3.0	Integrated electrical heater.
GAGRIS1693_0005B	700PE 4.5 EKO 3.0	Integrated electrical heater.

			1.2 EKO 3.0	3.0 EKO 3.0	4.5 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
		[kW]	1,2	3,0	4,5
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,218/1,9	
	fan speed	[min⁻¹]		3380	
supply	power/current	[kW/A]		0,237/2,07	
	fan speed	[min⁻¹]		3380	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	1,66/5,51	3,46/19,0	4,96/9,85
Control board				PRV V2.2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		30	
Colour	RAL	white		9016	
Weight (net, without packing)		[kg]		95	
Comply with ERP				2013; 2015	
Operation				indoors	
Fresh air temperature limits**		°C		-5 – +40	
Housing protection class	IP			34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 700PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	64	66	68	70	66	60	59
Extract	62	53	55	57	56	52	49	45
Surrounding	56	45	47	50	50	47	43	42
Measured at 764 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

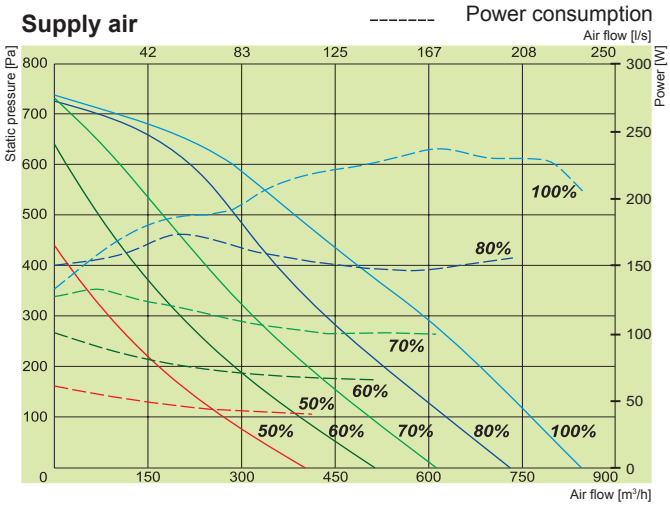
EUROVENT certified counter flow heat exchanger performance

RIS P EKO

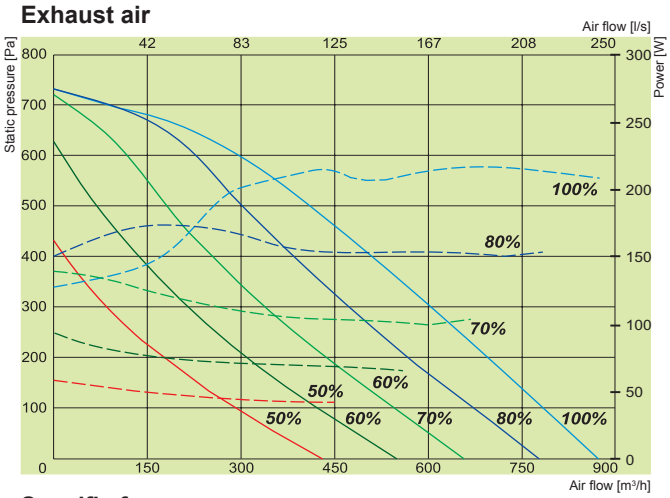
RIS 700PW EKO 3.0

Performance
Power consumption

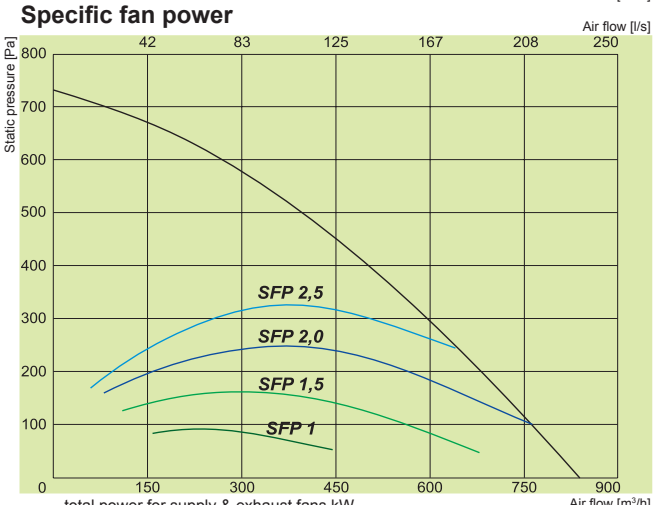
Supply air



Exhaust air



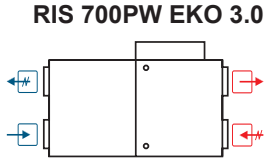
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIS 700PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1738_0009A	700PW EKO 3.0	Optional water heater.

			700PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	AVS 250
	power consumption	[kW]	
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,218/1,9
	fan speed	[min⁻¹]	3380
supply	power/current	[kW/A]	0,237/2,07
	fan speed	[min⁻¹]	3380
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,46/2,5
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	94
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 700PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	64	66	68	70	66	60	59
Extract	62	53	55	57	56	52	49	45
Surrounding	56	45	47	50	50	47	43	42
Measured at 764 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

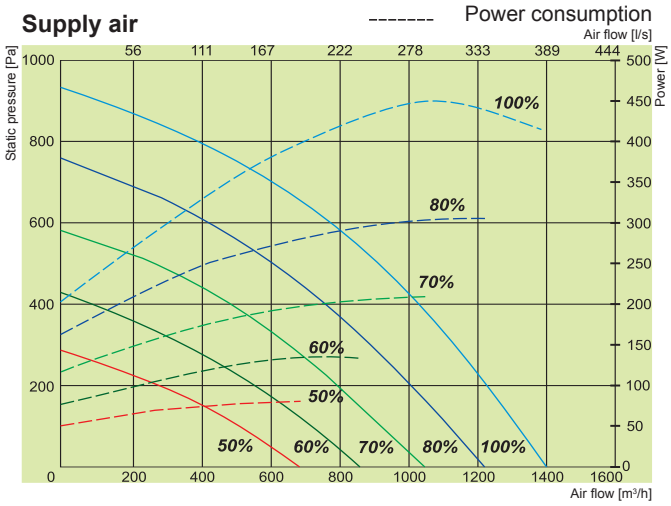
Certifications

EUROVENT certified counter flow heat exchanger performance

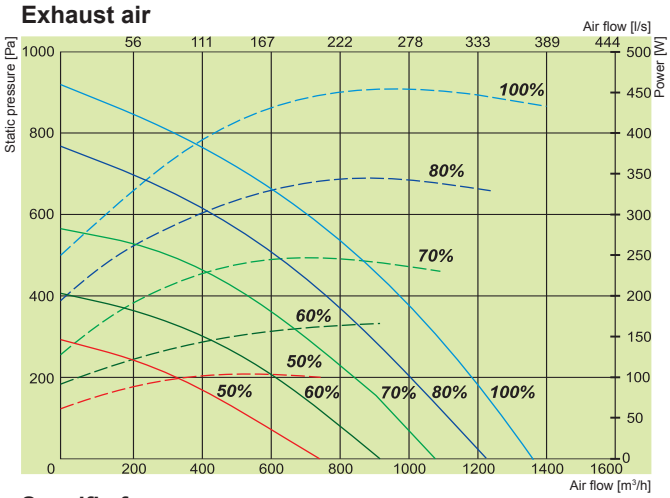
RIS 1200PE EKO 3.0

Performance
Power consumption

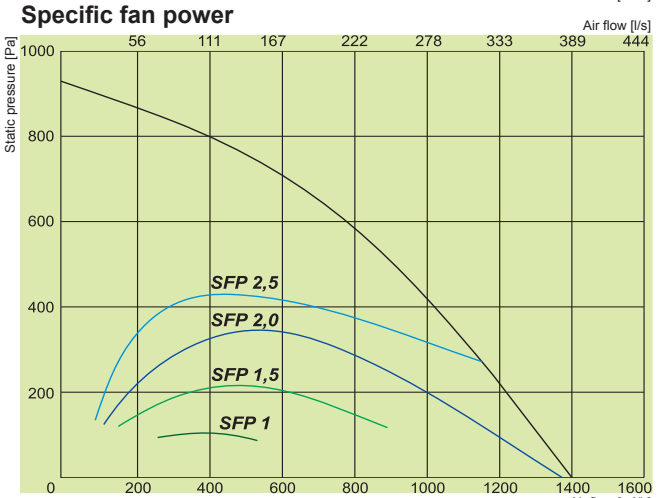
Supply air



Exhaust air

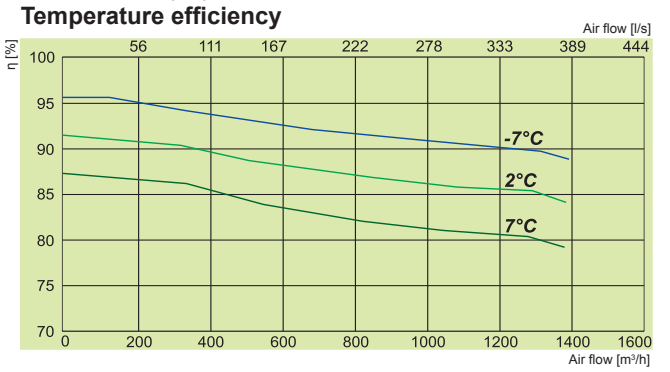


Specific fan power

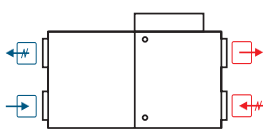


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1200PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1744_0022A	1200PE 3.0 EKO 3.0	Integrated electrical heater.
GAGRIS1745_0021B	1200PE 6.0 EKO 3.0	Integrated electrical heater.
GAGRIS1701_0020B	1200PE 9.0 EKO 3.0	Integrated electrical heater.

			3.0 EKO 3.0	6.0 EKO 3.0	9.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
		[kW]	3,0	6,0	9,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,37/2,5	
	fan speed	[min⁻¹]		3400	
supply	power/current	[kW/A]		0,45/2,95	
	fan speed	[min⁻¹]		3400	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	3,82/18,49	6,82/14,49	9,82/18,49
Control board				PRV V2.2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		50	
Colour	RAL	grey		7040	
Weight (net, without packing)		[kg]		168	
Comply with ERP				2013; 2015	
Operation				indoors	
Fresh air temperature limits**		°C		-5 – +40	
Housing protection class	IP			34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 1200PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	58	69	71	69	67	64	56
Extract	64	52	56	61	56	50	45	42
Surrounding	56	42	48	50	49	48	46	40
Measured at 1298 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

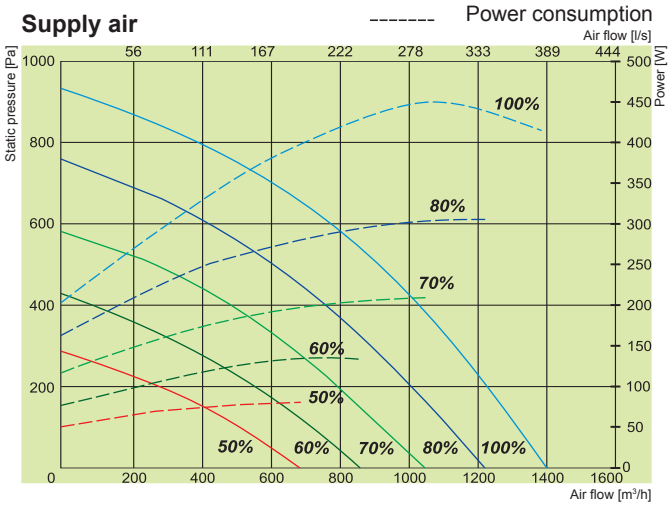
EUROVENT certified counter flow heat exchanger performance

RIS P EKO

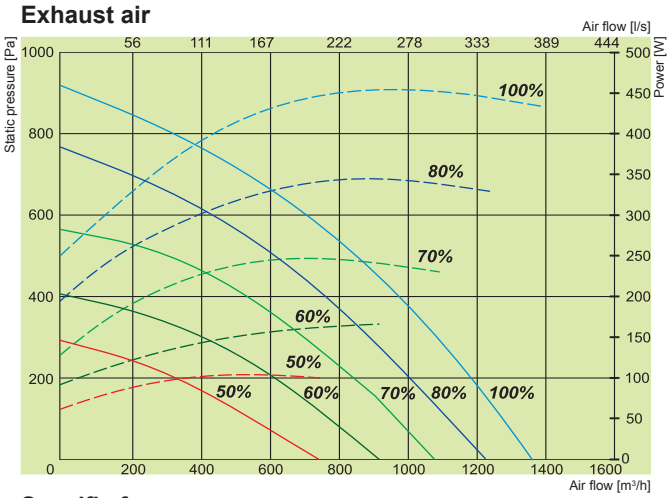
RIS 1200PW EKO 3.0

Performance
Power consumption

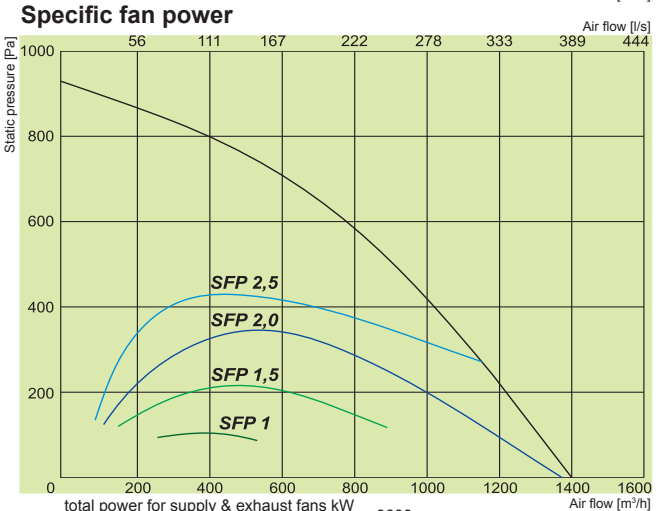
Supply air



Exhaust air

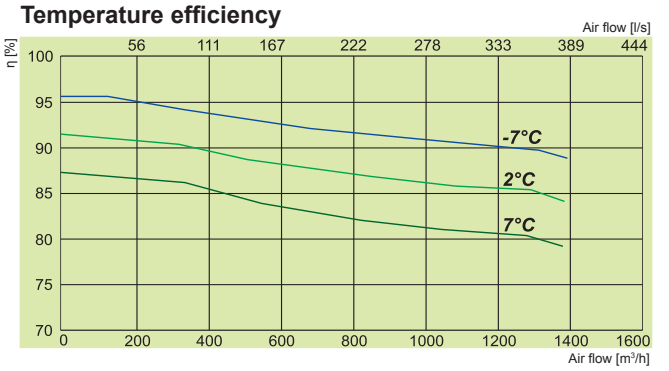


Specific fan power

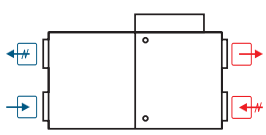


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1200PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1721_0023A	1200PW EKO 3.0	Optional water heater.

			1200PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	SVS 500x250
	power consumption	[kW]	
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,37/2,5
	fan speed	[min^{-1}]	3400
supply	power/current	[kW/A]	0,45/2,95
	fan speed	[min^{-1}]	3400
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,82/5,49
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	165
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 1200PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	58	69	71	69	67	64	56
Extract	64	52	56	61	56	50	45	42
Surrounding	56	42	48	50	49	48	46	40
Measured at 1298 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

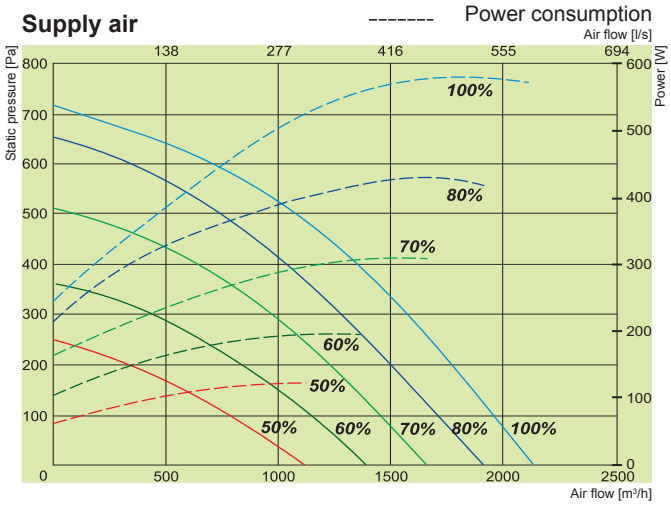
Certifications

EUROVENT certified counter flow heat exchanger performance

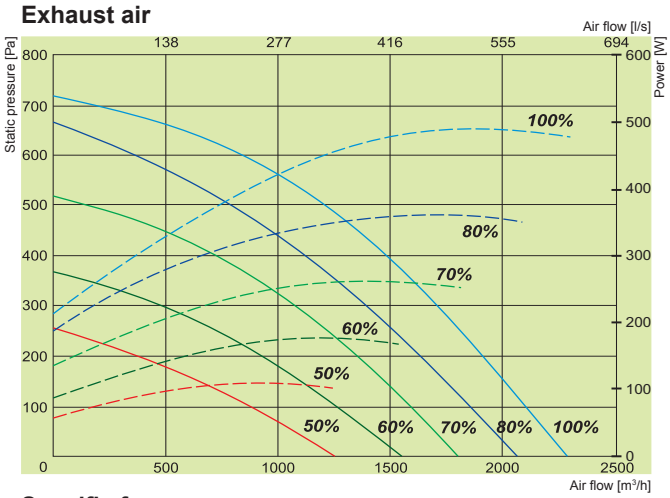
RIS 1900PE EKO 3.0

Performance
Power consumption

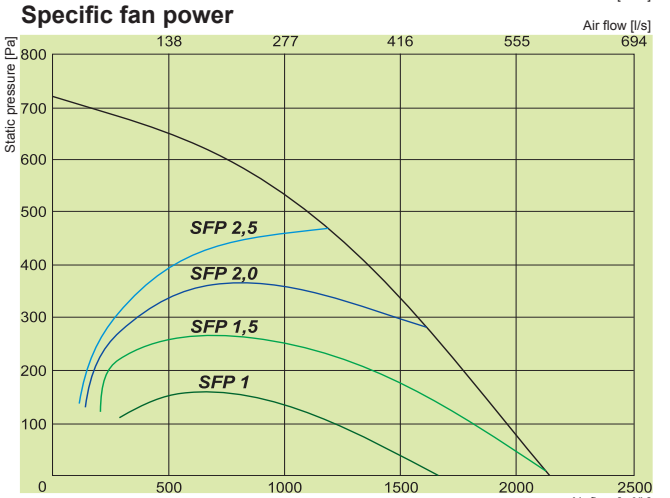
Supply air



Exhaust air



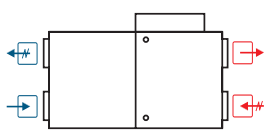
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIS 1900PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version
GAGRIS1751_0025A 1900PE 3.0 EKO 3.0	Integrated electrical heater.
GAGRIS1752_0024B 1900PE 6.0 EKO 3.0	Integrated electrical heater.
GAGRIS1706_0001B 1900PE 12.0 EKO 3.0	Integrated electrical heater.

			3.0 EKO 3.0	6.0 EKO 3.0	12.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
		[kW]	3,0	6,0	12,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,488/3,16	
	fan speed	[min⁻¹]		2540	
supply	power/current	[kW/A]		0,485/3,12	
	fan speed	[min⁻¹]		2540	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	4,11/19,98	7,02/14,7	13,31/24,03
Control board				PRV V2.2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		50	
Colour	RAL	grey		7040	
Weight (net, without packing)		[kg]	269	270	272
Comply with ERP				2013; 2015	
Operation				indoors	
Fresh air temperature limits**		°C		-5 – +40	
Housing protection class	IP			34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 1900PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	53	64	69	73	70	65	61
Extract	68	42	58	64	62	61	58	55
Surrounding	60	50	52	54	54	50	48	41
Measured at 1938 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

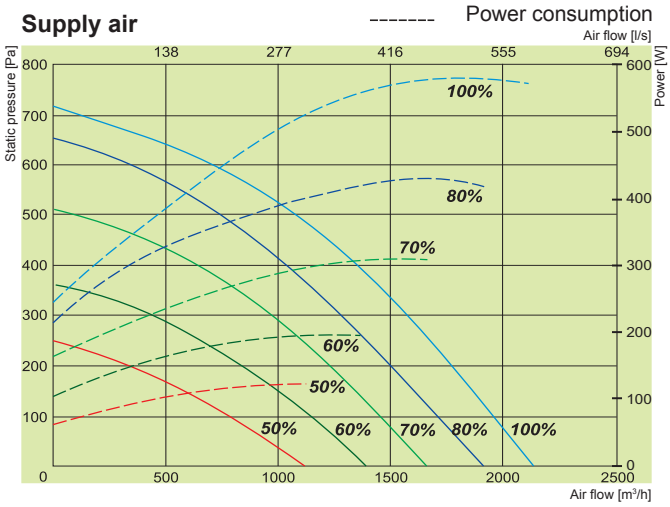
EUROVENT certified counter flow heat exchanger performance

RIS P EKO

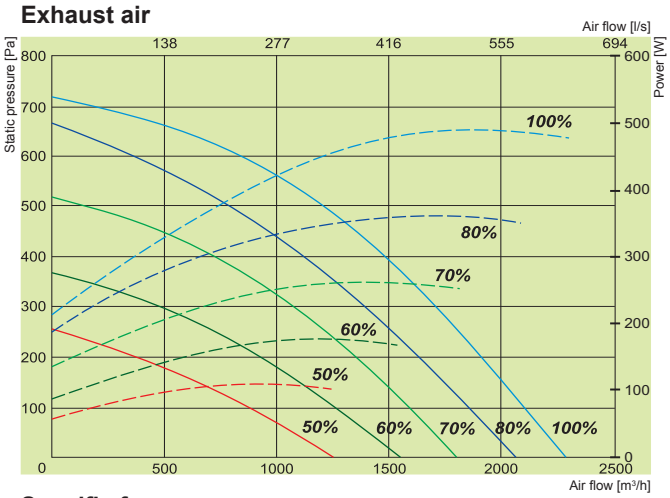
RIS 1900PW EKO 3.0

Performance
Power consumption

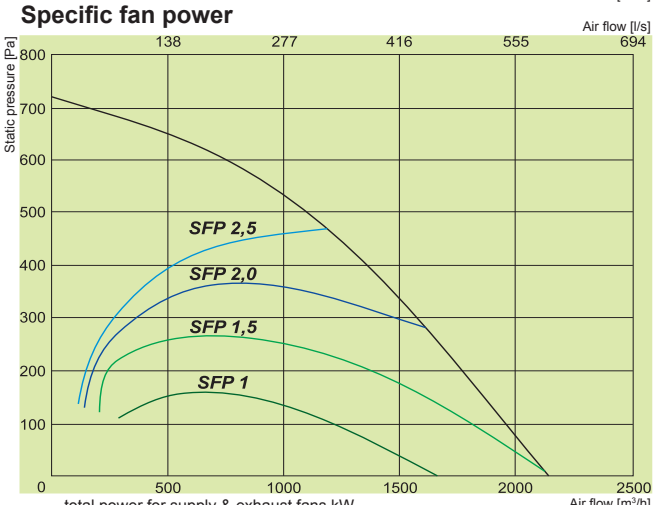
Supply air



Exhaust air



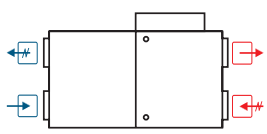
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIS 1900PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1753_0026A	1900PW EKO 3.0	Optional water heater.

			1900PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	SVS 700x400
	power consumption	[kW]	
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,488/3,16
	fan speed	[min⁻¹]	2540
supply	power/current	[kW/A]	0,485/3,12
	fan speed	[min⁻¹]	2540
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	1,21/5,03
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	265
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 1900PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	53	64	69	73	70	65	61
Extract	68	42	58	64	62	61	58	55
Surrounding	60	50	52	54	54	50	48	41
Measured at 1938 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

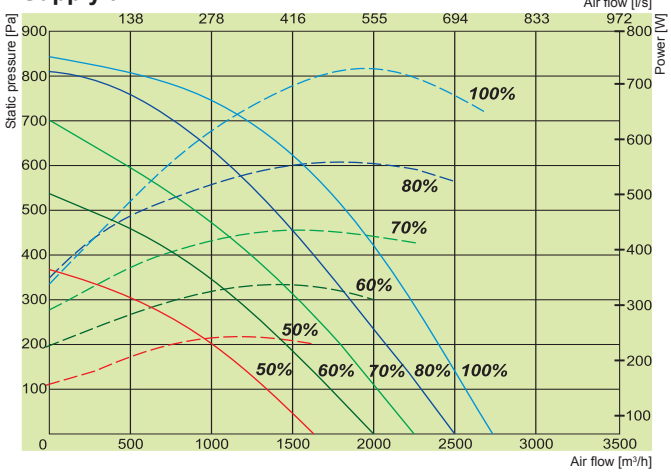
Certifications

EUROVENT certified counter flow heat exchanger performance

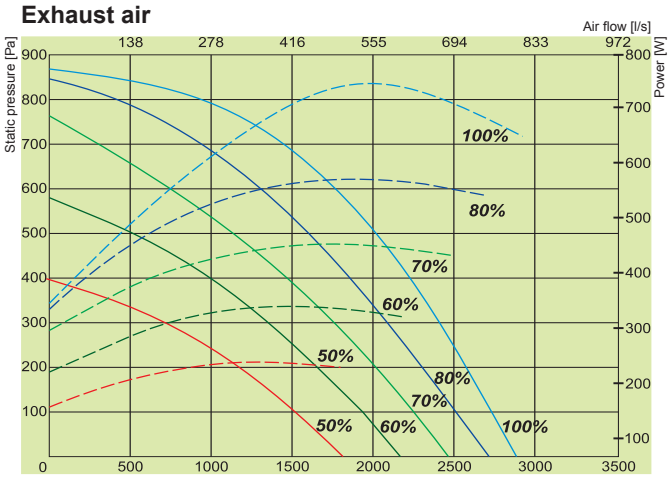
RIS 2500PE EKO 3.0

Performance
Power consumption

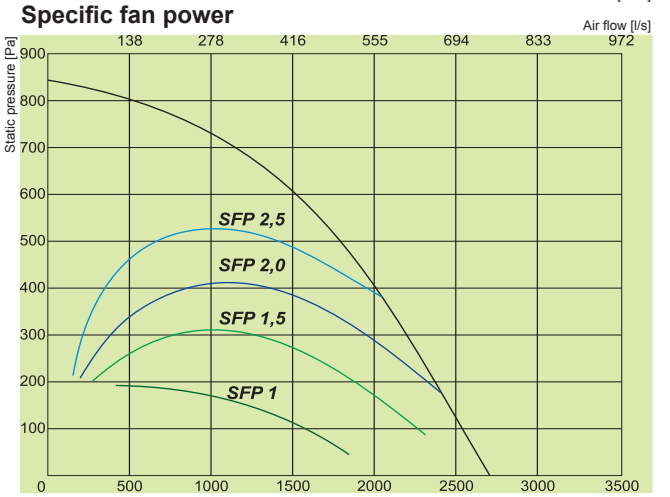
Supply air



Exhaust air

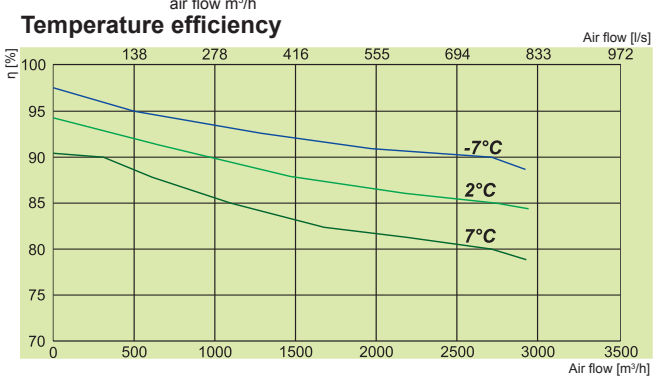


Specific fan power

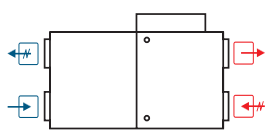


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version
GAGRIS1754_0027B	2500PE 4.5 EKO 3.0 Integrated electrical heater.
GAGRIS1755_0028B	2500PE 9.0 EKO 3.0 Integrated electrical heater.
GAGRIS1707_0015B	2500PE 18.0 EKO 3.0 Integrated electrical heater.

			4.5 EKO 3.0	9.0 EKO 3.0	18.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400
		[kW]	4,5	9,0	18,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,675/3,0	
	fan speed	[min⁻¹]		2800	
supply	power/current	[kW/A]		0,725/3,24	
	fan speed	[min⁻¹]		2800	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	5,87/12,5	10,7/19,5	19,7/33,1
Control board				PRV V2.2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		50	
Colour	RAL	grey		7040	
Weight (net, without packing)		[kg]	316	320	322
Comply with ERP				2013; 2015	
Operation				indoors	
Fresh air temperature limits**		°C		-5 – +40	
Housing protection class	IP			34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

RIS 2500PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	60	68	72	75	74	71	65
Extract	69	56	60	64	63	60	58	41
Surrounding	62	46	54	56	57	54	50	45
Measured at 2548 m³/h, 102 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

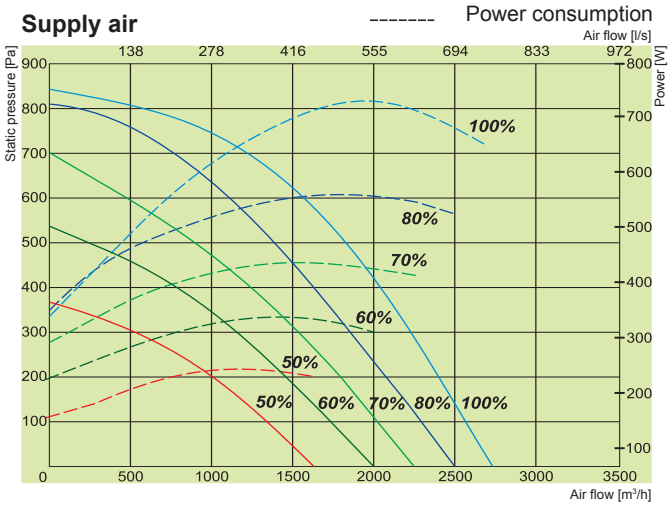
EUROVENT certified counter flow heat exchanger performance

RIS P EKO

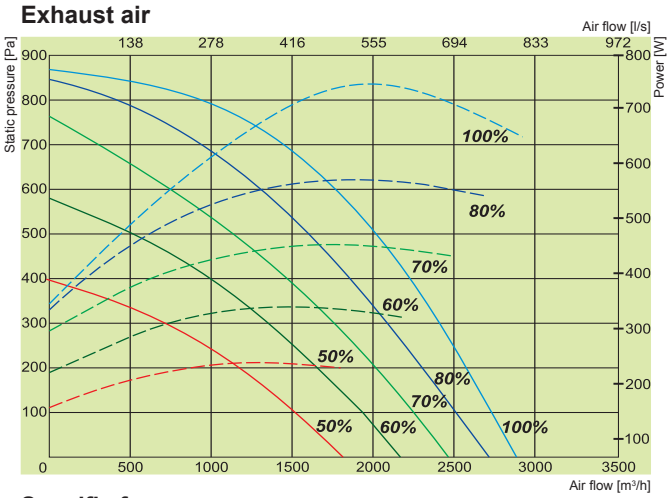
RIS 2500PW EKO 3.0

Performance
Power consumption

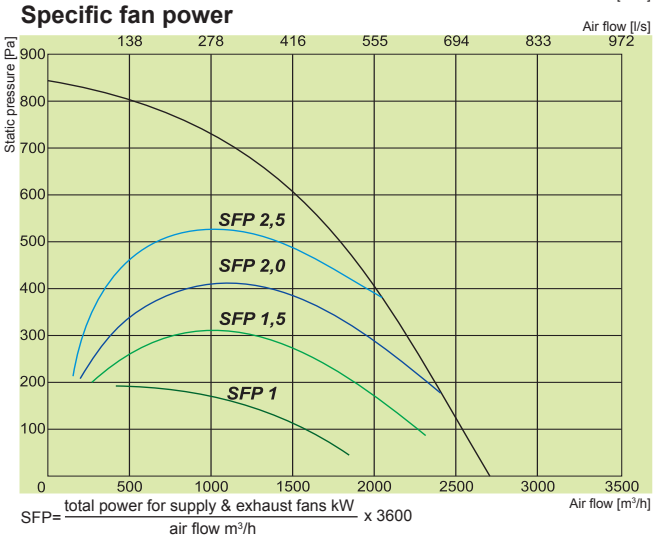
Supply air



Exhaust air

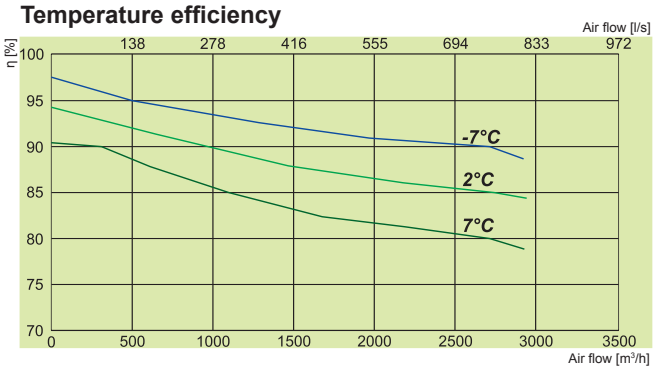


Specific fan power

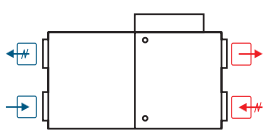


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIS1756_0029A	2500PW EKO 3.0	Optional water heater.

			2500PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	SVS 700x400
	power consumption	[kW]	
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,675/3,0
	fan speed	[min^{-1}]	2800
supply	power/current	[kW/A]	0,725/3,24
	fan speed	[min^{-1}]	2800
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	1,4/6,7
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing)		[kg]	313
Comply with ERP			2013; 2015
Operation			indoors
Fresh air temperature limits**		°C	-5 – +40
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

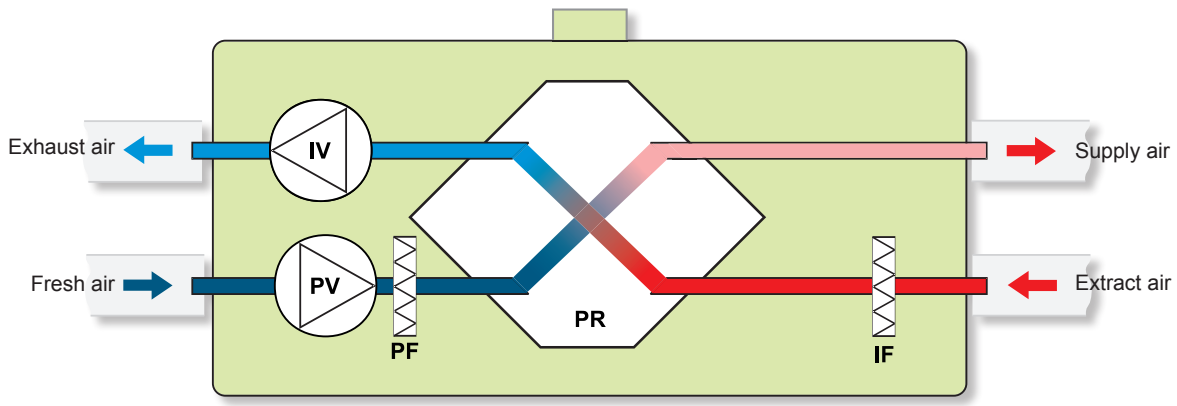
RIS 2500PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	60	68	72	75	74	71	65
Extract	69	56	60	64	63	60	58	41
Surrounding	62	46	54	56	57	54	50	45
Measured at 2548 m³/h, 102 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

Certifications

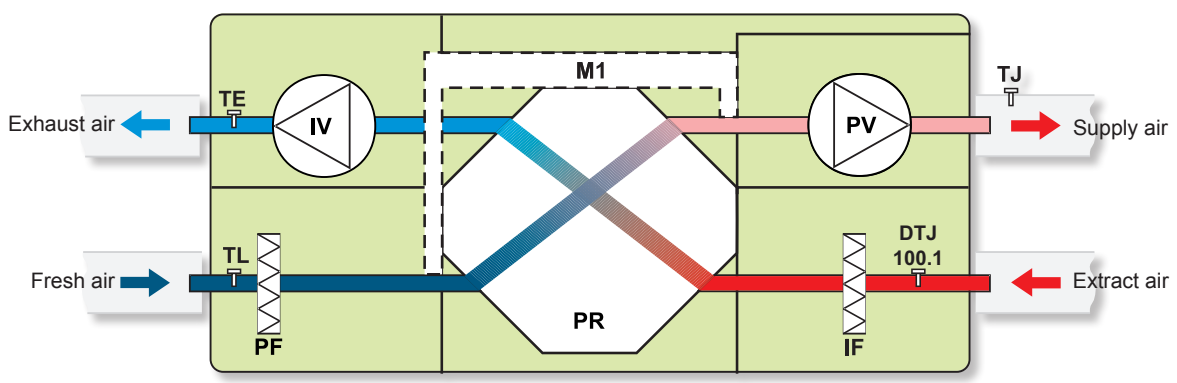
EUROVENT certified counter flow heat exchanger performance

RIS 150PE EKO (ceiling mounted) **versions without electrical heater**



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class M5)
IF - filter for extract air (class F7)

RIS 400PE EKO 3.0 (ceiling mounted) **version with electrical**

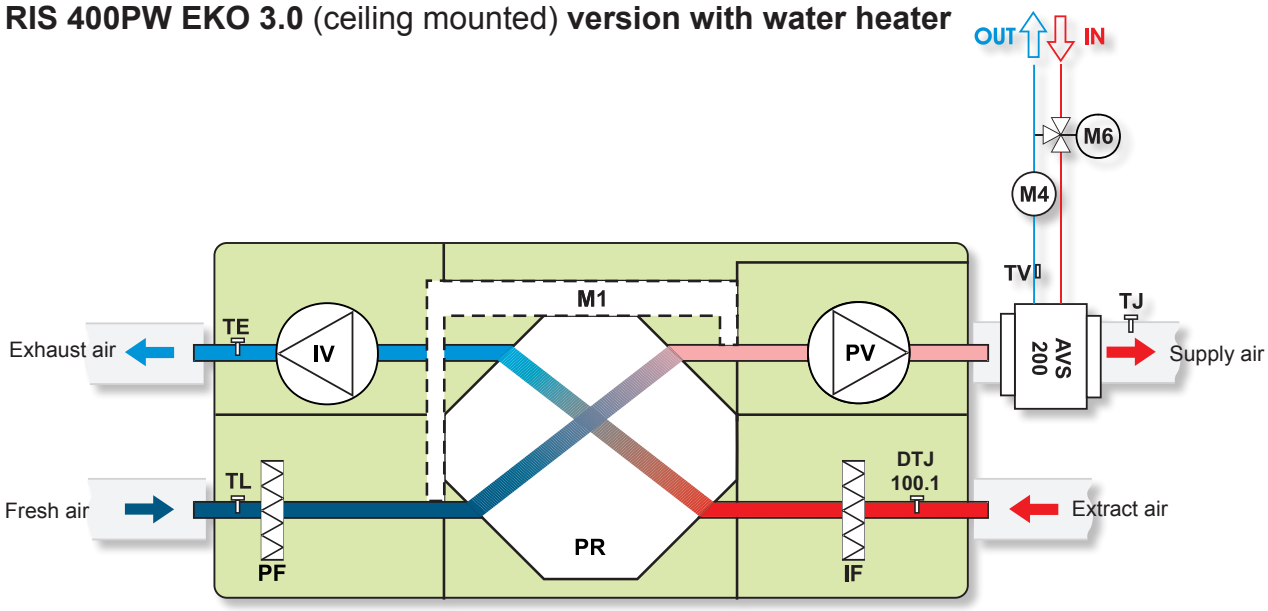


IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)

M1 - actuator of by-pass damper
TL - fresh air temperature sensor
TJ - supply air temperature sensor
TE - exhaust air temperature sensor
DTJ 100.1 - humidity + temperature sensor

RIS P EKO

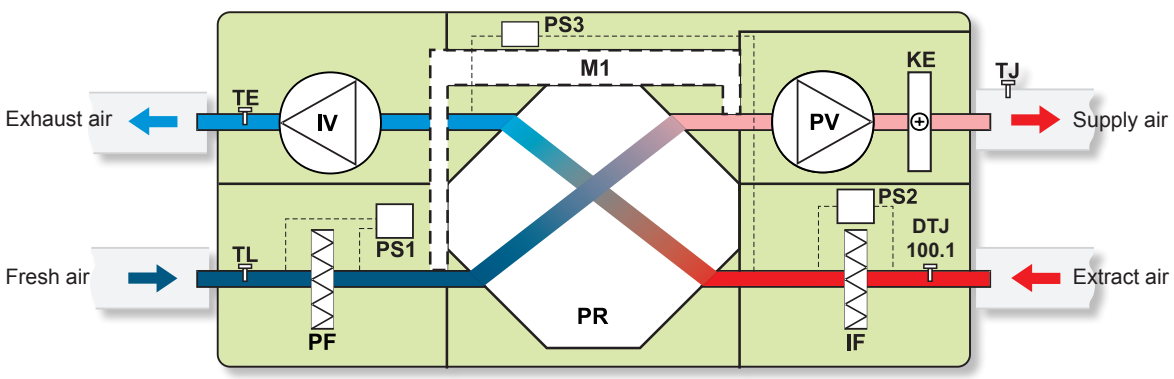
RIS 400PW EKO 3.0 (ceiling mounted) version with water heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TV - antifrost sensor

M1 - actuator of by-pass damper
M4 - water heater circulator pump
M6 - optionally supplied mixing valve and motor
TL - fresh air temperature sensor
TJ - supply air temperature sensor
TE - exhaust air temperature sensor
AVS - optionally supplied water heater
DTJ 100.1 - humidity + temperature sensor

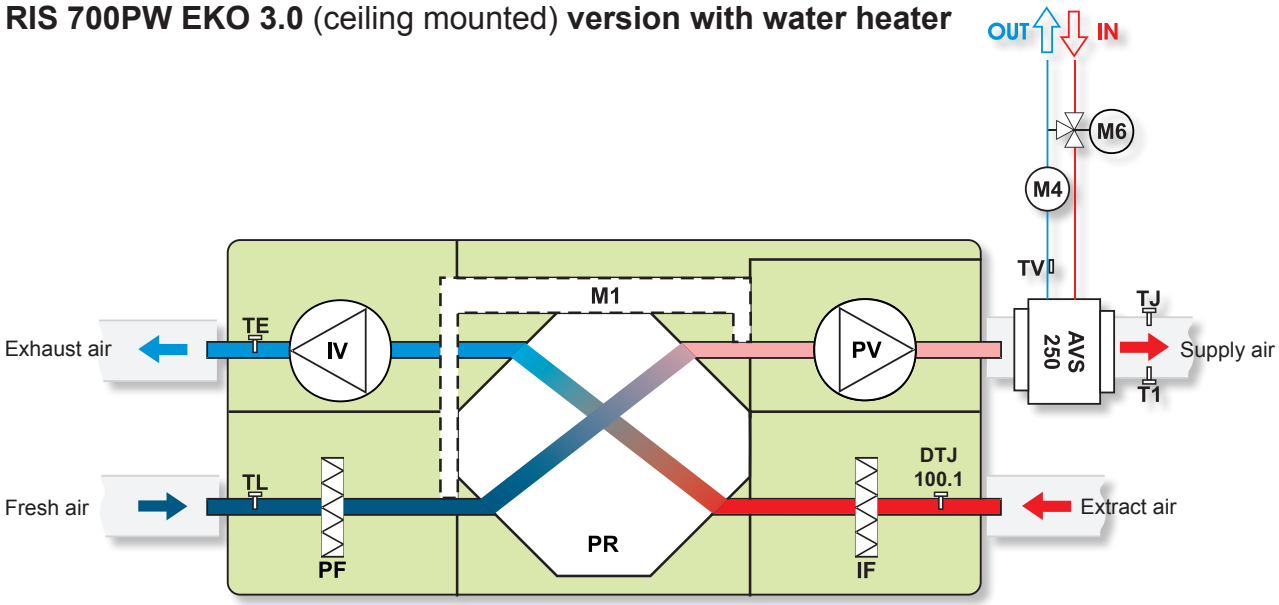
RIS 700PE EKO 3.0; 1200PE EKO 3.0; 1900PE EKO 3.0; 2500PE EKO 3.0
(ceiling mounted) **versions with electrical heater**



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air

DTJ 100.1 - humidity + temperature sensor
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch (RIS 1200PE EKO 3.0)
PS2 - extract air differential pressure switch (RIS 1200PE EKO 3.0)
PS3 - heat exchanger antifrost pressure switch (RIS 1200PE EKO 3.0)

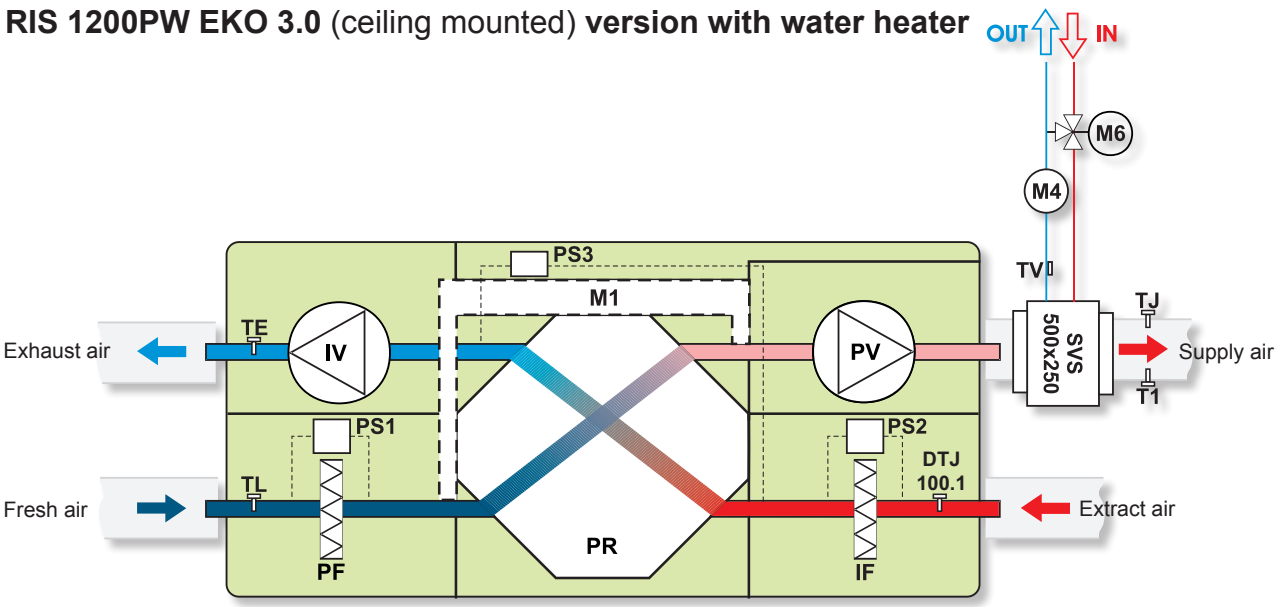
RIS 700PW EKO 3.0 (ceiling mounted) **version with water heater**



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
T1 - temperature sensor

TV - antifrost sensor
DTJ 100.1 - humidity + temperature sensor
M1 - actuator of by-pass damper
M4 - water heater circulator pump
M6 - optionally supplied mixing valve and motor
AVS - optionally supplied water heater

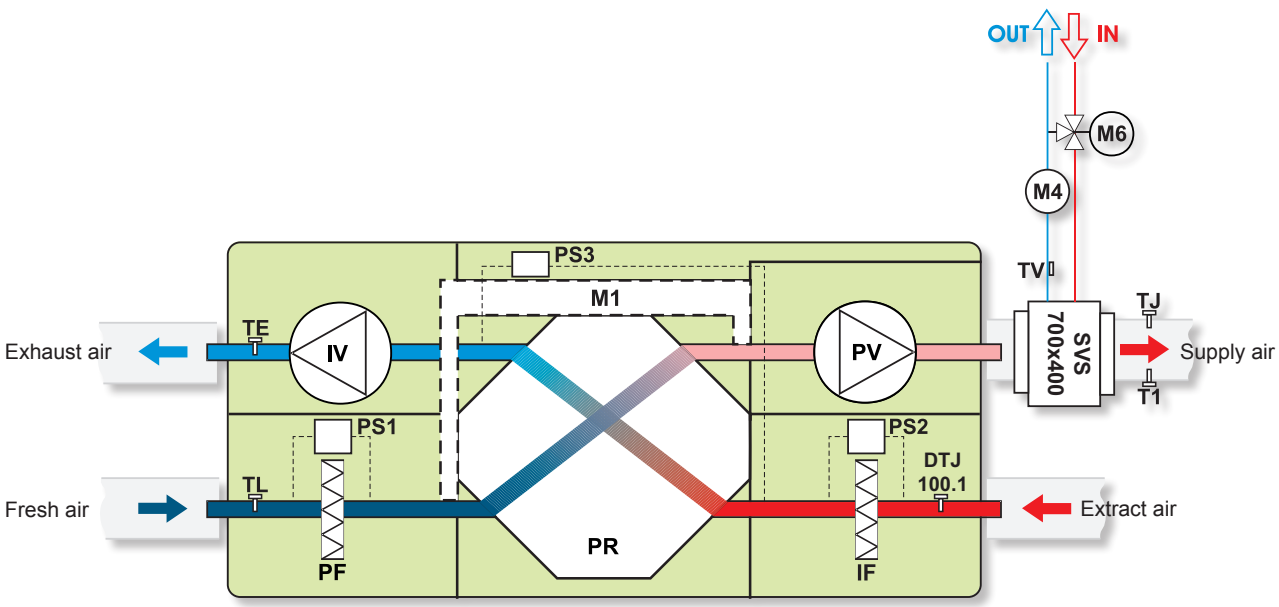
RIS 1200PW EKO 3.0 (ceiling mounted) **version with water heater**



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
T1 - temperature sensor

TV - antifrost sensor
DTJ 100.1 - humidity + temperature sensor
M1 - actuator of by-pass damper
M4 - water heater circulator pump
M6 - optionally supplied mixing valve and motor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
SVS - optionally supplied water heater

RIS 1900PW EKO 3.0; 2500PW EKO 3.0 (ceiling mounted) version with water heater

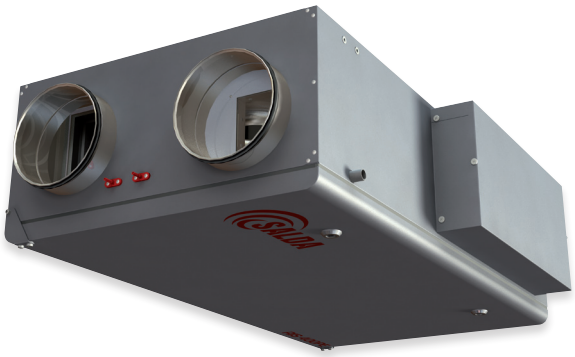


IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
T1 - temperature sensor

TV - antifrost sensor
DTJ 100.1 - humidity + temperature sensor
M1 - actuator of by-pass damper
M4 - water heater circulator pump
M6 - optionally supplied mixing valve and motor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
SVS - optionally supplied water heater

Notes

RIS P



AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIS have high efficiency plate heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Efficient, low noise fans.
- Efficiency of plate heat exchanger up to 80%.
- Electrical or water heater.
- Controlled air flow.
- Supply air temperature control.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- RIS 400P, 700P, 1000P, 1500P all versions can be controlled by UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls RIS 400P, 700P - 30mm and RIS 1000P, 1500P - 50mm.
- Housing: powder coated painting RAL 7040.
- Easy mounting.

Vėdinimo įrenginiai RIS P pagaminti su efektyviu plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio grąžinama šiluma iki 80%.
- Elektrinis arba papildomai komplektuojamas kanalinis vandeninis šildytuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Galima valdyti su UNI, PRO ir TPC pulteliais.
- Sienelių triukšmo izoliacija – RIS 400P, 700P - 30mm and RIS 1000P, 1500P - 50mm.
- Miltelinių būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.

Urządzenia wentylacyjne RIS P wyposażone w wydajny płytowy wymiennik ciepła. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory.
- Wydajny płytowy wymiennik ciepła, zwracający do 80% ciepła.
- Elektryczny lub opcjonalnie kanałowy grzejnik wody.
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek – RIS 400P, 700P - 30 mm i RIS 1000P, 1500P - 50mm.
- Obudowa malowana metodą proszkową – kolor RAL 7040.
- Szybki i łatwy montaż.

Установки с рекуперацией тепла RIS очищают, нагревают и подают свежий воздух. Установки RIS извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

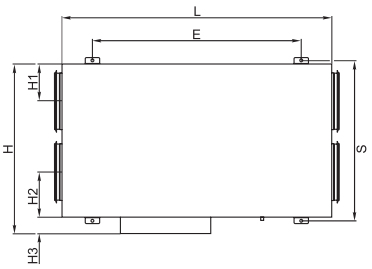
- Экономные и бесшумные вентиляторы EC.

Пластинчатый теплообменник, эффективность теплоотдачи до 80%.

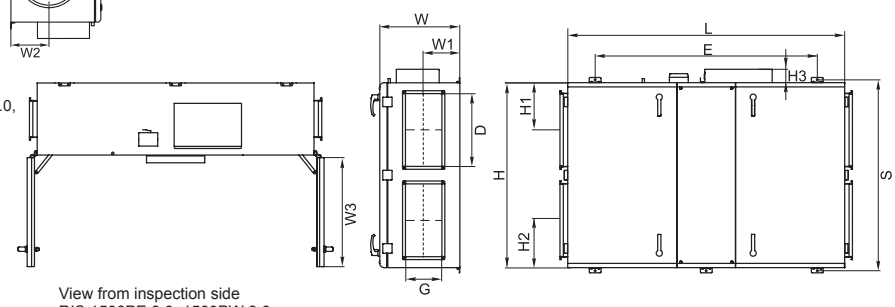
- Электрический или водяной нагреватель.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Каждый агрегат проверен отдельно.
- RIS 400P, 700P, 1000P, 1500P с интегрированными возможностями управления и наблюдения с помощью пультов управления UNI, PRO и TPC.
- Акустическая изоляция стенок RIS 400P, 700P - 30мм и RIS 1000P, 1500P - 50мм.
- Корпус: окрашенный RAL 7040.
- Легко монтируются.

Accessories

Control panel	Sensor controller	Programmable controller	Shuft-off damper	Circular duct silencer	Mounting clamp	Dampers for rectangular duct	Rectangular duct silencer
							
Flex p. 178	**Stouch** p. 179	**TPC** p. 180	**SKG** p. 226	**AKS** p. 230	**AP** p. 229	**SSK** p. 228	**SKS** p. 233



View from inspection side
RIS 400PE 3.0, 400PW 3.0, RIS 700PE 3.0, RIS 700PW 3.0,
RIS 1000PE 3.0, 1000PW 3.0



View from inspection side
RIS 1500PE 3.0, 1500PW 3.0

RIS 400 P E 3.0

RIS	Equipped with new PRV V1.1 control board
400	Heater type (E - integrated electrical heater; W - optional water heater)
P	Housing type (V - vertical, H - horozontal, P - under - ceiling)
E	AHU size according to air flow range m³/h
3.0	AHU with plate heat-exchanger

Type	Dimensions [mm]													
	W	W1	W2	W3	H	H1	H2	H3	E	L	S	øD	D	G
RIS 400PE/PW 3.0	264	125	140	484	615	125	120	75	830	970	592	160	-	-
RIS 700PE/PW 3.0	300	134	134	644	775	190	190	75	1040	1200	752	250	-	-
RIS 1000PE/PW 3.0	495	230	230	800	943	206	216	93	1124	1500	890	315	-	-
RIS 1500PE/PW 3.0	549	248	-	715	1363	325	325	93	1524	1900	1310	-	500	250

Type	Accessories												
	Flex Stouch TPC	SKG AKS AP	SSK	SKS	SVS	AVS	SP	TJP 10K CO4C***	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 400PE 3.0	+	160	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 400PW 3.0	+	160	-	-	-	160	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 700PE 3.0	+	250	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 700PW 3.0	+	250	-	-	-	250	TF230	+	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1000PE 3.0	+	315	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 1000PW 3.0	+	315	-	-	-	315	LF230	int	81	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0
RIS 1500PE 3.0	+	-	500x250	50-25	-	-	LM230A-TP	-	-	-	-	-	-
RIS 1500PW 3.0	+	-	500x250	50-25	500x250	-	TF230	int	81	3-2,5-4	3-1,6-4	45.10-2,5	45.10-1,6

*** - anti-frost thermostat
int - already integrated into the unit

Accessories

Water heater coil

SVS p. 198

Heating coil

AVS p. 192

Actuator for dampers

SP p. 188

Duct sensor

TJP 10K p. 187

Thermic water valve actuator

SSB p. 184

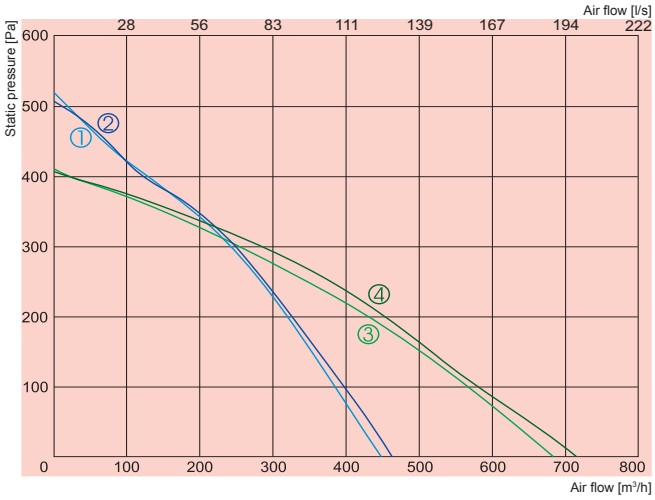
Mixing point

RMG p. 185

2 and 3 way valves

VVP/VXP p. 186

RIS P

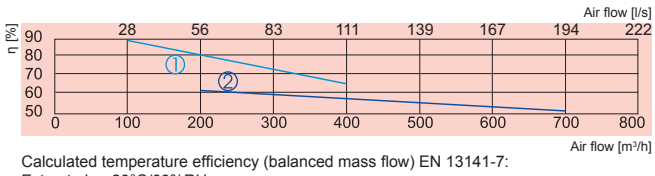


① supply
② exhaust

RIS 400PE 3.0

③ supply
④ exhaust

RIS 700PE 3.0



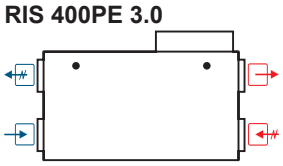
① **RIS 400PE 3.0**
② **RIS 700PE 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			400PE 3.0	700PE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
	-power consumption	[kW]	2,0	3,0
Pre-heater for heat exchanger		[kW]	1,0	1,2
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,166/0,73	0,212/0,92
	-fan speed	[min^{-1}]	1850	2000
supply	-power/current	[kW/A]	0,174/0,77	0,207/0,9
	-fan speed	[min^{-1}]	1850	2000
Motor protection class			IP-44	IP-44
Thermal efficiency			75%	57%
Max power consumption		[kW/A]	3,34/14,52	4,62/20,1
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	supply		M5	M5
Thermal insulation		[mm]	30	30
Weight		[kg]	42,0	57,0
Comply with ERP 2013			+	+

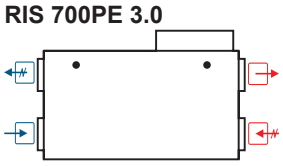
Designed for operation indoors only

RIS 400PE 3.0



400PE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	52	62	63	57	61	55	51
Extract	55	42	48	52	46	42	39	31
Surrounding	48	36	41	44	40	38	35	30
Measured at 380 m³/h, 108 Pa								

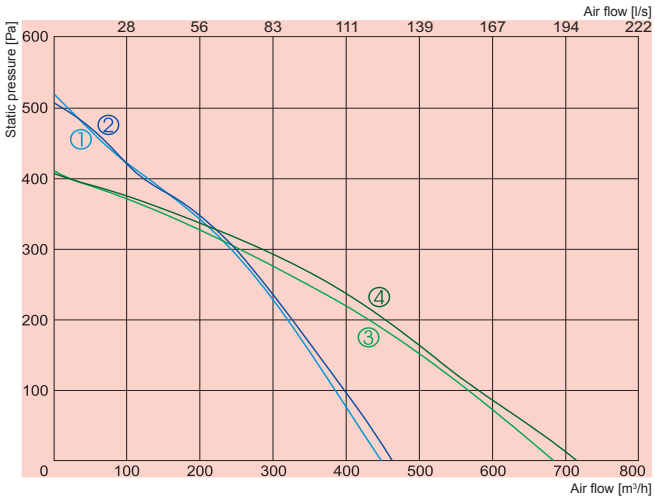
RIS 700PE 3.0



700PE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	55	63	70	73	67	68	60
Extract	61	52	59	52	45	44	39	27
Surrounding	53	42	46	47	45	44	42	34
Measured at 556 m³/h, 106 Pa								

View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

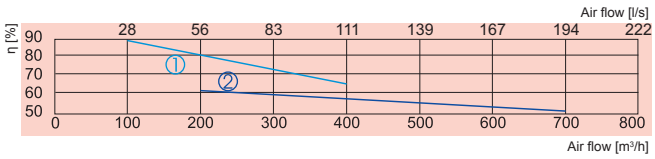


① supply
② exhaust

RIS 400PW 3.0

③ supply
④ exhaust

RIS 700PW 3.0



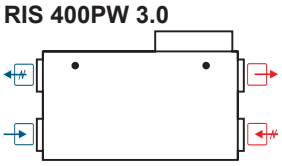
① **RIS 400PW 3.0**
② **RIS 700PW 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			400PW 3.0	700PW 3.0
Water heater	-power	[kW]		
	-water . T_{in}/T_{out}	[°C]	AVS 160	AVS 250
	-water flow rate	[l/s]		
Pre-heater for heat exchanger		[kW]	1,0	1,2
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,166/0,73	0,212/0,92
	-fan speed	[min^{-1}]	1850	2000
supply	-power/current	[kW/A]	0,174/0,77	0,207/0,9
	-fan speed	[min^{-1}]	1850	2000
Motor protection class			IP-44	IP-44
Thermal efficiency			75%	57%
Max power consumption		[kW/A]	1,34/5,83	1,62/7,04
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	supply		M5	M5
Thermal insulation		[mm]	30	30
Weight		[kg]	42,0	57,0
Comply with ERP 2013			+	+

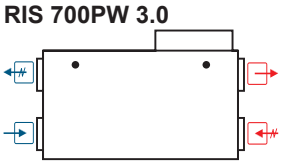
Designed for operation indoors only

RIS 400PW 3.0



400PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	52	62	63	57	61	55	51
Extract	55	42	48	52	46	42	39	31
Surrounding	48	36	41	44	40	38	35	30
Measured at 380 m³/h, 108 Pa								

RIS 700PW 3.0

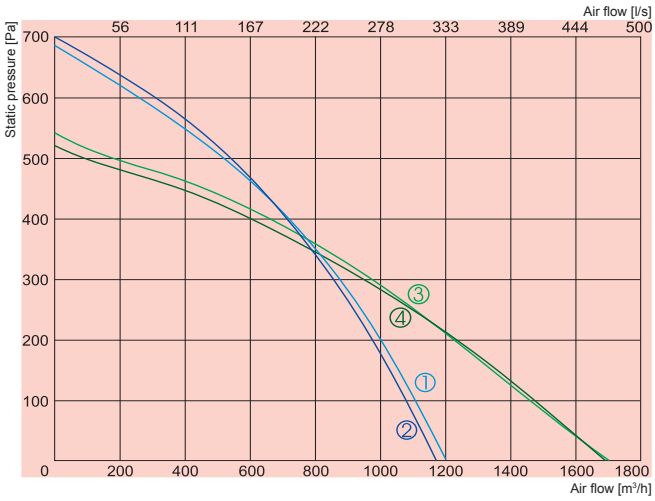


700PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	55	63	70	73	67	68	60
Extract	61	52	59	52	45	44	39	27
Surrounding	53	42	46	47	45	44	42	34
Measured at 556 m³/h, 106 Pa								

View from inspection side

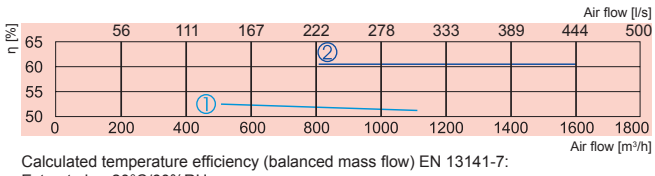
Exhaust air | Extract air | Fresh air | Supply air

RIS P



① ② supply exhaust **RIS 1000PE 3.0**

③ ④ supply exhaust **RIS 1500PE 3.0**



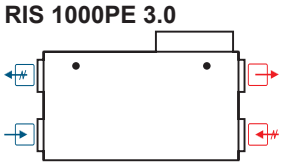
① ② **RIS 1000PE 3.0**
RIS 1500PE 3.0

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			1000PE 3.0	1500PE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400
	-power consumption	[kW]	6,0	9,0
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,303/1,32	0,359/1,57
	-fan speed	[min⁻¹]	2250	2750
supply	-power/current	[kW/A]	0,322/1,4	0,373/1,63
	-fan speed	[min⁻¹]	2250	2750
Motor protection class			IP-44	IP-44
Thermal efficiency			50%	62%
Max power consumption		[kW/A]	6,63/11,40	9,73/16,19
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	-supply		M5	M5
Thermal insulation		[mm]	50	50
Weight		[kg]	113,0	194,0
Comply with ERP 2013			-	+

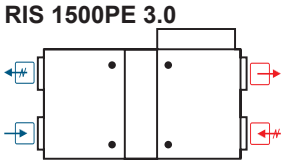
Designed for operation indoors only

RIS 1000PE 3.0



1000PE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	54	59	67	68	65	62	56
Extract	57	44	43	53	54	44	42	35
Surrounding	55	42	46	50	48	45	44	39
Measured at 935 m³/h, 90 Pa								

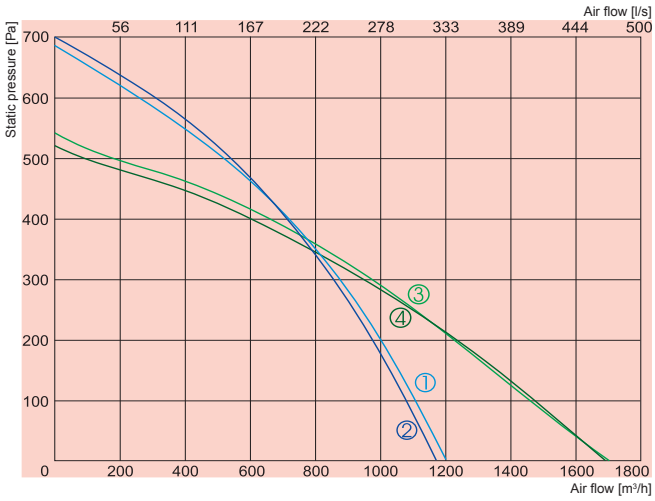
RIS 1500PE 3.0



1500PE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	69	71	76	74	69	68	65
Extract	59	52	51	56	50	41	32	27
Surrounding	58	48	50	54	52	46	38	36
Measured at 1507 m³/h, 101 Pa								

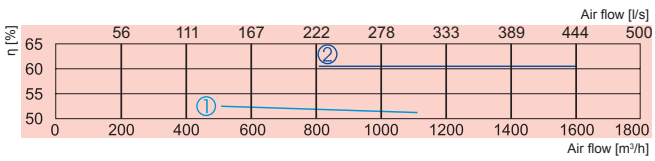
View from inspection side

Exhaust air | Extract air | Fresh air | Supply air



① ② supply exhaust **RIS 1000PW 3.0**

③ ④ supply exhaust **RIS 1500PW 3.0**



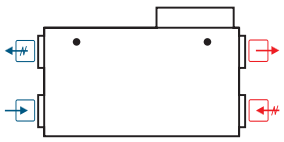
① ② **RIS 1000PW 3.0**
RIS 1500PW 3.0

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			1000PW 3.0	1500PW 3.0
Water heater	-power	[kW]	AVS 315	SVS 500x250
	-water . T_{in}/T_{out}	[°C]		
	-water flow rate	[l/s]		
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,286/1,25	0,359/157
	-fan speed	[min^{-1}]	2250	2750
supply	-power/current	[kW/A]	0,312/1,36	0,373/1,63
	-fan speed	[min^{-1}]	2250	2750
Motor protection class			IP-44	IP-44
Thermal efficiency			50%	62%
Max power consumption		[kW/A]	0,6/2,63	0,732/3,2
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	supply		M5	M5
Thermal insulation		[mm]	50	50
Weight		[kg]	113,0	189,0
Comply with ERP 2013			-	+

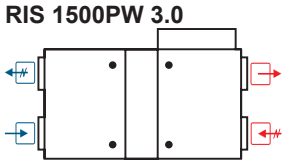
Designed for operation indoors only

RIS 1000PW 3.0



1000PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	54	59	67	68	65	62	56
Extract	57	44	43	53	54	44	42	35
Surrounding	55	42	46	50	48	45	44	39
Measured at 935 m³/h, 90 Pa								

RIS 1500PW 3.0

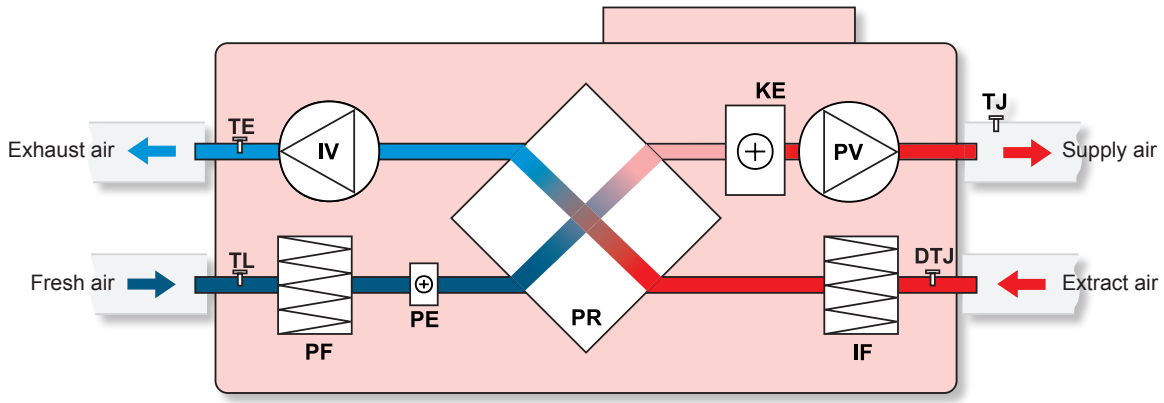


1500PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	69	71	76	74	69	68	65
Extract	59	52	51	56	50	41	32	27
Surrounding	58	48	50	54	52	46	38	36
Measured at 1507 m³/h, 101 Pa								

View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

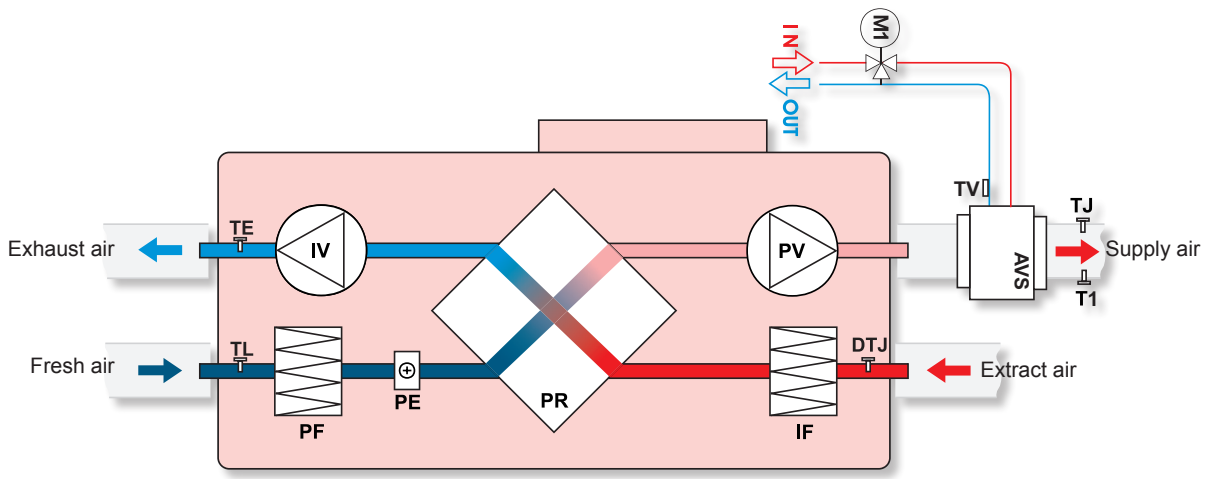
RIS 400PE 3.0; 700PE 3.0 (ceiling mounted) versions with electrical heater *



IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PE	- anti-freeze heater for heat exchanger
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor

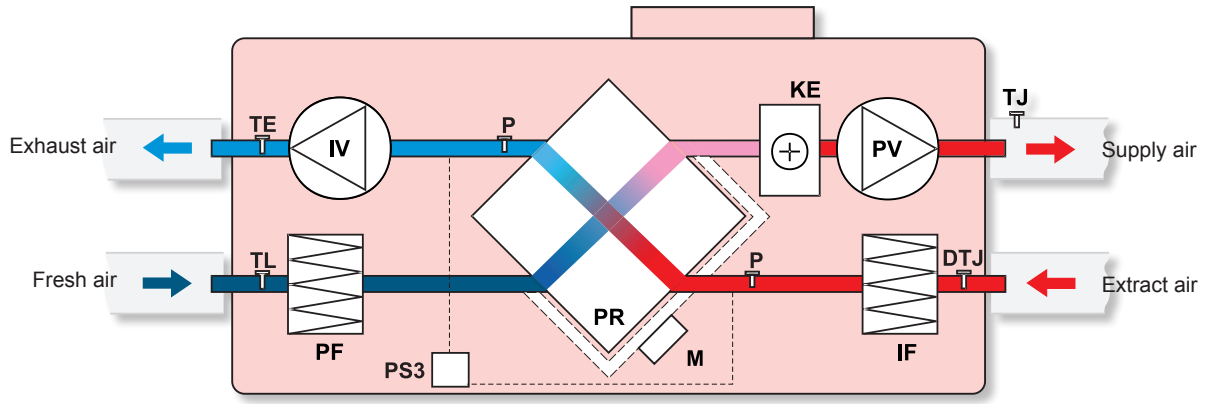
* - Summer casette can be applied to RIS 400 PE 3.0; RIS 700 PE 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

RIS 400PW 3.0; 700PW 3.0 (ceiling mounted) versions with water heater



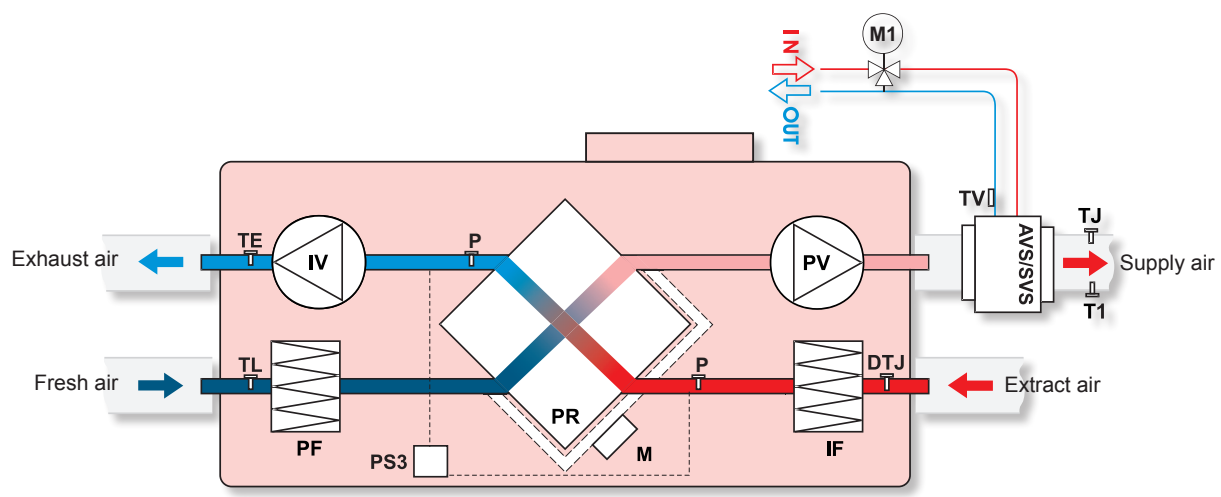
AVS	- optionally supplied water heater
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
PE	- anti-freeze heater for heat exchanger
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
M1	- optionally supplied mixing valve and motor
TV	- optionally supplied antifrost sensor
T1	- optionally supplied antifrost thermostat

RIS 1000PE 3.0; 1500PE 3.0 (ceiling mounted) versions with electrical heater



IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
M	- actuator of by-pass damper
PS3	- heat exchanger antifrost pressure switch
P	- heat exchanger pressure switch

RIS 1000PW 3.0; 1500PW 3.0 (ceiling mounted) versions with water heater



AVS/SVS	- optionally supplied water heater
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
M	- actuator of by-pass damper
M1	- optionally supplied mixing valve and motor
PS3	- heat exchanger antifrost pressure switch
TV	- optionally antifrost sensor
T1	- optionally antifrost thermostat
P	- heat exchanger pressure switch

RIS V

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIS V have high efficiency plate heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Efficient, low noise fans.
- Efficiency of plate heat exchanger up to 65%.
- Electrical or water heater.
- Controlled air flow.
- Supply air temperature control.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- Every unit is tested.
- RIS 260V - 1900V all versions can be controlled with UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls RIS 260V - 20 mm, RIS 400V, 700V - 30mm, RIS 1000V, 1500V, 1900V - 50 mm.
- RIS 260V - 1900V housing: powder coated painting RAL 7040.
- Easy mounting.

Vėdinimo įrenginiai RIS V pagaminiti su efektyviu plokšteliniu srautų šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio gražinama šiluma iki 65%.
- Elektrinis arba papildomai užsakomas kanalinis vandeninis šildytuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – RIS 260V - 20 mm, RIS 400V, 700V - 30mm, RIS 1000V, 1500V, 1900V - 50 mm.
- Milteliniu būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas motavimas.

Urządzenia wentylacyjne RIS V wyposażone w wydajny płytowy wymiennik ciepła strumieni. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory.
- Wydajny płytowy wymiennik ciepła, zwracający do 65% ciepła.
- Elektryczny lub opcjonalnie zamawiany kanałowy grzejnik wody
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek – RIS 260V - 20 mm, RIS 400V, 700V - 30mm, RIS 1000V, 1500V, 1900V - 50 mm.
- Obudowa malowana metodą proszkową – kolor RAL 7040.
- Szybki i łatwy montaż.

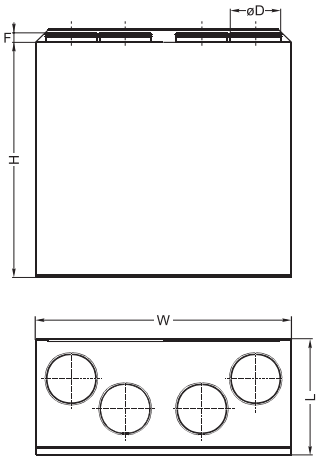
Установки с рекуперацией тепла RIS V очищают, нагревают и подают свежий воздух. Установки RIS извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Производительные и бесшумные вентиляторы.
- Пластинчатый теплообменник, эффективность теплоотдачи до 65%.
- Электрический или водяной нагреватель.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Каждый агрегат проверен отдельно.
- RIS 260V - 1900V с интегрированными возможностями управления и наблюдения с помощью пультов управления UNI, PRO и TPC.
- Акустическая изоляция стенок RIS 260V - 20 мм, RIS 400V, 700V - 30мм, RIS 1000V, 1500V, 1900V - 50 мм.
- RIS 260V - 1900V корпус: окрашенный RAL 7040.
- Легко монтируются.

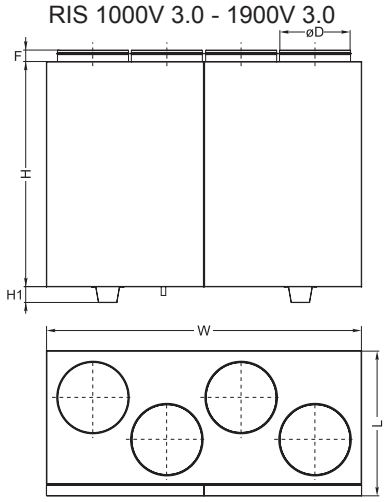
Accessories

Control panel	Sensor controller	Programmable controller	Circular duct silencer	Shuft-off damper	Mounting clamp	Heating coil
						
Flex p. 178	**Stouch** p. 179	**TPC** p. 180	**AKS** p. 230	**SKG** p. 226	**AP** p. 229	**AVS** p. 192

RIS 260V 3.0 - 700V 3.0



RIS 1000V 3.0 - 1900V 3.0



RIS 260 V E L 3.0

RIS	AHU with plate heat-exchanger
260	AHU size according to air flow range m³/h
V	Housing type (V - vertical, H - horozontal, P - under - ceiling)
E	Heater type (E - integrated electrical heater; W - optional water heater)
L	Air intake side (L - left; R - right)
3.0	Equipped with new PRV V1.1 control board

Type	Dimensions [mm]					
	L	W	H	øD	H_1	F
RIS 260VE/VW 3.0	295	598	680	125	-	30
RIS 400VE/VW 3.0	352	900	800	160	-	30
RIS 700VE/VW 3.0	462	950	845	200	-	30
RIS 1000VE/VW 3.0	645	1400	1000	315	70	40
RIS 1500VE/VW 3.0	645	1400	1000	315	70	40
RIS 1900VE/VW 3.0	790	1650	1100	400	70	65

Type	Accessories									
	Flex Stouch TPC	AKS SKG AP	AVS	SP	TJP 10K CO4C***	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 260VE 3.0	+	125	-	LM230A-TP	-	-	-	-	-	-
RIS 260VW 3.0	+	125	125	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 400VE 3.0	+	160	-	LM230A-TP	-	-	-	-	-	-
RIS 400VW 3.0	+	160	160	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 700VE 3.0	+	200	-	LM230A-TP	-	-	-	-	-	-
RIS 700VW 3.0	+	200	200	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 1000VE 3.0	+	315	-	LM230A-TP	-	-	-	-	-	-
RIS 1000VW 3.0	+	315	int	LF230	int	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1500VE 3.0	+	315	-	LM230A-TP	-	-	-	-	-	-
RIS 1500VW 3.0	+	315	int	LF230	int	81	3-1,0-4	3-0,63-4	45.10-1,0	45,10-0,63
RIS 1900VE 3.0	+	400	-	SM230A-TP	-	-	-	-	-	-
RIS 1900VW 3.0	+	400	int	SF230A	int	81	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0

*** - anti-frost thermostat
int - already integrated into the unit

Accessories

Actuator for dampers

SP p. 188

Duct sensor

TJP 10K p. 187

Thermic water valve actuator

SSB p. 184

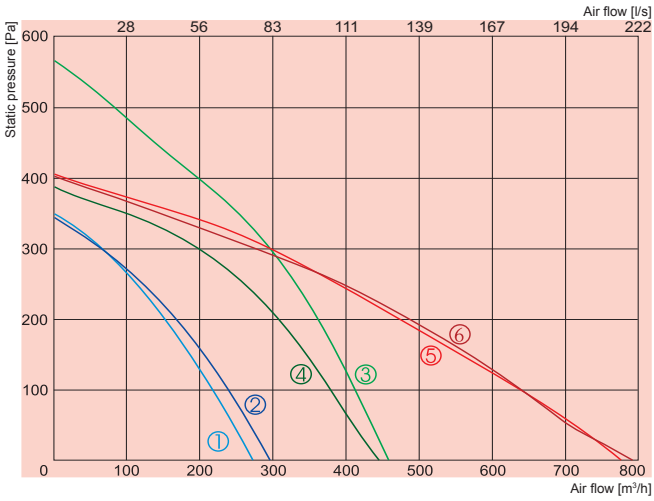
Mixing point

RMG p. 185

2 and 3 - way valves

VVP/VXP p. 186

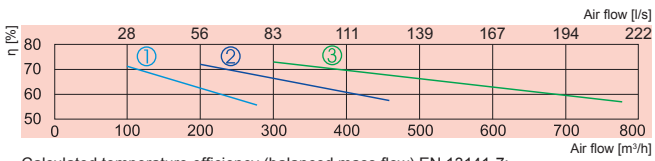
RIS V



① ② supply exhaust — **RIS 260VE 3.0**

③ ④ supply exhaust — **RIS 400VE 3.0**

⑤ ⑥ supply exhaust — **RIS 700VE 3.0**



① **RIS 260VE 3.0**

② **RIS 400VE 3.0**

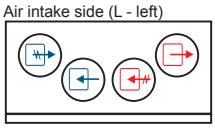
③ **RIS 700VE 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

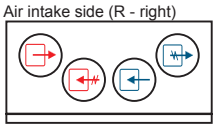
			260VE 3.0	400VE 3.0	700VE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-power consumption	[kW]	1,0	2,0	3,0
Pre-heater for heat exchanger		[kW]	0,3	1,0	1,2
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,075/0,33	0,207/0,91	0,205/0,89
	-fan speed	[min⁻¹]	1880	2100	2000
supply	-power/current	[kW/A]	0,080/0,35	0,198/0,87	0,203/0,88
	-fan speed	[min⁻¹]	1880	1850	2000
Motor protection class			IP-44	IP-44	IP-54
Thermal efficiency			55%	60%	60%
Max power consumption		[kW/A]	1,455/6,33	3,40/14,9	4,71/20,5
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		G4	G4	G4
	supply		M5	M5	M5
Thermal insulation		[mm]	20	30	30
Weight		[kg]	40,0	68,0	82,0
Comply with ERP 2013			+	+	+

Designed for operation indoors only

RIS 260VEL 3.0
Air intake side (L - left)

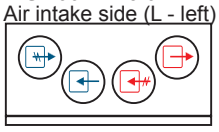


RIS 260VER 3.0
Air intake side (R - right)

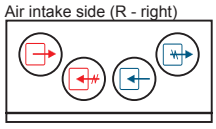


260VE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	59	61	63	62	60	53	43
Extract	58	46	50	56	51	44	40	26
Surrounding	49	39	40	44	42	40	34	24
Measured at 220 m³/h, 100 Pa								

RIS 400VEL 3.0
Air intake side (L - left)

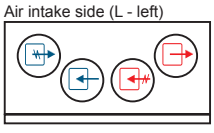


RIS 400VER 3.0
Air intake side (R - right)

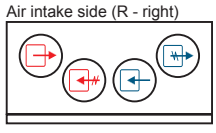


400VE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	70	62	61	63	64	61	55	50
Extract	60	57	53	54	50	46	32	27
Surrounding	52	47	49	40	38	34	27	26
Measured at 400 m³/h, 110 Pa								

RIS 700VEL 3.0
Air intake side (L - left)



RIS 700VER 3.0
Air intake side (R - right)

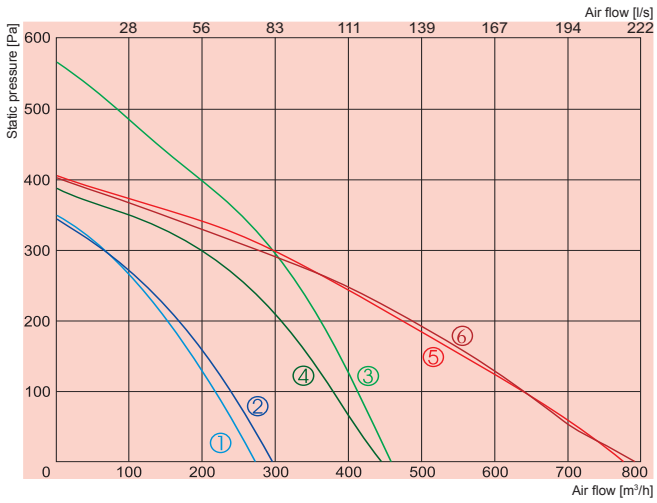


700VE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	74	68	65	67	66	65	58	57
Extract	65	58	60	61	57	50	47	37
Surrounding	55	51	52	44	37	34	31	22
Measured at 627 m³/h, 110 Pa								

View from inspection side

View from inspection side

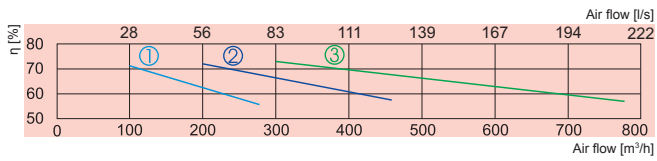
Exhaust air Extract air Fresh air Supply air



① ② supply / exhaust — **RIS 260VW 3.0**

③ ④ supply / exhaust — **RIS 400VW 3.0**

⑤ ⑥ supply / exhaust — **RIS 700VW 3.0**



① **RIS 260VW 3.0**

② **RIS 400VW 3.0**

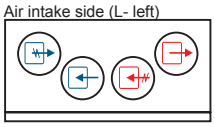
③ **RIS 700VW 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

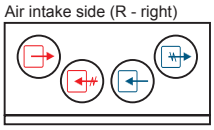
			260VW 3.0	400VW 3.0	700VW 3.0
Water heater	-power	[kW]	AVS 125	AVS 160	AVS 200
	-water . T_{in}/T_{ou}	[°C]			
	-water pressure drop	[kPa]			
Pre-heater for heat exchanger		[kW]	0,3	1,0	1,2
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,075/0,33	0,207/0,91	0,205/0,89
	-fan speed	[min^{-1}]	1880	2100	2000
supply	-power/current	[kW/A]	0,080/0,35	0,198/0,87	0,203/0,88
	-fan speed	[min^{-1}]	1880	1850	2000
Motor protection class			IP-44	IP-44	IP-54
Thermal efficiency			55%	60%	60%
Max power consumption		[kW/A]	0,455/1,98	1,40/6,09	1,6/6,96
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		G4	G4	G4
	supply		M5	M5	M5
Thermal insulation		[mm]	20	30	30
Weight		[kg]	40,0	68,0	82,0
Comply with ERP 2013			+	+	+

Designed for operation indoors only

RIS 260VWL 3.0
Air intake side (L- left)

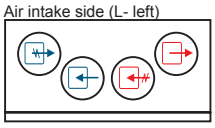


RIS 260VWR 3.0
Air intake side (R - right)

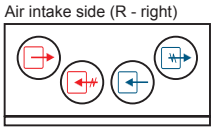


260VW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	59	61	63	62	60	53	43
Extract	58	46	50	56	51	44	40	26
Surrounding	49	39	40	44	42	40	34	24
Measured at 220 m³/h, 100 Pa								

RIS 400VWL 3.0
Air intake side (L- left)

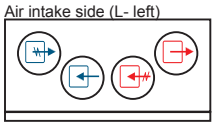


RIS 400VWR 3.0
Air intake side (R - right)

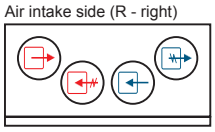


400VW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	70	62	61	63	64	61	55	50
Extract	60	57	53	54	50	46	32	27
Surrounding	52	47	49	40	38	34	27	26
Measured at 400 m³/h, 110 Pa								

RIS 700VWL 3.0
Air intake side (L- left)



RIS 700VWR 3.0
Air intake side (R - right)



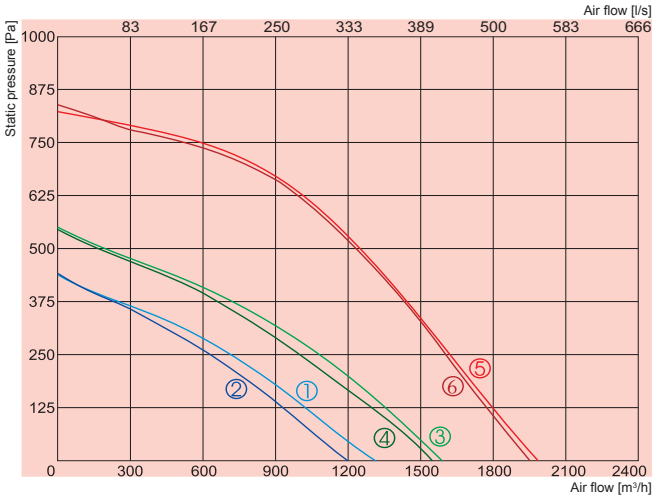
700VW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	74	68	65	67	66	65	58	57
Extract	65	58	60	61	57	50	47	37
Surrounding	55	51	52	44	37	34	31	22
Measured at 627 m³/h, 110 Pa								

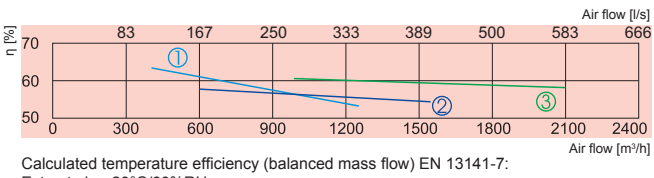
View from inspection side

View from inspection side

Exhaust air · Extract air · Fresh air · Supply air

RIS V



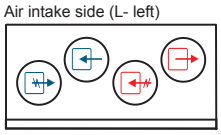


Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

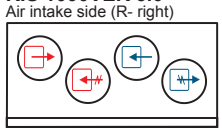
			1000VE 3.0	1500VE 3.0	1900VE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	6,0	9,0	15,0
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,239/1,04	0,372/1,62	0,650/2,87
	-fan speed	[min⁻¹]	2650	2750	2830
supply	-power/current	[kW/A]	0,239/1,04	0,380/1,66	0,650/2,87
	-fan speed	[min⁻¹]	2650	2750	2830
Motor protection class			IP-44	IP-44	IP-54
Thermal efficiency			54%	54%	60%
Max power consumption		[kW/A]	6,48/9,35	9,75/14,1	16,3/23,5
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	150,0	150,0	260,0
Comply with ERP 2013			+	+	-

Designed for operation indoors only

RIS 1000VEL 3.0
Air intake side (L- left)

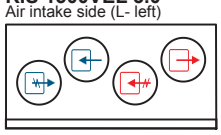


RIS 1000VER 3.0
Air intake side (R- right)

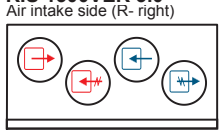


1000VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	72	74	68	70	64	56	52
Extract	64	60	61	55	50	49	42	31
Surrounding	57	51	52	49	48	45	37	32
Measured at 1039 m³/h, 120 Pa								

RIS 1500VEL 3.0
Air intake side (L- left)

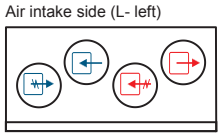


RIS 1500VER 3.0
Air intake side (R- right)



1500VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	67	73	74	75	69	66	54
Extract	68	65	62	61	58	53	45	43
Surrounding	60	52	53	54	53	49	44	39
Measured at 1366 m³/h, 120 Pa								

RIS 1900VEL 3.0
Air intake side (L- left)



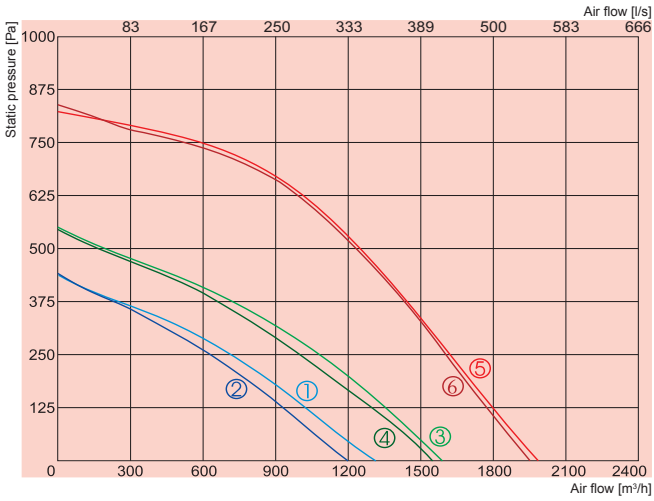
View from inspection side

RIRS 1900VER 3.0
Air intake side (R- right)

View from inspection side

1900VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	86	59	76	77	80	81	76	66
Extract	70	60	63	66	64	56	50	41
Surrounding	63	47	55	57	58	57	51	44
Measured at 1819 m³/h, 120 Pa								

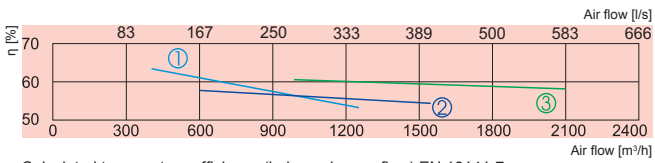
Exhaust air | Extract air | Fresh air | Supply air



① ② supply exhaust **RIS 1000VW 3.0**

③ ④ supply exhaust **RIS 1500VW 3.0**

⑤ ⑥ supply exhaust **RIS 1900VW 3.0**



① **RIS 1000VW 3.0**

② **RIS 1500VW 3.0**

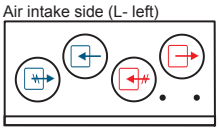
③ **RIS 1900VW 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

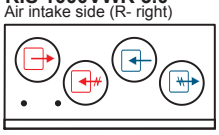
			1000VW 3.0	1500VW 3.0	1900VW 3.0
Water heater	-power	[kW]	6,7	9,4	12,8
	-water temp. T_{in}/T_{out}	[°C]	80/60	80/60	80/60
	-water flow rate	[l/s]	0,08	0,11	0,16
	-water pressure drop	[kPa]	0,9	1,6	3,3
	-kvs value	[m³/h]	3,1	3,2	3,2
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,239/1,04	0,372/1,62	0,650/2,87
	-fan speed	[min⁻¹]	2650	2750	2830
supply	-power/current	[kW/A]	0,239/1,04	0,380/1,66	0,650/2,87
	-fan speed	[min⁻¹]	2650	2750	2830
Motor protection class			IP-44	IP-44	IP-54
Thermal efficiency			54%	54%	60%
Max power consumption		[kW/A]	0,478/2,08	0,752/3,27	1,3/5,65
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	150,0	150,0	260,0
Comply with ERP 2013			+	+	-

Designed for operation indoors only

RIS 1000VWL 3.0
Air intake side (L- left)

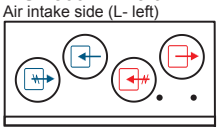


RIS 1000VWR 3.0
Air intake side (R- right)

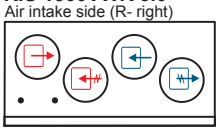


1000VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	72	74	68	70	64	56	52
Extract	64	60	61	55	50	49	42	31
Surrounding	57	51	52	49	48	45	37	32
Measured at 1039 m³/h, 120 Pa								

RIS 1500VWL 3.0
Air intake side (L- left)

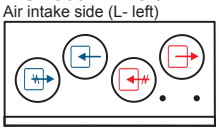


RIS 1500VWR 3.0
Air intake side (R- right)



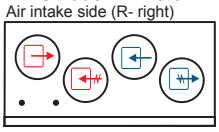
1500VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	67	73	74	75	69	66	54
Extract	68	65	62	61	58	53	45	43
Surrounding	60	52	53	54	53	49	44	39
Measured at 1366 m³/h, 120 Pa								

RIS 1900VWL 3.0
Air intake side (L- left)



View from inspection side

RIRS 1900VWR 3.0
Air intake side (R- right)



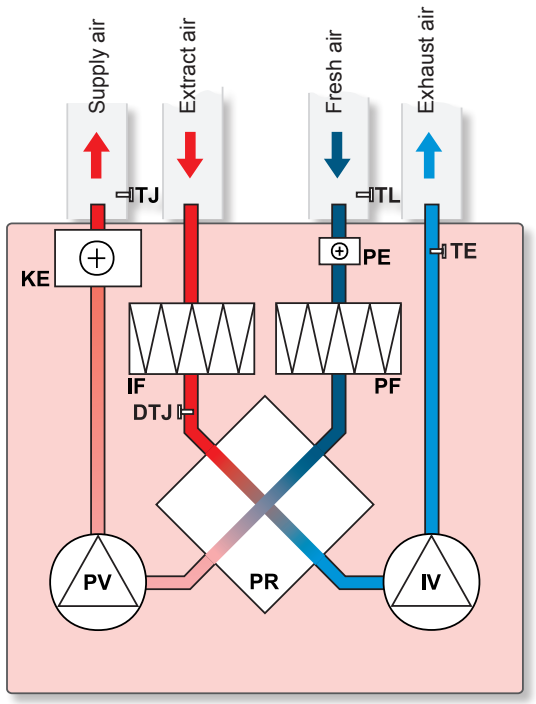
View from inspection side

1900VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	83	60	77	78	77	75	72	63
Extract	68	58	63	63	62	55	48	43
Surrounding	61	46	54	56	55	54	48	43
Measured at 1819 m³/h, 120 Pa								

Exhaust air | Extract air | Fresh air | Supply air

RIS V

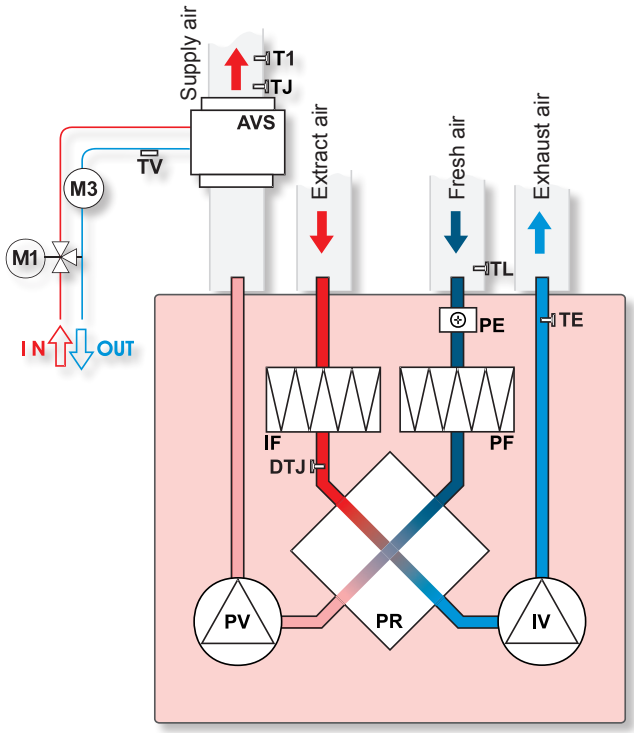
RIS 260VE 3.0; 400VE 3.0; 700VE 3.0 (vertical) versions with electrical heater *



IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PE	- anti-freeze heater for heat exchanger
PF	- filter for supply air (class M5)
IF	- filter for extract air (class G4)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor

* - Summer casette can be applied to all versions of RIS 260 VE 3.0; RIS 400 VE 3.0; RIS 700 VE 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

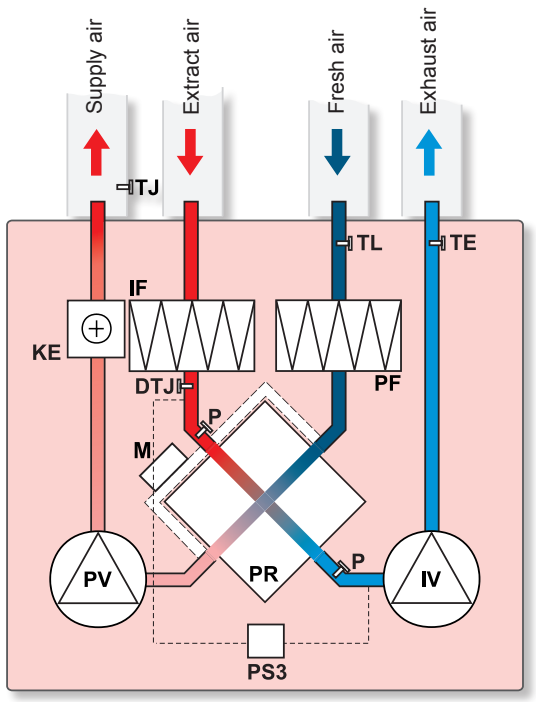
RIS 260VW 3.0; 400VW 3.0; 700VW 3.0 (vertical) versions with water heater *



AVS	- optionally supplied water heater
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
PE	- anti-freeze heater for heat exchanger
PF	- filter for supply air (class M5)
IF	- filter for extract air (class G4)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TV	- optionally supplied antifrost sensor
T1	- optionally supplied antifrost thermostat
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
M1	- optionally supplied mixing valve and motor
M3	- water heater circulatory pump

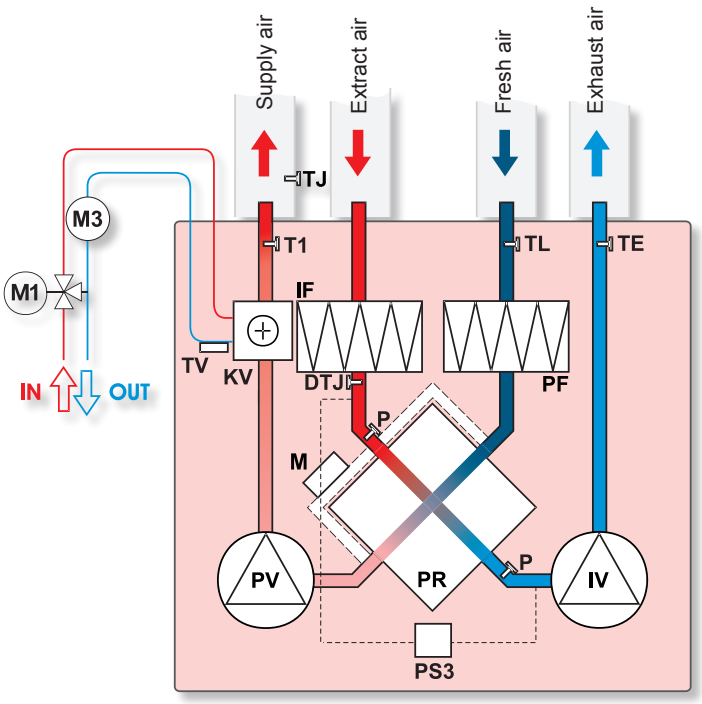
* - Summer casette can be applied to all versions of RIS 260 VW 3.0; RIS 400 VW 3.0; RIS 700 VW 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

RIS 1000VE 3.0; 1500VE 3.0; 1900VE 3.0 (vertical) versions with electrical heater



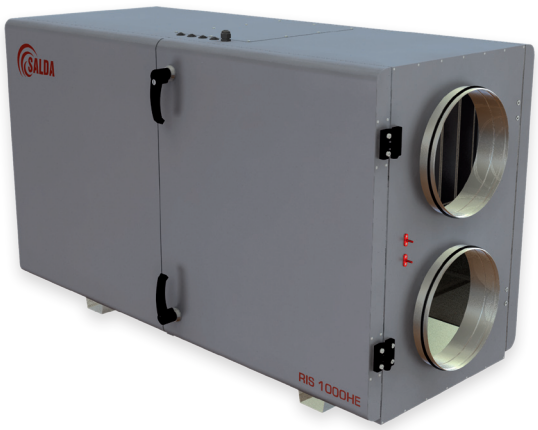
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
P	- heat exchanger pressure switch
M	- by-pass damper
PS3	- heat exchanger antifrost pressure switch

RIS 1000VW 3.0; 1500VW 3.0; 1900VW 3.0 (vertical) versions with water heater



IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KV	- water heater
PF	- filter for supply air (class M5)
IF	- filter for extract air (class M5)
TJ	- temperature sensor for supply air
TL	- temperature sensor for fresh air
TE	- temperature sensor for extract air
DTJ	- humidity + temperature sensor
P	- heat exchanger pressure switch
T1	- antifrost thermostat
TV	- antifrost sensor
M	- by-pass damper
M1	- optionally supplied mixing valve and motor
M3	- water heater circulatory pump
PS3	- heat exchanger antifrost pressure switch

RIS H



AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIS H have high efficiency plate heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Efficient, low noise fans.
- Efficiency of plate heat exchanger up to 65%.
- Electrical or water heater.
- Controlled air flow.
- Supply air temperature control.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- Every unit is tested
- RIS 400H - 1900H all versions can be controlled with UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls – 50 mm.
- RIS 400H - 1900H housing: powder coated painting RAL 7040.
- Easy mounting.

Vėdinimo įrenginiai RIS H pagaminti su efektyviu plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio grąžinama šiluma iki 65%.
- Elektrinis arba papildomai užsakomas kanalinis vandeninis šildytuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – 50mm.
- Miltelinių būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.

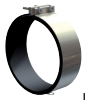
Urządzenia wentylacyjne RIS H wyposażone w wydajny płytowy wymiennik ciepła. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

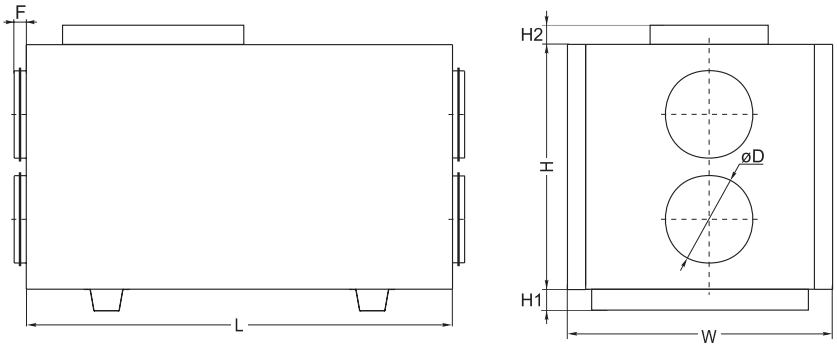
- Energooszczędne i cicho pracujące wentylatory.
- Wydajny płytowy wymiennik ciepła, zwracający do 65% ciepła.
- Elektryczny lub opcjonalnie zamawiany kanałowy grzejnik wody
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek – 50mm.
- Obudowa malowana metodą proszkową – kolor RAL 7040.
- Szybki i łatwy montaż.

Установки с рекуперацией тепла RIS H очищают, нагревают и подают свежий воздух. Установки RIS извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Производительные и бесшумные вентиляторы.
- Пластинчатый теплообменник, эффективность теплоотдачи до 65%.
- Электрический или водяной нагреватель.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Каждый агрегат проверен отдельно.
- RIS 400H - 1900H с интегрированными возможностями управления и наблюдения с помощью пультов управления UNI, PRO и TPC.
- Акустическая изоляция стенок – 50мм.
- RIS 400H - 1900H корпус: окрашенный RAL 7040.
- Легко монтируются.

Accessories

Control panel	Sensor controller	Programmable controller	Circular duct silencer	Shuft-off damper	Mounting clamp
					
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**AKS** **p. 230**	**SKG** **p. 226**	**AP** **p. 229**



RIS 1900 H E 3.0

1900	AHU size according to air flow range m³/h
H	Housing type (V - vertical, H - horozontal, P - under - ceiling)
E	Heater type (E - integrated electrical heater; W - optional water heater)
3.0	Equipped with new PRV V1.1 control board

Type	Dimensions [mm]						
	L	W	H	øD	H_1	H_2	F
RIS 400HE 3.0	1000	354	600	160	30	55	30
RIS 400HW 3.0	1170	354	600	160	30	55	30
RIS 700HE 3.0	1170	504	600	250	30	55	40
RIS 700HW 3.0	1320	504	600	250	30	55	40
RIS 1000HE/HW 3.0	1500	645	865	315	70	-	40
RIS 1500HE/HW 3.0	1500	645	865	315	70	-	40
RIS 1900HE/HW 3.0	1800	795	1050	400	70	-	65

Type	Accessories										
	Flex, Stouch, TPC	AKS	SKS	SKG, AP	SP	SP *by-pass*	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 400HE 3.0	+	160	-	160	LM230A-TP	-	-	-	-	-	-
RIS 400HW 3.0	+	160	-	160	TF230	-	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 700HE 3.0	+	250	-	250	LM230A-TP	-	-	-	-	-	-
RIS 700HW 3.0	+	250	-	250	TF230	-	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 1000HE 3.0	+	315	-	315	LM230A-TP	int	-	-	-	-	-
RIS 1000HW 3.0	+	315	-	315	LF230	int	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1500HE 3.0	+	315	-	315	LM230A-TP	int	-	-	-	-	-
RIS 1500HW 3.0	+	315	-	315	LF230	int	81	3-1,0-4	3-1,0-4	45.10-1,0	45.10-1,0
RIS 1900HE 3.0	+	400	-	400	SM230A-TP	int	-	-	-	-	-
RIS 1900HW 3.0	+	400	-	400	SF230A	int	81	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0

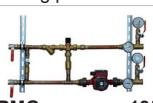
Accessories

Actuator for dampers

SP p. 188

Thermic water valve actuator

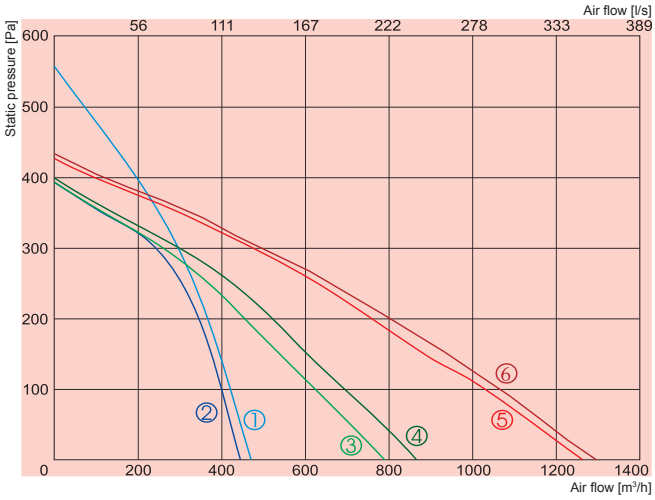
SSB p. 184

Mixing point

RMG p. 185

2 and 3 - way valves

VVP/VXP p. 186

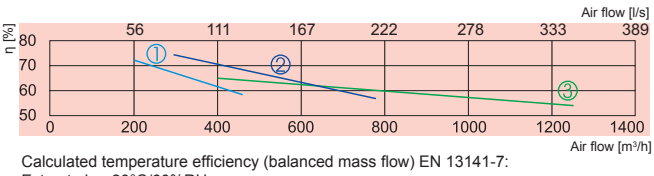
RIS H



① ② supply exhaust — **RIS 400HE 3.0**

③ ④ supply exhaust — **RIS 700HE 3.0**

⑤ ⑥ supply exhaust — **RIS 1000HE 3.0**



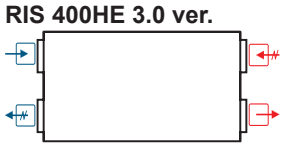
① **RIS 400HE 3.0**
② **RIS 700HE 3.0**
③ **RIS 1000HE 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			400HE 3.0	700HE 3.0	1000HE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
	-power consumption	[kW]	2,0	3	6,0
Pre-heater for heat exchanger		[kW]	1,0	1,2	-
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,162/0,70	0,230/1,0	0,230/1,0
	-fan speed	[min⁻¹]	2100	2000	2650
supply	-power/current	[kW/A]	0,199/0,87	0,230/1,0	0,226/0,98
	-fan speed	[min⁻¹]	1850	2000	2650
Motor protection class			IP-54/IP-44	IP-54	IP-44
Thermal efficiency			60%	60%	54%
Max power consumption		[kW/A]	3,36/14,61	4,66/15,91	6,45/10,64
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		G4	G4	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	48,0	57,0	152,0
Comply with ERP 2013			+	+	+

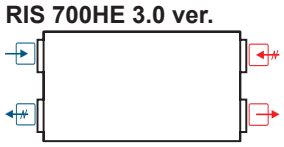
Designed for operation indoors only

RIS 400HE 3.0 ver.



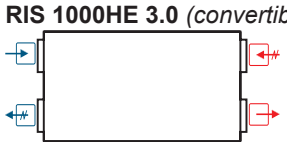
400HE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	69	63	62	64	61	59	55
Extract	56	49	51	52	45	44	39	35
Surrounding	51	42	45	46	43	41	37	35
Measured at 413 m³/h, 120 Pa								

RIS 700HE 3.0 ver.



700HE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	74	66	65	67	68	64	63	55
Extract	60	51	55	57	51	45	40	36
Surrounding	53	45	46	47	46	43	40	36
Measured at 622 m³/h, 100 Pa								

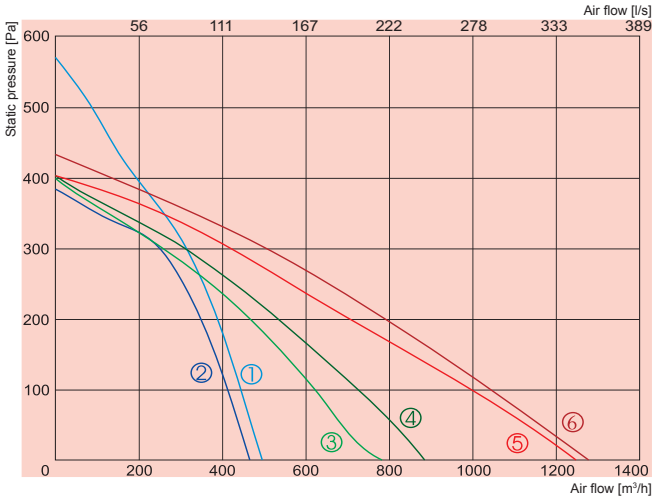
RIS 1000HE 3.0 *(convertible)* **ver.**



1000HE 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	69	65	69	70	66	59	56
Extract	58	52	50	53	51	46	41	35
Surrounding	55	48	45	50	48	44	38	34
Measured at 1050 m³/h, 90 Pa								

View from inspection side

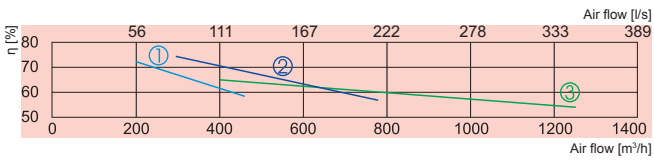
Exhaust air | Extract air | Fresh air | Supply air



① supply
② exhaust
RIS 400HW 3.0

③ supply
④ exhaust
RIS 700HW 3.0

⑤ supply
⑥ exhaust
RIS 1000HW 3.0



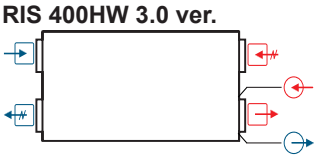
① **RIS 400HW 3.0**
② **RIS 700HW 3.0**
③ **RIS 1000HW 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

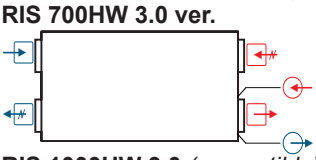
			400HW 3.0	700HW 3.0	1000HW 3.0
Water heater	-power	[kW]	2,7	4,7	6,75
	-water temp. T_{in}/T_{out}	[°C]	80/60	80/60	80/60
	-water flow rate	[l/s]	0,03	0,06	0,08
	-water pressure drop	[kPa]	2,47	4,9	1,8
	-kvs value	[m³/h]	0,7	1	2,2
Pre-heater for heat exchanger		[kW]	1	1,2	-
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,161/0,7	0,233/1,0	0,214/0,93
	-fan speed	[min⁻¹]	2100	2000	2650
supply	-power/current	[kW/A]	0,194/0,85	0,222/0,97	0,228/1,0
	-fan speed	[min⁻¹]	1850	2000	2650
Motor protection class			IP-54	IP-54	IP-44
Thermal efficiency			60%	60%	54%
Max power consumption		[kW/A]	1,35/5,90	1,65/7,19	0,44/1,98
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		G4	G4	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	48,0	57,0	152,0
Comply with ERP 2013			+	+	+

Designed for operation indoors only

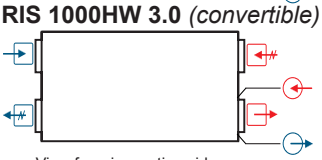
RIS 400HW 3.0 ver.



RIS 700HW 3.0 ver.



RIS 1000HW 3.0 *(convertible)* **ver.**



View from inspection side

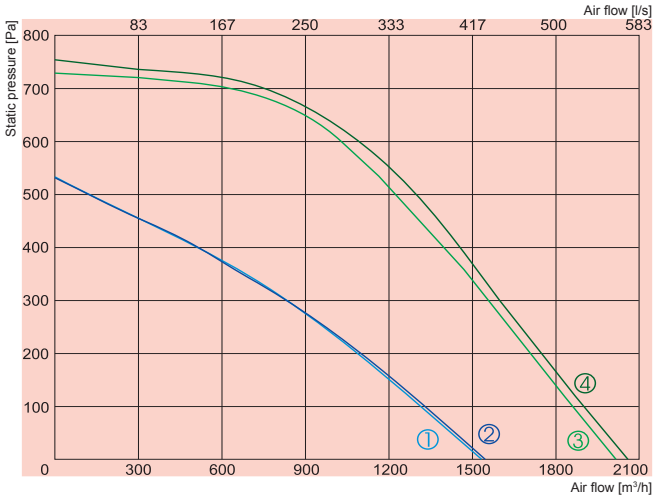
Used water outlet | Water inlet
Exhaust air | Extract air | Fresh air | Supply air

400HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	69	63	62	64	61	59	55
Extract	56	49	51	52	45	44	39	35
Surrounding	51	42	45	46	43	41	37	35
Measured at 413 m³/h, 120 Pa								

700HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	74	66	65	67	68	64	63	55
Extract	60	51	55	57	51	45	40	36
Surrounding	53	45	46	47	46	43	40	36
Measured at 622 m³/h, 100 Pa								

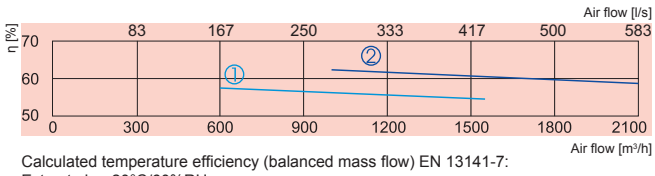
1000HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	69	65	69	70	66	59	56
Extract	58	52	50	53	51	46	41	35
Surrounding	55	48	45	50	48	44	38	34
Measured at 1050 m³/h, 90 Pa								

RIS H



① supply
② exhaust
RIS 1500HE 3.0

③ supply
④ exhaust
RIS 1900HE 3.0



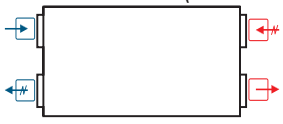
① **RIS 1500HE 3.0**
② **RIS 1900HE 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			1500HE 3.0	1900HE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400
	-power consumption	[kW]	9,0	15,0
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,356/1,55	0,669/2,95
	-fan speed	[min⁻¹]	2750	2830
supply	-power/current	[kW/A]	0,369/1,6	0,669/2,95
	-fan speed	[min⁻¹]	2750	2830
Motor protection class			IP-44	IP-54
Thermal efficiency			54%	60%
Max power consumption		[kW/A]	9,725/16,14	16,34/27,55
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	supply		M5	M5
Thermal insulation		[mm]	50	50
Weight		[kg]	152,0	214,0
Comply with ERP 2013			+	-

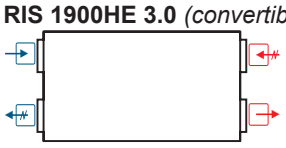
Designed for operation indoors only

RIS 1500HE 3.0 *(convertible)* **ver.**



1500HE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	67	66	70	70	67	62	56
Extract	58	51	49	53	51	45	40	33
Surrounding	57	49	50	52	48	45	41	37
Measured at 1380 m³/h, 70 Pa								

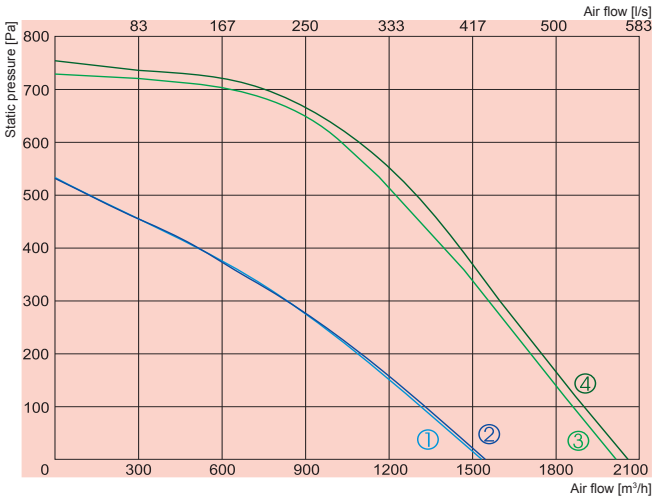
RIS 1900HE 3.0 *(convertible)* **ver.**



View from inspection side

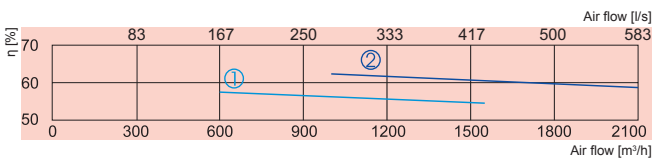
1900HE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	83	65	69	75	79	77	71	63
Extract	68	53	59	65	61	52	47	41
Surrounding	60	46	51	54	56	53	47	42
Measured at 1885 m³/h, 120 Pa								

Exhaust air Extract air Fresh air Supply air



① supply **RIS 1500HW 3.0**
② exhaust

③ supply **RIS 1900HW 3.0**
④ exhaust



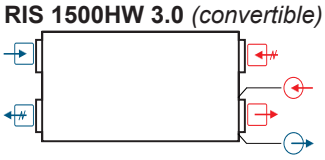
① **RIS 1500HW 3.0**
② **RIS 1900HW 3.0**

Calculated temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

			1500HW 3.0	1900HW 3.0
Water heater	-power	[kW]	10,12	12,82
	-water temp. T_{in}/T_{out}	[°C]	80/60	80/60
	-water flow rate	[l/s]	0,12	0,16
	-water pressure drop	[kPa]	3,3	4,70
	-kvs value	[m³/h]	2,4	2,7
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,351/1,52	0,669/2,95
	-fan speed	[min⁻¹]	2750	2830
supply	-power/current	[kW/A]	0,368/1,6	0,669/2,95
	-fan speed	[min⁻¹]	2750	2830
Motor protection class			IP-44	IP-55
Thermal efficiency			54%	60%
Max power consumption		[kW/A]	0,72/3,12	1,338/5,9
Automatic control			integrated	integrated
Filter class	-exhaust		M5	M5
	supply		M5	M5
Thermal insulation		[mm]	50	50
Weight		[kg]	152,0	216,0
Comply with ERP 2013			+	-

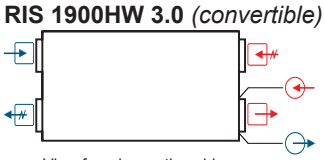
Designed for operation indoors only

RIS 1500HW 3.0 *(convertible)* **ver.**



1500HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	67	66	70	70	67	62	56
Extract	58	51	49	53	51	45	40	33
Surrounding	57	49	50	52	48	45	41	37
Measured at 1250 m³/h, 70 Pa								

RIS 1900HW 3.0 *(convertible)* **ver.**

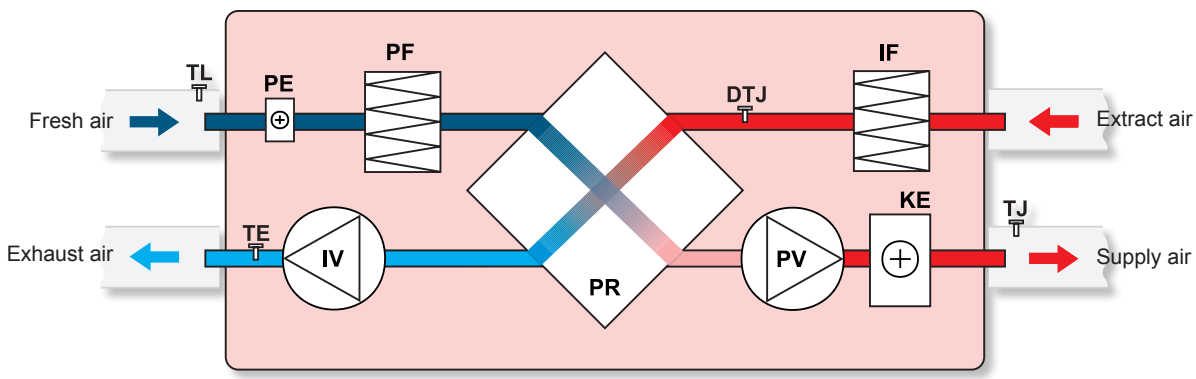


1900HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	86	65	68	77	82	81	75	66
Extract	71	57	59	69	64	55	49	44
Surrounding	63	48	50	55	57	56	50	45
Measured at 1812 m³/h, 124 Pa								

View from inspection side

Used water outlet · Water inlet
Exhaust air · Extract air · Fresh air · Supply air

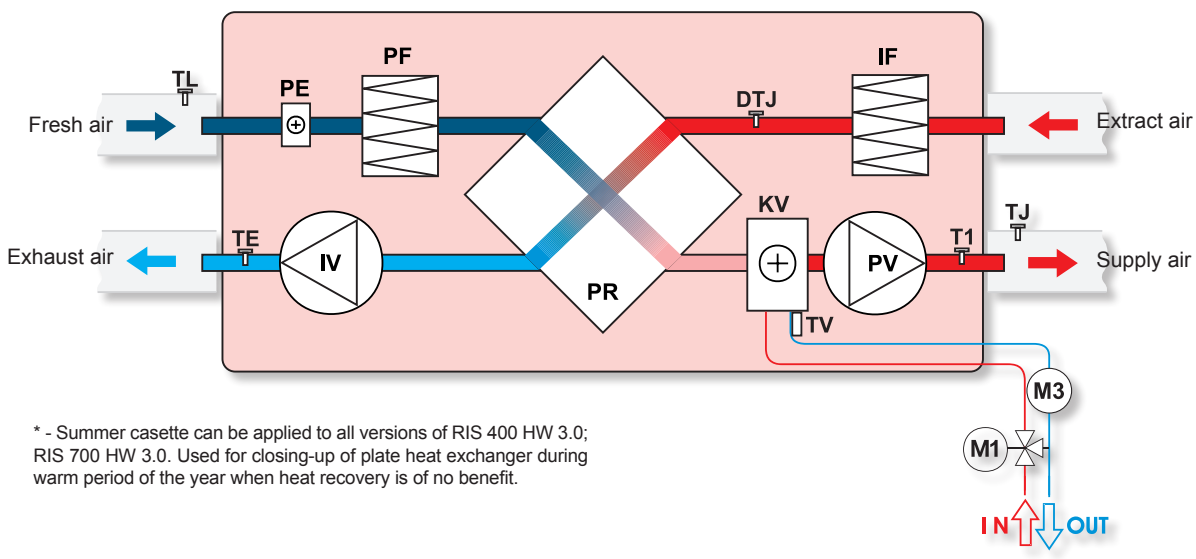
RIS 400HE 3.0; 700HE 3.0 versions with electrical heater *



* - Summer casette can be applied to all versions of RIS 400 HE 3.0; RIS 700 HE 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PE - anti-freeze heater for heat exchanger
PF - filter for supply air (class M5)
IF - filter for extract air (class G4)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
DTJ - humidity + temperature sensor

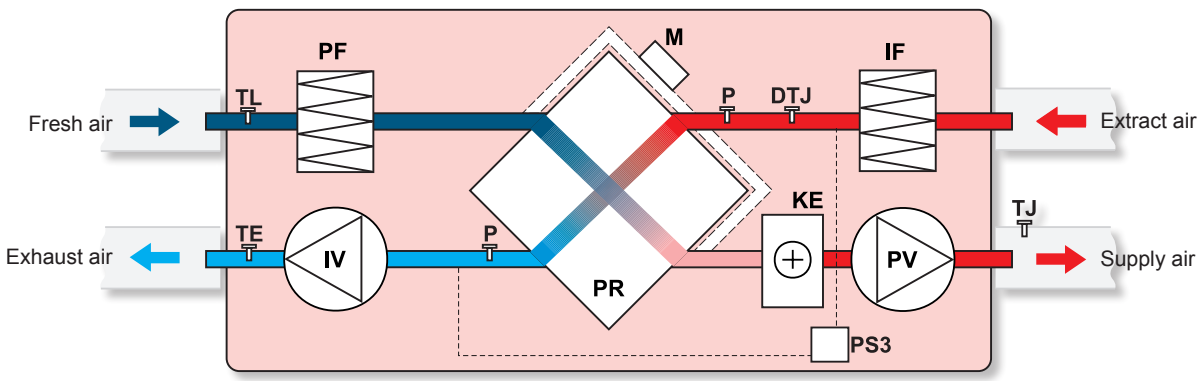
RIS 400HW 3.0; 700HW 3.0 versions with water heater *



* - Summer casette can be applied to all versions of RIS 400 HW 3.0; RIS 700 HW 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KV - water heater
PE - anti-freeze heater for heat exchanger
PF - filter for supply air (class M5)
IF - filter for exhaust air (class G5)
TL - temperature sensor for fresh air
TE - temperature sensor for extract air
DTJ - humidity + temperature sensor
T1 - antifrost thermostat
TV - antifrost sensor
TJ - temperature sensor for supply air
M1 - optionally supplied mixing valve and motor
M3 - water heater circulatory pump

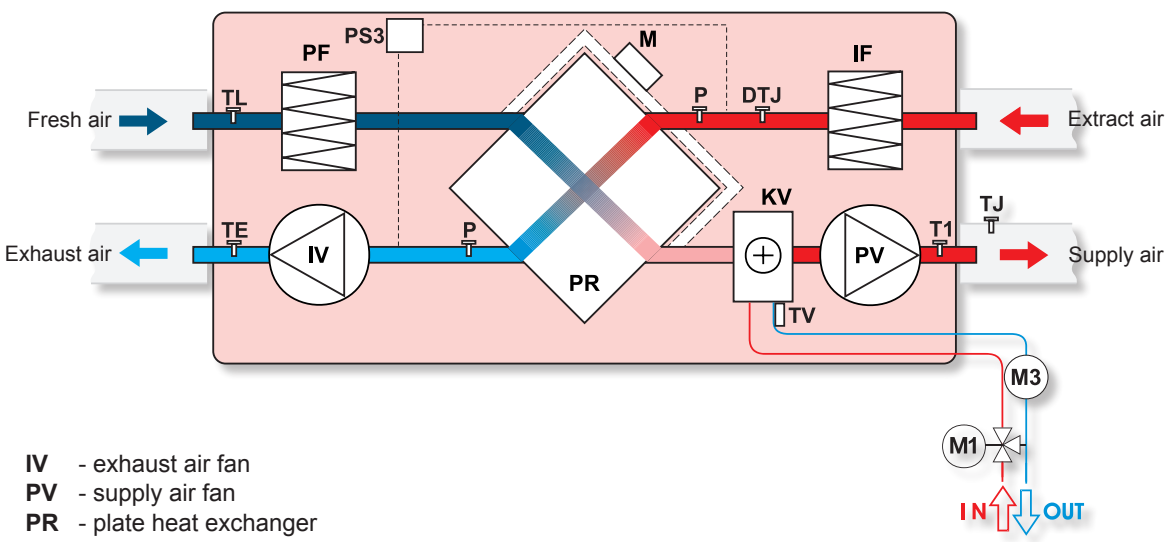
RIS 1000HE 3.0; 1500HE 3.0; 1900HE 3.0 versions with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class M5)
IF - filter for extract air (class M5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
DTJ - humidity + temperature sensor
P - heat exchanger pressure switch
M - actuator of by-pass damper
PS3 - heat exchanger antifrost pressure switch

RIS 1000HW 3.0; 1500HW 3.0; 1900HW 3.0 versions with water heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KV - water heater
PF - filter for supply air (class M5)
IF - filter for extract air (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
DTJ - humidity + temperature sensor

P - heat exchanger pressure switch
T1 - antifrost thermostat
TV - antifrost sensor
M - actuator of by-pass damper
M1 - optionally supplied mixing valve and motor
M3 - water heater circulatory pump
PS3 - heat exchanger antifrost pressure switch

RIS H EC

ErP 2015

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIS H EC have high efficiency plate heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficient plate heat exchanger with heat recovery efficiency up to 65%.
- Integrated electrical heater and optional water/DX heating/cooling.
- Controlled air flow.
- Supply air temperature control.
- Anti-freeze protection of the heat exchanger.
- Motorized by-pass damper.
- Can be controlled with UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls –50 mm.
- Housing: powder coated painting – RAL 7040.
- Easy and quick mounting.
- As an option SIEMENS Climatix controller can be ordered.
- Integrated pressure switch for filter pollution.
- Electrical heater control 0 - 10V.
- Optional CO_2, pressure or airflow transmitter.
- Optional roof and outlet cover.
- RIS 5500H EC delivered in two sections.

Urządzenia wentylacyjne RIS H EC wyposażone w wydajny płytowy wymiennik ciepła. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła, zwracający do 65% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodno-freonowy grzejnik/schładzacz
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Zasuwa obejściowa z silnikiem.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek – 50mm.
- Obudowa malowana metodą proszkową – kolor RAL 7040.
- Szybki i łatwy montaż.
- Opcjonalnie – możliwość zamówienia sterownika SIEMENS Climatix.
- Zintegrowany miernik zanieczyszczenia filtrów
- Sterowanie grzejnikiem elektrycznym 0-10V.
- Opcjonalny przetwornik CO2, ciśnienia lub wilgotności
- Opcjonalnie zamawiany okap i króciec.
- IS 5500H EC – dostarczany w dwóch sekcjach.

Vėdinimo įrenginiai RIS H EC pagaminti su efektyviu plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio grąžinama šiluma iki 65%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis/freoninis šildytuvas/aušintuvas
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Priešužšaliminė šilumokaičio apsauga.
- Motorizuota apėjimo sklendė
- Galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – 50mm.
- Milteliniu būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.
- Galimybė papildomai užsakyti SIEMENS Climatix valdiklį.
- Integruotas filtrų užterštumo matuoklis
- Elektrinio šildytuvo valdymas 0-10V.
- Papildomai komplektuojamas CO2, slėgio ar drėgmės keitiklis
- Papildomai užsakomas stogas ir atvamzdis.
- RIS 5500H EC – tiekiamas dviejomis sekcijomis.

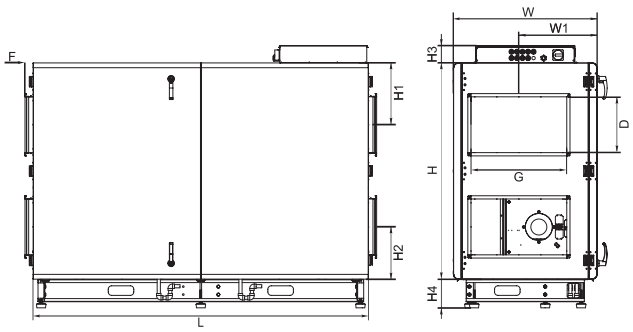
Установки с рекуперацией тепла RIS EC имеют высоко эффективные тёплообменники. Агрегат предназначен для вентиляции домов и других нагретых участков.

- Экономные и безшумные вентиляторы EC.
- Эффективность теплоотдачи до 65%.
- Интегрированыи електрический или водянои, DX нагреватель, охлаждение.
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Защита теплообменника от замерзания.
- Интегрированые моторизованые клапана для входящего и выходящего воздуха.
- RIS EC все версии упровляются с помощью пультов UNI, PRO и TPC.
- Акустическая изоляция стенок – 50 мм.
- RIS EC корпус – окрашенный RAL 7040.
- Легко монтируються.
- RIS EC – интегрированная полная система управления агрегата «plug & play» или контролером SIEMENS Climatix.
- Установлен датчик давления для загрезнённого фильтра.
- Упровления электрического нагревателя от 0 – 10В.
- Опциональная контроль: уровень CO2 в помещение и охлождения приточного воздуха.
- RIS 5500H EC - поставляется в двух секциях.

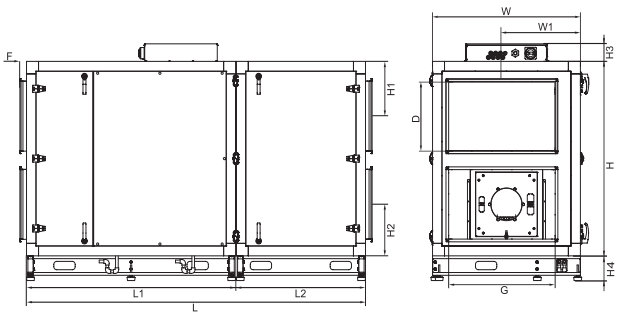
Accessories

Control panel	Sensor controller	Programmable controller	Rectangular duct silenser	Thermic water valve actuator	Mixing point	2 and 3 way valves	Comfort Box
							
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**SKS** **p. 233**	**SSB** **p. 184**	**RMG** **p. 185**	**VVP/VXP** **p. 186**	**CB** **p. 190**

RIS 2500H EC 3.0, RIS 3500H EC 3.0



RIS 5500H EC 3.0



RIS 2500 H E R 3.0

RIS	Equipped with new PRV V2.2 control board
2500	Air intake side (Models RIS 5500 EC: R - right)
H	Heater type (E - integrated electrical heater; W - optional water heater)
E	Housing type (V - vertical, H - horozontal, P - under - ceiling)
R	AHU size according to air flow range m³/h
3.0	AHU with plate heat-exchanger

Type	Dimensions [mm]												
	L	L_1	L_2	W	W_1	D	G	H	H_1	H_2	H_3	H_4	F
RIS 2500 HE/HW EC 3.0	2100	-	-	900	490	350	600	1355	387	327	108	180	51
RIS 3500 HE/HW EC 3.0	2100	-	-	900	490	350	600	1355	387	327	108	180	51
RIS 5500 HE/HW EC 3.0	2545	1570	975	1110	590	500	800	1400	395	370	127	180	51

Type	Accessories								
	Flex, Stouch TPC	SKS	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C	Comfort box	SVS
RIS 2500HE EC 3.0	+	600x350	-	Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***				+	-
RIS 2500HW EC 3.0	+	600x350	61					+	600x350
RIS 3500HE EC 3.0	+	600x350	-					+	-
RIS 3500HW EC 3.0	+	600x350	61					+	600x350
RIS 5500HE EC 3.0	+	800x500	-					+	-
RIS 5500HW EC 3.0	+	800x500	61					+	800x500

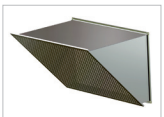
If ordering RIS 2500-5500HW EC 3.0 and SVS/AVS must be ordered water sensor (TJP 10K) and duct thermostat (C04C).

Accessories

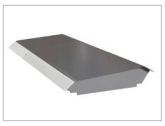
Water heater coil

SVS p. 198

Outlet cover

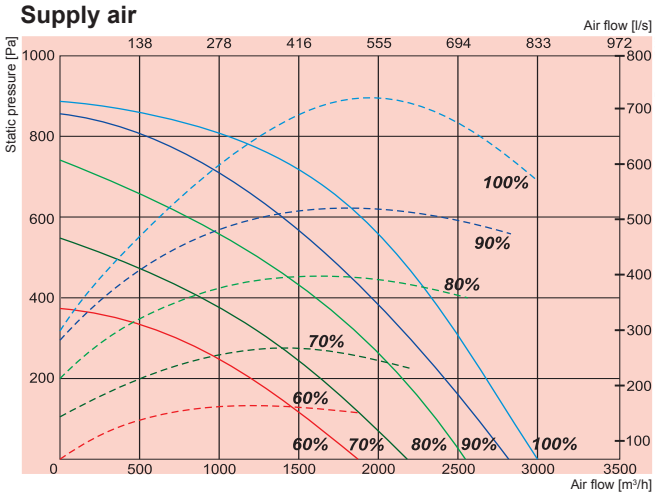


Roof

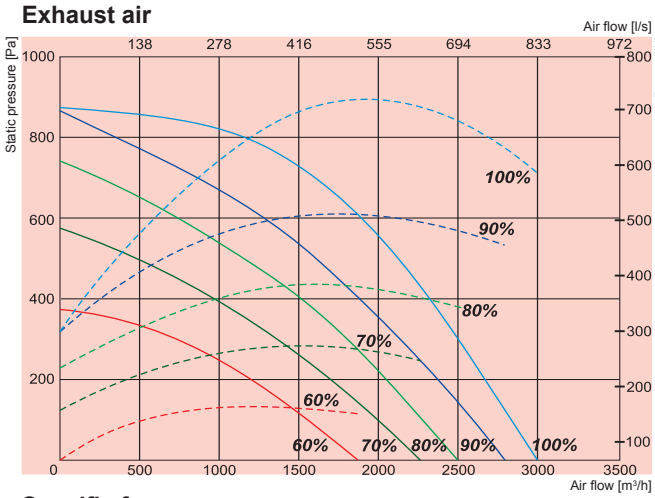


RIS H EC

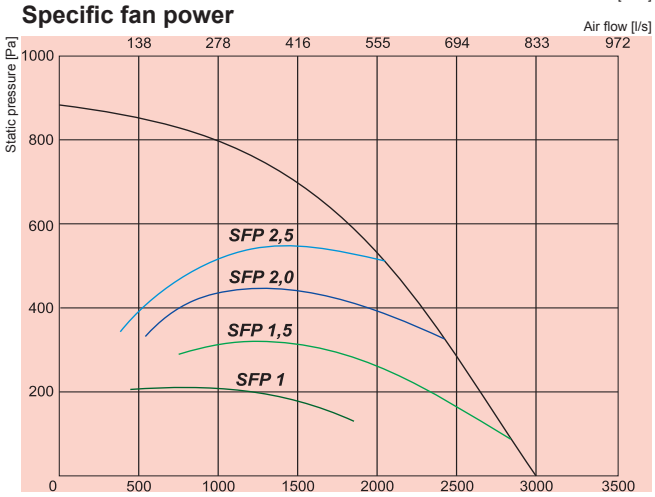
Supply air



Exhaust air

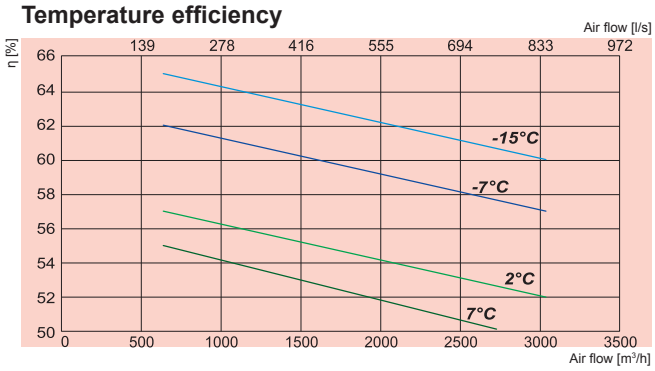


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

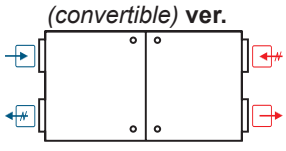
Temperature efficiency



RIS 2500HE EC 3.0

Performance
Power consumption

RIS 2500HE EC 3.0 *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1804_0056B	2500HE EC 3.0	Integrated electrical heater.
GAGRIS1857_0056B	2500HE EC 3.0	Integrated electrical heater and motorized supply and exhaust dampers.

			2500HE EC 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	18
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,72/3,18
	-fan speed	[min⁻¹]	2800
supply	-power/current	[kW/A]	0,72/3,19
	-fan speed	[min⁻¹]	2800
Motor protection class			IP-54
Thermal efficiency			61%
Max power consumption		[kW/A]	19,45/32,5
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	340,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

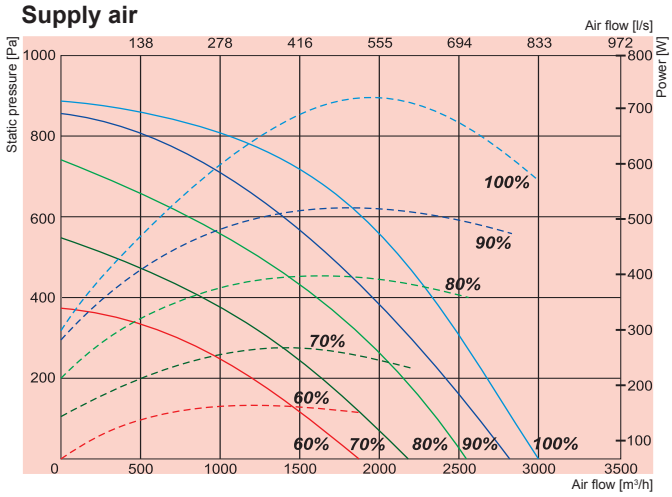
2500HE EC 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	84	65	77	78	79	74	68	67
Extract	66	44	63	61	54	52	46	40
Surrounding	62	45	57	59	55	51	45	43
Measured at 2757 m³/h, 121 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

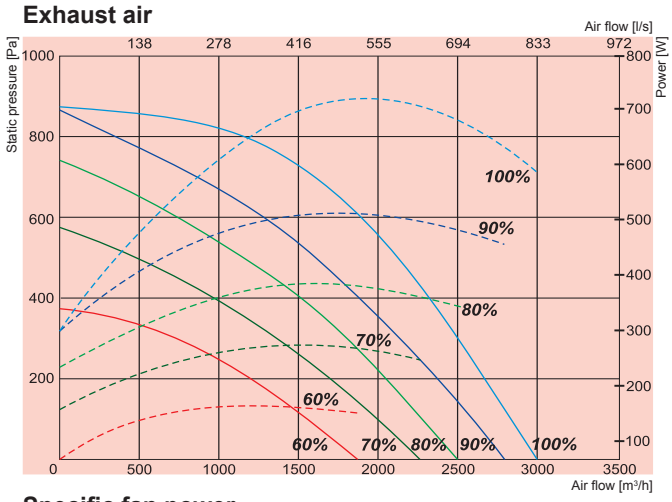
Certifications

EUROVENT certified counter flow heat exchanger performance

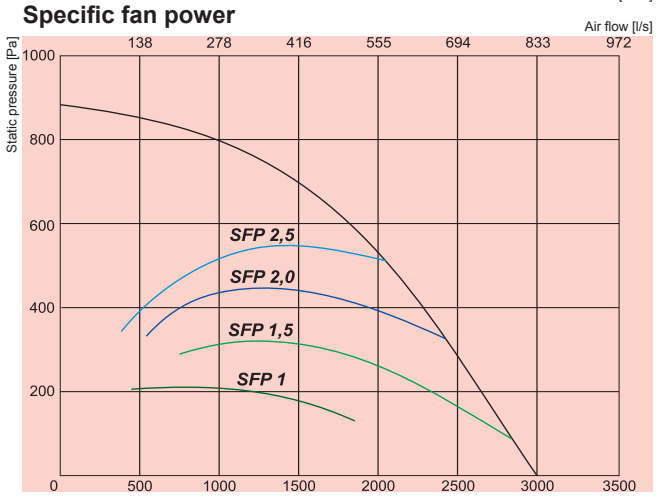
Supply air



Exhaust air

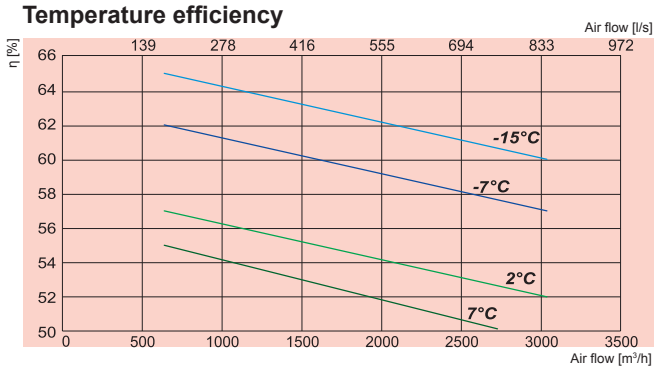


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

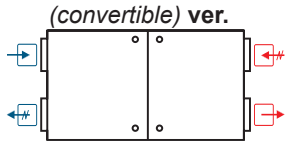
Temperature efficiency



RIS 2500HW EC 3.0

——— Performance
------- Power consumption

RIS 2500HW EC 3.0 *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1805_0057A	2500HW EC 3.0	Optional water heater.
GAGRIS1858_0057A	2500HW EC 3.0	Optional water heater and motorized supply and exhaust dampers.

			2500HW EC 3.0
Water heater			SVS 600x350 or Comfort Box 600x350
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,72/3,18
	-fan speed	[min^{-1}]	2800
supply	-power/current	[kW/A]	0,72/3,19
	-fan speed	[min^{-1}]	2800
Motor protection class			IP-54
Thermal efficiency			61%
Max power consumption		[kW/A]	1,45/6,47
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	337,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

2500HW EC 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	84	65	77	78	79	74	68	67
Extract	66	44	63	61	54	52	46	40
Surrounding	62	45	57	59	55	51	45	43
Measured at 2757 m³/h, 121 Pa								

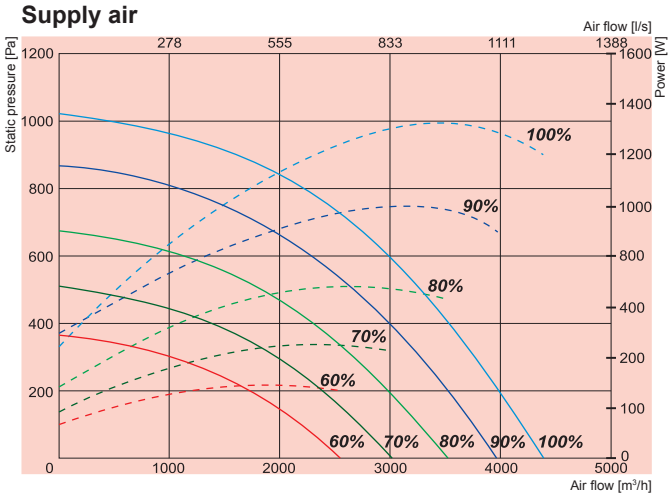
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

Certifications

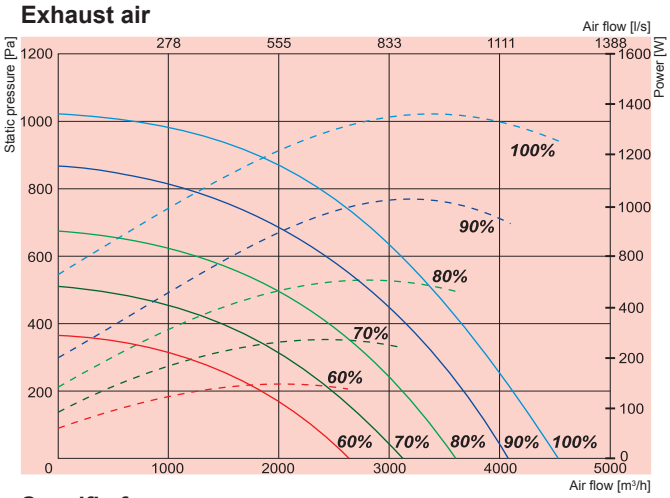
EUROVENT certified counter flow heat exchanger performance

RIS H EC

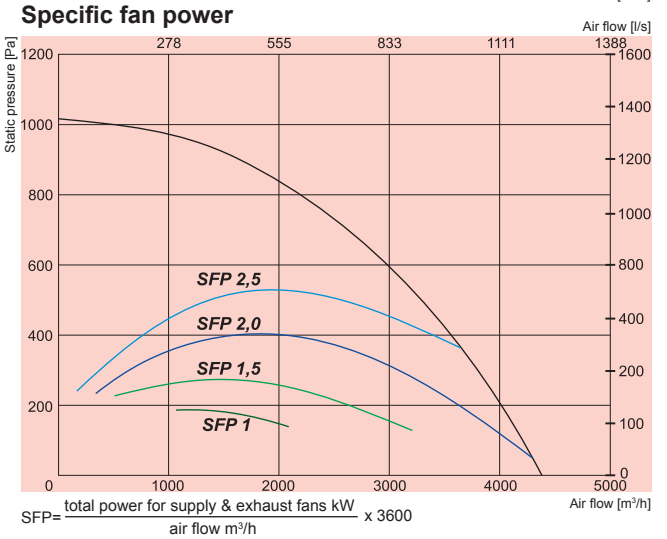
Supply air



Exhaust air

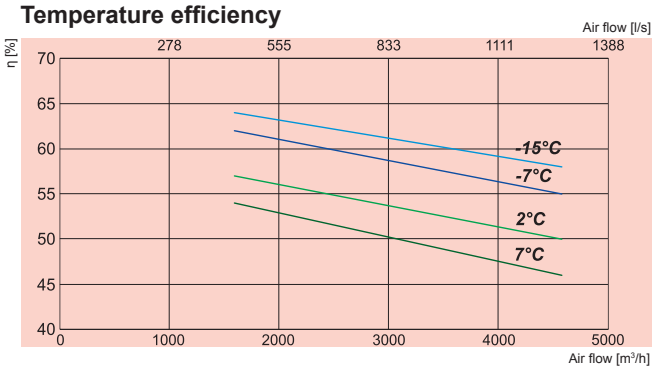


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

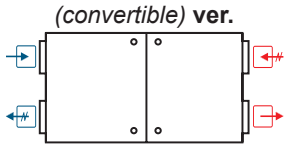
Temperature efficiency



RIS 3500HE EC 3.0

Performance
Power consumption

RIS 3500HE EC 3.0 *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1806_0058B	3500HE EC 3.0	Integrated electrical heater.
GAGRIS1859_0058B	3500HE EC 3.0	Integrated electrical heater and motorized supply and exhaust dampers.

			3500HE EC 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	24
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	1,37/6,12
	-fan speed	[min⁻¹]	2390
supply	-power/current	[kW/A]	1,41/6,35
	-fan speed	[min⁻¹]	2390
Motor protection class			IP-54
Thermal efficiency			59%
Max power consumption		[kW/A]	26,8/47,1
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	340,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

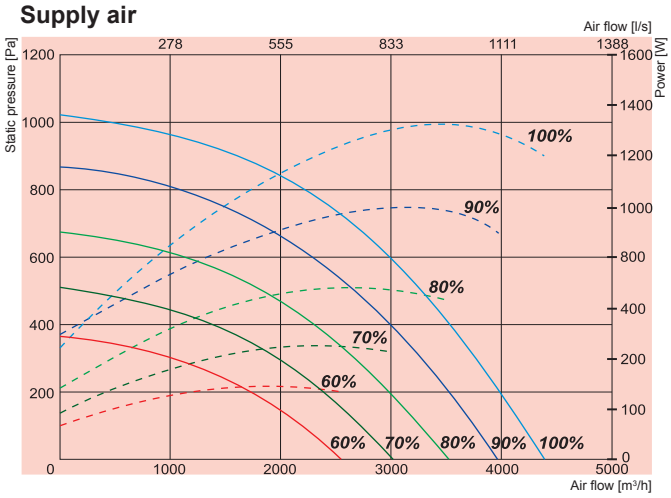
3500HE EC 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	86	63	79	80	81	77	76	64
Extract	72	60	69	66	62	62	54	43
Surrounding	68	57	65	62	58	55	52	46
Measured at 4006 m³/h, 198 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

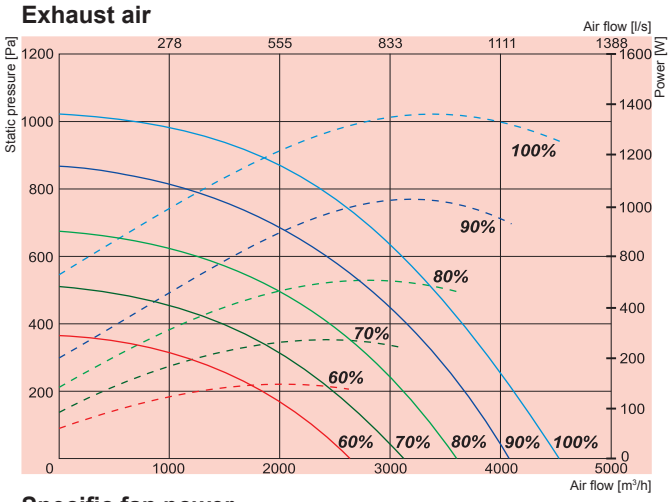
Certifications

EUROVENT certified counter flow heat exchanger performance

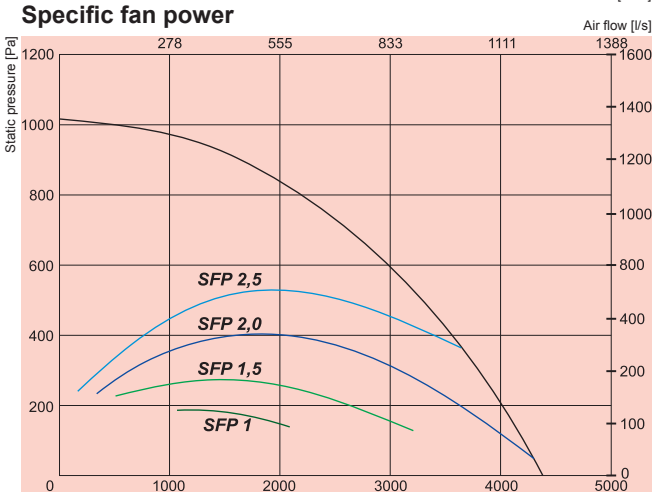
Supply air



Exhaust air

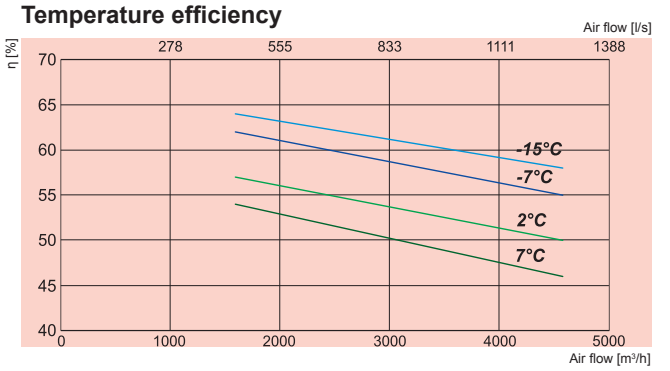


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

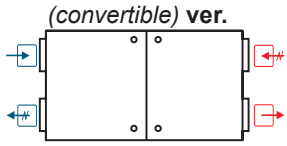
Temperature efficiency



RIS 3500HW EC 3.0

——— Performance
------- Power consumption

RIS 3500HW EC 3.0 *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1807_0059A	3500HW EC 3.0	Optional water heater.
GAGRIS1860_0059A	3500HW EC 3.0	Optional water heater and motorized supply and exhaust dampers.

			3500HW EC 3.0
Water heater			SVS 600x350 or Comfort Box 600x350
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	1,37/6,12
	-fan speed	[min^{-1}]	2390
supply	-power/current	[kW/A]	1,41/6,35
	-fan speed	[min^{-1}]	2390
Motor protection class			IP-54
Thermal efficiency			59%
Max power consumption		[kW/A]	2,78/12
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	337,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

3500HW EC 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	86	63	79	80	81	77	76	64
Extract	72	60	69	66	62	62	54	43
Surrounding	68	57	65	62	58	55	52	46

Measured at 4006 m³/h, 198 Pa

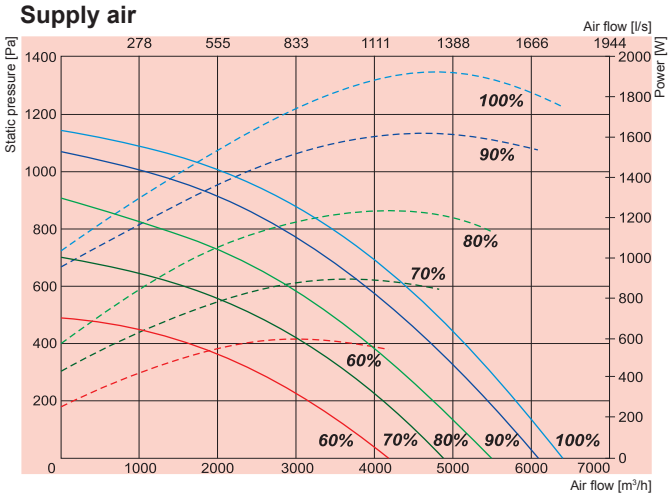
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

Certifications

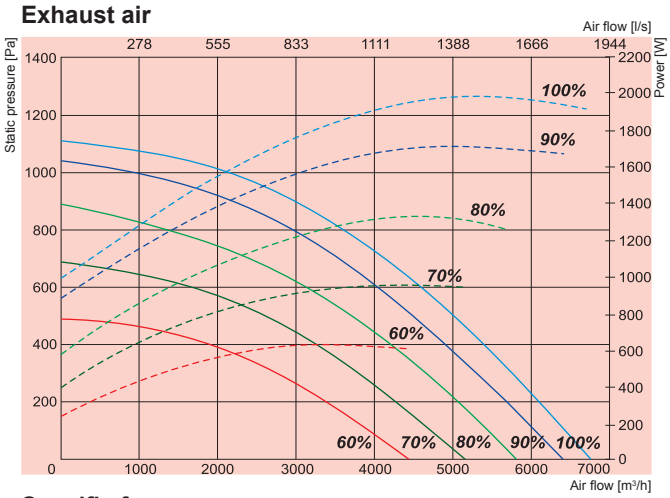
EUROVENT certified counter flow heat exchanger performance

RIS H EC

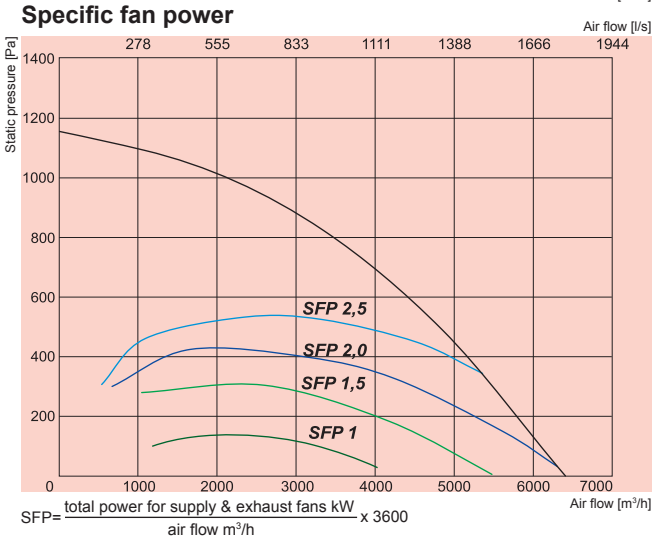
Supply air



Exhaust air

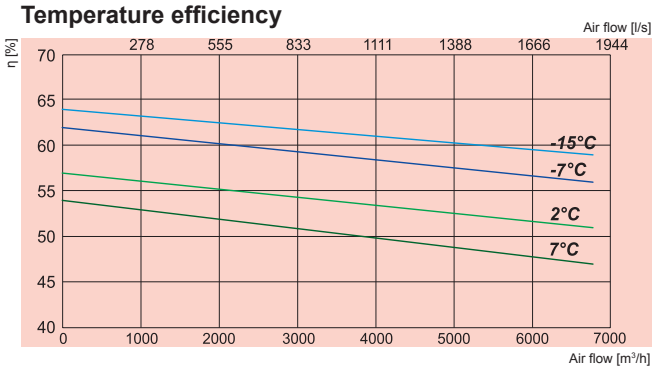


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

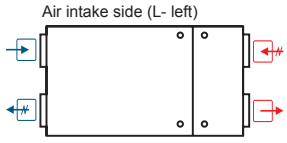


RIS 5500HE EC 3.0

——— Performance
------- Power consumption

RIS 5500HER EC 3.0

Air intake side (L- left)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1808_0060B	5500HER EC 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIS1861_0060B	5500HER EC 3.0	Integrated electrical heater and motor-ized supply and exhaust dampers.

			5500HE EC 3.0
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	30
EC Fans	-phase/voltage	[50Hz/VAC]	~3,400
exhaust	-power/current	[kW/A]	2,03/3,24
	-fan speed	[min⁻¹]	2180
supply	-power/current	[kW/A]	2,05/3,24
	-fan speed	[min⁻¹]	2180
Motor protection class			IP-54
Thermal efficiency			60%
Max power consumption		[kW/A]	34,1/50
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	480,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

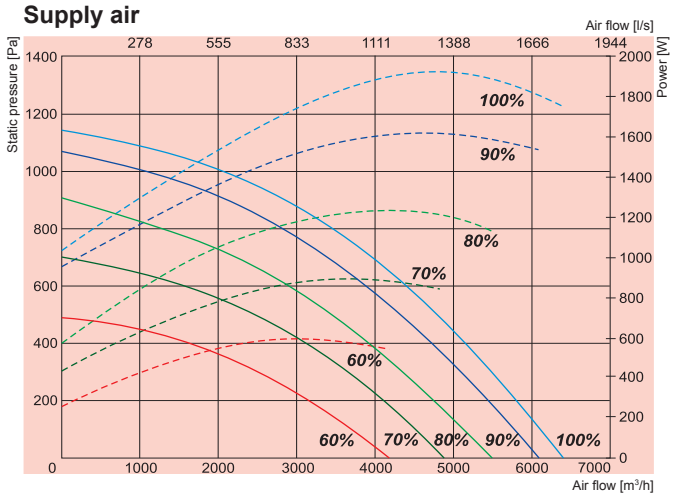
5500HE EC 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	89	70	81	83	85	81	77	73
Extract	75	65	72	69	68	62	53	52
Surrounding	79	60	72	74	73	69	64	61
Measured at 5788 m³/h, 211 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

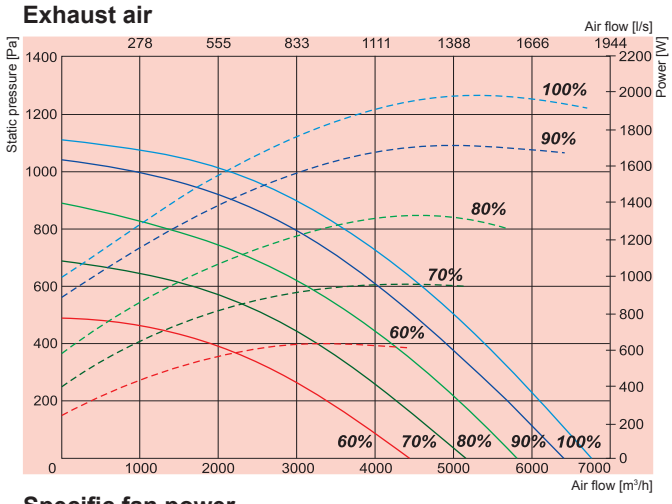
Certifications

EUROVENT certified counter flow heat exchanger performance

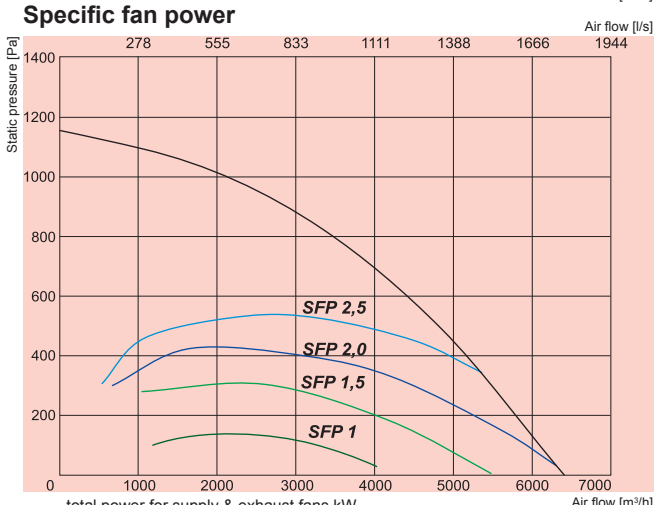
Supply air



Exhaust air

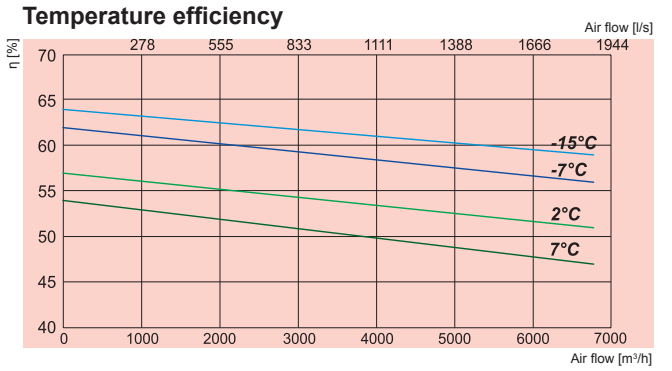


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

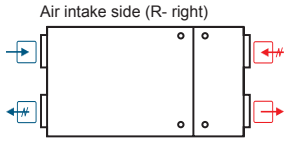


RIS 5500HW EC 3.0

——— Performance
------- Power consumption

RIS 5500HWR EC 3.0

Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIS1809_0061B	5500HWR EC 3.0	Right-hand maintenace version pre-pared for optional water heater.
GAGRIS1862_0061B	5500HWR EC 3.0	Optional water heater and motorized supply and exhaust dampers.

			5500HW EC 3.0
Water heater			SVS 800x500 or Comfort Box 800x500
EC Fans	-phase/voltage	[50Hz/VAC]	~3,400
exhaust	-power/current	[kW/A]	2,03/3,24
	-fan speed	[min⁻¹]	2180
supply	-power/current	[kW/A]	2,05/3,24
	-fan speed	[min⁻¹]	2180
Motor protection class			IP-54
Thermal efficiency			60%
Max power consumption		[kW/A]	4,1/6,64
Automatic control			integrated
Filter class	-exhaust		F7
	supply		M5
Thermal insulation		[mm]	50
Weight		[kg]	477,0
Comply with ERP 2013;2015			+

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

5500HW EC 2.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	89	70	81	83	85	81	77	73
Extract	75	65	72	69	68	62	53	52
Surrounding	79	60	72	74	73	69	64	61
Measured at 5788 m³/h, 211 Pa								

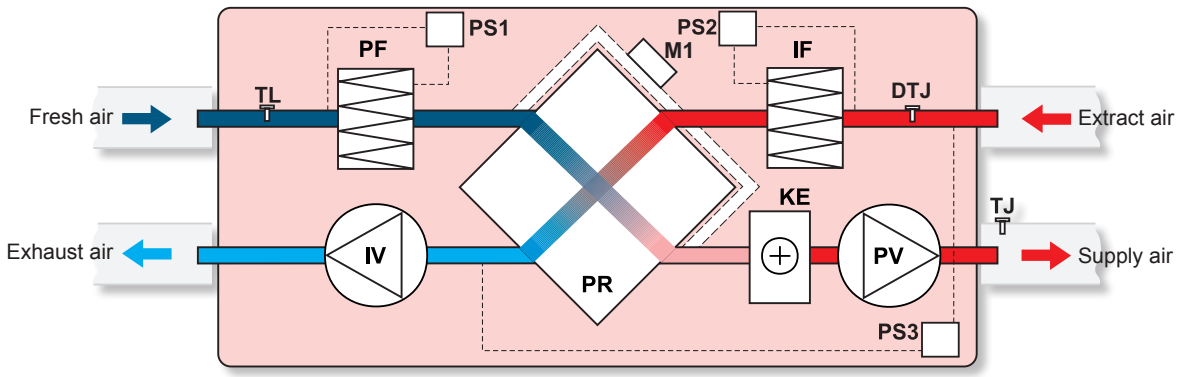
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -15°C / -7°C / 2°C / 7°C

Certifications

EUROVENT certified counter flow heat exchanger performance

RIS H EC

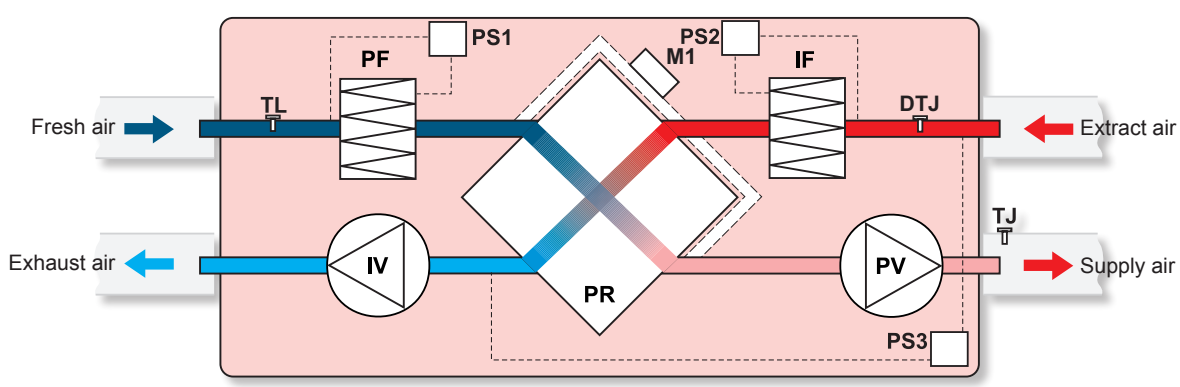
RIS 2500HE EC 3.0, 3500HE EC 3.0 versions with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class M5)
IF - filter for extract air (class F7)

DTJ - humidity + temperature sensor
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

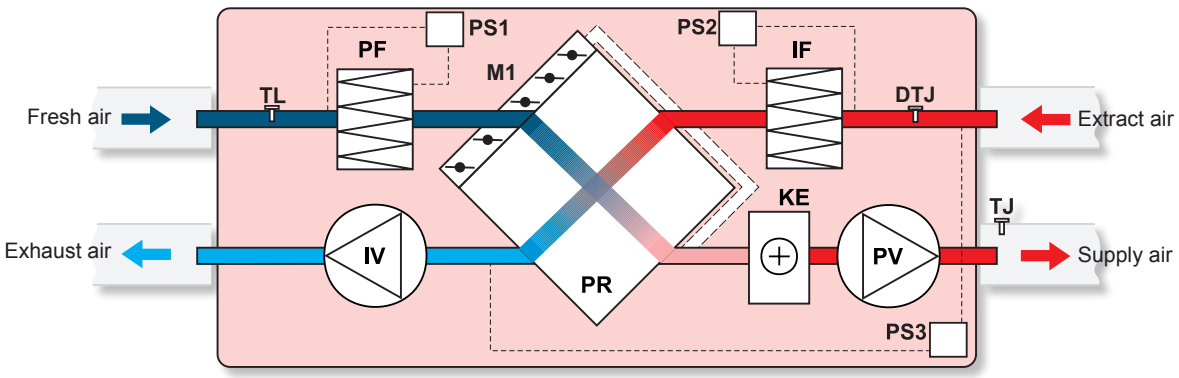
RIS 2500HW EC 3.0, 3500HW EC 3.0 versions with optional water heater



IV - exhaust air fan
PV - supply air fan
PF - filter for supply air (class M5)
IF - filter for extract air (class F7)
PR - plate heat exchanger
DTJ - humidity + temperature sensor

TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

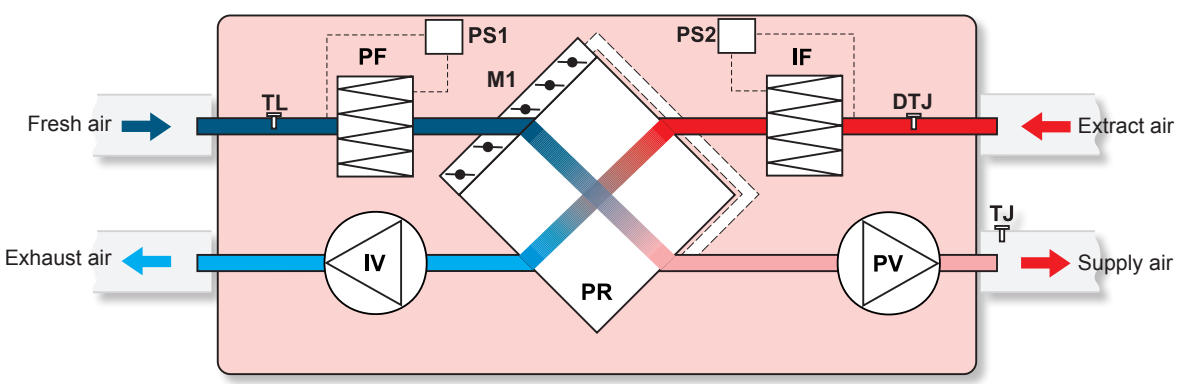
RIS 5500HE EC 3.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for supply air (class M5)
IF - filter for extract air (class F7)

DTJ - humidity + temperature sensor
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIS 5500HW EC 3.0 version with optional water heater



IV - exhaust air fan
PV - supply air fan
PF - filter for supply air (class M5)
IF - filter for extract air (class F7)
PR - plate heat exchanger
DTJ - humidity + temperature sensor

TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch

RIRS V EKO

NEW!

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIRS V EKO have high efficiency rotor heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of rotor heat exchanger up to 80%.
- Integrated electrical heater optional water heating/cooling.
- Electrical heater control 0 - 10V (RIRS 1200 – 1900 EKO 2.0).
- Controlled air flow.
- Supply air temperature control.
- RIRS V EKO versions can be controlled with UNI, PRO and TPC.
- Acoustic insulation of the walls – RIRS 200 - 300 EKO - 20 mm, RIRS 400 - 1900 EKO 2.0 – 50mm.
- RIRS 200 - 300 EKO housing: powder coated painting RAL 9010, RIRS 400 - 1900 EKO 2.0 - RAL 7040.
- Low noise level.
- Easy mounting.
- Full integrated plug & play control system.
- Integrated pressure switch for filter pollution (RIRS 400 - 1900 EKO 2.0).
- Optional CO_2, pressure or airflow transmitter (RIRS 400 – 1900 V EKO 2.0).

Urządzenia wentylacyjne RIS V EKO wyposażone w wydajny wirnikowy wymiennik ciepła. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny wirnikowy wymiennik ciepła, zwracający do 80% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodny grzejnik/schładzacz.
- Sterowanie grzejnikiem elektrycznym 0-10V (RIRS 1200 – 1900 EKO 2.0).
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek RIRS 200 - 300 EKO - 20 mm, RIRS 400 - 1900 EKO 2.0 – 50mm.
- Obudowa malowana metodą proszkową – kolor RAL 9010, RIRS 400 - 1900 EKO 2.0 - RAL 7040.
- Niski poziom hałasu.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play“ i całkowicie zintegrowana automatyka sterowania.
- Zintegrowany miernik zanieczyszczenia filtrów (RIRS 400 - 1900 EKO 2.0).
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności (RIRS 400 – 1900 V EKO 2.0).

Vėdinimo įrenginiai RIS V EKO pagaminti su efektyviu rotoriniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus rotorinis šilumokaitis, kurio grąžinama šiluma iki 80%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis šildytuvas/aušintuvas.
- Elektrinio šildytuvo valdymas 0-10V (RIRS 1200 – 1900 EKO 2.0).
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija RIRS 200 - 300 EKO - 20 mm, RIRS 400 - 1900 EKO 2.0 – 50mm.
- Milteliniu būdu dažytas korpusas - spalva RAL 9010, RIRS 400 - 1900 EKO 2.0 - RAL 7040
- Žemas triukšmo lygis.
- Greitas ir lengvas montavimas.
- „Plug & play“ paruošimas ir pilnai integruota valdymo automatika.
- Integruotas filtrų užterštumo matuoklis (RIRS 400 - 1900 EKO 2.0.).
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis (RIRS 400 – 1900 V EKO 2.0).

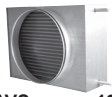
Установки с рекуперацией тепла RIS EKO очищают, нагревают и подают свежий воздух. Установки RIS EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

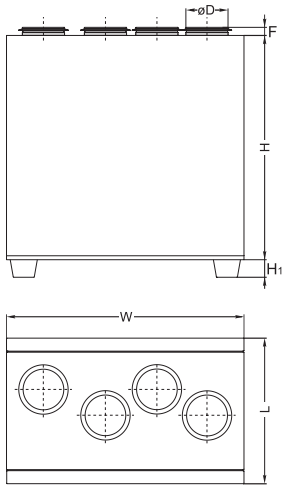
- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 80 %.
- Встроенный электрический нагреватель или опция водянных охлодителей/нагревателей.

Интегрирован электрический подогреватель 0-10 V (RIRS 1200 - 1900 EKO 2.0).

- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- RIRS V EKO версии с интегрированными возможнастями управления с помощью пультов UNI, PRO и TPC.
- Акустическая изоляция стенок - RIRS 200 -300 EKO - 20мм, RIRS 400- 1900 EKO 2.0 - 50мм.
- Корпус RIRS 200 – 300 EKO окрашекнн порошковым методом - RAL 9010, RIRS 400 - 1900 EKO 2.0 – RAL 7040.
- Низкий уровень шума.
- Легко монтируються.
- Интегрированная полная система управления агрегата “plug & play”.
- Установлен датчик давления для фильтра загрязнения в RIRS 400 - 1900 EKO 2.0.
- Опциональная контроль: CO_2 , давление в системе и трансмитер приточного воздуха для RIRS 400 - 1900 V EKO 2.0.

Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Circular duct silencer	Heating coil
							
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**1141** **p. 181**	**RC02-F2** **p. 182**	**KFF-U** **p. 183**	**AKS** **p. 230**	**AVS** **p. 192**



RIRS 200 V E L EKO 3.0

RIRS	Equipped with new PRV V2.2 control board
200	AHU with EC motors
V	Air intake side (L - left; R - right)
E	Heater type (E - integrated electrical heater; W - optional water heater)
L	Housing type (V - vertical, H - horozontal, P - under - ceiling)
EKO	AHU size according to air flow range m³/h
3.0	AHU with rotor heat-exchanger

Type	Dimensions [mm]					
	W	L	H	øD	H_1	F
RIRS 200VE EKO	598	320	620	125	-	30
RIRS 300VE EKO	598	320	620	125	-	30
RIRS 400VE/VW EKO 3.0	900	553	850	160	40	30
RIRS 700VE/VW EKO 3.0	1100	655	980	250	40	40
RIRS 1200VE/VW EKO 3.0	1500	855	1150	315	70	40
RIRS 1900VE/VW EKO 3.0	1500	855	1150	315	70	40

Type	Accessories											
	Flex Stouch TPC	1141 RC02-F2 KFF-U	AKS AP SKG	AVS AVA	SP	TJP 10P CO4C***	SSB *Heating*	SSB *Cooling*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIRS 200VE EKO	+	+	125	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 300VE EKO	+	+	125	-	TF230	-	-	-	-	-	-	-
RIRS 400VE EKO 3.0	+	+	160	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 400VW EKO 3.0	+	+	160	160	TF230	int	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIRS 700VE EKO 3.0	+	+	250	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 700VW EKO 3.0	+	+	250	250	TF230	int	61	81	3-1,0-4	3-1,0-4	45.10-1,0	45.10-1,0
RIRS 1200VE EKO 3.0	+	+	315	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 1200VW EKO 3.0	+	+	315	315	LF230	int	61	81	3-1,0-4	3-1,0-4	45.10-1,0	45.10-1,0
RIRS 1900VE EKO 3.0	+	+	315	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 1900VW EKO 3.0	+	+	315	315	LF230	int	61	81	3-1,0-4	3-1,0-4	45.10-1,0	45.10-1,0

*** - anti-frost thermostat

Accessories

Circular duct water cooler

AVA p. 202

Shuft-off damper

SKG p. 226

Actuator for dampers

SP p. 188

Thermic water valve actuator

SSB p. 184

Mixing point

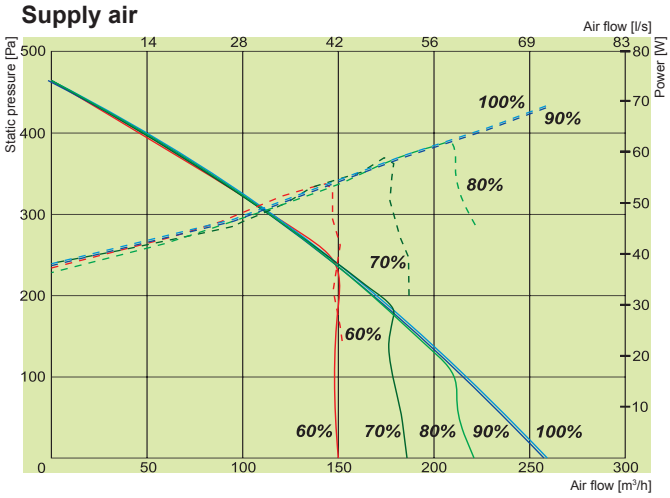
RMG p. 185

2 and 3 way valves

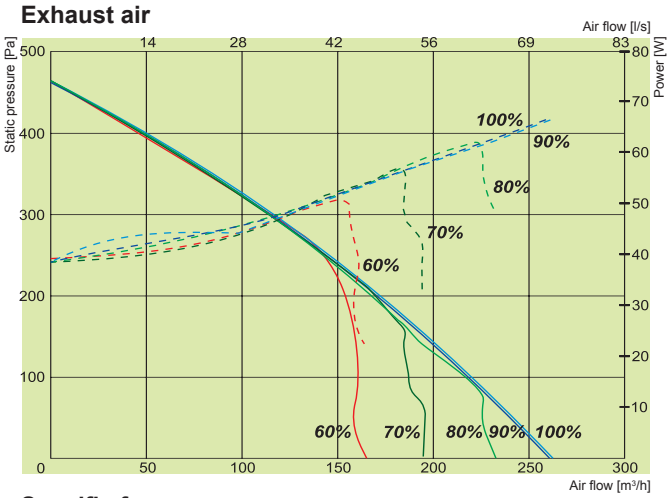
VVP/VXP p. 186

RIRS V EKO

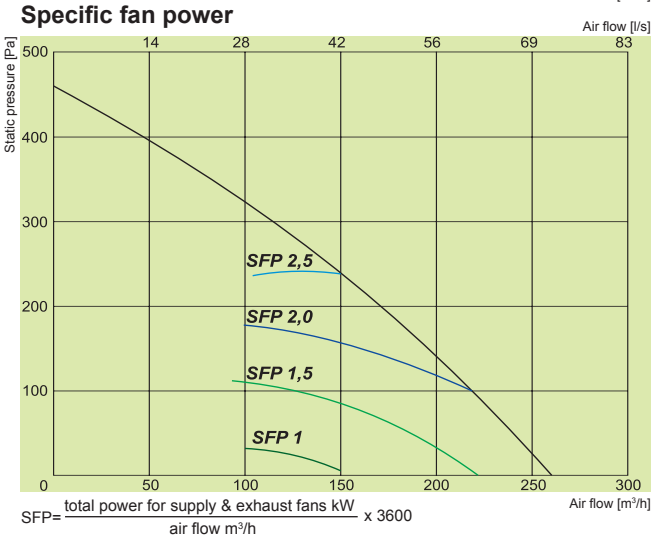
Supply air



Exhaust air

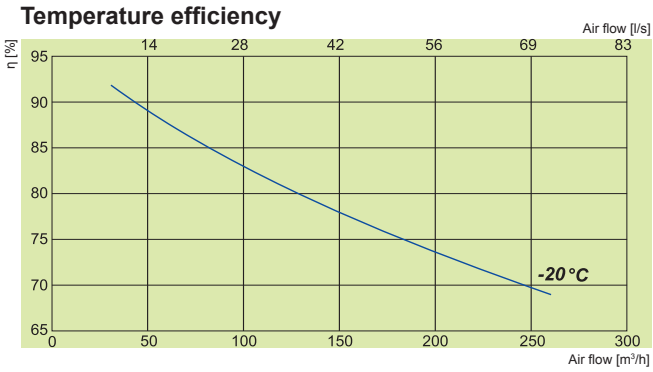


Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

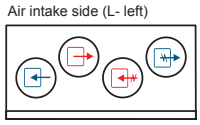
Temperature efficiency



RIRS 200VE EKO

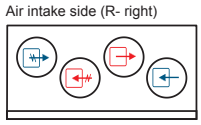
Performance
Power consumption

RIRS 200VEL EKO
Air intake side (L- left)



View from inspection side

RIRS 200VER EKO
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version
GRERIRS2007 200VEL EKO	Left-hand maintenace version with integrated electrical heater.
GAGRIRS055 200VER EKO	Right-hand maintenace version with integrated electrical heater.

			RIRS 200VE EKO
Heater	-phase/voltage	[50Hz/VAC]	~1, 230
	-power consumption	[kW]	0,6
EC Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,06 / 0,66
	-fan speed	[min⁻¹]	2300
supply	-power/current	[kW/A]	0,069 / 0,65
	-fan speed	[min⁻¹]	2300
Motor protection class			IP-44
Thermal efficiency			80%
Max power consumption		[kW/A]	0,73 / 3,92
Automatic control			integrated
Filter class	-exhaust		M5
	-supply		M5
Thermal insulation		[mm]	20
Weight		[kg]	41,0
Comply with ERP 2013			+

Air flow temperature range from -20°C to +40°C
Designed for operation indoors only

200VE EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	65	50	59	61	59	55	51	40
Extract	60	45	58	53	45	37	28	21
Surrounding	46	37	40	42	38	29	19	16
Measured at 214 m³/h, 100 Pa								

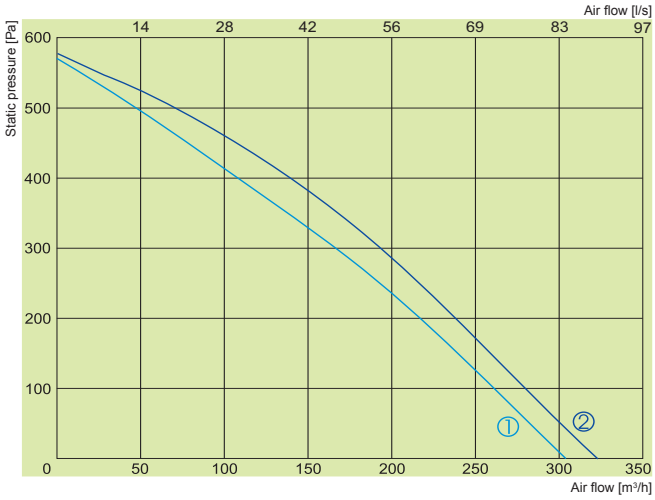
Extract air = 20°C/60% RH - Outdoor air = -20°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

Accessories

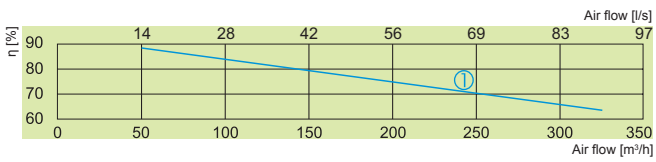
Kitchen hood

Front cover



① supply
② exhaust

RIRS 300VE EKO



①

RIRS 300VE EKO

Article No.	Version	
GRERIRS3002	300VE EKO	Integrated electrical heater.

			300VE EKO
Heater	-phase/voltage	[50Hz/VAC]	~1, 230
	-power consumption	[kW]	0,6
EC Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,118 / 0,9
	-fan speed	[min⁻¹]	3480
supply	-power/current	[kW/A]	0,123 / 0,9
	-fan speed	[min⁻¹]	3480
Motor protection class			IP-44
Thermal efficiency			80%
Max power consumption		[kW/A]	0,841 / 3,24
Automatic control			integrated
Filter class	-exhaust		M5
	-supply		M5
Thermal insulation		[mm]	20
Weight		[kg]	41,0
Comply with ERP 2013			+

Air flow temperature range from -20°C to +40°C
Designed for operation indoors only

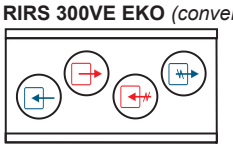
Thermal efficiency of RIRS 300VE EKO was calculated at 300m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)

Accessories


Kitchen hood


Front cover

RIRS 300VE EKO *(convertable)* **ver.**



View from inspection side

300VE EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	64	45	47	54	56	60	57	46
Extract	59	44	46	54	53	51	49	40
Surrounding	48	32	32	39	41	44	41	37
Measured at 258 m³/h, 111 Pa								

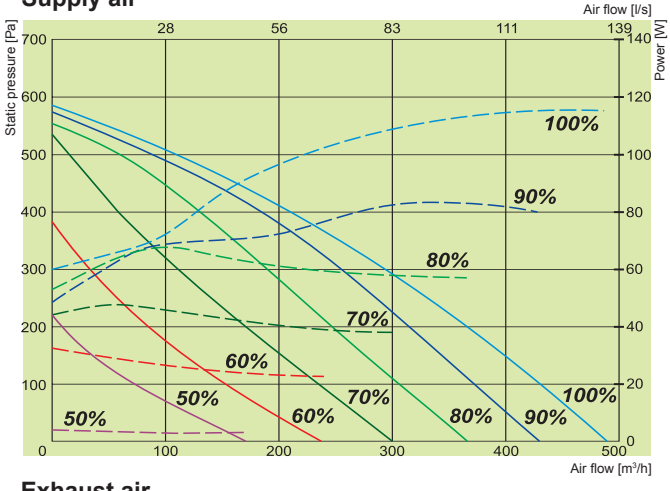
Exhaust air Extract air Fresh air Supply air

RIRS V EKO

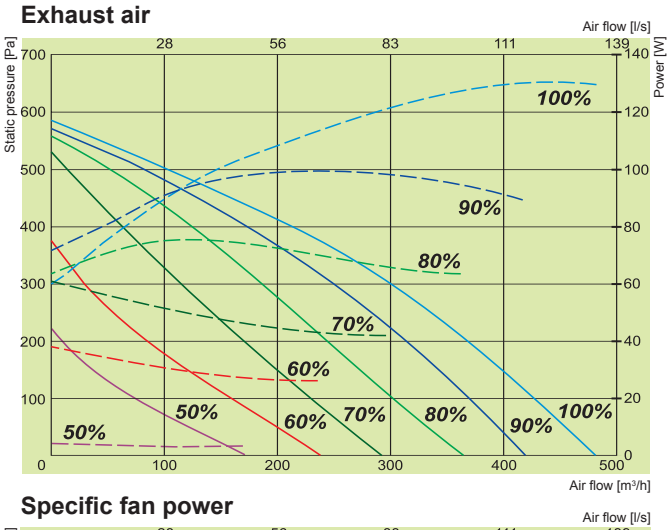
RIRS 400V EKO 3.0

Performance
Power consumption

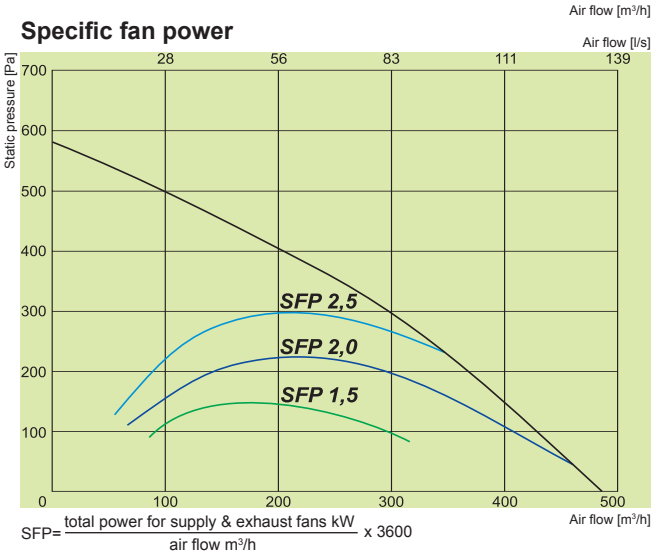
Supply air



Exhaust air

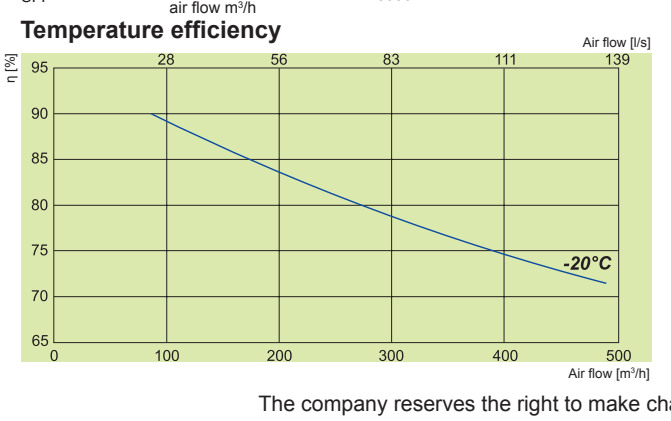


Specific fan power

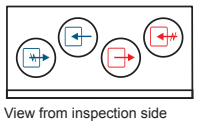


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

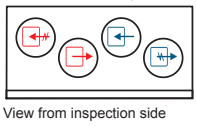


RIRS 400VL EKO 3.0
Air intake side (L- left)



View from inspection side

RIRS 400VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1759_0037A	400VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIRS1760_0039A	400VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIRS1757_0036A	400VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIRS1758_0038A	400VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

400VE / VW EKO 3.0			
Water heater (optional) VW ver.			AVS 200
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]	~1, 230
		[kW]	1,2
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,135/1,22
	fan speed	[min^{-1}]	3490
supply	power/current	[kW/A]	0,133/1,21
	fan speed	[min^{-1}]	3490
Thermal efficiency up to*			75%
Max power consumption VE / VW		[kW/A]	1,47/6,9 0,27/2,53
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	79
Comply with ERP			2013; 2015
Operation			indoors
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

400V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	70	64	59	61	66	63	54	52
Extract	61	55	57	57	49	43	34	30
Surrounding	54	51	48	41	42	43	33	28
Measured at 418 m³/h, 120 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

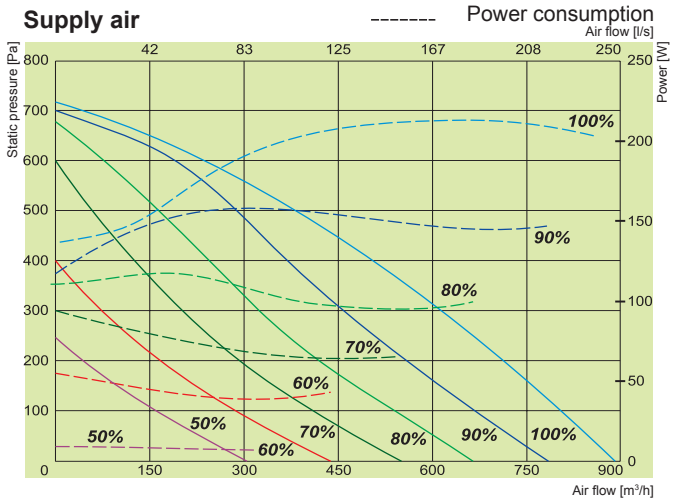
Certifications

EUROVENT certified counter flow heat exchanger performance

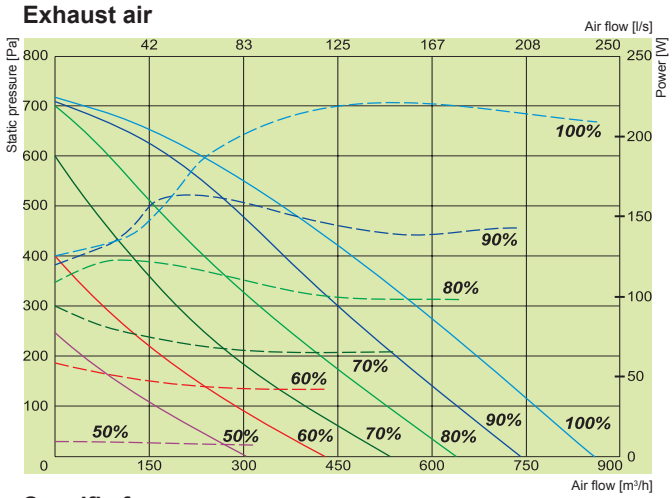
RIRS 700V EKO 3.0

Performance
Power consumption

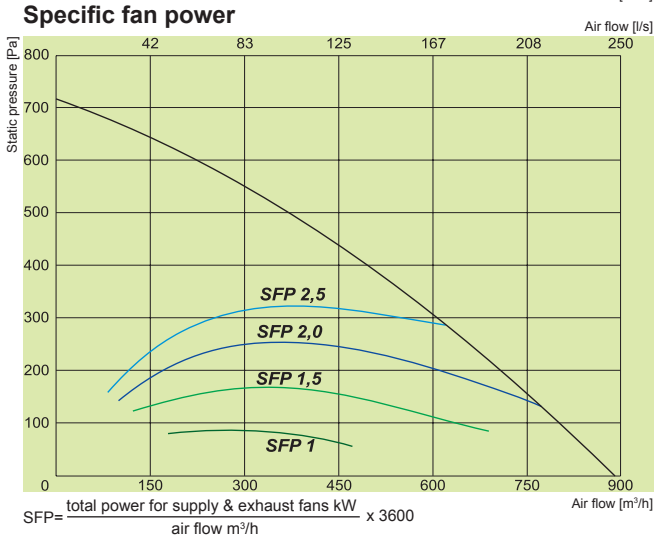
Supply air



Exhaust air



Specific fan power

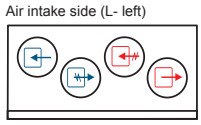


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIRS 700VL EKO 3.0

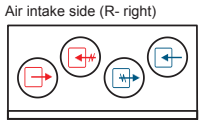
Air intake side (L- left)



View from inspection side

RIRS 700VR EKO 3.0

Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1770_0033A	700VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIRS1771_0035A	700VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIRS1766_0032A	700VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIRS1768_0034A	700VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

			700VE / VW EKO 3.0
Water heater (optional) VW ver.			AVS 250
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]	~1, 230
		[kW]	2,0
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,216/1,71
	fan speed	[min⁻¹]	3380
supply	power/current	[kW/A]	0,222/1,8
	fan speed	[min⁻¹]	3380
Thermal efficiency up to*			74%
Max power consumption VE / VW		[kW/A]	2,45/12,31 0,45/3,61
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	104
Comply with ERP			2013; 2015
Operation			indoors
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

700V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	67	69	70	69	68	63	62
Extract	63	52	60	58	47	44	38	35
Surrounding	55	47	50	49	44	43	39	39
Measured at 755 m³/h, 152 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

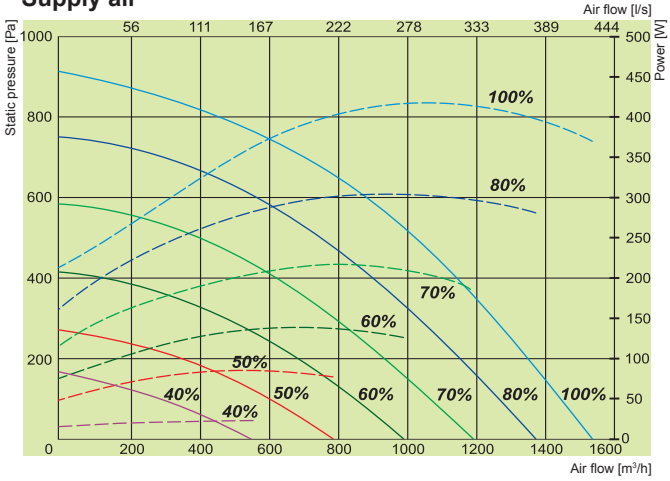
EUROVENT certified counter flow heat exchanger performance

RIRS V EKO

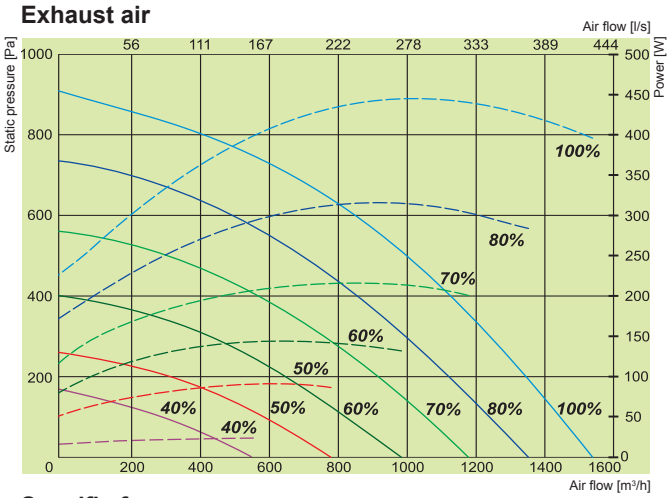
RIRS 1200V EKO 3.0

Performance
Power consumption

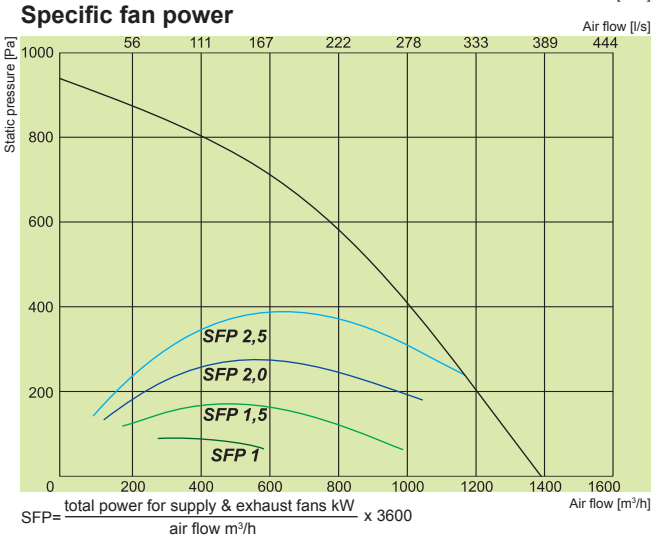
Supply air



Exhaust air



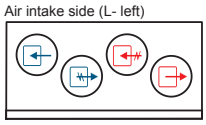
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

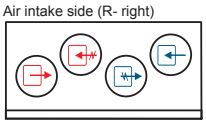
Temperature efficiency

RIRS 1200VL EKO 3.0
Air intake side (L- left)



View from inspection side

RIRS 1200VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1678_0003C	1200VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIRS1679_0004A	1200VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIRS1675_0001C	1200VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIRS1677_0002A	1200VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

			1200VE / VW EKO 3.0	
Water heater (optional) VW ver.				AVS 315
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]		~2, 400
		[kW]		4,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,45/2,99
	fan speed	[min^{-1}]		3400
supply	power/current	[kW/A]		0,419/2,69
	fan speed	[min^{-1}]		3400
Thermal efficiency up to*				74%
Max power consumption VE/VW		[kW/A]	4,89/15,9	0,88/5,85
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing) VE / VW		[kg]	180	178
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1200V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	63	74	71	70	69	64	55
Extract	67	57	63	56	52	53	51	37
Surrounding	57	47	54	49	47	49	46	36
Measured at 1351 m³/h, 181 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

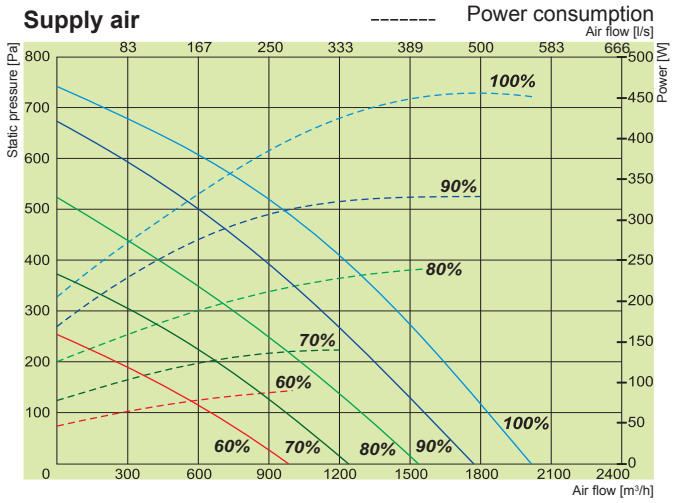
Certifications

EUROVENT certified counter flow heat exchanger performance

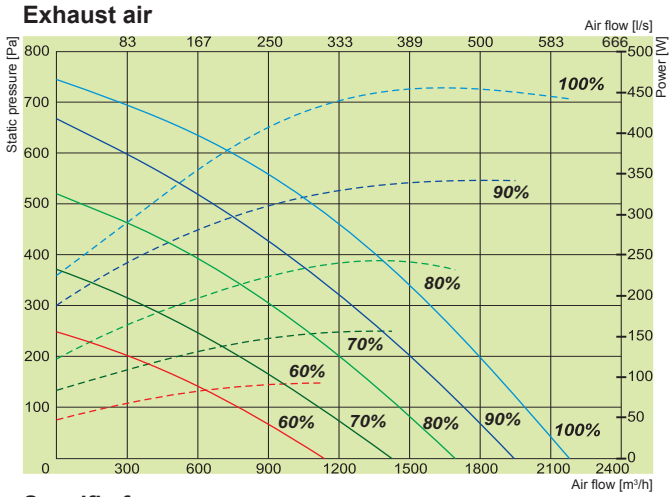
RIRS 1900V EKO 3.0

Performance
Power consumption

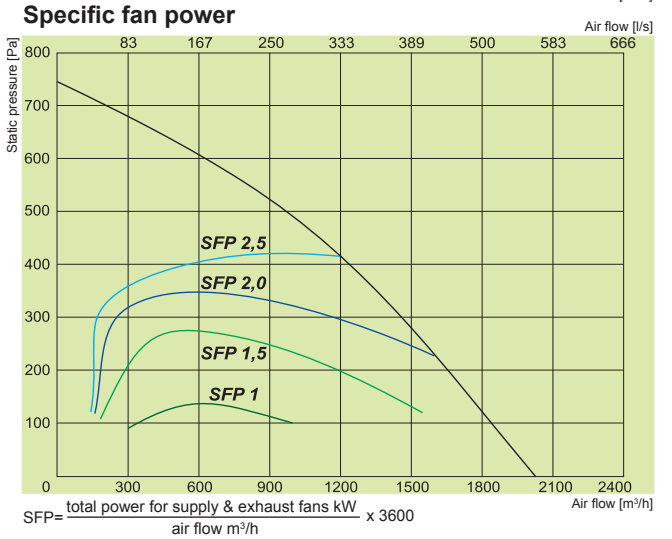
Supply air



Exhaust air

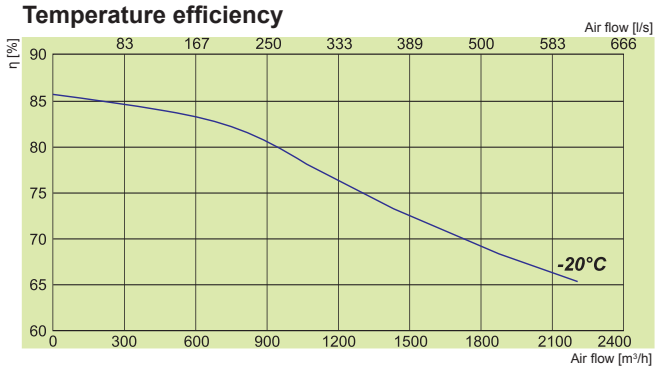


Specific fan power

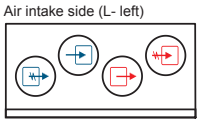


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

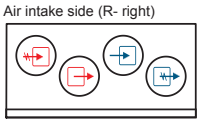


RIRS 1900VL EKO 3.0
Air intake side (L- left)



View from inspection side

RIRS 1900VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1712_0011B	1900VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater.
GAGRIRS1713_0012A	1900VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater.
GAGRIRS1708_0009B	1900VER EKO 3.0	Right-hand maintenace version with integrated electrical heater.
GAGRIRS1711_0010A	1900VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater.

1900VE / VW EKO 3.0				
Water heater (optional) VW ver.				AVS 315
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]		~3, 400
		[kW]		9,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,565/2,56
	fan speed	[min⁻¹]		2600
supply	power/current	[kW/A]		0,586/2,6
	fan speed	[min⁻¹]		2600
Thermal efficiency up to*				74%
Max power consumption VE / VW		[kW/A]	10,2/19	1,2/4,3
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing)		[kg]	162	160
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1900V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	58	76	71	72	71	70	62
Extract	69	56	67	60	54	58	57	48
Surrounding	60	44	57	51	49	53	52	45
Measured at 1879 m³/h, 101 Pa								

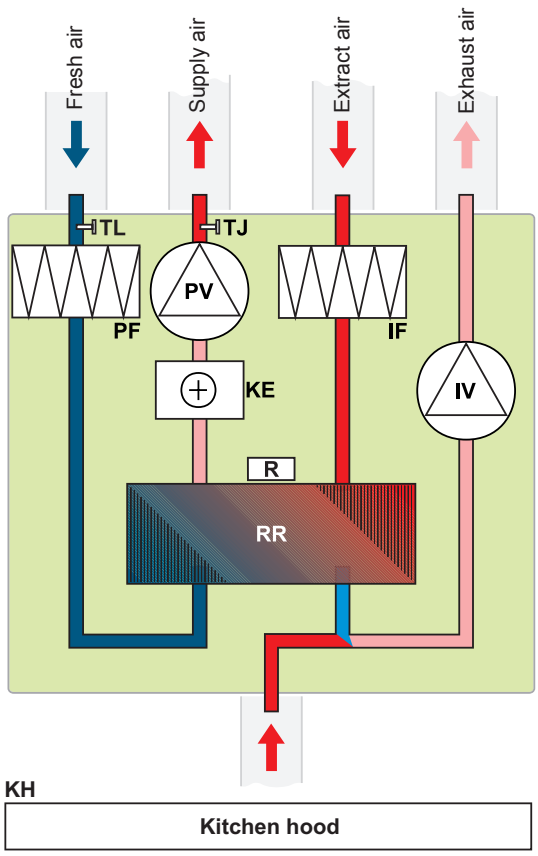
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

EUROVENT certified counter flow heat exchanger performance

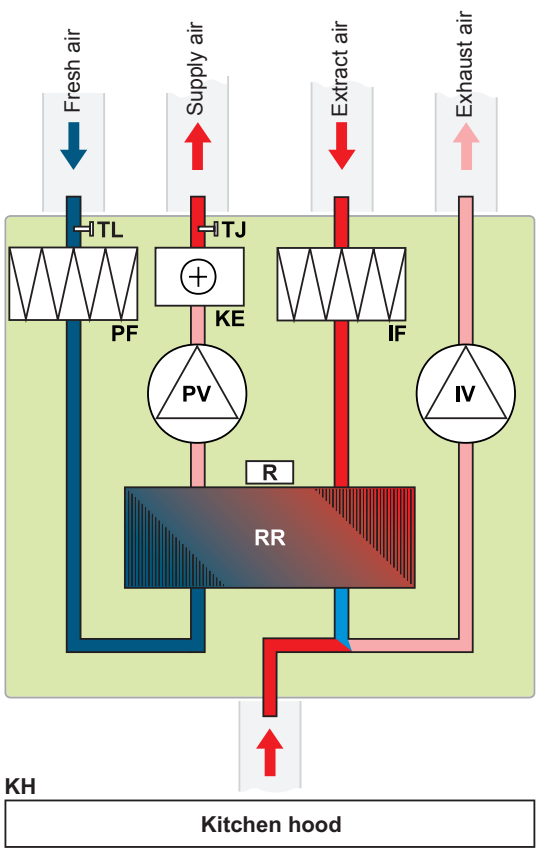
RIRS V EKO

RIRS 200VE EKO (vertical) with electrical heater



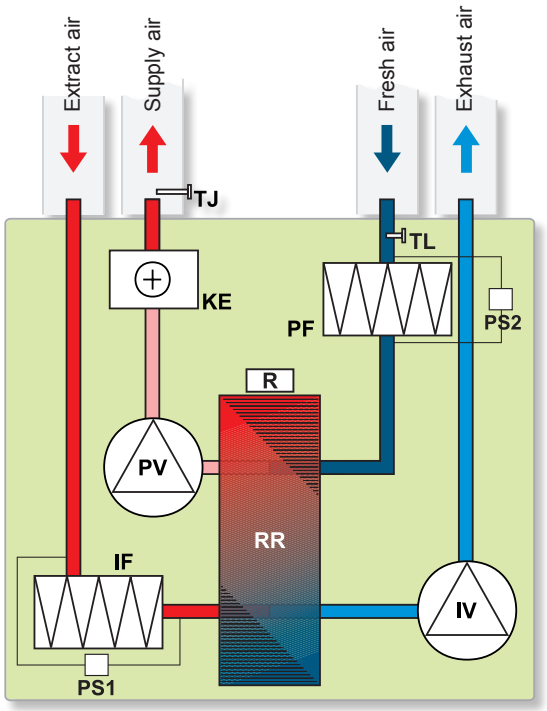
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - motor of rotor heat exchanger
KE - electrical heater
PF - filter for supply air
IF - filter for extract air
TJ - supply air temperature sensor
TL - fresh air temperature sensor
KH - optionally supplied kitchen hood

RIRS 300VE EKO (vertical) with electrical heater



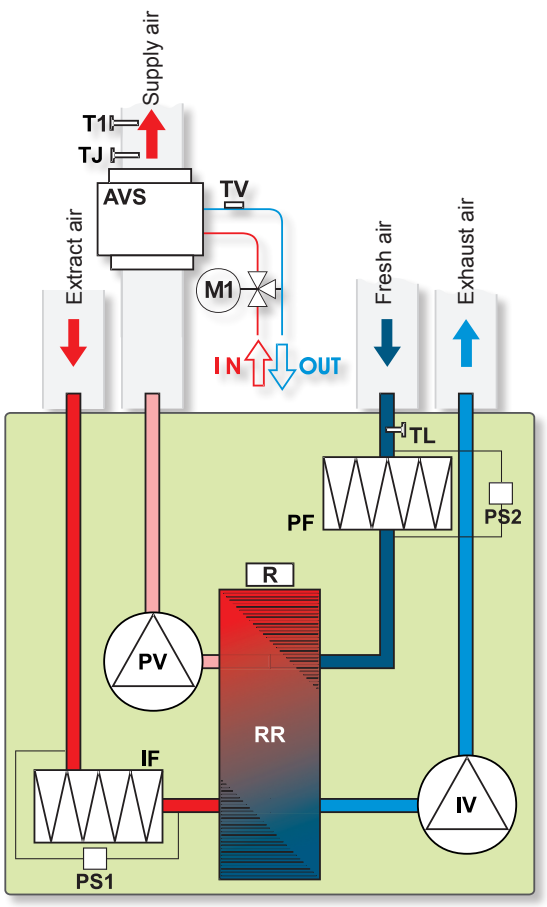
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class M5)
IF - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
KH - optionally supplied kitchen hood

RIRS 400VE EKO 3.0 (vertical) with electrical heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch

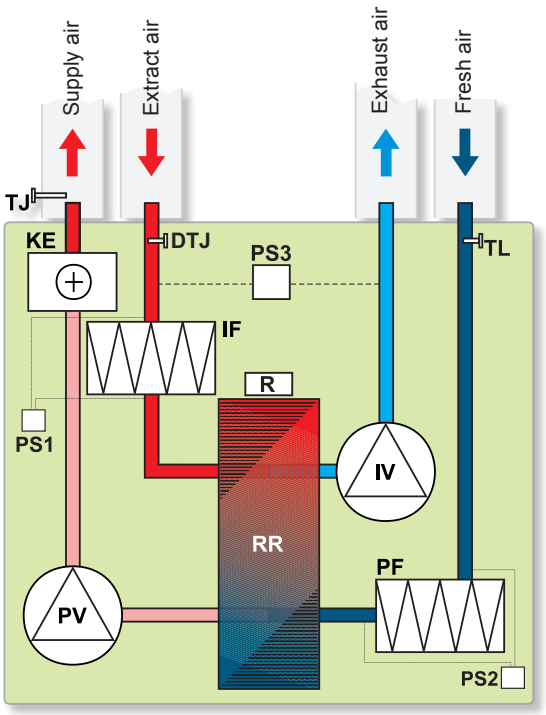
RIRS 400VW EKO 3.0 (vertical) with water heater



AVS - optionally supplied water heater
IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
I F - extract air filter (class M5)
TJ - supply air temperature sensor
TL - fresh air temperature sensor
M1 - optionally supplied mixing valve and motor
T1 - antifrost thermostat
TV - antifrost sensor
PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch

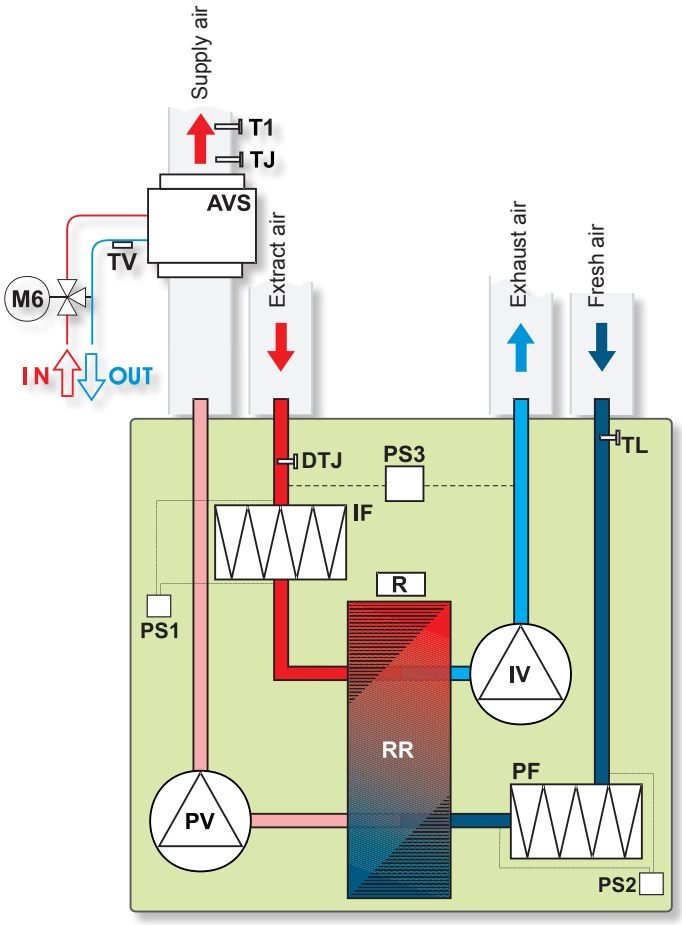
RIRS V EKO

RIRS 700VE EKO 3.0; 1200VE EKO 3.0; 1900VE EKO 3.0 (vertical) versions with electrical heater



PS3 - heat exchanger antifrost pressure switch
DTJ - humidity + temperature sensor
IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
IF - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air

RIRS 700VW EKO 3.0; 1200VW EKO 3.0; 1900VW EKO 3.0 (vertical) versions with water heater



AVS - optionally supplied water heater
PS3 - heat exchanger antifrost pressure switch
DTJ - humidity + temperature sensor
IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
I F - extract air filter (class M5)
TJ - air temperature sensor
TL - air temperature sensor
M6 - optionally supplied mixing valve and motor
T1 - supplied antifrost thermostat
TV - supplied antifrost sensor

Notes

RIRS H EKO

NEW!

ErP 2015

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIRS H EKO have high efficiency rotor heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of rotor heat exchanger up to 80%.
- Integrated electrical heater optional water heating/cooling.
- Electrical heater control 0 - 10V (RIRS 1200 – 5500 EKO 2.0).
- Controlled air flow.
- Supply air temperature control.
- Convertible inspection side.
- RIRS H EKO versions can be controlled with UNI, PRO and TPC.
- Acoustic insulation of the walls – 50mm.
- Housing: powder coated painting RAL 7040.
- Low noise level.
- Easy mounting.
- Full integrated plug & play control system.
- Integrated pressure switch for filter pollution (RIRS 400 - 5500 EKO 2.0).
- Optional CO_2, pressure or airflow transmitter (RIRS 400 – 5500 V EKO).
- RIRS 1200 – 5500 H EKO optional roof and outlet cover.
- RIRS 2500 – 5500 H EKO – can be supplied in three sections.
- RIRS 2500 – 5500 H EKO integrated motorized dampers for fresh and exhaust air.

Urządzenia wentylacyjne RIS H EKO wyposażone w wydajny wirnikowy wymiennik ciepła. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny wirnikowy wymiennik ciepła, zwracający do 80% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodny grzejnik/schładzacz.
- Sterowanie grzejnikiem elektrycznym 0-10V (RIRS 1200 – 5500 EKO).
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Zmienne strony obsługi.
- Można sterować za pomocą pilotów UNI, PRO i TPC.
- Izolacja przeciwhałasowa ścianek – 50mm.
- Obudowa malowana metodą proszkową RAL 7040.
- Niski poziom hałasu.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play" i całkowicie zintegrowana automatyka sterowania.
- Zintegrowany miernik zanieczyszczenia filtrów.
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności.
- Opcjonalnie zamawiany okap i króciec (RIRS 1200 – 5500 EKO).
- RIRS 2500 - 5500H EKO – dostarczany w trzech sekcjach.
- RIRS 2500 - 5500H EKO – zintegrowane zasuwy dostarczanego i usuwanego powietrza z silnikiem.

Vėdinimo įrenginiai RIS H EKO pagaminti su efektyviu rotoriniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus rotorinis šilumokaitis, kurio grąžinama šiluma iki 80%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis šildytuvas/aušintuvas.
- Elektrinio šildytuvo valdymas 0-10V (RIRS 1200 – 5500 EKO).
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Keičiamos aptarnavimo pusės
- Galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – 50mm.
- Miltelinių būdu dažytas korpusas RAL 7040
- Žemas triukšmo lygis.
- Greitas ir lengvas montavimas.
- „Plug & play" paruošimas ir pilnai integruota valdymo automatika.
- Integruotas filtrų užterštumo matuoklis.
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis.
- Papildomai užsakomas stogas ir atvamzdis (RIRS 1200 – 5500 EKO).
- RIRS 2500 - 5500H EKO – tiekiamas trijomis sekcijomis.
- RIRS 2500 - 5500H EKO – integruotos motorizuotos tiekiamo ir šalinamo oro sklendės.

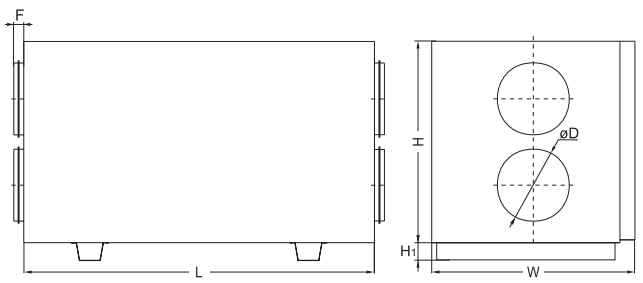
Установки с рекуперацией тепла RIRS EKO очищают, нагревают и подают свежий воздух. Установки RIS EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 80 %.
- Встроенный электрический нагреватель или опция водянных охладителей/нагревателей.
- Интегрирован электрический подогреватель 0-10 V (RIRS 1200 - 5500 EKO 2.0)
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Меняемая сторона обслуживания.
- RIRS H EKO версии с интегрированными возможнастями упровления с помощью пультов UNI, PRO и TPC.
- Акустическая изоляция стенок -50мм.
- Корпус: окрашекнный RAL 7040.
- Низкий уровень шума.
- Легко монтируються.
- Интегрированная полная система управления агрегата "plug & play".
- Установлен датчик давления для фильтра загрязнения в RIRS 400 - 5500 EKO.
- Опциональная контроль: CO_2, давление в системе и трансмитер приточного воздуха для RIRS 400 - 5500 H EKO.
- RIRS 1200H – 5500H EKO опция козырька и крышка розетки.
- RIRS 2500H – 5500H EKO разделяется на 3 секции.
- RIRS 2500H – 5500H EKO установленны моторизованы клапона для приточного и вытяжного воздуха.

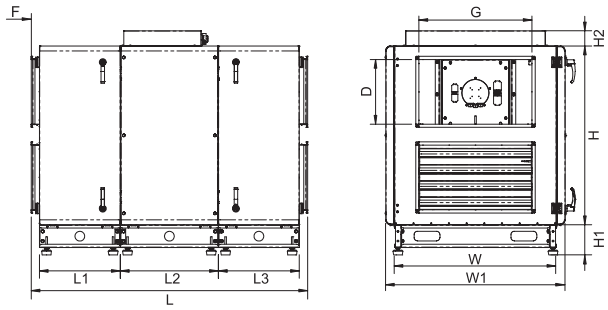
Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Circular duct silencer	Shuft-off damper
							
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**1141** **p. 181**	**RC02-F2** **p. 182**	**KFF-U** **p. 183**	**AKS** **p. 230**	**SKG** **p. 226**

RIRS 400H EKO - 1900H EKO 3.0



RIRS 2500H - 5500H EKO 3.0



RIRS 400 H E L EKO 3.0

	Equipped with new PRV V2.2 control board
	AHU with EC motors
	Air intake side (L - left; R - right)
	Heater type (E - integrated electrical heater; W - optional water heater)
	Housing type (V - vertical, H - horozontal, P - under - ceiling)
	AHU size according to air flow range m^3/h
	AHU with rotor heat-exchanger

Type	Dimensions [mm]							
	L	W	H	øD	G	D	F	H_1
RIRS 400HE/HW EKO 3.0	1000	560	610	200	-	-	30	40
RIRS 700HE/HW EKO 3.0	1100	653	700	250	-	-	40	40
RIRS 1200HE/HW EKO 3.0	1350	853	900	315	-	-	40	70
RIRS 1900HE/HW EKO 3.0	1350	853	900	315	-	-	40	70
RIRS 2500HE/HW EKO 3.0	1608	1110	1105	-	700	400	50	140
RIRS 3500HE/HW EKO 3.0	2005	1205	1433	-	700	400	50	140
RIRS 5500HE/HW EKO 3.0	1908	1394	1485	-	800	500	50	140

Type	Accessories														
	Flex Stouch TPC	1141 RC02-F2 KFF-U	AKS SKG AP	AVS AVA	SKS	SVS	Comfort Box	SP	TJP 10P CO4C***	SSB *Heating*	SSB *Cooling*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIRS 400HE EKO 3.0	+	+	160	-	-	-	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 400HW EKO 3.0	+	+	160	160	-	-	-	TF230	int	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIRS 700HE EKO 3.0	+	+	250	-	-	-	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 700HW EKO 3.0	+	+	250	250	-	-	-	TF230	int	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIRS 1200HE EKO 3.0	+	+	315	-	-	-	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 1200HW EKO 3.0	+	+	315	315	-	-	-	LF230	int	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIRS 1900HE EKO 3.0	+	+	315	-	-	-	-	LM230A-TP	-	-	-	-	-	-	-
RIRS 1900HW EKO 3.0	+	+	315	315	-	-	-	LF230	int	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIRS 2500HE EKO 3.0	+	+	-	-	700x400	-	600x350	int	-	-	-	-	-	-	-
RIRS 2500HW EKO 3.0	+	+	-	-	700x400	700x400	600x350	int	+	61	81	+	+	+	+
RIRS 3500HE EKO 3.0	+	+	-	-	700x400	-	800x500	int	-	-	-	-	-	-	-
RIRS 3500HW EKO 3.0	+	+	-	-	700x400	700x400	800x500	int	+	61	81	+	+	+	+
RIRS 5500HE EKO 3.0	+	+	-	-	800x500	-	800x500	int	-	-	-	-	-	-	-
RIRS 5500HW EKO 3.0	+	+	-	-	800x500	700x400	800x500	int	+	61	81	+	+	+	+

*** - anti-frost thermostat
int - already integrated into the unit

Accessories

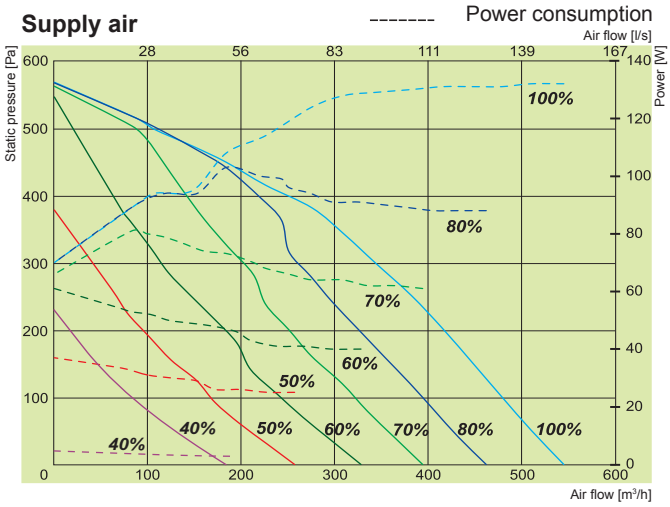
Mounting clamp	Heating coil	Circular duct water cooler	Actuator for dampers	Thermic water valve actuator	Mixing point	2 and 3 way valves
						
AP p. 229	AVS p. 192	AVA p. 202	SP p. 188	SSB p. 184	RMG p. 185	VVP/VXP p. 186

RIRS H EKO

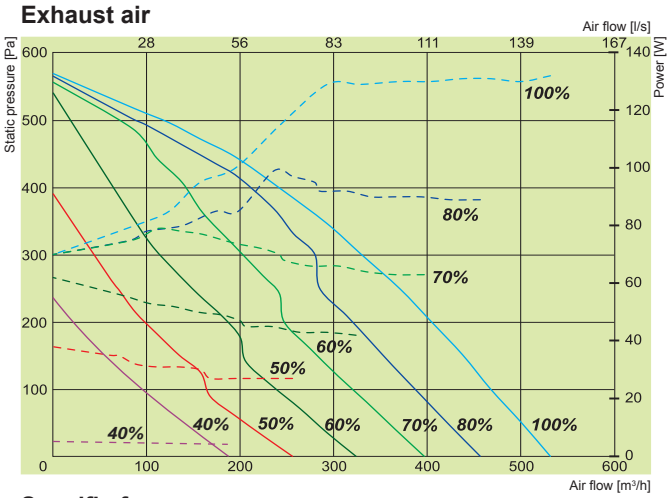
RIRS 400H EKO 3.0

Performance
Power consumption

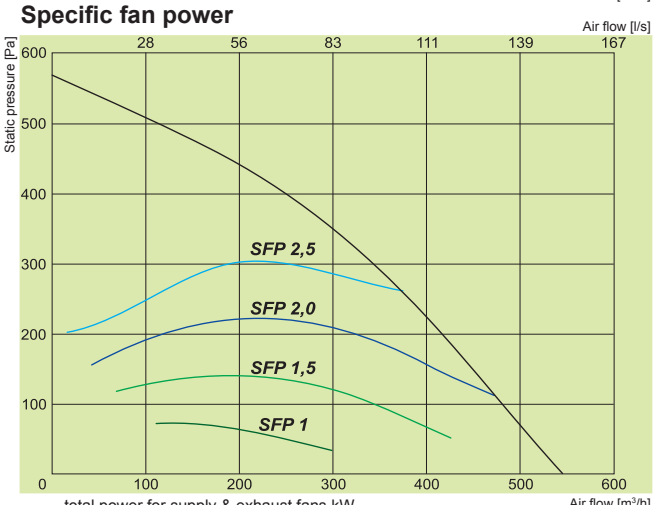
Supply air



Exhaust air



Specific fan power

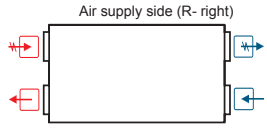


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIRS 400H EKO 3.0

Air supply side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1749_0022A	400HE EKO 3.0	Integrated electrical heater.
GAGRIRS1750_0023A	400HW EKO 3.0	Optional water heater.

400HE / HW EKO 3.0			
Water heater (optional) HW ver.			AVS 200
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~1, 230
		[kW]	1,2
EC fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,132/1,16
	fan speed	[min^{-1}]	3490
supply	power/current	[kW/A]	0,132/1,2
	fan speed	[min^{-1}]	3490
Thermal efficiency up to*			75%
Max power consumption HE/HW		[kW/A]	1,47/7,66 0,27/2,46
Control board			PRV V2.2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	50
Colour	RAL	grey	7040
Weight (net, without packing) HE / HW		[kg]	70
Comply with ERP			2013; 2015
Operation			indoors
Housing protection class	IP		34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

400H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	70	68	72	72	70	64	65
Extract	63	53	57	61	49	45	40	32
Surrounding	55	43	44	53	48	45	44	41
Measured at 445 m³/h, 124 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

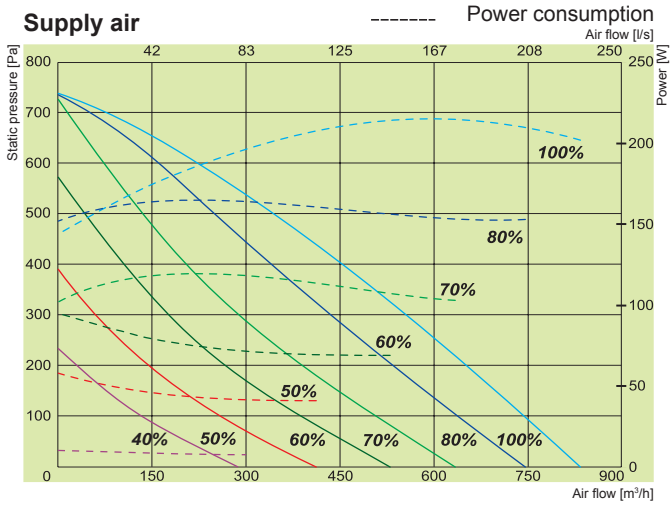
Certifications

EUROVENT certified counter flow heat exchanger performance

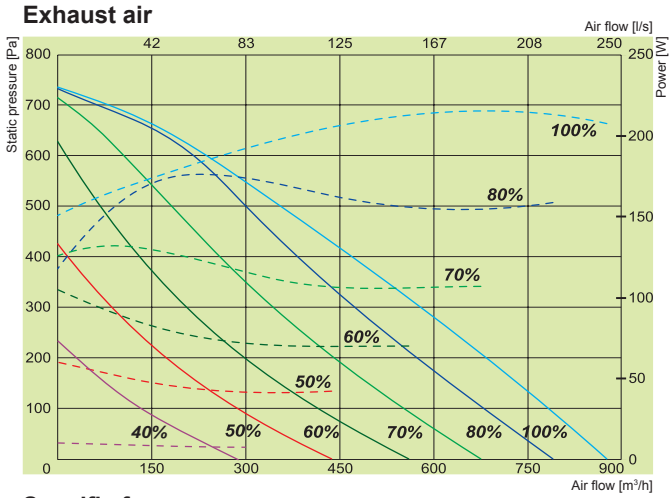
RIRS 700H EKO 3.0

Performance
Power consumption

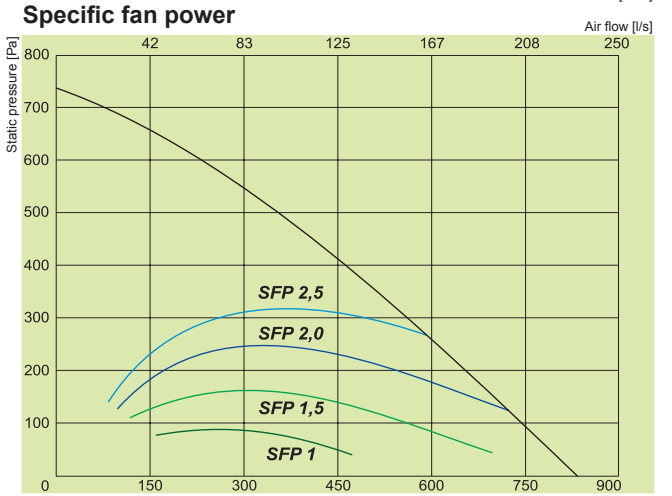
Supply air



Exhaust air



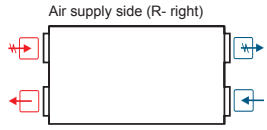
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIRS 700H EKO 3.0
Air supply side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1662_0013A	700HE EKO 3.0	Integrated electrical heater.
GAGRIRS1697_0014A	700HW EKO 3.0	Optional water heater.

700HE / HW EKO 3.0				
Water heater (optional) HW ver.				AVS 250
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		2,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,214/1,76
	fan speed	[min⁻¹]		3380
supply	power/current	[kW/A]		0,217/1,88
	fan speed	[min⁻¹]		3380
Thermal efficiency up to*				75%
Max power consumption HE / HW		[kW/A]	2,44/12,44	0,44/3,74
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing)		[kg]		96
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

700H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	67	68	74	72	71	65	63
Extract	65	54	62	63	53	52	48	36
Surrounding	55	48	49	51	49	46	44	43
Measured at 657 m³/h, 200 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

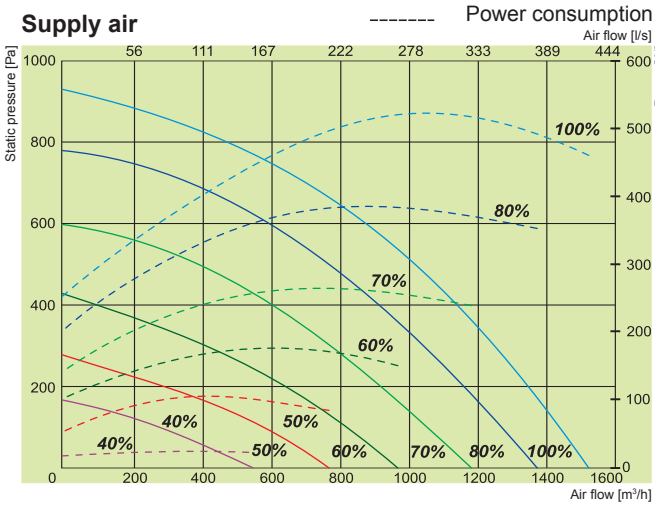
EUROVENT certified counter flow heat exchanger performance

RIRS H EKO

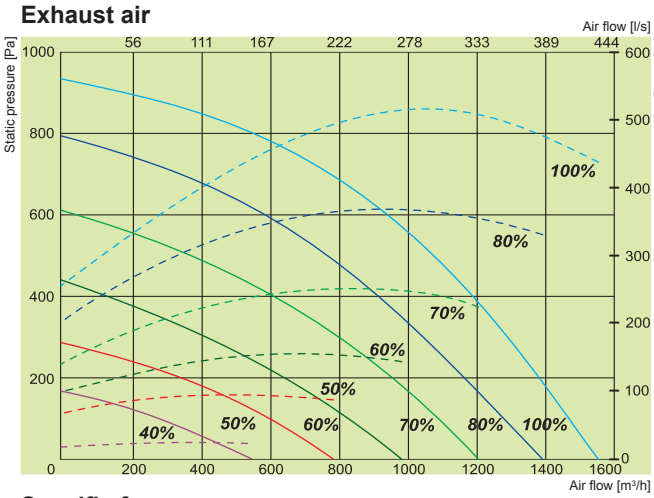
RIRS 1200H EKO 3.0

Performance
Power consumption

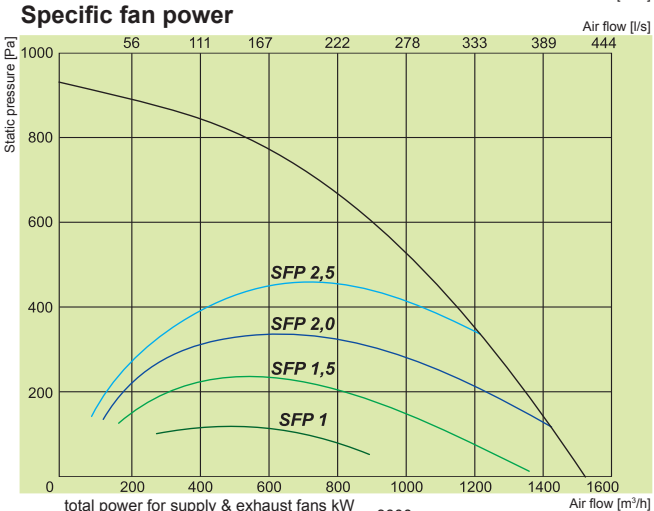
Supply air



Exhaust air

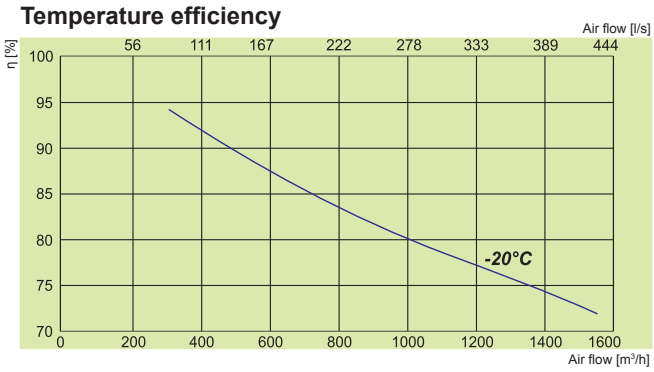


Specific fan power



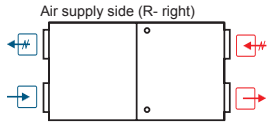
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIRS 1200H EKO 3.0

Air supply side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIRS1671_0015C	1200HE EKO 3.0	Integrated electrical heater.
GAGRIRS1672_0016A	1200HW EKO 3.0	Optional water heater.

1200HE / HW EKO 3.0				
Water heater (optional) HW ver.				AVS 315
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~2, 400
		[kW]		4,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,44/2,8
	fan speed	[min⁻¹]		3400
supply	power/current	[kW/A]		0,44/2,9
	fan speed	[min⁻¹]		3400
Thermal efficiency up to*				74%
Max power consumption HE / HW		[kW/A]	4,9/15,9	0,89/5,87
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing) HE / HW		[kg]	162	160
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1200H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	66	73	71	70	66	62	53
Extract	68	63	64	62	56	46	41	31
Surrounding	57	52	53	47	44	41	35	33
Measured at 1437 m³/h, 102 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

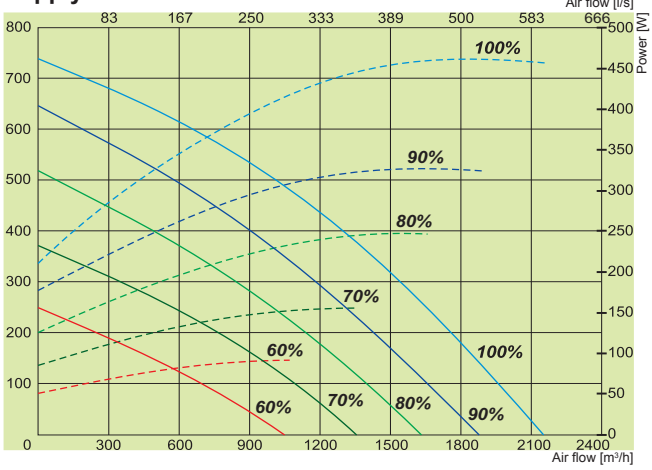
Certifications

EUROVENT certified counter flow heat exchanger performance

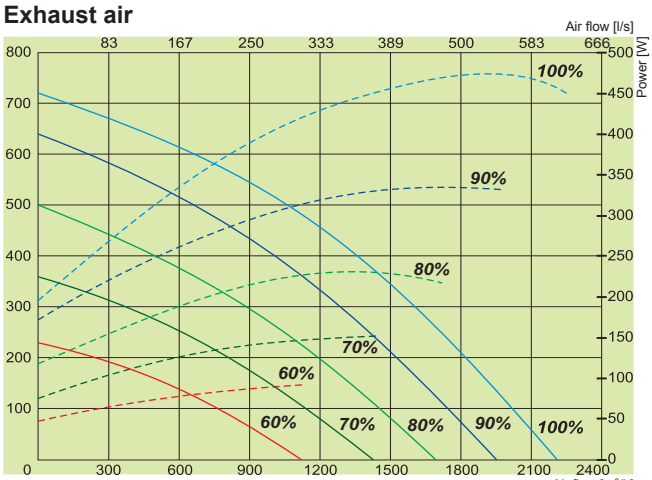
RIRS 1900H EKO 3.0

Performance
Power consumption

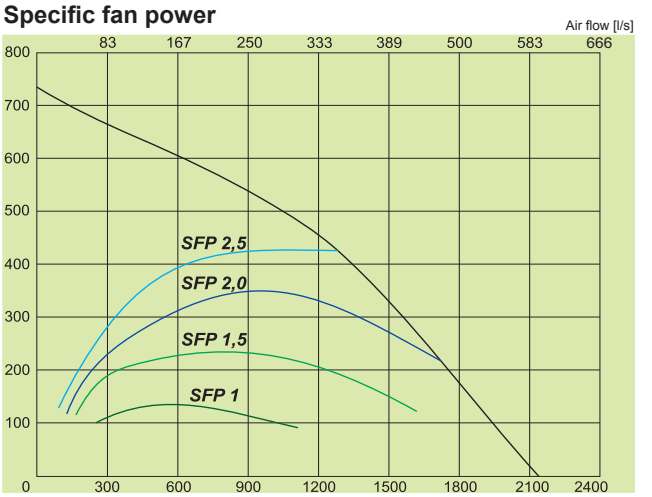
Supply air



Exhaust air



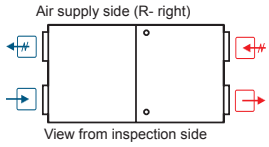
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIRS 1900H EKO 3.0
Air supply side (R- right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1719_0017B	1900HE EKO 3.0	Integrated electrical heater.
GAGRIRS1720_0019A	1900HW EKO 3.0	Optional water heater.

1900HE / HW EKO 3.0

Water heater (optional) HW ver.				AVS 315
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~3, 400
		[kW]		9,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,565/2,56
	fan speed	[min⁻¹]		2600
supply	power/current	[kW/A]		0,586/2,6
	fan speed	[min⁻¹]		2600
Thermal efficiency up to*				74%
Max power consumption HE / HW		[kW/A]	10,2/19	1,2/4,3
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing)		[kg]	162	160
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

1900H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	55	70	70	71	75	72	63
Extract	67	53	65	60	53	54	50	36
Surrounding	61	44	58	53	51	53	50	48
Measured at 1906 m³/h, 100 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

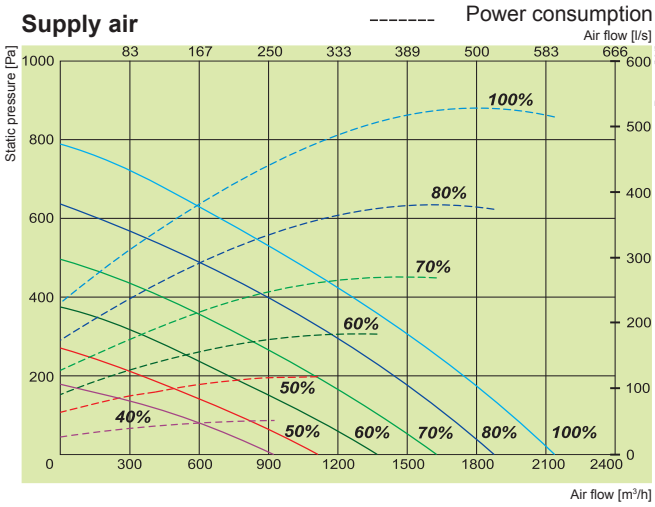
EUROVENT certified counter flow heat exchanger performance

RIRS H EKO

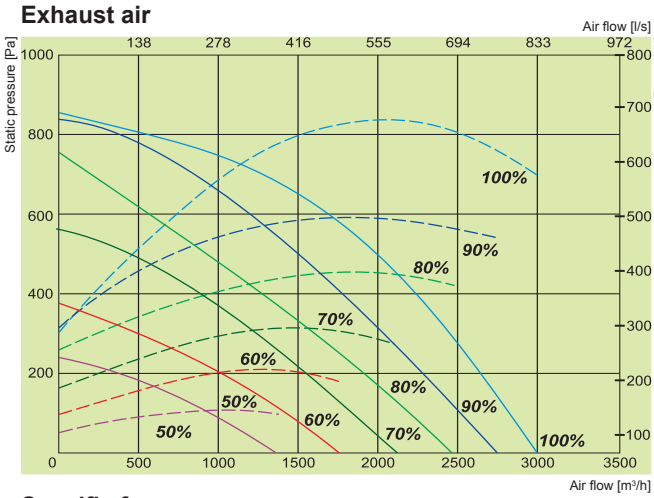
RIRS 2500H EKO 3.0

Performance
Power consumption

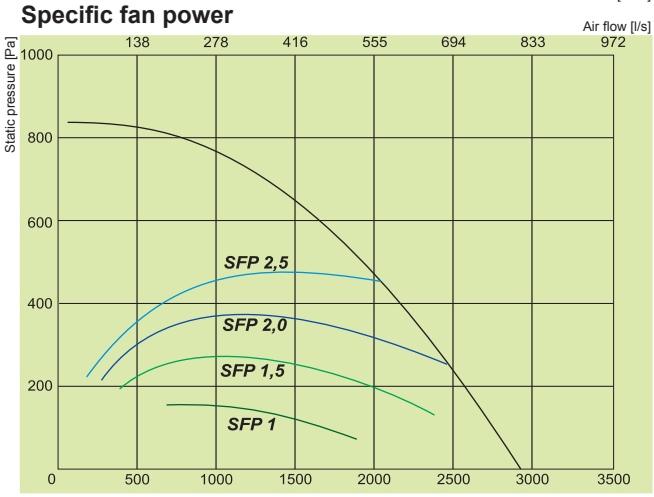
Supply air



Exhaust air

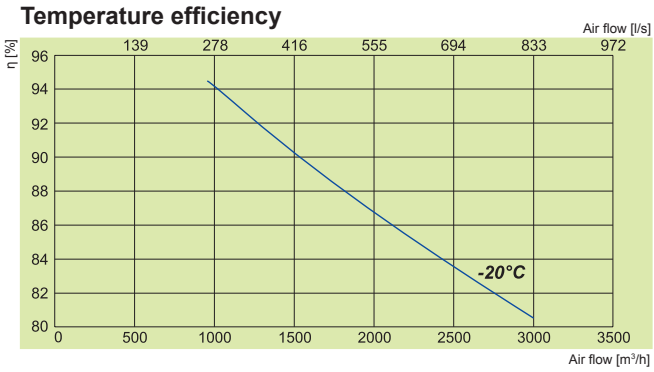


Specific fan power

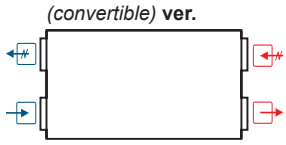


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIRS 2500H EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version
GAGRIRS1742_0026B	2500HE EKO 3.0	Integrated electrical heater.
GAGRIRS1772_0027A	2500HW EKO 3.0	Optional water heater.

2500HE / HW EKO 3.0

Water heater (optional) HW ver.				Comfort Box 600x350
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~3, 400
		[kW]		9,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,712/3,19
	fan speed	[min^{-1}]		2800
supply	power/current	[kW/A]		0,749/3,35
	fan speed	[min^{-1}]		2800
Thermal efficiency up to*				80%
Max power consumption HE / HW		[kW/A]	10,5/20,0	1,5/6,95
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing) HE / HW		[kg]	350	348
Comply with ERP				2013; 2015
Operation				indoors/outdoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

2500H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	61	69	71	75	71	65	64
Extract	68	60	61	65	56	51	46	41
Surrounding	62	45	52	60	54	52	48	43
Measured at 2599 m³/h, 180 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

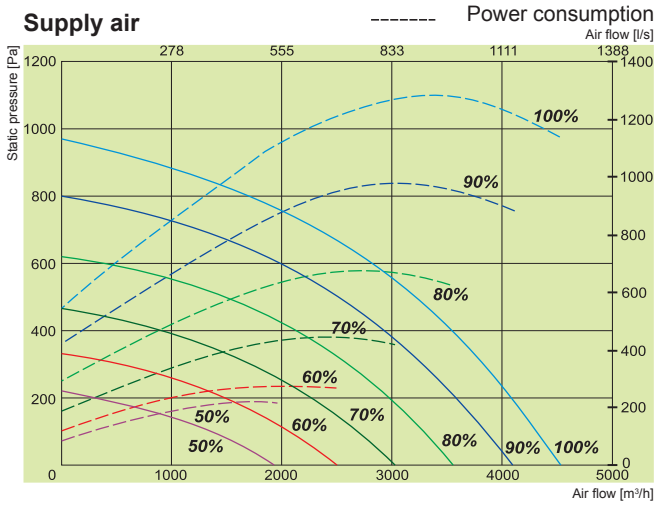
Certifications

EUROVENT certified counter flow heat exchanger performance

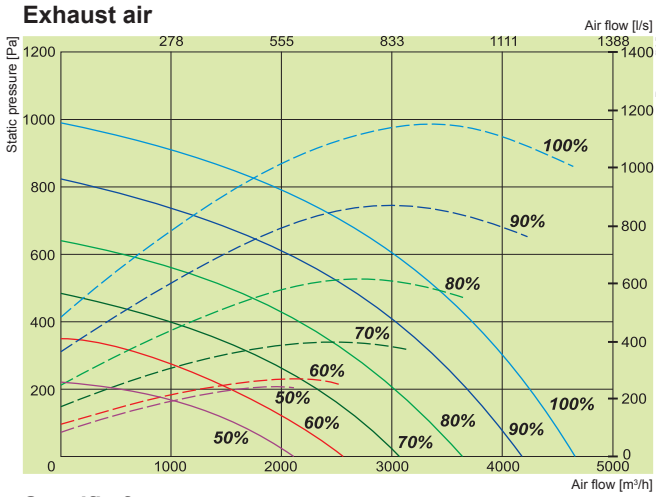
RIRS 3500H EKO 3.0

Performance
Power consumption

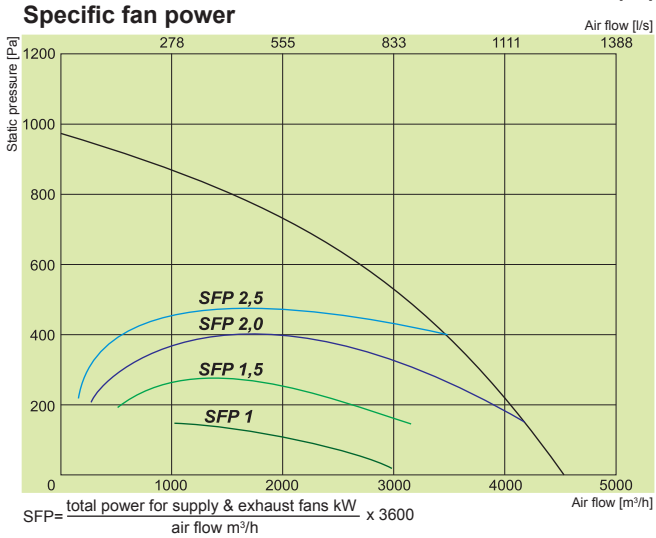
Supply air



Exhaust air

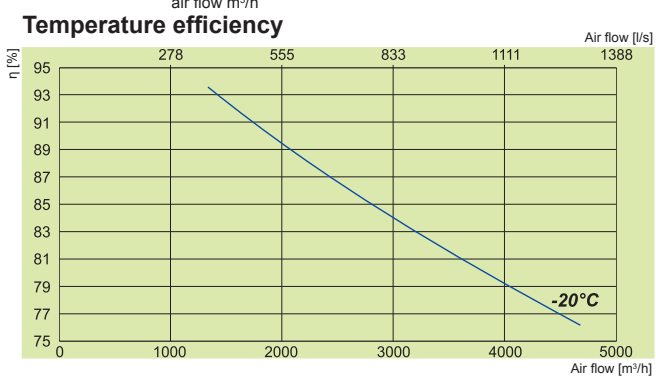


Specific fan power

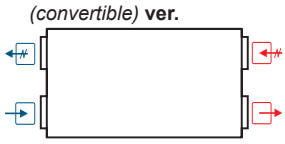


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIRS 3500H EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.		Version	
GAGRIRS1764_0020B	3500HE EKO 3.0	Integrated electrical heater.	
GAGRIRS1765_0021A	3500HW EKO 3.0	Optional water heater.	

3500HE / HW EKO 3.0

Water heater (optional) HW ver.				Comfort Box 800x500
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]		~3, 400
		[kW]		9,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		1,340/6
	fan speed	[min⁻¹]		2390
supply	power/current	[kW/A]		1,3/5,75
	fan speed	[min⁻¹]		2390
Thermal efficiency up to*				80%
Max power consumption HE / HW		[kW/A]	14,68/29,43	2,67/11,91
Control board				PRV V2.2
Filter class	exhaust/supply			M5/F7
Housing insulation, mineral wool		[mm]		50
Colour	RAL	grey		7040
Weight (net, without packing) HE / HW		[kg]	492	490
Comply with ERP				2013; 2015
Operation				indoors
Housing protection class	IP			34

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

3500HW EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	84	59	73	79	78	77	75	70
Extract	74	60	72	68	62	59	53	42
Surrounding	66	55	60	61	58	56	50	48
Measured at 4055 m³/h, 225 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

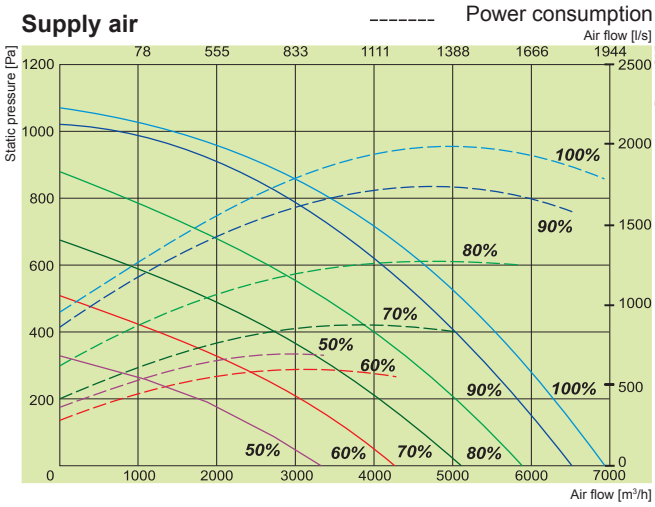
EUROVENT certified counter flow heat exchanger performance

RIRS H EKO

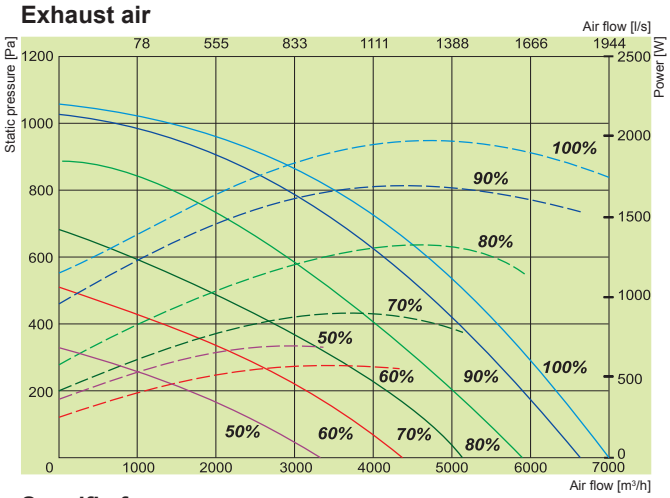
RIRS 5500H EKO 3.0

Performance
Power consumption

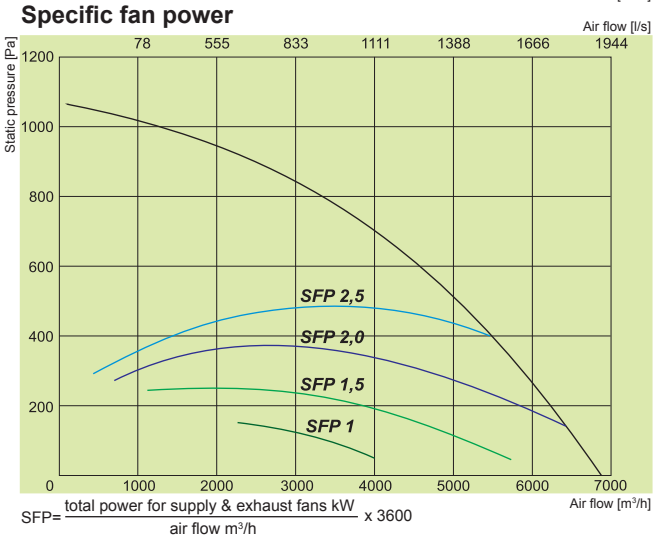
Supply air



Exhaust air

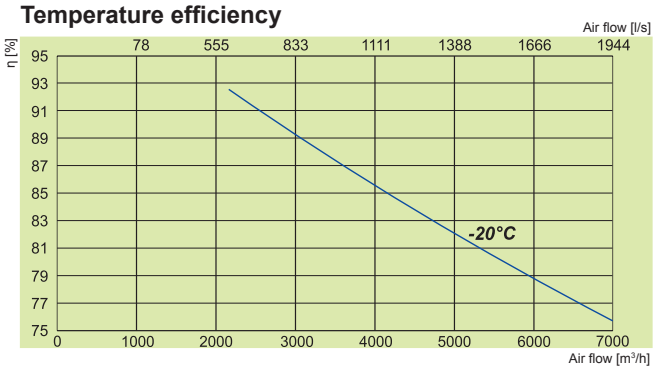


Specific fan power

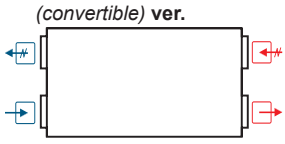


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIRS 5500H EKO 3.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIRS1743_0030B	5500HE EKO 3.0	Integrated electrical heater.
GAGRIRS1761_0031B	5500HW EKO 3.0	Optional water heater.

			5500HE / HW EKO 3.0	
Water heater (optional) HW ver.			Comfort Box 800x500	
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~3, 400	
		[kW]	15,0	
EC fans	phase/voltage	[50Hz/VAC]	~3, 400	
exhaust	power/current	[kW/A]	1,980/3,06	
	fan speed	[min^{-1}]	2180	
supply	power/current	[kW/A]	2,0/3,17	
	fan speed	[min^{-1}]	2180	
Thermal efficiency up to*			80%	
Max power consumption HE / HW		[kW/A]	19,0/28,35	4,2/6,64
Control board			PRV V2.2	
Filter class	exhaust/supply		M5/F7	
Housing insulation, mineral wool		[mm]	50	
Colour	RAL	grey	7040	
Weight (net, without packing) HE / HW		[kg]	625	623
Comply with ERP			2013; 2015	
Operation			indoors/outdoors	
Housing protection class	IP		34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

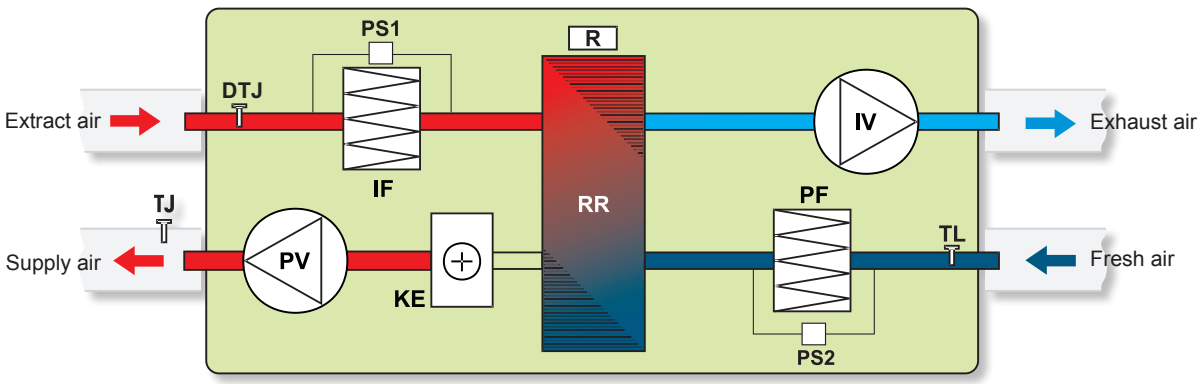
5500H EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	90	69	82	83	85	81	80	76
Extract	76	62	70	73	67	61	58	53
Surrounding	78	60	71	73	72	69	64	57
Measured at 6219 m³/h, 210 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

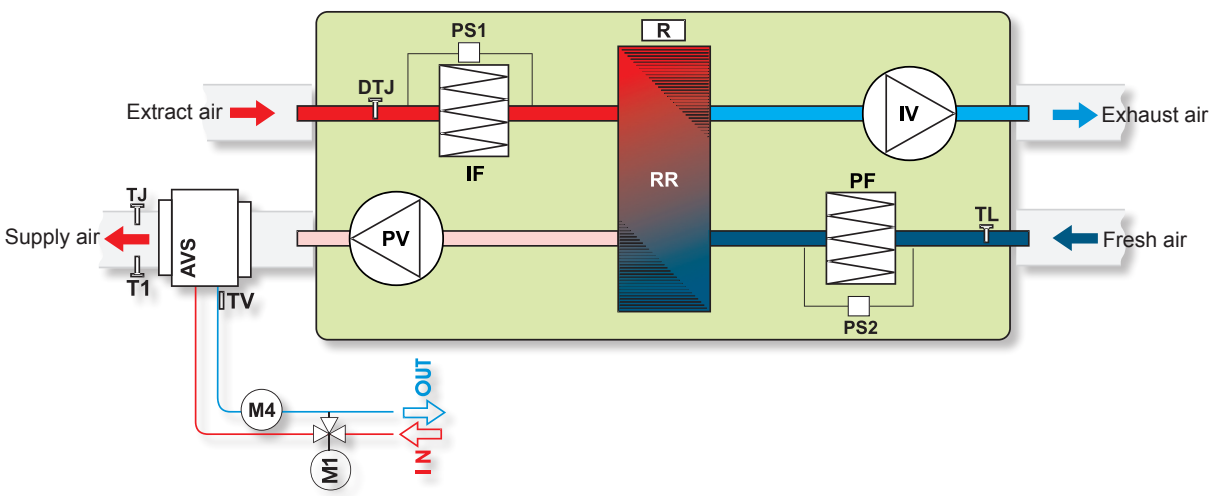
EUROVENT certified counter flow heat exchanger performance

RIRS 400HE EKO 3.0; 700HE EKO 3.0 (horizontal) versions with electrical heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
IF - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
DTJ - humidity + temperature sensor
PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch

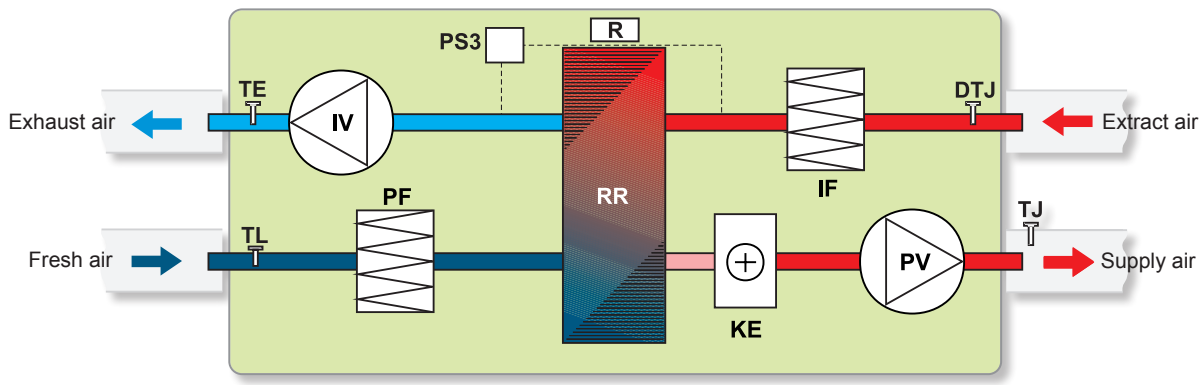
RIRS 400HW EKO 3.0; 700HW EKO 3.0 (horizontal) versions with water heater



PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch
AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
IF - extract air filter (class M5)
TJ - air temperature sensor for supply air
TL - air temperature sensor for fresh air
DTJ - humidity + temperature sensor
M1 - optionally supply mixing valve and motor
M4 - water heater circulatory pump
T1 - antifrost thermostat
TV - antifrost sensor

RIRS H EKO

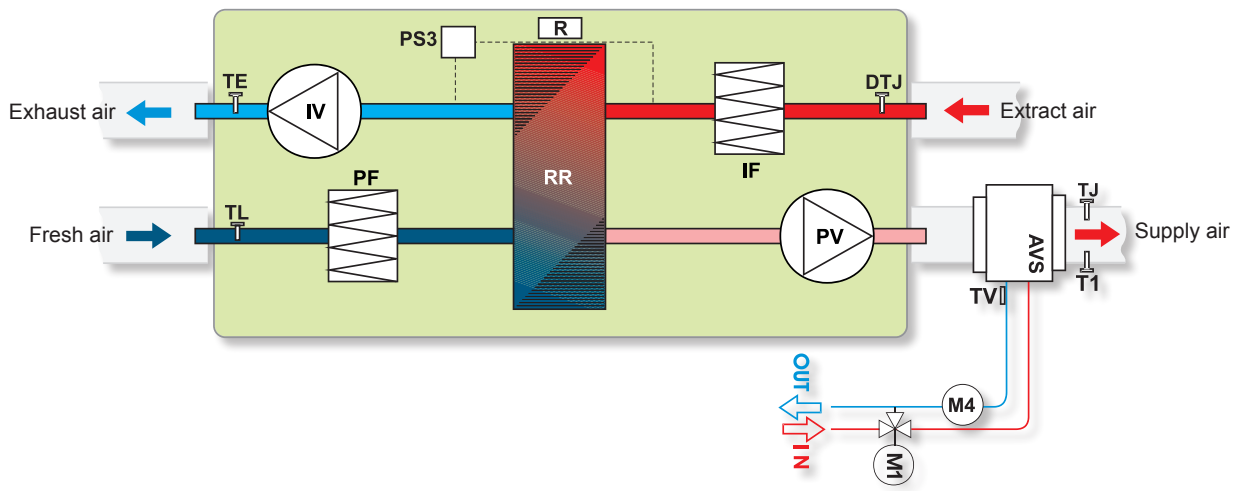
RIRS 1200HE EKO 3.0; 1900HE EKO 3.0 (horizontal) versions with electrical heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
DTJ -humidity + temperature sensor
PS3 - heat exchanger antifrost pressure switch

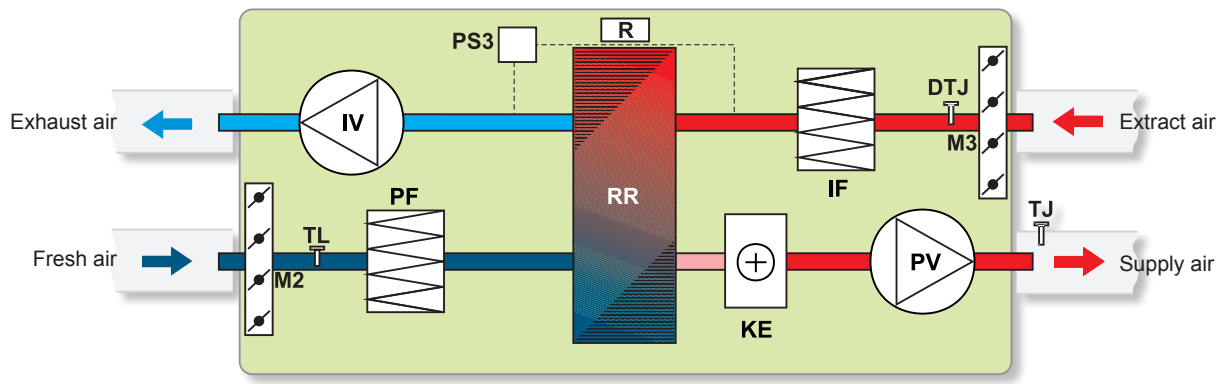
RIRS 1200HW EKO 3.0, 1900HW EKO 3.0 (horizontal) versions with water heater



PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch
AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

TJ - air temperature sensor for supply air
TL - air temperature sensor for fresh air
TE - temperature sensor for exhaust air
M1 - optionally supply mixing valve and motor
M4 - water heater circulatory pump
T1 - antifrost thermostat
TV - antifrost sensor
DTJ -humidity + temperature sensor
PS3 - heat exchanger antifrost pressure switch

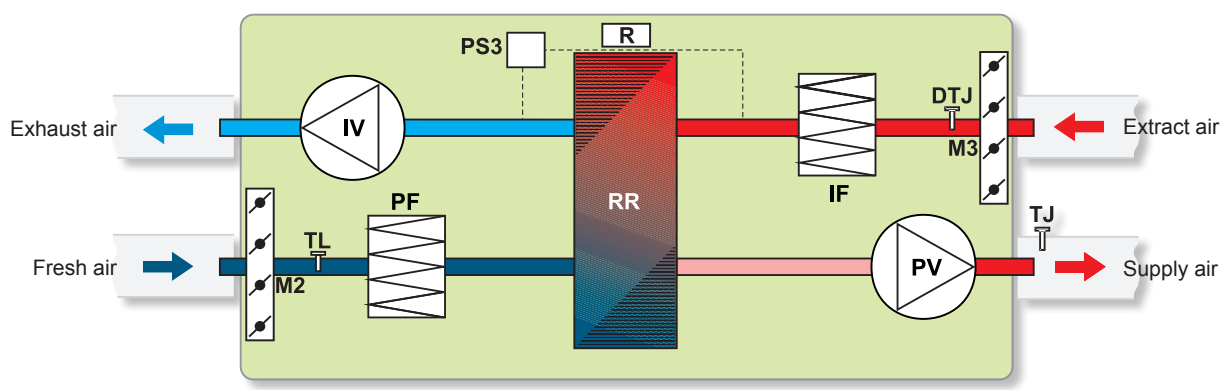
RIRS 2500HE EKO 3.0; 3500HE EKO 3.0; 5500HE EKO 3.0 (horizontal) versions with water heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
DTJ -humidity + temperature sensor
M2 - actuator for fresh air damper
M3 - actuator for extract air damper
PS3 - heat exchanger antifrost pressure switch

RIRS 2500HW EKO 3.0; 3500HW EKO 3.0; 5500HW EKO 3.0 (horizontal) versions with water heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
DTJ -humidity + temperature sensor
M3 - actuator for extract air damper
PS3 - heat exchanger antifrost pressure switch

RIRS P EKO

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIRS P EKO have high efficiency rotor heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of heat exchanger up to 80%.
- Integrated electrical heater or optional water heating/cooling.
- Controlled air flow.
- Supply air temperature control.
- Low noise level.
- Acoustic insulation of the walls – 30 mm.
- RIRS P EKO versions can be controlled with UNI, PRO and TPC remote control devices.
- RIRS P EKO housing: powder coated painting RAL 9016.
- Easy mounting.
- Full integrated plug & play control system.
- Integrated pressure switch for filter pollution.
- Optional CO_2, pressure or airflow transmitter.
- Extremely low height !

Urządzenia wentylacyjne RIS P EKO wyposażone w wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła, zwracający do 80% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodny grzejnik/schładzacz.
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Niski poziom hałasu.
- Izolacja przeciwhałasowa ścianek – 30 mm.
- RIRS PEKO można sterować za pomocą pilotów UNI, PRO i TPC.
- Obudowa malowana metodą proszkową – kolor RAL 9016.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play“ i całkowicie zintegrowana automatyka sterowania
- Zintegrowany miernik zanieczyszczenia filtrów.
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności
- Szczególnie niska wysokość !

Vėdinimo įrenginiai RIS P EKO pagaminti su efektyviu priešpriešinių srautų plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

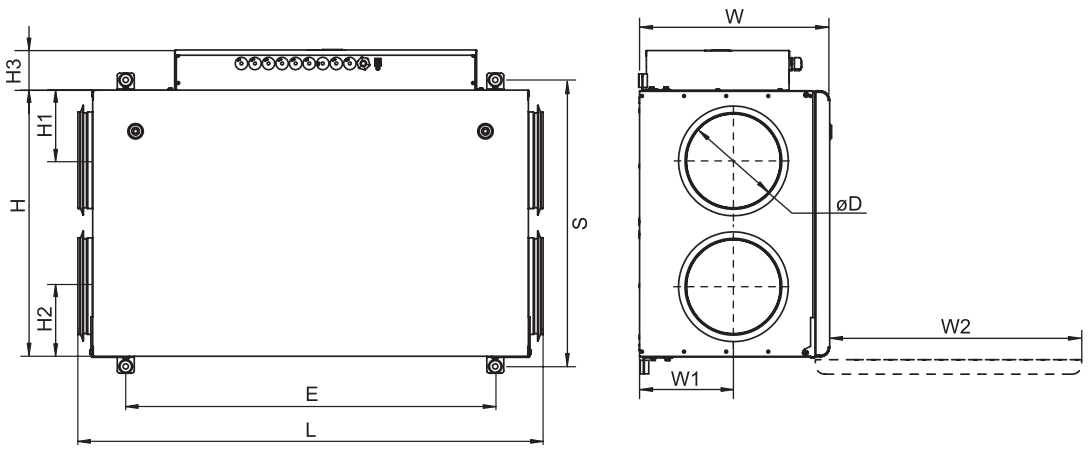
- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio grąžinama šiluma iki 80%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis šildytuvas/aušintuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Žemas triukšmo lygis.
- Sienelių triukšmo izoliacija - 30 mm.
- RIRS P EKO galima valdyti su UNI, PRO and TPC pulteliais.
- Miltelinių būdu dažytas korpusas - spalva RAL 9016.
- Greitas ir lengvas montavimas.
- „Plug & play“ paruošimas ir pilnai integruota valdymo automatika.
- Integruotas filtrų užterštumo matuoklis.
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis.
- Ypatingai žemas aukštis !

Установки с рекуперацией тепла RIRS EKO очищают, нагревают и подают свежий воздух. Установки RIS EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 80 %.
- Встроенный электрический нагреватель или опция водянных охлодителей/нагревателей.
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Акустическая изоляция стенок - 30мм.
- Низкий уровень шума.
- RIRS P EKO версии с интегрированными возможнастями упровления с помощью пультов UNI, PRO и TPC.
- Корпус: окрашекнный RAL 9016.
- Легко монтируються.
- Интегрированная полная система управления агрегата “plug & play”.
- Установлен датчик давления для фильтра загрязнения
- Опциональная контроль: CO_2, давление в системе и трансмитер воздуха.
- Очень удобная высота агрегата !

Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Actuator for dampers	Duct sensor
							
Flex p. 178	**Stouch** p. 179	**TPC** p. 180	**1141** p. 181	**RC02-F2** p. 182	**KFF-U** p. 183	**SP** p. 188	**TJK 10K** p. 187



RIRS 350 P E EKO 3.0

RIRS	Equipped with new PRV V2.2 control board
350	AHU with EC motors
P	Heater type (E - integrated electrical heater; W - optional water heater)
E	Housing type (V - vertical, H - horozontal, P - under - ceiling)
EKO	AHU size according to air flow range m³/h
3.0	AHU with rotor heat-exchanger

Type	Dimensions [mm]										
	W	W1	W2	H	H1	H2	H3	E	L	S	øD
RIRS 350PE EKO 3.0	398	196	550	610	160	160	83	764	961	652	200
RIRS 350PW EKO 3.0	398	196	550	610	160	160	83	764	961	652	200

Type	Accessories									
	Flex Stouch TPC	1141 RC02-F2 KFF-4	SP	TJK10K C04C***	SSB *Heating*	SSB *Cooling*	RMG 80/60°C	RMG 80/40°C	VVP/VXP 80/60°C	VVP/VXP 80/60°C
RIRS 350PE EKO 3.0	+	+	LM230A-TP	-	-	-	-	-	-	-
RIRS 350PW EKO 3.0	+	+	TF230	+	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63

*** - anti-frost thermostat

Accessories

Thermic water valve actuator

SSB p. 184

Mixing point

RMG p. 185

2 and 3 way valves

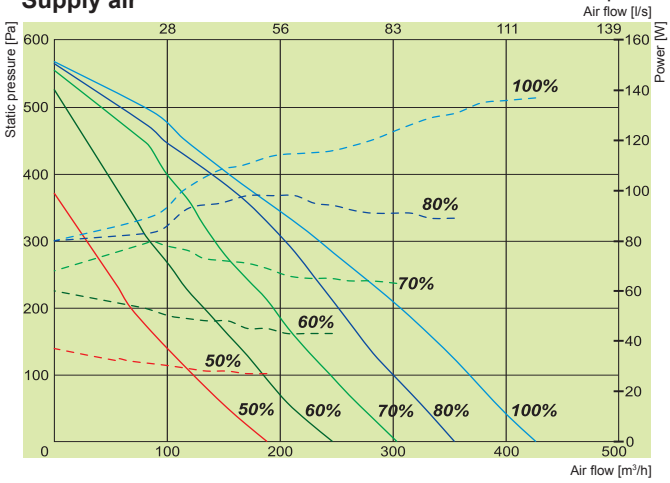
VVP/VXP p. 186

RIRS P EKO

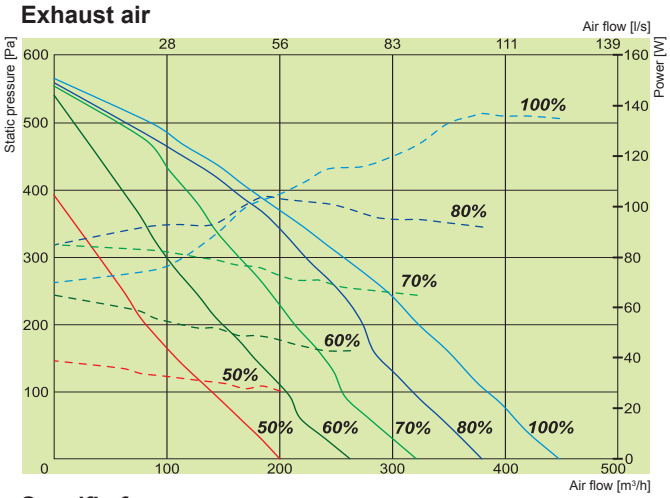
RIRS 350P EKO 3.0

Performance
Power consumption

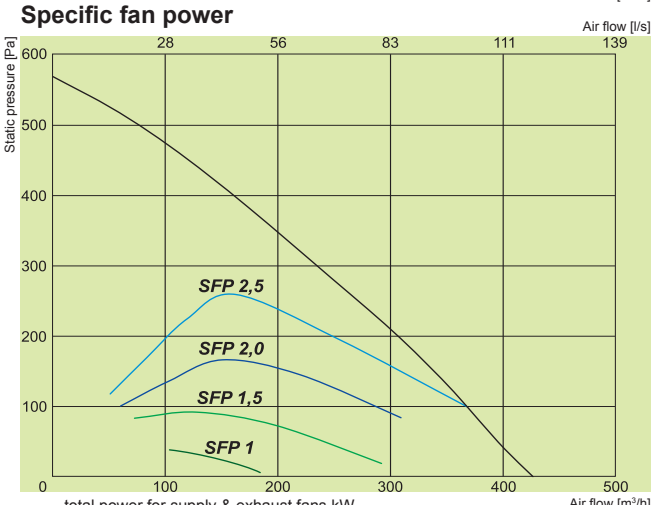
Supply air



Exhaust air



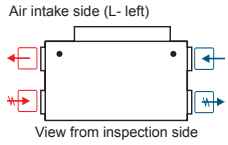
Specific fan power



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

RIRS 350P EKO 3.0
Air intake side (L- left)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

Article No.	Version	
GAGRIRS1762_0028A	350PE EKO 3.0	Integrated electrical heater.
GAGRIRS1763_0029A	350PW EKO 3.0	Optional water heater.

350PE / PW EKO 3.0				
Water heater (optional) PW ver.			AVS 200	
Electrical heater PE ver.	phase/voltage	[50Hz/VAC]	~1, 230	
		[kW]	0,6	
EC fans	phase/voltage	[50Hz/VAC]	~1, 230	
exhaust	power/current	[kW/A]	0,130/1,19	
	fan speed	[min⁻¹]	3490	
supply	power/current	[kW/A]	0,130/1,22	
	fan speed	[min⁻¹]	3490	
Thermal efficiency up to*			80%	
Max power consumption PE / PW		[kW/A]	0,88/5,3	0,27/2,5
Control board			PRV V2.2	
Filter class	exhaust/supply		M5/F7	
Housing insulation, mineral wool		[mm]	50	
Colour	RAL	grey	7040	
Weight (net, without packing) PE / PW		[kg]	54	53
Comply with ERP			2013; 2015	
Operation			indoors/outdoors	
Housing protection class	IP		34	

* Calculated according EN 13141-7.
**For temperatures lower than recommended use electrical pre-heater to ensure balanced operation.

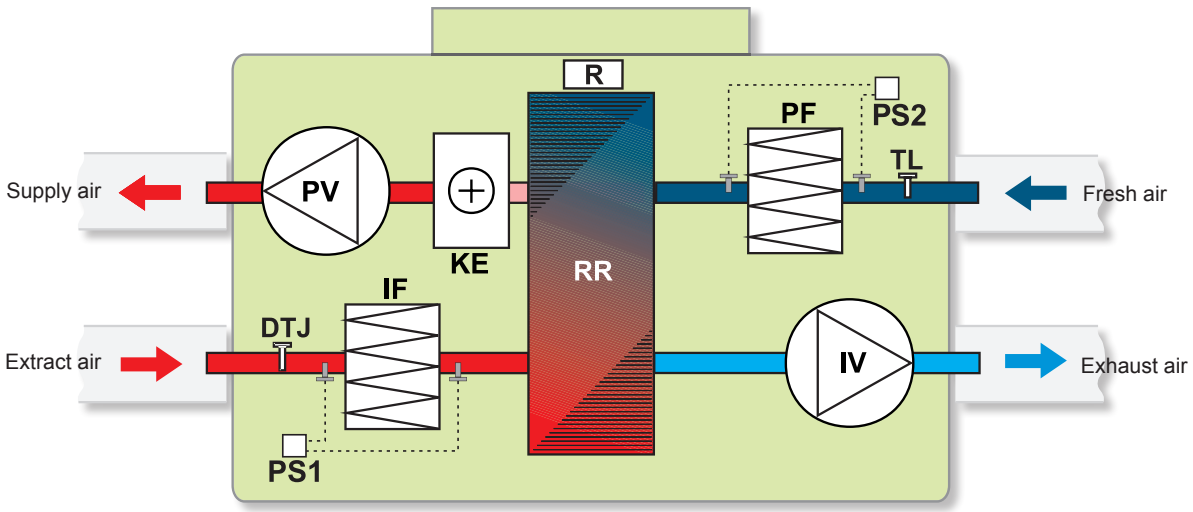
350P EKO 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	69	54	53	66	64	60	58	55
Extract	64	52	54	59	58	57	54	49
Surrounding	54	40	39	48	41	47	44	46
Measured at 356 m³/h, 120 Pa								

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -20°C

Certifications

EUROVENT certified counter flow heat exchanger performance

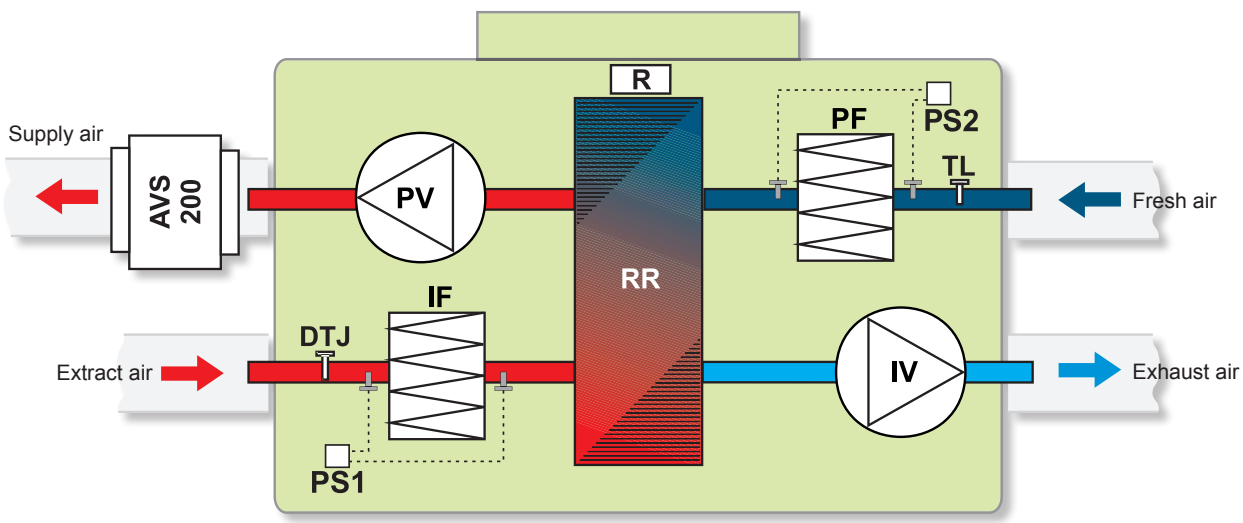
RIRS 350PE EKO 3.0 (ceiling mounted) **versions with electrical heater**



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

TL - temperature sensor for fresh air
DTJ -humidity + temperature sensor
PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch

RIRS 350PW EKO 3.0 (ceiling mounted) **versions with water heater**



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class F7)
IF - extract air filter (class M5)

TL - temperature sensor for fresh air
DTJ -humidity + temperature sensor
PS1 - extract air differential pressure switch
PS2 - fresh air differential pressure switch
AVS - optionally supplied water heater

RIRS V

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIRS have high efficiency rotor heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Rotor heat exchanger with efficiency up to 75%.
- Electrical or water heater.
- Efficient and low-noise fans.
- Controlled air flow.
- Supply air temperature control.
- External-rotor motors.
- RIRS 400VE - 1500VE with integrated control and monitoring capabilities, using UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls – 50 mm.
- RIRS 400V - 1500V housing: powder coated painting RAL 7040.
- Low noise level.
- Easy mounting.

Vėdinimo įrenginiai RIRS V pagaminiti su efektyviu rotoriniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Rotorinis šilumokaitis, efektyvumas iki 75%.
- Elektrinis arba papildomai užsakomas kanalinis vandeninis šildytuvas.
- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Integruota automatika, galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – 50mm.
- Miltelinių būdu dažytas korpusas - spalva RAL 7040.
- Žemas triukšmo lygis.
- Greitas ir lengvas motavimas.

RIRS slimatyzacja centrale mają wysoką wydajność wirnika wymiennika ciepła. Centrala służy do wentylacji domów i innych ogrzewanych.

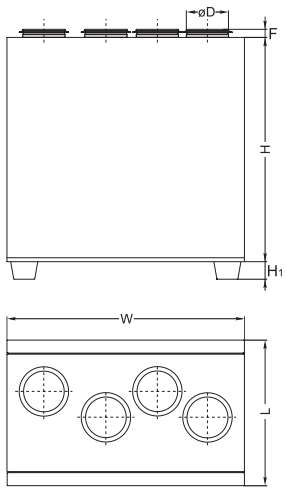
- Rotor wymiennika ciepła o wydajności do 75%.
- Elektryczne lub podgrzewacz wody.
- Wydajne i ciche wentylatory.
- Kontrolowany przepływ powietrza.
- Regulacja temperatury powietrza nawiewanego.
- Zewnętrzne - wirnikiem.
- RIR 400VE - 1500VE o zintegrowanej kontroli i możliwości monitoringu, stosując UNI, PRO i TPC urządzenia zdalnego sterowania.
- Izolacja akustyczna ścian - 50 mm.
- RIR 400V - 1500V obudowa: malowanie proszkowo RAL 7040.
- Niski poziom hałasu.
- Łatwy montaż.

Установки с рекуперацией тепла RIRS очищают, нагревают и подают свежий воздух. RIRS устройства извлекают тепло из выходящего воздуха и передают его в поступающий.

- Роторный теплообменник.
- Высокоэффективная отдача тепла до 75 %.
- Электрический или водяной нагреватель.
- Производительные и бесшумные вентиляторы.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Двигатели с наружными ротором.
- RIRS 400VE - 1500VE с интегрированными возможностями управления и наблюдения с помощью пультов управления UNI, PRO и TPC.
- Акустическая изоляция стенок - 50 мм.
- RIRS 400V - 1500V корпус: окрашенный RAL 7040.
- Низкий уровень шума.
- Легко монтируются.

Accessories

Control panel	Sensor controller	Programmable controller	Circular duct silencer	Shuft-off damper	Mounting clamp
					
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**AKS** **p. 230**	**SKG** **p. 226**	**AP** **p. 229**



RIRS 400 V E L 3.0

RIRS	Equipped with new PRV V1.1 control board
400	AHU size according to air flow range m³/h
V	Housing type (V - vertical, H - horozontal, P - under - ceiling)
E	Heater type (E - integrated electrical heater; W - optional water heater)
L	Air intake side (L - left; R - right)
3.0	AHU with rotor heat-exchanger

Type	Dimensions [mm]					
	W	L	H	øD	H_1	F
RIRS 400VE/VW 3.0	900	553	850	160	40	30
RIRS 700VE/VW 3.0	1000	653	980	250	40	40
RIRS 1200VE/VW 3.0	1500	855	1150	315	70	40

Type	Accessories									
	Flex Stouch TPC	AKS SKG AP	AVS	SP	TJK-10P CO4C***	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIRS 400VE 3.0	+	160	-	LM230A-TP	-	-	-	-	-	-
RIRS 400VW 3.0	+	160	160	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIRS 700VE 3.0	+	250	-	LM230A-TP	-	-	-	-	-	-
RIRS 700VW 3.0	+	250	250	TF230	+	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIRS 1200VE 3.0	+	315	-	LM230A-TP	-	-	-	-	-	-
RIRS 1200VW 3.0	+	315	315	LF230	+	81	3-1,0-4	3-1,0-4	45.10-1,0	45.10-1,0

*** - anti-frost thermostat

Accessories

Heating coil

AVS p. 192

Actuator for dampers

SP p. 188

Duct sensor

TJK 10K p. 198

Thermic water valve actuator

SSB p. 187

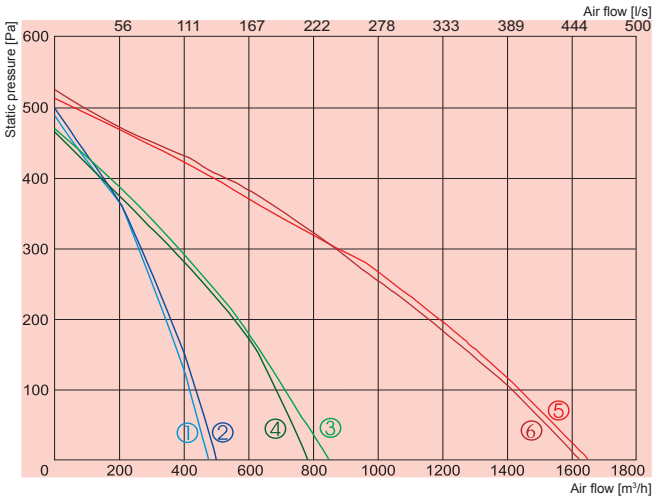
Mixing point

RMG p. 185

2 and 3 way valves

VVP/VXP p. 186

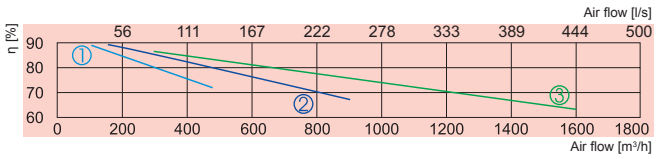
RIRS V



① supply
② exhaust
RIRS 400VE 3.0

③ supply
④ exhaust
RIRS 700VE 3.0

⑤ supply
⑥ exhaust
RIRS 1200VE 3.0



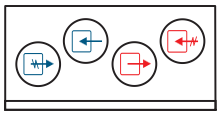
① **RIRS 400VE 3.0**
② **RIRS 700VE 3.0**
③ **RIRS 1200VE 3.0**

			400VE 3.0	700VE 3.0	1200VE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
	-power consumption	[kW]	1,2	2,0	4,5
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,190/0,84	0,280/1,22	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
supply	-power/current	[kW/A]	0,190/0,84	0,280/1,22	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
Motor protection class			IP-44	IP-44	IP-44
Thermal efficiency			75%	74%	74%
Max power consumption		[kW/A]	1,58/6,89	2,56/11,17	5,28/9,92
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	-supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	79,0	104,0	170,0
Comply with ERP 2013			+	+	+

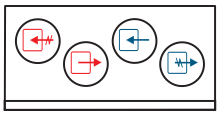
Air flow temperature range from -20°C to +40°C
Designed for operation indoors only

Thermal efficiency of RIRS 400VE 3.0 was calculated at 400m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 700VE 3.0 was calculated at 700m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 1200VE 3.0 was calculated at 1200m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)

RIRS 400VEL 3.0

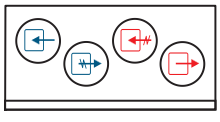


RIRS 400VER 3.0

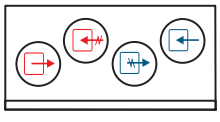


400VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	52	60	68	73	73	65	64
Extract	55	45	45	46	48	49	43	36
Surrounding	49	45	42	35	41	39	31	28
Measured at 366 m³/h, 135 Pa								

RIRS 700VEL 3.0

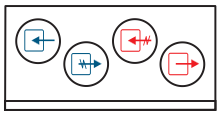


RIRS 700VER 3.0

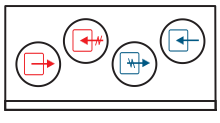


700VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	60	61	68	69	77	67	62
Extract	61	53	57	54	51	52	45	39
Surrounding	52	50	45	34	36	40	27	22
Measured at 687 m³/h, 144 Pa								

RIRS 1200VEL 3.0



RIRS 1200VER 3.0

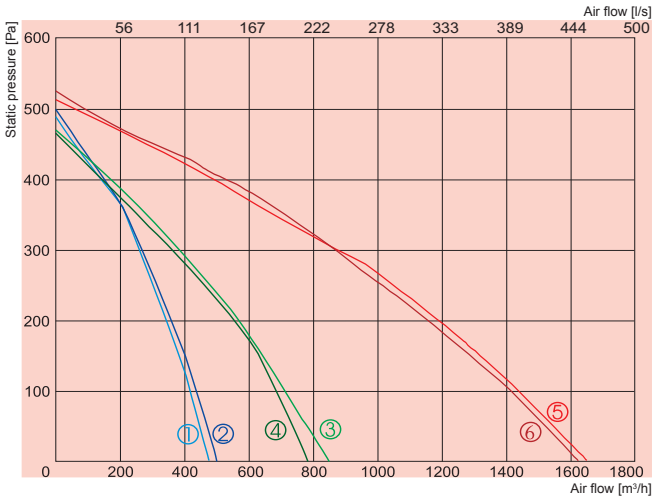


1200VE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	66	77	73	72	70	66	52
Extract	70	63	68	61	55	47	43	34
Surrounding	61	52	58	53	50	47	43	33
Measured at 1411 m³/h, 102 Pa								

View from inspection side

View from inspection side

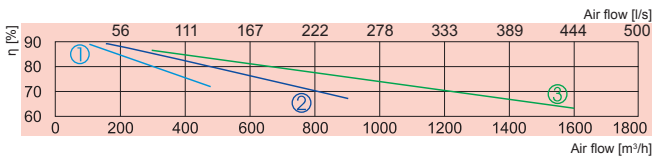
Exhaust air Extract air Fresh air Supply air



① supply
② exhaust
RIRS 400VW 3.0

③ supply
④ exhaust
RIRS 700VW 3.0

⑤ supply
⑥ exhaust
RIRS 1200VW 3.0



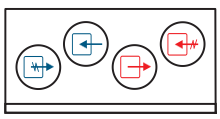
① **RIRS 400VW 3.0**
② **RIRS 700VW 3.0**
③ **RIRS 1200VW 3.0**

			400VW 3.0	700VW 3.0	1200VW 3.0
Water heater	-power	[kW]			
	-water . T_{in}/T_{out}	[°C]	AVS 160	AVS 250	AVS 315
	-water flow rate	[l/s]			
	-water pressure drop	[kPa]			
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,190/0,84	0,280/1,22	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
supply	-power/current	[kW/A]	0,190/0,84	0,280/1,22	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
Motor protection class			IP-44	IP-44	IP-44
Thermal efficiency			75%	74%	74%
Max power consumption		[kW/A]	0,39/1,68	0,56/2,44	0,78/3,42
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	79,0	104,0	170,0
Comply with ERP 2013			+	+	+

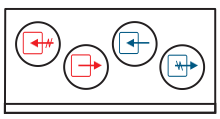
Air flow temperature range from -20°C to +40°C
Designed for operation indoors only

Thermal efficiency of RIRS 400VW 3.0 was calculated at 400m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 700VW 3.0 was calculated at 700m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 1200VW 3.0 was calculated at 1200m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)

RIRS 400VWL 3.0

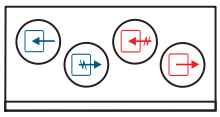


RIRS 400VWR 3.0

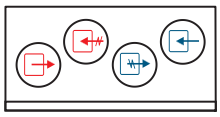


400VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	52	60	68	73	73	65	64
Extract	55	45	45	46	48	49	43	36
Surrounding	49	45	42	35	41	39	31	28
Measured at 366 m³/h, 135 Pa								

RIRS 700VWL 3.0

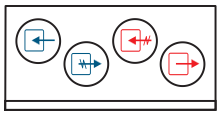


RIRS 700VWR 3.0

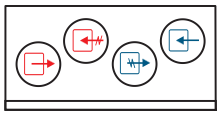


700VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	60	61	68	69	77	67	62
Extract	61	53	57	54	51	52	45	39
Surrounding	52	50	45	34	36	40	27	22
Measured at 687 m³/h, 144 Pa								

RIRS 1200VWL 3.0



RIRS 1200VWR 3.0



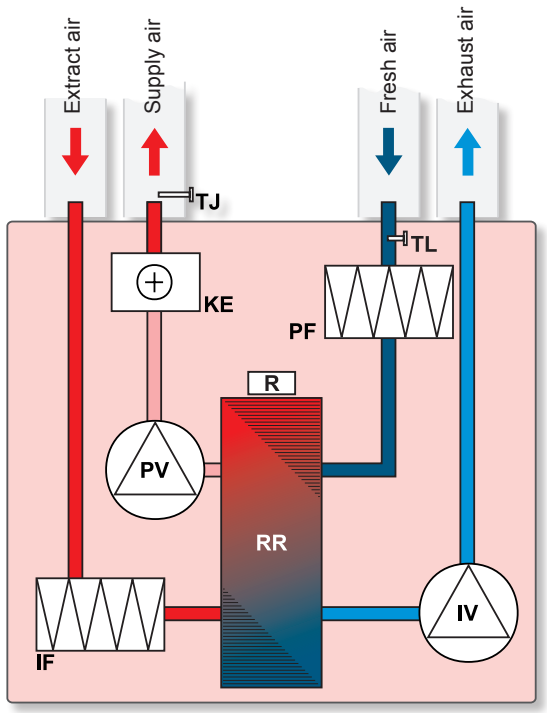
1200VW 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	66	77	73	72	70	66	52
Extract	70	63	68	61	55	47	43	34
Surrounding	61	52	58	53	50	47	43	33
Measured at 1411 m³/h, 102 Pa								

View from inspection side
Exhaust air Extract air

View from inspection side
Fresh air Supply air

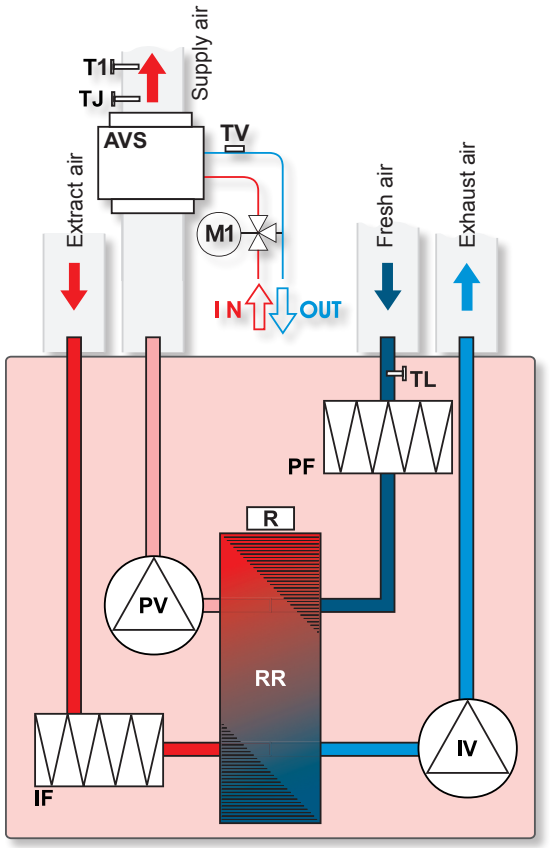
RIRS V

RIRS 400VE 3.0 (vertical) with electrical heater



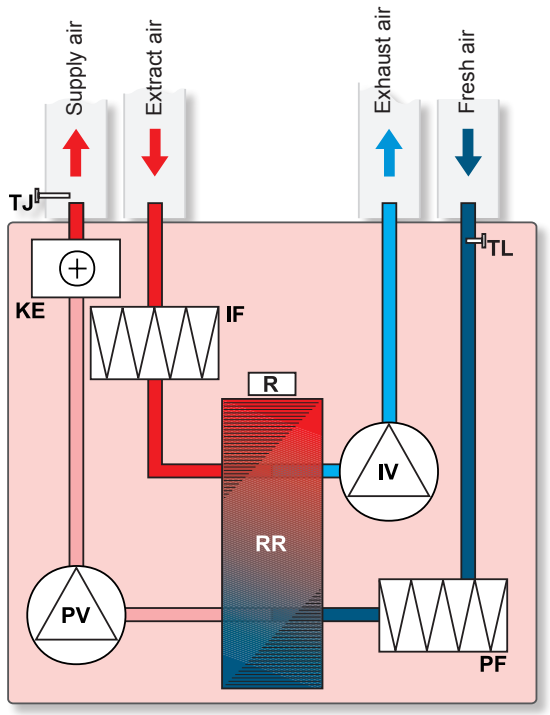
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air

RIRS 400VW 3.0 (vertical) with water heater



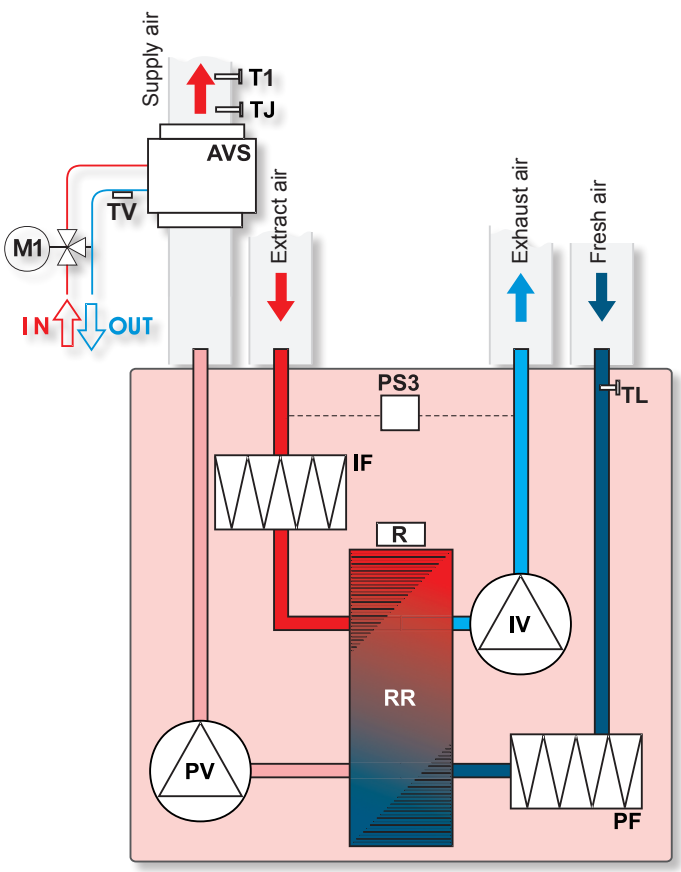
AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - air temperature sensor
TL - air temperature sensor
M1 - optionally supplied mixing valve and motor
T1 - optionally supplied antifrost thermostat
TV - optionally supplied antifrost sensor

RIRS 700VE 3.0; 1200VE 3.0 (vertical) versions with electrical heater



IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air

RIRS 700VW 3.0; 1200VW 3.0 (vertical) versions with water heater



AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - air temperature sensor
TL - air temperature sensor
M1 - optionally supplied mixing valve and motor
T1 - optionally supplied antifrost thermostat
TV - optionally supplied antifrost sensor
PS3 - heat exchanger antifrost pressure switch (RIS 1200VW 3.0)

RIRS H

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

Air handling units RIRS have high efficiency rotor heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Rotor heat exchanger with efficiency up to 80%.
- Electrical or water heater.
- Efficient and low-noise fans.
- Controlled air flow.
- Supply air temperature control.
- External-rotor motors.
- Convertible inspection side for RIRS 400HE - 1500HE and 400HW - 1500HW.
- RIRS 400H - 1500H with integrated control and monitoring capabilities, using UNI, PRO and TPC remote control devices.
- Acoustic insulation of the walls – 50 mm.
- RIRS 400H - 1500H housing: powder coated painting RAL 7040.
- Low noise level.
- Easy mounting.

Vėdinimo įrenginiai RIRS H pagaminiti su efektyviu rotoriniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Rotorinis šilumokaitis, efektyvumas iki 80%.
- Elektrinis arba papildomai užsakomas kanalinis vandeninis šildytuvas.
- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Keičiama aptarnavimo pusė.
- Integruota automatika, galima valdyti su UNI, PRO and TPC pulteliais.
- Sienelių triukšmo izoliacija – 50mm.
- Miltelinių būdu dažytas korpusas - spalva RAL 7040.
- Žemas triukšmo lygis.
- Greitas ir lengvas motavimas.

RIRS Klimatyzacja centrale mają wysoką wydajność wirnika wymiennika ciepła. Centrala służy do wentylacji domów i innych ogrzewanych pomieszczeniach.

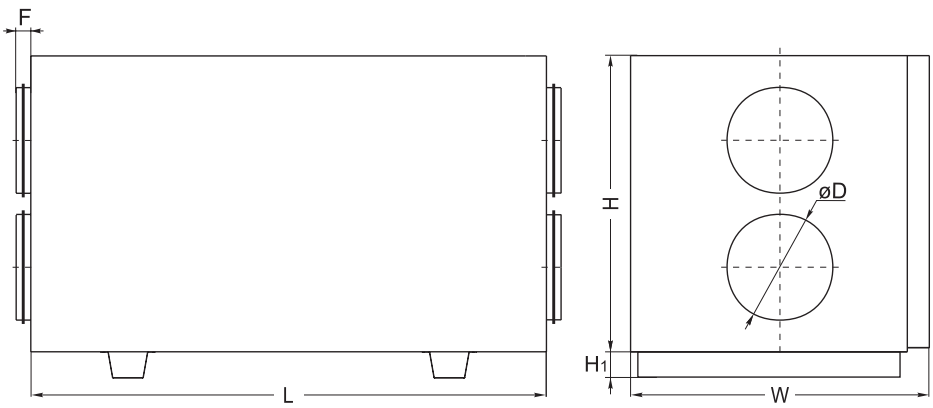
- Rotor wymiennika ciepła o wydajności do 80%.
- Elektryczne lub podgrzewacz wody.
- Wydajne i ciche wentylatory.
- Kontrolowany przepływ powietrza.
- Regulacja temperatury powietrza nawiewanego.
- Zewnętrzne-wirnikiem.
- Convertible strona inspekcji dla RIR 400HE - 1500HE i 400HW - 1500HW.
- RIR 400H - 1500H z zintegrowanej kontroli i możliwości monitoringu, stosując UNI, PRO i TPC urządzenia zdalnego sterowania.
- Izolacja akustyczna ścian - 50 mm.
- RIR 400H - 1500H Obudowa: malowane proszkowo RAL 7040 malarstwo.
- Niski poziom hałasu.
- Łatwy montaż.

Установки с рекуперацией тепла RIRS очищают, нагревают и подают свежий воздух. RIRS устройства извлекают тепло из выходящего воздуха и передают его в поступающий.

- Роторный теплообменник.
- Высокоэффективная отдача тепла до 80%.
- Электрический или водяной нагреватель.
- Производительные и бесшумные вентиляторы.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Двигатели с наружными ротором.
- Возможность менять сторону обслуживания в RIRS 400HE - 1500HE и 400HW - 1500HW.
- RIRS 400H - 700H с интегрированными возможностями управления и наблюдения с помощью пультов управления UNI, PRO и TPC.
- Акустическая изоляция стенок - 50 мм.
- RIRS 400H - 1500H корпус: окрашенный RAL 7040.
- Низкий уровень шума.
- Легко монтируются.

Accessories

Control panel	Sensor controller	Programmable controller	Heating coil	Mounting clamp	Shuft-off damper
					
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**AVS** **p. 192**	**AP** **p. 229**	**SKG** **p. 226**



RIRS 1200 H E 3.0

RIRS	Equipped with new PRV V1.1 control board
1200	Heater type (E - integrated electrical heater; W - optional water heater)
H	Housing type (V - vertical, H - horozontal, P - under - ceiling)
E	AHU size according to air flow range m³/h
3.0	AHU with rotor heat-exchanger

Type	Dimensions [mm]					
	L	W	H	øD	F	H_1
RIRS 400HE/HW 3.0	1000	553	580	160	30	40
RIRS 700HE/HW 3.0	1100	653	700	250	40	40
RIRS 1200HE/HW 3.0	1350	853	900	315	40	70

Type	Accessories										
	Flex Stouch TPC	AVS	SVS SSK	AP SKG	SP	TJK-10P CO4C***	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIRS 400HE 3.0	+	-	-	160	LM230A-TP	-	-	-	-	-	-
RIRS 400HW 3.0	+	160	-	160	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIRS 700HE 3.0	+	-	-	250	LM230A-TP	-	-	-	-	-	-
RIRS 700HW 3.0	+	250	-	250	TF230	+	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIRS 1200HE 3.0	+	-	-	315	LM230A-TP	-	-	-	-	-	-
RIRS 1200HW 3.0	+	int	-	315	LF230	int	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63

Accessories

Actuator for dampers

SP **p. 188**

Duct sensor

TJK 10P **p. 187**

Thermic water valve actuator

SSB **p. 184**

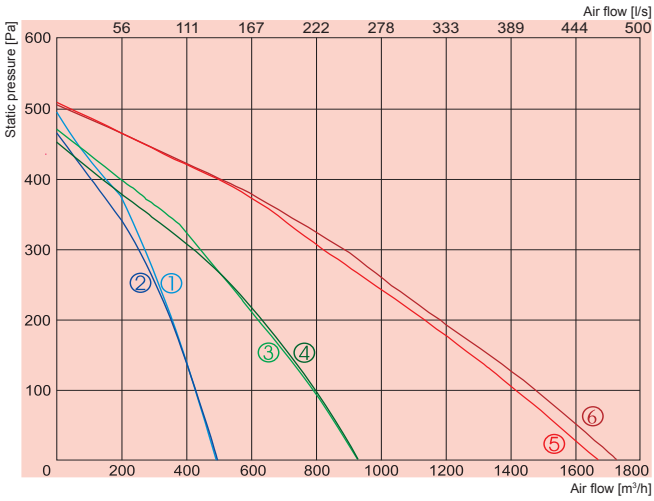
Mixing point

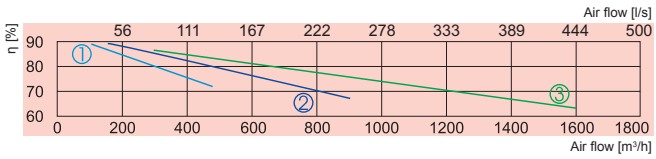
RMG **p. 185**

2 and 3 - way valves

VVP/VXP **p. 186**

RIRS H





			400HE 3.0	700HE 3.0	1200HE 3.0
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
	-power consumption	[kW]	1,2	2,0	4,5
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,190/0,84	0,300/1,31	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
supply	-power/current	[kW/A]	0,190/0,84	0,300/1,31	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
Motor protection class			IP-44	IP-44	IP-44
Thermal efficiency			75%	74%	74%
Max power consumption		[kW/A]	1,58/6,90	2,6/11,31	5,79/9,915
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	-supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	79,0	104,0	170,0
Comply with ERP 2013			+	+	+

Air flow temperature range from -20°C to +40°C
Designed for operation indoors only

Thermal efficiency of RIRS 400HE 3.0 was calculated at 400m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 700HE 3.0 was calculated at 700m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 1200HE 3.0 was calculated at 1200m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)

RIRS 400HE 3.0 *(convertible)* **ver.**

400HE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	42	50	57	64	72	72	66
Extract	54	45	43	44	50	44	42	37
Surrounding	51	31	32	36	43	46	45	44
Measured at 411 m³/h, 117 Pa								

RIRS 700HE 3.0 *(convertible)* **ver.**

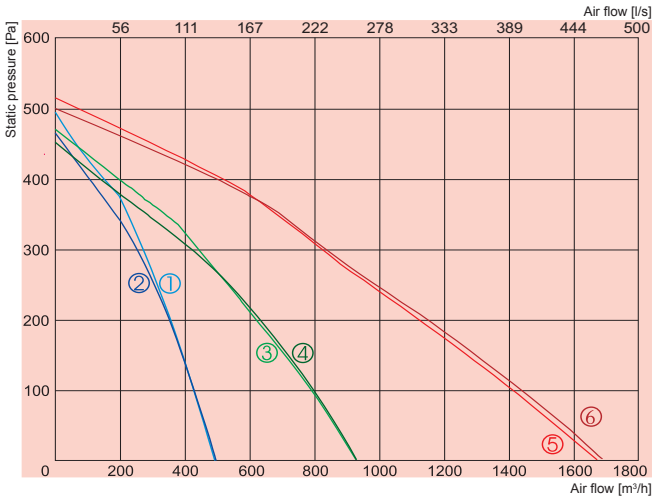
700HE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	56	63	70	69	71	68	62
Extract	59	52	52	53	49	49	47	40
Surrounding	54	41	43	47	45	48	46	45
Measured at 675 m³/h, 173 Pa								

RIRS 1200HE 3.0 *(convertible)* **ver.**

1200HE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	66	72	70	71	68	60	54
Extract	68	63	64	63	57	50	42	30
Surrounding	58	52	53	52	50	47	39	36
Measured at 1460m³/h, 86 Pa								

View from inspection side

Exhaust air | Extract air | Fresh air | Supply air



① supply
② exhaust

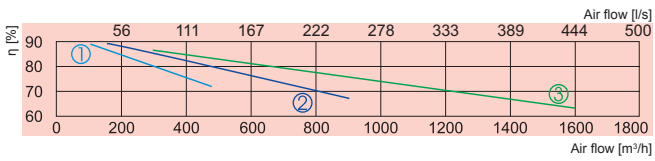
RIRS 400HW

③ supply
④ exhaust

RIRS 700HW

⑤ supply
⑥ exhaust

RIRS 1200HW



① **RIRS 400HW 3.0**
② **RIRS 700HW 3.0**
③ **RIRS 1200HW 3.0**

			400HW 3.0	700HW 3.0	1200HW 3.0
Water heater	-power	[kW]			5,45
	-water . T_{in}/T_{out}	[°C]			80/60
	-water flow rate	[l/s]	AVS 160	AVS 250	0,07
	-water pressure drop	[kPa]			2,3
	-kvs value	[m³/h]			1,7
Fans	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
exhaust	-power/current	[kW/A]	0,190/0,84	0,300/1,31	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
supply	-power/current	[kW/A]	0,190/0,84	0,300/1,31	0,390/1,71
	-fan speed	[min⁻¹]	1850	2050	2750
Motor protection class			IP-44	IP-44	IP-44
Thermal efficiency			75%	74%	74%
Max power consumption		[kW/A]	0,38/1,68	0,6/2,62	0,78/3,42
Automatic control			integrated	integrated	integrated
Filter class	-exhaust		M5	M5	M5
	supply		M5	M5	M5
Thermal insulation		[mm]	50	50	50
Weight		[kg]	70,0	96,0	165,0
Comply with ERP 2013			+	+	+

Air flow temperature range from -20°C to +40°C

Designed for operation indoors only

Thermal efficiency of RIRS 400HW 3.0 was calculated at 400m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 700HW 3.0 was calculated at 700m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)
Thermal efficiency of RIRS 1200HW 3.0 was calculated at 1200m³/h (indoor conditions +20°/60%; outdoor conditions -20°/90%)

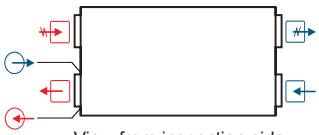
RIRS 400HW 3.0 *(convertible)* **ver.**

400HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	42	50	57	64	72	72	66
Extract	54	45	43	44	50	44	42	37
Surrounding	51	31	32	36	43	46	45	44
Measured at 411 m³/h, 117 Pa								

RIRS 700HW 3.0 *(convertible)* **ver.**

700HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	56	63	70	69	71	68	62
Extract	59	52	52	53	49	49	47	40
Surrounding	54	41	43	47	45	48	46	45
Measured at 675 m³/h, 173 Pa								

RIRS 1200HW 3.0 *(convertible)* **ver.**

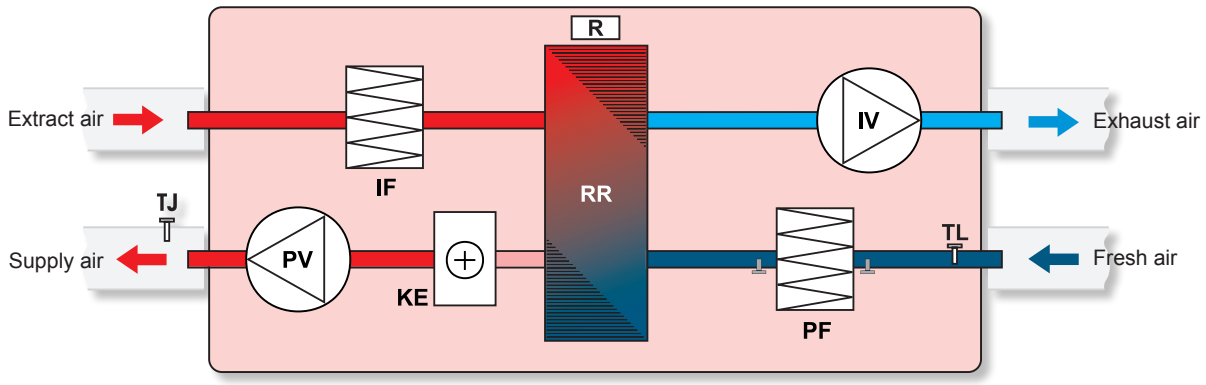


View from inspection side

1200HW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	66	72	70	71	68	60	54
Extract	68	63	64	63	57	50	42	30
Surrounding	58	52	53	52	50	47	39	36
Measured at 1460m³/h, 86 Pa								

Used water outlet | Water inlet
Exhaust air | Extract air | Fresh air | Supply air

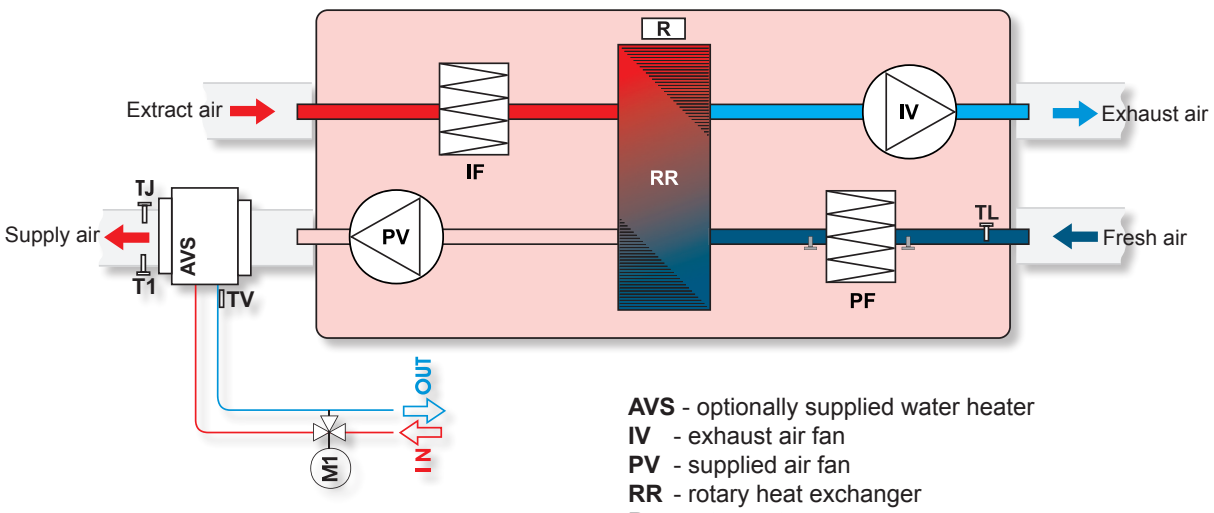
RIRS 400HE 3.0; 700HE 3.0; 1200HE 3.0 (horizontal) versions with electrical heater *



IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
KE - electrical heater
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air *
TL - temperature sensor for fresh air *

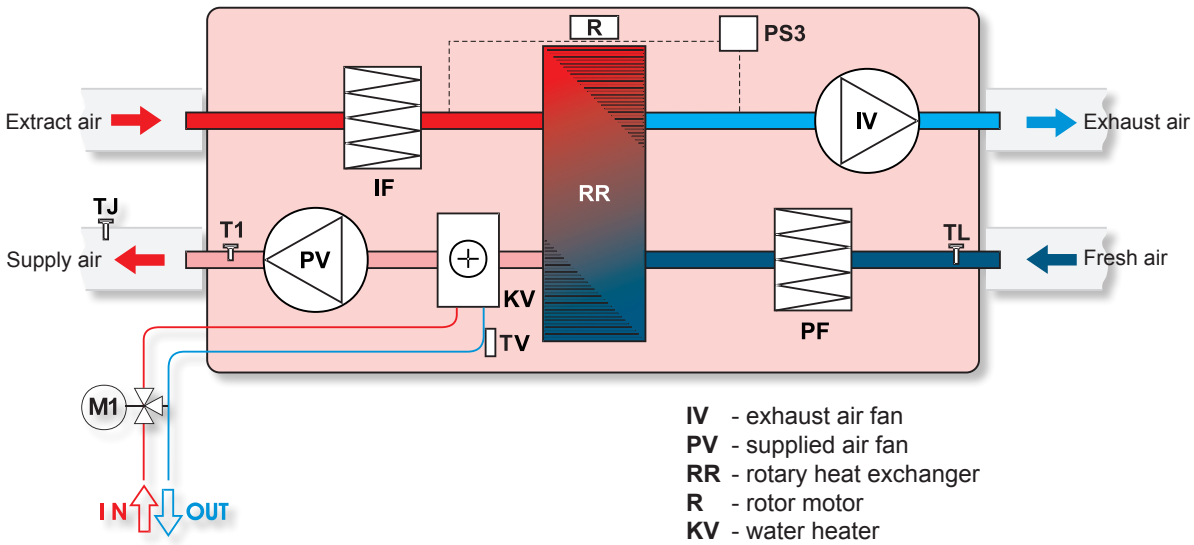
* - supplied with integrated automatic controll (RIRS 400HE 3.0, RIRS 700HE 3.0, RIRS 1200HE 3.0). It is optional for other RIRS models.

RIRS 400HW 3.0; 700HW 3.0 (horizontal) versions with water heater



AVS - optionally supplied water heater
IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
T1 - antifrost thermostat
TV - antifrost sensor
M1 - optionally supplied mixing valve and motor

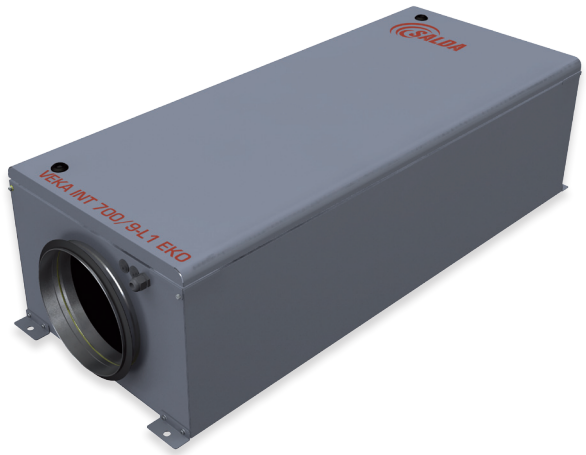
RIRS 1200HW 3.0 (horizontal) **versions with water heater ***



IV - exhaust air fan
PV - supplied air fan
RR - rotary heat exchanger
R - rotor motor
KV - water heater
PF - fresh air filter (class M5)
I F - extract air filter (class M5)
TJ - temperature sensor for supply air *
TL - temperature sensor for fresh air *
T1 - antifrost thermostat *
TV - antifrost sensor *
M1 - optionally supplied mixing valve and motor
PS3 - heat exchanger antifrost pressure switch

* - supplied with integrated automatic controll (RIRS 1200HW 3.0).
It is optional for other RIRS models.

VEKA INT EKO



NEW!

Air handling units

Oro tiekimo agrgatai

Centrale klimatyzacyjne

Приточные агрегаты

VEKA INT EKO is high quality compact ventilation unit which ensure savings of energy and time of installing.

- 5 sizes: 400, 700, 1000, 2000, 3000 m³/h with 1-3 phases electrical heaters.
- 3 models: 1000 and 2000, 3000 m³/h with water heaters.
- Integrated air damper with actuator.
- Installed pressure switch for filter pollution.
- Just remote controller must be selected: UNI, PRO or TPC.
- Low height – perfect for under ceilings installation.
- EC fan for saving energy and money.
- Optional filters class: G4, F5 or F7.
- Mountable with maintenance side - up and down.
- Quiet and long-life unit.
- Compact size, powder coated casing.
- Electrical heater control 0-10V.
- Integrated control system.
- Optional cooling and CO_2 control.
- Acoustic and thermal insulation of external walls: 30mm.

VEKA INT EKO kompaktiškas ir atitinkantis aukščiausius standartus vėdinimo įrenginys, kuris užtikrina energijos taupimą ir greitą montavimą.

- 5 dydžiai: 400, 700, 1000, 2000, 3000 m³/h su vienfaziais ir trifaziais elektriniais šildytuvais.
- 3 dydžiai: 1000, 2000, 3000 m³/h su integruotais vandeniais šildytuvais.
- Integruota motorizuota oro sklendė.
- Integruotas filtrų užterštumo matuoklis.
- VEKA INT EKO galima valdyti su UNI, PRO and TPC pulteliais.
- Ypatingai žemas aukštis – idealus sprendimas montavimui po lubomis.
- EC ventiliatoriai – energijos ir kaštų taupimas.
- Galimybė papildomai komplektuoti G4, F5 arba F7.
- Galima montuoti ant grindų, plubomis arba ant sienos.
- Tylus ir ilgaamžis vėdinimo įrenginys.
- Elektrinio šildytuvo valdymas 0-10V.
- Integruota valdymo automatika.
- Papildomai komplektuojamas CO_2, slėgio ar drėgmės keitiklis.
- Sienelių triukšmo izoliacija- 30 mm.

VEKA INT EKO jest wysokiej jakości kompaktowe urządzenie wentylacyjne które zapewniają oszczędność energii i czasu instalacji.

- 5 rozmiary: 400, 700, 1000, 2000, 3000 m³ / h, z 1-3 fazach grzejniki elektryczne.
- 2 modele: 1000 i 2000, 3000 m³ / h, z podgrzewaczem wody.
- Zintegrowana przepustnica powietrza z siłownikiem.
- Zainstalowany przełącznik ciśnienia dla filtra zanieczyszczeń.
- Wystarczy pilot musi być wybrany: UNI, PRO i TPC.
- Mała wysokość - idealny do instalacji pod sufitami.
- Wentylatory EC oszczędności energii i pieniędzy.
- Opcjonalnie Filtry klasy: G3, F5 lub F7.
- Możliwość montażu z boku konserwacji - w górę iw dół.
- Ciche i wytrzymałe urządzenie.
- Kompaktowy rozmiar, malowana proszkowo obudowa.
- Sterowanie elektryczne podgrzewane 0-10V.
- Zintegrowany system kontroli.
- Opcjonalne chłodzenie i CO2 kontroli.
- Akustyczna i termiczna ścian zewnętrznych: 30mm.

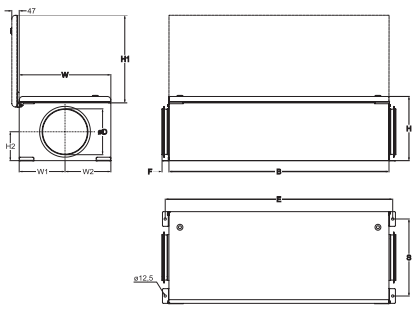
VEKA INT EKO - высокого качество приточные агрегаты, которые обеспечивают экономию энергии и короткое время инсталлирования.

- Агрегаты 5 размеров: 400, 700, 1000, 2000, 3000 м³/ч с 1-3 фаз электрическими нагревателями.
- Агрегаты 3 размеров: 1000 и 2000, 3000 м³/ч с водяными нагревателями.
- Интегрированная воздушная заслонка с приводом.
- Установлен датчик давления для фильтра загрязнения.
- Нужно только выбрать пульт дистанционного управления: UNI, PRO или TPC.
- Агрегат низкой высоты - идеально подходит для установки под потолками.
- EC вентиляторы для экономии энергии и денег.
- Дополнительный класс фильтров: G4, F5 или F7.
- Монтаж со стороны обслуживания - вверх и вниз.
- Порошковая окраска корпуса.
- Управления электрического нагревателя от 0 до 10В.
- Интегрированная система управления.
- К агрегату дополнительно можно постовлять и конролировать охладитель и устройство CO_2.
- Толщина акустической и тепловой изоляции наружных стен: 30мм.

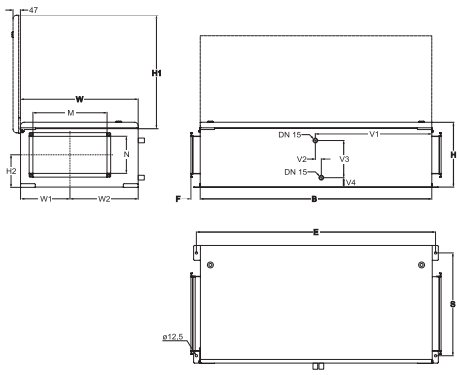
Accessories

Control panel	Sensor controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor
					
Flex **p. 178**	**Stouch** **p. 179**	**TPC** **p. 180**	**1141** **p. 181**	**RC02-F2** **p. 182**	**KFF-U** **p. 183**

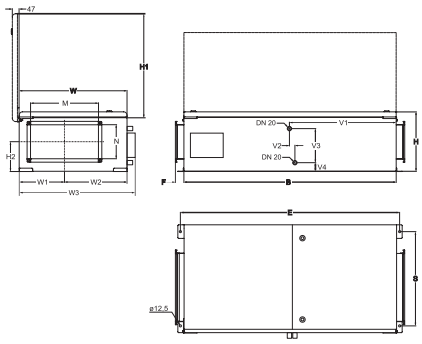
VEKA INT 400 EKO
VEKA INT 700 EKO



VEKA INT 1000 EKO
VEKA INT 2000 EKO
VEKA INT W 1000 EKO
VEKA INT W 2000 EKO



VEKA INT 3000 - 4000 EKO
VEKA INT W 3000 - 4000 EKO

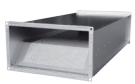


Type	Dimensions [mm]																	
	W	W1	W2	W3	B	H	H1	H2	E	S	M	N	V1	V2	V3	V4	F	øD
VEKA INT 400 EKO	450	225	225	-	1130	325	427	157	1171	370	-	-	-	-	-	-	30	200
VEKA INT 700 EKO	500	250	250	-	1200	350	477	157	1241	420	-	-	-	-	-	-	40	250
VEKA INT 1000 EKO	635	267	368	-	1250	350	612	174	1291	555	400	200	-	-	-	-	50	-
VEKA INT 2000 EKO	750	316	434	-	1550	460	727	249	1591	670	500	250	-	-	-	-	50	-
VEKA INT 3000 EKO	950	417	533	1054	1400	550	985	268	1440	870	700	400	708	38	361	79	50	-
VEKA INT 4000 EKO	950	417	533	1054	1400	550	985	268	1440	870	700	400	708	38	361	79	50	-
VEKA INT W 1000 EKO	635	267	368	-	1250	350	612	174	1291	555	400	200	618	43	190	71	50	-
VEKA INT W 2000 EKO	750	316	434	-	1550	460	727	249	1591	670	500	250	740	42	297	73	50	-
VEKA INT W 3000 EKO	950	417	533	1054	1400	550	985	268	1440	870	700	400	-	-	-	-	50	-
VEKA INT W 4000 EKO	950	417	533	1054	1400	550	985	268	1440	870	700	400	-	-	-	-	50	-

Type	Accessories								
	Flex Stouch TPC	1141 RC02-F2 KFF-U	SKS	AKS AP	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
VEKA INT400 EKO	+	+	-	200	-	-	-	-	-
VEKA INT 700 EKO	+	+	-	250	-	-	-	-	-
VEKA INT 1000 EKO	+	+	400x200	-	-	-	-	-	-
VEKA INT 2000 EKO	+	+	500x250	-	-	-	-	-	-
VEKA INT 3000 EKO	+	+	500x250	-	-	-	-	-	-
VEKA INT 4000 EKO									
VEKA INT W 1000 EKO	+	+	400x200	-	61	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0
VEKA INT W 2000 EKO	+	+	500x250	-	61	3-2,5-4	3-2,5-4	45.10-2,5	45.10-2,5
VEKA INT W 3000 EKO	+	+	700x400	-	61	+	+	+	+
VEKA INT W 4000 EKO									

SSB 61-control signal 0...10V DC

Accessories

Rectangular duct silencer

SKS p. 230

Circular duct silencer

AKS p. 230

Mounting clamp

AP p. 229

Thermic water valve actuator

SSB p. 184

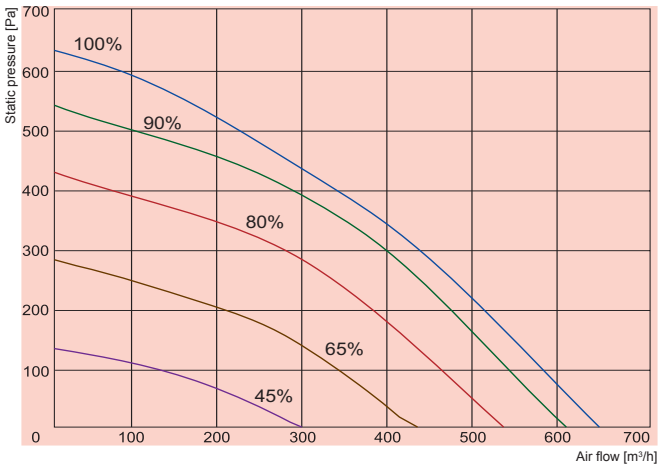
Mixing point

RMG p. 185

2 and 3 - way valves

VVP/VXP p. 186

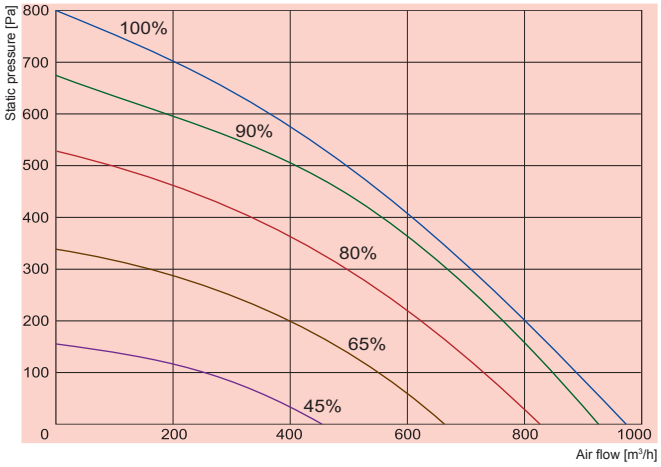
VEKA INT EKO



① VEKA INT400/1,2-L1 EKO
① VEKA INT 400/2,0-L1 EKO
① VEKA INT 400/5,0-L1 EKO

VEKA INT 400 EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	67	50	56	65	61	43	47	34
Outlet	74	56	62	73	62	63	57	40
Surrounding	53	37	41	51	45	38	37	24
Measured at 560 m³/h, 122 Pa								

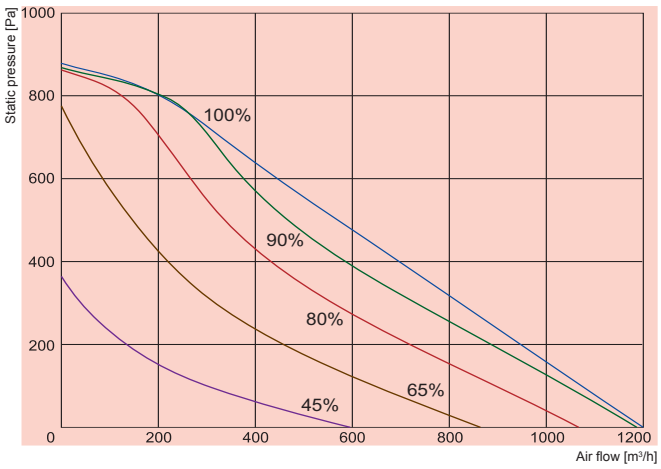
			400/1,2-L1 EKO	400/2,0-L1 EKO	400/5,0-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~2, 400
	-power consumption	[kW]	1,2	2,0	5,0
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	0,129/1,09	0,129/1,09	0,129/1,09
	-speed	[min⁻¹]	3490	3490	3490
	-protection class		IP-44	IP-44	IP-44
	-power consumption	[kW/A]	1,329/5,78	2,129/9,26	5,129/13,59
Automatic control integrated			integrated	integrated	integrated
Filter class			M5	M5	M5
Insulation of walls		[mm]	30	30	30
Weight		[kg]	37,0	37,0	37,0
Comply with ERP 2013			+	+	+



① VEKA INT 700/2,4-L1 EKO
① VEKA INT 700/5,0-L1 EKO
① VEKA INT 700/9,0-L1 EKO

VEKA INT 700 EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	69	50	59	61	65	64	54	52
Outlet	75	62	68	73	63	53	46	40
Surrounding	55	40	47	51	50	45	40	37
Measured at 838 m³/h, 162 Pa								

			700/2,4-L1 EKO	700/5,0-L1 EKO	700/9,0-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~2, 400	~3, 400
	-power consumption	[kW]	2,4	5,0	9,0
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	0,2/1,57	0,2/1,57	0,2/1,57
	-speed	[min⁻¹]	3380	3380	3380
	-protection class		IP-44	IP-44	IP-44
	-power consumption	[kW/A]	2,6/12,0	5,2/14,07	9,2/14,56
Automatic control integrated			integrated	integrated	integrated
Filter class			M5	M5	M5
Insulation of walls		[mm]	30	30	30
Weight		[kg]	45,0	45,0	45,0
Comply with ERP 2013			+	+	+

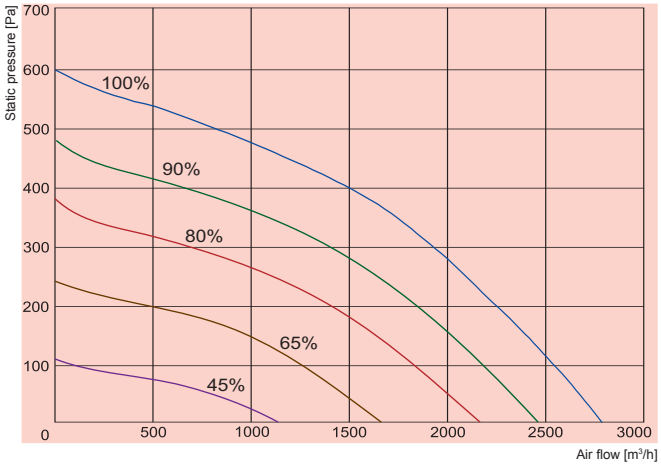


① **VEKA INT 1000/2,4-L1 EKO**
① **VEKA INT 1000/5,0-L1 EKO**
① **VEKA INT 1000/9,0-L1 EKO**
① **VEKA INT 1000/12,0-L1 EKO**

VEKA INT 1000 EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	69	53	56	65	63	61	59	53
Outlet	75	64	70	72	65	56	53	49
Surrounding	55	44	45	51	48	44	41	38

Measured at 1036 m³/h, 133 Pa

			1000/2,4-L1 EKO	1000/5,0-L1 EKO	1000/9,0-L1 EKO	1000/12,0-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~2, 400	~3, 400	~3, 400
	-power consumption	[kW]	2,4	5,0	9,0	12,0
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	0,235/1,7	0,235/1,7	0,235/1,7	0,235/1,7
	-speed	[min⁻¹]	3220	3220	3220	3220
	-protection class		IP-44	IP-44	IP-44	IP-44
	-power consumption	[kW/A]	2,61/12,13	5,21/14,2	9,21/14,69	12,21/19,02
Automatic control integrated			integrated	integrated	integrated	integrated
Filter class			M5	M5	M5	M5
Insulation of walls		[mm]	30	30	30	30
Weight		[kg]	59,0	59,0	59,0	59,0
Comply with ERP 2013			+	+	+	+



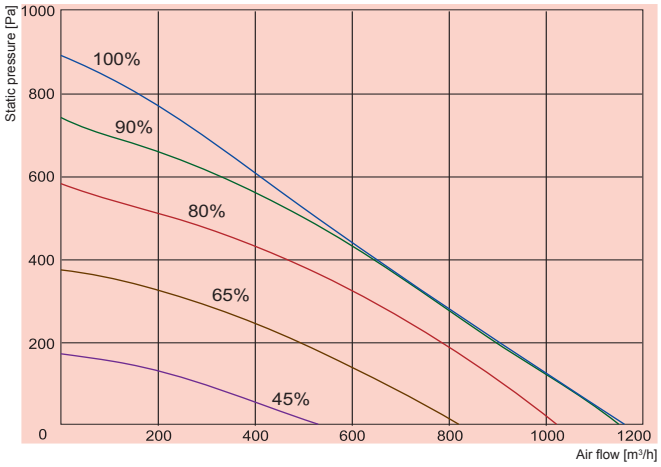
① **VEKA INT 2000/6,0-L1 EKO**
① **VEKA INT 2000/15,0-L1 EKO**
① **VEKA INT 2000/21,0-L1 EKO**

VEKA INT 2000 EKO	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	71	78	72	57	61	59	55
Outlet	84	75	80	79	74	73	70	67
Surrounding	65	58	62	57	49	52	51	48

Measured at 2493 m³/h, 120 Pa

			2000/6,0-L1 EKO	2000/15,0-L1 EKO	2000/21,0-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~2, 400	~3, 400	~3, 400
	-power consumption	[kW]	6,0	15,0	21,0(12+9)
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	0,438/1,97	0,446/2,05	0,446/2,05
	-speed	[min⁻¹]	2010	2010	2010
	-protection class		IP-44	IP-44	IP-44
	-power consumption	[kW/A]	6,44/16,1	15,45/23,70	21,45/32,36
Automatic control integrated			integrated	integrated	integrated
Filter class			M5	M5	M5
Insulation of walls		[mm]	30	30	30
Weight		[kg]	88,0	88,0	88,0
Comply with ERP 2013			+	+	+

VEKA INT EKO

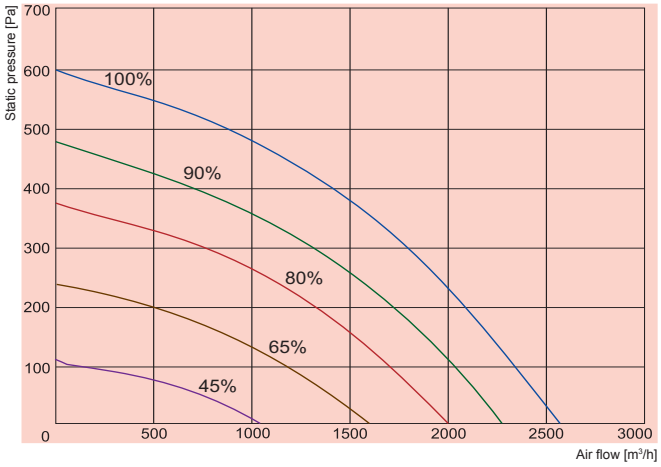


① VEKA INT W 1000/14,4-L1 EKO

VEKA INT W 1000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	70	55	50	66	62	60	61	57
Outlet	75	63	70	72	64	56	53	47
Surrounding	54	43	42	51	48	43	42	39
Measured at 1010 m³/h, 121 Pa								

W-1000/14,4-L1 EKO

Water heater	-power	[kW]	14,4
	-water temp. T_{in}/T_{out}	[°C]	+80/+60
	-water flow rate	[l/s]	0,18
	-water pressure drop	[kPa]	4
	-kvs value	[m³/h]	3,26
Fan	-phase/voltage	[50Hz/VAC]	~1, 230
	-current	[kW/A]	0,232/1,77
	-speed	[min⁻¹]	3220
	-power consumption	[kW/A]	0,232/1,77
	-motor protection class		IP-44
Automatic control integrated			integrated
Filter class			M5
Insulation of wall		[mm]	30
Weight		[kg]	59,0
Comply with ERP 2013			+

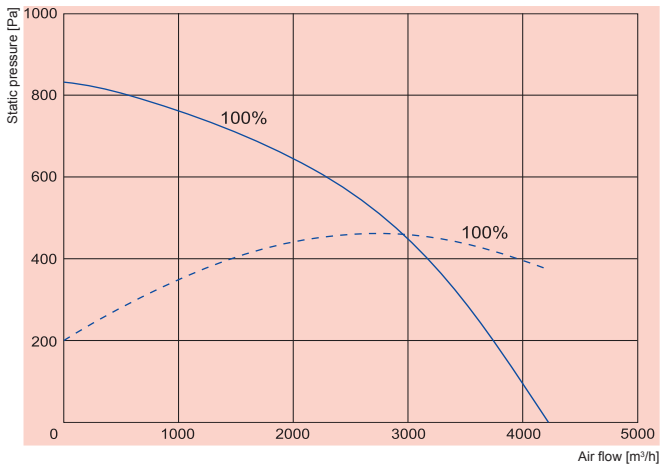


① VEKA INT W 2000/26,9-L1 EKO

VEKA INT W 2000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	78	72	75	72	63	59	52	49
Outlet	82	76	77	76	75	68	63	58
Surrounding	64	58	61	56	49	40	38	32
Measured at 2304 m³/h, 113 Pa								

W-2000/26,9-L1 EKO

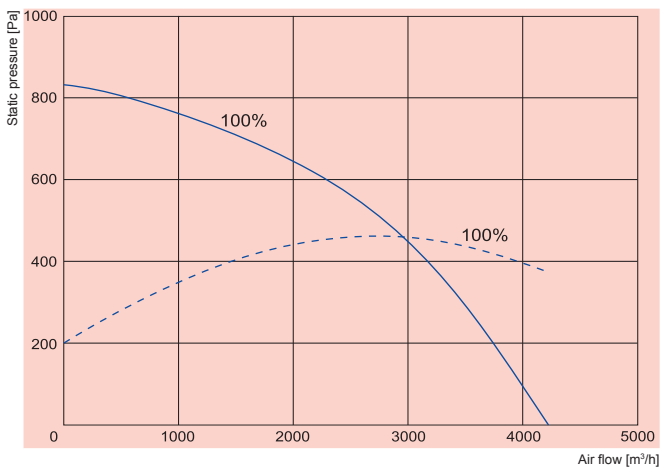
Water heater	-power	[kW]	26,9
	-water temp. T_{in}/T_{out}	[°C]	+80/+60
	-water flow rate	[l/s]	0,33
	-water pressure drop	[kPa]	18,1
	-kvs value	[m³/h]	2,81
Fan	-phase/voltage	[50Hz/VAC]	~1, 230
	-current	[kW/A]	0,481/2,18
	-speed	[min⁻¹]	2010
	-power consumption	[kW/A]	0,481/2,18
	-motor protection class		IP-44
Automatic control integrated			integrated
Filter class			M5
Insulation of wall		[mm]	30
Weight		[kg]	88,0
Comply with ERP 2013			+



① VEKA INT 3000/15,0-L1 EKO
① VEKA INT 3000/21,0-L1 EKO
① VEKA INT 3000/30,0-L1 EKO
① VEKA INT 3000/39,0-L1 EKO

VEKA INT 3000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	75	57	66	72	68	66	65	62
Outlet	82	60	70	75	78	75	71	63
Surrounding	68	50	59	63	61	61	58	51
Measured at 3805 m³/h, 122 Pa								

			3000/15,0-L1 EKO	3000/21,0-L1 EKO	3000/30,0-L1 EKO	3000/39,0-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	15,07	21,0 (9+12)	30,0 (15+15)	39,0 (12+9+18)
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	0,940/4,3	0,940/4,3	0,940/4,3	0,940/4,3
	-speed	[min⁻¹]	2200	2200	2200	2200
	-protection class		IP-54	IP-54	IP-54	IP-54
	-power consumption	[kW/A]	15,94/25,95	21,94/34,61	30,94/47,60	39,94/60,60
Automatic control integrated			integrated	integrated	integrated	integrated
Filter class			M5	M5	M5	M5
Insulation of walls		[mm]	30	30	30	30
Weight		[kg]	137,0	138,0	140,0	141,0
Comply with ERP 2013			+	+	+	+

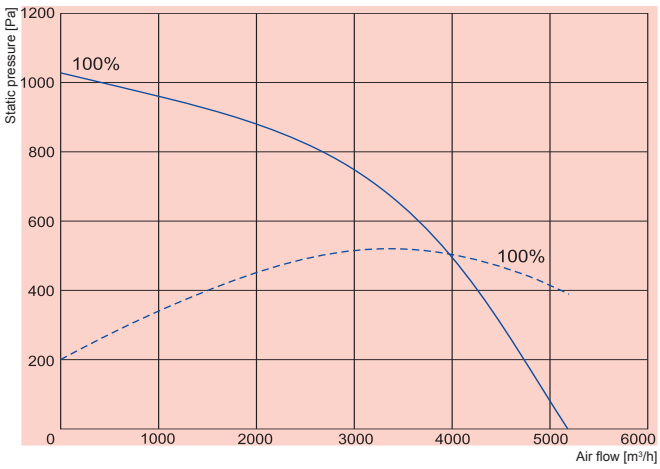


① VEKA INT W 3000/40,6-L1 EKO

VEKA INT W 3000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	75	57	65	71	68	66	65	62
Outlet	81	60	69	74	78	74	70	63
Surrounding	67	50	58	62	61	60	57	51
Measured at 3720 m³/h, 120 Pa								

			W-3000/40,6-L1 EKO
Water heater	-power	[kW]	40,6
	-water temp. T_{in}/T_{out}	[°C]	+80/+60
	-water flow rate	[l/s]	0,5
	-water pressure drop	[kPa]	9,6
	-kvs value	[m³/h]	5,86
Fan	-phase/voltage	[50Hz/VAC]	~1, 230
	-current	[kW/A]	0,94/4,3
	-speed	[min⁻¹]	2200
	-power consumption	[kW/A]	IP-54
	-motor protection class		0,94/4,3
Automatic control integrated			integrated
Filter class			M5
Insulation of wall		[mm]	30
Weight		[kg]	140,0
Comply with ERP 2013			+

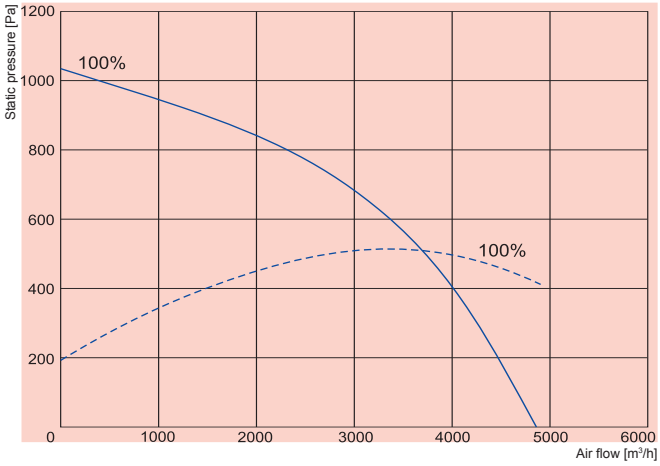
VEKA INT EKO



① VEKA INT4000/21-L1 EKO
① VEKA INT 4000/27-L1 EKO
① VEKA INT 4000/39-L1 EKO
① VEKA INT 4000/54-L1 EKO

VEKA INT 4000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	79	59	69	76	73	70	69	64
Outlet	86	61	73	79	83	79	76	69
Surrounding	72	52	62	67	66	65	63	55
Measured at 4857 m³/h, 142 Pa								

			4000/21-L1 EKO	4000/27-L1 EKO	4000/39-L1 EKO	4000/54-L1 EKO
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	21,0	27,0	39,0	54,00
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[KW/A]	1,285 / 5,8	1,285 / 5,8	1,285 / 5,8	1,285 / 5,8
	-speed	[min⁻¹]	2390	2390	2390	2390
	-protection class		IP-54	IP-54	IP-54	IP-54
	-power consumption	[kW/A]	22,2 / 35,0	28,2 / 45,0	40,3 / 61,0	55,2 / 76,0
Automatic control integrated				integrated	integrated	integrated
Filter class			M5	M5	M5	M5
Insulation of walls		[mm]	30	30	30	30
Weight		[kg]	137,0	139,0	143,0	148,0
Comply with ERP 2013			+	+	+	+

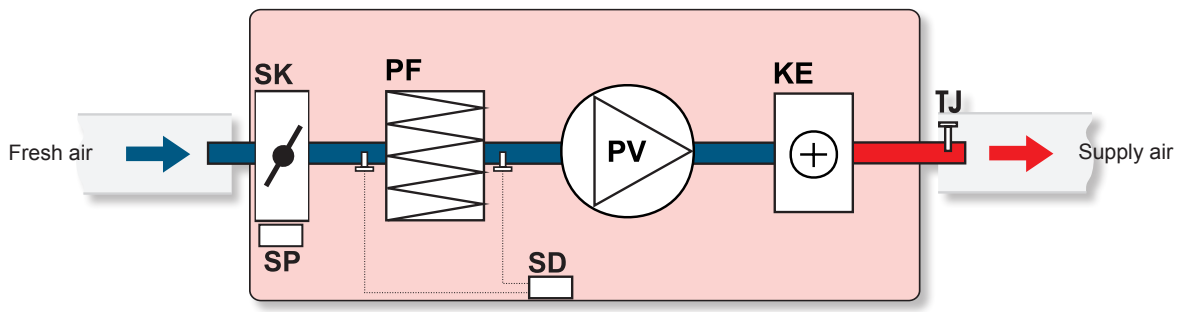


① VEKA INT W 4000/54-L1 EKO

VEKA INT W 4000 EKO	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	78	59	69	74	72	70	69	62
Outlet	84	60	73	77	80	78	75	67
Surrounding	71	51	62	65	64	65	62	53
Measured at 4677 m³/h, 101 Pa								

			W-4000/54-L1 EKO
Water heater	-power	[kW]	56,95
	-water temp. T_{in}/T_{out}	[°C]	+80/+60
	-water flow rate	[l/s]	0,7
	-water pressure drop	[kPa]	12
	-kvs value	[m³/h]	7,33
Fan	-phase/voltage	[50Hz/VAC]	~1, 230
	-current	[kW/A]	1,258/5,8
	-speed	[min⁻¹]	2390
	-power consumption	[kW/A]	1,29/5,80
	-motor protection class		IP-54
Automatic control integrated			integrated
Filter class			M5
Insulation of wall		[mm]	30
Weight		[kg]	128,0
Comply with ERP 2013			+

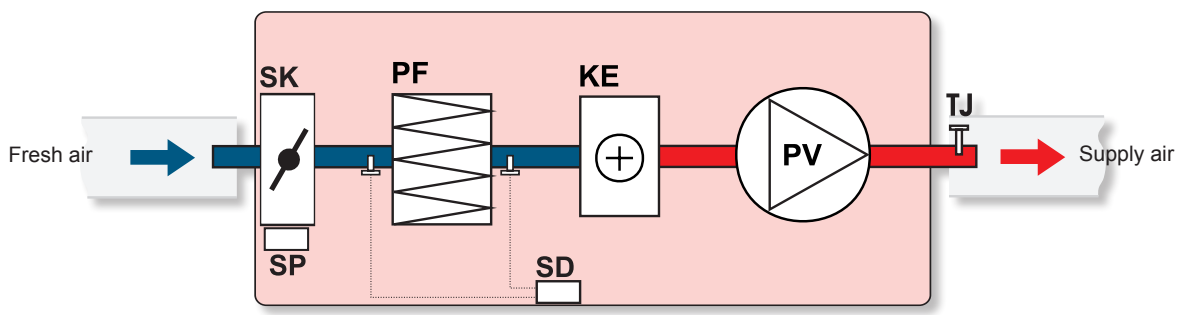
VEKA INT 400 EKO; 700 EKO versions with electrical heater (view from inspection side)



PV - supply air fan
PF - filter for supply air
KE - electrical heater
SK - air damper

SP - actuator
SD - differential pressure switch
TJ - air temperature sensor

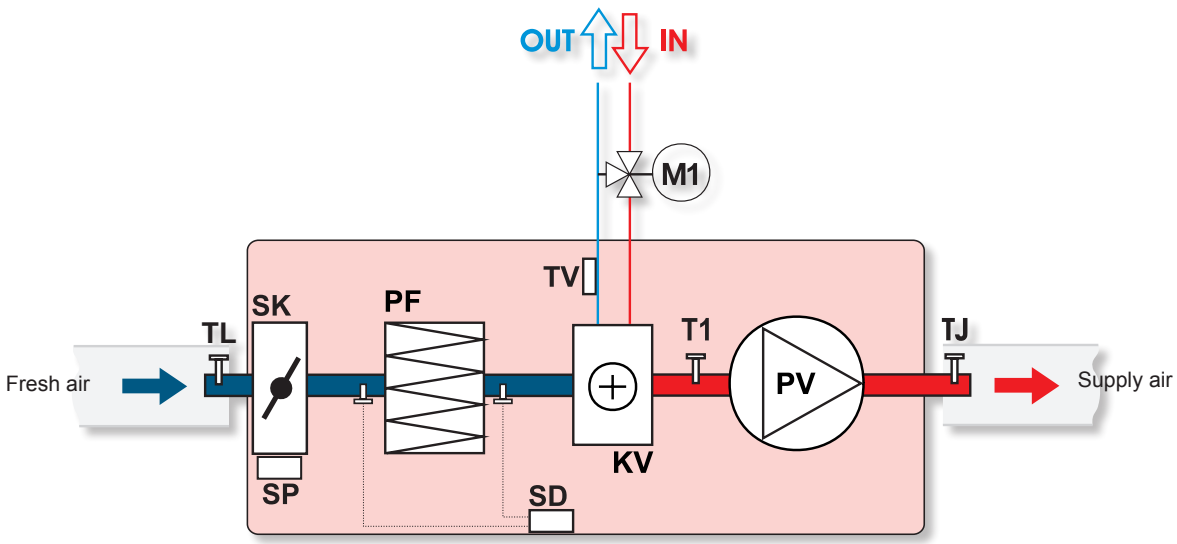
VEKA INT 1000 EKO; 2000 EKO; 3000 EKO; 4000 EKO versions with electrical heater (view from inspection side)



PV - supply air fan
PF - filter for supply air
KE - electrical heater
SK - air damper

SP - actuator
SD - differential pressure switch
TJ - air temperature sensor

VEKA INT W 1000 EKO; W 2000 EKO; W 3000 EKO; W 4000 EKO versions with water heater
(view from inspection side)



PV - supply air fan
PF - filter for supply air
KV - water heater
SK - air damper
SP - actuator
SD - differential pressure switch

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
T1 - antifrost thermostat
TV - temperature sensor
M1 - optionally supplied mixing valve and motor

VEKA

Air handling units

Oro tiekimo agrgatai

Centrale klimatyzacyjne

Приточные агрегаты

- Low noise level.
- Adjustable voltage fan control.
- Electrical or water heater.
- Easily removable inspection cover.
- Filter box with pocket filter F5 class.
- Possibility to install under the ceiling.
- Optional wide range controls available.

Air supply units for ventilation systems. Units' casing is made of galvanized steel and have insulation of 50 mm. Consists of centrifugal fan, heater (electrical or water), pocket filter. Not designed for functioning in explosive – inclined areas. Units are designed for clean air supply into premises. Have additional mounting brackets for under the ceiling instalation.

- Mažas triukšmo lygis.
- Reguliuojamo greičio ventiliatorius (įtampos keitimas).
- Elektrinis arba vandeninis šildytuvas.
- Lengvai nuimamas dangtis patikrinimui.
- Filtrų dėžė su F5 klasės filtru.

Oro tiekimo agregatas skirtas oro padavimui į patalpas. Jis susideda iš išcentrinio ventiliatoriaus, kurio greitis gali būti valdomas reguliatoriumi, oro šildytuvo ir kišeninio filtro. Visi šie elementai sumontuoti izoliuotame korpuse. Izoliacijos storis 50 mm. Korpusas pagamintas iš cinkuotos skardos su lengvai nuimamu dangčiu. Dangtis tvirtinamas keturiais lengvai atsegamais lankstais.

- Niski poziom hałasu.
- Regulacja wentylatora napięcia.
- Elektryczne lub podgrzewacz wody.
- Łatwo zdejmowana pokrywa inspekcji.
- Filtr pudełko z kieszeni F5 klasy filtra.
- Możliwość instalacji pod sufitem.
- Opcjonalnie dostępna szeroka gama kontroluje.

Jednostki nawiewne dla systemów wentylacyjnych. Obudowa Jednostki "wykonana jest z ocynkowanej stali i ma izolację 50 mm. Składa się z odśrodkowa wentylator, ogrzewanie (elektryczne lub wody), kieszeń na filtr. nie przeznaczone do funkcjonowania w wybuchowy - pochyłych obszarach. Urządzenia są przeznaczone do czyste powietrze do pomieszczeń. Mają dodatkowe uchwyty montażowe do montażu pod sufitem.

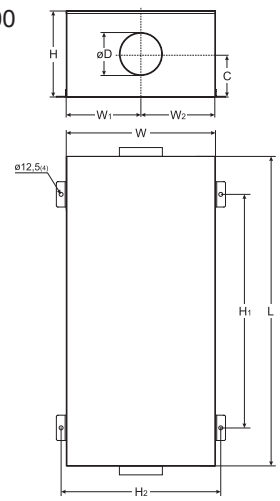
- Низкий уровень шума.
- Вентилятор с регулированием скорости (изменение напряжения).
- Электрический или водяной нагреватель.
- Легко снимаемая крышка для проверки.
- Кассета фильтров с фильтром класса F5.
- Дополнительно широкий спектр по подбору автоматики.

Агрегат подачи воздуха предназначен для подачи воздуха в помещения. Он состоит из эксцентрического вентилятора, скорость которого изменяется регулятором, а также нагревателя воздуха и карманного фильтра. Все эти элементы установлены в изолированном корпусе. Толщина изоляции 50 мм. Корпус изготовлен из оцинкованной жести с легко снимаемой крышкой. Крышка крепится легко отстёгивающимися шарнирами.

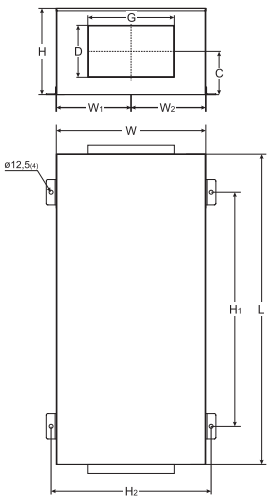
Accessories

Single phase speed controller	Three phase speed controller	Monophase speed controller	Controller for electrical heater	Controller for electrical heater	Back draft shutter	Shuft-off damper	Circular ducts silencer
							
TGRV p. 223	**TGRT p. 224**	**ETY/MTY p. 225**	**EKR 15.1P EKR 15.1 p. 221**	**EKR 6.1 p. 222**	**RSK p. 227**	**SKG p. 226**	**AKS p. 230**

VEKA 400 - 2000



VEKA 3000 - 4000

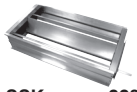


Type	Dimensions [mm]								
	W	W1	W2	C	L	H	ØD	H_1	H_2
VEKA 400	434	215	215	125	880	250	125	920	350
VEKA 700/2,4 - 12,0	459	228	228	207	955	400	160	996	375
VEKA 850/2,0 - 3,0	464	230	230	216	1000	400	200	700	500
VEKA 850/5,0 - 9,0	464	230	230	216	1100	400	200	800	500
VEKA 850/12,0	464	230	230	216	1230	400	200	880	500
VEKA 1000/2,4	614	210	400	198	1150	400	250	850	650
VEKA 1000/5,0	614	210	400	198	1300	400	250	900	650
VEKA 1000/9,0 - 12,0	614	210	400	198	1400	400	250	900	650
VEKA W-1000/13,6	614	210	400	198	1400	400	250	950	650
VEKA 2000	704	285	415	256	1500	500	315	1000	740

Type	Dimensions [mm]									
	W	W_1	W_2	C	L	H	D	G	H_1	H_2
VEKA 3000	824	410	410	239	1500	500	300	500	1000	860
VEKA 4000	924	460	460	300	1700	600	400	600	1400	960

Accessories

Damper for rectangular ducts



SSK p. 228

Rectangular ducts silencer

SSP p. 232

Actuator for damper

SP p. 188

Duct sensor

TJK 10K p. 187

Thermic water valve actuator

SSB p. 184

Mixing point

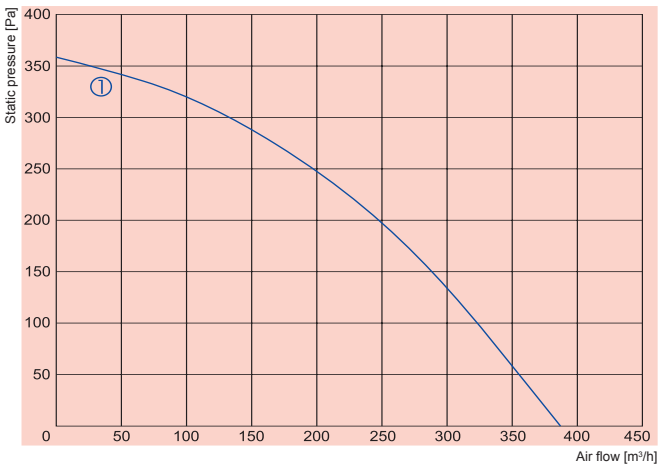
RMG p. 185

2 and 3 way valves

VVP/VXP p. 186

Type	Accessories													
	TGRV	TGRT	ETY MTY	EKR 15.1 EKR 15.1P	EKR 6.1	RSK SKG AKS AP	SSK SSP	SP PS	TJK 10K	SSB *Heating*	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
VEKA 400/1,2-L1	1	-	1,5	-	+	125	-	+	+	-	-	-	-	-
VEKA 400/2,0-L1	1	-	1,5	-	+	125	-	+	+	-	-	-	-	-
VEKA 400/5,0-L1	1	-	1,5	-	+	125	-	+	+	-	-	-	-	-
VEKA 700/2,4-L1	1,5	-	1,5	-	+	160	-	+	+	-	-	-	-	-
VEKA 700/5,0-L1	1,5	-	1,5	-	+	160	-	+	+	-	-	-	-	-
VEKA 700/9,0-L1	1,5	-	1,5	15.1	-	160	-	+	+	-	-	-	-	-
VEKA 700/12,0-L1	1,5	-	1,5	15.1	-	160	-	+	+	-	-	-	-	-
VEKA 850/2,0-L1	2	-	1,5	-	+	200	-	+	+	-	-	-	-	-
VEKA 850/3,0-L1	2	-	1,5	-	+	200	-	+	+	-	-	-	-	-
VEKA 850/5,0-L1	2	-	1,5	-	+	200	-	+	+	-	-	-	-	-
VEKA 850/6,0-L1	2	-	1,5	-	+	200	-	+	+	-	-	-	-	-
VEKA 850/9,0-L1	2	-	1,5	15.1	-	200	-	+	+	-	-	-	-	-
VEKA 850/12,0-L1	2	-	1,5	15.1	-	200	-	+	+	-	-	-	-	-
VEKA1000/2,4-L1	5	-	4	-	+	250	-	+	+	-	-	-	-	-
VEKA1000/2,4-L3	-	3	-	-	+	250	-	+	+	-	-	-	-	-
VEKA1000/5,0-L1	5	-	4	-	+	250	-	+	+	-	-	-	-	-
VEKA1000/5,0-L3	-	3	-	-	+	250	-	+	+	-	-	-	-	-
VEKA1000/9,0-L1	5	-	4	15.1	-	250	-	+	+	-	-	-	-	-
VEKA1000/9,0-L3	-	3	-	15.1	-	250	-	+	+	-	-	-	-	-
VEKA1000/12,0-L1	5	-	4	15.1	-	250	-	+	+	-	-	-	-	-
VEKA1000/12,0-L3	-	3	-	15.1	-	250	-	+	+	-	-	-	-	-
VEKA W-1000/13,6-L1	5	-	4	-	-	250	-	+	-	81*	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0
VEKA W-1000/13,6-L3	-	3	-	-	-	250	-	+	-	81*	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0
VEKA 2000/6,0-L1	11	-	-	-	+	315	-	+	+	-	-	-	-	-
VEKA 2000/6,0-L3	-	4	-	-	+	315	-	+	+	-	-	-	-	-
VEKA 2000/15,0-L1	11	-	-	15.1	-	315	-	+	+	-	-	-	-	-
VEKA 2000/15,0-L3	-	4	-	15.1	-	315	-	+	+	-	-	-	-	-
VEKA 2000/21,0-L1	11	-	-	15.1P	-	315	-	+	+	-	-	-	-	-
VEKA 2000/21,0-L3	-	4	-	15.1P	-	315	-	+	+	-	-	-	-	-
VEKA W-2000/27,2-L1	11	-	-	-	-	315	-	+	-	81*	3-2,5-4	3-1,6-4	45.15-2,5	45.10-1,6
VEKA W-2000/27,2-L3	-	4	-	-	-	315	-	+	-	81*	3-2,5-4	3-1,6-4	45.15-2,5	45.10-1,6
VEKA 3000/15,0-L1	14	-	-	15.1	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/15,0-L3	-	7	-	15.1	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/21,0-L1	14	-	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/21,0-L3	-	7	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/30,0-L1	14	-	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/30,0-L3	-	7	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/39,0-L1	14	-	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA 3000/39,0-L3	-	7	-	15.1P	-	-	500x300	+	+	-	-	-	-	-
VEKA W-3000/40,8-L1	14	-	-	15.1P	-	-	500x300	+	-	81*	3-4,0-4	3-2,5-4	45.20-4,0	45.15-2,5
VEKA W-3000/40,8-L3	-	7	-	15.1P	-	-	500x300	+	-	81*	3-4,0-4	3-2,5-4	45.20-4,0	45.15-2,5
VEKA 4000/21,0-L3	-	11	-	15.1P	-	-	600x400	+	+	-	-	-	-	-
VEKA 4000/27,0-L3	-	11	-	15.1P	-	-	600x400	+	+	-	-	-	-	-
VEKA 4000/39,0-L3	-	11	-	15.1P	-	-	600x400	+	+	-	-	-	-	-
VEKA4000/54,0-L3	-	11	-	15.1P	-	-	600x400	+	+	-	-	-	-	-
VEKA W-4000/54,0-L3	-	11	-	-	-	-	600x400	+	+	81*	3-6,3-4	3-4,0-4	45.25-6,3	45.20-4,0

* - only with PRV control board



① **VEKA 400/1,2-L1**

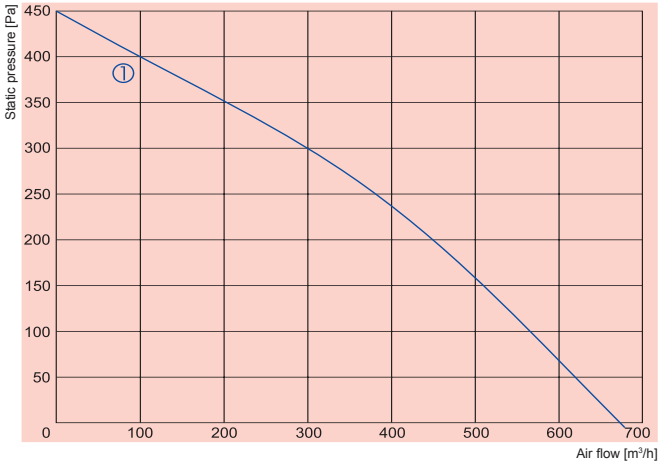
① **VEKA 400/2,0-L1**

① **VEKA 400/5,0-L1**

VEKA 400	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	60	50	57	54	50	44	39	30
Outlet	68	56	59	66	58	54	49	40
Surrounding	46	37	40	42	39	34	30	22

Measured at 334 m³/h, 90 Pa

			400/1,2-L1	400/2,0-L1	400/5,0-L1
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~2, 400
	-power consumption	[kW]	1,2	2,0	5,0
	-min. air speed	[m/s]	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-current	[A]	0,64	0,64	0,64
	-speed	[min⁻¹]	2300	2300	2300
	-power consumption	[kW]	0,147	0,147	0,147
	-max. airflow	[m³/h]	414	414	414
	-motor protection class		IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54
Filter class			M5	M5	M5
Total sound pressure level at 1 m		[dBA]	41	41	41
Wiring diagram			No. 1	No. 1	No. 2
Weight		[kg]	30,0	31,1	31,1



① **VEKA 700/2,4-L1**

① **VEKA 700/5,0-L1**

① **VEKA 700/9,0-L1**

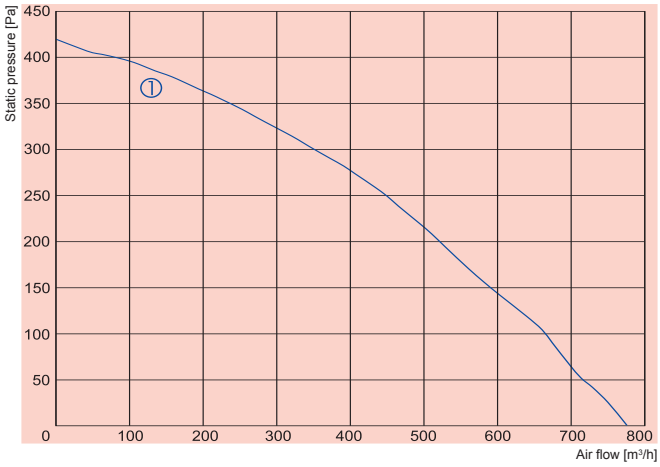
① **VEKA 700/12,0-L1**

VEKA 700	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	65	55	57	62	57	52	48	43
Outlet	70	57	59	65	64	63	57	48
Surrounding	53	40	43	51	44	38	35	28

Measured at 559 m³/h, 110 Pa

			700/2,4-L1	700/5,0-L1	700/9,0-L1	700/12,0-L1
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~2, 400	~3, 400	~3, 400
	-power consumption	[kW]	2,4	5,0	9,0	12,0
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[A]	0,93	0,93	0,93	0,93
	-speed	[min⁻¹]	2200	2200	2200	2200
	-power consumption	[kW]	0,214	0,214	0,214	0,214
	-max. airflow	[m³/h]	680	680	680	680
	-motor protection class		IP-44	IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54	IP-54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	45	45	45	45
Wiring diagram			No. 1	No. 2	No. 3	No. 3
Weight		[kg]	35,0	35,0	35,0	35,0

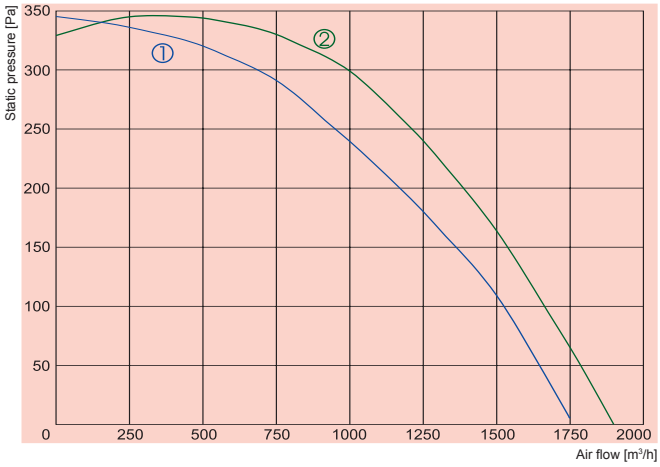
VEKA



① VEKA 850/2,0-L1
① VEKA 850/3,0-L1
① VEKA 850/5,0-L1
① VEKA 850/6,0-L1
① VEKA 850/9,0-L1
① VEKA 850/12,0-L1

VEKA 850	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	67	56	60	63	60	58	45	39
Outlet	71	58	62	69	63	56	51	42
Surrounding	54	44	48	50	47	45	38	32
Measured at 627 m³/h,100 Pa								

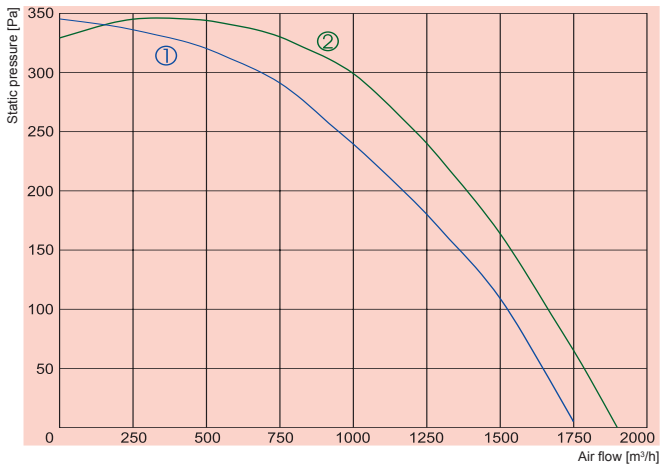
			850/2,0-L1	850/3,0-L1	850/5,0-L1	850/6,0-L1	850/9,0-L1	850/12,0-L1
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~2, 400	~2, 400	~3, 400	~3, 400
	-power consumption	[kW]	2	3	5	6	9	12
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[A]	0,98	0,98	0,98	0,98	0,98	0,98
	-speed	[min⁻¹]	2000	2000	2000	2000	2000	2000
	-power consumption	[kW]	0,25	0,25	0,25	0,25	0,25	0,25
	-max. airflow	[m³/h]	805	805	805	805	805	805
	-motor protection class		IP-44	IP-44	IP-44	IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54	IP-54	IP-54	IP-54
Filter class			M5	M5	M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	46	46	46	46	46	46
Wiring diagram			No. 1	No. 1	No. 2	No. 2	No. 3	No. 3
Weight		[kg]	41,0	41,0	41,0	41,0	41,0	41,0



① VEKA1000/2,4-L1
② VEKA1000/2,4-L3
① VEKA1000/5,0-L1
② VEKA1000/5,0-L3

VEKA 1000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	68	58	62	64	59	55	51	43
Outlet	75	60	68	72	69	62	55	49
Surrounding	56	47	49	51	50	48	42	39
Measured at 1217 m³/h, 100 Pa								

			1000/2,4-L1	1000/2,4-L3	1000/5,0-L1	1000/5,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~2, 400	~2, 400
	-power consumption	[kW]	2,4	2,4	5	5
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~1, 230	~3, 400
	-current	[A]	3,0	1,9	3,0	1,9
	-speed	[min⁻¹]	1190	1380	1190	1380
	-power consumption	[kW]	0,69	0,93	0,69	0,93
	-max. airflow	[m³/h]	1750	1900	1750	1900
	-motor protection class		IP-54	IP-54	IP-54	IP-54
Terminal box protection class			IP-54	IP-54	IP-54	IP-54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	52	52	52	52
Wiring diagram			No. 4	No. 5	No. 6	No. 7
Weight		[kg]	75,0	75,0	75,0	75,0



① **VEKA1000/9,0-L1**

② **VEKA1000/9,0-L3**

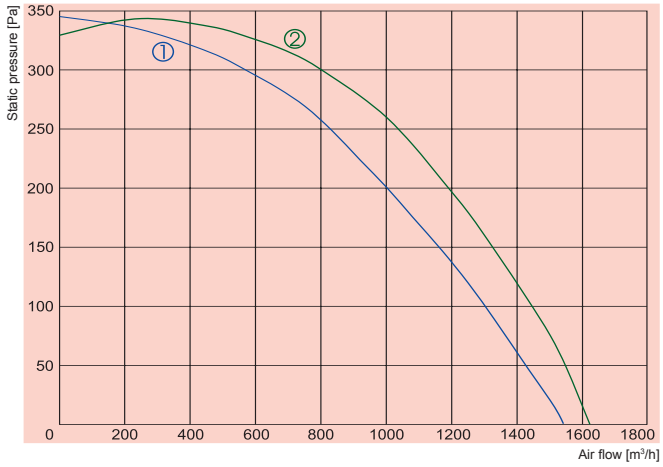
① **VEKA1000/12,0-L1**

② **VEKA1000/12,0-L3**

VEKA 1000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	68	58	62	64	59	55	51	43
Outlet	75	60	68	72	69	62	55	49
Surrounding	56	47	49	51	50	48	42	39

Measured at 1217 m³/h, 100 Pa

			1000/9,0-L1	1000/9,0-L3	1000/12,0-L1	1000/12,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	9	9	12	12
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~1, 230	~3, 400
	-current	[A]	3,0	1,9	3,0	1,9
	-speed	[min⁻¹]	1190	1380	1190	1380
	-power consumption	[kW]	0,69	0,93	0,69	0,93
	-max. airflow	[m³/h]	1750	1900	1750	1900
	-motor protection class		IP-54	IP-54	IP-54	IP-54
Terminal box protection class			IP-54	IP-54	IP-54	IP-54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	52	52	52	52
Wiring diagram			No. 8	No. 9	No. 12	No. 13
Weight		[kg]	75,0	75,0	75,0	75,0



① **VEKA W-1000/13,6-L1**

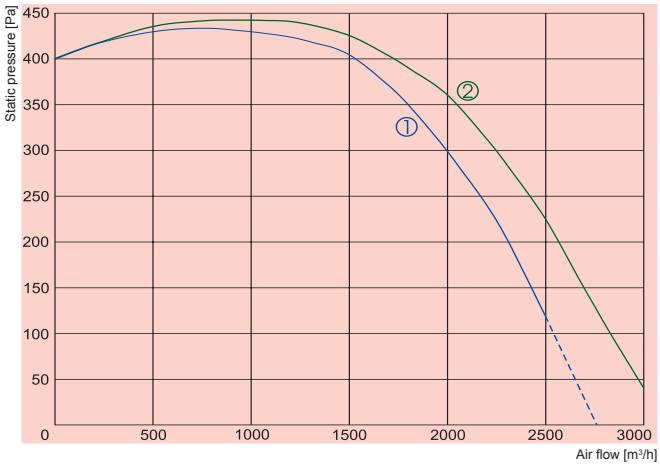
② **VEKA W-1000/13,6-L3**

VEKA W 1000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	68	59	61	63	60	57	50	41
Outlet	75	61	67	71	69	64	53	46
Surrounding	55	46	48	50	49	45	40	37

Measured at 1185 m³/h, 100 Pa

			W-1000/13,6-L1	W-1000/13,6-L3
Water heater	-power	[kW]	13,6	13,6
	-water temp. T_{in}/T_{out}	[°C]	+80/+60	+80/+60
	-water flow rate	[l/s]	0,17	0,17
	-water pressure drop	[kPa]	13,81	13,81
	-kvs value	[m³/h]	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400
	-current	[A]	3,0	1,9
	-speed	[min⁻¹]	1190	1380
	-power consumption	[kW]	0,69	0,93
	-max. airflow	[m³/h]	1540	1620
	-motor protection class		IP-54	IP-54
Terminal box protection class			IP-54	IP-54
Filter class			M5	M5
Total sound pressure level at 1 m		[dBA]	52	52
Wiring diagram			No. 14	No. 15
Weight		[kg]	78,0	78,0

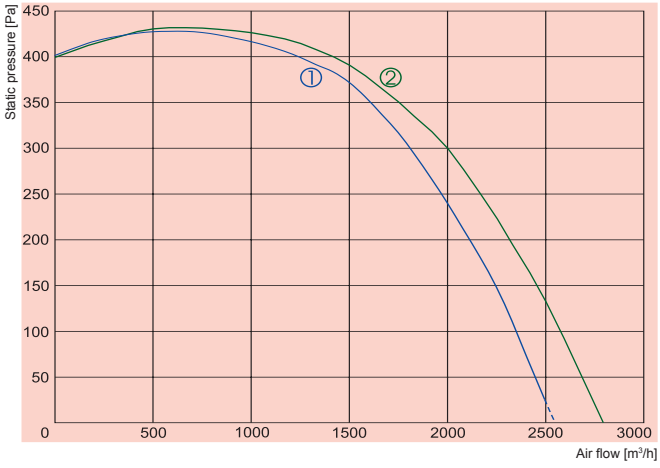
VEKA



① VEKA 2000/6,0-L1
② VEKA 2000/6,0-L3
① VEKA 2000/15,0-L1
② VEKA 2000/15,0-L3
① VEKA 2000/21,0-L1
② VEKA 2000/21,0-L3

VEKA 2000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	79	70	77	72	65	62	60	56
Outlet	85	73	80	79	77	73	72	68
Surrounding	66	58	64	58	52	50	52	49
Measured at 2102 m³/h,130 Pa								

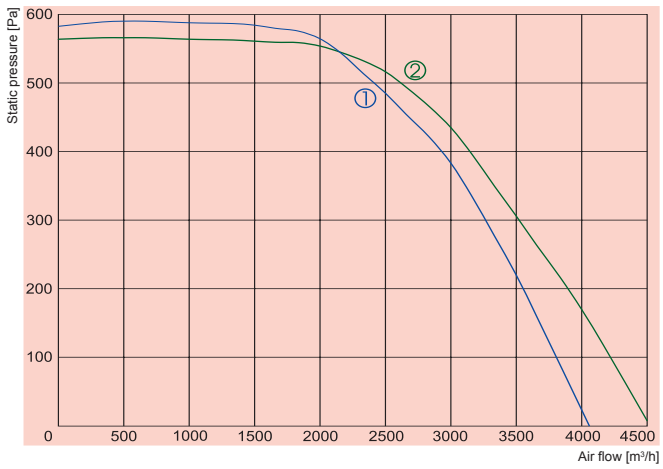
			2000/6,0-L1	2000/6,0-L3	2000/15,0-L1	2000/15,0-L3	2000/21,0-L1	2000/21,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~2, 400	~2, 400	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	6	6	15	15	21 (9+12)	21 (9+12)
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~1, 230	~3, 400	~1, 230	~3, 400
	-current	[A]	5,1	2,6	5,1	2,6	5,1	2,6
	-speed	[min⁻¹]	1210	1310	1210	1310	1210	1310
	-power consumption	[kW]	1,15	1,50	1,15	1,50	1,15	1,50
	-max. airflow	[m³/h]	2500	3000	2500	3000	2500	3000
	-motor protection class		IP-54	IP-54	IP-54	IP-54	IP-54	IP-54
Terminal box protection class			IP-54	IP-54	IP-54	IP-54	IP-54	IP-54
Filter class			M5	M5	M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	54	54	54	54	54	54
Wiring diagram			No. 10	No. 11	No. 12	No. 13	No. 12	No. 13
Weight		[kg]	98,0	98,0	98,0	98,0	98,0	98,0



① VEKA W-2000/27,2-L1
② VEKA W-2000/27,2-L3

VEKA W 2000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	79	70	77	72	65	62	60	56
Outlet	85	73	80	79	77	73	72	68
Surrounding	66	58	64	58	52	50	52	49
Measured at 2102 m³/h,130 Pa								

			W-2000/27,2-L1	W-2000/27,2-L3
Water heater	-power	[kW]	27,2	27,2
	-water temp. T_{in}/T_{out}	[°C]	+80/+60	+80/+60
	-water flow rate	[l/s]	0,32	0,32
	-water pressure drop	[kPa]	9,6	9,6
	-kvs value	[m³/h]	3,7	3,7
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400
	-current	[A]	5,1	2,6
	-speed	[min⁻¹]	1210	1310
	-power consumption	[kW]	1,15	1,50
	-max. airflow	[m³/h]	2500	2790
	-motor protection class		IP-54	IP-54
Terminal box protection class			IP-54	IP-54
Filter class			M5	M5
Total sound pressure level at 1 m		[dBA]	54	54
Wiring diagram			No. 14	No. 15
Weight		[kg]	103,0	103,0

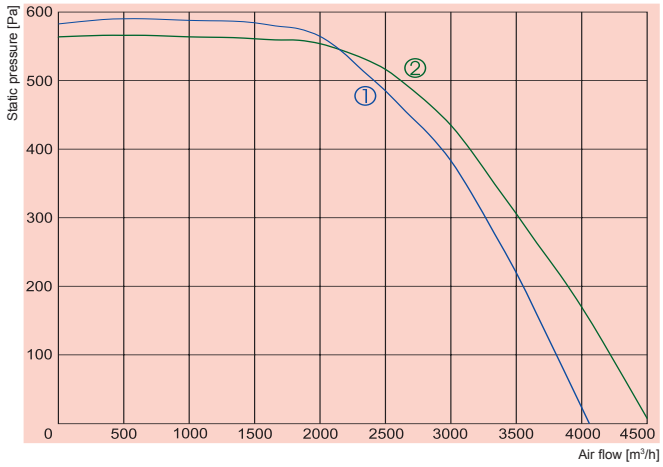


① VEKA 3000/15,0-L1
② VEKA 3000/15,0-L3
① VEKA 3000/21,0-L1
② VEKA 3000/21,0-L3

VEKA 3000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	71	70	76	75	68	62	58
Outlet	86	73	76	82	80	76	72	65
Surrounding	67	60	63	59	56	53	49	46

Measured at 3480 m³/h, 100 Pa

			3000/15,0-L1	3000/15,0-L3	3000/21,0-L1	3000/21,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	15	15	21 (9+12)	21 (9+12)
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~1, 230	~3, 400
	-current	[A]	11,0	4,1	11,0	4,1
	-speed	[min⁻¹]	1340	1300	1340	1300
	-power consumption	[kW]	2,5	2,5	2,5	2,5
	-max. airflow	[m³/h]	4000	4500	4000	4500
	-motor protection class		IP 54	IP 54	IP 54	IP 54
Terminal box protection class			IP 54	IP 54	IP 54	IP 54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	56	56	56	56
Wiring diagram			No. 12	No. 13	No. 12	No. 13
Weight		[kg]	103,0	103,0	103,0	103,0



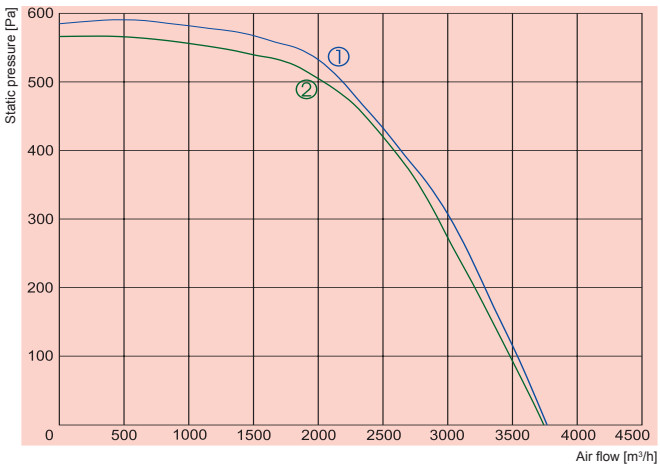
① VEKA 3000/30,0-L1
② VEKA 3000/30,0-L3
① VEKA 3000/39,0-L1
② VEKA 3000/39,0-L3

VEKA 3000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	71	70	76	75	68	62	58
Outlet	86	73	76	82	80	76	72	65
Surrounding	67	60	63	59	56	53	49	46

Measured at 3480 m³/h, 100 Pa

			3000/30,0-L1	3000/30,0-L3	3000/39,0-L1	3000/39,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	30 (15+15)	30 (15+15)	39 (9+12+18)	39 (9+12+18)
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~1, 230	~3, 400
	-current	[A]	11,0	4,1	11,0	4,1
	-speed	[min⁻¹]	1340	1300	1340	1300
	-power consumption	[kW]	2,5	2,5	2,5	2,5
	-max. airflow	[m³/h]	4000	4500	4000	4500
	-motor protection class		IP 54	IP 54	IP 54	IP 54
Terminal box protection class			IP 54	IP 54	IP 54	IP 54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	56	56	56	56
Wiring diagram			No. 12	No. 13	No. 12	No. 13
103,0Weight		[kg]	103,0	103,0	103,0	103,0

VEKA

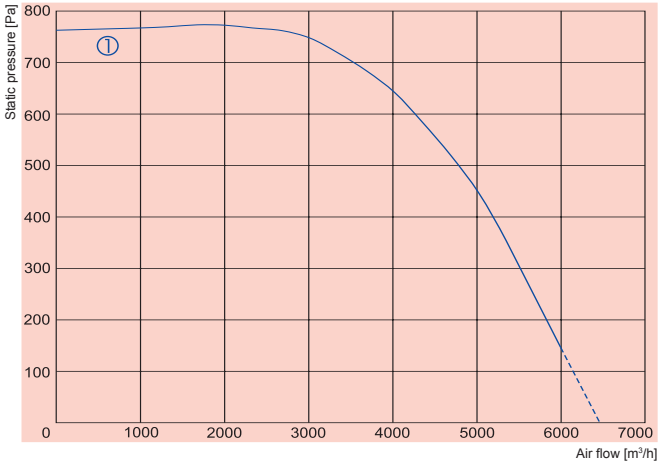


① VEKA W-3000/40,8-L1

② VEKA W-3000/40,8-L3

VEKA W 3000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	71	70	76	75	68	62	58
Outlet	86	73	76	82	80	76	72	65
Surrounding	67	60	63	59	56	53	49	46
Measured at 3480 m³/h, 100 Pa								

			W-3000/40,8-L1	W-3000/40,8-L3
Water heater	-power	[kW]	40,8	40,8
	-water temp. T_{in}/T_{out}	[°C]	+80/+60	+80/+60
	-water flow rate	[l/s]	0,49	0,49
	-water pressure drop	[kPa]	5,7	5,7
	-kvs value	[m³/h]	7,4	7,4
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~3, 400
	-current	[A]	11	4,10
	-speed	[min⁻¹]	1340	1300
	-power consumption	[kW]	2,5	2,5
	-max. airflow	[m³/h]	3770	3740
	-motor protection class		IP 54	IP 54
Terminal box protection class			IP 54	IP 54
Filter class			M5	M5
Total sound pressure level at 1 m		[dBA]	56	56
Wiring diagram			No. 14	No. 15
Weight		[kg]	110,0	110,0



① VEKA 4000/21,0-L3

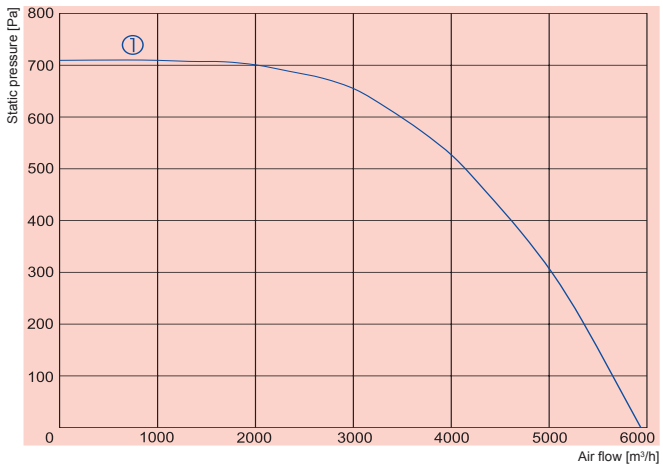
① VEKA 4000/27,0-L3

① VEKA 4000/39,0-L3

① VEKA4000/54,0-L3

VEKA W 4000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	82	55	72	78	76	73	68	63
Outlet	90	59	73	81	86	83	81	75
Surrounding	72	60	65	69	64	60	57	53
Measured at 5853 m³/h, 200 Pa								

			4000/21,0-L3	4000/27,0-L3	4000/39,0-L3	4000/54,0-L3
Heater	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-power consumption	[kW]	21 (9+12)	27 (12+15)	39 (9+12+18)	54 (9+12+15+18)
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400	~3, 400
	-current	[A]	6,0	6,0	6,0	6,0
	-speed	[min⁻¹]	1320	1320	1320	1320
	-power consumption	[kW]	3,7	3,7	3,7	3,7
	-max. airflow	[m³/h]	6020	6020	6020	6020
	-motor protection class		IP 54	IP 54	IP 54	IP 54
Terminal box protection class			IP 54	IP 54	IP 54	IP 54
Filter class			M5	M5	M5	M5
Total sound pressure level at 1 m		[dBA]	58	58	58	58
Wiring diagram			No. 13	No. 13	No. 13	No. 13
Weight		[kg]	175,0	175,0	175,0	175,0



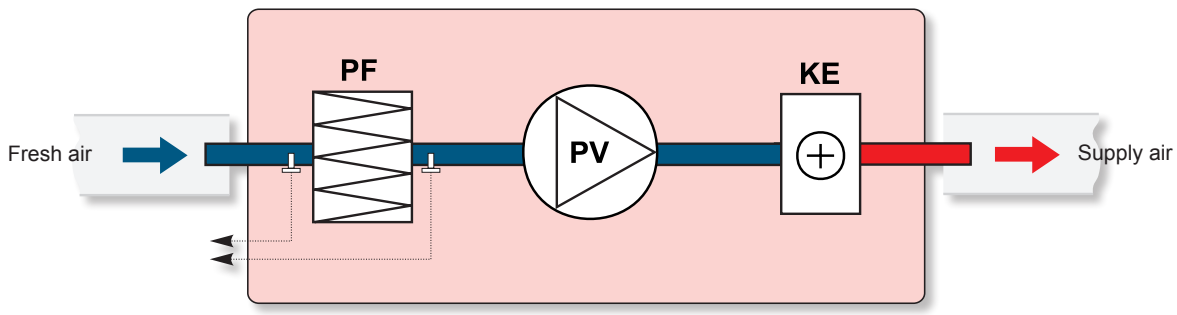
① VEKA W-4000/54,0-L3

VEKA W 4000	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	82	55	72	78	76	73	68	63
Outlet	90	59	73	81	86	83	81	75
Surrounding	72	60	65	69	64	60	57	53

Measured at 5853 m³/h, 200 Pa

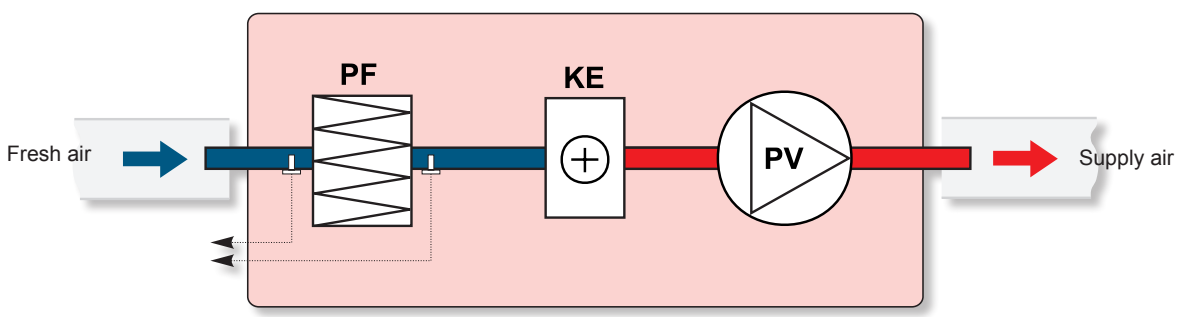
			W-4000/54,0-L3
Water heater	-power	[kW]	54
	-water temp. T_{in}/T_{out}	[°C]	+80/+60
	-water flow rate	[l/s]	0,71
	-water pressure drop	[kPa]	8,2
	-kvs value	[kPa]	9
Fan	-phase/voltage	[50Hz/VAC]	~3, 400
	-current	[A]	6,0
	-speed	[min⁻¹]	1320
	-power consumption	[kW]	3,7
	-max. airflow	[m³/h]	5940
	-motor protection class		IP-54
Terminal box protection class			IP-54
Filter class			M5
Total sound pressure level at 1 m		[dBA]	58
Wiring diagram			No. 15
Weight		[kg]	185,0

VEKA 400E; 700E; 850E; 1000E versions with electrical heater (view from inspection side)



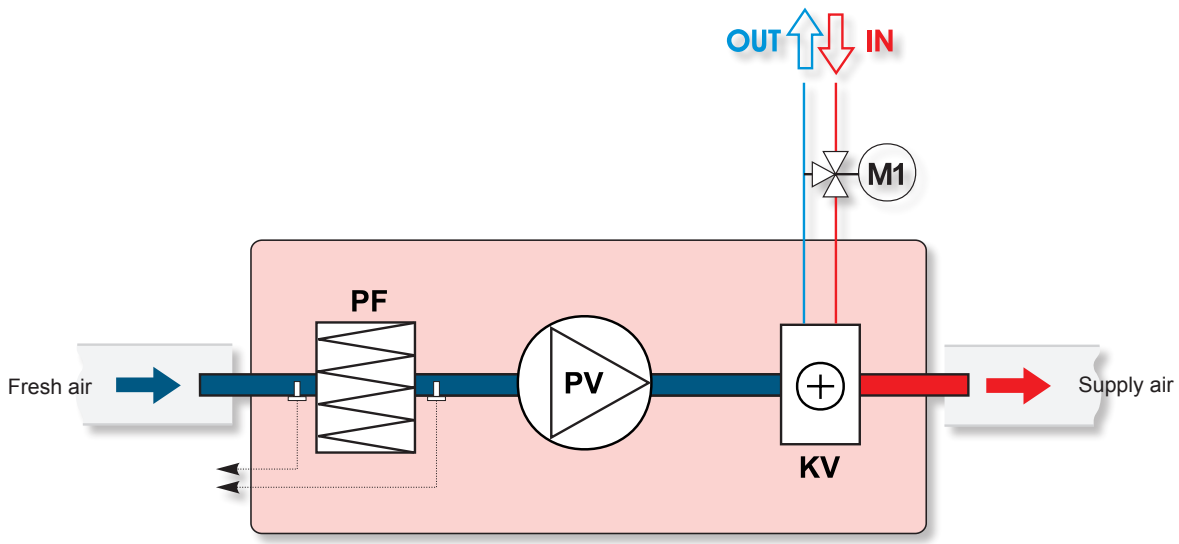
PV - supply air fan
PF - filter for supply air (class M5)
KE - electrical heater

VEKA 2000E; 3000E; 4000E versions with electrical heater (view from inspection side)



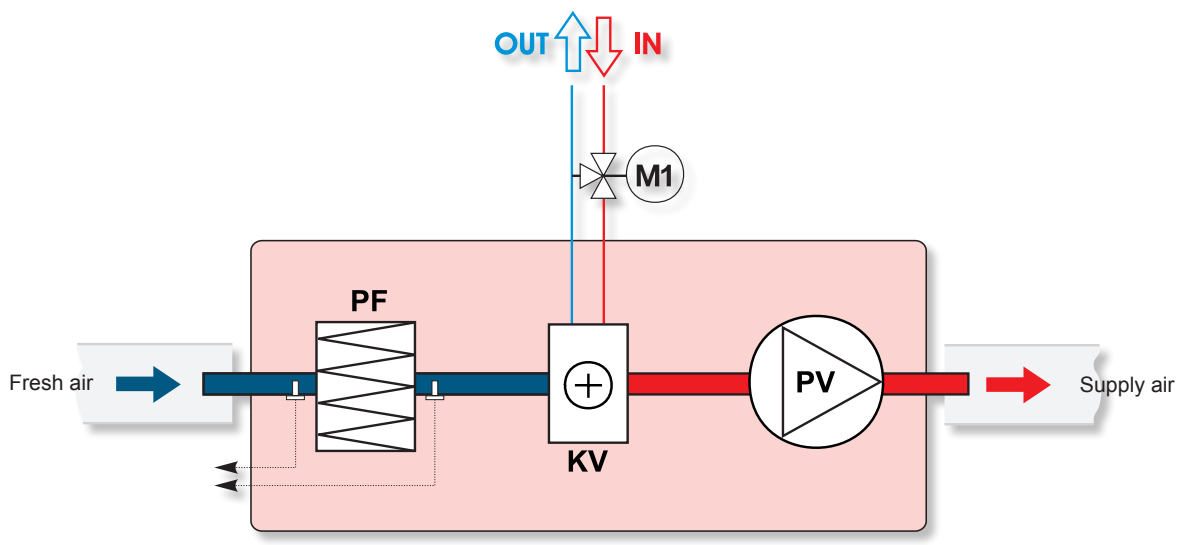
PV - supply air fan
PF - filter for supply air (class M5)
KE - electrical heater

VEKA 1000W versions with water heater (view from inspection side)



PV - supply air fan
PF - filter for supply air (class M5)
KV - water heater
M1 - optionally supplied mixing valve and motor

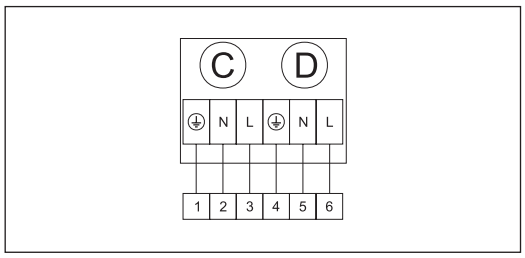
VEKA 2000W; 3000W; 4000W versions with water heater (view from inspection side)



PV - supply air fan
PF - filter for supply air (class M5)
KV - water heater
M1 - optionally supplied mixing valve and motor

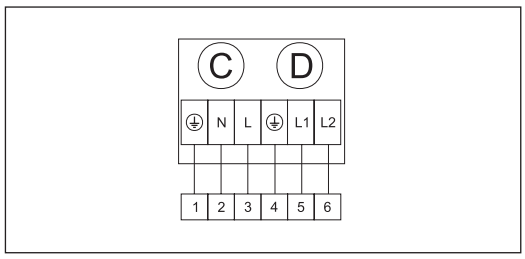
Wiring diagram No. 1

C -Centrifugal fan
D -Electrical heater



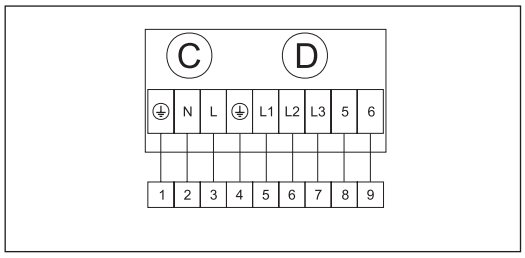
Wiring diagram No. 2

C -Centrifugal fan
D -Electrical heater



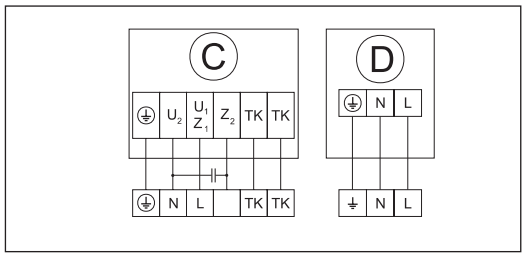
Wiring diagram No. 3

C -Centrifugal fan
D -Electrical heater



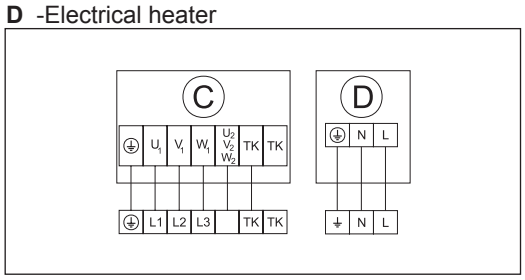
Wiring diagram No. 4

C -Centrifugal fan
D -Electrical heater



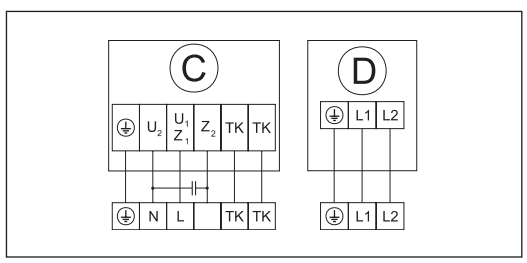
Wiring diagram No. 5

C -Centrifugal fan
D -Electrical heater



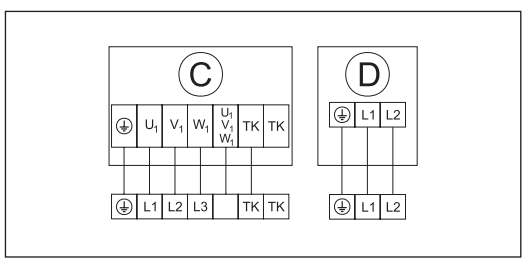
Wiring diagram No. 6

C -Centrifugal fan
D -Electrical heater



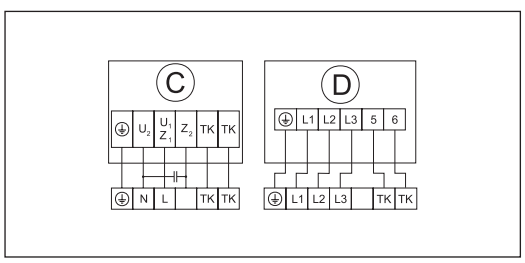
Wiring diagram No. 7

C -Centrifugal fan
D -Electrical heater



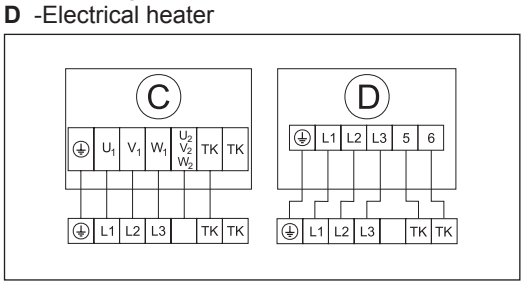
Wiring diagram No. 8

C -Centrifugal fan
D -Electrical heater



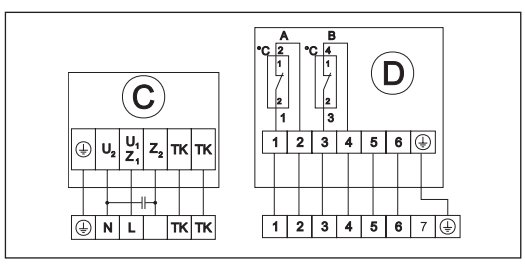
Wiring diagram No. 9

C -Centrifugal fan
D -Electrical heater



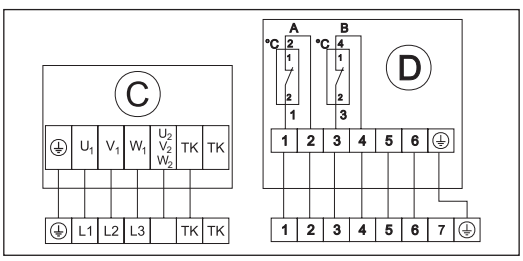
Wiring diagram No. 10

A -Overheat protection with manual reset 100°C
B -Overheat protection with automatical reset 50°C
C -Centrifugal fan
D -Electrical heater



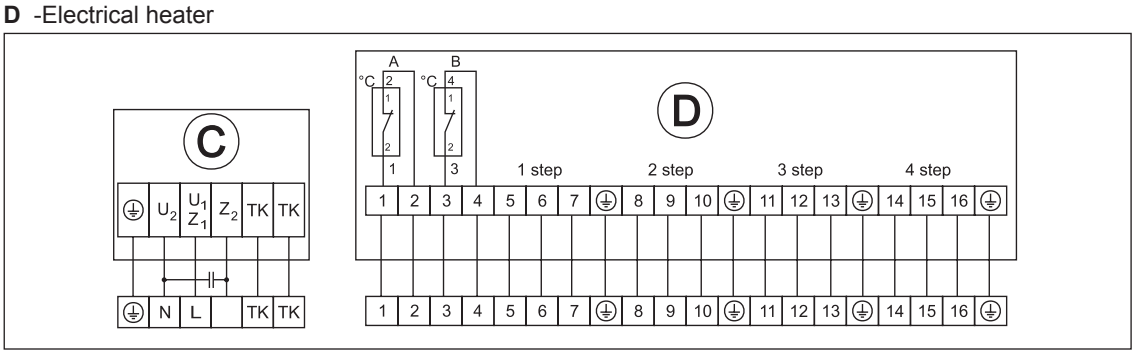
Wiring diagram No. 11

A -Overheat protection with manual reset 100°C
B -Overheat protection with automatical reset 50°C
C -Centrifugal fan
D -Electrical heater



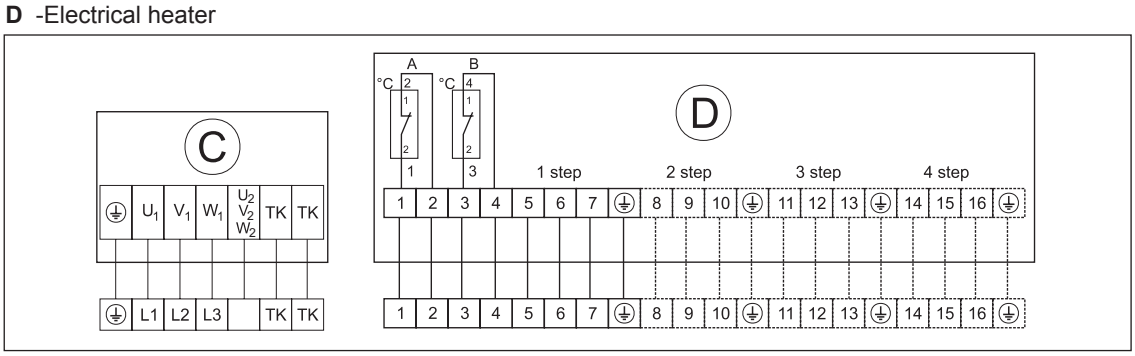
Wiring diagram No. 12

A -Overheat protection with manual reset 100°C
B -Overheat protection with automatical reset 50°C
C -Centrifugal fan
D -Electrical heater



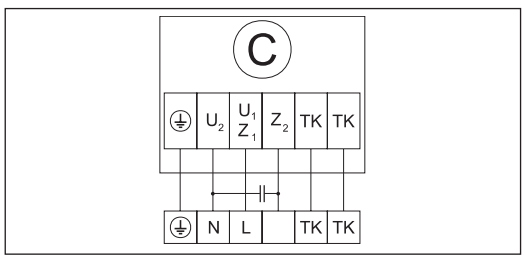
Wiring diagram No. 13

A -Overheat protection with manual reset 100°C
B -Overheat protection with automatical reset 50°C
C -Centrifugal fan
D -Electrical heater



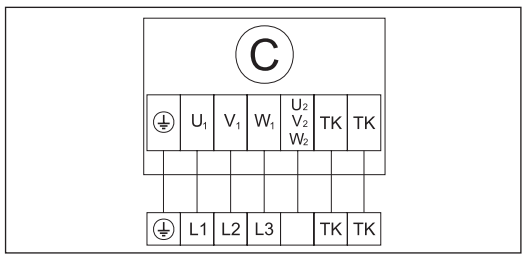
Wiring diagram No. 14

C -Centrifugal fan



Wiring diagram No. 15

C -Centrifugal fan



OTA

Air handling units

Oro tiekimo agrgatai

Centrale klimatyzacyjne

Приточные агрегаты

- Low noise level.
- Fans: ~1f with external rotor motor.
- Adjustable voltage fan control.
- Electrical heater.
- Easily removable inspection cover.
- Filter box with an G4-class panel filter.
- Wall insulation is 50mm.

Air supply units for ventilation systems. Not designed for functioning in explosive – inclined areas. The unit is designed for the air supply into premises. It consists of a duct fan, a duct air heater and a filter box. All these elements are installed in an isolated housing. The thickness of the wall insulation is 50 mm. The housing is made of galvanized steel and has an easily removable cover. The cover is attached by four hinges which are easy to unclasp.

- Niski poziom hałasu.
- Wentylatory: ~ 1f z zewnętrznym wirnikiem.
- Regulacja wentylatora napięcia.
- Nagrzewnica elektryczna.
- Łatwo zdejmowana pokrywa inspekcji.
- Filtr pole z klasy G4 filtr panelu.
- Izolacja ścian 50mm.

Jednostki nawiewne dla systemów wentylacyjnych. Nie jest przeznaczony do funkcjonowania w wybuchowych - pochyłe powierzchnie.Urządzenie przeznaczone jest do powietrza dostarczyć do pomieszczeń. Składa się on z przewodu wentylator, nagrzewnica kanałowa powietrza i filter box. Wszystkie te elementy są zamontowane w obudowie pojedyncze.

Grubość izolacji ściany wynosi 50 mm.Obudowa wykonana jest z z ocynkowanej blachy stalowej i posiada łatwo zdejmowaną pokrywę. Pokrywa jest dołączone przez czterech zawiasach, które łatwo odpiąć.

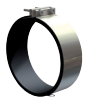
- Žemas triukšmo lygis
- Reguliuojamo greičio ventiliatorius (įtampos keitimas)
- Elektrinis šildytuvas
- Lengvai nuimamas dangtis patikrinimui
- Filtrų dėžė su G4 klasės filtru

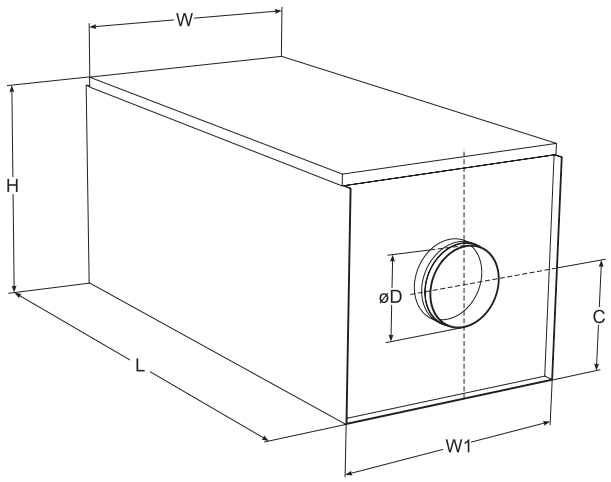
Oro tiekimo agregatas skirtas oro tiekimui į patalpas. Jis susideda iš kanalinio ventiliatoriaus, kanalinio oro šildytuvo ir filtrų dėžės. Visi šie elementai sumontuoti izoliuotame korpuse. Izoliacijos storis 50 mm. Korpusas pagamintas iš cinkuotos skardos su lengvai nuimamu dangčiu. Dangtis tvirtinamas keturiais lengvai atsegamais lankstais.

- Низкий уровень шума.
- Вентилятор с регулировкой скорости (изменение напряжения).
- Электрический нагреватель.
- Легко снимаемая крышка для проверки.
- Кассета фильтров с фильтром класса G4.

Агрегат подачи воздуха предназначен для подачи воздуха в помещения. Он состоит из канального вентилятора, канального нагревателя воздуха и кассеты фильтров. Все эти элементы установлены в изолированном корпусе. Толщина изоляции 50 мм. Корпус изготовлен из оцинкованной жести с легко снимаемой крышкой. Крышка крепится легко отстёгивающимися шарнирами.

Accessories

Single phase speed controller	Monophase speed controller	Controller for electrical heater	Controller for electrical heater	Mounting clamp	Back draft shutter
 TGRV p. 223	 ETY p.225	 EKR 15.1 p. 220	 EKR 6.1 p. 222	 AP p. 229	 RSK p. 227



Type	Dimensions [mm]					
	W	W1	C	L	H	øD
OTA 125	490	485	236	1000	490	125
OTA 160	490	485	236	1000	490	160
OTA 200	490	485	236	1000	490	200
OTA 250	550	545	285	1050	585	250
OTA 315	550	545	285	1050	585	315

Type	Accessories							
	TGRV	ETY	EKR 15.1	EKR 6.1	AP	RSK	AKS	TJK 10K
OTA 125/1200	1	1,5	-	+	125	125	125	+
OTA 160/2000	1	1,5	-	+	160	160	160	+
OTA 160/2400	1	1,5	-	+	160	160	160	+
OTA 160/5000	1	1,5	-	+	160	160	160	+
OTA 160/6000	1	1,5	-	+	160	160	160	+
OTA 200/2000	1	1,5	-	+	200	200	200	+
OTA 200/2400	1	1,5	-	+	200	200	200	+
OTA 200/3000	1	1,5	-	+	200	200	200	+
OTA 200/5000	1	1,5	-	+	200	200	200	+
OTA 200/6000	1	1,5	-	+	200	200	200	+
OTA 250/1200	1	1,5	-	+	250	250	250	+
OTA 250/5000	1	1,5	-	+	250	250	250	+
OTA 250/6000	1	1,5	-	+	250	250	250	+
OTA 250/9000	1	1,5	+	-	250	250	250	+
OTA 315/5000	2	2,5	-	+	315	315	315	+
OTA 315/6000	2	2,5	-	+	315	315	315	+
OTA 315/9000	2	2,5	+	-	315	315	315	+

Accessories

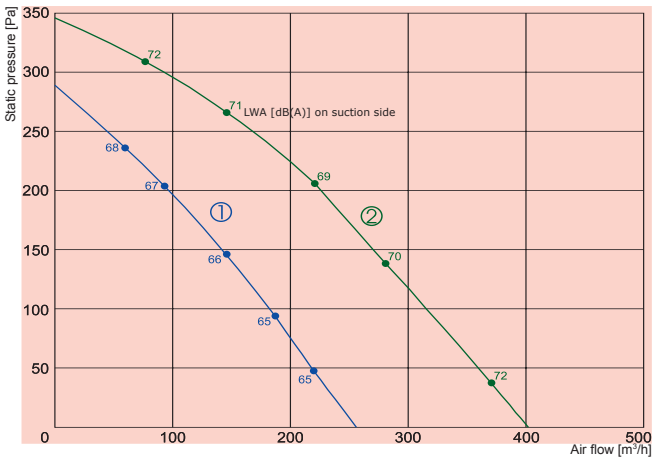
Circular duct silencer

AKS p. 230

Duct sensor

TJK 10K p. 187

OTA



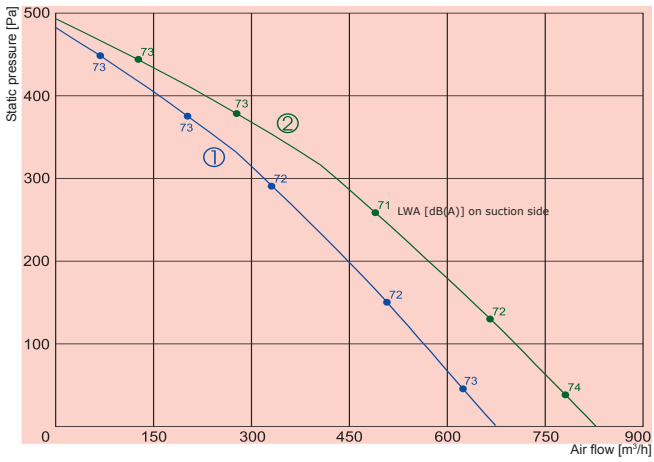
① OTA 125
② OTA 160

			125/1200	160/2000	160/2400	160/5000	160/6000
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~2, 400	~2, 400
	-power consumption	[kW]	1,2	2,0	2,4	5,0	6,0
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[A]	0,26	0,41	0,41	0,41	0,41
	-speed	[min^{-1}]	2549	2621	2621	2621	2621
	-power consumption	[W]	60	95	95	95	95
	-max. airflow	[m^3/h]	256	402	402	402	402
	-motor protection class		IP-44	IP-44	IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54	IP-54	IP-54
Filter class			G4	G4	G4	G4	G4
Total sound pressure level at 1 m		[dBA]	58	63	63	63	63
Wiring diagram			No. 1	No. 1	No. 1	No. 2	No. 2
Weight		[kg]	37,0	39,0	39,0	39,0	39,0

OTA 125	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	65	38	59	58	60	59	52	42
Outlet	63	38	57	55	58	56	46	38
Surrounding	48	23	42	41	42	41	35	27
Measured at 202 m^3/h, 72 Pa								

OTA 160	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	70	43	65	60	65	63	57	43
Outlet	70	47	63	64	64	61	55	44
Surrounding	52	28	48	43	47	45	40	28
Measured at 281 m^3/h, 138Pa								

The unit characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the unit.



① OTA 200

② OTA 250

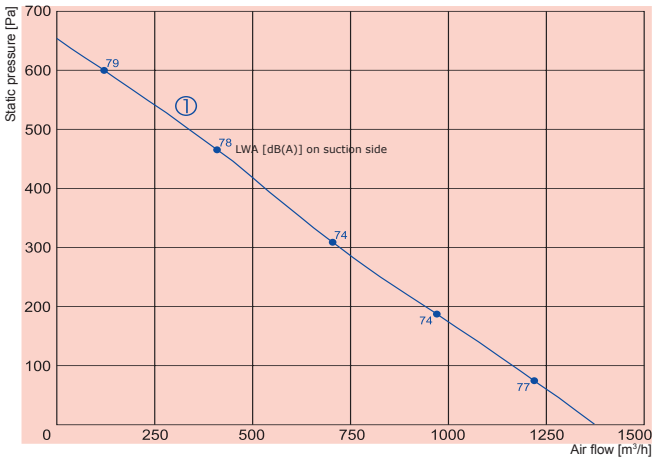
			200/2000	200/2400	200/3000	200/5000	200/6000
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~2, 400	~2, 400	~2, 400
	-power consumption	[kW]	2,0	2,4	3,0	5,0	6,0
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[A]	0,72	0,72	0,72	0,72	0,72
	-speed	[min^{-1}]	2621	2621	2621	2621	2621
	-power consumption	[W]	164	164	164	164	164
	-max. airflow	[m^3/h]	675	675	675	675	675
	-motor protection class		IP-44	IP-44	IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54	IP-54	IP-54
Filter class			G4	G4	G4	G4	G4
Total sound pressure level at 1 m		[dBA]	65	65	65	65	65
Wiring diagram			No. 1	No. 1	No. 2	No. 2	No. 2
41,0Weight		[kg]	41,0	41,0	41,0	41,0	41,0

			250/1200	250/5000	250/6000	250/9000
Heater	-phase/voltage	[50Hz/VAC]	~1, 230	~2, 400	~2, 400	~3, 400
	-power consumption	[kW]	1,0	5,0	6,0	9,0
	-min. air speed	[m/s]	1,5	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230	~1, 230
	-current	[A]	0,71	0,71	0,71	0,71
	-speed	[min^{-1}]	2497	2497	2497	2497
	-power consumption	[W]	160	160	160	160
	-max. airflow	[m^3/h]	828	828	828	828
	-motor protection class		IP-44	IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54	IP-54
Filter class			G4	G4	G4	G4
Total sound pressure level at 1 m		[dBA]	65	65	65	65
Wiring diagram			No. 1	No. 2	No. 2	No. 3
Weight		[kg]	51,0	51,0	51,0	51,0

OTA 200	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	72	54	65	62	67	66	64	54
Outlet	71	47	66	65	65	62	56	44
Surrounding	55	39	48	45	49	48	47	39
Measured at 565 m^3/h, 100 Pa								

OTA 250	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	72	53	64	61	67	67	64	55
Outlet	70	55	64	63	63	62	61	55
Surrounding	56	38	47	45	51	50	48	40
Measured at 666 m^3/h, 130 Pa								

The unit characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the unit.



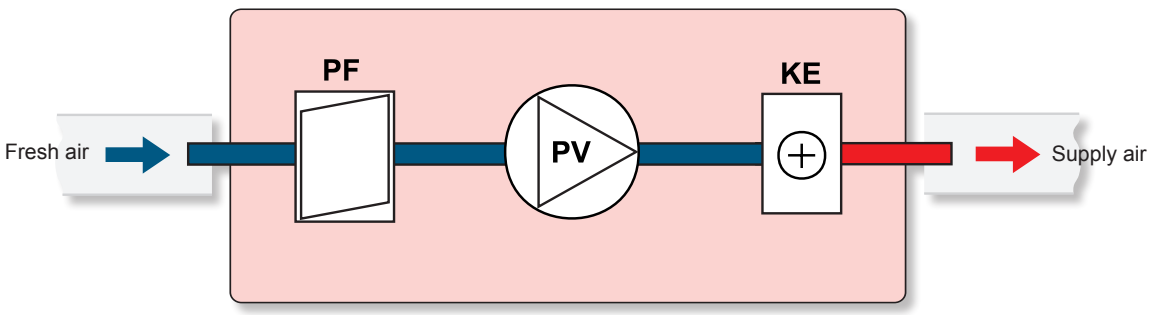
① **OTA 315**

			315/5000	315/6000	315/9000
Heater	-phase/voltage	[50Hz/VAC]	~2, 400	~2, 400	~3, 400
	-power consumption	[kW]	5,0	6,0	9,0
	-min. air speed	[m/s]	1,5	1,5	1,5
Fan	-phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
	-current	[A]	1,29	1,29	1,29
	-speed	[min⁻¹]	2343	2343	2343
	-power consumption	[W]	297	297	297
	-max. airflow	[m³/h]	1373	1373	1373
	-motor protection class		IP-44	IP-44	IP-44
Terminal box protection class			IP-54	IP-54	IP-54
Filter class			G4	G4	G4
Total sound pressure level at 1 m		[dBA]	68	68	68
Wiring diagram			No. 2	No. 2	No. 3
Weight		[kg]	51,0	64,0	67,0

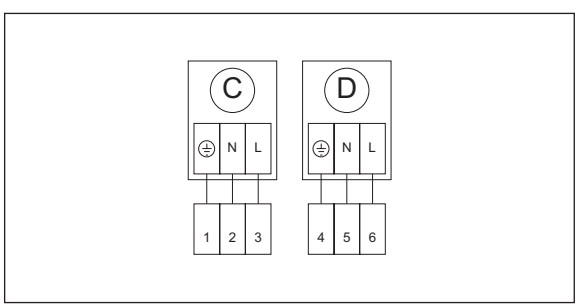
OTA 315	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	75	54	62	62	70	72	66	60
Outlet	72	59	61	65	64	66	63	59
Surrounding	58	39	45	45	54	54	50	45
Measured at 1062 m³/h, 148Pa								

The unit characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the unit.

OTA versions with electrical heater

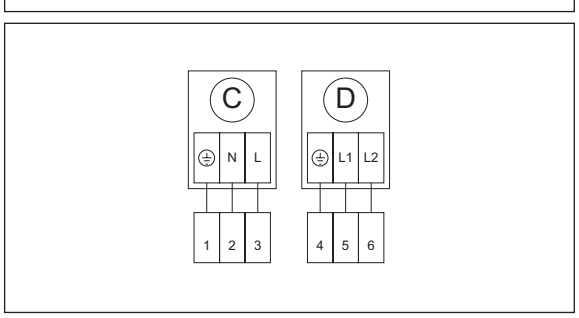


PV - supply air fan
KE - electrical heater
PF - filter for supply air (class G4)



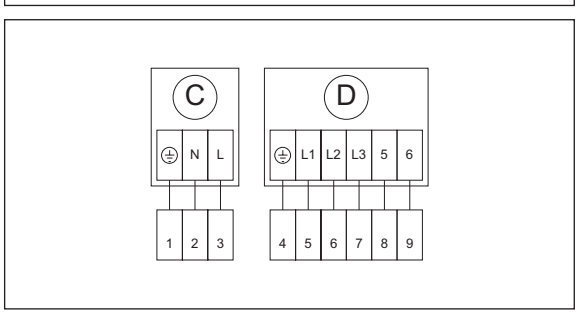
Wiring diagram No. 1

C - Circular fan
D - Electrical heater



Wiring diagram No. 2

C - Circular fan
D - Electrical heater



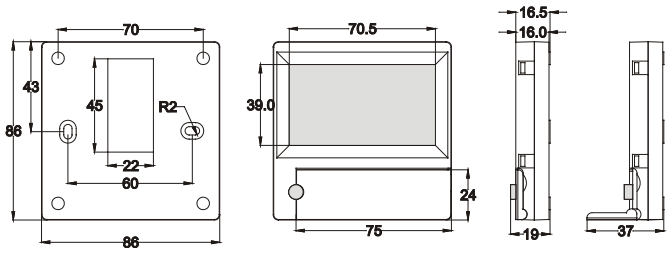
Wiring diagram No. 3

C - Circular fan
D - Electrical heater

CONTROLLERS, ACCESSORIES
REGULIATORIAI, PRIEDAI
REGULATORY, AKCESORIA
РЕГУЛЯТОРЫ, ПРИНАДЛЕЖНОСТИ

Flex

Control panel



The “FLEX” control panel is used for control of ventilation units with V1, V2 boards.

- Program the unit operation modes for one week.
- Set the temperature for supply or extracted air fl ow.
- Set fan motor rotation speed.
- Indication for the plate heat exchanger’s antifreeze protection.
- Alarm indication.
- Indication of the temperatures, humidity and pressure for ambient, room, exhaust and supply air.
- Automatic recognition of the controlled unit.
- Surface mounting.

Pultelis „FLEX“ naudojamas ventiliacijos agregatų valdymui su V1, V2 plokštėmis.

- Agregato darbo režimų programavimas savaitei.
- Tiekiamo arba ištraukiamo oro temperatūros nustatymas.
- Ventiliatorių motorų sukimosi greičio nustatymas.
- Plokštelinio šilumokaičio apsaugos nuo užšalimo indikacija.
- Avarijos signalų indikacija.
- Lauko, patalpos, išmetamo, tiekiamo oro temperatūrų, drėgmių, slėgių indikacija.
- Valdomo agregato automatinis atpažinimas.

FLEX – Sterownik do kontroli pracy urządzeń z płytą V1 i V2.

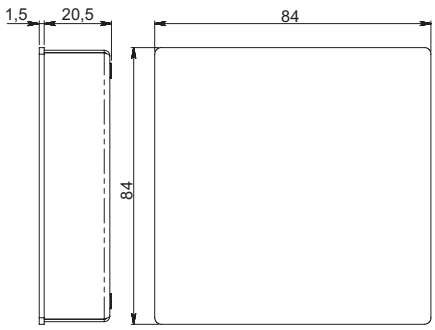
- Tygodniowy harmonogram pracy urządzenia.
- Pomiar temperatury na powietrzu nawiewanym lub wyciąganym.
- Programowanie prędkości obrotowej silników.
- Wskazanie aktywowania ochrony wymiennika krzyżowego przed zamrożeniem.
- Sygnalizacja alarmów.
- Wskazywanie temperatury, wilgotności i ciśnienia powietrza nawiewanego i wyciąganego.
- Automatyczne rozpoznawanie kontrolowanej jednostki.
- Ścienny montaż.

Пульт «FLEX» используется для управления вентиляционными агрегатами с платами V1, V2.

- Программирование режимов работы агрегата на неделю.
- Установка температуры приточного или вытяжного воздуха.
- Установка скорости вращения двигателей вентиляторов.
- Индикация защиты пластинчатого теплообменника от замерзания.
- Индикация аварийных сигналов.
- Индикация температур наружного воздуха, воздуха в помещении, вытяжного, приточного воздуха, влажности, давления.
- Автоматическое опознание управляемого агрегата.
- Монтаж над штукатуркой.

Technical data:		
Supply voltage	[VDC]	15..30
Data transfer		RS 485
Dimensions (WxHxL)	[mm]	86x86x16
Protection class		IP20
Ambient temperature	[°C]	10-30(50*)
Ambient humidity	[%]	<90

Sensor controller



Stouch controller is specially designed for control of:
• SALDA ventilation equipment;
• Other equipment with PRV and ECO control boards;
• Devices which are controlled using Modbus protocol.
Controller ensures comfortable operation, monitoring, maintenance and safety. All operations are performed
remotely by using controller, which shows fault reports and maintenance conditions.
Features:
• Exceptional and ergonomic design
• Easy operation
• Surface mounted
• One touch control
• Easily controlled
• Numbers displayed at screen
• Acoustic response to touch
• Can be connected to BMS network
• Can be directly connected to fan controlled with 0-10VDC signal
• CO2 or pressure sensor can be connected by using 0-10VDC output
• 4 selectable speeds
• Maximum fan speed for limited time period (boost);
• Blocking (locking) - protection from children;
• In the user menu, parameters of sound, standby menu and CO2 can be changed

Sterownik w stadium badań
Sterownik STOUCH jest zaprojektowany do kontroli :
• Urządzeń wentylacyjnych Salda;
• Innych urządzeń z płytą PRV i ECO;
• Urządzeń , które są kontrolowane za pomocą protokołu Modbus.
STOUCH zapewnia duży komfort pracy , monitorowanie, konserwacje i bezpieczeństwo wszystkich operacje przeprowadzonych zdalnie przy użyciu sterownika , który dodatkowo pokazuje raporty błędów i warunków utrzymania.
Cechy:
• Wyjątkowa i ergonomiczna konstrukcja
• Łatwa obsługa
• Ścienny montaż
• Dotykowe sterowanie
• Wskazania cyfrowe wyświetlane na ekranie
• Możliwość podłączenia do sieci BMS
• Może być bezpośrednio podłączony do wentylatora sterowanego sygnałem 0 -10VDC
• Czujnik CO2 lub ciśnienia może być podłączony za pomocą wyjścia 0 - 10VDC
• 4 prędkości do wyboru
• Maksymalna prędkość wentylatora z ograniczonym czasem działania (BOOST) ;
• Możliwość zabezpieczenia przed niepowołanym dostępem do sterownika;

Stouch valdymo pultelis specialiai sukurtas valdyti:
• SALDA vėdinimo įrenginius;
• Kitus įrenginius turinčius PRV ir ECO valdymo plokštes;
• Modbus protokolu valdomus prietaisus.
Valdymo pulteliai garantuoja optimalų eksploatacijos, stebėsenos ir aptarnavimo komfortą bei saugumą. Visos
operacijos atliekamos nuotoliniu būdu naudojant valdymo pultelį, kuriame parodomos gedimų ataskaitos ir aptarnavimo
sąlygos.
Ypatybės:
• Išskirtinis ir ergonomiškas dizainas;
• Paprastas naudojimas;
• Skirtas virštinkiniam montavimui;
• Vieno paspaudimo sensorinis valdymas;
• Lengvai valomas;
• Skaičių atvaizdavimas ekranėlyje;
• Garsinis atsakas į lietimą;
• Gali būti prijungtas prie BMS tinklo;
• Galima tiesiogiai prijungti prie 0-10VDC signalu valdomo ventiliatoriaus;
• Naudojant 0-10VDC įėjimą, galima prijungti CO2 arba slėgio jutiklį;
• 4 nustatomi greičiai;
• Makslimalus ventiliatoriaus greitis, ribotą laiko tarpą (boost);
• Blokavimas (užrakinimas) - apsauga nuo vaikų;
• Vartotojo meniu galite pakeisti garso, pristabdytosios veiksenos (StandBy), CO2 parametrus.

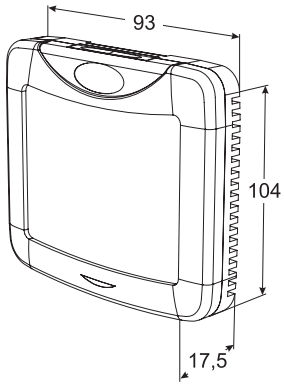
Пульт управления Stouch создан специально для управления:
• Вентиляционными устройствами SALDA;
• Другими устройствами с платами управления PRV и ECO;
• Приборами, управляемыми с помощью протокола Modbus.
Пульты управления гарантируют оптимальные комфортные условия эксплуатации, мониторинга и
обслуживания, а также безопасность. Все операции выполняются на расстоянии с помощью пульта
дистанционного управления , на котором отображается информация о неисправностях и условия
обслуживания.
Особенности:
• Эксклюзивный и эргономичный дизайн;
• Простота использования;
• Предназначен для поверхностного монтажа;
• Сенсорное управление одним нажатием;
• Легкая чистка;
• Изображение цифр на дисплее;
• Звуковой ответ на прикосновение;
• Может быть подключен к сети BMS;
• Может быть непосредственно подключен к вентилятору с управляющим сигналом 0-10VDC;
• С помощью ввода 0-10VDC можно подключить сенсор CO2 или давления;
• Возможность установить 4 скорости;
• Максимальная скорость вентилятора в течение ограниченного времени (boost);
• Блокировка (замыкание) – защита от детей;
• Возможность изменения параметров звука, дежурного режима (StandBy), CO2 в меню пользователя.

Technical data:

Supply voltage	[VDC]	24VDC ± 10% / 24VAC ± 10%
Data transfer		RS-485
Dimensions (WxHxL)	[mm]	84x84x22
Protection class		IP30
Ambient temperature	[°C]	10 to 40
Ambient humidity	[%]	10-80 (non-condensing)

TPC

Remote controller



The remote control device is designed for controlling cooling devices with heat recuperation.

Functions:
- Touch screen.
- Supply air temperature setting and display.
- Fan speed setting and display.
- Plate heat exchanger antifrost function display.
- Alarm signals display.
- Settings and modes display on LCD.
- Remote controller connection with modular connectors. Cable length – 13m.
- Installing in surface mounting box.

Valdymo pultelis skirtis valdyti ir stebėti vėdinimo įrenginio parametrus.

Funkcijos:
- Lietimui jautrus ekranas.
- Tiekiamos temperatūros valdymas ir indikacija.
- Ventiliatorių greičio valdymas.
- Priešužšaliminės šilumokaičio funkcijos indikavimas.
- Avarijų indikacija.
- Parametrų ir nustatymų indikavimas pultelyje.
- Valdymo pultelio pajungimas per modulines jungtis. Kabelio ilgis 13m.
- Virštinkinis pultelio korpuso montavimas.

Panel zdalnego sterowania służy do kontroli urządzeń chłodzących z odzyskiwaniem ciepła (VEKU 260 - 1900 oraz VERO 400 - 1500).

Funkcje:
Ekran dotykowy.
Ustawienia i wyświetlanie temperatury dostarczanego powietrza.
Ustawienia i wyświetlanie prędkości wentylatora.
Wyświetlanie funkcji zapobiegającej zamarzaniu w wymienniku krzyżowym.
Wyświetlanie sygnałów alarmowych.
Wyświetlanie ustawień i trybów na ekranie LCD.
Połączenie pilota zdalnego sterowania z łączami modułowymi; długość kabla - 13 m.
Montaż w powierzchniowej puszcze montażowej.

Пульт для управления вентиляционным агрегатом с рекуперацией тепла.

Функции:
- Сенсорный экран.
- Установка и индикация температуры приточного воздуха.
- Установка и индикация скорости вращения мотора вентилятора.
- Индикация защиты от замерзания теплообменника.
- Индикация сигналов аварии.
- Индикация режимов и параметров на экране жидких кристаллов.
- Подключения пульта с модулярными соединениями. Длина кабеля подключения – 13 м.
- Монтирование пульта в поверхностную стенную монтажную коробку.

Technical data:		
Supply voltage	[VDC]	15..30
Data transfer		RS 485
Dimensions (WxHxL)	[mm]	104x93x17,5
Protection class		IP30
Ambient temperature	[°C]	30
Ambient humidity	[%]	90

Pressure sensor

The calibrateable compact pressure sensor is equipped with four switchable measuring ranges a (4 devices in one) and are used for measuring above-atmospheric, belowatmospheric, or differential pressures in air. The piezo-resistive measuring element is temperature and pressure compensated and guarantees a high degree of reliability and accuracy. These pressure transmitters have a pushbutton for manual zero point calibration and an adjustable offset. Applications of these pressure sensors are in clean room, medical and filter technology, in ventilation and air conditioning ducts, in spray booths, in largescale catering facilities, for monitoring filters, for level measurement or for triggering frequency converters. Media measured with these pressure transducers are air (non-precipitating), or other gaseous non-aggressive, noncombustible media. Pressure sensor has 4 selectable measuring ranges and therefore, minimizes the diversity of types and stockkeeping while covering a greater range of applications. The differential pressure sensor is supplied including connection set (2 m connection hose, two pressure connection nipples, screws).

Kompaktiškas, kalibruojamas slėgio jutiklis turi 4 perjungiamas matavimo reikšmes (4 įtaisai viename) ir naudojamas matuojant atmosferos ir sistemos arba slėgio skirtumus. Matavimui naudojamas varžinis piezo elementas, kas užtikrina didelį tikslumą ir patikimumą. Šie slėgio keitikliai turi mygtuką rankiniam nulinio taško nustatymui. Slėgio keitikliai 1141 gali būti naudojami švariose patalpose, medicininėse ir filtruojamose patalpose - vėdinimo ortakių sitemose. Nenaudojami užterštoo oro, agresyvių, sprogių dujų aplinkose. Slėgio jutiklis turi 4 pasirenkamas reikšmes, kas užtikriną platų ir įvairių sistemų pritaikomumą. Skirtuminis slėgio jutiklis/keitiklis tiekiamas su pajungimo komplektu (2m pajungimo žarnelė, dvejomis pajungimo įmovomis ir važtais).

Calibrateable Kompaktowy czujnik ciśnienia jest wyposażony z czterema przełączanymi zakresami pomiarowymi (4 urządzenia w jednym) i są stosowane do pomiaru powyżej atmosferycznego, belowatmospheric, lub różnicy ciśnień w powietrzu.Piezorezystancyjny Element pomiarowy jest temperatura i ciśnienie kompensowane i zapewnia dużą niezawodność i dokładność. te przetworniki ciśnienia posiada przycisk ręcznego punktu zerowego kalibracja i regulacja offset. Zastosowania tych ciśnieniem czujniki są w czystym pomieszczeniu, technologii medycznej oraz filtr, w Przewody wentylacyjne i klimatyzacyjne w kabinach natryskowych, w largescale gastronomicznych, dla filtrów monitorujących, do pomiaru poziomu lub do wyzwalania przemienniki częstotliwości. Media mierzone Przetworniki te są ciśnienia powietrza (lotnym), lub inne gazowe nieagresywne, niepalne media. czujnik ciśnienia ma do wyboru 4 zakresy pomiarowe, a zatem minimalizuje Różnorodność typów i stockkeeping natomiast obejmujące większy zakres zastosowań.Czujnik różnicy ciśnień jest dostarczany tym zestawem przyłączeniowym (2 Przyłącze węża m, dwie przyłącze sutki, śruby).

Компактные калибруемые датчики давления имеют 4 переключаемых измерительных диапазона (4 прибора в одном), оснащены дисплеем и служат для измерения избыточного давления, разрежения и разности давлений в воздухе. Пьезорезистивный измерительный элемент гарантирует высокую достоверность и точность; к его достоинствам относятся компенсация температуры и давления. Датчики оснащаются кнопкой ручной установки нуля и имеют возможность настройки смещения. Датчики находят применение в стерильных помещениях, в медицинской технике, в производстве фильтров, в вентиляционных каналах и каналах систем кондиционирования воздуха, камерах для окраски распылением, столовых, для контроля фильтрующих устройств и измерения уровня наполнения, для управления частотными преобразователями. Измеряемой средой является воздух (без конденсата) или газообразные, неагрессивные и негорючие вещества. Датчик имеет 4 настраиваемых диапазона измерения, что позволяет свести к минимуму количество типов изделий и площади, потребные для хранения на складе, расширяя при этом область применения. С датчиком поставляется комплект соединительных деталей (соединительный шланг длиной 2 м, два пластиковых присоединительных штуцера, винты).

Technical data:

Max. measuring range	0...1000 Pa
Setting range pressure	0...100 Pa, 0...300 Pa, 0...500 Pa, 0...1000 Pa
Output	0-10 V
Power supply	24VAC (+-20%) and 15...36VDC (+-10%)
Media temperature	0...+50 °C
Pressure connection	4/6x11mm
Dimension	108x72,5x70mm
Protection type	IP65

CO2 sensors

RCO2-D-F2

RC02-F2

KCO2

The self-calibrating microprocessor-controlled room and duct CO2 sensors are used for the detection of the CO2 content in air within a range of 0 ppm to 2000 ppm CO2. The measurement signals generated by the CO2 transmitter are converted into standard signals of 0 – 10 V. The CO2 content in the air is determined by a NDIR sensor (non-dispersive infrared technology sensor). The detection range of the CO2 sensor is calibrated for standard applications such as monitoring of apartment rooms or meeting rooms. Room ventilation on an as-needed basis, improvement of well-being and customer benefit, increased comfort as well as a reduction of operating costs by saving energy.

Mikroprocesoriaus pagalba, savaime susikalibruojantis, kambarinis ir kanalinis CO2 jutiklis naudojamas oro CO2 lygio nustatymui (reikšmėse 0 ppm – 2000ppm CO2). CO2 lygis ore nustatomas naudojant NDIR jutiklį (non-dispersive infrared technology sensor). CO2 aptikimo lygis sukalibruotas gyvenamosioms ir susirinkimų arba panašioms patalpoms. Vėdinimas pagal poreikį – geresnė sveikata, komfortas, bei energijos išlaidų mažinimas.

Samokalibrujący sterowane mikroprocesorem pokój i CO2 czujniki kanałowe są stosowane do wykrywania CO2 zawartość powietrza w zakresie od 0 do 2000 ppm ppm CO2. Sygnały generowane przez pomiar CO2 nadajnika są przeliczone na standardowych sygnałów 0 - 10 V. zawartości CO2 w powietrza jest określona przez czujnik NDIR (non-dyspersyjne technologii podczerwieni czujnika). Zakres detekcji czujnika CO2 jest kalibrowany dla standardowych aplikacji, takich jak monitorowanie pomieszczeń mieszkalnych lub sale konferencyjne. Wentylacja na miarę potrzeb, poprawa dobrobytu i korzyści klienta, większy komfort oraz jako zmniejszenie kosztów operacyjnych poprzez oszczędności energii.

Самокалибрующийся, управляемые микропроцессором датчики углекислого газа CO2 используются в помещении и в воздуховодах и служат для измерения содержания в воздухе углекислого газа в диапазоне от 0 ppm до 2000 ppm CO2. Сигналы измерения преобразуются в стандартные сигналы 0 – 10 В. Содержание углекислого газа в воздухе определяется с помощью недисперсного инфракрасного анализатора (NDIR). Диапазон чувствительности датчика углекислого газа откалиброван в расчете на стандартный случай применения – для жилых помещений, конференц-залов и т.д. Вентиляция по мере необходимости, улучшение самочувствия, дополнительная выгода, улучшенная комфортность и снижение эксплуатационных расходов благодаря энергосбережению.

Technical data:

Type	RCO2-F2	RCO2-D-F2	KCO2
Measuring range, CO2	0...2000 ppm		0...2000ppm, 0...5000ppm, 0...10000ppm
Output CO2	0-10 V		
Power supply	24VAC/DC		
Ambient temperature	0...+50 ^{0}C		
Display	No	Yes	No
Dimension	98x106x32		108x73,5x70
Protection type	IP30		IP65
Installation	Wall mounting or in wall flush box, 55mm		Duct

Duct humidity sensors

KFF-U

RFF-U-F2

The calibrateable duct and room humidity sensors KFF-U, RFF-U-F2, accuracy class ± 3 % r.H., measures the relative humidity of air. The humidity transmitter converts the measurand humidity into standard signals of 0 – 10 V or 4...20 mA. This humidity sensor is applied in non-aggressive dust-free ambiences in refrigeration, air conditioning, ventilation and clean room technology. Relative humidity (in % r.H.) is the quotient of water vapour partial pressure divided by the saturation vapour pressure at the respective gas temperature. These measuring transducers are designed for exact detection of humidity. A digital long-term stable sensor is used as measuring element for humidity measurement. Fine adjustment by the user is possible.

Calibrateable kanału i czujniki wilgotności pokój KFF-U, RFF-U-F2, klasa dokładności ± 3% r.H, mierzy względne Wilgotność powietrza.Przetwornik wilgotności zamienia wilgotność mierzona do standardowych sygnałów 0 - 10 V lub 4 ... 20 mA. Czujnik wilgotności jest stosowana w nieagresywnych nastrojów bezpyłowy w pokoju chłodniczych, klimatyzacyjnych, wentylacyjnych i czyste technologia. Wilgotności względnej (% RH w) jest ilorazem wody Ciśnienie cząstkowe pary podzielona przez ciśnienie pary nasyconej w odpowiednia temperatura gazu. Przetworniki pomiarowe są przeznaczony do dokładnego wykrywania wilgotności.Cyfrowy długoterminowy stabilny Czujnik stosowany w element pomiarowy do pomiaru wilgotności. Precyzyjne ustawienie przez użytkownika jest możliwe.

Kalibruojamas kanalinis ir kambarinis drėgmės jutiklis, kurio tikslumo klasė ± 3 % r.H., išmatuotos santykinės drėgmės standartiniu signalu (0-10V arba 4...20mA). Nenaudojami užterštoo oro, agresyvių, sprogių dujų aplinkose.
Santykinis drėgnumas (% RH) yra vandens koeficientas garų prisotintame daliniame slėgyje, padalytame iš atitinkamos dujų temperatūros. Šie drėgmės keitikliai skirti drėgmės nustatymui. Skaitmeninis, ilgaamžis, stabilus drėgmės jutiklis naudojamas drėgmės nustatymui.

Калибруемые канальные датчики влажности KFF-U, RFF-U-F2, используются в помещении и в воздуховодах, класс точности ±3% отн. влажн., измеряют **относительную** влажность воздуха. Измеряемая величина преобразуется в нормированный сигнал 0–10 В или 4...20 мА. Датчик находит применение в неагрессивной среде, без существенного содержания пыли, в холодильной технике, системах вентиляции и кондиционирования, в особо чистых и стерильных помещениях. Относительная влажность (в процентах) является частным от деления парциального давления ненасыщенного водяного пара на давление насыщенного пара при заданной температуре газа. Измерительные преобразователи предназначены для точного измерения влажности.

Technical data:

Type	KFF-U	RFF-U-F2
Measuring range, humidity	0...100% r.H	
Output, humidity	0-10V	
Power supply	24VAC/DC	
Electrical connection	0,14 - 1,5 mm2	
Cable gland	M16	-
Dimension	72x64x39,4 mm	98x106x32
Protection type	IP 65	IP 30
Installation	duct	Wall mounting or in wall flush box, 55mm

Electromotoric actuator

SSB/SSC

STA

Electromotoric actuator for modulating or 3-position control of valves V...P45... for water-side control of hot water and cooling water in heating, ventilation and air conditioning systems.

Moduliacinės arba tripozicinės elektros pavaros naudojamos kartu su vandens vožtuvais V...P45... ventiliacijos ir oro kondicionavimo sistemose vandens šildytuvų ir aušintuvų valdymui.

Elektryczny siłownik do sterowania: modulowane lub 3-pozycyjne zaworów V...P45... .Kontrola gorącej i zimnnej wody. Zastosowanie: systemy wentylacji i klimatyzacji.

Электромоторный привод для плавного или 3-позиционного управления клапанов V... P45... для контролирования горячей и охлажденной воды в системах отопления, вентиляции и кондиционирования воздуха.

Electromotoric actuator for 2-position control valves for water-side control of hot water and cooling water ventilation systems.

Moduliacinės arba dvipozicinės elektros pavaros skirtos ventiliacijos ir oro kondicionavimo sistemose vandens šildytuvų ir aušintuvų valdymui.

Elcktyczny siłownik do zaworów dwjgrogowych regulacyjnych.Kontrola gorącej i zimnnej wody. Zastosowanie: systemy wentylacji i klimatyzacji

Электромоторный привод для 2-позиционного управления клапанов и для контролирования горячей и охлажденной воды в системах вентиляции.

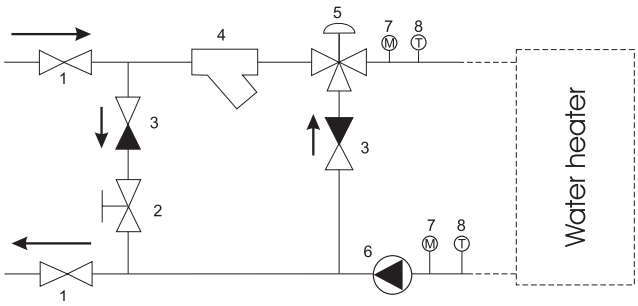
Technical data

Type	SSB31	SSB81	SSB61	SSC31	SSC81	SSC61
Power supply	AC230V (±15%)	AC24V (±20%)	AC24V (±20%) or DC24V (±25%)	AC230V (±15%)	AC24V (±20%)	AC24V (±20%)
Control signal	3-position		DC 0...10 V	3-position		DC 0...10 V
Input impedance for DC 0...10 V	-		> 100 kOhm	-		> 100 kOhm
Run time for 5.5 mm stroke at 50 Hz	150 s		75 s	150 s ± 2%		30 s ± 10%
Nominal stroke	5,5 mm					
Nominal force	200 N			300N		
Housing protection	IP40					
Operation temperature	+1...+50 °C			+5 ... +50°C		
Operation humidity	5...85 % r.h.			5 ... 95% r.h.		
Connecting cable, length	1.5 m				terminal connections	

Technical data

Type	STA
Power supply	AC 230 V, 50...60 Hz (±15 %)
Control signal	2-position control signal
Run time for 2,5 mm stroke	3 min
Nominal stroke	2,5 mm
Nominal force	105N
Housing protection	IP41(3)
Operation temperature	+5...+50°C
Operation humidity	5…85 % r.h.
Connecting cable, length	1,2 m

Mixing point



The main function of the mixing point is to control, jointly with the control system, the temperature of supplied water in water heaters. Used for water temperature control in heaters, air curtains, etc. The mixing point is used alongside other devices (shut-off damper, temperature sensor, control system) in order to protect the heaters from freezing.

Podstawową funkcją układu mieszającego jest w połączeniu z systemem regulacji, regulowanie wydzielanego ciepła przez nagrzewnicę. Stosowany jest do regulacji wodnych nagrzewnic lub też do regulacji wodnych wymienników ciepła wbudowanych do oddzielnych urządzeń np. kurtyn powietrznych itp. Jest możliwa regulacja kilku wodnych wymienników za pomocą jednego układu mieszającego jednocześnie, co jest często stosowane z powodu tej samej temperatury wody na wejściu do wymiennika i daje wiele korzyści (warunki ciśnienia) przy podłączeniu równoległym. Układ mieszający jest również stosowany razem z innymi elementami (zawór zamykający powietrze, czujnik temperatury, system regulacji) dla zabezpieczenia wymiennika ciepła przed zamarzaniem.

Pagrindinė reguliavimo mazgo RMG funkcija – kartu su valdymo sistema, valdyti tiekiamo vandens temperatūrą. Naudojami vandens temperatūrų reguliavimui šildytuvuose, oro užuolaidose, vandens aušintuvuose ir t.t. Reguliavimo mazgas naudojamas su kitais prietaisais (oro uždarymo sklende, temperatūros jutikliu, valdymo sistema), apsaugant šildytuvus nuo užšalimo.

Главная функция регулировочного узла – совместно с системой управления контролировать температуру приточной воды в водяных нагревателях. Применяются для регулировки температуры воды в нагревателях, воздушных завесах и т.д.

Components

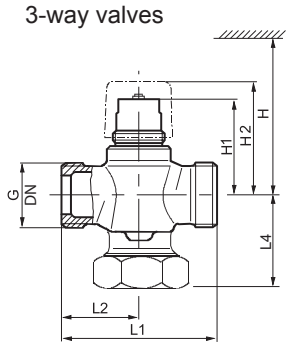
1 - in, out valves
2 - pressure reducing valve
3 - backflow preventing valve
4 - filter
5 - 3-way valve
6 - rotary pump
7 - pressure gauge
8 - thermometer

Technical data:

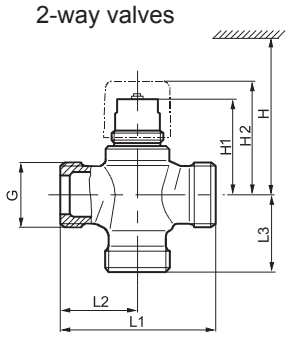
Type	Type of 3-way valve	Recomended actuator for water valve	Type of rotary pump	DN [mm]
RMG3-0,63-4E	VXP45.10-0,6	SSB	UPBAS 25-4	15
RMG3-1,0-4E	VXP45.10-1,0	SSB	UPBAS 25-4	15
RMG3-1,6-4E	VXP45.10-1,6	SSB	UPBAS 25-4	15
RMG3-1,6-6E	VXP45.10-1,6	SSB	UPBAS 25-6	15
RMG3-2,5-4E	VXP45.15-2,5	SSB	UPBAS 25-4	15
RMG3-2,5-6E	VXP45.15-2,5	SSB	UPBAS 25-6	15
RMG3-4,0-4E	VXP45.20-4,0	SSB	UPBAS 25-4	20
RMG3-4,0-6E	VXP45.20-4,0	SSB	UPBAS 25-6	20
RMG3-4,0-8E	VXP45.20-4,0	SSB	UPS 25-8	20
RMG3-6,3-4E	VXP45.25-6,3	SSB	UPBAS 25-6	20
RMG3-6,3-6E	VXP45. 25-6,3	SSB	UPBAS 25-6	20
RMG3-6,3-8E	VXP45.25-6,3	SSB	UPS 25-8	20
RMG3-10-6E	VXP45.25-10	SSC	UPBAS 25-6	25
RMG3-10-8E	VXP45.25-10	SSC	UPS 25-8	25

2 and 3 way valves

3-way valves



2-way valves



Used in ventilation systems to control the temperature of supplied water in water heaters. For fan coil units, small reheaters and small re-coolers.

Trieigis/dvieigis vožtuvas naudojamas vėdinimo sistemose valdyti vandens šildytuvo ar aušintuvo tiekiamą oro temperatūrą.

Stosowane w systemach wentylacyjnych, aby kontrolować temperaturę dostarczanej wody do nagrzewnic wodnych. Zastosowanie: klimakoiwektory, małe nagrzewnice i małe chłodnice wtórne.

Используется в системах вентиляции для контроля температуры подаваемой воды в водонагревателях. Предназначены для водяных нагревателей и охладителей.

2-way valves									
Type	DN	G [inch]	H [mm]	H1 [mm]	H2 [mm]	L1 [mm]	L2 [mm]	L4 [mm]	Weight [kg]
VVP45.10-0.25…1.6	10	G½B	> 200	44,9	≈ 54	60	30	20	0,26
VVP45.15-2.5	15	G¾B		44,9	≈ 54	65	32,5	20	0,30
VVP45.20-4	20	G1B		48,9	≈ 58	80	40	24	0,42
VVP45.25-6.3	25	G1¼B		51	≈ 60	80	40	49	0,76
VVP45.25-10		G1½B	> 280	62,5	≈ 71	105	52,5	62,5	1,40
VVP45.32-16	32	G2B		69	≈ 78	105	52,5	63,5	1,95
VVP45.40-25	40	G2¼B		72	≈ 81	130	65	76	2,75
3-way valves									
Type	DN	G [inch]	H [mm]	H1 [mm]	H2 [mm]	L1 [mm]	L2 [mm]	L4 [mm]	Weight [kg]
VXP45.10-0.25…1.6	10	G½B	> 200	44,9	≈ 54	60	30	30	0,28
VXP45.15-2.5	15	G¾B		44,9	≈ 54	65	32,5	32,5	0,34
VXP45.20-4	20	G1B		48,9	≈ 58	80	40	40	0,48
VXP45.25-6.3	25	G1¼B		51	≈ 60	80	40	40	0,64
VXP45.25-10	25	G1½B	> 280	62,5	≈ 81	105	52,5	52,5	1,20
VXP45.32-16	32	G2B		69	≈ 88	105	52,5	52,5	1,60
VXP45.40-25	40	G2¼B		72	≈ 91	130	65	65	2,30

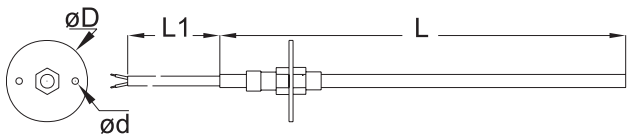
VVP45… 2-way	VXP45… 3-way	DN	Connection	k_{vs} A→AB [m³/h]	k_{vs} 1) B→AB [m³/h]	Sv
VVP45.10-0.25	VXP45.10-0.25	10	G½B	0,25	0,18	> 50
VVP45.10-0.4	VXP45.10-0.4			0,4	0,28	
VVP45.10-0.63	VXP45.10-0.63			0,63	0,44	
VVP45.10-1	VXP45.10-1			1,0	0,70	
VVP45.10-1.6	VXP45.10-1.6			1,6	1,12	
VVP45.15-2.5	VXP45.15-2.5	15	G¾B	2,5	1,75	
VVP45.20-4	VXP45.20-4	20	G1B	4,0	2,80	
VVP45.25-6.3	VXP45.25-6.3	25	G1¼B	6,3	4,40	
VVP45.25-10	VXP45.25-10		G1½B	10		> 100
VVP45.32-16	VXP45.32-16	32	G2B	16		
VVP45.40-25	VXP45.40-25	40	G2¼B	25		

1) - Valid for 3-way version only

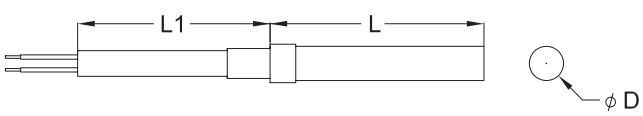
DN = Nominal size
k_{vs} = Nominal flow rate of cold water (5…30 °C) through the fully open valve (H_{100}) by a differential pressure of 100 kPa (1 bar)
S_v = Range ability k_{vs} / k_{vr}
k_{vr} = Smallest k_v value, at which the flow characteristic tolerances can still be maintained, by a differential pressure of 100 kPa (1 bar)

Functionl data	
Medium temperature	1...110 °C, short-term max. 120 °C
Nominal stroke	5.5 mm
Permissible media	low temperature hot water, chilled water, water with anti-freeze recommendation: water treatment to VDI 2035

Duct sensor



TJK 10K



TJP 10P

Duct sensors used in measuring air temperature in ventilation ducts. With adjustable insertion length.

Kanalinis temperatūros jutiklis TJK10K, naudojamas oro temperatūros matavimui ortakyje ventiliacijos sistemose. Kanaliniai temperatūros jutikliai komplektuojami su montavimo flanšais, kurių pagalba gali būti keičiamas jutiklio ilgis ortakyje.

Czujnik TJK 10K mierzy temparaturę w kanale wentylacyjnym. Posiada ustawianą długość elementu wprowadzanego do kanału.

Канальные температурные датчики, устанавливаются в каналах вентиляции для измерения температуры. Устанавливается длина погружения датчика в канал.

TJP 10K temperature sensors used in measuring return water temperature.

TJP 10K temperatūros jutiklis skirtas matuoti grįžtančio vandens temperatūrą.

TJP 10K czujniki temperatury stosowane do pomiaru temperatury wody powrotnej.

TJP 10K датчиков температуры, используемых для измерения температуры обратной воды.

Technical data

Type	Temperature range [°C]	Time constant [s]	Casing
TJK 10K	-30...+105	15	Plastic
TJP 10K	-30...+105	15	Stainless steel

Dimensions

Type	L, [mm]	L1, [mm]	øD, [mm]	ød, [mm]
TJK 10K	230	1500	40	3,2
TJP 10K	50	2000	8	-

Actuator for dampers

The function of the electrical motor is to control the shut-off damper in ventilation and air conditioning systems.

Elektrinė sklendės pavara yra skirta oro sklendės valdymui vėdinimo ir oro kondicionavimo sistemose.

Elektryczne siłowniki służą do regulacji nastawy przepustnic w systemach wentylacyjnych.

Двигатель электрической заслонки предназначен для управления заслонками в системах вентиляции и кондиционирования.

Type	Area, m²	**Torgue power**, Nm	**Power supply**, VAC	**Control signals**
Actuator LM230A-TP	1	5	AC 100 ... 240 V, 50/60 Hz	2 point (ON/OFF)
Actuator LM24A-TP	1	5	AC 24 V, 50/60 Hz / DC 24 V	2/3 point
Actuator LM24A-SR-TP	1	5	AC 24 V, 50/60 Hz / DC 24 V	Modulating 0-10VDC
Actuator NM24A-TP	2	10	AC 24 V, 50/60 Hz / DC 24 V	2/3 point
Actuator NM230A-TP	2	10	AC 100 ... 240 V, 50/60 Hz	2 point (ON/OFF)
Actuator NM24A-SR-TP	1	10	AC 24 V, 50/60 Hz / DC 24 V	Modulating 0-10V
Actuator NF230A	2	10	AC 100 ... 240 V, 50/60 Hz	2 point (ON/OFF) Spring back
Actuator NF24A	2	10	AC 24 V, 50/60 Hz / DC 24 V	2 point (ON/OFF)
Actuator SF24A	4	20	AC 24 V, 50/60 Hz / DC 24 V	2 point (ON/OFF) Spring back
Actuator SF230A	4	20	AC 230 V, 50/60 Hz	2 point (ON/OFF) Spring back
Actuator SF24A-SR	4	20	AC 24 V, 50/60 Hz / DC 24 V	Modulating 0-10VDC Spring back
Actuator SM230A-TP	4	20	AC 100 ... 240 V, 50/60 Hz	2/3 point (ON/OFF)
Actuator SM24A-TP	4	20	AC 24 V, 50/60 Hz / DC 24 V	2/3 point
Actuator SM24A-SR-TP	4	20	AC 24 V, 50/60 Hz / DC 24 V	Modulating 0-10VDC

Comfort Box

Heater Cooler

Comfort Box - insulated unit designed for integration of heater and/or cooler, which can be DX or H_2O.
Suitable for RIS EC/RIS EKO/RIRS EKO 1900-5500 and can be easily connected to the Air Handling Unit with standard C-profile flanges connectors (included in the set).
Comfort Box is made of galvanized steel. External coating – RAL 7040.
Insulation: 50 mm stone wool filling. Anti-frost thermostat, stainless steel condensate tray and drop trap are included.
Comfort Box is provided with adjustable rubber feets.
Inspection/connection side can be easily changed.
Connection flanges: Comfort Box 1900 – round; Comfort Box 2500-5500 – rectangular.
Designed for indoor or outdoor installation.

Comfort box – izoliuota sekcija skirta vandeninio/freoninio šildytuvo/aušintuvo integravimui.
Lengvai prijungiama prie RIRS EC/RIRS EKO/ RIS EKO įrenginių standartiniu C tipo montavimo profilio flanšu (įeina į komplektą). Comfort box pagamintas iš cinkuotos skardos ir miltelinių būdu dažytas korpusas - spalva RAL 7040. Sienelių termo izoliacija – 50mm mineralinė vata. Integruotas šildytuvo priešužšaliminis termostatas, nerūdijanti kondensato vonelė ir lašelių gaudytuvas. Comfort box tiekiamas su antivibracinėmis guminėmis kojelėmis. Aptarnavimo pusė lengvai keičiama.
Pajungimo flanšai: Comfort box 1900 - apvalūs; Comfort box 2500 – 5500 stačiakampiai.
Montuojama viduje arba lauke.

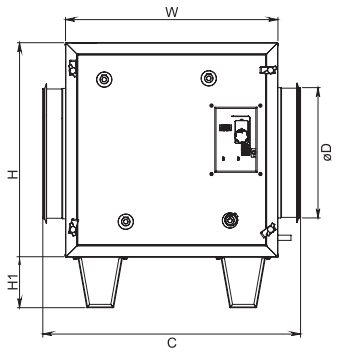
Komfort Box - urządzenie przeznaczone do izolacji integracji grzejnika i / lub chłodnicę, które mogą być lub H2O DX.
Nadaje się do KE RIS / RIS EKO / RIR EKO 1900-5500 i może być łatwo podłączony do centrali wentylacyjnej z normą Ceownik kołnierzy złącza (w zestawie).
Box Comfort wykonana jest ze stali ocynkowanej. Powłoka zewnętrzna - RAL 7040.
Izolacja: 50 mm kamień wełny napełniania. Termostat przeciwzamrożeniowy, stal nierdzewna taca skroplin i syfon drop są włączone.
Box Comfort jest wyposażony w regulowane feets gumowych.
Inspekcja / podłączenie boczne można łatwo zmienić.
Kołnierze przyłączeniowe: Box Comfort 1900 - Runda skrzynka Comfort 2500 - 5500 - prostokątne.
Przeznaczony do montażu wewnątrz lub na zewnątrz.

Comfort Box – изолированыи ящик, подготовлен для итерирования нагревателя и/или охладителя. Охладитель и нагреватель могут быть DX или H_2O.
Comfort Box подходит для RIS EC/RIS EKO/RIRS EKO 1900-5500, подключается к фланшу AHU, используя стандартное соединение C, которое входит в комплект.
50mm изоляцыя из каменной ваты, интегрированный термостат от замерзания, Ванночка для конденсата из нержавеющей стали, капляулавитель, внешние стенки покрыты краской RAL 7040, внутри – ацынкованая сталь.
Comfort Box имеет опорную раму и регулируемые резиновые опоры.
Легко меняется сторона обслужывания и подключения.
Диаметр подключения: Comfort Box 1900 – круглый; Comfort box 2500-5500 – прямоугольныи.
Монтируется внутри или снаружи.

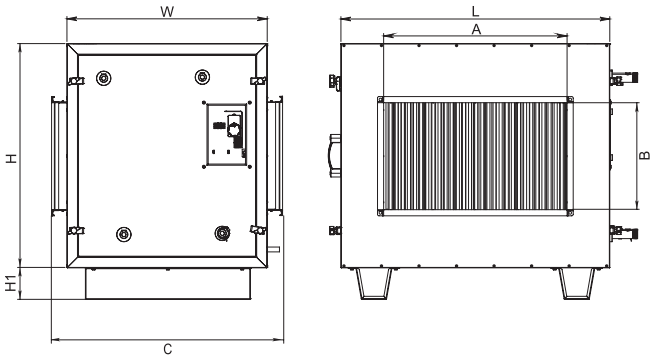
Accessories

CB coil

Comfort Box 400



Comfort Box 600x350; 800x500



Comfort Box 400 + CB coil 400 H 1

Comfort Box	
400	Number of rows
CB coil	
H	H-heater, C-cooler, F-DX cooler/heater
1	Optionally supplied heater/cooler coil
	Comfort Box flange connection diameter
	Insulated unit designed for integration of heater and/or cooler

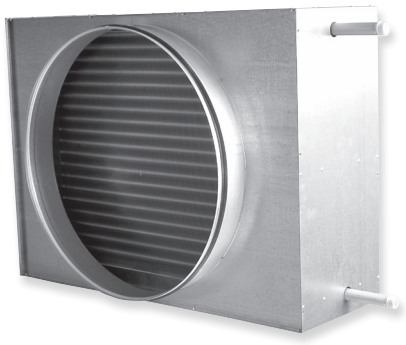
Type	Dimensions [mm]										
	L	H	W	C	H1	A	B	D	Air flow [m³/h]	Max. heater [kw]	Max. cooler [kw]
Comfort Box 400	679	658	652	791	155	-	-	400	1900	3,2	9,1
Comfort Box 600x350	880	734	656	756	104	600	350	-	2500	4,2	12,4
Comfort Box 800x500	1150	884	667	795	944	800	500	-	5500	9,2	27,3

From 15 to +20; 40/20 and 90/70
From 27 to +17, 7/12

	Comfort Box 400		
Type	Coil type	Connection dim.	Tube rows
CB coil 400 H1	Water heater	1/2''	1
CB coil 400 H2	Water heater	1/2''	2
CB coil 400 C2	Water cooler	3/4''	2
CB coil 400 C4	Water cooler	3/4''	4
CB coil 400 F4	Freon cooler	16/22 mm	4
	Comfort Box 600x350		
Type	Coil type	Connection dim.	Tube rows
CB coil 600x350 H1	Water heater	1/2''	1
CB coil 600x350 H2	Water heater	1/2''	2
CB coil 600x350 C2	Water cooler	1''	2
CB coil 600x350 C4	Water cooler	1''	4
CB coil 600x350 F4	Freon cooler	22/28 mm	4
	Comfort Box 800x500		
Type	Coil type	Connection dim.	Tube rows
CB coil 800x500 H1	Water heater	3/4''	1
CB coil 800x500 H2	Water heater	3/4''	2
CB coil 800x500 C2	Water cooler	1/4''	2
CB coil 800x500 C4	Water cooler	1/4''	4
CB coil 800x500 F4	Freon cooler	28/35 mm	4

Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***

AVS



Heating coil for circular ducting

Vandeninis kanalinis šildytuvas

Nagrzewnica wodna do kanałow wentylacyjnych o przekroju kołowym

Водяные канальные нагреватели

Used in ventilation systems. AVS heaters are made of copper tubes and aluminium plates. The housing is made of galvanized steel. The service panel is easily removed after unscrewing 4 bolts. With the cover removed, the heater can be cleaned and inspected.

Heating and cooling units may be selected according to available parameters, with the help of selection programme 'Heaters/coolers', which can be found in Internet page www.salda.lt

Naudojami vėdinimo sistemose. Šildytuvai AVS yra pagaminti iš varinių vamzdelių ir aliuminių plokštelių. Korpusas pagamintas iš cinkuotos skardos. Aptarnavimo dangtis lengvai nuimamas atsukus 4 varžtus. Šildytuvo valymas ir tikrinimas atliekamas nuėmus viršutinį dangtį. Visi AVS vandens pajungimo vamzdžiai turi sriegį.

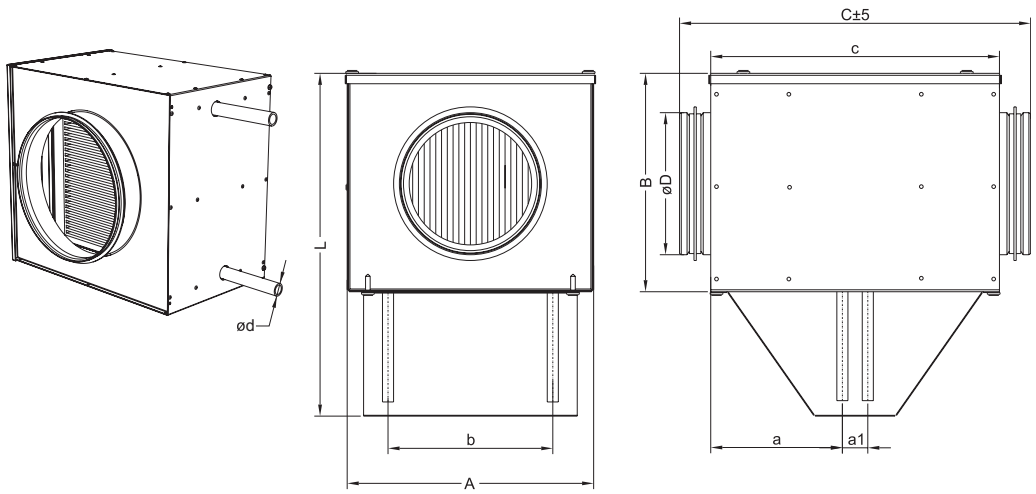
Šildymo ir aušinimo įrenginius galima parinkti pagal turimus parametrus, naudojantis „Heaters coolers" parinkimo programą, kurią galima rasti internetiniame puslapyje www.salda.lt

Nagrzewnice wodne wykorzystywane są w systemach wentylacji. Wymienniki nagrzewnic składają się z miedzianych rurek i aluminiowych lamelek. Obudowa wykonana jest ze stali pokrytej alu-cynkiem. Zdejmowalna pokrywa serwisowa umieszczona po stronie podłączeniowej pozwala czyścić i przeglądać uządenie. Zejmowanie poprzez odkręcenie czterech śrub.

Nagrzewnice i chłodnice mogą być dobierane wg,dostępnych parametrów lub w programie doborowym "Heaters/coolers". który dostępny jest na stronie internetowej www.salda.lt

Используются в системах вентиляции. Нагреватели AVS изготовлены из медных трубок и алюминиевых пластин. Корпус изготовлен из оцинкованной жести. Крышка легко снимается после откручивания 4 винтов. Чистка и проверка нагревателя осуществляется после снятия верхней крышки.

Нагреватели и охладители можно подобрать в соответствии с имеющимися параметрами, используя программу подбора „Heaters/coolers", которую можно найти на интернет-сайте www.salda.lt



Dimensions

Type	A [mm]	B [mm]	C [mm]	a [mm]	a1 [mm]	b [mm]	ød [mm]	Thread size*	L [mm]	øD [mm]	m [kg]
AVS 100	214	190	333	114	22	138	21,7	1/2''	287	100	5,2
AVS 125	214	190	333	114	22	138	21,7	1/2''	287	125	6,0
AVS 160	289	265	304	115	20	213	21,7	1/2''	361	160	8,2
AVS 200	289	265	304	115	20	213	21,7	1/2''	361	200	8,5
AVS 250	364	395	342	110	30	288	21,7	1/2''	531	250	12,5
AVS 315	439	460	342	110	30	363	21,7	1/2''	611	315	16,0
AVS 400	514	550	367	109	32	438	26,7	3/4''	691	400	20,0
AVS 500	599	730	367	109	32	463	26,7	3/4''	846	500	28,0

* Male thread size

Technical data — AVS 100

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
60	10,99	-25	51,62	1,54	0,02	0,75	42,45	1,36	0,02	0,62	21,92	0,94	0,01	0,35
60	11,37	-15	53,6	1,38	0,02	0,62	44,33	1,20	0,01	0,5	24,06	0,79	0,01	0,26
60	11,56	-10	54,55	1,30	0,02	0,56	45,22	1,11	0,01	0,44	25,76	0,72	0,01	0,22
60	11,95	0	56,39	1,14	0,01	0,44	46,85	0,95	0,01	0,33	29,16	0,59	0,01	0,16
60	12,37	10	58,09	0,98	0,01	0,34	48,15	0,77	0,01	0,23	32,59	0,46	0,01	0,10
110	23,14	-25	40,67	2,42	0,03	1,68	32,82	2,13	0,03	1,38	16,16	1,52	0,02	0,81
110	23,98	-15	43,81	2,17	0,03	1,38	35,92	1,88	0,02	1,10	18,84	1,25	0,02	0,58
110	24,41	-10	45,35	2,05	0,03	1,24	37,44	1,75	0,02	0,97	20,01	1,11	0,01	0,47
110	25,29	0	48,37	1,79	0,02	0,98	40,39	1,50	0,02	0,74	23,62	0,82	0,01	0,28
110	26,22	10	51,31	1,54	0,02	0,75	43,21	1,23	0,02	0,52	27,03	0,63	0,01	0,18
170	41,02	-25	32,31	3,27	0,04	2,87	25,45	2,88	0,04	2,34	11,08	2,06	0,02	1,38
170	42,57	-15	36,32	2,93	0,04	2,36	29,44	2,54	0,03	1,87	14,87	1,70	0,02	0,99
170	43,36	-10	38,3	2,76	0,03	2,12	31,40	2,36	0,03	1,65	16,68	1,52	0,02	0,81
170	45,00	0	42,2	2,42	0,03	1,67	35,27	2,02	0,03	1,25	19,95	1,14	0,01	0,49
170	46,73	10	46,04	2,07	0,03	1,27	39,04	1,67	0,02	0,89	23,4	0,77	0,01	0,25

Technical data — AVS 125

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
90	17,96	-25	44,43	2,10	0,03	1,30	36,14	1,85	0,02	1,07	18,32	1,31	0,02	0,62
90	18,60	-15	47,17	1,88	0,02	1,07	38,83	1,63	0,02	0,85	20,41	1,07	0,01	0,44
90	18,92	-10	48,51	1,77	0,02	0,96	40,14	1,52	0,02	0,75	21,15	0,94	0,01	0,35
90	19,59	0	51,14	1,55	0,02	0,76	42,66	1,29	0,02	0,57	24,44	0,74	0,01	0,23
90	20,30	10	53,67	1,33	0,02	0,58	45,01	1,06	0,01	0,41	28,82	0,57	0,01	0,15
180	44,31	-25	31,21	3,39	0,04	3,07	24,48	2,99	0,04	2,50	10,40	2,14	0,03	1,47
180	46,00	-15	35,33	3,04	0,04	2,52	28,58	2,63	0,03	2,00	14,32	1,77	0,02	1,06
180	46,86	-10	37,37	2,86	0,04	2,26	30,60	2,46	0,03	1,76	16,21	1,58	0,02	0,87
180	48,64	0	41,39	2,51	0,03	1,79	34,59	2,10	0,03	1,33	19,65	1,19	0,01	0,53
180	50,53	10	45,34	2,15	0,03	1,36	38,49	1,73	0,02	0,95	22,96	0,79	0,01	0,26
270	85,23	-25	23,51	4,39	0,05	4,88	17,67	3,86	0,05	3,97	5,57	2,77	0,03	2,33
270	87,92	-15	28,42	3,94	0,05	4,00	22,58	3,41	0,04	3,16	10,38	2,30	0,03	1,68
270	89,29	-10	30,86	3,71	0,05	3,59	25,00	3,17	0,04	2,79	12,74	2,06	0,02	1,38
270	92,16	0	35,68	3,24	0,04	2,83	29,81	2,71	0,03	2,10	17,29	1,57	0,02	0,86
270	95,23	10	40,45	2,78	0,03	2,14	34,55	2,24	0,03	1,50	21,17	1,02	0,01	0,40

Technical data — AVS 160

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
140	6,51	-25	48,37	3,45	0,04	5,13	40,62	3,08	0,04	4,32	24,9	2,34	0,03	2,85
140	6,74	-15	51,24	3,11	0,04	4,29	43,48	2,75	0,03	3,53	27,68	2,01	0,02	2,17
140	6,85	-10	52,65	2,95	0,04	3,89	44,88	2,58	0,03	3,16	29,03	1,84	0,02	1,86
140	7,10	0	55,41	2,61	0,03	3,14	47,62	2,25	0,03	2,47	31,61	1,49	0,02	1,30
140	7,35	10	58,10	2,28	0,03	2,46	50,28	1,91	0,02	1,85	33,94	1,13	0,01	0,81
290	17,51	-25	34,33	5,77	0,07	12,92	28,02	5,16	0,06	10,81	15,28	3,92	0,05	7,04
290	18,15	-15	38,58	5,22	0,06	10,77	32,27	4,60	0,06	8,81	19,48	3,36	0,04	5,36
290	18,45	-10	40,69	4,94	0,06	9,76	34,36	4,32	0,05	7,88	21,55	3,07	0,04	4,59
290	19,16	0	44,83	4,38	0,05	7,86	38,36	3,76	0,05	6,14	25,61	2,50	0,03	3,19
290	19,88	10	48,91	3,81	0,05	6,15	42,56	3,19	0,04	4,59	29,55	1,92	0,02	2,00
430	31,40	-25	26,74	7,46	0,09	20,54	21,23	6,67	0,08	17,14	10,10	5,06	0,06	11,10
430	32,38	-15	31,74	6,75	0,08	17,12	26,21	5,95	0,07	13,96	15,05	4,34	0,05	8,43
430	32,89	-10	34,21	6,39	0,08	15,50	28,68	5,59	0,07	12,47	17,49	3,97	0,05	7,21
430	34,15	0	39,1	5,66	0,07	12,47	33,56	4,86	0,06	9,71	22,32	3,23	0,04	5,01
430	35,47	10	43,93	4,93	0,06	9,73	38,37	4,12	0,05	7,24	27,06	2,48	0,03	3,14

Technical data — AVS 200

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
225	15,42	-25	44,79	5,27	0,06	10,97	37,40	4,71	0,06	9,19	22,47	3,58	0,04	6,01
225	15,97	-15	47,99	4,76	0,06	9,14	40,60	4,20	0,05	7,49	25,62	3,07	0,04	4,57
225	16,25	-10	49,57	4,50	0,06	8,28	42,17	3,94	0,05	6,69	27,16	2,81	0,03	3,91
225	16,83	0	52,67	3,99	0,05	6,67	45,26	3,43	0,04	5,22	30,16	2,28	0,03	2,73
225	17,44	10	55,70	3,48	0,04	5,21	48,27	2,91	0,04	3,90	33,02	1,75	0,02	1,71
455	40,29	-25	30,91	8,54	0,10	26,2	24,95	7,63	0,09	21,83	12,93	5,79	0,07	14,09
455	41,82	-15	35,48	7,71	0,09	21,79	29,51	6,80	0,08	17,75	17,45	4,96	0,06	10,69
455	42,60	-10	37,74	7,30	0,09	19,72	31,76	6,38	0,08	15,85	19,69	4,54	0,05	9,13
455	44,22	0	42,20	6,47	0,08	15,85	36,22	5,55	0,07	12,32	24,10	3,69	0,04	6,34
455	45,94	10	46,60	5,63	0,07	12,34	40,60	4,71	0,06	9,17	28,42	2,83	0,03	3,97
680	81,64	-25	23,16	10,99	0,13	41,47	18,02	9,81	0,12	34,46	7,63	7,44	0,09	22,09
680	84,28	-15	28,48	9,93	0,12	34,47	23,33	8,75	0,11	27,99	12,91	6,37	0,08	16,72
680	85,63	-10	31,12	9,39	0,12	31,17	25,96	8,21	0,10	24,97	15,53	5,83	0,07	14,27
680	88,44	0	36,35	8,32	0,10	25,01	31,17	7,14	0,09	19,37	20,72	4,74	0,06	9,88
680	91,44	10	41,51	7,24	0,09	19,45	36,33	6,05	0,07	14,39	25,82	3,64	0,04	6,17

Technical data — AVS 250

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
360	10,92	-25	43,35	8,26	0,10	5,82	36,06	7,38	0,09	4,87	21,28	5,59	0,07	3,17
360	11,31	-15	46,35	7,46	0,09	4,85	39,38	6,57	0,08	3,97	24,53	4,78	0,06	2,40
360	11,51	-10	48,32	7,06	0,09	4,39	41,01	6,17	0,08	3,54	26,12	4,37	0,05	2,05
360	11,93	0	51,55	6,25	0,08	3,53	44,22	5,36	0,07	2,76	29,21	3,54	0,04	1,42
360	12,36	10	54,70	5,44	0,07	2,76	47,35	4,55	0,06	2,06	32,08	2,69	0,03	0,88
710	28,15	-25	30,12	13,13	0,16	13,43	24,21	11,72	0,14	11,19	12,25	8,87	0,11	7,19
710	29,21	-15	34,76	11,86	0,15	11,18	28,83	10,45	0,13	9,09	16,84	7,59	0,09	5,44
710	29,75	-10	37,05	11,22	0,14	10,11	31,12	9,81	0,12	8,12	19,10	6,94	0,08	4,65
710	30,87	0	41,58	9,94	0,12	8,12	35,64	8,52	0,10	6,30	23,56	5,63	0,07	3,21
710	32,06	10	46,04	8,65	0,11	6,32	40,09	7,22	0,09	4,69	27,91	4,30	0,05	1,99
1050	54,80	-25	22,70	16,80	0,21	21,03	17,57	14,99	0,18	17,46	7,21	11,34	0,14	11,15
1050	56,57	-15	28,06	15,18	0,19	17,48	22,92	13,37	0,16	14,18	12,53	9,70	0,12	8,43
1050	57,48	-10	30,72	14,36	0,18	15,81	25,57	12,65	0,15	12,65	15,16	8,87	0,11	7,19
1050	59,37	0	35,98	12,72	0,16	12,68	30,82	10,90	0,13	9,81	20,37	7,20	0,09	4,96
1050	61,39	10	41,18	11,06	0,14	9,86	36,01	9,23	0,11	7,28	25,49	5,49	0,07	3,07

Technical data — AVS 315

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
560	10,69	-25	43,86	12,94	0,16	6,61	36,55	11,57	0,14	5,53	21,75	8,78	0,11	3,58
560	11,07	-15	47,16	11,69	0,14	5,50	39,84	10,31	0,13	4,50	24,98	7,52	0,09	7,52
560	11,26	-10	48,79	11,06	0,14	4,98	41,46	9,68	0,12	4,02	26,55	6,88	0,08	2,32
560	11,67	0	51,98	9,80	0,12	4,01	44,63	8,42	0,10	3,13	29,62	5,58	0,07	1,61
560	12,09	10	55,10	8,54	0,10	3,13	47,73	7,14	0,09	2,33	32,50	4,26	0,05	1,00
1120	28,05	-25	30,35	20,80	0,25	15,64	24,44	18,57	0,23	13,00	12,50	14,09	0,17	8,33
1120	29,10	-15	34,98	18,79	0,23	13,01	29,05	16,56	0,20	10,57	17,08	12,06	0,15	6,31
1120	29,64	-10	37,26	17,78	0,22	11,76	31,34	15,55	0,19	9,43	19,34	11,04	0,13	5,38
1120	30,76	0	41,79	15,76	0,19	9,45	35,85	13,52	0,16	7,32	23,80	8,97	0,11	3,72
1120	31,94	10	46,24	13,72	0,17	7,35	40,29	11,47	0,14	5,44	28,15	6,97	0,08	2,32
1680	55,96	-25	22,65	26,85	0,33	24,96	17,55	23,98	0,29	20,69	7,25	18,17	0,22	13,17
1680	57,78	-15	28,03	24,27	0,30	20,73	22,92	21,38	0,26	16,79	12,59	15,56	0,19	9,95
1680	58,70	-10	30,69	22,97	0,28	18,75	25,58	20,08	0,25	14,97	15,23	14,23	0,17	8,49
1680	60,64	0	35,97	20,35	0,25	15,03	30,85	17,44	0,21	11,60	20,46	11,57	0,14	5,85
1680	62,70	10	41,19	17,71	0,22	11,67	36,05	14,79	0,18	8,61	25,61	8,86	0,11	3,64

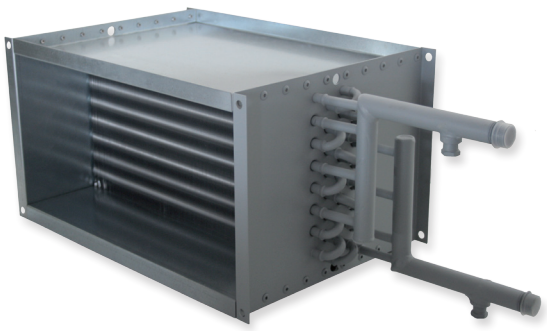
Technical data — AVS 400

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
900	12,10	-25	42,40	20,35	0,25	10,18	35,29	18,21	0,22	8,49	20,93	13,87	0,17	5,49
900	12,54	-15	45,87	18,40	0,23	8,47	38,75	16,24	0,20	6,91	24,34	11,89	0,14	4,17
900	12,76	-10	47,58	17,41	0,21	7,67	40,45	15,26	0,19	6,17	26,02	10,89	0,13	3,56
900	13,22	0	50,94	15,44	0,19	6,17	43,80	13,27	0,16	4,80	29,28	8,87	0,11	2,47
900	13,70	10	54,24	13,46	0,17	4,81	47,08	11,28	0,14	3,58	32,41	6,81	0,08	1,55
1800	32,10	-25	28,85	32,52	0,40	23,99	23,14	29,07	0,35	19,91	11,62	22,11	0,27	12,72
1800	33,32	-15	33,65	29,40	0,36	19,94	27,93	25,94	0,32	16,17	16,38	18,96	0,23	9,63
1800	33,94	-10	36,02	27,83	0,34	18,03	30,30	24,37	0,30	14,43	18,73	17,37	0,21	8,23
1800	35,22	0	40,72	24,68	0,30	14,47	34,98	21,20	0,26	11,20	23,36	14,16	0,17	5,70
1800	36,59	10	45,34	21,50	0,26	11,26	39,59	18,00	0,22	8,32	27,91	10,89	0,13	3,56
2700	66,16	-25	21,21	41,85	0,51	38,17	16,30	37,40	0,46	31,60	6,40	28,44	0,34	20,07
2700	68,33	-15	26,75	37,84	0,46	31,71	21,83	33,38	0,41	25,64	11,90	24,37	0,30	15,17
2700	69,44	-10	29,50	35,82	0,44	28,66	24,57	31,35	0,38	22,86	14,62	22,33	0,27	12,94
2700	71,76	0	34,94	31,76	0,39	22,97	30,00	27,27	0,33	17,71	20,02	18,19	0,22	8,94
2700	74,22	10	40,32	27,67	0,34	17,84	35,37	23,15	0,28	13,14	25,34	13,99	0,17	5,58

Technical data — AVS 500

			Water temperature in/out 90°/70°C				Water temperature in/out 80°/60°C				Water temperature in/out 60°/40°C			
Air flow	Pressure drop	Inlet air temp.	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)	Outlet air temp.	Power	Water flow	Pressure drop (water)
m³/h	Pa	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
1400	13,58	-25	40,57	30,80	0,38	8,34	33,62	27,54	0,34	6,94	19,58	20,94	0,25	4,48
1400	14,07	-15	44,21	27,84	0,34	6,93	37,25	24,56	0,30	5,65	23,16	17,93	0,22	3,39
1400	14,32	-10	46,00	26,34	0,32	6,27	39,04	23,06	0,28	5,04	24,91	16,42	0,20	2,90
1400	14,84	0	49,53	23,35	0,29	5,04	42,55	20,06	0,24	3,92	28,35	13,36	0,16	2,01
1400	15,39	10	52,99	20,35	0,25	3,93	45,99	17,03	0,21	2,92	31,63	10,23	0,12	1,25
2500	30,81	-25	29,24	45,49	0,56	17,00	23,47	40,65	0,50	14,11	11,82	30,87	0,37	9,00
2500	31,97	-15	33,99	41,12	0,50	14,13	28,21	36,26	0,44	11,45	16,52	26,45	0,32	6,81
2500	32,57	-10	36,34	38,92	0,48	12,77	30,55	34,05	0,42	10,21	18,84	24,22	0,29	5,81
2500	33,80	0	40,98	34,50	0,42	10,25	35,18	29,61	0,36	7,92	23,43	19,71	0,24	4,02
2500	35,11	10	45,56	30,05	0,37	7,97	39,75	25,13	0,31	5,89	27,91	15,13	0,18	2,50
3500	55,51	-25	22,86	56,20	0,69	25,07	17,76	50,20	0,61	20,75	7,46	38,11	0,46	13,17
3500	57,31	-15	28,23	50,80	0,62	20,82	23,12	44,78	0,55	16,84	12,79	32,64	0,40	9,95
3500	58,23	-10	30,89	48,08	0,59	18,82	25,77	42,05	0,51	15,01	15,43	29,89	0,36	8,49
3500	60,15	0	36,16	42,61	0,52	15,08	31,03	36,56	0,45	11,63	20,65	24,32	0,29	5,86
3500	62,19	10	41,37	37,10	0,45	11,70	36,23	31,02	0,38	8,62	25,79	18,66	0,23	3,64

SVS



Heating coil for rectangular ducting

Vandeninis kanalinis šildytuvas

Nagrzewnica wodna do kanałów wentylacyjnych o przekroju prostokątnym

Прямоугольные водяные канальные нагреватели

Used in ventilation systems. SVS heaters are made of copper tubes and aluminium plates. The housing is made of galvanized steel.

Heating and cooling units may be selected according to available parameters, with the help of selection programme 'Heaters/coolers', which can be found in Internet page www.salda.lt

Naudojami vėdinimo sistemose. Šildytuvai SVS yra pagaminti iš varinių vamzdelių ir aliuminių plokštelių. Korpusas pagamintas iš cinkuotos skardos. Visi SVS vandens pajungimo vamzdžiai turi sriegį.

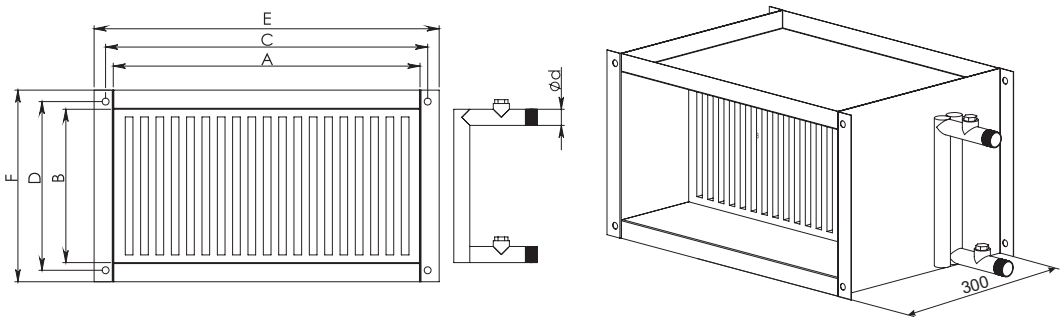
Šildymo ir aušinimo įrenginius galima parinkti pagal turimus parametrus, naudojantis „Heaters coolers" parinkimo programą, kurią galima rasti internetiniame puslapyje www.salda.lt

Nagrzewnice wodne wykorzystywane są w systemach wentylacji. Wymienniki nagrzewnic składają się z miedzianych rurek i aluminiowych lamelek. Obudowa wykonana jest ze stali pokrytej alu-cynkiem. Zdejmowalna pokrywa serwisowa umieszczona po stronie podłączeniowej pozwala czyścić i przeglądać urządenie. Zejmowanie poprzez odkręcenie czterech śrub.

Nagrzewnice i chłodnice mogą być dobierane wg.dostępnych parametrów lub w programie doborowym «Heaters/coolers», który dostępny jest na stronie internetowej www.salda.lt

Используются в системах вентиляции. Нагреватели SVS изготовлены из медных трубок и алюминиевых пластин. Корпус изготовлен из оцинкованной жести.

Нагреватели и охладители можно подобрать в соответствии с имеющимися параметрами, используя программу подбора „Heaters/coolers", которую можно найти на интернет-сайте www.salda.lt



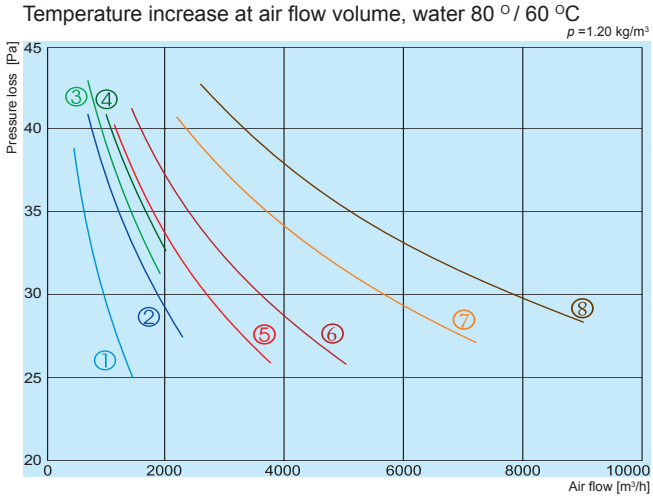
Dimensions

Type	Heat output		ΔT air		V	Pressure drop	Flow rate	A	B	C	D	E	F	d
	KW (1)	KW (2)	T (1)	T(2)	m^3/h	kPA	l/s	mm	mm	mm	mm	mm	mm	ø
SVS 400x200-2	11,8	7,8	26,9	17,8	1300	9/4,5	0,14/0,09	400	200	420	220	440	240	¾
SVS 400x200-4	19,3	12,9	44,1	29,4	1300	6,7/3,5	0,24/0,16	400	200	420	220	440	240	¾
SVS 500x250-2	19,5	12,6	29	18,64	2000	5,8/2,6	0,24/0,15	500	250	520	270	540	290	¾
SVS 500x250-4	30	20,1	44,5	29,8	2000	7,7/3,9	0,37/0,24	500	250	520	270	540	290	¾
SVS 500x300-2	23,3	15,3	30,1	19,7	2300	8,5/4,2	0,28/0,18	500	300	520	320	540	340	¾
SVS 500x300-4	35,6	22,3	44,6	29,7	2300	6,3/3,1	0,42/0,28	500	300	520	320	540	340	¾
SVS 600x300-2	26,7	17,5	29,4	19,2	2700	7,1/3,5	0,33/0,21	600	300	620	320	640	340	¾
SVS 600x300-4	45,3	30,4	49,9	33,5	2700	9/4,5	0,55/0,37	600	300	620	320	640	340	¾
SVS 600x350-2	29,4	19,4	28,2	18,6	3100	9,5/4,7	0,36/0,24	600	350	620	370	640	390	¾
SVS 600x350-4	50,4	34,1	48,3	32,7	3100	9,6/4,9	0,62/0,41	600	350	620	370	640	390	¾
SVS 700x400-2	41,5	27,4	26,8	17,7	4600	8,7/4,3	0,51/0,33	700	400	720	420	740	440	1
SVS 700x400-4	69	46,6	44,5	30,1	4600	15,5/5,6	0,84/0,56	700	400	720	420	740	440	1
SVS 800x500-2	69	44,7	26,3	17	7800	9/4,2	0,84/0,54	800	500	820	520	840	540	1
SVS 800x500-4	113,1	76	43	28,9	7800	16,5/8,2	1,38/0,92	800	500	820	520	840	540	1
SVS 1000x500-2	89	58,4	27,8	18,3	9500	13,4/6,6	1,09/0,71	1000	500	1020	520	1040	540	1
SVS 1000x500-4	135,8	91,7	42,5	28,7	9500	20,3/10,1	1,66/1,11	1000	500	1020	520	1040	540	1

The above values apply for an intake air temp. of 0 °C and flow/return water temperatures [1] 80/60 °C [2] 60/40 °C

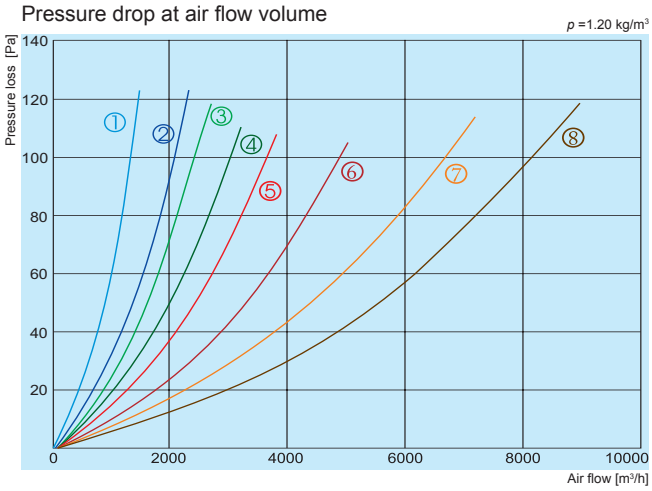
SVS

Temperature increase at air flow volume, water 80 °/ 60 °C



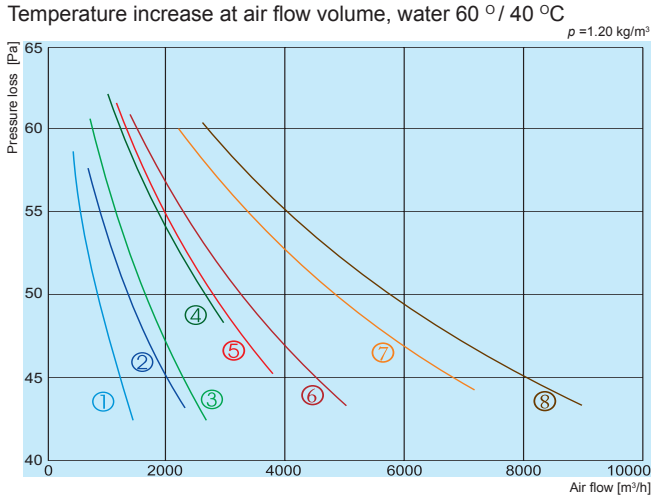
① SVS 400x200-2
② SVS 500x250-2
③ SVS 500x300-2
④ SVS 600x300-2
⑤ SVS 600x350-2
⑥ SVS 700x400-2
⑦ SVS 800x500-2
⑧ SVS 1000x500-2

Pressure drop at air flow volume



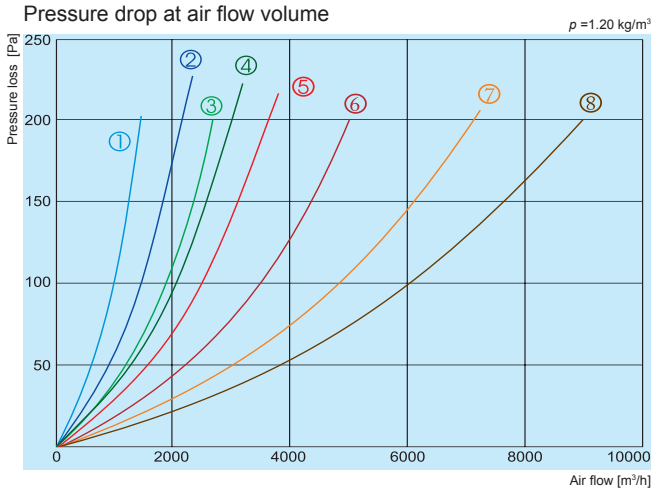
① SVS 400x200-2
② SVS 500x250-2
③ SVS 500x300-2
④ SVS 600x300-2
⑤ SVS 600x350-2
⑥ SVS 700x400-2
⑦ SVS 800x500-2
⑧ SVS 1000x500-2

Temperature increase at air flow volume, water 60 °/ 40 °C



① SVS 400x200-4
② SVS 500x250-4
③ SVS 500x300-4
④ SVS 600x300-4
⑤ SVS 600x350-4
⑥ SVS 700x400-4
⑦ SVS 800x500-4
⑧ SVS 1000x500-4

Pressure drop at air flow volume



① SVS 400x200-4
② SVS 500x250-4
③ SVS 500x300-4
④ SVS 600x300-4
⑤ SVS 600x350-4
⑥ SVS 700x400-4
⑦ SVS 800x500-4
⑧ SVS 1000x500-4

AVA

Circular duct water coolers

Apvalūs kanaliniai vandeniniai aušintuvai

Chłodnica wodna do kanałów wentylacyjnych o przekroju kołowym

Круглые канальные водяные охладители

Duct coolers are used in ventilation systems which require a supply of cooled air. AVA coolers are made of copper tubes and aluminium plates. The housing is made of galvanized steel. Contains a system for condensate drainage.

Heating and cooling units may be selected according to available parameters, with the help of selection programme “Heaters/coolers”, which can be found in Internet page www.salda.lt

Kanaliniai aušintuvai naudojami vėdinimo sistemose, reikalaujančiose ataušinto tiekiamo oro. Aušintuvai AVA yra pagaminti iš varinių vamzdelių ir aliuminių plokštelių. Korpusas pagamintas iš cinkuotos skardos. Yra kondensato drenažo sistema.

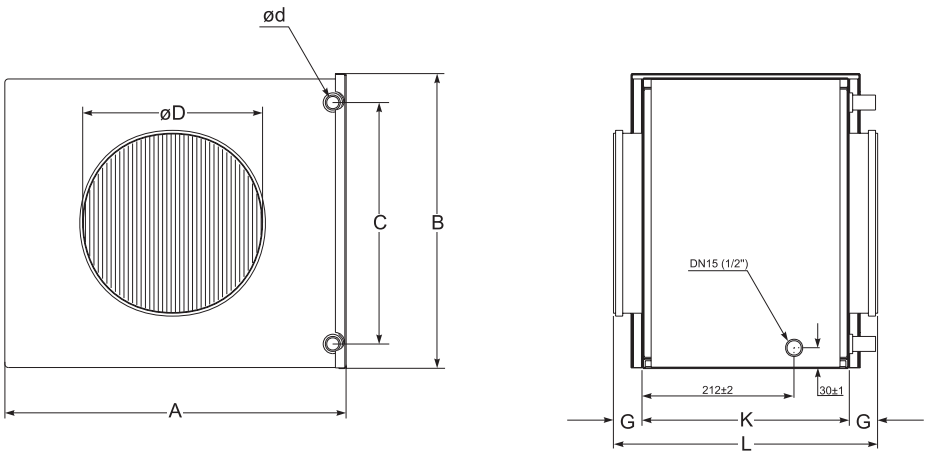
Šildymo ir aušinimo įrenginius galima parinkti pagal turimus parametrus, naudojantis „Heaters coolers“ parinkimo programą, kurią galima rasti internetiniame puslapyje www.salda.lt

Wodne chłodnice kanałowe wykorzystywne są w systemach wentylacyjnych. Wymienniki nagrzewnic składają się z miedzianych rurek i aluminiowych lamelek. Obudowa wykonana jest ze stali ocynkowanej, Wyposażone w drenaż kondensatu.

Nagrzewnice i chłodnice mogą być dobierane wg,dostępnych parametrów lub w programie doborowym “Heaters/coolers”, który dostępny jest na stronie internetowej www.salda.lt

Канальные охладители используются в системах вентиляции, требующих поступления охлаждённого воздуха. Охладители AVA изготовлены из медных трубок и алюминиевых пластин. Корпус изготовлен из оцинкованной жести. Имеется система дренажа конденсата.

Нагреватели и охладители можно подобрать в соответствии с имеющимися параметрами, используя программу подбора „Heaters/coolers“, которую можно найти на интернет-сайте www.salda.lt



Type	Dimensions [mm]								
	øD	**ød**	Thread size*	**C**	**B**	**A**	**K**	**G**	**L**
AVA 100	100	10	1/2”	98	236	170	265	48	365
AVA 125	125	22	1/2”	188	330	257	286	48	388
AVA 160	160	22	1/2”	188	330	255	286	40	360
AVA 200	200	22	1/2”	263	396	328	286	40	365
AVA 250	250	22	1/2”	338	475	415	286	55	396
AVA 315	315	22	1/2”	413	555	480	286	55	396
AVA 400	400	22	1/2”	438	720	505	316	65	445

* Male thread size

Technical data

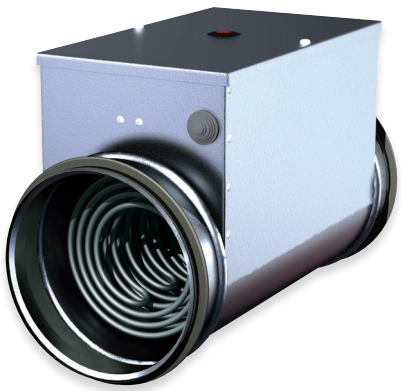
q - air flow
Δp - pressure drop on air side
t_{in} - inlet air temperature
t_{out} - outlet air temperature

P - output
qr - water flow
Δpr - pressure drop on water side

With water temperature: 6/12°C and relative humidity: 50%

Type	q [m³/h]	Δp [Pa]	t_{in} [C°]	t_{out} [C°]	P [kW]	qr [l/s]	Δpr [kPa]
AVA 100	60	9,99	25	15,23	0,24	0,01	0,51
		11,25	28	16,92	0,31	0,01	0,77
	110	23,19	25	17,09	0,33	0,01	0,84
		26,06	28	19,07	0,43	0,02	1,30
	165	43,01	25	18,28	0,40	0,02	1,16
		47,41	28	20,41	0,52	0,02	1,78
AVA 125	90	5,40	25	13,91	0,43	0,02	0,41
		6,07	28	15,34	0,56	0,02	0,58
	180	13,22	25	16,08	0,63	0,03	0,71
		14,87	28	17,90	0,82	0,03	1,11
	270	23,40	25	17,32	0,77	0,03	1,00
		26,52	28	19,32	1,00	0,04	1,56
AVA 160	140	9,44	25	15,29	0,55	0,02	0,57
		10,62	28	16,99	0,72	0,03	0,88
	290	25,95	25	17,53	0,80	0,03	1,06
		29,55	28	19,66	1,04	0,04	1,66
	400	42,85	25	18,50	0,93	0,04	1,36
		50,51	28	20,34	1,34	0,05	2,55
AVA 200	230	9,75	25	15,46	0,88	0,03	0,65
		10,97	28	17,18	1,15	0,05	1,02
	450	24,76	25	17,52	1,23	0,05	1,15
		28,66	28	19,57	1,66	0,07	1,91
	700	50,99	25	18,92	1,52	0,06	1,64
		61,37	28	20,28	2,43	0,10	3,72
AVA 250	360	7,91	25	15,00	1,47	0,06	1,15
		8,99	28	16,71	1,93	0,08	1,84
	700	20,44	25	16,69	2,32	0,09	2,53
		24,11	28	17,93	3,45	0,14	5,04
	1060	39,32	25	17,35	3,28	0,13	4,61
		45,92	28	19,07	4,63	0,18	8,44
AVA 315	570	8,85	25	15,34	2,24	0,09	1,89
		10,47	28	16,04	3,42	0,14	3,94
	1130	24,78	25	16,34	4,11	0,16	5,44
		28,71	28	17,91	5,73	0,23	9,78
	1700	47,81	25	17,25	5,51	0,22	9,13
		55,30	28	19,12	7,55	0,30	15,97
AVA 400	900	9,86	25	15,92	3,19	0,13	1,20
		11,83	28	16,66	4,99	0,20	2,62
	1800	28,69	25	16,85	5,99	0,24	3,60
		33,48	28	18,41	8,51	0,34	6,58
	2500	49,50	25	17,51	7,65	0,30	5,53
		57,57	28	19,36	10,64	0,42	9,91

EKA/EKA NV/EKA NI/EKA NIS



Electric duct heater

Elektrinis kanalinis šildytuvas

Elektryczna nagrzewnica kanałowa

Электрические канальные нагреватели

Electric heaters are designed to heat clean air in ventilation systems.
Casing is made from aluzinc coated steel which is high temperature proof. Heating elements tube is made from stainless steel AISI 304.
In heaters are installed 2 protection thermostats, screw terminals for easy connection. Casing is with rubber seals for duct connection.
Heaters can be installed vertically or horizontally.
Maximum output air temperature 50°C.

Elektriniai kanaliniai šldytuvai skirti švaraus oro pašildymui ventiliacijos sistemose. Korpusai pagaminti iš skardos, padengtos alucinku (AlZn), kurios paviršius atsparus aukštai temperatūrai. Kaitinimo elementų vamzdelis pagamintas iš nerūdyjančio plieno AISI 304. Šildytuvuose yra sumontuotos dvi termoapsaugos, elektrinio pajungimo gnybtai. Korpusas yra su sandarinimo gumomis, pajungimui prie ortakio. Šildytuvai gali būti montuojami horizontaliai ir vertikaliai.
Maksimali pašildyto oro temperatūra 50°C.

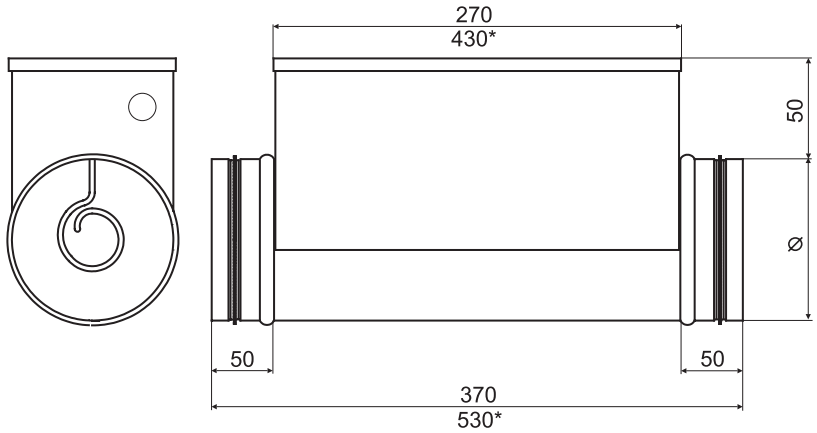
Elektryczne nagrzewnice kanałowe przeznaczone są do ogrzewania czystego powietrza w systemach wentylacyjnych.
Obudowa wykonana jest ze stali powlekanej alucynk, która jest odporna na wysokie temperatury. Elementy grzejne - rurki są wykonane ze stali nierdzewnej AISI 304. W nagrzewnicach zainstalowane są 2 zabezpieczenia termiczne. Obudowa jest wyposażona w uszczelki gumowe do połączenia z kanałem oraz zasicki śrubowe.
Nagrzewnice mogą być instalowane pionowo lub poziomo. Prędkość powietrza przez urządzenie grzewcze nie może być mniejsze niż 1,5 m/s.
Maksymalna temperatura powietrza wyjściowego 50°C.

Электрические канальные нагреватели предназначены для подогрева чистого воздуха в вентиляционных системах.
Корпус изготовлен из алюмоцинкованной стали, поверхность которой устойчива к высоким температурам. Трубка тена изготовлена из нержавеющей стали AISI 304. В нагревателе установленны 2 термозащиты, клемы электрического подключения, корпус с уплотнительными резиновыми кольцами для подключения к воздуховоду.
Нагреватели могут быть установленны горизонтально и вертикально.
Максимальная температура подогреваемого воздуха 50°C.

Accessories

Controller for electrical heater	Controller for electrical heater	Duct sensor
		
EKR 6.1 p. 222	**EKR 15.1** p. 220	**TJK 10K** p. 187

EKA/EKA NV/EKA NI/EKA NIS



All dimensions in *mm*
* Dimensions of 12 kW heaters

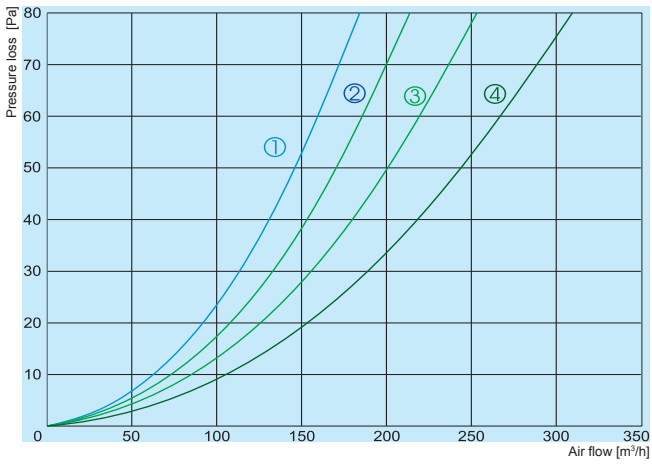
Technical data

Type	Diameter [mm]	Min. airflow [m³/h]	Voltage V/50Hz]	Power [kW]	Nominal current, I_n [A]
EKA/EKA NV/EKA NI/EKA NIS 100	100	40	1~ 230	0,3/0,6/0,9/1,2	1,4/2,8/4,1/5,5
EKA/EKA NV/EKA NI/EKA NIS 125	125	70	1~ 230	0,3/0,6/0,9/1,2/1,5/1,8	1,4/2,8/4,1/5,5/6,8/8,2
EKA/EKA NV/EKA NI/EKA NIS 160	160	110	1~ 230	1,2/2,0/2,4	5,5/9,1/10,9
			2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~ 400	6,0	8,7
EKA/EKA NV/EKA NI/EKA NIS 200	200	170	1~ 230	1,2/2,0/2,4	5,5/9,1/10,9
			2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~ 400	6,0	8,7
EKA/EKA NV/EKA NI/EKA NIS 250	250	270	1~ 230	1,2/2,0/2,4	5,5/9,1/10,9
			2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~ 400	6,0/9,0	8,7/13,0
EKA/EKA NV/EKA NI/EKA NIS 315	315	415	1~ 230	1,2/2,0/2,4	5,5/9,1/10,9
			2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~400	6,0/9,0/12,0	8,7/13,0/17,3
EKA/EKA NV/EKA NI/EKA NIS 400	400	690	2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~ 400	6,0/9,0/12,0	8,7/13,0/17,3
EKA/EKA NV/EKA NI/EKA NIS 500	500	1060	2~ 400	3,0/5,0/6,0	7,9/13,2/15,8
			3~ 400	6,0/9,0/12,0/15,0	8,7/13,0/17,3/21,6

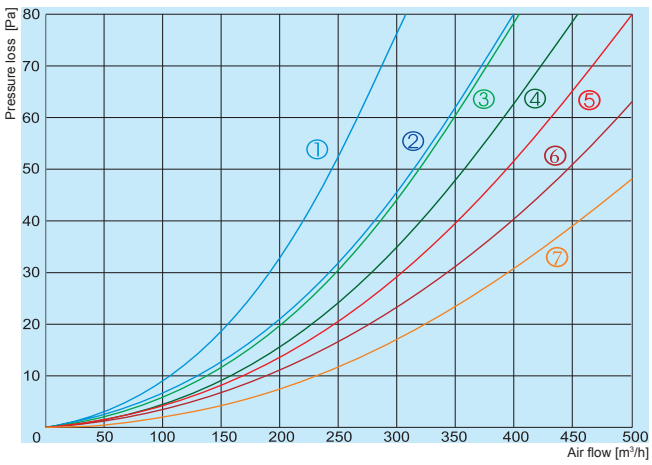
Electrical heaters conforms to requirements of standards IEC 60335-2-30 : 1996, LST EN 600335-2-30 : 1999, LST EN 61010-1+A2 : 2000, LST EN 50081-2 : 1995, LST EN 55011 : 1999+A1 : 2001and carries CE mark.

Type	Accessories		
	EKR 6.1 (1,2 - phase)	EKR 15.1 (3 - phase)	TJK 10K
EKA/EKA NV/EKA NI/EKA NIS 100	+	-	+
EKA/EKA NV/EKA NI/EKA NIS 125	+	-	+
EKA/EKA NV/EKA NI/EKA NIS 160	+	+	+
EKA/EKA NV/EKA NI/EKA NIS 200	+	+	+
EKA/EKA NV/EKA NI/EKA NIS 250	+	+	+
EKA/EKA NV/EKA NI/EKA NIS 315	+	+	+
EKA/EKA NV/EKA NI/EKA NIS 400	+	+	+
EKA/EKA NV/EKA NI/EKA NIS 500	+	+	+

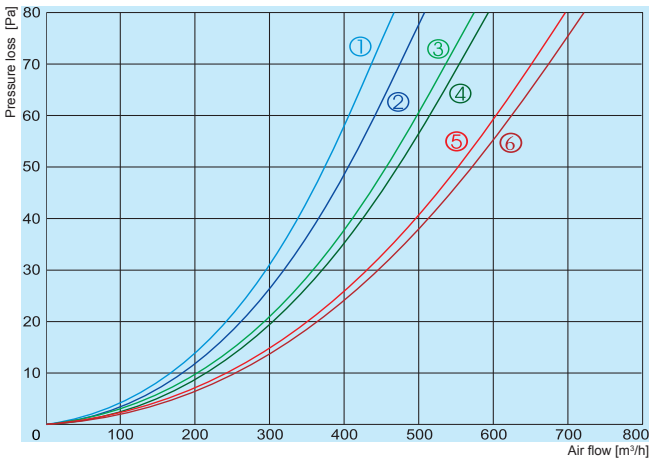
EKA/EKA NV/EKA NI/EKA NIS



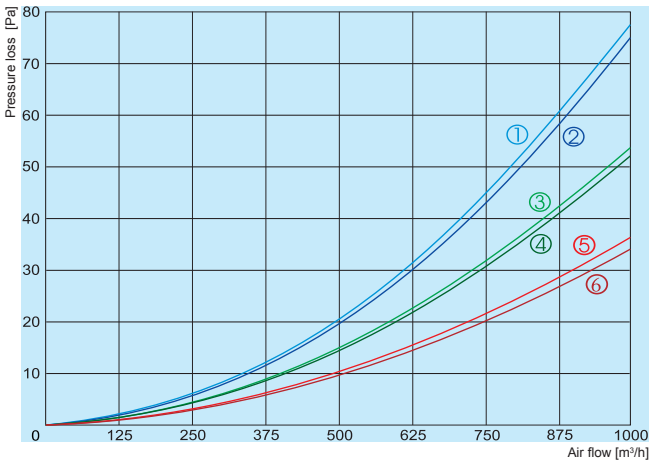
① EKA/EKA NV/ EKA NI/EKA NIS 100-1,2
② EKA/EKA NV/ EKA NI/EKA NIS 100-0,9
③ EKA/EKA NV/ EKA NI/EKA NIS 100-0,6
④ EKA/EKA NV/ EKA NI/EKA NIS 100-0,3



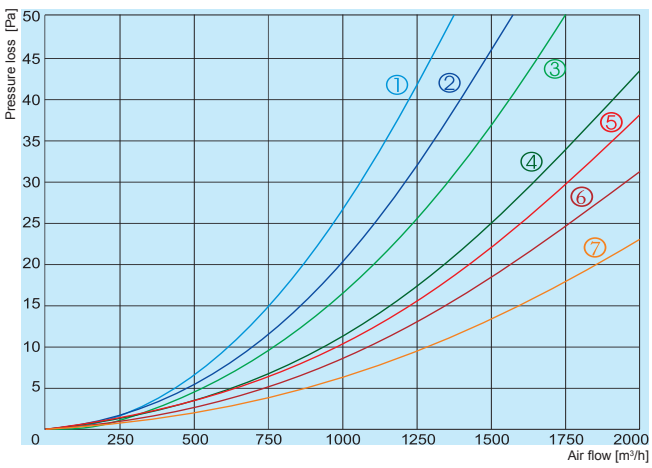
① EKA/EKA NV/ EKA NI/EKA NIS 125-2,4
② EKA/EKA NV/ EKA NI/EKA NIS 125-1,8
③ EKA/EKA NV/ EKA NI/EKA NIS 125-1,5
④ EKA/EKA NV/ EKA NI/EKA NIS 125-1,2
⑤ EKA/EKA NV/ EKA NI/EKA NIS 125-0,9
⑥ EKA/EKA NV/ EKA NI/EKA NIS 125-0,6
⑦ EKA/EKA NV/ EKA NI/EKA NIS 125-0,3



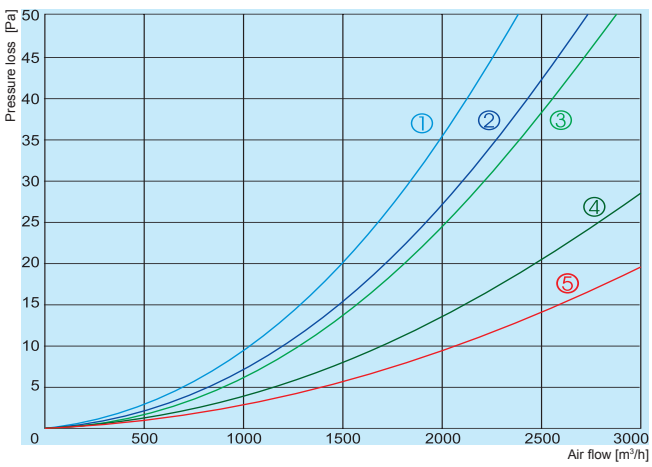
① EKA/EKA NV/ EKA NI/EKA NIS 160-6,0
② EKA/EKA NV/ EKA NI/EKA NIS 160-5,0
③ EKA/EKA NV/ EKA NI/EKA NIS 160-3,0
④ EKA/EKA NV/ EKA NI/EKA NIS 160-2,4
⑤ EKA/EKA NV/ EKA NI/EKA NIS 160-2,0
⑥ EKA/EKA NV/ EKA NI/EKA NIS 160-1,2



① EKA/EKA NV/ EKA NI/EKA NIS 200-6,0
② EKA/EKA NV/ EKA NI/EKA NIS 200-5,0
③ EKA/EKA NV/ EKA NI/EKA NIS 200-3,0
④ EKA/EKA NV/ EKA NI/EKA NIS 200-2,4
⑤ EKA/EKA NV/ EKA NI/EKA NIS 200-2,0
⑥ EKA/EKA NV/ EKA NI/EKA NIS 200-1,2

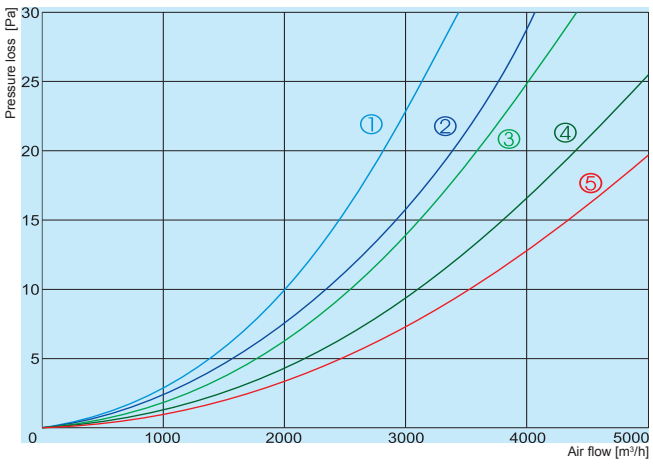


① EKA/EKA NV/ EKA NI/EKA NIS 250-9,0
② EKA/EKA NV/ EKA NI/EKA NIS 250-6,0
③ EKA/EKA NV/ EKA NI/EKA NIS 250-5,0
④ EKA/EKA NV/ EKA NI/EKA NIS 250-3,0
⑤ EKA/EKA NV/ EKA NI/EKA NIS 250-2,4
⑥ EKA/EKA NV/ EKA NI/EKA NIS 250-2,0
⑦ EKA/EKA NV/ EKA NI/EKA NIS 250-1,2



① EKA/EKA NV/ EKA NI/EKA NIS 315-12,0
② EKA/EKA NV/ EKA NI/EKA NIS 315-9,0
③ EKA/EKA NV/ EKA NI/EKA NIS 315-6,0
④ EKA/EKA NV/ EKA NI/EKA NIS 315-3,0
⑤ EKA/EKA NV/ EKA NI/EKA NIS 315-2,0

EKA/EKA NV/EKA NI/EKA NIS



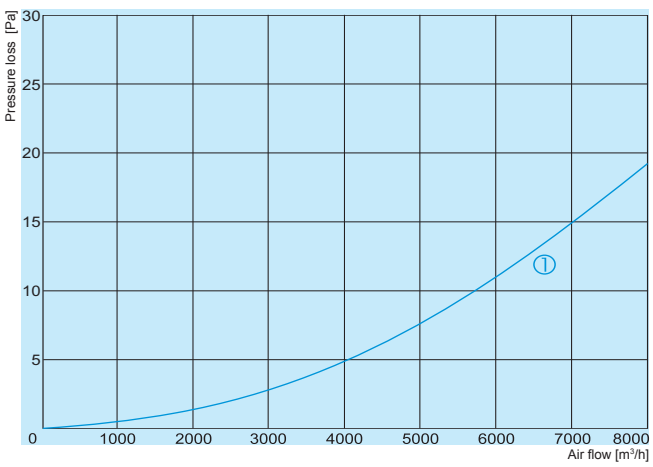
① EKA/EKA NV/ EKA NI/EKA NIS 400-12,0

② EKA/EKA NV/ EKA NI/EKA NIS 400-9,0

③ EKA/EKA NV/ EKA NI/EKA NIS 400-6,0

④ EKA/EKA NV/ EKA NI/EKA NIS 400-5,0

⑤ EKA/EKA NV/ EKA NI/EKA NIS 400-3,0



① EKA/EKA NV/ EKA NI/EKA NIS 500-6,0

Overheat protection

All EKA duct heaters have two-stage overheat protection: the first stage switches on when the temperature reaches 50°C (resets automatically), the second stage switches on when the temperature reaches 100°C (is reset manually with pushbutton on the casing).
EKA has no internal temperature controller. External heating controllers EKR are used in this case. Heaters with internal temperature controller (EKA...NV, EKA...NI and EKA...NIS) have this controller.

EKA ...NV

Heaters with integrated temperature controller, temperature setpoint internal

Heaters EKA ...NV with integrated temperature control contains temperature regulator which works by algorithm impulse/pause, that enables fine temperature control. Regulator controls load by triacs without moving parts, which causes no-noise commutation. Potentiometer is used to set temperature. Manual termocontact restoration button and temperature setpoint are located on the case of a heater.
The duct temperature sensor is needed.

EKA ...NI

Heaters with integrated temperature controller, temperature setpoint external

Heaters EKA ...NI with integrated temperature control, contains temperature regulator which works by algorithm impulse/pause, that enables fine temperature control. Regulator controls load by triacs without moving parts, which causes no-noise commutation. External temperature setpoint must be connected separately. The button of manual restoration located on the case of a heater.
The duct temperature sensor and potentiometer is needed.

EKA ...NIS

Heaters with integrated temperature controller, external control signal

Heaters EKA ...NIS with integrated temperature control, contains temperature regulator which works by algorithm impulse/pause, that enables fine temperature control. Regulator controls load by triacs without moving parts, which causes no-noise commutation. The button of manual restoration located on the case of a heater.
The external control signal (0-10V) is needed. The ratio between On-time and Off-time is varied 0-100% to suit the prevailing heat demand.

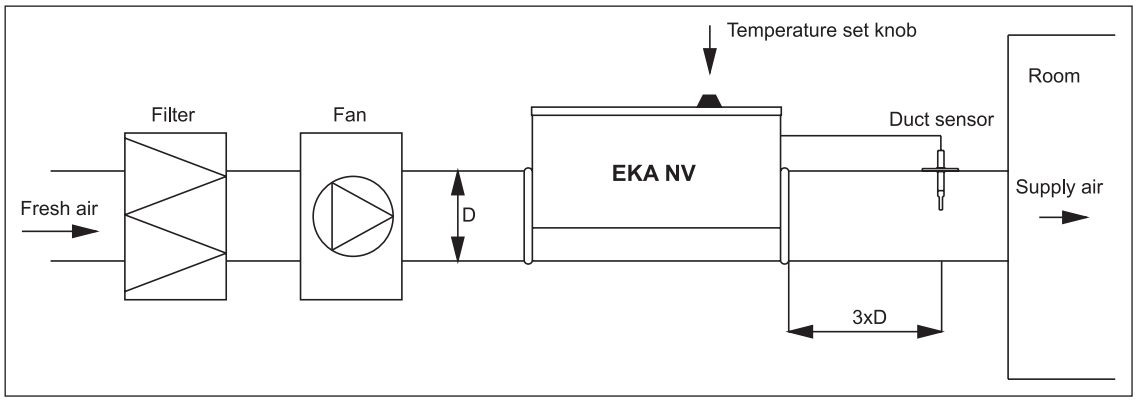
Temperature regulator EKR-K...

Temperature controller EKR-K... is installed into electrical heaters EKA -NV, -NI, -NIS

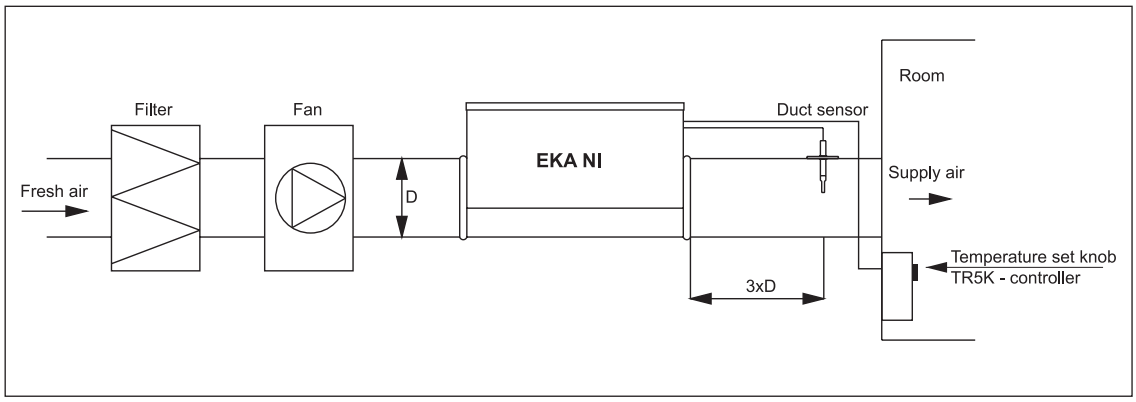
Voltage:	1 phase - 230V
	2 phase - 400V
	3 phase - 400V
Ambient temperature:	0 - 40°C
Humidity:	max 80%
Adjustment range of temperature:	0 - 30°C.
Temperature is adjusted by:	internal or external potentiometer.
Input signal for temperature control:	0...10V DC.

The PCB is equipped with internal fuses F1 and F2 on 50 mA. Their applicability, to protect PCB from the increased current.

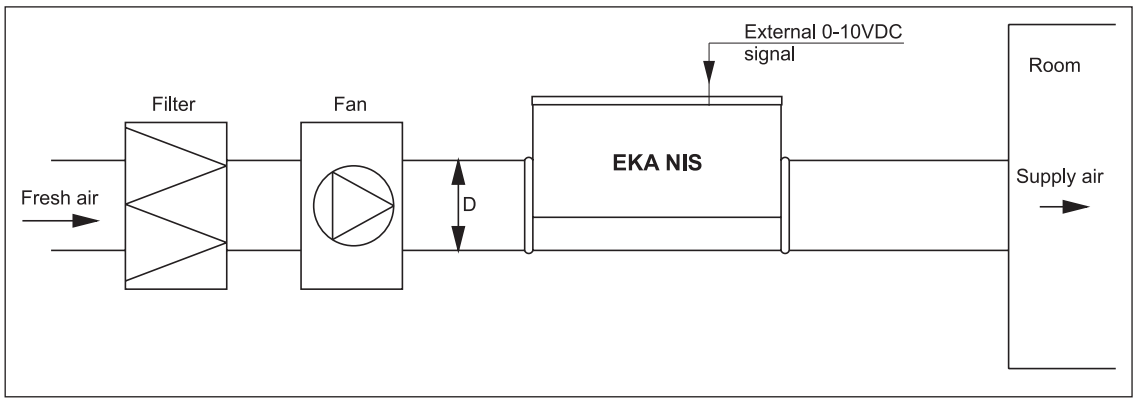
EKA NV connection diagram



EKA NI connection diagram

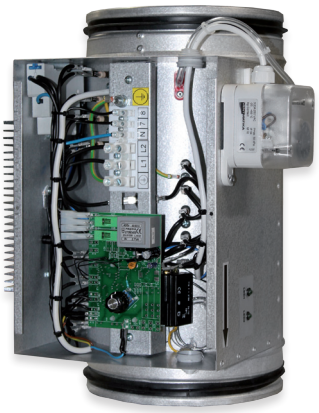


EKA NIS connection diagram



Notes

EKA NV PH



Electric duct heater

Elektrinis kanalinis šildytuvas

Elektryczna nagrzewnica kanałowa

Электрические канальные нагреватели

Electric heaters are designed to heat clean air in ventilation systems. Casing is made from aluzinc coated steel which is high temperature proof. Heating elements tube is made from stainless steel AISI 304. Heaters are equipped with 2 protection thermostats, pressure switch, supply air sensor, air flow sensor, screw terminals for easy connection. Casing is with rubber seals for duct connection. Heaters can be installed vertically or horizontally. Maximum output air temperature 50°C.

Elektriniai kanaliniai šldytuvai skirti švaraus šviežio oro pašildymui prieš rekuperatorių. Korpusai pagaminti iš skardos, padengtos AlZn, kurios paviršius atsparus aukštai temperatūrai. Kaitinimo elementų vamzdelis pagamintas iš nerūdijančio plieno ASI 304. Šildytuvuose yra sumontuotos dvi termoapsaugos, slėgio jungiklis, tiekiamo oro temperatūros jutiklis, oro srauto jutiklis, elektrinio pajungimo gnybtai. Šildytuvai gali būti montuojami horizontaliai ir vertikaliai. Maksimali pašildyto oro temperatūra 50°C.

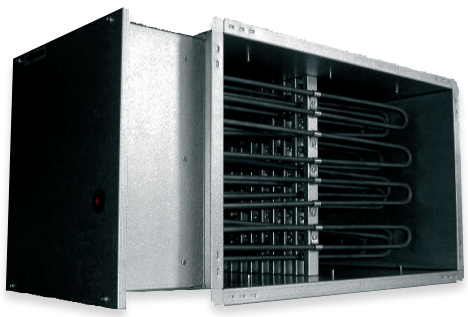
Elektryczne nagrzewnice kanałowe przeznaczone są do ogrzewania czystego powietrza w systemach wentylacyjnych.
Obudowa wykonana jest ze stali powlekanej alucynk, która jest odporna na wysokie temperatury. Elementy grzejne - rurki są wykonane ze stali nierdzewnej AISI 304. Grzejniki wyposażone są w 2 ochrony termostatów, przełącznik ciśnienia, czujnik powietrza nawiewanego, czujnik przepływu powietrza, zaciski śrubowe dla łatwego podłączenia. Obudowa jest wyposażona w uszczelki gumowe do połączenia z kanałem oraz zasicki śrubowe.
Nagrzewnice mogą być instalowane pionowo lub poziomo. Prędkość powietrza przez urządzenie grzewcze nie może być mniejsze niż 1,5 m/s. Maksymalna temperatura powietrza wyjściowego 50°C.

Электрические канальные нагреватели предназначены для подогрева чистого воздуха в вентиляционных системах. Корпус изготовлен из алюмоцинкованной стали, поверхность которой устойчива к высоким температурам. Трубка тена изготовлена из нержавеющей стали AISI 304.Обогреватели оснащены 2 термозащиты, реле давления, датчик подачи воздуха, датчика расхода воздуха, винтовые клеммы для подключения. Нагреватели могут быть установленны горизонтально и вертикально. Максимальная температура подогреваемого воздуха 50°C.

EKA NV PH

Type	Type of preheater	Number of phases	Air flow based on the outside temperature, [m³/h]			Power based on the outside temperature, [kW]		
			-10°C	-15°C	-23°C	-10°C	-15°C	-23°C
RIS 200VE/VW	EKA NV 125-0,3-1/PH	1	167	83	46	-	0,3	-
	EKA NV 125-0,6-1/PH	1	333	167	93	-	0,6	-
	EKA NV 125-0,9-1/PH	1	500	250	139	-	0,9	-
	EKA NV 125-1,2-1/PH	1	667	333	185	-	-	1,2
RIS 400VE/VW RIS 400PE/PW EKO 3.0	EKA NIS 160-0,3-1/PH	1	167	83	46	0,3	-	-
	EKA NIS 160-0,6-1/PH	1	333	167	93	-	0,6	-
	EKA NIS 160-0,9-1/PH	1	500	250	139	-	0,9	-
	EKA NIS 160-1,2-1/PH	1	667	333	185	-	1,2	-
	EKA NIS 160-3,0-1/PH	1						
	EKA NIS 200-0,9-1/PH	1						
	EKA NV 200-1,5-1f/PH	1						
	EKA NV 200-3,0-1f/PH	1						
	EKA NV 200-5.0-2/PH	2						
	EKA NV 250-0,6-1/PH	1						
RIS 700HE/HW RIS 700VE/VW RIS 700PE/PW EKO 3.0	EKA NV 250-0,6-1/PH	1	333	167	93	-	0,6	-
	EKA NV 250-0,9-1/PH	1	500	250	139	-	0,9	-
	EKA NV 250-1,2-1/PH	1	667	333	185	-	-	1,2
	EKA NV 250-2,0-1/PH	1	1111	556	309	-	-	2,0
	EKA NV 250-5,0-2/PH	1	2778	1389	772	-	-	5,0
	EKA NV 315-1,0-1/PH	1						
	EKA NV 315-1,2-1/PH	1						
	EKA NV 315-2,0-1/PH	1						
RIS 1200HE/HW RIS 1200VE/VW	EKA NV 315-1,0-1/PH	1	556	278	154	-	1,0	-
	EKA NV 315-1,2-1/PH	1	667	333	185	-	1,2	-
	EKA NV 315-2,0-1/PH	1	1111	556	309	-	2	-
	EKA NV 315-3,0-1/PH	1	1667	833	463	-	-	3,0
	EKA NV 315-5,0-2/PH	1	2778	1389	772	-	-	5
	EKA NV 315-6,0-3/PH	1	3333	1667	926	-	-	6
RIS 1900HE/HW RIS 1900VE/VW RIS 1900PE/PW EKO 3.0	EKA NV 400-1,0-1/PH	1	556	278	154	-	1	-
	EKA NV 400-1,2-1/PH	1	667	333	185	1,2	-	-
	EKA NV 400-2,0-1/PH	1	1111	556	309	-	2,0	-
	EKA NV 400-5,0-2/PH	2	2778	1389	772	-	5,0	-
	EKA NV 400-6,0-3/PH	3	3333	1667	926	-	6,0	-
	EKA NV 400-9,0-3/PH	3	5000	2500	1389	-	-	9,0
	EKA NV 400-12,0-3/PH	3	6667	3333	1852	-	-	12,0
	EKS NV 500x250x370/3/PH	1						
	EKS NV 500x250x370/5/PH	2						
	EKS NV 500x250x370/9/PH	3						
RIS 2500HE/HW RIS 2500PE/PW EKO 3.0	EKS NV 600x350x370/3/PH	1	1667	833	463	-	3,0	-
	EKS NV 600x350x370/6/PH	3	3333	1667	926	-	-	6,0
	EKS NV 600x350x370/9/PH	3	5000	2500	1389	-	-	9
	EKS NV 600x350x370/12/PH	3	6667	3333	1852	-	-	12,0
	EKS NV 600x350x370/15/PH	3	8333	4167	2315	-	-	15,0
	EKS NV 700x300x370/5/PH	2						
	EKS NV 700x300x370/9/PH	3						
	EKS NV 700x300x370/12/PH	3						
	EKS NV 700x400x370/5/PH	2						
	EKS NV 700x400x370/9/PH	3						
	EKS NV 700x400x370/18/PH	3						
RIS 3500HE/HW	EKS NV 800x500x370/6/PH	3	3333	1667	926	-	6,0	-
	EKS NV 800x500x370/9/PH	3	5000	2500	1389	-	9	-
	EKS NV 800x500x370/12/PH	3	6667	3333	1852	-	-	12
RIS 5500HE/HW	EKS NV 800x500x370/15/PH	3	8333	4167	2315	-	-	15,0
	EKS NV 800x500x370/18/PH	3	10000	5000	2778	-	-	18,0
	EKS NV 800x500x370/24/PH	3	13333	6667	3704	-	-	24,0
	EKS NV 800x500x370/30/PH	3	16667	8333	4630	-	-	30,0
	EKA NV 500-15-3/PH, 3x230V							

EKS



Electric duct heater

Elektrinis kanalinis šildytuvas

Elektryczna nagrzewnica kanałowa

Электрические канальные нагреватели

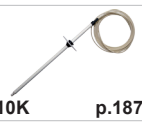
Electric heaters are designed to heat clean air in ventilation systems.
Casing is made from aluzinc coated steel which is high temperature proof. Heating elements tube is made from stainless steel AISI 304. In heaters are installed 2 protection thermostats, screw terminals for easy connection. Casing can be with PG connection, flanges or intended to install directly to AHU.
Heaters can be installed vertically or horizontally.
Maximum output air temperature 50°C.

Elektriniai kanaliniai šildytuvai skirti švaraus oro pašildymui ventiliacijos sistemose. Korpusai pagaminti iš skardos, padengtos alucinku (AlZn), kurios paviršius atsparus aukštai temperatūrai. Kaitinimo elementų vamzdelis pagamintas iš nerūdijančio plieno AISI 304. Šildytuvuose yra sumontuotos dvi termoapsaugos, elektrinio pajungimo gnybtai. Korpusai gaminami su PG jungtimis, flanšais arba skirti montuoti tiesiai į vėdinimo įrenginius.
Šildytuvai gali būti montuojami horizontaliai ir vertikaliai.
Maksimali pašildyto oro temperatūra 50°C.

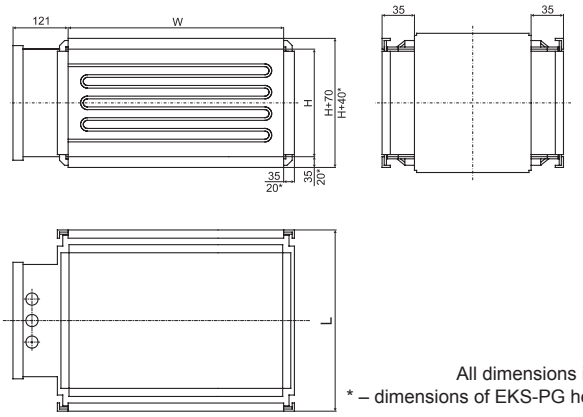
Elektryczne nagrzewnice kanałowe przeznaczone są do ogrzewania czystego powietrza w systemach wentylacyjnych. Obudowa wykonana jest ze stall powlekanej alucynk, która jest odporna na wysokie temperatury. Elementy grzejne - rurki są wykonane ze stall nierdzewnej AISI 304. W nagrzewnicach zainstalowane są 2 zabezpieczenia termiczne. Obudowa jest wyposażona w uszczelki gumowe do połączenia z kanałem oraz zasicki śrubowe. Nagrzewnice mogą być instalowane pionowo lub poziomo.
Nagrzewnica może być połączona ze złączem PG, kołnierzami lub przeznaczona do instalacji bezpośrednio przy centrali.
Prędkość powietrza przez urządzenie grzewcze nie może być mniejsze niż 1,5 m/s.
Maksymalna temperatura powietrza wyjściowego 50°C.

Электрические канальные нагреватели предназначены для подогрева чистого воздуха в вентиляционных системах. Корпус изготовлен из алюмоцинкованной стали, поверхность которой устойчива к высоким температурам. Трубка тена изготовлена из нержавеющей стали AISI 304. В нагревателе установленные 2 термозащиты, клеммы электрического подключения, корпус может быть изготовлен с PG соединением, с фланшами или для монтирования в вент. агрегат.
Нагреватели могут быть установлены горизонтально и вертикально.
Максимальная температура подогреваемого воздуха 50°C.

Accessories

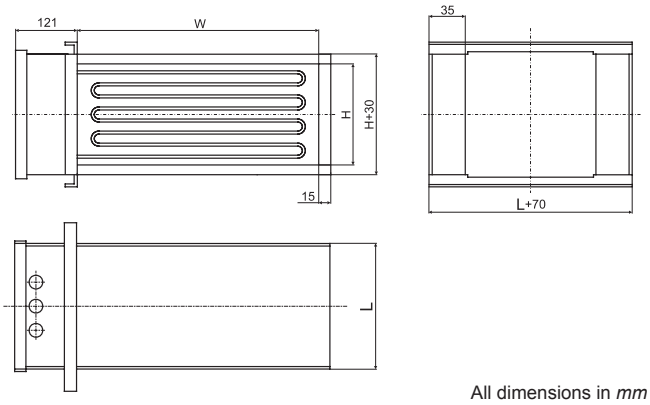
Controller for electrical heater	Controller for electrical heater	Duct sensor
		
EKR 15.1 **p. 220**	**EKR 15.1P** **p. 221**	**TJK 10K** **p.187**

EKS, EKS-PG



All dimensions in *mm*
* – dimensions of EKS-PG heaters

EKS-L



All dimensions in *mm*

Specification	EKS W x H
EKS	Electrical duct heater
W [mm]	Rectangular duct width
H [mm]	Rectangular duct height

Dimensions

EKS 400 x 200							
Length L	[mm]	370			420	520	
Total rated power	[kW]	6	9	12	15	21	

EKS 500 x 250								
Length L	[mm]	370		420	520	600	820	970
Total rated power	[kW]	9	12	15	21	24	36	45

EKS 500 x 300													
Length L	[mm]	370						440			520	600	
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	42	45

EKS 600 x 300													
Length L	[mm]	370						440			520	600	
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	42	45

EKS 600 x 350														
Length L	[mm]	370								420			500	
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	39	42	45

EKS 700 x 400																
Length L	[mm]	370											440		520	
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	42	45	51	60	66

EKS 800 x 500																		
Length L	[mm]	370												420		440	500	
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	39	42	45	51	54	60	66

EKS 1000 x 500																		
Length L	[mm]	370																
Total rated power	[kW]	9	12	15	18	21	24	27	30	33	36	39	42	45	51	54	60	66

Electrical heaters conforms to requirements of standards IEC 60335-2-30: 1996, EN 600335-2-30: 1999, EN 61010-1+A2: 2000, EN 50081-2: 1995, EN 55011: 1999+A1: 2001 and carries CE mark.

Type	Accessories		
	EKR 15.1	EKR 15.1P	TJK 10K
EKS 400 x 200	+	+	+
EKS 500 x 250	+	+	+
EKS 500 x 300	+	+	+
EKS 600 x 300	+	+	+
EKS 700x400	+	+	+
EKS 800x500	+	+	+
EKS 1000x500	+	+	+

Power steps

Total rated power [kW]	Steps
9	9
12	12
15	15
18	9 + 9
21	9 + 12
24	9 + 15
27	12 + 15
30	15 + 15
33	15 + 18
36	9 + 12 +15
39	9 + 15 + 15
42	12 + 15 + 15
45	12 + 15 + 18
51	9 + 12 + 12 + 18
54	9 + 12 + 15 + 18
60	12 + 15 +15 +18
66	15 + 15 +18 + 18

Power requirements

Heating power range of manufactured EKS heaters varies from 0,3 kW to 300 kW.
Calculation of required heater power:

$$P = Q * 0,36 * (t_2 - t_1)$$

I.e.: **P** - heating power [W],
Q - airflow [m³/h],
t_1 - temperature of incoming air [°C],
t_2 - required air temperature [°C].

Overheat protection

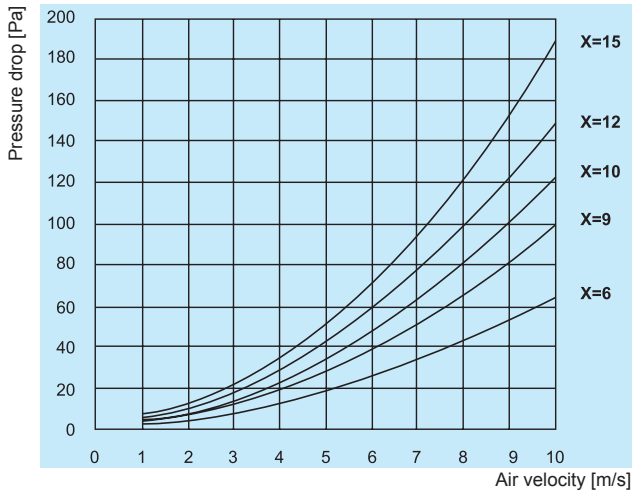
Minimum air velocity is 1,5 m/s.
All EKS duct heaters has two-stage overheat protection: the first stage switches on when the temperature reaches 50°C (resets automatically), the second stage switches on when the temperature reaches 100°C (is reset manually with pushbutton on the casing).
EKS has no internal temperature controller. External heating controllers EKR are used in this case.

Pressure drop

Pressure drop across a duct heater depends on air velocity and the number of rows of heating elements (with reference to diagram).
Calculation of heating element rows number:

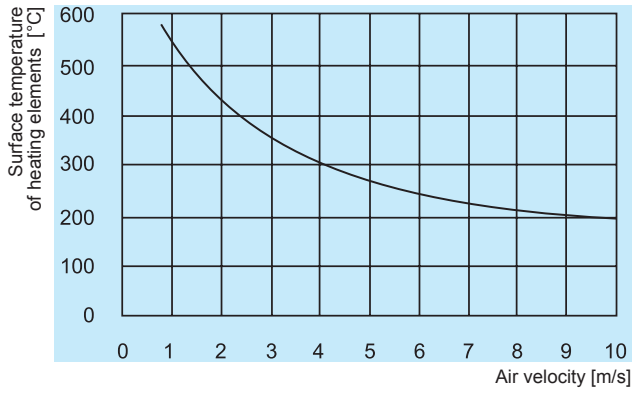
X = P / (A * 15)

I.e.: **X** - approx. number of heating element rows
P - total rated power [kW],
A - cross sectional area [m²].



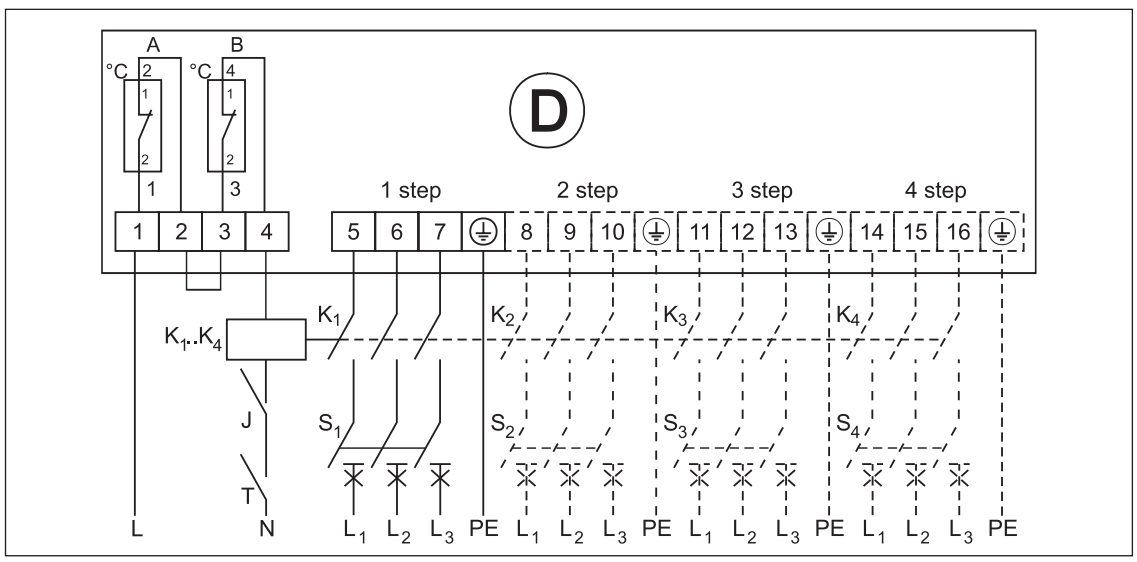
Surface temperature of heating element

Surface temperature of heating elements depend on air velocity and surface heating power rating of the element (approx. 3 W/cm²). The diagram illustrates the surface temperature of the element as a function of air velocity at an air output temperature of approx. 20°C from the heater.



Possible electrical connection

A -Overheat protection with manual reset 100°C
B -Overheat protection with automatical reset 50°C
D -Electrical heater
J -Switch
K_1 - **K_4** -Contactors
T -Thermostat
S_1 - **S_4** -Automatic circuit breakers
1step - **4step** -Heater steps



EKR 15.1

Controller of electrical heating

EKR15.1 is a proportional controller for electric heaters with automatic voltage adaptation. EKR15.1 controls the whole load On-Off. The ratio between On-time and Off-time is varied 0-100% to suit the prevailing heat demand.
EKR15.1 is designed only for electric heating control. The control principle makes it unsuitable for motor or lighting control.
EKR15.1 can control 15kW heater and has relay output for extra load control with contactor, on which can be connected load up to 12kW. Full load can be 27kW.

EKR15.1 jest elektronicznym proporcjonalnym regulatorem temperatury z automatycznym dopasowaniem napięcia. Regulator ten pracuje w układzie (włącz/wyłącz). Regulator EKR15.1 przeznaczony jest tylko do regulacji nagrzewnic elektrycznych. Nie nadaje się do regulacji silników czy też oświetlenia.
EKR15.1 może sterować pracą nagrzewnicy do 15 kW, posiada także gniazdo do podłączenia dodatkowego regulatora, do którego można podłączyć do 12kW. Razem wówczas można sterować nagrzewnicami do 27 kW.

EKR 15.1 - tai proporcinis elektrinio šildytuvo reguliatorius su automatine įtampos adaptacija. Reguliuoja kaitimą visiškai įjungdamas arba išjungdamas apkrovą. Santykis tarp išjungimo ir įjungimo laiko priklauso nuo šildymo poreikio ir gali kisti 0-100%. EKR15.1 yra pritaikytas tik elektrinių šildytuvų reguliavimui. Veikimo principai neleidžia jo naudoti variklių ar apšvietimo valdymui. Gali valdyti iki 15kW šildytuvą ir turi rėlinį išėjimą, skirtą kontaktoriaus pagalba valdyti papildomą apkrovą. Papildoma apkrova – iki 12kW. Pilna valdoma apkrova – 27kW.

EKR15.1 – это пропорциональный регулятор электрического нагрева. EKR15.1 регулирует нагрев путём полного включения или отключения нагрузки. Соотношение между временем включения и отключения зависит от потребности в нагреве и может меняться на 0-100%. EKR15.1 предназначен для регулировки исключительно электрических нагревателей. Принципы действия не позволяют использовать его в управлении двигателей или освещения. EKR15.1 может управлять нагревателем 15kW и имеет релейный выход, предназначенный для управления дополнительной нагрузкой с помощью контактора. Дополнительная нагрузка – до 12kW. Полная управляемая нагрузка – 27kW.

Technical data

Controlled load [kW]	15
Extra controlled load (recommended) * [kW]	12
Total controlled load [kW]	27
Max. conrolled current [A]	25
Voltage [V]	3x230/3x400
Frequency [Hz]	50-60
Phases	3~
Dimensions (WxHxL) [mm]	105 x 260 x 120
Fuse [A]	2 x 0,315
Protection class	IP20
Ambient temperature without condensation [°C]	0-40
Heat dissipation [W]	50
Ambient humidity	90%RH max.

* Extra load should be connected via contactor to the relay output.

Controllers conforms to requirements of standards EN 61010-1+A2: 2000, EN 50081-1: 1995, EN 55022: 2000 and carries CE mark.

Control principle

EKR15.1 has zero phase-angle detection to prevent RFI (radio frequency interference).
EKR15.1 automatically adapts its control mode to suit the dynamics of the controlled object . For rapid temperature changes i. e. supply air control EKR15.1 will act as a PID controller. For slow temperature changes i.e. room control EKR15.1 will act as a PID controller.

PID- proportional–integral–derivative.

Night set-back
Potential-free closure will give a night set-back of 0-10°C. Settable with a potentiometer (Contacts 10, 11) in the EKR15.1.

Controller of electrical heating

EKR15.1P is a proportional controller for multistep(up to 5 steps) electric heaters with automatic voltage adaptation. EKR15.1P controls the whole load On-Off. The ratio between On-time and Off-time is varied 0-100% to suit the prevailing heat demand.
EKR15.1P is designed only for electric heating control. The control principle makes it unsuitable for motor or lighting control.
EKR15.1P can control with triac output 15kW heater and has four relay outputs for 4 extra load steps control with contactors, on which can be connected load up to 225kW. Full load can be 240kW.

EKR15.1P jest proporcjonalnym regulatorem temperatury wielostopniowych nagrzewnic (do 5 stopni) z automatycznym dopasowaniem napięcia. Regulator ten pulsuje (włącz/wyłącz) całą energią cieplną wytwarzaną przez nagrzewnicę zapewniając w ten sposób płynną regulację mocy. Regulator EKR15.1P przeznaczony jest tylko do regulacji nagrzewnic elektrycznych. Nie nadaje się do regulacji silników czy też oświetlenia.
Regulator EKR15.1P może sterować poprzez triac pracą nagrzewnicy do 15 kW, posiada 4 wyjścia do podłączenia 4 dodatkowych regulacji stopni mocy ze stycznikami, do których może być podłączone łącznie do 225kW. Razem moc regulowana może wynosić do 240kW.

EKR15.1P - tai proporcinis daugiapakopis (iki 5 pakopų) elektrinio šildymo reguliatorius su automatiniu įtampos valdymu. EKR15P reguliuoja kaitimą pilnai įjungdamas arba išjungdamas apkrovą. Santykis tarp išjungimo ir įjungimo laiko priklauso nuo šildymo poreikio ir gali kisti 0-100%. EKR15.1P yra pritaikytas tik elektrinių šildytuvų reguliavimui. Veikimo principai neleidžia jo naudoti variklių ar apšvietimo valdymui. EKR15P gali valdyti 15kW šildytuvą ir turi 4 papildomus relinius išėjimus, skirtus kontaktorių pagalba valdyti papildomas apkrovas. Papildomos apkrovos sudaro iki 225kW. Pilna valdoma apkrova iki 240kW.

EKR15.1P - это пропорциональный многоступенчатый (до 5 ступеней) регулятор электрического нагрева с автоматическим управлением напряжения. EKR15.1P регулирует нагрев путём полного включения или отключения нагрузки. Соотношение между временем включения и отключения зависит от потребности в нагреве и может меняться на 0-100%. EKR15.1P предназначен для регулировки исключительно электрических нагревателей. Принципы действия не позволяют использовать его в управлении двигателей или освещения. EKR15.1P может управлять нагревателем 15kW и имеет 4 дополнительных релейных выхода, предназначенных для управления дополнительными нагрузками с помощью контактора. Дополнительные нагрузки – до 225kW. Полная управляемая нагрузка – до 240kW.

Technical data

Controlled load [kW]	15
Extra load control output	4x5A/230V
Max. triac conrolled current [A]	25
Voltage [V]	3x230/3x400
Frequency [Hz]	50-60
Phases	3~
Dimensions (WxHxL) [mm]	105 x 260 x 120
Fuse [A]	2x 0,315
Protection class	IP20
Ambient temperature without condensation [°C]	0-40
Heat dissipation [W]	50
Ambient humidity	90%RH max.

* Extra load should be connected via contactor to the relay output.

Controllers conforms to requirements of standards EN 61010-1+A2: 2000, EN 50081-1: 1995, EN 55022: 2000 and carries CE mark.

Control principle

Triac output of EKR15.1P has zero phase-angle detection to prevent RFI (radio frequency interference).
If triac output is ON more then 5 min controller will increase output by one step. Second step will be switch on after 2 min if previous is switched on for this time. All steps are switching in such order to increasing output. In case then output decreasing is needed, step will be switch off after 5min. Other steps will be switch off after 2 min to decrease output.
Extra load steps can switching in binary or serial mode. Number of connected extra load steps can be selected with rotating switch. In binary mode switching steps can be 0-15, in serial mode 0-4.

Night set-back
Potential-free closure will give a night set-back of 0-10°C. Settable with a potentiometer (Contacts 10, 11) in the EKR15.1P.

EKR 6.1

Controller of electrical heating

EKR6.1 is a proportional controller of electrical heating controller with automatic adaptation of voltage. An internal or an external sensor is used with the device. EKR6.1 controls the heating intensity by switching electrical power on or off. The ratio between the off-time and on-time depends on the need for heating and can vary in the range between 0% and 100%. EKR6.1 is suitable for the control of electrical heating only. Its principle of operation preclude its being used for the control of motors or lighting systems. EKR6.1 is not suitable for the control of three-phase electrical current, it is used to control monophasic and diphase heaters only.

EKR6.1 jest kompletnym elektronicznym proporcjonanym regulatorem nagrzewnic elektrycznych z automatycznym dopasowaniem napięcia. Może być używany z wbudowanym lub zewnętrznym czujnikiem temperatury.
Regulator ten pulsuje (włącz/wyłącz) całą energią cieplną wytwarzaną przez nagrzewnicę zapewniając w ten sposób płynną regulację mocy. Regulator EKR6.1 przeznaczony jest tylko do regulacji nagrzewnic elektrycznych. Nie nadaje się do regulacji silników czy też oświetlenia.
Regulator EKR6.1 nie może może sterować pracą nagrzewnicy 3 fazowych, jest przeznaczony tylko dla nagrzewnic 1 lub 2 fazowych.

EKR6.1 – proporcinis elektrinio šildymo reguliatorius su automatine įtampos adaptacija, naudojamas su vidiniu arba išoriniu jutikliu. EKR6.1 reguliuoja kaitimą visiškai įjungdamas arba išjungdamas apkrovą. Santykis tarp išjungimo ir įjungimo laiko priklauso nuo šildymo poreikio ir gali kisti 0-100%. EKR6.1 yra pritaikytas tik elektrinių šildytuvų reguliavimui. Veikimo principai neleidžia jo naudoti variklių ar apšvietimo valdymui. EKR6.1 negali valdyti trijų fazių apkrovos, jis skirtas vienfazių arba dvifazių šildytuvų valdymui.

EKR6.1 – это пропорциональный регулятор электрического отопления с автоматической адаптацией напряжения, используемый с внутренним или внешним датчиком. EKR6.1 регулирует нагрев путём полного включения или отключения нагрузки. Соотношение между временем включения и отключения зависит от потребности в нагреве и может меняться на 0-100%. EKR6.1 предназначен для регулировки исключительно электрических нагревателей. Принципы действия не позволяют использовать его в управлении двигателей или освещения. EKR6.1 не может управлять трёхфазной нагрузкой, он предназначен для управления однофазными или двухфазными нагревателями.

Technical data

Max. controlled load [kW]	6,4/400V, 3,2/230V
Max. conrolled current [A]	16
Voltage [V]	230-415
Frequency [Hz]	50-60
Phases	1~230V, 2~400V
Dimensions (WxHxL) [mm]	150 x 80 x 55
Protection class	IP20
Ambient temperature [°C]	30 max.
Ambient humidity	90% RH max.

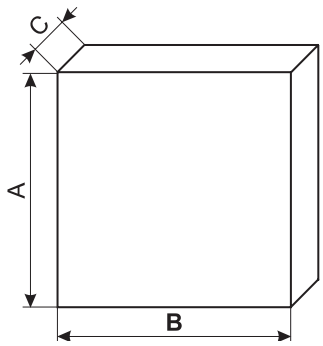
Controllers conforms to requirements of standards LST EN 61010-1:2002, LST EN 55022:2000, LST EN 60730-1+A11: 2002/A16 2007 and carries CE mark.

Control principle

EKR6.1 controls the full load On-Off. EKR6.1 adjusts the mean power output to the prevailing power demand by proportionally adjusting the ratio between On-time and Off-time.
EKR6.1 has zero phase-angle detection for preventing RFI (radio frequency interference).
EKR6.1 automatically adjusts it's control mode to suit the controlled object's dynamics.
For rapid temperature changes i.e. supply air control EKR6.1 will act as a PID controller.
For slow temperature changes i.e. room control EKR6.1 will act as a PID controller.

Night temperature set-back
Potential-free closure will give a night set-back of 1 - 10°C. Settable with a potentiometer which is in the EKR6.1.

Single phase speed controller



Transformer controllers are designed to change motor rotating speed by changing voltage. All controllers are with motors and transformers thermo protection function. 1 phase controllers are with power supply fault protection. When power supply recovered, controller did not switch on previous step until is switched OFF and ON to desired step. Steps are with fix voltage and are changed with rotary switch. Controllers also have power indication led. All controllers have 230 VAC output for connection servo motors, actuators, heaters relays and etc.

To one controller more than one motor can be connected, if total current of all controllers is less than maximum controller current. In this case all motors thermo protections must be connected in series.

Transformatoriniai greičio reguliatoriai TGRV skirti keisti ventiliatorių sukimosi greitį, keičiant įtampą. Visi reguliatoriai turi variklių ir transformatorių termoapsaugos pajungimo kontaktus.

Vienfaziai reguliatoriai turi apsaugą nuo fazės dingimo. Kai maitinimas atsistato, reguliatorius neįsijungia į buvusią pakopą, kol neišjungiamas ir vėl įjungiamas norimai pakopai. Pakopos yra fiksuotų įtampų ir perjungiamos su rotaciniu jungikliu. Taip pat reguliatoriuose sumontuotos įtampos indikacijos lemputės. Visi reguliatoriai turi 230 VAC išėjimą pavarų, aptarnaujančių motorų, šildytuvų blokavimui ir pan. pajungimui. Su vienu greičio reguliatoriumi galima valdyti keletą variklių, jei suminis visų variklių srovės sunaudojimas neviršija maksimalios reguliatoriaus srovės. Šiuo atveju visų variklių termoapsaugos turi būti sujungtos nuosekliai.

TGRV regulatory transformatorowe przeznaczone są do regulacji prędkości silników poprzez zmianę napięcia. Wszystkie regulatory posiadają zabezpieczenie termiczne. Sterowniki posiadają funkcję ochrony silnika przed błędnym zasilaniem. Po odzyskaniu prawidłowego zasilania regulator nie włączy wentylatora - potrzebne jest ręczne włączenie i ustawienie żądanego stopnia regulacji. Regulatory posiadają krokowe ustawienie napięcia i zmieniane są przełącznikiem obrotowym.

Wszystkie regulatory posiadają 230 VAC wyjście do podłączenia serwomotorów, siłowników, przekaźników i nagrzewnic itp.

Do jednego sterownika istnieje możliwość podłączenie więcej niż jednego silnika pod warunkiem, że całkowita suma natężenia prądu wszystkich podłączonych wentylatorów jest mniejsza niż maksymalny prąd regulatora. W tym przypadku wszystkie zabezpieczenia termiczne silników muszą być połączone seryjnie.

Трансформаторные регуляторы предназначены для изменения скорости вращения электродвигателей путем изменения напряжения. Все регуляторы имеют функцию защиты двигателя и трансформатора от перегрева. Однофазовые регуляторы имеют защиту от пропажи напряжения. При восстановлении питания регулятор не включится в бывшую ступень, пока он не будет выключен и снова включен для выбранной ступени. Ступени имеют фиксированное напряжение и переключаются с помощью ротационного переключателя. Регуляторы также оснащены лампочками индикации напряжения. Все регуляторы имеют выход на 230 В для блокирования приводов, обслуживающих двигателей, отопителей и др. подключений.

С помощью одного регулятора скорости можно управлять несколькими двигателями, если суммарное потребление тока всеми двигателями не превышает максимального значения тока регулятора. В этом случае термозащита каждого двигателя должна подключаться последовательно.

Dimensions

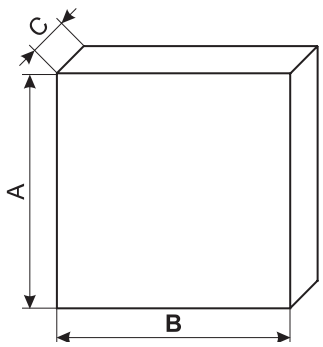
Type	Max. current	Voltage	A [mm]	B [mm]	C [mm]	Weight [kg]
TGRV 1,5	1,5 A	230V/50Hz	178	155	99	2,6
TGRV 2	2,0 A	230V/50Hz	178	155	99	3,0
TGRV 3	3,0 A	230V/50Hz	178	155	99	3,5
TGRV 4	4,0 A	230V/50Hz	178	155	150	4,4
TGRV 5	5,0 A	230V/50Hz	178	155	150	4,9
TGRV 7	7,0 A	230V/50Hz	244	184	178	7,3
TGRV 11	11,0 A	230V/50Hz	244	184	178	9,5
TGRV 14	14,0 A	230V/50Hz	244	184	178	10,4

Technical data

- Input 230V / 50 Hz
- 5 steps: 230V / 170V / 140V / 120V / 80V
- Casing protection rating - IP 44
- Enclosure: Plastic
- Max. ambient temperature +40°C
- Auto-transformer completely impregnated with resin
- 5-step switch and operating lamp
- Additional connection for servo motor 230V / 50Hz, 0,5A
- Full motor protection, re-set is locked through thermal contacts lead out of the motor
- Speed controllers conform with LST EN 600335-1:2003+A11:2004+A 1:2005+A12:2006+A2:2007 standards and are CE marked.

TGRT

Three phase speed controller



Transformer controllers are designed to change motor rotating speed by changing voltage. All controllers are with motors and transformers thermo protection function. 3 phase controllers are with power supply fault protection. When power supply recovered, controller did not switch on previous step until is switched OFF and ON to desired step. Steps are with fix voltage and are changed with rotary switch. Controllers also have power indication led. All controllers have 230 VAC output for connection servo motors, actuators, heaters relays and etc.

To one controller more than one motor can be connected, if total current of all controllers is less than maximum controller current. In this case all motors thermo protections must be connected in series.

Transformatoriniai greičio reguliatoriai TGRT skirti keisti ventiliatorių sukimosi greitį, keičiant įtampą. Visi reguliatoriai turi variklių ir transformatorių termoapsaugos pajungimo kontaktus.

Trifaziai reguliatoriai turi apsaugą nuo fazės dingimo. Kai maitinimas atsistato, reguliatorius neįsijungia į buvusią pakopą, kol neišjungiamas ir vėl įjungiamas norimai pakopai. Pakopos yra fiksuotų įtampų ir perjungiamos su rotaciniu jungikliu. Taip pat reguliatoriuose sumontuotos įtampos indikacijos lemputės. Visi reguliatoriai turi 230 VAC išėjimą pavarų, aptarnaujančių motorų, šildytuvų blokavimui ir pan. pajungimui. Su vienu greičio reguliatoriumi galima valdyti keletą variklių, jei suminis visų variklių srovės sunaudojimas neviršija maksimalios reguliatoriaus srovės. Šiuo atveju visų variklių termoapsaugos turi būti sujungtos nuosekliai.

TGRT regulatory transformatorowe przeznaczone są do regulacji prędkości silników poprzez zmianę napięcia. Wszystkie regulatory posiadają zabezpieczenie termiczne. Sterowniki posiadają funkcję ochrony silnika przed błędnym zasilaniem. Po odzyskaniu prawidłowego zasilania regulator nie włączy wentylatora - potrzebne jest ręczne włączenie i ustawienie żądanego stopnia regulacji. Regulatory posiadają krokowe ustawienie napięcia i zmieniane są przełącznikiem obrotowym.

Wszystkie regulatory posiadają wyjście 230 VAC do podłączenia serwomotorów, siłowników, przekaźników i nagrzewnic itp.

Do jednego sterownika istnieje możliwość podłączenie więcej niż jednego silnika pod warunkiem, że całkowita suma natężenia prądu wszystkich podłączonych wentylatorów jest mniejsza niż maksymalny prąd regulatora. W tym przypadku wszystkie zabezpieczenia termiczne silników muszą być połączone seryjnie.

Трансформаторные регуляторы предназначены для изменения скорости вращения электродвигателей путем изменения напряжения. Все регуляторы имеют функцию защиты двигателя и трансформатора от перегрева. Трёхфазовые регуляторы имеют защиту от пропажи напряжения. При восстановлении питания регулятор не включится в бывшую ступень, пока он не будет выключен и снова включен для выбранной ступени. Ступени имеют фиксированное напряжение и переключаются с помощью ротационного переключателя. Регуляторы также оснащены лампочками индикации напряжения. Все регуляторы имеют выход на 230 В для блокирования приводов, обслуживающих двигателей, отопителей и др. подключений.

С помощью одного регулятора скорости можно управлять несколькими двигателями, если суммарное потребление тока всеми двигателями не превышает максимального значения тока регулятора. В этом случае термозащита каждого двигателя должна подключаться последовательно.

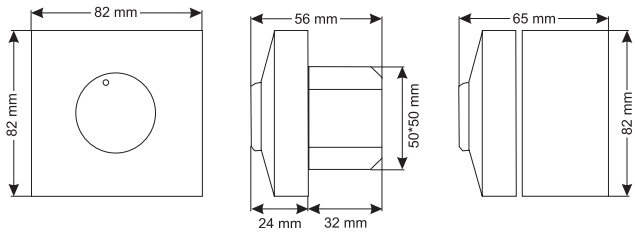
Dimensions

Type	Max. current	Voltage	A [mm]	B [mm]	C [mm]	Weight
TGRT 1	1 A	400V/50Hz	335	245	133	6,3 kg
TGRT 2	2,0 A	400V/50Hz	335	245	133	8,1 kg
TGRT 3	3,0 A	400V/50Hz	335	245	133	10,7 kg
TGRT 4	4,0 A	400V/50Hz	335	245	133	14,6 kg
TGRT 5	5,0 A	400V/50Hz	300	290	160	18,7 kg
TGRT 7	7,0 A	400V/50Hz	365	320	190	24,7 kg
TGRT 11	11,0 A	400V/50Hz	365	320	190	34,1 kg
TGRT 14	14,0 A	400V/50Hz	365	320	190	37,2 kg

Technical data

- Input 400V / 50Hz
- 5 steps: 400V / 270V / 220V / 170V / 130V
- Casing protection rating - IP 44
- Enclosure: Plastic (TGRT 1-4) / steel sheet, powder coated (TGRT 5-14)
- Max. ambient temperature +40^{0}C
- Auto-transformer completely impregnated with resin, 2 transformers
- 5-step switch and operating lamp
- Additional connection for servo motor 230V / 50Hz, 0,5A
- Full motor protection, re-set is locked through thermal contacts lead out of the motor
- Speed controllers conform with LST EN 600335-1:2003+A11:2004+A1 :2005+A12:2006+A2:2007 standards and are CE marked

Single phase speed controller



Manual regulation of speed or airflow of voltage controllable (230 Vac, 50 Hz) motors and fans. Several motors can be connected as long as the current limit is not exceeded. These speed-controllers offer an excellent and accurate regulation. What's more, the splash-proved housing (as well with inset as with surface mounting) allows the use in a demanding (damp) environment. E.g. kitchens or bathrooms… Fast current and temperature fuses complete this user-security.

Elektroninis greičio reguliatorius ETY/MTY naudojamas keisti ventiliatorių, kurių įtampa 230V (~1, 50Hz) sukimosi greitį. Jei neviršijama srovės ribų, gali būti pajungti keli variklai. ETY/MTY užtikrina sklandų greičio reguliavimą.
Drėgmei atsparus korpusas (su vidinio arba išorinio montavimo galimybe) leidžia reguliatorių naudoti ir drėgnose patalpose (virtuvėse, tualetuose).

Regulatory ETY/MTY zapewniają płynną regulację prędkości obrotowej silników i wentylatorów zasilanych napięciem (230 V, 50 Hz) silników i wentylatorów.
Do jednego sterownika istnieje możliwość podłączenie więcej niż jednego silnika pod warunkiem, że całkowita suma natężenia prądu wszystkich podłączonych wentylatorów jest mniejsza niż maksymalny prąd regulatora. W tym przypadku wszystkie zabezpieczenia termiczne silników muszą być połączone seryjnie. Te kontrolery oferują doskonałą i dokładną regulację. Wstawka do montażu powierzchniowego umożliwia użycie go w wymagającym środowisku (np. kuchnie lub łazienki).

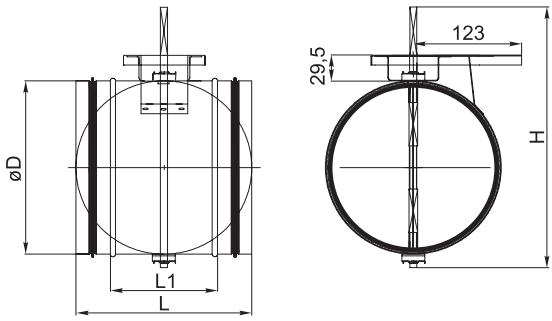
Для регулировки скорости вращения вентиляторов с напряжением 230V (~1, 50Hz). Допускается подключение нескольких двигателей, если ток не превышает предельно допустимой величины. ETY/MTY обеспечивает плавную регулировку скорости.

Technical data

Model	ETY1,5	ETY2,5	MTY4
Supply		**~1, 230, 50 Hz**	
Current rating (A)	0,1 - 1,5 A	0,2 - 2,5 A	0,4 - 4 A
Current fuse (A) (5*20 mm)	F2,0A-H	F3,15A-H	M5,00A-H
IP	44/54	44/54	54
Control	full	full	full
Weight	200g	235g	325g
Mounting	inset/surface	inset/surface	surface

All models have an extra (not regulated) 230 V output. The models 0,5 till 2,0 A are suitable for inset and for surface mounting. Model 4,0 A can only be used for surface mounting.
Directive 2006/95/EC on low voltage.
Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2001 (Modified))
Amendment A11:2004 to EN 60335-1:2002
Amendment A1:2004 to EN 60335-1:2002 (IEC 60335-1:2001/A1:2004)
Amendment A12:2006 to EN 60335-1:2002
EN 60669-1:1999
Switches for household and similar fixed-electrical installations — Part 1: General requirements (IEC 60669-1:1998 (Modified))
Amendment A1:2002 to EN 60669-1:1999 (IEC 60669-1:1998/A1:1999 (Modified))
EN 60669-2-1:2004
Switches for household and similar fixed electrical installations — Part 2- 1: Particular requirements — Electronic switches (IEC 60669-2-1:2002 (Modified))
EMC:
Directive 2004/108/EC relating to electromagnetic compatibility

Shut-off dampers



Shut-off dampers SKG are used for shutting off and controlling air flow. They are easily installed in a circular air duct system. Can be mounted in any position. The casing is made of galvanized steel.
Has a rotating, cut-off blade. The blade can be continually adjusted in a 0-90° angle by a motor on the top of damper. The blade of SKG dampers has rubber seal that tightens the inside of the damper when it's in closed position.
SKG shut-off damper is controlled by a motor which is supplied separately.

Odcinające przepustnice szczelne SKG służą do odcinania i regulacji ilości przepływu powietrza, Łatwe do instalacji w systemie okrągłych kanałów wentylacyjnych, Mogą być montowane w dowolnej pozycji.Obudowa jest wykonana z ocynkowanej blachy stalowej. Posiada obrotową klapę odcinającą. Kia pa może być regulowana w zakresie 0-90˚ kątem przez siłownik zamontowany na górnej półce SKG.
Klapy posiadają gumową uszczelkę, która napina wnętrze przepustnicy gdy jest w położeniu zamkniętym, SKG przepustnica odcinająca jest sterowana przez siłownik, który jest dostarczanyoddzielnie.

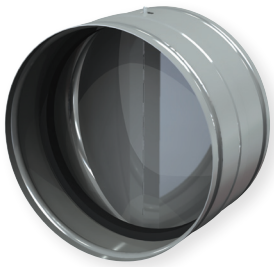
Lengvai montuojamos į apvalių ortakių sistemą. Gali būti montuojamos bet kokioje padėtyje. Korpusas pagamintas iš cinkuotos skardos. Uždarymo sparneliai 0-90º kampu pasukami pavara.
Sklendė yra suprojektuota taip, kad sukeltų kuo mažiau triukšmo. Sklendės uždarymo sparneliai aptraukti gumine tarpine juosta, užsandarinančia uždarytą sklendę.
Sklendžių SKG uždarymo sparneliai valdomi pavara, kuri yra tiekiama atskirai.

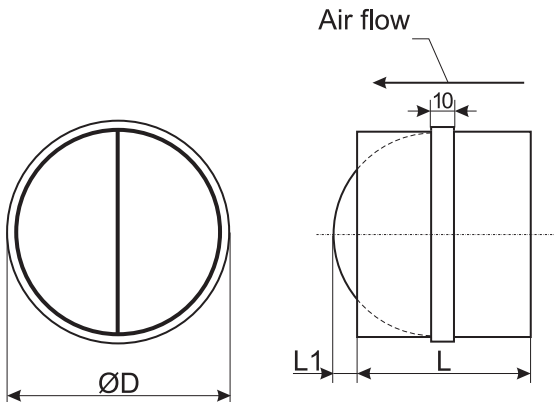
Заслонки SKG для запора и регулировки воздушного потока, легко устанавливаются в систему круглых воздуховодов. Могут устанавливаться в любом положении. Корпус изготовлен из оцинкованной жести. Запорные лопатки могут поворачиваться под углом 0-90º с помощью двигателей. Запорные лопатки оснащены резиновой прокладкой, повышающей плотность заслонки в закрытом положении.
Запорные лопатки заслонок SKG управляются с помощью двигателя, поставляемого отдельно.

Dimensions

Type	**Torgue power**, Nm	øD, [mm]	L1, [mm]	L, [mm]	H, [mm]
SKG 100	1,3	99	100	200	230
SKG 125	1,3	124	100	200	255
SKG 160	1,4	159	100	200	290
SKG 200	2,1	199	100	200	330
SKG 250	2,6	249	100	200	380
SKG 315	3,5	314	140	240	445
SKG 355	-	354	140	240	485
SKG 400	13	399	140	240	535
SKG 450	-	449	140	240	580
SKG 500	-	499	140	240	630
SKG 630	-	629	140	240	760

Back draft shutter





Back draft dampers RSK are used in circular ducting. They allow circulation of air in one direction only. They are mounted into a system of round air ducts.
The damper casing is made of galvanized steel. Blades are made of aluminium, they are spring-loaded. Shutter RSK has to be installed as it is shown in the picture-shaft stands vertically rubber ring is fitted inside.

Atbulinės traukos sklendės RSK skirtos praleisti oro srautą tik viena kryptimi. Montuojamos į apvalių ortakių sistemą. Sklendės korpusas pagamintas iš cinkuotos skardos. Sparneliai iš aliuminio, uždaromi spyruokle. Sklendes RSK reikia montuoti kaip parodyta paveikslėlyje – ašis stovi vertikaliai viduje įmontuoto gumos žiedo.

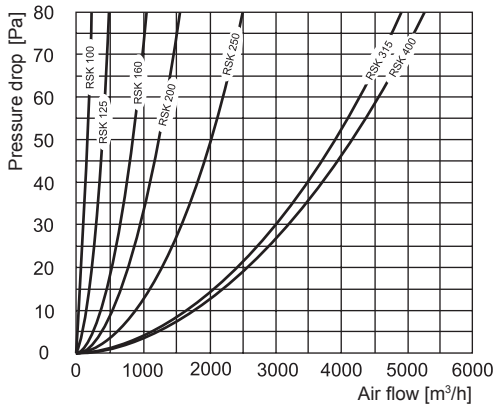
Klapy zwrotne szczelne do kanałów okrągłychwykonane są z galwanizowanej stali, Dwa skrzydełka są otwierane za pomocą sprężyny co oznacza, że klapa może być montowana tylko w pozycji pionowej. Wyposażone w gumową uszczelkę zapewniającą szczelność.

Обратные клапаны RSK для пропуска воздуха только в одном направлении. Устанавливаются в систему круглых воздуховодов.
Корпус клапанов изготовлен из гальванизированной стали. Лопатки алюминиевые, запираются пружиной. Клапаны RSK устанавливаются только так, что бы ось оставалась в вертикальном положении, как показано на рисунке.
Внутри установлено резиновой кольцо.

Dimensions

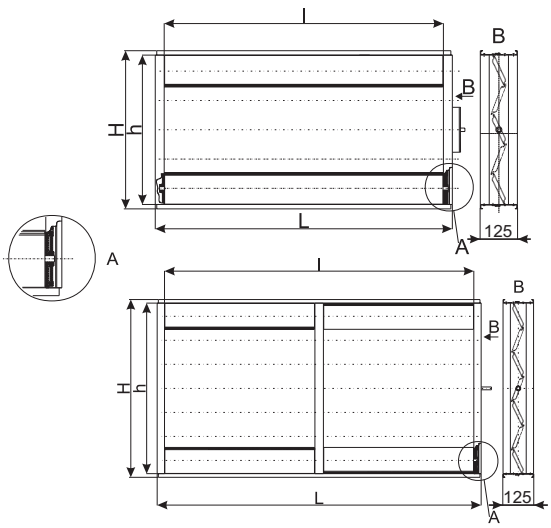
Type	ØD, [mm]	L, [mm]	L1, [mm]	Weight
RSK 100	100	88	26	0,13 kg
RSK 125	125	88	19	0,17 kg
RSK 150	150	88	31	0,22 kg
RSK 160	160	88	36	0,24 kg
RSK 200	200	88	56	0,29 kg
RSK 250	250	128	61	0,68 kg
RSK 315	315	128	94	0,81 kg
RSK 400	400	198	94	1,68 kg

Pressure drop



Dampers for rectangular ducts

SSK - damper without separating profile



SSK dampers are used for closing air flow. The dampers are made of aluminium profile with sealing rubber gaskets. Palm driving gear is made of glass-fibre material. Silicon sealing strip provides proper tightness.
Dampers are suitable to be used in the temperature ranges from -40º to +80ºC.
The flange system of these dampers is the same as in the rectangular air ducts and fans, therefore mounting operations are simple.

Sklendės SSK skirtos oro srauto uždarymui. Sklendės pagamintos iš aliuminio profilių, aliuminio mentelių, sandarinamų gumomis. Mentelių valdymo mechanizmas gaminamas iš stiklo pluošto. Sandarinimo medžiaga užtikrina sklendės sandarumą. Sklendės tinkamos naudoti temperatūros diapazone nuo -40º iki +80ºC.
Šių sklendžių flanšų sistema tokia pat kaip ir stačiakampių ortakių ar ventiliatorių, todėl lengvai montuojamos.

Przepustnice SSK stosowane są do odcinania przepływu powietrza. Przepustnice wykonane są z aluminiowych profili z uszczelką gumową. Mechanizm napędowy wykonany jest z włókna szklanego. Uszczelki na krawędziach lamelek zaoewmają doskonałą szczelność przepustnic. Przepustnice przeznaczone są do stosowania w zakresie temperatur od -40° do *80°C. System kołnierzy w przepustnicach jest taki sam jak w kanałach prostokątnych czy też wentylatorach prostokątnych co powoduje, żc ich montaż jest bardzo prosty.

Заслонки SSK для запора воздушного потока. Заслонки изготовлены из алюминиевых профилей, алюминиевых лопаток с резиновым уплотнением. Управляющий механизм лопаток изготовлен из стекловолокна. Герметизирующий материал обеспечивает необходимую герметичность заслонок. Заслонки пригодны к эксплуатации в температурном диапазоны от -40º до +80ºC.
Так как фланцевая система этих заслонок такая же, как в прямоугольных воздуховодах или вентиляторах, она легко монтируется.

Dimensions

Size range of manufactured SSK dampers varies from 100mm (H_{min}-100mm, L_{min}-100mm) to 3000mm (H_{max}-3000mm, L_{max}-3000mm). If dim. L bigger than 1000mm, dampers SSK are produced with separating plate.

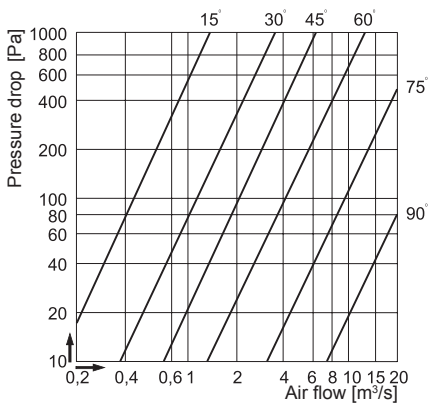
Calculation of required size:
$H=H_n+40$
$L=L_n+40$

$h=H-30$
$l=L-60$

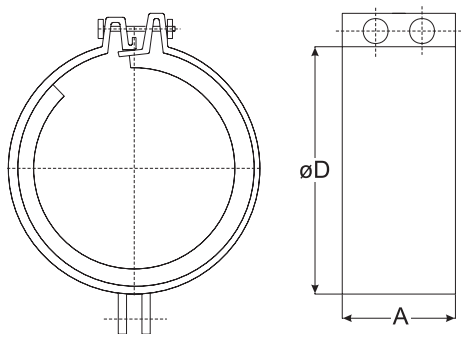
H - height of damper
L - width of damper
h - inner height of damper
l - inner width of damper
$\mathbf{H_n}$ - nominal height of damper
$\mathbf{L_n}$ - nominal width of damper

Specification	SSK L-H
Damper for rectangular ducts	**SSK**
Width [mm]	**L**
Height [mm]	**H**

Pressure drop



Mounting clips for circular ducts



Clamps AP are used for the mounting of various elements of ventilation and air conditioning systems. They minimize vibrations and ensure tight fit of various parts of a system. Made of galvanized steel.

Apkabos AP yra naudojamos įvairių vėdinimo ir oro kondicionavimo sistemų elementų montavimui. Jos slopina vibraciją ir užtikrina tvirtą įvairių sistemos dalių sumontavimą. Pagamintos iš cinkuoto plieno.

Obejmy okrągłe AP służą do montażu różnych elementów wentylacyjnych I klimatyzacyjnych. MInImallzowują one drgania I zapewniają szczelne dopasowanie poszczególnych części systemu. Wykonany ze stall ocynkowanej I uszczelki gumowej.

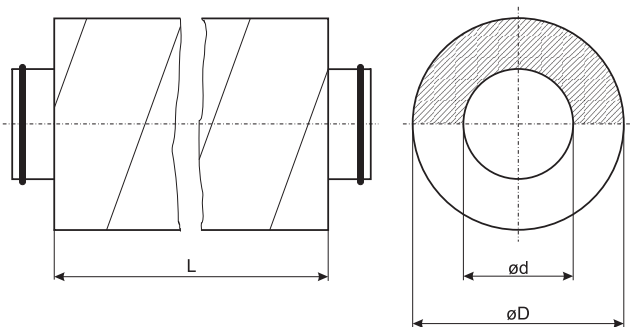
Хомуты AP применяются в монтаже различных элементов систем вентиляции и кондиционирования. Они подавляют вибрацию и обеспечивают прочный монтаж различных деталей системы. Изготовлены из оцинкованной стали.

Dimensions

Type	øD, [mm]	A, [mm]	Weight, [kg]
AP 100	100	60	0,12
AP 125	125	60	0,15
AP 150	150	60	0,18
AP 160	160	60	0,20
AP 200	200	60	0,22
AP 250	250	60	0,25
AP 315	315	60	0,28
AP 355	355	60	0,30
AP 400	400	60	0,32
AP 450	450	60	0,35
AP 500	500	60	0,37
AP 630	630	60	0,44
AP 800	800	60	0,47

AKS, SAKS

Circular duct silencers



Round duct silencers AKS, SAKS can be mounted into a system of round air ducts. These silencers have good sound attenuation characteristics. Several silencers can be mounted into a circular air duct system if there is requirement for bigger noise reduction. The housing is made of external SPIRO System duct and inner casing is made of perforated sheet steel. Mineral wool is used for sound insulation.
The insulating part in SAKS silencers is thicker than in AKS silencers.

Tłumiki kanałowe AKS posiadają bardzo dobre charakterystyki tłumienia. Łatwe do wbudowania w system kanałów okrągłych. Spadki ciśnienia na tłumiku są prawie takie same jak na zwykłych kanałach wentylacyjnych. Jeśli zachodzi potrzeba jeszcze większej redukcji hałasów należy zainstalować dwa tłumiki. Okrągły tłumik to z zewnątrz kanał SPIRO, a wewnątrz obudowa z perforowanej stali. Kulisa wypełniona jest dźwiękochłonną wełną mineralną. Ulepszona wersja tłumika (z grubszą warstwą izolacji) - SAKS.

Slopintuvai AKS, SAKS montuojami į apvalių ortakių sistemas, gerai slopina triukšmą, lengvai montuojami į ortakių sistemą. Slėgio pokytis slopintuvuose beveik toks pat kaip vėdinimo sistemų ortakiuose. Esant dideliam triukšmo lygiui į apvalių ortakių sistemą montuojami du slopintuvai. Korpusas pagamintas iš cinkuotos skardos juostos, kuri sukama į SPIRO vamzdį. Vidinė pertvara pagaminta iš perforuoto cinkuotos skardos lakšto ir užpildyta garsą izoliuojančia mineraline vata.
Slopintuvuose SAKS garsą slopinanti dalis yra storesnė už AKS slopintuvų.

Глушитель AKS, SAKS устанавливается в системы круглых воздуховодов, хорошо подавляет шум, легко устанавливается в систему воздуховодов. При высоком уровне шума в системы круглых воздуховодов устанавливаются несколько глушителей. Корпус изготовлен из оцинкованной жестяной ленты, которая сворачивается в трубу SPIRO. Внутренняя стенка изготовлена из перфорированной листовой оцинкованной жести и заполнена звукоизолирующей каменной ватой.
Звукоподавляющая часть в глушителях SAKS толще, чем в глушителях AKS.

Dimensions

Type	L, [mm]	ød, [mm]	øD, [mm]
AKS 100	300; 600; 900	100	200
AKS 125	300; 600; 900; 1000; 1200	125	200
AKS 160	600; 900; 1000; 1200	160	250
AKS 200	600; 900; 1000; 1200	200	315
AKS 250	600; 900; 1000; 1200	250	400
AKS 315	600; 900; 1000; 1200	315	500
AKS 400	900; 1000; 1200	400	630
AKS 500	900; 1000; 1200	500	630
AKS 630	900; 1000; 1200	630	800
AKS 800	900; 1000; 1200	800	1000
SAKS 100	300; 600; 900; 1000; 1200	100	315
SAKS 125	300; 600; 900; 1000; 1200	125	315
SAKS 160	300; 600; 900; 1000; 1200	160	400
SAKS 200	300; 600; 900; 1000; 1200	200	400
SAKS 250	300; 600; 900; 1000; 1200	250	500
SAKS 500	900; 1000; 1200	500	800

Weight

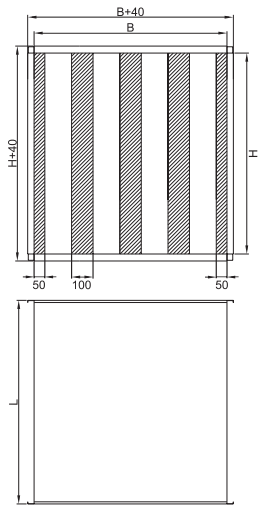
Type	Weight [kg]				
	300 mm	600 mm	900 mm	1000 mm	1200 mm
AKS 100	3,0	4,1	4,7	-	-
AKS 125	3,2	4,5	5,0	5,2	7,7
AKS 160	-	5,8	6,4	7,0	10,0
AKS 200	-	7,0	10,0	11,5	12,0
AKS 250	-	10,3	13,0	14,1	15,0
AKS 315	-	13,10	17,2	21,0	24,0
AKS 400	-	-	22,8	23,0	32,0
AKS 500	-	-	25,64	28,0	29,0
AKS 630	-	-	31,6	33,4	35,0
AKS 800	-	-	41,00	46,1	58,5
SAKS 100	2,1	4,2	6,3	7,0	8,4
SAKS 125	2,2	4,4	6,6	7,3	8,8
SAKS 160	3,3	5,6	9,2	10,2	12,2
SAKS 200	3,6	6,8	10,0	11,0	13,2
SAKS 250	4,1	8,2	12,4	13,8	16,6
SAKS 500	-	-	23,6	26,2	31,4

Attenuation values in frequency bands [dB]

Type	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
AKS 100/6	8	14	26	34	41	45	25
AKS 100/9	8	15	27	36	42	47	24
AKS 125/6	6	12	22	28	37	38	22
AKS 125/9	9	18	30	40	48	43	24
AKS 160/6	5	10	18	23	33	30	19
AKS 160/9	8	16	27	36	47	37	21
AKS 200/6	4	9	17	22	29	25	18
AKS 200/9	7	13	24	31	44	31	20
AKS 250/6	6	11	21	27	39	25	19
AKS 250/9	8	15	29	34	47	33	17
AKS 315/6	5	9	18	23	32	20	18
AKS 315/9	6	12	22	24	36	26	19
AKS 400/9	5	8	11	23	19	17	15
AKS 500/9	6	8	12	23	18	19	15
AKS 630/9	6	8	10	22	17	15	14
AKS 800/9	4	6	7	16	12	10	11

SSP

Rectangular duct silencer



Rectangular duct silencers SSP can be mounted into a system of rectangular air ducts. SSP silencers have good sound attenuation characteristics. Several silencers can be mounted into a rectangular air duct system if there is requirement for bigger noise reduction. The housing is made of galvanized steel and inner casing is made of perforated sheet steel. Mineral wool is used for sound insulation.

Slopintuvai stačiakampiams kanalams SSP montuojami į stačiakampių ortakių sistemas. Slopintuvai SSP gerai slopina triukšmą, lengvai montuojami į ortakių sistemą. Esant dideliam triukšmo lygiui, į stačiakampių ortakių sistemą montuojami keli slopintuvai. Korpusas pagamintas iš cinkuotos skardos. Vidinės pertvaros pagamintos iš perforuoto cinkuotos skardos lakšto, užpildytos garsą izoliuojančia mineralinė vata.

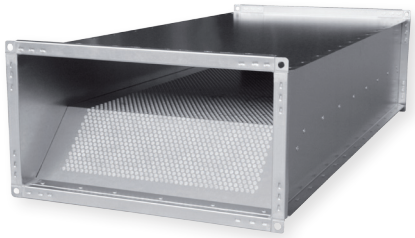
Tłumiki kanałowe SSP mogą być montowane w systemie prostokątnych kanałów wentylacyjnych, Tłumiki SSP mają dobre charakterystyki tłumienia. Kilka tłumików może być zamontowanych w prostokątnym układzie kanałów, jeśli istnieje wymóg zwiększenia redukcji szumów. Obudowa wykonana jest z blachy stalowej ocynkowanej, wewnętrzna obudowa jest wykonana z perforowanej blachy. Wełna skalna jest wykorzystywane do izolacji akustycznej.

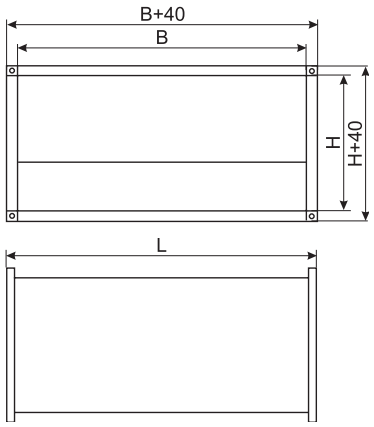
Глушитель для прямоугольных каналов SSP устанавливается в системы прямоугольных воздуховодов. Глушителъ SSP хорошо подавляет шум, легко устанавливается в систему воздуховодов. При высоком уровне шума, в системы прямоугольных воздуховодов устанавливаются несколько глушителей. Корпус изготовлен из оцинкованной жести. Внутренняя стенка изготовлена из перфорированной листовой оцинкованной жести. Для звукоизоляции применяется каменная вата.

Dimensions

For KUB fans	n [partitions]	B, [mm]	H, [mm]	L, [mm]
SSP 420x420	2	420	420	900
SSP 600x600	3	600	600	900
SSP 720x720	3	720	720	900
SSP 920x920	4	920	920	900

Rectangular duct silencer





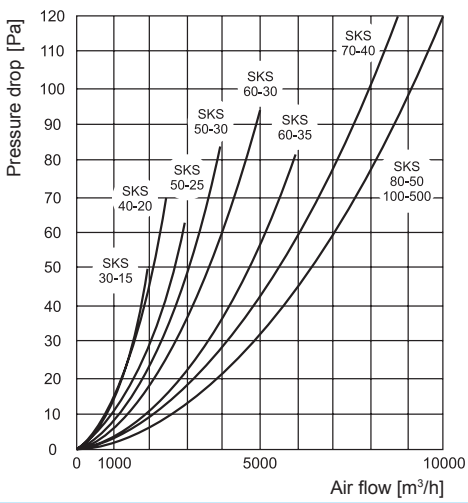
Rectangular duct silencers SKS are designed for rectangular duct fans VKS/VKSA and can be mounted into a system of rectangular air ducts. SKS silencers have good sound attenuation characteristics. Several silencers can be mounted into a rectangular air duct system if there is requirement for bigger noise reduction. The casing is made of galvanized steel and inner casing is made of perforated sheet steel. Mineral wool is used for sound insulation.

Slopintuvai stačiakampiams kanalams SKS montuojami prie stačiakampių kanalinių ventiliatorių VKS/VKSA arba į stačiakampių ortakių sistemas. Slopintuvai SKS gerai slopina triukšmą, lengvai montuojami į ortakių sistemą. Esant aukštam triukšmo lygiui, į stačiakampių ortakių sistemą montuojami keli slopintuvai. Korpusas pagamintas iš cinkuotos skardos. Vidinė pertvara pagaminta iš perforuoto cinkuotos skardos lakšto. Garso izoliacijai naudojama mineraline vata.

Tłumiki kanałowe SKS przeznaczone są do stosowania wraz z wentylatorami kanałowymi VKS/VKSA. Posiadają bardzo dobre charakterystyki tlumienia. Latwe do wbudowania w system kanałów wentylacyjnych. Spadki ciśnienia na tłumiku pokazano na wykresach poniżej. Jeśli zachodzi potrzeba jeszcze większj redukcji hałasów należy zainstalować dwa tłumiki. Prostokątny tłumik to z zewnątrz prostokątny kanał, wewnątrz obudowa z perforowanej stali.Kulisy wypełnione są dźwiękochłonną wełną mineralną.

Глушитель для прямоугольных каналов SKS устанавливается в прямоугольных каналах. Глушитель SKS хорошо подавляет шум, легко устанавливается в систему воздуховодов. При высоком уровне шума, в системы прямоугольных воздуховодов устанавливаются несколько глушителей. Корпус изготовлен из оцинкованной жести. Внутренняя стенка изготовлена из перфорированной листовой оцинкованной жести. Для звукоизоляции применяется каменная вата.

Pressure drop



Dimensions

Type	B, [mm]	H, [mm]	L, [mm]	Weight, [kg]
SKS 30-15	300	150	950	10,0
SKS 40-20	400	200	950	13,0
SKS 50-25	500	250	950	17,0
SKS 50-30	500	300	950	19,0
SKS 60-30	600	300	950	21,0
SKS 60-35	600	350	950	23,0
SKS 70-40	700	400	950	27,0
SKS 80-50	800	500	950	29,0
SKS 100-50	1000	500	950	32,0

Attenuation values in frequency bands [dB]

Type	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SKS 30-15	7	15	18	25	25	19	19
SKS 40-20	5	9	15	23	16	12	10
SKS 50-25	10	15	25	25	20	15	12
SKS 50-30	8	15	20	31	17	14	11
SKS 60-30	8	15	20	31	17	14	11
SKS 60-35	7	13	17	18	13	10	8
SKS 70-40	7	11	14	14	10	8	6
SKS 80-50	6	10	15	12	10	8	7
SKS 100-500	6	9	15	13	11	8	6

STP

Flange - adapter