Regulus

HEAT RECOVERY
VENTILATION

- **HRV units**
- **accessories**
- **air ducts**

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CONTENTS

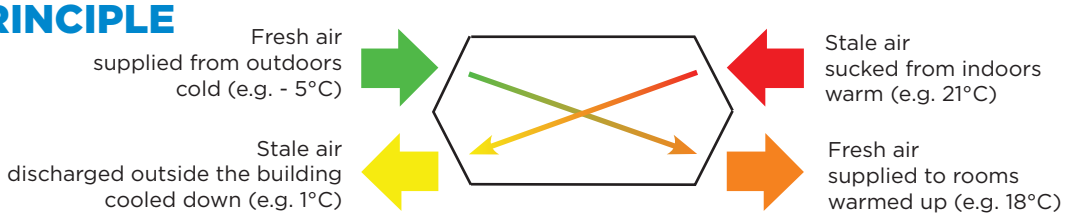
HEAT RECOVERY VENTILATION SYSTEM

A heat recovery ventilation system is intended for optimum air exchange in a building with minimum heat loss from ventilation. Thermal loss caused by ventilation in current family houses ventilated by micro-ventilation or semi-opened windows makes up to 40% of the total heat loss of a building. Heat recovery ventilation has become an integral part of recent ventilation systems. Thanks to heat transfer between the outgoing and incoming air, a house is ventilated sufficiently without suffering from high heat loss.

More and more strict requirements regarding the airtightness of the building envelope and other construction elements bring about insufficient air exchange inside the buildings, causing problems with dampness, mould and growth of microorganisms like e.g. mite, which often leads even to health problems. These problems cease when a controlled ventilation system is installed. The building is ventilated mechanically, with different intensity at different times of day. Permanent ventilation is ensured this way even at times when nobody is present.

A heat exchanger has become a crucial component in recent Heat Recovery Ventilation (HRV) systems. It transfers heat from the outgoing stale warm air to the incoming fresh cold air. However, it shall be noted that this is no heating appliance, just a ventilation unit ensuring the necessary air exchange. For this reason the building in question shall be equipped with an independent heating system and a heat source. HRV systems for detached houses require neither a detailed design nor complicated calculations, the principle and design of a Heat Recovery Ventilation system is very simple. Just a couple of principles shall be maintained during design and installation that are described on the following pages.

WORKING PRINCIPLE

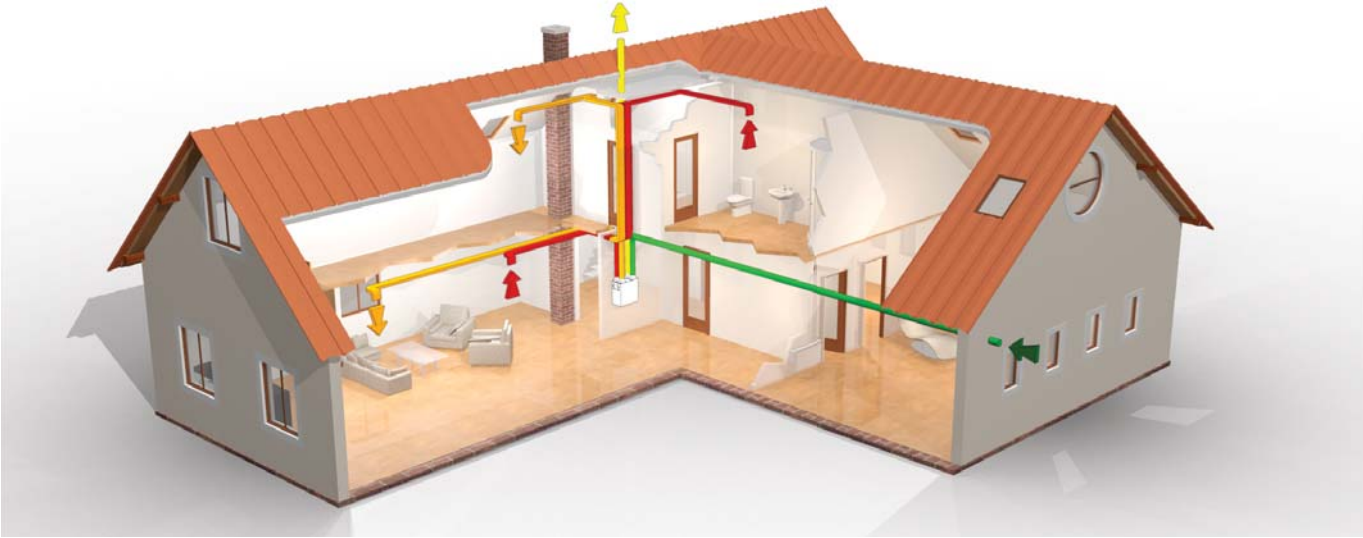


Fresh air is sucked into the HRV unit either through an outer wall or through a vent duct termination in a roof. The incoming fresh air flows into the HRV unit where it is preheated in a heat exchanger by heat taken from the warm stale exhaust air.

The preheated fresh air is distributed to individual rooms like bedrooms, living room, study etc. while the stale air is extracted from wet rooms like a toilet, bathroom or kitchen. This way the incoming fresh air flows through the entire house and adequate whole house ventilation is secured. It is not advisable to connect a kitchen hood to such a ventilation system because there is a risk of air ducts becoming contaminated with impurities coming from cooking.

The cooled stale air is discharged either through an outer wall or through a roof, however a minimum distance from the intake orifice shall be secured. Single room HRV units are installed in a peripheral wall, so no air ducts are needed.

A WHOLE-HOUSE VENTILATION SYSTEM



SYSTEM DESIGN

HRV system design is simple, requiring no complicated calculations.

First of all, a suitably sized unit shall be selected depending on the size of the building and number of inhabitants. Sentinel Kinetic B, Sentinel Kinetic Advance or Horizontal 200ZPH are the best for singlefamily houses with living area up to 200 sqm.

Sentinel Kinetic Horizontal	Sentinel Kinetic B	Sentinel Kinetic Advance	Sentinel Kinetic B Plus
			
for **family homes and flats up to 120 sqm** performance: **168** m³/h inlets/outlets **240x60** mm	for **family homes up to 200 sqm** performance: **275** m³/h spigot diameter: **125** mm	for **family homes up to 300 sqm** performance: **414** m³/h spigot diameter: **125** mm	for **family homes up to 350 sqm** performance: **490** m³/h spigot diameter: **150** mm

Then, the duct routes and positions of air disks shall be considered.

Ideally, both supply and exhaust air disks should be located in a ceiling. If this is not possible, air can be supplied through grilles above the floor. In any case, stale air intake shall not be located less than 150 cm above floor.

Air ducts are routed from the unit to individual rooms.

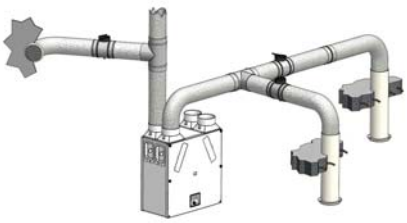
Regulus ventilation systems use several types of air ducts:

- round flexible aluminium ducts,
- rigid rectangular plastic ducts 60×200 mm,
- flexible highly resistant PE ducts with antibacterial treatment,
- round plastic ducts,
- round EPP ducts.

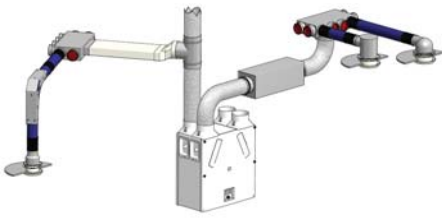
For newly built houses, consult the ducting layout with your building designer.

In case of a house remodelling, our engineers are ready to help you with ducting design.

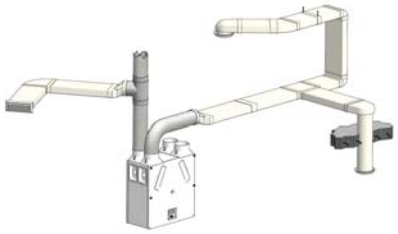
ROUND FLEXIBLE ALUMINIUM DUCTS



ROUND FLEXIBLE PE DUCTS



RECTANGULAR PLASTIC DUCTS



CENTRAL HRV UNITS

Sentinel Kinetic Advance

Sentinel Kinetic Advance S, S ENT and SX Central HRV Units are HRV units of a new generation that permit respecting individual operation of the building and the lifestyle of the user. They are designed for continuous ventilation of family homes of living area up to 300 sqm, bringing maximum comfort for the user and an easy installation. The most advanced materials are used for the production.

Advance HRV Units are equipped with an integrated digital controller with a touchscreen, automatic bypass, humidity sensor, a condensate discharge point, enabling also WiFi connectivity. For the most comfortable ventilation, also carbon dioxide sensors, humidistats, PIR sensor and similar can be added.

The inner room of the units is fitted with highquality thermal insulation which permits the units to be installed also in unheated spaces (e.g. an attic) without suffering from energy losses.

The unit can be controlled via the integrated backlit touchscreen, via WiFi connection or through a master controller. The touchscreen can be fitted directly on the unit, or connected via a docking station. The WiFi connection enables the user immediate access to the unit, its commissioning, configuring and monitoring of the ventilation mode. Then the unit can be controlled and its settings modified using a smartphone or tablet. Two G3 filters are integrated in Kinetic Advance units for the sake of a healthy climate inside the building. When even a better filtration is needed, F5 filters can be added downstream from the G3 filters that will secure clean air even in locations with polluted air.

Due to the high efficiency of the unit, the heat exchanger could suffer from ice formation under extreme frost. For this reason the unit is equipped with an automatic defrost function. A frozen heat exchanger can be also prevented by installing an air duct heater in the intake air duct – see the chapter Air duct heaters. A cooler outdoor air can be used to help cool the building via the integrated summer bypass.

TECHNICAL DATA

PERFORMANCE DATA

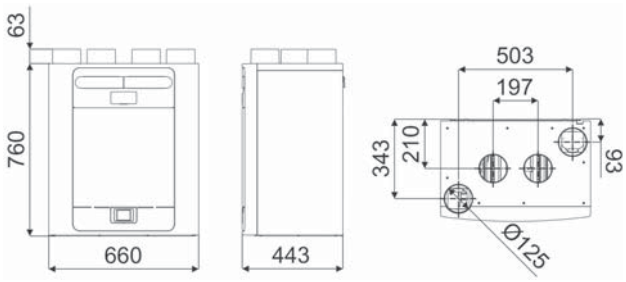
Max. air flow rate *	**414 m³/h**
Heat recovery efficiency	**max. 93 %**
Energy Efficiency Class	**A+**

*flow rates for specific installations shall be modified by performance diagrams

ACOUSTIC DATA

Sound level (at 3 m distance)	**15,5 dB(A) for low air flow** **34 dB(A) for high air flow**

DIMENSIONS



MODELS

Sentinel Kinetic Advance S
Code: 16487

Sentinel Kinetic Advance S ENT
Code: 17601

Sentinel Kinetic Advance SX
Code: 16488

Compared to the S type, the S ENT unit is equipped with an enthalpy heat exchanger that recovers not only heat but also humidity.

Compared to the S type, the SX unit is equipped with a WiFi module and offers constant volume flow control.

PERFORMANCE MODES

5 preset performance modes are available in the unit. It is possible to program a different ventilation intensities for different day periods and for separate days of a week, purge intervals and silent hours for night operation. Maintaining optimum relative humidity inside the building is ensured by automatic proportional air flow increase based on the measurements from an integrated humidity sensor. The integrated timer function in the unit will also ensure sufficient room ventilation with the possibility of relative humidity boost.

CENTRAL HRV UNITS

Sentinel Kinetic B

A whole-house heat recovery ventilation unit with integrated summer by-pass, designed for ventilation of family homes of living area up to 200 sqm.

An integrated air bypass permits air to bypass the heat exchanger in the summer. Its control is automatic, based on both the outdoor and indoor temperatures.

It shall be installed on the wall in a utility room or on the floor in the attic.

The unit is fitted with a condensate discharge point that needs to be connected to a sanitary sewer.

The unit involves replaceable G3 class air filters (for fine dust).

As a result of the unit's high efficiency, during periods of extreme frost the heat exchanger might suffer from freezing; for this reason the unit is equipped with an automatic defrosting function.

The heat exchanger freezing can be prevented by installing an air duct heater on the intake air duct – see the Air Duct Heaters chapter.

To ensure the most comfortable ventilation in the building, it is possible to add CO2 sensors, hygrostats, PIR sensors, etc. to the unit.

A compact size and a very low noise level are the big advantages of this unit.

Code: 10176

TECHNICAL DATA

PERFORMANCE DATA

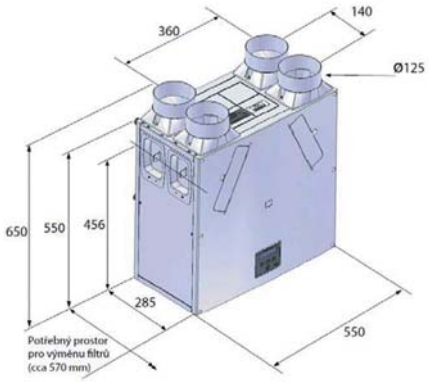
Max. air flow rate *	**275 m³/h**
Heat recovery efficiency	**max. 92 %**
Energy Efficiency Class	**A**
Low air flow	**20 % (preset)**
Medium air flow	**30 % (preset)**
High air flow	**50 % (preset)**
Purge	**100 %**

*flow rates for specific installations shall be modified by performance diagrams

ACOUSTIC DATA

Sound level (at 3 m distance)	**20 dB(A) for medium air flow** **36 dB(A) for high air flow**

DIMENSIONS



PERFORMANCE MODES

3 performance modes (speeds) are preset in the unit. Different intensity of ventilation can be programmed for different times of the day.

Preset values can be changed freely. Switching between low and medium speed modes is automatic following the preset time program. High speed mode (boost) can be switched on either periodically, or by schedule, or by pressing a key.

The boost mode start can be also automatic, e.g. by turning on the light in toilet.

Air flow settings with respect to the total floor area of ventilated rooms.

Max. ventilated room		Low air flow		Medium air flow		High air flow (boost)	
living area	space volume	setting	[m³/h]	setting	[m³/h]	setting	[m³/h]
80 m²	200 m³	25%	40	40%	70	60%	130
100 m²	250 m³	30%	50	50%	100	70%	160
120 m²	300 m³	35%	60	60%	130	80%	200
150 m²	375 m³	40%	70	70%	160	100%	240

CENTRAL HRV UNITS

Sentinel Kinetic B Plus

A whole-house heat recovery ventilation unit with integrated summer by-pass, designed for ventilation of family homes of living area up to 350 sqm.

An integrated air bypass permits air to bypass the heat exchanger in the summer. Its control is automatic, based on both the outdoor and indoor temperatures.

It shall be installed on the wall in a utility room or on the floor in the attic.

The unit is fitted with a condensate discharge point that needs to be connected to a sanitary sewer.

The unit involves replaceable G3 class air filters (for fine dust).

As a result of the unit's high efficiency, during periods of extreme frost the heat exchanger might suffer from freezing; for this reason the unit is equipped with an automatic defrosting function.

The heat exchanger freezing can be prevented by installing an air duct heater on the intake air duct – see the Air Duct Heaters chapter.

To ensure the most comfortable ventilation in the building, it is possible to add CO2 sensors, hygrostats, PIR sensors, etc. to the unit.

A compact size and a very low noise level are the big advantages of this unit.

Code: 10335

TECHNICAL DATA

PERFORMANCE DATA

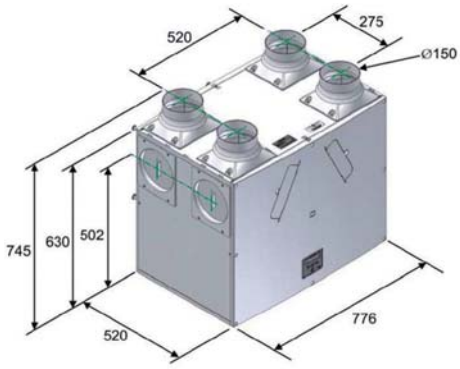
Max. air flow rate *	**490 m³/h**
Heat recovery efficiency	**max. 92%**
Energy Efficiency Class	**A+**
Low air flow	**20% (preset)**
Medium air flow	**30% (preset)**
High air flow	**50% (preset)**
Purge	**100%**

*flow rates for specific installations shall be modified by performance diagrams

ACOUSTIC DATA

Sound level (at 3 m distance)	**24 dB(A) for medium air flow** **34 dB(A) for high air flow**

DIMENSIONS



PERFORMANCE MODES

3 performance modes (speeds) are preset in the unit. Different intensity of ventilation can be programmed for different times of the day. Preset values can be changed freely. Switching between low and medium speed modes is automatic following the preset time program. High speed mode (boost) can be switched on either periodically, or by schedule, or by pressing a key. The boost mode start can be also automatic, e.g. by turning on the light in toilet.

Air flow settings with respect to the total floor area of ventilated rooms.

Max. ventilated room		Low air flow		Medium air flow		High air flow (boost)	
living area	space volume	setting	[m³/h]	setting	[m³/h]	setting	[m³/h]
150 m²	375 m³	10%	40	40%	150	60%	250
170 m²	425 m³	15%	60	45%	170	70%	280
200 m²	500 m³	25%	90	50%	200	80%	330
230 m²	575 m³	30%	120	60%	250	100%	380

CENTRAL HRV UNITS

Sentinel Kinetic Horizontal 200ZPH

A central heat recovery ventilation unit, designed for continuous ventilation of family homes and flats of living area up to 120 sqm.

Kinetic Horizontal 200 ZPH HRV Units are equipped with an integrated digital controller, automatic bypass, humidity sensor and a condensate discharge point. For the most comfortable ventilation, also carbon dioxide sensors, humidistats, PIR sensor and similar can be added.

Horizontal 200 ZPH HRV Units, just 200 mm high, offer many variants for placing inside the rooms to be ventilated. They are especially suitable for installation into a ceiling void, or freely under the ceiling and into roof framing. In order to minimize heat loss and permit installation into unheated rooms, the unit is fully thermally insulated.

Two replaceable air filters of G3 class (fine dust) are integrated in Kinetic Advance units.

Due to the high efficiency of the unit, the heat exchanger could suffer from ice formation under extreme frost. For this reason the unit is equipped with an automatic defrost function. A frozen heat exchanger can be also prevented by installing an air duct heater in the intake air duct – see the chapter Air duct heaters.

A cooler outdoor air can be used to help cool the building via the integrated summer bypass.

Code: 16709

PERFORMANCE MODES

A different ventilation intensity can be programmed for different day times. The unit comes with a digital controller that can be placed inside the dwelling and used for a quick change in ventilation modes depending on the individual needs of the user. The integrated humidity sensor increases speed in proportion in order to ensure optimum relative humidity levels. The integrated timer function in the unit will also ensure sufficient room ventilation with the possibility of relative humidity boost.

TECHNICAL DATA

PERFORMANCE DATA

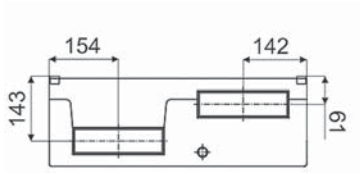
Max. air flow rate *	**168 m³/h**
Heat recovery efficiency	**max. 86 %**
Energy Efficiency Class	**A**
Low air flow	**20 % (preset)**
Medium air flow	**30 % (preset)**
High air flow	**50 % (preset)**
Purge	**100 %**

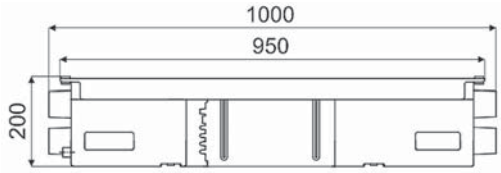
*flow rates for specific installations shall be modified by performance diagrams

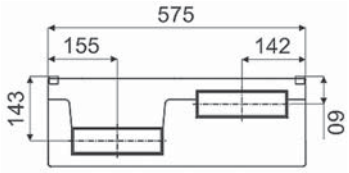
ACOUSTIC DATA

Sound level (at 3 m distance)	**20,8 dB(A) for low air flow** **27,7 dB(A) for high air flow**

DIMENSIONS







CENTRAL HRV UNITS

HR100R, HR100RS

Central HRV units intended for ventilation of small flats or single rooms, featuring 2 speed modes – low and high. They need an external switch for control, mostly a plain rocker switch on a wall or a humidistat.

Both the HRV unit and air ducts are usually installed into a ceiling void or unused attic.

TECHNICAL DATA

PERFORMANCE DATA

Air flow	**66 m³/h (max. air flow)** **48 m³/h (current air flow)**
Heat recovery efficiency	**max. 70 %**

ACOUSTIC DATA

Sound level (at 3 m distance)	**20 dB(A)** **for current air flow** **30 dB(A)** **for max. air flow**

MODELS

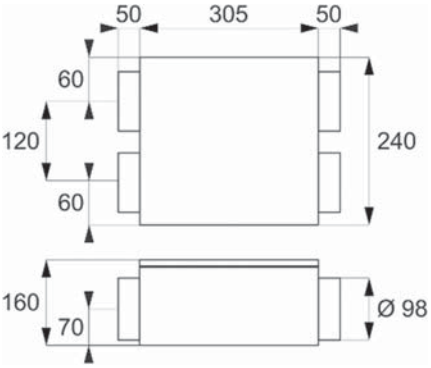
HR100R is suitable for attic-room installations. The service panel is located on its upper side.

Code: 7483

HR100RS is suitable for ceiling void installations or for ceiling mount. The service panel is located on its bottom.

Code: 10308

DIMENSIONS



SINGLE-ROOM HRV UNITS

HR100W, HR30W

Single-room HRV units intended for ventilation of single rooms (living rooms, kitchens, bathrooms, toilets etc.). They feature 2 speed modes – low and high. An external switch is needed for control, mostly a plain double rocker switch on a wall or a humidistat.

This unit is designed to be installed in a wall, its suitable thickness is between 220 and 280 mm (up to 500 mm with an extension, see Accessories).

TECHNICAL DATA

PERFORMANCE DATA	HR100W	HR30W
Low air flow- intake	38 m³/h	30 m³/h
Low air flow- exhaust	43 m³/h	35 m³/h
High air flow- intake	69 m³/h	40 m³/h
High air flow- exhaust	77 m³/h	50 m³/h
Heat recovery efficiency	max. 70 %	max. 70 %

ACOUSTIC DATA

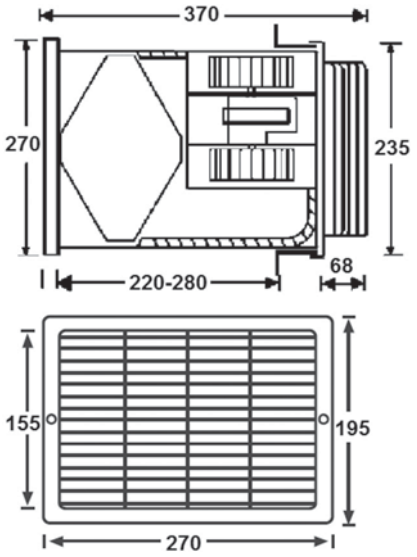
	20 dB(A) for low air flow	
Sound level (at 3 m distance)	35 dB(A) for high air flow	28 dB(A) for high air flow

MODELS

HR100W
Code: 6955

HR30W
Code: 6954

DIMENSIONS



ACCESSORIES

EXT100 Extension is available that permits installation into thicker walls, 280-500 mm.

ACCESSORIES TO CENTRAL HEAT RECOVERY VENTILATION UNITS

ACCESSORIES		CODE
	Humidity sensor for Sentinel Kinetic B, B plus, Horizontal	**10177**
	CO_2 sensor for Sentinel Kinetic	**11852**
	Remote control, 15m cable, for Sentinel Kinetic B, B plus, Horizontal	**10757**
	Connection Module - Sentinel Kinetic B to IR 12 via CIB	**17786**
	Connection Module - Sentinel Kinetic Advance to IR 12 via CIB	**17787**
	0-10V Module for Sentinel Kinetic Advance S	**16607**
	WiFi Module for Sentinel Kinetic Advance S	**16608**
	Docking station for Advance unit control module, incl. 15 m cable	**20192**
	Voltage-free Extension Module for Sentinel Kinetic Advance, 4 inputs	**16610**
	Extension Module for Sentinel Kinetic Advance, 2 inputs	**16611**
	HR-S Humidistat - 35-95% RH, mechanical type	**14334**
	Circuit breaker for Sentinel	**9532**
	Insulation for HR 100 R HRV unit	**11767**
	Insulation for HR 100 RS HRV unit	**11768**

FILTERS FOR HRV UNITS

FILTERS FOR HRV UNITS		CODE
	Filter fabric for Sentinel Kinetic B – set of 2 G3 filters	**13323**
	Filter fabric for Sentinel Kinetic B – set of 2 G5 pollen filters	**13324**
	Filter fabric for Sentinel Kinetic B Plus – set of 2 G3 filters	**13325**
	Filter fabric for Sentinel Kinetic B Plus – set of 2 G5 pollen filters	**13326**
	Filter for Sentinel Kinetic B – set of 2 G3 filters	**17026**
	Filter for Sentinel Kinetic B – set of 2 G5 pollen filters	**17572**
	Filter for Sentinel Kinetic B Plus – set of 2 G3 filters	**17028**
	Filter for Sentinel Kinetic B Plus – set of 2 G5 pollen filters	**17573**
	Filter fabric for HR 30 W, HR 100 W	**9001**
	Filter fabric for HR 100 R	**8136**
	Filter for Sentinel Kinetic Advance – set of 2 G3 filters	**16891**
	Filter for Sentinel Kinetic Advance – set of 2 G5 pollen filters	**16892**
	Filter for Sentinel Kinetic Advance – 1 pocket F5 pollen filter	**17024**
	Filter for Sentinel Kinetic Advance – 1 pocket F7 pollen filter	**17025**
	Filter for Sentinel Kinetic Horizontal – set of 2 G3 filters	**17030**

ROUND FLEXIBLE ALUMINIUM DUCTS

Ducting can be bent easily so no elbows are needed. These hoses are delivered in one- or two-layer versions, with 25 cm thick insulation.

The duct size depends on the air volume to be transported (unit size):

HR100R	DN 100 mm
Sentinel Kinetic B	DN 125 mm
Sentinel Kinetic B Plus	DN 150 mm - backbone duct, for branches 125mm is sufficient
Sentinel Kinetic Advance	DN 125 mm

For HR100R and in confined spaces also for Sentinel models, the ducts supplying air to small rooms under 15 sqm can be reduced even to 100mm in diameter.

Metal adapters are used to make branches or transitions. A flexible duct shall be shifted onto the adapter and fixed with a hose band or a duct tape.

HOSE BAND, CLAMP

Hose band is available in 30m coils.
Any desired portion of the hose band can be cut off and fitted with a clamp.

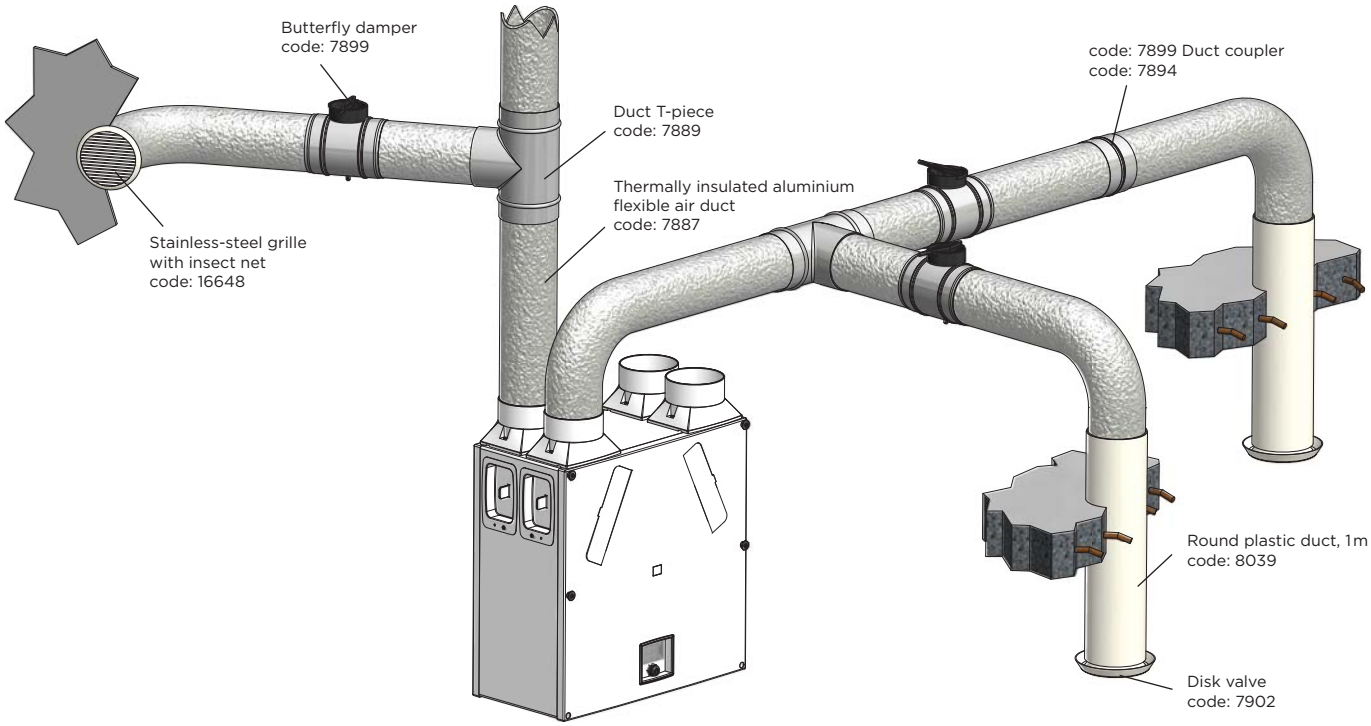
Hose band code: 9209.
Clamp code: 9210 – 1 piece, 17061 – 50 pcs bulk pack.

DUCT TAPE

Aluminium foil tape (no mesh), 50 mm wide and 0.3 mm thick, 50 m.

Code: 11515

Installation example with round aluminium air ducts



Through the wall ducts

Round plastic duct shall be fitted into a wall and fixed with mortar. Its outer diameter shall correspond to the flexible duct diameter. About 3 cm of the rigid duct shall be left protruding from the wall, enabling the flexible duct be shifted on it.

ROUND HOSES	CODE
 Single layer aluminium flexible air duct, 100 mm x 5 m	**7743**
Single layer aluminium flexible air duct, 125 mm x 5 m	**7589**
Single layer aluminium flexible air duct, 150 mm x 5 m	**7886**
 Insulated aluminium flexible air duct, 102 mm x 10 m	**8000**
Insulated aluminium flexible air duct, 127 mm x 10 m	**7887**
Insulated aluminium flexible air duct, 152 mm x 10 m	**7888**
Insulated aluminium flexible air duct, 203 mm x 10 m	**8037**

FITTINGS	CODE
 Duct coupler, 100 mm	**8854**
Duct coupler, 125 mm	**7894**
Duct coupler, 150 mm	**7895**
 Duct reducer, 125/100	**7896**
Duct reducer, 150/125	**7897**
Duct reducer, 150/100	**16653**
Duct reducer, 200/150	**7904**
 Duct T-connector, 100/100	**7769**
Duct T-connector, 125/100	**7721**
Duct T-connector, 125/125	**7889**
Duct T-connector, 150/100	**7890**
Duct T-connector, 150/125	**7908**
Duct T-connector, 150/150	**7891**

COMPONENTS	CODE
 Butterfly damper, 100 mm	**7898**
Butterfly damper, 125 mm	**7899**
Butterfly damper, 150 mm	**7900**
 Airtight butterfly damper, 100 mm	**7771**
Airtight butterfly damper, 125 mm	**10872**
Airtight butterfly damper, 150 mm	**11565**

SANIFLEX FLEXIBLE ROUND ANTIBACTERIAL DUCTS

SANIFLEX is flexible round antibacterial thermally insulated ducting. The inner air duct is a foil made of self-extinguishing poly-olefin resins with silver ions that prevent growth of a wide range of microorganisms. The next layer is formed by a 25 mm thick thermal insulation of mineral wool with a plastic outside jacket that offers excellent vapour barrier, preventing moisture condensation. SANIFLEX is suitable also for more demanding applications in air distribution, air conditioning and heating.

AIR DUCTS	CODE
 Thermally insulated antibacterial air duct 127 mm x 10 m	**16068**

RIGID ROUND EPP DUCTS

The EPP ducting system is made of extruded polypropylene. It has a number of advantages: it is light, rigid, easy and quick to work with. The system achieves Class C leak tightness. It does not require additional insulation and eliminates thermal bridges.

It is made in diameters 125 mm and 150 mm.

Standard wall thickness is 15 mm. The 90° elbow can be cut to create two 45° elbows (one coupler needs to be added).

RIGID ROUND EPP DUCTS			CODE
	Round EPP duct, 0.5m	125 mm	**18064**
		150 mm	**18065**
	Round EPP duct, 1m	125 mm	**18066**
		150 mm	**18067**
	90° EPP elbow	125 mm	**18068**
		150 mm	**18069**
	45° EPP elbow	125 mm	**18070**
		150 mm	**18071**
	EPP coupler	125 mm	**18072**
		150 mm	**18073**

RIGID ROUND PLASTIC DUCTS

RIGID ROUND PE DUCTS			CODE
	Round plastic duct, 1m	100 mm	**8852**
		125 mm	**8039**
		150 mm	**16731**
	90° Elbow	100 mm	**18164**
		125 mm	**18165**
		150 mm	**18166**
	45° Elbow	100 mm	**18167**
		125 mm	**18168**
	Tee	100 mm	**18161**
		125 mm	**18162**
		150 mm	**18163**
	Duct coupler	100 mm	**18169**
		125 mm	**18170**
		150 mm	**18171**
	Duct reducer	125/100 mm	**18172**
		150/125 mm	**18173**

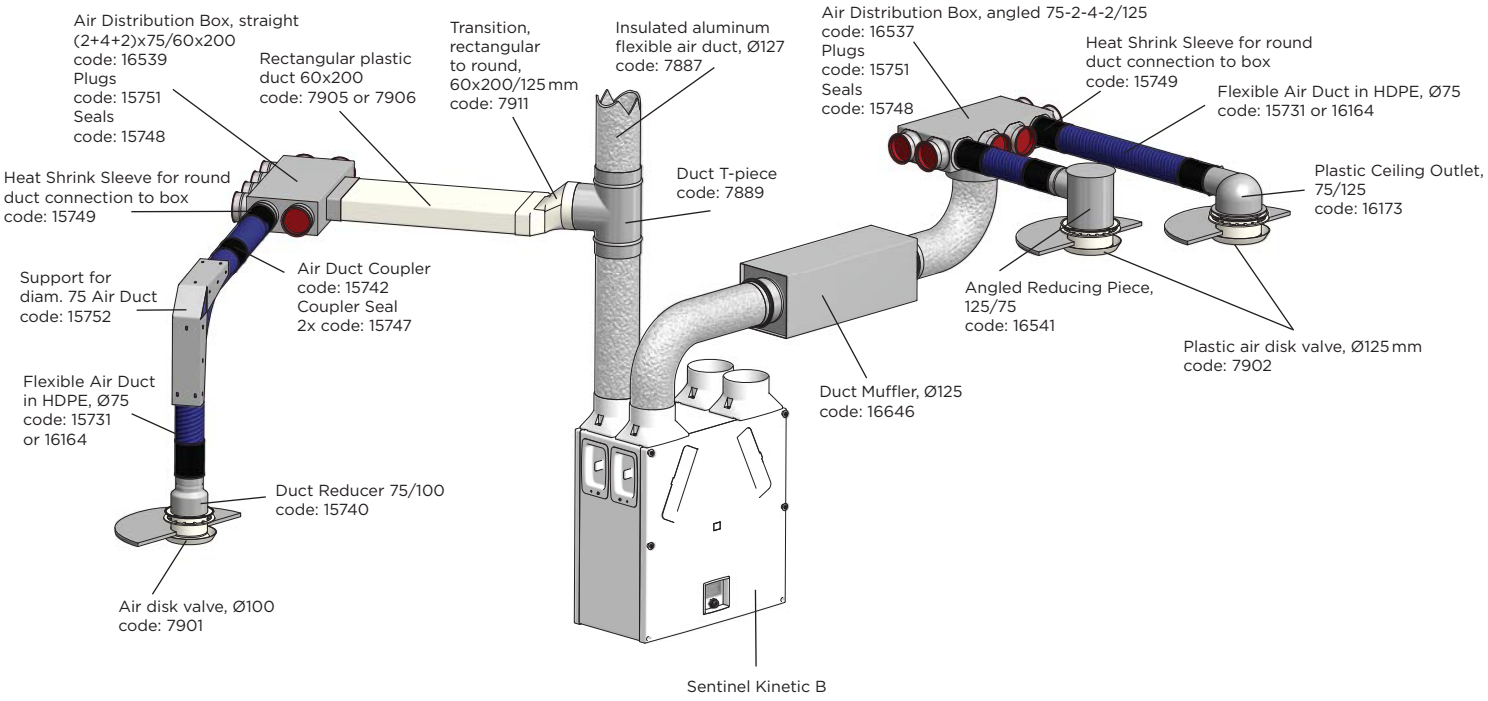
HIGHLY RESISTANT FLEXIBLE PE AIR DUCTS

Air ducting made of special polyethylene, its inner wall with smooth surface offers low pressure drop for air transport and easy cleaning. Its small diameter (75 mm) permits easy installation into suspended ceiling. High mechanical resistance enables also installation into floors, to concrete screed. The duct material contains ions of silver that ensure antistatic, antibacterial and antifungal protection.

Advantages:

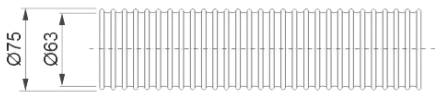
- minimum pressure drop
- easy cleaning
- simple handling and installation
- noise suppression
- hygienic protection
- long service life

Installation example with PE round ducting



Flexible pipes

Delivered in 10 or 50m bulk pack, ends plugged.



Distribution boxes

Designed as connection parts for separate branches of ducts, connection for DN 125 flexible aluminium air ducts.

ROUND AIR DUCTS		CODE
	ø 75 mm Air Duct, antibacterial - 50 m	**15731**
	ø 75 mm Air Duct, antibacterial - 10 m	**16164**

PLASTIC AIR DISTRIBUTION BOXES		CODE
	Plastic Air Distribution Box 2x75/125	**18773**
	Plastic Air Distribution Box, angled 2x75/125	**18770**
	Plastic Air Distribution Box, angled (2+2+2+2)x75/125	**18772**
	Plastic Air Distribution Box, angled (4+2+4+2)x75/125	**18771**

METAL AIR DISTRIBUTION BOXES		CODE
	Air Distribution Box, angled, 3x75/125	**15733**
	Air Distribution Box, angled, (1+3+1)x75/125	**16536**
	Air Distribution Box, angled, (2+4+2)x75/125	**16537**
	Air Distribution Box, angled, (2+4+2)x75/150	**16538**
	Air Distribution Box, angled, (1+3+1)x75/60x200	**16540**
	Air Distribution Box, angled, (2+4+2)x75/60x200	**16539**

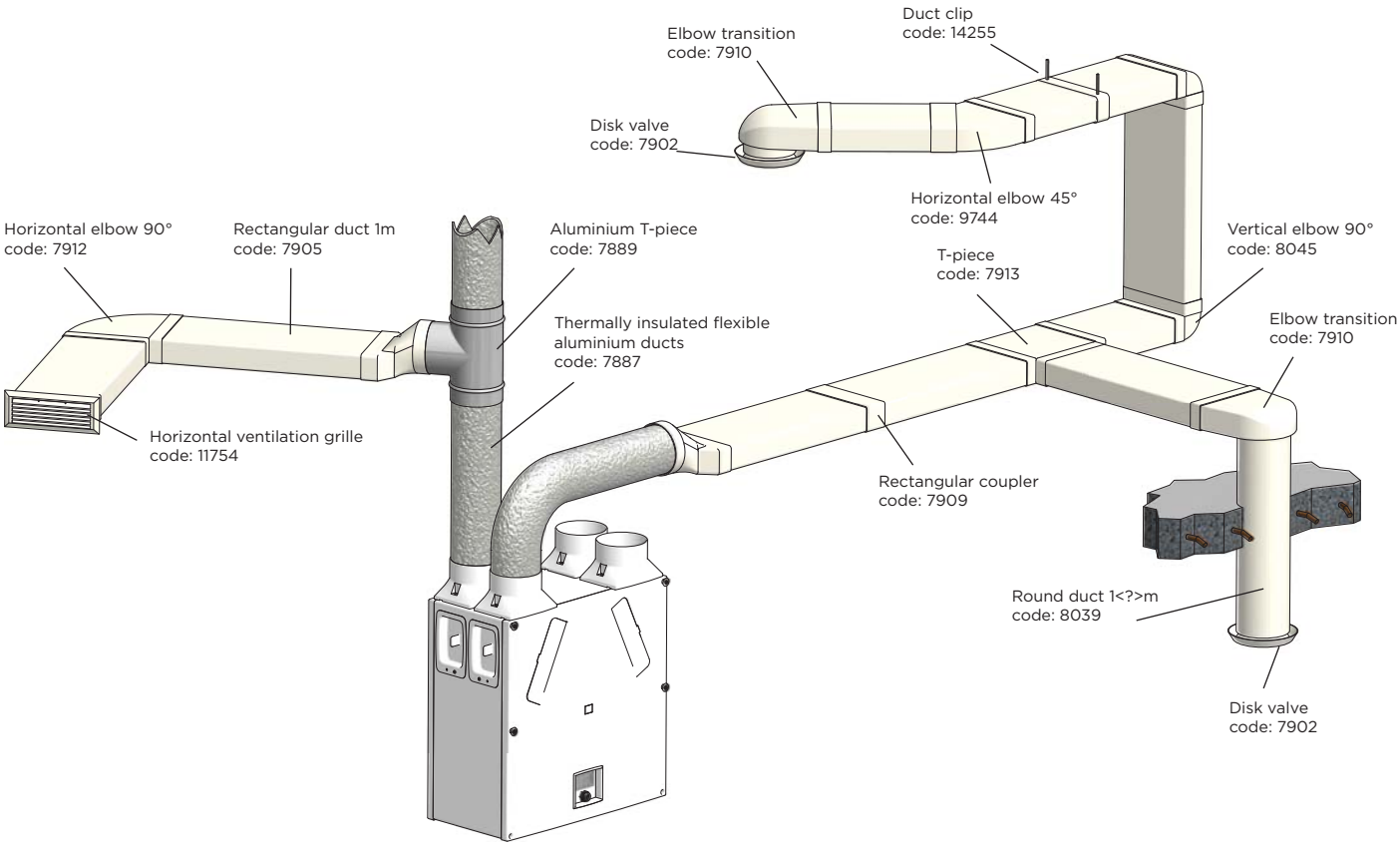
ACCESSORIES		CODE
	Extension, 125 mm x 0.5 m	**16542**
	Extension, 150 mm x 0.5 m	**16706**
	Butterfly damper	**16730**
	90° Bend	**15739**
	100/75 Adapter	**15740**
	125/75 Adapter	**15741**
	Angled Reducing Piece, 125/75	**16541**
	Support for flexible air duct	**15752**
	Flexible duct cutter, 75 mm	**20248**
	Flexible Duct Coupler	**15742**
	Heat shrink sleeve	**15749**
	Gasket between flexible duct and box	**15748**
	Gasket between flexible duct and coupler	**15747**
	Air Distribution Box Plug	**15751**
	Flexible Duct Plug	**15750**
	DUCT Universal silver adhesive tape - 50 mm x 50 m x 0.15 mm, up to 60 °C	**16654**
	TALE Sealing tape (reinforced with glass fibre mesh) - 50 mm x 50 m x 0.3 mm, up to 120 °C	**16655**

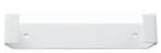
RECTANGULAR PLASTIC DUCTS

Plastic ducting of 60x200 mm cross section can be installed even into constrained ceiling voids or floors thanks to its small height. The plastic ducts are rigid so transitions are needed to change the direction or divide the air flow - bends or T-pieces. When installed into an unheated space (attic), additional insulation is needed.

Rectangular plastic ducting connects through so called sockets. Straight sections are slid into the sockets of shaped transitions, and two transitions cannot be connected directly, only through a section of a straight duct.

Installation example with rectangular plastic air ducts



RECTANGULAR PLASTIC DUCTS		CODE white	CODE gray
	Rectangular plastic ducts, 60x200 mm, 1.5 m	**7906**	**19247**
	Rectangular coupler, 60x200 mm	**7909**	**20186**
	Elbow transition, rectangular to round, 60x200/125 mm	**7910**	**20239**
	Elbow transition, rectangular to round, 60x200/100 mm	**8243**	**20285**
	Rectangular to round transition, 60x200/125 mm	**7911**	**20291**
	Rectangular to round transition, 60x200/100 mm	**18160**	**20290**
	Horizontal elbow 90°, 60x200 mm	**7912**	**20240**
	Horizontal elbow 45°, with divisible segments, 60×200 mm	**9744**	
	Horizontal elbow 45°, without divisible segments, 60×200 mm	**18557**	**20287**
	Vertical elbow 90°, 60x200 mm	**8045**	**20188**
	Vertical elbow 45°, 60x200 mm	**18157**	**20288**
	T-piece T, 60x200 mm	**7913**	**20187**
	Drop down section, 60x200 mm	**18158**	**20289**
	Horizontal ventilation grille, 60x200 mm, enlarged frame	**11754**	
	Horizontal ventilation grille, 60x200 mm, with frame into coupler	**18578**	
	Vertical ventilation grille, 60x200 mm	**18159**	
	Round plastic duct, 100 mm x 1 m	**8852**	
	Round plastic duct, 125 mm x 1 m	**8039**	
	Round plastic duct, 150 mm x 1 m	**16731**	
	Rectangular duct clip, 204x60 mm	**14255**	

ACCESSORIES

Air duct heaters

An air duct heater installs directly into a round duct upstream of the heat recovery unit. It is intended primarily for preventing the unit from entering defrost mode, i.e. from creating a slight negative pressure inside the building. A heater of circa 400W output is sufficient to pre-heat the incoming air. The heater is thermostat-controlled, switching on for low outdoor temperature periods only.

AIR DUCT HEATERS		CODE
	Electric air duct heater, 0.4 kW DN 125, incl. an adjustable and safety thermostats, 3m cable	**14059**
	Electric air duct heater, 0.6 kW DN 150, incl. an adjustable and safety thermostats, 3m cable	**14769**
	HDW 150 Air duct heater for ducts of 150 mm diam., max. air flow rate 400 m³/h, 2.8 kW output (at 300 m³/h air flow rate, 60°C inlet water temperature and 0°C incoming air temperature).	**18642**
	MKV 150 Air duct heater/cooler, connection diam. 150 mm, for max. air flow rate of 300 m³/h, with condensate drain and drop eliminator, 1.6 kW cooling output (at 300 m³/h air flow rate, 7°C inlet water temperature, 28°C incoming air temperature), 2 kW heating output (at 300 m³/h air flow rate, 50°C inlet water temperature, 15°C incoming air temperature)	**18139**
	Insulation Kit for MKV 150 Air Heater/Cooler	**18269**

Duct noise muffler

Insulated flexible ducts have very good soundproofing properties. Should there be less than 3m from the unit to the closest outlet, it is advisable to install a duct muffler.

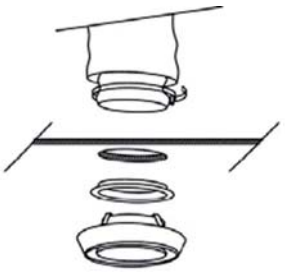
Code: 16646

Duct cleaning spray

Air ducts cleaning is often difficult, for this reason we recommend using a hemical spray. The frequency of chemical treatment depends on the quality of air supplied from outside / extracted from inside the building. The minimum cleaning interval is once a year.

Code: 10686

Air disk valves



It is advisable to use plastic disk valves for easy installation and proper air distribution in a room. They are user-adjustable from inside the ventilated room and can be mounted into a ceiling or a suspended ceiling, fitted on a plastic transition piece or on a flexible aluminium duct. When connected to a 75 mm diameter flexible air duct, a straight steel reducer or a ceiling plastic air disk valve shall be used. The valve diameter depends on the diameter of the ducting and on the size of the ventilated room.

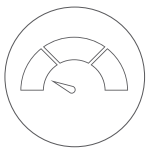
Round grilles may be fitted into walls.

AIR DISK VALVES			CODE
	RV Designer Air Disc Valve, 125 mm diam., small		**18766**
	RV Designer air disc valve, 125 mm diam., big - lacquered alumimium		**18767**
	RV Designer air disc valve, 125 mm diam., square - lacquered aluminium		**18768**
	Shield for RV designer air disc valve		**18769**
	Supply and exhaust plastic air disk valve	100 mm	**7901**
	Supply and exhaust plastic air disk valve	125 mm	**7902**
	G2 Filter for air disk valves 7901, 7902	100 mm	**18619**
		125 mm	**18620**
	Vyústka stropní plastová 75/125		**16173**
	Round plastic grille, insect net, 80-125 mm		**9002**
	Round grille in CrNi stainless steel, insect mesh	100 mm	**16647**
		125 mm	**16648**
		150 mm	**16649**
	Round grille in CrNi stainless steel, bull nose, insect mesh	100 mm	**16650**
		125 mm	**16651**
		150 mm	**16652**
	Vertical terminal 125 mm		**175**
	Pitched-roof flashing, malleable Al sheet		**8014**

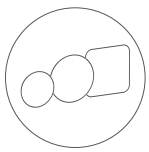
Adjustable RV air disk valves

For air supply/extract, suitable for air flow rate up to 21 l/s

Easy adjusting: 26 lockable positions



Low noise level and small pressure drop



Three designs to fit in various interiors

Outer dimensions are the same disregarded of the selected flow rate setting

For all air ducts with connection diam. 116 or 155 mm

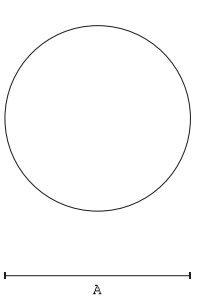
Easy cleaning: no need to disassemble the valve base

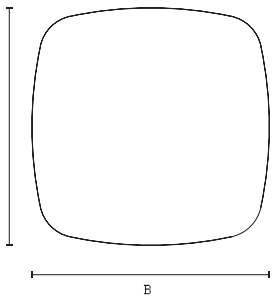
Low turbulent air flow: prevents dirt accumulation around the valve

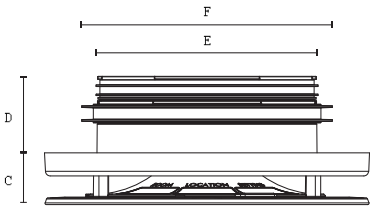
ACOUSTIC DATA

	Air supply		Air extraction	
Valve open	13 l/s	21 l/s	13 l/s	21 l/s
50 %	< 22 dB(A)	25 dB(A)	< 22 dB(A)	24 dB(A)
100 %	23 dB(A)	29 dB(A)	< 22 dB(A)	25 dB(A)

DIMENSIONS







A (18766)	ø 170
A (18767)	ø 125
B	215
C	27
D	40
E	ø 116
F	ø 125

Material - lacquered alumimium.

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