Regulus

Heat Recovery
Ventilation

overview of HRV units,
accessories
and air ducts

Energy-saving solutions

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Heat Recovery Ventilation

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 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.

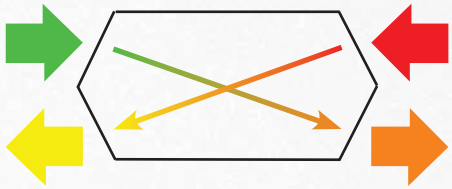
A heat exchanger has become a crucial component in recent Heat Recovery Ventilation (HRV) systems. It transfers heat from the outgoing stale warm air to the incoming fresh cold air.

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
Supplied from outdoors
Cold (e.g. - 5°C)

Stale air
Discharged outside the building
Cooled down (e.g. 1°C)



Stale air
Sucked from indoors
Warm (e.g. 21°C)

Fresh air
Supplied to rooms
Warmed up (e.g. 18°C)

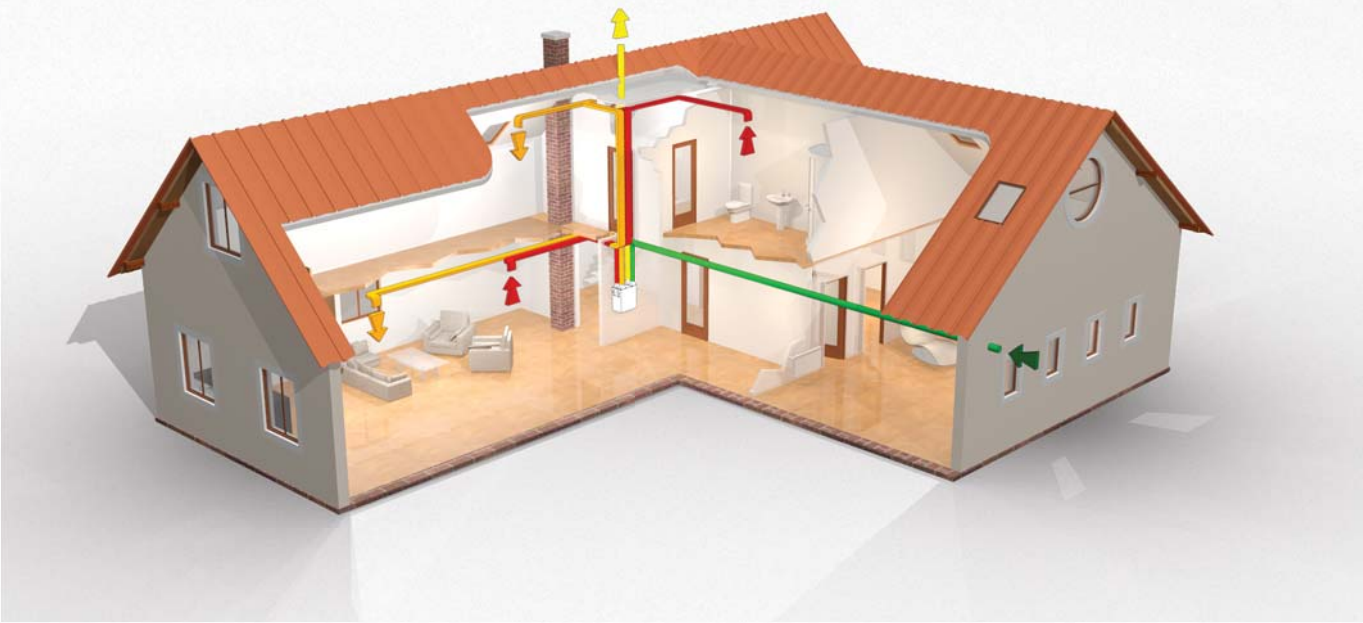
Fresh air is sucked into the HRV unit either through an outer wall or through a vent duct termination in a roof. The incoming fresh air flows into the HRV unit where it is preheated in a heat exchanger by heat taken from the warm stale exhaust air.

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.

Heat recovery ventilation		Code
	**HR30W** - for walls up to 280mm thick Single-room heat recovery ventilation unit	6954
	HR100W - for walls up to 280mm thick Single-room heat recovery ventilation unit	6955
	**HR 100R** - ducted HRV unit for single-bedroom apartments, for attic installations	7483
	HR 100RS - ducted HRV unit for single-bedroom apartments, for suspended ceiling	10308
	**Sentinel Kinetic Horizontal 200ZPH** central HRV unit for flats and family homes, incl. room unit, integrated humidity sensor, summer bypass, max. air flow rate 168 m³/h	16709
	**Sentinel Kinetic B** Ducted heat recovery ventilation unit with integrated controller and summer bypass, air extraction 275 m³/h max.	10176
	Sentinel Kinetic B Plus Ducted heat recovery ventilation unit with integrated controller and summer bypass, air extraction 490 m³/h max.	10335
	**Sentinel Kinetic Advance S a SX** central HRV unit for family homes, incl. integrated controller w. touch screen, humidistat, integrated summer bypass, max. air flow rate 490 m³/h	16487 16488

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 single-family houses with living area up to 200 sqm.

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 3 basic types of air ducts. Either round flexible aluminium ducts, or rigid rectangular plastic ducts 60×200 mm, or flexible highly resistant PE ducts with antibacterial treatment. 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.

Sentinel Kinetic Advance

Sentinel Kinetic Advance S and SX Central HRV Units are HRV units of a new generation that permit respecting individual living mode in 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 high-quality 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.

Types

Sentinel Kinetic Advance S *code: 16487*
Sentinel Kinetic Advance SX *code: 16488*

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

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*

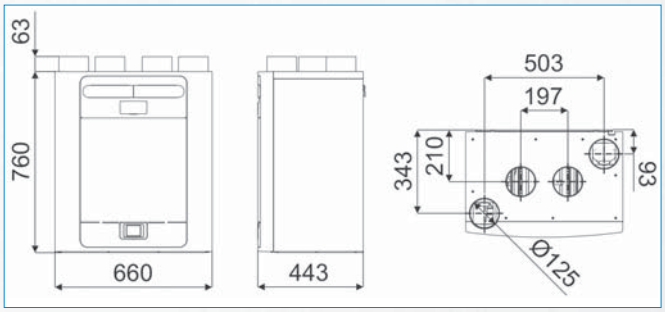
AKUSTICKÉ PARAMETRY

Sound level (at 3 m distance)	15.5 dB(A) for low air flow 34 dB(A) for high air flow

Performance modes

5 preset performance modes are available in the unit. It is possible to program a different ventilation intensity 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.

Dimensions



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.

The unit control is very simple, different ventilation intensity can be programmed for different times. 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.

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

Code: 10176

Technical Data

PERFORMANCE DATA

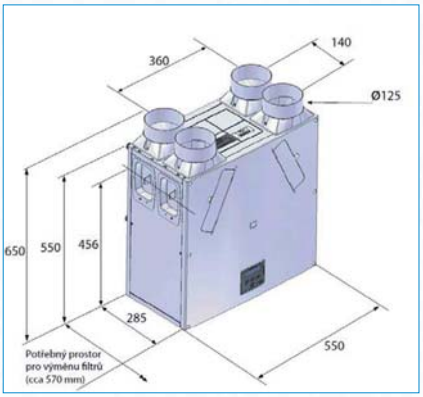
Max. air flow rate *	275 m³/h
Heat recovery efficiency	max. 92 %
Energy Efficiency Class	A
Low air flow	20 % (preset)
Medium air flow	30 % (preset)
High air flow	50 % (preset)
Purge	100 %

**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 depending on the ventilated area. The 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.

Accessories

The inbuilt control panel permits connection of external control elements, e.g. a humidity sensor or a carbon dioxide sensor. A remote control panel can be connected as well which is suitable in installations where the unit is located at a not easily accessible place.

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

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.

The unit control is very simple, different ventilation intensity can be programmed for different times. 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.

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

Code: 10335

Technical Data

PERFORMANCE DATA

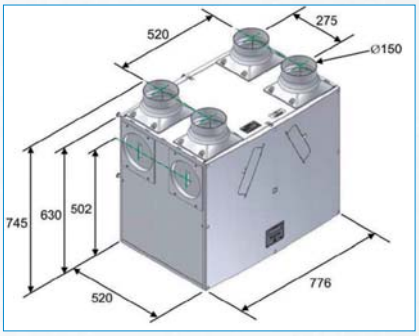
Max. air flow rate *	490 m³/h
Heat recovery efficiency	max. 92 %
Energy Efficiency Class	A+
Low air flow	20 % (preset)
Medium air flow	30 % (preset)
High air flow	50 % (preset)
Purge	100 %

**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. Preset values can be changed freely in relation to the space to be ventilated. 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.

Accessories

The inbuilt control panel permits connection of external control elements, e.g. a humidity sensor or a carbon dioxide sensor. A remote control panel can be connected as well which is suitable in installations where the unit is located at a not easily accessible place.

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

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 G3 filters are integrated in Kinetic Advance units for the sake of a healthy climate inside the building.

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

Technical Data

PERFORMANCE DATA

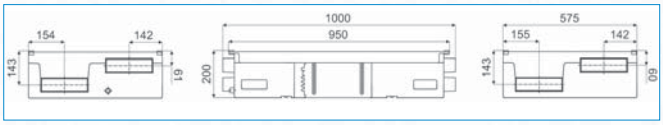
Max. air flow rate *	168 m^3/h
Heat recovery efficiency	max. 86 %
Energy Efficiency Class	A
Low air flow	20 % (preset)
Medium air flow	30 % (preset)
High air flow	50 % (preset)
Purge	100 %

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

ACOUSTIC DATA

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

Dimensions



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 to relative humidity levels.

HR 100 R and HR 100 RS

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.

HR 100 R is suitable for attic-room installations. The service panel is located on its upper side.

Code: 7483

HR 100 RS is suitable for ceiling void installations or for ceiling mount. The service panel is located on its bottom.

Code: 10308

Technical Data

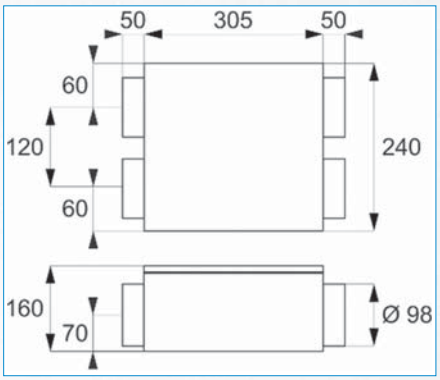
PERFORMANCE DATA

Air flow	66 m^3/h (max. air flow) 48 m^3/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

Dimensions



Accessories

G3 class air filters (fine dust) and insulation kits for heat loss reduction are available as accessories.

HR 100 W and HR 30 W

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

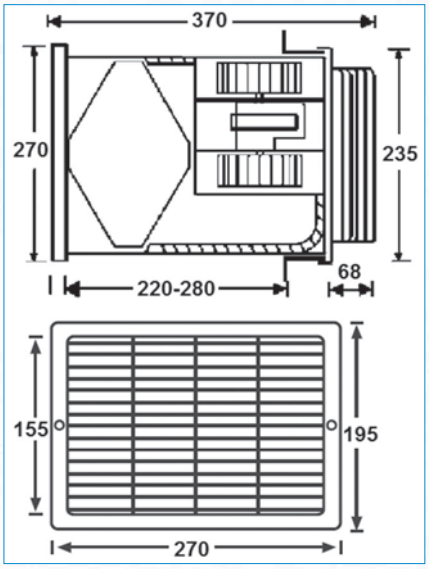
This unit is designed to be installed in a wall, its suitable thickness is between 220 and 280 mm (up to 500 mm with an extension, see Accessories).

Code:
HR 100 W 6955
HR 30 W 6954

Technical Data

PERFORMANCE DATA	HR 100W	HR 30W
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		
Sound level (at 3 m distance)	20 dB(A) for low air flow	
	35 dB(A) for high air flow	28 dB(A) for high air flow

Dimensions



Accessories

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

ROUND FLEXIBLE 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.

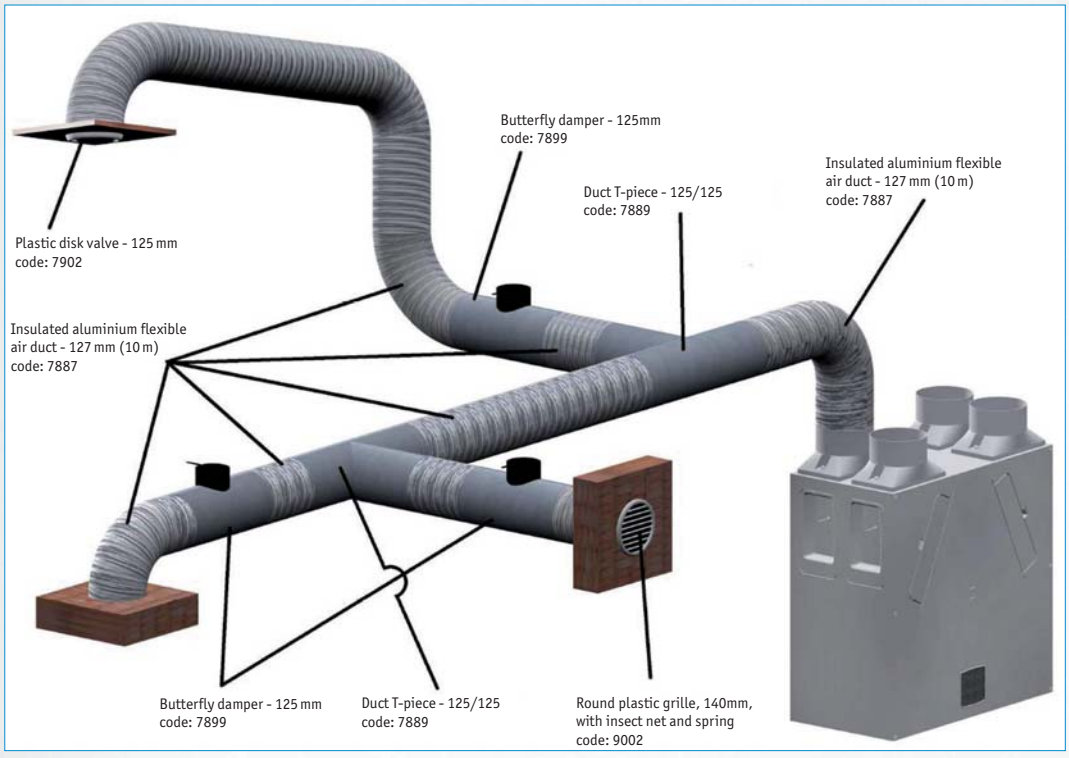
The duct size depends on the air volume to be transported (unit size):

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 Horizontal.....	200x60 mm
Sentinel Kinetic Advance.....	DN 125 mm

For HR 100R 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.

Installation example with round 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 FLEXIBLE AIR DUCTS

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

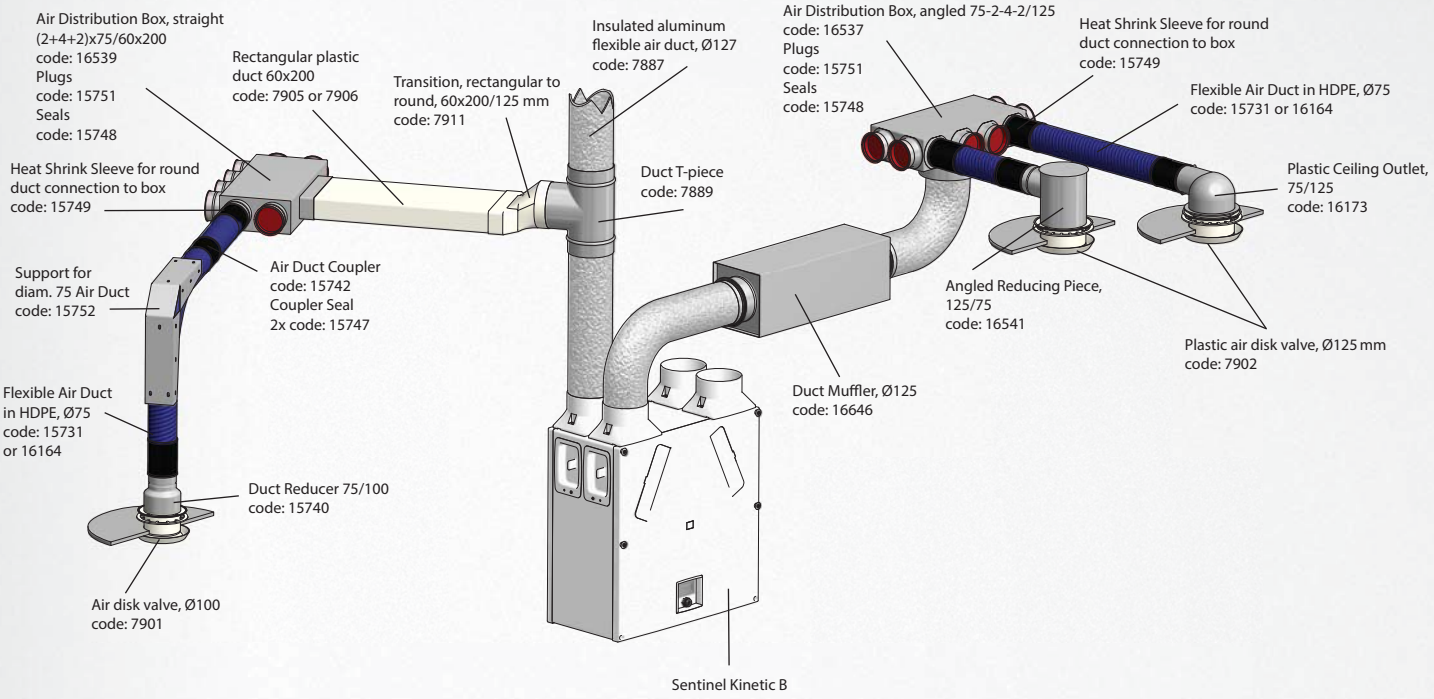
HIGHLY RESISTANT FLEXIBLE PE AIR DUCTS

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:

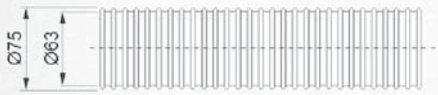
- minimum pressure drop
- easy cleaning
- simple handling and installation
- noise suppression
- hygienic protection
- long service life

Installation example with round ducting



Flexible pipes

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



Distribution boxes

Designed as connection parts for separate branches of FLX-HDPE-A ducts, connection for flexible aluminium air ducts.

HIGHLY RESISTANT FLEXIBLE PIPING

Round air pipes		Code
	ø 75 Air Duct, antibacterial - 50 m (FLX-HDPE-A-75)	15731
	ø 75 Air Duct, antibacterial - 10 m (FLX-HDPE-A-75-10)	16164

Air distribution boxes		Code
	Air Distribution Box, angled, 3x75/125 (FLX-PRO-75-3)	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, long, 3x75/125 (FLX-PRO-L-75-3)	15735
	Air Distribution Box, straight, (1+3+1)x75/60x200	16540
	Air Distribution Box, straight, (2+4+2)x75/60x200	16539
	Air distribution box, straight, long, 2x75/125 (FLX-PRO-PL-75-2)	15736
	Air distribution box, straight, long, 3x75/125 (FLX-PRO-PL-75-3)	15737

Plastic Air Disc Valves		Code
	Plastic Ceiling Outlet, 125/75	16173
	Plastic air duct disk valve, 100 mm	7901
	Plastic air duct disk valve, 125 mm	7902

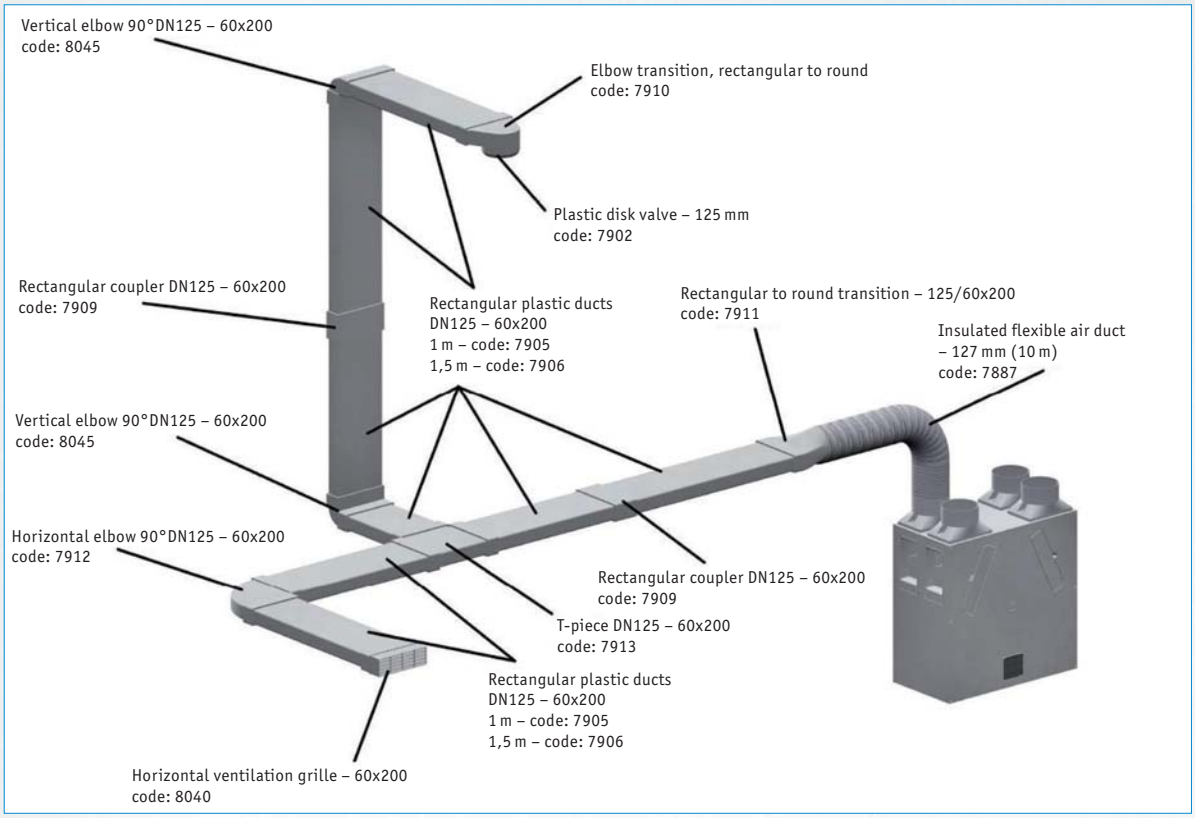
Accessories		Code
	Extension, 125 mm x 0.5 m	16542
	Extension, 150 mm x 0.5 m	16706
	Butterfly damper (FXL-DAS-75)	16730
	90° Bend (FLX-BP-75)	15739
	100/75 Adapter (FLX-RPC-100-75)	15740
	125/75 Adapter (FLX-RPC-125-75)	15741
	Angled Reducing Piece, 125/75 (FLX-RR-75/125)	16541
	Support for flexible air duct (FLX-FAX-75)	15752
	Flexible Duct Coupler (FLX-MSF-75)	15742
	Heat shrink sleeve (FLX-UST-75)	15749
	Gasket between flexible duct and box (FLX-USC-75)	15748
	Gasket between flexible duct and coupler (FLX-USZ-75)	15747
	Air Distribution Box Plug (FLX-CF-PVC-75)	15751
	Flexible Duct Plug (FLX-CS-PVC-75)	15750
	DUCT Universal adhesive tape - 50 mm x 50 m x 0.15 mm, up to 60 °C	16654
	TALE Sealing tape - 50 mm x 50 m x 0.3 mm, up to 120 °C	16655

RECTANGULAR PLASTIC DUCTS

Plastic ducting of 60x200 mm cross section. It is so flat that it can be installed even into constrained ceiling voids or floors. 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

Rectangular plastic ducts		Code
	Rectangular plastic ducts, 60x200, 1 m	7905
	Rectangular plastic ducts, 60x200, 1,5 m	7906
	Rectangular coupler, 60x200 mm	7909
	Elbow transition, rectangular to round, 60x200/125 mm	7910
	Elbow transition, rectangular to round, 60x200/100 mm	8243
	Rectangular to round transition, 125/60x200 mm	7911
	Horizontal elbow 90°, 60x200 mm	7912
	Horizontal elbow 45°, with divisible segments, 60×200 mm	9744
	Vertical elbow 90°, 60x200 mm	8045
	T-piece T, 60x200 mm	7913
	Horizontal ventilation grille, 60x204 mm	11754
	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

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
	Hot water air duct heater 1.2 kW DN200	9215

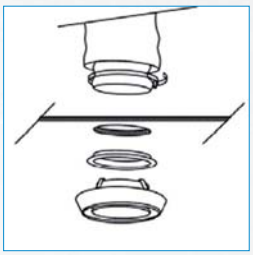
Duct noise muffler

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.*

Plastic 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 75mm 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.



Plastic air disk valves			Code
	Supply and exhaust plastic air disk valve, 100 mm		7901
	Supply and exhaust plastic air disk valve, 125 mm		7902
	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

INSTALLATION COMPONENTS

Hose band and clamp

In order to fix round ducts to their mating adaptors, a hose band is used that 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*.

Duct cleaning spray

Air ducts cleaning is often difficult, for this reason we recommend using a chemical 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.*

Installation components		Code
	Humidity sensor for Sentinel Kinetic	10177
	CO_2 sensor for Sentinel Kinetic	11852
	Remote control, 15m cable, for Sentinel Kinetic	10757
	Wireless boost switch for Sentinel Kinetic	10756
	0-10V Module for Sentinel Kinetic Advance	16607
	WiFi Module for Sentinel Kinetic Advance S	16608
	Docking station for Advance unit control module, incl. 15 m cable	16609
	Voltage-free Extension Module for Sentinel Kinetic Advance, 4 inputs	16610
	Extension Module for Sentinel Kinetic Advance, 2 inputs	16611
	Hygrostat HR-S - 35-95% rel.vlhkosti, mechanický	14334
	Aluminum foil tape 50 mm × 50 m	11515
	Insulation for HR100R HRV unit	11767
	Insulation for HR100RS HRV unit	11768
	Set of 2 G3 filters for Sentinel Kinetic HRV unit	13323
	Set of 2 G3 filters for Sentinel Kinetic B Plus HRV unit	13325
	Set of 2 F5 pollen filters for Sentinel Kinetic HRV unit	13324
	Set of 2 F5 pollen filters for Sentinel Kinetic B Plus HRV unit	13326
	Spare filter fabric for HR30W and HR100W	9001
	Spare filter fabric for HR100R	8136
	G3 filters for Sentinel Kinetic Advance, set of 2	16891
	F5 filters for Sentinel Kinetic Advance, set of 2	16892

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