PRODUCT CATALOGUE

HEAT EXCHANGERS

ZERN ENGINEERING

KLICON

Plate counter-flow heat exchangers

Enthalpy counter-flow heat exchangers

Plate cross-flow heat exchangers

Enthalpy cross-flow heat exchangers

Rotary heat exchangers

ZERN-ENGINEERING.COM

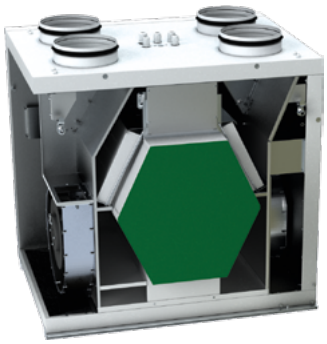
CONTENT

GENERAL DESCRIPTION

- The HC-EX6 counter-flow heat exchangers are specifically developed for heat recovery in balanced ventilation systems. These heat exchangers allow efficient use of extract air energy for heating or cooling, thus optimizing ventilation and providing healthy indoor climate.
- Due to the unique heat exchanger design and the shape of the heat exchanging plates the heat exchange surface is maximized and the pressure losses are minimized. This heat exchanger type is compatible nearly with all ventilation systems.
- The supply and extract air streams move in opposite directions toward each other. The heat energy is transferred through the thin plates. Heat recovery efficiency exceeds 90 %.

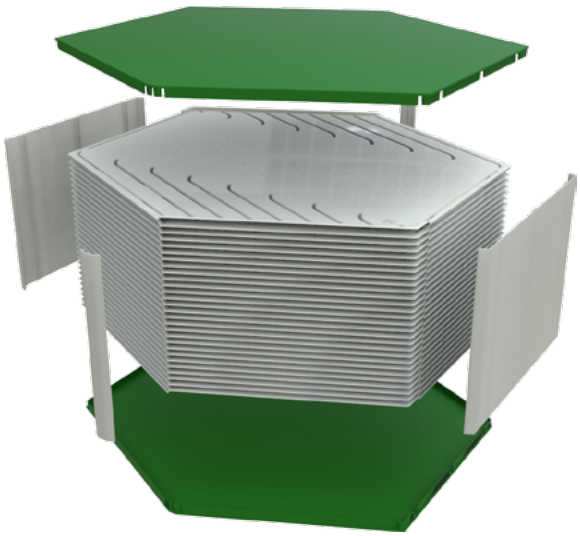
APPLICATIONS

- Domestic ventilation units
- Heating and air conditioning systems
- Full separation of air streams
- Heat recovery in winter
- Cool recovery in summer
- Premises with no air circulation
- School premises
- Office buildings



DESIGN

- The heat exchanger has a hexagonal shape with the overall dimensions of 366 x 366 mm, 230 x 455 mm and 232 x 461 mm (length and width). The maximum depth is 600 mm.
- The heat exchanger consists of a heat accumulating mass (a set of plates) and a casing. The assembled and interconnected plates build a heat exchanging stack with air channels. The extensional channels in the plates are parallel located. The air streams move in the channels and do not get mixed.
- The distance between the plates of 2.6 mm provides combination of the maximum efficiency with the lowest pressure loss.



APPLIED MATERIALS

- The heat accumulating mass is made of impact-resistant polystyrene with the thickness of 0.2 up to 0.3 mm for the basic modification. Optionally it can be made of PET. These materials are featured with high thermal conductivity and high performance characteristics.
- All the casing components are made of high-quality aluzinc plates or impact-resistant polystyrene.

AIRTIGHT SEALING

Air sealing process is automated. High-quality hot-melt synthetic-base polymer adhesive used in food and pharmacy industries provides air tightness.

MODIFICATIONS

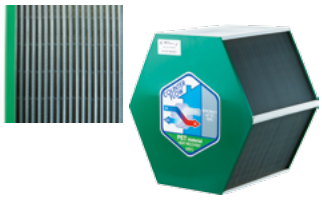
HEAT EXCHANGER PLATES

Basic modification «Standard». HC-EX6

The heat exchanger plates are made of polystyrene. Compatible with the sizes 366 x 366 mm, 230 x 455 mm, 232 x 461 mm.

Optionally the PET design version is possible. HP-EX6

The heat exchanger plates are made of PET thermoplastic. Compatible with the size 366 x 366 mm only.



CASING

Version 1. Aluzinc casing

The casing components are made of high-quality aluzinc plates. This modification is used for the size 230 x 455 mm only.

Version 2. Plastic casing

The head plates, side plates and the profiles are made of impact-resistant polystyrene. This modification is used for the sizes 366 x 366 mm and 232 x 461 mm.

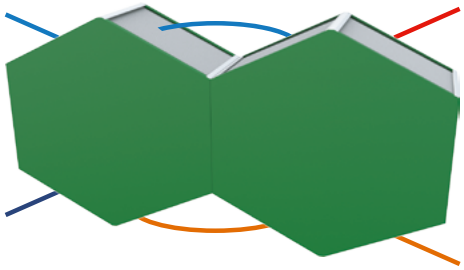
Version 2.1. Plastic casing with T-profile

All the casing components are made of impact-resistant polystyrene. T-profile is used instead of a standard profile. This profile is used in case of a special mounting in air handling unit. The T-profile modifications are possible for the heat exchangers enclosed in a plastic casing with the size of 366 x 366 mm both with polystyrene (HC-EX6 series) and PET (HC-EX6) series plates.

Name	Overall dimensions [mm]	Polystyrene	PET	Casing modification
HC-EX6 366/...	366 x 366	+	+	-2 / -2.1
HC-EX6 230/...	230 x 455	+	-	-1
HC-EX6 232/...	232 x 461	+	-	-2

MOUNTING OPTIONS

Serial installation of several heat exchangers on counter-flow basis increases the heat recovery efficiency.



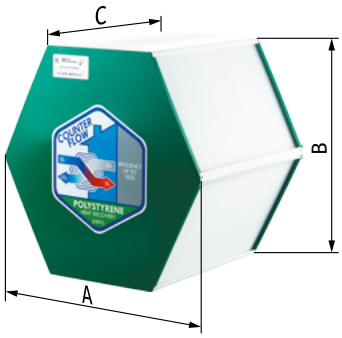
OPERATION CONDITIONS

- The applied materials enable operation, storage and transportation of the heat exchangers in the temperature conditions from -25 up to +50 °C.
- Storage of heat exchangers in an exposed position in direct sunlight is forbidden.
- In winter season the air humidity is condensed on the heat recovery plates and the condensed water freezes at the temperature of -5 °C and lower. Heat recovery efficiency during these temperature conditions is slim to zero.
- Avoid condensate freezing on the heat exchanger plates.

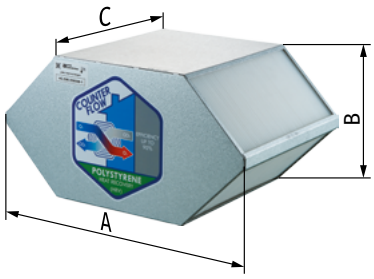
TECHNICAL MAINTENANCE

- The HC-EX6 counter-flow heat exchangers have no movable parts and metal connections, therefore no mechanical maintenance is required. Slight contaminations are eliminated by compressed air jets or flushing with warm mild detergent solutions.

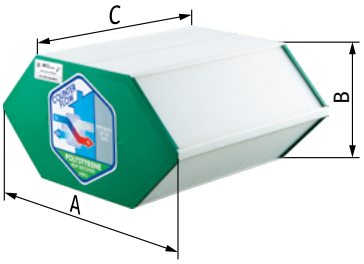
MODEL LINE



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
HC-EX6 366	366	366	100...500	-2 / -2.1



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
HC-EX6 230	455	230	100...600	-1



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
HC-EX6 232	461	232	100...600	-2

DESIGNATION KEY

HC-EX6 B / C - x

HC-EX6: commercial group
B: height [mm]: 366/230/232
C: depth [mm]: 100…600
x: casing modification:

- 1: aluzinc
- 2: plastic with a standard profile
- 2.1: plastic with a T-profile

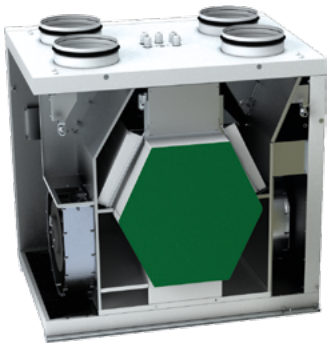
*A: width [mm]: 366/455/461 not indicated in the heat exchanger name

GENERAL DESCRIPTION

- The new generation of the enthalpy counter-flow EC-EX6 heat exchangers offers an alternative to standard heat exchanger models. In case of operation in residential premises with low indoor humidity these heat exchangers keep the comfortable indoor climate due to humidity recovery from the extract air.
- This process is possible due to the unique polymer membrane with a microporous structure that enables transition of water vapour molecules, but blocks transition of bacteria, germs, mould, gases and smells. This design enables to keep high hygienic standards also in sanitary areas, kitchen and laboratories and other premises with permanent sources of air pollution. No transition of smells and toxins! Only warmth and water vapours are allowed!
- The supply and extract air streams are moved in the air channels of the heat exchanger plates toward each other. The sensible and latent heat energy is transferred thought the heat exchanger membrane.
- The comparison of the standard plate heat exchanger (HC-EX6 series) and the enthalpy heat exchanger (EC-EX6 series) shows that the standard heat exchangers have higher sensible heat recovery efficiency as compared to the enthalpy heat exchangers, but the enthalpy heat exchangers of EC-EX6 series have higher total heat recovery efficiency due to the latent heat recovery from water vapour.

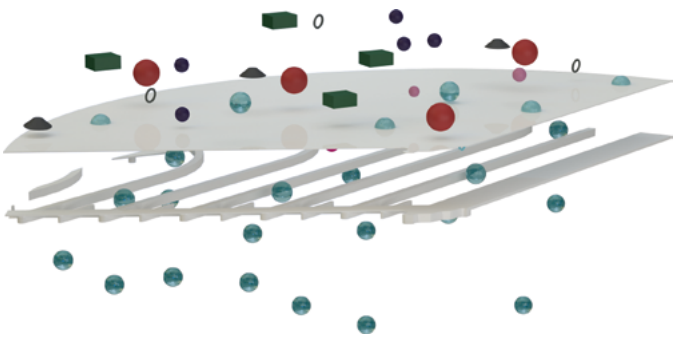
APPLICATIONS

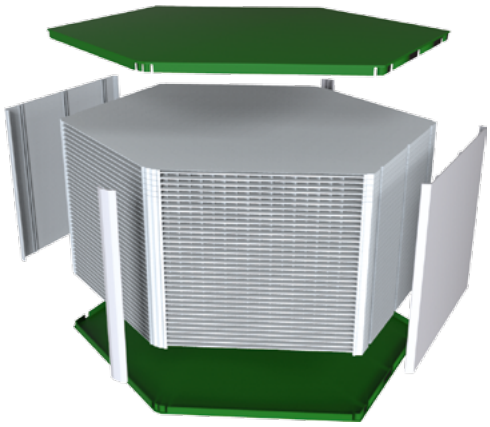
- Central ventilation
- Single-room ventilation
- Heat recovery with air humidification in winter
- cool recovery with air dehumidification in summer
- School premises
- Health care buildings
- Office buildings



DESIGN

- The heat exchanger has a hexagonal shape with the overall dimensions of 366 x 366 mm, 230 x 455 mm and 232 x 461 mm (length and width).
- The maximum depth is 600 mm.
- The heat accumulating mass consists of special plates laid as channels to enable moving of air streams toward each other.
- The ultrathin membrane is used as a barrier in the heat exchanger.
- The rigid airtight casing is protected against mechanical influence.





APPLIED MATERIALS

- The membrane is made of microporous polymer with an antibacterial coating.
- All the casing components are made of impact-resistant polystyrene or high-quality aluzinc plates.

AIRTIGHT SEALING

- Air sealing process is automated.
- High-quality hot-melt synthetic-base polymer adhesive used in food and pharmacy industries provides air tightness.

MODIFICATIONS

The heat exchangers have three basic casing modifications.

Version 1. Aluzinc casing

The casing components are made of high-quality aluzinc plates. This modification is used for the size 230 x 455 mm only.

Version 2. Plastic casing

The head plates, side plates and the profiles are made of impact-resistant polystyrene. This modification is used for the sizes 366 x 366 mm and 232 x 461 mm.

Version 2.1. Plastic casing with T-profile

All the casing components are made of impact-resistant polystyrene. T-profile is used instead of a standard profile. This profile is used in case of a special mounting in air handling unit. This modification is used for the heat exchangers enclosed in a plastic casing with the size of 366 x 366 mm.

Name	Dimensions [mm]	Casing modification
EC-EX6 366/...	366 x 366	-2 / -2.1
EC-EX6 230/...	230 x 455	-1
EC-EX6 232/...	232 x 461	-2

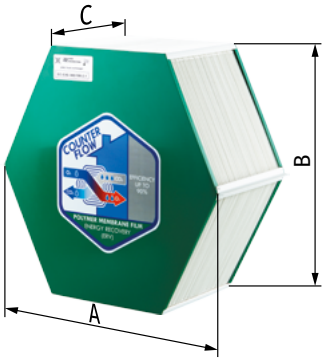
OPERATION CONDITIONS

- The applied materials enable operation, storage and transportation of the heat exchangers in the temperature conditions from -25 up to +50 °C.
- Storage of heat exchangers in an exposed position in direct sunlight is forbidden.
- The EC-EX6 enthalpy heat exchangers are not subjected to freezing in case of normal operation conditions in winter.

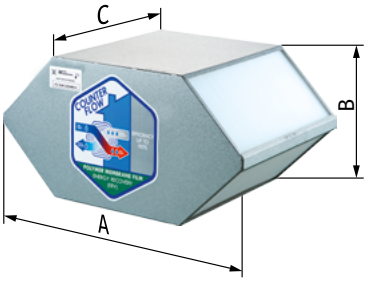
TECHNICAL MAINTENANCE

- Regular check-up of filters is required to keep the heat exchangers and the supply filter clean. The filters must be cleaned or replaced as required.
- To remove the contaminations flush the heat exchanger with warm water up to 55 °C.
- Do not use high pressure water jet for cleaning of the heat exchanger because it may damage the ultrathin membrane.

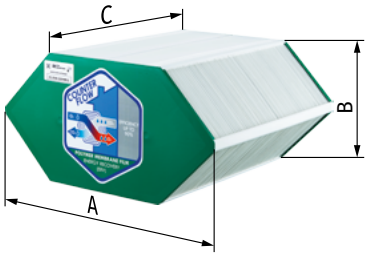
MODEL LINE



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
EC-EX6 366	366	366	100...500	-2 / -2.1



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
EC-EX6 230	455	230	100...600	-1



Name	A: width [mm]	B: height [mm]	C: depth [mm]	x: casing modification
EC-EX6 232	461	232	100...600	-2

DESIGNATION KEY

EC-EX6 B / C - x

EC-EX6 – commercial group
B: height [mm]: 366/230/232
C: depth [mm]: 100…600
x: casing modification:

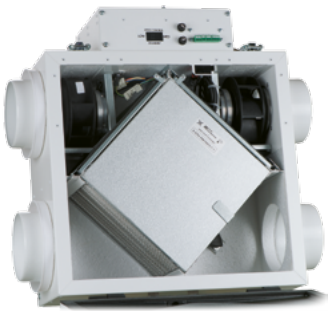
- 1: aluzinc
- 2: plastic with a standard profile
- 2.1: plastic with a T-profile

*A: width [mm]: 366/455/461 not indicated in the heat exchanger name

GENERAL DESCRIPTION

- The Hp-EX4 plate heat exchangers are the unique high-efficient heat exchangers designed for efficient energy recovery and re-use. The cross warm extract and cold intake air streams are separated with the plate walls and do not come in contact with each other. This design solution excludes transfer of humidity, contaminants, smells and microbes from one air stream to another.
- The heat recovery efficiency is about 90 %! This high heat recovery efficiency is attained due to the unique design, shape and material of the heat exchanging plates. Turbulence in the heat exchanging stack develops even at low speed. The specially designed material of the plates enables to reach higher heat conductivity as compared to standard aluminium plates.

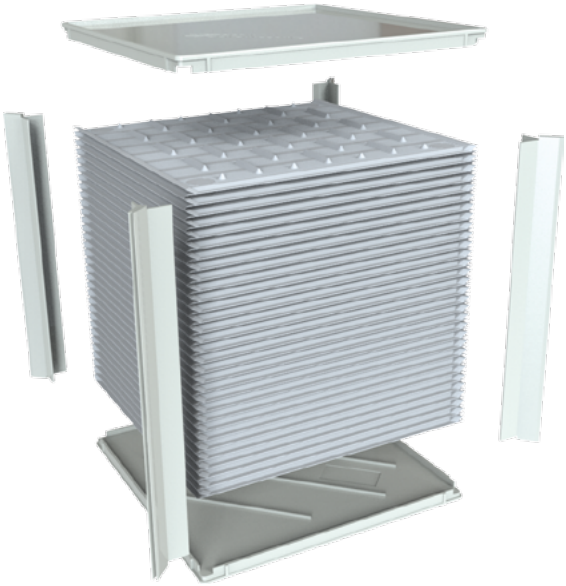
APPLICATIONS



- Heat recovery in winter and cool recovery in summer
- Heating and air conditioning systems
- Ventilation of premises
- Separation of air streams
- Heat removal in control boards.

DESIGN

- The heat exchanger has a square shape with the overall dimensions of 200 x 200 mm, 250 x 250 mm and 300 x 300 mm. The heat exchanger depth is from 100 up to 400 mm.
- The heat exchanger consists of a heat accumulating mass (a set of plates) and a casing. The assembled and interconnected plates build a heat exchanging stack with many air channels. The air channels are crossed at 90° angle. The two air streams moving in the air channels do not get mixed.
- The distance between the plates of 2.4, 2.7 or 3.0 mm provides combination of the maximum efficiency and the lowest pressure loss.



APPLIED MATERIALS

- The heat exchanging plates are made of special impact-resistant polystyrene with the thickness of 0.2 up to 0.3 mm. This material is featured with high thermal conductivity and high performance characteristics.
- The casing is made of high-quality aluzinc or plastic.

AIRTIGHT SEALING

Air sealing process is automated.High-quality hot-melt synthetic-base polymer adhesive used in food and pharmacy industries provides air tightness.

MODIFICATIONS

The heat exchangers have three basic casing modifications.

Version 1. Aluzinc casing

All the casing components are made of plates of high-quality aluzinc, which is not subjected to influence of corrosion and aggressive environments such as chemical or salt environment. Other customized versions of the heat exchanger casing material are available, such as aluminium, stainless steel, painted steel.

Version 2. Plastic casing

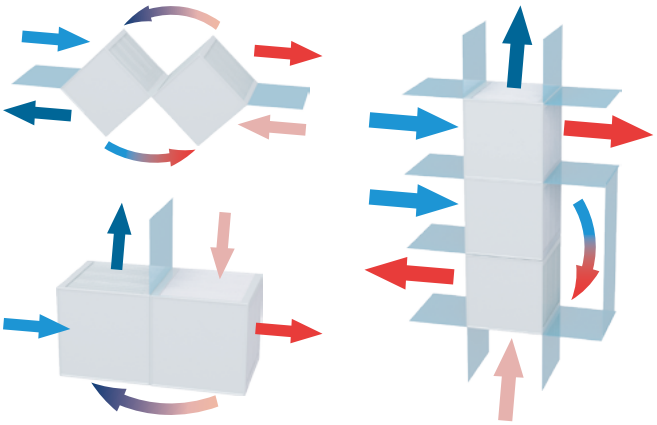
The head plates and profiles are made of impact-resistant polystyrene. The upper head plate is supplied with a transport polypropylene holder.

Version 2.1. Plastic casing with T-profile

The head plates and profiles are made of impact-resistant polystyrene. The upper head plate is supplied with a transport polypropylene holder. T-profile with an inner extensional groove is used instead of a standard profile in case of special mounting in a mounting seat of an air handling unit.

MOUNTING OPTIONS

Several Hp-EX4 cross-flow plate heat exchangers can be installed in series or connected to modular units with the size up to 600 x 600 x 800 mm.



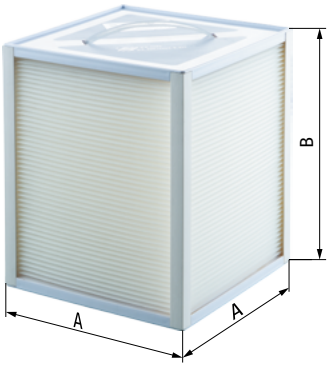
OPERATION CONDITIONS

- The applied materials enable operation, storage and transportation of the heat exchangers in the temperature conditions from -25 up to +50 °C. Storage of heat exchangers in an exposed position in direct sunlight is forbidden.
- In winter season the air moisture is condensed on the heat recovery plates and the condensed water freezes at the temperature of -5 °C and lower. Heat recovery efficiency during these temperature conditions is slim to zero. Avoid condensate freezing on the heat exchanger plates.

TECHNICAL MAINTENANCE

The Hp-EX4 heat exchangers have no movable parts and metal connections, therefore mechanical maintenance is not required. Slight contaminations are eliminated by air jets or flushing with warm mild detergent solutions.

MODEL LINE



Name	A: width [mm]	B: depth [mm]	h: distance between plates [mm]	x: casing modification
Hp-EX4 200	200	100...400	2.4	-1 / -2 / -2.1
Hp-EX4 250	250	100...400	2.7	-1 / -2 / -2.1
Hp-EX4 300	300	100...400	3.0	-1 / -2 / -2.1

DESIGNATION KEY

Hp-EX4 A / B / h - x

Hp-EX4: commercial group
A: width, length [mm]: 200/250/300
B: height [mm]: 100...400
h: distance between plates [mm]: 2.4/2.7/3.0
x: casing modification:

- 1: aluzinc
- 2: plastic with a standard profile
- 2.1: plastic with a T-profile

GENERAL DESCRIPTION

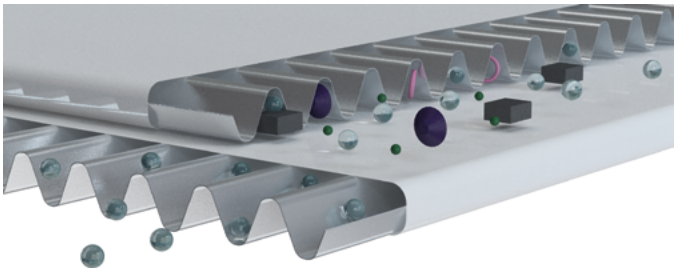
- The E-EX4 cross-flow enthalpy heat exchangers are able to recover heat and warmth and to transfer them to the intake air flow.
- An ultrathin polymer membrane serves as a partition between the air streams and enables both heat and humidity recovery.
- The membrane has a thin polymer barrier film, that allows to water vapour transit through it. At the same time transition of gases, contaminants, smells, microbes and viruses is not possible.
- The enthalpy heat exchangers keep the balanced comfortable indoor humidity in dry winter and hot humid outside conditions.

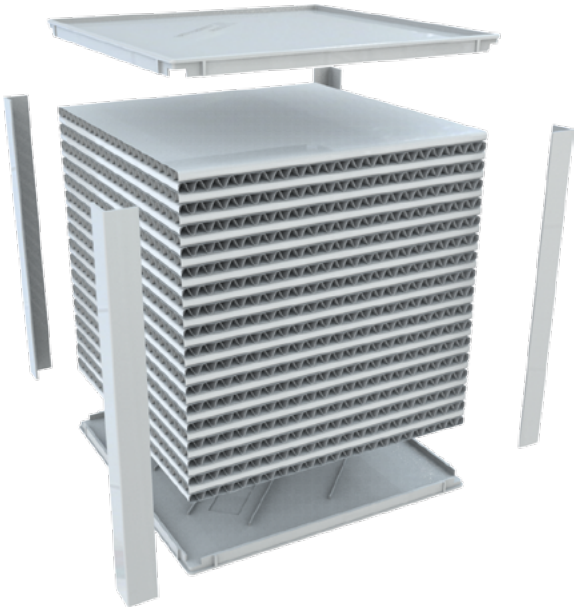
APPLICATIONS

- Ventilation and air conditioning systems
- Heat recovery ventilation in residential premises
- School premises
- Hospitals
- Office buildings

DESIGN

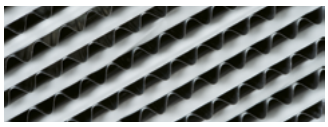
- The heat exchangers are available in the sizes 200 x 200 mm, 250 x 250 mm and 300 x 300 mm. The heat exchanging plates have the installation depth from 100 mm up to 400 mm.
- The accumulating mass consists of aluminium waveform plates, that are laid perpendicular to the channel direction. The wave height is from 2.7 up to 10.0 mm.
- The vapour-permeable membrane is located between the aluminium plates. This design keeps the two air streams fully separated.
- The casing has no movable parts and is made of various materials.





APPLIED MATERIALS

- The heat exchanging plates are made of high-quality aluminium foil with the thickness from 0.07 mm.
- The membrane is made of polymer with microporous structure and has antibacterial coating.
- The casing is made of aluzinc steel and impact-resistant plastic.



AIRTIGHT SEALING

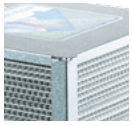
Air sealing process is automated. High-quality hot-melt synthetic-base polymer adhesive used in food and pharmacy industries provides air tightness.

MODIFICATIONS

The heat exchangers have three basic casing modifications.

Version 1. Aluzinc casing

The head plates and the profiles are made of aluminium and zinc alloy. Used for corrosion-resistant coating of steel sheets.



Version 2. Plastic casing

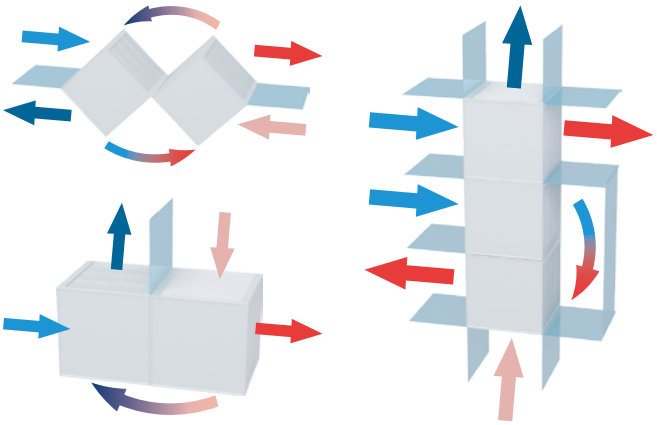
The head plates and profiles are made of impact-resistant polystyrene. The upper head plate is supplied with a transport polypropylene holder.

Version 2.1. Plastic casing with T-profile

The head plates and profiles are made of impact-resistant polystyrene. The upper head plate is supplied with a transport polypropylene holder. T-profile with an inner extensional groove is used instead of a standard profile in case of a special mounting in a mounting seat of an air handling unit.

MOUNTING OPTIONS

Several E-EX4 cross-flow plate heat exchangers can be installed in series or connected to modular units with the size up to 100 x 1000 x 800 mm.



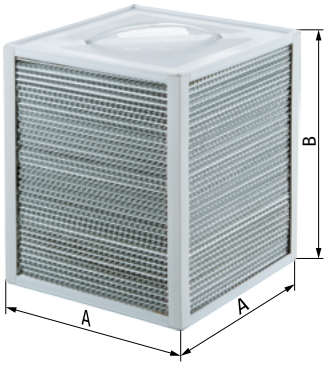
OPERATION CONDITIONS

- The applied materials enable operation, storage and transportation of the heat exchangers in the temperature conditions from -25 up to +50 °C.
- The E-EX4 heat exchangers are not subjected to icing during normal operation conditions in winter and during intensive humidity recovery. Even in case of icing on the heat exchanging plates the heat exchanger will not get damaged. Icing likelihood increases if the heat exchangers are continuously operated at very low outside temperature and high humidity conditions.

TECHNICAL MAINTENANCE

- The heat exchangers have no movable parts and metal connections, therefore mechanical maintenance is not required. Slight contaminations are eliminated with flushing with warm water up to +55 °C.
- Do not use high pressure water jet for cleaning of the heat exchanger because it may damage the ultrathin membrane.

MODEL LINE



Name	A: width [mm]	B: depth [mm]	h: distance between plates [mm]	x: casing modification
E-EX4 200	200	100...400	2.7 / 4.5	-1 / -2 / -2.1
E-EX4 250	250	100...400	2.7 / 4.5	-1 / -2 / -2.1
E-EX4 300	300	100...400	2.7 / 4.5 / 6.0	-1 / -2 / -2.1

DESIGNATION KEY

E-EX4 A / B / h - x

E-EX4: commercial group
A: width, length [mm]: 200/250/300
B: height [mm]: 100...400
h: distance between plates [mm]: 2.7/4.5/6.0
x: casing modification:

- 1: aluzinc
- 2: plastic with a standard profile
- 2.1: plastic with a T-profile

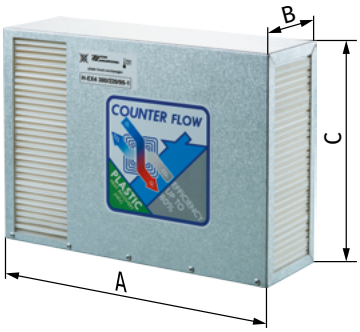
GENERAL DESCRIPTION

- The HC-EX4 counter-flow heat exchangers have a very simple design and contain no movable parts.
- The heat exchangers of this series are made of plastic plates with cellular structure, which are interconnected with a special glue. The plate height is from 3 to 4 mm.
- The warm extract and cold intake air streams are separated with the plate walls and do not come in contact with each other. This design solution excludes transfer of humidity, contaminants, smells and microbes from one air stream to another. Heat recovery efficiency reaches 79 %.
- The accumulating mass is assembled into a rigid aluzinc casing.
- The applied heat exchanger material enables operation in the temperature conditions from -25 up to +50 °C. The heat exchangers are frost-resistant and keep the high performance after defrosting.
- The heat exchangers require low maintenance. Water flushing is used for cleaning.

FUNCTIONING

- The outside intake air flows through the filter and the heat exchanger and is moved to the room with the supply fan.
- The warm extract air flows through the filter and the heat exchanger and is exhausted outside by the extract fan.
- In the heat exchanger the heat extracted from the warm extract air is absorbed with the cold air from outside.
- Heat recovery technology minimises heat losses and heating expenses in the cold season.
- The supply and extract air streams do not get mixed, so transfer of humidity, contaminants, smells and microbes from one air stream to another is not possible.

MODEL LINE



Name	A: width [mm]	B: depth [mm]	C: height [mm]
HC-EX4 300/95/C-1	300	95	100...500

DESIGNATION KEY

HC-EX4 A / B / C - 1

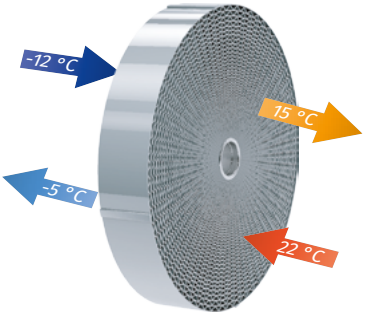
HC-EX4: commercial group
A: width [mm]: 300
B: height [mm]: 95
C: depth [mm]: 100…500
1: casing modification: aluzinc

GENERAL DESCRIPTION

The rotary heat exchangers have a rotating heat wheel. The accumulating mass rotates permanently between the warm extract and the cold intake air flows. During rotation of the heat exchanger the extract air heat is absorbed with the cold intake flow. Heat recovery efficiency reaches 85 %.

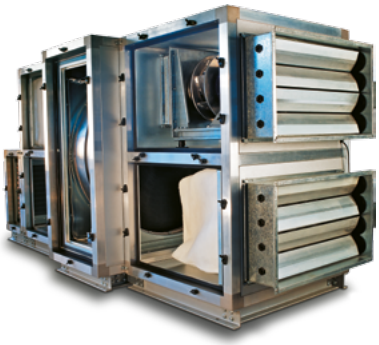
DESIGN

The rotary heat exchanger has a cylindrical shape and cellular structure in the form of traverse through air channels used for movement of extract air flow from the room and supply air flow to the room. The reinforcing rods connected to the central hub and the aluminium shell provide rigid rotor design.The rotary heat exchanger is supplied enclosed in the galvanized steel casing with an electric motor as a standard.



APPLICATIONS

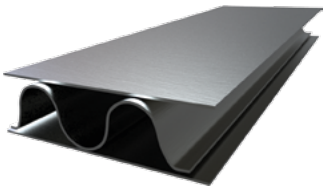
- Air conditioning and heating
- Industrial ventilation
- Swimming pools
- Paint booths
- Agricultural premises
- Marine environment
- Industrial premises

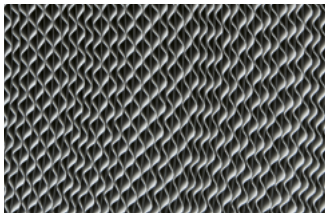


APPLIED MATERIALS

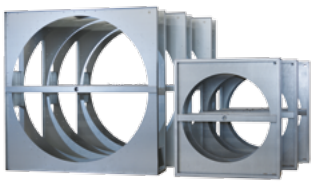
- The rotary heat exchangers are made of high-quality aluminium foil with the width of 100 mm and 200 mm and thickness of 0.07 mm. Optionally the foil may have a special coating.

Foil width [mm]	100		200	
Foil wave height [mm]	1.6	2.1	1.6	2.1
Foil thickness [mm]	0.07		0.07	





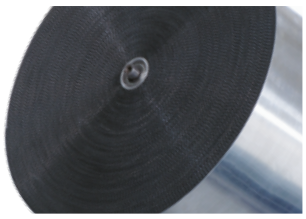
- The casing has seamless design as a standard and is made of galvanized steel with variable thickness, depending on a size of the rotary heat exchanger.



MODIFICATIONS

ROTOR

- **Shallow rotors of 100 mm depth (RS)**
  The basic rotor modification has the depth of 200 mm. However the rotary heat exchangers with the maximum depth of 100 mm are used for ventilation units, which have limited space for the heat exchangers, design limitations or high requirements to pressure losses.
- **Rotor without casing**
  The rotor may be supplied without a casing. The rotor diameter is from 300 mm up to 1900 mm.



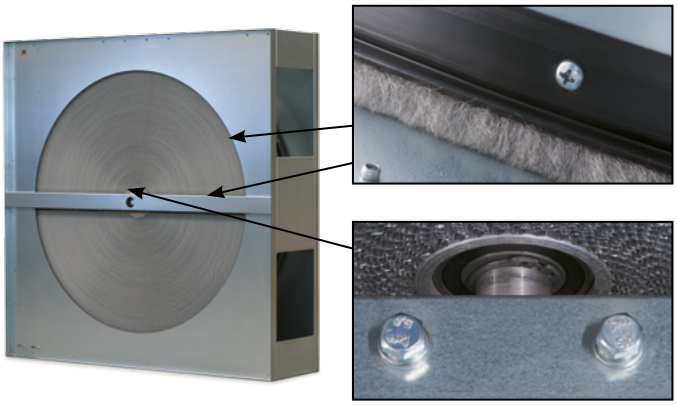
CASING

The standard rotary heat exchanger is made of galvanized steel. Other customized versions of the heat exchanger casing material are possible, such as aluminium, stainless steel, painted steel.

COMPONENTS

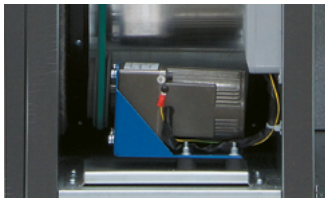
The smart air sealing technology minimises air leakages in the rotary heat exchanger. It also prevents air leakage from the heat exchanger or mixing of supply and extract air streams. All the gaps between the rotor and the casing are protected with special brush sealing. These sealings are reliable, durable and easy to replace.

The fasteners are made of zinc coated metal to prevent corrosion. The delivery set includes high-quality ball bearing of closed type.



MOTOR AND ROTATION SPEED CONTROL COMPONENTS

The rotary heat exchanger drive consists of an electric motor with a worm reduction gearbox, a pulley and a belt. The rotation speed from 10 to 13 RPM ensures higher heat recovery efficiency. The three-phase electric motor is designed for connection to three-phase 400 V power supply and the single-phase electric motor is designed for connection to single-phase 230 V power supply. The motor power varies from 60 W up to 180 W depending on the rotor diameter. The rotor speed is controlled with a frequency controller (not included in the delivery set).



TECHNICAL MAINTENANCE

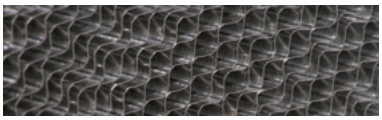
During operation the air channels get gradually contaminated. This contamination not only decreases performance, but accelerates pressure losses. To attain the maximum performance regular maintenance of the rotary heat exchangers is required as follows:

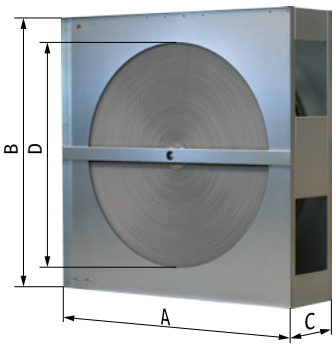
- Cleaning of the rotor cells with compressed air to remove dust and other contaminants
- Regular control and check-up of the electric motor and controls
- Control of transmission belt tensioning

TYPES. MODEL LINE

- Depending on environmental conditions and operation requirements the rotary heat exchangers are available in various sizes and with various coatings from aluminium foil.

CONDENSING ROTARY HEAT EXCHANGERS. R-EX SERIES

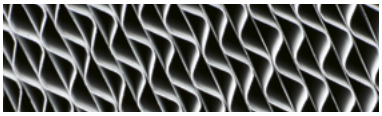


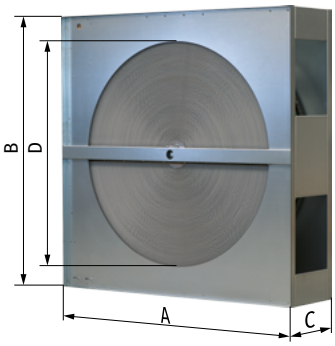


This rotary heat exchanger type is made of high-quality aluminium foil with no special coating. The rotor diameter is from 400 mm up to 1900 mm. This modification is used for non-aggressive environments with requirements to high heat recovery efficiency.

Name	D: rotor diameter [mm]	A: casing width [mm]	B: casing height [mm]	C: casing depth [mm]	h: wave height [mm]	Foil thickness [mm]
R-EX D400	400	600	600	295	1.6; 2.1	100; 200
R-EX D500	500	600	600	295	1.6; 2.1	100; 200
R-EX D600	600	700	700	295	1.6; 2.1	100; 200
R-EX D700	700	800	895	295	1.6; 2.1	100; 200
R-EX D800	800	900	900	290	1.6; 2.1	100; 200
R-EX D900	900	1100	1100	290	1.6; 2.1	100; 200
R-EX D1000	1000	1100	1100	290	1.6; 2.1	100; 200
R-EX D1100	1100	1250	1250	290	1.6; 2.1	200
R-EX D1150	1150	1250	1250	290	1.6; 2.1	200
R-EX D1300	1300	1400	1400	310	1.6; 2.1	200
R-EX D1400	1400	1500	1500	310	1.6; 2.1	200
R-EX D1510	1510	1630	1630	330	1.6; 2.1	200
R-EX D1600	1600	1700	1700	310	1.6; 2.1	200
R-EX D1700	1700	2010	2010	330	1.6; 2.1	200
R-EX D1900	1900	2210	2210	330	1.6; 2.1	200

ENTHALPY ROTARY HEAT EXCHANGERS. R-E-EX SERIES (SILICA GEL COATING)

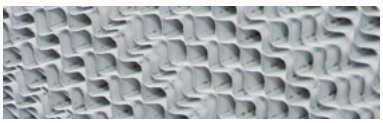




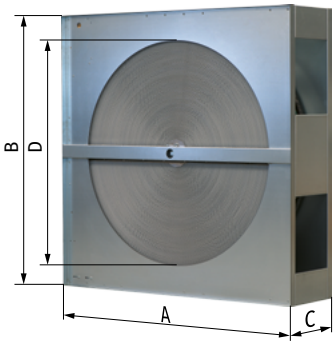
This rotary heat exchanger type is made of aluminium foil with water-absorbing coating. These heat exchangers enable sensible and latent heat recovery and are used for operation in premises requiring air humidifying with no air cooling.

Name	D: rotor diameter [mm]	A: casing width [mm]	B: casing height [mm]	C: casing depth [mm]	h: wave height [mm]	Foil thickness [mm]
R-E-EX D400	400	600	600	295	1.6; 2.1	100; 200
R-E-EX D500	500	600	600	295	1.6; 2.1	100; 200
R-E-EX D600	600	700	700	295	1.6; 2.1	100; 200
R-E-EX D700	700	800	895	295	1.6; 2.1	100; 200
R-E-EX D800	800	900	900	290	1.6; 2.1	100; 200
R-E-EX D900	900	1100	1100	290	1.6; 2.1	100; 200
R-E-EX D1000	1000	1100	1100	290	1.6; 2.1	100; 200
R-E-EX D1100	1100	1250	1250	290	1.6; 2.1	200
R-E-EX D1150	1150	1250	1250	290	1.6; 2.1	200
R-E-EX D1300	1300	1400	1400	310	1.6; 2.1	200
R-E-EX D1400	1400	1500	1500	310	1.6; 2.1	200
R-E-EX D1510	1510	1630	1630	330	1.6; 2.1	200
R-E-EX D1600	1600	1700	1700	310	1.6; 2.1	200
R-E-EX D1700	1700	2010	2010	330	1.6; 2.1	200
R-E-EX D1900	1900	2210	2210	330	1.6; 2.1	200

SORPTION ROTARY HEAT EXCHANGERS. R-N-EX SERIES (BESCHICHTUNG MOLECULAR SIEVE)



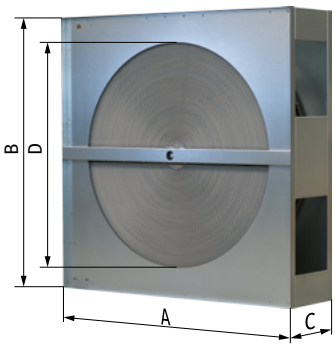
This rotary heat exchanger type is made of foil with high extremely hygroscopic coating. These heat exchangers are designed for permanent air dehumidification in premises with total heat recovery.



Name	D: rotor diameter [mm]	A: casing width [mm]	B: casing height [mm]	C: casing depth [mm]	h: wave height [mm]	Foil thickness [mm]
R-N-EX D400	400	600	600	295	1.6; 2.1	100; 200
R-N-EX D500	500	600	600	295	1.6; 2.1	100; 200
R-N-EX D600	600	700	700	295	1.6; 2.1	100; 200
R-N-EX D700	700	800	895	295	1.6; 2.1	100; 200
R-N-EX D800	800	900	900	290	1.6; 2.1	100; 200
R-N-EX D900	900	1100	1100	290	1.6; 2.1	100; 200
R-N-EX D1000	1000	1100	1100	290	1.6; 2.1	100; 200
R-N-EX D1100	1100	1250	1250	290	1.6; 2.1	200
R-N-EX D1150	1150	1250	1250	290	1.6; 2.1	200
R-N-EX D1300	1300	1400	1400	310	1.6; 2.1	200
R-N-EX D1400	1400	1500	1500	310	1.6; 2.1	200
R-N-EX D1510	1510	1630	1630	330	1.6; 2.1	200
R-N-EX D1600	1600	1700	1700	310	1.6; 2.1	200
R-N-EX D1700	1700	2010	2010	330	1.6; 2.1	200
R-N-EX D1900	1900	2210	2210	330	1.6; 2.1	200

EPOXY ROTARY HEAT EXCHANGERS. R-K-EX SERIES (EPOXY COATING)

This rotary heat exchanger type is made of foil with a special coating with high corrosion-, salt- and chemical-resistant properties. Used in swimming pools, paint booths, agricultural premises, etc.



Name	D: rotor diameter [mm]	A: casing width [mm]	B: casing height [mm]	C: casing depth [mm]	h: wave height [mm]	Foil thickness [mm]
R-K-EX D400	400	600	600	295	1.6; 2.1	100; 200
R-K-EX D500	500	600	600	295	1.6; 2.1	100; 200
R-K-EX D600	600	700	700	295	1.6; 2.1	100; 200
R-K-EX D700	700	800	895	295	1.6; 2.1	100; 200
R-K-EX D800	800	900	900	290	1.6; 2.1	100; 200
R-K-EX D900	900	1100	1100	290	1.6; 2.1	100; 200
R-K-EX D1000	1000	1100	1100	290	1.6; 2.1	100; 200
R-K-EX D1100	1100	1250	1250	290	1.6; 2.1	200
R-K-EX D1150	1150	1250	1250	290	1.6; 2.1	200
R-K-EX D1300	1300	1400	1400	310	1.6; 2.1	200
R-K-EX D1400	1400	1500	1500	310	1.6; 2.1	200
R-K-EX D1510	1510	1630	1630	330	1.6; 2.1	200
R-K-EX D1600	1600	1700	1700	310	1.6; 2.1	200
R-K-EX D1700	1700	2010	2010	330	1.6; 2.1	200
R-K-EX D1900	1900	2210	2210	330	1.6; 2.1	200

DESIGNATION KEY

Rx-x-EX Dx-x/7-0-1 AxBxC-x

R: standard heat exchanger type
x: foil width: «_»: 200 mm; «S»: 100 mm
x: rotor type: «_»: condensing type; «E»: enthalpy type, «N»: sorption type, «K»: epoxy type
EX: standard commercial group
Dx: rotor diameter [mm]: 350-2400
x: wave height [mm]: 1.6 / 2.1
A: casing width [mm]: 500-2600
B: casing height [mm]: 500-2600
C: casing depth [mm]: 250-500
7: standard foil thickness [mm]: 0.07
0: standard available cleaning section: 0: not available; 1: available
1: standard number of sections
x: number of phases of electric motor: 1: single-phase 230 V; 3: three-phase 400 V

Distribuidor en España:
Klicon Climatización y Control S.L.
C/Aragón, 44 (Pol. ind. Las Acacias)
28840 -Mejorada del Campo- MADRID | SPAIN
T:+34 916792223 | F:+34 916681321
comercial@climacontrol.es | tecnico@climacontrol.es

2018-04