recutech

SIRE

100%
proudly made
in Czech Republic

We believe that quality is the key to success, and our employees embody this philosophy.

We are proud of our long-term relationships with customers, we respect their requirements and offer full technical support.

“We know that the competition never sleeps. Therefore I personally supervise the continuous development of our products. Each year we come up with new ideas and innovations that drive RECUTECH closer to its ambitious target to become the world-leader in counterflow heat exchangers.”

Filip Hazuka, CEO

Certifications

Eurovent | AHRI | RLT | EAC | ISO | Nordic Swan listed

The widest range of TOP quality counter-flow heat exchangers

15.000 m² of production area

170.000 exchangers per year

Let´s visit us

Industry 4.0

We love modern technology, we were never going to miss the chance to incorporate Industry 4.0 trends into our production processes. New technologies improve the coordination of our employees and our robots and make our work much easier.

100% tightness testing

To ensure TOP quality, **we measure the leakage of every heat exchanger we produce**.
The customer therefore knows that the supplied heat exchanger
meets the EUROVENT standard requirements.

Recutech PARTNER

We have created a **unique overview tool** for our business partners.
Here you will find all your orders, invoices, delivery notes, statistics of deliveries, price list of your products and much more.

Recutech INSIDE

* Dimension of the sticker is 60 x 32 mm

We will be excited to welcome you in the RECUTECH inside program. It is possible to customize it to perfectly suit your needs.

Join RECUTECH inside!

Your benefits

	7 YEARS	5 YEARS	5 YEARS
Warranty for RECUTECH products			
Guaranteed lead time for all products	✔	✖	✖
Free annual factory visit in RECUTECH	✔	✔	✖
Presentation on RECUTECH webpage	✔	✖	✖

Your participation

Presentation of „RECUTECH inside“ in your marketing and technical documentation	✔	✔	✔
“RECUTECH inside” sticker on display units at trade shows and/or show rooms	✔	✔	✖
„RECUTECH inside“ sticker on standard units	✔	✖	✖

$NEP_{ratio} = P_{rout} / P_{rin}$

P_{rout} (W) = ϱ_{air} * q_v * c_{air} * Δt

ϱ air (kg * m^{3-1}, constant 1,2)
Air density

q_v (m^3 * s^{-1})
Standard air flow

c_{air} (J * kg-1 * K-1, constant 1005)
Specific heat capacity of air

Δt (°F)
Temperature increase at the inlet by passing through the recuperator

P_{rin} (W) = 2 [(q_v dp) / η_{fan}] pef

q_v (m^3 * s^{-1})
Standard air flow

dp (Pa)
Standard pressure drop

η_{fan}= 60 %
Average fan efficiency (conversion of electrical energy to air movement through heat exchanger)

pef (kWh * kWh-1, constant 2,5)
Primary energy factor for obtaining electricity

How to choose the best heat exchanger?

Recovery heat exchangers used in ventilation units have two key parameters: **heat recovery efficiency and pressure drop**. These parameters oppose each other; therefore, their values must be balanced so that the heat exchanger's overall result and performance in the recovery unit are optimal.

To monitor and evaluate both quantities at the same time, we have established a **Net Energy Performance ratio (NEP ratio)**, i.e. the **ratio between the thermal energy gained by the heat exchanger's heat recovery (P_{rout}), and the energy supplied to ventilators in order to overcome the heat exchanger's pressure drops (P_{rin})**. To choose the optimal recovery unit, the NEP ratio should be in the range 9–18.

The value of the NEP ratio can be easily worked out using our rSelect software.

ENTHALPY

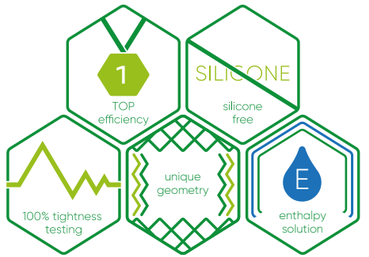
RFK+ / RFC+

VenturE-RV

The **RFK+ range is a fully enthalpy** alternative to the counter flow heat exchangers REK+, offering **up to 90 % sensible efficiency** and **very high latent efficiency** thanks to innovative technology. Having identical dimensions, it is easy to interchange the aluminium and enthalpy heat exchanger in an air handling unit, without any adjustments. The RFK+ range offers excellent price-performance ratio.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AHRI CERTIFIED®
www.ahridirectory.org
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified. Actual performance in packaged equipment may vary.



- Sensible efficiency up to 90 %
- Latent efficiency up to 75 %
- 100% tightness testing
- High resistance to unbalanced pressure
- High selective permeability
- Minimizing condesation
- Standard shape and dimensions
- Combi solution
- Unique patent pending technical solution METALPIC

Example performance at EN 308*						
Model	Width	Air velocity	Air flow	Pressure drop	Sensible efficiency	Latent efficiency
RFK+17	300 mm	1,7 m/s	200 m³/h	150 Pa	83,5 %	59,8 %
RFK+23	300 mm	1,7 m/s	260 m³/h	145 Pa	84,0 %	62,5 %
RFC+27	300 mm	1,7 m/s	310 m³/h	140 Pa	82,0 %	61,5 %
RFC+31	300 mm	1,7 m/s	370 m³/h	127,4 Pa	81,4 %	56,8 %
RFC+39	300 mm	2 m/s	580 m³/h	162,4 Pa	77,5 %	54,9 %

Model	Dimensions [mm]			
	A	B	C	Plate distance
RFK+17	397	172	150 - 1000	2,2
RFK+23	455	230	150 - 1000	2,2
RFC+27	496	271	150 - 1000	2,5
RFC+31	537	312	150 - 1000	2,5
RFC+39	619	394	150 - 1000	3,0

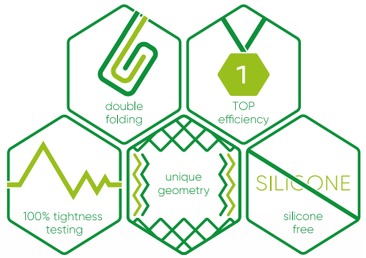
online calculator

METALPIC

Enthalpy heat exchangers of the highest quality, providing heat and moisture transfer between supply and exhaust air in ventilation systems.

ALUMINIUM

REK+



REK+ aluminium heat exchangers form an essential part of our product range.
They are distinguished by their **unique plate geometry**, which has been developed
in cooperation with specialists from the Technical University of Liberec, Czech Republic.
As a result, these heat exchangers **achieve maximum possible efficiency** and low pressure drop.

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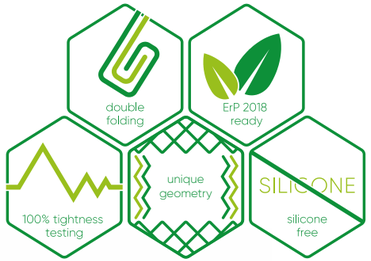
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified, Actual performance in packaged equipment may vary.

- Efficiency up to 90 %, guaranteed by patented technology
- Perfect plate geometry
- Low pressure drop thanks to computer simulations
- Double-Folding Technology ensures the best tightness
- Optional bypass
- Combi solution
- Epoxy option

online calculator

REC+



REC+ aluminium heat exchangers are the **perfect way of switching from a crossflow to a counterflow**. They meet Ecodesign requirements, and the plate geometry enables the heat exchangers to **achieve the minimum required efficiency with the least possible pressure drop**. Plus, it is much cheaper.

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Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified, Actual performance in packaged equipment may vary.

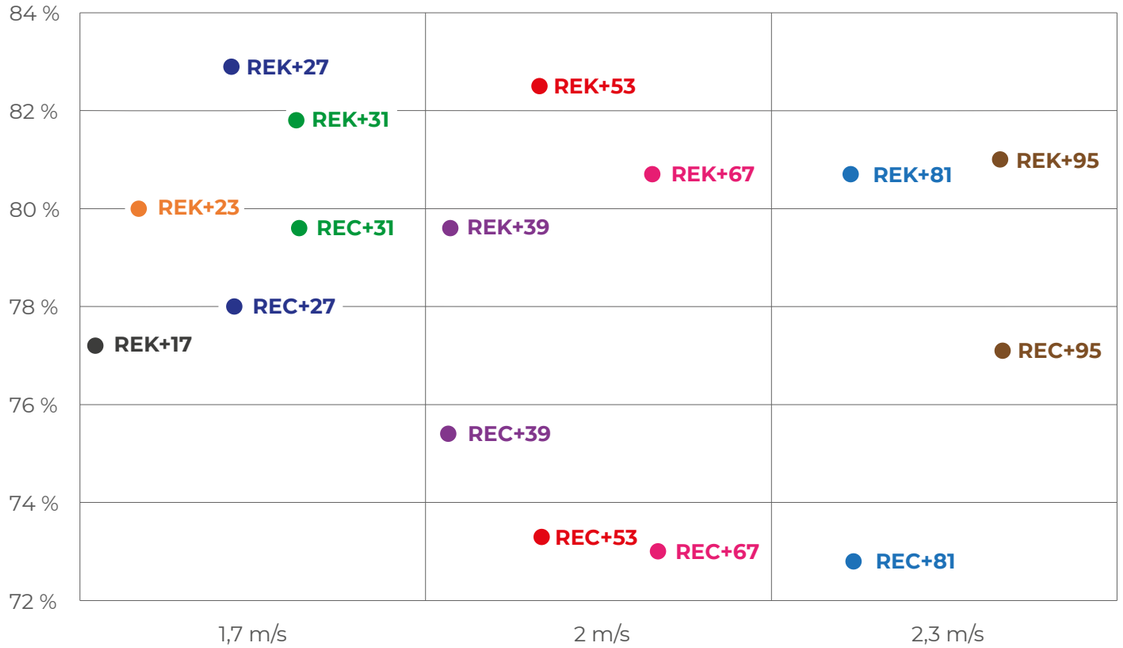
- Minimum efficiency of 73 % – complying with Ecodesign 2021
- Lowest possible pressure drop
- Double-Folding Technology
- 100% of production is leak-tested
- Optional bypass installation
- COMBI solution
- EPOXY option

online calculator

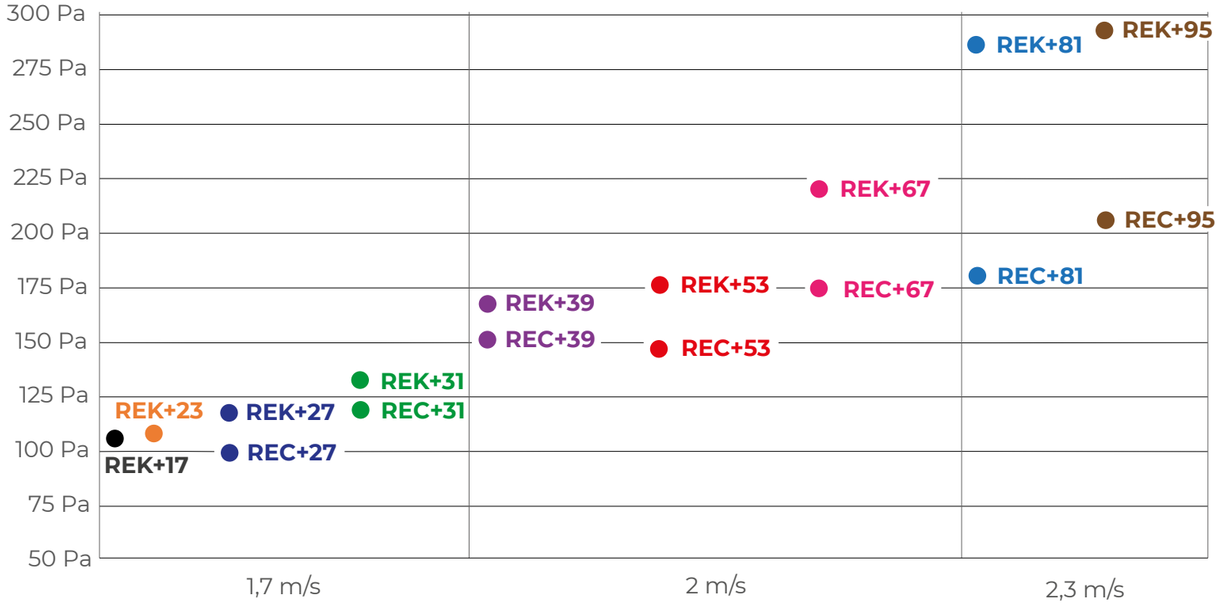
Type	Dimension [mm]				Model case with EN 308				
	A	B	C	Plate distance	Lenght	Air velocity	Air volume	Pressure drop	Efficiency
REK+17	397	172	150 - 1000	2,2	300 mm	1,7 m / s	200 m³/h	113 Pa	77,2 %
REK+23	455	230	150 - 1000	2,2	300 mm	1,7 m / s	260 m³/h	115 Pa	80,0 %
REK+27	496	271	150 - 1000	2,2	300 mm	1,7 m / s	320 m³/h	125 Pa	82,9 %
REK+31	537	312	150 - 1000	2,2	300 mm	1,7 m / s	370 m³/h	141 Pa	81,8 %
REK+39	619	394	150 - 1000	2,4	300 mm	2,0 m / s	580 m³/h	179 Pa	79,6 %
REK+53	758	533	150 - 1000	2,4	300 mm	2,0 m / s	800 m³/h	188 Pa	82,5 %
REK+67	899	674	150 - 1000	2,6	300 mm	2,0 m / s	1050 m³/h	238 Pa	80,7 %
REK+81	1040	815	150 - 1000	2,6	300 mm	2,3 m / s	1450 m³/h	309 Pa	80,7 %
REK+95	1182	957	150 - 1000	2,6	300 mm	2,3 m / s	1700 m³/h	315 Pa	81,0 %

Type	Dimension [mm]				Model case with EN 308				
	A	B	C	Plate distance	Lenght	Air velocity	Air volume	Pressure drop	Efficiency
/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/
REC+27	496	271	150 - 1000	2,5	300 mm	1,7 m / s	320 m³/h	106 Pa	78,0 %
REC+31	537	312	150 - 1000	2,5	300 mm	1,7 m / s	370 m³/h	127 Pa	79,6 %
REC+39	619	394	150 - 1000	3,0	300 mm	2,0 m / s	580 m³/h	162 Pa	75,4 %
REC+53	758	533	150 - 1000	3,0	300 mm	2,0 m / s	800 m³/h	157 Pa	73,3 %
REC+67	899	674	150 - 1000	2,9	300 mm	2,0 m / s	1050 m³/h	188 Pa	73,0 %
REC+81	1040	815	150 - 1000	3,1	300 mm	2,3 m / s	1450 m³/h	194 Pa	73,0 %
REC+95	1182	957	150 - 1000	3,1	300 mm	2,3 m / s	1700 m³/h	221 Pa	77,1 %
REC+120	1425	1200	150 - 600	3,3	300 mm	2,3 m / s	2100 m³/h	337 Pa	80,0 %

Efficiency



Pressure drop



COMBI

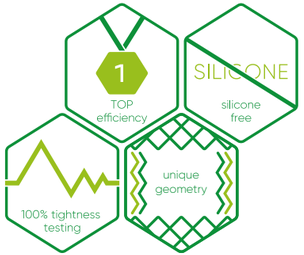
The COMBI solution is designed for recovery from **larger air volumes**. It consists of two REK+ or REC+ counterflow heat exchangers and two air dividers. The use of counterflow heat exchangers in the COMBI solution results in higher efficiency than with commonly used crossflow heat exchangers, which are also commonly employed for **higher flow rates above 3,000 m³/h**.

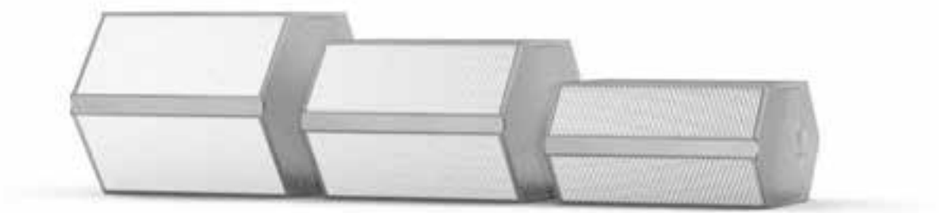
BYPASS

BYPASS is suitable for situations where heating the air would be inconvenient, e.g. during summer months when interior heating is not desirable. It is useful in winter as well, since it **prevents the heat exchanger from freezing** (which could easily damage it) when outside temperatures are below zero.

PLASTIC

REP+





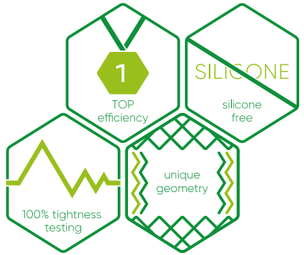
The REP+ series are the plastic version of the REK+ aluminium counterflow heat exchangers.
Thanks to their identical dimensions, aluminium and plastic heat exchangers can be easily interchanged without any additional modifications to the recovery unit.
This series provides an **excellent price / quality ratio**.

EUROVENT CERTIFIED PERFORMANCE

- Heat recovery efficiency up to 92%
- Eurovent, RLT and AHRI certificates
- 100% of production is leak-tested
- Made of HPS without silicon
- Easy handling using handling strips
- Optional bypass installation
- Low weight
- Fire class „E“ according to EN 13501-1

online calculator

RSF+/RSP+



The RSF+ / RSP+ series provide **perfect solutions for residential units**.
Their dimensions are identical to those of the most frequently used plastic heat exchangers in the sector.
With optimized parameters for efficiency and pressure drop, **they are among the best on the market**.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AHRI CERTIFIED®
www.ahridirectory.org
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified. Actual performance in packaged equipment may vary.

- The only plastic heat exchanger 366×366 certified by Eurovent
- 100% of production is leak-tested
- Enables your unit to be classified in the lowest “A” energy class
- Made of HPS without silicon
- Easy handling using handling strips
- Optional bypass installation
- Low weight
- Fire class „E“ according to EN 13501-1

online calculator

Type	Dimension [mm]				Model case with EN 308				
	A	B	C	Plate distance	Lenght	Air velocity	Air volume	Pressure drop	Efficiency
REP+17	397	172	150 - 600	3,0	300 mm	1,7 m / s	200 m³/h	135 Pa	79,3 %
REP+23	**455**	**230**	**150 - 600**	**3,0**	**300 mm**	**1,7 m / s**	**260 m³/h**	**131 Pa**	**80,9 %**
REP+27	496	271	150 - 600	3,2	300 mm	1,7 m / s	310 m³/h	123 Pa	80,6 %

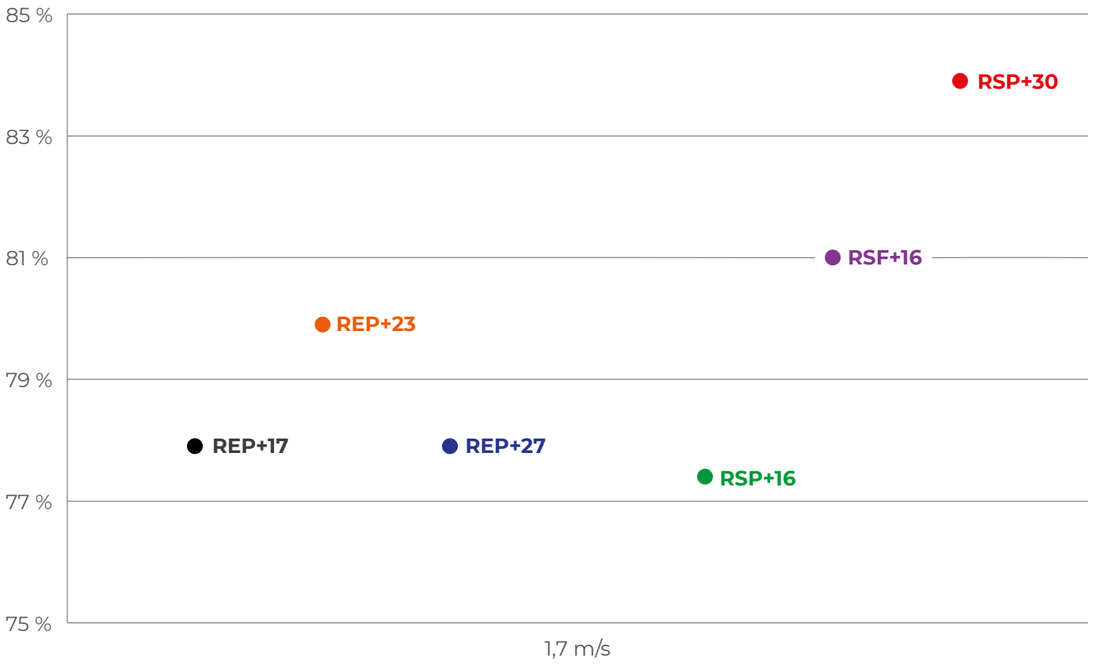
Type	Dimension [mm]				Model case with EN 308				
	A	B	C	Plate distance	Lenght	Air velocity	Air volume	Pressure drop	Efficiency
RSF+16	**366**	**366**	**150 - 600**	**3,2**	**300 mm**	**1,7 m / s**	**400 m³/h**	**174 Pa**	**80,4 %**
RSP+30	461	232	150 - 600	3,2	300 mm	1,7 m / s	260 m³/h	211 Pa	83,9 %

The importance of leak-tight heat exchangers

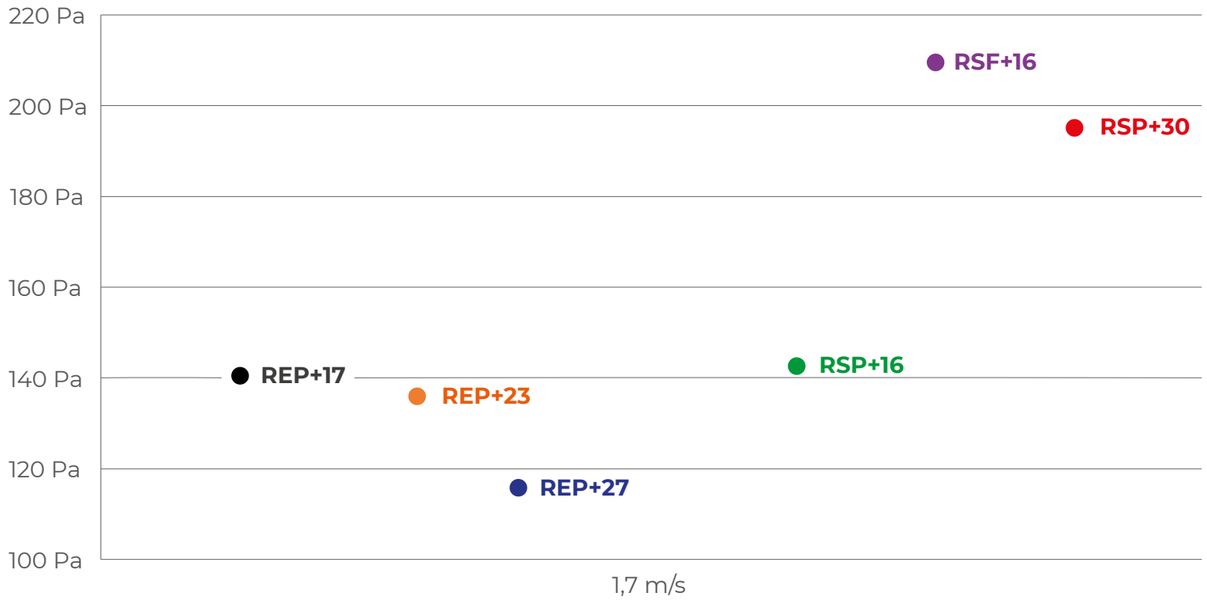
Leak-tightness is one of three key parameters of recovery units, together with thermal efficiency and pressure drop. Heat exchanger tightness significantly affects the internal leakage of the recovery unit, and is also an important, monitored parameter in the system overall.

We guarantee our customers that the leakage of all delivered heat exchangers is within 0.5 % of their nominal flow rate.

Efficiency



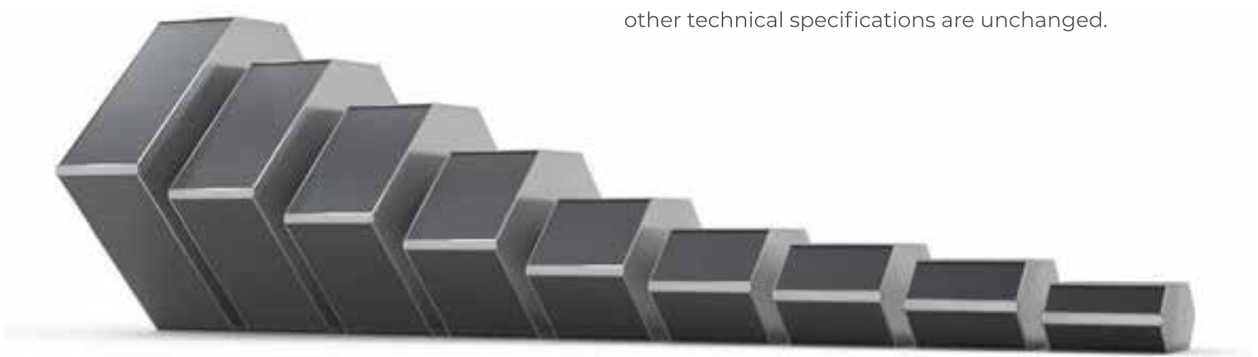
Pressure drop



SPECIAL PRODUCTS

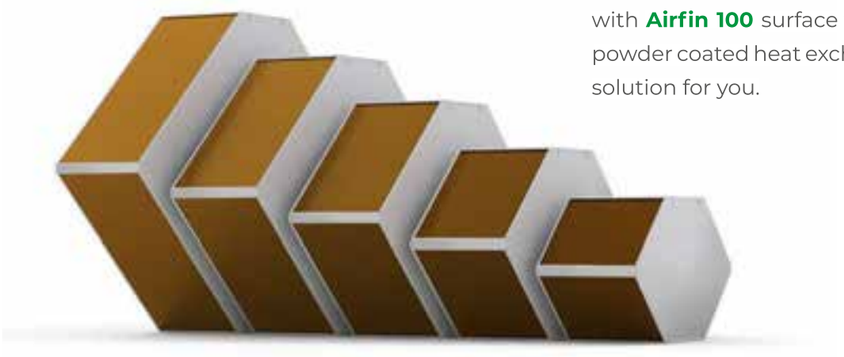
ANTIFIRE

If you are using your recovery unit in non-standard conditions with **temperatures up to 120 °C**, this heat exchanger is the best choice. The heat exchanger's other technical specifications are unchanged.



EPOXY

Do you need to place your unit in an extremely aggressive environment, e.g. swimming pools, seaside areas, kitchens or chemical plants? Plates with **Airfin 100** surface treatment and a completely powder coated heat exchanger casing are the perfect solution for you.



PACKAGING

HANDLING STRIPES

EASY RECYCLABLE AND STACKABLE PALLETS

Type	Dimension [mm]			
	A	B	C	Plate distance
REK+17	397	172	**150 - 1000**	2,2

REK+17-**519**-22
Key to coding for REK+ range

REK+17-519-22-**CXS**
Key to coding for **Combi** solution

REK+17-519-22-**BY-103**-14-A
Key to coding for solution with **Bypass**
width of bypass = 103 mm

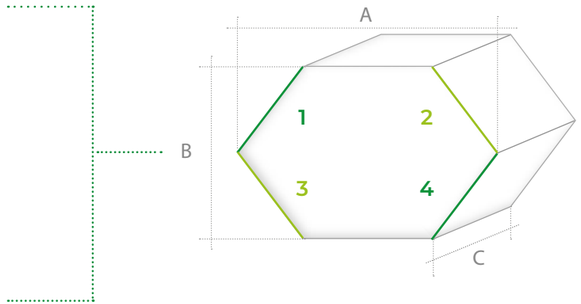
REK+17-519-22-BY-103-**23**-A
Key to coding for solution with **Bypass**
Closed sides of bypass = 14 / 23

REK+17-519-22-BY-103-23-**A**
Hem dimension for solution with damper
A = 9 mm | B = 20 mm

Type	Dimension [mm]			
	A	B	C	Plate distance
REK+67	899	674	**150 - 1000**	2,9

REC+67-**876**-29
Key to coding for REC+ range

REC+67-519-22-**CXS**
Key to coding for **Combi**



Type	Dimension [mm]			
	A	B	C	Plate distance
REP+27	496	271	**150 - 600**	3,2

REP+27-**152**-H-F-32 / REP+27-**152**-H-T-32
Key to coding for REC+ range

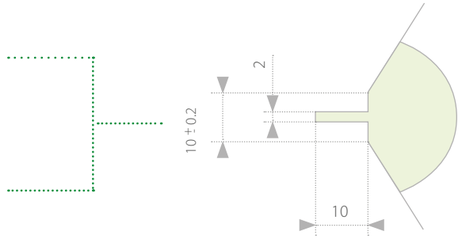
REP+27-152-**H**-F-32
H = **High impact polystyrene** (HPS)

REP+27-152-H-**F**-32
F = flat exchanger **without „T“ profile**

REP+27-152-H-**T**-32
T = exchanger **with „T“ profile**

Type	Dimension [mm]			
	A	B	C	Plate distance
RSF+16	366	366	**150 - 600**	2,9

RSF+16-**302**-H-T-29 / RSF+16-**152**-H-F-29
Key to coding for RSF+ / RSP+ range



„T“ profile for easy
installation in the unit

Contacts

RECUTECH s.r.o.
+420 725 544 965
info@recutech.com
www.recutech.com

Rappresentanza per l'Italia

SIRE s.r.l.
Via Monte Rosa, 1 - 20863 Concorezzo (MB)
Tel. 039 6049008 r.a. - www.sireonline.com - info@sireonline.com