



HEAT EXCHANGERS PRODUCT RANGE

ZERN ENGINEERING team,
2025



THE HISTORY OF ZERN ENGINEERING



The history of ZERN ENGINEERING started out in 2013 with selling of heat exchangers only for the internal needs of BLAUBERG GROUP.

Since 2016, we have been successfully selling heat exchangers of ZERN ENGINEERING for EXPORT (outside the BLAUBERG GROUP).

The primary mission of ZERN ENGINEERING is to provide Customers with innovative and unique heat exchangers that would allow them to achieve desired results, namely improving living standards due to organization of high-quality and reliable ventilation.

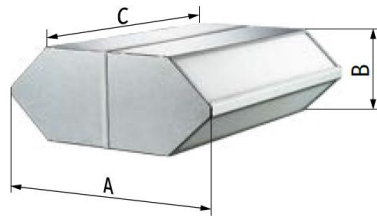
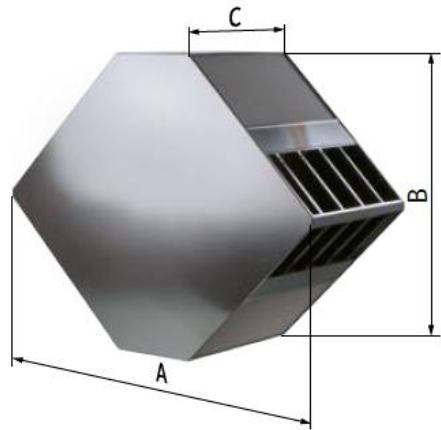
In this regard, our main values/principles are formed below:

- innovation
- uniqueness
- reliability
- professionalism
- result

We keep receiving positive feedback from our Customers and generate desired profit for the business owners.

Thereby, the outcomes of our work confirm we are moving in the right direction.

COUNTER-FLOW SENSIBLE



Top efficiency



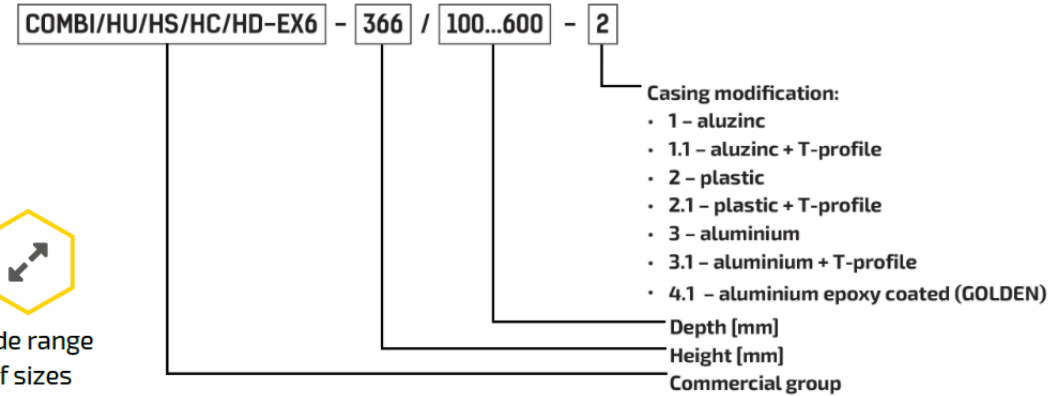
Great balance
efficiency –
pressure drop



Competitive
prices and
production times

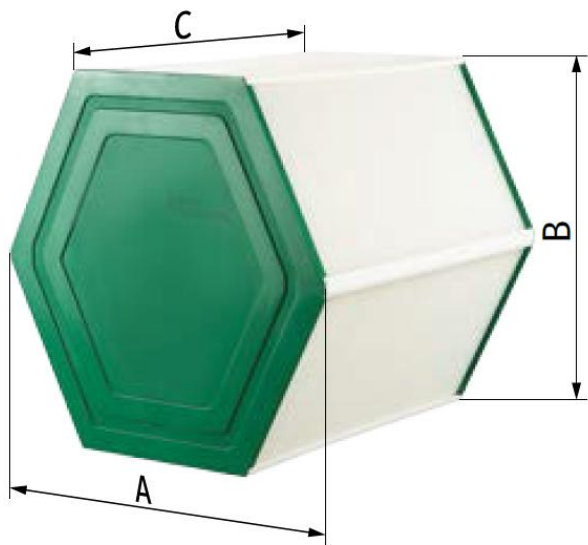


Wide range
of sizes



Model	Geometry, mm			Casing modification	Plate material	Airflow, m³/h min/max	Model case according to EN 308				
	A	B	C				Length, mm	Air velocity, m/s	Airflow, m³h	Efficiency, %	Pressure Drop, Pa
HU-EX6 138	318	138	100-600	2/2.1	PS	20 - 350	500	1	120	87,4	50
HU-EX6 172	397	172	100-600	1/1.1/2/2.1/3/3.1		20 - 450	500	1	180	90,2	69
HU-EX6 230	455	230	100-600	1/1.1/2/2.1/3/3.1		30 - 600	500	1	250	89,4	63
HU/HS-EX6 232	461	232	100-600	1/1.1/2/2.1/3/3.1		30 - 600	500	1	270	89,8/90,4	60/91
HU-EX6 366	366	366	100-600	2/2.1		40 - 750	500	1	350	90,4	78
HC-EX6 366						40 - 820	500	1	350	88,5	65
HD-EX6 366						40 - 900	500	1	350	86,4	49
HU-EX6 450	270	450	100-600	1/1.1/3/3.1		40 - 600	500	1	315	87,1	118
HU/HS-EX6 271	496	271	100-600	1/1.1/3/3.1/4		30 - 730	500	1	320	89,2/90,2	68/80
HU/HS-EX6 312	537	312	100-600	1/1.1/3/3.1/4		40 - 850	500	1	530	88,9/90,1	51/70
HC-EX6 394	619	394	100-600	3/4		50 - 1100	500	1	460	88,9	69
HU-EX6 477	700	477	100-600	3/4		60 - 1370	500	1	570	88,7	71
HC-EX6 533	758	533	100-600	3/4		70 - 1550	500	1	650	88,8	72
Combi HU/HC-EX6 815	1040	815	100-600	3/4		150 - 2400	500	1	1000	88,6/86,5	95/82
Combi HU/HC-EX6 959	1182	959	100-600	3/4		150 - 2900	500	1	1200	88,8/86,4	97/80
Combi HU/HC-EX6 1089	1314	1089	100-600	3/4		150 - 3300	500	1	1400	88,4/86,5	99/81

COUNTER-FLOW ENTHALPY





High sensible
and latent
efficiency



No
condensation



100% high
quality



For hot and cold
humid climates



Competitive
prices and
production times



Simple to install
and maintain

EC/ECD-EX6

Commercial
group

-

366

Height
[mm]

/

100...600

Depth
[mm]

-

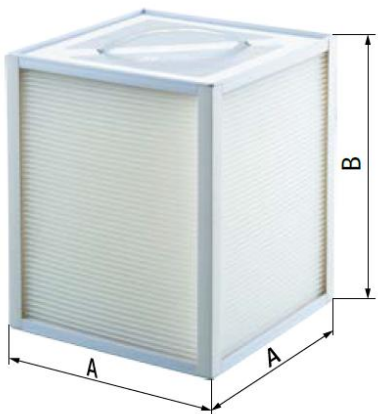
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Casing modification:

1 – aluzinc;
1.1 – aluzinc with T-profile;
2 – plastic;
2.1 – plastic with T-profile;
3 – aluminium;
3.1 – aluminium with T-profile;
4 – aluminium epoxy coated;
5 – stainless steel;
5.1 – stainless steel with T-profile.

Model	Geometry, mm			Casing modification	Plate material	Airflow, m³/h min/max	Model case according to EN 308					
	A	B	C				Length, mm	Air velocity, m/s	Airflow, m³h	Efficiency, %	Humidity Efficiency, %	Pressure Drop, Pa
ECD-EX6 172	397	172	100-600	5/5.1	Membrane	20 - 300	500	1,2	280	70,1	47,6	85
EC-EX6 230	455	230	100-600	1/1.1/2/2.1/3/3.1		35 - 600	500	1,2	310	70,5	44,5	86
EC-EX6 232	461	232	100-600	2/2.1		35 - 600	500	1,2	320	68,5	44,5	82
EC-EX6 366	366	366	100-600	2/2.1		35 - 800	500	1,2	400	74,8	51,3	104

CROSS-FLOW SENSIBLE



**Improved
Energy Efficiency**



**Space-Efficient
Design**



**Minimal
Maintenance**



**Diverse
Applications**

Combi/Hp-EX4 - 200 / 100...800 - 2

Casing modification:

- 1 – aluzinc
- 2 – plastic
- 2.1 – plastic + T-profile

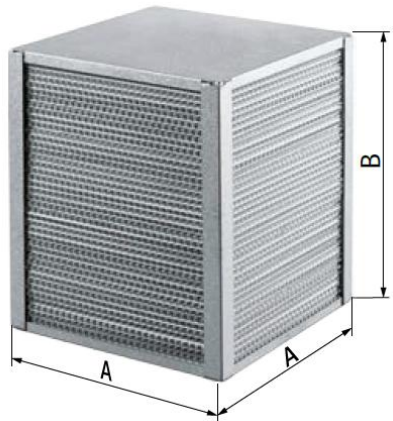
Depth [mm]

Height [mm]

Commercial group

Model	Geometry, mm			Casing modification	Plate material	Airflow, m ³ /h min/max	Model case according to EN 308				
	A	A	B				Length, mm	Air velocity, m/s	Airflow, m ³ h	Efficiency, %	Pressure Drop, Pa
Hp-EX4 200	200	200	100-800	2/2.1	PS	40 - 600	300	1,5	350	60	107
Hp-EX4 250	250	250	100-800	2/2.1		50 - 780	300	1,5	420	61	102
Hp-EX4 300	300	300	100-800	2/2.1		60 - 900	300	1,5	510	60	120
Combi Hp-EX4 400	400	400	100-800	1		75 - 1200	300	1,5	680	62	117
Combi Hp-EX4 500	500	500	100-800	1		95 -1500	300	1,5	840	67	130
Combi Hp-EX4 600	600	600	100-800	1		115 - 1800	300	1,5	1020	65,5	111
Combi Hp-EX4 750	750	750	100-800	1		140 - 2300	300	1,5	1300	66,6	136
Combi Hp-EX4 800	800	800	100-800	1		150 - 2500	300	1,5	1400	69,5	158
Combi Hp-EX4 900	900	900	100-800	1		170 - 2700	300	1,5	1550	68,9	135
Combi Hp-EX4 1000	1000	1000	100-800	1		190 - 3000	300	1,5	1700	69,6	152
Combi Hp-EX4 1200	1200	1200	100-800	1		230 - 3500	300	1,5	2000	69	190
Combi Hp-EX4 1400	1400	1400	100-800	1		260 - 4200	300	1,5	2400	69	202
Combi Hp-EX4 1500	1500	1500	100-800	1		280 - 4500	300	1,5	2600	69	225
Combi Hp-EX4 1600	1600	1600	100-800	1		300 - 4800	300	1,5	2800	69	220
Combi Hp-EX4 1800	1800	1800	100-800	1		340 - 5400	300	1,5	3100	69	220

CROSS-FLOW ENTHALPY



**Efficient Heat
and Moisture
Transfer**



**Condensation
Prevention**



**Year-Round
Comfort**



**Compliance with
Building Codes**

Combi/E-EX4 - 200 / 100...400 - 1

Casing modification:

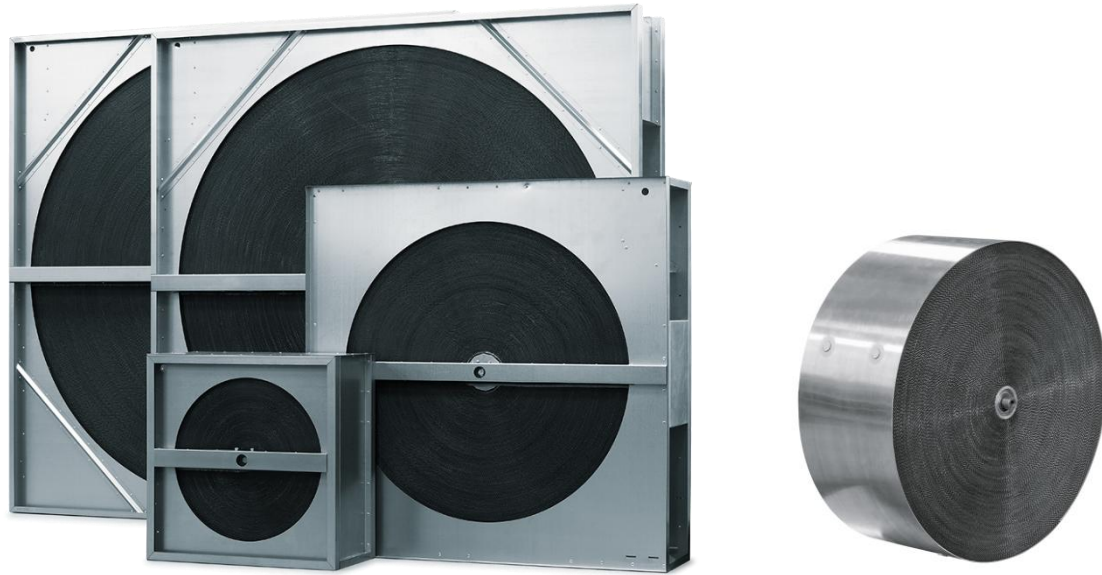
- 1 – aluzinc
- 1.1 – aluzinc + T-profile

Depth [mm]

Height [mm]

Commercial group

Model	Geometry, mm			Plate distance, mm	Casing modification	Plate material	Airflow, m ³ /h min/max	Model case according to EN 308					
	A	A	B					Length, mm	Air velocity, m/s	Airflow, m ³ h	Efficiency, %	Humidity Efficiency, %	Pressure Drop, Pa
E-EX4 200	200	200	100-400	2.7	1/1.1	Membrane	40 - 600	300	1,5	340	61	22	102
E-EX4 250	250	250	100-400	2.7	1/1.1		50 - 780	300	1,5	420	62	24	102
E-EX4 300	300	300	100-400	2.7	1/1.1		60 - 900	300	1,5	510	66	24	147
Combi Hp-EX4 400	400	400	100-400	2.7	1		75 - 1200	300	1,5	680	66	26	135
Combi Hp-EX4 500	500	500	100-400	2.7	1		95 -1500	300	1,5	840	66	26	134
Combi Hp-EX4 600	600	600	100-400	2.7	1		115 - 1800	300	1,5	1020	65	26	135
E-EX4 200	200	200	100-400	4.5	1/1.1	Membrane	40 - 800	300	1,5	340	56	19	70
E-EX4 250	250	250	100-400	4.5	1/1.1		50 - 1100	300	1,5	420	55	18	65
E-EX4 300	300	300	100-400	4.5	1/1.1		60 - 1300	300	1,5	510	58	20	94
Combi Hp-EX4 400	400	400	100-400	4.5	1		75 - 1500	300	1,5	680	58	20	93
Combi Hp-EX4 500	500	500	100-400	4.5	1		95 -1800	300	1,5	840	57	19	94
Combi Hp-EX4 600	600	600	100-400	4.5	1		115 - 2100	300	1,5	1020	57	19	96



Efficient
Heat Transfer



Constant &
Balanced
Airflow



Variability
Diameters



Long
Lifespan

R-EX: Condensing series



R-N-EX: Sorption Series



R-E-EX: Enthalpy series



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

R: standard heat exchanger type

x: foil width: «-»: 200 mm; «5»: 100 mm

x: rotor type: «-»: condensing type; «E»: enthalpy type; «N»: sorption type;

EX: standard commercial group

Dx: rotor diameter [mm]: 200-2500

x: wave height [mm]: 1.4/1.6/1.8/2.1

A: casing width [mm]: 500-2600

B: casing height [mm]: 500-2600

C: casing depth [mm]: 250-500

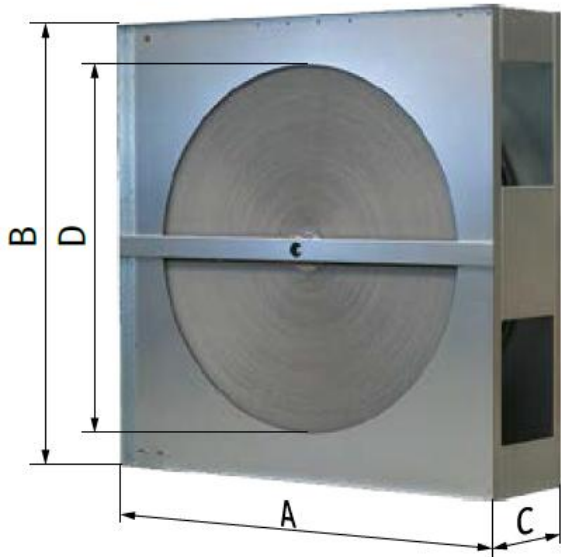
5.5/7: standard foil thickness [mm]: 7 – 0.07; 5 – 0.055

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;

4: OJ DRHX single-phase 230 V 50/60 Hz rotary step drive



Series	Geometry, mm				Wave height, mm	Wheel material	Casing material	Model case according to EN 308					
	D	A	B	C				Airflow, m³/h min/max	1,6 mm				
									Diameter, mm	Air velocity, m/s	Airflow, m³h	Efficiency, %	Pressure Drop, Pa
R-EX R-E-EX R-N-EX	200	D + 50		290	1.4 1.6 1.8 2.1	R-EX: Condensing R-E-EX: Enthalpy R-N-EX: Sorption	Main: Zinc-plated steel Option: Al Stainless steel	50 - 400	200	1,5	175	84,2	87
	300							70 - 550	300	1,5	200	84,1	89
	400							120 - 720	400	1,5	350	84	85
	500							190 - 1100	500	1,5	550	84	89
	600							270 - 1650	600	1,5	800	85	91
	700							370 - 2150	700	1,5	1100	85,9	97
	800							480 - 2850	800	1,5	1400	86	90
	900							610 - 3600	900	1,5	1800	85,9	101
	1000							750 - 4500	1000	1,5	2200	86	104
	1100							900 - 5400	1100	1,5	2700	85,9	101
	1200	D + 100		290	1.4 1.6 1.8 2.1	R-EX: Condensing R-E-EX: Enthalpy R-N-EX: Sorption	Main: Zinc-plated steel Option: Al Stainless steel	1070 - 6400	1200	1,5	3200	85,9	101
	1300							1250 - 8000	1300	1,5	3750	86	97
	1400							1450 - 9000	1400	1,5	4350	86	101
	1500							1700 - 10 000	1500	1,5	5000	86	100
	1600							2000 - 11 400	1600	1,5	5700	86	98
	1700							2200 - 12 900	1700	1,5	6500	85,9	106
	1800							2400 - 14 400	1800	1,5	7200	86,9	101
	1900							2700 - 16 000	1900	1,5	8000	86	98
	2000							3000 - 17 800	2000	1,5	9000	85,9	98
	2100							3300 - 19 500	2100	1,5	9800	86	103
	2200							3600 - 21 500	2200	1,5	10 800	85,9	104
	2300							4000 - 23 500	2300	1,5	11 700	86	103
	2400							4300 - 25 500	2400	1,5	12 900	85,9	104
	2500							4700 - 27 700	2500	1,5	13 900	85,9	104

PLATE HEAT EXCHANGERS:

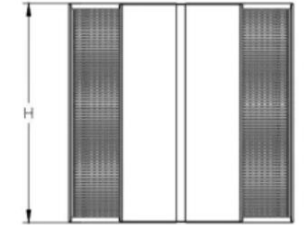
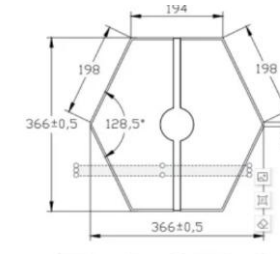
- T/Y-profile



- Different types of casing



- Custom solutions



ROTARY HEAT EXCHANGERS:

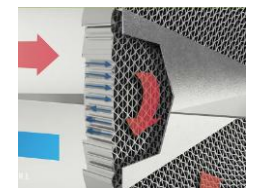
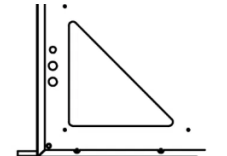
- Only wheel supply



- 1f/3f AC gear motor + FE; Step motor



- Additional options



**Thank you for your
attention!**

**ZERN ENGINEERING team,
2025**