Brazed plate heat exchangers

EXEL

Very economical
to buy, install and operate,
very compact and lightweight,
fullly welded construction
Exceptional mechanical
strength and zero leaks

Capacity : 1 to 200 kW

Use

EXEL is used in a wide variety of applications such as heating, industry or refrigeration.
EXEL can perform all refrigerant cycle functions:

- Evaporation.
- Condensation.
- Desuperheating.
- Superheating/sub.cooling.
- Oil cooling.

Range

The EXEL range is composed of 5 plate sizes (EXL 2 - EXL 4 - EXL 7 - EXL 8 - EXL 14).

The number of plates varies between 40 and 140 depending on the models.

Description

EXEL is composed of a stack of corrugated stainless steel plates (316 stainless steel) on which the contact points and periphery are brazed with **copper.**

Operating limits

- Min./max. temperatures :
  – Max. temperature = 225 °C*
  – Min. temperature = –40 °C
- Min./max. operating pressures :
  – Max. allowable pressure (Dir. 97/23CE) : PS = 42 bar**
  – Min. pressure = empty

Options

Various connection, support and insulation possibilities: consult us.

* According to fluid and pressure
** According to model and temperature

EVAPORATION

QUICK SELECTION

	R407C / WATER			R404A / MEG 35		
	WATER Inlet temperature	**12 °C**		MEG 35 Inlet temperature	**– 4 °C**	
	Evaporating temperature	**> 0 °C**		Evaporating temperature	**> – 14 °C**	
	Temp. of fluid before expansion	**35 °C**		Temp. of fluid before expansion	**35 °C**	
	Superheating of suction gases	**5 K**		Superheating of suction gases	**5 K**	
Power kW	**EXEL**	Flow m^3/h	Pressure drop kPa	**EXEL**	Flow m^3/h	Pressure drop kPa
2	**EXL 2 10**	0,3	1	**EXL 4 10**	0,5	3
5	**EXL 2 20**	0,7	2	**EXL 7 14**	1,2	15
10	**EXL 4 20**	1,4	4	**EXL 7 20**	2,4	30
35	**EXL 7 30**	6,0	44	**EXL 14 20**	4,8	42
60	**EXL 7 60**	10,3	41	**EXL 14 40**	9,6	35
80	**EXL 14 30**	13,7	63	**-**	–	–
120	**EXL 14 50**	20,6	56	**-**	–	–

CONDENSATION

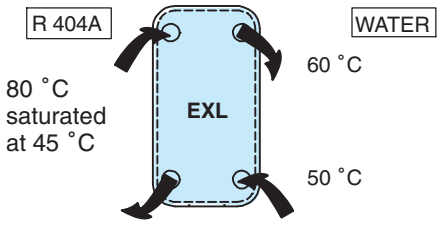
QUICK SELECTION

	R407C / WATER			R404A / MEG 30		
	WATER Inlet temperature	**30 °C**		MEG 30 Inlet temperature	**– 5 °C**	
	Outlet temperature	**90 °C**		Outlet temperature	**60 °C**	
	Condensing temperature	**45 °C**		Condensing temperature	**10 °C**	
	Fluid sub cooling	**2 K**		Fluid sub cooling	**2 K**	
Power kW	**EXEL**	Flow m^3/h	Pressure drop kPa	**EXEL**	Flow m^3/h	Pressure drop kPa
5	**EXL 2 20**	0,6	2	**EXL 2 20**	0,9	5
10	**EXL 2 30**	2,2	9	**EXL 2 30**	2,7	18
20	**EXL 4 30**	3,5	9	**EXL 4 30**	3,7	15
30	**EXL 4 40**	7,0	22	**EXL 4 40**	6,2	24
50	**EXL 7 30**	6,5	48	**EXL 7 30**	5,8	63
90	**EXL 7 60**	11	43	**EXL 7 50**	12	86
150	**EXL 14 50**	22	59	**EXL 14 50**	15,6	64
200	**EXL 14 70**	30	64	**-**	–	–

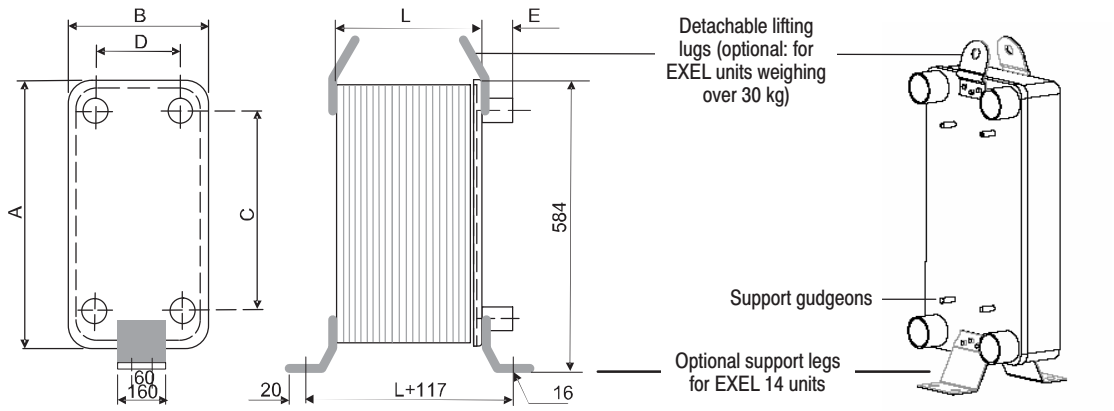
DESUPERHEATING

QUICK SELECTION

EXEL	R 404A / WATER Water inlet / outlet : 50 / 60 °C COUNTER-FLOW				
	Flow R404A	Pressure drop R404A	Power	Water flow	Water pressure drop
	kg/h	kPa	kW	kg/h	kPa
EXL 4 30	2000	22.9	16.7	1.69	2.10
EXL 4 40	2500	22.8	21.1	2.11	2.11
EXL 4 40	3000	32.7	24.8	2.53	2.98
EXL 4 50	3500	33.6	29.2	2.95	3.05
EXL 4 70	4000	32.9	34.1	3.37	2.92
EXL 14 50	4500	19.1	43.3	3.79	2.18
EXL 14 50	5000	23.5	48.0	4.23	2.65
EXL 14 50	5500	28.3	52.5	4.64	3.13
EXL 14 50	6000	33.5	57.0	5.06	3.67
EXL 14 70	6500	23.1	62.5	5.48	2.55
EXL 14 70	7000	26.7	67.2	5.92	2.94
EXL 14 70	7500	30.5	71.7	6.32	3.31
EXL 14 70	8000	34.6	76.3	6.74	2.72



DIMENSIONS

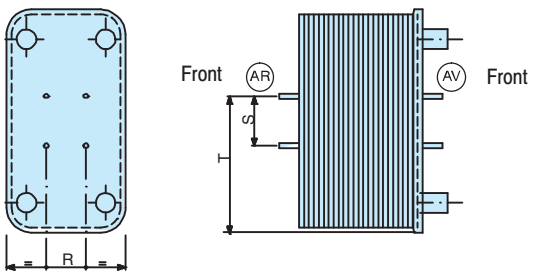


EXEL	Q_{max} (m^3/h)	A (mm)	B (mm)	C (mm)	D (mm)	L (mm)	NP MAX. (number of plates)	TOTAL VOUME (l)	WEIGHT EMPTY (kg)
EXL 2	**7.1**	248	85	208	45	(NP * 2.25) + 8.0	40	(NP – 1) * 0.034	1.0 + (NP * 0.084)
EXL 4	**13.6**	361	125	312	76	(NP * 2.30)+ 8.0	100	(NP – 1) * 0.075	2.0 + (NP * 0.178)
EXL 7	**15.3**	526	119	476	69	(NP * 2.65)+ 6.5	120	(NP – 1) * 0.095	2.3 + (NP * 0.180)
EXL 8	**33.6**	530	153	462	85	(NP * 2.60) + 8.5	120	(NP – 1) * 0.149	3.5 + (NP * 0.316)
EXL 14	**35.4**	528	265	460	198	(NP * 2.50) + 7.0	140	(NP – 1) * 0.226	8.5 + (NP * 0.400)

CONNECTIONS

EXEL	EXL 2		EXL 4		EXL 7		EXL 8	EXL 14	
Type connection	**DG**	**SE**	**DI**	**DK**	**GK**	**SL**	**DM**	**BJ**	**SR**
Conical external threading	3/4“	–	1”	1” 1/4	1” 1/4	–	1” 1/2	–	–
Metric borings	20	12	22	–	–	35	42	–	54
Refrigerant borings	3/4”	1/2”	7/8”	1”3/8	1”1/8	1”3/8	1”5/8	–	2”1/8
PN40 flanges on collars	–	–	–	–	–	–	–	DN 50	–
E (mm)	19.5	19.5	19.5	30	30	19.5	30	83	19.5

SUPPORTING GUDGEONS



Positions of gudgeons	EXL 2		EXL 4		EXL 7		EXL 8		EXL 14	
front	**AV**	**AR**	**AV**	**AR**	**AV**	**AR**	**AV**	**AR**	**AV**	**AR**
M x L	M6x16	M6x16	M6x16	M6x16	M6x16	M6x16	M6x16	M6x16	M8x25	M8x25
R (mm)	0	40	0	0	0	0	0	0	100	145
S (mm)	100	0	200	280	300	400	300	400	260	400
T (mm)	174	167	278	322	413	463	415	465	394	464