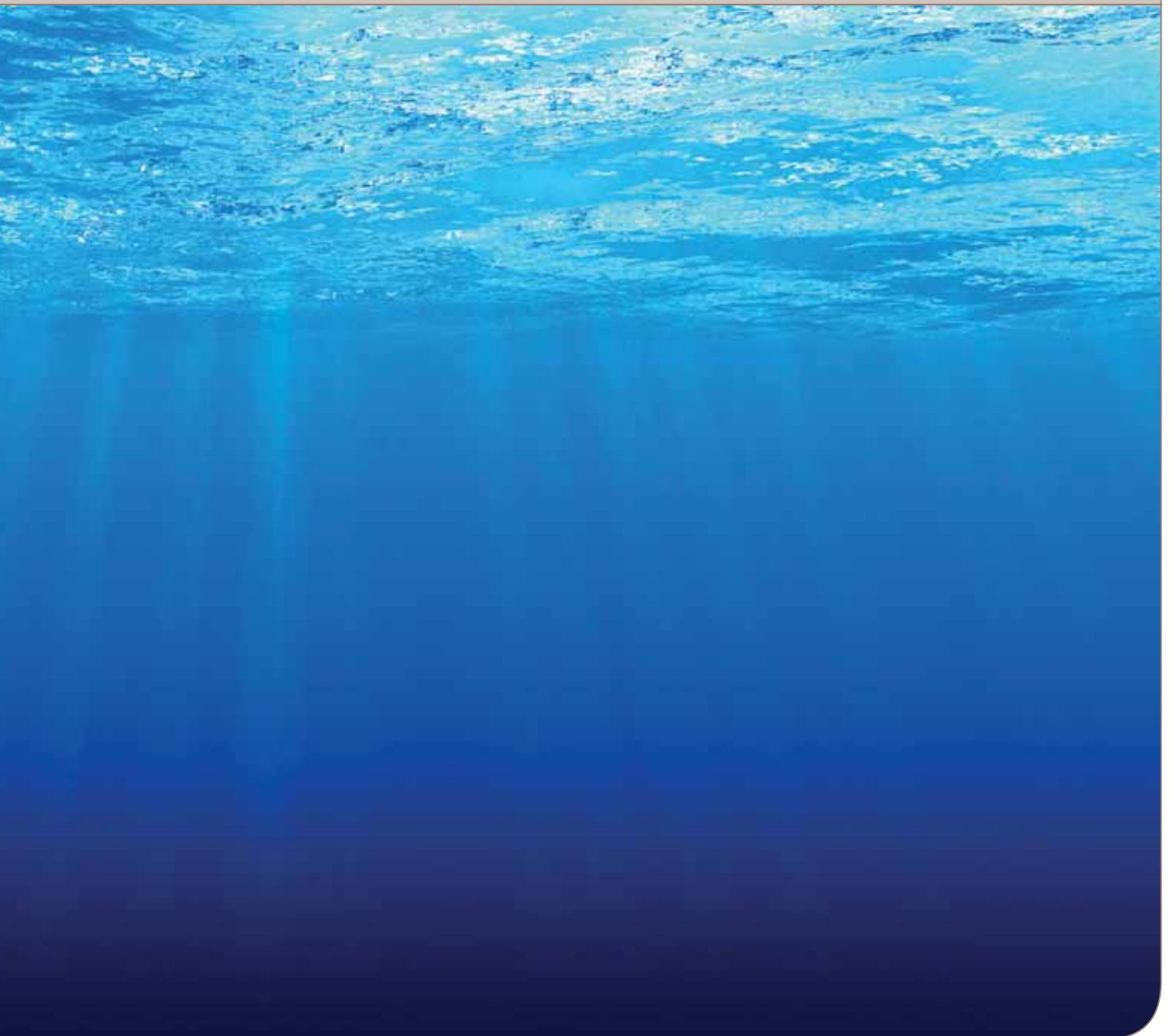




Well-equipped for any challenge

Shell-and-tube water cooled condensers for fresh and seawater applications



One range for all waters

Whether it is in the search of precision fine-tuning or braving high seas, Alfa Laval's condenser range provides optimal individual solutions for all applications where fresh or seawater is used as coolant.





A strong set of benefits

Alfa Laval has a long-term track record in supplying optimal heat transfer solutions to industries around the world. Optimized for HFC condensation, our unique range of shell-and-tube condensers ensures reliable performance for all waters.

Ensuring premium efficiency

The special design of the Alfa Laval condensers feature finned tubes and tube geometry – ensuring a lower condensing temperature which results in high efficiency of the cooling system.

Easy to install

All condenser models are simple to install and can be easily opened for inspection, cleaning and maintenance purposes. The cleaning procedures of the tubes depend on the type of copper tube used.

Flexibility of different choices

The condenser serie is available ready-made but is by no means rigid – models can be customized to suit every need.

A vast number of different refrigerants can be used where fresh, dirty or seawater is available. The option of 2, 4 or even 8 passes gives flexibility for various types of water depending on fouling and velocity factors.

Alfa Laval quality and reliability

Each unit undergoes an individual pressure and leak test. These tests are specified by the relevant authority and in accordance with Alfa Laval quality systems which are certified with ISO9001 from TÜV-Italia*. A further warranty of the shell and tube condenser's high quality level.

*International service corporation focusing on consulting, testing, certification and training





Five shell-and-tube condensers to match all water coolants

The Alfa Laval shell-and-tube condenser family consists of five series in different configurations for various requirements. Whether your focus is on capacity, efficiency or the flexibility to use different types of refrigerant we have the solution.

Condensers for fresh water applications

CDEW, CDEW-E and CXP series are optimized for HFC condensation to provide the best efficiency in applications when fresh water is used as cooling medium. The cooling water source can be a cooling tower, dry cooler, a well, river, lake or an industrial process. Standard models fulfill condensation capacities ranging from 15 to 1680 kW.

Condensers for seawater applications

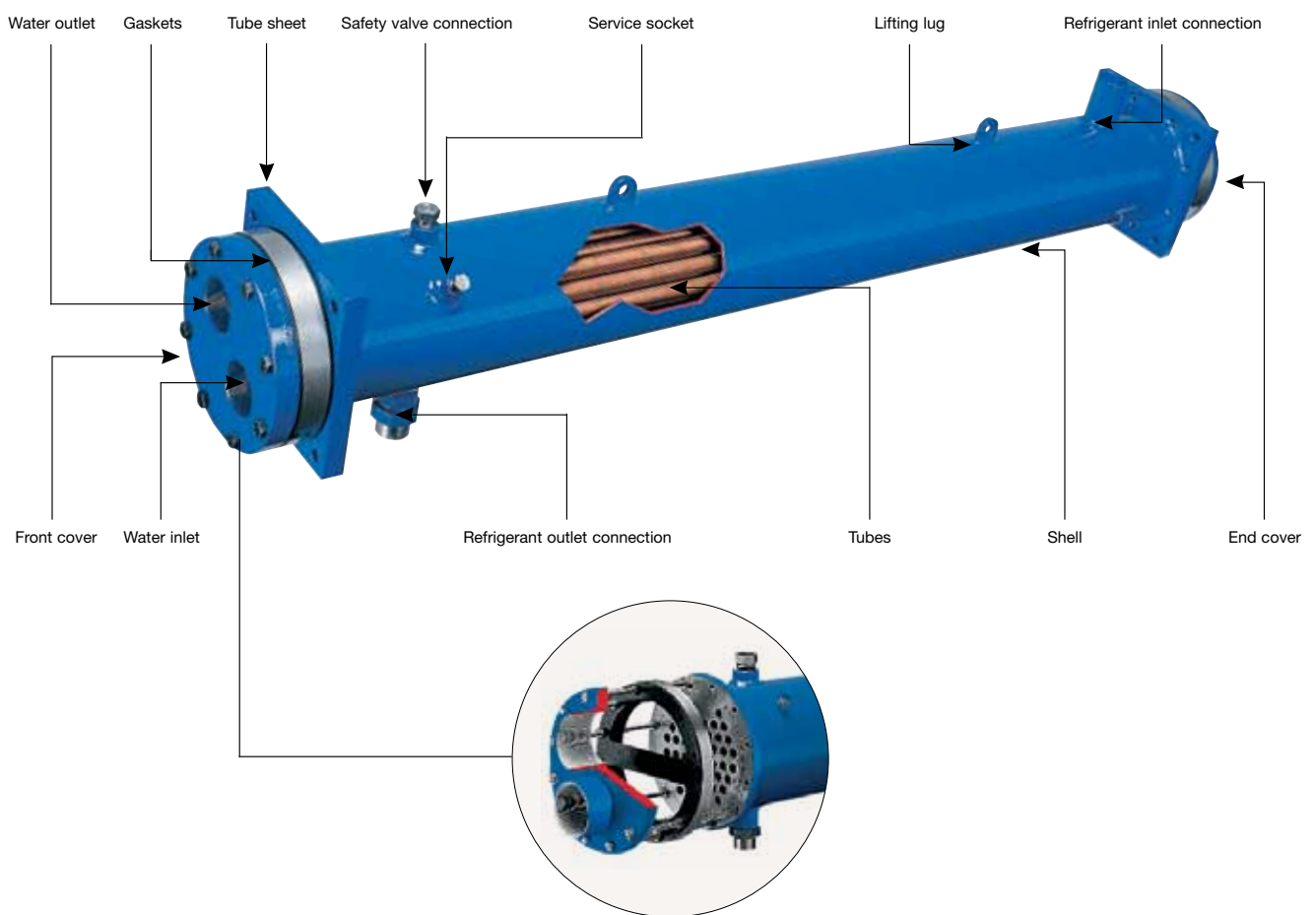
McDEW and CXPM – of shell-and-tube condensers are optimized for HFC condensation in order to provide the best reliability and efficiency whenever seawater is used as the cooling medium. Both series are dedicated to seawater and provide optimal condensation and reliable operation for on-board marine applications and for all other

mainland installations where it is possible to use the sea as a natural source of cooling water. Standard models fulfill condensation capacities ranging from 15 to 1500 kW.

In accordance with all major pressure vessel codes

All condensers are available in accordance with the major pressure vessel codes as CE (Europe), GOST (Russia), SQL (China) and ASME (USA).





Product overview

- Shell: carbon steel
- Tube sheets: carbon steel for fresh water, AISI316 stainless steel for seawater
- Tubes: integrally finned thick copper tubing for fresh water and integrally finned copper-nickel tubing for seawater
- Covers: carbon steel for fresh water, AISI316 stainless steel for seawater
- Gaskets: thermo-polymer compound
- Baffles: Teflon



Condensers for fresh water applications

The Alfa Laval condenser series for fresh water applications features models for various requirements and are optimized for HFC condensation to provide the best efficiency. Three series in a number of configurations enable a solution for every need.

CDEW series

– optimized for R407c refrigerant

When high performance is a must the CDEW series is optimized for HFC-R407C. This refrigerant is particularly affected by glide. This phenomenon can be relevant during the condensing phase, as it causes losses in performance if standard condensers are used which are designed to operate with azeotropic refrigerant.

The special design and sizing of the CDEW condenser ensures the highest performance when using R407c refrigerant.

The CDEW series can be manufactured in stainless steel by request. The special gasket configuration resists high pressure and gives the best resistance to aging in the working temperature range. CDEW condensers are equipped with square tube sheets ensuring a simple solution for the unit positioning.

CDEW-E series

– for the use of R134a refrigerant

When it comes to high efficiency, the CDEW-E series contributes to energy savings and is optimized for the use of R134a refrigerant.

R134a refrigerant is getting used more frequently in cooling systems, as it saves energy and assures important advantages in comparison with conventional systems.

CXP series – for applications using R404 refrigerants

For lower capacity requirements, the CXP series is ideal as it is specially designed to use smaller tubing for up to 150 kW. This series is suitable for (among others) R404 refrigerants.



Model CXP		111-XS-2P	112-XS-2P	113-XS-2P	142-XS-2P	143-XS-2P	144-XS-2P	142-S-2P	143-S-2P	144-S-2P	161-S-2P	162-S-2P	163-S-2P	161-M-1P	162-M-1P	163-M-1P
R404A refrigerant	Qn (KW)*	19	25	32	42	52	60	67	75	85	105	115	125	166	185	205
Tc, mean =40°C	Wn(m³/h)	3,7	4,4	5,4	7	9,2	10,5	10,5	12	14,5	17	19	21,5	28,6	32	35
Ti=30°C ΔT≈5K*	Wm(m³/h)	4,45	6,7	8,9	11	13,2	15,5	11,2	13,4	15,7	17,9	20,1	22,4	35,7	40	44,8
FF=0.000043 m² KW	Dpn(bar)	0,24	0,16	0,15	0,14	0,17	0,17	0,38	0,36	0,39	0,4	0,4	0,41	0,21	0,22	0,23

Model CXP		111-XS-4P	112-XS-4P	113-XS-4P	142-XS-4P	143-XS-4P	144-XS-4P	142-S-2P	143-S-2P	144-S-2P	161-S-4P	162-S-4P	163-S-4P
R404A refrigerant	Qn (KW)*	24	35	45	55	70	80	90	100	120	130	140	150
Tc, mean =35°C	Wn (m³/h)	1,5	2,15	2,7	3,3	4,3	4,9	5,6	6,3	7,5	7	7,5	8
Ti=15°C ΔT≈15K*	Wm (m³/h)	2,2	3,3	4,4	5,5	6,7	7,8	11	13,4	15,7	8,9	10	11
FF=0.000043 m² KW	Dpn (bar)	0,35	0,33	0,32	0,27	0,32	0,3	0,13	0,12	0,11	0,55	0,51	0,5

Model CDEW		60	80	100	120	135	165	190	215	240	260	300	360	400	450	470	520	550	610	680	760	840
Cooling tower water (2 passes)																						
R407C refrigerant	Qn (kW)	57	75	100	118	135	165	190	215	233	260	300	360	400	450	470	520	550	610	680	760	840
Tc, mean = 42°C	Wn (m³/h)	9.5	12.7	17.5	20.6	20.2	25.5	27.7	30.7	33.6	37.0	44.0	53.3	59.2	62.9	68.4	75.8	83.4	90.8	99.9	110.5	121.7
Ti = 29.4°C	Wm (m³/h)	10.2	13.6	18.7	22.1	23	19.8	32.4	35.8	35.8	42.5	51	61.4	68.3	72.5	78.5	87	95	102	112	126	140
FF = 0.000043 m² KW	Dpn (bar)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
City water (4 passes)																						
R407C refrigerant	Qn (kW)	55	74	99	118	133	165	185	205	230	255	300	365	415	445	467	520	581	613	680	755	850
Tc, mean = 35°C	Wn (m³/h)	3.4	4.5	6.1	7.2	7.5	9.3	10.2	11.3	12.1	14	16.8	20	22.1	23.8	25.6	28	31.5	33.8	37.1	41.6	46.2
Ti = 15°C	Wm (m³/h)	4.5	6	8.2	9.7	10.1	13.1	14.2	15.7	15.7	18.7	22.5	27	30	31.7	34.5	38	42	45	49.5	55.2	61.2
FF = 0.000043 m² KW	Dpn (bar)	0.35	0.35	0.35	0.35	0.38	0.38	0.38	0.38	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43

Model CDEW		900	940	1040	1100	1220	1360	1520	1680
Cooling tower water (2 passes)									
R407C refrigerant	Qn (KW)*	940	990	1070	1180	1280	1400	1560	1750
Tc, mean =42°C	Wn(m³/h)	130	140	151	165	180	195	224	252
Ti=29.4°C	Wm(m³/h)	146	156	174	190	204	225	252	280
FF=0.000043m²KW	Dpn(bar)	0,41	0,4	0,4	0,4	0,4	0,4	0,4	0,45
Cooling city water (4 passes)									
R407C refrigerant	Qn (KW)*	900	945	1040	1100	1220	1360	1520	1680
Tc, mean =42°C	Wn(m³/h)	49	51	56	60	66	74	85	91
Ti=15°C	Wm(m³/h)	64,5	69	76	84,2	90	99	111	123
FF=0.000043m²KW	Dpn(bar)	0,45	0,44	0,44	0,42	0,44	0,45	0,5	0,5

Model CDEW-E		155	170	185	215	260	315	350	370	395	440	480	520	570	640	705
Cooling tower water (2 passes)																
R134a refrigerant	Qn (kW)	155	168	183	216	260	313	348	368	394	438	479	520	570	638	705
Tc = 37.5°C	Wn (m³/h)	24	26	28.6	34.1	41	49	54.5	58	62.6	69.5	76.2	82	90	101	112
Ti = 29.4°C	Wm (m³/h)	29.8	32.4	35.8	42.5	51	61.4	68	72.4	78	87	95	102	112	126	140
FF = 0.000043 m² K/W	Dpn (bar)	0.40	0.39	0.35	0.40	0.41	0.39	0.39	0.39	0.40	0.40	0.39	0.39	0.39	0.40	0.40
City tower water (4 passes)																
R134a refrigerant	Qn (kW)	175	190	210	250	300	360	400	428	460	512	560	600	660	740	825
Tc = 35°C	Wn (m³/h)	8.9	9.7	10.8	12.8	15.3	18.4	20.5	21.8	23.5	26.1	28.6	30.8	33.7	37.8	41.8
Ti = 15°C	Wm (m³/h)	13.1	14.2	15.7	18.7	22.5	27	30	31.9	34.5	38	42	45	49.5	55.5	61.5
FF = 0.000043 m² K/W	Dpn (bar)	0.47	0.46	0.41	0.44	0.43	0.44	0.44	0.43	0.44	0.46	0.43	0.45	0.45	0.45	0.44

Qn Nominal condensation capacity Wm Maximum water flow rate Ti Water inlet temperature
Wn Nominal water flow rate Tc Condensing temperature Ff Fouling factor

* the datas are indicative. To select precise datas, please use our dedicated software.



Condensers for seawater applications

Two series of shell-and-tube condensers have been optimized for HFC condensation in order to provide the best reliability and efficiency when seawater is used as the cooling medium.

As the use of seawater can cause chemical corrosion, galvanic corrosion and erosion, both series are made of high-resistance materials. The design ensures easy inspection and cleaning of the condensers and assures that the water velocity is kept within the safety limits.

All units are provided with interchangeable anodes made of soft iron. The carbon steel components are sandblasted to

protect against rusting, including the internal wall of the shell.

The two series are optimized especially for R407 and R404 refrigerant, however they offer flexibility in use of other refrigerants as well.

McDEW series

– optimized for R407c refrigerant

McDEW models have enhanced, internally finned Cu/Ni 90/10 tubes, but

alternative versions with Cu/Ni 70/30 tubes are also available on request.

CXPM series

– optimized for R404 refrigerants

CXPM models have enhanced, internally finned Cu/Ni 90/10 tubes.



Model CXPM		111-XS-2P	112-XS-2P	113-XS-2P	142-XS-2P	143-XS-2P	144-XS-2P	142-S-2P	143-S-2P	144-S-2P	161-S-2P	162-S-2P	163-S-2P	161-M-1P	162-M-1P	163-M-1P
R404A refrigerant	Qn (kW)*	14	24	34	40	45	55	58	65	75	90	100	110	135	150	175
Tc, mean =40°C	Wn(m³/h)	2,5	4,8	7	7,5	8,2	10,5	8,8	10	11,5	14	15,4	16,5	23,4	26	30,3
Ti=30°C ΔT≈5K*	Wm(m³/h)	3,5	5,4	7,2	9	10,8	12,5	9	10,8	12,4	14,2	16	17,9	28,5	32	36
FF=0.000043m²/KW	Dpn(bar)	0,11	0,19	0,25	0,16	0,14	0,17	0,28	0,25	0,25	0,27	0,27	0,25	0,14	0,15	0,18

Model	CXPM	111-XS-4P	112-XS-4P	113-XS-4P	142-XS-4P	143-XS-4P	144-XS-4P	142-S-2P	143-S-2P	144-S-2P	161-S-4P	162-S-4P	163-S-4P
R404A refrigerant	Qn (kW)*	18	28	37	49	60	72	85	93	110	122	135	150
Tc, mean =35°C	Wn(m³/h)	1,1	1,7	2,2	3	3,7	4,4	5,5	6	7	6,9	7,7	8,6
Ti=15°C ΔT≈15K*	Wm(m³/h)	1,8	2,7	3,6	4,5	5,4	6,3	9	10,7	12,5	7,2	8	9
FF=0.000043m²/KW	Dpn(bar)	0,2	0,21	0,22	0,22	0,29	0,24	0,12	0,1	0,1	0,55	0,55	0,55

Model McDEW		15	25	34	48	50	67	90	105	123
Seawater	Passes	4	4	4	4	2	2	2	2	2
R407C refrigerant	Qn (kW)	15	24.5	34	48	51	67	90	106	123
Tc, mean = 43°C	Wn (m³/h)	2.4	3.6	4.8	6	7.2	9.59	13.19	15.59	16.19
Ti = 29.4°C	Wm (m³/h)	2.65	4	5.3	7.3	8	10.6	14.6	17.3	18
FF = 0.000043 m² K/W	Dpn (bar)	0.21	0.21	0.21	0.21	0.19	0.19	0.19	0.19	0.21
Seawater	Passes	8	8	8	8	4	4	4	4	4
R407C refrigerant	Qn (kW)	22.2	33.2	46.1	57.5	60	81	109	130	146
Tc, mean = 38°C	Wn (m³/h)	1.2	1.8	2.4	3	3.4	4.5	6.1	7.2	7.5
Ti = 15°C	Wm (m³/h)	1.33	2.2	2.66	3.65	4	5.4	7.32	8.64	9
FF = 0.000043 m² K/W	Dpn (bar)	0.4	0.4	0.41	0.4	0.34	0.34	0.34	0.34	0.34

Model McDEW		153	175	200	205	238	275	330	370	410
Seawater	Passes	2	2	2	2	2	2	2	2	2
R407C refrigerant	Qn (kW)	153	175	198	206	238	276	331	367	413
Tc, mean = 43°C	Wn (m³/h)	20.99	22.78	25.18	25.18	29.98	35.98	43.17	47.97	50.96
Ti = 29.4°C	Wm (m³/h)	23.3	25.3	28	28	33.3	40	48	53.4	56.7
FF = 0.000043 m² K/W	Dpn (bar)	0.22	0.22	0.22	0.22	0.24	0.25	0.24	0.24	0.24
Seawater	Passes	4	4	4	4	4	4	4	4	4
R407C refrigerant	Qn (kW)	182	203	225	250	280	330	396	452	487
Tc, mean = 38°C	Wn (m³/h)	9.3	10.2	11.3	12.6	14	16.8	20	22.1	23.8
Ti = 15°C	Wm (m³/h)	11.6	12.6	14	14	16.7	20	24	26.5	28.5
FF = 0.000043 m² K/W	Dpn (bar)	0.34	0.34	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Model McDEW		430	480	505	555	620	700	770
Seawater	Passes	2	2	2	2	2	2	2
R407C refrigerant	Qn (kW)	431	477	505	555	619	696	772
Tc, mean = 43°C	Wn (m³/h)	55.16	61.16	67.15	71.95	79.15	88.74	98.33
Ti = 29.4°C	Wm (m³/h)	61.3	68	74.5	80	88	98.5	109
FF = 0.000043 m² K/W	Dpn (bar)	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Seawater	Passes	4	4	4	4	4	4	4
R407C refrigerant	Qn (kW)	510	566	635	670	740	828	924
Tc, mean = 38°C	Wn (m³/h)	25.6	28	31.5	33.8	37.1	41.6	46.2
Ti = 15°C	Wm (m³/h)	30.7	33.9	37.4	40	44	49.4	54.7
FF = 0.000043 m² K/W	Dpn (bar)	0.4	0.4	0.41	0.41	0.41	0.41	0.41

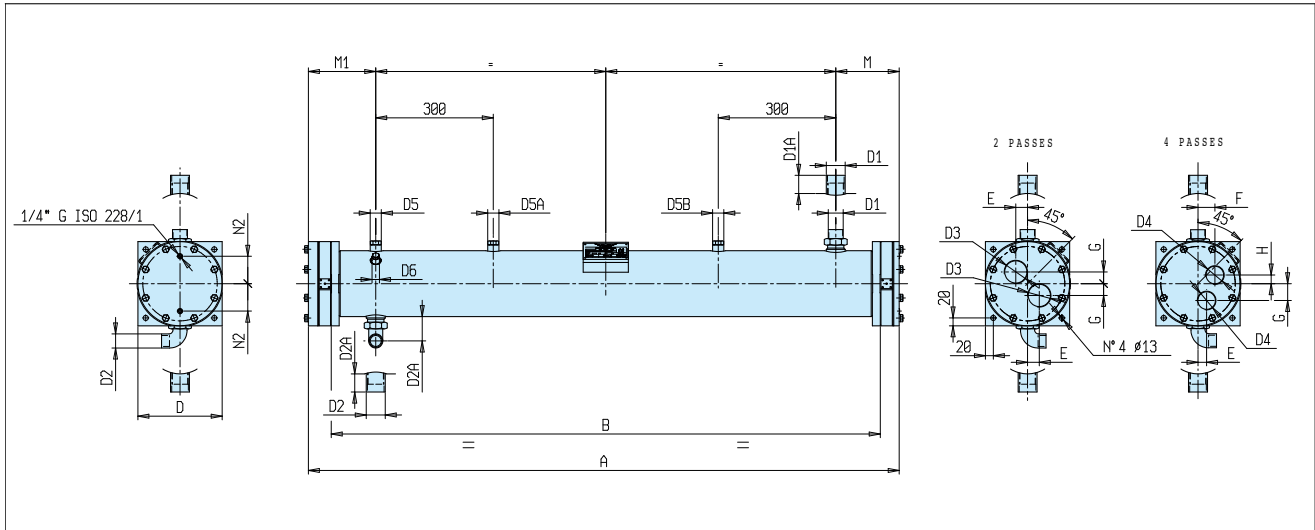
Qn Nominal condensation capacity
Wn Nominal water flow rate

Wm Maximum water flow rate
Tc Condensing temperature

Ti Water inlet temperature
FF Fouling factor

* the datas are indicative. To select precise datas, please use our dedicated software.

CDEW

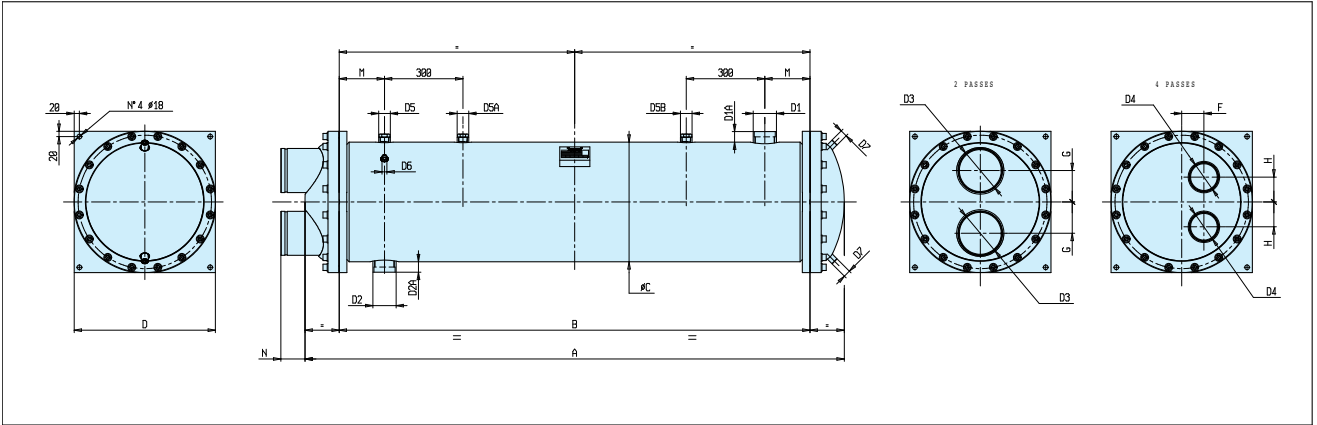


Model CDEW		60	80	100	120	135	165	190	215	240	260	300	360	400	450	470	520	550	610	680	760	840			
A	mm	1500			1600		1740			1940		1970			1980			1980							
B	mm	1400			1700		1600			1800		1800			1800			1800		1800					
C	mm	168					194					273			324			406							
D	mm	215					245					325			380			480							
E 2 passes	mm	30					35					55			65			0							
E 4 passes	mm	22					25					45			55			70							
F	mm	43					55					75			90			70							
G 2 passes	mm	30					35					55			65			105							
G 4 passes	mm	43					55					75			90			80							
H	mm	22					25					45			55			80							
M	mm	170					200					225			250			260							
M1	mm	180					210					235			260			270							
D1	mm	RC35					WA42					WA54			WA67			WA80							
D1A	mm	60					50					50			50			50							
D2	mm	RCL28					RCL35					WA42			WA54			WA54							
D2A	mm	65					65					50			50			50							
D3	in-G	T2					T21					T3			T4			T5							
D4	in-G	T11					T11					T2			T3			T4							
D5	in-NPT	1/2					3/4					1			1			1							
D5A	in-NPT	no					no					no			1			1							
D5B	in-NPT	no					no					no			no			1							
D6	in-NPT	1/4					1/4					1/4			1/4			1/4							
N2	mm	70					85					120			148			195							
Vr	dm ³	22,3	20,8	19,4	18,1	20,1	24,9	23,7	21,9	24,9	70,6	66,1	57,0	53,1	50,6	90,5	86,1	81,7	152,1	146,0	137,8	129,6			
Lres	dm ⁴	3,8	3,8	3,4	3,1	0,9	7,1	6,7	2,8	3,1	10,0	10,0	8,4	8,4	3,4	5,2	5,2	4,7	14,8	14,8	14,8	14,8			
VH2O	dm ⁵	4,8	5,9	7,3	8,2	10,1	13,3	14,2	15,4	17,1	24,7	27,7	31,2	33,9	35,7	41,0	44,1	47,5	52,4	57,7	64,7	71,7			
P	Kg	58	61	65	68	85	105	108	111	121	195	203	215	222	227	293	304	313	441	452	467	482			

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
 D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

Attention: tolerance has to be considered on the dimensional data.

CDEW

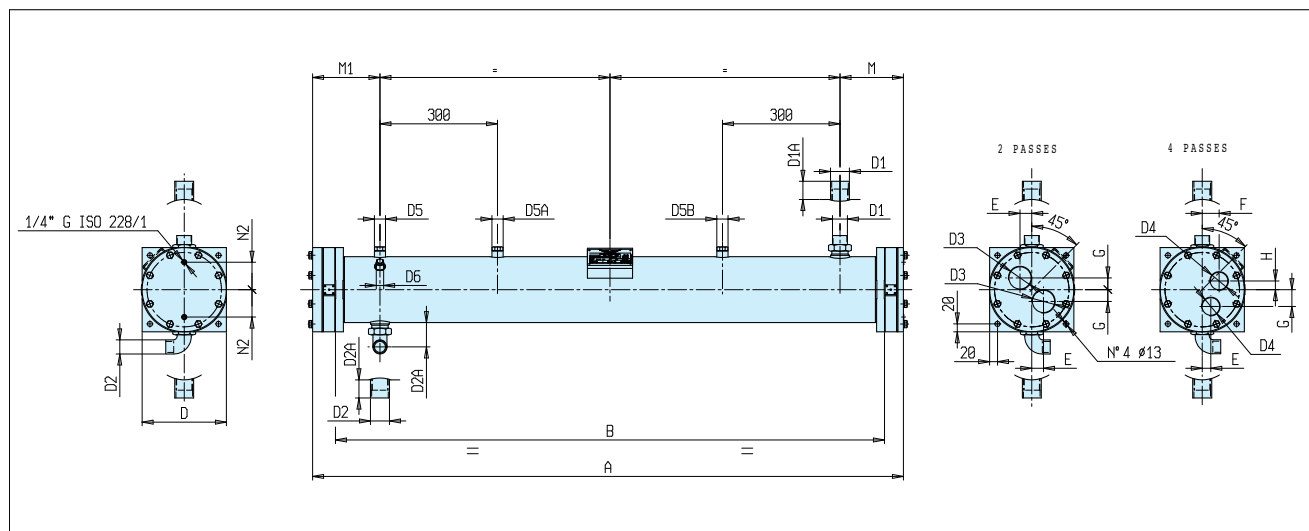


Model CDEW		900	940	1040	1100	1220	1360	1520	1680
A	mm		2075			2105		2115	
B	mm		1800			1800		1800	
C	mm		457,2			508		558,8	
D	mm		540			590		640	
F	mm		80			90		100	
G	mm		120			150		140	
H	mm		95			100		110	
M	mm		173			178		183	
M1	mm		173			178		183	
D1	mm		WA80			WA89		WA100	
D1A	mm		50			50		50	
D2	mm		WA54			WA80		WA89	
D2A	mm		50			50		50	
D3	in-G		J6			J6		J8	
D4	in-G							J5	
D5	in-NPT		1			1		1	
D5A	in-NPT		1			1		1	
D5B	in-NPT		1			1		1	
D6	in-NPT		1/4			1/4		1/4	
N2	mm		450			500		559	
Vr	dm ³	176,0	170,0	160,0	212,0	204,0	192,0	243,0	227,0
Lres	dm ⁴	17,0	17,0	17,0	21,0	21,0	21,0	15,0	15,0
VH2O	dm ⁵	88,0	92,0	99,0	116,0	121,0	129,0	152,0	163,0
P	Kg	597	608	627	736	750	773	913	943

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

Attention: tolerance has to be considered on the dimensional data.

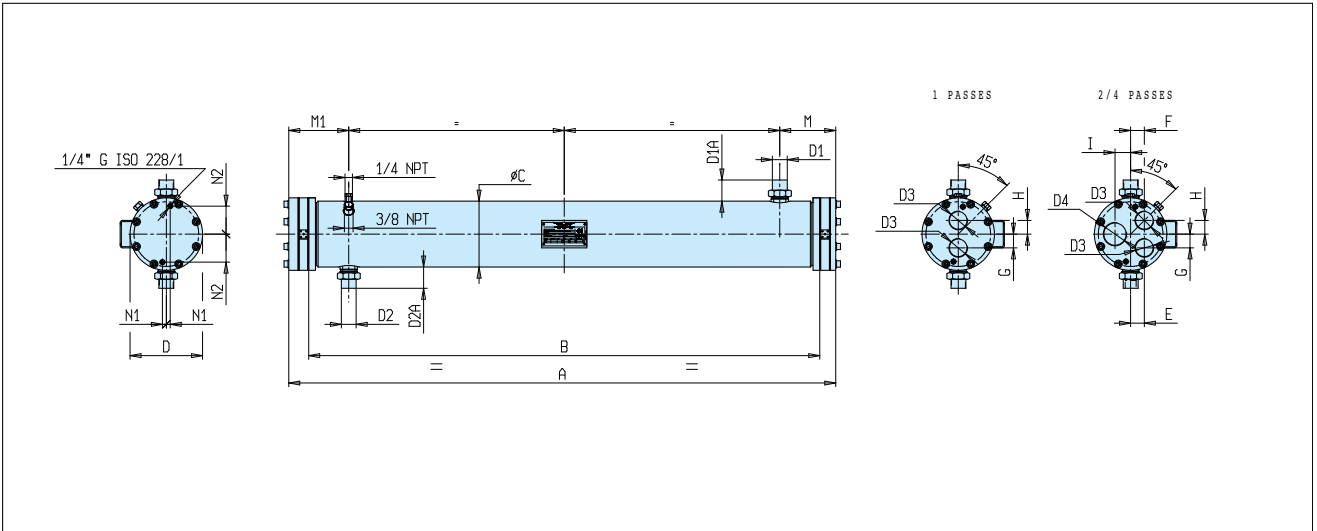
CDEW-E



Model CDEW-E		155	170	185	215	260	315	350	370	395	440	480	520	570	640	705
A	mm		2540			2570		2570			2580				2580	
B	mm		2400			2400		2400			2400				2400	
C	mm		194			273		273			324				406	
D	mm		245			325		325			380				480	
E 2 passes	mm		35			55		55			65				0	
E 4 passes	mm		25			45		45			55				70	
F	mm		55			75		75			90				80	
G 2 passes	mm		35			55		55			65				105	
G 4 passes	mm		55			75		75			90				80	
H	mm		25			45		45			55				70	
M	mm		200			225		225			250				260	
M1	mm		210			235		235			260				270	
D1	mm		WA42			WA54		WA67			WA67				WA80	
D1A	mm		50			50		50			50				50	
D2	mm		RCL35			WA42		WA54			WA54				WA54	
D2A	mm		65			50		50			50				50	
D3	in-G		T21			T3		T3			T4				T5	
D4	in-G		T11			T2		T2			T3				T4	
D5	in-NPT		3/4			1		1			1				1	
D5A	in-NPT		no			no		no			1				1	
D5B	in-NPT		no			no		no			no				1	
D6	in-NPT		1/4			1/4		1/4			1/4				1/4	
N2	mm		85			120		120			148				195	
Vr	dm3	37,4	35,6	33,1	93,9	87,9	75,8	70,6	67,3	120,4	114,5	108,7	202,3	194,2	183,0	172,4
Lres	dm4	10,7	10,1	4,1	13,3	13,3	11,2	11,2	4,5	6,9	6,9	6,3	19,7	19,7	19,7	19,7
VH2O	dm5	20,0	21,3	20,5	32,9	36,9	41,5	41,5	47,5	54,5	58,7	63,2	69,7	76,7	86,1	95,4
P	Kg	147	151	157	253	264	279	289	295	381	395	407	573	588	607	627

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

Attention: tolerance has to be considered on the dimensional data.



Model CXP		111-XS	112-XS	113-XS	142-XS	143-XS	144-XS	142-S	143-S	144-S	161-S	162-S	163-S	161-M-1P*	162-M-1P*	163-M-1P*
A	mm	973	973	973	981	981	981	1381	1381	1381	1396	1396	1396	1906	1906	1906
B	mm	900	900	900	900	900	900	1300	1300	1300	1300	1300	1300	1800	1800	1800
C	mm	114	114	114	141	141	141	141	141	141	168	168	168	168	168	168
D	mm	130	130	130	158	158	158	158	158	158	185	185	185	185	185	185
E	mm	25	25	25	25	25	25	25	25	25	35	35	35	0	0	0
F	mm	25	25	25	25	25	25	25	25	25	35	35	35	35	35	35
G	mm	25	25	25	30	30	30	30	30	30	35	35	35	35	35	35
H	mm	25	25	25	30	30	30	30	30	30	35	35	35	35	35	35
I	mm	20	20	20	35	35	35	35	35	35	40	40	40	40	40	40
M	mm	111	111	111	114	114	114	138	138	138	143	143	143	153	153	153
M1	mm	115	115	115	120	120	120	143	143	143	153	153	153	153	153	153
D1	mm	RA16	RA16	RA16	RB22	RB22	RB22	RC28	RC28	RC28	RC35	RC35	RC35	RC35	RC35	RC35
D1A	mm	57	57	57	57	57	57	54	54	54	54	54	54	54	54	54
D2	mm	RA16	RA16	RA16	RB22	RB22	RB22	RC28	RC28	RC28	RC28	RC28	RC28	RC28	RC28	RC28
D2A	mm	57	57	57	57	57	57	54	54	54	54	54	54	54	54	54
D3	in-G	1/2	1/2	1/2	T1	T1	T1	T1	T1	T1	T11	T11	T11	T11	T11	T11
D4	in-G	T1	T1	T1	T11	T11	T11	T11	T11	T11	T2	T2	T2	no	no	no
N1	mm	15	15	15	10	10	10	10	10	10	0	0	0	12	12	12
N2	mm	42	42	42	55	55	55	55	55	55	71,5	71,5	71,5	70	70	70
Vr	dm ³	7,36	7,19	7,02	10,85	10,68	10,51	15,91	15,66	15,41	22,92	22,67	22,42	32,02	31,67	31,33
VH2O	dm ⁵	0,92	1,37	1,83	2,29	2,75	3,20	3,31	3,97	4,63	5,29	5,95	6,61	7,32	8,24	9,15
P	Kg	21,7	23,3	24,9	36,6	38,2	39,8	47,3	49,6	51,9	64,7	67,0	69,4	82,4	85,6	88,8

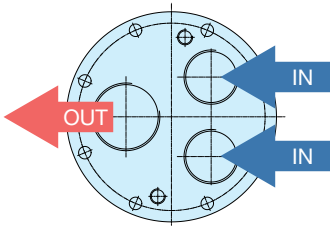
*1P: one pass version

D1	Refrigerant inlet	D3-D4	Water connections	D5-D5A-D5B	Safety valve connection	VH2O	Water volume
D2	Refrigerant outlet	N1-N2	For air vent/for drain of water	Vr	Refrigerant volume	P net	Weight

2 passes or 4 passes have the same design.

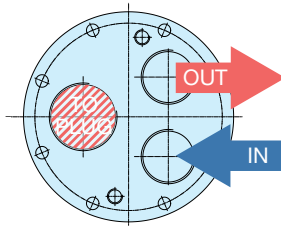
In case of 2 passes configuration, water connections have to be connected as scheme A:

Scheme A:



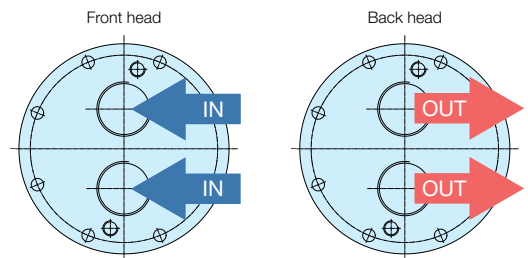
In case of 4 passes configuration, water connections have to be connected as scheme B:

Scheme B:

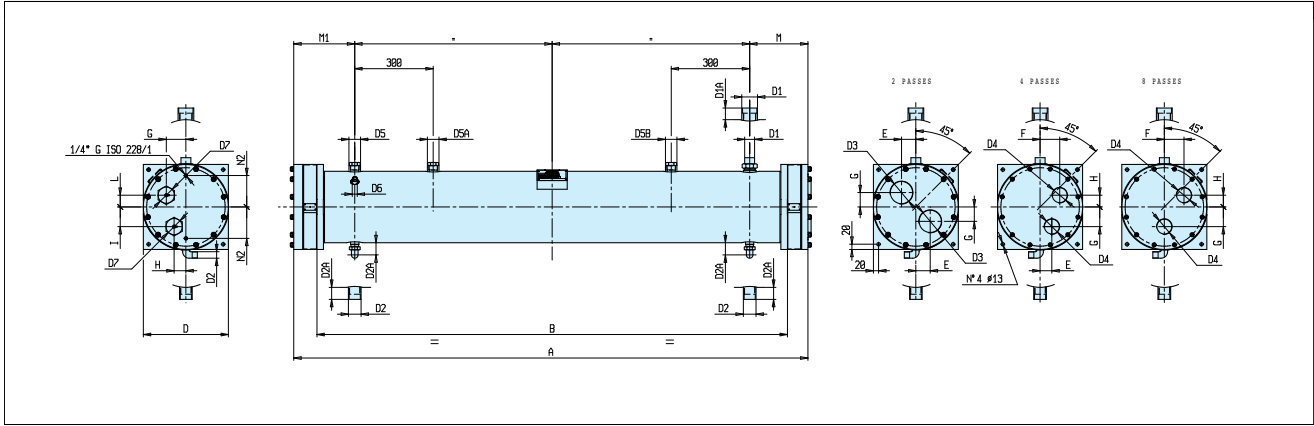


In case of single pass configuration, water connections have to be connected as scheme C:

Scheme C:



McDEW

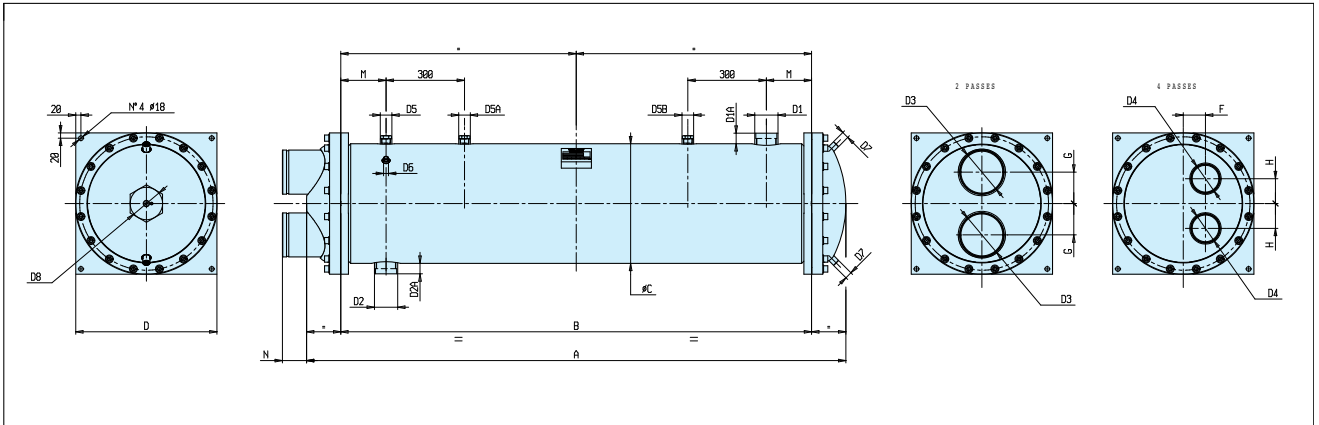


Model McDEW	15	25	34	48	50	67	90	105	123	153	175	200	205	238	275	330	370	410	430	480	505	555	620	700	770	
A	mm	800			1500			1600			1740			1940			1970			1980			1980			
B	mm	700			1400			1700			1600			1800			1800			1800			1800			
C	mm	168			168			194			273			324			406									
D	mm	215			215			245			325			380			480									
E 2 passes	mm	no			30			35			55			65			0									
E 4 passes	mm	22			22			25			45			55			70									
E 8 passes	mm	0			no			no			no			no			no									
F 4 passes	mm	43			43			55			75			90			70									
F 8 passes	mm	45			no			no			no			no			no									
G 2 passes	mm	no			30			35			55			65			105									
G 4 passes	mm	43			43			55			75			90			80									
G 8 passes	mm	55			no			no			no			no			no									
H 4 passes	mm	22			22			25			45			55			80									
H 8 passes	mm	32			no			no			no			no			no									
M	mm	160			170			200			225			250			260									
M1	mm	170			180			210			235			260			270									
D1	mm	RC28			RC35			WA42			WA54			WA67			WA80									
D1A	mm	60			60			50			50			50			50									
D2	mm	RBL22			RCL28			RCL35			WA42			WA54			WA54									
D2A	mm	65			65			65			50			50			50									
D3	in-G	-			T2			T21			T3			T4			T5									
D4 4 passes	in-G	T11			T11			T11			T2			T3			T4									
D4 8 passes		T1			-			-			-			-			-									
D5	in-NPT	3/8			1/2			3/4			1			1			1									
D5A	in-NPT	no			no			no			no			1			1									
D5B	in-NPT	no			no			no			no			no			1									
D6	in-NPT	1/4			1/4			1/4			1/4			1/4			1/4									
N2	mm	70			70			85			120			148			195									
Vr	dm3	11,7	11,0	10,3	8,7	22,3	20,8	19,4	18,1	20,1	24,9	23,7	21,9	24,9	70,6	66,1	57,0	53,1	50,6	90,5	86,1	81,7	152,1	146,0	137,8	129,6
Lres	dm4	1,9	1,9	1,9	1,9	3,8	3,8	3,4	3,1	0,9	7,1	6,7	2,8	3,1	10,0	10,0	8,4	8,4	3,4	5,2	5,2	4,7	14,8	14,8	14,8	14,8
VH2O	dm5	1,9	2,4	2,9	3,7	4,8	5,9	7,3	8,2	10,1	13,3	14,2	15,4	17,1	24,7	27,7	31,2	33,9	35,7	41,0	44,1	47,5	52,4	57,7	64,7	71,7
P	Kg	41	43	45	47	58	61	65	68	85	105	108	111	121	195	203	215	222	227	293	304	313	441	452	467	482

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

Attention: tolerance has to be considered on the dimensional data.

McDEW

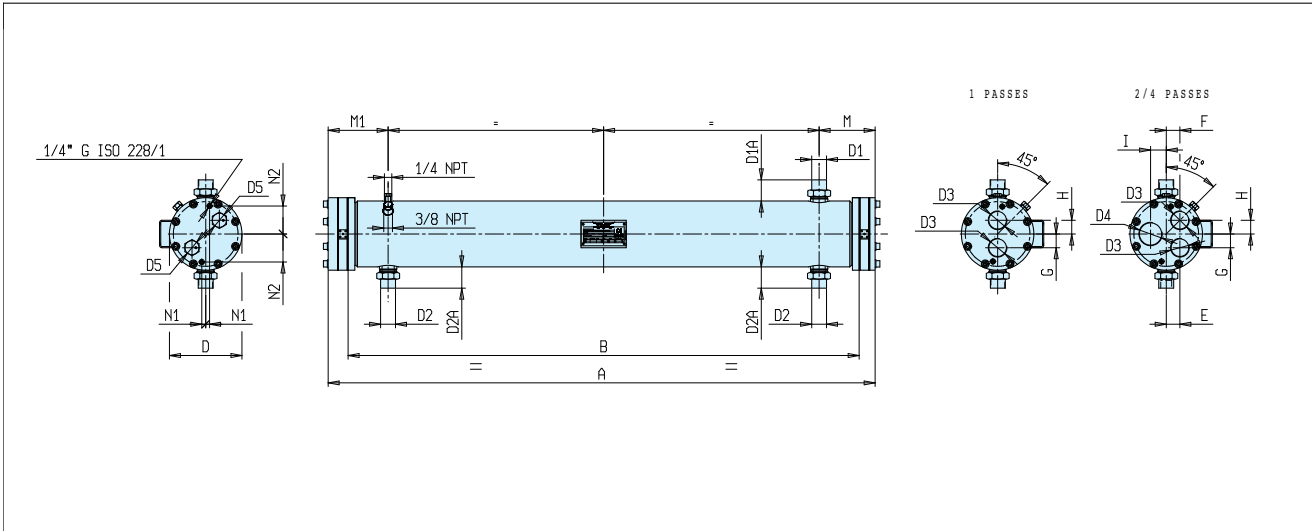


Model McDEW		900	940	1040	1100	1220	1360	1520	1680
A	mm		2075			2105			2115
B	mm		1800			1800			1800
C	mm		457,2			508			558,8
D	mm		540			590			640
F	mm		80			90			100
G	mm		120			150			140
H	mm		95			100			110
M	mm		173			178			183
M1	mm		173			178			183
D1	mm		WA80			WA89			WA100
D1A	mm		50			50			50
D2	mm		WA54			WA80			WA89
D2A	mm		50			50			50
D3	in-G		J6			J6			J8
D4	in-G		J4			J4			J5
D5	in-NPT		1			1			1
D5A	in-NPT		1			1			1
D5B	in-NPT		1			1			1
D6	in-NPT		1/4			1/4			1/4
N2	mm		450			500			559
Vr	dm3	176,0	170,0	160,0	212,0	204,0	192,0	243,0	227,0
Lres	dm4	17,0	17,0	17,0	21,0	21,0	21,0	15,0	15,0
VH2O	dm5	88,0	92,0	99,0	116,0	121,0	129,0	152,0	163,0
P	Kg	597	608	627	736	750	773	913	943

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
 D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

Attention: tolerance has to be considered on the dimensional data.

CXPM



Model CXPM	111-XS	112-XS	113-XS	142-XS	143-XS	144-XS	142-S	143-S	144-S	161-S	162-S	163-S	161-M-1P*	162-M-1P*	163-M-1P*
A	mm	973	973	973	981	981	981	1381	1381	1381	1396	1396	1906	1906	1906
B	mm	900	900	900	900	900	1300	1300	1300	1300	1300	1300	1800	1800	1800
C	mm	114	114	114	141	141	141	141	141	168	168	168	168	168	168
D	mm	130	130	130	158	158	158	158	158	185	185	185	185	185	185
E	mm	25	25	25	25	25	25	25	25	35	35	35	0	0	0
F	mm	25	25	25	25	25	25	25	25	35	35	35	35	35	35
G	mm	25	25	25	30	30	30	30	30	35	35	35	35	35	35
H	mm	25	25	25	30	30	30	30	30	35	35	35	35	35	35
I	mm	20	20	20	35	35	35	35	35	40	40	40	40	40	40
M	mm	111	111	111	114	114	114	138	138	138	143	143	153	153	153
M1	mm	115	115	115	120	120	120	143	143	143	153	153	153	153	153
D1	mm	RA16	RA16	RA16	RB22	RB22	RB22	RC28	RC28	RC28	RC35	RC35	RC35	RC35	RC35
D1A	mm	57	57	57	57	57	57	54	54	54	54	54	54	54	54
D2	mm	RA16	RA16	RA16	RB22	RB22	RB22	RC28	RC28	RC28	RC28	RC28	RC28	RC28	RC28
D2A	mm	57	57	57	57	57	57	54	54	54	54	54	54	54	54
D3	in-G	1/2	1/2	1/2	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1
D4	in-G	T1	T1	T1	T1	T1	T1	T1	T1	T2	T2	T2	no	no	no
N1	mm	15	15	15	10	10	10	10	10	0	0	0	12	12	12
N2	mm	42	42	42	55	55	55	55	55	71,5	71,5	71,5	70	70	70
Vr	dm3	7,36	7,19	7,02	10,85	10,68	10,51	15,91	15,66	15,41	22,92	22,67	32,02	31,67	31,33
VH2O	dm5	0,92	1,37	1,83	2,29	2,75	3,20	3,31	3,97	4,63	5,29	5,95	6,61	7,32	8,24
P	Kg	21,7	23,3	24,9	36,6	38,2	39,8	47,3	49,6	51,9	64,7	67,0	69,4	82,4	85,6

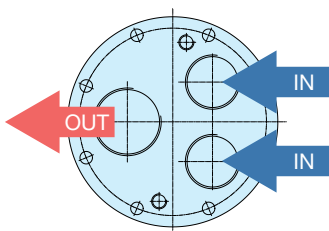
*1P: one pass version

D1 Refrigerant inlet D3-D4 Water connections D5-D5A-D5B Safety valve connection VH2O Water volume
 D2 Refrigerant outlet N1-N2 For air vent/for drain of water Vr Refrigerant volume P net Weight

2 passes or 4 passes have the same design.

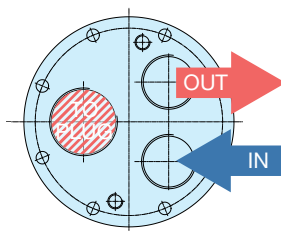
In case of 2 passes configuration, water connections have to be connected as scheme A:

Scheme A:



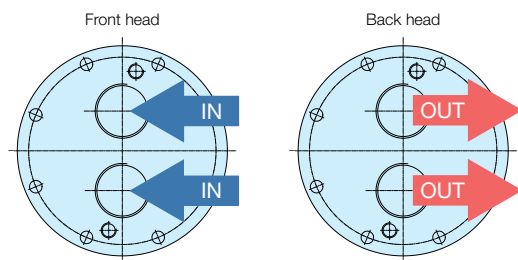
In case of 4 passes configuration, water connections have to be connected as scheme B:

Scheme B:



In case of single pass configuration, water connections have to be connected as scheme C:

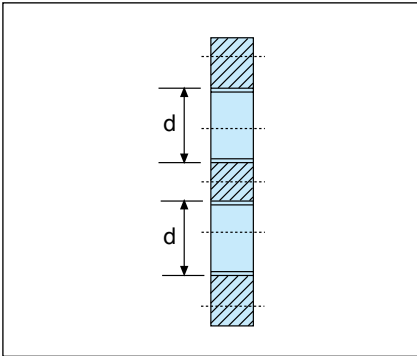
Scheme C:



Water connections

CDEW, CDEW-E, McDEW

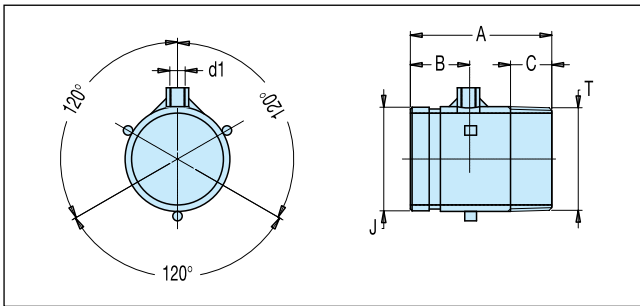
Water inlet and outlet connections on the condenser are ISO 228/1-G female threaded connections.



Model	Threaded connections (T)			
	Tower		City	
	Name	d (In)	Name	d (In)
McDEW 15-48	T11	1 1/2	T1	1
CDEW 60-135/McDEW 50-123	T2	2	T11	1 1/2
CDEW 165-240/CDEW-E 155-185/McDEW 153-205	T21	2 1/2	T11	1 1/2
CDEW-E 260-450/CDEW-E 215-370/McDEW 238-410	T3	3	T2	2
CDEW 470-550/CDEW-E 395-480/McDEW 430-505	T4	4	T3	3
CDEW 610-840/CDEW-E 520-705/McDEW 555-770	T5	5	T4	4

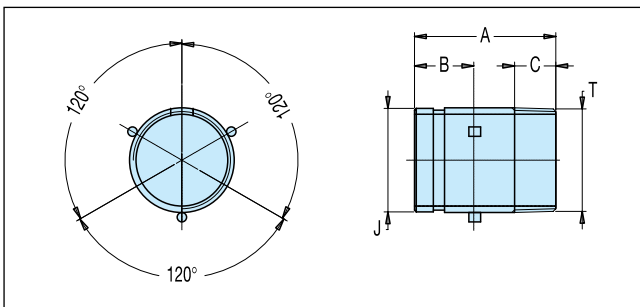
It is possible to convert the standard female threaded connections to a flexible joint solution with or without temperature sockets. Different adaptor kits can be supplied.

Water inlet with temperature socket



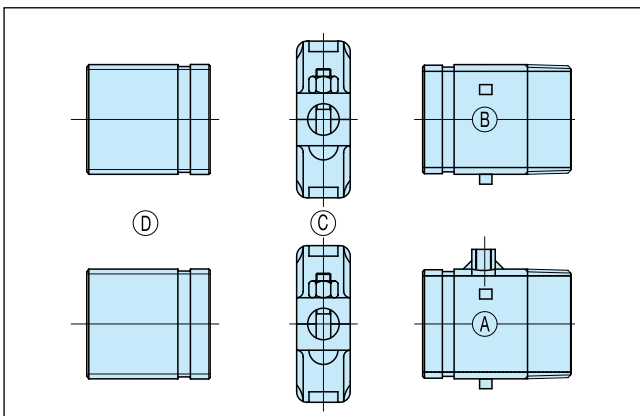
Type	Connection pipe					
	A (mm)	B (mm)	C (mm)	T (in-G)	J (in)	d1 (in-G)
T21-14 - J21	170	100	30	2-1/2	2-1/2	1/4
T3-14 - J3	120	50	35	3	3	1/4
T4-14 - J4	170	100	40	4	4	1/4
T5-14 - J5	170	100	45	5	5	1/4

Water outlet



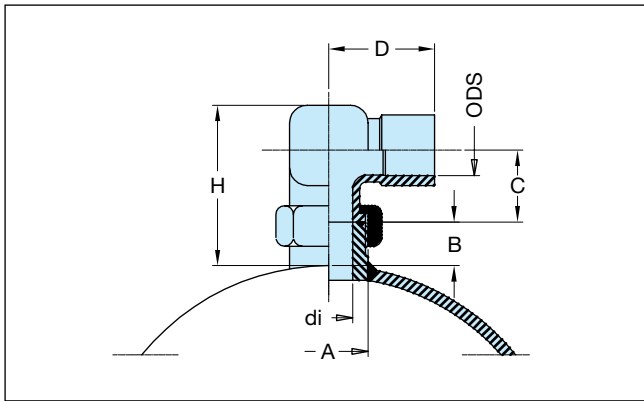
Type	Connection pipe					
	A (mm)	B (mm)	C (mm)	T (in-G)	J (in)	DN x sp (mm)
T21 - J21	100	50	30	2-1/2	2-1/2	76.1x5
T3 - J3	100	50	35	3	3	88.9x5.49
T4 - J4	100	50	40	4	4	114.3x3.2
T5 - J5	100	50	45	5	5	139.7x4

Kit

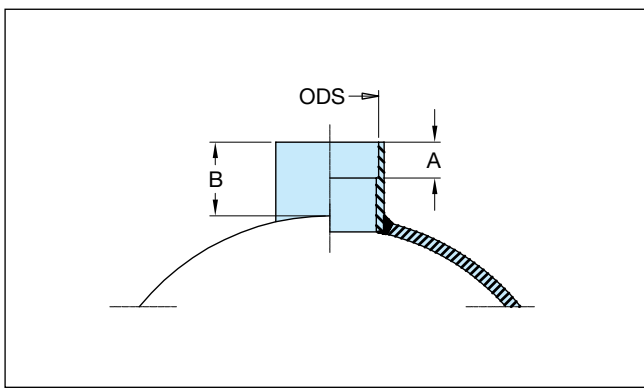


Type	Components			
	Adapter in A)	Adapter out B)	Flex. joint C)	Count. pipe D)
	Nbr	Nbr	Nbr	Nbr
KIT T21 - J21	1	1	2	2
KIT T3 - J3	1	1	2	2
KIT T4 - J4	1	1	2	2
KIT T5 - J5	1	1	2	2

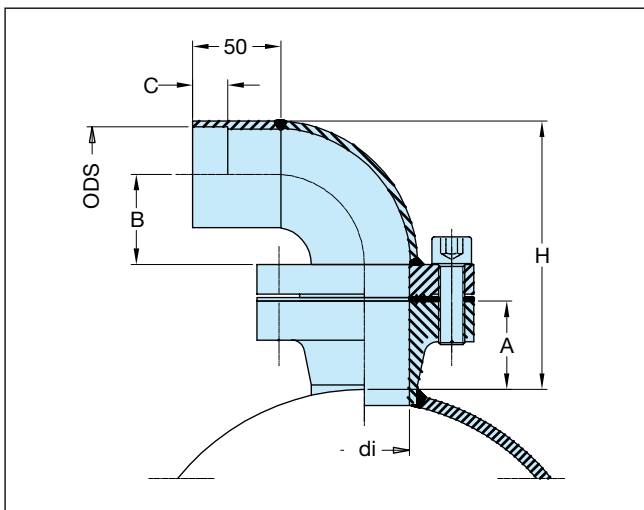
CDEW / CDEW-E / McDEW refrigerant connections



Rotalock CDEW /CDEW-E / McDEW)				
Rotalock type	Name	Type B		Type C
		RB 22	RB 28	RB35
A	UNF	1 ^{1/4}	1 ^{3/4}	
B	mm	28	27	27
C	mm	29	38	
D	mm	44	47	52
di	mm	19	31	
H	mm	71	83	
ODS	mm	22	28	35



Welding connections CDEW /CDEW-E / McDEW)					
Welding type	Name	Type A	Type B	Type C	Type D
		WA 42	WA 54	WA 67	WA 80
A	mm	20	20	25	25
B	mm	50	50	50	50
ODS	mm	42	54	67	80
OD	mm	48.3	60.3	76.1	88.9

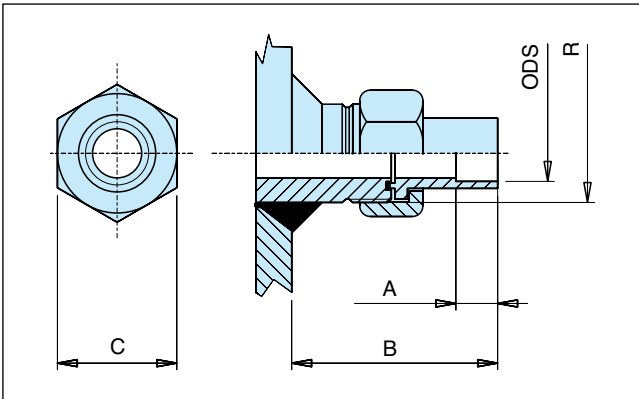


Special flange connections CDEW /CDEW-E / McDEW)						
Flange type	Name	Type A		Type B	Type C	
		FA 35	FA 42	FB 54	FC 67	FC 80
A	mm	45		45	45	
B	mm	32	38	51	63	76
C	mm	20		20	25	
di	mm	39		51	75	
H	mm	119	128	152	172	191
ODS	mm	35	42	54	67	80
OD	mm	42.4	48.3	60.3	76.1	88.9

Refrigerant connections

Refrigerant inlet and outlet can be equipped with Rotalock brazing (ODS), welding (OD) or flanged (F) connections. All data concerning the different connections available are indicated in the following table.

Rotalock connection (R)

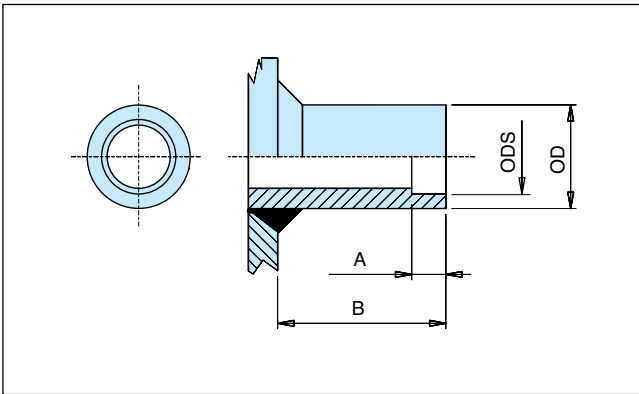


Seawater series have two refrigerant outlet connections.

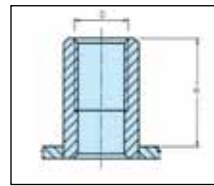
Rotalock (CDEW / CDEW-E / McDEW)							
Type	A	B	C	RT	Name	ODS	ID
	[mm]	[mm]	[mm]			[mm]	[mm]
B	20	80	36	1¼ - 12UNF	RB22	22	22,5
C	20	80	50	1¼ - 12UNF	RC28	28	28,2
	20	80	50	1¼ - 12UNF	RC35	35	35,3

Rotalock (CXP/CXPM)				
B	C	RT	Name	ODS
[mm]	[mm]			[mm]
63	30	1 - 14UFS	RA16	16
63	36	1¼ - 12UNF	RB22	22
63	50	1¾ - 12UNF	RC28	28
63	50	1¾ - 12UNF	RC35	35

Welding connection (W)

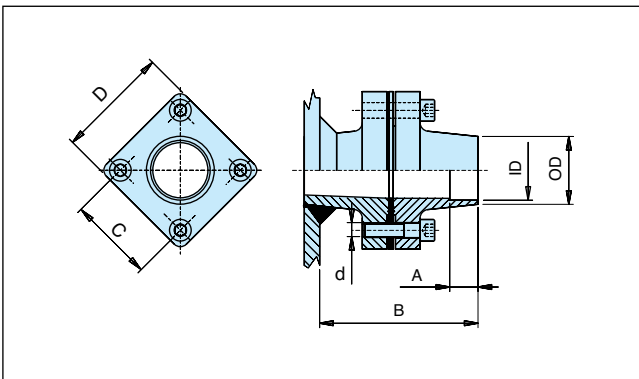


Welding (CDEW / CDEW-E / McDEW)						
Type	A	B	Name	ODS	ID	OD
	[mm]	[mm]		[mm]	[mm]	[mm]
A	20	70	WA42	42	42,4	48,3
	20	70	WA54	54	54,4	60,3
	20	70	WA80	80	80,6	88,9

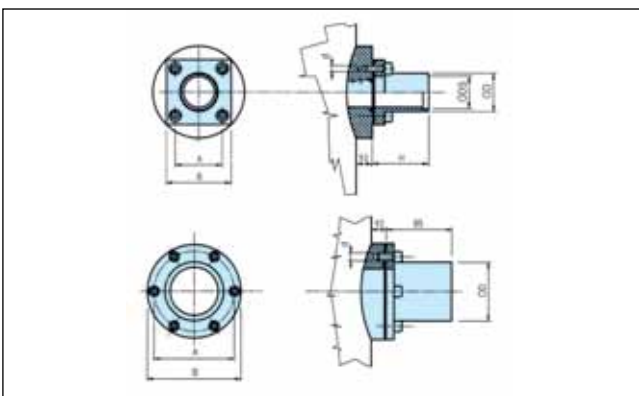


NPT (CDEW, CDEW-E, McDEW, CXP, CXPM)				
D	1/4"	3/8"	1/2"	1"
d (mm)	20	24	30	40
H (mm)	22	22	25	25

Flange connection (F)



Flange (CDEW / CDEW-E / McDEW)									
Type	A	B	C	D	d	Name	ODS	ID	OD
	[mm]	[mm]	[mm]	[mm]			[mm]	[mm]	[mm]
A	20	110	55	75	M10	FA35	35	35,3	-
	20	110	55	75	M10	FA42	42	42,4	-
	20	110	55	75	M10	FA54	54	54,4	-
B	20	130	70	90	M10	FB54	54	54,4	-
	20	130	70	90	M10	FB67	67	67,4	76
C	20	130	90	110	M12	FC67	67	67,4	76
	20	130	90	110	M12	FC80	80	80,6	88,9



Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

Alfa Laval reserves the right to change specifications without prior notification.

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