Samantekt. Elías Þorsteinsson.

KÆLI3VC05

ÞJÖPPUR

CAPACITÀ FRIGORIFERE — REFRIGERATING CAPACITY — PUISSANCE FRIGORIFIQUES — KALTEISTUNGS DATEN

R404A (HFC) **Watt** 1450 RPM

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Compressore / Compressor / Compresseur / Verdichter	Condensazione / Condensing / Condensation / Verflussig Temp. °C	EVAPORAZIONE - EVAPORATING - EVAPORATION - VERDAMPFUNG 12.5	7	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
A 0.5 4	30				3730	3070	2510	2020	1600	1250	960	710	510	
	35				3560	2900	2340	1860	1460	1120	840	610	430	
	40				3360	2710	2170	1700	1310	990	730	520	350	
	45				3140	2510	1990	1540	1170	860	620	430	280	
	50				2900	2300	1800	1370	1030	750	530	350	220	
A 0.5 5	30						3180	2570	2050	1600	1240	930	680	470
	35						2980	2370	1870	1440	1090	800	570	390
	40						2760	2170	1690	1280	950	680	470	310
	45						2540	1980	1510	1130	820	580	390	240
	50						2300	1770	1340	980	700	480	310	
A 0.7 5	30			5650	4700	3880	3180	2570	2050	1600	1240	930	680	470
	35			5440	4490	3670	2980	2370	1870	1440	1090	800	570	390
	40			5190	4250	3440	2760	2170	1690	1280	950	680	470	310
	45				3990	3190	2540	1980	1510	1130	820	580	390	240
	50					2930	2300	1770	1340	980	700	480	310	
A 0.7 6	30						3530	2850	2280	1780	1380	1030	760	530
	35						3300	2640	2080	1600	1220	890	640	430
	40						3070	2420	1880	1430	1060	760	530	350
	45						2820	2200	1680	1260	920	640	440	270
	50						2560	1970	1490	1090	780	530	350	
A 1 6	30			6270	5220	4300	3530	2850	2280	1780	1380	1030	760	530
	35			6040	4980	4070	3300	2640	2080	1600	1220	890	640	430
	40			5760	4710	3820	3070	2420	1880	1430	1060	760	530	350
	45			5450	4430	3550	2820	2200	1680	1260	920	640	440	270
	50			5080	4100	3260	2560	1970	1490	1090	780	530	350	
A 1 7	30						4590	3740	3010	2380	1860	1420	1070	770
	35						4320	3470	2760	2160	1660	1250	920	640
	40						4030	3200	2520	1940	1470	1080	780	530
	45						3730	2930	2280	1730	1290	930	650	430
	50						3410	2650	2030	1520	1110	780	530	
A 1.5 7	30			7880	6550	5390	4410	3560	2830	2210	1690	1260	910	630
	35			7580	6240	5090	4120	3280	2570	1970	1490	1090	770	510
	40			7220	5900	4760	3810	3000	2320	1750	1290	920	630	410
	45			6820	5530	4420	3500	2720	2070	1540	1110	770	510	320
	50			6350	5100	4050	3170	2430	1820	1330	940	630	410	
A 1.5 8	30				7310	6030	4950	4010	3200	2510	1940	1460	1070	750
	35				6980	5710	4640	3700	2920	2250	1710	1260	900	610
	40				6610	5350	4300	3400	2640	2010	1500	1080	750	490
	45				6210	4980	3960	3090	2370	1770	1290	910	620	390
	50				5750	4570	3600	2770	2090	1540	1100	750	490	
B 1.5 9	30					7180	5920	4810	3860	3050	2380	1810	1350	970
	35					6810	5560	4470	3540	2760	2120	1580	1160	810
	40					6410	5180	4110	3220	2480	1870	1370	980	660
	45					5990	4790	3760	2910	2200	1630	1170	810	530
	50					5520	4370	3400	2590	1930	1400	980	660	
B 1.5 10	30						6560	5350	4310	3420	2680	2050	1540	1110
	35						6180	4980	3960	3100	2400	1800	1330	940
	40						5770	4590	3610	2790	2120	1560	1130	770
	45						5340	4210	3270	2490	1860	1340	940	630
	50						4890	3810	2920	2190	1610	1140	780	
B 2 10	30				9150	7490	6100	4870	3840	2950	2230	1630	1150	760
	35				8690	7040	5660	4460	3460	2620	1940	1380	950	600
	40				8170	6550	5200	4040	3090	2290	1660	1150	760	470
	45				7620	6040	4740	3640	2730	1990	1410	950	600	350
	50					5500	4260	3220	2380	1690	1170	760	460	
D 2 11	30				10530	8780	7290	5970	4840	3870	3050	2340	1750	1250
	35				9870	8210	6810	5560	4490	3570	2790	2120	1570	1090
	40				9150	7610	6290	5120	4120	3250	2530	1900	1370	920
	45				8430	6990	5770	4680	3750	2940	2260	1670	1180	760
	50				7640	6330	5200	4210	3350	2600	1980	1430	980	
D 2 13	30						8150	6710	5490	4430	3540	2770	2130	1580
	35						7640	6280	5120	4120	3280	2550	1940	1430
	40						7090	5820	4730	3790	3000	2320	1750	1260
	45						6540	5360	4340	3460	2730	2090	1560	1100
	50						5940	4850	3920	3110	2430	1840	1350	
D 3 13	30		15520	14480	12150	10120	8400	6870	5570	4440	3490	2670	1990	
	35		14550	13570	11370	9460	7830	6390	5160	4090	3190	2420	1770	
	40		13510	12590	10540	8760	7230	5880	4730	3720	2880	2150	1550	
	45		12460	11610	9710	8050	6630	5370	4290	3350	2570	1890	1320	
	50		11300	10530	8790	7270	5970	4820	3830	2970	2240	1620	1090	
D 2 15	30								6520	5240	4170	3250	2480	1820
	35								6080	4860	3850	2970	2250	1620
	40								5600	4460	3510	2690	2000	1420
	45								5120	4060	3180	2410	1770	1210
	50								4610	3630	2820	2110	1520	

CAPACITÀ FRIGORIFERE — REFRIGERATING CAPACITY — PUISSANCE FRIGORIFIQUES — KALTEISTUNGS DATEN

Compressore / Compressor / Compresseur / Verdichter

Condensazione / Condensing / Condensation / Verflussig

R404A (HFC) — Watt — 1450 RPM

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Compressore	Condensazione Temp. °C	EVAPORAZIONE - EVAPORATING - EVAPORATION - VERDAMPFUNG												
		12.5	7	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
D 3 15	30		18180	16970	14270	11920	9920	8160	6640	5330	4240	3290	2500	1820
	35		17070	15930	13390	11170	9290	7620	6180	4940	3910	3010	2260	1620
	40		15880	14820	12440	10370	8600	7040	5700	4530	3560	2710	2010	1410
	45		14670	13690	11480	9560	7910	6460	5200	4120	3210	2420	1760	1200
	50				10430	8670	7160	5830	4680	3680	2840	2110	1510	
D 3 16	30			17910	15070	12600	10510	8650	7060	5680	4530	3530	2700	1990
	35			16830	14150	11820	9840	8080	6580	5270	4180	3240	2450	1780
	40			15660	13160	10980	9130	7480	6070	4850	3820	2930	2200	1560
	45			14480	12160	10140	8410	6880	5560	4420	3460	2630	1940	1350
	50					9210	7620	6220	5010	3960	3070	2310	1670	
F 4 16	30		19520	18220	15300	12770	10620	8710	7080	5670	4490	3460	2610	
	35		18320	17090	14350	11960	9920	8120	6580	5240	4120	3150	2350	
	40		17030	15880	13320	11080	9180	7490	6050	4790	3740	2830	2070	
	45		15720	14660	12280	10200	8430	6860	5510	4340	3360	2510	1800	
	50		14280	13310	11140	9240	7620	6180	4940	3860	2960	2170	1520	
D 3 18	30					14000	11660	9590	7820	6280	5000	3890	2970	2180
	35					13120	10920	8960	7280	5830	4620	3560	2690	1940
	40					12190	10120	8290	6720	5350	4210	3220	2400	1700
	45						9320	7610	6140	4870	3810	2880	2110	1450
	50						8440	6870	5530	4360	3380	2520	1820	
D 3 19	30						12170	10050	8230	6650	5340	4200	3250	2440
	35						11430	9420	7700	6210	4960	3880	2980	2210
	40						10620	8740	7130	5730	4560	3540	2700	1970
	45							8060	6550	5250	4150	3210	2420	1740
	50							7310	5930	4730	3720	2850	2120	
F 4 19	30			21680	18250	15270	12740	10500	8570	6910	5520	4320	3320	2460
	35			20370	17150	14330	11940	9820	8000	6430	5110	3970	3030	2210
	40			18970	15950	13320	11080	9100	7390	5920	4680	3610	2720	1950
	45			17550	14750	12300	10220	8370	6780	5400	4250	3250	2420	1700
	50				13420	11180	9270	7580	6120	4850	3790	2860	2100	
F 5 19	30		23830	22250	18710	15640	13030	10720	8740	7020	5590	4350	3320	2430
	35		22380	20890	17560	14660	12200	10010	8140	6520	5160	3980	3010	2170
	40		20830	19440	16330	13620	11310	9260	7500	5980	4700	3600	2680	1890
	45		19250	17960	15080	12560	10410	8500	6860	5440	4250	3220	2360	1620
	50		17510	16340	13700	11400	9430	7680	6170	4870	3770	2820	2030	
F 4 24	30						15590	12890	10570	8560	6880	5430	4230	3190
	35						14650	12090	9900	8000	6410	5030	3890	2910
	40						13630	11230	9180	7400	5900	4610	3540	2620
	45							10370	8450	6790	5400	4190	3190	2320
	50							9420	7660	6130	4850	3740	2810	
F 5 24	30				22740	19030	15870	13080	10690	8620	6890	5390	4150	3080
	35				21360	17860	14880	12240	9980	8020	6380	4960	3780	2770
	40				19880	16610	13820	11340	9220	7380	5840	4510	3400	2450
	45				18380	15340	12740	10440	8460	6740	5310	4060	3020	2130
	50						11560	9450	7630	6050	4730	3580	2630	
F 5 25	30						17640	14550	11900	9600	7690	6030	4650	3470
	35						16540	13620	11120	8940	7130	5560	4250	3130
	40						15370	12630	10280	8240	6540	5060	3830	2780
	45						14180	11630	9440	7540	5950	4560	3420	2430
	50						12880	10540	8530	6780	5310	4040	2980	
F 7 25	30		31280	29210	24590	20560	17140	14110	11520	9270	7390	5770		
	35		29400	27450	23090	19290	16050	13190	10740	8610	6830	5290		
	40		27360	25540	21470	17920	14890	12210	9910	7920	6250	4800		
	45		25300	23620	19840	16540	13720	11220	9080	7220	5660	4310		
	50		23020	21490	18040	15020	12440	10150	8180	6470	5030	3780		
F 5 28	30							15040	12340	10010	8050	6360	4960	3760
	35							14120	11560	9350	7500	5900	4570	3430
	40							13120	10730	8650	6920	5410	4160	3090
	45							12120	9880	7950	6330	4920	3750	2750
	50								8970	7190	5690	4400	3320	
F 7 28	30		33600	31390	26430	22130	18460	15220	12450	10040	8030	6290		
	35		31590	29510	24840	20770	17320	14250	11620	9350	7450	5800		
	40		29430	27480	23120	19320	16080	13210	10750	8610	6830	5280		
	45		27230	25430	21380	17850	14840	12160	9860	7870	6200	4760		
	50		24800	23150	19460	16230	13470	11020	8910	7080	5540	4210		
S 5 33	30								14290	11540	9240	7260	5610	4190
	35								13350	10750	8580	6700	5130	3790
	40								12360	9920	7880	6110	4640	3370
	45								11350	9080	7170	5520	4140	2960
	50								11020	8170	6410	4890	3620	
S 7 33	30		38850	36270	30480	25450	21180	17390	14150	11340	8990	6960	5280	
	35		36480	34040	28590	23840	19800	16230	13160	10500	8280	6350	4760	
	40		33920	31640	26560	22120	18330	14980	12110	9610	7530	5720	4220	
	45		31330	29220	24500	20370	16850	13730	11050	8730	6780	5090	3680	
	50		28470	26550	22240	18470	15240	12380	9910	7780	5980	4420		

CAPACITÀ FRIGORIFERE | **REFRIGERATING CAPACITY** | **PUISSANCE FRIGORIFIQUES** | **KALTEISTUNGS DATEN**

R404A (HFC) — Watt — 1450 RPM

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Compressore Compressor Compresseur Verdichter	Condensazione Condensing Condensation Verflussig Temp. °C	EVAPORAZIONE - EVAPORATING - EVAPORATION - VERDAMPFUNG												
		12.5	7	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
S 7 39	30					29530	24660	20340	16640	13440	10770	8450	6530	4880
	35					27740	23130	19050	15560	12530	9990	7800	5970	4410
	40					25810	21500	17670	14390	11550	9170	7110	5390	3920
	45					23850	19840	16280	13220	10570	8350	6420	4820	3440
	50						18030	14760	11950	9510	7460	5690	4210	
S 10 39	30		45820	42790	36020	30140	25130	20710	16910	13630	10880	8510	6530	
	35		43060	40210	33840	28280	23560	19370	15780	12680	10080	7820	5950	
	40		40100	37440	31480	26290	21870	17940	14580	11660	9220	7110	5350	
	45		37090	34620	29100	24270	20160	16500	13370	10650	8370	6390	4750	
	50		33760	31520	26480	22060	18290	14940	12050	9550	7450	5630		
S 10 51	30						33390	27540	22530	18190	14560	11420	8820	6580
	35						31320	25790	21050	16950	13510	10530	8060	5940
	40						29100	23920	19470	15620	12390	9600	7280	5280
	45						26860	22030	17880	14290	11270	8660	6490	4630
	50							19970	16160	12850	10080	7670	5670	
S 15 51	30		59660	55700	46850	39150	32600	26810	21850	17560	13960	10850		
	35		56040	52310	43970	36700	30520	25050	20350	16290	12880	9940		
	40		52130	48660	40870	34070	28290	23160	18750	14940	11740	8980		
	45		48180	44960	37730	31420	26030	21260	17150	13590	10610	8020		
	50		43820	40880	34290	28510	23580	19190	15420	12150	9400	7020		
V 15 59	30				54400	46270	39260	32910	26530	21100	16630	12850	9790	7500
	35				49840	42400	35970	30130	24160	19090	14930	11430	8610	6550
	40				45300	38550	32690	27370	21820	17110	13280	10060	7490	5650
	45				40860	34780	29500	24680	19550	15220	11700	8770	6430	4810
	50				36360	30970	26270	21980	17290	13360	10170	7530	5440	
V 20 59	30		67620	63560	54400	46270	39260	32910	26530	21100	16630			
	35		61920	58210	49840	42400	35970	30130	24160	19090	14930			
	40		56220	52880	45300	38550	32690	27370	21820	17110	13280			
	45		50640	47650	40860	34780	29500	24680	19550	15220	11700			
	50		44980	42350	36360	30970	26270	21980	17290	13360	10170			
V 15 71	30						47970	40380	32710	26180	20800	16230	12520	9770
	35						44080	37100	29910	23800	18780	14540	11110	8630
	40						40190	33830	27130	21450	16810	12910	9760	7550
	45						36390	30630	24430	19190	14920	11350	8490	
	50						32540	27390	21730	16950	13070	9840	7270	
V 20 71	30				65640	55880	47460	39840	32170	25640	20260	15710		
	35				60190	51250	43520	36520	29330	23230	18220	14000		
	40				54740	46630	39600	33220	26520	20860	16240	12360		
	45				49410	42110	35770	29990	23810	18590	14350	10810		
	50				44010	37540	31900	26740	21100	16350	12500	9310		
V 25 71	30		81520	76640	65640	55880	47460	39840	32170	25640	20260			
	35		74680	70230	60190	51250	43520	36520	29330	23230	18220			
	40		67850	63840	54740	46630	39600	33220	26520	20860	16240			
	45		61160	57570	49410	42110	35770	29990	23810	18590	14350			
	50		54360	51200	44010	37540	31900	26740	21100	16350	12500			
V 20 84	30							47700	38620	30880	24500	19100	14710	11450
	35							43800	35280	28050	22110	17100	13040	10110
	40							39920	31990	25270	19780	15160	11440	8820
	45							36130	28790	22590	17540	13320	9940	
	50							32290	25590	19940	15350	11530	8500	
V 25 84	30				77800	66250	56280	47270	38180	30440	24070	18680		
	35				71350	60770	51630	43340	34820	27590	21660	16670		
	40				64910	55310	46990	39430	31500	24800	19320	14720		
	45				58600	49970	42460	35610	28290	22110	17080	12880		
	50				52210	44560	37880	31770	25080	19450	14890	11100		
V 30 84	30		96590	90820	77800	66250	56280	47270	38180	30440	24070			
	35		88500	83240	71350	60770	51630	43340	34820	27590	21660			
	40		80430	75670	64910	55310	46990	39430	31500	24800	19320			
	45		72500	68250	58600	49970	42460	35610	28290	22110	17080			
	50		64460	60720	52210	44560	37880	31770	25080	19450	14890			
Z 30 88	30			102850	85820	71120	58750	47920	38740	30910	24450	18960		
	35			96150	80060	66170	54490	44280	35640	28290	22240	17110		
	40			89220	74130	61120	50170	40610	32540	25680	20060	15310		
	45			82200	68170	56060	45880	36990	29500	23150	17950	13570		
	50			74750	61900	50790	41440	33290	26420	20610	15850	11880		
Z 25 106	30						71790	58790	47770	38350	30560	23940	18530	13990
	35						66760	54510	44130	35270	27970	21760	16730	12520
	40						61680	50190	40470	32200	25390	19630	14970	11090
	45						56600	45910	36870	29190	22890	17570	13280	
	50						51530	41500	33200	26160	20380	15130		
Z 35 106	30		131900	124010	103550	85890	71030	58010	46980	37550	29780			
	35		123350	116000	96660	79980	65940	53660	43280	34420	27140			
	40		114490	107710	89580	73940	60770	49280	39570	31310	24530			
	45		105500	99300	82440	67880	55640	44950	35930	28270	22000			
	50		95960	90380	74930	61570	50320	40510	32240	25220	19490			

CAPACITÀ FRIGORIFERE | **REFRIGERATING CAPACITY** | **PUISSANCE FRIGORIFIQUES** | **KALTEISTUNGS DATEN**

R404A (HFC) — Watt — 1450 RPM

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Compressore Compressor Compresseur Verdichter	Condensazione Condensing Condensation Verflussig Temp. °C	EVAPORAZIONE - EVAPORATING - EVAPORATION - VERDAMPFUNG 12.5	7	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Z 30 126	30						84840	69450	56390	45230	36010	28170	21770	16410
	35						78890	64360	52060	41570	32930	25590	19630	14650
	40						72840	59230	47720	37930	29870	23060	17540	12960
	45							54140	43450	34360	26900	20610	15540	
	50							48920	39100	30760	23940	18200		
Z 40 126	30		156290	146950	122730	101830	84230	68820	55750	44590	35380			
	35		146180	137490	114590	94840	78220	63680	51380	40890	32260			
	40		135700	127680	106220	87700	72110	58500	47000	37220	29180			
	45		125070	117740	97780	80540	66030	53380	42690	33620	26190			
	50		113780	107180	88890	73070	59750	48120	38320	30010	23220			
W 40 142	30		169880	159720	133150	110250	91000	74170	59940	47810	37820	29350		
	35		156600	147270	122850	101750	83980	68430	55260	44010	34750	26880		
	40		143200	134730	112470	93200	76940	62670	50560	40220	31680	24420		
	45		129960	122320	102220	84760	69990	56990	45950	36490	28670	22030		
	50		116350	109590	91720	76130	62890	51210	41260	32710	25640	19620		
Z 40 154	30						104250	85350	69320	55610	44300	34660	26810	
	35						96950	79110	64010	51130	40510	31500	24180	
	40						89520	72810	58680	46650	36760	28390	21610	
	45						82120	66570	53440	42280	33120	25390	19160	
	50						74450	60160	48100	37860	29470	22430		
Z 50 154	30		191940	180470	150740	125070	103460	84540	68500	54790	43480			
	35		179530	168860	140750	116490	96080	78230	63130	50250	39650			
	40		166670	156820	130470	107720	88590	71870	57750	45740	35870			
	45		153620	144620	120100	98940	81130	65590	52470	41330	32200			
	50		139760	131660	109200	89770	73410	59140	47100	36900	28550			
W 40 168	30						108690	88790	71950	57580	45740	35690	27510	
	35						100480	82080	66480	53150	42160	32820	25220	
	40						92210	75320	60980	48710	38580	29960	22930	
	45						84040	68650	55560	44340	35060	27150	20700	
	50						75670	61840	50040	39900	31490	24320		
W 50 168	30		201300	189270	157810	130700	107910	87990	71140	56770	44940	34900		
	35		185580	174550	145630	120660	99620	81210	65600	52290	41310	31990		
	40		169740	159710	133360	110550	91290	74390	60060	47800	37680	29090		
	45		154070	145040	121240	100560	83070	67680	54600	43390	34130	26260		
	50		137970	129960	108800	90340	74670	60840	49050	38930	30550			
W 50 187	30						120370	98250	79530	63570	50420	39260	30180	
	35						111200	90750	73420	58620	46420	36050	27620	
	40						101980	83220	67290	53660	42410	32850	25060	
	45						92880	75790	61250	48790	38490	29710	22570	
	50						83570	68200	55100	43840	34510	26560		
W 60 187	30		223230	209850	174850	144700	119350	97210	78480	62520	49380			
	35		205700	193420	161260	133480	110090	89620	72290	57500	45310			
	40		188040	176870	147570	122200	100790	82010	66090	52480	41250			
	45		170570	160520	134060	111070	91620	74520	60000	47560	37290			
	50		152640	143740	120210	99690	82270	66900	53810	42580	33290			
W 60 206	30					161500	133560	109130	88440	70800	56260	43920	33870	
	35					149270	123480	100880	81730	65370	51870	40400	31060	
	40					136950	113330	92600	74990	59920	47480	36890	28260	
	45					124770	103310	84410	68340	54560	43160	33440	25520	
	50					112270	93040	76050	61560	49100	38780	29960		
W 70 206	30			232440	193820	160540	132550	108090	87400	69760	55230			
	35			214370	178870	148210	122380	99760	80610	64260	50780			
	40			196160	163810	135800	112150	91400	73800	58750	46330			
	45			178140	148920	123540	102060	83160	67100	53340	41970			
	50			159640	133660	110990	91740	74760	60280	47850	37560			
W 80 206	30		247210	232440	193820	160540	132550	108090	87400	69760				
	35		227920	214370	178870	148210	122380	99760	80610	64260				
	40		208480	196160	163810	135800	112150	91400	73800	58750				
	45		189240	178140	148920	123540	102060	83160	67100	53340				
	50		169460	159640	133660	110990	91740	74760	60280	47850				

Watt x 0.860=Kcal/h

è necessario raffreddare il compressore con un motoventilatore posto sulla testa o con teste raffreddate ad acqua
it's necessary to cool the compressor with a head fan motor of with water cooled head
il est necessaire de refroidie le compresseur par un motoventilateur sur la tete ou par de tetes refroidies par eau
kuhlung durch kopflufter oder wassergekuhlte zylinderkopfenotwendig

POTENZE ASSORBITE **POWER INPUT** **PUISSANCE ABSORBÉE** **LEISTUNGS AUFNAHME**

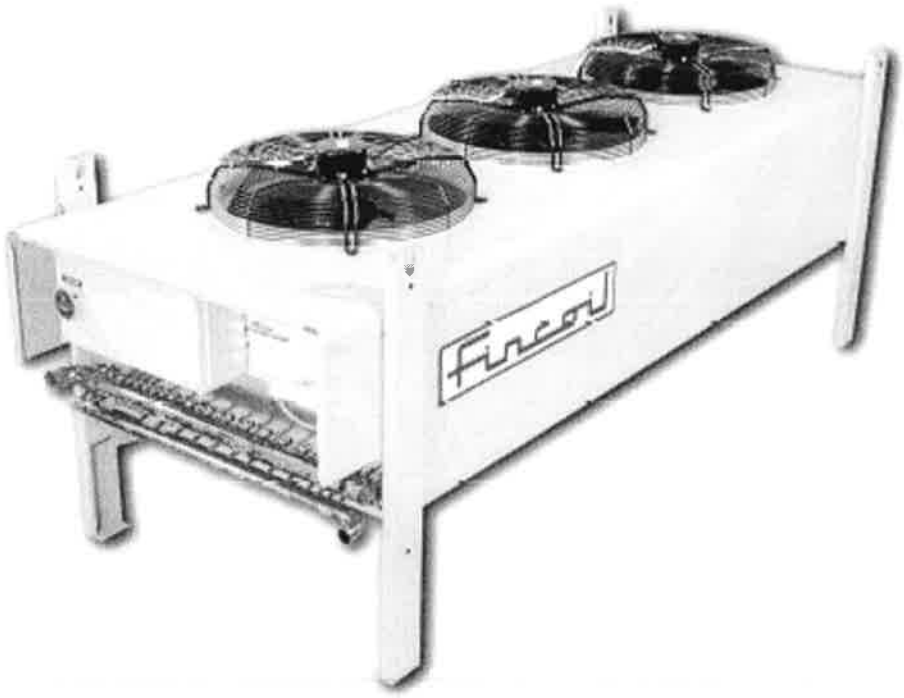
Compressore / Compressor / Compresseur / Verdichter			R507 [Watt] 400 V / 3 Ph / 50 Hz			R404A [Watt] 400 V / 3 Ph / 50 Hz			R407A [Watt] 400 V / 3 Ph / 50 Hz			R22 [Watt] 400 V / 3 Ph / 50 Hz			R134a [Watt] 400 V / 3 Ph / 50 Hz		
	Te (°C)		-10	-20	-30	-10	-20	-30	-10	-20	-30	+5	-10	-30	+5	0	-5
	Tc (°C)		+40	+40	+40	40	+40	+40	+40	+40	+40	+40	+40	+40	+40	+40	+40
A	0.5	4	960	750	560	930	730	540	880	680	480	1020	920	600	520	500	460
A	0.5	5	1240	960	700	1210	930	670	1140	850	590		1190	750	670	640	600
A	0.7	5	1240	960	700	1210	930	670	1140	850	590	1330	1190	750	790	750	700
A	0.7	6	1420	1070	760	1380	1040	730	1290	950	650		1350	830	760	710	660
A	1	6	1340	1040	780	1300	1010	750	1230	940	660	1400	1280	840	870	830	780
A	1	7	1810	1400	1020	1760	1360	980	1670	1270	880		1730	1120	1010	960	890
A	1.5	7	1600	1270	950	1560	1230	910	1480	1140	800	1700	1540	1020	1080	1030	970
A	1.5	8	1820	1430	1060	1770	1380	1020	1670	1280	910	1910	1750	1140	1110	1060	990
B	1.5	9	2220	1750	1280	2160	1690	1230	2050	1570	1100	2300	2120	1380	1330	1260	1180
B	1.5	10	2490	1970	1420	2420	1910	1370	2300	1780	1230		2920	1810	1480	1410	1300
B	2	10	2420	1910	1380	2360	1850	1330	2230	1720	1170	2530	2320	1510	1550	1480	1370
D	2	11	2800	2370	1860	2730	2290	1790	2540	1980	1380	2500	2380	1560	1740	1610	1470
D	2	13	3500	2990	2370	3410	2890	2280	3020	2340	1630	2950	2810	1840	2050	1910	1730
D	3	13	3550	3050	2490	3460	2950	2400	2980	2390	1730	2930	2800	1930	2220	2090	1930
D	2	15		3630	2810		3510	2700	3650	2820	1960		3370	2200	2470	2300	2080
D	3	15	4280	3580	2820	4170	3470	2710	3540	2810	2040	3440	3300	2260	2560	2420	2230
D	3	16	4620	3900	3100	4500	3780	2980	3810	3000	2170		3540	2410	2670	2510	2300
F	4	16	4030	3450	2770	3920	3340	2670	3180	2800	2350	4010	3460	2080	2660	2520	2340
D	3	18	5060	4200	3280	4930	4070	3160	4200	3290	2360		3890	2620	2900	2730	2500
D	3	19	5500	4570	3610	5360	4420	3470		3540	2520			2790	3120	2920	2680
F	4	19	4840	4140	3320	4710	4010	3200	3750	3310	2810	4730	4080	2440	3080	2910	2700
F	5	19	4830	4110	3280	4700	3980	3160	3710	3270	2760	4660	4030	2440	3100	2940	2730
F	4	24	6170	5240	4170	6010	5070	4010	4690	4120	3490		5110	3000	3790	3600	3330
F	5	24	6060	5180	4160	5900	5010	4000	4640	4100	3500	5870	5060	3030	3800	3610	3350
F	5	25	6410	5460	4350	6240	5290	4190	4980	4400	3750		5430	3230	4090	3900	3630
F	7	25	6260	5360	4300	6100	5190	4140	5000	4450	3830	6230	5420	3320	4120	3920	3650
F	5	28		6000	4790		5810	4610	5420	4770	4050		5920	3480	4410	4200	3920
F	7	28	6880	5920	4750	6700	5730	4570	5360	4730	4020	6710	5830	3500	4420	4190	3890
S	5	33		6770	5280		6550	5080		4520	3770			3950	4590	4350	4010
S	7	33	7480	6380	5120	7280	6180	4930	5170	4450	3670	7650	6610	3890	4830	4610	4290
S	7	39	8650	7430	5970	8420	7190	5750	6390	5650	4880		8200	4990	5570	5310	4920
S	10	39	8460	7280	5870	8240	7050	5650	6060	5250	4360	8910	7760	4590	5620	5370	5000
S	10	51	11710	10050	8040	11400	9730	7740	8800	7930	7060		11210	7030	7660	7350	6870
S	15	51	11310	9520	7510	11010	9220	7230	8260	7290	6250	11950	10510		7550	7260	6800
V	15	59	12100	10540	8590	11780	10200	8270	10720	8880	6720	15290	12880	7690	9040	8470	7760
V	20	59	11990	10650	8880	11670	10310	8550	10760	9120		14900	12650		9290	8800	8170
V	15	71	15250	13370	10960	14850	12940	10550	13520	11260	8590		16240	9720	11000	10300	9440
V	20	71	14630	12810	10680	14250	12400	10280	12990	10940	8500	18450	15570	9600	11060	10480	9730
V	25	71	14500	12750	10550	14120	12340	10150	12910	10840		18040	15360		10970	10360	9570
V	20	84		15690	12860		15190	12380	15880	13220	10250		19120	11490	13080	12340	11440
V	25	84	17400	15250	12510	16940	14760	12040	15450	12880	9830	21730	18490	11180	13010	12260	11310
V	30	84	17060	14940	12220	16610	14460	11760	15150	12600		21310	18130		12730	11980	11020
Z	30	88	18010	15610	12400	17540	15110	11930	16490	13510	10030	19200	16720		15540	14260	12750
Z	25	106		20680	16470		20020	15850	21750	17930	13340		21940	13620	19760	17960	15830
Z	35	106	22860	19870	15990	22260	19240	15390	20940	17270		24280	21200		19660	18070	16210
Z	30	126	27080	23680	18980	26370	22920	18270	24860	20590	15390		25090	15750	22750	20800	18490
Z	40	126	27670	24040	19130	26940	23270	18410	25350	20820		29400	25640		23740	21780	19450
W	40	142	31340	27290	21970	30520	26420	21150	28460	22990	16650	36850	30930		24790	22710	20320
Z	40	154	35550	30780	24570	34620	29800	23650	32490	26660	19930		32800	20380	29890	27420	24530
Z	50	154	34270	29900	23870	33370	28940	22970	31450	25950		36290	31810		29500	27110	24250
W	40	168	37970	33210	26860	36970	32150	25850	34530	27980	20380		37410	24300	30440	28030	25200
W	50	168	36520	31750	25540	35560	30740	24580	33120	26720	19490	43090	36030		30150	27940	25270
W	50	187	41160	35820	28820	40080	34680	27740	37330	30110	21880		40610	26100	33010	30440	27400
W	60	187	39920	34670	27910	38870	33560	26860	36200	29180		47110	39400		33130	30700	27810
W	60	206	45250	39550	32070	44060	38290	30870	41100	33380	24560		44600	29040	36960	34250	31000
W	70	206	44190	38050	30520	43030	36830	29370	39870	31800		52260	43660		36070	33290	30120
W	80	206	43480	37600		42340	36400		39310	31890		51990	42930		35680	33210	30280

Samantekt. Elías Þorsteinsson.

KÆLI3VC05

EIMSVALAR

SOLAR JUNIOR
condensers



The Solar Junior condensers are designed as heat exchangers for commercial refrigeration and air conditioning. Due to its construction, the range is especially suitable for places where easy assembly as well as a light and robust structure are required. The units are designed for outdoor use, but the structure and low sound level make them suitable also for indoor use, where the condensation effect can be utilized for heating. Solar Junior G dry coolers, designed for cooling water or solutions that do not corrode copper, are presented in a separate brochure.

Characteristics

- 39 sizes with nominal capacities from 7.5 to 265 kW (R404A/DT1 15 K, EN 327)
- Performance data according to Eurovent Rating Standard 7/C/002
- Three fan sizes and four fan speed alternatives
- Two mounting positions: H = vertical air flow and V = horizontal air flow
- Complete fan control systems available, based on stepless variable fan speed control (VC) or stepwise starting cycle of fans (Step Control)
- Quick installation, fans are connected to the cooler end
- Product selection with the Polar Power selection program

Technical data

The heat transfer section is made of copper tubes and aluminium fins. Fin spacing is 2.3 mm. It can be multi-circuited according to the number of circuits or equipped with a sub-cooling circuit. Casing material is polyester coated hot dip galvanized steel, colour grey NCS 2502-B.

The fan chambers are separated crosswise. The products are equipped with lifting lugs. All standard products are suitable for both horizontal and vertical mounting. Electrical connection including safety switch is located at the end of the condenser.

A manual including installation and service instructions is shipped with each unit.

02/2006

Product designation

SJE-104-2-350-1400-3/400/50-VC

- SJ = Condenser
- E = special model
- Size
- No. of fans
- Fan diameter
- Fan speed rpm
- Power supply

- Sub = Sub-cooling coil
- J = Multi-circuited condenser, number of passes from left to right/from up to down (J:1:2:1)
- VC = Fan speed control 1-/2- circuited (-/2) refrigerant (R)

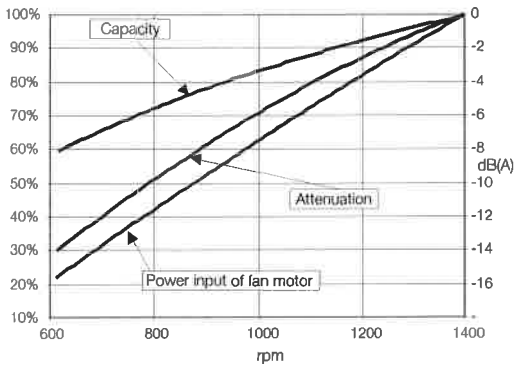
Fans

3-phase fans are suitable for 3/400 V/50 Hz and 1-phase fans for 1/230 V/50 Hz. For other power supplies, the fans must be specified as special. All fans are suitable at least for +50 °C air out temperatures. Suitability for higher temperatures must be checked according to fan type. Protection class for all fan motors is at least IP 44.

The fan power input at +20 °C is given in the performance data tables. The full load current is given at a temperature of –30 °C for specifying the overload protector. The current value changes according to air density. This data may also vary due to changes in motor types; therefore the overload protectors should have a +/-20 % adjustment margin.

Stepless fan speed control VC

- Adjustment range of fan speed approximately 35...100 %
- Fans provided with automatic internal thermal protection
- Control from 1 or 2 condensing circuits (not Ø 350 mm)
- Alarm transmission possibility in 3-phase models
- Models with Ø 350 mm fan 1-phase only

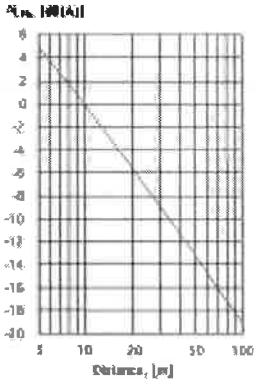


Required heat transfer capacity can be achieved steadily with variable fan speed control. This results in a significant decrease of power input and sound level.

Heat transfer capacities

The capacities, air flows and sound power levels shown on the Polar Power selection software and in the tables in this brochure are certified with Eurovent Certify-All certification, and verified by tests (EN 327) in independent laboratories.

The nominal heat transfer capacities of the condensers are given for the refrigerant R404A, with temperature difference 15 K and air on temperature +25 °C. L_{wa} is the A-weighted sound power level [dB(A)]. The total sound pressure level L_{pa} is the average A-weighted sound pressure level dB(A) at a surface of 10 m parallel piped envelope over one reflecting plane (calculated according to EN 13487). The sound pressure level correction ΔL_{pa} is presented as function of distance [m] in the table.



The sound level at any specific point can easily be calculated by help of Polar Power selection program.

Selection

The preliminary product selection can be made by using the tables in this leaflet. The condenser capacities for required refrigerant and temperature difference can be calculated with help of the correction factors. The exact cooler selection is made by Polar Power software, which is available either on CD-rom or on our web page www.fincoil.fi.

The selection is based on required capacity, temperatures, noise level at desired point and refrigerant. The program gives the most suitable models with heat transfer capacities, connection data, noise levels by octave bands, operating cost calculations and dimensional drawings.

Performance data Solar Junior

R404A, DT1 15 K, EN 327

3/400 V/50 Hz

Fan diameter 914 mm

			1400 rpm				1150 rpm				900 rpm				700 rpm			
size	Fan Ø	Number of fans	Capa-city kW	Air flow m³/s	Sound pres-sure level db(A)	Sound power level db(A)	Capa-city kW	Air flow m³/s	Sound pres-sure level dB(A)	Sound power level db(A)	Capa-city kW	Air flow m³/s	Sound pres-sure level dB(A)	Sound power level db(A)	Capa-city kW	Air flow m³/s	Sound pres-sure level dB(A)	Sound power level db(A)
101	350	1	7.54	0.67	42	73	-	-	-	-	-	-	-	-	-	-	-	-
102	350	1	9.16	0.63	42	73	-	-	-	-	-	-	-	-	-	-	-	-
103	350	1	10.1	0.60	42	73	-	-	-	-	-	-	-	-	-	-	-	-
104	350	2	15.2	1.34	45	76	-	-	-	-	-	-	-	-	-	-	-	-
105	350	2	18.6	1.27	45	76	-	-	-	-	-	-	-	-	-	-	-	-
106	350	2	19.8	1.20	45	76	-	-	-	-	-	-	-	-	-	-	-	-
107	350	3	23.0	2.01	47	78	-	-	-	-	-	-	-	-	-	-	-	-
108	350	3	27.8	1.90	47	78	-	-	-	-	-	-	-	-	-	-	-	-
109	350	3	30.0	1.80	47	78	-	-	-	-	-	-	-	-	-	-	-	-
110	500	1	18.6	1.91	52	84	16.8	1.53	46	77	14.9	1.26	41	72	12.6	0.98	33	64
111	500	1	23.9	1.79	52	84	20.4	1.42	46	77	17.8	1.18	41	72	14.5	0.90	33	64
112	500	1	26.2	1.68	52	84	22.0	1.31	46	77	18.7	1.10	41	72	15.1	0.83	33	64
113	500	2	38.9	3.82	55	87	34.0	3.06	49	80	30.1	2.53	44	75	25.4	1.96	36	67
114	500	2	48.3	3.59	55	87	40.9	2.83	49	80	35.4	2.36	44	75	29.3	1.81	36	67
115	500	2	52.6	3.37	55	87	43.0	2.63	49	80	37.5	2.21	44	75	29.7	1.67	36	67
116	500	3	57.7	5.73	57	89	50.0	4.58	51	82	44.4	3.80	46	77	37.6	2.95	38	69
117	500	3	72.7	5.38	57	89	61.7	4.24	51	82	54.0	3.54	46	77	44.1	2.71	38	69
118	500	3	79.0	5.05	57	89	65.4	3.94	51	82	57.0	3.31	46	77	45.2	2.50	38	69
119	630	1	32.1	3.07	58	89	28.4	2.51	53	84	26.6	2.25	46	77	20.7	1.62	37	67
120	630	1	40.1	2.92	58	89	34.4	2.35	53	84	31.8	2.10	46	77	24.1	1.49	37	67
121	630	1	43.6	2.77	58	89	36.7	2.20	53	84	33.7	1.98	46	77	25.0	1.38	37	67
122	630	2	64.3	6.14	61	92	56.8	5.02	56	87	52.9	4.48	49	80	43.0	3.25	40	70
123	630	2	80.7	5.84	61	92	69.3	4.71	56	87	63.9	4.21	49	80	49.3	2.99	40	70
124	630	2	88.1	5.54	61	92	74.0	4.41	56	87	67.8	3.95	49	80	50.1	2.76	40	70
125	500	4	80.6	7.46	58	90	69.1	5.91	52	83	60.6	4.89	47	78	50.9	3.77	39	70
126	500	4	94.0	7.08	58	90	78.9	5.55	52	83	68.8	4.63	47	78	54.7	3.49	39	70
127	500	4	103	6.41	58	90	84.0	4.94	52	83	72.3	4.16	47	78	55.4	3.06	39	70
128	630	3	101	9.06	62	94	88.0	7.35	57	89	82.5	6.57	51	82	65.3	4.67	42	72
129	630	3	117	8.67	62	94	100	6.95	57	89	91.8	6.22	51	82	70.3	4.39	42	72
130	630	3	131	7.99	62	94	107	6.26	57	89	98.2	5.62	51	82	70.9	3.86	42	72
131	630	4	137	12.1	63	95	119	9.81	58	90	110	8.76	52	83	86.0	6.22	43	73
132	630	4	156	11.6	63	95	134	9.26	58	90	123	8.30	52	83	93.6	5.85	43	73
133	630	4	175	10.6	63	95	144	8.35	58	90	131	7.49	52	83	94.6	5.15	43	73
134	630	5	167	15.1	64	96	151	12.3	59	91	140	11.0	53	84	108	7.78	44	74
135	630	5	198	14.4	64	96	168	11.6	59	91	154	10.4	53	84	117	7.31	44	74
136	630	5	220	13.3	64	96	180	10.4	59	91	164	9.37	53	84	118	6.43	44	74
137	630	6	206	18.1	65	97	179	14.7	60	92	165	13.1	54	85	131	9.34	45	75
138	630	6	235	17.3	65	97	203	13.9	60	92	186	12.4	54	85	141	8.77	45	75
139	630	6	265	16.0	65	97	217	12.5	60	92	198	11.2	54	85	142	7.72	45	75

Correction factors for different refrigerants

DT1	8	10	12	14	15	16	18	20
R404A / R507	0.53	0.67	0.80	0.93	1.00	1.07	1.20	1.33
R407C	0.40	0.54	0.67	0.81	0.87	0.94	1.07	1.20
R134a	0.50	0.62	0.74	0.87	0.93	0.99	1.12	1.24
R22	0.51	0.64	0.77	0.90	0.96	1.02	1.15	1.28

Technical data of fan motors, 3/400 V/50 Hz

3/400 V/50 Hz	1400 rpm		1150 rpm		900 rpm		700 rpm	
Fan diameter	Power input kW	FLC A	Power input kW	FLC A	Power input kW	FLC A	Power input kW	FLC A
350	0.15	0.46	-	-	-	-	-	-
500	0.60	1.52	0.40	0.82	0.24	0.62	0.15	0.38
630	0.90	2.30	0.62	1.35	0.44	1.20	0.25	0.57

Technical data of fan motors, 1/230 V/50 Hz

1/230 V/50 Hz	1400 rpm		900 rpm	
Fan diameter	Power input kW	FLC A	Power input kW	FLC A
350	0.15	0.74	-	-
500	0.59	3.60	-	-
630	-	-	0.46	2.40

Performance data for 1-phase fan motors corresponds to that of 3-phase motors with same fan diameter and fan speed.

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KÆLI3VC05

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Capacity

R404A / R507

Capacity in kW for range N: –40°C to +10°C

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature +10°C								**Evaporating temperature 0°C**							
TS 2/TES 2 - 0.11	0X	0.28	0.35	0.40	0.42	0.43	0.43	0.42	0.41	0.30	0.37	0.41	0.42	0.43	0.43	0.43	0.41
TS 2/TES 2 - 0.21	00	0.67	0.82	0.90	0.94	0.96	0.96	0.93	0.90	0.68	0.80	0.87	0.90	0.92	0.93	0.91	0.87
TS 2/TES 2 - 0.45	01	1.7	2.1	2.3	2.4	2.5	2.5	2.4	2.3	1.5	1.9	2.0	2.1	2.2	2.2	2.2	2.1
TS 2/TES 2 - 0.6	02	2.3	3.0	3.4	3.6	3.7	3.7	3.7	3.6	2.1	2.6	3.0	3.1	3.2	3.3	3.2	3.1
TS 2/TES 2 - 1.2	03	4.2	5.4	6.0	6.4	6.6	6.7	6.6	6.4	3.7	4.7	5.3	5.6	5.8	5.8	5.7	5.6
TS 2/TES 2 - 1.7	04	6.2	8.1	9.1	9.7	10.0	10.0	9.8	9.6	5.5	7.1	7.9	8.3	8.6	8.6	8.5	8.3
TS 2/TES 2 - 2.2	05	7.9	10.2	11.4	12.2	12.5	12.6	12.3	12.0	7.0	8.9	10.0	10.5	10.8	10.9	10.8	10.4
TS 2/TES 2 - 2.6	06	9.7	12.5	14.0	14.9	15.3	15.3	15.1	14.7	8.6	10.9	12.2	12.9	13.2	13.3	13.1	12.7
		Evaporating temperature –10°C								**Evaporating temperature –20°C**							
TS 2/TES 2 - 0.11	0X	0.30	0.37	0.40	0.42	0.42	0.42	0.41	0.41		0.35	0.38	0.40	0.39	0.40	0.39	0.38
TS 2/TES 2 - 0.21	00	0.65	0.76	0.82	0.84	0.87	0.87	0.85	0.83		0.70	0.75	0.77	0.79	0.79	0.79	0.76
TS 2/TES 2 - 0.45	01	1.3	1.6	1.7	1.8	1.8	1.9	1.8	1.8		1.3	1.5	1.5	1.5	1.5	1.5	1.5
TS 2/TES 2 - 0.6	02	1.8	2.2	2.5	2.6	2.7	2.7	2.7	2.6		1.9	2.0	2.1	2.2	2.2	2.2	2.1
TS 2/TES 2 - 1.2	03	3.1	4.0	4.5	4.7	4.8	4.8	4.8	4.7		3.3	3.7	3.8	3.9	3.9	3.9	3.8
TS 2/TES 2 - 1.7	04	4.7	6.0	6.6	7.0	7.1	7.2	7.1	6.9		4.9	5.4	5.6	5.8	5.8	5.7	5.6
TS 2/TES 2 - 2.2	05	5.9	7.6	8.4	8.8	9.0	9.1	9.0	8.7		6.2	6.9	7.2	7.3	7.3	7.2	7.1
TS 2/TES 2 - 2.6	06	7.3	9.3	10.3	10.8	11.0	11.1	11.0	10.7		7.6	8.4	8.8	8.9	8.9	8.8	8.6
		Evaporating temperature –30°C								**Evaporating temperature –40°C**							
TS 2/TES 2 - 0.11	0X			0.35	0.37	0.36	0.37	0.36	0.35			0.32	0.33	0.33	0.33	0.32	0.32
TS 2/TES 2 - 0.21	00			0.67	0.70	0.70	0.70	0.69	0.67			0.60	0.61	0.62	0.61	0.60	0.59
TS 2/TES 2 - 0.45	01			1.2	1.2	1.2	1.2	1.2	1.2			0.92	0.96	0.97	0.96	0.94	0.91
TS 2/TES 2 - 0.6	02			1.6	1.7	1.7	1.7	1.7	1.6			1.3	1.3	1.3	1.3	1.3	1.2
TS 2/TES 2 - 1.2	03			2.9	3.0	3.1	3.1	3.0	2.9			2.3	2.4	2.4	2.4	2.3	2.2
TS 2/TES 2 - 1.7	04			4.3	4.5	4.5	4.5	4.5	4.4			3.3	3.5	3.5	3.5	3.4	3.3
TS 2/TES 2 - 2.2	05			5.5	5.7	5.7	5.7	5.7	5.5			4.3	4.4	4.5	4.4	4.4	4.2
TS 2/TES 2 - 2.6	06			6.7	6.9	7.0	7.0	6.9	6.8			5.2	5.4	5.5	5.4	5.3	5.2

Capacity in kW for range B: –60°C to –25°C

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature –25°C								**Evaporating temperature –30°C**							
TS 2/TES 2 - 0.21	00	0.57	0.67	0.72	0.73	0.74	0.85	0.74	0.71	0.53	0.64	0.67	0.70	0.70	0.70	0.69	0.67
TS 2/TES 2 - 0.45	01	0.98	1.2	1.3	1.5	1.4	1.4	1.4	1.31	0.88	1.07	1.2	1.2	1.2	1.2	1.2	1.2
TS 2/TES 2 - 0.6	02	1.3	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.2	1.5	1.6	1.7	1.7	1.7	1.7	1.6
TS 2/TES 2 - 1.0	03	2.4	3.0	3.3	3.4	3.5	3.5	3.4	3.3	2.1	2.7	2.9	3.0	3.1	3.1	3.0	2.9
TS 2/TES 2 - 1.4	04	3.5	4.4	4.8	5.0	5.1	5.1	5.1	4.9	3.1	3.9	4.3	4.5	4.5	4.5	4.5	4.4
TS 2/TES 2 - 1.7	05	4.4	5.6	6.1	6.4	6.5	6.5	6.4	6.3	3.9	4.9	5.5	5.7	5.7	5.7	5.7	5.5
TS 2/TES 2 - 1.9	06	5.4	6.8	7.5	7.8	7.9	7.9	7.9	7.6	4.8	6.1	6.7	6.9	7.0	7.0	6.9	6.8
		Evaporating temperature –40°C								**Evaporating temperature –50°C**							
TS 2/TES 2 - 0.21	00		0.56	0.60	0.61	0.62	0.61	0.60	0.59		0.49	0.53	0.54	0.54	0.53	0.52	0.50
TS 2/TES 2 - 0.45	01		0.85	0.92	0.96	0.97	0.96	0.94	0.91		0.51	0.57	0.60	0.60	0.60	0.60	0.59
TS 2/TES 2 - 0.6	02		1.2	1.3	1.3	1.3	1.3	1.3	1.2		0.91	0.99	1.0	1.0	1.0	0.98	0.95
TS 2/TES 2 - 1.0	03		2.1	2.3	2.4	2.4	2.4	2.3	2.2		1.6	1.8	1.8	1.8	1.8	1.8	1.7
TS 2/TES 2 - 1.4	04		3.0	3.3	3.5	3.5	3.5	3.4	3.3		2.4	2.6	2.7	2.7	2.7	2.6	2.6
TS 2/TES 2 - 1.7	05		3.9	4.3	4.4	4.5	4.4	4.4	4.2		3.0	3.3	3.4	3.5	3.4	3.4	3.3
TS 2/TES 2 - 1.9	06		4.7	5.2	5.4	5.5	5.5	5.3	5.2		3.7	4.0	4.2	4.2	4.2	4.1	4.0
		Evaporating temperature –60°C															
TS 2/TES 2 - 0.21	00			0.46	0.48	0.47	0.45	0.45	0.43								
TS 2/TES 2 - 0.45	01			0.58	0.60	0.60	0.58	0.56	0.54								
TS 2/TES 2 - 0.6	02			0.78	0.80	0.80	0.78	0.75	0.72								
TS 2/TES 2 - 1.0	03			1.4	1.4	1.4	1.4	1.4	1.3								
TS 2/TES 2 - 1.4	04			2.0	2.1	2.1	2.1	2.0	2.0								
TS 2/TES 2 - 1.7	05			2.6	2.7	2.7	2.7	2.6	2.5								
TS 2/TES 2 - 1.9	06			3.2	3.3	3.3	3.3	3.2	3.1								

Correction for subcooling Δt_{sub}

Note:
Insufficient subcooling can produce flash gas.

The evaporator capacities used must be corrected if subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor below. Selections can then be made from the tables above.

Δt_u	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
Correction factor	1.00	1.10	1.20	1.29	1.37	1.46	1.54	1.63	1.70	1.78

Capacity (continued)

Capacity in kW for range N = –40 → +10°C and opening superheat OS = 4 K

R404A/R507

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature +10°C								**Evaporating temperature 0°C**							
TU	0	0.32	0.40	0.44	0.46	0.46	0.46	0.45	0.44	0.31	0.39	0.42	0.44	0.44	0.44	0.43	0.42
	1	0.47	0.60	0.68	0.69	0.70	0.70	0.68	0.66	0.44	0.56	0.61	0.64	0.64	0.64	0.63	0.61
	2	0.70	0.91	1.0	1.1	1.1	1.1	1.1	1.1	0.60	0.77	0.87	0.92	0.94	0.94	0.93	0.90
	3	0.96	1.2	1.4	1.5	1.5	1.5	1.5	1.5	0.83	1.1	1.2	1.3	1.3	1.5	1.3	1.3
	4	1.5	1.9	2.1	2.3	2.3	2.3	2.3	2.2	1.3	1.6	1.8	1.9	2.0	2.0	1.9	1.9
	5	2.0	2.5	2.8	3.0	3.1	3.1	3.1	3.0	1.7	2.2	2.4	2.6	2.6	2.6	2.6	2.5
	6	2.9	3.8	4.3	4.5	4.7	4.7	4.6	4.5	2.5	3.2	3.6	3.8	3.9	3.9	3.9	3.8
	7	3.9	5.1	5.7	6.0	6.2	6.2	6.1	6.0	3.4	4.3	4.8	5.1	5.2	5.3	5.2	5.0
	8	5.8	7.5	8.4	9.0	9.2	9.2	9.1	8.9	5.0	6.5	7.2	7.6	7.8	7.8	7.7	7.5
	9	8.8	11.3	12.7	13.5	13.8	13.9	13.7	13.39	7.5	9.6	10.8	11.4	11.7	11.7	11.5	11.2
		Evaporating temperature –10°C								**Evaporating temperature –20°C**							
TU	0	0.29	0.36	0.39	0.40	0.41	0.41	0.40	0.39		0.32	0.35	0.36	0.36	0.36	0.35	0.34
	1	0.39	0.50	0.54	0.57	0.57	0.57	0.56	0.54		0.41	0.46	0.48	0.48	0.48	0.47	0.45
	2	0.50	0.64	0.71	0.75	0.76	0.76	0.75	0.73		0.51	0.56	0.59	0.60	0.60	0.59	0.57
	3	0.70	0.89	0.99	1.0	1.1	1.1	1.1	1.0		0.71	0.79	0.83	0.84	0.84	0.82	0.80
	4	1.0	1.3	1.5	1.6	1.6	1.6	1.6	1.5		1.1	1.2	1.2	1.2	1.2	1.2	1.2
	5	1.4	1.8	2.0	2.1	2.1	2.1	2.1	2.0		1.4	1.6	1.6	1.7	1.7	1.6	1.6
	6	2.1	2.7	3.0	3.1	3.2	3.2	3.1	3.1		2.1	2.3	2.4	2.5	2.5	2.4	2.4
	7	2.8	3.6	4.0	4.2	4.3	4.3	4.2	4.1		2.8	3.1	3.3	3.3	3.3	3.3	3.2
	8	4.2	5.3	5.9	6.3	6.4	6.4	6.3	6.1		4.3	4.7	4.9	5.0	5.0	4.9	4.8
	9	6.2	7.9	8.8	9.3	9.5	9.5	9.3	9.0		6.3	6.9	7.3	7.4	7.4	7.2	7.0
		Evaporating temperature –30°C								**Evaporating temperature –40°C**							
TU	0			0.3	0.31	0.31	0.31	0.3	0.29			0.24	0.25	0.25	0.25	0.24	0.23
	1			0.36	0.38	0.38	0.38	0.37	0.36			0.27	0.28	0.28	0.28	0.27	0.26
	2			0.43	0.45	0.45	0.45	0.44	0.43			0.32	0.33	0.33	0.33	0.32	0.31
	3			0.60	0.63	0.64	0.63	0.62	0.60			0.45	0.46	0.47	0.46	0.45	0.43
	4			0.89	0.93	0.94	0.93	0.91	0.88			0.65	0.68	0.68	0.67	0.66	0.63
	5			1.2	1.2	1.3	1.2	1.2	1.2			0.88	0.91	0.91	0.90	0.88	0.85
	6			1.8	1.9	1.9	1.9	1.8	1.8			1.3	1.4	1.4	1.3	1.3	1.3
	7			2.4	2.5	2.5	2.5	2.4	2.4			1.8	1.8	1.8	1.8	1.8	1.7
	8			3.6	3.7	3.8	3.8	3.7	3.6			2.6	2.7	2.8	2.7	2.7	2.6
	9			5.3	5.5	5.5	5.5	5.4	5.2			3.9	4.0	4.0	4.0	3.9	3.7

Correction for subcooling Δt_{sub}
The evaporator capacity used must be corrected if subcooling deviates from 4 K.
The corrected capacity can be obtained by dividing the evaporator capacity by the correction factor given below.

Note:
Insufficient subcooling can produce flash gas.

Correction factor for subcooling Δt_{sub}

Δt_{sub}	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
Correction factor	1.00	1.1	1.2	1.29	1.37	1.46	1.54	1.63	1.7	1.78

Capacity (continued)

Capacity in kW for range B = –60 → –25°C and opening superheat OS = 4 K

R404A/R507

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature –25°C								**Evaporating temperature –30°C**							
TU	0	0.30	0.36	0.39	0.40	0.40	0.40	0.39	0.38	0.28	0.33	0.36	0.37	0.37	0.37	0.36	0.35
	1	0.41	0.51	0.55	0.56	0.57	0.56	0.55	0.53	0.36	0.45	0.49	0.51	0.51	0.50	0.48	0.47
	2	0.53	0.66	0.73	0.76	0.77	0.77	0.75	0.73	0.45	0.57	0.62	0.65	0.65	0.65	0.64	0.61
	3	0.74	0.92	1.01	1.06	1.07	1.07	1.04	1.01	0.64	0.79	0.87	0.91	0.91	0.91	0.89	0.86
	4	1.1	1.4	1.5	1.6	1.6	1.6	1.6	1.5	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.3
	5	1.5	1.8	2.0	2.1	2.1	2.1	2.1	2.0	1.3	1.6	1.7	1.8	1.8	1.8	1.8	1.7
	6	2.2	2.8	3.0	3.2	3.2	3.2	3.1	3.0	1.9	2.4	2.6	2.7	2.7	2.7	2.6	2.6
	7	2.9	3.7	4.1	4.2	4.3	4.3	4.2	4.0	2.5	3.2	3.5	3.6	3.6	3.6	3.5	3.4
	8	4.4	5.5	6.1	6.3	6.4	6.4	6.3	6.1	3.8	4.7	5.2	5.4	5.5	5.4	5.3	5.1
	9	6.5	8.2	9.0	9.4	9.5	9.4	9.2	8.9	5.6	7.0	7.7	8.0	8.1	8.0	7.8	7.5
		Evaporating temperature –40°C								**Evaporating temperature –50°C**							
TU	0		0.28	0.30	0.30	0.31	0.30	0.29	0.28		0.22	0.23	0.24	0.24	0.23	0.22	0.21
	1		0.34	0.37	0.38	0.38	0.38	0.37	0.35		0.24	0.25	0.26	0.26	0.26	0.25	0.24
	2		0.40	0.44	0.45	0.46	0.45	0.44	0.42		0.27	0.30	0.31	0.31	0.30	0.29	0.28
	3		0.57	0.62	0.64	0.64	0.63	0.62	0.59		0.39	0.42	0.43	0.43	0.42	0.41	0.39
	4		0.83	0.91	0.94	0.94	0.93	0.91	0.87		0.57	0.61	0.63	0.63	0.62	0.60	0.57
	5		1.1	1.2	1.3	1.3	1.3	1.2	1.2		0.76	0.82	0.84	0.84	0.83	0.81	0.77
	6		1.7	1.8	1.9	1.9	1.9	1.8	1.8		1.1	1.2	1.3	1.3	1.2	1.2	1.2
	7		2.2	2.4	2.5	2.5	2.5	2.4	2.4		1.5	1.6	1.7	1.7	1.7	1.6	1.5
	8		3.4	3.7	3.8	3.8	3.8	3.7	3.5		2.3	2.5	2.6	2.6	2.5	2.4	2.3
	9		4.9	5.4	5.6	5.6	5.5	5.4	5.2		3.3	3.6	3.7	3.7	3.7	3.5	3.4
		Evaporating temperature –60°C															
TU	0			0.16	0.16	0.16	0.16	0.15	0.15								
	1			0.17	0.17	0.17	0.17	0.16	0.15								
	2			0.19	0.20	0.20	0.19	0.19	0.18								
	3			0.27	0.28	0.28	0.27	0.26	0.25								
	4			0.40	0.41	0.41	0.40	0.38	0.36								
	5			0.53	0.55	0.55	0.53	0.51	0.49								
	6			0.79	0.81	0.81	0.79	0.76	0.73								
	7			1.1	1.1	1.1	1.1	1.0	1.0								
	8			1.6	1.7	1.7	1.6	1.6	1.5								
	9			2.3	2.4	2.4	2.3	2.3	2.1								

Correction for subcooling Δt_{sub}

The evaporator capacity used must be corrected if subcooling deviates from 4 K.
The corrected capacity can be obtained by dividing the evaporator capacity by the correction factor given below.

Note:
Insufficient subcooling can produce flash gas.

Correction factor for subcooling Δt_{sub}

Δt_{sub}	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
Correction factor	1.00	1.1	1.2	1.29	1.37	1.46	1.54	1.63	1.7	1.78

Capacity *(continued)*

Capacity in KW for Range N: –40°C to +10°C

R404A/R507

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature +10°C								**Evaporating temperature 0°C**							
TES 5 - 3.7	01	9.9	12.8	14.3	15.1	15.5	15.7	15.8	15.8	9.4	12.1	13.7	14.5	14.9	14.9	14.9	14.9
TES 5 - 5.0	02	13.6	17.4	19.4	20.5	21.0	21.2	21.4	21.3	13.0	16.6	18.6	19.6	20.1	20.2	20.2	20.2
TES 5 - 7.2	03	19.9	25.1	27.7	29.1	29.9	30.2	30.4	30.4	19.3	24.4	27.3	28.8	29.5	29.6	29.6	29.5
TES 5 - 10.3	04	28.2	35.8	39.7	41.7	42.8	43.2	43.5	43.5	27.4	34.9	39.1	41.4	42.4	42.4	42.4	42.3
TES 12 - 4.2	01	11.8	15.5	17.5	18.7	19.4	19.6	19.8	19.8	10.3	13.5	15.3	16.31	6.7	16.8	16.9	16.8
TES 12 - 6.8	02	19.2	25.2	28.5	30.3	31.3	31.7	31.9	32.0	16.9	22.0	24.8	26.4	27.2	27.4	27.4	27.3
TES 12 - 10.0	03	28.4	37.0	41.8	44.5	46.0	46.6	47.0	47.0	24.7	32.2	36.4	38.7	39.9	40.2	40.3	40.3
TES 12 - 13.4	04	38.0	49.4	55.7	59.2	61.2	62.1	62.7	63.0	33.0	42.8	48.5	51.7	53.4	53.9	54.2	54.4
TES 20 - 16.7	01	48.0	62.0	69.0	73.0	75.0	76.0	77.0	77.0	42.0	53.0	60.0	64.0	66.0	66.0	66.0	66.0
TES 55 - 37	01	106	137	154	164	169	170	171	171	92	119	134	142	145	146	145	145
TES 55 - 56.0	02	161	208	232	245	252	254	255	255	141	181	203	214	219	219	219	218
		Evaporating temperature -10°C								**Evaporating temperature -20°C**							
TES 5 - 3.7	01	7.9	10.1	11.3	12.0	12.4	12.4	12.3	12.2		7.9	8.9	9.6	9.8	9.9	9.8	9.7
TES 5 - 5.0	02	10.9	13.9	15.6	16.6	17.0	17.0	16.9	16.8		11.0	12.4	13.3	13.7	13.8	13.6	13.5
TES 5 - 7.2	03	16.0	20.4	23.0	24.5	25.1	25.2	25.2	25.2		16.1	18.3	19.8	20.5	20.7	20.6	20.6
TES 5 - 10.3	04	22.9	29.1	32.9	35.0	36.0	36.2	36.1	36.1		23.1	26.2	28.4	29.3	29.6	29.6	29.4
TES 12 - 4.2	01	9.0	11.7	13.2	14.1	14.5	14.5	14.4	14.3		6.2	10.9	11.7	12.0	12.0	11.9	11.7
TES 12 - 6.8	02	14.8	19.1	21.6	23.0	23.6	23.6	23.5	23.3		15.7	17.8	19.1	19.6	19.7	19.5	19.3
TES 12 - 10.0	03	21.6	27.8	31.5	33.6	34.7	34.8	34.7	34.6		22.8	25.9	28.0	28.8	29.2	29.1	28.9
TES 12 - 13.4	04	28.6	37.0	42.1	45.1	46.7	47.1	47.2	47.2		30.2	34.6	37.6	39.1	39.9	39.9	40.0
TES 20 - 16.7	01	36.0	46.0	52.0	56.0	57.0	58.0	58.0	57.0		38.0	43.0	47.0	48.0	49.0	49.0	48.0
TES 55 - 37.0	01	80.0	103	115	122	125	125	123	122		84.0	94.0	101	103	103	101	100
TES 55 - 56.0	02	124	157	176	186	190	190	188	186		129	145	155	158	158	156	153
		Evaporating temperature -30°C								**Evaporating temperature -40°C**							
TES 5 - 3.7	01			6.9	7.3	7.6	7.6	7.5	7.5			5.1	5.5	5.7	5.7	5.6	5.5
TES 5 - 5.0	02			9.7	10.3	10.7	10.7	10.6	10.5			7.2	7.7	8.0	8.0	7.9	7.8
TES 5 - 7.2	03			14.3	15.4	16.2	16.4	16.3	16.2			10.7	11.6	12.3	12.5	12.5	12.4
TES 5 - 10.3	04			20.5	22.1	23.1	23.4	23.3	23.2			15.3	16.6	17.5	17.8	17.8	17.7
TES 12 - 4.2	01			8.7	9.3	9.6	9.6	9.5	9.3			6.7	7.2	7.4	7.4	7.3	7.2
TES 12 - 6.8	02			14.3	15.3	15.8	15.9	15.7	15.4			11.1	11.8	12.3	12.3	12.1	11.9
TES 12 - 10.0	03			20.8	22.4	23.4	23.7	23.5	23.4			16.1	17.4	18.3	18.6	18.5	18.4
TES 12 - 13.4	04			27.8	30.3	32.0	32.7	32.9	32.9			21.6	23.8	25.3	26.1	26.3	26.5
TES 20 -16.7	01			35.0	37.0	39.0	40.0	40.0	39.0			27.0	29.0	31.0	31.0	31.0	31.0
TES 55 -37.0	01			75.0	80.0	82.0	81.0	80.0	78.0			58.0	61.0	62.0	62.0	60.0	59.0
TES 55 - 56.0	02			116	123	127	126	124	121			90.0	95.0	97.0	97.0	94.0	92.0

Capacity *(continued)*

Capacity in KW for Range B: –60°C to –25°C

R404A/R507

Valve type	Orifice no.	Pressure drop across valve Δp bar								Pressure drop across valve Δp bar							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
		Evaporating temperature -25°C								**Evaporating temperature -30°C**							
TES 5 - 3.7	01	8.1	8.5	8.6	9.1	9.2	9.4	9.5	9.5	7.7	8.1	8.3	8.6	8.9	9.1	9.1	9.2
TES 5 - 5.0	02	12.0	12.5	13.0	13.5	14.7	15.3	15.9	16.0	11.2	11.7	12.2	12.6	13.4	14.2	14.7	14.8
TES 5 - 7.2	03	19.8	20.5	21.3	22.3	24.4	25.1	25.8	26.2	18.0	18.2	18.8	19.6	20.8	21.8	22.9	23.4
TES 5 - 10.3	04	20.0	24.0	26.0	27.0	27.5	28.0	28.5	29.0	18.0	22.0	24.8	25.0	25.5	26.0	26.3	26.5
TES 12 - 4.2	01	9.8	12.8	13.6	14.6	15.1	15.4	15.5	15.9	9.4	11.1	12.3	13.0	13.3	13.5	13.6	14.1
TES 12 - 6.8	02	18.4	21.2	22.8	24.9	25.7	25.8	26.2	26.3	16.5	18.6	20.2	21.5	22.1	22.2	22.4	22.8
TES 12 - 10.0	03	30.5	35.3	37.4	41.7	42.4	43.0	43.2	43.6	27.7	30.7	33.8	35.8	36.5	37.1	37.4	37.9
TES 12 - 13.4	04	34.3	40.2	42.8	47.0	48.4	48.8	49.1	49.3	30.5	34.4	37.7	40.5	40.9	41.4	41.6	42.1
TES 20 - 11.7	01	34.0	41.0	46.0	50.0	51.0	52.0	53.0	53.0	30.0	37.0	40.0	43.0	45.0	45.0	46.0	47.0
TES 55 - 27.0	01	71.0	91.0	97.0	104	109	109	111	112	63.0	79.0	86.0	93.0	94.0	95.0	96.0	96.0
TES 55 - 41.0	02	111	140	147	161	170	171	174	175	99.0	124	132	143	145	146	147	149
		Evaporating temperature -40°C								**Evaporating temperature -50°C**							
TES 5 - 3.7	01		6.3	6.6	6.7	7.1	7.2	7.3	7.5		4.4	4.6	4.7	4.8	4.9	4.9	5.3
TES 5 - 5.0	02		10.0	10.1	10.3	10.5	11.0	11.3	11.4		7.8	7.9	8.2	8.3	8.3	8.4	8.6
TES 5 - 7.2	03		14.2	14.4	14.6	15.3	15.8	16.1	16.4		10.3	10.5	10.6	10.7	11.0	11.1	11.3
TES 5 - 10.3	04		17.5	19.5	20.0	20.5	21.0	21.0	21.2		13.5	15.0	15.5	16.0	16.0	16.0	15.5
TES 12 - 4.2	01		9.0	9.6	10.0	10.5	10.6	10.8	10.9		7.1	7.4	7.8	7.9	8.0	8.1	8.3
TES 12 - 6.8	02		14.8	15.8	16.2	16.7	17.0	17.1	17.5		11.4	11.8	12.4	12.9	13.1	13.3	13.4
TES 12 - 10.0	03		24.7	27.0	27.0	28.2	28.5	28.8	29.1		19.5	20.5	21.0	21.7	21.9	22.1	22.7
TES 12 - 13.4	04		27.7	29.4	30.5	31.9	32.1	32.3	32.6		21.9	23.1	23.9	24.4	24.9	25.1	25.4
TES 20 - 11.7	01		31.0	33.0	34.0	34.0	35.0	35.0	35.0		26.0	26.0	27.0	27.0	27.0	28.0	28.0
TES 55 - 27.0	01		63.0	67.0	70.0	73.0	74.0	75.0	76.0		46.0	48.0	50.0	51.0	52.0	53.0	54.0
TES 55 - 41.0	02		98.0	106	108	114	115	115	116		74.0	78.0	79.0	81.0	82.0	82.0	83.0
		Evaporating temperature -55°C								**Evaporating temperature -60°C**							
TES 5 - 3.7	01											3.0	3.3	3.4	3.4	3.4	3.5
TES 5 - 5.0	02											6.6	6.8	6.9	6.9	7.1	7.3
TES 5 - 7.2	03											7.8	7.9	8.0	8.1	8.2	8.2
TES 5 - 10.3	04											11.5	12.0	12.2	12.3	12.2	12.0
TES 12 - 4.2	01			6.3	6.9	7.0	7.1	7.3	7.8								
TES 12 - 6.8	02			10.7	10.9	11.2	11.3	11.4	11.5								
TES 12 - 10.0	03			17.9	18.5	18.9	19.2	19.5	19.7								
TES 12 - 13.4	04			20.2	20.5	20.9	21.3	21.6	22.0								
TES 20 - 11.7	01			24.0	24.0	25.0	25.0	26.0	26.0								
TES 55 - 27.0	01			39.0	39.0	41.0	41.0	42.0	42.0								
TES 55 - 41.0	02			63.0	64.0	65.0	65.0	66.0	66.0								

Correction for subcooling Δt_{sub}

The evaporator capacities used must be corrected if subcooling deviates from 4 K. The corrected capacity can be obtained by dividing the required evaporator capacity by the correction factor below. Selections can then be made from the tables above.

Note:
Insufficient subcooling can produce flash gas.

Δt_{sub}	4 K	10 K	15 K	20 K	25 K	30 K	35 K	40 K	45 K	50 K
Correction factor	1.00	1.1	1.2	1.29	1.37	1.46	1.54	1.63	1.7	1.78

Samantekt. Elías Þorsteinsson.

KÆLI3VC05

EIMAR

SERIE FRM — PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 4,2 mm

MODELO / MODEL / MODELE / TYP			FRM 110	FRM 145	FRM 170	FRM 240	FRM 260	FRM 320	FRM 455	FRM 510	FRM 580	FRM 860	FRM 1140
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	1440	2430	3100	3960	4860	6200	7430	9140	11550	17330	21920
Capac. aplicación / Anwendungleistung	Tc=+10°C Δt_1=10K	W	2160	3650	4650	5940	7290	9300	11150	13710	17330	26000	32880
Applicat. capacity / Puiss. d'application	Tc=-18°C Δt_1=7K	W	1110	1870	2390	3050	3740	4770	5720	7040	8890	13340	16880
Superficie / Surface / Surface / Oberfläche		m²	4,6	9,3	13,9	13,9	18,5	27,8	28,7	31,5	47,2	70,8	86,0
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm³	1,0	2,1	3,1	2,9	3,9	5,8	5,9	6,5	9,8	14,4	17,4
Caudal aire / Air flow / Débit d'air / Luftmenge		m³/h	1500	1430	1370	2920	2860	2740	4380	5580	5380	8070	10440
Proyección aire / Air throw / Projection air / Wurfweite		m	12	12	11	14	14	13	14	14	14	15	16
ENV 328 cond. 2		kW	1,2	1,9	2,5	3,2	3,9	5,0	5,9	7,3	9,2	13,9	17,5

SERIE FRA — PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 2,8 mm

MODELO / MODEL / MODELE / TYP			FRA 150	FRA 200	FRA 250	FRA 375	FRA 420	FRA 520	FRA 730	FRA 830	FRA 890	FRA 1150	FRA 1420
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	1810	2890	3480	4860	5780	6960	8840	10890	13340	20000	25200
Capac. aplicación / Anwendungleistung Applicat. capacity / Puiss. d'application	Tc=+10°C Δt_1=10K	W	2720	4340	5220	7290	8670	10440	13260	16340	20010	30000	37800
Superficie / Surface / Surface / Oberfläche		m²	6,8	13,6	20,4	20,4	27,2	40,7	42,0	46,1	69,1	103,7	125,9
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm³	1,0	2,1	3,1	2,9	3,9	5,8	5,9	6,5	9,8	14,4	17,4
Caudal aire / Air flow / Débit d'air / Luftmenge		m³/h	1470	1380	1310	2840	2760	2620	4230	5400	5180	7770	10000
Proyección aire / Air throw / Projection air / Wurfweite		m	12	11	11	14	13	13	14	14	14	15	16
ENV 328 cond. 2		kW	1,4	2,3	2,8	3,9	4,6	5,6	7,1	8,7	10,7	16,0	20,2

DATOS COMUNES — COMMON DATA - CARACTERISTIQUES COMMUNES - GEMEINSAME DATEN

Ventiladores		num.	1	1	1	2	2	2	3	2	2	3	4
Fans	230V/1/50Hz 1350 r.p.m	diam.	300	300	300	300	300	300	300	400	400	400	400
Ventilateurs		A.	0,4	0,4	0,4	0,8	0,8	0,8	1,2	1,22	1,22	1,83	2,44
Lüfter		W.	90	90	90	180	180	180	270	280	280	420	560
DESESCARCHE ELECTRICO / ELECTRICAL DEFROST / DEGIVRAGE ELECTRIQUE / ELEKTRISCHE ABTAUUNG													
Bandeja / Drip tray / Bac / Tropfwanne		num.	1	1	1	1	1	1	1	1	1	1	1
Batería / Coil / Batterie / Block		num.	1	2	2	2	2	2	2	2	3	3	3
Total / Total / Total / Gesamt		num.	2	3	3	3	3	3	3	3	4	4	4
Potencia / Power / Puissance / Leistung		W	1100	1650	1650	3300	3300	3300	5100	4200	5600	8400	10200
DESESCARCHE POR AGUA / WATER DEFROST / DEGIVRAGE PAR EAU / WASSERABTAUUNG													
Caudal / Flow / Débit / Menge	Dp=20 KPa	L/h	300	600	850	850	1150	1750	1800	1500	2200	3350	4000
Entrada / Intel / Entrée / Zulauf		GAS	1x3/4"	1x3/4"	1x3/4"	2x3/4"	2x3/4"	2x3/4"	3x3/4"	2x3/4"	2x3/4"	3x3/4"	4x3/4"
CONEXIONES FRIGORIFICAS / REFRIGERANT CONNECTION / RACCORDEMENTS DU REFRIGERANT / KÄLTEMITTEL ANSCHLÜSSE													
Entrada / Inlet / Entrée / Zulauf	FRM	E	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	7/8"	7/8"
Salida / Oulet / Sortie / Auslauf		S mm	16	16	16	22	22	22	22	28	28	35	35
Entrada / Inlet / Entrée / Zulauf	FRA	E	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	7/8"	7/8"
Salida / Oulet / Sortie / Auslauf		S mm	16	16	16	22	22	22	22	28	28	35	35
Peso neto / Net weight	FRM	Kg	19	21	23	34	36	39	52	46	54	79	98
Poids net / Nettogewicht	FRA	Kg	20	22	25	36	38	43	55	49	59	86	107

SERIE FRM

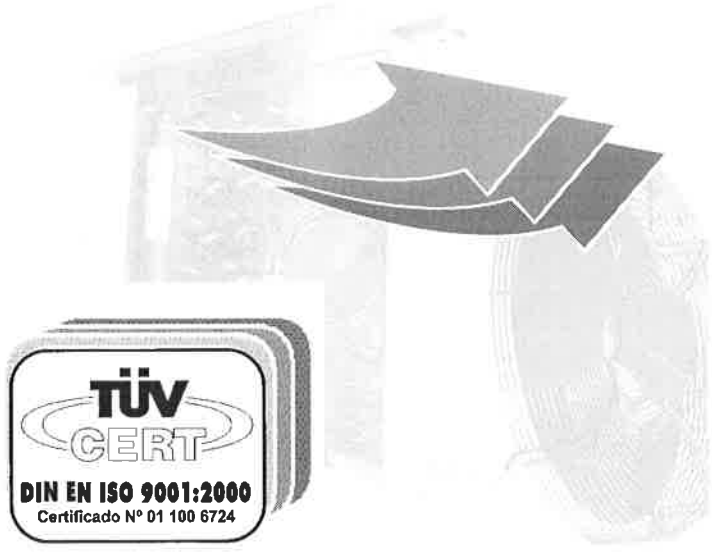
PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND **4,2 mm**

MODELO / MODEL / MODELE / TYP			FRM 850	FRM 950	FRM 1290	FRM 1780	FRM 2430	FRM 2590	FRM 3500	FRM 4490	FRM 4800
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	**15620**	**18110**	**28350**	**33340**	**42530**	**51450**	**57230**	**77180**	**85840**
Capac. aplicación / Anwendungleistung	Tc=+10°C Δt_1=10K	W	23430	27170	42530	50010	63800	77180	85850	115770	128760
Applicat. capacity / Puiss. d'application	Tc=-18°C Δt_1=7K	W	12030	13940	21830	25670	32750	39620	44070	59430	66100
Superficie / Surface / Surface / Oberfläche		m^2	65	87	111	148	167	180	240	270	360
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm^3	13	18	22	29	32	35	46	51	68
Caudal aire / Air flow / Débit d'air / Luftmenge		m^3/h	6700	6360	12400	12000	18600	23400	22000	35100	33000
Proyección aire / Air throw / Projection air / Wurfweite		m	17	16	19	18	21	32	31	33	32
ENV 328 cond. 2		kW	12,5	14,5	22,7	26,7	34,0	41,2	45,8	61,7	68,7

CARACTERÍSTICAS

DATA - CARACTERISTIQUES - DATEN

Ventiladores		num.	1	1	2	2	3	2	2	3	3
Fans	400V/3/50Hz 1350 r.p.m	diam.	500	500	500	500	500	630	630	630	630
Ventilateurs		A.	2,1	2,1	4,2	4,2	6,3	6,4	6,4	9,6	9,6
Lüfter		kW	0,97	0,97	1,94	1,94	2,91	3,8	3,8	5,7	5,7
DESESCARCHE ELECTRICO / ELECTRICAL DEFROST / DEGIVRAGE ELECTRIQUE / ELEKTRISCHE ABTAUUNG											
Bandeja / Drip tray / Bac / Tropfwanne		num.	2	2	2	2	2	2	2	2	2
Batería / Coil / Batterie / Block		num.	4	6	4	6	4	6	8	6	8
Total / Total / Total / Gesamt		num.	6	8	6	8	6	8	10	8	10
Potencia / Power / Puissance / Leistung		W	6000	8000	10200	13600	15300	16000	20000	24000	30000
DESESCARCHE POR AGUA / WATER DEFROST / DEGIVRAGE PAR EAU / WASSERABTAUUNG											
Caudal / Flow / Débit / Menge	Dp=20 KPa	L/h	2200	3000	3800	5000	5700	4500	6000	6750	9000
Entrada / Intel / Entrée / Zulauf		GAS	1x3/4"	1x3/4"	2x3/4"	2x3/4"	3x3/4"	2x3/4"	2x3/4"	3x3/4"	3x3/4"
CONEXIONES FRIGORIFICAS / REFRIGERANT CONNECTION / RACCORDEMENTS DU REFRIGERANT / KÄLTEMITTEL ANSCHLÜSSE											
Entrada / Inlet / Entrée / Zulauf		E mm	16	16	16	22	22	28	28	28	28
Salida / Oulet / Sortie / Auslauf		S mm	35	35	42	54	54	66	66	66	66
Peso neto / Net weight / Poids net / Nettogewicht		Kg	82	97	135	158	193	205	236	312	358



TÜV CERT
DIN EN ISO 9001:2000
Certificado Nº 01 100 6724

TÜV
ACCORDING
ENV 328
TESTED BY
TÜV BAYERN

FRM 580
FRM 850

FRIMETAL

SERIE FRB

PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 7 mm

MODELO / MODEL / MODELE / TYP			FRB 100	FRB 160	FRB 200	FRB 270	FRB 330	FRB 405	FRB 505	FRB 790
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	**2280**	**3680**	**4590**	**5700**	**7280**	**8930**	**13390**	**16800**
Capac. aplicación / Applicat. capacity	Tc=-18°C Δt_1=7K	W	1760	2830	3530	4390	5610	6880	10310	12940
Puissance d'application	Tc=-25°C Δt_1=6K	W	1440	2320	2890	3590	4590	5630	8440	10580
Anwendungleistung	Tc=-40°C Δt_1=5K	W	1160	1880	2340	2910	3710	4550	6830	8570
Superficie / Surface / Surface / Oberfläche		m^2	7,6	11,4	15,1	17,5	21,7	28,9	43,3	52,6
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm^3	2,5	3,5	4,7	5,3	6,6	8,8	13,0	15,7
Caudal aire / Air flow / Débit d'air / Luftmenge		m^3/h	1380	2840	2760	4350	5600	5480	8220	10640
Proyección aire / Air throw / Projection air / Wurfweite		m	11	14	13	14	14	14	16	16
ENV 328 cond. 2		kW	1,8	2,9	3,7	4,6	5,8	7,1	10,7	13,4

SERIE FRL

PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 9 mm

MODELO / MODEL / MODELE / TYP			FRL 90	FRL 155	FRL 175	FRL 215	FRL 315	FRL 380	FRL 495	FRL 630
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	**2100**	**3310**	**4190**	**5070**	**6500**	**7980**	**11970**	**15170**
Capac. aplicación / Applicat. capacity	Tc=-18°C Δt_1=7K	W	1620	2550	3230	3900	5010	6140	9220	11680
Puissance d'application	Tc=-25°C Δt_1=6K	W	1320	2090	2640	3190	4100	5030	7540	9560
Anwendungleistung	Tc=-40°C Δt_1=5K	W	1070	1690	2140	2590	3320	4070	6100	7740
Superficie / Surface / Surface / Oberfläche		m^2	6,1	9,1	12,1	14,1	17,4	23,1	34,7	42,2
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm^3	2,5	3,5	4,7	5,3	6,6	8,8	13,0	15,7
Caudal aire / Air flow / Débit d'air / Luftmenge		m^3/h	1420	2900	2840	4440	5720	5600	8400	10920
Proyección aire / Air throw / Projection air / Wurfweite		m	12	14	14	14	14	14	16	16
ENV 328 cond. 2		kW	1,7	2,6	3,3	4,1	5,2	6,4	9,6	12,1

DATOS COMUNES

COMMON DATA - CARACTERISTIQUES COMMUNES - GEMEINSAME DATEN

Ventiladores		num.	1	2	2	3	2	2	3	4
Fans	230V/1/50Hz 1350 r.p.m	diam.	300	300	300	300	400	400	400	400
Ventilateurs		A.	0,4	0,8	0,8	1,2	1,22	1,22	1,83	2,44
Lüfter		W.	90	180	180	270	280	280	420	560
DESESCARCHE ELECTRICO / ELECTRICAL DEFROST / DEGIVRAGE ELECTRIQUE / ELEKTRISCHE ABTAUUNG										
Bandeja / Drip tray / Bac / Tropfwanne		num.	1	1	1	1	1	1	1	1
Batería / Coil / Batterie / Block		num.	2	2	2	2	2	3	3	3
Total / Total / Total / Gesamt		num.	3	3	3	3	3	4	4	4
Potencia / Power / Puissance / Leistung		W	1650	3300	3300	5100	4200	5600	8400	10200
DESESCARCHE POR AGUA / WATER DEFROST / DEGIVRAGE PAR EAU / WASSERABTAUUNG										
Caudal / Flow / Débit / Menge	Dp=20 KPa	L/h	850	1150	1750	1800	1500	2200	3350	4000
Entrada / Intel / Entrée / Zulauf		GAS	1x3/4"	2x3/4"	2x3/4"	3x3/4"	2x3/4"	2x3/4"	3x3/4"	4x3/4"
CONEXIONES FRIGORIFICAS / REFRIGERANT CONNECTION / RACCORDEMENTS DU REFRIGERANT / KÄLTEMITTEL ANSCHLÜSSE										
Entrada / Inlet / Entrée / Zulauf		E	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"
Salida / Oulet / Sortie / Auslauf		S mm	16	22	22	22	28	28	35	35
Peso neto / Net weight	FRB	Kg	22	35	36	50	45	51	74	92
Poids net / Nettogewicht	FRL	Kg	21	34	35	49	44	49	72	89

SERIE FRB

PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 7 mm

MODELO / MODEL / MODELE / TYP			FRB 560	FRB 650	FRB 1050	FRB 1450	FRB 1730	FRB 2160	FRB 2650	FRB 3450	FRB 3900
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	13650	15880	24680	29140	37010	43840	51190	65760	76780
Capac. aplicación / Applicat. capacity	Tc=-18°C Δt_1=7K	W	10510	12230	19000	22440	28500	33760	39420	50640	59120
Puissance d'application	Tc=-25°C Δt_1=6K	W	8600	10000	15550	18360	23320	26620	32250	41430	48370
Anwendungleistung	Tc=-40°C Δt_1=5K	W	6960	8100	12590	14860	18880	22360	26110	33540	39160
Superficie / Surface / Surface / Oberfläche		m^2	41	55	70	93	104	113	150	169	225
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm^3	13	18	22	29	32	35	46	51	68
Caudal aire / Air flow / Débit d'air / Luftmenge		m^3/h	7050	6850	13400	13000	20100	26000	24600	39000	36900
Proyección aire / Air throw / Projection air / Wurfweite		m	18	17	20	19	22	33	32	34	33
ENV 328 cond. 2		kW	10,9	12,7	19,7	23,3	29,6	35,1	41,0	52,6	61,4

SERIE FRL

PASO DE ALETAS - FIN SPACING - PAS DES AILETTES - LAMELLENABSTAND 9 mm

MODELO / MODEL / MODELE / TYP			FRL 540	FRL 600	FRL 865	FRL 1160	FRL 1590	FRL 1795	FRL 2340	FRL 2960	FRL 3850
Capacidad nominal / Nominal capacity Puissance nominale / Nennleistung	Tc=0°C Δt_1=8K	W	12340	14700	22580	26780	33860	39900	47510	59850	71270
Capac. aplicación / Applicat. capacity	Tc=-18°C Δt_1=7K	W	9500	11320	17390	20620	26070	30720	36580	46080	54880
Puissance d'application	Tc=-25°C Δt_1=6K	W	7770	9260	14230	16870	21330	25140	29930	37710	44900
Anwendungleistung	Tc=-40°C Δt_1=5K	W	6290	7500	11520	13660	17270	20350	24230	30520	36350
Superficie / Surface / Surface / Oberfläche		m^2	33	44	56	74	84	90	120	135	180
Volumen interior / Circuit Vol / Vol. circuit / Rohrinhalt		dm^3	13	18	22	29	32	35	46	51	68
Caudal aire / Air flow / Débit d'air / Luftmenge		m^3/h	7200	7050	13800	13400	20700	27000	25800	40500	38700
Proyección aire / Air throw / Projection air / Wurfweite		m	19	18	21	20	23	34	33	35	34
ENV 328 cond. 2		kW	9,9	11,8	18,1	21,4	27,1	31,9	38,0	47,9	57,0

DATOS COMUNES

COMMON DATA - CARACTERISTIQUES COMMUNES - GEMEINSAME DATEN

Ventiladores		num.	1	1	2	2	3	2	2	3	3
Fans	400V/3/50Hz 1350 r.p.m	diam.	500	500	500	500	500	630	630	630	630
Ventilateurs		A.	2,1	2,1	4,2	4,2	6,3	6,4	6,4	9,6	9,6
Lüfter		kW	0,97	0,97	1,94	1,94	2,91	3,8	3,8	5,7	5,7
DESESCARCHE ELECTRICO / ELECTRICAL DEFROST / DEGIVRAGE ELECTRIQUE / ELEKTRISCHE ABTAUUNG											
Bandeja / Drip tray / Bac / Tropfwanne		num.	2	2	2	2	2	2	2	2	2
Batería / Coil / Batterie / Block		num.	4	6	4	6	4	6	8	6	8
Total / Total / Total / Gesamt		num.	6	8	6	8	6	8	10	8	10
Potencia / Power / Puissance / Leistung		W	6000	8000	10200	13600	15300	16000	20000	24000	30000
DESESCARCHE POR AGUA / WATER DEFROST / DEGIVRAGE PAR EAU / WASSERABTAUUNG											
Caudal / Flow / Débit / Menge	Dp=20 KPa	L/h	2200	3000	3800	5000	5700	4500	6000	6750	9000
Entrada / Intel / Entrée / Zulauf		GAS	1x3/4"	1x3/4"	2x3/4"	2x3/4"	3x3/4"	2x3/4"	2x3/4"	3x3/4"	3x3/4"
CONEXIONES FRIGORIFICAS / REFRIGERANT CONNECTION / RACCORDEMENTS DU REFRIGERANT / KÄLTEMITTEL ANSCHLÜSSE											
Entrada / Inlet / Entrée / Zulauf		E mm	16	16	22	22	22	28	28	28	28
Salida / Oulet / Sortie / Auslauf		S mm	35	35	42	54	54	66	66	66	66
Peso neto / Net weight	FRB	Kg	78	88	128	148	182	193	220	294	333
Poids net / Nettogewicht	FRL	Kg	75	84	123	142	175	185	210	283	318

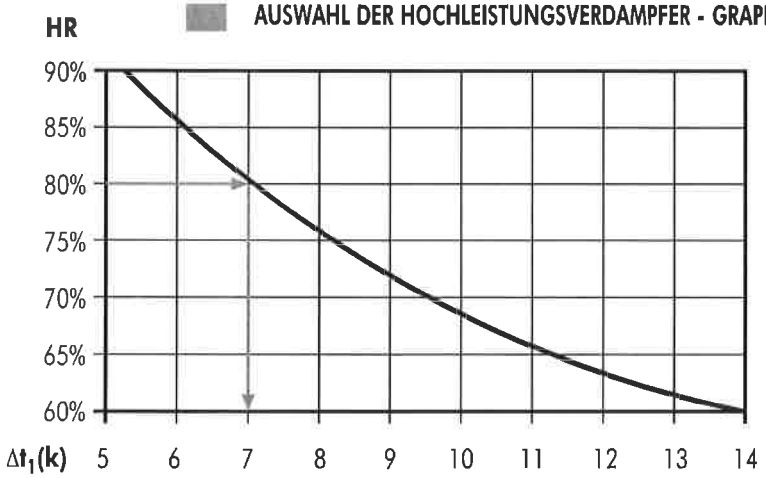
SELECCION DE AEROEVAPORADORES

GRAFICOS Y FACTORES DE CORRECCION

UNIT COOLER SELECTION - GRAPHICS AND CORRECTION FACTORS

SELECTION DES EVAPORATEURS - GRAPHIQUES ET FACTEURS DE CORRECTION

AUSWAHL DER HOCHLEISTUNGSVERDAMPFER - GRAPHIKEN UND KORREKTURFAKTOREN



GR-1

HR - Humedad relativa.
Relative humidity.
Humidité relative.
Relative Luftfeuchtigkeit.

Δt_1 = Tc - Te
Diferencia de temperatura.
Temperature difference.
Différence de température.
Temperaturunterschied.

GR-2

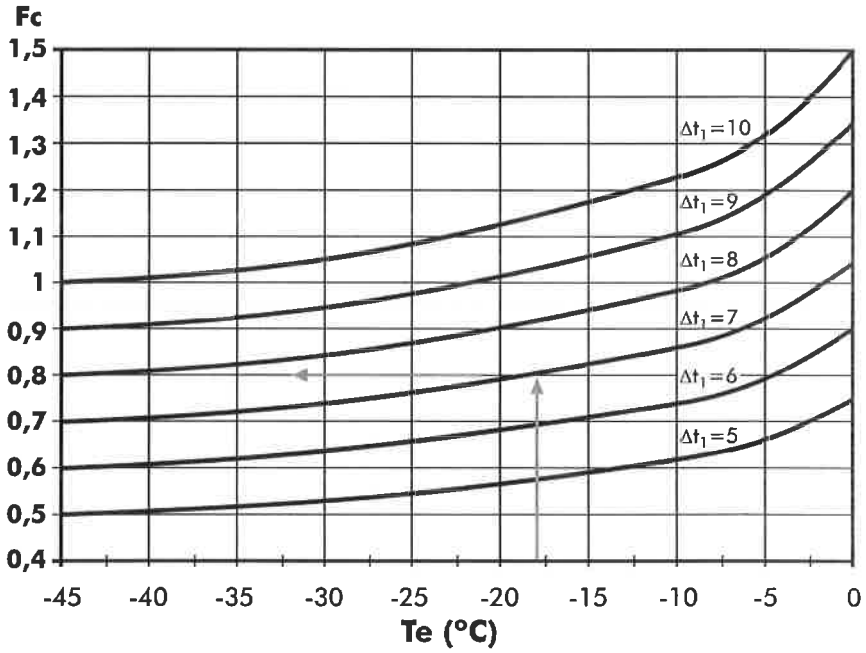
Te- Temperatura de evaporación.
Evaporation temperature.
Température d´évaporation.
Verdampfungstemperatur.

Q - Capacidad del evaporador.
Evaporator capacity.
Puissance de l'évaporateur.
Verdampferleistung.

Tc - Temperatura de la cámara.
Room temperature.
Température de la chambre.
Kühlraumtemperatur.

Qc - Capacidad nominal.
Nominal capacity.
Puissance nominale.
Nennleistung.

Fc - Factor de correcion.
Correction factor.
Facteur de correction.
Korrekturfaktor.



EJEMPLO DE SELECCION - SELECTION EXAMPLE - EXEMPLE DE SELECTION - BERECHNUNGSBEISPIEL

	GR-1		GR-2
Q = 32.000 W Tc = -11°C HR = 80%	Δt_1 = 7 K	Tc = -11°C Δt_1 = 7 K Te = -18 K	Fc = 0,8

$$Qc = \frac{Q}{Fc} = \frac{32.000\ W}{0,8} = 40.000\ W$$

FRM - 2430
FRB - 2160

FACTOR DEL REFRIGERANTE - REFRIGERANT FACTOR - FACTEUR DU REFRIGERANT - KÄLTEMITTELFAKTOR

R -404 A = 1 **R-22 = 0,95** **R-134a = 0,90**