



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4T-12.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity Control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

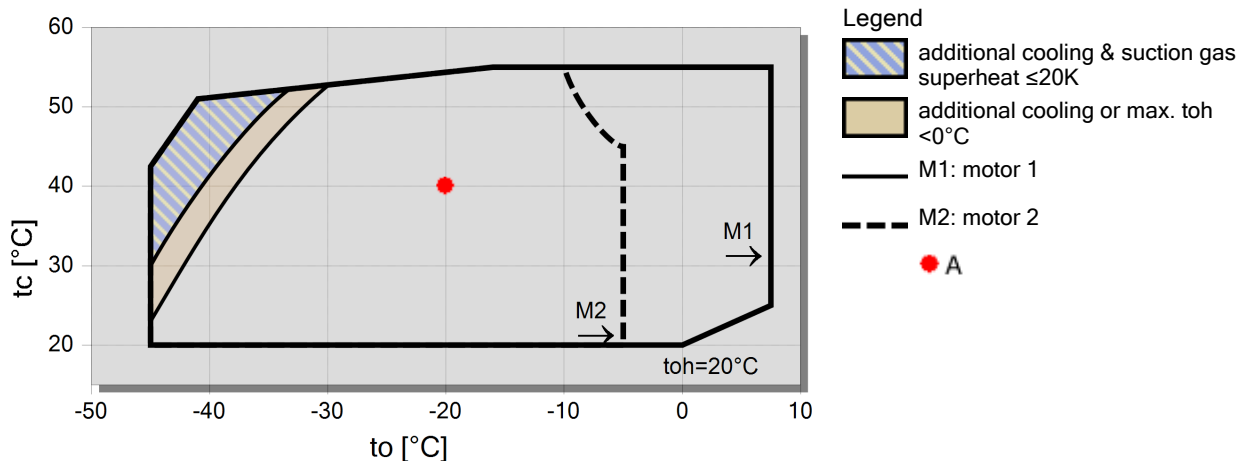
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C
30°C	Q [W]	45321	37996	31638	26125	21358	17250	13728	10727
	Q* [W]	45321	37996	31638	26125	21358	17250	13728	10727
	P [kW]	8,55	8,25	7,91	7,52	7,07	6,57	6,00	5,37
	I [A]	15,12	14,69	14,21	13,67	13,06	12,40	11,67	10,90
	Qc [W]	53870	46248	39548	33643	28428	23815	19727	16092
	COP [-]	5,30	4,60	4,00	3,48	3,02	2,63	2,29	2,00
	COP* [-]	5,30	4,60	4,00	3,48	3,02	2,63	2,29	2,00
	m [kg/h]	1168	966	795	650	527	423	334	260
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	56,6	62,3	68,4	75,1	82,3	90,3	99,0	108,7
40°C	Q [W]	39036	32681	27147	22336	18167	14571	11486	8857
	Q* [W]	39036	32681	27147	22336	18167	14571	11486	8857
	P [kW]	9,98	9,57	9,08	8,50	7,86	7,15	6,39	5,57
	I [A]	17,22	16,61	15,88	15,05	14,14	13,17	12,17	11,15
	Qc [W]	49019	42254	36224	30839	26027	21724	17875	14432
	COP [-]	3,91	3,41	2,99	2,63	2,31	2,04	1,80	1,59
	COP* [-]	3,91	3,41	2,99	2,63	2,31	2,04	1,80	1,59
	m [kg/h]	1138	938	769	625	504	401	314	241
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	66,5	72,6	79,1	85,9	93,4	101,4	110,3	119,9
50°C	Q [W]	32170	26901	22289	18263	14764	11739	9139	6922
	Q* [W]	32170	26901	22289	18263	14764	11739	9139	6922
	P [kW]	11,58	10,97	10,26	9,45	8,58	7,66	6,72	5,78
	I [A]	19,65	18,72	17,63	16,43	15,16	13,87	12,60	11,41
	Qc [W]	43746	37874	32545	27714	23343	19401	15862	12705
	COP [-]	2,78	2,45	2,17	1,93	1,72	1,53	1,36	1,20
	COP* [-]	2,78	2,45	2,17	1,93	1,72	1,53	1,36	1,20
	m [kg/h]	1091	896	731	591	473	373	288	217
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	78,0	84,3	91,0	98,1	105,7	114,1	123,5	134,5

-- No calculation possible (see message in single point selection)

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

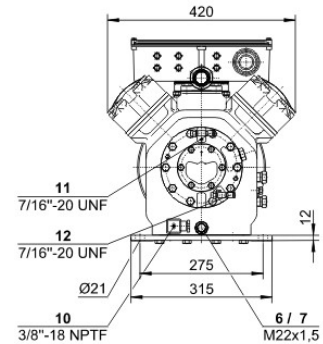
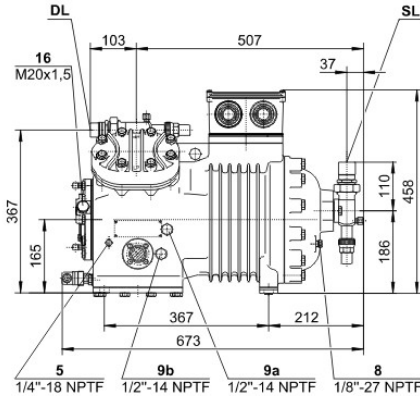
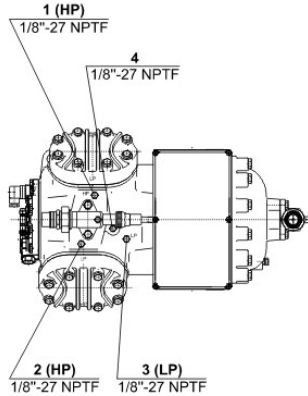
Application Limits 100%





Technical Data: (4T-12.2Y)

Dimensions and Connections



Technical Data

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Displacement (1450 RPM 50Hz)	39,36 m ³ /h
Displacement (1750 RPM 60Hz)	47,50 m ³ /h
No. of cylinder x bore x stroke	4 x 60 mm x 40 mm
Weight	146 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	35 mm - 1 3/8"
Connection discharge line	28 mm - 1 1/8"
Connection cooling water	R 1/2"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	tc<55°C: BSE32 / tc>55°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2 (Standard)
Oil type R290/R1270	SHC226E (Standard)

Motor data

Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	24.0 A
Winding ratio	50/50
Starting current (Rotor locked)	69.0 A Y / 113.0 A YY
Max. Power input	13,8 kW

Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	3,00 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
Oil service valve	Option
Crankcase heater	100 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)

Sound measurement

Sound power level (+5°C / 50°C)	76,5 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	77,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	(83,5) dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	68,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	69,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	(75,5) dB(A) @ 50Hz