



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

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

Result

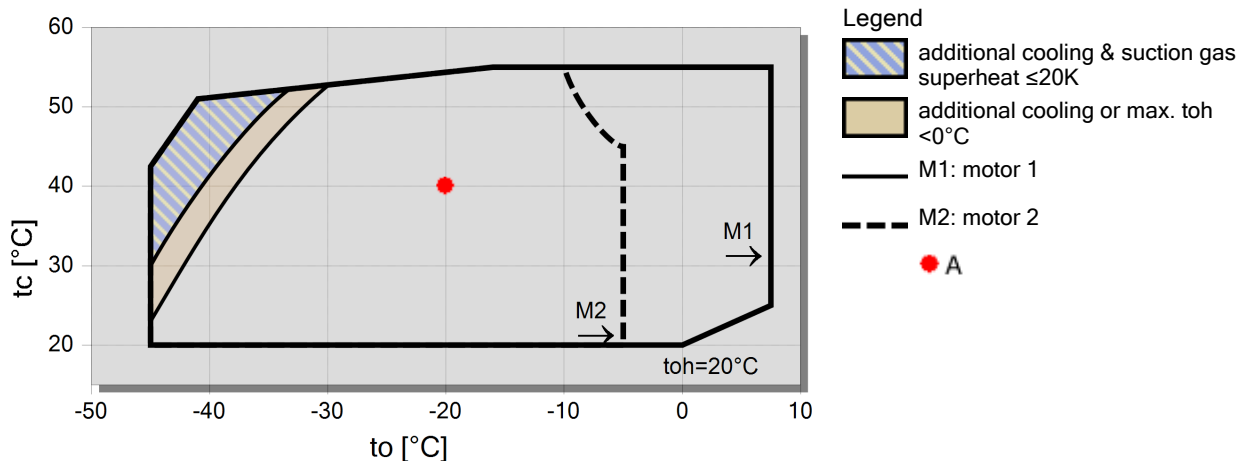
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	44316	36552	29842	24067	19121	14913	11357	8379
	Q* [W]	44316	36552	29842	24067	19121	14913	11357	8379
	P [kW]	11,24	10,62	9,91	9,13	8,28	7,36	6,38	5,36
	I [A]	19,13	18,18	17,12	15,96	14,73	13,45	12,16	10,89
	Qc [W]	55558	47170	39755	33196	27398	22271	17740	13735
	COP [-]	3,94	3,44	3,01	2,64	2,31	2,03	1,78	1,56
	COP* [-]	3,94	3,44	3,01	2,64	2,31	2,03	1,78	1,56
	m [kg/h]	1113	909	736	589	466	361	274	201
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	68,9	75,4	82,4	90,1	98,5	107,7	118,0	129,2
40°C	Q [W]	38056	31289	25434	20390	16071	12398	9299	6710
	Q* [W]	38056	31289	25434	20390	16071	12398	9299	6710
	P [kW]	12,97	12,07	11,08	10,02	8,89	7,72	6,50	5,26
	I [A]	21,8	20,4	18,89	17,28	15,62	13,95	12,32	10,78
	Qc [W]	51030	43359	36515	30408	24965	20117	15803	11970
	COP [-]	2,93	2,59	2,30	2,04	1,81	1,61	1,43	1,28
	COP* [-]	2,93	2,59	2,30	2,04	1,81	1,61	1,43	1,28
	m [kg/h]	1077	876	705	561	439	337	252	180,8
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	79,8	86,5	93,7	101,5	109,9	119,1	129,1	139,9
50°C	Q [W]	--	25496	20645	16459	12871	9820	7249	5103
	Q* [W]	--	25496	20645	16459	12871	9820	7249	5103
	P [kW]	--	13,49	12,16	10,80	9,41	8,00	6,57	5,14
	I [A]	--	22,6	20,6	18,45	16,37	14,33	12,40	10,63
	Qc [W]	--	38988	32805	27256	22279	17817	13820	10240
	COP [-]	--	1,89	1,70	1,52	1,37	1,23	1,10	0,99
	COP* [-]	--	1,89	1,70	1,52	1,37	1,23	1,10	0,99
	m [kg/h]	--	825	661	522	405	307	226	158,1
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	--	99,2	106,5	114,4	123,0	132,4	0	0

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

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

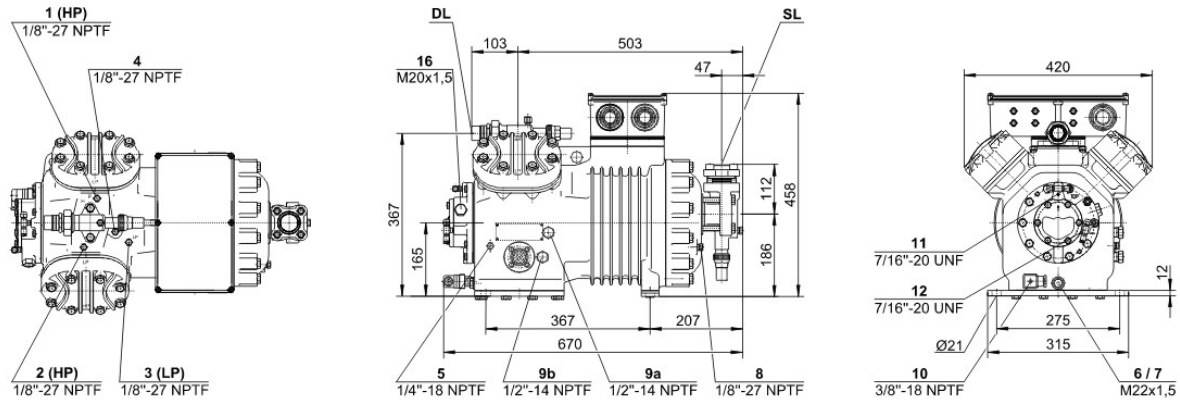
Application Limits 100%





Technical Data: (4N-12.2Y)

Dimensions and Connections



Technical Data

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Displacement (1450 RPM 50Hz)	56,10 m ³ /h
Displacement (1750 RPM 60Hz)	67,71 m ³ /h
No. of cylinder x bore x stroke	4 x 60 mm x 57 mm
Weight	147 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	42 mm - 1 5/8"
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	14,1 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
CIC System	Option
Oil service valve	Option
Crankcase heater	100 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-Pil (Option, not for R290/R1270)

Sound measurement

Sound power level (-10°C / 45°C)	78,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	84,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	70,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	76,5 dB(A) @ 50Hz