



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4N-20.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R507A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity Control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

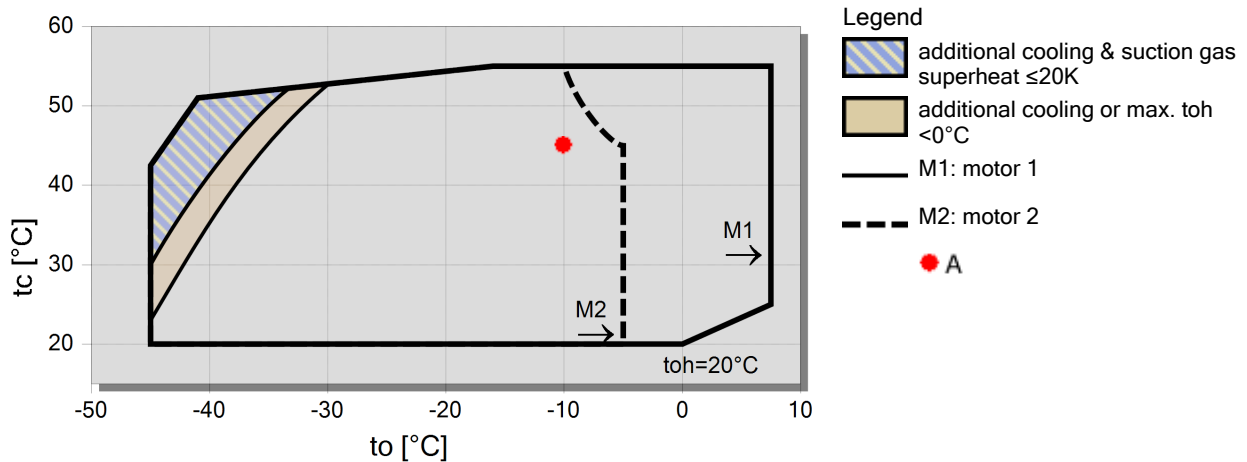
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser Capacity		

tc	to	10°C	0°C	-10°C	-20°C	-30°C	-40°C	-50°C	-60°C
30°C	Q [W]	--	54695	37660	24919	15556	8853	--	--
	Qu* [W]	--	54695	37660	24919	15556	8853	--	--
	P [kW]	--	12,06	10,86	9,40	7,70	5,75	--	--
	I [A]	--	21,3	19,63	17,75	15,75	13,79	--	--
	Qc [W]	--	66758	48515	34321	23257	14603	--	--
	COP [-]	--	4,53	3,47	2,65	2,02	1,54	--	--
	m [kg/h]	--	1436	966	629	388	219	--	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	--	62,1	74,2	88,6	106,4	128,6	--	--
	40°C	Q [W]	--	46819	32089	21034	12906	7100	--
Qu* [W]		--	46819	32089	21034	12906	7100	--	--
P [kW]		--	13,85	12,22	10,28	8,11	5,77	--	--
I [A]		--	23,9	21,5	18,87	16,21	13,81	--	--
Qc [W]		--	60671	44308	31316	21016	12871	--	--
COP [-]		--	3,38	2,63	2,05	1,59	1,23	--	--
m [kg/h]		--	1391	930	598	362	197,6	--	--
Op.		--	Standard	Standard	Standard	Standard	Standard	--	--
th [°C]		--	72,0	84,8	99,7	117,9	0	--	--
50°C		Q [W]	--	38018	25978	16886	10183	5397	--
	Qu* [W]	--	38018	25978	16886	10183	5397	--	--
	P [kW]	--	15,66	13,61	11,15	8,49	5,82	--	--
	I [A]	--	26,6	23,5	20,0	16,65	13,85	--	--
	Qc [W]	--	53678	39586	28038	18671	11214	--	--
	COP [-]	--	2,43	1,91	1,51	1,20	0,93	--	--
	m [kg/h]	--	1319	875	557	331	173,5	--	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	--	83,4	97,1	112,8	131,8	0	--	--

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

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

Application Limits 100%



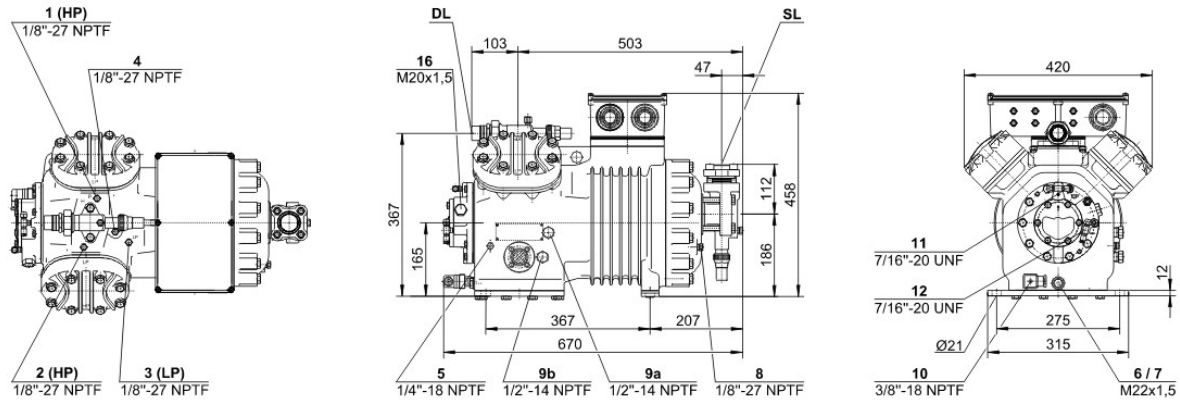
Legend

- additional cooling & suction gas superheat ≤ 20K
- additional cooling or max. toh < 0°C
- M1: motor 1
- M2: motor 2
- A



Technical Data: (4N-20.2Y)

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	155 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	37.0 A
Winding ratio	50/50
Starting current (Rotor locked)	97.0 A Y / 158.0 A YY
Max. Power input	19,5 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)	78,0 dB(A) @ 50Hz
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 (+5°C / 50°C)	70,0 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