Selection: 2-stage Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	S6H-20.2	Suction gas temperature	20,00 °C
Refrigerant	R22	Useful superheat	100%
Reference temperature	Dew point temp.	Power supply	400V-3-50Hz
Operating mode	with sub cooler		

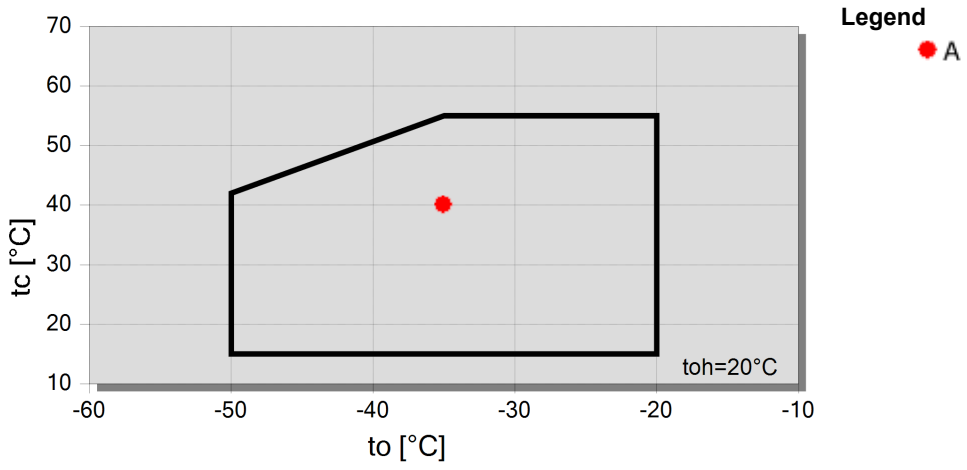
Result

Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	mLP [kg/h]	Mass flow LP
I [A]	Current	pm [bar(a)]	Intermed. pressure
Qc [W]	Condenser Capacity (w. HX)		

tc	to	-20°C	-25°C	-30°C	-35°C	-40°C	-45°C	-50°C	-55°C
30°C	Q [W]	35524	29674	24514	19969	15960	12398	9182	--
	Q* [W]	32362	26389	21267	16886	13143	9933	7149	
	P [kW]	15,46	14,21	12,94	11,68	10,41	9,15	7,91	
	I [A]	25,8	24,1	22,3	20,6	18,90	17,31	15,83	
	Qc [W]	50208	43170	36812	31064	25852	21093	16693	
	COP [-]	2,30	2,09	1,89	1,71	1,53	1,35	1,16	
	COP* [-]	2,09	1,86	1,64	1,45	1,26	1,09	0,90	
	mLP [kg/h]	621	504	405	321	249	188,1	135,2	
	pm [bar(a)]	6,26	5,49	4,74	4,03	3,35	2,73	2,15	
40°C	Q [W]	34752	29086	24045	19561	15555	11935	8586	--
	Q* [W]	29752	24280	19568	15513	12016	8973	6279	
	P [kW]	17,61	16,12	14,64	13,15	11,67	10,19	8,71	
	I [A]	28,9	26,8	24,7	22,6	20,6	18,61	16,77	
	Qc [W]	51477	44402	37950	32056	26641	21613	16860	
	COP [-]	1,97	1,80	1,64	1,49	1,33	1,17	0,99	
	COP* [-]	1,69	1,51	1,34	1,18	1,03	0,88	0,72	
	mLP [kg/h]	613	499	400	317	245	182,3	127,4	
	pm [bar(a)]	6,58	5,74	4,95	4,21	3,52	2,88	2,30	
50°C	Q [W]	34046	28524	23610	19208	15218	--	--	--
	Q* [W]	27125	22179	17898	14186	10942			
	P [kW]	19,74	18,00	16,29	14,56	12,80			
	I [A]	32,0	29,5	27,0	24,6	22,1			
	Qc [W]	52799	45628	39083	33043	27380			
	COP [-]	1,72	1,58	1,45	1,32	1,19			
	COP* [-]	1,37	1,23	1,10	0,97	0,85			
	mLP [kg/h]	606	493	397	314	241			
	pm [bar(a)]	6,87	6,04	5,22	4,44	3,72			

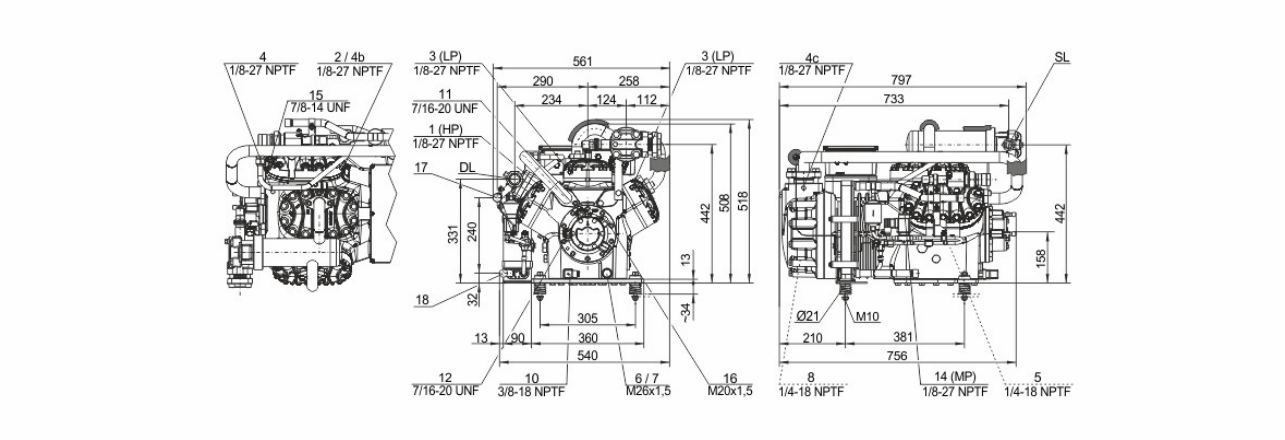
-- No calculation possible (see message in single point selection)
*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits S6H-20.2



Technical Data: S6H-20.2

Dimensions and Connections



Technical Data

Technical Data	
Displacement (1450 RPM 50Hz)	73.60 / 36.90 m³/h
Displacement (1750 RPM 60Hz)	88.83 / 44.53 m³/h
No. of cylinder x bore LP/HP x stroke	6 x 70/ 70 mm x 55 mm
Weight	220 kg
Max. pressure (LP/MP/HP)	19 / 19 / 28 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	35 mm - 1 3/8"
Oil type R404A/R507A	BSE32 (Standard)
Oil type R448A/R449A	BSE32 (Standard)
Oil type R22	B5.2 (Option)
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	21,8 kW
Extent of delivery (Standard)	
Motor protection	SE-B2 (Standard)
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
TX valve for liquid injection	Standard
Sight glass	Standard
Filter Drier	Standard
Solenoid valve	Standard
Oil charge	4.75 dm3
Available Options	
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta P II(Option)
Oil service valve	Option
Discharge gas temperature sensor	Option
CIC (only for R22,instead of TX valve for LI)	Option
Liquid sub cooler (also mounted)	Option

2-stage Semi-hermetic Reciprocating Compressors

Note

For R22 / R407F / R448A / R449A applications the CIC-system can be used instead of a thermostatic post-injection valve.
For R404A / R507A applications the use of the CIC-system is not recommended.

Condensing capacity

Condensing capacity: The condensing capacity can be calculated with or without heat rejection. This option can be set in the menu Program Optionen. The heat rejection is constantly 5% of the power consumption. The condensing capacity is to be found in the line Condensing cap. (with HR) resp. Condensing capacity.

Legend of connection positions according to "Dimensions":

1 High pressure connection (HP)
2 Connection for discharge gas temperature sensor (HP) (for 4VE(S)-6Y .. 4NE(S)-20(Y) connection for CIC sensor as alternative)
3 Low pressure connection (LP)
4 CIC system: injection nozzle (LP)
4b Connection for CIC sensor
4c Connection for CIC sensor (MP / operation with liquid subcooler)
5 Oil fill plug
6 Oil drain
7 Oil filter (magnetic screw)
8 Oil return (oil separator)
8* Oil return with NH3 and insoluble oil
9 Connection for oil and gas equalization (parallel operation)
9a Connection for gas equalization (parallel operation)
9b Connection for oil equalization (parallel operation)
10 Oil heater connection
11 Oil pressure connection +
12 Oil pressure connection –
13 Cooling water connection
14 Intermediate pressure connection (MP)
15 Liquid injection (operation without liquid subcooler and with thermostatic expansion valve)
16 Connection for oil monitoring (opto-electrical oil monitoring "OLC-K1" or differential oil pressure switch "Delta-PII")
17 Refrigerant inlet at liquid subcooler
18 Referigerant outlet at liquid subcooler
19 Clamp space
20 Terminal plate
21 Maintenance connection for oil valve
22 Pressure relief valve to the atmosphere (discharge side)
23 Pressure relief valve to the atmosphere (suction side)
SL Suction gas line
DL Discharge gas line
Dimensions can show tolerances according to EN ISO 13920-B.