



Selection: 2-stage Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	S6F-30.2Y	Suction gas temperature	20,00 °C
Refrigerant	R404A	Useful superheat	100%
Reference temperature	Dew point temp.	Power supply	400V-3-50Hz
Operating mode	with sub cooler		

Result

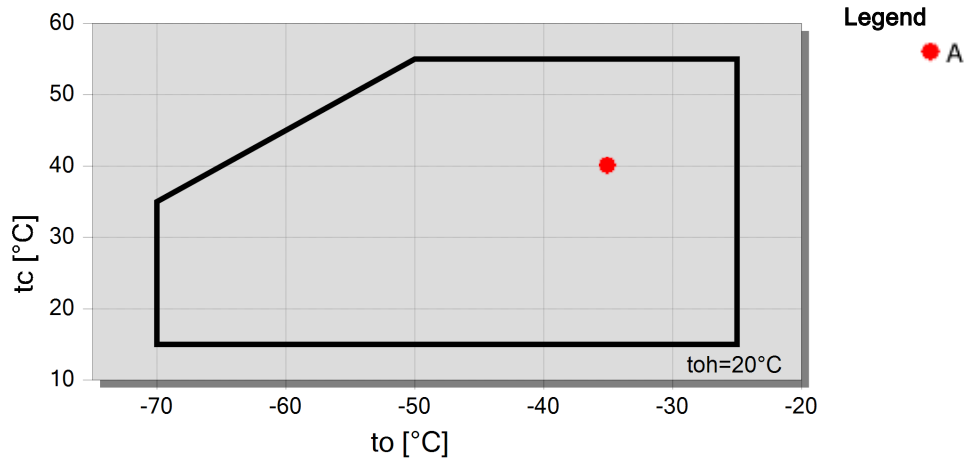
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	mLP [kg/h]	Mass flow LP
I [A]	Current	pm [bar(a)]	Intermed. pressure
Qc [W]	Condenser capacity		

tc	to	-25°C	-30°C	-35°C	-40°C	-45°C	-50°C	-55°C	-60°C
30°C	Q [W]	43398	37364	31720	26476	21683	17403	13681	10525
	Q* [W]	38061	31728	26046	21007	16617	12884	9788	7281
	P [kW]	22,5	20,6	18,78	16,94	15,15	13,42	11,77	10,20
	I [A]	38,0	35,3	32,7	30,2	27,8	25,6	23,6	21,8
	Qc [W]	65931	58009	50495	43414	36830	30821	25446	20727
	COP [-]	1,93	1,81	1,69	1,56	1,43	1,30	1,16	1,03
	COP* [-]	1,69	1,54	1,39	1,24	1,10	0,96	0,83	0,71
	mLP [kg/h]	927	769	628	505	398	308	234	173,5
	pm [bar(a)]	6,87	6,01	5,20	4,46	3,78	3,17	2,64	2,17
40°C	Q [W]	41459	35708	30285	25259	20702	16663	13153	10142
	Q* [W]	33796	28022	22889	18393	14532	11281	8592	6397
	P [kW]	25,2	23,1	21,0	18,96	16,95	15,00	13,14	11,37
	I [A]	41,8	38,8	35,8	32,9	30,2	27,6	25,2	23,1
	Qc [W]	66656	58807	51299	44217	37650	31666	26292	21515
	COP [-]	1,65	1,55	1,44	1,33	1,22	1,11	1,00	0,89
	COP* [-]	1,34	1,21	1,09	0,97	0,86	0,75	0,65	0,56
	mLP [kg/h]	924	762	619	496	390	302	230	170,7
	pm [bar(a)]	7,48	6,55	5,70	4,92	4,21	3,56	2,98	2,46
50°C	Q [W]	39476	33950	28813	24105	19850	16042	12634	--
	Q* [W]	28962	23983	19587	15764	12489	9713	7364	
	P [kW]	28,1	25,7	23,3	21,0	18,75	16,57	14,49	
	I [A]	45,9	42,5	39,1	35,8	32,6	29,7	26,9	
	Qc [W]	67542	59635	52139	45113	38602	32616	27127	
	COP [-]	1,41	1,32	1,24	1,15	1,06	0,97	0,87	
	COP* [-]	1,03	0,93	0,84	0,75	0,67	0,59	0,51	
	mLP [kg/h]	912	750	610	488	386	299	226	
	pm [bar(a)]	8,15	7,16	6,26	5,44	4,68	3,99	3,36	

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

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

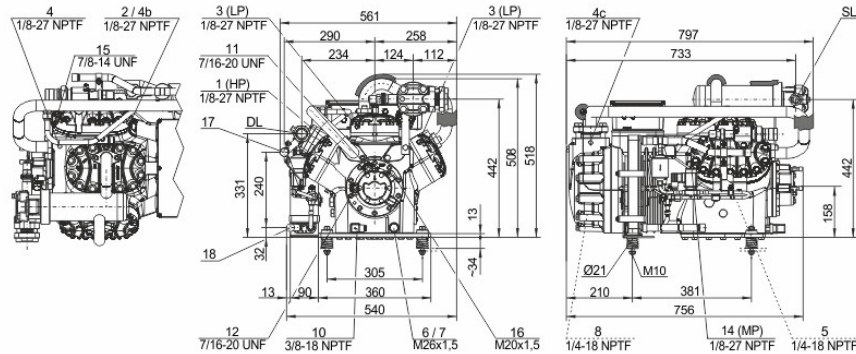
Application Limits S6F-30.2





Technical Data: S6F-30.2Y

Dimensions and Connections



Technical Data

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Displacement (1450 RPM 50Hz)	101.10 / 50.50 m ³ /h
Displacement (1750 RPM 60Hz)	122.02 / 60.95 m ³ /h
No. of cylinder x bore LP/HP x stroke	6 x 82/ 82 mm x 55 mm
Weight	234 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/R454C	BSE32 (Standard)
Oil type R22	B5.2 (Option)

Motor data

Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	51.0 A
Winding ratio	50/50
Starting current (Rotor locked)	135.0 A Y / 220.0 A YY
Max. Power input	31,9 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 dm ³

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



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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 Refrigerant 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.