



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		

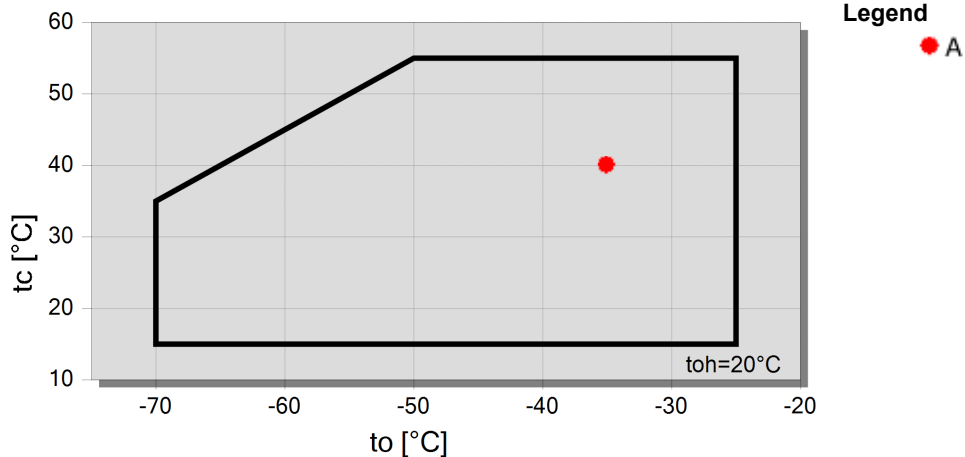
Result

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	-20°C	-25°C	-30°C	-35°C	-40°C	-45°C	-50°C	-55°C
40°C	Q [W]	--	41459	35708	30285	25259	20702	16663	13153
	Q* [W]	--	33796	28022	22889	18393	14532	11281	8592
	P [kW]	--	25,2	23,1	21,0	18,96	16,95	15,00	13,14
	I [A]	--	41,8	38,8	35,8	32,9	30,2	27,6	25,2
	Qc [W]	--	66656	58807	51299	44217	37650	31666	26292
	COP [-]	--	1,65	1,55	1,44	1,33	1,22	1,11	1,00
	COP* [-]	--	1,34	1,21	1,09	0,97	0,86	0,75	0,65
	mLP [kg/h]	--	924	762	619	496	390	302	230
	pm [bar(a)]	--	7,48	6,55	5,70	4,92	4,21	3,56	2,98
	40°C	Q [W]	--	41459	35708	30285	25259	20702	16663
Q* [W]		--	33796	28022	22889	18393	14532	11281	8592
P [kW]		--	25,2	23,1	21,0	18,96	16,95	15,00	13,14
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	mLP [kg/h]	--	924	762	619	496	390	302	230
	pm [bar(a)]	--	7,48	6,55	5,70	4,92	4,21	3,56	2,98

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

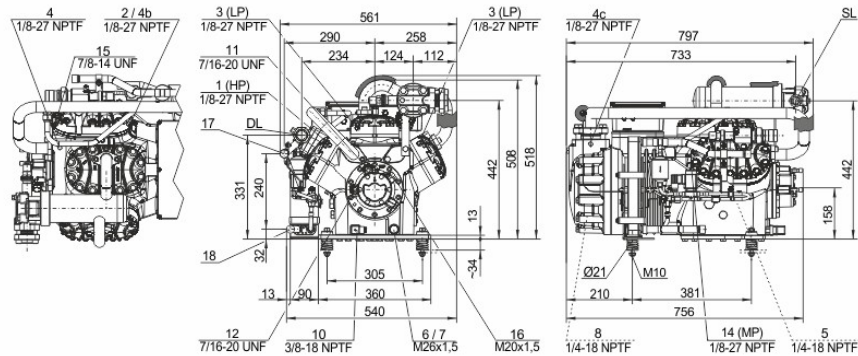
Application Limits





Technical Data: S6F-30.2Y

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	101.10 / 50.50 m³/h
Displacement (1750 RPM 60Hz)	122.02 / 60.95 m³/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	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 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



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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.