



## Selection: 2-stage Semi-hermetic Reciprocating Compressors

### Input Values

Compressor model	S66F-60.2Y	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

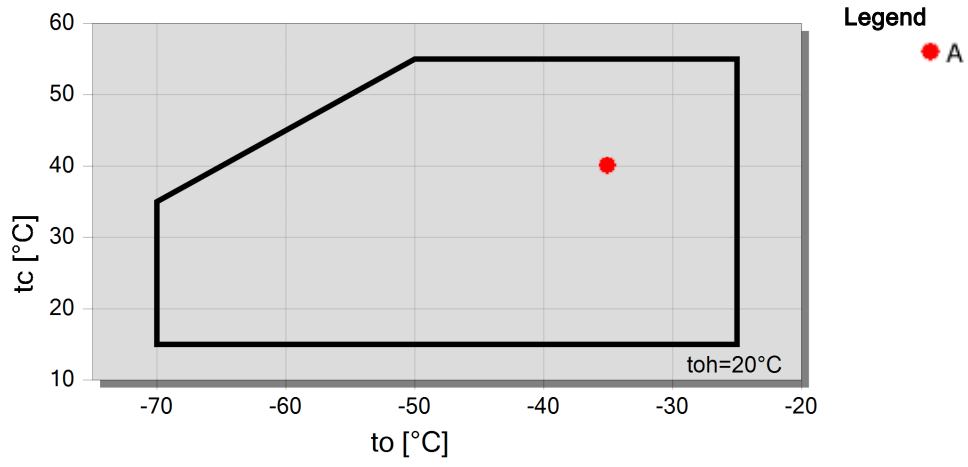
Q [W]	Cooling capacity	COP [ - ]	COP/EER
Q* [W]	Cooling capacity *	COP* [ - ]	COP/EER *
P [kW]	Power input	mLP [kg/h]	Mass flow LP
I [A]	Current	pm [bar(a)]	Intermed. pressure
Qc [W]	Condenser capacity		

tc	to	-25°C	-30°C	-35°C	-40°C	-45°C	-50°C	-55°C	-60°C
30°C	Q [W]	86796	74727	63440	52952	43365	34805	27361	21049
	Q* [W]	76123	63456	52092	42013	33235	25767	19575	14562
	P [kW]	45,1	41,3	37,6	33,9	30,3	26,8	23,5	20,4
	I [A]	75,9	70,6	65,3	60,3	55,5	51,1	47,1	43,6
	Qc [W]	131862	116017	100990	86828	73661	61642	50892	41454
	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]	1853	1537	1257	1010	797	616	467	347
	pm [bar(a)]	6,87	6,01	5,20	4,46	3,78	3,17	2,64	2,17
40°C	Q [W]	82917	71416	60570	50518	41403	33326	26305	20284
	Q* [W]	67593	56044	45778	36787	29064	22562	17185	12794
	P [kW]	50,4	46,2	42,0	37,9	33,9	30,0	26,3	22,7
	I [A]	83,5	77,5	71,6	65,8	60,3	55,2	50,4	46,2
	Qc [W]	133312	117615	102598	88433	75301	63333	52583	43031
	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]	1847	1523	1238	991	781	604	459	341
	pm [bar(a)]	7,48	6,55	5,70	4,92	4,21	3,56	2,98	2,46
50°C	Q [W]	78952	67900	57626	48209	39700	32084	25268	--
	Q* [W]	57924	47965	39173	31528	24979	19426	14729	
	P [kW]	56,1	51,4	46,7	42,0	37,5	33,1	29,0	
	I [A]	91,9	84,9	78,2	71,6	65,3	59,3	53,8	
	Qc [W]	135085	119269	104278	90226	77204	65232	54254	
	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]	1824	1501	1219	977	771	598	452	
	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)

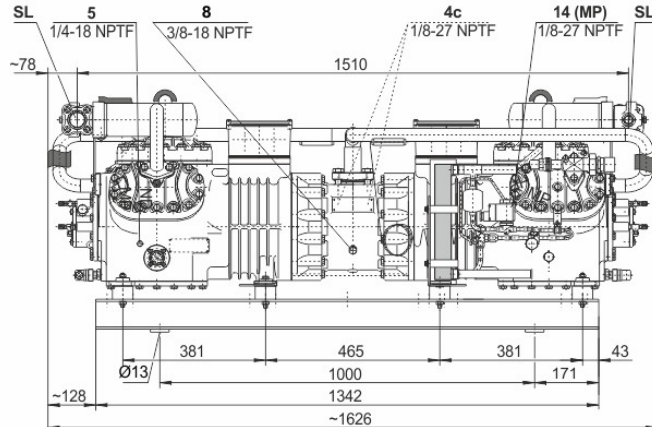
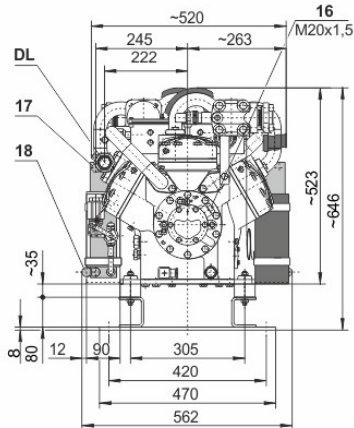
## Application Limits S66F-60.2





## Technical Data: S66F-60.2Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	202.20 / 101.00 m <sup>3</sup> /h
Displacement (1750 RPM 60Hz)	244.04 / 121.90 m <sup>3</sup> /h
No. of cylinder x bore LP/HP x stroke	6+6 x 82/ 82 mm x 55 mm
Weight	461 kg
Max. pressure (LP/MP/HP)	19 / 19 / 28 bar
Connection suction line	2x42 mm - 1 5/8"
Connection discharge line	2x35 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	2x51.0 A
Winding ratio	50/50
Starting current (Rotor locked)	2x135.0 A Y / 2x220.0 A YY
Max. Power input	2 x 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	9.50 dm <sup>3</sup>

#### Available Options

Crankcase heater	2x140 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 NH<sub>3</sub> 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.