



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model Mode	(6F-40.2Y) Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity Control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

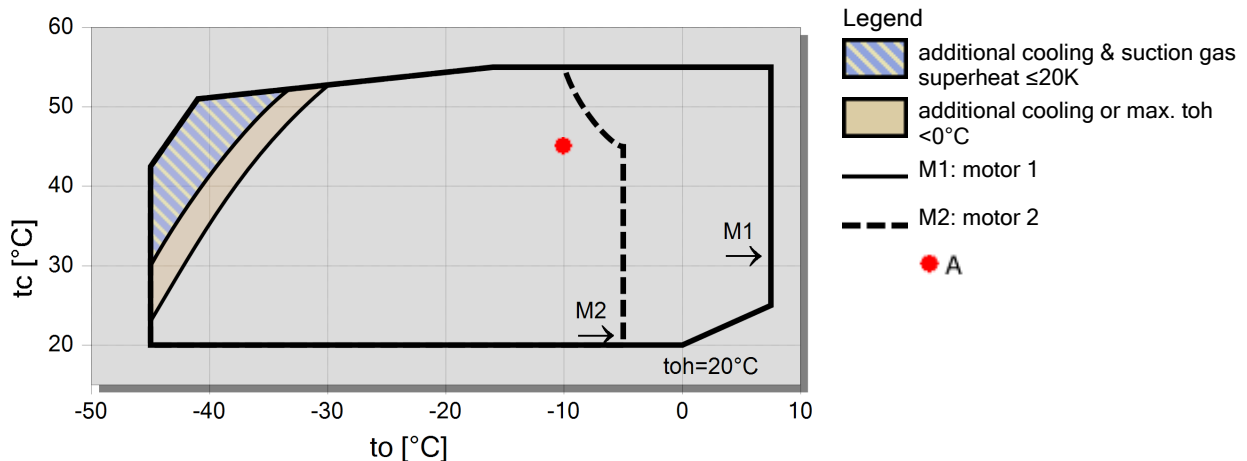
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	118731	98040	80128	64678	51411	40082	30468	22368
	Q* [W]	118731	98040	80128	64678	51411	40082	30468	22368
	P [kW]	31,5	29,7	27,7	25,4	22,8	20,1	17,34	14,49
	I [A]	56,9	54,6	51,9	48,9	45,6	42,3	39,0	36,0
	Qc [W]	150191	127774	107814	90046	74247	60224	47809	36854
	COP [-]	3,77	3,30	2,89	2,55	2,25	1,99	1,76	1,54
	COP* [-]	3,77	3,30	2,89	2,55	2,25	1,99	1,76	1,54
	m [kg/h]	2983	2439	1976	1584	1252	971	735	538
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	70,4	77,1	84,2	91,8	100,0	109,0	118,9	130,4
40°C	Q [W]	100899	83090	67634	54274	42783	32956	24607	17567
	Q* [W]	100899	83090	67634	54274	42783	32956	24607	17567
	P [kW]	36,0	33,4	30,6	27,5	24,4	21,1	17,73	14,40
	I [A]	63,2	59,6	55,8	51,7	47,5	43,4	39,4	35,9
	Qc [W]	136897	116514	98223	81822	67137	54018	42334	31967
	COP [-]	2,80	2,49	2,21	1,97	1,76	1,56	1,39	1,22
	COP* [-]	2,80	2,49	2,21	1,97	1,76	1,56	1,39	1,22
	m [kg/h]	2856	2326	1876	1493	1169	896	666	473
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	81,5	88,4	95,6	103,4	111,8	121,1	131,6	0
50°C	Q [W]	--	68309	55295	44026	34324	26027	18984	13056
	Q* [W]	--	68309	55295	44026	34324	26027	18984	13056
	P [kW]	--	36,7	33,1	29,3	25,5	21,6	17,76	13,98
	I [A]	--	64,1	59,1	54,1	49,0	44,1	39,5	35,5
	Qc [W]	--	104988	88368	73351	59812	47643	36746	27037
	COP [-]	--	1,86	1,67	1,50	1,35	1,20	1,07	0,93
	COP* [-]	--	1,86	1,67	1,50	1,35	1,20	1,07	0,93
	m [kg/h]	--	2212	1771	1397	1081	814	591	404
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	--	99,9	107,3	115,4	124,2	134,0	0	0

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

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

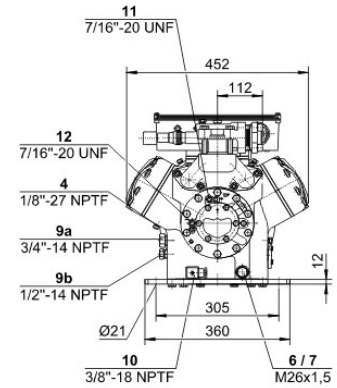
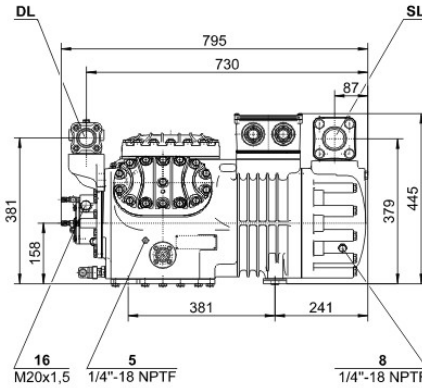
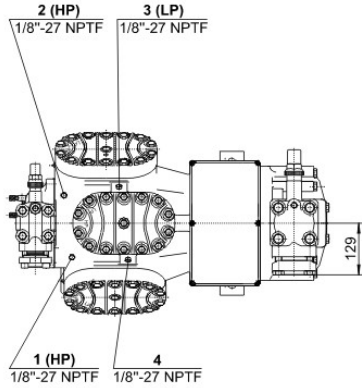
Application Limits 100%





Technical Data: (6F-40.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	151,6 m ³ /h
Displacement (1750 RPM 60Hz)	183,0 m ³ /h
No. of cylinder x bore x stroke	6 x 82 mm x 55 mm
Weight	239 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	54 mm - 2 1/8"
Connection discharge line	42 mm - 1 5/8"
Connection cooling water	R 3/4"
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	78.0 A
Winding ratio	50/50
Starting current (Rotor locked)	180.0 A Y / 323.0 A YY
Max. Power input	38,6 kW

Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,75 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-66-33% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
CIC System	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-P11 (Option, not for R290/R1270)

Sound measurement

Sound power level (-10°C / 45°C)	83,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	91,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	75,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	83,5 dB(A) @ 50Hz



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model Mode	(6F-50.2Y) Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant Reference temperature Liq. subc. (in condenser)	R404A Dew point temp. 0 K	Power supply Capacity Control Useful superheat	400V-3-50Hz 100% 100%

Result

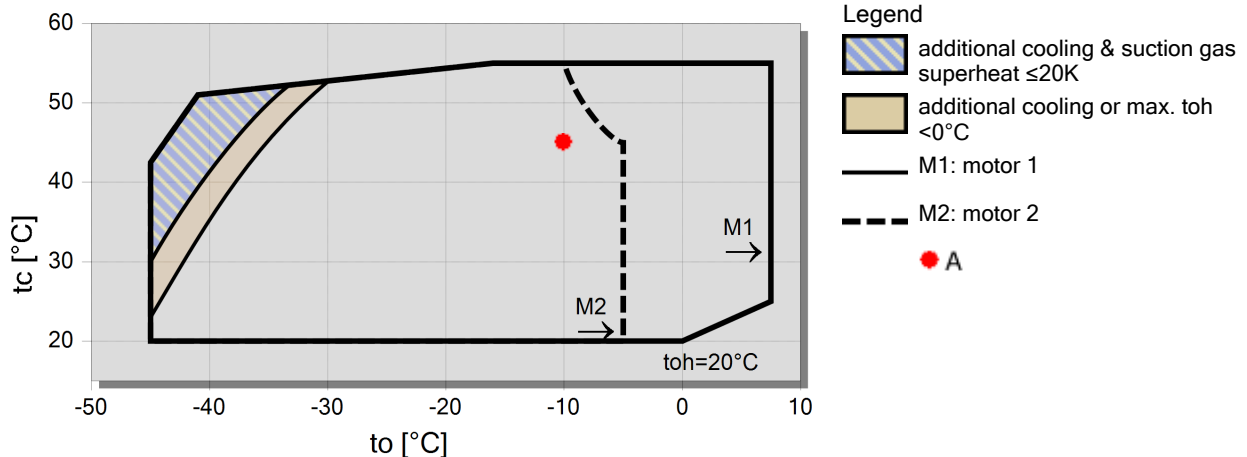
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	118566	98113	80413	65152	52055	40878	31403	23428
	Q* [W]	118566	98113	80413	65152	52055	40878	31403	23428
	P [kW]	32,9	30,9	28,8	26,4	23,9	21,4	18,79	16,23
	I [A]	70,1	67,8	65,0	61,9	58,5	55,0	51,5	48,2
	Qc [W]	151434	129059	109195	91580	75997	62255	50190	39659
	COP [-]	3,61	3,17	2,79	2,47	2,17	1,91	1,67	1,44
	COP* [-]	3,61	3,17	2,79	2,47	2,17	1,91	1,67	1,44
	m [kg/h]	2979	2440	1984	1596	1267	990	758	563
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	72,0	78,7	85,9	93,7	102,2	111,8	122,9	136,5
40°C	Q [W]	101314	83614	68260	54994	43592	33850	25582	18619
	Q* [W]	101314	83614	68260	54994	43592	33850	25582	18619
	P [kW]	37,2	34,4	31,5	28,4	25,3	22,2	19,09	16,13
	I [A]	75,2	72,0	68,4	64,5	60,3	56,1	51,9	48,1
	Qc [W]	138531	118036	99723	83390	68866	56002	44670	34754
	COP [-]	2,72	2,43	2,17	1,94	1,72	1,53	1,34	1,15
	COP* [-]	2,72	2,43	2,17	1,94	1,72	1,53	1,34	1,15
	m [kg/h]	2868	2341	1893	1513	1191	920	692	502
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	82,7	89,4	96,6	104,4	113,0	122,9	134,7	0
50°C	Q [W]	83780	68915	55985	44794	35165	26936	19957	14089
	Q* [W]	83780	68915	55985	44794	35165	26936	19957	14089
	P [kW]	41,3	37,6	33,8	30,0	26,2	22,5	18,97	15,59
	I [A]	79,7	75,6	71,3	66,6	61,6	56,6	51,8	47,4
	Qc [W]	125073	106515	89807	74809	61398	49467	38922	29679
	COP [-]	2,03	1,83	1,66	1,49	1,34	1,20	1,05	0,90
	COP* [-]	2,03	1,83	1,66	1,49	1,34	1,20	1,05	0,90
	m [kg/h]	2748	2231	1793	1422	1107	843	621	436
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	94,0	100,7	107,9	115,8	124,5	134,6	0	0

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

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

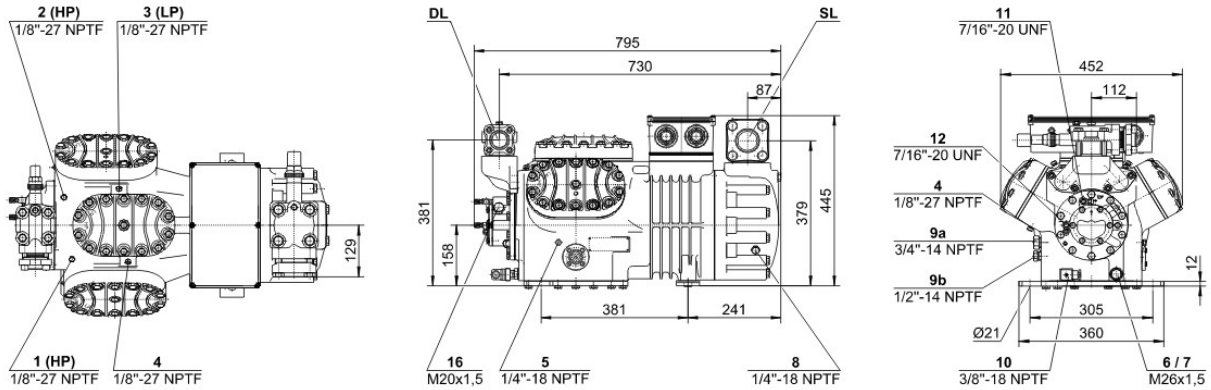
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Oil type R22 (R12/R502)	B5.2 (Standard)
Oil type R290/R1270	SHC226E (Standard)

Motor data

Motor voltage (more on request)	380-400V PW-3-50Hz
Max operating current	92.0 A
Winding ratio	50/50
Starting current (Rotor locked)	226.0 A Y / 404.0 A YY
Max. Power input	53,2 kW

Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,75 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-66-33% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)

Sound measurement

Sound power level (+5°C / 50°C)	84,0 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	83,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	(91,5) dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	76,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	75,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	(83,5) dB(A) @ 50Hz