



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 Reference temperature Liq. subc. (in condenser)	R404A Dew point temp. 0 K	Power supply Capacity Control Useful superheat	400V-3-50Hz 100% 100%

Result

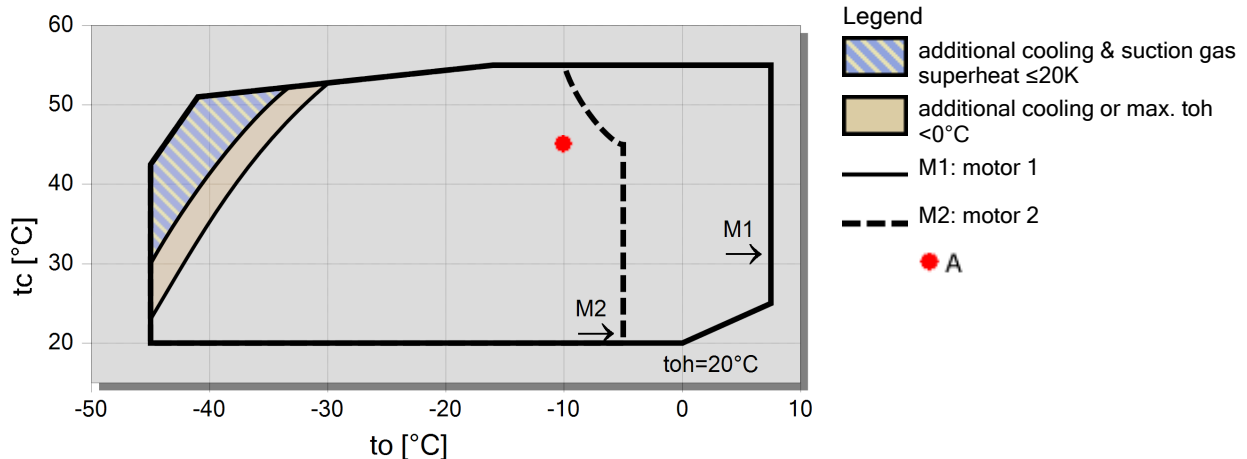
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	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)

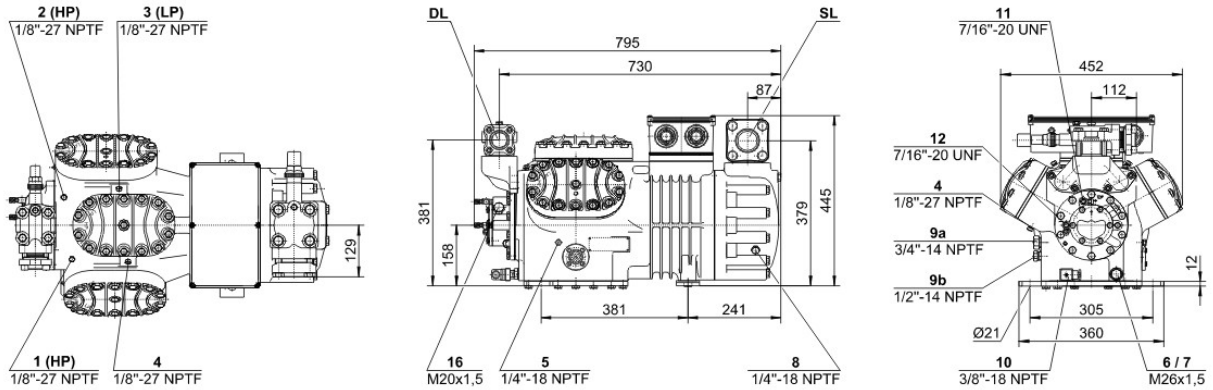
Application Limits 100%





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-Pil (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	6FE-44Y 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

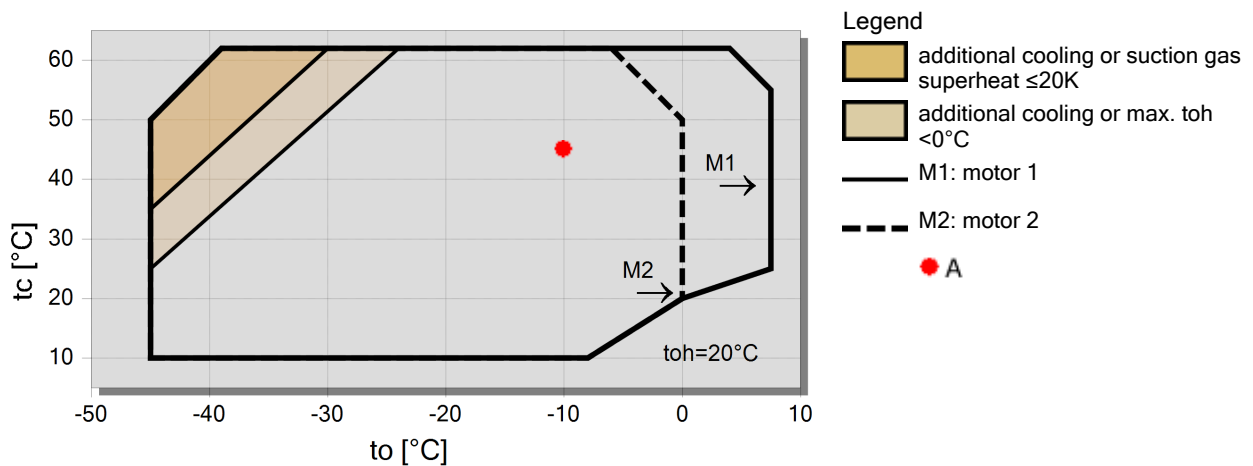
Q [W] Qu* [W] P [kW] I [A] Qc [W]	Cooling capacity Evaporator capacity Power input Current Condenser Capacity	COP [-] m [kg/h] Op. th [°C]	COP/EER Mass flow Operating mode Discharge gas temp. w/o cooling
---	---	---	---

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	123636	102426	84076	68259	54690	43116	33309	25063
	Qu* [W]	123636	102426	84076	68259	54690	43116	33309	25063
	P [kW]	32,2	30,5	28,5	26,3	23,8	21,3	18,65	16,05
	I [A]	57,9	55,7	53,0	50,0	46,9	43,6	40,5	37,6
	Qc [W]	155818	132942	112598	94528	78516	64378	51956	41112
	COP [-]	3,84	3,36	2,95	2,60	2,30	2,03	1,79	1,56
	m [kg/h]	3106	2548	2074	1672	1332	1045	804	603
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	69,8	76,4	83,4	90,8	98,9	107,7	117,7	129,4
	40°C	Q [W]	105709	87538	71756	58101	46342	36268	27691
Qu* [W]		105709	87538	71756	58101	46342	36268	27691	20436
P [kW]		36,8	34,3	31,6	28,6	25,5	22,4	19,26	16,19
I [A]		64,3	60,9	57,1	53,1	49,1	45,1	41,2	37,7
Qc [W]		142534	121879	103343	86734	71888	58667	46949	36629
COP [-]		2,87	2,55	2,27	2,03	1,81	1,62	1,44	1,26
m [kg/h]		2993	2451	1990	1599	1267	986	749	551
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		80,6	87,2	94,2	101,6	109,7	118,5	128,7	0
50°C		Q [W]	87213	72192	59073	47657	37766	29237	21916
	Qu* [W]	87213	72192	59073	47657	37766	29237	21916	15662
	P [kW]	40,7	37,4	34,0	30,3	26,6	22,9	19,30	15,80
	I [A]	69,8	65,2	60,3	55,4	50,5	45,7	41,3	37,3
	Qc [W]	127920	109628	93026	77986	64398	52168	41213	31460
	COP [-]	2,14	1,93	1,74	1,57	1,42	1,27	1,14	0,99
	m [kg/h]	2860	2337	1892	1512	1189	915	682	485
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	91,6	98,2	105,1	112,5	120,5	129,4	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%



Legend

- additional cooling or suction gas superheat ≤20K
- additional cooling or max. toh <0°C
- M1: motor 1
- M2: motor 2
- A