



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	4VES-7Y	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R407F	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

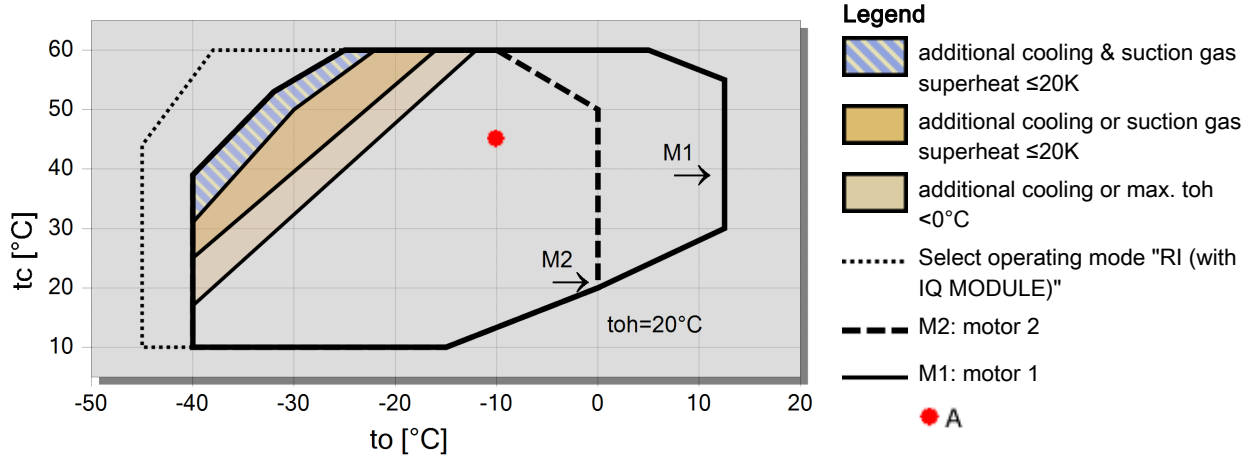
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C
30°C	Q [W]	32569	26510	21326	16912	13176	10039	7428	5279
	Qu* [W]	32569	26510	21326	16912	13176	10039	7428	5279
	P [kW]	6,51	6,25	5,88	5,41	4,86	4,25	3,61	2,95
	I [A]	11,25	10,87	10,32	9,64	8,86	8,04	7,22	6,44
	Qc [W]	39078	32765	27207	22319	18033	14288	11035	8230
	COP [-]	5,00	4,24	3,63	3,13	2,71	2,36	2,06	1,79
	m [kg/h]	596	480	383	302	234	177,1	130,5	92,4
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	72,0	80,9	90,4	100,5	111,4	123,4	136,6	0
	40°C	Q [W]	28153	22816	18240	14336	11027	8244	5925
Qu* [W]		28153	22816	18240	14336	11027	8244	5925	3880
P [kW]		7,80	7,28	6,67	5,97	5,22	4,43	3,62	3,03
I [A]		13,20	12,42	11,49	10,46	9,37	8,27	7,23	6,52
Qc [W]		35952	30099	24906	20306	16243	12670	9547	6906
COP [-]		3,61	3,13	2,74	2,40	2,11	1,86	1,64	1,28
m [kg/h]		562	450	357	278	213	158,1	113,1	73,8
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	RI (IQ MODULE)
th [°C]		86,5	95,7	105,5	115,9	127,2	139,7	0	0
50°C		Q [W]	23780	19163	15193	11797	8912	6480	4160
	Qu* [W]	23780	19163	15193	11797	8912	6480	4160	2590
	P [kW]	8,87	8,10	7,25	6,34	5,40	4,43	3,61	2,82
	I [A]	14,86	13,67	12,37	11,01	9,62	8,28	7,21	6,29
	Qc [W]	32654	27266	22445	18140	14309	10915	7765	5408
	COP [-]	2,68	2,37	2,09	1,86	1,65	1,46	1,15	0,92
	m [kg/h]	525	418	328	252	189,3	136,9	87,4	54,2
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	RI (IQ MODULE)	RI (IQ MODULE)
	th [°C]	101,0	110,5	120,7	131,6	0	0	0	0

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

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling) - attention: data based on dew point!

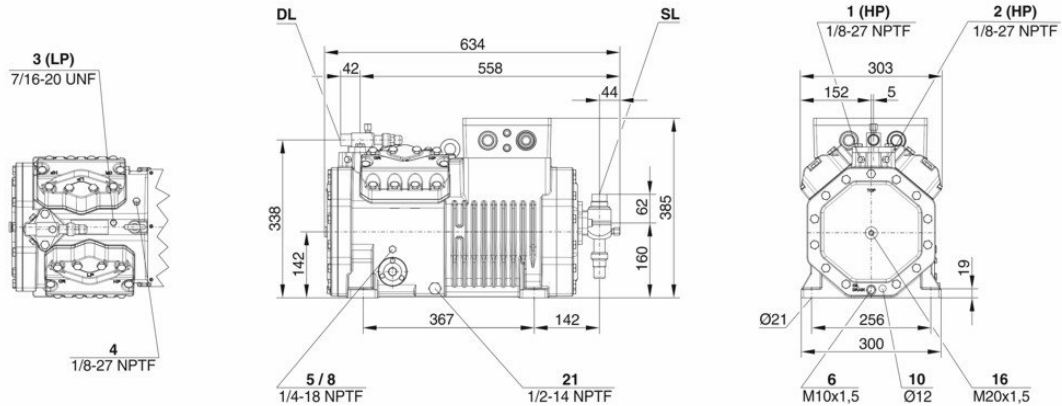
Application Limits 100% 4VES-7





Technical Data: 4VES-7Y

Dimensions and Connections



Technical Data

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Displacement (1450 RPM 50Hz)	34,73 m3/h
Displacement (1750 RPM 60Hz)	41,92 m3/h
No. of cylinder x bore x stroke	4 x 55 mm x 42 mm
Weight	139 kg
Max. pressure (LP/HP)	19 / 32 bar
Connection suction line	28 mm - 1 1/8"
Connection discharge line	22 mm - 7/8"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	BSE32(Standard) R134a tc>70°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2(Option)
Oil type R1234yf	BSE32 (Standard) R1234yf tc>70°C : BSE55 (Option)
Oil type R1234ze	BSE55 (Standard) to>15°C: BSE85K (Option) tc>70°C: BSE85K (Option)
Ölfüllung R454C/R455A	BSE32 (Standard)
Oil type R515B	BSE55 (Standard) to>15°C: BSE85K (Option) tc>70°C: BSE85K (Option)

Motor data

Motor version	2
Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	16.6 A
Winding ratio	50/50
Starting current (Rotor locked)	39.0 A Y / 68.0 A YY
Max. Power input	11,0 kW

Extent of delivery (Standard)

Motor protection	SE-B1, CM-RC-01(Option)
Enclosure class	IP66
Vibration dampers	Standard
Oil charge	2,60 dm ³
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Refrigerant Injection (RI)	Option
Oil service valve	Option
Crankcase heater	0..140 W PTC (Option)



Oil level monitoring

OLC-K1 (Option)

Sound measurement

Sound power level (-10°C / 45°C)	72,3 dB(A) @50Hz
Sound power level (-35°C / 40°C)	77,4 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C)	64,3 dB(A) @50Hz
Sound pressure level @ 1m (-35°C / 40°C)	69,4 dB(A) @50Hz
Sound power level (-10°C / 45°C) R134a	70,3 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C) R134a	62,3 dB(A) @50Hz