



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4DC-5.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	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

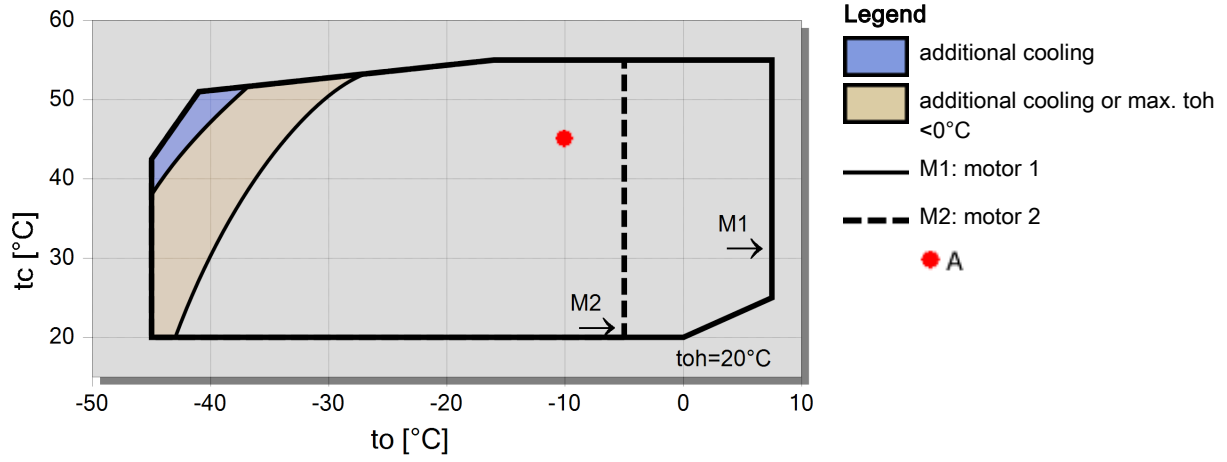
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	21119	17422	14223	11466	9100	7081	5369	3930
	Qu* [W]	21119	17422	14223	11466	9100	7081	5369	3930
	P [kW]	5,52	5,29	4,99	4,62	4,18	3,70	3,19	2,66
	I [A]	9,64	9,32	8,89	8,37	7,78	7,17	6,56	5,99
	Qc [W]	26635	22717	19214	16081	13282	10784	8560	6586
	COP [-]	3,83	3,29	2,85	2,48	2,18	1,91	1,68	1,48
	m [kg/h]	531	433	351	281	222	171,5	129,5	94,5
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	69,9	77,2	85,0	93,2	102,1	111,8	122,3	134,2
	40°C	Q [W]	17654	14523	11807	9460	7441	5715	4250
Qu* [W]		17654	14523	11807	9460	7441	5715	4250	3014
P [kW]		6,34	5,95	5,50	4,99	4,43	3,83	3,22	2,60
I [A]		10,84	10,28	9,61	8,88	8,11	7,33	6,60	5,93
Qc [W]		23992	20478	17307	14446	11868	9549	7470	5612
COP [-]		2,79	2,44	2,15	1,90	1,68	1,49	1,32	1,16
m [kg/h]		500	407	327	260	203	155,3	115,0	81,2
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		81,8	89,2	97,2	105,7	114,8	124,8	136,0	0
50°C		Q [W]	14301	11733	9494	7553	5879	4444	3222
	Qu* [W]	14301	11733	9494	7553	5879	4444	3222	2188
	P [kW]	7,07	6,53	5,93	5,29	4,62	3,92	3,22	2,52
	I [A]	11,92	11,12	10,24	9,32	8,37	7,45	6,59	5,86
	Qc [W]	21367	18261	15428	12846	10497	8366	6441	4709
	COP [-]	2,02	1,80	1,60	1,43	1,27	1,13	1,00	0,87
	m [kg/h]	469	380	304	240	185,2	139,0	100,3	67,8
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	94,1	101,7	109,9	118,7	128,4	139,2	0	0

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

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

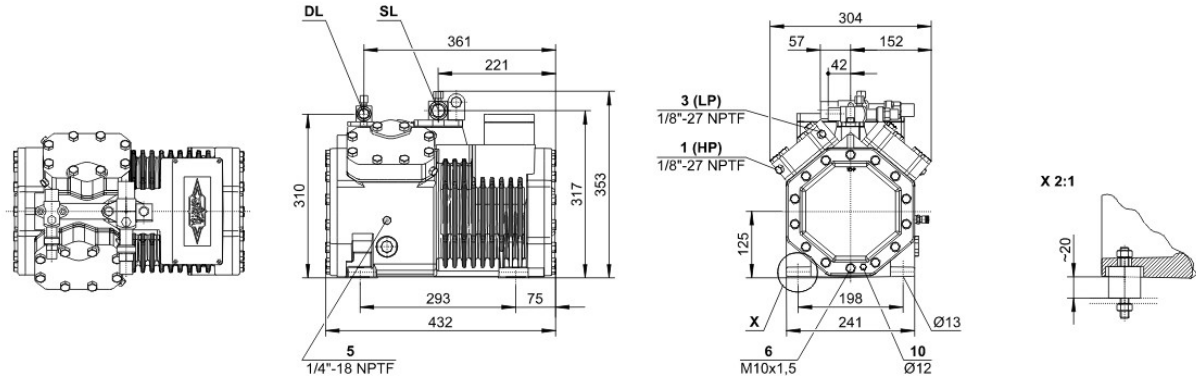
Application Limits 100% Octagon 4DC-5.2





Technical Data: (4DC-5.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	26,84 m3/h
Displacement (1750 RPM 60Hz)	32,39 m3/h
No. of cylinder x bore x stroke	4 x 50 mm x 39,3 mm
Weight	85,5 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	28 mm - 1 1/8"
Connection discharge line	22 mm - 7/8"
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 Y-3-50Hz
Max operating current	13.5 A
Starting current (Rotor locked)	62.2 A
Max. Power input	8,0 kW

Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	2,00 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Crankcase heater	0..120 W PTC (Option)
Oil level monitoring	OLC-K1 (Option, not for R290/R1270)

Sound measurement

Sound power level (-10°C / 45°C)	72,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	74,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	64,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	66,0 dB(A) @ 50Hz



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4PCS-10.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	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

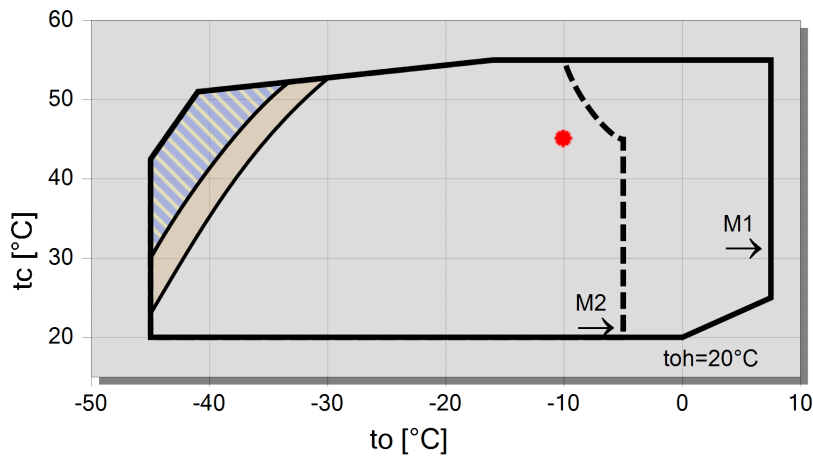
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	38327	31588	25753	20717	16391	12694	9554	6905
	Qu* [W]	38327	31588	25753	20717	16391	12694	9554	6905
	P [kW]	10,07	9,37	8,64	7,87	7,06	6,22	5,34	4,43
	I [A]	17,34	16,31	15,22	14,10	12,95	11,78	10,63	9,52
	Qc [W]	48392	40959	34390	28584	23450	18910	14892	11333
	COP [-]	3,81	3,37	2,98	2,63	2,32	2,04	1,79	1,56
	m [kg/h]	963	786	635	507	399	308	230	166,0
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	70,1	76,2	82,9	90,1	98,2	107,2	117,5	129,5
40°C	Q [W]	32297	26501	21475	17134	13404	10218	7516	5243
	Qu* [W]	32297	26501	21475	17134	13404	10218	7516	5243
	P [kW]	11,39	10,45	9,47	8,45	7,41	6,35	5,30	4,25
	I [A]	19,33	17,92	16,45	14,95	13,44	11,97	10,57	9,31
	Qc [W]	43685	36953	30944	25584	20812	16571	12813	9493
	COP [-]	2,84	2,54	2,27	2,03	1,81	1,61	1,42	1,23
	m [kg/h]	914	742	596	471	366	278	203	141,3
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	81,1	87,5	94,3	101,7	109,8	119,0	129,8	0
50°C	Q [W]	--	21476	17284	13660	10547	7890	5642	3758
	Qu* [W]	--	21476	17284	13660	10547	7890	5642	3758
	P [kW]	--	11,26	10,04	8,80	7,53	6,28	5,05	3,88
	I [A]	--	19,13	17,31	15,46	13,62	11,86	10,27	8,90
	Qc [W]	--	32733	27329	22456	18078	14166	10693	7637
	COP [-]	--	1,91	1,72	1,55	1,40	1,26	1,12	0,97
	m [kg/h]	--	695	554	434	332	247	175,6	116,4
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	--	98,7	105,7	113,2	121,4	130,5	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% 4PCS-10.2



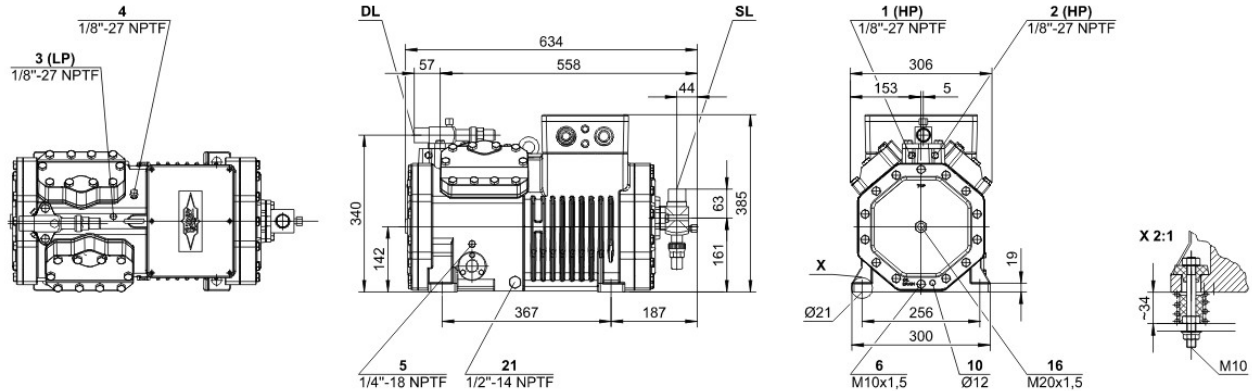
Legend

-  additional cooling & suction gas superheat $\leq 20K$
-  additional cooling or max. $t_{oh} < 0^\circ C$
-  M1: motor 1
-  M2: motor 2
-  A



Technical Data: (4PCS-10.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	48,50 m ³ /h
Displacement (1750 RPM 60Hz)	58,53 m ³ /h
No. of cylinder x bore x stroke	4 x 65 mm x 42 mm
Weight	139 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	35 mm - 1 3/8"
Connection discharge line	28 mm - 1 1/8"
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	21.0 A
Winding ratio	50/50
Starting current (Rotor locked)	59.0 A Y / 99.0 A YY
Max. Power input	11,7 kW

Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	2,60 dm ³

Available Options

Connection suction line	Option
Discharge shut-off valve	Option
Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
CIC System	Option
Oil service valve	Option
Crankcase heater	0..140 W PTC (Option)
Oil level monitoring	OLC-K1 (Option, not for R290/R1270)

Sound measurement

Sound power level (-10°C / 45°C)	76,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	81,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	68,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	73,0 dB(A) @ 50Hz



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4PCS-15.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	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

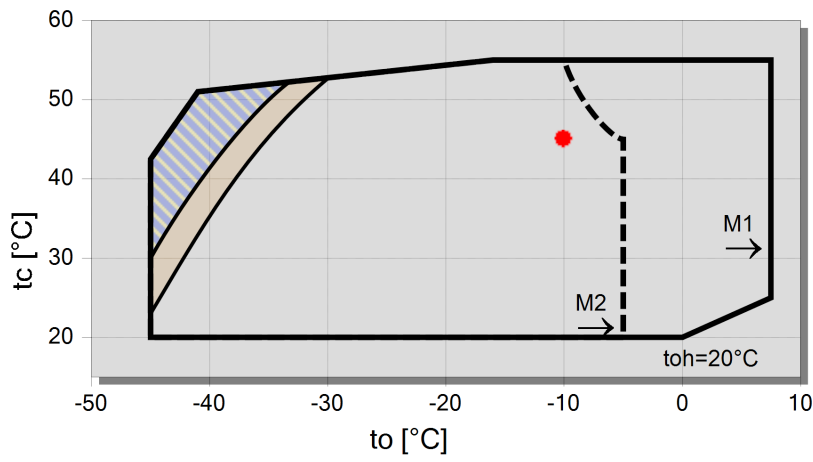
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C
30°C	Q [W]	47117	39065	32077	26027	20807	16323	12493	9242
	Qu* [W]	47117	39065	32077	26027	20807	16323	12493	9242
	P [kW]	9,96	9,58	9,06	8,43	7,70	6,90	6,04	5,14
	I [A]	18,27	17,75	17,06	16,24	15,33	14,38	13,43	12,52
	Qc [W]	57078	48646	41141	34457	28508	23220	18530	14383
	COP [-]	4,73	4,08	3,54	3,09	2,70	2,37	2,07	1,80
	m [kg/h]	1198	981	798	642	510	397	303	223
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	61,6	67,8	74,4	81,3	88,8	97,1	106,3	117,2
40°C	Q [W]	39958	33063	27064	21858	17361	13494	10190	7385
	Qu* [W]	39958	33063	27064	21858	17361	13494	10190	7385
	P [kW]	11,51	10,79	9,99	9,11	8,18	7,19	6,17	5,13
	I [A]	20,5	19,43	18,31	17,13	15,92	14,72	13,57	12,51
	Qc [W]	51468	43854	37050	30970	25537	20688	16363	12514
	COP [-]	3,47	3,06	2,71	2,40	2,12	1,88	1,65	1,44
	m [kg/h]	1146	936	758	606	478	369	277	199,8
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	72,1	78,2	84,6	91,5	99,1	107,5	117,2	128,5
50°C	Q [W]	32481	26762	21770	17432	13680	10456	7704	5376
	Qu* [W]	32481	26762	21770	17432	13680	10456	7704	5376
	P [kW]	12,78	11,73	10,66	9,55	8,43	7,28	6,11	4,94
	I [A]	22,3	20,8	19,24	17,72	16,24	14,83	13,51	12,33
	Qc [W]	45257	38495	32428	26986	22107	17735	13819	10312
	COP [-]	2,54	2,28	2,04	1,82	1,62	1,44	1,26	1,09
	m [kg/h]	1082	878	705	558	434	329	241	167,3
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	83,0	89,0	95,5	102,6	110,5	119,6	130,4	0






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

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

Application Limits 100% 4PCS-15.2



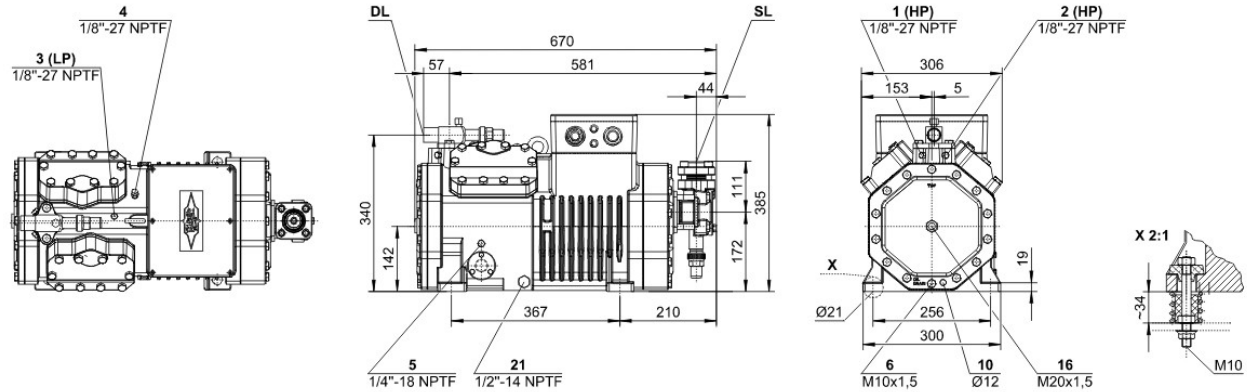
Legend

-  additional cooling & suction gas superheat $\leq 20K$
-  additional cooling or max. toh $< 0^\circ C$
-  M1: motor 1
-  M2: motor 2
-  A



Technical Data: (4PCS-15.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	48,50 m ³ /h
Displacement (1750 RPM 60Hz)	58,53 m ³ /h
No. of cylinder x bore x stroke	4 x 65 mm x 42 mm
Weight	142 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	28 mm - 1 1/8"
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	31.0 A
Winding ratio	50/50
Starting current (Rotor locked)	81.0 A Y / 132.0 A YY
Max. Power input	16,3 kW

Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	2,60 dm ³

Available Options

Connection suction line	Option
Discharge shut-off valve	Option
Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Oil service valve	Option
Crankcase heater	0..140 W PTC (Option)
Oil level monitoring	OLC-K1 (Option, not for R290/R1270)

Sound measurement

Sound power level (+5°C / 50°C)	75,5 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	76,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	(81,0) dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	67,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	68,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	(73,0) dB(A) @ 50Hz



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	4PES-12Y	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	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

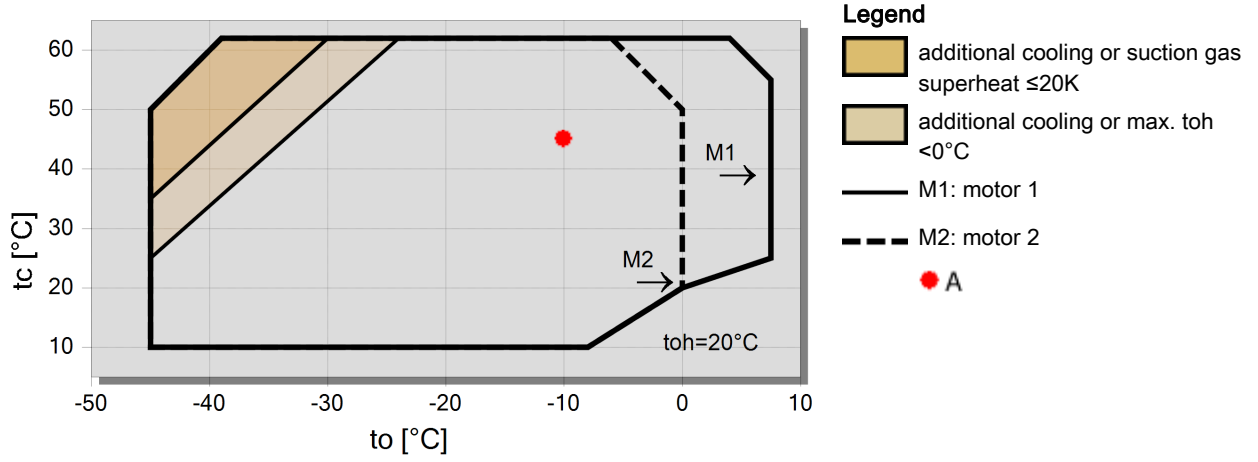
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C
30°C	Q [W]	47236	38866	31666	25497	20241	15794	12063	8966
	Qu* [W]	47236	38866	31666	25497	20241	15794	12063	8966
	P [kW]	9,76	9,36	8,80	8,12	7,35	6,52	5,65	4,79
	I [A]	16,88	16,28	15,46	14,46	13,36	12,19	11,03	9,94
	Qc [W]	57000	48224	40467	33619	27592	22313	17718	13754
	COP [-]	4,84	4,15	3,60	3,14	2,75	2,42	2,13	1,87
	m [kg/h]	1201	976	788	629	496	385	292	216
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	61,0	67,2	73,8	80,6	87,9	95,8	104,4	114,2
40°C	Q [W]	39905	32680	26463	21141	16616	12798	9609	6976
	Qu* [W]	39905	32680	26463	21141	16616	12798	9609	6976
	P [kW]	11,48	10,72	9,85	8,88	7,86	6,81	5,76	4,74
	I [A]	19,45	18,31	17,01	15,58	14,09	12,60	11,17	9,88
	Qc [W]	51386	43402	36310	30026	24479	19610	15369	11712
	COP [-]	3,48	3,05	2,69	2,38	2,11	1,88	1,67	1,47
	m [kg/h]	1145	925	741	586	457	350	261	188,7
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	72,1	78,4	85,0	91,9	99,4	107,5	116,4	126,7
50°C	Q [W]	32441	26415	21226	16788	13022	9856	7224	5066
	Qu* [W]	32441	26415	21226	16788	13022	9856	7224	5066
	P [kW]	12,88	11,79	10,61	9,39	8,14	6,89	5,67	4,50
	I [A]	21,6	19,92	18,15	16,32	14,48	12,70	11,05	9,60
	Qc [W]	45323	38203	31841	26176	21158	16742	12890	9568
	COP [-]	2,52	2,24	2,00	1,79	1,60	1,43	1,28	1,13
	m [kg/h]	1080	866	687	538	413	310	226	157,7
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	83,4	89,7	96,4	103,6	111,3	119,8	129,4	0

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

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

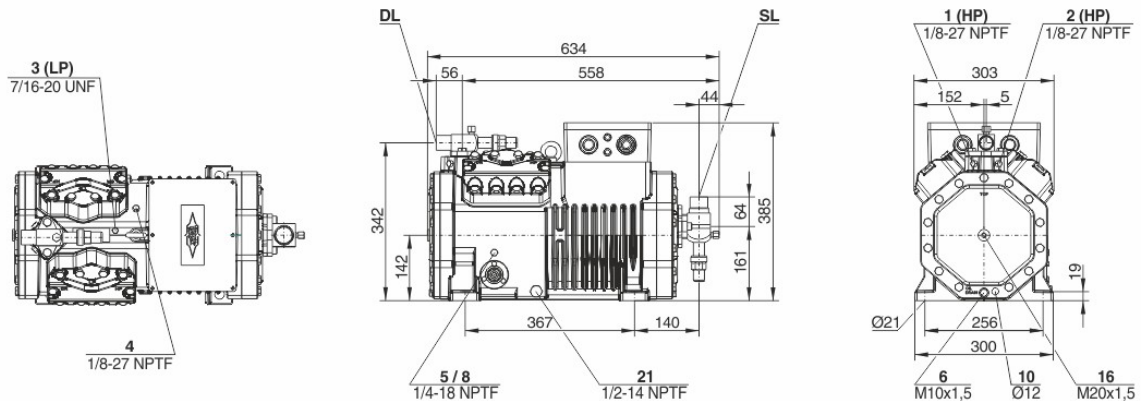
Application Limits 100% 4PES-12





Technical Data: 4PES-12Y

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	48,50 m ³ /h
Displacement (1750 RPM 60Hz)	58,53 m ³ /h
No. of cylinder x bore x stroke	4 x 65 mm x 42 mm
Weight	145 kg
Max. pressure (LP/HP)	19 / 32 bar
Connection suction line	35 mm - 1 3/8"
Connection discharge line	28 mm - 1 1/8"
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	22.7 A
Winding ratio	50/50
Starting current (Rotor locked)	59.0 A Y / 99.0 A YY
Max. Power input	14,0 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)

76,3 dB(A) @50Hz

Sound power level (-35°C / 40°C)

79,9 dB(A) @50Hz

Sound pressure level @ 1m (-10°C / 45°C)

68,3 dB(A) @50Hz

Sound pressure level @ 1m (-35°C / 40°C)

71,9 dB(A) @50Hz

Sound power level (-10°C / 45°C) R134a

74,3 dB(A) @50Hz

Sound pressure level @ 1m (-10°C / 45°C) R134a

66,3 dB(A) @50Hz