



Bitzer 4DC-5.2

BITZER Software v6.4.3 rev1353

11.06.2015 / All data subject to change.

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Compressor 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

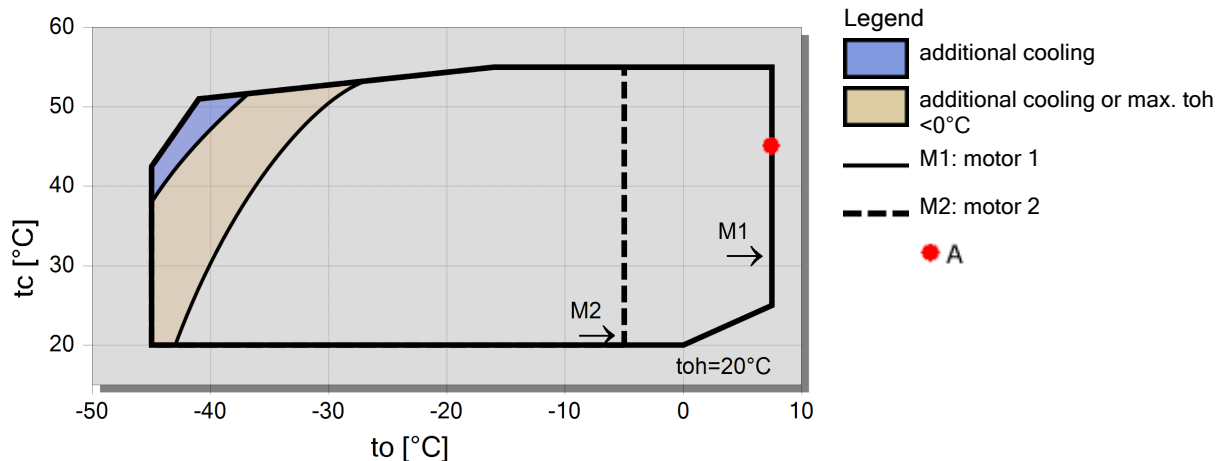
Q [W]	Cooling capacity	COP [-]	COP/EER
Q* [W]	Cooling capacity *	COP* [-]	COP/EER *
P [kW]	Power input	m [kg/h]	Mass flow
I [A]	Current	Op.	Operating mode
Qc [W]	Condenser Capacity	th [°C]	Discharge gas temp. w/o cooling

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	21119	17422	14223	11466	9100	7081	5369	3930
	Q* [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
	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	3014
	Q* [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
	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	2188
	Q* [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
	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)

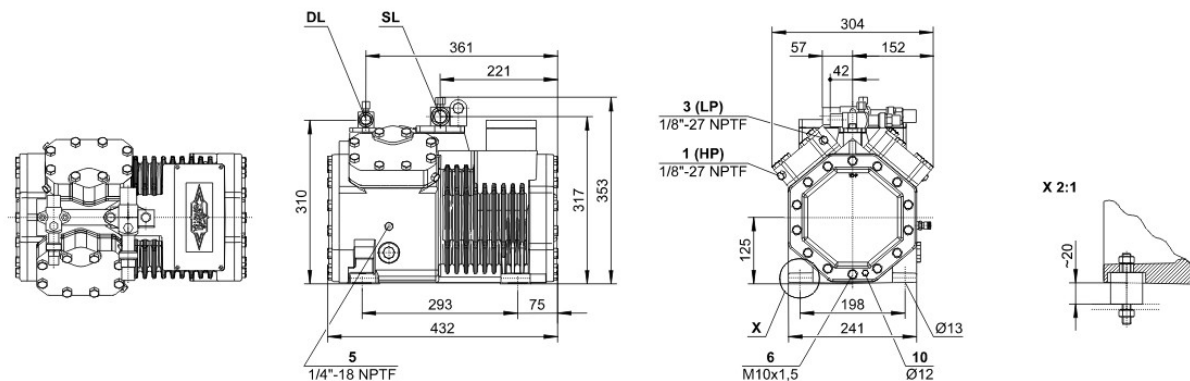
Application Limits 100% Octagon





Technical Data: (4DC-5.2Y)

Dimensions and Connections



Technical Data

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Displacement (1450 RPM 50Hz)	26,84 m ³ /h
Displacement (1750 RPM 60Hz)	32,39 m ³ /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



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(2CC-3.2Y)	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]	12468	10290	8404	6779	5384	4193	3184	2334
	Qu* [W]	12468	10290	8404	6779	5384	4193	3184	2334
	P [kW]	3,33	3,15	2,95	2,72	2,48	2,21	1,93	1,64
	I [A]	6,15	5,91	5,64	5,35	5,04	4,72	4,41	4,12
	Qc [W]	15795	13442	11354	9502	7859	6404	5116	3977
	COP [-]	3,75	3,26	2,85	2,49	2,17	1,90	1,65	1,42
	m [kg/h]	313	256	207	166,0	131,1	101,6	76,8	56,1
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	70,7	77,5	85,0	93,1	102,2	112,3	124,1	138,0
40°C	Q [W]	10508	8649	7036	5642	4443	3418	2548	1814
	Qu* [W]	10508	8649	7036	5642	4443	3418	2548	1814
	P [kW]	3,85	3,58	3,29	2,98	2,65	2,32	1,97	1,62
	I [A]	6,88	6,50	6,10	5,68	5,26	4,85	4,45	4,10
	Qc [W]	14363	12232	10326	8621	7096	5734	4518	3434
	COP [-]	2,73	2,41	2,14	1,89	1,67	1,48	1,29	1,12
	m [kg/h]	297	242	195,1	155,2	121,4	92,9	68,9	48,9
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	82,7	89,7	97,4	105,8	115,1	125,6	137,9	0
50°C	Q [W]	8594	7053	5711	4548	3544	2685	1954	1336
	Qu* [W]	8594	7053	5711	4548	3544	2685	1954	1336
	P [kW]	4,35	3,98	3,60	3,21	2,80	2,39	1,98	1,57
	I [A]	7,60	7,07	6,53	5,98	5,45	4,94	4,47	4,06
	Qc [W]	12942	11035	9311	7753	6347	5079	3937	2910
	COP [-]	1,98	1,77	1,59	1,42	1,26	1,12	0,98	0,85
	m [kg/h]	282	228	182,9	144,3	111,6	84,0	60,8	41,4
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	95,2	102,5	110,4	119,2	128,9	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% Octagon

