



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4TCS-8.2Y)	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	-15°C	-25°C	-35°C	-45°C	-55°C	-65°C	-75°C
30°C	Q [W]	33051	22218	14166	8302	4150	--	--	--
	Qu* [W]	33051	22218	14166	8302	4150			
	P [kW]	8,74	7,55	6,16	4,64	3,07			
	I [A]	14,96	13,14	11,07	8,94	6,99			
	Qc [W]	41789	29766	20326	12947	7223			
	COP [-]	3,78	2,94	2,30	1,79	1,35			
	m [kg/h]	830	548	345	200	99,5			
	Op.	Standard	Standard	Standard	Standard	Standard			
	th [°C]	70,3	83,5	98,8	117,6	0			
40°C	Q [W]	27759	18477	11559	6520	2959	--	--	--
	Qu* [W]	27759	18477	11559	6520	2959			
	P [kW]	9,86	8,20	6,46	4,66	2,81			
	I [A]	16,69	14,14	11,52	8,96	6,70			
	Qc [W]	37624	26680	18020	11178	5773			
	COP [-]	2,81	2,25	1,79	1,40	1,05			
	m [kg/h]	786	512	316	176,4	79,5			
	Op.	Standard	Standard	Standard	Standard	Standard			
	th [°C]	81,4	94,7	110,6	130,9	0			
50°C	Q [W]	--	14792	9065	4879	--	--	--	--
	Qu* [W]		14792	9065	4879				
	P [kW]		8,71	6,65	4,55				
	I [A]		14,91	11,80	8,81				
	Qc [W]		23498	15715	9430				
	COP [-]		1,70	1,36	1,07				
	m [kg/h]		474	285	151,8				
	Op.		Standard	Standard	Standard				
	th [°C]		106,4	123,3	0				






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

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

Application Limits 100% 4TCS-8.2



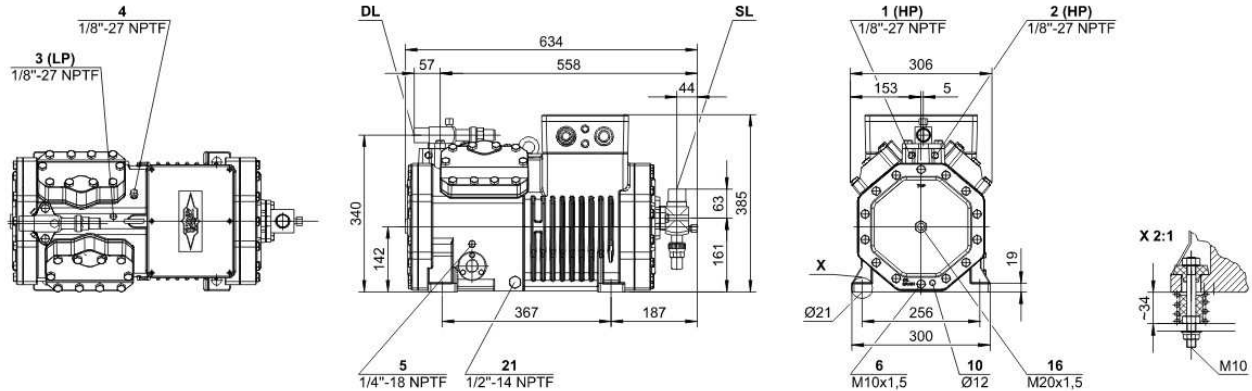
Legend

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



Technical Data: (4TCS-8.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	41,33 m ³ /h
Displacement (1750 RPM 60Hz)	49,88 m ³ /h
No. of cylinder x bore x stroke	4 x 60 mm x 42 mm
Weight	134 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	17.0 A
Winding ratio	50/50
Starting current (Rotor locked)	49.0 A Y / 81.0 A YY
Max. Power input	10.3 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
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)	74,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	79,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	66,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	71,0 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

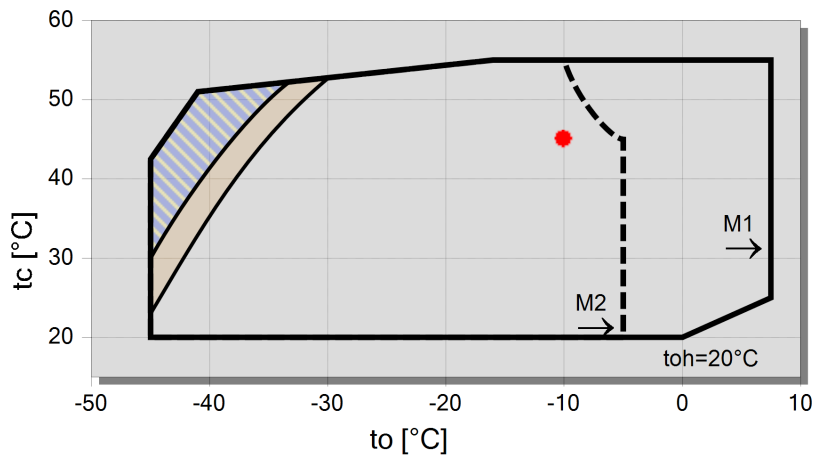
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	10°C	0°C	-10°C	-20°C	-30°C	-40°C	-50°C	-60°C
30°C	Q [W]	--	47117	32077	20807	12493	6501	--	--
	Qu* [W]		47117	32077	20807	12493	6501		
	P [kW]		9,96	9,06	7,70	6,04	4,23		
	I [A]		18,27	17,06	15,33	13,43	11,70		
	Qc [W]		57078	41141	28508	18530	10731		
	COP [-]		4,73	3,54	2,70	2,07	1,54		
	m [kg/h]		1198	798	510	303	156,3		
	Op.		Standard	Standard	Standard	Standard	Standard		
	th [°C]		61,6	74,4	88,8	106,3	130,8		
40°C	Q [W]	--	39958	27064	17361	10190	5023	--	--
	Qu* [W]		39958	27064	17361	10190	5023		
	P [kW]		11,51	9,99	8,18	6,17	4,07		
	I [A]		20,5	18,31	15,92	13,57	11,56		
	Qc [W]		51468	37050	25537	16363	9092		
	COP [-]		3,47	2,71	2,12	1,65	1,23		
	m [kg/h]		1146	758	478	277	135,3		
	Op.		Standard	Standard	Standard	Standard	Standard		
	th [°C]		72,1	84,6	99,1	117,2	0		
50°C	Q [W]	--	32481	21770	13680	7704	3422	--	--
	Qu* [W]		32481	21770	13680	7704	3422		
	P [kW]		12,78	10,66	8,43	6,11	3,75		
	I [A]		22,3	19,24	16,24	13,51	11,30		
	Qc [W]		45257	32428	22107	13819	7171		
	COP [-]		2,54	2,04	1,62	1,26	0,91		
	m [kg/h]		1082	705	434	241	106,0		
	Op.		Standard	Standard	Standard	Standard	Standard		
	th [°C]		83,0	95,5	110,5	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



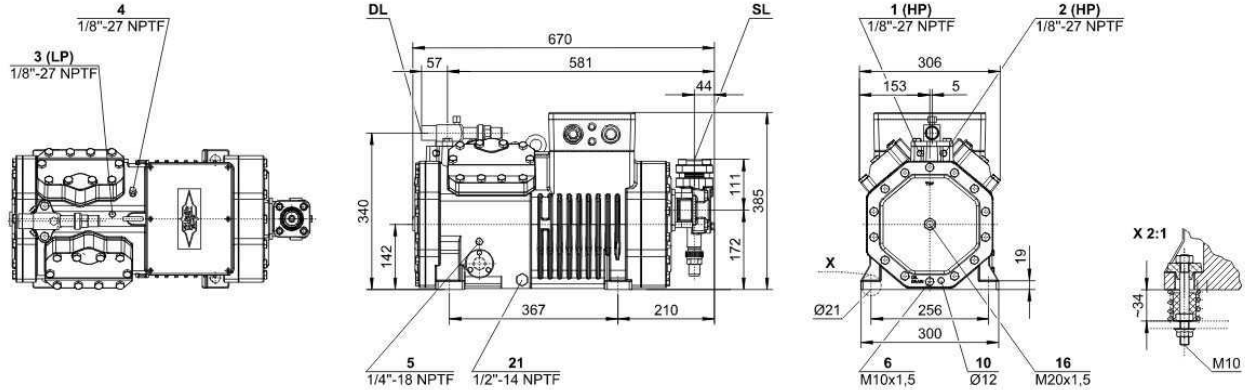
Legend

-  additional cooling & suction gas superheat $\leq 20K$
-  additional cooling or max. $t_{oh} < 0^\circ C$
-  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	(4FC-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

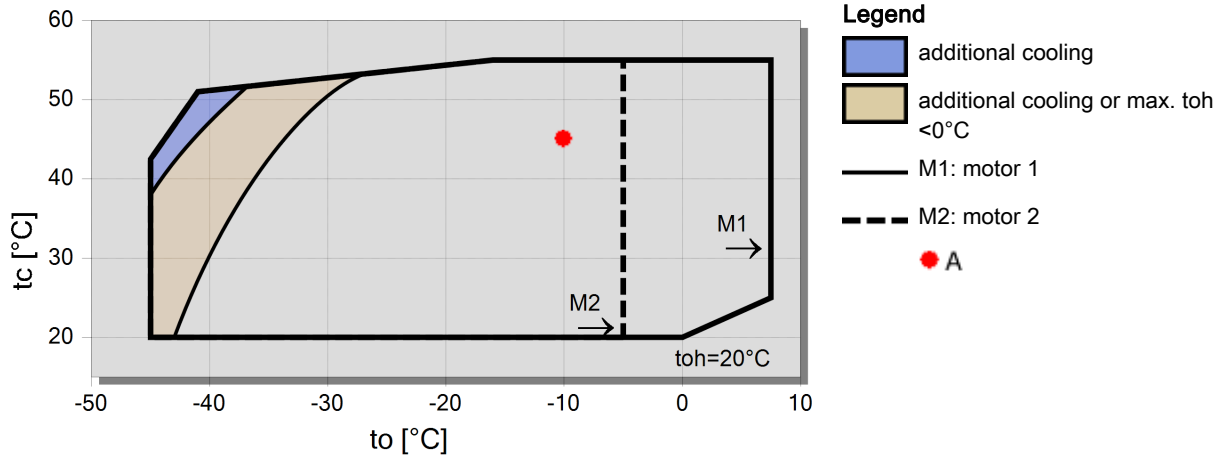
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-5°C	-15°C	-25°C	-35°C	-45°C	-55°C	-65°C	-75°C
30°C	Q [W]	13721	9257	5936	3515	1796	--	--	--
	Qu* [W]	13721	9257	5936	3515	1796			
	P [kW]	3,85	3,44	2,90	2,24	1,50			
	I [A]	6,95	6,40	5,71	4,98	4,34			
	Qc [W]	17568	12695	8833	5759	3297			
	COP [-]	3,57	2,69	2,05	1,57	1,20			
	m [kg/h]	345	228	144,5	84,8	43,1			
	Op.	Standard	Standard	Standard	Standard	Standard			
	th [°C]	72,4	87,7	106,0	128,4	0			
40°C	Q [W]	11564	7739	4882	2792	1306	--	--	--
	Qu* [W]	11564	7739	4882	2792	1306			
	P [kW]	4,42	3,76	3,03	2,23	1,40			
	I [A]	7,76	6,84	5,87	4,97	4,27			
	Qc [W]	15981	11502	7908	5023	2707			
	COP [-]	2,62	2,06	1,61	1,25	0,93			
	m [kg/h]	327	215	133,4	75,5	35,1			
	Op.	Standard	Standard	Standard	Standard	Standard			
	th [°C]	84,3	99,5	117,7	0	0			
50°C	Q [W]	9451	6256	3859	2106	--	--	--	--
	Qu* [W]	9451	6256	3859	2106				
	P [kW]	4,91	4,04	3,13	2,22				
	I [A]	8,48	7,22	6,00	4,95				
	Qc [W]	14363	10294	6991	4324				
	COP [-]	1,92	1,55	1,23	0,95				
	m [kg/h]	310	200	121,5	65,5				
	Op.	Standard	Standard	Standard	Standard				
	th [°C]	96,5	111,9	131,0	0				

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

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

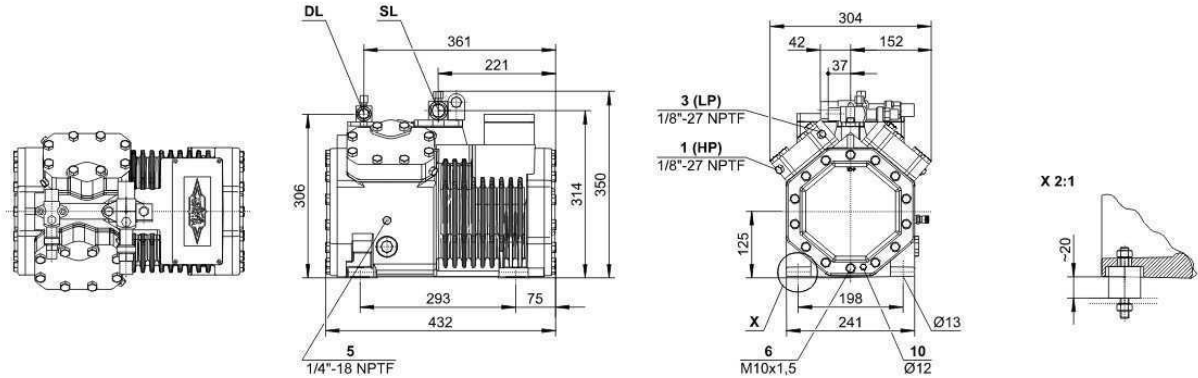
Application Limits 100% Octagon 4FC-3.2





Technical Data: (4FC-3.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	18,05 m ³ /h
Displacement (1750 RPM 60Hz)	21,78 m ³ /h
No. of cylinder x bore x stroke	4 x 41 mm x 39,3 mm
Weight	82 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	22 mm - 7/8"
Connection discharge line	16 mm - 5/8"
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	9.2 A
Starting current (Rotor locked)	44.2 A
Max. Power input	5.4 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)	67,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	70,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	59,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	62,0 dB(A) @ 50Hz