Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4H-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%

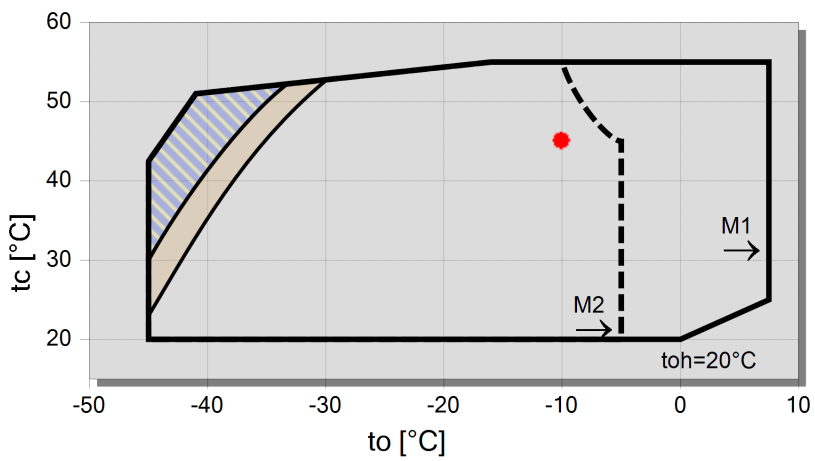
Result

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]	--	58417	48362	39660	32155	25712	20213	15549
	Qu* [W]		58417	48362	39660	32155	25712	20213	15549
	P [kW]		15,76	14,83	13,78	12,62	11,39	10,09	8,77
	I [A]		26,9	25,4	23,8	22,1	20,3	18,45	16,67
	Qc [W]		74180	63195	53438	44777	37100	30307	24314
	COP [-]		3,71	3,26	2,88	2,55	2,26	2,00	1,77
	m [kg/h]		1468	1203	978	788	626	490	375
	Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]		71,0	77,6	84,5	91,9	99,9	108,6	118,2
40°C	Q [W]	--	49793	41118	33591	27086	21493	16712	12652
	Qu* [W]		49793	41118	33591	27086	21493	16712	12652
	P [kW]		18,14	16,78	15,33	13,81	12,24	10,64	9,04
	I [A]		30,6	28,5	26,2	23,9	21,5	19,22	17,04
	Qc [W]		67934	57900	48922	40895	33732	27355	21695
	COP [-]		2,74	2,45	2,19	1,96	1,76	1,57	1,40
	m [kg/h]		1410	1151	932	745	587	454	342
	Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]		82,4	89,0	96,1	103,6	111,8	120,8	130,9
50°C	Q [W]	--	--	33906	27553	22051	17313	13259	9816
	Qu* [W]			33906	27553	22051	17313	13259	9816
	P [kW]			18,49	16,66	14,79	12,90	11,02	9,16
	I [A]			31,1	28,3	25,4	22,5	19,75	17,20
	Qc [W]			52395	44211	36839	30213	24278	18981
	COP [-]			1,83	1,65	1,49	1,34	1,20	1,07
	m [kg/h]			1098	882	700	545	415	306
	Op.			Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]			100,7	108,0	115,8	124,4	134,1	0

-- No calculation possible (see message in single point selection)
*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits 100% 4H-15.2

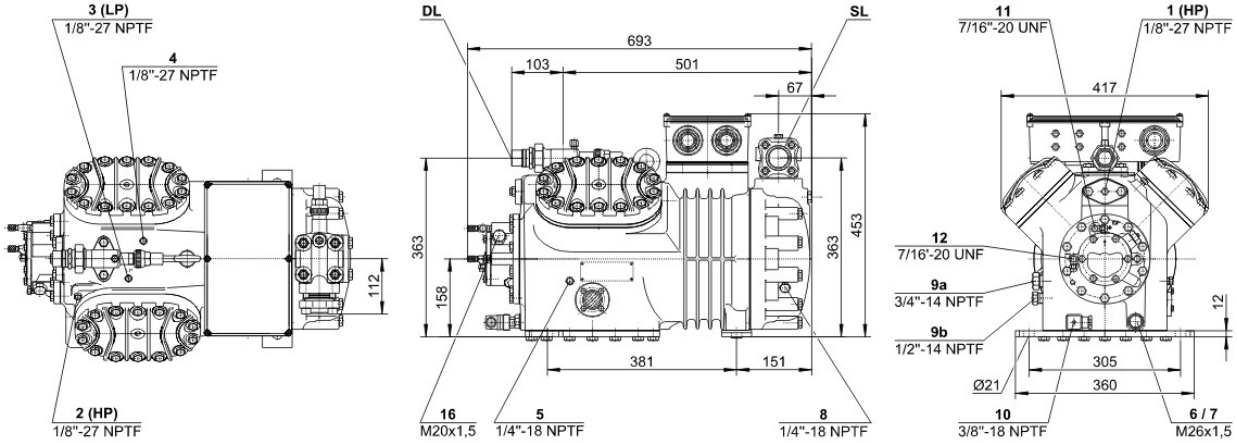


Legend

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

Technical Data: (4H-15.2Y)

Dimensions and Connections



Technical Data

Technical Data	
Displacement (1450 RPM 50Hz)	73,6 m³/h
Displacement (1750 RPM 60Hz)	88,83 m³/h
No. of cylinder x bore x stroke	4 x 70 mm x 55 mm
Weight	183 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	28 mm - 1 1/8"
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	31.0 A
Winding ratio	50/50
Starting current (Rotor locked)	81.0 A Y / 132.0 A YY
Max. Power input	19,3 kW
Extent of delivery (Standard)	
Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,00 dm³
Available Options	
Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (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-PII (Option, not for R290/R1270)
Sound measurement	
Sound power level (-10°C / 45°C)	78,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	81,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	70,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	73,0 dB(A) @ 50Hz

Semi-hermetic Reciprocating Compressors

Motor 1 = e.g. 4TES-12 with 12"HP", primary for air-conditioning (e.g. R22,R407C) and air-conditioning with R134a at high ambient temperatures.
Motor 2 = e.g. 4TES-9 with 8"HP", universal Motor for medium and low temperature application (e.g. R404A, R507A, R407A, R407F) and air-conditioning with R134a
Motor 3 = e.g. 4TES-8, for medium temperature applications and R134a

For more information concerning the application range use the "Limits" button.

Operation modes 4VES-7 to 6FE-44 and 44JE-30 to 66FE-88 with R407F/R407A/R22

CIC = liquid injection with low temperature application, suction gas cooled motor.

ASERCOM certified performance data

The Association of European Refrigeration Component Manufacturers has implemented a procedure of certifying performance data. The high standard of these certifications is assured by:

* plausibility tests of the data performed by experts.

* regular measurements at independent institutes.

These high efforts result in the fact that only a limited number of compressors can be submitted. Due to this not all BITZER compresors are certified until now. Performance data of compressors which fulfil the strict requirements may carry the label "ASERCOM certified". In this software you will find the label at the respective compressors on the right side below the field "result" or in the print out of the performance data. All certified compressors and further information are listed on the homepage of ASERCOM.

Condensing capacity

The condensing capacity can be calculated with or without heat rejection. This option can be set in the menu Program ☐ Options. The heat rejection is constantly 5 % of the power consumption. The condensing capacity is to be found in the line Condensing cap. (with HR) resp. Condensing capacity.

Data for sound emission

Data based on 50 HZ apllication (IP-units 60 Hz) and R404A if not declared.
Sound pressure level: values based on free field area conditions with hemisperhical sound emission in 1 meter distance.

General remarks regarding sound data

Listed sound data were measured under testing conditions in our laboratory. For this purpose the free-standing test sample is mounted on a solid foundation plate and the pipework is connected vibration-free to the largest extend possible. Suction and discharge lines are fixed in a flexible configuration, such that a transmission of vibrations to the environment can be largely excluded. In real installations considerable differences might be observed, compared to the measurements in the laboratory. The airborne sound emitted by the compressor can be reflected from surfaces of the system and this may increase the airborne sound level measured close to the compressor. Vibrations caused by the compressor are also transferred to the system by the compressor feet and piping depending on the damping ratio of the fixings. Thus, the vibrations can induce other components to such an extent that these components contribute to an increase in airborne sound emission. If required, the transfer of vibrations to the system can be minimized by suitable fixing and damping elements.

Legend of connection positions according to "Dimensions":

1 High pressure connection (HP)
2 Connection for discharge gas temperature sensor (HP) (for 4VE(S)-6Y .. 4NE(S)-20(Y) connection for CIC sensor as alternative)
3 Low pressure connection (LP)
4 CIC system: injection nozzle (LP)
4b Connection for CIC sensor
4c Connection for CIC sensor (MP / operation with liquid subcooler)
5 Oil fill plug
6 Oil drain
7 Oil filter (magnetic screw)
8 Oil return (oil separator)
8* Oil return with NH3 and insoluble oil
9 Connection for oil and gas equalization (parallel operation)
9a Connection for gas equalization (parallel operation)

9b Connection for oil equalization (parallel operation)
10 Oil heater connection
11 Oil pressure connection +
12 Oil pressure connection –
13 Cooling water connection
14 Intermediate pressure connection (MP)
15 Liquid injection (operation without liquid subcooler and with thermostatic expansion valve)
16 Connection for oil monitoring (opto-electrical oil monitoring "OLC-K1" or differential oil pressure switch "Delta-PII")
17 Refrigerant inlet at liquid subcooler
18 Referigerant outlet at liquid subcooler
19 Clamp space
20 Terminal plate
21 Maintenance connection for oil valve
22 Pressure relief valve to the atmosphere (discharge side)
23 Pressure relief valve to the atmosphere (suction side)
24 IQ MODULE
SL Suction gas line
DL Discharge gas line
Dimensions can show tolerances according to EN ISO 13920-B.

Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4H-25.2Y)	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%

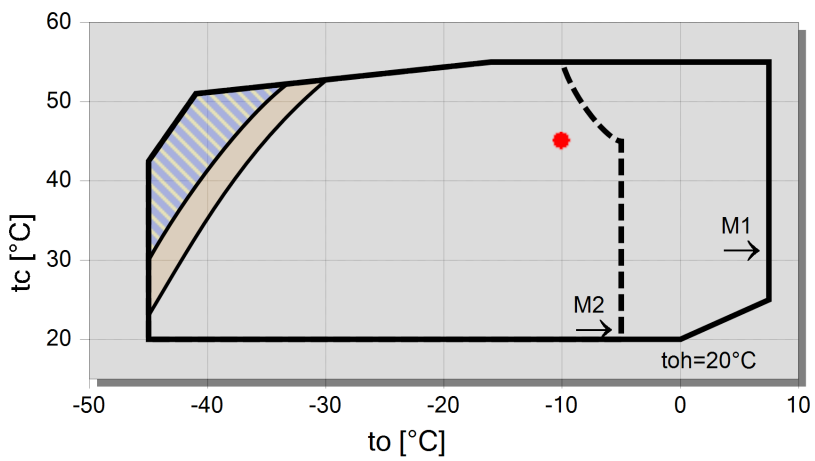
Result

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]	57888	47717	38909	31307	24775	19192	14449	10448
	Qu* [W]	57888	47717	38909	31307	24775	19192	14449	10448
	P [kW]	15,13	14,35	13,40	12,31	11,10	9,80	8,45	7,07
	I [A]	27,2	26,1	24,8	23,4	21,9	20,4	18,86	17,46
	Qc [W]	73017	62068	52309	43613	35873	28996	22902	17520
	COP [-]	3,83	3,33	2,90	2,54	2,23	1,96	1,71	1,48
	m [kg/h]	1454	1187	960	767	603	465	349	251
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	69,9	76,8	84,1	92,0	100,5	110,1	121,1	134,3
40°C	Q [W]	49364	40602	32996	26418	20757	15912	11792	8314
	Qu* [W]	49364	40602	32996	26418	20757	15912	11792	8314
	P [kW]	17,31	16,10	14,75	13,30	11,77	10,19	8,59	7,00
	I [A]	30,3	28,6	26,7	24,7	22,7	20,8	19,00	17,39
	Qc [W]	66670	56698	47747	39717	32526	26102	20382	15311
	COP [-]	2,85	2,52	2,24	1,99	1,76	1,56	1,37	1,19
	m [kg/h]	1397	1137	915	727	567	432	319	224
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	80,8	87,7	95,0	102,9	111,5	121,2	132,6	0
50°C	Q [W]	40984	33598	27172	21608	16820	12727	9253	6330
	Qu* [W]	40984	33598	27172	21608	16820	12727	9253	6330
	P [kW]	19,32	17,69	15,96	14,17	12,33	10,48	8,64	6,85
	I [A]	33,3	30,9	28,4	25,9	23,4	21,1	19,06	17,25
	Qc [W]	60302	51289	43137	35777	29150	23205	17895	13181
	COP [-]	2,12	1,90	1,70	1,53	1,36	1,21	1,07	0,92
	m [kg/h]	1344	1088	870	686	530	398	288	196,1
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	92,0	98,9	106,3	114,4	123,2	133,3	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% 4H-25.2

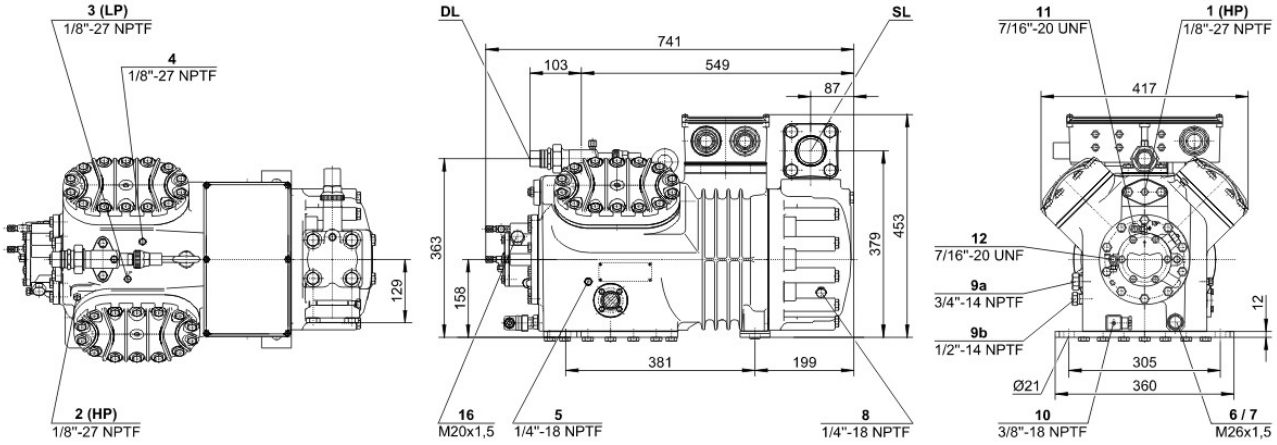


Legend

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

Technical Data: (4H-25.2Y)

Dimensions and Connections



Technical Data

Technical Data	
Displacement (1450 RPM 50Hz)	73,6 m³/h
Displacement (1750 RPM 60Hz)	88,83 m³/h
No. of cylinder x bore x stroke	4 x 70 mm x 55 mm
Weight	203 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	54 mm - 2 1/8"
Connection discharge line	28 mm - 1 1/8"
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	45.0 A
Winding ratio	50/50
Starting current (Rotor locked)	116.0 A Y / 193.0 A YY
Max. Power input	24,9 kW
Extent of delivery (Standard)	
Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,50 dm³
Available Options	
Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)
Sound measurement	
Sound power level (+5°C / 50°C)	77,5 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	78,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	(81,0) dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	69,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	70,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	(73,0) dB(A) @ 50Hz

Semi-hermetic Reciprocating Compressors

Motor 1 = e.g. 4TES-12 with 12"HP", primary for air-conditioning (e.g. R22,R407C) and air-conditioning with R134a at high ambient temperatures.
Motor 2 = e.g. 4TES-9 with 8"HP", universal Motor for medium and low temperature application (e.g. R404A, R507A, R407A, R407F) and air-conditioning with R134a
Motor 3 = e.g. 4TES-8, for medium temperature applications and R134a

For more information concerning the application range use the "Limits" button.

Operation modes 4VES-7 to 6FE-44 and 44JE-30 to 66FE-88 with R407F/R407A/R22

CIC = liquid injection with low temperature application, suction gas cooled motor.

ASERCOM certified performance data

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* plausibility tests of the data performed by experts.

* regular measurements at independent institutes.

These high efforts result in the fact that only a limited number of compressors can be submitted. Due to this not all BITZER compresors are certified until now. Performance data of compressors which fulfil the strict requirements may carry the label "ASERCOM certified". In this software you will find the label at the respective compressors on the right side below the field "result" or in the print out of the performance data. All certified compressors and further information are listed on the homepage of ASERCOM.

Condensing capacity

The condensing capacity can be calculated with or without heat rejection. This option can be set in the menu Program ☐ Options. The heat rejection is constantly 5 % of the power consumption. The condensing capacity is to be found in the line Condensing cap. (with HR) resp. Condensing capacity.

Data for sound emission

Data based on 50 HZ apllication (IP-units 60 Hz) and R404A if not declared.
Sound pressure level: values based on free field area conditions with hemisperhical sound emission in 1 meter distance.

General remarks regarding sound data

Listed sound data were measured under testing conditions in our laboratory. For this purpose the free-standing test sample is mounted on a solid foundation plate and the pipework is connected vibration-free to the largest extend possible. Suction and discharge lines are fixed in a flexible configuration, such that a transmission of vibrations to the environment can be largely excluded. In real installations considerable differences might be observed, compared to the measurements in the laboratory. The airborne sound emitted by the compressor can be reflected from surfaces of the system and this may increase the airborne sound level measured close to the compressor. Vibrations caused by the compressor are also transferred to the system by the compressor feet and piping depending on the damping ratio of the fixings. Thus, the vibrations can induce other components to such an extent that these components contribute to an increase in airborne sound emission. If required, the transfer of vibrations to the system can be minimized by suitable fixing and damping elements.

Legend of connection positions according to "Dimensions":

1 High pressure connection (HP)
2 Connection for discharge gas temperature sensor (HP) (for 4VE(S)-6Y .. 4NE(S)-20(Y) connection for CIC sensor as alternative)
3 Low pressure connection (LP)
4 CIC system: injection nozzle (LP)
4b Connection for CIC sensor
4c Connection for CIC sensor (MP / operation with liquid subcooler)
5 Oil fill plug
6 Oil drain
7 Oil filter (magnetic screw)
8 Oil return (oil separator)
8* Oil return with NH3 and insoluble oil
9 Connection for oil and gas equalization (parallel operation)
9a Connection for gas equalization (parallel operation)

9b Connection for oil equalization (parallel operation)
10 Oil heater connection
11 Oil pressure connection +
12 Oil pressure connection –
13 Cooling water connection
14 Intermediate pressure connection (MP)
15 Liquid injection (operation without liquid subcooler and with thermostatic expansion valve)
16 Connection for oil monitoring (opto-electrical oil monitoring "OLC-K1" or differential oil pressure switch "Delta-PII")
17 Refrigerant inlet at liquid subcooler
18 Referigerant outlet at liquid subcooler
19 Clamp space
20 Terminal plate
21 Maintenance connection for oil valve
22 Pressure relief valve to the atmosphere (discharge side)
23 Pressure relief valve to the atmosphere (suction side)
24 IQ MODULE
SL Suction gas line
DL Discharge gas line
Dimensions can show tolerances according to EN ISO 13920-B.

Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4NCS-12.2Y)	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%

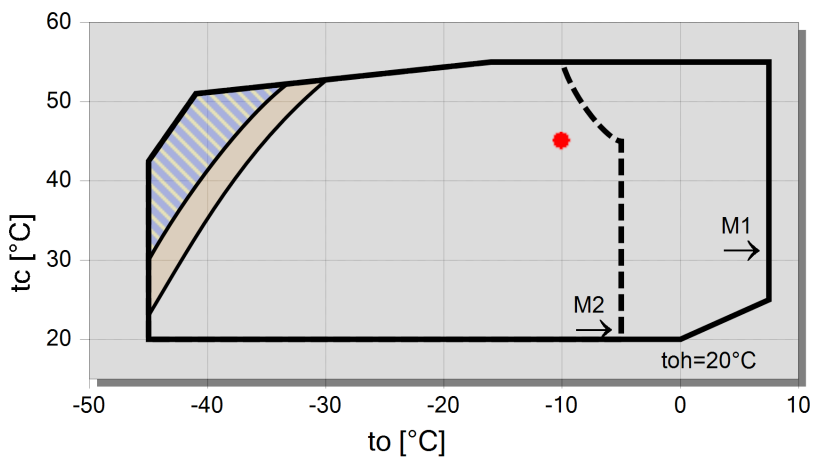
Result

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]	43999	36251	29547	23768	18810	14580	10995	7980
	Qu* [W]	43999	36251	29547	23768	18810	14580	10995	7980
	P [kW]	11,88	11,15	10,30	9,35	8,35	7,30	6,23	5,19
	I [A]	20,1	18,99	17,70	16,29	14,83	13,37	11,97	10,69
	Qc [W]	55883	47401	39845	33123	27155	21877	17230	13166
	COP [-]	3,70	3,25	2,87	2,54	2,25	2,00	1,76	1,54
	m [kg/h]	1105	902	729	582	458	353	265	191,9
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	71,1	77,7	84,6	92,0	100,0	108,7	118,7	130,7
40°C	Q [W]	37317	30624	24821	19812	15512	11843	8735	6124
	Qu* [W]	37317	30624	24821	19812	15512	11843	8735	6124
	P [kW]	13,39	12,33	11,18	9,97	8,71	7,44	6,19	4,99
	I [A]	22,5	20,8	19,04	17,20	15,35	13,56	11,92	10,47
	Qc [W]	50703	42957	36005	29778	24221	19284	14928	11115
	COP [-]	2,79	2,48	2,22	1,99	1,78	1,59	1,41	1,23
	m [kg/h]	1056	857	688	545	424	322	236	165,0
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	81,8	88,4	95,4	102,8	110,9	119,8	130,3	0
50°C	Q [W]	--	24847	20006	15815	12208	9123	6506	4303
	Qu* [W]		24847	20006	15815	12208	9123	6506	4303
	P [kW]		13,28	11,83	10,37	8,91	7,45	6,01	4,60
	I [A]		22,3	20,0	17,81	15,64	13,57	11,69	10,03
	Qc [W]		38123	31840	26188	21115	16572	12515	8905
	COP [-]		1,87	1,69	1,52	1,37	1,22	1,08	0,94
	m [kg/h]		804	641	502	384	285	202	133,3
	Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]		99,7	106,7	114,4	122,9	132,6	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% 4NCS-12.2

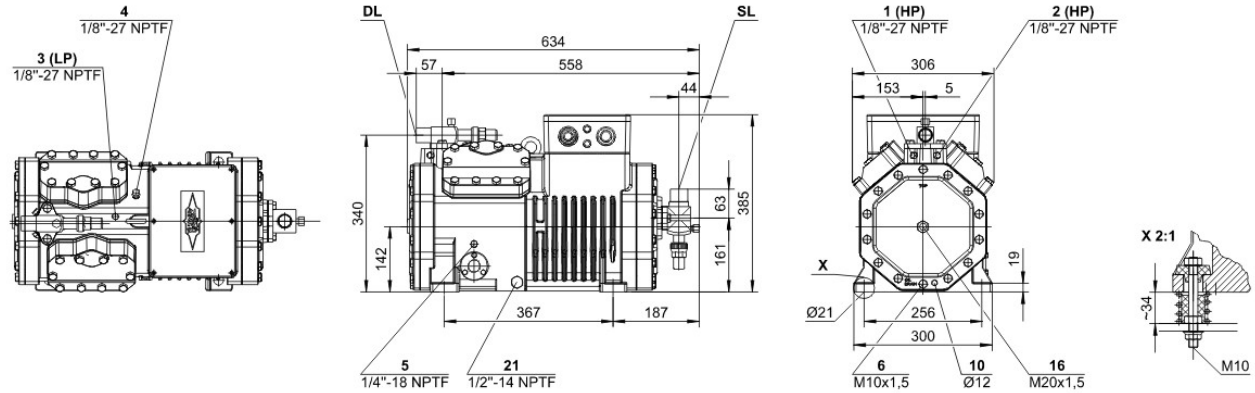


Legend

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

Technical Data: (4NCS-12.2Y)

Dimensions and Connections



Technical Data

Technical Data	
Displacement (1450 RPM 50Hz)	56,25 m3/h
Displacement (1750 RPM 60Hz)	67,89 m3/h
No. of cylinder x bore x stroke	4 x 70 mm x 42 mm
Weight	141 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	24.0 A
Winding ratio	50/50
Starting current (Rotor locked)	69.0 A Y / 113.0 A YY
Max. Power input	14,1 kW
Extent of delivery (Standard)	
Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	2,60 dm³
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)	78,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	83,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	70,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	75,0 dB(A) @ 50Hz

Semi-hermetic Reciprocating Compressors

Motor 1 = e.g. 4TES-12 with 12"HP", primary for air-conditioning (e.g. R22,R407C) and air-conditioning with R134a at high ambient temperatures.
Motor 2 = e.g. 4TES-9 with 8"HP", universal Motor for medium and low temperature application (e.g. R404A, R507A, R407A, R407F) and air-conditioning with R134a
Motor 3 = e.g. 4TES-8, for medium temperature applications and R134a

For more information concerning the application range use the "Limits" button.

Operation modes 4VES-7 to 6FE-44 and 44JE-30 to 66FE-88 with R407F/R407A/R22

CIC = liquid injection with low temperature application, suction gas cooled motor.

ASERCOM certified performance data

The Association of European Refrigeration Component Manufacturers has implemented a procedure of certifying performance data. The high standard of these certifications is assured by:

* plausibility tests of the data performed by experts.

* regular measurements at independent institutes.

These high efforts result in the fact that only a limited number of compressors can be submitted. Due to this not all BITZER compresors are certified until now. Performance data of compressors which fulfil the strict requirements may carry the label "ASERCOM certified". In this software you will find the label at the respective compressors on the right side below the field "result" or in the print out of the performance data. All certified compressors and further information are listed on the homepage of ASERCOM.

Condensing capacity

The condensing capacity can be calculated with or without heat rejection. This option can be set in the menu Program ☐ Options. The heat rejection is constantly 5 % of the power consumption. The condensing capacity is to be found in the line Condensing cap. (with HR) resp. Condensing capacity.

Data for sound emission

Data based on 50 HZ apllication (IP-units 60 Hz) and R404A if not declared.
Sound pressure level: values based on free field area conditions with hemisperhical sound emission in 1 meter distance.

General remarks regarding sound data

Listed sound data were measured under testing conditions in our laboratory. For this purpose the free-standing test sample is mounted on a solid foundation plate and the pipework is connected vibration-free to the largest extend possible. Suction and discharge lines are fixed in a flexible configuration, such that a transmission of vibrations to the environment can be largely excluded. In real installations considerable differences might be observed, compared to the measurements in the laboratory. The airborne sound emitted by the compressor can be reflected from surfaces of the system and this may increase the airborne sound level measured close to the compressor. Vibrations caused by the compressor are also transferred to the system by the compressor feet and piping depending on the damping ratio of the fixings. Thus, the vibrations can induce other components to such an extent that these components contribute to an increase in airborne sound emission. If required, the transfer of vibrations to the system can be minimized by suitable fixing and damping elements.

Legend of connection positions according to "Dimensions":

1 High pressure connection (HP)
2 Connection for discharge gas temperature sensor (HP) (for 4VE(S)-6Y .. 4NE(S)-20(Y) connection for CIC sensor as alternative)
3 Low pressure connection (LP)
4 CIC system: injection nozzle (LP)
4b Connection for CIC sensor
4c Connection for CIC sensor (MP / operation with liquid subcooler)
5 Oil fill plug
6 Oil drain
7 Oil filter (magnetic screw)
8 Oil return (oil separator)
8* Oil return with NH3 and insoluble oil
9 Connection for oil and gas equalization (parallel operation)
9a Connection for gas equalization (parallel operation)

9b Connection for oil equalization (parallel operation)
10 Oil heater connection
11 Oil pressure connection +
12 Oil pressure connection –
13 Cooling water connection
14 Intermediate pressure connection (MP)
15 Liquid injection (operation without liquid subcooler and with thermostatic expansion valve)
16 Connection for oil monitoring (opto-electrical oil monitoring "OLC-K1" or differential oil pressure switch "Delta-PII")
17 Refrigerant inlet at liquid subcooler
18 Referigerant outlet at liquid subcooler
19 Clamp space
20 Terminal plate
21 Maintenance connection for oil valve
22 Pressure relief valve to the atmosphere (discharge side)
23 Pressure relief valve to the atmosphere (suction side)
24 IQ MODULE
SL Suction gas line
DL Discharge gas line
Dimensions can show tolerances according to EN ISO 13920-B.