



Bitzer
6F-50.2Y
Ozsayin

BITZER Software v7.0.4 rev0

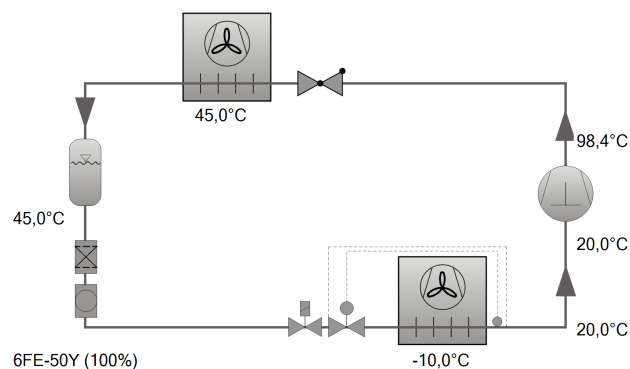
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Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	6FE-50Y
Mode	Refrigeration and air conditioning
Refrigerant	R134a
Reference temperature	Dew point temp.
Evaporating SST	-10,00 °C
Condensing SDT	45,0 °C
Liq. subc. (in condenser)	0 K
Suction gas temperature	20,00 °C
Operating mode	Auto
Power supply	400V-3-50Hz
Capacity control	100%
Useful superheat	100%



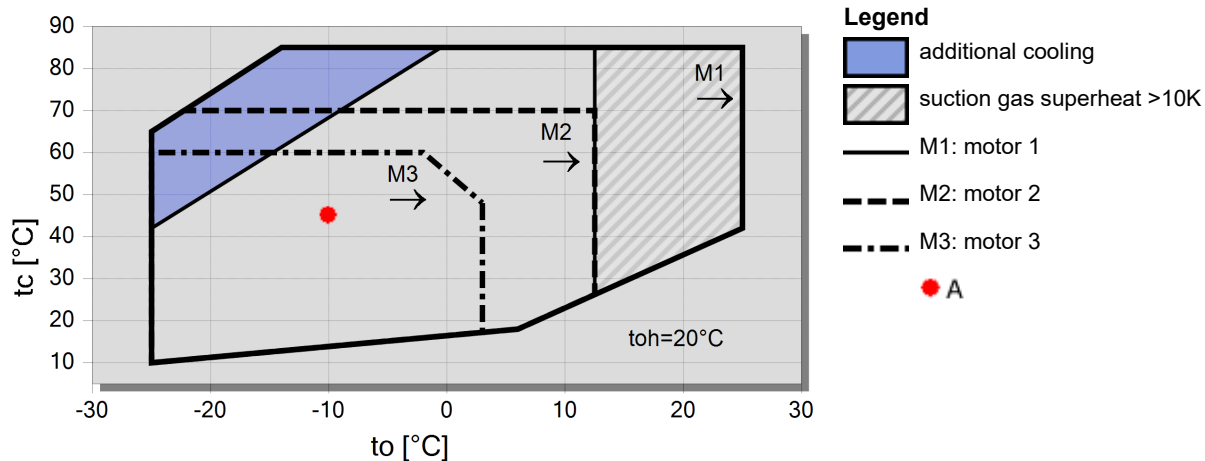
Result

Compressor	6FE-50Y-40P
Capacity steps	100%
Cooling capacity	45,7 kW
Cooling capacity *	45,7 kW
Evaporator capacity	45,7 kW
Power input	18,74 kW
Current (400V)	51,5 A
Voltage range	380-400V
Condenser capacity	64,4 kW
COP/EER	2,44
COP/EER *	2,44
Mass flow	1070 kg/h
Operating mode	Standard
Discharge gas temp. w/o cooling	98,4 °C

Tentative Data.

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

Application Limits 100% 6FE-50





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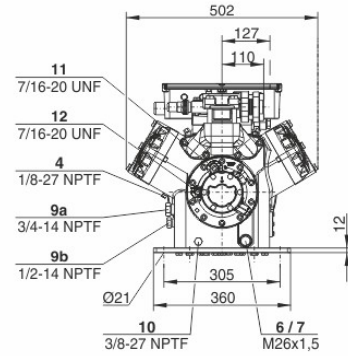
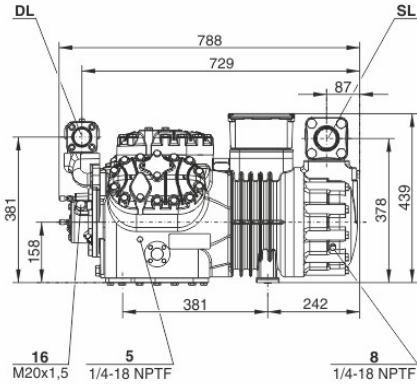
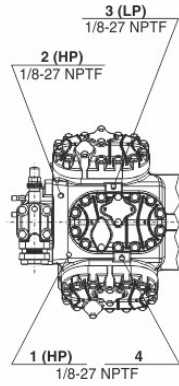
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Technical Data: 6FE-50Y

Dimensions and Connections





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Technical Data

Technical Data

Displacement (1450rpm 50Hz)	151,6 m³/h
Displacement (1750rpm 60Hz)	183,07 m³/h
No. of cylinder x bore x stroke	6 x 82 mm x 55 mm
Weight	246 kg
Max. pressure (LP/HP)	19 / 32 bar
Connection suction line	54 mm - 2 1/8"
Connection discharge line	42 mm - 1 5/8"
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)
Oil type R454C/R455A	BSE32 (Standard)

Motor data

Motor version	1
Motor voltage (more on request)	380-400V PW-3-50Hz
Max. operating current	96.2 A
Winding ratio	50/50
Starting current (Rotor locked)	226.0 A Y / 404.0 A YY
Max. power input	51,0 kW

Extent of delivery (standard)

Motor protection	SE-B3 (Option), SE-B2 (Option), CM-RC-02 (Standard)
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,75 dm³
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

Available options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-66-33% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Oil service valve	Option
Oil heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII

Sound measurement

Sound power level (+5°C / 50°C)	83,9 dB(A) @50Hz
Sound power level (-10°C / 45°C)	82,8 dB(A) @50Hz
Sound power level (-35°C / 40°C)	90,5 dB(A) @50Hz
Sound pressure level @ 1m (+5°C / 50°C)	75,9 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C)	74,8 dB(A) @50Hz
Sound pressure level @ 1m (-35°C / 40°C)	82,5 dB(A) @50Hz
Sound power level (+5°C / 50°C) R134a	81,9 dB(A) @50Hz
Sound power level (-10°C / 45°C) R134a	80,8 dB(A) @50Hz
Sound pressure level @ 1m (+5°C / 50°C) R134a	73,9 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C) R134a	72,8 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 compressors 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 application (IP-units 60 Hz) and R404A if not declared.

Sound pressure level: values based on free field area conditions with hemispherical 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 extent 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.



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Selection: Horizontal receivers

Input Values

Common	Yes
Auto	
Operating point	Auto

Operating points

	A
to [°C]	-10
tc [°C]	45

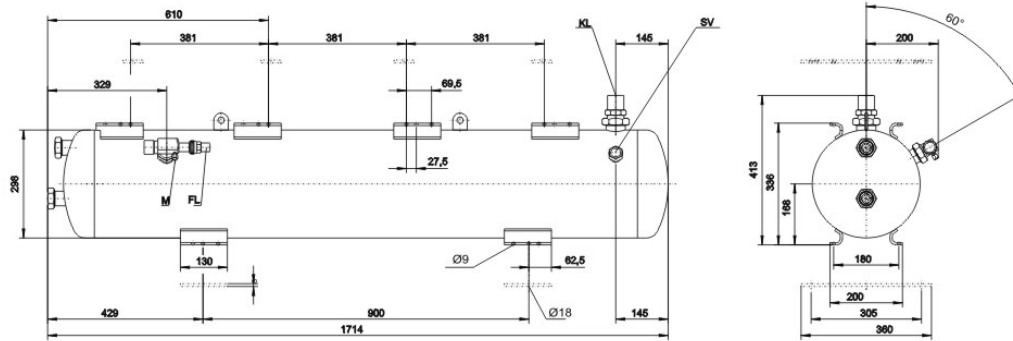
Result

Compressor:	6FE-50Y
Recommendation:	F1052T
Selection	F1052T
Recommended operating point:	A
Selected operating point:	A
Receiver volume	105,0 dm ³
Max. refrigerant charge	115,9 kg
Receiver load	56,0 %
Receiver unit	indivi. components
lower fixing rails	327301-06
upper fixing rails	327301-10
upper fixing plate	320366-02

#1: Receiver selection for compact systems without condensing pressure control. Precise calculation only via refrigerant charge (see notes).

Technical Data: F1052T

Dimensions and Connections





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Technical Data

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Weight	86,5 kg
Total width	1714 mm
Total depth	349 mm
Total height	413mm
Receiver volume refrigerant	105,0 l
Max. refrigerant charge 90% at 20°C / 68°F	
R22	114,4 kg
R134a	115,9 kg
R407C	109,5 kg
R404A/R507A	100,9 kg
R448A	105,2 kg
R449A	105,6 kg
R450A	112,7 kg
R454C	94,8 kg
R455A	98,3 kg
R513A	115,7 kg
R1234yf	105 kg
R1234ze	111,3 kg
R515B	113,1 kg
Max. pressure	33 bar
Max. operating temperature	120°C
Connection inlet KL	42mm - 1 5/8"
Connection thread/ -flange	2 1/4" - 12 UN
Connection outlet FL	35mm - 1 3/8"
Connection thread/ -flange	1 3/4" - 12 UNF
Gauge	7/16" 20UNF
Connection for pressure relief valve	1 1/4"-12UNF
Adapter for pressure relief valve	Option
Minimum level control	Option
Maximum level control	Option
Electric liquid level control	Option
*According PED 2014/68/EU	Standard
Special Approvals (on request)	Option