



**BITZER Output data**

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## Project survey

### ***Selected compressors***

Condensing Units

1x LH104E/4TES-9Y



### Selection: Condensing Units

#### Input Values

Unit type	LH104E/4TES-9Y	Useful superheat	100%
Series	Standard	Operating mode	Auto
Refrigerant	R449A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Suction gas temperature	20,00 °C		

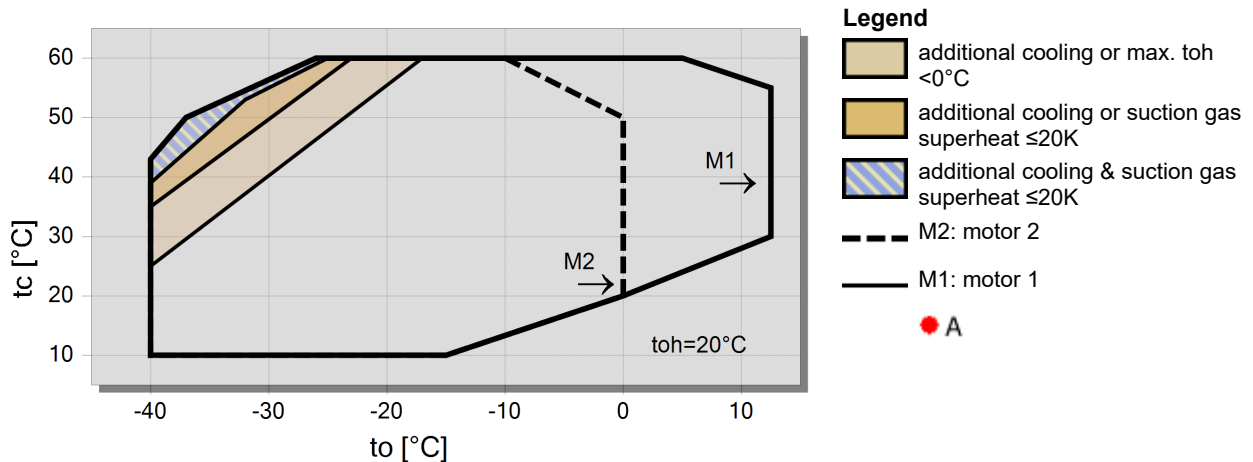
#### Result

Q [W]	Cooling capacity	Op.	Operating mode
P [kW]	Power input	tc [°C]	Condensing SDT
I [A]	Current	dtau [K]	subcooling
m [kg/h]	Mass flow		

tamb	to	10°C	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C
27°C	Q [W]	--	--	--	24269	20357	16793	13595	10768
	P [kW]	--	--	--	10,10	9,03	8,00	7,02	6,08
	I [A]	--	--	--	16,00	14,36	12,80	11,33	9,98
	m [kg/h]	--	--	--	560	452	360	283	219
	Op.	--	--	--	Standard	Standard	Standard	Standard	Standard
	tc [°C]	--	--	--	48,4	45,6	42,9	40,5	38,4
	dtau [K]	--	--	--	3,00	3,00	3,00	3,00	3,00
32°C	Q [W]	--	--	--	22508	18840	15497	12497	9848
	P [kW]	--	--	--	10,47	9,32	8,22	7,17	6,16
	I [A]	--	--	--	16,57	14,81	13,14	11,56	10,09
	m [kg/h]	--	--	--	545	438	348	272	209
	Op.	--	--	--	Standard	Standard	Standard	Standard	Standard
	tc [°C]	--	--	--	52,6	49,8	47,3	45,0	42,9
	dtau [K]	--	--	--	3,00	3,00	3,00	3,00	3,00
43°C	Q [W]	--	--	--	--	15529	12682	10125	7869
	P [kW]	--	--	--	--	9,83	8,58	7,37	6,21
	I [A]	--	--	--	--	15,59	13,67	11,85	10,16
	m [kg/h]	--	--	--	--	405	318	246	185,5
	Op.	--	--	--	--	Standard	Standard	Standard	Standard
	tc [°C]	--	--	--	--	59,1	56,8	54,7	52,8
	dtau [K]	--	--	--	--	3,00	3,00	3,00	3,00

-- No calculation possible (see message in single point selection)  
 Power input compressor, power input fan see "T. Data"

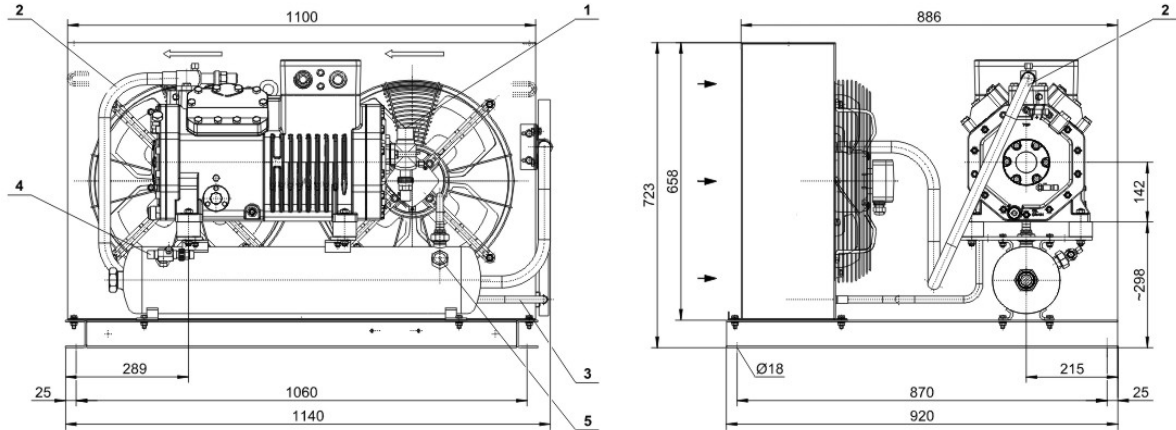
### Application Limits 1 LH104E/4TES-9





## Technical Data: LH104E/4TES-9Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Weight	235 kg
Total width	1140 mm
Total depth	920 mm
Total height	723 mm
Connection suction line	35 mm - 1 3/8"
Connection liquid line	16 mm - 5/8"
Fans: Number	2xEC
Voltage (50Hz, more on request)	230V-1-50Hz (Standard)
Current / Power consumption of each fan (50Hz)	1,5 A / 330 W
Air flow condenser 50Hz	9000 m <sup>3</sup> /h
Voltage (60Hz, more on request)	230V-1-60Hz (Standard)
Current / Power consumption of each fan (60Hz)	1,8 A / 330 W
Air flow condenser 60Hz	9000 m <sup>3</sup> /h
Coil Volume	1,8 dm <sup>3</sup>
Receiver type (Standard)	F152H
Max. refrigerant charge 90% at 20°C / 68°F	
R22	16,3 kg
R134a	16,5 kg
R407C	15,6 kg
R404A/R507A	14,4 kg
R407A	15,8 kg
R407F	15,4 kg
R448A	15 kg
R449A	15,1 kg
R450A	16,1 kg
R513A	16,5 kg
R1234yf	15 kg
R1234ze	15,9 kg
Receiver type (Option)	F302H
R22	32,7 kg
R134a	33,1 kg
R407C	31,3 kg
R404A/R507A	28,8 kg

#### Extent of delivery (Standard)

Discharge line	Standard
Protective charge	Standard

#### Available Options

Oil separator	Option
Check valve	Option
High & low pressure switch	Option
Dressed unit	Option
Weather protective housing	Option
Fans: elect. Speed control	Option

#### Sound measurement

Data of compressors: see compressor program



## Condensing Units

**Motor 1** = e.g. LH..E/4TES-12 with 12 "HP", primary for air-conditioning (e.g. R22,R407C) and medium temperature application (e.g. R134a, R407F, R407A, R404A, R507A, R22) and air-conditioning with R134a at high ambient temperatures.

**Motor 2** = e.g. LH..E/4TES-9 with 8 "HP", for medium and low temperature application (e.g. R134a, R407F, R407A, R404A, R507A, R22) and air-conditioning with R134a.

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

### Operation modes for LH..E/4VES-7 to LH../6HE-28 with R22

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

### Specifications for sound emission Ecostar

The data are based on 50 Hz operation with R404A.

Soundpressure: Data are valid for free field conditions according to EN13487 with a block-shaped reference area in a distance of 10m.

For further informations see technical information for sound data.

### Legend of connection positions according to "Dimensions":

- 1 Suction gas valve
- 2 Discharge gas line
- 3 Condensate line
- 4 Refrigerant outlet (liquid line)
- 5 Pressure relief valve connection
- 6 Liquid injection (operation without liquid subcooler and with thermostatic expansion valve)
- 7 Refrigerant inlet at liquid subcooler
- 8 Refrigerant outlet at liquid subcooler
- 9 Suction gas line
- 10 Sight glass
- 11 Load suspension points
- 12 Plug for screwed cable gland
- 13 Cable bushing (for cables  $\varnothing$  9-17 mm) (only ECOLITE)

Dimensions can show tolerances according to EN ISO 13920-B.