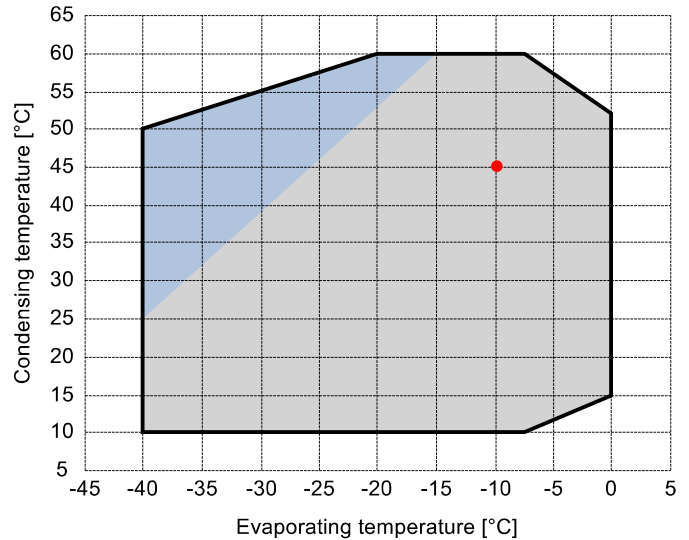


## Input data

Refrigerant	R449A	
Reference temperature	Dew point temperature	
Calculation mode	Refrigeration / Air Cond.	
Operating mode	Subcritical	
Power supply	400/3/50	
Condensing temperature	°C	45
Condensing pressure	bar	18,86
Liquid subcooling	K	0
Liquid temperature	°C	40,72
Evaporating temperature	°C	-10
Evaporating pressure	bar	3,61
Suction gas superheating	K	10
Useful fraction of superheating	%	100

Additional cooling required



## Output data

<b>Compressor :</b>	<b>Q4-21.1Y</b>	
Number of compressors :	FSx1	
Refrigerating capacity	kW	9,553
Refrigerating capacity [ *ref ]	kW	9,813
Evaporator capacity	kW	9,553
Power input	W	4374
Condenser capacity, theor.	kW	13,927
Current	A	8,02
COP/EER	W/W	2,18
Mass flow	kg/h	244
Operating frequency	Hz	50
Connection	-	DOL-STAR
Operating mode	-	100%
Discharge temperature	°C	88,54
Ratio (%)	%	100,0%
Note	-	
Oil flow	l/min	-
Heat Exchanged (oil Cooler)	kW	-
Oil Temp. at Oil Cooler Outlet	°C	-
Certified by	-	ASERCOM

## Certified by:

- ASERCOM (ref. EN12900, 50 Hz, 100% cap.)

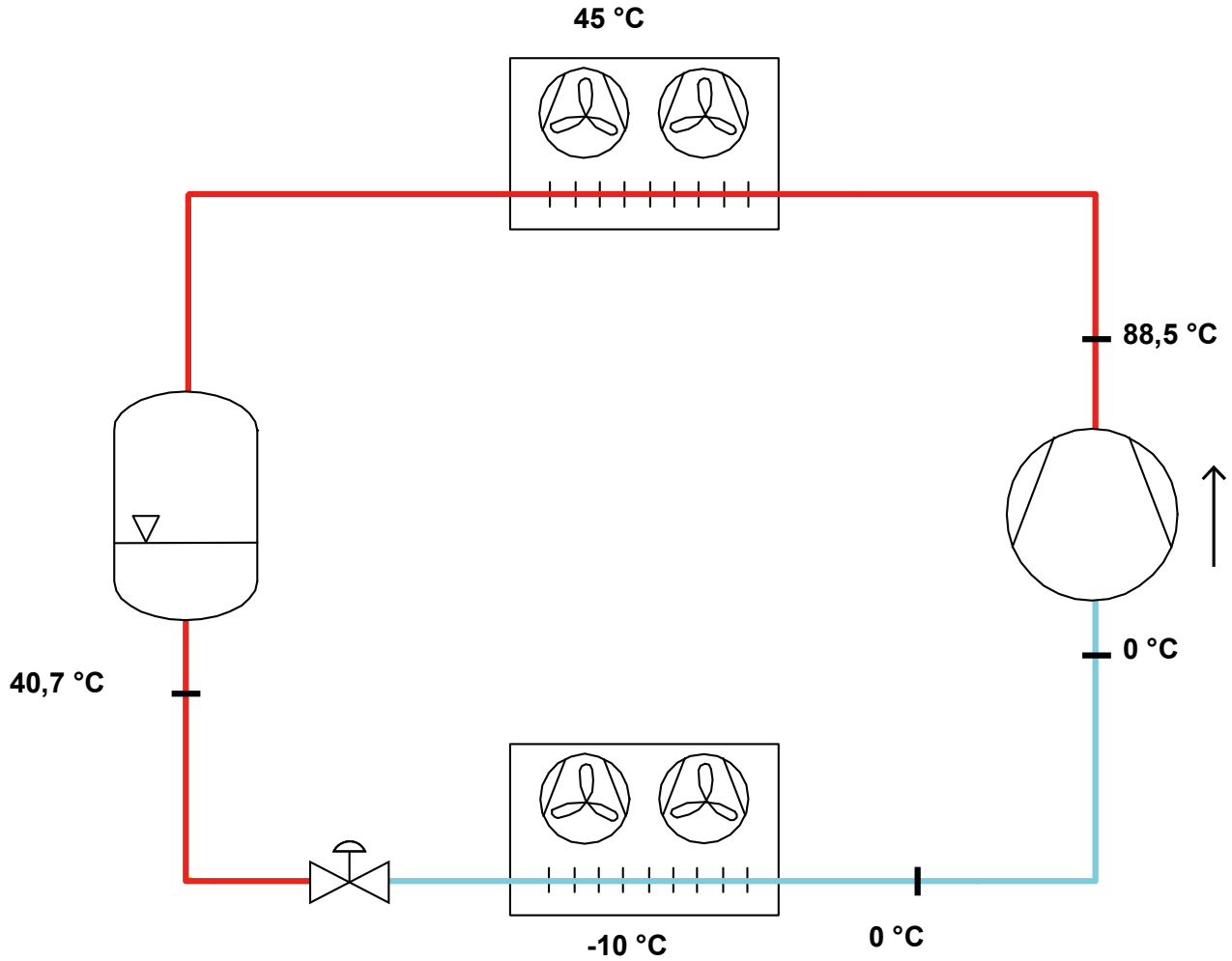


## Legend:

- \*ref: At conditions according to EN12900
- Suction gas temperature = 20 °C
- Liquid subcooling = 0 K

All data subject to change without notice

**P&I Diagram:**



*All data subject to change without notice*

**Model: Q4-21.1Y**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Technical data:**

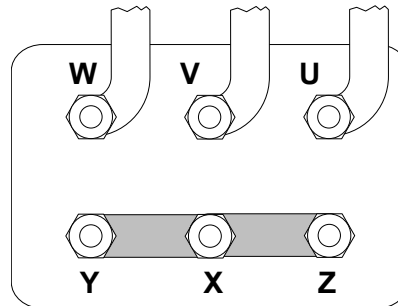
Displacement	21,18 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	10 A
Locked rotor current (LRA)	53,2 A
Number of pistons	4
Net weight	79 kg
Lubricant	FRASCOLD POE32
Oil charge	1,6 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar

**Sound level:**

Sound power level -10/45°C R404A @50Hz	70 dB(A)
Sound pressure (*) - Distance: 1 m	62 dB(A)
Sound power level -35/40°C R404A @50Hz	72 dB(A)
Sound pressure (*) - Distance: 1 m	64 dB(A)

\*half sphere model

**Motor connections:**



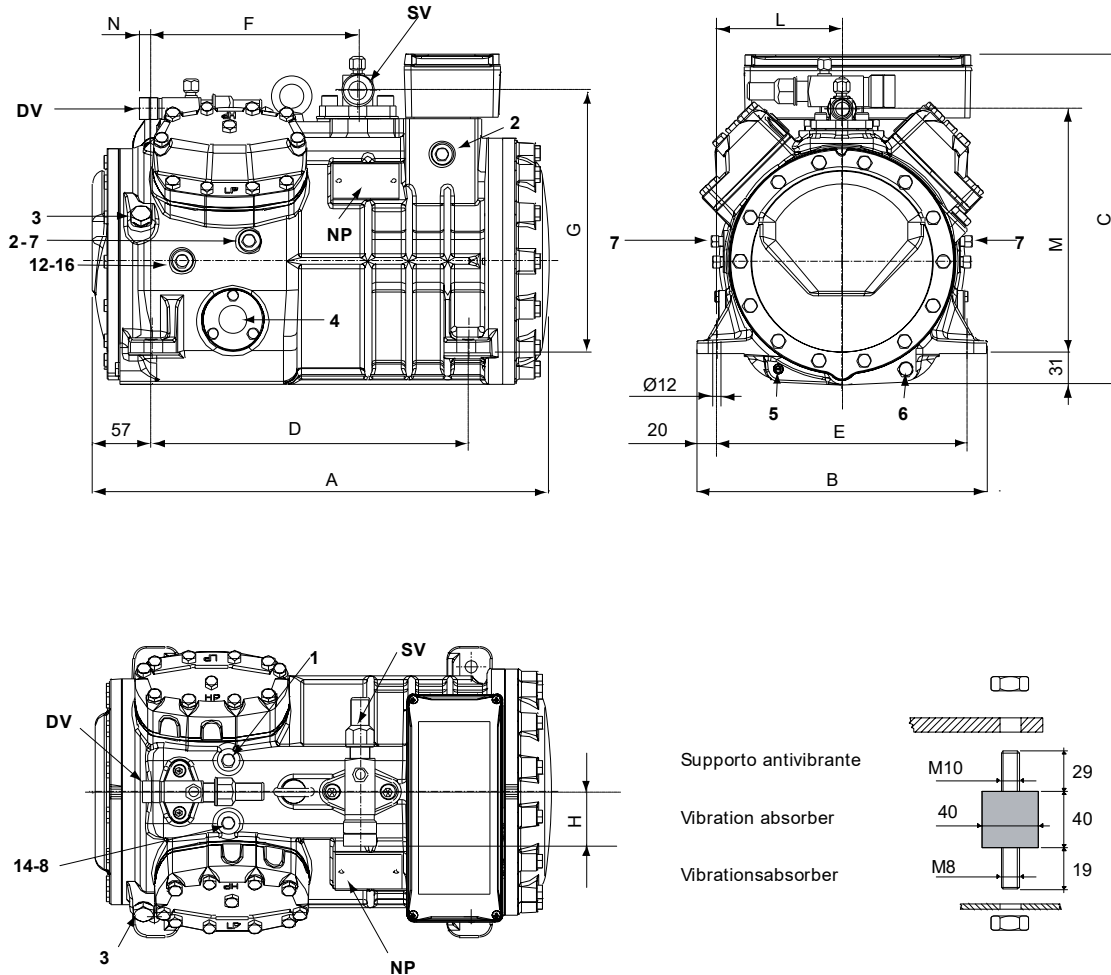
*All data subject to change without notice*

**Model: Q4-21.1Y**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Dimensions:**



**Legend:**

SV: Suction Valve	1 1/8" in - 28,575 mm	1: High pressure connection	1/8" NPT
DV: Discharge valve	3/4" in - 19 mm	2: Low pressure connection	1/8" NPT
A: Length	449 mm	3: Oil charge plug	1/4" GAS
B: Width	286 mm	4: Oil level sight glass	-
C: Height	325 mm	5: Crankcase heater seat	-
D: Base mounting	312 mm	6: Oil drain plug	M8 x 22
E: Base mounting	246 mm	7: Liquid injection plug	1/8" NPT
F: Suction Valve	203 mm	8: Liquid injection sensor plug	1/8" NPT
G: Suction Valve	258 mm	12: Oil return plug	1/8" NPT
H: Suction Valve	53 mm	14: Max discharge temperature sensor connection	1/8" NPT
L: Discharge valve	123 mm	16: Crankcase pressure plug	1/8" NPT
M: Discharge valve	239 mm	NP: Nameplate	
N: Discharge valve	12 mm		

All data subject to change without notice

**Model: Q4-21.1Y**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Polynomial coefficients according to EN12900 for Q4-21.1Y:**

\*S = T<sub>evap</sub> ; D = T<sub>cond</sub>

Reference conditions

Refrigerant	R449A
Ambient temperature	35 °C
Suction gas temperature	20 °C
Liquid subcooling	0 K
Frequency	50 Hz

	Refrigerating capacity [W]	Power input [W]
<b>C1</b>	2,811180E+004	1,767406E+003
<b>C2</b>	1,094060E+003	-3,511732E+001
<b>C3</b>	-3,655420E+002	7,272446E+001
<b>C4</b>	1,475950E+001	-1,474240E+000
<b>C5</b>	-1,318240E+001	2,002892E+000
<b>C6</b>	2,040180E+000	2,308460E-001
<b>C7</b>	6,121640E-002	-9,019078E-003
<b>C8</b>	-1,440250E-001	1,341201E-002
<b>C9</b>	3,418650E-002	7,034421E-003
<b>C10</b>	-1,148990E-002	-3,976381E-003

$$Y = C1 + C2*S + C3*D + C4*S^2 + C5*S*D + C6*D^2 + C7*S^3 + C8*D*S^2 + C9*S*D^2 + C10*D^3$$