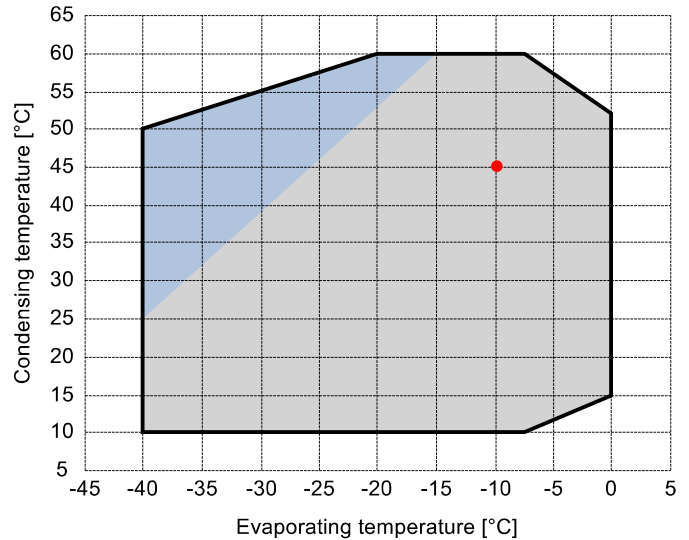


Input data

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

Compressor :	V20-84Y	
Number of compressors :	FSx1	
Refrigerating capacity	kW	41,295
Refrigerating capacity [*ref]	kW	42,419
Evaporator capacity	kW	41,295
Power input	W	17612
Condenser capacity, theor.	kW	58,907
Current	A	31,88
COP/EER	W/W	2,34
Mass flow	kg/h	1056
Operating frequency	Hz	50
Connection	-	PWS
Operating mode	-	100%
Discharge temperature	°C	84,62
Ratio (%)	%	100,0%
Note	-	
Oil flow	l/min	-
Heat Exchanged (oil Cooler)	kW	-
Oil Temp. at Oil Cooler Outlet	°C	-
Certified by	-	Frascold

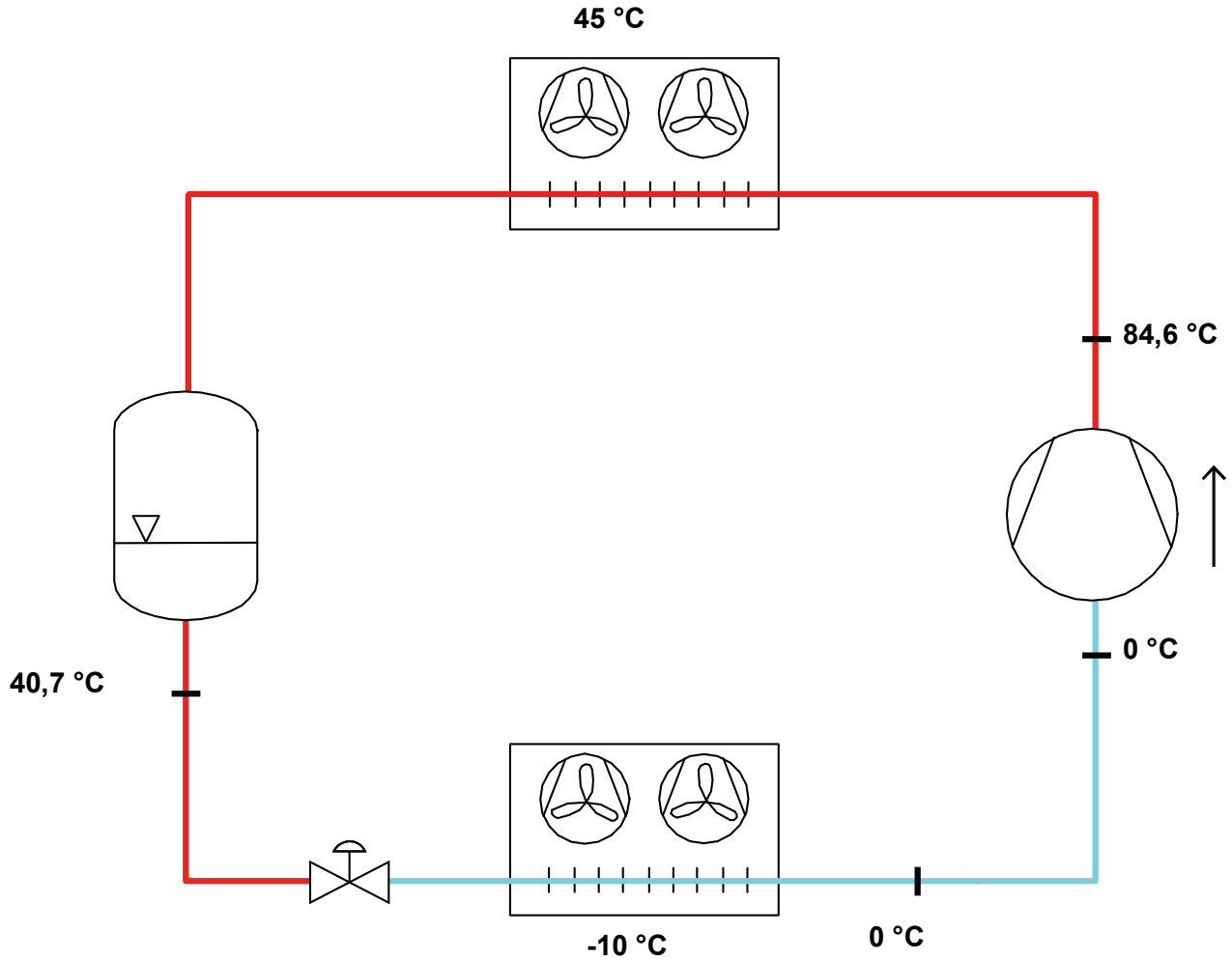
Certified by:

- Frascold tentative data

Legend:

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

P&I Diagram:



All data subject to change without notice

Model: V20-84Y

Refrigerant: R449A

Power supply: 400/3/50 PWS

Technical data:

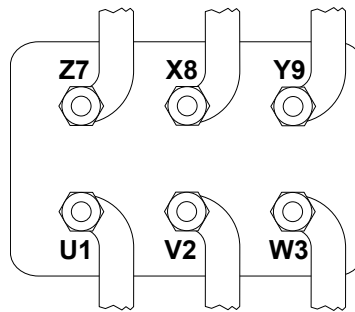
Displacement	83,81 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	42,6 A
Locked rotor current (LRA)	106,6 A
Locked rotor current (LRA), DOL	180,5 A
Number of pistons	4
Net weight	180 kg
Lubricant	FRASCOLD POE68
Oil charge	4 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar

Sound level:

Sound power level -10/45°C R404A @50Hz	81 dB(A)
Sound pressure (*) - Distance: 1 m	73 dB(A)
Sound power level -35/40°C R404A @50Hz	86,5 dB(A)
Sound pressure (*) - Distance: 1 m	78,5 dB(A)

*half sphere model

Motor connections:



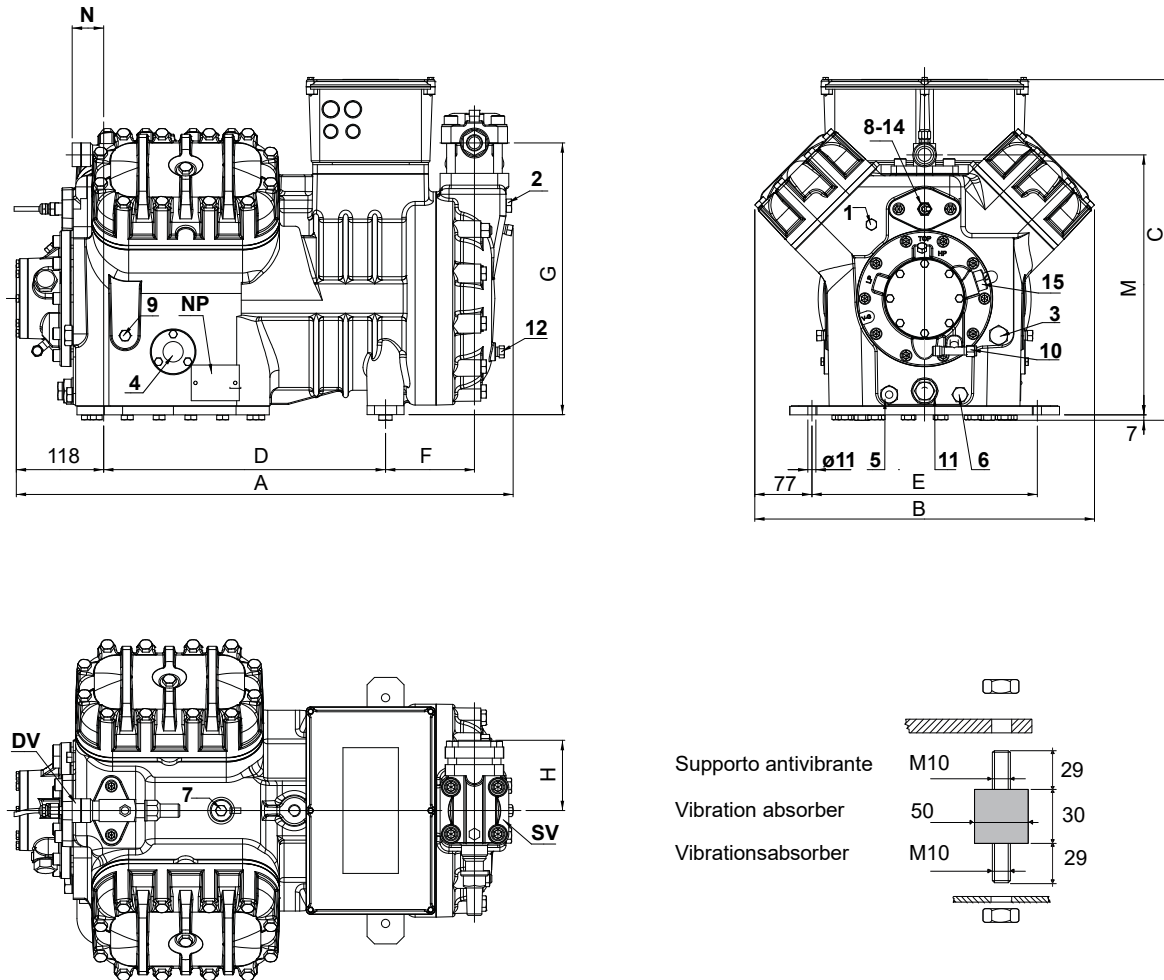
All data subject to change without notice

Model: V20-84Y

Refrigerant: R449A

Power supply: 400/3/50 PWS

Dimensions:



Legend:

SV: Suction Valve	1 5/8" in - 42 mm	2: Low pressure connection	1/4" NPT
DV: Discharge valve	1 1/8" in - 28,575 mm	3: Oil charge plug	3/8" GAS
A: Length	672 mm	4: Oil level sight glass	-
B: Width	460 mm	5: Crankcase heater seat	-
C: Height	463 mm	6: Oil drain plug	1/4" GAS
D: Base mounting	381 mm	7: Liquid injection plug	1/4" NPT
E: Base mounting	305 mm	8: Liquid injection sensor plug	1/8" NPT
F: Suction Valve	120 mm	9: Oil pressure switch connection (LP)	1/4" NPT
G: Suction Valve	367 mm	10: Oil pressure switch connection (HP)	1/4" SAE
H: Suction Valve	95 mm	11: Oil filter	3/8" GAS
L: Discharge valve	152 mm	12: Oil return plug	1/4" NPT
M: Discharge valve	352 mm	14: Max discharge temperature sensor connection	1/8" NPT
N: Discharge valve	43 mm	15: Electronic oil pressure switch connection	3/4 UNF
1: High pressure connection	1/8" NPT	NP: Nameplate	

All data subject to change without notice

Model: V20-84Y

Refrigerant: R449A

Power supply: 400/3/50 PWS

Polynomial coefficients according to EN12900 for V20-84Y:

*S = T_{evap} ; D = T_{cond}

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]
C1	1,046700E+005	3,692450E+003
C2	3,835020E+003	-3,243580E+002
C3	-7,866800E+002	5,099750E+002
C4	5,172270E+001	-9,582940E+000
C5	-2,695810E+001	1,622400E+001
C6	-3,457650E+000	-3,344270E+000
C7	2,779460E-001	-7,794170E-002
C8	-2,686310E-001	1,029690E-001
C9	-3,865820E-002	-6,868330E-002
C10	2,086790E-002	9,065600E-003

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