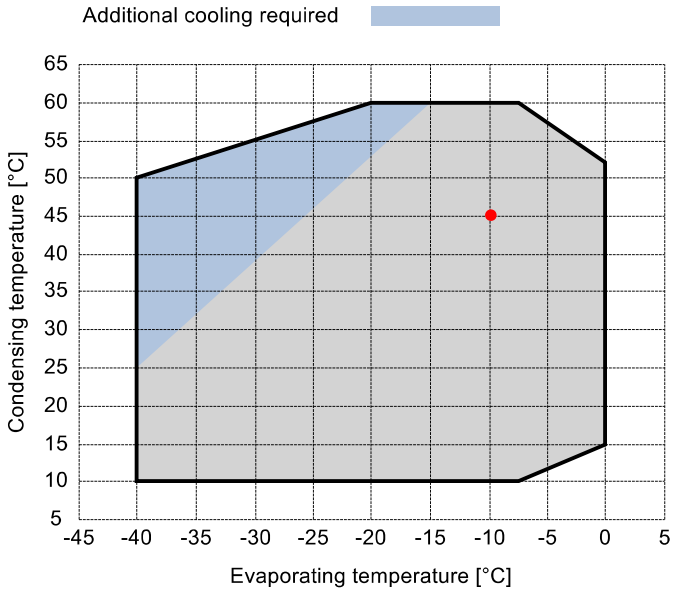
Customer: Kubitech.SRL
Project: frigotehnie.ro

Frascold Selection Software 3 v1.20.0 - joi.03.11.2022

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



Output data

Compressor :		**D3-16.1Y**
Number of compressors :		FSx1
Refrigerating capacity	kW	7,88
Refrigerating capacity [*ref]	kW	8,094
Evaporator capacity	kW	7,88
Power input	W	3580
Condenser capacity, theor.	kW	11,46
Current	A	7,18
COP/EER	W/W	2,2
Mass flow	kg/h	202
Operating frequency	Hz	50
Connection	-	DOL-STAR
Operating mode	-	100%
Discharge temperature	°C	88,09
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:

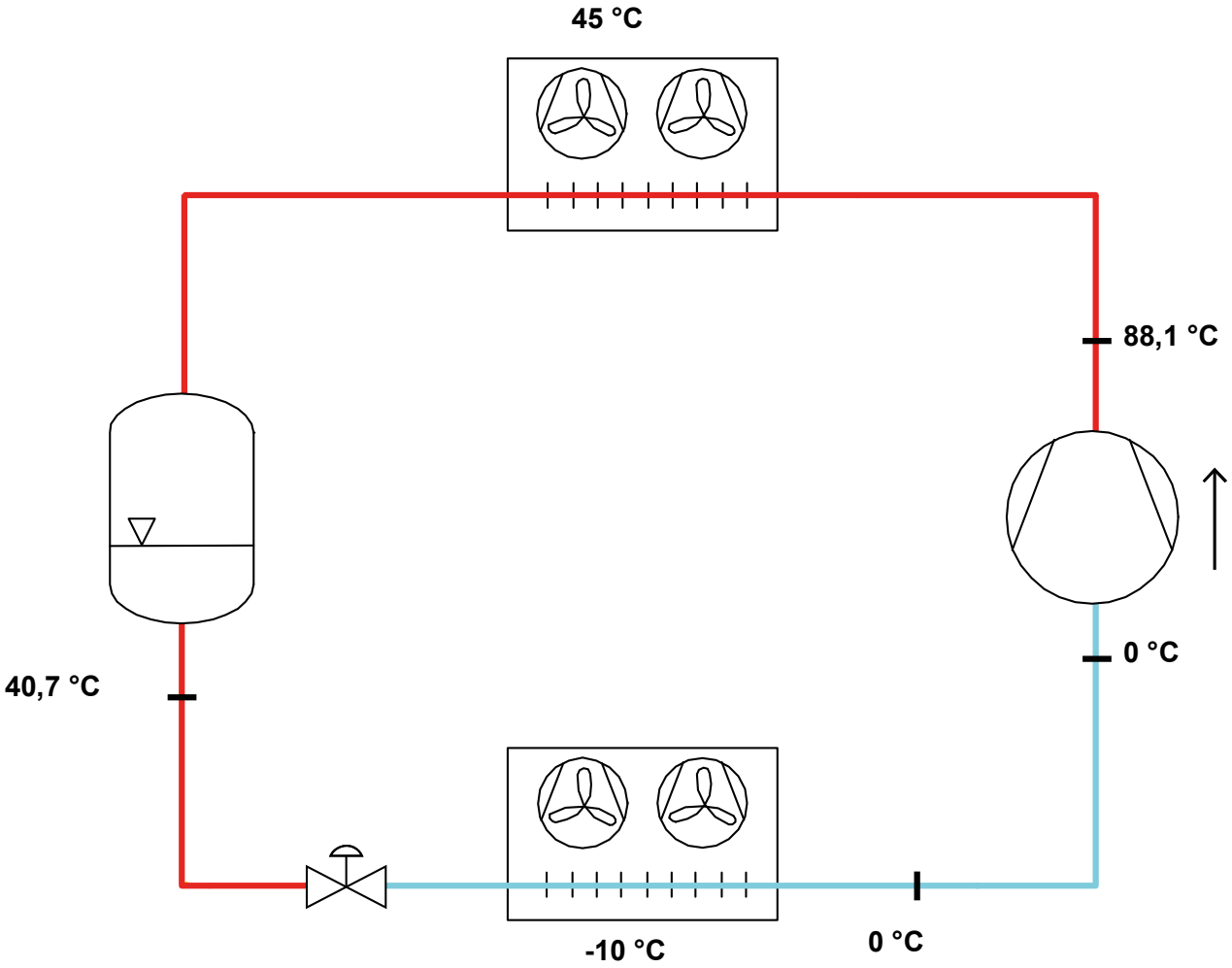
- Frascold tentative data

Legend:

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

All data subject to change without notice

P&I Diagram:



Model: D3-16.1Y

Refrigerant: R449A

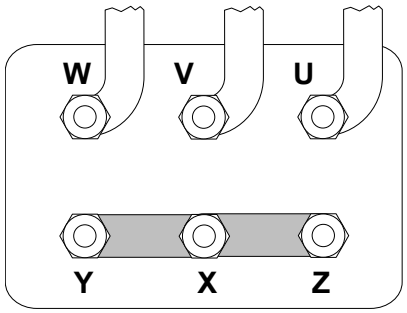
Power supply: 400/3/50 DOL-STAR

Technical data:	
Displacement	16,4 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	9,9 A
Locked rotor current (LRA)	43,7 A
Number of pistons	2
Net weight	49 kg
Lubricant	FRASCOLD POE32
Oil charge	1,2 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar

Sound level:	
Sound power level -10/45°C R404A @50Hz	67 dB(A)
Sound pressure (*) - Distance: 1 m	59 dB(A)
Sound power level -35/40°C R404A @50Hz	70 dB(A)
Sound pressure (*) - Distance: 1 m	62 dB(A)

*half sphere model

Motor connections:

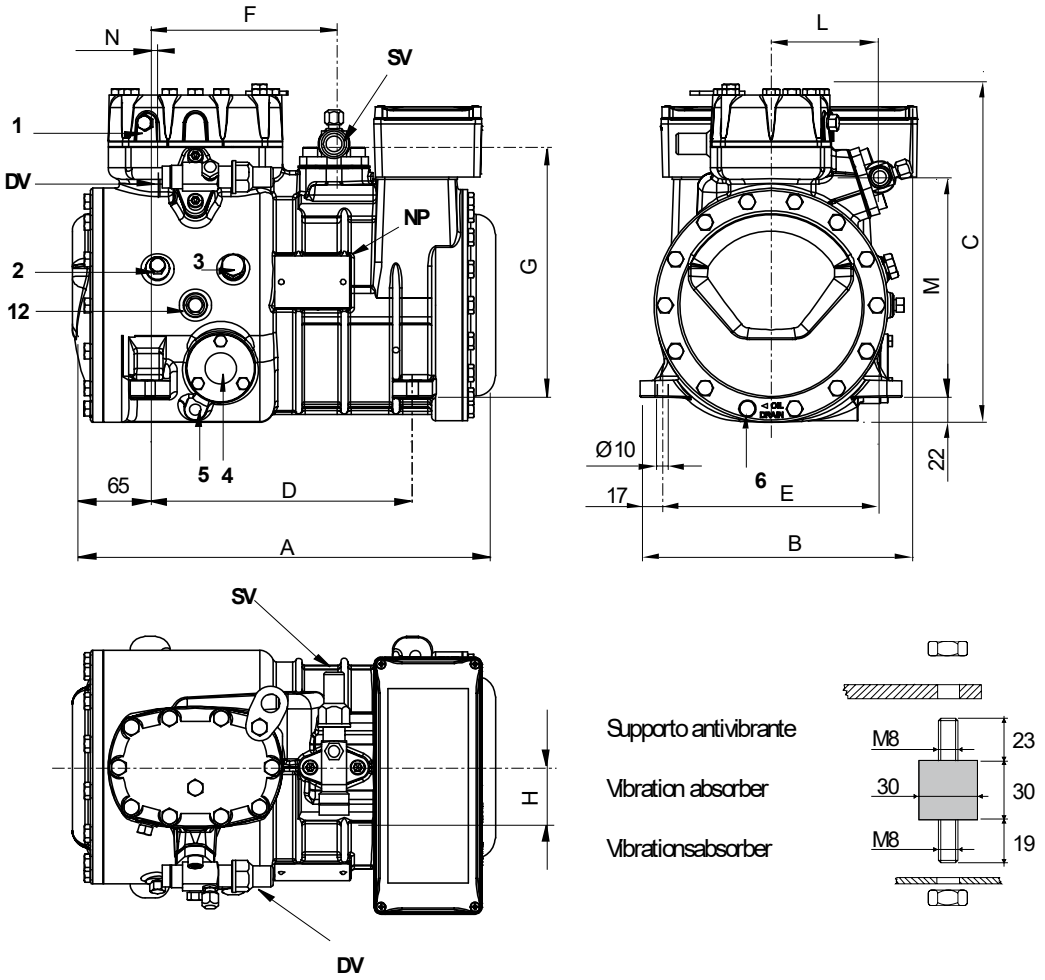


Model: D3-16.1Y

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Dimensions:



Legend:

SV: Suction Valve	1 1/8" in - 28,575 mm	M: Discharge valve	192 mm
DV: Discharge valve	5/8" in - 16 mm	N: Discharge valve	13 mm
A: Length	374 mm	1: High pressure connection	1/8" NPT
B: Width	242 mm	2: Low pressure connection	1/8" NPT
C: Height	317 mm	3: Oil charge plug	1/4" GAS
D: Base mounting	234 mm	4: Oil level sight glass	-
E: Base mounting	194 mm	5: Crankcase heater seat	-
F: Suction Valve	165 mm	6: Oil drain plug	M8 x 22
G: Suction Valve	225 mm	12: Oil return plug	1/8" NPT
H: Suction Valve	53 mm	NP: Nameplate	
L: Discharge valve	94 mm		

Model: D3-16.1Y

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Polynomial coefficients according to EN12900 for D3-16.1Y:

*S = Tevap ; D = Tcond

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	2,115430E+004	8,088850E+002
C2	7,644240E+002	-7,205520E+001
C3	-2,057570E+002	9,265410E+001
C4	9,388520E+000	-2,297030E+000
C5	-6,438980E+000	3,035570E+000
C6	2,436490E-001	-3,845070E-001
C7	3,834190E-002	-1,930390E-002
C8	-5,756830E-002	2,230730E-002
C9	4,416720E-003	-6,608480E-003
C10	-1,092740E-003	2,151510E-005

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