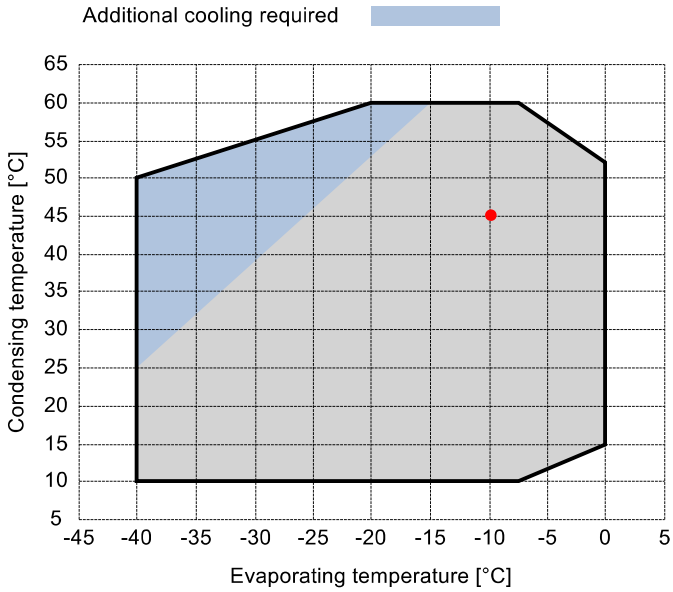
Customer: Kubitech.SRL
Project: frigotehnie.ro

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 :		**Q5-28.1Y**
Number of compressors :		FSx1
Refrigerating capacity	kW	12,638
Refrigerating capacity [*ref]	kW	12,981
Evaporator capacity	kW	12,638
Power input	W	5787
Condenser capacity, theor.	kW	18,424
Current	A	10,14
COP/EER	W/W	2,18
Mass flow	kg/h	323
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:

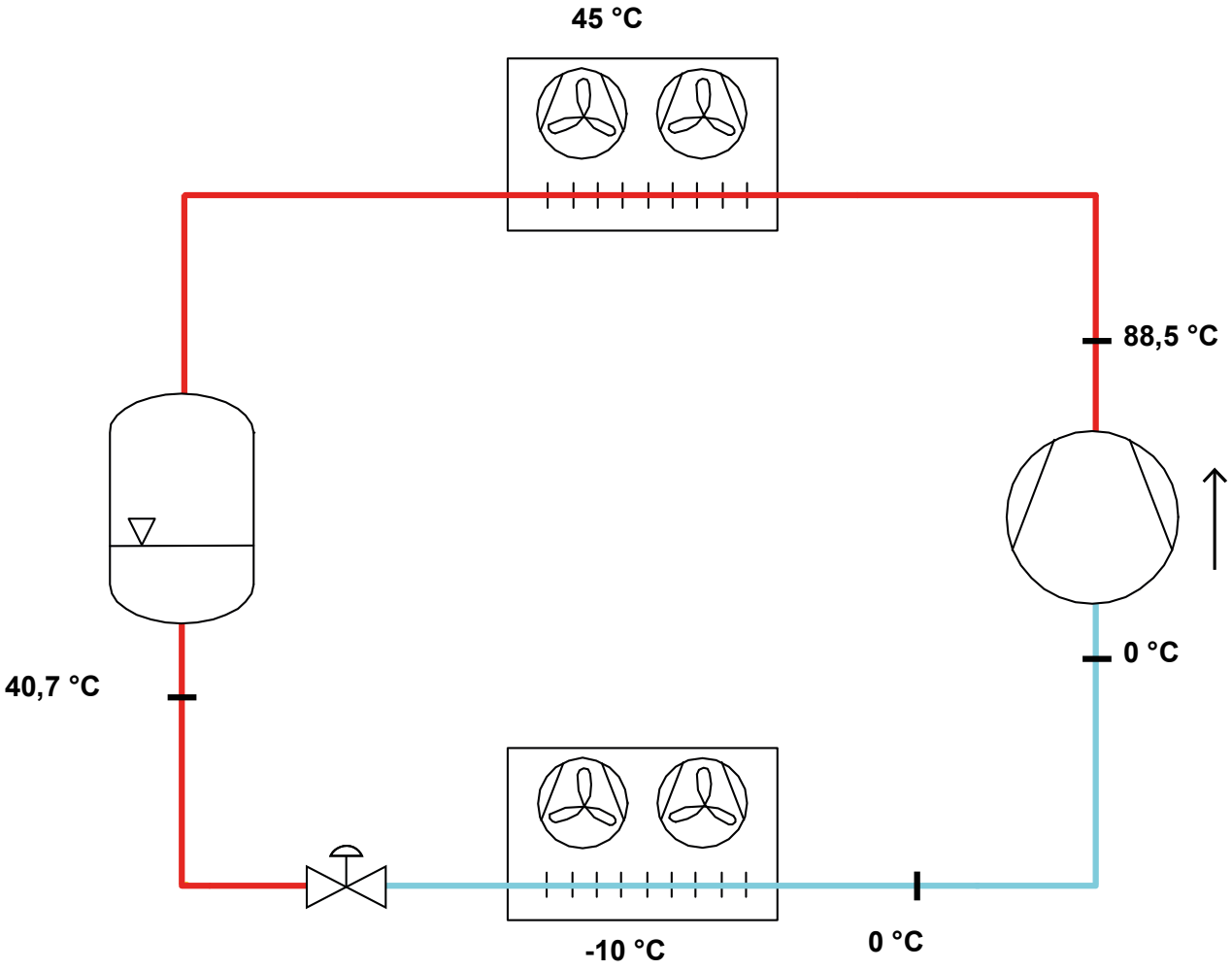
- ASERCOM (ref. EN12900, 50 Hz, 100% cap.)

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:



Model: Q5-28.1Y

Refrigerant: R449A

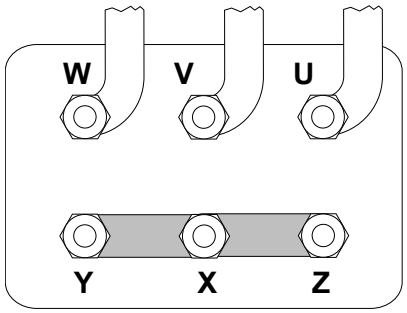
Power supply: 400/3/50 DOL-STAR

Technical data:	
Displacement	28,02 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	14 A
Locked rotor current (LRA)	63,1 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	72 dB(A)
Sound pressure (*) - Distance: 1 m	64 dB(A)
Sound power level -35/40°C R404A @50Hz	74 dB(A)
Sound pressure (*) - Distance: 1 m	66 dB(A)

*half sphere model

Motor connections:

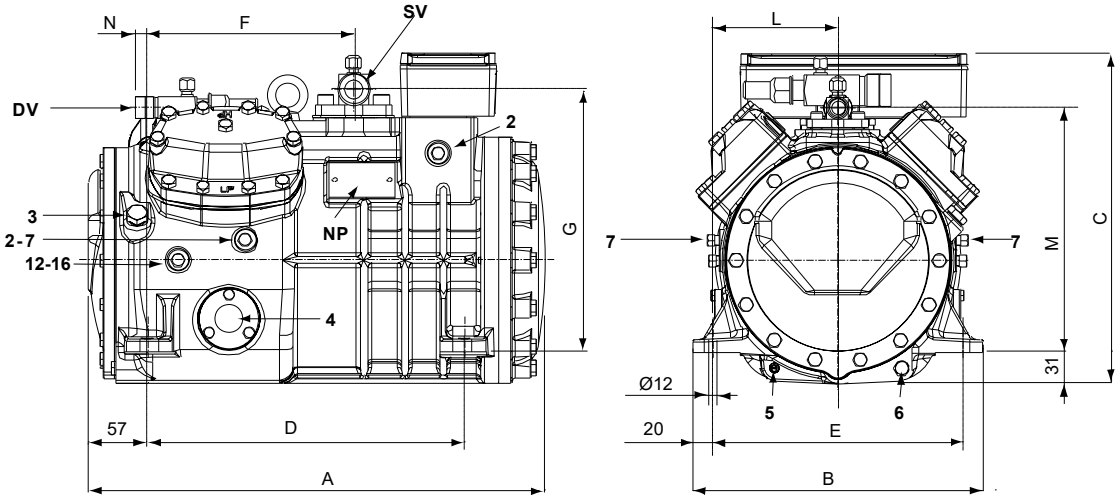


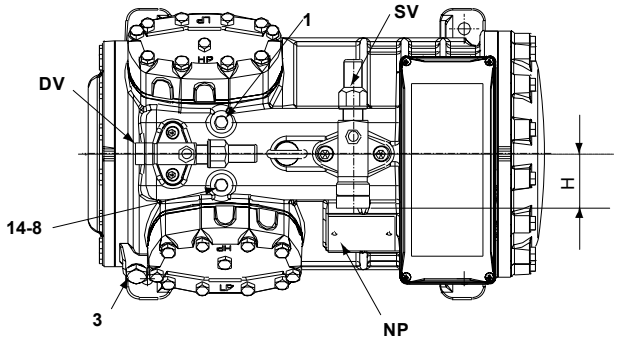
Model: Q5-28.1Y

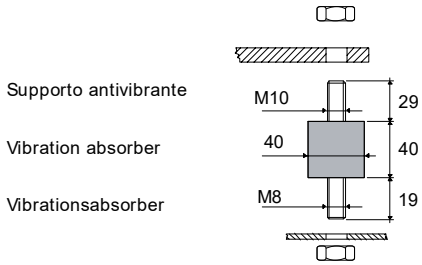
Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Dimensions:







Legend:

SV: Suction Valve	1 3/8" in - 35 mm	1: High pressure connection	1/8" NPT
DV: Discharge valve	7/8" in - 22,225 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	261 mm	12: Oil return plug	1/8" NPT
H: Suction Valve	58 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	17 mm		

All data subject to change without notice

Model: Q5-28.1Y

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Polynomial coefficients according to EN12900 for Q5-28.1Y:

*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	3,717510E+004	2,335358E+003
C2	1,446850E+003	-4,673381E+001
C3	-4,823440E+002	9,640723E+001
C4	1,951970E+001	-1,963931E+000
C5	-1,741320E+001	2,650580E+000
C6	2,668410E+000	2,973520E-001
C7	8,100990E-002	-1,211675E-002
C8	-1,903110E-001	1,782344E-002
C9	4,497330E-002	9,348761E-003
C10	-1,495960E-002	-5,160866E-003

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