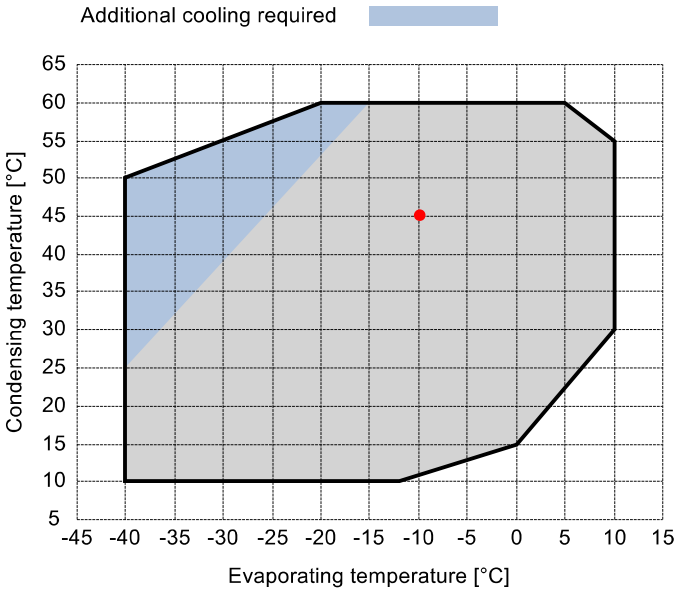
Customer: KUBITECH.SRL
Project: frigotehnie.ro

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 :		**V30-84Y**
Number of compressors :		FSx1
Refrigerating capacity	kW	40,222
Refrigerating capacity [*ref]	kW	41,316
Evaporator capacity	kW	40,222
Power input	W	16521
Condenser capacity, theor.	kW	56,743
Current	A	31,08
COP/EER	W/W	2,43
Mass flow	kg/h	1029
Operating frequency	Hz	50
Connection	-	PWS
Operating mode	-	100%
Discharge temperature	°C	82,66
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:

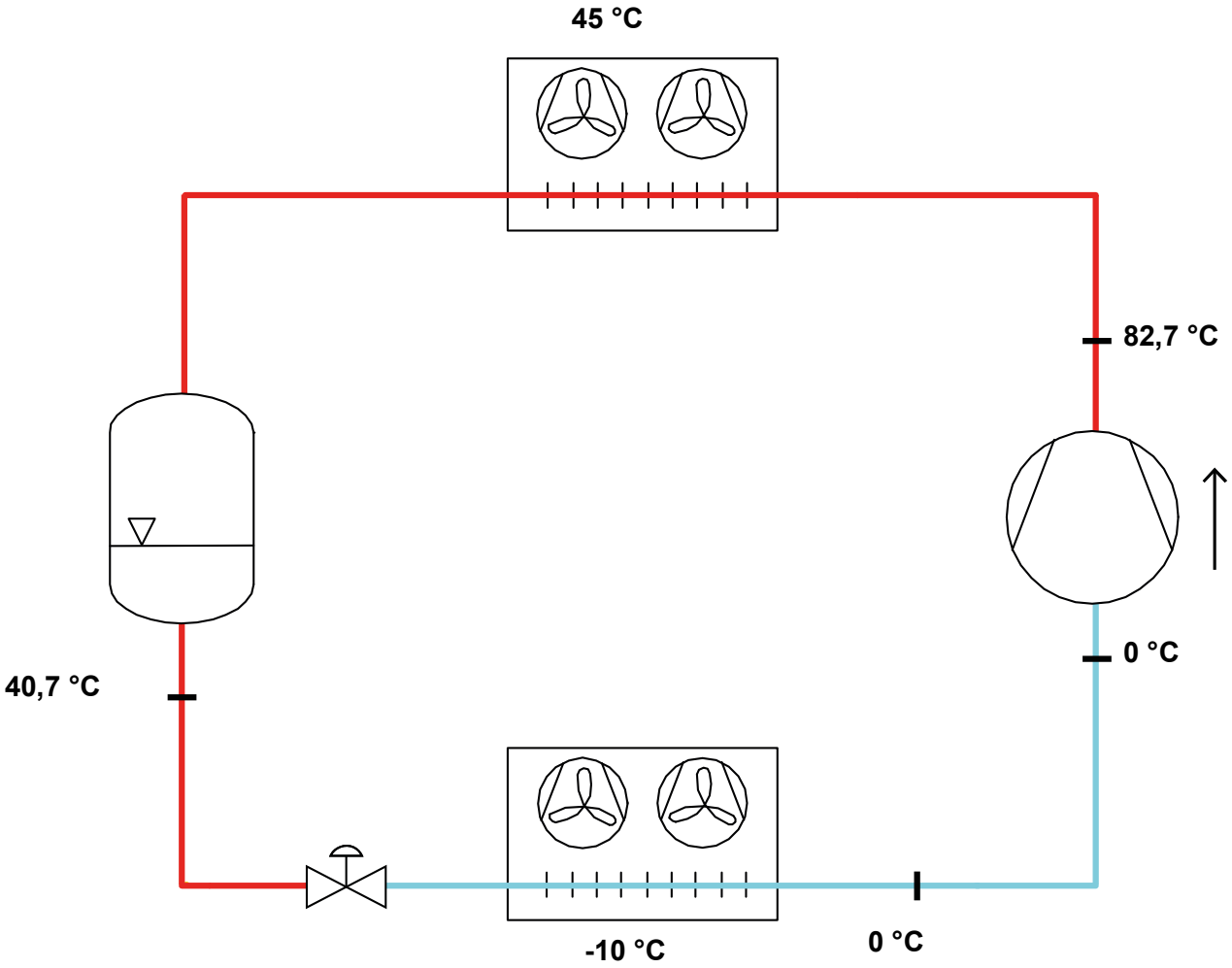
- Frascold tentative data

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: V30-84Y

Refrigerant: R449A

Power supply: 400/3/50 PWS

Technical data:

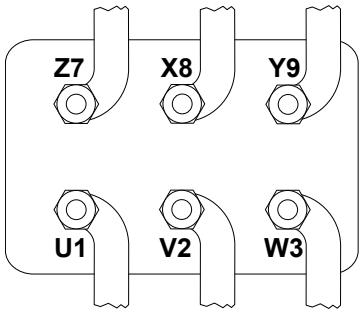
Displacement	83,81 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	49,2 A
Locked rotor current (LRA)	132,6 A
Locked rotor current (LRA), DOL	224,4 A
Number of pistons	4
Net weight	187 kg
Lubricant	FRASCOLD POE68
Oil charge	4 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar

Sound level:

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

*half sphere model

Motor connections:

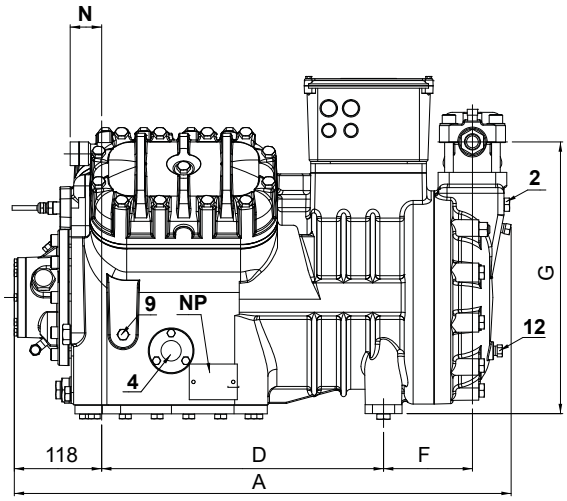


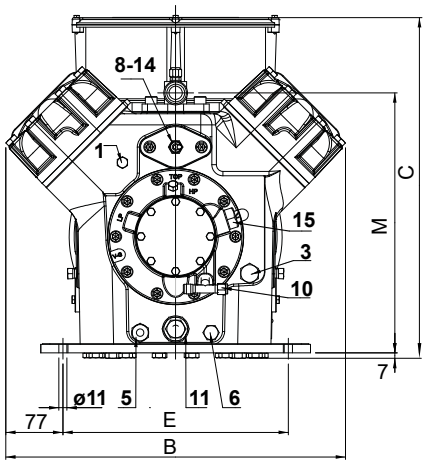
Model: V30-84Y

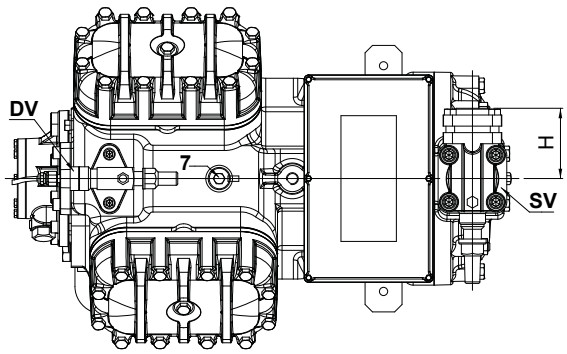
Refrigerant: R449A

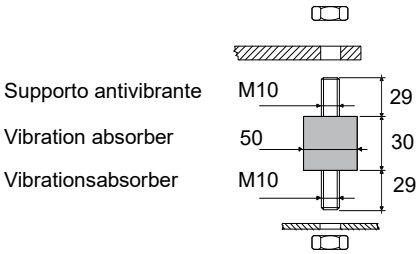
Power supply: 400/3/50 PWS

Dimensions:









Legend:

SV: Suction Valve	2 1/8" in - 54 mm	2: Low pressure connection	1/4" NPT
DV: Discharge valve	1 3/8" in - 35 mm	3: Oil charge plug	3/8" GAS
A: Length	703 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	133 mm	9: Oil pressure switch connection (LP)	1/4" NPT
G: Suction Valve	389 mm	10: Oil pressure switch connection (HP)	1/4" SAE
H: Suction Valve	130 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	48 mm	15: Electronic oil pressure switch connection	3/4 UNF
1: High pressure connection	1/8" NPT	NP: Nameplate	

Model: V30-84Y

Refrigerant: R449A

Power supply: 400/3/50 PWS

Polynomial coefficients according to EN12900 for V30-84Y:

*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	1,036950E+005	4,768780E+003
C2	3,917030E+003	-2,350780E+002
C3	-7,530150E+002	3,989840E+002
C4	5,318900E+001	-6,918940E+000
C5	-2,959770E+001	1,265960E+001
C6	-4,501020E+000	-1,529540E+000
C7	2,502180E-001	-5,336470E-002
C8	-3,623920E-001	7,039160E-002
C9	-5,698720E-002	-4,342460E-002
C10	2,063840E-002	-3,474210E-003

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