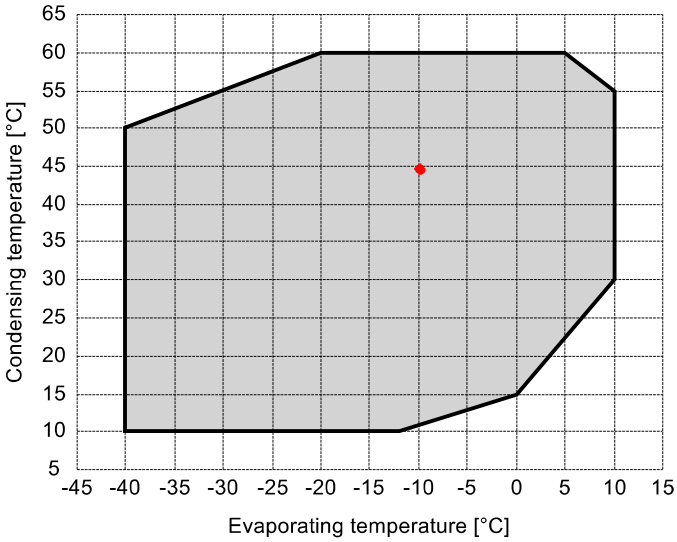
Input data

Refrigerant		R449A
Reference temperature		Dew point temperature
Calculation mode		Refrigeration / Air Cond.
Operating mode		Subcritical
Power supply		400/3/50
Ambient temperature	°C	32
Liquid subcooling	K	3
Liquid temperature	°C	37,35
Evaporating temperature	°C	-10
Evaporating pressure	bar	3,61
Suction gas superheating	K	10
Useful fraction of superheating	%	100



Output data

Compressor :		**LB2-Q728-0Y-2T**
Number of compressors :		FSx1
Refrigerating capacity	kW	13,641
Condensing temperature (dew point)	°C	44,64
Evaporator capacity	kW	13,641
Power input (with fan)	W	6312
Condenser capacity, theor.	kW	19,323
Current	A	12
COP/EER (with fan)	W/W	2,16
Mass flow	kg/h	335
Operating frequency	Hz	50
Connection	-	DOL-STAR
Operating mode	-	100%
Discharge temperature	°C	85,26
Ratio (%)	%	100,0%
Note	-	
Oil flow	l/min	-
Heat Exchanged (oil Cooler)	kW	-
Oil Temp. at Oil Cooler Outlet	°C	-
Certified by	-	Frascold

Compliant with EU Ecodesign Directive 2009/125/EC - Regulation EU 2015/1095.

Certified by:

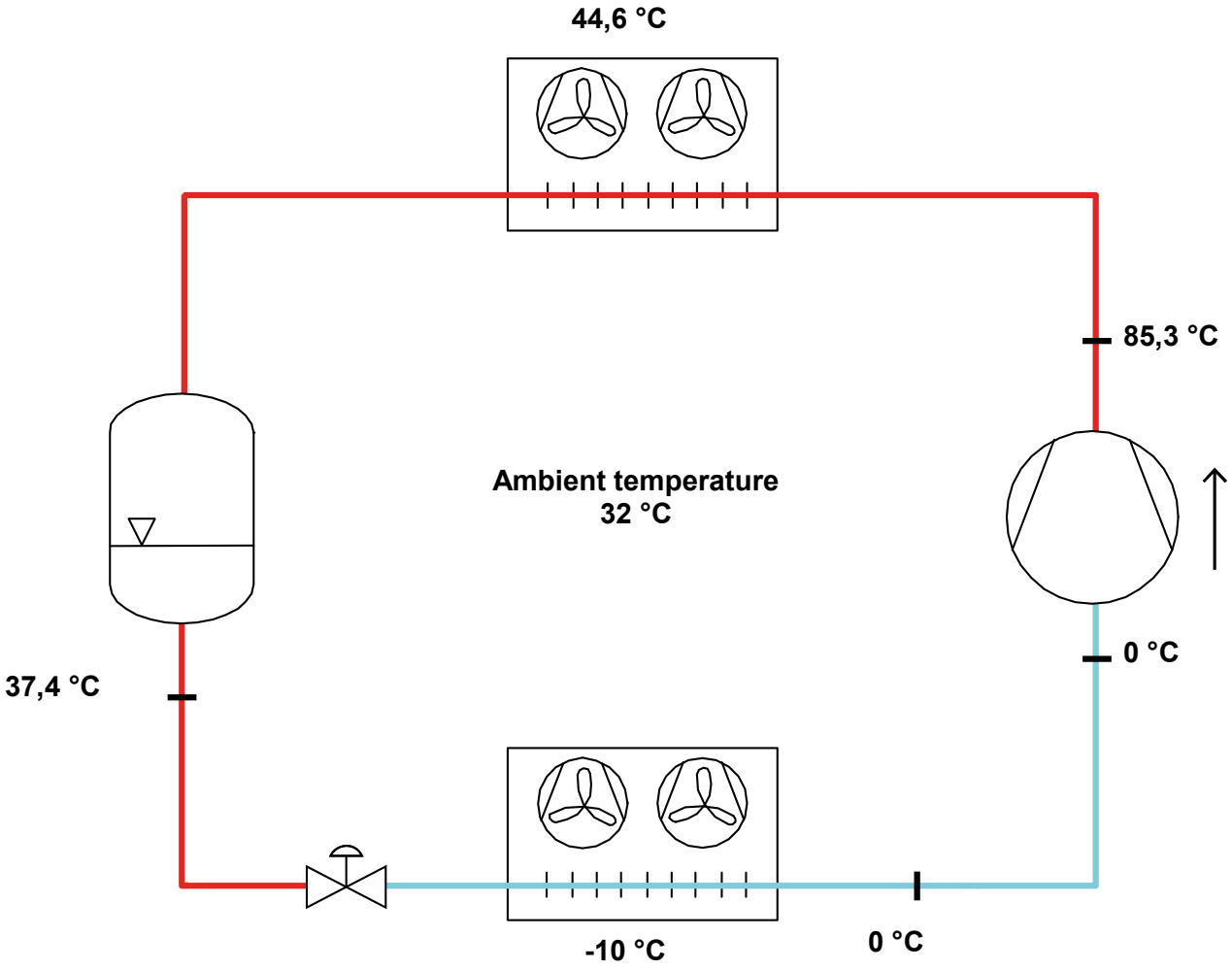
- Frascold Data

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: LB2-Q728-0Y-2T

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

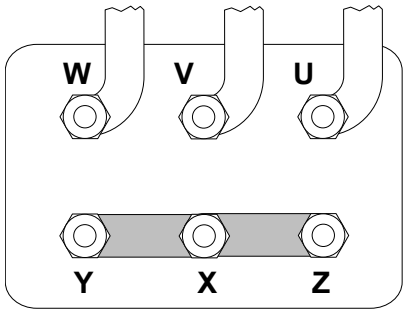
Technical data:

Compressor	
Compressor	Q7-28.1Y
Displacement	28,02 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	17,6 A
Locked rotor current (LRA)	87,3 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
Condenser	
Volume	4,85 l
Fan motor	
Number	2
Air flow	11400 m³/h
Power supply	230 - 400/3/50
Max power input (x1)	315 W
Max Current (x1) @400V	0,65 A
Max Current (x1) @230V	1,13 A
Liquid receiver	
Code	USLR06-M
Volume	5,7 l
Net weight	
STANDARD	168 kg
with housing	212 kg

Sound level:

*half sphere model

Motor connections:



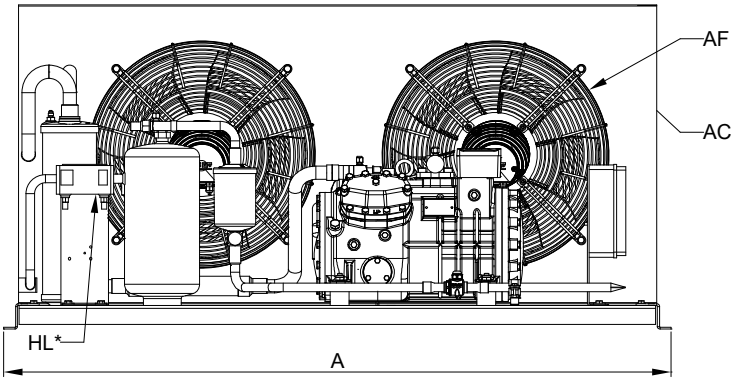
All data subject to change without notice

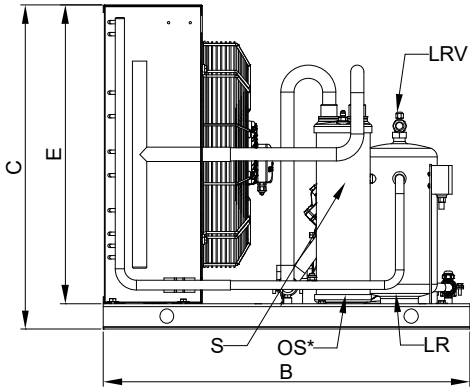
Model: LB2-Q728-0Y-2T

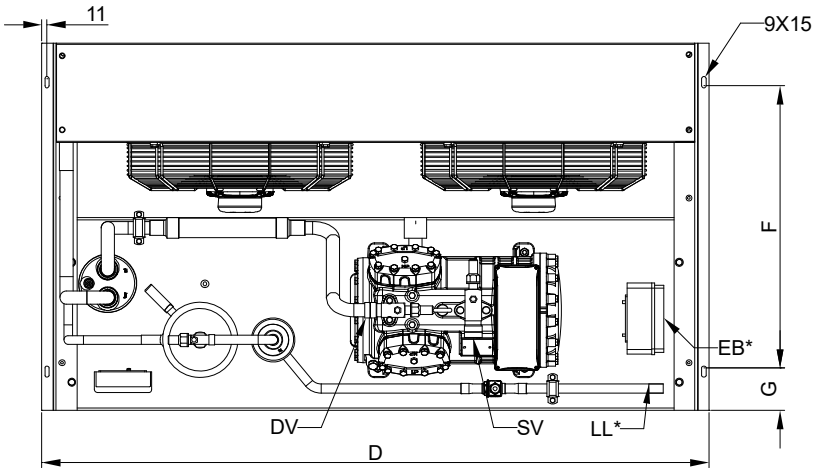
Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Dimensions:







Legend:

SV: Suction Valve	35 mm - 1 3/8" in		
LRV: Liquid valve	19 mm - 3/4" in	S: Safety Valve	
A: Length	1420 mm	AC: Condenser	
B: Width	780 mm	AF: Fan motor	AC Type
C: Height	689 mm	DV: Discharge valve	
A: Length (with housing)	1420 mm	LR: Liquid receiver	
B: Width (with housing)	804 mm	OS*: Oil separator	
C: Height (with housing)	713 mm	EB*: Electric box	
D: Base length	1370 mm	HL*: High/Low pressure switch	
E: Condenser Height	635 mm	H*: High pressure switch	
F: Base mounting	600 mm	LL*: Liquid line	
G: Base mounting	80 mm	*Package	

Model: LB2-Q728-0Y-2T

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Polynomial coefficients according to EN12900 for Q7-28.1Y:

*S = Tevap ; D = Tcond

Reference conditions	
Refrigerant	R449A
Ambient temperature	32 °C
Suction gas temperature	20 °C
Liquid subcooling	3 K
Frequency	50 Hz

	Refrigerating capacity [W]	Power input [W]
C1	3,513970E+004	1,417460E+003
C2	1,302100E+003	-1,069870E+002
C3	-2,976460E+002	1,459520E+002
C4	1,770440E+001	-3,072070E+000
C5	-9,371910E+000	4,670800E+000
C6	-6,502250E-001	-5,645030E-001
C7	9,211290E-002	-1,982750E-002
C8	-9,699610E-002	3,386510E-002
C9	-1,367620E-002	-8,217920E-003
C10	3,233080E-003	-1,555710E-003

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

Seasonal efficiency calculation according to EU Regulation 2015/1095

Model: LB2-Q728-0Y-2T

Refrigerant: R449A

Item	Symbol	Value		Unit
Evaporating temperature	t	-10	-35	[°C]
Annual electricity consumption	Q	27938	18671	[kWh/a]
Seasonal energy performance ratio	SEPR	3,09	1,6	[-]
Parameters at full load and ambient temperature 32°C (Point A)				
Rated cooling capacity	P_A	14,033	4,01	[kW]
Rated power supply	D_A	6,295	3,305	[kW]
Rated COP	**COP_A**	**2,23**	**1,21**	**[-]**
Parameters at part load and ambient temperature 25°C (Point B)				
Declared cooling capacity	P_B	15,54	4,618	[kW]
Declared power supply	D_B	5,949	3,309	[kW]
Declared COP	**COP_B**	**2,61**	**1,4**	**[-]**
Parameters at part load and ambient temperature 15°C (Point C)				
Declared cooling capacity	P_C	17,661	5,493	[kW]
Declared power supply	D_C	5,368	3,249	[kW]
Declared COP	**COP_C**	**3,29**	**1,69**	**[-]**
Parameters at part load and ambient temperature 5°C (Point D)				
Declared cooling capacity	P_D	19,751	6,377	[kW]
Declared power supply	D_D	4,686	3,119	[kW]
Declared COP	**COP_D**	**4,21**	**2,04**	**[-]**
Parameters at full load and ambient temperature 43°C (Point 3)				
Declared cooling capacity	P_3	11,687	3,123	[kW]
Declared power supply	D_3	6,723	3,219	[kW]
Declared COP	**COP_3**	**1,74**	**0,97**	**[-]**
Other Items				
Capacity control		Fixed		
Degradation coefficient for fixed and staged capacity units	Cdc	0.25		[-]
Power supply		400/3/50		
Fan speed regulation (Rated)	V	Fixed		[V]
Reference temperature		Dew point temperature		
Suction gas temperature	toh	20		[°C]
Subcooling	SC	3		[K]

Declaration of conformity - Directive 2009/125/UE Ecodesign -Condensing units LB2 series: FDEC151