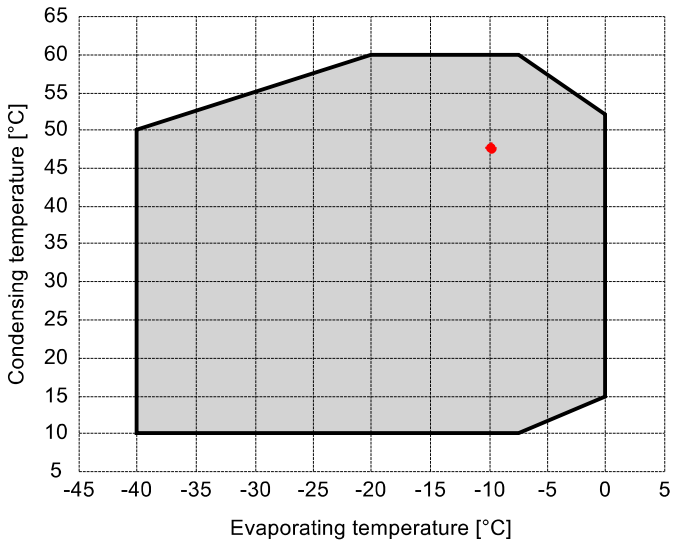
Input data

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	40,4
Evaporating temperature	°C	-10
Evaporating pressure	bar	3,61
Suction gas superheating	K	10
Useful fraction of superheating	%	100



Output data

Compressor :		**LB2-Q424-0Y-2M**
Number of compressors :		FSx1
Refrigerating capacity	kW	10,665
Condensing temperature (dew point)	°C	47,58
Evaporator capacity	kW	10,665
Power input (with fan)	W	5324
Condenser capacity, theor.	kW	15,729
Current	A	8,94
COP/EER (with fan)	W/W	2
Mass flow	kg/h	272
Operating frequency	Hz	50
Connection	-	DOL-STAR
Operating mode	-	100%
Discharge temperature	°C	92,29
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:

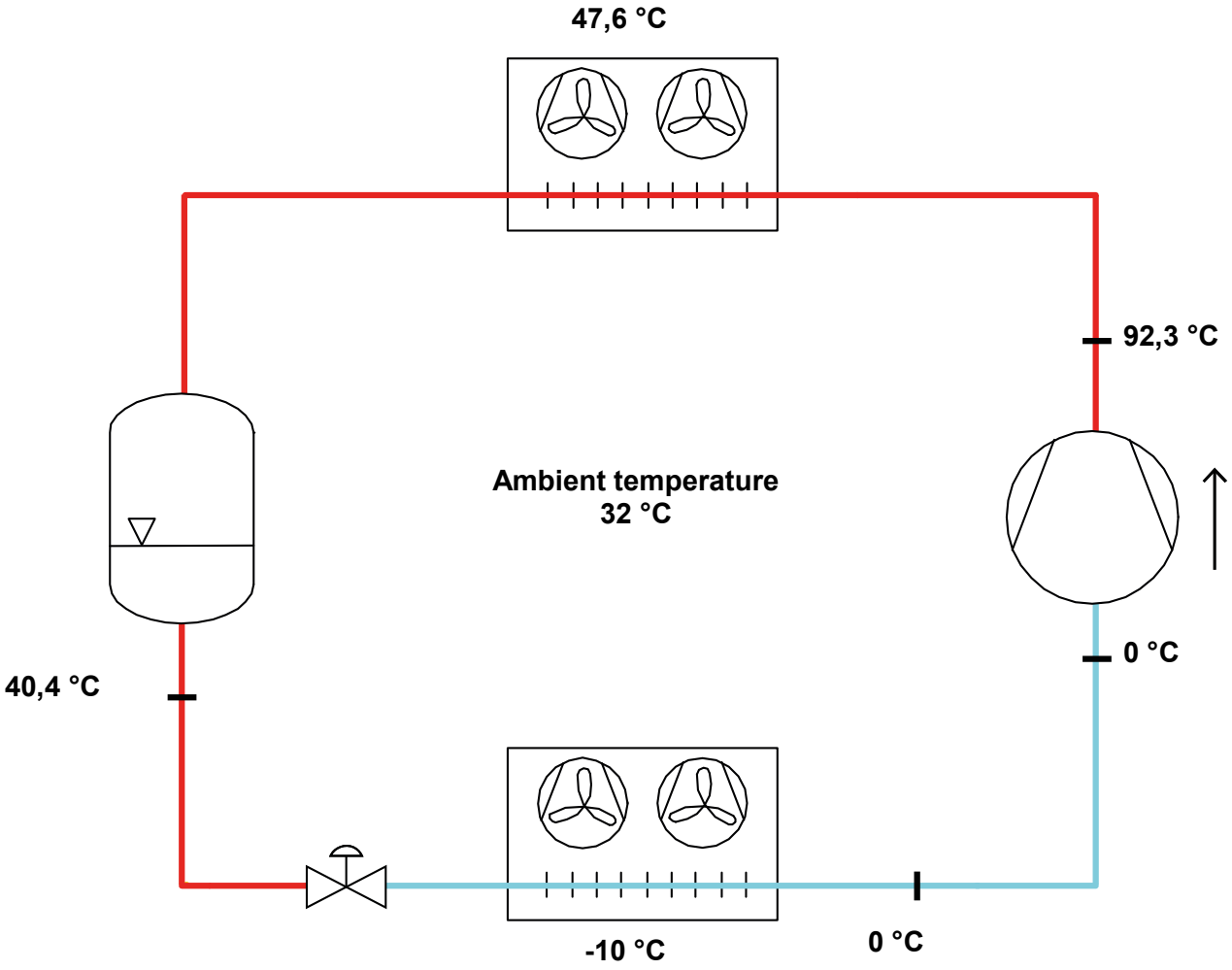
- Frascold Data

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-Q424-0Y-2M

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

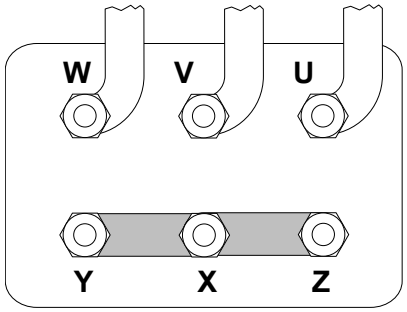
Technical data:

Compressor	
Compressor	Q4-24.1Y
Displacement	23,91 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	11,7 A
Locked rotor current (LRA)	53,2 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	2 l
Fan motor	
Number	2
Air flow	5000 m³/h
Power supply	230/1/50
Max power input (x1)	130 W
Max Current (x1)	0,6 A
Liquid receiver	
Code	USLR04
Volume	3,4 l
Net weight	
STANDARD	140 kg
with housing	176 kg

Sound level:

*half sphere model

Motor connections:



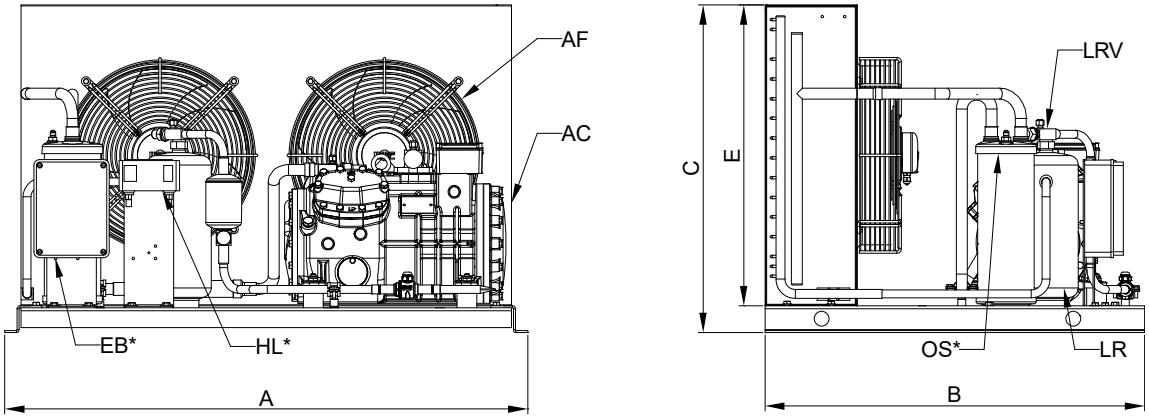
All data subject to change without notice

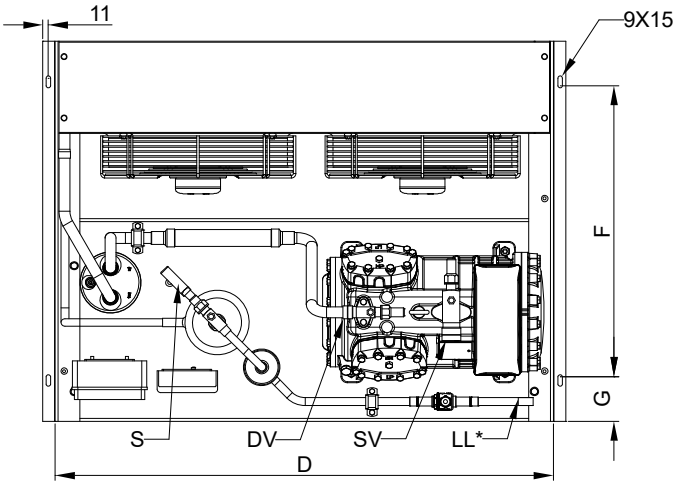
Model: LB2-Q424-0Y-2M

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Dimensions:





Legend:

SV: Suction Valve	28,6 mm - 1 1/8" in		
LRV: Liquid valve	15,8 mm - 5/8" in	S: Safety Valve	
A: Length	1060 mm	AC: Condenser	
B: Width	770 mm	AF: Fan motor	AC Type
C: Height	664 mm	DV: Discharge valve	
A: Length (with housing)	1060 mm	LR: Liquid receiver	
B: Width (with housing)	795 mm	OS*: Oil separator	
C: Height (with housing)	688 mm	EB*: Electric box	
D: Base length	1010 mm	HL*: High/Low pressure switch	
E: Condenser Height	610 mm	H*: High pressure switch	
F: Base mounting	600 mm	LL*: Liquid line	
G: Base mounting	90 mm	*Package	

Model: LB2-Q424-0Y-2M

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

Polynomial coefficients according to EN12900 for Q4-24.1Y:

*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	3,171760E+004	1,990522E+003
C2	1,234520E+003	-3,970346E+001
C3	-4,112360E+002	8,246587E+001
C4	1,666450E+001	-1,662861E+000
C5	-1,484480E+001	2,262550E+000
C6	2,270230E+000	2,497844E-001
C7	6,931560E-002	-1,012214E-002
C8	-1,622840E-001	1,521773E-002
C9	3,824140E-002	7,989161E-003
C10	-1,272740E-002	-4,377154E-003

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

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Seasonal efficiency calculation according to EU Regulation 2015/1095

Model: LB2-Q424-0Y-2M

Refrigerant: R449A

Item	Symbol	Value		Unit
Evaporating temperature	t	-10	-35	[°C]
Annual electricity consumption	Q	23645	14297	[kWh/a]
Seasonal energy performance ratio	SEPR	2,87	1,69	[-]
Parameters at full load and ambient temperature 32°C (Point A)				
Rated cooling capacity	P_A	11,025	3,242	[kW]
Rated power supply	D_A	5,304	2,587	[kW]
Rated COP	**COP_A**	**2,08**	**1,25**	**[-]**
Parameters at part load and ambient temperature 25°C (Point B)				
Declared cooling capacity	P_B	12,168	3,718	[kW]
Declared power supply	D_B	4,993	2,561	[kW]
Declared COP	**COP_B**	**2,44**	**1,45**	**[-]**
Parameters at part load and ambient temperature 15°C (Point C)				
Declared cooling capacity	P_C	13,825	4,361	[kW]
Declared power supply	D_C	4,51	2,461	[kW]
Declared COP	**COP_C**	**3,07**	**1,77**	**[-]**
Parameters at part load and ambient temperature 5°C (Point D)				
Declared cooling capacity	P_D	15,543	5,011	[kW]
Declared power supply	D_D	4	2,306	[kW]
Declared COP	**COP_D**	**3,89**	**2,17**	**[-]**
Parameters at full load and ambient temperature 43°C (Point 3)				
Declared cooling capacity	P_3	9,263	2,394	[kW]
Declared power supply	D_3	5,718	2,532	[kW]
Declared COP	**COP_3**	**1,62**	**0,95**	**[-]**
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