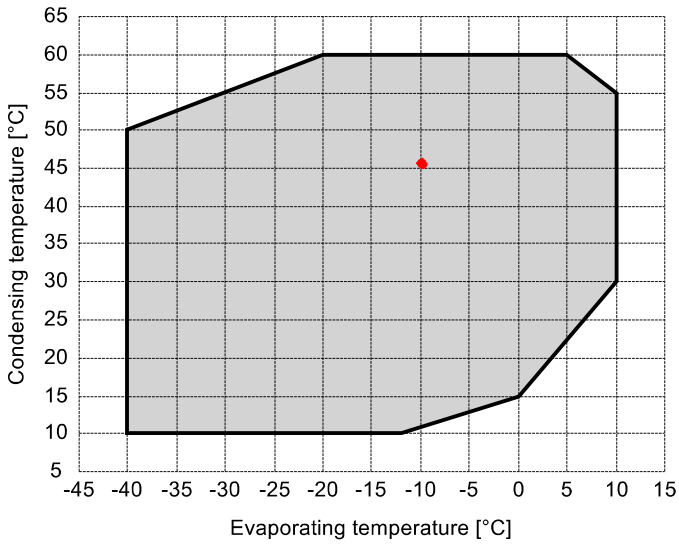
Input data

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	38,55
Evaporating temperature	°C	-10
Evaporating pressure	bar	3,61
Suction gas superheating	K	10
Useful fraction of superheating	%	100



Output data

Compressor :		**LB2-S1552-3Y-2T**
Number of compressors :		FSx1
Refrigerating capacity	kW	23,517
Condensing temperature (dew point)	°C	45,8
Evaporator capacity	kW	23,517
Power input (with fan)	W	11341
Condenser capacity, theor.	kW	33,358
Current	A	20,83
COP/EER (with fan)	W/W	2,07
Mass flow	kg/h	586
Operating frequency	Hz	50
Connection	-	PWS
Operating mode	-	100%
Discharge temperature	°C	85,42
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, at medium temperature (-10 °C).
This unit can't be used with this refrigerant at low temperature (-35 °C) in EU Countries.

Certified by:

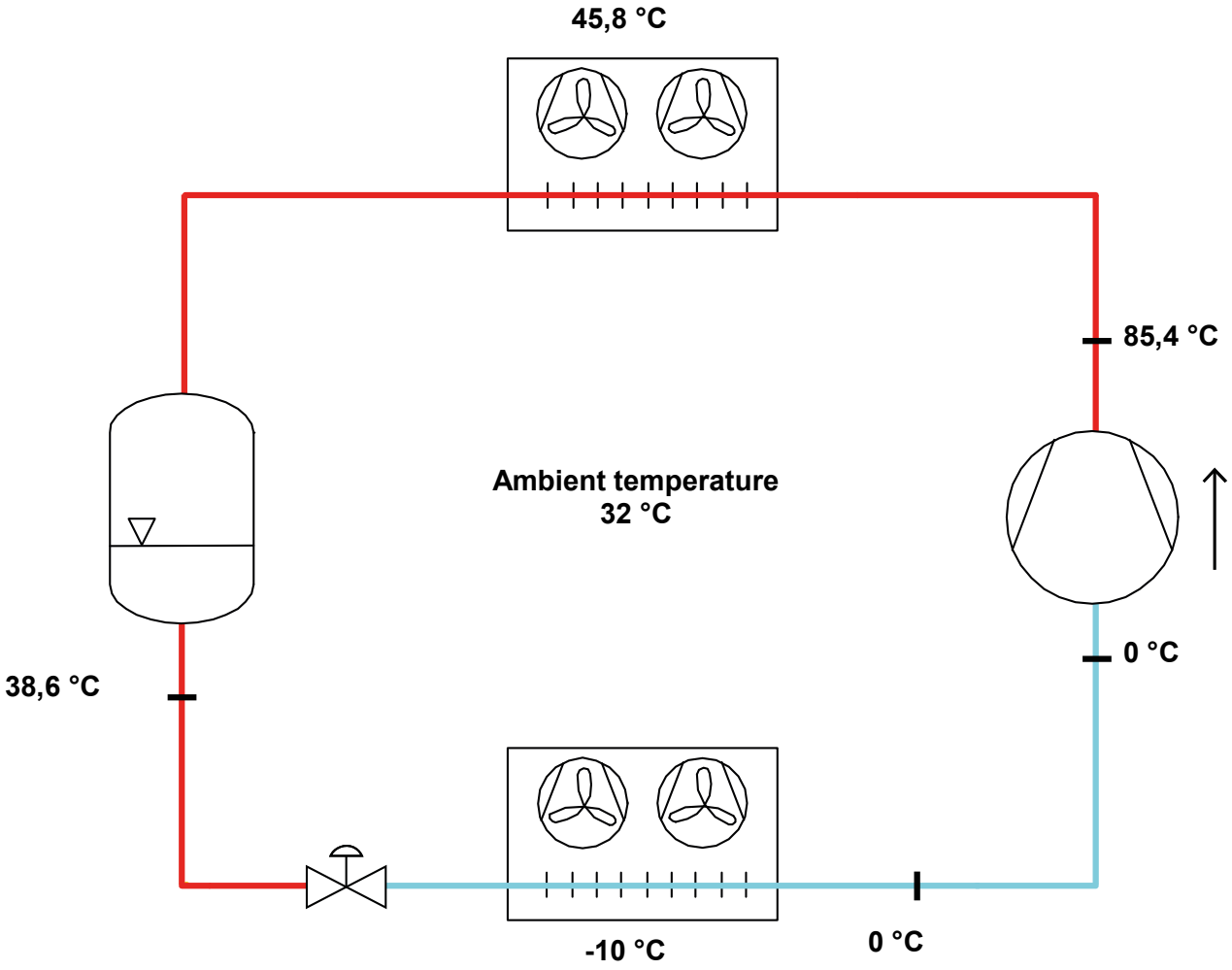
- Frascold Data

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-S1552-3Y-2T

Refrigerant: R449A

Power supply: 400/3/50 PWS

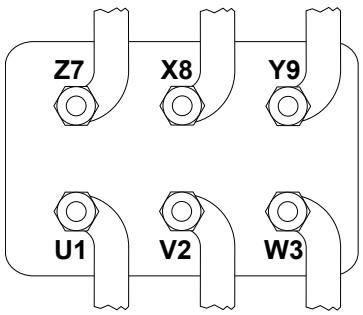
Technical data:

Compressor	
Compressor	S15-52Y
Displacement	51,5 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	32,4 A
Locked rotor current (LRA)	74,8 A
Locked rotor current (LRA), DOL	117,1 A
Number of pistons	4
Net weight	126 kg
Lubricant	FRASCOLD POE32
Oil charge	2,9 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar
Condenser	
Volume	6,9 l
Fan motor	
Number	2
Air flow	16020 m³/h
Power supply	230 - 400/3/50
Max power input (x1)	750 W
Max Current (x1) @400V	1,75 A
Max Current (x1) @230V	3,03 A
Liquid receiver	
Code	USLR06,6-M
Volume	6,6 l
Net weight	
STANDARD	259 kg
with housing	316 kg

Sound level:

*half sphere model

Motor connections:



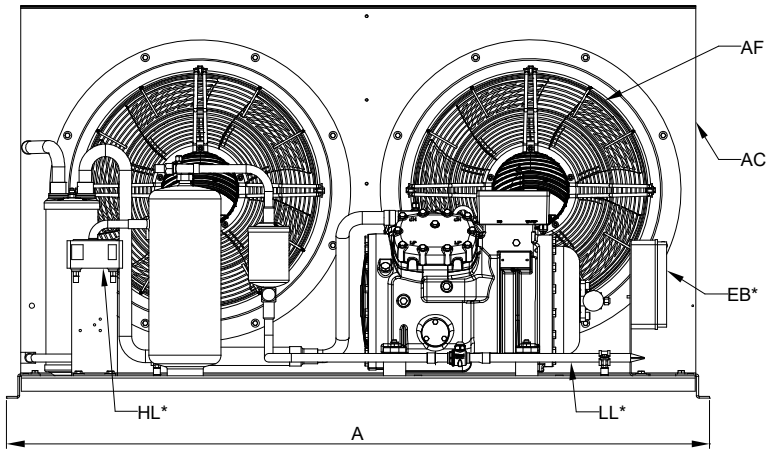
All data subject to change without notice

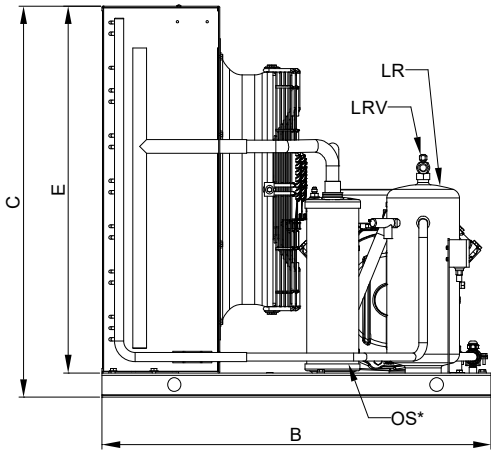
Model: LB2-S1552-3Y-2T

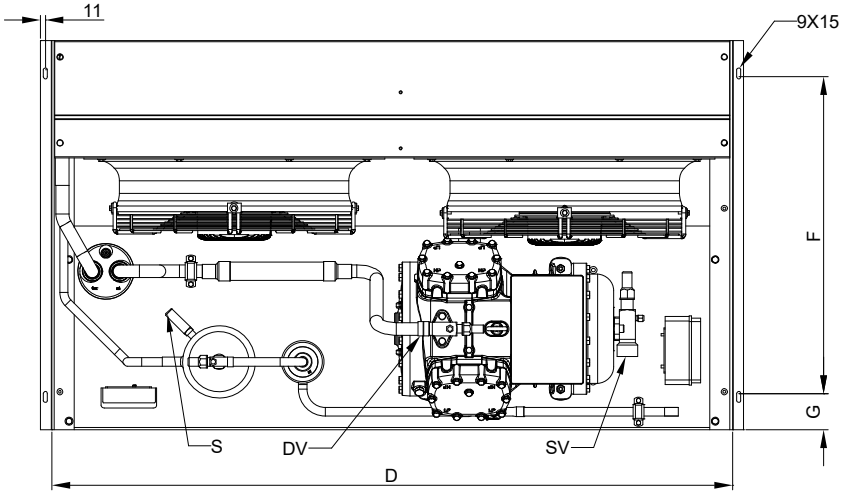
Refrigerant: R449A

Power supply: 400/3/50 PWS

Dimensions:







Legend:

SV: Suction Valve	42 mm - 1 5/8" in		
LRV: Liquid valve	19 mm - 3/4" in	S: Safety Valve	
A: Length	1556 mm	AC: Condenser	
B: Width	860 mm	AF: Fan motor	AC Type
C: Height	867 mm	DV: Discharge valve	
A: Length (with housing)	1556 mm	LR: Liquid receiver	
B: Width (with housing)	884 mm	OS*: Oil separator	
C: Height (with housing)	888 mm	EB*: Electric box	
D: Base length	1504 mm	HL*: High/Low pressure switch	
E: Condenser Height	813 mm	H*: High pressure switch	
F: Base mounting	700 mm	LL*: Liquid line	
G: Base mounting	80 mm	*Package	

All data subject to change without notice

Model: LB2-S1552-3Y-2T

Refrigerant: R449A

Power supply: 400/3/50 PWS

Polynomial coefficients according to EN12900 for S15-52Y:

*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	6,849150E+004	2,943410E+003
C2	2,625890E+003	-1,566080E+002
C3	-7,346690E+002	1,975170E+002
C4	3,670160E+001	-4,770680E+000
C5	-2,306180E+001	6,686600E+000
C6	1,237090E+000	8,259710E-001
C7	1,862480E-001	-3,862580E-002
C8	-2,387210E-001	1,894230E-002
C9	5,980200E-003	-9,690150E-003
C10	-6,977080E-003	-2,328070E-002

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

Seasonal efficiency calculation according to EU Regulation 2015/1095

Model: LB2-S1552-3Y-2T

Refrigerant: R449A

Item	Symbol	Value		Unit
Evaporating temperature	t	-10	-35	[°C]
Annual electricity consumption	Q	50320	-	[kWh/a]
Seasonal energy performance ratio	SEPR	2,96	-	[-]

Parameters at full load and ambient temperature 32°C (Point A)				
Rated cooling capacity	P_A	24,246	-	[kW]
Rated power supply	D_A	11,317	-	[kW]
Rated COP	**COP_A**	**2,14**	**-**	**[-]**

Parameters at part load and ambient temperature 25°C (Point B)				
Declared cooling capacity	P_B	27,114	-	[kW]
Declared power supply	D_B	10,794	-	[kW]
Declared COP	**COP_B**	**2,51**	**-**	**[-]**

Parameters at part load and ambient temperature 15°C (Point C)				
Declared cooling capacity	P_C	31,193	-	[kW]
Declared power supply	D_C	9,836	-	[kW]
Declared COP	**COP_C**	**3,17**	**-**	**[-]**

Parameters at part load and ambient temperature 5°C (Point D)				
Declared cooling capacity	P_D	35,305	-	[kW]
Declared power supply	D_D	8,709	-	[kW]
Declared COP	**COP_D**	**4,05**	**-**	**[-]**

Parameters at full load and ambient temperature 43°C (Point 3)				
Declared cooling capacity	P_3	19,868	-	[kW]
Declared power supply	D_3	11,777	-	[kW]
Declared COP	**COP_3**	**1,69**	**-**	**[-]**

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