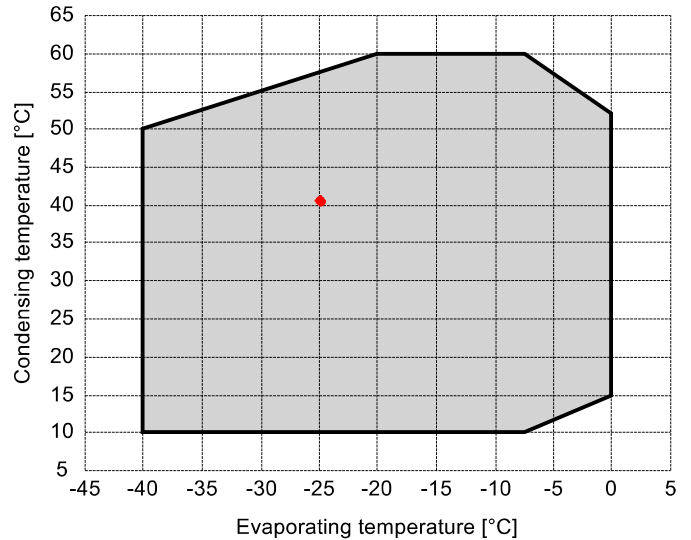


## Input data

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	33,39
Evaporating temperature	°C	-25
Evaporating pressure	bar	2
Suction gas superheating	K	10
Useful fraction of superheating	%	100



## Output data

<b>Compressor :</b>	<b>LB2-Q533-0Y-2T</b>	
Number of compressors :	FSx1	
Refrigerating capacity	kW	7,766
Condensing temperature (dew point)	°C	40,81
Evaporator capacity	kW	7,766
Power input (with fan)	W	5183
Condenser capacity, theor.	kW	12,319
Current	A	7,78
COP/EER (with fan)	W/W	1,5
Mass flow	kg/h	194
Operating frequency	Hz	50
Connection	-	DOL-STAR
Operating mode	-	100%
Discharge temperature	°C	96,68
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

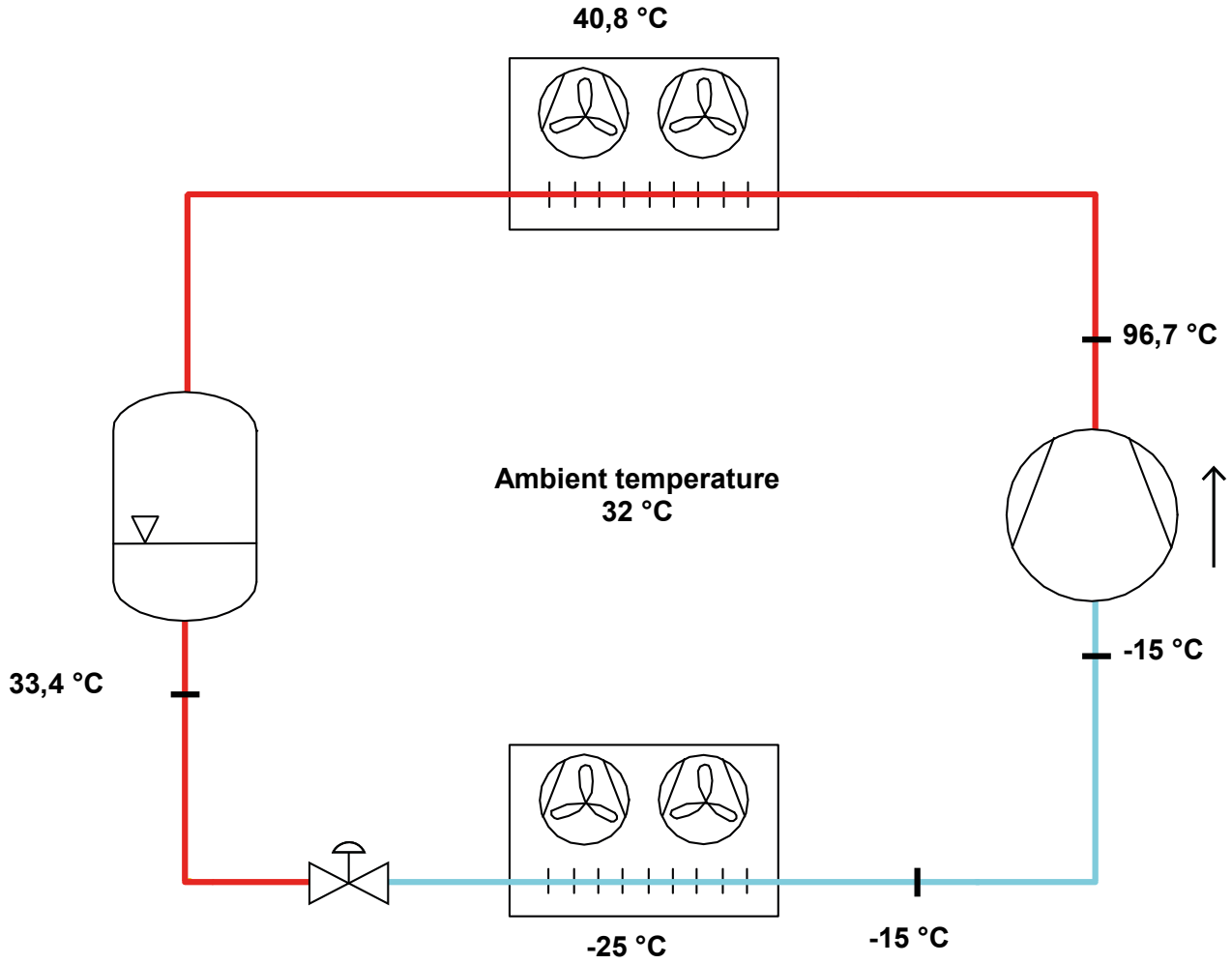


### Legend:

- \*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:**



*All data subject to change without notice*

**Model: LB2-Q533-0Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Technical data:**

**Compressor**

Compressor	Q5-33.1Y
Displacement	32,66 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	14,4 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

**Condenser**

Volume	4,85 l
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**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

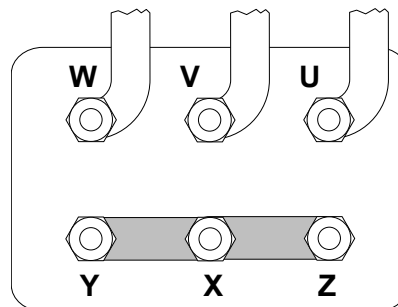
**Net weight**

STANDARD	168 kg
with housing	212 kg

**Sound level:**

\*half sphere model

**Motor connections:**



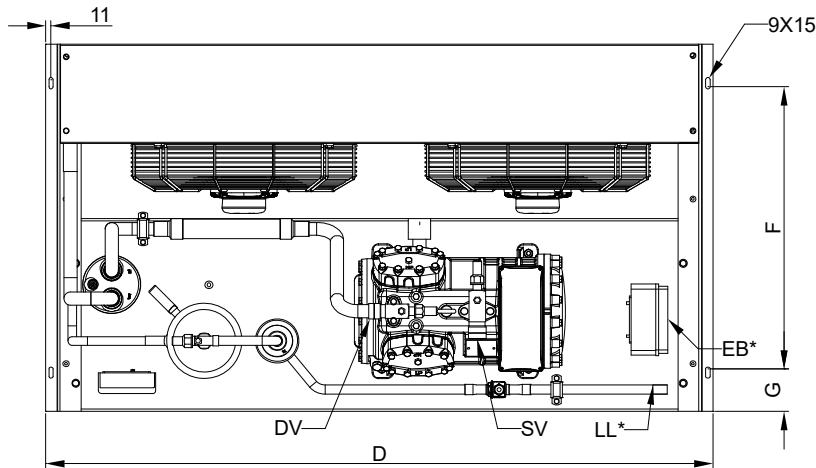
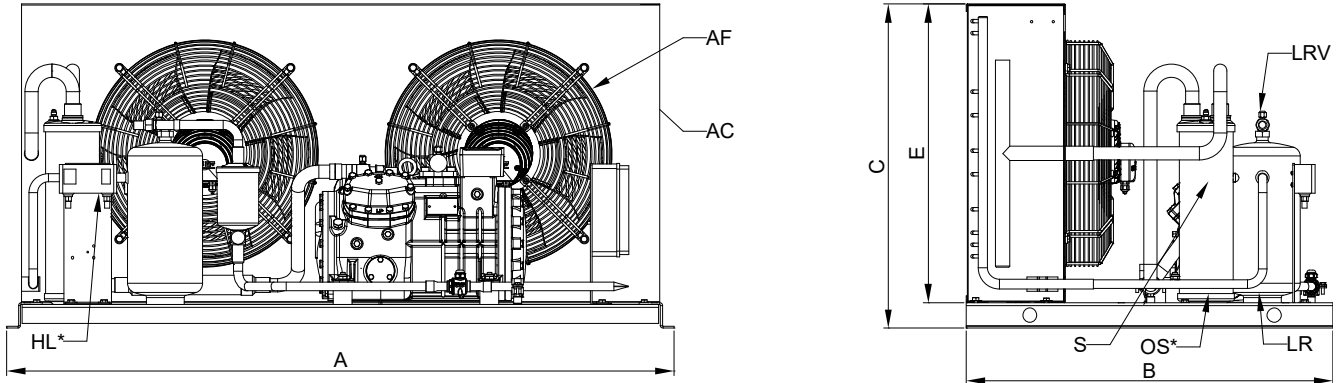
All data subject to change without notice

**Model: LB2-Q533-0Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Dimensions:**



**Legend:**

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

*All data subject to change without notice*

**Model: LB2-Q533-0Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 DOL-STAR

**Polynomial coefficients according to EN12900 for Q5-33.1Y:**

\*S = T<sub>evap</sub> ; D = T<sub>cond</sub>

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]
<b>C1</b>	4,332380E+004	2,722278E+003
<b>C2</b>	1,686090E+003	-5,441031E+001
<b>C3</b>	-5,616660E+002	1,123635E+002
<b>C4</b>	2,274740E+001	-2,280808E+000
<b>C5</b>	-2,028040E+001	3,093598E+000
<b>C6</b>	3,097830E+000	3,478325E-001
<b>C7</b>	9,443980E-002	-1,392705E-002
<b>C8</b>	-2,216530E-001	2,088332E-002
<b>C9</b>	5,227950E-002	1,089999E-002
<b>C10</b>	-1,734620E-002	-6,025875E-003

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

*All data subject to change without notice*

### Seasonal efficiency calculation according to EU Regulation 2015/1095

Model: LB2-Q533-0Y-2T

Refrigerant: R449A

Item	Symbol	Value		Unit
Evaporating temperature	t	-10	-35	[°C]
Annual electricity consumption	Q	32810	-	[kWh/a]
Seasonal energy performance ratio	SEPR	2,91	-	[-]

Parameters at full load and ambient temperature 32°C (Point A)				
Rated cooling capacity	P <sub>A</sub>	15,511	-	[kW]
Rated power supply	D <sub>A</sub>	7,402	-	[kW]
<b>Rated COP</b>	<b>COP<sub>A</sub></b>	<b>2,1</b>	-	<b>[-]</b>

Parameters at part load and ambient temperature 25°C (Point B)				
Declared cooling capacity	P <sub>B</sub>	17,108	-	[kW]
Declared power supply	D <sub>B</sub>	6,957	-	[kW]
<b>Declared COP</b>	<b>COP<sub>B</sub></b>	<b>2,46</b>	-	<b>[-]</b>

Parameters at part load and ambient temperature 15°C (Point C)				
Declared cooling capacity	P <sub>C</sub>	19,463	-	[kW]
Declared power supply	D <sub>C</sub>	6,264	-	[kW]
<b>Declared COP</b>	<b>COP<sub>C</sub></b>	<b>3,11</b>	-	<b>[-]</b>

Parameters at part load and ambient temperature 5°C (Point D)				
Declared cooling capacity	P <sub>D</sub>	21,902	-	[kW]
Declared power supply	D <sub>D</sub>	5,544	-	[kW]
<b>Declared COP</b>	<b>COP<sub>D</sub></b>	<b>3,95</b>	-	<b>[-]</b>

Parameters at full load and ambient temperature 43°C (Point 3)				
Declared cooling capacity	P <sub>3</sub>	13,033	-	[kW]
Declared power supply	D <sub>3</sub>	8,006	-	[kW]
<b>Declared COP</b>	<b>COP<sub>3</sub></b>	<b>1,63</b>	-	<b>[-]</b>

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