



Semi-Hermetic

Air-Cooled Condensing Units

EB Series





[FCAT032_00_EN \(v0\)](#)

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Air-cooled condensing units ECO-Design compliant

Frascold offers a wide range of commercial and industrial air-cooled condensing units for medium and low temperature applications. Their compact design is ideal for installations where need to cover small space and quiet operation is important.

The range of models has two main series:

- **EB models** for moderate climate areas, high efficiency unit with single-stage compressors
- **EBT models** for tropical climate areas, high efficiency unit with single-stage compressors

Both series are applied in many cooling installations, including applications like: cold and refrigerated rooms, supermarkets and shops, distribution centres, but also industrial applications, cooling processes in the food production and preservation industry.

Features

Reliable operation:

EB & EBT condensing units are rigorously assembled and tested in our factories in Italy. The Diagnose technology protection system, available for all Frascold compressors, enables early detection of faults and their quick resolution, thus reducing maintenance and system down time.

Efficiency:

EB & EBT condensing units have been designed to meet the ECODesign Directive 2009/125/EC and Regulation EU 2015/1095. The best efficiency of condensing units is reached thanks to the advanced design of Frascold semi-hermetic compressors and accurate sizing of all components.

Wide temperature range and universal use:

The range of units enables temperature control from 10°C to -45°C with all HCFC and HFC, HFO refrigerants.

Low noise:

Frascold compressors are distinguished by their particularly low noise level achieved through the intelligent combination of the monobloc structure with the mechanical components, the pipework, the compressor, high efficiency air-cooled condenser and the EC fan motors. This also enables unit installations very close to the utility provided by the application in order to reduce pressure drops and possible danger of leaks.

Compact and complete:

The compact size makes the condensing units a perfect solution for installations with small space available. The different versions proposed and the wide range of accessories make Frascold condensing units more efficient and reliable.

Easy to install and maintain:

As a result of their design structure, installation of the units is made simple. Accessibility to all components enables quick and safe maintenance operations.

Full assistance:

Frascold offers an accurate and comprehensive customer service and prompt assistance in any emergency, both directly and through an extensive network of service centres and partners all around the world.

Standard design specifications

The choice of all components is based on quality and safety, respect for the environment and social responsibility:

- Frascold semi-hermetic compressor with POE oil filling and suitable for inverter regulation.
- Air-cooled condenser with wide exchange surface and optimised circuiting to reduce pressure drops and refrigerant charge .
- EC fan motors with low power consumption and optimised airflow.
- Vertical-type liquid receiver with high storage capacity.
- Compressor discharge line with vibration absorber pipe.
- Electronic device for compressor protection.
- Support base frame designed to ensure the necessary strength and stability.

Configurations

The condensing units are available in different configurations to meet the installation requirements:

Standard

Basic configuration, including: Compressor, air-cooled condenser, fan motors, liquid receiver with shut-off valve, compressor discharge line and base frame.

Standard + Package

The basic configuration is also including: the liquid line (filter dryer, liquid sight glass and shut-off valve), high and low pressure switches, high-pressure switch for condensation control, electrical wiring box.



Accessories

Above mentioned configurations can be completed with other optionals (see page 13).

ASERCOM performance certifications



Frascold is a member of ASERCOM, the Association which ensures the accuracy and reliability of compressors and condensing units performance. ASERCOM has set out the procedure for measuring the performance and the certification process. The certification guarantees that the performance published corresponds to that actually measured with reference to European standard EN12900.

The compressors and condensing units with certified performance are listed on ASERCOM's certified products list.

Performance data

Performance data of all condensing units are available through the FSS.3 Frascold selection software, download for free from website, easy to install and user friendly.

FSS.3 selection software can easily inform about the operating limits of the condensing unit, the cooling capacity and all operating data with any kind of refrigerant. The capacities are according to the European standard EN12900 at 50Hz operation. The capacity can also be calculated at 60 Hz.

With FSS.3 it also possible to get technical information, drawings, manuals, bulletins and others.

FSS.3 Product Selection Software



Blue Is Better!

Conformity

The condensing units comply with the following Directives:

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/ECE
- Ecodesign directive 2009/125/EC
- Commission regulation EU 2015/1095

To verify compliance with Directive 2009/125/EC Ecodesign-Commission regulation EU 2015/1095, refer to the FTEC030 manual or use the FSS.3 selection program.

The condensing units are not functional assemblies, which means that in order to work they need to be integrated into a device or system. It is forbidden to commission the product before the device/system in which the cooling unit will be incorporated has been declared compliant with the provisions of the relevant directives, with particular reference to the directive regarding pressure equipment.

Models overview

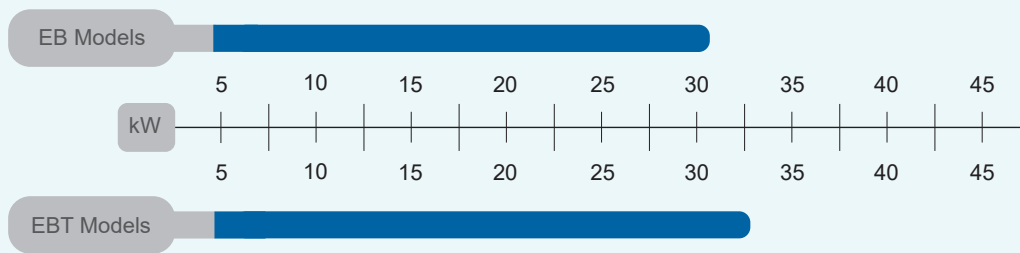
Frascold offers a wide range of models and versions that allow to keep the right temperature and the perfect balance between refrigerant load and efficiency in every refrigeration process. The range of models has two main series:

- **High efficiency models:** EB for moderate climate areas with a single-stage compressor and EBT for tropical climate areas
- **Standard models:** LB for moderate climate areas with a single and two-stage compressor and LBT for tropical climate areas

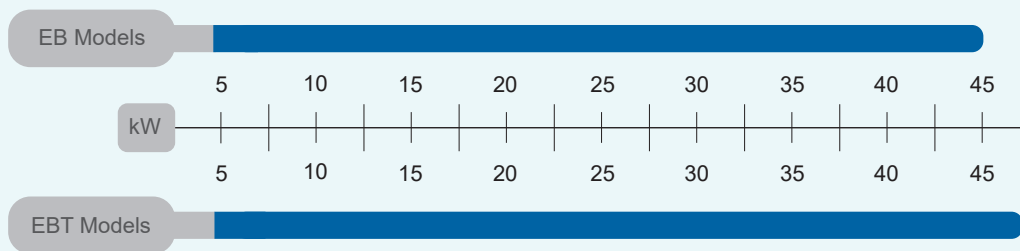
Current range:

2 versions, 58 models with compressors having displacements from 4 to 56 m³/h at 50Hz

Low Temperature



Medium Temperature



Model designation

EB - S1242 - 3 Y - 2 M - 0

Air-cooled condensing unit			Arrangement	
Compressor model			0	Standard
Motor type and power supply			1	with Oil Separator
0	DOL	220-240V/380-420V/3/50Hz 265-290V/440-480V/3/60Hz	2	with Package
1		220V/1/50Hz	3	with Package and Oil Separator
3	PWS	380V-420V/3/50Hz 440V-480V/3/60Hz	Fan motor type	
4	DOL	220-240V/3/60Hz 380-420V/3/60Hz	M	Single phase motor
5		220V/1/60Hz	Number of fans	
7	PWS	380V-420V/3/60Hz	1	One Fan motor
Oil type			2	Two Fan motors
Y		POE		
1		Mineral		

Special features

Low noise: Frascold compressors are distinguished by their particularly low noise level achieved through the intelligent combination of a monobloc body structure with the mechanical components of gas compression and suction and the electric motor. This also enables unit installations that are very close to the utility provided by the application in order to reduce pressure drops and possible danger of leaks.

Reliable operation: Frascold condensing units are rigorously assembled and pressure tested in our factories. The Diagnose technology protection system installed on all Frascold compressors enables early detection of faults and their rapid resolution, thus reducing maintenance and system stoppage.

Easy to install and maintain: As a result of their design structure, installation of the units is made simple. Accessibility to all components enables quick and safe maintenance operations.

Full assistance: Frascold offers an accurate and comprehensive customer service and prompt assistance in any emergency, both directly and through an extensive network of service centres and partners distributed across all five continents.

Compact and complete: Their compact size also makes them the perfect solution for installations with limited space. The different versions proposed and the wide range of accessories make Frascold condensing units more efficient and reliable.

Reduced consumption: The efficiency of condensing units is due to the advanced design of Frascold semi-hermetic compressors and correct sizing of all components used in the units such as air-cooled condensers and EC fans.

Wide temperature range and universal use: The range of units enables temperature control from 10°C to -45°C. The units can be used with all HCFC and HFC, HFO refrigerants.



Information plate

All the important information to identify the main components and operating limits are displayed on the unit name plate.

Manufacturer	Frascold	Frascold S.p.A. via Barbara Melzi 103/105 20027 Rescaldina (MI) - Italy Telephone: +39 0331 742 201	CE	EU conformance mark
Condensing unit model	Unit model: EB-A054-0Y-1M	Lubricant: POE 32 cSt		Oil charged into the compressor
Serial number	Serial: 0S001003	Liquid receiver: USLR02		Type of liquid receiver
Type of condensing unit	Condenser: USAC03E	PS (HP): 30 bar		Maximum operating pressures and temperature limits
Type of fan motor	Fan model: USAF1EC	PS (LP): 17 bar		
Model of installed compressor	Compressor: A05-4Y	TS*: -45°C / +140°C	Year: 2018	Year of construction
Classification of allowed refrigerants	*Refer to the instruction manual for the temperature range of each components Voltage: refer to components' technical specification Use refrigerants group 2 only, according to EN 378-1 Read carefully the instruction manual before assembling and using the unit			

Technical data

Condensing units		Compressor ①					Condenser						
Model	Model	Displacement (m³/h 50Hz)	Oil charge (liters)	Version	Motor ③		Model	EC Fan motors					
					Power supply	MRA (A)		Quantity	Model	Power supply	Max power (W)	Max absorbed current (A)	Max Condenser air flow (m³/h 50Hz)
			②	④									
EB-A054-0Y-1M	A05-4Y	3,95	1	1	A	2,8	USAC03E	1	USAF1EC	M	165	1,35	2650
EBT-A054-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-A075-0Y-1M	A07-5Y	4,93	1	1	A	2,7	USAC03E	1	USAF1EC	M	165	1,35	2650
EBT-A075-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-A16-0Y-1M	A1-6Y	5,47	1	1	A	3,6	USAC03E	1	USAF1EC	M	165	1,35	2650
EBT-A16-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-A17-0Y-1M	A1-7Y	6,91	1	2	A	3,7	USAC03E	1	USAF1EC	M	165	1,35	2650
EBT-A17-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-A157-0Y-1M	A1.5-7Y	6,91	1	1	A	4,5	USAC06E	1	USAF2EC	M	160	1,25	3435
EBT-A157-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-B159-0Y-1M	B1.5-9.1Y	8,96	1	2	A	5,9	USAC03E	1	USAF1EC	M	165	1,35	2650
EBT-B159-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-B210-0Y-1M	B2-10.1Y	9,88	1	1	A	6,7	USAC06E	1	USAF2EC	M	160	1,25	3435
EBT-B210-0Y-2M							USAC07E	2	USAF1EC	M	330	2,70	5300
EB-D211-0Y-1M	D2-11.1Y	11,26	1,1	1	A	7,1	USAC06E	1	USAF2EC	M	160	1,25	3435
EBT-D211-0Y-2M							USAC08E	2	USAF2EC	M	320	2,50	6870
EB-D213-0Y-1M	D2-13.1Y	13,15	1,1	2	A	7,1	USAC06E	1	USAF2EC	M	160	1,25	3435
EBT-D213-0Y-2M							USAC08E	2	USAF2EC	M	320	2,50	6870
EB-D313-0Y-1M	D3-13.1Y	13,15	1,1	1	A	8,8	USAC06E	1	USAF2EC	M	160	1,25	3435
EBT-D313-0Y-2M							USAC08E	2	USAF2EC	M	320	2,50	6870
EB-D316-0Y-2M	D3-16.1Y	16,40	1,1	2	A	9,9	USAC07E	2	USAF1EC	M	330	2,70	5300
EBT-D316-0Y-2M							USAC08E	2	USAF2EC	M	320	2,50	6870
EB-D416-0Y-2M	D4-16.1Y	16,40	1,2	1	A	11,6	USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-D416-0Y-2M							USAC16E	2	USAF4EC	M	600	4,10	12420
EB-D318-0Y-2M	D3-18.1Y	17,93	1,1	2	A	10,0	USAC07E	2	USAF1EC	M	330	2,70	5300
EBT-D318-0Y-2M							USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-D418-0Y-2M	D4-18.1Y	17,93	1,2	1	A	12,5	USAC16E	2	USAF4EC	M	600	4,10	12420

① For other compressor technical data refer to catalogue FCAT100

② POE oil

③ Standard motor / Contact Frascold for different motors

④ Motor size: Version 1 = optimized for medium-high evaporating temperatures
Version 2 = optimized for low evaporating temperatures

⑤ A = 220-240V Δ / 360-420V Y / 3~ / 50Hz // 265-290V Δ / 440-480V Y / 3~ / 60Hz

B = 380-420V Y / 3~ / 50Hz // 440-480V Y / 3~ / 60Hz

Tolerance +/- 10% of the mean value of the voltage range

⑥ Maximum operating current (MRA) at full load (400V). For rated current see FSS.3 Frascold selection program

⑦ Maximum operating current (MRA) at 230V = (400V MRA) x 1.75

⑧ M = 230/1/50 Hz

⑨ Total installed power of the fans

⑩ Maximum total current absorbed by the fans

Technical data

Condensing units		Compressor ①					Condenser						
Model	Model	Displacement (m³/h 50Hz)	Oil charge (liters)	Version	Motor ③		Model	EC Fan motors					
					Power supply	MRA (A)		Quantity	Model	Power supply	Max power (W)	Max absorbed current (A)	Max Condenser air flow (m³/h 50Hz)
			②	④	⑤	⑥ ⑦				⑧	⑨	⑩	
EB-Q420-0Y-2M	Q4-20.1Y	19,77	1,6	2	A	10,1	USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-Q420-0Y-2M							USAC16E	2	USAF4EC	M	600	4,10	12420
EB-Q521-0Y-2M	Q5-21.1Y	21,18	1,6	1	A	11,6	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q521-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-Q424-0Y-2M	Q4-24.1Y	23,91	1,6	2	A	11,7	USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-Q424-0Y-2M							USAC16E	2	USAF4EC	M	600	4,10	12420
EB-Q524-0Y-2M	Q5-24.1Y	23,91	1,6	1	A	13,8	USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-Q524-0Y-2M							USAC16E	2	USAF4EC	M	600	4,10	12420
EB-Q528-0Y-2M	Q5-28.1Y	28,02	1,6	2	A	14,0	USAC08E	2	USAF2EC	M	320	2,50	6870
EBT-Q528-0Y-2M							USAC16E	2	USAF4EC	M	600	4,10	12420
EB-Q728-0Y-2M	Q7-28.1Y	28,02	1,6	1	A	17,6	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q728-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-Q533-0Y-2M	Q5-33.1Y	32,66	1,6	2	A	14,4	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q533-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-Q733-0Y-2M	Q7-33.1Y	32,66	1,6	1	A	20,0	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q733-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-Q536-0Y-2M	Q5-36.1Y	35,86	1,6	2	A	11,8	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q536-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-Q736-0Y-2M	Q7-36.1Y	35,86	1,6	1	A	19,4	USAC16E	2	USAF4EC	M	600	4,10	12420
EBT-Q736-0Y-2M							USAC18E	2	USAF10EC	M	1300	5,80	18460
EB-S842-3Y-2M	S8-42Y	41,32	2,9	2	B	20,3	USAC18E	2	USAF10EC	M	1300	5,80	18460
EBT-S842-3Y-2M							USAC19E	2	USAF10EC	M	1300	5,80	18460
EB-S1242-3Y-2M	S12-42Y	41,32	2,9	1	B	22,4	USAC18E	2	USAF10EC	M	1300	5,80	18460
EBT-S1242-3Y-2M							USAC19E	2	USAF10EC	M	1300	5,80	18460
EB-S1052-3Y-2M	S10-52Y	51,50	2,9	2	B	24,5	USAC18E	2	USAF10EC	M	1300	5,80	18460
EBT-S1052-3Y-2M							USAC19E	2	USAF10EC	M	1300	5,80	18460
EB-S1552-3Y-2M	S15-52Y	51,50	2,9	1	B	32,4	USAC18E	2	USAF10EC	M	1300	5,80	18460
EBT-S1552-3Y-2M							USAC19E	2	USAF10EC	M	1300	5,80	18460
EB-S1556-3Y-2M	S15-56Y	56,00	2,9	2	B	30,7	USAC18E	2	USAF10EC	M	1300	5,80	18460
EBT-S1556-3Y-2M							USAC19E	2	USAF10EC	M	1300	5,80	18460
EB-S2056-3Y-2M	S20-56Y	56,00	2,9	1	B	38,4	USAC19E	2	USAF10EC	M	1300	5,80	18460

① For other compressor technical data refer to catalogue FCAT100

② POE oil

③ Standard motor / Contact Frascold for different motors

④ Motor size: Version 1 = optimized for medium-high evaporating temperatures
Version 2 = optimized for low evaporating temperatures

⑤ A = 220-240V Δ / 360-420V Y / 3~ / 50Hz // 265-290V Δ / 440-480V Y / 3~ / 60Hz

B = 380-420V Y / 3~ / 50Hz // 440-480V Y / 3~ / 60Hz

Tolerance +/- 10% of the mean value of the voltage range.

⑥ Maximum operating current (MRA) at full load (400V). For rated current see FSS.3 Frascold selection program

⑦ Maximum operating current (MRA) at 230V = (400V MRA) x 1.75

⑧ M = 230/1/50 Hz

⑨ Total installed power of the fans

⑩ Maximum total current absorbed by the fans

Technical data

Condensing units		Liquid receiver ⑪					Piping connections				Installation/Transport			Housing
Model	Model	Vol. (dm ³)	R134a R450A R513A	R404A R507A R407F R407A R448A R449A	R407C R22	Safety valve connection	Compressor suction valve		Liquid line valve		Net Weight (kg) (Standard construction)	Gross weight (kg) (Standard construction)	Volume with packaging (dm ³)	
							Ø mm	Ø inch	Ø mm	Ø inch				
		⑫							⑬				⑭	
EB-A054-0Y-1M	USLR02	1,5	1,8	1,7	1,8	1¼"	15,8	5⁄8"	9,5	⅜"	65	72	465	USHAOU26
EBT-A054-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	88	98	795	USHAOU29
EB-A075-0Y-1M	USLR02	1,5	1,8	1,7	1,8	1¼"	15,8	5⁄8"	9,5	⅜"	65	72	465	USHAOU26
EBT-A075-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	88	98	795	USHAOU29
EB-A16-0Y-1M	USLR02	1,5	1,8	1,7	1,8	1¼"	15,8	5⁄8"	9,5	⅜"	65	72	465	USHAOU26
EBT-A16-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	88	98	795	USHAOU29
EB-A17-0Y-1M	USLR02	1,5	1,8	1,7	1,8	1¼"	15,8	5⁄8"	9,5	⅜"	65	72	465	USHAOU26
EBT-A17-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	88	98	795	USHAOU29
EB-A157-0Y-1M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	15,8	5⁄8"	12,7	½"	70	77	531	USHAOU27
EBT-A157-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	88	98	795	USHAOU29
EB-B159-0Y-1M	USLR02	1,5	1,8	1,7	1,8	1¼"	15,8	5⁄8"	9,5	⅜"	67	74	465	USHAOU26
EBT-B159-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	90	100	795	USHAOU29
EB-B210-0Y-1M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	19,0	¾"	12,7	½"	74	81	531	USHAOU27
EBT-B210-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"			12,7	½"	92	102	795	USHAOU29
EB-D211-0Y-1M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	22,0	7⁄8"	12,7	½"	79	86	531	USHAOU27
EBT-D211-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1¼"			15,8	5⁄8"	106	116	795	USHAOU30
EB-D213-0Y-1M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	22,0	7⁄8"	12,7	½"	79	86	531	USHAOU27
EBT-D213-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1¼"			15,8	5⁄8"	106	116	795	USHAOU30
EB-D313-0Y-1M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	28,6	1" ⅛	12,7	½"	83	90	531	USHAOU27
EBT-D313-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1¼"			15,8	5⁄8"	106	116	795	USHAOU30
EB-D316-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	28,6	1" ⅛	12,7	½"	101	111	795	USHAOU29
EBT-D316-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1¼"			15,8	5⁄8"	110	120	795	USHAOU30
EB-D416-0Y-2M	USLR03-M	2,3	2,3	2,2	2,3	1¼"	28,6	1" ⅛	15,8	5⁄8"	116	126	795	USHAOU30
EBT-D416-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1¼"			19,0	¾"	144	159	1150	USHAOU31
EB-D318-0Y-2M	USLR03-M	2,2	2,3	2,2	2,3	1¼"	28,6	1" ⅛	12,7	½"	107	117	795	USHAOU29
EBT-D318-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1¼"			15,8	5⁄8"	116	126	795	USHAOU30
EBT-D418-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1¼"	28,6	1" ⅛	19,0	¾"	144	159	1150	USHAOU31

⑪ Liquid receiver with safety valve

⑫ Max liquid refrigerant 90% of the volume. Liquid temperature 20°C

⑬ Valves with solder connections

⑭ Including service valves, oil charge, rubber supports; not including any accessories supplied on request

⑮ Optional component (see page 13)

Technical data

Condensing units		Liquid receiver ⑪					Piping connections				Installation/Transport			Housing
Model	Model	Vol. (dm ³)	R134a R450A R513A	R404A R507A R407F R407A R448A R449A	R407C R22	Safety valve connection	Compressor suction valve		Liquid line valve		Net Weight (kg) (Standard construction)	Gross weight (kg) (Standard construction)	Volume with packaging (dm ³)	
							Ø mm	Ø inch	Ø mm	Ø inch				
			⑫				⑬				⑭			⑮
EB-Q420-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1/4"	28,6	1" 1/8	15,8	5/8"	135	145	795	USHAOU30
EBT-Q420-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	28,6	1" 1/8	19,0	3/4"	168	183	1150	USHAOU31
EB-Q521-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	28,6	1" 1/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q521-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	28,6	1" 1/8	19,0	3/4"	227	247	2352	USHAOU32
EB-Q424-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1/4"	28,6	1" 1/8	15,8	5/8"	140	150	795	USHAOU30
EBT-Q424-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	28,6	1" 1/8	19,0	3/4"	168	183	1150	USHAOU31
EB-Q524-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1/4"	28,6	1" 1/8	15,8	5/8"	140	150	795	USHAOU30
EBT-Q524-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	28,6	1" 1/8	19,0	3/4"	168	183	1150	USHAOU31
EB-Q528-0Y-2M	USLR04	3,4	3,6	3,1	3,5	1/4"	35,0	1" 3/8	15,8	5/8"	140	150	795	USHAOU30
EBT-Q528-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EB-Q728-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q728-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	227	247	2352	USHAOU32
EB-Q533-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q533-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	227	247	2352	USHAOU32
EB-Q733-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q733-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	227	247	2352	USHAOU32
EB-Q536-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q536-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	227	247	2352	USHAOU32
EB-Q736-0Y-2M	USLR06-M	5,7	6,3	5,5	6,2	1/4"	35,0	1" 3/8	19,0	3/4"	168	183	1150	USHAOU31
EBT-Q736-0Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	227	247	2352	USHAOU32
EB-S842-3Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	265	285	2352	USHAOU32
EBT-S842-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	35,0	1" 3/8	22,2	7/8"	286	306	2352	USHAOU33
EB-S1242-3Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	268	288	2352	USHAOU32
EBT-S1242-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	35,0	1" 3/8	22,2	7/8"	289	309	2352	USHAOU33
EB-S1052-3Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	35,0	1" 3/8	19,0	3/4"	268	288	2352	USHAOU32
EBT-S1052-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	35,0	1" 3/8	22,2	7/8"	289	309	2352	USHAOU33
EB-S1552-3Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	42,0	1" 5/8	19,0	3/4"	274	294	2352	USHAOU32
EBT-S1552-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	42,0	1" 5/8	22,2	7/8"	295	315	2352	USHAOU33
EB-S1556-3Y-2M	USLR6.6-M	6,6	7,0	6,1	6,9	1/4"	42,0	1" 5/8	19,0	3/4"	278	298	2352	USHAOU32
EBT-S1556-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	42,0	1" 5/8	22,2	7/8"	295	315	2352	USHAOU33
EB-S2056-3Y-2M	USLR12-M	11,0	12,1	10,6	12,0	1/2"	42,0	1" 5/8	22,2	7/8"	301	321	2352	USHAOU33

⑪ Liquid receiver with safety valve

⑫ Max liquid refrigerant 90% of the volume. Liquid temperature 20°C

⑬ Valves with solder connections

⑭ Including service valves, oil charge, rubber supports; not including any accessories supplied on request

⑮ Optional component (see page 13)

Control and protection device

The compressor is equipped with the Kriwan INT69[®] Diagnose protection devices, a further development of the compressors protection capability.

The Diagnose technology is not limited to the protection of the compressor, it also provides specific functions of diagnostics aimed for:

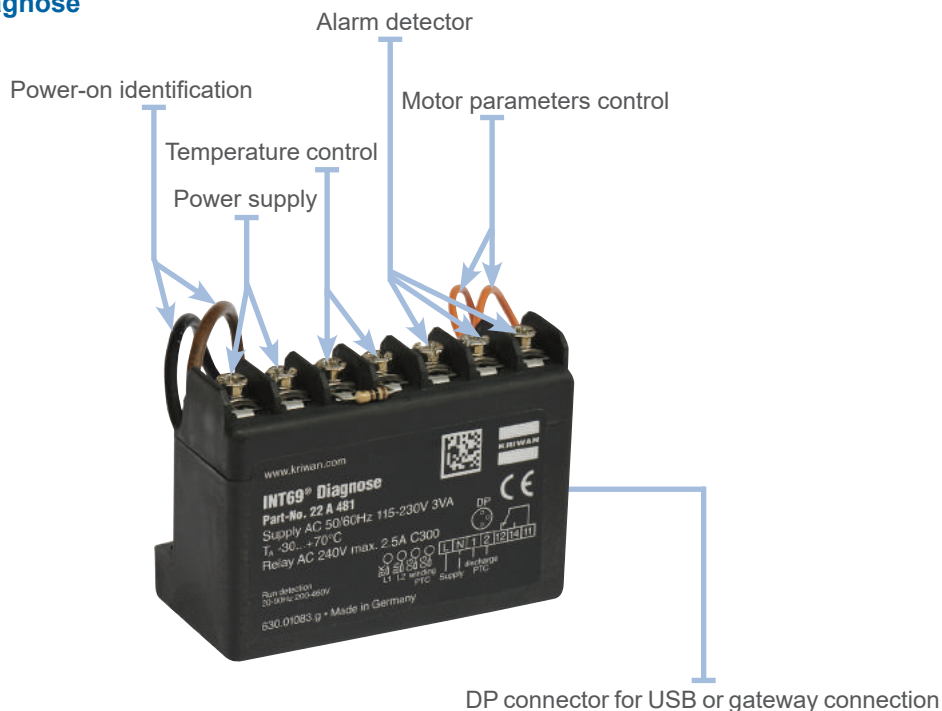
- preventing operating faults that may occur in the system through the historical data analysis,
- planning maintenance actions,
- adjusting parameters for system optimisation.

The additional protection capabilities help extending the service life of the compressor. Through this technology applied to the compressors, users benefit from the increased reliability of the refrigeration system and the reduced operating and maintenance cost.

Advantages

- Guarantee of optimal operation throughout the life cycle of the compressor
- Practical and with simple operation
- Immediate diagnosis and accurate problem-solving in case of error or failure
- Intelligent monitoring of the compressor operation
- Extends the service life of the refrigeration systems
- Improves the compressor protection
- Reduces operating and maintenance costs
- Automatically saves operational data and errors in a memory
- Technical sheet with retrieval of stored data
- Display of compressor status through flash LED code
- Data download through DP port connection
- Remote communication through Modbus-Gateway and LAN-Gateway protocol
- Also applicable to already installed compressors

INT69[®] Diagnose



INT69[®] Diagnose is intellectual property and trademarks[®] of KRIWAN Industrie-Elektronik GmbH.

Construction features and optionals

Air-cooled condensing unit EB & EBT series / model	EB-A...1M	EBT-A...2M	EB-B...1M	EBT-B...2M	EB-D...1M	EB-D...2M EBT-D...2M	EB-Q...2M EBT-Q...2M	EB-S...2M EBT-S...2M
Semi-hermetic compressor with integrated direct electric start-up motor 220-240V Δ / 380-420V / 3 / 50 Hz <=> 265-290V Δ / 440-480V / 3 / 60 Hz PTC/AMS sensors; INT69 protection device; POE oil filling; suction and discharge valves; rubber mounts	①	①	①	①	①	①		
Semi-hermetic compressor with integrated direct electric start-up motor 220-240V Δ / 380-420V / 3 / 50 Hz <=> 265-290V Δ / 440-480V / 3 / 60 Hz PTC/AMS sensors; INT69 DIAGNOSE protection device; POE oil filling; suction and discharge valves; rubber mounts							①	
Semi-hermetic compressor with integrated PWS electric start-up motor 380-420V / 3 / 50 Hz <=> 440-480V / 3 / 60 Hz AMS sensors; INT69 DIAGNOSE protection device; POE oil filling; suction and discharge valves; rubber mounts								①
Discharge temperature control sensor							○	○
EC Fan motor speed regulation device (supplied loose)	○	○	○	○	○	○	○	○
Liquid receiver (PED certified) with large volume, brazing rotalock valve, safety valve (30 bar set-point)	①	①	①	①	①	①	①	①
Vibration absorber pipe on compressor discharge line	①	①	①	①	①	①	①	①
Optional "Package", including: - Oil separator, liquid line (filter, liquid sight glass, shut-off valve), - High/Low safety pressure switch (PED certified, Cat. IV)	② ④		② ④		② ④			
Optional "Package", including: - Oil separator, liquid line (filter, liquid sight glass, shut-off valve) - High/Low safety pressure switch (PED certified, Cat. IV) - Electrical wiring junction box		③ ④		③ ④		③ ④	③ ④	③ ④
Solenoid valve (alternative to shut-off valve supplied with "Package")	○	○	○	○	○	○	○	○
Factory mounted Check-valve for compressor discharge line		⑤	⑤	⑤	⑤	⑤	⑤	⑤
Protecting Housing for outdoor installation	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥

① Standard components included

○ Optional component supplied on request

② Package fitting without electric cable junction box

③ Package fitting with electric cables Junction box

④ Oil separator supplied without oil charge

⑤ Accessory required when the compressor is equipped with "US" head for unloading start

⑥ Supplied loose for installation on site

Dimensions

Condensing units	Standard construction ①									Unit with Housing ②					
	Overall dimensions			Condenser dimensions		Fixing holes position		Drawing		Overall dimensions				Housing	
	Length	Width	Height	Length	Height	Distance between holes	Distance from side A	Ref.	Page	Length	Width (base)	Width (max)	Height	Weight	Code
	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Nr.	Nr.	A mm	B mm	C mm	D mm	kg	
Model															
EB-A054-0Y-1M	771	700	463	721	410	470	115	1	18	771	703	724	486	22	USHA0U26
EBT-A054-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-A075-0Y-1M	771	700	463	721	410	470	115	1	18	771	703	724	486	22	USHA0U26
EBT-A075-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-A16-0Y-1M	771	700	463	721	410	470	115	1	18	771	703	724	486	22	USHA0U26
EBT-A16-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-A17-0Y-1M	771	700	463	721	410	470	115	1	18	771	703	724	486	22	USHA0U26
EBT-A17-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-A157-0Y-1M	771	700	543	721	490	470	115	2	18	771	703	724	566	25	USHA0U27
EBT-A157-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-B159-0Y-1M	771	700	463	721	410	470	115	1	18	771	703	724	486	22	USHA0U26
EBT-B159-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-B210-0Y-1M	771	700	543	721	490	470	115	2	18	771	703	724	566	25	USHA0U27
EBT-B210-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EB-D211-0Y-1M	771	700	543	721	490	470	115	2	18	771	703	724	566	25	USHA0U27
EBT-D211-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EB-D213-0Y-1M	771	700	543	721	490	470	115	2	18	771	703	724	566	25	USHA0U27
EBT-D213-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EB-D313-0Y-1M	771	700	543	721	490	470	115	2	18	771	703	724	566	25	USHA0U27
EBT-D313-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EB-D316-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EBT-D316-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EB-D416-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EBT-D416-0Y-2M	1420	760	689	1370	635	600	80	5	20	1420	763	784	713	44	USHA0U31
EB-D318-0Y-2M	1060	770	559	1010	505	600	90	3	19	1060	771	792	583	32	USHA0U29
EBT-D318-0Y-2M	1060	770	664	1010	610	600	90	4	19	1060	771	792	688	36	USHA0U30
EBT-D418-0Y-2M	1420	760	689	1370	635	600	80	5	20	1420	763	784	713	44	USHA0U31

① Condensing Unit without Protecting Housing

② Condensing Unit with Protecting Housing (supplied loose) see page 16

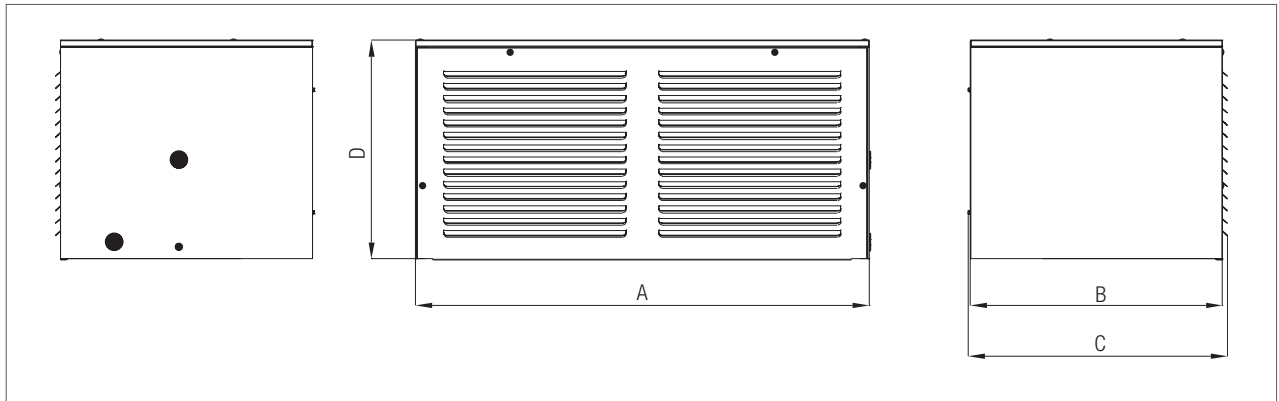
Dimensions

Condensing units	Standard construction ①									Unit with Housing ②					
	Overall dimensions			Condenser dimensions		Fixing holes position		Drawing		Overall dimensions				Housing	
	Length	Width	Height	Length	Height	Distance between holes	Distance from side A	Ref.	Page	Length	Width (base)	Width (max)	Height	Weight	Code
Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Nr.	Nr.	A mm	B mm	C mm	D mm	kg	
EB-Q420-0Y-2M	1060	770	664	1010	610	600	90	6	20	1060	771	792	688	36	USHA0U30
EBT-Q420-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EB-Q521-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q521-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-Q424-0Y-2M	1060	770	664	1010	610	600	90	6	20	1060	771	792	688	36	USHA0U30
EBT-Q424-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EB-Q524-0Y-2M	1060	770	664	1010	610	600	90	6	20	1060	771	792	688	36	USHA0U30
EBT-Q524-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EB-Q528-0Y-2M	1060	770	664	1010	610	600	90	6	20	1060	771	792	688	36	USHA0U30
EBT-Q528-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EB-Q728-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q728-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-Q533-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q533-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-Q733-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q733-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-Q536-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q536-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-Q736-0Y-2M	1420	760	689	1370	635	600	80	7	21	1420	763	784	713	44	USHA0U31
EBT-Q736-0Y-2M	1556	810	944	860	1506	700	80	8	21	1556	861	882	968	57	USHA0U32
EB-S842-3Y-2M	1556	810	944	860	1506	700	80	9	22	1556	861	882	968	57	USHA0U32
EBT-S842-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33
EB-S1242-3Y-2M	1556	810	944	860	1506	700	80	9	22	1556	861	882	968	57	USHA0U32
EBT-S1242-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33
EB-S1052-3Y-2M	1556	810	944	860	1506	700	80	9	22	1556	861	882	968	57	USHA0U32
EBT-S1052-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33
EB-S1552-3Y-2M	1556	810	944	860	1506	700	80	9	22	1556	861	882	968	57	USHA0U32
EBT-S1552-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33
EB-S1556-3Y-2M	1556	810	944	860	1506	700	80	9	22	1556	861	882	968	57	USHA0U32
EBT-S1556-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33
EB-S2056-3Y-2M	1556	1010	1144	860	1506	700	80	10	22	1556	861	882	1169	65	USHA0U33

① Condensing Unit without Protecting Housing

② Condensing Unit with Protecting Housing (supplied loose) see page 16

Dimensional drawings - Housing



Housing code	Length	Width (base)	Width (max)	Height	Weight
	A	B	C	D	kg
USHAOU26	721	702	725	432	22
USHAOU27	721	702	725	514	25
USHAOU29	1010	770	793	529	32
USHAOU30	634	770	793	634	36
USHAOU31	1370	762	785	659	44
USHAOU32	1506	860	883	834	57
USHAOU33	1506	860	883	1034	65

Dimensional drawings - Positions and dimensions

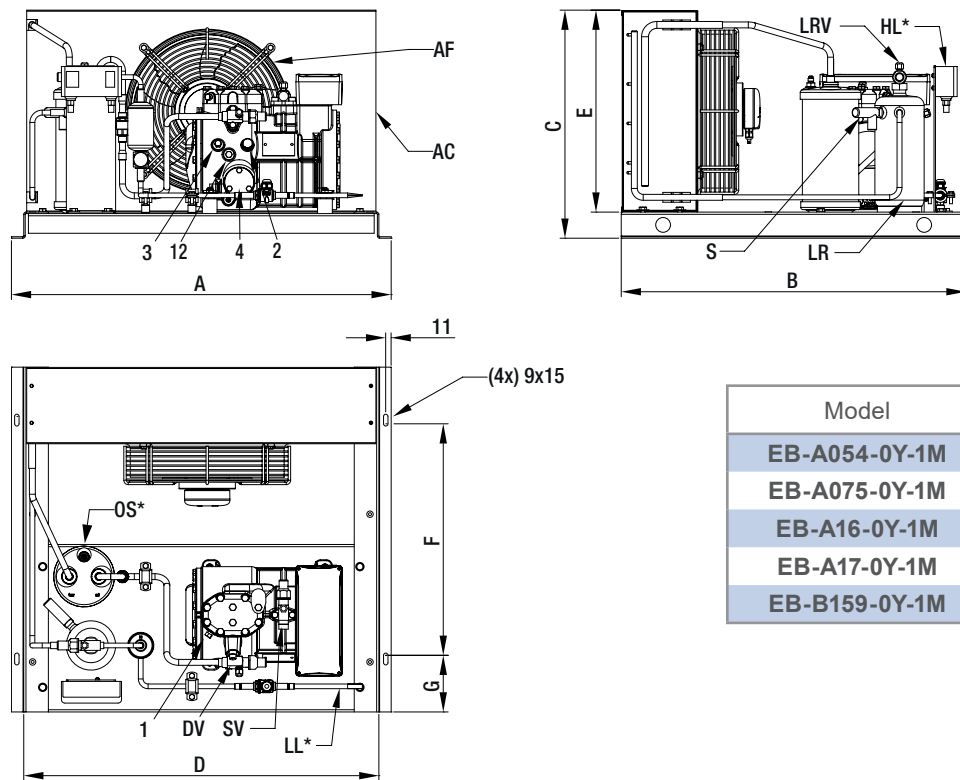
Condensing units model			EB-A...1	EB-A...2 EBT-A...2	EB-B...1	EB-B...2 EBT-B...2	EB-D...1	EB-D...2 EBT-D...2	EB-Q...2 EBT-Q...2	EB-S...2 EBT-S...2
Pos.	Components									
1	High-pressure plug	NPT	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"
2	Low-pressure plug	NPT	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"
3	Oil filling plug	GAS	1⁄4"	1⁄4"	1⁄4"	1⁄4"	1⁄4"	1⁄4"	1⁄4"	1⁄4"
4	Oil level indicator									
5	Oil heater pocket									
6	Oil drain plug	ISO4017	M8 x 22							M10x30
6	Oil drain plug	GAS								
7	Connection for liquid injection valve	NPT							1⁄8"	1⁄4"
8	Connection for liquid injection sensor	NPT							1⁄8"	1⁄8"
9	Oil pressure switch connection (LP)	SAE								
10	Oil pressure switch connection (HP)	SAE								
12	Oil return plug	NPT	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄8"	1⁄4"
14	Max discharge temperature sensor plug									
AC	Air-cooled condensing unit		②	②	②	②	②	②	②	②
AF	Fan motor		②	②	②	②	②	②	②	②
DV	Discharge valve		③	③	③	③	③	③	③	③
LR	Liquid receiver		③	③	③	③	③	③	③	③
LRV	Liquid receiver shut-off valve		③	③	③	③	③	③	③	③
SV	Suction valve		③	③	③	③	③	③	③	③
OS	Oil separator		①	①	①	①	①	①	①	①
EB	Electric wiring box		①	①	①	①	①	①	①	①
HL	High/low pressure switch		①	①	①	①	①	①	①	①
H	High pressure switch		①	①	①	①	①	①	①	①
LL	Liquid line		①	①	①	①	①	①	①	①
S	Safety valve / Safety valve connection		③	③	③	③	③	③	③	③
SC	Fan motor speed controller		①	①	①	①	①	①	①	①

① Optional components supplied on request.

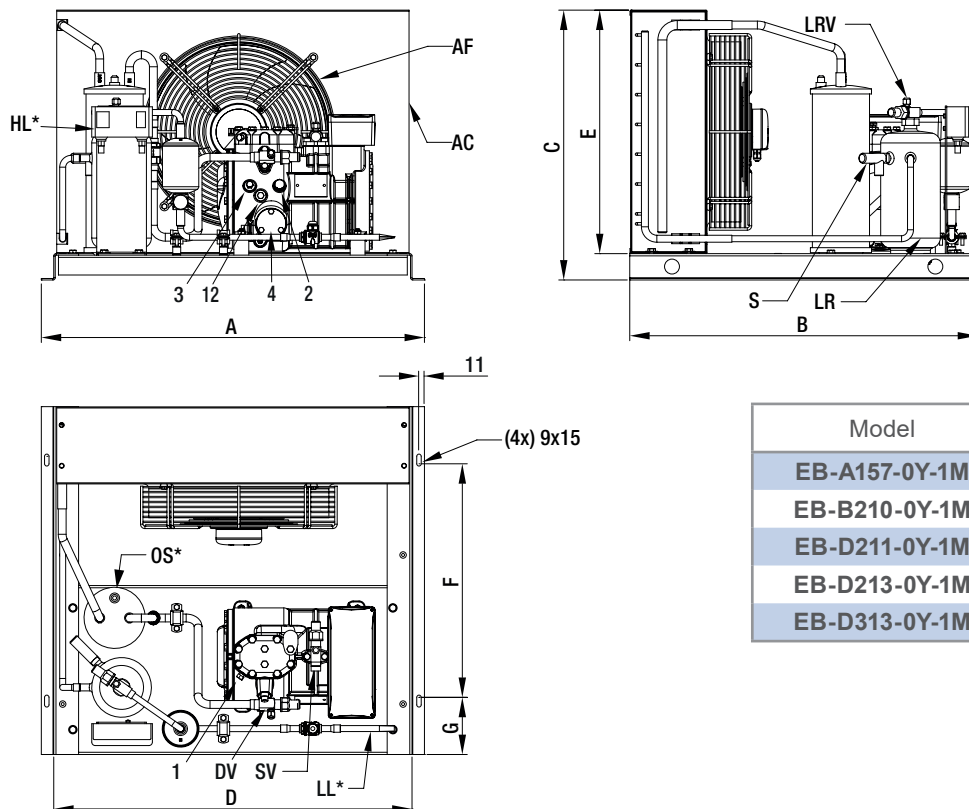
② See Technical Data, page 8-9.

③ See Technical Data, page 10-11.

Dimensional drawings

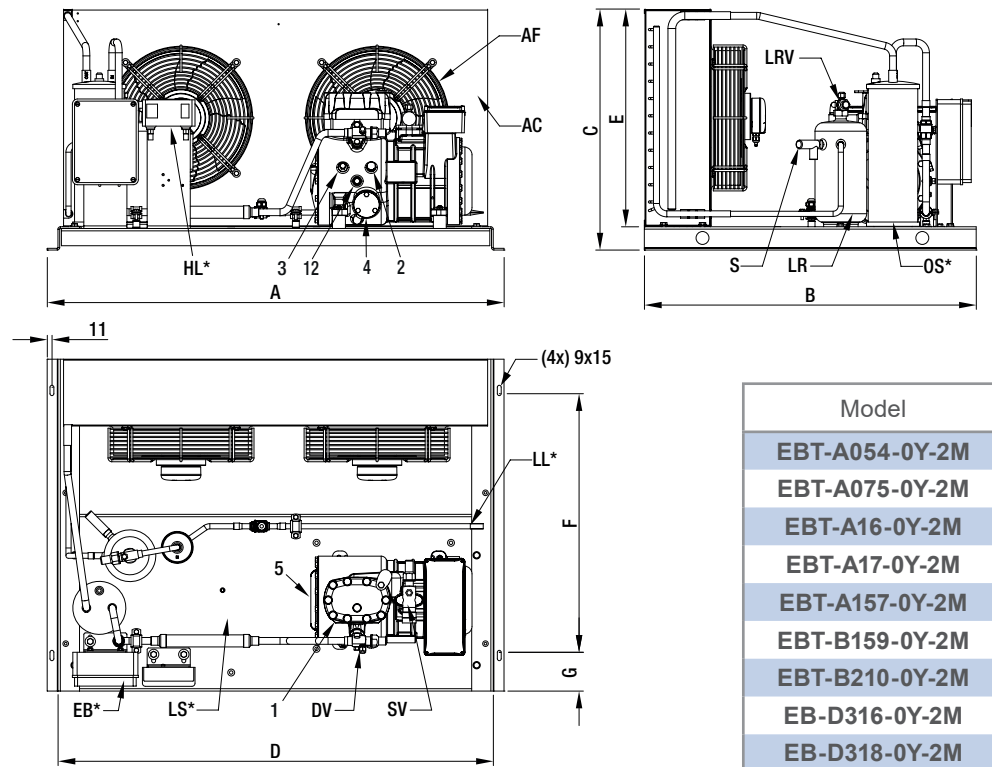


Drawing 1

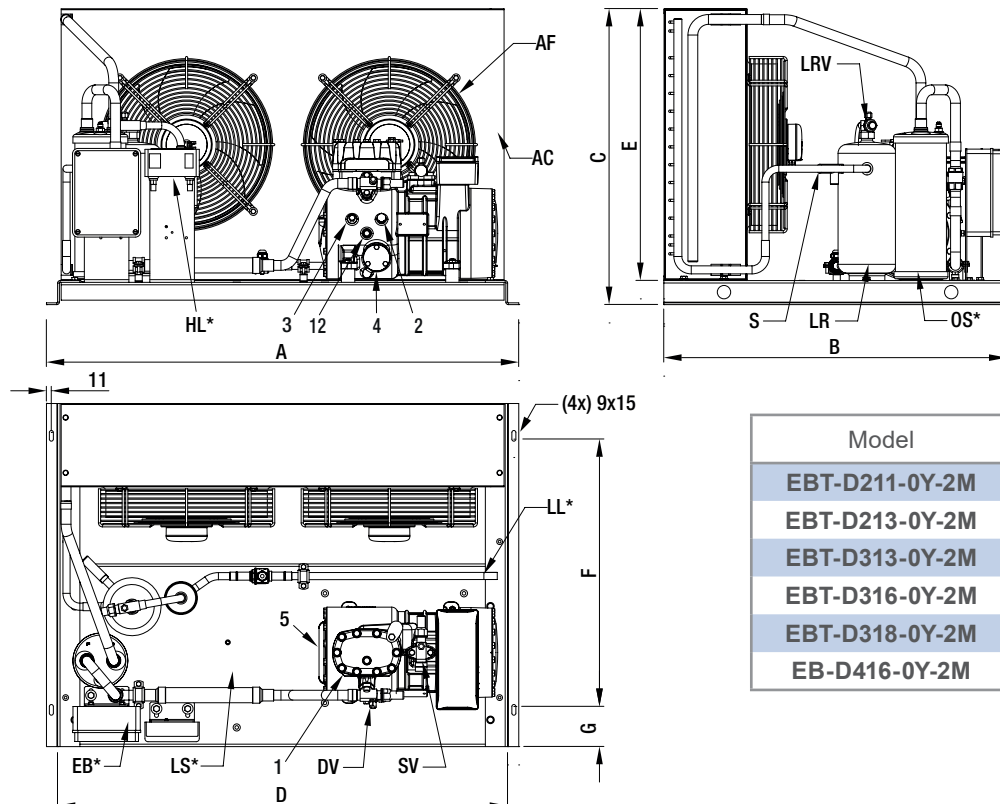


Drawing 2

Dimensional drawings

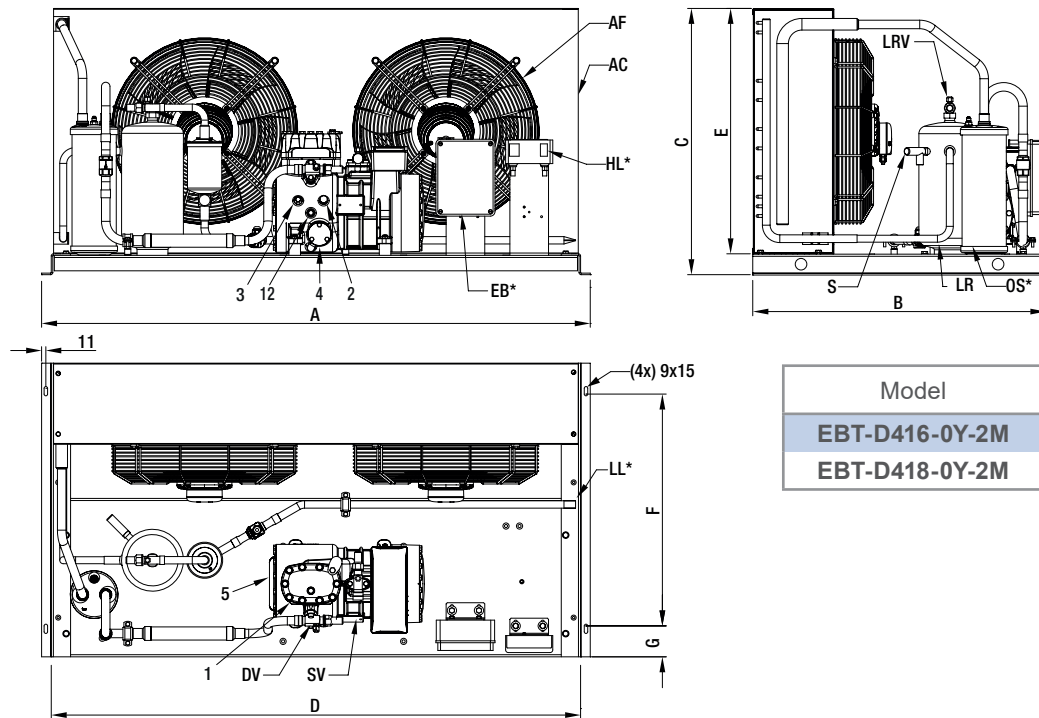


Drawing 3

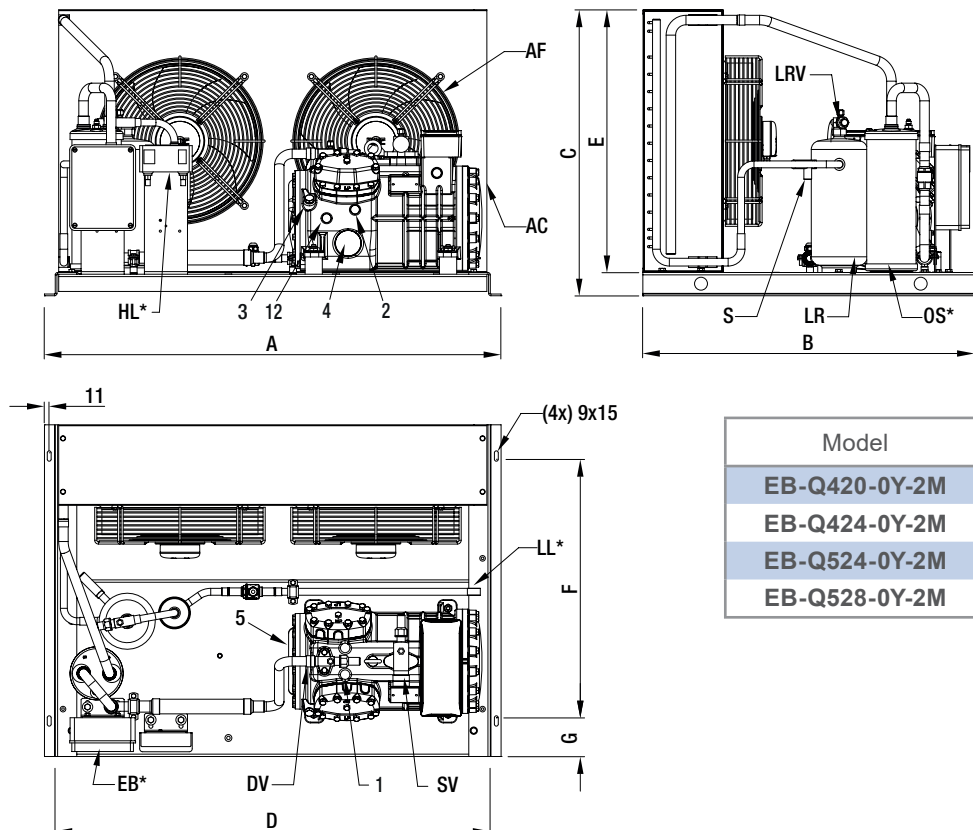


Drawing 4

Dimensional drawings

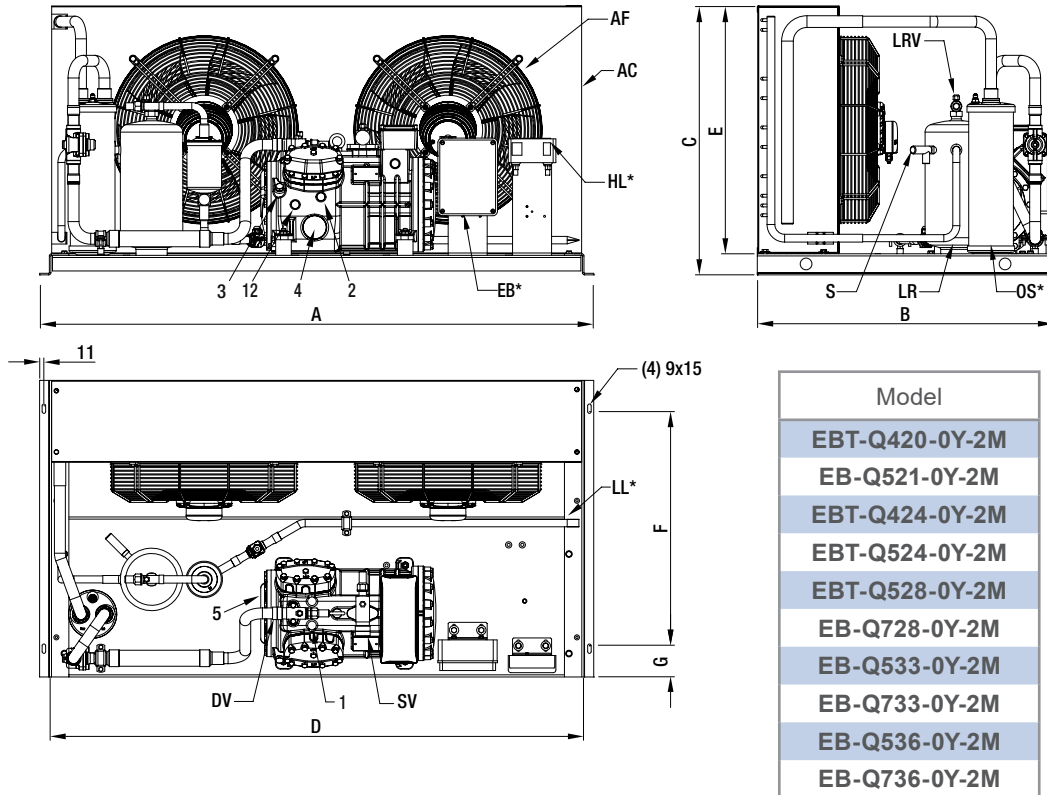


Drawing 5

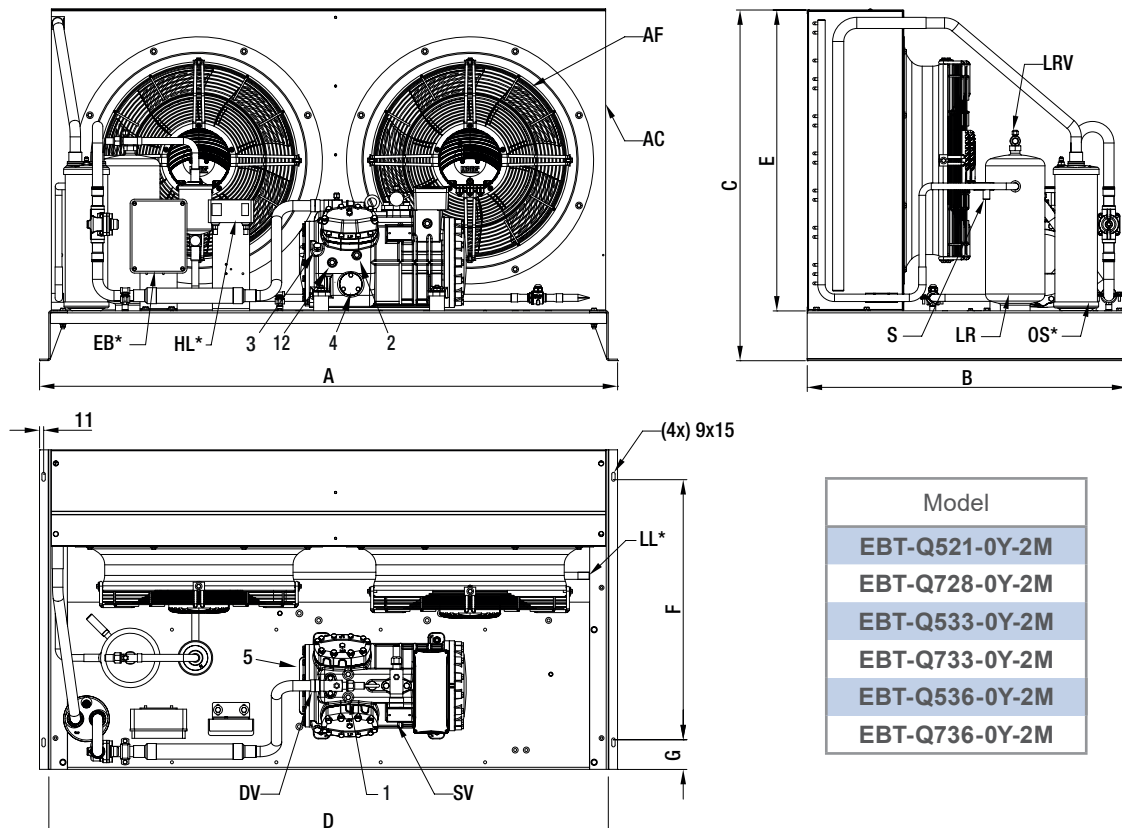


Drawing 6

Dimensional drawings

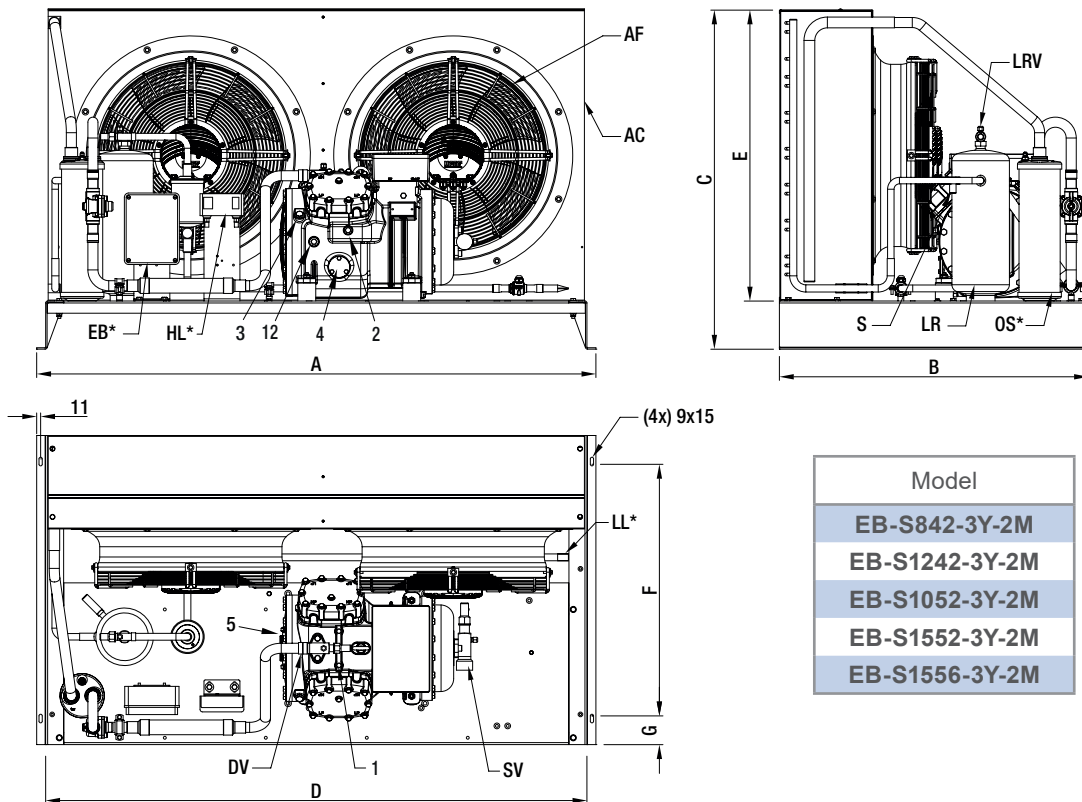


Drawing 7

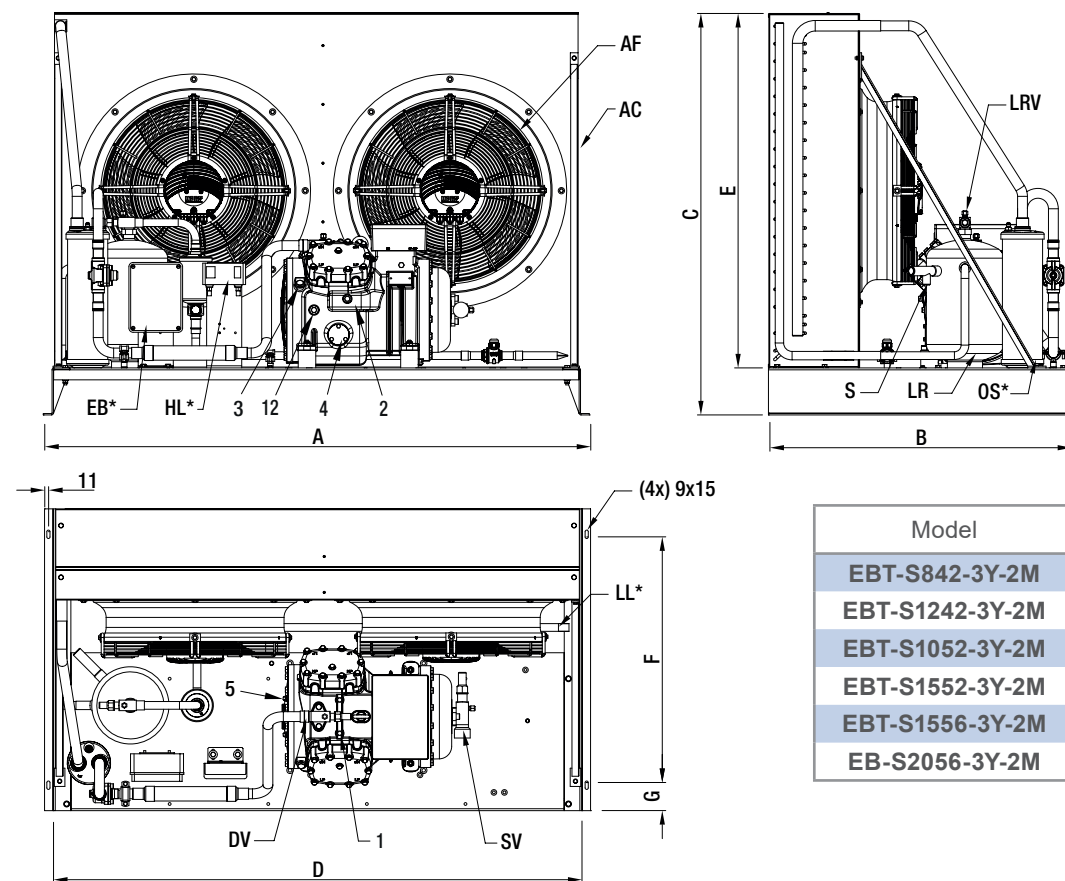


Drawing 8

Dimensional drawings



Drawing 9



Drawing 10

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