ARCTIC
ARCTIC CO_2

REFRIGERATION UNITS

CHILLING
YOUR WORLD
SINCE 1981

CHILLING YOUR WORLD

SINCE 1981

ARCTIC

With **over 40 years of experience** in refrigeration technology, we have been committed to the continuous development and enhancement of refrigeration equipment, **delivering custom-made solutions** to clients globally.

EXPERIENCE

40 years of expertise in refrigeration technology.

TOP QUALITY

We deliver premium-grade refrigeration solutions, encompassing everything from individual components to fully integrated systems.

EXPERTISE

We continually advance technical expertise to capitalize on innovations in refrigeration, through trend analysis and strategic investment in education and equipment.

LOW LIFE-CYCLE COSTS

Refrigeration solutions are cost-effective, with low maintenance and high energy efficiency.

INVESTING IN THE FUTURE

Refrigeration solutions are engineered for optimal energy efficiency, appealing to environmentally conscious users with a future-oriented focus.

ENGINEERING-INSTALLER APPROACH

We combine innovative engineering, installation expertise, and comprehensive technical support.

ADAPTABILITY

We design, engineer, and manufacture custom-made refrigeration equipment tailored to specific customer requirements.

ARCTIC LINE

REFRIGERATION UNITS

Arctic line specializes in providing wide range of **refrigeration equipment** and **custom-made refrigeration solutions**, tailored to the specific needs of your business, ensuring maximum energy eFFiciency and long-term reliability.

KEY ADVANTAGES

ADVANTAGES OF ARCTIC / ARCTICCO_2 REFRIGERATION UNITS

HIGH ENERGY EFFICIENCY

Refrigeration units are designed to reduce energy consumption, resulting in lower operating costs and reduced environmental impact.

RELIABILITY AND DURABILITY

Refrigerant units are built with high-quality components designed to provide durable and reliable performance, reducing the need for frequent maintenance and ensuring long-term efficiency.

APPLICATION FLEXIBILITY

Refrigerant units oCer versatile solutions, engineered to meet the specific demands of various industries, ensuring superior performance and energy efficiency across a wide range of applications.

EASY INSTALLATION AND MAINTENANCE

Easy installation and streamlined maintenance, helping to minimize downtime and reduce maintenance and servicing costs.

LOW GWP REFRIGERANTS

The use of low GWP refrigerants provides significant benefits, such as minimizing environmental impact, ensuring compliance with strict regulations, and enhancing energy efficiency, making them an optimal choice for sustainable refrigeration solutions.

REFRIGERANT CO_2

CO_2 offers outstanding thermodynamic properties, ensuring exceptional energy efficiency in refrigeration systems. It is also an environmentally friendly refrigerant, making it a sustainable choice for modern cooling solutions.

ARCTIC LINE

Refrigeration units

ARCTIC MONOBLOCK

'All in one' cooling system designed for cold rooms up to 20 m³. It represents an ideal solution for commercial use in various types of facilities.

More information > page 6

ARCTIC AL

Ideal solution for use in cold rooms and refrigerated display cases at gas stations, in restaurants, cafés, bakeries, butchers and in facilities with similar applications.

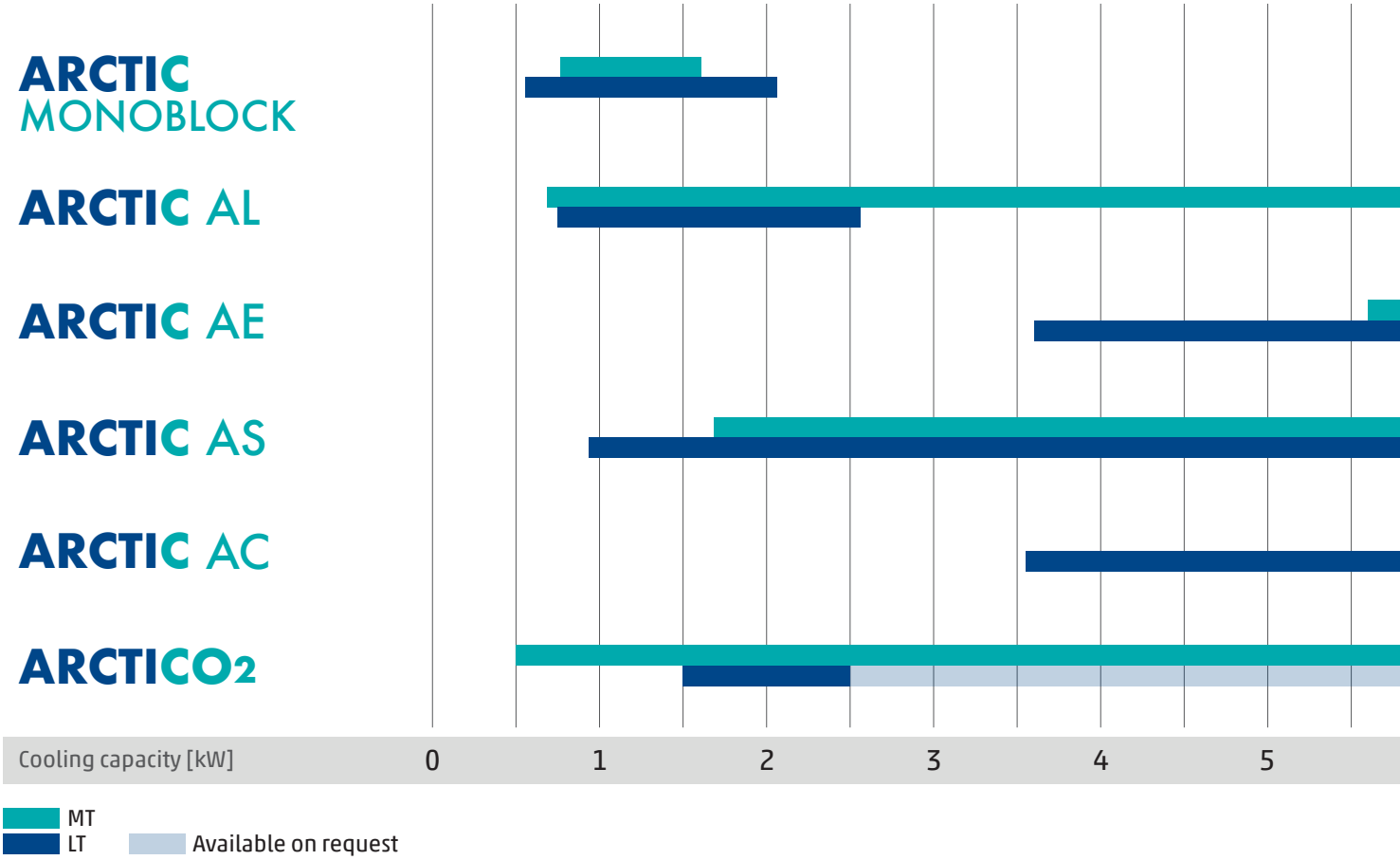
More information > page 14

ARCTIC AE

Ideal solution for use in larger cold rooms in restaurants, butchers, fishmongers, and in facilities with similar applications.

More information > page 22

COOLING CAPACITY RANGE



ARCTIC AS

Ideal solution for use in larger cooling systems for various industries (food, processing, etc.) and in larger refrigerated distribution centres and supermarkets.

More information > page 28

ARCTIC AC

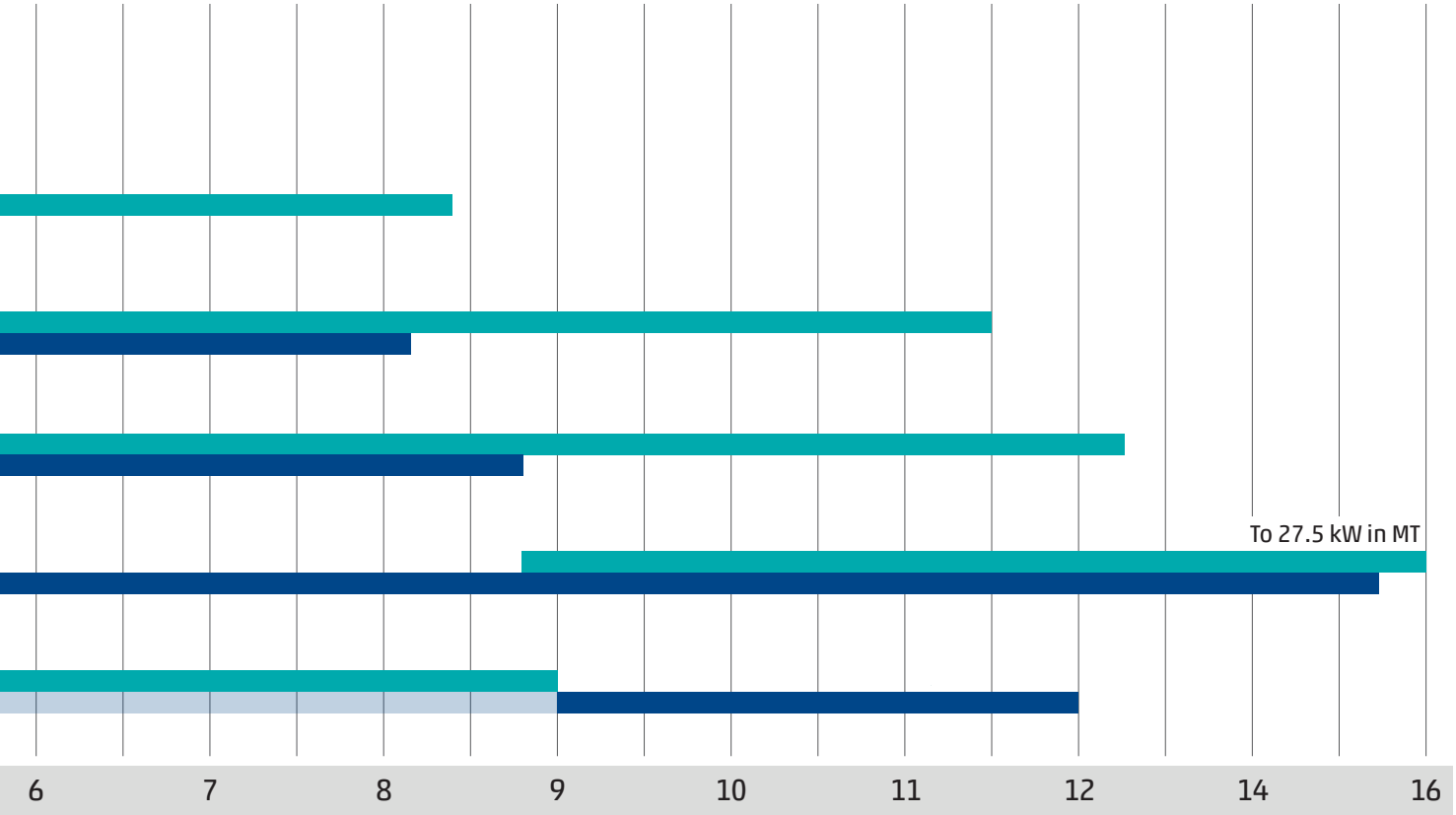
Ideal solution for use in larger cooling systems for various industries (food, processing, etc.) and in larger refrigerated distribution centres and supermarkets.

More information > page 36

ARCTIC CO_2

Ideal for cooling in commercial and industrial applications with the natural refrigerant CO_2. Ensures energy-efficient cooling, superior control of product and raw material quality, and energy savings.

More information > page 44



ARCTIC MONOBLOCK

ARCTIC MONOBLOCK
"ALL IN ONE" SOLUTION

The Arctic Monoblock is an '**all in one**' cooling system designed for cold rooms up to 20 m³.
It represents an ideal solution for commercial use in various types of facilities.

The Arctic Monoblock uses the refrigerant R290, achieving an **environmentally friendly solution** and ensuring **energy efficiency.**

The units are designed with a focus on **compactness** and **simplicity.** The compact design allows for easy installation, application, maintenance, and servicing.

INFORMATIONS

FEATURES
compact design
"all in one" solution for coldrooms up to 20 m³
coldroom wall thickness up to 150 mm
simple installation
light and cooling switch
hot gas defrost
CE ("declaration of conformity")
R290 natural refrigerant (except some models)

PREINSTALLED CABLING
for coldroom light
for door switch
for door hinge heater (LT models)

EQUIPMENT
hermetic compressor
electrical cabinet with electronic controller
housing with anticorrosive protection
air cooled condenser
dynamic evaporator
solenoid valve for hot gas defrost
capillary tube/TXV
filter drier
protective pressure switch HP/LP
condensate pipe heater
condensate collector with overflow pipe

MODELS

MT			LT		
OPERA CODE	TYPE	REFRIGERANT	OPERA CODE	TYPE	REFRIGERANT
64001	SCR012	R290	64189	SCK150	R290
64187	SCR058	R290	64191	SCL150	R452A
64188	SCR034	R290	64190	ACK210	R290
64000	ACR100	R290	64192	ACL220	R452A
			64193	ACL300	R452A

TECHNICAL DATA

MT MODELS

	Technical Specifications	Unit	SCR012	SCR058	SCR034	arc100
Unit	Power supply	(Volt/ph/Hz)	230/1/50			230/1/50
	Power input	(W)	730	920	1160	1410
	Compressor	(m^3/h)	2.11	2.49	3.03	3.89
	Comp. type		hermetic			
	Refrigerant		R290			
	Defrost	(el./hot gas)	hot gas			
	Defrost draw	(W)	/			
Condenser	Fans	(nxø)	1x254			2x254
	Airflow	(m^3/h)	1050			2100
Evaporator	Fans	(nxø)	1x200			2x200
	Airflow	(m^3/h)	550			1100
	Air throw	(m)	5			5

SELECTION OF ARCTIC MONOBLOCK

		Unit	SCR012	SCR058	SCR034	arc100
Tamb 20°C	Thl 5°C	W	1065	1295	1495	2400
		m^3	11	15	17	26.1
	Thl 0°C	W	860	1100	1270	2026
		m^3	8.4	11.5	14	19.71
	Thl -5°C	W	725	855	1060	1715
		m^3	6	7.5	9.4	14.7
Tamb 32°C	Thl 5°C	W	970	1070	1265	1953
		m^3	9	11	13.2	19.6
	Thl 0°C	W	785	855	980	1629
		m^3	6.5	7.5	9.6	14.9
	Thl -5°C	W	660	755	845	1381
		m^3	4.8	5.8	7.2	11
Tamb 43°C	Thl 5°C	W	710	880	1040	1660
		m^3	5.8	7	8.8	14.5
	Thl 0°C	W	625	690	835	1357
		m^3	3.6	4.2	5.2	10.1
	Thl- 5°C	W	495	545	670	1173
		m^3	3	3.4	4.3	7.9

*selection table for 100 mm wall thickness, for 80 mm wall thickness use 0,8 coefficient

TECHNICAL DATA

ARCTIC MONOBLOCK

LT MODELS

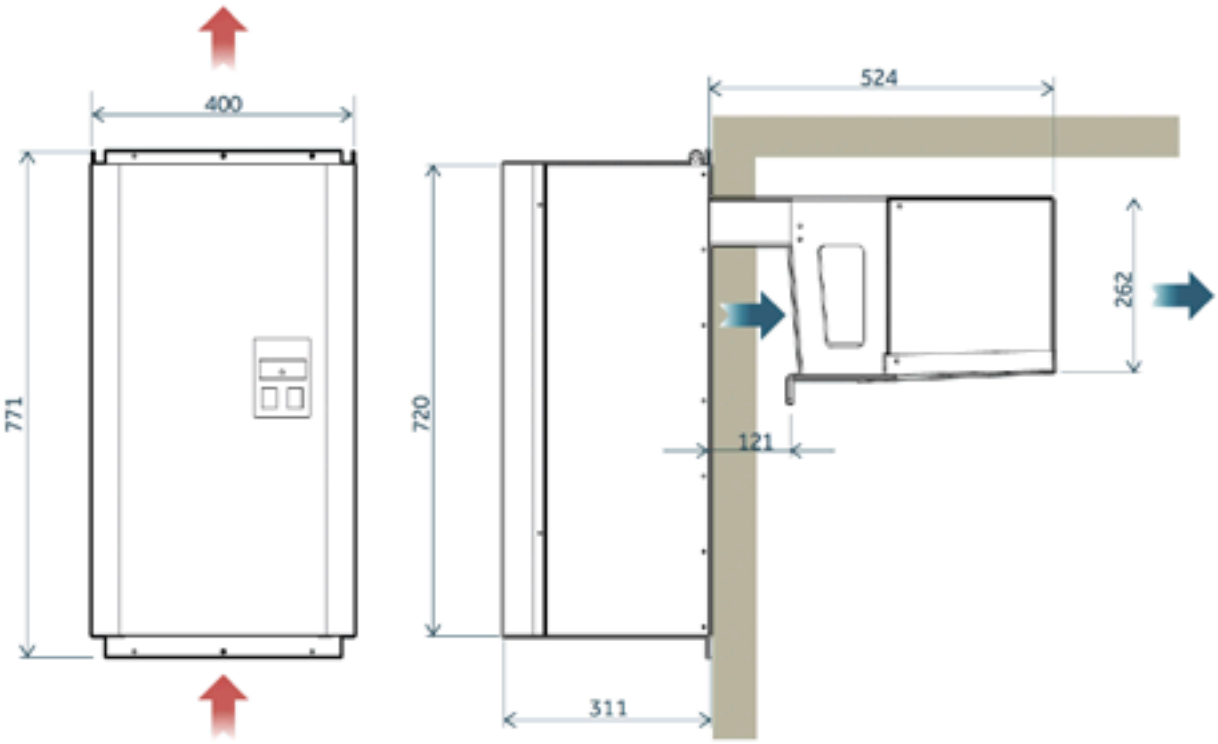
	Technical Specifications	Unit	SCK150	SCL150	ACK210	ACL220	ACL300
Unit	Power supply	(Volt/ph/Hz)	230/1/50		230/1/50	400/3/50	
	Power input	(W)	1350		1460	1810	2400
	Compressor	(m^3/h)	4.84		5.99	9.29	12.96
	Comp. type				hermetic		
	Refrigerant		R290	R452A	R290	R452A	
	Defrost	(el./hot gas)			hot gas		
	Defrost draw	(W)			/		
Condenser	Fans	(nxø)	1x254		2X254	1X300	
	Airflow	(m^3/h)	1050		2100	1610	
Evaporator	Fans	(nxø)	1x200		2x200	1x300	
	Airflow	(m^3/h)	550		1100	1700	
	Air throw	(m)	5		5	7.5	

SELECTION OF ARCTIC MONOBLOCK

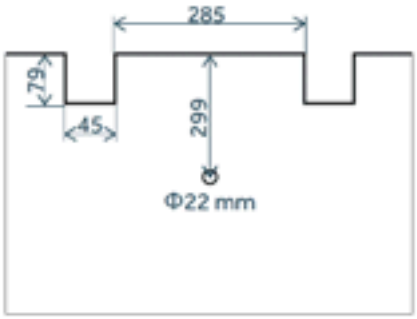
		Unit	SCK150	SCL150	ACK210	ACL220	ACL300
Tamb 20°C	Thl 5°C	W	950	1295	1210	2022	3110
		m^3	10.2	13	13.4	21.3	38.8
	Thl 0°C	W	820	1084	950	1720	2652
		m^3	8.2	10.9	9.4	16.9	30.8
	Thl -5°C	W	630	918	865	1511	2334
		m^3	4.8	8.3	8.5	14	24.8
Tamb 32°C	Thl 5°C	W	810	948	1020	1566	2535
		m^3	6.6	8.2	10	14.2	27.7
	Thl 0°C	W	620	780	810	1310	2125
		m^3	4.8	5.4	7	10.6	21.2
	Thl -5°C	W	560	630	590	1133	1887
		m^3	4	4.1	5.2	8.6	17
Tamb 43°C	Thl 5°C	W	640	710	710	1215	2037
		m^3	5	6.1	6.6	10.1	20.7
	Thl 0°C	W	495	538	570	994	1687
		m^3	3.8	3.9	4.4	7.5	15.5
	Thl- 5°C	W	455	443	510	844	1455
		m^3	3	3	3.6	5.8	12.7

*selection table for 100 mm wall thickness, for 80 mm wall thickness use 0,8 coefficient

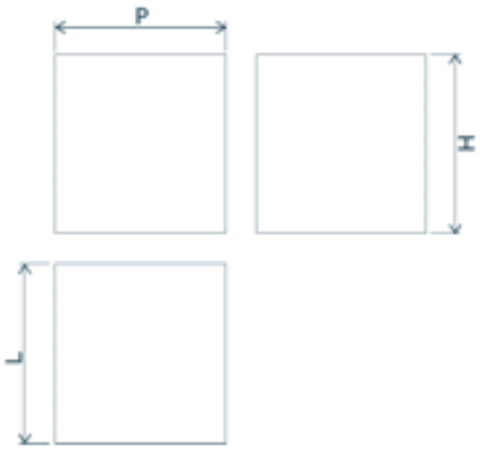
DIMENSIONS



MOUNTING

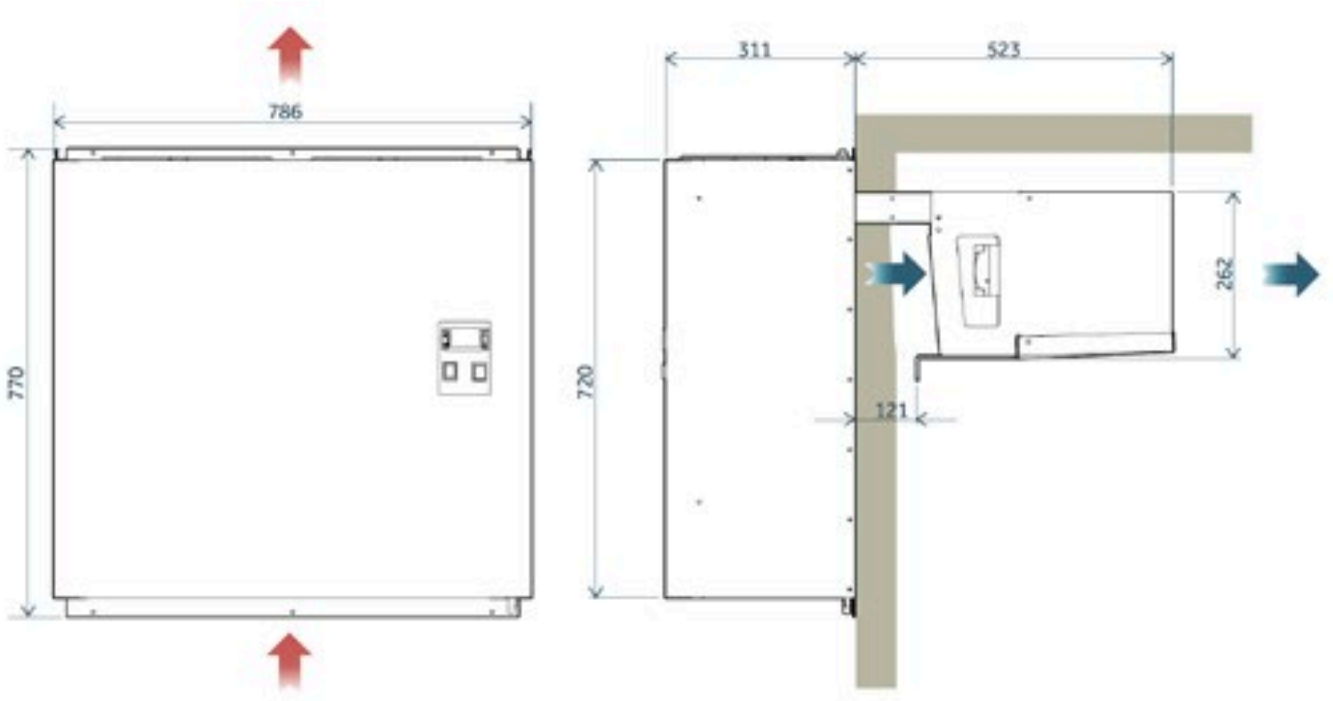


PACKAGING DIMENSIONS

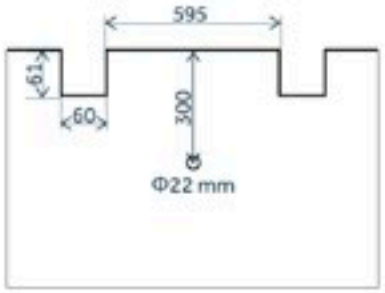


	SCR012	SCR058	SCR034	SCK150	SCL150
PxLxH (mm)	450x900x920				
Mass nett (kg)	44		48		52
Mass gross (kg)	53		57		61

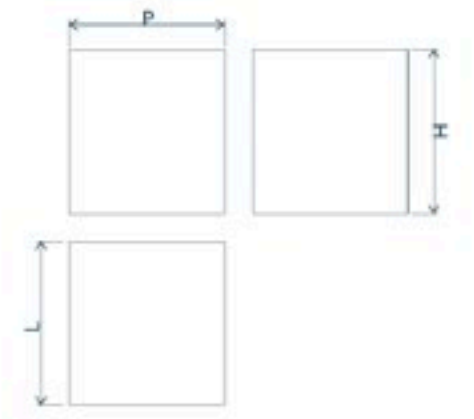
DIMENSIONS



MOUNTING

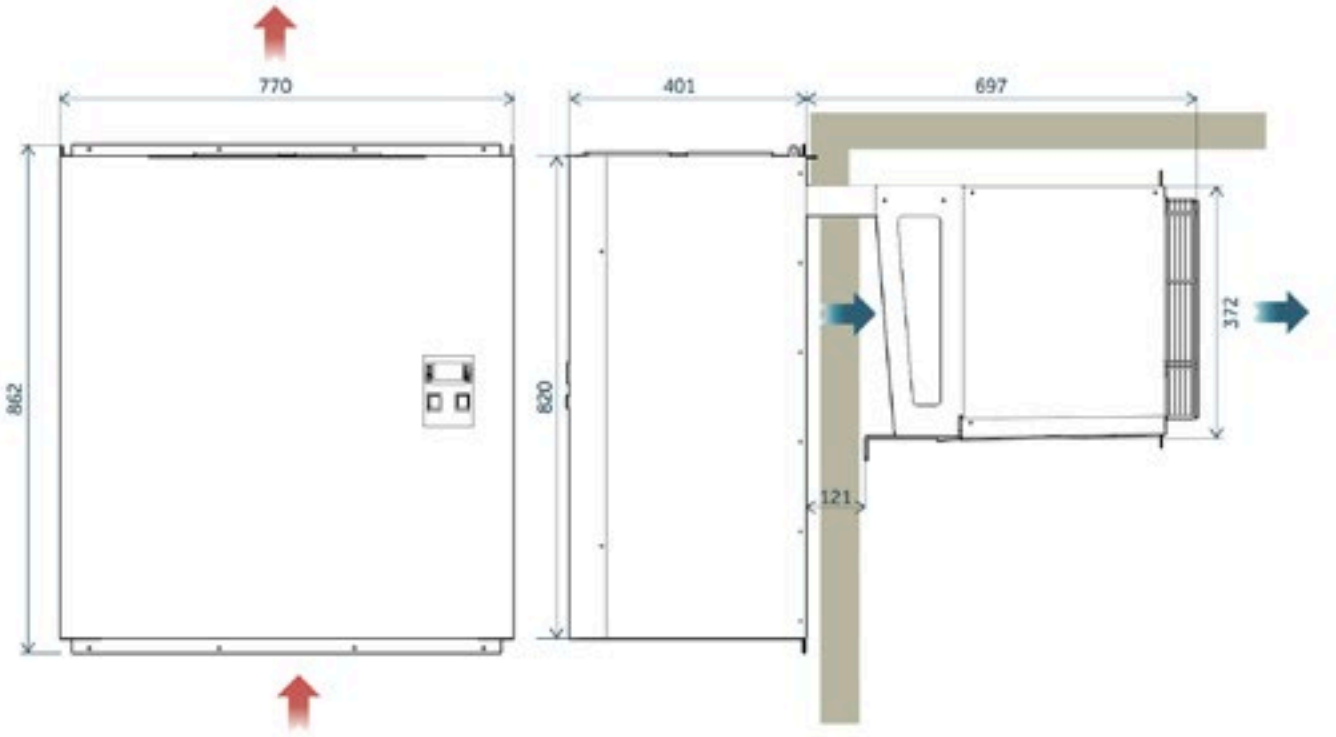


PACKAGING DIMENSIONS

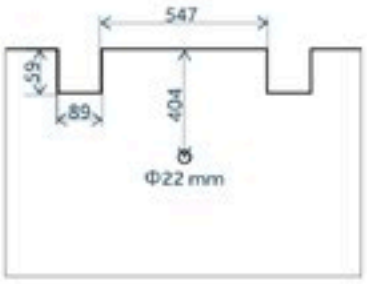


	ACR100	ACK210	ACL220
PxLxH (mm)		830x900x920	
Mass nett (kg)	73	73	83
Mass gross (kg)	85	85	95

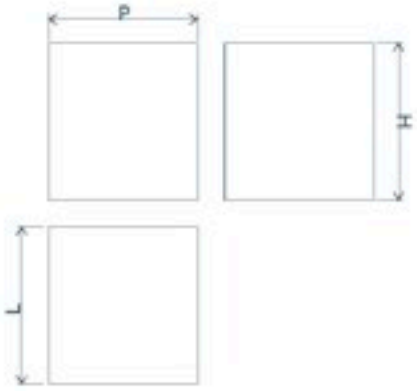
DIMENSIONS



MOUNTING



PACKAGING DIMENSIONS



	ACL300
PxLxH (mm)	840x1160x1030
Mass nett (kg)	93
Mass gross (kg)	129

ARCTIC AL

ARCTIC AL
COMMERCIAL REFRIGERATION UNITS

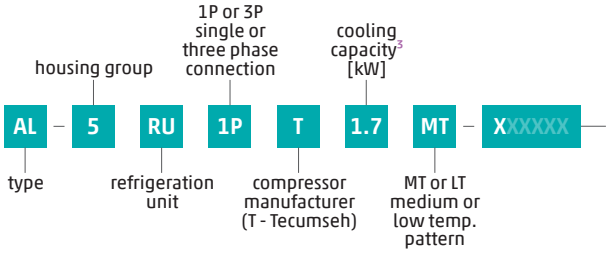
- Ideal solution for cold rooms and refrigerated display cases
- Suitable for commercial facilities
- Compact design allows for easy handling and installation in confined spaces
- Anti-corrosion construction ensures reliable operation in all climatic conditions

TABLE WITH OPTIONS

OPTION	EQUIPMENT	NOTE
BASIC	• hermetic compressor • crankcase heater for units with high capacity compressor • air-cooled condenser with fan • liquid receiver • safety valve[2] • filter-drier with sight glass • vibration absorbers	• when choosing a refrigerant unit, in addition to unit's name please also specify the number of the option. • e.g. unit AL - SRU1PT1.7MT - 0; with standard units only (see left) • e.g. unit AL - SRU1PT1.7MT - 134; with protective housing, power supply and protection and a fixed protective pressure switch of the LP compressor • e.g. unit AL - SRU1PT1.7MT - 8; contains all equipment from option 1 and option 3, and comes with an evaporator unit and a control unit
	• protect. pressure switch of the HP compressor • pressostatic regulation of cond. pressure	• protect. pressure switch of the compressor

OPTIONS	EQUIPMENT	NOTE
OPTION 1	• protective housing	• standard with option 8
OPTION 2	• sound insulation	• only with option 1
OPTION 3	• power supply and protection - compressor switch, el. heater, condenser fans, main switch (option 3)	• power distribution cabinet • to choose only with option 1. Electrical cabinet • power dist. cabinet standard with option 8 - plus stand. equipment (see left) • power dist. cabinet has consumer fuses (evaporator fans, el. defrost heater)
OPTION 4	• fixed prot. pressure switch of the LP compressor	• automatic reset
OPTION 5	• fan speed controller	• the fan speed controller regulates pressure in the condenser so by selecting option 5 the pressure switch is removed from the stand. equipment
OPTION 6	• adjustable protective pressure switch of the LP compressor for Tisp= -35°C	• with option 6, an adjust. prot. pressure switch of the compressor is installed • applied in case when the desired evaporating of the LT model is -35°C
OPTION 7	• adjustable prot. pressure switch of the HP/LP compresso	• with option 7, an adjust. high/low pressure switch of the compressor is installed • with option 7 the fixed LP protective pressure switch is not installed • options 4 and 6 are not added with option 7
OPTION 8	• split unit • protective housing for outdoor use • power supply and protection - compressor switch, consumer fuses (condenser and evaporator fans, electric defrost heater), main switch	• option 8 completes the cooling system **(condensing unit, evaporator unit and control unit)**

NOMENCLATURE



0 standard unit
1 housing for outdoor application
2 sound insulation (only with 1 option)
3 electrical cabinet
4 compressor safety, low pressure switch (fixed)
5 fan speed controller (instead of KP5)
6 compressor safety, low pressure switch (adjustable) Tisp= -35°C
7 compressor safety, high/low pressure switch (KP15)
8 split unit (see table with explanations)

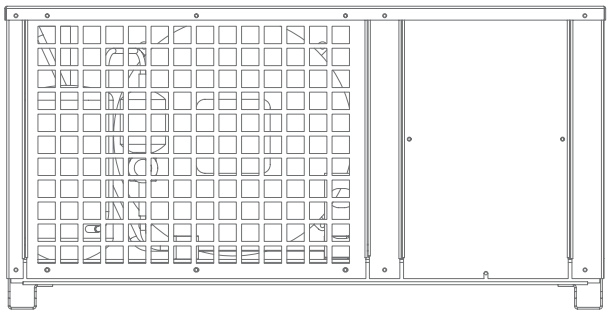
2 Except for AL-3RU1PT0.7MT and AL-3RU1PT0.8MT

3 Under conditions: For R449A
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature

Note: The system can be filled with other refrigerants (R404A, R407F, R448A). Cooling capacities differ from those shown in the table in this data sheet. When option 8 is chosen, the cooling system may only be filled with R449A or R448A.

REFRIGERATION UNITS

REFRIGERATION UNIT OUTSIDE THE COLD ROOM



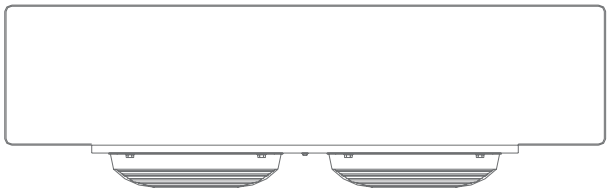
STANDARD UNIT

- hermetic compressor
- oil sump heater for higher power compressors[1]
- air-cooled condenser with fan
- liquid operating substance tank
- safety valve[2]
- filter-drier with inspection glass
- fixed protective pressure switch of the HP compressor
- regulation of condensation pressure via pressure switch
- anti-vibrants on units where øSL >= 22mm

STANDARD UNIT (WITH OPTION 8)

- protective housing for outdoor use
- fixed protective pressure switch of the LP compressor, automatic
- power supply and protection - compressor switch, consumer fuses (condenser and evaporator fans, electric defrost heater), main switch

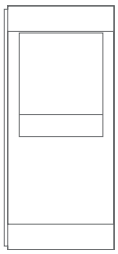
EVAPORATOR UNIT INSIDE THE COLD ROOM



STANDARD UNIT (OPTION 8)

- Evaporator with electric defrost (ED - electric defrost)
- Electromagnetic valve
- Thermal expansion valve with nozzle

CONTROL UNIT OUTSIDE THE COLD ROOM



STANDARD UNIT (OPTION 8)

- SmartCella
- two temperature probes

FEATURES
compact design
PED I
easy mounting
design with anti-corrosion protection
refrigerant with GWP = 1397, R449A

ASSEMBLY ACCESSORIES
floor stand
mounting brackets

ACCESSORIES
protective housing for outdoor use (standard with option 8)
sound insulation (with protective housing only)
power supply and protection (with protective housing only; standard with option 8)
fixed protective pressure switch of the LP compressor
fan speed controller
fixed protective pressure switch of the LP compressor for Tisp= -35 °C
adjustable protective pressure switch of the HP/LP compressor
refrigeration units

2 Except for 3CU1PT0.7MT and 3CU1PT0.8MT

Note: The system can be filled with other refrigerants (R404A, R407F, R448A). Cooling capacities differ from those shown in the table in this data sheet. With option 8, the cooling system may only be filled with R449A or R448A).

TECHNICAL DATA

COOLING CAPACITY

Refrigeration unit MT MODEL	Condensing unit				Evaporator unit (option 8)[4]
	Compressor	Cooling capacity [kW][3]	Connections		
		Te/Ta	øSL	øLL	
		-10°C/+32°C			
AL-3RU1PT0.7MT	AE 4450 Z	0,7	10	6	EVS 61 ED
AL-3RU1PT0.8MT	AE 4460 Z	0,8	10	6	EVS 101 ED
AL-4RU1PT1.1MT	CAJ 9480 Z	1,1	12	10	EVS 131 ED
AL-4RU1PT1.3MT	CAJ 9510 Z	1,3	16	10	EVS 201 ED
AL-5RU1PT1.7MT	CAJ 9513 Z	1,7	16	10	EVS 201 ED
AL-5RU1PT1.9MT	CAJ 4517 Z	1,9	16	10	EVS 181 ED
AL-6RU1PT2.5MT	CAJ 4519 Z	2,5	16	10	EVS 291 ED
AL-6RU3PT2.8MT	FH4524-XG1A	2,8	16	10	EVS 391 ED
AL-6RU3PT3.6MT	FH4532-XG1A	3,6	22	10	EVS 521 ED
AL-7RU3PT4.7MT	FH4538Z-XG1A	4,7	22	10	GCE 254E8 ED
AL-7RU3PT5.7MT	TAG 4553 Z	5,7	22	10	GCE 352E8 ED
AL-7RU3PT6.6MT	TAG 4561 Z	6,6	28	10	GCE 313F8 ED
AL-7RU3PT7.8MT	TAG 4568 Z	7,8	28	10	GCE 314F8 ED
AL-7RU3PT8.4MT	TAG 4573 Z	8,4	28	10	GCE 314F8 ED

Refrigeration unit LT MODEL	Condensing unit				Evaporator unit (option 8)[4]
	Compressor	Cooling capacity [kW][3]	Connections		
		Te/Ta	øSL	øLL	
		-30°C/+32°C			
AL-4RU1PT0.8LT	CAJ 2464 Z	0,8	16	10	GCE 251E8R ED
AL-5RU1PT1.1LT	FH 2480 Z-XC	1,1	16	10	GCE 251E8 ED
AL-5RU3PT1.1LT	FH 2480 Z-XG	1,1	16	10	GCE 251E8 ED
AL-5RU3PT1.4LT	FH 2511 Z-XG	1,4	16	10	GCE 252G8 ED
AL-7RU3PT1.8LT	TAG 2516 Z	1,8	22	10	GCE 253E8 ED
AL-7RU3PT2.3LT	TAG 2519 Z	2,3	22	10	GCE 253E8 ED
AL-7RU3PT2.6LT	TAG 2522 Z	2,6	22	10	GCE 253E8 ED

REPLACEMENT FOR FH/TFH compressors

- TECUMSEH is replacing FH and TFH compressors with new FH2 compressors to be installed when the stock of existing FH and TFH runs out.
- The table below shows the new designation of the compressor that is being replaced in the Arctic AL product series.

MODEL TYPE	CAJ/TAG	AJ/AG
LT MODELS	CAJ 9510 Z	AJ 4510 P-FZ
	CAJ 9513 Z	AJ 4513 P-FZ
	CAJ 4519 Z	AJ 4519 P-FZ
	TAG 4553 Z	AG 4553 P-TZ
	TAG 4561 Z	AG 4561 P-TZ
MT MODELS	TAG 2516 Z	AG 2516 P-TZ
	TAG 2519 Z	AG 2519 P-TZ
	TAG 2522 Z	AG 2522 P-TZ

3 Under conditions: For R449A
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C

4 Applies only for R449A

- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- XC single phase
- XG three phase
- øSL suction line
- øLL liquid line

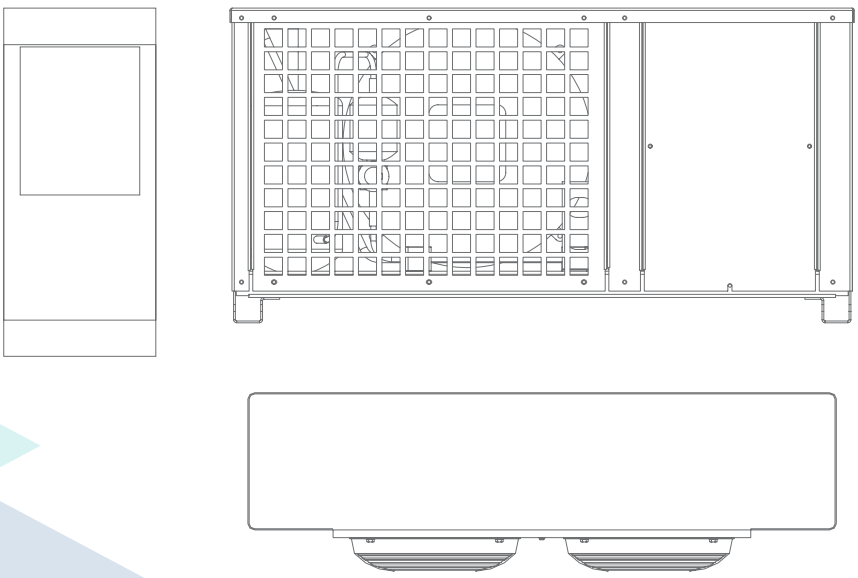
OPTION 8 (SPLIT UNIT)

CHOOSING A SPLIT UNIT (OPTION 8)

The table below refers to temperature maintenance in rooms i.e. goods enter the room already cooled. Cold rooms must be properly insulated.

MAX. COLD ROOM VOLUME			
Cooling temperature	0°C/+2°C	+4°C	+6°C
AL-3RU1PT0.7MT	4 m³	5 m³	6 m³
AL-3RU1PT0.8MT	6 m³	8 m³	9 m³
AL-4RU1PT1.1MT	10 m³	12 m³	14 m³
AL-4RU1PT1.3MT	14 m³	16 m³	18 m³
AL-5RU1PT1.7MT	18 m³	22 m³	25 m³
AL-5RU1PT1.9MT	20 m³	24 m³	27 m³
AL-6RU1PT2.5MT	28 m³	32 m³	35 m³
AL-6RU3PT2.8MT	38 m³	45 m³	50 m³
AL-6RU3PT3.6MT	50 m³	60 m³	65 m³
AL-7RU3PT4.7MT	70 m³	80 m³	90 m³
AL-7RU3PT5.7MT	80 m³	90 m³	100 m³
AL-7RU3PT6.6MT	95 m³	105 m³	110 m³
AL-7RU3PT7.8MT	120 m³	130 m³	140 m³
AL-7RU3PT8.4MT	140 m³	150 m³	160 m³

MAX. COLD ROOM VOLUME	
Cooling temperature	-20°C/-18°C
AL-4RU1PT0.8LT	5 m³
AL-5RU1PT1.1LT	8 m³
AL-5RU3PT1.1LT	8 m³
AL-5RU3PT1.4LT	15 m³
AL-7RU3PT1.8LT	25 m³
AL-7RU3PT2.3LT	30 m³
AL-7RU3PT2.6LT	40 m³



TECHNICAL DATA

POWER SUPPLY

Refrigeration unit MT MODEL	Condensing unit				Evaporator unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]	Evaporator	Power supply	Imax [A]	Pmax [kW]
AL-3RU1PT0.7MT	AE 4450 Z	230 V/1~/50 Hz	6,2	0,7	EVS 61 ED	230 V/1~/50 Hz	2,4	0,5
AL-3RU1PT0.8MT	AE 4460 Z	230 V/1~/50 Hz	6,3	0,8	EVS 101 ED	230 V/1~/50 Hz	3,5	0,8
AL-4RU1PT1.1MT	CAJ 9480 Z	230 V/1~/50 Hz	7,6	1,1	EVS 131 ED	230 V/1~/50 Hz	3,7	0,8
AL-4RU1PT1.3MT	CAJ 9510 Z	230 V/1~/50 Hz	9,2	1,3	EVS 201 ED	230 V/1~/50 Hz	3,7	0,8
AL-5RU1PT1.7MT	CAJ 9513 Z	230 V/1~/50 Hz	11,6	1,6	EVS 201 ED	230 V/1~/50 Hz	3,7	0,8
AL-5RU1PT1.9MT	CAJ 4517 Z	230 V/1~/50 Hz	13	1,8	EVS 181 ED	230 V/1~/50 Hz	5,7	1,3
AL-6RU1PT2.5MT	CAJ 4519 Z	230 V/1~/50 Hz	17,2	2,5	EVS 291 ED	230 V/1~/50 Hz	6,3	1,4
AL-6RU3PT2.8MT	FH4524-XG1A	400 V/3~/50 Hz	8,1	2,7	EVS 391 ED	230 V/1~/50 Hz	6,3	1,4
AL-6RU3PT3.6MT	FH4532-XG1A	400 V/3~/50 Hz	8,9	3,5	EVS 521 ED	230 V/1~/50 Hz	8,4	1,8
AL-7RU3PT4.7MT	FH4538Z-XG1A	400 V/3~/50 Hz	10,8	4,5	GCE 254E8 ED	400 V/3~/50 Hz	9,1	4,8
AL-7RU3PT5.7MT	TAG 4553 Z	400 V/3~/50 Hz	15,9	5,6	GCE 352E8 ED	400 V/3~/50 Hz	6,5	3,6
AL-7RU3PT6.6MT	TAG 4561 Z	400 V/3~/50 Hz	16,9	6,4	GCE 313F8 ED	400 V/3~/50 Hz	8,7	5,2
AL-7RU3PT7.8MT	TAG 4568 Z	400 V/3~/50 Hz	19,4	7,2	GCE 314F8 ED	400 V/3~/50 Hz	11,21	6,8
AL-7RU3PT8.4MT	TAG 4573 Z	400 V/3~/50 Hz	20,6	8	GCE 314F8 ED	400 V/3~/50 Hz	11,21	6,8

Refrigeration unit LT MODEL	Condensing unit				Evaporator unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]	Evaporator	Power supply	Imax [A]	Pmax [kW]
AL-4RU1PT0.8LT	CAJ 2464 Z	230 V/1~/50 Hz	10,8	1,6	GCE 251E8R ED	230 V/1~/50 Hz	3,9	0,8
AL-5RU1PT1.1LT	FH 2480 Z-XC	230 V/1~/50 Hz	16,3	2,3	GCE 251E8 ED	230 V/1~/50 Hz	5,6	1,2
AL-5RU3PT1.1LT	FH 2480 Z-XG	400 V/3~/50 Hz	5,1	2,3	GCE 251E8 ED	230 V/1~/50 Hz	5,6	1,2
AL-5RU3PT1.4LT	FH 2511 Z-XG	400 V/3~/50 Hz	7,5	3	GCE 252G8 ED	230 V/1~/50 Hz	11,1	2,4
AL-7RU3PT1.8LT	TAG 2516 Z	400 V/3~/50 Hz	10,1	4	GCE 253E8 ED	400 V/3~/50 Hz	5,5	3,6
AL-7RU3PT2.3LT	TAG 2519 Z	400 V/3~/50 Hz	11	4,2	GCE 253E8 ED	400 V/3~/50 Hz	5,5	3,6
AL-7RU3PT2.6LT	TAG 2522 Z	400 V/3~/50 Hz	14	5	GCE 253E8 ED	400 V/3~/50 Hz	5,5	3,6

REPLACEMENT FOR FH/TFH compressors

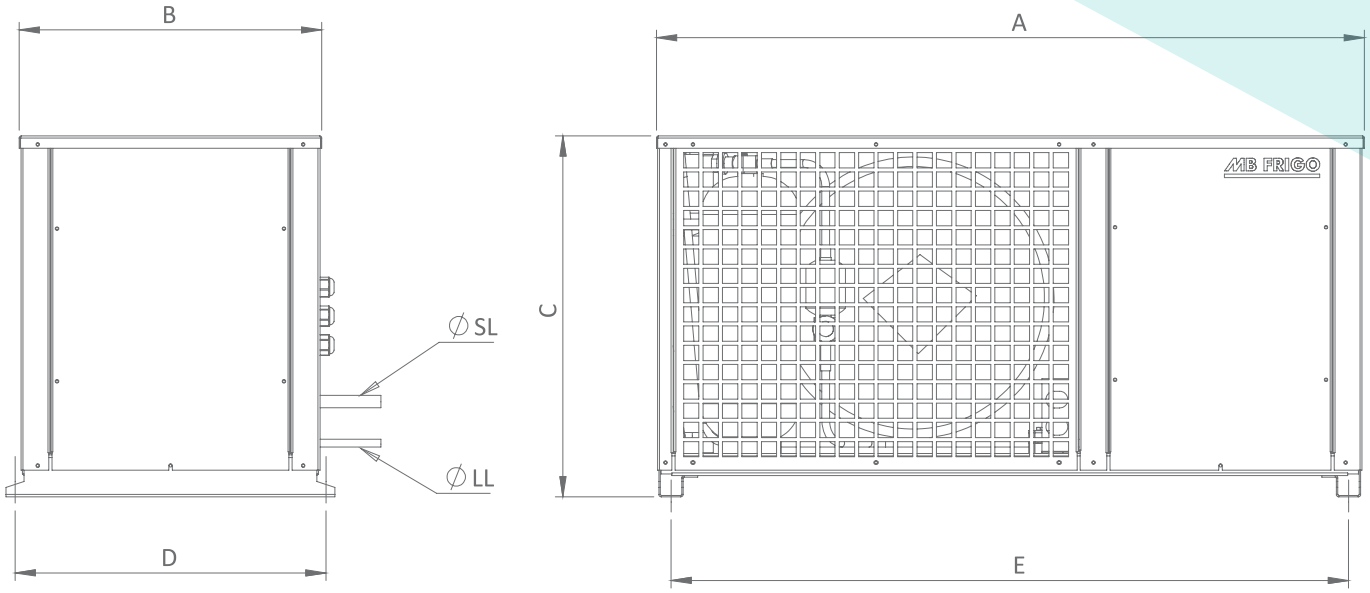
- TECUMSEH is replacing FH and TFH compressors with new FH2 compressors to be installed when the stock of existing FH and TFH runs out.
- The table below shows the new designation of the compressor that is being replaced in the Arctic AL product series.

MODEL TYPE	CAJ/TAG	AJ/AG
LT MODELS	CAJ 9510 Z	AJ 4510 P-FZ
	CAJ 9513 Z	AJ 4513 P-FZ
	CAJ 4519 Z	AJ 4519 P-FZ
	TAG 4553 Z	AG 4553 P-TZ
	TAG 4561 Z	AG 4561 P-TZ
MT MODELS	TAG 2516 Z	AG 2516 P-TZ
	TAG 2519 Z	AG 2519 P-TZ
	TAG 2522 Z	AG 2522 P-TZ

- XC single phase
- XG three phase
- Pmax maximum electrical power
- Imax maximum electric current

TECHNICAL DATA

CONDENSING UNIT OUTSIDE THE COLD ROOM



Refrigeration unit MT MODEL	DIMENSIONS (mm)					WEIGHT[5] (kg)
	A	B	C	D	E	
AL-3RU1PT0.7MT	691	367	348	383	651	30
AL-3RU1PT0.8MT	691	367	348	383	651	31
AL-4RU1PT1.1MT	846	367	398	383	806	57
AL-4RU1PT1.3MT	846	367	398	383	806	58
AL-5RU1PT1.7MT	978	397	473	413	938	66
AL-5RU1PT1.9MT	978	397	473	413	938	68
AL-6RU1PT2.5MT	1052	454	573	470	1012	86
AL-6RU3PT2.8MT	1052	454	573	470	1012	95
AL-6RU3PT3.6MT	1052	454	573	470	1012	96
AL-7RU3PT4.7MT	1359	553	674	564	1319	131
AL-7RU3PT5.7MT	1359	553	674	564	1319	131
AL-7RU3PT6.6MT	1359	553	674	564	1319	144
AL-7RU3PT7.8MT	1359	553	674	564	1319	146
AL-7RU3PT8.4MT	1359	553	674	564	1319	146

Refrigeration unit LT MODEL	DIMENSIONS (mm)					WEIGHT[5] (kg)
	A	B	C	D	E	
AL-4RU1PT0.8LT	846	367	398	383	806	59
AL-5RU1PT1.1LT	978	397	473	413	938	83
AL-5RU3PT1.1LT	978	397	473	413	938	78
AL-5RU3PT1.4LT	978	397	473	413	938	79
AL-7RU3PT1.8LT	1359	553	674	564	1319	145
AL-7RU3PT2.3LT	1359	553	674	564	1319	145
AL-7RU3PT2.6LT	1359	553	674	564	1319	165

5 Units weight includes housing for outdoor application, power supply and protection. Weights are approximate and are subject to change.

TECHNICAL DATA

EVAPORATOR UNIT INSIDE THE COLD ROOM

Evaporator	DIMENSIONS (mm)			WEIGHT (kg)
	D	Š	V	
EVS 61 ED	411	433	120	4,6
EVS 101 ED	611	433	120	6,7
EVS 131 ED	611	433	120	7,3
EVS 201 ED	605	435	170	10,7
EVS 181 ED	1111	433	120	10,5
EVS 291 ED	1111	433	120	11,5
EVS 391 ED	1105	435	170	17
EVS 521 ED	1455	435	170	23
GCE 254E8 ED	2124	509	431	39
GCE 313F8 ED	1974	561	468	45
GCE 314F8 ED	2524	561	424	58,5
GCE 251E8R ED	674	409	390	12
GCE 251E8 ED	774	509	431	13,5
GCE 252G8 ED	1224	509	431	20
GCE 253E8 ED	1674	509	431	31
GCE 352E8 ED	1130	608	499	39,5

ARCTIC AE

ARCTIC AE

COMMERCIAL REFRIGERATION UNITS

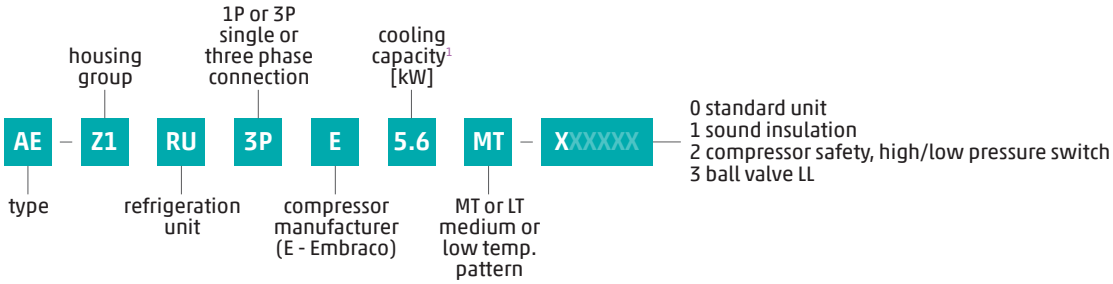
- Ideal solution for medium-scale commercial refrigeration systems
- Suitable for larger commercial facilities
- Compact design allows for easy handling and installation in confined spaces
- Anti-corrosion construction ensures reliable operation in all climatic conditions
- Standard equipment includes components designed to enhance performance and increase energy efficiency
- Flexible installation options with floor stands or wall mounting brackets for easier on-site preparation

TABLE WITH OPTIONS

OPTION	EQUIPMENT	NOTE
BASIC	• hermetic scroll compressor • protective housing for outdoor installation • crankcase heater • vibration dampeners • electrical cabinet • air cooled condenser with EC fan • liquid receiver • safety valve • fixed high/low pressure switch • fan speed controller • DTC valve for cooling the compressor head (only in LT version)	• when choosing a refrigeration unit, in addition to its name please also specify the number of the option • e.g. unit AE - Z1RU3PT5.6MT - 0; standard unit • e.g. unit AE - Z1RU3PT5.6MT - 12; with sound insulation and adjustable protective pressure switch of the HP/LP compressor

OPTIONS	EQUIPMENT	NOTE
OPTION 1	• sound insulation - soundjackets	• side walls of the 'engine room' are insulated
OPTION 2	• compressor safety high/low pressure switch	• with option 2, the fixed pressure switch from the standard unit is not installed
OPTION 3	• ball valve LL	• ball valve on the liquid line

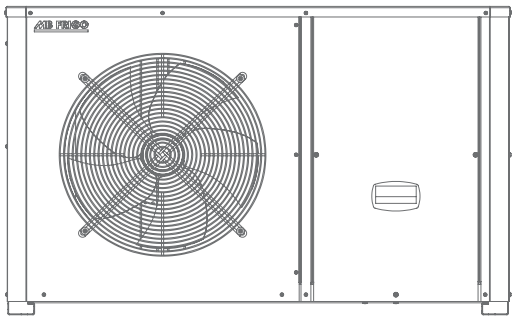
NOMENCLATURE

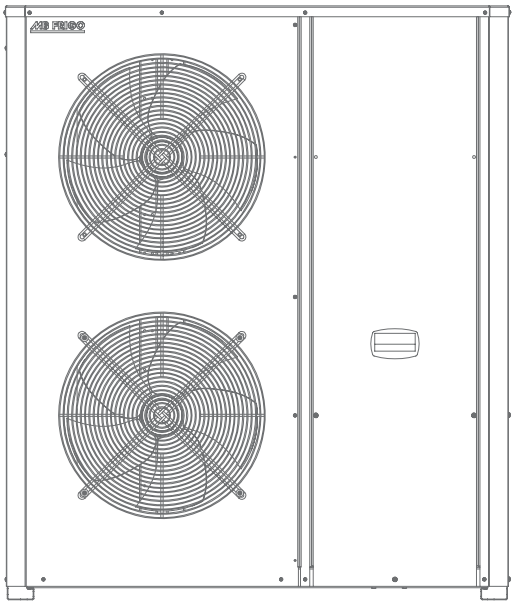


1 Under conditions:
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature

REFRIGERATION UNITS

REFRIGERATION UNIT OUTSIDE THE COLD ROOM





STANDARD UNIT

- scroll compressor
- protective housing for outdoor installation
- electrical cabinet
- crankcase heater
- vibration dampeners
- air cooled condenser with EC fan
- liquid receiver
- safety valve
- fixed high/low pressure switch
- fan speed controller
- DTC valve for cooling of the compressor head (only in LT version)

FEATURES
evaporation operating range for MT units from 10°C to 0°C
evaporation operating range for LT units from -30°C to -25°C
compact design with anti-corrosion protection
simple installation
refrigerant with low GWP (GWP = 1397) R449A

ACCESSORIES
sound insulation
adjustable protective pressure switch of the HP/LP compressor
ball valve LL

ASSEMBLY ACCESSORIES
floor stand

TECHNICAL DATA

COOLING CAPACITY

Refrigeration unit MT MODEL	Condensing unit				
	Compressor	Cooling capacity [kW]		Connections	
		Te/Ta		øSL	øLL
		-10°C/+32°C	-5°C/+32°C		
AE-Z1RU3PE5.6MT	SE6026GS	5.6	6.6	22	10
AE-Z1RU3PE6.5MT	SE6030GS	6.5	7.7	22	10
AE-Z2RU3PE8.0MT	SE3036GS	8	9.6	28	12
AE-Z2RU3PE9.5MT	SE6043GS	9.5	11.4	28	12
AE-Z2RU3PE11.5MT	SE6053GS	11.5	13.7	28	16

Refrigeration unit LT MODEL	Condensing unit				
	Compressor	Cooling capacity [kW]		Connections	
		Te/Ta		øSL	øLL
		-30°C/+32°C	-25°C/+32°C		
AE-Z1RU3PE3.6LT	SE2017GS	3.6	4.3	28	10
AE-Z1RU3PE4.3LT	SE2020GS	4.3	5.2	28	10
AE-Z2RU3PE5.4LT	SE2023GS	5.4	6.5	28	10
AE-Z2RU3PE6.3LT	SE2028GS	6.3	7.6	28	10
AE-Z2RU3PE7.3LT	SE2031GS	7.3	8.9	42	12
AE-Z2RU3PE8.2LT	SE2039GS	8.2	10	42	12

OPTION 8 (SPLIT UNIT)

POWER SUPPLY

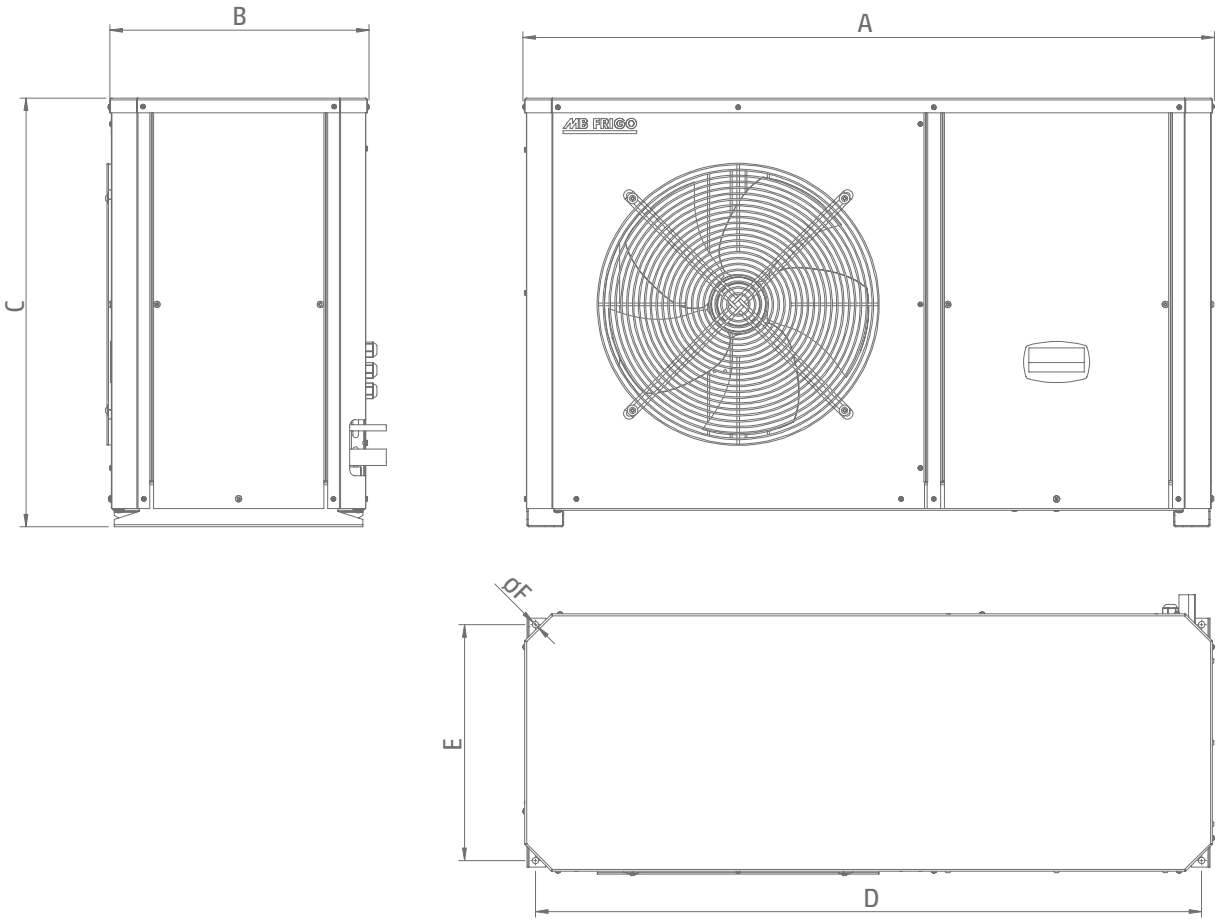
Refrigeration unit MT MODEL	Condensing unit			
	Compressor	Power supply	Imax	Pmax
			[A]	[kW]
AE-Z1RU3PE5.6MT	SE6026GS	400 V/3~/50 Hz	11	4.3
AE-Z1RU3PE6.5MT	SE6030GS	400 V/3~/50 Hz	12	4.6
AE-Z2RU3PE8.0MT	SE3036GS	400 V/3~/50 Hz	14	5.6
AE-Z2RU3PE9.5MT	SE6043GS	400 V/3~/50 Hz	16	6.5
AE-Z2RU3PE11.5MT	SE6053GS	400 V/3~/50 Hz	19	7.8

Refrigeration unit LT MODEL	Condensing unit			
	Compressor	Power supply	Imax	Pmax
			[A]	[kW]
AE-Z1RU3PE3.6LT	SE2017GS	400 V/3~/50 Hz	12	1.6
AE-Z1RU3PE4.3LT	SE2020GS	400 V/3~/50 Hz	14	1.8
AE-Z2RU3PE5.4LT	SE2023GS	400 V/3~/50 Hz	19	2.4
AE-Z2RU3PE6.3LT	SE2028GS	400 V/3~/50 Hz	21	2.8
AE-Z2RU3PE7.3LT	SE2031GS	400 V/3~/50 Hz	24	3.1
AE-Z2RU3PE8.2LT	SE2039GS	400 V/3~/50 Hz	27	3.4

Under conditions:
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- øSL suction line
- øLL liquid line
- Imax maximum electric current
- Pmax maximum electrical power

TECHNICAL DATA

CONDENSING UNIT - DESIGN GROUP Z1

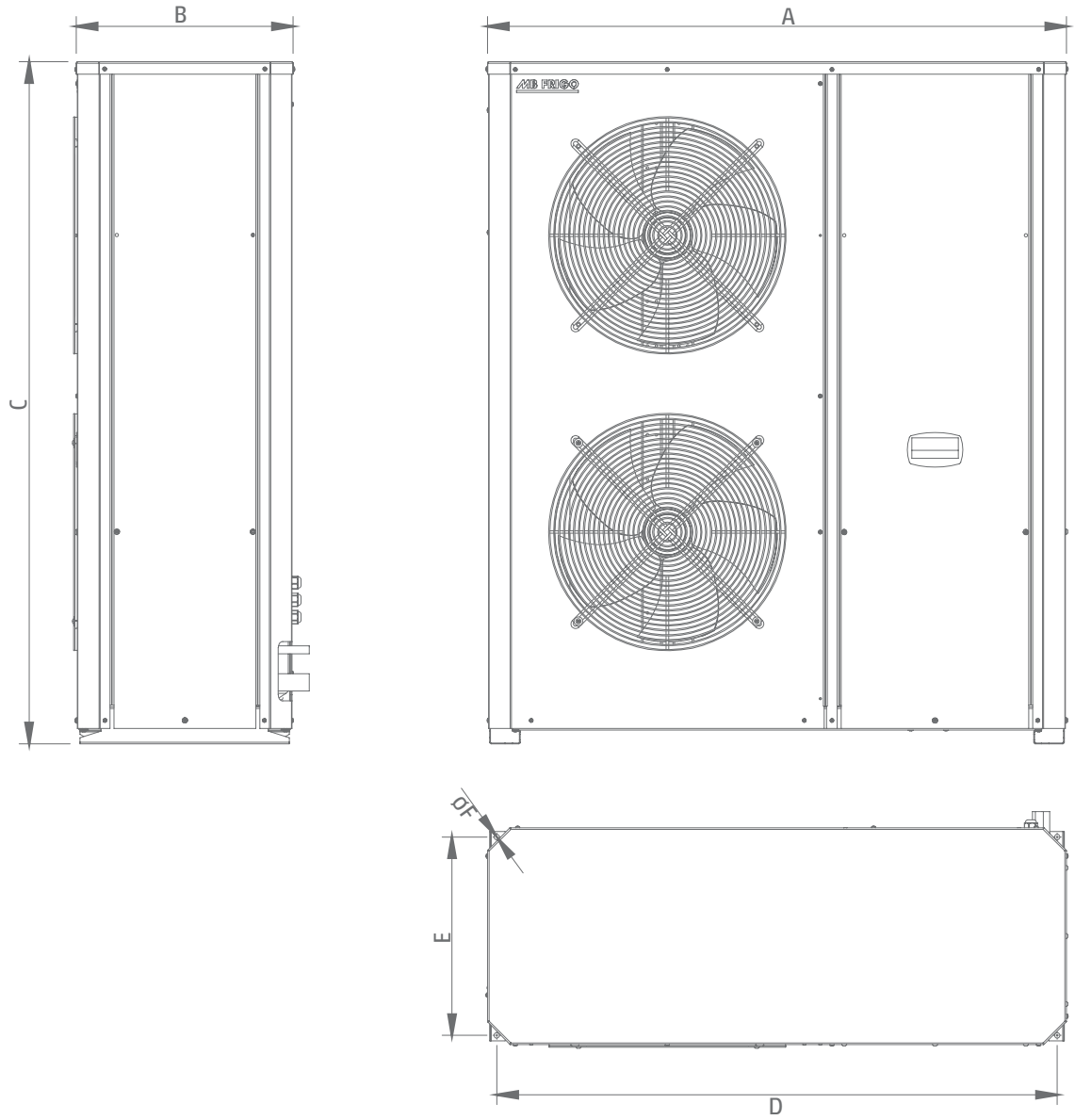


Refrigeration unit MODEL	DIMENSIONS (mm)						WEIGHT[4] (kg)
	A	B	C	D	E	F	
AE-Z1RU3PE5.6MT	1170	438	729	1133	400	11	117
AE-Z1RU3PE6.5MT	1170	438	729	1133	400	11	117
AE-Z1RU3PE3.6LT	1170	438	729	1133	400	11	117
AE-Z1RU3PE4.3LT	1170	438	729	1133	400	11	117

4 Units weights include housing for outdoor application, power supply and protection. Weights are approximate and are subject to change.

TECHNICAL DATA

CONDENSING UNIT - DESIGN GROUP Z2



Refrigeration unit MODEL	DIMENSIONS (mm)						WEIGHT[4] (kg)
	A	B	C	D	E	F	
AE-Z2RU3PE8.0MT	1170	458	1380	1133	400	11	171
AE-Z2RU3PE9.5MT	1170	458	1380	1133	400	11	178
AE-Z2RU3PE11.5MT	1170	458	1380	1133	400	11	178
AE-Z2RU3PE5.4LT	1170	458	1380	1133	400	11	171
AE-Z2RU3PE6.3LT	1170	458	1380	1133	400	11	171
AE-Z2RU3PE7.3LT	1170	458	1380	1133	400	11	178
AE-Z2RU3PE8.2LT	1170	458	1380	1133	400	11	178

4 Units weights include housing for outdoor application, power supply and protection. Weights are approximate and are subject to change.

ARCTIC AS

ARCTIC AS

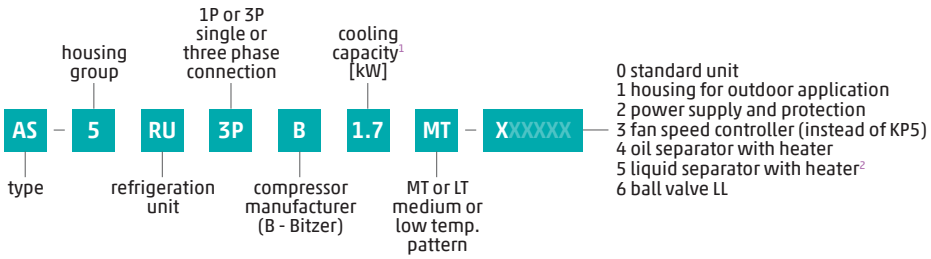
INDUSTRIAL REFRIGERATION UNITS

- Ideal solution for large-scale refrigeration systems in various industries
- Suitable for industrial facilities
- Equipped with semi-hermetic compressors for enhanced serviceability and reliability
- Anti-corrosion construction ensures reliable operation in all climatic conditions
- Optimized components ensure high energy efficiency and operational performance
- Flexible installation with floor stands or wall mounting brackets for simplified on-site setup

TABLE WITH OPTIONS

OPTION	EQUIPMENT	NOTE
BASIC	• semi-hermetic compressor with oil crankcase heater • air-cooled condenser with fan • liquid receiver • safety valve • filter-drier with sight glass • adjustable high/low pressure switch of the compressor • pressostatic regulation of condensation pressure • anti-vibration pipes on the suction and pressure pipelines	• when choosing the cooling unit in addition to its name please also specify the number of the option • e.g. unit AS - 5RU3PB1.7MT - 0; with standard units • e.g. unit AS - 5RU3PB1.7MT - 12; with housing for outdoor application, power supply and protection
OPTIONS	**EQUIPMENT**	**NOTE**
OPTION 1	• housing for outdoor application	
OPTION 2	• power supply and protection - compressor switch, el. heater, condenser fans, main switch	
OPTION 3	• fan speed controller • Danfoss XGE	• the fan speed controller (RBO) serves to regulate the condenser pressure, therefore, when selecting option 5, the adjustable pressure switch, which standardly controls the condensing pressure, is omitted from the standard equipment
OPTION 4	• oil separator with heater	• inspection glass on the oil return is installed only on units of design groups 6, 7 and 8
OPTION 5	• liquid separator with heater	• liquid separator installed only on units pertaining to housing group 8
OPTION 6	• ball valve LL	• ball valve on the liquid pipe

NOMENCLATURE

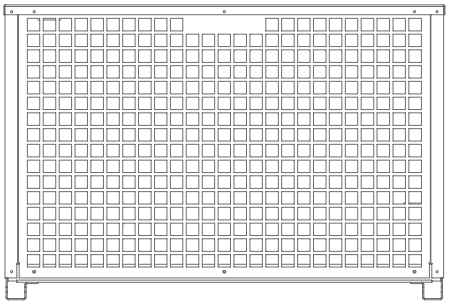


1 Under conditions:
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature

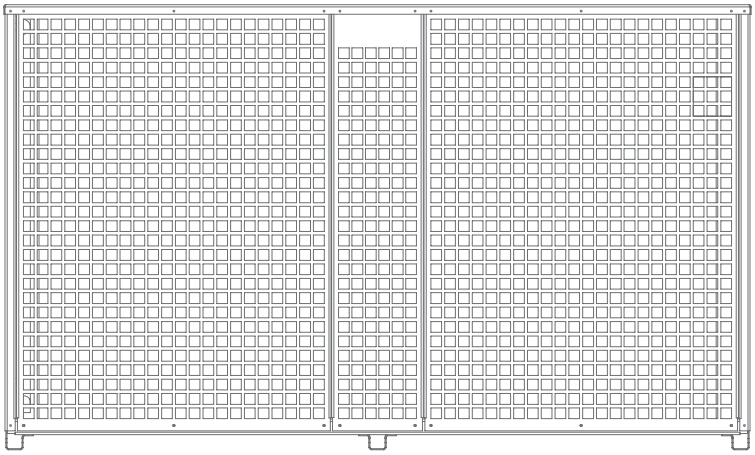
2 Only in the design group 8

REFRIGERATION UNITS

REFRIGERATION UNIT OUTSIDE THE COLD ROOM



• design groups 5, 6 and 7



• design group 8

STANDARD UNIT

- semi-hermetic compressor with oil crankcase heater
- air-cooled condenser with fan
- liquid receiver
- safety valve
- filter-drier with sight glass
- adjustable high/low pressure switch of the compressor
- pressostatic regulation of condensation pressure
- anti-vibration pipes on the suction and pressure pipelines

FEATURES
short delivery terms
simple installation
anti-corrosion protection
refrigerant with low GWP (GWP = 1397), R449A

ASSEMBLY ACCESSORIES
floor stands
mounting brackets

ACCESSORIES
housing for outdoor application
power supply and protection
fan speed controller
oil separator with heater
liquid separator with heater[2]
ball valve with heater

2 Only in the design group 8

TECHNICAL DATA

COOLING CAPACITY

Refrigeration unit MT MODEL	Condensing unit			
	Compressor	Cooling capacity [kW]	Connections	
		Te/Ta	øSL	øLL
		-10°C/+32°C		
AS-SRU3PB1.7MT	2KES-05Y	1,7	16	10
AS-6RU3PB2.3MT	2JES-07Y	2,3	16	10
AS-6RU3PB2.9MT	2HES-2Y	2,9	16	10
AS-6RU3PB3.4MT	2GES-2Y	3,4	16	10
AS-7RU3PB4.4MT	2FES-3Y	4,4	16	10
AS-7RU3PB5.4MT	2EES-3Y	5,4	22	10
AS-7RU3PB6.3MT	2DES-3Y	6,3	22	12
AS-7RU3PB8.1MT	2CES-4Y	8,1	22	12
AS-8RU3PB8.8MT	4FES-5Y	8,8	22	12
AS-8RU3PB11.1MT	4EES-6Y	11,1	28	16
AS-8RU3PB12.6MT	4DES-7Y	12,6	28	16

Refrigeration unit LT MODEL	Condensing unit			
	Compressor	Cooling capacity [kW]	Connections	
		Te/Ta	øSL	øLL
		-30°C/+32°C		
AS-5RU3PB0.9LT	2HES-1Y	0,9	16	10
AS-5RU3PB1.0LT	2GES-2Y	1	16	10
AS-5RU3PB1.3LT	2FES-2Y	1,3	16	10
AS-6RU3PB1.7LT	2EES-2Y	1,7	22	10
AS-6RU3PB2.0LT	2DES-2Y	2	22	10
AS-6RU3PB2.7LT	2CES-3Y	2,7	22	10
AS-7RU3PB2.9LT	4FES-3Y	2,9	22	10
AS-7RU3PB3.6LT	4EES-4Y	3,6	28	10
AS-7RU3PB4.1LT	4DES-5Y	4,1	28	10
AS-7RU3PB5.4LT	4CES-6Y	5,4	28	10
AS-8RU3PB6.5LT	4TES-9Y	6,5	35	12
AS-8RU3PB6.9LT	4PES-12Y	6,9	35	12
AS-8RU3PB8.8LT	4NES-14Y	8,8	35	12

Under conditions:
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- øSL suction line
- øLL liquid line
- Imax maximum electric current
- Pmax maximum electrical power

TECHNICAL DATA

POWER SUPPLY

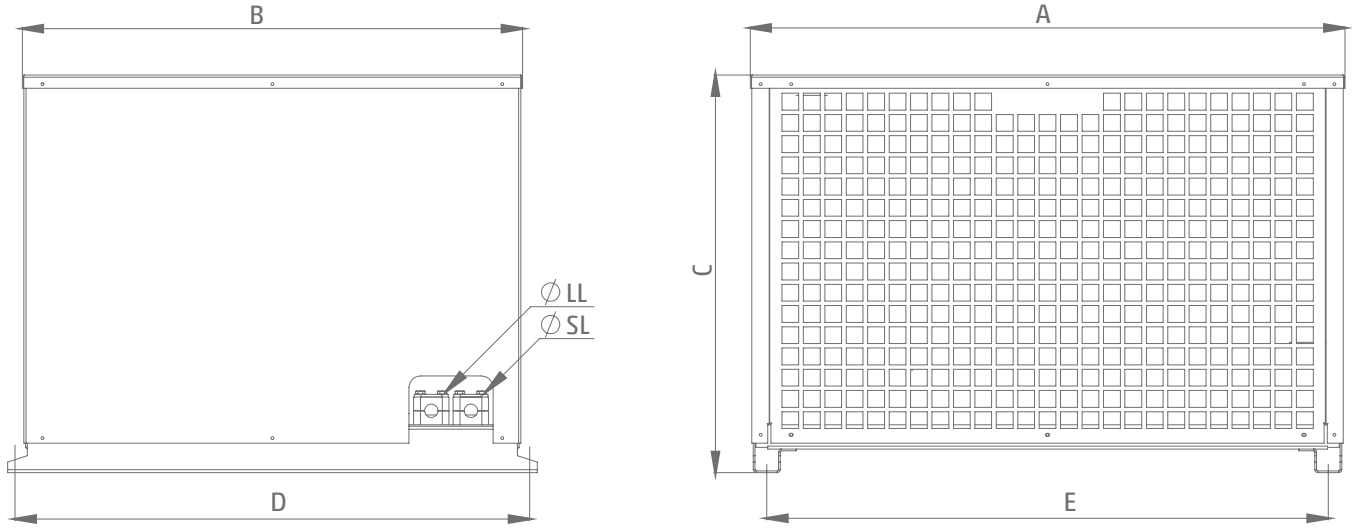
Refrigeration unit MT MODEL	Condensing unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]
AS - SRU3PB1.7MT	2KES-05Y	400 V/3~/50 Hz	3,1	1,6
AS - 6RU3PB2.3MT	2JES-07Y	400 V/3~/50 Hz	4,1	2
AS - 6RU3PB2.9MT	2HES-2Y	400 V/3~/50 Hz	4,9	2,5
AS - 6RU3PB3.4MT	2GES-2Y	400 V/3~/50 Hz	5,7	2,9
AS- 7RU3PB4.4MT	2FES-3Y	400 V/3~/50 Hz	6,7	3,5
AS - 7RU3PB5.4MT	2EES-3Y	400 V/3~/50 Hz	8,1	3,9
AS-7RU3PB6.3MT	2DES-3Y	400 V/3~/50 Hz	10,2	5
AS - 7RU3PB8.1MT	2CES-4Y	400 V/3~/50 Hz	11,6	6
AS- 8RU3PB8.8MT	4FES-5Y	400 V/3~/50 Hz	11,9	6,1
AS - 8RU3PB11.1MT	4EES-6Y	400 V/3~/50 Hz	14,7	7,9
AS - 8RU3PB12.6MT	4DES-7Y	400 V/3~/50 Hz	17,6	9,2

Refrigeration unit LT MODEL	Condensing unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]
AS - SRU3PB0.9LT	2HES-1Y	400 V/3~/50 Hz	4,1	2,1
AS - SRU3PB1.0LT	2GES-2Y	400 V/3~/50 Hz	5,3	2,8
AS - SRU3PB1.3LT	2FES-2Y	400 V/3~/50 Hz	5,6	3
AS - 6RU3PB1.7LT	2EES-2Y	400 V/3~/50 Hz	6,4	3,4
AS - 6RU3PB2.0LT	2DES-2Y	400 V/3~/50 Hz	7,9	4,1
AS - 6RU3PB2.7LT	2CES-3Y	400 V/3~/50 Hz	9,8	5,2
AS - 7RU3PB2.9LT	4FES-3Y	400 V/3~/50 Hz	10,2	5,5
AS - 7RU3PB3.6LT	4EES-4Y	400 V/3~/50 Hz	12,8	7
AS - 7RU3PB4.1LT	4DES-5Y	400 V/3~/50 Hz	15,1	8,2
AS - 7RU3PB5.4LT	4CES-6Y	400 V/3~/50 Hz	19,3	10,1
AS - 8RU3PB6.5LT	4TES-9Y	400 V/3~/50 Hz	21,5	13,4
AS - 8RU3PB6.9LT	4PES-12Y	400 V/3~/50 Hz	23,8	14,3
AS - 8RU3PB8.8LT	4NES-14Y	400 V/3~/50 Hz	29,7	17,7

Under conditions:
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- ϕSL suction line
- ϕLL liquid line
- Imax maximum electric current
- Pmax maximum electrical power

TECHNICAL DATA

CONDENSING UNIT - DESIGN GROUPS 5, 6 AND 7



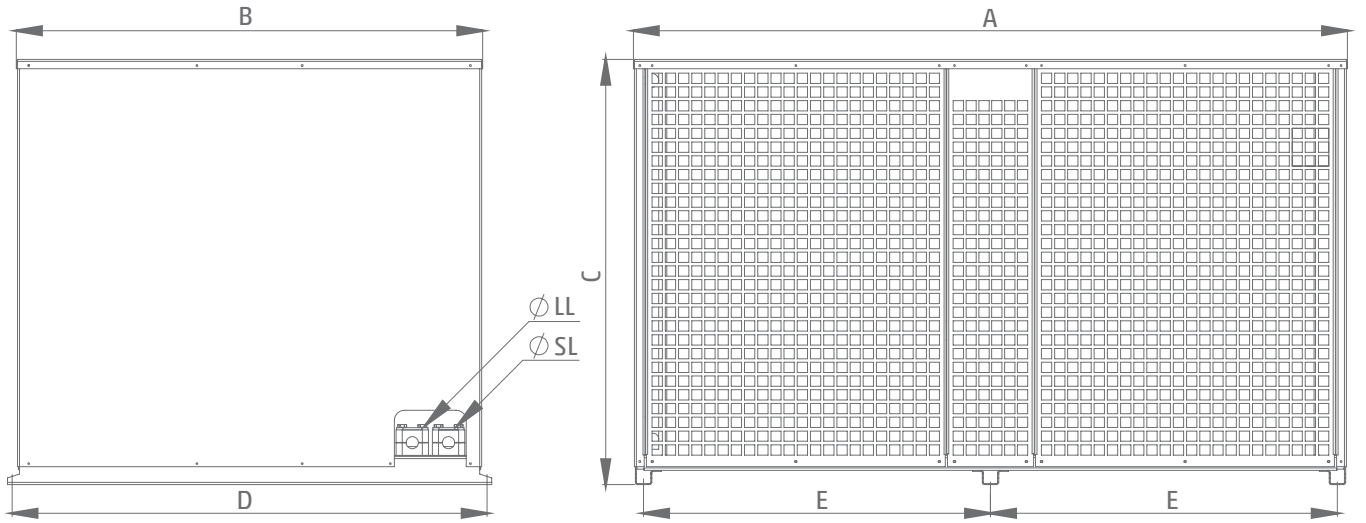
Refrigeration unit MT MODEL	DIMENSIONS (mm)					WEIGHT[4] (kg)
	A	B	C	D	E	
AS - SRU3PB1.7MT	707,5	595	473	612	668	105
AS - 6RU3PB2.3MT	807,5	705	573	722	768	115
AS - 6RU3PB2.9MT	807,5	705	573	722	768	117
AS - 6RU3PB3.4MT	807,5	705	573	722	768	117
AS - 7RU3PB4.4MT	1001,5	865	673	882	962	143
AS - 7RU3PB5.4MT	1001,5	865	673	882	962	176
AS - 7RU3PB6.3MT	1001,5	865	673	882	962	176
AS - 7RU3PB8.1MT	1001,5	865	673	882	962	185

Refrigeration unit LT MODEL	DIMENSIONS (mm)					WEIGHT[4] (kg)
	A	B	C	D	E	
AS - SRU3PB0.9LT	707,5	595	473	612	668	106
AS - SRU3PB1.0LT	707,5	595	473	612	668	106
AS - SRU3PB1.3LT	707,5	595	473	612	668	107
AS - 6RU3PB1.7LT	807,5	705	573	722	768	140
AS - 6RU3PB2.0LT	807,5	705	573	722	768	140
AS - 6RU3PB2.7LT	807,5	705	573	722	768	143
AS - 7RU3PB2.9LT	1001,5	865	673	882	962	180
AS - 7RU3PB3.6LT	1001,5	865	673	882	962	180
AS - 7RU3PB4.1LT	1001,5	865	673	882	962	180
AS - 7RU3PB5.4LT	1001,5	865	673	882	962	185

4 Units weights include housing for outdoor application, power supply and protection. Weights are approximate and are subject to change.

TECHNICAL DATA

REFRIGERATION UNIT



Refrigeration unit MT MODEL	DIMENSIONS (mm)					WEIGHT[4] (kg)
	A	B	C	D	E	
AS - 8RU3PB8.8MT	1390,5	908	828	925	676	281
AS - 8RU3PB11.1MT	1390,5	908	828	925	676	281
AS - 8RU3PB12.6MT	1390,5	908	828	925	676	284

Refrigeration unit LT MODEL	DIMENSIONS (mm)					WEIGHT[4] (kg)
	A	B	C	D	E	
AS - 8RU3PB6.5LT	1390,5	908	828	925	676	329
AS - 8RU3PB6.9LT	1390,5	908	828	925	676	334
AS - 8RU3PB8.8LT	1390,5	908	828	925	676	336

4 Units weights include housing for outdoor application, power supply and protection. Weights are approximate and are subject to change.

ARCTIC AC

ARCTIC AC

INDUSTRIAL REFRIGERATION UNITS

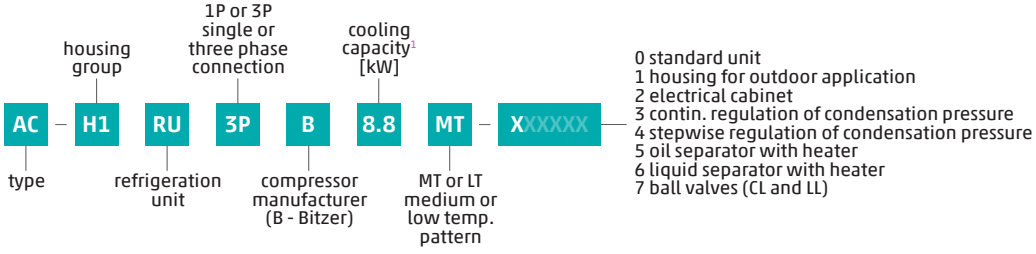
- Ideal solution for large-scale refrigeration systems in various industries
- Suitable for various industrial applications, including food storage and process cooling
- Designed for demanding industrial applications, ensuring long-term performance
- Equipped with semi-hermetic compressors, offering high serviceability and operational reliability
- Anti-corrosion construction ensures reliable operation in all climatic conditions
- Optimized components ensure high energy efficiency and operational performance
- Flexible installation options with floor stands or wall mounting brackets facilitate easier setup and maintenance
- The units are compatible with various environmentally friendly refrigerants, including R134a and R404A, ensuring compliance with current F-Gas regulations

TABLE WITH OPTIONS

OPTION	EQUIPMENT	NOTE
BASIC	• semi-hermetic compressor with oil crankcase heater • liquid receiver • safety valve up to 28 bar • filter-drier with sight glass • adjustable high/low pressure switch of the compressor • stepwise regulation of condensation pressure • pressostatic oil pressure regulation • anti-vibration pipes • cooling fan for the compressor head (LT models only)	• when choosing a cooling unit in addition to its name please also specify the number of the option • e.g. unit AC- H1RU3PB8.8MT- 0; standard unit • e.g. unit AC- H1KU3PB8.8MT- 12; with housing for outdoor application and power supply and protection

OPTIONS	EQUIPMENT	NOTE
OPTION 1	• protective housing	
OPTION 2	• power supply and protection-compressor switch, el. heater, condenser fans, main switch	• power distribution cabinet
OPTION 3	• continuous regulation of condensation pressure	• Danfoss XGE 4C is installed. speed regulator regulates the pressure of the condenser for MBF condensers only. See table with explanations on p. 6.
OPTION 4	• oil separator with heater	
OPTION 5	• liquid separator with heater	
OPTION 6	• ball valves CL and LL	• ball valve on condensation and liquid piping
OPTION 7	• non-return valve on the pressure side of the compressor	

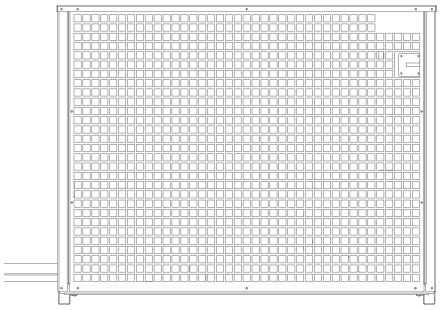
NOMENCLATURE



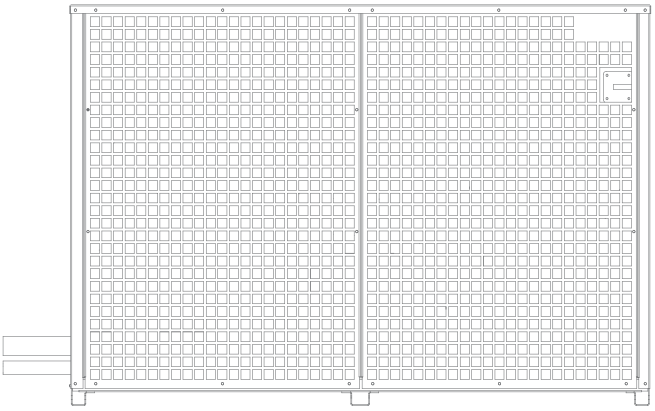
1 Under conditions:
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C
- superheat 10K
- subcooling 2K

REFRIGERATION UNITS

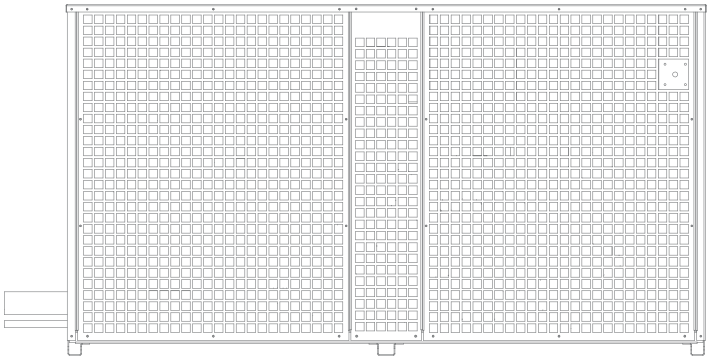
REFRIGERATION UNIT OUTSIDE THE COLD ROOM



• design group H1



• design group H2



• design group H3

STANDARD UNIT

- semi-hermetic compressor with oil crankcase heater
- liquid receiver
- safety valve up to 28 bar
- filter-drier with slight glass
- adjustable protective pressure switch of the HP/LP compressor
- pressostatic regulation of oil pressure
- antivibration pipes on pressure and suction
- cooling fan for the compressor's head (LT models only)

FEATURES
anti-corrosion protection
refrigerant with low GWP (GWP = 1397), R449A

ASSEMBLY ACCESSORIES
floor stands
mounting brackets

ACCESSORIES
housing for outdoor application
electrical cabinet
continuous regulation of condensation pressure
oil separator with heater
liquid separator with heater
ball valves (CL and LL)
non-return valve on the pressure side of the compressor

TECHNICAL DATA

COOLING CAPACITY

Refrigeration unit MT MODEL	Condensing unit				Connections			
	Compressor	Cooling capacity [kW][3]			Evaporator		Condenser	
		Te/Ta			øSL	øLL	øSL	øLL
		-10°C/+32°C	-5°C/+32°C	0°C/+32°C				
AC-H1RU3PB8.8MT	4FES-5Y	8,8	10,8	13,4	22	12	16	16
AC-H1RU3PB11.1MT	4EES-6Y	11,1	13,5	16,8	28	12	16	16
AC-H1RU3PB12.6MT	4DES-7Y	12,6	15,4	19,2	28	16	22	18
AC-H1RU3PB16.1MT	4CES-9Y	16,1	19,6	24,4	28	16	22	18
AC-H2RU3PB16.6MT	4VES-10Y	16,6	20,3	25,5	28	16	22	18
AC-H2RU3PB20.1MT	4TES-12Y	20,1	24,6	30,8	35	16	28	18
AC-H2RU3PB22.8MT	4PES-15Y	22,8	27,9	35,2	42	16	28	22
AC-H2RU3PB27.5MT	4NES-20Y	27,5	33,6	42	42	22	28	22

Refrigeration unit LT MODEL	Condensing unit				Connections			
	Compressor	Cooling capacity [kW][3]			Evaporator		Condenser	
		Te/Ta			øSL	øLL	øSL	øLL
		-35°C/+32°C	-30°C/+32°C	-25°C/+32°C				
AC-H1RU3PB3.6IT	4EES-4Y	2,4	3,6	4,7	22	10	12	12
AC-H1RU3PB4.1IT	4DES-5Y	2,7	4,1	5,4	22	10	12	12
AC-H1RU3PB5.4IT	4CES-6Y	3,6	5,4	7	28	10	12	12
AC-H2RU3PB6.5IT	4TES-9Y	4,2	6,5	8,5	28	10	16	12
AC-H2RU3PB6.9IT	4PES-12Y	4,3	6,9	9,3	35	10	16	12
AC-H2RU3PB8.8IT	4NES-14Y	5,7	8,8	11,5	35	12	16	16
AC-H3RU3PB10.6IT	4JE-15Y	7	10,6	13,9	42	12	18	16
AC-H3U3PB12.8IT	4HE-18Y	8,6	12,8	16,6	42	16	18	18
AC-H3U3PB15.4IT	4GE-23Y	10,6	15,4	19,7	54	16	22	18

3 Under conditions: For R449A
- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- øSL suction line
- øLL liquid line

REFRIGERATION UNITS

POWER SUPPLY

Refrigeration unit MT MODEL	Condensing unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]
AC-H1RU3PB8.8MT	4FES-5Y	400 V/3~/50 Hz	10,8	5,8
AC-H1RU3PB11.1MT	4EES-6Y	400 V/3~/50 Hz	13,6	7,6
AC-H1RU3PB12.6MT	4DES-7Y	400 V/3~/50 Hz	16,5	8,9
AC-H1RU3PB16.1MT	4CES-9Y	400 V/3~/50 Hz	20,2	11,3
AC-H2RU3PB16.6MT	4VES-10Y	400 V/3~/50 Hz	19,9	12
AC-H2RU3PB20.1MT	4TES-12Y	400 V/3~/50 Hz	25,1	14
AC-H2RU3PB22.8MT	4PES-15Y	400 V/3~/50 Hz	28,2	16
AC-H2RU3PB27.5MT	4NES-20Y	400 V/3~/50 Hz	33,2	19

Refrigeration unit LT MODEL	Condensing unit			
	Compressor	Power supply	Imax [A]	Pmax [kW]
AC-H1RU3PB3.6IT	4EES-4Y	400 V/3~/50 Hz	12,2	6,9
AC-H1RU3PB4.1IT	4DES-5Y	400 V/3~/50 Hz	14,5	8,1
AC-H1RU3PB5.4IT	4CES-6Y	400 V/3~/50 Hz	17,7	9,7
AC-H2RU3PB6.5IT	4TES-9Y	400 V/3~/50 Hz	19,9	13
AC-H2RU3PB6.9IT	4PES-12Y	400 V/3~/50 Hz	22,7	14
AC-H2RU3PB8.8IT	4NES-14Y	400 V/3~/50 Hz	26,6	17
AC-H3RU3PB10.6IT	4JE-15Y[2]	400 V/3~/50 Hz	30,8	19
AC-H3U3PB12.8IT	4HE-18Y[2]	400 V/3~/50 Hz	36,7	22
AC-H3U3PB15.4IT	4GE-23Y[2]	400 V/3~/50 Hz	43,9	27

OPTION 3

OPTION 3 - CONTINUOUS REGULATION OF CONDENSATION PRESSURE

It is used when an MBF condenser is delivered with the system, and the desired regulation of the condensation pressure is continuous using the speed regulator. The table lists the units and paired MBF condensers according to which the operating speed is installed and the appropriate electrical preparation is carried out. Option 3 does NOT include the condenser in the "package".

MT MODEL	CONDENSER	SPEED REG. NO.	LT MODEL	CONDENSER	SPEED REG. NO.
AC-H1RU3PB8.8MT	MBF 08	2	AC-H1RU3PB3.6IT	MBF 07	1
AC-H1RU3PB11.1MT	MBF 08	2	AC-H1RU3PB4.1IT	MBF 07	1
AC-H1RU3PB12.6MT	MBF 08	2	AC-H1RU3PB5.4IT	MBF 07	1
AC-H1RU3PB16.1MT	MBF 08	2	AC-H2RU3PB6.5IT	MBF 07	1
AC-H2RU3PB16.6MT	MBF 08	2	AC-H2RU3PB6.9IT	MBF 08	2
AC-H2RU3PB20.1MT	MBF 09	2	AC-H2RU3PB8.8IT	MBF 08	2
AC-H2RU3PB22.8MT	MBF 10	3	AC-H3RU3PB10.6IT	MBF 08	2
AC-H2RU3PB27.5MT	MBF 10	3	AC-H3U3PB12.8IT	MBF 08	2
			AC-H3U3PB15.4IT	MBF 09	2

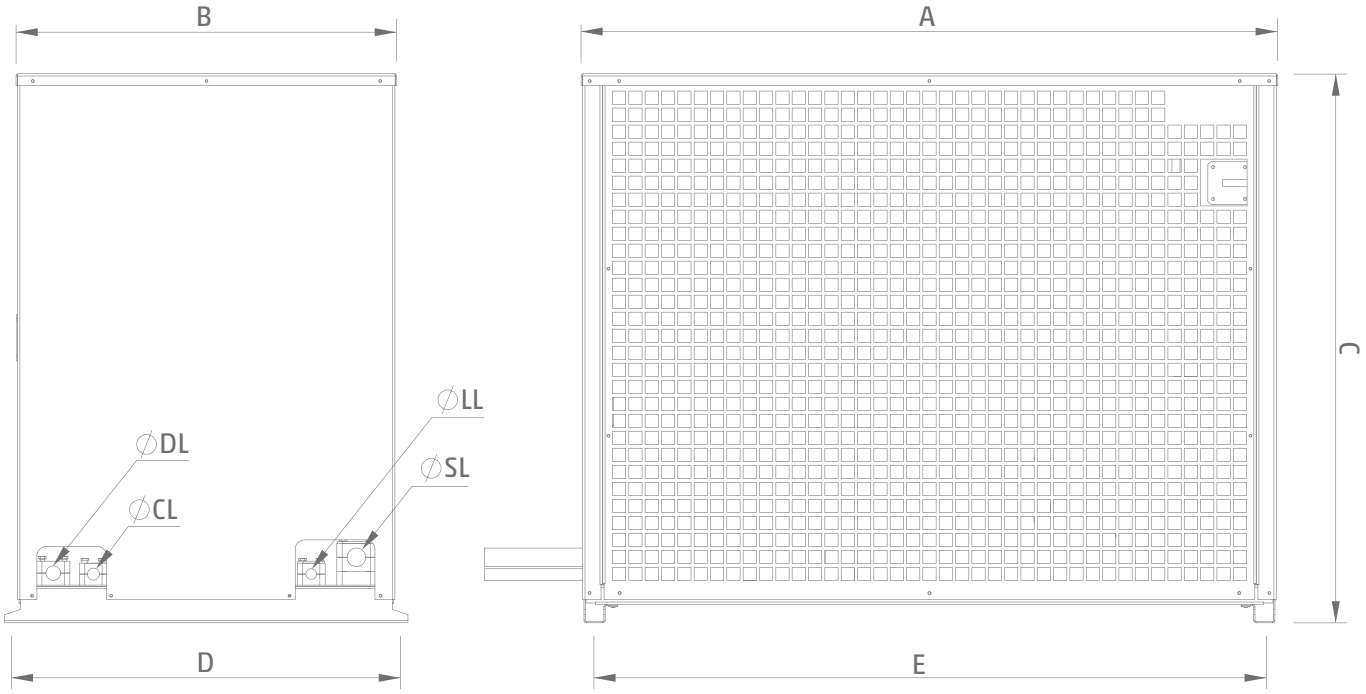
Under conditions:
- superheat 10K
- subcooling 2K
- Te evaporation temperature
- Ta ambient temperature
- ϕSL suction line
- ϕLL liquid line
- Imax maximum electric current
- Pmax maximum electrical power

TECHNICAL DATA

COMPRESSOR UNIT OUSIDE THE COLD ROOM

Arctic AC compressor units are placed on a base (with housing) in three housing groups. Each design group is divided into two subgroups. The subgroup "a" is used when, as an option, the compressor unit is not equipped with a liquid separator. The subgroup "b" is used when the unit is equipped with a liquid separator.

HOUSING GROUP H1



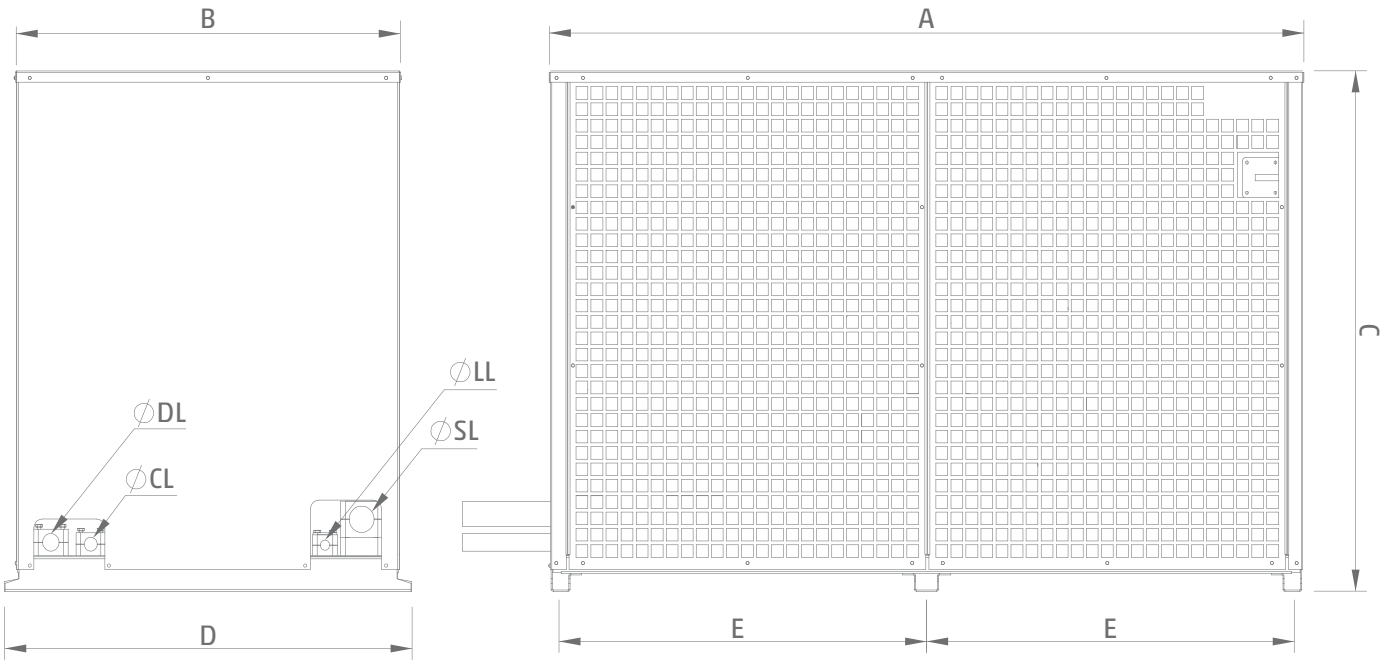
Refrigeration unit MT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT[4] (kg)
		A	B	C	D	E	
AC-H1RU3PB8.8MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB11.1MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB12.6MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB16.1MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-

Refrigeration unit LT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT[4] (kg)
		A	B	C	D	E	
AC-H1RU3PB3.6LT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB4.1LT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB5.4LT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-

4 Units weights include protective housing, power supply and protection.

TECHNICAL DATA

HOUSING GROUP H2



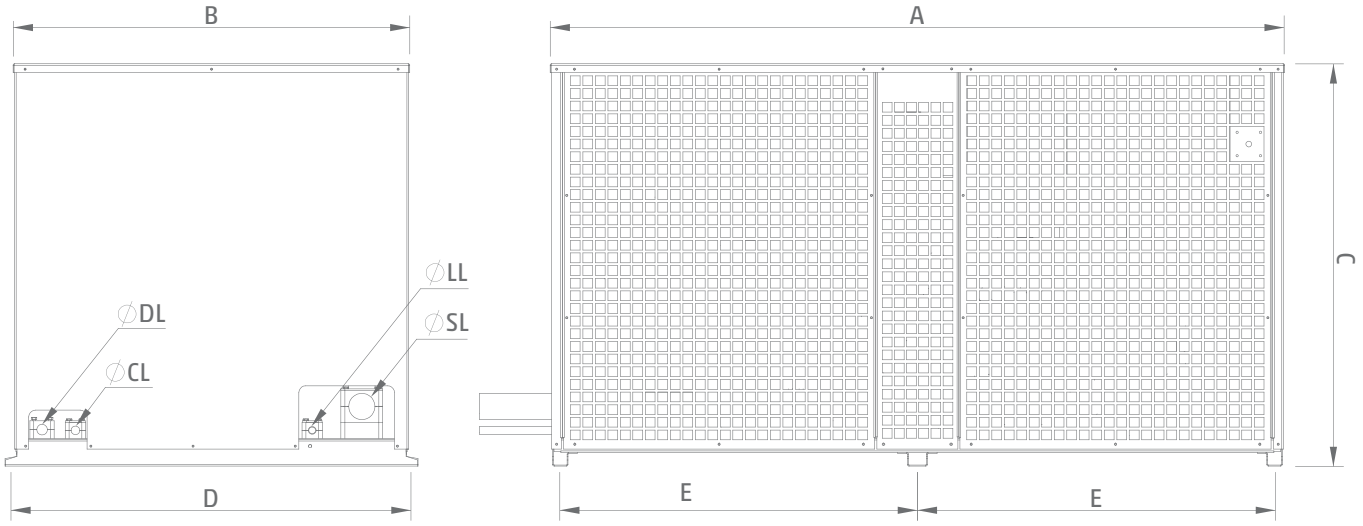
Refrigeration unit MT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT[4] (kg)
		A	B	C	D	E	
AC-H2RU3PB16.6MT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB20.1MT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB22.8MT	a	1277	651	827	669	619	265
	b	1410	765	827	779	684	295
AC-H2RU3PB27.5MT	a	1277	651	827	669	619	265
	b	1410	765	827	779	684	-

Refrigeration unit LT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT[4] (kg)
		A	B	C	D	E	
AC-H2RU3PB6.5LT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB6.9LT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB8.8LT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-

4 Units weights include protective housing, power supply and protection.

TECHNICAL DATA

HOUSING GROUP H3



Refrigeration unit LT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT[4] (kg)
		A	B	C	D	E	
AC-H3RU3PB10.6LT	a	1410	765	827	779	684	-
	b	1510	816	827	829	734	-
AC-H3U3PB12.8LT	a	1410	765	827	779	684	-
	b	1510	816	827	829	734	-
AC-H3U3PB15.4LT	a	1410	765	827	779	684	-
	b	1510	816	827	829	734	-

4 Units weights include protective housing, power supply and protection.

ARCTICO2

ARCTICO2 AG

COMMERCIAL REFRIGERATION UNITS

- Natural refrigerant CO_2 (R744), offering energy-efficient cooling with minimal environmental impact (ODP 0, GWP 1)
- Suitable for commercial facilities
- Compact design ensures easy handling and installation, even in confined spaces
- Anti-corrosion construction ensures reliable operation in all climatic conditions
- Standard units come with advanced features, including frequency converters and proportional modulation, ensuring optimized energy efficiency and performance

KEY ADVANTAGES - NATURAL REFRIGERANT CO_2 (R744)

LONG-TERM COST-EFFECTIVENESS

ARCTICO2 AG units offer significant savings through superior energy efficiency, minimal refrigerant leakage, and reduced maintenance costs, leading to lower total ownership expenses.

REGULATORY COMPLIANCE

CO_2, as a natural refrigerant, ensures compliance with upcoming regulations on phasing out synthetic refrigerants, such as those with high GWP, thus protecting your investment from future regulatory changes.

INCENTIVES AND SUBSIDIES

Many countries provide incentives and subsidies for the installation of eco-friendly refrigeration systems, like those using CO_2, reducing the upfront costs.

SUSTAINABILITY IMAGE

Using CO_2 as a refrigerant demonstrates a strong commitment to environmental sustainability, improving corporate reputation and attracting eco-conscious clients.

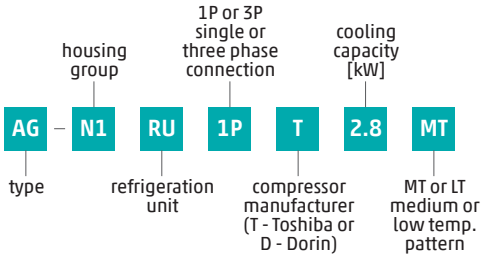
EXTENDED LIFESPAN

ARCTICO2 AG units are built for durability, equipped with high-quality components and advanced control systems, ensuring a long operational life and steady returns on investment .

TABLE WITH OPTIONS

OPTION	ARTICO2 AG MT	ARTICO2 AG LT
BASIC	• hermetic rotary compressor • gas cooler with EC fan • liquid receiver • HPV and RPRV valves • safety valve up to 80 bar • filter-drier • sight glass • HP compressor protective pressure switch • magnetic valve pressure equalization to protect the compressor at its start • non-return valve on the pressure side of the compressor	• semi-hermetic two-stage piston compressor • gas cooler / intercooler with EC fan • liquid receiver • HPV and RPRV valves • safety valve up to 80 bar • filter-drier • sight glass • HP compressor protective pressure switch • oil separator with heater (+ oil filter, solenoid valve, inspection glass)
CONTROLLER	• Carel Hecu CO_2	• Carel uRack CO_2

NOMENCLATURE

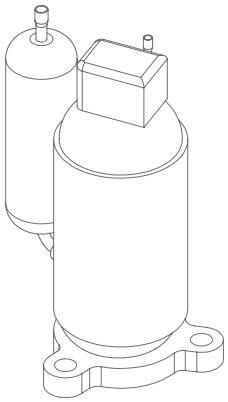


TRANSCRITICAL TECHNOLOGY FOR LOWER COOLING CAPACITIES REQUIREMENTS

Awareness of the need for environmental protection increases by the day. As one of the measures aimed at reducing greenhouse gas emissions, the F-Gas regulation was introduced in 2015, which limits and prohibits the use of HFC refrigerants in air conditioning and refrigeration units. At the same time, the use of natural refrigerants is encouraged, one of which is CO_2. Carbon dioxide is a suitable replacement for existing refrigerants due to its characteristics such as ODP = 0 and GWP = 1. An additional advantage of carbon dioxide is its low price and easy availability, which makes it an ideal replacement for the existing HFC refrigerants.

APPLICATION IN MT UNITS

Arctic AC compressor units are placed on a base (with housing) in three housing groups. Each design group is divided into two subgroups. The subgroup "a" is used when, as an option, the compressor unit is not equipped with a liquid separator. The subgroup "b" is used when the unit is equipped with a liquid separator.

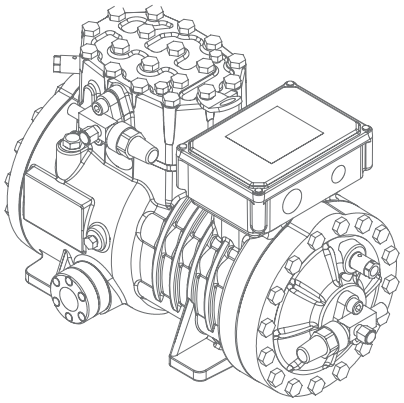


MB Frigo has developed 4 models with different cooling functions in two dimensional sizes. Condensing units are designed to work in warm climates where the air temperature can reach up to +46°C. Also, the evaporation working range spans from -15°C to +5°C. Specially designed, air-cooled gas cooler of curved design, equipped with continuously regulated EC fans, which maintain pressure in a narrow area and are working almost silently. Thanks to this curved design of the gas cooler, the unit is compact, small in dimensions and has a small floor plan area.

In cooperation with the company CAREL, we adapted the control software especially for our units. With a simple local control, network management of units is also possible, i.e. establishment of remote monitoring and control of all stored parameters, thus
fulfilling the HACCP requirements.

APPLICATION IN LT UNITS

For the application in LT units, we have developed CO_2 condensing units that operate in subcritical and transcritical areas. The chiller is powered by a two-stage semi-hermetic compressor.



MB Frigo has developed 5 models with different cooling functions in two dimensional sizes. The evaporation working range spans from -30°C to -25°C. Smaller LT units also use an air-cooled curved gas cooler, which is equipped with a continuously regulated EC fan, which maintains pressure in a narrow area and are working almost silently. Thanks to this curved design of the gas cooler, the unit is compact, small in dimensions and has a small floor plan area. The version of the LT unit with two fans is also cooled by EC fans. Therefore, even stronger refrigeration units are designed for quiet operation.

Local and network management of units, i.e. remote monitoring and control of all parameters, is also enabled on LT units.

TECHNICAL DATA

DEVICE DATA

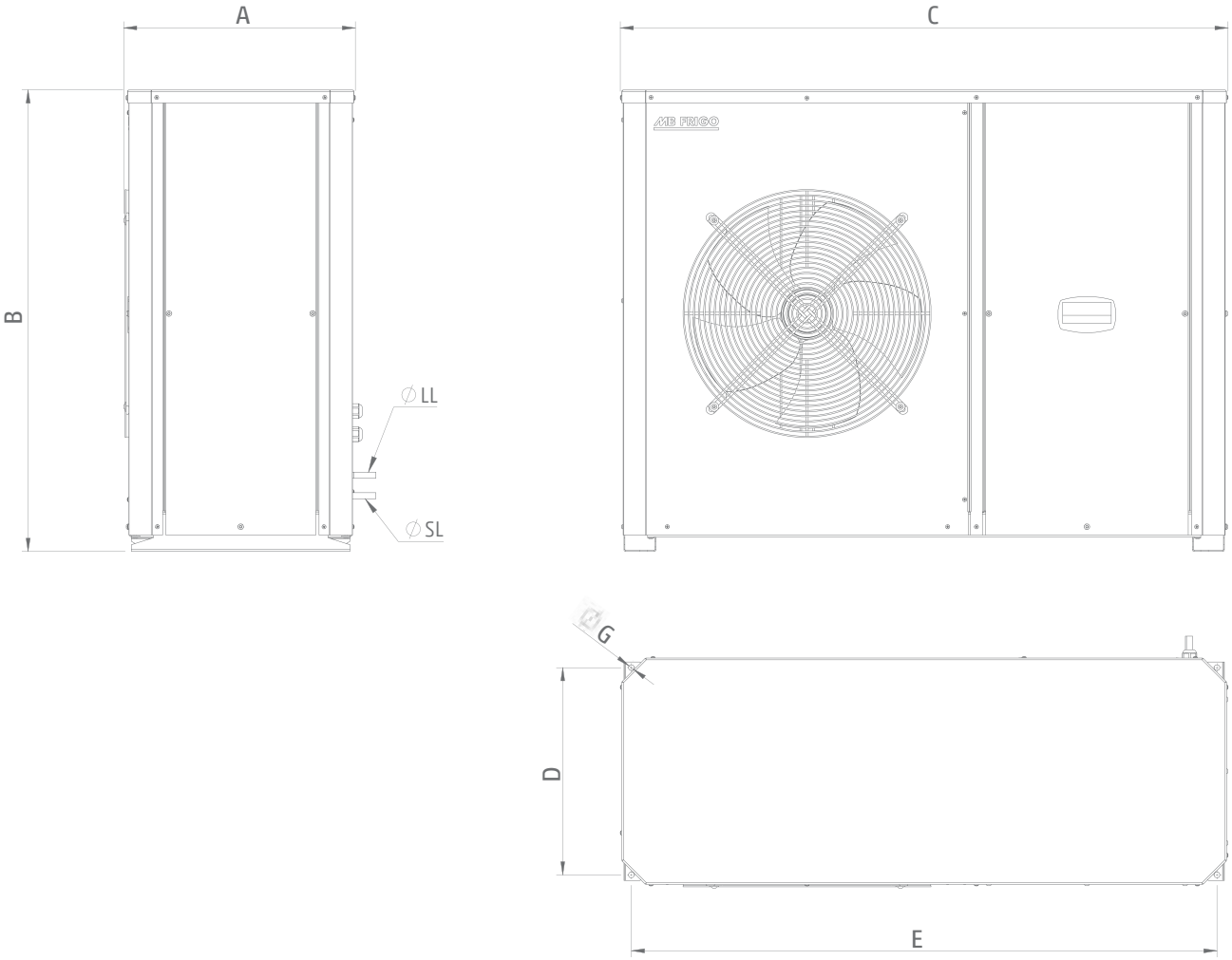
MT MODEL	Name	ARCTICO2 30	ARCTICO2 45	ARCTICO2 67	ARCTICO2 100
	Type	AG-N1RU1PT2.8MT	AG-N2RU1PT4.2MT	AG-N2RU1PT6MT	AG-N3RU3PT9MT
Compressor	Type	DY30N1F-10FU	DY45N1F-10FU	DY67L1F-10FU	RY100L1F-10FU
	Power supply	230 V/1~/50 Hz			
Max. current		12.5 A	18 A	24 A	18 A
Cooling capacity[1]	min. (25 rps)	0.7 kW	1 kW	1.5 kW	2.25 kW
	max. (100 rps)	2.8 kW	4.2 kW	6 kW	9 kW
Liquid tank	PS[2]	80 bar			
	PED	II			
Fan type		1 x Ø450 mm (EC)			2 x Ø450 mm (EC)
Connecting pipes	øSL	3/8"	3/8"	1/2"	5/8"
	øLL	3/8"	3/8"	1/2"	1/2"
PS[2]	high/medium/low	120/80/80 bar			

LT MODEL	Name	ARCTICO2 300	ARCTICO2 350	ARCTICO2 360	ARCTICO2 1200	ARCTICO2 1500
	Type	AG-N4RU3PD1.6LT	AG-N4RU3PD2UT	AG-N4RU3PD2.5UT	AG-N6RU3PD9UT	AG-N6RU3PD12UT
Compressor	Type	CD2S300	CD2S350	CD2S360	CD2S1200	CD2S1500
	Power supply	400 V/3~/50 Hz				
Max. current		6.0	7.3	7.5	28.0	34.0
Cooling capacity[1]		1.6 kW	2 kW	2.5 kW	9 kW	12 kW
Liquid tank	PS[2]	90 bar				
	PED	II				
Fan type		1 x Ø450 mm (EC)			2 x Ø450 mm (EC)	
Connecting pipes	øSL	3/8"	3/8"	3/8"	3/4"	7/8"
	øLL	3/8"	3/8"	3/8"	1/2"	1/2"
PS[2]	high/medium/low	120/80/80 bar				

1 Evaporation temperature -7°C, temperature at the gas cooler exit +35°C, total superheating 10K liquid subcooling
2 Maximum allowed pressure

TECHNICAL DATA

REFRIGERANT UNIT



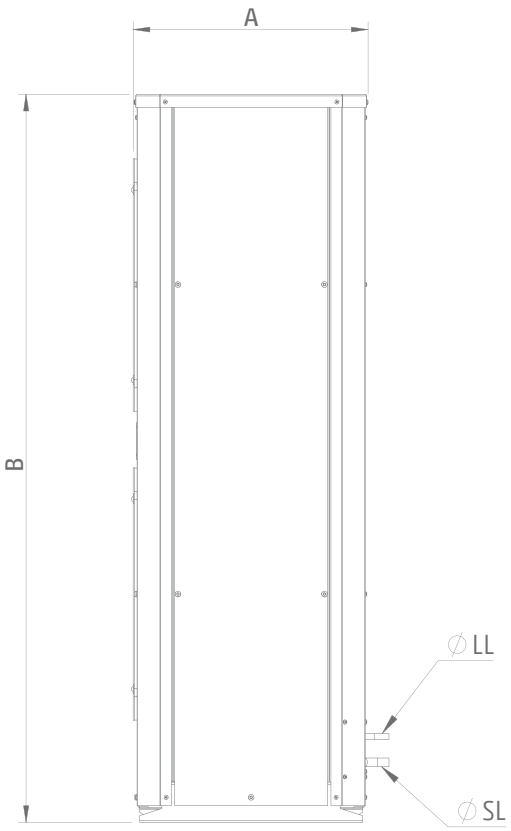
Refrigeration unit		DIMENSIONS (mm)						WEIGHT[4] (kg)
MT model	Type	A	B	C	D	E	G	
ARCTICO2 30	AG-N1RU1PT2.8MT	448	893	1176	400	1133	11	105
ARCTICO2 45	AG-N2RU1PT4.2MT	448	893	1176	400	1133	11	120
ARCTICO2 67	AG-N2RU1PT6MT	448	893	1176	400	1133	11	121

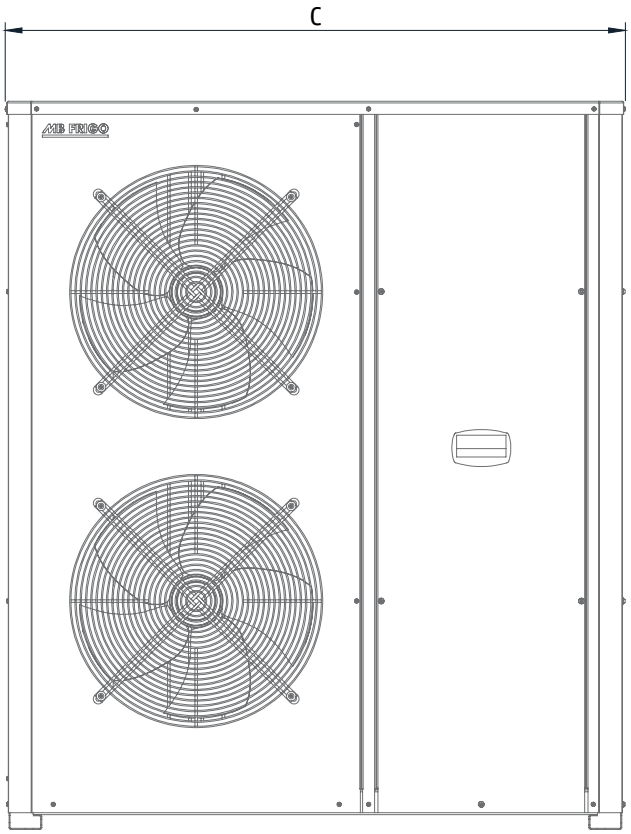
Refrigeration unit		DIMENSIONS (mm)						WEIGHT[4] (kg)
LT model	Type	A	B	C	D	E	G	
ARCTICO2 300	AG-N4RU3PD1.6LT	593	890	1351	516	1310	11	231
ARCTICO2 350	AG-N4RU3PD2LT	593	890	1351	516	1310	11	231
ARCTICO2 360	AG-N4RU3PD2.5LT	593	890	1351	516	1310	11	231

4 Units weights include protective housing, power supply and protection.

TECHNICAL DATA

REFRIGERANT UNIT



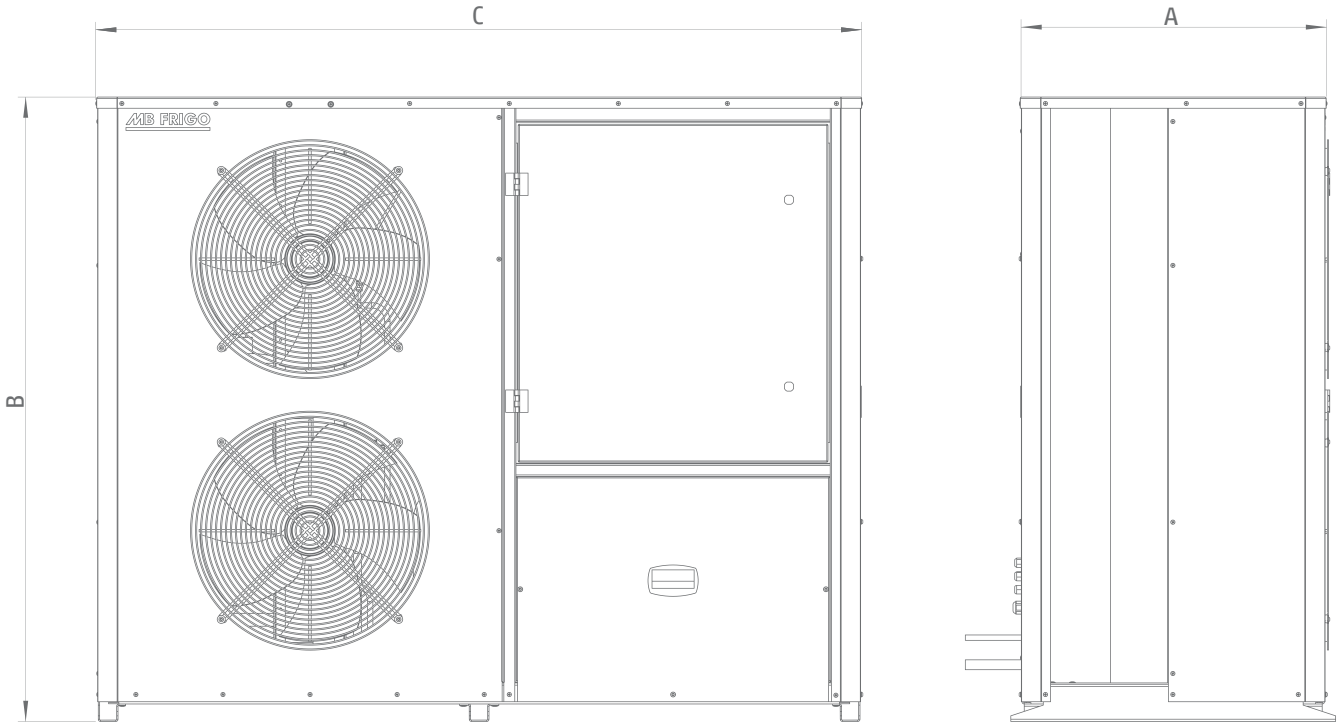


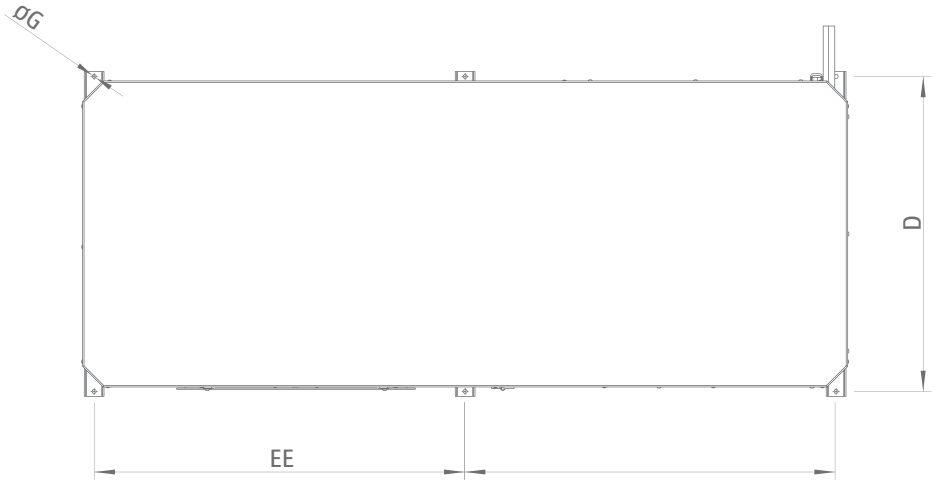
Refrigeration unit		DIMENSIONS (mm)						WEIGHT[4] (kg)
MT model	Type	A	B	C	D	E	G	
ARCTICO2 100	AG-N3RU3PT9MT	446	1381	1176	400	1133	11	165

4 Units weights include protective housing, power supply and protection.

TECHNICAL DATA

REFRIGERANT UNIT





Refrigeration unit		DIMENSIONS (mm)						WEIGHT[4] (kg)
LT model	Type	A	B	C	D	E	G	
ARCTICO2 1200	AG-N6RU3PD9LT	725	1394	1712	703	828	11	530
ARCTICO2 1500	AG-N6RU3PD12LT	725	1394	1712	703	828	11	530

4 Units weights include protective housing, power supply and protection.

Every sketch, every line is the beginning of creating unique products tailored to your needs.
We bring your ideas to life through custom-made refrigeration equipment, produced according to your specifications.

ARCTICO2 MULTI

ARCTIC & ARCTICO2 MULTI
MULTICOMPRESSOR UNIT

Depending on the application, ARCTIC&ARCTICO2 MULTI is a standard or specific solution for refrigeration.
They ensure energy- efficient cooling, superior quality control of products and raw materials, and energy savings.

With multicompressor units we provide a complete solution for cooling in industrial and commercial applications.
Depending on the application, we can produce custom made multicompressor units adapted to the project requirements.

In accordance with the environmental protection requirements, we have developed transcritical multicompressor units that are featured energy efficiency, operational safety, flexibility and a specific design.

For the needs of the application in supermarket chains, logistics and the food industry, we also provide CO2 mini booster cooling units with 2 or 3 compressors and refrigeration capacity of up to 50 kW (MT and LT regimes), which are featured by reliability and very compact dimensions. Our range also includes HFC alongside CO2 multi- compressor refrigeration units.









MB FRIGO

TECHNOLOGY

Since 1981, we have been building and improving business in the segment of air conditioning and refrigeration technology.

OWN PRODUCTION

Over the years, we have developed the production of refrigeration equipment in our own production centre using technology and machinery that allow a more flexible approach to the needs of customers.

Leveraging robotized production, we've automated business processes, increased efficiency, enhanced quality, and shortened delivery times.

Our expertise lies in the manufacturing of cold rooms, refrigeration doors, and refrigeration units. The high flexibility of production program enables the creation of custom-made products tailored to specific market needs.

MB FRIGO

WHAT WE OFFER?

A long-term business relationship, a professional approach to collaboration and 360° support.

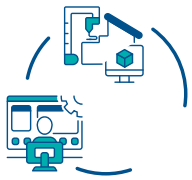
HIGH QUALITY PRODUCTS

- Comprehensive refrigeration solutions
- Custom - made solutions according to customer requirements
- Factory production control and thorough inspection of finished products
- Reliable, safe, user-friendly, and energy-efficient refrigeration solutions
- Fully compliant with EU and ISO standards

EASY FOR INSTALLERS

- Quick and easy assembly without the need for power tools or silicone
- High level of assembly readiness
- Superior packaging standards to ensure safe transportation and protection of goods

PRODUCTION AND DELIVERY ON TIME



PRESALES AND ENGINEERING SUPPORT

SUPPORT OF THE R&D DEPARTMENT AND SERVICE-TECHNICAL CENTER

AVAILABLE SPARE PARTS

MB FRIGO

CHILLING
YOUR WORLD
SINCE 1981

Authorized representatives for
ARCTIC refrigerant solutions:

MB Frigo Grupa d.o.o.
Bani 81, 10010 Zagreb, Croatia
Tel: +385 1 660 8002, **Fax:** +385 1 660 9005
www.mbfrigo.com

Scan to download vCard

CE 2464 CSI

TÜV CERTIFIED ISO 9001:2015 TÜV CERTIFIED ISO 14001:2015 TÜV CERTIFIED ISO 45001:2018