

ARCTIC AC



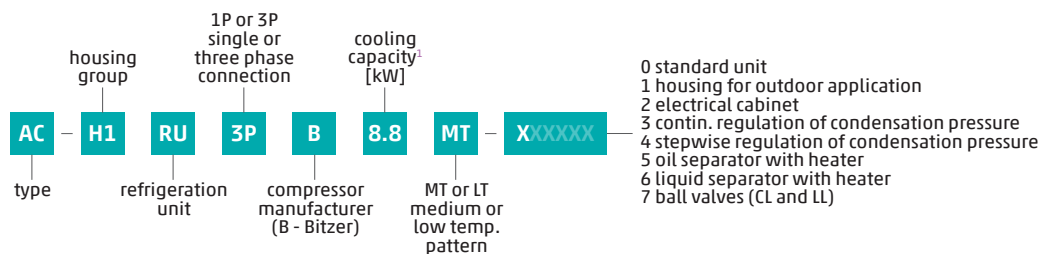
ARCTIC AC INDUSTRIAL REFRIGERATION UNITS

- 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	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • protective housing 	
OPTION 2	<ul style="list-style-type: none"> • power supply and protection-compressor switch, el. heater, condenser fans, main switch 	<ul style="list-style-type: none"> • power distribution cabinet
OPTION 3	<ul style="list-style-type: none"> • continuous regulation of condensation pressure 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • oil separator with heater 	
OPTION 5	<ul style="list-style-type: none"> • liquid separator with heater 	
OPTION 6	<ul style="list-style-type: none"> • ball valves CL and LL 	<ul style="list-style-type: none"> • ball valve on condensation and liquid piping
OPTION 7	<ul style="list-style-type: none"> • non-return valve on the pressure side of the compressor 	

NOMENCLATURE



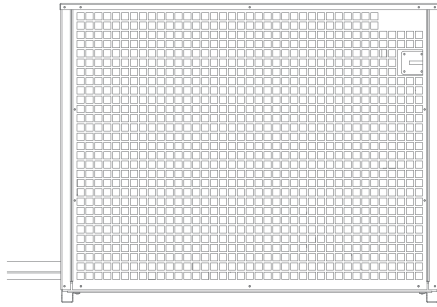
¹ Under conditions:

- MT Te/Ta = -10°C/+32°C
- LT Te/Ta = -30°C/+32°C

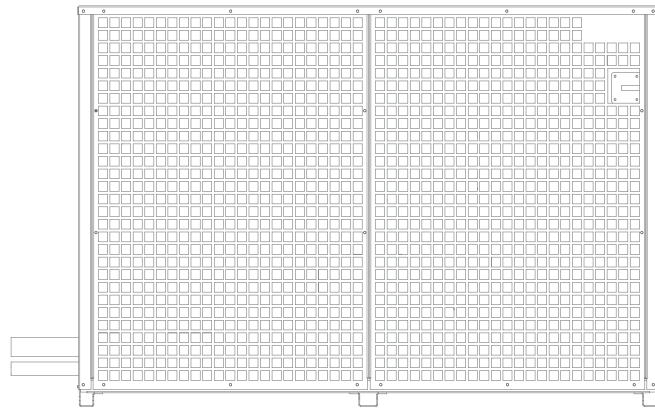
- superheat 10K
- subcooling 2K

REFRIGERATION UNITS

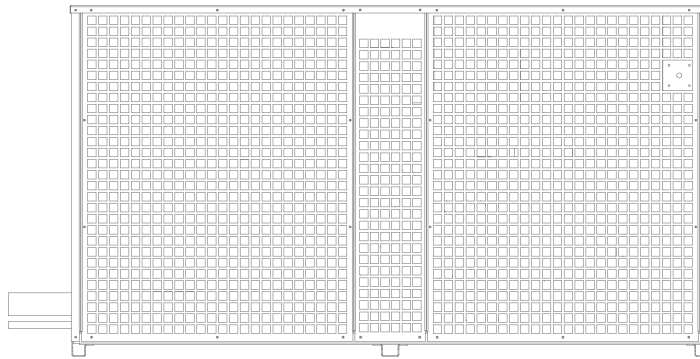
REFRIGERATION UNIT OUTSIDE THE COLD ROOM



• 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	ACCESSORIES
anti-corrosion protection	housing for outdoor application
refrigerant with low GWP (GWP = 1397), R449A	electrical cabinet
ASSEMBLY ACCESSORIES	continuous regulation of condensation pressure
floor stands	oil separator with heater
mounting brackets	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	I _{max}	P _{max}
			[A]	[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	I _{max}	P _{max}
			[A]	[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

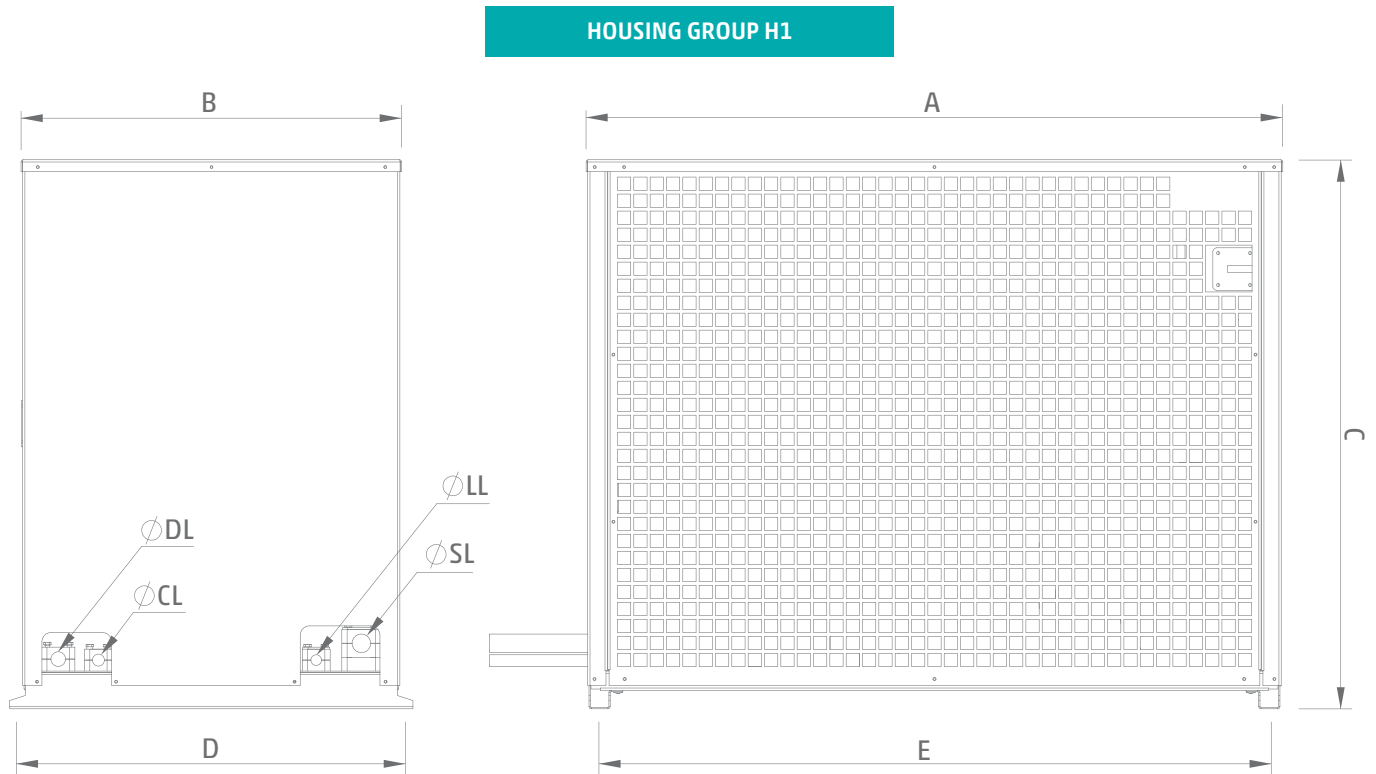
Under conditions:

- superheat 10K
- subcooling 2K
- T_e evaporation temperature
- T_a ambient temperature
- øSL suction line
- øLL liquid line
- I_{max} maximum electric current
- P_{max} maximum electrical power

TECHNICAL DATA

COMPRESSOR UNIT OUTSIDE 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.



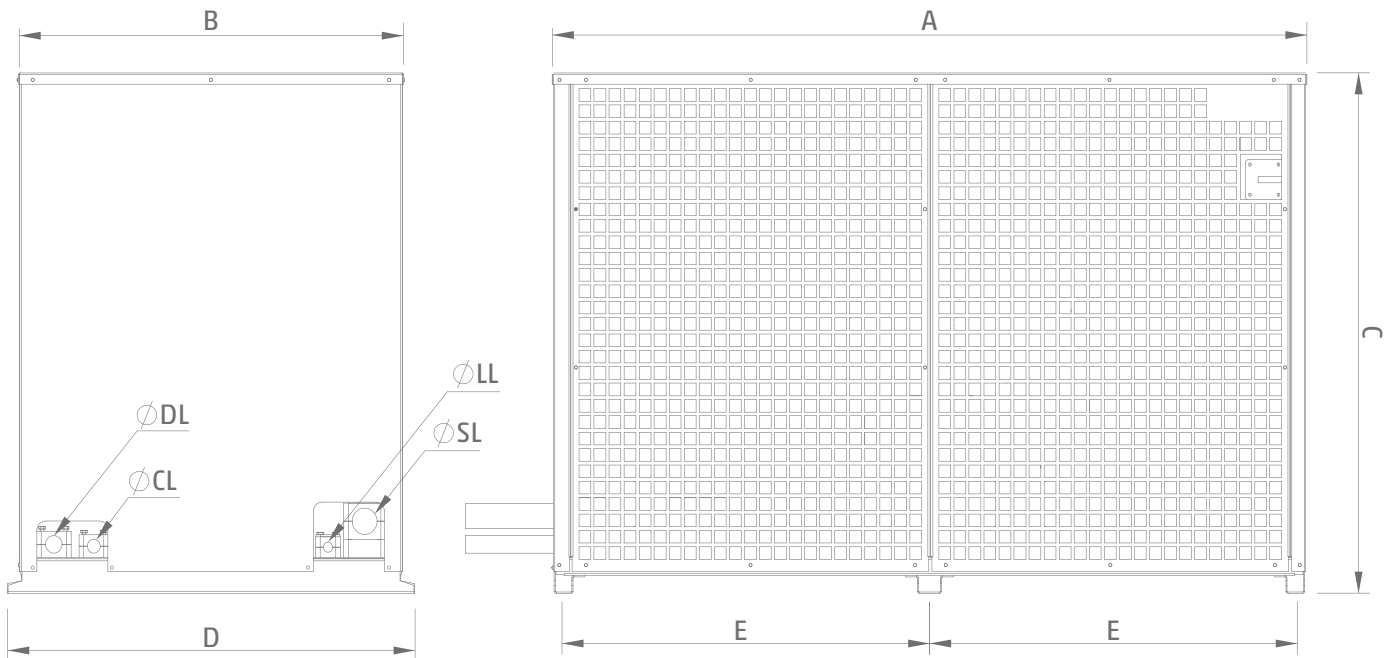
Refrigeration unit MT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT ⁴ (kg)
		A	B	C	D	E	
AC-H1RU3PB8.8MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB11.1MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB12.6MT	a	1049	573	827	589	1008	-
	b	1133	612	827	629	1093	-
AC-H1RU3PB16.1MT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



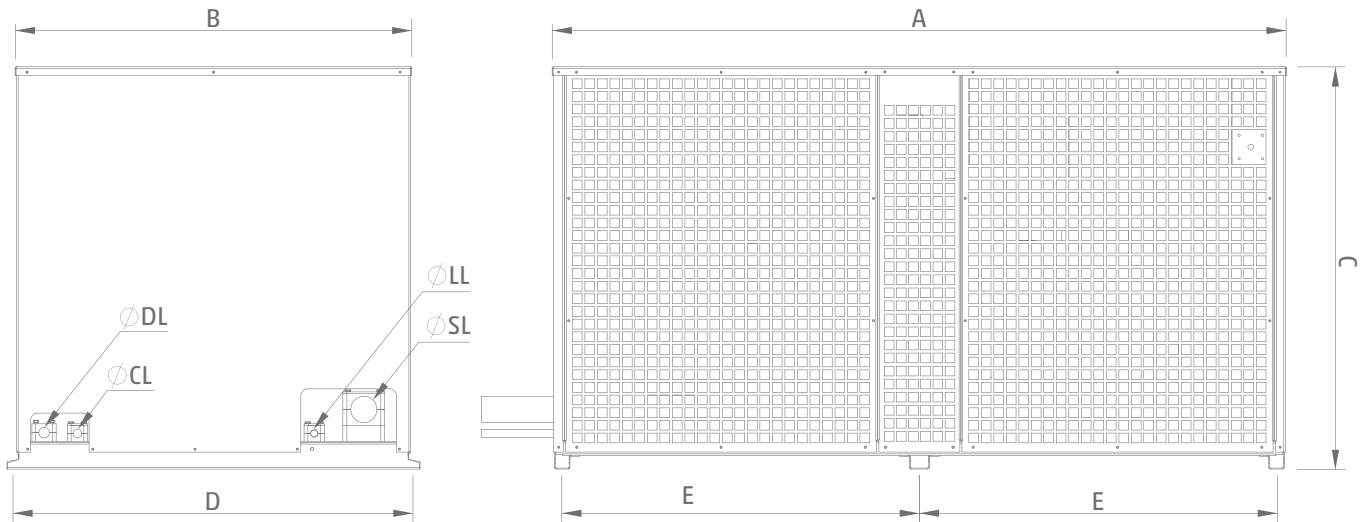
Refrigeration unit MT MODEL	Subgroup	DIMENSIONS (mm)					WEIGHT ⁴ (kg)
		A	B	C	D	E	
AC-H2RU3PB16.6MT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB20.1MT	a	1277	651	827	669	619	-
	b	1410	765	827	779	684	-
AC-H2RU3PB22.8MT	a	1277	651	827	669	619	265
	b	1410	765	827	779	684	295
AC-H2RU3PB27.5MT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