

DANTHERMGROUP



HVAC SOLUTIONS FOR HUMANITARIAN AND DEFENCE

MOBILE HEATING AND MOBILE AIR-CONDITIONING

Dantherm[®]
CLIMATE SOLUTIONS

MASTER[®]
CLIMATE SOLUTIONS



About the Dantherm Group

Dantherm Group is a European leader in portable and installed climate control solutions for a wide range of industries and uses. Based on the heritage of the variety of brands we own, our climate control experts build and manufacture hundreds of thousands of exceptional heating, cooling, dehumidification, air cleaning and ventilation units in our own factories in Europe every year.

All of them are designed to create healthy and comfortable climate surroundings in a sustainable, energy-efficient and cost-effective way.

Why partner with us

- ✔ European design quality
- ✔ Experts in climate control
- ✔ Extensive range of solutions



INDEX

Fuel-fired indirect heaters	04
Container coolers	10
Mobile air-conditioners	19
Portable evaporative coolers	34
Accessories	36

Humanitarian and defence

Our climate control solutions have supported military and humanitarian field camps for over 35 years, becoming the NATO standard for field deployable mobile heating, cooling and drying units with more than 30.000 deployed climate controlled units. Complying with advanced NATO requirements, as well as ISO 9001 and 14001 standards, we work closely with tent and container suppliers to develop site-specific solutions that allow military camps, field hospitals and more function in all conditions.



Discover our
climate solutions
danthermgroup.com



FH 20-40



FH 20 (bronze)



FH 40 (silver)



FH 20
(customized colour)



- Will operate at temperatures down to -40°C
- Creates a comfortable working temperature
- Equipment and transportation such as helicopters stay warm and ready for use, reducing wear and tear and ensuring quicker response times
- Reliable and virtually maintenance free
- Easy to transport and handle and handle
- Can be set up by one person without the use of tools, and is easy to operate
- Developed in close collaboration with the armed forces of NATO countries
- Ideal for open air operation with ducted supply and return air
- Adjustable fresh-air intake
- Large built-in fuel tank - more than 24h heating
- The efficient multi-liquid burner - compatible with all NATO fuels and biodiesel HVO100
- New innovative 2 stage burning principle, which reduces energy consumption, creates a more comfortable room temperature and reduces wear and tear
- CE-marked
- Registered NSN numbers

Optional accessories



Insulated flexible air duct nylon, black
FH 20 - Ø350mm x 3m
4515.371
FH 40 - Ø400mm x 3m
4515.372



Air distribution ducts, black
FH 20 - Ø350mm x 5m
4515.380
FH 40 - Ø400mm x 7m
4515.381



Forklift pockets
FH 20
4035.740
FH 40
4035.738



Stacking frame
FH 20
4035.741
FH 40
4035.739



Consumables pack
FH 20
4519.021
FH 40
4519.022



Remote CO sensor with cable
15m
025432



Digital remote thermostat
TH M with cable
15m
4035.555

FH 20-40

Product variants



Bronze
Unit with built-in wheels



Silver
Bronze package + forklift pockets



Gold
Silver package + stackable frame

The heaters are based on the in-direct fired (clean air) principle to avoid introducing combustion or fumes into occupied spaces. Specifically developed to provide heating in tents or other temporary and transportable buildings, FH Warm Air Heaters are suitable for outside installation with supply and return air ducted to the tent or temporary building.

i

Specifications	Units	FH 20	FH 40
Registered NSN number	-	Yes	Yes
Operating range	°C	-40 – +30	-40 – +30
Heat output - step 1/step 2	kW	21/27	36/49
Efficiency	%	88	88.2
Air flow	m ³ /h	1815	2555
Fresh air volume	m ³ /h	0-350	0-500
Fuel consumption	Kg/h	1.6/2.1	2.9/3.9
Max. current	A	3.75	4.2
Power supply	V/Hz	230/1ph/50	230/1ph/50
Plug type		Schuko / CEE 7/7	Schuko / CEE 7/7
Duct connection (1x)	Ømm	350	400
Ducting recirculation (1x)	Ømm	350	400
Operation above sea level	m	3000	3000
Tank	l	65	105
IP-grade electrical parts	-	IP44	IP44
CE & Safety		CE	CE
Height with chimney installed	mm	2200	2200
Product size (l x w x h) - Bronze variant	mm	1458 x 614 x 966	1723 x 718 x 1039
Weight - Bronze variant	kg	95	125
Weight - Silver variant	kg	109	142
Weight - Gold variant	kg	115	150

Indirect fuel fired air heaters – tent heating
VA-M15 MKII, VA-M40 MKII



VA-M15 MKII



VA-M40 MKII



- Can operate at temperatures down to -40°C
- Creates a comfortable working environment
- Equipment and transportation such as helicopters stay warm and ready for use, reducing wear and tear and ensuring quicker response times
- Reliable and virtually maintenance free
- Easy to transport, even over ice and snow
- Can be set up by one person without the use of tools, and is easy to operate
- Developed in close collaboration with the armed forces of NATO countries
- Chosen as the NATO standard, conforming to all NATO requirements and norms
- All units are allocated NATO stock numbers (NSN)
- Ideal for open air operation with ducted supply and return air
- Adjustable fresh-air intake
- The efficient multi-liquid burner accepts almost all diesel fuels

Optional accessories



Remote thermostat with cable
 15m
018668



Remote CO sensor with cable
 15m
025432



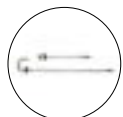
Insulated flexible air duct with spigot
 Ø225mm x 3m
295030



Storage bag for flexible duct
 Ø225mm
428436



Air distribution ducts
 Ø225mm x 6m
295331



Alternative fuel lance for oil drum
293766

Indirect fuel fired air heaters – tent heating
VA-M15 MKII, VA-M40 MKII



Specifications	Units	VA-M15 MKII	VA-M40 MKII
Registered NSN number	-	Yes	Yes
Operating temperature range	°C	-40 – +30	-40 – +30
Heat output	kW	18	38
Air flow	m ³ /h	1,080	2,200
Sound level @ 1.5m	dB(A)	60	60
Protection class		IPX4	IPX4
Max. fuel consumption	kg/h	1.7	3.5
Power supply	V/Hz	230/1ph/50	230/1ph/50
Max. power consumption	W	1,000	1,055
Air discharge temperature	°C	80	80
Flex duct connection	Ømm	225	225
Product size (h x l x w)	mm	605 x 1360 x 490	890 x 1400 x 700
Weight	kg	93	129

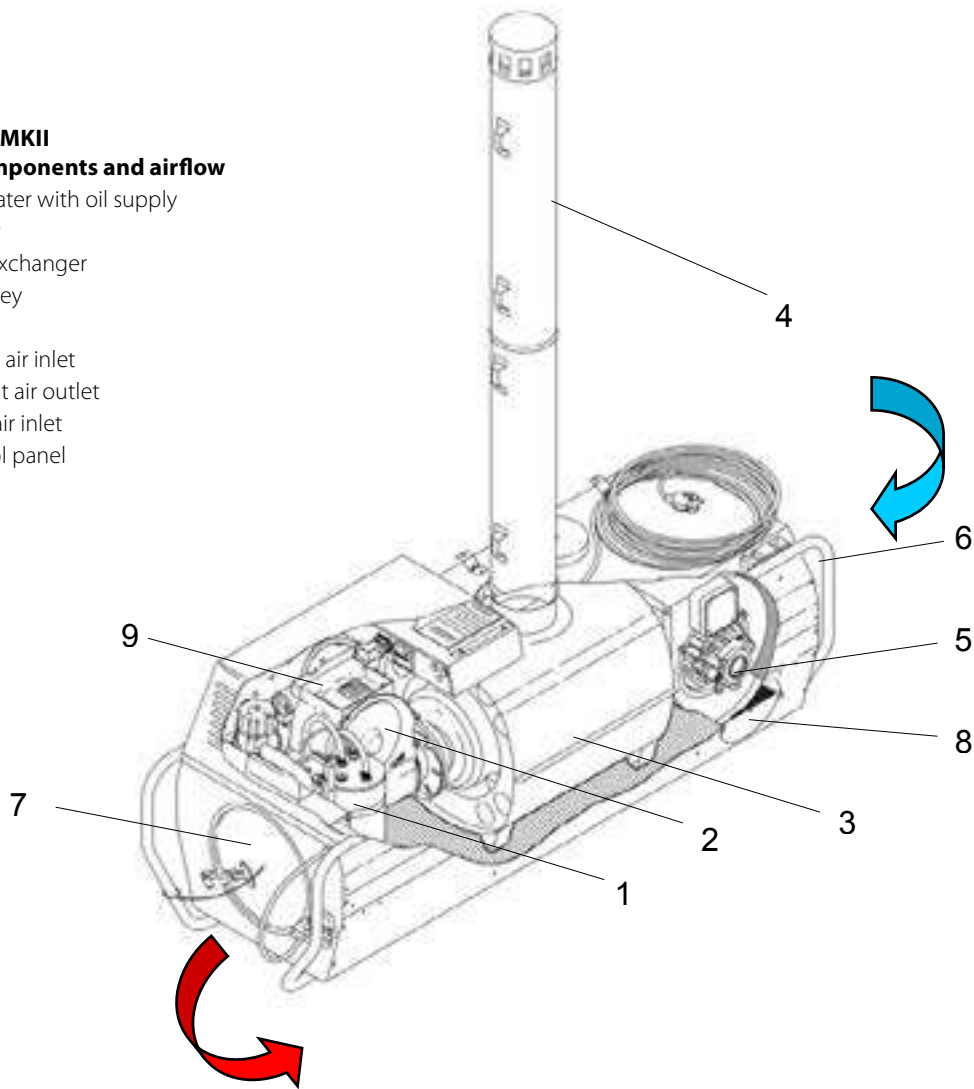
Indirect fuel fired air heaters – tent heating
VA-M15 MKII, VA-M40 MKII



VA-M15 MKII

Unit components and airflow

- 1. Pre heater with oil supply
- 2. Burner
- 3. Heat exchanger
- 4. Chimney
- 5. Fan
- 6. Return air inlet
- 7. Exhaust air outlet
- 8. Fresh air inlet
- 9. Control panel



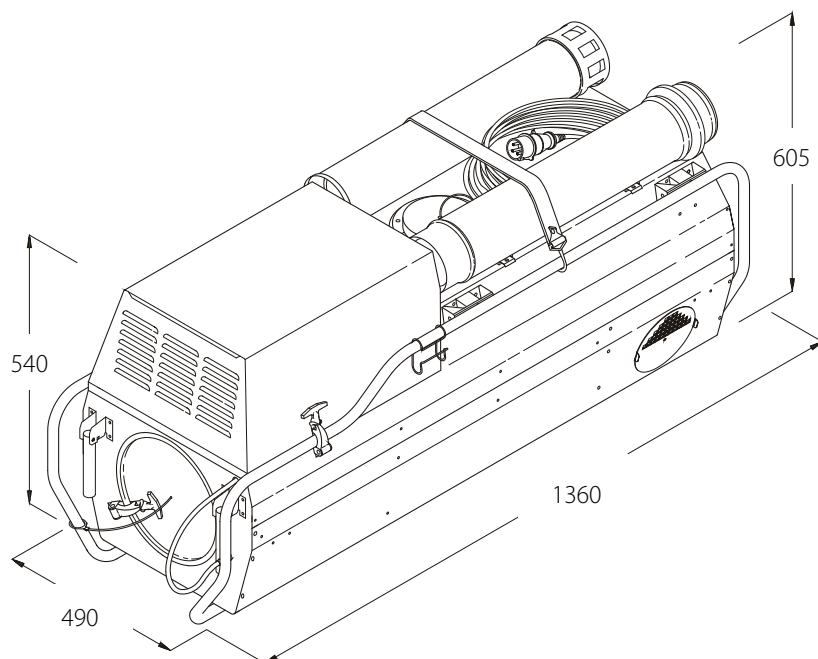
Power supply plug



or CEE 16A



VA-M15 MKII dimensions in mm



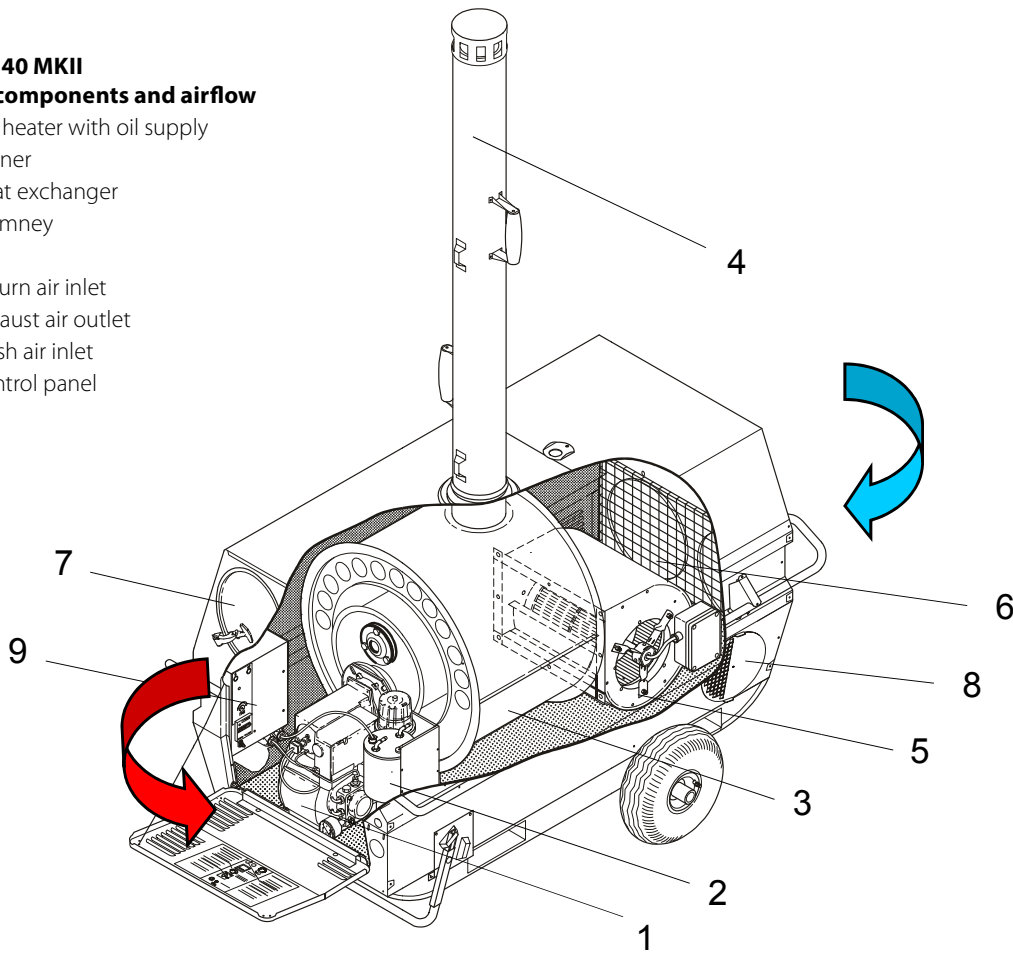
Indirect fuel fired air heaters – tent heating
VA-M15 MKII, VA-M40 MKII



VA-M40 MKII

Unit components and airflow

- 1. Pre heater with oil supply
- 2. Burner
- 3. Heat exchanger
- 4. Chimney
- 5. Fan
- 6. Return air inlet
- 7. Exhaust air outlet
- 8. Fresh air inlet
- 9. Control panel



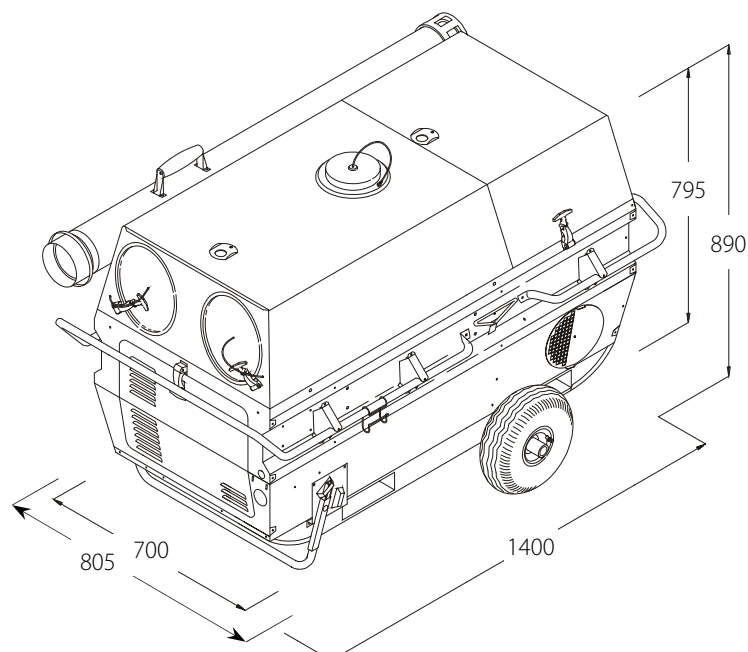
Power supply plug



or CEE 16A



VA-M40 MKII dimensions in mm





AC-M5 MKI

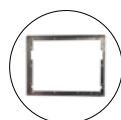


- Manufactured from hot dip galvanized and powder coated steel sheet
- Top finish painting is standard NATO green RAL6014, RAL6031 and other colors on request
- Can provide cooling at ambient temperatures up to +60°C
- Scroll compressor for high degree of reliability and low noise
- HP pressostat switching off the unit at too high ambient temperatures
- Easily controlled by a room thermostat placed inside the container
- Two speed selector for the internal fan
- "VENT-only" option, allowing ventilation without cooling
- Built-in fresh air intake
- Coarse filters in front of internal air intake as well as in front of external air intake and fresh air intake
- During transport the AC-M5 is stored inside the container
- CE-marked
- ErP 2015 compliant


Optional accessories



Trap door system
322007



Welding frame for corrugated container
019502

 In the standard version this unit is equipped with an optional electric heating element to warm up the internal air during cold start or cold environment.

Container cooling AC-M5 MKI

The AC-M5 is designed for window mounting in ISO containers. Together with the trap door system the air conditioner is mounted inside the container. It is designed to store within the confinement of the ISO corners of the container during transportation, or storage.

The AC-M5 is sliding in its trap door system and is deployed from the container for operation. Once deployed the unit is locked from inside the container when operating.



AC-M5 MKI-drain



Container installation - inside view

Specifications	Units	AC-M5 MKI (50 Hz)
Registered NSN number	-	Yes
Operating temperature range, cooling	°C	+20 – +60
Operating temperature range, heating	°C	-32 – +20
Airflow, internal, step I / II	m ³ /h	420/700
Airflow, fresh air intake, step I / II	m ³ /h	37/60
Airflow, external	m ³ /h	1400
Sound level, fan-speed 1 & 2 @ 1m	dB(A)	52/59
Protection class		IPX4
Refrigerant (GWP 1430)	type/kg	R134a/1.4
Max. Cooling capacity	kW	4.9
Cooling capacity @ 55/55°C 30% r.h.	kW	4.6
Cooling capacity @ 35/35°C 30% r.h.	kW	3.6
Heating capacity (optional)	kW	2
Power supply	V/Hz	230/1ph/50
Power supply plug		Schuko plug
Max. running current, cooling/heating	A	9.8/9.3
Locked rotor amperage (LRA)	A	47
Generator requirement (with 300% start allowance)	kVA	4
Max. power consumption cooling/heating	W	2,300
Filter material		PPI 15
Product size (h x l x w)	mm	482 x 755 x 666
Weight net/with trap door system	kg	79/102.5

Container cooling AC-M5 MKI

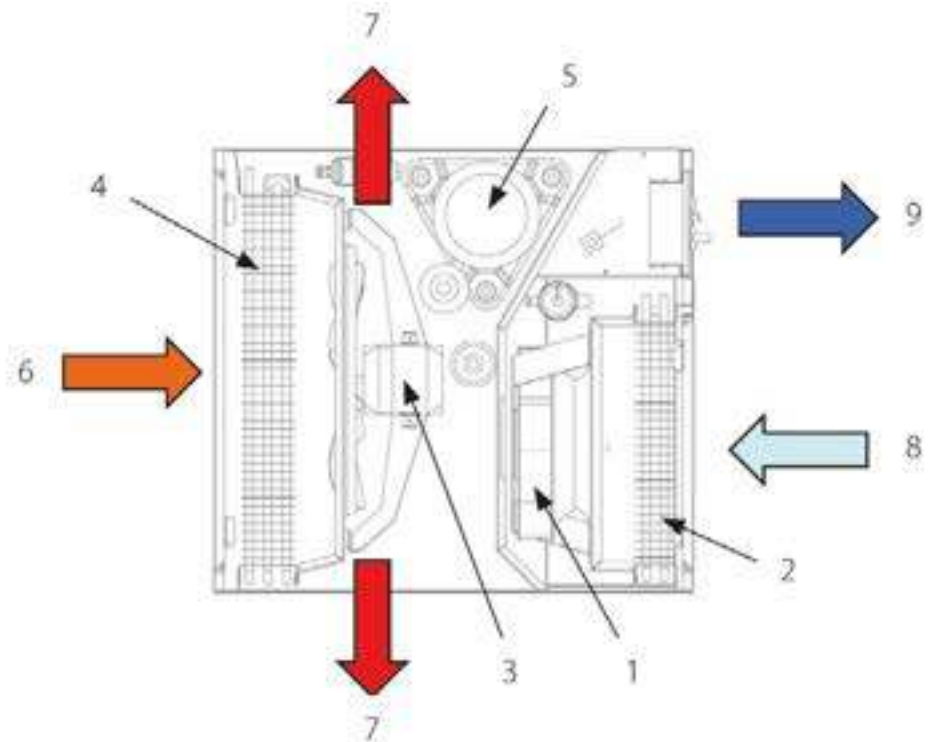


The function of the AC-M5 is based on a cooling circuit with two powerful fans. The evaporator (inside the container) section contains the evaporator core and a radial fan, which cycles the warm internal air from the shelter through the cold evaporator core and expels

the cooled air through the discharge grill. The condenser (outside the container) section contains the condenser core and an axial fan, which is moving the heat from the internal air to the outside atmosphere.

Unit components and airflow

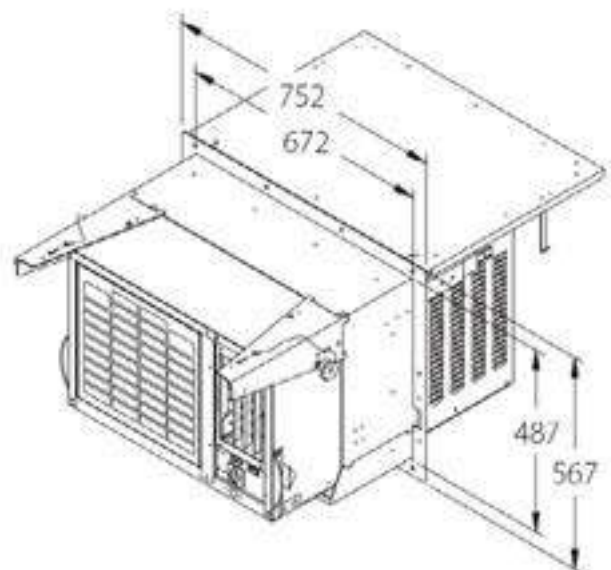
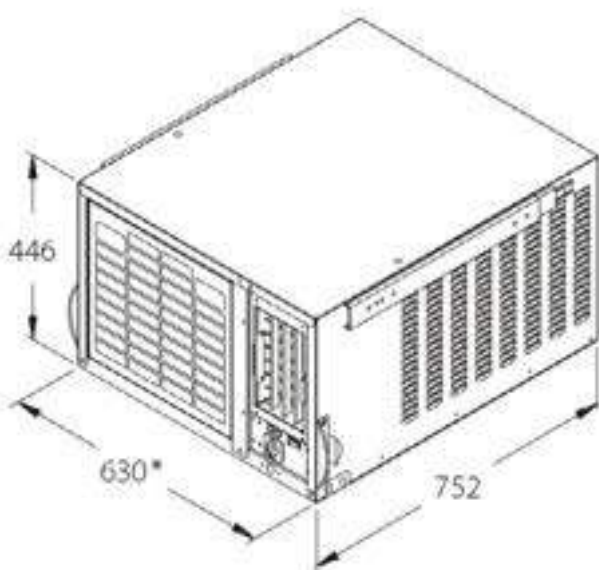
- 1. Internal fan
- 2. Evaporator core
- 3. External fan
- 4. Condenser core
- 5. Compressor
- 6. External air intake
- 7. External air discharge
- 8. Internal warm air intake
- 9. Internal cooled air discharge



Schuko power plug



AC-M5 MKI dimensions in mm



* 698 with handles

Dimensions in mm



AC-M5 MKII



AC-M5 MKII trap door



- Manufactured from hot dip galvanized and powder coated steel sheet
- When in operation and transportation mode the trap door and AC-M5MKII provides an air tight boundary to ambient environment
- The above qualifies for CBRN/COLPRO compatibility
- The trap door unit also serves as protection against rain and extreme sun when the unit is operating
- Provides cooling at ambient temperatures up to +60°C
- Nato green RAL 6014 or RAL 6031 optional colours on request
- Scroll compressor for high degree of reliability and low noise
- Easy to operate microprocessor to control temperature and comply with EMC military standard
- Two speed selector for the internal fan
- "VENT-only" option, allowing ventilation without cooling
- Possible to lock the trapdoor with a padlock or positively lock the trapdoor for under-slung transportation by helicopter

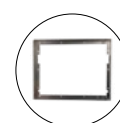
Control panel



Optional accessories



Trap door system
 322040



Welding frame for corrugated container
 019502

AC-M5 MKII mounted outside in trap door



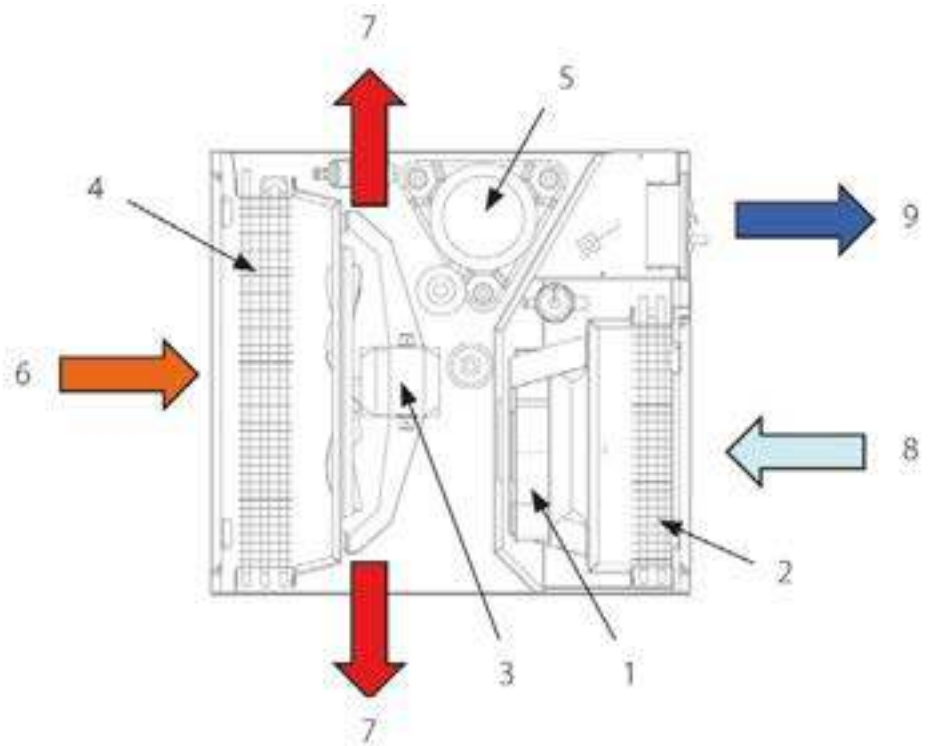
AC-M5 MKII mounted inside in trap door



Specifications	Units	AC-M5 MKII	AC-M5 MKII (60 Hz)
Registered NSN number	-	Yes	Yes
Operating temperature range, cooling	°C	+20 – +60	+20 – +60
Operating temperature range, heating	°C	-32 – +20	-32 – +20
Air flow	m ³ /h	900	970
Sound level, fan-speed 1 & 2 @ 1m	dB(A)	49/63	49/63
Protection class		IP55	IP55
Refrigerant	Type/kg	R134a/1.4	R134a/1.4
GWP (Global Warming Potential)		1300	1300
Nominal cooling capacity	kW/Btu	4.7/60,000	4.7/60,000
Heating capacity (optional)	kW	2	2
Power supply	V/Hz	230/1ph/50	208/230/1ph/60
Max. running current, cooling/heating	A	9.8/9.3	12/9.2
Locked rotor amperage (LRA)	A	47	56
Max. power consumption cooling/heating	W	2,300	2,400
Hose connection	Ømm	N/A	N/A
Product size (h x l x w)	mm	482 x 755 x 666	482 x 755 x 666
Weight	kg	79	74

Unit components and airflow

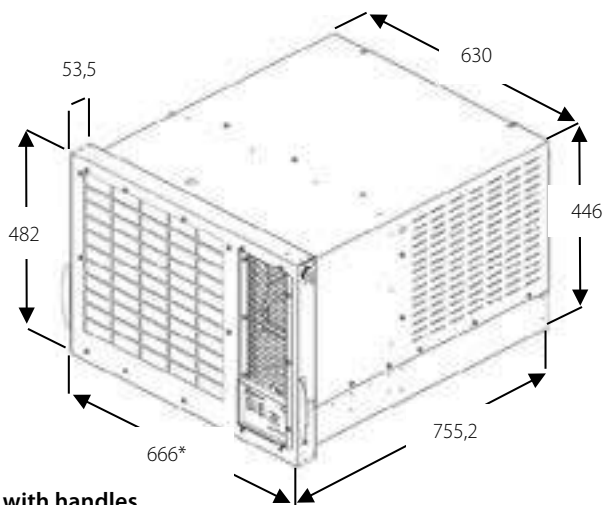
- 1. Internal fan
- 2. Evaporator core
- 3. External fan
- 4. Condenser core
- 5. Compressor
- 6. External air intake
- 7. External air discharge
- 8. Internal warm air intake
- 9. Internal cooled air discharge



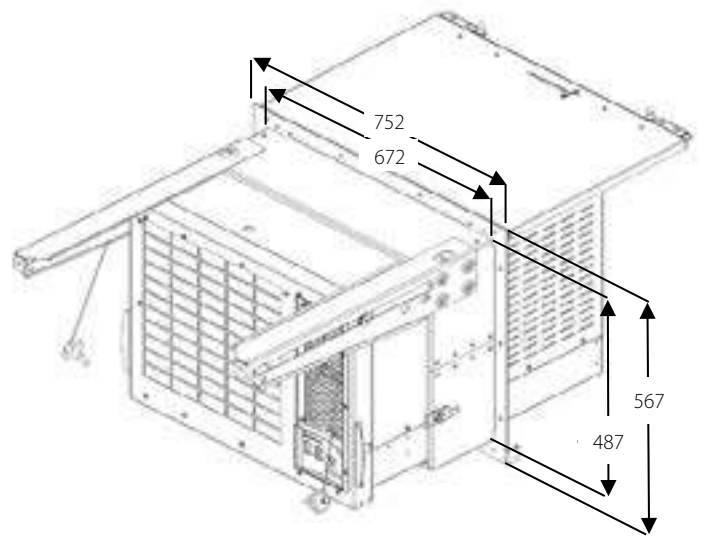
Schuko power plug



AC-M5 MKII dimensions in mm



* 716 with handles



AC-M10

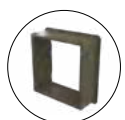


AC-M10



- Manufactured from hot dip galvanized and powder coated steel sheet
- Can provide cooling at ambient temperatures up to +60°C
- No fresh air intake as to qualify CBRN/COLPRO compliance
- When in operation and transportation mode the trap door and AC-M10 provides an air tight boundary to ambient environment
- Scroll compressor for high degree of reliability and low noise level
- Safety high pressure switch to prevent over pressure
- Easy to operate micro-processor to control temperature
- PPL 15 filtering recirculated air within the shelter
- Easy mounting into the trap door system by means of a forklift
- ErP 2015 compliant
- CO2 equivalent only 3.5ton
- Arctic model can provide cooling down to -51°C
- Large electrical heater at 4kW standard
- Monobloc cooling circuit hermetically sealed
- No cooling technician required for installation
- Easy change of cooling and heating setpoint at display unit
- RS485 ModBus standard

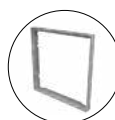
Optional accessories



Trapdoor frame
322048



Door and mounting kit
322049



Welding frame for corrugated container
111536

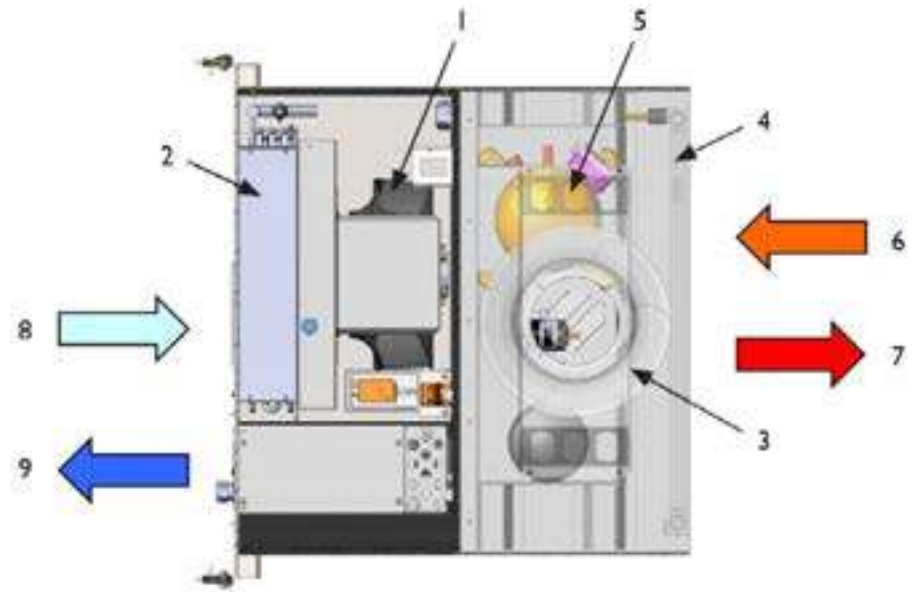
AC-M10

The AC-M10 is designed for window mounting in ISO containers and hard walls applications. Together with the trap door system the air-conditioner is mounted in the container wall. It is designed to store within the confinement of the ISO corners of the container during transportation, or storage. For operation the AC-M10 is pushed out from the container in the trapdoor system. Once push out for operation the unit is locked from inside the container.

The function of the AC-M10 is based on a cooling circuit with two powerful fans. The evaporator (inside the container) section contains the evaporator core and a radial fan, which cycles the warm internal air from the shelter through the cold evaporator core and expels the cooled air through the discharge grill. The condenser (outside the container) section contains the condenser core and an axial fan, which is moving the heat from the internal air to the outside atmosphere.

Unit components and airflow

- 1. Internal fan
- 2. Evaporator core
- 3. External fan
- 4. Condenser core
- 5. Compressor
- 6. External air intake
- 7. External air discharge
- 8. Internal warm air intake
- 9. Internal cooled air discharge

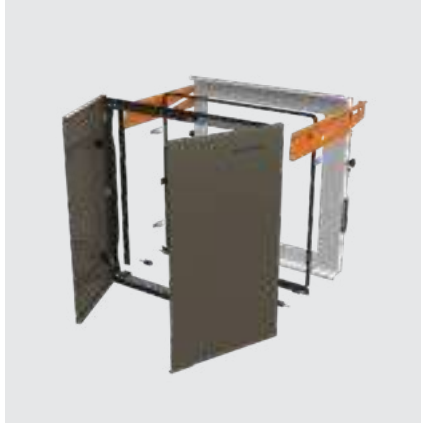


Specifications	Units	AC-M10	AC-M10 Arctic
Registered NSN number		Yes	Yes
Operating temperature range, cooling	°C	-20 – +60	-51 – +60
Operating temperature range, heating	°C	-32 – +20	-51 – +20
Air flow	m ³ /h	1,600	1,600
Sound level @ 1.5m	dB(A)	60	60
Protection class		IPX5	IPX5
Refrigerant	Type/kg	R134a/2.5	R134a/2.5
Nominal cooling capacity	kW	10	10
Cooling capacity 35°C outdoor/ 25°C indoor	kW	6.9	6.9
Heating capacity (optional)	kW	4	4
Power supply	V/Hz	400/3ph/50	400/3ph/50
Max. running current	A	10	10
Locked rotor amperage (LRA)	A	48	48
Max. power consumption cooling	W	4,525	4,525
Colour (standard)		BS285 (NATO green)	BS285 (NATO green)
Product size (h x l x w)	mm	800 x 860 x 800	800 x 860 x 800
Weight	kg	139	141

Installation



Trapdoor – part 1



Trapdoor with mounting kit – part 2



Outside view in transportation mode



Outside view in operation mode



Inside view in transportation mode

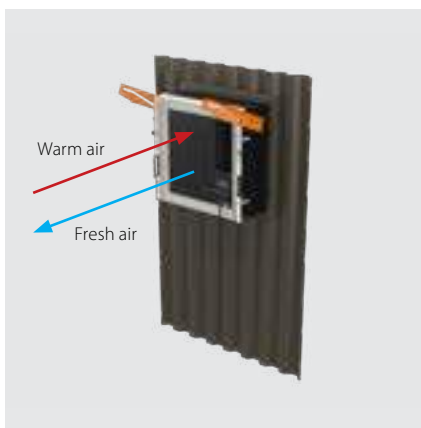


Inside view in operation mode

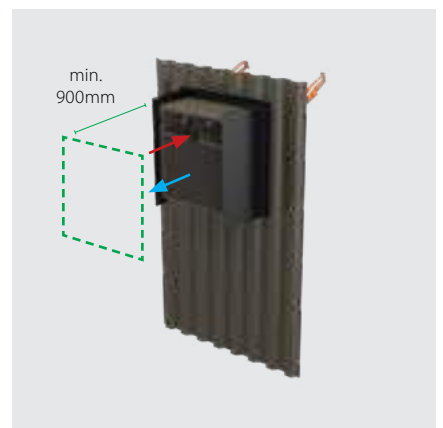
Air flow



Outside



Inside



Keep at least 900mm free space in front of the unit in operation mode

AC-M6



AC-M6



- The AC-M 6 is manufactured from 0.9- 2.5mm galvanized and powder coated steel sheet
- Top finish is powder painting RAL 9010 or RAL6031 green
- Cooling at outside temperatures up to +51°C
- 7.2kW electrical heating coil (optional)
- Environmentally friendly R454C refrigerant
- High/low pressure switch ensuring a long compressor lifespan
- The AC-M 6 with a heater connects to the mains power supply or to a separate diesel generator via a 10m power cable with CEE 16 Amp plug
- The AC-M 6 without a heater connects to the mains power supply or to a separate diesel generator via 10m power cable with a Schuko plug
- Temperature control carried out by a room thermostat
- Inlet and discharge openings for Ø315mm uninsulated, flexible ducts
- Fresh air intake via adjustable dampers
- Coarse filter for fresh air intake and recirculation
- Easy transportation by either forklift or wheels

Optional accessories



Insulated duct
Ø315 x 3m
095852



Uninsulated duct
Ø315 x 5m
428441



Air distribution duct
Ø315 x 5m
097756



Thermostat Cooling/ Heating
064409



Thermostat Cooling
018668

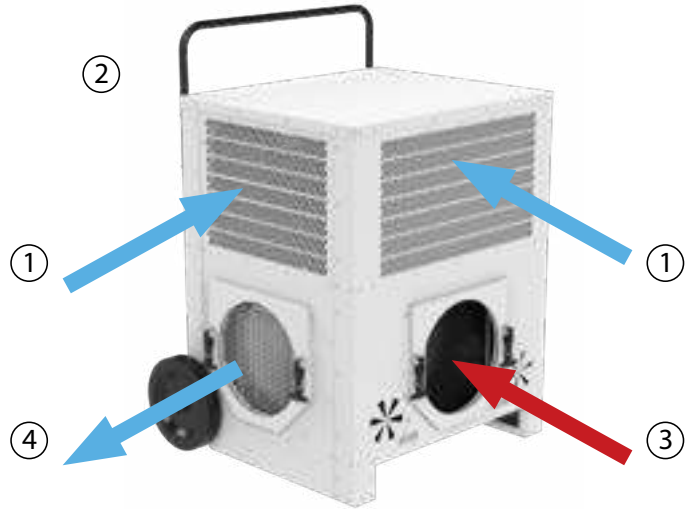
AC-M6



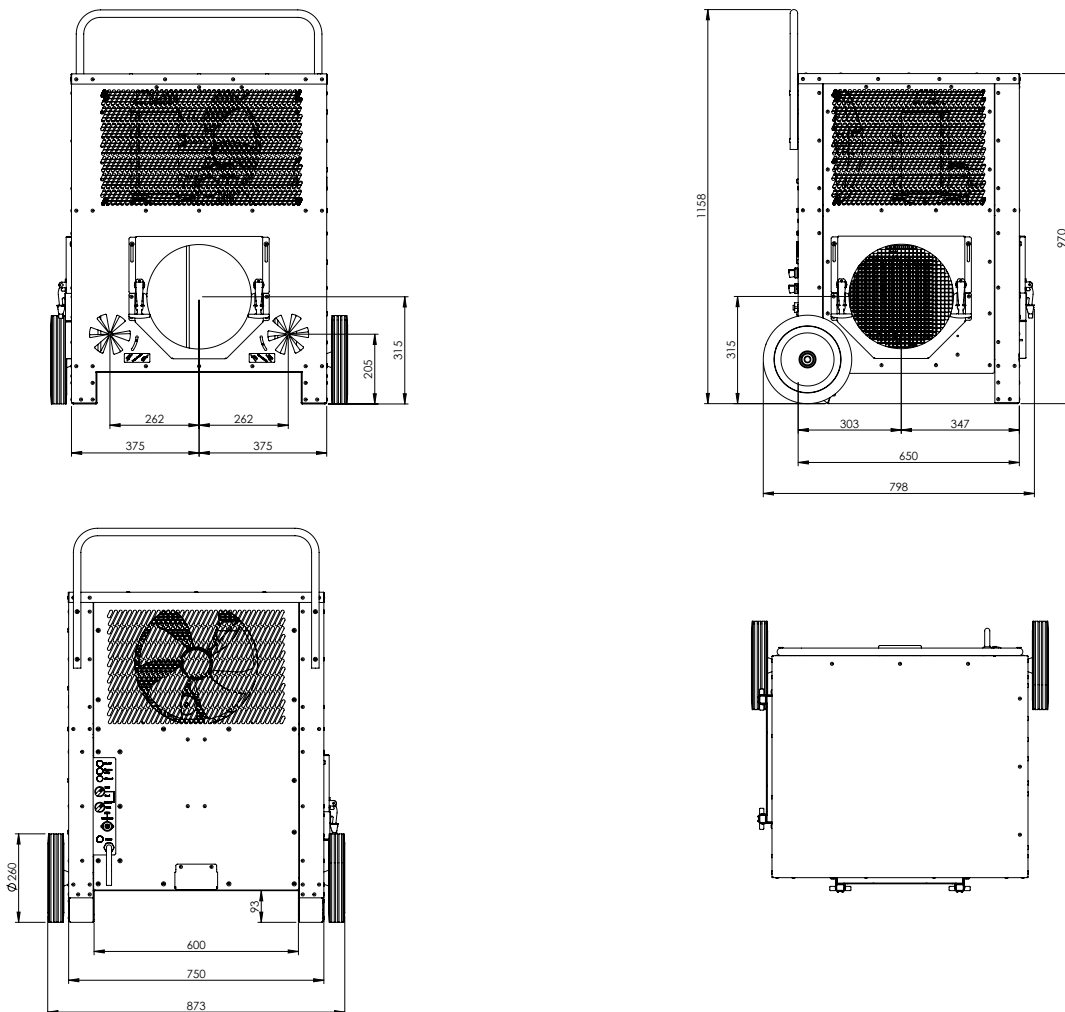
The function of the AC-M 6 is based on a cooling circuit and two powerful fans. The lower section contains the evaporator and evaporator fan and draws outside or recirculated air through the cold evaporator. The AC-M 6 have fresh air dampers that can supply fresh air to the tent when the air is recirculated.

Airflow

- 1. Condenser in
- 2. Condenser out
- 3. Return air from tent
- 4. Supply air to tent



AC-M6 dimensions in mm



AC-M6



Control panel



The AC-M 6 air-conditioner is a transportable unit developed primarily to provide air conditioning in temporary or transportable buildings or tents. The AC-M 6 is designed for placement outside with supply air and return air ducted to the tent (Ø315mm).

Specifications	Units	AC-M6 w. heater	AC-M6 w/o heater
Operating range, ambient temperature, cooling	°C	+20 – + 51	+20 – +51
Operating range, ambient temperature, heating	°C	-32 – +20	N/A
Airflow, std. setup	m³/h	1600	1600
Max fresh air via adjustable dampers	m³/h	200	200
Cooling capacity @ 51/51°C 30% RH	kW/BTU	6.6/22,500	6.6/22,500
Cooling capacity @ 35/25°C 38% RH	kW/BTU	4.2/ 14,300	4.2/ 14,300
Heating capacity	kW	7.2	-
Power supply	V/Hz	400/3ph/50	230/1ph/50
Max. Current (Heating / Cooling)	A	7.8 / 14.3	14.3
LRA	A	35.5	35.5
Refrigerant	Type/ kg	R454C / 1.17	R454C / 1.17
Max. system pressure	bar	28	28
GWP (Global Warming Potential)	-	148	148
IP (electrical panel)	-	54	54
Sound pressure in 1 meter	dB(A)	63	63
Fresh air intake	m³/h	0 to 200	0 to 200
Filter (fresh air intake + recirculation)	Type	Coarse	Coarse
Handling	-	On wheels or by forklift	On wheels or by forklift
Power cable with plug	-	10m with CEE16 Amp	10m with Schuko Amp
Ducting	mm	Ø315	Ø315
Room thermostat	-	Optional	Optional
Safety		CE/UKCA	CE/UKCA
Product size (h x w x l)	mm	970 x 650 x 750	970 x 650 x 750
Weight	kg	108	102

**AC-M7 MKII
one opening**



**AC-M7 MKII
two openings**



- Manufactured from hot dip galvanized and powder coated steel sheet
- Can provide cooling at ambient temperatures up to +55°C
- Connect to the mains power supply or a separate diesel generator through a 15m power cable with CEE plug
- "VENT-only" option, allowing ventilation without cooling
- Temperature control by a room thermostat placed inside the tent
- Washable and easy removable coarse filters in front of internal air intake as well as in front of external air intake
- Easy transportation, either by forklift, the four lifting hooks on top of the unit or with the two wheels
- Setup and operation can be done by a single person
- Removable wheels, which can be stowed on top of the unit
- Adjustable fresh air intake
- As operational range, heating: an option can be provided to operate between -32°C to +20°C

Optional accessories



Remote thermostat with cable
15m
064409



Insulated flexible air duct
Ø225mm x 3m
295030



Uninsulated flexible air duct
Ø315mm x 5m
428441



Insulated, flexible air duct (incl. bag)
Ø315mm x 3m
562409



Storage bag for insulated air duct
Ø225mm
428436



Uninsulated flexible air distribution extension duct
Ø315mm x 2m
428442



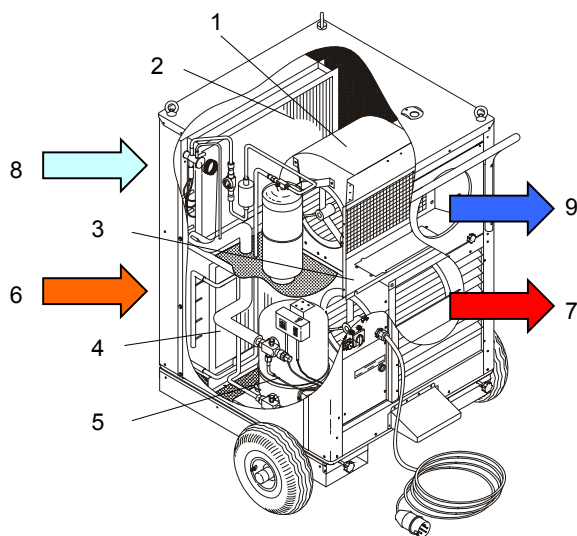
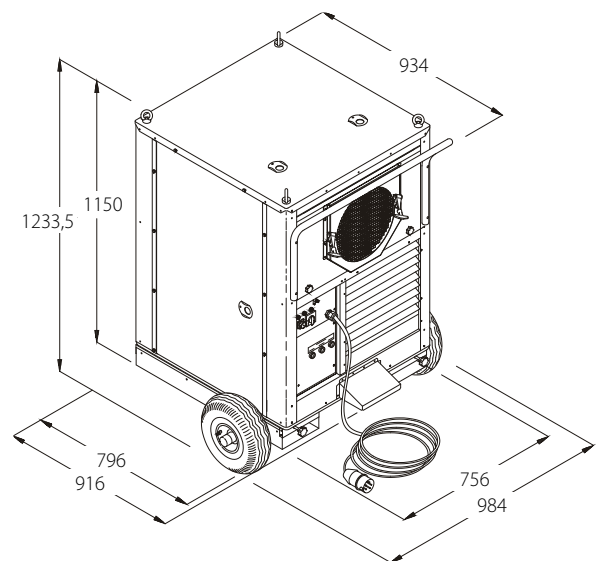
Uninsulated flexible air distribution duct
Ø315mm x 5m
428443



Uninsulated flexible air distribution duct
Ø225mm x 6m
295331

Unit components and airflow

1. Internal fan
2. Evaporator
3. External fan
4. Condenser
5. Compressor
6. External air intake
7. External air discharge
8. Internal warm air intake
9. Internal cooled air discharge

Power supply plug**Fresh air intake****AC-M7 MKII dimensions in mm**

Specifications	Units	AC-M7 MKII
Registered NSN number	-	Yes
Operating temperature range, cooling	°C	+20 – +55
Operating temperature range, heating	°C	-20 – +20
Air flow	m ³ /h	2,500
Sound level @ 1.5m	dB(A)	69
Protection class		IPX4
Refrigerant		R134a
Nominal cooling capacity	kW	7.6
Heating capacity (optional)	kW	7.2
Power supply	V/Hz	400/3ph/50
Max. running current, cooling/heating	A	7.2/13
Locked rotor amperage (LRA)	A	24
Max. power consumption cooling/heating	W	3,700/7,700
Hose connection	Ømm	1 x 315 or 2 x 225
Product size (h x l x w)	mm	1150 x 796 x 756
Weight	kg	190



AC-M11



**AC-M11
with trolley**

Optional accessories



**Remote thermostat
with cable**
15m
064409



**Insulated flexible
air duct including
storage bag**
Ø315mm x 3m
039732



**Uninsulated flexible
air duct**
Ø315mm x 5m
428441



Air distribution duct
Ø315mm x 5m
428443



**Trolley with
wheels**
068459



Filter ePM2.5 65%
068532



- The AC-M11 is capable of maintaining the shelter temperature at +20 -25°C when the shelter is built accordingly
- The AC-M11 is built into a strong metal frame with insulated panels where relevant, powder coated
- Top finish painting is standard sand colour or NATO green
- Designed for air conditioning when the temperature is above 20°C. It can provide cooling at ambient temperatures up to +60°C. Option with built in heating will heat when ambient temperature is below 20°C
- Scroll compressor for a high degree of reliability and low noise level
- Automatic phase surveillance
- Sequential start of units possible
- Environment-friendly R134a refrigerant
- HP/LP pressostat switches ensuring long compressor lifetime
- Controlled by a room thermostat placed inside the tent (accessory)
- ISO coarse 75% filtration of the internal air
- Dual filters in front of internal air intake as an option
- Fresh air intake
- Four way fork lift handling
- Easy strap down on air cargo pallets and stackable (two units on top of each other)
- Insulated flexible ducts Ø315mm for exhaust and return air openings
- Low voltage control circuit
- CE-marked
- ErP 2015 compliant
- Designed for optimal utilization of a standard 20" ISO container (30 pcs.)

Tent cooling AC-M11

The AC-M11 unit is primarily designed to provide air conditioning and heating in temporary or transportable buildings or tents. It is a small light weight unit made out of aluminium and built into a rigid steel frame. The unit is designed to be placed outside, with supply air and return air ducted to the tent.

The function of the AC-M11 is based on a cooling circuit and two powerful fans. The evaporator section contains the evaporator and a radial fan, which draws warm internal air of the tent through the cold evaporator and blows out the cooled air through the side or the top of the unit. The condenser section contains two condenser coils and a large axial fan, returning the heat taken from the internal air to the outside atmosphere.

All sheet metal parts are protected against corrosion by a minimum 80µm top coat.



Filter ePM2.5 65%



Control panel



Installation with the air ducts



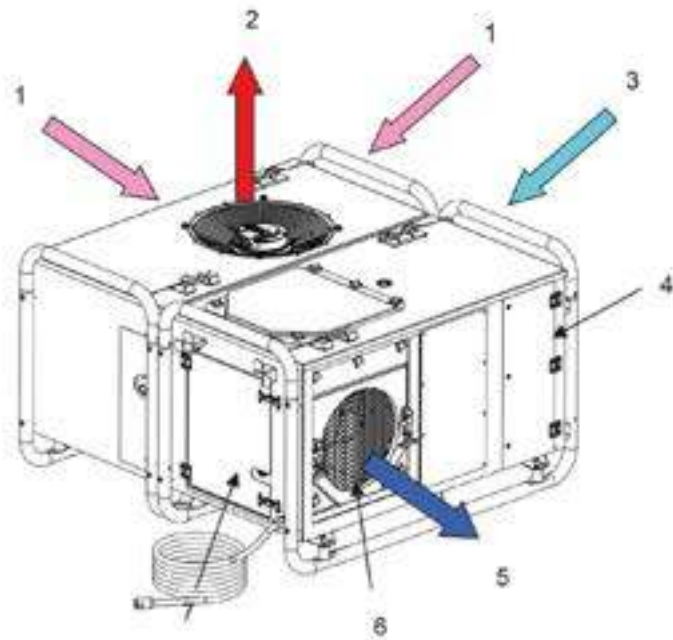
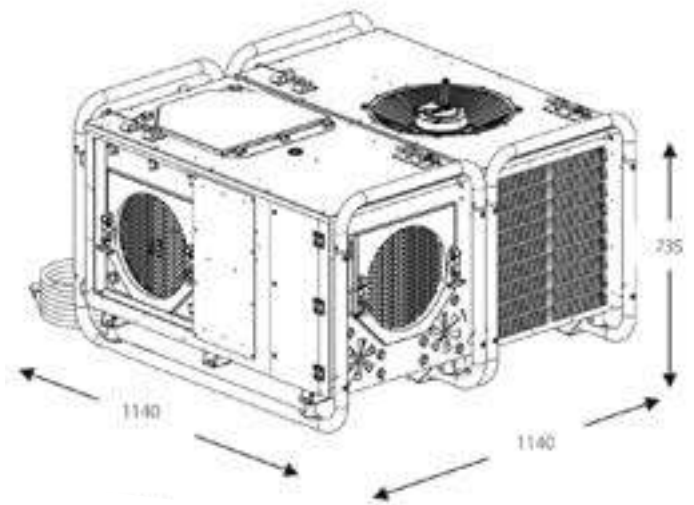
Trolley with robust wheels

For field hospitals where a higher filtration than for normal accommodation is wanted, a dual filtration system for the internal air path is available. The AC-M11 is equipped with an electric heating coil, to provide heating for example for night time when temperatures can fall under 20°C.



Unit components and airflow

1. Condenser air intake
2. Condenser air discharge
3. Warm air intake
4. Dual filter system (optional)
5. Cooled air discharge
6. Duct coupling (Ø315mm)
7. Electrical panel with cover

**AC-M11 dimensions in mm**

Specifications	Units	AC-M11
Registered NSN number		Yes
Operating temperature range, cooling	°C	+20 – +60
Operating temperature range, heating	°C	-32 – +20
Air flow	m ³ /h	1,700
Sound level @ 1m	dB(A)	55
Protection class		IPX5
Refrigerant		R134a
Nominal cooling capacity	kW	11
Heating capacity (optional)	kW	8
Power supply	V/Hz	400/3ph/50
Max. running current, cooling/heating	A	15/16
Locked rotor amperage (LRA)	A	65.5
Max. power consumption cooling/heating	W	4,200/8,800
Hose connection	Ømm	315
Product size (h x l x w)	mm	735 x 1140 x 1140
Weight	kg	182



AC-M18



- Designed for optimal utilization of a standard 20" ISO container (24 pcs)
- The AC-M18 is built into a strong metal frame with insulated panels where relevant, powder coated
- Top finish painting is standard sand colour
- Option with built in heating will heat when ambient temperature is below 20°C
- Scroll compressor for a high degree of reliability and low noise level
- Automatic phase surveillance
- Sequential start of units possible
- HP/LP pressostat switches ensuring long compressor lifetime
- Fresh air intake
- Four way fork lift handling
- Easy strap down on air cargo pallets and stackable (two units on top of each other)
- Filter class: ISO coarse 75%

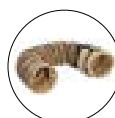


**AC-M18
with trolley**

Optional accessories



**Remote thermostat
with cable**
15m
064409



**Insulated flexible
air duct including
storage bag**
Ø400mm x 3m
030774



**Uninsulated flexible
air duct including
storage bag**
Ø400mm x 5m
033223



Air distribution duct
Ø400mm x 6m
033224



Trolley with wheels
075770



Filter ePM2.5 65%
090973



HEPA filter
323041



Control panel



Filter ePM2.5 65%



Control panel open



Trolley with robust wheels



Condenser view

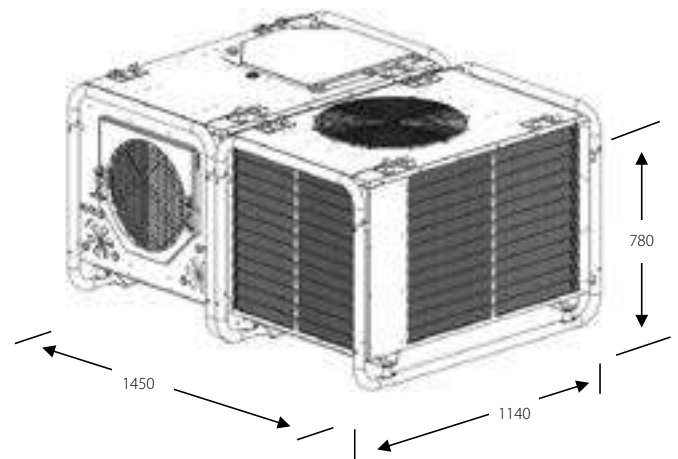
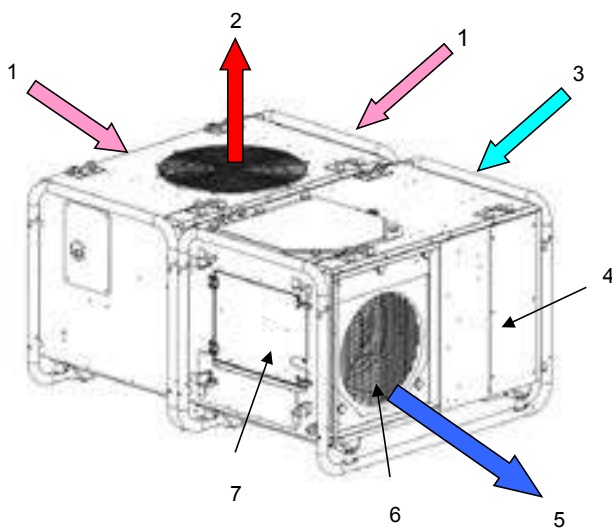
Unit components and airflow

1. Condenser air intake
2. Condenser air discharge
3. Warm air intake
4. Dual filter system (optional)
5. Cooled air discharge
6. Duct coupling (Ø400mm)
7. Electrical panel with cover

Power supply plug



AC-M18 dimensions in mm



Specifications	Units	AC-M18 (3x400V/50 Hz)	AC-M18 (3x208V/60 Hz)	AC-M18 (3x400V/60 Hz)
Registered NSN number	-	Yes	Yes	Yes
Operating temperature range, cooling	°C	+20 – +60	+20 – +55	+20 – +60
Operating temperature range, heating	°C	-32 – +20	-32 – +20	-32 – +20
Air flow	m ³ /h	2,500	2,500	2,500
Sound level @ 3m	dB(A)	59	59	59
Protection class		IPX5	IPX5	IPX5
Refrigerant		R134a	R407C / R134a	R134a
Nominal cooling capacity	kW/Btu	17.5/60,000	17.5/60,000	17.5/60,000
Heating capacity (optional)	kW	6/16	6/16	6/16
Power supply	V/Hz	400/3ph/50	208/3ph/60	400/3ph/60
Max. running current, cooling/heating	A	16/26	33/52	13/26
Locked rotor amperage (LRA)	A	73	164	72
Max. power consumption cooling/heating	W	8,300/variable	8,300/variable	8,300/variable
Hose connection	Ømm	400	400	400
Product size (h x l x w)	mm	780 x 1450 x 1140	780 x 1450 x 1140	780 x 1450 x 1140
Weight	kg	206	206	206



AC-M18 CBRN



- The AC-M18 is built into a strong metal frame with insulated panels where relevant, powder coated
- Top finish painting is standard NATO green or sand
- Scroll compressor for a high degree of reliability and low noise level
- Automatic phase surveillance
- Sequential start of units possible
- HP/LP pressostat switches ensuring long compressor lifetime
- Fresh air intake
- Four way fork lift handling
- Easy strap down on air cargo pallets and stackable (two units on top of each other)
- Optional soft starter

Optional accessories



Remote thermostat with cable
15m
064409



Insulated flexible air duct including storage bag
Ø400mm x 3m
030774



Uninsulated flexible air duct including storage bag
Ø400mm x 5m
033223



Air distribution duct
Ø400mm x 6m
033224



Trolley with wheels
075770



Filter ePM2.5 65%
090973



HEPA filter
323041

AC-M18 CBRN

The AC-M18 CBRN is designed to operate on COLPRO applications with the evaporator module placed inside the shelter and the condenser module placed outside. The two modules are interconnected by 5 m long refrigerant hoses, power and control cables. The interconnections are all equipped with quick disconnect components for quick and safe setup and take down.

The HVAC unit can also operate with both modules placed outside, with supply air and return air ducted to one tent. A dual filtration system for the internal air path is available for selective filtration.



Control panel



COLPRO tent application

Specifications	Units	AC-M18 CBRN (50 Hz)	AC-M18 CBRN (60 Hz)
Registered NSN number	-	Yes	Yes
Operating temperature range, cooling	°C	+20 – +60	+20 – +55
Operating temperature range, heating	°C	-32 – +20	-32 – +20
Air flow	m ³ /h	2,500	2,500
Sound level @ 1m	dB(A)	54	59
Protection class		IPX5	IPX5
Refrigerant		R134a	R407C / R134a
Nominal cooling capacity	kW/Btu	17.5/60,000	17.5/60,000
Heating capacity (optional)	kW	16/20	6/16
Power supply	V/Hz	400/3ph/50	208/3ph/60
Max. running current, cooling/heating	A	18/26	33/52
Locked rotor amperage (LRA)	A	73	179
Max. power consumption cooling/heating	W	8,300/variable	8,300/variable
Hose connection	Ømm	400	400
Product size (h x l x w)	mm	(2x) 780 x 725 x 1140	(2x) 780 x 725 x 1140
Weight	kg	108/107	112/120

AC-M18 CBRN



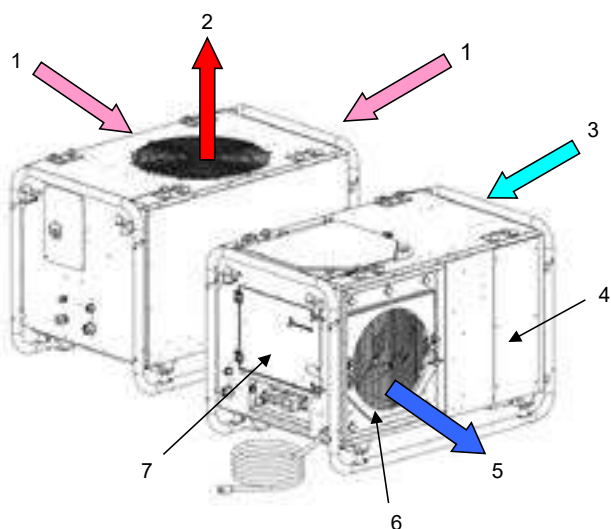
The function of the AC-M18 CBRN is based on a cooling circuit and two powerful fans. The evaporator section contains the evaporator and a radial fan, which draws warm internal air of the tent through the cold evaporator and blows out the cooled air either through the side or top of the unit. The condenser section contains two condenser coils and a large axial fan, returning the heat taken from the internal air to the outside atmosphere.

The AC-M18 CBRN can be equipped with an electric heating coil, to provide heating for example for night time when temperatures can fall under 20°C. All sheet metal parts are protected against corrosion by a minimum 50 to 80µm top coat.



Unit components and airflow

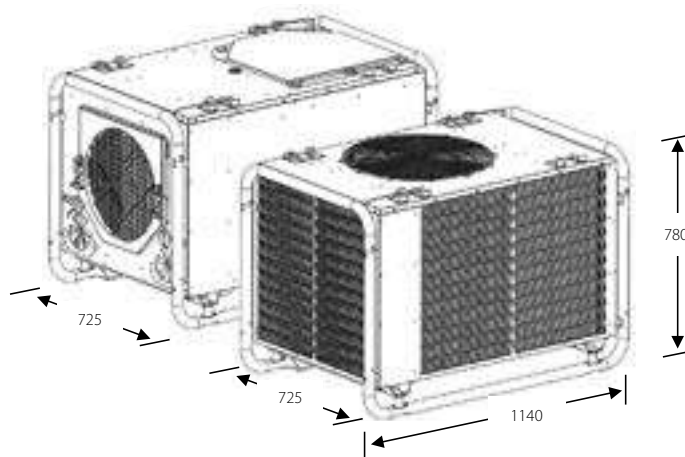
1. Condenser air intake
2. Condenser air discharge
3. Warm air intake
4. Dual filter system (optional)
5. Cooled air discharge
6. Duct coupling (Ø400mm)
7. Electrical panel with cover



Power supply plug



AC-M18 CBRN dimensions in mm



HEPA FILTER



The HEPA filter unit is mounted on top of the AC-M18 unit

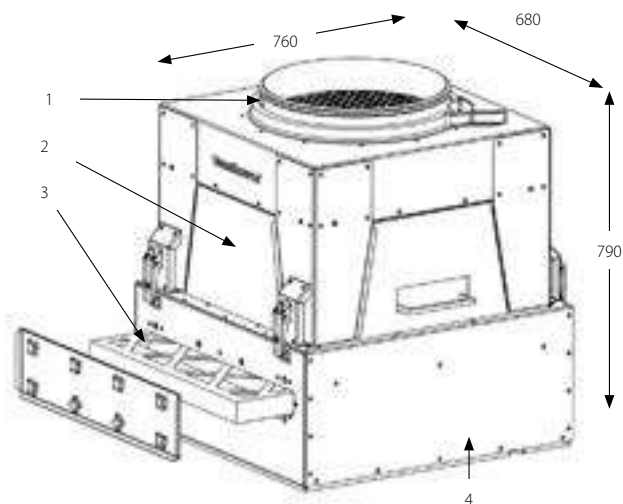


- For external installation, mounted on top of the AC-M18 evaporator side
- Can be fitted with H13 or H14 filters
- Up to four filters can be used in the air stream
- Reduces the internal fan noise of the air-conditioner of 3 dB (at 1m distance)
- Flexible air duct connection diameter 400mm



AC-M18 with HEPA filter unit and protective tarpaulin

HEPA filter unit dimensions in mm




Specifications	Units	HEPA filter unit
Registered NSN number	-	On all variants
Flex. air duct connection	Ømm	400
Filter collection efficiency for H13	%	99,95
Filter collection efficiency for H14	%	99,995
Weight (with HEPA and pre-filter)	kg	38
Product size (h x l x w)	mm	760 x 680 x 790

BC 121-221



BC 121 - BC 221
Patent (UV lamp included)



- Efficient and durable spot cooler for industrial applications
- Quiet running even with large air-flow
- Automatic swing function as standard
- Large water tank for longer operating hours
- Large, durable wheels with brakes allow easy movement
- Connect water hose or refill tank manually to offer comfort to your employees
- Corrosion-resistant plastic casing
- Air filter included to enable easy maintenance
- Remote control to easily adjust speed
- UV lamp, disinfecting the water
- Water level indicator

Optional accessories



Winter cover
 BC 121
4250.414
 BC 221
4250.415

Specifications	Units	BC 121	BC 221
Cooling pad	dm ³	80	120
Air flow	m ³ /h	12,000	22,000
Loaded air flow	m ³ /h	8,000	15,000
Maximum area	m ²	250	330
Power consumption	W	500	800
Power supply	V/Hz	220-240/1ph/50	220-240/1ph/50
Rated current	A	2.3	3.7
Water consumption	l/h	8-10	12-18
Tank capacity	l	60	120
Direct water connection	inch	½	½
Tank level control		Yes	Yes
Sound level	dB(A)	67	67
Product size (l x w x h)	mm	1050 x 600 x 1460	1230 x 640 x 1730
Box size (l x w x h)	mm	1120 x 680 x 1650	1300 x 720 x 1930
Net/gross weight	kg	50/55	64/69
Pallet	pcs	1	1

BC 341



BC 341
Patent (UV lamp included)



- Powerful air volume 30,000 m³/h to cool large working areas
- No installation, no duct work required
- Low running costs
- Easy to maintain
- Evaporative filter pads, blocking dirt
- UV lamp, disinfecting the water
- Low energy consumption
- Applications: Workshops and warehouses, plastic, glass, assembly and painting plants, agriculture, greenhouses and aircraft hangars

Optional accessories







Winter cover
BC 341
4250.416

Specifications	Units	BC 341
Cooling pad	dm ³	340
Air flow	m ³ /h	30,000
Loaded air flow	m ³ /h	23,000
Maximum area	m ²	400
Power consumption	W	1,050
Power supply	V/Hz	220-240/1ph/50
Rated current	A	4.9
Water consumption	l/h	10-15
Tank capacity	l	200
Direct water connection	inch	½
Tank level control		Yes
Sound level	dB(A)	70
Product size (l x w x h)	mm	1690 x 920 x 1910
Pallet size (l x w x h)	mm	1000 x 1800 x 2100
Net/gross weight	kg	130/140
Pallet	pcs	1





ACCESSORIES

Thermostats and CO sensors

Illustration	Name	Code	Description	For products
	Remote thermostat for heating or cooling only	018668	Water and dust tight enclosure (IP 66), adjustable differential, 15 m connection cable	VA-M15 MKII, VA-M40 MKII, AC-M6, AC-M7 MKII w/o electric heating
	Thermostat for manual switch between cooling and heating	064409		AC-M6, AC-M7 MKII with heating, AC-M11, AC-M18
	Thermostat for automatic switch between cooling and heating			VA-M15 MKII, VA-M40 MKII, AC-M7 MKII, AC-M18, AC-M18 CBRN, AC-M11
	Digital remote thermostat TH-M	4035.555	15 m cable, digital	FH 20, FH 40
	Remote CO sensor	096472	15 m cable, hanging strap, power indicator, visible alarm, audible alarm	VA-M15 MKII, VA-M40 MKII, FH 20, FH 40





ACCESSORIES

Air duct systems

Illustration	Name	Code	Description	For products
Air duct system Ø225mm				
	Insulated flexible air duct - 3m	295030	Extremely UV resistant (desert conditions), anti-infrared, resistant to mechanical wear	AC-M7 MKII, VA-M15 MKII, VA-M40 MKII
	Non-insulated flexible air duct - 6m	295331		
	Storage bag for insulated 3m air duct	428436		
Air duct system Ø315mm				
	Insulated flexible air duct - 3m	562409	Extremely UV resistant (desert conditions), anti-infrared, resistant to mechanical wear, the air duct includes a storage bag	AC-M7 MKII (with Ø315 air outlet), AC-M11
	Non-insulated flexible air duct - 5m	428441		
	Non-insulated flexible air distribution duct - 5m	428443		
	Non-insulated flexible air distribution extension duct - 2m	428442		
	Insulated duct - 3m	095852		AC-M6
	Uninsulated duct - 5m	428441		
	Air distribution duct - 5m	097756		




ACCESSORIES

Air duct systems

Illustration	Name	Code	Description	For products
Air duct system Ø350mm				
	Insulated flexible air duct - 3m	4515.371	Nylon, black, UV resistant, resistant to mechanical wear	FH 20
	Non-insulated flexible air distribution duct - 5m	4515.380	25mm holes in two rows - 18 holes every meter	
Air duct system Ø400mm				
	Insulated flexible air duct - 3m	4515.372	Nylon, black, UV resistant, resistant to mechanical wear	FH 40
	Non-insulated flexible air distribution duct - 7m	4515.381	25mm holes in two rows - 18 holes every meter	
	Insulated flexible air duct - 3m	030774	Extremely UV resistant (desert condition) anti infrared, the air duct includes a storage bag	AC-M18, AC-M18 CBRN
	Non-insulated flexible air duct - 5m	033223		
	Non-insulated flexible air distribution duct - 6m	033224		

ACCESSORIES

Additional equipment for air heaters

Illustration	Name	Code	Description	For products
	Fuel lance for oil drum	293766		VA-M15 MKII, VA-M40 MKII
	Forklift pockets	4035.740		FH 20
		4035.738		FH 40
	Stacking frame	4035.741		FH 20
		4035.739		FH 40

Additional equipment for air-conditioners

Illustration	Name	Code	Description	For products
	Trap door system	322007		AC-M5 MKI
		322040		AC-M5 MKII
	Trap door frame	322048		AC-M10
	Door and mounting kit	322049		AC-M10
	Welding frame for corrugated container	111536		AC-M10
		019502		AC-M5 MKI, AC-M5 MKII
	Filter ePM2,5 65%	068532	ePM2,5 65%	AC-M11
		090973		AC-M18, AC-M18 CBRN
	HEPA filter	323041	Can be fitted with H13 or H14 filters, up to four filters can be used in the air stream, flexible air duct connection diameter 400mm	AC-M18, AC-M18 CBRN
	Trolley with wheels	068459	In situations and sites where no forklift is available, the wheel solution enables rapid and easy deployment of the environment control systems.	AC-M11
		075770		AC-M18, AC-M18 CBRN
	Winter cover	4250.414		BC 121
		4250.415		BC 221
		4250.416		BC 341

DANTHERMGROUP

DENMARK

Dantherm A/S
DK-7800 Skive
+45 96 14 37 00
sales.dk@danthermgroup.com

GERMANY

Dantherm GmbH
22844 Norderstedt
+49 40 526 8790
sales.de@danthermgroup.com

ITALY

Dantherm S.p.A.
37010 Pastrengo (VR)
+39 045 6770533

62012 Civitanova Marche (MC)
+39 0733 714368
sales.it@danthermgroup.com

SPAIN

Dantherm SP S.A.
28108 Alcobendas, Madrid
+34 91 661 45 00

46980 Paterna, Valencia
+34 961 524 866
sales.es@danthermgroup.com

UNITED KINGDOM

Dantherm Ltd
Maldon CM9 4XD
+44 (0)1621 856611
sales.uk@danthermgroup.com

FRANCE

Dantherm SAS
69694 Vénissieux Cedex
+33 4 78 47 11 11
sales.fr@danthermgroup.com

POLAND

Dantherm Sp. z o.o.
62-023 Gądko
+48 61 65 44 000
sales.pl@danthermgroup.com

NORWAY

Dantherm AS
3138 Skallestad
+47 33 35 16 00
sales.no@danthermgroup.com

SWEDEN

Dantherm AB
602 13 Norrköping
+46 (0)11 19 30 40
sales.se@danthermgroup.com

RUSSIA

Dantherm LLC
142800, Stupino
Moscow
+7 (495) 642 444 8
sales.ru@danthermgroup.com

SWITZERLAND

AirCenter AG
CH-5405 Baden Dättwil
+41 43 500 00 50
info@aircenter.ch

CHINA

MCS China
Baoshang, Shanghai, 201906
+8621 61486668
sales.cn@danthermgroup.com

Sales contact:

Dantherm A/S
Marienlystvej 65
DK-7800 Skive
Denmark
t. +45 96 14 37 00

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