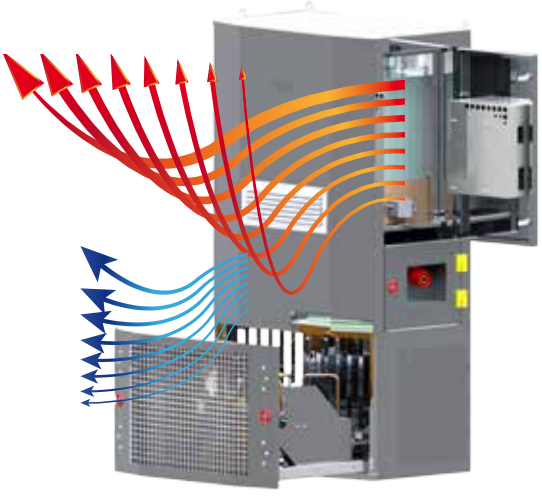
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Air Conditioning Systems

ARMSTRONG Power

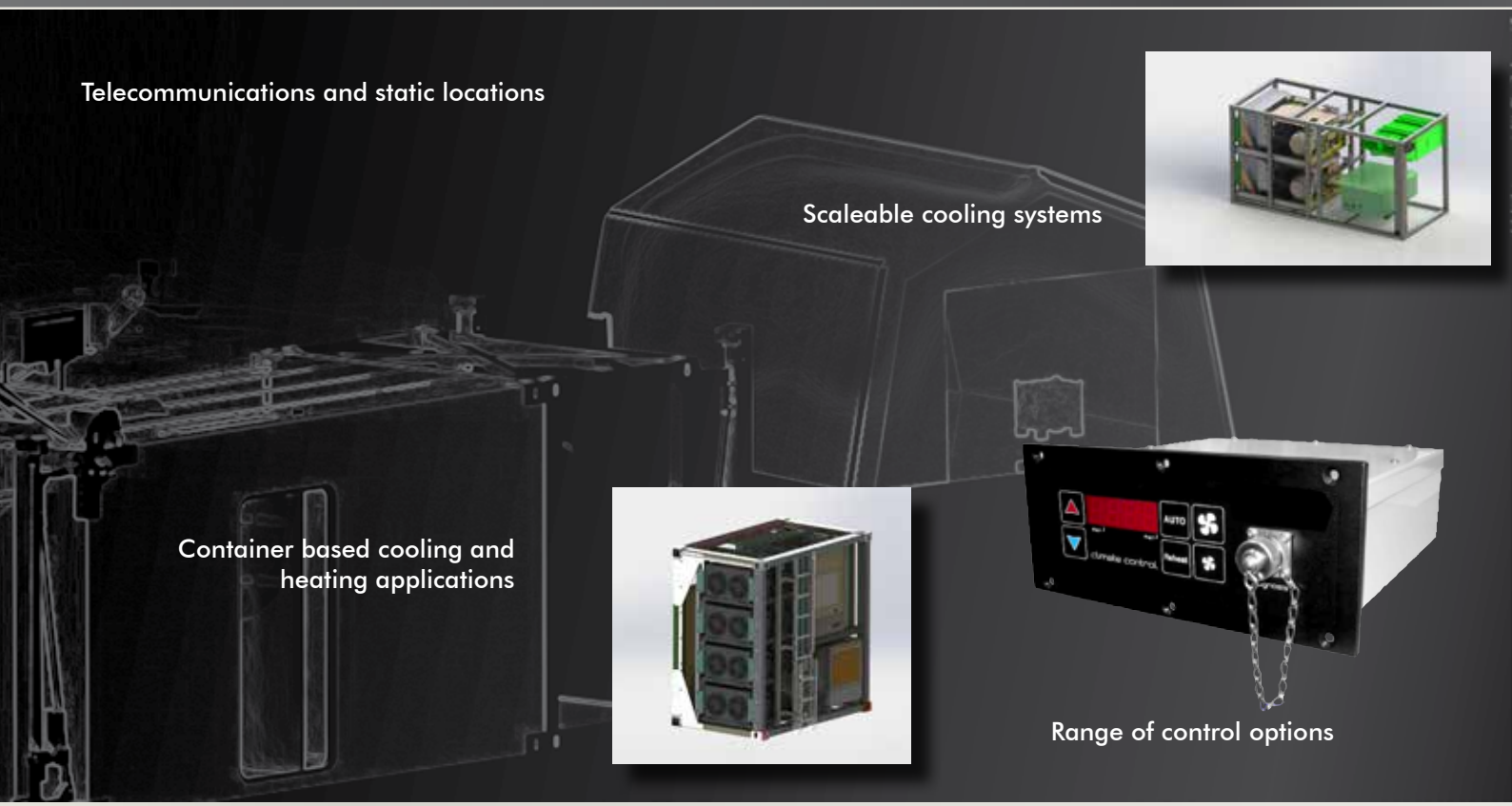


Fischer Panda®

Power wherever you are™

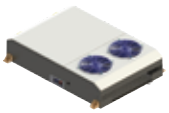
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



Contents

RTU-1
Multi-voltage Inverter A/C
Page 4



RTU-2
Multi Voltage Inverter ACU
Page 6

WMU-1
Modular wall-mounted ECU with Hybrid Inverter
Page 8

WMU-2
Moduler Wall Mounted ACU Multivoltage Inverter
Page 12

CCU-1
Compact Compressor Unit (cascadable)
Page 14

CEV-7
Ceiling Mounted Evaporator
Page 15

WEV-8
Wall Mounted Evaporator
Page 16

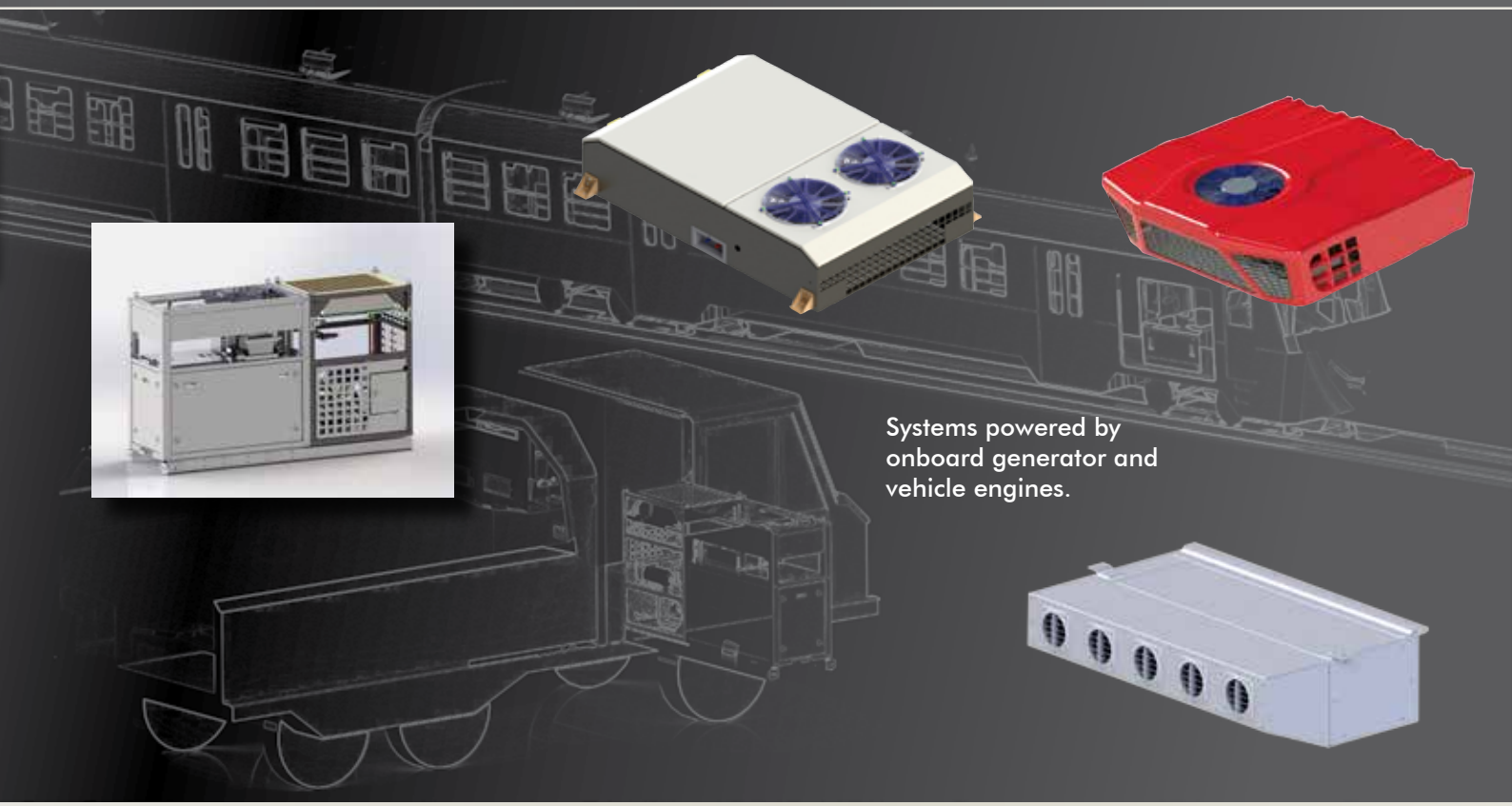
WEV-16
Wall Mounted Evaporator
Page 17

WEV-24
Wall Mounted Evaporator
Page 18

FHB-1
Floor Heater
Page 19

MACCs
Mobile Air Conditioning Cubes
Page 20

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



Innovative Air Conditioning Technology

With a new range of wall and ceiling air conditioners, Fischer Panda continues a 35- year tradition. Since 1977, we have been involved in air conditioning. These are characterized by extremely high level of efficiency, control diversity and individual design. Very compact compressor units and evaporators reflect clear and structured concepts. Fischer Panda offers wall and ceiling evaporators as integrated and also as independent double or triple units. This allows larger rooms can be perfectly air-conditioned.

The combination of compressor, condenser and evaporator integrated into a compact air-conditioning as particularly suited for container, vehicle trailers and telecommunications equipment. Many of these climate solutions with the Fischer Panda generator can be combined (such with the CAPS - Combined Air conditioning & Power System) to produce unique climate and energy systems.

Premium Performance

1 "Plug & Cool" - Innovative, compact and lightest air conditioners with inverter technology
2 Economical - no compressor starting current & always at the optimum operating point
3 Flexible - cascade multiple systems with fully automated load balancing

Premium Security

4 Monitoring - dimming to the high pressure side at overpressure
5 Emergency Operation - preset temperatures in case of control failure
6 Services - Worldwide network with 24 Sales

Premium Climate

7 Very Quiet - Up to 39 dB (A) in ventilation mode
8 Clean - uses air-filter and UV technology
9 Pleasant - Automatic temperature control ±1 °C

Premium Comfort

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

RTU-1 Multi-voltage Inverter A/C

Motor independant High performance air conditioning unit with AC and DC multi-voltage input

Multi-voltage Inverter

- EXTREMELY POWERFUL: Up to 8kW / 27.300 BTU/h
- "READY TO USE" Build in full hermetic compressors
- "ONE FOR ALL" multi-voltage INVERTER operation
- Pressure tight evaporator for using with NBC devices

Multi usability:

- Trucks
- Emergency vehicles
- Construction vehicles
- Railway
- Special vehicles
- Caravans
- Custom applications

PDC" System® (Power Demand Control)

One controller can operate up to 8 RTU-1 units parallel in depending of actual needed cooling-/heating capacity.

- Take only that power you need and save energy!

CAN BUS controlled system:

- easy and quick cabling
- full automatic operation
- low energy consumption
- stepless regulated cooling-/heating capacity

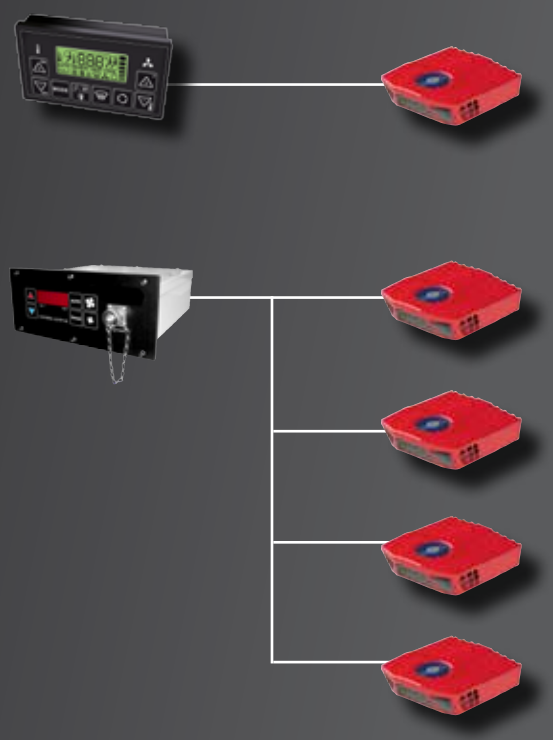
INVERTER driven e-compressors:

- No high starting current
- Speed regulated compressor
- Guarantees perfect climate regulation and co_2 savings!

Options:

- fresh air flap, 0-100 % automatic controlled
- Air cleaner PHI (photohydroionization technology)
- clean and bacteria free air!

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



Ein universal unit for practically every application
- Modular designed and expandable

Cooling capacity:	R134a Coolant 4 – 8,0 kW @ 230/400VAC, 320VDC 3,0 kW @ 24VDC 5,0 kW @ 48VDC	Available Drives:	Electric INVERTER drives with variable compressor speed AC: 230 - 1 phase / 400 - 3 phase DC: 24 / 48 / 110 / 300
Heating capacity:	5.000 Watt max.@ 230 / 400VAC DC: no heating	Airflow:	max. 1.000 m^3/h / 588 cfm

Technical Advantages:

- Single unit for all voltages, integrated frequency converter!
- Unit designed and tested to temperatures from max. +55 °C -
- System extendable with fresh air pressured system (protective ventilation)

- System extendable with diesel air heater
- System electric with inverter technology – no high starting current
- Cooling performance with stepless regulation

- CAN SPS including connection to vehicle main system via CANopen is possible including error logging
- NEW! System can be extended to include floor heating (electrical or water).
  Allows a possible temperature range of only ±1 °C to be maintained!
- Air distribution plate with LED lighting (Optional)

Protective Air Units:

Can to docked on the roof-mounted unit. Upgrade for use in very dusty environment. We deliver G3/F6 filter combinations. Active coal filters also available.

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Cooling capacity: R134a refrigerant
@ 48VDC = 2.000 to 5.000 Watt, stepless regulated
@ 250 – 400VDC = 4.000 to 8.000 Watt, stepless regulated
@ 230 / 400VAC = 4.000 to 8.000 Watt, stepless regulated

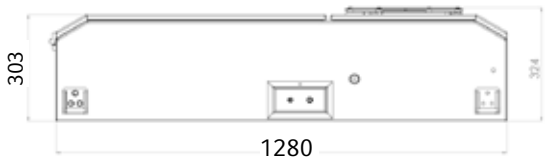
Electric heating: (option)
@ 230-1 ph or 400-3ph VAG stepless regulated
5.000 Watt (17.000 BTU/h)

RTU-2 Multi Voltage Inverter ACU

Extremely small, light weight and powerful

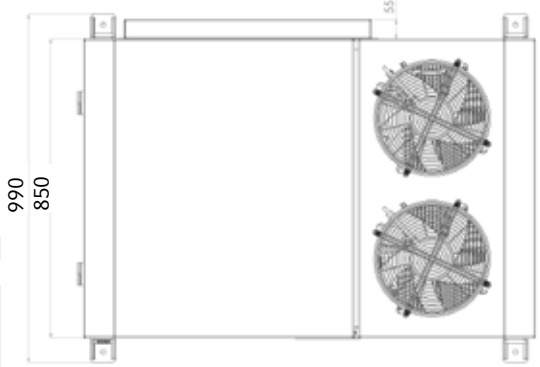
- First ACU with SCT- Smart Compressor Technology®
- "READY TO USE" - Build in compressor
- "ONE FOR ALL" - Multi voltage input AC or DC

- "PLUG & COOL" -Quick install, ready filled with gas
- Available also with hydraulic driven compressor
- Extremely robust design, suited for railway applications
- For extreme temperatures : - 40°C to +60°C in operation
- EMC Compliant : (only RTU-2 MIL version)
- Shock I Vibration : (only RTU-2 MIL version)



Ideal for:

- Lorry/HGV Cabins
- Constuction Machines
- Locomotive and Rail Applications
- Special Applications & Containers



CAN BUS System

- Quick install: only 1 power and 1 control cable
- CAN bus controlled over fiber optics (only MIL-461 E models)
- Failsafe programs: redundancy, high reliability

INVERTER powered compressors:

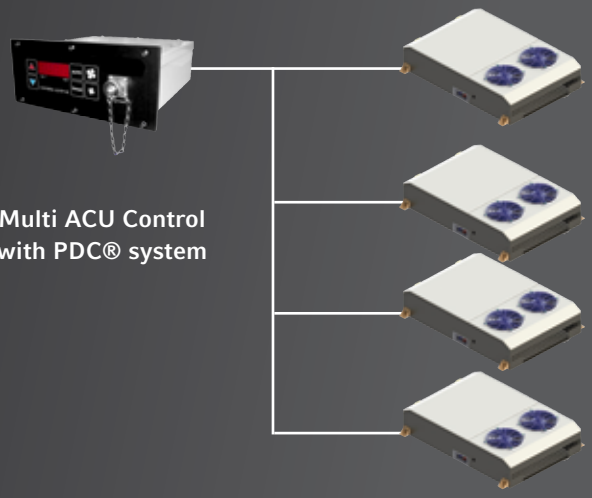
- No high start up currents. This prevents generators against overloads
- Stepless power regulated compressors
- Exactly regulation of room temperatures with no hot I cold effects
  ~ Guarantees a perfect room temperature!

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

"PDC" System® (Power Demand Control)

- 1 controller can operate up to 8 ACU's over CAN Bussystem. This can provide up to 64kW (220.000 BTU/h) of cooling, and 40kW (136.500BTU/h) of heating capacity! The cooling/heating power is controlled automatically depending on actual power requirements. In case a unit fails the system starts automatically another unit(s).
- Performance range from 4-64kW cooling / 5-50 kW heat capacity with 7x redundancy! These enormous performaces can be fully controlled as required! ~ *Take only the power that you need and have reserves!*



Multi ACU Control with PDC® system

OPTIONS:

- Automatically and stepless regulated motor fresh air flap
- 2nd evaporator ventilator for lower noise operation
- Air cleaner system PHI® (Photohydroionization)
  ~ Frees the air from bad smells and kills bacteria!

Technical Data:

Cooling capacity:	**R134a refrigerant**	
	@ 48VDC	= 2.000 to 5.000 Watt, stepless regulated
	@ 250 – 400 VDC	= 4.000 to 8.000 Watt, stepless regulated
	@ 230 / 400 VAC	= 4.000 to 8.000 Watt, stepless regulated
Electric heating: (option)	5.000 Watt (17.000 BTU/h)@ 230-1 ph or 400-3ph VAG stepless regulated	
Airflow evaporator:	up to 2.000m³/h, brushless ventilator motors, stepless regulated extremely low noise operation down to 39dB! (when air conditioner operates at lowest level)	
Airflow condenser:	up to 4.500m³/h - stepless regulated and pressure controlled (PLC controller) 2 brushless axialfans with low noise operation. Fail safe mode: operates also with 1 fan	
Drive:	Electric compressors	: variable power controlled with inverter over PLC Controller
	Hydraulic compressors	: variable power controlled over plc controller, 11 cm³ I 3.000rpm motor
EMC:	meets MIL-STD 461E (only RTU-2 MIL version)	
Shock I Vibration:	meets MIL-STD810F (only RTU-2 MIL version)	

NEW: Cooled electric cabinet for inverter and power supplies!

~ No failures due to high temperatures on the roof from sun. Ideal to operate in hot climates!

Extremely light weight: only 110 kg, including compressor, inverter, power supplies!

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

WMU-1 Modular wall-mounted ECU with Hybrid Inverter

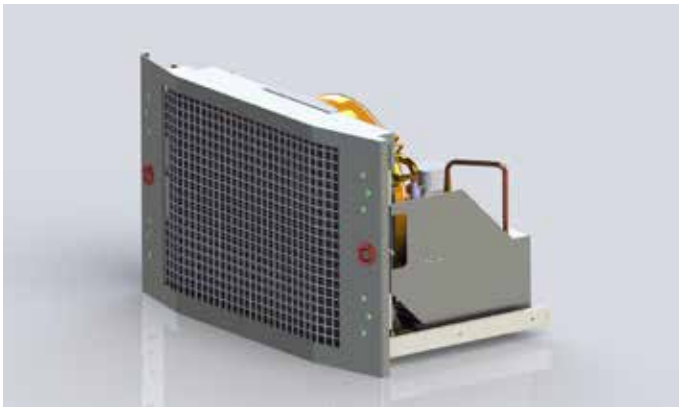
Standard design „compact system for all applications“

Features:

- Suited for commercial and custom applications
- Multi voltage, hydraulic, or truck-motor operation
- Easy and quick installation “plug and cool”

- Quick maintenance, easy to work on it (compressor unit on slides)
- Optional with integrated NBC filter
- Smallest dimensions and lightweight

- Operation up to +60 °C
- Single or multi- room configuration
- Extra low noise level - down to 39dB inside

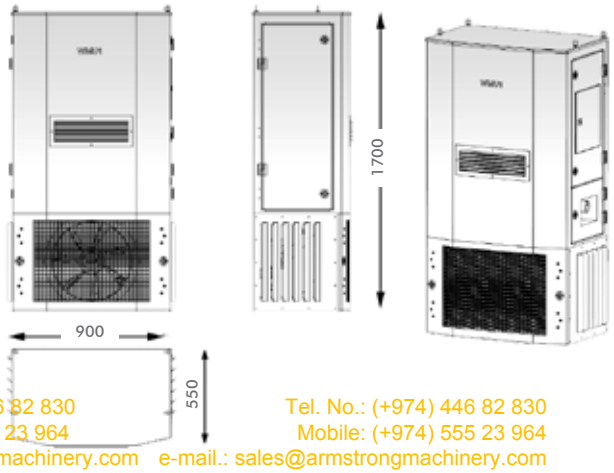


Compressor mounted on slides eases maintenance

Power Features:

Cooling power:
Single room configuration: up to 8.200 W / 28.000 BTU/h*
Multi room configuration: up to 14.000 W / 48.000 BTU/h*

Heat power
Water : 20.000 W
Electric : 5.000 W at 400 3ph 50Hz



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Drives Available:

Electric drive	AC: 230-3-60 or 400-3-50 DC: 12 / 24 / 48 / 110 / 230 or 400 V

Controllers for select:

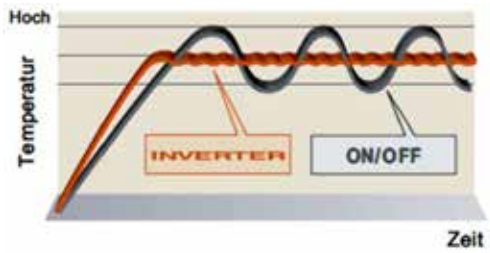
Basic manual controller (for single room use only)
CAN-Bus controller with digital display to control 1 or 2 rooms with less cable.
Also available with fibre optic connections (EMC compatible)

Fresh air systems available:

Economizer flap for compressor- and free-air cooling mode
Small or extra large fresh air filters
NBC unit Beth-EL FA80 - 80 m²/h integrated and connected to the outside mounted, air pressure sealed evaporator

INVERTER TECHNOLOGY

Our new inverter technology regulates the compressor power in dependence of actual temperatures and pressures. The compressor will take only that power which is actually needed. This provides greater energy saving when operating!

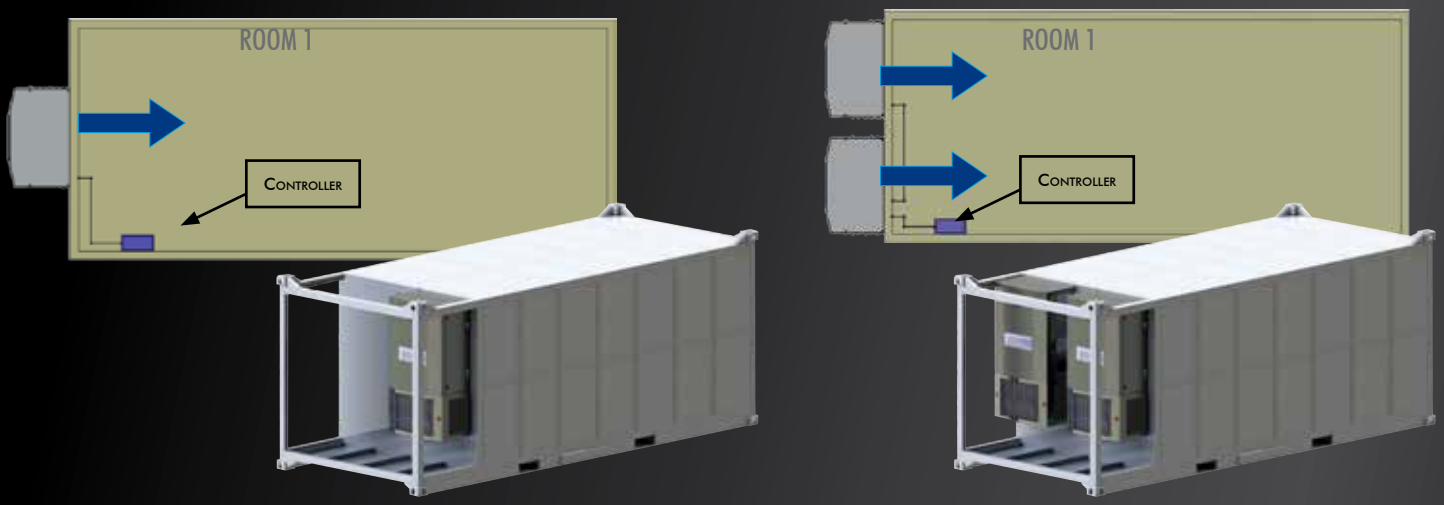


Frame:

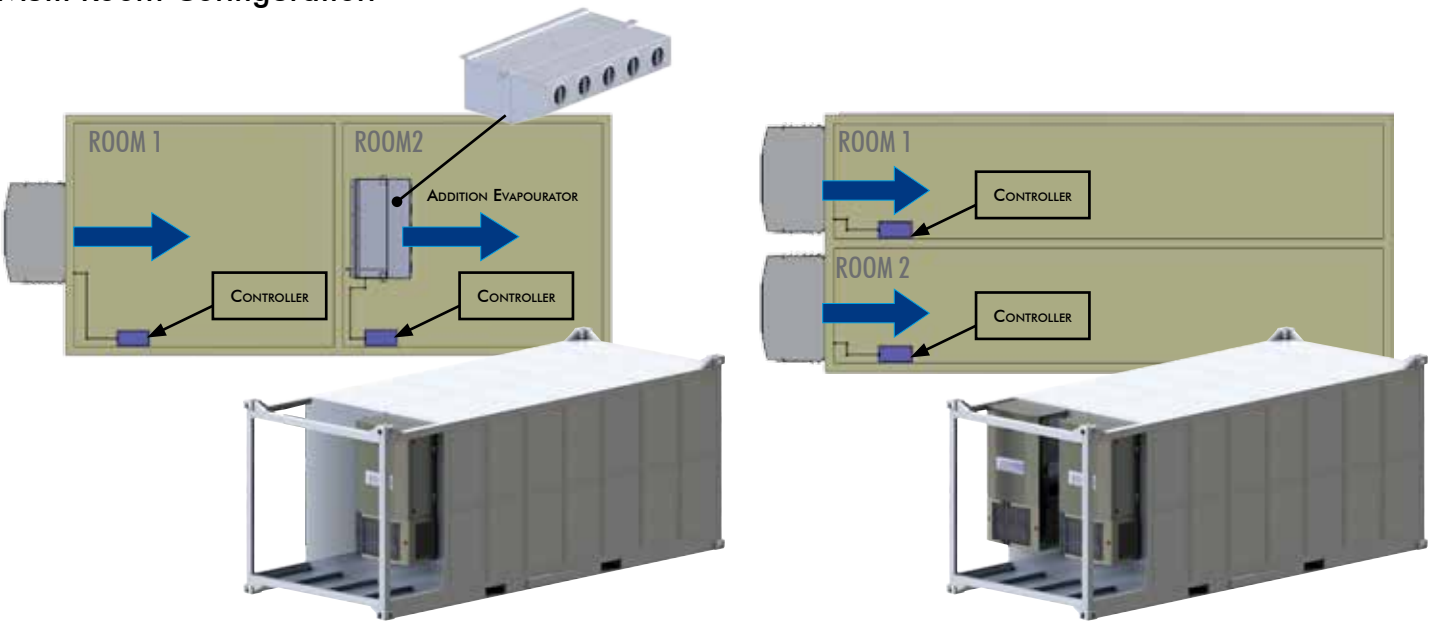
Left or right configurations for easy access, maintenance and control from 2 sides (ideal, if 2 units are mounted) only 950 mm width allows to mount 2 units on the container. This allows in 2-room models the configuration up to 4 rooms with a maximum cooling power of 28.000 Watts / 96.000 BTU/h and NBC airflow up to 160 m³/h

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Single Room Configuration



Multi Room Configuration



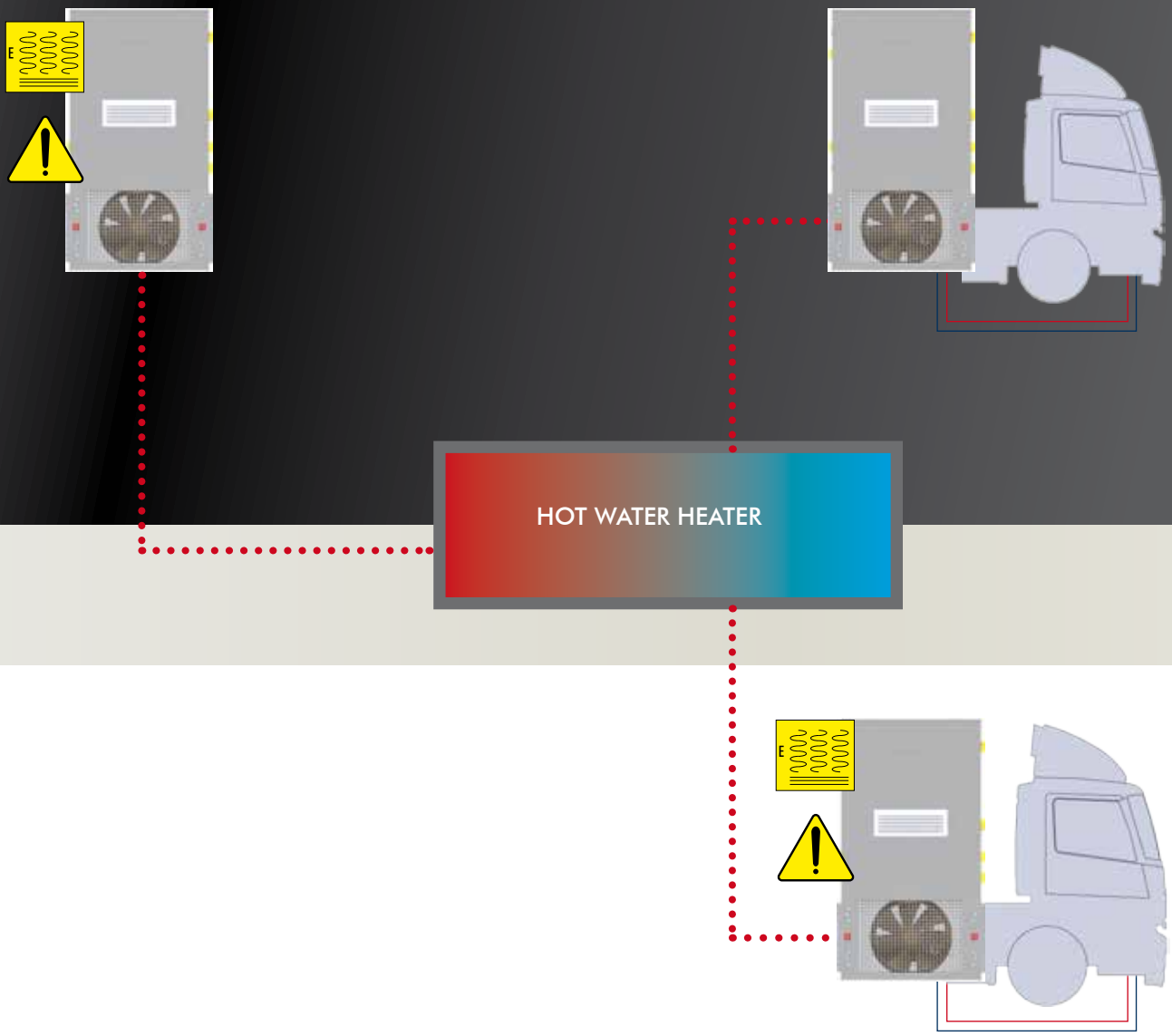
Tel. No.: (+974) 446 82 830 Tel. No.: (+974) 446 82 830 Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964 Mobile: (+974) 555 23 964 Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com e-mail.: sales@armstrongmachinery.com e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Available Systems:

Electric Drive

Direct Drive



CAN-Bus controlled system.

Only one control cable is needed for the ECU. The controller is located in the control-box outside. Optionally, a second controller can be used inside and operates parallel.

Electric– and Direct drive

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

WMU-2 Moduler Wall Mounted ACU Multivoltage Inverter

Telecommunication ECU for civil and custom applications

Features:

- Multi Voltage operation*:
- 12 / 24 / 36 / 48 / 110 V DC
- 230-1-50 V or 400-3-50 V AC

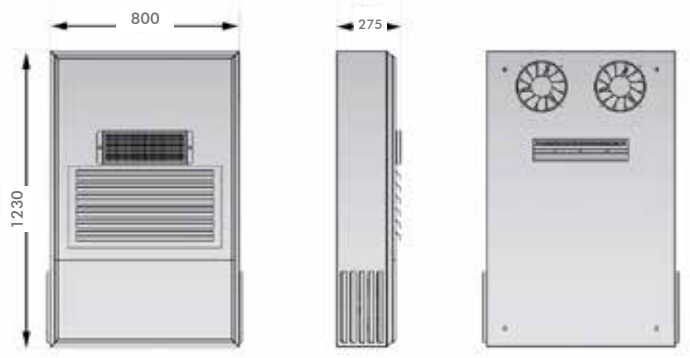
- Hydraulic operation*
- Easy wiring with CAN controller or conventional wiring
- Quick and easy installation „plug and cool“

- Quick maintenance, easy to work on it
- Large fresh air filters G3 and F5 - changeable
- Smallest dimensions and light weight

- Operation up to +60 °C
- For single– or Multiroom operation

FRESH AIR COOLING / COMPRESSOR COOLING*

Economizer flap for compressor-/ and free air cooling mode
Small or XL fresh air filters G3 and F5 combination



* to select

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Cooling Power
2,0 or 3,0 kW @ 24 V DC (6.800 or 10.200 BTU/h)
5 kW @ 48 V DC
3,0 / 4,5 or powerful 8,0 kW (!) @ 230 / 400 V AC (10.200 / 15.300 / 27.300 BTU/h)

Heating Power
up to 5kW @ 230 / 400 V AC stepless regulated and limitable with our PLC CAN controller (programmable)
DC Heaters up to 1,5 kW (5.100 BTU/h) on request

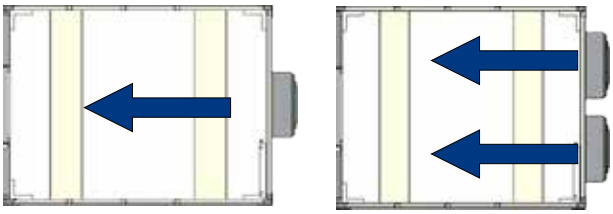
Ventilators
Brushless EC-Motors, very high MTBF, high energy savings, speed regulated

Controllers
Conventional controller (manual thermostat)
CAN-Bus Controller with digital display

Inverter Drive System

Stepless ECU power regulation with CAN-Bus controller
-> ECU takes only the power that is actually required

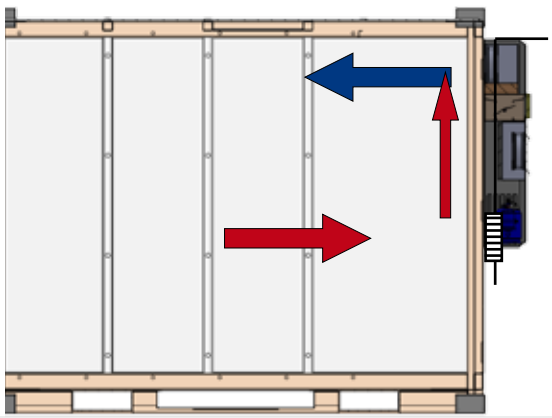
- Reduced startup current
- Very smooth operation
- Very high energy saving when combined with economizer system



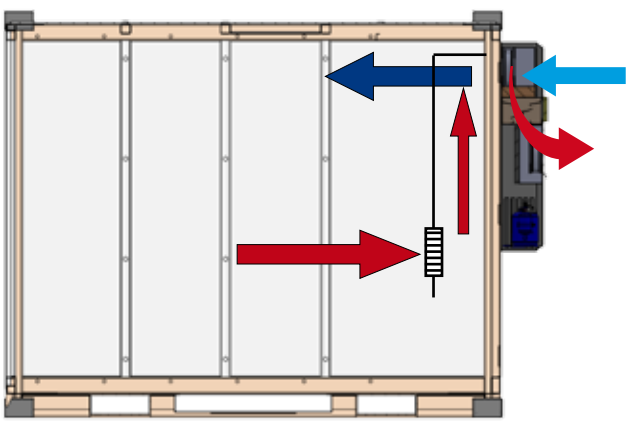
Single and multi unit installations possible

ECONOMIZER SYSTEM—Saving energy!

Recirculation mode with compressor

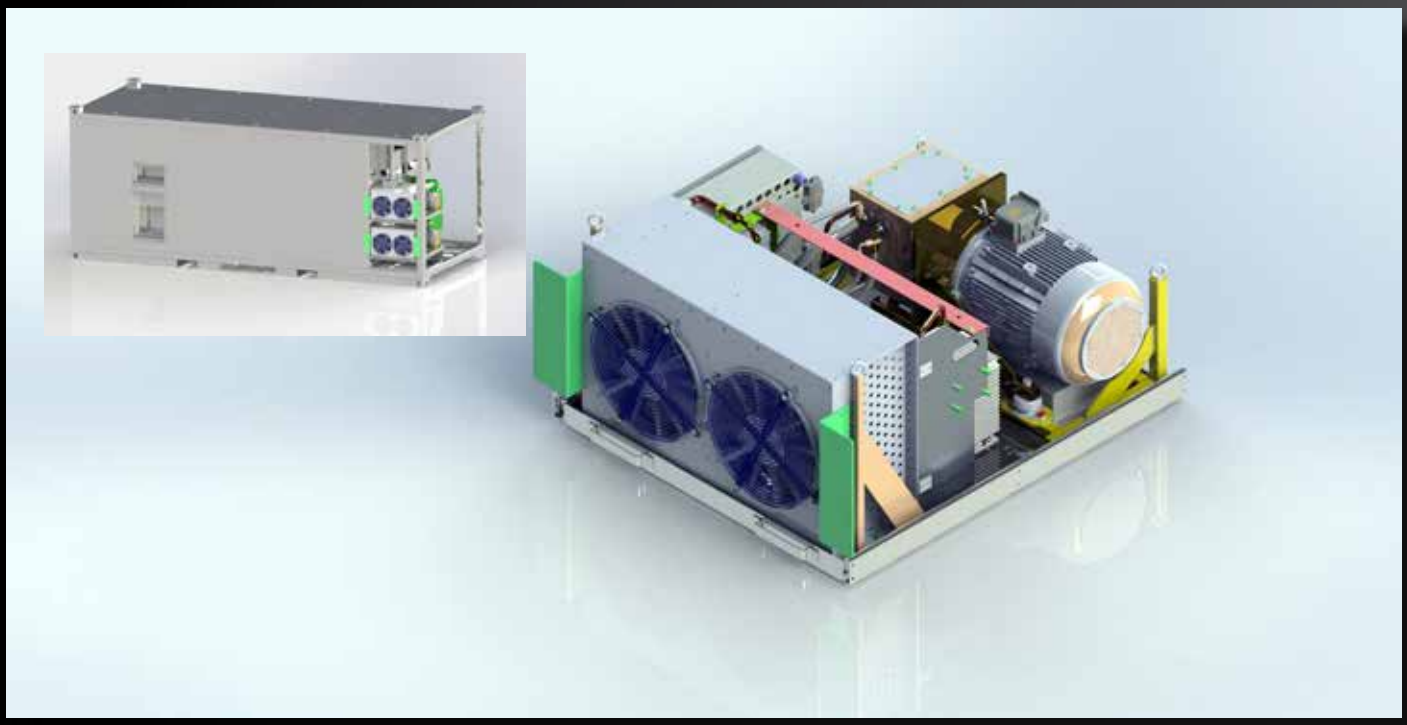


Fresh Air cooling without compressor



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



CCU-1 Compact Compressor Unit (cascadable)

Features:

- Cooling Power: 8 kW
- Stepless compressor, 4-8kW variable (Cooling Power)
- Suited for commercial and custom applications
- "SPR" System: Step-less ACU power regulation with special compressor and without inverter
- For Drive and Standby operation

Cascading system:

- 1 to 4 Units controlled only with 1 Controller
- Single or multiple room configuration
- Easy and Quick installation "Plug and Cool"

- Quick maintenance, easy to work on it
- Compressor unit on slides
- Smallest dimensions and light weight

- Operation up to +60°C
- Special condenser:
- 4 mm fin spacing and epoxy coated

STANDARD
Through wall fittings

OPTIONAL
Quick release fittings
("Stäubli" Connectors)

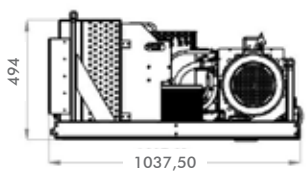
Units fitted with Stäubli can be exchanged in under 1 hour!
In case of cascading systems: units are interchangeable with another

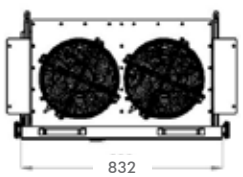
Controlling:

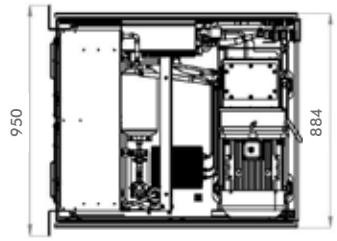
PLC version
Integrated electrical cabinet with CAN-Bus controller and all electric components to control evaporator with only one system cable.

Optional with custom interface connector
(e.g. door switch, fail over mode)

Manual version
Available without CAN-Bus controller for manual control







Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

CEV-7 Ceiling Mounted Evaporator

Features:

- Cooling Power: 7 kW / 24.000 BTU/h
- Heating Power Electrical: 4 kW / 400-3-50
- Air Volume: 1.000 m³/h @ 26 V DC

- Cleanable return-air filter
- Through wall fitting connectors
- Painted surface

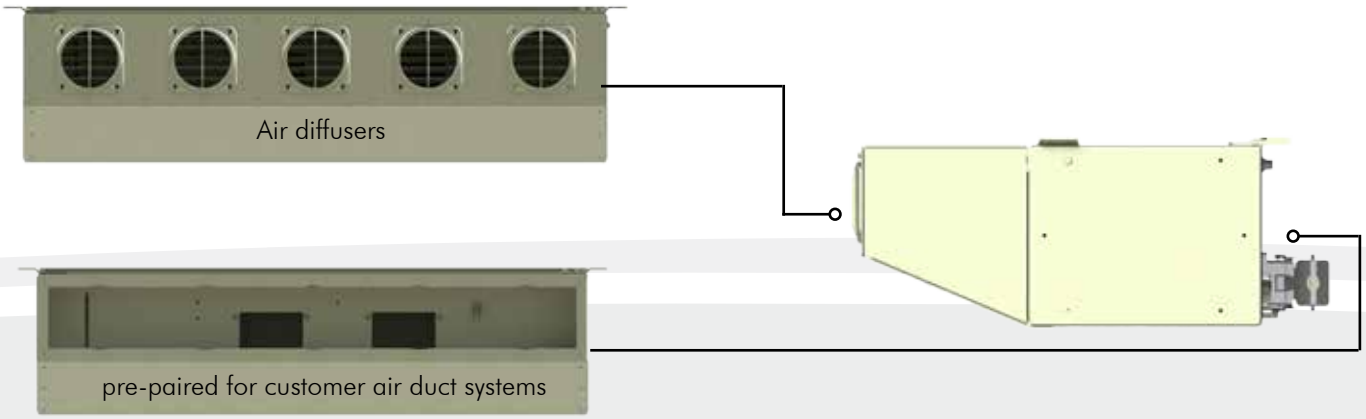
- Customized supply air covers with air diffusers for fitting to various air ducting systems

Controlling:

PLC version
Integrated electrical cabinet with CAN-Bus controller and all electric components to control evaporator with only one system cable.

Optional with custom interface connector (e.g. door switch, fail over mode)

Manual version
Available without CAN-Bus controller for manual operation



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

WEV-8 Wall Mounted Evaporator

Features:

- Cooling Power: 8 kW / 28.000 Btu/h
- Heating Power Electrical: 5 kW / 400-3-50
- Heating Power Water: 20 kW—Q100

- Air Volume: 1.000 m³/h @ 230 VAC
- Very low noise operation → 39dB!
- Return-Air Filter

- Pressure resistant housing for using NBC system
- Inside or outside use
- Through-wall fitting (Standard)

- Optional with Quick release couplings
- Powder coated and painted surface
- Electrically Isolated

Refrigerant Connectors

STANDARD:
Through wall fittings

OPTIONAL:
Quick release fittings
("Stäubli" Connectors)

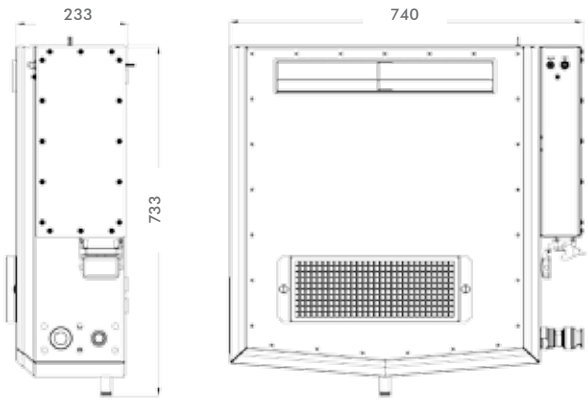
Units fitted with Stäubli can be changed in under 1 hour! In case of cascading systems: units are interchangeable with another

Controlling:

PLC version
Integrated electrical cabinet with CAN-Bus controller and all electric components to control evaporator with only one system cable.

Optional with custom interface connector
(e.g. door switch, fail over mode)

Manual version
Available without CAN-Bus controller for manual operation



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

WEV-16 Wall Mounted Evaporator

Features:

- Cooling Power: 2 x 8 kW or 1 x 16 kW
- Heating Power Electrical: 10 kW / 400-3-50
- Heating Power Water: 40 kW—Q100

- Air Volume: 2.000 m^3/h
- Very low noise operation → 39dB!
- Return air filter

- Pressure resistant housing for using NBC system
- Inside or outside use
- Through wall fitting (Standard)

- Optional with quick release couplings
- Powder coated and painted surface
- Electrically Isolated

Controlling:

PLC version
Integrated electrical cabinet with CAN-Bus controller and all electric components to control evaporator with only one system cable.

Optional with custom interface connector (e.g. door switch, fail over mode)

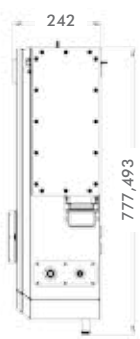
Manual version
Available without CAN-Bus controller for manual operation

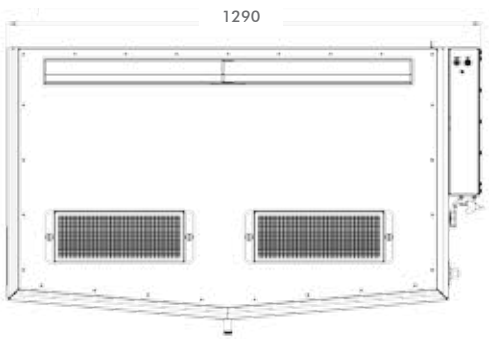
Refrigerant Connectors

STANDARD:
Through wall fittings

OPTIONAL:
Quick release fittings ("Stäubli" Connectors)

Units fitted with Stäubli can be changed in under 1 hour! In case of cascading systems: units are interchangeable with another





Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

WEV-24 Wall Mounted Evaporator

Features:

- Cooling Power: 2 x 12 kW or 1 x 24 kW
- Heating Power Electrical: 15 kW / 400-3-50
- Heating Power Water: 25 kW

- Air Volume: 4.000 m³/h
- Very low noise operation -> 42 dB!
- Return-air filter

- Pressure resistant housing for use with NBC systems
- Inside or outside use
- Through wall fitting (Standard)

- Optional with quick release couplings
- Powder coated and painted surface
- Electrically Isolated

Controlling:

PLC version
Integrated electrical cabinet with CAN-Bus controller and all electric components to control evaporator with only one system cable.
Optional with custom interface connector (e.g. for door switch, fail-over mode)

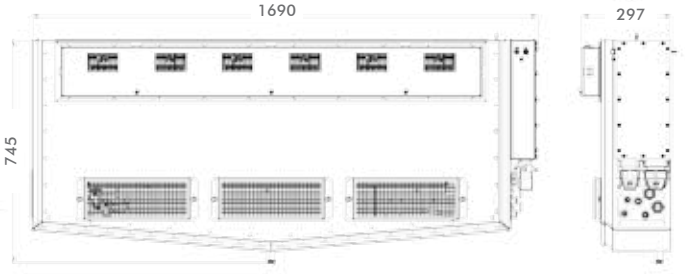
Manual version
Available without CAN-Bus controller for manual operation

Refrigerant Connectors

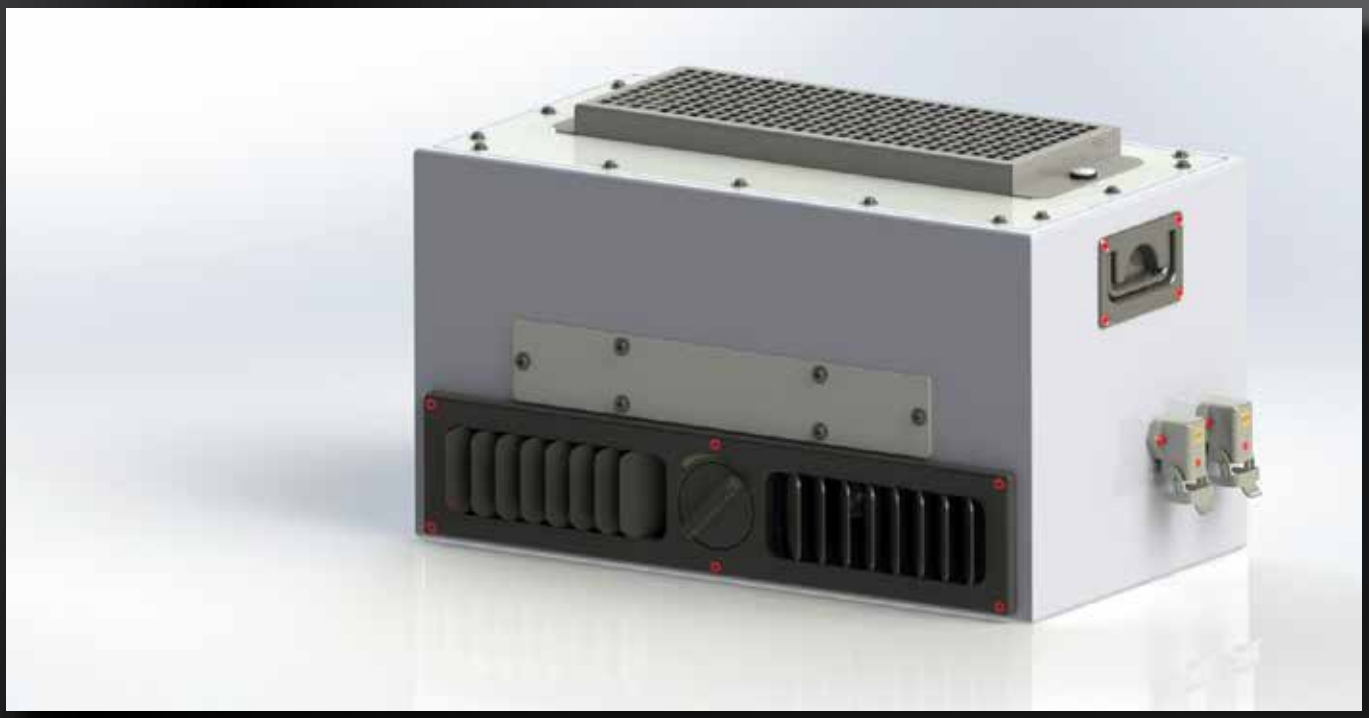
STANDARD:
Through wall fittings

OPTIONAL:
Quick release fittings
("Stäubli" Connectors)

Units fitted with Stäubli can be changed in under 1 hour! In case of cascading systems: units are interchangeable with another



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

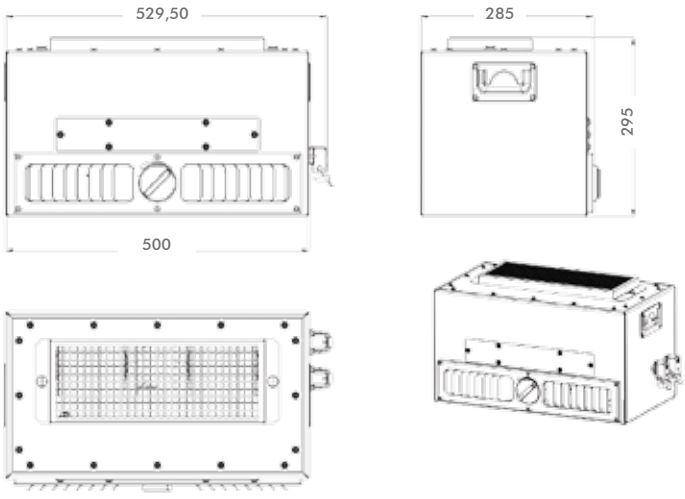


FHB-1 Floor Heater

Compact and light Unit with 4 kw Heating Performance

- 4 kW Heating performance @400-3-50 or 230-1-50
- Perfect addition to all our air conditioning systems (including the roof-mounted (RTU-1) and Combined Air conditioning and Power System (CAPS)
- Multiple units can be mounted in container.

- Heat performance regulated via a temperature sensor in the floor.
- Automatic operation: control from main air conditioning unit
- Manual: stand-alone operation via a switch is also possible



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Combined Air-Conditioning & Power Systems

Fischer Panda CAPS® is a highly sophisticated Combined Air-conditioner and Power System for container-based applications requiring electrical power, advanced ECU heating and air-conditioning capabilities. By fully utilising performance, management and self testing features, the CAPS® can maintain an optimal environment for sensitive electronic equipment and personnel to operate in.

Thermal management: An innovative coupling of generator cooling and ECU system can supply heat from three different sources: heat as "by product" from the generator cooling system, integrated diesel heating and heat produced electrically. The CAPS® 30 ECU has a cooling capacity of 2 x 8 kW.

Active performance management: Adjusts the air conditioner's output depending on the altitude. This will ensure efficient electrical supply to the shelter. Electrical systems are supplied the generator via multiple electrical outlets with isolation transformer protection. Upon loss grid power, the generator is automatically started and the supply switched to the generator.
This can also be done manually.

Advanced "built-in" test equipment: Designed for mobile command centers maintaining a heightened "operational readiness" and who are expecting disruption or total loss of the mains power grid. During periods of inactivity, the system can start and automatically accomplish system tests to ensure functioning correctly.

Dedicated Generator for ECU and Electrical Systems for Containers:

- High Performace
- Extremely low operating sound levels
- Compact design mounted on slides for easy access to components
- Water-cooling for engine and generator
- System heating sources can be used for preheating - increases efficiency
- Operation in extreme temperatures -46°C - +60°C
- Integrated electrical distribution cabinet
- Integrated fuel tank provides 12 hours at full load (auto refill from external source)
- Worldwide Service Network

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

External control unit allows all functions to be controlled from within the container

Quick release connectors allow the complete unit to be operational in a short period of time

Main Advantages:

- Complete system solution: single unit combining generator and ECU
- 1 contact person - 1 supplier - 1 price
- Modular system for container shelter system, highly adaptable

Rapid Setup:

- Quick release connectors simplify installation
- Cooling fluids pre-filled and tested before delivery
- Timesaving - no additional assembly work required

Easy to Maintain

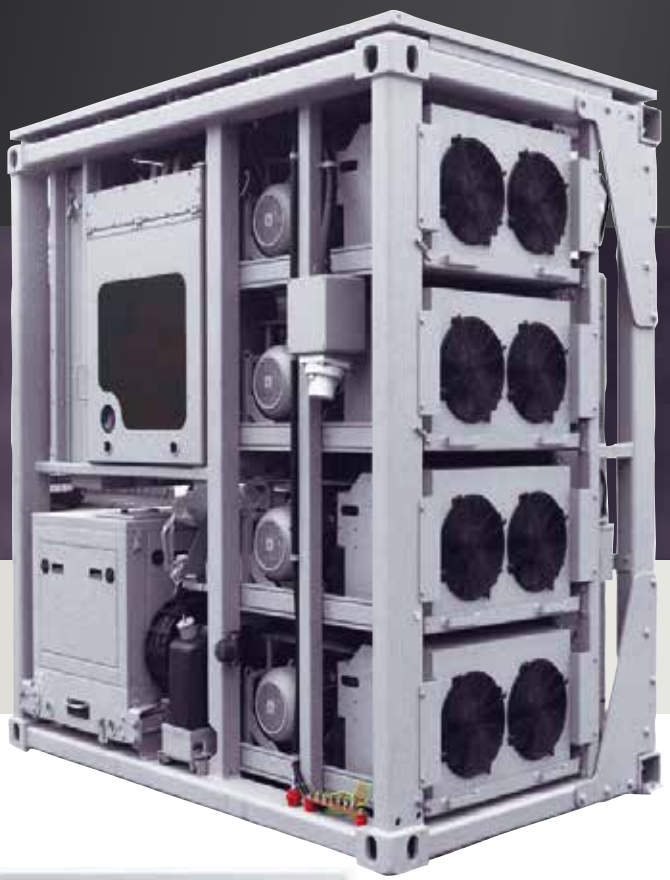
- "Rapid Replacement System" reduces repair time - assemblies can swapped as complete units
- Primary air conditioning module is fitted with quick release connectors
- Replacement parts are pre-filled and tested before delivery
- Possible to replace assembly without a technician "on site"

Sufficient electrical power for sensitive electronic equipment

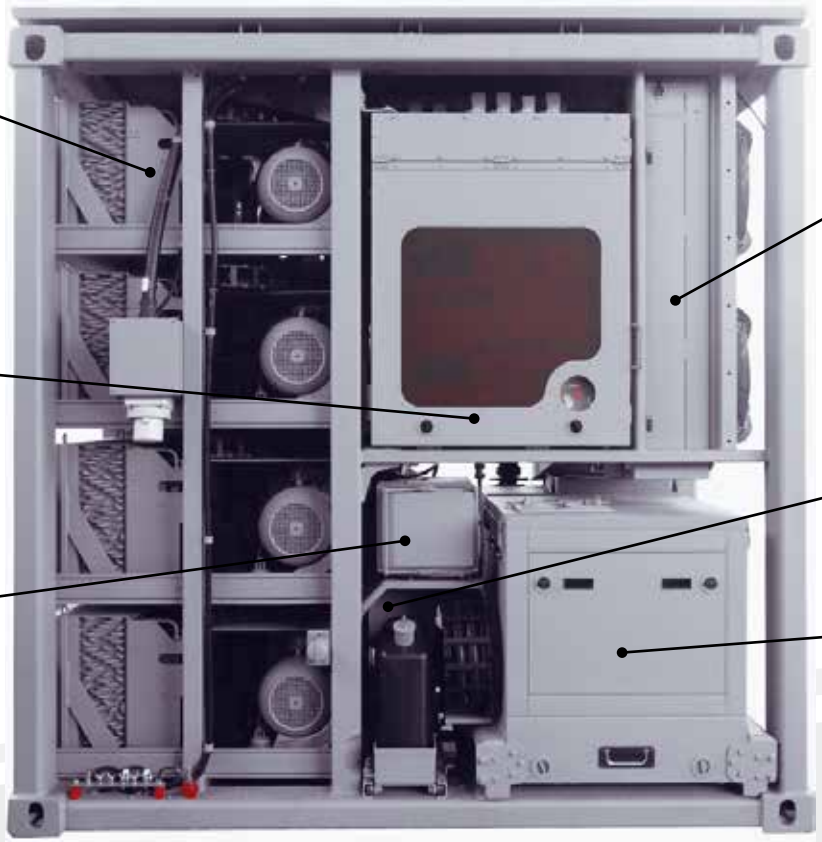
Blowers inside the container shelter ensure the correct distribution and air circulation

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



CAPS 60

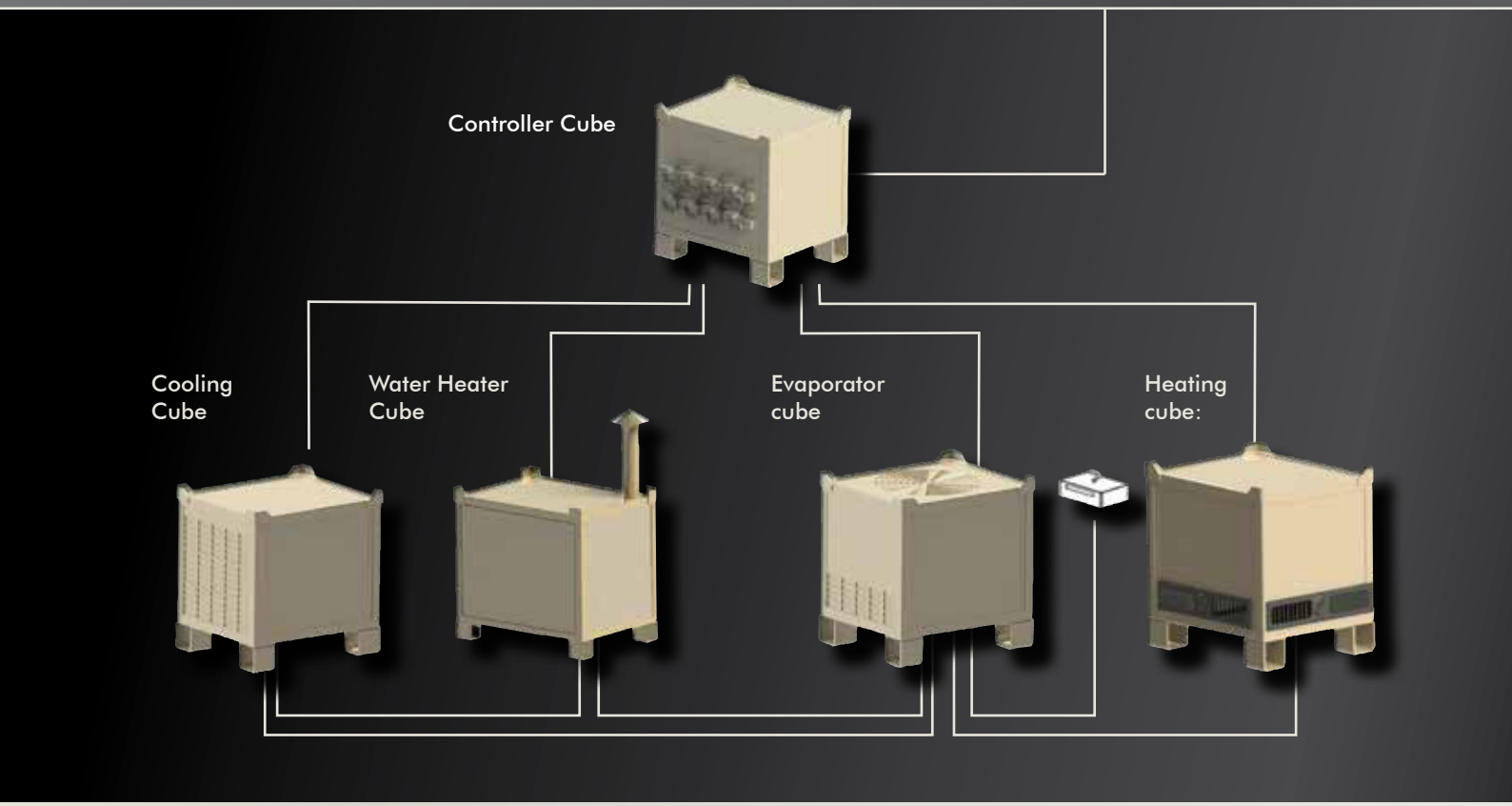


Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Generator	Panda CAPS 30 	Panda CAPS 60 
	Combined generator + air-con + NBC filter+ heating Built to comply with MIL STD 461E / MIL STD 810F Ambient temperature - 46°C up to + 60°C	Combined generator + air-con + NBC filter+ heating Built to comply with MIL STD 461E / MIL STD 810F Ambient temperature - 46°C up to + 60°C
Constant Output	up to 20 kW elec. / 2 x 8kW cooling at 3000m / +50°C	up to 60 kW elec. / 4 x 8kW cooling at 3000m / +50°C
Output Voltage	400 V 3-phase AC 50 Hz	400 V 3-phase AC 50Hz
Output Current	3x29 A	3x86A
Start System	24V Electrical	24V Electrical
Engine Manufacturer	Kubota	Mercedes
Engine Type	V 1505 T	OM602
Engine Cylinders	4-cylinder	5
Engine Operating Temp. Range	-32°C up to +50°C (other temperature ranges on request)	-32°C up to +50°C (other temperature ranges on request)
Fuel Types	F 34, F54, Standard automotive diesel fuel, kerosene, JP 8, JP 5, JET A	F 34, F54, Standard automotive diesel fuel, kerosene, JP 8, JP 5, JET A
Approx. Fuel Consumption [1]	2.7 - 7.1l / h (7-8 l/h fully loaded)	5.8 - 19.8 l/h
Fuel Supply	Internal (approx. 100 liters) with connections for an external supply source	Integrated fuel tank (470 liter capacity)
Frame / Mounting	Stackable frame with quick-release connections designed for rapid setup	Complete unit mounted in a frame
Cooling System	Integrated radiator and fans mounted for cooling	Integrated radiator and fans mounted for cooling
Instrumentation & Electrical	Features a fully external control unit for mounting within container. Early-warning alarm functions on sensors so operator can override according to operational state	Integrated electrical cabinet
Approx APU weight (dry)		approx. 3500kg

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



Mobile Air Conditioning Cubes

Mobile air condition cubes:

- Easy and quick set up
- Light weight
- Stackable frame

- Flexible positioning
- NEW! inverter driven compressors – low energy consumption
- Multi Voltage input

„ICS - intelligent connect system"

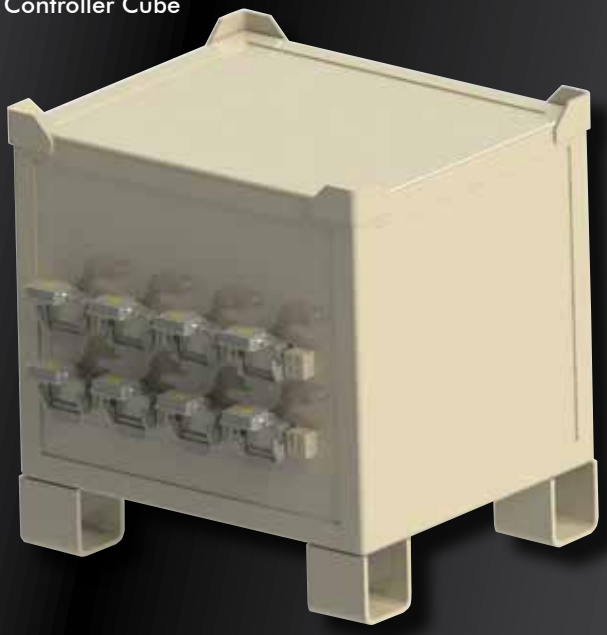
Connect what you want: The controller detects automatically which cubes are connected and controls them.

You have only to set your desired room temperature. Cooling, heating and ventilation is done automatically. Depending on the power requirements, the PLC senses all relevant parameters and controls (step-less) the fans, heater and compressor. You do not have to intervene!

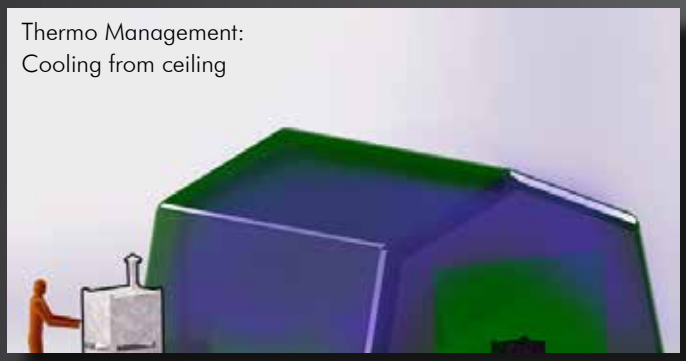
Complete System: Can be packed and stacked on a pallet

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

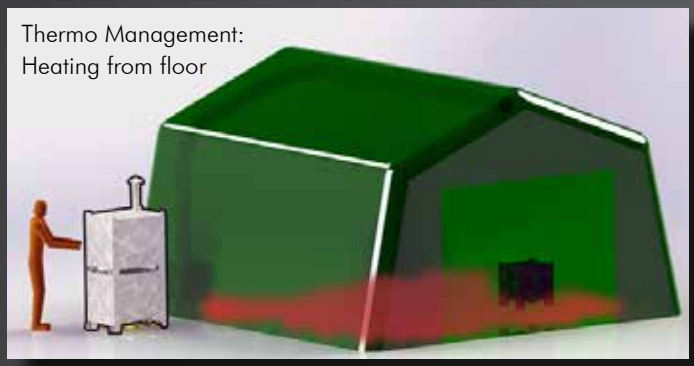
Controller Cube

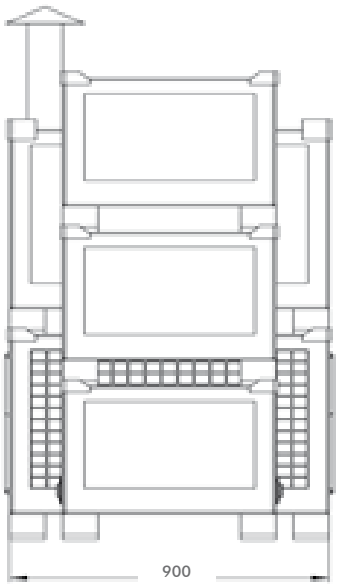


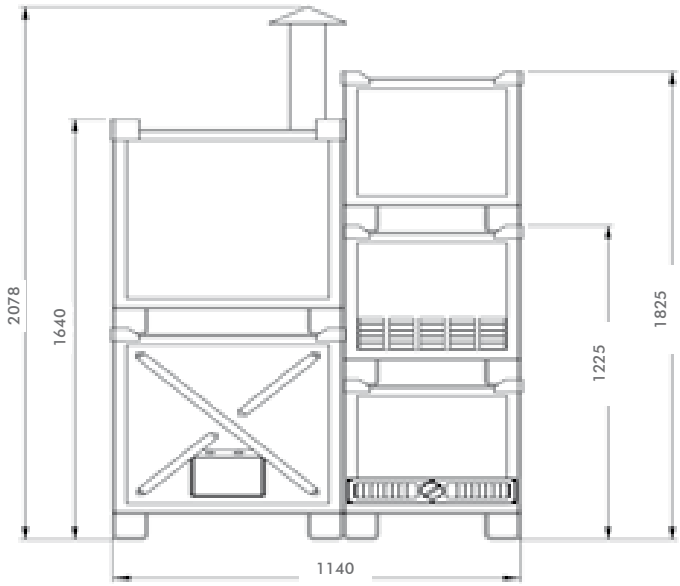
Thermo Management:
Cooling from ceiling

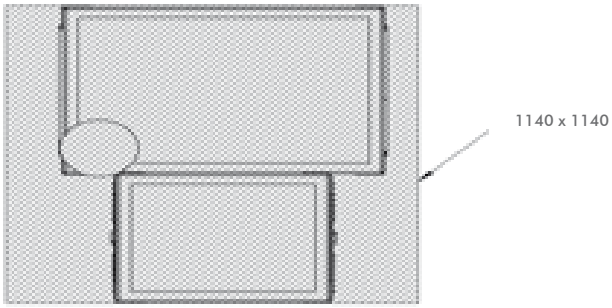


Thermo Management:
Heating from floor

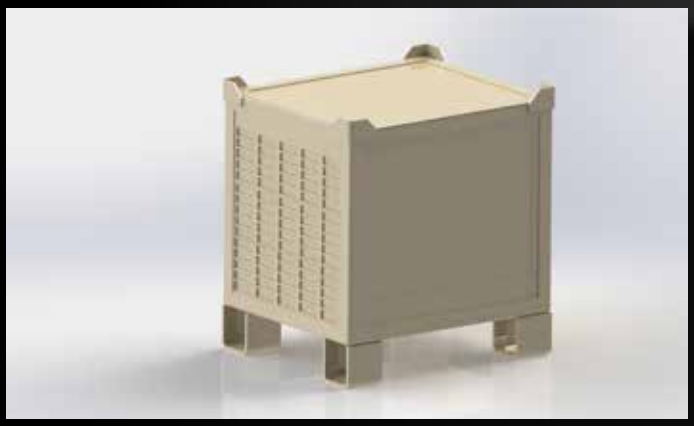


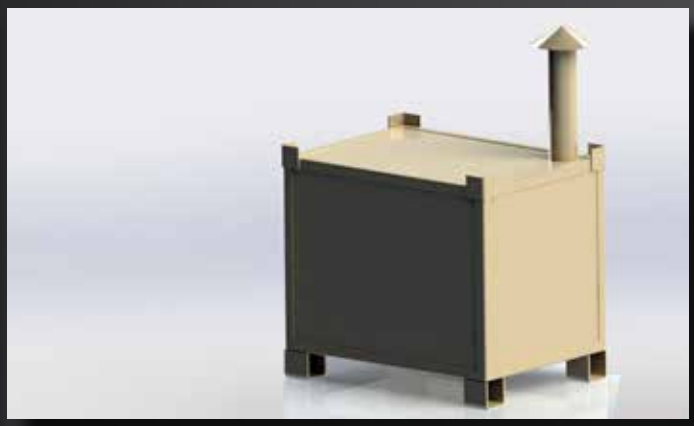






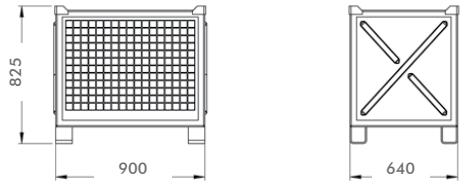
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com





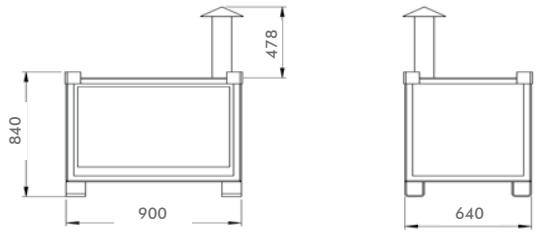
Cooling cube

Cooling Power	from 4 – 12 kW / 13.700 – 41.000 Btu/h
input voltage options*	230 V AC - 1 phase 400 V AC - 3 phase 24 / 48 / 110 / 150 / 300 V DC * other voltages on request
Cooling capacity	3 or 6 kW @ 24 V DC 4 or 8 kw @ 48/110/150 V DC 8 kW @ 300 V DC 8 or 12 kW @ 230 V AC - 1 phase 8 or 12 kW @ 400 V AC - 3 phase
Operation T°	-40 to +60 °C /-40 to +140 °F
Condenser fan	variable speed controlled
Compressor	NEW! full hermetic inverter drive
Weight	only 65 kg!
Frame	heavy duty, stackable
Coating	zinc plated
Standards	EMC according to MIL-461E shock vibration according to MIL-810F



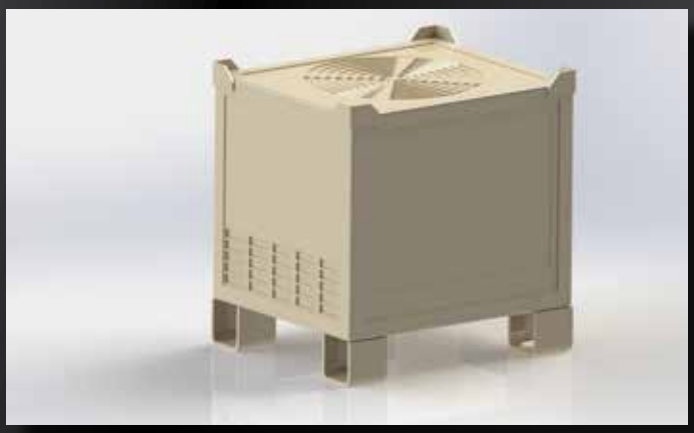
Water Heater cube

Heating Power	8, 10 or 12 kW / 27,31 or 41.000 Btu/h
input voltage options*	230 V AC - 1 phase 400 V AC - 3 phase 24 / 48 / 110 / 150 / 300 V DC * other voltages on request
Operation T°	down to -40 °C / -40 °F
Exhaust system	isolated, quick release System
Fuel heater	MIL-461E tested
Operation with	Diesel, F54, from external tank, quick release fuel couplings
Water hoses	with leak free quick coupling
Weight	approx. 50 kg!
Frame	heavy duty, stackable
Coating	zinc plated
Standards	EMC according to MIL-461E shock vibration according to MIL-810F



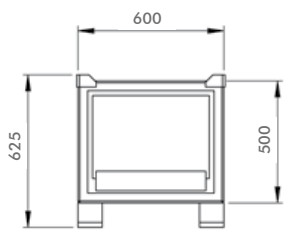
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com



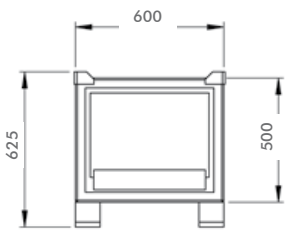
Evaporator cube

Cooling Power	8 or 12 kW/ 27.500 or 41.000 Btu/h
Operation T°	-40 to +60 °C /-40 to +140 °F
Evaporator fan	speed controlled, low noise!
Air flow	up to 2.000 cbm
Air filter	F6, exchangeable
controller	PLC
weight	only 45 kg
Frame	heavy duty, stackable



Heating cube

Heat Power (water)	up to 12 kW / 41.000 Btu/h
Heat power (electric)	5 kW / 17.000 Btu/h @ 400 V AC 3 phase
Operation T°	-40 to +60 °C /-40 to +140 °F
Evaporator fan	speed controlled, low noise!
Air filter	F6 long life, exchangeable
Weight	only 45 kg
Frame	heavy duty, stackable



Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com

ARMSTRONG Power

Fischer Panda®

Disclaimer:

The information contained here is to the best of our knowledge accurate at the date of publication. Please note that the data in this publication reflects the technical state at time of print. Dimensions apply for the sound insulation capsule only and do not include latches, fittings, etc. Additional room will need to be calculated for the installation to include hoses, cables and capsule mountings. Additional components or alternators may also affect capsule dimensions. Due to our policy of continual product development, we reserve the right to alter technical specifications without notice. All performance data relates to air and water temperatures of 20°C. Performance reduction (approx. 1% per 100m height and approx 2% per 5°C air temperature and approx. 1% per 1°C water temperature above 20°C)

Stand: 7. März 2014, 4:29 nachm.

Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com
Tel. No.: (+974) 446 82 830
Mobile: (+974) 555 23 964
e-mail.: sales@armstrongmachinery.com