

Technical data sheet Mobile air conditioning systems

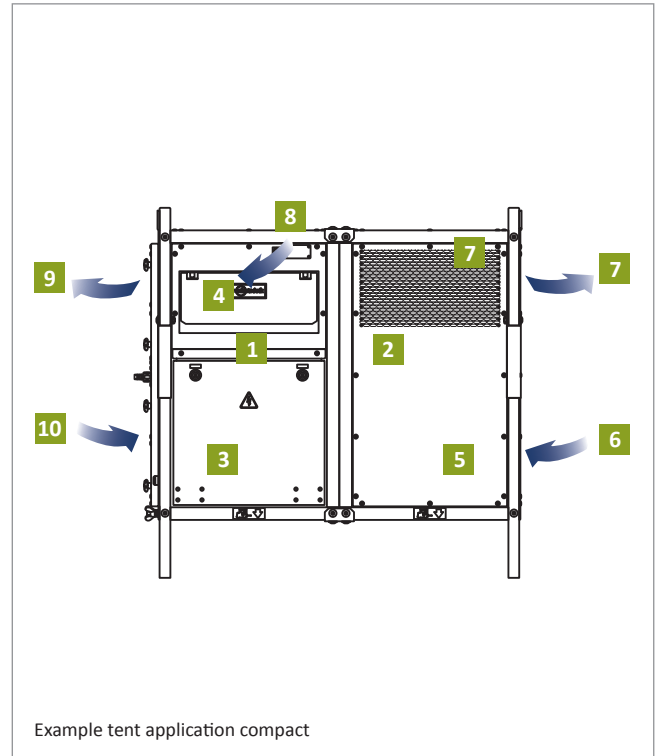
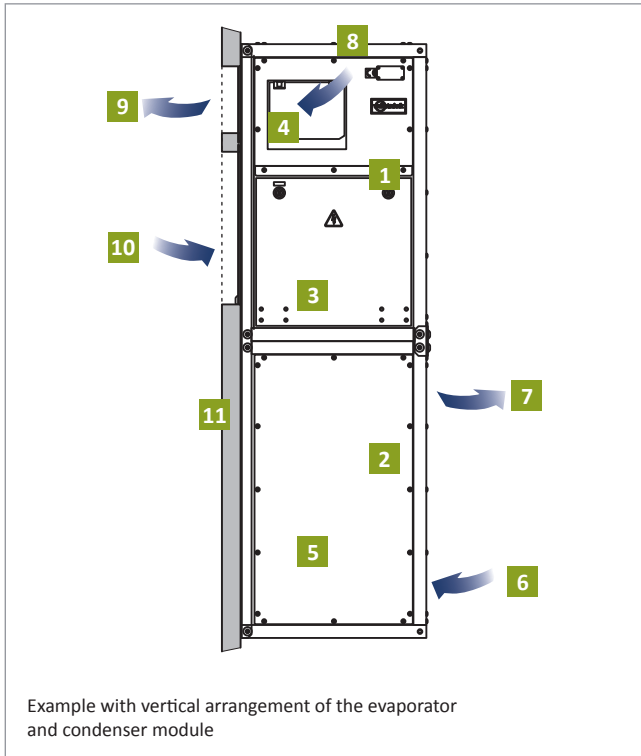


Module-R series

- Modular HVACs for tents and containers
- Complies with all relevant MIL-STD
- Energy efficient and noise optimized
- CAN-Bus network compatible controller

Standard types		Cooling capacity				
Application		5 kW/1.5 t	7 kW/2.0 t	10 kW/3.0 t	12 kW/3.5 t	15 kW/4.0 t
Container	vertical (V)	Type 5-C-V	Type 7-C-V	Type 10-C-V	Type 12-C-V	Type 15-C-V
	horizontal (H)	Type 5-C-H	Type 7-C-H	Type 10-C-H	Type 12-C-H	Type 15-C-H
	deep (D)	Type 5-C-D	Type 7-C-D	Type 10-C-D	Type 12-C-D	Type 15-C-D
	split (SP)	Type 5-C-SP	Type 7-C-SP	Type 10-C-SP	Type 12-C-SP	Type 15-C-SP
Tent	compact (C)	Type 5-T-C	Type 7-T-C	Type 10-T-C	Type 12-T-C	Type 15-T-C
	split (SP)	Type 5-T-SP	Type 7-T-SP	Type 10-T-SP	Type 12-T-SP	Type 15-T-SP

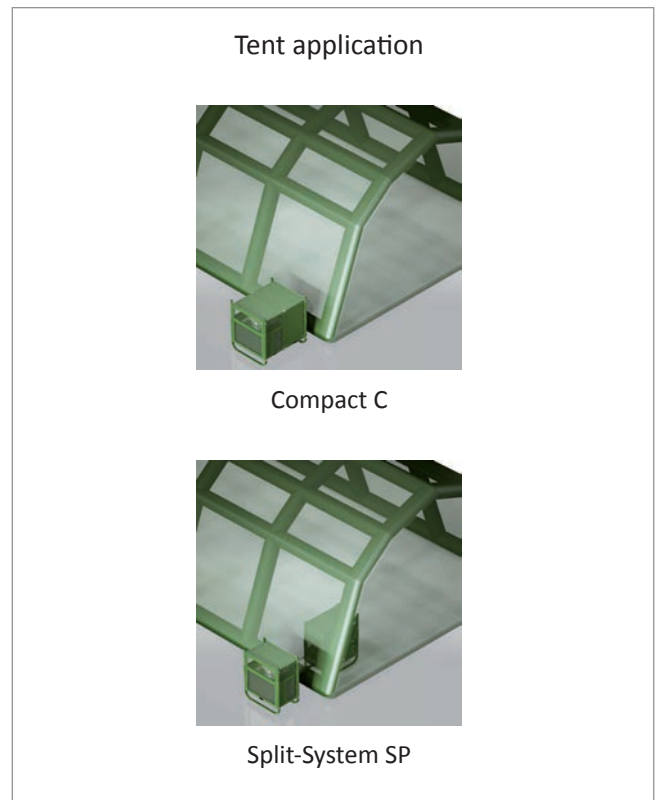
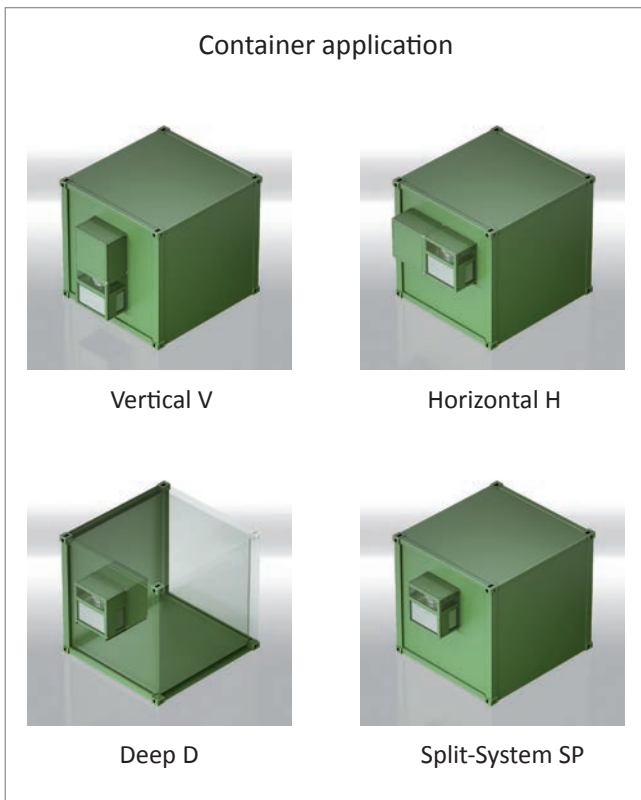
Schematic function



- 1** Evaporator module
- 2** Condenser module
- 3** Electric compartment
- 4** Fresh air filter
- 5** Compressor
- 6** Condenser air inlet

- 7** Condenser air outlet
- 8** Fresh air inlet
- 9** Supply air outlet
- 10** Indoor air inlet
- 11** Shelter wall

Variants of applications and arrangements



Technical data

		Module-R tent application						
Dimensions and weight								
	Type	5-T-C 7-T-C	5-T-SP 7-T-SP	10-T-C 12-T-C	10-T-SP 12-T-SP	15-T-C	15-T-SP	
Arrangement condenser/evaporator module		compact (C)	split (SP)	compact (C)	split (SP)	compact (C)	split (SP)	
External dimensions ¹⁾	width	mm	1070	500/500	1070	500/550	1450	700/740
	length	mm	680	680/685	880	880/885	880	860/885
	height	mm	970	970/970	1020	1020/1020	1120	1120/1120
Weight ²⁾	kg	180	105/80/25	215	115/105/30	290	150/135/35	
Min. service area in front of electric compartment	mm	500						
Min. free space for condenser air inlet	mm	80-100						
Performance data								
	Type	5-T-C 5-T-SP	7-T-C 7-T-SP	10-T-C 10-T-SP	12-T-C 12-T-SP	15-T-C 15-T-SP		
Cooling capacity ³⁾	kW/tons	5/1.5	7.0/2.0	10/3.0	12.0/3.5	15/4.0		
Heating capacity ⁴⁾	kW	5	5	7	7	10		
Supply air flow ⁴⁾	m ³ /h	1500	1500	2000	2000	2500		
Max. fresh air quantity		standard 100 m ³ /h; other quantity on request						
Operating temperature		-40 °C ... +55 °C; +60 °C on request						
Climate zones ⁵⁾		A1, A2, A3, B1, B2, B3, C0, C1						
Set point air temperature inside (standard value)		+18 °C ... +28 °C						
Consumption and connection data								
Max. power consumption	kW	5.3	5.3	7.6	8.7	10.6		
Rated power	kVA	5.6	6.6	8.7	11.8	11.8		
Power factor	cos phi	cos phi of 0,95 is available on request						
Max. rated current	A	9.4	10.3	13.8	15.7	19		
Filling quantity refrigerant	kg	3.5		4.5		9.7		
Power supply		3 PH, 400 V, 50 Hz ⁶⁾						
Power requirement		3 PH/N/PE; AC 400 V ±10%; 50 Hz						
Connection cable		5 G 2.5 mm ²				5 G 6 mm ²		
On site line fuse		16 A				32 A		
Return air filter		available on request				integrated in unit		

- 1) split variant: condenser module/evaporator module
 2) split variant: condenser module/evaporator module/accessories
 3) ambient +55°C, inside +35°C
 4) standard design
 5) according to STANAG 2895 and AECTP-230
 6) single phase on request
 ** customized to user requirements

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Module-R container application

5-C-V 7-C-V	5-C-H 7-C-H	5-C-D 7-C-D	5-C-SP 7-C-SP	10-C-V 12-C-V	10-C-H 12-C-H	10-C-D 12-C-D	10-C-SP 12-C-SP	15-C-V	15-C-H	15-C-D	15-C-SP
vertical (V)	horizontal (H)	deep (D)	split (SP)	vertical (V)	horizontal (H)	deep (D)	split (SP)	vertical (V)	horizontal (H)	deep (D)	split (SP)
510	510	1000	500/**	510	510	1000	500/**	710	710	1400	700/**
600	1200	600	600/**	800	1600	800	800/**	800	1600	800	800/**
1500	750	750	750/**	1600	800	800	800/**	1800	900	900	900/**
170	170	170	100/**	205	205	205	110/**	275	275	275	145/**

500

100

5-C-V 5-C-H 5-C-D 5-C-SP	7-C-V 7-C-H 7-C-D 7-C-SP	10-C-V 10-C-H 10-C-D 10-C-SP	12-C-V 12-C-H 12-C-D 12-C-SP	15-C-V 15-C-H 15-C-D 15-C-SP
5/1.5	7.0/2.0	10/3.0	12.0/3.5	15/4.0
5	5	7	7	10
1500	1500	2000	2000	2500

 standard 100 m³/h; other quantity on request

-40 °C ... +55 °C; +60 °C on request

A1, A2, A3, B1, B2, B3, C0, C1

+18 °C ... +28 °C

5.3	5.3	7.6	8.7	10.6
5.6	6.6	8.7	11.8	11.8

cos phi of 0,95 is available on request

9.4	10.3	13.8	15.7	19
3.5		4.5		9.7

 3 PH, 400 V, 50 Hz ⁶⁾

3 PH/N/PE; AC 400 V ±10%; 50 Hz

5 G 2.5 mm ²	5 G 6 mm ²
16 A	32 A

standard return air filter available on request

Standard features and options

	Standard feature	Options/additional devices
Components		
Compressor	<ul style="list-style-type: none"> single scroll type compressor 	<ul style="list-style-type: none"> soft starter for compressor start (low start-up current)
Supply air fan	<ul style="list-style-type: none"> integrated into the housing of the evaporator module supply air fan speed controlled 	<ul style="list-style-type: none"> variable fan types
Return air filter	<ul style="list-style-type: none"> standard for tent applications 	<ul style="list-style-type: none"> installed in the shelter wall opening for container applications
Fresh air volume	<ul style="list-style-type: none"> approx. 100 m³/h 	<ul style="list-style-type: none"> customized fresh air volume
Heating system	<ul style="list-style-type: none"> electrical heating in different sizes 	<ul style="list-style-type: none"> electrical heating with higher heating capacity custom-engineered fuel-powered heater
Installation for container application	<ul style="list-style-type: none"> brackets integrated robust sealing 	<ul style="list-style-type: none"> customized brackets
Air inlet/outlet interface (tent application)	<ul style="list-style-type: none"> air hoses in various sizes 	<ul style="list-style-type: none"> textile air distribution system for tents
Air distribution system (container application)	<ul style="list-style-type: none"> open outlet 	<ul style="list-style-type: none"> customized distribution system return air inlet grill
Cooling system		
Refrigerant	<ul style="list-style-type: none"> R134a 	<ul style="list-style-type: none"> environmental friendly GWP < 1000 on request
Condenser type	<ul style="list-style-type: none"> air cooled 	
Condenser fan	<ul style="list-style-type: none"> single, high-speed, speed controlled via the pressure in the frigde cuircuit 	
Condenser air outlet	<ul style="list-style-type: none"> on the front of the condenser module 	<ul style="list-style-type: none"> additional lateral outlet
Safety features	<ul style="list-style-type: none"> low/ high pressure shutdown 	
Construction		
Housing frame	<ul style="list-style-type: none"> stainless steal frame, powder coated 	
Lifting eyes	–	<ul style="list-style-type: none"> 4 x lifting eyes, 1 x each corner
Panels	<ul style="list-style-type: none"> solvent free, powder coated aluminium 	
External finish	<ul style="list-style-type: none"> RAL 6031 HR, powder coated 	<ul style="list-style-type: none"> other colours and paint systems available
Transportability	<ul style="list-style-type: none"> forklift transport marker 	<ul style="list-style-type: none"> wheels, equipment storage box on request
Stackability	<ul style="list-style-type: none"> only tent application 	
Control system		
Controller ¹⁾	<ul style="list-style-type: none"> weissdefence[®] control unit with CAN-BUS 	
Control panel	<ul style="list-style-type: none"> 6-key pad²⁾ 	<ul style="list-style-type: none"> colour display³⁾
Failure indication	<ul style="list-style-type: none"> indication by blinking-code LED 	<ul style="list-style-type: none"> failure text message and history
Operational data	<ul style="list-style-type: none"> operations mode 	<ul style="list-style-type: none"> detailed visualization of operational values
Service data	–	<ul style="list-style-type: none"> change of operation setup, customization of operational behavior
Full network capability	<ul style="list-style-type: none"> passive, fully connectable 	<ul style="list-style-type: none"> active, connectional with HVAC
Embedding in external CAN-Bus system	–	<ul style="list-style-type: none"> fully integrated with various functions

1)



2)



3)



Module-R series

weissdefence® air conditioners, type Module-R, are reliable and energy efficient, even under extreme operational conditions. A modular concept made of 3 different housing sizes for tents and containers meets all relevant military requirements and specification. Network compatible by CAN-Bus controller, Module-R type mobile HVAC units provide cooling capacity in the range of 5 to 15 kW (1.5-4.0 tons) with integrated electrical or Diesel heating available.

Key facts

- Reliable modular HVAC series for military hard and soft shelter
- Maximum cooling capacity at +55°C/131°F ambient temperature and higher
- Designed for extreme operational and climatic conditions
- Energy efficient and noise optimized by intelligent control system
- Network and communication capabilities by CAN-Bus controller
- Easy to maintain
- Complies with all relevant MIL-STD



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