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Roof-mounted Blue e+ cooling unit Integration solution VX25

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

Ease of use
Intuitive operation via touch display

Time savings
The cooling unit is easily pulled forwards to allow maintenance

Efficiency
High level of energy efficiency, also as an autonomous roof-mounted cooling unit.

Integration solution VX25 and Blue e+
- Cooling unit with 1.3 kW and Blue e+ technology with the dimensions W x H x D 800 x 2200 x 600 mm – integrated into the VX25 baying enclosure system
- No assembly outlay – the cooling unit, door limit switch and connection cabling are installed ready-to-connect
- State-of-the-art design – not a cooling unit built onto the enclosure

Excellent planning certainty
- The digital twin is available in the EPLAN Data Portal
- Dependable and efficient construction planning with EPLAN Pro Panel
- “Thermal Design Integration” can be used to produce a graphical display of exclusion zones dictated by ventilation requirements, the optimum climate control area, and any hot spots

Efficient roof-mounted solution
- Also available as an autonomous roof-mounted cooling unit for enclosures with minimum dimensions (W x D) 800 x 600 mm

Ready for Industry 4.0
- Intelligent interfaces and software
- Cooling units are easily incorporated into a wide range of IoT applications via the Rittal IoT interface (optional)
- This in turn facilitates new applications and smart services

Efficient and flexible
- High energy efficiency with innovative hybrid technology
- Maximum flexibility, thanks to unique multi-voltage capability
- Longer service life of components with component-friendly cooling
- Simple operation with touch display and intelligent interfaces

Further information can be found at:
http://www.rittal.com

HIGH EFFICIENCY – **THE BLUE E+ PRINCIPLE**

Benefit from this revolutionary energy efficiency with innovative hybrid technology.

VX25 Blue e+ integration solution

Accessories for climate control Cat. 35, page 454 **RiDiag software** Cat. 35, page 474 **Roof-mounted Blue e+ cooling unit** Page 5

Benefits:
- The perfect symbiosis of the VX25 baying enclosure system and Blue e+ cooling unit
- The cooling unit is easily pulled out forwards for maintenance purposes
- No assembly work required – the cooling unit, door-operated switch and connection cabling are installed ready-to-connect
- Cooling unit offers all the benefits of Blue e+ Technology

Temperature control:
- e+ controller (factory setting +35 °C)

Protection category IP to IEC 60 529:
- External circuit IP 54 with pleated filter
- Internal circuit IP 54 with pleated filter

Supply includes:
- Basic enclosure VX25, door, roof, rear panel, side panels, gland plates, mounting plate
- Lock: 3 mm double-bit
- Integral door-operated switch
- Integral Blue e+ cooling unit 1.5 kW
- Electric condensate evaporator
- Pleated filter

Approvals:
- UL + cUL - NITW

Output class 1300 W

Model No.		Packs of	**3185.030**	Page
Material	Sheet steel		■	
Colour	RAL 7035		■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			**1.3**	
Total cooling output 50/60 Hz L35 L35 kW			1.3 / 1.3	
Rated operating voltage V, ~, Hz			110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	
Width mm			800	
Height mm			2200	
Depth mm			600	
Mounting plate width mm			699	
Mounting plate height mm			1696	
Rated output kW			0.75	
Power consumption P_{el} 50/60 Hz L35 L35 kW			0.67 / 0.67	
Power consumption P_{el} 50/60 Hz L35 L50 kW			0.61 / 0.61	
Operating temperature range			-20 °C...+55 °C	
Setting range			+20 °C...+50 °C	
Storage temperature range			-40 °C...+70 °C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.04	
Seasonal energy efficiency ratio (SEER) 50/60 Hz			5.3	
Refrigerant g			R134a, 590	
Permissible operating pressure (p. max.) bar			24	
Weight kg			180.0	
Accessories				
IoT interface		1 pc(s).	3124.300	6
Temperature sensor		1 pc(s).	3124.400	Cat. 35, 470
RiDiag		1 pc(s).	3159.300	Cat. 35, 474
Display frame		1 pc(s).	3355.700	7
Pleated filter		3 pc(s).	3285.700	7
Baying plate		1 pc(s).	3355.710	7
LED system light			see page	Cat. 35, 750

Roof-mounted Blue e+ cooling unit

Accessories for climate control Cat. 35, page 454 **Therm software** Cat. 35, page 474 **RiDiag software** Cat. 35, page 474

Benefits:
- Average 75% energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

Temperature control:
- e+ controller (factory setting +35 °C)

Protection category IP to IEC 60 529:
- External circuit IP 54 with pleated filter
- Internal circuit IP 54 with pleated filter

Supply includes:
- Roof-mounted Blue e+ cooling unit
- Pleated filter
- Fully wired ready for connection
- Assembly parts

Note:
- Only suitable for mounting on enclosures with minimum dimensions (W x D) 800 x 600 mm

Approvals:
- UL + cUL - FTTA
- UR + cUR - ACVS2/8
- Tested safety GS

Output class 1300 W

Model No.		Packs of	**3185.730**	Page
Material	Sheet steel		■	
Colour	RAL 7035		■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			**1.3**	
Total cooling output 50/60 Hz L35 L35 kW			1.3 / 1.3	
Rated operating voltage V, ~, Hz			110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	
Width mm			700	
Height mm			308	
Depth mm			560	
Rated output kW			0.75	
Power consumption P_{el} 50/60 Hz L35 L35 kW			0.67 / 0.67	
Power consumption P_{el} 50/60 Hz L35 L50 kW			0.61 / 0.61	
Operating temperature range			-20 °C...+55 °C	
Setting range			+20 °C...+50 °C	
Storage temperature range			-40 °C...+70 °C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.04	
Seasonal energy efficiency ratio (SEER) 50/60 Hz			5.3	
Refrigerant g			R134a, 590	
Permissible operating pressure (p. max.) bar			24	
Weight kg			38.0	
Accessories				
IoT interface		1 pc(s).	3124.300	6
RiDiag		1 pc(s).	3159.300	Cat. 35, 474
Display frame		1 pc(s).	3355.700	7
Pleated filter		3 pc(s).	3285.700	7
Electrical condensate evaporation		1 pc(s).	3355.720	8
Temperature sensor		1 pc(s).	3124.400	Cat. 35, 470
Door-operated switch		1 pc(s).	4127.010	Cat. 35, 755

IoT interface

The IoT interface is used to link Rittal components such as Blue e+ cooling units, Blue e+ chillers, smart monitoring systems etc. to the customer's own monitoring and/or energy management systems. Data may be integrated both horizontally and vertically into data collectors and processors, to allow the long-term logging and evaluation of device data, statuses and system messages.

Benefits:
- The IoT interface is middleware, whose interfaces allow a variety of devices and systems to communicate with one another. The data can then be forwarded into superordinate systems.
- Central element for the intelligent networking of Rittal components
- Up to 5 IoT interfaces may be connected in series
- Simple connection of up to two Blue e+ cooling units or chillers
- Compatible with up to 32 CMC III sensors and the Smart monitoring system

Material:
- Plastic to UL 94-V0

Colour:
- RAL 7016

Protection category IP to IEC 60 529:
- IP 20

Supply includes:
- IoT interface
- USB cable (USB-A connector on micro-USB-B connector)
- Angle bracket for Blue e+ cooling unit

Note:
- The IoT interface is only supported by Blue e+ cooling units from firmware version 1.11.0 or above. If applicable, update the firmware using the RiDiag III software (3159.300).

Assembly

- The IoT interface can be secured on a 35 x 7.5 top hat rail to DIN EN 60715 using a spring-loaded metal clip, or to the rear of a Blue e+ cooling unit using the angle bracket.

W x H x D mm	18 x 117 x 120
For	Blue e+ cooling units Blue e+ chillers Smart Monitoring System CMC III sensors
Operating temperature range	+0 °C...+70 °C
Protocols	OPC-UA SNMPv1 SNMPv2c SNMPv3 Modbus/TCP TCP/IPv4 TCP/IPv6 Radius Telnet SSH FTP SFTP HTTP HTTPS NTP DHCP DNS SMTP Syslog LDAP
Interfaces	1 x Micro USB type B (device) for USB 2.0 1 x Micro-SD memory card slot for SD 2.0 1 x USB 2.0 high-speed functions (EHCI) 1 x acknowledgement button 1 x push-in spring connection terminal for NTC sensor 2 x RJ45 jack for RS 485 interface (climate control unit interface)
Network interface	Ethernet IPv4/IPv6 Ethernet to IEEE 802.3 via 10BASE-T, 100BASE-T and 1000BASE-T
Type of electrical connection	Push-in spring connection terminal (24 V DC)
Packs of	1 pc(s).
Model No.	**3124.300**

Display frame

for Blue e+ roof-mounted cooling unit and VX25 Blue e+ integration solution
The display frame allows the touch display of the roof-mounted cooling unit Blue e+ or the VX25 Blue e+ integration solution to be positioned in the enclosure door.

Benefits:
– For positioning the display at the optimum operator height

Material:
– Plastic

Colour:
– RAL 7016

Protection category IP to IEC 60 529:
– IP 54

Supply includes:
– Display frame
– Blanking cover
– Assembly parts and sealing material

To fit Model No.	W x H x D mm	Packs of	**Model No.**
3185.030/ 3185.730	316 x 118 x 27.5	1 pc(s).	**3355.700**

Pleated filter

for Blue e+ roof-mounted cooling unit and VX25 Blue e+ integration solution
To achieve a protection category of IP 54 with roof-mounted cooling unit Blue e+ and VX25 Blue e+ integration solution.

Material:
– Non-woven fabric

Filter class to DIN EN 779:
– G4

To fit Model No.	W x H x D mm	Filter class to DIN EN 779	Packs of	**Model No.**
3185.030/ 3185.730	158 x 652 x 15	G4	3 pc(s).	**3285.700**

Baying plate

for VX25 Blue e+ integration solution
The baying plate guarantees a protection category of IP54 when baying the VX25 Blue e+ integration solution to a 2,000 mm high, 600 mm deep enclosure.

Material:
– Sheet steel

Colour:
– Textured RAL 7035

Supply includes:
– Baying plate
– Cross member
– Assembly parts and sealing material

To fit Model No.	W x H x D mm	Packs of	**Model No.**
3185.030	600 x 200 x 17	1 pc(s).	**3355.710**

Electrical condensate evaporation

for Blue e+ roof-mounted cooling units
Tool-free mounting of the condensate evaporator on the underside of the roof-mounted Blue e+ so that it is not visible from the outside. Any condensation is evaporated and emitted to the ambient air via the air exhaust of the cooling unit.

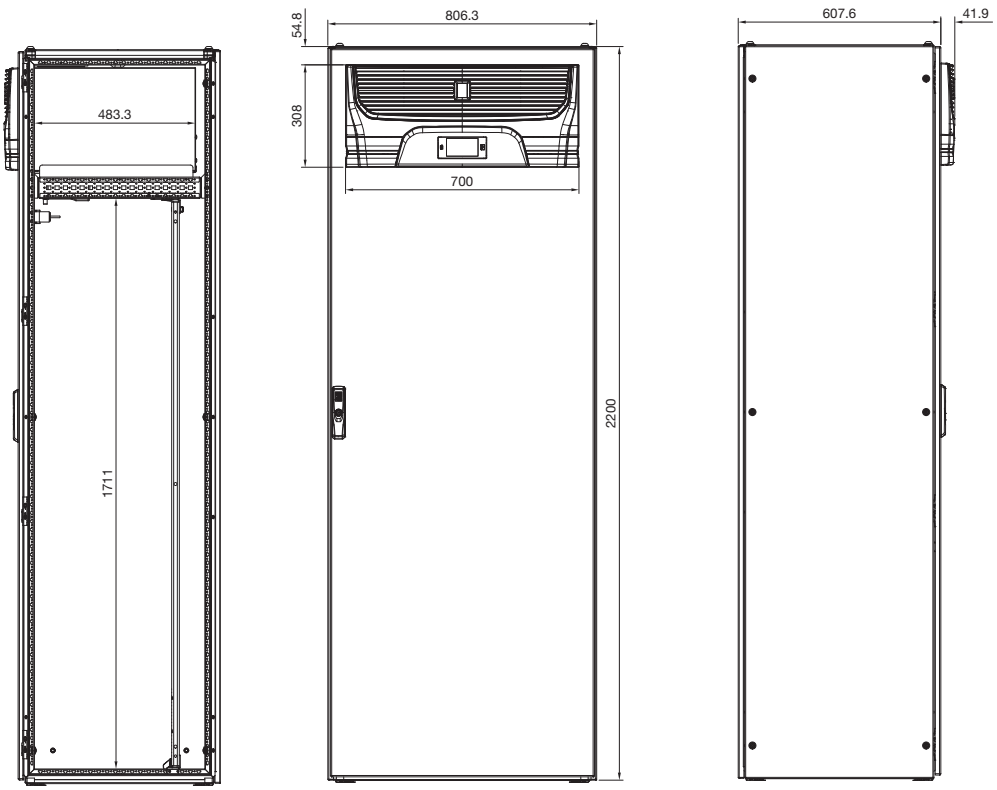
Material:
– Plastic

Colour:
– RAL 9005

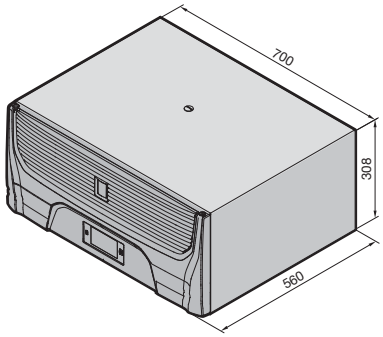
Supply includes:
– Electrical condensate evaporation
– Shipping brace screw
– Entry grommet

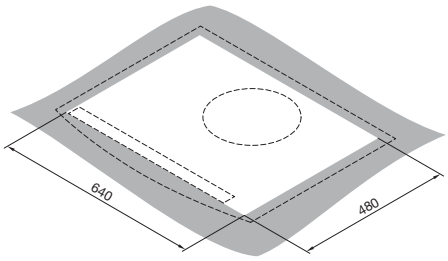
To fit Model No.	W x H x D mm	Rated operating voltage V (DC)	Operating temperature range	Evaporation performance	Packs of	**Model No.**
3185.730	89 x 121 x 158	380	+5 °C...+60 °C	100 ml/h	1 pc(s).	**3355.720**

VX25 Blue e+ integration solution

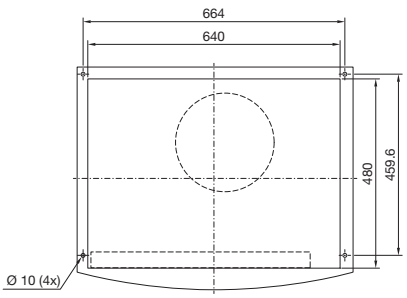


Roof-mounted Blue e+ cooling unit





Mounting cut-out

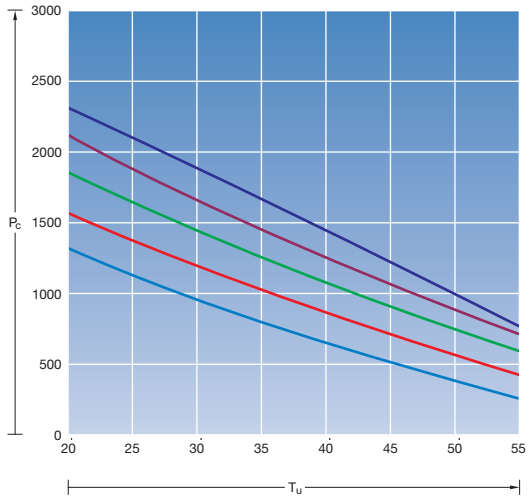


Note:
Only suitable for mounting on enclosures with minimum dimensions 800 x 600 (W x D).

Characteristic curves

Output class 1300 W (110 – 240 V, 1 ~, 50 – 60 Hz / 380 – 480 V, 3 ~, 50 – 60 Hz)

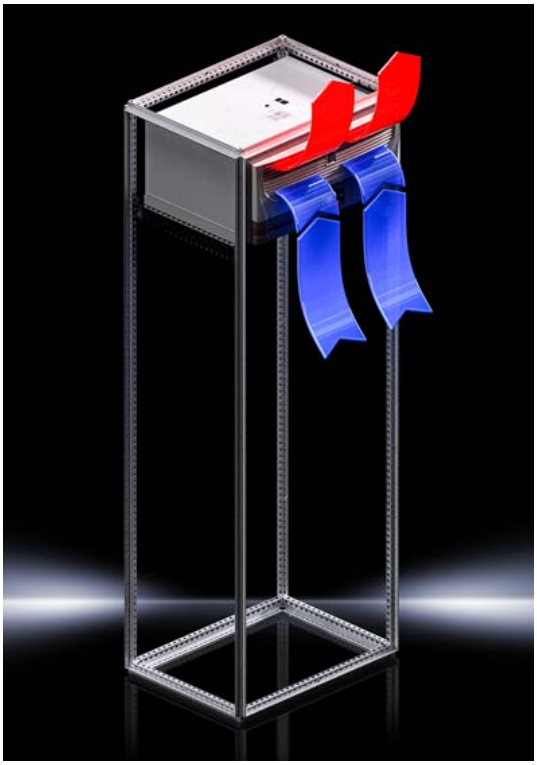
1.3 kW
SK 3185.030/3185.730



Enclosure internal temperature
- T_i = 45°C
- T_i = 40°C
- T_i = 35°C
- T_i = 30°C
- T_i = 25°C

P_c = Total cooling output [W]
T_u = Ambient temperature [°C]

External circuit

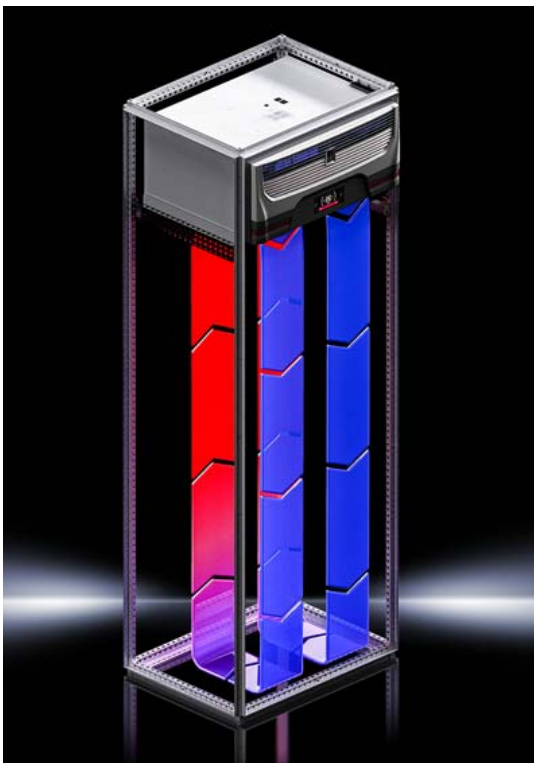


Maximum flexibility
- The ambient air is drawn in and expelled at the front of the cooling unit.
- This means there is no need to observe any minimum distances from adjacent devices or walls.

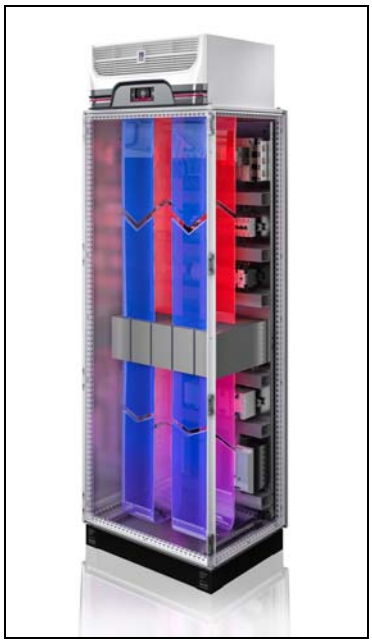
Flexible baying – no minimum distances to the left or right required

Flexible installation location – no minimum distances at the top or rear required

Internal circuit



Optimum air circulation
- The cooled air is expelled in the front section of the enclosure
- In this way, the cold air flows around and cools other components such as frequency converters



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