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► **World's first – The  principle**

**New output class
1600 W**



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The whole is more than the sum of its parts

The same is true of “Rittal – The System.” With this in mind, we have bundled our innovative enclosure, power distribution, climate control and IT infrastructure products together into a single system platform. Complemented by our extensive range of software tools and global service, we create unique added value for trade and industry: Production plant, test equipment, facility management and data centres. In accordance with our simple principle, “Faster – better – everywhere”, we are able to combine innovative products and efficient service to optimum effect.

Faster – with our “Rittal – The System.” range of modular solutions, which guarantees fast planning, assembly, conversion and commissioning with its system compatibility.

Better – by being quick to translate market trends into products.
In this way, our innovative strength helps you to secure competitive advantages.

Everywhere – thanks to global networking:

- 13 production facilities with almost 250,000 m² production space worldwide
- 58 subsidiaries
- Around 90 warehouse facilities with more than 180,000 pallet locations and over 250,000 m² storage space worldwide

IT INFRASTRUCTURE

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Rittal – The System.

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World's first

The Blue e+ cooling unit series – the ultimate in efficiency. Worldwide.

The principle:

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

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Rittal climate control/Wall-mounted cooling units Blue e+

The **e+** principle

Revolutionary energy efficiency with innovative hybrid technology

Unbelievably efficient

- Let hybrid technology take your cooling units' energy efficiency to a whole new level
- Active cooling circuit with speed-regulated components for demand-based cooling
- Integral heat pipe for passive cooling dissipates heat from the enclosure as soon as the ambient temperature falls below the setpoint

Transparent efficiency comparisons

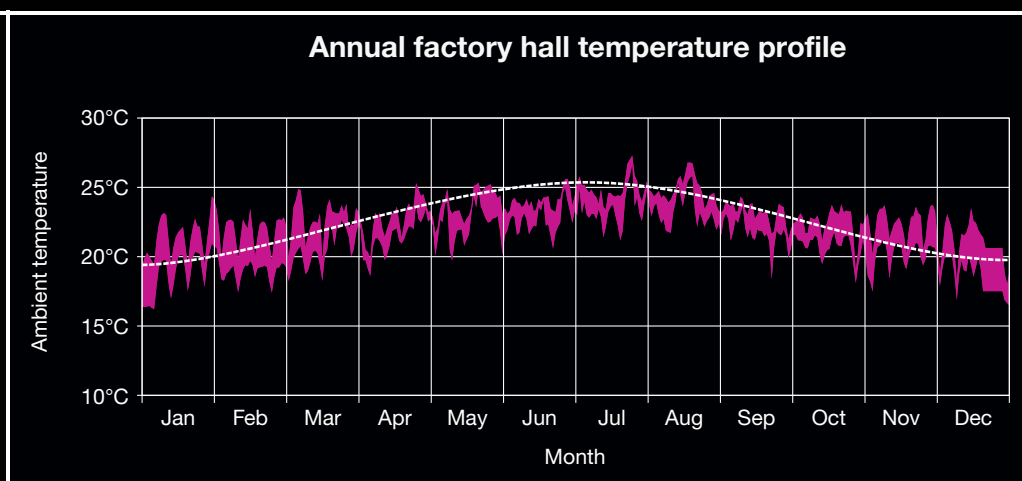
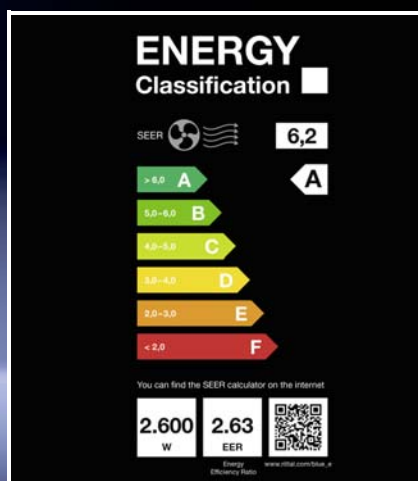
- Energy Efficiency Ratio:
The standardised efficiency ratio
- Seasonal Energy Efficiency Ratio:
The seasonal efficiency ratio for actual energy consumption

Amazingly economical

- Average 75% energy savings
- Component-friendly cooling for a longer service life
- A constant temperature inside the enclosure is ensured – with three control modes
- High operational reliability

Easier to calculate

- Determine your energy savings with the efficiency calculator
- TCO calculation includes all costs arising in the product's lifecycle
- Precise amortisation calculation



Rittal specifies the SEER to indicate the actual efficiency of a cooling unit, since a precise calculation must also consider the seasonal temperature variation. The standard point for determining the EER does not make allowance for actual fluctuations in hall temperatures.



The **e+** principle

Simple operation with touch display and intelligent interfaces

Get information faster

- Fast device analysis with RiDiag software via the USB interface
- Remote monitoring via Ethernet in conjunction with the IoT interface

Blue e+ app

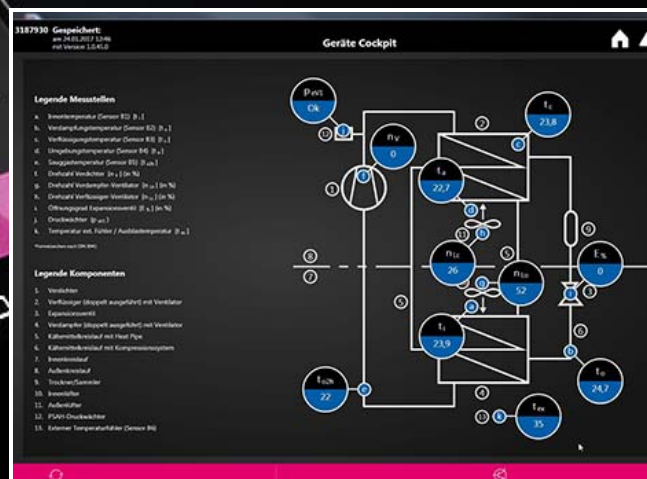
- Contactless information exchange and rapid, direct on-site analysis via an NFC interface
- Simple repair, maintenance and spare parts enquiries may be sent directly via your smart-phone
- Save device data directly on the device

Easier to operate

- Fast parameterisation, data reading and plain-text system messages on the intelligent, multi-lingual, industrial-grade display

IoT interface

- For linking Blue e+ cooling units and Blue e+ chillers to the customer's own monitoring, energy management and/or superordinate systems
- Analysis and parametrisation
- Device data can be supplied in most standard protocols
- Generate your own dashboards and analyses
- Attaches to the top hat rail or to the cooling unit itself





The **e+** principle

Versatility through standard assembly

Easy assembly

- One version for external mounting, partial internal mounting and full internal mounting
- One mounting cut-out for external mounting, partial internal mounting and full internal mounting in multiple output categories
- Maintenance-friendly, tool-free filter mat replacement

Fast assembly

- Handle for convenient transport and positioning
- Mounting clip as securing aid
- Eyebolts for easy mounting

Maximum flexibility with unique multi-voltage capability

- One unit for all voltages and networks, suitable for worldwide use thanks to inverter technology:
 - 110 – 240 V, 1~, 50 – 60 Hz
 - 380 – 480 V, 3~, 50 – 60 Hz

International approvals and certifications

- cULus Listed
- EAC
- TÜV Nord GS
- TÜV Nord-tested output measurement
- cULus FTTA



Wall-mounted cooling units Blue e+



Accessories for climate control Page 14 **Therm software** Cat. 35, page 474 **RiDiag software** Page 15

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)

Material:

- Sheet steel

Colour:

- RAL 7035

Protection category IP to IEC 60529:

- Internal circuit IP 55

Supply includes:

- Assembly parts
- Fully wired ready for connection (plug-in terminal strip)

Note:

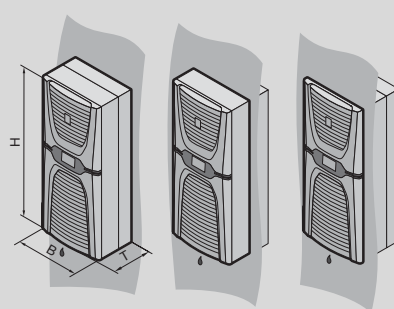
- Please observe the mounting instructions.

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet



Output class 1600 W

Model No.	Packs of	3185.830	Page
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		1.6	
Total cooling output 50/60 Hz L35 L35 kW		1.6 / 1.6	
Total cooling output 50/60 Hz L35 L50 kW		1.2 / 1.2	
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	
Width (B) mm		400	
Height (H) mm		950	
Depth (T) mm		310	
Rated output kW		0.62	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.54 / 0.54	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.61 / 0.61	
Operating temperature range		-20°C...+60°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		3.05	
Seasonal energy efficiency ratio (SEER) 50/60 Hz L35 L35		6.4	
Refrigerant g		R134a, 750	
Permissible operating pressure (p. max.) bar		24	
Air throughput of fans (unimpeded air flow), internal circuit/external circuit m³/h		700 / 895	
Weight kg		30.5	
Accessories			
Filter mats	3 pc(s).	3285.800	14
Metal filters	1 pc(s).	3285.810	14
Temperature sensor	1 pc(s).	3124.400	14
Door-operated switch	1 pc(s).	4127.010	Cat. 35, 755

Wall-mounted cooling units Blue e+



Accessories for climate control Page 14 Therm software Cat. 35, page 474 RiDiag software Page 15

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
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- Intuitive operation due to touch display and intelligent interfaces

Temperature control:

- e+ controller (factory setting +35°C)

Material:

- Sheet steel

Colour:

- RAL 7035

Protection category IP to IEC 60529:

- Internal circuit IP 55

Supply includes:

- Assembly parts
- Fully wired ready for connection (plug-in terminal strip)

Note:

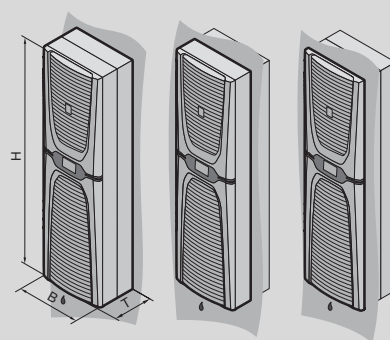
- Please observe the mounting instructions.

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet



Output class 2000 – 6000 W

Model No.	Packs of	3186.930	3187.930	3188.940	3189.940	Page
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		2	2.6	4.2	5.8	
Total cooling output 50/60 Hz L35 L35 kW		2 / 2	2.6 / 2.6	4.2 / 4.2	5.8 / 5.8	
Total cooling output 50/60 Hz L35 L50 kW		1.29 / 1.29	1.82 / 1.82	3.02 / 3.02	4.2 / 4.2	
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	380 - 480, 3~, 50/60	380 - 480, 3~, 50/60	
Width (B) mm		450	450	450	450	
Height (H) mm		1600	1600	1600	1600	
Depth (T) mm		294	294	393	393	
Rated output kW		0.73	1.05	1.3	2.2	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.57 / 0.57	0.99 / 0.99	1.21 / 1.21	2.2 / 2.2	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.6 / 0.6	0.94 / 0.94	1.28 / 1.28	2.2 / 2.2	
Operating temperature range		-20°C...+60°C	-20°C...+60°C	-20°C...+60°C	-20°C...+60°C	
Setting range		+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		3.5	2.63	3.46	2.64	
Seasonal energy efficiency ratio (SEER) 50/60 Hz L35 L35		8.1	6.2	8.1	6.2	
Refrigerant g		R134a, 1150	R134a, 1150	R134a, 1750	R134a, 1750	
Air throughput of fans (unimpeded air flow), internal circuit/external circuit m³/h		1250 / 1250	1250 / 1250	2300 / 2300	2300 / 2300	
Weight kg		55.2	55.2	72.4	72.4	
Note on Model No.		–	–	Full installation not possible	Full installation not possible	

Accessories

Filter mats	3 pc(s).	3285.900	3285.900	3285.900	3285.900	14
Metal filters	1 pc(s).	3285.910	3285.910	3285.910	3285.910	14
Temperature sensor	1 pc(s).	3124.400	3124.400	3124.400	3124.400	14
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	Cat. 35, 755

Accessories for climate control



Filter mats

for cooling units, air/air heat exchangers and chillers

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

Benefits:

- Temperature-resistant from -40°C...+80°C

Material:

- Open-celled polyurethane foamed plastic

To fit Model No.	for cooling units	for chillers	W x H x D mm	Packs of	Model No.
3185.830	■	–	360 x 297 x 10	3 pc(s).	3285.800
3186.930/3187.930/ 3188.940/3189.940/ 3334.400	■	■	380 x 358 x 10	3 pc(s).	3285.900



Metal filters

Particularly when cooling units are used in dusty and oily environments, it is advisable to use washable metal filters. If air or steam condenses on the metal surfaces, any particles present will adhere to the metal, and can easily be washed out with water or grease-dissolving detergents.

Material:

- Aluminium

To fit Model No.	for cooling units	for chillers	W x H x D mm	Packs of	Model No.
3185.830	■	–	320 x 280 x 10	1 pc(s).	3285.810
3186.930/3187.930/ 3188.940/3189.940/ 3334.400	■	■	380 x 358 x 10	1 pc(s).	3285.910



Temperature sensor

for Blue e+ cooling units, Blue e+ chillers

NTC sensor to regulate Blue e+ cooling units according to an individual measurement point within the enclosure (control based on an external sensor), and according to the cold air outlet from the cooling unit inside the enclosure (control based on outlet temperature). For chillers: Differential control is used if it is necessary to regulate the temperature of the medium depending on the ambient temperature (positive or negative). For this, the temperature sensor needs to be positioned near the Blue e+ chiller.

Supply includes:

- External sensor with connection cable (length 2.5 m)

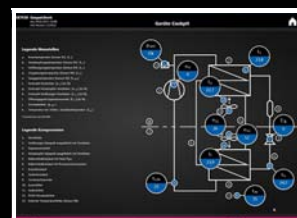
Packs of	Model No.
1 pc(s).	3124.400

Accessories for climate control

RiDiag

Software for the parameterisation, diagnosis and analysis of Rittal cooling units.

For	Blue e+ chillers Blue e+ cooling units
Design	RiDiag III
Product-specific scope of supply	Full, downloadable version in German and English. Release of additional functions with chargeable licence under Model No. 3159.300
Packs of	1 pc(s).
Model No.	3159.300



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.

Communication protocols:

SNMPv1, SNMPv2c, SNMPv3, OPC-UA, Modbus/TCP, CAN bus, Profinet

Network protocols:

Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP, RADIUS

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.

Material:

- Plastic to UL 94-V0

Colour:

- RAL 7016 Anthracite grey

Protection category IP to IEC 60529:

- IP 20

Supply includes:

- Connection cable (1 m) with RJ 45 connector
- Angle bracket for Blue e+ cooling unit



Assembly instruction:

- The IoT interface can be secured on a 35 x 7.5 top hat rail to DIN EN 60 715 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	SNMP OPC-UA Modbus/TCP CAN bus Profinet
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 3-pole 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	3-pole push-in spring connection terminal (24 V DC)
Packs of	1 pc(s).
Model No.	3124.300

Wall-mounted cooling units Blue e+

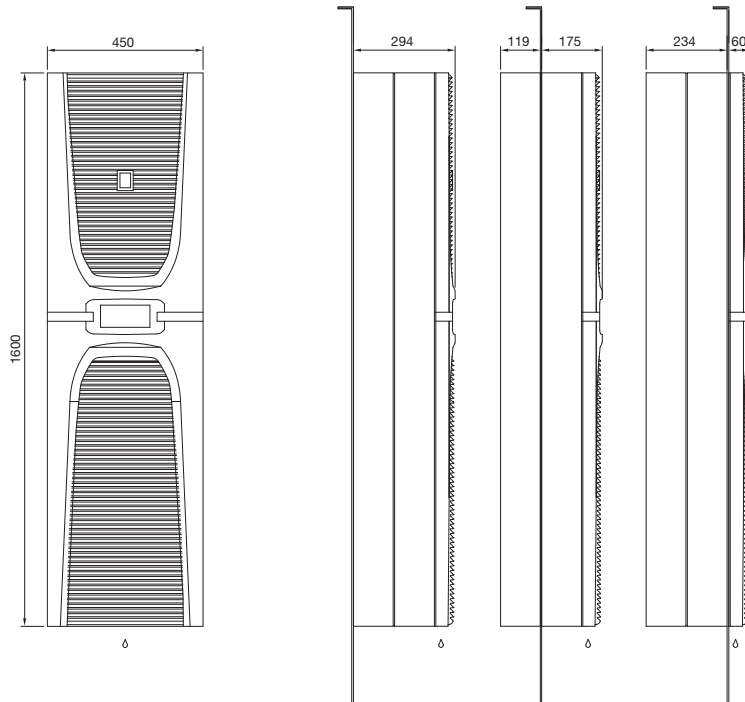
Technical details

Wall-mounted cooling units

Blue e+ SK 3186.930, SK 3187.930, SK 3188.940, SK 3189.940

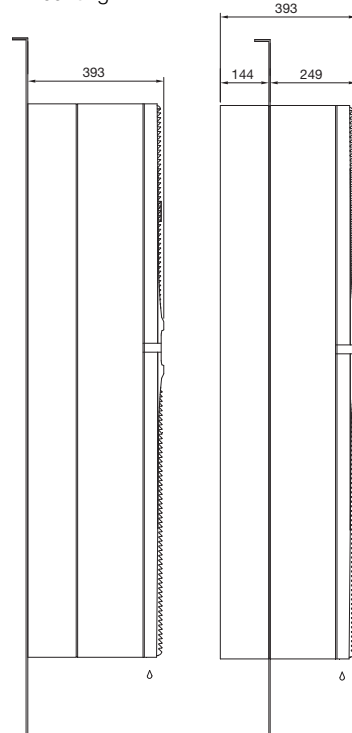
Installation options SK 3186.930, SK 3187.930

External mounting Partial internal mounting Internal mounting

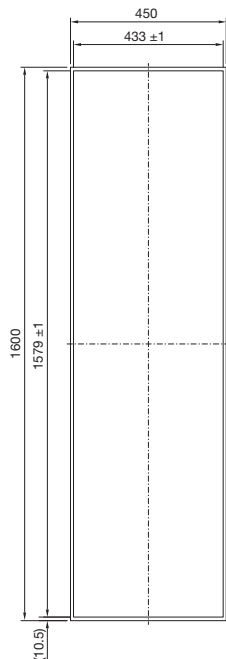


Installation options SK 3188.940, SK 3189.940

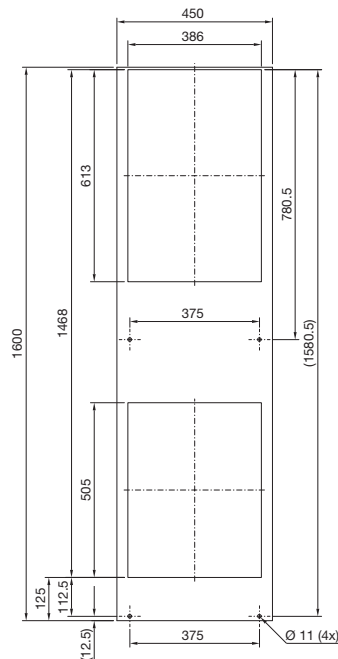
External mounting Partial internal mounting



Mounting cut-out
External mounting, partial internal mounting, internal mounting for door, rear and side panel, $W \geq 600$ mm



Mounting cut-out
External mounting rear and side panel, $W = 500$ mm



Important installation instructions for full internal mounting

- Not generally possible for 4.2 and 5.8 kW
- For 600 mm wide enclosure doors, please note: Move the cut-out towards the door hinge by 25 mm, and dismantle the tubular door frame

Important installation instructions for external mounting on 500 mm deep enclosures

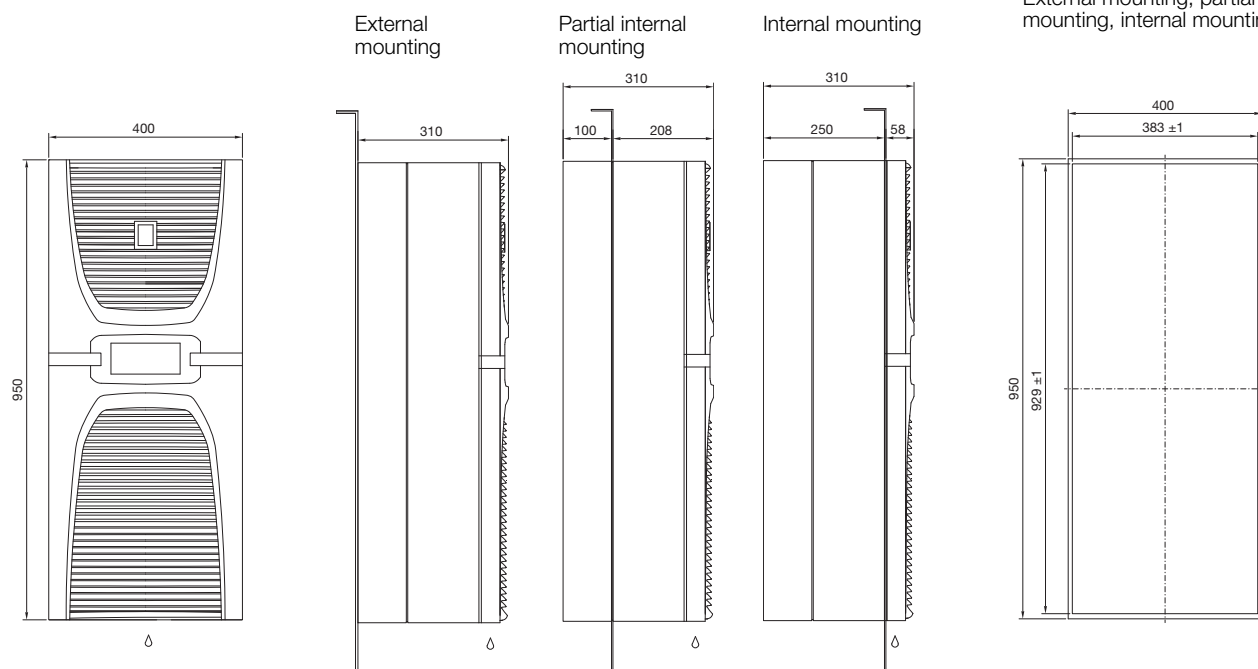
- Partial internal mounting and full internal mounting not supported
- External mounting only possible with mounting cut-out for 500 mm deep enclosures

Wall-mounted cooling units

Blue e+ SK 3185.830

Installation options SK 3185.830

Mounting cut-out
External mounting, partial internal
mounting, internal mounting



Overview of all Blue e+ information

Design made easy

- Detailed climate control calculation with the Therm software
- Therm app enables rapid parameterisation

www.rittal.com/therm

Item information

- Product description and features
- Assembly instructions
- Approvals
- Interactive performance diagrams
- CAD drawings

www.rittal.com/blue_e_plus_wallmount

The Blue e+ microsite

- Calculate potential savings and amortisation periods with the efficiency calculator
- Full information on the energy label and the SEER
- Videos showing technical details:
 - Heat pipe
 - Multi-voltage support
 - Intelligent interfaces and Blue e+ app
- Service messages may easily be sent with the Blue e+ app via an NFC interface

and much more besides can be found at

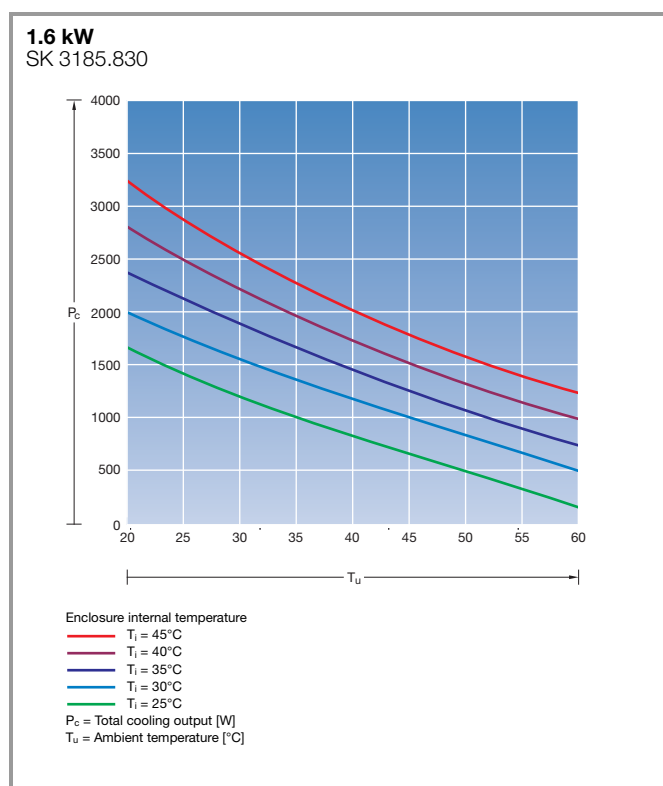
www.rittal.com/blue_e_plus

Wall-mounted cooling units Blue e+

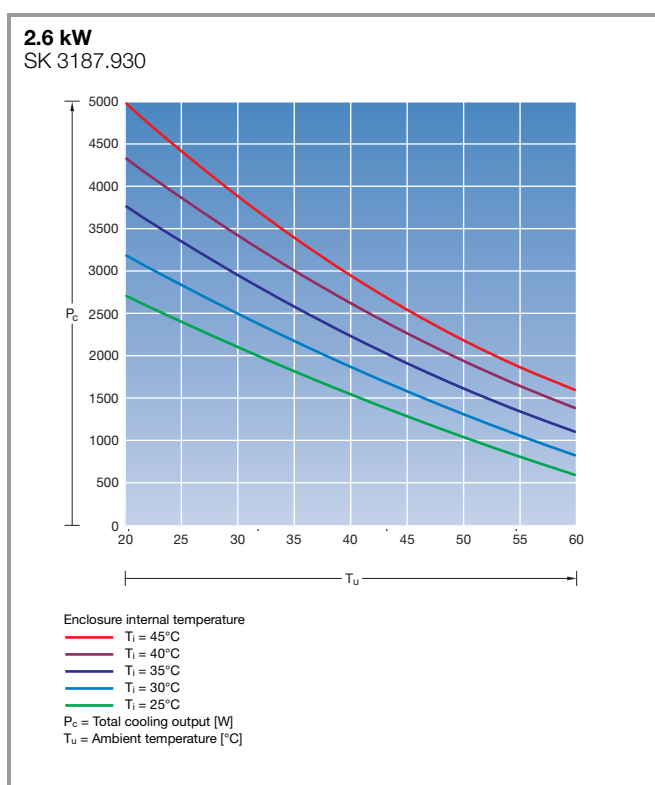
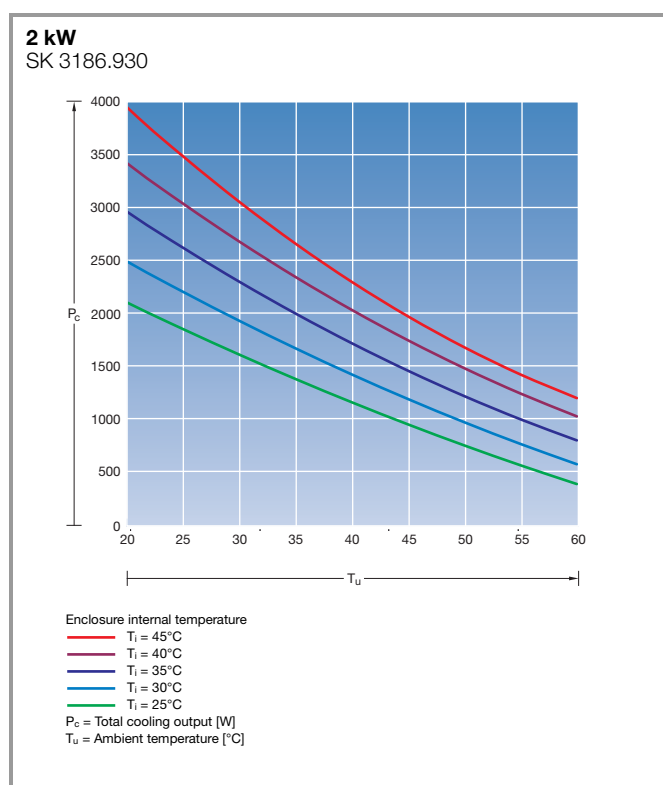
Technical details

TopTherm wall-mounted cooling units Blue e+

Output class 1600 W (110 – 240 V, 1 ~, 50 – 60 Hz / 380 – 480 V, 3 ~, 50 – 60 Hz)

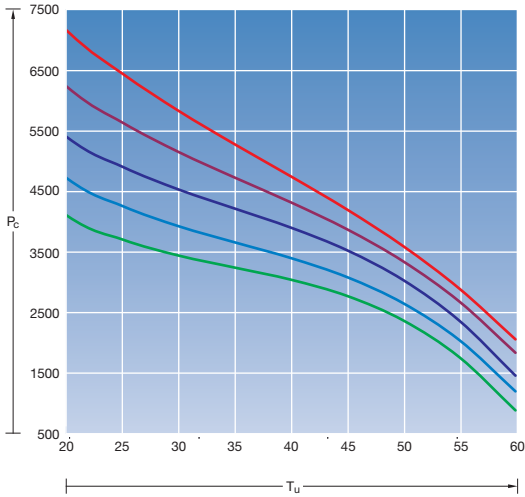


Output class 2000/2600 W (110 – 240 V, 1 ~, 50 – 60 Hz / 380 – 480 V, 3 ~, 50 – 60 Hz)

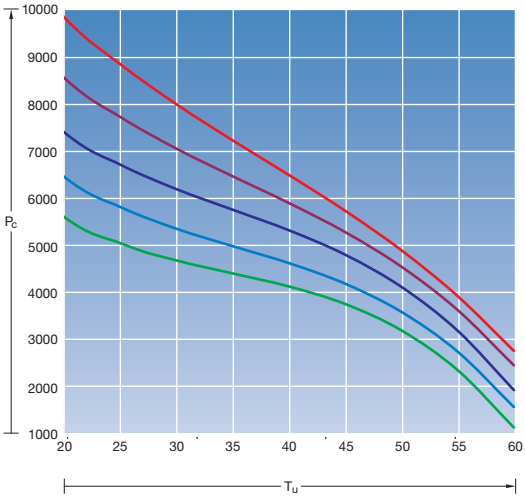


Output category 4200/5800 W (380 – 480 V, 3 ~, 50 – 60 Hz)

4.2 kW
SK 3188.940



5.8 kW
SK 3189.940



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