Faster - better - everywhere.

# World's first – The principle



Faster - better - everywhere.



**ENCLOSURES** 

**POWER DISTRIBUTION** 

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**CLIMATE CONTROL** 

FRIEDHELM LOH GROUP

# 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 m<sup>2</sup> production space worldwide
- 58 subsidiaries
- Around 90 warehouse facilities with more than 180,000 pallet locations and over 250,000 m<sup>2</sup> storage space worldwide



**IT INFRASTRUCTURE** 

Faster – better – everywhere.

# World's first

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

### The 🗲 principle:

- Efficiency 75% energy saved due to speed-regulated components and heat pipe technology
- Versatility Suitable for international use due to unique multi-voltage capability

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- 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

ENCLOSURES

**POWER DISTRIBUTION** 

**CLIMATE CONTROL** 

FRIEDHELM LOH GROUP



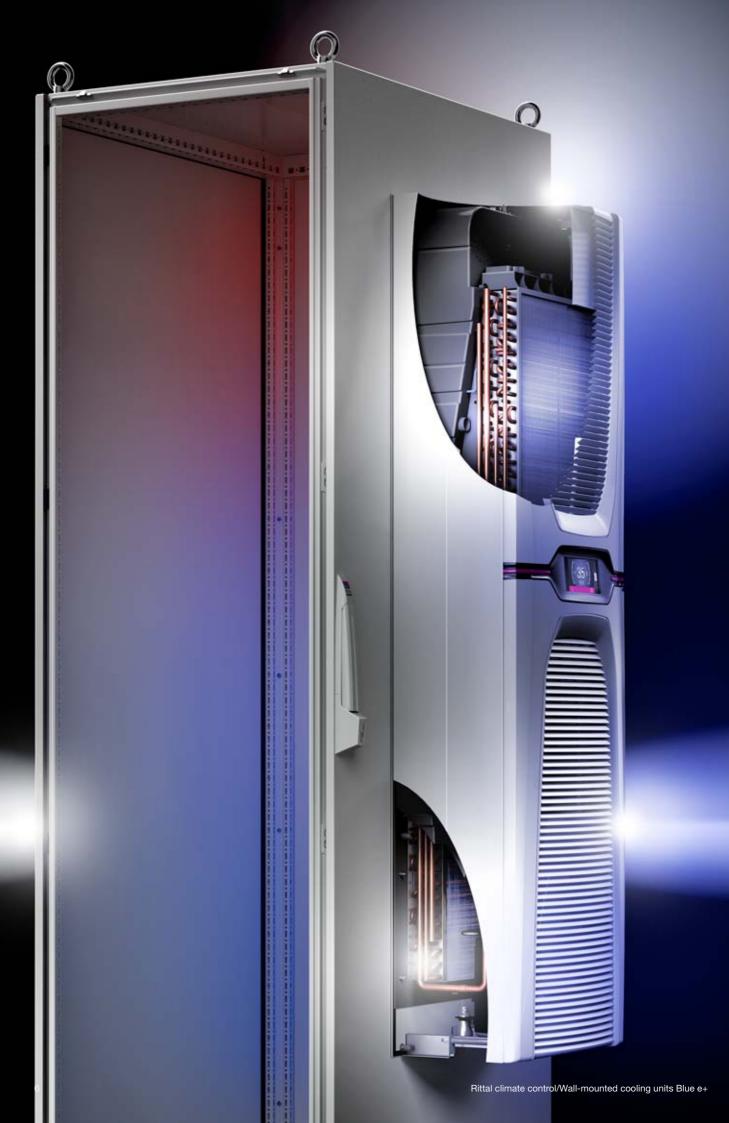


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#### **IT INFRASTRUCTURE**

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#### **SOFTWARE & SERVICES**



## The principle A revolution in energy efficiency through 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

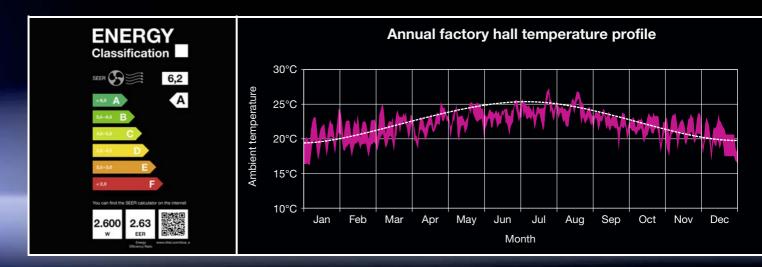
- Energy Efficiency Ratio: The standardised efficiency ratio
- Seasonal Energy Efficiency Ratio: The seasonal efficiency ratio for actual energy consumption

#### Amazingly economical

- Energy savings of up to 75%
- 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 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

#### 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 smartphone
- 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

#### Blue e+ update function

- Software for updating the Blue e+ firmware
- Updating of language packs in 21 individual languages
- Download at www.rittal.com





## The 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 filter mat replacement, tool-free

#### **Rapid assembly**

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

## Maximum flexibility with unique multi-voltage capability

- One device 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



## Wall-mounted cooling units Blue e+



#### Accessories for climate control Cat. 34, page 369 Therm software Cat. 34, page 385

#### **Benefits:**

- 75% energy saved due 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 60 529:

- Internal circuit IP 55
- Supply includes: Assembly parts

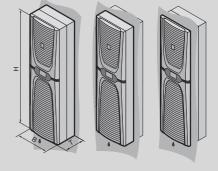
Approvals: – UL

#### - cUL \_ Tested safety GS

- EAC

Performance diagrams: Available on the Internet

**Further technical** information: 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 Pel 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 <sub>el</sub> 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	13
Metal filters	1 pc(s).	3285.910	3285.910	3285.910	3285.910	13
Temperature sensor	1 pc(s).	3124.400	3124.400	3124.400	3124.400	13
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	Cat. 34, 639

### **Accessories**

#### **Filter mats**

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 plasticThickness: 10 mm

To fit Model No.	Packs of	Model No.
3186.930/ 3187.930/ 3188.940/ 3189.940	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:

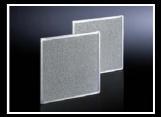
- AluminiumThickness: 10 mm

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or cooling units blue e+					
To fit Model No.	Packs of	Model No.			
3186.930/ 3187.930/ 3188.940/ 3189.940	1 pc(s).	3285.910			



#### **Temperature sensor**

#### for Blue e+ cooling units

NTC sensor to regulate Blue e+ cooling units according to an individual measurement point within the enclosure (control based on an external sensor).

#### Supply includes:

External sensor with connection cable (length 2.5 m)

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

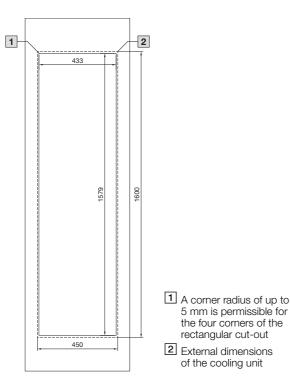


#### **Technical details**

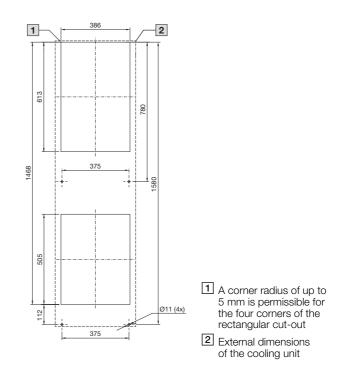
#### Wall-mounted cooling units

Blue e+ Page 12

Mounting cut-out SK 3186.930, SK 3187.930, SK 3188.940, SK 3189.940



Mounting cut-out SK 3186.930, SK 3187.930, SK 3188.940, SK 3189.940 for 500 mm deep enclosures (external mounting only)



#### **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

and much more besides can be found at

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

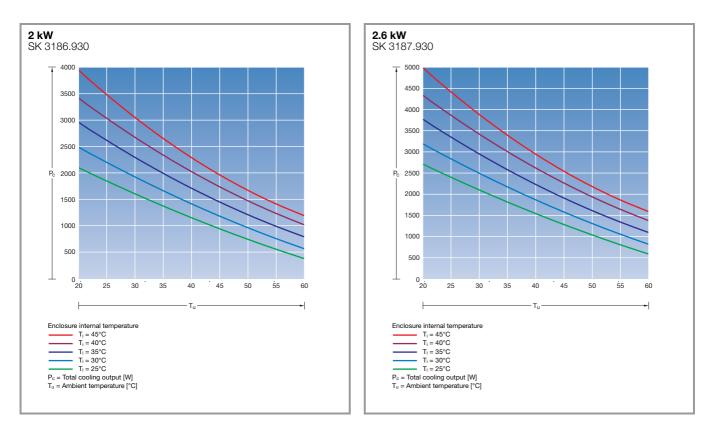
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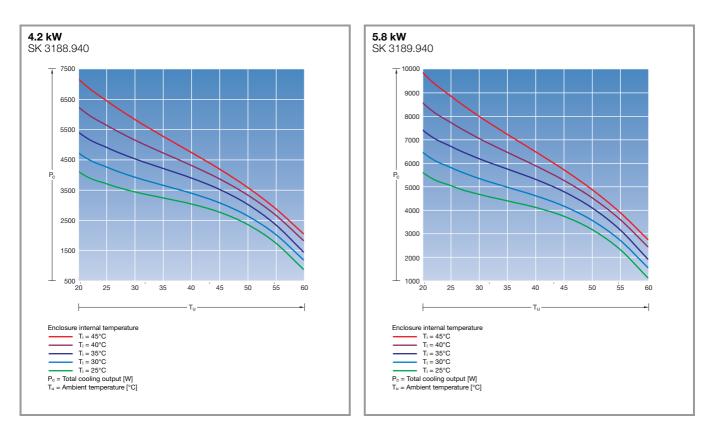
**Technical details** 

#### TopTherm wall-mounted cooling units "Blue e"

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



#### Output class 4200/5800 W (380 - 480 V, 3 ~, 50 - 60 Hz)



## Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

You can find the contact details of all Rittal companies throughout the world here.

POWER DISTRIBUTION CLIMATE CONTROL



ENCLOSURES

www.rittal.com/contact



IT INFRASTRUCTURE SOFTWARE & SERVICES

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