Rittal – The System.
Faster – better – everywhere.

Blue e+ chillers with the e+ principle
Blue e+ chillers

The world’s most efficient range of chillers.

The e principle:

- **Efficient** – Energy savings of up to 70% thanks to DC inverter technology
- **Flexible** – Worldwide use due to international approvals, multi-voltage capability, high operating limits and pre-configured option packages
- **Reliable** – Longer service life for all components and high control accuracy for optimum workpieces thanks to component-friendly cooling and integrated monitoring sensor technology
- **User-friendliness** – Intuitive operation due to touch display and intelligent interfaces
The principle

Pioneering energy efficiency thanks to DC inverter technology

Incredibly efficient
- By using DC inverter technology as standard (speed-controlled components) and an electronic expansion valve, the cooling power is adapted automatically to the load profile of the relevant application. As a result, only as much power is generated as is actually needed.
- The optional HGBP (hot gas bypass) controller has been eliminated, so the compressor no longer needs to run permanently at full power.

Eco-friendly
- 55% less refrigerant as a result of using micro-channel technology
- No galvanic corrosion, as the microchannel heat exchanger is 100% aluminium

Amazingly economical
- Energy savings of up to 70%
- Longer service life due to component-friendly cooling
- High control accuracy thanks to needs-based DC inverter technology with two regulating modes
- Excellent operational reliability thanks to integrated flow sensor, overflow valve and electronic fill level monitoring

Transparent efficiency comparison
- Energy Efficiency Ratio (EER) – the standard-compliant efficiency value
- Seasonal Energy Performance Ratio (SEPR) – the power-specific efficiency value for actual annual energy consumption

Easy to calculate
- Calculate energy savings with the efficiency calculator
- Precise payback calculation

Rittal specifies the SEPR to indicate a chiller’s actual efficiency, since a precise calculation must be made in a power-specific temperature profile. The standard point for determining the EER does not make allowance for actual fluctuations in load profiles.
Rittal Climate control/Blue e+ chillers
The e+ principle

Easy touch operation and intelligent interfaces

Find out faster
- Fast unit analysis using RiDiag III software via USB port
- Remote monitoring via Ethernet

Blue e+ app
- Contactless on-site information sharing and fast, direct analysis via an NFC interface
- Send simple repair, maintenance and spare parts enquiries from a smartphone
- Save unit data directly on the unit

Easier to operate
- Fast parameterisation, data reading and plain-text system messages via the intelligent, multilingual, industry-grade display

Blue e+ update function
- For updating Blue e+ firmware
- Updating of language packs in 21 different languages
- Download at www.rittal.com
Rittal Climate control/Blue e+ chillers
The principle

**Flexibility thanks to easy assembly**

**Mounting and installation**
- Easy mounting thanks to plug and play
- Handles for removal and mounting of side panels
- Eyebolts make transport easier
- Customised waste air routing via radial fans enables flexible installation on walls and machinery
- Identical footprint for all performance classes
- Standardised water connections and externally adjustable overflow valve (bypass valve)
- Extensive range of accessories

**Pre-configured option packages, e.g.**
- Speed-controlled pump
- Integrated free cooler (hybrid operation)
- Water-cooled condenser
- And much more besides at www.rittal.com

**Maximum flexibility due to unique multi-voltage capability**
- One unit for all voltages and networks, suitable for worldwide use thanks to inverter technology:
  - 380 to 415 V, 3~, 50 Hz (±5%)
  - 440 to 480 V, 3~, 60 Hz (±5%)
- International approvals and certifications:
  - cULus Listed
  - EAC
  - TÜV Nord-tested output measurement

**Design**
- Compact and modular design
- Minimal footprint 0.29 m²
- Service-friendly thanks to optimum accessibility of all components
- Easy replacement of components
- High operating limits: -5 °C to +50 °C
Chiller Blue e+

Benefits:
- Blue e+ chillers ensure centralised and efficient cooling of liquid media with a high level of temperature accuracy and innovative DC inverter technology
- Suitable for international use thanks to its unique multi-voltage capability (without rewiring) and high operating limits
- Maximum reliability thanks to integral overflow valve and monitoring sensors
- Intuitive operation due to touch display and intelligent interfaces
- Compact and modular layout ensures minimum footprint
- Pumps with highly efficient IE3 motors

Temperature control:
- e+ controller (factory setting +20 °C)

Colour:
- Textured RAL 7035

Protection category IP to IEC 60 529:
- IP 24

Supply includes:
- Complete unit ready for connection (plug-in terminal strip)

Approvals:
Available on the Internet

Performance diagrams:
Available on the Internet

Output class 2500 – 5500 W

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Packs of</th>
<th>3320.200</th>
<th>3334.300</th>
<th>3334.400</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption Pₚₑₜ, 50/60 Hz kW</td>
<td>1.19 / 1.33</td>
<td>1.66 / 1.91</td>
<td>2.45 / 2.63</td>
<td></td>
<td></td>
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<tr>
<td>Rated operating voltage V, ~, Hz</td>
<td>380 - 415, 3~, 50</td>
<td>440 - 480, 3~, 50</td>
<td>380 - 415, 3~, 50</td>
<td>440 - 480, 3~, 50</td>
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<tr>
<td>Width mm</td>
<td>450</td>
<td>450</td>
<td>450</td>
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<td></td>
</tr>
<tr>
<td>Height mm</td>
<td>820</td>
<td>820</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth mm</td>
<td>710</td>
<td>710</td>
<td>710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated current max., A</td>
<td>2.17 / 1.95</td>
<td>3.95 / 3.47</td>
<td>3.97 / 3.47</td>
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<td></td>
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<tr>
<td>Pre-fuse A</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
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<tr>
<td>Operating temperature range</td>
<td>-5 °C...+50 °C</td>
<td>-5 °C...+50 °C</td>
<td>-5 °C...+50 °C</td>
<td></td>
<td></td>
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<tr>
<td>CO₂ equivalent (CO₂e) t</td>
<td>0.66</td>
<td>1.09</td>
<td>1.33</td>
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<tr>
<td>Global Warming Potential (GWP)</td>
<td>1430</td>
<td>1430</td>
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<tr>
<td>Refrigerant g</td>
<td>R134a, 460</td>
<td>R134a, 760</td>
<td>R134a, 930</td>
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<td>Water connection</td>
<td>⅜” internal thread</td>
<td>n/a</td>
<td>n/a</td>
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<td></td>
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<tr>
<td>Pump pressure bar</td>
<td>2.5 / 3.6</td>
<td>3.3 / 4.5</td>
<td>3.3 / 4.9</td>
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<td></td>
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<tr>
<td>Volumetric flow (cooling medium) l/min</td>
<td>7</td>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature hysteresis</td>
<td>± 0.5 °K</td>
<td>± 0.5 °K</td>
<td>± 0.5 °K</td>
<td></td>
<td></td>
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<tr>
<td>Temperature of liquid</td>
<td>+5 °C...+35 °C</td>
<td>+5 °C...+35 °C</td>
<td>+5 °C...+35 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>hermetically open</td>
<td>hermetically open</td>
<td>hermetically open</td>
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<td></td>
</tr>
<tr>
<td>Tank</td>
<td>PE plastic</td>
<td>PE plastic</td>
<td>PE plastic</td>
<td></td>
<td></td>
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<tr>
<td>Tank capacity l</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
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<tr>
<td>Weight as delivered kg</td>
<td>84.0</td>
<td>90.0</td>
<td>96.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accessories
- Filter mat for cooling units, air/air heat exchangers and chillers 3 pc(s). 3285.920 3285.920 3285.920 Cat. 35, 454
- Filter mat for Blue e+ chillers (inverter housings) 3 pc(s). 3285.940 3285.940 3285.940
- Metal filters 1 pc(s). 3285.930 3285.930 3285.930
- Temperature sensor 1 pc(s). 3124.400 3124.400 3124.400 Cat. 35, 470
- IoT interface 1 pc(s). 3124.300 3124.300 3124.300
- Cooling medium (ready-mixed) see page see page see page Cat. 35, 465
- Levelling feet see page see page see page
- Twin castors 1 pc(s). 6148.000 6148.000 6148.000
**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 Anthracite grey

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- 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.

<table>
<thead>
<tr>
<th>W x H x D mm</th>
<th>18 x 117 x 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>For</td>
<td>Blue e+ cooling units, Blue e+ chillers, Smart Monitoring System, CMC III sensors</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>+0 °C...+70 °C</td>
</tr>
<tr>
<td>Protocols</td>
<td>OPC-UA, SNMPv1, SNMPv2c, SNMPv3, Modbus/TCP, TCP/IPv4, TCP/IPv6, Radius, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP</td>
</tr>
<tr>
<td>Interfaces</td>
<td>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 push-in spring connection terminal for NTC sensor (climate control unit interface)</td>
</tr>
<tr>
<td>Network interface</td>
<td>Ethernet IPv4/IPv6, Ethernet to IEEE 802.3 via 10BASE-T, 100BASE-T and 1000BASE-T</td>
</tr>
<tr>
<td>Type of electrical connection</td>
<td>Push-in spring connection terminal (24 V DC)</td>
</tr>
<tr>
<td>Packs of</td>
<td>1 pc(s).</td>
</tr>
<tr>
<td>Model No.</td>
<td>3124.300</td>
</tr>
</tbody>
</table>
Chiller Blue e+

Accessories

**Levelling feet**

*for VX, TS, TS IT, SE, PC, IW, Blue e+ chillers*

**Benefits:**
- To compensate for height differences with floor irregularities

**Material:**
- Sheet steel

<table>
<thead>
<tr>
<th>Design</th>
<th>Max. load capacity (static) per component N</th>
<th>Thread</th>
<th>Adjustment range mm</th>
<th>Packs of</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>without hex socket</td>
<td>3000</td>
<td>M12 x 40</td>
<td>18 - 43</td>
<td>4 pc(s)</td>
<td>4612.000</td>
</tr>
<tr>
<td>with hex socket for adjustment from the inside of the enclosure</td>
<td>300</td>
<td>M12 x 60</td>
<td>18 - 63</td>
<td>4 pc(s)</td>
<td>7493.100</td>
</tr>
</tbody>
</table>

**Assembly**
- A base/plinth adaptor is required for mounting on the VX base/plinth

**Twin castors**

For mobile use, for mounting directly on the enclosure.

**Thread:**
- M12 x 20

**Supply includes:**
- 4 twin castors, 2 x with, 2 x without locks
- Assembly parts

<table>
<thead>
<tr>
<th>Colour</th>
<th>To fit enclosure type</th>
<th>Max. load capacity (static) per component N</th>
<th>Ground clearance mm</th>
<th>Packs of</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black with grey running surface</td>
<td>VX, TS, SE, PC, TP pedestals, IW, Data Rack Chiller</td>
<td>750</td>
<td>85</td>
<td>1 pc(s)</td>
<td>6148.000</td>
</tr>
<tr>
<td>Black</td>
<td>VX, TS, SE, PC, TP pedestals, IW, Data Rack Chiller</td>
<td>1200</td>
<td>125</td>
<td>1 pc(s)</td>
<td>7495.000</td>
</tr>
</tbody>
</table>

**Assembly**
- A base/plinth adaptor is required for mounting on the TS base/plinth.

**Cross member**

*for VX, TS, SE, CM, TP, PC, IW, Blue e+ chillers*

To increase stability, the cross member is positioned 138 mm from the base frame of the enclosure at the front and rear. For deeper enclosures, the rear part may be extended and screw-fastened again.

**Benefits:**
- To increase stability
- Adjustable to the enclosure depth

**Installation options:**
- For screw-fastening to the floor and enclosure with mounting hole at the sides, front and rear
- The castors and levelling feet may be secured to the welded nuts M12
- For Blue e+ chillers, the cross member can be used as base/plinth component

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

<table>
<thead>
<tr>
<th>Height mm</th>
<th>For enclosure depth mm</th>
<th>Packs of</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>600</td>
<td>2 pc(s)</td>
<td>8601.680</td>
</tr>
</tbody>
</table>

**Colour:**
- RAL 7015

**Supply includes:**
- 1 cross member, left
- 1 cross member, right

**Note:**
- Ensure sufficient stability to prevent the enclosure from tipping over!

**Accessories:**
- Twin castors, see page 12
- Levelling feet, see page 12

Further technical information available on the Internet.
Blue e+ chiller
SK 3320.200

1 Bottom drain
2 IoT interface (M25)
3 Signal connector (M20)
4 Connector (M25)
5 Master switch
6 Water outlet
7 Water inlet
8 Bypass setting
9 Tank drain
Chiller Blue e+

Technical details

Blue e+ chiller
SK 3334.300

1. Bottom drain
2. IoT interface (M25)
3. Signal connector (M20)
4. Connector (M25)
5. Master switch
6. Water outlet
7. Water inlet
8. Bypass setting
9. Tank drain

Detail X

Detail Y
Blue e+ chiller
SK 3334.400

1 Bottom drain
2 IoT interface (M25)
3 Signal connector (M20)
4 Connector (M25)
5 Master switch
6 Water outlet
7 Water inlet
8 Bypass setting
9 Tank drain
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- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

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www.rittal.com/contact