

Rittal – The System.

Faster – better – everywhere.

► Blue e+ chillers with the e+ principle



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Rittal – The System.

Faster – better – everywhere.

Blue e+ chillers

The world's most efficient range of chillers.

The principle:

- **Efficient** – Energy savings of up to 70% due 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-friendly** – Touch display and intelligent interfaces support intuitive operation

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



IT INFRASTRUCTURE

SOFTWARE & SERVICES





Pioneering energy efficiency due 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.
- Elimination of the optional HGBP (hot gas bypass) control, which means the compressor no longer needs to run continuously.

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

Eco-friendly

- 55% less refrigerant as a result of using microchannel technology
- No galvanic corrosion, as the microchannel heat exchanger is 100% aluminum

Amazingly economical

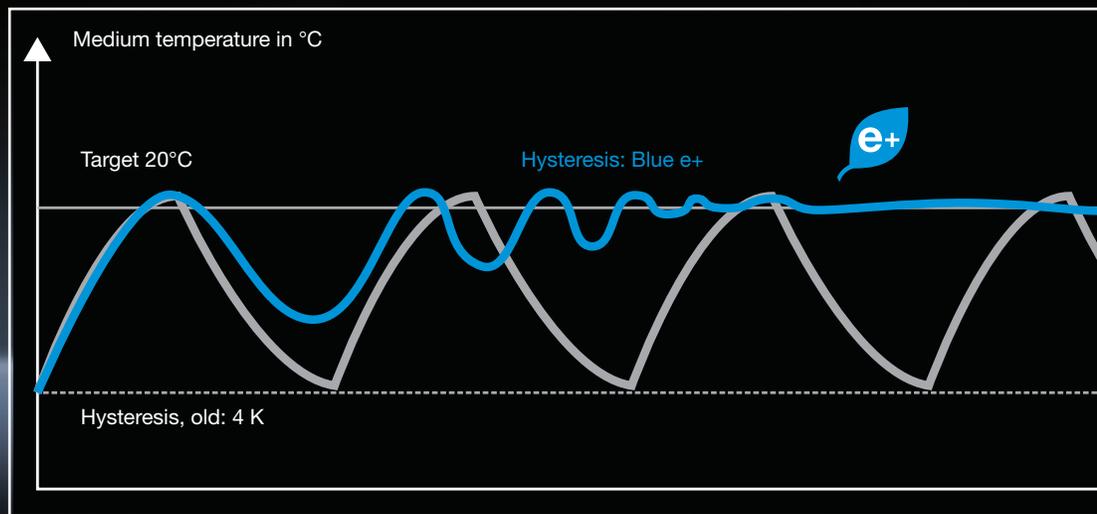
- Energy savings of up to 70%
- Longer service life due to component-friendly cooling
- High control accuracy due to needs-based DC inverter technology with two regulating modes
- Excellent operational reliability due to integrated flow sensor, overflow valve and electronic fill level monitoring

Easy to calculate

- Calculate energy savings with the efficiency calculator
- Precise payback calculation



- 1 Electrical interfaces
- 2 Master switch
- 3 Water connections
- 4 Adjustable overflow valve
- 5 Drainage



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.



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

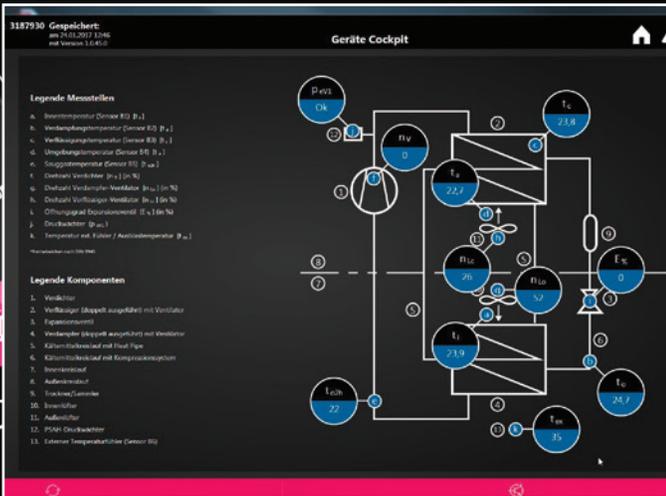
- Contactless on-site information sharing and fast, direct analysis via an NFC interface
- Send simple repair, maintenance and spare parts inquiries from a smartphone
- Save unit data directly on the unit

Easier to operate

- Fast parameterization, 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
- Compatible with the IoT Interface
- Download at www.rittal.com





Flexibility due to easy assembly

Mounting and installation

- Handle on the side panel and eyebolts simplify transport
- Customized waste air routing via radial fans enables flexible installation on walls and machinery
- Identical footprint for all performance classes
- Standardized water connections and externally adjustable overflow valve (bypass valve)
- Extensive range of system 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 due to inverter technology:
 - 380 to 415 V, 3~, 50 Hz ($\pm 5\%$)
 - 440 to 480 V, 3~, 60 Hz ($\pm 5\%$)
- International approvals and certifications:
 - cULus Listed
 - EAC
 - CCC
 - TÜV Nord GS
 - TÜV Nord-tested output measurement

Design

- Compact modular design
- Minimal footprint
- Service-friendly thanks to optimum accessibility of all components
- Easy replacement of components
- High operating limits: 23°F – 122°F



Chiller Blue e+



Benefits:

- Blue e+ chillers ensure centralized and efficient cooling of liquid media with a high level of temperature accuracy and innovative DC inverter technology
- Suitable for international use due to unique multi-voltage capability (without rewiring)

- 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 68°F)

Color:

- 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 – 6000 W

Model	Packs	3320.200	3334.300	3334.400
Total cooling output at Tw = 18°C/Tu = 35°C to DIN EN 14511 kW		8,530 (2.5)	13,649 (4)	20,473 (6)
Rated operating voltage V, ~, Hz		380 - 415, 3~, 50 440 - 480, 3~, 60	380 - 415, 3~, 50 440 - 480, 3~, 60	380 - 415, 3~, 50 440 - 480, 3~, 60
Width in (mm)		18 (450)	18 (450)	18 (450)
Height in (mm)		32 (820)	32 (820)	39 (1000)
Depth in (mm)		28 (710)	28 (710)	28 (710)
Operating temperature range		23°F – 122°F (-5°C...+50°C)	23°F – 122°F (-5°C...+50°C)	23°F – 122°F (-5°C...+50°C)
CO ₂ equivalent (CO ₂ e)t		0.75	1.15	1.57
Global Warming Potential (GWP)		1430	1430	1430
Refrigerant g		R134a, 530	R134a, 800	R134a, 1100
Water connection	3/4" internal thread	■	■	■
Pump pressure bar		2.5 / 3.6	3 / 4.3	3 / 4.3
Volumetric flow (cooling medium) g/m (l/m)		1.6 (6)	4 (15)	4 (15)
Temperature hysteresis		± 0.5 K	± 0.5 K	± 0.5 K
Temperature of liquid		41°F – 95°F (+5°C...+35°C)	41°F – 95°F (+5°C...+35°C)	41°F – 95°F (+5°C...+35°C)
Design		hermetically open	hermetically open	hermetically open
Tank		PE plastic	PE plastic	PE plastic
Tank capacity gal (l)		3.2 (12)	3.2 (12)	3.2 (12)
Weight lb (kg)		185 (84)	198 (90)	211 (96)

Accessories

Accessories	Quantity	3320.200	3334.300	3334.400
Filter mats for cooling units, air/air heat exchangers and chillers	3 pc(s).	3285.920	3285.920	3285.900
Filter mats for Blue e+ chillers (inverter housings)	3 pc(s).	3285.940	3285.940	3285.940
Metal filters	1 pc(s).	3285.930	3285.930	3285.910
Temperature sensors	1 pc(s).	3124.400	3124.400	3124.400
Cross member	2 pc(s).	8601.680	8601.680	8601.680
Levelling feet	4 pc(s).	see page 11	see page 11	see page 11
Twin castors	1 pc(s).	6148.000	6148.000	6148.000
Cooling medium (ready-mixed)	25 L	3301.965	3301.965	3301.965

Levelling feet

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

Benefits:

- To compensate for height differences with floor irregularities

Material:

- Sheet steel



Assembly

- A base/plinth adaptor is required for mounting on the TS base/plinth.
- The adaptor is required for mounting on the Flex-Block base/plinth system.

Design	Max. load capacity (static) per component kg	Thread	Adjustment range mm	Packs of	Model No.
without hex socket	300	M12 x 40	18 - 43	4 pc(s).	4612.000
with hex socket for adjustment from the inside of the enclosure	300	M12 x 60	18 - 63	4 pc(s).	7493.100



Twin castors

Color:

- Black

Thread:

- M12 x 20

Supply includes:

- 4 twin castors, 2 x with, 2 x without locks
- Assembly parts



Assembly

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

To fit enclosure type	Max. load capacity (static) per component kg	Ground clearance mm	Packs of	Model No.
TS SE PC TP pedestals IW Data Rack Chiller	75	85	1 pc(s).	6148.000
TS SE PC TP pedestals IW Data Rack Chiller	120	125	1 pc(s).	7495.000



Cross member

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

To increase stability, the cross member is positioned 138 mm above 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:

- Sheet steel

Material:

- Sheet steel

Assembly

- 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.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Color:

- RAL 7015

Supply includes:

- 1 cross member, left
- 1 cross member, rig

Height mm	For enclosure depth mm	Packs of	Model No.
70	600 800	2 pc(s).	8601.680



Rittal – The System.

Faster – better – everywhere.

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

Rittal North America LLC

Woodfield Corporate Center
425 North Martingale Road, Suite 400 • Schaumburg, Illinois 60173 • USA
Phone: 937-399-0500 • Toll-free: 800-477-4000
Email: rittal@rittal.us • Website: www.rittal.us

Rittal Systems Ltd.

6485 Ordan Drive • Mississauga, Ontario L5T 1X2 • Canada
Phone: 905-795-0777 • Toll-free: 800-399-0748
Email: marketing@rittal.ca • Website: www.rittal.ca

Rittal Mexico

Dr. Roberto Gayol 1219-1B • Col. Del Valle Sur, 03100 • Mexico, D.F.
Phone: (+52) (55) 5559-5369 • Toll-free: 01 800 8 Rittal (748.825)
Email: info@rittal.com.mx • Website: www.rittal.com.mx

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES



FRIEDHELM LOH GROUP