

Rittal – The System.

Faster – better – everywhere.

► Climate Solutions Handbook



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Defend and extend the life of your electronics

Heat is the enemy of extending the life of your electronics. Heat attacks your equipment from all sides: on the outside with extreme variations in ambient temperatures and inside with high thermal loads caused by the high density of components within the enclosure. The challenge is to manage temperatures consistently on both ends of the thermal spectrum in any environment.

Rittal industrial climate solutions lengthen the life of your components, optimize performance and reduce equipment failure. Time is money, and uptime ensures your operations are profitable.

Sources of damaging heat

The trend toward high equipment density in enclosures challenges the heat removal process. Components, even those rated for high heat use, degrade when the heat load rises. Not only do enclosure temperatures rise from the waste heat generated inside but also from external environmental factors.

Deployment of mission-critical enclosures into harsh environments increases the level of heat risk to the components inside. Your thermal control system must manage the impact of any factor that inhibits air flow and increases temperature.

Higher temperatures increase downtime

Generated heat must be removed efficiently or heat damage will occur. Controlling units and microprocessors age quickly under heat pressure. If left unchecked, small nuisance malfunctions may be the first sign of overheating and lead to a sudden catastrophic failure that can cost thousands in downtime costs, and derail your project timeline.

Interior heat consequences

- De-rated power performance
- Trip faults and fluctuations in circuits
- Mean time between failure decrease
- Component set point drift
- Intermittent or catastrophic system failure
- Voided component warranty
- Factory downtime
- Lost revenue
- Delayed shipments
- Customer dissatisfaction
- Component replacement costs

**Double
the life of your
electronics
with every
18°F/10°C drop in
temperature**

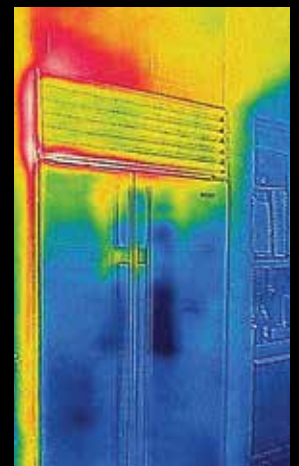
Rittal advanced climate control technology is your defense. Our methodical approach ensures the internal temperature is stable and heat-related incidents or costly shutdowns are avoided. Rittal responds to your bottom line demands with a variety of engineered solutions, including exchangers, coolers and air conditioners that handle heat dissipation. Our high efficiency units offer passive and active cooling technology that saves up to 70% in energy costs. These innovative thermal management systems are available only from Rittal.

Exterior heat factors

- Ambient temperature range and humidity
- Factory equipment heat emissions
- Level of dust or dirt
- Exposure to direct or indirect solar radiation
- Exposure to rain, snow, wind
- Presence of corrosive or abrasive chemicals and oils
- Environment requiring high-pressure wash down
- Amount of natural ventilation

Internal heat sources

- Power supplies
- Controllers, drives, servos
- Processors and server racks
- AC drives/inverters
- Microprocessor control gear
- VFD controllers
- Soft starters
- Transformers
- PLC systems
- Communication products
- HMI systems
- Battery back-up systems



The right industrial climate solution

With Rittal, you get certified solutions that have been field-proven to handle the most challenging industrial environments around the world. Every day, across the globe, Rittal is there. From audit to design to manufacturing, we work closely with you to deliver the right solution.



Filter Fans

- UL Type 12
- UL Type 3R, 4, 4X, with optional hose-proof hood
- 12–529 CFM
- Tool-less assembly
- Reversible/diagonal fan motor
- Roof-top design available



TopTherm Air-to-Air Heat Exchanger

- 17.5 to 90 W/K
- 115V and 230V available
- Quick-connecting terminals



Thermoelectric Coolers

- Uses the Peltier effect
- 341 BTU
- Compact, lightweight, efficient
- Multiple mounting positions
- 24V DC or dual 100–240V option



TopTherm Blue e Wall-mounted Air Conditioners

- UL Type 12
- 1,000–15,000 BTU
- Available in carbon steel or 316 stainless steel 4X
- Nano-coated condenser
- Integrated condensate evaporator
- Multiple mounting positions



Blue e+ Wall-mounted Air Conditioners

- UL Type 12 and 3R
- 6,000–20,000 BTU
- Energy efficient
- Touch screen controller
- Nano-coated condenser
- Multi-voltage



TopTherm Air-to-Water Heat Exchangers

- UL Type 12
- 1,000–17,000 BTU
- Roof- and wall-mounted versions
- 115V, 230V, 400V, 3~
- Intelligent comfort controller
- Energy efficient
- Maintenance free
- Optimal for extreme ambient conditions



TopTherm Chillers

- Centralized, efficient cooling using water
- 3,412–150,000 BTU
- Intelligent comfort controller
- Nano-coated condenser
- Ideal for machine and enclosure cooling
- Multi-voltage



Enclosure Heaters

- UL Type 12
- 30–2,700 BTU
- Maintenance free design
- Positive temperature coefficient (PTC) technology
- Available with or without fans

Climate decisions simplified

Use this comprehensive reference guide to find the right solution and specifications for your application.

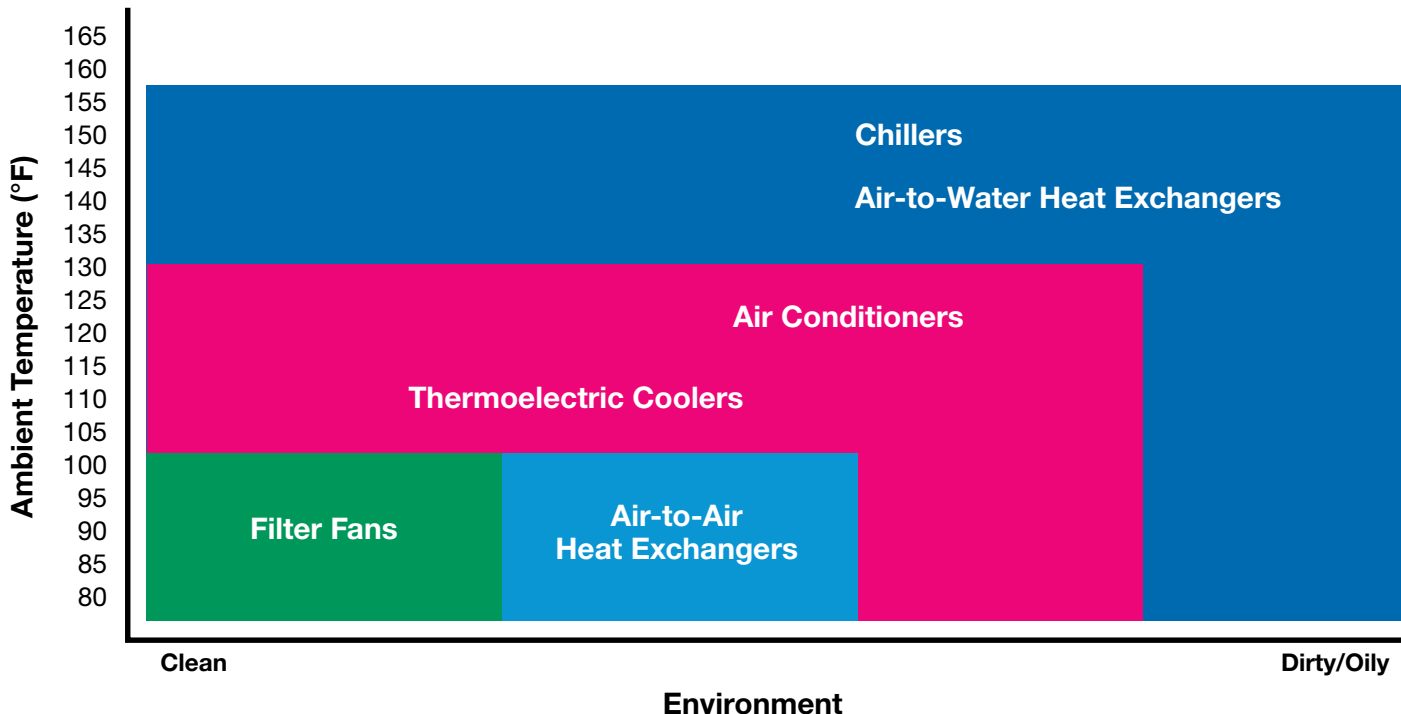
	Filter Fans	TopTherm Air-to-Air Heat Exchangers	Thermoelectric Coolers	TopTherm Blue e Air Conditioners	Blue e+ Air Conditioners	TopTherm Air-to-Water Heat Exchangers	TopTherm Chillers	Enclosure Heaters
PROTECTION RATING								
Indoor Industrial (Type 12, IP54, IP55)	■	■	■	■	■	■	■	■
Outdoor (Type 3R/4)	*				■			
Corrosive (Type 4X)	*			■				
CAPACITY								
100W-200W (300-700 BTU)			■					■
300W-2,000W (1,000-7,000 BTU)				■	■	■		
2,500-6,000W (8,000-20,000 BTU)				■	■	■	■	
7,000-15,000W (23,000-53,000 BTU)							■	
FANS—Air Flow								
10 CFM-50 CFM	■							
51 CFM-200 CFM	■							
201 CFM-400 CFM	■							
401 CFM-600 CFM	■							
601 CFM-750 CFM								
VOLTAGE								
115 VAC 50/60 Hz	■	■	■	■	■	■		■
230 VAC 50/60 Hz	■	■		■	■	■	■	■
400/460 VAC 50/60 Hz, 2~				■				
400/460 VAC 50/60 Hz, 3~	■			■	■	■	■	
24-48 VDC	■		■			■		
CERTIFICATION								
UR/cUR	■	■						■
UL/cUL	■	■		■	■	■		
CSA	■			■	■			■
CE	■	■	■	■	■	■	■	■
*With optional hose-proof hood								

The right cooling chart for your climate control plan

Rittal climate product capabilities and applications

Climate Product	Cooling Technique	Cooling Capacity	Environments	Applications
Filter Fans	Open-loop forced-air	Low	Clean, cool ambient conditions	IT Infrastructure Industrial Manufacturing
Air-to-Air Heat Exchangers	Closed-loop	Moderate (17.4 – 90 W/C)	Clean to dirty/oily air with cool ambient conditions	Textiles Pharmaceuticals and Biotechnology
Thermoelectric Coolers	Peltier effect Solid state; no moving parts or refrigerant	Low (Up to 100 W)	Limited space availability	Automation Technology Measurement and Control Technology Industrial Electronics and Telecommunications
Air Conditioners	Closed-loop environmentally-safe refrigerant	High (300 – 6,000 W)	Dirty, oily, hot & humid	Food & Beverage Water/Wastewater Renewable Energy
Air-to-Water Heat Exchangers	Closed-loop water-cooled	Highest (300 – 10,000 W)	Extremely harsh locations; corrosive, airborne oil	Metal Production & Processing Paper & Pulp Oil & Gas
TopTherm Chillers	Closed-loop water cooling used with air-to-water heat exchangers	Highest (1,000 – 40,000 W)	Extremely harsh locations; corrosive, airborne oil	Metal Production & Processing Paper & Pulp Oil & Gas

Climate product spectrum based on ambient temperature and environment



The Blue principle

Hybrid Technology: Pioneering Climate Control

The Blue e+ is a completely new generation of cooling units that represents a quantum leap in terms of cost-effectiveness and energy conservation. As well as providing far higher energy efficiency than existing cooling solutions, the units offer a range of powerful new features that provide longer component life, flexibility and ease of use.

Blue e+ features hybrid cooling technology that delivers 75% greater energy savings than competitive products. The cooling mode automatically adjusts to ambient conditions, switching from a passive heat pipe to an active speed-regulated refrigerant circuit or hybrid combination to maintain a constant temperature. This precision cooling aggressively manages internal temperatures to extend the life of enclosure components.

Data collection and analysis with Rittal's new Smart IoT interface data exchange allows relevant operating data and parameters to be shared around the plant and around the world. A multitude of values can be measured and recorded, and seamlessly interfaced with other IoT devices. This ease of access to energy data management improves efficiency and lowers maintenance costs.

With multi-voltage capacity, Blue e+ is versatile and ready for international use. It provides an intuitive user experience, with a simple, multi-lingual touch display and NFC-enabled interfaces.

In addition to significant energy savings, Blue e+ features:

- One standard model, one range of spare parts
- Easy, rapid assembly
- Maintenance-friendly, tool-less filter mat replacement
- Blue e+ app for smartphone interface
- International approvals and certifications
 - cULus Listed
 - EAC
 - TÜV Nord GS
 - TÜV Nord-tested Output Measurement



Rittal products meet the highest internationally recognized quality standards

All components of Rittal products are subjected to the most stringent testing in accordance with international standards and regulations. The consistently high product quality is ensured by a comprehensive quality management system. Regular product inspections by external test institutes guarantee compliance with global standards.

Rittal TopTherm Cooling Units – Guaranteed Output TÜV-tested output to DIN EN 14511



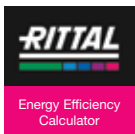
Rittal is the only supplier in the world to deliver its entire range of enclosure cooling units tested to the latest DIN EN standard. All TopTherm cooling units in the output range from 300 to 4,000 W are tested to the DIN EN 14511:2012-01 standard by the independent test institute TÜV NORD, and are authorized to carry the relevant test mark for the entire series.

This testing assures you that Rittal provides:

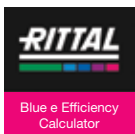
- Cooling units that are guaranteed to provide the cooling output you have paid for, giving you complete confidence when designing your climate control solution.
- Verified cooling outputs that are up to 10% higher than previously claimed.
- Improved Energy Efficiency Ratio (EER)
- Commitment to annual voluntary inspections

Calculators, configurators and apps

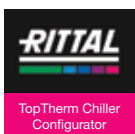
Rittal provides calculators, configurators and apps to assist you in making the best and most informed decisions regarding your Rittal products.



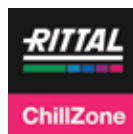
Rittal Energy Efficiency Calculator for Cooling Units (Blue e+) Compare your current cooling unit to the Blue e+ to determine your energy savings. <http://bit.ly/RittalEfficiencyCalc>



Blue e Efficiency Calculator Blue e cooling units provide savings in both cost and CO2 emissions. Enter your current system information to discover the Rittal difference. <http://bit.ly/BlueEcalc>



Rittal Chiller Configurator The TopTherm chiller configurator enables you to select an economically efficient solution for all your machine and process cooling needs. <http://bit.ly/ChillerConfig>

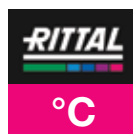


Blue e+ ChillZone app

Rittal created the ChillZone app, an energy savings estimator for its Blue e+ line of industrial enclosure cooling solutions. The app lets you easily compare annual cost savings between an existing system and Rittal Blue e+ products. What's more, you can even compare specific competitive products by inputting a specific product number or that product's average energy efficiency ratio (EER).

iOS: <http://bit.ly/ChillZoneAppIOS>

Android: <http://bit.ly/ChillZoneAppAndroid>



RiTherm Climate Control

Simplify the time-consuming and complicated process of calculating how much cooling your enclosure needs with this app. It also includes a rapid climate control system selection feature. Just enter temperature specs, enclosure dimensions, type of cooling solution needed and RiTherm calculates a summary of climate control equipment you'll need.

iOS: <http://bit.ly/ThermAppIOS>

Android: <http://bit.ly/ThermAppAndroid>



Fans and Filters

Ease of use for intelligent cooling

Installation is easy with the TopTherm Filter Fan: Quick-fit technology lets you snap the fan into a prepared mounting cutout, power connections are flexible for quick wiring, and spring clamp terminals make tools unnecessary for power installation. In addition, a hand-latched louvered grill improves access, and the fan motor can be reversed simply by turning the fan module.

A diagonal fan motor design provides pressure stability, for a higher and more consistent air flow, even with a filter mat. The air throughput ranges from 12 to 424 CFM (20 to 700m³/h). A full range of available voltages bring cooling to any configuration.

TopTherm Filter fans feature:

- A shallow installation depth to preserve enclosure space
- An intelligent combination of radial and axial fan technology
- Diagonal fan air flow that promotes even air distribution
- Extended filter mat service life
- UL Type 12 out of the box, UL 4X with optional hood
- Optional EMC shielding available
- Hose-proof hoods to prevent water entry

Refer to page 16 for product specifications



TopTherm Air-to-Air Heat Exchanger

Cooling advantage with ambient air

In applications where filter fans may be compromised by dust or particulates, the Rittal TopTherm Air-to-Air Heat Exchanger is an efficient solution. Two separate air circuits prevent pollutants in ambient air from entering the enclosure interior. The slim design mounts to the enclosure exterior wall for maximum air flow. For ease of use, the unit is fully wired with a digital display and controller.

- Closed system support
- Digital thermostat and controller
- Fast installation on identical cut-outs for cooling units, air/air or air/water heat exchangers

Refer to page 18 for product specifications



Thermoelectric Coolers

Compact cooling for your control panel and small enclosures, targeted cooling for your hot spots

Rittal's innovative design and air routing system achieves the highest refrigeration factor from the Peltier plates and fans through pulse width modulation (PWM). This eco-friendly solution provides an energy savings of 60% over conventional industry systems. The lightweight design and Peltier technology permit problem-free assembly and operation on command panels. Low vibration during use makes this system ideal for support arm systems or precision processes.

- Lightweight and powerful
- Peltier design allows cooling output of 100 W
- Low maintenance
- Scalable output either vertically or horizontally
- High operating ratio (COP >1)
- Floating change-over fault signal contact for full protection
- Large voltage range both AC and DC
- USB interface to unit programming
- RJ45 interface for linking to Rittal CMC-TC monitoring system
- Door operated switch option
- Digital enclosure internal temperature display option with memory

Refer to page 18 for product specifications



TopTherm Blue e Wall-mounted Air Conditioners

Guaranteed eco-efficiency, guaranteed output

High output combines with energy efficiency in TopTherm Blue e wall-mounted air conditioners. Rittal is the only supplier in the world to deliver its entire range of enclosure cooling units to the TÜV-tested DIN EN standard output. Eco-mode precision adjustment with the Comfort Controller keeps cooling rates steady. Nano-coated condenser coils and integrated condensate evaporator resist corrosion and reduce maintenance time and cost while maintaining reliable cooling capacity.

- Save up to 45% in energy consumption
- May be used with or without filter
- Multiple mounting positions
- UL Type 12
- 1,000 – 15,000 BTU
- Available in carbon steel or 316 stainless steel

Refer to page 19 for product specifications



Blue e+ Wall-mounted Air Conditioners

Hybrid technology for maximum energy efficiency

The Blue e+ wall-mounted cooling unit pioneers new standards in cost-effectiveness and energy conservation. Hybrid climate control merges speed-regulated components with patented heat pipe technology. On average, this combination saves up to 75% in energy costs over existing cooling solutions. Blue e+ units also offer a range of powerful new features that provide longer component life, flexibility and ease of use.

- Constant temperature inside enclosure
- Active speed-governed circuit components for demand-based cooling
- Integral heat pipe for passive cooling
- Component-friendly cooling for long service life
- One standard model, one range of spare parts
- Fits standard cut-out for simple installation
- Multi-voltage capacity for international use
- Nano-coated condenser for clean reliability
- Industrial grade touchscreen for intuitive controls
- Remote monitoring via Ethernet
- For environments ranging from -20°C to +60°C
- UL Type 12 and 3R
- 6,000 – 20,000 BTU

Refer to page 23 for product specifications



TopTherm Air-to-Water Heat Exchanger

Closed-loop cooling confidence

TopTherm exchangers offer a cost-effective, efficient and low-maintenance solution for higher ambient temperatures. Rittal Air-to-Water Heat Exchangers dissipate high heat loads, even in small, tight spaces. To facilitate a variety of installations, the liquid cooling system can be connected to an independent circuit or an entire facility system. It can be mounted using standard cut-outs for either enclosure roof or panel installation. To ensure optimal performance and longevity, the closed-loop system is sealed from contaminant penetration.

TopTherm Air-to-Water Exchangers feature:

- High-performance cooling capacity
- Output ranges from 375 to 7,000 W
- Controller-trackable temperature control, leak detection, fault signal contact
- Partial or full interior mounting
- The option to upgrade to corrosion-resistant steel water transfer parts
- A digitally controlled thermostat

Refer to page 24 for product specifications



TopTherm Chillers

Reliable liquid cooling units for climate control

TopTherm chillers deliver thermodynamic-efficient cooling as well as supply cooling water to air/water heat exchangers and other systems. One TopTherm chiller pipeline can cool an entire unit or a single enclosure. Both roof-mounted and stand-alone TopTherm chillers feature modular, compact designs.

- Small-scale footprint – only 24"
- Cooling capacity from 1 kW to 150,000 BTU
- Nano-coated condenser resists dirt buildup for an efficiency boost
- Wall-mounted chiller centralizes cooling water
- Modular design fits easily in the enclosure suite
- Integrated icing protection ensures reliable service
- One version with two frequencies provides international compatibility
- Indoor or outdoor use
- Multiple available options to customize your application

Refer to page 26 for product specifications



Enclosure Heaters

Condensation protection with continual thermal output

Condensation represents a serious risk for control electronics in both indoor and outdoor locations. Rittal's enclosure heaters are designed to regulate the internal humidity and temperature of an enclosure efficiently. Their advanced positive temperature coefficient (PTC) technology allows the heater to self-regulate its operation, using energy only when required. This technology, combined with design optimization, takes advantage of the latest in computational fluid dynamics (CFD) to permit improved heating outputs. Plus, new features like double quick-connection terminals and a rapid assembly system save time and reduce unnecessary costs.

- Available with or without internal fans
- Continual thermal output of 10-150 W without fans
- Three models with built-in fans capable of generating thermal output of 250 W, 400 W and 800 W
- Models without fans operate at 110-240 volts – 50/60 Hz
- Optional thermostat, temperature indicator/controller and hygrostat

Refer to page 29 for product specifications

TopTherm Filter Fans

Air throughput 12 – 32 cfm (20 – 55 m³/h)

Model No.	3237.100	3237.110	3237.124	3238.100	3238.110	3238.124
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60	24 (DC)
Air throughput (unimpeded air flow) cfm (m³/h)	12/15 (20/25)	12/15 (20/25)	12 (20)	32/39 (55/66)	32/39 (55/66)	32 (55)
Rated current A	0.065/0.052	0.12/0.1	0.125	0.12/0.11	0.24/0.22	0.24
Pre-fuse A	2	2	2	2	2	2
Motor circuit-breaker	–	–	–	–	–	–
Power consumption W	11/9	11/9	3	19/18	19/18	5.5
Height (H) inches (mm)	5 (116.5)	5 (116.5)	5 (116.5)	6 (148.5)	6 (148.5)	6 (148.5)
Width (B) inches (mm)	5 (116.5)	5 (116.5)	5 (116.5)	6 (148.5)	6 (148.5)	6 (148.5)
Depth (T1) inches (mm)	1 (16)	1 (16)	1 (16)	1 (16)	1 (16)	1 (16)
Maximum installation depth (T2) inches (mm)	2 (43)	2 (43)	2 (43)	2 (58.5)	2 (58.5)	2 (58.5)
Required mounting cut-out (HxW) inches (mm)	4 x 4 (92 x 92)	4 x 4 (92 x 92)	5 x 5 (124 x 124)	5 x 5 (124 x 124)	5 x 5 (124 x 124)	
Fan	Axial, self-starting shaded pole motor	Axial, self-starting shaded pole motor	Axial, DC motor	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor
Operating temperature range	+5°F...+131°F	+5°F...+131°F	+5°F...+131°F	+5°F...+131°F	+5°F...+131°F	+5°F...+131°F
Storage temperature range	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F
Noise pressure level dB (A)	38/43	38/43	38	46/49	46/49	46

Air throughput 412 cfm (700 m³/h)

Model No.	3244.100	3244.110	3244.140
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60
Air throughput (unimpeded air flow) cfm (m³/h)	412/453 (700/770)	412/453 (700/770)	412/453 (700/770)
Rated current A	0.43/0.6	0.9/1.25	0.17/0.21
Pre-fuse A	4	6	–
Motor circuit-breaker A	–	–	6.3...10
Power consumption W	95/135	100/145	93/140
Height (H) inches (mm)	13 (323)	13 (323)	13 (323)
Width (B) inches (mm)	13 (323)	13 (323)	13 (323)
Depth (T1) inches (mm)	1 (25)	1 (25)	1 (25)
Maximum installation depth (T2) inches (mm)	5 (130.5)	5 (130.5)	5 (130.5)
Required mounting cut-out (HxW) inches (mm)	12 x 12 (292 x 292)	12 x 12 (292 x 292)	12 x 12 (292 x 292)
Fan	Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor	Diagonal, three-phase motor
Operating temperature range	-22°F...+131°F	-22°F...+131°F	-22°F...+131°F
Storage temperature range	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F
Noise pressure level dB (A)	65/66	65/66	65/66

TopTherm Filter Fans

Air throughput 62 – 106 cfm (105 – 180 m³/h)

Model No.	3239.100	3239.110	3239.124	3240.100	3240.110	3240.124
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60	24 (DC)
Air throughput (unimpeded air flow) cfm (m³/h)	62/71 (105/120)	62/71 (105/120)	62 (105)	106/94 (180/160)	106/94 (180/160)	106 (180)
Rated current A	0.12/0.11	0.24/0.22	0.23	0.21/0.19	0.42/0.38	0.43
Pre-fuse A	2	2	2	2	4	2
Motor circuit-breaker	–	–	–	–	–	–
Power consumption W	19/18	19/18	5.5	35/34	35/34	10
Height (H) inches (mm)	8 (204)	8 (204)	8 (204)	10 (255)	10 (255)	10 (255)
Width (B) inches (mm)	8 (204)	8 (204)	8 (204)	10 (255)	10 (255)	10 (255)
Depth (T1) inches (mm)	1 (24)	1 (24)	1 (24)	1 (25)	1 (25)	1 (25)
Maximum installation depth (T2) inches (mm)	4 (90)	4 (90)	4 (90)	4 (107)	4 (107)	4 (107)
Required mounting cut-out (HxW) inches (mm)	7 x 7 (177 x 177)	7 x 7 (177 x 177)	7 x 7 (177 x 177)	9x9 (224 x 224)	9x9 (224 x 224)	9x9 (224 x 224)
Fan	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor	Diagonal, self- starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor
Operating temperature range	+5°F...+131°F	+5°F...+131°F	+5°F...+131°F	-22°F...+131°F	-22°F...+131°F	-22°F...+131°F
Storage temperature range	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F
Noise pressure level dB (A)	46/49	46/49	46	51/46	51/46	51

Air throughput 135 – 323 cfm (230 – 550 m³/h)

Model No.	3241.100	3241.110	3241.124	3243.100	3243.110
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60
Air throughput (unimpeded air flow) cfm (m³/h)	135/147 (230/250)	135/147 (230/250)	135 (230)	323/353 (550/600)	323/353 (550/600)
Rated current A	0.26/0.24	0.52/0.48	0.8	0.37/0.39	0.78/0.8
Pre-fuse A	4	4	2	4	6
Motor circuit-breaker	–	–	–	–	–
Power consumption W	40/42	40/42	19	70/87	75/90
Height (H) inches (mm)	10 (255)	10 (255)	10 (255)	13 (323)	13 (323)
Width (B) inches (mm)	10 (255)	10 (255)	10 (255)	13 (323)	13 (323)
Depth (T1) inches (mm)	1 (25)	1 (25)	1 (25)	1 (25)	1 (25)
Maximum installation depth (T2) inches (mm)	4 (107)	4 (107)	4 (107)	5 (118.5)	5 (118.5)
Required mounting cut-out (HxW) inches (mm)	9 x 9 (224 x 224)	9 x 9 (224 x 224)	9 x 9 (224 x 224)	12 x 12 (224 x 224)	12 x 12 (224 x 224)
Fan	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor
Operating temperature range	-22°F...+131°F	-22°F...+131°F	-22°F...+131°F	-22°F...+131°F	-22°F...+131°F
Storage temperature range	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F	-22°F...+158°F
Noise pressure level dB (A)	54/56	54/56	54	59/61	59/61

Roof-Mounted Fan, Roof Vent

Air throughput 294 – 512 cfm (500 – 800 m³/h)

Model No.	3138.000	3139.100	3139.110	3140.100	3140.110	3140.140
Rated operating voltage V, ~, Hz	-	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 60 460, 3~, 60
Air throughput, unimpeded air flow cfm (m³/h)	-	294/323 (500/550)	294/323 (500/550)	471/530 (800/900)	471/518 (800/880)	471/512 (800/870)
Rated current A	-	0.23 / 0.29	0.47 / 0.59	0.45 / 0.6	0.93 / 1.23	0.19 / 0.22
Pre-fuse A	-	6	6	6	6	-
Motor circuit-breaker A	-	-	-	-	-	6.3...10
Power consumption W	-	52 / 65	53 / 66	102 / 135	105 / 140	98 / 130
Width inches (mm)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)
Height inches (mm)	5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)
Depth inches (mm)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)
Max. installation depth inches (mm)	1.1 (27)	1.8 (30)	1.8 (30)	1.8 (30)	1.8 (30)	1.8 (30)
Required mounting cut-out inches (mm)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)
Fan	without fan motor	Radial, capacity motor	Radial, capacity motor	Radial, capacity motor	Radial, capacity motor	Radial, rotary current motor
Operating temperature range F (C)	-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)
Storage temperature range F (C)	-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (40°C...+70°C)	-40°F...+150°F (40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)

Air throughput, unimpeded air flow 589 cfm (1000 m³/h), with EC technology

Model No.	3140.500	3140.510
Control interface	n	n
Rated operating voltage V, ~, Hz	200 - 240, 1~, 50/60	100 - 130, 1~, 50/60
Air throughput, unimpeded air flow cfm (m³/h)	589 (1000)	589 (1000)
Rated current A	1.2	1.9
Pre-fuse A	6	6
Power consumption W	148	125
Width inches (mm)	15.7 (400)	15.7 (400)
Height inches (mm)	5.2 (133)	5.2 (133)
Depth inches (mm)	15.7 (400)	15.7 (400)
Max. installation depth inches (mm)	1.8 (30)	1.8 (30)
Required mounting cut-out inches (mm)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)
Fan	Radial, EC motor	Radial, EC motor
Operating temperature range F (C)	-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (-30°C...+55°C)
Storage temperature range F (C)	-40°F...+158°F (-40°C...+70°C)	-40°F...+158°F (-40°C...+70°C)

TopTherm Air/Air Heat Exchangers

Specific thermal output 17.5 – 45 W/K, wall-mounted with controller

Model No.	3126.100	3126.115	3127.100	3127.115	3128.100	3128.115
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60
Specific thermal output W/K	17.5	17.5	30	30	45	45
Max. rated current per fan A	0.11/0.13	0.11/0.13	0.28/0.34	0.28/0.34	0.3/0.4	0.3/0.4
Pre-fuse A	2	2	2	2	2	2
Output per fan BTU (W)	78/92 (23/27)	78/92 (23/27)	205/256 (60/75)	205/256 (60/75)	239/307 (70/90)	239/307 (70/90)
Air throughput of fans (unimpeded air flow), external circuit cfm (m³/h)	156/185 (265/315)	156/185 (265/315)	283/309 (480/525)	283/309 (480/525)	353/368 (600/625)	353/368 (600/625)
Air throughput of fans (unimpeded air flow), internal circuit cfm (m³/h)	156/185 (265/315)	156/185 (265/315)	283/309 (480/525)	283/309 (480/525)	353/368 (600/625)	353/368 (600/625)
Height inches (mm)	22 (550)	22 (550)	37 (950)	37 (950)	37 (950)	37 (950)
Width inches (mm)	11 (280)	11 (280)	16 (400)	16 (400)	16 (400)	16 (400)
Depth inches (mm)	6 (150)	6 (150)	8 (205)	8 (205)	8 (205)	8 (205)
Operating temperature range	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F
Weight lb (kg)	22 (10.0)	22 (10.0)	40 (18.0)	40 (18.0)	42 (19.0)	42 (19.0)

Specific thermal output 60 – 90 W/K, wall-mounted with controller

Model No.	3129.100	3129.115	3130.100	3130.115
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60
Specific thermal output W/K	60	60	90	90
Max. rated current per fan A	0.38/0.4	0.38/0.4	0.67/0.88	0.67/0.88
Pre-fuse A	2	2	4	4
Output per fan BTU (W)	290/307 (85/90)	290/307 (85/90)	512/682 (150/200)	512/682 (150/200)
Air throughput of fans (unimpeded air flow), external circuit cfm (m³/h)	506/530 (860/900)	506/530 (860/900)	500/556 (850/945)	500/556 (850/945)
Air throughput of fans (unimpeded air flow), internal circuit cfm (m³/h)	506/530 (860/900)	506/530 (860/900)	500/556 (850/945)	500/556 (850/945)
Height inches (mm)	37 (950)	37 (950)	62 (1580)	62 (1580)
Width inches (mm)	16 (400)	16 (400)	16 (400)	16 (400)
Depth inches (mm)	9 (225)	9 (225)	8 (215)	8 (215)
Operating temperature range	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F	+23°F...+131°F
Weight lb (kg)	46 (21.0)	46 (21.0)	75 (34.0)	75 (34.0)

Thermoelectric Cooler - Total cooling output/heating output 341 BTU (100 W)

Model No.	3201.200	3201.300
Rated operating voltage V, ~, Hz	100 - 240, 1~, 50/60	24 (DC)
Total cooling output L35 L35 BTU (W)	341/341 (100/100)	341 (100)
Heating output BTU (W)	341 (100)	341 (100)
Height inches (mm)	16 (400)	16 (400)
Width inches (mm)	5 (125)	5 (125)
Depth inches (mm)	6 (155)	6 (155)
Installation depth (T2) inches (mm)	4 (100)	4 (100)
Start-up current A	6.4	4.5
Rated current max. A	1.9	4.5
Pre-fuse A	4	10
Operating temperature range	-22°F...+131°F	-22°F...+140°F
Refrigeration factor/COP	1	1.2
Power pack integrated	■	—
Air throughput of fans (unimpeded air flow), internal circuit/external circuit cfm (m³/h)	29/29 (50/50)	29/29 (50/50)
Weight lb (kg)	6.6 (3.0)	5.3 (2.4)

TopTherm Blue e Wall-Mounted Cooling Units

Power Category 1706 BTU (500 W)

Model No.	3303.500	3303.510
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	1877 (0.55)	–
Total cooling output 50/60 Hz L35 L35 BTU (kW)	1877/2252 (0.55/0.66)	2252 (0.66)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	1126/1365 (0.33/0.4)	1365 (0.4)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 60
Height inches (mm)	22 (550)	22 (550)
Width inches (mm)	11 (280)	11 (280)
Depth inches (mm)	8 (210)	8 (210)
Rated current max. A	2.6/2.6	5.7
Start-up current A	5.1/6.4	11.5
Pre-fuse A	10	10
Rated power Pel 50/60 Hz L35 L35 kW	0.39/0.41	0.5
Rated power Pel 50/60 Hz L35 L50 kW	0.45/0.42	0.53
Operating temperature range	+50°F...+131°F	+50°F...+131°F
Setting range	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	1.4	1.31
Refrigerant oz (g)	R134a, 6.0 (170)	R134a, 6.0 (170)
Weight lb (kg)	37.5 (17.0)	37.5 (17.0)

Power Category 2559 BTU (750 W)

Model No.	3361.500	3361.510
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	2900 (0.85)	–
Total cooling output 50/60 Hz L35 L35 BTU (kW)	2900/3037 (0.85/0.89)	3037 (0.89)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	2286/2286 (0.67/0.67)	2286 (0.67)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 60
Height inches (mm)	22 (550)	22 (550)
Width inches (mm)	11 (280)	11 (280)
Depth inches (mm)	11 (280)	11 (280)
Rated current max. A	2.7/2.7	5.3
Start-up current A	6/9.6	12
Pre-fuse A	10	10
Transformer circuit-breaker A	–	–
Toroidal transformer (external) Ø x D inches (mm)	–	–
Rated power Pel 50/60 Hz L35 L35 kW	0.41/0.44	0.56
Rated power Pel 50/60 Hz L35 L50 kW	0.47/0.5	0.66
Operating temperature range	+50°F...+131°F	+50°F...+131°F
Operating temperature (max.) 60 Hz	+50°F...+127°F	+50°F...+126°F
Setting range	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	2.08	1.59
Refrigerant oz (g)	R134a, 9.9 (280)	R134a, 9.2 (260)
Weight lb (kg)	48.5 (22.0)	48.5 (22.0)

TopTherm Blue e Wall-Mounted Cooling Units

Power category 3412 BTU (1000 W)

Model No.	3304.500	3304.510
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	3753 (1.1)	3753 (1.1)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	3753/4265 (1.1/1.25)	3753/4265 (1.1/1.25)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	3105/3071 (0.91/0.9)	3105/3071 (0.91/0.9)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60
Height inches (mm)	37 (950)	37 (950)
Width inches (mm)	16 (400)	16 (400)
Depth inches (mm)	10 (260)	10 (260)
Rated current max. A	5.4/5	10.6/11.1
Start-up current A	12/14	26/28
Pre-fuse A	10	–
Transformer circuit-breaker A	–	11...16
Motor circuit-breaker A	–	–
Rated power Pel 50/60 Hz L35 L35 kW	0.6/0.68	0.6/0.68
Rated power Pel 50/60 Hz L35 L50 kW	0.71/0.81	0.71/0.81
Operating temperature range	+50°F...+131°F	+50°F...+131°F
Setting range	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	1.83	1.83
Refrigerant oz (g)	R134a, 11.4 (325)	R134a, 17.6 (500)
Weight lb (kg)	86.0 (39.0)	97.0 (44.0)

Power category 5118 BTU (1500 W)

Model No.	3305.500	3305.510	3305.540
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	5459 (1.6)	5459 (1.6)	5459 (1.6)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	5459/6005 (1.6/1.76)	5459/6005 (1.6/1.76)	5459/5494 (1.6/1.61)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	4265/4675 (1.25/1.37)	4265/4675 (1.25/1.37)	4538/4606 (1.33/1.35)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50
Height inches (mm)	37 (950)	37 (950)	37 (950)
Width inches (mm)	16 (400)	16 (400)	16 (400)
Depth inches (mm)	10 (260)	10 (260)	10 (260)
Rated current max. A	5.5/5.8	11.5/12.5	2.5/2.8
Start-up current A	12/14	26/28	12.2/11.3
Pre-fuse A	16	–	–
Transformer circuit-breaker A	–	14...20	–
Motor circuit-breaker A	–	–	6.3...10
Rated power Pel 50/60 Hz L35 L35 kW	0.87/0.98	0.87/0.98	0.9/1.08
Rated power Pel 50/60 Hz L35 L50 kW	1.03/1.15	1.03/1.15	1.06/1.25
Operating temperature range	+50°F...+131°F	+50°F...+131°F	+50°F...+131°F
Setting range	+68°F...+131°F	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	1.83	1.83	1.83
Refrigerant oz (g)	R134a, 17.6 (500)	R134a, 17.6 (500)	R134a, 17.6 (500)
Weight lb (kg)	90.4 (41.0)	101.4 (46.0)	92.6 (42.0)

TopTherm Blue e Wall-Mounted Cooling Units

Power category 6824 BTU (2000 W)

Model No.	3328.500	3328.510
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	7507 (2.2)	7507 (2.2)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	7507/8735 (2.2/2.56)	7507/8735 (2.2/2.56)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	6210/6654 (1.82/1.95)	6210/6654 (1.82/1.95)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60
Height inches (mm)	62 (1580)	62 (1580)
Width inches (mm)	16 (400)	16 (400)
Depth inches (mm)	12 (295)	12 (295)
Rated current max. A	6.1/6.6	13.4/14.8
Start-up current A	20/22	40/38
Pre-fuse A	16	–
Transformer circuit-breaker A	–	18...25
Motor circuit-breaker A	–	–
Rated power Pel 50/60 Hz L35 L35 kW	0.92/1.03	0.92/1.03
Rated power Pel 50/60 Hz L35 L50 kW	1.06/1.23	1.06/1.23
Operating temperature range	+50°F...+131°F	+50°F...+131°F
Setting range	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	2.4	2.4
Refrigerant oz (g)	R134a, 33.5 (950)	R134a, 33.5 (950)
Weight lb (kg)	145.5 (66.0)	160.9 (73.0)

Power category 6824 BTU (2000 W)

Model No.	3328.540
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	7507 (2.2)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	7507/8701 (2.2/2.55)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	5630/6449 (1.65/1.89)
Rated operating voltage V, ~, Hz	400, 3~, 50 460, 3~, 60
Height inches (mm)	62 (1580)
Width inches (mm)	16 (400)
Depth inches (mm)	12 (295)
Rated current max. A	2.8/3.3
Start-up current A	6.8/7.8
Pre-fuse A	–
Transformer circuit-breaker A	–
Motor circuit-breaker A	6.3...10
Rated power Pel 50/60 Hz L35 L35 kW	0.92/1.15
Rated power Pel 50/60 Hz L35 L50 kW	1.15/1.4
Operating temperature range	+50°F...+131°F
Setting range	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	2.22
Refrigerant oz (g)	R134a, 33.5 (950)
Weight lb (kg)	147.7 (67.0)

TopTherm Blue e Wall-Mounted Cooling Units

Power category 8530 BTU (2500 W)

Model No.	3329.500	3329.510	3329.540
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	8701 (2.55)	8701 (2.55)	8701 (2.55)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	8701/9247 (2.55/2.71)	8701/9247 (2.55/2.71)	8701/9383 (2.55/2.75)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	6449/6722 (1.89/1.97)	6449/6722 (1.89/1.97)	6654/6824 (1.95/2)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60
Height inches (mm)	62 (1580)	62 (1580)	62 (1580)
Width inches (mm)	16 (400)	16 (400)	16 (400)
Depth inches (mm)	12 (295)	12 (295)	12 (295)
Rated current max. A	8.2/9.3	17/22	3.7/3.8
Start-up current A	20/24	44/42	6.8/7.6
Pre-fuse A	16	–	–
Transformer circuit-breaker A	–	18...25	–
Motor circuit-breaker A	–	–	6.3...10
Rated power Pel 50/60 Hz L35 L35 kW	1.21/1.35	1.21/1.35	1.2/1.4
Rated power Pel 50/60 Hz L35 L50 kW	1.41/1.64	1.41/1.64	1.45/1.75
Operating temperature range	+50°F...+131°F	+50°F...+131°F	+50°F...+131°F
Setting range	+68°F...+131°F	+68°F...+131°F	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	2.11	2.11	2.11
Refrigerant oz (g)	R134a, 33.5 (950)	R134a, 33.5 (950)	R134a, 33.5 (950)
Weight lb (kg)	152.1 (69.0)	167.6 (76.0)	154.3 (70.0)

Power category 13649 BTU (4000 W)

Model No.	3332.540
Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)	13478 (3.95)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	13478/14843 (3.95/4.35)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	10305/12011 (3.02/3.52)
Rated operating voltage V, ~, Hz	400, 3~, 50 460, 3~, 60
Height inches (mm)	62 (1580)
Width inches (mm)	20 (500)
Depth inches (mm)	13 (340)
Rated current max. A	4.2/4.2
Start-up current A	9.2/11
Pre-fuse	–
Transformer circuit-breaker	–
Motor circuit-breaker A	6.3...10
Rated power Pel 50/60 Hz L35 L35 kW	1.6/2
Rated power Pel 50/60 Hz L35 L50 kW	1.87/2.34
Operating temperature range	+50°F...+131°F
Setting range	+68°F...+131°F
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	2.47
Refrigerant oz (g)	R134a, 105.6 (2995)
Weight lb (kg)	200.6 (91.0)

Wall-mounted Air Conditioners Blue e+

Power Category 5118 BTU (1600 W)

Model No.	3185.830
Total cooling output 50 Hz L35 L35 toDIN EN 14511 BTU (kW)	5459 (1.6)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	5459 / 5459 (1.6 / 1.6)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	4095 / 4095 (1.2 / 1.2)
Rated operating voltage V, ~, Hz	110 - 240, 1~, 50/60 380 - 480, 3~, 50/60
Width inches (mm)	16 (400)
Height inches (mm)	37 (950)
Depth inches (mm)	12 (310)
Rated output kW	0.62
Power consumption Pel 50/60 Hz L35 L35 kW	0.54 / 0.54
Power consumption Pel 50/60 Hz L35 L50 kW	0.61 / 0.61
Operating temperature range °F (°C)	-4°F...+140°F (-20°C...+60°C)
Setting range °F (°C)	+68°F...+122°F (+20°C...+50°C)
Storage temperature range °F (°C)	-40°F...+158°F (-40°C...+70°C)
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511	3.05
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 lbs (kg)	67 (30.5)

Power Category 6830 – 19808 BTU (2000W – 6000W)

Model No.	3186.930	3187.930	3188.940	3189.940
Total cooling output 50 Hz L35 L35 toDIN EN 14511 BTU (kW)	6830 (2)	8879 (2.6)	14340 (4.2)	19808 (5.8)
Total cooling output 50/60 Hz L35 L35 BTU (kW)	6830 / 6830 (2 / 2)	8879 / 8879 (2.6 / 2.6)	14340 / 14340 (4.2 / 4.2)	19808 / 19808 (5.8 / 5.8)
Total cooling output 50/60 Hz L35 L50 BTU (kW)	4405 / 4405 (1.29 / 1.29)	6215 / 6215 (1.82 / 1.82)	10313 / 10313 (3.02 / 3.02)	14344 / 14344 (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 inches (mm)	18 (450)	18 (450)	18 (450)	18 (450)
Height inches (mm)	63 (1600)	63 (1600)	63 (1600)	63 (1600)
Depth inches (mm)	12 (294)	12 (294)	15 (393)	15 (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 Pel 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
Refrigerant g	R134a, 1150	R134a, 1150	R134a, 1750	R134a, 1750
Permissible operating pressure (p. max.) bar	24	24	24	24
Air throughput of fans (unimpeded air flow), Internal circuit/external circuit m³/h	1250 / 1250	1250 / 1250	2300 / 2300	2300 / 2300
Weight lbs (kg)	121 (55.2)	121 (55.2)	159 (72.4)	159 (72.4)
Note on Model No.	-	-	Full installation not possible	Full installation not possible

Air/Water Heat Exchangers

Power category 1024 – 1706 BTU (300 – 500 W), wall-mounted

Model No.		3212.024	3212.115	3212.230	3363.100	3363.500
Water-carrying parts	Copper/brass (Cu/CuZn)		■	■	■	■
Temperature control	Basic controller (factory setting +35°C)		–	–	–	–
	e-Comfort controller (factory setting +35°C)		–	–	–	■
Total cooling output L35 W10, 52.8 gal/h (200 l/h) BTU (kW)		1024 (0.3)	1024 (0.3)	1024 (0.3)	–	–
Total cooling output L35 W10, 105 gal/h (400 l/h) BTU (kW)		–	–	–	1706 (0.5)	1706 (0.5)
Rated operating voltage V, ~, Hz		24 (DC)	115, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60
Height inches (mm)		12 (300)	12 (300)	12 (300)	22 (550)	22 (550)
Width inches (mm)		6 (150)	6 (150)	6 (150)	11 (280)	11 (280)
Depth inches (mm)		3 (85)	3 (85)	3 (85)	5 (120)	5 (120)
Rated power Pel 50/60 Hz BTU (W)		89 (26)	89/102 (26/30)	78/92 (23/27)	126/130 (37/38)	126/130 (37/38)
Rated current max. A		1.2	0.23/0.24	0.11/0.13	0.18/0.18	0.18/0.18
Pre-fuse A		2	2	2	4	4
Operating temperature range		+34°F...+158°F	+34°F...+158°F	+34°F...+158°F	+34°F...+158°F	+34°F...+158°F
Setting range		–	–	–	+68°F...+131°F	+68°F...+131°F
Water inlet temperature		+34°F...+86°F	+34°F...+86°F	+34°F...+86°F	+34°F...+86°F	+34°F...+86°F
Water connection	½" connector sleeve	–	–	–	■	■
	G 3/8" external thread	–	–	–	■	■
	3/8" connector sleeve	■	■	■	–	–
Permissible operating pressure (p. max.) psi (bar)		15 - 145 (1 - 10)	15 - 145 (1 - 10)	15 - 145 (1 - 10)	15 - 145 (1 - 10)	15 - 145 (1 - 10)
Weight lb (kg)		7.1 (3.2)	7.1 (3.2)	7.1 (3.2)	17.6 (8.0)	17.6 (8.0)

Power category 2047 – 3412 BTU (600 – 1000 W), wall-mounted

Model No.		3214.100	3364.100	3364.500
Water-carrying parts	Stainless steel (1.4571)		–	–
	Copper/brass (Cu/CuZn)	■	■	■
Temperature control	Basic controller (factory setting +35°C)	–	■	–
	e-Comfort controller (factory setting +35°C)	–	–	■
	Thermostat-controlled solenoid valve	■	–	–
Total cooling output L35 W10, 52.8 gal/h (200 l/h) BTU (kW)		2047 (0.6)	–	–
Total cooling output L35 W10, 105 gal/h (400 l/h) BTU (kW)		2388 (0.7)	3412 (1)	3412 (1)
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60
Height inches (mm)		20 (500)	22 (550)	22 (550)
Width inches (mm)		8 (200)	11 (280)	11 (280)
Depth inches (mm)		4 (100)	5 (120)	5 (120)
Rated power Pel 50/60 Hz BTU (W)		123/126 (36/37)	123/130 (37/38)	123/130 (37/38)
Rated current max. A		0.17/0.18	0.18/0.18	0.18/0.18
Pre-fuse A		2	4	4
Operating temperature range		+34°F...+158°F	+34°F...+158°F	+34°F...+158°F
Setting range		+68°F...+131°F	+68°F...+131°F	+68°F...+131°F
Water inlet temperature		+34°F...+86°F	+34°F...+86°F	+34°F...+86°F
Water connection	1/2" connector sleeve	■	■	■
	G 3/8" external thread	–	■	■
Permissible operating pressure (p. max.) psi (bar)		15 - 145 (1 - 10)	15 - 145 (1 - 10)	15 - 145 (1 - 10)
Weight lb (kg)		15.4 (7.0)	19.8 (9.0)	19.8 (9.0)

Air/Water Heat Exchangers

Power category 4265 – 6824 BTU (1250 – 2000 W), wall-mounted

Model No.		3215.100	3373.100	3373.500
Water-carrying parts	Stainless steel (1.4571)	–	–	–
	Copper/brass (Cu/CuZn)	■	■	■
Temperature control	Basic controller (factory setting +35°C)	–	■	–
	e-Comfort controller (factory setting +35°C)	–	–	■
	Thermostat-controlled solenoid valve	■	–	–
Total cooling output L35 W10, 52.8 gal/h (200 l/h) BTU (kW)		4265 (1.25)	–	–
Total cooling output L35 W10, 105 gal/h (400 l/h) BTU (kW)		4436 (1.3)	6824 (2)	6824 (2)
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60
Height inches (mm)		37 (950)	37 (950)	37 (950)
Width inches (mm)		8 (200)	16 (400)	16 (400)
Depth inches (mm)		4 (100)	6 (145)	6 (145)
Rated power Pel 50/60 Hz BTU (W)		283/290 (83/85)	375/478 (110/140)	375/478 (110/140)
Rated current max. A		0.38/0.4	0.49/0.61	0.49/0.61
Pre-fuse A		4	4	4
Operating temperature range		+34°F...+158°F	+34°F...+158°F	+34°F...+158°F
Setting range		+68°F...+131°F	+68°F...+131°F	+68°F...+131°F
Water inlet temperature		+34°F...+86°F	+34°F...+86°F	+34°F...+86°F
Water connection	½" connector sleeve	■	■	■
	G 3/8" external thread	–	■	■
Permissible operating pressure (p. max.) psi (bar)		15 - 145	15 - 145 (1 - 10)	15 - 145 (1 - 10)
Weight lb (kg)		28.7 (13.0)	44.1 (20.0)	44.1 (20.0)

Power category 9554 – 10236 BTU (2800 – 3000 W), wall-mounted

Model No.		3374.504	3374.100	3374.110
Water-carrying parts	Stainless steel (1.4571)	■	–	–
	Copper/brass (Cu/CuZn)	–	■	■
Temperature control	Basic controller (factory setting +35°C)	–	■	■
	e-Comfort controller (factory setting +35°C)	■	–	–
	Thermostat-controlled solenoid valve	–	–	–
Total cooling output L35 W10, 105 gal/h (400 l/h) BTU (kW)		9554 (2.8)	10236 (3)	10236 (3)
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60
Height inches (mm)		37 (950)	37 (950)	37 (950)
Width inches (mm)		16 (400)	16 (400)	16 (400)
Depth inches (mm)		6 (145)	6 (145)	6 (145)
Rated power Pel 50/60 Hz BTU (W)		577/792 (169/232)	577/792 (169/232)	577/792 (169/232)
Rated current max. A		0.76/1.01	0.76/1.01	0.76/1.01
Pre-fuse A		4	4	4
Operating temperature range		+34°F...+158°F	+34°F...+158°F	+34°F...+158°F
Setting range		+68°F...+131°F	+68°F...+131°F	+68°F...+131°F
Water inlet temperature		+34°F...+86°F	+34°F...+86°F	+34°F...+86°F
Water connection	½" connector sleeve	■	■	■
	G 3/8" external thread	■	■	■
Permissible operating pressure (p. max.) psi (bar)		15 - 145 (1 - 10)	15 - 145 (1 - 10)	15 - 145 (1 - 10)
Weight lb (kg)		50.7 (23.0)	50.7 (23.0)	50.7 (23.0)

Air/Water Heat Exchangers

Power category 23885 BTU (7000 W), wall-mounted

Model No.		3216.480
Water-carrying parts	Copper/brass (Cu/CuZn)	■
Temperature control	Thermostat-controlled solenoid valve	■
Total cooling output L35 W10, 132 gal/h (500 l/h) BTU (kW)		23885 (7)
Total cooling output L35 W20, 132 gal/h (500 l/h) BTU (kW)		15355 (4.5)
Rated operating voltage V, ~, Hz		400, 3~, 50
460, 3~, 60		
Height inches (mm)		71 (1800)
Width inches (mm)		18 (450)
Depth inches (mm)		12 (300)
Rated current max. A		1.4/1.6
Pre-fuse A		4
Operating temperature range		+34°F...+158°F
Setting range		+68°F...+131°F
Water inlet temperature		+34°F...+86°F
Permissible operating pressure (p. max.) psi (bar)		15 - 145 (1 - 10)
Weight lb (kg)		174.2 (79.0)

TopTherm Chillers

Power category 3412 – 5118 BTU (1000 – 1500 W)

Model No.	3318.600	3318.610	3319.600	3319.610
Total cooling output at Tw = 50°F/Tu = 90°F BTU (kW)	2730/3071 (0.8/0.9)	2730/3071 (0.8/0.9)	4095/4436 (1.2/1.3)	4095/4436 (1.2/1.3)
Total cooling output at Tw = 64°F/Tu = 90°F BTU (kW)	3412/3753 (1/1.1)	3412/3753 (1/1.1)	5118/5801 (1.5/1.7)	5118/5801 (1.5/1.7)
Rated power Pel 50/60 Hz BTU (kW)	2150/2661 (0.63/0.78)	2150/2661 (0.63/0.78)	2900/3583 (0.85/1.05)	2900/3583 (0.85/1.05)
Rated operating voltage V, ~, Hz	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60
Height inches (mm)	16 (400)	16 (400)	16 (400)	16 (400)
Width inches (mm)	24 (600)	24 (600)	24 (600)	24 (600)
Depth inches (mm)	17 (430)	17 (430)	17 (430)	17 (430)
Rated current max. A	4.2/4.1	4.2/4.1	5.4/5.3	5.4/5.3
Operating temperature range	+50°F...+109°F	+50°F...+109°F	+50°F...+109°F	+50°F...+109°F
Refrigerant	R134a	R134a	R134a	R134a
Water connection	½" internal thread	■	■	■
Temperature hysteresis	+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K
Liquid temperature	+50°F...+86°F	+50°F...+86°F	+50°F...+86°F	+50°F...+86°F
Version	(pressure-sealed,	open)	(pressure-sealed,	open)
Tank	–	Plastic PP	–	Plastic PP
Tank capacity gal (l)	–	0.7 (2.5)	–	0.7 (2.5)
Weight lb (kg)	105.8 (48.0)	105.8 (48.0)	112.4 (51.0)	112.4 (51.0)

TopTherm Chillers

Power category 10236 – 20473 BTU (3000 – 6000 W)

Model No.		3320.600	3334.600	3334.660
Total cooling output at Tw = 50°F /Tu = 90°F BTU (kW)		9213/10236 (2.7/3)	13307/16037 (3.9/4.7)	16378/17743 (4.8/5.2)
Total cooling output at Tw = 64°F /Tu = 90°F BTU (kW)		10236/11601 (3/3.4)	15355/18426 (4.5/5.4)	20814/22520 (6.1/6.6)
Rated power Pel 50/60 Hz BTU (kW)		7165/9213 (2.1/2.7)	9895/13990 (2.9/4.1)	13990/16378 (4.1/4.8)
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60
Height inches (mm)		27 (676)	27 (676)	41 (1050)
Width inches (mm)		24 (602)	24 (602)	24 (602)
Depth inches (mm)		25 (645)	25 (645)	25 (645)
Rated current max. A		4.1/4.4	5.7/6.3	8.4/9
Operating temperature range		+50°F...+109°F	+50°F...+109°F	+50°F...+109°F
Refrigerant		R134a	R134a	R134a
Integral tank level display		–	–	■
Water connection	½" internal thread	■	■	–
	¾" internal thread	–	–	■
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K
Liquid temperature		+50°F...+86°F	+50°F...+86°F	+50°F...+86°F
Version		open)	open)	open)
Tank		Plastic PP	Plastic PP	Plastic PP
Tank capacity gal (l)		7.9 (30)	7.9 (30)	7.9 (30)
Weight lb (kg)		194.0 (88.0)	207.2 (94.0)	275.6 (125.0)

Power Category 9554 BTU (2800 W), wall-mounted

Model No.		3360.250
Total cooling output at Tw = 50°F /Tu = 90°F BTU (kW)		7165/7848 (2.1/2.3)
Total cooling output at Tw = 64°F /Tu = 90°F BTU (kW)		8530/9554 (2.5/2.8)
Rated power Pel 50/60 Hz BTU (kW)		5289/6824 (1.55/2)
Rated operating voltage V, ~, Hz		400, 3~, 50
460, 3~, 60		
Height inches (mm)		62 (1580)
Width inches (mm)		16 (400)
Depth inches (mm)		11 (290)
Rated current max. A		5.5/5.6
Operating temperature range		+50°F...+109°F
Refrigerant		R134a
Water connection	Quick-release coupling (counter-part included in accessories bag)	■
Temperature hysteresis		+/- 2 K
Liquid temperature		+50°F...+86°F
Tank		Plastic PP
Tank capacity gal (l)		2.6 (10)
Weight lb (kg)		172.0 (78.0)

TopTherm Chillers

Power category 27297 – 54594 BTU (8000 – 16000 W)

Model No.		3335.790	3335.830	3335.840	3335.850
Total cooling output at Tw = 50°F/Tu = 90°F BTU (kW)		22179/25591 (6.5/7.5)	22179/25591 (6.5/7.5)	35145/38557 (10.3/11.3)	47088/51865 (13.8/15.2)
Total cooling output at Tw = 64°F/Tu = 90°F BTU (kW)		27297/29344 (8/8.6)	27297/29344 (8/8.6)	40946/44699 (12/13.1)	54594/60054 (16/17.6)
Rated power Pel 50/60 Hz BTU (kW)		14911/17777 (4.37/5.21)	14911/17777 (4.37/5.21)	22520/26478 (6.6/7.76)	24909/31392 (7.3/9.2)
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60
Height inches (mm)		67 (1700)	83 (2100)	84 (2140)	84 (2140)
Width inches (mm)		32 (805)	32 (805)	32 (805)	32 (805)
Depth inches (mm)		24 (605)	24 (605)	24 (605)	24 (605)
Rated current max. A		8.2/7.7	8.2/7.7	10/11.4	12.7/13.3
Operating temperature range		+50°F...+109°F	+50°F...+109°F	+50°F...+109°F	+50°F...+109°F
Refrigerant		R410a	R410a	R410a	R410a
Water connection	1" internal thread	■	■	■	■
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K
Liquid temperature		+50°F...+77°F	+50°F...+77°F	+50°F...+77°F	+50°F...+77°F
Tank capacity gal (l)		19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Weight lb (kg)		546.7 (248.0)	546.7 (248.0)	621.7 (282.0)	621.7 (282.0)

Power category 68243 – 136486 BTU (20000 – 40000 W)

Model No.		3335.860	3335.870	3335.880	3335.890
Total cooling output at Tw = 50°F/Tu = 90°F BTU (kW)		56642/63807 (16.6/18.7)	70973/ 81209 (20.8/23.8)	92128/103729 (27/30.4)	110895/127955 (32.5/37.5)
Total cooling output at Tw = 64°F/Tu = 90°F BTU (kW)		68243/74385 (20/21.8)	85304/94175 (25/27.6)	109189/120107 (32/35.2)	136486/150134 (40/44)
Rated power Pel 50/60 Hz BTU (kW)		31392/40946 (9.2/12)	38898/47429 (11.4/13.9)	51012/60054 (14.95/17.6)	61111/78820 (17.91/23.1)
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60
Height inches (mm)		84 (2140)	84 (2140)	84 (2140)	84 (2140)
Width inches (mm)		47 (1205)	47 (1205)	63 (1605)	95 (2405)
Depth inches (mm)		24 (605)	24 (605)	24 (605)	24 (605)
Rated current max. A		20.1/17.3	22.8/23.8	26.3/26.7	38.4/32.7
Operating temperature range		+50°F...+109°F	+50°F...+109°F	+50°F...+109°F	+50°F...+109°F
Refrigerant		R410a	R410a	R410a	R410a
Water connection	1" internal thread	■	■	–	–
	1¼" internal thread	–	–	■	■
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K
Liquid temperature		+50°F...+77°F	+50°F...+77°F	+50°F...+77°F	+50°F...+77°F
Tank capacity gal (l)		39.6 (150)	39.6 (150)	19.8 (75)	39.6 (150)
Weight lb (kg)		793.7 (360.0)	824.5 (374.0)	1126.6 (511.0)	1424.2 (646.0)

Enclosure Heaters

Continuous thermal output 34 – 512 BTU (10 – 150 W), without fan

Model No.	3105.310	3105.320	3105.330	3105.340	3105.350	3105.360	3105.370
Height inches (mm)	5 (120)	5 (120)	6 (155)	6 (155)	9 (230)	6 (165)	7 (180)
Width inches (mm)	2 (45)	2 (45)	3 (64)	3 (64)	3 (64)	4 (90)	4 (90)
Depth inches (mm)	2 (46)	2 (46)	2 (56)	2 (56)	2 (56)	3 (75)	3 (75)
Continuous thermal output at Tu = 50°F BTU (W)	27 - 34 (8 - 10)	61 - 68 (18 - 20)	78 - 102 (23 - 30)	167 - 171 (49 - 50)	215 - 256 (63 - 75)	293 - 341 (86 - 100)	444 - 512 (130 - 150)
Rated operating voltage V, ~, Hz	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60
Pre-fuse A	2	2	4	4	4	4	4

Continuous thermal output 802 – 2730 BTU (235 – 800 W), with fan

Model No.	3105.410	3105.380	3105.420	3105.390	3105.430	3105.400
Height inches (mm)	8 (200)	8 (200)	8 (200)	8 (200)	8 (200)	8 (200)
Width inches (mm)	4 (103)	4 (103)	4 (103)	4 (103)	4 (103)	4 (103)
Depth inches (mm)	4 (103)	4 (103)	4 (103)	4 (103)	4 (103)	4 (103)
Continuous thermal output at Tu = 50°F BTU (W)	802/853 (235/250)	853/904 (250/265)	1211/1365 (355/400)	1365/1416 (400/415)	2423/2730 (710/800)	2730/2969 (800/870)
Rated operating voltage V, ~, Hz	115, 1~,50/60	230, 1~,50/60	115, 1~,50/60	230, 1~,50/60	115, 1~,50/60	230, 1~,50/60
Pre-fuse A	4	4	6	6	10	6



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Basic	Office hours	Next working day	Standard	1x/year	Optional
Comfort	Office hours	Next day	Standard	2x/year	Optional
Advanced	24 hours 365 days a year	Next day	24 hours	2x/year	Yes
Full	24 hours 365 days a year	8 hours	Custom	Custom (min. 2x/year)	Yes



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