Rittal – The System.

Faster – better – everywhere.

▶ **Fact Book.** It's time to make a change for the better.

Change for the Better.

RITTAL

FRIEDHELM **LOH** GROUP

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e+

Blue e+ Delivers Energy Savings Up to 75%

The Blue e+ uses an innovative process that relies upon two parallel cooling circuits working together, adjusting to the desired temperature of the enclosure. The integral heat pipe passively dissipates heat while active cooling is achieved via the compressor's cooling circuit with variable speed-controlled components. This unique inverter technology provides cooling output that is on target at the time it is needed. By combining variable speed cooling components Blue e+ delivers significant energy savings and a longer service for the enclosure components.

The e+ Principle

- **Efficiency** – Energy savings of 75% with speed-regulated components and heat pipe technology
- **Versatility** – Multi-voltage capability adapts to international
- **Longevity** – Automatic shut-off and variable speed of components greatly increases service life
- **User-friendliness** – Automatic shut-off and variable speed of components greatly increases service life

Join the revolution in **hybrid technology. Never compromise** on savings, efficiency and longevity.

Blue e+ enclosure air conditioners can save up to 75% in enclosure cooling costs and energy. Featuring hybrid, climate control with patented heat pipe technology, the unit offers a range of powerful new features that provide longer component life, flexibility and ease of use.

Download the
ChillZone© App

Available on the **App Store**

ANDROID APP ON **Google play**

The Facts:
Engineered better to perform better than the competition

		Rittal Blue e+	Hoffman	Pfannenberg	Kooltronic	ICEqube	Thermal Edge	Saginaw	Rittal Blue e
	Cooling Capacity	1,000 – 20,000 BTU	800 -19,000 BTU	1,000-19,000 BTU	1,000-26,000 BTU	1,000-27,000 BTU	1,000- 20,000 BTU	1,800-5,100 BTU	1,000 – 14,000 BTU
	Energy Efficient	Avarage EER for Blue e is ~ 2,5	On Average ~ 30% less efficient than Blue e+	On Average -30% less efficient than Rittal Blue e+	Not enough information to determine	Not enough information to determine	Not enough information to determine	Not enough information to determine	Avarage EER for Blue e is ~ 2,0
	Mounting	Wall- and roof-mounted, 3 Types of wall-mounting. 1 cutout wall-mount	Wall- and roof-mounted 2 types of wall-mounting	2 Types of installation, Twist&Fit	External Mounting	External Mounting	External Mounting	External Mounting	Wall- and roof-mounted, 3 Types of wall-mounting
	Approvals	Ul list., GS, CSA, CE	UL/cUL Listed, UR/cUR, CE, GOST	cUL, Gost, CE	UL/cUL Listed	cUL	cUL	UL Recognized, CE	cUR, UL rec., GS, CSA, CE
	System	Complete portfolio in cooling, enclosures, IT and PD	Offers enclosures and climate products	Cooling solutions, Lights, Sensors	Only offers climate products	Only offers climate products	Only offers climate products	Offers enclosures and limited climate products	Complete portfolio in cooling, enclosures, IT and PD
	Technical Support	RiCAD, RiDIAG, ePlan, Blue e+ App	Website, Phone Support	Own Software Tools, Makros for ePlan	Website support	Website, Phone Support	Website has a tech support portal	Website support	RiCAD, RiDIAG, ePlan

Easy Assembly

- One version for external mounting, partial internal mounting and full internal mounting

- One mounting cut-out for external mounting, partial internal mounting and full internal mounting in multiple output categories

- Maintenance-friendly, tool-less filter mat replacement

Choose the Best:
Wall-mounted air conditioners Blue e+

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)
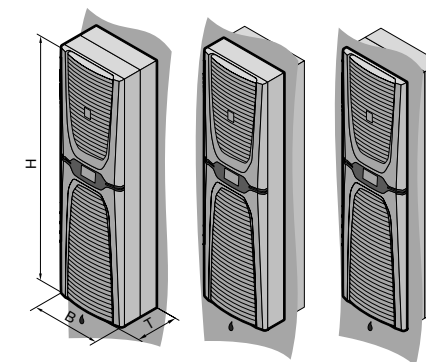**Material:**
– Sheet steel
Color:
– RAL 7035
Protection category IP to IEC 60 529:
– Internal circuit IP 55
Supply includes:
– Assembly parts

Output class 2000 – 6000 W

Model No.	Packs of	3186.930	3187.930	3188.940	3189.940
Total cooling output 50 Hz L35 L35 toDIN 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 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 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
Metal filters	1 pc(s).	3285.910	3285.910	3285.910	3285.910
Temperature sensor	1 pc(s).	3124.400	3124.400	3124.400	3124.400
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010

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TS 8 Modular Enclosures
Invented Here. Perfected Here.
Poorly Copied Over There.

The TS 8 enclosure is Rittal's flagship product, with more than 10 million units sold to date. Across North America and around the world, industries as diverse as Oil & Gas, Food & Beverage, Water Supply/ Wastewater Management, Wind Power, Data Centers, Chemicals and Medical Technology rely on this versatile, modular enclosure design for panel building, low-voltage switchgear, IT infrastructure and mechanical engineering applications.

Combined with Rittal's climate control and power distribution systems, the TS 8 enclosure safely and efficiently protects electronic equipment, control and processing systems in the harshest environments, the hottest factories and the most demanding conditions. Accessories enable the TS 8 to be the world's most adaptable enclosure for industrial and IT needs.

■ **Greater Efficiency**
■ **Unlimited Flexibility**
■ **Increased Safety**
■ **Better Quality**
■ **Greater Productivity**

An enclosure that fits every need: IP66, NEMA 4/4X, EMC, Power Distribution, Baying, Server and Network, Electronics.

There are over 350,000 **configurations of the TS 8 line of enclosures** available off-the-shelf

Proven More Than 10 Million Times Over

Highly innovative and remarkably flexible, the TS 8 is available in more than 100 versions off the shelf and comes in carbon steel, and 304 and 316 stainless steel varieties. Its modular construction allows for easy assembly, baying, equipment installations, removals and reconfigurations.

The Facts:
Engineered better to perform better than the competition

	RITTAL	**SCE** Saginaw Control & Engineering	**Hoffman**	**Hoffman**	**HAMMOND MANUFACTURING**	**COOPER**
	Rittal 316 Stainless Steel TS 8 Enclosure, 2000H0800W0800D (P/N 9977466)	**Saginaw Enviroline® Free Standing Single Door, (P/N SCE72EL3636SS6FS)**	**Pentair Hoffman® Free-Stand, Type 4X (P/N A72H3124SS6FS)**	**Pentair Hoffman® Free-Stand, Single Access with 3 Point Latches Type 4X (P/N A723024SSFSN4)**	**Hammond Manufacturing® Type 4X Freestanding Enclosure (P/N1418N4S16Y24)**	**Cooper B-Line® Ground-Mount Enclosure Type 4X Single-Door, Free-Standing Enclosure (P/N 7237244XSS6FS)**
Material	Stainless Steel 316	Stainless Steel 316	Stainless Steel 316	Stainless Steel 304	Stainless Steel 316	Stainless Steel 316
Latching System	4 Point internal	3 point internal and 2 quarter turns	External latching	3 point internal	External latching	External latching
Hinge System	Discrete, Easily Removable	Continuous (Piano)	Continuous (Piano)	Continuous (Piano)	Continuous (Piano)	Continuous (Piano)
Gasketing System	Foamed-in-place	Oil-resistant	Oil-resistant	Foamed-in-place	Poured in place	Poured in place
Handle	Padlock-able Stainless Steel 316	Black anodized	None	316L Stainless Steel POWERGLIDE™ padlocking handle	None	None
Expandable	Yes	No	No	No	No	No
Unibody or modular	Modular	Unibody	Unibody	Unibody	Unibody	Unibody
Maximum Available Height	87"	90"	72"	90"	72"	72"
Maximum Available Width	32"	36"	37"	36"	37"	37"
Maximum Available Depth	32"	36"	24"	36"	24"	24"
Mounting Panel Included	Yes	No	No	No	No	No
Number of eyebolts	4	2	2	2	2	2
Enclosure Weight (pounds)	400*	489	350	360	390	390
Mounting Panel Dimensions	75"x28"	60"x32"	60"x22"	60"x22"	60"x32"	60"x32"
Mounting Panel Area (sq. in.)	2100	1920	1320	1320	1920	1920
Surface Area of Above P/N	11,904 sq.in.	12960 sq.in.	9,408 sq.in.	9,216 sq.in.	10,560 sq.in.	10,560 sq.in.
List Price	$9,320*	$8,960	$17,590	$12,450	$18,090	$17,910
Distributor Cost	$5,592*	n/a	$6,504	$4,603	$6,688	$6,622
Street Price	$6,990*	$4,480	$8,130	$5,754	$8,360	$8,277
Internal Gland Plate in Floor	Yes	No	No	No	No	No

*Total with plinth and sidewalls

316 Stainless Steel TS8 Enclosure, UL Type 4X, IP 66, Single Door — Type 316 Stainless Steel

Part No.	HxWxD inches	HxWxD mm	Sidewalls Part Number (Pair)	Mounting Panel (Included) HxW inches	Mounting Panel (Included) HxW mm	8" (200 mm) High Plinth, Front & Rear	8" (200 mm) High Plinth, Sides	12" (300 mm) High Floor Stand Kit
9977477	71x24x24	1800x0600x0600	9977479	67x20	1696x499	9972908	8702065	9963530
9977472	71x32x20	1800x0800x0500	9977478	67x28	1696x699	9972907	8702055	9963529
9977475	71x32x24	1800x0800x0600	9977479	67x28	1696x699	9972907	8702065	9963530
9977470	79x24x24	2000x0600x0600	9977481	75x20	1896x499	9972908	8702065	9963530
9977473	79x24x32	2000x0600x0800	9977482	75x20	1896x499	9972908	9977494	9973052
9977468	79x32x20	2000x0800x0500	9977480	75x28	1896x699	9972907	8702055	9963529
9977467	79x32x24	2000x0800x0600	9977481	75x28	1896x699	9972907	8702065	9963530
9977466	79x32x32	2000x0800x0800	9977482	75x28	1896x699	9972907	9977494	9973052
9977471	87x24x24	2200x0600x0600	9977483	83x20	2096x499	9972908	8702065	9963530
9977476	87x24x32	2200x0600x0800	9977484	83x20	2096x499	9972908	9977494	9973052
9977469	87x32x24	2200x0800x0600	9977483	83x28	2096x699	9972907	8702065	9963530
9977474	87x32x32	2200x0800x0800	9977484	83x28	2096x699	9972907	9977494	9973052

System Accessories

Intermediate Hinge CP 120

Without height offset. For vertically hinged connection of horizontal support sections within the support arm system.

Clamping Elements

for support sections CP 60/120, open. For additional protection against rotation and twisting of the open section.

Interface Flap

For RC circuit-breaker. Under the current Safety of Machinery Standard EN 60204-1, all externally accessible sockets on an enclosure must be fused with an RC circuit-breaker. Prepared for the installation of standard, 2-pole RCBO circuit-breakers.

Mounting angles additional fastening attachment

For TS IT. Prevents the mounting angles from twisting in case of unevenly distributed loads. Secured directly between the mounting angle and a mounting sec-tion on the outer mounting level of the TS frame structure.

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TS IT Dynaload Offers Superior Safety and Ease-Of-Use

Safely transport critical Data Center equipment eliminating additional labor and transportation costs. The shock pallet variant integrates a rigid design with additional bracing, ensuring a safe delivery. The rugged TS 8 rack, with 16-fold vertical sections, 9-fold horizontal sections and 19" component mounting rails secured directly to the patented frame, is delivered ready for component installation. Individual racks, with pre-installed casters, are shipped on shock absorbing, reinforced pallets with multipurpose brackets. Pallets and brackets are suitable for reuse.

Unpack. Build. Repack. Deploy.

The low profile frame system provides the greatest usable internal volume and ease of access from all angles, providing ease of installation for components while minimizing impact on installed devices. Two (2) parallel, full depth slotted roof cable entry cutouts with brush strips provide cable management flexibility, ease of cable installation and support airflow management. A center cutout can support roof mount fan installation.

Single piece front and split rear doors are fully perforated, providing up to 85% of open perforated surface area. The large perforated surfaces maximize airflow through the enclosure. The Rittal advanced shipping system adheres to strict international Safe Transit Association (ISTA) standards. Intelligent and economical packaging, suitable for reuse, is applied at Rittal's Ohio facility to each enclosure.

Additional features address thermal and cable management, including multi-functional roof design and cable management accessories.

The reinforced pallet with multi-purpose brackets is able to withstand transport hazards such as dropping or uneven flooring.

Smart Design
enables movement of equipment up to 2500 lbs.

The Facts:
Engineered better to perform better than the competition

	Rittal	APC	CPI	Damac
RU/Height	42U/ 2000mm 47U/ 2200mm	42U/ 2000mm	42U/ 2000mm 45U/ 2100mm 47U/ 2200mm	3 point internal
Width	600mm 800mm	600mm	600mm	600mm
Depth	1050mm 1200mm	1200mm	1075mm 1200mm	Foamed-in-place
Shiploadable Rating (lbs.)	2,500	2,250 (needs additional bracing)	3,000	3,000
Competitor Price Point vs. Rittal Channel Price		↑	↓	↓
Strengths	■ Wide variety of sizes available for today's high-density applications ■ Priced for value	■ Widely accepted rack design and accessory offering ■ Low price point	High load rating	Has NEBS 2 Rating, used as adifferentiation with bid opportunities
Weaknesses	■ Solid sidewall ordered separately and installed at final destination	■ Not a true ship-loadable solution without additional bracing (ordered separately) ■ Limited sizes	■ Ramp ordered separately, limited width variants ■ High price point	■ Built in air dam and cable management wall makes installation harder ■ Limited sizes

TS-IT Dynaload Rack

Part No.	Description
9962.173	TS-IT Dynaload Rack, RAL9005, 2000mm H x 600mm W x 1050mm D (79 in. H x 24 in. W x 41 in. D), 42U
9962.174	TS-IT Dynaload Rack , RAL9005, 2000mm H x 600mm W x 1200mm D (79 in. H x 24 in. W x 47 in. D), 42U
9962.175	TS-IT Dynaload Rack , RAL9005, 2000mm H x 800mm W x 1050mm D (79 in. H x 32 in. W x 41 in. D), 42U
9962.176	TS-IT Dynaload Rack , RAL9005, 2000mm H x 800mm W x 1200mm D (79 in. H x 32 in. W x 47 in. D), 42U
9962.177	TS-IT Dynaload Rack , RAL9005, 2200mm H x 600mm W x 1050mm D (87 in. H x 24 in. W x 41 in. D), 47U
9962.178	TS-IT Dynaload Rack , RAL9005, 2200mm H x 600mm W x 1200mm D (87 in. H x 24 in. W x 47 in. D), 47U
9962.179	TS-IT Dynaload Rack, RAL9005, 2200mm H x 800mm W x 1050mm D (87 in. H x 32 in. W x 41 in. D), 47U
9962.180	TS-IT Dynaload Rack, RAL9005, 2200mm H x 800mm W x 1200mm D (87 in. H x 32 in. W x 47 in. D), 47U
9962.181	TS-IT Dynaload Rack with pallet, RAL9005, 2000mm H x 600mm W x 1050mm D (79 in. H x 24 in. W x 41 in. D), 42U
9962.182	TS-IT Dynaload Rack with pallet, RAL9005, 2000mm H x 600mm W x 1200mm D (79 in. H x 24 in. W x 47 in. D), 42U
9962.183	TS-IT Dynaload Rack with pallet, RAL9005, 2000mm H x 800mm W x 1050mm D (79 in. H x 32 in. W x 41 in. D), 42U
9962.184	TS-IT Dynaload Rack with pallet, RAL9005, 2000mm H x 800mm W x 1200mm D (79 in. H x 32 in. W x 47 in. D), 42U
9962.185	TS-IT Dynaload Rack with pallet, RAL9005, 2200mm H x 600mm W x 1050mm D (87 in. H x 24 in. W x 41 in. D), 47U
9962.186	TS-IT Dynaload Rack with pallet, RAL9005, 2200mm H x 600mm W x 1200mm D (87 in. H x 24 in. W x 47 in. D), 47U
9962.187	TS-IT Dynaload Rack with pallet, RAL9005, 2200mm H x 800mm W x 1050mm D (87 in. H x 32 in. W x 41 in. D), 47U
9962.188	TS-IT Dynaload Rack with pallet, RAL9005, 2200mm H x 800mm W x 1200mm D (87 in. H x 32 in. W x 47 in. D), 47U

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Cooling Solutions to Protect Vital Equipment

From Enclosure Based to Room Based Thermal Management.

Controlling climate is key, and Rittal has a lock on a complete range of solutions: CRAC, in line/in row, chillers, condensers, pipe installations, water distribution cabinets or water heat exchangers. Each product offers state-of-the-art, high efficiency climate control technology. We can support your precise application with planning, assembly, commission and service, all from your one stop supplier.

All Optimally Coordinated to the Tailored Requirements of your Data Center.

You know that 30-50% of your data center energy costs are attributable to your cooling infrastructure. When your best IT Cooling Solution includes Rittal, you know that you are achieving energy efficiency while you reduce investment and running costs, save resources and CO_2 output while your IT components work to capacity.
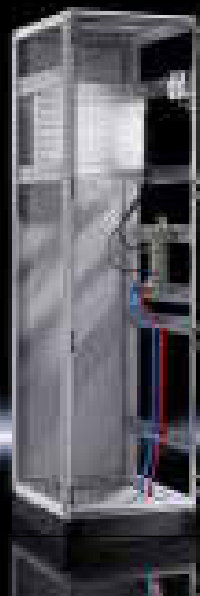
The Facts:
Engineered better to perform better than the competition

	RITTAL	**APC** by Schneider Electric	**STULZ**	**EMERSON**
	Rittal LCP CW In Row - Open Loop	**APC IN ROW 301S ACRC301S**	**STULZ CYBER ROW CRS 090**	**LIEBERT CRV CR032RC1**
MAXIMUM CAPACITY	30kW	40kW	37 kW	32kW
ACTUAL CAPACITY	30.7kW	26kW	29.5 kW	25.2kW
Chill Water Supply	59	59	50	50
Warm Water Return	70.3	71	62	60
Server Air In	73	75	72	75
Server Air Return	111	111	100	95
Water Flow (GPM)	18.5	16.4	17	18
Air Flow (CFM)	2900	3200	2900	2550
Power Usage (Watts)	1053	1000	1040	1300
H x W x D	78" x 12" x 48"	78" x 12" x 43"	78" x 12" x 42"	78"x12"x43"
Weight	484 Lbs	406 Lbs	380 Lbs	365 Lbs.
Input Power	208 VAC, 20 Amp, 1 Phase	100-220 VAC, 20 Amp, 1 Ph	100 - 220VAC, 20 Amp, 1 or 3 Ph	120/208-230/-460VAC, 20 Amp, 1 or 3 Ph
Power Feed	Single, ATS Optional	Dual - A & B	Single. ATS Optional	Single - ATS Optional
Air Flow Path	Closed & Open Loop	Open Loop ONLY	Open Loop ONLY	Open Loop ONLY
Max Air Flow	2900 cfm	3200 cfm	2900 cfm	2550 cfm
Fan Type	EC, VFD, Hot swap	VFD, Hot Swap	EC, VFD	EC, VFD
Fan Location	Front	Front	Front	Front
Fan Speed Range	0 - 100%	30 - 100%	0 - 100%	0 - 100%
Number of Fans	4	8	3	6
Decibels @ 100% Fan Speed	77 dB	77.1dB	58 dB	72.4dB - Discharge Side
Humidity Control	No	No	No	No
Water Valve	2 Way Control	3 Way Control	2 Way(std), 3 Way(Opt)	3 Way (Std), 2 Way (Opt)
Water Connections	Top & Bottom	Top & Bottom	Top & Bottom	Top & Bottom
Pipe Connection	1 1/2"	1"	1 1/4"	1 1/4"
Condensate Pump	Optional	Standard	Standard	Optional
Touch Screen	Optional	Included	Included	Included - iCOM
Remote Monitoring	Yes	Yes	Yes	Yes
Communications Protocols	SNMP, TCP/IP	SNMP, ModBus, TCP/IP	Optional - pLAN: SNMP, ModBus, BACNet	Optional - Intellislot: SNMP, RS485 Modbus, ModbusIP/BACNet IP
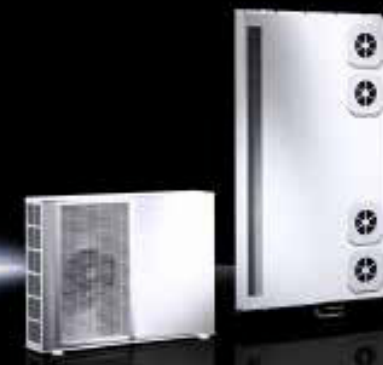
Flexible Product Spectrum

From entry-level systems IT cooling to a high-end, multi-unit application, Rittal IT Cooling Solutions bring cost-efficiency to each installation, with the best options to maximize your savings without sacrificing computer or server performance.

Wall-mounted cooling units

Roof-mounted cooling units
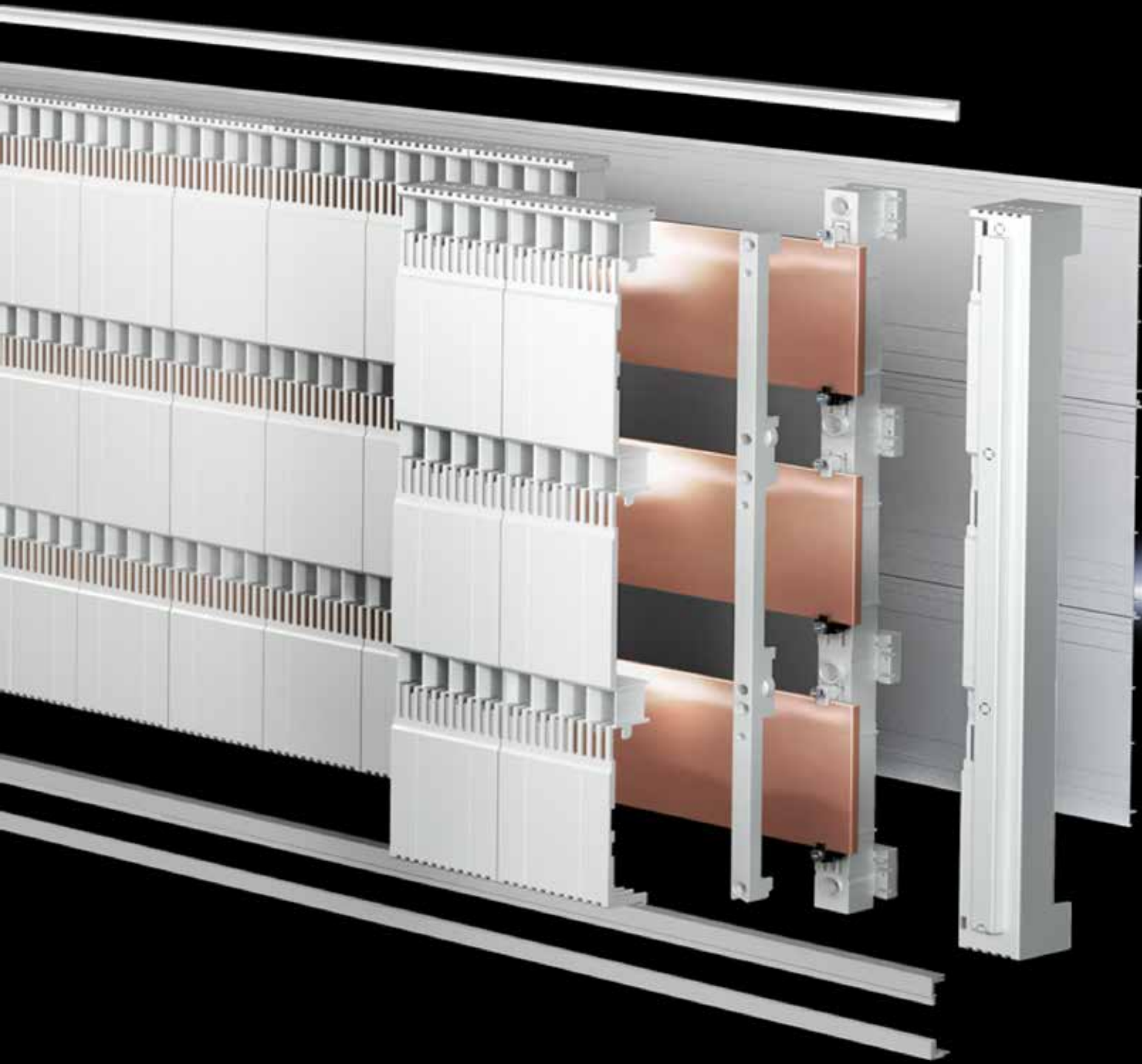
Climate control enclosure (doors)

Output class 600 – 1300 W, wall-mounted HD

Model No.		Packs of	3214.700	3215.700	Cat. 34, Page
Temperature control	Thermostat-controlled magnetic valve		■	■	
Total cooling output L35 W10, 200 l/h kW			**0.6**	**1.25**	
Total cooling output L35 W10, 400 l/h kW			**0.7**	**1.3**	
Power consumption P$_{el}$ 50/60 Hz W			36 / 37	83 / 85	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	230, 1~, 50/60	
Width cm			220	215	
Height cm			526	982	
Depth cm			100	100	
Rated current max. A			0.17 / 0.18	0.38 / 0.4	
Pre-fuse A			2	4	
Operating temperature range			+1°C...+70°C	+1°C...+70°C	
Setting range			+20°C...+55°C	+20°C...+55°C	
Water inlet temperature			+1°C...+30°C	+1°C...+30°C	
Water connection	G ⅜" external thread		■	■	
Permissible operating pressure (p. max.) bar			1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow), internal circuit 50/60 Hz m³/h			280 / 310	680 / 735	
Cooling medium			Water (see instructions for specifications)	Water (see instructions for specifications)	
Weight kg			7.5	14.0	
Accessories					
Toroidal transformer			see page	see page	382

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RiLine Busbar Systems Improve Enclosure Efficiency

Use of RiLine copper busbar system provides reliable electrical power distribution, requires less panel modification, and fewer contact points and wiring work. By eliminating power distribution blocks, line-side wiring and large, parallel cable runs, busbar systems save space and time for IT managers and increase contact hazard protection.

Power Management Systems Simplify System Expansion

RiLine Busbar systems enable expansion without additional wiring. Rapidly add or change operational layouts without losing uptime. New components can be simply snapped onto the unpopulated bus system.

Power
Management
Systems
**Reduce
Space**
up to 50% within
enclosures

Flexibility is in the Design

Up to 1600 A current rated systems, available 60 mm bar center distance, 3 or 4 pole design are just some of the design options for your RiLine Busbar system. You get a continuous, reliable connection, with the safety of all around contact protection. In addition, the systems meet all international standards, including IEC, UL, and CSA.
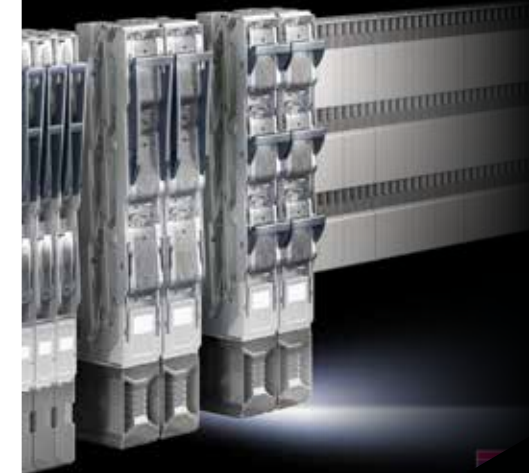
Flange Mount Disconnect Protects Panel Modifiers

Safe, Smart Technology That Meets Industry Standards for Panel Builders.

Preventing your staff from opening a powered enclosure is a safety measure you can control. Rittal is one of the few manufacturers of a Flange Mount Disconnect Enclosure that truly meets the UL508A Standard, the standard for the construction of Industrial Control Panels.

If the Slave Door is open, the Master Door cannot be closed and power cannot be turned on. The Master Door can be closed and the system powered on only when all of the Slave Doors are closed. The Slave Door Interlocking Kit provides the means to lock the slave door while the master door is closed and the power is on. It also prevents the Master Door from closing while the Slave Door is open and unsecure.

If the
Slave Door
is open, the
Master Door
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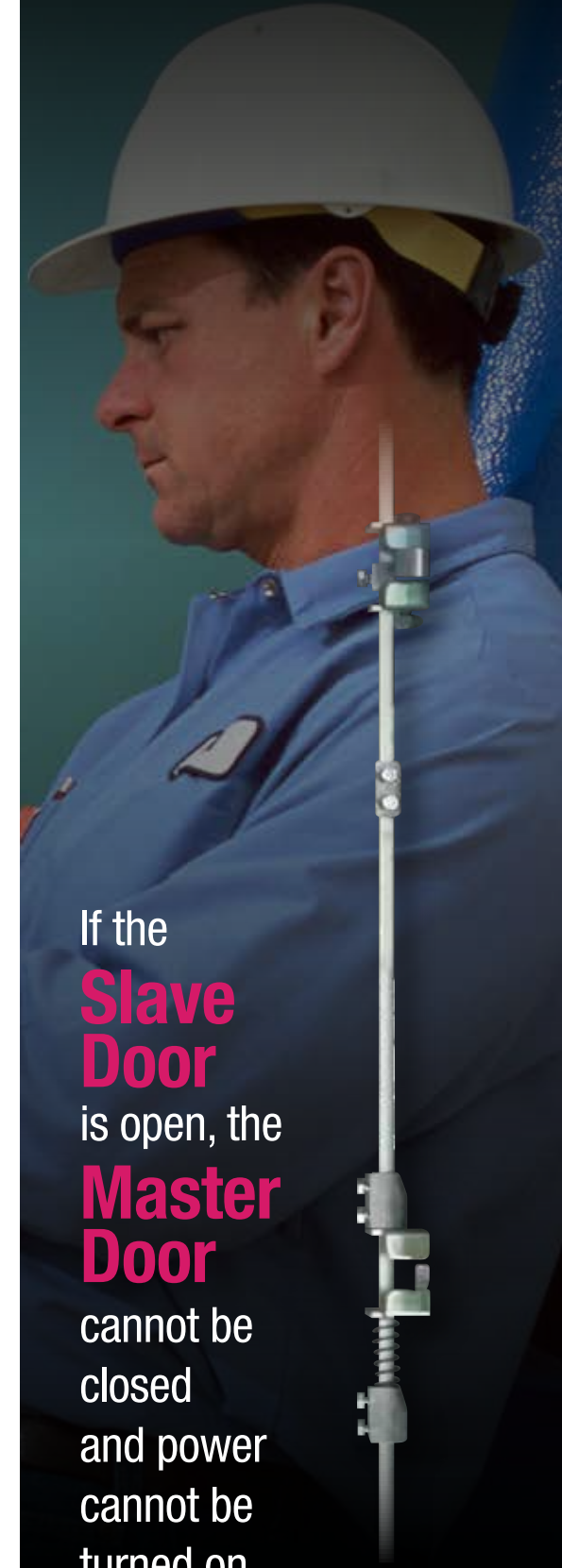
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Faster – better – everywhere.

## Excellence in Hygienic Standards for the Food Industry

Successful Hygienic Design (HD) helps you battle the ever-present contamination risks. It is crucial to maximize the units safety for open processes. Our terminal boxes and compact enclosures are key elements in our plan for your ease of cleaning solution. But we don't stop there. Baying system and production data enclosures can be integrated with ease into production clean rooms. Flexible design options for almost infinite possibilities. Compatible accessories such as wall spacer brackets and HD-compatible cable glands customize your unit to your exact specifications.

It's All About the Cleanliness

Our designs optimize your cleaning. There is no external cavity between the enclosure and the door. Strategic silicone sealing is joint-free, extends all around, and is a distinctive blue color to distinguish it from foodstuffs. Hinges are inside the sealing zone to create an exceptionally easy-to-clean surface on the outside. Every surface is designed with durability while being easy to maintain, from captive screws to stainless steel locks. Contamination risks are minimized, reducing the excessive use of cleaning and disinfecting agents.

Roof angled forward at 30° to allow fluid to drain rapidly and to be easily inspected.
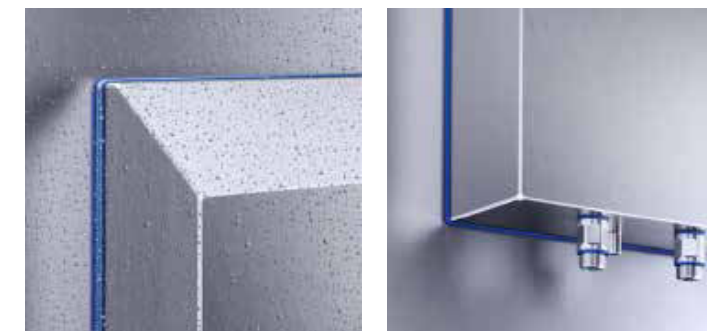
Benefits:
– Easy-to-clean, hygienic design
– A roof tilt of 30° prevents objects from being deposited on it, and allows liquids to run off quickly
– All-round external, replaceable silicone seal prevents the accumulation of dirt between the enclosure and the air/ water heat exchanger

Temperature control:
– e+ controller (factory setting +35°C)

Material:
– Enclosure: Stainless steel 1.4301 (AISI 304)

Surface finish:
– Enclosure: Brushed, grain 400, peak-to-valley height < 0.8 µm

Protection category IP to IEC 60 529:
– IP 55

Protection category IP to DIN 40 050-9:
– IP 69K

Protection category NEMA:
– NEMA 4X

Supply includes:
– Fully wired ready for connection (plug-in terminal strip)
– Drilling template
– Sealing and assembly parts

Further technical information:
Available on the internet

Output class 600 – 1300 W, wall-mounted HD

Model No.		Packs of	3214.700	3215.700	Cat. 34, Page
Temperature control	Thermostat-controlled magnetic valve		■	■	
Total cooling output L35 W10, 200 l/h kW			**0.6**	**1.25**	
Total cooling output L35 W10, 400 l/h kW			**0.7**	**1.3**	
Power consumption P_{el} 50/60 Hz W			36 / 37	83 / 85	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	230, 1~, 50/60	
Width cm			220	215	
Height cm			526	982	
Depth cm			100	100	
Rated current max. A			0.17 / 0.18	0.38 / 0.4	
Pre-fuse A			2	4	
Operating temperature range			+1°C...+70°C	+1°C...+70°C	
Setting range			+20°C...+55°C	+20°C...+55°C	
Water inlet temperature			+1°C...+30°C	+1°C...+30°C	
Water connection	G ⅜" external thread		■	■	
Permissible operating pressure (p. max.) bar			1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow), internal circuit 50/60 Hz m³/h			280 / 310	680 / 735	
Cooling medium			Water (see instructions for specifications)	Water (see instructions for specifications)	
Weight kg			7.5	14.0	
Accessories					
Toroidal transformer			see page	see page	382

SILICONE SEAL
prevents the accumulation of dirt

Rittal – The System.

Faster – better – everywhere.

Brilliant! Innovative Lighting Designed For Enclosures and Sealed Cases

Shine some light in your enclosure with the Rittal LED Compact Lighting System. It is safe, with an extra low voltage range. And it packs the newest generation of LED technology for double the luminous flux of past lighting. A Fresnel structured optical cover spreads light coverage throughout the enclosure. With the LED system, you blend economical energy use with low maintenance.

Get Attached to Intelligent Lighting

For optimal illumination of every corner of your enclosure, Rittal LED Compact Lighting is perfectly integrated to the TS 8. Fast and tool-free assembly simply clips to the latch-in hook pattern, and optional screw fastening is available. Or go magnetic, for freely positionable locating within the enclosure. Motion detection or door operated switch is available for hands-free illumination. Suitable for immediate, global use with wide-range voltage 100 – 240 V (AC) and 24 V (DC).

The Facts:
Engineered better to perform better than the competition

LED System Light

	Rittal	Hoffman – Panel Lite	Hoffman – LED Light	Saginaw – SCE-SLMS
Lumens	900 and 1200 LM	470 LM	400 LM	400 LM
Swivel capability	Yes	Yes	No	No
Motion Sensor	Yes	Yes	Yes	Yes
Daisy chain	Up to 15 direct wire; 10 with socket	Up to 5 direct wire	Up to 10	16 AC; 8 DC

Benefits:
- Optimum illumination of the entire enclosure
- Optionally with clip, screw and magnetic attachment
- A configuration to suit every application

Length:
- 437 mm

Material:
- Plastic
- Aluminium

Color:
- Enclosure: RAL 7016

Light color:
- 4000 K (neutral white)
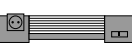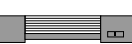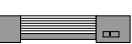
Supply includes:
- Assembly screws

Approvals:
- ENEC

Note:
- Connection accessories should be ordered separately

Model No.		2500.310	2500.300	2500.210	2500.200	2500.220	Page
Output (lumen)		1200	1200	900	900	900	
Motion sensor		■	■	–	–	–	
Voltage supply	100 – 240 V AC	■	■	■	■	–	
	24 V DC	–	–	–	–	■	
Equipment	Socket	■	–	■	–	–	
	90° rotating connector	■	■	■	■	■	
	Adjustable light direction	■	■	–	–	–	
	Adjustable light distribution	■	■	■	■	■	
Protection class II (all-insulated)		■	■	■	■	■	
Installation type	Screw-fastening	■	■	■	■	■	
	Clip attachment	■	■	■	■	■	
	Magnetic attachment to surfaces (accessory)	–	■	–	■	■	
Connection options	Infeed	3-pole	3-pole	3-pole	3-pole	2-pole	
	Through-wiring	3-pole	3-pole	3-pole	3-pole	2-pole	
	Door-operated switch (accessories)	–	–	■	■	■	
Mounting options	TS, SE Screw fastening/clip	Directly on the profile	Directly on the profile	Directly on the profile	Directly on the profile	Directly on the profile	
	AE Screw-fastening	With universal bracket	With universal bracket	With universal bracket	With universal bracket	With universal bracket	
Accessories							
Universal bracket		2373.000	2373.000	2373.000	2373.000	2373.000	Cat. 34, 623
Mounting kit magnet		–	2500.480	–	2500.480	2500.480	29
Rail for interior installation		see page	see page	see page	see page	see page	Cat. 34, 605
Connection accessories							
Infeed, 2-pole		–	–	–	–	2500.410	29
Infeed, 3-pole (with socket)		2500.400	2500.400	2500.400	2500.400	–	29
Through-wiring, 2-pole		–	–	–	–	2500.440	29
Through-wiring, 3-pole (with connector and socket)		2500.430	2500.430	2500.430	2500.430	–	29
Door-operated switch		–	–	2500.460	2500.460	2500.460	29
Door-operated switch, UL		–	–	2500.470	2500.470	2500.470	29

Link to the Value Chain

From the very first customer interface through every process necessary to completing a customer's order...each step forms a link in the Rittal Value Chain.

Every step optimizes your production process. We work with you to harness your efficiency potential. Requirements are defined, as together we simulate and virtualize your control panel design. Individual production stages are validated and documented in the virtual design. When the design is complete, assuring that materials and resources are most efficiently utilized, it is output to machinery which will begin the production. Once complete, safe delivery is made, your system is seamlessly installed and you receive ongoing service support, assuring your complete satisfaction.

Rittal brings the Industry 4.0 Value Chain to control panel designers at any organization of any size. You will appreciate the effective production and increased flexibility for your industry edge.

ePlan: The Gateway to Project Planning Efficiency

Imagine a uniform project planning environment for electrical, fluid, EI&C engineering and enclosure assembly, all in 3D. ePlan directs you through each field of action: *IT infrastructure, product structure, platform set-up, codes and standards, workflow, process integration and process management*. It's highly modular and allows the most flexibility in application.

Support comes from targeted ePlan packages:

- **ePlan Electric P8:** CAE software for the planning, documentation and administration of electrical automation projects.

- **ePlan Pro Panel:** For the 3D engineering and verification of control cabinets and switchgear, including access to device data.

- **ePlan Fluid:** CAE software for the configuration and documentation of circuits in fluid power installations in hydraulics, pneumatics, cooling and lubrication.

- **ePlan PPE:** For planning and configuring of process automation, measurement control and regulation systems for data exchange to integrate with all processes.

- **ePlan Data Portal:** Integrated, web based data portal providing access to up to date device data from leading component manufacturers.

- **ePlan Engineering Configuration:** Functional mechatronic configuration solution for consistent sales and production management processes for consistent workflow. Reduces time and costs in engineering by up to 50% while quality of documentation is increased.

- **ePlan Harness ProD:** Simplifies one of the most important phases of the design and documentation of wire harnesses and nail boards.

ePLAN®

We help you make your engineering processes even more intuitive, faster and more target-oriented.

Rittal: World Leader in the Field of IT and Industrial Enclosure Systems, Climate Control, and IT Infrastructure Solutions.

When you specify product for a comprehensive data center or a single stand alone enclosure unit, know that Rittal keeps your user experience at the forefront in everything they do. Our innovations don't simply introduce something new and different, they solve a problem, improve your efficiency, lower your costs or decrease CO_2 footprint. We chose our superior stainless steel for TS 8 to withstand your most aggressive environment. We developed Blue e+ to be the world's most efficient cooling unit to save you operating costs, and give your components a longer service life. Rittal wants to give you and your company the global competitive advantage you deserve.

Rittal Automation Systems (RAS) to Optimize your Panel Building Processes

We've automated panel building and switchgear engineering with comprehensive range of solutions from manual tools to fully mechanical engineering solutions. We can assist in implementing the exact modifications for your individual panels.

- **Machining:** Discover our solutions for the fully automated, fast, precise and reliable milling or laser machining of enclosures and cases, plus cut-optimised machining of cable ducts and DIN rails.

- **Assembly:** Find enhanced efficiency with automated production of clamping strips and ergonomic component mounting systems.

- **Wire Processing:** Professional and practical solutions for wire machining and processing featuring simple and reliable handling.

- **Wiring:** Our fully automated wiring of mounting plates offers efficient wiring and intuitive control.

- **Tools:** High quality manual tools available for use by those with high professional standards.

- **Handling:** Ergonomic, efficient handling systems for transport and lifting operations.

For each step, Rittal Automation Systems will simplify and streamline your panel building process.

Rittal – The System.

Faster – better – everywhere.

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

ENCLOSURES   POWER DISTRIBUTION   CLIMATE CONTROL   IT INFRASTRUCTURE   SOFTWARE & SERVICES

RITTAL

FRIEDHELM LOH GROUP