

Rittal – The System.

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► Rittal Automation Systems – Automate your panel building and switchgear manufacturing



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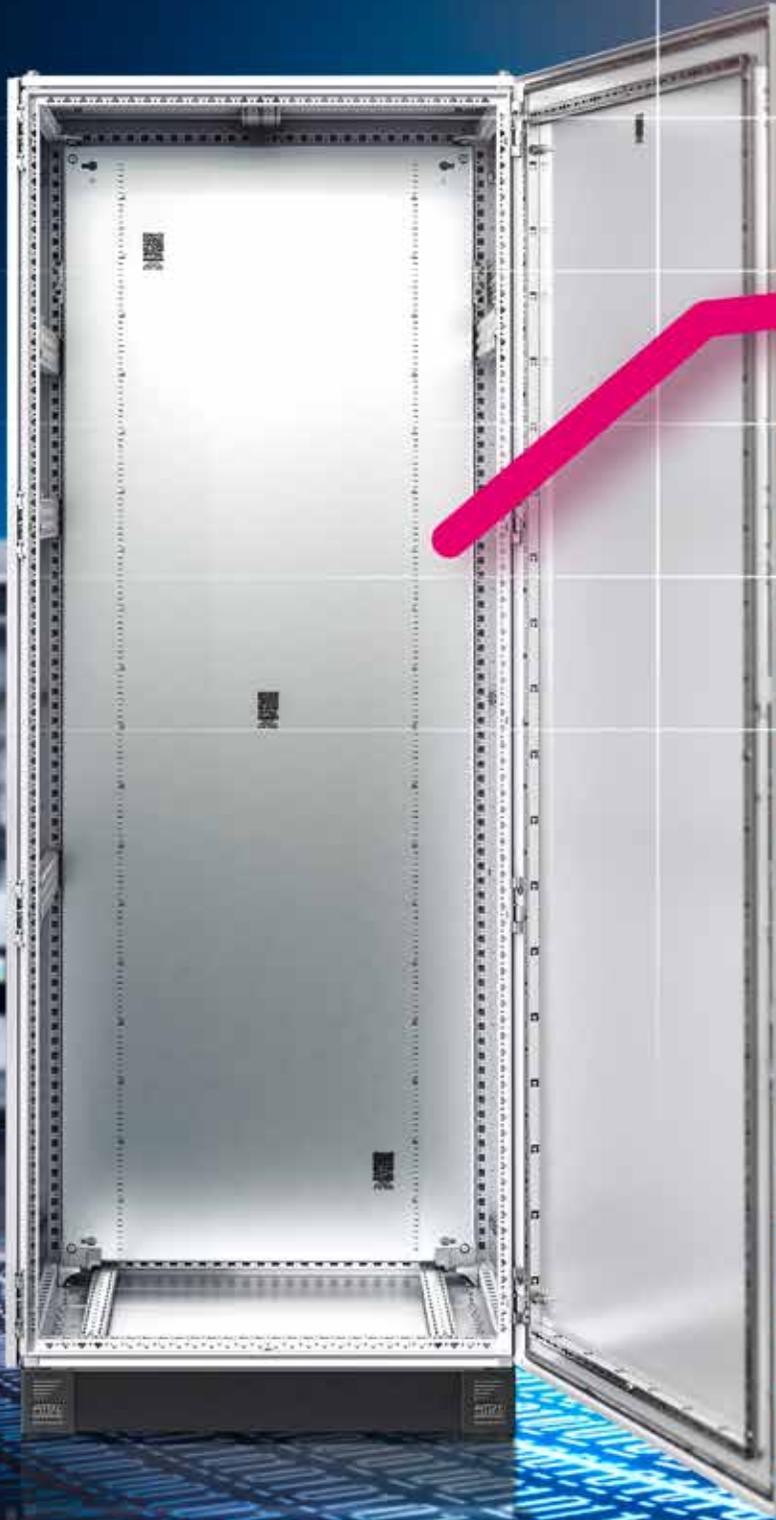
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Increasing efficiency through automation

Rittal can supply all your machines and devices – The Rittal Automation Systems division can supply everything you need to make enclosure assembly easier, faster, more accurate and more repeatable through automation. This allows you to link all work operations together into one highly efficient, digitally seamless, automated process. All machines and devices required for this purpose, including manual handling aids and a wide selection of hand tools, are available from a single source and can be ordered directly from Rittal.

Rittal Automation Systems

Handling

Assembly Frames	8
LT 1000 Storage and Transport Trolley	10
Functional Trolley	11
Accessories for Assembly Frames	12

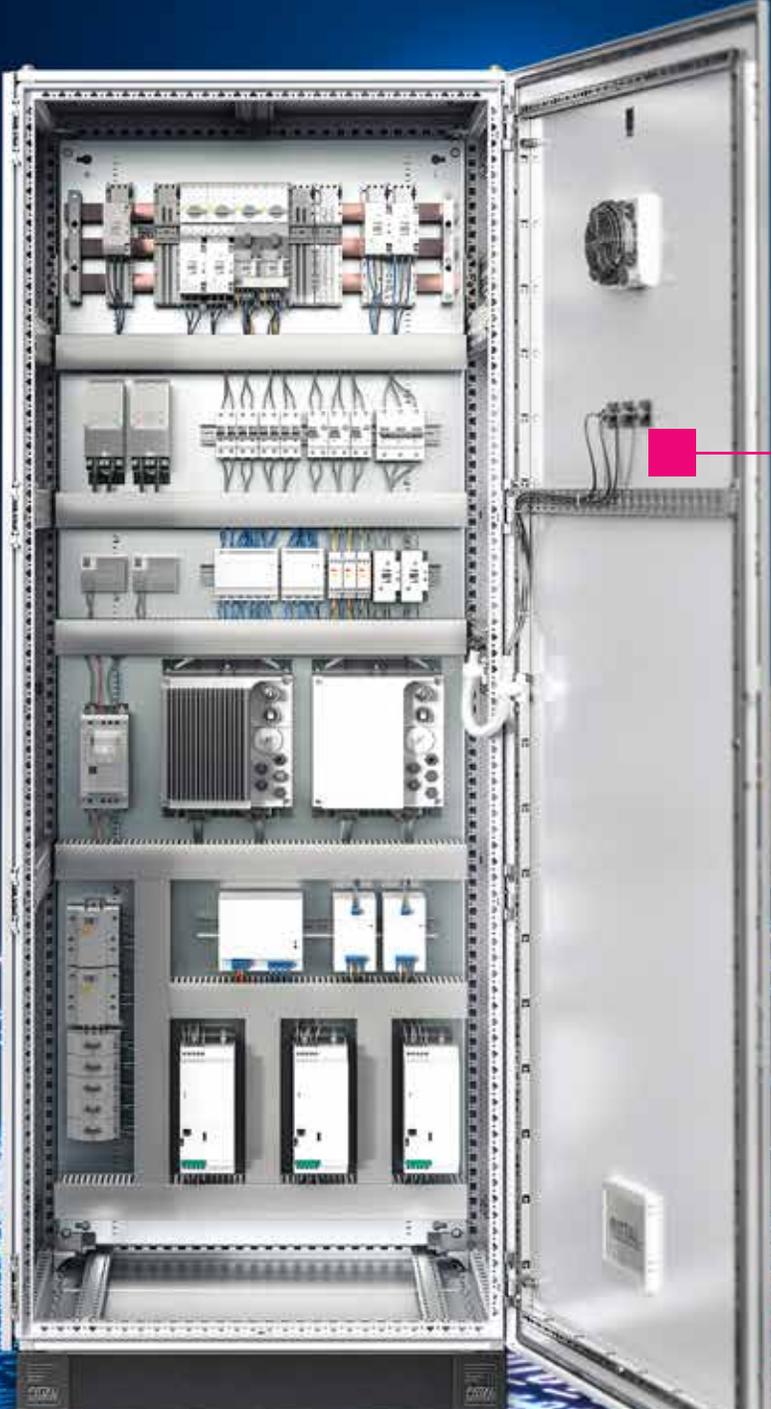
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Improve the workflow in every production phase

With **Rittal Automation Systems** – Engineering-generated digital data (e.g. from Eplan tools) allows the seamless automation of production processes. This is based on the virtual prototype. It carries all the relevant information, and in collaboration with the product spectrum from Rittal Automation Systems, ensures maximum possible efficiency at every point of the panel-building workflow.



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Automate machining

Fully automated milling or laser machining, plus machining of cable ducts and busbars



Make component mounting more flexible

Automatic manufacturing and component mounting of terminal strips



Organize wire processing

Professional, rational solutions for wire machining and processing



Streamline wiring

To complete the process chain, Rittal Automation Systems are involved in developing pioneering wiring solutions, right through to full automation



Simplify handling

Ergonomic, efficient handling systems for transport and lifting operations



Perfecting the hand tool

High-quality hand tools for professional use in industry and trade

IT INFRASTRUCTURE

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Increase productivity at every step

With seamless optimization of all process stages – In panel building and switchgear manufacturing, efficiency relies on the quality of productivity, and on all automated and manual work stages. We achieve the ideal workflow with the aid of digitalization, from engineering right through to production.

Machining

- Significant time saving with the milling center Perforex BC
- High level of precision with the laser center Perforex LC
- Less wastage with the cutting center Secarex AC 18
- Efficient working with the copper busbar workstations CW 120-S and CS 120-M

Assembly

- Rapid throughput with the terminal block assembly center
- Athex TC 80 CS

Wire processing and wiring

- Project-controlled cutting with the length-cutting machines C8+
- Quick insulation stripping with the stripping machines S22
- User-friendly wire processing with the crimping machines L8, R8, R8 E, RC
- Faster processes, utilizing fully automated wire processing with the Wire Terminal WT

Handling

- Fatigue-free, ergonomic working with Rittal assembly frames
- Safe transportation of enclosure panels with the storage and transport trolley LT 1000
- Flexible work surface with the functional trolley for assembly and maintenance

Hand tools

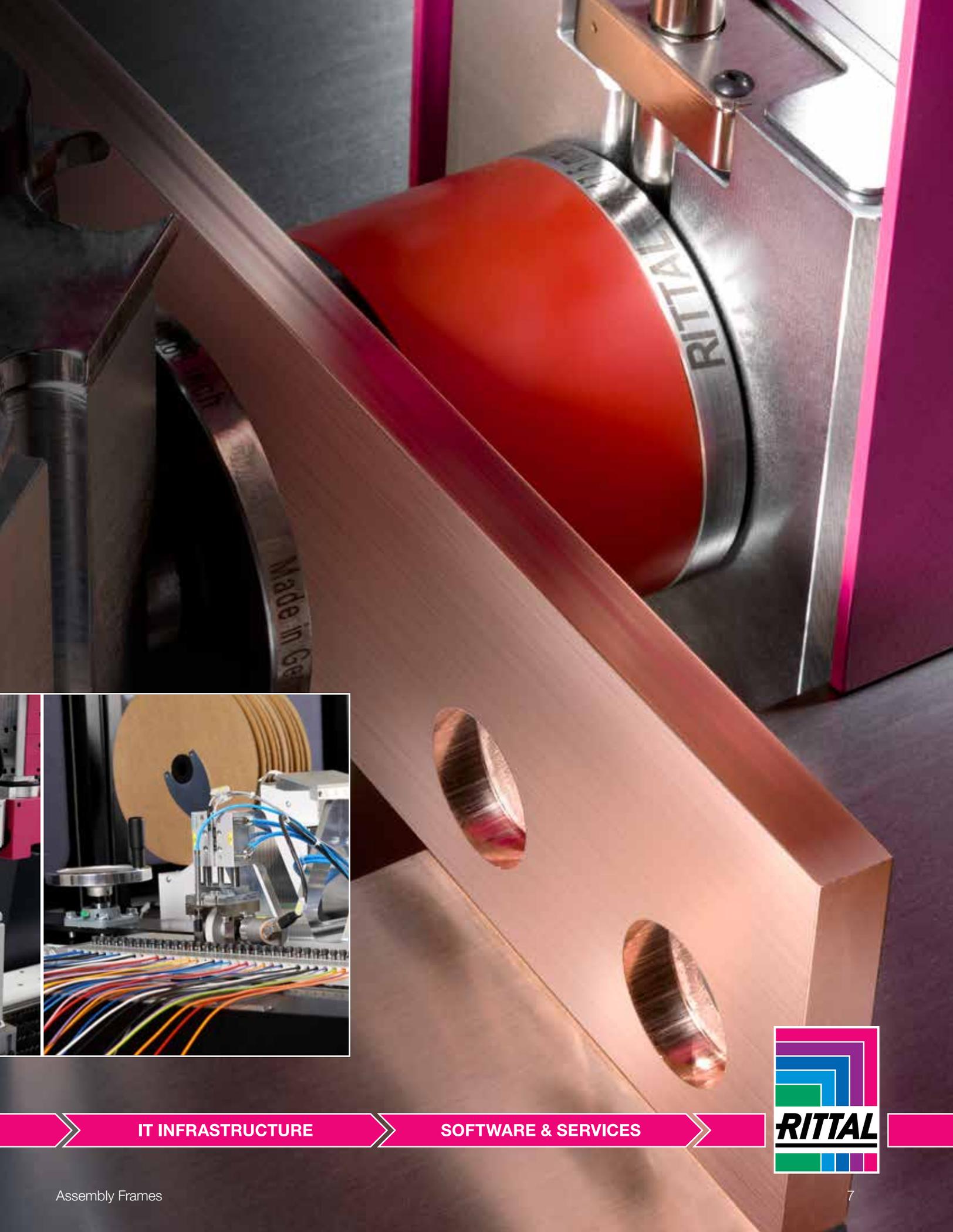
- Covers all manual processes in the workshop with high-quality hand tools



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Assembly frames and LT 1000 storage and transport trolley



We have the perfect ergonomic solution for you, particularly when it comes to the automation and rationalization of every stage of the enclosure machining, assembly, wiring and testing process. Our assembly frames are mobile, tiltable and (depending on the version) height-adjustable for machining mounting plates and enclosures. All types offer simple, variable fixing of mounting plates using quick-release fasteners, are independent from the mains power, and take up minimal space when not in use. For easier handling of enclosure panels, we also offer the storage and transport trolley LT 1000.

- Tilt-adjustable and optionally height-adjustable for ergonomic, effective, time-saving construction, wiring and testing of mounting plates or complete enclosures

Numerous adaptation options available:

- Widening to a maximum of 2050 mm
 - Wire routing
 - Wire reel holder
- More options from page 11

- Height-adjustable support for any size part



- Four castors including total lock function ensure simple handling



- Eight wide compartments for effortless storage and transportation of enclosure panels
- User-friendly transportation through the workshop on castors

Functional trolley



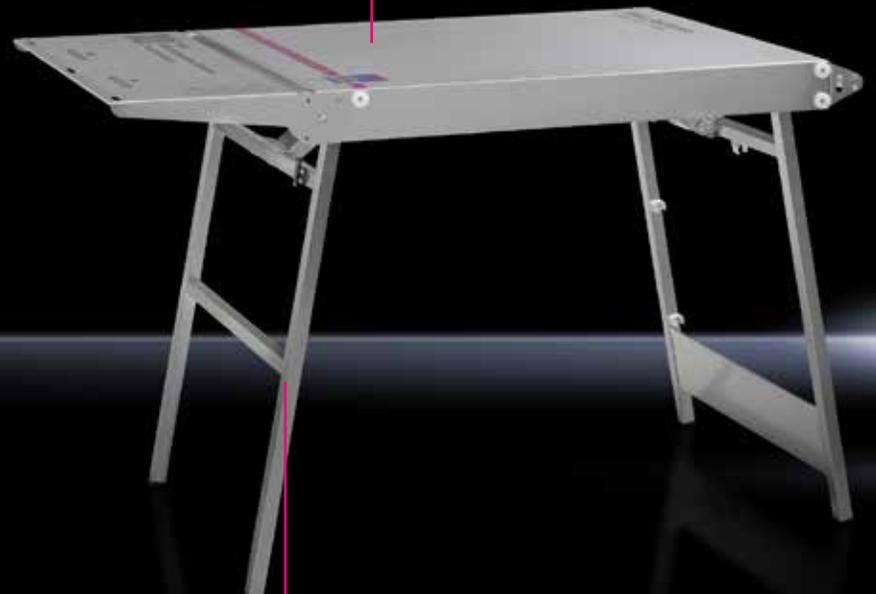
The functional trolley is multi-functional. Whether for transporting materials and tools to the installation site or for commissioning, the functional trolley is perfectly suited for assembly technicians and service personnel. The sophisticated fold-out concept is the ideal solution when you are on the road, and its compact dimensions mean that it can be conveniently transported by car.



Folds together for space-saving transportation



- Made from V2A stainless steel for robustness and durability



- Computer mouse-friendly surface

- Converts from a transport function to a desk by simply unfolding

Assembly frame



The assembly frames are mobile, tiltable and (depending on the version) height-adjustable frames for mounting plates and enclosures.

Benefits:

- For ergonomic, back-friendly working
- Individually positionable in the workshop, as it is battery powered
- Minimum space requirements during storage
- Simple handling due to four castors including total lock function
- Variable fixing of mounting plates with a quick-release fastener

Technical specifications:

- Tilt adjustment approx. 0 - 70°

Supply includes:

- Assembly frame
- 1 clamping unit pack, bottom
- 1 clamping unit pack, top

Note:

- With the assembly frame extension, a maximum machining area of 2130 x 2050 mm (83.9 x 80.7 in.) can be achieved.

Model No.	Packs of	4050.150	4050.303	4050.305
Dimensions W x D mm (W x D in.)		1400 x 1250 (5.1 x 49.2)	1524 x 1040 (60.0 x 40.9)	1524 x 1040 (60.0 x 40.9)
Power supply		Manual	Battery	Battery
Dimensions of support surface H x W mm (H x W in.) min.		1250 x 1110 (49.2 x 43.3)	1280 x 1118 (50.4 x 44.0)	1280 x 1118 (50.4 x 44.0)
Dimensions of support surface H x W mm (H x W in.) max.		1900 x 1110 (74.8 x 43.3)	2130 x 1118 (83.9 x 44.0)	2130 x 1118 (83.9 x 44.0)
with extension H x W mm (H x W in.) max.		1900 x 1900 (74.8 x 74.8)	2130 x 2050 (83.9 x 80.7)	2130 x 2050 (83.9 x 80.7)
Load Capacity kg (lbs)		150 (330.7)	500 (1102.3)	500 (1102.3)
Working height (min/max) mm (in.)		1000 (39.4)	850 (33.5)	826-1168 (32.5 - 45.9)
Weight kg (lbs)		138 (304.2)	170 (374.8)	200 (440.9)
Accessories				
Width extension	2 pc(s).	4050.210	4051.910	4051.910
Wire routing	1 pc(s).	4051.922	4051.922	4051.922
Wire reel holder	1 pc(s).	4051.923	4051.923	4051.923
Tool holder	1 pc(s).	4051.921	4051.921	4051.921
Power strip	1 pc(s).	4051.917	4051.917	4051.917
Screw adaptor	1 pc(s).	4050.218	—	—
AE/WM mounting brackets	1 set	4050.221	4051.938	4051.938
Roller conveyor	1 pc(s).	—	4051.918	4051.918
Tool holder	1 pc(s).	4051.921	4051.921	4051.921

Accessories

for assembly frames

Assembly frame extension

To widen assembly frames to a maximum width of 11900 mm (74.8 in.) for 4050.150 or 2050 mm (80.7 in.) for 4050.303/4050.305.

To fit Model No.	Packs of	Model No.
4050.150	2 pc(s).	4050.210
4050.303/ 4050.305	2 pc(s).	4051.910



Enclosure kit

for assembly frame

For secure attachment of an enclosure such as AE or WM to assembly frame.

To fit Model No.	Packs of	Model No.
4050.150	2 pc(s).	4050.211
4050.303/ 4050.305	2 part numbers	4051.916 plus 4051.920



Wire guide

for assembly frame

For user-friendly handling of wires on assembly frame.

To fit Model No.	Packs of	Model No.
4050.150/ 4050.303/ 4050.305	1 pc(s).	4050.212



Clamping unit

for assembly frame

For secure attachment of a mounting panel onto assembly frame.

To fit Model No.	For	Design	Product specific scope of supply	Packs of	Model No.
4050.150	Mounting panel TS/SE/VX	Top	1 clamp with spring pin	1 pc (s).	4050.213
4050.150	Mounting panel TS/SE/VX	Bottom	1 clamp with knob pin	1 pc (s).	4050.213
4050.303/ 4050.305	Mounting panel TS/SE/VX	Top or Bottom	2 clamps (LH/RH) with spring pin	1 set	4050.911
4050.303/ 4050.305	Mounting panel TS/SE/VX	Top or Bottom	1 clamp (LH) with spring pin	1 set	4050.912
4050.303/ 4050.305	Mounting panel TS/SE/VX	Top or Bottom	1 clamp (RH) with spring pin	1 set	4050.913



Accessories

for assembly frames



Wire reel holder

for assembly frame
For adapting wire reels or drums on assembly frame.

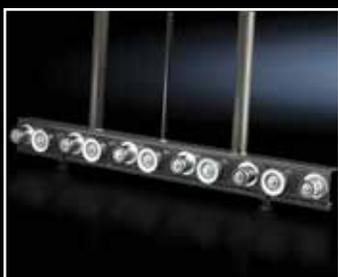
To fit Model No.	Packs of	Model No.
4050.150/ 4050.303/ 4050.305	1 pc(s).	4051.923



Screw adapter

for spindle hoist
For operating the assembly frame spindle drive using a cordless screwdriver.

To fit Model No.	Packs of	Model No.
4050.150	1 pc(s).	4050.218



Roller conveyor

for assembly frame
For inserting the mounting plate from the side into the enclosure.

To fit Model No.	Packs of	Model No.
4050.305	1 pc(s).	4051.918



AE/WM panel brackets

for assembly frame
For secure attachment of small mounting panels onto assembly frame.

Supply includes:

- 4 cover caps
- 12 handles
- 2 holders
- 16 washers
- 12 sliding blocks

To fit Model No.	Packs of	Model No.
4050.150	1 set	4050.221
4050.303/ 4050.305	1 set	4050.938

Accessories

for assembly frames

Power strip

for assembly frame

Mounts directly to Assembly Table for easy access to power.

To fit Model No.	Suitable for rated operating voltage	Packs of	Model No.
4050.303/ 4050.305	110V	1 pc(s).	4051.917



Mounting plate

for assembly frame

Creates a continuous surface along the width of the lower Assembly Table frame.

To fit Model No.	Packs of	Model No.
4050.303/ 4050.305	1 pc(s).	4050.222



Storage and transport trolley LT1000



The LT 1000 storage and transport trolley is used for storage and order picking, and ensures easy handling of enclosure panels such as mounting plates, enclosure doors, side panels and rear panels.

Benefits:

- 2 levels of support each with 8 slots, distance between tubes 100 mm (3.9 in.)

Benefits:

- Individually adjustable due to height-adjustable supports
- Effortless storage and transportation of enclosure panels
- User-friendly transportation on industrial castors
- Support tubes, powder-coated, protects enclosure panels such as doors, side panels etc. from scratches and damage.

Material:

- Base plate: Plastic
- Tube support: Steel, powdercoated

Model No.	Packs of	4050.000
Transport dimensions H x W x D mm (H x W x D in.)		1500 x 1000 x 1000 (59.1 x 39.4 x 39.4)
Load capacity kg (lbs.)		500 (1102.3)
Weight kg (lbs.)		122.0 (268.9)

Functional trolley



Whether for transporting essential materials and tools to the installation site or for commissioning, the functional trolley's foldout system is the ideal solution for assembly technicians and service personnel.

Benefits:

- Table surface suitable for computer mouse
- Converts from its transport function to a desk by simply unfolding
- Made from stainless steel for strength and durability
- Includes folding chair

Material:

- Functional trolley: Stainless steel 1.4301 (AISI 304)
- Work surface: Plastic coating
- Seat surface: Woven polyester fabric, coated in PVC

Load capacity:

- Handcart max. 20 kg (44.1 lbs)
- Table max. 30 kg (66.1 lbs)
- Folding chair max. 100 kg (220.5 lbs.)

Supply includes:

- Functional trolley
- Folding chair

Model No.	Packs of	4050.130
Transport dimensions H x W x D mm (H x W x D in.)		1000 x 610 x 82 (39.4 x 24.0 x 3.4)
Handcart dimensions H x W x D mm (H x W x D in.)		610 x 300 x 1000 (24.0 x 11.8 x 39.4)
Table dimensions H x W x D mm (H x W x D in.)		780 x 1290 x 610 (30.7 x 50.8 x 24.0)
Weight kg (lbs)		20.0 (44.1)

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