

Rittal – The System.

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



ENCLOSURES

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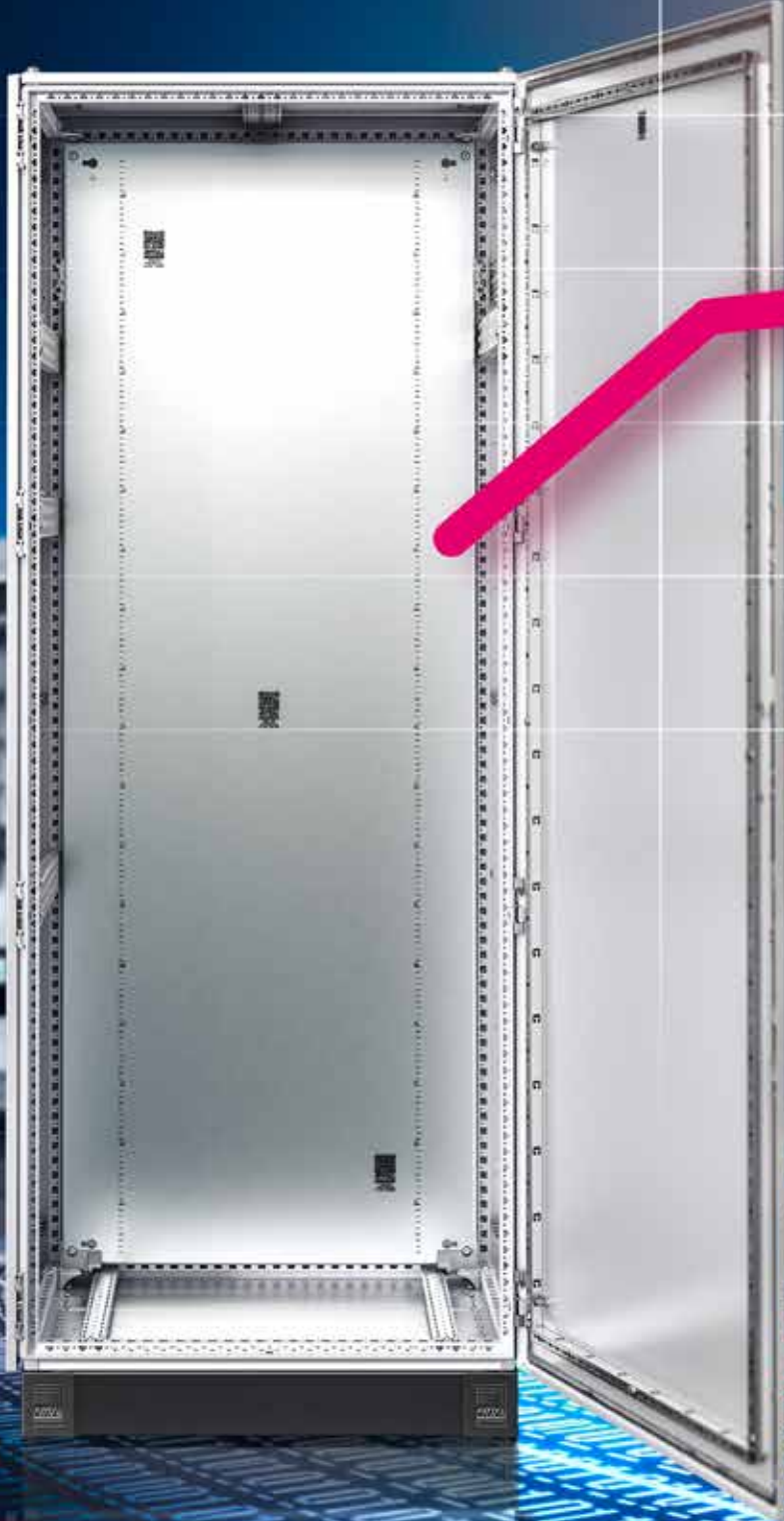
SOFTWARE & SERVICES

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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

Machining

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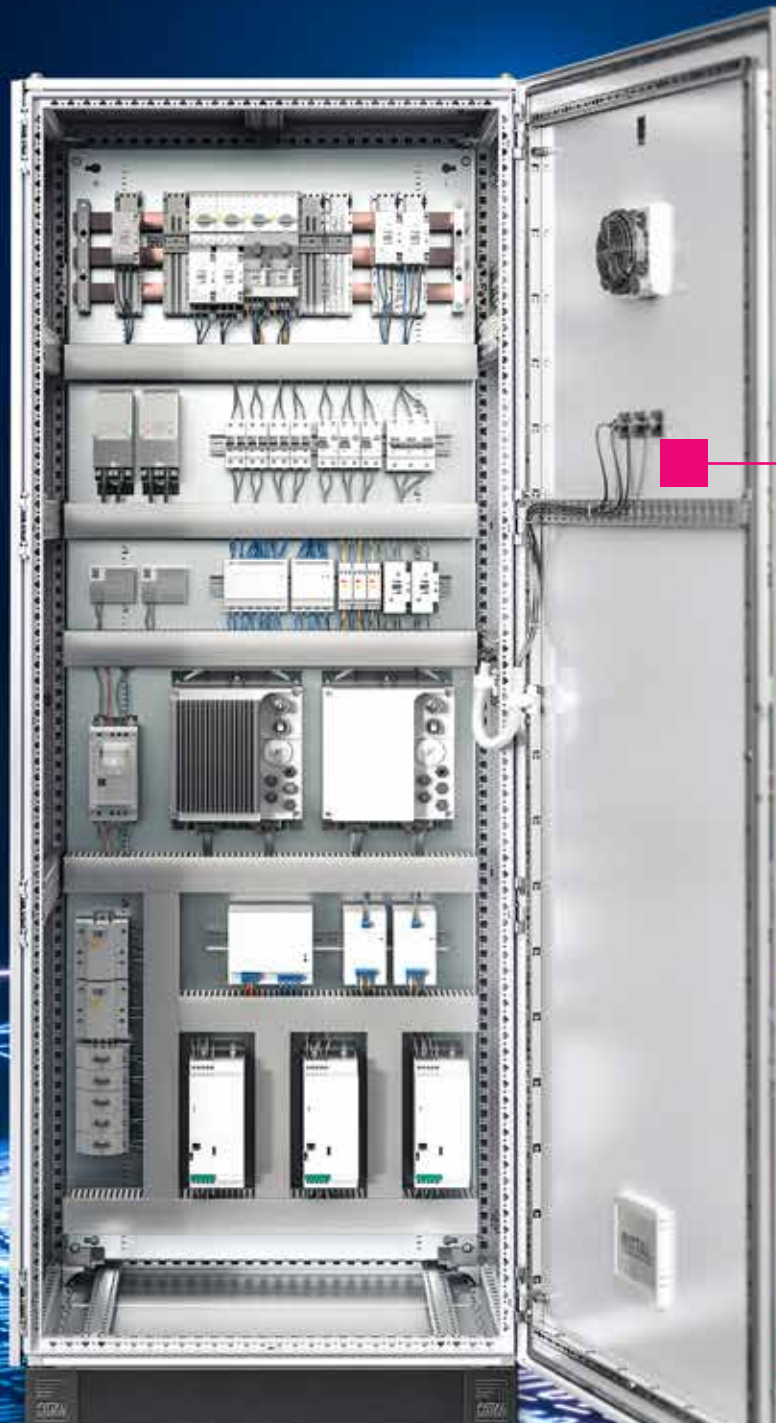
IT INFRASTRUCTURE

SOFTWARE & SERVICES



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



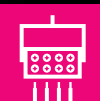
Make component mounting more flexible

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

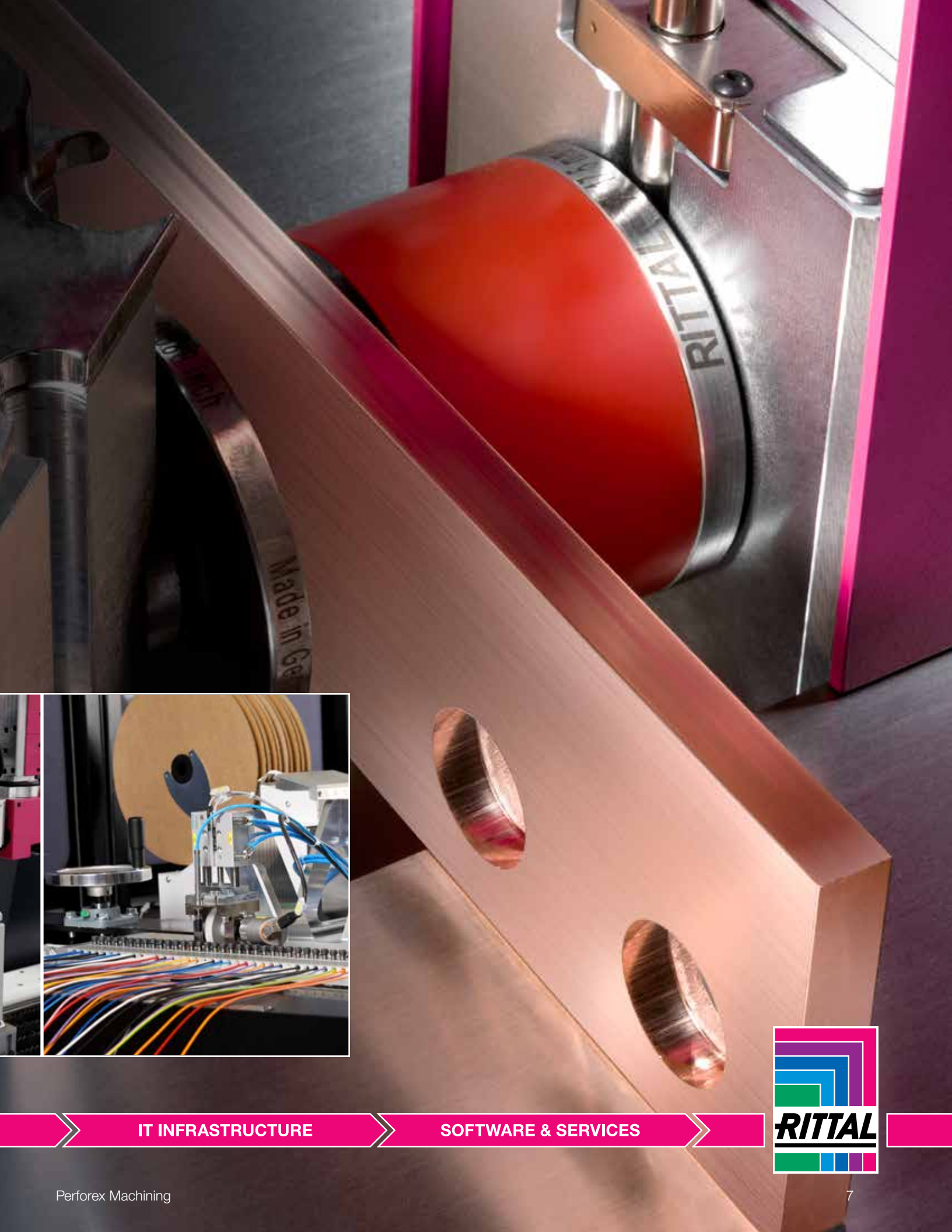
- Covers all manual processes in the workshop with high-quality hand tools



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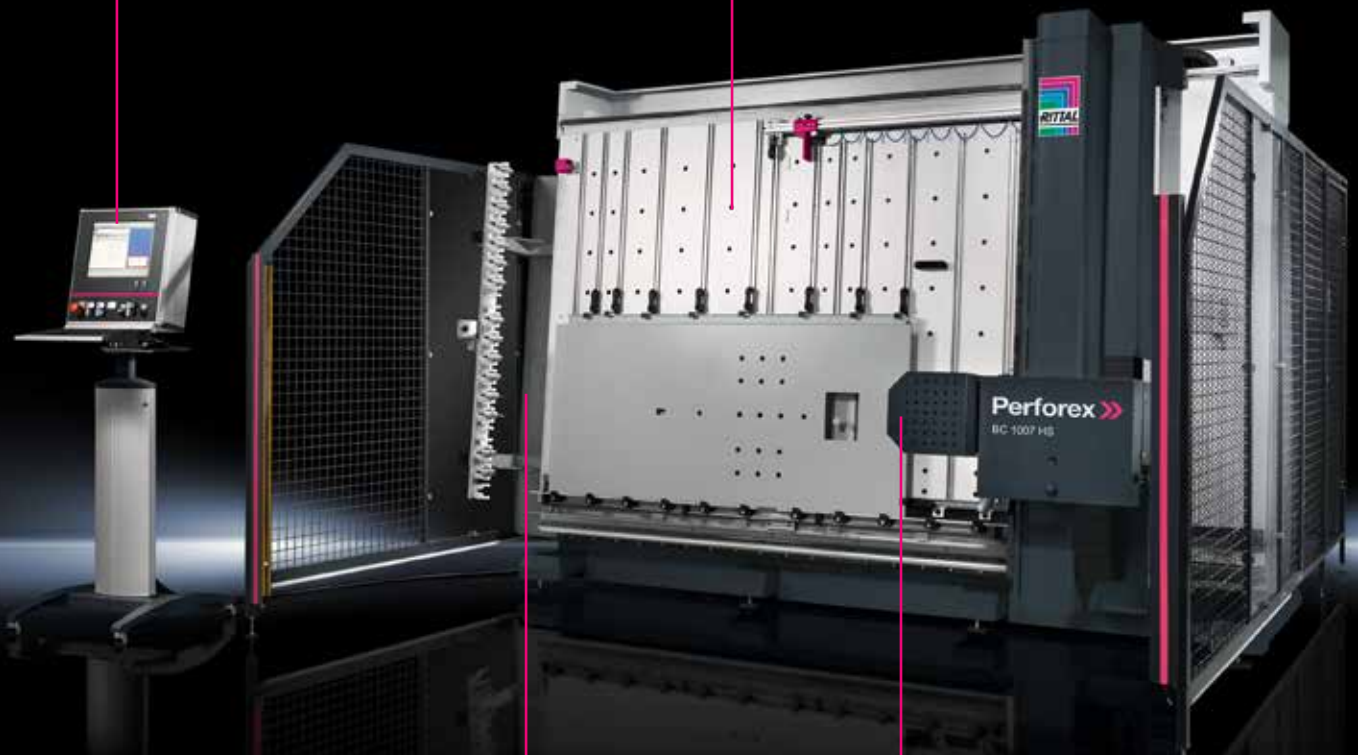
Milling center Perforex BC



Perforex machining center accelerate your processing times when machining anything from the smallest enclosures and enclosure panels, right through to large enclosures. The drilling and milling centers in the Perforex BC series allow you to machine any material, including powder-coated sheet and stainless steel as well as aluminium, copper and plastic. The machine is efficient even with a batch size of 1, and your investment will pay off in next to no time. No more labor intensive manual machining with hand tools.

- User-friendly workshop programming with interfaces to all standard CAD systems (DXF import), or direct transfer from EPLAN Pro Panel
- Transfer of configuration data from the Rittal Configuration System (RiCS)

- Performance package for fast, low-vibration, noise-optimised milling, comprised of brush strips and special milling cutters



- Patented pressure plate with integral swarf extraction system
- High-performance spindle including minimal quantity lubrication for drilling, milling and thread tapping

- Automated broken tool testing and changing
- DIN or Imperial tools
- Pneumatic clamping device

Milling center Perforex BC 1001 HS



The Perforex BC 1001 HS is suitable for machining virtually all enclosures. This drilling/milling center is the most compact, cost-efficient machine in the Perforex BC series.

Design:

- Enclosure panel machining
- Patented pressure plate with integral extraction of the milling swarf
- High-performance spindle including minimal quantity lubrication
- Automatic broken tool testing
- DIN or Imperial tools
- Pneumatic clamping device

Benefits:

- Fast return on investment (ROI) and significantly enhanced competitiveness
- Short processing times with consistently high machining quality
- Fast, precise, reliable working
- Intuitive workshop programming, suitable for remote maintenance
- Networking-compatible software with central database
- Programmable workshop jobs are immediately available and can be reused

Machinable material:

- Aluminium
- Steel
- Stainless steel
- Plastic
- Copper

Machine controller:

- Workshop programming
- 4-axis CNC controller
- Rittal Optipanel with 15" PC/monitor

Safety:

- Protective fencing with polycarbonate viewing area with safety light curtains
- Protective fence, rear, for machine option of enclosure machining

Supply includes:

- The Perforex BC is configured based on the customers requirements

Note:

- We reserve the right to make technical modifications

Model No.	Packs of	4050.101	Page
Transport dimensions H x W x D mm (H x W x D in.)		2200 x 3500 x 2450 (86.6 x 137.8 x 96.5)	
Footprint size H x W x D mm (H x W x D in.)		2200 x 3850 x 3450 (86.6 x 151.6 x 135.8)	
Space requirements H x W x D mm (H x W x D in.)		2200 x 3850 x 3450 (86.6 x 151.6 x 135.8)	
Electrical connection V, ~, Hz		400, 3~, 50	
Rated current (max.) A		32	
Control voltage (DC) V		24	
Dimensions of clampable enclosure panels H x W mm (H x W in.)		1500 x 2500 (59.1 x 98.4)	
Maximum machinable area for enclosure panels H x W mm (H x W in.)		1500 x 2260 (59.1 x 88.9)	
Dimensions of clampable cubic parts H x W x D mm (H x W x D in.)		1400 x 1200 x 1400 (55.1 x 47.2 x 55.1)	
Maximum machinable area for cubic parts H x W x D mm (H x W x D in.)		1400 x 750 (55.1 x 29.5)	
Tool holder (pick-up system)		-	
No. of tool slots		18	
Interfaces		Link to different CAD systems; Transfer of DXF formats; EPLAN Pro Panel; Rittal Configuration System	
Machine options		Enclosure machining 4050.010	
Weight kg (lbs)		1600 (3527.4)	

Accessories			
Performance package	1 pc(s)	4050.041	19
Circular thread milling tool set	1 pc(s)	4050.050	22
Aluminium/plastic milling tool set	1 pc(s)	4050.051	22
Tool mounting aid	1 pc(s)	4050.030	19
Clamping Frame	1 pc(s)	4050.060	23
Busbar clamber		see page	23
Magnetic rod	1 pc(s)	4050.067	22
Swivel stop	2 pc(s)	4050.066	20
Deburring blade	1 pc(s)	4050.720	20

Milling center Perforex BC 1007 HS



The Perforex BC 1007 HS is used to modify all standard enclosures, from small to large. Within the Perforex BC series, this drilling/milling center offers the greatest flexibility for individual configurations.

Design:

- Enclosure machining
- Enclosure panel machining
- Patented pressure plate with integral extraction of the milling swarf
- High-performance spindle including minimal quantity lubrication
- Automatic broken tool testing
- DIN or Imperial tools
- Pneumatic clamping device

Benefits:

- Fast return on investment (ROI) and significantly enhanced competitiveness
- Short processing times with consistently high machining quality
- Fast, precise, reliable working
- Intuitive workshop programming, suitable for remote maintenance
- Networking-compatible software with central database
- Programmable workshop jobs are immediately available and can be reused
- High accuracy due to fully welded machine frame

Machinable material:

- Aluminium
- Steel
- Stainless steel
- Plastic
- Copper

Machine controller:

- Workshop programming
- 4-axis CNC controller
- Rittal Optipanel with 15" PC/monitor

Safety:

- Protective fencing with polycarbonate viewing area with safety light curtains
- Protective fence, rear, for machine option of enclosure machining

Supply includes:

- The Perforex BC is configured based on the customers requirements

Note:

- We reserve the right to make technical modifications

Model No.	Packs of	4050.107	Page
Transport dimensions H x W x D mm (H x W x D in.)		2300 x 3800 x 2500 (90.6 x 149.6 x 98.4)	
Footprint size H x W x D mm (H x W x D in.)		2410 x 4390 x 2720 (94.9 x 172.8 x 107.48)	
Electrical connection V, ~, Hz		400, 3~, 50	
Rated current (max.) A		32	
Control voltage (DC) V		24	
Dimensions of clampable enclosure panels H x W mm (H x W in.)		1700 x 2450 (66.9 x 96.5)	
Maximum machinable area for enclosure panels H x W mm (H x W in.)		1700 x 2200 (66.9 x 86.6)	
Dimensions of clampable cubic parts H x W x D mm (H x W x D in.)		1600 x 1400 x 1600 (62.9 x 55.1 x 62.9)	
Maximum machinable area for cubic parts H x W mm (H x W in.)		1600 x 1200 (62.9 x 47.2)	
Option of extended carriage H x W x D mm (H x W x D in.)		1600 x 1400 x 2000 (62.9 x 55.1 x 78.7)	
Tool holder (pick-up system)		-	
No. of tool slots		18	
Interfaces		Link to different CAD systems; Transfer of DXF formats; EPLAN Pro Panel; Rittal Configuration System	
Machine options		Depth adjuster extension 4050.022 Motorised depth adjustment 4050.020	
Weight kg (lbs)		2300 (5070.6)	

Accessories			
Performance package	1 pc(s)	4050.044	19
Circular thread milling tool set	1 pc(s)	4050.050	22
Aluminium/plastic milling tool set	1 pc(s)	4050.051	22
Clamping frame		see page	23
Busbar clamber		see page	23
Tool mounting aid	1 pc(s)	4050.030	19
Magnetic rod	1 pc(s)	4050.067	22
Swivel stop	2 pc(s)	4050.066	20

Milling center Perforex BC 1008 HS



The drilling/milling center Perforex BC 1008 HS is ideal for machining fully welded enclosures and those which cannot be dismantled. Two hinged doors in the machining zone mean that enclosures of up to 2300 x 1600 mm (W x H) can be effortlessly clamped.

Design:

- Motorized depth adjuster 2200 mm
- Enclosure machining
- Enclosure panel machining
- Two-door
- Patented pressure plate with integral extraction of the milling swarf

- High-performance spindle including minimal quantity lubrication
- Automatic broken tool testing
- DIN or Imperial tools
- Pneumatic clamping device

Benefits:

- Fast return on investment (ROI) and significantly enhanced competitiveness
- Short processing times with consistently high machining quality
- Fast, precise, reliable working
- Intuitive workshop programming, suitable for remote maintenance

- Networking-compatible software with central database
- Programmable workshop jobs are immediately available and can be reused

Machinable material:

- Aluminium
- Steel
- Stainless steel
- Plastic
- Copper

Machine controller:

- Workshop programming
- 4-axis CNC controller
- Rittal Optipanel with 15" PC/monitor

Safety:

- Protective fencing with polycarbonate viewing area with safety light curtains
- Protective fence, rear

Supply includes:

- The Perforex BC is configured based on the customers requirements

Note:

- We reserve the right to make technical modifications

Model No.	Packs of	4050.108	Page
Transport dimensions H x W x D mm (H x W x D in.)		2300 x 3800 x 2500 (90.6 x 149.6 x 98.4)	
Footprint size H x W x D mm (H x W x D in.)		2410 x 4600 x 4600 (94.9 x 181.1 x 181.1)	
Electrical connection V, ~, Hz		400, 3~, 50	
Rated current (max.) A		32	
Control voltage (DC) V		24	
Dimensions of clampable enclosure panels H x W mm (H x W in.)		1550 x 2300 (61.0 x 90.6)	
Maximum machinable area for enclosure panels H x W mm (H x W in.)		1700 x 2300 (66.9 x 90.6)	
Dimensions of clampable cubic parts H x W x D mm (H x W x D in.)		1600 x 2300 x 2200 (62.9 x 90.6 x 86.6)	
Maximum machinable area for cubic parts H x W mm (H x W in.)		1600 x 2300 (62.9 x 90.6)	
Tool holder (pick-up system)		—	
No. of tool slots		20	
Interfaces		Link to different CAD systems; Transfer of DXF formats; EPLAN Pro Panel; Rittal Configuration System	
Machine options		Clamping height extension 4050.035	
Weight kg (lbs)		2700 (5952.5)	
Accessories			
Performance package	1 pc(s)	4050.044	19
Circular thread milling tool set	1 pc(s)	4050.050	22
Aluminium/plastic milling tool set	1 pc(s)	4050.051	22
Clamping frame		see page	23
Clamping height extension	1 pc(s)	4050.035	24
Tool mounting aid	1 pc(s)	4050.030	19
Magnetic rod	1 pc(s)	4050.067	22
Swivel stop	2 pc(s)	4050.066	20

Milling center Perforex BC 2014 HS



The Perforex BC 2014 HS is the largest variant among the Perforex BC machining centers. This milling center is ideal for simultaneous machining of large enclosure panels or freestanding large enclosures with a height of up to 2300 mm (90.5 in.). In this way, efficient, process-oriented machining can be achieved very quickly.

Design:

- Motorised depth adjustment up to 2200 mm (86.6 in.)
- Enclosure machining
- Enclosure panel machining
- Movable tool changer

- Patented pressure plate with integral extraction of the milling swarf
- High-performance spindle including minimal quantity lubrication
- Automatic broken tool testing
- DIN or Imperial tools
- Pneumatic clamping device
- Gantry drive for the X-axis (two synchronised axes)

Benefits:

- Fast return on investment (ROI) and significantly enhanced competitiveness
- Short processing times with consistently high machining quality

- Fast, precise, reliable working
- Intuitive workshop programming, suitable for remote maintenance
- Networking-compatible software with central database
- Programmable workshop jobs are immediately available and can be reused

Machinable material:

- Aluminium
- Steel
- Stainless steel
- Plastic
- Copper

Machine controller:

- Workshop programming
- 4-axis CNC controller
- Rittal Optipanel with 15" PC/monitor

Safety:

- Protective fencing with polycarbonate viewing area with safety light curtains
- Protective fence, rear

Supply includes:

- The Perforex BC is configured based on the customers requirements

Note:

- We reserve the right to make technical modifications

Model No.	Packs of	4050.230	Page
Transport dimensions H x W x D mm (H x W x D in.)		3500 x 2400 x 5250 (137.8 x 94.5 x 206.7)	
Footprint size H x W x D mm (H x W x D in.)		3140 x 5030 x 4625 (123.6 x 198.0 x 182.1)	
Electrical connection V, ~, Hz		400, 3~, 50	
Rated current (max.) A		32	
Control voltage (DC) V		24	
Dimensions of clampable enclosure panels H x W mm (H x W in.)		2200 x 3600 (86.6 x 141.7)	
Maximum machinable area for enclosure panels H x W mm (H x W in.)		2200 x 3600 (86.6 x 141.7)	
Dimensions of clampable cubic parts H x W x D mm (H x W x D in.)		2200 x 1400 x 2200 (86.6 x 55.1 x 86.6)	
Maximum machinable area for cubic parts H x W mm (H x W in.)		2200 x 1100 (86.6 x 43.3)	
Two-door option H x W mm (H x W in.)		2200 x 2300 (86.6 x 90.6)	
Tool holder (pick-up system)		-	
No. of tool slots		20	
Interfaces		Link to different CAD systems; Transfer of DXF formats; EPLAN Pro Panel; Rittal Configuration System	
Machine options		Comfort clamp 4050.235	
Weight kg (lbs)		4000 (8818.5)	
Accessories			
Performance package	1 pc(s)	4050.045	19
Circular thread milling tool set	1 pc(s)	4050.050	22
Aluminium/plastic milling tool set	1 pc(s)	4050.051	22
Clamping frame		see page	23
Tool mounting aid	1 pc(s)	4050.030	19
Magnetic rod	1 pc(s)	4050.067	22
Swivel stop	2 pc(s)	4050.066	20

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Laser center Perforex LC



The 3D laser technology in the Perforex LC is ideally suited for machining stainless steel and sheet steel, as well as powder-coated metals such as enclosure doors, side panels etc. Painted metal parts are cut without any visible paint damage or discolouration, even with delicate contours. What is more, there is no tarnishing of the cut edges when machining stainless steel. The Perforex LC is cost-effective from approximate volumes of just 150 stainless steel enclosures or 300 sheet steel enclosures per year.

- User-friendly workshop programming with central database
- Machine operation with 3D visualisation
- Interfaces to EPLAN Pro Panel and processing of the neutral DXF format
- Transfer of configuration data from the Rittal Configuration System (RiCS)
- Simple attachment of enclosures
- Contactless, low-vibration manufacturing process
- Five sides may be machined simultaneously



3D laser machining

- Clean, non-wearing cutting without coolant/lubricant
- Machining speed with stainless steel 20x faster than with conventional milling process

- Ergonomic design, due to the extendible support surface for enclosure and panel machining

Laser center Perforex LC 3030



Perforex laser centers are specially designed for the automated mechanical modification of standard enclosures. The Perforex LC specializes in 3D laser machining of enclosures and contactless, low vibration machining. Machining of mounting plates including tapped holes is also supported.

Benefits:

- 3D enclosure machining without repositioning the workpiece
- No tarnishing or discoloration of the cut edges when machining stainless steel
- Painted metal parts, even those with delicate contours, can be cut without damaging the paint or causing discoloration
- Product sizes from compact to large enclosures
- Contactless, low-vibration machining with no tool wear
- No need to clamp the workpieces
- Machining speed with stainless steel 20x faster than with conventional milling process
- Ergonomic working, due to the extendible support surface for enclosure and panel machining
- Simultaneous machining of 5 sides

Technical specifications:

- Laser device (auxiliary laser), beam power laser class 1
- Very narrow cutting width of just 0.3 mm (0.01 in.) (approx.)
- Class 4 laser

Machinable material:

- Stainless steel
- Sheet steel
- Aluminium
- The technical specification of the materials to be machined can be found on the Internet

Machine controller:

- Workshop programming

Safety:

- Protective housing to achieve laser class 1. May be operated by properly trained personnel, no need for a laser specialist
- Security door

Supply includes:

- Laser center
- Compressor
- Machine housing
- Filter system
- Operating unit

Note:

- Safety roof (4050.317) for machine housing is mandatory if the machine can be viewed from above
- A site inspection by a Rittal specialist to select and define the laser version required is necessary
- We reserve the right to make technical modifications

Model No.	Packs of	4050.330	Page
Maximum machinable material thickness, sheet steel mm (in.)		5 (0.2)	
Maximum machinable material thickness, stainless steel mm (in.)		5 (0.2)	
Maximum machinable material thickness, aluminium mm (in.)		3 (0.1)	
Footprint size H x W x D mm (H x W x D in.)		3800 x 3900 x 10500 (149.6 x 153.5 x 413.4)	
Power consumption kW		3	
Electrical connection V, ~, Hz		400, 3~, 50	
Control voltage (DC) V		24	
Beam power max.		300 W (CW) or 3000 W (pulse)	
Duration of pulse, max.		50 µs at 300 W output	
Pulse energy (max.) J		30	
Wavelength nm		1070	
Max. machinable area for cubic parts H x W x D mm (H x W x D in.)		2250 x 1270 x 800 (88.6 x 50.0 x 31.5)	
Interfaces		EPLAN Pro Panel; Transfer of DXF formats; Rittal Configuration System	
Accessories			
Safety roof	1 pc(s)	4050.317	25
Thread tapping option	1 pc(s)	4050.318	25
Tool mounting aid	1 pc(s)	4050.030	19

Consumables

for Perforex



Standard milling cutter

Steel/stainless steel milling cutter for Perforex machining centers BC.

Design

- Triple flute
- HSS Co8
- TiAlN coating

Machinable material:

- Sheet steel
- Stainless steel

Standards:

- DIN 844

Ø mm	Packs of	Model No.
6	10 pc(s).	4050.818



End mill

Aluminium/plastic milling cutter for Perforex machining centers BC.

Design

- AIRline SH
- Two-flute trimmer, right-hand cutting

Benefits:

- High level of wear resistance
- High cutting edge stability

Material:

- LW630

Machinable material:

- Aluminium
- Plastic

Standards:

- DIN 6527 A/B

Ø mm	Packs of	Model No.
6	5 pc(s).	4050.819
4	5 pc(s).	4050.820



Performance milling tool

Milling cutter for Perforex machining centers BC.

Design

- Quadruple flute
- HSS Co8
- TiAlN coating

Benefits:

- Faster feed rates of up to 1.5 m/min

Machinable material:

- Sheet steel
- Stainless steel

Standards:

- DIN 844

Ø mm	Packs of	Model No.
6	5 pc(s).	4050.891



Circular thread milling cutter

Milling cutter for cutting metric threads for Perforex machining centers BC.

Technical specifications

- Ø 12 x SL20 x 85
- Pitch 1.5 x 60° ISO
- TiAlN coating

Machinable material:

- Steel
- Stainless Steel
- Cast Aluminum
- Plastic
- Copper

Standards:

- DIN 13-1 metric ISO thread

For threads	Packs of	Model No.
M16 - M64	1 pc(s).	4050.877

Consumables

for Perforex

Steel and stainless steel milling cutter

Roughing cutter especially for machining steel and stainless steel in powder-coated metal version for Perforex machining centers BC.

Design

- Four-flute trimmer
- HSS E-PM

Material:

- Powder metal edition (PM)

Machinable material:

- Steel
- Stainless steel

Design	Ø mm	Packs of	Model No.
Triple flute	4	5 pc(s).	4050.885
Quadruple flute	6	5 pc(s).	4050.886



Drill bits

Machine drill bits for Perforex machining centers BC.

Design

- HSS
- TiN coating

Machinable material:

- Steel
- Stainless steel
- Aluminium
- Plastic
- Copper

Ø mm	Packs of	Model No.
2.6	10 pc(s).	4050.801
3.3	10 pc(s).	4050.802
4.2	10 pc(s).	4050.803
5	10 pc(s).	4050.804
6	10 pc(s).	4050.805
6.8	10 pc(s).	4050.806
8.5	10 pc(s).	4050.807
10.5	5 pc(s).	4050.809



Machine thread tap

Machine thread tapper for Perforex machining centers BC and laser centers LC.

Design:

- HSSE-V3
- Vaporized
- For through-hole thread
- Form B with spiral point
- High-performance steel with vanadium portion

Machinable material:

- Steel
- Stainless steel
- Aluminium
- Plastic

Thread	Packs of	Model No.
M3	3 pc(s).	4050.811
M4	3 pc(s).	4050.812
M5	3 pc(s).	4050.813
M6	3 pc(s).	4050.814
M8	3 pc(s).	4050.815
M10	3 pc(s).	4050.816



Consumables

for Perforex



Support pegs

Spare support pegs for Perforex machining centers BC

To fit Model No.	For	Length mm (in.)	Design	Packs of	Model No.
4050.101	BC 1001 HS BC 1001 S BC 2001 L	33 (1.29 in.)	internal thread	10 pc(s).	4050.849
4050.101	BC 1001 HS	54 (2.1 in.)	plug-type	10 pc(s).	4050.847
4050.107/ 4050.108	BC 1007 HS BC 1008 HS	57 (2.25 in.)	internal thread	10 pc(s).	4050.843
-	BC 1001 S BC 2001 L	66 (2.6 in.)	plug-type	10 pc(s).	4050.848
4050.107/ 4050.108	BC 1007 HS BC 1008 HS	69 (2.7 in.)	plug-type	10 pc(s).	4050.846
4050.845	BC 1007 HS BC 1008 HS BC 2007 HS BC 2014 HS	73 (2.8 in.)	plug-type	10 pc(s).	4050.844
4050.107/ 4050.108/ 4050.207/ 4050.230	BC 1007 HS BC 1008 HS BC 2007 HS BC 2014 HS	73 (2.8 in.)	adjustable	1 pc(s).	4050.845
4050.107/ 4050.108/	BC 1007 HS BC 1008 HS	78 (3 in.)	internal thread	10 pc(s).	4050.842
4050.107/ 4050.108/	BC 1007 HS BC 1008 HS	90 (3.5 in.)	plug-type	10 pc(s).	4050.841



Minimal quantity lubrication oil

Minimal quantity lubrication oil for tool lubrication in the Perforex machining centers BC and Perforex laser centers LC.

Oil type	Contents l (qts.)	Packs of	Model No.
MK 150	3 (3.17 qts.)	1 pc(s).	4050.861



Special oil

Special oil for gear lubrication in Perforex machining centers BC.

Standards:
- DIN 51524-2 VG32

Contents l (qts.)	Packs of	Model No.
1 (1.05 qts.)	1 pc(s).	4050.862



Lubricant

Lubricant for greasing the slide rails in Perforex machining centers BC.

Standards:
- DIN 51818

Oil type	Contents kg (lbs.)	Packs of	Model No.
KP2K-NLG12	5 (11 lbs.)	1 pc(s).	4050.863



Filter Bag

Vacuum cleaner bags for swart extraction while machining on Perforex BC machining centers.

Packs of	Model No.
5 pc(s).	4050.860

Accessories

for Perforex

Performance package

For optimized workpiece machining on the Perforex machining center BC.

Benefits:

- Reduced vibration
- Faster feed rates of up to 1.5m/min (59 in/min)
- Lower noise emissions
- Extended tool life
- Optimized handling with workpiece clamping

Supply includes:

- Brush strips
- Performance milling tool \varnothing 6 mm (Model No. 4050.891)

To fit Model No.	No. of milling cutters	No. of brush strips	Packs of	Model No.
4050.101	10	12	1 pc(s).	4050.401
4050.107	10	22	1 pc(s).	4050.042
4050.108	10	24	1 pc(s).	4050.044
4050.230	10	51	1 pc(s).	4050.045



Tool mounting aid

For replacing and calibrating tools such as drill bits, milling cutters and thread tappers in Perforex machining centers BC.

Benefits:

- Easy to use
- High level of measurement accuracy

Supply includes:

- Assembly aid including C-wrench

Packs of	Model No.
1 pc(s).	4050.030



Webcam

For simple, fast support with remote maintenance of the Perforex machining centers BC and laser centers LC.

Supply includes:

- Power supply

Packs of	Model No.
1 pc(s).	4050.072



Accessories

for Perforex



Deburring tool

Universal deburrer, for deburring holes and edges in the Perforex machining center BC.

Design:

- Curved and rotating blade
- HSS B30

Benefits:

- Automatically assumes the optimum position
- Easy to use
- Effortless deburring
- Adjustable length

Supply includes:

- Handle and steel holder
- Including steel blade

Blade length mm (in.)	Blade dia mm (in.)	Handle length mm (in.)	Handle dia. mm (in.)	Packs of	Model No.
47 (1.85)	3 (.11)	110 (4.3)	25 (.98)	1 pc(s).	4050.720

+ Accessories:

- Deburring blades



Deburring blades

Replacement blades for deburrer. Rotating 360° blades for deburring.

Design:

- HSS B30

To fit Model No.	Packs of	Model No.
4050.720	10 pc(s).	4050.721



Swivel stops

For multi-workpiece machining (multiple zero points) on Perforex machining centers BC.

Packs of	Model No.
2 pc(s).	4050.066



Air-jet cone

Replacement nozzle for minimal quantity lubrication in Perforex machining centers BC.

Material:

- Aluminum

Packs of	Model No.
1 pc(s).	4050.888

Accessories

for Perforex

Vacuum hose

Metal hose for extracting milling filings in the Perforex machining center BC.

Benefits:

- Cut resistance to filings
- Heat resistant

Material:

- Aluminum

Length m (ft.)	Packs of	Model No.
13 (42 ft.)	1 pc(s).	4050.889



Collet, drills

Elastic clamping jaws to accommodate the drill bits for the Perforex machining center BC.

Design:

- ER 25

To fit Ø m	Packs of	Model No.
3 - 2	1 pc(s).	4050.822
4 - 3	1 pc(s).	4050.823
5 - 4	1 pc(s).	4050.824
6 - 5	1 pc(s).	4050.825
7 - 6	1 pc(s).	4050.826
8 - 7	1 pc(s).	4050.827
9 - 8	1 pc(s).	4050.828
10 - 9	1 pc(s).	4050.829
11 - 10	1 pc(s).	4050.830
12 - 11	1 pc(s).	4050.831
13 - 12	1 pc(s).	4050.839



Collet, taps

The elastic clamping jaws accommodate the thread tappers for the Perforex machining center BC.

Design:

- ER 25

For threads	Packs of	Model No.
M3	1 pc(s).	4050.832
M4	1 pc(s).	4050.833
M5	1 pc(s).	4050.834
M6	1 pc(s).	4050.835
M8	1 pc(s).	4050.836
M10	1 pc(s).	4050.837
M12	1 pc(s).	4050.838



Tool Holder

To accommodate milling cutters, drill bits and other tools for the machining of enclosures and enclosure panels on Perforex machining center BC.

Design:

- SK30 ER25

Standards:

- DIN 69871

Packs of	Model No.
1 pc(s).	4050.821



Accessories

for Perforex



Magnetic rod

Magnetic filing wand with scraper ring to support and clean Perforex machining centers BC by removing magnetic swarf.

Packs of	Model No.
1 pc(s).	4050.067



Circular thread milling tool set

For cutting metric threads of all sizes. Additional tool for Perforex machining centers BC.

Machinable material:

- Sheet Steel
- Stainless Steel
- Aluminum

Supply includes:

- Circular thread milling cutter
- Collet
- Tool holder

Ø mm	Packs of	Model No.
10	1 pc(s).	4050.050

Note: Please contact your Rittal Representative for application support.



Aluminum/plastic milling tool set

Milling tool set for machining with Perforex machining centers BC.

Machinable material:

- Aluminum
- Plastic

Supply includes:

- Tool holder
- Collet
- End mill 6 mm

Packs of	Model No.
1 pc(s).	4050.051



Machine thread tap set

Extension for standard 6 mm milling cutters with FRX 16 mm clamping jaw.

Machinable material:

- Steel
- Stainless steel
- Aluminium
- Plastic

Design.	Product-specific scope of supply	Packs of	Model No.
Machine thread tap set M3	2 x tool holders SK30 ER25 1 x collet for thread tap M3 1 x collet for drill, to fit 3 - 2 mm 1 x drill bit 2.6 mm 1 x machine thread tap M3	1 pc(s).	4050.057
Machine thread tap set M10	2 x tool holders SK30 ER25 1 x collet for thread tap M10 1 x collet for drill, to fit 9 - 8 mm 1 x drill bit 8.5 mm 1 x machine thread tap M10	1 pc(s).	4050.058
Machine thread tap set M12	2 x tool holders SK30 ER25 1 x collet for thread tap M12 1 x collet for drill, to fit 11 - 10 mm 1 x drill bit 10.5 mm 1 x machine thread tap M12	1 pc(s).	4050.059



Milling cutter extension with collet

Extension for standard 6 mm milling cutters with FRX 16 mm clamping jaw.

To fit Model No.	Length mm (in.)	Packs of	Model No.
4050.101/ 4050.107/ 4050.108/ 4050.230	16 (.62 in.)	1 pc(s).	4050.056

Accessories

for Perforex

Clamping frame

Enables the machining of multiple enclosures on the Perforex machining center BC.

Design

– Pneumatic clamping device

Note:

– Use of the clamping frame (Model No. 4050.080) in the machining center BC (Model No. 4050.230) is only possible with the two-door variant.

To fit Model No.	Dimensions of clampable cubic parts min. (H x W x D) mm (in.)	Dimensions of clampable cubic parts max. (H x W x D) mm (in.)	Number of terminal boxes for parallel machining (max.)	Packs of	Model No.
4050.101	85 x 70 x 70 (3.3 x 2.7 x 2.7 in.)	200 x 300 x 300 (7.8 x 11.8 x 11.8 in.)	3	1 pc(s).	4050.060
4050.107 4050.108/ 4050.230	90 x 70 x 70 (3.5 x 2.7 x 2.7 in.)	200 x 300 x 300 (7.8 x 11.8 x 11.8 in.)	4	1 pc(s).	4050.061
4050.107 4050.108/ 4050.230	90 x 90 x 90 (3.5 x 3.5 x 3.5 in.)	380 x 400 x 600 (14.9 x 15.7 x 23.6 in.)	3	1 pc(s).	4050.062
4050.108/ 4050.230	80 x 100 x 80 (3.1 x 3.9 x 3.1 in.)	510 x 510 x 600 (20 x 20 x 23.6 in.)	3	1 pc(s).	4050.080
4050.108/ 4050.230	150 x 150 x 80 (5.9 x 5.9 x 3.1 in.)	400 x 400 x 400 (15.7 x 15.7 x 15.7 in.)	4	1 pc(s).	4050.081



Busbar clumper

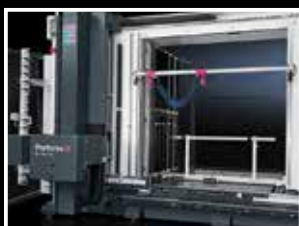
Busbar clumper for the Perforex machining center BC, for simple machining of copper bars.

To fit Model No.	Machinable length with 5 mm thickness mm (in.)	Machinable length with 10 mm thickness mm (in.)	Machinable height (max.) mm (in.)	Simultaneous clamping of 3 copper bars	Packs of	Model No.
4050.107/ 4050.108	150 - 300 (5.9 - 11.8 in.)	150 - 1000 (5.9 - 39.3 in.)	30 - 120 (1.1 - 4.7 in.)	■	1 pc(s).	4050.063
4050.101	100 - 2200 (3.9 - 86.6 in.)	100 - 2200 (3.9 - 86.6 in.)	10 - 100 (0.39 - 3.9 in.)	–	1 pc(s).	4050.064
4050.107 4050.108/	100 - 2200 (3.9 - 86.6 in.)	100 - 2200 (3.9 - 86.6 in.)	10 - 100 (0.39 - 3.9 in.)	–	1 pc(s).	4050.065
4050.101	150 - 300 (5.9 - 11.8 in.)	150 - 1000 (5.9 - 39.3 in.)	30 - 120 (1.1 - 4.7 in.)	■	1 pc(s).	4050.082



Machine options

for Perforex



Enclosure machining

Machine equipped with door and pneumatic clamping device. The corresponding support surface enables the machining of enclosures up to a maximum depth of 1400 mm (55.1 in.). For additional machining of undismantable enclosures on Perforex machining centers BC.

Design:

- Machining surface with door
- Pneumatic clamping device
- Additional support surface
- Mechanical depth adjuster

Benefits:

- Depth-variable
- Use of existing machine surface for the additional machining of enclosures

Note:

- Not suitable for retrofitting. Must be ordered with new machine

To fit Model No.	Dimensions of clampable cubic parts (H x W x D) mm (in.)	Maximum machinable area for cubic parts (H x W) mm (in.)	Packs of	Model No.
4050.101	1200 x 1400 x 1400 (47.2 x 55.1 x 55.1 in.)	750 - 1400 (29.5 x 55.1 in.)	1 pc(s).	4050.010

Motorized depth adjuster

Upgrade your enclosures machining with an electrically powered depth adjuster for frequently changing enclosure sizes. For user-friendly operation of the Perforex machining centers BC.

Design:

- Motorized depth adjuster including membrane clamping system

Benefits:

- Motorized depth adjustment of the end stop with enclosure machining
- Ergonomic handling
- Efficient operation

Note:

- Not suitable for retrofitting. Must be ordered with new machine

To fit Model No.	Length mm (in.)	Packs of	Model No.
4050.107	1600 (62.9 in.)	1 pc(s).	4050.020

Clamping height extension

Upgrade kit to extend the clamping height from 1550mm (61.0 in.) to 1730mm (68.1 in.) for Perforex BC1008HS machine center.

Supply includes:

- 3 clamping elements
- Assembly parts

Note:

- May be retrofitted

To fit Model No.	Height mm (in.)	Packs of	Model No.
4050.108	1730 (68.1 in.)	1 pc(s).	4050.035

Machine options

for Perforex

Depth adjuster extension

Machine equipped with a support surface of 2000 mm (78.7 in.) instead of the standard 1600 mm (62.9 in.) support surface in Perforex machining centers BC.

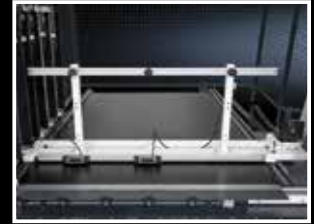
Design:

- Motorized depth adjuster
- Membrane clamping system

Note:

- Not suitable for retrofitting. Must be ordered with new machine.

To fit Model No.	Length mm (in.)	Packs of	Model No.
4050.107	2000 (78.7 in.)	1 pc(s).	4050.022



Comfort clamping

Clamping system for user-friendly clamping of enclosure panels from a size of 1700 mm (66.9 in.) on the Perforex machining center BC.

Supply includes:

- 3 clamping elements
- Assembly parts

Note:

- Not suitable for retrofitting. Must be ordered with new machine.

To fit Model No.	Length mm (in.)	Packs of	Model No.
4050.230	2200 (86.6 in.)	1 pc(s).	4050.235



Safety roof for Perforex LC 3030

Safety roof of the machine housing for Perforex laser LC. Mandatory for all machine installation locations that can be viewed from above and for reflective objects located above the laser, such as lights, cable ducts and others.

Note:

- A site inspection by a Rittal specialist to select and define the laser version required is necessary

To fit Model No.	Machine dimensions (H x W x D) mm (in.)	Packs of	Model No.
4050.315/ 4050.330	3900 x 1100 x 5400 (153.5 x 43.3 x 212.5 in.)	1 pc(s).	4050.317



Thread tapping option

Thread tapping option for the Perforex laser center LC.

Design:

- Movable tool magazine with 6 magazine slots
- Tool holder
- Additional drive unit

Benefits:

- Machining of projects with tapped holes supported
- Fast, automatic changeover from laser function to thread-tapping function by accommodating an additional machine head

Machinable material:

- Steel
- Stainless steel
- Aluminum

Supply includes:

- Thread tapper
- Including clamping units for M3 – M10

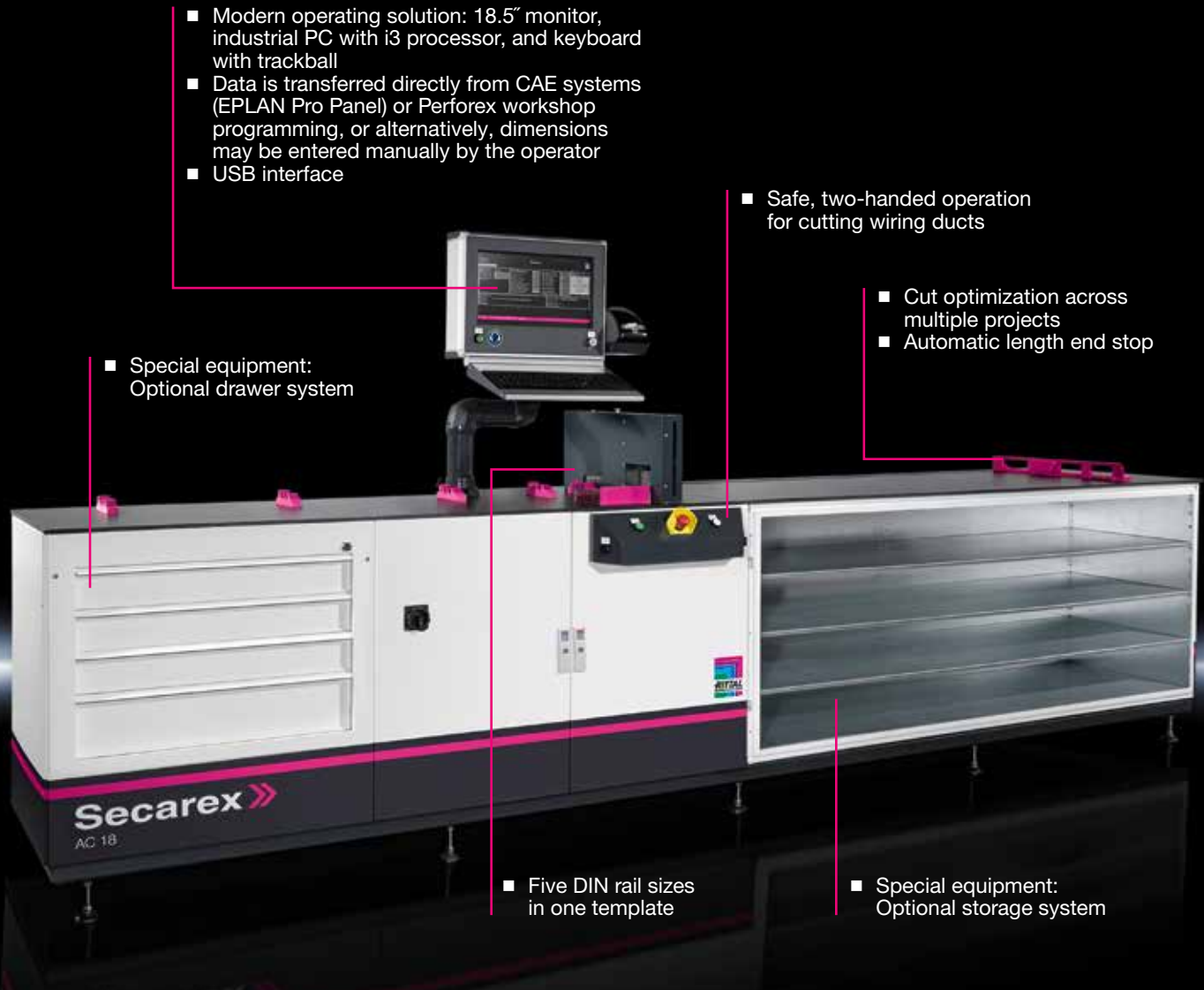
To fit Model No.	Machinable height (max) mm (in.)	Material thickness (max) mm (in.)	Packs of	Model No.
4050.315/ 4050.330	600 (23.6 in.)	5 (0.19 in.)	1 pc(s).	4050.318



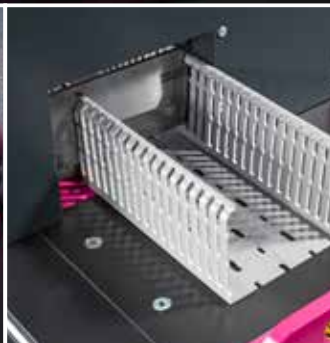
Cutting center Secarex AC 18



The Secarex cutting center is convenient to use and cuts wiring ducts, cable duct covers and DIN rails to length quickly, precisely and reliably. The integral label printer provides project-specific labelling of the DIN rails and cable duct. The cutting center helps to improve quality, optimise cutting waste, lower costs and accelerate the overall process.



Cutting DIN rails



Cutting a cable duct



Manual wiring duct cutter MC125, see page 30



Cutting center Secarex AC 18



Partially automated cutting of cable ducts, cable duct covers and DIN rails to the required size, especially for one-off and smallscale production. The Secarex AC 18 cutting center may optionally be fitted with a drawer system on the left-hand side and/or a storage system on the right-hand side of the machine. If the machining of other DIN rails outside of the standard template is required, this can be quoted as a special. (4050.491).

Design:

- Modern operating solution with 18.5" monitor, industrial PC with I3 processor, and keyboard with trackball

Benefits:

- Fast, precise, reliable working
- Easy to use
- User-friendly, reliable operation
- Very low costs for cutting waste thanks to optimization of the cutting process
- Significant time savings compared to manual cutting
- Clean cuts with high-performance tools
- Automatic retraction of the end stop during the cutting process
- Cut controllable via viewing window
- Five DIN rail sizes in one template

Machinable material:

- Steel
- Stainless steel
- Plastic

Safety:

- Safe, two-handed operation

Supply includes:

- Secarex AC 18
- Label printer
- Operating unit

Support rail type:

- C rails 30/15 (to EN 60 715)
- Top-hat rails 15 (to EN 60 715)
- Top-hat rails 35/15 (to EN 60 715)
- Top-hat rails 35/7.5 (to EN 60 715)
- Busbars NLS-CU 3/10

Note:

- We reserve the right to make technical modifications

Model No.	Packs of	4050.108	Page
Footprint size H x W x D mm (H x W x D in.)		1610 x 4000 x 875 (63.4 x 157.5 x 34.4)	
Space requirements H x W x D mm (H x W x D in.)		1610 x 4000 x 875 (63.4 x 157.5 x 34.4)	
Power consumption kW		1.5	
Electrical connection V, ~, Hz		230, 1~, 50	
Control voltage (DC) V		24	
Minimum machinable width of cable duct mm (in.)		15 (0.6)	
Maximum machinable width of cable duct mm (in.)		125 (4.9)	
Maximum machinable height of cable duct mm (in.)		100 (3.9)	
For wall thickness (max.) mm (in.)		2.5 (0.1)	
Interfaces		Link to different CAD systems; Transfer of DXF formats; EPLAN Pro Panel; Rittal Configuration System	
Machine options		Drawer system 4050.441 Support system 4050.442	
Weight kg (lbs)		400 (881.8)	
Accessories			
Support for mousepad, vertically hinged	1 pc(s)	2383.020	

Wiring duct cutter MC 125



For manual cutting of cable ducts, with adjustable length end stop for the machined material. Anodised contact surface with laser-engraved calibration in millimetres and inches. Integral finger guard ensures safe machining. Intended for mounting on a workbench.

Benefits:

- Enables inexpensive manual cutting of cable ducts
- Easier for cutting cable ducts to length compared to sawing by hand

Machinable material:

- Plastic

Model No.	Packs of	4050.435	Page
Footprint size H x W x D mm (H x W x D in.)		81 x 133 x 28 (3.2 x 5.2 x 1.1)	
Minimum machinable width of cable duct mm (in.)		125 (4.9)	
Maximum machinable wall thickness of cable duct mm (in.)		2.5 (0.1)	
Maximum insertion height mm (in.)		28 (1.1)	
Weight kg (lbs)		15 (33.1)	
Accessories			
Support for mousepad, vertically hinged	1 pc(s)	2383.020	

Busbar machining, static CW 120-S



The units in the CW 120-S product series are ideal for bending, punching and cutting busbars. The integral precision laser facilitates the cutting and bending process.

Electro-hydraulic pump

- To operate products in the CW 120-S product series

Busbar cutting unit

- Time savings compared to manual cutting
- Precise marking of the cutting point

Busbar bending and hole-punching unit

- Simple tool changes
- High level of bending and punching accuracy
- Independent busbar machining



Machining examples for the CW 120-S:



Punching



Cutting a busbar to length



Bending a busbar

Busbar bending and hole-punching unit CW 120-S



Female dies Page 34 Male dies Page 34 Accessories Page 34

The bending and hole-punching unit in the CW 120-S product series is ideal for bending and punching busbars. Round holes and slots may be punched. The bending and hole-punching unit is easily positioned on a workbench.

Design:

- Electric protractor
- Length stop
- Mandrel R10
- Bending die
- Laser pointer (auxiliary laser), beam power laser class 1

Benefits:

- High level of bending and punching accuracy
- Simple tool changes

Machinable material:

- Copper
- Aluminium

Note:

- With a Z bend, the length of the short side depends on the material thickness

Model No.	Packs of	4055.700	Page
Machine dimensions H x W x D mm (H x W x D in.)		410 x 700 x 461 (16.1 x 27.6 x 18.1)	
Footprint size H x W x D mm (H x W x D in.)		426 x 756 x 461 (16.8 x 29.8 x 18.1)	
Bending (max.) mm (in.)		120 x 12 (4.7 x 0.5)	
Bending angle (max.) °		90	
Bending/side length (min.) mm (in.)		50 (1.9)	
U-bending (min.) mm (in.)		100 (3.9)	
Z-bending (min.) mm (in.)		72 (2.8)	
Punching (max.) mm (in.)		6.6 x 21.5 (0.3 x 0.8)	
Punching/material thickness (max.) mm (in.)		12 (0.5)	
Punching/material width (max.) mm (in.)		120 (4.7)	
Weight kg (lbs)		60.0 (132.3)	
Accessories			
Electro-hydraulic pump	1 pc(s)	4055.720	35
Foot switch	1 pc(s)	4055.712	35

Busbar cutting unit CW 120-S



Accessories Page 34

The cutting unit in the CW 120-S product series is ideal for cutting busbars to length. The unit is easily mounted on a workbench.

Design:

- Laser pointer (auxiliary laser), beam power laser class 1

Benefits:

- Significant time savings compared to manual cutting

Machinable material:

- Copper
- Aluminium

Model No.	Packs of	4055.710	Page
Machine dimensions H x W x D mm (H x W x D in.)		370 x 335 x 275 (14.6 x 13.2 x 10.8)	
Footprint size H x W x D mm (H x W x D in.)		318 x 283 x 372 (12.5 x 11.1 x 14.6)	
Cutting (max.) mm (in.)		120 x 12 (4.7 x 0.5)	
Weight kg (lbs)		20.5 (45.2)	
Also required			
Electro-hydraulic pump	1 pc(s).	4055.720	
Foot switch	1 pc(s).	4055.712	
Accessories			
Support roller	2 pc(s)	4055.714	36

Busbar machining, mobile CW 120-M



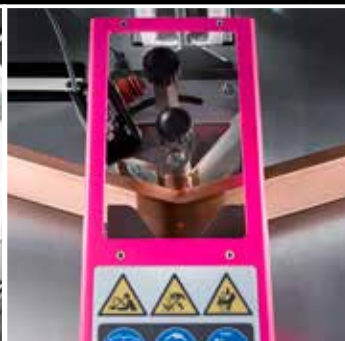
The Copper Workstation CW 120-M is ideal for bending, punching and cutting busbars. It supports cutting and bending up to a maximum width of 120 mm and a maximum thickness of 12 mm. The integral precision laser facilitates the cutting and bending process. In general, round holes with a diameter of 6.6 to 21.5 mm (0.26 to 0.85 in.) and slots up to a maximum width of 18 mm and a length of 21 mm (0.8 in.) may be punched.



Machining examples for the CW 120-M:



Bending busbars



Punching busbars, pull-out measurement system



Cutting busbars to length with integral precision laser



Making cut-outs in steel and stainless steel (accessories, hydraulic hose and cylinder, see page 39)

Busbar machining CW 120-M



Female dies Page 34 Male dies Page 34 Accessories Page 34

The CW 120-M mobile station is ideal for bending, punching and cutting busbars.

Design:

- Electric protractor
- Mandrel R10
- Bending die
- Pull-out side support extension for long rails
- External hydraulic connection for other hydraulic tools
- 4 castors (2 lockable)
- Drawer pull-outs
- Integral hydraulic pump
- Laser pointer (auxiliary laser), beam power laser class 1
- Length end stop, pull-out

Benefits:

- High level of bending and punching accuracy
- Simple tool changes
- Flexible use in the workshop

Machinable material:

- Copper
- Aluminium

Supply includes:

- Busbar machining, mobile CW 120-M
- Foot switch

Note:

- With a Z bend, the length of the short side depends on the material thickness
- For punching, slots of up to a max. of 21 x 18 mm (0.8 x 0.7 in.) are also supported
- Slot tools available on request
- We reserve the right to make technical modifications

Model No.	Packs of	4055.800	Page
Machine dimensions H x W x D mm (H x W x D in.)		1270 x 1380 x 945 (50 x 54.3 x 37.2)	
Support surface (W x D) mm		1211 x 811 (47.7 x 31.9)	
Working height mm (in.)		974 (38.3)	
Power consumption kW		2.2	
Electrical connection V, Hz		230, 50	
Permissible operating pressure (p. max.) bar		700	
Bending (max.) mm (in.)		120 x 12 (4.7 x 0.5)	
Bending angle (max.) °		90	
Bending/side length (min.) mm (in.)		50 (1.9)	
Z-bending (min.) mm (in.)		72 (2.8)	
Punching (max.) mm (in.)		6.6 x 21.5 (0.3 x 0.8)	
Punching/material thickness (max.) mm (in.)		12 (0.5)	
Cutting (max.) mm (in.)		120 x 12 (4.7 x 0.5)	
Length stop (max.) mm (in.)		1224 (48.2)	
Weight kg (lbs)		390.0 (859.8)	
Accessories			
Hydraulic hose	1 pc(s)	4055.807	36
Hydraulic cylinder	1 pc(s)	4055.806	36
Foot switch	1 pc(s)	4055.791	35

Accessories

for busbar machining CW 120



Male die

Male die for punching round holes in busbars.

Machinable material:

– Copper

Thread	Diameter mm (in.)	Material thickness (max.) mm (in.)	Packs of	Model No.
M6	6.6 (0.3)	5 (0.2)	1 pc(s).	4055.740
M8	9 (0.4)	6 (0.2)	1 pc(s).	4055.741
M8	9.5 (0.4)	6 (0.2)	1 pc(s).	4055.742
M10	11 (0.4)	12 (0.5)	1 pc(s).	4055.743
M10	11.5 (0.5)	12 (0.5)	1 pc(s).	4055.744
M12	13.5 (0.5)	12 (0.5)	1 pc(s).	4055.745
M12	14 (0.6)	12 (0.5)	1 pc(s).	4055.746
M16	17.5 (0.7)	12 (0.5)	1 pc(s).	4055.747
M16	18 (0.7)	12 (0.5)	1 pc(s).	4055.748
M20	21 (0.8)	12 (0.5)	1 pc(s).	4055.749
M20	21.5 (0.8)	12 (0.5)	1 pc(s).	4055.750

! Also required:

- Busbar bending and hole-punching unit CW 120-S, see page 29
- Busbar machining CW 120-M, see page 32



Female die

The female dies should be used in combination with the respective male die. This allows round holes to be punched in busbars.

Machinable material:

– Copper

Diameter mm (in.)	Material thickness (max.) mm (in.)	Packs of	Model No.
6.6 (0.3)	5 (0.2)	1 pc(s).	4055.770
9 (0.4)	6 (0.2)	1 pc(s).	4055.771
9.5 (0.4)	6 (0.2)	1 pc(s).	4055.772
11 (0.4)	12 (0.5)	1 pc(s).	4055.773
11.5 (0.5)	12 (0.5)	1 pc(s).	4055.774
13.5 (0.5)	12 (0.5)	1 pc(s).	4055.775
14 (0.6)	12 (0.5)	1 pc(s).	4055.776
17.5 (0.7)	12 (0.5)	1 pc(s).	4055.777
18 (0.7)	12 (0.5)	1 pc(s).	4055.778
21 (0.8)	12 (0.5)	1 pc(s).	4055.779
21.5 (0.8)	12 (0.5)	1 pc(s).	4055.780

! Also required:

- Busbar bending and hole-punching unit CW 120-S, see page 29
- Busbar machining CW 120-M, see page 32

Accessories

for busbar machining CW 120

Male and female dies for slots

For incorporating slots up to max. 21 x 18 mm (0.8 x 0.7) into busbars.

Machinable material:

– Copper

Supply includes:

– Male and female dies for slots

Note:

– Slot tools available on request

Packs of	Model No.
1 pc(s).	4055.791

! Also required:

- Busbar bending and hole-punching unit CW 120-S, see page 29
- Busbar machining CW 120-M, see page 32



Electro-hydraulic pump

The electro-hydraulic pump is used to drive products in the CW 120-S product series.

Oil type	HLP 32
Delivery rate (max.) l/min	1.1
Fill volume l	3.2
Work volume l	2.2
Permissible operating pressure (p.max.) bar	700
Machine dimensions H x W x D mm (H x W x D in.)	325 x 400 x 335 (12.8 x 15.7 x 13.2)
Space requirements H x W x D mm (H x W x D in.)	342 x 402 x 397 (13.5 x 15.8 x 15.6)
Electrical connection V, Hz	230, 50
Power consumption kW	1.3
Rated current A	5.65
Packs of	1 pc(s).
Model No.	4055.720



Foot switch

Foot switch including connection cable, for using busbar machining equipment from the CW 120-S range.

Packs of	Model No.
1 pc(s).	4055.712



Accessories

for busbar machining CW 120



Hydraulic cylinder

The hydraulic cylinder is ideal for making cut-outs in sheet steel and stainless steel. It is used in conjunction with the hydraulic pump or the CW 120-M.

Design:

- With quick-release coupling

Benefits:

- Flexible use in the workshop
- Ergonomic handling
- Allows you to create cut-outs easily

Note:

- Sheet steel
- Stainless steel

Punching force t	Packs of	Model No.
11	1 pc(s).	4055.806

! Also required:

- Hydraulic hose, see page 36



Hydraulic hose

The AS hydraulic hose, in combination with the AS hydraulic cylinder, allows round, square and rectangular cut-outs to be punched in sheet steel and stainless steel. It is used in conjunction with the hydraulic pump or the CW 120-M.

Design:

- Double-walled

Length m (ft)	Packs of	Model No.
3 (3.3)	1 pc(s).	4055.807



Support roller

for busbars

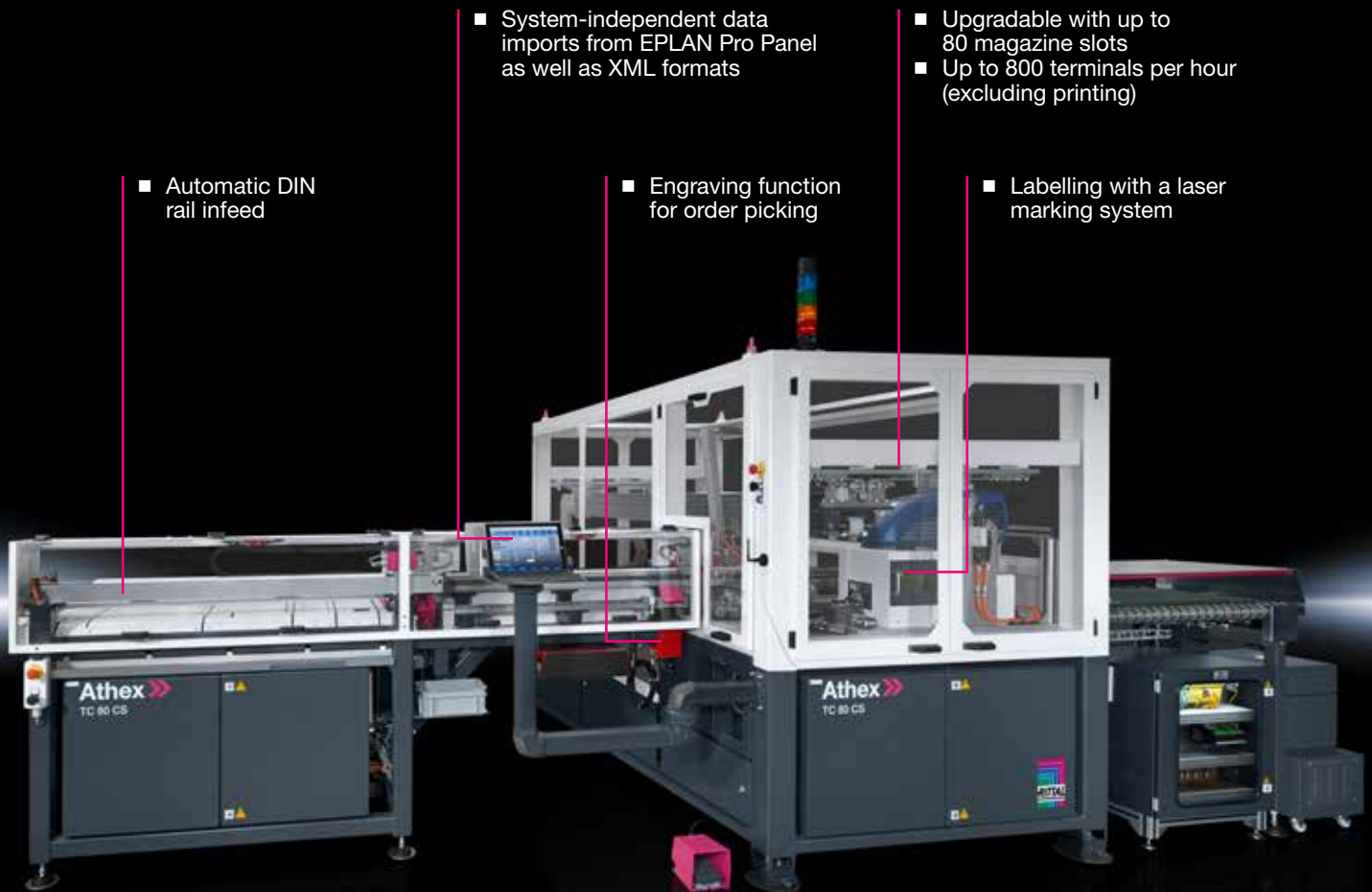
Support roller for user-friendly handling when cutting busbars to size.

Packs of	Model No.
2 pc(s).	4055.714

Terminal block assembly center Athex TC 80 CS



The Athex TC 80 CS terminal block assembly center handles data from EPLAN Pro Panel or manually configured XML formats. During machining, DIN rails from the buffer store are measured and automatically cut to size, then marked on the underside with a needle engraver for order-picking/project-planning. In a subsequent operation, the terminals required are either fitted directly on the DIN rail with a gripper system, or optionally labelled with the laser marking system prior to positioning. The finished terminal strip exits the machine through the sorting unit and can then be removed.



Sorting unit and buffer stores for machined terminal strips



Magazine and magazine support for terminal blocks



Automatic terminal block assembly

Terminal block assembly center Athex TC 80 CS



The Athex TC 80 CS terminal block assembly machine processes data from EPLAN Pro Panel or manually configured XML formats. During machining, DIN rails from the buffer store are measured and automatically cut to size, then marked on the underside for order picking / project planning with a needle engraver. In a subsequent operation, the terminals required are either fitted directly on the DIN rail with a gripper system, or optionally labelled with the laser marking system prior to positioning. The finished terminal strip is output from the machine through the sorting unit and can then be removed.

Design:

- Measurement device for bar cutting
- Automatic cutting of DIN rails 35/15 and 35/7.5 (to EN 60 715)
- Needle marking system for labelling the rail underside
- Sorting and buffer stores for DIN rails

Benefits:

- Optimum accessibility across the entire workspace
- Consistent quality, due to fully automated process
- Simple installation options for extending the terminal magazine
- Ideal cut optimization, due to fully automated measurement of bar wastage

Supply includes:

- Compressed air consumption: approx. 60 l/min (at full load), effective: 10 l/min

Note:

- Optionally upgradable with up to 80 magazine slots
- Individual design of the terminal magazines supported. Advance, project-specific completion of the terminals you are using is an essential requirement.

Model No.	Packs of	4055.700	Page
Machine dimensions H x W x D mm (H x W x D in.)		2354 x 6266 x 3138 (92.7 x 246.7 x 123.5)	
Power consumption kW		11	
Compressed air connection bar		6	
Support rail type		DIN 35	
Capacity of rail magazine		28	
Type of bar labelling		Engraving	
Rail section mm (in.)		100 - 1200 (3.9 - 47.2)	
No. of levels		5	
No. of magazines per level		8	
Machinable terminal width mm (in.)		40 - 110 (1.6 - 4.3)	
Machinable terminal height mm (in.)		28 - 80 (1.1 - 3.1)	
Machinable terminal thickness mm (in.)		3.5 - 20 (0.1 - 0.8)	
Machinable support rail length mm (in.)		230 - 3000 (9.1 - 118.1)	
Interfaces		Data import from EPLAN Pro Panel RJ45 Data import in XML formats	
Weight kg (lbs)		3000.0 (6613.9)	
Accessories			
Magazine	1 pc(s)	4050.520	
Magazine support	1 pc(s)	4050.522	
Laser labelling system	1 pc(s)	4050.524	
Rotating device	1 pc(s)	4050.526	
Scanner	1 pc(s)	4050.528	
2-D scanner software	1 pc(s)	4050.530	

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-  Original spare parts

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On-site service		Within 96 hours, incl. reduced hourly rate	Within 72 hours, incl. reduced hourly rate
Warranty of the machine		No warranty extension	+ 12 months
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DXF training Remote		On request	
Software update		As necessary (but excluding hardware/PC or operating system replacement)	

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