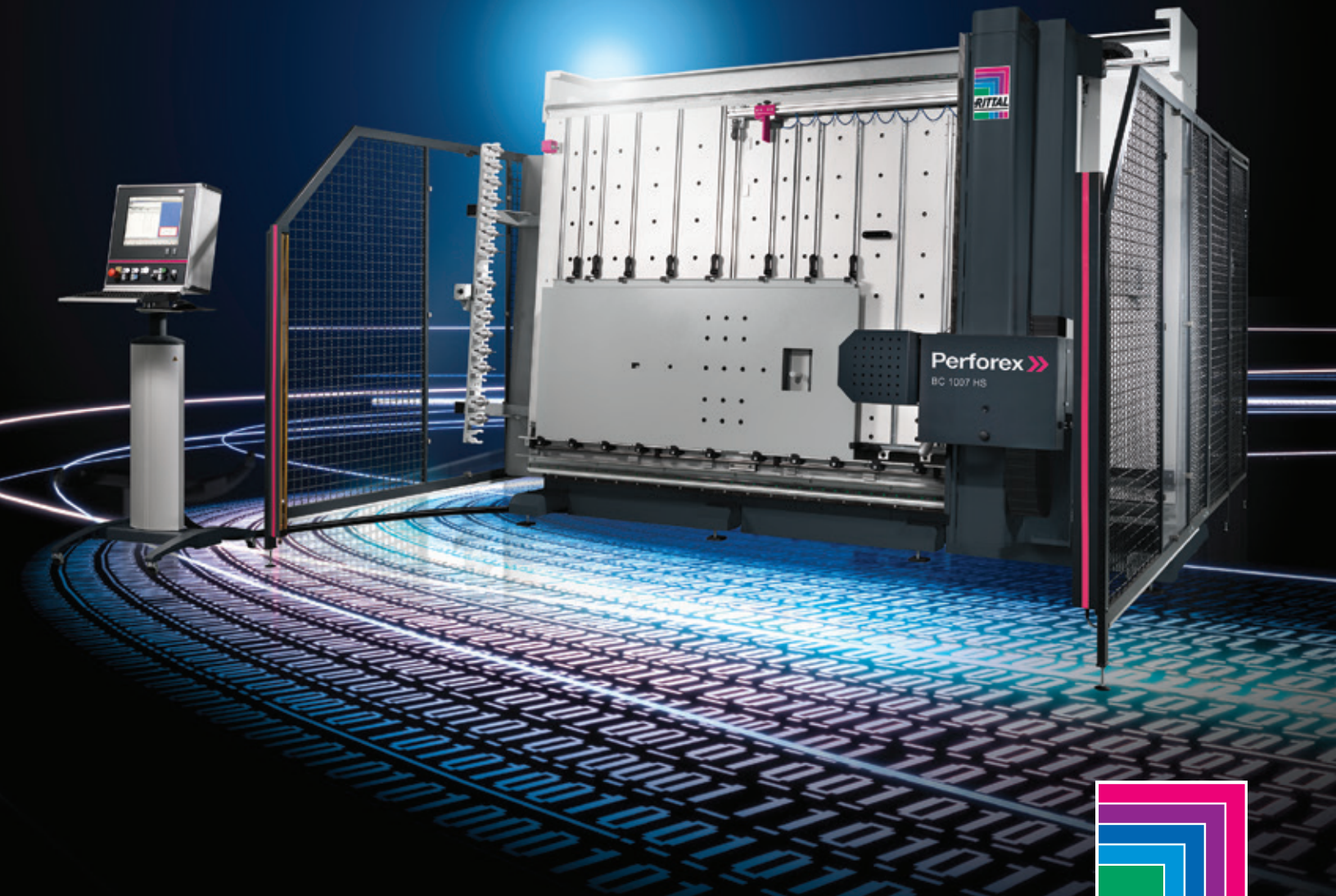


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▶ Rittal Automation Systems We automate panel building



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Rittal Automation Systems

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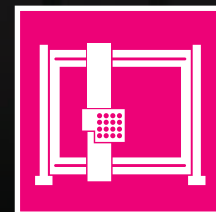
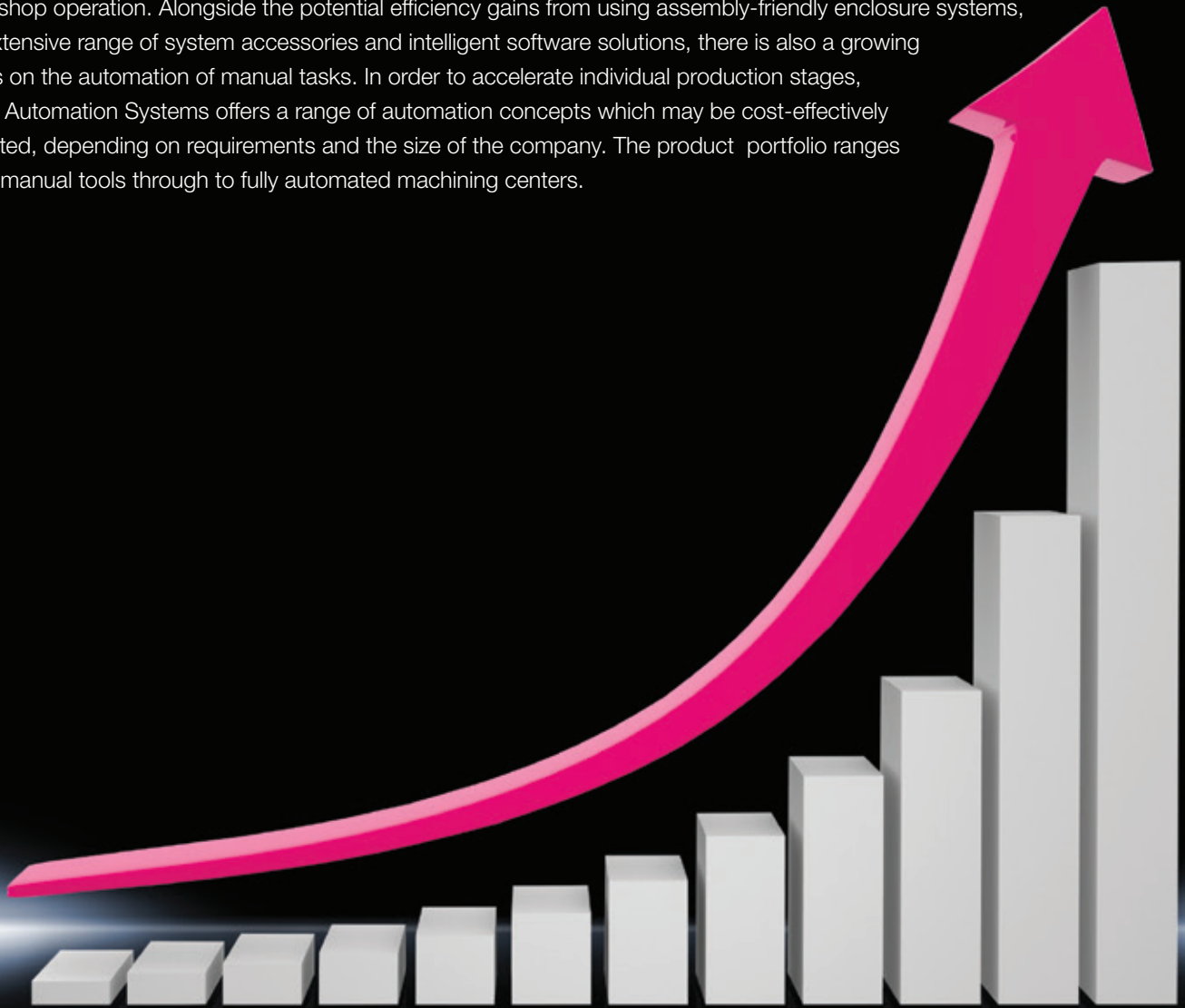
IT INFRASTRUCTURE

SOFTWARE & SERVICES



Rittal automates enclosure manufacturing

The new Rittal Automation Systems business unit extends Rittal's comprehensive range of solutions for control and switchgear engineering and manufacturing. By taking over the entire product range of its sister company Kiesling, Rittal is continuing to expand "The System", offering a comprehensive range of equipment for professional workshop operation. Alongside the potential efficiency gains from using assembly-friendly enclosure systems, an extensive range of system accessories and intelligent software solutions, there is also a growing focus on the automation of manual tasks. In order to accelerate individual production stages, Rittal Automation Systems offers a range of automation concepts which may be cost-effectively adapted, depending on requirements and the size of the company. The product portfolio ranges from manual tools through to fully automated machining centers.



Automation

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

Optimization of the complete workflow in enclosure manufacturing

The Rittal Automation Systems business unit with its portfolio of services supports all process stages in control and switchgear engineering. From manual tools through to fully automated systems, find your customized solutions for process-optimized workshop operations.

- Machining of enclosures and components
- Assembly of terminal blocks on DIN rails
- Assembly of wires and cables
- Automated wiring solutions
- Handling systems and tools



Machining



Tools



Handling

Machining:

Discover our solutions for the fully automated, fast, precise and reliable milling or laser machining of enclosures and boxes, plus optimized cutting and kitting of cable ducts and DIN rails.

- Perforex BC – Milling, thread tapping, drilling
- Perforex LC – Laser cutting of stainless steel and powder-coated sheet steel enclosures
- Secarex – For cutting cable ducts and DIN rails to length
- Copper busbar processing CW 120 – Bending, punching, cutting

IT INFRASTRUCTURE

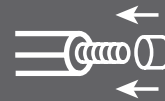
SOFTWARE & SERVICES



Optimization of the complete workflow in enclosure manufacturing



Assembly



Wire processing



Tools



Handling

Assembly:

Our component mounting products are used for the automated manufacturing of terminal strips in control and switchgear engineering.

- **Athex** – Terminal assembly and labeling

Wire processing:

Take advantage of our professional, sensible solutions in wire processing.

- Cutting machine
- Stripping machines
- Stripping/crimping machines

Tools:

The right tool for every application.

- Screwdrivers
- Pliers
- Insulation stripping and crimping tools
- Hole punching tools

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



Wiring



Tools



Handling

Wiring

The efficient interplay between engineering, handling, assembly and hand tools makes your wiring process swift, ergonomic and safe.

To complete the process chain, our automation team is dedicated to the development of pioneering wiring solutions through to full automation.

Handling:

We support you with ergonomic, efficient handling systems for a wide range of transport and lifting operations in the workshop.

- **LUT 1000** – Workpiece stillage and transport
- **Assembly frames** – Ergonomic assembly and wiring
- **Functional trolley** – Practical solution for transport of parts and a working table in the factory

IT INFRASTRUCTURE

SOFTWARE & SERVICES



Perforex machining centers BC

Perforex machining centers were designed specifically for panel building and switchgear manufacturing to optimize the machining of large enclosure panels, wall mount enclosures and mounting panels in the workshop and boost efficiency. Perforex machining centers can automatically create holes, threads and milled openings in the workpiece. All standard materials used in enclosure manufacturing, such as steel, stainless steel, aluminum and copper, as well as various plastics and other machinable materials, mounting plates, painted doors, covers, console plates, housings etc. may be machined.

Software

The user interface of a Perforex machining center is an intuitive workshop programming system which supports remote maintenance. The software is networkable, uses a central database, and may be used on an unlimited number of different PCs within the company.

This means that all programmed jobs are immediately available on the machine and can be reused. Alternatively, almost any standard CAD and E-planning system can be used for programming.

Ask about our interfaces.

Hardware

Depending on the model, enclosure panels up to (W x H) 3600 x 2200 mm (141.7 x 86.6 in.) and enclosures up to (W x H x D) 2300 x 2200 x 2200 mm (90.5 x 86.6 x 86.6 in.) may be clamped and pneumatically secured. As standard, the tool magazine can simultaneously accommodate 18 or 20 tools. Up to 40 tools are optionally available. With the motorized depth adjustment for enclosures and a wide range of options, Perforex machines are equipped for the optimum handling of all parts.

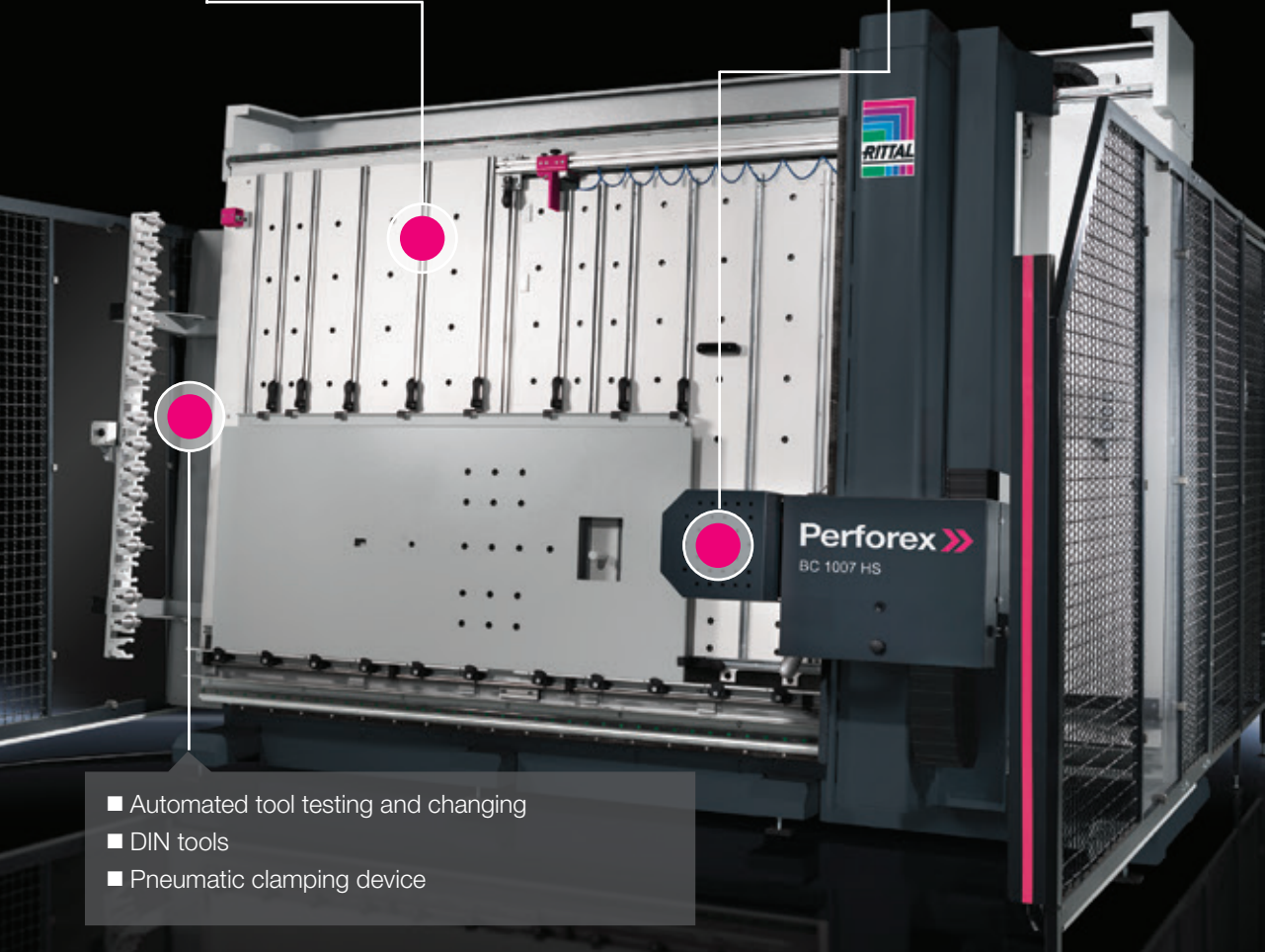
- User-friendly workshop programming with interfaces to all standard CAD systems (DXF import), plus direct transfer of the machining data from EPLAN Pro Panel
- Transfer of configuration data from the Rittal Configuration System (RiCS)



Item name	Perforex BC 1001 HS	Perforex BC 1007 HS	Perforex BC 1008 HS	Perforex BC 2014 HS
Clampable enclosure panels W x H mm (W X H in.)	2500 x 1500 (98.4 x 59 in.)	2450 x 1700 (96.4 x 66.9 in.)	2300 x 1550 (90.5 x 61 in.)	3600 x 2200 (141.7 x 86.6 in.)
Maximum machinable area for panels W x H mm (W x H in.)	2260 x 1500 (88.9 x 59 in.)	2200 x 1700 (86.6 x 66.9 in.)	2300 x 1700 (90.5 x 66.9 in.)	3600 x 2200 (141.7 x 86.6 in.)
Clampable cubic parts W x H x D mm (W x H x D in.)	1200 x 1400 x 1400 (47.2 x 55.1 x 55.1 in.)	1400 x 1600 x 1600 (55.1 x 62.9 x 62.9 in.)	2300 x 1600 x 2200 (90.5 x 62.9 x 86.6 in.)	1400 x 2200 x 2200 (55.1 x 86.6 x 86.6 in.)
Option of extended carriage W x H x D mm (W x H x D in.)	—	1400 x 1600 x 2000 (55.1 x 62.9 x 78.7 in.)	—	—
Maximum machinable area for cubic parts W x H mm (W x H in.)	750 x 1400 (29.5 x 55.1 in.)	1200 x 1600 (47.2 x 62.9 in.)	2300 x 1600 (90.5 x 62.9 in.)	1100 x 2200 (43.3 x 86.6 in.)
Two-door option W x H x D mm (W x H x D in.)	—	—	—	2300 x 2200 x 2200 (90.5 x 86.6 x 86.6 in.)
Model No.	4050.101	4050.107	4050.108	4050.230

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

- Patented pressure plate with integral extraction of the milling swarf
- High-performance spindle including minimal quality lubrication for drilling, milling, thread tapping and thread forming



- Automated tool testing and changing
- DIN tools
- Pneumatic clamping device

Item name	Options	BC 10001 HS	BC1007 HS	BC 1008 HS	BC 2014 HS
Performance Package		4050.041	4050.042	4050.044	4050.045
Enclosure machining	For machining fully welded enclosures (door)	4050.010	Standard	Standard	Standard
Motorized depth adjuster	Electric depth adjustment of the end stop in enclosure machining	—	4050.020	Standard	Standard
Depth adjuster extension 2200 mm (86.6 in.)	Motorized depth adjuster extension for enclosures up to 2200 mm (86.6 in.)	—	4050.022	—	—
Circular thread milling tool		4050.050	4050.050	4050.050	4050.050
Aluminum and plastic machining		4050.051	4050.051	4050.051	4050.051
Mounting aid for tools		4050.030	4050.030	4050.030	4050.030
Magnetic swarf wand		4050.067	4050.067	4050.067	4050.067
Swivel stops for multiple machining		4050.066	4050.066	4050.066	4050.066
Clamping height extension 1700 mm (66.9 in.)		—	—	4050.035	—

Perforex laser center LC

The 3D laser technology of the Perforex LC series is ideally suited to the machining of stainless steel and sheet steel, as well as powder-coated parts such as enclosure doors, side panels etc. Painted metal parts are cut without any visible paint damage or discoloration, even with delicate contours. Additionally, there is no tarnishing of the cut edges when machining stainless steel. The Perforex LC series is cost-effective from machining volumes of around 150 stainless steel enclosures or 300 painted carbon enclosures per year.

Technical specifications

- Machining of material thicknesses up to 5 mm (0.2 in.)
- Machining range (H x W x D) 2300 mm x 1270 mm x 800 mm (90.55 x 50 x 31.4 in.) for product ranges from AE to TS 8
- Machining of enclosures on 5 sides without repositioning
- Very narrow beam cutting width of just approximately 0.3 mm (0.01 in.)
- No need to clamp the workpieces

Item name	Model No.
LC 3015 Perforex laser center, 1500/150 W (Pulse/CW)	4050.315
LC 3030 Perforex laser center, 3000/300 W (Pulse/CW)	4050.330
Options	
Thread tapping function (includes an additional drive unit plus thread tappers, including clamping jaws for tooling and 6 positions for taps)	4050.318
Roof/ceiling for safety housing	4050.317
Optional Accessories	
Cover glass	4050.321
Nozzle	4050.322
Stop blocks	4050.323
Lubricants	4050.324
Filter cartridge set	4050.325
Gland plate set	4050.326
Cleaning cloths	4050.327
Cleaning spray	4050.328
Welding gun spray	4050.329

Note:

- The machine housing (roof) 4050.317 is mandatory if the machine can be viewed from above

Scope of supply

- Laser center including safety housing
- Compressor
- Filter system
- Operating unit



- User-friendly workshop programming similar to Perforex BC with central database
- Machine operation with 3D visualization
- Includes Perforex Workshop Programming database, interfaces to EPLAN Pro Panel and processing of the neutral format "DXF"
- Transfer of configuration data from the Rittal Configuration System (RiCS)

- No clamping required to secure enclosures, mounting panels or flat parts
- Contactless, low-vibration manufacturing process
- Simultaneous machining of five sides

- Clean, non-wearing cutting without the need for coolant/lubricant
- Cutting speed in stainless steel 20x faster than with conventional milling process



■ 3D laser machining

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

Secarex AC 18 cutting center

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 labeling of the DIN rails and cable ducts. The cutting center contributes to improved quality, an optimization of cutting waste, lower costs and an accelerated overall process.

Benefits

- Waste cost are reduced due to optimization of the cutting process
- Significant time savings compared to manual cutting
- Clean cuts with high-performance tools
- Five DIN rail sizes in one template

Technical specifications

- Modern operator station: 18.5" monitor, swivel pendant arm, industrial PC with i3 processor, and keyboard with trackball
- Electrical connection: 230 V, 50/60 Hz
- Pneumatic connection: 6 bar
- Machinable DIN rail type;
 - C rails 30/15 (to EN 60 715)
 - DIN rails 15 (to EN 60 715)
 - DIN rails 35/15 (to EN 60 715)
 - DIN rails 35/7.5 (to EN 60 715)
 - Busbars CU 3/10

Scope of supply

- Secarex cutting center
- Label printer
- Operator station

Item name	Model No.
Secarex AC 18 cutting center	4050.405
Options	Model No.
Mousepad support, vertically hinged	2383.020
Cutting of other DIN rail shapes can be quoted	4050.491
Drawer system, left side	4050.441
Storage system, right side	4050.442



- Manual input of dimensions or direct data transfer from CAD systems (EPLAN Pro Panel) or Perforex workshop programming
- USB interface

- Cut optimization across multiple projects
- Automatic length stop

- Five DIN rail sizes in one template

- Safe, two-handed operation for cutting wiring ducts

Athex TC 80 CS terminal block assembly machine

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 staging area 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 placed on a DIN rail with a gripper system, or optionally labeled with the laser marking system prior to positioning. The finished terminal strip is output from the machine via the sorting unit and can then be removed.

Equipment

- Assembly arm for manufacturer-independent machining of terminals in the following sizes:
 - Terminal width 40 – 110 mm
 - Terminal height 28 – 80 mm
 - Terminal thickness 3.5 – 20 mm
- Up to a max. of 80 terminal magazines on 5 levels
- Machining of DIN rails from a length of 100mm (3.9 in.)
- Standard module for a rail length of 2 m (78.7 in.)
[optionally extendable up to 3 m (118.1 in.)]
- Automatic cutting of DIN rails 35/15 and 35/7.5 (to EN 60 715)
- Management of offcuts from a minimum length of 230 mm (9.1 in.)

Benefits

- Consistent quality, due to fully automated process
- Optimum accessibility to all process
- Simple installation options for extending the terminal magazine
- Direct printing of user-defined information onto the DIN rails for easy identification
- Fully automated measurement of cut length of DIN rails to reduce waste

Technical specifications

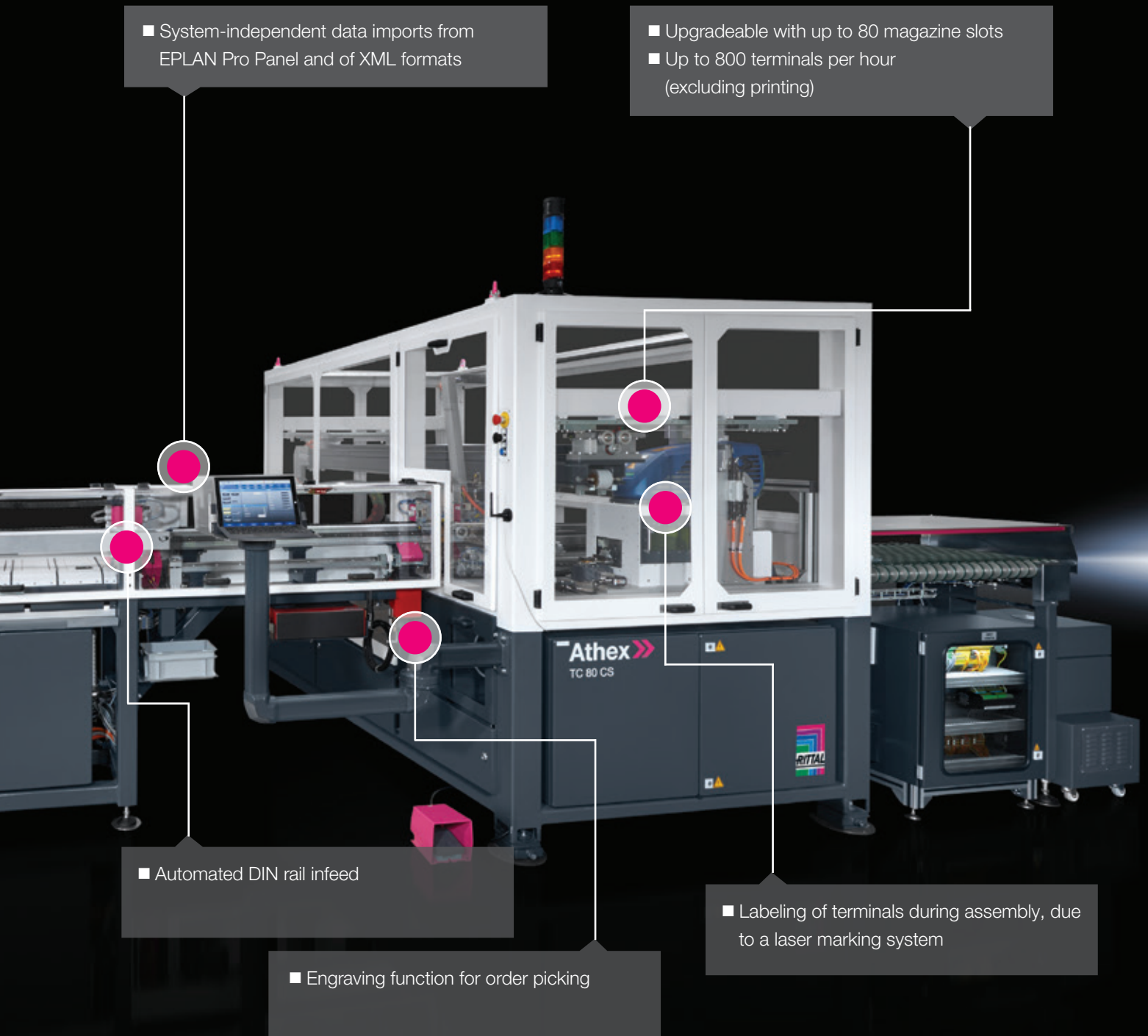
- Machine dimensions (W x H x D):
6266 x 2354 x 3138 mm (246.7 x 92.7 x 123.5 in.), width dimension without support console max. bar length 2 m (78.7 in.); may optionally be extended by 876 mm (34.48 in.) to a bar length of 3 m (118.1 in.)
- Weight approx. 3000 kg (6613.8 lbs.)
- Connected load: 3 x 400 V AC + N + PE; 11kW
- Compressed air: 6 – 10 bar, dry and unoiled
- Air consumption: 10 l/min (peak load 60 l/min)
(0.4 cfm/peak load 2.1 cfm)
- Network connection: RJ 45



Scope of supply

- Buffer stores for DIN rails (28 pieces)
- Measurement device for DIN rail cutting
- Automatic cutting of DIN rails:
 - 35/15 (to EN 60 715)
 - 35/7.5 (to EN 60 715)
- Engraving marking system for labeling the rail underside
- Gripper system for manufacturer-independent automated placement of terminals
- Sorting and staging area

Item name	Model No.
Athex TC 80 CS terminal block assembly machine	4050.505
Options	
Magazine for terminal blocks etc.	4050.520
Magazine support	4050.522
Laser labeling system	4050.524
Rotating device	4050.526
Scanner	4050.528
Scanner software	4050.530



- System-independent data imports from EPLAN Pro Panel and of XML formats

- Upgradeable with up to 80 magazine slots
- Up to 800 terminals per hour (excluding printing)

- Automated DIN rail infeed

- Engraving function for order picking

- Labeling of terminals during assembly, due to a laser marking system

Consumables

for Perforex



Standard milling cutter

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

Design

- Three-flute trimmer
- 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

Optimized milling cutter for Perforex machining centers BC.

Design

- Four-flute trimmer
- 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

Note: Please contact your Rittal Representative for application support.



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

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



Drill bits

Machine twist drill for Perforex machining centers BC.

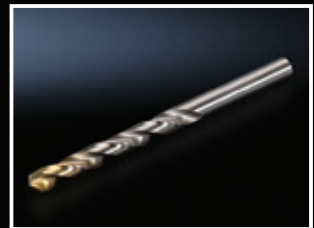
Design

- 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

Touch-up paint

For touching up and repairing powder-coated and wet-painted surfaces, air-drying

	Contents ml (oz.)	Color	Packs of	Model No.
Touch-up pen	12 (.4 oz.)	RAL 9003 Signal white	1 pc(s).	4050.090
Paint pen	12 (.4 oz.)	RAL 7016 Anthracite gray	1 pc(s).	4050.091
Touch-up pen	12 (.4 oz.)	Rittal pink	1 pc(s).	4050.092



Performance package

For optimized workpiece machining on the Perforex machining center BC.

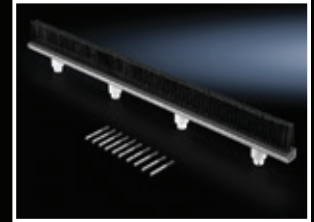
Benefits:

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

Supply includes:

- Brush strips
- Performance milling tool Ø 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.

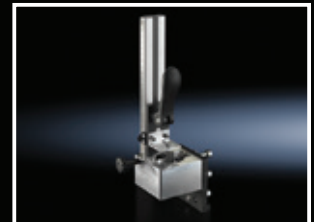
Benefits:

- 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

Suction hose

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

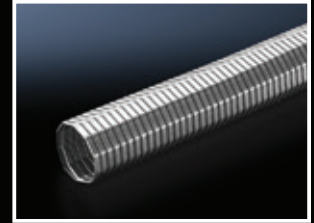
Benefits:

- Cut resistance to filings
- Heat resistant

Material:

- Aluminum

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



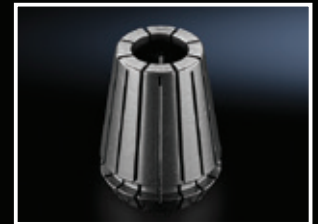
Collet, drills

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.

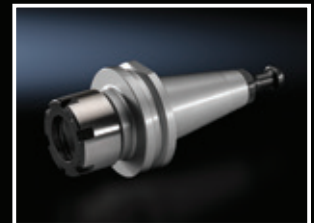
Design:

- 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



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 parallel cube machining of 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.

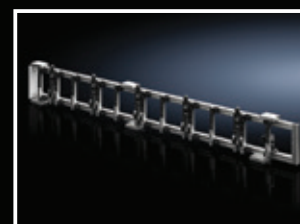
To fit Model No.	Dimensions of clampable cubic parts min. (W x H x D) mm (in.)	Dimensions of clampable cubic parts max. (W x H x D) mm (in.)	Number of terminal boxes for parallel machining (max.)	Packs of	Model No.
4050.101	85 x 70 x 70 (3.3 x 2.7 x 2.7 in.)	200 x 300 x 300 (7.8 x 11.8 x 11.8 in.)	3	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 clammer

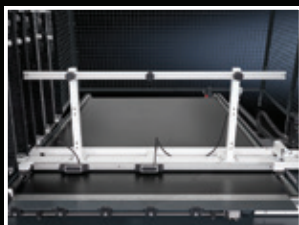
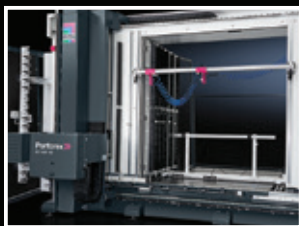
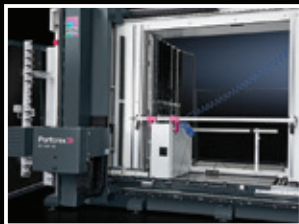
Busbar clammer for the Perforex machining center BC, for simple machining of copper bars.

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



Accessories

for Perforex



Enclosure machining

Machine equipped with door and pneumatic clamping device. The corresponding support surface enables the machining of cubes up to a maximum depth of 1400 mm (55.11 in.). For additional machining of undismantable enclosures on Perforex machining centers BC.

Benefits:

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

Note:

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

Design:

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

To fit Model No.	Dimensions of clampable cubic parts (W x H x D) mm (in.)	Maximum machinable area for cubic parts (W x H) 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 cube machining with an electrically powered depth adjuster for frequently changing enclosure sizes. For user-friendly operation of the Perforex machining centers BC.

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

Design:

- Motorized depth adjuster including membrane clamping system

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 for Perforex machining centers BC.

Supply includes:

- 3 clamping elements
- Assembly parts

Note:

- May be retrofitted

To fit Model No.	Height mm (in.)	Packs of	Model No.
4050.108	1700 (66.9 in.)	1 pc(s).	4050.035

Accessories

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.

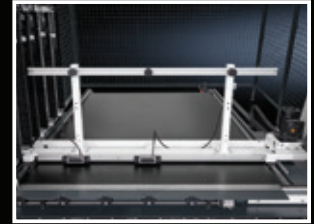
Design:

- 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.

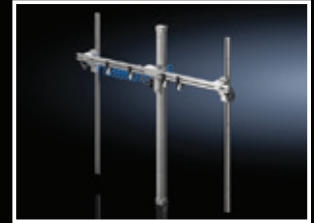
Supply includes:

- 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



Roof-mounting for Perforex laser center LC

Roof/ceiling for safety housing for Perforex laser centers LC. Mandatory for all machine installation locations that can be viewed from above.

To fit Model No.	Machine dimensions (W x H 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



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