

Rittal – The System.

Faster – better – everywhere.

► Rittal Automation Systems We automate wire processing



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Rittal – The System.

Faster – better – everywhere.



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



Rittal Automation Systems

Wire Processing

Cutting machine C8.....	8
Stripping machine S22	9
Crimping machine L8 and R8	10
Crimping machine R8 E.....	11

Perforex >>
BC 1007 HS

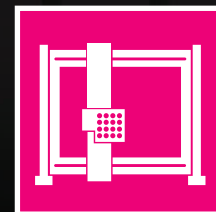
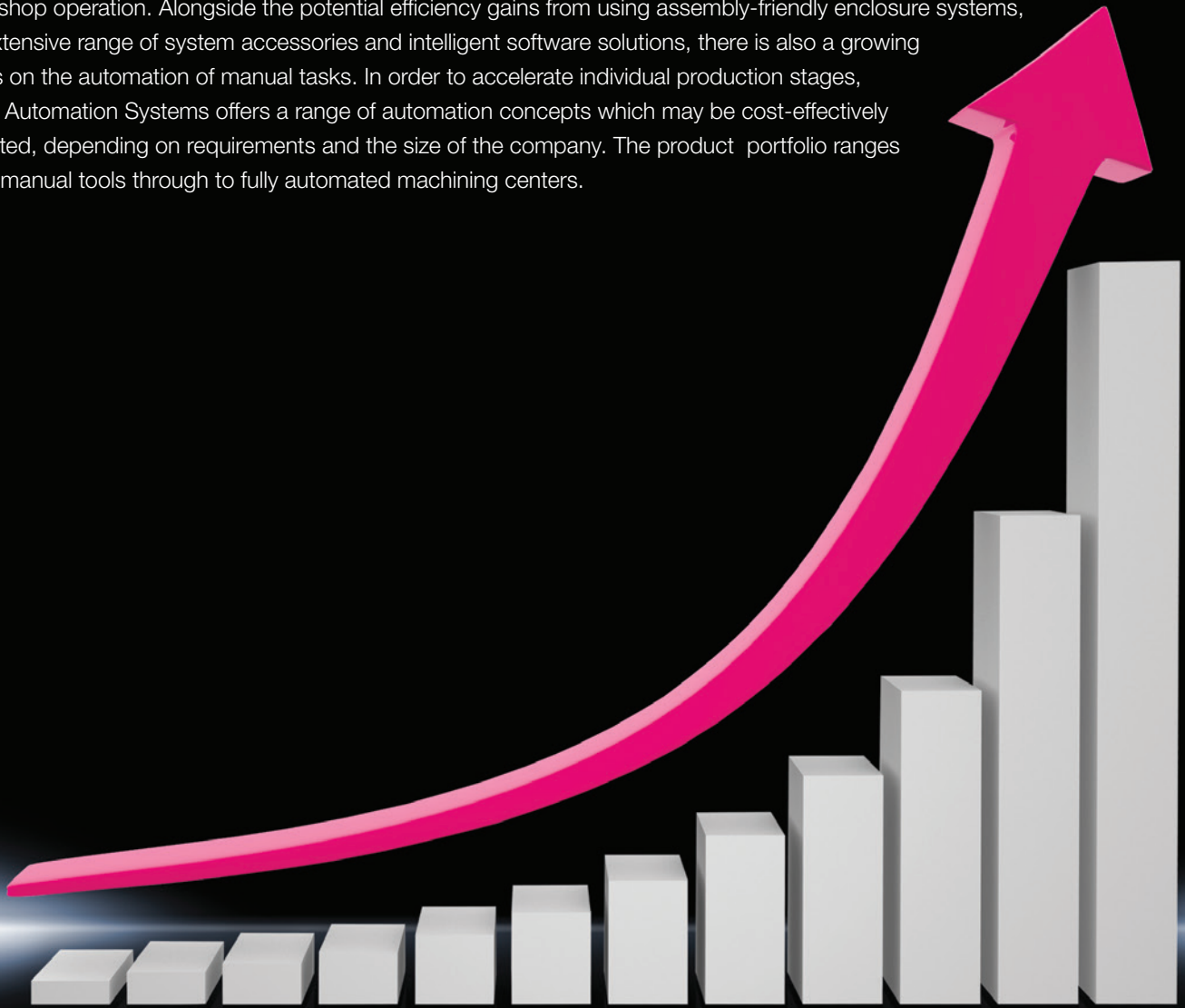
IT INFRASTRUCTURE

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 cases, 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

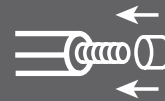
SOFTWARE & SERVICES



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 are 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



Cutting machine C8

The C8 length-cutting machine is sure to impress with its simple, reliable handling. Wires with up to 8 mm² (AWG 28) or 10 mm² (AWG 8) diameter may be cut to an individually set length, ensuring more efficient operating processes. Additionally, excellent repetition accuracy is guaranteed due to the precise servo DC drive. Cutting jobs from the cutting machine can also be managed, documented and transmitted with a PC via a USB interface.

Scope of supply

- Cutting machine C8
- Software on CD-ROM
- Power pack

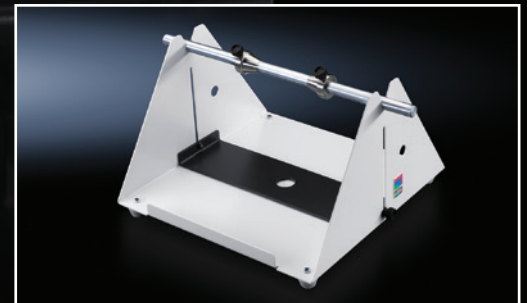
- Simple opening of the feed rollers
- 0.08 – 10 mm² (AWG 28-8) round conductor

- Jobs are easily programmed and executed with an integrated operation terminal
- EPLAN Pro Panel interface

- Controllable pressing force of the feed rollers



- Simple insertion of the wires



- Optional accessories for convenient removal and dispensing of cables and wires

Item name	Model No.
Cutting machine C8	4050.450
Wire dispenser	4050.463
Accessories	Model No.
Spare blade, titanium	4050.465

Stripping machine S22

The stripping machine S22 is electrically driven. It ensures accurate, careful stripping of the insulation from your wires. The draw-off and stripping length is set with linear control. The stripping machine also features a pre-integrated spare blade inside the enclosure. You benefit from the running total counter and daily counter, which are easily read from the touch display.

Scope of supply

- Stripping machine S22
- Mains connection cable



Item name	Model No.
Stripping machine S22	4050.451
Accessories	
Insulation stripping blade, titanium	4050.464

Crimping machine L8 and R8

Electropneumatically driven wire stripping and crimping machine for safe, fast processing of insulated wire end ferrules. The particular value-added feature of the electropneumatic crimping machines is its fully automated detection of the wire cross-section and processing of the wire end ferrules, with no tool changes required. Due to linear adjustment of the blades and the high force of the pneumatically driven crimping unit, all standard cables as well as special ferrules (AWG) in the application range from 0.5 to 2.5 mm² (AWG 20 – 14) may be processed with a crimping length of 8 mm (0.3 in.). The integrated daily unit counter ensures you have an overview of your project quantities at all times.

Scope of supply

- Crimping machine L8
- Oscillating conveyor (both conveyor bowls are included)
- Mains connection cable

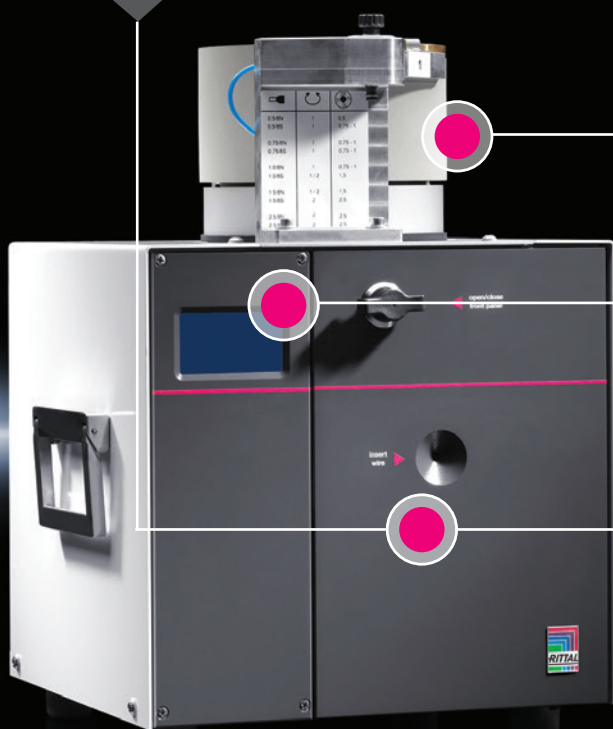
Scope of supply

- Crimping machine R8
- Mains connection cable

- Wire cross-sections from 0.5 to 2.5 mm² (AWG 20-14) can be machined
- Automatic detection of cross-sections
- Handling of special wires supported
- UL-certified crimping in conjunction with wire end ferrules from Rittal

- Simple filling and processing of loose wire end ferrules

- User-friendly menu prompting via touch display



Item name	Model No.
Crimping machine L8	4050.452
Accessories	
Oscillating conveyor 0.5 – 1.5 mm ² (AWG 20-16)	4050.467
Oscillating conveyor 1.5 – 2.5 mm ² (AWG 16-14)	4050.468
Insulation stripping blade kit, titanium	4050.466

Item name	Model No.
Crimping machine R8	4050.453
Accessories	
Insulation stripping blade kit, titanium	4050.466

Crimping machine R8 E

Electrically powered wire stripping and crimping machine for taped wire end ferrules on a reel. The R8 E crimping machine is suitable for fast, careful processing of insulated wire end ferrules and standard PVC cables in cross-sections ranging from 0.5 to 2.5 mm² (AWG 20 – 14) with a crimping length of 8 mm. For flexible use in the workshop, all you need is a power connection

Scope of supply

- Crimping machine R8 E
- Mains connection cable

- Locator for taped wire end ferrules on a reel

Note:

- All units for cable assembly support multiple voltages from 100 – 240 V, 50/60 Hz
- Wire end ferrules for crimping machines
(Standard crimping form: Trapezoid – others available on request)

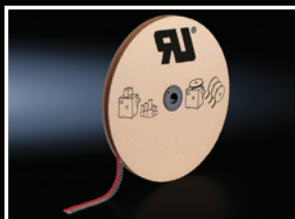


Item name	Model No.
Crimping machine R8 E	4050.454

- Easy replacement of consumables
- Simple adjustment
- Flexible use in the workshop

Wire end ferrules

for Wiring Machines L8, R8 and R8 E



Wire end ferrules

According to DIN color code

With plastic collar.

Technical specifications

- Heat resistant to 105°C (221° F)
- HSS Co8
- TiAlN coating

Material:

- E-Cu, galvanic tin-plated
- Plastic collar: Polypropylene

Note:

- UL-certified in conjunction with the relevant tools, such as crimping machines.

Standards:

- AEH DIN 46228

Approvals

- UL
- UR
- CSA

For crimping machines

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Delivery form	Packs of	Model No.
0.5 (0.0007)	20	8 (0.31)	White	Loose	500 pc(s).	4050.730
0.75 (.0011)	18	8 (0.31)	Grey	Loose	500 pc(s).	4050.731
1 (.0015)	18	8 (0.31)	Red	Loose	500 pc(s).	4050.732
1.5 (.0023)	16	8 (0.31)	Black	Loose	500 pc(s).	4050.733

For crimping machines

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Delivery form	Packs of	Model No.
0.5 (0.0007)	20	8 (0.31)	White	Taped	5000 pc(s).	4050.746
0.75 (.0011)	18	8 (0.31)	Grey	Taped	5000 pc(s).	4050.747
1 (.0015)	18	8 (0.31)	Red	Taped	5000 pc(s).	4050.748
1.5 (.0023)	16	8 (0.31)	Black	Taped	5000 pc(s).	4050.749
2.5 (.0038)	14	8 (0.31)	Blue	Taped	3000 pc(s).	4050.750

For manual wire processing (AWG cables) and crimping machines 0.5 - 1.5mm²

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Delivery form	Packs of	Model No.
0.5 (.0007)	20	8 (0.31)	White	Loose	500 pc(s).	4050.742
0.75 (.0011)	18	8 (0.31)	Grey	Loose	500 pc(s).	4050.743
1 (.0015)	18	8 (0.31)	Red	Loose	500 pc(s).	4050.744
1.5 (.0023)	16	8 (0.31)	Black	Loose	500 pc(s).	4050.745

For manual wire processing

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Delivery form	Packs of	Model No.
0.5 (.0007)	20	10 (0.39)	White	Loose (10 packs of 100)	1000 pc(s).	4051.638
0.5 (.0007)	20	12 (0.47)	White	Loose (10 packs of 100)	1000 pc(s).	4050.737
0.75 (.0011)	18	10 (0.39)	Grey	Loose (10 packs of 100)	1000 pc(s).	4051.641
0.75 (.0011)	18	12 (0.47)	Grey	Loose (10 packs of 100)	1000 pc(s).	4050.738
1 (.0015)	18	10 (0.39)	Red	Loose (10 packs of 100)	1000 pc(s).	4051.644
1 (.0015)	18	12 (0.47)	Red	Loose (10 packs of 100)	1000 pc(s).	4050.739
1.5 (.0023)	16	10 (0.39)	Black	Loose (10 packs of 100)	1000 pc(s).	4051.647
1.5 (.0023)	16	12 (0.47)	Black	Loose (10 packs of 100)	1000 pc(s).	4050.740
2.5 (.0038)	14	10 (0.39)	Blue	Loose (10 packs of 100)	1000 pc(s).	4051.525
2.5 (.0038)	14	12 (0.47)	Blue	Loose (10 packs of 100)	1000 pc(s).	4050.741
4 (.0062)	12	12 (0.47)	Grey	Loose	500 pc(s).	4050.783
6 (.0093)	10	12 (0.47)	Yellow	Loose	100 pc(s).	4050.736

Wire end ferrules

for Wiring Machines L8, R8 and R8 E

Wire end ferrule

According to Rittal color code:
With plastic collar.

Technical specifications:
– Heat-resistant to 105°C (221°F)

Material:
– E-Cu, galvanic tin-plated
– Plastic collar: Polypropylene

Note:
– UL-certified in conjunction with the relevant tools,
such as crimping machines.

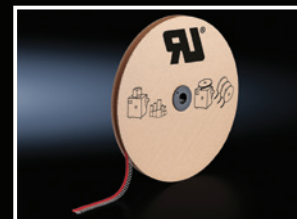
Approvals:
– UL
– UR
– CSA

For crimping machines

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Deliver form	Packs of	Model No.
0.5 (.0007)	20	8 (0.31)	Orange	Taped	5000 pc(s).	4051.597
0.75 (0.011)	18	8 (0.31)	White	Taped	5000 pc(s).	4051.599
1 (.0015)	18	8 (0.31)	Yellow	Taped	5000 pc(s).	4051.601
1.5 (.0023)	16	8 (0.31)	Red	Taped	5000 pc(s).	4051.603
2.5 (.0038)	14	8 (0.31)	Blue	Taped	3000 pc(s).	4051.750

For manual wire processing and crimping machines 0.5 - 2.5 mm² (.0007 - .0038 in.²)

For cross-section mm ² (in. ²)	AWG	Length mm (in.)	Color	Delivery form	Packs of	Model No.
0.14 (.0002)	26	8 (0.31)	Grey	Loose	500 pc(s).	4050.752
0.25 (.0003)	24	8 (0.31)	Light Blue	Loose	500 pc(s).	4050.754
0.34 (.0005)	22	8 (0.31)	Turquoise	Loose	500 pc(s).	4050.757
0.5 (.0007)	20	8 (0.31)	Orange	Loose	500 pc(s).	4050.760
0.5 (.0007)	20	10 (0.39)	Orange	Loose	500 pc(s).	4050.761
0.75 (.0011)	18	8 (0.31)	White	Loose	500 pc(s).	4050.764
0.75 (.0011)	18	10 (0.39)	White	Loose	500 pc(s).	4050.766
1 (.0015)	18	8 (0.31)	Yellow	Loose	500 pc(s).	4050.769
1 (.0015)	18	10 (0.39)	Yellow	Loose	500 pc(s).	4050.770
1.5 (.0023)	16	8 (0.31)	Red	Loose	500 pc(s).	4050.773
1.5 (.0023)	16	10 (0.39)	Red	Loose	500 pc(s).	4050.774
2.5 (.0038)	14	8 (0.31)	Blue	Loose	500 pc(s).	4050.734
2.5 (.0038)	14	10 (0.39)	Blue	Loose	500 pc(s).	4050.779
4 (.0062)	12	8 (0.31)	Grey	Loose	500 pc(s).	4050.782
4 (.0062)	12	10 (0.39)	Grey	Loose	500 pc(s).	4050.735
6 (.0093)	10	12 (0.47)	Black	Loose	100 pc(s).	4050.785



Rittal – The System.

Faster – better – worldwide.

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

Rittal North America LLC

Woodfield Corporate Center
425 North Martingale Road, Suite 400 • Schaumburg, Illinois 60173 • USA
Phone: 937-399-0500 • Toll-free: 800-477-4000
Email: rittal@rittal.us • Website: www.rittal.us

Rittal Systems Ltd.

6485 Ordan Drive • Mississauga, Ontario L5T 1X2 • Canada
Phone: 905-795-0777 • Toll-free: 800-399-0748
Email: marketing@rittal.ca • Website: www.rittal.ca

Rittal Mexico

Dr. Roberto Gayol 1219-1B • Col. Del Valle Sur, 03100 • Mexico, D.F.
Phone: (+52) (55) 5559-5369 • Toll-free: 01 800 8 Rittal (748.825)
Email: info@rittal.com.mx • Website: www.rittal.com.mx

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

