Schleuniger

Cut, Strip & Terminate, Crimp & Quality Assurance

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Schleuniger's fully automatic CrimpCenter series machines are the ideal solution for high-speed wire processing. With a full range of processing stations and optional accessories, these machines maximize productivity for a broad spectrum of applications. For all other crimping needs, Schleuniger offers a wide range of products, from universal crimp applicators and pneumatic crimping machines to programmable cutting, stripping and crimping machines and crimp quality assurance equipment.

Schleuniger CoaxCenters are the first fully automatic machines for processing micro-coaxial and coaxial cables with unbeatable precision.

Application Overview CST

Processing Capabilities |

		36 S 0.13-6 mm² 26-10 AWG	36 SP 0.13-6 mm² 26-10 AWG	64 0.13-6 mm² 26-10 AWG	67 0.13-6 mm² 26-10 AWG	HD16 6-16 mm² 10-6 AWG
Crimp & Seal	Crimp to crimp	■	■	■	■	■
	Crimp to crimp (closed barrel)	■	■	■	■	
	Seal to crimp	■	■	■	■	■
	Seal to seal	■	■	■	■	■
Twist & Tin	Crimp to twist / tin	■	■	■	■	
	Seal to twist / tin	■	■	■	■	
	Twist / tin both ends	■	■	■	■	
Doubling Crimp	Crimp / crimp (same terminals)	■	■	■	■	
	Crimp / crimp (different terminals)	■	■	■	■	
	Crimp / seal (different terminals)	■	■		■	
	Seal / seal (same terminals and seals)	■	■	■	■	
	Twist and tin / crimp	■	■		■	
Special Applications	Printing and marking	■	■	■	■	■
	Two-layer strip	■	■	■	■	■
	Center strip			■	■	
	Coax cable strip			■	■	
	Hard shell / mini seals	■	■	■	■	
	Coiling (ACS)			■	■	
	Compacting - resistance welding (KM-CFK)				■	
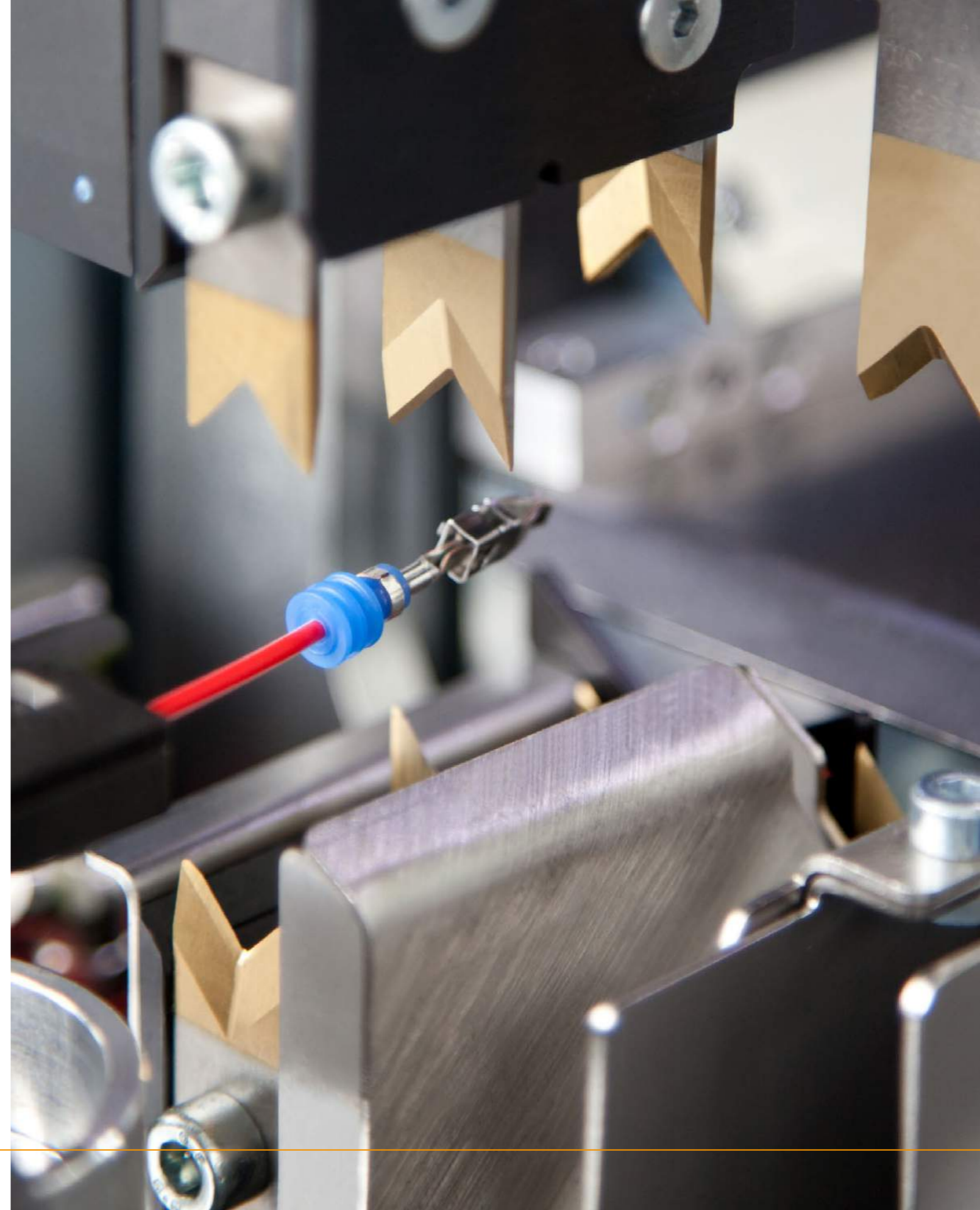
CrimpCenter 36 S
Fully Automatic Crimping Machine

Equipped with reliable high precision technology, the CrimpCenter 36 S features a compact, modular design offering space for up to six processing stations with the precision and quality one can expect from Schleuniger. Various configuration possibilities allow for a variety of applications to be processed with cross sections from 0.13 to 6 mm² (26 – 10 AWG). An optimal combination of proven state-of-the-art components results in outstanding production rates.

Technical Data

Number of stations
6

Wire Feed Rate
8 m/s (26.3 ft/s)

Wire Size Range*
0.13 – 6 mm² (26 – 10 AWG)

Wire Length
45 mm – 65 m (1.77″ – 213 ft)
Optional from 35 mm (1.38″)

Stripping Length
Side 1: 0.1 – 18 mm (0.04 – 0.71″)
Side 2: 0.1 – 18 mm (0.04 – 0.71″)

*Highly flexible wires, wires with hard insulations or those that are tightly bonded might not be able to be processed even if they are within the application range stated above. For cross sections smaller than 0.22 mm² (24 AWG) and larger than 4 mm² (12 AWG), sample processing is required.

Production rate CrimpCenter 36 S

Crimp-Crimp
Crimp-Seal
Seal-Seal

Pieces/h

6000
5000
4000
3000
2000
1000
0

100 500 1000 1500 2000 2500 3000 3500 4000

Wire Length [mm]

Your Benefits

FEATURING
Smart**Detect**
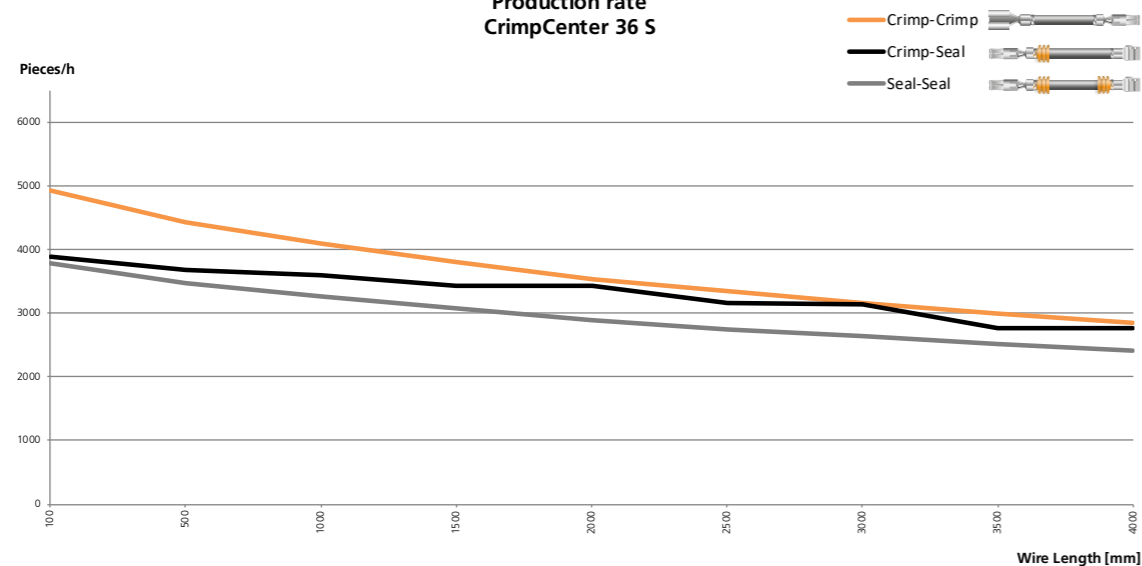
- Compact modular design
- Great flexibility with up to six processing stations
- High-end components for highest precision
- Simple operation with touchscreen and icon-based EASY software
- Simple network integration with standard TCP/IP protocol

CrimpCenter 36 SP
Fully Automatic Crimping Machine

The CrimpCenter 36 SP offers decreased set-up time and increased effective performance. Therefore, overall productivity is increased and jobs can be processed in less time. Furthermore, new features improve quality by systematic optimization, automating previously manual processes and enhancing wire handling. The end result is that the CrimpCenter 36 SP will help you achieve your targets in less time, while decreasing cost-per-lead.

Technical Data

Processing Stations
Maximum 6 (maximum 3 crimping stations)

Feed Rate
Maximum 10 m/s (32.8 ft/s)

Conductor Cross-Section*
0.13 – 6 mm² (26 – 10 AWG)

Strip Length
Side 1: 0.1 – 18 mm (0.004 – 0.71")
Side 2: 0.1 – 18 mm (0.004 – 0.71")
[Optional cutter blocks for applications up to „side 1: 31 mm and side 2: 5 mm" are available.]

* Wires with hard insulations or those that are tightly bonded might not be able to be processed even if they are within the application range stated above. For cross sections smaller than 0.22 mm² (24 AWG) and larger than 4 mm² (12 A WG), sample processing is required.

Production rate CrimpCenter 36 SP

Crimp-Crimp
Crimp-Seal
Seal-Seal

Pieces/h

6000
5000
4000
3000
2000
1000
0

100 500 1000 1500 2000 2500 3000 3500 4000

Wire Length [mm]

Your Benefits

FEATURING
Smart**Detect**
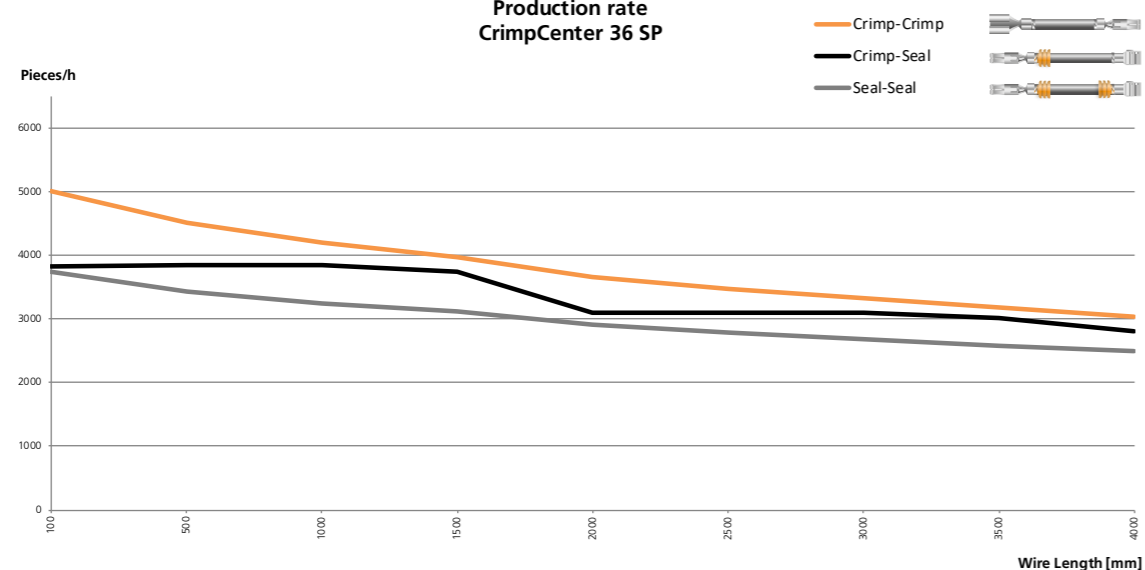
- Increased effective performance of 13 percent on average significantly reduces cost per lead
- Improved quality by automating previously manual processes
- Enhanced wire handling by improved deposit quality
- Application flexibility with up to 6 stations
- Simple, intuitive user interface & Quick-change mechanisms

CrimpCenter 64
Fully Automatic Crimping Machine

Your Benefits

- High performance and short set-up times
- Simple operation with state-of-the-art software and touchscreen
- Simple network integration with standard TCP/IP protocol
- Wide range of options and accessories available

FEATURING
Smart**Detect**

The CrimpCenter 64 is a fully automatic swivel arm crimping machine with up to four processing stations. At a maximum feed rate of 12 m/s (39.4 ft/s), the CrimpCenter 64 processes high crimping, sealing, twisting and tinning of wires from 0.13 to 6 mm² (26 - 10 AWG) at maximum productivity.

Technical Data

Number of stations
4
Wire Feed Rate

12 m/s (39.4 ft/s)

Wire Cross Section*
0.13 – 6 mm² (26 – 10 AWG)
Optional from 0.05 mm² (30 AWG)

Wire Length
60 mm – 65 m (1.77" – 213 ft)
Optional from 35 mm (1.38")

Stripping Length Side 1
0.1 – 18 mm (0.04 - 0.71")
Optional up to 26 mm (1.02")

Stripping Length Side 2
0.1 – 18 mm (0.04 – 0.71")

*However, for cross sections smaller than 0.22 mm² (24 AWG), sample processing is required.

CrimpCenter 67
Fully Automatic Crimping Machine

Your Benefits

- Maximum flexibility and high performance
- Simple operation with state-of-the-art software and touchscreen
- Simple network integration with standard TCP/IP protocol
- Wide range of options and accessories available

FEATURING
Smart**Detect**

The CrimpCenter 67 accommodates up to seven stations (maximum four crimp stations) and is ideal for customers with a large variety of applications such as crimping, doubling, sealing, tinning, twisting and welding. A multitude of applications can be processed with minimal set-up times.

Technical Data

Number of stations
7
Wire Feed Rate
12 m/s (39.4 ft/s)

Wire Cross Section*
0.13 – 6 mm² (26 – 10 AWG)
Optional from 0.05 mm² (30 AWG)

Wire Length
60 mm – 65 m (1.77" – 213 ft)
Optional from 35 mm (1.38")

Stripping Length Side 1
0.1 – 18 mm (0.004 – 0.71")
Optional up to 26 mm (1.02")

Stripping length Side 2
0.1 – 18 mm (0.004 – 0.71")

*However, for cross sections smaller than 0.22 mm² (24 AWG), sample processing is required.

CrimpCenter 67 HD16
Fully Automatic Crimping Machine

Your Benefits

- Production of larger cables up to 16 mm² (6 AWG)
- High performance and short set-up times
- Simple operation with state-of-the-art software and touchscreen
- Simple network integration with standard TCP/IP protocol

FEATURING

SmartDetect   in the Standard Wire Cross Section

The CrimpCenter 67 HD16 is a fully automatic swivel arm crimping machine with up to four processing stations. It is ideally suited for medium to large cable applications from 6 to 16 mm² (10 - 6 AWG). At a maximum feed rate of up to 12 m/s (39.4 ft/s), this versatile, fully automatic crimping machine allows high quality crimping and sealing of wires at maximum productivity.

Technical Data

Number of stations
4

Wire Feed Rate
12 m/s (39.4 ft/s)

Wire Cross Section
6 – 16 mm² (10 – 6 AWG)
Optional 0.13 – 6 mm² (26 – 10 AWG)
or 6 – 25 mm² (10 – 4 AWG)

Wire Length
60 mm – 65 m (1.77" – 213 ft)

Stripping Length Side 1
0.1 – 18 mm (0.04 – 0.71")
Optional up to 26 mm (1.02")

Stripping Length Side 2
0.1 – 18 mm (0.04 – 0.71")

CrimpCenter ACS
Coil-Binding System for CrimpCenter 6-Series
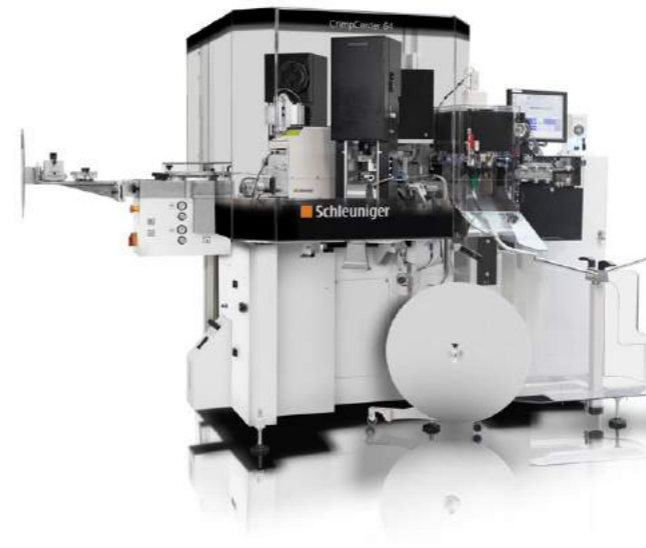
Your Benefits

- High performance with minimal space requirements
- Excellent length accuracy due to servo motor and encoder combination
- Handles single wire applications with or without seals or terminals on either end
- Simple operation and set up via the CrimpCenter EASY software and touchscreen interface

The CrimpCenter ACS (AutoCoiling System) is built on the 6-series platform, The auto-coiling function eliminates the need for extension conveyors and significantly reduces the floor space required for long-wire applications. The system will automatically coil, bind and batch long wires during production. Binding is accomplished with tape that can be easily removed for downstream production steps.

Technical Data

Number of stations
4

Wire Feed Rate
9 m/s (26.3 ft/s)

Wire Cross Section
0.35 – 2.5 mm² (22 – 13 AWG)

Wire Length
4 m – 30 m (13.1 – 98.4 ft.)
Depending on wire outer diameter (cross section)

Stripping Length Side 1
0.1 – 18 mm (0.04 – 0.71")
Optional up to 26 mm (1.02")

Stripping Length Side 2
0.1 – 18 mm (0.04 – 0.71")

Cut, Strip & Terminate

UniCrimp 222 | 221
Crimping Station for CrimpCenter Series

Your Benefits

- Suited for precise high speed crimping
- Integrated crimp force monitoring
- Suitable for all standard crimp applicators
- UniCrimp 222: Automatic crimp height adjustment

The UniCrimp 221 and UniCrimp 222 are crimping stations designed for high speed production on CrimpCenter series machines. The stations include integrated crimp force monitoring with the Schleuniger CFM 20 as well as a height adjustable base frame. They accept most side- or rear-feed mini-style crimping applicators with either mechanical or pneumatic feed. The UniCrimp 222 also includes electronic crimp height adjustment to minimize set-up times.

Technical Data

Crimping Force
20 kN (2 tons)

Wire Cross Section
Up to 6 mm² (10 AWG)

Stroke
40 mm (1.58") or 30 mm (1.18")
(mechanical adjustable)

Shut Height
From 135.78 mm (5.346") to 190.00 mm
(7.480")

Options
Various applicator adaptors and fixations / shut heights available

Crimp Height Adjustment
UniCrimp 221: Manual +- 0.8 mm (0.03")
UniCrimp 222: Electronically adjusted via EASY software ± 0.5 mm (0.02")

UniCrimp 500 A
Crimping Station for CrimpCenter Series

Your Benefits

- Ideal for processing large cable cross sections up to 16 mm² (6 AWG)
- Compatible with rear- and sidefeed banded terminals
- Short cycle times
- Quick-change applicator base plate
- Optional crimp force monitoring

The UniCrimp 500 A is a crimping station with five tons of crimping force. It processes both rear- and side-feed banded terminals (open or closed barrel type) for cable cross sections up to 16 mm² (6 AWG).

Technical Data

Crimping Force
49 kN (5 tons)

Wire Cross Section
Up to 16 mm² (6 AWG)

Stroke
40 mm (1.58")

Shut Height
Standard 158.38 mm (6.235")
Optional 135.78 mm (5.346")

Crimp Force Monitoring
Optional

Crimp Height Adjustment
Manual

Cut, Strip & Terminate

SealLoad 3100
Seal Loading Station for CrimpCenter

The seal loading station for CrimpCenter series machines conveys and orientates loose seals and positions them on previously stripped wires. Station is suitable for all types of seals, including mini and hard-shell seals. Seal monitoring options are available. The station also accepts seal kits for the Schleuniger SLU 3000 and some competitor models as well.

Technical Data

Process Time
160 ms (without options)
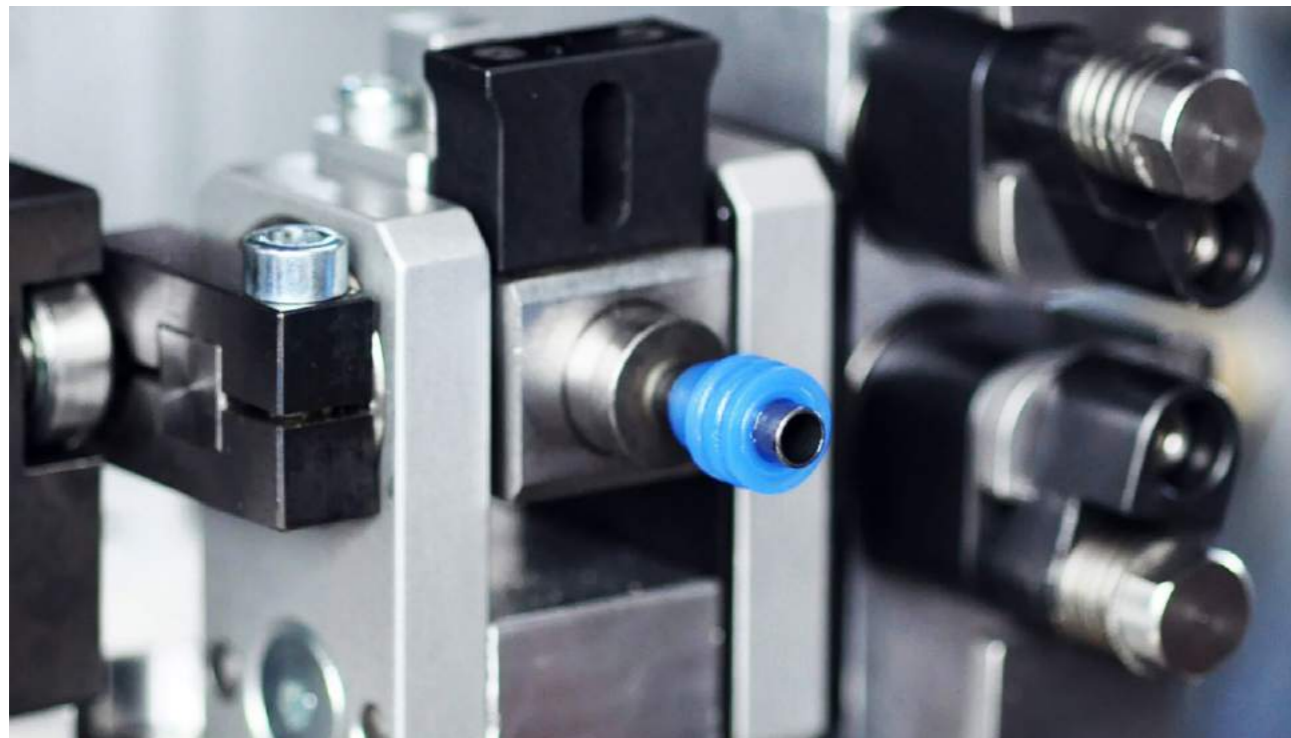
Cycle Time
750 ms

Maximum Seal Dimensions
17 mm diameter (0.67")
19 mm length (0.78")

Seal Kit Compatibility
SLU + SL Sealkits / Adapter kits for competitive seal kits.

Your Benefits

- Improved performance over the SLU 3000
- Fast cycle times optimizes performance of CST machines
- Tool-less kit changeover
- Low energy consumption
- Fully integrated with EASY software

SLD 4100
Double Gripper Module for CrimpCenter

Your Benefits

- Compact, fully pneumatic module
- Doubled wires can have different lengths and strip lengths
- Horizontal or vertical doubling
- All parameters are fully programmable (no mechanical adjustments)
- Simple programming directly in CrimpCenter EASY software

The SLD 4100 double gripper module can be used with all models of the CrimpCenter series for processing doubling crimp applications on wires from 1 – 4 mm (0.039 – 0.157") in outer diameter. The unit gathers two single wires in the proper orientation allowing the swivel arm gripper to collect them. The wires are then moved to a separate station for termination into a double crimp. Each wire can have a different length and depending on the terminal design, wire orientation can be either vertical or horizontal.

Technical Data

Cable Outer Diameter
1 – 4 mm (0.039 – 0.157")

Wire Alignment
Horizontal and vertical

STS 1100
Tinning Station for CrimpCenter

Your Benefits

- Short cycle times
- Full control via CrimpCenter EASY operating software
- Designed for use with lead-free solder
- Consistently tinned diameters
- Wire cross sections up to 2.5 mm² (14 AWG), optional up to 4 mm² (12 AWG)

The STS 1100 tinning station is designed specifically to resist the corrosive properties of lead-free solder. The station includes an integrated flux unit for tinning cross sections up to 2.5 mm² (14 AWG) and tinning lengths up to 5 mm (0.2"). Cross sections up to 4 mm² (12 AWG) and tinning lengths up to 10 mm (0.39") may be possible but testing should be done.

Technical Data

Wire Cross Section
Up to 2.5 mm² (14 AWG);
possibly 4 mm² (12 AWG) depending on wire

Tinning Length
Up to 5 mm (0.2");
possibly 10 mm (0.39") depending on wire

Operating Temperature
Maximum 400°, adjustable

Fluxing
Integrated

Cut, Strip & Terminate

STW 1100
Twisting Station for CrimpCenter

Your Benefits

- Programmable twist rates and wire pull-out speeds
- All production parameters programmed and stored through the machine interface
- Short cycle times and fast changeover times
- Can be mounted inside the press to minimize station requirements
- Can be mounted outside the press on its own pedestal for optimum flexibility

The STW 1100 twisting station is specifically designed for twisting conductor end strands on CrimpCenter series, fully automatic cut, strip and terminate machines . It easily handles wire sizes up to 2.5 mm² (14 AWG) and twists conductor end strands of stripped wires up to 18 mm (0.71") stripping length. It is typically used in conjunction with the STS 1100 tinning station.

Technical Data

Wire Cross Section
Up to 2.5 mm² (14 AWG);
possibly 4 mm² (12 AWG) depending on wire

Maximum Wire Outside Diameter
4.5 mm (0.17")

Twisting Length End 1
4 – 18 mm (0.15 – 0.71")
Optional up to 23 mm (0.90"), depending on wire

Twisting Length End 2
4 – 18 mm (0.15 – 0.71")

KM-CFK
Compacting Station (Resistance Welding)

Your Benefits

- Reliable compacting process
- Very short cycle times
- Easy adjustment for various wire cross sections
- Quality assurance with automatic data storage (optional PC controller)

The Strunk KM-CFK welding station will compact (compress, form, and bond) stripped wire ends from 0.5 up to 6 mm² (20 AWG – 10 AWG) on the CrimpCenter 6-series machines through a resistance welding process. Depending on the CrimpCenter model, one or both wire ends can be compacted or the process can be combined with other processing steps. The system includes the KM-CFK station, a separate control unit and a separate (optional) cooling unit.

Technical Data

Wire Size Range
0.5 – 6 mm² (20 AWG – 10 AWG)

Maximum Electrode Force
1800 N

Maximum Welding Power
104 kVA

Cut, Strip & Terminate

ToolingShuttle 30
Mobile Quick-Change Unit for CrimpCenter 3-Series

Your Benefits

- Changeover in less than 60 seconds
- For most standard crimp applicators (tooling)
- Retrofittable for all CrimpCenter 3-series models
- Simple and quick handling without additional tools
- Modular concept: expand system according to your requirements

The ToolingShuttle 30 combines the crimp applicator (tooling), terminal reel and paper winder into one mobile quick-change unit for CrimpCenter 3-series fully automatic crimping machines. The ToolingShuttle 30 allows the operator to exchange all three elements simultaneously which significantly reduces changeover time.

Technical Data

Dimensions
660 x 140 x 1107 mm (26.0 x 5.5 x 43.5")

Weight
7 kg (15.4 lbs.)

ToolingShuttle 61
Mobile Quick-Change Unit for CrimpCenter 6-Series

Your Benefits

- Changeover in less than 30 seconds
- For most standard crimp applicators (tooling)
- Retrofittable for all CrimpCenter 6-series models
- Simple and quick handling without additional tools
- Modular concept: expand system according to your requirements

The ToolingShuttle 61 combines the crimp applicator (tooling), terminal reel and paper winder into one mobile quick-change unit for CrimpCenter 6-series fully automatic crimping machines. The ToolingShuttle 61 allows the operator to exchange all three elements simultaneously which significantly reduces changeover time.

Technical Data

Dimensions
545 x 230 x 1195 mm (21.4 x 9.0 x 47.0")

Weight
7.5 kg (16.5 lbs.)

Cut, Strip & Terminate

CenterStrip 1000
CenterStripping Unit

Your Benefits

- New controller with touch screen and multilingual navigation
- Simplified operation and communication
- Safety circuit interface to base machine
- Optimised machine cycle with status monitoring
- Increased flexibility regarding customer requirements

The CenterStrip 1000 is designed to precisely strip insulation windows from wires and multi-layer cables ranging from 0.5 – 10 mm² (20 – 8 AWG). Short cycle times, simple operation, and easy integration make the CenterStrip 1000 an ideal add-on to automatic wire processing systems such as fully automatic crimping machines or cut & strip machines.

Technical Data

Wire Size Range
0.5 – 10 mm² (20 – 8 AWG)
Bigger cross sections on request

Cable Outer Diameter
9 mm (0.35")

Cycle Time
Maximum 550 ms

SealCleaner 20
Cleaning Station for Seals

Your Benefits

- Air input for best cleaning results
- Timer operated
- Automatic motor shut off after the pre-set has elapsed
- Automatic input voltage regulator
- Removable seal container, easy to fill and empty

The SealCleaner 20 is an accessory used in loose piece sealing. It easily cleanes and dries oily seals by tumbling in combination with special towels.

Technical Data

Dimensions
400 x 300 x 450 mm (12" x 16" x 18")

Weight
11 kg (24 lbs.)

CoaxCenter 6000

Unbeatable Quality in Micro-Coaxial and Coaxial Cable Processing

Schleuniger's CoaxCenter 6000 systematically integrates and automates all of the individual steps needed for the processing of micro-coaxial and coaxial cables on a highly flexible machine platform. Our award-winning machine provides unbeatable precision, flexibility and speed.

Technical Data

Maximum Cable Outer Diameter
5.5 mm (0.21") / with Linearfeed Unit 7.0 mm (0.27")

Minimum Cable Cross Section
0.005 mm² (AWG 40)
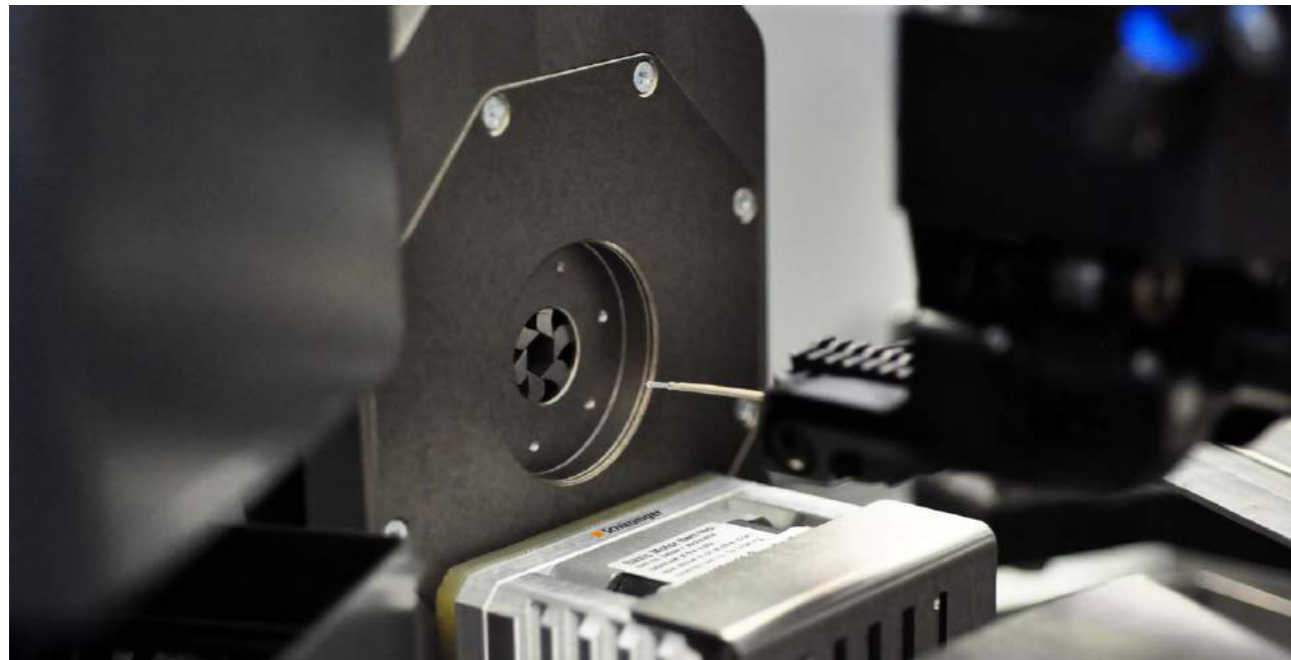
Minimum Cable Length
11 mm (0.43")

Maximum Strip Length Side 1
58 mm (2.28")
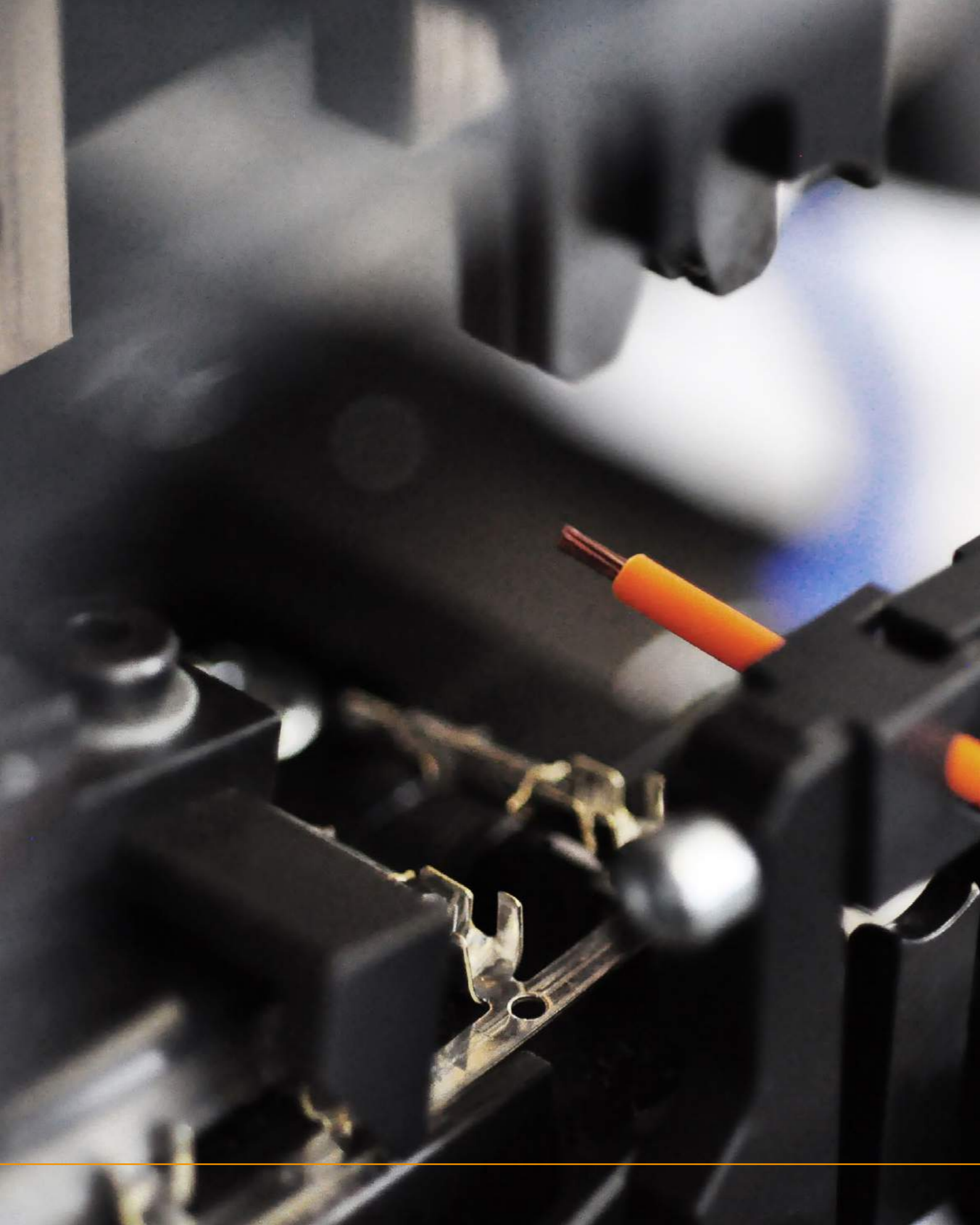
Maximum Strip Length Side 2
38 mm (1.49")
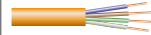
Your Benefits

- Unrivaled length precision
- Unbeatable stripping accuracy
- Automatic quality monitoring of the stripping results
- High degree of processing flexibility
- High production output

Application Overview Crimp

Applications

Crimp Machine	UniCrimp 200	StripCrimp 200	SealCrimp 210 B
Maximum cable OD	6 mm (0.24")	6 mm (0.24")	6 mm (0.24")
Discrete wire stripping		■	■
Multi-conductor cable stripping		■	■
Discrete wire crimping	■	■	■
Multi-conductor cable crimping	■	■	■
Discrete wire stripping & crimping		■	■
Multi-conductor cable stripping & crimping		■	■
Discrete wire stripping & crimping of loose terminals			
Multi-conductor cable stripping & crimping of loose terminals			
Discrete wire stripping, crimping & sealing			■
Multi-conductor cable stripping, crimping & sealing			■

(Sample)

UniCrimp 200
Crimping Machine

Meet the most powerful crimping machine in its class! The UniCrimp 200 benchtop crimping machine is designed for crimping open or closed barrel terminals with up to 3.4 tons (33 kN) of crimp force. The machine easily handles wire sizes up to 6 mm² (10 AWG) and accepts most standard mini-style applicators (mechanical or pneumatic) for crimping side- and rear-feed terminals. The UniCrimp 200 ensures fast cycle speed as well as extremely quiet and safe operation.

Technical Data

Crimping Force
33 kN (3.4 tons)

Maximum Cable Diameter
6 mm (0.24″)

Maximum Cable Cross Section
6 mm² (10 AWG)

Minimum Cable Cross Section
0.05 mm² (30 AWG)
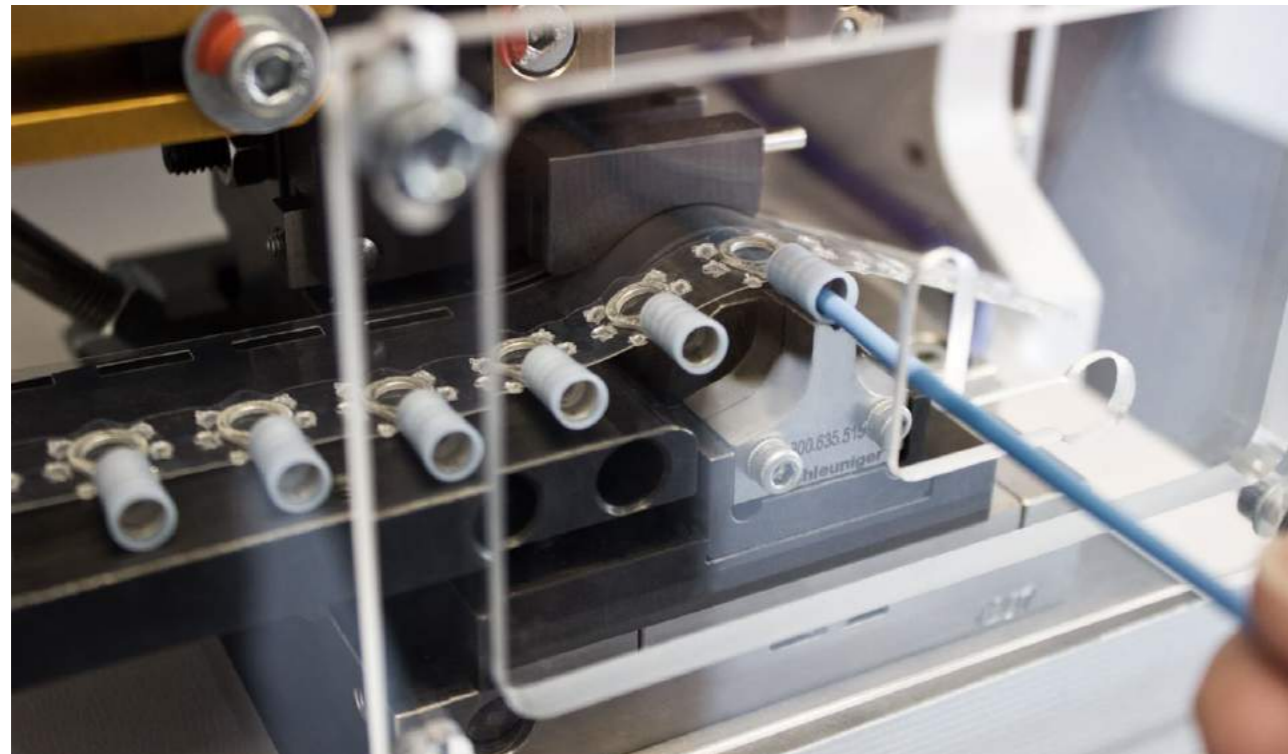
Your Benefits

- Economical & user-friendly
- Quick-release applicator base for easy changeover
- Adjustable crimp speed
- Standard tool-less, incremental crimp height adjustment (micro-adjust)
- Split cycle capability for closed barrel contacts

StripCrimp 200
Stripping and Crimping Machine

The fully programmable StripCrimp 200 is one of the most flexible stripper crimper machines on the market! It's most suitable for high precision stripping and crimping of side- or rear-feed terminals for wires between 30 – 12 AWG (0.05 – 4.00 mm²). The StripCrimp 200 captivates with great flexibility and user-friendly operation. The machine is highly suitable as a semi-automatic stripper crimper or within fully automatic transfer systems and runs quickly, quietly and safely.

Technical Data

Crimping Force
33 kN (3.4 tons)

Maximum Cable Diameter
6 mm (0.24")

Maximum Cable Cross Section
4 mm² (12 AWG)

Minimum Cable Cross Section
0.05 mm² (30 AWG)

Maximum Stripping Length
15 mm (0.59")
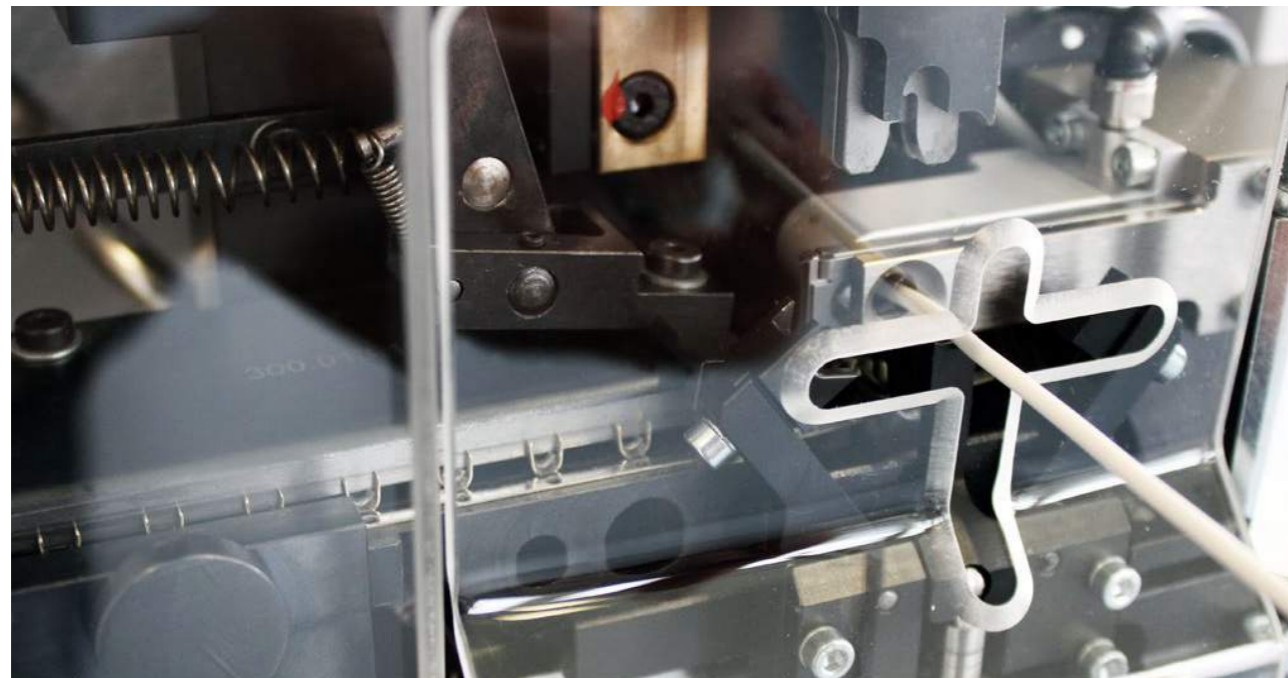
Your Benefits

- Fully programmable stripping unit with wayback and recut function
- Economical & user-friendly
- Quick-release applicator base plate for easy changeover
- Job memory for all cable parameters and functions
- Split cycle capability for closed barrel contacts

Crimp

SealCrimp 210 B
Stripping, Sealing and Crimping Machine

The SealCrimp 210 B is a highly flexible benchtop machine for stripping, sealing, and crimping a great variety of different wire sizes up to 2.5 mm² (14 AWG). The machine can process a great variety of crimp terminals and seal types, including mini seals and hard-shell seals. Due to its modular design it can also be used as a stripper, stripper-crimper, or a crimping machine.

Technical Data

Crimping Force
20 kN (2 tons)

Maximum Cable Diameter
6 mm (0.24")

Maximum Cable Cross Section
2.5 mm² (14 AWG)

Minimum Cable Cross Section
0.2 mm² (24 AWG)

Maximum Stripping Length
8 mm (0.31")
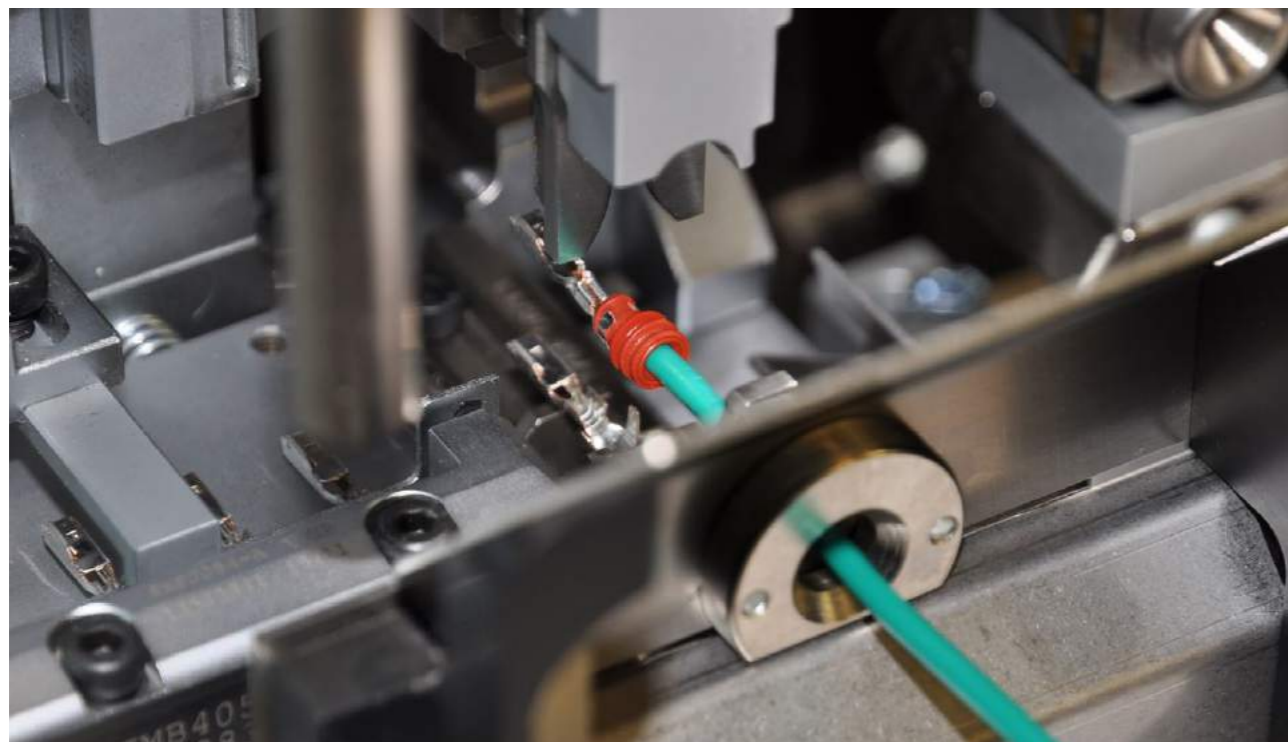
Your Benefits

- High output
- Flexible use: selectable operating modes
- Short changeover times
- Precision & repeatability
- Simple operation

Uni-S Applicators
Universal Crimp Applicators

The Uni-S family of applicators are designed for use with side and end feed, banded terminals with either open or closed barrel construction. The robust designs ensures precise tooling alignment for high quality results and easy setup. Schleuniger applicators are suitable for use on automatic wire processing systems as well as on bench-top presses for terminals with either metal, plastic or Mylar tape carrier strips.

Technical Data

Feed Type
Mechanical or pneumatic

Press Stroke
40 or 30 mm (1.57" or 1.18") (other strokes available on request)

Cross Section Range
$0.08 - 6$ mm^2 (28 – 10 AWG)

Uni-S Pneumatic

Your Benefits

- Economically priced applicators to handle practically all terminal and feed types
- Rugged construction and simple set up to ensure long life and high quality results
- Includes convenient micro-adjust dials, a 6-digit counter and one additional set of tooling
- For use on automatic terminating machines as well as benchtop crimping presses

Uni-S Mechanical Rear Feed
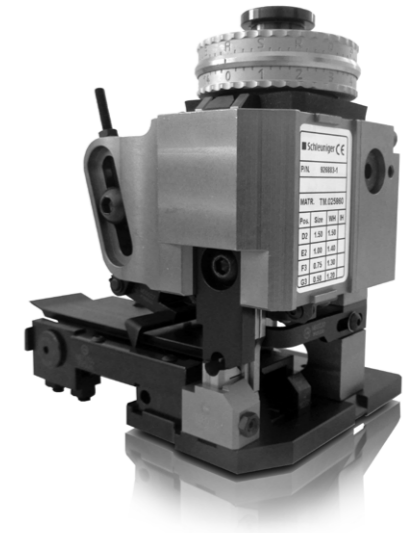
Uni-S Mechanical Side Feed

Processing Specifications
Crimping Conditions

	Insulation Crimp		Wire Crimp	
Good				
Conditional Approval			Width of flash max. 1/2 of material thickness	
Bad			Flange distance to base min. 1/2 of material thickness	
			Terminal material broken	

Insulation   Wire

O-Crimp   D   B-Crimp   A

B-Crimp   D   O-Crimp   A

U-Crimp   D

A. Wire crimp width
B. Wire crimp height
C. Flash
D. Insulation crimp width
E. Insulation crimp height
F. Rear bellmouth height
G. Front bellmouth height
H. Rear bellmouth length
J. Front bellmouth length
K. End of insulation
L. Wire brush
M. Insulation barrel length
N. Cut-off-tab (front and back)
O. Strip length
P. Insulation diameter
R. Terminal bent left/right
S. Terminal bent upward/downward

ACO 07
Crimp Force Monitoring

The ACO 07 features numerous new functions and capabilities, such as faster processing times and a VGA monitor interface, making the ACO 07 very powerful and convenient.

Technical Data

Measurement Range
0 – 15kN (optional up to 100kN)

LCD-Display
Single channel: 2 x 16 characters

Analysis
Software for multi-channel monitoring with optional statistical analysis

Network Compatibility
Via RS 232 or Ethernet (TCP/IP) via WinCrimp LAN or WLAN

Your Benefits

- High process reliability with 100% inspection
- Network capability for efficient data collection and control
- Simple display and user interface for ease of learning and use

SawInspect System 6
Crimp Micrograph Analysis

The Schleuniger SIS 6 is an extremely compact device for crimp cross section analysis. Within a few quick steps, users can create cross sectioned samples.

All parameters of cross sectioned contacts can be measured and analyzed with the CrimpLab 2 analysis software. Measurements are performed manually when using the CrimpLab 2 Standard software. The optional CrimpLab 2 Automatic software includes fully automatic contour recognition and measurement of B-crimps. All measurement parameters can be captured in seconds with just a few clicks. The high quality, carbide saw blade eliminates the need for polishing so significant processing time is saved.

Technical Data

Cross Section Range
0.03 – 6 mm² (32 – 10 AWG)

Maximum Contact Height
9 mm (0.35")

Blade
VHM / 40 x 0.4 mm

Camera / Resolution
USB 2.0 / 1.3 Megapixel

Your Benefits

- Complete cross section analysis and job management with CrimpLab 2 software
- User-friendly measurement software with optional automatic contour recognition
- Compact design with minimized processing movements and steps for fastest results

Quality Assurance

SawPolish Unit
Crimp Micrograph Analysis

The SawPolish product family offers three models to cover a wide range of applications. Each model has its own specifications to meet varying budgets and production needs. All units feature carbide cutting blade that provide a high quality cut. In many cases, polishing is not needed saving valuable processing time. The SawPolish Unit 6 Comfort includes integrated micrometer for repeatable cutting location and camera to aid in aligning the terminal with the saw blade.

Technical Data

Maximum Terminal Height
SawPolish Unit 6 Comfort: 9 mm (0.35")
SawPolish Unit 6: 9 mm (0.35")
SawPolish Unit 60: 20 mm (0.79")

Standard Saw Blade
SawPolish Unit 6 Comfort: Carbide (VHM) 40 x 10 x 0.4 mm (1.57 x 0.39 x 0.02")
SawPolish Unit 6: Carbide (VHM) 40 x 10 x 0.4 mm (1.57 x 0.39 x 0.02")
SawPolish Unit 60: Carbide 100 x 22 x 1.0 mm (3.94 x 0.87 x 0.04")
Suitable for copper, aluminum, steel, alloy steel, stainless steel, titanium, bronze, brass, cast iron, gold, silver, inconel, nimonic, hastelloy, magnesium alloys, plastic

Polishing Disc Diameter
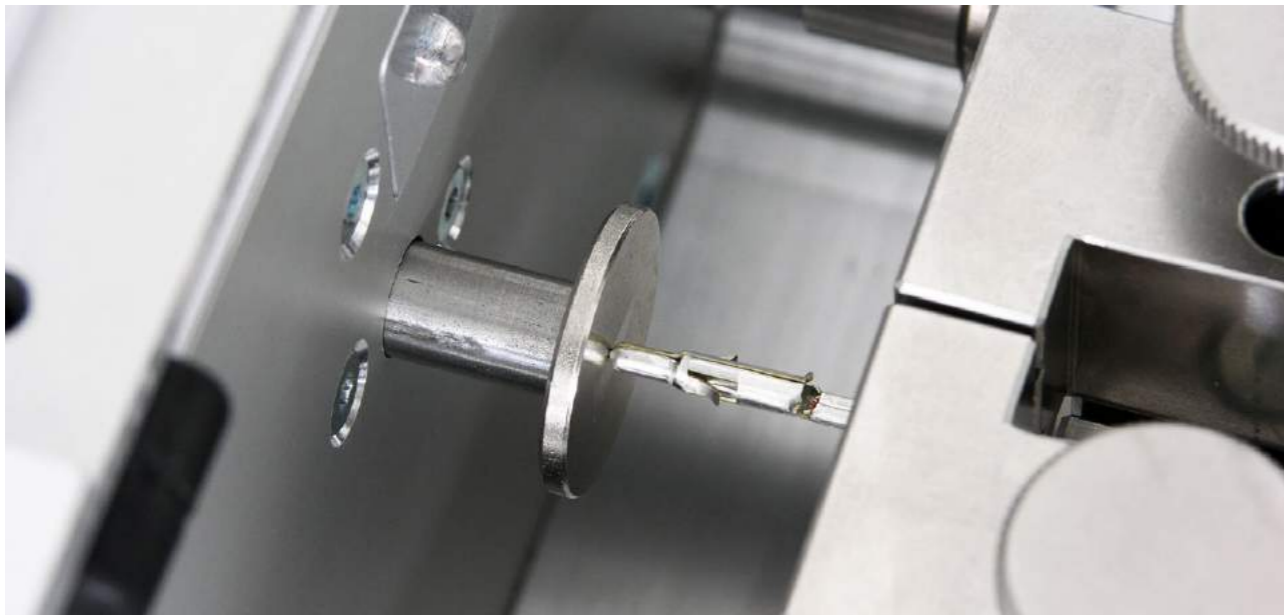
Your Benefits

- Three models for sawing and polishing a wide range of crimp connections
- Polishing disc is in line with the saw blade for fast and simple processing
- Compatible with ElectrolyteStaining Unit and MacroZoom Unit 1.3 for a complete crimp cross section analysis
- Numerous sample holders are available for a variety of applications such as welding, potting and connector inspection

MacroZoom Unit 1.3
Sample Inspection System for Crimp Cross Section Analysis

Your Benefits

- Nine fixed zoom positions for calibration accuracy
- Simple connection and installation with standard PC
- Clear illumination with LED ring light
- Analysis according to international standards

Technical Data

Field of View MZU for SPU 6 | SPU 6 C
1.0 x 0.8 mm up to 6.8 x 5.1 mm
(0.04 x 0.03" up to 0.26 x 0.2")

Field of View MZU for SPU 60
2.6 x 2.0 mm up to 17.1 x 12.8 mm
(0.10 x 0.08" up to 0.67 x 0.50")

Resolution
1.3 Megapixel

Lens and Zoom
MacroZoom lens with nine incremental
zoom steps

The MacroZoom Unit 1.3 is a component of the MicroGraph System for the creation of high quality cross sectional images of crimp connections and other applications. The MacroZoom Unit 1.3 includes the microscope unit plus the analysis Software CrimpLab 2.

ElectrolyteStaining Unit 6
Sample Staining Unit for Crimp Cross Section Analysis

Your Benefits

- No special purchasing due to hazardous chemicals
- No special hazardous chemical safety equipment required
- Environmentally-friendly

Technical Data

Cleaning Process
Electrolytic-Staining process
(electro-chemical process)

Staining Pen Tip Material
Felt tips

The ElectrolyteStaining Unit 6 utilizes a staining solution with Ph level of 7, which is equal to water. Therefore, the staining process is simple and fast yet much safer than conventional systems that utilize acid solutions to etch the face of the sample.

MicroGraph System
Modular System for Crimp Cross Section Analysis

Crimp cross sectional analysis has quickly become an integral part of the crimp quality process. With the MicroGraph System (MGS), crimp cross sectional images can be created in a fraction of the time compared to conventional methods.

Quality Assurance

CHM
Crimp Height Meter

Precision crimp height measurement device for verification of non-insulated crimp terminals. The CHM can be used as a stand-alone device or integrated into CrimpCenter machines for quality verification. The spring-loaded measuring pin ensures a consistent force is applied for best consistency between operators.

Technical Data

Measuring Gauge
Standard: Mitutoyo Digimatic, Optional: Sylvac

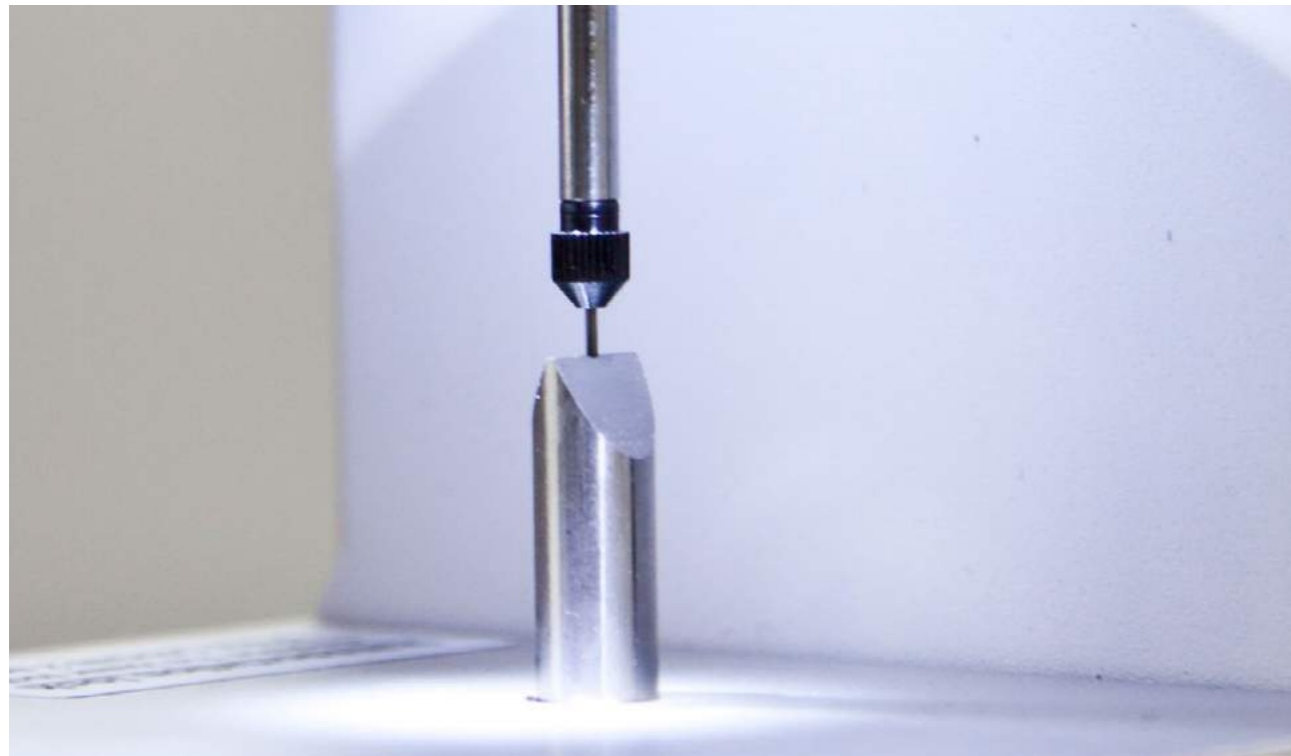**Resolution**
Standard: 0.01 mm (0.0004")
Optional: 0.001 mm (0.00004")

Power Supply
110/220 VAC

Dimensions
155 x 125 x 233 mm (6.1 x 4.9 x 9.2")

Your Benefits

- Pin & blade measuring points
- Easier terminal positioning
- Consistent measuring force
- Improved reliability and repeatability

PullTester 20
Pull Testing Machine

Your Benefits

- Two selectable pulling rates
- Speed controlled motor for consistent pull rates
- Standard RS 232 interface for curve analysis with optional WinCrimp PC software

Technical Data

Measuring Range
Up to 500 N (110 lbs.)

Applied Force Accuracy
0.4% of full scale (± 2 N or 0.44 lbs.)

Schleuniger's PullTester 20 is a motorized, benchtop unit designed to measure pull-test forces for a variety of applications.The most common applications are wire crimp and ultrasonic metal welding connections, but the design makes it possible to create custom fixtures for many other applications.

PullTester 26
Pull Testing Machine

Your Benefits

- Dual-range for improved accuracy over a wider range of wires
- Four pulling modes for destructive & non-destructive tests
- Four selectable pulling rates
- Job memory for up to 48 jobs with 50 measurements
- Networking capabilities

Schleuniger's PullTester 26 is a dual-range, motorized, benchtop unit designed to measure pull-test forces of crimp and ultrasonic weld connections. This versatile machine has two measuring ranges, which are individually calibrated enabling use of its 500 N (110 lbs.) scale for small wires, while easily switching to its 1000 N (220 lbs.) scale for larger wires.

Technical Data

Measuring Range
Standard: 0 – 500 N and 0 – 1000 N
(0 – 110 lbs. and 0 – 220 lbs.), other
variations possible

Applied Force Accuracy
0.2% of full scale

Device Data Memory
Up to 48 jobs with 50 measurements (2.400 values)

PullTester 25
Pull Testing Machine

Your Benefits

- Dual-range for improved accuracy over a wider range of wires
- Two selectable pulling rates
- Simple LCD display for easy programming & reading
- Variety of possible terminal (crimp) and wire holders

Technical Data

Measuring Range
Standard: 0 – 500 N and 0 – 1000 N
(0 – 110 lbs. and 0 – 220 lbs.),
other variations possible

Applied Force Accuracy
0.2% of full scale

The PullTester 25 is a dual-range, motorized benchtop device for measuring pull forces of crimp connections, welded connections or many other possibilities. The dual-range capability provides greater accuracy on a broader range of wires than single-range pull test devices. The PullTester 25 is specially suited for quality assurance in a production environment.

PullTester 27
Pull Testing Machine

Your Benefits

- Dual-range for improved accuracy over a wider range of wires
- Two selectable pulling rates
- Speed controlled motor for consistent pull rates
- Standard RS 232 interface for curve analysis with optional WinCrimp PC software

Schleuniger's PullTester 27 is a dual-range, motorized, benchtop unit designed to measure pull-test forces of crimp and ultrasonic weld connections on a wider range of wires. This dual-range capability ensures the highest accuracy for the widest range of applications.

Technical Data

Measuring Range
Standard: 2.000 / 5.000 N (440 / 1100 lbs.),
Special: 5.000 / 10.000 N (1100 / 2200 lbs.)
(other combinations possible)

Applied Force Accuracy:
0.2% of full scale

PullTester 28
Pull Testing Machine

Your Benefits

- Speed controlled motor provides extremely consistent readings
- Three pulling modes for destructive & non-destructive tests
- Simple LCD display for easy programming and read out
- Standard RS 232 interface for curve analysis and downloading test data
- Networking capabilites

Schleuniger's PullTester 28 is a dual-range, motorized benchtop device designed to measure pull forces of wire crimp connections as well as ultrasonic metal welding connections on a wider range of wire than single-range pull test devices. The PullTester 28 is specially suited for quality assurance in a production environment.

Technical Data

Measuring Range
Standard: 2.000 / 5.000 N (440 / 1100 lbs.)
Special: 5.000 / 10.000 N (1100 / 2200 lbs.)
Other combinations possible.

Applied Force Accuracy
0.2% of full scale

Device Data Memory
Up to 48 jobs with 50 measurements (2.400 values)

Quality Assurance

PullTester 320
Pull Testing Machine

Schleuniger's PullTester 320 is a motorized device for use with Schleuniger CrimpCenter automatic crimping machines to measure pull-test forces of wire terminations. This versatile machine has three measuring ranges, which are individually calibrated. Multiple pulling ranges offer a higher accuracy over the entire device range than single-range devices. The standard measuring ranges are 100 N, 200 N and 1000 N (22.5 lb, 45 lb, and 220 lb). The PullTester 320 with its triple-range capability ensures the highest accuracy over the widest range of applications.
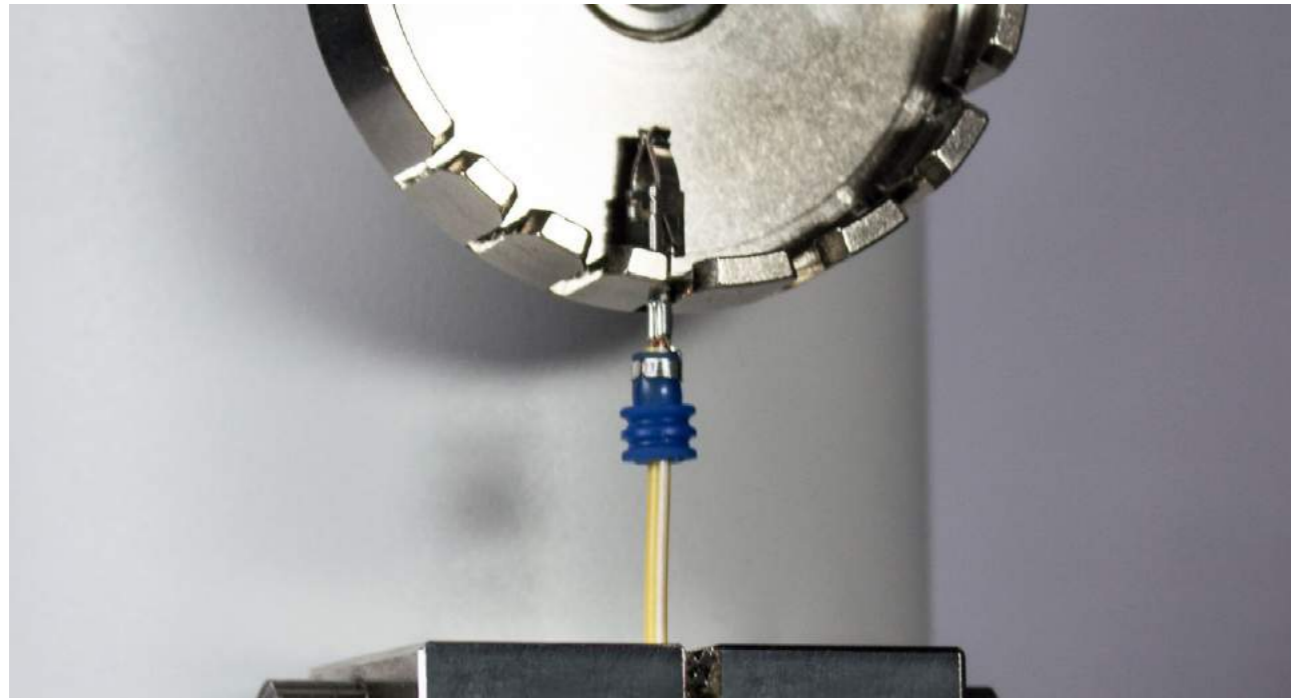
Technical Data

Measuring Range
0 – 100 N / 0 – 22 lbf / 0 – 10 Kp
0 – 200 N / 0 – 44 lbf / 0 – 20 Kp
0 – 1000 N / 0 – 220 lbf / 0 – 100 Kp

Applied Force Accuracy
±0.2 % of measurement range

Your Benefits

- Triple range for the best accuracy over the widest range of wires
- Four selectable pulling rates to comply with common test requirements
- Speed-controlled motor for consistent pull rates throughout the measuring range
- Fully integrated into CrimpCenter EASY software to save time

PullTester 325
Pull Testing Machine

Your Benefits

- Three selectable force ranges for improved accuracy over a wider range of wires
- Two selectable pulling rates
- Speed controlled motor for consistent pull rates
- Standard RS 232 interface for curve analysis with optional WinCrimp PC software

The PullTester 325 is a triple-range, motorized benchtop device for measuring pull forces of crimp connections, welded connections or many other possibilities. The triple-range capability gives the PullTester 325 incredible application flexibility to handle a wide variety of testing applications.

Technical Data

Measuring Range
0 – 200 N / 0 – 45 lbf / 0 – 20 Kp
0 – 1000 N / 0 – 220 lbf / 0 – 100 Kp
0 – 2000 N / 0 – 450 lbf / 0 – 200 Kp
other variations available by special order

Applied Force Accuracy
0.5% of measurement range

PullTester 326
Pull Testing Machine

Your Benefits

- Three selectable force ranges for improved accuracy over a wider range of wires
- Four selectable test modes for destructive and non-destructive testing
- Job memory for loading test parameters and extracting test results for statistical analysis
- Standard RS 232 interface for curve analysis with optional WinCrimp statistical software
- Networking capabilities

The PullTester 326 is a motorized benchtop device to measure pull-test forces of wire terminations. The Schleuniger PullTester 326 offers four selectable pulling rates consistent with the most common specifications. It is equipped with a speed-controlled motor, ensuring consistent pull rates throughout the complete measurement cycle resulting in repeatable and accurate data.

Technical Data

Measuring Range
0 – 200 N / 0 – 45 lbf / 0 – 20 Kp
0 – 1000 N / 0 – 220 lbf / 0 – 100 Kp
0 – 2000 N / 0 – 450 lbf / 0 – 200 Kp
other variations available by special order

Applied Force Accuracy
0.5% of measurement range

Device Data Memory
Up to 48 jobs with 50 measurements (2.400 values)

Quality Assurance

Schleuniger Software Options

Easy Production Server (Easy PS) – Production Management Software

With the Easy PS Software wire processing can be optimized on an unlimited number of networked CrimpCenters. Production planning, managing of production orders and real-time production monitoring can be controlled from one central computer workstation.

Easy Production Server

CrimpCenter 36 S

CrimpCenter 64

CrimpCenter 67
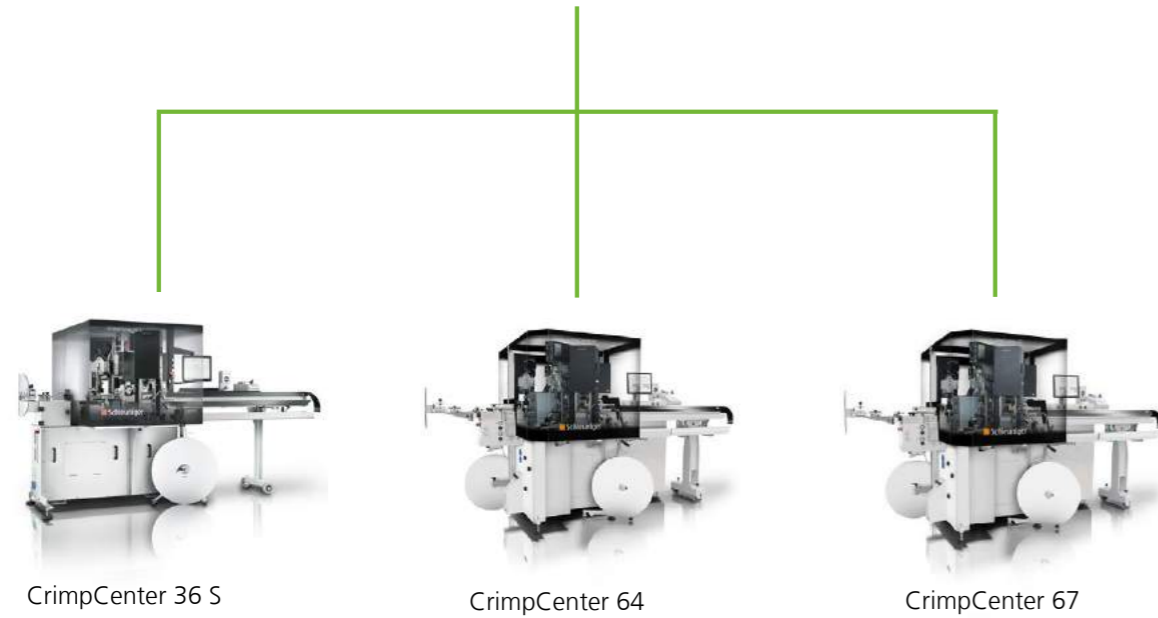
Schleuniger Software Options

WinCrimp – Quality Assurance Software

WinCrimp software enables quick and accurate collection of pull test and crimp force data and will significantly add to the traceability of your quality assurance data. The additional "Statistics" version uses SPC analysis to graph and print the captured results ensuring a high level of quality.


Software

Leading Software Solutions for the Wiring Harness Industry

DiIT GmbH is the world's leading supplier of manufacturing execution systems (MES) for the production of cable sets and wiring harnesses, for industries such as automotive.

For more than 25 years the company's innovative software solutions optimize and control complex development, manufacturing, and logistics processes for international manufacturers and support quality assurance and traceability. The company offers a comprehensive range of services, from consulting and project management right through to customer-specific implementation and training for both large and small customers.

DiIT's competencies are bundled in the "4*Wire* Solutions" software suite, which is primarily used for the production of wire harnesses and wiring systems in the automotive industry and other industrial sectors. By digitalizing the value chains, the company's innovative software optimizes and controls complex development, manufacturing and logistics processes and supports quality assurance and traceability.
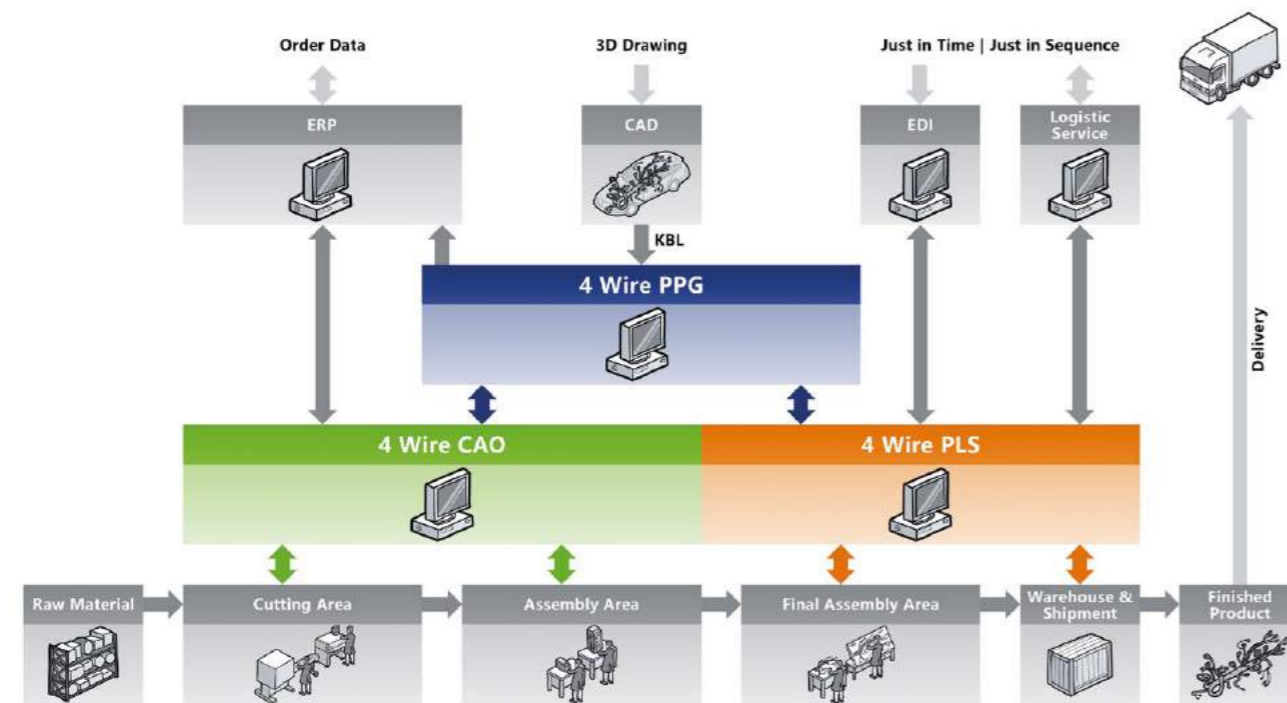
Testimonials

"CAO is state-of-the-art technology and enables us, on a worldwide basis, to control and optimize production in this field with a standardized, integrated solution."

Ralf Maus, Managing Director,
Executive Vice President & COO, LEONI Bordnetz-Systeme GmbH

4*Wire* Software Solutions

4*Wire* PPG – Production Plan Generation

4*Wire* PPG generates the production documents and production data automatically from the drawing.

4*Wire* CAO – Cutting and Assembly Optimization

4*Wire* CAO generates, optimizes and distributes cutting orders directly to machines and provides quality equivalent to the OEM requirements.
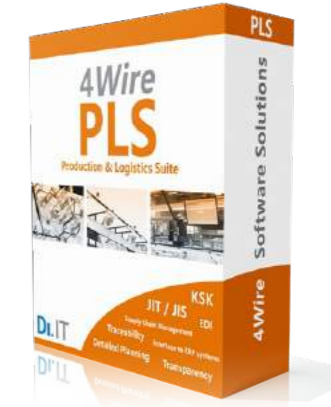
4*Wire* PLS – Production & Logistics Suite

Produce and deliver customer specific wire harnesses (KSK) just-in time or just-in sequence 4*Wire* PLS receives customer specific order and JIT/JIS-calls and manages the production and delivery.

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To Be Precise.