



# Applicators and Crimping Machines

## Applicators and Crimping Machines

Being one of the leading manufacturers and suppliers of wire processing and application tooling Tyco Electronics offers competitively priced tools from entry level tooling up to fully featured equipment.

Tyco Electronics crimping tools and presses are offered and supported in the following ways

- Purchase / Rental / Lease
- Installation, Training and Service
- Spare- and Wear Parts Service

On the following pages we present you a selection of our products

### Applicators

- For processing of side feed or end feed terminals
- For bench presses or leadmakers
- Covering a wide range of wire cross sections
- Adjustable crimp heights, i.e. pre-set crimp heights or crimp height fine adjust
- Retrofittable cycle counters
- Retrofittable air feed assembly
- Applicator spare and wear parts

### Crimping Machines

- Terminators
- Stripping and crimping machines
- Stripping, sealing and crimping machines

### Wide Range of Applicator Accessories

- Gauges for alignment of presses to applicators
- Press gauge
- Shut height gauge

### Accessories for Crimping Presses

- Crimp Quality Monitoring
- Stripper Attachment
- Defective Crimp Cutter
- Carrier Scrap Chopper

## HD-I Applicators



- Value for money
- Heavy duty rugged design
- Compatible with all commercial applicator presses (30 mm and 40 mm stroke)
- Metric design
- Variants for end and side feed terminals
- Variants for use in bench presses and in leadmakers
- Variants for pre-set crimp heights and crimp height fine adjust

HD-I Applicator with pre-set crimp heights for end feed terminals



HD-I Applicators with crimp height fine adjust for side feed terminals



HD-I Applicators with crimp height fine adjust for end feed terminals

## HD-M Applicators



- Value for money
- Suitable for closed and open barrel terminals
- Adjustment screw for feed and positioning of terminals
- For wire sizes from 0.03 mm<sup>2</sup> up to 6.0 mm<sup>2</sup>
- Variants for end and side-feed terminals
- Variants for use in bench presses and lead makers
- Variants for pre-set crimp heights and crimp height fine adjust

HD-M Applicators with pre-set crimp heights or with crimp height fine adjustment for side and end-feed (shown) terminals



HD-M Applicators with pre-set crimp heights or with crimp height fine adjust for end-feed terminals

For more detailed information please refer to our website at [www.tooling.tycoelectronics.com/europe](http://www.tooling.tycoelectronics.com/europe)

## Retrofittable Applicator Cycle Counters



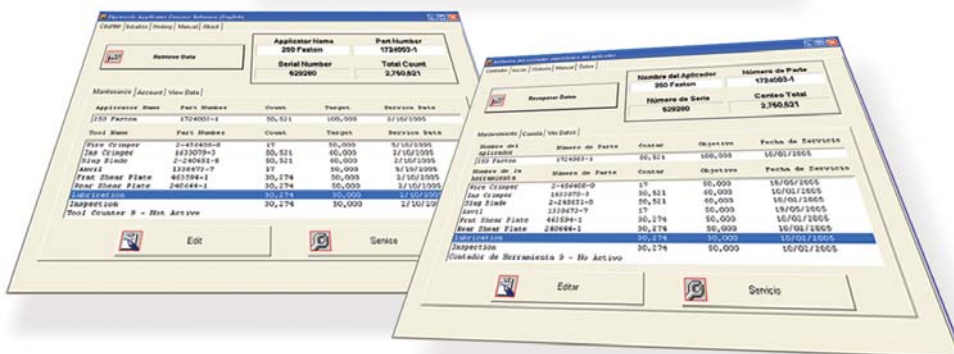
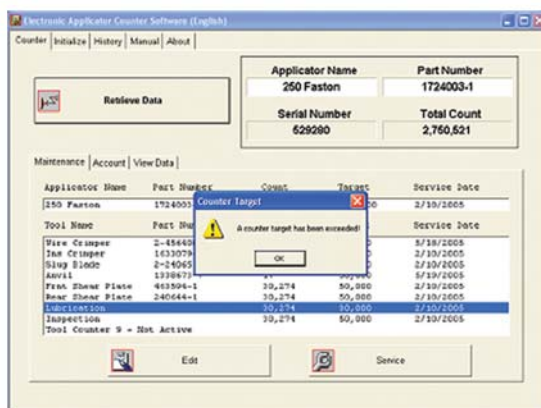
We offer two types of cycle counters: Mechanical and electronic.

The electronic cycle counter offers the following features:

- Basic functionality of cycle counting integrated into an electronic documentation and maintenance concept for applicators ("intelligent applicator")
- Electronic counter giving full insight into the usage and tracking data of the applicator
- Electronic data registration (counted cycles, identity and reporting data) instead of conventional paper based documentation of the tool
- Data can be read out via wireless IrDA interface
- Comfortable Software for readout and evaluation
- Automatic indication when maintenance is required - thus helping the user to assure optimum crimp quality

### Retrofit-Kit

Mechanical and electronic cycle counters are retrofittable and allow to equip applicators being already in the field.



## Retrofittable Air Feed Assembly



- Applicator air feed designed for difficult and demanding applications
- Highly precise positioning and transport of the contact carrier strips
- Longer feeding paths possible by pneumatic feeding system
- Specially suitable to larger contacts
- Precise adjustment of pneumatic feeding speed and contact positioning
- Air feed assembly retrofittable and allowing to equip applicators being already in the field where compressed air is available

## Applicator Wear Parts Stocking Programme

In order to ensure support of installed HD-I applicators we established a stocking programme with the following features:

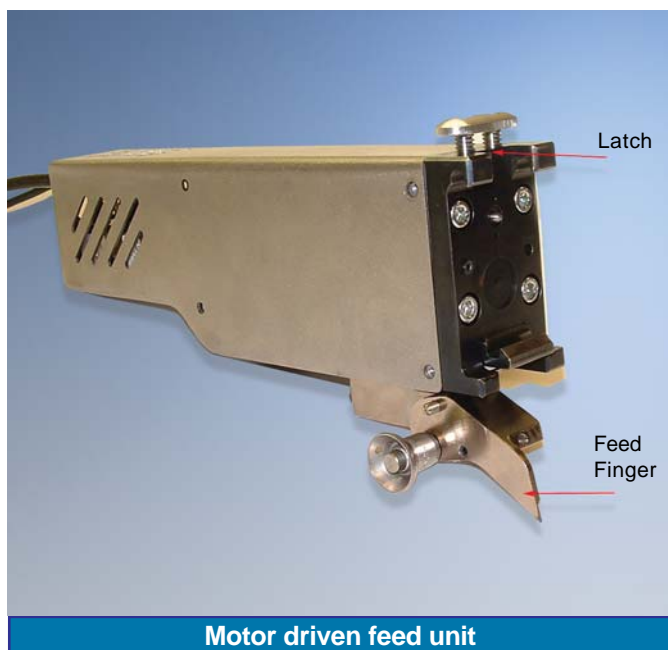
- All Tyco Electronics applicator spare and wear parts available separately
- Extremely robust and long-life anvils and crimpers
- Broad variety of materials, forms and sizes of anvils and crimpers according to the specific crimping requirements
- Applicator components also for stainless steel contacts in our program
- Detailed logistical agreements possible in order to assure constant supply of Tyco Electronics customer with spare parts (for example consignment stocks)

## System III Applicator



- Most significant component of the AMPOMATOR System III leadmaker
- Feed performed by a separate, servo-motor driven feed unit
- Highly accurate terminal feed is independent of the terminator ram stroke, so timing and positioning can be optimized for each specific terminal
- One feed finger accommodating up to 95% of side feed terminals, with simple, tool-less change of the finger

- Integrated data module containing all setup and maintenance data
- Installed into AMP-O-ELECTRIC ST III terminator reading out the data from data module and adjusting all crimp parameters automatically
- Part of an applicator/terminator concept reducing and even eliminating human errors, which may occur on tool change and setup



Motor driven feed unit



Motor driven feed unit

## AMP-O-LECTRIC ST III Terminator



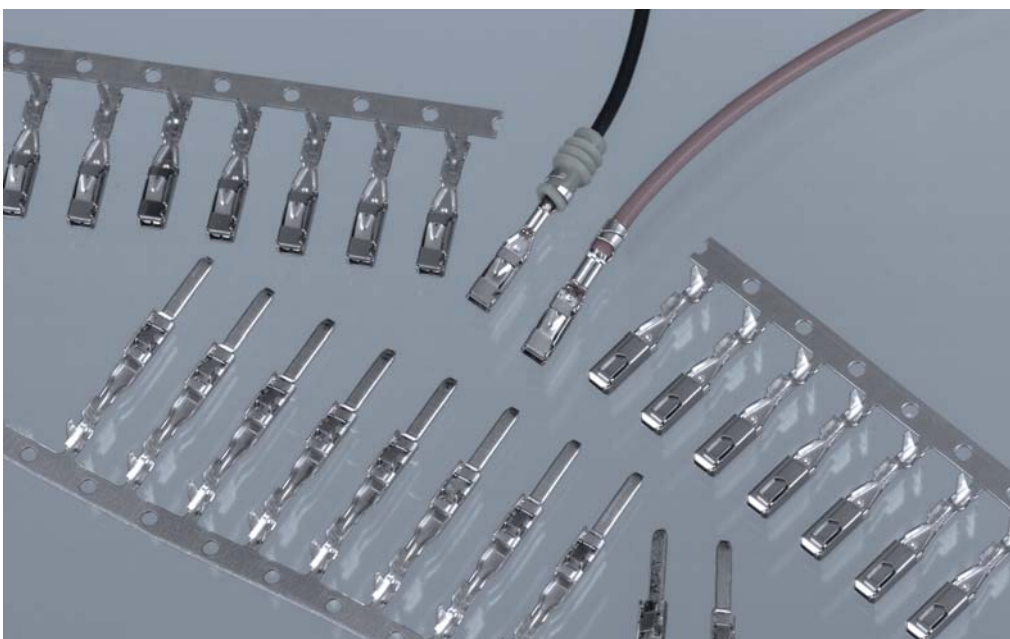
- AMP-O-LECTRIC ST III terminator being part of a new design approach
- Allows faster changeover and higher uptime
- Programmable crimp height adjustment
- Elimination of time-consuming manual adjustments when changing terminals and applicators
- Takes on all control functions, allowing automation of most crimping adjustments
- Main ram is servo driven, enabling unprecedented crimping flexibility
- Automatic adjustment of initial crimp height, utilizing the parameters transmitted from the data module in the applicator
- Automatic terminator height adjustment (wire line adjustment) via stepper motor in the terminator base
- Compatible with similar applicator footprints such as Lear, Molex and Panduit
- Compatibility with Delphi, JAM and JST style applicators by using adaptors
- Integrated crimp force monitoring system

## AMP 3K/40 and AMP 5K/40 Terminators

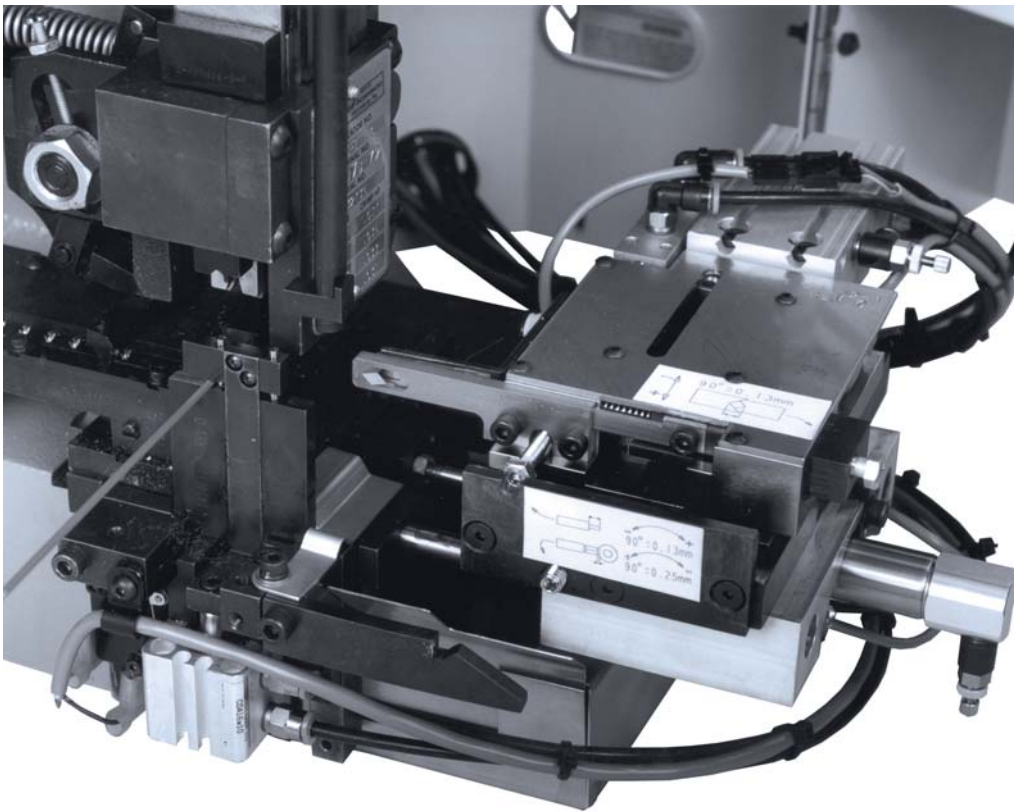


- Termination of wire sizes
  - up to 2.5 mm<sup>2</sup> / 14 AWG (AMP 3K/40 Terminator)
  - up to 6mm<sup>2</sup> / 10 AWG (AMP 5K/40 Terminator)
- New development based on the field proven “G” Terminator for wire termination using reeled terminals
- Semiautomatic machine
- Cycle time less than 0.4 seconds
- Jog mode
- Manual shut height adjustment
- Easy and quick exchange of applicators
- Wide range of functions and options
- Optional features
  - 30 mm press stroke
  - Pneumatic feed
  - Oiler kit
  - Stripping Module
  - Carrier Scrap Chopper (CSC)
  - Defective Crimp cutter
  - Crimp quality Monitoring (CQM)

See also detailed description on page 8.

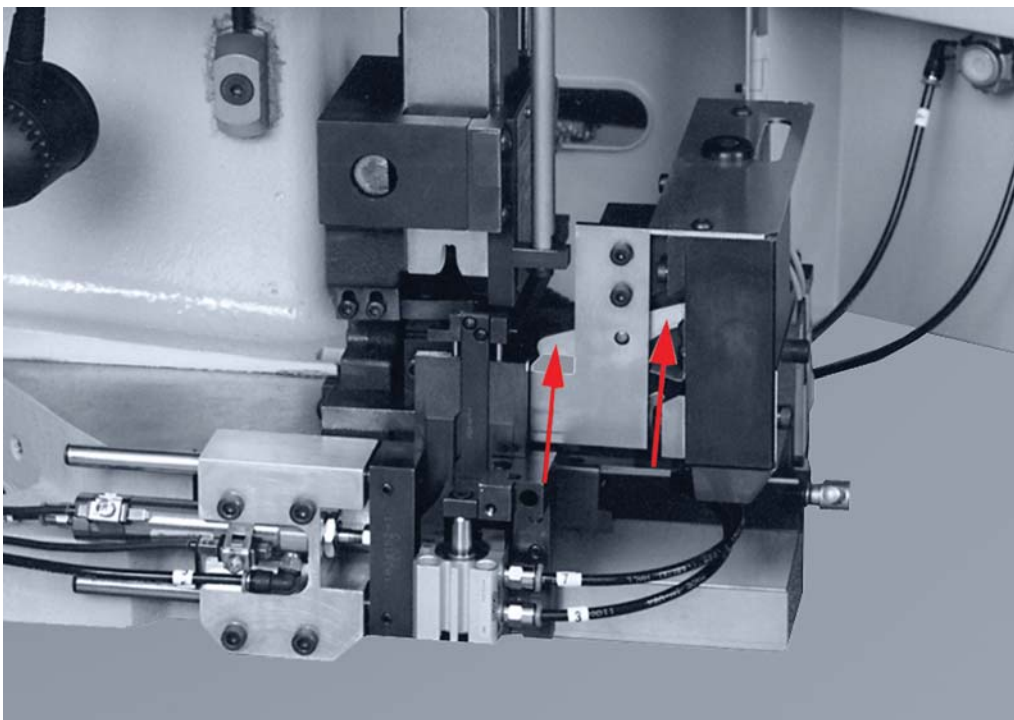


## Retrofittable Stripping Module



- Field installed or available as complete unit from the factory
- For end- and side-feed applicators
- 3 modes of operation
  - crimp only
  - strip only or
  - strip and crimp
- Footswitch or sensor activated
- Fast applicator changeover and easy adjustments
- Step mode for fast set-up
- Air blast ejects slugs into a collecting tray
- Compatible with Crimp Quality Monitor

## DCC and CSC Accessory



- When the CQM detects a bad crimp, the DCC unit will cut off the defective terminal.
- All DCC units equipped with Carrier Scrap Chopper.
- The DCC and CSC units can easily be hinged out. So easy access to the installed applicator is given.
- The use of DCC will provide more consistent wire placement accuracy capability due to the use of the grip jaws, compared to hand placing the wire in a terminator.
- Integrated scrap collection bin.
- The DCC applies to 0.03-3.1 mm<sup>2</sup> / 32 -12 AWG.

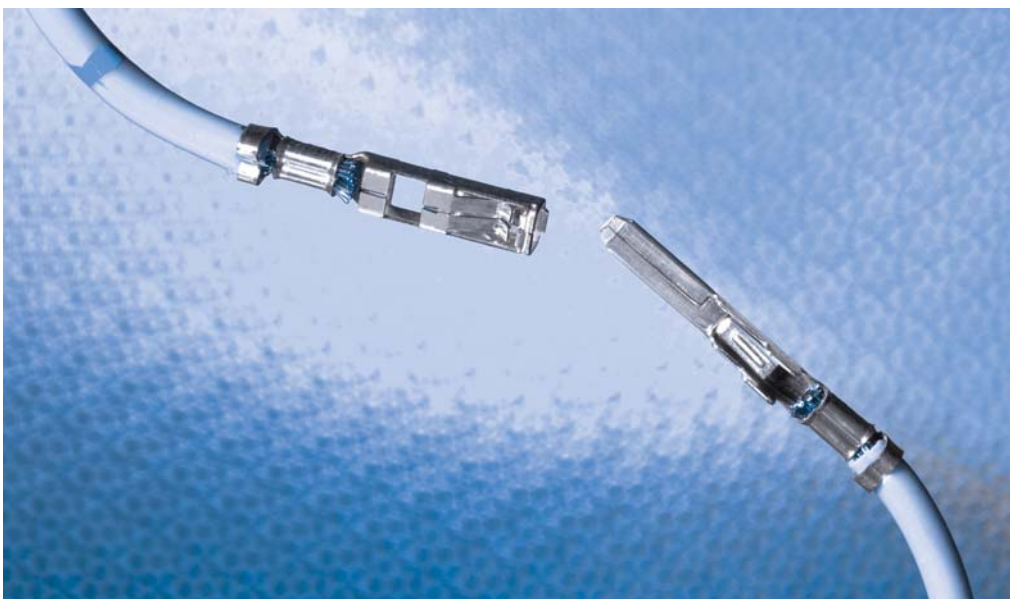
Defective Crimp Cutter (DCC) and Carrier Scrap Chopper (CSC)  
The DCC is equipped on either the AMP 3K/40 or AMP 5K/40 Terminators.

For more detailed information please refer to our website at [www.tooling.tycoelectronics.com/europe](http://www.tooling.tycoelectronics.com/europe)

## CRIMPMATIC 970/971



- For reeled crimp terminals or loose piece terminals
- Press force 150 kN
- For wire size up to 50 mm<sup>2</sup>
- Stroke 44 mm
- Quick change crimp tools with a lower dead centre of 135.78 mm can be mounted by means of an adapter plate
- Optional features:
  - Machine lighting
  - Crimp force monitoring
  - Fine adjustment of lower dead center
  - Adaptor for standard crimp applicators
  - Paper spooler



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## WDT Pneumatic Crimping Presses

The crimping presses and accessories of the WDT range enable solutions for a wide variety of loose piece applications. The machines come basically in two versions:

- Shear action
- Parallel action

The parallel action machines through the use of a selection of die mounting adaptors enable the WDT machines to accept die inserts from a variety of hand tools for example many ERGOCRIMP and SDE tool types with or without locators.

These flexible features allow the customer to move simply from low volume hand tool aided production to medium volume production and retain an identical crimp quality through the use of existing die sets.

### UP/42N Crimping Machine System



- For insulated and non-insulated loose piece terminals from 0.14 mm<sup>2</sup> up to 95 mm<sup>2</sup>
- For copper-tube and copper sheet loose piece terminals up to 16 mm<sup>2</sup>
- For wire-end ferrules up to 50 mm<sup>2</sup>

#### **The Crimping Machine System is equipped with**

- Positive closing mechanism
- Speed adjustment valve
- Safety protection
- Pneumatic foot pedal
- Tubes for compressed air
- Tool set

#### **Accessories**

- Crimping dies
- Push-in device and locator set

## SSC-2FP Swiss Safety Crimping-Press



- For insulated loose piece terminals up to 6 mm<sup>2</sup>
- For copper-tube and copper sheet loose piece terminals up to 16 mm<sup>2</sup>
- For wire-end ferrules up to 50 mm<sup>2</sup>

### The Crimping-Press is equipped with

- Positive closing mechanism
- Electronic cycle counter
- Pneumatic safety double foot switch
- Tubes for compressed air
- Tool set

### Accessories

- Crimping dies
- Push-in device and locator set

The SSC-2FP is a patented, parallel Safety Crimping Machine which can be operated without safety guarding.

The mechanic, pneumatic safety control mechanism guarantees a 3-step crimping sequence:

- Step 1  
Terminal hold-down
- Step 2  
Precrimp  
(can be activated infinitely variable)
- Step 3  
Actual terminal crimping cycle

The Swiss Safety Crimping Machine is designed to be operated safely without the customary safety guarding or a double-palm trigger device.

The crimping cycle is activated through a safety double foot switch.

## FMP-20 and FMP-20 BA Pneumatic Crimping Machines



These machines crimp insulated and non-insulated terminals in loose piece form.

The FMP-20 BA machine is equipped with an opening lever for the die which can conveniently be mounted on either side of the machine for right or left handed use.

Through the use of either our ERGOCRIMP or SDE adaptors the processable application range is greatly widened.

A comprehensive range of standard crimping dies increases the flexibility and makes the machine most suitable for many different applications.

- For insulated terminals up to 6 mm<sup>2</sup>
- For copper-tube and copper-sheet terminals up to 16 mm<sup>2</sup>
- For end-sleeves up to 50 mm<sup>2</sup>

### The Crimping-Machines are equipped with

- Positive closing mechanism
- Adjustable closing speed
- Spring loaded upper die hold down device
- Installed safety guard
- Pneumatic foot pedal
- Electronic piece counter
- Air hoses
- Tool kit

### Accessories

Additional die mounting adaptors are optionally available.

- ERGOCRIMP Die Adaptor
- SDE Die Adaptor
- GAP Die Adaptor

Customized adaptors, Push in Device and Locator Set are available upon request.

## CTR-16 Pneumatic Crimping Unit



- For insulated terminals up to 6 mm<sup>2</sup>
- For copper-tube and copper-sheet terminals up to 16 mm<sup>2</sup>
- For end-sleeves up to 50 mm<sup>2</sup>

### **The Crimping-Press is equipped with**

- Positive closing mechanism
- Adjustable closing speed
- Installed safety guard
- Pneumatic foot pedal
- Electronic piece counter
- Air hoses

### **Accessories**

- Push-in Device
- Locator Set

The TT 1416 CA Crimping Unit crimps insulated and non-insulated terminals in loose piece form.

A comprehensive range of standard crimping dies increases the flexibility and makes the crimping unit suitable for different applications.

## TT 1416 CA Pneumatic Crimping Unit



- For insulated terminals up to 6 mm<sup>2</sup>
- For copper-tube and copper-sheet terminals up to 16 mm<sup>2</sup>
- For End-Sleeves up to 50 mm<sup>2</sup>
- Spring loaded upper die hold-down device

### **The Crimping-Press is equipped with**

- Installed safety guard
- Pneumatic foot pedal
- Air hoses

### **Accessories**

- Push-in Device
- Locator Set

The TT 1416 CA Crimping Unit crimps insulated and non-insulated terminals in loose piece form.

A comprehensive range of standard crimping dies increases the flexibility and makes the crimping unit suitable for different applications.

## UP/55 Universal Pneumatic Press



The UP/55 pneumatic press crimps insulated and non-insulated terminals in loose piece form.

Through the use of one or many of our adaptors and our comprehensive range of standard and special crimping dies increases the flexibility and makes the machine suitable to a wide range of different applications.

Double-W-Crimp-Set for copper-tube terminals from 10 mm<sup>2</sup> up to 120 mm<sup>2</sup>

### The Universal Pneumatic Press is equipped with

- Positive closing mechanism
- Electronic cycle counter
- Speed adjustment valve
- Pneumatic foot pedal
- Air hoses
- Tool kit

### Accessories

- Adaptor for Hex- or double-W-dies
- Double-W-Die set for copper tube terminals from 10 mm<sup>2</sup> up to 95 mm<sup>2</sup>
- Heavy duty adaptor for double-W-die 120 mm<sup>2</sup>
- SDE, ERGOCRIMP, U-Die, SOLISTRAND adaptors
- With the appropriate adaptor the press can also accommodate all other standard WDT dies
- Cutting device for flat-material, max. width 32 mm and copper-cable up to 240 mm<sup>2</sup> (max. o.d. 28 mm)

## SDE Electric Terminator



- Ideal for low to medium production volumes
- Accepts any SDE Die-set
- Mains powered unit - no air required
- Switchable 110 V or 240 V supply
- Cycle Counter
- Two stage crimp cycle option
- Portable Bench-top Unit with SDE Head & Foot Switch
- Portable Bench-top Unit without SDE Head or Foot Switch
- Optional Foot Switch
- SDE Heads are an option

## SC 750 and SC 750 CFM Crimping Machine



- Programmable Stripping and Crimping Machine
- Accepts standard mini-style applicators
- Wire sizes from 0.05 mm<sup>2</sup> to 4.0 mm<sup>2</sup> (30 to 11 AWG)
- Three stepper motors control all the stripping functions such as strip length, wire size and wire position in the terminal.
- The stepper motors allow to program the settings via the keyboard then store them in memory.
- The StripCrimp 750 will hold up to 200 jobs in memory.
- An optional PC interface is available for up-loading and down-loading more jobs if necessary.
- The machine offers a programmable way-back feature to prevent wire scraping during the strip as well as a programmable wire-trimming feature for critical applications and precise wire positioning in the terminal.
- The StripCrimp 750 is also available with a integrated crimp force monitoring system. This version offers an optional "bad terminal cut-off". If a bad crimp is detected by the crimp monitor, the crimp is automatically cut off to ensure that it is not mixed in with the good crimps.

## PP3 Stripping and Crimping Machine

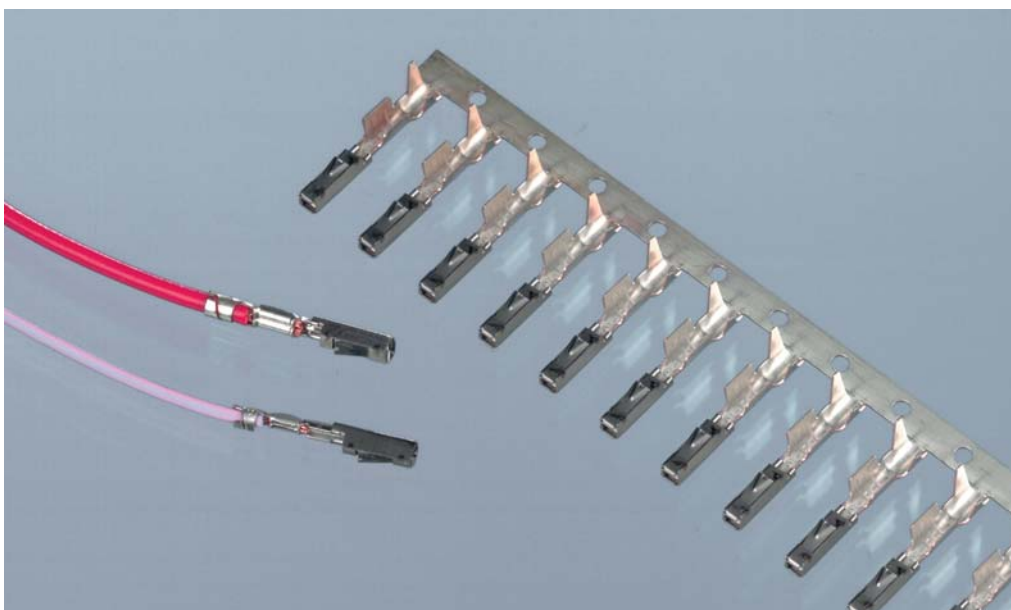


- Pneumatically controlled semi-automatic bench machine
- For side and end-feed terminal reels
- Wire sizes from 0.012 mm<sup>2</sup> to 1.5 mm<sup>2</sup>
- Stripping length 12 mm (0.48") max.
- The machine is capable for stripping and crimping wires in one operation
- Accurate and repeatable wire placement
- Continuously adjustable crimp height
- For quick change crimp tools
- The precision design of the machine and tooling make it the ideal solution for fine wire applications.
- The Stripper Crimper is available in two versions:
  - PP3 SL  
for left-to-right and end feed terminals
  - PP3 SR  
for right-to-left and end feed terminals

## SC15 Stripper Crimper



- Stripper crimper for solid and stranded wires
- CAM and pneumatically controlled
- Wire range  
0.09 mm<sup>2</sup> to 4.0 mm<sup>2</sup>
- Insulation range from  
0.5 mm to 3.6 mm
- Strip length  
2.0 mm to 6.0 mm
- Conductor insertion  
depth 10.0 mm
- Power supply 115 V/  
230 V, 50/60 Hz
- Compressed air supply  
600 kPa (6 bar)
- Can be delivered with  
CQM



## bt711 Crimp Module



- Crimp module for the most demanding applications
- For crimping of wires sizes up to 6 mm<sup>2</sup>
- Press force 20 kN
- Stroke adjustment programmable from 10 to 40 mm
- Integrated crimp force analyser
- Machine STOP and bad crimp signal
- Integrated interfaces for accessories
- OMI handheld controller
- Foot pedal
- Power 115V/230 V 50/60 Hz

## bt752 Stripping, Sealing and Crimping Machine



- Programmable semi-automatic bench machine
- Stripping, sealing application and crimping in a single device
- Reliable processing of twisted conductors or multi-core cables
- Wire cross section for crimping 0.08 - 6.0 mm<sup>2</sup>
- Wire cross section for stripping and sealing 0.08 - 4.0 mm<sup>2</sup>
- Stripping length 1.0 - 12.0 mm
- Application of seals with diameter up to 10 mm and max length 8 mm
- Crimping force 20 kN
- Stroke range 10-40 mm
- Compressed air supply 500-800 kPa (5-8 bar)

## bt722 Crimping Machine



- All commercially available crimping tools can be used for processing the contacts
- Easy operation with TopTouch user interface
- Very short set-up and cycle times
- Quality control even during set-up
- Minimal material consumption during set-up
- Automatic crimp height correction
- Integrated crimp force monitoring
- Logging of measured values
- Programmable DigiStripper is available as an option

## AM 03 Universal Stripper Crimper



- Stripping range  
0.14-2.50 mm<sup>2</sup>  
AWG 26-14
- Programmable  
adjustment for stripping  
and crimping depth
- Data Memory  
50 programs
- Rapid and reliable  
crimping process

The AM03 Universal Stripper Crimper processes loose piece turned male and female pin contacts rapidly and reliably.

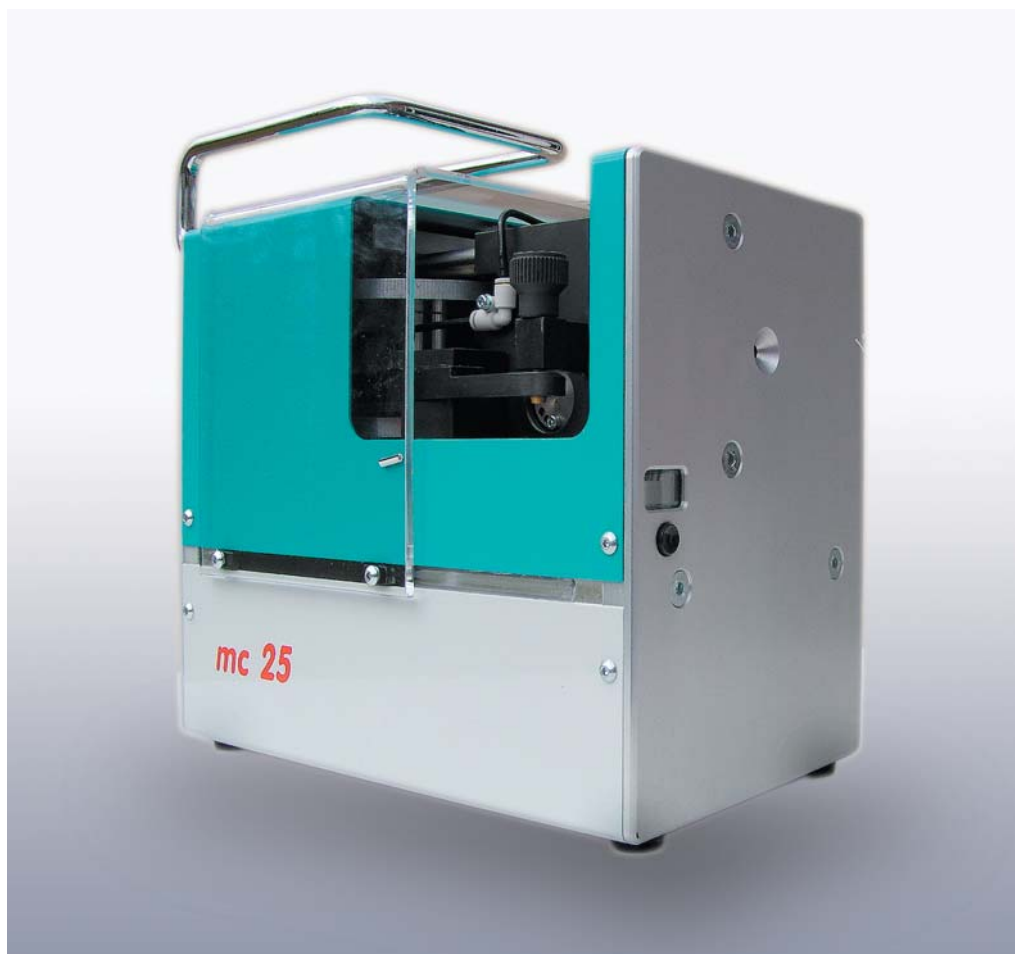
It is compatible to following Tyco Electronics contacts:

- HN.D
- HE
- HVT

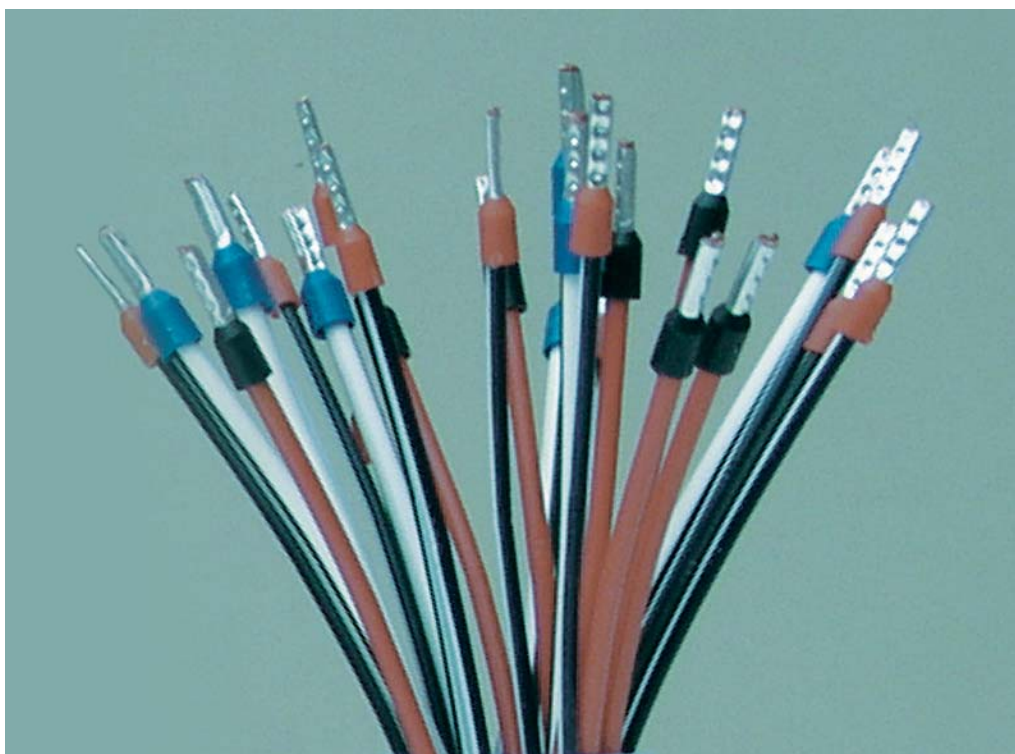
The machine can also be converted for different contacts by using specific tool kits.

If you plan to process non Tyco Electronics contacts please address the special request to your local Tyco Electronics representative.

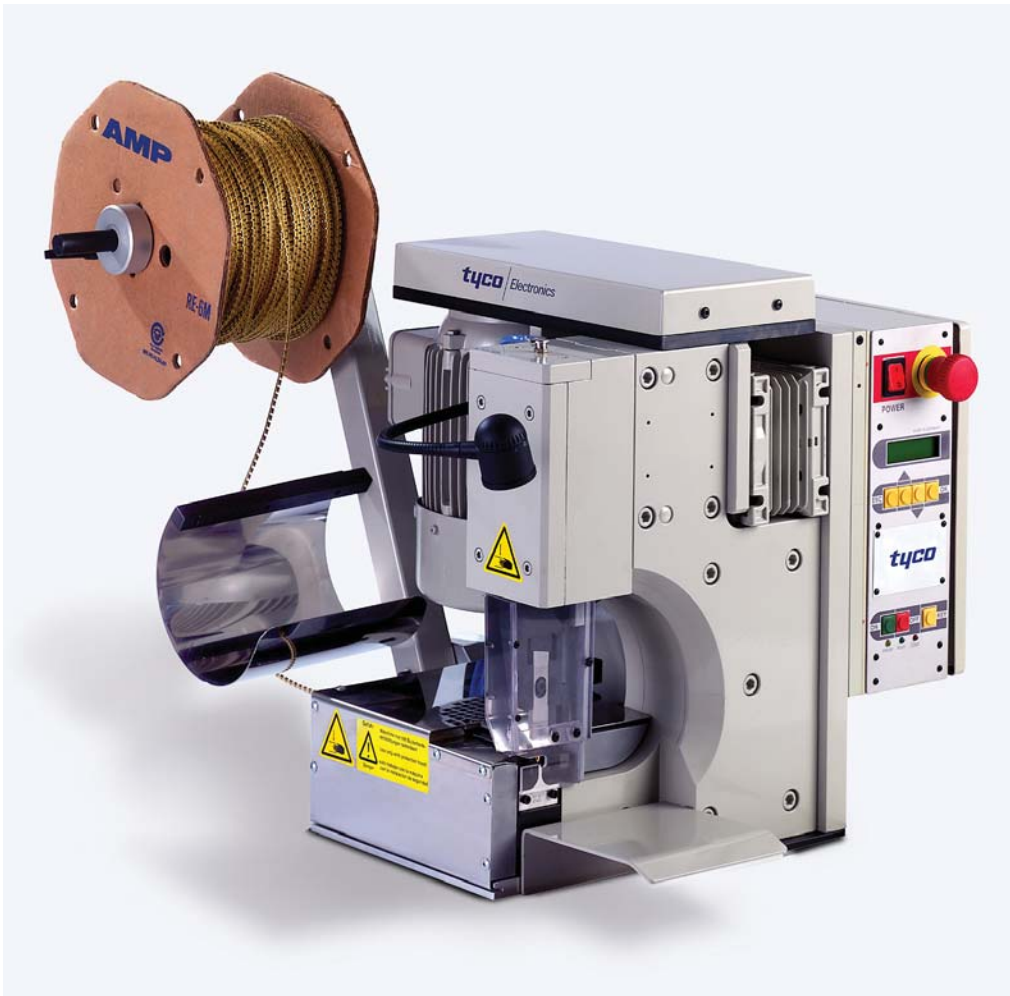
## mc25 Stripper Crimper



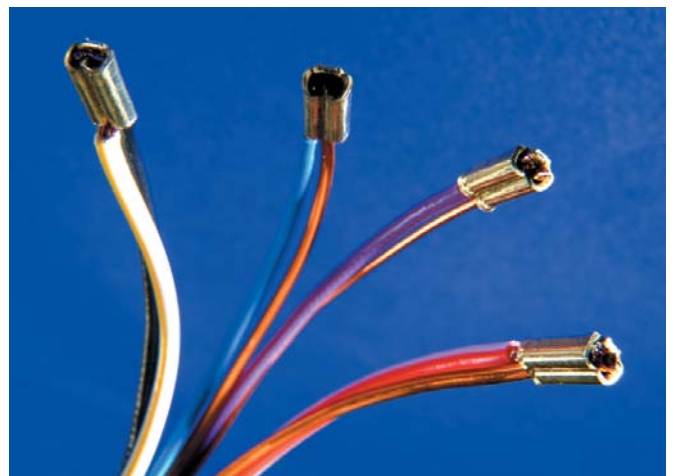
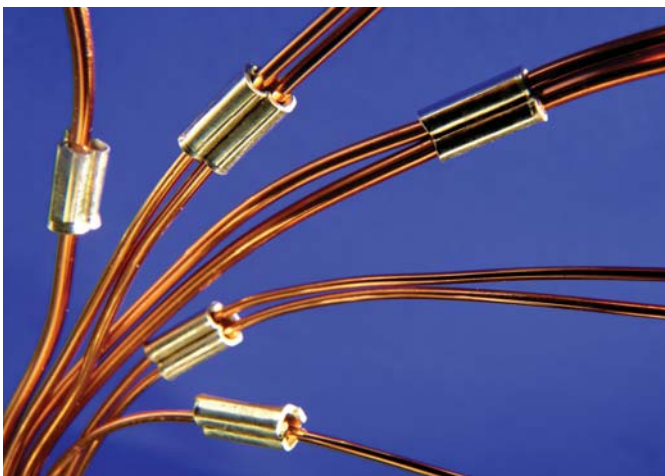
- Stripper crimper for wire end ferrules
- Applies insulated connector sleeves in strip form
- Stranded wires with wire range of 0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> / AWG 20-14
- Wire length min 49.0 mm
- Stripping length 8.0 mm
- Changeover of the machine to different wire ranges possible without any additional tools
- Fully-automatic stripping and crimping process
- No compressed air required
- Portable device, weight 12 kg
- Cycle time 1.5 s for stripping and crimping



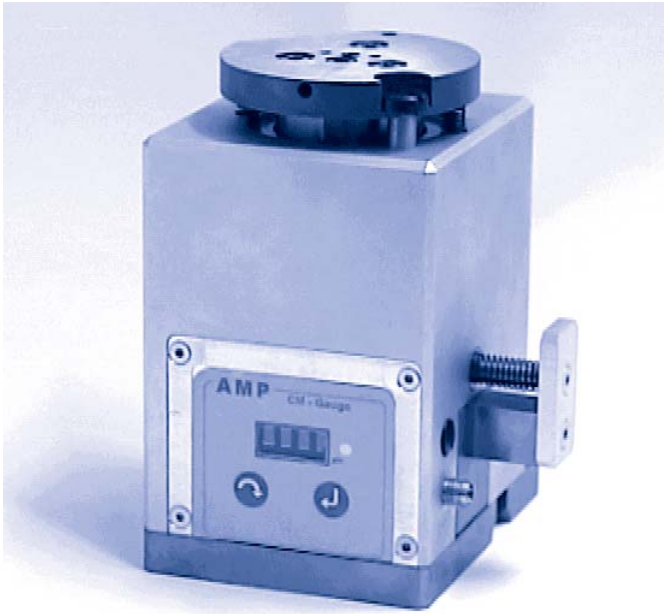
## AMPLIVAR Terminator



- Terminator for magnet wire unions by means of AMPLIVAR spliced product
- Simultaneous termination of up to 3 magnet wires in one splice
- Parallel and end connections
- Wire size up to 4.0 mm<sup>2</sup>
- Pressing force 20 kN
- Cycle time 0.3 s
- Excellent handling and ergonomic crimp position
- Trimming of excess wires for end splices



## Shut Height Gauge



- Compatible with all Tyco Electronics and commercially available crimping presses, using quick changes style applicators
- Dynamic measuring of press shut height and direct display
- Enormous time savings
- Gauge is supplied in a handy transport case, complete with power supply and manual
- Software to generate measuring result reports is available on request

## Press Gauge



- Compatible with all Tyco Electronics and commercially available crimping presses, using quick change style applicators
- Ideal instrument to assure correct positioning of all Tyco Electronics applicators
- Simple installation and use

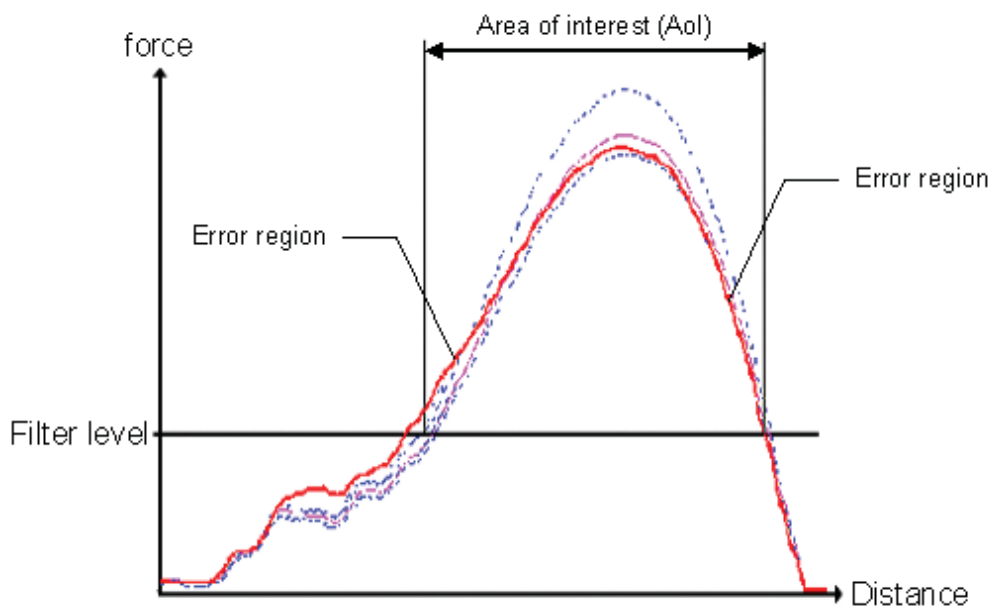
## Crimp Quality Monitoring



- CQM equipment for the complete range of Tyco Electronics' crimping machines
- Modern CQM modules
- Analysis of crimp forces measured during crimping process
- Automatic generation and evaluation of a crimp force curve
- Qualification of crimps as "good" or "bad" based on the evaluation results
- Multiple CQM possible based on a HOST controlled network

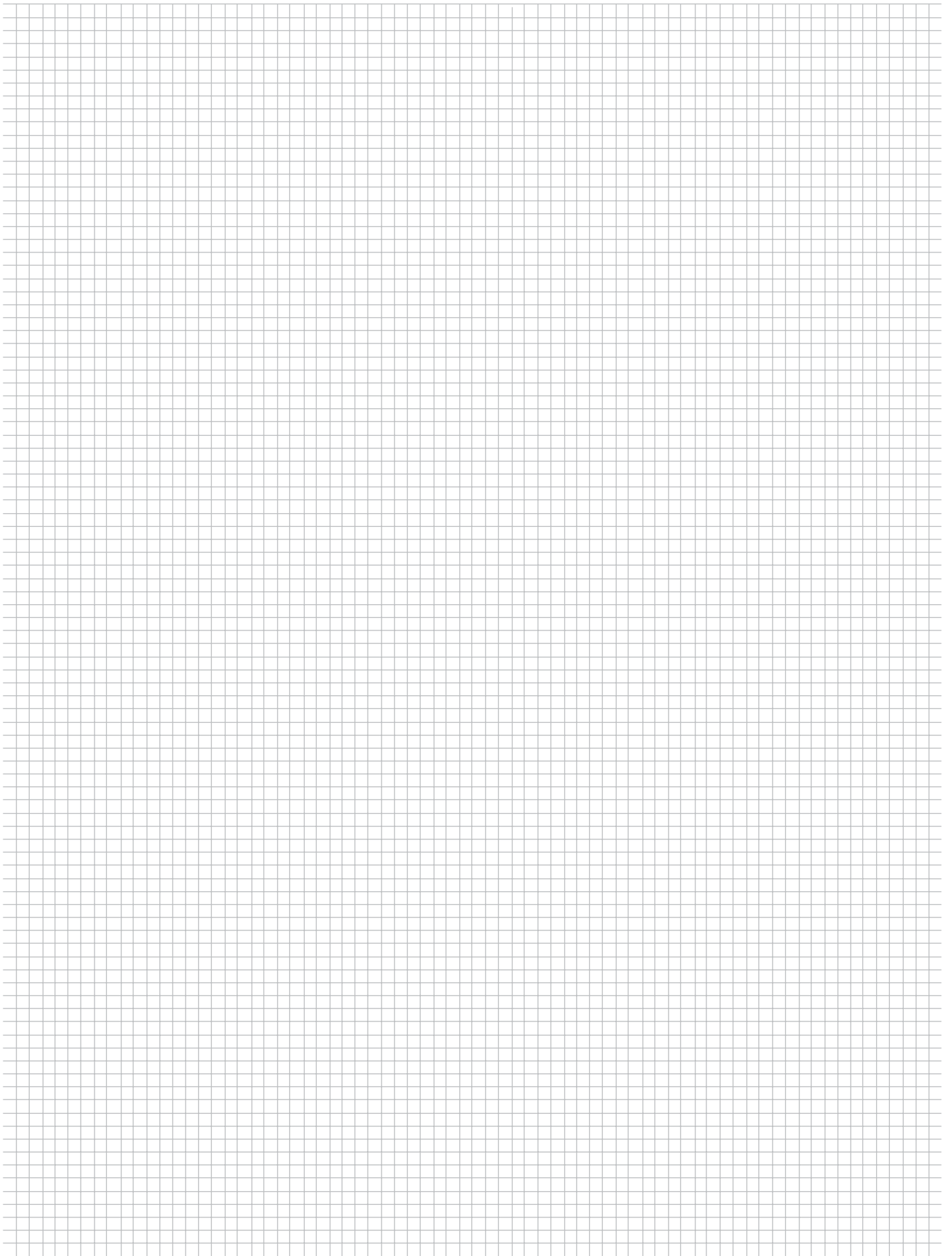
For special applications SLE CQMs are available in 2 basic variants:

- SL Ecoline
  - Crimp force monitoring with basic function
  - 2 line text display for operator guidance
- SL Carline
  - Features of SL Ecoline
  - 2-channel system for fully automatic crimp machines



Criteria to analyse crimp values are crimp area and crimp shape. Evaluation of the area below the crimp force curve is used to determine crimp quality.





## Contact Addresses

Detailed Product Information is available at the following Tyco Electronics Companies

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