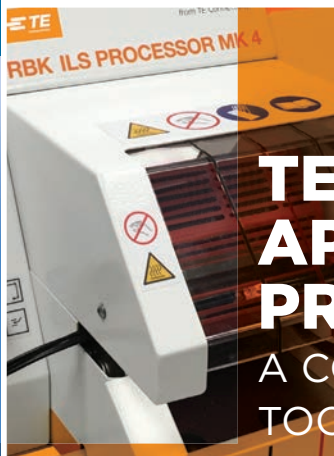




TE CONNECTIVITY® APPLICATION TOOLING PRODUCT LINE CARD

A COMPLETE LINE OF QUALITY
TOOLING SOLUTIONS



PORTABLE WIRE PROCESSING

SELECTION GUIDE



INSERTION/ EXTRACTION



Making terminal extractions is as easy as 1, 2, 3.

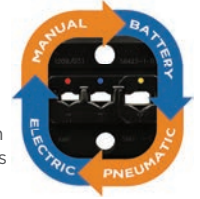


Select Your Die Platform

Standard Die Envelope - SDE (Commercial)



Standard Die Envelope (SDE) technology is a flexible approach to crimp tooling that allows use of the same TE dies on tooling across a range of application platforms. Dies are interchangeable in tools from manual, battery, pneumatic, and electrically powered tools it is a family of tools that you can take from bench to production or into the field, without the need for dies fitted to each kind of tool. They are suited for R & D, networking applications and on-site maintenance work.



32-8 AWG

CERTI-CRIMP (Premium)



The CERTI-CRIMP family consists of reliable, repeatable and certified crimping tools to handle a variety of industry mandated specifications. Their interchangeable head designs allow users to easily upgrade their manual CERTI-CRIMP tools to battery or electric powered alternatives.



32-8 AWG

Hydraulic Dies & Crimp Heads



Our line of quality hydraulic tooling includes industry-standard 10,000 psi [68,950 kPa] and 8,200 psi [56,540 kPa] tool systems. The basic hydraulic tool system requires a pump, hose (multiple lengths are available with all configurations), crimp head, and crimp die. U-dies for a 10,000 psi hydraulic system are well suited for applications requiring a crimp force of up to 14 tons [125 kN]. For wire sizes requiring up to 33 tons [294 kN], TE offers crimp heads that are compatible with shank dies

8 AWG -1000 MCM.



8 - 4/0 AWG
22 ton output force
16 lbs



4/0 AWG - 1000 MCM
26 ton output force
29 lbs



8 - 4/0 AWG
33 ton output force
28 lbs



12-10 AWG - 350 MCM
18 ton output force
13 lbs



12 ton output force
1 stroke;
20,000 cycle
Light Duty
Compression Head*
U-Die Compatible



12 ton output force
1.5 stroke;
20,000 cycle
Light Duty
Compression Head
U-Die Compatible



12 ton output force
1 stroke Titanium
Compression Head
U-Die Compatible



14 ton output force
1.5 stroke;
Heavy-Duty
Compression Head
U-Die Compatible



14 ton output force 1.5 stroke
Compression Tool
U-Die Compatible



1 stroke Hand
Compression Tool
U-Die Compatible

SELECT YOUR POWER SOURCE

Portable Tooling - Manual (Hand)

SDE (Commercial)	CERTI-CRIMP (Premium)	Hydraulic Assist
 - Flexible standard die envelope design - Adjustable ratchet control system - Ergonomic design	 - Designed to exacting specifications - Requires minimum skill - Meets military, UL and CSA requirements as applicable	 8,200 & 10,000 psi - Shank & U-dies - Heads, pumps & hoses - Among industry leaders in reliability

APPLICATORS

SELECTION GUIDE



Flexibility



Value



Ergonomic



Hydraulic



Pneumatic



Semi-automatic



Battery



Cycle count



Manual



Portable



1200 crimps/hr.



3600 crimps/hr.



Electric



Safety



Fully-Automatic

Spare Tooling



- Precision ground, chrome plated
- Engineered for compliance to meet OEM specifications
- UL Listed
- CSA certified



Mid Size

- Wire range: > 10.0 – 25.0 mm²
- Can fit on presses that accept traditional applicators
- Robust casting frames

Large Wire



- Wire range: 25.0 – 50.0 mm²
- Fine adjustment
- Press stroke: 40.0 mm
- Shut height: 135.78 mm



Splice

- Wire Range: 0.5 – 25 mm²
- Fine adjustment
- Press stroke: 40.0 mm
- Shut height: 135.78 mm
- Side feed splice terminals up to 45.0 mm

OCEAN Mechanical



- Mechanical feed
- Excellent repeatability
- Atlantic & Pacific style ram configurations available

OCEAN Pneumatic



- Single piece piston and rod assembly
- Atlantic & Pacific style ram configurations available
- Self actuated

OCEAN Servo



- Maximum feed repeatability
- Automatic setup
- Modular feed stays with terminator



Center Line & Applicator Alignment Gauges



- Ideal instrument to assure correct positioning of all TE applicators
- Compatible with TE & commercially available crimping presses, using quick changes style applicators

CrimpData App



- Provides compatibility verification between terminals and tooling
- Scans and looks up applicator and terminal information
- Enables you to record cycles on the applicator spare parts
- Scan this QR code to download from the APP store



Collars

- Designed to protect applicators from unwanted motion and damage during transport
- Available in three colors to help differentiate between active and inactive applicators



SEMI & FULLY AUTOMATIC

Semi-Automatic Terminators

3K	5K	GII
 - Small footprint - Open architecture for design flexibility - Fast, quiet design	 - Small footprint - Open architecture for design flexibility - Fast, quiet design - Optional stripping module available	 - Improved lighting and safety features - Open architecture for design flexibility - Fast, quiet design - Optional stripping module available
      	      	      
GII+ (coming soon)	CQM II	FFC
 - Versatile crimping press for large conductor cross-sections up to 21mm² - LED lighting and safety features	 Effective for monitoring the crimp of open barrel, uninsulated contacts and terminals. CQM II monitors the entire crimp	 - Number of pins can be programmed - Pitches between 1.27mm and 5.08mm can be programmed - Interchangeable applicators available for different products
      	      	   

Fully Automatic Lead-Makers

UNIQA PRO	Alpha 355	Alpha 530
 - Single ended wire processor 20% smaller footprint than traditional lead makers 4x faster throughput than standard wire prep and benchtop units	 Equipped with up to three processing stations, enabling crimping of both ends of the wire, double-crimp connections with three different contacts, single-ended seal applications, tinning, or ink-jet marking	 - Solid and reliable processing of wire cross sections 0.13mm² to 4mm² - Manifold configuration possibilities on 4 stations for industrial production
     	     	     
Alpha 550	Gamma 263	Gamma 333
 - Precise and reliable processing of wire cross sections 0.13mm² to 6mm² - Integrated conductor detection (ACD) for high quality stripping	 Equipped with up to three processing stations, enabling crimping of both ends of the wire, double-crimp connections with three different contacts, single-ended seal applications, tinning, or ink-jet marking	 - Handles double-crimp connections involving varying lengths - Dual channel cuthead allows for a large range of wire sizes without blade changes
     	     	     

WIRE PROCESSING EQUIPMENT

SELECTION GUIDE



Determine Your Processing Type

Achieving crimp quality starts with prepping the wire strand. Our tooling portfolio covers almost all processing requirements. We offer processing solutions for both standard, as well as specialized stripping and cutting challenges for demanding insulation materials.



Measure

+



Cut

+



Strip



Strip Only

Measure, Cut & Strip



Kappa 310

- Compact, high-speed machine
- Can handle wire sizes from 0.02mm² to 6mm²
- Intuitive, flexible, and simple touch-screen operation



Kappa 315

- Compact, high-speed machine
- Can handle wire sizes from 0.05mm² to 10mm²
- Intuitive, flexible, and simple touch-screen operation



Kappa 320

- Wire sizes from 0.05 mm² to 10 mm²
- Innovative sensors to aid in setup and to monitor processing
- TopWin software for connecting inkjet, part list production and network solutions



Kappa 322

- Designed for a wide variety of special applications or the separation and processing of inside wires in multi-pole cables
- TopWin software for connecting inkjet, part list production and network solutions



Kappa 330

- For processing cables with a cross section of up to 35 mm², multi-core conductors with an outside diameter of up to 16 mm or flat cables with a width of up to 40 mm
- Belt drive or various double-roller drives
- TopWin interface



Kappa 350

- Designed for processing round conductors with a cross section of up to 120 mm² and a maximum outside diameter of up to 35 mm
- Minimal wire loss thanks to sensor monitoring
- TopWin interface



WIRE PREPARATION EQUIPMENT

Wire Strip Only

Cosmic 32M	Cosmic 42R	Cosmic 48R
 - High-speed electric wire stripper - Operates anywhere in the world with AC 100 V - 240 V compatibility - Wide strip range of AWG 12 - 32	 - For ultra-micro coaxial cables - Repeatable high precision - Equipped with waste vacuum system - Stores up to 1.000 sets of data	 - For stripping coaxial or standard wire - Can store up to 1.000 different sets of data - Stripping up to 9 steps
 	 	 

Cosmic 60R	Cosmic 927R	Mira 230
 - Patented rotary 4-blade system, for larger diameter multi-conductor cable - Strip different wire sizes without the need to change the stripping blades - Easy to adjust the cutting diameter - Powered by electricity only	 - Micro-cable stripping machine - AWG 36 - to 10 (0.11 mm to 3.5 mm) - For most wire types, optimized to maximize stripping quality - Can be selected to twist with clockwise/ counter-clockwise or non-twist	 - Ideal for multi-conductor processing - Large processing range up to 8 mm²/AWG 8 - Unique scope of functions, including sequence processing
 	 	 

Spare Parts

Wire Guides



Blades



Belts



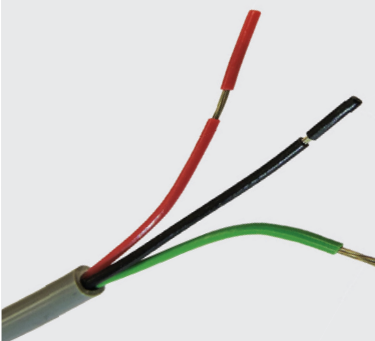
Rollers



Multi-conductor processing in a single work operation

Its unique ability to sequence makes the Mira 230 the first pick for processing multi-conductor cables. In consecutive steps, it strips and cuts the inner conductors with a variety of parameters and without a program change.

Every cable and every sequence can be stored for reproduction at any time. All recorded articles (cables and sequences) are stored in the library. That way, the operator can retrieve the processing parameters at any time using search and filter functions.



HEAT SHRINK EQUIPMENT

SELECTION GUIDE

	Flexibility		30 crimps/hr.
	Value		60 crimps/hr.
	Ergonomic		90 crimps/hr.
	Pneumatic		Heat shrink/hr.
	Semi-automatic		Heat shrinks/hr.
	Manual		Electric
	Portable		Safety

Manual



RBK MK IV

- Bar code scanning option
- Automatic calibration
- PC controlled with touchscreen monitor
- Adaptable for different applications



Semi-Automatic



Model 17

- Closed-loop temperature and belt speed control
- Suitable for continuous running
- Tubing diameter up to 19 mm
- Tubing length up to 90 mm



Semi-Automatic



Model 19

- Can handle tubing up to 25 mm diameter and 102 mm long
- Tubing up to 178 mm long can be handled with the use of the wide heating element tool



Model 105

- Can handle unlimited tubing lengths and large substrate diameters if run parallel to belt travel



CV-OBHAT

- Lightweight, portable hot air tool, used to install TE's Raychem escap stub splice sealing products



IR-1891 Shuttle

- Twin workstation heater for multiple installation of short length tubing products
- Multiple product fixture assemblies give increased process rates
- CE approved



AD-3050 Seal Test

- Fast determination of sealing integrity
- Multiple test fixtures
- Easy load and release of test samples



Power of Automation

60/hr

Heat Gun



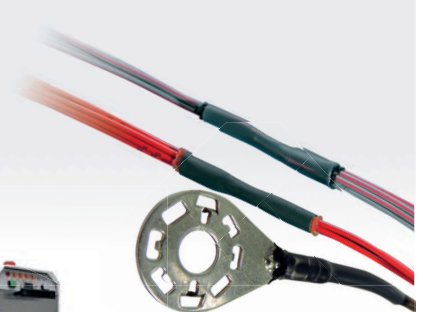
120/hr

Manual Machine



500/hr

Belt Drive



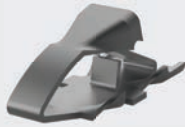
MAGNET WIRE EQUIPMENT

Select Your Terminal Type

MAG-MATE



Mini MAG-MATE



SIAMESE



Leadlok



AMPLIVAR



Power Splice



Manual

Manual Arbor Press



- Ideal for repair, service and prototype work



MPT Head



- For manual SIAMESE and Leadlok terminal applications
- Can be integrated into custom automatic production line



Semi-Automatic

MK I & II



- Single, dual, triple and quadruple insertion capabilities
- Cycle time: 0.9 - 1.3 sec depending on terminal type
- Force distance control available on MARK II



MPT-5 Bench Machine

- Available as a horizontal or vertical bench machine
- Inserts a SIAMESE terminal into a customer-designed cavity in the coil bobbin or similar magnet wire housing



MARK Workstation

- Standardized and customized work stations to meet customer demands
- Designed to automatically insert terminals into cavities of coil bodies

Semi-Automatic

APT-5



- Fast, efficient system with no need to strip mag-wire insulation
- CQM II controlled
- CE Approved
- Connects up to 3 wires in 1 splice



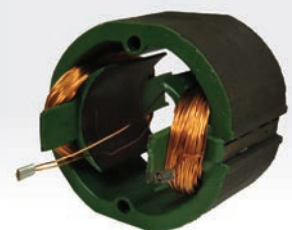
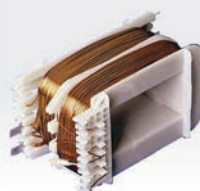
Power Splice

- Reliable pigtail splice termination of magnet wire and solid or stranded lead wire



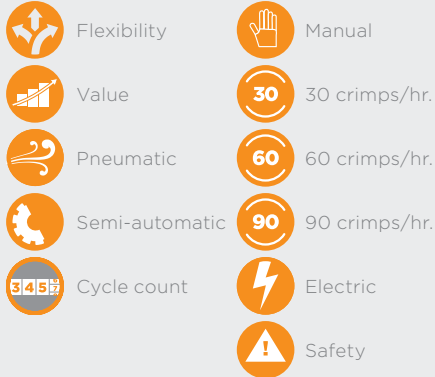
Thru-Splice

- Includes fine crimp height adjustment, full guarding with interlocks, total and batch counter and capabilities for jog and split-cycle operation



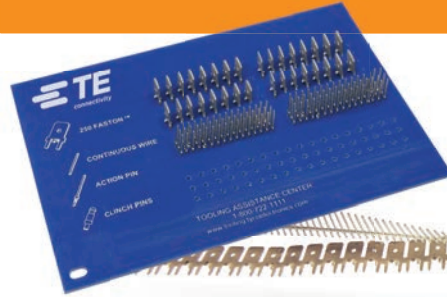
BOARD PROCESSING EQUIPMENT

SELECTION GUIDE



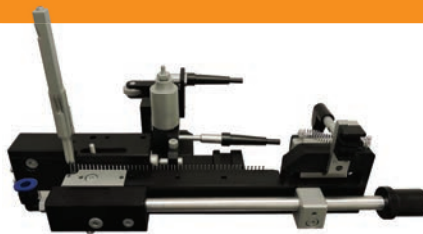
Select Your Processing Type

Pin Insertion



All of our insertion machines can be supplied with a rotary insertion finger that can apply products at different angles without decreasing the insertion rate. This eliminates costly lost production time associated with rotating the PCB.

Conversion Kit



The P50/P100/P300/P350 machines can be supplied with modular insertion tools that allow the tooling to be quickly changed on the insertion head. A wide range of conversion kits for various TE Connectivity and non TE Connectivity products is available.

Pin Insertion – Repair

P10



- Convenient and easy operation due to a touch screen monitor
- Single pins can be interchanged on a complete equipped PCB
- High insertion quality due to press cycle monitoring with PQM



Pin Insertion – Manual

P50



- Manually loaded bench top machine
- PCB size: 350 x 300 mm max.
- PCB thickness: 1.0 – 3.5 mm
- Applies reeled products, press-fit terminals, solder terminals and others



Pin Insertion – Semi Auto

P100



- Discrete pin insertion into PC-board applications
- Manual and semi-automatic designs
- Simple operator interface
- Multiple quality tools available



Pin Insertion – Fully Auto

P300



- Board capacity up to 400 x 600 mm (15.5 x 23.5 in) 370 x 480 mm (14.5 x 19 in) when in-line
- Repeatability: ± 0.01 mm
- Insertion rate up to 3 cycles per second at 5.08 mm (0.2 in) pitch
- Optional automatic tool changer can apply up to 4 different products



P350



- Board capacity up to 450 x 450 mm (17.5 x 17.5 in)
- Repeatability: ± 0.01 mm
- Insertion rate up to 5 cycles per second at 5.08 mm (0.2 in) pitch
- Automatic tool changer to apply up to 4 different products on one machine

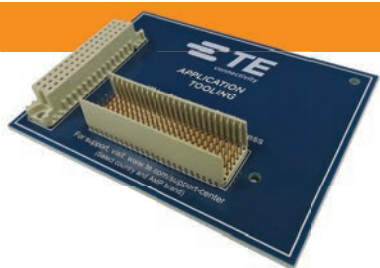


P360



- Board capacity up to 450 x 450 mm (17.5 x 17.5 in)
- Repeatability: ± 0.01 mm
- Insertion rate up to 5 cycles per second at 5.08 mm (0.2 in) pitch

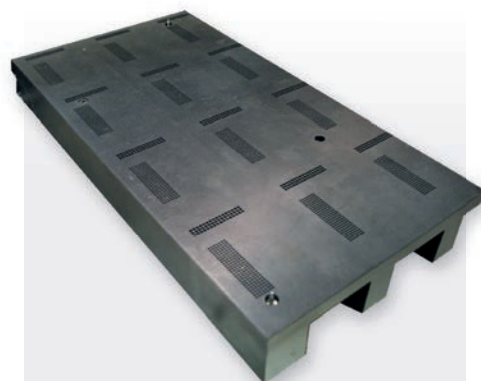




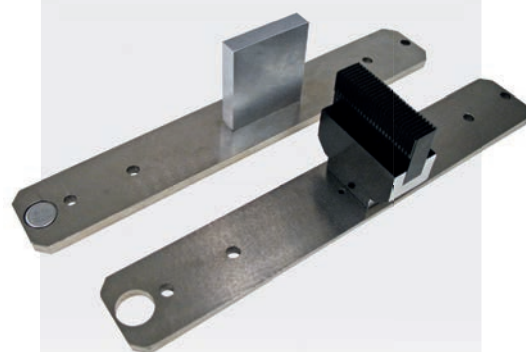
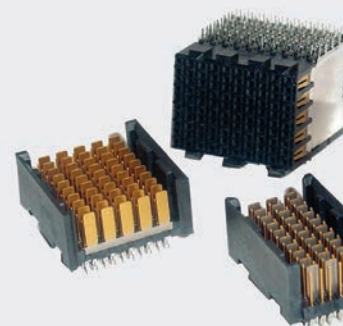
Connector Press Fit

TE Connectivity offers a wide range of servo presses that mass terminate compliant pin connectors. So there's one that is perfectly suited for your product needs. And each model leverages the simple, field-proven, solder-free manufacturing offered by the entire product line.

Board Processing Accessories



Dedicated support fixture for quick product changeover



Process flat-rock and header type products from TE Connectivity and other suppliers

CBP-5T



- Servo electric press
- PCB capacity of 460 x 610 mm (18 x 24 in)
- Press force capacity of 44 kN (5 tons)
- Small foot-print for low to medium volume product levels



CSP-5T



- Shuttle system for product location under press ram
- Housing capacity of 75 x 150 mm (3 x 6 in)
- Manual & Pneumatic option
- Small foot-print



CMP-6T



- 53 kN force (6 tons) CMP-6T
- Board capacity of 610 x 915 mm (24 x 36 in) CMP-6T
- Wide range of insertion heads for TE Connectivity and non TE Connectivity products available



CMP-12T



- 107 kN force (12 tons) CMP-12T
- Board capacity of 610 x 915 mm (24 x 36 in) CMP-6T
- Wide range of insertion heads for TE Connectivity and non TE Connectivity products available



CAP-6T



- Automatic pressing capabilities help improve quality, lower rework and helps prevent rejects
- Board capacity of 760 x 910 mm (30 x 36 in)
- 53 kN force (6 tons)
- Manual loading drawer for simple loading and unloading of PCBs



CAPI-6T



- Automatic pressing capabilities help improve quality, lower rework and helps prevent rejects
- Board capacity of 760 x 910 mm (30 x 36 in)
- 53 kN force (6 tons)
- Inline system SMEMA compatible





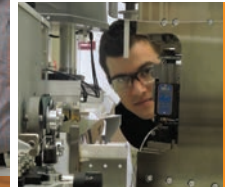
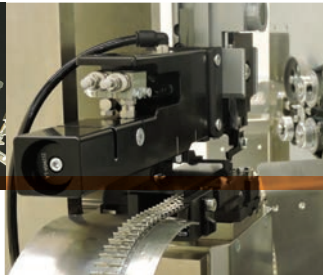
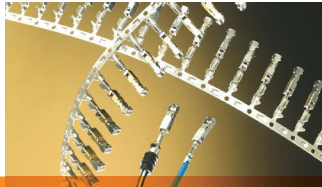
Let's Connect

Learn more about our comprehensive line of tooling solutions at www.tooling.te.com.
To find the right TE tooling for your needs, call us at **717-810-2082**
or email toolingSales@te.com.



TE Connectivity Technical Support Center

USA:	1.800.522.6752	UK:	+44.0800.267666
Canada:	1.800.522.6752	France:	+33.1.34.20.8686
Mexico:	+52.55.11.06.0800	Netherlands:	+31.73.624.6999
Latin/S. America	+54.11.4733.2200	China:	+86.400.820.6015
Germany:	+49.6151.607.1999		



Waste Not. Want Not.

Whether it's time or scrap, in manufacturing everyone knows that waste costs money. With our on-site certification and consultation services, we can help you:

- Reduce downtime
- Reduce scrap
- Maintain crimp quality
- Improve manufacturing efficiency



Time is Money.

In manufacturing downtime can be expensive. That's why TE is constantly working to improve product availability and delivery rates. With a strong global footprint, short lead times and a strong distribution channel, TE has the equipment and the accessories to keep production online.

To check distributor stock and availability for your tooling needs go to: www.te.com/commerce/sck/cdi.do

te.com

OCEAN, CERTI-CRIMP, EYE Check, RAYCHEM, TE Connectivity, TE connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2017 TE Connectivity Ltd. family of companies All Rights Reserved.

1-1773864-6 04/17 Original

Contact us today to learn more

E-mail (Americas): fieldservicesnorthamerica@te.com

Phone (Americas): 800-722-1111 or 717-986-3434

E-mail (EMEA): TEFE1@te.com

Phone (EMEA): +49-6151-607-1518

For additional information download catalog no. 1-1307619-0 from www.tooling.te.com.

www.te.com