LITHIUM-ION BATTERY POWERED CRIMP TOOLS

COMPLETELY PORTABLE POWER CRIMPING

TE connectivity

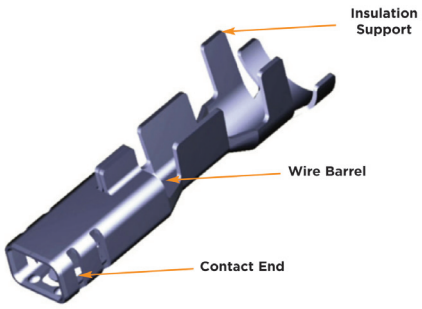
INTRODUCTION TO TOOLING SOLUTIONS

TE Connectivity. A Leader in Crimp Quality.

Anyone can make a tool to crimp terminals onto a wire. But not everyone can manufacture a tool to crimp the terminals properly. Crimp termination of wires isn't easy. At least, doing it right isn't easy. We know. We started it. TE Connectivity developed the technology of hand crimping over 70 years ago.

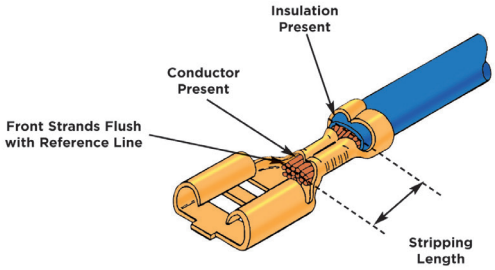
The Secret to a Successful Crimp.

Matching the Terminal to the Tooling - Among the many factors that are critical in producing a quality crimp, matching the terminal to the tooling is crucial. Unlike inferior tooling options, TE offers engineered solutions that are designed to match the exact crimp geometry of the terminal to be applied on the wire. To create a proper crimp you need to follow these important steps:

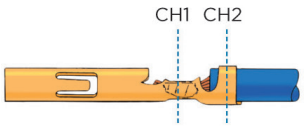


1. Wire Selection - AWG and wire insulation thickness varies from wire to wire. Just because two wires are listed at the same AWG, it doesn't mean their insulation thickness is the same. If you don't take into account both factors, the copper or aluminum strands may not fit in the wire barrel correctly or the terminal's insulation support may be too large or small for the wire strand.

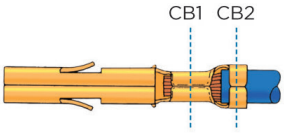
2. Wire Prep - In order to properly place a wire in a terminal, the wire insulation must first be stripped to the proper length based on the terminal specifications. If the insulation is cut too short or too long, the wire will not be seated properly into the wire barrel, causing terminal separations or shorting.



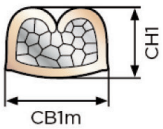
3. Crimp Specifications - To create a proper crimp for a TE connector or terminal you should use a TE tooling solution that is specifically engineered to the proper crimp height, width and crimp geometry of the selected terminal or contact.

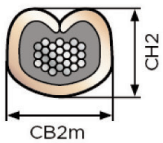


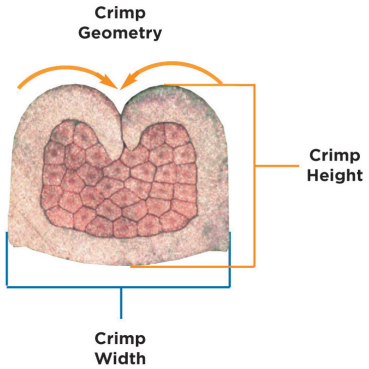
CH2: Insulation crimp height
CH1: Conductor crimp height



CB2m: Insulation crimp width
CB1m: Conductor crimp width







Standard Die Envelope (SDE) - Technology

FAST FACTS

- Dies meet wire crimp requirements per specification
- Over 100 interchangeable SDE die sets for crimping over 4,000 different connectors
- Ability to handle multiple wire and terminal sizes in one die set

Standard Die Envelope (SDE) technology is a new, flexible approach to crimp tooling, that allows use of the same dies on tooling across a range of application platforms. Dies are interchangeable in tools from portable hand tools — manual or battery-powered — to pneumatic hand tools and electric bench terminators. It's 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're suited for R & D, networking applications and on-site maintenance work.

Customers can be sure their dies will fit their long-term needs, because they are completely compatible with all tools in the SDE system. They move with a customer as their needs grow.

By removing just 2 screws you cai easily swap dies between your SDE compatible manual, battery, pneumatic and electric TE tools.

Standard Micro Crimp Hand Tool Kit, 10.8V, 3,400 lb

FAST FACTS

- Light weight, ergonomic design is only 2.2 lbs
- Uses 90% less force, thereby reducing operator muscle fatigue
- Contains a built in LED light for illuminating crimping point and work area
- Contains mounting lugs for use with a balancer or as fall protection when used outdoors
- 10.8V Lithium-Ion battery
- USB adapter to download crimp cycle information to a computer
- Higher crimp force capability than comparable tools

Maximum Power. Minimum Effort.

The SDE Micro Crimp hand tool provides maximum crimping results for minimum effort with its one-lever operation for controlling all tool functions. Unlike other 2-handed manual crimping tools, the intuitive Quick Takeup technology built into the SDE Micro Crimp hand tool allows the operator to keep one hand free to place the wire while crimping with the other hand.

Compared to a manual hand tool the SDE Micro Crimp hand tool:

- Utilizes an electronic control with lock function to monitor complete closing of the dies
- Automatically retracts when the crimping is complete
- Features motor stall protection in case of faulty operation

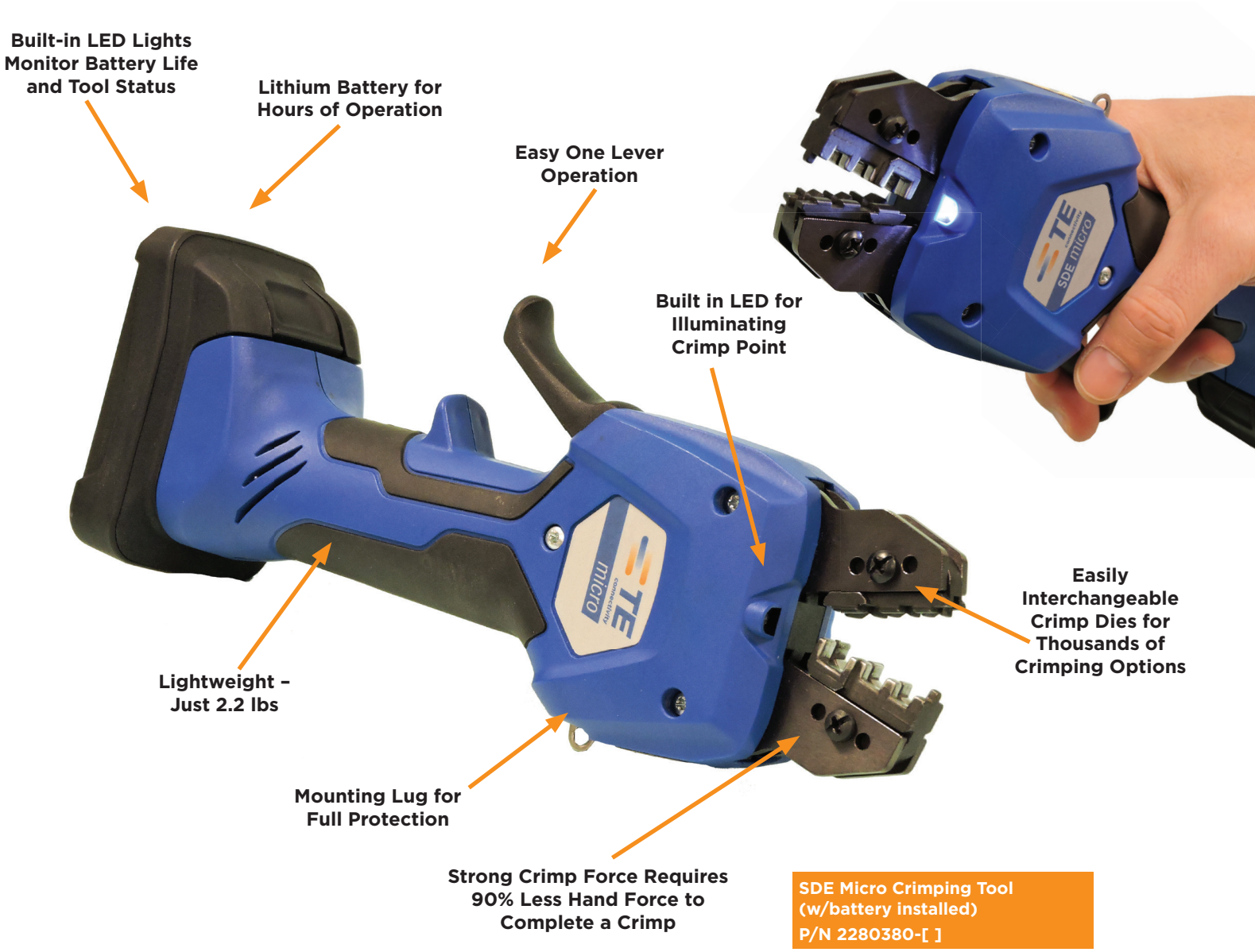
CRIMP FASTER IN 3 EASY STEPS

Quick takeup: Pull trigger part way and adjust terminal and wire to the proper position before crimping.

Depress trigger completely to activate the motorized crimp feature.

Release trigger and the jaws will open automatically.

Standard Micro Crimp Hand Tool Kit, 10.8V, 3,400 lb



P/N	Description
2280380-1*	SDE Micro Tool Kit, 110-120 Volt Charger, Battery
2280380-2*	SDE Micro Tool Kit, 220-240 Volt Charger, Battery
2280381-1*	SDE Micro Tool Battery, 10.8 Volts
2280382-1*	SDE Micro Tool Charger, 110-120 Volts
2280382-2*	SDE Micro Tool Charger, 220-240 Volts
2217896-1*	SDE Micro USB Adapter Module

* CE Certified

SDE Micro Crimping Tool (w/battery installed) P/N 2280380-[ ]	
Length	253mm [9.96"]
Width	93mm [3.66"]
Depth	64mm [2.52"]
Weight (w/battery)	0.96kg [2.12 lb]
Sound Level	70 dBA at 1 meter
Vibration	< 2.5 m/s^2

Crimping Capacities	
Max. Crimping Force 15 kn (1.53 metric tons) [3,400 lbs] max.]	
Avg. Crimping Force	2 sec.
Avg. Crimps Per Charge	Approx. 350

Lithium-Ion Battery-Powered Crimp Tool Kits, 18V, 3,500 lb

Fast Facts

Fast, ergonomically-designed tools suitable for use at the bench, on the line, or in the field.

- Maximum wire size depending on terminal type: 10 AWG (3,500 lb tool)
- Completely portable — Over 150 crimps per charge (3,500 lb tool)
- Pressure-sensitive cycle control
- On-board pressure monitoring with visual (LED) and audible warnings of an incomplete crimp
- Crimp cycle information can be downloaded to a computer via optional USB adapter
- Lightweight and compact
- Kits include tool, 2 batteries, charger, case
- Lithium-Ion batteries - no memory effects
- 20 minute charging time

3500 lb Crimping Tool (w/battery installed, w/o head)	
Length	254mm [10.00”]
Width	73mm [2.87”]
Depth	114mm [4.50”]
Mass Weight (w/battery)	1.3kg [2.9 lb]
Sound Level	75 dBA at 1 meter
Vibration	< 2.5 m/s^2
Hydraulic Oil	Shell Tellus T15

3500 lb Crimping Capacities	
Maximum Crimping Force	15.6 kn [1.75 ton]
Average Crimping Force	2 sec
Average Crimps Per Charge	Approx. 150

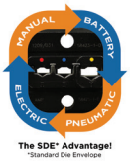
Each battery tool kit includes a tool, 2 batteries and a charger in a rugged carrying case.

Lithium-Ion Battery-Powered Crimp Tool Kits, 18V, 3,500 lb Tooling Options

SDE Open Head Battery Powered Crimp Tool Kit

PN 2217480-1, 110 volts
PN 2217480-2, 220 volts
This battery powered crimp tool kit accepts TE's SDE shoulder mounted die sets like the one shown. For a partial list of SDE die sets, please refer to catalog 1773379-1.

Customer Manual 409-32031



SDE Closed Head Battery Powered Crimp Tool Kit

PN 2217481-1, 110 volts
PN 2217481-2, 220 volts
This battery powered crimp tool kit accepts TE's SDE shoulder and pin mounted die sets like the ones shown. This tool kit can not be used to crimp butt splices. For a partial list of SDE die sets, please refer to catalog 1773379-1.

Customer Manual 409-32032

CERTI-CRIMP II, Battery Powered Crimp Tool Kit

PN 2217482-1, 110 volts
PN 2217482-2, 220 volts
This battery powered crimp tool kit accepts heads from TE's CERTI-CRIMP II straight action hand tools like the one shown. For a partial list of CERTI-CRIMP II straight action hand tools, please refer to catalog 65780.**Customer Manual 409-32033**

Double Action Battery Powered Crimp Tool Kit

PN 2217483-1, 110 volts
PN 2217483-2, 220 volts
This battery powered crimp tool kit accepts heads from TE's double action hand tools like the one shown. For a partial list of double action hand tools, please refer to catalog 65780.

Customer Manual 409-32028

Heavy-Head Battery Powered Crimp Tool Kit

PN 2217484-1, 110 volts
PN 2217484-2, 220 volts
This battery powered crimp tool kit accepts TE's SDE shoulder mounted die sets like the one shown. For a partial list of SDE die sets, please refer to catalog 1773379-1.

Customer Manual 409-32029

T-Head Battery Powered Crimp Tool Kit*

PN 2217485-1, 110 volts
PN 2217485-2, 220 volts
This battery powered crimp tool kit can be used to crimp 22-16 and 16-14 AWG PIDG terminals and splices. The kit can also crimp 22-16 and 16-14 AWG PLASTI-GRIP terminals. *Crimp head is included.

Customer Manual 409-32030

Lithium-Ion Battery-Powered Crimp Tool Kits, 18V, 8,000 lb, 12,000 lb, 24,000 lb

Fast Facts

Fast, ergonomically-designed tools suitable for use at the bench, on the line, or in the field.

- Pressure-sensitive cycle control
- On-board pressure monitoring with visual (LED) and audible warnings of an incomplete crimp
- Crimp cycle information can be downloaded to a computer via optional USB adapter
- Kits include tool, 2 batteries, charger, case
- Lithium-Ion batteries - no memory effects
- 20 minute charging time

8,000 lb Crimping Tool (with Battery Installed) P/N 2217330-[ ]	
Length	337mm [13.25]
Width	73mm [2.87]
Depth	114mm [4.5]
Weight (w/battery)	1.8kg [4.0 lb]
Sound Level	75 dBA at 1 meter
Vibration	< 2.5 m/s2
Hydraulic Oil	Shell Tellus T15
Crimping Capacities	
Max. Crimping Force	35 kn [4 ton]
Avg. Crimping Time	4 sec
Avg. Crimps/Charge	Approx. 85

12,000 lb Inline Crimping Tool (with Battery Installed) P/N 2280116-[ ]	
Length	413mm [16.26]
Width	75mm [2.95]
Depth	116mm [4.56]
Weight (w/battery)	3.08kg [6.8 lb]
Sound Level	75 dBA at 1 meter
Vibration	< 2.5 m/s2
Hydraulic Oil	Shell Tellus T15s or RIVOLTA S.B.H. 11
Crimping Capacities	
Max. Crimping Force	60 kn (6 metric ton) [13,500 lb]
Avg. Crimping Time	2-5 sec
Avg. Crimps/Charge	Approx. 100-300

12,000 lb Pistol Grip Crimping Tool (with Battery Installed) P/N 2161171-[ ]	
Length	327mm [12.9]
Width	75mm [2.95]
Depth	325mm [12.8]
Weight (w/battery)	4.2kg [9.6 lb]
Sound Level	75 dBA at 1 meter
Vibration	< 2.5 m/s2
Hydraulic Oil	Shell Tellus T15s or RIVOLTA S.B.H. 11
Crimping Capacities	
Max. Crimping Force	60 kn (6 metric ton) [13,500 lb]
Avg. Crimping Time	3-6 sec
Avg. Crimps/Charge	Approx. 100-300

24,000 lb Pistol Grip Crimping Tool (with Battery Installed) P/N 2280308-[ ]	
Length	412mm [16.2]
Width	75mm [2.95]
Depth	319mm [12.6]
Weight (w/battery)	6.8kg [15.0 lb]
Sound Level	75 dBA at 1 meter
Vibration	< 2.5 m/s2
Hydraulic Oil	Shell Tellus T15s or RIVOLTA S.B.H. 11
Crimping Capacities	
Max. Crimping Force	106.6 kn [12 ton]
Avg. Crimping Time	10-15 sec
Avg. Crimps/Charge	Approx. 110

Lithium-Ion Battery-Powered Crimp Tool Kits, 18V, 8,000 lb, 12,000 lb, 24,000 lb Tooling Options

8,000 lb Latch Head Battery Powered Crimp Tool Kit

PN 2217330-1, 110 volts
PN 2217330-2, 220 volts

This battery powered crimp tool kit can be used to crimp the following terminals and splices:

8 to 6 AWG TERMINYL and PLASTI-GRIP
See instruction sheet 408-10051 for a list of available die sets

8-4 AWG SOLISTRAND
See instruction sheet 408-10050
for a list of available die sets

12-10 AWG STRATO-THERM
See instruction sheet 408-10228
for a list of available die sets

Customer Manual 409-32026

12,000 lb Inline & Pistol Grip Battery Powered Crimp Tool Kits

PN 2280116-1, 110 volts (Inline),
PN 2280116-2, 220 volts (Inline)
PN 2161171-1, 110 volts (Pistol Grip)
PN 2161171-2 220 volts (Pistol Grip)

These battery powered crimp tool kits can be used to crimp the following terminals and splices:

SOLISTRAND 8, 6, 4, 2 AWG only

See instruction sheet 408-8691

STRATO-THERM 8, 6, 4 only per TE Instruction Sheet 408-8691 (Ring Tongue Terminals, Butt Splices, and Parallel Splice)

Customer Manual 409-32039

24,000 lb Pistol Grip Battery Powered Crimp Tool Kit

PN 2280308-1, 110 volts
PN 2280308-2, 220 volts

These battery powered crimp tool kits can be used to crimp the following terminals and splices:

SOLISTRAND 8, 6, 4, 2, 1/0, 2/0, 3/0 and 4/0 AWG only.

See instruction sheet 408-8691

STRATO-THERM 8, 6, 4, 2 and 1/0 only per TE Instruction Sheet 408-8691 (Ring Tongue Terminals, Butt Splices, and Parallel Splice)

Customer Manual 409-32039

Tooling-to-Terminal Cross Reference

LITHIUM-ION BATTERY POWERED TOOLS

3,400 lb

3,500 lb

8,000 lb

12,000 lb

24,000 lb

UNINSULATED TERMINALS

		Wire Range AWG	Wire Range mm²	Max. Insul.	Max. Dia.	Battery Tools Powered
SOLISTRAND Terminals and Splices		22-16	0.3-1.25	—	—	X
		16-14	1.25-2	—	—	X
		12-10	3-5	—	—	X
		8	7	—	—	X

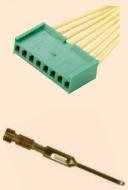
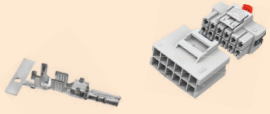
INSULATED TERMINALS

		Wire Range AWG	Wire Range mm²	Max. Insul.	Max. Dia.	Battery Tools Powered
PIDG FASTON Receptacles (6409oo Series)		22-18	0.3-0.8	.100	2.54	X
		16-14	1.25-2	.170	4.32	X
		12-10	3-5	.250	6.35	X
PIDG Terminals and Splices, PLASTI-GRIP Terminals		26-22	0.12-0.3	.082	2.08	X
		22-16	0.3-1.25	.125	3.18	X
		16-14	1.25-2	.150	3.81	X
		12-10	3-5	.230	5.84	X
PLASTI-GRIP Butt Splices		26-22	0.12-0.3	.080	2.03	X
		22-16	0.3-1.25	.170	4.32	X
		16-14	1.25-2	.215	5.46	X
PLASTI-GRIP Terminals		8	7	.377	9.58	X

FULLY-INSULATED TERMINALS

		Wire Range AWG	Wire Range mm²	Max. Insul.	Max. Dia.	Battery Tools Powered
Ultra-Fast Plus FASTON Receptacles		22-18	0.3-0.8	.135	3.43	X
		16-14	1.25-2	.160	4.06	X
Ultra-Fast FASTON Tabs and Receptacles		22-18	0.3-0.8	.230	5.84	X
		16-14	1.25-2	.260	6.60	X

Tooling-to-Terminal Cross Reference

OPEN BARREL TERMINALS		Style	Wire Range AWG	Wire Range mm²	Max Insul.	Max Dia.	Battery Tools Powered
AMPLIMITE D-Sub. Connectors		Size 20 DF Contacts	28-24	0.08-0.2	.040	1.02	X
			24-20	0.2-0.5	.060	1.52	X
		Size 22 DF Contacts	28-22	0.08-0.3	.040	1.02	X
AMPMODU Connectors		Mod. IV Contacts	26-22	0.12-0.3	.061	1.55	X
			24-20	0.2-0.5	.069	1.75	X
		Locking Clip Contacts	26-22	0.12-0.3	.062	1.58	X
		MTE & Tandem Spring Contacts	32-28	0.03-0.08	.054	1.37	X
			26-22	0.12-0.3	.065	1.65	X
		Short Point Contacts	32-22	0.03-0.3	.060	1.52	X
			24-20	0.2-0.5	.060	1.52	X
CPC Connectors, M Series Connectors		Type II Contacts	28-24	0.08-0.2	.055	1.40	X
			24-20	0.2-0.6	.062	1.57	X
			18-16	0.8-1.4	—	—	X
			14	2	—	—	X
		Type III+ Contacts	30-26	0.05-0.15	.060	1.52	X
			26-24	0.12-0.2	.055	1.40	X
			24-20	0.2-0.6	.080	2.03	X
			24-20	0.2-0.6	.100	2.54	X
			24-20	0.2-0.6	.120	3.05	X
			18-16	0.8-1.25	.100	2.54	X
			18-14	0.8-2	.100	2.54	X
		Type XII Contacts	16	1.25	.160	4.06	X
			14-12	2-3	.160	4.06	X
			10-8	5-7	.220	5.59	X
FASTON Straight Receptacles (Premier Line Only)		250 Series	22-18	0.3-0.8	.130	3.30	X
			18-14	0.8-2	.170	4.32	X
			14-10	2-5	.200	5.08	X
MATE-N-LOK Connectors		Commercial Contacts	30-22	0.05-0.3	.075	1.91	X
			24-18	0.2-0.8	.100	2.54	X
			20-14	0.5-2	.130	3.30	X
		Universal & Universal II Contacts	24-18	0.2-0.8	.100	2.54	X
			20-14	0.5-2	.130	3.30	X
			20-18	0.5-0.8	.200	5.08	X
			16-14	1.25-2	.200	5.08	X
		Mini-Universal	20-16	0.5-1.25	.126	3.20	X
		Mini-Universal II Contacts	26-22	0.12-0.3	.069	1.75	X
			22-18	0.3-0.8	.094	2.39	X
			20-16	0.5-1.25	.126	3.20	X
Power Triple Lock Connectors		Power Triple Lock	22-20	0.3-0.6	.106	2.70	X
			20-16	0.6-1.25	.130	3.30	X
			18-14	0.9-2.1	.146	3.70	X
			12	3.3	.167	4.25	X

Let's Connect

To learn more about the right TE tooling for your needs, call us at 717-810-2082 or email ToolingSales@te.com

TE Technical Support Center

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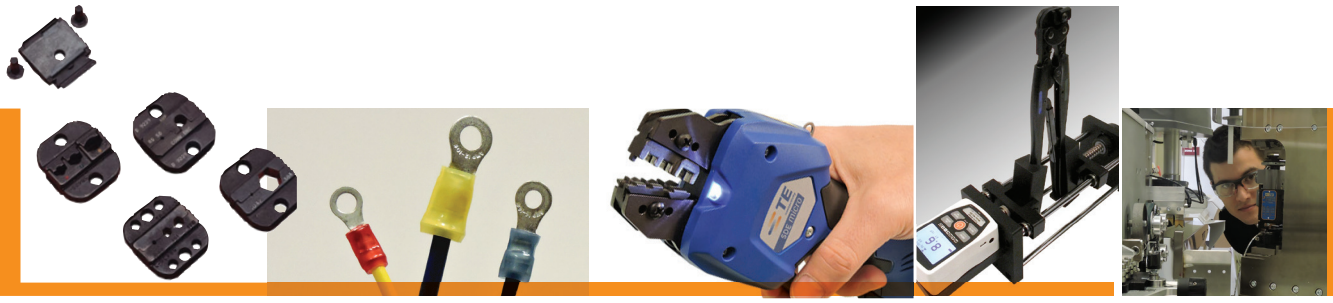
Mexico:	+52.55.1106.0800	Netherlands:	+31.73.624.6999
Latin/S. America	+54.11.4733.2200	China:	+86.400.820.6015
Germany:	+49.6151.607.1999		



Use SDE to Step Up Production

If your production needs require faster output consider maximizing the power of the SDE die sets found in your Lithium-Ion powered battery hand tools. With an SDE benchtop unit you can quickly transfer the SDE die sets you are already using into our SDE electric bench terminator or our AT-SC MK II pneumatic safety crimping machine, thereby speeding up your production capacity whenever you need it. For purchasing or leasing options go to Tooling.te.com and search for part number **1490076-2 and 1-528050-0.**

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

Connect with us today to learn more.

- E-mail: fieldservicesnorthamerica@te.com
- Phone: **800-722-1111 or 717-986-3434**
- For additional information download catalog **#1-1307619-0** from Tooling.te.com.

tooling.te.com