SDE Standard Die Envelope Crimp Tooling

Standardize Your Crimp Tooling

TE connectivity

Standard Die Envelope Crimp Tooling

SDE (standard die envelope) 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 ideally suited for R & D, networking applications and on-site maintenance work.

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

Featuring:

- User-adjustable ratchet control for a complete crimping cycle
- Emergency ratchet release
- Angled head, providing a comfortable hand and wrist position
- Over 100 interchangeable SDE die sets for crimp a broad range of connectors
- Able to handle multiple wire and terminal sizes in one die set

SDE SA Hand Tool
Part No. 9-1478240-0 (frame only)

The unique geometry of this tool results in a comfortable, easy-to-use handle design that is unmatched in the market.

- Large crimp jaw arc, minimizing "roll" in open barrel applications
- Easy accessibility for space-constrained applications
- User-adjustable ratchet control and emergency ratchet release

SDE DA Hand Tool
Part No. 1213745-1 (frame only)

This tool is specifically designed for closed barrel SDE dies. It incorporates all the convenient operational features of the SDE family.

- Excellent mechanical advantage, enhancing user comfort
- Adjustable ratchet with emergency release

Need More Information? **www.tooling.te.com**

Catalog 1773379-1
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PRO-CRIMPER III Hand Tool, Part No. 354940-1 (frame only)

Put it to work in the lab, factory, or field. The PRO-CRIMPER III Hand Tool is ideally suited for R&D prototyping, networking applications, and commercial, industrial, and institutional maintenance work.

- Enhanced ergonomics, with a thin, comfortable handle profile
- Manufactured with precision stamping that permits close tolerance controls on critical parts, for better performance and repeatability
- Improved tool geometry for a longer life, stronger tool frame
- Fits industry's largest selection of crimp die options

PRO-CRIMPER Hand Tool Kits

RE Connectivity specialty hand tools are available in convenient kits that contain the tooling, terminations, and spare parts you need for your crimping operations.

PRO-CRIMPER III Hand Tool PIDG and PLASTI-GRIP Terminal Kit, Part No. 55823-1

Includes hand tool (Part No. 58433-3), 225 insulated ring and spade terminals in 12-10, 16-14 and 22-16 AWG [3.0-5.0, 1.3-2.0 and 0.3-1.3 mm^2] wire sizes.

BNC Premises Wiring Kit, Part No. 58477-1

Includes hand tool (Part No. 58433-1); plugs—5 RG-58, 10 RG-59/62, 5 RG-58 plenum and RG-59/62 plenum sizes; adapters—2 jack-to-jack and 2 "T".

Carrying Case (Empty), Part No. 679223-1

Includes two empty storage boxes for die sets.

PRO-CRIMPER III Hand Tool Repair Kit, Part No. 679221-1

Includes retaining rings, handle return spring, pawl spring, pivot pins, pawl pin, ratchet pawl, die pins, nut and die set screws.

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For drawings or technical data, contact your TE Connectivity sales engineer or call the Technical Support Center: 1-800-522-6752. Dimensions are in millimeters unless specified otherwise. Values in brackets are English equivalents unless specified otherwise. Specifications subject to change. Consult TE Connectivity for latest specifications.

BT 3500 Battery-Hydraulic Hand Tool
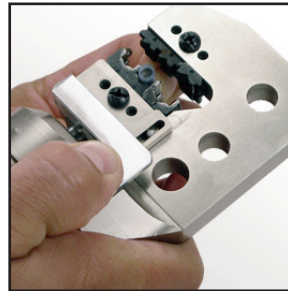*More than a ton of portable power in your hand*

The BT 3500 Battery-Hydraulic Hand Tool Kit provides the ultimate in flexibility, modularity, and powered efficiency in a powerful crimp unit powered by a superior Lithium-ion Battery.

- Highly Portable, Lightweight
- Ergonomic
- Approx. 250 crimps per charge
- New 'quick take-up' feature
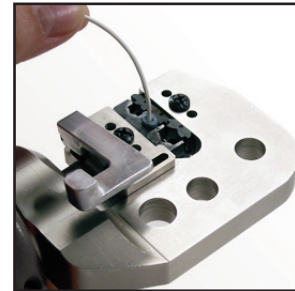- Compatible with CERTI-CRIMP II heads, SDE Closed Heads and SDE C-Heads
- Generates up to 3500 lbs of crimp force

Request catalog 1773381-5 for more information.

- **Red Pressure Release Button**
- **Knurled Reset Tool is specially threaded and removable**

BT 3500 with the NEW "quick take-up" terminal retention feature

Options

4-point Harness (for use with Padded Belt)	Shoulder Strap	Belt	Shoulder Strap with Case

Need More Information? **www.tooling.te.com**

Catalog 1773379-1
Revised 07-2014

Lithium-Ion Battery-Powered Crimp Tool Kits
Completely Portable Power Crimping

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

Product Facts

- Maximum wire size depending on terminal type:
  10 AWG (3,500 lb tool),
  4 AWG (8,000 lb tool)

- Completely portable —
  Over 150 crimps per charge (3,500 lb tool),
  Over 85 crimps per charge (8,000 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

- Kit includes tool, 2 batteries, charger, case

- Lithium-Ion batteries - no memory effects

- 20 minute charging time

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

* Makita is a trademark.

The USB Adapter Module can be used to download crimp cycle information to a computer.

Catalog 1773379-1
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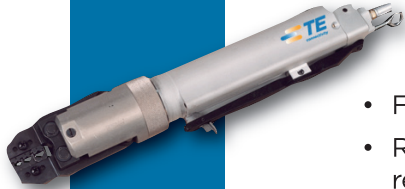
SDE Electric Terminator, Part No. 1490076-2

This small benchtop power unit is well suited for low- to medium-volume bench production and harness assembly operations.

- Terminates wires to 10 AWG [6 mm^2]
- Compact footprint to fit into tight production spaces: 390 x 260 x 200 mm [15.5 x 10 x 8 in]
- Foot-actuated, including a jog cycle; crimp height adjustment
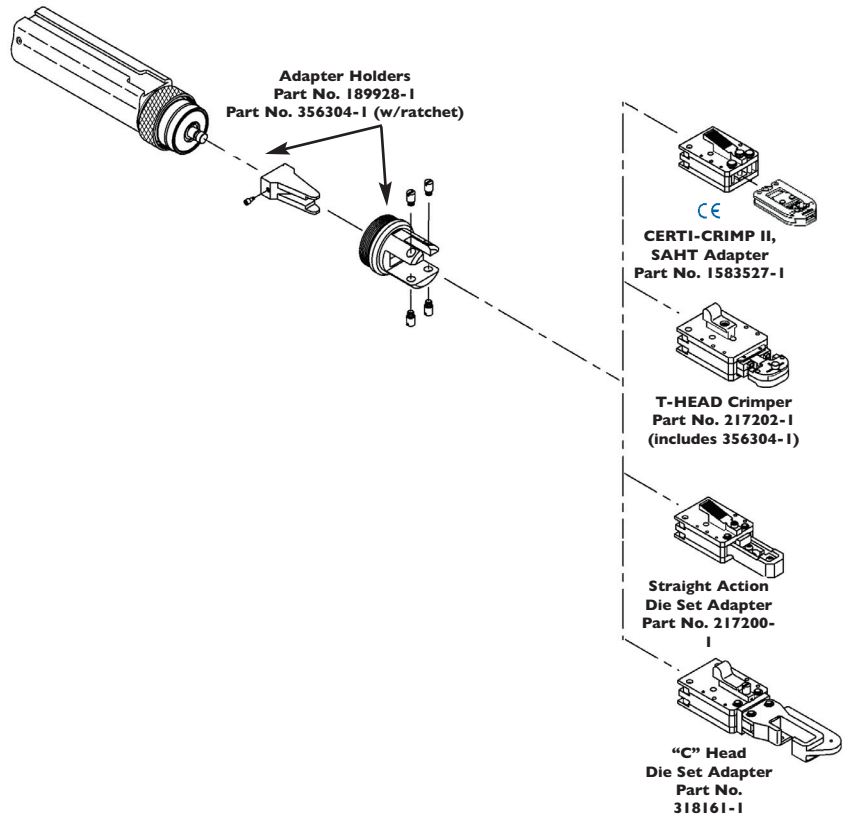- Models available for 110 V or 220 V

Request catalog 1654714 for more information.

6-26 Pneumatic Tool System

Replacing manual hand tools with the 626 Pneumatic Tool System maximizes productivity and minimizes effort. This system makes it easier to terminate wires from 26-6 AWG [0.12-13 mm^2], while continuing to use most, if not all, existing TE-compatible crimp heads and die sets. **Request catalog 124208 for more information.**

- Flexible for hand- or foot-switch operations
- Rotating head assembly reaches difficult termination locations
- Lightweight tool eliminates pysical force required by hand tools
- Termination wire range from 26-6 AWG [0.12-13.0mm^2], plus coaxial and fiber optic cable
- Works with existing TE-compatible crimp heads and die sets
- Ratchet control option provides complete crimp cycle, eliminating partial crimps

Adapter Holders
Part No. 189928-1
Part No. 356304-1 (w/ratchet)

CERTI-CRIMP II,
SAHT Adapter
Part No. 1583527-1

T-HEAD Crimper
Part No. 217202-1
(includes 356304-1)

Straight Action
Die Set Adapter
Part No. 217200-1

"C" Head
Die Set Adapter
Part No. 318161-1

Need More Information?   **www.tooling.te.com**

Customized Hand Tool Kits

In addition to providing standard kits, TE Connectivity is also able to provide custom kits for volume requirements containing only tools, or a combinations of tools, dies and terminals tailored to your specific requirements.

The kit shown is an example designed specifically for the Automotive Industry. However, we can also provide kits for promotion and product support as well as application support and repair.

The flexibility in creation of these individual kits enable the customer to control and ensure quality.

Advantages

- Portability
- Customization
- Cost effectiveness
- OEM personalization
- Flexibility in the factory as well as in service and repair garages
- Consist of well-proven hand tools and dies as well as accessories matched to special applications
- A selection of sample terminals enables the technician to start work immediately

Catalog 1773379-1
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Connector/Terminal-to-Tool Reference

Product Family	Catalog Number[1]	TE® Product	RG/U Cable[2] Wire Size	Termination Type/Style	P/N 354940-1 with SDE Die Set	SDE Die Set Only
Coaxial Connectors	82074	50 Ohm BNC and TNC	RD 316, 180, 195, Belden 8218	"O"/Commercial	—	58539-1[S]
			58, 62, 59	"O"/Commercial	58433-1	58435-1[S]
			58, 62, 59	Hex/Commercial	58433-2	58436-1[S]
			Belden 9248, 9114	"O"/Commercial	—	58539-1[S]
			174, 188, 316, 179, 161, 187	"O"/Commercial	318450-1	318450-2[P]
			62, 59	"O"/Commercial	—	58435-1[S]
		50 Ohm BNC	Belden 9907, 89907, Comm/Scope 2104	"O"/Commercial	318452-1	318452-2[P]
			174, 188, 316, 179, 161, 187	Hex/Commercial	—	58436-3[S]
			62, 59, Belden 9104, 9112	"O"/Commercial & Military	—	58537-1[S]
			Belden 8281, 9141	Hex/Commercial	—	58436-2[S]
			Belden 8281, 9141	"O"/Commercial & Military	—	58538-1[S]
			180, 195, Belden 8218, 9248, 9114	"O"/Commercial	—	58539-1[S]
			58	"O"/Military	—	220189-3[S]
		75 Ohm BNC and TNC	62, 59	"O"/Commercial	—	58536-1[S]
			6, Belden 8281	"O"/Commercial	—	58538-1[S]
		75 Ohm BNC	179, 161, 187	"O"/Commercial	318451-1	318451-2[P]
			179, 161, 187	Hex/Commercial	58531-2	58425-2[S]
			62, 59	Hex/Commercial	58531-1	58425-1[S]
			Double Braid 59, Belden 8281, 9141	Hex/Commercial	58531-3	58425-3[S]
			Belden 9248, 9114	"O"/Commercial	—	58536-1[S]
			Belden 8218	"O"/Commercial	—	58174-1[S]
		50 and 75 Ohm BNC	6, Belden 8281	"O"/Commercial	—	58538-1[S]
		50 Ohm N	58, 62, 59	Hex/Commercial	58433-2	58436-1[S]
			8, 213, 11, 216, 9, 214	Hex/Commercial	58501-1	58485-1[S]
		Miniature UHF	58	Dual Crimp	58506-3	220196-1[S]
		50 Ohm SMB	174, 316, 188, 179, 161, 187, RD 316, 188 Double Braid	Hex/Commercial	58500-1	58489-1[S]
				Hex/Military	58499-1	58483-1[S]
			178, 196, 174, 316, 188, 179, 161, 187	Hex/Commercial	—	58046-1[S]
		50 and 75 Ohm Consumer BNC	58, 62, 59	"F" / "O"	58558-1	58558-2[S]
			174, 316, 188, 179, 161, 187	"F" / "O"	58559-1	58559-2[S]
		Series F CATV Plugs	58, 6, 7 6.6, 8.2, 9.8 [0.259, 0.324, 0.384] Dia.	Hex/Commercial	58621-1	58621-2[S]
			59, 6, 7 7.4, 8.7 [0.290, 0.343] Dia.	Hex/Commercial	58622-1	58622-2[S]
			59, 6 9.1 [0.360] Dia.	Hex/Commercial	58663-1	58663-2[S]
		Braid-Pic Braid Termination	58, 62, 59	—	—	220195-1[S]
Terminals And Splices	82042	Insulated Terminals and Splices (PIDG and PLASTI-GRIP)	22-16 AWG [0.3-1.3 mm²]	—	58433-3[3]	58423-1[3,S]
			16-14 AWG [1.3-2.0 mm²]			
			12-10 AWG [3.0-5.0 mm²]			
	65505	Uninsulated Terminals and Splices (SOLISTRAND)	22-10 AWG [0.3-5.0 mm²]	—	58546-1	58545-1[S]
	65472	Closed End Splices	ECV-ECN 18-16 AWG [0.8-1.3 mm²]	—	217212-1	217212-2[P]
			ECN 18-10 AWG [0.8-5.0 mm²]			
			ECV-ECN 18-10 AWG [0.8-5.0 mm²]			
		Spare Wire Caps	0.048-0.225 [1.22-5.72] Ins. Dia.	—	58573-1	—
Receptacles and Tabs	82004	FASTON 250 Series Recpt.	18-14 AWG [0.8-2.0 mm²]	—	58524-1	58524-2[P]
			14-10 AWG [2.0-5.0 mm²]	—	58525-1	58525-2[P]
		Ultra-Fast FASTON (Straight) 0.110/0.125 in. Recpt. 0.187/0.250 in. Recpt. 0.250 in. Tabs	26-14 AWG [0.13-2.0 mm²]	—	58628-1	58628-2[P]
		0.250 in. Recpt.	12-10 AWG [3.0-5.0 mm²]	—	58630-1	58630-2[P]

[1] Request catalog for detailed product information.

[2] Coaxial cable of similar size can be crimped. Request Catalog 82074 for a complete listing of possible cable sizes.

[3] Not for use with PIDG FASTON receptacles; crimp not approved by UL or CSA.

P. Pin Die

S. Shoulder Die

Need More Information? **www.tooling.te.com**

Product Family	Catalog Number	TE® Product		Cable or Wire Size	Part Number	
					P/N 354940-1 with SDE Die Set	SDE Die Set Only
Fiber Optic Connectors	82164 and 296355	FSMA and ST-Style (S.S.) Connectors (504XXX Series only)		3.0 mm Jacket Dia.	58551-1*	58552-1S
		ST-Style, FC Type, D4 and AMP® SC Connectors		3.0 mm Jacket Dia.	58433-4*	58424-1S
		ST-Style (Ceramic) Connectors		3.8 mm Jacket Dia.	—*	503890-1
		FC Type and AMP® SC Connectors (Next Generation)		3.0 mm Jacket Dia.	503911-1**	503910-1S
		FSD, FSD MC and RSD Connectors; FSD Breakout Kit		DUALAN and LDD	58519-1*	58510-1S
		LightCrimp XTC Connectors Ceramic/Polymer/S.S.)		3.0 mm Jacket Dia.	492623-1*	492622-1
		LightCrimp SC (Ceramic) Connectors		3.0 mm Jacket Dia.	503699-1*	503698-1
	1307099	LightCrimp Plus	ST-Style	3.0 mm Jacket Dia.	492623-1***	492622-1
			AMP® SC	3.0 mm Jacket Dia.	492782-1***	492783-1
	—	Multimate Contacts		1 mm Plastic Fiber, 2.2 mm Jacket Dia.	217211-1	217211-2P
Pin and Socket Connectors	82068	D-Subminiature 20 DF Pin and Socket Contacts (AMPLIMITE)		28-24 AWG [0.08-0.2 mm²]	58448-2	58448-3P
				24-20 AWG [0.2-0.6 mm²]		
		D-Subminiature 22 DF Pin and Socket Contacts (AMPLIMITE)		28-22 AWG [0.08-0.3 mm²]	90800-1	90800-2P
		Type II Pin and Socket Contacts		24-14 AWG [0.2-2.0 mm²]	58541-1	58541-2P
		Type III+ and Type VI Pin and Socket Contacts		28-24 AWG [0.08-0.2 mm²]	58495-1	58495-2P
				24-20 AWG [0.2-0.6 mm²]		
				18-16 AWG [0.8-1.4 mm²]		
	82181	0.093 Soft Shell Commercial Pin and Socket Contacts		24-18 AWG [0.2-0.9 mm²]	90872-1	90872-2P
				20-14 AWG [0.6-2.0 mm²]	90871-1	90871-2P
		0.062 Soft Shell Commercial Pin and Socket Contacts		30-24 AWG [0.05-0.2 mm²]	90870-1	90870-2P
				24-18 AWG [0.2-0.9 mm²]	90869-1	90869-2P
		MR Pin and Socket Contacts		26-18 AWG [0.13-0.9 mm²]	58514-1	58514-2P
		Universal MATE-N-LOK II and Universal MATE-N-LOK Pin and Socket Contacts		24-18 AWG [0.2-0.9 mm²]	90548-1	90548-2P
				20-14 AWG [0.6-2.0 mm²] 1.52-3.30 [0.060-0.130] Ins. Dia.	90546-1	90546-2P
				20-14 AWG [0.6-2.0 mm²] 3.30-5.08 [0.130-0.200] Ins. Dia.	90547-1	90547-2P
				12-10 AWG [3-5 mm²]	58530-1	58530-2P
		Mini-Universal MATE-N-LOK Pin and Socket Contacts		26-22 AWG [0.13-0.3 mm²]	90758-1	90758-2P
				22-18 AWG [0.3-0.9 mm²] or Two 22 AWG	90759-1	90759-2P
				20-16 AWG [0.6-1.4 mm²] or Two 20 AWG	90760-1	90760-2P
		Commercial MATE-N-LOK Pin and Socket Contacts		24-18 AWG [0.2-0.9 mm²]	90574-1	90574-2P
				20-14 AWG [0.6-2.0 mm²]	90575-1	90575-2P
Receptacle and Tab Connectors	—	Dynamic Series D-3 Contacts		24-20 AWG [0.2-0.56 mm²]	90683-1	90683-2P
				20-16 AWG [0.5-1.42 mm²]	90684-1	90684-2P
	—	CST-100 Contacts		26-22 AWG [0.13-0.3 mm²]	58517-1	58517-2P
	65481	AMPSEAL Automotive Receptacles		20-16 AWG [0.5-1.25 mm²]	58529-1	58529-2P
		AMP SUPERSEAL 1.5 SERIES Contacts		0.5-1.5 mm²	58583-1	58583-2P
	124962	EI Series Receptacle Contacts		26-20 AWG [0.13-0.6 mm²]	58548-1	—
		Universal Power Contacts		26-16 AWG [0.13-1.4 mm²]	58564-1	—
Modular Plugs	82066	Modular Plugs (10 Pos.)		28-24 AWG [0.08-0.2 mm²]†	58560-1	58560-2P
		Modular Plug Strain Relief		5.08 [0.200] Max. Ins. Dia.	—	852681-1S
PC Card Connectors	65701	INFOPORT Series III Shield Kit		3.43-3.81 [0.135-0.150] Ins. Dia.	224933-1	224933-2P
Universal Data Connector Kits	82164	AMP® Crimp Ring		Type 1, 2, 6, 9 and MONTROSE	—	58450-1S

Request catalog for detailed product information.

† Terminates cable with 24 AWG [0.2 mm²] conductors with 0.039 [0.99] Max. O.D.

* Tool Frame Part No. 58532-1.

** Tool Frame Part No. 58588-1.

*** Tool Frame Part No. 58532-2.

P. Pin Die

S. Shoulder Die

Need More Information? **www.tooling.te.com**

Specialty Hand Tools and Accessories

Non-TE Crimp Applications

Connector/Terminal-to-Tool Reference				
			Part Number	
Manufacturer	Terminal	Wire Size	P/N 354940-1 with SDE Die Set	SDE Die Set Only
T&B	Sta-Kon Nylon and Vinyl Insulated Terminal and Splices	22-10 AWG [0.3-5.0 mm²]	58433-3	58423-1
	Sta-Kon Uninsulated Terminals and Splices	22-10 AWG [0.3-5.0 mm²]	58546-1	58545-1
Panduit	Pan-Term Nylon and Vinyl Insulated Terminals and Splices	22-10 AWG [0.3-5.0 mm²]	58433-3	58423-1
	Pan-Term Uninsulated Terminals and Splices	22-10 AWG [0.3-5.0 mm²]	58546-1	58545-1
Molex	Insulkrimp Vinyl Insulated Terminals and Splices	22-10 AWG [0.3-5.0 mm²]	58433-3	58423-1
	Avikrimp Nylon Insulated Terminals and Splices	22-10 AWG [0.3-5.0 mm²]	58433-3	58423-1
	Versakrimp Uninsulated Terminal and Splices	22-10 AWG [0.3-5.0 mm²]	58546-1	58545-1
	20 DF Sub-D	28-20 AWG [0.08-0.5 mm²]	58448-2	58448-3
	.062 Dia.	24-18 AWG [0.2-0.8 mm²]	90869-1	90869-2
		30-24 AWG [0.05-0.2 mm²]	90870-1	90870-2
	.093 Dia.	20-14 AWG [0.5-2 mm²]	90871-1	90871-2
		24-18 AWG [0.2-0.8 mm²]	90872-1	90872-2

Note: All terminals are crimped to UL 486 tensile requirements.

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Specialty Hand Tools and Accessories

Premium SDE Dies used in combination with the proper connectors, meet all applicable TE Connectivity termination and performance requirements.

Part No.[1]	Description
91900-1[S]	Fiber Optic
91901-1[S]	BNC RG 55B
91902-1[P]	N Series RG 141
91903-1[S]	TNC RG 59
91904-1[S]	Coax RG 187
91904-2[S]	Coax RG 59,62
91904-3[S]	Coax RG 55
91904-4[S]	Coax RG 58
91905-1[S]	ARINC 3 crimp
91907-1[P]	ARINC #8 Triax
91908-1[P]	SMA RG 188, 58
91909-1[P]	BNC Coax
91910-1[P]	Coax RG 187
91911-1[S]	Coax RG 187
91911-2[S]	Coax RG 180
91911-3[S]	Coax
91911-4[S]	Coax
91912-1[P]	Coax
91912-3[P]	Mini Coax
91912-5[P]	Mini Coax

Part No.[1]	Description
220189-1[S]	Comm BNC, RG 58
220189-2[S]	Comm BNC, RG 59
220189-3[S]	Comm BNC
1424050-1[P]	BNC
91963-2[2, P]	Premium PIDG Die Assy, 16-14 AWG (Same as crimp form in 47387)
91964-2[2, P]	Premium PIDG Die Assy, 22-16 AWG (Same as crimp form in 47386)
91965-2[2, P]	Premium PIDG Die Assy, 12-10 AWG (Same as crimp form in 59239-4)

1. Premium coax SDE die set only. Requires additional hand tool or power source.
2. These die options provide the same crimp profiles as those provided in our CERTI-CRIMP hand tool line and include adjustable insulation. The CERTI-CRIMP options have attained MIL-T-7928 qualification, when used with the correct terminals.
P. Pin Die
S. Shoulder Die

Custom Tooling — If What You Need Isn't in Our Catalog

While we offer die sets for thousands of terminal and wire combinations, in most cases our engineering capability allows us to create a custom die set to meet your specific requirements, with the same high quality as our standard products. You can take advantage of the same portability across platforms with the custom die sets as for a standard die set. And since we know that custom requirements often arise during the prototyping stage of your product development, a time when you can't afford to wait for normal engineering cycles for custom tooling, we've set up a special rapid response program.

Take advantage of this service. Talk to us with your non-standard tooling requirements. Sometimes we can even point you to an existing solution. If not, we'll find a way to get you back on your prototype or production path. Just fill out a custom order form, and give it to your local TE sales person or e-mail to TETooling@te.com. You can find the form at tooling.te.com/hand_tool.asp under SDE Standard Die Envelope.

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tooling.te.com

Disclaimer

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The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.