



Aerospace Tooling and Equipment

Aerospace Tooling and Equipment

Tyco Electronics' Global Application Tooling Division (GATD) is dedicated to providing high quality equipment options to meet all levels of our connector products specifications. We are also able to provide a broad range of equipment for other manufacturer's products.

Equipment is segregated into two types and managed accordingly:

Generic Equipment

Where we can supply you with sufficient information referenced by Part Number such that you can identify and order what you need yourself.

Specialised Equipment

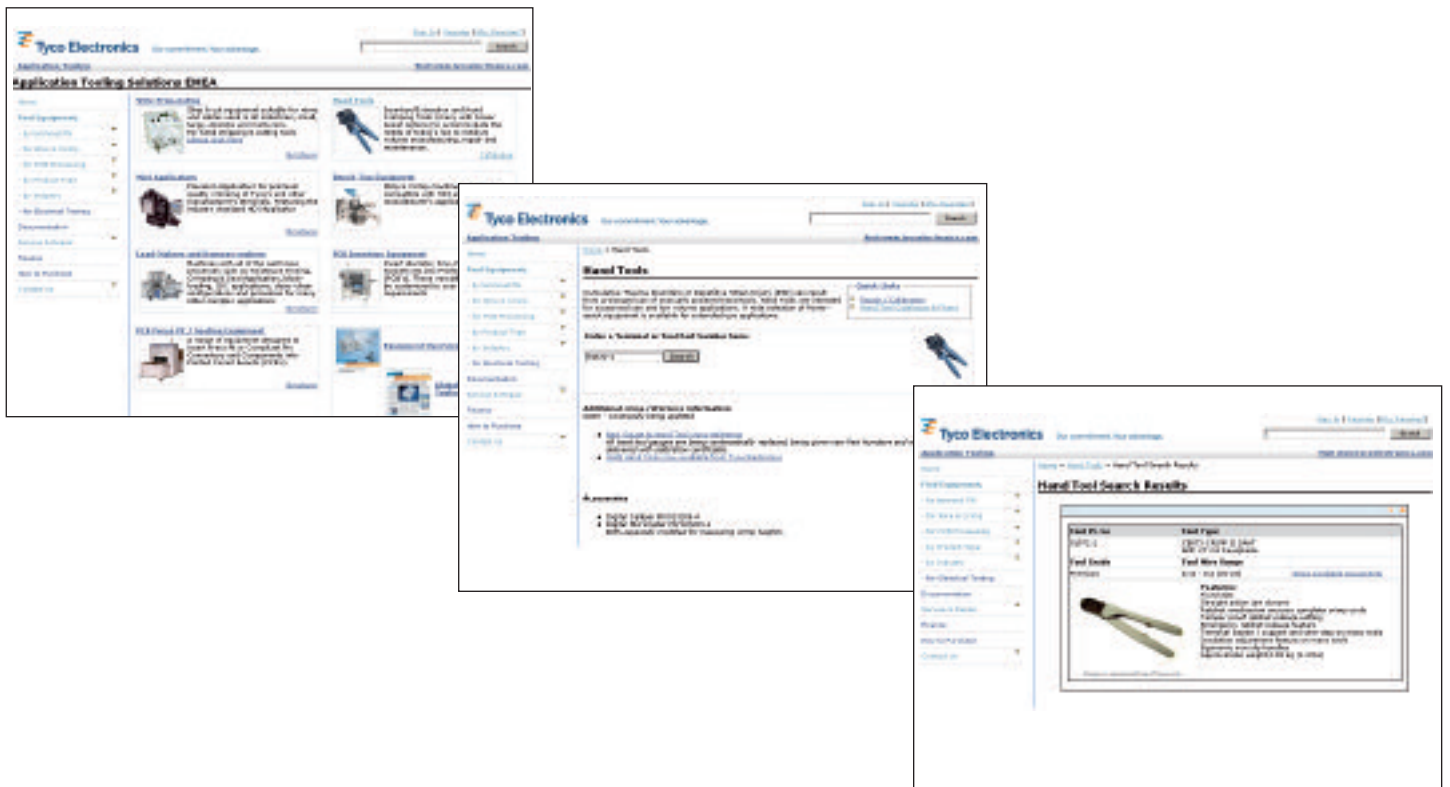
Where you will need help from our specialist product managers to identify what's just right for your application.

Finding Equipment online

www.tooling.tycoelectronics.com/europe – a dedicated European Tooling Website with:

- Powerful searches to find generic equipment options (Hand Tools / Applicators)
- Brochures and more detailed flyers for the specialised equipment along with local contact information.

It's quick, easy and more importantly the latest and most up to date information is available online.




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1 Crimping Equipment

1.1 Tooling available by Product Family

Insulated Terminals

Connector/ Terminal	Style	Wire Range (AWG)	Hand Tools		Power Tools					
			Premium CERTI-CRIMP and CERTI-CRIMP II	SDE Premium Dies	Battery Tool 1.5 t	Battery Tool 4 t	Hydraulic Equipment	626 Pneumatic Tool	Electric Terminator	
			Section 1.2	Section 1.3	Section 1.5	Section 1.5	Section 1.6	Section 1.5	Sections 1.3, 1.5	
										
PIDG	Terminals and Splices	26 to 24	X		X			X		
		22 to 18	X	X	X			X	X	
		16	X	X	X			X		
		14	X	X	X			X	X	
		12 to 10	X	X		X		X	X	
	Terminals and Splices (Radiation resistant)	24 to 14	X		X					
		12 to 10	X			X				
	Terminals and Splices (Insulation restricting nylon)	26 to 14	X		X					
		12 to 10	X			X				
	Spare Wire caps	22 to 14	X		X					
12 to 10		X			X					
PLASTI-GRIP	Splices	26 to 24	X		X					
		22 to 14	X		X			X		
		12 to 10	X			X				
		8	X			X				
	Terminals	26 to 24	X		X			X		
		22 to 14	X	X	X			X	X	
		12 to 10	X	X		X		X	X	
		8	X			X		X		
	Terminals and Splices	6				X				
		4 to 4/0								
PIDG STRATO-THERM with TEFLON or PEEK Insulation	Terminals	24 to 16	X		X			X	X	
		14	X		X			X	X	
		12 to 10	X			X		X	X	
TERMINYL	Terminals and Splices	8						X		
		6				X				
		4 to 4/0								
AMPLI-BOND		8	X			X				
		6 to 4/0								

TEFLON is a trademark of E.I. DuPont deNemours and Co.

Un-Insulated Terminals

Connector/ Terminal	Style	Wire Range (AWG)	Hand Tools		Power Tools				
			Premium CERTI-CRIMP and CERTI-CRIMP II	SDE Premium Dies	Battery Tool 1.5 t	Battery Tool 4 t	Hydraulic Equipment	626 Pneumatic Tool	Electric Terminator
			Section 1.2	Section 1.3	Section 1.5	Section 1.5	Section 1.6	Section 1.5	Sections 1.3, 1.5
SOLISTRAND	Terminals & Splices	26 to 24	X		X				
		22 to 18	X		X			X	
		12 to 10	X			X		X	
		8 to 6				X	X	X	
		4 to 2					X		
		0 to 600 MCM					X		
COPALUM		16 to 10						X	
		8					X	X	
		6 to 500 MCM					X		
STRATO-THERM	Terminals (with and without insulation support)	22 to 14	X		X			X	
		12 to 10	X			X		X	
		8 to 2/0					X		
TERMI-FOIL		8						X	
AMPOWER		1/0 to 1500 MCM					X		

Contacts

Connector/ Terminal	Style	Wire Range (AWG)	Hand Tools			Power Tools				
			Premium CERTI-CRIMP and CERTI-CRIMP II	SDE Premium Dies	MIL Indent Tooling	Battery Tool 1.5 t	Battery Tool 4 t	Hydraulic Equipment	626 Pneumatic Tool	Electric Terminator
			Section 1.2	Section 1.3	Section 1.4	Section 1.5.1	Section 1.5	Section 1.6	Section 1.5	Sections 1.3, 1.5
Screw-machined Contacts					X					
AMPLIMITE D-SUB	Size 22 DF	28 to 22	X						X	
	Size 20 DF	28 to 20	X			X			X	X
AMPMODU	AMPMODU IV	26 to 20	X			X			X	X
	Locking Clip	26 to 22	X			X			X	X
	Mini Tandem Spring	32 to 28	X			X			X	X
	MTE Pin	32 to 22	X			X			X	X
	Short Point	32 to 20	X			X			X	X
MATE-N-LOK	Commercial	30 to 14	X			X			X	X
	Universal	24 to 14	X			X			X	X
	Universal II	24 to 14	X			X			X	X
	Mini Universal	20 to 16	X			X			X	X
	Mini Universal II	26 to 16	X			X			X	X
MR Connector	Contacts	26 to 18	X			X			X	X
CPC	Type II		X			X			X	X
	Type III+	30 to 14	X			X			X	X

Coaxial Connectors

Connector/ Terminal	Style	Wire Range (AWG)	Hand Tools		Power Tools				
			Premium CERTI-CRIMP and CERTI-CRIMP II	SDE Premium Dies	Battery Tool 1.5 t	Battery Tool 4 t	Hydraulic Equipment	626 Pneumatic Tool	Electric Terminator
			Section 1.2	Section 1.3	Section 1.5	Section 1.5	Section 1.6	Section 1.5	Sections 1.3, 1.5
50 Ohm BNC		26 to 24		X	X			X	X
50 Ohm SMB		22 to 18		X	X			X	X

Raychem Splices

Connector/ Terminal	Style	Wire Range (AWG)	Hand Tools		Power Tools				
			Premium CERTI-CRIMP and CERTI-CRIMP II	SDE Premium Dies	Battery Tool 1.5 t	Battery Tool 4 t	Hydraulic Equipment	626 Pneumatic Tool	Electric Terminator
			Section 1.2	Section 1.3	Section 1.5	Section 1.5	Section 1.6	Section 1.5	Sections 1.3, 1.5
MiniSeal		26 to 12	X	X					
DuraSeal		26 to 12	X	X					

1.2 Premium CERTI-CRIMP and CERTI-CRIMP II Hand Tools

- Designed to exacting specifications
- Ratchet control provides complete crimping cycle
- For most military, UL and CSA applications
- Manufactured using the highest quality materials
- Requires minimum skill
- Repairable
- Calibrated; recalibration recommended every 6 months or 5,000 cycles
- Produced under a Quality Management System certified to ISO 9001



CERTI-CRIMP Hand Tools are top-of-the-line, premium, hand-operated tools for crimping a broad array of terminals, contacts and special wiring devices available from Tyco Electronics. They are designed to exacting specifications to produce consistent, high-quality terminations. A potential service life of over 50,000 cycles is possible, depending on operator care.

Other features include insulation crimp adjustment for different insulation thicknesses, a locator for properly positioning and supporting the terminal or contact in the tool, a wire stop, and color coding and/or wire size information on the head of the tool or on the handles.

All CERTI-CRIMP Hand Tools feature the reliable ratchet control. The ratchet will not release until the handles are fully closed and the dies bottomed. This helps eliminate partial crimps.

Calibration:

Recommended every 6 month or 5000 crimp cycles.
See section 1.9 of this catalogue for your nearest calibration centre.
Produced under a Quality Management System.
Certified to ISO 9001.

CERTI-CRIMP Hand Tools are well suited for low production runs, prototype work, and repairs almost any application requiring consistent, highly-reliable terminations.

CERTI-CRIMP Hand Tools are designed to meet all feature requirements listed on applicable Tyco Electronics Application Specifications.

(Check appropriate product catalogs for qualification to military specifications, UL recognition and CSA certification.)

Hand Tools



CERTI-CRIMP II Straight Action Hand Tools (SAHT)

- Dies close in a straight line
- Contact locator and support
- Wire stop
- Insulation crimp adjustment (4 positions)
- Ejects crimped contact
- Approx. weight 0.59 kg [1.3 lb]

Heads are compatible with:				
	Battery Kits	Micro Pneumatic	Pneumatic 6-26	Electric Terminator
Double Action HT	Yes	Yes	Yes	No
Heavy Head HT	Yes	No	Yes	No
CERTI-CRIMP II Straight Action HT	Yes	Yes	Yes	Yes
CERTI-CRIMP II Straight Action HT Large Die	Yes	No	Yes	Yes



Double Action Hand Tool (DAHT)

- Dies travel in arc-like path
- Locator on tools for FASTON, MATE-N-LOK, PIDG and PLASTI-GRIP terminals
- Insulation adjustment on tools for FASTON, MATE-N-LOK, PIDG and PLASTI-GRIP terminals
- Approx. weight 0.54 kg [1.2 lb]

Battery Tool for CERTI-CRIMP II, Straight Action (SAHT) and Double Action (DAHT)

- Light weight and fully mobile power assist option
- Compatible with all standard die sets



Heavy Head Hand Tool (HHHT)

- Designed to terminate most large coaxial cable and heavy-gage wire
- Dies close in a straight line
- Locator and wire stop when applicable
- Insulation adjustment on tools for AMPLI-BOND, PIDG and PLASTI-GRIP terminals
- Approx. weight 0.95 kg [2.1lb]

626 and Micro Pneumatic Tool for CERTI-CRIMP II, Straight Action (SAHT) and Double Action (DAHT)

- Effortless crimping for a broad range of terminals
- Either bench-mounted or handheld for working in cramped quarters



Premium CERTI-CRIMP and CERTI-CRIMP II Terminal to Tool Reference

Insulated Terminals		Sleeve	Wire Range		Insulation Range	Hand Tool Type and P/N	
Terminal Type	Style	Colour / Stripe	mm ²	AWG	Diameter [mm]	DAHT	
						HHHT	
PIDG	Terminals and Splices	Yellow	0.1-0.4	26-22	2.08 max	46121	
		White	0.16-0.65	24-20	2.54 max	47907-1	
		Red	0.26-0.96	22-18	3.18 max	47386	
		Green	0.5-1.42	20-16 HD	3.81 max	47387	
		Blue	1.04-2.62	16-14	4.32 max		
		Yellow / Black	1.04-2.62	16-14 HD	6.35 max	59239-4	
		Yellow	2.62-6.64	12-10			
	Terminals and Splices (Radiation Resistant)	Translucent / White	0.16-0.65	24-20	2.54 max	47907-1	
		Translucent / Red	0.26-0.96	22-18	3.18 max	47386	
		Translucent / Blue	1.04-2.62	16-14	4.32 max	47387	
		Translucent / Black	1.04-2.62	16-14 HD	6.35 max	59239-4	
		Translucent / Yellow	3.0-5.0	12-10			
	Terminals and Splices (Insulation Restricting Nylon)	Yellow / Black	0.15	26	0.66-1.4	46121	
		Yellow / Blue	0.24	24	0.79-1.4		
		Red / Green	0.38	22	0.97-1.4	47386	
		Red / Red	0.6	20	1.17-2.79		
		Red / White	0.96	18	1.42-2.79		
		Blue / Blue	1.42	16	1.6-3.3	47387	
		Blue / Green	2.15	14	1.98-3.3		
		Yellow / Yellow	3.37	12	2.41-5.08	59239-4	
		Yellow / Brown	6.11	10	3.02-5.08		
	Spare Wire Caps (Nylon)	Red	0.3-0.85	22-18	3.15 max	47386	
		Blue	1.4-2.0	16-14	3.78 max	47387	
		Yellow	3.0-6.0	12-10	5.33 max	59239-4	
	PLASTI-GRIP	Terminals & Butt Splice	Yellow	0.1-0.41	26-22	2.03 max	46121
		Butt Splice	Red	0.26-1.65	22-16	4.32 max	45160
		Parallel Splice					45449
		Butt Splice	Blue	1.04-2.62	16-14	5.46 max	45575-1
Parallel Splice		45450					
Butt Splice		Yellow	2.62-6.64	12-10	7.62 max	59489	
Parallel Splice				16-14 HD		59270	

Premium CERTI-CRIMP and CERTI-CRIMP II Terminal to Tool Reference

Insulated Terminals		Sleeve	Wire Range		Insulation Range	Hand Tool Type and P/N
Terminal Type	Style	Colour / Stripe	mm ²	AWG	Diameter [mm]	
						DAHT
						HHHT
						CERTI-CRIMP II
PLASTI-GRIP	Terminals	Red	0.26-1.65	22-16	5.08 max	47386
		Blue	1.04-2.62	16-14	6.35 max	47387
		Yellow	2.62-6.64	12-10	7.62 max	59239-4
	Butt Splice	Red	6.64-10.5	8	9.14 max	69959
AMPLI-BOND	Red	6.35 max				
		Red			9.58 max	
PIDG STRATO-THERM with PTFE or PEEK Insulation	Terminals (thin-wall insulation)	Brown	0.25-0.4	24-22	0.89-1.9	576778
		Grey	0.6	20	1.14-2.03	576779
		Brown	0.25-0.4	24-22	0.89-1.9	1901611-1
		Grey	0.6	20	1.14-2.03	
		Orange	1.0	18	1.4-2.67	576780
			1.2	16		576781
			1.0-1.2	18-16		1901600-1
		Beige	2.0	14	2.3-3.18	576782
			3.0	12		576783
		Black	5.0	10	2.6-5.44	576784

Uninsulated Terminals - no insulation support		Wire Range		Hand Tool Type and P/N
Terminal Type	Terminal Style	mm ²	AWG	
				DAHT
				HHHT
SOLISTRAND	Terminals and Splices (except Flat Tongue Terminals)	0.1-0.41	26-22	69363
		0.2-0.6	24-20	
		0.26-1.65	22-16	49935
		1.04-2.62	16-14	
		2.62-6.64	12-10	
		1.65-4.17	14-12	49592
		6.64-10.50	8	69355

For Battery Tool Kit with Adapter for CERTI-CRIMP II options see Section 1.5

Premium CERTI-CRIMP and CERTI-CRIMP II Terminal to Tool Reference

Terminals		Wire Range		Insulation Range	Hand Tool Type and P/N
Terminal Type	Terminal Style	mm ²	AWG	Diameter [mm]	CERTI-CRIMP II
AMPLIMITE D-Sub	Size 20 DF	0.08-0.24	28-24	0.76-1.00	91503-1
		0.2-0.6	24-20	1.27-1.52	
	Size 22 DF	0.09-0.15	28-26	0.76-1.27	91520-1
		0.2-0.39	24-22		
AMPMODU	MODU IV	0.12-0.24	26-24	1.02-1.52	91517-1
		1.32-0.38	22		
		0.12-0.51	26-20	1.22 max	91516-1
		0.2-0.6	24-20	1.75 max	
	Locking Clip	0.12-0.38	26-22	0.97-1.57	91533-1
	Mini TANDEM SPRING Receptacle MTE Pin	0.03-0.09	32-28	1.52-0.64	1901786-1
	SHORT POINT Recept. MTE Pin	0.12-0.38	26-22	0.91-1.42	91531-1
	SHORT POINT Receptacle	0.03-0.09	32-28	0.64-1.52	91518-1
		0.12-0.38	26-22		
		0.2-0.6	24-20	0.64-1.52	91551-1
MATE-N-LOK	Commercial	0.05-0.38	30-22	0.89-1.4	91515-1
		0.05-0.6	30-20	1.02-1.91	
		0.2-0.6	24-20	1.52-2.54	91512-1
		0.81-0.96	18		
		0.5-2.1	20-14	2.54-3.3	91504-1
	Universal Universal II	0.2-0.38	24-22	2.54 max	91510-1
		0.51-0.96	20-18		
		0.51-0.96	20-18	3.30 max	91500-1
		1.2-2.1	16-14		
		0.51-0.96	20-18	5.08 max	91508-1
		1.2-2.1	16-14		
	Mini-Universal	0.5-0.96	20-18	2.0-3.0	91536-1
		1.42	16	2.49-3.2	
	Mini-Universal II	0.12-0.24	26-24	1.19-1.60	91529-1
		0.32-0.38	22	1.5-1.75	91522-1
		0.32-0.6	22-20	1.5-2.01	
		0.81-0.96	18	2.11-2.39	91594-1
		0.5-0.89	20-18	2.0-3.2	
		1.42	16	2.49-3.2	
	MR Connector	MR Contacts	0.12-0.38	26-22	1.27-2.79
0.5-0.96			20-18		
CPC M Series	Type II	Terminal PN Specific			91539-1
	Type III+	0.05-0.38	30-22	0.89-1.4	91515-1
		0.05-0.6	30-20	1.02-1.91	
		0.2-1.6	24-20	2.03-2.54	91523-1
		1.81-1.42	18-16		
		0.2-0.6	24-20	1.14-1.78	91505-1
		1.81-1.42	18-16	2.03-2.54	
		0.81-1.42	18-16	2.03-2.54	91519-1
1.94-2.14	14				

Power Assist Options for CERTI-CRIMP II Straight Action Hand Tools

CERTI-CRIMP II Tool Adapter can be used with the following tools

- Battery Tool
- 626 or Micro Pneumatic
- Electric Terminator

Battery Tool Heads can be removed from Hand Tools, or the head only is available as a [-3] option.

Example P/N 91503-1; handles can be removed or alternatively P/N 91503-3 (head only) can be purchased and used in the shown Power-Assist options.



626 or Micro Pneumatic Tool with CERTI-CRIMP II Tool Adapter	
CERTI-CRIMP II Tool Adapter for 626 or Micro Pneumatic Tool	P/N 1583527-1

For more information on the 626 and Micro Pneumatic System see Section 15



Battery Tool Kit with Adapter for CERTI-CRIMP II Hand Tool	
EU Power Plug	P/N 1213805-4
GB Power Plug	P/N 1213805-6

These tools have the standard retract switch covered over to best ensure complete crimp cycle. The switch is fully functional with the cover removed.



Electric Terminator with CERTI-CRIMP II Tool Adapter	
CERTI-CRIMP II Tool Adapter for Electric Terminator	P/N 1213660-1

For more information on the Electric Terminator see Section 15

Power Assist Options for Double Action and Heavy Head Hand Tools

Battery tools have the standard retract switch covered over to best ensure complete crimp cycle. The switch is fully functional with the cover removed.



Battery Tool Kit with Adapter for DAHT	
EU Power Plug	P/N 1213840-4
GB Power Plug	P/N 1213840-6

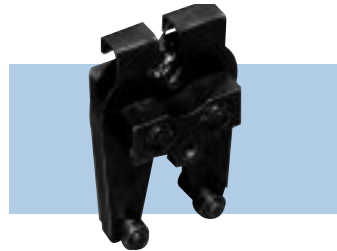
Battery Tool Kit with Adapter for HHHT	
EU Power Plug	P/N 190 1235-4
GB Power Plug	P/N 190 1235-6

HHHT = Heavy Head Hand Tool
 DAHT = Double Action Hand Tool

For more information on the Battery Tool Kits see Section 15

Power Assist Options for Double Action and Heavy Head Hand Tools

626 or Micro Pneumatic Tool



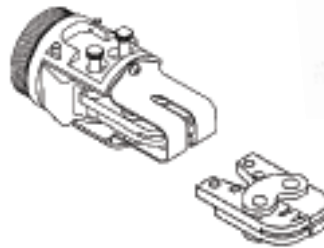
Crimping Head for Large Tool Holder (LTH)



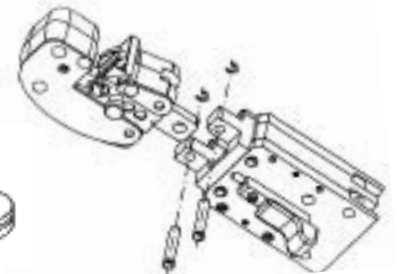
Crimping Head for Small Tool Holder (STH)

Crimping Heads for 626 or Micro Pneumatic Tool

Large Tool Holder LTH	P/N 356302-1
Small Tool Holder STH	P/N 356303-1



DAHT Adapter to Micro Pneumatic Hand Tool



HHHT Adapter to Micro Pneumatic Hand Tool

Adapters to Micro Pneumatic Tool

DAHT Adapter	P/N 1213563-1
HHHT Adapter	P/N 525432-1

HHHT = Heavy Head Hand Tool
DAHT = Double Action Hand Tool

626 or Micro Pneumatic Terminal to Tool Reference Tool

Terminal Type	Wire Range		Crimping Heads		
	mm ²	AWG	626 (LTH)	626 (STH)	Micro
PIDG Terminals and Splices PLASTI-GRIP Terminals	1.3-2.0 HD	16-14 HD	679300-1		
	3.0-6.0	12-10			
	0.12-0.3	26-22		314537-1	
	0.3-1.3	22-16		31470-3	
	1.3-2.0	16-14		314269-1	
PLASTI-GRIP Butt Splices	0.3-1.3	22-16		314868-1	
	1.3-2.0	16-14		314869-1	
Closed End Splice Insulated	0.9-8.0	ECV 18-8			
	0.9-6.0	CES 18-10			
	0.3-2.0	22-14		354422-1	
	0.3-1.3	VS 22-16		217205-1	
	0.3-6.0	EC 22-10		354422-2	
PIDG STRATO-THERM Terminals and Splices	0.3-6.0	22-10	217206-1		
SOLISTRAND Uninsulated Terminals and Splices	0.3-6.0	22-10	679301-1		
	8.0	8	1338757-1		
	13.0	6	1338758-1		
	0.3-3.0	22-14			189989-1
	0.3-1.3	22-16		314516-1	
	1.3-2.0	16-14		314517-1	
	2.0-3.0	14-12		314518-1	

1.3 SDE Premium 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 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.

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.

Fast Facts

These versatile hand tools are ideally suited for R&D, networking applications, and on-site maintenance work.

- 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 to crimp a broad range of connectors
- Able to handle multiple wire and terminal sizes in one die set
- Precision construction of durable high-carbon steel
- Extra strength pivot pins for maximum durability
- Engineered and manufactured using processes independently certified to internationally recognized quality standards ISO-9001:2000 and Telecommunications Industry Standard TL 9000.

SDE Hand Tools



PRO-CRIMPER III Hand Tool

Part No. 354940-1

The PRO-CRIMPER III Hand Tool combines the versatility of general purpose service tools with the reliability and ease of use of many premium grade tools. It is ideally suited for R&D prototyping, networking applications, and commercial, industrial, and institutional maintenance work.

The precision design and manufacturing techniques that go into this tool ensure reliable, repeatable performance. The new handles and head design result in increased usable lifecycle.

Versatile. As part of the SDE family of tools, the system accommodates dozens of interchangeable dies in an ever-expanding range, including those for open-barrel contacts and terminals. Many die sets have multiple cavities for crimping more than one wire or terminal size at the same time.

Dependable. The tool is constructed of durable high-carbon steel with extra strength pivot pins, for maximum reliability and long-life precision. Locators are included with pin-and-socket style tools. They help properly locate the contact in the die set, provide a wire stop, and help minimize contact rotation and bending during crimping.

Convenient. User convenience and comfort features are evident throughout. User-adjustable ratchet control is provided for complete crimp cycling that helps eliminate partial crimps. An emergency ratchet release allows the user to open the tool jaws at any time during the crimp cycle. To reduce handle force, the linkage was designed to match the forces required to crimp our largest insulated terminal. The result is dramatically less hand force than comparable tools. The angled head and specially designed handles provide comfortable operation.

Quality. Every tool crimps with precision, because every tool incorporates the traditional quality of all Tyco Electronics products.



SDE DA Hand Tool

Part No. 1213745-1

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



SDE PEW 12 Hand Tool

Part No. 9-1478240-0

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

- Easy accessibility for space-constrained applications
- Large crimp jaw arc, minimizing "roll" in open barrel applications
- User-adjustable ratchet control and emergency ratchet release
- Compatible with over 100 interchangeable SDE dies

SDE Premium Crimp Tooling Terminal to Tool Reference

Product Family	Catalog Number	Tyco Electronics Product	RG/ U Cable Wire Size	Termination Type/ Style	Part Number	
					P/ N 354940-1 with SDE Die Set	SDE Die Set Only
Coaxial Connector	82074	50 Ohm BNC and TNC	RD 316, 180, 195, Belden 8218	"O"/ Commercial	—	58539-1
			58, 62, 59	"O"/ Commercial	58433-1	58435-1
				Hex/ Commercial	58433-2	58436-1
			Belden 9248, 9114	"O"/ Commercial	—	58539-1
			174, 188, 316, 179, 161, 187	"O"/ Commercial	318450-1	318450-2
		62, 59	"O"/ Commercial	—	58435-1	
		50 Ohm BNC	Belden 9907, 89907, Comm/ Scope 2104	"O"/ Commercial	318452-1	318452-2
			174, 188, 316, 179, 161, 187	Hex/ Commercial	—	58436-3
			62, 59, Belden 9104, 9112	"O"/ Commercial & Military	—	58537-1
			Belden 8281, 9141	Hex/ Commercial	—	58436-2
				"O"/ Commercial & Military	—	58538-1
			180, 195, Belden 8218, 9248, 9114	"O"/ Commercial	—	58539-1
		58	"O"/ Military	—	220189-3	
		75 Ohm BNC and TNC	62, 59	"O"/ Commercial	—	58536-1
			6, Belden 8281	"O"/ Commercial	—	58538-1
		75 Ohm BNC	179, 161, 187	"O"/ Commercial	318451-1	318451-2
				Hex/ Commercial	58531-2	58425-2
			62, 59	Hex/ Commercial	58531-1	58425-1
			Double Braid 59, Belden 8281, 9141	Hex/ Commercial	58531-3	58425-3
			Belden 9248, 9114	"O"/ Commercial	—	58536-1
			Belden 8218	"O"/ Commercial	—	58174-1
		50 and 75 Ohm BNC	6, Belden 8281	"O"/ Commercial	—	58538-1
		50 Ohm N	58, 62, 59	Hex/ Commercial	58433-2	58436-1
			8, 213, 11, 216, 9, 214	Hex/ Commercial	58501-1	58485-1
		Miniature UHF	58	Dual Crimp	58506-3	220196-1
		50 Ohm SMB	174, 316, 188, 179, 161, 187, RD 316, 188 Double Braid	Hex/ Commercial	58500-1	58489-1
				Hex/ Military	58499-1	58483-1
			178, 196, 174, 316, 188, 179, 161, 187	Hex/ Commercial	—	58046-1
		50 and 75 Ohm Consumer BNC	58, 62, 59	"F" / "O"	58558-1	58558-2
			174, 316, 188, 179, 161, 187	"F" / "O"	58559-1	58559-2
		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
			58, 6.7, 7.4, 8.7 [0.290, 0.343] Dia.	Hex/ Commercial	58622-1	58622-2
			59.6 9.1 [0.360] Dia.	Hex/ Commercial	58663-1	58663-2
		Braid-Pic Braid Termination	58, 62, 59	—	—	220195-1

SDE Premium Crimp Tooling Terminal to Tool Reference

Product Family	Catalog Number	Tyco Electronics Product	Cable or Wire Size	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*	58552-1
		ST-Style FC Type, D4 and AMP SC Connectors	3.0 mm Jacket Dia.	58433-4*	58424-1
		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**	503910-1
		FSD, FSD MC and RSD Connectors; FSD Breakout Kit	DUALAN and LDD	58519-1*	58510-1
		LightCrimp XTC Connectors (Ceramic/Polymer/S.S.)	3.0 mm Jacket Dia.	503568-1*	503567-1
	1307099	LightCrimp SC (Ceramic) Connectors	3.0 mm Jacket Dia.	503699-1*	503698-1
		LightCrimp Plus AMP SC	3.0 mm Jacket Dia.	492623-1***	492622-1
	—	LightCrimp Plus ST-Style	3.0 mm Jacket Dia.	492782-1***	492783-1
		Multimate Contacts	1 mm Plastic Fiber, 2.2 mm Jacket Dia.	217211-1	217211-2

Request catalog for detailed product information.

* Tool Frame Part No. 58532-1

** Tool Frame Part No. 58588-1

*** Tool Frame Part No. 58532-2

SDE Premium Die-Sets for PIDG and PLASTI-GRIP Terminals

Part Number	Description	AWG / mm ² / other
91963-2	PIDG, PLASTI-GRIP Terminals & Splices - equivalent crimp to 47387 Qualifications: Mil-T-7928; LUL RSE 024 pt6 and EE6161 Marks the applied product with a two dot indent code.	16-14 / 15-2.5 20-16 / 0.6-1.5 HD
91964-2	PIDG, PLASTI-GRIP Terminals and Splices - equivalent crimp to 47386 Qualifications: Mil-T-7928; LUL RSE 024 pt6 & EE6161 Marks the applied product with a two dot indent code.	22-16 / 0.4-1.5
91965-2	PIDG, PLASTI-GRIP Terminals & Splices - equivalent crimp to 59239-4 Qualifications: Mil-T-7928; LUL RSE 024 pt6 and EE6161 Marks the applied product with a two dot indent code.	12-10 / 4.0-6.0

Only the most popular options are listed here, please use our online search by terminal PN to find the right tool for your application, and contact us where information is unclear or missing - there may well be something available for your requirement.

Power Assist Options for SDE Premium Tooling



SDE 626 Pneumatic Tool

- P/N 1213855-1
Complete all pneumatic unit
- P/N 679304-1
SDE Head only

For more information on the 626 System see Section 1.5



SDE Battery Tool Kits

- P/N 1725837-4
SDE Shoulder Dies
OPEN head (EU Power Plug)
- P/N 1725837-6
SDE Shoulder Dies
OPEN head (UK Power Plug)

For more information on the Battery Tool Kits see Section 1.5



SDE Electric Terminator

- P/N 1490076-2
Portable Bench-top Unit with SDE Head and Foot Switch
- P/N 1673663-2
Adapter only for SDE Dies

For more information on the Electric Terminator see Section 1.5

1.4 Tools for Mil Indent Crimping



AF8

P/N 60 1967-1

Base Tool (AF8) without Turret

P/N 2031846-1

Pneumatic AF8 (WA27F) without Turret

Features

- 4/8 indent Crimp to Military standard M22520/ 1-01
- Ratchet mechanism ensures complete crimp cycle
- 8 Position Dial select Indent Depth control
- Many Turrets available
- Ergonomic non-slip handles

Turrets - accurately position Contacts in the Tool

Part Number Description

P/N 60 1967-2

Turret TH1A [M22520/ 1-02] for ARINC Contacts

P/N 60 1967-3

Turret TH163 [M22520/ 1-04] for MS27490; MS27655

P/N 60 1967-4

Turret TH4 [M22520/ 1-03] for MS17803; MS21097; OSI2814 Contacts

P/N 60 1967-5

Universal Head UH2-5 [M22520/ 1-05]

P/N 60 1967-6

Turret TP45 [M22520/ 1-06]

for OSI2814 type M size 16 & 22

P/N 60 1967-7

Turret TP85 [M22520/ 1-07]

for MS18232; MS18233 Contacts

P/N 60 1967-8

Turret TH199S [M22520/ 1-08]

for MS3343; MS90460; MS90461 Contacts

P/N 1-60 1967-2

Single Position Head TP465 [M22520/ 1-11]

for M39029

Partial listing only. For the full range please visit our online Hand Tool Catalogue at www.tooling.tycoelectronics.com/europe/catalogue.asp then go to the Tools for Screw-machined Contacts section.

DMC is a trademark of Daniels Manufacturing Corp.

For more detailed information please visit our website
www.tooling.tycoelectronics.com/europe

AEP Tools T. +31(0)78-692 2100 F. +31(0)78-692 2109 E. sales@aepint.nl www.aepint.nl

Tools for Mil Indent Crimping



AFM8

P/N 60 1966-1

Base Tool (AFM8) without Positioner

P/N 2031845-1

Pneumatic AFM8 (WA22) without Positioner

Features

- 4/8 indent Crimp to Military standard M22520/2-01
- Ratchet mechanism ensures complete crimp cycle
- 8 Position Dial select Indent Depth control
- Many Positioners available
- Ergonomic non-slip handles

Positioners - accurately position Contacts in the Tool

Part Number Description

P/N 60 1966-2

Positioner K1S [M22520/2-02]
for TERMI-BLOK Contact

P/N 60 1966-3

Positioner K60S [M22520/2-03]
for MS3343; MS90461 Contacts

P/N 60 1966-4

Positioner K41 [M22520/2-06]
for Size 22 Contacts

P/N 60 1966-6

Positioner K13-1 [M22520/2-08]
for ARINC size 20 Contacts

P/N 1-60 1966-1

Positioner K339 [M22520/2-16]
for M39029/ 17 Contacts

P/N 1-60 1966-3

Positioner K40 [M22520/2-07]
for MS27490; MS27655 Contacts

P/N 1-60 1966-4

Positioner K43 [M22520/2-10]
for MS27490; MS27491; MS27492 and more Contacts

P/N 1-60 1966-6

Positioner K370 [M22520/2-12]
for ARINC COAXICON size 15 Contacts

P/N 966254-1

Positioner K42 [M22520/2-09]
for ARINC size 22 Contacts

Partial listing only. For the full range please visit our online Hand Tool Catalogue at www.tooling.tycoelectronics.com/europe/catalogue.asp then go to the Tools for Screw-machined Contacts section.

DMC is a trademark of Daniels Manufacturing Corp.

1.5 Power Assist Equipment

Tyco Electronics only recommends the use of hand tools for prototyping, service and repair, as continued use can cause operators to experience RSI (Repetitive Strain Injury).

We are continually adding to our power-assist range to minimise this risk. All electric, all pneumatic and now battery powered options. With the vast improvement of battery life and small motor power, the practicality and convenience of battery powered tools is now well known.

Battery Tool 1.5 t

Convert your existing Hand Tools into Powered!

- Ideal for low to medium production volumes.
- Over 100 crimps per charge
- Compact - only 356 mm (14") long and weighs 1.57 kg (3.48 lbs)

Kits are supplied in a durable plastic carry case and include:

- Battery Tool with the relevant Adapter / Head
- Battery Charger 230 V
- Two Batteries

Spares:

- Battery P/N 1725839-1
- Battery Charger (EU Power Plug) P/N 1725840-2
- Battery Charger (UK Power Plug) P/N 1725840-5



Battery Tool Kit with Adapter for SDE Dies	
EU Power Plug	P/N 1725837-4
GB Power Plug	P/N 1725837-6

Battery Tool Kit with CERTI-CRIMP II Head	
EU Power Plug	P/N 1213805-4
GB Power Plug	P/N 1213805-6

Battery Tool 1.5 t



Battery Tool Kit with Adapter for DAHT	
EU Power Plug	P/N 1213804-4
GB Power Plug	P/N 1213804-6

Battery Tool Kit with HHHT Head	
EU Power Plug	P/N 190 1235-4
GB Power Plug	P/N 190 1235-6

CERTI-CRIMP II SAHT Battery Powered Crimp Tool Kit

P/N 1213805-X 230 V
(-2 includes Ram Retract Switch; -4 without)

See Customer Manual CM 409-10055

Heavy Head Hand Tool “heads” can be disassembled and removed from the hand tool assembly, and used with this battery kit.

For example, the head from a 59239-4 can be removed from the handles, and assembled as shown. For a list of Heavy Head Hand Tools that can all be used with this battery tool, refer to catalog 65780.



CERTI-CRIMP DAHT Battery Powered Crimp Tool Kit

P/N 1213804-X 230 V
(-2 includes Ram Retract Switch; -4 without)

See Customer Manual CM 409-10056

Double Action Heads can be removed from hand tools, and used with this battery kit. For example, the crimp head from hand tool 49935 can be removed from the handles, and assembled as shown. For a partial list applicable to Double Action Hand Tools, please refer to catalog 65780.

Battery Tool 1.5 t



CERTI-CRIMP II Heavy-Head Battery Powered Crimp Tool Kit

P/N 190 1235-X 230 V

(-2 includes Ram Retract Switch; -4 without)

See Customer Manual CM 409-10068

Heads can be removed from hand tools, or are available as a (-3) option. For example, for P/N 91500-1 CERTI-CRIMP II SAHT, the head can be removed from the hand tool and used, or the customer can order just the head assembly, P/N 91500-3, for use with the battery kit.

These tools use the same dies that are compatible with the P/N 69710-1, CERTI-CRIMP Hand Tool Frame.



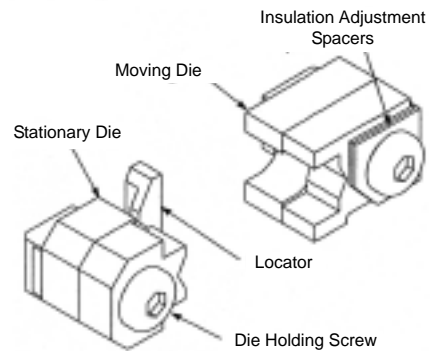
CERTI-CRIMP II Large Die, Straight-Action Adapter Battery Powered Crimp Tool Kit

P/N 1213819-X 230 V

(-2 includes Ram Retract Switch; -4 without)

See Customer Manual CM 409-10058

Typical CERTI-CRIMP Tool Large Dies



Battery Tool 4 t

Over 100 Crimps per charge

Compact only 356 mm long and weighs 160 kg (3.4lbs)

Kits are supplied in a durable carry case and include:

- Battery tool
- 4 t Latched Head
- Battery Charger 230 V
- Two Batteries

Spares:

- Battery P/N 1725839-1
- Battery Charger EU Power Plug P/N 1725840-2
- Battery Charger GB Power Plug P/N 1725840-5

Crimping Tool (with Battery Installed)	
Length	356 mm [14 in]
Width	60 mm [2 3/8 in]
Depth	80 mm [3 1/8 in]
Mass Weight (w/Battery)	16 kg [3.4 lb]
Sound Level	75 dB(A) at 1m
Vibration	<2.5 m/s ²
Hydraulic Oil	Shell Tellus® T 15

Crimping Capacities	
Maximum Crimping Force	35 kN [4 t]
Average Crimping Time	4 s
Average Crimps Per Charge	Approximately 85

4 t Latched Head Battery Tool Kit	
EU Power Plug	P/N 190 1343-4
GB Power Plug	P/N 190 1343-6



		Wire Range		Insulation Range	
Insulated Terminals	Style	mm ²	AWG	Ø mm max.	Die Set
PIDG STRATO-THERM (PTFE & PEEK Insulation)	Terminals (thin-wall Insulation)	3.0	12	2.3-3.18	P/N 1976976-1
		5.0	10	2.6-5.44	P/N 1976977-1
AMPLI-BOND	Terminals and Splices	7-8.5	8	9.58	P/N 190 1727-1
PLASTI-GRIP TERMINYL	Terminals and Splices	7-8.5	8	Non Ins. Crimp	P/N 190 1006-1
	Terminals and Splices	13-15	6		P/N 190 1007-1

		Wire Range			
Uninsulated Terminals No insulation support	Style	mm ²	AWG	Nest	Identer
SOLISTRAND	Terminals and Splices	7-8.5	8	P/N 190 1001-1	P/N 190 1002-2
		13-15	6	P/N 190 1000-1	P/N 190 1002-1
		21	4	P/N 190 1000-2	P/N 190 1002-1

SDE Electric Terminator with CERTI-CRIMP Tool Adapters



This all electric portable bench-top Terminator is fast, effortless and ideal for low to medium volume production.

- P/N 167377-2 Electric Terminator
- P/N 679304-1 SDE Head Adapter
- P/N 123860-1 CERTI-CRIMP II Straight Action Head Adapter
- P/N 1901556-1 C-Head SAHT Adapter
- P/N 1673664-1 Optional Foot Switch

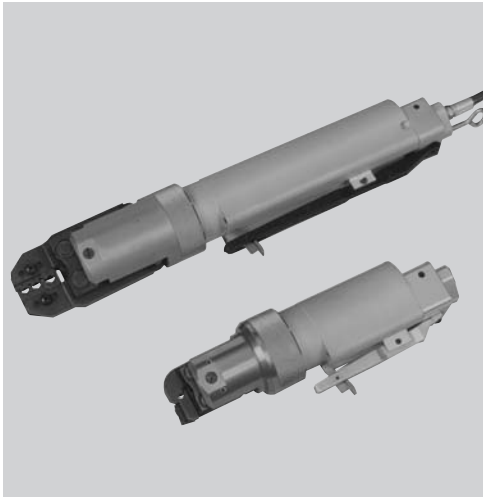
Main powered unit - no air required
 Switchable 110 V or 240 V supply
 Cycle Counter
 Two stage crimp cycle option

Dimensions [mm] 390 x 260 x 200
 Weight 13 kg

PIDG and STRATO-THERM Die Sets for Electric Terminator with C-Head SAHT Adapter

Color	AWG	Die Set
Brown	24-22	P/N 576711
Grey	20	P/N 576720
Orange	18	P/N 576715
Orange	16	P/N 576714
White / Beige	14	P/N 576716
White / Beige	12	P/N 576742
Black	10	P/N 576723

626 and Micro Pneumatic Tool System



Maximize your productivity while minimizing your effort - replace your manual hand tools with the 626 Pneumatic Tool System. Terminating wires from 0.12–13.0 mm² [26–6 AWG] has never been easier. And you can continue to use most, if not all, of your existing Tyco Electronics compatible crimp heads and die sets.

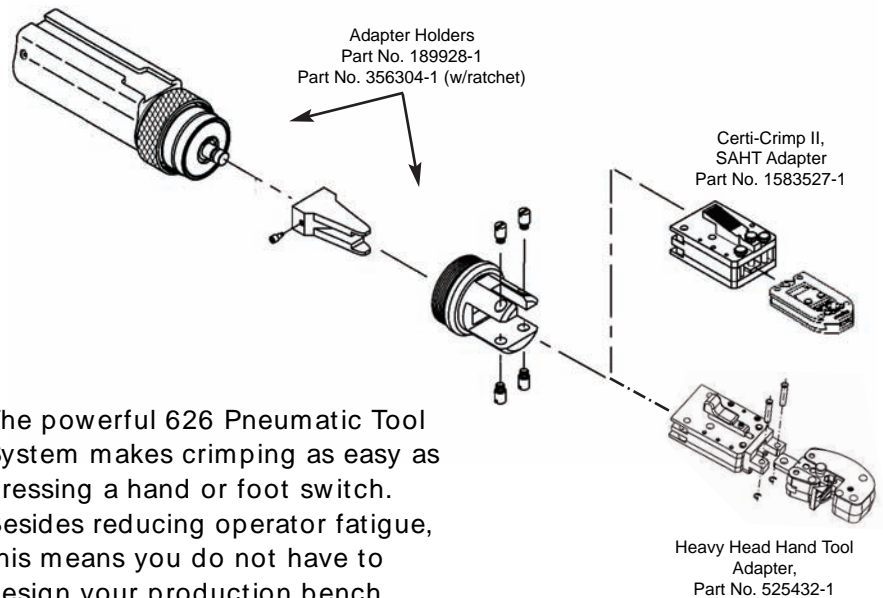
The 626 System Works Where and How You Need It

Using 626 adapters, tools previously restricted to prototype or limited production applications can now be used in low to medium bench production and harness assembly operations. Because the 626 crimp head can be rotated to any angle, you can

Fast Facts

Effortless crimping for a broad range of terminals, either bench-mounted or hand-held for working in cramped quarters.

- Lightweight tool eliminates physical force required by hand tools
- Hand- or foot-switch operation
- Termination wire range from 0.12–13.0 mm² [26–6 AWG], plus coaxial and fiber optic cable
- Works with existing Tyco Electronics compatible crimp heads and die sets
- Ratchet control option provides complete crimp cycle, eliminating partial crimps
- Use rotating head assembly to reach difficult termination locations
- Engineered and manufactured using processes independently certified to internationally recognized quality standards ISO-9001:2000 and Telecommunications Industry Standard TL 9000



The powerful 626 Pneumatic Tool System makes crimping as easy as pressing a hand or foot switch. Besides reducing operator fatigue, this means you do not have to design your production bench around your tool. Include the fully adjustable Bench Mount Assembly with the foot switch, and you are completely free to concentrate on aligning the wire and terminal. Now you can crimp faster and with fewer mistakes.

also work on those difficult terminations in confined equipment cabinets or enclosures. Looking for the complete crimp cycle control provided by the mechanical ratchet in premium CERTI-CRIMP hand tools? The available 626 System ratchet tool holders produce a complete crimp cycle by simply pressing a switch. Dies will fully bottom before you can open the jaws to release the crimped product.

626 and Micro Pneumatic Tool System

626 Pneumatic System Power Unit



Outside Diameter	45 mm [1.8 in]
Length	225 mm [8.88] for foot actuated unit 230 mm [9.00 in] for hand actuated unit
Grip Span	55 mm [2.19 in] over button/handle
Mass	0.60 kg [1.32 lbm] for foot actuated unit
Air Pressure	600-700 kPa [90-100 psi]
Air Displacement	0.00018 m ³ [11.14 in ³]
Air Supply Hose	3.05 m [10 ft] long 4.8 mm [3/16 in] I.D. with 1/8 in NPT fitting
Cycle Time	0.7-0.8 s (for 16-14 AWG [1.3-2 mm ²] PIDG Terminals)

Protect Your Tool Investment

The 626 System's power unit works with a variety of adapters and tool holders, so you can continue to work with your existing crimp heads and die sets.

Big Return in a Micro Package

Does your crimping application demand even more accessibility and flexibility than the 626 System offers?

The Micro Pneumatic Tool System terminates wires in the 0.12-2 mm² [26-14 AWG] range,* but with a smaller and lighter power unit. Weighing in at only 0.7 kg [15 lb] and just 146.5 mm [5.75 in] long, the hand-actuated Micro System is compatible with three different head systems.

* With the exception of the SOLISTRAND tool head combination, which crimps 0.3-2 mm² [22-10 AWG] combinations.

Die Interchangeability

For the ability to change dies quickly when needs change, whether from one terminal type to another or from tool to tool when workload and environment change, consider the SDE family of tools and dies.

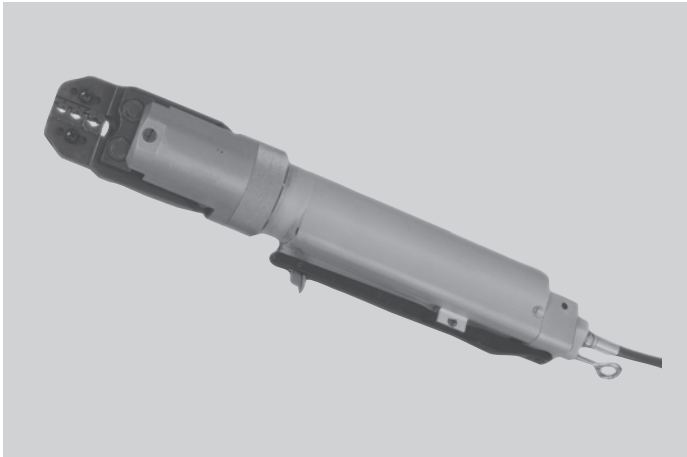
For more information, see Catalog 1773379.

Micro Pneumatic System Power Unit

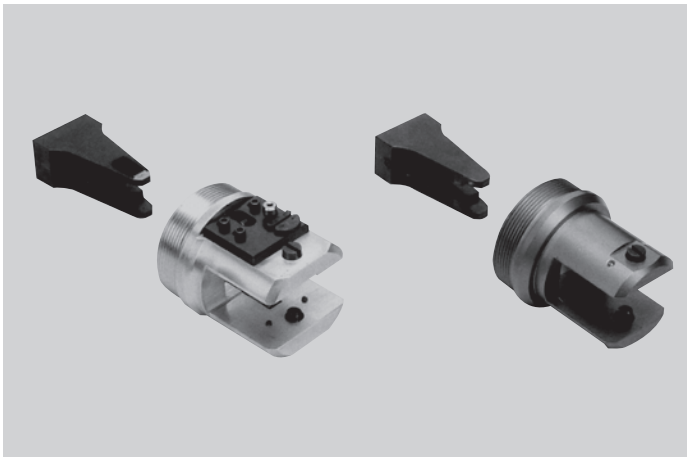


Outside Diameter	45 mm [1.8 in]
Length	146.5 mm [5.75 in]
Grip Span	55 mm [2.19 in] over button/handle
Mass	0.70 kg [1.5 lbm]
Air Pressure	600 - 700 kPa [90-100 psi]
Air Displacement	0.00018 m ³ [11.14 in ³]
Air Supply Hose	3.05 m [10 ft] long 4.8 mm [3/16 in] I.D. with 1/8 in NPT fitting
Cycle Time	0.7-0.8 s (for 16-14 AWG [1.3-2 mm ²] PIDG Terminals)

626 and Micro Pneumatic Tool System



SDE Compatible Kit		
Complete tool with hand-held power unit	P/N 1213855-1	0.3 - 6.0 mm ² (22-10 AWG)

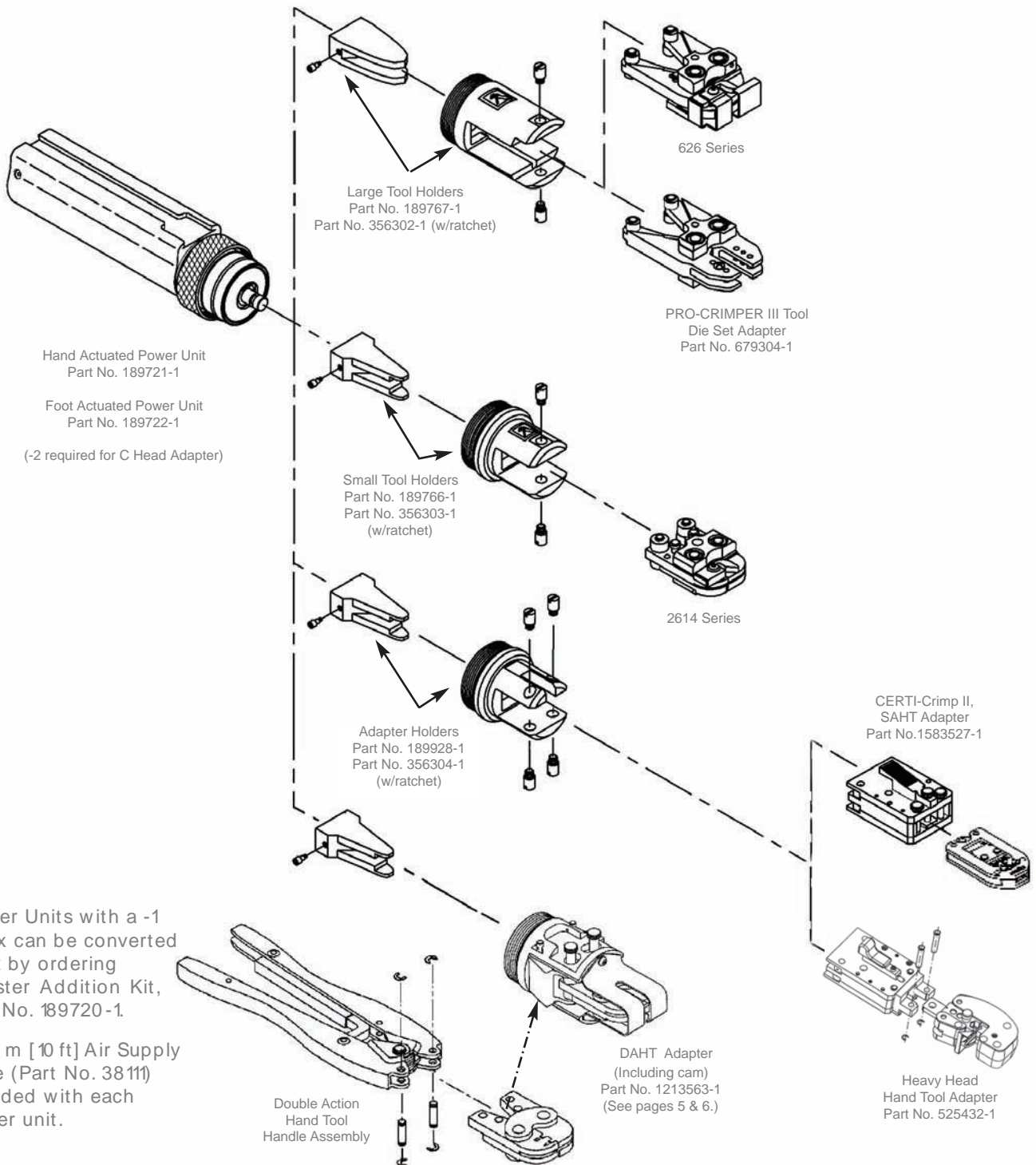


Tool and Adapter Holders*			
	Large Tool Holder	Small Tool Holder	Adapter Holder
Length (with Head Assembly)	100 mm [3.88]	70 mm [2.75]	70 mm [2.75]
Weight (with Head Assembly)	0.76 kg [1.68 lb]	0.44 kg [0.96 lb]	0.44 kg [0.96 lb]
P/N	356302-1	356303-1	356304-1

*Measurements are averages.

626 and Micro Pneumatic Tool System Configurations and Ordering Information

The basic 626 and Micro Pneumatic Tool Systems require a power unit, a tool holder, a head assembly, and a die set, when applicable. Tool holder assemblies (i.e., tool holder and cam) accept the crimping heads, adapters, and die sets listed in section 1.2



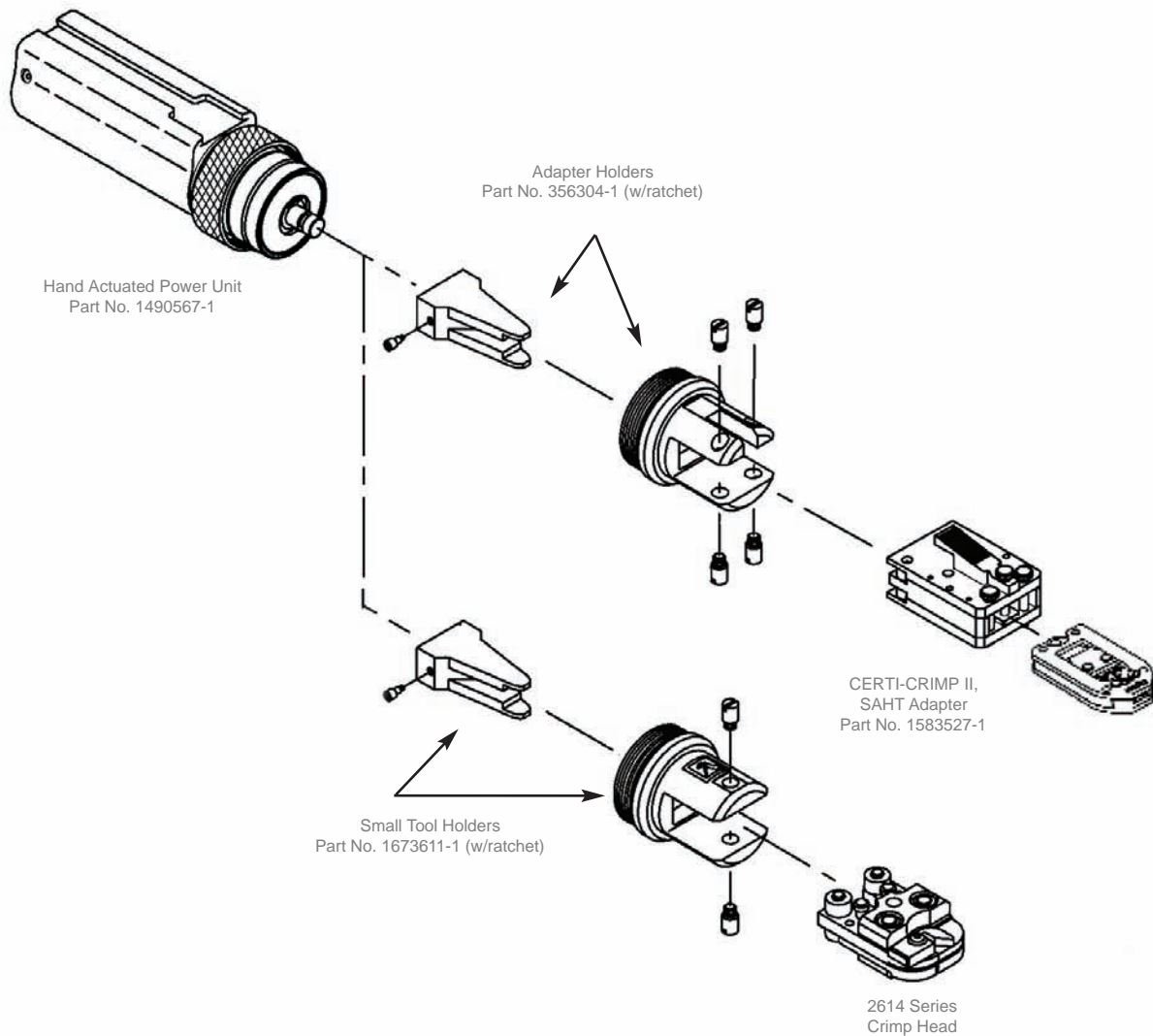
- Power Units with a -1 suffix can be converted to -2 by ordering Booster Addition Kit, Part No. 189720-1.
- 3.05 m [10 ft] Air Supply Hose (Part No. 3811) included with each power unit.

626 and Micro Pneumatic Tool System Configurations and Ordering Information

Power Unit

Tool Holders

Adapters



1.6 Hydraulic Equipment



Fast Facts

- Standard 68,950 kPa [10,000 psi] rated hydraulic pumps and heads
- Interchangeable AMP-design U-dies for crimp force up to 14 t [125 kN]
- U-die stroke options of 1 in [25 mm] and 1.5 in [38 mm]
- Termination range varies by product type
- Integrated head/die for crimping 7-34 mm² [#8-2 AWG] SOLISTRAND terminals
- Heads compatible with shank-dies available for larger wires requiring crimp force greater than 14 t [125 kN]
- Portable power, using a hand-held tool with rechargeable battery, or a Portable Battery Hydraulic Unit for standard crimping system
- Electric & manual hydraulic pumps for crimping at fixed locations
- Produced under a Quality Management System certified to ISO 9001. A copy of the certificate is available upon request.

Tyco Electronics continues the quality tradition of AMP crimping tools with a new line of industry-standard 68,950 kPa [10,000 psi] hydraulic compression crimp heads, pumps, and interchangeable U-dies. A new battery-powered pump and tool options provide unprecedented portability for any crimping application.

The U-dies, made with the AMP design precision and performance you have come to expect, are well suited for applications requiring a crimp force of up to 14 t [125 kN].

For wire sizes requiring more than 14 t [125 kN], Tyco Electronics offers five heavy-duty AMP crimp head configurations that are compatible with shank dies.

There are four light-duty crimp head options, including three in the U-die format. U-dies are available in two types, with 25 mm [1 in] and 38 mm stroke [1.5 in], respectively. The two 12 t [101 kN] head options have 25 mm [1 in] stroke.

The 14 t [125 kN] head is for larger products that call for a 38 mm [1.5 in] stroke. Also available is an integrated head/die for crimping #8 to #2 SOLISTRAND terminals. The heavy-duty heads are available in five different configurations.

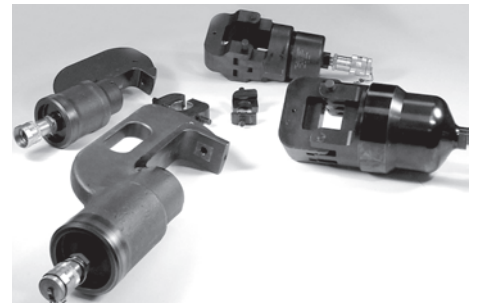
Note: These heads are not compatible with 8,200 psi [56,540 kPa] tooling.

The basic 68,950 kPa [10,000 psi] hydraulic tool system requires a pump, hose (multiple lengths are available with all configurations), crimp head, and crimp die.

There is a Tyco Electronics hydraulic pump to meet the demands of any crimping application. For maximum portability, the hand-held crimping tool with rechargeable battery is an effective solution.



U-Die Line up, including #8-#2 SOLISTRAND tool head, for 68,950 kPa [10,000 psi] systems providing up to 14 t [125 kN] of crimp force



Shank-Die Line up, for wiring sizes requiring more than 14 t [125 kN] of crimp force



Heavy-Duty Crimp Head (U-Die).

Or, to power a standard crimping system at any location, order the Portable Battery Hydraulic Unit. For fixed crimping locations, you can choose between a 110 V or 220 V Electric Hydraulic Pump (with optional remote hand control), or manual foot and hand hydraulic pumps.

Aerospace Tooling and Equipment

Selecting a Hydraulic System?
Have you remembered a...

- Pump
- Hand or Foot control
- Hose
- Crimp Head
- Crimp Die

Hydraulic Tooling Selection Guide - 70,000 kPa / 10,000 psi

Pumps, and Hose Options

The Heavy-duty Pump is designed for continuous use.



OR



WITH



Light Duty Electric Hydraulic Pump
P/N 523199-1 (220 V) ^{1,2}

Heavy Duty Electric Hydraulic Pump
P/N 439798-2 (220 V) ^{1,2}

Hydraulic Hoses³
P/N 1583662-1 - 1.8 m / 6 ft
P/N 1583662-2 - 3.0 m / 10 ft
P/N 1583662-3 - 6.1 m / 20 ft

Heavy-Duty Crimp Heads (Shank Dies) (> 25,000 cycles)

Shank Dies



8 - 4/0 A
22 t output force 16 lbs
P/N 1752877-1
IS 408-8956



4/0 AWG-1000 MCM
26 t output force 29 lbs
P/N 1752786-1
IS 408-8958



8 - 4/0 AWG
33 t output force 28 lbs
P/N 1752787-1
IS 408-8914



12-10 AWG - 350 MCM
18 t output force 13 lbs
P/N 1752868-1
IS 408-8959



AMPLI-BOND	8 AWG-4/0 AWG
AMPOWER	6 AWG-1500 MCM
AMPOWER Quick Disconnect	1/0 AWG-600 MCM
Insulation Piercing COPALUM	10 AWG (Cu)-3/0 AWG
Sealed COPALUM	10 AWG-3/0 AWG
Bar COPALUM	10 AWG (Cu)-400 MCM
SOLISTRAND	8 AWG-600 MCM
STRATO-THERM	8 AWG-2/0 AWG
TERMINYL	1/0 AWG thru 4/0 AWG

Medium-Duty Crimp Heads & Hand Tools (U-Dies)

U-Dies



12 t output force
1.5" stroke; 50,000 cycle
Compression Head

U-Die Compatible
P/N 1901821-1
IS 408-10112



12 t output force
1" stroke Titanium
Compression Head

U-Die Compatible
P/N 1490747-1
IS 408-8715



14 t output force
1.5" stroke
Heavy-Duty
Compression Head

U-Die Compatible
P/N 1976230-1
IS 408-10145



14 t output force
1.5" stroke
Compression Tool

U-Die Compatible
P/N 1976230-1
IS 408-8717



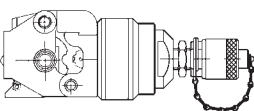
1" stroke Hand
Compression Tool

U-Die Compatible
P/N 1490748-1
IS 408-8716

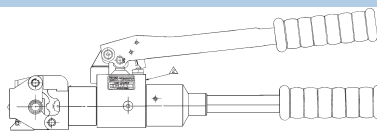


AMPLI-BOND	8 AWG - 2 AWG
AMPOWER	6 AWG - 4/0 AWG
SOLISTRAND	8 AWG - 4/0 AWG
TERMINYL	8 AWG - 1/0 AWG

SOLISTRAND (Integrated Crimp Dies)



#8-#2 AWG SOLISTRAND Compression Head
(No crimp dies required)
P/N 1673672-1 / IS 408-8910



#8-#2 AWG SOLISTRAND Compression Tool
(No crimp dies required)
P/N 59975-1 / IS 408-6758

¹ Foot Pump 523199-2 OR

Hand Pump 1583661-1 can be substituted as manual options for Electro-Hydraulic Pumps

² Includes male screw-to-connect, 3/8" NPT quick couplers

³ Includes female screw-to-connect, 3/8" NPT quick couplers

Dies, Hand Tools and Hydraulic Heads Configuration Options

The Tyco Electronics hydraulic crimping tool line offers a wide array of die, hand tool, and hydraulic head configurations.

Use the following tables to determine the configuration that best matches your requirements.

The tables are color-coded to help you identify the new 68,950 kPa [10,000 psi] rated configurations that correspond to previous 56,540 kPa [8,200 psi] tooling.

TERMINYL Terminals and Splices

Hydraulic Crimp Tooling 10,000 psi Operating Pressure						DYNA-CRIMP Tool System 8,200 psi Operating Pressure				
	Hand Tools (U-Die)		Hydraulic Heads (U-Die)		Hydraulic Heads (Shank-Die)		Hand Tool	Hydraulic Heads (Shank Die)		
Wire Size in AWG [mm ²]	1490748-1	1490749-1	1901820-1 1490747-1	1901821-1 1976230-1	1752877-1	1752787-1	59974-1 §	69051 §	69066	58422-1
8 [7-8.5]	1490597-1	1490597-1	1490597-1	1490597-1			47820 §	47820 §		
6 [13-15]	1490598-1	1490598-1	1490598-1	1490598-1			47821 §	47821 §		
4 [21]	1490599-1	1490599-1	1490599-1	1490599-1			47822 §	47822 §		
4HD					69463	69463			69463	69463
2 [34-35]		1490406-1		1490406-1			47823 §	47823 §		
1/0 [50-60]		1490700-1		1490700-1	47824	47824			47824	47824
2/0 [67-70]					47825	47825			47825	47825
3/0 [80-95]					47915	47915			47915	47915
4/0 [100-125]					47918	47918			47918	47918

AMPLI-BOND and PLASTI-GRIP Terminals and Splices

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure				DYNA-CRIMP Tool System 8,200 psi Operating Pressure			
	Hand Tool (U-Die)	Hydraulic Head (U-Die)	Hydraulic Heads (Shank Die)		Hand Tool	Hydraulic Heads (Shank Die)		
	1490749-1	1901821-1 1976230-1	1752877-1	1752787-1	59974-1 §	69051 §	69066	58422-1
8 [7-8.5]	1490534-1	1490534-1	48858-1	48858-1	48752-1 §	48752-1 §	48858-1	48858-1
6 [13-15]	1490535-1	1490535-1	48859-1	48859-1	48753-1 §	48753-1 §	48859-1	48859-1
4 [21]	1490536-1	1490536-1	48860-1	48860-1	48754-1 §	48754-1 §	48860-1	48860-1
2 [34-35]	1490410-1	1490410-1	48861-1	48861-1	48755-1 §	48755-1 §	48861-1	48861-1
1/0 [50-60]			48756-1	48756-1			48756-1	48756-1
2/0 [67-70]			48757-1	48757-1			48757-1	48757-1
3/0 [80-95]			48758-1	48758-1			48758-1	48758-1
4/0 [100-125]			48759-1	48759-1			48759-1	48759-1

§	These products will be discontinued
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Aerospace Tooling and Equipment

Dies, Hand Tools and Hydraulic Heads Configuration Options

AMPLI-BOND and PLASTI-GRIP Large Expansion Terminals

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure		DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
	Hydraulic Heads (Shank Die)		Hydraulic Heads (Shank Die)	
	1752877-1	1752787-1	69066	58422-1
8 [7-8.5]	47236-1	47236-1	47236-1	47236-1
6 [13-15]	47237-1	47237-1	47237-1	47237-1
4 [21]	47238-1	47238-1	47238-1	47238-1
2 [34-35]	47239-1	47239-1	47239-1	47239-1
1/0 [50-60]	47378-1	47378-1	47378-1	47378-1

★	Stationary Die
★★	Moving Die
+	Self-Contained Die
◇	Use Adapter 69760
×	Use Adapter 69834
§	These products will be discontinued

SOLISTRAND Terminals

Hydraulic Crimp Tooling 10,000 psi Operating Pressure							DYNA-CRIMP Tool System 8,200 psi Operating Pressure							
Wire Size in AWG [mm ²]	Hand Tool (Dies Included)	Hand Tools (U-Die)	Hydraulic Heads (U-Die)	Hydraulic Heads (Shank Die)			Hand Tool	Hydraulic Heads	Hydraulic Heads (Shank Die)					
	59975-1 +	1490748-1 1490749-1	1901820-1 1901821-1 1490747-1 1976230-1	673672-1 +	1752868-1	1752788-1	1752786-1	59973-1 §	69065 § 69067 §	69097 §	69069 + §	69099	58445-1	69082
8 [7-8.5]	+	1490413-1★ 1490414-1★★	1490413-1★ 1490414-1★★	+	69216			48126★ § 48355★★ §	48126★ § 48355★★ §	46146★ § 46145★★ §	+	69216		
6 [13-15]	+	1490413-2★ 1490414-2★★	1490413-2★ 1490414-2★★	+	69217			48128★ § 48127★★ §	48128★ § 48127★★ §	46134★ § 46133★★ §	+	69217		
4 [21]	+	1490413-3★ 1490414-2★★	1490413-3★ 1490414-2★★	+	69218			48129★ § 48127★★ §	48129★ § 48127★★ §	46135★ § 46133★★ §	+	69218		
2 [34-35]	+	1490413-4★ 1490414-2★★	1490413-4★ 1490414-2★★	+	45433			48130★ § 48127★★ §	48130★ § 48127★★ §	46136★ § 46133★★ §	+	45433		
1/0 [50-60]		1490413-5★ 1490414-3★★	1490413-5★ 1490414-3★★		45436			48132★ § 48131★★ §	48132★ § 48131★★ §	46138★ § 46137★★ §		45436		
2/0 [67-70]		1490413-6★ 1490414-3★★	1490413-6★ 1490414-3★★		45439			48133★ § 48131★★ §	48133★ § 48131★★ §			45439		
3/0 [80-95]		1490413-7★ 1490414-3★★	1490413-7★ 1490414-3★★		45442			48134★ § 48131★★ §	48134★ § 48131★★ §			45442		
4/0 [100-125]		1490413-8★ 1490414-3★★	1490413-8★ 1490414-3★★		45445			300430★ § 48131★★ §	300430★ § 48131★★ §			45445		
250-300 MCM [127-152]						48816	69911						48816	69911
300-350 MCM [152-177]						48817	69912						48817	69912
400 MCM [203]						48818	69913						48818	69913
500-600 MCM [253-304]						48819	69914						48819	69914

Dies, Hand Tools and Hydraulic Heads Configuration Options

Heavy Duty SOLISTRAND Terminals

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure		DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
	Hand Tools (U-Die)	Hydraulic Heads (U-Die)	Hand Tools	Hydraulic Heads (Shank Die)
		1490748-1 1490749-1	1901820-1, 1901821-1 1490747-1, 1976230-1	59973-1 §
8 [7-8.5]	1490413-9 ★ 1490413-2 ✱	1490413-9 ★ 1490414-2 ✱	48128-1 ★ § 48127-1 ✱ §	48128-1 ★ § 48127-1 ✱ §
6 [13-15]	1-1490413-0 ★ 1490414-2 ✱	1-1490413-0 ★ 1490414-2 ✱	48129-1 ★ § 48127-1 ✱ §	48129-1 ★ § 48127-1 ✱ §
4 [21]	1-1490413-1 ★ 1490414-2 ✱	1-1490413-1 ★ 1490414-2 ✱	48130-1 ★ § 48127-1 ✱ §	48130-1 ★ § 48127-1 ✱ §
2 [34-35]	1-1490413-2 ★ 1490414-3 ✱	1-1490413-2 ★ 1490414-3 ✱	48132-1 ★ § 48131-1 ✱ §	48132-1 ★ § 48131-1 ✱ §
1/0 [50-60]	1-1490413-3 ★ 1490414-3 ✱	1-1490413-3 ★ 1490414-3 ✱	48133-1 ★ § 48131-1 ✱ §	48133-1 ★ § 48131-1 ✱ §

SOLISTRAND Flag Terminals

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure			DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
	Hand Tools (U-Die)	Hydraulic Heads (U-Die)	Hand Tool (Shank Die)	Hydraulic Heads (Shank Die)	
		1490749-1	1901821-1, 1976230-1	1752868-1	69067 §
8 [7-8.5]	1752680-8 ★ 1752681-2 ✱	1752680-8 ★ 1752681-2 ✱	48506-1 ★◇ 48505-1 ✱✱	48506 ★ § 48505 ✱ §	48506-1 ★◇ 48505-1 ✱✱
6 [13-15]	1752680-7 ★ 1752681-3 ✱	1752680-7 ★ 1752681-3 ✱	48508-1 ★◇ 48507-1 ✱✱	48508 ★ § 48507 ✱ §	48508-1 ★◇ 48507-1 ✱
4 [21]	1752680-6 ★ 1752681-3 ✱	1752680-6 ★ 1752681-3 ✱	48509-1 ★◇ 48507-1 ✱✱	48509 ★ § 48507 ✱ §	48509-1 ★◇ 48507-1 ✱✱
2 [34-35]	1752680-5 ★ 1752681-3 ✱	1752680-5 ★ 1752681-3 ✱	48510-1 ★◇ 48507-1 ✱✱	48510 ★ § 48507 ✱ §	48510-1 ★◇ 48507-1 ✱✱
1/0 [50-60]	1752680-4 ★ 1752681-1 ✱	1752680-4 ★ 1752681-1 ✱	48652-1 ★◇ 48511-1 ✱✱	48652 ★ § 48511 ✱ §	48652-1 ★◇ 48511-1 ✱✱
2/0 [67-70]	1752680-3 ★ 1752681-1 ✱	1752680-3 ★ 1752681-1 ✱	48805-1 ★◇ 48511-1 ✱✱	48805 ★ § 48511 ✱ §	48805-1 ★◇ 48511-1 ✱✱
3/0 [80-95]	1752680-2 ★ 1752681-1 ✱	1752680-2 ★ 1752681-1 ✱	48806-1 ★◇ 48511-1 ✱✱	48806 ★ § 48511 ✱ §	48806-1 ★◇ 48511-1 ✱✱
4/0 [100-125]	1752680-1 ★ 1752681-1 ✱	1752680-1 ★ 1752681-1 ✱	48807-1 ★◇ 48511-1 ✱✱	48807 ★ § 48511 ✱ §	48807-1 ★◇ 48511-1 ✱✱

★	Stationary Die
✱	Moving Die
+	Self-Contained Die
◇	Use Adapter 69760
✱	Use Adapter 69834
§	These products will be discontinued

Dies, Hand Tools and Hydraulic Heads Configuration Options

AMPOWER Quick Disconnect Terminals

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure		DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
	Hydraulic Heads (Shank Die)		Hydraulic Heads (Shank Die)	
	1752868-1	1752786-1	69099	
1/0 [50-60]	68361-1 ● / 68200-1		68361-1 ● / 68200-1	
2/0 [67-70]	68253-1 ● / 68201-1		68253-1 ● / 68201-1	
3/0 [80-95]	59867-1 ●		59867-1 ●	
4/0 [100-125]	68304-1 ●		68304-1 ●	
250 MCM [127]	68203-1		68203-1	
350 MCM [177]		68204-1		68204-1
400 MCM [203]		68332-1 ◆		68332-1 ◆
500 MCM [253]		68206-1 ◆		68206-1 ◆
600 MCM [304]		46757-3		46757-3

●	With locator
◆	Dual Crimp

Insulation Piercing Crimp COPALUM Terminals and Splices

Wire Size in AWG [mm ²]		Hydraulic Crimp Tooling 10,000 psi Operating Pressure			DYNA-CRIMP Tool System 8,200 psi Operating Pressure		
		Hand Tool (U-Die)	Hydraulic Head (U-Die)	Hydraulic Heads (Shank Die)		Hydraulic Heads (Shank Die)	
Al	Cu	1490749-1	1901821-1 1976230-1	1752868-1	1752786-1	69099	69082
8 [7-8.5]	10 [5-6]	1490714-1	1490714-1	68084		68084	
6 [13-15]	8 [7-8.5]	1490715-1	1490715-1	68085		68085	
4 [21]	6 [13-15]	1490716-1	1490716-1	68086		68086	
2 [34-35]	4 [21]	1490717-1	1490717-1	68130		68130	
1/0 [50-60]	2 [34-35]	1490718-1	1490718-1	68131		68131	
2/0 [67-70]	1/0 [50-60]			68132		68132	
3/0 [80-95]	2/0 [67-70]			68133		68133	
4/0 [100-125]	3/0 [80-95]			318106-1	68129	318106-1	68129

Dies, Hand Tools and Hydraulic Heads Configuration Options

AMPOWER Terminals and Splices

Wire Size in AWG [mm ²]	Hydraulic Crimp Tooling 10,000 psi Operating Pressure							DYNA-CRIMP Tool System 8,200 psi Operating Pressure					
	Hand Tools (U-Die)		Hydraulic Heads (U-Die)		Hydraulic Heads (Shank Die)			Hand Tool	Hydraulic Heads (Shank Die)				
	1490748-1	1490749-1	1901820-1 1490747-1	1901821-1 1976230-1	1752868-1	1752788-1	1752786-1	59973-1 §	69065 § 69067 §	68073-2	69099	58445-1	69082
6 [13-15]	1583092-1	1583092-1	1583092-1	1583092-1	69133-1						69133-1		
4 [21]	1583093-1	1583093-1	1583093-1	1583093-1	69134-2						69134-2		
2 [34-35]	1583094-1	1583094-1	1583094-1	1583094-1	46765-3			46321-3 §	46321-3 §		46765-3		
1/0 [50-60]	1583095-1	1583095-1	1583095-1	1583095-1	46766-2			46322-2 §	46322-2 §		46766-2		
2/0 [67-70]	1583096-1	1583096-1	1583096-1	1583096-1	46767-2			46323-2 §	46323-2 §		46767-2		
3/0 [80-95]				†1583097-1	46749-2			46324-2 §	46324-2 §		46749-2		
4/0 [100-125]				†1583098-1	46750-2			46325-2 §	46325-2 §		46750-2		
250 MCM [127]					46751-2	46326-2					46751-2	46326-2	
300 MCM [152]					46752-2						46752-2		
350 MCM [177]					46753-2		69653				46753-2		69653
400 MCM [203]							46754-2						46754-2
500 MCM [253]							46755-2						46755-2
600 MCM [304]							46756-2						46756-2
600 HD							59870-1						59870-1
700 MCM [355]							46757-2						46757-2
800 MCM [405]							46758-2						46758-2
900 MCM [456]							46759-2						46759-2
1000 MCM [507]							46760-2						46760-2
1250 MCM [634]										68114-1			
1500 MCM [761]										68282-1			

†	1976230-1 only
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Dies, Hand Tools and Hydraulic Heads Configuration Options

Sealed Crimp COPALUM Terminals and Splices

Wire Size in AWG [mm ²]		Hydraulic Crimp Tooling 10,000 psi Operating Pressure				DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
		Hand Tool (U-Die)	Hydraulic Head (U-Die)	Hydraulic Heads (Shank Die)		Hydraulic Heads (Shank Die)	
Al	Cu	1490749-1	1901821-1 1976230-1	1752877-1	1752787-1	69066	58422-1
8 [7-8.5]	10 [5-6]	1490555-1	1490555-1	68006	68006	68006	68006
6 [13-15]	8 [7-8.5]	1490556-1	1490556-1	68007	68007	68007	68007
4 [21]	6 [13-15]	1490557-1	1490557-1	68008	68008	68008	68008
2 [34-35]	4 [21]			68009	68009	68009	68009
1/0 [50-60]	2 [34-35]			68010-1	68010-1	68010-1	68010-1
2/0 [67-70]	1/0 [50-60]			314964-1	68011-1	314964-1	68011-1
3/0 [80-95]	2/0 [67-70]				59877-1		59877-1
4/0 [100-125]	3/0 [80-95]				314948-1		314948-1

Bar Crimp COPALUM Terminals and Splices

Wire Size in AWG [mm ²]		Hydraulic Crimp Tooling 10,000 psi Operating Pressure				DYNA-CRIMP Tool System 8,200 psi Operating Pressure	
		Hand Tool (U-Die)	Hydraulic Head (U-Die)	Hydraulic Heads (Shank Die)		Hydraulic Heads (Shank Die)	
Al	Cu	1490749-1	1901821-1 1976230-1	1752868-1	1752786-1	69099	69082
8 [7-8.5]	10 [5-6]	1490572-1	1490572-1	68043		68043	
6 [13-15]	8 [7-8.5]	1490573-1	1490573-1	68044		68044	
4 [21]	6 [13-15]	1490574-1	1490574-1	68045		68045	
2 [34-35]	4 [21]	1490575-1	1490575-1	68046		68046	
1/0 [50-60]	2 [34-35]			68047		68047	
2/0 [67-70]	1/0 [50-60]			68048		68048	
3/0 [80-95]	2/0 [67-70]			68049		68049	
4/0 [100-125]	3/0 [80-95]				68050		68050
250 MCM [127]	4/0 [100-125]				68034		68034
300 MCM [152]	250 MCM [127]				68035		68035
400 MCM [203]	300 MCM [152]				68036		68036
500 MCM [253]	400 MCM [203]				68037		68037

Dies, Hand Tools and Hydraulic Heads Configuration Options

STRATO-THERM Terminals and Splices

Wire Size in AWG	Wire Size in mm ²	Hydraulic Crimp Tooling 10,000 psi Operating Pressure	DYNA-CRIMP Tool System 8,200 psi Operating Pressure
		Hydraulic Head (Shank Die)	Hydraulic Head (Shank Die)
		1752868-1	69099
8	7-8.5	69211-1	69211-1
6	13-15	69212-1	69212-1
4	21	69213-1	69213-1
2	34-35	69214-1	69214-1
1/0	50-60	69215-1	69215-1
2/0	67-70	69254-1	69254-1

Hydraulic Equipment Options and more detailed Information for 70,000 kPa / 10,000 psi

Electric Hydraulic Pumps, heavy duty

P/N 439798-2 (220 V)

suitable for continuous use

- Two speed cycle reduces cycle time for improved productivity
- Footswitch and 1.8 meter hose included
- Pump shuts down after pressure-switch setting is reached
- Easy to read integrated oil level sight glass
- Totally enclosed fan-cooled motor - ideal for use in any environment
- Quiet operation 70-79 dB(A)
- Swivel wheels provide easy manoeuvrability



Portable Electric Hydraulic Pump, light duty

P/N 523199-1 (220 V)

- Lightweight and compact design 10 kg
- Large Carry-handle for easy portability
- Two speed cycle reduces cycle time for improved productivity
- 24 V DC remote motor control, 3m length for operator safety
- Starts under full load
- High strength moulded shroud
- Supplied with male quick coupler (no hose supplied)

Pressure Gauge options:

P/N 523200-1 Pressure Gauge

P/N 523200-2 Digital Pressure Gauge

P/N 523200-3 1/4" Adapter (required when using either Gauge)



Hydraulic Foot Pump, manual

P/N 523199-2

- Pump action operation
- Clicker valve pressure regulation
- Supplied with male quick-coupling



Hydraulic Hand Pump, manual

P/N 1583661-1

This pump action unit allows hydraulic heads via optional length hydraulic hoses a degree of positional flexibility.



Battery-Hydraulic Tool Kit 12 t 'U' Die

P/N 1213875-2

- Complete Kit with EU Power Plug
- Suitable for all 'U' Dies with the exception of 'U' Die Assy (14 t)
- Rotating Head 320°
- Excellent power to weight ratio
- circa 10,000 Cycles

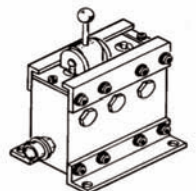
Kit Includes:

- Crimp Tool
- Battery Charger 220 V (PN 1213873-2)
- Rechargeable Battery (PN 1213872-1)
- Carry Case with strap

3-Way Multidirectional Valve

P/N 190 1782-1 (Manual)

P/N 190 1783-1 (Electric)



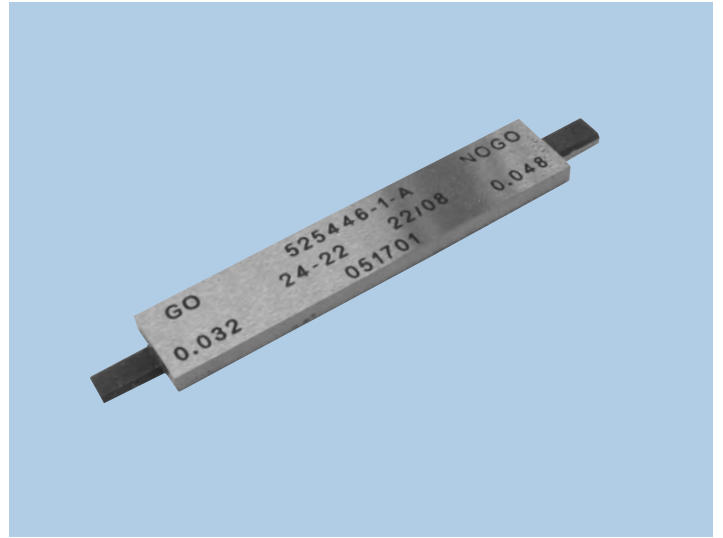
1.7 Insertion and Extraction Tools



Insert discrete terminals into connector housings or remove them, without causing damage to either the terminal, housing or yourself.

To reference the relevant tool(s) to your Terminal P/N please visit
www.tooling.tycoelectronics.com/europe/Handtools.asp

1.8 Hand Tool Control Gauges



To reference the relevant gauge(s) to your Hand Tool please visit

www.tooling.tycoelectronics.com/europe/Handtools.asp

Gauges are available for most closed barrel crimp tools for regular wear checks.

However, factory recalibration is recommended every 6 months or 5,000 cycles. See section 19

1.9 Service and Calibration

Most premium tools and some commercial tools can be economically serviced and repaired. Our tooling Service Centres hold spares for all commonly used tools along with the specialist equipment and skills required to re-calibrate after repair.

Tyco Electronics recommends that for hand tools a calibration check is carried out every 6 months or every 5,000 crimp cycles, whichever the sooner.

We calibrate and provide certificates for the following Tyco Electronics / AMP equipment:

- Premium tools complete
- Interchangeable dies (independent of the optional equipment they are used in)
- Any equipment that has measurable parameters.

We will be pleased to quote for any of the above options or to service all other types of equipment. Only Tyco Electronics authorised Service Centres listed below have the necessary access to engineering drawings and specialised equipment required for our repair and calibration processes.

Tyco Electronics uses crimp height as the primary measure of crimp quality integrity, and does not recognize pull-off values alone as a measure.

If you would like more information on this subject, why not get in touch with your Country Contact who will be happy to arrange a visit to present explanatory information

www.tooling.tycoelectronics.com/europe/Contact.asp

Approved Service Centres

Tyco Electronics Nederland b.v.
Tooling Service Centre
5222 BH, 's-Hertogenbosch
Nederland b.v.
Tel +31(0)73 6246362
Fax +31(0)73 6246931
email nltoolingservicecentre@tycoelectronics.com

Tyco Electronics UK Ltd.
Tooling Service Centre
Barton Tors
Bideford
North Devon
EX39 4HE
United Kingdom
Tel +44 (0)1237 42 8640
Fax +44 (0)1237 42 8617
email uktoolingservicecentre@tycoelectronics.com

Tyco Electronics Norge AS
Service department
Holmengaten 24
1394 Nesbru
Norge (Norway)
Tel +47 667 78889
Fax +47 667 78855
email tooling.no@tycoelectronics.com

Tyco Electronics AMP GmbH
Reparatur Service
Ampèrestr. 7-11
63225 Langen
Germany
Tel +49 (0)6103 709 1534
Fax +49 (0)6103 709 3076
email gherzog@tycoelectronics.com

2 Wire Processing Equipment

2.1 Stripping Machines



AVG 0 160 Cable Strip and Twist Machine

The AVG 0 160 is a stripping and twisting machine for wires with insulation such as PVC, TEFLON, Silicon, Fiberglass, Rubber etc. The machine can cover a wire size range from 0.03 mm² up to 6 mm² with an adjustable stripping length from 0.5 mm up to 29 mm. The machine utilizes rotary stripping blades for a smooth, 360° cutting of the insulation.

P/N 1481003-1

JacketStrip 8400 Jacket Stripping Machine

The JacketStrip 8400 enables automatic jacket stripping of round cables up to 26 mm in diameter and a stripping length of 200 mm. After the cable jacket has been cut, the piece of insulation is removed using a strong electric motor (full/partial or window strip can be selected). Pneumatically operated clamping jaws guarantee optimal cable retention during the stripping process. All functions of the machine are electronically monitored and diagnosed by means of a LCD display.

P/N 1-528453-7

UniStrip 20 15/ 2100 Stripping Machines

The pneumatically operated stripping machine UniStrip 20 15 primarily processes stranded wires and single wires. Due to the minimal distance between the acryl safety cover and the stripping blades, this machine can perform stripping on extreme short cables.

The UniStrip 2100 is an electrically driven stripping machine. Ease of operation, fast cycle times, a powerful yet silent motor drive as well as a vast cable processing range are the main features of this machine.

UniStrip 20 15 P/N 1-528453-0

UniStrip 2100 P/N 528453-8

UniStrip 2500 Stripping Machine

This pneumatically driven stripping machine comes standard with V-blades, with no blade changeover necessary. Through the use of special blades, the range of applications can be expanded to include flat ribbon cable, double-stranded wire, thin multistranded wire or demanding isolations. The adjustable way-back prevents the conductor from being damaged during the stripping process.

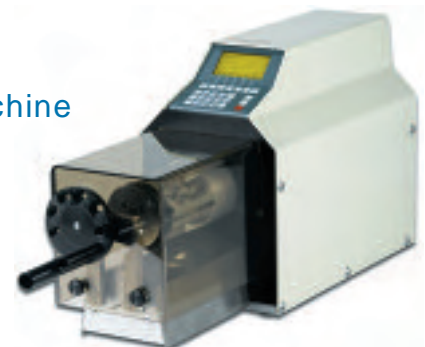
P/N 528453-7

CoaxStrip 5300 - Programmable Coaxial Cable Stripping Machine

The Coax Strip 5300 is a semi-automatic, programmable multi-step stripping machine for coaxial, triaxial, multi-conductor cable and single conductor wire.

This benchtop unit can easily process coaxial and triaxial cables up to 7 mm (0.276") outer diameter and strips lengths up to 30 mm (1.18").

PN 1-528453-5



TEFLON is a trademark of E.I. duPont deNemours and Co.

2.2 Cutting and Stripping Machines

KAPPA family stripping machines are ideal for cutting individual and special wires to length and stripping them. They can strip in sections, allowing them to strip even extremely long lengths in perfect quality. The machines cover an extraordinarily broad range of cross sections. KAPPA 220, 225, 235, 330 and 350 stripping machines support a variety of processing options such as wire marking with hot-stamp or ink jet markers. Hot stamp marking can even be done on the KAPPA 210 machine, the entry-level model.

Many wires outside the indicated cross section range can be processed on the Kappa machines. Certain extremely hard, tough wires may not be able to be processed even though they are within the indicated cross section range. In case of doubt, we are happy to produce samples of your wires.

New KAPPA Generation:

- Dynamic, flexible cutting and stripping unit
- New intelligent sensors
- New electronic and software
- KAPPAWIN or TOPWIN software



KAPPA 330 Machine



KAPPA 350 Machine

Overview of Kappa Automatic Stripping Machines

	Kappa 210	Kappa 220	Kappa 225	Kappa 330	Kappa 350
Part Number (Base Machine)	X-547178-X	X-547178-X	X-547178-X	X-509309-X	X-528309-X
Length Accuracy (Standard Wires)	± 1mm resp. <0.2% depending on wire length				
Stripping Lengths					
Side 1 Full Strip	40 mm	40 mm	40 mm	180 mm	290 mm
Side 1 Partial Strip	40 mm	40 mm	40 mm	999.9 mm	999.9 mm
Side 2 Full Strip	36 mm	36 mm	36 mm	50 mm	150 mm
Side 2 Partial Strip	999.9 mm	999.9 mm	999.9 mm	999.9 mm	999.9 mm
Wire Cross Section, Stranded Wires	0.05-3 mm ² AWG 30-AWG 12	0.05-6 mm ² AWG 30-AWG 10	0.05-10 mm ² AWG 30-AWG 7	0.22-35 mm ² AWG 24-AWG 2	2.5 - 120 mm ² AWG 14 - AWG 5
Maximum Cable Outside Diameter	10.5 mm	10.5 mm	10.5 mm	16 mm	35 mm
Noise Level	<70 dB(A)				
Electrical Connection	110 V / 230 V 50/60 Hz	110 V / 230 V 50/60 Hz	110 V / 230 V 50/60 Hz	110 V / 230 V 50/60 Hz	110 V / 230 V 50/60 Hz
Dimensions (W x H x D)	480 x 340 x 390 mm		560 x 340 x 390 mm	630 x 365 x 480 mm	1090 x 1424 x 890 mm
Weight	Approx. 28 kg	Approx. 28 kg	Approx. 36 kg	Approx. 55 kg	Approx. 270 kg

KAPPA, KAPPAWIN and TOPWIN are trademarks of KOMAX AG.

2.3 4/8 Indent Stripper Crimper with Touch Sensor System



Fast Facts

- Modular open design
- Fast and simple tool kit changes
- Fast changeover times
- Variety of tool kits
- Touch sensor system
- Wire sizes from 0.14 - 2.5 mm
- Insulation diameter 0.35 - 2.5 mm
- Jacket strip length 30 mm
- Strip length 2.0 - 10 mm
- Electric power supply: 115 V / 230 V
- Compressed air: 500-700 kPa
- Cycle time: 2.5 seconds
- Weight: Approx. 60 kg
- Dimensions machine [mm]
W x H x D = 530 x 620 x 800

The machine is suitable for stripping and crimping loose piece contacts to accepted MIL specifications with 4/8 indent crimp form.

The machine feeds, sorts and separates the contacts prior to the stripping and crimping process. A variety of contact specific tool kits is available or can be created to suit almost all screw machined contacts.

The machine is easy to operate and can be changed from one contact to another quickly and easily.

The touch sensor is a safety system designed to monitor when the stripping blades contact the conductor during insulation stripping. If the blades make contact with the conductor then the machine will not crimp the contact.

The system allows for partial or full monitoring or can be turned off completely.

The touch sensor system is particularly useful when stripping wires where a non-contact situation is required.

Application specific equipment: Please address your request to your local Tyco Electronics representative.

The relevant GATD contact can be found on the website below.

2.4 AM03 Universal Stripper Crimper



Fast Facts

- Stripping range 0.14-2.50 mm² [AWG 26-14]
- Special version up to 4 mm²
- Programmable adjustment for stripping and crimping depth
- Data memory 50 programs
- Rapid and reliable crimping process
- Insertion wire length: min. 32 mm
- Drive: Electro-pneumatic
- Electrical connection: 230 V, 50 Hz, 120 VA
- Pneumatic connection: 550 kPa (5.5 bar)
- Dimensions [mm]
WxDxH = 500x500x460
- Weight: 40 kg

The AM03 Universal Stripper Crimper processes loose piece turned male and female pin contacts. As standard the machine uses the 4/8 ident crimp corresponding to MIL 22520/ 1-01.

The adjustment of the stripping and crimping depth is motorised.

Different values for up to 50 programs can be memorised. Adjustment and programming can be made through the keyboard. The LCD display shows all important data, functions and errors.

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

All tools are quick and easily exchangeable.

Machine Components

- Basic machine
- Oscillating conveyor
- Tool unit equipped with 4/8 ident crimping dies
- Motorised adjustment unit for stripping and crimping
- Stripping unit with V-knives
- Contact specific tooling feeding tube
- Singling unit
- Contact holder
- Contact stopper
- Wire centraliser

A crimp quality monitoring system is available as an option.

AM03 Basic Machine
without Kits
PN 0528375-8

2.5 Crimp Quality Control Equipment Micrograph Laboratory



Features

- Quick process flow of 5 to 10 minutes
- No cross section potting
- Evaluation according to DIN and different electrical and physical parameters
- PC specific software for micrograph evaluation

The micrograph laboratory is designed for Tyco Electronics crimp terminal systems but is not restricted to them.

With a modified sample holder, cross sections of competitors products are also possible.

The flexibility of the CSL allows cross sections of a variety of crimp terminals.

Better than conventional processes the new cutting method makes potting and long drying times a thing of the past. So processing time can be reduced dramatically.

For special requirements an optional impregnation module is available. With it the cutting area can be lightly fixed.

If you need more detailed information please contact your local representative. The relevant contact can be found on the website below.

Our GATD team will be very pleased to assist you.
PN X-528000-X

Portable Micrograph Laboratory for Crimp Terminal Systems



Features

- Compact, easy to operate
- Optional electrolyte Etching module
- Easy fixation station for sample holder
- Secure mechanism for Optic during transportation
- 1.3 Mpixels USB 2.0 Camera with SL Vision II Evaluation and Documentation module

The Micrograph Laboratory is designed for Tyco Electronics crimp terminal systems but is not restricted to them.

With a modified sample holder, cross sections of competitors products are also possible.

The flexibility of the CSL allows cross sections of a variety of crimp terminals.

Nowadays quick and significant process monitoring gains increasing importance as a competitive factor.

The CSL brings you a decisive advantage in order to evaluate the quality of your crimp connections simply and safely, fast and economically priced.

Due to the mobility you can use the CSL everywhere. Thereby you are able to decide on the release for production, e.g. after a tool change, in best time and on site. You will lose less of your value scooping production time.

PN 1-528000-2

3 Test Equipment

3.1 High Voltage Test Equipment

Tyco Electronics offers a comprehensive range of automatic test equipment for wiring harnesses and associated systems. Overall maintenance procedures require a 100% electrical inspection by means of high voltage testing. The automatic test equipment provides up to 500,000 test points in 2-wire or 4-wire Kelvin measurement. Capability ranges from a simple harness to the most complex high density back planes can be analyzed in an unrivaled accuracy, quality and reliability.

19" Rack Based System

Standard test systems are built into 19" cabinets with test point numbers varying from 32 to over 500,000. Test voltages can range from 10 V DC to 25 kV DC. AC voltages are optional upon request. 19" racks can also be built as moveable units.



Portable System

Especially for harsh environments, Tyco Electronics offers portable systems in ruggedized, waterproof cases. Systems come completely with PC and ticket printer. The test voltage of 500 V DC can be supplemented with 250 V AC.

Remote Control POCKETMEG

When it comes to planning a test environment, hooking-up a large unit under test or when troubleshooting on larger applications needs to be performed, the operator will benefit from being able to move around the application while at the same time having full control over the test software. Using WiFi communication and data transfer protocol, POCKETMEG wireless PDA offers full remote control and operator interaction with the automatic test system. The operator can move around the unit under test, with POCKETMEG wireless PDA in hand, while receiving test progress information, test results and pictorial guides and instructions. Productivity and test speed can be drastically improved.



MK and POCKETMEG are trademarks of MK Test Systems, Ltd.

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For more detailed information please visit our website
www.tooling.tycoelectronics.com/europe

AEP Tools T. +31(0)78-692 2100 F. +31(0)78-692 2109 E. sales@aepint.nl www.aepint.nl

Electrical Test Software

WINDOWS-based Test Software is truly intuitive and easy to use. Test programs use familiar from-to connections, drop-down menus and tick boxes, so operator training time is minimal. Operator guidance is highly visual; pictorial prompts, links to photographs and manuals produce an immediate graphic message of nature and location of fault.

Automatic Program Generation (APG), coupled with a state of the art data import facility, dramatically cuts programming time and virtually eliminates the need for analysis by the operator. This means that the world's most powerful testing solution is also the easiest to use and most cost-effective solution for you.

Typical Systems and Applications

2-Wire Systems

T 100

- Low voltage, high speed testing
- 2-wire continuity measurement to 0.1 Ohm
- 50 V AC option

T 10000

- 2-wire continuity measurement to 0.1 Ohm
- 0,000 V DC testing to 1,000 MOhm
- 5,000 V AC option

4-Wire Systems

F 1500

- 4-wire continuity measurement to 0.001 Ohm
- 1,500 V DC testing to 1,000 MOhm
- 1,000 V AC option

F 2500

- 4 wire continuity measurement to 0.001 Ohm
- 2,500 V DC testing to 1,000 MOhm
- 1,500 V AC option

Dual Systems

D 1500

- 2/4 dual-wire continuity measurement to 0.001 Ohm
- 1,500 V DC testing to 1,000 MOhm
- 1,000 V AC option

D 2500

- 2/4 dual-wire continuity measurement to 0.001 Ohm
- 2,500 V DC testing to 1,000 MOhm
- 1,500 V AC option

Special Variants and Modules

Intrinsically Safe System

- For use in hazardous areas in which explosive gas atmosphere is likely to be present
- 4-wire continuity measurement to 0.001 Ohm
- 200 V DC testing to 200 MOhm



WINDOWS is a trademark of Microsoft Corp.
MK is a trademarks of MK Test Systems, Ltd.

Advantages of the powerful Test Systems Product Range

Specific Build Options

Built to your specific requirements, supplied, installed and commissioned at your site, we offer the optimum in quality, accuracy and reliability - the complete turnkey solution.

System Control

Setting new standards with its simple to use, yet powerful, menu driven software. Test files for complex harness systems are created with ease, using one of a variety of Auto Create facilities, confirming it's place at the forefront of automatic testing technology.

Quality

A comprehensive diagnostics system allows verification of the switching matrix, programmable power supplies and all measurement circuits. This includes verification of external test fixtures. All diagnostics give clear results with an optional dated report and archive file. Diagnostics can be configured to run before every test, daily, weekly, monthly, etc. In addition to the diagnostics tools, the operation of power supplies, switching matrix and measurement circuits is being monitored during normal testing.

Calibration is designed to be carried out by your on-site engineers making use of the in-built calibration program and calibration card which is supplied with the system. This is a simple and fast operation and is completed in a matter of minutes.

Additional Services

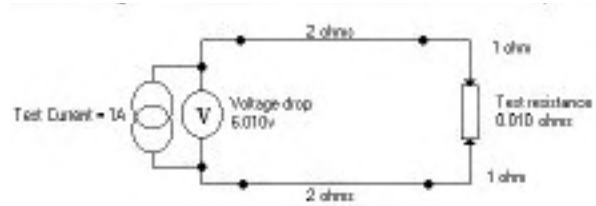
Tyco Electronics test systems offer test interface fixture, harnesses and jigs as part of a complete package. If you would like to take advantage of this service, contact us with full details of your requirement.

Resistance Measurements

The range of test systems can be supplied in three formats either 2-wire, 4-wire, or a Dual systems capable of performing both 2- and 4-wire measurement. The fundamental difference is explained as follows:

2-Wire Measurement

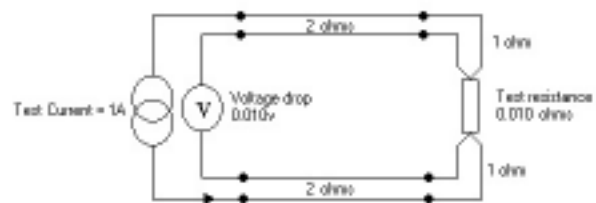
The 2-wire technique is typically used in automotive wiring, computer cables and other low specification applications to verify that an item is wired correctly and not to verify the integrity or performance of a cable. When measuring low resistance measurements using the 2-wire technique, the test lead or test interface wiring will be in series with the device under test. With a constant test current of 1A flowing through the circuit a Volt drop of 6.010 V is measured, therefore displaying a resistance of 6.010 Ohm. All contact resistances and test lead resistances are added into the test value. In this typical example the measurement error is >60,000%.



4-Wire Measurement

The 4-wire measurement technique is found in some higher specification ATE, more commonly known as Kelvin measurement. When measuring low resistance measurements using the 4-wire technique the test lead or test interface wiring will be automatically nulled out. With a constant test current of 1A flowing through the circuit a Volt drop of 0.010 V is measured, therefore displaying a resistance of 0.010 Ohm.

Most Aerospace and Defense companies have adopted the 4-wire continuity measurement technique as the industry standard.



Advantages of the powerful Test Systems Product Range

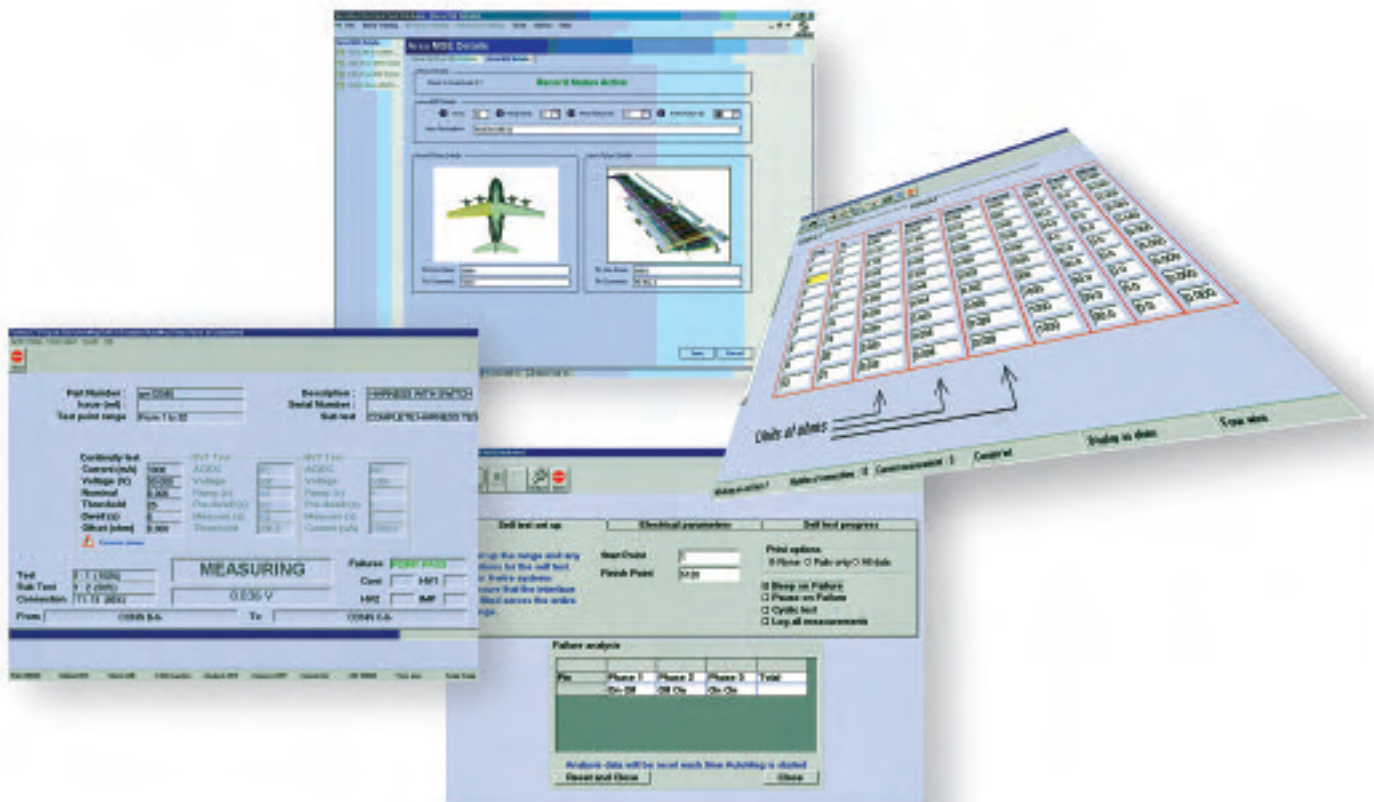
The 4-wire Kelvin resistance measurement technique in the typical manufacturing environment will allow the test system to detect faults such as:

- Incorrect wire gauge
- Dirty contacts
- Bad ground / shield connections
- Poorly mated or loose connections
- Incorrect fuse / breaker installations
- Incorrect or malfunctioning components

When combined with specialist Kelvin probes and our continuous scanning features, and used in the correct environment the system can be used to detect faults such as:

- Wire with broken strands
- Bad crimp connections
- Dry solder joints
- Intermittent connection faults

... and other events that can only be detected with consistent milliohm resistance measurement and accuracy.



3.2 Cable Test Systems

CT15 and CT30 Cable Testers by TSK



The cable testers CT15 and CT30 are based on a universal measuring board which allows for a greater flexibility so that these units can also be combined with TSK's modular test table systems like TS1300.

Fast Facts

- Continuity and short circuit testing
- Resistance testing, testing of diodes and capacitors
- Programme creation from qualified sample (Autoprogram)
- Pin number function
- USB interface (CT15) resp. Ethernet data transfer to PC
- Programme creation on CS WIN (CS WIN License required)
- 7 resp. 8 freely programmable I/Os
- Extended range of power source to 200 mA

Standard Equipment

- USB, serial port, parallel port resp. Ethernet (for CT30)
- Keyboard, Mouse, VGA (for CT30)

CT15 Cable Tester:

Slots for 3 test point cards internally, up to 384 test points

Fully compatible with CT20 and CT30 testers

CT30 Cable Tester:

Slots for 512 test points internally additional 2048 test points in extra housing

Fully compatible with CT15 tester

Designed especially for the electrical test of simple cables to complex wire harnesses these cable testers sets standards in technology and price.

The large graphic display and the ergonomic keypad enable easy handling for both operator and setter.

The logical software structure enables simple and easy operation and programming.

A programme can be created at the tester directly or via a connected PC with the CS WIN Software.

TSK CT15 and CT30 Cable Testers are products of TSK Quality Solutions.

4 Appendix - Useful Information

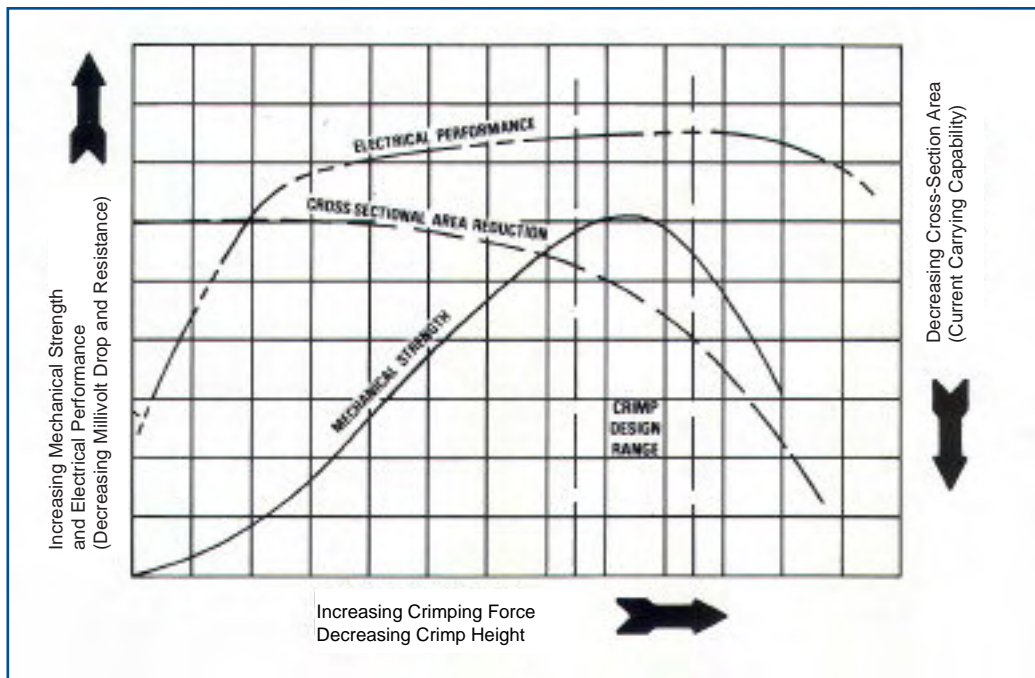
4.1 Wire Range Limits

A reliable termination includes: Good Electrical Performance, Cross-Sectional Area Reduction, and Mechanical Strength.

Termination Quality is determined by measuring the Crimp Height of the crimped terminal. The proper crimp height, accompanied by careful visual inspection, assures that the termination will meet or exceed specified requirements, provided that the wire and tooling being used are correct.

A quality termination occurs when the terminal is crimped within the Crimp Design Range.

Mechanical Strength & Electrical Performance Related to Crimping Force & the Cross-Sectional Area of Reduction



4.2 Computing CMA

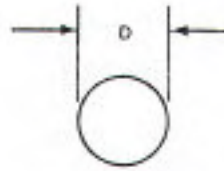
STRANDED WIRE



1. Multiply Diameter (D) of one Strand (in mils) by itself.
2. Multiply the result by the total number of Strands.

$$CMA = D^2 \times N$$

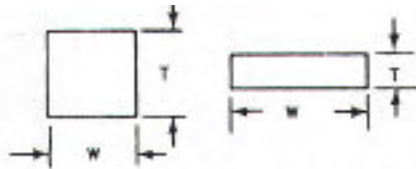
ROUND WIRE



1. Multiply the Diameter (D) in mils by itself.

$$CMA = D^2$$

SQUARE OR RECTANGULAR WIRE



1. Multiply the Width (W) of the Wire Cross-Section in mils by the Thickness (T) of the Wire Cross-Section in mils.
2. Multiply the result by 1273.

$$CMA = W \times T \times 1273$$

Whole numbers

Examples:

.0150" = 150

.100" = 100

.250" = 250

.500" = 500

CMA Table (Typical Values)

Wire Size	CMA	Wire Size	CMA	Wire Size	CMA	Wire Size	CMA
26	250	18	1,620	10	10,400	2	66,400
24	475	16	2,580	8	16,500	1/0	106,000
22	750	14	4,110	6	26,300	2/0	133,000
20	1,200	12	6,530	4	41,700	3/0	168,000
						4/0	212,000

4.3 Wire Range and Colour Codes

The Wire Range stamped on a Terminal indicates the smallest and largest acceptable Single Wire.

When two or more Wires are used, the total Cross-Sectional Area should be within the Range listed in the CMA Range Column.

TERMINAL SIZE	PRODUCT COLOR CODE* PDC, PLASTI-BOND, AMPLI-BOND, TERMINYL	CMA RANGE®	CRIMP CODE ††	TERMINAL SIZE	CMA RANGE	CRIMP CODE ††	
						AMPOWER	SOLISTRAND
26-22	YELLOW	202-810	●	22-16	509-3,260	↑	↑
				16-14	2,050-5,180		
				16-14 HD†	2,050-5,180		
				14-12	3,260-8,230		
				12-10	5,180-13,100		
				8	13,100-20,800		
				6	20,800-33,100		
				4	33,100-52,600		
				2	52,600-83,700		
				1/0	83,700-119,500		
24-20	WHITE OR TRANSLUCENT	320-1,290	●●	2/0	119,500-150,500	↑	↑
				3/0	150,500-190,000		
				4/0	190,000-231,000		
				250-300 MCM	231,000-300,000		
				300-350 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500-600 MCM	478,000-600,000		
				250 MCM	231,000-275,000		
				300 MCM	275,000-325,000		
				22-16 22-18 (MIL)	RED		
400 MCM	375,000-450,000						
500 MCM	450,000-550,000						
600 MCM	550,000-650,000						
700 MCM	650,000-750,000						
800 MCM	750,000-850,000						
900 MCM	850,000-950,000						
1000 MCM	950,000-1,125,000						
1250 MCM	1,125,000-1,300,000						
1500 MCM	1,300,000-1,600,000						
20-16 HD†	GREEN	992-2,800	●●	900 MCM	850,000-950,000	↑	↑
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				16-14	2,050-5,180		
				16-14 HD†	2,050-5,180		
				12-10	5,180-13,100		
				8	13,100-20,800		
				6	20,800-33,100		
				4	33,100-52,600		
16-14 HD†	YELLOW OR BLACK‡	2,050-5,180	●	250 MCM	231,000-300,000	↑	↑
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
				800 MCM	750,000-850,000		
				900 MCM	850,000-950,000		
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
12-10	YELLOW	5,180-13,100	●	1250 MCM	1,125,000-1,300,000	↑	↑
				1500 MCM	1,300,000-1,600,000		
				8	13,100-20,800		
				6	20,800-33,100		
				4	33,100-52,600		
				2	52,600-83,700		
				1/0	83,700-119,500		
				2/0	119,500-150,500		
				3/0	150,500-190,000		
				4/0	190,000-231,000		
8	RED	13,100-20,800	EMBOSSED 8	250 MCM	231,000-300,000	↑	↑
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
				800 MCM	750,000-850,000		
				900 MCM	850,000-950,000		
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
6	BLUE	20,800-33,100	EMBOSSED 6	1000 MCM	950,000-1,125,000	↑	↑
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
				800 MCM	750,000-850,000		
4	YELLOW	33,100-52,600	EMBOSSED 4	800 MCM	750,000-850,000	↑	↑
				900 MCM	850,000-950,000		
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
2	RED	52,600-83,700	EMBOSSED 2	900 MCM	850,000-950,000	↑	↑
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
1/0	BLUE	83,700-119,500	EMBOSSED 1/0	800 MCM	750,000-850,000	↑	↑
				900 MCM	850,000-950,000		
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
2/0	YELLOW	119,500-150,500	EMBOSSED 2/0	900 MCM	850,000-950,000	↑	↑
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
3/0	RED	150,500-190,000	EMBOSSED 3/0	1000 MCM	950,000-1,125,000	↑	↑
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		
				800 MCM	750,000-850,000		
4/0	BLUE	190,000-231,000	EMBOSSED 4/0	900 MCM	850,000-950,000	↑	↑
				1000 MCM	950,000-1,125,000		
				1250 MCM	1,125,000-1,300,000		
				1500 MCM	1,300,000-1,600,000		
				250 MCM	231,000-300,000		
				300 MCM	300,000-380,000		
				400 MCM	380,000-478,000		
				500 MCM	450,000-550,000		
				600 MCM	550,000-650,000		
				700 MCM	650,000-750,000		

† CRIMP WITH NEXT LARGER SIZE TOOLING.

‡ BLACK CODING USED FOR PRE-INSULATED FLAGS.

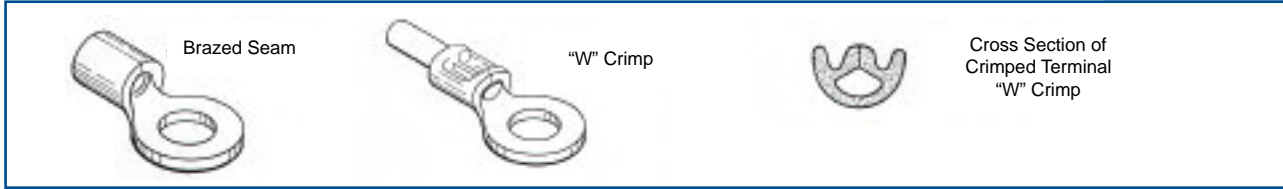
* THERE ARE EXCEPTIONS.

†† EMBOSSED ON CRIMPED TERMINAL OR SPLICE.

® NOT APPLICABLE TO MILITARY SPECIFICATIONS.

Wire Range and Colour Codes

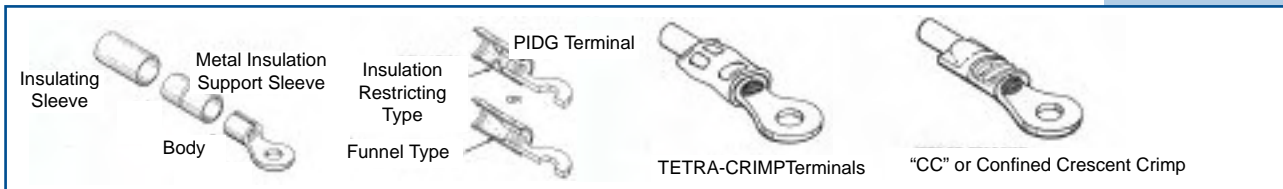
SOLISTRAND Terminal Uninsulation Support Sleeve / Size 26 to 600 MCM



DIAMOND GRIP Uninsulated Terminal with Metal Insulation Support Sleeve / Size 26 to 10



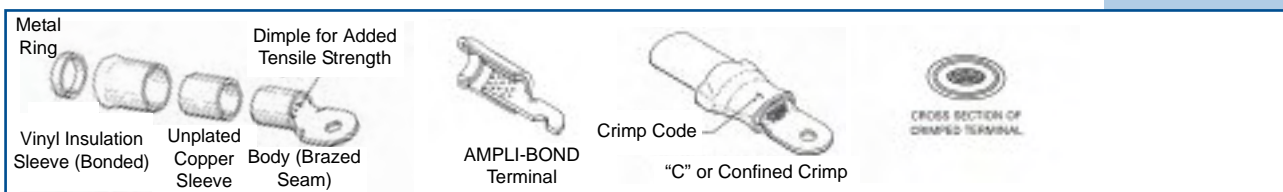
PIDG Terminal Insulated with Metal Insulation Support Sleeve / Size 26 to 10



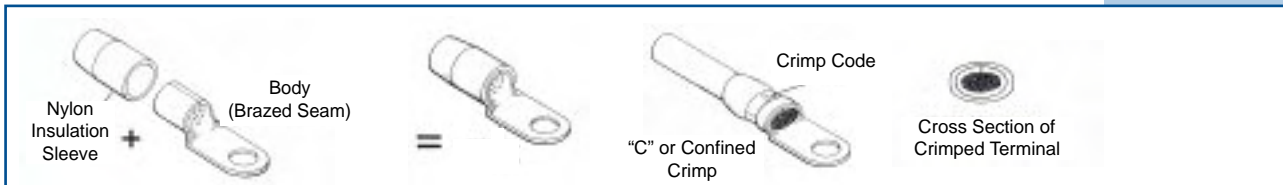
PLASTI-GRIP Terminal Insulated with Insulation Support / Size 22 to 2/0



AMPLI-BOND Terminal Vinyl-Insulated with Insulation Grip / Size 8 to 4/0



TERMINYL Terminal Nylon Insulated / Size 8 to 4/0

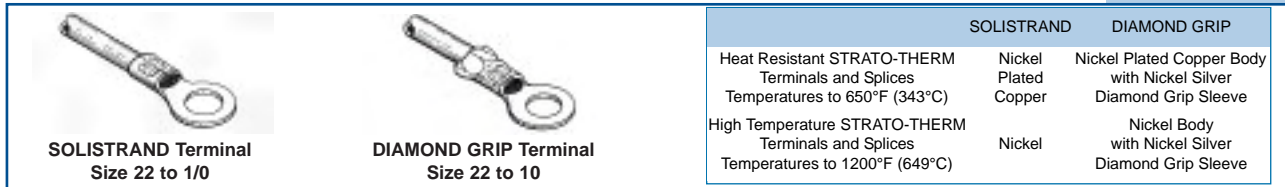


Wire Range and Colour Codes

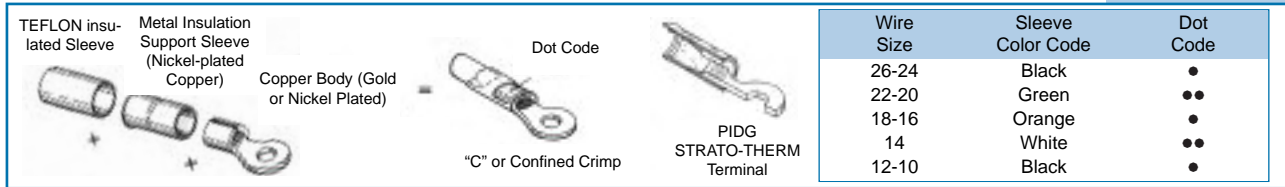
AMPOWER Terminal Uninsulated



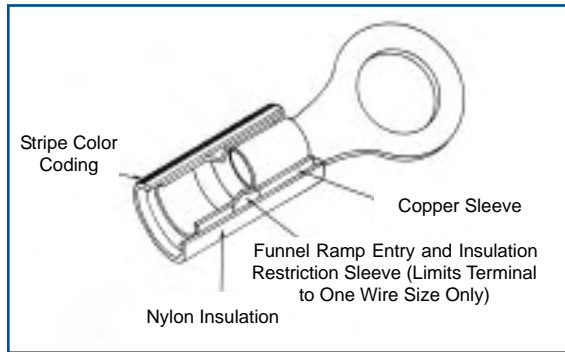
STRATO-THERM Terminal Uninsulated



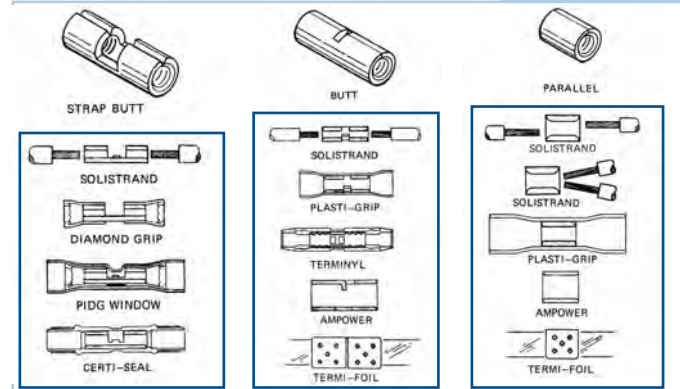
PIDG STRATO-THERM Terminal Insulated with Metal Insulation Support Sleeve / Size 26 to 10



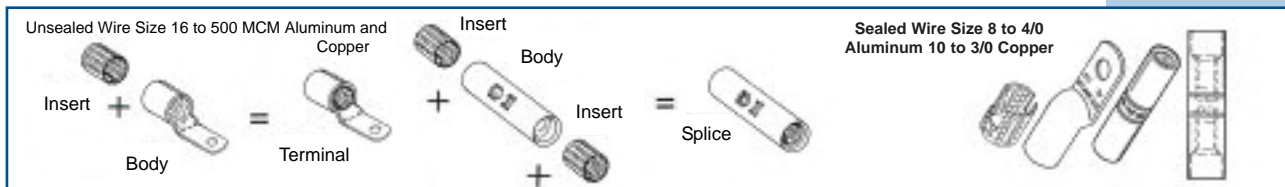
PIDG Terminal Insulation-Restricting Size 26 to 10 AWG



Standard Splices



COPALUM Terminal and Splice Uninsulated Terminals for Aluminum Wire

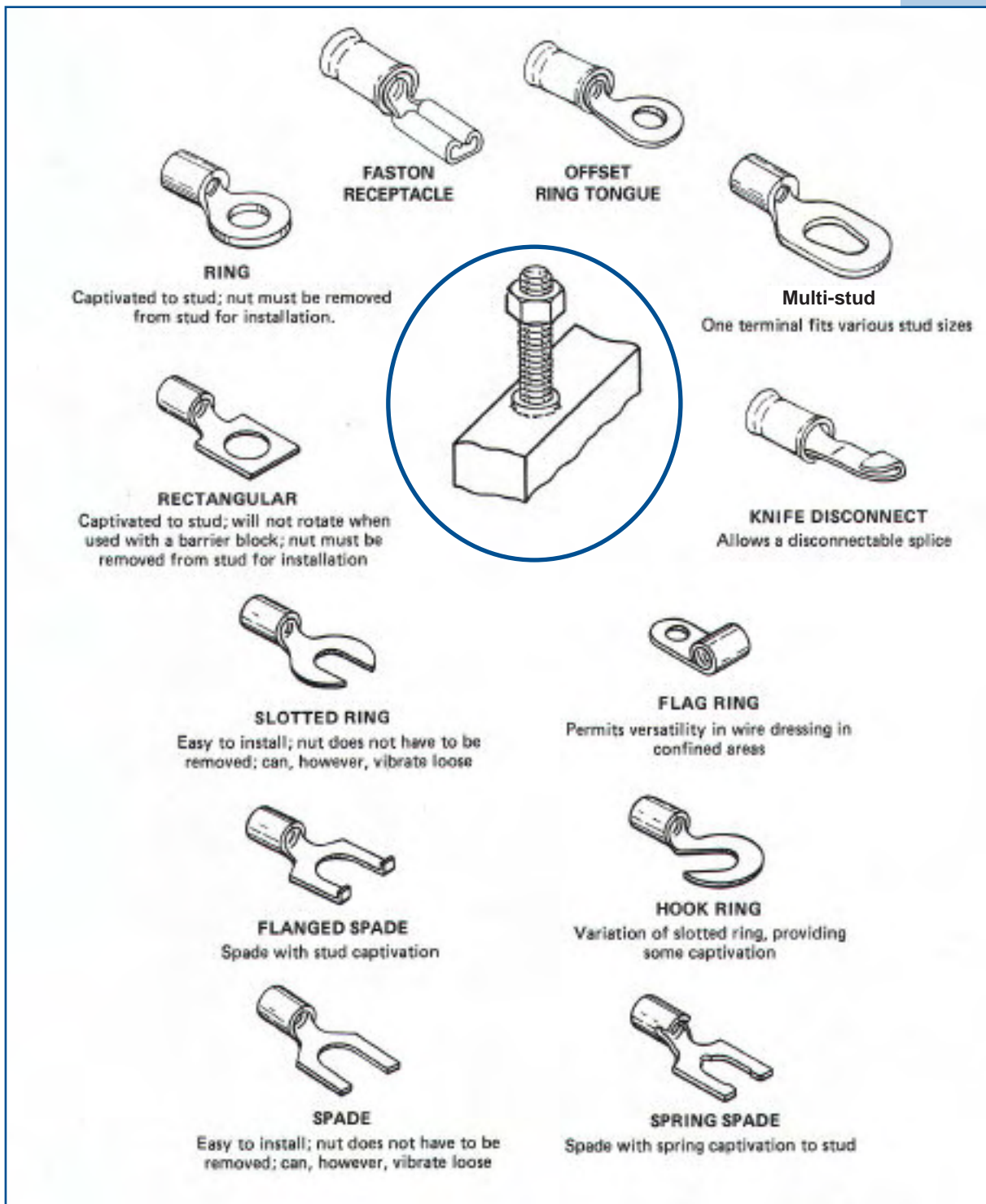


Closed-End Splices



TEFLON is a trademark of E.I. DuPont deNemours and Co.

4.4 Terminal Styles



AMP, AMPLI-BOND, AMPLIMITE, AMPMODU, AMPOWER, CERTI-CRIMP, CERTI-SEAL, COAXICON, COPALUM, DIAMOND GRIP, DUALAN, DURASEAL, DYNA-CRIMP, ERGOCRIMP, FASTON, FSD, LIGHTCRIMP, LIGHTCRIMP PLUS, MATE-N-LOK, MINISEAL, PIDG, PLASTI-GRIP, PRO-CRIMPER, RSD, SOLISTRAND, STRATO-THERM, TERMI-BLOK, TERMI-FOIL, TERMINYL, TETRA-CRIMP, XTC, TE Logo and Tyco Electronics are trademarks. Other products, logos and company names mentioned herein may be trademarks of their respective owners.