

Tooling Overview

Deutsch Industrial manufactures two types of contacts, solid and stamped & formed. Both styles of contacts are designed for crimp style terminations, no solder is required or recommended. A crimp style termination displaces the wire strands creating a superior bond between the wire and the contact.

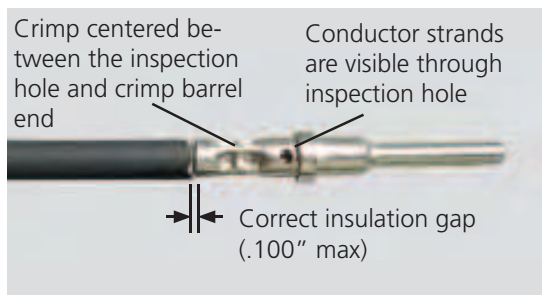
Deutsch offers several types of tools to assist with hand and production wire crimping, wire insertion and removal and wedgelock/terminal position assurance removal. The tools are specific to the solid contacts or the stamped & formed contacts. To ensure a proper crimp and achieve the highest performance specifications, Deutsch contacts must be crimped with Deutsch tooling. Deutsch can only warrant electrical performance when proper parts, procedures, and tooling are used.

■ Benefits of Crimping

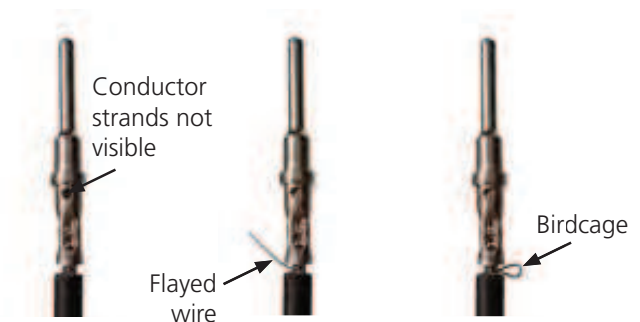
Mechanically crimping contacts is the dominant wire termination method, for some very good reasons:

1. Since no wet process is involved, corrosion is not a problem. No adhesive, flux, or additives are used.
2. Strength, accuracy and overall reliability of a crimped contact are controlled by the crimp tool, not the operator. The field tools (except size 4 solid style) release the contact only after the full crimping cycle is completed.
3. The crimp tool is universal, accepts both pins and sockets of many sizes.
4. Crimping can be done anywhere, without special preparation. Terminations are replaced or modified in the field exactly the same as in the shop, using the same tools and the same techniques, and with the same ease of operation and certainty of results.
5. Total installed and maintenance costs are lower.

■ Solid Contact Crimp Inspection

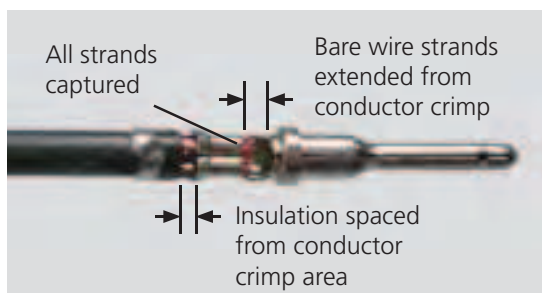


Acceptable Crimp

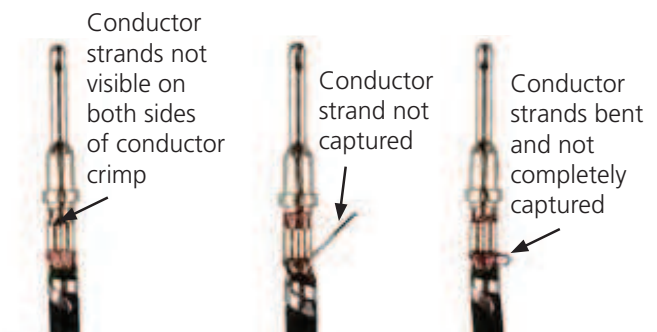


Unacceptable Crimps

■ Stamped & Formed Contact Crimp Inspection



Acceptable Crimp



Unacceptable Crimps

Automated Tooling Overview

For higher production volumes, Deutsch offers a pneumatic power crimp tool for the solid contacts, and applicator dies for stamped & formed contacts. The HDP-400, the pneumatic solid crimp tool, is a fast, bench-top tool that crimps all of the contacts in the Deutsch Industrial Common Contact System. The HDP-400 has a foot control, and easy-to-change dies and locators for each contact size. Deutsch's stamped & formed applicator dies are heavy duty mini-dies that work in many industry standard presses. Deutsch's applicator dies offer simple adjustments and the flexibility to accept different sized Deutsch contacts and wire gauge.

Automated Tooling for Solid Contacts



Tool P/N	Contact Size	Contact Part Number
HDP-400	4	0460-204-0490
		0462-203-04141
	8	0460-204-08141
		0462-203-08141
	12	0460-204-12**
		0462-203-12**
	16	0460-202-16**
		0462-201-16**
		0460-215-16**
		0462-209-16**
20	0460-202-20**	
	0462-201-20**	



HDP-400 Dies and Locators

Crimp Tool Part Number	Drawing Number Reference
HDP-400	0425-205-0000

HDP-400 Tooling Accessories



Go-No-Go Gauges

Part Number	Go-No-Go Gauges
GA20N	HDP-400 Size 20
450GA-16N	HDP-400 Size 16
450GA-12N	HDP-400 Size 12
GA8-SPEC	HDP-400 Size 8
450GA-4-SPEC	HDP-400 Size 4

■ Automated Tooling for Stamped & Formed Contacts

Tool P/N	Contact Size	Contact Part Number
DCT12-02-00	12	1060-12-01** 1062-12-01**
DCT12-02-01		1060-12-02** 1062-12-02**
DCT16-02-00	16	1060-16-01** 1062-16-01**
DCT1620-02-00		1060-16-06** 1062-16-06**
DCT20-02-00	20	1060-20-01**
DCT1620-02-00		1062-20-01**



DCT Applicator Punches and Anvils



Applicator Part Number	Drawing Number Reference
DCT12-02-00	0425-208-0000
DCT12-02-01	0425-041-0000
DCT16-02-00	0425-203-0000
DCT1620-02-00	0425-059-0000
DCT20-02-00	0425-207-0000

■ DCT Tooling Accessories



Bolster plate for mounting Deutsch DCT applicators to AMP K press

Part Number	Bolster Plate Accessories
BOLSTER PLATE	Bolster Plate
BOLSTER PLATE BAR	Bolster Plate Bar
BOLSTER PLT CLAMP	Bolster Plate Clamp



Oiler for DCT Series applicators

Part Number	Oiler Accessories
20000082	Oiler Unit
E807	Terminal Lubricant

Hand Tool Overview

For field service, prototype, and low-volume production, Deutsch offers several easy-to-use hand crimp tools for both solid barrel and stamped & formed contacts. All Deutsch hand crimp tools provide a tight, complete crimp with minimal effort. The HDT-48-00, the most commonly used tool for solid contacts, crimps a wide range of contact sizes with no need to change out dies or locators. It provides a symmetrical four indent crimp, is compact and easy-to-use for field service, yet sturdy and reliable enough for low volume production. Hand crimp tools for stamped & formed contacts are wire gauge specific and simultaneously crimp the insulation and conductor, saving time and effort during field service.

Hand Tools for Solid Contacts



HDT-04-08



HDT-48-00



HDT-50-00



HDT-1561



Contact Size	Contact Part Number	Tool Part Number	Crimp Type
4	0460-204-0490 0462-203-04141	HDT-04-08	Two Indent Crimp
8	0460-204-08141 0462-203-08141	HDT-04-08	Two Indent Crimp
12	0460-204-12** 0462-203-12**	HDT-48-00	Four Indent Crimp
		HDT-1561	Two Indent Crimp
		HDT-50-00	One Indent Crimp
16	0460-202-16** 0462-201-16** 0460-215-16** 0462-209-16**	HDT-48-00	Four Indent Crimp
		HDT-1561	Two Indent Crimp
		HDT-50-00	One Indent Crimp
20	0460-202-20** 0462-201-20**	HDT-48-00	Four Indent Crimp
		HDT-1561	Two Indent Crimp
		HDT-50-00	One Indent Crimp

HDT-48-00 Hand Tool Accessories



HDT-48-00 Adjustment Screw and Locking Nut

Part Number	Crimp Tool Replacement Part
0426-209-0000	Adjustment Screw and Locking Nut
M2700-395-10	Locking Nut

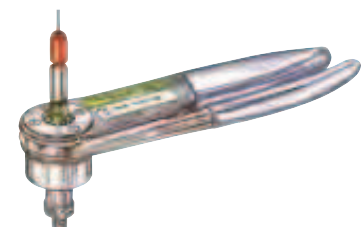


Go-no-go gauges are used to inspect crimp tooling. The G454 gauge is used with the HDT-48-00 hand tool.



Go-No-Go Gauge

Part Number	Description
G454	HDT-48-00 Go-No-Go Gauge



■ Hand Tools for Stamped & Formed Contacts



DTT-12-00



DTT-12-01

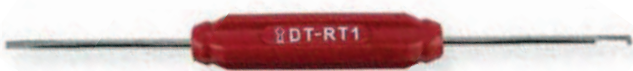


DTT-16-00
DTT-16-01
DTT-20-00
DTT-20-02

Contact Size	Contact Part Number	Tool Part Number
12	1060-12-01** 1062-12-01**	DTT-12-00
	1060-12-02** 1062-12-02**	DTT-12-01
16	1060-16-01** 1062-16-01**	DTT-16-00 (14-16 AWG)
	1060-16-06** 1062-16-06**	DTT-16-01 (18-20 AWG)
20	1060-20-01** 1062-20-01**	DTT-20-00
	1060-20-02** 1062-20-02**	DTT-20-02









■ DT-RT1

The DT-RT1 is a multi-use tool with a small hook on one end to remove the wedgelock, and a small screwdriver on the other end to push back the locking fingers and release the contact. The DT-RT1 is a helpful tool for the DT, DTM, DTP, DTV, DRB, and STRIKE series of connectors.



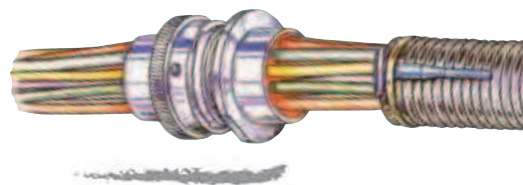
■ Removal Tools

Deutsch Industrial removal tools are designed to simplify contact removal and field service repair in all connectors that utilize a round shoulder contact retention system. Removal tools are compact, easy-to-use, and manufactured of heavy duty plastic to remove contacts without damage to the wire, insulation, connector seals, or connector body. The removal tools are required for wire removal in the DTHD, Jiffy Splices, HD10, HDP20, HD30, DRC, AEC, and WT Series.

Removal Tool	Part Number	Contact Size	Wire Gauge Range	Color
	0411-027-0405	Size 4	4 AWG	Black
	114009	Size 4	6 AWG	White
	114008	Size 8	8-10 AWG	Green
	0411-353-0805	Size 8 for HD Box	8-10 AWG	Green Extended
	114010	Size 12	12 AWG	Yellow
	0411-337-1205	Size 12	12-14 AWG Extra Thin Wall (E-Seal)	Orange
	0411-291-1405	Size 16	14-16 AWG	Green
	0411-310-1605	Size 16	16-18 AWG	Light Blue
	0411-336-1605	Size 16	16-18 AWG Extra Thin Wall (E-Seal)	Dark Blue
	0411-240-2005	Size 20	20-24 AWG	Red



A contact removal tool taped or tie wrapped to the harness will make it easily available, should repairs be needed.



Series Specific Tools

■ Crimp Tools for STRIKE Series



Contact Size	Contact Style	Hand Crimp Tool	Production Crimp Tool
Ø8mm, Ø12mm	Solid	Hex shaped crimp per NFC20.130 standard*	
12-20	Solid	HDT-48-00	HDP-400
12	Stamped & Formed	DTT-12-00, DTT-12-01	DCT12-02-00, DCT12-02-01
16	Stamped & Formed	DTT-16-00, DTT-16-01, DTT-16-02	DCT1620-02-00
20	Stamped & Formed	DTT-20-00, DTT-20-02	DCT1620-02-00

*See drawing 8925-003-0000 for full specifications.

■ Assembly/Removal Tools for STRIKE Series







Contact Removal Tools

The STRIKE Series Ø8mm and Ø12mm contacts require the following removal tools.

Tool	Part Number	Connector	Description
	SRK-EXT-80	Plug and Receptacle	Removal tool for Ø8mm contacts
	SRK-EXT-120	Plug and Receptacle	Removal tool for Ø12mm contacts

TPA Tools

The STRIKE Series has integrated TPA, which require removal tools. Multiple STRIKE tools may be needed to service a single connector. TPA removal tools are specific to each connector half and some cavity arrangements.

Tool	Part Number	Connector	Description
	SRK-RT-02	Receptacle	TPA removal tool for receptacles Not for use with 18 cavity insert
	SRK-RT-02-G2	Receptacle	TPA removal tool for receptacles For use with 18 cavity insert
	SRK-RT-06	Plug	TPA removal tool for plugs Not for use with 18 cavity insert
	SRK-RT-06-G2	Plug	TPA removal tool for plugs For use with 18 cavity insert
	SRK-MT-02	Receptacle	TPA mounting tool for receptacles
	DT-RT1	Plug and Receptacle	Field service removal tool (TPA or contacts) for plugs and receptacles

■ Tools for IMC and Quick Connect Series

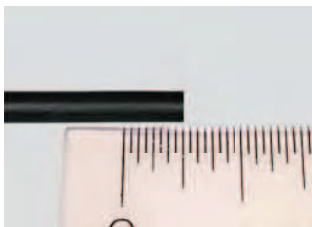
The Industrial Micro Connect and Quick Connect Series use special contacts and tools. The contacts are smaller and designed for high pin density. Removal tools along with multiple crimp tools are available and are designed to work with the smaller contacts and tighter pin arrangements. The common contact system and tools are not compatible with the IMC or QC Series.

Tools for Solid Contacts	
Part Number	Adjustable Hand Crimp Tools
MH860	QC/IMC #22 crimp tool, adjustable AWG ranges, requires 86-5
86-5	QC/IMC crimp tool positioner for MH860
AF8-TH163	QC/IMC #20 and #16 crimp tool, adjustable AWG ranges
	Single Gauge Hand Crimp Tools
AMSC22/1	QC/IMC #22 crimp tool, low cost, only crimps 22 AWG wire
AMSC20/1	QC/IMC #20 crimp tool, low cost, only crimps 20 AWG wire
AMSC16/A/1	QC/IMC #16 crimp tool, low cost, only crimps 16 AWG wire
	Insert/Removal Tools
6757-201-2201	Insert/Removal Tool #22
6757-201-2001	Insert/Removal Tool #20
6757-201-1601	Insert/Removal Tool #16



How To Instructions

■ Wire Stripping



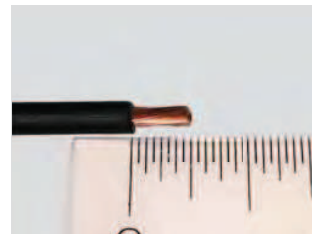
Step 1:

1. Choose the correct AWG for the contact being used.
2. Measure from the end of the wire the recommended strip length according to the contact size.
3. Place the wire into a stripping tool at the recommended strip length. Strip the wire according to stripping tool instructions.



Step 2:

1. After stripping, a small piece of the insulation should come off.
2. Check for any broken strands or for a dent in the wire. If either exist, the wire is damaged and should be cut and stripped again.

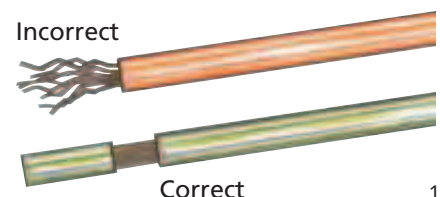


Step 3:

- Measure the exposed strands to be sure the crimp length is correct.



Leaving the stripped portion of the insulation on the wire until prior to crimping will avoid flayed wire strands.



■ **Crimping with the HDT-48-00 Hand Tool**



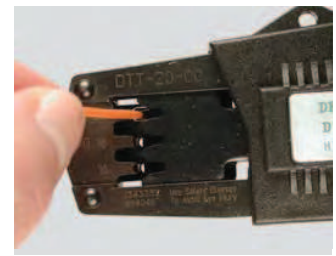
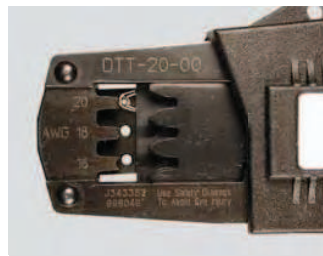
Notice
Tool must be adjusted for each type/size of contact.

- Step 1:**
1. Strip insulation from wire.
 2. Raise selector knob and rotate until arrow is aligned with wire size to be crimped.
 3. Loosen locknut, turn adjusting screw in until it stops.

- Step 2:**
- Insert contact with barrel up. Turn adjusting screw counterclockwise until contact is flush with indenter cover. Tighten locknut.

- Step 3:**
1. Insert wire into contact. Contact must be centered between indentors. Close handles until crimp cycle is completed.
 2. Release handles and remove crimped contact.

■ **Crimping with DTT Style Hand Tools (size 16 & 20)**



- Step 1:**
- Cycle the hand tool to the open position. Place the contact into the correct die nest.

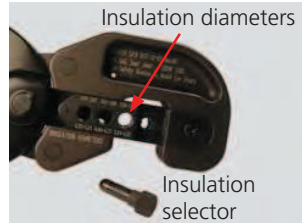
- Step 2:**
- Partially close the tool until the contact is held in place.

- Step 3:**
- Insert the prestripped wire into the crimp area of the contact.



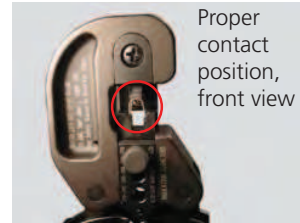
- Step 4:**
- Close the tool until the ratchet releases. The ratchet is released when a loud click is heard and crimp is complete.

■ Crimping with DTT-12-01 Hand Tool



Step 1:
Cycle handles to release ratchet and fully open crimp jaws. Pull out insulation selector and push into proper diameter using the chart below.

Wire Type	Insulation Selector
10 TXL	.150-.170
10 GXL	.160-.180
10 SXL	.170-.205
5.0 mm ²	.160-.180
6.0 mm ²	.170-.205



Step 2:

1. Insert contact into locator. Adjust alignment and width of crimp wings if necessary to ensure capture by crimp jaws.
2. Insert stripped wire into the contact. Close crimp tool until full-cycle ratchet control releases.



■ Crimping with DTT-12-00 Hand Tool



Step 1:
Cycle the tool to release ratchet and open tool. Lift the locator gate, and place the contact into the correct die nest. Adjust alignment of crimp wings to ensure capture by crimp jaws.



Step 2:
Partially close the tool until the contact is held in place.



Step 3:
Insert the prestripped wire into the crimp area of the contact.



Step 4:
Close the tool until the ratchet releases. The ratchet is released when a loud click is heard and crimp is complete.