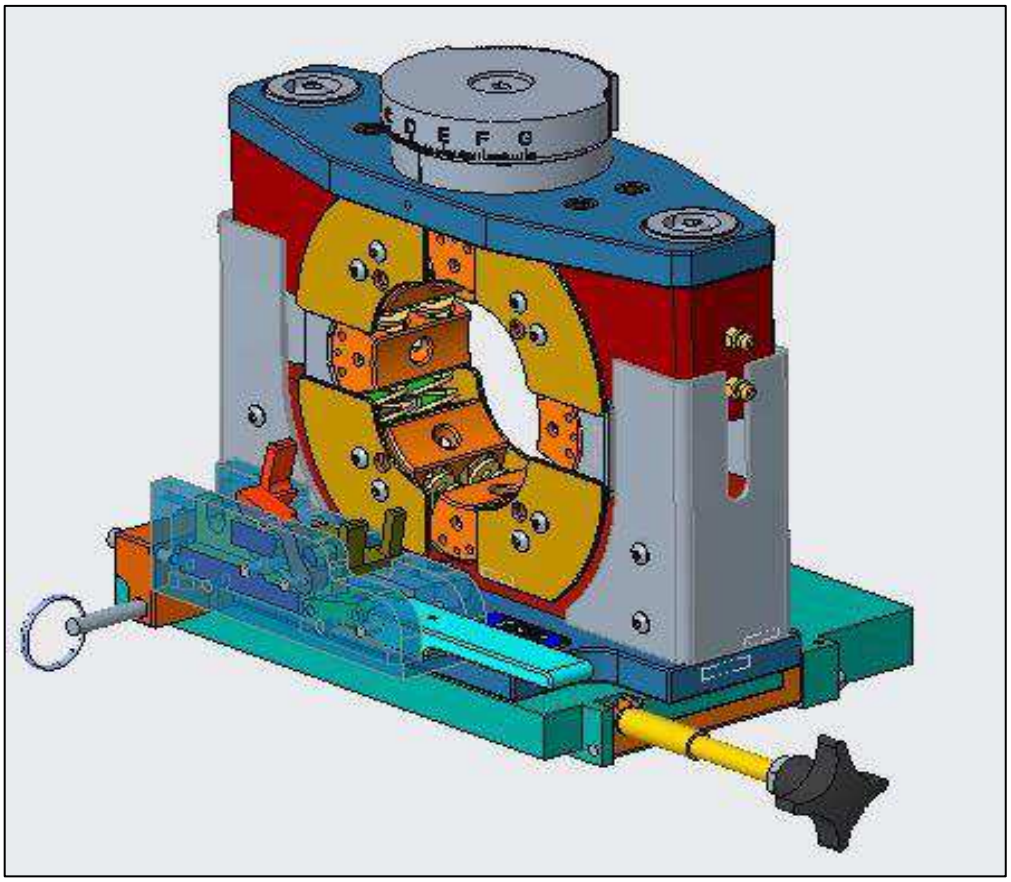


Mid-range Segmented Radial Crimp Applicator Unit SRC-A

Part number 2510896-1

Customer Manual
409-35047
10 JAN 2024 Rev A

Original instructions

SUPPORT CENTER

CALL TOLL FREE +1 800 522 6752 (CONTINENTAL UNITED STATES AND PUERTO RICO ONLY)

The **Support Center** offers a means of providing technical assistance when required. In addition, Field Service Specialists are available to provide assistance in the adjustment or repair of the application equipment when problems arise that your maintenance personnel cannot correct.

INFORMATION REQUIRED WHEN CONTACTING THE SUPPORT CENTER

When calling the Support Center regarding service to equipment a person familiar with the device should be present with a copy of the manual (and drawings) to receive instructions. Many difficulties can be avoided in this manner.

When calling the Support Center, be ready with the following information:

- Customer name
- Customer address
- Person to contact (name, title, telephone number, and extension)
- Person calling
- Equipment number (and serial number, if applicable)
- Product part number (and serial number, if applicable)
- Urgency of request
- Nature of problem
- Description of inoperative components
- Additional information that might be helpful

PRODUCT INFORMATION +1 800 522 6752

This controlled document is subject to change.

For the latest revision and Regional Customer Service, visit our website at www.te.com.

Contents

SAFETY PRECAUTIONS — AVOID INJURY — READ THIS FIRST!

NOTE
Keep all decals clean and legible. Replace them when necessary.

DANGER
ELECTRIC SHOCK HAZARD
This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning could result in severe injury or death.

DANGER
Denotes an imminent hazard that can result in moderate or severe injury.

SKIN INJECTION HAZARD
Do not use hands to check for oil leaks. Highly pressurized oil punctures the skin, causing serious injury, gangrene, or death. If injured, seek immediate medical help to remove the oil.

DANGER
FIRE HAZARD
Do not use solvents or flammable liquids to clean the Applicator. Solvents or flammable liquids could ignite and cause serious injury or property damage.

Failure to heed these warnings could result in severe injury from harmful fumes or burns from flying debris.

DANGER
Inspect the Applicator and dies before each use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.
Failure to observe this warning could result in severe injury or death.

CAUTION
Protect the crimping tool from rain and moisture. Water damages the Applicator.
Failure to observe these precautions can result in injury or property damage.

CAUTION
Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool can result.

Failure to observe these precautions can result in injury or property damage

.

Safeguards are designed into this application equipment to protect operators and maintenance personnel from most hazards during equipment operation. However, certain safety precautions must be taken by the operator and repair personnel to avoid personal injury, as well as damage to the equipment. For best results, application equipment must be operated in a dry, dust-free environment. Do not operate equipment in a gaseous or hazardous environment.

Carefully observe the following safety precautions before and during operation of the equipment:

Always wear approved eye protection while operating equipment.

Always wear appropriate ear protection while using equipment.

Moving parts can crush and cut. Always keep guards in place during normal operation.

Always insert power plug into a properly grounded receptable to avoid electric shock.

Always turn off the main power switch and disconnect the electrical cord from the power source when performing repair or maintenance on the equipment.

Do not operate equipment if the guards are removed.

Never alter, modify, or misuse the equipment.

Use caution when working with this equipment.

Never insert hands into installed equipment. Never wear loose clothing or jewelry that may catch in moving parts of the equipment.

Never use other than what it is designed, which is crimping terminals to wire. Do not use machine for crushing any item.

1 Introduction

The Mid-range Segmented Radial Crimp Applicator (SRC-A) is a mechanical solution for segmented radial crimping. It provides a platform where multiple, modular die sets can be used to crimp high voltage terminals with Closed Barrel Crimp area as well as Shield Ferrule Crimps. Each Applicator unit consist of an Applicator, a base plate, and a cable clamp. (See Figure 1 and Table 1.)

Figure 1: Mid-Range SRC Applicator Unit

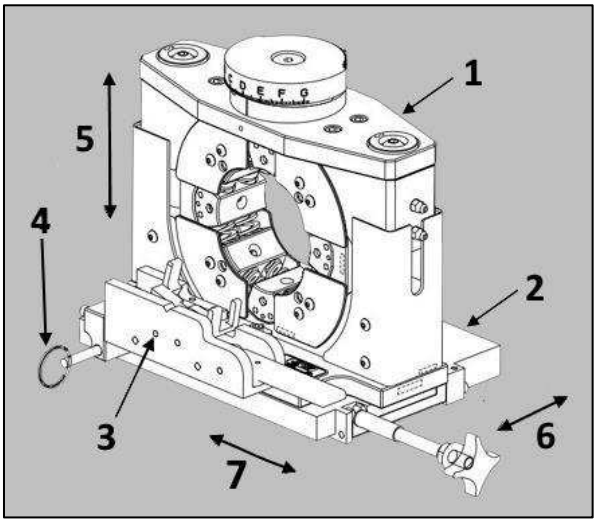


Table 1: Included components.

Item	Description	Part number
1	Mid-Range SRC Applicator Loose Piece	2440896-1
2	Base Plate Assembly	2384466-4
3	Cable Clamp Assembly	2364330-5
4	Cable Clamp Positioning Pin	-
5	Height	-
6	Width	-
7	Length	-

This Applicator unit is designed to be used on HV-20 terminator (PN 2348822-X) or HF-20 terminator (PN 2335500-X).

Table 2: Technical Data

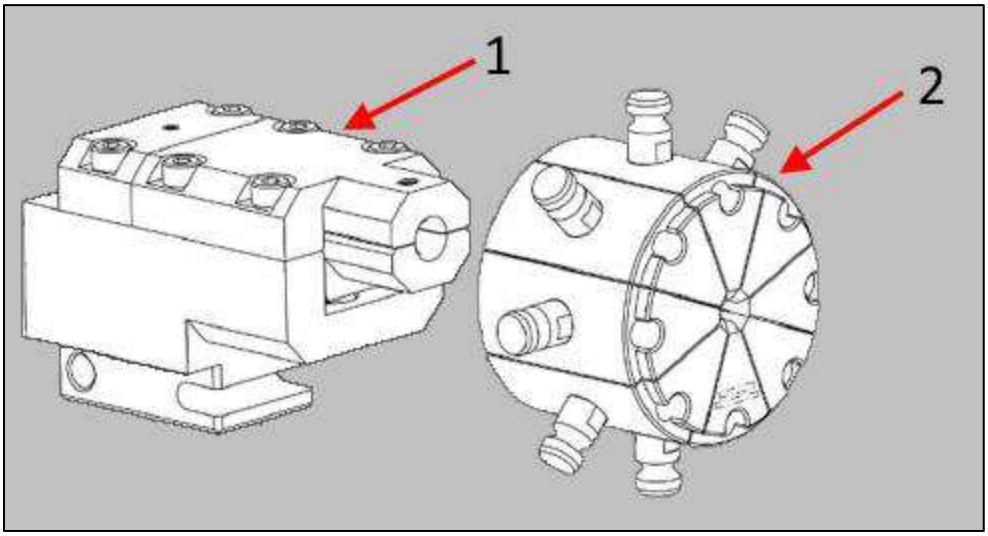
Dimensions	Length	238.6 mm [9.39 in.]
	Width	192.3 mm [7.57 in.]
	Height	207.5 mm [8.17 in.]
	Mass/weight	≈15kg [33 lb.]
Applicator Data	Basic press platform	HV20 TCPN 2348822- [] / HF20 TCPN 2335500- []
	Crimping force	7t max (20t max preliminary)
	Stroke length	29.1mm (press stroke can be larger)
	Open diameter	≈79mm (without die insert)
	Close diameter	50mm (without die insert)
	Adjustment entire range	±0.6mm (total 1.20mm)

The mid-range SRC Applicator is designed to crimp high voltage terminals with Closed Barrel Crimp area within 4mm²-25mm², and Shield Ferrule Crimps with diameter within 8mm-35mm.

To terminate a certain Terminal or Shield Crimp, the associated Die Set (8 Segments + Terminal Locator) is required and to be mounted to the SRC-A Applicator (see Figure 2).

The Part Number of the Tool Kit is shown in the associated Application Specification to the Terminal or Shield Crimp.

Figure 2: Terminal Specific SRC-A Die Set (Exemplary)



Item	Description
1	Terminal Holder
2	Press Segments

NOTE
Measurements are in metric units [followed by U.S. customary units in brackets] unless otherwise indicated. Some commercial items contain non-metric hardware.

When reading this manual, pay particular attention to DANGER, CAUTION, and NOTE statements.

DANGER
Denotes an imminent hazard that can result in moderate or severe injury.

CAUTION
Denotes a condition that can result in product or equipment damage.

NOTE
Highlights special or important information.

1.1 Additional Documents

114-97858 Segmented Radial Crimp (SRC) Closed Barrel Core Crimp termination - General Guideline.

114-nnnnnn Product Specific Application Specification (given on Customer Drawing of Product).

2 Receiving and inspection

Each kit is thoroughly inspected during and after assembly. Prior to packaging and shipping a final series of tests and inspections is made to ensure proper function of the tool. The following inspection should be performed as a safeguard against potential problems generated in transit.

1. In a well-lighted area, carefully uncrate the kit and inspect each component as it is removed from the crate.
2. Thoroughly inspect each component for evidence of damage that occurred in transit. If any of the components are damaged, file a claim against the carrier and notify TE Connectivity immediately.
3. Keep this manual, all drawings and product samples with the kit for the benefit of operation and maintenance personnel.

Inspect the crimping tool at regularly scheduled intervals (every 40 hours of use or less). Base your inspection schedule on care, degree of operator skill, the type and size of the product to be crimped, and environmental conditions.

3 Operation

3.1 Installing and removing the die sets

CAUTION
Before performing any work on the Die Holder, verify that the terminator is disconnected from its power source.

3.1.1 Removing die sets

1. **Removing terminal locator assembly:** Pull out the locating pin on the mount fixture, then take out the terminal locator assembly *(see Figure 3).*
2. **Removing die segments**: Manually remove the 8 die segments one by one (Preliminary) *(see Figure 4).*

NOTE
The segments are each held by spring loaded bearings. Removal should be able to do by hand, without tool.

3.1.2 Installing die sets

Refer to die Instruction Sheet for proper orientation, and place die sets into the Applicator accordingly.

Install the positioning pin as shown in Figure 3 to fix the position of the terminal locator assembly.

NOTE
The segments are held by spring loaded bearings. Mounting should be able to do by hand. Make sure that each segment is properly locked in place.

Figure 3: Removing terminal locator assembly.

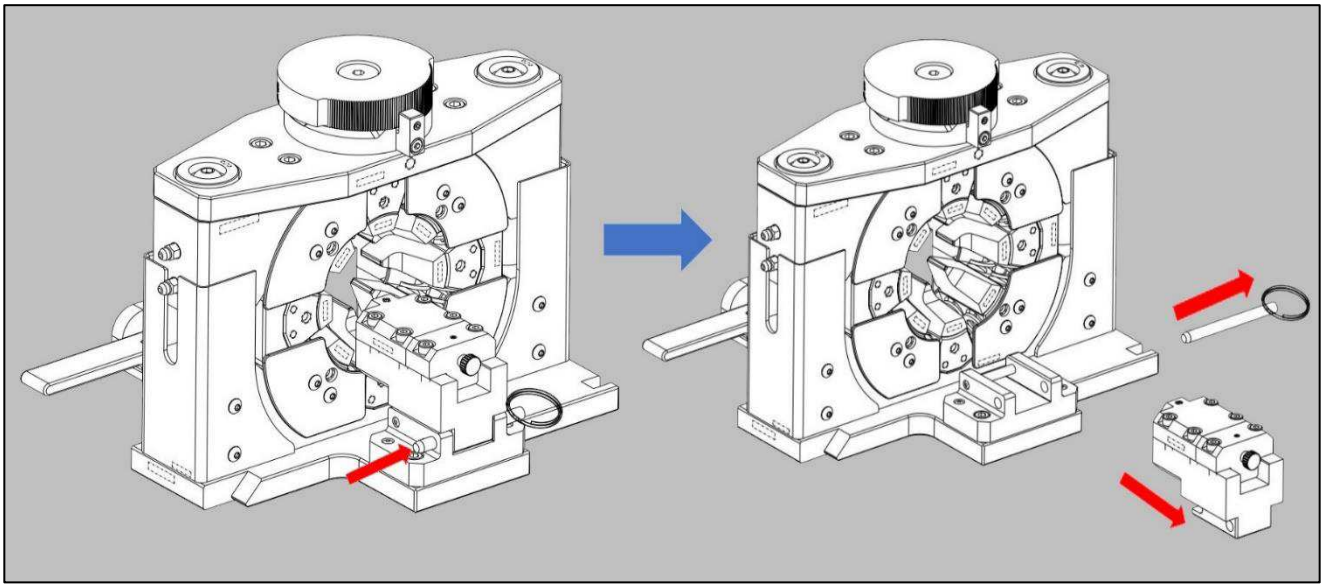
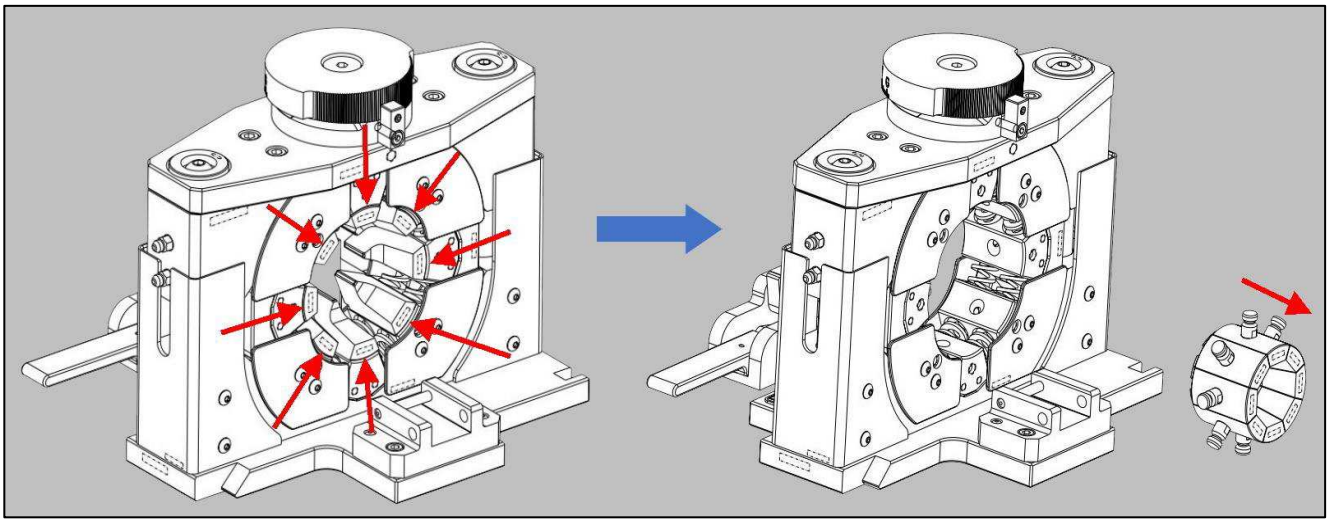


Figure 4: Removing die segments.



3.2 Installing and removing the Applicator

DANGER
To avoid personal injury, make sure the power air source to the machine is turned off and power cord/air supply are disconnected before installing or removing the Applicator.

NOTE
*With the Applicator in the machine, **never** attempt to cycle the machine under power without terminals properly loaded; as described in this Section; otherwise, the tooling may be damaged.*

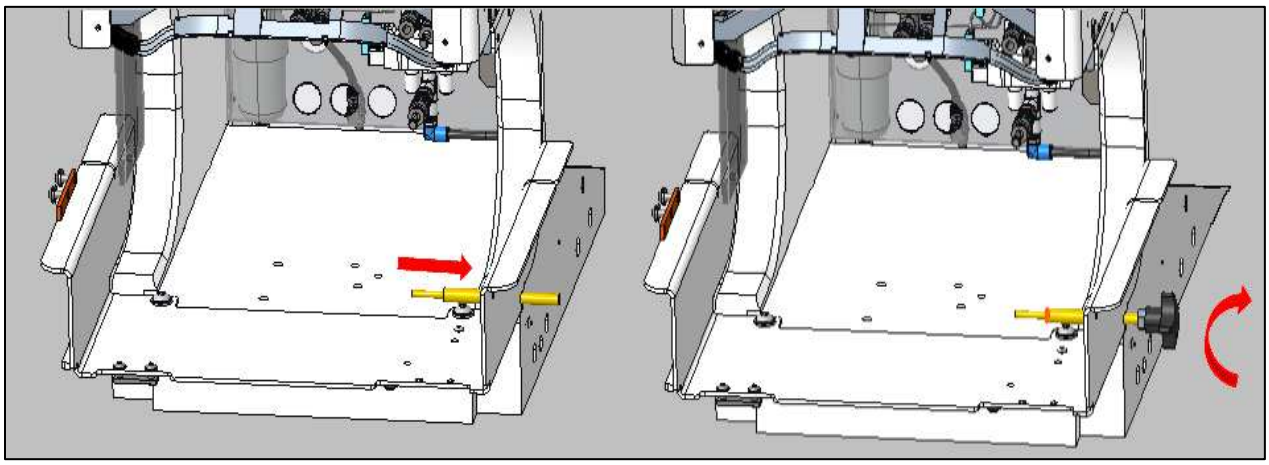
DANGER
*To avoid personal injury, the Applicator should be used **only** in an appropriate terminating machine.*

3.2.1 Installing the Base Plate

The Applicator Unit provides a Base Plate to be once installed to the press. This than allows a Quick-Change interface of the SRC-A Applicator to the press.

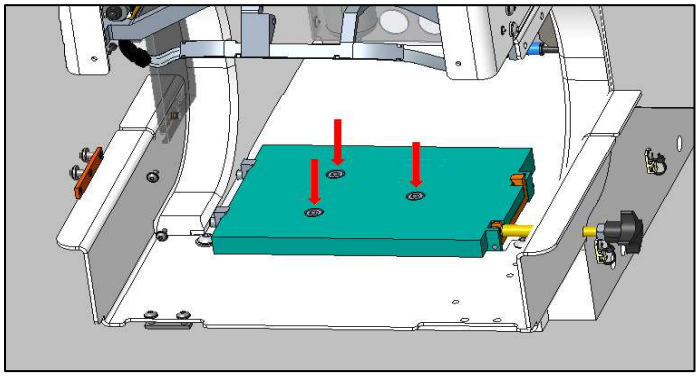
1. Place the KNOB SHAFT in the appropriate position of the terminator (see Figure 5).

Figure 5: Place the Knob shaft.



2. Align the screw holes of the base plate with the screw holes of the terminator, place the base plate in the appropriate position and tighten the screws (see Figure 6).

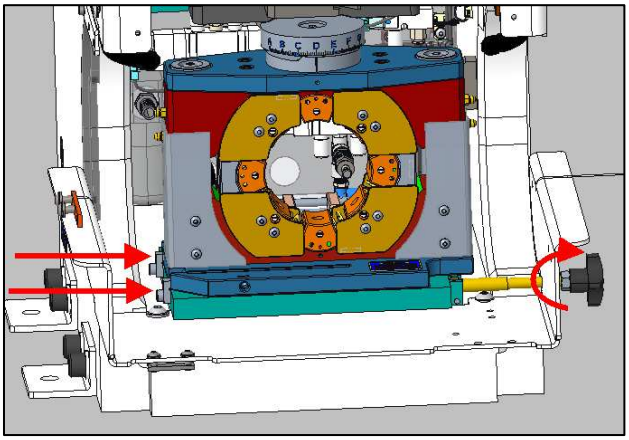
Figure 6: Place the base plate.



3.2.2 Installing the Applicator

Align the Base Plate stops on the terminator with the slots on the Base Plate of the Applicator and lock the Applicator in place by turning the KNOB SHAFT (see Figure 7).

Figure 7: Installing the Applicator.



3.2.3 Removing the Applicator

1. Release the KNOB SHAFT.
2. Remove the Applicator from the terminator interface.

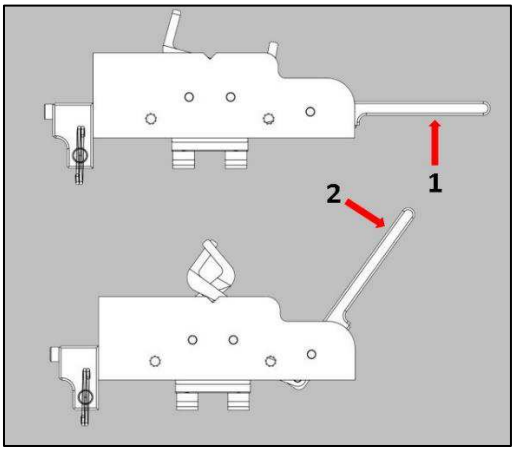
3.3 Opening and closing the cable clamp

The Cable Clamp assembly is a spring-operated mechanism that holds the cable during the crimping process. It can be applied to cables of different diameters. Lift-up the handle to close the grip jaws around the cable. Push down the handle to open the grip jaws (see Figure 8).

CAUTION
Make sure that the cable is inserted correctly in the terminal before operating the crimp cycle.

NOTE
The jaws only help locate the cable. They do not lock the cable in place before and during crimping. The cable is allowed to slide in the jaws due to terminal extrusion during crimping. The cable should be supported outside of the guarding to prevent cable movement before termination.

Figure 8: Open / close the cable clamp.



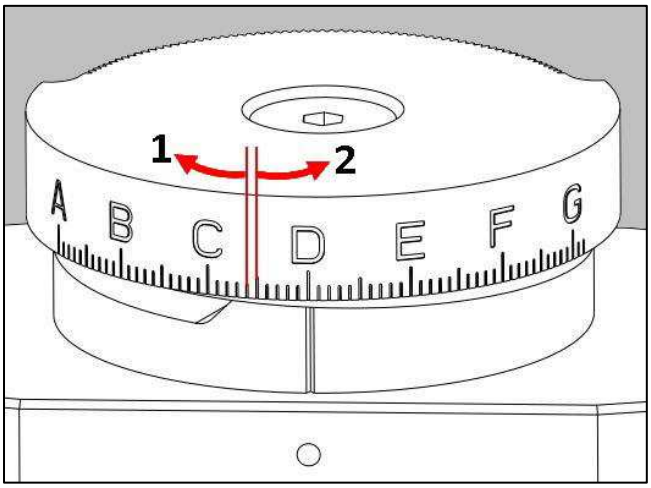
Item	Description
1	Lift to Close Jaws
2	Push to Open Jaws

3.4 Adjusting the Press Diameter

The Press Diameter of the Applicator can be adjusted by turning the dial disk. Each increment on the dial disk corresponds to 0.02 mm. Turning the dial disk clockwise will decrease the Press Diameter; Turning the dial disk counterclockwise will increase the Press Diameter (see Figure 9).

NOTE
Every tenth (10 count) increment is denoted by a letter - A to G (see Figure 9).

Figure 9: Adjusting crimp height by turning the dial disk.



Item	Description
1	Decrease Crimp height 0.02mm
2	Increase Crimp height 0.02mm

The Press Diameter for a certain Terminal or Shield Ferrule is given in its associated Application Specification.

Once Press Diameter has been adjusted, run the Applicator through several cycles and inspect terminals **closely**, look for the following:

1. Rough or sharp edges around the crimp barrels (flash), deformed crimps, bent terminals, or other defects could indicate misaligned, worn or broken tooling.
2. If necessary, replace tooling.
3. Incorrect Press Diameter.
4. Make further adjustments to the Dial Disk.
5. Terminations that appear normal.
6. Measure the Press Diameter of each termination, and record dimensions for reference.

NOTE
Crimp height must agree with measurement specified on the Application Specification for the terminal.

During continuous operation, check Press Diameter routinely, and adjust as needed, to ensure the Applicator is terminating the product according to its Application Specification.

3.5 Crimping

The following procedure provides only general information concerning crimping. Refer to the instructions packaged with the dies and Terminal associated Application Specification for detailed information, including wire stripping dimensions and instructions for positioning terminals and splices in the die assemblies.

DANGER
To avoid personal injury, keep fingers clear of the crimping area.

1. Position the product to be crimped in the appropriate die set.
2. Insert a stripped wire in the wire barrel of the product to be crimped, making sure that the wire insulation does not enter the wire barrel.

CAUTION
Do not use wires with nicked or missing conductor strands.

3. While holding the wire in position, close the safety guard and press the control bottom on HV20 to complete the crimp. When the crimp is complete, the crimping tool returns automatically to the first position of its cycle.

CAUTION
Denotes a condition that can result in product or equipment damage.

4. Inspect the crimp according to the crimping procedure for the terminal in TE instruction sheets.

4 Preventive maintenance

4.1 Daily maintenance

Perform the following maintenance daily.

1. Inspect the Applicator for wear or damage such as cracks, gouges, or chips.

   If damage is evident, return the tool to TE for repair.
2. Clean the Applicator, removing accumulations of dirt and grease from the areas where the crimping head is installed.
3. Wipe the entire Applicator frequently with a clean, lint-free cloth.

4.2 Annual maintenance

4.2.1 Grease

The moving parts of the machine require regular lubrication to ensure reliable service and long life.

1. Preferred greases are:

Chevron Ultra-Duty EP NLGI 2, Chevron Ulti-Plex EP NLGI 2, and Caltex Ultra-Duty EP NLGI 2.

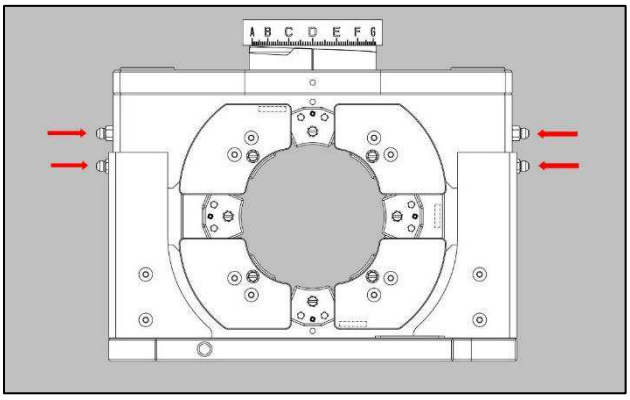
NOTE
Contact TE Engineering for 2nd choice alternatives.

For operation in temperatures below 10 °C (50 °F), it will be necessary to use a No. 1 grease.

2. Recommended greasing schedule:

   Every 50,000 cycles, one pump of grease should be applied (via a grease gun) to each location indicated in Figure 10.

Figure 10: Typical grease port position.



4.2.2 Replacing springs

The Applicator needs to replace the springs regularly due to the spring lifetime.

1. Preferred spring type:

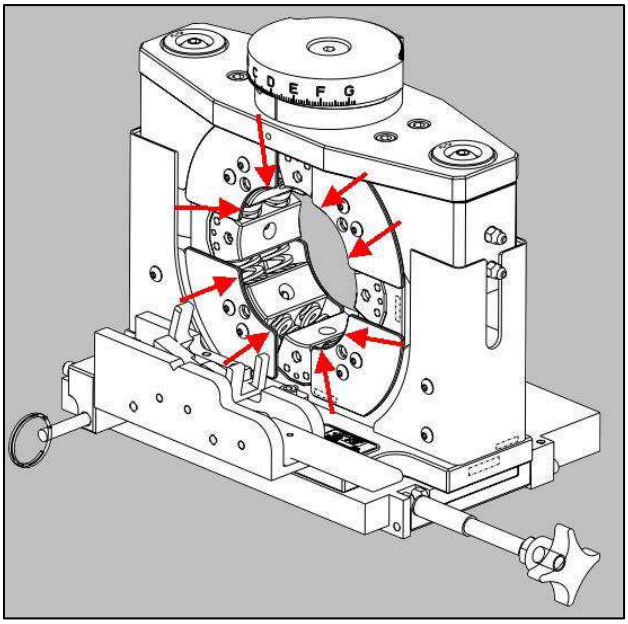
   MISUMI TF 14X25 for TE Part Number see Table 4.

NOTE
Contact TE Engineering for 2nd choice alternatives.

2. Recommended replacing schedule:

   Every 300,000 cycles, replace all the springs (total 16 pieces) shown in Figure 11 with new ones.

Figure 11: Spring position.



5 Replacement and repair

Kit replacement parts are listed in Table 4. Stock and control a complete inventory to prevent lost time when replacement of parts is necessary. Order or return parts through your TE representative or go to TE.com and click the **Shop TE Store** link at the top of the page.

For field service, go to the Service and Repair page on the TE website, or send an e-mail to the address for your region in Table 3

Figure 12: Service and repair

Table 3: Field service e-mail addresses

Region	Address
Asia	Tefe1ap@te.com
EMEA (including India)	Tefe1@te.com
North America	Fieldservicesnortharmerica@te.com
South America	FSE@te.com

Table 4: Kit replacement parts

Part number	Description
2388770-5	Spring, compression, Strong
2360330-5	Cable clamp

6 Revision summary

Since the last revision of this document, the following changes were made:

LTR	REVISION RECORD	DRAWN	APPROVED	DATE
A	INITIAL RELEASE	GK	LJ	10JAN2024