



# Raychem Application Tooling

The Tools to Make Every Connection Count

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## HIGH QUALITY

- Manufactured to TE Connectivity's strict quality standards
- Tools are designed to make every job easy and trouble-free
- Made from the highest quality materials for low cost of ownership

## EASY TO USE

- Designed and developed with the operator in mind
- Convenient, easy to use features make installations faster and easier
- More choice in tooling, from simple hand tools to advanced, automatic operation

## APPLICATION SPECIFIC

- Tools offered by TE are designed to aid in the installation of TE wire and cable products
- Decades of experience are applied to the development of all TE installation tools
- Choose from a wide range of tools for any cable management task

TE Connectivity (TE) offers a variety of dependable hand and bench-mount tools for crimping Raychem devices and heating heat-shrinkable products. The tools help give you more accuracy in terminations—increasing productivity, reducing rework, and taking the guesswork out of procedures. With easy-to-use controls and ergonomic design, Raychem tools help make the job go faster and easier.

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## INFRARED HEATING TOOLS

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## HOT AIR HEATING TOOLS

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## HEATING TOOLS FOR TINEL-LOCK RING SCREENED TERMINATIONS

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## PRODUCTS AND RECOMMENDED TOOLING

### TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem  
SEACON | Rochester | DEUTSCH

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# Raychem AD-1377 Hand Crimping Tool

## VERSATILE

- Crimps MiniSeal splices, covering a wire range from 26 to 12 AWG
- Ratchet-controlled release handle
- Pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice

## HIGH PERFORMANCE

- Built-in ratchet system ensures full cycling of the tool and prevents early release
- Designed for an easy and smooth effort to achieve the crimp
- Inside cavities are polished to bring maximum reliability to the crimping operation

## QUALIFICATIONS

- Tool: MIL-DTL-22520/37-01
- Calibration Gauge: MIL-DTL-22520/39-01



### AD-1377 Hand Crimping Tool

Tool is used for crimping wire terminations with MiniSeal splices.

### AD-1377-CRIMP-TOOL-3-CVTY MIL-DTL-22520/37-01

The Raychem AD-1377 crimp tool from TE is designed for MiniSeal splices. It has a pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice. The ratcheted release ensures full closure of the tool to help prevent undercrimping.

The tool is calibrated with standard gauge pins or with TE calibration gauge AD-1386. The drawing supplied with the tool defines appropriate cavity dimensions as diameters for the “Go” and “No Go” conditions.

## Specifications

### DIMENSION

- **Overall Length:** 230 mm (9”) approx.

### WEIGHT

- 350 g (12.3 oz.)

## Ordering Information

### AD-1377 Crimp Tool for MiniSeal Splices

| Model                                       | Description               | Part No.   |
|---------------------------------------------|---------------------------|------------|
| Mil Spec MiniSeal Splice Crimp Tool AD-1377 | AD-1377-CRIMP-TOOL-3-CVTY | 992008-000 |
| MiniSeal Splice Crimp Tool                  | AD-1377-S-SPEC-CRIMP-TOOL | 959025-000 |
| Calibration Gauge                           | AD-1386-CALIBRATION-GAUGE | 992013-000 |

### Accessories and Replacement Parts

| Parts         | Description               | Part No.   |
|---------------|---------------------------|------------|
| Crimp Locator | AD-1377-103-CRIMP-LOCATOR | 994855-000 |
| Spring        | AD-1377-P-E118-TOR-SPRNG  | 994123-000 |



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

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# Raychem AD-1522-1 Hand Crimping Tool

## VERSATILE

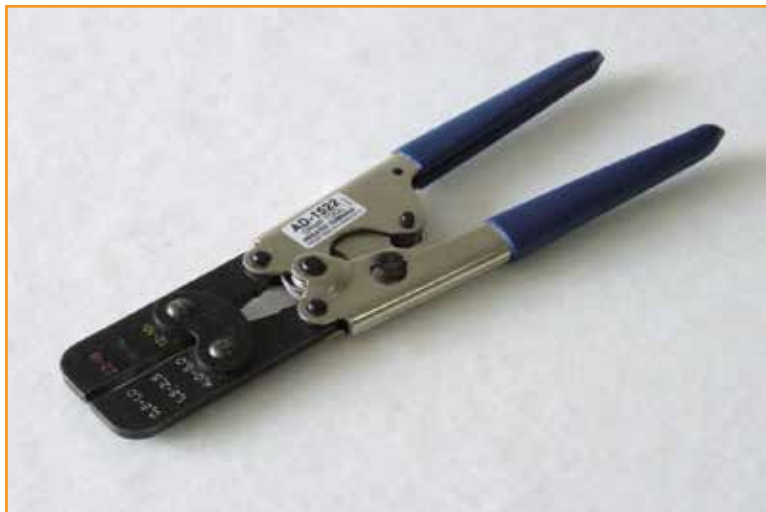
- Crimps DuraSeal crimp splices, covering a range from 22 to 10 AWG

## EASY TO USE

- Ratchet-controlled release handle
- Pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice

## HIGH PERFORMANCE

- Built-in ratchet system ensures full cycling of the tool and prevents early release
- Designed for an easy and smooth effort to achieve the crimp
- Inside cavities are polished to bring maximum reliability to the crimping operation



### AD-1522-1 Hand Crimping Tool

Tool is used for completing wire terminations using DuraSeal splices.

The Raychem AD-1522-1 crimp tool from TE can be used on all DuraSeal splices. It has a pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice. The ratcheted release ensures full closure of the tool to help prevent undercrimping.

The tool is calibrated with standard gauge pins or with TE calibration gauge AE-2245. The drawing supplied with the tool defines appropriate cavity dimensions as diameters for the “Go” and “No Go” conditions.

## Specifications

### DIMENSION

- **Overall Length:** 230 mm (9”) approx.

### WEIGHT

- 350 g (12.3 oz.)

### PRODUCT RANGE

- DuraSeal Crimp Splices and Terminals

## Ordering Information

### AD-1522-1 Crimp Tool for DuraSeal Splices

| Product           | Description             | Part No.   |
|-------------------|-------------------------|------------|
| Crimp Tool        | AD-1522-1-CRIMPING-TOOL | 047011-000 |
| Calibration Gauge | AE-2245                 | 020435-000 |



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



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# Raychem AD-1381 Hand Crimping Tool

## VERSATILE

- Crimps cold-applied gel-filled splices, covering a wire range from 26 to 12 AWG

## EASY TO USE

- Ratchet-controlled release handle
- Pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice

## HIGH PERFORMANCE

- Built-in ratchet system ensures full cycling of the tool and prevents early release
- Designed for an easy and smooth effort to achieve the crimp

## QUALIFICATIONS

- Tool: MIL-DTL-22520/44-01
- Calibration Gauge: MIL-DTL-22520/39-03



### AD-1381 Hand Crimping Tool

Tool is used to crimp cold-applied gel-filled splices with wires ranging from 26 to 12 AWG.

The Raychem AD-1381 crimping tool from TE terminates cold-applied splices, which are TE's in-line, sealed, crimp splices designed for 150°C applications.

The tool has a pre-set crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice. The ratcheted release ensures full closure of the tool to help prevent undercrimping.

The tool is calibrated with standard gauge pins or with the TE calibration gauge AD-1382. The drawing supplied with the tool defines appropriate cavity dimensions as diameters for the "Go" and "No Go" conditions.

## Specifications

### DIMENSION

- **Overall Length:** 230 mm (9") approx.

### WEIGHT

- 350 g (12.3 oz.)

### COLD-APPLIED SPLICE PRODUCT RANGE

- **D-436-36-COLD:** 26 to 20 AWG wire range
- **D-436-37-COLD:** 18 to 16 AWG wire range
- **D-436-38-COLD:** 14 to 12 AWG wire range

## Ordering Information

### AD-1381 Hand Crimping Tool

| Model                      | Description               | Part No.   |
|----------------------------|---------------------------|------------|
| AD-1381 Hand Crimping Tool | AD-1381-CRIMP-TOOL-3-CVTY | CS1660-000 |
| Calibration Gauge          | AD-1382-CALIBRATION-GAUGE | 992013-000 |



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

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# Raychem IR-550/ED-7 Heating Tool and Controller Kit

## COMPREHENSIVE

- Controller and foot-pedal-operated portable infrared heating tool
- Controller keypad enables the selection of the operation mode up to 20 stored programmed sequences

## EASY TO USE

- Provides reliable installation of SolderSleeve and MiniSeal devices, SolderTacts contacts, and TE heat-shrinkable products
- Controller can be used in a manual or automatic mode

## FLEXIBLE OPERATION

- **Manual Mode:** Applies full power when foot pedal is depressed, and removed power when the pedal is released
- **Automatic Mode:** Controls duration and level of power according to a preset sequence stored in memory when foot pedal is pressed and released



### IR-550/ED-7 Heating Tool and Controller Kit

Kit is used to install SolderSleeve and MiniSeal devices, SolderTacts contacts, and TE heat-shrinkable products.

The Raychem IR-550/ED-7 from TE provides a convenient portable electric infrared heating tool and controller. This system gives fast, reliable installations of SolderSleeve devices, MiniSeal devices, SolderTacts contacts, and TE heat-shrinkable products.

The foot-pedal-operated, benchtop tool allows both manual and automatic control of the heating tool. In the manual mode, the operator uses the foot pedal to start and stop the heating sequence. In the automatic mode, the power and duration of heating—including varying levels and times in the sequence—allow consistent and precise application of heat. The controller can store up to 20 sequences in memory.

## Specifications

### INPUT POWER

- **IR-550/ED-7-KIT:** 220 V, 50 Hz, 7.3 A
- **ED-7-001-550 Controller:** 220 V, 50 Hz, 2.8 A
- **IR-550-MK3-CE-MINUS Heating Tool:** 220 V, 50 Hz, 4.5 A

### DIMENSIONS

- **ED-7-001-550:** 160 mm x 120 mm x 250 mm (6.29" x 4.7" x 9.8")
- **IR-550-MK3-CE-MINUS:** 113.2 mm x 119.3 mm x 250 mm (4.46" x 4.7" x 9.8")

### WEIGHT

- **IR-550/ED-7-KIT:** 8.7 kg (19.1 lb.)
- **ED-7-001-550:** 6.2 kg (13.6 lb.)
- **IR-550-MK3-CE-MINUS:** 2.5 kg (5.5 lb.)



## Ordering Information

### IR-550/ED-7 Heating Tool and Controller Kit

| Model                                   | Description     | Part No.   |
|-----------------------------------------|-----------------|------------|
| IR-550/ED-7 Heating Tool and Controller | IR-550/ED-7-KIT | CV1032-000 |

### Accessories and Replacement Parts

| Parts                                                                                       | Description                | Part No.   |
|---------------------------------------------------------------------------------------------|----------------------------|------------|
| Infrared Heating Tool                                                                       | IR-550-MK3-CE-MINUS-00     | CY8483-000 |
| Controller*                                                                                 | ED-7-001-550               | CV2777-000 |
| Lamp 220/230 500 W Lamp                                                                     | IR-550-303-CE-LAMP         | F95965-000 |
| Foot Switch Assembly                                                                        | IR-550-301-CE-FOOT-SW-ASSY | F91912-000 |
| Viewing Window (frame not included)                                                         | IR-550-238-VIEWING-WINDOW  | 007510-000 |
| RG-2 Reflector, Solder Sleeve Reflector, 19 mm (.75")                                       | IR-500-24-RG-2-SLD-SL-REF  | 993770-000 |
| RG-6 Reflector, Large-Diameter Solder Sleeve Terminations. Aperture is 25, 4 mm (1.0") wide | IR-550-19-RG-6-NOSECONE    | 994590-000 |
| Holding Fixture                                                                             | ED-7-001-550-HOLD-FIX      | CV4406-000 |
| PCB for Controller                                                                          | ED-7-001-550-PCB           | CV4408-000 |
| Filter                                                                                      | IR-550-237-FLTR-DUAL-COAT  | 118902-000 |

\*Controller can be purchased separately.



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



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# Raychem IR-550 Infrared Heating Tools

## CAPABLE

- Designed for fast installation of SolderSleeve terminations, MiniSeal terminations, SolderTacts contacts, and heat-shrinkable tubing
- Controls include a power switch, foot switch, and a handle-mounted switch
- The IR-550-300-MARKIII-CE unit is CE approved

## SAFE OPERATION

- Fan keeps external surfaces cool and allows for long-duration heating
- Thermostatic switch helps protect from overheating
- Optical filter helps reduce glare from the lamp for safer observation
- A 30-degree base reduces eye strain and glare to others working nearby

## CONVENIENT

- Viewing window enables viewing of the heating process
- Foot switch or handle switch operation
- Designed primarily as a benchtop heating tool



**IR-550-50-MARKII-HT-TOOL - 120 V**



**IR-550-300-MARKIII-CE - 230 V**

## IR-550-50-MARKII-HT-TOOL (120 V) IR-550-300-MARKIII-CE (230 V)

The Raychem IR-550 heating tool from TE is a portable electric infrared heating tool designed for fast, reliable installation of Raychem SolderSleeve terminations, MiniSeal terminations, SolderTacts contacts, and heat-shrinkable tubing.

The IR-550 heating tool can be used as a hand tool, but is primarily designed as a bench-top heating tool. As a hand tool, it is operated using a switch on the handle. As a bench-top heating tool, it can be operated by either a foot switch or handle switch.

A halogen lamp provides the radiant heat source, and reflectors focus the heat from the lamp to concentrate it within the work area of the front reflector. Interchangeable front reflectors are designed for specific product applications.

An optical filter between the lamp and the work area reduces the glare from the lamp, allowing the operator to observe the heating process. The tool also has a viewing window to further reduce glare. The 30-degree base has been designed to further reduce eye strain and glare to others working nearby.

The IR-550-50 is a single unit containing both controls and infrared tool. For the IR-550-300, the control box and infrared tool are separate units.





## Specifications

|             | IR-550-50                                   | IR-550-300                                                                                                       |
|-------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Input Power | 120 V, 50-60 Hz, 4.5 A                      | 230 V, 50-60 Hz, 3 A                                                                                             |
| Weight      | 2.5 kg (5.5 lb.)                            | 4.8 kg (10 lb.) approx.                                                                                          |
| Dimensions  | 113 x 120 x 249 mm<br>(4.46" x 4.7" x 9.8") | <b>Control Box:</b> 152 x 120 x 19 mm (6" x 4.7" x .75")<br><b>Tool:</b> 114 x 209 x 249 mm (4.5" x 8.2" x 9.8") |
| Duty Cycle  | 80%, 90-second max. heating times           |                                                                                                                  |
| Lamp Life   | 1000+ hours of intermittent use             |                                                                                                                  |

## Ordering Information

### IR-550 Infrared Heating Tools

| Model                   | Description              | Part No.   |
|-------------------------|--------------------------|------------|
| IR-550-50 Heating Tool  | IR-550-50-MARKII-HT-TOOL | 994350-000 |
| IR-550-300 Heating Tool | IR-550-300-MARKIII-CE    | C66438-000 |

### Reflectors

| Parts                                                                                        | Description               | Part No.   |
|----------------------------------------------------------------------------------------------|---------------------------|------------|
| RG-2 Reflector for Solder Sleeve Terminations<br>19.0 mm (.75") Wide Aperture                | IR-500-24-RG-2-REFLECTOR  | 993770-000 |
| RG-6 Reflector For Large-Diameter Solder Sleeve Terminations<br>25.4 mm (1.0") Wide Aperture | IR-550-19-RG-6-NOSECONE   | 994590-000 |
| RG-9 Reflector<br>9.525 mm (.375") Wide Aperture                                             | IR-550-39-RG-9-REFLECTOR  | 993693-000 |
| RG-11 Reflector;<br>12.7 mm (9.5") Wide Aperture                                             | IR-550-41-RG-11-REFLECTOR | 993695-000 |

### Accessories and Replacement Parts

| Parts Common to Both IR-550-50 and -300                                 | Description                 | Part No.   |
|-------------------------------------------------------------------------|-----------------------------|------------|
| Upgrade Kit: Filter, Viewing Window,<br>Inner Reflector-Outer Reflector | IR-550-240-Refurb-KIT       | 529600-000 |
| Filter                                                                  | IR-550-237-FLTR-DUAL-COAT   | 118902-000 |
| Button, Large, Black                                                    | AES-IR550-C23-BUTTON        | C33802-000 |
| Viewing Window (Frame Not Included)                                     | IR-550-238-VIEWING-WINDOW   | 007510-000 |
| <b>Parts for IR-550-50 Only</b>                                         |                             |            |
| Lamp (120 V)                                                            | IR-1000-P-N-13-LAMP         | 993020-000 |
| Foot Switch Assembly                                                    | IR-550-216-FOOT-SWITCH-ASSY | 994375-000 |
| <b>Parts for IR-550-300 Only</b>                                        |                             |            |
| Lamp (220-230 V), 500 W                                                 | IR-550-303-CE-LAMP          | F95965-000 |
| Foot Switch Assembly                                                    | IR-550-301-CE-FOOT-SW-ASSY  | F91912-000 |
| PC Board                                                                | AES-IR550-63-PC-BRD         | 576297-000 |



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



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# Raychem Mini-Ray MK5 Infrared Heating Tool

## CONVENIENT

- Portable, lightweight and convenient for use where workspace is constrained
- Product being installed is visible during the heating cycle
- Available as a complete kit, comprised of manual control box, hand tool, AT3130 reflector and spare bulb

## SAFE AND EFFICIENT

- Heat energy is derived from a tungsten halogen lamp and focused onto the product with a reflector
- Optical filter eliminates unwanted UV emissions and excess visible light, reducing glare for the operator
- UL Approved

## EASY TO USE

- Hand-held unit with simple trigger operation
- Options available for products up to 9 mm diameter
- Tool can be used with either 230 V or 110 V (nom.) power supply



### Mini-Ray MK5 Infrared Heating Tool

Tool is designed for installing SolderSleeve termination products up to 9 mm diameter.

### IR1759-MK5-AT3130-ED-CONT

The Raychem Mini-Ray MK5 tool from TE is a hand-held infrared heating tool designed for use in installing TE's SolderSleeve termination products. The tool is portable, lightweight and convenient for use where workspace is constrained.

The hand tool is fan cooled and has low heat emission, as the lamp is only energized on demand. The heat energy is derived from a halogen lamp and is focused onto the product by means of the reflector design.

The IR1759-MK5 standard aperture is recommended for products up to 6 mm diameter, and the IR-3104-MK4/A large aperture for installing products up to 9 mm diameter. This version of the tool will accept larger diameter components, but uniform heating cannot be assured.

The Raychem ED-7 controller is a simple unit, with no variable time or variable power memory functions. It maintains power to the lamp for as long as the tool's trigger switch remains depressed. The controller can be used with either 230 V or 110 V supply voltage.

NOTE: Control unit ED-7-CONT-230/110V-MK5 is used with the IR-1759-MK5-GUN and cannot be used with or fitted to other existing Mini-Ray systems (such as 1759-MK4/A and IR-3104-Mk4/A hand tool).



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

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## Specifications

### HEATING TOOL

- **Supply Voltage:** 24.0 VAC Nom.
- **Typical Operating Temperature:** 600°C @ 10-second operation
- **Typical Heating Time:** 15 to >70 seconds
- **Lamp:** 250 W tungsten halogen, 800 cycles
- **Noise:** 51 dB (A)
- **Weight:** 1.1 kg (2.4 lb.)
- **Power Cord Length:** 3.1 m

### CONTROLLER

- **Supply Voltage:** 230 V, 50 Hz or 110 V, 50-60 Hz
- **Input Current:** 6.3 A
- **Output Voltage:** 24.0 VAX
- **Weight:** 8.0 kg (17.6 lb.)
- **Dimension:** 160 x 120 x 250 mm

## Ordering Information

### IR-1759 Infrared Heating Tools

| Model                          | Description                                                                                          | Part No.   |
|--------------------------------|------------------------------------------------------------------------------------------------------|------------|
| Mini-Ray Infrared Heating Tool | IR1759-MK5-AT3130-EDCont<br>(With manual control box, hand tool,<br>AT3130 reflector and spare bulb) | CV3948-000 |

### Accessories and Replacement Parts

| Part                                                                  | Description                | Part No.   |
|-----------------------------------------------------------------------|----------------------------|------------|
| Heating Tool                                                          | IR-1759-MK5-GUN*           | CV4411-000 |
| Controller                                                            | ED-7-CONT-230/110V-MK5*    | CV4409-000 |
| <b>Reflectors for Standard Aperture</b>                               |                            |            |
| Reflector With Vee Block                                              | AT-3130                    | 988299-000 |
| Reflector for SolderTacts Contacts                                    | AT-3131                    | 988300-000 |
| Reflector With Clamps                                                 | AT-3132                    | 988301-000 |
| Reflector With Clamps and 5 mm Mask                                   | AT-3132 -MK31              | 879865-000 |
| Reflector With Special Vee Block                                      | AT-3191                    | 588701-000 |
| Linear Reflector                                                      | AE-205                     | 988596-000 |
| <b>Reflectors For Large Aperture</b> (Requires Conversion Kit AE-897) |                            |            |
| Conversion Kit From Standard To Large Aperture                        | AE-897                     | 966953-000 |
| Reflector With Clamps                                                 | AT-3134                    | 988303-000 |
| Reflector With Clamps                                                 | AT-3147                    | 988328-000 |
| Linear Reflector                                                      | AE-206                     | 988314-000 |
| <b>Inner Reflectors</b>                                               |                            |            |
| For Standard Aperture                                                 | AE-424 Standard IR-1759    | 547918-000 |
| For Large Aperture                                                    | AE-153 3104                | 988285-000 |
| <b>Replacement Parts</b>                                              |                            |            |
| PCB For Trigger/Handle                                                | IR-1759-MK5-TRIGGER-PCB    | CV4416-000 |
| Thermal Switch With Plate/Tubing                                      | IR-1759-MK5-THRMSW-PLT     | CV4418-000 |
| Dual Filter                                                           | AES-IR1759-100- FILTER-DUL | 431468-000 |
| Main PCB                                                              | ED-7-CONT-MK5-PCB          | CV4414-000 |
| Filter Spring IE-1759                                                 | AE-900                     | 277774-000 |
| Bulb, 250 W, 24 V IR1759/3104                                         | NAE-143-3                  | 988208-000 |
| Replacement Connector, De-Pin Tool, and Instructions                  | IR1759-MK5-REPCON-DEPINTL  | EG2846-000 |
| Cable, Trigger PCB, Lamp Holder, and Thermal Switch                   | IR-1759-MK5-CABLE-ASY      | CV4412-000 |

\*Note: Heating tool and controller not sold separately.

# Raychem Mini-Ray MK4 Heating Tool Systems

## SAFE AND EFFICIENT

- Product being installed is visible during the heating cycle
- Optical filter eliminates unwanted UV emissions and excess visible light, reducing glare for the operator
- Heat energy from a tungsten halogen lamp is focused onto the product with a reflector

## VERSATILE

- Controller can be used in a manual mode with the trigger switch or by pre-set time and power
- Up to 20 memory locations are available for the storage of time/power values

## COMPONENTS

- The ED-7-Cont-230 V/110 V controller is a simple unit, with no variable time or variable power memory functions
- The ED-7-001/002 control units provide controls for both power and time, and are suitable where the use of pre-set installation conditions is required
- The ED-7-Batterybox controller is designed for remote areas, and can install approximately 50 x 30 second installations before recharging

## COMPLETE

- A kit product is available, comprising manual control box, hand tool, AT3130 reflector and bulb



### Mini-Ray MK4 Infrared Heating Tool

Designed for installing Solder Sleeve termination products up to 9 mm diameter.

**IR-1759-MK4/A, IR-3104-MK4/A  
ED-7-001/002, ED-7-CONT-230 V/110 V  
ED-7-BATTERYBOX-230 V/110 V**

The Raychem Mini-Ray MK4 tool from TE is a hand held infrared heating tool designed for use in installing Solder Sleeve termination products. The tool is portable, lightweight and convenient for use where workspace is restricted.

The hand tool is fan cooled and has low heat emission as the lamp is only energized on demand. A duty cycle up to 50% is permissible with a maximum heating time of 50 seconds. With the ED-7-Cont and ED-7-Batterybox, this duty cycle is fixed within the controller software.

The controllers have a new software feature that improves filter and bulb life. The heat energy is derived from a halogen lamp and is focused onto the product by means of the reflector design. The IR-1759-MK4/A standard aperture is recommended for products up to 6 mm diameter and the IR-3104-MK4/A large aperture for products up to 9 mm diameter. This version of the tool will accept larger diameter components, but uniform heating is not then assured.

Note: Current optical filters still fit the older MK III tools.



## Specifications

### Mini-Ray MK4 Heating Tool System

|                                                    | Hand Tool                                                | Control Units                      |                                   |                                  |
|----------------------------------------------------|----------------------------------------------------------|------------------------------------|-----------------------------------|----------------------------------|
|                                                    | IR-1759/IR-3104                                          | ED-7-001/002                       | ED-7-Cont                         | ED-7-Batterybox                  |
| <b>Supply Voltage</b>                              | 21.5 VAC nom.                                            | 230 VAC, 50 Hz and 110 V, 50-60 Hz | 230 VAC, 50 Hz or 110 V, 50-60 Hz | NP7-12FR Yuasa 12 V 7 Ah         |
| <b>Input Current</b>                               | —                                                        | 4 A/10 A                           | 6.3 A                             | 2 x 12 V batteries, not supplied |
| <b>Output Voltage</b>                              | —                                                        | 16-22 VAC (dependent on program)   | 21.5 VAC                          | 22 VDC nominal                   |
| <b>Weight</b>                                      | 1.1 kg (2.4 lb.)                                         | 6.2 kg (13.6 lb.)                  | 8.0 kg (17.6 lb.)                 | 8.5 kg, 160 (18.7 lb.)           |
| <b>Typical Operating Temperature</b>               | 500°C @ 10 second operation                              | —                                  | —                                 | —                                |
| <b>Typical Heating Time</b>                        | 15 seconds                                               | —                                  | —                                 | —                                |
| <b>Halogen Lamp. Power/ Live, Typical Values</b>   | 250 W x 24 V average life 10,000 cycles @ 50% duty cycle | —                                  | —                                 | —                                |
| <b>Noise</b>                                       | 41 dB (A)                                                | —                                  | —                                 | —                                |
| <b>Power Cord Length</b>                           | 3.1 m                                                    | —                                  | —                                 | —                                |
| <b>Dimensions</b>                                  | —                                                        | 6.3" x 4.7" x 9.8"                 |                                   |                                  |
| <b>Timer A Memory Locations (001 and 002 only)</b> | —                                                        | 1-250 secs 20 Memory               | —                                 | —                                |

\*Note: Current optical filters still fit the older MK III tools.

## Ordering Information

### IR-1759 Infrared Heating Tools

| Model                            | Description                                              | Part No.   |
|----------------------------------|----------------------------------------------------------|------------|
| Mini-Ray MK4 Heating Tool System | IR1759-MK4-AT3130-EDCont Hand tool/Reflector/Control Box | CF0024-000 |
| IR-1759-MK4/A (1)                | Hand tool, standard aperture                             | CF0025-000 |
| IR-3104-MK4/A (1)                | Hand tool large aperture                                 | CF5497-000 |
| IR1759-MK4AT3130-ED-7-001        | Hand tool/standard aperture/ Timed 230 V Control Box     | EG3472-000 |
| ED-7-001-MK4-230V-50HZ           | Control Box with time control-230 V                      | CF0199-000 |
| ED-7-002-MK4-110V-60HZ           | Control Box with time control-110 V                      | CF0201-000 |
| ED-7-CONT-230/110V-MK4           | Control Box manual control 110/230                       | CF0026-000 |
| ED-7-BATTBOX-MK4-230/110V        | Battery Box <sup>†</sup>                                 | CF0200-000 |

<sup>†</sup>Battery box takes 2X12V batteries, type NP7-12FR. Please note that TE does not supply replacement batteries.

(1) Note: No control box or reflector supplied. Hand tool only.



## Ordering Information (continued)

### Accessories and Replacement Parts

| Model                      | Description                                                  | Part No.   |
|----------------------------|--------------------------------------------------------------|------------|
| AE-153                     | Inner reflector for large aperture (3104)*                   | 988285-000 |
| AE-424                     | Inner reflector for standard aperture*                       | 547918-000 |
| AES-IR1759-100- FILTER-DUL | Standard filter*                                             | 431468-000 |
| AES-IR1759-300-FLT-LRG     | Large filter                                                 | F52511-000 |
| ED-7-CONT-PCB              | PCB*                                                         | CA3022-000 |
| AE-900                     | Filter spring IR-1759*                                       | 277774-000 |
| AE-897                     | Conversion kit for standard to Large aperture*               | 966953-000 |
| AT-3130                    | Reflector to fit standard aperture standard Vee block*       | 988299-000 |
| AT-3131                    | Reflector to fit standard aperture for SolderTacts contacts* | 988300-000 |
| AT-3132                    | Reflector to fit standard aperture*                          | 988301-000 |
| AT-3132-MK31/1             | Reflector to fit standard aperture with clamps*              | 879865-000 |
| AT-3134                    | Reflector to fit large aperture with standard Vee block*     | 988303-000 |
| AT-3147                    | Reflector to fit large aperture with clamps*                 | 988328-000 |
| AT-3191                    | Reflector to fit standard aperture special Vee block*        | 588701-000 |
| ED-7-CONT-TRANSFORMER      | Transformer                                                  | 139128-000 |
| ED-7-BATT-FRONT-PANEL      | Comes complete with PCB                                      | 132692-000 |
| IR-1759/3104-CABLE-ASSY    | Trigger PCB/cable/fan/lamp holder*                           | 585643-000 |
| NAE-143-3                  | Bulb 250 W, 24 V IR1759/3104*                                | 988208-000 |
| AE-205                     | Linear reflector for standard aperture                       | 988596-000 |
| AE-226                     | Linear reflector for large aperture                          | 988314-000 |
| AT-3134/AE-897             | Reflector and conversion kit (see above)                     | 934630-000 |
| NAE-109-02                 | Lamp support                                                 | 988382-000 |
| NAE-152-1                  | Fan                                                          | 988204-000 |
| MINIRAY-GUN-CASE           | Mini-Ray heat gun case                                       | CM8837-000 |

\*Items marked with an asterisk are compatible and can be used with MK2/MK3 IR1759.



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem CV2014 Series ThermoGun Heating Tool

## SPACE AND WEIGHT EFFICIENT

- Ultra compact design
- Lightweight: 600 g (1.32 lb.)

## POWERFUL

- Produces temperatures to 650°C
- Electronic steplessly controlled temperature
- Electronic steplessly controlled airflow
- Electronic heating element protection

## SAFE

- Low noise
- Built in stand
- UL Approved



### CV2014 Series ThermoGun Heating Tool

Tool is used for installing TE heat-shrink tubing and SolderSleeve terminations, and for making cable repairs.

**CV2014-JETS-120V460W-UL**

**CV2014-JETS-230V460W-EU**

**CV2014-JETS-230V460W-UK**

The small, but powerful Raychem CV2014 hot air gun is capable of producing temperatures of up to 600°C. It can be used for installing heat-shrink tubing, SolderSleeve devices, and cable repair products.

PR Reflectors as shown below can be used with a reflector adapter.

## Specifications

### POWER

- **Voltage:** 120 V (US models) or 230 V (UK/EU models)
- **Power Consumption:** 460 W

### AIR

- **Air Flow (@ 20°C):** 20 to 80 l/min

### TEMPERATURE

- **Temperature Range:** 40°C to 650°C

### DIMENSIONS

- **Size (L x Ø):** 235 mm L x 70 mm dia., 9.25" L x 2.75 dia.  
Handle is 40 mm (1.6") dia.

### WEIGHT

- 0.6 kg (1.3 lb.) (with 3 m cord)





## Ordering Information

### CV2014 Series ThermoGun Heating Tools

| Model                 | Plug        | Description             | Part No.   |
|-----------------------|-------------|-------------------------|------------|
| Hot Jet S 120 V/460 W | UL (US)     | CV2014-JETS-120V460W-UL | EG2900-000 |
| Hot Jet S 230 V/460 W | Schuko (EU) | CV2014-JETS-230V460W-EU | EG2902-000 |

### Reflectors

| Reflector/Application                                     | Description       | Part No.   |
|-----------------------------------------------------------|-------------------|------------|
| PR Reflector adaptor                                      | CV2014-PR-ADAPTOR | EG3417-000 |
| PR-38: Large cable repair                                 | PR-38-REFLECTOR   | EG2498-000 |
| PR-13: Tubing up to 6 mm dia.                             | PR-13-REFLECTOR   | 991963-000 |
| PR-13-C: Tubing 6 to 12 mm dia.                           | PR-13C-REFLECTOR  | 991974-000 |
| PR-25: SolderSleeve products up to 6 mm dia.              | PR-25-REFLECTOR   | 991965-000 |
| PR-25-D: SolderSleeve products 6 to 12 mm dia.            | PR-25D-REFLECTOR  | 989523-000 |
| PR-26: Miniature SolderSleeve products and small products | PR-26-REFLECTOR   | 991967-000 |
| PR-33: For SolderSleeve products 20 to 27 mm dia.         | PR-33-REFLECTOR   | 997768-000 |



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem CV1981 and CV1983 Series ThermoGun Heating Tools

## VERSATILE

- Heavy-duty bench or hand held hot air tool
- Intelligent e-Drive operating unit
- Digital temperature indicator (AT models) for easy adjustment to product requirements

## CAPABLE

- Wide temperature range: 40°C to +650°C
- Precise temperature control on AT models allows tool temperature to be matched to the heat-shrink product's requirements
- Closed-loop controlled temperature
- Open-loop controlled air volume

## SAFE

- Ergonomic handling
- Modern design
- Safety guard



### CV1981 and CV1983 Series ThermoGun Heating Tools

ThermoGun heating tools are used for installation of TE heat-shrink products, molded parts, and Solder Sleeve terminations.

### CV1981 Series ThermoGun Heating Tool CV1983 Series ThermoGun Heating Tool

Raychem CV1981 and CV1983 Series ThermoGun heating tools from TE are intelligent, robust, double insulated heavy-duty tools. The tools use an internal thermocouple to ensure accurate output temperature.

CV1981 AT model use closed-loop control to ensure that the set value is achieved even while supply voltage varies slightly. The digital display shows set temperature and measured temperature simultaneously. AT models also feature adjustable airflow.

A motor-driven fan forces air through the heating element, which is enclosed in a stainless steel barrel and safety guard. The tool is fitted with power control, to allow for adjustment of output temperature. An integral stand allows the tool to be used as a bench tool.

The heating tool is available in a variety of models and is suited to a wide range of heat-shrink applications. The various PR Series push-on reflectors are easily and quickly attached to the gun.



## Specifications

|                          | CV1981                                                                         | CV1983               |
|--------------------------|--------------------------------------------------------------------------------|----------------------|
| <b>Power Consumption</b> | 1600 W                                                                         | 2300 W/2400 W/3400 W |
| <b>Voltage</b>           | 120 V or 230 V                                                                 |                      |
| <b>Temperatures</b>      | 40°C to 650°C                                                                  |                      |
| <b>Air Flow (20°C)</b>   | 240 l/min max.                                                                 |                      |
| <b>Dimensions</b>        | Tool: 338 mm L x 90 mm dia. (13.3" L x 3.5" dia.)<br>Handle: 56 mm (2.2" dia.) |                      |
| <b>Weight</b>            | 990 g (2 lb.)                                                                  | 1.3 kg (2.9 lb.)     |

## Ordering Information

### Heating Tools

| Model                                                                                             | Description               | Part No.   |
|---------------------------------------------------------------------------------------------------|---------------------------|------------|
| <b>CV1981 AT Series (with Controlled Temperature, Adjustable Air Volume, and Digital Display)</b> |                           |            |
| 230 V, 1600 W, EU Plug                                                                            | CV1981-ATPID-230V1600W-EU | EG1106-000 |
| 230 V, 1600 W, UK Plug                                                                            | CV1981-ATPID-230V1600W-UK | EG1108-000 |
| 120 V, 1600 W, US Plug                                                                            | CV1981-ATPID-120V1600W-US | EG1110-000 |
| 120 V, 1600 W, CEE Plug                                                                           | CV1981-ATPID120V1600W-CEE | EG1112-000 |
| <b>CV1981 ST Series†</b>                                                                          |                           |            |
| 230 V, 1600 W, EU Plug                                                                            | CV1981-ST-230V1600W-EU    | EG1114-000 |
| 230 V, 1600 W, Swiss Plug                                                                         | CV1981-ST-230V1600W-CH*   | EG1115-000 |
| 230 V, 1600 W, UK Plug                                                                            | CV1981-ST-230V1600W-UK*   | EG1116-000 |
| 120 V, 1600 W, US Plug                                                                            | CV1981-ST-120V1600W-US*   | EG1118-000 |
| 120 V, 1600 W, CEE Plug                                                                           | CV1981-ST-120V1600W-CEE*  | EG1120-000 |
| <b>CV1983 ST Series†</b>                                                                          |                           |            |
| 230 V, 3400 W, EU Plug                                                                            | CV1983-ST-230V3400W-EU    | EG0998-000 |
| 230 V, 2300 W, EU Plug                                                                            | CV1983-ST-230V2300W-EU    | EG1100-000 |
| 120 V, 2400 W, CEE Plug                                                                           | CV1983-ST-120V2400W-CEE   | EG1102-000 |
| 230 V, 3400 W, CEE Plug                                                                           | CV1983-ST-230V3400W-CEE   | EG1104-000 |

\*Note: Refer to TE installation guides and Codes of Practice for appropriate temperature settings.

† ST tooling does not feature digital display.

### Accessories and Replacement Parts

Spare/replacement elements for CV1981 and CV1983

| Description               | Part No.   |
|---------------------------|------------|
| CV1981-ATSTELEM-230V1600W | EG8165-000 |
| CV1981-ATSTELEM-120V1600W | EG8166-000 |
| CV1983-STELEM-230V3400W   | EG8167-000 |
| CV1983-STELEM-230V3400W   | EG8168-000 |
| CV1983-STELEM-120V2400W   | EG8169-000 |



### Accessories and Replacement Parts (continued)

Spares for CV1981MK2-PID, CV1983M2

| Description               | Part No.   |
|---------------------------|------------|
| CV-1981-PID-ELEM-120V     | 179178-000 |
| CV-1981-PID-ELEM-230V     | 091282-000 |
| CV-1983-M2-230V-2200W-ELE | D40442-000 |
| CV-1983-M2-230V-3060W-ELE | 123906-000 |

### Reflectors

| Part                      | Description                                            | Part No.   |
|---------------------------|--------------------------------------------------------|------------|
| AD-1962-CV1648-PR.RFL-ADP | Adaptor to CV1983 for PR Series Reflectors             | 989172-000 |
| AD-1999-Temp-Meas-Rflt    | Temperature Measurement Reflector                      | 932525-000 |
| PR-12-REFLECTOR           | For Tubing 6 to 25 mm Dia.                             | 991973-000 |
| PR-13-REFLECTOR           | For Tubing up to 6 mm Dia.                             | 991963-000 |
| PR-13C-REFLECTOR          | For Tubing 6 - 12 mm Dia.                              | 991974-000 |
| PR-21-REFLECTOR           | For Tubing 6 - 25 mm Dia.                              | 991984-000 |
| PR-24-REFLECTOR           | For Small Molded Parts and Tubing 25 to 35 mm Dia.     | 991964-000 |
| PR-24-A-REFLECTOR         | For Small Molded Parts and Tubing 35 to 60 mm Dia.     | 991989-000 |
| PR-25-REFLECTOR           | For SolderSleeve Products up to 6 mm Dia.              | 991965-000 |
| PR-25-D-REFLECTOR         | For SolderSleeve Products 6 to 12 mm Dia.              | 989523-000 |
| PR-26-REFLECTOR           | For Miniature SolderSleeve Products and Small Products | 991967-000 |
| PR-27-REFLECTOR           | Special                                                | 997858-000 |
| PR-33-REFLECTOR           | For SolderSleeve Products 20 to 27 mm Dia.             | 997768-000 |
| PR-34-REFLECTOR           | For SolderSleeve Products 12 to 20 mm Dia.             | 989111-000 |
| PR-ATUM-HTAT-16/4-32/8    | For HTAT 16/4 - 32/8                                   | 463664-000 |
| AD-7-025                  | Unicure Heat Shield (HS1)                              | 121629-000 |

### Accessories and Replacement Parts

| Reflectors | Applications                          | Description              | Part No.   |
|------------|---------------------------------------|--------------------------|------------|
| A-160-HG   | Up to 19 mm (0.75") Dia. Tubing       | TG-12/A-160-HG-RFL-SMALL | 991017-000 |
| A-170-HG   | 19 to 51 mm (0.75" to 2") Dia. Tubing | A-170-HG                 | 991018-000 |
| TG-23      | 44 to 51 mm (1.75") Dia. Tubing       | TG-23/A-205-HG           | 991026-000 |
| TG-24      | Molded Parts                          | TG-24-RFL-LGE-BOOT       | 991027-000 |



A-160-HG Reflector

A-170-HG Reflector

TG-23 Reflector

TG-23 and TG-24 reflectors will fit CV-1981 and CV-1983 heat guns using adaptor part 989172-000 AD-1962-CV1648-PR.RFL-ADP



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

 This product must not be disposed of as municipal waste.

# Heat Guns for Raychem Products

## HL1920E

### CONVENIENT

- Electronic temperature control
- Hand-held and self-resting
- Industrial grade rubber power cord

### RELIABLE

- Thermal fuse
- Dual air vents
- Ergonomic soft grip handle

## HL2020E

### ADVANCED

- Electronically controlled hot air tool with LCD display
- Adjustable by joystick from 80°C to 630°C in 10°C steps
- Current working temperature and airflow rate is indicated on the display

### SAFE, COMFORTABLE

- Residual heat indicator to prevent burns
- Ergonomic soft grip handle



### Raychem Heat Guns

Tools are designed for installation of TE heat-shrink products and Solder Sleeve devices.

## HL1920E HL2020E

### HL1920E

The HL1920E heat gun is a powerful, electronically controlled hot air gun with temperature control and cool air stage. The switch, located on the grip handle, is used for setting temperature and airflow. The heat gun can be conveniently operated using one hand.

Temperature range 50°C to 600°C @150/300/500 l/min.

Both tools are suited for heat-shrink products and Solder Sleeve devices.

### HL2020E

The HL2020E heat gun from TE is a microprocessor-controlled, high-end heat gun with temperature control, LCD display, and cold air stage. The heat gun features a joystick for making temperature adjustments, and the current working temperature is identified on an LCD display.

Temperature range: 80°C to 630°C in 10°C steps @150/300/500 l/min.



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

 This product must not be disposed of as municipal waste.



## Specifications

### TEMPERATURE

- **HL2020E:** 80°C to 630°C
- **HL1920E:** 50°C to 600°C

### POWER

- 120 V - 60 Hz, 12.5 A
- 230 V - 50 Hz, 8.7 A

### HEATER ELEMENT POWER

- 120 V, 2000 W
- 230 V, 2000 W

### WEIGHT

- 900 g (2.0 lb.)

### CORD LENGTH

- 2.2 m (7.2') approx.

## Ordering Information

### Heat Guns

| Models               | Description           | Part No.   |
|----------------------|-----------------------|------------|
| <b>HL1920E Tools</b> |                       |            |
| 230 V, UK Plug       | HL1920E-230V-UK       | EG8160-000 |
| 230 V, EU Plug       | HL1920E-230V-EURO     | EG8162-000 |
| Kit, 230 V, EU Plug  | HL1920E-KIT-230V-EURO | EG8164-000 |
| Kit, 120 V, US Plug  | --                    | CJ2086-000 |
| <b>HL2020E Tools</b> |                       |            |
| 230 V, UK Plug       | HL2020E-230V-UK       | EG6424-000 |
| 230 V, EU Plug       | HL2020E-230V-EURO     | EG6422-000 |
| Kit, 230 V, EU Plug  | HL2020E-KIT-230V-EURO | EG6426-000 |
| Kit, 120 V, US Plug  | --                    | CJ2087-000 |

Note: Kit contains heating tool plus SolderSleeve reflector EH0600-000.

### Accessories and Replacement Parts

| Part/Application                            | Description             | Part No.   |
|---------------------------------------------|-------------------------|------------|
| <b>Reflectors</b>                           |                         |            |
| Adaptor for PR Series Reflectors            | *HL-ADPT-PR-REFLECTORS  | EH0598-000 |
| Reflector For Tubing                        | HL-GEN-TUBE-REFLECTOR   | EH0599-000 |
| Reflector for SolderSleeve Products         | HL-SOLDER-SLV-REFLECTOR | EH0600-000 |
| <b>Reduction Nozzles</b>                    |                         |            |
| 9 mm Nozzle For Small-to-Medium Tubing      | HL-9MM-REDUCTION-NOZ    | EH0601-000 |
| 14 mm Medium Nozzle                         | HL-14MM-REDUCTION-NOZ   | EH0602-000 |
| 20 mm Medium-to-Large Nozzle                | *PR-12-REFLECTOR        | 991973-000 |
| <b>Stands</b>                               |                         |            |
| Bench Stand for Fixed Position Environments | HL-BENCH-STAND          | EH0603-000 |

Note - Reflector: SolderSleeve reflector comes with the kit only.

\*HL-ADPT-PR-REFLECTORS required for use with PR-12-REFLECTOR.



SolderSleeve Reflector

20 mm Reduction Nozzle

Small to Medium Tubing

Reflector Tubing

# Raychem AA-400 Super Heater Compressed-Air Heating Tool

## APPLICATIONS

- For installing heat-shrinkable tubing in confined spaces
- Small SolderSleeve devices
- Devices (wire-to-pin applications)
- SolderTacts contacts

## VERSATILE

- Very focused heat
- Wide variety of reflectors available
- Excellent tool for small items and confined areas

## EASY TO USE

- Automatic power cut-off switch to protect heating element if air flow is interrupted
- Pressure regulator and gauge for adjusting air flow and temperature
- Indicator light to show when power is applied to heating element



**AA-400 Super Heater Compressed-Air Heating Tool**  
Tool is used for installing heat-shrinkable tubing and devices.

**AA-400-32-Mk3 (120V)**  
**AA-400-200-CE-SUPERHTR (230V) CE**

## Specifications

### POWER

- **120 V model:** 120 VAC, 4 A, 50-60 Hz
- **240 V model:** 240 VAC, 2 A, 50-60 Hz

### AIR

- 60 psi /413 kPa /4 bar minimum, 5 cfm, oil free

### DIMENSION

- 152 x 108 x 89 mm (6 x 4.25 x 3.5") with regulator

### WEIGHT

- 1kg (2.2 lb.)

### TEMPERATURES

- **Standard Tool as Supplied:** 375°C to 400°C
- **Tool with Needlepoint Tip:** 283°C to 306°C
- **Tool with Mini SolderSleeve Reflector:** 347°C to 459°C  
(Temperatures achieved within the specified pressure switch operating range as shown on the front of controller.)





## Ordering Information

### AA-400 Super Heater

| Model                                                                                                                | Voltage AC | Description            | Part No.   |
|----------------------------------------------------------------------------------------------------------------------|------------|------------------------|------------|
| <b>AA-400 Super Heater</b><br>(With stand, needlepoint tip,<br>Mini SolderSleeve reflector,<br>and input air filter) | 120        | AA-400-32-Mk3 (120 V)  | 582602-000 |
|                                                                                                                      | 240 CE     | AA-400-200-CE-SUPERHTR | 281917-000 |

Note: Controller is not sold separately.

### Accessories and Replacement Parts

| Parts                                       | Description               | Part No.   | NSN Stock No.    |
|---------------------------------------------|---------------------------|------------|------------------|
| SolderSleeve Reflector                      | AA-400-94-SLD-SLV-TIP-KIT | 979646-000 | 4940-00-609-4993 |
| *Needlepoint Tip                            | AA-400-96                 | 979647-000 | 4940-00-148-9847 |
| Boot And Tubing Tip                         | AA-400-101                | 979691-000 | 4940-00-148-9848 |
| *Mini SolderSleeve Reflector                | AA-400-102                | 979663-000 | 4940-01-043-7634 |
| Low-Flow Tip                                | AA-400-103                | 979672-000 | 3439-01-173-8810 |
| Heating Element Replacement Kit, 120 V      | AA-400-128                | 013750-000 |                  |
| Heating Element Replacement Kit, 240 V (CE) | AA-400-228-EL-KT-240V-CE  | 444179-000 |                  |
| *Stand                                      | AA-400-09                 | 979649-000 |                  |
| *Input Air Filter                           | AA-400-P-Y-92-Filter      | 979673-000 |                  |
| Air Hose Replacement Kit                    | AA-400-136                | 156553-000 |                  |
| Gun And Air Hose Replacement Kit            | AA-400-229-GUN-HSE-KIT    | 238231-000 |                  |

\*Indicates parts that come with the Super Heater



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem HT-900B Compressed Air Nitrogen Heater Tools

## CAPABLE

- 290°C to 495°C temperature range
- Compressed air/nitrogen 80 to 200 psi
- Regulated air/nitrogen through the hose
- Air/nitrogen monitored by small sensing hose

## EASY TO USE

- Temperature is controlled by the controller setting and on thermo-couple feedback
- On/Off power switch handle with overload protection controls electrical supply

## SAFE

- Automatic shutdown if air supply falls below 5.0 psi
- Compressed air/nitrogen runs through four orifices to cool handle of tool
- Power on light for unit
- Heated air light for heating element



## HT-900B Compressed Air Nitrogen Heater Tools (Available in the US only)

Tools are used for the field installation of heat-shrinkable insulation and termination products.

**HT-900B-1-HT-TOOL-YELLOW (115 V)**  
**HT-900B-30-HT-TOOL-OLIVE (115 V)**  
**HT-920B-10-HT-TOOL-YELLOW (230 V)**  
**HT-920B-1-HT-TOOL-OLIVE (230 V)**

The Raychem HT900B compressed air/nitrogen heating tool from TE supplies a stream of heated air or nitrogen to aid in the field installation of heat-shrinkable insulation and termination products.

The heating tool consists of a heat gun and a control module. The tool comes with hot air reflectors, a spare heating element, thermocouple, and operating instructions. The heat gun is permanently attached to the control module by a hose assembly, which contains air hoses and electrical wires.

The compressed air/nitrogen heating tool operates by passing a stream of air or nitrogen through an electrical heated element located in the body of the heat gun.

## Specifications

### ELECTRICAL

- **HT-900B:** 115 VAC, 50-400 Hz, single-phase, 7 A
- **HT-920B:** 220 VAC, 50-400 Hz, single-phase, 3.5 A

### WEIGHT

- 9 kg (20 lb.)

### DIMENSION

- **Tool Case:** 246 x 440 x 292 mm (9.7" x 17.3" x 11.5")

### OUTPUT TEMPERATURE

- 290°C to 495°C

### COMPRESSED AIR/NITROGEN

- 80 to 200 psi, 4 SCFM (Dry and oil-free)



## Ordering Information

### HT-900B Compressed Air Nitrogen Heater Tools (Available in the US only)

| Model   | Voltage | Description               | Case Color | Part No.   |
|---------|---------|---------------------------|------------|------------|
| HT-900B | 115     | HT-900B-1-HT-TOOL-YELLOW  | Yellow     | 910987-000 |
| HT-900B | 115     | HT-900B-30-HT-TOOL-OLIVE  | Olive Drab | 837097-000 |
| HT-920B | 230     | HT-920B-10-HT-TOOL-YELLOW | Yellow     | 303754-000 |
| HT-920B | 230     | HT-920B-1-HT-TOOL-OLIVE   | Olive Drab | 712121-000 |

### Accessories and Replacement Parts

| Part                                                                     | Description               | Part No.   |
|--------------------------------------------------------------------------|---------------------------|------------|
| <b>Supplied with HT-900B and HT-920B tools, and as replacement parts</b> |                           |            |
| Heating Element                                                          | HT-900A-112-SPAR-ELE-115V | 252997-000 |
| Thermocouple                                                             | HT-900A-114-TC-RPLMT-KIT  | 729711-000 |
| <b>1.</b> Boot and Tubing Reflector                                      | AA400-101-STAINLESS-BOOT  | 979691-000 |
| <b>2.</b> Miniature Termination Sleeve Reflector                         | AA-400-102-MINI-SOLD-TIP  | 979663-000 |
| <b>3.</b> Termination Sleeve Reflector                                   | HT-900A-103-REFL-RPLMT-KT | 491878-000 |
| <b>4.</b> Needle Point Reflector                                         | AA-400-96-NED-PNT-TIP-KIT | 979647-000 |
| <b>5.</b> Large Boot and Tubing Reflector                                | HT-900A-100-LBT-RPLMT-KIT | 444100-000 |
| <b>Additional Replacement Parts</b>                                      |                           |            |
| Heater Element, 120 V                                                    | HT-900A-123-HTR-RPLMT-KIT | 508744-000 |
| Heating Element, 230 V                                                   | HT-920A-124-HTELE-RPL-KIT | 011349-000 |
| Handle Kit 115 V                                                         | HT-900A-32-HNDLE-KIT-115V | 980123-000 |
| Handle Assembly                                                          | HT-900A-34-HANDLE-ASSMBLY | 074594-000 |



ROHS Information can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem AD-5000 Installation Tool

## EASY TO USE

- Designed specifically to install Tinel-Lock ring screened terminations in the correct position
- Tinel-Lock rings have thermochromic patch to aid in consistent installation
- Thermochromic patch color changes to black to provide visual verification of correct installation
- Tool switches off when pressure on jaws is released

## FAST

- 5 to 15-second typical installation time for a Tinel-Lock ring
- Simple line-up and squeeze-handle installation

## VERSATILE

- Accommodates Tinel-Lock rings from size TR04 to TR24 inclusive
- Various electrode types can be used to install other Tinel-Lock ring sizes and types



### AD-5000 Installation Tool

Tool is used to correctly position and install size TR04 to TR24 Raychem Tinel-Lock rings in screened terminations.

### AD-5000-TINEL-ASSY

The AD-5000 tool is a manually operated resistance-heating tool designed to install Raychem Tinel-Lock rings in screened terminations. Intended for small batches, the tool makes it easy to consistently and quickly install Tinel-Lock rings. Machine cycle time is typically 5 to 15 seconds, depending on ring size and braid type on the termination.

The tool accommodates Tinel-Lock rings from size TR04 to TR24. Various electrode (jaws) types can be used to install other ring sizes and types.

## Specifications

### POWER

- **Supply:** 220–240 V, 50 Hz
- **Main Fuse:** 240 V, 2 A (Type T) Anti-surge
- **System Noise:** Silent operation

### DIMENSION

- 340 x 320 x 170 mm (13.4" x 13" x 6.7")

### WEIGHT

- 4.2 kg (9.5 lb.)



## Ordering Information

A complete tool includes the hand tool assembly and electrodes. Three types of electrodes are available:

- Standard electrodes are used for Tinel-Lock rings, sizes TR04 through TR24
- Conduit electrodes are used when terminating Tinel-Lock rings on conduit or double braids
- Square profile electrodes are used with TC02 and TC03 rings

Tinel installation tool AD-5000-TINEL-ASSY includes both the hand tool assembly (AD-5000-TINEL-HAND-TOOL) and standard electrodes (AD-5000-TINEL-STD-ELECT).

### AD-5000 Installation Tool

| Model                     | Description        | Part No.   |
|---------------------------|--------------------|------------|
| AD-5000 Installation Tool | AD-5000-TINEL-ASSY | 411993-000 |

### Accessories and Replacement Parts

| Parts                     | Description               | Part No.   |
|---------------------------|---------------------------|------------|
| Hand Tool Assembly        | AD-5000-TINEL-HAND-TOOL   | 795257-000 |
| Standard Electrodes       | AD-5000-TINEL-STD-ELECT   | 180245-000 |
| Conduit Electrodes        | AD-5000-TINEL-COND-ELECT  | 747235-000 |
| Square Profile Electrodes | AD-5000-TINEL-SQ-EXT-ELEC | 065583-000 |



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem AD-5020 Installation Tool

## CONVENIENT

- Designed specifically to install Tinel-Lock ring screened terminations in the correct position
- Foot pedal operated on and off
- Controller "POWER OUTPUT" is adjustable from 80% to 100%

## EASY TO USE

- Ring's thermochromic patch color changes to black to provide visual verification of correct installation
- Tool switches off when foot pedal is released

## FAST

- 5 to 15-second typical installation time for a Tinel-Lock ring
- Simple line-up and press foot pedal switch installation



### AD-5020 Installation Tool for Tinel-Lock Rings

Tool is used to correctly position and install size TR04 through TR24 Raychem Tinel-Lock rings in screened terminations.

### AD-5020-TINEL-HAND-TOOL-230V EG1245-000

The AD-5020 tool is a manually operated resistance-heating tool designed to install Tinel-Lock rings in screened terminations. Intended for small batches, the tool makes it easy to consistently and quickly install Tinel-Lock rings. Machine cycle times typically 5 to 15 seconds, depending on ring size and braid type on the termination.

The tool accommodates Tinel-Lock rings from size TR04 through TR24. A foot pedal is used to cycle the tool on and off.

## Specifications

### POWER

- **Supply:** 220-240 V, 50 Hz
- **Main Fuse:** 230 V, 4 A (Type T) Anti-surge
- **System Noise:** Silent operation

### DIMENSIONS

- 160 x 120 x 250 mm (6.3" x 4.7" x 9.8")
- **Power Lead:** 1.3 m (51")
- **Foot Pedal Lead:** 2 m (78")

### WEIGHT

- 7.9 kg (17.4 lb.)



## Ordering Information

### AD-5020 Installation Tool

| Model             | Description             | Part No.   |
|-------------------|-------------------------|------------|
| AD-5020 Hand Tool | AD-5020-TINEL-HAND-TOOL | EG1245-000 |

### Accessories and Replacement Parts

| Model               | Description             | Part No.   |
|---------------------|-------------------------|------------|
| Standard Electrodes | AD-5020-TINEL-ELECTRODE | EG7238-000 |
| Jaws                | AD-5020-TINEL-JAWS      | EG7239-000 |
| PCB for Controller  | AD-5020-TINEL-PCB       | EG7240-000 |



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.



# RH-3960 and RH-3965 Tinel-Lock Installation Tools

## EASY TO USE

- Designed specifically to install Tinel-Lock ring screened terminations in the correct position
- Tinel-Lock rings have thermochromic patch to aid in consistent installation
- Thermochromic patch color changes to black to provide visual verification of correct installation
- Tool switches off when pressure on jaws is released

## FAST

- 5 to 15-second typical installation time for a Tinel-Lock ring
- Simple line-up and squeeze-handle installation

## VERSATILE

- Accommodates Tinel-Lock rings from size TR04 to TR24 inclusive



### **RH-396X Tinel-Lock Installation Tool**

Tool is designed specifically to install TE Connectivity's Tinel-Lock rings for screened terminations.

### **RH-3960-1-TINEL-KIT-120V** **RH-3965-1-TINEL-KIT-220V**

The RH-396X manually operated resistance heating tool is designed specifically to install TE Connectivity's Tinel-Lock rings for screened terminations. Available in 120 V and 220 V versions, it is designed to accommodate our Tinel-Lock rings from size TR04 through TR24 inclusive.

The tool makes it easy to install Tinel-Lock rings consistently and quickly. The operator uses the hand-held tool to install the Tinel-Lock ring in its correct position on screened terminations. The ring has a patch of thermochromic paint, which turns to a black color upon successful installation.

The operator positions the ring on the termination, ensuring that the patch of thermochromic color is visible. The jaws of the installation tool are then clamped onto the ring to start the installation. When the thermochromic paint turns black, installation is complete.

The RH-396X Tinel-Lock ring installation tool is available in North America and Asia Pacific only.



## Specifications

### POWER

- **Supply:** 250 W/2.8 VAC

### TRANSFORMER DIMENSIONS

- 260 mm x 210 mm x 165 mm (10.25" x 8.25" x 6.5")

### WEIGHT

- 3.18 kg (7.0 lb.)

## Ordering Information

Recommended for installing Tinel-Lock rings TC series and TR04 thru TR20.

A complete tool includes the hand tool assembly and electrodes.

- Standard electrodes are used for Tinel-Lock rings, sizes TR04 through TR24
- Resistance Heating Tool: 915088-01
- Use with American Beauty Transformer 105-A12 (110 V) or 105-A12-220V (220 V) and Foot Switch 10519

### TH-3960 and TH-3965 Installation Tools

| Model                               | Description              | Part No.   |
|-------------------------------------|--------------------------|------------|
| TH-3960 Installation Tool (120 VAC) | RH-3960-1-TINEL-KIT-120V | 173643-000 |
| TH-3965 Installation Tool (220 VAC) | RH-3965-1-TINEL-KIT-220V | 859855-000 |

### Accessories and Replacement Parts

| Parts               | Description               | Part No.    |
|---------------------|---------------------------|-------------|
| Hand Tool Assembly  | 915088-01-TINI-RING-HEATR | 170224-000  |
| Foot Switch         | IR-500-P-FOOT-SWITCH      | 993702-000  |
| 120 VAC Transformer | AES-RH3960-TRNSFMR-120V   | 9951119-000 |
| 220 VAC Transformer | TRNSFMR-220V-105-A12-250W | 574557-000  |



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.

# Raychem Underwater Cable Splice (UWCS) Kit

## CONVENIENT

- Portable
- Available in 110 V and 240 V
- Full range of spares available

## FOR INSTALLING HIGH PERFORMANCE SPLICES

- Splices tested to 86 bar (on specified cables)
- Splices operating temperature range: -55°C to +95°C
- Kit: NATO Codified (110 V option)



### Raychem Underwater Cable Splice Kit

Tool is used for jointing of TE specified polyethylene jacketed cables.



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>

 This product must not be disposed of as municipal waste.

## UWCS-AT3535-110V UWCS-AT3535-220V

The Raychem underwater cable splice (UWCS) from TE is suitable for jointing of TE specified polyethylene jacketed cables, which are subject to water immersion and pressure.

The splice consists of molded polyethylene inserts, which are encased in a heat recoverable sleeve. The joint is placed in a **purpose-made oven**, which melts the joint components with the cable jacket and, when cooled, gives a water- and pressure-tight joint with the insulated conductor connections embedded within it.

## Specifications

### ELECTRIC

- 110 V
- 240 V

### TOOL KITS

| Voltage | Description      | Part No.   |
|---------|------------------|------------|
| 110 V   | UWCS-AT3535-110V | 921209-000 |
| 240 V   | UWCS-AT3535-220V | 866776-000 |



## Product Range

| Cable Description<br>(Diameter first)  | EPD No. | Splice Kit          | End Cap           |
|----------------------------------------|---------|---------------------|-------------------|
| 6.8 mm, 6 mm <sup>2</sup> unscreened   | 26732C  | UCWS-1U/6.8         | UWCS-END-CAP/6.8  |
| 6.8 mm, 6 mm <sup>2</sup> unscreened   | 26732C  | UCWS-1U/10.9-1U/6.8 |                   |
| TO                                     |         |                     |                   |
| 10.9 mm, 25 mm <sup>2</sup> unscreened |         | UCWS-2U/7.6         |                   |
| 7.6 mm, 2 core unscreened              | 21735F  |                     | UWCS-END-CAP/7.6  |
| 7.6 mm, 2 core unscreened              | 21735F  | UCWS-2U/7.6-1C/5.8  |                   |
| TO                                     |         |                     |                   |
| 5.8 mm, 25 mm Coaxial                  | 26640A  | UCWS-2S/8.3         |                   |
| 8.3 mm, 2 core screened                | 21291G  | UCWS-2S/8.3         | UWCS-END-CAP/8.3  |
| 8.3 mm, 3 core screened                | 24171E  | UCWS-3S/8.3         | UWCS-END-CAP/8.3  |
| 8.3 mm, 4 core screened                | 21736E  | UCWS-4S/8.3         | UWCS-END-CAP/8.3  |
| 10.3 mm                                | 45572Q  |                     | UWCS-END-CAP/8.3  |
| 10.9 mm, 25 mm <sup>2</sup> unscreened | 31451A  | UCWS-1U/10.9        |                   |
| 11.2 mm, 50'Ω Coaxial                  | 25984G  | UCWS-1C/11.2        | UWCS-END-CAP/11.2 |
| 12.7 mm, 3 core unscreened             | 36892C  | UCWS-3U/12.7        |                   |

\* Please contact TE for more details

# Raychem AD-1319-9 Holding Fixture

## EASY TO USE

- Holding fixture simplifies and speeds installation of terminations and splices
- Two lateral clamps, simple to adjust and align
- Fixture secures wire or cable for consistent installation

## VERSATILE

- Designed for use with Raychem heat-shrinkable devices
- Adjustable jaws set distance between clamps



### AD-1319-9 Holding Fixture

Tool is used to quickly and accurately install Raychem heat-shrinkable devices.

## AD-1319-9

The AD-1319-9 holding fixture is a tool that simplifies and speeds installation of Raychem devices. The fixture contains two wire clamps that are easily adjusted to center and secure the wire or cable for installation.

## Specifications

### DIMENSION

- 180 x 150 mm (7" x 6") approx.

### WEIGHT

- 300 g (.67 lb.)

### PRODUCT RANGE

- SolderSleeve splices
- DuraSeal splices
- MiniSeal splices
- One-Step BNC/TNC connectors
- Shield terminators: D-100-XX, D-144-XX, SO63, SO96
- SolderTacts contacts: D-602-XX



## Ordering Information

### AD-1319-9 Holding Fixture

| Model                     | Description | Part No.   |
|---------------------------|-------------|------------|
| AD-1319-9 Holding Fixture | AD-1319-9   | 993850-000 |

Note: For holding fixtures for our SolderTacts products, please refer to TE's SolderTacts brochure, 1-1773722-5.

### Accessories and Replacement Parts

| Parts                       | Description | Part No.   |
|-----------------------------|-------------|------------|
| <b>SolderTacts Adapters</b> |             |            |
| 38999 Size 8 Contact        | AT-1319-22  | 395241-000 |
| 38999 Size 16 Contact       | AT-1319-78  | 413186-000 |
| Subminiature Contact        | AT-1319-12  | 993872-000 |
| 748 Contact                 | AT-1319-14  | 993877-000 |
| 723 Contact                 | AT-1319-19  | 993938-000 |
| 482 Size 16 Contacts        | AT-1319-17  | 993917-000 |



**ROHS Information** can be found at the following website: <http://www.te.com/customersupport/productcompliance/>



This product must not be disposed of as municipal waste.



## Selecting the Equipment Needed To Install TE Connectivity Heat-Shrinkable Products

Selecting the proper tool is very important in order to ensure correct and efficient installation.

Our application equipment has been designed, selected, and engineered for maximum production efficiency, providing optimal heating temperatures, performance and control features.

TE has developed installation Codes of Practice and Product Installation Procedures that give instructions to our customers in the correct methods for successfully installing our heat-shrinkable products. These are either available as stand-alone documents, or are incorporated into the product drawings themselves.

Below are listed some of our heat-shrinkable products along with the recommended tooling that can be found within this catalog. Please note that there are some tools that can be used for the installation of several of our product families, such as our various types of heat gun.

In order to ensure the correct and focused delivery of heat, reflectors are recommended and available in a variety of sizes. For more details, see the Codes of Practice and Product Installation Guides, or contact your TE representative.

### Product Family

### Recommended Application Tooling

### Page

#### MiniSeal Crimp Splices



|                                            |       |
|--------------------------------------------|-------|
| AD-1377 Hand Crimping Tool                 | 3     |
| UL Approved MK5 Infrared Hand-Held Tooling | 10-11 |
| Mini-Ray MK4 Infrared Hand-Held Tooling    | 12-13 |
| CV2014 Series ThermoGun Heating Tool       | 15-16 |
| AA-400 Super Heater                        | 22-23 |

#### DuraSeal Crimp Splices



|                                              |       |
|----------------------------------------------|-------|
| AD-1522-1 Hand Crimping Tool                 | 4     |
| CV1981/CV1983 Series ThermoGun Heating Tools | 17-19 |
| Reflectors for CV1981/CV1983 Tools           | 19    |
| Heat Guns                                    | 20-21 |
| Reflectors for Heating Guns                  | 21    |



## Product Family

### Heat-Shrinkable Molded Boots and Shapes



### Heat-Shrinkable Tubing (For example DR-25, RNF-100 Tubing)



### Tinel-Lock Rings for TXR Backshells



## Recommended Application Tooling

## Page

|                                              |       |
|----------------------------------------------|-------|
| CV1981/CV1983 Series ThermoGun Heating Tools | 17-19 |
| Reflectors for CV1981/CV1983 Tools           | 19    |
| Heat Guns                                    | 20-21 |
| Reflectors for Heat Guns                     | 21    |
| CV1981/CV1983 Series ThermoGun Heating Tools | 17-19 |
| Reflectors for CV1981/CV1983 Tools           | 19    |
| Heat Guns                                    | 20-21 |
| Reflectors for Heat Guns                     | 21    |
| AD-5000 Installation Tool                    | 26-27 |
| AD-5020 Installation Tool                    | 28-29 |
| RH-3960/RH-3965 Tinel-Lock Installation Tool | 30-31 |

Please note that our infrared tools are not suitable for installation of black-colored tubing.

The above are recommendations only. Please consult your TE representative for further details on our tooling or any of our Raychem heat-shrink tubing and molded shapes





## Notes



## Notes

## LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit [www.te.com/industrial](http://www.te.com/industrial) to chat with a Product Information Specialist.

## Technical Support

[te.com/support-center](http://te.com/support-center)

|                      |                 |              |                    |
|----------------------|-----------------|--------------|--------------------|
| North America        | +1 800 522 6752 | Asia Pacific | +86 400 820 6015   |
| North America (Toll) | +1 717 986 7777 | Japan        | +81 044 844 8180   |
| EMEA/South Africa    | +800 0440 5100  | Australia    | +61 2 9554 2695    |
| EMEA (Toll)          | +31 73 624 6999 | New Zealand  | +64 (0) 9 634 4580 |
| India (Toll-Free)    | +800 440 5100   |              |                    |

# te.com/Raychem-tooling

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Consult TE for the latest dimensions and design specifications.

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