

Raychem application equipment is designed and engineered specifically for installation of Raychem heat-shrinkable products. These tools provide the optimal heating temperatures, performance, and control features for maximum production efficiency.

**Table of Contents**

|                                                                                                     |       |
|-----------------------------------------------------------------------------------------------------|-------|
| <b>AA-400 Super Heater</b>                                                                          |       |
| Compressed-air heating tool                                                                         | 10-2  |
| <b>AD-1319-9</b>                                                                                    |       |
| Holding fixture tool                                                                                | 10-3  |
| <b>AD-1377, AD-1522</b>                                                                             |       |
| Hand-operated crimp tools                                                                           | 10-4  |
| <b>AD-3050-SEAL-TEST-EQUIP</b>                                                                      |       |
| Seal test equipment Splice sealing and connector sealing evaluation                                 |       |
| - various products                                                                                  | 10-5  |
| <b>AD-5000 and RH-396X</b>                                                                          |       |
| Tinel-Lock installation tool Tinel-Lock screened termination products                               | 10-7  |
| <b>AD-5010-Tinel-Bench-230V</b>                                                                     |       |
| Tinel-Lock installation tool Tinel-Lock screened termination products                               | 10-9  |
| <b>CV-1981, CV-1983</b>                                                                             |       |
| Heavy-duty hot-air heating tools                                                                    | 10-11 |
| <b>HL1802E/HL2005E</b>                                                                              |       |
| Steinel general purpose hot-air heating tool                                                        | 10-13 |
| <b>IR-1891</b>                                                                                      |       |
| Shuttle machine - twin workstation heater for multiple installation of short length tubing products | 10-15 |
| <b>IR-550 Mark II</b>                                                                               |       |
| Infrared heating tool                                                                               | 10-17 |
| <b>IR-1759 MiniRay</b>                                                                              |       |
| Infrared heating tool                                                                               | 10-18 |
| <b>Model 16B</b>                                                                                    |       |
| Belt heater                                                                                         | 10-19 |
| <b>Model 19</b>                                                                                     |       |
| Conveyor heater for processing Raychem heat-shrinkable tubing and terminating devices               | 10-21 |
| <b>Model 81CE</b>                                                                                   |       |
| Discrete heater                                                                                     | 10-23 |
| <b>Model 105</b>                                                                                    |       |
| Tunnel oven                                                                                         | 10-25 |
| <b>RBK-ILS-Processor MkII</b>                                                                       |       |
| Installation of splice sealing products adjacent to ultrasonic welder                               | 10-27 |
| <b>ThermoGun HG</b>                                                                                 |       |
| Hot-air heating tool                                                                                | 10-29 |

**Note:** Users should independently evaluate the suitability of the product for their application. Before ordering, check with Tyco Electronics for most current data.

**AA-400 Super Heater Compressed-Air Heating Tool**

**Product Facts**

- 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 that goes on when power is applied to heating element
- Very focused heat
- Wide variety of reflectors available
- Excellent tool for small items and confined areas

**Applications**

Used for installing heat-shrinkable tubing in multiple applications. Excellent for installing SolderSleeve devices (wire-to-pin applications) and SolderTacts contacts.



**Specifications**

| Utility Requirements |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| Electrical           | 120-V model: 120 Vac, 4 A, 50–60 Hz<br>240-V model: 240 Vac, 2 A, 50–60 Hz |
| Air (oil free)       | 60 psig minimum, 5 cfm                                                     |

**Ordering Information**

| Model                                                                                              | Voltage                         | Description | Part No.                 |
|----------------------------------------------------------------------------------------------------|---------------------------------|-------------|--------------------------|
| AA-400 Super Heater with stand, needlepoint tip, Mini SolderSleeve reflector, and input air filter | 120 Vac<br>240 Vac (CE version) | AA-400-32   | 582602-000<br>281917-000 |

| Accessories and Replacement Parts*          | Part No.   | Description   | NSN Stock No.    |
|---------------------------------------------|------------|---------------|------------------|
| SolderSleeve reflector                      | 979646-000 | AA-400-94     | 4940-00-609-4993 |
| Needlepoint tip                             | 979647-000 | AA-400-96     | 4940-00-148-9847 |
| Boot and tubing tip                         | 979691-000 | AA-400-101    | 4940-00-148-9848 |
| Mini SolderSleeve reflector                 | 979663-000 | AA-400-102    | 4940-01-043-7634 |
| Low-flow tip                                | 979672-000 | AA-400-103    | 3439-01-173-8810 |
| Heating Element replacement kit, 120 V      | 013750-000 | AA-400-128    | —                |
| Heating Element replacement kit, 240 V (CE) | 444179-000 | AA-400-228    | —                |
| Stand                                       | 979649-000 | AA-400-09     | —                |
| Input air filter                            | 979673-000 | AA-400-P-Y-92 | —                |
| Air hose replacement kit                    | 156553-000 | AA-400-136    | —                |
| Gun and air hose replacement kit            | 238231-000 | AA-400-229    | —                |

\*Controller is not sold separately.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**Product Facts**

- AD-1319-9 comes with two lateral wire clamps as standard
- Secures wire or cable, enabling easy installation of products

**Applications**

Simplifies and speeds installation of Raychem SolderSleeve terminators or splices and SolderTacts shielded contacts.

**Holding Fixture Tool AD-1319-9**



**Specifications and Dimensions**

|            |                                       |
|------------|---------------------------------------|
| Dimensions | 18 cm [7.07 in] W x 15 cm [5.91 in] L |
| Weight     | 300 g [.67 lb]                        |

**Product Range Covered**

|                      |                                   |
|----------------------|-----------------------------------|
| SolderSleeve splices | MiniSeal, CWT-9XXX, D-1744, D-110 |
| Shield terminators   | D-100-XX                          |
| SolderTacts contacts | D-602-XX                          |

**Ordering Information**

| Model                             | Description | Part No.   |
|-----------------------------------|-------------|------------|
| Holding fixture                   | AD-1319-9   | 993850-000 |
| 38999 size 8 SolderTacts adapter  | AT-1319-22  | 395241-000 |
| 38999 size 16 SolderTacts adapter | AT-1319-78  | 413186-000 |
| Submin SolderTacts adapter        | AT-1319-12  | 993872-000 |
| 748 SolderTacts adapter           | AT-1319-14  | 993877-000 |
| 723 SolderTacts adapter           | AT-1319-19  | 993938-000 |
| 482 size 16 SolderTacts adapter   | AT-1319-17  | 993917-000 |

Note: Additional tooling for SolderTacts can be found under SolderTacts contacts, see section 8.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

Hand-Operated Crimp Tools AD-1377, AD-1522

AD-1377, AD-1522



**AD-1377 Crimp Tool**

The Raychem AD-1377 crimp tool fits all MiniSeal crimp barrels. It also meets MIL specification M22520/37-01. A calibration verification gauge, AD-1386, is also available for the AD-1377. The gauge meets MIL specification M22520/39-01



**AD-1522 Crimp Tool**

The Raychem AD-1522 crimp tool crimps all DuraSeal crimp products. It has a preset crimp depth that provides the optimum combination of tensile strength and insulation integrity in the finished splice.

Ordering Information

| Model                       | Description               | Part No.   |
|-----------------------------|---------------------------|------------|
| AD-1377 MiniSeal crimp tool | AD-1377-CRIMP-TOOL        | 992008-000 |
| AD-1386 Calibration gauge   | AD-1386-CALIBRATION-GAUGE | 992013-000 |
| AD-1522 DuraSeal crimp tool | AD-1522-1-CRIMPING TOOL   | 047011-000 |

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**AD-3050-SEAL-TEST-EQUIP**

**Seal Test Equipment Splice Sealing and Connector Sealing Evaluation – Various Products**

**Product Facts**

- Simple fixture design allows fast sealing test result assisting determination of installation conditions for splice sealing products
- Connector fixture adapter allows connector sealing verification
- Strong portable container allows use in various locations



**Applications**

The AD-3050-SEAL-TEST-EQUIP is a manually operated pneumatic device, intended for use as a convenient 'in-process' sampling technique for checking sealed splices. Different combinations of in-line or stub splices can be pressure tested in any of the combination of fixtures (8 in total). There is also a facility to allow leak testing of various connectors.

Tyco Electronics UK has seen good correlation between results obtained with the AD-3050 and those obtained through water immersion testing. However testing in accordance with the OEM specification is the only guaranteed way of confirming that the OEM spec is being met. The splice products are located

in clamps which deliver the test pressure. The product is immersed in water and pressure is delivered down the wire(s) to the sealed area. The test result is determined visually by looking for bubbles in the area of the sealing product.

Use of this equipment is described in Tyco Electronics UK procedure, reference No. PIP/017/95. This equipment does not check for poke through i.e. where individual wire strands poke through the installed heat-shrinkable sleeve. Poke through is eliminated by ensuring correct welding and subsequent handling conditions.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**Seal Test Equipment Splice  
Sealing and Connector  
Sealing Evaluation –  
Various Products**

(Continued)

**AD-3050-SEAL-TEST-EQUIP (Continued)**

**Technical Specification**

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| Pneumatic Supply                      | 6 bar maximum, filtered supply.<br>2 bar test pressure maximum.<br>(Test pressure typically 0.5 bar) |
| Machine Cycle Times for seal testing: | Typically 1 minute                                                                                   |
| Total System Noise:                   | Negligible noise from air test                                                                       |
| Dimensions:                           | 550 x 350 x 215 [22 x 14 x 8 in]<br>(Excludes packing case)                                          |
| Weight:                               | 4 Kg (8.80 lb)<br>(Excludes packing case)                                                            |
|                                       | 9.6 Kg (21.20 lb)<br>(Includes packing case)                                                         |

**Ordering Information**

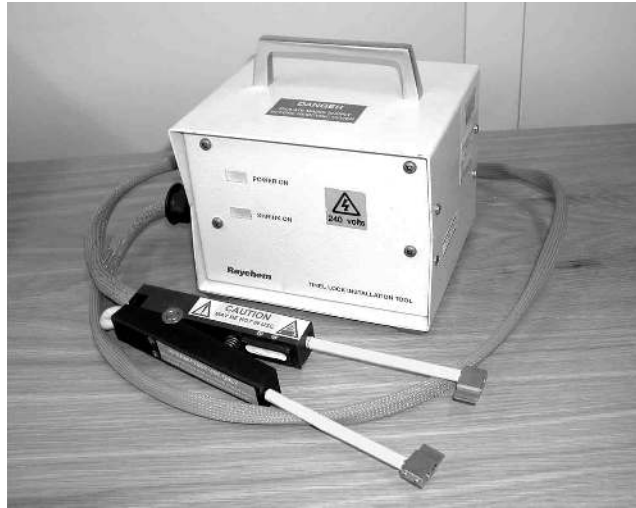
|                     | Description             | Part No.   |
|---------------------|-------------------------|------------|
| Seal Test Equipment | AD-3050-SEAL-TEST-EQUIP | 102119-000 |

**Recommended Spares**

|                                | Description                                               | Part No.   |
|--------------------------------|-----------------------------------------------------------|------------|
| Tool Assembly                  | AD-3050-SEAL-TEST-EQUIP                                   | 102119-000 |
| Set of 8 Seals**               | AD-3050-SEAL-8-KIT                                        | 299155-000 |
| Clamp assembly including seals | AD-3050-SEAL-CLAMP-ASSY                                   | 168927-000 |
| Sealing tape                   | EPDM foam, 6 mm x 9 mm,<br>with acrylic adhesive backing. | —          |

\*\* Full set of seals

**AD-5000 and RH-396X Tinel-Lock Installation Tool  
Tinel-Lock Screened Termination Products**



**Applications**

The AD-5000-TINEL-ASSY is a manually operated resistance heating tool designed specifically to install Raychem Tinel-Lock ring screened terminations in small batches. Recommended maximum continuous batch is 15, 6 second installations. The standard tool accommodates Tinel Rings from size TR04 to TR24 inclusive.

Various electrode (jaws) types can be used to install other Tinel-Lock ring sizes and types. The operator uses the hand-held tool to install the Tinel-Lock ring in its correct position on screened terminations. The Tinel-Lock ring has two patches of thermochromic paint on the Tinel-Lock ring.

The operator positions the Tinel-Lock ring on the terminations, with at least one of the patches of thermochromic paint visible. The Tinel-Lock ring is then clamped in the jaws to start the installation. Installation is complete when the thermochromic paint turns black.

|                              |                 |               |                     |
|------------------------------|-----------------|---------------|---------------------|
| <b>AD-5000 available in:</b> | <b>Americas</b> | <b>Europe</b> | <b>Asia Pacific</b> |
|                              | ■               | ■             | ■                   |
| <b>RH-396X available in:</b> | <b>Americas</b> | <b>Europe</b> | <b>Asia Pacific</b> |
|                              | ■               |               | ■                   |

**AD-5000 and RH-396X Tinel-Lock Installation Tool**  
**Tinel-Lock Screened Termination Products** (Continued)

**Technical Specification**

|                                                                              |                                                                           |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Electrical Supply                                                            | 220V-240V-50Hz                                                            |
| Machine Cycle Times for Tinel-Lock rings used on typical range of harnesses: | 5 to 15 Seconds depending on ring size and braid type on the termination. |
| Mains Fuse                                                                   | 240 V 2 Amp (Type T anti - surge)                                         |
| Total System Noise                                                           | Silent Operation                                                          |
| Dimensions                                                                   | 340 x 320 x 170 mm [13.4 x 13 x 6.7 in]                                   |
| Weight                                                                       | 4.2 Kg                                                                    |

**Product Range**

| <b>Tinel-Lock Rings</b>          |                                            |
|----------------------------------|--------------------------------------------|
| STANDARD ELECTRODES FITTED :     | Sizes TR04 to TR24                         |
| Conduit Electrodes Fitted        | Conduit systems / TR rings on double braid |
| Square Profile Electrodes Fitted | TC02-TC03 RINGS                            |

**Ordering Information**

|                                                                                                                                                                                            | <b>Description</b>       | <b>Part No.</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|
| Tinel installation tool (220V-240V)                                                                                                                                                        | AD-5000-TINEL-ASSY       | 411993-000      |
| Also available in the US and Asia Pacific:<br>Resistance heating tool: 915088-01.<br>Use with American Beauty Transformer - #105-A12 (110V) or #105-A12-220V (220V) and foot switch #10519 |                          |                 |
| Tinel installation tool (120 VAC)                                                                                                                                                          | RH-3960-1-TINEL-KIT-120V | 173643-000      |
| Tinel installation tool (220 VAC)                                                                                                                                                          | RH-3965-1-TINEL-KIT-220V | 859855-000      |

**Recommended Spares —  
AD-5000**

|                                                                  |                           |            |
|------------------------------------------------------------------|---------------------------|------------|
| Hand Tool Assembly                                               | AD-5000-TINEL-HAND-TOOL   | 795257-000 |
| Standard Electrodes (TR04 to TR24 RINGS)                         | AD-5000-TINEL-STD-ELECT   | 180245-000 |
| Conduit Electrodes (Conduit systems or TR rings on double braid) | AD-5000-TINEL-COND-ELECT  | 747235-000 |
| Square Profile Electrodes (TC02-TC03 RINGS)                      | AD-5000-TINEL-SQ-EXT-ELEC | 065583-000 |

**Recommended Spares —  
RH-396X**

|                     |                           |            |
|---------------------|---------------------------|------------|
| Hand Tool Assembly  | 915088-01-TINI-RING-HEATR | 170224-000 |
| Foot Switch         | IR-500-P-FOOT-SWITCH      | 993702-000 |
| 120 VAC Transformer | TRNSFMR-120V-105-A12-250W | 570939-000 |
| 220 VAC Transformer | TRNSFMR-220V-105-A12-250W | 574557-000 |

N.B. Electrodes are two per P.C.N.



**AD-5010-Tinel Bench-230V Tinel-Lock Installation Tool  
Tinel-Lock Screened Termination Products**



**Applications**

The AD-5010-TINEL-BENCH-230V is a manually operated resistance heating tool designed specifically to install Raychem Tinel-Lock ring screened terminations in large batches, in continuous operation. The tool accommodates Tinel Rings from size TR04 to TR24 inclusive. Various electrode (jaws) types can be used to install other Tinel-Lock ring sizes and types.

The operator uses the tool to install the Tinel-Lock ring in its correct position on screened terminations. The Tinel-Lock ring has two patches of thermochromic paint to ensure consistent installation.

The operator positions the Tinel-Lock ring on the termination, with at least one of the patches of thermochromic paint visible, and operates the push-button (or footswitch if fitted).

The Tinel-Lock ring is then located in spring-loaded jaws (it is not necessary to clamp the ring manually). The push button or footswitch (if fitted) is then operated to start the cycle, the cable is held in position for the duration of the installation. This is complete when the thermochromic paint turns black. This normally takes between 3 to 12 seconds, depending on ring size, braid type etc. An

ammeter on the front panel shows installation current used. A needle file is provided for periodic cleaning of the electrodes.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**AD-5010-Tinel Bench-230V Tinel-Lock Installation Tool  
Tinel-Lock Screened Termination Products (Continued)**

**Technical Specification**

|                                                                              |                                                                           |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Electrical Supply                                                            | 230 V 50 Hz                                                               |
| Machine Cycle Times for Tinel-Lock rings used on typical range of harnesses: | 3 to 12 Seconds depending on ring size and braid type on the termination. |
| Mains Fuses (2)                                                              | 240 V 2 Amp<br>(Type T anti - surge)                                      |
| Total System Noise                                                           | Silent Operation                                                          |
| Dimensions                                                                   | 245 x 305 x 290 mm [10 x 12 x 11 in]                                      |
| Weight                                                                       | 24 Kg                                                                     |

**Product Range**

|                                  | Tinel-Lock rings                                                 |
|----------------------------------|------------------------------------------------------------------|
| STANDARD ELECTRODES FITTED :     | Sizes TRO4 to TR24, conduit systems and TR rings on double braid |
| Square Profile Electrodes Fitted | TC02-TC03 RINGS                                                  |

**Accessories**

|                | Description              | Part No.   |
|----------------|--------------------------|------------|
| Footswitch Kit | AD-5010-BENCH-FOOTSW-KIT | 072845-000 |

**Recommended Spares**

|                                              | Description             | Part No.   |
|----------------------------------------------|-------------------------|------------|
| Standard Electrodes (TR04-TR24 RINGS)        | AD-5010-BENCH-STD-ELECT | 222899-000 |
| Square Profile Electrodes (TC02-TC03 RINGS)  | AD-5010-BENCH-SQ-ELECT  | 727799-000 |
| Mechanism Assembly (Including electrode set) | AD-5010-BENCH-MECH      | 924079-000 |

N.B Electrodes are two per P.C.N.

**Ordering Information**

|                         | Description        | Part No.   |
|-------------------------|--------------------|------------|
| Tinel installation tool | AD-5000-TINEL-ASSY | 411993-000 |

**CV-1981 and CV-1983 Heavy-Duty Hot-Air Heating Tools**

**Product Facts**

- Robust, double-insulated, heavy-duty unit
- Highest-wattage unit (1600–2260 watts)
- Integral stand that allows use as bench tool
- Safe, quiet operation
- Precisely variable temperature
- Variety of reflectors available
- Easy fixturing for dual opposing heating

**Applications**

Used for installing dual wall or single wall tubing up to three inches in diameter and for installing Solder Sleeve devices. Closed loop version (PID) also available.



**Technical Specification**

| <b>Electrical Supply</b>  |                  |
|---------------------------|------------------|
| CV-1981-MK2               | 120 V and 230 V  |
| CV-1983                   | 120 V and 230 V  |
| CV-1981 PID               | 120 V and 230 V  |
| <b>Power Consumption</b>  |                  |
| CV-1981-MK2               | 1600 W           |
| CV-1983                   | 2260 W/3060 W    |
| CV-1981 PID               | 1600 W           |
| <b>Total System Noise</b> |                  |
| CV-1981-MK2               | 65dB             |
| CV-1983                   | 65dB             |
| CV-1981 PID               | >70dB            |
| <b>Length</b>             |                  |
| CV-1981-MK2               | 340 [13]         |
| CV-1983                   | 320 [13]         |
| CV-1981 PID               | 350 [13]         |
| <b>Weight</b>             |                  |
| CV-1981-MK2               | 1.3 Kg [2.90 lb] |
| CV-1983                   | 1.5 Kg [3.30 lb] |
| CV-1981 PID               | 1.4 Kg [3.10 lb] |
| <b>Air Flow</b>           |                  |
| CV-1981-MK2               | Max 230 l/min    |
| CV-1983                   | Max 500 l/min    |
| CV-1981 PID               | 230 l/min        |

**Product Range**

All dual wall, single wall and molded part products.  
 Various devices products.  
 For other Raychem products , contact Tyco Electronics.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

Ordering Information

**CV-1981 and CV-1983 Heavy-Duty Hot-Air Heating Tools** (Continued)

| Equipment   | Description                | Part No.   | Voltage    | Hz       |
|-------------|----------------------------|------------|------------|----------|
| CV-1981-MK2 | CV-1981-120V1600W-CANMK2   | A42716-000 | 120V       | 50/60 Hz |
|             | CV-1981-120V1600W-UKMK2    | E95798-000 | 120V       | 50/60 Hz |
|             | CV-1981-230V1600WMMK2      | 813914-000 | 230V       | 50/60 Hz |
|             | CV-1981-230V1600W-SEVMK2   | F25836-000 | 230V       | 50/60 Hz |
|             | CV-1981-230V1600-UKMK2     | 340970-000 | 230V       | 50/60 Hz |
| CV-1983     | CV-1983-110V-2260W-UK      | 441753-000 | 120V       | 50/60 Hz |
|             | CV-1983-220V-2260W         | 773898-000 | 230V       | 50/60 Hz |
|             | CV-1983-220V-2260W-UK      | 985426-000 | 230V       | 50/60 Hz |
|             | CV-1983-220V-3060W         | 538361-000 | 230V       | 50/60 Hz |
| CV-1981-PID | CV-1983-220V-3060W-UK      | 231866-000 | 230V       | 50/60 Hz |
|             | CV-1981-120V-1600W-CANPIDF | 839218-000 | 120V       | 50/60 Hz |
|             | CV-1981-120V-1600W-UKPID   | 928826-000 | 120V       | 50/60 Hz |
|             | CV-1981-230V-1600WPID      | 958770-000 | 230V       | 50/60 Hz |
|             | CV-1981-230V-1600W-SEVPIDF | 434366-000 | 230V       | 50/60 Hz |
| CV-1981-PID | CV-1981-230V-1600W-UKPIDF  | 385828-000 | 230V       | 50/60 Hz |
|             | CV-1983 Barrel Adapter     | AD-1962    | 989172-000 | —        |

Accessories

|                                           | Application                                                                                | Part No.   |
|-------------------------------------------|--------------------------------------------------------------------------------------------|------------|
| PR-12 reflector                           | Tubing: 6.3–25.4 mm [0.25–1 in]                                                            | 991973-000 |
| PR-13 reflector                           | Tubing: Up to 6 mm [0.25 in]                                                               | 991963-000 |
| PR-13C reflector                          | Large SolderSleeve products                                                                | 991974-000 |
| PR-21 reflector                           | Tubing: Up to 25.4 mm [1 in]                                                               | 991984-000 |
| PR-24 reflector                           | Tubing/molded parts: 25.4–34.93 mm [1–1.38 in]                                             | 991964-000 |
| PR-24A reflector                          | Tubing/molded parts: 34.93–60.33 mm [1.38–2.38 in]                                         | 991989-000 |
| PR-25 reflector                           | SolderSleeve products: Up to 7 mm [0.28 in]                                                | 991965-000 |
| PR-25D reflector                          | SolderSleeve products: 6.3–12.7 mm [0.25–0.50 in]                                          | 989523-000 |
| PR-26 reflector                           | Small SolderSleeve products                                                                | 991967-000 |
| PR-33 reflector                           | SolderSleeve products: 19.05–25.4 mm [0.75–1 in]                                           | 997768-000 |
| AD-1962 adapter for larger-barrel CV-1983 | —                                                                                          | 989172-000 |
| PR-34 reflector                           | SolderSleeve products: 12.0–20.0 mm [0.47–0.79 in]                                         | 989111-000 |
| PR-51                                     | Special narrow reflector for molded part transitions (21.5 x 3.5 mm nozzle) [.85 x .14 in] | 113069-000 |

\*Note: A42716 supersedes and replaces 538005  
340970 supersedes and replaces 923002

**HL1802E and HL2005E Steinel General Purpose Hot-Air Heating Tool**

**Products Facts**

- Light weight
- Easy, quiet operation
- Precise variable temperature
- 1500 watts
- Reflectors and stand (optional)
- Wide variety of applications
- CE approved (230 V only)

**Applications**

Used for installing heat-shrinkable tubings and molded parts, SolderSleeve devices, and SolderTacts contacts.



**Specifications**

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Steinel (120 V) power requirement | 120 V, 60 Hz, 12.5 A            |
| Steinel (230 V) power requirement | 230 V, 50 Hz, 8.7 A             |
| Rated heater element power        | 110V - 1500 W/230V-2000W        |
| Weight                            | 850 g [1.9 lb]                  |
| Cord length                       | Approx. 3 m [approx. 8 ft]      |
| Typical temperature output*       | 49°C to 593°C [120°F to 1100°F] |

\*The Steinel heating tool is equipped with a variable temperature control. The correct temperature setting of the tool will vary, depending on application characteristics. The recommended procedure is to experiment with scrap materials and start with the lowest temperature range.

|               |          |        |              |
|---------------|----------|--------|--------------|
| Available in: | Americas | Europe | Asia Pacific |
|               | ■        | ■      | ■            |

Ordering Information

**HL1802E and HL2005E Steinel General Purpose Hot-Air Heating Tool (Continued)**

| Model /Description     | Part No.   |
|------------------------|------------|
| HL1802E-Kit-120 V**    | 289759-000 |
| HL2005E-230V-Euro      | 910424-000 |
| HL2005E-230V-UK        | 629014-000 |
| HL2005E-Kit-230-Euro** | 849224-000 |

| Accessories and Replacement Parts           | Description       | Part No.   |
|---------------------------------------------|-------------------|------------|
| SolderSleeve reflector                      | HL1802E-074616    | 832011-000 |
| HL1802E-ADAPT for use with PR reflectors*** | HL1802E-ADAPT-PR  | 444817-000 |
| Tubing reflector                            | HL1802E-070519    | 022611-000 |
| Bench stand                                 | HL1802E-BENCH-STD | 717083-000 |
| 9-mm-diameter reduction nozzle              | HL1802E-070618    | 930321-000 |

\*\*Complete with SolderSleeve reflector.  
 \*\*\*Selection of PR reflectors can be found in CV-1981/CV-1983 section.

Accessories



Clip-on bench stand (P/N 717083-000) for heating tool. Must be ordered separately.



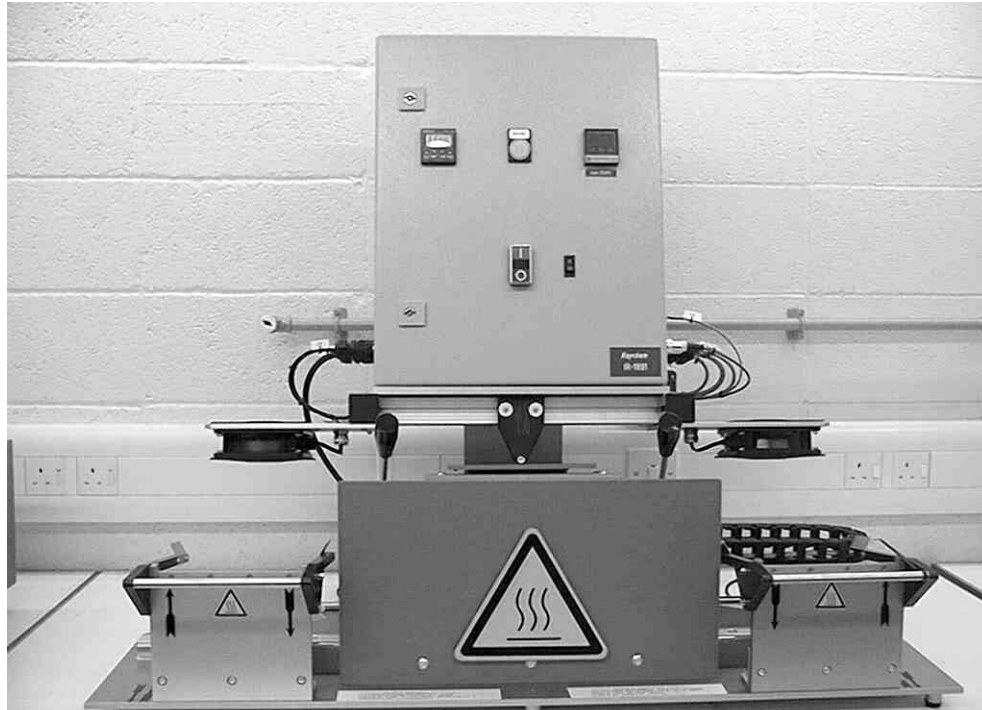
SolderSleeve reflector (P/N 832011-000) for SolderSleeve terminators, SolderTacts contacts, and small-diameter tubing. Comes standard with Steinel heating tool.

Optional tubing reflector (P/N 022611-000) for larger tubing and molded parts. Must be ordered separately.

**IR-1891 Shuttle Machine — Twin Workstation Heater for Multiple Installation of Short Length Tubing Products**

**Product Facts**

- Automatic cycle start once heater is manually positioned over product, which gives improved process control (recommended for adhesive lined heat-shrinkable tubing e.g. sealing applications)
- Automatic heating head retraction at end of cycle prevents damage to components
- Multiple product fixture assemblies give increased process rates
- Cooling fan above each fixture assembly maintains holding fixture at an acceptable temperature



**Applications**

The IR-1891 is suitable for the installation of a range of Raychem heat-shrinkable tubing products onto a variety of small components, e.g. ring terminals, FASTON terminals and small connectors etc. The machine is provided with two work stations and a moveable heating head.

Each workstation is provided with supports for tooling fixtures (which must be specified and ordered separately). These support the workpieces and locate the tubing products. The operator loads the workpieces into the fixtures at one of the workstations, ensures that the tubing product is correctly positioned and then slides the heat head into position before initiating the heating cycle. The operator

then continues with loading/unloading the other work station whilst the heating cycle is taking place.

The IR-1891-220V-Shuttle-Retr is provided with closed loop temperature control and in addition the heat head is 'locked' into position by use of an electromagnet during the heating cycle.

Once the other workstation has been loaded and the first installation is complete, the heat head is moved into position over the product and the next heating cycle initiated. Heating times vary typically from 3 to 30 seconds depending on the size and type of tubing product. Process rates up to 1200 pieces/hour can be achieved depending on the heating time and the time

taken by the operator to load/unload the workpieces. The installation temperature/power can be varied according to product type/size and required cycle times.

The heating elements, which are continuously energized, are of the infra-red medium wave length type and consist of a coiled resistance wire contained in quartz glass tubes. The closed loop temperature control uses similar elements but having integral thermocouple sensors.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               |          |        |              |

**IR-1891 Shuttle Machine — Twin Workstation Heater for Multiple Installation of Short Length Tubing Products (Continued)**

**Technical Specification**

|                                                   |                                                           |
|---------------------------------------------------|-----------------------------------------------------------|
| Electrical Supply                                 | 230 V Single Phase                                        |
| Power Consumption                                 | 1600 W                                                    |
| Operating Temperature                             | 650°C max                                                 |
| Process Rate                                      | 1200 / hour maximum depending on application and operator |
| Heating Times                                     | 3 to 20 seconds depending on application                  |
| System Noise                                      | < 70 dB                                                   |
| Dimensions – 508636-000                           | L1100 x H650 x D500 mm [L43 x H25 x D20 in]               |
| Dimensions – 613148-000 / 167309-000 / 289588-000 | L1100 x H900 x D500 mm [L43 x H35 x D20 in]               |
| Base Plate Dimensions 289588-000 / 167309-000     | L1040 x D450 mm [L41 x D18 in]                            |
| Base Plate Dimensions 613148-000                  | L1040 x D397 mm [L41 x D16 in]                            |

**Product Range**

Wide range of Raychem tubing products in particular LSTT, RNF-3000, RNF-100, HTAT, ATUM.  
Maximum diameter 20 mm [0.8 in] and maximum length 60 mm [2.0 in]

**Ordering Information**

| Description                 | Part No.   |
|-----------------------------|------------|
| *IR-1891-220V-Shuttle-Retrn | 289588-000 |
| *IR-1891-220V-Retrn-Syl     | 613148-000 |

**Note:** The descriptions given here DO NOT include the supply of the necessary tooling fixtures. These are designed for each individual application.

**Accessories**

| Description                               | Part No.                                                                                 |
|-------------------------------------------|------------------------------------------------------------------------------------------|
| Auto-Return-Kit IR-1891-Heater-Return-Kit | 184947-000<br>For use on non-preferred IR-1891-220V-shuttle-std serial nos 400 and above |

**Note:** A range of tooling fixtures designed for previous applications are available. Please contact Tyco Electronics for details.



**Infrared Heating Tool IR-550 Mark II**

**Product Facts**

- Lightweight, portable unit with pedestal base for benchtop operation
- Foot switch, so both hands can be free to hold parts
- Commercially available tungsten-halogen lamp
- Fan-cooled housing
- Instant on/off heat
- Viewing window that allows parts to be inspected during installation
- Quiet, focused IR operation

**Applications**

Used for installing small and large Solder Sleeve devices and SolderTacts contacts.



**Specifications**

|                  |                                          |
|------------------|------------------------------------------|
| Input power      | 105–120 V, 50–60 Hz, 4.5 A               |
| Normal lamp life | More than 1000 hours of intermittent use |
| Weight           | Approximately 2.5 Kg [5.5 lb]            |
| Duty cycle       | 80%, 90-second max. heating times        |

**Ordering Information**

| Model                                                                             | Description              | Part No.   |
|-----------------------------------------------------------------------------------|--------------------------|------------|
| IR-550 heating tool* (120 V) with RG-2 reflector, viewing window, and foot switch | IR-550-50-MARKII-HT-TOOL | 994350-000 |

**Note:** For 230V CE-approved version, contact Tyco Electronics

**Accessories and Replacement Parts**

|                                                                                                 |                   |            |
|-------------------------------------------------------------------------------------------------|-------------------|------------|
| IR-550 foot switch (included with tool assembly 994350)                                         | IR-550-216        | 994375-000 |
| RG-6 reflector for large-diameter Solder Sleeve terminations; aperture is 25.4 mm [1.0 in] wide | IR-550-19         | 994590-000 |
| RG-11 reflector; aperture is 12.7 mm [.5 in] wide                                               | IR-550-41         | 993695-000 |
| RG-9 reflector; aperture is 9.525 mm [.375 in] wide                                             | IR-550-39         | 993693-000 |
| RG-2 reflector, included with 994350; aperture is 19.05 mm [.75 in] wide                        | IR-550-24         | 993770-000 |
| Lamp (120 V)                                                                                    | IR-1000-P-N-13    | 993020-000 |
| Optical filter                                                                                  | IR-550-237        | 118902-000 |
| Viewing window (frame not included)                                                             | IR-550-238        | 007510-000 |
| IR-550 upgrade kit: filter, viewing window, inner reflector, outer reflector                    | IR-550-240-Refurb | 529600-000 |

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        |        | ■            |

### Product Facts

- Small, lightweight, fan-cooled unit
- Small profile for installation where space is restricted
- Handheld operation
- Focused heat
- Quiet, efficient IR operation
- CE approved

### Applications

Used for installing SolderSleeve devices and SolderTacts contacts.

### Infrared Heating Tool IR-1759 MiniRay



\*Control box not shown

### Specifications and Dimensions

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Lamp                           | Tungsten-halogen                           |
| Fan                            | Nominal power 250 W, 24 Vac, 50–60 Hz      |
| Weight                         | .73 kg [1.6 lb]                            |
| Cable length                   | 2 m [6.5 ft]                               |
| <b>Electronic Control Unit</b> |                                            |
| Main supply                    | 110/230 Vac, 50/60 Hz, 11 A/5.5A universal |
| Weight                         | 3.4 kg [7.6 lb]                            |
| Dimensions                     | 16.3 x 12.2 x 12.2 cm [6.4 x 4.8 x 4.8 in] |

### Ordering Information

|                                                                                              | Description              | Part No.   |
|----------------------------------------------------------------------------------------------|--------------------------|------------|
| Complete kit consisting of:<br>Handtool/Reflector/Control Box (Manual control, Dual voltage) | IR1759-MK3-AT3130-EDCont | 898738-000 |

### Accessories and Replacement Parts

|                                                                                                                                |                          |                      |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|
| Handtool, standard aperture                                                                                                    | IR-1759-MK3/A            | 986899-000           |
| Handtool, large aperture                                                                                                       | IR-3104-MK3/A            | 035343-000           |
| Control box with time control-230 V                                                                                            | ED-7-001-MK2-230V-50HZ   | 869233-000           |
| Control box with time control-110 V                                                                                            | ED-7-002-MK2-110V-60HZ   | 903553-000           |
| Control box with manual control-110/230V                                                                                       | ED-7-CONT-230/110V       | 684886-000           |
| Battery powered control box                                                                                                    | ED-7-Batterybox-230/110V | 448969-000           |
| Conversion kit (AE-897) for adapting standard-aperture MiniRay heating tool to wide-aperture MiniRay tool (includes reflector) | AT-313/AE-897            | 934630-000           |
| Inner reflector (standard aperture)                                                                                            | AE-424                   | 547918-000           |
| Inner reflector (wide aperture)                                                                                                | AE-153                   | 988285-000           |
| Lamp (250 W, 24 V)                                                                                                             | NAE-143-3                | 988208-000           |
| Filter (standard aperture) US                                                                                                  | AES-IR1759-100           | 431468-000 (US only) |
| Filter (standard aperture) UK                                                                                                  | NAE-144-2                | 988128-000           |
| Filter (wide aperture)                                                                                                         | NAE-144-3                | 988293-000           |

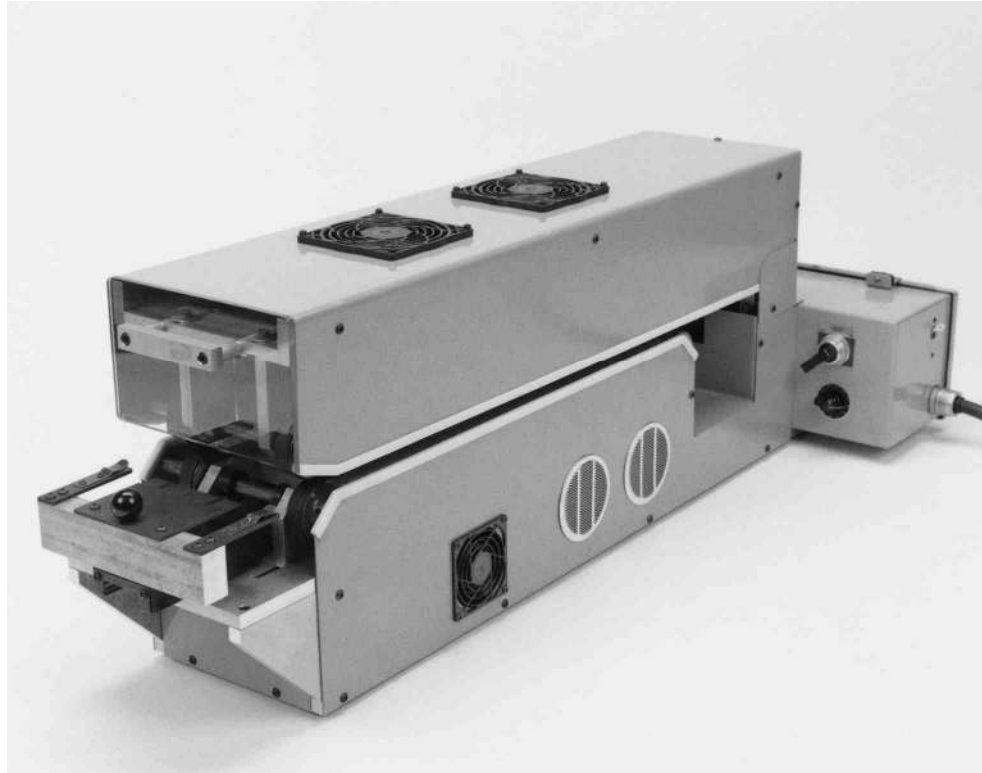
\*IR tools are not recommended for use with black wire or cable insulations.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**Model 16B Belt Heater**

**Product Facts**

- **Controlled heating for installation of Raychem heat-shrinkable tubing at rates required for mass production**
- **Controlled repeatable heating: time and temperature settings can be fixed to maintain repeatable installation parameters**
- **Part positioning that is clearly defined and easy to maintain**
- **Operation that requires only minimal skill**
- **Efficient and economical operation, which greatly reduces labor costs. In most cases the throughput rate is limited only by the rate at which an operator can load parts into the heater**



**Applications**

Designed for processing a broad range of heat-shrinkable tubing products up to 19 [75] in diameter and 101 [4.0] long. Suitable for either single-wall or adhesive-lined tubing. Heating-element temperature is adjustable up to 600°C [1112°F] and the belt speed is adjustable to 2.28 [7.5] per minute. Operator simply positions the heat-shrink tubing over the assembly and feeds it into the process chamber. Heating and cooling take place automatically with the cables or wires securely fixed.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        |        | ■            |

**Model 16B Belt Heater** (Continued)**Specifications and Dimensions**

| <b>Electrical</b>  | <b>Part No. 827429-000</b>      | <b>Part No. 047143-000</b>              | <b>Part No. 584313-000</b>              |
|--------------------|---------------------------------|-----------------------------------------|-----------------------------------------|
| Power requirements | 120 Vac, 1 Ø,<br>50/60 Hz, 20 A | 220 Vac, 1 Ø,<br>50/60 Hz, 15 A, 3-wire | 120 Vac, 1 Ø,<br>50/60 Hz, 15 A, 4-wire |
| Heating elements   | 875 W (upper and lower)         | 875 W (upper and lower)                 | 875 W (upper and lower)                 |

**Mechanical**

|                              |                                                          |  |  |
|------------------------------|----------------------------------------------------------|--|--|
| Conveyor belt system         | Two sets of pinch belts right and left, four belts total |  |  |
| Machine dimensions           | 48 cm [19 in] W x 110 cm [43 in] L x 33 cm [13 in] H     |  |  |
| Shipping dimensions          | 61 cm [24 in] W x 111 cm [44 in] L x 56 cm [42 in] H     |  |  |
| Machine weight without crate | 55 Kg [120 lb]                                           |  |  |
| Shipping weight with crate   | 91 Kg [200 lb]                                           |  |  |

**Tubing Sizes**

|                                 |                       |
|---------------------------------|-----------------------|
| Inside diameter before recovery | Up to 19 mm [0.75 in] |
| Length                          | Up to 101mm [4.0 in]  |

**Optional Attachment**

|                   |                     |
|-------------------|---------------------|
| Ring terminal kit | Part No. 060053-000 |
|-------------------|---------------------|

**Product Facts**

- Closed-loop speed and temperature control
- CE approved for worldwide use
- Adaptable for different applications
- Continuous controlled process

**Available in:**

- |              |   |
|--------------|---|
| Americas     | ■ |
| Europe       | ■ |
| Asia Pacific | ■ |

**Model 19 Conveyor Heater for Processing Raychem Heat-Shrinkable Tubing and Termination Devices**



**Applications**

The Model 19 conveyor heater is the latest generation of reliable and versatile process heaters for a wide variety of heat-shrinkable products.

Two sets of timing belts grip the individual assemblies and carry them through a closed-loop infrared heating zone, then through a cooling zone, and deposit the completed assemblies in a collection bin.

The processor was designed to meet the requirements of the European Safety Directives and is CE approved, allowing for worldwide use.

The processor is designed to operate on the following line voltages: 210 to 240 Vac, 20 A, 1 Ø, 50/60 Hz.

Options for this processor include:

- Powered or unpowered extension tables to support long or heavy harnesses.

- Kit for processing ring terminals and end terminations.
- Floor stand with wheels.
- Wider heating elements for tubing up to 178 [7.0] long.
- Narrow heating elements for SolderSleeve devices up to 10 [0.4] diameter and 45 [1.8] long or short length tubing less than 50 mm [2.0].

**Product Features**  
**Controlled Heating Zone**

The Model 19 has two etched- foil heating elements mounted under a quartz face. Consistent heating chamber temperatures are obtained with a closed-loop temperature controller. There is a lockout on the controller to prevent unauthorized changes.

**Speed Control**

Consistent speed is obtained with a closed-loop speed controller. The speed is adjusted using a 3-digit thumbwheel on the front control panel. There is

a lockout on the thumbwheel to prevent unauthorized changes.

**Minimal Skill Requirements**

There are clearly marked guides for aligning the assembly as well as the tubing or device being processed. The operator only has to center the assembly; the grippers carry it through the heating and cooling zone and deposit it into the unloading bin.

**Economical Production**

The throughput rate is determined by the rate at which an operator can load the processor.

**Versatility**

The tool description CLTEQ-M19-Belt-htr part number 714529-000 will handle tubing up to 25 [1.0] diameter and 102 [4.0] long. Tubing up to 178 [7.0] long can be handled with the use of tool description CLTEQ-M19-Belt-Htr-6in part number 075131-000. The tool description CLTEQ-M19-Beltheater-SS

part number D43037-000 will handle SolderSleeve devices up to 10 [0.4] diameter and 45 [1.8] long, or short length tubing (less than 50 [2.0]), where applications require a narrow heat width.

**Self-Diagnostic Circuitry**

There are several "self-diagnostic" circuits that alert the operator if any major component fails or if an unsafe processing condition occurs. A light will turn on and a lockout gate will lift in the entry zone, preventing the operator from loading assemblies until the situation has been corrected.

**Other Features Include:**

- Emergency stop.
- Automatic cool-down circuit to extend the life of components.
- Lockout on temperature and speed controllers to prevent unauthorized changes.

**Model 19 Conveyor Heater for Processing Raychem Heat-Shrinkable Tubing and Termination Devices** (Continued)**Specifications and Dimensions****Electrical**

|                    |                                            |
|--------------------|--------------------------------------------|
| Power requirements | 210–240 Vac, 20 A, 1 Ø, 50/60 Hz           |
| Heating elements   | Std = 3160 W/Wide = 3320 W/Narrow = 1760 W |

**Mechanical**

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| Conveyor belt system       | Double-sided timing belts, pitch - 9.5 [0.375]     |
| Belt speed                 | Up to 152 cm/min [5.0/min]                         |
| Processor dimensions       | 53 cm [21 in] W, 135 cm [53 in] L, 45 cm [18 in] H |
| Shipping dimensions        | 66 cm [26 in] W, 147 cm [58 in] L, 58 cm [23 in] H |
| Shipping weight with crate | 86 Kg [190 lb]                                     |

**Tubing sizes**

|                         |                                            |
|-------------------------|--------------------------------------------|
| Tubing diameter (max)   | 25 mm [1.0 in]                             |
| Tubing length (max)     | 102 mm [4.0 in]                            |
|                         | 178 mm [7.0 in] wide heating element tool  |
|                         | 50 mm [2.0 in] narrow heating element tool |
| Work-piece length (min) | 240 mm [9.5 in]                            |

**Version****Part No.**

|                   |            |
|-------------------|------------|
| Model 19 Standard | 714529-000 |
| Model 19 Wide     | 075131-000 |
| Model 19 Narrow   | D43037-000 |

**Model 81CE Discrete Heater**

**Product Facts**

- Closed-loop temperature control for a precise and repeatable thermal process
- Oven dwell time precisely set by a 3-digit thumb wheel digital timer
- Heat output can be controlled to accommodate a wide variety of applications
- Operation requires only minimal skill
- Contains numerous safety features
- Meets the requirements of CE, OSHA and the NEC



**Applications**

The Model 81CE is a discrete heater that can process large, complex assemblies or other suitable substrates using a wide variety of heat-shrinkable tubing products up to 25 mm [1.0] in diameter and 127 mm [5.0] in length. It is suitable for use with both single wall and adhesive-lined tubing. Two jaws grip the assembly or substrate, carry it into an infrared heating chamber for a user-selectable predetermined period of time, then return the completed assembly back to the start position for removal.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

Specifications and Dimensions

**Model 81CE Discrete Heater** (Continued)

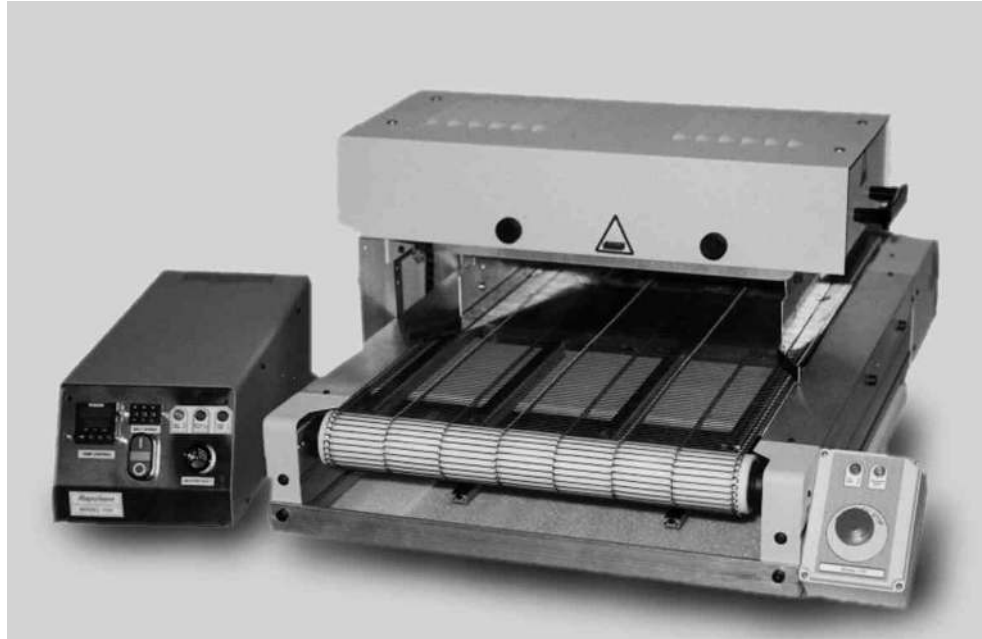
| Electrical                    | Part No. 071965-000                                                                    | Part No. 704393-000                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Power requirements            | 120 VAC, 1Ø, 50/60 Hz, 15 A                                                            | 220 VAC, 1Ø, 50/60 Hz, 15 A                                                            |
| Heating elements              | Two 400 watt infrared stamped foil with infrared heating elements, one top and bottom. | Two 400 watt infrared stamped foil with infrared heating elements, one top and bottom. |
| Timing system                 | Eagle digital timer, 1 to 999 seconds                                                  | Eagle digital timer, 1 to 999 seconds                                                  |
| <b>Pneumatic</b>              |                                                                                        |                                                                                        |
| Requirements for jaw traverse | 30-40 psi clean shop air                                                               | 30-40 psi clean shop air                                                               |
| <b>Dimensions</b>             |                                                                                        |                                                                                        |
| Control box dimensions:       |                                                                                        |                                                                                        |
| Length                        | 432 mm [17 in]                                                                         | 432 mm [17 in]                                                                         |
| Width                         | 216 mm [9 in]                                                                          | 216 mm [9 in]                                                                          |
| Height                        | 165 mm [7 in]                                                                          | 165 mm [7 in]                                                                          |
| Control box weight            | 7.7 Kg [17 lb.]                                                                        | 7.7 kg [17 lb.]                                                                        |
| Heating chamber dimensions:   |                                                                                        |                                                                                        |
| Length                        | 380 mm [15 in]                                                                         | 380 mm [15 in]                                                                         |
| Width                         | 240 mm [10 in]                                                                         | 240 mm [10 in]                                                                         |
| Height                        | 343 mm [14 in]                                                                         | 343 mm [14 in]                                                                         |
| Heating chamber weight        | 18 Kg [40 lb.]                                                                         | 18 kg [40 lb.]                                                                         |
| <b>Shipping Dimensions</b>    |                                                                                        |                                                                                        |
| Length                        | 610 mm [24 in]                                                                         | 610 mm [24 in]                                                                         |
| Width                         | 610 mm [24 in]                                                                         | 610 mm [24 in]                                                                         |
| Height                        | 530 mm [21 in]                                                                         | 530 mm [21 in]                                                                         |
| Shipping weight               | 41 Kg [90 lb.]                                                                         | 41 kg [90 lb.]                                                                         |
| <b>Tubing Sizes</b>           |                                                                                        |                                                                                        |
| Inside diameter before heat   | Up to 25.4 mm [1 in]                                                                   | Up to 25.4 mm [1 in]                                                                   |
| Length                        | Up to 127 mm [5 in]                                                                    | Up to 127 mm [5 in]                                                                    |



**Model 105 Tunnel Oven**

**Product Facts**

- Closed-loop temperature control for a precise and repeatable thermal process
- Conveyor speed precisely set by a 3-digit potentiometer
- Operation requires only minimal skill
- Contains numerous safety features
- Custom length conveyors for longer entry and/or exit sections available
- Optional accessories to customize the tunnel oven



**Applications**

Table conveyor heater that provides a controlled process system suitable for installing a wide variety of heat-shrinkable tubing products up to 76 mm [3.0] diameter and unlimited in length. Ideally suited for efficient processing of fiber and fabric HFT and both single wall and dual wall tubing. Designed as an integrated modular unit. Assemblies are placed on the entry section of a mesh belt, transported through a heating chamber, across a bank of cooling fans then discharged from the rear of the conveyor.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**Specifications and Dimensions**

**Model 105 Tunnel Oven (Continued)**

| <b>Electrical</b>                  |                                                                                | <b>Part number 955018-000</b> |
|------------------------------------|--------------------------------------------------------------------------------|-------------------------------|
| Power requirements                 | 208/240 VAC, 1Ø, 50/60 Hz, 15 A                                                |                               |
| Heating elements                   | Two 1500 watt infrared stamped foil with black quartz face, one top and bottom |                               |
| Operating temperature              | Ambient to 650°C [1202°F]                                                      |                               |
| Effective heating width            | 356 mm [14 in]                                                                 |                               |
| <b>Dimensions</b>                  |                                                                                |                               |
| <b>Control box dimensions</b>      |                                                                                |                               |
| Length                             | 515 mm [20 in]                                                                 |                               |
| Width                              | 210 mm [8 in]                                                                  |                               |
| Height                             | 178 mm [7 in]                                                                  |                               |
| Control box weight                 | 7.7 Kg [17 lb]                                                                 |                               |
| <b>Heating conveyor dimensions</b> |                                                                                |                               |
| Length                             | 990 mm [39 in]                                                                 |                               |
| Width                              | 685 mm [27 in]                                                                 |                               |
| Height                             | 417 mm [17 in]                                                                 |                               |
| Heating conveyor weight            | 68 Kg [150 lb]                                                                 |                               |
| <b>Shipping Dimensions</b>         |                                                                                |                               |
| Length                             | 1346 mm [53 in]                                                                |                               |
| Width                              | 1168 mm [46 in]                                                                |                               |
| Height                             | 635 mm [25 in]                                                                 |                               |
| Shipping weight                    | 146 Kg [320 lb]                                                                |                               |
| <b>Tubing sizes</b>                |                                                                                |                               |
| Inside diameter before heat        | Up to 76.2 mm [3 in]                                                           |                               |
| <b>Length</b>                      |                                                                                |                               |
| Perpendicular to belt travel       | 356 mm [14 in]                                                                 |                               |
| Parallel to belt travel            | Unlimited                                                                      |                               |

**Installation of Splice Sealing Products Adjacent to Ultrasonic Welder**

**Product Facts**

- Optimized heating element life
- Installation times, temperatures and product size information storage (individual selection)
- Sequenced installations
- Operator key lock/password protection levels
- Automatic heater retraction on mains failure
- Automatic calibration
- RS232 interface allows time, temperature and product sizes for the next installation to be transferred from a remote machine (e.g. an ultrasonic welding tool)
- Machine hours and installation cycle counters
- Software upgradeable to support special applications

**RBK-ILS-Processor MkII**



**Applications**

The RBK-ILS-Processor MkII is a semi-automatic unit designed specifically to install splice sealing products onto ultrasonically welded or crimped splice joints used in automotive harnesses.

The tool can operate in several modes:

- Stand-alone — operator sets time and temperature.
- Sequenced — preset times and temperatures can be sequenced automatically (and can also be randomly selected from sequence stored.)

- Automatic — communication with upstream ultrasonic welder can allow time and temperature to be automatically set without operator intervention.

The wire assembly is automatically ejected, with the splice sealing product installed and the joint area sealed, insulated and strain relieved. In-line or stub-type splices can be installed.

The operator is able to efficiently load both machines and so minimize 'dead time'. Installing Raychem splice sealing products immediately after welding gives reduced installation time and earliest possible mechanical protection for the welded joint. The operator positions the splice sealing product centrally over the splice joint and then locates the assembly into the gripper mechanism.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               |          |        |              |

**Installation of Splice Sealing Products Adjacent to Ultrasonic Welder**

(Continued)

**RBK-ILS-Processor MkII (Continued)**

**Technical Specification**

|                                                                                             |                                                                     |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Electrical Supply                                                                           | 220V-240V-50Hz                                                      |
| Power Consumption                                                                           | 1.7 Amps (Max)                                                      |
| Operating Temperature                                                                       | 550°C [1022°F] (Max)<br>(500°C [932°F] recommended)                 |
| Machine Cycle Times for splice sealing products used on typical range of automotive splices | 6 to 20 seconds depending on wire size and the number of wires used |
| Total System Noise                                                                          | <80dB                                                               |
| Dimensions                                                                                  | 390 x 365 x 225 mm [15 x 14 x 9 in.]                                |
| Weight                                                                                      | 18 Kg [40 lb]                                                       |

**Product Range**

|                                                       |                          |
|-------------------------------------------------------|--------------------------|
| RBK-ILS-125 Products                                  | Sizes 1 to 3A            |
| RBK-ILS-85 Products                                   | Sizes 6/1 to 12/3        |
| For Other Raychem Products (eg. RBK-VWS, RBK-ESS....) | Contact Tyco Electronics |

**Ordering Information**

|             | Description                                                | Part No.   |
|-------------|------------------------------------------------------------|------------|
| Equipment   | RBK-Proc-Mk2-Processor                                     | 740331-000 |
| Accessories | Stub splice fixture - RBK-ILS-Proc-Stub-Sp-Fix             | 981721-000 |
|             | Air cooled stub splice fixture - RBK-ILS-Proc-Air-Cool-Kit | 843800-000 |
|             | 8 mm ring terminal fixture - RBK-ILS-Proc-Termfix-08mm     | 049857-000 |

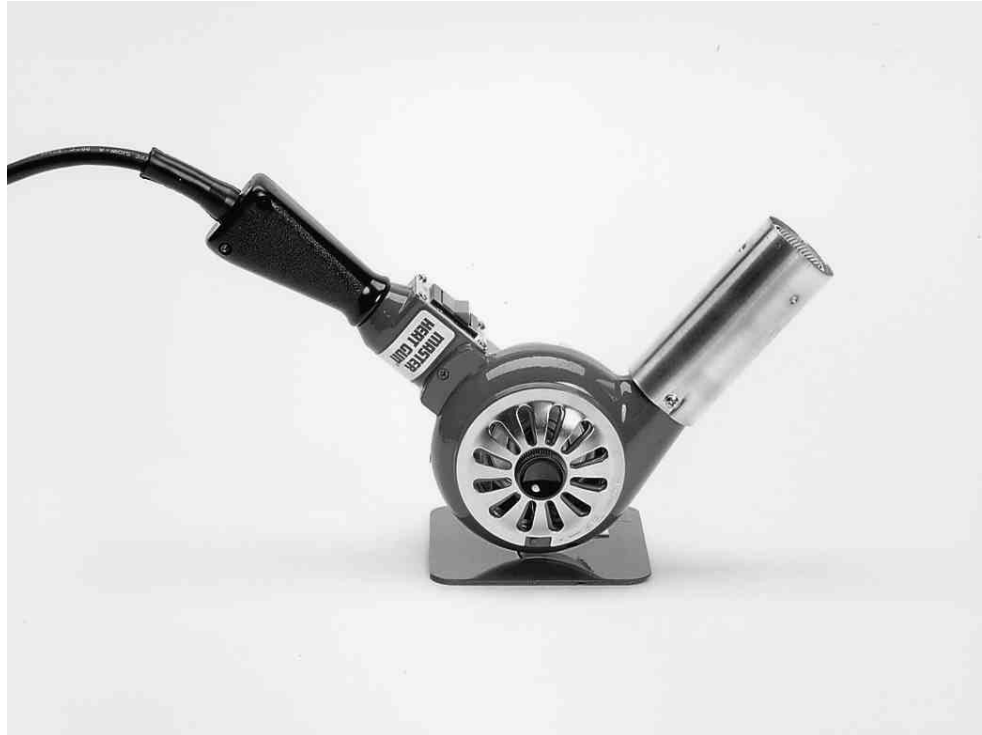
ThermoGun HG Hot-Air Heating Tool

**Product Facts**

- Stand-mounted or handheld, rugged unit for heavy-duty use
- Built-in stand and turbo-fan-driven blower
- Adjustable side vents
- Adjustable temperature
- 1680 to 2160 watts
- Large reflector size
- High heat output for fast installation

**Applications**

Used for installing molded parts onto adapters or harnesses and installing a broad range of heat-shrinkable products, including boots and tubing up to three inches in diameter..



**Specifications**

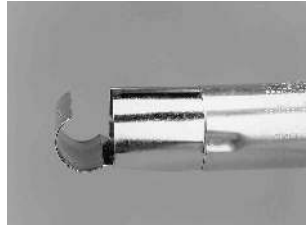
| Model     | Power Requirements   | Input Watts | Temperature Range          | CFM* | RPM** |
|-----------|----------------------|-------------|----------------------------|------|-------|
| HG-501A   | 120 V, 60 Hz, 14 A   | 1680        | 260°C–399°C [500°F–750°F]  | 23   | 1700  |
| HG-502A   | 230 V, 50/60 Hz, 7 A | 1680        | 260°C–399°C [500°F–750°F]  | 23   | 1700  |
| HG-751A-C | 120 V, 60 Hz, 18 A   | 2160        | 399°C–538°C [750°F–1000°F] | 23   | 1700  |
| HG-752A   | 230 V, 50/60 Hz, 9 A | 1740        | 399°C–538°C [750°F–1000°F] | 23   | 1700  |

\*CFM = Cubic feet per minute.  
 \*\*RPM = Revolutions per minute.

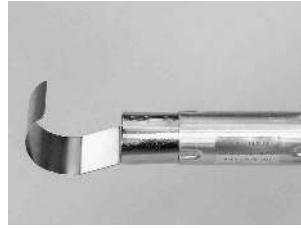
| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        |        | ■            |

Accessories

ThermoGun HG Hot-Air Heating Tool (Continued)



**A-160-HG reflector (P/N 991017)** for short lengths of tubing up to 19.05 [75] in diameter. Must be ordered separately.



**A-170-HG reflector (P/N 991018)** for short lengths of tubing 19.05–50.8 [.75–2] in diameter. Must be ordered separately.



**TG-23 reflector (P/N 991026)** for boots up to 44.45 [1.75] in diameter. Must be ordered separately.

Ordering Information

| Model*    | Housing Color | Part No.   |
|-----------|---------------|------------|
| HG-501A   | Red           | 462047-000 |
| HG-502A   | Red           | 389363-000 |
| HG-751A-C | Red           | 926935-000 |
| HG-752A   | Red           | 026239-000 |

| Accessories                     | Tubing Application                     | Part No.   |
|---------------------------------|----------------------------------------|------------|
| A-160-HG standard reflector     | Diameters up to 19.05 mm [0.75 in]     | 991017-000 |
| A-170-HG large tubing reflector | Diameters of 19.05–50.8 mm [0.75–2 in] | 991018-000 |
| TG-23 small boot reflector      | Diameters up to 44.5 mm [1.75 in]      | 991026-000 |
| TG-24 large boot reflector      | —                                      | 991027-000 |

\*Complete with bench stand.