

**NOTE**



All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of  $\pm 0.13$  [ $\pm 0.005$ ] and angles have a tolerance of  $\pm 2^\circ$ . Figures and illustrations are for identification only and are not drawn to scale.

## 1. INTRODUCTION

This specification covers the requirements for application of STRATO-THERM terminals, splices, and spare wire caps for high temperature applications. There are two types of these terminals, splices, and spare wire caps. One type is insulated, which consist of PIDG\* (pre-insulated diamond grip) ring tongue terminals, splices, and spare wire caps insulated with polytetrafluoroethylene (PTFE), post-insulated, or pre-insulated ; and the other type is uninsulated, which consist of DIAMOND GRIP\* (insulation support) ring tongue terminals, spade tongue terminals, and splices with SOLISTRAND\* (non-insulation support). The uninsulated are available in heat resistant and high temperature. The terminals, splices, and spare wire caps accept solid or stranded wire for single applications.

The pre-insulated terminals, splices, and spare wire caps are designed for reliable performance at maximum temperatures of 288°C [550°F] and at 260°C [500°F] for silver-plated post-insulated terminals and splices. The uninsulated heat resistant terminals and splices operate at maximum temperature of 343°C [650°F], and at 649°C [1200°F] for high temperature terminals and splices.

The terminals and splices are color-coded to provide a visual reference applicable to the wire size range suitable for the terminal or splice. In addition, terminals are marked on the tongue with the wire size range. The serrations or dimples inside the wire barrel provide maximum contact and tensile strength after crimping. The terminals are suitable for mounting and accept stud sizes M2.5 [4] through M8 [.375] (inside diameter range of 2.95 through 9.80 [.116 through .386]). The terminals, splices, and spare wire caps are available in loose-piece for terminating with manual and pneumatically-powered hand-held tools, and in tape-mounted form for terminating with semi-automatic hand-held tools and electrically-powered machines.

When corresponding with personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

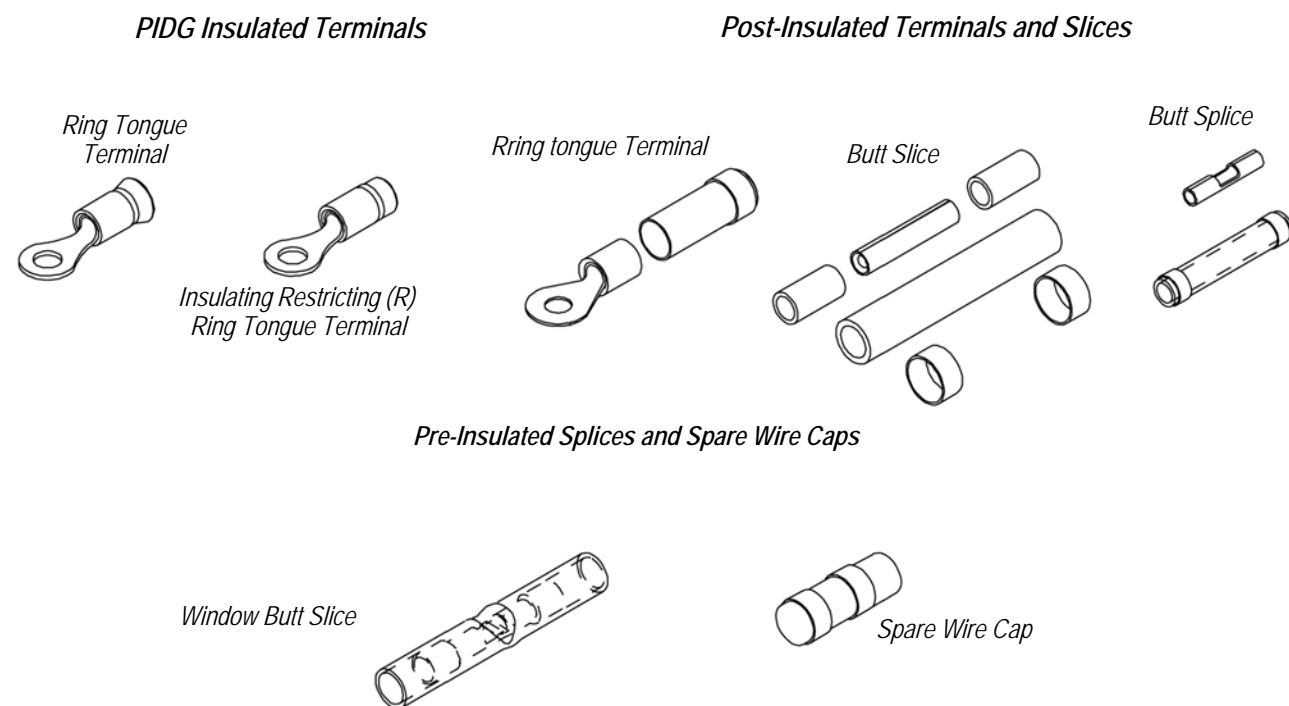


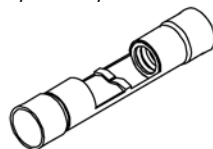
Figure 1 (Cont'd)

*DIAMOND GRIP Heat Resistant  
Uninsulated Terminal and Slices*

*Ring Tongue Terminal*



*Strap Butt Splice*



*DIAMOND GRIP High Temperatures  
Uninsulated Terminal and Slices*

*Ring Tongue Terminal*



*Strap Butt Splice*



*SOLISTRAND Heat Resistant  
Uninsulated Terminals and Splices*

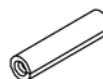
*Ring Tongue Terminal*



*Parallel Splice*



*Butt Splice*



*Strap Butt Splice*



*SOLISTRAND High Temperature  
Uninsulated Terminals and Splices*

*Ring Tongue Terminal*



*Spade Tongue Terminal*



*Parallel Splice*



*Butt Splice*



*Strap Butt Splice*



Figure 1 (End)

## 2. REFERENCE MATERIAL

### 2.1. Revision Summary

Since the previous release of this document, the new company logo has been applied.

### 2.2. Customer Assistance

Reference Product Base Part Number 50836 and Product Code 3027 are representative of STRATO-THERM terminals, splices, and spare wire caps. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local Representative or, after purchase, by calling PRODUCT INFORMATION at the number at the bottom of page 1.

### 2.3. Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, call PRODUCT INFORMATION at the number at the bottom of page 1.

### 2.4. Instructional Material

Instruction Sheets (408-series) provide assembly instructions and Customer Manuals (409-series) provide machine setup and operation procedures. Documents available which pertain to this product are:

#### A. Product

408-7424 Checking Terminal Crimp Height or Gaging Die Closure

408-9816 Handling of Reeled Products

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**B. Tooling**

408-1254	Crimping Tool 69355
408-1259	STRATO-THERM Hand Crimping Tools 59294 and 59461
408-1310	Pneumatic Tool 69015
408-1311	Pneumatic Crimping Heads 48172, 48173, 48174, 48183, and 49956
408-1532	Hand Crimping Tools 45730 and 46468
408-1535	STRATO-THERM Hand Crimping Tools 46673, 46673-1, and 46988
408-1542	Hand Crimping Tool 46447
408-1610	"T"-Head* Crimping Tools 69692-1 and 69693-1
408-1632	Crimping Dies 69731, 69732, 69733, 69734, and 69735
408-1697	SOLISTRAND Crimping Dies 45433, 45436, 46133, 46134, 46135, 46136, 46137, 46138, 46145, 46146, 69216, 69217, and 69218
408-1745	DYNA-CRIMP* Head 69069
408-1826	STRATO-THERM Post-Insulated Terminal and Splice Die Assembly 69211-1
408-1836	Hand Crimping Tool 69272-1 for Pre-Insulated Spare Wire Caps
408-1927	ROTA-CRIMP* Hand Crimping Tool 600850
408-1939	Crimping Dies 69327, 69328, and 69329 for Pre-Insulated Splices
408-2095	Hand Crimping Tool 69710-1
408-2395	Terminal and Splice Crimping Jaws 68135
408-2423	Crimping Die Assembly 69937
408-2452	Hydraulic Crimping Head 69065
408-2454	Hydraulic Crimping Head 69067
408-2457	DYNA-CRIMP Crimping Head 69097
408-2458	DYNA-CRIMP Crimping Head 69099
408-2498	Crimping Head Cross-Reference for Pneumatic Tools
408-2648	AMP-TAPEMATIC* Crimping Dies 69930, 69931, 69932, 69954, 69955, and 69956
408-4072	626 Pneumatic Crimping Heads 1338757-1 and 1338758-1
408-4105	Straight Action Crimper 217200-1
408-4110	626 Pneumatic Crimping Head 217206-1
408-4190	C-Head Pneumatic Adapter 318161-1
408-4303	Pneumatic CERTI-CRIMP* Tool Holder Assembly (Large) 356302-1
408-4321	Pneumatic CERTI-CRIMP Tool Holder 356304-1
408-4450	626 Pneumatic Crimping Head 904870-1
408-6758	Hydraulic Hand Crimping Tool 59975-1
408-6803	Hydraulic Hand Crimping Tool 59973-1
408-8044	Miniature Quick-Change Applicator (Side-Feed with Mechanical Feed System) 687658-1
408-8082	Miniature Quick-Change Applicators (Side-Feed with Air Feed System) 567200-2 and 567200-3
408-9684	Inspection and Servicing of Hydraulic Crimping Heads 69065 and 69067
408-9786	Crimping Dies 48126, 48127, 48128, 48129, 48130, 48131, 48132, and 48355 for SOLISTRAND Terminals and Splices
409-1950	Hydraulic Power Units 69120-1 and 69120-2
409-1993	AMP-TAPETRONIC* Machine 69875
409-2426	Pneumatic Tool 68068
409-2500	Pneumatic Tool 68068-3
409-5842	AMP-O-LECTRIC Model "G" Terminating Machines 354500-[ ]
409-5852	AMPOMATOR* CLS III-G Lead-Making Machines 122500-[ ]
409-5860	Hydraulic Hand Pump 314979-1
409-5862	626 Pneumatic Tooling Assemblies 189721-[ ] and 189722-[ ]

### 3. REQUIREMENTS

#### 3.1. Special Characteristics

PIDG IR terminals prevent insulation of thin-wall insulated wire from entering the wire barrel during crimping.

#### 3.2. Material

##### A. Insulated

These terminals, splices, and spare wire caps consist of precision formed metal wire barrel and support sleeve (except spare wire caps) insulated with PTFE.

**PIDG Terminals and Pre-Insulated Terminals and Splices** -- The body is made of copper and plated with nickel or gold over nickel. The metallic sleeve is made of copper and plated with nickel.

**Post-Insulated Terminals and Splices** -- The body is made of copper and plated with gold over nickel, silver, or nickel. The ring is made of aluminum or copper and plated with nickel. The bushing is made of PTFE insulation.

##### B. Uninsulated

These terminals and splices consist of precision formed metal wire barrel with or without a support sleeve.

**SOLISTRAND Terminals and Splices** -- The heat resistant body is made of copper and plated with nickel. The high temperature body is made of nickel.

**DIAMOND GRIP Terminals and Splices** -- The heat resistant body is made of copper and plated with nickel. The high temperature body is made of nickel, alumel, or chromel. The metallic sleeve is made of nickel silver.

#### 3.3. Storage

##### A. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to the terminals, splices, or spare wire caps. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect signal transmissions.

##### B. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product insulation material.

##### C. Reeled Product

When using tape-mounted reeled product, care must be taken to prevent stretching, sagging, or other distortion that would prevent smooth feeding of the tape through automatic machine feed mechanisms. Store coil wound reels horizontally and traverse wound reels vertically.

#### 3.4. Wire Selection and Preparation

The terminals, splices, and spare wire caps accept copper wire sizes 26 through 1/0 AWG (238 through 119,500 circular mil area) with an insulation diameter range of 1.17 through 7.87 [.046 through .310].

PIDG terminals and splices must be used with stranded wire; and PIDG insulation restricting terminals, and post-insulated and uninsulated terminals and splices with solid or stranded wire. The splices can accommodate different wire combinations. Proper strip length is necessary to properly insert the wire into the terminal or splice. The wire must be stripped to the dimensions provided in the instructional material supplied with the product or application tooling.



*Reasonable care must be taken not to nick, scrape, or cut any strands during the stripping operation.*

The spare wire caps must be used with unstripped PTFE insulated stranded wire with insulation diameter range of 0.91 through 3.50 [.036 through .138].

### 3.5. Wire Placement

The solid wire conductor or stranded wire conductors must be inside the terminal, splice, or spare wire cap wire barrel. No strands can be folded back over the wire insulation. The conductor end(s) must be flush with, or extend slightly beyond, the end of the wire barrel; or, for splices with a wire stop in the center of the splice, the conductor end(s) must butt against the wire stop. The wire insulation must be inside the insulation of the product, but must not enter the wire barrel, to provide strain relief for the wire.

### 3.6. Crimp Requirements

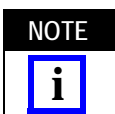
The terminal, splice, or spare wire cap must be crimped to the wire according to instructions packaged with applicable tooling.



*Wire insulation must NOT be cut or broken during the crimping operation. Reasonable care must be taken to provide undamaged wire terminations.*

#### A. Wire Barrel Crimp

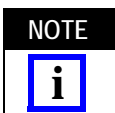
The crimp applied to the wire barrel portion of the terminal, splice, or spare wire cap is the most compressed area and is most critical in ensuring optimum electrical and mechanical performance of the crimped product. The crimped area must be symmetrical on both sides of the wire barrel. The crimp may be off center on the wire barrel but not off the end of the wire barrel. See Figure 2.



*The resilience of the product insulation prevents accurate direct measurement of crimp height. Tooling used to crimp product must be dimensionally correct to ensure quality crimp configurations.*

#### B. Crimp Dot and Hashmark Code

Some tools with multiple crimping chambers will emboss a crimp dot code or hashmark code onto the product insulation when crimped. The dot or hashmark code must be fully formed on the insulation to indicate that the correct product and tooling combination was used. The crimp dot or hashmark code must correspond with the wire size marking on the tooling.



*The hashmark code should appear on the bottom (side opposite the crimp indents) for high temperature and heat-resistant terminals and splices.*

#### C. Wire Conductor and Insulation Location

The wire insulation must be inside, and in firm contact with, the insulation barrel of the product. The wire insulation must not enter the wire barrel. The conductor end(s) must be flush with, or extend slightly beyond, the end of the wire barrel; or, for splices with a wire stop in the center of the splice, the conductor end(s) may butt against the wire stop. See Figure 2.

#### D. Product Insulation

The terminal, splice, or spare wire cap insulation must not be deformed, cut, or show uneven stress marks. Some insulation flash or extruded insulation is normal. Holes and thin spots in the insulation provides evidence of either improper crimping or defective tooling.

#### E. Bellmouths

The rear bellmouth length must be within 0.51 to 1.27 [.020 to .050], and the front bellmouth must not exceed 0.51 [.020]. Refer to Figure 2.

#### F. Sleeve, Ring, and Bushing Position (Post-Insulated Terminal and Splice Only)

After crimping post-insulated terminals or splices, rings, bushings, and a sleeve must be assembled onto the terminal or splice. The sleeve must be centered over the crimped terminal wire barrel or crimped splice. The sleeve must extend from the ring and the bushing must extend from the sleeve to the dimensions shown in Figure 2.

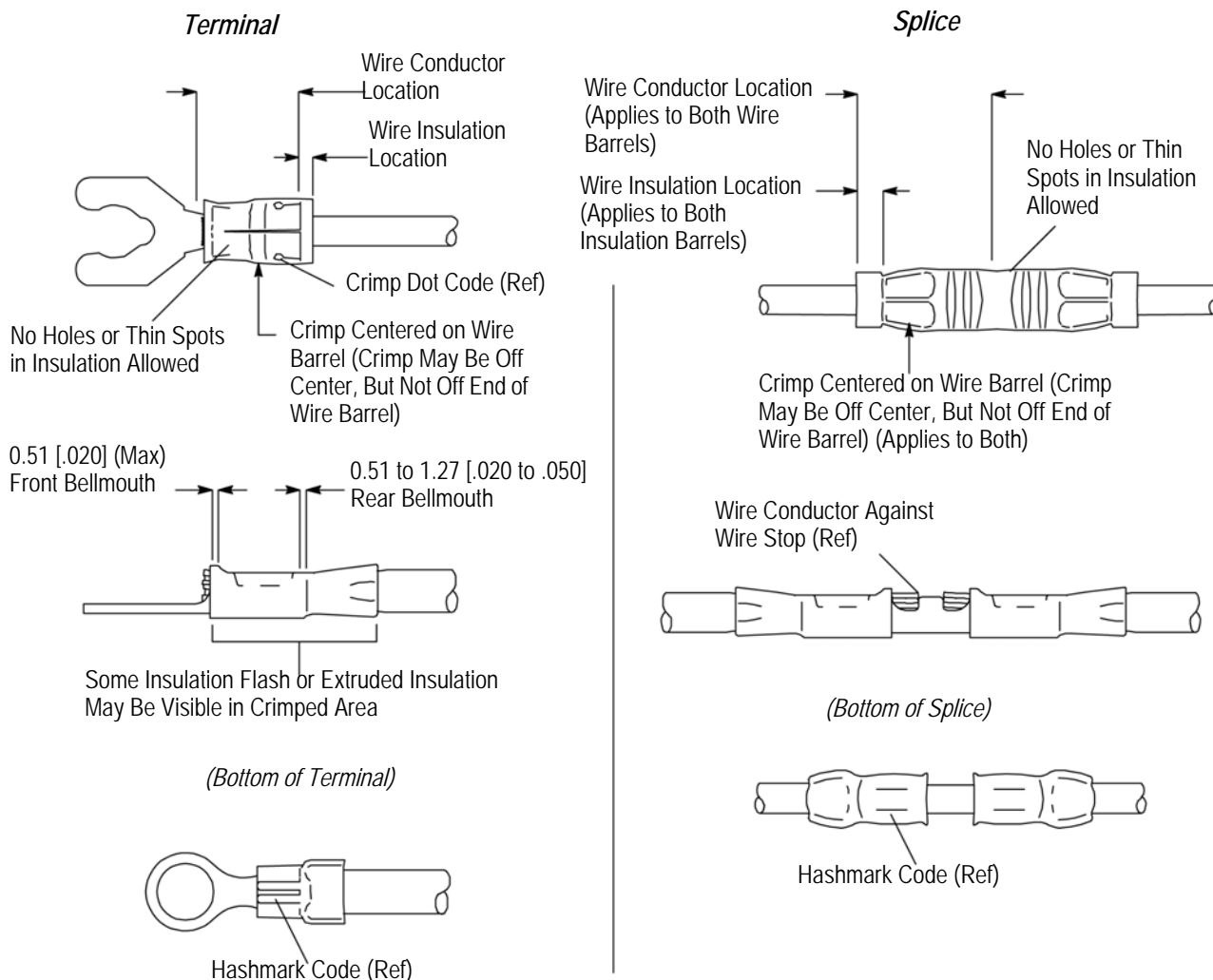


Figure 2

### G. Bend Allowance

The force applied during crimping may cause some bending between the wire barrel and wire. Such deformation is acceptable within the following limits.

- 1) Up and Down -- The crimped portion must not be bent beyond the limits shown in Figure 3.
- 2) Side-to-Side -- The crimped portion must not be bent from one side to the other beyond the limits shown in Figure 3

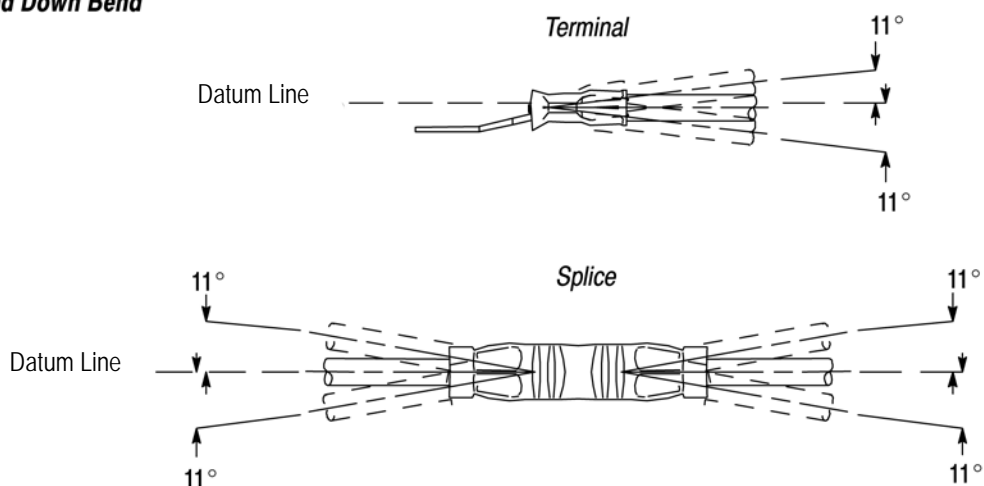
### 3.7. Repair

Damaged terminals, splices, and spare wire caps or product that does not meet crimp dimension requirements must be removed from wires, discarded, and replaced with new ones. When removing a terminal, splice, or spare wire cap, cut the wires as close as possible to the end of the wire barrel.

### 4. QUALIFICATION

No qualifying support for STRATO-THERM terminals, splices, and spare wire caps was defined at the time of publication of this document.

### Up and Down Bend



### Side-to-Side Bend

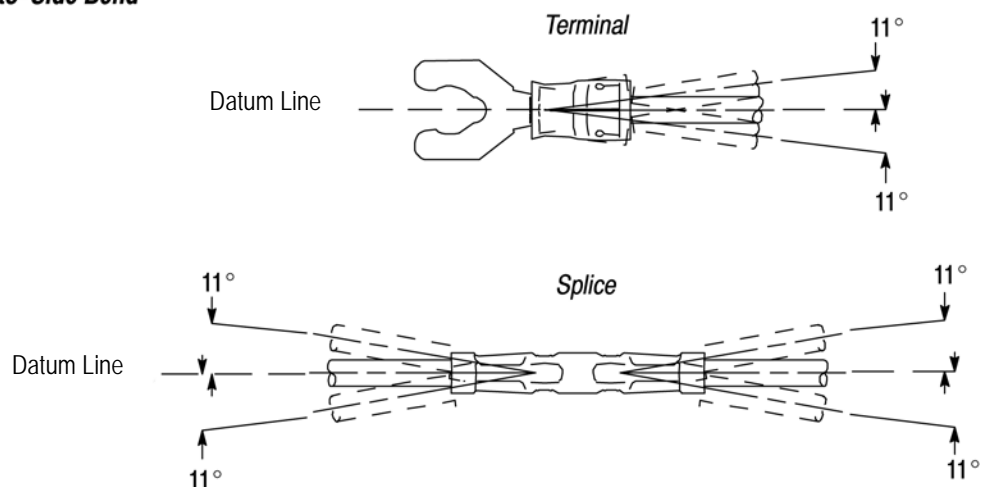
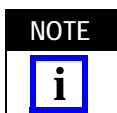


Figure 3

## 5. TOOLING (Figure 4)

Hand tools for manual application of loose piece terminals and splices, and automatic and semi-automatic machines for power assisted application of tape-mounted terminals and splices are available to cover the full wire size range. Tooling part numbers and instructional material packaged with the tooling are shown in Figure 4.



*Modified designs and additional tooling concepts may be available to meet other application requirements. Machines can be designed for a variety of application requirements. For assistance in setting up prototype and production line equipment, call the TOOLING ASSISTANCE CENTER at the number at the bottom of page 1.*

### 5.1. Crimping Dies, Hand Tools, Tool Holder Assemblies, and Heads and Adapters

The hand tools consist of a handle assembly with integral fixed jaws or fixed dies, or a head that accepts various die assemblies. The jaws or dies have one or more crimping chambers used to crimp terminals and splices onto pre-stripped wire. The hand tools have a ratchet, except the hydraulic hand crimping tool which uses hydraulic fluid, to ensure full crimping pressure is applied to the terminal or splice.



The 626 pneumatic tooling system consists of a pneumatic power unit, tool holder assembly, and variety of crimping heads used to crimp terminals and splices onto pre-stripped wire. This tooling system was developed to reduce operator fatigue and provide interchangeability of die assemblies. The system is designed for prototype and medium-volume application of loose piece terminals and splices.

The pneumatic tools use a pneumatic crimping head which contains jaws to crimp terminals and splices onto pre-stripped wires. These tools use a filter and moisture separator, regulator, and lubricator. These tools are designed for low-volume application.

## 5.2. Applicators

The applicators are designed to crimp tape-mounted terminals and splices onto pre-stripped wire, and provides for high volume, heavy duty production requirements. These applicators accept interchangeable crimping dies and must be installed onto a power unit.

## 5.3. Power Units

### A. Hydraulic Machines

The hydraulic power units combine the convenience of a hand tool with the power of a larger machine to crimp loose piece terminals and splices onto pre-stripped wire. Each unit uses a hydraulic head or interchangeable dies. These units are, basically, a portable crimping unit which uses a handle or foot control to activate a pump. They are used primarily for low-volume production or at locations where electrical power sources are not readily available.

### B. Pneudraulic Machines

Pneudraulic power units provide the force required for automatic crimping tape-mounted terminals and splices. These machines accept interchangeable dies and are air-operated using a foot valve. These machines use a filter and moisture separator, regulator, and lubricator and are designed to be bench-mounted.

### C. Semi-Automatic Machines

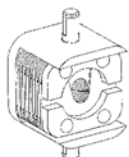
These power units provide the force required to drive applicators for crimping tape-mounted terminals and splices. They provide for medium-volume applications. These machines are designed to be bench mounted.

### D. Automatic Machines

These power units provide the force required to drive applicators for crimping tape-mounted terminals and splices. They can be set up to automatically measure, cut, strip, and terminate wire. They provide for high volume, heavy duty production requirements. These machines are designed to be floor standing.



### *Crimping Dies*



STRATO-THERM Post-Insulated Terminal and Splice Die Assembly 69211-1 (408-1826)



Crimping Dies 48126, 48127, 48128, 48129, 48130, 48131, 48132, and 48355 for SOLISTRAND Terminals and Splices (408-9786)

#### **Also:**

Crimping Dies 69731, 69732, 69733, 69734, and 69735 (408-1632)

SOLISTRAND Crimping Dies 45433, 45436, 46133, 46134, 46135, 46136, 46137, 46138, 46145, 46146, 69216, 69217, and 69218 (408-1697)

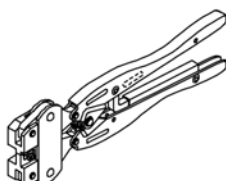
Crimping Dies 69327, 69328, and 69329 for Pre-Insulated Splices (408-1939)

Terminal and Splice Crimping Jaws 68135 (408-2395)

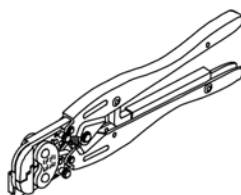
Crimping Die Assembly 69937 (408-2423)

AMP-TAPEMATIC Crimping Dies 69930, 69931, 69932, 69954, 69955, and 69956 (408-2648)

### *Hand Tools*



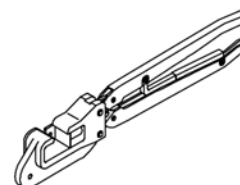
Hand Crimping Tools 46468 and 45730 (408-1532)



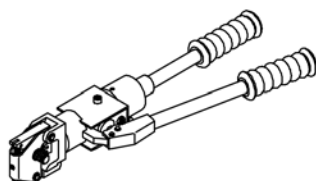
STRATO-THERM Hand Crimping Tools 46468 and 45730 (408-1532)



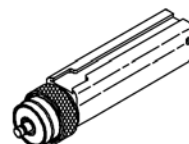
"T"-Head Crimping Tools 69692-1 and 69693-1 (408-1610)



Hand Crimping Tool 69710-1 (408-2095)



Hydraulic Hand Crimping Tool 59975-1 (408-6758)



626 Pneumatic Tooling Assemblies 189721-[] and 189722-[] (409-5862)

#### **Also::**

Crimping Tools 69355 (408-1254)

STRATO-THERM Hand Crimping Tools 59294 and 59461 (408-1259)

Hand Crimping Tool 46447 (408-1542)

Hand Crimping Tool 69272-1 for Pre-Insulated Spare Wire Caps (408-1836)

ROTA-CRIMP Hand Crimping Tool 600850 (408-1927)

Single-Action, Double-Action Hand Tool Assembly 46467 (No Document)

*Figure 4 (Cont'd)*

Hydraulic Hand Crimping Tool 59973-1 (408-6803)

Pneumatic Tool 69015 (408-1310)

Pneumatic Tool 68068 (409-2426)

Pneumatic Tool 68068-3 (409-2500)\

#### *Tool Holder Assemblies*



*Pneumatic CERTI-CRIMP Tool Holder Assembly 356302-1 (Large) (408-4303)*



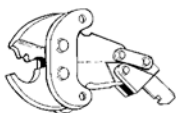
*Pneumatic CERTI-CRIMP Tool Holder 356304-1 (408-4321)*

#### **Also:**

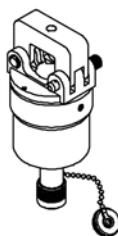
Straight Action Pneumatic Holder 189928-1 (No Document)

Pneumatic Tool Holder 189767-1 (No Document)

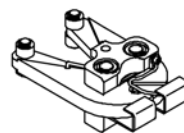
#### *Heads and Adapters*



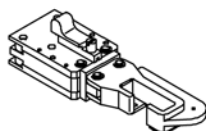
*Pneumatic Crimping Heads 48172, 48173, 48174, 48183, and 49956 (408-1311)*



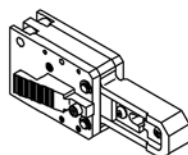
*Hydraulic Crimping Head 69065 (408-2452)*



*626 Pneumatic Crimping Heads 1338757-1 and 138878-1 (408-4072)*



*C-Head Pneumatic Adapter 318161-1 (408-4190)*



*Straight Action Crimper 217200-1 (408-4105)*

#### **Also:**

DYNA-CRIMP Head 69069 (408-1745)

Hydraulic Crimping Head 69067 (408-2454)

DYNA-CRIMP Crimping Head 69097 (408-2457)

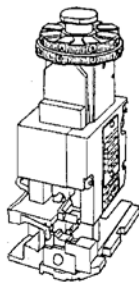
DYNA-CRIMP Crimping Head 69099 (408-2458)

626 Pneumatic Crimping Head 217206-1 (408-4110)

626 Pneumatic Crimping Head 904870-1 (408-4450)

*Figure 4 (Cont'd)*

### Applicators



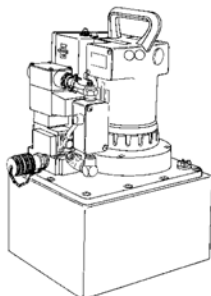
Miniature Quick-Change Applicator 687658-1 (For Tape-Mounted Closed Barrel Terminals) (408-8044)

Also:

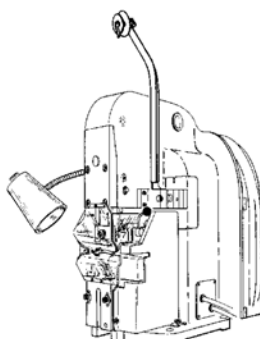
Miniature Quick-Change Applicators 567200-2 and 567200-3 (Side-Feed Type with Air Feed for Tape-Mounted Terminals) (408-8082)

### Power Units

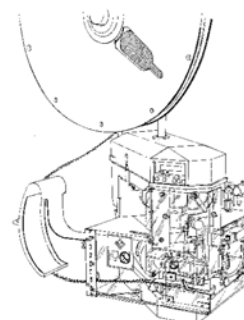
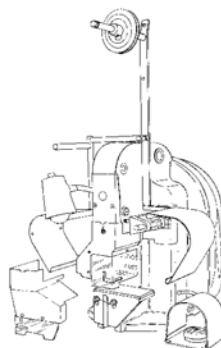
Hydraulic Power Units  
69120-1 and 69120-2  
(409-1950)



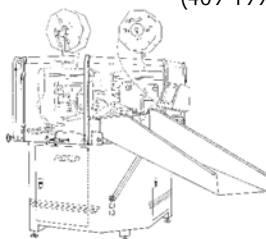
AMP-O-ELECTRIC Model "K" Terminator  
Machine 565435-5 (409-5128) No  
Longer Manufactured New



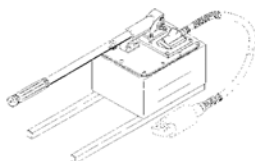
AMP-TAPETRONIC  
Machine 69875  
(409-1993)



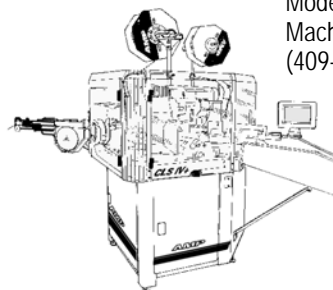
AMP-O-ELECTRIC  
Model "G" Terminating  
Machine 354500-[]  
(409-5842)



AMPOMATOR CLS III-G  
Lead-Making Machine  
122500-[] (409-5852)



Hydraulic Hand Pump  
314979-1 (409-5860)



AMPOMATOR CLS IV+ Lead-Making  
Machine 356500-[] (409-5878)

Figure 4 (Cont'd)

PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
PIDG Ring Tongue Terminal	26-24	--	69692-1	--	--	--	--
		69731	69710-1	--	--		
		69731	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69731	189721-1 or 189722-1	189928-1	217200-1 or 318161-1		
	22-20	--	69692-1	--	--	--	--
		69732	69710-1	--	--		
		69732	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69732	189721-2 or 189722-2	189928-1	217200-1 or 318161-1		
	18-16	--	69693-1	--	---	--	--
		69733	69710-1	--	--		
		69733	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69733	189721-2 or 189722-2	189928-1	217200-1 or 318161-1		
		69937	--	----	--	--	69875
	14	69734	69710-1	--	--	--	
		69734	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69734	189721-2 or 189722-2	189928-1	217200-1 or 318161-1		
		--	69693-1	--	--		
	12-10	69735	69710-1	--	--	--	--
		69735	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69735	189721-2 or 189722-2	189928-1	217200-1 or 318161-1		

Figure 4 (Cont'd)

PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
PIDG Insulation Restricting Ring Tongue Terminal	24	--	69692-1	--	--	--	--
		69731	69710-1	--	--		
		69731	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69731	189721-1 or 189722-1	189928-1	217200-1 or 318161-1		
	22	--	69692-1	--	--	--	--
		69732	69710-1	--	--		
		69732	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69731	189721-2 or 189722-2	189928-1	217200-1 or 318161-1		
	12	69735	69710-1	--	--	--	--
		69732	189721-1 or 189722-1	356304-1	217200-1 or 318161-1		
		69731	189721-1 or 189722-1	189928-1	217200-1 or 318161-1		
Post-Insulated Ring Tongue Terminal	22-20	--	46467	--	--	--	69120-1, 69120-2, or 314979-1
	8	46146 and 46145	--	--	69097		
		69216 or 69211-1	--	--	69099		
Post-Insulated Splice	26-24	--	45730	--	--	--	--
	22-20	--	46467	--	--	--	--
	18-16	--	46468	--	--	--	--
	8	69216 or 69211-1	--	--	69099	--	69120-1, 69120-2, or 314979-1
		46146 and 46145	--	--	69097		
Pre-Insulated Window Butt Splice	22-20	69327	69710-1	--	--	--	--
		69327	189721-2 or 189722-2	189928-1	318161-1		
	18-16	69328	69710-1	--	--	--	--
		69328	189721-2 or 189722-2	189928-1	318161-1		

Figure 4 (Cont'd)

PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
Pre-Insulated Window Butt Splice	14-12	69329	69710-1	--	--	--	69120-1, 69120-2, or 314979-1
		69329	189721-2 or 189722-2	189928-1	318161-1		
Pre-Insulated Spare Wire Caps	--	--	69272-1	--	--	--	--
DIAMOND GRIP Heat Resistant and High Temperature Ring Tongue Terminal	22-16	--	46673	--	--	--	--
		--	46673-1	--	--		
		69930	--	--	--	--	69875
	16-14	--	46988	--	--	--	--
		--	59294	--	--		
		69931	--	--	--	--	69875
	12-10	--	59461	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	904870-1		
		69932	--	--	--	--	69875
DIAMOND GRIP Heat Resistant Ring Tongue Terminal	22-16	--	46673 or 46673-1	--	--	--	--
	16-14	--	46988 or 59294	--	--	--	--
	12-10	--	59461	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	904870-1		
SOLISTRAND Heat Resistant Ring Tongue Terminal	16-14	--	46447	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		
		69955	--	--	--	--	69875
SOLISTRAND Heat Resistant Parallel Splice	8	--	69355	--	--	--	--
		69216	--	--	69099	--	69120-1 or 69120-2
		68135	68068 or 68068-3	--	--	--	--
		48126 and 48355	59973-1	--	69065 or 69067		

Figure 4 (Cont'd)

PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
SOLISTRAND High Temperature Ring Tongue Terminal	16-14	--	46447	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1	--	--
		69955	--	--	--	567200-2	69875, 565435-5† or 354500-1
SOLISTRAND High Temperature Spade Tongue Terminal	16-14	--	46447	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	22-16	--	46447	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		
		69954	--	--	--	687658-1	122500-2, 122500-3, 356500-1, or 356500-2
		69954	--	--	--	--	69875
		69954	--	--	--	567200-2	564435-5† or 354500-1
		69954	--	--	--	567200-3	354500-1, 354500-2, 354500-9, or 1-354500-1
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	12-10	--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1	--	--
		--	46447	--	--		
		69956	--	--	--	--	69875
		69956	--	--	--	687658-1	122500-2, 122500-3, 356500-1, or 356500-2
		69956	--	--	--	567200-2	565435-5†
		69956	--	--	--	567200-3	354500-1, 354500-2, 354500-9, or 1-354500-1

† No longer manufactured new.

Figure 4 (Cont'd)



PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	8	--	69355	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	1338757-1		
		--	69015	--	49956		
		48126 and 48355	--	--	69065 or 69067	--	69120-1, 69120-2, or 314979-1
		69216	--	--	69099		
		46146 and 46145	--	--	69097		
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	6	--	189721-1 or 189722-1	189767-1 or 356302-1	1338758-1	--	--
		69217	--	--	69099	--	69120-1 or 69120-2
		48127 and 48128	--	--	69065 or 69067	--	69120-1 or 69120-2
		--	69015	--	48172	--	--
		48127 and 48128	59973-1	--	--		
		48127 and 48128	--	--	69067	--	314979-1
		48127 and 48128	--	--	69065		
		69217	--	--	69099		
		46133 and 46134	--	--	69067	--	69120-1 or 69120-2
		46133 and 46134	--	--	69097	--	314979-1

Figure 4 (Cont'd)

PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	4	46133 and 46135	--	--	69097	--	69120-1 or 69120-2
		69218	--	--	69099	--	69120-1 or 69120-2
		--	59975-1	--	--	--	--
		--	69015	--	48173		
		--	--	--	69069	--	69120-1
		--	--	--	69069	--	314979-1
		46133 and 46135	--	--	69097	--	314979-1
		69218	--	--	69099	--	314979-1
		48127 and 48129	--	--	69065 or 69067	--	69120-1 or 69120-2
		48127 and 48129	59973-1	--	--	--	--
		48127 and 48129	--	--	69065 or 69067	--	314979-1
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	2	--	--	--	69069	--	69120-1 or 69120-2
		46133 and 46136	--	--	69097		
		45433	--	--	69099		
		--	69015	--	48174	--	--
		48127 and 48130	--	--	69065 or 69067	--	69120-1 or 69120-2
		48127 and 48130	59973-1	--	--	--	--
		--	--	--	69069	--	314979-1
		48127 and 48130	--	--	69067		
		46133 and 46136	--	--	69097		
		48127 and 48130	--	--	69065		

Figure 4 (Cont'd)

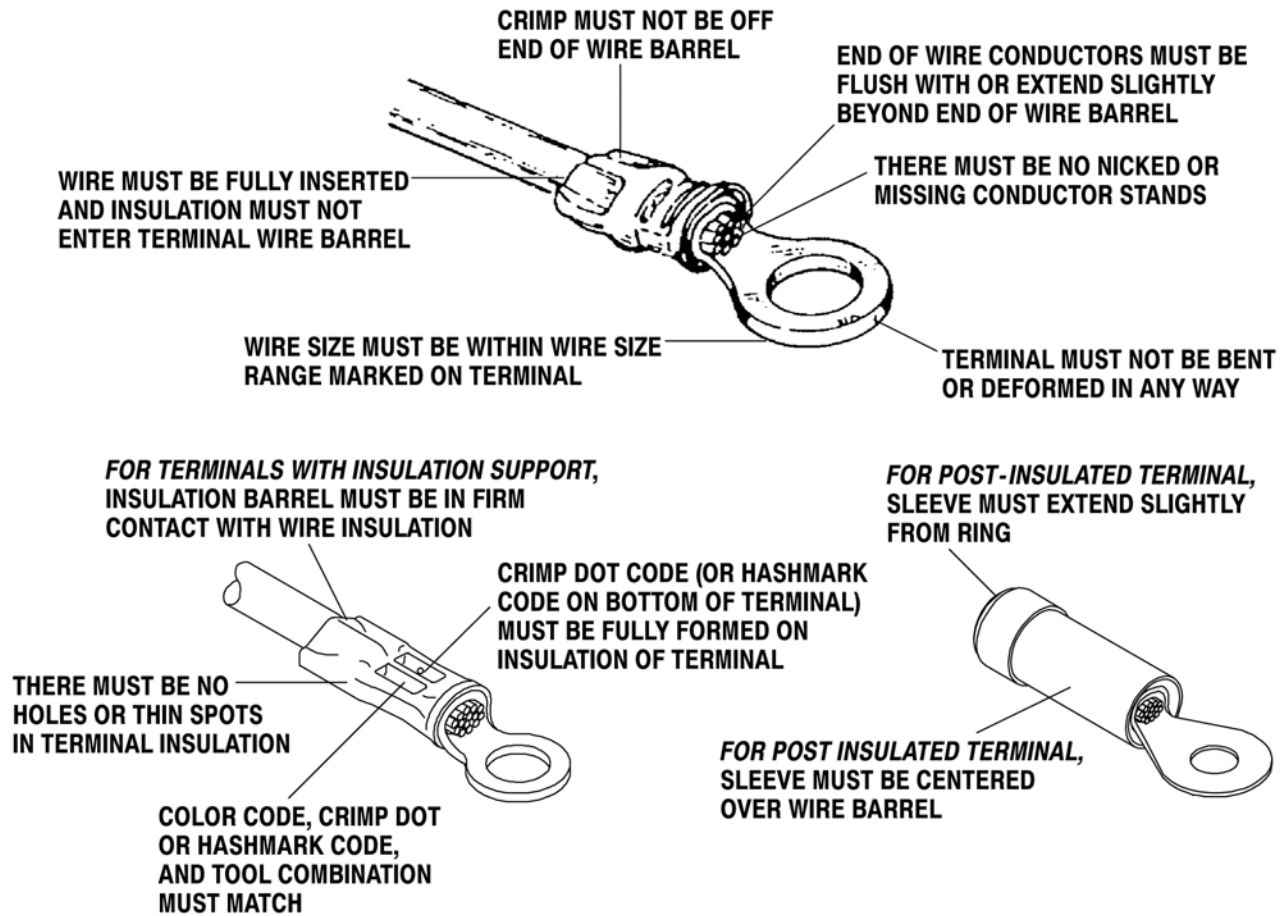
PRODUCT	WIRE SIZE (AWG)	CRIMPING DIE	HAND TOOL	TOOL HOLDER ASSEMBLY	HEAD OR ADAPTER	APPLICATOR	POWER UNIT
SOLISTRAND Heat Resistant and High Temperature Ring Tongue Terminal	1/0	45436	--	--	69099	--	69120-1 or 69120-2
		--	69015	--	48183	--	--
		--	600850	--	--		
		48131 and 48132	--	--	69065 or 69067	--	69120-1 or 69120-2
		48131 and 48132	59973-1	--	--	--	--
		48131 and 48132	--	--	69065 or 69067	--	314979-1
		45436	--	--	69099	--	314979-1
		46137 and 46138	--	--	69097	--	69120-1, 69120-2, or 314979-1
SOLISTRAND Heat Resistant and High Temperature Splice	22-16	--	46447	--	--	--	--
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		
	16-14	--	46447	--	--		
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		
	12-10	--	46447	--	--		
		--	189721-1 or 189722-1	189767-1 or 356302-1	217206-1		

Figure 4 (End)

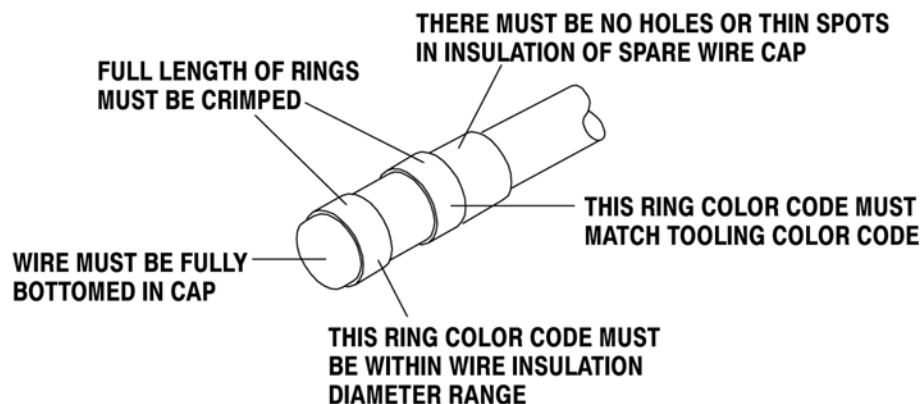
## 6. VISUAL AID

The illustration below shows a typical application of STRATO-THERM terminals, splices, and spare wire caps. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

### TERMINALS

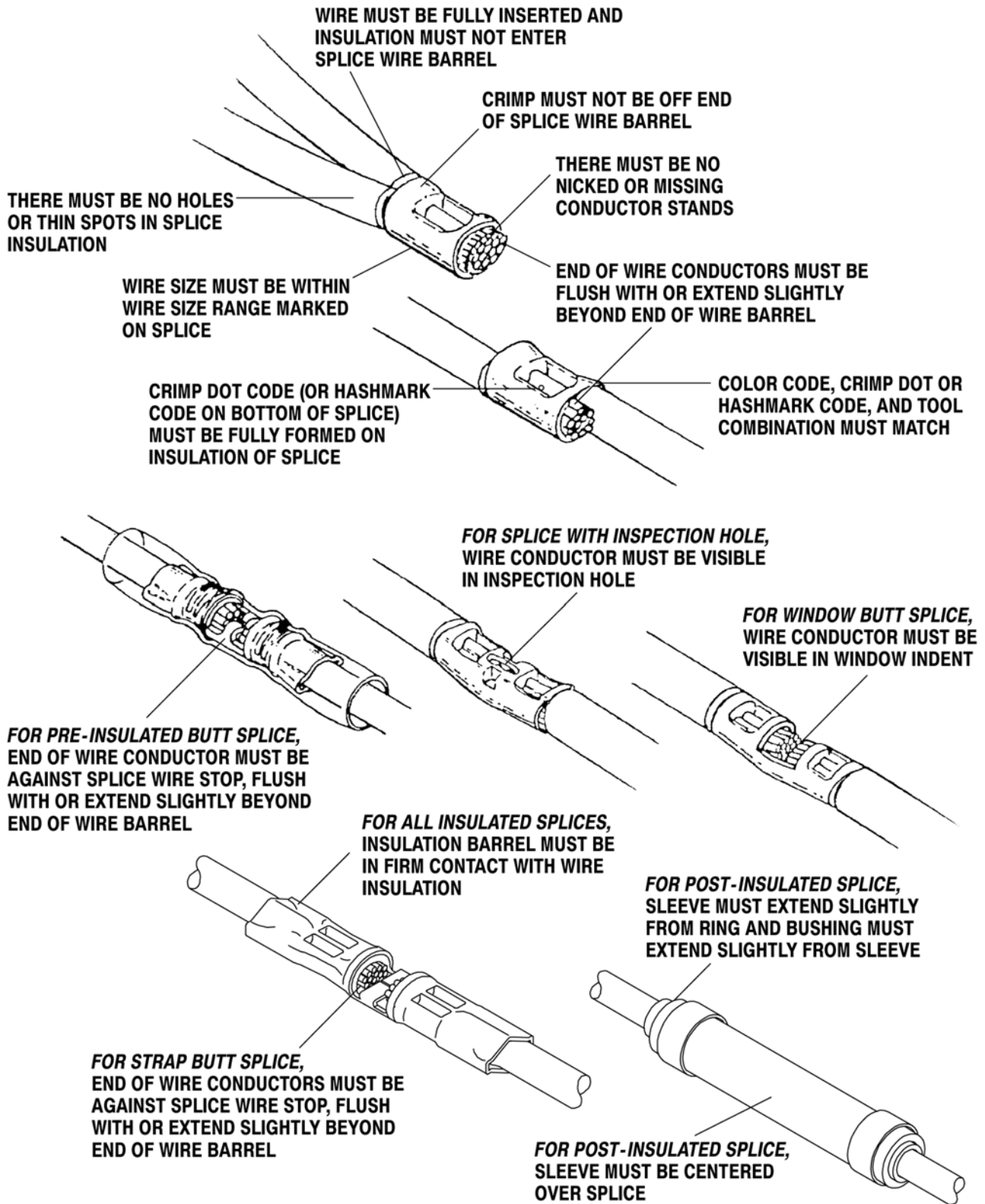


### SPARE WIRE CAP



**FIGURE 4. VISUAL AID (CONT'D)**

### SPLICES



**FIGURE 4. VISUAL AID (END)**