

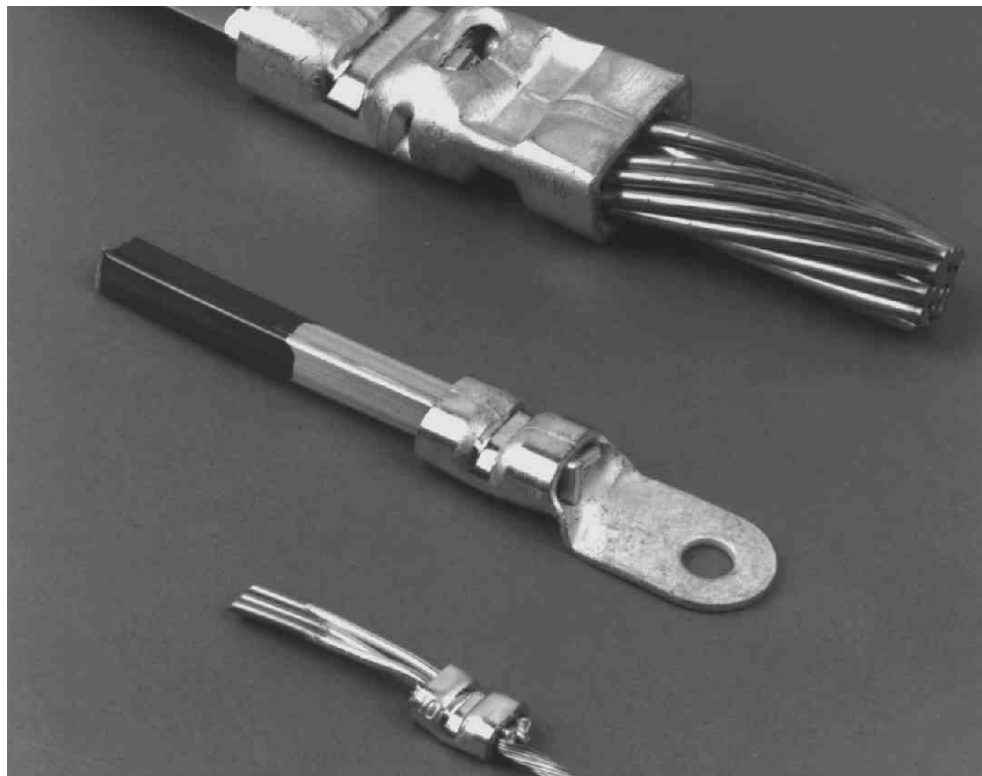
**Product Facts**

**Bar Crimp Technique**

- Terminals and Splices for aluminum-to-aluminum and aluminum-to-copper strip-wired wire applications
- Terminates stripped, stranded and solid (round or rectangular) aluminum and copper conductors — individually or in combination
- Eliminates messy inhibitors
- Available for a broad range of wire sizes — from 16 AWG to 500 MCM [1.25 to 253 mm<sup>2</sup>]
- Low cost, reliable terminations provide stable electrical and mechanical performance
- UL 486B Listed where indicated (see page 4)



<sup>1</sup> Bar crimp only



**Insulation Piercing Technique**

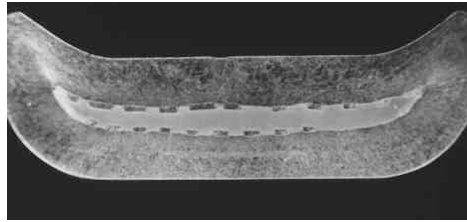
- Terminals and splices for aluminum-to-aluminum, copper-to-copper and aluminum-to-copper wire applications
- Terminates film insulated solid aluminum, film insulated solid copper, or uninsulated stranded copper conductors — individually or in combination
- Stripping of film insulated solid conductors not required
- Eliminates messy inhibitors
- Available for a broad range of wire sizes — from 16 to 4/0 AWG [1.25 to 105 mm<sup>2</sup>]
- Copper body construction
- Low cost, reliable terminations provide stable electrical and mechanical performance



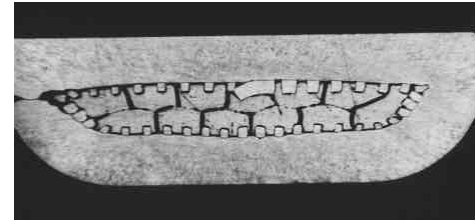
## Introduction

The AMP family of COPALUM terminals and splices provides reliable, low cost terminations for both aluminum and copper wire. Stranded, solid, round and rectangular conductors, individually or in combinations falling within a specified CMA range, can be terminated in the same wire barrel. Also, the same terminals and splices can be crimped to either uninsulated wire, using a bar crimp configuration or with the insulation piercing technique, to film insulated wire. Prestripping of conductors is not required. Because of this versatility, AMP COPALUM products are finding wide usage wherever aluminum wire is being used for its weight and cost savings advantages.

COPALUM terminals and splices are available for terminating a broad range of wire sizes: 16 AWG to 500 MCM [1.25 to 253 mm<sup>2</sup>] using the bar crimp technique, and 16 to 4/0 AWG [1.25 to 105 mm<sup>2</sup>] using the insulation piercing method. Each product features a copper body construction and employs a perforated copper alloy liner. This construction, coupled with the AMP crimp, produces electrically and mechanically stable connections by overcoming the inherent problems of aluminum oxide penetration and reformation, cold flow, creep, corrosion and thermal expansion (common in aluminum-to-copper applications).



**Cross Section of  
Bar Crimp**



**Cross Section of  
Insulation Piercing Crimp**

## The Bar Crimp

The bar crimp technique employs the principle of high crimp deformation to achieve electrically and mechanically reliable terminations. During crimping, the relatively soft aluminum conductor is extruded through the liner perforations, breaking brittle aluminum oxides and allowing clean aluminum metal to be brought into direct contact with the liner and the wire barrel. Due to the crimp's tight configuration, reforming of aluminum oxides, as well as the formation of other corrosive films, is minimized. When crimping standard conductors, this high deformation breaks up the oxides that surround each individual strand and brings the strands into direct contact with each other, creating possible inter-strand bonds or cold welds among strands. Because of the large number of independent contact surfaces, the total contact area is increased, thus reducing the possibility of electrical failure due to thermal expansion, creep and corrosion.

The mechanical characteristics of the termination are achieved through a secondary portion of the crimp which reduces, by a predetermined amount, the cross sectional area of the termination. The reduction is totally independent of the wire type, size and shape as long as the wire(s) being terminated fall within the appropriate CMA range. Termination reliability is further enhanced by the fact that inhibitors are not required. Subsequently, COPALUM terminals and splices using the bar crimp method are highly adaptable for oil-filled transformer use.

When three or more rectangular conductors are being crimped, they should be inserted on edge. They should not be inserted to permit the electrical and mechanical crimps to be positioned across the width of the connector.

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## The Insulation Piercing Crimp

The insulation piercing crimp technique uses its specific crimp configuration and the perforated design of the terminal or splice liner to break down the film insulation and establish an electrical interface between the conductor and terminal or splice body. During crimping, the film insulated conductor is extruded into the perforated liner, causing the film insulation to be sheared. This produces a hermetically sealed interface between the connector and the body of the terminal or splice. An adequate surface contact area is achieved due to the high density hole pattern of the liner. Because of the hermetic seal, products using the insulation piercing crimp can be exposed to the gaseous and oil environments found in oil and air cooled transformers or air and Freon cooled motors.

A secondary crimp section provides the mechanical properties of the termination (tensile strength, vibration, resistance, flex life, etc.). This secondary crimp flanks the electrical crimp, establishing optimum mechanical characteristics on both sides of the electrical crimp. Such a crimp design permits either parallel, butt or pigtail splicing. The crimp design also allows solid copper, solid aluminum and stranded copper to be terminated in the same wire barrel if certain restriction regarding size, number and total CMA of conductors being terminated are observed as follows:

1. In a solid (or combination of solids) aluminum and stranded copper application, the maximum amount of CMA fill for the copper conductor should not exceed 40% of the total CMA being crimped.
2. Up to a maximum of 10 equal size round conductors may be crimped without insulation removal.
3. Up to a maximum of 6 equal square conductors may be crimped without insulation removal.
4. Four rectangular conductors where  $T = 1/4W$  or 2 rectangular conductors where  $T = 1/4W$  may be crimped without insulation removal.
5. Due to the physical size limitations of the wire barrel, it may not be possible for a particular CMA loading to physically fit in the normally recommended connector. In these instances where 7 or more equal round conductors or a combination of solid aluminum and stranded copper is used, and the total CMA is at least 50% of the maximum CMA of the next larger size connector, this larger size connector may be used with its appropriate crimping die.
6. When crimping different size solid conductors, size should not vary by more than 1 wire gauge, and preferably by no more than 1/2 wire gauge.

Tooling available for terminating COPALUM terminals and splices using the insulation piercing crimp includes the DYNA-CRIMP tool for wire sizes 8 through 4/0 AWG [8 through 105 mm<sup>2</sup>], pneumatic tooling for wire sizes 16-14 through 6 AWG [1.25-2 through 15 mm<sup>2</sup>] and manually operated hand tools for wire sizes 16-14 AWG [1.25-2 mm<sup>2</sup>] and 12-10 AWG [2-6 mm<sup>2</sup>].

### Technical Documents

**Test Reports:**  
110-13506

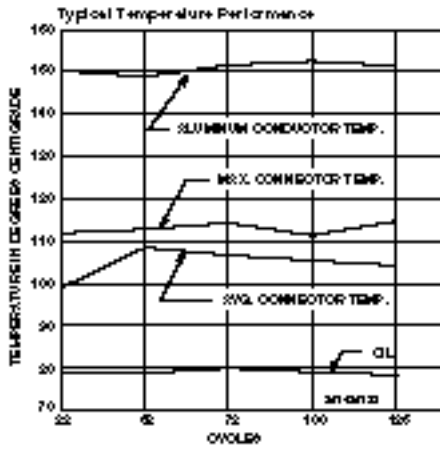
**Product Specification:**  
108-13013

**Application Specification:**  
114-02121

**Warning: Not approved for reconnection of residential aluminum branch circuit wiring. (Refer to Catalog #82205.)**

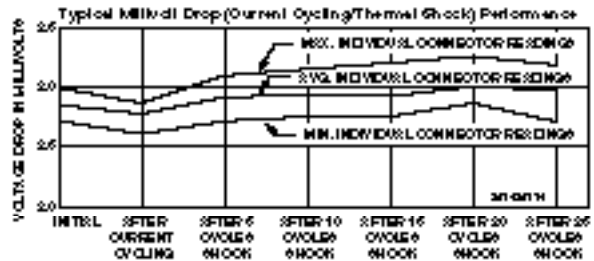
## Testing Data

### Test Results of Bar Crimp Terminations



**Current Cycling:** Under oil at 1375 amperes, AC  
**Products Tested:** COPALUM splices, wire size 250 MCM [127 mm<sup>2</sup>]

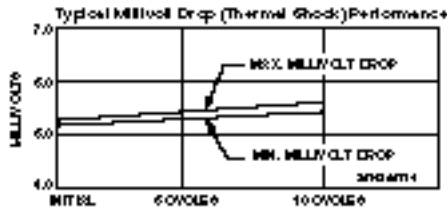
### Test Results of Insulation Piercing Crimp Terminations



**Current Cycling:** 100 cycles @ 35 amperes, AC; each cycle consisting of 15 min. "on current" and 15 min. "off current"

**Thermal Shock:** 0.5 hr. @ +150°C and 0.17 hr. in ice water per cycle; 5 amperes, DC

**Products Tested:** COPALUM parallel splices, wire size 8 AWG [8 mm<sup>2</sup>] using two 14 AWG [2 mm<sup>2</sup>] solid aluminum conductors (unstripped) and one 14 AWG [2 mm<sup>2</sup>] stranded copper wire conductor (stripped). Graph curves represent individual conductor readings.



**Thermal Shock:** 0.5 hr. @ +150°C & -55°C per cycle; 15 amperes, DC

**Products Tested:** COPALUM terminals wire size 8 AWG [8 mm<sup>2</sup>] (terminal-to-terminal readings include two terminations plus 4 in. [101.6 mm] of conductor length).

### Pressure Type Wire/Connector Reference Chart

AMP Wire Range		UL Listed File E13288		Connector Marking and Aluminum Wire Size		Copper Wire Size		Strip Length Nominal	
AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>	inch	mm <sup>2</sup>
10-16 Solid or Stranded Copper or Aluminum	1.25-6	12-10 Solid Aluminum	3-6	16-14	1.25-2	18-14	0.8-2	5/16	7.94
		8	8	10-8	5-8	7/16	11.11		
		6	14	8-6	8-14	19/32	15.08		
		4	21	6-4	14-21	3/4	19.05		
		2	35	4-2	21-35				
		1/0	50	2-1/0	35-50				
		8-500 MCM Solid or Stranded Aluminum or Copper	8-253	8-500 MCM Stranded Aluminum or Copper	8-253	2/0	70	1/0-2/0	50-70
						3/0	85	2/0-3/0	70-85
						4/0	105	3/0-4/0	85-105
250 MCM	127					4/0-250 MCM	105-127	1-3/16	30.16
300 MCM	152					250-300 MCM	127-152	1-5/16	33.34
400 MCM	203	300-400 MCM	152-203	1-7/16	36.51				
500 MCM	253	400-500 MCM	203-253	1-9/16	39.69				

**Notes:** Perforated liner must be present in wire barrel.

## Ring Tongue Terminals

### Wire Size Range:

**Aluminum – AWG 16 to 10**  
[1.25 to 5.0 mm<sup>2</sup>], CMA 2,050 to 13,100



Wire Size [mm <sup>2</sup> ] Circular Mils	Tongue Thickness Max.	Stud Size	Dimensions				Part Numbers			
			W	L Max.	E Max.	C Min.	Hand Tool*	Heads for Pneumatic Tools*		Terminal
								6-26	68068	
16-14 [1.25] 2050-5180	.033 0.84	1/4	.531	1.107	.839	.564	68041	—	68100	52587-1
		M6	13.49	28.12	21.31	14.33	68140	189447-1	68100	52587-1
12-10 [5.0] 5180-13100	.042 1.07	6	.375	.835	.645	.302	68042	—	68105	51979
		M3.5	9.53	21.21	16.38	7.67	68141-1	189444-1	68100, 68101	51979
		8	.375	.835	.645	.302	68042	—	68105	51979-1
		M4	9.53	21.21	16.38	7.67	68141-1	189444-1	68100, 68101	51979-1
		10	.375	.835	.645	.302	68042	—	68105	51979-2
		—	9.53	21.21	16.38	7.67	68141-1	189444-1	68100, 68101	51979-2
		1/4	.375	.835	.645	.302	68042	—	68105	51979-3
		M6	9.53	21.21	16.38	7.67	68141-1	189444-1	68100, 68101	51979-3
1/4	.593	1.173	.874	.531	68042	—	68105	52590-1		
M6	15.06	29.79	22.2	13.49	68141-1	189444-1	68100, 68101	52590-1		
5/16	.593	1.173	.874	.531	68042	—	68105	52590-2		
M8	15.06	29.79	22.2	13.49	68141-1	189444-1	68100, 68101	52590-2		

\*First (top) part numbers denote bar crimp tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

### Wire Size Range:

**Aluminum – AWG 8 to 6**  
[8.0 to 14 mm<sup>2</sup>], CMA 13,100 to 33,100



Wire Size [mm <sup>2</sup> ] Circular Mils	Tongue Thickness Max.	Stud Size	Dimensions				Part Numbers					
			W	L Max.	E Max.	R Max.	Heads for Pneumatic Tools*			Heads & Die Inserts for Power Unit 69120*		Terminal
							6-26	69015	68068	Head	Die Insert	
8 [8.0] 13100-20800	.048 1.22	10	.500	1.384	1.131	.560	—	68032	68105	69099	68043	50720
		—	12.7	35.15	28.73	14.22	1320369-1**	68081	68101, 68192-1	69099	68084	50720-1
		1/4	.500	1.384	1.131	.560	—	68032	68105	69099	68043	50720-1
		M6	12.7	35.15	28.73	14.22	1320369-1**	68081	68101, 68192-1	69099	68084	50720-2
5/16	.625	1.446	1.131	.560	—	68032	68105	69099	68043	50720-2		
M8	15.88	36.73	28.73	14.22	1320369-1**	68081	68101, 68192-1	69099	68084	50720-2		
10MM	.625	1.446	1.131	.560	—	68032	68105	69099	68043	184076-1		
—	15.88	36.73	28.73	14.22	1320369-1**	68081	68101, 68192-1	69099	68084	184076-1		
6 [14] 20800-33100	.051 1.30	10	.500	1.415	1.162	.580	—	69999	68106	69099	68044	50719
		—	12.7	35.94	29.51	14.73	—	68082	68102	69099	68085	50719
		1/4	.500	1.415	1.162	.580	—	69999	68106	69099	68044	50719-1
		M6	12.7	35.94	29.51	14.73	—	68082	68102	69099	68085	50719-1
		5/16	.679	1.504	1.162	.580	—	69999	68106	69099	68044	50719-2
		M8	17.25	38.2	29.51	14.73	—	68082	68102	69099	68085	50719-2
		3/8	.679	1.504	1.162	.580	—	69999	68106	69099	68044	50719-3
		—	17.25	38.2	29.51	14.73	—	68082	68102	69099	68085	50719-3
10MM	.679	1.504	1.162	.580	—	69999	68106	69099	68044	184079-1		
—	17.25	38.20	29.51	14.73	—	68082	68102	69099	68085	184079-1		

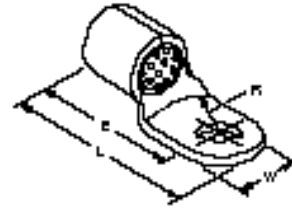
\*First (top) part numbers denote bar crimp tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

\*\*Requires Hand Actuated Power Unit Part No. 189721-2 or Foot Actuated Power Unit Part No. 189722-2.

## Ring Tongue Terminals (Continued)

**Wire Size Range:**

**Aluminum – AWG 4 to 500 MCM**  
**[21 to 253 mm<sup>2</sup>], CMA 33,100 to 600,000**



Wire Size [mm <sup>2</sup> ] Circular Mils	Tongue Thickness Max.	Stud Size	Dimensions				Part Numbers				Terminal
			W	L Max.	E Max.	R Max.	Heads for Pneumatic Tools*		Heads & Die Inserts for Power Unit 69120*		
							69015	68068	Head	Die Insert	
4 [21] 33100-52600	.060 1.52	10	.531	1.630	1.362	.625	68038	—	69099	68045 68086	50717
		—	13.49	41.4	34.59	15.88	—	—	—	—	—
		1/4 M6	.531	1.630	1.362	.625	68038	—	69099	68045 68086	50717-1
		—	13.49	41.4	34.59	15.88	—	—	—	—	—
		5/16 M8	.531	1.630	1.362	.625	68038	—	69099	68045 68086	50717-1
		—	13.49	41.4	34.59	15.88	—	—	—	—	—
2 [35] 52600-83700	.060 1.52	3/8	.675	1.702	1.362	.625	68038	—	69099	68045 68086	50717-3
		—	17.15	43.23	34.59	15.88	—	—	—	—	—
		1/2	.675	1.702	1.362	.625	68038	—	69099	68045 68086	50717-5
		—	17.15	43.23	34.59	15.88	—	—	—	—	—
		10MM	.675	1.702	1.362	.625	68038	—	69099	68045 68086	184082-1
		—	17.15	43.23	34.59	15.88	—	—	—	—	—
1/0 [50] 83700-119500	.073 1.85	1/4 M6	.675	1.859	1.541	.625	—	—	69099	68046 68130	51982
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
		5/16 M8	.675	1.859	1.541	.625	—	—	69099	68046 68130	51982-1
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
		3/8	.675	1.859	1.541	.625	—	—	69099	68046 68130	51982-2
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
2/0 [70] 119500-150500	.083 2.11	1/2	.807	1.925	1.541	.625	—	—	69099	68046 68130	51982-3
		—	20.5	48.9	39.14	15.88	—	—	—	—	—
		10MM	.807	1.925	1.541	.625	—	—	69099	68046 68130	184084-1
		—	20.49	48.89	39.14	15.88	—	—	—	—	—
		1/4 M6	.675	1.859	1.541	.625	—	—	69099	68047 68131	51986
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
3/0 [85] 150500-190000	.094 2.39	5/16 M8	.675	1.859	1.541	.625	—	—	69099	68047 68131	51986-1
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
		3/8	.675	1.859	1.541	.625	—	—	69099	68047 68131	51986-2
		—	17.15	47.22	39.14	15.88	—	—	—	—	—
		1/2	.807	1.925	1.541	.625	—	—	69099	68047 68131	51986-3
		—	20.5	48.9	39.14	15.88	—	—	—	—	—
4/0 [105] 190000-231000	.105 2.67	10MM	.807	1.925	1.541	.625	—	—	69099	68047 68131	184087-1
		—	20.49	48.89	39.14	15.88	—	—	—	—	—
		5/16 M8	.926	1.930	1.560	.625	—	—	69099	68048 68132	51989-1
		—	23.52	49.02	39.62	15.88	—	—	—	—	—
		3/8	.926	1.930	1.560	.625	—	—	69099	68048 68132	51989-2
		—	23.52	49.02	39.62	15.88	—	—	—	—	—
250 MCM [127] 23100-300000	.130 3.30	1/2	.926	1.930	1.560	.625	—	—	69099	68048 68132	51989-3
		—	23.52	49.02	39.62	15.88	—	—	—	—	—
		10MM	.926	1.930	1.560	.625	—	—	69099	68048 68132	184090-1
		—	23.52	49.02	39.62	15.88	—	—	—	—	—
		7/16	1.020	2.112	1.645	.625	—	—	69099	68049 68133	51992-2
		—	25.91	53.64	41.66	15.88	—	—	—	—	—
300 MCM [152] 300000-380000	.140 3.56	1/2	1.020	2.112	1.645	.625	—	—	69099	68049 68133	51992-3
		—	25.91	53.64	41.66	15.88	—	—	—	—	—
		10MM	1.020	2.112	1.645	.625	—	—	69099	68046 68130	184092-1
		—	25.91	53.64	41.66	15.88	—	—	—	—	—
		1/2	1.087	2.178	1.676	.625	—	—	69099	318106-1	51995-2
		—	27.61	55.32	42.57	15.88	—	—	69082	68050 68129	—
400 MCM [203] 380000-478000	.158 4.01	10MM	1.087	2.178	1.676	.625	—	—	69099	318106-1	184094-1
		—	27.61	55.32	42.57	15.88	—	—	69082	68050 68129	—
		250 MCM [127]	1.426	2.602	1.987	.625	—	—	69082	68034	52559-4
		—	36.22	66.09	50.47	15.88	—	—	—	—	—
		300 MCM [152]	1.535	2.671	2.056	.625	—	—	69082	68035	52558-4
		—	38.99	67.84	52.22	15.88	—	—	—	—	—
500 MCM [253] 478000-600000	.182 4.62	1/2 M12	1.738	2.790	2.175	.625	—	—	69082	68036	52568-4
		—	44.15	70.87	55.25	15.88	—	—	—	—	—
		500 MCM [253]	2.004	3.187	2.447	.750	—	—	69082	68037	52569-4
		—	50.9	80.95	62.15	19.05	—	—	—	—	—

6 \*First (top) part numbers denote bar crimp tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support  
USA: 1-800-522-6752  
Canada: 1-905-475-6222  
Mexico: 01-800-733-8926

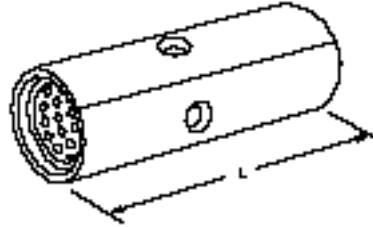
www.tycoelectronics.com

## Butt Splices

### Wire Size Range:

**Aluminum – AWG 16 to 10**  
[1.25 to 5.0 mm<sup>2</sup>], CMA 2,050 to 13,100

**Copper – AWG 18 to 12**  
[0.8 to 3 mm<sup>2</sup>], CMA 1,290 to 8,230



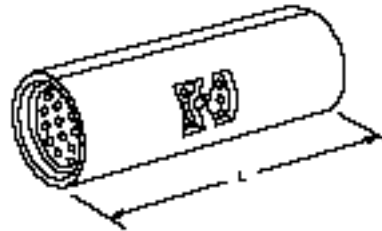
Wire Size [mm <sup>2</sup> ] Circular Mils		Dim. L Max.	Hand* Tool	Part Numbers		Splice
Aluminum	Copper			Heads for Pneumatic Tools*		
				6-26	68068	
16-14 [1.25]	18-16 [0.8]	.701 17.81	68041 68140-1	— 189447-1	68104 68100	52001
2050-5180	1290-3260					
12-10 [5.0]	14-12 [3.0]	.799 20.29	68042 68141-1	— 189444-1	68104,68105 68100,68101	52004
5180-13100	3260-8230					

\*First (top) part numbers denote crimp bar tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

### Wire Size Range:

**Aluminum – AWG 8 to 4/0**  
[8.0 to 105 mm<sup>2</sup>], CMA 13,100 to 231,000

**Copper – AWG 12 to 3/0**  
[5.0 to 85 mm<sup>2</sup>], CMA 5,180 to 190,000



Wire Size [mm <sup>2</sup> ] Circular Mils		Dim. L Max.	Part Numbers					Splice
Aluminum	Copper		Heads for Pneumatic Tools*		Tooling for Power Unit 69120*			
			6-26	69015	68068	Head	Die Insert*	
8 [8.0]	12-10 [5.0]	1.195 30.35	— 1320369-1**	68032 68081	68105 68101,68192-1	69099	68043 68084	51826
13100-20800	5180-13100							
6 [14]	8 [8.0]	1.340 34.04	—	69999 68082	68106 68102	69099	68044 68085	51941
20800-33100	13100-20800							
4 [21]	6 [14]	1.630 41.4	—	68038 —	—	69099	68045 68086	51942
33100-52600	20800-33100							
2 [35]	4 [21]	1.995 50.67	—	—	—	69099	68046 68130	52007
52600-83700	33100-52600							
1/0 [50]	2 [35]	1.985 50.42	—	—	—	69099	68047 68131	52010
83700-119500	52600-83700							
2/0 [70]	1/0 [50]	1.985 50.42	—	—	—	69099	68048 68132	52013
119500-150500	83700-119500							
3/0 [85]	2/0 [70]	1.985 50.42	—	—	—	69099	68049 68133	52016
150500-190000	119500-150500							
4/0 [105]	3/0 [85]	1.985 50.42	—	—	—	69099	— 318106-1	52019
190000-231000	150500-190000					69082	68050 68129	

\*First (top) part numbers denote crimp bar tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

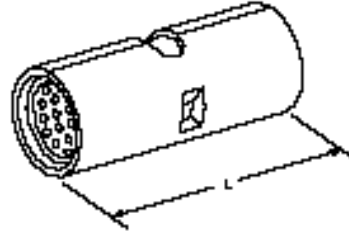
\*\*Requires Hand Actuated Power Unit Part No. 189721-2 or Foot Actuated Power Unit Part No. 189722-2.

## Butt Splices (Continued)

### Wire Size Range:

**Aluminum – AWG 250 to 500 MCM**  
[127 to 253 mm<sup>2</sup>], CMA 231,000 to 600,000

**Copper – AWG 4/0 to 400 MCM**  
[105 to 203 mm<sup>2</sup>], CMA 190,000 to 478,000



Wire Size [mm <sup>2</sup> ] Circular Mils		Dim. L Max.	Part Numbers		Splice
Aluminum	Copper		Tooling for Power Unit 69120		
			Head	Die Insert*	
250 MCM [127] 231000-300000	4/0 [105] 190000-231000	<b>2.093</b> 53.16	69082	68034	52560
300 MCM [152] 300000-380000	250 MCM [127] 231000-300000	<b>2.217</b> 56.31	69082	68035	52561
400 MCM [203] 380000-478000	300 MCM [152] 300000-380000	<b>2.467</b> 62.66	69082	68036	52562
500 MCM [253] 478000-600000	400 MCM [203] 380000-478000	<b>2.811</b> 71.4	69082	68037	52563

\*Bar crimp tooling.

### Important:

Butt splices will accept the same wire size at either end for aluminum-to-aluminum applications. However, for aluminum-to-copper applications, when using bar crimp tooling, the size of the copper wire should be stepped down using one smaller wire size to compensate for the differences in the physical properties between copper and aluminum. For the correct butt splice to use, refer to the CMA ranges listed with each part number.

When two or more wires are used in either end of a butt splice, the combined cross-section area must be within the CMA range listed.

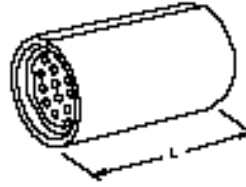
**Warning: Not approved for reconnection of residential aluminum branch circuit wiring. (Refer to Catalog #82205.)**



## Parallel Splices

### Wire Size Range:

Aluminum – AWG 16 to 4/0  
[1.25 to 105 mm<sup>2</sup>], CMA 2,050 to 231,000



Wire Size [mm <sup>2</sup> ] Circular Mils	Dim. L Max.	Hand Tool*	Part Numbers					Splice
			Heads for Pneumatic Tools*			Tooling for Power Unit 69120*		
			69015	6-26	68068	Head	Die Insert	
16-14 [1.25] 2050-5180	.283 7.19	68041 68140-1	—	— 189447-1	68104 68100	—	—	52791
12-10 [5.0] 5180-13100	.375 9.53	68042 68141-1	—	— 189444-1	68104,68105 68100,68101	—	—	52792
8 [8.0] 13100-20800	.437 11.1	—	68032 68081	— 1320369-1**	68105 68101,68192-1	69099	68043 68084	52745
6 [14] 20800-33100	.450 11.43	—	69999 68082	—	68106 68102	69099	68044 68085	52746
4 [21] 33100-52600	.562 14.27	—	68038	—	—	69099	68045 68086	52747
2 [35] 52600-83700	.781 19.84	—	—	—	—	69099	68046 68130	52748
1/0 [50] 83700-119500	.734 18.64	—	—	—	—	69099	68047 68131	52749
2/0 [70] 11950-150500	.734 18.64	—	—	—	—	69099	68048 68132	52750
3/0 [85] 150500-190000	.749 19.02	—	—	—	—	69099	68049 68133	52751
4/0 [105] 190000-231000	.765 19.43	—	—	—	—	69082 69099	68050 68129 318106-1	52752

\*First (top) part numbers denote bar crimp tooling. Second (bottom) part numbers denote insulation piercing crimp tooling.

\*\*Requires Hand Actuated Power Unit Part No. 189721-2 or Foot Actuated Power Unit Part No. 189722-2.

### Important:

When two or more wires are used in a parallel splice, the combined cross-section area must be within the CMA range listed.

**Warning: Not approved for reconnection of residential aluminum branch circuit wiring. (Refer to Catalog #82205.)**

## Tooling

### Manually Operated Tools

These tools are designed for hand operation and low volume production work or where power is not available. They feature the CERTI-CRIMP ratchet device for controlled compression crimping to provide uniform terminations consistently.



Heavy Head Hand Tool

### Pneumatic Tools

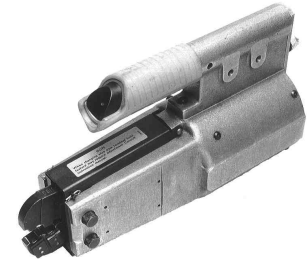
Designed for medium production, these semi-automatic power tools offer the convenience of hand tools plus the effortless precision and speed of machines. They are built for long, rugged service and are equipped with removable crimping dies for terminating a variety of AMP products.



6-26 Pneumatic Tool  
(See Catalog 124208 for part numbers and more information.)



Pneumatic Tool  
Part No. 69015



Pneumatic Tool  
Part No. 68068 – As shown  
Part No. 68068-3 – Foot pedal;  
can be bench mounted

### DYNA-CRIMP Tools

Power Unit Only (Includes Pressure Release)  
115 Volts — 69120-1  
230 Volts — 69120-2

The DYNA-CRIMP Power Unit can be equipped with various heads and dies for terminating COPALUM products in wire ranges from AWG 8 to 500 MCM [8 to 253 mm<sup>2</sup>]. A complete line of accessories is also available, permitting use in portable and stationary applications, as well as for multi-head crimping.



Electro-Hydraulic Power Unit



Power Unit  
Crimping Head  
Part No. 69099



Power Unit  
Crimping Head  
Part No. 69082

### Accessories for DYNA-CRIMP Tools

Accessory Part Number	Description	Power Unit Part Number
59907-7	7 ft. [2.13 m] Handle Control Assembly—Hose and Cord	Pressure Release on Power Unit Only
1-59907-5	15 ft. [4.57 m] Handle Control Assembly—Hose and Cord	
2-59907-1	21 ft. [6.4 m] Handle Control Assembly—Hose and Cord	
2-59908-1	21 ft. [6.4 m] Handle Control Assembly—Cord (Less Hose)	
2-59907-8	28 ft. [8.53 m] Handle Control Assembly—Hose and Cord	
68284-1	15 ft. [4.57 m] Foot Switch Assembly (needs hose assembly)	69120-1 69120-2
59909-3	3 ft. [0.91 m] Hose Assembly	
59909-7	7 ft. [2.13 m] Hose Assembly	
1-59909-5	15 ft. [4.57 m] Hose Assembly	
2-59909-1	21 ft. [6.4 m] Hose Assembly	
59220	3-way Multi-Directional Valve	For use with Foot Switch only
59220-2	3-way Multi-Directional Valve (Elec. Control)	
59221	6-way Multi-Directional Valve	

For additional tooling information call 1-800-522-6752.

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**Numerical Index**

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**Note:** This numerical index lists all cataloged parts by base no. only. Complete part nos. (with prefixes and/or suffixes) are shown on the page(s) indicated.

<b>Part No.</b>	<b>Page</b>	<b>Part No.</b>	<b>Page</b>
50717	6	52563	8
50719	5	52568	6
50720	5	52569	6
51826	7	52587	5
51941	7	52590	5
51942	7	52745	9
51979	5	52746	9
51982	6	52747	9
51986	6	52748	9
51989	6	52749	9
51992	6	52750	9
51995	6	52751	9
52001	7	52752	9
52004	7	52791	9
52007	7	52792	9
52010	7	184076	5
52013	7	184079	5
52016	7	184082	6
52019	7	184084	6
52558	6	184087	6
52559	6	184090	6
52560	8	184092	6
52561	8	184094	6
52562	8		



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