

# Aluminum Products

*Experience. Technology. Answers.*



**FCI** BURNDY  
PRODUCTS

## Why Aluminum vs. Copper?

- Lower cost
- Lighter material
- High conductivity
- Easier to manipulate during installation
- Dual-rated for use in Bi-Metallic Applications

## Why Mechanical?

- Easy to install
- Does not require special installation tooling
- Reusable
- Accommodates a wide range of cable
- One wrench installation
- High mechanical strength

## Why Compression?

- Irreversible installation
- High holding strength
- Meets industry standards
- High quality connections at a low installed cost
- Connector barrels pre-filled with PENETROX® oxide inhibiting compound to minimize galvanic corrosion
  - PENETROX® contains homogeneously suspended metallic particles that penetrate the wire's oxides to establish excellent continuity between the individual strands and the connector barrel for a low resistance connection.

# Compression

## YA-A - HYLUG™

Uninsulated Aluminum Compression Terminals for use with both Copper and Aluminum conductors

Catalog #	Conductor Size	# Bolt Holes	Stud Size	Catalog #	Conductor Size	# Bolt Holes	Stud Size
YA8CA1	8 str.	1	1/0				
YA6CA3	6 str.	1	3/8				
YA4CA1	4 str.	1	1/4				
YA2CA3	2 str.	1	3/8	YA2CA9	2 str.	2	1/2
YA1CA1	1 str.	1	3/8				
YA25A3	1/0 str.	1	3/8	YA25A7	1/0 str.	2	1/2
YA26A6	2/0 str.	1	3/8				
YA26A1	2/0 str.	1	1/2	YA26A3	2/0 str.	2	1/2
YA27A1	3/0 str.	1	3/8				
YA27A3	3/0 str.	1	1/2	YA27A5	3/0 str.	2	1/2
YA28A1	4/0 str.	1	3/8				
YA28A3	4/0 str.	1	1/2	YA28A5	4/0 str.	2	1/2
YA29A1	250 kcmil	1	1/2	YA29A3	250 kcmil	2	1/2
YA30A1	300 kcmil	1	1/2	YA30A3	300 kcmil	2	1/2
YA31A1	350 kcmil	1	1/2	YA31A3	350 kcmil	2	1/2
YA32A1	400 kcmil	1	5/8				
YA34A1	500 kcmil	1	5/8	YA34A3	500 kcmil	2	1/2
YA36A1	600 kcmil	1	5/8	YA36A3	600 kcmil	2	1/2
YA39A1	700/750 kcmil	1	1/2	YA39A5	700/750 kcmil	2	1/2
YA39A3	700/750 kcmil	1	5/8				
YA44A1	1000 kcmil	1	5/8	YA44A3	1000 kcmil	2	1/2



## YS-A - HYLINK™

Uninsulated Aluminum Compression Splices for use with both Copper and Aluminum conductors

Catalog #	Wire Range	Catalog #	Wire Range	Catalog #	Wire Range
YS8CA1	8 str.	YS25A1	1/0 str.	YS30A1	300 kcmil
YS6CA1	6 str.	YS26A1	2/0 str.	YS31A1	350 kcmil
YS4CA1	4 str.	YS27A1	3/0 str.	YS32A1	400 kcmil
YS2CA1	2 str.	YS28A1	4/0 str.	YS34A1	500 kcmil
YS1CA1	1 str.	YS29A1	250 kcmil	YS36A1	600 kcmil
				YS39A1	700/750 kcmil
				YS44A1	1000 kcmil



## YA-A-E - ELINET™

Equipment Line Compression designed with narrow tongues to fit into tight areas. These terminals are designed to be range taking and for use with both Copper and Aluminum conductors.

Catalog #	# of Bolt Holes	Bolt Hole	Aluminum Conventional Size	Aluminum/Copper Expanded Range
YA8CA3S56T14E	1	1/4	#8 AWG	#8 AWG
YA2CA5S53T14E	1	1/4	#2 AWG	#6 - #2 AWG
YA2CA1S91T516E	1	5/16	#2 AWG	#6 - #2 AWG
YA25A1S60T516	1	5/16	1/0 AWG	#1 - 1/0 AWG
YA25A3N69T38E	1	3/8	1/0 AWG	#1 - 1/0 AWG
YA27A10S76T516E	1	5/16	3/0 AWG	#1 - 3/0 AWG
YA30A9N100T516E	1	5/16	300 Kcmil	2/0 AWG - 300 Kcmil
YA30A6N100T38E	1	3/8	300 Kcmil	2/0 AWG - 300 Kcmil
YA30A1N131T12E	1	1/2	300 Kcmil	2/0 AWG - 300 Kcmil
YA31A11N100T516E	1	5/16	350 Kcmil	3/0 AWG - 350 Kcmil
YA31A9N100T38E	1	3/8	350 Kcmil	3/0 AWG - 350 Kcmil
YA32A8N106T516E	1	5/16	400 Kcmil	4/0 AWG - 400 Kcmil
YA34A8N131T38E	1	3/8	500 Kcmil	4/0 AWG - 500 Kcmil
YA34A3N131T12E	2-Nema	1/2	500 Kcmil	4/0 AWG - 500 Kcmil
YA34A7N131T12E	1	1/2	500 Kcmil	4/0 AWG - 500 Kcmil
YA36A9N131TD12E	1	1/2	600 Kcmil	250 - 600 Kcmil
YA36A3N131TD12E	2-Nema	1/2	600 Kcmil	250 - 600 Kcmil
YA39A5N131TD12E	2-Nema	1/2	750 Kcmil	500 - 750 Kcmil Aluminum
YA39A1N131TD12E	1	1/2	750 Kcmil	500 - 750 Kcmil Aluminum & Copper



## AYP/AYPO - HYPLUG™

Aluminum compression adapters designed to terminate both Copper and Aluminum Conductors for use with Mechanical connectors.

Catalog #	Wire Size	
	Pin Configuration	
Straight		
Offset		
AYP6		#6 str.
AYP4		#4 str.
AYP2		#2 str.
AYP1		#1 str.
AYP1/0		1/0 str.
	AYPO2/0	2/0 str.
	AYPO3/0	3/0 str.
	AYPO4/0	4/0 str.
AYP250	AYPO250	250 kcmil
	AYPO300	300 kcmil
AYP350	AYPO350	350 kcmil
	AYPO400	400 kcmil
AYP500	AYPO500	500 kcmil
	AYPO600	600 kcmil
AYP750	AYPO750	700/750 kcmil



## YRB - HYREDUCER™

Compression Reducer inline Splice designed to splice two different conductor sizes and is for use on Aluminum to Copper and Aluminum to Aluminum applications. (For additional sizes contact factory)

Catalog #	Side A	Side B
	Conductor Size	Conductor Size
YRB2U4	#2 - 1 str.	#4 str.
YRB25U2	1/0 str.	#2 - 1 str.
YRB27U25	3/0 str.	1/0 str.
YRB27U26	3/0 str.	2/0 str.
YRB28U26	4/0 str.	2/0 str.
YRB29U28	250 kcmil	4/0 str.
YRB31U28	350 kcmil	4/0 str.
YRB31U29	350 kcmil	250 kcmil
YRB34U31	500 kcmil	350 kcmil
YRB36U31	600 kcmil	350 kcmil
YRB36U34	600 kcmil	500 kcmil
YRB39U34	700 - 750 kcmil	500 kcmil
YRB39U36	700 - 750 kcmil	600 kcmil



# Mechanical

## KSA - TRITAP™ SERUIT

Split Bolt style connector for use in Tap and Splice applications.  
Catalog # **Wire Range Aluminum or Copper**

<b>KSA6</b>	#10 SOL. (.102) - #6 STR. (.184)
<b>KSA4</b>	#10 SOL. (.102) - #4 STR. (.232)
<b>KSA2</b>	#8 SOL. (.146) - #2 STR. (.292)
<b>KSA 1/0</b>	#8 SOL. (.129) - #1/0 STR. (.373)
<b>KSA 2/0</b>	#8 STR. (.146) - #2/0 STR. (.418)
<b>KSA 4/0</b>	#6 STR. (.184) - #4/0 STR. (.528)
<b>KSA 350</b>	#4 STR. (.232) - #350 KCMIL (.681)
<b>KSA 500</b>	#2 STR. COMPACT (.268) - #500 KCMIL (.813)



## BGBL - QIKLUG™

Lay-In style connector for Copper or Aluminum.  
Catalog # **Conductor Range**

<b>BGBL4</b>	4- 14 AWG
<b>BGBL1/0</b>	1/0 - 14 AWG
<b>BGBL250</b>	250 kcmil - 6



## AMS

Mechanical splicer/reducer connectors accommodating both  
Copper and Aluminum Conductors.

Catalog #	Conductor Range Aluminum or Copper
<b>AMS-2</b>	14 - 2
<b>AMS-0</b>	14 - 1/0
<b>AMS-4/0</b>	6 - 4/0
<b>AMS-250</b>	6 - 250
<b>AMS-350</b>	6 - 350
<b>AMS-500</b>	3/0 - 500
<b>AMS-750</b>	250 - 750
<b>AMS-1000</b>	500 - 1000



## KA-U

Universal termination connector made of Tin Plated High Strength Aluminum Alloy for use on both  
Copper and Aluminum Conductors.

Catalog #	Conductor Range	# Of Conductors	Catalog #	Conductor Range	# Of Conductors
<b>KA6U</b>	14 STR. - 6 STR.	1			
<b>KA2U</b>	14 STR. - 2 STR.	1			
<b>KA25U</b>	14 STR. - 1/0 STR.	1	<b>K2A25U</b>	Two: 14 STR. - 1/0 STR.	2
<b>KA26U</b>	6 STR. - 2/0 STR.	1	<b>K2A26U</b>	Two: 14 STR. - 2/0 STR.	2
<b>KA29U</b>	6 STR. - 250	1	<b>K2A29U</b>	Two: 6 STR. - 250	2
<b>KA30U</b>	6 STR. - 300	1			
<b>KA31U</b>	6 STR. - 350	1	<b>K2A31U</b>	Two: 4 STR. - 350	2
<b>KA34U</b>	4 STR. - 500	1			
<b>KA36U</b>	2 STR. - 600	1	<b>K2A36U</b>	Two: 2 STR. - 600	2
<b>KA40U</b>	300 - 800	1	<b>K2A40U</b>	Two: 300 - 800	2
<b>KA44U</b>	500 - 1000	1	<b>K2A44U</b>	Two: 500 - 1000	2
<b>KKA31U-2N</b>	6 STR. - 350	1	<b>K2A31U-2N</b>	Two: 6 STR. - 350	2
<b>KA36U-2N</b>	2 STR. - 600	1	<b>K2A36U-2N</b>	Two: 2 STR. - 600	2
<b>KA40U-2N</b>	300 - 800	1	<b>K2A40U-2N</b>	Two: 300 - 800	2
<b>KA44U-2N</b>	500 - 1000	1	<b>K2A44U-2N</b>	Two: 500 - 1000	2



## BIPC - INSUL-TAP™

Mechanical Insulation Piercing Connector ideally suited for Splicing and  
Tapping for use on both Copper and Aluminum Conductors.

Catalog #	Conductor Run	Conductor Tap	Voltage Rating
<b>BIPC1/0-2</b>	1/0 - 8 AWG	2 - 8 AWG	600V
<b>BIPC4/0-6</b>	4/0 - 1/0 AWG	1/0 - 6 AWG	300V
<b>BIPC4/0-1/0</b>	4/0 - 1/0 AWG	4/0 - 1/0 AWG	300V
<b>BIPC350-4/0</b>	350 - 4/0 AWG	4/0 - 10 AWG	300V
<b>BIPC350-350</b>	350 - 4/0 AWG	350 - 4/0 AWG	300V
<b>BIPC500-4/0</b>	500 - 350 kcmil	4/0 - 4 AWG	600V



## UNITAP™

Clear Insulated Multi-Tap Connectors providing a wide variety of Tap and Splice solutions for Copper or Aluminum.

TWO PORT 1 or 2 SIDED ENTRY			SPLICER / REDUCER	
Catalog #	No. of Ports	Wire Range	Catalog #	Wire Range
Same Side	Offset Side			
<b>BIT4</b>	<b>BITO4</b>	#14 - #4	<b>BISR2</b>	#14 - 2
<b>BIT2/0</b>	<b>BITO2/0</b>	#14 - 2/0	<b>BISR1/0</b>	#14 - 1/0
<b>BIT250</b>	<b>BITO250</b>	#10 - 250	<b>BISR250</b>	#10 - 250
<b>BIT350</b>	<b>BITO350</b>	#10 - 350	<b>BISR350</b>	#10 - 350
<b>BIT600</b>	<b>BITO600</b>	#4 - 600	<b>BISR500</b>	#6 - 500
<b>BIT750</b>	<b>BITO750</b>	#2 - 750		



## MULTIPOINT CONNECTORS

Available in 3-14 port configurations - please contact factory for more details

Catalog #	Catalog #	Wire Range (AWG/kcmil)
Single Sided	Double Sided	
<b>BIBS4</b>	<b>BIBD4</b>	#14 - 4
<b>BIBS2/0</b>	<b>BIBD2/0</b>	#14 - 2/0
<b>BIBS250</b>	<b>BIBD250</b>	#10 - 250
<b>BIBS350</b>	<b>BIBD350</b>	#10 - 350
<b>BIBS600</b>	<b>BIBD600</b>	#4 - 600
<b>BIBS750*</b>	<b>BIBD750</b>	#2 - 750



Note: Add number of Ports required to the end of the catalog number for actual catalog number

\*—Not UL Listed

## BATTERY TOOLS 18 volt Battery powered tools



Die Style	Conductor Range
<i>PAT81KFT18V</i>	8-750 AL / 8-1000 CU
<i>PAT64418V</i>	6-750 AL / 6-100 CU
<i>PAT750XT18V</i>	8-750 AL / 8-750 CU
<i>PAT600HS-18V</i>	8-350 AL / 8-600 CU

## SELF-CONTAINED Mechanically operated tools

Die Style	Conductor Range
<i>Y81KFT</i>	8-750 AL / 8-1000 CU
<i>Y644HS</i>	6-750 AL / 6-100 CU
<i>Y750HS</i>	8-750 AL / 8-750 CU
<i>Y600HS</i>	8-350 AL / 8-600 CU
<i>MY29-3</i>	8-4/0 AL / 8-250 CU
<i>MD6 / MD7</i>	6-4/0 AL / 6-4/0 CU

## REMOTE POWERED Remote powered crimping heads requiring a hydraulic pump producing 10,000 psi



Die Style	Conductor Range
<i>Y81KFTMBH</i>	8-750 AL / 8-1000 CU
<i>Y644MBH</i>	6-750 AL / 6-100 CU
<i>Y750BH</i>	8-750 AL / 8-750 CU

## OTHER ACCESSORY ITEMS AVAILABLE

Oxide Inhibitor	PENETROX® - A, A-13	Available in 1/2, 4 and 8oz bottles
Hardware		
Heatshrink		
Cable ties		

## Design Requirements

BURNDY® connectors for aluminum are designed on the basis of several basic design principles:

1. Connector sections are heavy enough to carry electrical loads and to withstand the forces applied during installation as well as those developed under extreme service conditions of short circuit and expansion and contraction.
2. Contact surfaces are finished and protected to prevent the build-up of non-conducting oxide.
3. Current paths are as short and direct as possible.
4. Connector design avoids crevices in which moisture might accumulate or through which corrosive atmospheres might penetrate.
5. The pressure applied from bolts as well as from compression tools is well distributed over the contact surface and does not weaken the conductor.

## Connector Materials

The materials employed by BURNDY® for use in connectors are chosen because of the suitability of their properties to the particular type of connector involved. For bolted connectors, heat-treatable aluminum alloy is used. This alloy provides the best combination of conductivity and strength.

In connectors designed for installation by means of compression tools, high-conductivity and malleable grade aluminum is used in order to supply the desired ductility.

## Hardware

Prime requirements of the bolts and nuts used to assemble connectors are high strength, corrosion resistance and resistance to galling. BURNDY® aluminum bolts are coated with a lubricant that not only prevents galling, but also results in optimum performance for the recommended installation torques.

## Oxide Film

Oxide film is present on all aluminum surfaces. This film can cause high contact resistance between conductor and connector. Since it is present on each strand of conductor, high and usually unequal resistance is developed between the strands. In order to assure electrical joints of low initial resistance the effects of the oxide film must be offset to prevent reformation during the service life of the connection. PENETROX® compounds were developed for this specific purpose.



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*Technical Papers*  
*Powerpoint of FCI/BURNDY® company overview*  
*PDF Catalog of Aluminum Connectors*  
*Powerpoint of Aluminum Electrical Connections*  
*FAQ's*  
*Additional Contact information*