



Medium & Large HYDENT™

*Crimp Instructions*





## Trust the BURNDY® Engineered System

The BURNDY® Engineered System of coordinating dies, connectors and tools are always designed to work together and engineered to meet stringent, accepted quality standards.

Dies and  
Connectors



+

Tools



=

Safe, easy and  
inspectable connection



- Requirements for a good connection :

- A Correct Connector for the Conductor
- Correct Crimping Tool\*
- Correct Die for the chosen tool



\*Use calibrated tools for optimum results

# Copper Connectors



## Step One

Select the appropriate HYDENT™ connector for the conductor to be crimped and verify the conductor and connector markings are the same.

For better visual identification, the BURNDY connector which accommodates Class A, B & AA (code conductor) will have solid color band(s) on the connector barrel. Flexible Conductors Class G, H, I K & M will have the lettering and narrow bands color coded.



## Step Two

Measure appropriate strip length.  
Line up the connector barrel to the  
wire and mark the cable.

Strip the cable to the needed length  
with a wire stripper or similar tool to  
strip the insulation.

*NOTE: For recommended strip length please refer to  
catalog page of connector or sales drawing.*



## Step Two (Continued)

Strip the insulation carefully to avoid nicking or cutting conductors (wire brush as required).

*Cut Strands*



*Nicked Strands*



*Good Strip*



Strip the insulation to the proper length so the conductor can be fully inserted into the connector barrel.

*Strip Length Too Long*



*Strip Length Too Short*



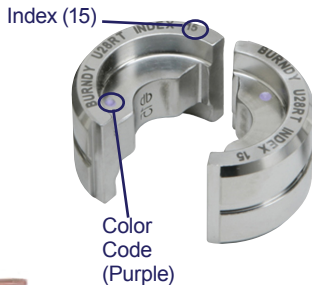
*Strip Length Just Right*





### Step Three

Select the appropriate die style to match the installation tool. The die index number and color code indicated on the connector should match when the correct die is chosen.



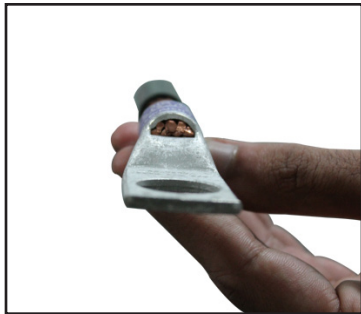
## **Step Four**

Insert the dies into the tool.



## **Step Five**

Insert the conductor fully into the connector barrel. If an inspection window is provided, the conductor end can be easily seen.



## Step Six

Place the connector between the installed dies. Use the color stripes as a guide for crimp placement. Refer to Master catalog pages for required amount of crimps depending on tool and die selected.

*NOTE: It is easier to place the connector on the non-moving top die, allowing the ram die to move up to crimp the connector.*

For terminals: Be sure to always crimp from the tongue end to the conductor end.

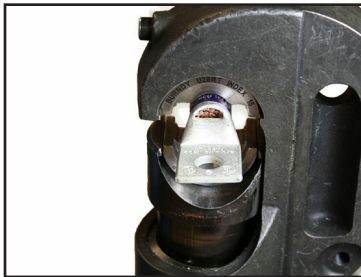
For splices: Standard practice is to start crimping from the middle. Crimping is performed on alternating sides moving out towards the end of the connector.

*Using this process of crimping allows the material to extrude outwards, thereby reducing electrical and mechanical stress points.*



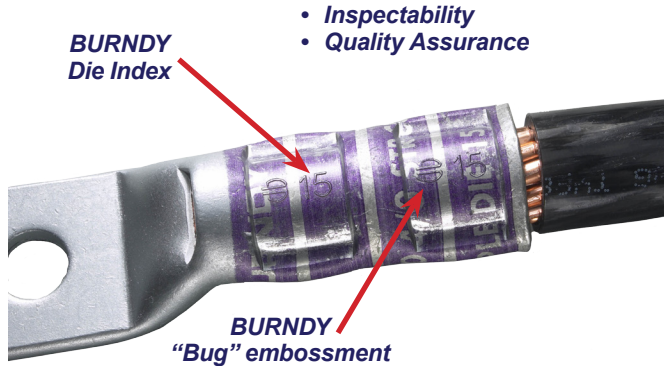
## Step Seven

Begin the tool's crimping cycle and continue until the full cycle is complete. Release ram. Repeat process until all crimp locations on the barrel have been completed. Refer to Master Catalog pages for required amount of crimps depending on tool and die selected.



## Step Eight

Once all crimps have been completed, the connection is ready and can be inspected for proper installation. The embossment made by the die should match that on the connector.



## **Step Nine - Inspection**

Ensure the correct number of crimps were made (see BURNDY catalog, sales drawing or cut sheet).

Ensure the die index embossment matches the die index on the connector markings.

The crimps should be reasonably within the color bands/knurling areas.

## **Step Nine (Continued)**

The orientation of the crimp is not critical on a seamless barrel.

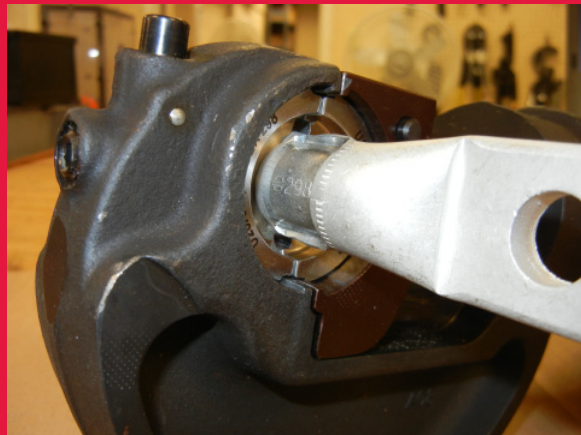
Standard practice for Medium and Large HYDENT™ terminals is not to alternate the crimp direction, but doing so would not negatively affect the integrity of the connector or resulting connection.



# Aluminum Connectors

Dual Rated

Designed for Both Aluminum and  
Copper Code Conductors



## Step One

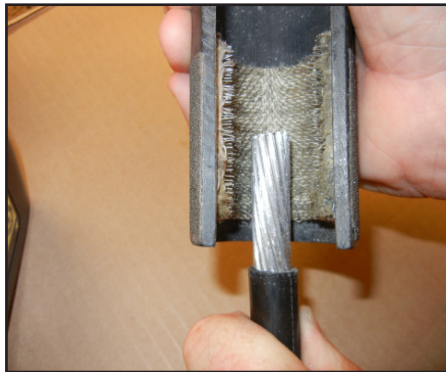
Select the appropriate HYDENT™ connector for the conductor to be crimped and verify the conductor and connector markings are the same. Strip the cable to the needed length with a wire stripper or similar tool to cut the insulation.

For better visual identification, the BURNDY connector has the lettering embossed onto the barrel and tongue.



## Step Two

Scratch brush conductor thoroughly. Aluminum oxidizes very quickly and forms a hard non visual/ non-conductive coating that develops on the surface. It is very important to always wire brush the stripped portion of the wire before making the connections.



## Step Three

Apply PENETROX™ to the conductor to prevent the formation of surface oxides once the connection is made.



## Step Four

Insert the dies into the tool. Place the connector between the installed dies. Align dies between knurls on barrel.

NOTE: It is easier to place the connector on the non-moving top die, allowing the ram die to move and crimp the connector. Be sure to always crimp from the tongue end to the conductor end.



## **Step Five**

Refer to the Master Catalog and/or the sales drawing for the correct number of crimps for the connector chosen.



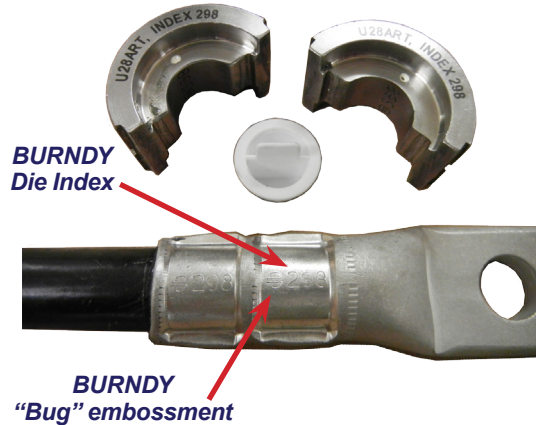
## **Step Six**

Start the crimping tool cycle and hold steady until the entire cycle is complete. Release ram. Repeat the same process until all crimp locations on the barrel have been completed.



## Step Seven

Once all the crimps have been completed, the connection is ready and can be inspected for proper installation. The embossment made by the die should match that on the connector.





## **Step Eight**

Ensure the correct number of crimps were made (see BURNDY catalog, sales drawing or cut sheet).

Ensure the die index embossment matches the die index on the connector markings.

The crimps should be reasonably within the color bands/knurling areas.

## **Step Eight (Continued)**

The orientation of the crimp is not critical on a seamless barrel.

Standard practice for Medium and Large HYDENT™ terminals is not to alternate the crimp direction, but doing so would not negatively affect the integrity of the connector or resulting connection.

## Verification Die Chart - Copper

Connector Size			Color Keyed Die Groove
Copper	Flex	Die Index	
8 AWG	37/24	49	Red
6 AWG	61/24	7	Blue
4 AWG	91/24	8	Gray
2 AWG	125/24	10	Brown
1 AWG	150/24	11	Green
1/0	225/24	12	Pink
2/0	275/24	13	Black
3/0	325/24	14	Orange
4/0	450/24	15	Purple
250MCM	550/24	16	Yellow
300MCM		17	White
350MCM	775/24 (short)	18	Red
400MCM	775/24 (long)	19	Blue
500MCM		20	Brown
600MCM	1100/24	22	Green
700MCM		400	Pink
750MCM		24	Black
800MCM		25	Orange
900MCM	1925/24	26	Yellow
1000MCM		27	White

## Verification Die Chart- Aluminum

Connector Size		Color Keyed Die Groove
AL/CU	Die Index	
10AWG		N/A
8AWG	374	Blue
6AWG	346	Gray
4AWG	375	Green
2AWG	348	Pink
1AWG	471	Gold
1/0	296	Tan
2/0	297	Olive
3/0	467	Ruby
4/0	298	White
250MCM	324	Red
300MCM	470	Blue
350MCM	299	Brown
400MCM	472	Green
500MCM	300	Pink
650MCM	473	Black
700MCM	936	Yellow
750MCM		
1000MCM	302	Brown

## **BURNDY Quality Process**

The start of every day ensure your tools are developing the correct output force.

FORCEGAUGE12-15 force test gauge is a means to ensure your tool is developing the correct output force. The visual reading of the output force is made easy with the solid green bars provided on the gauge. Factory calibrated and inspected to provide customers a high quality test instrument that will assist with quality assurance.



## **BURNDY Quality Process (Continued)**

### **Torque Wrench**

- Section 110.3 (B) of the National Electrical Code (NEC) requires the prudent selection of a tool (i.e. torque wrench) to properly make the connection per the manufacturer's guidelines.

### **WIRE MIKE**

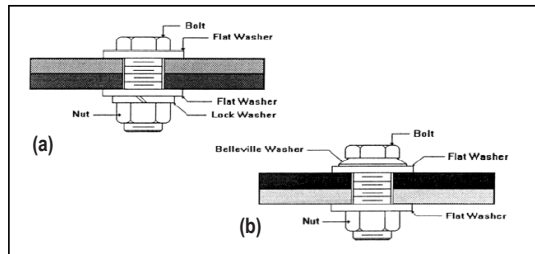
- The wire mike is a useful instrument designed for measuring ACSR, stranded and solid conductors, I.P.S. tubing, rigid and thinwall conduit, inside and outside dimensions of tubing/pipe.



## Hardware Data

Steel Hardware DURIUM™ Hardware		Aluminum Hardware	
Bolt Size	Recommended Torque (in-lb)	Bolt Size	Recommended Torque (in-lb)
1/4-20	80	1/2-13	300
5/16-18	180	5/8-11	480
3/8-16	240	3/4-10	650
1/2-13	480		
5/8-11	660		
3/4-10	1050		

## Recommended Termination Hardware



## Recommended Hardware Materials (Quantity per Bolt)

Materials Being Joined	Bolt	Nut (1)	Flat Washer (2)	Lock Washer (1)	Belleville Washer (1)	Reference Figure
Copper to Copper	SB	SB	SB	SB	NR	(a)
	SS	SS	SS	SS	NR	(a)
Copper to Aluminum	SB*	SB*	SB*	NR	SS	(b)
	SS	SS	SS	NR	SS	(b)
Aluminum to Aluminum	AL	AL	AL	AL	NR	(a)
	SS	SS	SS	NR	SS**	(b)
Copper to Steel	SB	SB	SB	SB	SS**	(a) or (b)
	SS	SS	SS	SS	NR	(a)
	GS	GS	GS	GS	NR	(a)
Aluminum to Steel	SB*	SB*	SB*	NR	SS	(b)
	SS	SS	SS	NR	SS	(b)
	GS	GS	GS	NR	SS	(b)

### Key:

NR	Not Required
SB	Silicon Bronze
AL	Aluminum
SS	Stainless Steel
GS	Galvanized Steel
*	Tin Plated
**	Alternate recommendation in place of lock washer.



## Notes

## Notes



Certificate of Training

Has successfully completed the

**BURNDY® Engineered System Training (B.E.S.T.)**

Date: \_\_\_\_\_

Authorized BURNDY Signature \_\_\_\_\_

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Certificate of Training

Has successfully completed the  
**BURNDY® Engineered System Training (B.E.S.T.)**

Date: \_\_\_\_\_

Authorized BURNDY Signature \_\_\_\_\_

**Customer Service Department**

7 Aviation Park Drive  
Londonderry, NH 03053

**1-800-346-4175**

**1-603-647-5299 (International)**

**Canada**

**1-800-361-6975 (Quebec)**

**1-800-387-6487 (All other provinces)**

**Mexico**

**011-52-722-265-4400**

**Brazil**

**011-55-11-5515-7225**

**Tool Service Center**

Littleton Industrial Park  
Littleton, NH 03561

**1-800-426-8720**

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**Dies and  
Connectors**



+

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Item #50028346

