Medium & Large HYDENT™
Copper & Aluminum Terminal
Crimp Instructions
with 750 Series 12-Ton Tool

T3 TRACK TRACE TRANSMIT

⬡® BURNDY®

Trust the BURNDY® Engineered System

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

Copper Terminal Installation

Aluminum Terminal Installation

Safe and Reliable Connections

For a Burndy connector to be UL Listed and CSA Certified, the **Connection** must be qualified. Burndy Connector qualifications include:
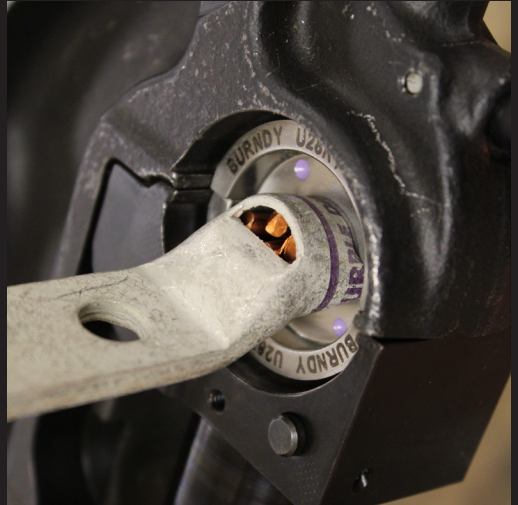
- **Specified Wire:** Material, Type/Class, and Size
- **Specified Connector:** Rated for the Specified Wire
- **Installation Tool:** Specific tool(s) designed to install the Specified Connector
- **Proper Die Set:** Specific die set designed for the specified Installation Tool
- **Proper Installation Procedures:** Follow Burndy's Installation Procedure

BURNDY®

Copper Terminals

Step 1

Select the appropriate connector for the wire being terminated.

**Wire Identification Requirements:**
1. **Wire Material:** Copper, Aluminum
2. **Wire Type/Class:** Solid, Stranded Classes B, C, G, H, I, K, M, DLO
3. **Wire Gauge:** AWG, kcmil

Burndy Connector Types:
- **Code:** Accommodates Solid, Class B (Concentric, Compressed, Compact) & C wire and have a solid thick color band(s) with knockout lettering on the barrel
- **Flex:** Accommodates Classes G, H, I, K, M, DLO and have solid thin color bands with solid color-coded lettering on the barrel

CODE Connector Barrel Markings
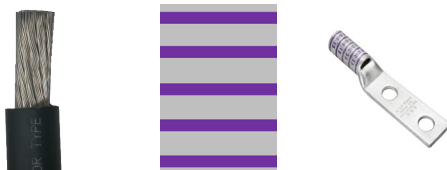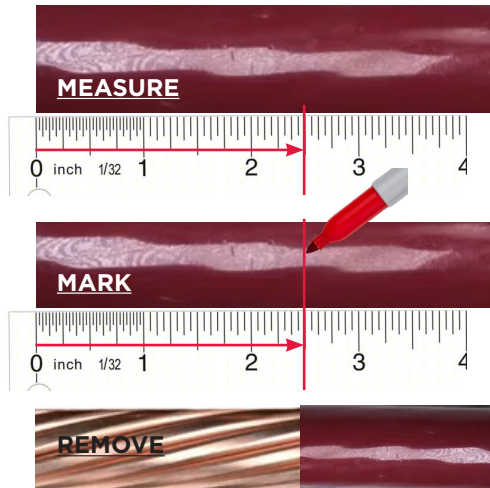

FLEX Connector Barrel Markings

Step 2

Strip the wire to the appropriate length to ensure proper wire insertion.

Wire Stripping:
1. **MEASURE** the appropriate strip length from the end of the wire.
   Wire strip length measurement information can be found in the Burndy Master Catalog, Sales Drawing, and Product Package Label
2. **MARK** the wire insulation to indicate the location where the wire should be stripped.
3. **REMOVE** the insulation with a wire stripping tool exposing the bare wire, while ensuring you are not nicking, cutting, or damaging the strands in the process.

MEASURE

MARK

REMOVE

Step 2 (continued)
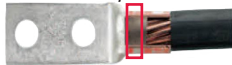
Importance of proper wire stripping.

Strip Length:
Too Long: Excess bare wire exposure
Wire strip length is designed to minimize exposed wire, but exposed wire is aesthetic and does not affect the performance.

Too Short: Wire not fully inserted
If the wire is not fully inserted, the installation may not have full wire contact with the crimp(s) that could affect the performance.

Proper: Wire is fully inserted
Recommended practice to ensure a safe and reliable wire connection that results in 0"-1/4" wire exposure after installation.

Wire Stripping Importance:
Cut and Nicked Strands: Damage can result in higher resistance affecting the safety and reliability of the connection.
Good Strip: Recommended practice as it better ensures a safe and reliable wire connection.

Cut Strands   *Nicked Strands*   *Good Strip*
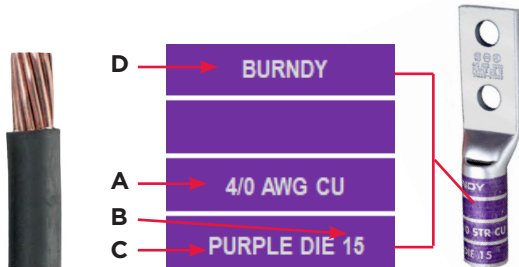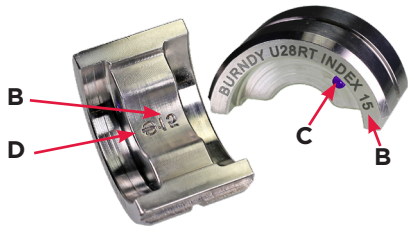
Step 3

Select the appropriate Burndy die set based on the Burndy installation tool being used. This installation is using a Burndy 750 series 12-ton tool requiring a Burndy U-Die.

Proper U-Die Selection:

Verify proper U-Die by matching the following with the wire, connector and die:

A.   Wire Accommodates
B.   Die Index Number
C.   Color Code
D.   Burndy Corporate Identifiers

Step 4

Insert U-Die into the 750 series installation tool.

Inserting Dies:

1. For battery operated tools, as a safety measure, it is recommended that the installer remove the battery prior to inserting dies to avoid accidently actuating the tool
2. For the upper and lower die halves, press the die release button and slide the die half inside the tool's die channel until the dies are seated halfway into the tool head
3. Release the die release button and wiggle the die half until the locking button seats in the die locking channel.
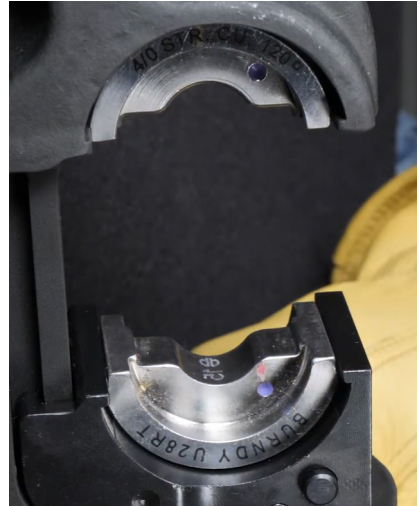
Step 5

Insert the stripped wire into the connector barrel.

Inserting Wire:

1. Before inserting the wire into the connector barrel, visually verify the proper wire strip length by butting the insulation of the stripped wire to the end of the barrel. Visually verify that the bare wire extends beyond the crimp zone bands. (Figure 1)
2. Once verified, insert the bare wire fully into the barrel. Be sure to butt the insulation to the end of the barrel for full wire insertion.* (Figure 2)

If the connector has an inspection window, the installer can verify full insertion through the inspection window.
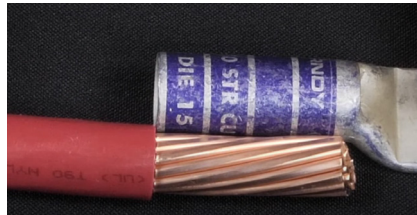
Figure 1

Figure 2

Step 6

Crimp the connector. *Recommended practice is to not alternate or rotate crimps for medium and large HYDENT™ products. Before crimping, be familiar with the proper number of crimps, crimp direction, and crimp location. Number of crimps can be found in the Burndy Master Catalog, the product label or website.*

Fig 1

Crimping:

1. Place the connector against the top die, oriented as shown, and aligned in the die with the proper crimp location on the bands. (Fig. 1)
2. Once the barrel is properly aligned in the tool, begin the tool's crimp cycle until you hear the audible popping sound from the tool. Tools may also have a visual light indicator letting an installer know when the tool has reached a full crimp cycle. (Fig. 2)
3. Repeat steps 1-2 if a connector requires more than one crimp.

Fig 2

Step 6 (continued)

To identify the proper number of crimps, crimp location, crimp direction, and view installation videos, scan the QR Code and select the appropriate resource.

Copper Code Terminals

| YA-L SHORT BARREL |
| YA- LONG BARREL |
| YA-E E-LINE |

TERMINAL CONFIGURATOR

TERMINAL OVERVIEW VIDEO

INSTALLATION VIDEO

Number Crimps
Crimp Location
Crimp Direction

Copper Flex Terminals

| YA-L-FX SHORT BARREL |
| YA-FX LONG BARREL |

TERMINAL OVERVIEW VIDEO

TERMINAL CONFIGURATOR
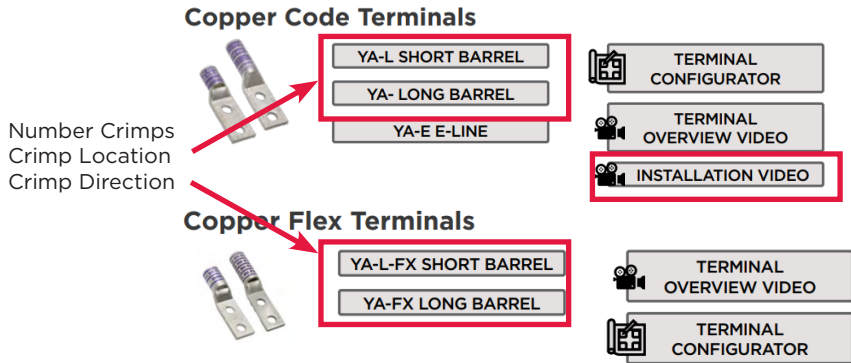
Step 7

Once all the crimps have been completed, the connection is ready to be inspected.

Inspection:

1. Visually verify the Burndy Die Index Number embossment. Unique Die Index number provides the following information:
   - Color Code
   - Wire Material, Wire Construction, and Wire Size
   - Connector Catalog Number Designation
2. Visually verify that the color code of the connector and die match.
3. Visually verify the proper number of crimps were applied.
4. Visually verify that the crimps are reasonably placed and spaced within the crimp zone.
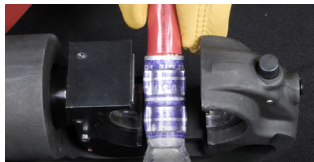
Step 7 (continued)

U-Die Post Crimp Inspection Tool:

WIREMIKECI measures the U-Die crimp and indicates a proper installation with an arrow pointing to the die catalog number used during installation. In this example, the WIREMIKECI will point to the U28RT.

U-Die Catalog Number	Post Crimp Dimension (inches)	Color Code	Die Index #
U8CRT	.196/.226	Red	49
U5CRT	.236/.266	Blue	7
U5CRT	.236/.266	Blue	7
U4CRT	.282/.314	Gray	8
U3CRT	.306/.339	White	9
U2CRT	.352/.385	Brown	10
U1CRT1	.378/.412	Green	11
U25RT	.430/.464	Pink	12
U26RT	.470/.503	Black	13
U27RT	.516/.548	Orange	14

U-Die Catalog Number	Post Crimp Dimension (inches)	Color Code	Die Index #
U28RT	.520/.557	Purple	15
U29RT	.622/.657	Yellow	16
U30RT	.682/.718	White	17
U31RT	.732/.772	Red	18
U32RT	.798/.902	Blue	19
U34RT	.854/.929	Brown	20
U36RT	.986/1.098	Green	22
U38XRT	.976/1.038	Pink	L99
U39RT	1.070/1.152	Black	24
U44XRT	1.108/1.288	Yellow	L115

BURNDY®

Aluminum Terminals

Step 1

Select the appropriate connector for the wire being terminated.

Wire Identification Requirements:
- **Wire Material:** Aluminum or Copper
- **Aluminum Wire Types:** Class B (Concentric, Compressed, Compact)
- **Copper Wire Types:** Class B (Concentric, Compressed, Compact), C
- **Wire Gauge:** AWG, kcmil

Aluminum Dual Rating:
- Aluminum terminals are dual rated for accommodating copper and aluminum wire. See product information for wire type accommodates.

Step 2

Strip the wire to the appropriate length to ensure proper wire insertion.

Wire Stripping:

1. **MEASURE** the appropriate strip length from the end of the wire.
   *Wire strip length measurement information can be found in the Burndy Master Catalog, Sales Drawing, and Product Package Label
2. **MARK** the wire insulation to indicate the location where the wire should be stripped.
3. **REMOVE** the insulation with a wire stripping tool exposing the bare wire, while ensuring you are not nicking, cutting, or damaging the strands in the process.

MEASURE

MARK

REMOVE

Step 2 (continued)

Importance of proper wire stripping.

Strip Length:
Too Long: Excess bare wire exposure
*Wire strip length is designed to minimize exposed wire, but exposed wire is aesthetic and does not affect the performance.

Too Short: Wire not fully inserted
*If the wire is not fully inserted, the installation may not have full wire contact with the crimp(s) that could affect the performance.

Proper: Wire is fully inserted
*Recommended practice to ensure a safe and reliable wire connection that results in 0"-1/4" wire exposure after installation.

Wire Stripping Importance:
Cut and Nicked Strands: Damage can result in higher resistance affecting the safety and reliability of the connection.
Good Strip: Recommended practice as it better ensures a safe and reliable wire connection.

Cut Strands *Nicked Strands* *Good Strip*

Step 3

Select the appropriate Burndy die set based on the Burndy installation tool being used. This installation is using a Burndy 750 series 12-ton tool requiring a Burndy U-Die.

Proper U-Die Selection:

Verify proper U-Die by matching the following with the wire, connector and die:

A. Wire Accommodates
B. Die Index Number
C. Color Code

BARREL MARKING

EMBOSSMENT

Step Four

Insert U-Die into the 750 series installation tool.

Inserting Dies:

1. For battery operated tools, as a safety measure, it is recommended that the installer remove the battery prior to inserting dies to avoid accidentally actuating the tool.
2. For the upper and lower die halves, press the die release button and slide the die half inside the tool's die channel until the dies are seated halfway into the tool head.
3. Release the die release button and wiggle the die half until the locking button seats in the die locking channel.

Step Five

Insert the stripped wire into the connector barrel. Prior to wire insertion, it is recommended that the bare conductor be wire brushed to remove any oxides. (Fig. 1)

Fig 1

Inserting Wire:
1. Before inserting the wire into the connector barrel, visually verify the proper wire strip length by butting the insulation of the stripped wire to end of the barrel and visually verify that the bare wire extends beyond the crimp zone bands. (Fig. 2)
2. Once verified insert the bare wire fully into the barrel. Be sure to butt the insulation to the end of the barrel for full wire insertion. (Fig. 3)

Due to PENETROX™ being prefilled in the barrel, the installer might feel the wire stop once in contact with the PENETROX™. This is not full wire insertion. The installer should apply enough force, so the wire seats fully into the barrel. Be aware that excess PENETROX™ may discharge.

Fig 2

Fig 3

Step Six

Crimp the connector. *Recommended practice is to not alternate or rotate crimps for medium and large HYDENT™ products. Before crimping, be familiar with the proper number of crimps, crimp direction, and crimp location. Number of crimps can be found in the master catalog, product label or website.*

Crimping:

1. Place the connector against the top die, oriented as shown, and aligned based on the proper crimp location. (Fig. 1)
2. Once the barrel is aligned on the tool correctly, begin the tool's crimp cycle until you hear the audible popping sound from the tool. New tools have the audible pop sound and visual light indicator letting an installer know when the tool has reached a full crimp cycle. (Fig. 2)
3. Aluminum connectors are prefilled with PENETROX™ that will seep out of the connector barrel.
4. Repeat steps 1-2 if a connector requires more than one crimp.
5. Remove excess PENETROX™ that may have seeped out of the connector barrel.

Fig 1

Fig 2

Step Six (continued)

To identify the proper number of crimps, crimp location, crimp direction, and installation video, scan the QR Code and select the appropriate resource.

Aluminum Terminals

YA-A

YA-A-E E-LINE

INSTALLATION VIDEO

TERMINAL CONFIGURATOR

TERMINAL OVERVIEW VIDEO

NUMBER CRIMPS
CRIMP LOCATION
CRIMP DIRECTION

INSTALLATION VIDEO

Step Seven

Once all the crimps have been completed, the connection is ready to be inspected.

Inspection:

1. Visually verify the Burndy Die Index Number and Burndy Bug embossment. Unique Die Index number provides the following information:
   • Color Code
   • Wire Material, Wire Construction, and Wire Size
   • Connector Catalog Number Designation
2. Visually verify that the color code of the connector and die match.
3. Visually verify the proper number of crimps were applied.
4. Visually verify that the crimps are reasonable placed and spaced within the crimp zone.

Step Seven (continued)

U-Die Post Crimp Inspection Tool:

WIREMIKECI measures the U-Die crimp and indicates a proper installation with an arrow pointing to the die catalog number used during installation. In this example, the WIREMIKECI will point to the U28ART.
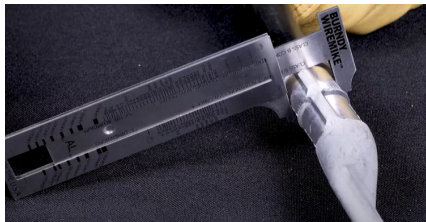
U-Die Catalog Number	Post Crimp Dimension (inches)	Color Code	Die Index #
U8CABT	.228"/.257"	Blue	374
U6CABT	.264"/.296"	Gray	346
U4CABT	.336"/.368"	Green	375
U2CABT	.420"/.452"	Pink	348
U1CART	.436"/.469"	Gold	471
U25ART	.488"/.522"	Tan	296
U26ART	.522"/.588"	Olive	297
U27ART	.620"/.654"	Ruby	467

U-Die Catalog Number	Post Crimp Dimension (inches)	Color Code	Die Index #
U28ART	.695"/.732"	White	298
U29ART	.760"/.796"	Red	324
U30ART	.832"/.868"	Blue	470
U31ART	.880"/.934"	Brown	299
U32ART	.944"/1.006"	Green	472
U34ART	1.058"/1.112"	Pink	300
U36ART	1.174"/1.231"	Black	473
U39ART-2	1.128"/1.195"	Yellow	936

Verification Die Chart
Copper Code &
Flex Terminals

Barrel	Code B, C	Flex G, H, I, K, M, DLO	Die Index & Color Code
YAV10	14-10 AWG	I, K, M, DLO	N/A
YA8C	8 AWG	G, H, I, K, M, DLO	49 Red
YA6C	6 AWG		7 or 37/4 Blue
YAV6C	6 AWG	G, H, I, K, M, DLO	7 or 37/4 Blue
YA5C	5 AWG		7 or 37/4 Blue
YA4C	4 AWG		8 or 346 Gray
YAV4C	4 AWG	G, H, I, K, M, DLO	8 or 346 Gray
YA3C	3 AWG		9 White
YAV3C	3 AWG	G, H, I, K, M, DLO	9 White
YA2C	2 AWG		10 Brown
YAV2C	2 AWG	G, H, I, K, M, DLO	10 Brown
YA1C	1 AWG		11 or 375 Green
YAV1C	1 AWG	G, H, I, K, M, DLO	11 or 375 Green
YA25	1/0 AWG		12 or 348 Pink
YAV25	1/0 AWG	G, H, I, K, M, DLO	12 or 348 Pink
YA26	2/0 AWG		13 Black
YAV26	2/0 AWG	G, H, I, K, M, DLO	13 Black
YA27	3/0 AWG		14 Orange
YAV27	3/0 AWG	G, H, I, K, M, DLO	14 Orange
YA28	4/0 AWG		15 Purple
YAV28	4/0 AWG	G, H, I, K, M, DLO	15 Purple
YA29	250 kcmil		16 Yellow
YAV29	250 kcmil	4/0 AWG G, H, I, K, M, DLO	16 Yellow

Barrel	Code B, C	Flex G, H, I, K, M, DL0	Die Index & Color Code
YA30	300 kcmil		17 or 298 White
YA30		250 kcmil G, H	16 Yellow
YA31	350 kcmil		18 or 324 Red
YA31		250 kcmil I, K, M, 262 DL0	17 or 298 White
YA32	400 kcmil		19 Blue
YA32		300 kcmil G, H, I, K, M 313 DL0	18 or 324 Red
YA34	500 kcmil		20 or 299 Brown
YA34		350 kcmil G, H, I, K, M 373 DL0	19 Blue
YA36	600 kcmil		22 or 472 Green
YA36		500 kcmil H, I, K 550 kcmil G, H, I 555 DL0	20 or 299 Brown
YA38		500 kcmil H, I, K 550 kcmil G, H, I 535 DL0	L99 Pink
YA39	750 kcmil		24 Black
YA39		600 kcmil G, H, I, K 1470/24 DL0	400 Pink
YA40	800 kcmil		25 Orange
YA40		650 kcmil G 646 DL0	24 Black
YA44	1000 kcmil		27 White
YA44		750 kcmil G, H 777 DL0	L115 Yellow

Verification Die Chart
Aluminum Code Terminals

Barrel	Code	Die Index & Color Code
YA8CA-	8 AWG	374 Blue
YA6CA-	6 AWG	346 Gray
YA4CA-	4 AWG	375 Green
YA2CA-	2 AWG	348 Pink
YA1CA-	1 AWG	471 Gold
YA25A-	1/0 AWG	296 Tan
YA26A-	2/0 AWG	297 Olive
YA27A-	3/0 AWG	467 Ruby
YA28A-	4/0 AWG	298 White
YA29A-	250 kcmil	324 Red
YA30A-	300 kcmil	470 Blue
YA31A-	350 kcmil	299 Brown
YA32A-	400 kcmil	472 Green
YA34A-	500 kcmil	300 Pink
YA36A-	600 kcmil	473 Black
YA39A-	750 kcmil	936 Yellow
YA40A-	800 kcmil	474 Gray
YA44A-	1000 kcmil	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
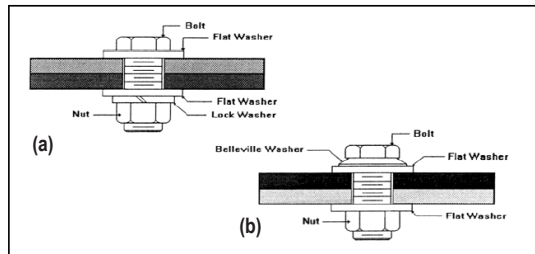
Recommended Hardware Materials (Quantity per Bolt)

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

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

Certificate of Training

_____

has successfully completed the

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

Date: _____   _____

Authorized BURNDY Signature

BURNDY

Certificate of Training

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

has successfully completed the

Date: _____

Authorized BURNDY Signature

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

750 Series Crimp Instruction Booklet

A Hubbell brand HUBBELL