

TABLE OF CONTENTS














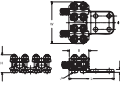



COPPER SUBSTATION			
	Introduction	G-3	
	Type NT Tube to Tube	G-4	 Type HFBW Bar Clamp
	Type NSNT/NHNT Tube to Cable	G-5	 Type HFB-P1 Bar Clamp
	Type NSNT/NHNT Cable to Cable	G-6	 Type HFB-N Tap Pad Adapter.....
	Type VT Cable to Cable	G-7	 Type NA Tube to Flat
	Type NS Tube to Tube.....	G-7	 Type XA Tube to Flat, Expandable
	Type XP Tube to Tube.....	G-8	 Type NAS/NAH Cable to Flat (Terminal).....
	Type B Flexible Braid Jumper ...	G-8 - G-11	 Type N2AH Two Cables to Flat.....
	Type B Assembly Components Expansion Coupler	G-12	 Type VA, VVA Cable to Flat (Terminal).....
			 Type UH Bus Support, Tube.....

TABLE OF CONTENTS (Continued)



Type UHR
Bus Support, Tube or Cable ...G-20



Types LH, LHR
Bus Support, Tube or Cable ...G-21



Type NDR
Stud Connector, Cable,
Tube, Flat BarG-22



Type FD
Stud Connector, Stud to
Flat BarG-23



Type QGFL
Bar Tap, Cable to FlatG-24



Type FCB
Transformer Tap AdapterG-24



Type E-C-G
Transformer Tap AdapterG-25



Type FNG-25

ALUMINUM SUBSTATION
IntroductionG-26



Type NNT-A
Tube to TubeG-27



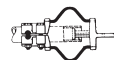
Type NNTR-A
Tube to Cable, Cable to
Cable.....G-27 - G-28



Type NS-A
Tube to TubeG-28



Type NA-A
Tube to Flat.....G-29



Type XA-A
Tube to Flat.....G-29

Type NBC-A
Tube to FlatG-30 - G-31



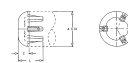
Type NAR-A
Cable to FlatG-32



Type UHG-A
Bus Support, TubeG-33



Type UHKR-A
Bus Support, Tube or Cable ...G-33



Type LB-A
End Cap, Aluminum TubeG-34

Type WAS-A
Terminal ConnectorG-35

Type WASC-A-N
Centerformed TerminalG-36

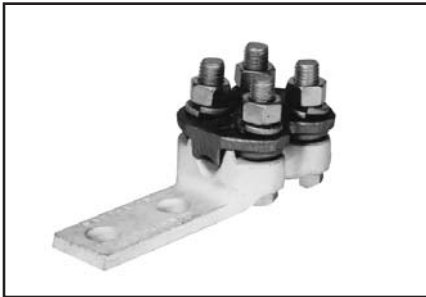
Type WG-A
Weldment Ground StudG-37

COPPER SUBSTATION CONNECTORS

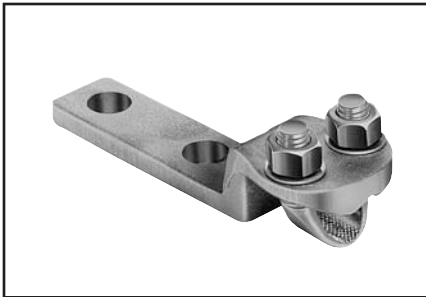
INTRODUCTION

BURNDY® electrical connectors are designed to be installed with a minimum of effort, to run cooler than the conductors being joined and to provide optimum performance under all operating conditions.

To achieve this type of performance, extensive research and development time is spent by BURNDY® engineers and scientists to improve manufacturing techniques, materials and designs. As these improvements become available, they are incorporated into both existing and new product lines. This continuous program of product innovation and improvement insures that, as new and more critical applications evolve, high quality connectors from BURNDY® will be available to meet the need.



N-Line connectors are two-piece copper alloy castings assembled with DURIMUM™ (silicon bronze) hex bolts, nuts and washers. They are available for connecting tube or cable.



The Variline incorporates a modified V-bolt as the clamping element for heavy-duty applications. This line is particularly suited for use with flexible and extra flexible cables.



Flat pad connectors used to join cable or tubing terminals to equipment studs.



A variety of bus supports are also available for tube or cable. Some can be adjusted for either a rigid or slide-fit by rotating the clamping cap 180°.

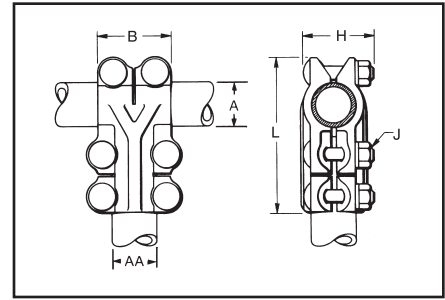
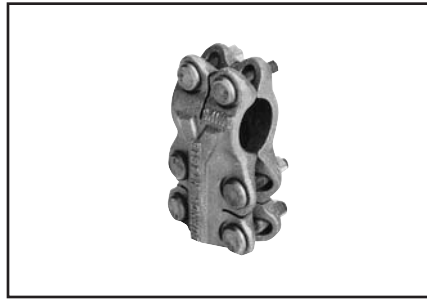
Expansion connectors are used to absorb the stress imposed on the bus by settling ground, thermal expansion and shocks, as in circuit breaker operations. The flexible elements are flat-tinned, copper braid, with sufficient cross sectional area to carry the rated current of the conductors being joined.

TYPE NT

T-CONNECTOR

FOR COPPER TUBE TO TUBE

High copper alloy T-Connector for tubing run and tap. Slots between bolts provide independent high-pressure areas of contact. One-wrench installation.



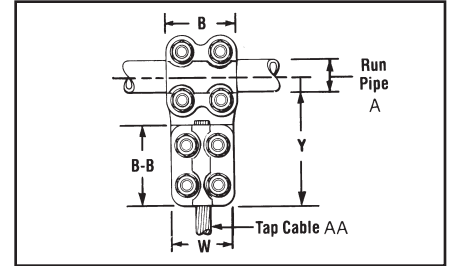
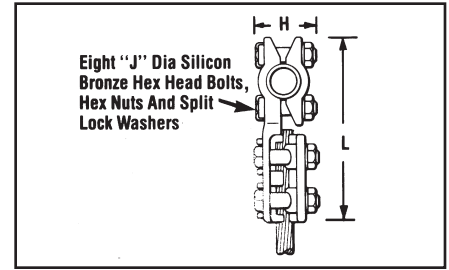
CATALOG NUMBER	CONDUCTOR		B	H	J	L
	RUN 'A'	TAP 'AA'				
NT1313	1/2	1/2	2	1-3/4	3/8	4
NT1413	3/4	1/2		2		4-1/8
NT1414	3/4	3/4		2-1/8		4-3/8
NT1514	1	3/4		2-1/2		4-1/2
NT1515	1	1		2-1/2		4-3/4
NT1614	1-1/4	3/4		2-3/4		1/2
NT1615		1	2	3/8	5-1/8	
NT1616	1-1/4	1-1/4	2-3/4	3-1/4	1/2	6-1/8
NT1714	1-1/2	3/4				3-3/8
NT1715		1	3-5/8	3-7/8	7-1/4	
NT1717	1-1/2	1-1/2	3-1/8	4-5/8	5/8	8-5/8
NT1816	2	1-1/4				4-3/8
NT1817	2	1-1/2	4-7/8	5-1/4	5/8	9-7/8
NT1818	2	2	5-1/2	5-3/4		
NT1919	2-1/2	2-1/2				
NT2020	3	3				
NT2121	3-1/2	3-1/2				
NT2222	4	4				

TYPE NSNT/NHNT

T-CONNECTOR

FOR COPPER TUBE TO CABLE

High copper alloy T-Connector for joining copper tubing run to a wide range of copper tap cable. Tap utilizes reversible cap to achieve large conductor range and the connector is designed for one-wrench installation.



CATALOG NUMBER	RUN IPS OR EHPS A	COMMERCIAL COPPER CABLE RANGE			B	B-B	H	"J" DIA.	L	W	Y
		COMPLETE ① TAP CABLE RANGE AA	SMALL TAP GROOVE	LARGE TAP GROOVE							
NSNT1329	1/2" (.840 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)	2.00	2.38	2.00	3/8"-16	5.08	1.96	3.89
NHNT1329					2.25	2.62	2.32	1/2"-13	5.82	2.44	4.38
NSNT1429	3/4" (1.050 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)	2.00	2.38	2.00	3/8"-16	5.08	1.96	3.89
NHNT1429					2.25	2.62	2.32	1/2"-13	5.82	2.44	4.38
NSNT1434		1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.00	2.38	2.10	3/8"-16	5.08	2.20	3.89
NHNT1434					2.25	2.62	2.42	1/2"-13	5.82	2.56	4.38
NSNT1529	1" (1.315 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)	2.00	2.38	2.00	3/8"-16	5.34	1.96	4.02
NHNT1529							2.57			2.44	
NHNT1534		1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.25	2.62	2.57	1/2"-13	5.92	2.56	4.43
NHNT1540		2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)			2.60		—	2.78	
NSNT1629	1-1/4" (1.660 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)	2.00	2.38	2.37	3/8"-16	5.78	1.96	4.24
NHNT1629							2.57			2.44	
NHNT1634		1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)		2.62	2.60		6.32	2.56	4.63
NHNT1640		2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)	2.69		2.68			2.78	
NHNT1644		4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)		2.88	2.69		6.58	2.90	4.89
NHNT1729			6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	210 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)			2.70		2.44	
NHNT1734	1-1/2" (1.900 Dia.)	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.69	2.62	2.70		6.76	2.56	4.85
NHNT1740		2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)			2.78			2.78	
NHNT1744		4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)		2.88	2.80		7.02	2.90	5.11
NHNT1829	2" (2.375 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)						2.44	
NHNT1834		1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.69	2.62	3.06	1/2"-13	7.44	2.56	5.19
NHNT1840		2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)						2.78	
NHNT1844		4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)		2.88	3.06		7.70	2.90	5.45
NHNT1846		1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	—	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)		3.06	3.23		7.88	3.16	5.63
NHNT1929			6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)						2.44
NHNT1934	2-1/2" (2.875 Dia.)	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.69	2.62	3.64		8.06	2.56	5.50
NHNT1940		2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)						2.78	
NHNT1944		4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)		2.88			8.32	2.90	5.76
NHNT1946		1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	—	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)		3.06			8.50	3.16	5.94
NHNT2044	3" (3.500 Dia.)	4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)		5.75	4.26		8.95	2.90	6.07

① Complete cable range may be accommodated by reversing cap.

BURNDY® Products FCI

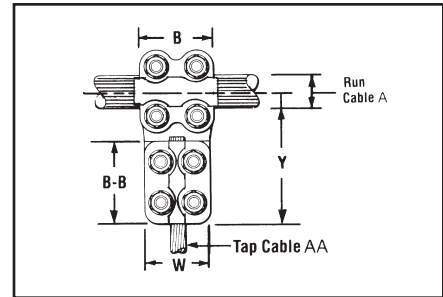
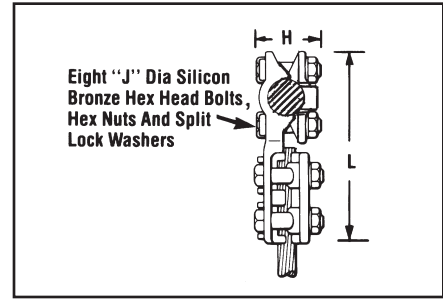
Substation

TYPE NSNT/NHNT

T-CONNECTOR

FOR COPPER CABLE TO CABLE

High copper alloy reversible T-Connector for joining a wide range of run and tap cables. Connector is designed for one-wrench installation. "S" standard 3/8" hardware and "H" heavy duty 1/2" hardware.



CATALOG NUMBER	COMMERCIAL COPPER CABLE RANGE					
	COMPLETE RUN CABLE RANGE A ①	SMALL RUN GROOVE	LARGE RUN GROOVE	COMPLETE TAP CABLE RANGE AA ①	SMALL TAP GROOVE	LARGE TAP GROOVE
NSNT2929	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)
NHNT2929	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NSNT3429	4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)
NHNT3429				1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NSNT3434				1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NHNT3434				1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NHNT4429	500 kcmil (.813 Dia.) to 2000 kcmil (1.632 Dia.)	500 kcmil (.813 Dia.) to 1500 kcmil (1.412 Dia.)	1500 kcmil (1.412 Dia.) to 2000 kcmil (1.632 Dia.)	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.372 Dia.)	2/0 Str. (.420 Dia.) to 250 kcmil (.575 Dia.)
NHNT4434				1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NHNT4440				2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)
NHNT4444				4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)
NHNT4834	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	500 kcmil (.813 Dia.) to 1500 kcmil (1.412 Dia.)	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)
NHNT4840				2/0 Str. (.420 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Str. (.420 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)
NHNT4844				4/0 Str. (.529 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.529 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)
NHNT4846				1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	—	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)
NHNT4848				500 kcmil (.813 Dia.) to 2000 kcmil (1.632 Dia.)	500 kcmil (.813 Dia.) to 1500 kcmil (1.412 Dia.)	1500 kcmil (1.412 Dia.) to 2000 kcmil (1.632 Dia.)

① Complete cable range may be accommodated by reversing cap.

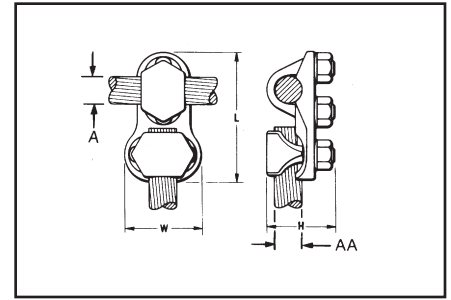
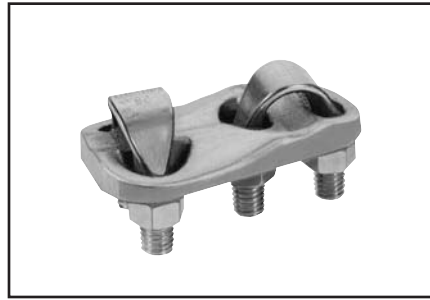
CATALOG NUMBER	B	B-B	H	"J" DIA.	L	W	Y	
NSNT2929	2.38	2.38	1.75	3/8"-16	4.60	1.96	3.62	
NHNT2929	2.62	2.62	2.07	1/2"-13	5.32	2.44	4.10	
NSNT3429	2.38	2.38	2.00	3/8"-16	4.84	1.96	3.74	
NHNT3429	2.62	2.62	2.32	1/2"-13	5.44	2.44	4.16	
NSNT3434	2.38	2.38	2.00	3/8"-16	4.84	2.20	3.74	
NHNT3434	2.62	2.62	2.32	1/2"-13	5.38	2.56	4.10	
NHNT4429	2.88	2.62	2.57		5.78	2.44	4.33	
NHNT4434					2.56			
NHNT4440					2.78			
NHNT4444					6.03	2.90		4.58
NHNT4834	3.25	2.62	3.07		6.26	2.56	4.57	
NHNT4840					2.78			
NHNT4844					6.51	2.90		4.82
NHNT4846					6.76	3.16		5.07
NHNT4848					6.94	3.38		5.25

TYPE VT

T-CONNECTOR

FOR COPPER CABLE TO CABLE

High copper alloy T-Connector for cable run, cable tap, V-bolt clamping elements accommodate large range of cable and are particularly suited for extra flexible cable. One-wrench installation.



Catalog Number	Conductor		H	L	W
	Run - A	Tap - AA			
VT2C2C	8 Sol. - 2 Str.	8 Sol. - 2 Str.	1-3/8	2-3/8	1
VT2525	6 Sol. - 1/0 Str.	6 Sol. - 1/0 Str.	1-5/8	2-5/8	1-1/4
VT2825	1/0 Str. - 4/0 Str.	6 Sol. - 1/0 Str.		3-1/8	
VT2828	1/0 Str. - 4/0 Str.	1/0 Str. - 4/0 Str.			1-1/8
VT3025	1/0 Str. - 300	6 Sol. - 1/0 Str.	1-7/8	3-3/8	2
VT3030	1/0 Str. - 300	1/0 Str. - 300	2-3/8	3-3/4	1-1/4
VT3425	300 - 500	6 Sol. - 1/0 Str.		3-1/2	1-3/4
VT3428	300 - 500	1/0 Str. - 4/0 Str.		3-5/8	2
VT3430	300 - 500	1/0 Str. - 300		3-3/4	2-1/4
VT3434	300 - 500	300 - 500		2-5/8	4-1/2
VT4040	500 - 800	500 - 800	2-7/8	4-3/8	1-1/4
VT4425	750 - 1000	6 Sol. - 1/0 Str.		4-1/8	1-3/4
VT4428	750 - 1000	1/0 Str. - 4/0 Str.	4-1/4	5-1/4	2-1/4
VT4834	1500 - 2000	300 - 500		5-3/4	2-7/8
VT4844	1500 - 2000	750 - 1000			

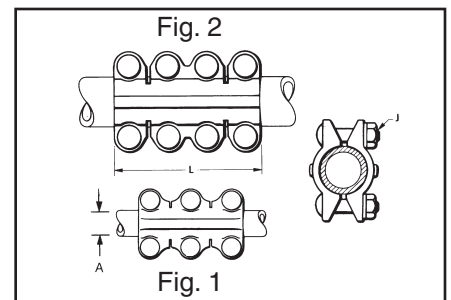
G-7

TYPE NS

COUPLER

FOR COPPER TUBE TO TUBE

High copper alloy coupler for joining equal sizes of tube end to end. Slots between bolts provide independent high pressure areas of contact. One-wrench installation.



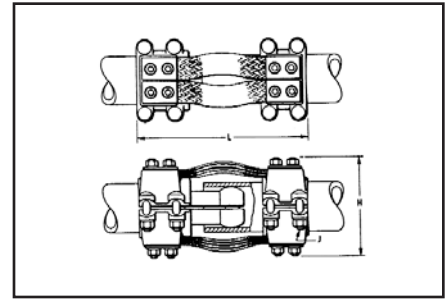
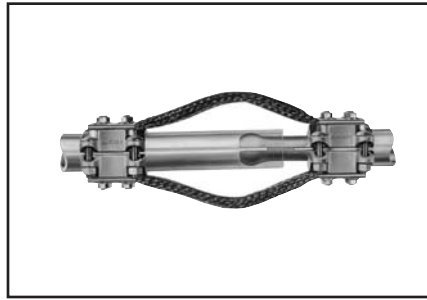
Catalog Number	Conductor - A	Conductor - B	J	L	Fig. No.
NS1313	1/2	1/2	3/8	3-1/4	1
NS1414HC	3/4	3/4		4	
NS1515	1	1		4-1/4	
NS1616HC	1-1/4	1-1/4	1/2	5-3/4	2
NS1717	1-1/2	1-1/2			
NS1818	2	2			
NS1919	2-1/2	2-1/2			
NS2020	3	3	5/8	7-1/4	
NS2121	3-1/2	3-1/2		8	
NS2222	4	4		8-1/2	

TYPE XP

EXPANSION COUPLER

FOR COPPER TUBE TO TUBE

High alloy copper expansion coupler for joining equal size tube on end. Extra flexible tinned copper braid allows longitudinal movement of the tube. Type XP has alignment guide. One-wrench installation.



Catalog Number Standard IPS With Guide	Conductor	H	J	L
XP1313	1/2	3-7/8	3/8	8-3/4
XP1414	3/4	4-1/8		9-1/2
XP1515	1	4-3/8		11-1/2
XP1616	1-1/4	5-7/8	1/2	12
XP1717	1-1/2	6-1/2		13
XP1818	2	7		13-1/2
XP1919	2-1/2	8-1/2	5/8	13-1/2
XP2020	3	7-3/4		13-5/8
XP2121	3-1/2	8		
XP2222	4	9-1/8		

G-8

TYPE B

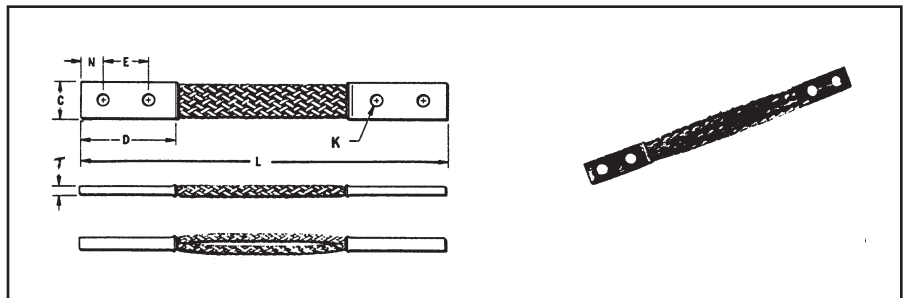
FLEXIBLE COPPER BRAID JUMPER

Flexible copper braid jumpers designed to take up linear expansion and contraction, compensate for misalignment and absorb vibratory movement of electrical equipment and devices.

Made of flat, extra flexible, tinned, pure copper braid, with unplated, seamless, pure copper ferrules formed into a rectangular shape on each end.

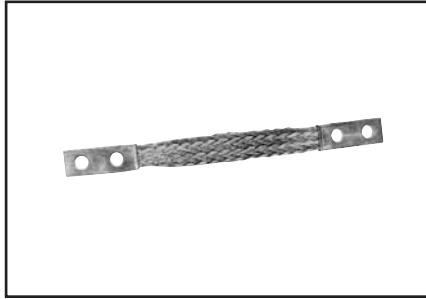
Last two numbers in catalog number indicate total length of braid in inches, e.g., BD12N or BD12 is standard 12" long braid jumper. All braids are available in 12", 18", and 24" lengths.

Other lengths, plating and drilling are available. Refer to factory.



FLEXIBLE COPPER BRAID JUMPER

Copper braid is made of tinned, pure copper wire woven and flattened into a rectangular shape for greater flexibility. Seamless, pure copper ferrules are formed and assembled on each end to provide appropriate contact surfaces.



Braid is used extensively to compensate for expansion and contraction of moving parts and for thermal movement of rigid devices; to prevent breakage of insulators or bushings or equipment because of misalignment during settling of substation foundations; to absorb shock and vibration of operating equipment; and to provide flexible current carrying leads between moving parts of heavy machinery or equipment.

CURRENT CARRYING CAPACITY

Flexible copper braid has generally better heat dissipation properties than flat bar, cable or other conductors, and therefore can be expected to have a greater current carrying capacity for a given cross-sectional area. This is due to its greater surface area resulting from the woven construction of fine strands. However, ventilation, due to the vertical convection current of air, is appreciably better when the long axis of the braid is vertical rather than horizontal, so that the long sides of the braid, rather than the edges, are exposed to the moving air. This is particularly true when spaced braids are used in multiple as can be seen by comparing Figures 1 and 2.

To take full advantage of ventilation, the cooling convection current of air should be permitted to flow freely between the braids. Therefore, if possible, the braids should be spaced apart, rather than bunched together, as illustrated in Figure 3. The effectiveness of spacing is, of course, greater when the braids are in a vertical position.

BULK BRAID

Bulk braid can be ordered with a minimum order quantity of 10 feet. Specify feet in number of inches.

Example: 10 feet of 190 ampere braid is Catalog No. BB077L120.

INDOOR RATING AMPS	EQUIV CIRCULAR AREA	CAT NO.	APPROX WEIGHT PER* FT
190	77,184	BB077L	.24
340	153,700	BB154L	.49
360	231,552	BB226L	.76
415	300,000	BB300L	1.06

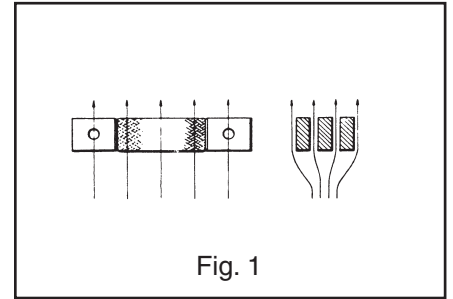


Fig. 1

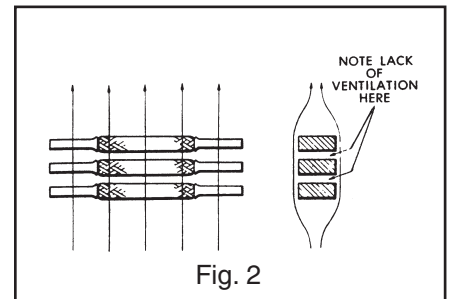


Fig. 2

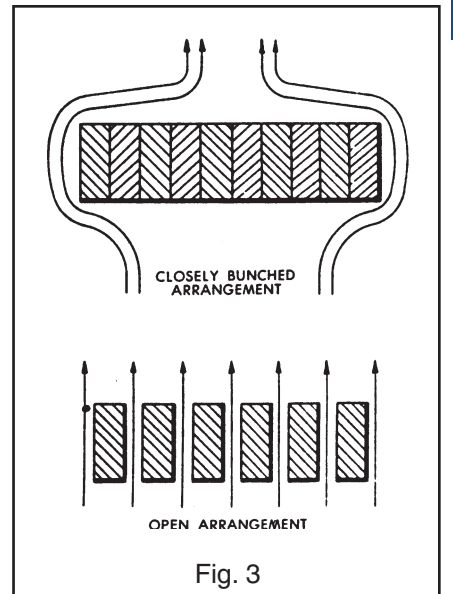


Fig. 3

Cooling Due to Convection Currents Much More Effective with Spaced Braid

FLEXIBLE COPPER BRAID

CUSTOM DESIGNS

Flexible copper braid offers an economical and efficient means of protecting electrical equipment from the potentially harmful effects of shock and vibration, terminal expansion, movement of components and misalignment that may occur during the service life of the equipment.

Many varieties of braid are required to meet those needs which we can build to your specifications.

We also offer engineering assistance in the selection of the most appropriate standard or custom braid configuration for your application.

CUSTOM VARIATIONS

Drilling

- * Undrilled
- * Elongated (slotted) holes
- * Special hole patterns and location
- * Metric
- * NEMA

Plating

- * Tin
- * Silver
- * Nickel
- * Unplated

Length

- * Jumper (overall)
- * Ferrule(s) contact

Insulated (covered)

- * Tubular
- * Heat shrink

Split Braid Assemblies

- * Stacked
- * Side-by-side

Multiple Ferrules

Preformed Configurations

- * Offset contact surfaces
- * Angular (e.g., 90°, 180°) bends
- * Ferrule contact surfaces rotated 90° on braid axis

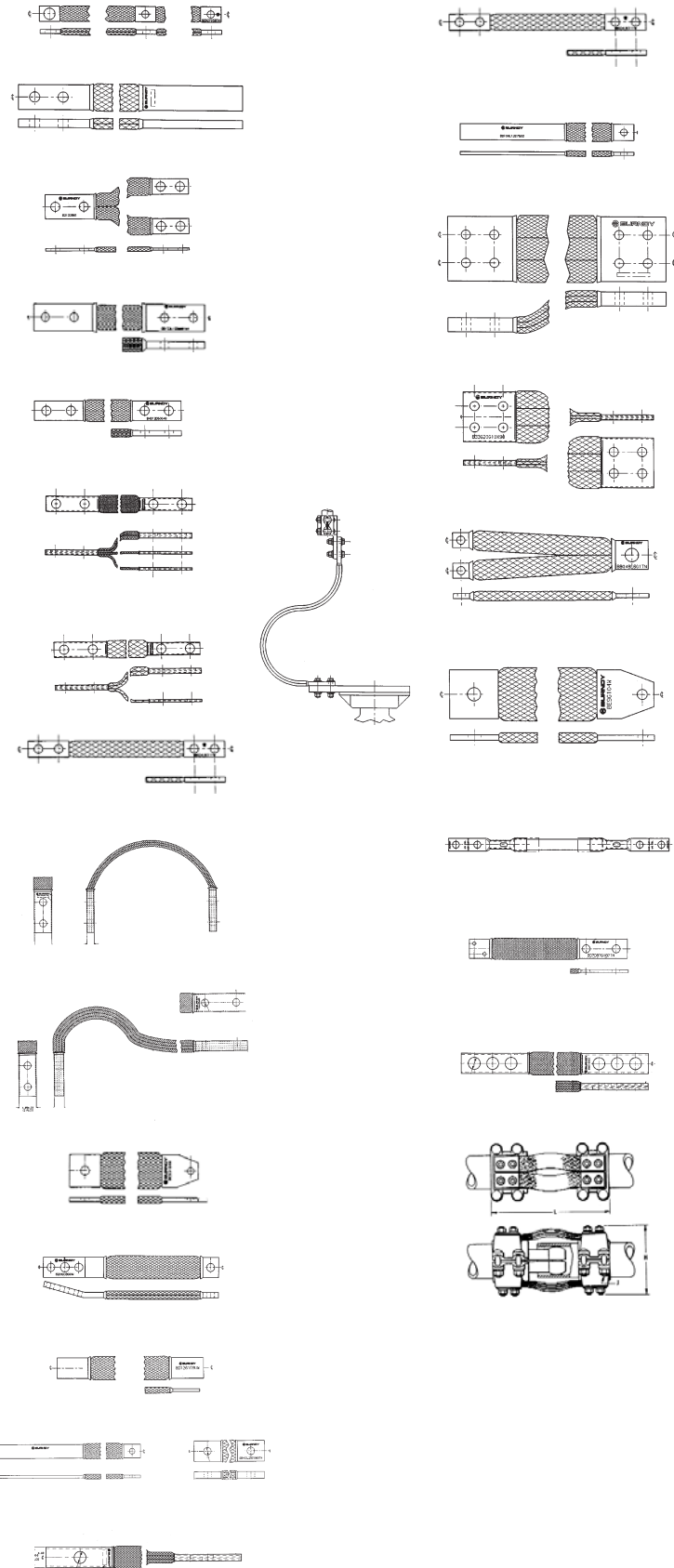
Combined Braid Assemblies

Combined Connector - Braid Assemblies

Ferrule Variations

- * Belled/unbelled
- * Width/thickness
- * Contact length
- * Special shaping
- * Bent at angle °

High Ampacity Requirements

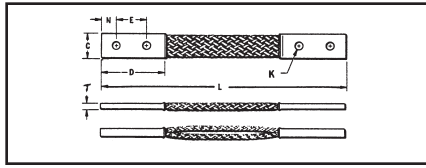


BURNDY® Products FCI

Substation

TYPE B

FLEXIBLE COPPER BRAID JUMPER



CATALOG NUMBER	NO. OF BRAIDS IN FERRULES	C	D	E	K	L	N	T	APPROXIMATE AMPERE RATING*	
									INDOOR	OUTDOOR
BD12 †	1	.94	2.50	1.25	.44	12	.62	.13	190	225
BD12N** †			3.00	1.75	.56	12				
BD18 †			2.50	1.25	.44	18				
BD18N** †			3.00	1.75	.56	18				
BD24 †			2.50	1.25	.44	24				
BD24N** †			3.00	1.75	.56	24				
BE12 †	1	1.50	3.00	1.50	.44	12	.75	.17	340	405
BE12N** †				1.75	.56	12	.62			
BE18 †				1.50	.44	18	.75			
BE18N** †				1.75	.56	18	.62			
BE24 †				1.50	.44	24	.75			
BE24N** †				1.75	.56	24	.62			
BF12 †	1	1.19	3.00	1.50	.44	12	.75	.25	360	430
BF12N** †				1.75	.56	12	.62			
BF18 †				1.50	.44	18	.75			
BF18N** †				1.75	.56	18	.62			
BF24 †				1.50	.44	24	.75			
BF24N** †				1.75	.56	24	.62			
BG12	1	1.50	3.00	1.50	.44	12	.75	.25	415	495
BG12N**				1.75	.56	12	.62			
BG18				1.50	.44	18	.75			
BG18N**				1.75	.56	18	.62			
BG24				1.50	.44	24	.75			
BG24N**				1.75	.56	24	.62			
B2D12 †	2	.94	2.50	1.25	.44	12	.62	.25	380	455
B2D12N** †			3.00	1.75	.56	12	.62			
B2E12		1.62	3.00	1.50	.44	12	.75	.25	530	635
B2E12N**			3.00	1.75	.56	12	.62			
B2F12		1.38	3.00	1.50	.44	12	.75	.38	600	720
B2F12N**			3.00	1.75	.56	12	.62			
B2G12	1.50	3.00	1.50	.44	12	.75	.50	700	840	
B2G12N**		3.00	1.75	.56	12	.62				
B3D12 †	3	1.19	2.50	1.25	.44	12	.62	.25	470	560
B3D12N** †			3.00	1.75	.56	12	.62			
B3E12		1.64	3.00	1.50	.44	12	.75	.31	700	840
B3E12N**			3.00	1.75	.56	12	.62			
B3F12		1.44	3.00	1.50	.44	12	.75	.56	820	980
B3F12N**			3.00	1.75	.56	12	.62			
B3G12	1.69	3.00	1.50	.44	12	.75	.69	960	1150	
B3G12N**		3.00	1.75	.56	12	.62				
B4D12	4	1.19	2.50	1.25	.44	12	.62	.32	600	720
B4D12N**			3.00	1.75	.56	12	.62			
B4E12		1.64	3.00	1.50	.44	12	.75	.38	850	1020
B4E12N**			3.00	1.75	.56	12	.62			
B4F12		1.50	3.00	1.50	.44	12	.75	.78	1000	1200
B4F12N**			3.00	1.75	.56	12	.62			
B4G12	1.69	3.00	1.50	.44	12	.75	.94	1200	1440	
B4G12N**		3.00	1.75	.56	12	.62				

G-11

* This rating may vary with ambient conditions, orientation of the braid and other service conditions.
 ** Tongue drilled per NEMA Standard - 9/16" diameter for 1/2" diameter bolts on 13/4 C to C.

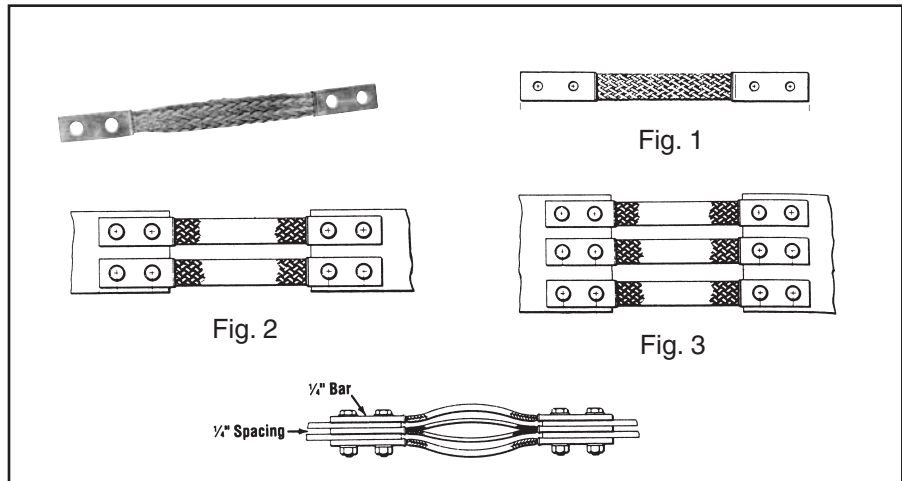
Note: All sizes are listed to UL467 and specific sizes (†) are certified to CSA C22.2, No. 41 Grounding and Bonding Equipment Standards. Equivalent sizes may be designated by suffix letters representing variations in length, mounting configurations, pad size and finish. Contact factory for details.

TYPE B

EXPANSION COUPLER ASSEMBLY COMPONENTS

FOR COPPER BAR

To build your own expansion coupler assembly for single or multiple flat bar(s), using extra flexible tinned copper braid (shown on page 9) and clamping hardware, the following table has been provided. The assembly takes up longitudinal and lateral motion.



G-12

CONDUCTOR COPPER BAR WIDTH ②	⑥ APPROXIMATE AMPERE RATING		EXPANSION COUPLER ASSEMBLY COMPONENTS ①																				
			④ FLEXIBLE COPPER ② BRAID JUMPER		SILICON BRONZE CLAMPING HARDWARE								FIG. NO.										
			QTY.	CAT. NO.	BOLTS		NUTS		SPLIT LOCKWASHER		FLAT WASHER												
NUMBER ③	INDOOR	OUTDOOR	QTY.	CAT. NO.	QTY.	CAT. NO.	QTY.	CAT. NO.	QTY.	CAT. NO.	QTY.	CAT. NO.	NO.										
2	1	700	840	2	B2E12	4	38X125HEB	4	38CHEN	4	38SW	8	38FW	1									
	2	1100	1320	3			38X175HEB																
	3	1600	1920	4			38X225HEB																
	4	1800	2160	3			38X250HEB																
3	1	1000	1200	4	BG12	8	38X125HEB	8	38CHEN	8	38SW	16	38FW	2									
	2	1650	1980	6	B2E12		38X175HEB																
	3	2000	2400	8	BG12		38X225HEB																
	4	2200	2640	8	BG12		38X250HEB																
	4	1	1350	1620	4		B2E12								8	38X125HEB	8	38CHEN	8	38SW	16	38FW	2
		2	2250	2700	2		B2G12 ⑤									38X225HEB							
		3	2700	3240	6		BG12									38X250HEB							
		4	3000	3600	4		B2G12 ⑤									38X325HEB							
5	1	1600	1920	4	B3E12	8	38X125HEB	8	38CHEN	8	38SW	16	38FW	2									
	2	2650	3180	9	B2E12		38X175HEB																
	3	3200	3840	12	BG12		38X225HEB																
	4	3500	4200	15	BG12		38X275HEB																
6	1	1900	2280	6	B2E12	12	38X125HEB	12	38CHEN	12	38SW	24	38FW	3									
	2	3150	3780	3	B2E12		38X175HEB																
				6	B3E12		38X175HEB																
	3	3800	4560	9	BG12		38X250HEB																
				3	B2G12 ⑤		38X250HEB																
	4	4200	5040	9	BG12		38X325HEB																
				6	B2G12 ⑤		38X325HEB																

① Components ordered separately from BURNDY.
 ② See page 11 for flexible copper braid jumper dimensions and drilling.
 ③ Bars listed are 1/4" thick. Multiple bars are spaced 1/4".
 ④ For two hole NEMA drilling in each ferrule add suffix letter "N" to catalog number of braid jumper as shown on page 11.
 EXAMPLE: B2E12 drilling is .44 dia. holes on 1.50" centers.
 B2E12N drilling is .56 dia. holes on 1.75" centers.
 When specifying NEMA drilling bolt diameter in table must be changed from 38 to 50 (length is not changed).

NOTE: Minimum length of each ferrule with NEMA drilling is 3.00".
 ⑤ Braid jumper ferrule (pad) thickness is larger than 1/4" requiring assembly to outer contact surface(s) of multiple (1/4" spaced) bars.
 ⑥ These ratings may vary with ambient conditions, orientation of the braid and other service conditions.
 ⑦ For other combinations and configurations of flat bar contact BURNDY.
 8. For UL/CSA listing see page 11.

TYPE HFBW

BAR CLAMP

FOR COPPER BAR

The clamp assembly eliminates the need for drilling the flat bar and is used in indoor and outdoor applications.

The open web design provides a uniform clamping pressure while minimizing the weight of the connector.

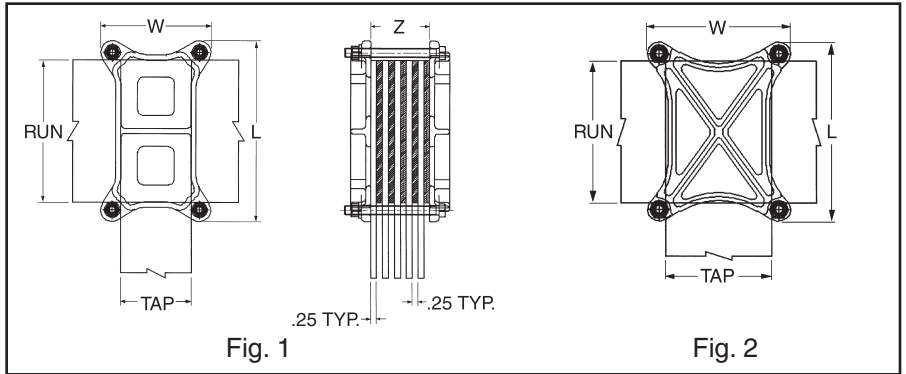
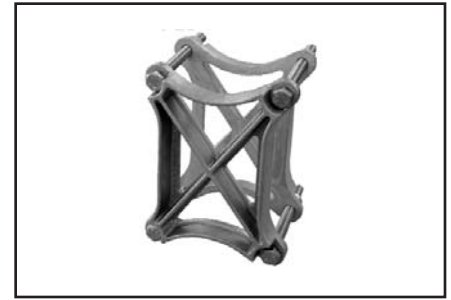
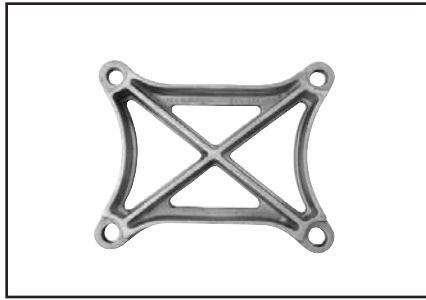


Fig. 1

Fig. 2

FEATURES

- Web design cast copper body.
- Fully threaded yellow galvanized bolts with split-lockwashers and nuts included.
- Flat bar accommodation molded into body.

BENEFITS

- Increased torsional resistance.
- Reduced weight.
- Simple installation.
- Easy identification.

CATALOG NUMBER *	CONDUCTOR		FIG. NO.	STD. MAX. 'Z' DIM.	TOTAL NO. OF FLAT BARS (STD. 1/4" THICK)	BOLT SIZE	DIMENSIONS	
	RUN	TAP					W	L
HFBW86T20CG1	8.0	6.0	2	5.00	20	5/8"-11	8.13	10.13
HFBW66T16CG1	6.0	6.0	2	4.00	16	1/2"-13	7.75	7.75
HFBW64T17CG1	6.0	4.0	2	4.25	17	1/2"-13	5.75	7.75
HFBW63T10CG1	6.0	3.0	1	2.50	10	3/8"-16	4.70	7.63
HFBW62T10CG1	6.0	2.0	1	2.50	10	3/8"-16	3.44	7.44
HFBW44T17CG1	4.0	4.0	2	4.25	17	1/2"-13	5.68	5.68
HFBW43T10CG1	4.0	3.0	2	2.50	10	3/8"-16	4.42	5.42
HFBW42T10CG1	4.0	2.0	1	2.50	10	3/8"-16	3.54	5.55
HFBW32T5CG1	3.0	2.0	1	1.25	5	3/8"-16	3.54	4.55

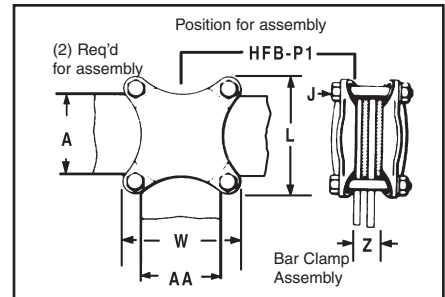
* Catalog number based on standard maximum "Z" dimension. Refer to your FCI representative for non-standard "Z" dimensions.
Add TN suffix for tin plating (example: HFBW86T20CG1TN).
All dimensions in inches.

TYPE HFB-P1

BAR CLAMP ASSEMBLY COMPONENTS

FOR COPPER BAR

To build your own high strength clamp assembly for multiple flat bar using type HFB-P1 bar clamps & clamping hardware, the following tables have been provided. The clamp assembly eliminates the need for drilling the flat bar and is used in indoor and outdoor applications.



ONE CLAMP HALF					
BAR CLAMP CATALOG NUMBER	BUS BAR		"J" BOLT DIA.	L	W
	RUN 'A'	TAP 'AA'			
HFB33P1	3.00	3.00	3/8	4.38	4.38
HFB44P1	4.00	4.00	1/2	5.75	5.75
HFB63P1	6.00	3.00	1/2	7.75	4.75
HFB66P1	6.00	6.00	5/8	8.12	8.12
HFB88P1	8.00	8.00	3/4	10.50	10.50

G-14

COPPER BUS BAR WIDTH (INCHES)	BAR CLAMP ASSEMBLY COMPONENTS †								
	BAR CLAMP		SILICON BRONZE CLAMPING HARDWARE						
			BOLTS**		NUTS		SPLIT LOCKWASHERS		
RUN-A	TAP-AA	QTY.	CAT. NO.	QTY.	CAT. NO.	QTY.	CAT. NO.	QTY.	CAT. NO.
3	3	2	HFB33P1	4	38 X (*) HEB	4	38CHEN	4	38SW
4	4	2	HFB44P1	4	50 X (*) HEB	4	50CHEN	4	50SW
6	3	2	HFB63P1	4	50 X (*) HEB	4	50CHEN	4	50SW
6	6	2	HFB66P1	4	62 X (*) HEB	4	62CHEN	4	62SW
8	8	2	HFB88P1	4	75 X (*) HEB	4	75CHEN	4	75SW

† Ordered separately from BURNDY®.

* Z = Space between the bar clamp contact surfaces.

** See table below when ordering assembly clamping bolts to specify correct bolt length in Cat. #.

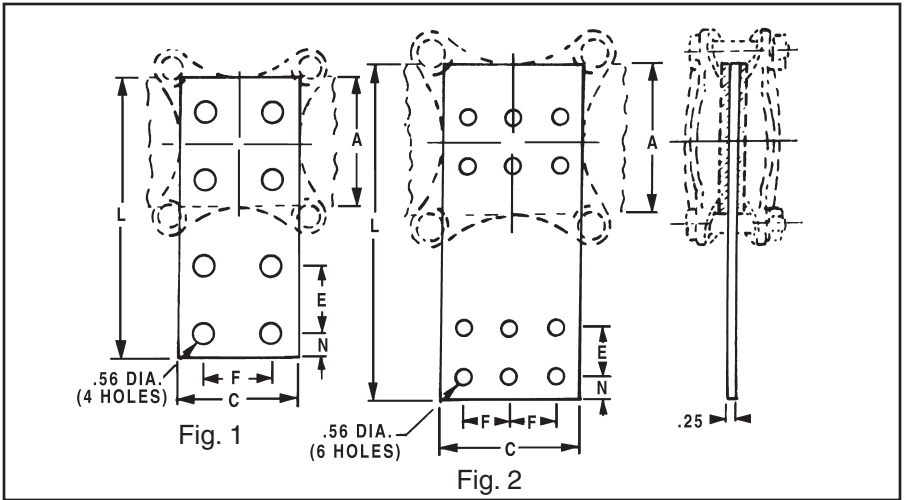
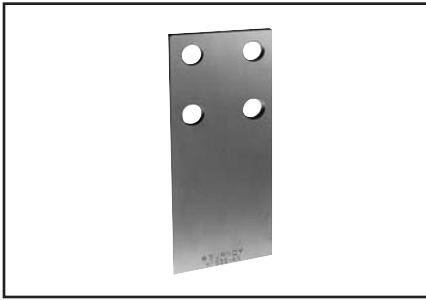
CLAMP NUMBER	'J' BOLT DIA.	BOLT LENGTH**							
		WHEN Z=1.25*	WHEN Z=1.50*	WHEN Z=1.75*	WHEN Z=2.00*	WHEN Z=2.25*	WHEN Z=2.50*	WHEN Z=2.75*	WHEN Z=3.00*
HFB33P1	3/8"(-16)	3.00	3.25	3.50	4.00	4.00	4.50	4.50	5.00
HFB44P1	1/2"(-13)	3.25	3.50	3.75	4.00	4.50	4.50	5.00	5.00
HFB63P1	1/2"(-13)	3.25	3.50	3.75	4.00	4.50	4.50	5.00	5.00
HFB66P1	5/8"(-11)	3.50	4.00	4.00	4.50	4.50	5.00	5.00	6.00
HFB88P1	3/4"(-10)	3.75	4.00	4.50	4.50	5.00	5.00	5.50	5.50

TYPE HFB-N

BAR CLAMP TAP PAD ADAPTER

FOR COPPER BAR

High conductivity copper, tap pad adapter provides a NEMA drilled contact pad when assembled to the HFB-P1 clamps. Tap connections can be made from copper bus bar(s) without drilling by bolting standard mechanical or compression terminal pads directly to the pre-drilled tap pad adapter.



CATALOG NUMBER	FIG. NO.	A-C	E & F	L	N	① USE WITH 'H' CLAMP CAT. NO.
HFB33-4N	1	3.00	1.75	7.00	.62	HFB33P1
HFB44-4N	1	4.00	1.75	9.12	1.12	HFB44P1
HFB66-6N	2	6.00	1.75	11.31	1.12	HFB66P1

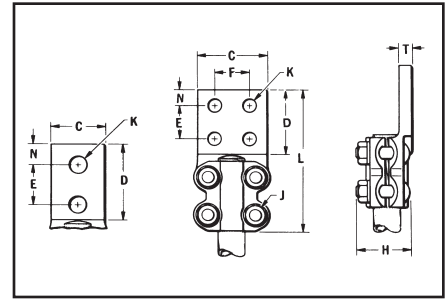
① 'H' Clamp (two required per assembly) and hardware (as shown) not included with bar clamp tap pad, order separately.

TYPE NA

TERMINAL

FOR COPPER TUBE TO FLAT

High copper alloy terminal for joining copper tube to a flat pad. Letter "N" on end of catalog number indicates pad drilled to NEMA standards. One-wrench installation.



CATALOG NUMBER	CONDUCTOR	NO. OF HOLES IN PAD	C	D	E & F	H	J	K	L	N	T	
NA13-2N	1/2	2	1-1/2	3	1-3/4	1-3/4	3/8	9/16	5-1/4	5/8	3/8	
NA14-2N	3/4	2	1-5/8			2	3/8				3/8	
NA15-2N	1	2	1-7/8			2-1/8	3/8				3/8	
NA15-4N	1	4	3			2-1/8	3/8				3/8	
NA16-2N	1-1/4	2	2-1/4			2-5/8	1/2				1/2	
NA16-4N	1-1/4	4	3			2-5/8	1/2				1/2	
NA17-2N	1-1/2	2	2-1/2			2-3/4	1/2	1/2	6	5/8	5/8	1/2
NA17-4N	1-1/2	4	3			2-3/4	1/2	1/2				
NA18-4N	2	4	3-1/8			3-1/8	1/2	1/2				
NA19-4N	2-1/2	4	3-1/4			3-3/4	1/2	1/2				
NA20-4N	3	4	4-3/8			4-3/8	5/8	5/8				
NA21-4N	3-1/2	4	4-3/8			5	5/8	5/8				
NA22-4N	4	4	5-1/4	5-1/2	5/8	5/8	6-5/8	7/8	7/8			

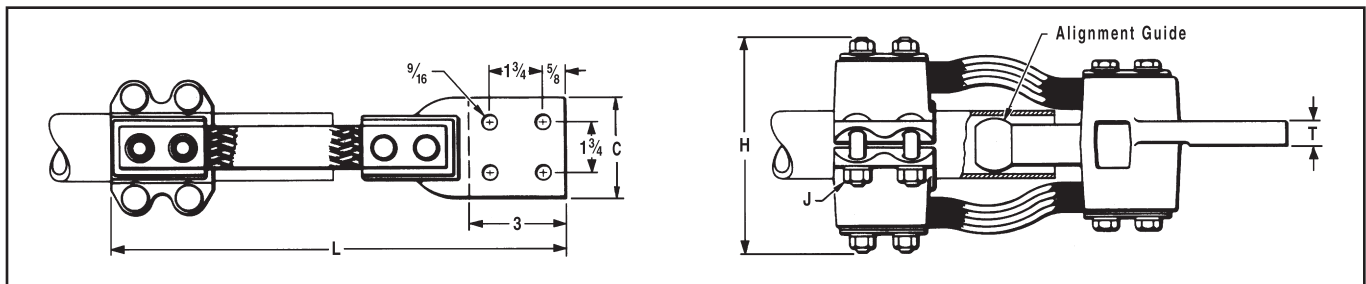
G-16

TYPE XA

EXPANSION TERMINAL

FOR COPPER TUBE TO FLAT

High copper alloy expansion terminal for tube to flat. Provides for longitudinal movement of tubing. Extra flexible braid carries full load of joint. One-wrench installation.



Catalog Number Standard I.P.S. With Guide	Conductor	Number of Holes in Pad*	C	H	J	L	T
XA18-4N	2	4	3	7	1/2	15-1/4	1/2
XA19-4N	2-1/2		3-3/4	7-1/2		16-1/8	5/8
XA20-4N	3		4-3/8	8		16-3/4	3/4
XA21-4N	3-1/2		4-3/4	8-1/4	5/8	17	7/8
XA22-4N	4		5-1/4	9-1/2		17	7/8

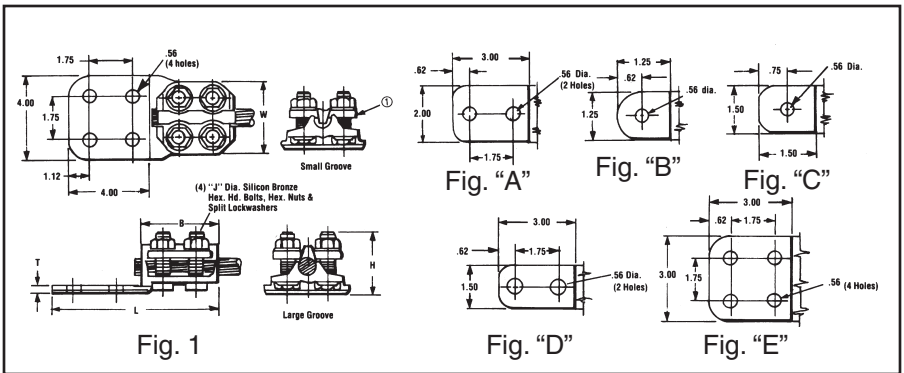
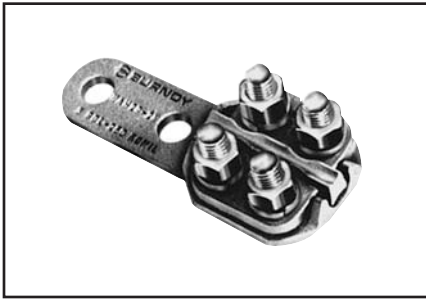
* Conforms to NEMA Standards

TYPE NAS/NAH

TERMINAL

FOR COPPER CABLE

High copper alloy reversible cap terminal for joining a wide range of cable to equipment pads. Tongue is side formed to provide adequate clearance and terminal is designed for one-wrench installation.



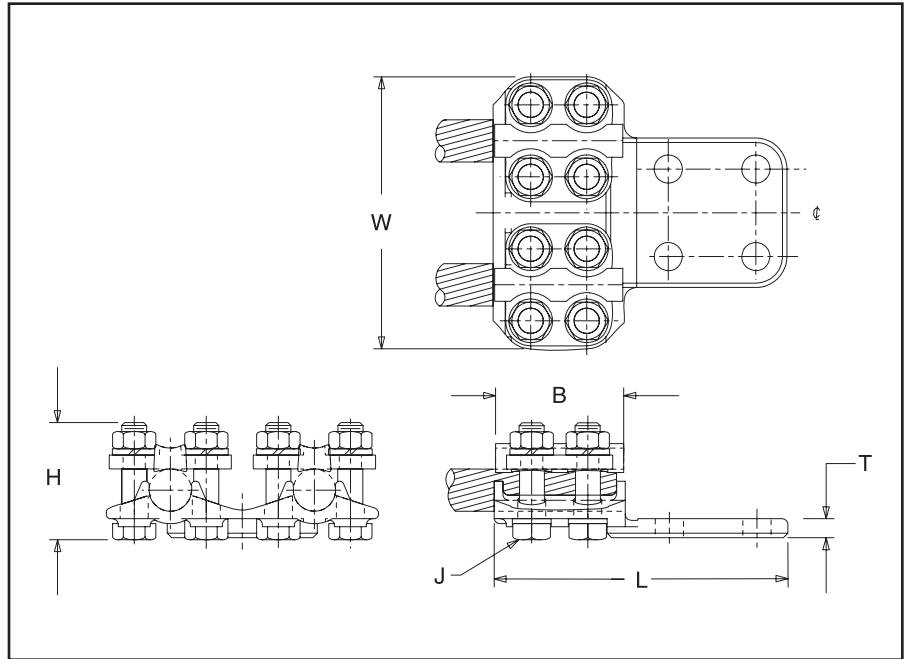
CATALOG NUMBER	FIG. NO.	COPPER CABLE RANGE			B	H	J DIA.	L	T	W	
		COMPLETE CABLE RANGE	SMALL GROOVE	LARGE GROOVE							
NAS29-N	1B	6 Sol. (.162 Dia.) to 250 kcmil (.575 Dia.)	6 Sol. (.162 Dia.) to 1/0 Str. (.373 Dia.)	2/0 Str. (.419 Dia.) to 250 kcmil (.575 Dia.)	2.38	1.80	3/8"-16	3.58	.25	2.00	
NAS29-2N	1D				2.62	2.12	1/2"-13	5.62		2.44	
NAS29-2N	1D						1.80	5.62		2.00	
NAS29-34N	1E						2.38	4.12		2.20	
NAS34-N	1C						2.05	5.62			
NAS34-2N	1A	1/0 Sol. (.325 Dia.) to 500 kcmil (.813 Dia.)	1/0 Sol. (.325 Dia.) to 4/0 Str. (.529 Dia.)	250 kcmil (.575 Dia.) to 500 kcmil (.813 Dia.)	2.62	2.38	1/2"-13	5.88	.31	2.56	
NAH34-2N	1A				2.38	2.05	3/8"-16	5.62		2.20	
NAS34-34N	1E						2.30	5.62		2.20	
NAH34-34N	1E						2.30	5.62		2.56	
NAS40-2N	1A						2.30	5.88		2.56	
NAH40-2N	1A	2/0 Sol. (.365 Dia.) to 800 kcmil (1.031 Dia.)	2/0 Sol. (.365 Dia.) to 500 kcmil (.813 Dia.)	500 kcmil (.813 Dia.) to 800 kcmil (1.031 Dia.)	2.62	2.62	1/2"-13	5.88	.38	2.44	
NAS40-34N	1E				2.62	2.30	3/8"-16	5.88		2.81	
NAH40-34N	1E				2.62	2.30	1/2"-13	5.88		2.44	
NAS40-44N	1						2.30	5.88		2.81	
NAH40-44N	1						2.30	5.88		2.44	
NAH44-2N	1A	4/0 Str. (.528 Dia.) to 1000 kcmil (1.152 Dia.)	4/0 Str. (.528 Dia.) to 750 kcmil (.998 Dia.)	750 kcmil (.998 Dia.) to 1000 kcmil (1.152 Dia.)	2.88	2.62	1/2"-13	6.88	.31	2.81	
NAH44-34N	1E									2.81	
NAH44-44N	1									2.81	
NAH44-44N	1									2.81	
NAH44-44N	1									2.81	
NAH46-2N	1A	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	—	1000 kcmil (1.152 Dia.) to 1500 kcmil (1.412 Dia.)	3.06	2.88	1/2"-13	6.12	.44	2.88	
NAH46-34N	1E									.38	
NAH46-34N	1E									.31	
NAH46-44N	1									.50	
NAH46-44N	1									.41	
NAH48-2N	1A	500 kcmil (.813 Dia.) to 2000 kcmil (1.632 Dia.)	500 kcmil (.813 Dia.) to 1500 kcmil (1.412 Dia.)	1500 kcmil (1.412 Dia.) to 2000 kcmil (1.632 Dia.)	3.25	3.12	1/2"-13	7.31	.38	3.19	
NAH48-34N	1E									.69	
NAH48-34N	1E									.50	
NAH48-44N	1									.50	
NAH48-44N	1									.44	

TYPE N2AH

TERMINAL

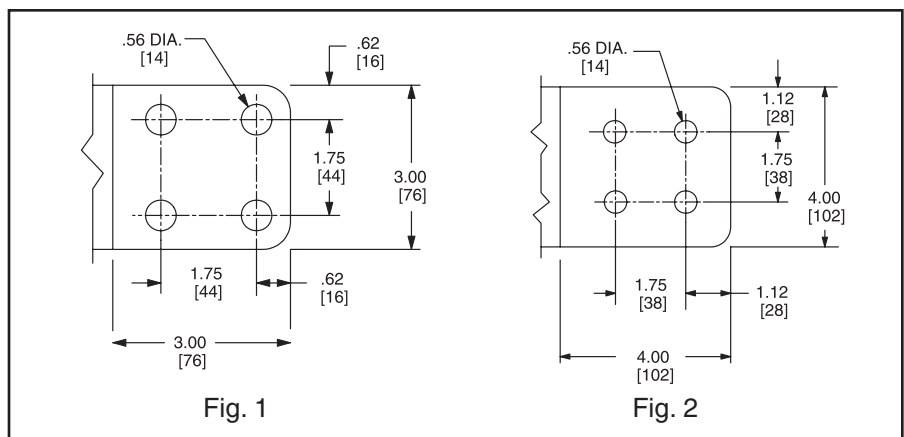
FOR TWO COPPER CABLES TO FLAT

High copper alloy, reversible cap terminal for joining a wide range of two copper cables to equipment pads. Tongue is side formed to provide adequate clearance and terminal is designed for one-wrench installation.



G-18

CATALOG NUMBER	FIG. NO.	COPPER CABLE RANGE			DIMENSIONS IN[mm]					
		COMPLETE CABLE RANGE	SMALL GROOVE	LARGE GROOVE	B	H	J DIA.	L	T	W
N2AH34-34N	1	1/0 Str. (.325) to 500 kcmil (.813)	1/0 Sol. (.325) to 4/0 Str. (.529)	250 kcmil (.575) to 500 kcmil (.813)	2.63 [67]	2.30 [58]	1/2 - 13	6.13 [156]	.31 [8]	3.88 [99]
N2AH40-34N	1	2/0 Str. (.420) to 800 kcmil (1.031)	2/0 Str. (.420) to 500 kcmil (.813)	500 kcmil (.813) to 800 kcmil (1.031)	2.63 [67]	2.62 [67]		5.88 [149]	.31 [8]	5.70 [145]
N2AH44-34N	1	4/0 Str. (.529) to 1000 kcmil (1.152)	4/0 Str. (.529) to 750 kcmil (.998)	750 kcmil (.998) to 1000 kcmil (1.152)	2.88 [73]	2.62 [67]		6.38 [175]	.50 [13]	4.69 [119]
N2AH44-44N	2	4/0 Str. (.529) to 1000 kcmil (1.152)	4/0 Sol. (.529) to 750 kcmil (.998)	750 kcmil (.998) to 1000 kcmil (1.152)	2.88 [73]	2.25 [57]		7.32 [186]	.50 [13]	6.12 [155]
N2AH46-44N	2	1000 kcmil (1.152) to 1500 kcmil (1.411)	—	—	3.07 [78]	2.50 [64]		7.46 [189]	.75 [19]	6.50 [165]

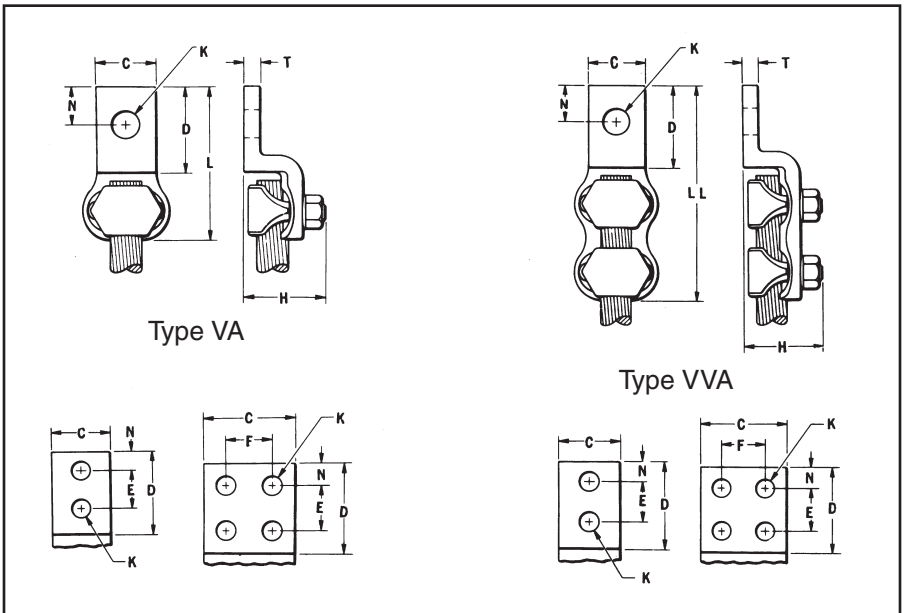
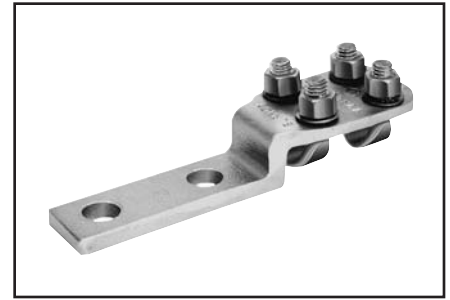
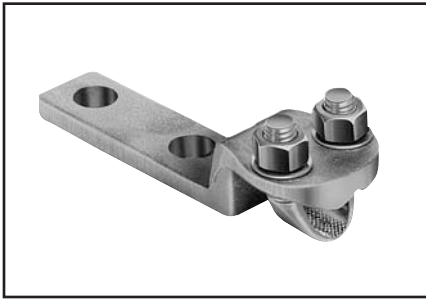


TYPE VA, VVA

VARILUG

FOR COPPER CABLE

High copper alloy terminal for joining a wide range of cable to equipment pads or bar. Particularly suitable for use on extra flexible cable. One-wrench installation. Type VVA, twin elements secure joint against vibration and flexing. Particularly recommended for use on extra flexible cables. One-wrench installation.



CATALOG NUMBER*		CONDUCTOR	NO. OF HOLES IN PAD	C	D	E & F	H	K	L	LL	N	T
TYPE VA	TYPE VVA											
VA2C	VVA2C	8 Sol. - 2 Str.	1	13/16	1-1/4	—	1-1/2	7/16	2-3/4	4-1/8	3/8	1/4
VA25	VVA25	6 Sol. - 1/0 Str.		7/8	1-3/8	—	1-7/8		2-1/8	4-3/8	1/2	
VA28	VVA28	1/0 Str. - 4/0 Str.	1	1-1/16	1-1/2	—	1-7/8	7/16	2-5/8	4-1/8	1/2	5/16
VA28-2N	VVA28-2N		2 NEMA		3-1/2	1-3/4		9/16	5	6-1/4	5/8	
VA30	VVA30	1/0 Str. - 300	1	1-1/8	1-5/8	—	2-1/4	7/16	3-1/4	4-5/8	5/8	3/8
VA30-2N	VVA30-2N		2 NEMA		3-5/8	1-3/4		9/16	5-1/4	6-5/8	5/8	
VA34	VVA34	300 - 500	1	1-3/8	2	—	2-5/8	9/16	3-7/8	5-3/8	7/8	3/8
VA34-2N	VVA34-2N		2 NEMA		3-5/8	1-3/4		9/16	5-3/8	6-1/8	5/8	
VA34-4N	VVA34-4N		4 NEMA		3	3-1/16		1-3/4	2-9/16	9/16	5-3/8	
VA40	VVA40	500 - 800	1	1-5/8	2-3/8	—	2-1/8	11/16	4-1/2	6-3/8	1	3/8
VA40-2N	VVA40-2N		2 NEMA		3-5/8	1-3/4		9/16	5-7/8	7-3/4	5/8	
VA40-4N	VVA40-4N		4 NEMA		3	2-5/8		1-3/4	9/16	5-7/8	7-3/4	

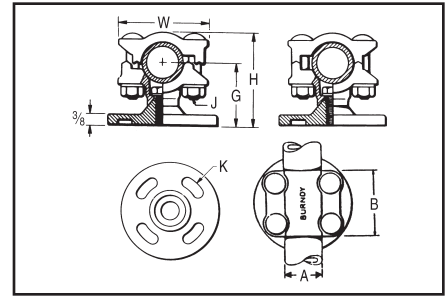
* "N" indicates NEMA standard stud holes.

TYPE UH

BUS SUPPORT

FOR COPPER TUBE

High copper alloy bus support for mounting tube on a post or pedestal type insulator. Single bolt allows rotation to any angle. Rotate cap 180° for slip or rigid fit. One-wrench installation. Supplied with hardware for mounting to cap of insulator. Specify base mounting hardware, if required, by adding suffix "B" to Catalog No.



CATALOG NUMBER	COPPER CONDUCTOR IPS "A"	BOLT CIRCLE	B	G	H	J	K	W
UH14-3	3/4	3	2-1/2	2	2-7/8	3/8	9/16	2-5/8
UH15-3	1	3		2	3		9/16	2-7/8
UH15-5		5	2-11/16	2-1/4	3-1/4		11/16	3-1/2
UH16-3	1-1/4	3		2-3/8	3-1/2	9/16		
UH16-5		5	3-5/8	11/16				
UH17-3	1-1/2	3	3	2-1/2	3-7/8	1/2	9/16	4
UH17-5		5		2-3/4	4-3/8		11/16	
UH18-3	2	3	3-1/4	3-1/8	5		9/16	4-5/8
UH18-5		5				11/16		
UH19-3	2-1/2	3	3	3-5/8	5-7/8	5/8	9/16	5-1/4
UH19-5		5					11/16	
UH20-3	3	3	3-1/4	4	6-1/2		9/16	6-1/4
UH20-5		5				11/16		
UH21-5	3-1/2	5	3-1/4	4-1/2	7-1/4	5/8	11/16	6-7/8
UH22-5	4	5					11/16	7-1/2

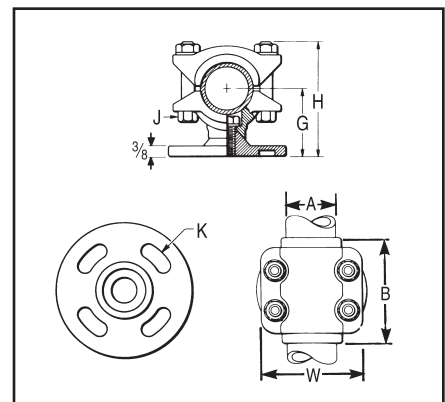
G-20

TYPE UHR

BUS SUPPORT

FOR COPPER CABLE OR TUBE

High copper alloy bus support clamp for mounting a wide range of cable or tube on post or pedestal type insulators. Single bolt allows rotation to any angle. Supplied with hardware for mounting to cap of insulator. Specify base mounting hardware, if required, by adding suffix "-B" to Catalog No.



Catalog Number	Copper Conductor "A"		Bolt Circle	B	G*	H	J	K	W
	Cable	Tube							
UHR13-3	6 Str. - 500	1/8 - 1/2	3	3-5/8	1-3/4	3	3/8	9/16	2-1/4
UHR13-5			5		2-1/8	3-3/8		11/16	
UHR15-3	4/0 Str. - 1250	1/4 - 1	3	3-3/4	2	3-1/2		9/16	2-3/4
UHR15-5			5		2-1/4	3-3/4	11/16		
UHR17-3	750 - 2500	3/4 - 1-1/2	3	2-7/8	2-1/2	4-1/4	1/2	9/16	4
UHR17-5			5					11/16	

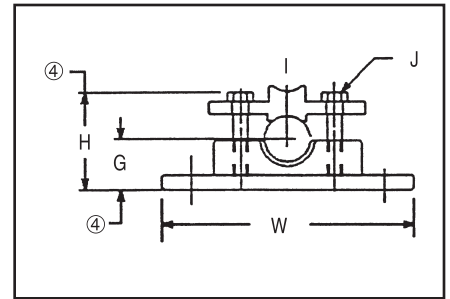
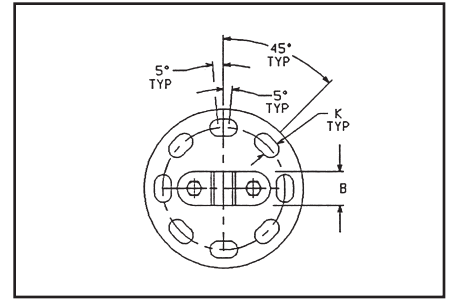
* With maximum conductor in place.

TYPES LH, LHR

BUS SUPPORT

FOR COPPER CABLE OR TUBE

High copper alloy, light duty bus support for mounting a wide range of cable or tube on post or pedestal type insulators. One-wrench installation. Supplied with hardware for mounting to cap of insulator. Specify base mounting hardware, if required, by adding suffix “-B” to Catalog No.



COPPER CABLE RANGE COMPLETE RANGE	TUBING SCH. 40/80	⑤ BOLT ⑥ CIRCLE	CATALOG NUMBER	DIMENSIONS IN/[mm]					
				B	G ④	H ④	J	K	W
6 Sol. - 4/0 Str.	—	3"	LH28-3	1.69 [43]	1.25 [32]	2.62 [66.5]	3/8 - 16	.56 [14]	4.25 [108]
③ #8 - 250 kcmil	1/8 - 1/4	3"	LHR29-3	1.00 [25]	1.23 [31]	2.03 [52]		.56 [14]	4.25 [108]
2/0 Str. - 500 kcmil	1/4 - 1/2	3"	LH34-3	1.38 [35]	1.38 [35]	2.50 [63.5]		.56 [14]	4.25 [108]
③ 4/0 - 1000 kcmil	1/4 - 3/4	5"	LHR44-5	1.00 [25]	1.33 [34]	2.51 [64]		.69 [18]	6.25 [158]

NOTES:

- 1 Material:
Connector: Cast copper alloy
Clamping Hardware: Silicon bronze
Mounting Hardware: Galvanized steel
- 2 Dimensions in brackets [] are in millimeters.
- ③ Complete range may be accommodated by reversing the cap.
- ④ Dimension with maximum conductor in place.
- ⑤ Cap mounting hardware is supplied as standard. 3.00 Dia. bolt circle furnished with four 1/2 -13 × 1.00 long galvanized steel hex head bolts and split lockwashers. 5.00 Dia. bolt circle furnished as above except bolts are .625 × 1.75.
- ⑥ If base mounting is desired, add “-B” to the Catalog Number and the following hardware will be supplied: 3.00 Dia. bolt circle furnished 1/2 -13 × 1-1/2 long galvanized steel hex head bolt, hex nuts, and 5.00 Dia. bolt circle furnished as above except bolts are .625 × 1.75.

BURNDY® Products FCI

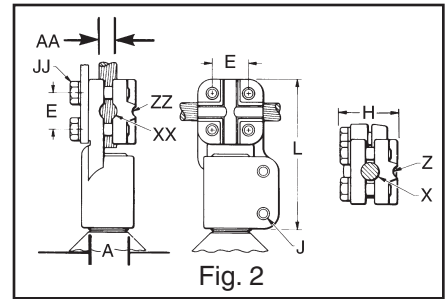
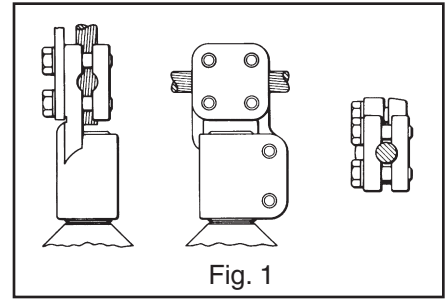
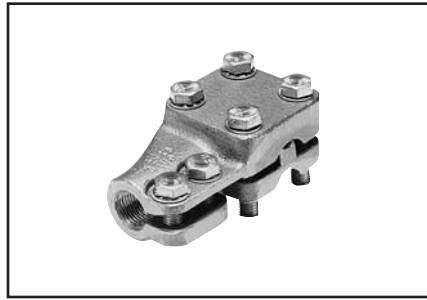
Substation

TYPE NDR

STUD CONNECTOR

FOR COPPER CABLE,
TUBE, FLAT BAR

High copper alloy reversible and rotatable cap stud connector joins cable, tube and flat bar in-line or at right angles to equipment studs. Accommodates a wide range of cables or tubes. One-wrench installation.



G-22

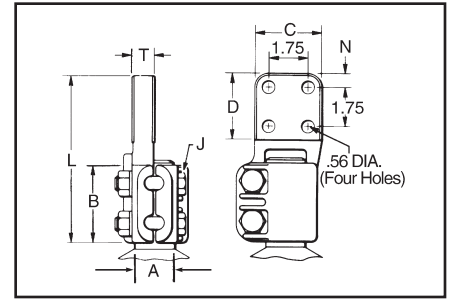
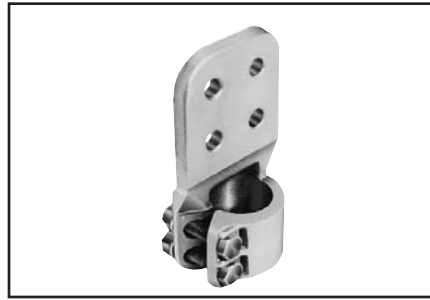
Catalog Number	Stud A	Complete Range AA		Fig. No.	X Groove	XX Groove	Z Groove	ZZ Groove	E	H	J	JJ	L
		Cable	Tube I.P.S.										
NDR6328T13	1/2-13	6 Sol. - 4/0 Str.	—	1	6 Sol. - 1 Str.	2/0 Sol. - 4/0 Str.			1-1/16	1-3/4		3/8	3-5/8
NDR6428T16		6 Sol. - 4/0 Str.	—		6 Sol. - 1 Str.	2/0 Sol. - 4/0 Str.							
NDR6434T16	3/4-16	6 Sol. - 500	3/8 - 1/2	2	250 - 350	400 - 500	6 Sol. - 2 Str.	1/0 Sol. - 4/0 Str.	1-7/16	2-1/4			4-1/8
NDR6444T16		2 Sol. - 1000	3/8 - 3/4		550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8			1/2
NDR6528T14	1-14	6 Sol. - 4/0 Str.	—	1	6 Sol. - 1 Str.	2/0 Sol. - 4/0 Str.			1-1/16	1-3/4	3/8	3/8	4-1/8
NDR6534T14		6 Sol. - 500	3/8 - 1/2	2	250 - 350	400 - 500	6 Sol. - 2 Str.	1/0 Sol. - 4/0 Str.	1-7/16	2-1/4			4
NDR6544T14		2 Sol. - 1000	3/8 - 3/4		550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8			1/2
NDR65528T12		6 Sol. - 4/0 Str.	—	1	6 Sol. - 1 Str.	2/0 Sol. - 4/0 Str.			1-1/16	1-3/4			3/8
NDR65534T12	1-1/8-12	6 Sol. - 500	3/8 - 1/2	2	250 - 350	400 - 500	6 Sol. - 2 Str.	1/0 Sol. - 4/0 Str.	1-7/16	2-1/4		3/8	4
NDR65544T12		2 Sol. - 1000	3/8 - 3/4		550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8			1/2
NDR6644T12	1-1/4-12	2 Sol. - 1000	3/8 - 3/4		550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8		1/2	4-5/8
NDR6728T12	1-1/2-12	6 Sol. - 4/0 Str.	—	1	6 Sol. - 1 Str.	2/0 Sol. - 4/0 Str.			1-1/16	2-1/4	1/2	3/8	4-3/4
NDR6734T12		6 Sol. - 500	3/8 - 1/2	2	250 - 350	400 - 500	6 Sol. - 2 Str.	1/0 Sol. - 4/0 Str.	1-7/16	2-3/8			5
NDR6744T12		2 Sol. - 1000	3/8 - 3/4		550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8			1/2
NDR6748T12		4/0 Str. - 2000	3/8-1-1/4	1250 - 1600	1700 - 2000	4/0 Str. - 600	650 - 1200	2-3/8	3-1/4				5-3/4
NDR6844T12	2-12	2 Sol. - 1000	3/8 - 3/4	2	550 - 700	750 - 1000	2 Sol. - 250	300 - 500	1-7/8	2-7/8		1/2	6-1/8
NDR6848T12		4/0 Str. - 2000	3/8-1-1/4		1250 - 1600	1700 - 2000	4/0 Str. - 600	650 - 1200	2-3/8				6-5/8

TYPE FD

STUD CONNECTOR

FOR STUD TO FLAT BAR

High copper alloy stud connector allows bolting cable and tubing terminals to equipment studs. Hex head captured bolts provide one-wrench installation. One pad contact surface is on centerline of stud. Pad is finished on both sides. All pads are four hole NEMA drilled.



Catalog Number	Stud A	Nominal Ampere Rating ①	B	C	D	J	L	N	T	
FD64C5T16	3/4" -16	1000	1.75	3.00	3.00	3/8"-16	5.72	.62	.31	
FD65C6T14	1" -14	1075		3.00	3.00		5.72	.62	.38	
FD655C6	1-1/8"-12	1075		3.00	3.00		5.80	.62	.38	
FD655D6		1300		4.00	4.00		6.86	1.12	.38	
FD66C6	1-1/4"-12	1075		3.00	3.00		5.78	.62	.38	
FD66D6		1300		4.00	4.00		6.84	1.12	.38	
FD67C6	1-1/2"-12	1075	2.18	3.00	3.00	1/2"-13	6.23	.62	.38	
FD67D8		1450		4.00	4.00		7.30	1.12	.50	
FD675C8	1-3/4"-12	1220		3.00	3.00		6.32	.62	.50	
FD675D8		1450		4.00	4.00		7.39	1.12	.50	
FD68C8	2"-12	1220		3.00	3.00		6.35	.62	.50	
FD68D8		1450		4.00	4.00		7.42	1.12	.50	
FD68D12	2-1/4"-12	2100	2.50	4.00	4.00	5/8"-11	7.42	1.12	.75	
FD685C8		1220		3.00	3.00		6.71	.62	.50	
FD685D8		1450		4.00	4.00		7.77	1.12	.50	
FD685D12		2100		4.00	4.00		7.77	1.12	.75	
FD69C8		2-1/2"-12		1220	3.00		3.00	6.77	.62	.50
FD69D8				1450	4.00		4.00	8.03	1.12	.50
FD69D12	2100		4.00	4.00	8.03	1.12	.75			
FD70D8	3"-12	1450	2.88	4.00	4.00	5/8"-11	8.28	1.12	.50	
FD70D12		2100		4.00	4.00		8.26	1.12	.75	
FD70D16		3000		4.00	4.00		8.24	1.12	1.00	

NOTES:

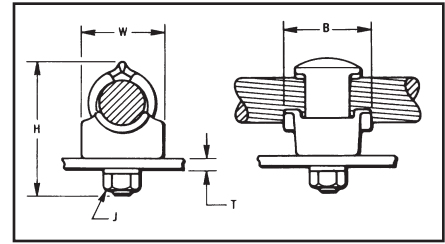
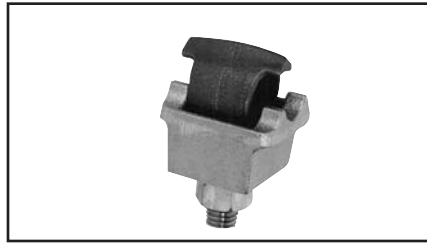
- ① Indoor Rating
- 2. Contact factory for other variations in drilling, plating, etc.

TYPE QGFL

BARTAP™

FOR COPPER CABLE TO FLAT

High copper alloy BARTAP™ for joining a range of cable to bar or pad. One-wrench installation.



Catalog Number	Conductor	B	H	J	T (MAX.)	W
QGFL1CB1	10 Sol. - 1 Str.	1-1/8	1-7/8	3/8	1/4	1
QGFL1CB1T6			2-3/8		3/4	
QGFL26B1	8 Sol. - 2/0 Str.	1-1/4	2-1/8	1/2	1/4	1-1/8
QGFL26B1T6			2-5/8		3/4	
QGFL26B2*		1-1/2	1-1/2		1/4	
QGFL26B2T6*			2-7/8		3/4	
QGFL29B1*	6 Str. - 250	1-5/8	2-5/8	1/4	1-3/8	
QGFL29B1T6*			3-1/8	3/4		
QGFL31B1*	2 Sol. - 350	1-3/4	2-7/8	1/4	1-5/8	
QGFL31B1T6*			3-1/4	3/4		
QGFL34B1	1/0 Sol. - 500	2	3-1/8	1/2	1/4	1-3/4
QGFL34B1T6			3-5/8		3/4	
QGFL39B1	350 - 750	2-1/4	3-1/4	1/2	1/4	1-3/4
QGFL39B1T6			3-5/8		3/4	
QGFL44B1	750 - 1000		3-3/8		1/4	2-1/8
QGFL44B1T6			4-1/8		3/4	
QGFL46B1	1000 - 1500	2-1/4	4	1/2	1/4	2-1/2
QGFL46B1T6			4-1/2		3/4	
QGFL48B1	1500 - 2000	2-1/4	4-3/4	1/2	1/4	3
QGFL48B1T6			5-1/4		3/4	

* Can be installed side by side or in-line on NEMA drilled bar.

G-24

TYPE FCB

TRANSFORMER TAP ADAPTER

FOR COPPER AND ALUMINUM

Cast in one piece from copper alloy. Transformer tap adapter designed to accommodate from 1 to 6 NEMA drilled copper or aluminum terminal taps from a single secondary transformer outlet. Tin-plated. Order mounting hardware and tap terminals separately.

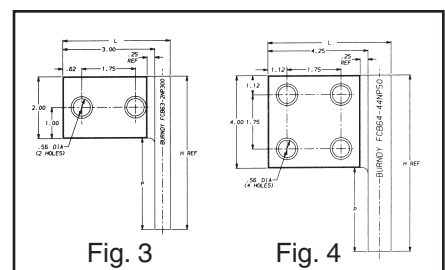
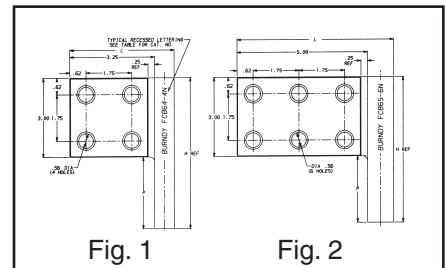
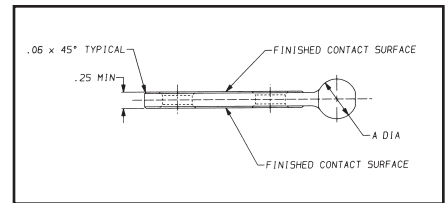
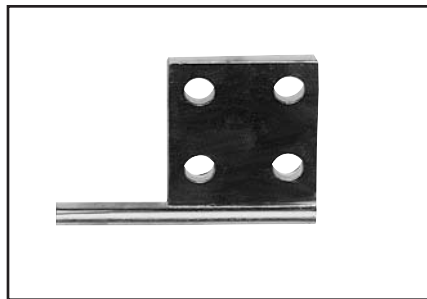


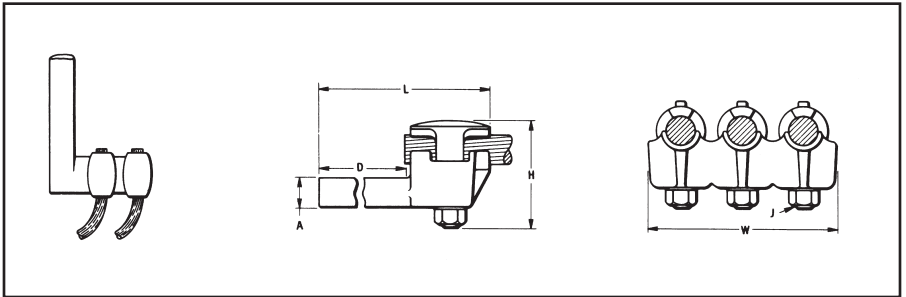
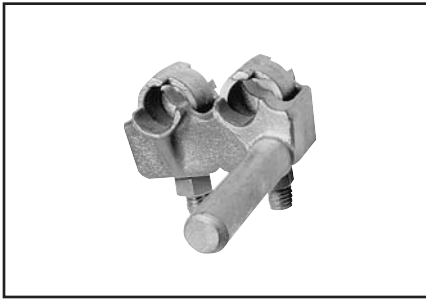
FIG. NO.	CATALOG NUMBER	A DIA.	H REF	L	P
1	FCB63-4N	.50	5.25	3.75	2.25
2	FCB63-6N	.50	5.25	5.50	2.25
1	FCB64-4N	.75	5.75	4.00	2.75
2	FCB64-6N	.75	5.75	5.75	2.75
1	FCB65-4N	1.00	7.00	4.25	4.00
2	FCB65-6N	1.00	7.00	6.00	4.00
3	FCB63-2NP300	.50	5.00	3.50	3.00
4	FCB64-44NP50	.75	9.00	5.00	5.00

TYPE E-C-G

TRANSFORMER TAP ADAPTER

FOR COPPER CABLE

Multi-tap, range-taking cast copper alloy connector designed to take 2, 3, or 4 conductors from a single secondary transformer outlet.



CATALOG NUMBER	NO. OF CONDUCTORS	CONDUCTOR SIZE	A DIA.	D	H	J	L	W
E2C34G1	2	1/0 Sol. to 500	.78	3-3/4	3-7/8	1/2-13	6-1/4	3-1/2
E3C34G1	3							5-1/4
E4C34G1	4							6-7/8

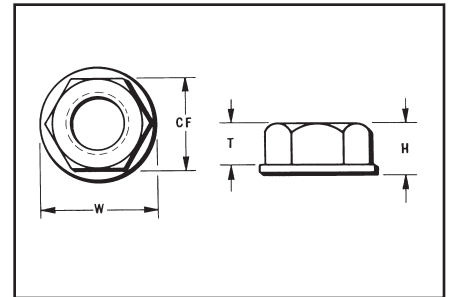
G-25

TYPE FN

CONTACT NUT

FLAT TO STUD

High copper alloy contact nut for joining bar or terminal pads to studs. Designed to carry full current load from flat to stud.



Catalog Number Type FN	Stud Dia. and Threads per Inch	CF (Cross Flats)	H	T	W
FN62T16	3/8 - 16	3/4	3/8	5/16	7/8
FN63T13	1/2 - 13	1	15/32	3/8	1-1/4
FN64T16	3/4 - 16	1-1/4	3/4	9/16	1-1/2
FN655T12	1-1/8 - 12	1-3/4	1	3/4	2-1/8
FN66T14	1-1/4 - 14	2	1-1/8	7/8	2-3/8
FN67T12	1-1/2 - 12	2-3/8			2-3/4

ALUMINUM INTRODUCTION

CONNECTORS FOR ALUMINUM CONDUCTORS

Bolted aluminum connectors are cast of aluminum alloy and assembled with aluminum alloy bolts, nuts and galvanized steel washers. The hex head bolts are captured for one-wrench installation. The connectors accommodate aluminum or copper conductor. The "mass anode" design pioneered by BURNDY® minimizes the effect of galvanic corrosion on aluminum (anode+) connectors when used with copper (cathode-) conductor (Reference Fig. 1).

Joint deterioration caused by relaxation or "cold flow" of the aluminum is eliminated by the massive design. Generous contact areas distribute clamping forces evenly over the conductor, eliminating points of high stress that cause "cold flow." These contact areas are factory treated to remove surface oxides and coated with an oxide inhibitor to prevent their reformation. Large radiating surfaces allow the connectors to run cooler than the copper conductor compensating for the fact that aluminum has a higher coefficient of thermal expansion. Connector and conductor expand and contract together during load cycles, eliminating stresses on the aluminum body that can cause relaxation of the joint.

CONNECTOR SELECTION

Generally, copper connectors are recommended for copper conductor and aluminum connectors for aluminum conductor. Where aluminum connectors are recommended for use on both aluminum and copper conductors, the copper must be positioned parallel to or below the aluminum to prevent contamination of the aluminum by copper salts washed down by rain.

Except where indicated, all rigid connectors accept standard or extra heavy I.P.S. and all flexible connectors standard I.P.S. If extra heavy I.P.S. is to be used with a flexible joint, it must be spelled out at the time of ordering so that the proper cross sectional area of the flexible element may be supplied for the increased conductor rating.

CONDUCTOR PREPARATION

To obtain optimum performance from any connector, the conductor surface must be thoroughly cleaned before installation. The surface oxides that form on all conductors act as insulation. Failure to remove them can result in high resistance joint and, ultimately, failure.

Conductor contact surfaces should be scratch brushed until bright and shiny. Aluminum conductor (new or old) should be coated with BURNDY® PENETROX™ after scratch brushing. PENETROX™ is a joint compound that aids in the establishment of low resistance joints and prevents aluminum oxides from reforming.

G-26

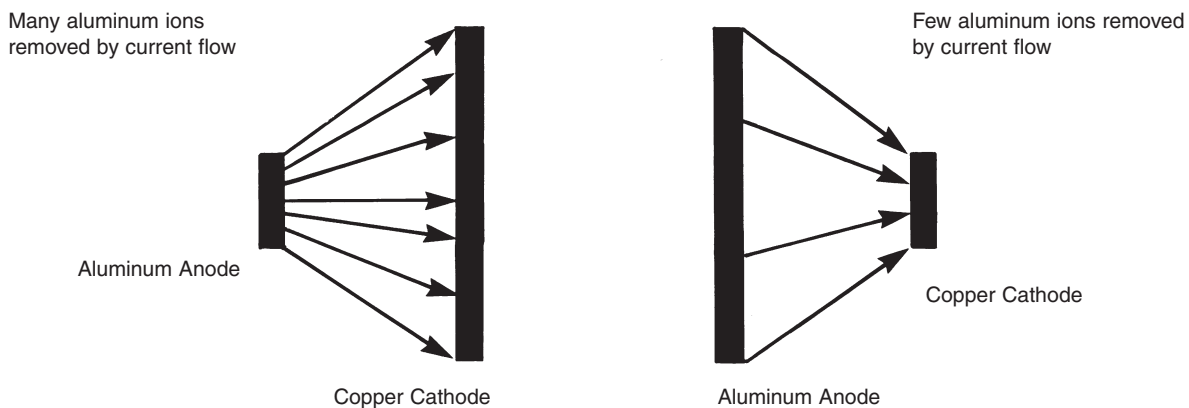


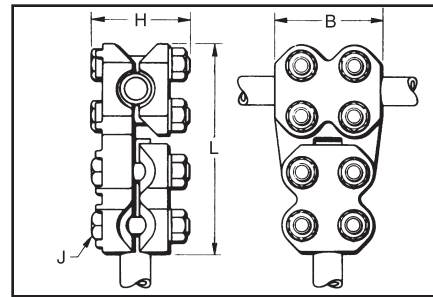
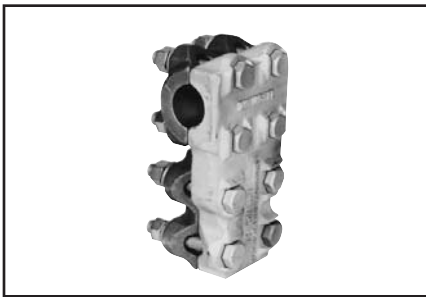
Fig. 1

TYPE NNT-A

T-CONNECTOR

FOR ALUMINUM AND COPPER
TUBE TO TUBE

Aluminum alloy T-Connector for tubing run and tap. Properly proportioned to permit use on copper-aluminum conductor combinations. Captured hex head bolts permit one-wrench installation. PENETROX™ joint compound recommended on contact surfaces.



Catalog Number	Conductor		B	H	J	L
	Run	Tap				
NNT15A15A	1	1	3-1/2	3-3/8	1/2	6-7/8
NNT16A16A	1-1/4	1-1/4	3-3/4	3-3/8	1/2	7-1/2
NNT17A17A	1-1/2	1-1/2	4	3-7/8	1/2	7-7/8
NNT18A18A	2	2	4-1/4	4-1/2	5/8	9
NNT19A19A	2-1/2	2-1/2	4-1/2	5	5/8	9
NNT20A20A	3	3	5	5	5/8	11
NNT21A20A	3-1/2	3	5-1/2	5-5/8	5/8	11-5/8
NNT22A22A	4	4	6	6-1/4	5/8	12-5/8

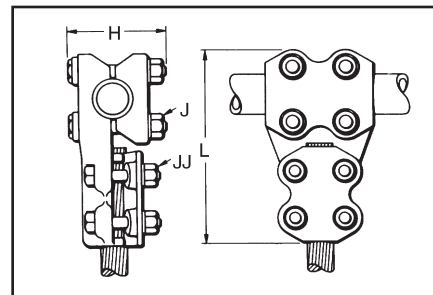
G-27

TYPE NNTR-A

T-CONNECTOR

FOR ALUMINUM & COPPER
TUBE TO CABLE

Aluminum alloy T-Connector for tube run, range of cable tap. Properly proportioned to permit use on copper-aluminum combinations. One-wrench installation. PENETROX™ joint compound recommended on contact surfaces.



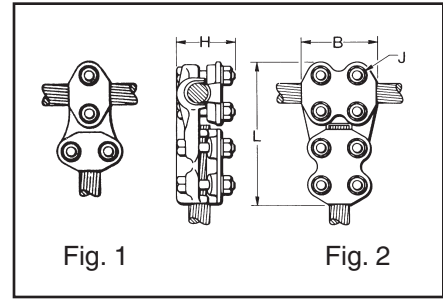
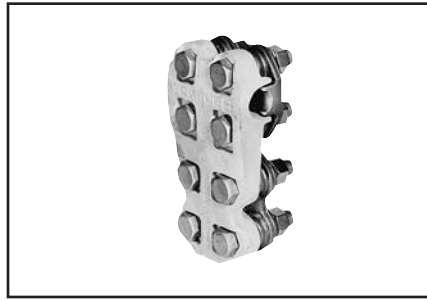
Catalog Number	Conductor			H	J	JJ	L
	Tap						
	Run	Alum. or Cu.	ACSR				
NNTR14A29A	3/4	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	3-1/8	1/2	1/2	5-7/8
NNTR14A36A	3/4	350 - 600	336.4 (18-1) - 477 (30-7)	3-1/8			6-3/8
NNTR15A36A	1	350 - 600	336.4 (18-1) - 477 (30-7)	3-3/8			6-5/8
NNTR15A42A	1	600 - 900	477 (30-7) - 795 (54-7)	3-3/8			6-7/8
NNTR16A29A	1-1/4	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	3-3/8			6-1/2
NNTR16A32A	1-1/4	250 - 400	4/0 (6-1) - 397.5 (18-1)	3-3/8			6-3/4
NNTR16A42A	1-1/4	600 - 900	477 (30-7) - 795 (54-7)	3-7/8			7-1/4
NNTR17A29A	1-1/2	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	3-7/8			6-3/4
NNTR18A29A	2	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	4-1/2			7-5/8
NNTR19A42A	2-1/2	600 - 900	477 (30-7) - 795 (54-7)	4-5/8			8-7/8
NNTR20A32A	3	250 - 400	4/0 (6-1) - 397.5 (18-1)	5			9
NNTR22A46A	4	1250 - 1600	1113 (54-9) - 1431 (45-7)				9-1/4

TYPE NNTR-A

T-CONNECTOR

FOR ALUMINUM AND COPPER CABLE TO CABLE

Aluminum alloy T-Connector for a range of copper, aluminum and ACSR cable on run and tap. Properly proportioned to permit use on copper-aluminum conductor combinations. One-wrench installation. PENETROX™ joint compound recommended on contact surfaces.



G-28

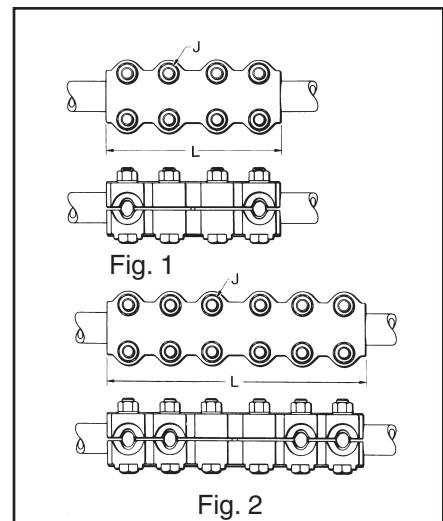
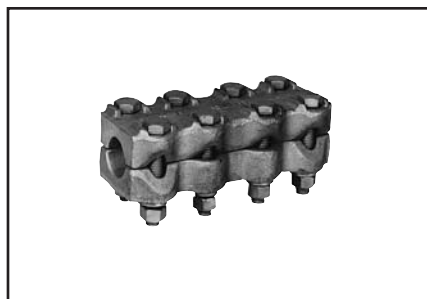
Catalog Number	Conductor				Fig. No.	B	H	J	L
	Run		Tap						
	Alum. or Copper	ACSR	Alum. or Copper	ACSR					
NNTR29A29A	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	2	2-3/4	2-5/8	1/2	5-5/8
NNTR32A25A	250 - 400	4/0 (6-1) - 397.5 (18-1)	4 Str. - 1/0 Str.	4 (6-1) - 1/0 (6-1)	1	1-7/8	2-5/8		4-7/8
NNTR32A32A	250 - 400	4/0 (6-1) - 397.5 (18-1)	250 - 400	4/0 (6-1) - 397.5 (18-1)	2	3	2-5/8		6
NNTR36A25A	350 - 600	336.4 (18-1) - 477 (30-7)	4 Str. - 1/0 Str.	4 (6-1) - 1/0 (6-1)	1	1-7/8	2-5/8		5
NNTR36A29A	350 - 600	336.4 (18-1) - 477 (30-7)	1/0 Str. - 250	1/0 (6-1) - 4/0 (6-1)	2	3-1/4	2-5/8		5-7/8
NNTR36A36A	350 - 600	336.4 (18-1) - 477 (30-7)	350 - 600	336.4 (18-1) - 477 (30-7)	2	3-1/4	2-5/8		6-3/8
NNTR42A32A	600 - 900	477 (30-7) - 795 (54-7)	250 - 400	4/0 (6-1) - 397.5 (18-1)	2	3-1/2	3-1/8		6-3/8
NNTR42A36A	600 - 900	477 (30-7) - 795 (54-7)	350 - 600	336.4 (18-1) - 477 (30-7)	2	3-1/2	3-1/8		6-5/8
NNTR42A42A	600 - 900	477 (30-7) - 795 (54-7)	600 - 900	477 (30-7) - 795 (54-7)	2	3-1/2	3-1/8		6-7/8
NNTR45A45A	900 - 1250	715.5 (30-19) - 1113 (54-19)	900 - 1250	715.5 (30-19) - 1113 (54-19)	2	3-3/4	3-1/4		7-3/8
NNTR46A42A	1250 - 1600	1113 (54-19) - 1431 (45-7)	600 - 900	477 (30-7) - 795 (54-7)	2	3-3/4	3-1/2	7-1/4	
NNTR46A46A	1250 - 1600	1113 (54-19) - 1431 (45-7)	1250 - 1600	1113 (54-19) - 1431 (45-7)	2	4-3/8	3-3/4	5/8	8-3/8
NNTR48A48A	1500 - 2000	1272 (54-19) - 1780 (84-19)	1500 - 2000	1272 (54-19) - 1780 (84-19)	2	4-3/8	3-7/8	5/8	8-5/8

TYPE NS-A

COUPLER

FOR ALUMINUM AND COPPER TUBE TO TUBE

Aluminum alloy coupler for joining equal sizes of tube end to end. Properly proportioned to permit use on aluminum-copper conductor combinations. One-wrench installation. PENETROX™ joint compound recommended on contact surfaces.



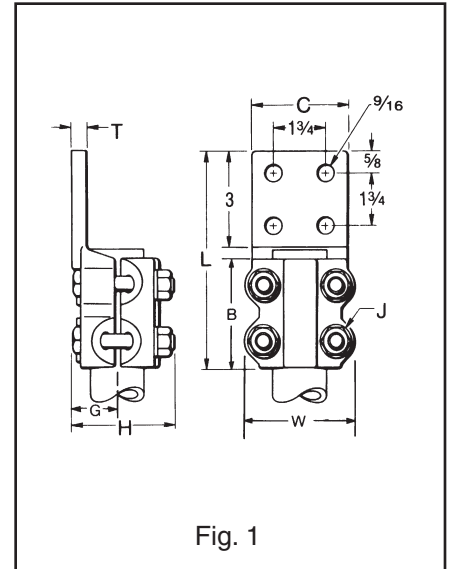
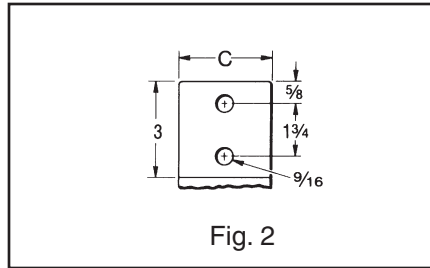
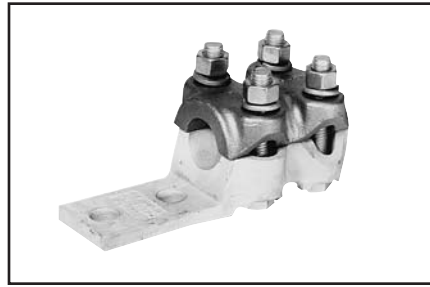
CATALOG NUMBER	CONDUCTOR I.P.S.	FIG. NO.	J	L
NS14A14A	3/4	1	1/2	6-3/4
NS15A15A	1			7-1/4
NS17A17A	1-1/2			8-1/4
NS18A18A	2		5/8	8-3/4
NS19A19A	2-1/2			9-1/4
NS20A20A	3			10-1/4
NS21A21A	3-1/2			11-1/4
NS22A22A	4	2	12-1/4	
NS24A24A	5		14-1/4	

TYPE NA-A

TERMINAL

FOR ALUMINUM AND COPPER TUBE TO FLAT

Aluminum alloy terminal for joining copper or aluminum tube to copper or aluminum pad. Properly proportioned to minimize conductor corrosion due to galvanic action. Drilling in pad conforms to NEMA standards. One-wrench installation. PENETROX™ joint compound recommended on contact surfaces.



CATALOG NUMBER	CONDUCTOR	FIG. NO.	B	C	G	H	J	L	T	W
NA15A-2N	1	2	3-1/2	1-7/8	1.50	3-3/8	1/2	6-3/4	3/8	3-1/16
NA15A-4N	1	1	3-1/2	3	1.50	3-3/8	1/2	6-3/4	3/8	3-1/16
NA16A-4N	1-1/4	1	3-3/4	3	1.60	3-3/8	1/2	7	1/2	3-7/16
NA17A-2N	1-1/2	2	4	2-1/2	1.76	3-7/8	1/2	7-1/2	1/2	3-11/16
NA17A-4N	1-1/2	1	4	3	1.76	3-7/8	1/2	7-1/2	1/2	3-11/16
NA18A-2N	2	2	4-1/4	2-3/4	2.05	4-1/2	5/8	7-1/2	1/2	4-1/2
NA18A-4N	2	1	4-1/4	3-1/8	2.05	4-1/2	5/8	7-1/2	1/2	4-1/2
NA19A-4N	2-1/2	1	4-1/2	3-3/4	2.19	5	5/8	7-3/4	3/4	5
NA20A-4N	3	1	5	4-3/8	2.43	5-1/2	5/8	8-3/8	3/4	5-5/8
NA22A-4N	4	1	6	5-1/4	2.94	6-1/4	5/8	9-3/8	7/8	6-5/8

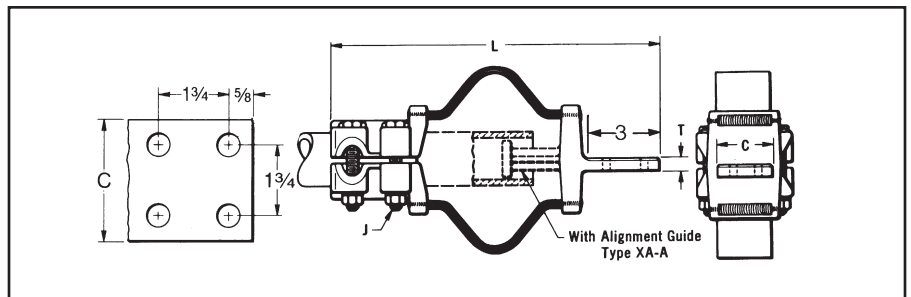
G-29

TYPE XA-A

EXPANSION TERMINAL

FOR ALUMINUM AND COPPER TUBE TO FLAT

Aluminum alloy expansion connector for joining tube to copper or aluminum bar or equipment pads. Flexible aluminum straps allow longitudinal or lateral movement and carries full current load of the joint. PENETROX™ joint compound recommended on contact surfaces. Pad contact surface is on centerline of conductor.



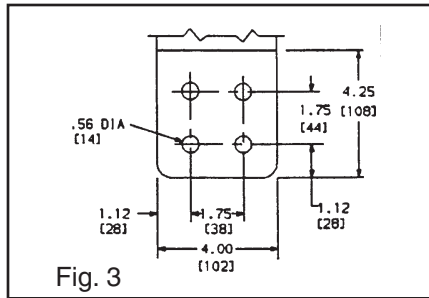
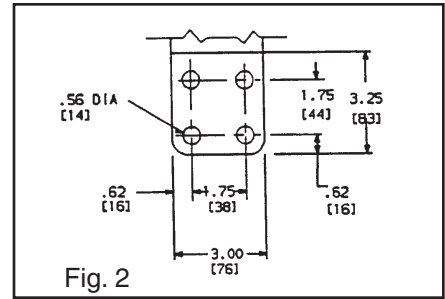
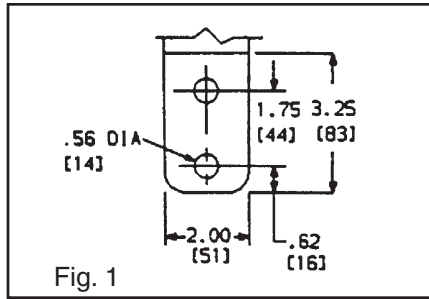
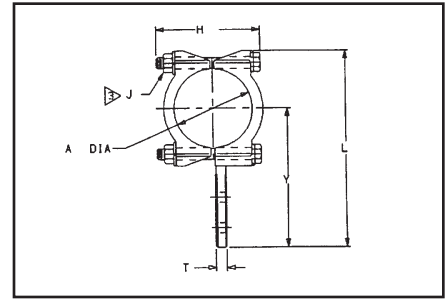
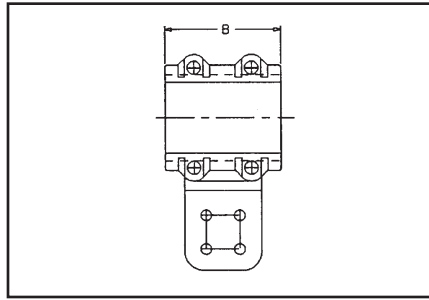
Catalog Number* STANDARD I.P.S. (Schedule 40) With Guide	Conductor	C	J	L	T
XA15A-4N	1	3	1/2	12-3/4	3/8
XA16A-4N	1-1/4	3		13-5/8	1/2
XA18A-4N	2	3	5/8	15-1/2	1/2
XA19A-4N	2-1/2	3-3/4		17	5/8
XA20A-4N	3	4-3/8		18-5/8	5/8
XA21A-4N	3-1/2	4-3/4		20	7/8
XA22A-4N	4	5-1/4		21	7/8
XA24A-4N	5	6-1/2		24-1/8	7/8

* Conforms to 4-hole NEMA mounting standards.

TYPE NBC-A

BARTAP™

Aluminum alloy bolted type terminal for joining aluminum tube to copper or aluminum pads. Drilling in pad conforms to NEMA Standards. PENETROX™ joint compound recommended on contact surfaces.



TYPE NBC-A (Continued)

CONDUCTOR ALUMINUM		CATALOG NUMBER	FIG. NO.	DIMENSIONS IN [mm]					
IPS/EHPS	A			B	H	J	L	T	Y
1"	1.32 [33]	NBC15A-2N	1	3.50	3.00	1/2 - 13	6.81	.38	5.28
		NBC15A-34N	2	[89]	[76]		[173]	[10]	[134]
1-1/4"	1.66 [42]	NBC16A-2N	1	3.75 [95]	3.25 [76]	1/2 - 13	7.15 [182]	.38 [10]	5.45 [138]
		NBC16A-34N	2	3.75 [95]	3.25 [76]		7.15 [182]	.38 [10]	5.45 [138]
		NBC16A-44N	3	3.75 [95]	3.25 [76]		8.15 [207]	.38 [10]	6.45 [164]
1-1/2"	1.90 [48]	NBC17A-2N	1	4.00 [102]	3.50 [89]	1/2 - 13	7.39 [188]	.38 [10]	5.57 [141]
		NBC17A-34N	2	4.00 [102]	3.50 [89]		7.39 [188]	.38 [10]	5.57 [141]
		NBC17A-44N	3	4.00 [102]	3.50 [89]		8.39 [213]	.38 [10]	6.57 [167]
2"	2.38 [42]	NBC18A-2N	1	4.25 [108]	4.00 [76]	5/8 - 11	8.25 [210]	.38 [10]	6.00 [152]
		NBC18A-34N	2	4.25 [108]	4.00 [76]		8.25 [210]	.38 [10]	6.00 [152]
		NBC18A-44N	3	4.25 [108]	4.00 [76]		9.25 [135]	.38 [10]	7.00 [178]
2-1/2"	2.88 [73]	NBC19A-34N	2	4.50 [114]	4.50 [114]	5/8 - 11	8.75 [222]	.50 [13]	6.25 [159]
		NBC19A-44N	3	4.50 [114]	4.50 [114]		9.75 [248]	.50 [13]	7.25 [184]
3"	3.00 [76]	NBC20A-34N	2	5.00 [127]	4.50 [114]	5/8 - 11	9.37 [238]	.50 [13]	6.56 [167]
		NBC20A-44N	3	5.00 [127]	4.50 [114]		10.37 [263]	.50 [13]	7.56 [192]
3-1/2"	4.50 [33]	NBC21A-44N	3	5.50 [140]	5.00 [127]	5/8 - 11	10.89 [277]	.62 [16]	7.82 [199]
4"	4.50 [114]	NBC22A-34N	2	6.00 [152]	5.50 [140]	5/8 - 11	10.37 [263]	.62 [16]	7.06 [179]
		NBC22A-44N	3	6.00 [152]	5.50 [140]		11.37 [289]	.62 [16]	8.06 [205]
5"	5.56 [141]	NBC24A-34N	2	7.00 [178]	6.00 [152]	5/8 - 11	12.45 [316]	.62 [16]	8.60 [218]
6"	6.62 [168]	NBC86A-44N	3	8.00 [203]	7.25 [184]	5/8 - 11	13.51 [343]	.75 [19]	9.13 [232]

NOTES:

- Materials:
Connector: Cast Aluminum Alloy
Hardware: Aluminum Alloy
- Scratch brush connector contact, surface dry then apply an oxide inhibitor, "PENETROX™ A". "PENETROX™ A" can be purchased from BURNDY® Corporation in can or plastic squeeze bottles.
- Recommended Tightening Torque:
1/2-13 300 Inch Pounds
5/8-11 480 Inch Pounds
- All dimensions in brackets [] are in millimeters.

BURNDY® Products FCI

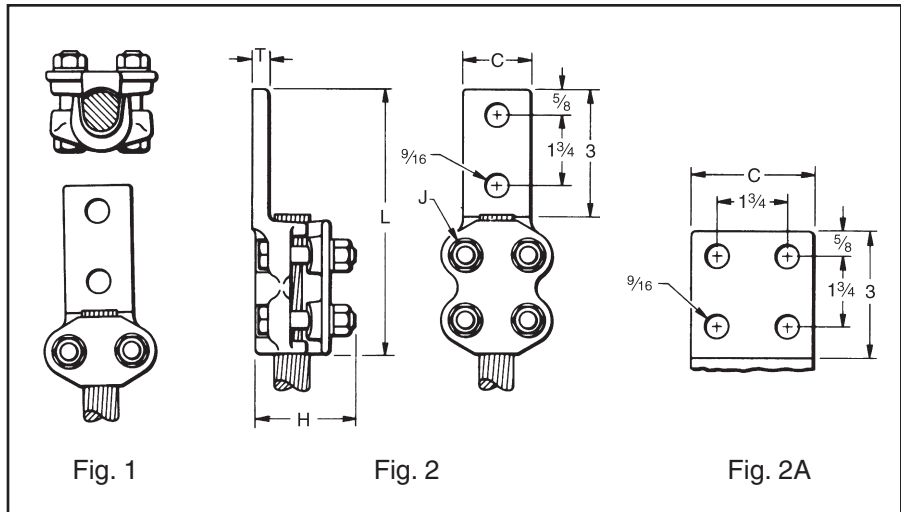
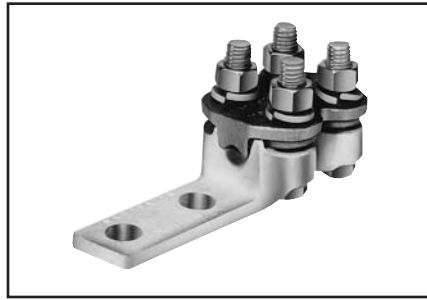
Substation

TYPE NAR-A

TERMINAL

FOR ALUMINUM AND COPPER CABLE TO FLAT

Aluminum alloy terminal for joining a wide range of copper or aluminum cable to copper or aluminum pad. Properly proportioned to minimize conductor corrosion due to galvanic action. Drilling in pad conforms to NEMA standards. One-wrench installation. PENETROX™ A joint compound recommended on contact surfaces.



G-32

Catalog Number	Conductor		No. of holes in pad	Fig. No.	C	H	J	L	T
	Alum. or Copper	ACSR							
NAR25A-2N	4 Str. - 1/0 Str.	4 (6-1) - 1/0 (6-1)	2 NEMA	1	1-1/4	2-3/8	1/2	5-1/4	5/16
NAR29A-2N*	1/0 Str. - 250	1.0 (6-1) - 4/0 (6-1)		2	1-5/8	2-7/8		6-1/8	
NAR29A-4N*			4 NEMA	2A	3	2-3/4			
NAR32A-2N	250 - 400	4/0 (6-1) - 397.5 (18-1)	2 NEMA	2	1-5/8	2-7/8		6-3/8	3/8
NAR32A-4N			4 NEMA	2A	3				
NAR36A-2N	350 - 600	336.4 (18-1) - 477 (30-7)	2 NEMA	2	1-3/4	3-3/8		6-5/8	1/2
NAR36A-4N*			4 NEMA	2A	3				
NAR42A-2N**	600 - 900	477 (30-7) - 795 (54-7)	2 NEMA	2	2	3-3/8	6-7/8	1/2	
NAR42A-4N*			4 NEMA	2A	3				
NAR45A-2N	900 - 1250	715 (30-19) - 1113 (54-19)	2 NEMA	2	2-5/8	3-3/4	7-1/8	5/8	
NAR45A-4N			4 NEMA	2A	3				
NAR46A-2N	1250 - 1600	1113 (54-19) - 1431 (54-7)	2 NEMA	2	2-3/4	3-3/4	7-3/4	5/8	
NAR46A-4N*			4 NEMA	2A	3				
NAR48A-2N	1500 - 2000	1272 (54-19) - 1780 (84-19)	2 NEMA	2	2-3/4	4	7-7/8	3/4	
NAR48A-4N			4 NEMA	2A	3				

* Available with 90 degree pad as shown (example: NAR36A-4N90).

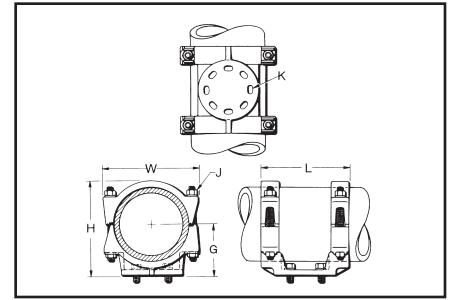
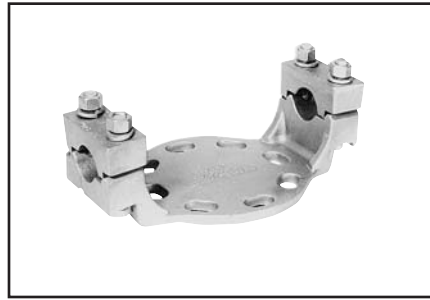
** Available with 45 degree pad as shown (example: NAR42A-2N45).

TYPE UHG-A

BUS SUPPORT

FOR ALUMINUM AND
COPPER TUBE

Aluminum alloy bus support for mounting tube on post or pedestal insulators. Properly proportioned to minimize conductor corrosion due to galvanic action. Rotate caps 180° for slip or rigid fit. One-wrench installation. Supplied with hardware for mounting to cap of insulator. Specify base mounting



hardware, if required, by adding suffix “-B” to Catalog Number. For static clips add “-CH” to Catalog Number.

CATALOG NUMBER	CONDUCTOR	BOLT CIRCLE	G	H	J	K	L	W
UHG14A-3	3/4	3	2	3-1/2	1/2	9/16	7-1/2	3
UHG15A-3	1	3	2	3-5/8		9/16	7-1/2	3-1/8
UHG15A-5		5	2-1/4			11/16	9-7/8	
UHG17A-3	1-1/2	3	2-1/2	4-1/8		9/16	7-3/4	3-3/4
UHG17A-5		5				11/16	10-1/8	
UHG18A-3	2	3	2-3/4	5-1/4		9/16	7-3/4	4-1/8
UHG18A-5		5		4-5/8		11/16	10-1/8	
UHG19A-3	2-1/2	3	3-1/8	5-1/4		9/16	7-3/4	4-5/8
UHG19A-5		5				11/16	10-5/8	
UHG20A-3	3	3	3-5/8	6-1/8		9/16	8-1/4	5-5/8
UHG20A-5		5			11/16	10-5/8		
UHG21A-3	3-1/2	3	4	6-3/4	5/8	9/16	8-1/4	6-1/4
UHG22A-5	4	5	4-1/2	7-1/2		11/16	10-5/8	6-5/8
UHG24A-3	5	3	5-1/4	8-7/8		9/16	8-3/4	7-3/4
UHG24A-5		5				11/16	11-5/8	

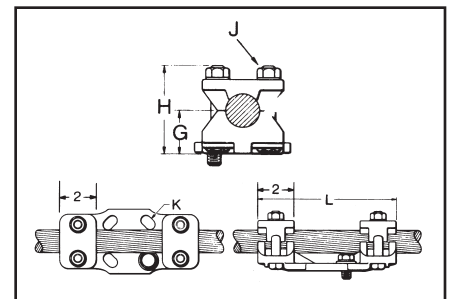
G-33

TYPE UHKR-A

BUS SUPPORT

FOR ALUMINUM
CABLE OR TUBE

Aluminum alloy bus support for mounting a wide range of cable or tube on post or pedestal type insulators. Supplied with hardware for mounting to cap of insulator. Specify base mounting hardware, if required, by adding suffix “-B” to Catalog Number.



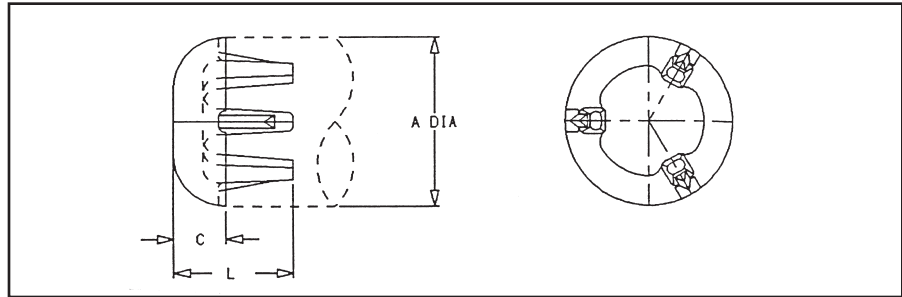
CATALOG NUMBER	CONDUCTOR			BOLT CIRCLE	G *	H	J	K	L
	ALUMINUM	ACSR	TUBE SCH. 40/80						
UHKR11A-3	4 Sol. - 4/0 Str.	6 (6-1) - 4/0 (6-1)	1/4	3	1-1/8	2-5/8	1/2	9/16	7-5/8
UHKR11A-5				5				11/16	9-1/2
UHKR13A-3	250 - 550	266.8 (6-7) - 477 (30-7)	3/8 - 1/2	3	1-3/8	2-7/8		9/16	7-5/8
UHKR13A-5				5				11/16	8-7/8
UHKR14A-3	600 - 1113	556.5 (26-7) - 1033.5 (54-7)	3/4	3	1-3/4	3-5/8		9/16	7-5/8
UHKR14A-5				5				1-1/2	3-3/8
UHKR16A-3	1000 - 2000	1113 (54-19) - 1780 (84-19)	1 - 1-1/4	3	1-31/32	4-1/16	1/2	9/16	7-9/16
UHKR16A-5				5				1-13/16	3-7/8

* With maximum conductor in place.

TYPE LB-A

END CAP

Aluminum alloy end cap for aluminum tube. Driven into place for a secure fit. Seals out moisture, reduces electrostatic loss and eliminates hazards created by nesting birds.



CONDUCTOR ALUMINUM PIPE SIZE	DIMENSIONS IN/[mm]			CATALOG NUMBER	
	A	C	L	SCHD. 40	SCHD. 80
1/2"	.84 [21]	.38 [9.7]	1.25 [32]	LB13A	LB53A
3/4"	1.05 [27]	.50 [13]	1.37 [35]	LB14A	LB54A
1"	1.32 [34]	.50 [13]	1.43 [36]	LB15A	LB55A
1-1/4"	1.66 [42]	.50 [13]	1.43 [36]	LB16A	LB56A
1-1/2"	1.90 [48]	.50 [13]	1.45 [37]	LB17A	LB57A
2"	2.38 [60]	.88 [22]	1.85 [47]	LB18A	LB58A
2-1/2"	2.88 [73]	.88 [22]	2.01 [51]	LB19A	LB59A
3"	3.50 [89]	.88 [22]	2.10 [53]	LB20A	LB90A
3-1/2"	4.00 [102]	.88 [22]	2.15 [55]	LB21A	LB91A
4"	4.50 [114]	.88 [22]	2.22 [56]	LB22A	LB92A
5"	5.56 [141]	.88 [22]	2.34 [59]	LB24A	LB94A
6"	6.63 [168]	.88 [22]	2.46 [62]	LB86A	LB96A

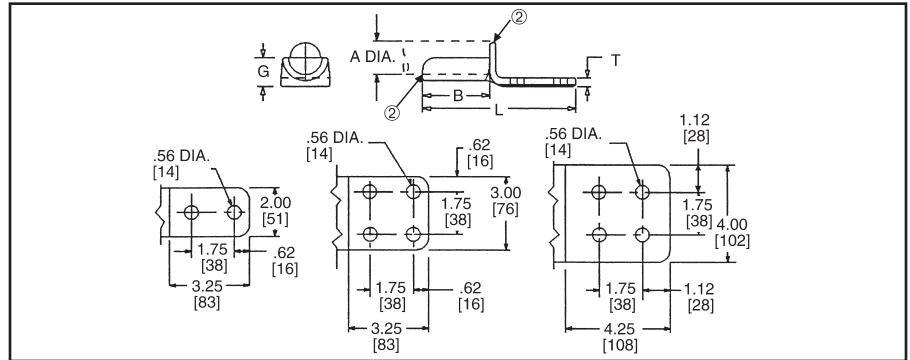
NOTES:

1. Material: Cast Aluminum Alloy.
2. Dimensions in brackets [] are in millimeters.

TYPE WAS-A

TERMINAL CONNECTOR

Aluminum alloy weld type terminal for joining aluminum tube to copper or aluminum pads. Drilling in pad conforms to NEMA standards. PENETROX™ joint compound recommended on pad contact surfaces.



CONDUCTOR ALUMINUM		CATALOG NUMBER	DIMENSIONS IN/[mm]			
SCH. 40/SCH. 80	A		B	G	L	T
3/4"	1.05 [27]	WAS14A-2N	2.50 [64]	1.50 [38]	6.50 [165]	.38 [9.7]
1"	1.32 [34]	WAS15A-2N	2.75 [70]	1.19 [30]	6.75 [171]	.38 [9.7]
		WAS15A-34N	2.75 [70]	1.19 [30]	6.75 [171]	.38 [9.7]
1-1/4"	1.66 [42]	WAS16A-2N	3.00 [76]	1.38 [35]	7.00 [178]	.38 [9.7]
		WAS16A-34N	3.00 [76]	1.38 [35]	7.00 [178]	.38 [9.7]
1-1/2"	1.90 [48]	WAS17A-2N	3.25 [83]	1.50 [38]	7.25 [184]	.44 [11]
		WAS17A-34N	3.25 [83]	1.50 [38]	7.25 [184]	.38 [9.7]
2"	2.38 [60]	WAS18A-2N	3.50 [89]	1.75 [44]	7.50 [19]	.44 [11]
		WAS18A-34N	3.50 [89]	1.75 [44]	7.50 [19]	.38 [10]
		WAS18A-44N	3.63 [92]	1.75 [44]	8.62 [219]	.50 [13]
2-1/2"	2.88 [73]	WAS19A-2N	3.63 [92]	2.00 [51]	7.87 [200]	.56 [14]
		WAS19A-34N	3.63 [92]	2.00 [51]	7.87 [200]	.56 [14]
		WAS19A-44N	3.63 [92]	2.00 [51]	8.87 [225]	.50 [13]
3"	3.50 [89]	WAS20A-2N	3.67 [93]	2.38 [60]	8.25 [21]	.69 [18]
		WAS20A-34N	3.75 [95]	2.38 [60]	8.25 [21]	.62 [16]
		WAS20A-44N	3.75 [95]	2.38 [60]	9.25 [235]	.62 [16]
3-1/2"	4.00 [102]	WAS21A-34N	4.25 [108]	2.62 [67]	8.50 [216]	.62 [16]
		WAS21A-44N	4.25 [108]	2.62 [67]	9.50 [241]	.62 [16]
4"	4.50 [114]	WAS22A-44N	4.25 [108]	2.88 [73]	9.50 [241]	.75 [19]
5"	5.56 [141]	WAS24A-44N	4.25 [108]	3.62 [92]	9.50 [241]	.75 [19]
6"	6.63 [168]	WAS86A-44N	4.25 [108]	4.00 [102]	9.75 [248]	1.00 [25]

G-35

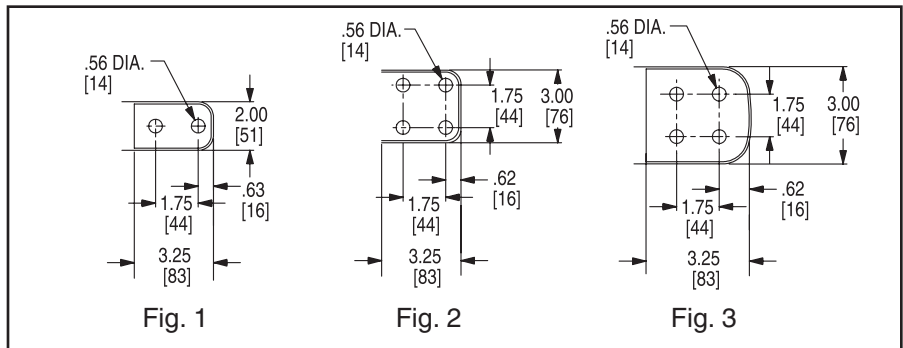
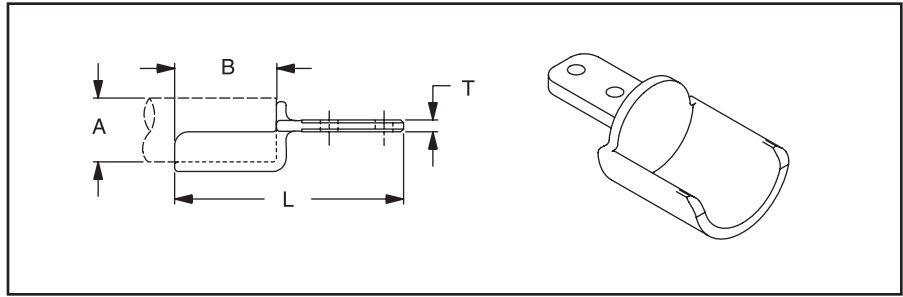
NOTES:

- 1 Material: Cast Aluminum Alloy.
- 2 WELDING TO BE DONE BY THE CUSTOMER.
For welding recommendation see drawing SD73608
- 3 After welding, scratch brush connector contact surface dry then apply an oxide inhibitor "PENETROX™ A".
"PENETROX™ A" can be purchased from BURNDY® Corporation in cans or plastic squeeze bottles.
- 4 Dimensions in brackets [] are in millimeters.
- 5 Tongue finished on ONE SIDE ONLY (bottom).
For tongue finished on both sides, add suffix letter "Q" to Catalog Number (e.g., WAS22A-44NQ).

TYPE WASC-A-N

CENTERFORMED WELDMENT TERMINAL

Aluminum alloy weldment terminal. Type WASC-A-N has one contact surface on the center line of the tube. Holes are NEMA spaced for terminating aluminum or copper mating pads. PENETROX™ joint compound recommended for use on contact surfaces.



G-36

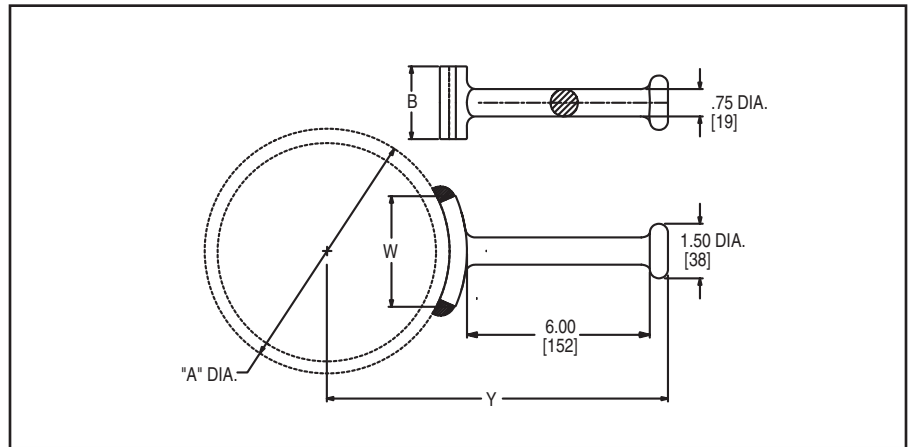
CATALOG NUMBER	ALUMINUM CONDUCTOR		FIG. NO.	DIMENSIONS IN/[mm]		
	SCH. 40/80	A [mm]		B	L	T
WASC14A2N	3/4"	1.05 [27]	1	2.50 [64]	6.44 [164]	.22 [6]
WASC15A2N	1"	1.32 [33]	1	2.75 [70]	6.69 [170]	.38 [10]
WASC15A34N			2			
WASC16A2N	1-1/4"	1.66 [42]	1	3.00 [76]	7.00 [178]	.38 [10]
WASC16A34N			2			
WASC17A34N	1-1/2"	1.90 [48]	2	3.25 [83]	7.31 [186]	.44 [11]
WASC18A2N	2"	2.38 [60]	1	3.50 [90]	7.56 [192]	.50 [13]
WASC18A34N			2		8.56 [217]	
WASC18A44N			3			
WASC19A2N	2-1/2"	2.88 [73]	1	3.75 [95]	7.88 [200]	.56 [14]
WASC19A34N			2		8.88 [226]	
WASC19A44N			3			
WASC20A2N	3"	3.50 [89]	1	4.00 [102]	8.13 [207]	.62 [16]
WASC20A34N			2		9.13 [232]	
WASC20A44N			3			
WASC21A2N	3-1/2"	4.00 [102]	1	4.25 [108]	8.38 [213]	
WASC21A34N			2		9.38 [238]	
WASC21A44N			3			
WASC22A2N	4"	4.50 [114]	1	4.25 [108]	8.38 [213]	.75 [19]
WASC22A34N			2		9.38 [238]	
WASC22A44N			3			
WASC24A34N	5"	5.56 [141]	2	4.25 [108]	8.50 [216]	.75 [19]
WASC24A44N			3		9.50 [241]	
WASC86A44N	6"	6.63 [168]	3	4.25 [108]	9.50 [241]	1.00 [25]

For tongue finished on both sides add suffix letter "Q" to Catalog Number (e.g., WASC14A2NQ).

TYPE WG-A

WELDMENT GROUND STUD

Range-taking weldment stud for grounding Aluminum tube.



CATALOG NUMBER	ALUM IPS	DIMENSIONS IN/[mm]			
		A	B	W	Y
WG19A	1" - 2-1/2"	1.315 - 2.88 [33] - [73]	3.00 [76]	1.32 [34]	8.19 [208]
WG86A	3" - 6"	3.50 - 6.62 [89] - [168]	2.00 [51]	3.06 [78]	10.31 [262]

Dimensions in brackets [] are in millimeters