



## EHV CONNECTORS

### EHV TERMINALS

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## EHV CONNECTORS (CONTINUED)

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## EXTRA HIGH VOLTAGE SUBSTATION CONNECTORS

We have been actively engaged in the design, development and production of substation power connectors for Extra High Voltage (EHV) applications since 1957. The experience gained through research and development in designing substation connectors for use at low voltage levels helped in planning ahead for the EHV era.

The use of Extra High Voltage has evolved as an economic necessity rather than a glamorous alternate. With large generating stations being located at fuel availability points in remote areas, plus the requirement for utility interconnections, the need is increasing to transfer larger and larger blocks of power over greater distances.

Extra High Voltage was and is necessary; however, existing designs of equipment and connectors had to be altered to handle the higher voltages. EHV connectors must operate free of corona and maintain the mechanical strength and current transfer capabilities required of other power connectors.

As an established leader in the Extra High Voltage substation connector market, we were one of the 345 KV connector pioneers and the first manufacturer to supply connectors for 500 and 765 KV substations. And, a major percentage of the EHV connectors in service today were designed and supplied by us. Our continuing efforts have aided the electrical industry in the development of design standards and performance criteria for these connectors.

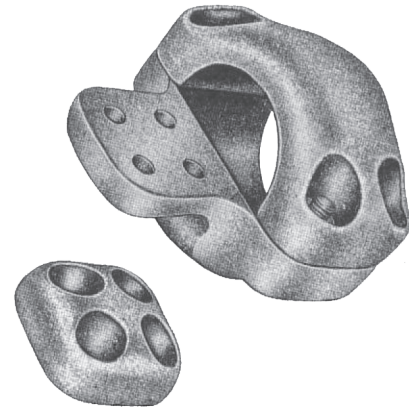
Our goals coincide with those of the electric utility industry...to provide an ever improving product at the lowest possible price.



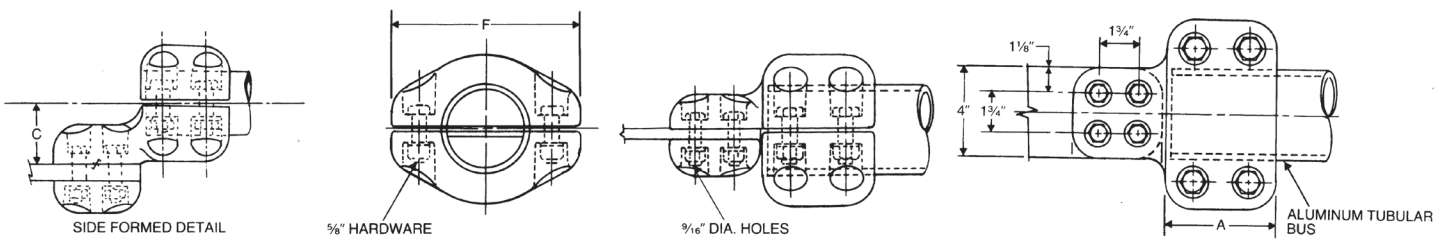
# EHV BOLTED TERMINALS FOR TUBE TO FLAT PAD TYPE HVSTF/EVSTF

ALUMINUM  
HVSTF/EVSTF

Aluminum alloy, tube to flat, terminal connectors are designed for corona free service at 345 and 500 KV respectively. Tongue mounting hardware is not furnished as part of this catalog number. Hardware must be ordered separately, specifying thickness of the pad to be clamped. *The hardware shield is furnished as part of this catalog number.* Tongue holes have NEMA spacing. Contact sealant is recommended. Terminals with side formed contact may be ordered by adding “-SF” to catalog number (example: HVSTF-34-D-SF).



**Material:** Castings - 356-T6 aluminum alloy  
Clamping Hardware - aluminum alloy



## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

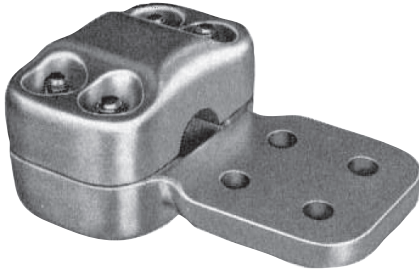
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS/EHIPS	DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS.(KG)
		A	C	F	
<b>345 KV APPLICATIONS</b>					
HVSTF20D	2	4 (101.60)	21/2 (63.50)	61/4 (158.75)	8.0 (3.63)
HVSTF24D	2 1/2	4 (101.60)	23/4 (69.85)	61/2 (165.10)	8.9 (4.04)
HVSTF30D	3	4 (101.60)	31/16 (77.79)	73/16 (182.56)	9.2 (4.17)
HVSTF34D	3 1/2	4 1/4 (107.95)	35/16 (84.14)	77/8 (200.03)	9.8 (4.45)
HVSTF40D	4	4 1/4 (107.95)	39/16 (90.49)	83/8 (212.73)	10.7 (4.85)
<b>500 KV APPLICATIONS</b>					
EVSTF24D	2 1/2	5 (127.00)	35/16 (84.14)	77/8 (200.03)	13.2 (5.99)
EVSTF30D	3	5 (127.00)	35/16 (84.14)	77/8 (200.03)	13.1 (5.94)
EVSTF34D	3 1/2	5 (127.00)	39/16 (90.49)	8 (203.20)	13.8 (6.27)
EVSTF40D	4	5 (127.00)	313/16 (96.84)	87/8 (203.20)	14.4 (6.53)
EVSTF50D	5	6 (152.40)	45/16 (109.54)	10 (254.00)	19.9 (9.03)

EHV  
1



**EHV BOLTED TERMINALS  
FOR CABLE TO FLAT PAD TYPE HVCF**

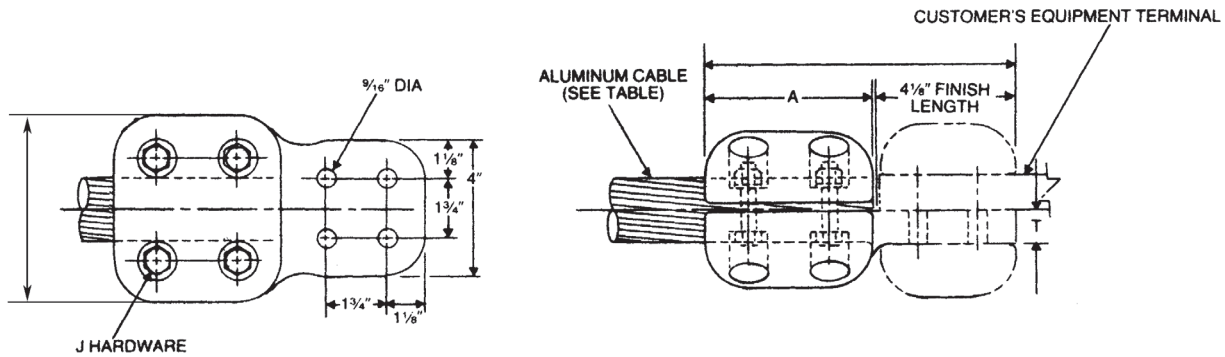
ALUMINUM  
HVCF



Aluminum alloy, cable to flat, terminals are designed for corona free service at 345 and 500 KV respectively. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately. (See Type EVHS-D bolt shields.)* Bolt shields must be used on both sides of pad to assure corona free performance. Tongue holes have NEMA spacing. Contact sealant is recommended.

**Add suffix: “-HS” for one hardware shield, and “-HS2” for two hardware shields.**

**Material:** Castings - 356-T6 aluminum alloy  
Clamping Hardware - aluminum alloy



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE				DIMENSIONS-INCHES (MM)					APPROX. WT. EA. LBS.(KG)	
	DIA. IN.	AAC	ACSR (AL/ST)		A	T	W	J	L		
HVCF1172D	1.072-1.172	874.5	(37 Str.)	715.5	30/19	4 (101.60)	3/4 (19.05)	41/2 (114.30)	1/2 (12.70)	83/8 (212.7)	5.2 (2.36)
		1033.5	(61 Str.)	715.5	24/7						
HVCF1300D	1.200-1.300	1100	(91 Str.)	1033.5	45/7	4 (101.60)	3/4 (19.05)	41/2 (114.30)	1/2 (12.70)	83/8 (212.7)	5.1 (2.31)
		1272	(61 Str.)	1113	54/7						
HVCF1382D	1.282-1.382	1250	(91 Str.)	1113	54/19	4 (101.60)	3/4 (19.05)	45/8 (117.48)	1/2 (12.70)	81/4 (209.6)	5.2 (2.36)
		1431	(61 Str.)	1272	45/7						
HVCF1545D	1.445-1.545	1590	(61 Str.)	1431	54/19	4 (101.60)	7/8 (22.23)	51/8 (130.18)	5/8 (15.88)	81/4 (209.6)	6.7 (3.04)
		1750	(91 Str.)	1590	45/7						
†HVCF1824D	1.724-1.824	2500	(91 Str.)	2167	72/7	63/4 (171.45)	1 (25.40)	51/2 (139.70)	5/8 (15.88)	11 (279.4)	11.6 (5.26)

\*6 Clamping Bolts

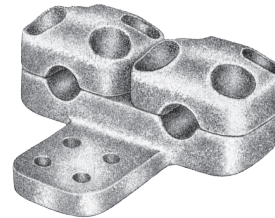
EHV  
2



## EHV BOLTED TERMINALS TWO CABLES TO FLAT PAD TYPE HV2CF

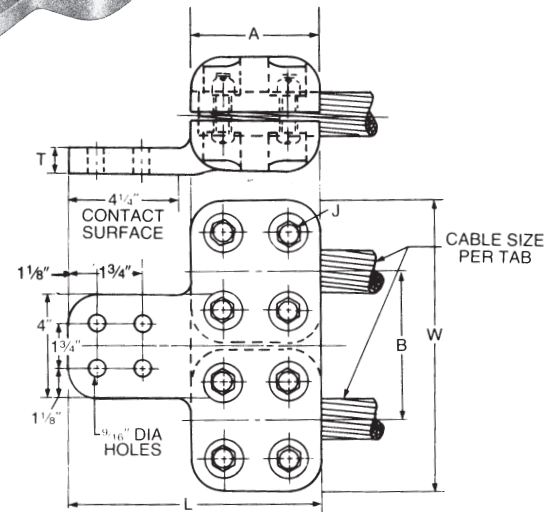
**ALUMINUM**  
**HV2CF**

Aluminum alloy, cable to flat, terminals are designed for corona free service at 345 KV. *This catalog number does not include tongue mounting hardware or bolt shields*; these components must be ordered separately. Bolt shields must be used on both sides of pad to assure corona free performance. Tongue holes have NEMA spacing. Contact sealant is recommended.



**Material:** Castings – 356-T6 aluminum alloy  
Clamping Hardware – aluminum alloy

**Add suffix:** “-HS” for one hardware shield, and “-HS2” for two hardware shields.



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

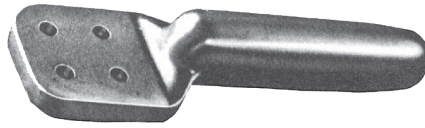
CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIMENSIONS-INCHES (MM)						APPROX. WT. EA. LBS.(KG)
	DIA. IN.	AAC	ACSR	A	T	L	W	J	B	
HV2CF1028D	.928-1.028	650 (61 Str.) 795 (37 Str.) (91 Str.)	636 36/1 24/7 26/7 18/1 36/1 24/7 666.6	4 (101.60)	1 (25.40)	81/2 (215.90)	91/8 (231.78)	1/2 (12.70)	45/8 (117.48)	6.9 (3.13)
HV2CF1163D	1.063-1.163	874.5 (37 Str.) 954 (37 Str.) (61 Str.)	795 45/7 24/7 54/7 26/7 30/19 54/7 874.5	4 (101.60)	1 (25.40)	81/2 (215.90)	91/8 (231.78)	1/2 (12.70)	45/8 (117.48)	6.9 (3.13)
HV2CF1196D	1.096-1.196	954 (37 Str.) 1033.5 (61 Str.)	795 26/7 30/19 36/1 1033.5	4 (101.60)	1 (25.40)	81/2 (215.90)	91/8 (231.78)	1/2 (12.70)	45/8 (117.48)	6.9 (3.13)
HV2CF1300D	1.200-1.300	1100 (91 Str.) 1272 (61 Str.)	1113 45/7 54/7 45/7 54/19	4 (101.60)	1 (25.40)	81/2 (215.90)	91/8 (231.78)	1/2 (12.70)	45/8 (117.48)	6.9 (3.13)
HV2CF1382D	1.282-1.382	1250 (91 Str.) 1431 (61 Str.)	1113 54/19 54/19 1272	4 (101.60)	1 (25.40)	81/2 (215.90)	93/8 (238.13)	1/2 (12.70)	43/4 (120.65)	7.8 (3.54)
HV2CF1454D	1.354-1.454	1400 (91 Str.) 1590 (61 Str.) (91 Str.)	1272 54/19 45/7 1431	4 (101.60)	1 (25.40)	81/2 (215.90)	93/4 (247.65)	5/8 (15.88)	415/16 (125.41)	8.1 (3.68)
HV2CF1650D	1.550-1.650	1900 (127 Str.) 2000 (91 Str.) (127 Str.)	1780 84/19	4 (101.60)	1 (25.40)	81/2 (215.90)	103/8 (263.53)	5/8 (15.88)	51/4 (133.35)	8.7 (3.95)
*HV2CF1824D	1.724-1.824	2500 (91 Str.) (127 Str.)	2167 72/7 84/19 2156	63/4 (171.45)	1 (25.40)	111/4 (285.75)	111/8 (282.58)	5/8 (15.88)	55/8 (142.85)	11.3 (5.13)

\* Furnished with 12 clamping bolts.

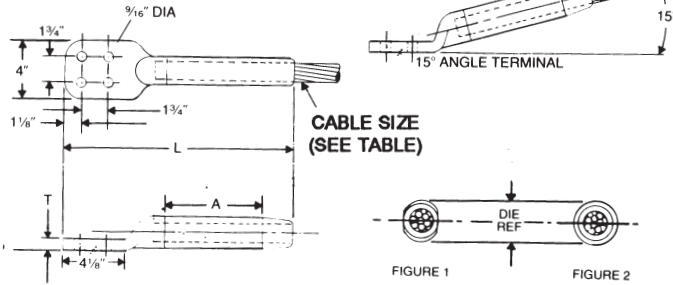


## EHV COMPRESSION TERMINALS FOR CABLE TYPE CCL-EHV

**ALUMINUM  
CCL-EHV**



Aluminum compression terminal connectors are designed for corona free service at 500 KV. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. These connectors can be compressed with conventional tooling. The barrel is factory inhibited and the entire connector is sealed in a clear plastic bag. *Tongue mounting hardware and bolt shields are not part of this catalog number, and must be ordered separately.* For 15° angle terminals add "15" to the catalog number (example: CCL-1659-D-15-EHV). For conductors not shown and for angles other than 15°, contact factory for information and dimensions. Pad holes have NEMA spacing. Contact sealant is recommended.



**Material:** Casting - 99 aluminum alloy

For use with conventional compression tooling refer to chart CC-4872 for tool and die information see page 85. Add "-XY" for double contact surfaces.

### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIE REF.	FIGURE NUMBER	DIMENSIONS-INCHES (MM)			APPROX. WT. EA. LBS.(KG)
	DIA. IN.	AAC	ACSR			A	T	L	
CCL1036DEHV	1.019-1.036	795 (37 Str.) 800 (61 Str.)	636 30/19 715.5 54/7	1.843	1	81/2 (215.90)	3/4 (19.05)	137/8 (352.43)	2.8 (1.27)
CCL1051DEHV	1.040-1.063	-	795 36/1 795 47/7 715.5 26/7 26/7	1.843	1	81/2 (215.90)	3/4 (19.05)	137/8 (352.43)	2.7 (1.22)
CCL1108DEHV	1.077-1.108	874.5 (37 Str.) (61 Str.) 900 (37 Str.) (91 Str.) (61 Str.)	715.5 30/19 24/7 795 54/7 26/7	1.843	1	81/2 (215.90)	3/4 (19.05)	137/8 (352.43)	2.9 (1.32)
CCL1162DEHV	1.124-1.162	954 (37 Str.) (61 Str.) 1000 (61 Str.)	900 45/7 54/7 795 30/19 954 86/1 874 54/7	2.125	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	4.0 (1.81)
CCL1196DEHV	1.165-1.196	1033.5 (37 Str.) (61 Str.)	954 45/7 54/7 1033.5 36/1	2.125	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	4.0 (1.81)
CCL1246DEHV	1.209-1.263	1100 (91 Str.) 1113(61 Str.) 1192.5 (61 Str.) 1200 (91 Str.)	1033.5 45/7 54/7 111354/7	2.125	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.43)	4.2 (1.9)
CCL1299DEHV	1.293-1.302	1250 (91 Str.) 1272 (61 Str.) 1300 (91 Str.) 1351.5 (61 Str.)	111354/19 1192.5 45/7 54/19 1192.5 54/19	2.375	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	4.2 (1.91)
CCL1382DEHV	1.338-1.385	1400 (91 Str.) 1431 (61 Str.)	1272 45/7 54/19 1351.5 45/7	2.375	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	3.9 (1.77)
CCL1465DEHV	1.412-1.466	1500 (91 Str.) (61 Str.) 1590 (91 Str.) 1510.5 (61 Str.) 1600 (127 Str.)	1351.5 54/19 1431 45/7 1431 54/19 1510.5 45/7	2.375	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	3.9 (1.77)
CCL1545DEHV	1.502-1.548	1700 (127 Str.) 1750 (127 Str.) 1800 (127 Str.)	1590 45/7 1510.5 54/19 1590 54/19	2.375	1	91/4 (234.95)	3/4 (19.05)	145/8 (371.48)	3.9 (1.77)
CCL1659DEHV	1.602-1.659	2000 (91 Str.) 2000 (127 Str.)	1780 84/19	2.937	2	93/4 (247.65)	1 (25.40)	155/8 (396.85)	6.3 (2.86)
CCL1762DEHV	1.710-1.762	-	2167 72/7 2156 84/19	2.937	2	93/4 (247.65)	1 (25.40)	155/8 (396.85)	6.6 (2.99)
CCL1824DEHV	1.763-1.824	(91 Str.) 2500 (127 Str.)	-	2.937	2	93/4 (247.65)	1 (25.40)	155/8 (396.85)	6.6 (2.99)
CCL1950DEHV	1.825-1.950	2750 (91 Str.)	-	2.937	2	93/4 (247.65)	1 (25.40)	155/8 (396.85)	6.6 (2.99)
CCL1996DEHV	1.953-1.996	3000 (127 Str.)	-	2.937	2	93/4 (247.65)	1 (25.40)	155/8 (396.85)	6.6 (2.99)
CCL2160DEHV	2.160	3500 (127 Str.)	-	2.937	2	91/2 (241.30)	1 (25.40)	155/8 (396.85)	6.6 (2.99)

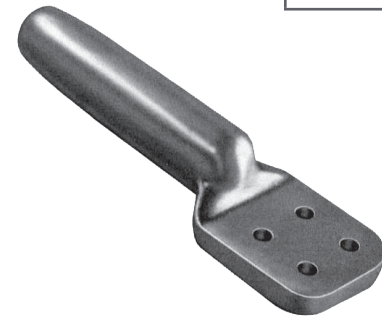
EHV  
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## EHV SHORT BARREL COMPRESSION TERMINALS FOR CABLE TYPE CCLS-EHV

ALUMINUM
CCLS-EHV

Aluminum compression terminal connectors are designed for corona free service at 500 KV. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. These connectors can be compressed with conventional tooling. The barrel is factory inhibited and the entire connector is sealed in a clear plastic bag. *Tongue mounting hardware and bolt shields are not part of this catalog number, and must be ordered separately.* Short barrel requires less space and allows faster installation.



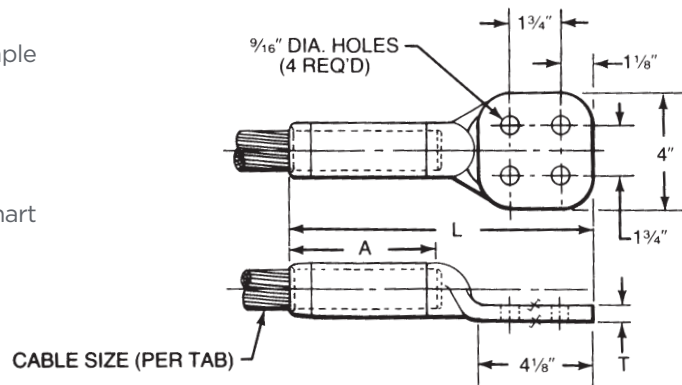
Pad holes have NEMA spacing. Contact sealant is recommended.

For 15° angle terminals add "-15" to catalog number (example CCLS-1424-D-15)

**Material:** Casting - 99 aluminum alloy

For use with conventional compression Tooling, refer to chart C-13282 for tool and die information see page 86.

Add "-XY" for double contact surfaces.



### TYPE CCLS-EHV COMPRESSION TERMINALS FOR CABLE 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE CABLE DIA. INCHES	DIE REF.	DIMENSIONS-INCHES (MM)			WEIGHT
			A	T	L	
CCLS1081DEHV	1.026-1.081	1.625	3.88 (98.55)	1/2 (12.70)	8 (203.20)	1.3
CCLS1152DEHV	1.092-1.152	1.625	3.88 (98.55)	1/2 (12.70)	8 (203.20)	1.3
CCLS1216DEHV	1.140-1.216	1.625	3.88 (98.55)	1/2 (12.70)	8 (203.20)	1.3
CCLS1300DEHV	1.246-1.300	1.844	51/4 (133.35)	1/2 (12.70)	105/8 (269.88)	1.6
CCLS1424DEHV	1.345-1.424	2.062	51/4 (133.35)	1/2 (12.70)	105/8 (269.88)	2.0
CCLS1506DEHV	1.424-1.506	2.062	53/8 (136.53)	5/8 (15.88)	103/4 (273.05)	1.9
CCLS1545DEHV	1.506-1.545	2.062	53/8 (136.53)	5/8 (15.88)	103/4 (273.05)	1.9
CCLS1659DEHV	1.602-1.659	2.375	53/4 (146.05)	5/8 (15.88)	11 (279.40)	2.3
CCLS1762DEHV	1.750-1.762	2.375	53/4 (146.05)	5/8 (15.88)	11 (279.40)	2.2
CCLS1824DEHV	1.824	2.375	53/4 (146.05)	5/8 (15.88)	11 (279.40)	2.2
CCLS1996DEHV	1.996	2.625	63/4 (171.45)	3/4 (19.05)	121/8 (307.98)	2.8
CCLS2160DEHV	2.160	2.750	63/4 (171.45)	3/4 (19.05)	121/8 (307.98)	2.8

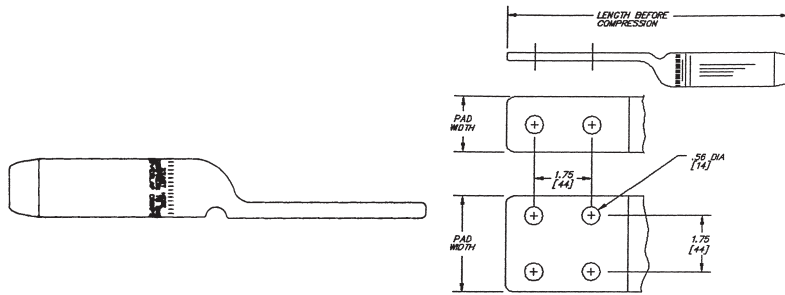
EHV  
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## EHV TERMINALS LONG BARREL COMPRESSION CABLE TO FLAT

ALUMINUM
ACF



Jumper terminals are prefilled with inhibitor. Pad holes have NEMA spacing.

**Material:** Seamless Extruded Aluminum Tube

For use with conventional hex die tooling  
Available with 15, 45 or 90 degree angled pad.

**Example:** ACF1196N445 for 45 deg. pad angle.

IDENTIFICATION:  
CONDUCTOR DIAMETER RANGE  
DIE SIZE, MIN PRESS SIZE  
DATE CODE, HPS  
CATALOG NO.

### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	AAC KCMIL	ACSR KCMIL (STR)	O.D. (IN) STD COND. (COMPACT / TW)	COMPR. DIES	MIN. PRESS (TONS)	PAD DETAILS		LENGTH BEFORE COMPR. (IN)	NET WEIGHT LB (KG)
						BOLT HOLES	WIDTH (IN)		
ACF1108N4	795-900	636 (30/19) 715.5 (24/7) (26/7) (30/19) 795 (45/7) (54/7) (26/7)	1.019 - 1.108 (0.921 - 1.010)	30AH	60	4	2.98	13.06	2.0 (.91)
		715.5 (30/19) 795 (45/7) (54/7) (26/7)	1.077 - 1.108 (0.977 - 1.108)	L727					
ACF1196N4	954-1033.5	795 (26/7) (30/19) 954 (36/1) (45/7) (54/7)	1.108 - 1.196 (1.010 - 1.084)	30AH	60	4	3.20	13.63	2.0 (.91)
	1000-1033.5	795 (30/19) 954 (45/7) (54/7)	1.140 - 1.196 (1.040 - 1.084)	L727					
ACF1263N4	1113-1200	954 (30/19) 1033.5 (45/7) (54/7) 1113 (45/7)	1.203 - 1.263 (1.092 - 1.165)	34AH L767	60	4	3.10	13.84	2.8 (1.27)
ACF1340N4	1250-1351.5	1113 (54/19) 1192.5 (45/7) (54/19)	1.289 - 1.340 (1.165 - 1.225)	34AH L767	60	4	3.33	13.97	2.7 (1.23)
ACF1386N4	1431	1192.5 (54/19) 1272 (45/7) (54/19) 1351.5 (45/7)	1.338 - 1.386 (1.225 - 1.259)	36AH L728	60	4	3.04	14.69	3.1 (1.41)
ACF1504N4	1500-1590	1351.5 (54/19) 1431 (45/7) (54/19) 1510.5 (45/7), 1590 (45/7)	1.412 - 1.504 (1.320 - 1.358)	38AH	60	4	3.51	15.19	3.5 (1.59)
ACF1545N4	1750	1510.5 (54/19) 1590 (45/7) (54/19)	1.504 - 1.545 (1.358 - 1.424)	40AH L735	60	4	3.49	16.00	4.2 (1.91)
ACF1700N4	2000	1780 (84/19), 1869 (68/7) 2034.5 (72/7), 2057 (76/19)	1.602 - 1.700 (1.445 - 1.545)	42AH	100	4	3.93	16.13	4.5 (2.04)
ACF1762N4	2250-2300	2167 (72/7) 2156 (84/19)	1.729 - 1.762 (1.545 - 1.608)	44AH	100	4	4.0	17.56	5.2 (2.36)
ACF1824N4	2500	2156 (84/19) 2312 (76/19)	1.762 - 1.824 (1.608 - 1.650)	44AH	100	4	3.93	17.94	5.2 (2.36)

**NOTES:**

1. These terminals are also recommended for AAAC and ACAR conductors within the diameter ranges listed.
2. Terminals are pre-filled with Anderson/Fargo standard joint compound.  
Consult factory for terminals pre-filled with high performance, conductive-grit compound type HTJC.

EHV  
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# EHV TERMINALS

## SHORT BARREL COMPRESSION CABLE TO FLAT

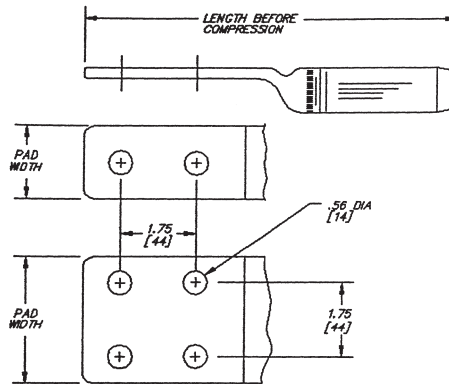
**ALUMINUM**  
**ACFS**

Jumper terminals are prefilled with inhibitor. Pad holes have NEMA spacing.

For use with conventional hex die tooling  
Available with 15, 45 or 90 degree angled pad.

**Example:** ACFS1196N445 for 45 deg. pad angle.

IDENTIFICATION:  
CONDUCTOR DIAMETER RANGE  
DIE SIZE, MIN PRESS SIZE  
DATE CODE, HPS  
CATALOG NO.



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	AAC KCMIL	ACSR KCMIL (STR)	O.D. (IN) STD COND. (COMPACT / TW)	COMPR. DIES	MIN. PRESS (TONS)	PAD DETAILS		LENGTH BEFORE COMPR. (IN)	NET WEIGHT LB (KG)
						BOLT HOLES	WIDTH (IN)		
ACFS1108N4	795-900	636 (30/19) 715.5 (24/7) (26/7) (30/19) 795 (45/7) (54/7) (26/7)	1.019 - 1.108 (0.921 - 1.010)	30AH	60	4	2.98	11.25	1.7 (.77)
		715.5 (30/19) 795 (45/7) (54/7) (26/7)	1.077 - 1.108 (0.977 - 1.108)	L727					
ACFS1196N4	954-1033.5	795 (26/7) (30/19) 954 (36/1) (45/7) (54/7)	1.108 - 1.196 (1.010 - 1.084)	30AH	60	4	3.20	11.50	1.7 (.77)
	1000-1033.5	795 (30/19) 954 (45/7) (54/7)	1.140 - 1.196 (1.040 - 1.084)	L727					
ACFS1263N4	1113-1200	954 (30/19) 1033.5 (45/7) (54/7) 1113 (45/7)	1.203 - 1.263 (1.092 - 1.165)	34AH L767	60	4	3.10	11.84	2.4 (1.09)
ACFS1340N4	1250-1351.5	1113 (54/19) 1192.5 (45/7) (54/19)	1.289 - 1.340 (1.165 - 1.225)	34AH L767	60	4	3.33	12.22	2.4 (1.09)
ACFS1386N4	1431	1192.5 (54/19) 1272 (45/7) (54/19) 1351.5 (45/7)	1.338 - 1.386 (1.225 - 1.259)	36AH L728	60	4	3.04	12.81	2.7 (1.23)
ACFS1504N4	1500-1590	1351.5 (54/19) 1431 (45/7) (54/19) 1510.5 (45/7), 1590 (45/7)	1.412 - 1.504 (1.320 - 1.358)	38AH	60	4	3.51	13.19	3.0 (1.36)
ACFS1545N4	1750	1510.5 (54/19) 1590 (45/7) (54/19)	1.504 - 1.545 (1.358 - 1.424)	40AH L735	60	4	3.49	13.97	3.7 (1.68)
ACFS1700N4	2000	1780 (84/19), 1869 (68/7) 2034.5 (72/7), 2057 (76/19)	1.602 - 1.700 (1.445 - 1.545)	42AH	100	4	3.93	14.03	3.9 (1.77)
ACFS1762N4	2250-2300	2167 (72/7) 2156 (84/19)	1.729 - 1.762 (1.545 - 1.608)	44AH	100	4	4.0	15.31	4.5 (2.04)
ACFS1824N4	2500	2156 (84/19) 2312 (76/19)	1.762 - 1.824 (1.608 - 1.650)	44AH	100	4	3.93	15.44	4.5 (2.04)

**NOTES:**

1. These terminals are also recommended for AAC and ACAR conductors within the diameter ranges listed.
2. Terminals are pre-filled with Anderson/Fargo standard joint compound.  
Consult factory for terminals pre-filled with high performance, conductive-grit compound type HTJC.



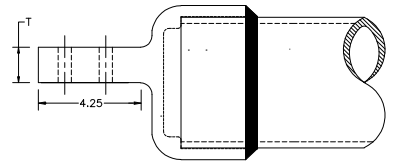
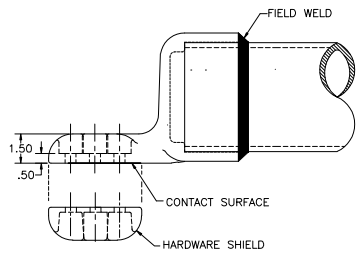
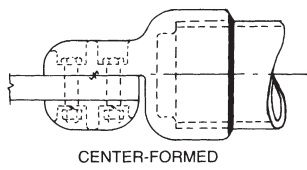
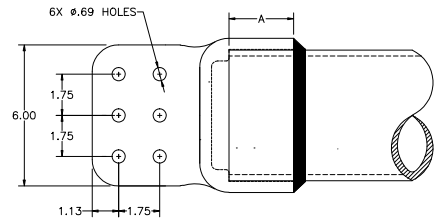
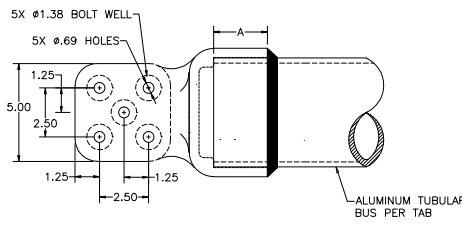
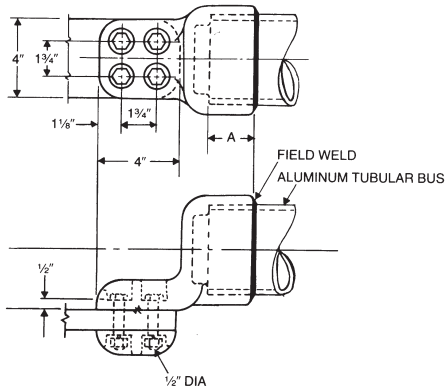
## EHV EXTERNAL WELDED TERMINALS FOR TUBE TO FLAT PAD TYPE WSTFE-EHV

**ALUMINUM  
WSTFE-EHV**



Aluminum alloy tube to flat terminals are designed for corona free service at 345 and 500 KV. Terminals with center-formed contact may be ordered by adding "CF" to the catalog number (example: WSTFE-40-D-CF-EHV). *The hardware shield is included as part of this catalog number.* Tongue hardware is not furnished as part of this catalog number. Hardware must be ordered separately, specifying thickness of pad to be clamped. Pad holes have NEMA spacing. Contact sealant is recommended after welding.

**Material:** Castings - 356-T6 aluminum alloy  
Bolt Shield - 356-T6 aluminum alloy



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	DIMENSIONS - INCHES (MM)		APPROX. WT. EA. LBS. (KG)
		A	T	
WSTFE30DEHV	3	13/4 (44.45)	-	3.9 (1.77)
WSTFE40DEHV	4	2 1/4 (57.15)	-	6.1 (2.77)
WSTFE50DEHV	5	2 3/4 (69.85)	-	7.6 (3.45)
WSTFE60DEHV	6	3 1/2 (88.90)	-	10.8 (4.90)
WSTFE34DCFEHV	3 1/2	2 (50.80)	-	5.0 (3.07)
WSTFE40NCFEHV*	4	2 (50.80)	0.88 (22.2)	8.5 (3.86)
WSTFE50NCFEHV*	5	2 (50.80)	1.0 (25.4)	11.1 (5.03)
WSTFE60NCFEHV*	6	3 1/2 (88.90)	1.0 (25.4)	13.3 (6.04)
WSTFE40KCFEHV	4	2 1/4 (57.15)	-	8.0 (3.63)
WSTFE50KCFEHV	5	2 3/4 (69.85)	-	9.6 (4.36)

\* Includes 2 Hardware Shields

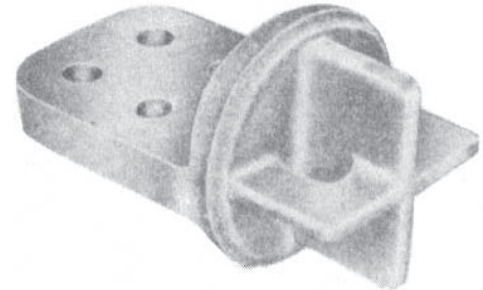
EHV 8



## EHV INTERNAL WELDED TERMINALS FOR TUBE TO CENTER-FORMED FLAT PAD TYPE WSTFX-EHV

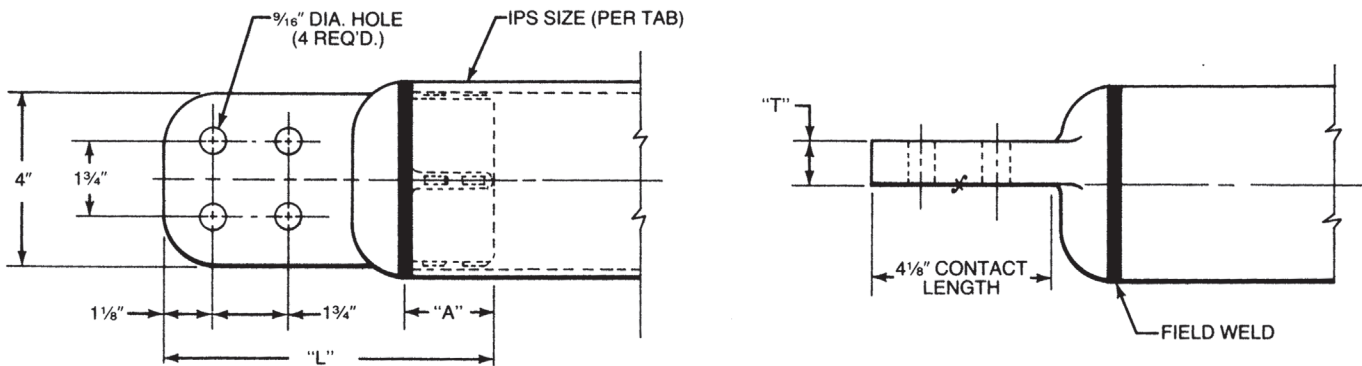
ALUMINUM
<b>WSTFX-EHV</b>

Aluminum alloy, tube to flat, terminal connectors are designed for corona free service at 345 and 500 KV. Only one side of the contact tongue is machined. Casting is chamfered for proper welding fit. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately.* Specify "H" in catalog number if Schedule 80 EHIPS tubing is to be used. (example: WSTFXH-40-D-CF-EHV.) Tongue holes have NEMA spacing. Contact sealant is recommended for contact pad after welding.



**Material:** Castings - 356-T6 aluminum alloy

**Add suffix:** "HS" for one hardware shield, and "HS2" for two hardware shields.



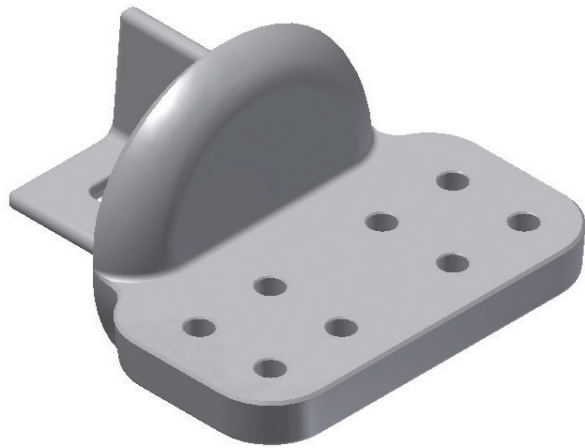
### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS	DIMENSIONS-INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		A	T	L	
WSTFX24DCFEHV	2 1/2	1 1/2 (38.10)	1/2 (12.70)	7 (177.80)	1.5 (.68)
WSTFX30DCFEHV	3	1 3/4 (44.45)	5/8 (15.88)	7 1/4 (184.15)	2.2 (.99)
WSTFX34DCFEHV	3 1/2	1 3/4 (44.45)	3/4 (15.88)	7 1/4 (184.15)	2.7 (1.23)
WSTFX40DCFEHV	4	2 (50.80)	7/8 (19.05)	7 5/8 (193.68)	3.7 (1.68)
WSTFX50DCFEHV	5	2 (50.80)	1 (25.40)	7 5/8 (193.68)	4.8 (2.18)
WSTFX60DCFEHV	6	2 1/2 (63.50)	1 (25.40)	8 (203.20)	6.4 (2.91)

EHV  
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**ALUMINUM**  
**WSTFXH-EHV**



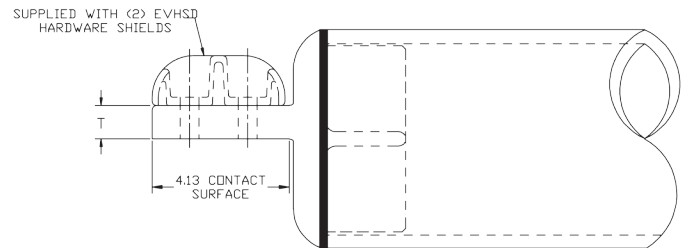
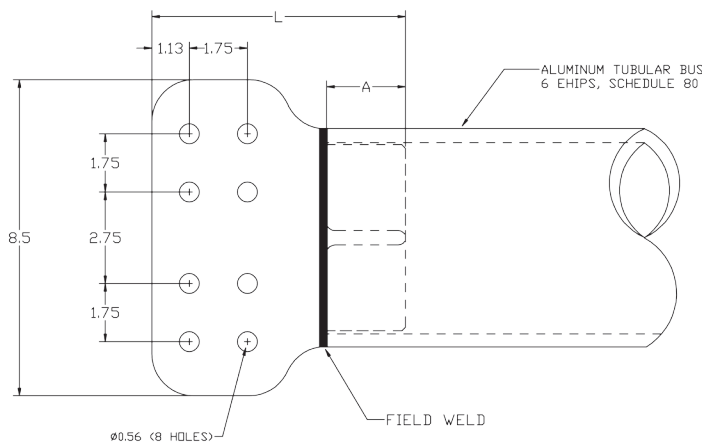
Aluminum alloy, tube-to-flat terminal, designed for corona-free EHV service, on 6 EHIPS, schedule 80 bus up to 500kV. Two bolt shields are required and included:

**Material:** Castings - 356-T6 aluminum alloy

**Note:** When mounting to unshielded equipment pad, two additional hardware shields (EVHSD) must be used to ensure corona-free performance.

Pad bolting hardware is not included. Bolt lengths depend on thickness of mating pad to be clamped.

Ampacity is 5,000 amps outdoors with 2 ft/sec cross wind and normal oxidized surface, when installed with type HTJC Inhibitor compound and the two EVHSD hardware shields provided.



**EHV**  
**10**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE EHIPS	DIMENSIONS—INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		A	L	T	
WSTFXH602N4CFEHV	6	2.37 (60.2)	8.0 (203)	1.0 (25.4)	7.5 (3.4)



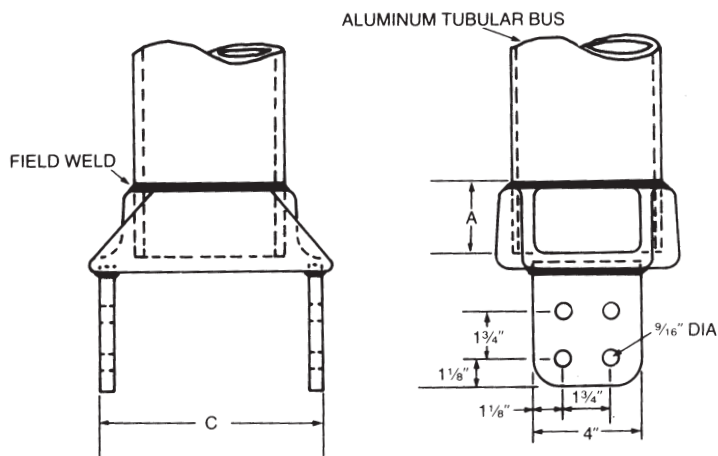
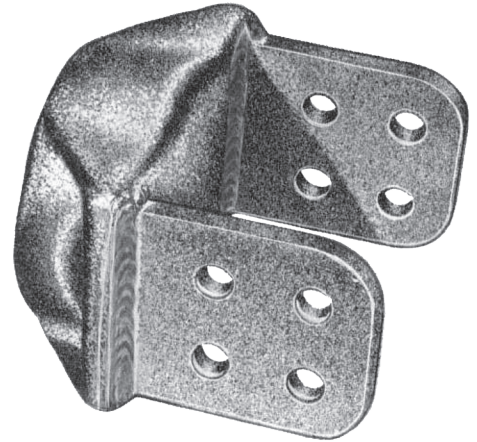
## EHV EXTERNAL WELDED TERMINALS FOR TUBE TO TWO FLAT PADS TYPE WST2F-EHV

ALUMINUM  
WST2F-EHV

Aluminum alloy weldment, tube to double flat, terminal is designed for corona free service at 345 and 500 KV when bolt shields are installed. *This catalog number does not include hardware shields or mounting hardware.* Contact sealant is recommended for contact pads after welding.

**Material:** Castings - 356-T6 aluminum alloy  
Pads - 6061-T6

**Add suffix:** "HS" for one hardware shield, and "HS2" for two hardware shields.



### 345 KV LINE-TO-LINE APPLICATIONS

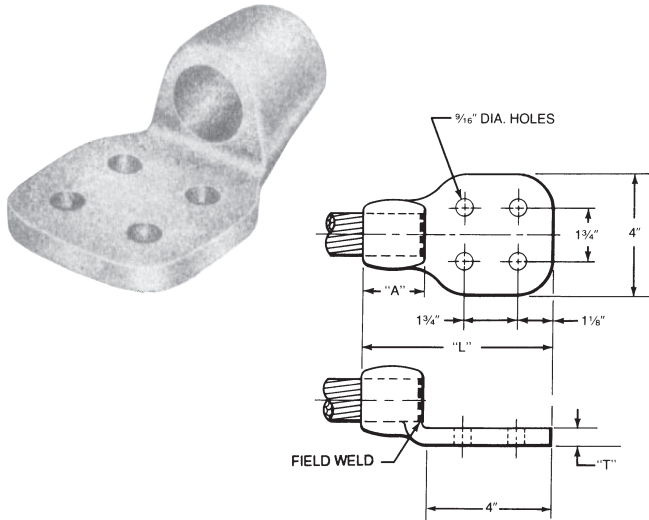
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS/EHIPS	DIMENSIONS-INCHES (MM)		APPROX. WT. EA. LBS. (KG)
		A	C	
WST2F24DEHV	2 1/2	1 (25.40)	6 (152.40)	2.3 (1.04)
WST2F30DEHV	3	1 (25.40)	6 (152.40)	2.9 (1.37)
WST2F34DEHV	3 1/2	1 (25.40)	6 (152.40)	3.6 (1.63)
WST2F40DEHV	4	1 1/4 (31.75)	6 7/8 (174.63)	4.9 (2.22)
WST2F50DEHV	5	1 1/4 (31.75)	9 3/8 (238.13)	5.4 (2.45)
WST2F60DEHV	6	1 1/2 (38.10)	6 3/4 (171.45)	4.6 (2.09)

EHV  
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## EHV WELDED CABLE TERMINALS FOR CABLE TO FLAT PAD TYPE WCF-EHV

ALUMINUM
WCF-EHV



Aluminum alloy, cable to flat pad, terminal connectors are designed for corona free service at 345 KV. Tongue holes have NEMA spacing. Cable should be positioned 1/8" to 3/16" from edge inside barrel prior to puddle welding. *This catalog number does not include tongue mounting hardware or bolt shields;* these components must be ordered separately. Corona rings, terminal equipment or bolt shields must be used on both sides of pad to assure corona free performance. Contact sealant is recommended for contact pads after welding.

**Material:** Casting - 356-T6 aluminum alloy

**Add suffix:** "-HS" for one hardware shield, and "-HS2" for two hardware shields.

### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIMENSIONS-INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	DIA. IN.	AAC	ACSR	A	L	T	
WCF106DEHV	.990-1.028	750 (61 Str.) 795 (37 Str.) 795 (61 Str.)	636 30/19 666.6 24/7	13/4 (44.45)	6 (152.40)	1/2 (12.70)	1.1 (.48)
WCF113DEHV	1.031-1.081	800 (61 Str.) 874.5 (37 Str.) 874.5 (61 Str.)	715.5 54/7 30/19 26/7 795 36/1 45/7	13/4 (44.45)	6 (152.40)	1/2 (12.70)	1.1 (.48)
WCF117DEHV	1.093-1.125	900 (91 Str.) 954 (61 Str.) 954 (37 Str.)	795 54/7 26/7	13/4 (44.45)	6 (152.40)	1/2 (12.70)	1.1 (.48)
WCF123DEHV	1.140-1.172	1000 (61 Str.) 1033.5 (37 Str.) 1033.5 (61 Str.)	795 30/19 954 54/7	13/4 (44.45)	6 (152.40)	1/2 (12.70)	1.1 (.48)
WCF129DEHV	1.209-1.246	1100 (91 Str.) 1113 (61 Str.) 1113 (37 Str.)	1033.5 45/7 954 54/7	2 (50.80)	61/4 (158.75)	9/16 (14.20)	1.4 (.64)
WCF136DEHV	1.263-1.315	1200 (91 Str.) 1300 (91 Str.)	1113 54/19	2 (50.80)	61/4 (158.75)	9/16 (14.20)	1.4 (.64)
WCF143DEHV	1.320-1.346	1351.5 (61 Str.)	1192. 54/19 1272 45/7	2 (50.80)	61/4 (158.75)	9/16 (14.20)	1.6 (.73)
WCF147DEHV	1.364-1.412	1400 (91 Str.) 1500 (91 Str.)	1272 54/19 1351.5 45/7	2 (50.80)	61/4 (158.75)	9/16 (14.20)	1.6 (.73)
WCF155DEHV	1.454-1.504	1590 (61 Str.) 1700 (91 Str.) 1700 (127 Str.)	1431 54/19 1590 45/7	2 1/2 (63.50)	63/4 (171.45)	5/8 (15.88)	1.8 (.82)
WCF162DEHV	1.526-1.590	1750 (127 Str.) 1900 (127 Str.)	1590 54/19	2 1/2 (63.50)	63/4 (171.45)	5/8 (15.88)	1.8 (.82)
WCF172DEHV	1.630-1.631	2000 (91 Str.)	-	2 1/2 (63.50)	63/4 (171.45)	5/8 (15.88)	1.8 (.82)
WCF181DEHV	1.729-1.762	-	2167 72/7 2156 84/19	3 (76.20)	71/4 (184.15)	3/4 (19.05)	2.7 (1.22)
WCF188DEHV	1.823-1.824	2500 (91 Str.) (127 Str.)	-	3 (76.20)	71/4 (184.15)	3/4 (19.05)	2.7 (1.22)

EHV  
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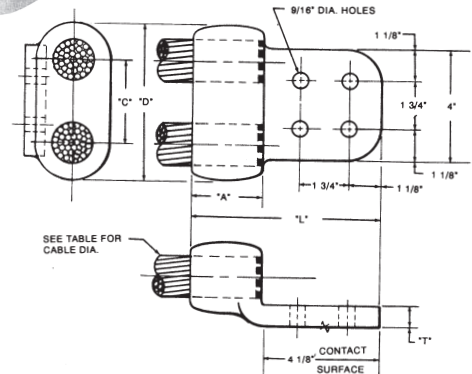
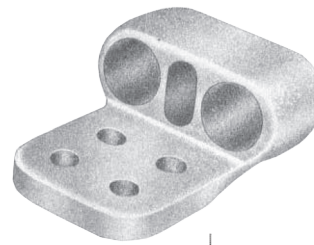
## EHV WELDED CABLE TERMINALS TWO CABLES TO FLAT PAD TYPE W2CF-EHV

ALUMINUM  
W2CF-EHV

Aluminum alloy, cable to flat pad, terminal connectors are designed for corona free service at 345 KV. Tongue holes have NEMA spacing. Cable should be positioned 1/8" to 3/16" from edge inside barrel prior to puddle welding. *This catalog number does not include tongue mounting hardware or bolt shields;* these components must be ordered separately. Corona rings, terminal equipment or bolt shields must be used on both sides of pad to assure corona free performance. Contact sealant is recommended for contact pads after welding.

**Material:** Castings – 356-T6 aluminum alloy

**Add suffix:** “-HS” for one hardware shield, and “-HS2” for two hardware shields.



### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIMENSIONS-INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	DIA. IN.	AAC	ACSR	A	L	T	
W2CF106DEHV	.990-1.028	750 (61 Str.) 37 Str.) 795 (61 Str.)	636 30/19 666.6 24/7	13/4 (44.45)	6 (152.40)	5/8 (15.88)	1.1 (.77)
W2CF113DEHV	1.031-1.081	800 (61 Str.) 37 Str.) 874.5 (61 Str.)	715.5 54/7 30/19 795 26/7 36/1 45/7	13/4 (44.45)	6 (152.40)	5/8 (15.88)	1.7 (.77)
W2CF117DEHV	1.093-1.125	900 (91 Str.) 61 Str.) 954 (37 Str.)	795 54/7 26/7	13/4 (44.45)	6 (152.40)	5/8 (15.88)	1.7 (.77)
W2CF123DEHV	1.140-1.172	1000 (61 Str.) 1033.5 (37 Str.) (61 Str.)	795 30/19 954 45/7	13/4 (44.45)	6 (152.40)	5/8 (15.88)	1.7 (.77)
W2CF129DEHV	1.209-1.246	1100 (91 Str.) 1113 (61 Str.)	954 54/7 1033.5 45/7	2 (50.80)	61/4 (158.75)	11/16 (17.46)	2.7 (1.22)
W2CF136DEHV	1.263-1.315	1200 (91 Str.) 1300 (91 Str.)	1113 54/19	2 (50.80)	61/4 (158.75)	11/16 (17.46)	2.7 (1.22)
W2CF143DEHV	1.320-1.346	1351 (61 Str.)	1192.5 54/19 1272 45/7	2 (50.80)	61/4 (158.75)	11/16 (17.46)	2.7 (1.22)
W2CF147DEHV	1.364-1.412	1400 (91 Str.) 1500 (91 Str.)	1272 54/19 1351.5 45/7	2 (50.80)	61/4 (158.75)	11/16 (17.46)	2.7 (1.22)
W2CF155DEHV	1.454-1.504	1590 (61 Str.) 91 Str.) 1700 (127 Str.)	1431 54/19 1590 45/7	2 1/2 (63.50)	63/4 (171.45)	3/4 (19.05)	3.6 (1.63)
W2CF162DEHV	1.526-1.590	1750 (127 Str.) 1900 (127 Str.)	1590 54/19	2 1/2 (63.50)	63/4 (171.45)	3/4 (19.05)	3.6 (1.63)
W2CF172DEHV	1.630-1.631	2000 (91 Str.)	-	2 1/2 (63.50)	63/4 (171.45)	3/4 (19.05)	3.6 (1.63)
W2CF181DEHV	1.729-1.762	-	2167 72/7 2156 84/19	3 (76.20)	71/4 (184.15)	1 (25.4)	5.7 (2.58)
W2CF188DEHV	1.823-1.824	2500 (91 Str.) (127 Str.)	-	3 (76.20)	71/4 (184.15)	1 (25.4)	5.7 (2.58)

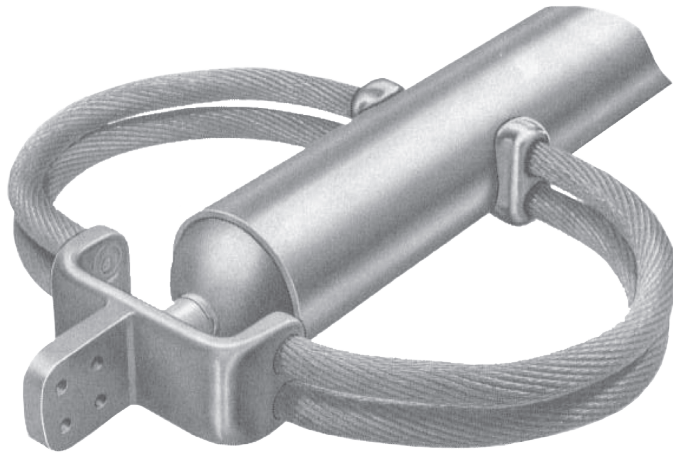
EHV  
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## EHV WELDED EXPANSION TERMINALS FOR TUBE TO FLAT PAD TYPE HV RTE

ALUMINUM
HVRTE

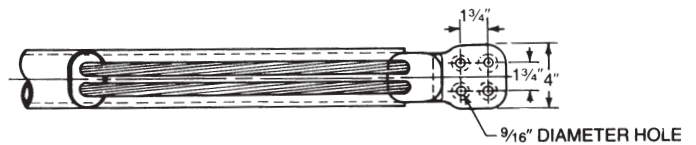
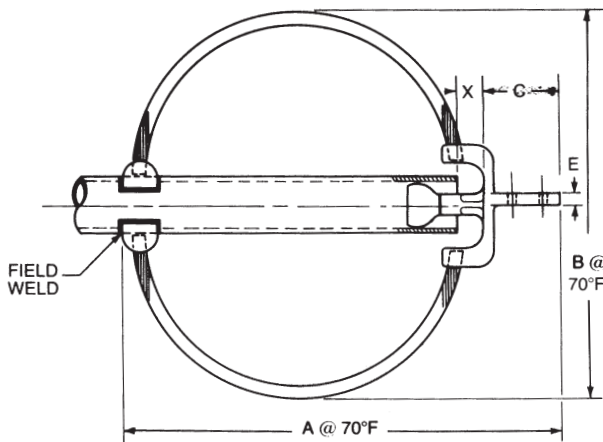


Aluminum alloy weldment, expansion terminal, is designed for corona free service at 345KV. This design provides 32 inch expansion. The cables serves as the expansion part of the fitting as well as the corona rings. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately. Specify "H" in catalog number if Schedule 80 EHIPS tubing is to be used; example: HVRTEH-40-D.*

**Material:** Castings - 356-T6 aluminum alloy  
Cables - aluminum alloy

Refer to installation chart DC-11853 on page 87 for instructions.

**Add suffix:** "-HS" for one hardware shield, and "-HS2" for two hardware shields.



EHV  
14

### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS-INCHES (MM)				APPROX. WT. EA. LBS. (KG)
		A	B	C	E	
HVRTE24D	2 1/2	271/16 (687.39)	253/4 (654.05)	47/8 (123.83)	3/4 (19.05)	11.6 (5.10)
HVRTE30D	3	271/16 (687.39)	253/4 (654.05)	47/8 (123.83)	3/4 (19.05)	11.8 (5.35)
HVRTE34D	3 1/2	271/16 (687.39)	253/4 (654.05)	47/8 (123.83)	3/4 (19.05)	11.9 (5.36)
HVRTE40D	4	271/16 (687.39)	253/4 (654.05)	47/8 (123.83)	3/4 (19.05)	12.0 (5.44)
HVRTE50D	5	28 (711.20)	283/4 (730.25)	51/8 (130.18)	1 (25.40)	12.3 (5.58)
HVRTE60D	6	28 (711.20)	283/4 (730.25)	51/8 (130.18)	1 (25.40)	12.5 (5.67)



## EHV WELDED EXPANSION TERMINALS FOR TUBE TO FLAT PAD TYPE EVKET

ALUMINUM
EVKET

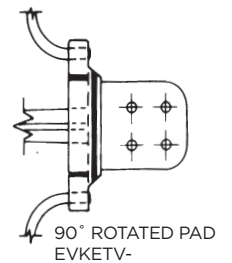
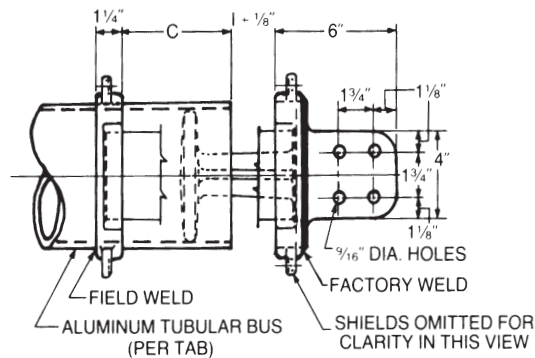
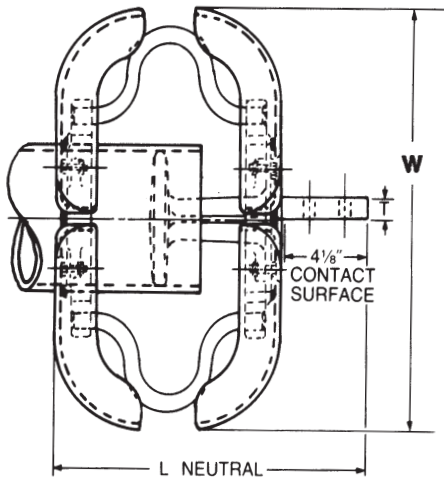
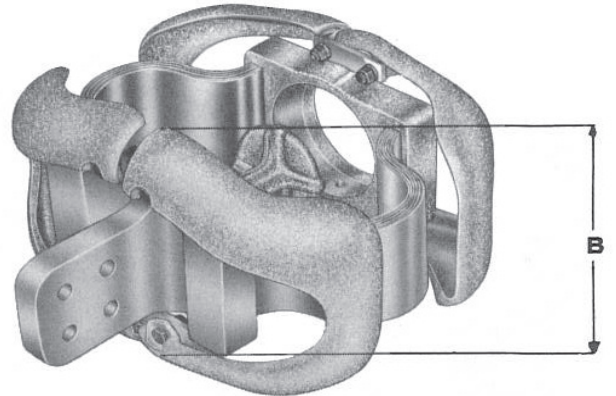
Aluminum alloy, tube to flat, compact expansion terminals are designed for corona free service at 500 KV. This design provides 32 inch expansion. *This catalog number does not include tongue mounting hardware or bolt shields*; these components must be ordered separately. Contact sealant is recommended for pads after welding. Specify "H" in catalog number if Schedule 80 EHIPS tubing is to be used; example: EVKETH-40-D.

**Material:** Castings - 356-T6 aluminum alloy  
 Shunts - 1100-D aluminum alloy  
 Shield Mounting Hardware - stainless steel

**Note:** To obtain pad rotated 90°, add "V" to catalog number; (example EVKETV-40-D).

Refer to installation chart DC-9295 on page 86 for instructions.

**Add suffix:** "-HS" for one hardware shield, and "-HS2" for two hardware shields.



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM ♦♦ CONDUCTOR SIZE IPS	DIMENSIONS-INCHES (MM)					APPROX. WT. EA. LBS. (KG)
		L	W	C	T	B *	
EVKET34D	3 1/2	143/4 (374.65)	18 (457.20)	43/4 (120.65)	3/4 (19.05)	101/16	18.3 (8.30)
EVKET40D	4	15 (381.00)	18 (457.20)	5 (127.00)	7/8 (22.23)	101/16	19.9 (9.03)
EVKET50D	5	15 1/4 (387.35)	21 1/2 (546.10)	5 1/4 (133.35)	1 (25.40)	113/4	24.3 (11.02)
EVKET60D	6	15 1/2 (393.70)	21 1/2 (546.10)	5 1/2 (139.70)	1 (25.40)	113/4	27.6 (12.52)

♦♦ 140 ft. maximum total bus length.  
 \* Height of Corona Shield

EHV  
15



**ALUMINUM**  
**EVKETVH**

Aluminum alloy, tube-to-flat, compact expansion terminal designed for corona-free EHV service, on 6 EHIPS, schedule 80 bus up to 500kV. Two bolt shields are required and included.

This design provides 32 inch expansion.

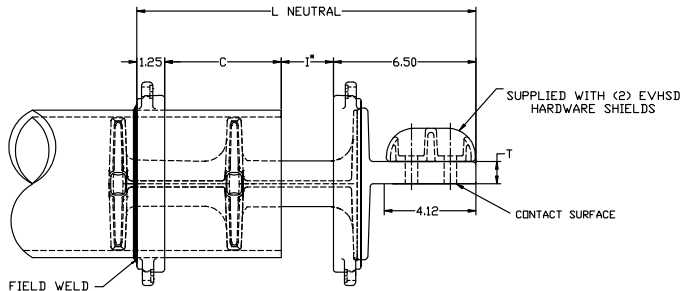
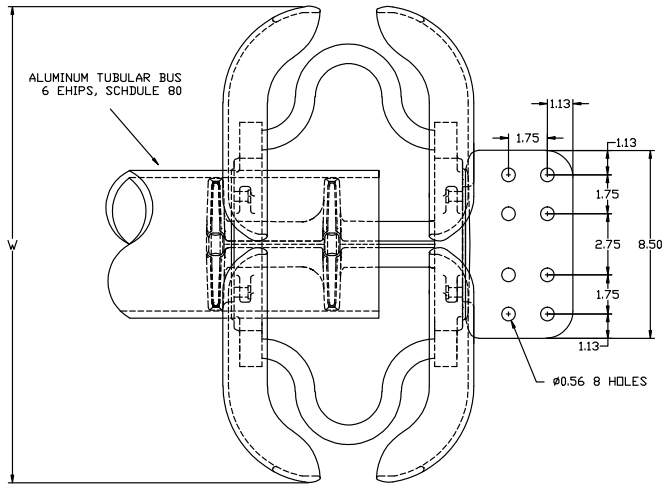
**Material:** Castings - 356-T6 aluminum alloy  
Shunts - 1100D aluminum alloy  
Shield Mounting Hardware - Stainless Steel

**Note:** When mounting to unshielded equipment pad, two additional hardware shields (EVHSD) must be used to ensure corona-free performance.

Pad bolting hardware is not included. Bolt lengths depend on thickness of mating pad to be clamped.

Maximum bus length is 90 feet.

Ampacity: 5,000A outdoors with 2 ft/sec cross wind and normal oxidized surface, when installed with type HTJC Inhibitor compound and the two EVHSD hardware shields provided.



SHUNT STRAPS & SHIELDS NOT SHOWN IN THIS VIEW

\*SEE INSTALLATION CHRT DC-9295 ON PAGE 86 'I' DIMENSION

**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE EHIPS	DIMENSIONS - INCHES (MM)					APPROX. WT. EA. LBS. (KG)
		L	W	C	T	SHIELD HEIGHT	
EVKETVH602N4	6	16.0 (406)	21.5 (546)	5.50 (140)	1.0 (25.4)	11.75 (298)	33.0 (15.0)

EHV  
16



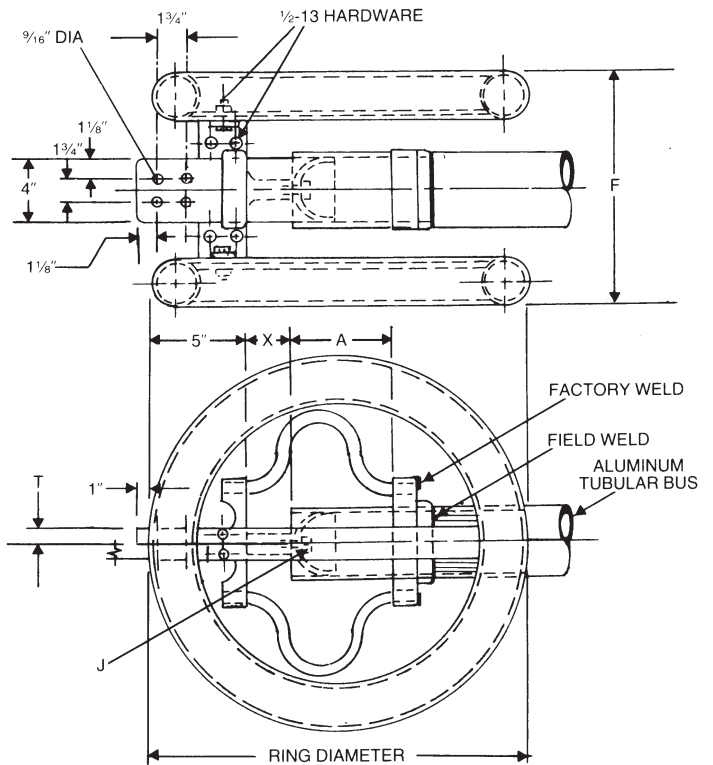
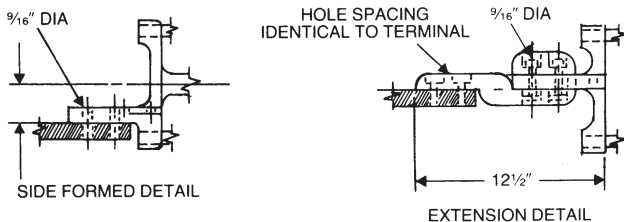
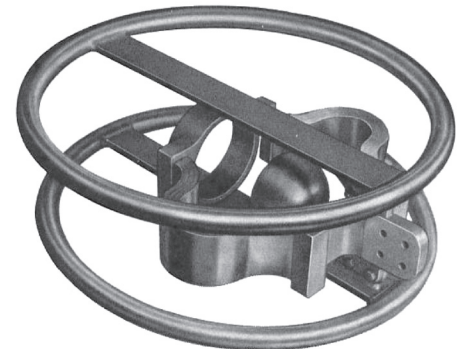
# EHV WELDED EXPANSION TERMINALS FOR TUBE TO FLAT PAD TYPE HVETF/EVETF

ALUMINUM  
HVETF/EVETF

Aluminum alloy, tube to flat, expansion terminals are designed for corona free service at 345 and 500 KV respectively. This design provides 32 inch expansion. Terminals with side formed contact may be ordered by adding "SF" to the catalog number (example: HVETF-40-D-SF). For additional equipment clearance, a pad extension may be ordered by adding "E" in the catalog number (example: HVETFE-40-D). When pad extension is specified, one hardware shield and hardware is furnished. Specify "H" in catalog number if schedule 80 EHIPS tubing is to be used; example: HVETFH-40-D. Pad mounting hardware is not furnished as part of this catalog number and must be ordered separately, specifying thickness of pad to be clamped.

- Material:**
- Castings** - 356-T6 aluminum alloy
  - Rings** - 6061-T6 aluminum alloy
  - Ring Brackets** - 6061-T6 aluminum alloy
  - Shunts** - 1100-O aluminum alloy
  - Guide Mounting Hardware** - galvanized steel
  - Ring Mounting Hardware** - aluminum alloy

Refer to for installation chart DC-6750 on page 87 for instructions.



## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	RING DIAMETER	DIMENSIONS-INCHES (MM)				APPROX. WT. EA. LBS. (KG)
			A	T	F	J	
HVETF20D	2	24 (609.60)	63/4 (171.45)	1/2 (12.70)	111/4 (285.75)	1/2 (12.70)	18.2 (8.26)
HVETF24D	2 1/2	24 (609.60)	61/4 (158.75)	1/2 (12.70)	111/4 (285.75)	1/2 (12.70)	19.6 (8.89)
HVETF30D	3	24 (609.60)	63/4 (171.45)	5/8 (15.88)	111/4 (285.75)	1/2 (12.70)	22.9 (10.39)

Continued on next page



**TYPES HVETF/EVETF WELDED EXPANSION TERMINALS  
FOR TUBE TO FLAT 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS  
(CONTINUED)**

345 KV AND 500 KV LINE-TO-LINE APPLICATIONS							
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	RING DIAMETER	DIMENSIONS-INCHES (MM)				APPROX. WT. EA. LBS. (KG)
			A	T	F	J	
<b>345 KV APPLICATIONS (CONTINUED)</b>							
HVETF34D	3 1/2	24 (609.60)	7 (177.80)	1 (25.40)	1 1/4 (285.75)	1/2 (12.70)	31.7 (14.38)
HVETF40D	4	24 (609.60)	7 1/4 (184.15)	1 (25.40)	1 15/8 (295.28)	1/2 (12.70)	28.2 (12.79)
HVETF50D	5	30 (762.00)	7 3/4 (196.85)	1 (25.40)	1 15/8 (295.28)	5/8 (15.88)	37.2 (16.87)
HVETF60D	6	30 (762.00)	8 (203.20)	1 (25.40)	12 (304.80)	5/8 (15.88)	41.9 (19.01)
<b>500 KV APPLICATIONS</b>							
EVETF30D	3	24 (609.60)	6 3/4 (171.45)	5/8 (15.88)	1 23/4 (323.85)	1/2 (12.70)	29.4 (13.34)
EVETF34D	3 1/2	24 (609.60)	7 (177.80)	1 (25.40)	1 23/4 (323.85)	1/2 (12.70)	38.2 (17.33)
EVETF40D	4	24 (609.60)	7 1/4 (184.15)	1 (25.40)	1 13/8 (333.38)	1/2 (12.70)	34.7 (15.74)
EVETF50D	5	30 (762.00)	7 1/4 (196.85)	1 (25.40)	1 13/8 (333.38)	5/8 (15.88)	40.7 (18.46)
EVETF60D	6	30 (762.00)	8 (203.20)	1 (25.40)	1 13/2 (342.90)	5/8 (15.88)	45.4 (20.59)

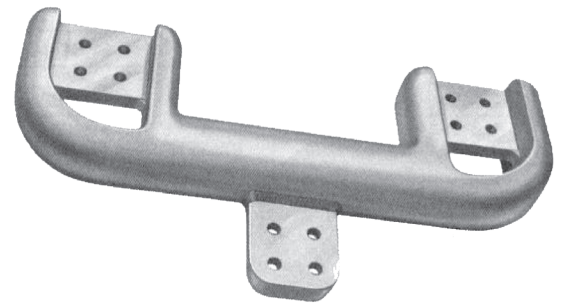
EHV  
18



## EHV BIFURCATING TERMINALS ONE FLAT PAD TO TWO FLAT PADS TYPE EVT2F-D

ALUMINUM  
EVT2F-D

Aluminum alloy, bifurcating terminals are designed for two terminations to a single flat pad. The connectors are corona free at 500 KV. When mounted on unshielded equipment tongue, bolt shield (catalog number EVHS-D) must be used to assure corona free performance. Mounting hardware should not project above recess. *Bolt shields are not included as part of this catalog number.* Connector will be corona free only if tap connectors are attached. Maximum terminal pad thickness is one inch. Contact sealant is recommended. Add "-90" for tap pads in horizontal plane.

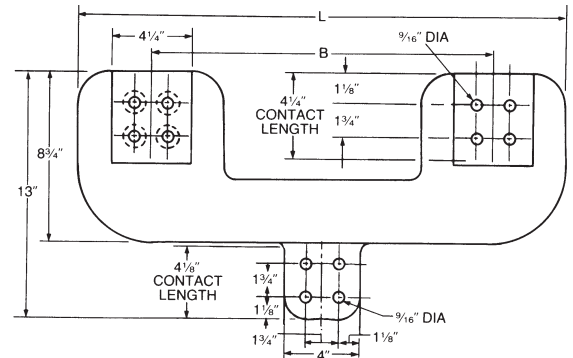


**Material:** Castings - 356-T6 aluminum alloy

**Note:** Contact factory to obtain center pad at special angles.

### 500 kV LINE-TO-LINE APPLICATIONS

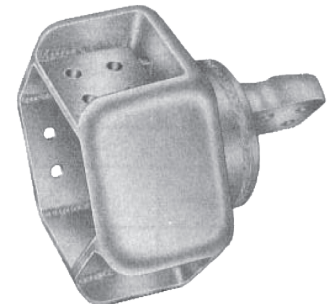
CATALOG NUMBER	DIMENSIONS-INCHES (MM)		APPROX WT EA LBS (KG)
	B	L	
EVT2FD12	12 (304.80)	19 1/8 (485.78)	23.1 (10.49)
EVT2FD18	18 (457.20)	25 1/8 (638.18)	24.2 (10.99)



## EHV TRIFURCATING TERMINAL ONE FLAT PAD TO THREE FLAT PADS TYPE EVT3F-D

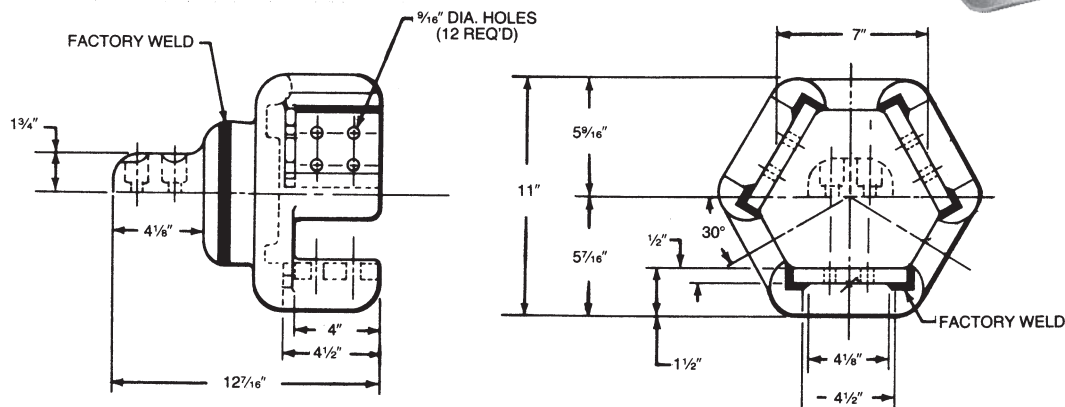
ALUMINUM  
EVT3F-D

Aluminum alloy terminal is designed for corona free service at 500 KV. *Hardware and terminals are not included and must be ordered separately.* Maximum terminal pad thickness is one inch. *This catalog number does not include tongue mounting hardware or bolt shields;* these components must be ordered separately. Contact sealant is recommended. Bolt shields not required on recessed pad connections.



**Material:** Castings - 356-T6 aluminum alloy

**Weight** - 25.5 (11.58 kg)



EHV  
19



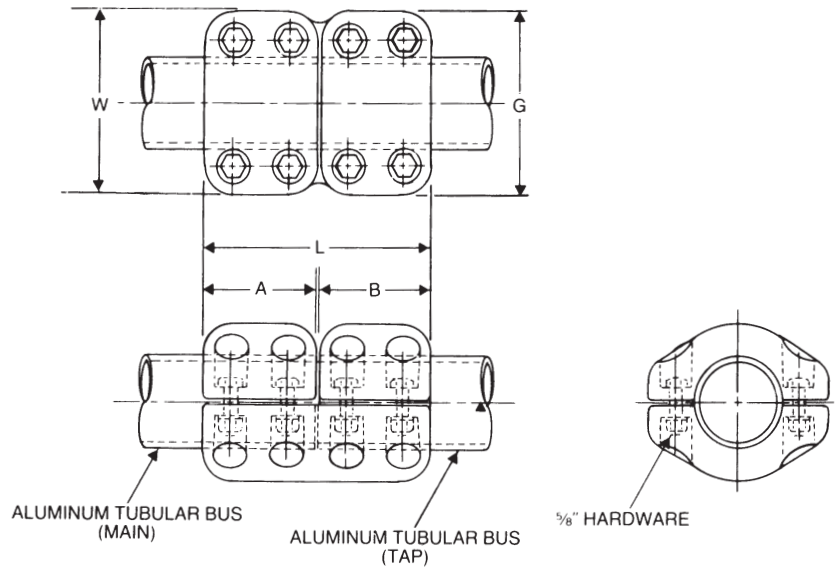
**EHV BOLTED COUPLERS FOR TUBE TYPE HVSTT/EVSTT**

**ALUMINUM  
HVSTT/EVSTT**

Aluminum alloy, tube to tube, couplers are designed for corona free service at 345 and 500 KV respectively. Contact sealant is recommended.



**Material:** Castings - 356-T6 aluminum alloy  
Hardware - aluminum alloy



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	CONDUCTOR SIZE TUBING IPS/EHIPS		DIMENSIONS-INCHES (MM)					APPROX. WT. EA. LBS. (KG)
	MAIN	TAP	A	L	B	W	G	
<b>345 KV APPLICATIONS</b>								
HVSTT2424	2 1/2	2 1/2	4 (101.60)	8 1/8 (206.38)	4 (101.60)	6 1/2 (165.10)	6 1/2 (165.10)	9.1 (4.13)
HVSTT3030	3	3	4 (101.60)	8 1/8 (206.38)	4 (101.60)	7 3/16 (182.56)	7 3/16 (182.56)	-
HVSTT3434	3 1/2	3 1/2	4 1/4 (107.95)	8 5/8 (219.08)	4 1/4 (107.95)	7 7/8 (200.03)	7 7/8 (200.03)	13.9 (6.31)
HVSTT4040	4	4	4 1/4 (107.95)	8 5/8 (219.08)	4 1/4 (107.95)	8 3/8 (212.73)	8 3/8 (212.73)	16.3 (7.39)
+HVSTT5050	5	5	6 (152.40)	12 1/8 (307.98)	6 (152.40)	9 5/16 (236.54)	9 5/16 (236.54)	28.1 (12.75)
+HVSTT6060	6	6	6 (152.40)	12 1/8 (307.98)	6 (152.40)	10 3/8 (263.53)	10 3/8 (263.53)	32.0 (14.52)

Continued on next page.

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**EHV BOLTED COUPLERS  
FOR TUBE TYPE HVSTT/EVSTT (CONTINUED)**

**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	CONDUCTOR SIZE TUBING IPS/EHIPS		DIMENSIONS-INCHES (MM)					APPROX. WT. EA. LBS. (KG)
	MAIN	TAP	A	L	B	W	G	
<b>500 kV APPLICATIONS</b>								
EVSTT3030	3	3	5 (127.00)	101/8 (257.18)	5 (127.00)	77/8 (200.03)	77/8 (200.03)	20.4 (9.25)
EVSTT3434	3 1/2	3 1/2	5 (127.00)	101/8 (257.18)	5 (127.00)	8 (203.20)	8 (203.20)	17.7 (8.03)
EVSTT4040	4	4	5 (127.00)	101/8 (257.18)	5 (127.00)	87/8 (225.43)	87/8 (225.43)	23.6 (10.70)
†EVSTT5030	5	3	6 (152.40)	111/8 (282.58)	5 (127.00)	10 (254.00)	77/8 (200.03)	27.4 (12.43)
†EVSTT5040	5	4	6 (152.40)	111/8 (282.58)	5 (127.00)	10 (254.00)	87/8 (225.43)	28.8 (13.06)
†EVSTT5050	5	5	6 (152.40)	121/8 (307.98)	6 (152.40)	10 (254.00)	10 (254.00)	33.4 (15.15)
†EVSTT6030	6	3	6 (152.40)	111/8 (282.58)	5 (127.00)	11 (279.40)	77/8 (200.03)	29.9 (13.56)
†EVSTT6040	6	4	6 (152.40)	111/8 (282.58)	5 (127.00)	11 (279.40)	87/8 (225.43)	31.5 (14.79)
†EVSTT6060	6	6	6 (152.40)	121/8 (307.98)	6 (152.40)	11 (279.40)	11 (279.40)	36.7 (16.66)

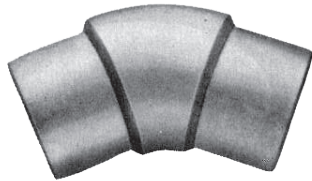
†Furnished with 6 clamping bolts for 5" and 6" IPS tubing.





## EHV WELDED ANGLE COUPLERS FOR TUBE TYPE WLI-45-EHV/WLI-90-EHV

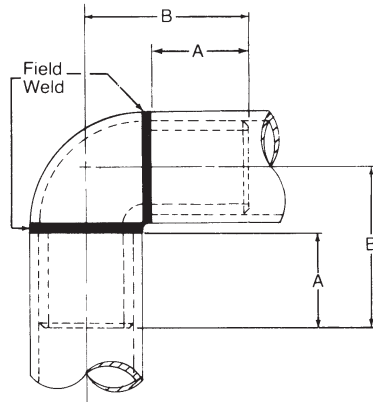
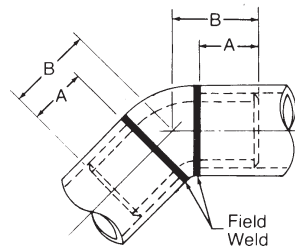
ALUMINUM  
WLI-45-EHV/  
WLI-90-EHV



WLI-45



WLI-90



Aluminum alloy, tube to tube, couplers are designed for corona free service at 500 KV. This is an internal fitting connector with sufficient chamfer adjacent to tube ends for proper welding. The fitting is of sufficient strength to give adequate support to the tubing. The smooth contoured surface of this connector is free of nicks and burrs, which make it suitable for high voltage corona free application. To specify for extra heavy schedule 80 EHIPS tubing, add "H" to catalog number; example: WLIH-45-3030-EHV.

**Material:** Castings - 356-T6 aluminum alloy

### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS-INCHES (MM)		APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS	TUBING TAP IPS	A	B	
45°					
90°					

EHV  
22



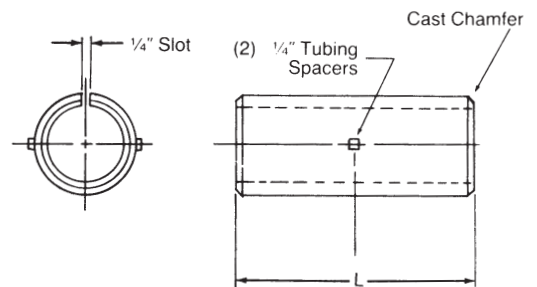
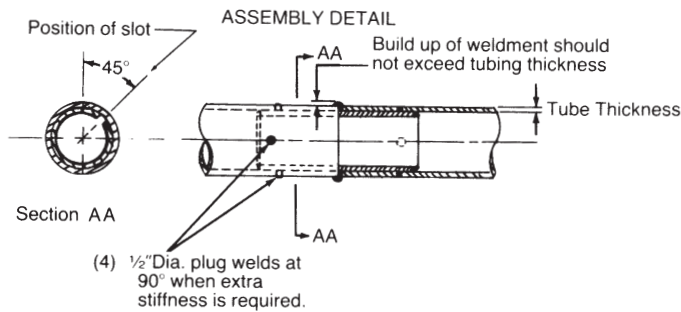
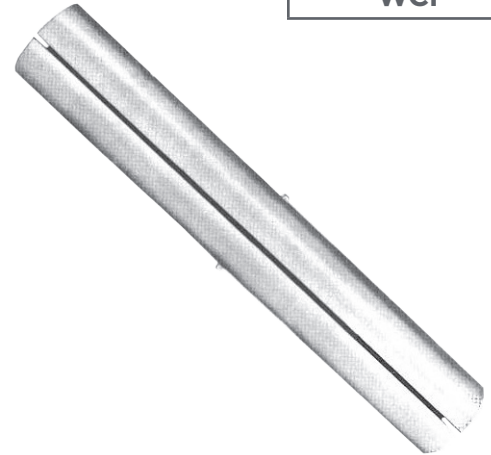
## EHV WELDED COUPLERS FOR TUBE TYPE WCI

Aluminum alloy weldment couplers are designed for corona free service at 345, 500, and 765 KV levels. Slot provides for close fit regardless of tubing tolerance. The joint can be stiffened, if desired, by drilling four holes in the tubing at 90° lateral points and plug welding the tubing to the coupler. When joining two different bus sizes, add "EHV" suffix to catalog number (example: WCI-5040-EHV, for coupling a 5" IPS to a 4" IPS).

**Material:** Castings - 356-T6 aluminum alloy

**Note:** To specify coupler for extra heavy (Schedule 80, EHIPS) tubing add "H" to catalog number; example: WCIH-3030.

ALUMINUM
WCI



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS INCHES (MM) L	APPROX. WT. EA.
WCI2020	2	12 (304.80)	1.5 (.68)
WCI2424	2 1/2	15 (381.00)	2.3 (1.04)
WCI3030	3	18 (457.20)	3.5 (1.59)
WCI3434	3 1/2	18 (457.20)	5.4 (2.45)
WCI4040	4	24 (609.60)	7.1 (3.22)
WCI5050	5	24 (609.60)	9.7 (4.40)
WCI6060	6	24 (609.60)	12.7 (5.76)
WCI80D1/4	8 O.D. 1/4" Thick wall	24 (609.60)	14.6 (6.63)
WCI80D1/2	8 O.D. 1/2" Thick wall	24 (609.60)	14.6 (6.63)

Contact factory for sizes not shown.

EHV  
23



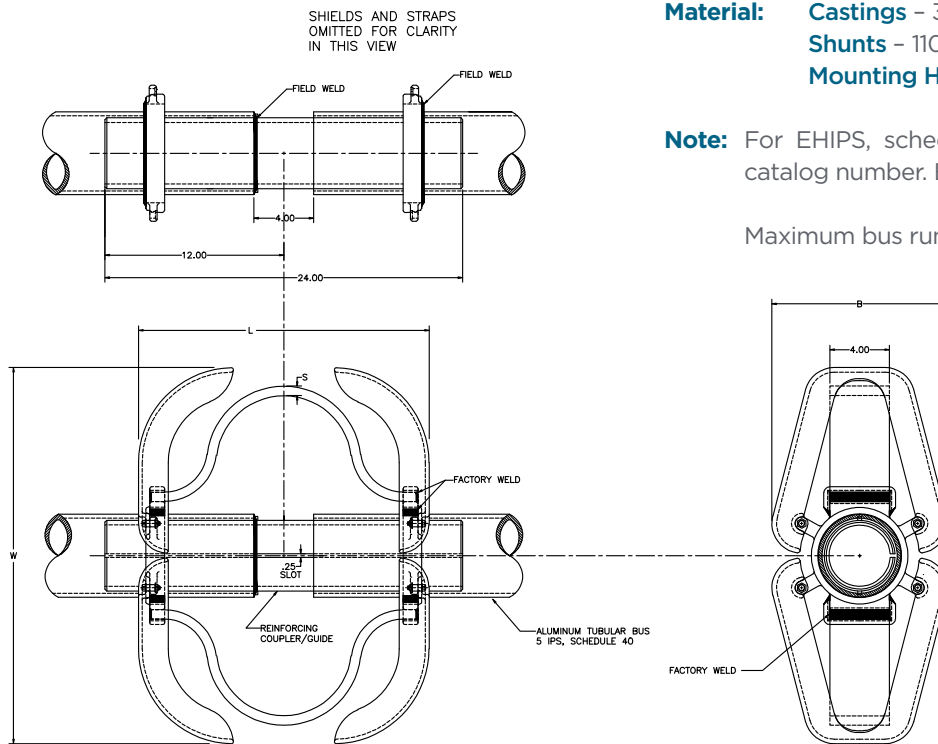
**ALUMINUM  
EVWETTR**

Aluminum alloy, tube-to-tube coupler, designed for corona-free EHV service up to 500kV. Coupling is mechanically reinforced via an internal slotted coupler/guide tube. This design provides 32 inch expansion.

- Material:** Castings - 356-T6 aluminum alloy
- Shunts - 1100 aluminum alloy
- Mounting Hardware - Galvanized Steel

**Note:** For EHIPS, schedule 80 bus tube design, add "H" to catalog number. Example: EVWETTRH50.

Maximum bus run 90 ft.



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
		L	W	B	S	
EVWETTR50	5	19.5 (495)	23.5 (596)	11.75 (298)	0.81 (20.6)	40.5 (17.6)

EHV  
24



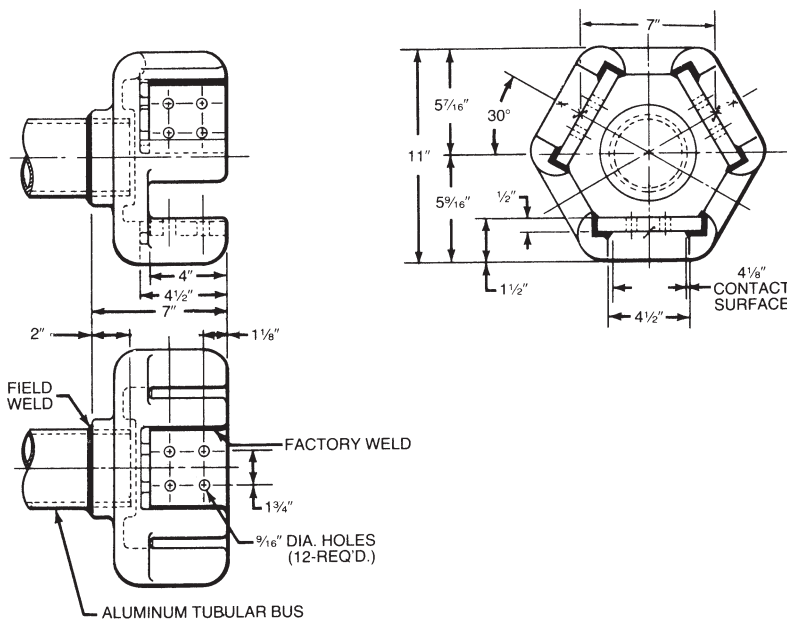
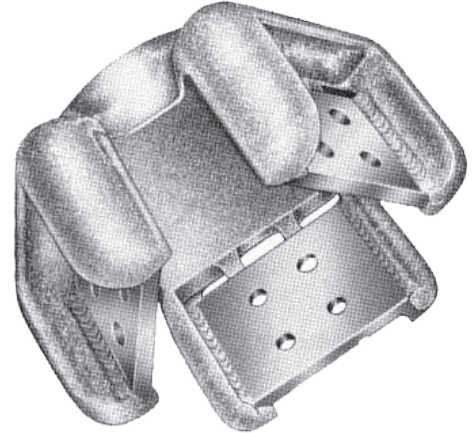
## EHV WELDED TRIFURCATING COUPLERS FOR TUBE TO THREE FLAT PADS TYPE EVST3F

ALUMINUM
EVST3F

Aluminum alloy, tube to flat, trifurcating couplers are designed for corona free service at 500 KV. They are designed to be used with Type CCL-EHV compression terminal lugs with maximum terminal pad thickness of one inch. Contact sealant is recommended for contact pads after welding.

**Material:** Castings - 356-T6 aluminum alloy

Bolt shields not required on recessed pad connections.



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

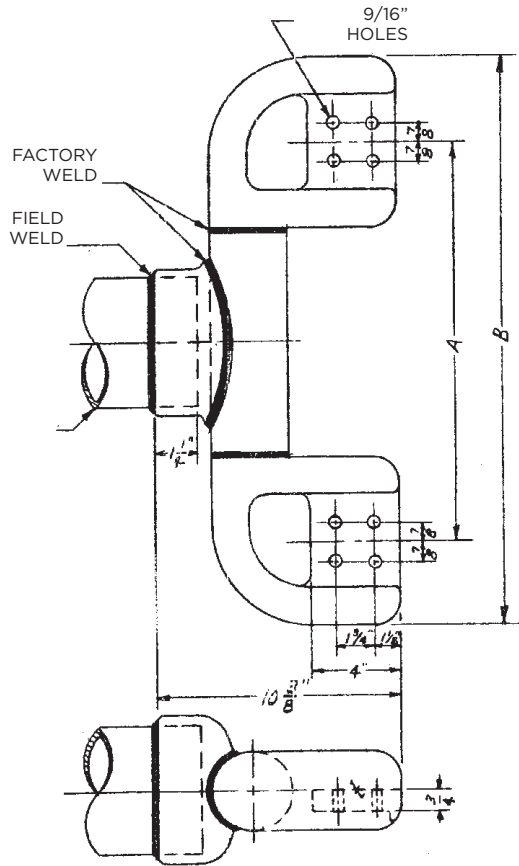
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	APPROX. WT. EA. LBS. (KG)
EVST3F30	3	16.3 (7.39)
EVST3F34	3 1/2	16.4 (7.45)
EVST3F40	4	16.5 (7.48)
EVST3F50	5	16.7 (7.58)
EVST3F60	6	16.9 (7.67)

EHV  
25



**EHV WELDED BIFURCATING COUPLERS FOR TUBE TO 2 FLAT PADS TYPE EVST2F**

**ALUMINUM  
EVST2F**

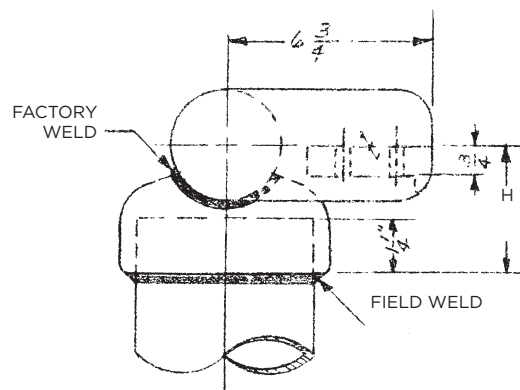


Aluminum alloy, tube to flat, bifurcating couplers are designed for corona free service at 500 KV. They are designed to be used with Type CCL-EHV compression terminal lugs with maximum terminal pad thickness of one inch. Contact sealant is recommended for contact pads after welding.

**Material:** Castings - 356-T6 aluminum alloy  
Cross Brace - 6061-T6 aluminum alloy

**Note:** To obtain tongues finished on both sides, add "XY" to catalog number (Example: EVST2F-50-18-XY)

Connector will be corona free only if tap connectors are attached. Bolt shields not included as part of these catalog numbers.



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	A	B	H	TUBE	APPROX. WT. EA. LBS. (KG)
EVST2F4012	12 (304.8)	191/8 (484.2)	-	4"	20.9 (9.49)
EVST2F4018	18 (457.2)	251/8 (636.6)	-	4"	21.5 (9.76)
EVST2F5012	12 (304.8)	191/8 (484.2)	-	5"	19.7 (8.94)
EVST2F5018	18 (457.2)	251/8 (636.6)	-	5"	22.1 (10.03)
EVST2F409012	12 (304.8)	191/8 (484.2)	35/8 (90.5)	4"	20.9 (9.49)
EVST2F409018	18 (457.2)	251/8 (636.6)	35/8 (90.5)	4"	21.5 (9.76)
EVST2F509012	12 (304.8)	191/8 (484.2)	41/4 (107.9)	5"	19.7 (8.94)
EVST2F509018	18 (457.2)	251/8 (636.6)	41/4 (107.9)	5"	22.1 (10.03)

**EHV  
26**

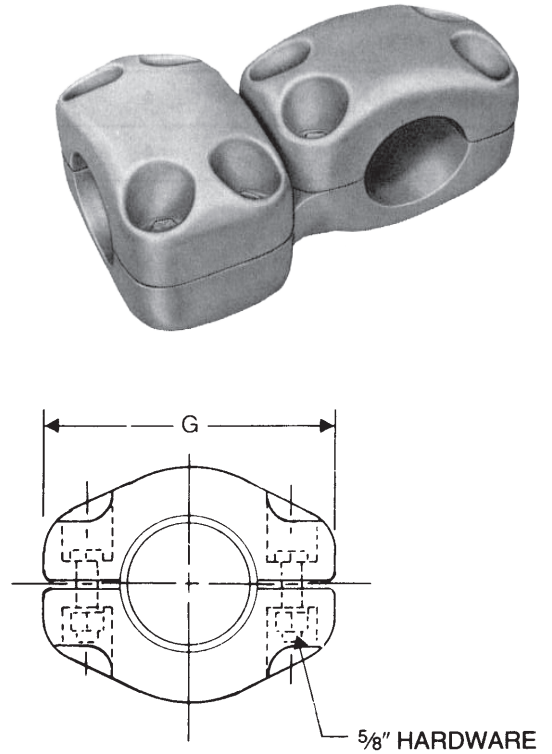
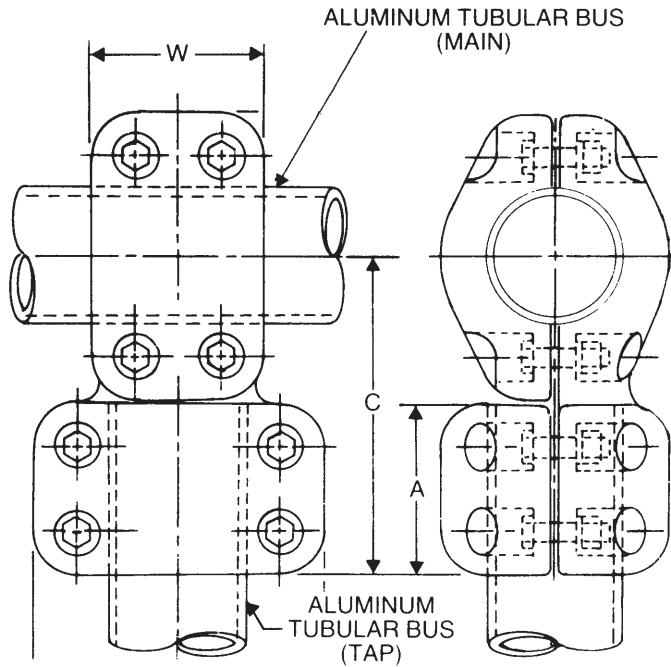


## EHV BOLTED TEE CONNECTORS TUBING MAIN TO TUBING TAP TYPE HVTTT/EVTTT

Aluminum alloy, tube to tube, tee connectors are designed for corona free service at 345 and 500 KV respectively. Contact sealant is recommended.

ALUMINUM  
HVTTT/EVTTT

**Material:** Castings - 356-T6 aluminum alloy  
Hardware - aluminum alloy



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS-INCHES (MM)				APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	W	C	A	G	
<b>345 KV APPLICATIONS</b>							
HVTTT2020	2	2	4 (101.60)	71/4 (184.15)	4 (101.60)	61/4 (158.75)	8.3 (3.76)
HVTTT2420	2 1/2	2	4 (101.60)	73/8 (187.33)	4 (101.60)	61/4 (158.75)	-
HVTTT2424	2 1/2	2 1/2	4 (101.60)	73/8 (187.33)	4 (101.60)	61/2 (165.10)	10.2 (4.63)
HVTTT3020	3	2	4 (101.60)	73/4 (196.85)	4 (101.60)	61/4 (158.75)	-
HVTTT3024	3	2 1/2	4 (101.60)	73/4 (196.85)	4 (101.60)	61/2 (165.10)	-
HVTTT3030	3	3	4 (101.60)	73/4 (196.85)	4 (101.60)	73/16 (182.56)	-
HVTTT3420	3 1/2	2	4 1/4 (107.95)	81/16 (204.79)	4 (101.60)	61/4 (158.75)	14.2 (6.44)
HVTTT3424	3 1/2	2 1/2	4 1/4 (107.95)	81/16 (204.79)	4 (101.60)	61/2 (165.10)	-
HVTTT3430	3 1/2	3	4 1/4 (107.95)	81/16 (204.79)	4 (101.60)	73/16 (182.56)	-
HVTTT3434	3 1/2	3 1/2	4 1/4 (107.95)	85/16 (227.01)	4 1/4 (107.95)	77/8 (200.03)	-

Continued on next page



**TYPES HVTTT/EVTTT (CONTINUED)**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS-INCHES (MM)				APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	W	C	A	G	
<b>345 KV APPLICATIONS (CONTINUED)</b>							
HVTTT4020	4	2	41/4 (107.95)	85/16 (211.14)	4 (101.60)	61/4 (158.75)	-
HVTTT4024	4	2 1/2	41/4 (107.95)	85/16 (211.14)	4 (101.60)	61/2 (165.10)	12.8 (5.81)
HVTTT4030	4	3	41/4 (107.95)	85/16 (211.14)	4 (101.60)	73/16 (182.56)	-
HVTTT4034	4	3 1/2	41/4 (107.95)	89/16 (217.49)	4 1/4 (107.95)	77/8 (200.03)	-
HVTTT4040	4	4	41/4 (107.95)	89/16 (217.49)	4 1/4 (107.95)	83/8 (212.73)	17.01 (7.72)
†HVTTT5020	5	2	6 (152.40)	83/4 (222.25)	4 (101.60)	61/4 (158.75)	-
†HVTTT5024	5	2 1/2	6 (152.40)	83/4 (222.25)	4 (101.60)	61/2 (165.10)	-
†HVTTT5030	5	3	6 (152.40)	83/4 (222.25)	4 (101.60)	73/16 (182.56)	-
†HVTTT5034	5	3 1/2	6 (152.40)	9 (228.60)	4 1/4 (107.95)	77/8 (200.03)	-
†HVTTT5040	5	4	6 (152.40)	9 (228.60)	4 1/4 (107.95)	83/8 (212.73)	-
†HVTTT5050	5	5	6 (152.40)	103/4 (273.05)	6 (152.40)	95/16 (236.54)	-
†HVTTT6020	6	2	6 (152.40)	95/16 (236.54)	4 (101.60)	61/4 (158.75)	-
†HVTTT6024	6	2 1/2	6 (152.40)	95/16 (236.54)	4 (101.60)	61/2 (165.10)	-
†HVTTT6030	6	3	6 (152.40)	95/16 (236.54)	4 (101.60)	73/16 (182.56)	-
†HVTTT6034	6	3 1/2	6 (152.40)	99/16 (242.89)	4 1/4 (107.95)	77/8 (200.03)	-
†HVTTT6040	6	4	6 (152.40)	99/16 (242.89)	4 1/4 (107.95)	83/8 (212.73)	24.4 (11.07)
†HVTTT6050	6	5	6 (152.40)	115/16 (287.34)	6 (152.40)	95/16 (236.54)	27.6 (12.52)
†HVTTT6060	6	6	6 (152.40)	115/16 (287.34)	6 (152.40)	103/8 (263.53)	32.6 (14.79)
<b>500 KV APPLICATIONS</b>							
EVTTT3030	3	3	5 (127.00)	91/16 (230.19)	5 (127.00)	77/8 (200.03)	20.3 (9.21)
EVTTT3430	3 1/2	3	5 (127.00)	91/8 (231.78)	5 (127.00)	77/8 (200.03)	-
EVTTT3434	3 1/2	3 1/2	5 (127.00)	91/8 (231.78)	5 (127.00)	8 (203.20)	14.7 (6.67)
EVTTT4030	4	3	5 (127.00)	99/16 (242.89)	5 (127.00)	77/8 (200.03)	23.0 (10.43)
EVTTT4034	4	3 1/2	5 (127.00)	99/16 (242.89)	5 (127.00)	8 (203.20)	-
EVTTT4040	4	4	5 (127.00)	99/16 (242.89)	5 (127.00)	87/8 (225.43)	24.2 (10.98)
†EVTTT5030	5	3	6 (152.40)	101/8 (257.18)	5 (127.00)	77/8 (200.03)	27.2 (12.34)
†EVTTT5034	5	3 1/2	6 (152.40)	101/8 (257.18)	5 (127.00)	8 (203.20)	24.9 (11.29)
†EVTTT5040	5	4	6 (152.40)	101/8 (257.18)	5 (127.00)	87/8 (225.43)	28.9 (13.11)
†EVTTT5050	5	5	6 (152.40)	111/8 (282.58)	6 (152.40)	10 (254.00)	34.7 (15.74)
†EVTTT6030	6	3	6 (152.40)	105/8 (269.88)	5 (127.00)	77/8 (200.03)	29.9 (13.56)
†EVTTT6034	6	3 1/2	6 (152.40)	105/8 (269.88)	5 (127.00)	8 (203.20)	-
†EVTTT6040	6	4	6 (152.40)	105/8 (269.88)	5 (127.00)	87/8 (225.43)	-
†EVTTT6050	6	5	6 (152.40)	115/8 (295.38)	6 (152.40)	10 (254.00)	37.4 (16.96)
†EVTTT6060	6	6	6 (152.40)	115/8 (295.38)	6 (152.40)	11 (279.40)	36.9 (16.74)

†Furnished with 6 clamping bolts for 5" IPS and 6" IPS.

**EHV  
28**



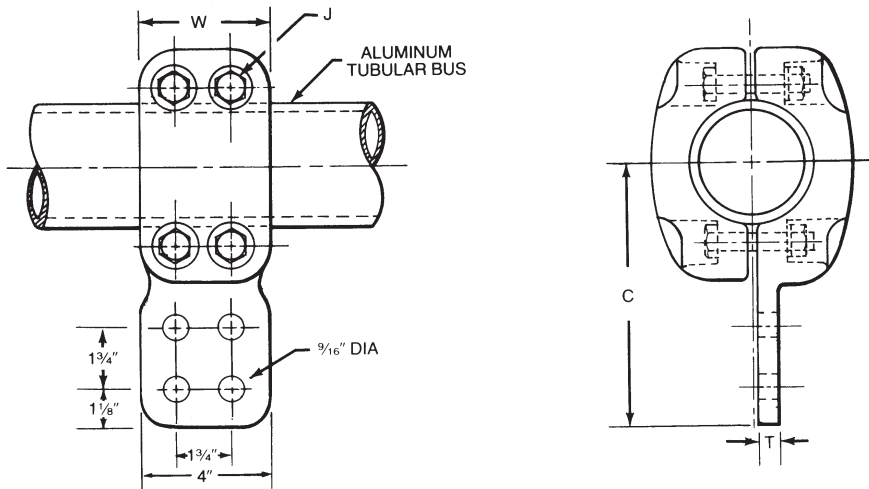
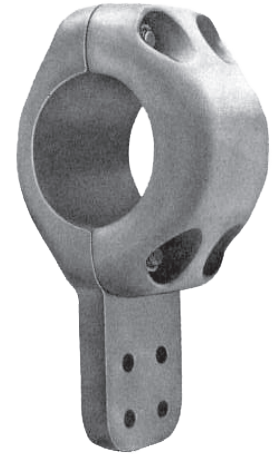
## EHV BOLTED TEE CONNECTORS TUBING MAIN TO FLAT PAD TYPE HVTTF/EVTTF

**ALUMINUM  
HVTTF/EVTTF**

Aluminum alloy, tube to flat, tee connectors are designed for corona free service at 345 and 500 KV respectively. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately.* Tongue holes have NEMA spacing. Contact sealant is recommended.

**Material:** **Castings** – 356-T6 aluminum alloy  
**Hardware** – aluminum alloy

**Add suffix:** “-HS” for one hardware shield, and “-HS2” for two hardware shields.



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING MAIN IPS/EHIPS	DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
		W	C	T	J	
<b>345 KV APPLICATIONS</b>						
HVTTF20D	2	4 (101.60)	7 1/2 (190.50)	1 (25.40)	5/8 (15.88)	6.5 (2.93)
HVTTF24D	2 1/2	4 (101.60)	7 1/2 (190.50)	1 (25.40)	5/8 (15.88)	6.9 (3.13)
HVTTF30D	3	4 (101.60)	7 7/8 (200.03)	1 (25.40)	5/8 (15.88)	8.8 (3.99)
HVTTF40D	4	4 1/4 (107.95)	8 7/16 (214.31)	1 (25.40)	5/8 (15.88)	10.6 (4.02)
†HVTTF50D	5	6 (152.40)	8 15/16 (227.01)	1 (25.40)	5/8 (15.88)	13.9 (6.31)
†HVTTF60D	6	6 (152.40)	9 7/16 (239.71)	1 (25.40)	5/8 (15.88)	17.5 (7.94)
<b>500 KV APPLICATIONS</b>						
EVTTF30D	3	5 (127.00)	8 3/16 (207.96)	1 (25.40)	5/8 (15.88)	11.7 (5.31)
EVTTF40D	4	5 (127.00)	8 11/16 (220.66)	1 (25.40)	5/8 (15.88)	14.2 (6.44)
†EVTTF50D	5	6 (152.40)	9 1/4 (234.95)	1 (25.40)	5/8 (15.88)	18.8 (8.54)
†EVTTF60D	6	6 (152.40)	9 3/4 (247.65)	1 (25.40)	5/8 (15.88)	20.4 (9.25)

†Furnished with 6 clamping bolts for 5" IPS and 6" IPS.

**EHV  
29**





## EHV BOLTED TERMINALS FOR CABLE TO FLAT PAD TYPE EVTCF

ALUMINUM
EVTCF

Aluminum alloy, cable to flat, tee connectors are designed for corona free service at 345 and 500 KV respectively. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately.* Tongue holes have NEMA spacing. Contact sealant is recommended. To assure corona free operation, cable clamping hardware must be inserted from terminal body side as shown.

**Material:** Castings - 356-T6 aluminum alloy  
Hardware - aluminum alloy

**Add suffix:** “-HS” for one hardware shield, and “-HS2” for two hardware shields.

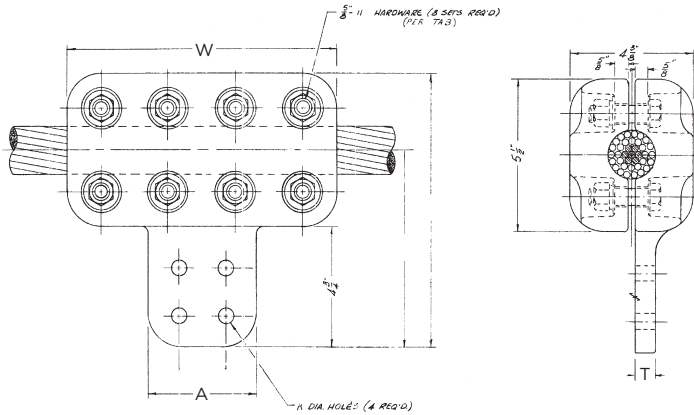


FIGURE 1

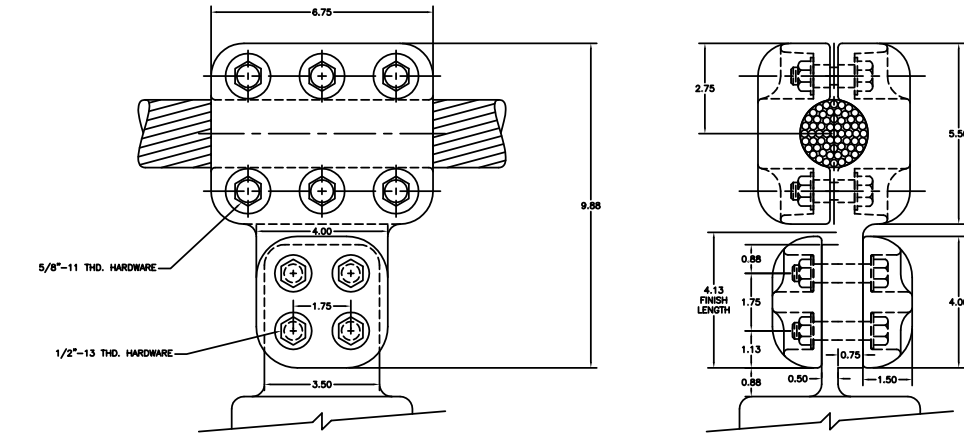
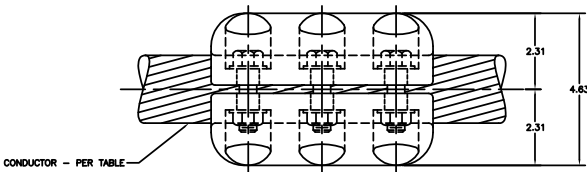


FIGURE 2

### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	CABLE SIZE	O.D.	FIGURE #	DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
				C	W	H	T	
EVTCTF1762D*	2156 84/19 ACSR	1.762"	1	7 1/2 (190.50)	10 (254.00)	10 1/4 (260.35)	3/4 (19.05)	14.7 (6.67)
EVTCTF1824D	2500 MCM AAC	1.824"	2	7 1/8 (180.98)	6 3/4 (171.45)	9 7/8 (250.83)	3/4 (19.05)	11.0 (4.99)

EHV  
30

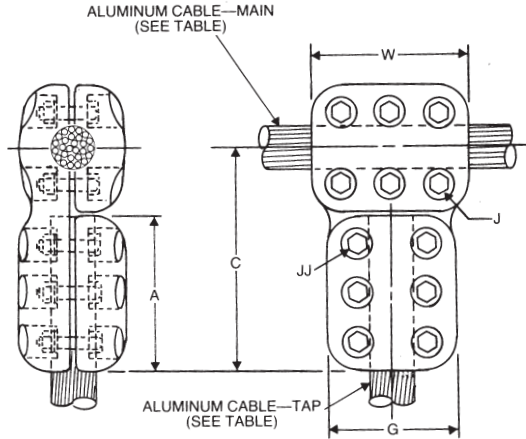


## EHV BOLTED TEE CONNECTORS CABLE MAIN TO CABLE TAP TYPE HVTBCC/EVTBCC

ALUMINUM
HVTBCC/ EVTBCC

Aluminum alloy, cable to cable tee connectors are designed for corona free service at 345 and 500 KV respectively. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. Contact sealant is recommended.

**Material:** Castings – 356-T6 aluminum alloy  
Hardware – aluminum alloy



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR DIA. IN.		DIMENSIONS—INCHES (MM)						NUMBER OF BOLTS REQ'D.		APPROX. WT. EA. LBS. (KG)
	MAIN	TAP	W	C	A	G	J	JJ	MAIN	TAP	
<b>345 KV APPLICATIONS</b>											
HVTBCC11961196	1.196	1.196	4 (101.60)	63/8 (161.93)	4 (101.60)	47/16 (112.71)	1/2 (12.70)	1/2 (12.70)	4	4	7.7 (3.50)
HVTBCC12461246	1.246	1.246	4 (101.60)	63/8 (161.93)	4 (101.60)	47/16 (112.71)	1/2 (12.70)	1/2 (12.70)	4	4	7.7 (3.50)
HVTBCC13821382	1.382	1.382	4 (101.60)	67/16 (163.51)	4 (101.60)	45/8 (117.48)	1/2 (12.70)	1/2 (12.70)	4	4	-
HVTBCC14241424	1.424	1.424	4 (101.60)	617/32 (165.89)	4 (101.60)	413/16 (122.24)	5/8 (15.88)	5/8 (15.88)	4	4	-
HVTBCC14541454	1.454	1.454	4 (101.60)	617/32 (165.89)	4 (101.60)	413/16 (122.24)	5/8 (15.88)	5/8 (15.88)	4	4	-
HVTBCC15021502	1.502	1.502	4 (101.60)	69/16 (166.69)	4 (101.60)	47/8 (123.83)	5/8 (15.88)	5/8 (15.88)	4	4	-
HVTBCC16811681	1.681	1.681	63/4 (171.45)	95/8 (244.48)	63/4 (171.45)	51/2 (139.70)	5/8 (15.88)	5/8 (15.88)	4	4	-
HVTBCC17621762	1.762	1.762	63/4 (171.45)	95/8 (244.48)	63/4 (171.45)	51/2 (139.70)	5/8 (15.88)	5/8 (15.88)	6	6	-
HVTBCC18241454	1.824	1.454	63/4 (171.45)	67/8 (174.63)	4 (101.60)	413/16 (122.24)	5/8 (15.88)	5/8 (15.88)	6	4	-
HVTBCC18241824	1.824	1.824	63/4 (171.45)	95/8 (244.48)	63/4 (171.45)	51/2 (139.70)	5/8 (15.88)	5/8 (15.88)	6	6	16.3 (7.39)
HVTBCC18801454	1.880	1.454	63/4 (171.45)	67/8 (174.63)	4 (101.60)	413/16 (122.24)	5/8 (15.88)	5/8 (15.88)	6	4	-
HVTBCC18801880	1.880	1.880	63/4 (171.45)	95/8 (244.48)	63/4 (171.45)	51/2 (139.70)	5/8 (15.88)	5/8 (15.88)	6	6	-
HVTBCC19981998	1.998	1.998	63/4 (171.45)	95/8 (244.48)	63/4 (171.45)	51/2 (139.70)	5/8 (15.88)	5/8 (15.88)	6	6	-

Continued on next page.



**BOLTED TEE CONNECTORS FOR CABLE TO CABLE-(CONTINUED)  
TYPES HVTBCC/EVTBCC  
345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR DIA. IN.		DIMENSIONS-INCHES (MM)						NUMBER OF BOLTS REQ'D.		APPROX. WT. EA. LBS. (KG)
	MAIN	TAP	W	C	A	G	J	JJ	MAIN	TAP	
<b>500 KV APPLICATIONS</b>											
EVTBCC12461246	1.246	1.246	5 (127.00)	75/8 (193.68)	5 (127.00)	5 (127.00)	1/2 (17.70)	1/2 (17.70)	4	4	9.8 (4.45)
EVTBCC13821382	1.382	1.382	5 (127.00)	71/16 (195.26)	5 (127.00)	51/8 (130.18)	1/2 (17.70)	1/2 (17.70)	4	4	-
EVTBCC14241424	1.424	1.424	5 (127.00)	713/16 (198.44)	5 (127.00)	53/8 (136.53)	5/8 (15.88)	5/8 (15.88)	4	4	-
EVTBCC14541454	1.454	1.454	5 (127.00)	713/16 (198.44)	5 (127.00)	53/8 (136.53)	5/8 (15.88)	5/8 (15.88)	4	4	-
EVTBCC15021502	1.502	1.502	5 (127.00)	713/16 (198.44)	5 (127.00)	53/8 (136.53)	5/8 (15.88)	5/8 (15.88)	4	4	-
EVTBCC16811681	1.681	1.681	6 (152.40)	815/16 (227.01)	6 (152.40)	55/8 (136.53)	5/8 (15.88)	5/8 (15.88)	4	4	-
EVTBCC17621762	1.762	1.762	71/2 (190.50)	1015/32 (265.90)	71/2 (190.50)	511/16 (144.46)	5/8 (15.88)	5/8 (15.88)	6	6	18.4 (8.35)
EVTBCC18241454	1.824	1.454	71/2 (190.50)	81/16 (204.79)	5 (127.00)	53/8 (136.53)	5/8 (15.88)	5/8 (15.88)	6	4	-
EVTBCC18241824	1.824	1.824	71/2 (190.50)	109/16 (268.29)	71/2 (190.50)	57/8 (149.23)	5/8 (15.88)	5/8 (15.88)	6	6	18.5 (8.40)
EVTBCC18801454	1.880	1.454	71/2 (190.50)	81/16 (204.79)	5 (127.00)	53/8 (136.53)	5/8 (15.88)	5/8 (15.88)	6	4	19.0 (8.63)
EVTBCC18801880	1.880	1.880	71/2 (190.50)	109/16 (268.29)	71/2 (190.50)	57/8 (149.23)	5/8 (15.88)	5/8 (15.88)	6	6	19.1 (8.68)
EVTBCC19981998	1.998	1.998	71/2 (190.50)	109/16 (268.29)	71/2 (190.50)	57/8 (149.23)	5/8 (15.88)	5/8 (15.88)	6	6	19.1 (8.68)

**EHV  
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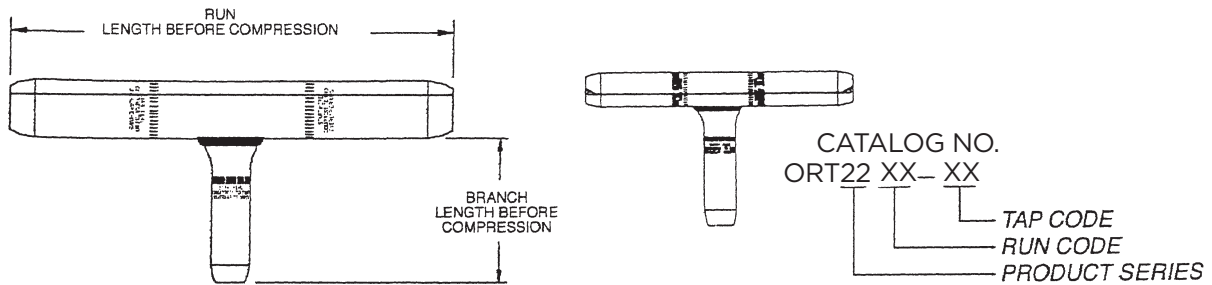


# EHV TEE-TAPS COMPRESSION CABLE TO CABLE-OPEN RUN AAC, ALLOY, ACAR AND ACSR CONDUCTORS

ALUMINUM
ORT22

Aluminum compression tee connectors are designed for corona free service at 500 KV. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. Tap barrel is prefilled with inhibitor, ends are capped and tapers are coated with protective plastic.

**Material:** Seamless Extruded Aluminum Alloy Tube



## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CONDUCTOR RANGE (1)			RUN OR TAP CODE	LENGTH BEFORE COMPRESSION		DIE SIZE	MINIMUM PRESS SIZE (TONS)	NET WEIGHT LB (KG)
O.D. IN. (MM)	AAC SIZE KCMIL	ACSR SIZE KCMIL (STR)		RUN IN (MM)	TAP IN (MM)			
1.026 - 1.131 (26.1 - 28.7)	795, 800, 874.5, 900, 954	715.5 (26/7) (30/19), 795 (24/7) (26.7) (45/7) 795 (54/7) 795 (36/1) 900 (45/7)	12	17.2 (436)	6.2 (157)	12CD	60	2.40 (1.09)
1.140 - 1.235 (29.0 - 31.4)	1000, 1033.5	795.5 (30/19)	13	18.6 (473)	6.7 (170)	13CD 30AH	60	3.00 (1.36)
	1100, 1113	795.5 (30/19), 900 (54/7), 954 (45/7) (54/7), 1033 (36/1) (45/7)				13CD		
1.236 - 1.330 (31.5 - 33.8)	1192.5, 1200, 1250, 1272, 1300	954 (30/19), 1113 (45/7) (54/19), 1192.5 (45/7), 1272 (36/1)	14	20.1 (509)	7.2 (183)	14CD 34AH	60	3.80 (1.73)
1.331 - 1.425 (33.9 - 36.2)	1351.5, 1400, 1431, 1500, 1510.5	1192.5 (54/19), 1272 (45/7) (54/19), 1351.5 (45/7) (54/19)	15	21.5 (546)	7.7 (197)	15CD 36AH	60	4.70 (2.14)
1.426 - 1.520	1590, 1600, 1700	1431 (45/7) (54/19), 1510.5 (45/7) (54/19), 1590 (45/7)	16	21.3 (541)	8.2 (210)	16CD 38AH	60	5.30 (2.41)
1.521 - 1.615	1750, 1800, 1900	1590 (54/19), 1780 (84/19), 1869 (68/7)	17	22.6 (575)	8.8 (223)	17CD 40AH	60	6.30 (2.86)
1.630 - 1.805	2000, 2250, 2300	2034.5 (72/7), 2057 (76/19) 2167 (72/7)	19	25.3 (643)	9.8 (249)	19CD 44AH	100	8.90 (4.04)
	-	2156 (84/19), 2312 (76/19)				19CD		

**NOTES:**

- (1) These tee taps also approved applications on AAAC and ACAR conductors within the diameter ranges listed.
- (2) Standard Hex dies not available for some sleeve & conductor combinations. If no AH die listed for conductor, use only the CD die shown.
- (3) Install with Fargo type UJC or, for lowest resistance connection, type HTJC inhibitor compound.



## EHV TEE-TAPS COMPRESSION CABLE TO PAD-OPEN RUN AAC, ACAR AND ACSR CONDUCTOR

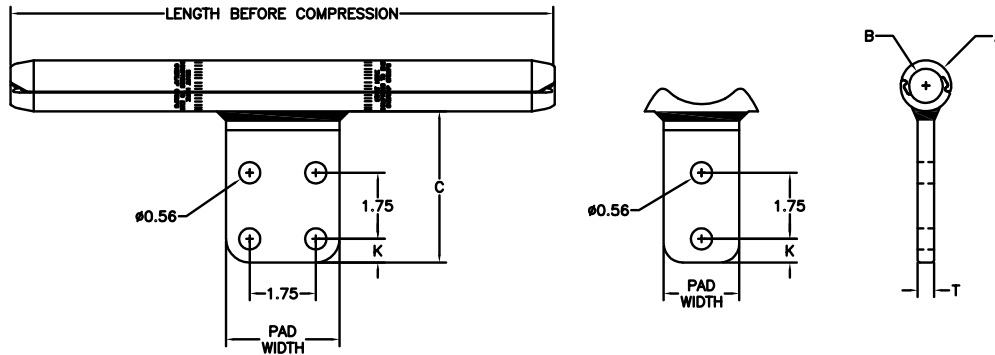
ALUMINUM
ORT21

Aluminum compression tee connectors are designed for corona free service at 500 KV. Single cable diameter under 1.76 inch for 345 KV and 2.50 inch diameter for 500 KV may not be corona free unless conductors are bundled. *Hardware shields and hardware must be ordered separately.* Contact sealant is recommended.

Tapers and pad are coated with protective strippable plastic. Pad holes have NEMA spacing.

**Material:** Seamless Extruded Aluminum Alloy Tube  
Pad-Pure Cast Aluminum

**Add suffix:** “-HS” for one hardware shield, and “-HS2” for two hardware shields.



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	CONDUCTOR RANGE (1)			PAD DETAILS		LENGTH BEFORE COMPR. IN (MM)	DIE SIZE (2)	MINIMUM PRESS (TONS)	NET WEIGHT LB (KG)
	O.D. (IN.)	AAC SIZE KCMIL	ACSR SIZE KCMIL (STR)	BOLT HOLES	WIDTH IN (MM)				
ORT2112 ORT2112D	1.026 - 1.131 (26.1 - 28.7)	795, 800, 874.5, 900, 954	715.5 (24/7) (26/7) (30/19), 795 (24/7) (26/7) (45/7) (54/7), 795 (36/1), 900 (45/7)	4	3.0 (76) 4.0 (102)	17.3 (439) 18.3 (465)	12CD	60	3.1 (1.35) 3.3 (1.50)
ORT2113 ORT2113D	1.140 - 1.235 (29.0 - 31.4)	1000, 1003.5	795 (30/19)	4	3.0 (76) 4.0 (102)	18.5 (470) 19.5 (495)	13CD or 30AH	60	3.6 (1.57) 3.8 (1.66)
		1100, 1113	900 (54/7) 954 (45/7) (54/7), 1033.5 (36/1) (45/7)	4		13CD			
ORT2114 ORT2114D	1.236 - 1.330 (31.5 - 33.8)	1192.5, 1200 1250, 1272, 1300	954 (30/19), 1033.5 (54/7), 1113 (45/7) (54/19), 1192.5 (45/7)	4	3.0 (76) 4.0 (102)	19.8 (503) 20.8 (528)	14CD or 34AH	60	4.6 (2.00) 4.8 (2.09)
ORT2115 ORT2115D	1.331 - 1.425 (33.9 - 38.2)	1351.5, 1400 1431, 1500 1510.5	1192.5 (54/19), 1272 (45/7) (54/19), 1351.5 (45/7) (54/19)	4	3.0 (76) 4.0 (102)	20.7 (526) 21.7 (551)	15CD or 36AH	60	5.5 (2.40) 5.7 (2.48)
ORT2116 ORT2116D	1.425 - 1.520 (36.3 - 38.6)	1590, 1600, 1700	1431 (45/7) (54/19), 1510.5 (45/7) (54/19), 1590 (45/7)	4	3.0 (76) 4.0 (102)	21.6 (549) 22.9 (574)	16CD or 38AH	60	6.1 (2.66) 6.3 (2.74)
ORT2117	1.521 - 1.615 (38.7 - 41.0)	1750, 1800, 1900	1590 (54/19), 1780 (84/19), 1869 (68/7)	4	4.0 (102)	23.5 (597)	17CD or 40AH	60	7.8 (3.40)
ORT2119	1.630 - 1.805 (41.4 - 45.8)	2000, 2250, 2300	2034.5 (72/7), 2057 (76/19) 2167 (72/7)	4	4.0 (102)	25.4 (645)	19CD or 44AH	100	10.2 (4.43)
		-	2156 (84/19), 2312 (76/19)	4		19CD			

**NOTES:**

- (1) These tee taps are also approved application on AAAC and ACAR conductors within the diameter ranges listed.
- (2) Hex dies not available for some sleeve & conductor combinations. If no AH die listed for conductor, use only the CD die shown.
- (3) Install with Fargo type UJC or, for lowest resistance connection, type HTJC inhibitor compound.

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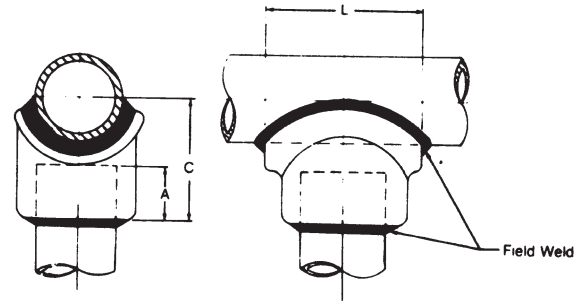
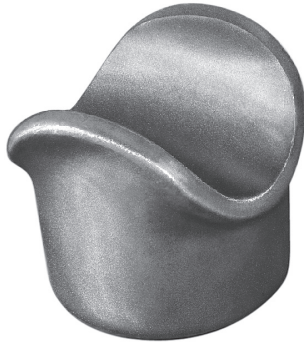


**EHV TEES WELDMENT  
ALUMINUM TUBE TO TUBE**

ALUMINUM
WTT

Aluminum alloy straight weldment tee for connecting aluminum tubing main to aluminum tubing tap.

**Material:** Casting - 356-T6 aluminum alloy



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	L	C	A	
WTT2020	2	2	3-3/4 (95.25)	2-7/8 (73.02)	1-1/4 (31.75)	.98 (.44)
WTT2420	2-1/2	2	4 (101.5)	3-19/32 (91.28)	1-3/4 (44.45)	1.2 (.54)
WTT2424	2-1/2	2-1/2	4 (101.6)	3-3/8 (85.72)	1-1/2 (38.1)	1.4 (.64)
WTT3020	3	2	4 (101.6)	4 (101.6)	1-3/4 (44.45)	1.6 (.72)
WTT3024	3	2-1/2	4-3/8 (111.12)	4-1/4 (107.95)	2 (50.8)	1.7 (.77)
WTT3030	3	3	5 (127.0)	4 (101.6)	1-3/4 (44.45)	2.3 (1.0)
WTT3420	3-1/2	2	4 (101.6)	4-1/4 (107.95)	1-3/4 (44.45)	1.3 (.59)
WTT3424	3-1/2	2-1/2	4-3/8 (111.12)	4-1/2 (114.3)	2 (50.8)	2.0 (.91)
WTT3434	3-1/2	3-1/2	5-5/8 (142.88)	4-1/4 (107.95)	1-3/4 (44.45)	3.9 (1.77)
WTT4020	4	2	4 (101.6)	4-3/4 (120.65)	2 (50.8)	1.9 (.86)
WTT4024	4	2-1/2	4-3/8 (111.12)	4-3/4 (120.65)	2 (50.8)	1.9 (.86)
WTT4030	4	3	5-7/8 (149.22)	5-1/4 (133.35)	2-1/2 (63.5)	2.0 (.91)
WTT4040	4	4	6-1/8 (155.58)	4-3/4 (120.65)	2 (50.8)	3.5 (1.59)
WTT5020	5	2	4 (101.6)	5-3/8 (136.52)	2 (50.8)	2.4 (1.09)
WTT5024	5	2-1/2	4-3/8 (111.12)	4-3/4 (120.65)	1-1/2 (38.1)	2.1 (.95)
WTT5030	5	3	5-5/8 (142.88)	5-7/8 (149.22)	2-1/2 (63.5)	3.8 (1.72)
WTT5034	5	3-1/2	5-5/8 (142.88)	5-7/8 (149.22)	2-1/2 (63.5)	3.9 (1.77)
WTT5040	5	4	6-1/8 (155.58)	5-3/4 (146.05)	2-1/2 (63.5)	6.0 (2.72)

Continued on the next page



**EHV TEES WELDMENT  
ALUMINUM TUBE TO TUBE (CONTINUED)**

345 kV AND 500 kV LINE-TO-LINE APPLICATIONS						
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	L	C	A	
WTT5050	5	5	7-1/4	5-1/4	2	5.3
WTT6030	6	3	5-1/2	5-7/8	2	2.8
WTT6040	6	4	6-1/8	6-3/8	2-1/2	4.4
WTT6060	6	6	8-1/2	6-3/8	2-1/2	6.8

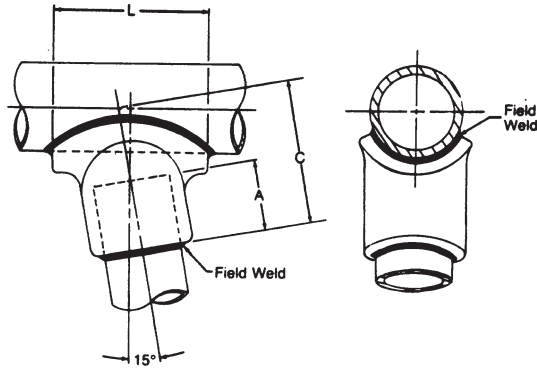
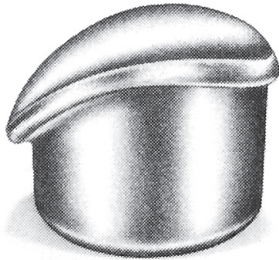


**EHV TEES WELDMENT  
ALUMINUM TUBE TO TUBE**

ALUMINUM
WTT15

Aluminum alloy angle weldment tee for connecting aluminum tubing main to aluminum tubing tap at 15 degrees.

**Material:** Casting - 356-T6 aluminum alloy



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	L	C	A	
WTT152020	2	2	4 (101.6)	3-1/4 (87.55)	1-1/4 (31.75)	.97 (44)
WTT152420	2-1/2	2	4 (101.6)	4 (101.6)	1-3/4 (44.45)	1.4 (.64)
WTT152424	2-1/2	2-1/2	4-5/8 (117.48)	4-5/16 (109.54)	2 (50.8)	2.2 (1.0)
WTT153020	3	2	4 (101.6)	3-7/8 (98.42)	1-1/4 (31.75)	1.3 (.59)
WTT153024	3	2-1/2	4-3/8 (111.12)	4-11/16 (119.06)	2 (50.8)	2.3 (1.04)
WTT153030	3	3	5-1/8 (130.18)	4-11/16 (119.06)	1-3/4 (44.45)	2.4 (1.09)
WTT153420	3-1/2	2	4 (101.6)	4-1/8 (104.78)	1-1/4 (31.75)	1.3 (.59)
WTT153424	3-1/2	2-1/2	4-3/8 (111.12)	4-1/2 (114.3)	1-1/2 (38.1)	1.6 (.72)
WTT153434	3-1/2	3-1/2	6 (152.4)	5-1/8 (130.18)	2 (50.8)	3.8 (1.72)
WTT154020	4	2	4 (101.6)	4-3/8 (111.12)	1-1/4 (31.75)	1.4 (.64)
WTT154024	4	2-1/2	4-3/8 (111.12)	4-3/4 (120.65)	1-1/2 (38.1)	1.6 (.72)
WTT154030	4	3	5-1/8 (130.18)	5 (127.0)	1-3/4 (44.45)	2.5 (1.13)
WTT154040	4	4	6-1/8 (155.58)	5-7/16 (138.11)	2 (50.8)	4.1 (1.86)
WTT155020	5	2	4 (101.6)	5-3/4 (146.05)	2 (50.8)	2.0 (.91)
WTT155024	5	2-1/2	4-3/8 (111.12)	5-3/8 (136.52)	1-1/2 (38.1)	1.8 (.82)
WTT155030	5	3	5-1/8 (130.18)	5-11/16 (144.46)	2-1/2 (63.5)	3.5 (1.59)
WTT156030	6	3	5-1/8 (130.18)	7 (177.8)	2-1/2 (63.5)	3.3 (1.50)
WTT156040	6	4	6-1/8 (155.58)	6-5/8 (168.28)	2 (50.8)	4.4 (2.0)

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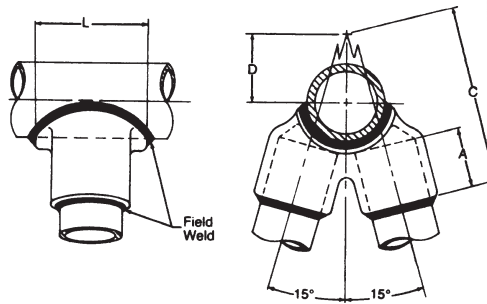


**EHV TEES WELDMENT  
ALUMINUM TUBE TO TWO TUBE**

<b>ALUMINUM</b>
<b>WTT215</b>

Aluminum alloy angle weldment tee for connecting aluminum tubing main to two aluminum tubing taps at 15 degrees.

**Material:** Casting - 356-T6 aluminum alloy



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
	TUBING MAIN IPS/EHIPS	TUBING TAP IPS/EHIPS	L	C	D	A	
WTT2152020	2	2	4 (101.6)	7-5/16 (185.74)	4-3/8 (111.12)	1-1/2 (38.1)	2.1 (.95)
WTT2152420	2-1/2	2	4 (101.6)	7-3/4 (196.85)	4-5/16 (109.54)	1-3/4 (44.45)	2.2 (1.0)
WTT2152424	2-1/2	2-1/2	4-1/2 (114.3)	8-7/8 (225.42)	5-3/16 (131.76)	2 (50.8)	3.2 (1.45)
WTT2153020	3	2	4 (101.6)	7-3/4 (196.85)	3-7/8 (98.42)	1-3/4 (44.45)	2.6 (1.18)
WTT2153024	3	2-1/2	4-3/8 (111.12)	8-15/16 (227.01)	4-7/8 (123.82)	2 (50.8)	3.0 (1.36)
WTT2153030	3	3	5-1/2 (139.7)	10 (254.0)	6-1/4 (158.75)	1-3/4 (44.45)	5.0 (2.27)
WTT2153420	3-1/2	2	4 (101.6)	7-3/4 (196.85)	3-5/8 (92.08)	1-3/4 (44.45)	2.6 (1.18)
WTT2153424	3-1/2	2-1/2	4-3/8 (111.12)	9-3/16 (296.86)	4-3/4 (120.65)	2 (50.8)	3.5 (2.99)
WTT2153434	3-1/2	3-1/2	6 (152.4)	11-11/16 (296.86)	7 (177.8)	2-1/2 (63.5)	6.6 (2.99)
WTT2154020	4	2	4-3/8 (111.12)	8 (203.2)	3-3/8 (85.72)	2 (50.8)	3.1 (1.41)
WTT2154024	4	2-1/2	4-3/8 (111.12)	8-15/16 (227.01)	4-3/8 (111.12)	2 (50.8)	3.9 (1.77)
WTT2154030	4	3	5-1/8 (130.18)	11-1/4 (285.75)	5-11/16 (144.46)	3 (76.2)	6.9 (3.13)
WTT2154040	4	4	5-7/16 (138.11)	11-1/8 (282.58)	6-1/4 (158.75)	2-3/8 (60.32)	5.8 (2.54)
WTT2155020	5	2	5-1/8 (130.18)	8-1/16 (204.79)	3-1/8 (79.38)	1-3/4 (44.45)	3.6 (1.63)
WTT2155024	5	2-1/2	4-3/8 (111.12)	8-7/8 (225.42)	3-3/4 (95.25)	2 (50.8)	2.4 (1.09)
WTT2155030	5	3	5-1/8 (130.18)	10-15/16 (277.81)	5-5/16 (134.94)	2-1/2 (63.5)	6.6 (2.99)
WTT2156030	6	3	5-1/8 (130.18)	10-15/16 (277.81)	4-3/4 (120.65)	2-1/2 (63.5)	6.2 (2.81)
WTT2156040	6	4	6-1/8 (155.58)	12-11/16 (322.26)	6-9/16 (166.69)	2-1/2 (63.5)	9.0 (4.08)

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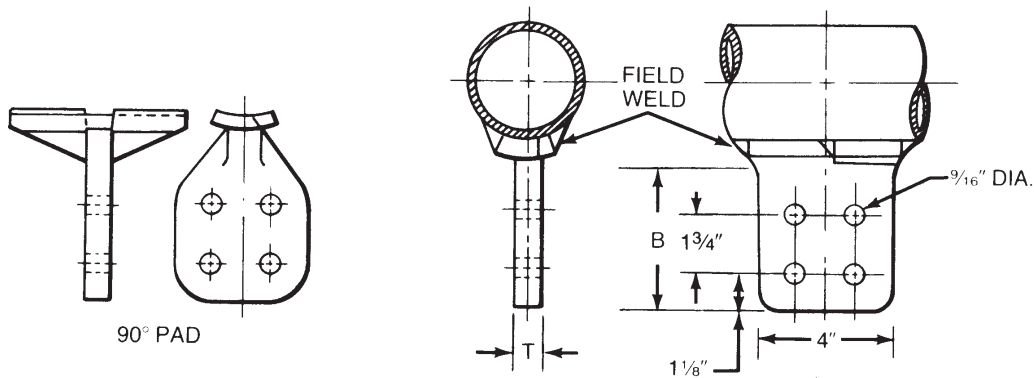
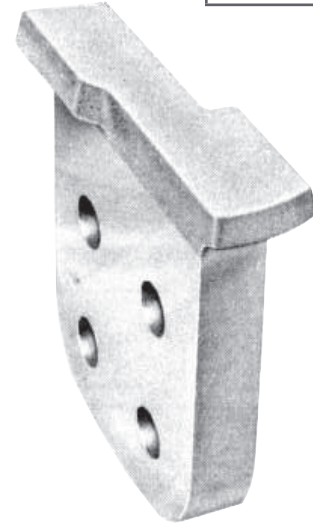
## EHV WELDED TEE CONNECTOR TUBE TO FLAT PAD TYPE WTTFR

ALUMINUM
WTTFR

Aluminum alloy weldment, range taking tee for connecting aluminum tubing main to flat. Tongue holes have NEMA spacing. Contact surfaces are finished on both sides of tongue. The saddle configuration provides a weld area equivalent to 110% of the cross-sectional area of the tongue. This design is for corona free EHV service when bolt shields are installed. *Catalog number does not include hardware shields or mounting hardware.* Refer to type EVHS-D for bolt shields. Contact sealant is recommended for pads after welding.

**Material:** Casting - 356-T6 aluminum alloy

**Note:** To obtain 90° transverse type, add -90 to catalog number; example: WTTFR-30-60-D-90



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

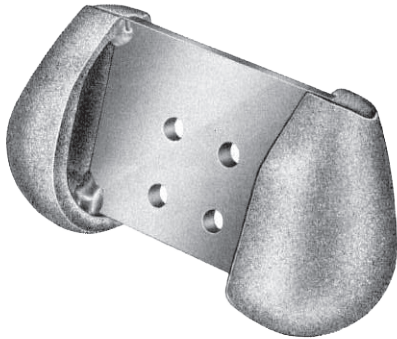
CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE IPS/EHIPS	DIMENSIONS - INCHES (MM)		APPROX. WT. EA. LBS.
		B	T	
WTTFR1024D	1 thru 2 1/2	4 1/8 (104.78)	1/2 (12.70)	1.2 (.54)
WTTFR3060D	3 thru 6	4 1/8 (104.78)	3/4 (19.05)	1.6 (.73)

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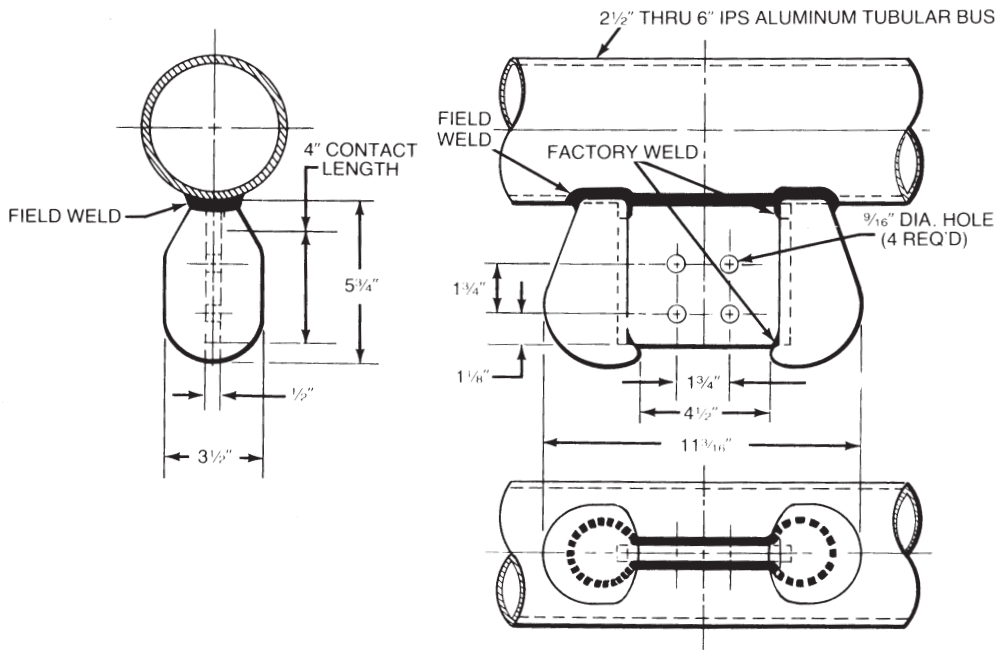
**EHV WELDED TEE CONNECTORS  
TUBE TO FLAT SELF SHIELDING  
TYPE EVWTF**

ALUMINUM
EVWTF



Aluminum alloy weldment, range taking tee for connecting aluminum tubing main to flat. Tongue holes have NEMA spacing. Contact surfaces are finished on both sides of tongue. This design is for corona free service at 500 KV with or without taps attached. No bolt shields are required due to built-in recesses. Maximum terminal pad thickness is one (1) inch. Contact sealant is recommended after welding.

**Material:** Casting - 356-T6 aluminum alloy  
Pad - 6061-T6 aluminum alloy



EHV  
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**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE IPS/EHIPS	APPROX. WT. EA. LBS. (KG)
EVWTF2460D	2 1/2 thru 6	5.22 (2.37)



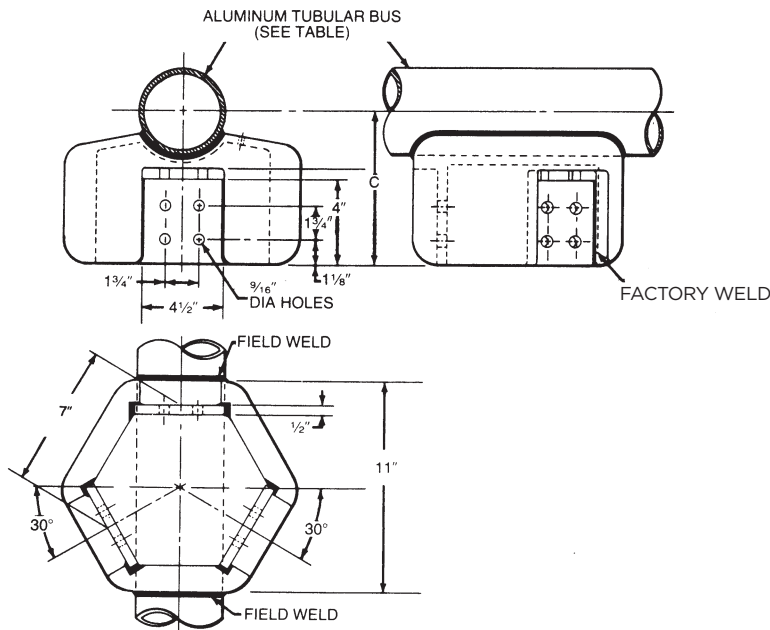
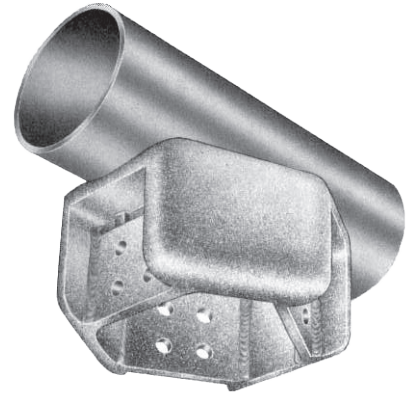
# EHV WELDED TRIFURCATING TEE CONNECTORS TUBE TO THREE FLAT PADS TYPE EVTT3F

ALUMINUM
EVTT3F

Aluminum alloy tubing to pads tee connectors are designed for corona free service at 500 KV. Bolt shields are not required due to recessed pads. Mounting hardware must be ordered separately. See compression terminal Type CCL-EHV for tapping off the EVTT3F pad. Maximum terminal pad thickness is one (1") inch. Contact sealant is recommended for contact pad after welding.

Bolt shields not required on recessed pad connections.

**Material:** Castings - 356-T6 aluminum alloy  
Pads - 6061-T6 aluminum alloy



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	DIMENSION C	APPROX. WT. EA. LBS. (KG)
EVTT3F24	2 1/2	63/4 (171.45)	—
EVTT3F30	3	615/16 (176.21)	21.5 (9.76)
EVTT3F34	3 1/2	71/2 (190.50)	—
EVTT3F40	4	77/16 (188.91)	22.3 (10.12)
EVTT3F50	5	81/16 (204.79)	22.5 (10.21)
EVTT3F60	6	89/16 (217.49)	22.5 (10.21)

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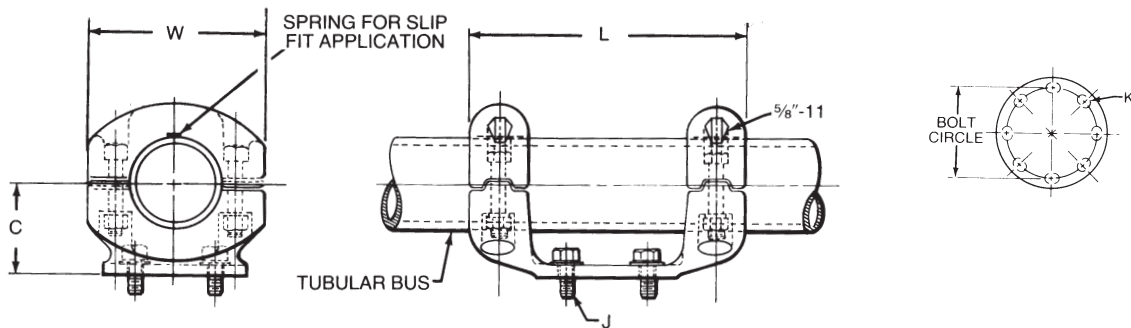
**EHV BOLTED BUS SUPPORTS  
TYPE EVTS**

**ALUMINUM  
EVTS**

Aluminum alloy, bolted, rigid or slip fit, tubular bus supports are designed for corona free service at 500KV. The cap members can be rotated to provide rigid or slip-free clamping. One static eliminator spring is furnished in each cap.



- Material:** Casting – 356-T6 aluminum alloy
- Springs – stainless steel
- Clamping Hardware – aluminum alloy
- Mounting Hardware – galvanized steel



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)					APPROX. WT. EA. LBS. (KG)
			L	C	W	J	K	
EVTS305	3	5	12 (304.80)	35/8 (92.08)	71/4 (184.15)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	7.8 (3.54)
EVTS345	3 1/2	5	12 (304.80)	4 (101.60)	73/4 (196.85)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	8.6 (3.90)
EVTS405	4	5	12 (304.80)	4 1/2 (114.30)	8 1/2 (215.90)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	9.9 (4.49)
EVTS505	5	5	12 (304.80)	47/8 (123.83)	9 1/2 (241.30)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	10.2 (4.63)
EVTS605	6	5	12 (304.80)	53/8 (136.53)	10 3/8 (263.53)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11.9 (5.40)
EVTS307	3	7	14 (355.60)	35/8 (92.08)	71/4 (184.15)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	8.9 (4.04)
EVTS347	3 1/2	7	14 (355.60)	4 (101.60)	73/4 (196.85)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	9.4 (4.27)
EVTS407	4	7	14 (355.60)	4 1/2 (114.30)	8 1/2 (215.90)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	10.0 (4.54)
EVTS507	5	7	14 (355.60)	47/8 (123.83)	9 1/2 (241.30)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	10.4 (4.72)
EVTS607	6	7	14 (355.60)	53/8 (136.53)	10 3/8 (263.53)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	10.8 (4.90)

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# SUBSTATION BUS SUPPORTS

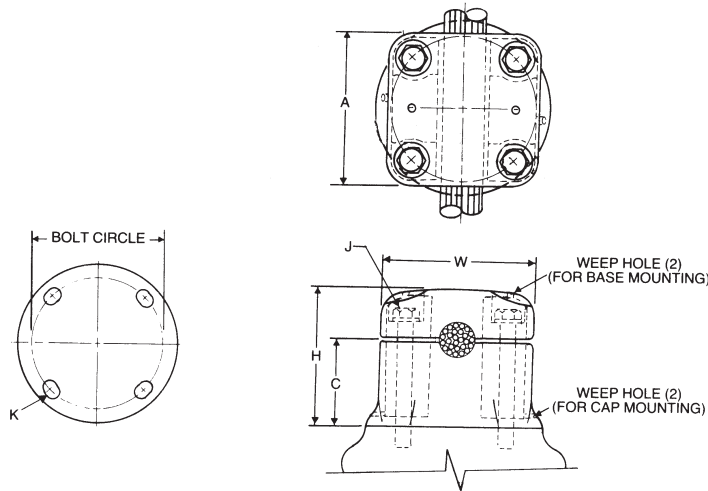
HUBBELL® Power Systems

## EHV BOLTED BUS SUPPORTS FOR CABLE TYPE HVCS

Aluminum alloy, bolted cable, bus supports are corona free single cable bus supports for 345 KV service. For mounting to base of insulator, add "B" to catalog number (example: HVCS-1996-5-B); bolt length will be increased, nuts will be furnished, and weep holes will be drilled in cap as shown.

**Material:** Casting – 356-T6 aluminum alloy  
Bolts and Lockwashers – galvanized steel

ALUMINUM  
HVCS



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	BOLT CIRCLE DIA. IN.	ALUMINUM CONDUCTOR SIZE (IN.)	DIMENSIONS - INCHES (MM)						APPROX. WT. EA. LBS. (KG)
			A	C	W	H	J	K	
HVCS10265	5	795 MCM ALUM. -37 STR (1.026)	517/32 (138.91)	15/16 (49.21)	61/4 (158.75)	31/8 (79.38)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	4.2 (1.89)
HVCS11085	5	795 26/7 ACSR (1.108)	517/32 (138.91)	15/16 (49.21)	61/4 (158.75)	31/8 (79.38)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	4.2 (1.89)
HVCS11625	5	900 MCM ALUM. (1.162)	517/32 (138.91)	15/16 (49.21)	61/4 (158.75)	31/8 (79.38)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	4.2 (1.89)
HVCS12165	5	1113 MCM ALUM. (1.216)	517/32 (138.91)	15/16 (49.21)	61/4 (158.75)	31/8 (79.38)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	4.2 (1.89)
HVCS12995	5	1272 MCM ALUM. (1.300)	517/32 (138.91)	15/16 (49.21)	61/4 (158.75)	31/8 (79.38)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	4.3 (1.95)
HVCS17625	5	2156 MCM 84/19 ACSR (1.762)	517/32 (138.91)	2 (50.80)	61/4 (158.75)	45/32 (105.57)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	6.5 (2.95)
HVCS18245	5	2500 MCM ALUM. (1.824)	517/32 (138.91)	2 (50.80)	61/4 (158.75)	45/32 (105.57)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	6.5 (2.95)
HVCS18805	5	2515 MCM 76/19 ACSR (1.880)	517/32 (138.91)	2 (50.80)	61/4 (158.75)	45/32 (105.57)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	6.5 (2.95)
HVCS19965	5	3000 MCM ALUM. (1.996)	517/32 (138.91)	2 (50.80)	61/4 (158.75)	45/32 (105.57)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	6.5 (2.95)
HVCS21605	5	3500 MCM ALUM. (2.160)	517/32 (138.91)	2 (50.80)	61/4 (158.75)	45/32 (105.57)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	6.0 (2.72)
HVCS17627	7	2156 MCM 84/19 ACSR (1.762)	73/8 (187.33)	2 (50.80)	81/2 (215.30)	45/32 (105.57)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	9.8 (2.45)
HVCS18247	7	2500 MCM ALUM. (1.824)	73/8 (187.33)	2 (50.80)	81/2 (215.30)	45/32 (105.57)	3/4 (19.05)	13/16 X 1 (20.64 X 25.40)	9.8 (2.45)

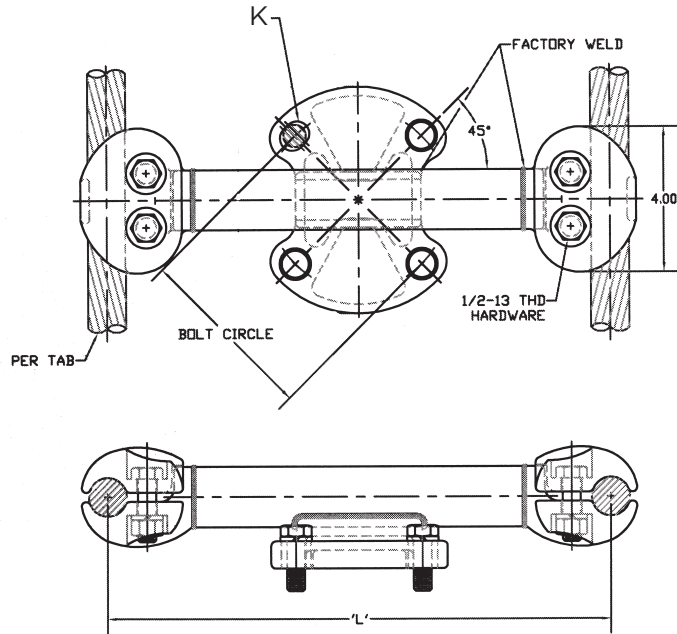
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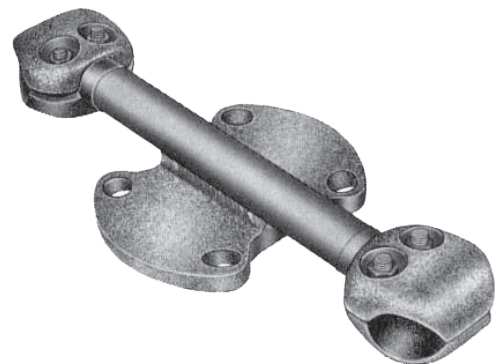
**EHV BOLTED BUS SUPPORTS  
TYPE HVDCS/EVDCS**

**ALUMINUM  
HVDCS/EVDCS**

Aluminum alloy, double cable, bus supports are designed for corona free service at 345 and 500 KV respectively. The grooves are fully rounded at entry to prevent conductor damage. Cable spacing other than shown may be ordered by changing catalog number suffix (example HVDCS-1108-5-16 for 1.108 diameter cable at 16" center line to center line).



- Material:**
- Caps and Base** - 356-T6 aluminum alloy
  - Cross Braces** - 6061.T6 aluminum alloy
  - Clamping Bolt** - aluminum alloy
  - Mounting Hardware** - galvanized steel



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE				DIMENSIONS - INCHES (MM)		APPROX. WT EA. LBS. (KG)	
	BOLT CIRCLE DIA. IN.	DIA. IN.	AAC	ACSR	C	K		
<b>345 KV APPLICATION</b>								
HVDCS1036512	5	1.019 - 1.036	795 (37-61 Str) 800 (61 Str)	636 30/19 715 54/7	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.8 (2.16)	
HVDCS1036518	5	1.019 - 1.036	795 (37-61 Str) 800 (61 Str)	636 30/19 715 54/7	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)	
HVDCS1108518	5	1.070 - 1.108	874.5-900 (37 Str-61 Str)	715.5 30/19 795 54/7	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)	
HVDCS1108712	7	1.070 - 1.108	874.5-900 (37 Str-61 Str)	715.5 30/19 795 54/7	12 (304.80)	13/16 x 1 (20.64 x 25.40)	5.5 (2.49)	
HVDCS1108718	7	1.070 - 1.108	874.5-900 (37 Str-61 Str)	715.5 30/19 795 54/7	18 (457.20)	13/16 x 1 (20.64 x 25.40)	6.1 (2.75)	
HVDCS1162712	7	1.124 - 1.162	954-1000 (37 Str-61 Str)	900 45/7 900 54/7	12 (304.80)	13/16 x 1 (20.64 x 25.40)	5.5 (2.49)	
HVDCS1196510	5	1.165 - 1.196	1033.5 (37 Str-61 Str)	954 45/7 954 54/7	10	11/16 x 7/8 (17.46 x 22.23)	4.6 (2.07)	
HVDCS1196512	5	1.165 - 1.196	1033.5 (37 Str-61 Str)	954 45/7 954 54/7	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.8 (2.16)	
HVDCS1196518	5	1.165 - 1.196	1033.5 (37 Str-61 Str)	954 45/7 954 54/7	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)	
HVDCS1196712	7	1.165 - 1.196	1033.5 (37 Str-61 Str)	954 45/7 954 54/7	12 (304.80)	13/16 x 1 (20.64 x 25.40)	6.1 (2.75)	
HVDCS1246512	5	1.209 - 1.263	1100-1200 (91 Str)	1033.5 45/7 1113 45/7	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.8 (2.16)	
HVDCS1246518	5	1.209 - 1.263	1100-1200 (91 Str)	1033.5 45/7 1113 45/7	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.5 (2.49)	

Continued on next page.

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# SUBSTATION BUS SUPPORTS

## EHV BOLTED BUS SUPPORTS TYPE HVDCS/EVDCS (CONTINUED)

HUBBELL® Power Systems

### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE				DIMENSIONS - INCHES (MM)		APPROX. WT EA. LBS. (KG)
	BOLT CIRCLE DIA. IN.	DIA. IN.	AAC	ACSR	C	K	
<b>345 kV APPLICATION (CONT.)</b>							
HVDCS1299512	5	1.258 - 1.300	1192.5-1272 (61 Str)	1113 <sup>45/7</sup> 1113 <sup>54/19</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.9 (2.22)
HVDCS1299518	5	1.258 - 1.300	1192.5-1272 (61 Str)	1113 <sup>45/7</sup> 1113 <sup>54/19</sup>	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.4 (2.45)
HVDCS1299718	7	1.258 - 1.300	1192.5-1272 (61 Str)	1113 <sup>45/7</sup> 1113 <sup>54/19</sup>	18 (457.20)	13/16 x 1 (20.64 x 25.40)	6.3 (2.86)
HVDCS1382512	5	1.345 - 1.385	1400-1431 (91 Str-61 Str)	1272 <sup>45/7</sup> 1351.5 <sup>45/7</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.9 (2.22)
HVDCS1465512	5	1.412 - 1.466	1500-1600 (91 Str-127 Str)	1351.5 <sup>54/19</sup> 1510.5 <sup>45/7</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.9 (2.22)
HVDCS1465518	5	1.412 - 1.466	1500-1600 (91 Str-127 Str)	1351.5 <sup>54/19</sup> 1510.5 <sup>45/7</sup>	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
HVDCS1465718	7	1.412 - 1.466	1500-1600 (91 Str-127 Str)	1351.5 <sup>54/19</sup> 1510.5 <sup>45/7</sup>	18 (457.20)	13/16 x 1 (20.64 x 25.40)	5.7 (2.57)
HVDCS1502512	5	1.467 - 1.502	-	1590 <sup>45/7</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.9 (2.22)
HVDCS1545510	5	1.502 - 1.545	1700-1750 (127 Str)	1590 <sup>45/7</sup> 1590 <sup>54/19</sup>	10 (254.00)	11/16 x 7/8 (17.46 x 22.23)	4.8 (2.16)
HVDCS1545512	5	1.502 - 1.545	1700-1750 (127 Str)	1590 <sup>45/7</sup> 1590 <sup>54/19</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	4.9 (2.22)
HVDCS1545516	5	1.502 - 1.545	1700-1750 (127 Str)	1590 <sup>45/7</sup> 1590 <sup>54/19</sup>	16 (406.40)	11/16 x 7/8 (17.46 x 22.23)	5.1 (2.30)
HVDCS1545518	5	1.502 - 1.545	1700-1750 (127 Str)	1590 <sup>45/7</sup> 1590 <sup>54/19</sup>	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.3 (2.39)
<b>500 kV APPLICATION</b>							
EVDCS1650512	5	1.602 - 1.650	2000 (91 Str-127 Str.)	1780 <sup>84/19</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	5.0 (2.25)
EVDCS1650518	5	1.602 - 1.650	2000 (91 Str-127 Str.)	1780 <sup>84/19</sup>	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.4 (2.45)
EVDCS1729512	5	1.682 - 1.729	2250 (91 Str.)	-	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	5.0 (2.25)
EVDCS1729518	5	1.682 - 1.729	2250 (91 Str.)	-	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.4 (2.45)
EVDCS1762512	5	1.737 - 1.762	2300 (61 Str.)	2167 <sup>72/7</sup> 2156 <sup>84/19</sup>	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	5.0 (2.25)
EVDCS1762518	5	1.737 - 1.762	2300 (61 Str.)	2167 <sup>72/7</sup> 2156 <sup>84/19</sup>	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.4 (2.45)
EVDCS1762712	7	1.737 - 1.762	2300 (61 Str.)	2167 <sup>72/7</sup> 2156 <sup>84/19</sup>	12 (304.80)	13/16 x 1 (20.64 x 25.40)	5.8 (2.61)
EVDCS1824512	5	1.763 - 1.824	2500 (91 Str-127 Str)	-	12 (304.80)	11/16 x 7/8 (17.46 x 22.23)	5.0 (2.27)
EVDCS1824516	5	1.763 - 1.824	2500 (91 Str-127 Str)	-	16 (406.40)	11/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
EVDCS1824518	5	1.763 - 1.824	2500 (91 Str-127 Str)	-	18 (457.20)	11/16 x 7/8 (17.46 x 22.23)	5.4 (2.75)
EVDCS1824712	7	1.763 - 1.824	2500 (91 Str-127 Str)	-	12 (304.80)	13/16 x 1 (20.64 x 25.40)	5.8 (2.61)
EVDCS1824716	7	1.763 - 1.824	2500 (91 Str-127 Str)	-	16 (406.40)	13/16 x 1 (20.64 x 25.40)	6.1 (2.75)
EVDCS1824718	7	1.763 - 1.824	2500 (91 Str-127 Str)	-	18 (457.20)	13/16 x 1 (20.64 x 25.40)	6.3 (2.86)

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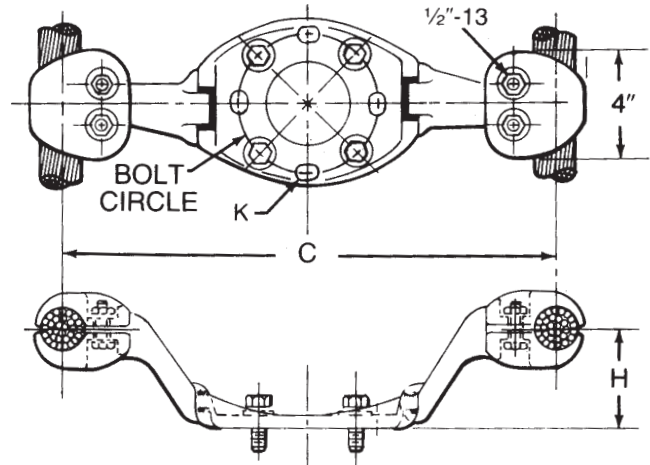
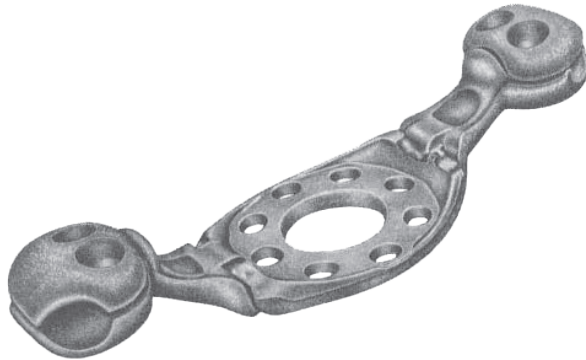


**EHV BOLTED BUS SUPPORTS  
TYPE HVDCH/EVDCH**

**ALUMINUM  
HVDCH/EVDCH**

Aluminum alloy, double cable, bus supports are designed for corona free service at 345 and 500 KV respectively. The rigid cast design has cable grooves fully rounded at entry to prevent conductor damage.

**Material:** **Body and Caps** - 356-T6 aluminum alloy  
**Clamping Hardware** - aluminum alloy  
**Mounting Hardware** - galvanized steel



**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE				DIMENSIONS-INCHES (MM)			APPROX. WT. EA. LBS. (KG)
	BOLT CIRCLE DIA. IN.	DIA. IN	AAL	ACSR	C	H	K	
<b>345 KV APPLICATIONS</b>								
HVDCH1108518	5	1.070 - 1.108	874.5-900 (37 Str-61 Str)	715.5 30/19 - 795 54/7	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
HVDCH1196518	5	1.165 - 1.196	1033.5 (37 Str-61 Str)	954 45/7 - 954 54/7	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
HVDCH1299518	5	1.258 - 1.300	1192.5-1272 (61 Str)	1113 45/7 - 1113 54/19	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.4 (2.45)
HVDCH1382518	5	1.345 - 1.385	1400_1431 (91 Str-61 Str)	1272 45/7 - 1351.5 45/7	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
HVDCH1545518	5	1.502 - 1.545	1700-1750 (127 Str)	-	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.2 (2.36)
<b>500 KV APPLICATION</b>								
EVDCH1650518	5	1.602 - 1.650 (40.69 - 41.91)	2000-2000 (91 Str-127 Str)	1780 84/19	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.9 (2.68)
EVDCH1762518	5	1.737 - 1.762 (44.12 - 44.75)	-	2167 72/7 - 2156 84/19	18 (457.20)	2 1/2 (63.50)	1 1/16 x 7/8 (17.46 x 22.23)	5.7 (2.59)

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# SUBSTATION BUS SUPPORTS

## EHV WELDED BUS SUPPORTS

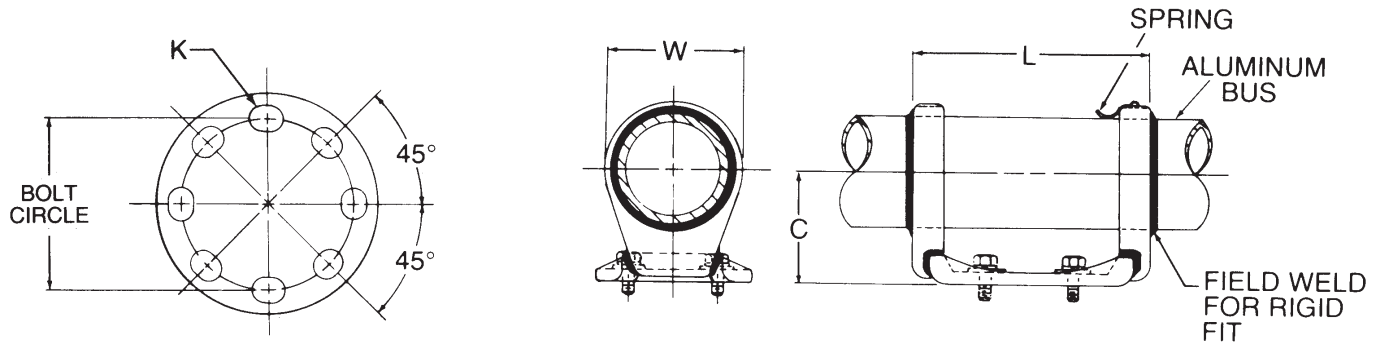
### TYPE WURE-EHV

HUBBELL® Power Systems

Aluminum alloy weldment, rigid or slip fit, bus supports are designed for corona free service at 345 kV. If rigid fit is desired, field weld each end. Stainless steel static eliminator spring is furnished as standard. Cap screws and washers for mounting to cap of insulator are supplied for upright mounting; when mounting to base, add "B" to catalog number (example: WURE-20-5-B-EHV).

**Material:** Casting – 356-T6 aluminum alloy  
**Mounting Hardware** – galvanized steel

ALUMINUM  
**WURE-EHV**



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
			L	C	W	K	
WURE245EHV	2 1/2	5	9 1/8 (231.78)	3 1/8 (79.38)	3 1/16 (93.66)	1 1/16 X 7/8 (17.46 X 22.23)	3.4 (1.54)
WURE305EHV	3	5	9 1/8 (231.78)	3 5/8 (92.08)	4 7/16 (112.71)	1 1/16 X 7/8 (17.46 X 22.23)	3.4 (1.54)
WURE345EHV	3 1/2	5	9 1/8 (231.78)	4 (101.60)	5 3/16 (131.76)	1 1/16 X 7/8 (17.46 X 22.23)	4.7 (2.13)
WURE405EHV	4	5	9 3/8 (238.13)	4 1/2 (114.30)	5 9/16 (141.25)	1 1/16 X 7/8 (17.46 X 22.23)	5.3 (2.40)
WURE505EHV	5	5	9 3/8 (238.13)	4 7/8 (123.83)	6 1/16 (169.86)	1 1/16 X 7/8 (17.46 X 22.23)	5.8 (2.63)
WURE605EHV	6	5	9 7/8 (250.83)	5 3/8 (136.53)	7 1/16 (195.26)	1 1/16 X 7/8 (17.46 X 22.23)	6.7 (3.04)

EHV  
 47

# SUBSTATION BUS SUPPORTS

## EHV HOOK-ON BUS SUPPORTS

### TYPE WTH-EHV

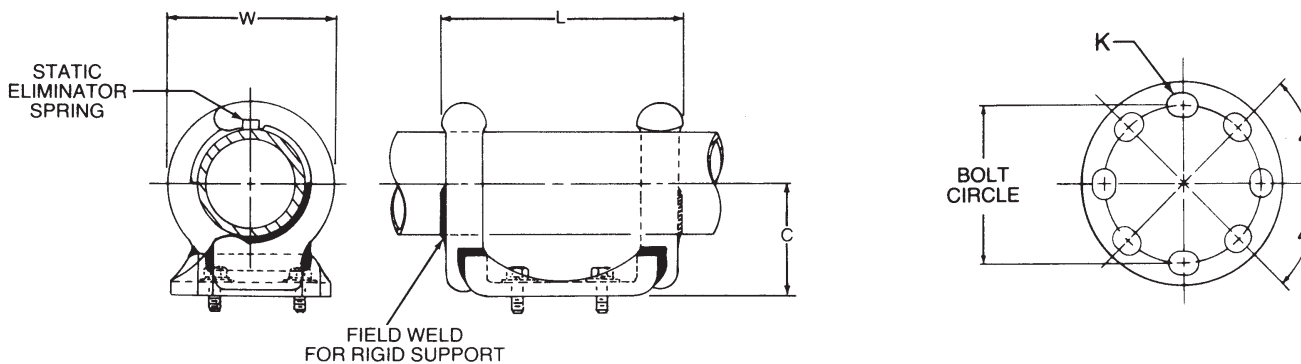


ALUMINUM  
WTH-EHV



Aluminum alloy weldment bus supports are corona free hook-on type tubular supports for 345 and 500 KV service. The bus supports can be welded at each end for rigid fit. Stainless steel static eliminator springs are furnished as standard. Cap screws and washers for mounting to cap of insulator are supplied for upright mounting. When mounting to base of insulator, add "B" to catalog number for bolts, nuts, lockwashers and flatwashers (example: WTH-24-5-B-EHV).

**Material:** Casting - 356-T6 aluminum alloy  
**Mounting Hardware** - galvanized steel



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	DIMENSIONS - INCHES (MM)				APPROX. WT. EA. LBS. (KG)
		L	C	W	K	
<b>5" BOLT CIRCLE</b>						
WTH205EHV	2	93/8 (238.13)	2 3/4 (69.85)	4 (101.6)	11/16 X 7/8 (17.46 X 22.23)	3.7 (1.67)
WTH245EHV	2 1/2	93/8 (238.13)	31/8 (79.38)	4 1/2 (114.30)	11/16 X 7/8 (17.46 X 22.23)	4.1 (1.81)
WTH305EHV	3	93/8 (238.13)	35/8 (92.08)	5 1/2 (139.70)	11/16 X 7/8 (17.46 X 22.23)	4.1 (1.81)
WTH345EHV	3 1/2	93/8 (238.13)	4 (101.60)	5 7/8 (149.23)	11/16 X 7/8 (17.46 X 22.23)	4.3 (1.93)
WTH405EHV	4	93/8 (238.13)	4 1/2 (114.30)	6 1/2 (165.10)	11/16 X 7/8 (17.46 X 22.23)	4.3 (1.95)
WTH505EHV	5	93/8 (238.13)	4 7/8 (123.83)	7 13/16 (198.44)	11/16 X 7/8 (17.46 X 22.23)	5.0 (2.27)
WTH605EHV	6	93/8 (238.13)	5 3/8 (136.53)	9 1/8 (231.78)	11/16 X 7/8 (17.46 X 22.23)	5.6 (2.54)
<b>7" BOLT CIRCLE</b>						
WTH307EHV	3	113/4 (298.45)	35/8 (92.08)	5 1/2 (139.70)	13/16 X 1 (20.64 X 25.40)	5.5 (2.48)
WTH407EHV	4	113/4 (298.45)	4 1/2 (114.30)	6 1/2 (165.10)	13/16 X 1 (20.64 X 25.40)	5.7 (2.59)
WTH507EHV	5	113/4 (298.45)	4 7/8 (123.83)	7 13/16 (198.44)	13/16 X 1 (20.64 X 25.40)	5.7 (2.59)
WTH607EHV	6	113/4 (298.45)	5 3/8 (136.53)	9 1/8 (231.78)	13/16 X 1 (20.64 X 25.40)	7.0 (3.18)

EHV  
48



# SUBSTATION BUS SUPPORTS

## EHV WELDED BUS SUPPORTS

### TYPE WUR-EHV

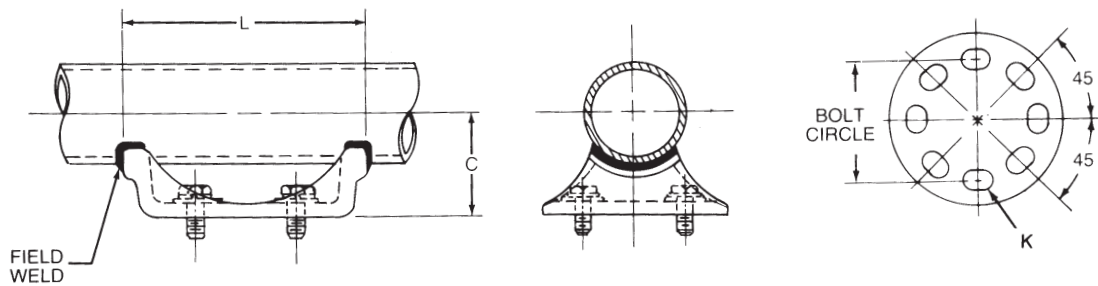
HUBBELL® Power Systems

ALUMINUM  
WUR-EHV

Aluminum alloy horizontal weldment bus support for aluminum tubing designed for rigid corona free service at 345 and 500 kV. Cap screws are supplied for upright mounting.

For mounting to base of insulator; nuts, bolts, and lock-washers will be supplied by adding “-B” to catalog number; example: WUR-30-5-B-EHV

**Material:** Casting – 356-T6 aluminum alloy  
Hardware – galvanized steel



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
			L	C	K	
WUR245EHV	2 1/2	5	8 (203.20)	3 1/8 (79.38)	1 1/16 X 7/8 (17.46 X 22.23)	1.30 (.59)
WUR305EHV	3	5	8 1/8 (206.38)	3 5/8 (92.08)	1 1/16 X 7/8 (17.46 X 22.23)	1.40 (.63)
WUR345EHV	3 1/2	5	8 1/8 (206.38)	4 (101.60)	1 1/16 X 7/8 (17.46 X 22.23)	1.60 (.72)
WUR405EHV	4	5	8 1/8 (206.38)	4 1/2 (114.30)	1 1/16 X 7/8 (17.46 X 22.23)	1.80 (.81)
WUR505EHV	5	5	8 1/8 (206.38)	4 7/8 (123.82)	1 1/16 X 7/8 (17.46 X 22.23)	1.90 (.86)
WUR605EHV	6	5	8 1/8 (206.38)	5 3/8 (136.52)	1 1/16 X 7/8 (17.46 X 22.23)	2.06 (.93)
WUR607EHV	6	7	10 3/8 (263.53)	5 1/2 (139.70)	1 3/16 X 1 (20.64 X 25.4)	2.94 (1.33)

EHV  
49

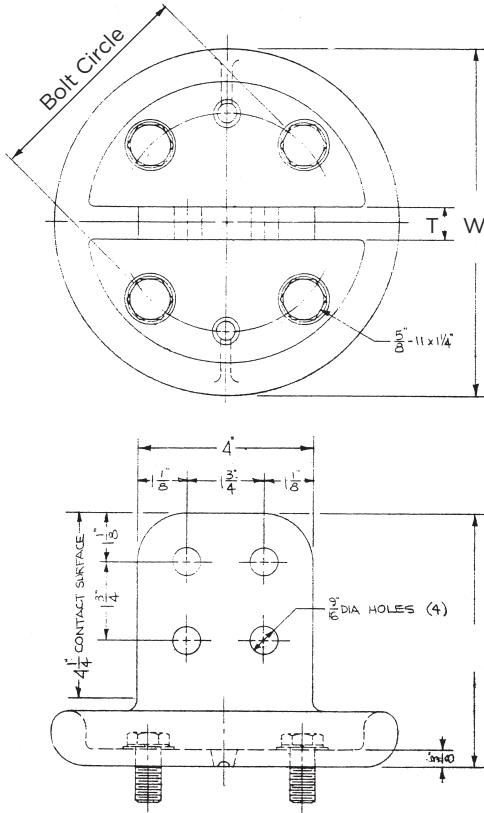


**EHV BUS SUPPORTS  
TYPE EVBCF**

ALUMINUM  
EVBCF

Aluminum alloy, insulator to flat, terminals are designed for corona free service at 500KV. *This catalog number does not include tongue mounting hardware or bolt shields; these components must be ordered separately. Bolt shields must be used on both sides of pad to assure corona free performance. Tongue holes have NEMA spacing. Contact sealant is recommended.*

**Material:** Castings - 356-T6 aluminum alloy  
Clamping Hardware - Galvanized Steel



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		H	W	T	
EVBCF	5	53/4 (146.1)	63/8 (161.9)	3/4 (19.05)	5.4 (2.45)

EHV  
50



# SUBSTATION BUS SUPPORTS

## EHV WELDED BUS SUPPORTS

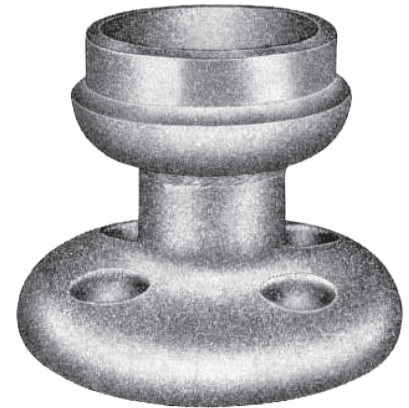
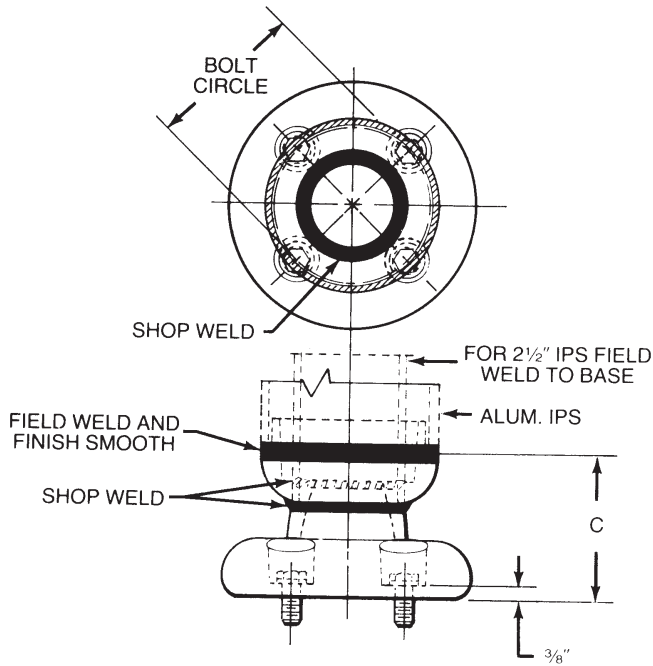
### TYPE EVVBS

HUBBELL® Power Systems

ALUMINUM  
EVVBS

Aluminum alloy weldment bus supports are corona free vertical tubular supports for 500 kV service. For schedule 40 Bus <sup>(1)</sup>.

**Material:** **Bus Support** - 356-T6 aluminum alloy  
**Hardware** - galvanized steel



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	BOLT CIRCLE DIA. IN.	DIMENSION - INCHES (MM) C	APPROX. WT. EA. LBS. (KG)
EVVBS245	2 1/2	5	315/16 (100.01)	5.3 (2.41)
EVVBS305	3	5	57/16 (138.11)	6.4 (2.90)
EVVBS405	4	5	51/2 (139.70)	7.2 (3.27)
EVVBS505	5	5	51/2 (139.70)	7.7 (3.49)
EVVBS605	6	5	51/2 (139.70)	8.2 (3.72)
EVVBS247	2 1/2	7	315/16 (100.01)	5.9 (2.68)
EVVBS307	3	7	57/16 (138.11)	6.9 (3.13)
EVVBS407	4	7	57/16 (138.11)	7.9 (3.58)
EVVBS507	5	7	51/2 (139.80)	-
EVVBS607	6	7	51/2 (139.80)	-

<sup>(1)</sup> Some sizes available for schedule 80 bus - consult factory.

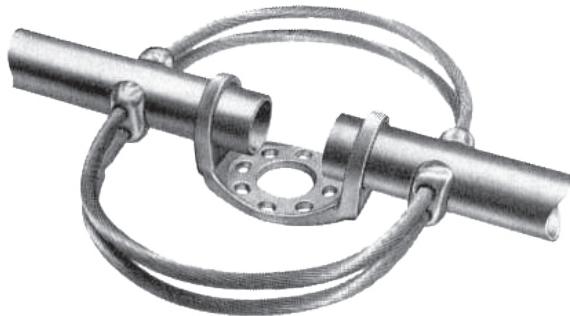
EHV  
51

# SUBSTATION BUS SUPPORTS

## EHV EXPANSION TUBULAR BUS SUPPORT TYPE HVRTS



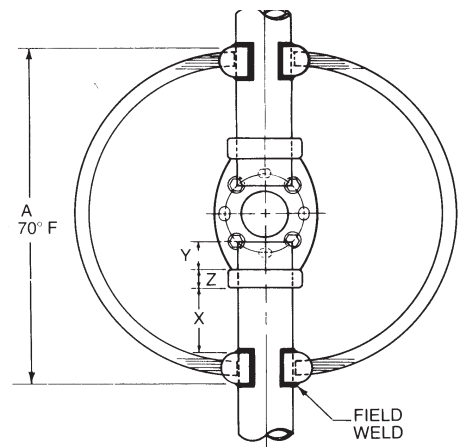
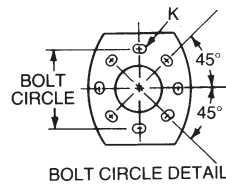
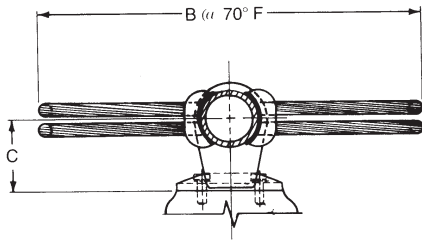
ALUMINUM
HVRTS



Aluminum alloy weldment, expansion tubular, bus support-coupler is designed for corona free service at 345 KV. The cables serve as the expansion part of the fitting as well as the corona rings. Weldment end plugs will be furnished if desired by adding "EP" suffix to catalog number; example: HVRTS-40-5-EP.

**Material:** **Castings** - 356-T6 aluminum alloy  
**Cables** - aluminum alloy  
**Hardware** - galvanized steel

Refer to Class 3940 for installation chart DC-11852 on page 89 for instructions.



### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)					APPROX. WT. EA. LBS. (KG)
			A	B	C	K	Z	
HVRTS305	3	5	205/8 (523.88)	241/8 (612.78)	35/8 (92.08)	11/16 X 7/8 (17.46 X 22.23)	13/16 (20.64)	16.2 (7.35)
HVRTS345	3 1/2	5	205/8 (523.88)	241/8 (612.78)	4 (101.60)	1/16 X 7/8 (17.46 X 22.23)	1 (25.40)	16.8 (7.62)
HVRTS405	4	5	207/8 (530.23)	251/8 (638.18)	41/2 (114.30)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	17.8 (8.08)
HVRTS505	5	5	223/8 (568.33)	263/4 (679.45)	47/8 (123.83)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	20.1 (9.13)
HVRTS605	6	5	227/8 (581.03)	277/8 (708.03)	53/8 (136.53)	11/16 X 7/8 (17.46 X 22.23)	11/2 (38.10)	21.0 (9.53)
HVRTS307	3	7	203/4 (527.05)	241/8 (612.78)	35/8 (92.08)	13/16 X 1 (20.64 X 25.40)	13/16 (20.64)	17.5 (7.95)
HVRTS407	4	7	21 (533.40)	251/8 (638.18)	41/2 (114.30)	13/16 X 1 (20.64 X 25.40)	11/4 (31.75)	19.6 (8.90)
HVRTS507	5	7	221/2 (571.50)	263/4 (679.45)	47/8 (123.83)	13/16 X 1 (20.64 X 25.40)	11/4 (31.75)	21.7 (9.85)
HVRTS607	6	7	23 (584.20)	277/8 (708.03)	53/8 (136.53)	13/16 X 1 (20.64 X 25.40)	11/2 (38.10)	22.8 (10.35)

EHV  
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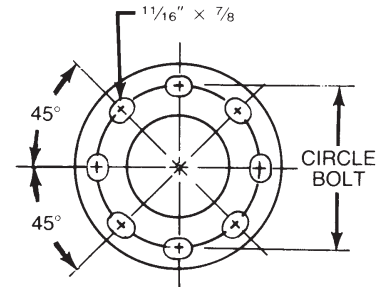
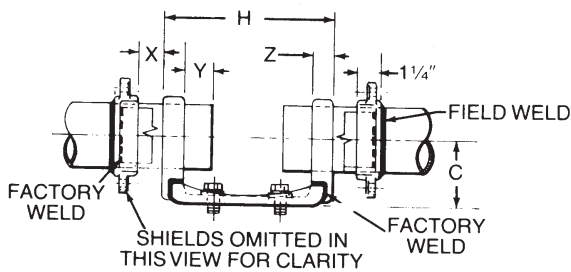
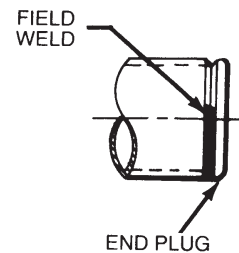
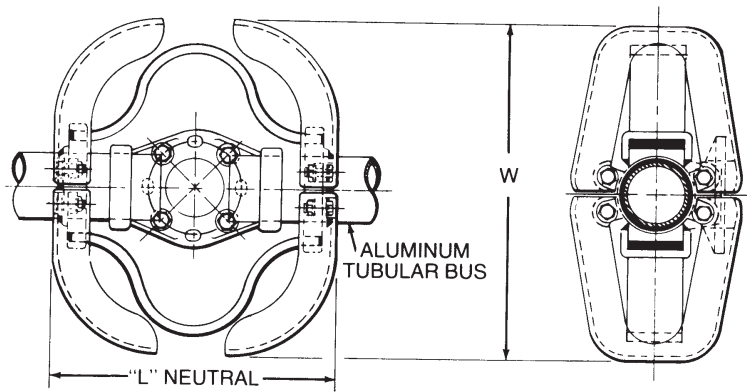
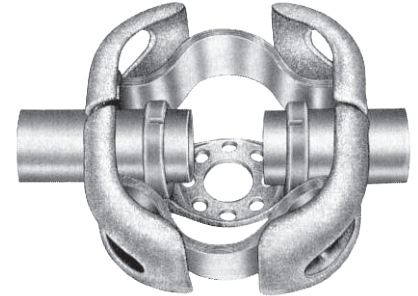
# EHV WELDED EXPANSION TUBULAR BUS SUPPORTS TYPE EVKES

ALUMINUM  
EVKES

Aluminum alloy, compact expansion, horizontal bus supports are designed for corona free service at 500 KV. This design provides 32 inch expansion. Weldment end plugs will be furnished if desired by adding "EP" suffix to catalog number; example: (EVKES-40-5-EP). Specify "H" in catalog number if schedule 80 EHIPS tubing is to be used: example: (EVKESH-40-5).

- Material:** Casting - 356-T6 aluminum alloy
- Shunts - 1100-O aluminum alloy
- Shield Mounting Hardware - stainless steel
- Base Mounting Hardware - galvanized steel

Refer to installation chart DC-6536 on page 90 for instructions.



## 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)					APPROX. WT. EA. LBS. (KG)
			L	C	H	Z	W	
EVKES305	3	5	15 1/4 (387.35)	35/8 (92.08)	9 1/8 (231.78)	1 (25.40)	18 1/2 (469.90)	20.8 (9.43)
EVKES345	3 1/2	5	15 1/4 (387.35)	4 (101.6)	9 1/8 (231.78)	1 (25.40)	19 1/2 (495.30)	27.3 (12.38)
EVKES405	4	5	15 1/2 (393.70)	4 1/2 (114.30)	9 3/8 (238.13)	1 1/4 (31.75)	19 1/2 (495.30)	28.3 (12.84)
EVKES505	5	5	15 1/2 (393.70)	4 7/8 (123.83)	9 3/8 (238.13)	1 1/4 (31.75)	23 1/2 (596.90)	32.9 (14.92)
EVKES605	6	5	16 (406.40)	5 3/8 (136.53)	9 7/8 (250.83)	1 1/2 (38.10)	23 1/2 (596.90)	41.8 (18.96)

∅160 ft. maximum total bus length.



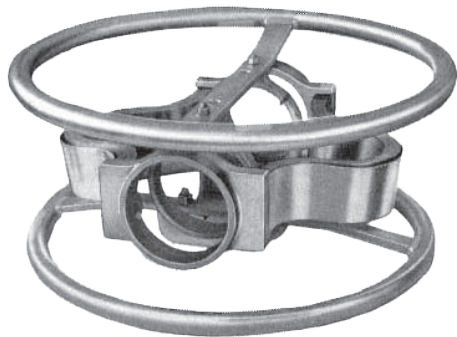
# SUBSTATION BUS SUPPORTS

## EHV EXPANSION TUBULAR BUS SUPPORTS

### TYPE HVETS/EVETS



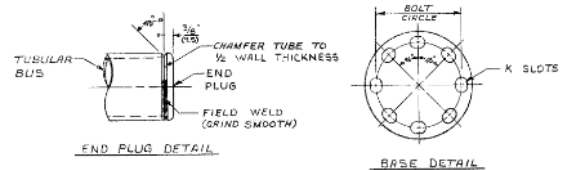
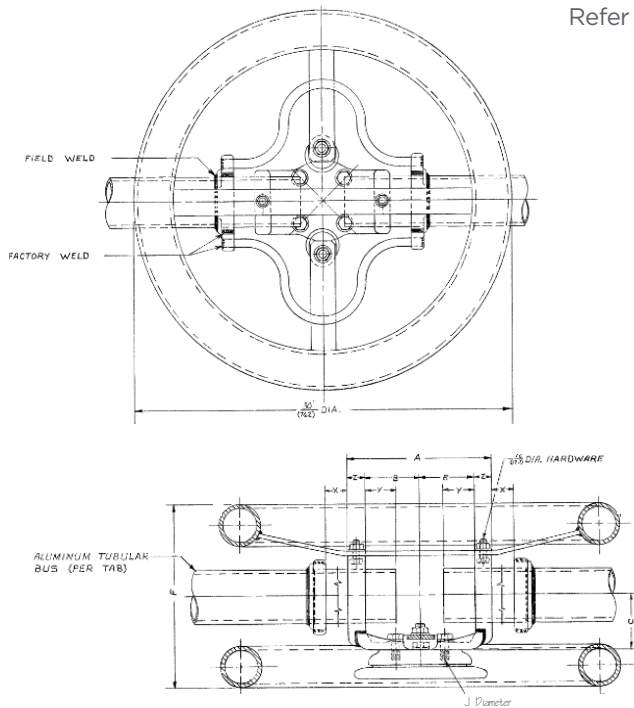
**ALUMINUM  
HVETS/EVETS**



Aluminum alloy weldment, expansion tubular, bus support couplers designed for corona free service at 345 or 500 KV level respectively. Weldment end plugs will be furnished if desired; add “-EP” to catalog number. (Example: HVETS-40-5-EP). Specify “H” in catalog number if schedule 80 EHIPS tubing is to be used: example: (HVETSH-40-5).

- Material:**
- Casting** - 356-T6 aluminum alloy
  - Rings** - 6061-T6 aluminum alloy
  - Shunts** - 1100-O aluminum alloy
  - Ring Mounting Brackets** - 6061-T6 aluminum alloy
  - Upper Ring Mounting Hardware** - aluminum alloy
  - Lower Ring and Base Mounting Hardware** - galvanized steel

Refer to installation Chart DC-6536 on page 90 for instructions.



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### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)							APPROX. WT. EA. LBS. (KG)
			A	B	C	F	J	K	Z	
<b>345 KV APPLICATIONS</b>										
HVETS305♦	3	5	93/8 (238.13)	37/16 (87.31)	35/8 (92.08)	103/8 (263.53)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	25.6 (11.61)
HVETS345♦	3 1/2	5	93/8 (238.13)	37/16 (87.31)	4 (101.60)	11 (279.40)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	34.9 (15.83)
HVETS405♦	4	5	93/8 (238.13)	37/16 (87.31)	4 1/2 (114.30)	113/4 (298.45)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	32.8 (14.88)
HVETS505♦	5	5	93/8 (238.13)	37/16 (87.31)	4 7/8 (123.83)	123/4 (323.85)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	36.1 (16.37)
HVETS605♦	6	5	93/8 (238.13)	37/16 (87.31)	5 3/8 (136.53)	133/4 (349.25)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	1 1/2 (38.10)	45.7 (20.73)

♦ 3 21/8" expansion, 160 ft. maximum total bus length (both sides).  
♦♦ 3 3" expansion, 240 ft. maximum total bus length (both sides).

*Continued on next page.*



# SUBSTATION BUS SUPPORTS

## TYPES HVETS/EVETS EXPANSION TUBULAR BUS SUPPORTS (CONTINUED)

HUBBELL® Power Systems

### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	BOLT CIRCLE DIA. IN.	DIMENSIONS - INCHES (MM)							APPROX. WT. EA. LBS. (KG)
			A	B	C	F	J	K	Z	
HVETS507◆◆	5	7	113/4 (298.45)	45/8 (117.48)	47/8 (123.83)	123/4 (323.85)	3/4 (19.05)	13/16 X 7/8 (20.64 X 25.40)	11/4 (31.75)	39.0 (17.69)
HVETS607◆◆	6	7	121/4 (311.15)	45/8 (117.48)	53/8 (136.53)	133/4 (349.25)	3/4 (19.05)	13/16 X 7/8 (20.64 X 25.40)	11/2 (38.10)	53.0 (24.04)
500 kV APPLICATIONS										
EVETS305◆	3	5	93/8 (238.13)	37/16 (87.31)	35/8 (92.08)	117/8 (301.63)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	33.1 (15.01)
EVETS345◆	3 1/2	5	93/8 (238.13)	37/16 (87.31)	4 (101.60)	121/2 (317.50)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	42.4 (19.37)
EVETS405◆	4	5	93/8 (238.13)	37/16 (87.31)	41/2 (114.30)	131/4 (336.55)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	40.3 (18.28)
EVETS505◆	5	5	93/8 (238.13)	37/16 (87.31)	47/8 (123.83)	141/4 (361.95)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/4 (31.75)	43.6 (19.78)
EVETS605◆	6	5	97/8 (250.83)	37/16 (87.31)	53/8 (136.53)	151/4 (387.35)	5/8 (15.88)	11/16 X 7/8 (17.46 X 22.23)	11/2 (38.10)	53.2 (24.13)
EVETS507◆◆	5	7	113/4 (298.45)	45/8 (117.48)	47/8 (123.83)	141/4 (361.95)	3/4 (19.05)	13/16 X 7/8 (20.64 X 25.40)	11/4 (31.75)	46.5 (21.09)
EVETS607◆◆	6	7	121/4 (311.15)	45/8 (117.48)	53/8 (136.53)	151/4 (387.35)	3/4 (19.05)	13/16 X 7/8 (20.64 X 25.40)	11/2 (38.10)	60.5 (27.44)

**Designed for:** ◆ 3 21/8" expansion, 160 ft. maximum total bus length (both sides).  
◆◆ 3 3" expansion, 240 ft. maximum total bus length (both sides).

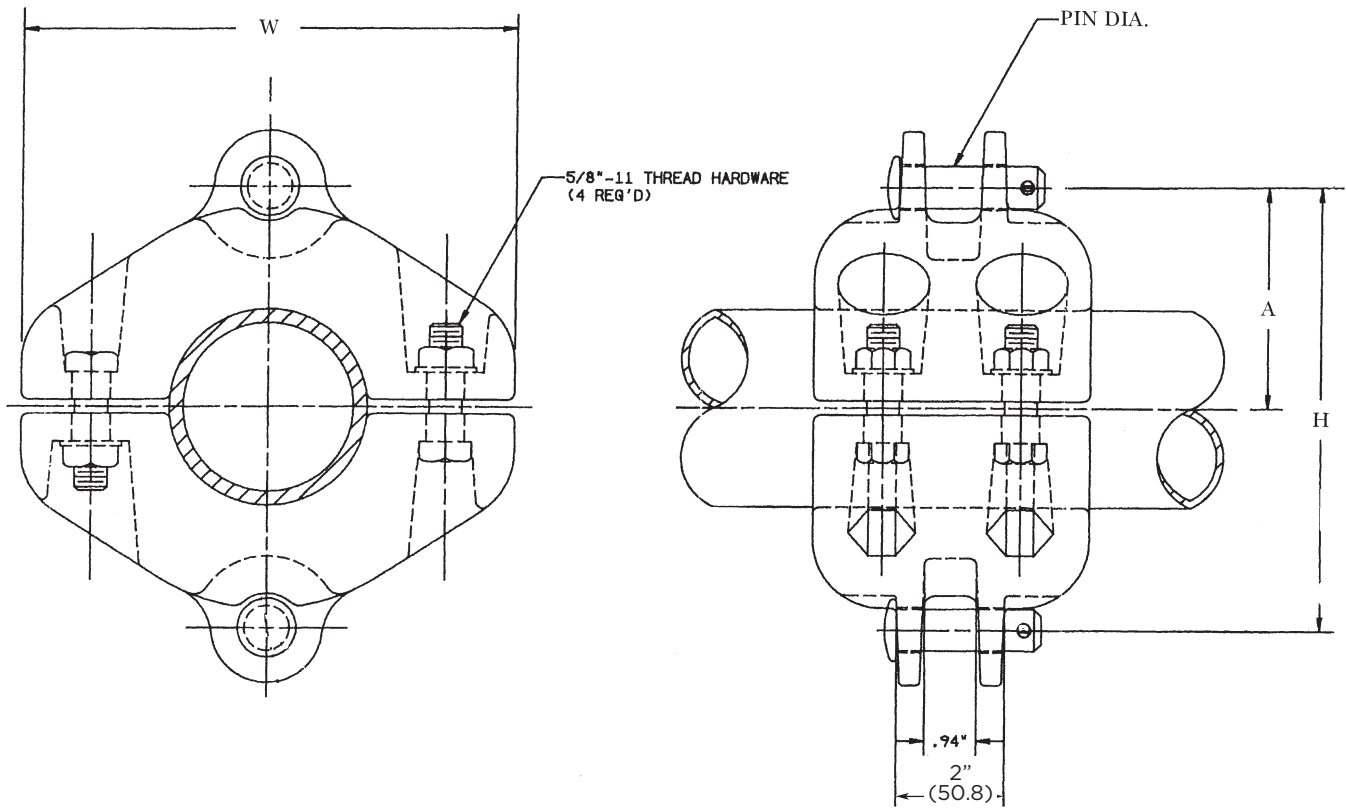


**EHV SUSPENSION CLEVIS CLEVIS BUS SUPPORT  
TYPE HVSCCS**

ALUMINUM
HVSCCS

Corona free suspension bus support 3" IPS AL. Tubular bus to two clevis fittings. Corona-free when installed between two close-coupled insulator strings.

**Material:** **Body** - 356-T6 Aluminum Alloy  
**Hardware** - Stainless Steel  
**Clevis Pins** - Galvanized Steel



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**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS			PIN DIA.	APPROX. WT. EA. LBS. (KG)
		A	H	W		
HVSCCS30	3	4 (101.6)	8 (203.2)	87/8 (225.43)	3/4 (19.05)	17.5 (7.95)

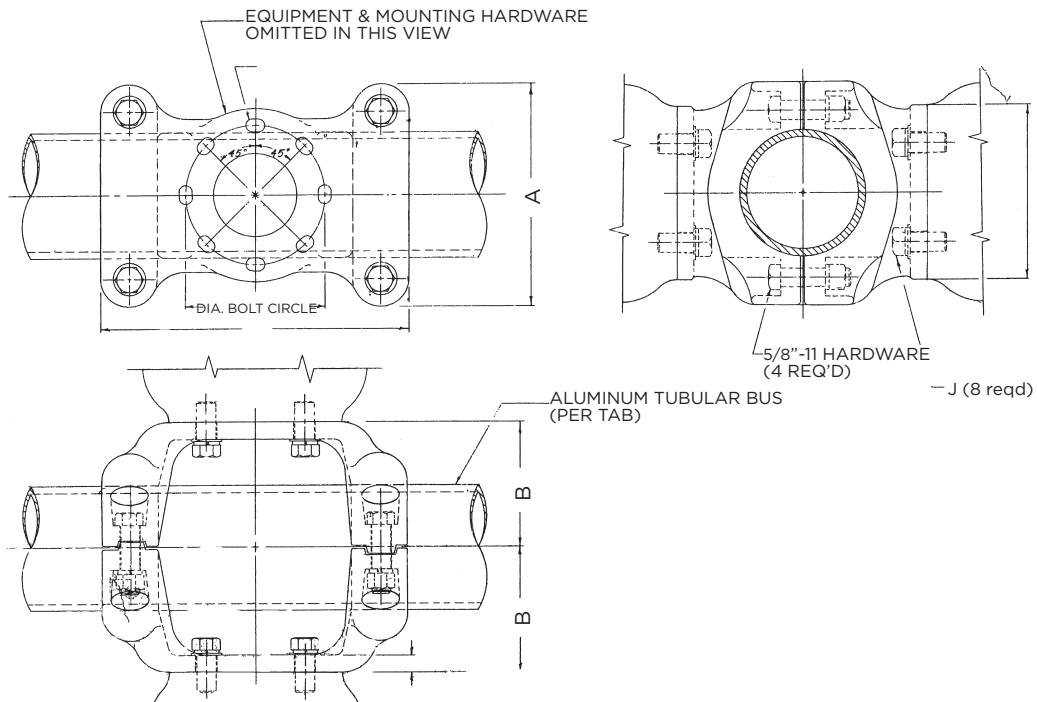


# EHV DOUBLE MOUNTED TUBULAR BUS SUPPORT TYPE EVT2S

ALUMINUM
EVT2S

Aluminum alloy double mounted tubular bus support, installed between two post insulators, provides a rigid tube fit. The corona free support is used in multi-level tubing runs. May be used with Schedule 40 or Schedule 80 tube.

- Materials:**
- Castings** - 356-T6 Aluminum Alloy
  - Clamping Hardware** - Aluminum Alloy
  - Mounting Hardware** - Galvanized Steel



## 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	DIMENSIONS - INCHES (MM)					APPROX. WT. EA. LBS. (KG)
		A	B	C	BOLT CIRCLE	J	
EVT2S405	4"	8 1/2 (215.30)	4 1/2 (114.30)	12 (304.80)	5	5/8	12.6 (5.72)
EVT2S505	5"	9 1/2 (241.30)	4 7/8 (121.54)	12 (304.80)	5	5/8	13.5 (6.13)

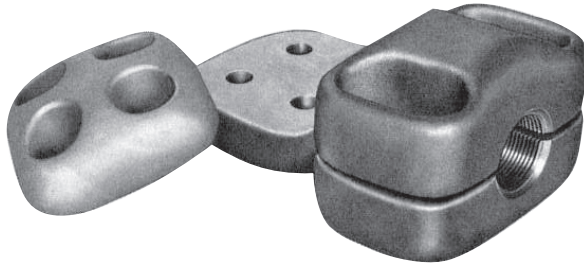
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# SUBSTATION STUD CONNECTORS

## BRONZE BOLTED STUD CONNECTORS TO FLAT PAD WITH HARDWARE SHIELD TYPE BHVSF

BRONZE
BHVSF

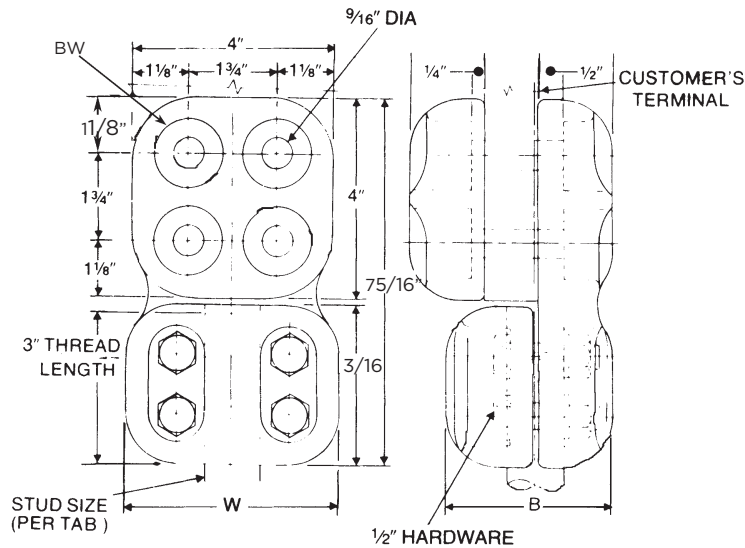


Bronze alloy stud connectors are designed for corona free service at 345 KV. Pad mounting hardware is not furnished as part of this catalog number. One aluminum hardware shield is supplied with this catalog number. Hardware must be ordered separately; specify thickness of pad to be clamped when ordering. This connector may be supplied tin plated by adding "TP" to catalog number (example: BHVSF-20-D-12-TP).

Tongue holes have NEMA spacing.

- Material:**
- Castings** - 255 bronze alloy
  - Hardware Shield** - 356-T6 aluminum alloy
  - Stud Clamping Hardware** - silicon bronze

Suffix "-13" denotes 13/8" O.D. washer size in bolt wells.



### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA IN./THD	DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		B	W	BW	
BHVSF11D12	11/8 - 12	31/2 (88.90)	45/16 (109.54)	11/8 (28.58)	13.3 (6.03)
BHVSF14D12	11/2 - 12	31/2 (88.90)	41/2 (114.30)	11/8 (28.58)	13.8 (6.26)
BHVSF20D12	2 - 12	4 (101.60)	51/4 (133.35)	11/8 (28.58)	16.0 (7.26)
BHVSF24D12	21/2 - 12	43/4 (120.65)	53/4 (146.05)	11/8 (28.58)	17.7 (8.04)
BHVSF30D12	3 - 12	5 (127.00)	63/8 (161.93)	11/8 (28.58)	19.1 (8.66)
BHVSF27D0	27/8 SMOOTH	5 (127.00)	63/8 (161.93)	17/16 (33.46)	19.2 (8.72)
BHVSF14D1213	11/2 - 12	4 (101.60)	51/4 (133.35)	17/16 (33.46)	13.5 (6.13)
BHVSF22D1213	21/4 12	41/2 (114.30)	51/2 (139.70)	17/16 (33.46)	16.9 (7.67)

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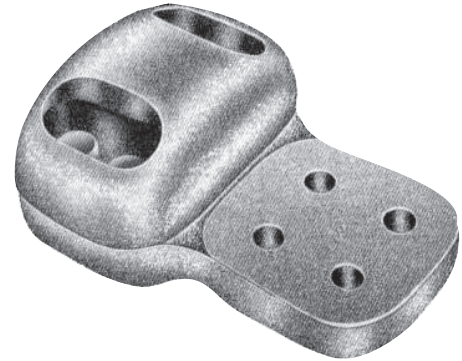
# SUBSTATION STUD CONNECTORS

## BRONZE BOLTED STUD CONNECTORS TO FLAT PAD WITH HARDWARE SHIELD TYPE BHVSD

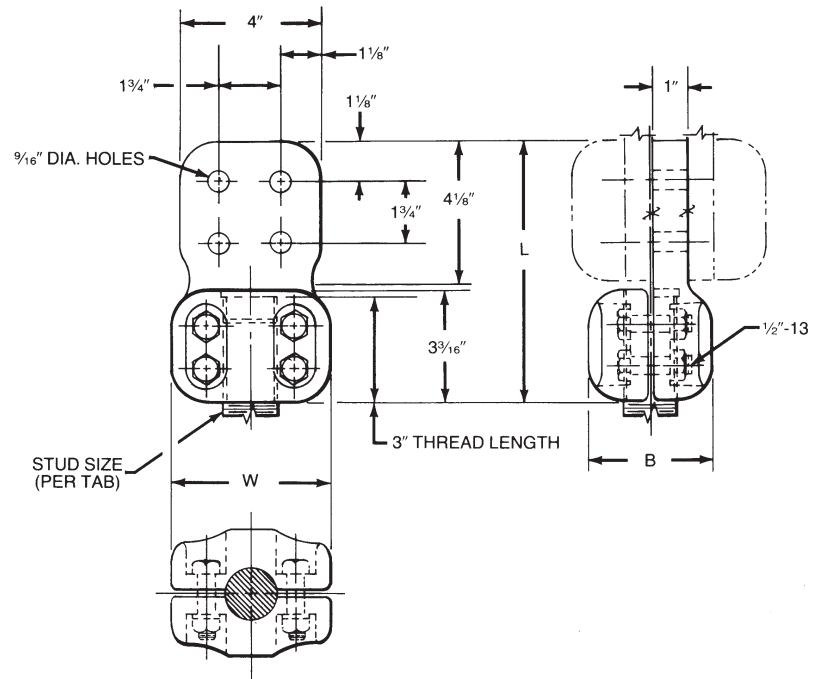
HUBBELL® Power Systems

BRONZE
BHVSD

Bronze alloy stud connectors are designed for corona free service at 345 KV. Tongue holes have NEMA spacing with contact surface on both sides. Does not include tongue mounting hardware or bolt shields; these components must be ordered separately. This connector may be supplied tin plated by adding "TP" to catalog number (example: BHVSD-20-D-1-12-TP). The bronze body of this connector provides an ideal transition surface to connect an aluminum terminal on both surfaces.



**Material:** Castings - 255 bronze alloy  
Stud Clamping Hardware - silicon bronze



### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA IN./THD	DIMENSIONS - INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		B	W	L	
BHVSD11D112	1 1/8-12	35/8 (92.08)	4 1/2 (114.30)	77/16 (188.91)	13.9 (6.31)
BHVSD14D112	1/2-12	35/8 (92.08)	4 1/2 (114.30)	77/16 (188.91)	13.9 (6.31)
BHVSD20D112	2-12	4 (101.60)	5 1/4 (133.35)	73/4 (196.85)	17.6 (7.98)
BHVSD24D112	2 1/2-12	43/4 (120.65)	53/4 (146.05)	73/4 (196.85)	18.2 (8.26)
BHVSD30D112	3-12	5 (127.00)	63/8 (161.93)	81/16 (204.79)	20.9 (9.48)

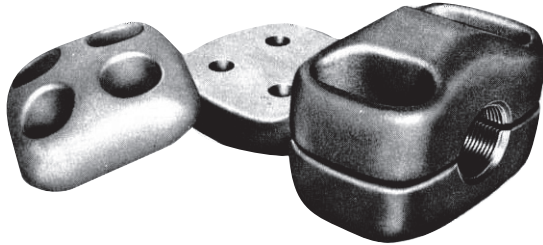
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# SUBSTATION STUD CONNECTORS

## ALUMINUM EHV BOLTED STUD CONNECTORS TO FLAT PAD WITH HARDWARE SHIELD TYPE HVSF

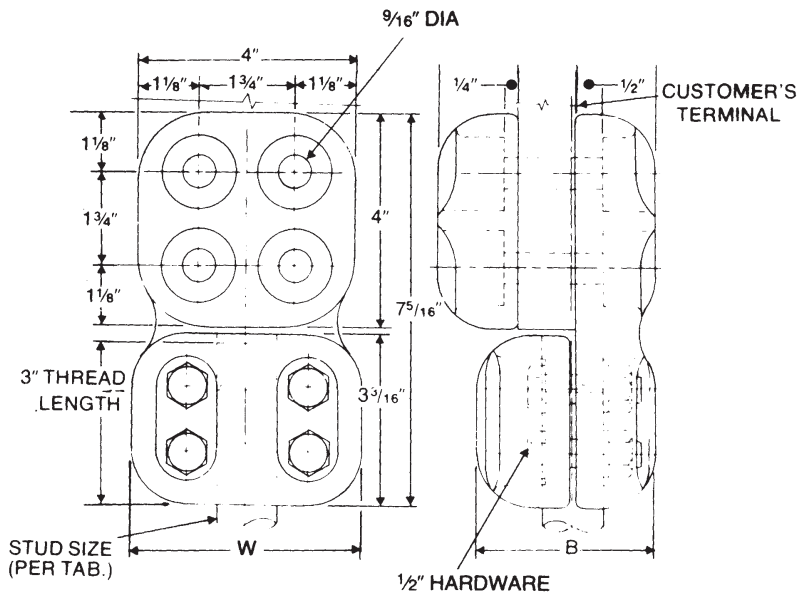


ALUMINUM
HVSF



Aluminum alloy stud connectors are designed for corona free service at 345 KV. Stud threads are factory coated with sealant and connectors are individually sealed in plastic bag. *Bolt shield is furnished with this catalog item.* Pad mounting hardware is not furnished as part of this catalog number and must be ordered separately; specify thickness of pad to be clamped when ordering hardware. Tongue holes have NEMA spacing. Contact sealant is recommended.

**Material:**    **Castings** - 356-T6 aluminum alloy  
                   **Bolt Shield** - 356-T6 aluminum alloy  
                   **Clamping Hardware** - aluminum alloy



### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA. IN./THD	DIMENSIONS - INCHES (MM)		APPROX. WT. EA. LBS.(KG)
		B	W	
HVSF11D12	1 1/8-12	3 1/2 (88.90)	4 5/16 (109.54)	5.7 (2.59)
HVSF14D12	1 1/2-12	3 1/2 (88.90)	4 1/2 (114.30)	5.6 (2.54)
HVSF20D12	2-12	4 (101.60)	5 1/4 (133.35)	6.4 (2.90)
HVSF24D12	2 1/2-12	4 3/4 (120.65)	5 3/4 (146.05)	6.6 (2.99)
HVSF30D12	3-12	5 (127.00)	6 3/8 (161.93)	6.8 (3.08)

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# SUBSTATION STUD CONNECTORS

## EHV BIFURCATING STUD CONNECTORS TO TWO FLAT PADS TYPE EVSF2

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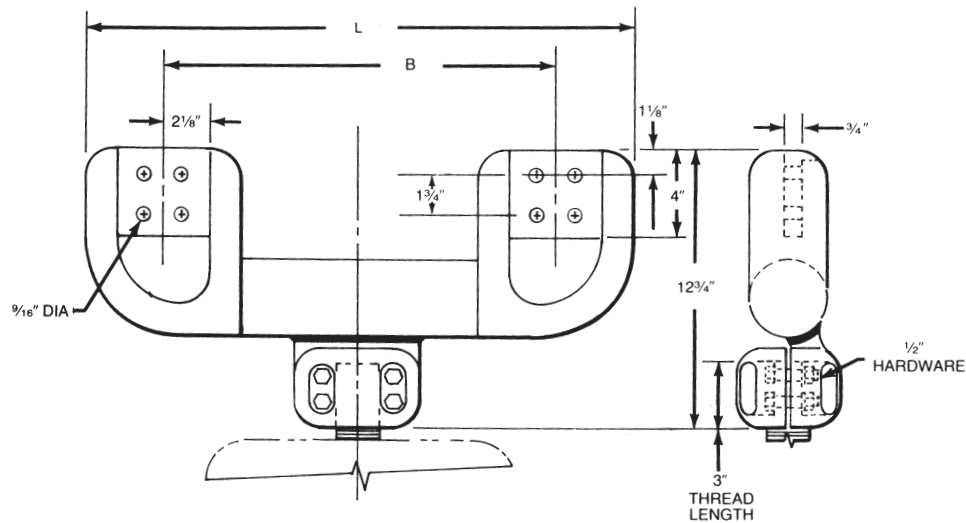
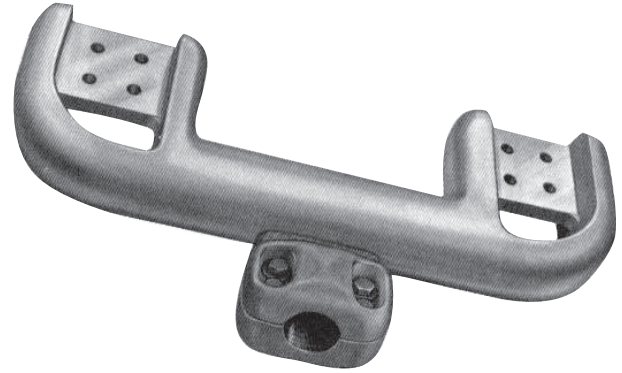
ALUMINUM
<b>EVSF2</b>

Aluminum alloy stud to double flat connectors are designed for corona free service at 500 KV. The connectors are designed for use with Type CCL-EHV compression lugs. Stud threads are factory coated with sealant and connectors are individually sealed in plastic bag. Terminal clamping hardware is not furnished as part of this catalog number. This connector is designed to clamp terminal pads of a maximum thickness of 1". To assure corona free performance, tap terminal must be connected. Tongue holes have NEMA spacing. Contact sealant is recommended.

For pads in horizontal plane, add "-90" after stud size in number (Example - EVSF2-20-90-12-18)

**Material:**     **Castings** - 356-T6 aluminum alloy  
                   **Stud Clamping Hardware** - aluminum alloy

**Note:** Contact factory to obtain stud body at special angles.



### 300 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA. IN./THD	DIMENSIONS - INCHES (MM)		APPROX. WT. EA. LBS. (KG)
		B	L	
EVSF2141212	1 1/2-12	12	19 1/8	26.4
EVSF2141218	1 1/2-12	18	25 1/8	28.8
EVSF2201212	2-12	12	19 1/8	26.0
EVSF2201218	2-12	18	25 1/8	28.8
EVSF2301212	3-12	12	19 1/8	27.2
EVSF2301218	3-12	18	25 1/8	30.1

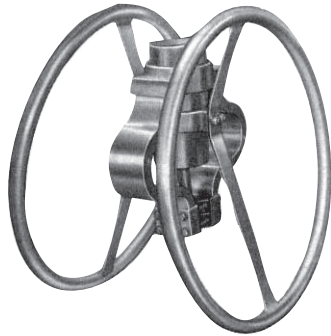
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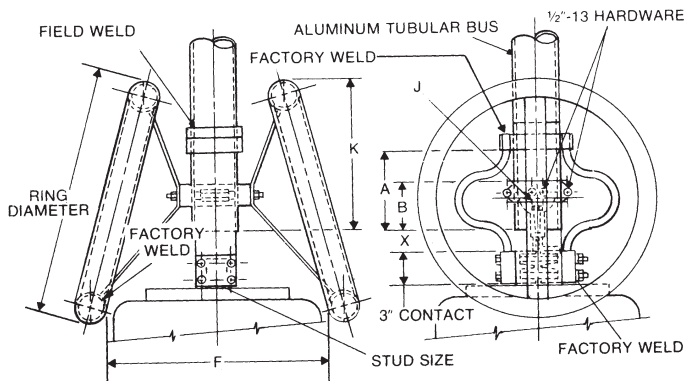


**EHV WELDED EXPANSION  
STUD CONNECTORS  
FOR TUBE TYPE HVEDST/EVEDST**

**ALUMINUM  
HVEDST/  
EVEDST**



Aluminum alloy weldment expansion stud connectors are designed for corona free service at 345 and 500 KV respectively. Pressure plates are puddle-welded to straps on three (3) sides. Contact surfaces on pressure plates have bonded copper liners. Connector is designed for 3 one inch expansion. Specify "H" in catalog number if schedule 80 EHIPS tubing is to be used; example: HVEDSTH. Proper guide ball and laminations will be furnished. Spacing of corona rings is based on use over transformer expansion cap or dome of 17" diameter at 345 KV, or 22" diameter at 500 KV. Contact factory for information on other diameters.



- Material:**
- Stud Body and Cap** - 255 bronze alloy
  - Shunt Body, Flatback and Guided Ball** - 356-T6 aluminum alloy
  - Corona Ring** - 6061-T6 aluminum alloy
  - Pressure Plates and Ring Brackets** - 6061-T6 aluminum alloy
  - Laminated Straps** - 1100-O aluminum alloy
  - Stud Clamping Hardware** - stainless steel
  - Tube Clamping and Ring Mounting Hardware** - aluminum alloy
  - Guide Mounting Hardware** - galvanized steel

Refer to installation chart DC-6788 on page 91 for instructions.

**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	STUD DIA. IN./THD.	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS - INCHES (MM)				RING DIA.	INSTALLATION CHART LINE NUMBER	APPROX. WT. EA. LBS. (KG)
			A	B	F	J			
<b>345 KV APPLICATIONS</b>									
HVEDST1420G12	1 1/2-12	2	5 1/4 (133.35)	2 1/2 (63.50)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	2	21.0 (9.53)
HVEDST1424G12	1 1/2-12	2 1/2	5 1/4 (133.35)	2 1/2 (63.50)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	2	21.6 (9.80)
HVEDST1430G12	1 1/2-12	3	5 7/8 (149.23)	2 3/4 (69.85)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	2	22.6 (10.25)
HVEDST1440G12	1 1/2-12	4	6 1/4 (158.75)	3 (76.20)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	2	25.0 (11.34)
HVEDST1450G12	1 1/2-12	5	6 1/2 (165.10)	3 (76.20)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	1	28.3 (12.84)
HVEDST1460G12	1 1/2-12	6	6 5/8 (168.28)	3 (76.20)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	1	31.2 (14.15)
HVEDST2020G12	2-12	2	5 3/4 (146.05)	3 (76.20)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	3	26.6 (12.07)
HVEDST2024G12	2 1/2	2 1/2	5 3/4 (146.05)	3 (76.20)	19 3/8 (492.13)	1/2 (12.70)	30 (762.00)	3	27.4 (12.43)

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# SUBSTATION STUD CONNECTORS TYPE HVEDST/EVEDST WELDED EXPANSION STUD CONNECTORS FOR TUBE - (CONTINUED)

HUBBELL® Power Systems

## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA. IN./THD.	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS - INCHES (MM)				RING DIA.	INSTALLATION CHART LINE NUMBER	APPROX. WT. EA. LBS. (KG)
			A	B	F	J			
<b>345 KV APPLICATIONS</b>									
HVEDST2030G12	2-12	3	63/8 (161.93)	31/4 (82.55)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	3	28.1 (12.75)
HVEDST2034G12	2-12	31/2	61/2 (165.10)	33/8 (85.73)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	3	28.8 (13.06)
HVEDST2040G12	2-12	4	61/4 (158.75)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	2	29.9 (13.56)
HVEDST2050G12	2-12	5	6 (152.40)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	1	32.4 (14.70)
HVEDST2060G12	2-12	6	65/8 (168.28)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	1	34.7 (15.74)
HVEDST2220G12	21/4-12	2	53/4 (146.05)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	3	26.5 (12.02)
HVEDST2224G12	21/4-12	21/2	53/4 (146.05)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	3	28.0 (12.70)
HVEDST2230G12	21/4-12	3	61/4 (158.75)	25/8 (66.68)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	3	29.0 (13.15)
HVEDST2240G12	21/4-12	4	61/4 (158.75)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	2	30.7 (13.93)
HVEDST2250G12	21/4-12	5	61/2 (165.10)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	1	34.3 (15.56)
HVEDST2260G12	21/4-12	6	65/8 (168.28)	3 (76.20)	193/8 (492.13)	1/2 (12.70)	30 (762.00)	1	37.1 (16.83)
<b>500 KV APPLICATIONS</b>									
EVEDST1430G12	11/2-12	3	615/16 (176.21)	23/4 (69.85)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	2	26.1 (11.84)
EVEDST1440G12	11/2-12	4	611/16 (169.86)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	2	28.5 (12.93)
EVEDST1450G12	11/2-12	5	69/16 (166.69)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	31.8 (14.42)
EVEDST1460G12	11/2-12	6	61/8 (155.58)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	34.7 (15.74)
EVEDST2030G12	2-12	3	53/4 (146.05)	31/4 (82.55)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	3	31.6 (14.33)
EVEDST2040G12	2-12	4	61/8 (155.58)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	2	33.4 (15.15)
EVEDST2050G12	2-12	5	61/4 (158.75)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	35.9 (16.28)
EVEDST2060G12	2-12	6	61/8 (155.58)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	38.8 (17.60)
EVEDST2230G12	21/4-12	3	57/8 (149.23)	25/8 (66.68)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	3	32.5 (14.74)
EVEDST2240G12	21/4-12	4	61/4 (158.75)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	2	34.2 (15.51)
EVEDST2250G12	21/4-12	5	6 (152.40)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	37.8 (17.15)
EVEDST2260G12	21/4-12	6	61/8 (155.58)	3 (76.20)	221/8 (561.98)	1/2 (12.70)	24 (609.60)	1	40.0 (18.14)

Refer to Type HVEDST90 listings for bus type 90° to stud.

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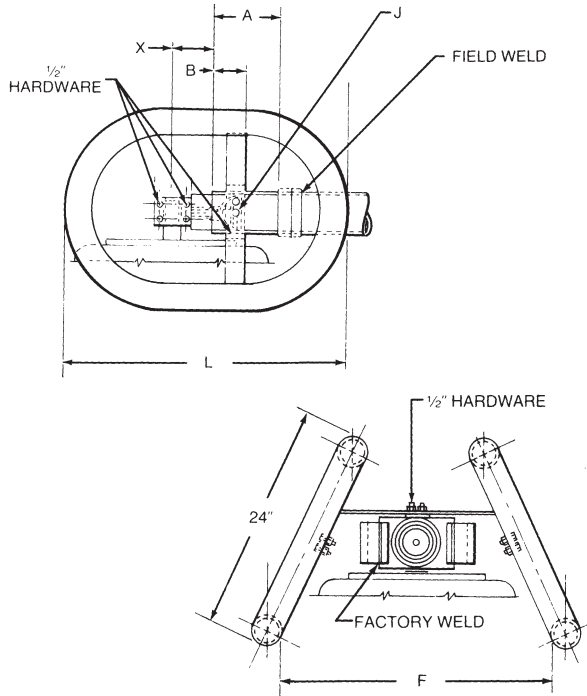
# SUBSTATION STUD CONNECTORS

## EHV WELDED 90° EXPANSION STUD CONNECTORS FOR TUBE

### TYPE HVEDST-90 / EVEDST-90



**ALUMINUM**  
**HVEDST-90/  
EVEDST-90**



Aluminum alloy weldment expansion stud connectors are the same as Type HVEDST/EVEDST listed on preceding pages, except they mount at 90° to the stud. Both are designed for corona free service at 345 and 500 KV respectively. Pressure plates are puddle-welded to straps on three (3) sides. Contact surfaces on pressure plates have bonded copper liners. Connector is designed for 3 one inch expansion. Specify "H" in catalog number if schedule 80 EHIPS tubing is to be used; example: WSATHL. Spacing of corona rings is based on use over transformer expansion cap or dome of 17" diameter at 345 KV, or 22" diameter at 500 KV. Contact factory for information on other diameters.

- Material:**
- Stud Body and Cap** - 255 bronze alloy
  - Shunt Body, Flatback and Guide Ball** - 356-T6 aluminum alloy
  - Corona Ring** - 6061-T6 aluminum alloy
  - Pressure Plates & Ring Brackets** - 6061-T6 aluminum alloy
  - Laminated Straps** - 1100-O aluminum alloy
  - Stud Clamping Hardware** - stainless steel
  - Tube Clamping and Ring Mounting Hardware** - aluminum alloy
  - Guide Mounting Hardware** - galvanized steel

Refer to installation chart DC-6790 for instructions.

### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA. IN./ THD.	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS - INCHES (MM)					INSTALLATION CHART LINE NUMBER	APPROX. WT. EA. LBS. (KG)
			A	B	F	J	L		
<b>345 KV APPLICATIONS</b>									
HVEDST1420G9012	1 1/2-12	2	5 1/4 (133.35)	2 1/2 (63.50)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	4	19.5 (8.85)
HVEDST1424G9012	1 1/2-12	2 1/2	5 1/4 (133.35)	2 1/2 (63.50)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	4	20.1 (9.12)
HVEDST1430G9012	1 1/2-12	3	5 7/8 (149.23)	2 3/4 (69.85)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	3	21.1 (9.57)
HVEDST1440G9012	1 1/2-12	4	6 1/4 (158.75)	3 (76.20)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	2	23.5 (10.66)
HVEDST1450G9012	1 1/2-12	5	6 1/2 (165.10)	3 (76.20)	28 5/8 (727.08)	1/2 (12.70)	27 (685.80)	1	26.8 (12.16)
HVEDST1460G9012	1 1/2-12	6	6 5/8 (168.28)	3 (76.20)	28 5/8 (727.08)	1/2 (12.70)	27 (685.80)	1	29.7 (13.47)
HVEDST2020G9012	2-12	2	5 3/4 (146.05)	3 (76.20)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	2	25.1 (11.39)
HVEDST2024G9012	2-12	2 1/2	5 3/4 (146.05)	3 (76.20)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	1	26.6 (12.07)
HVEDST2030G9012	2-12	3	6 3/8 (161.9)	3 1/4 (82.55)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	1	26.6 (12.07)
HVEDST2034G9012	2-12	3 1/2	6 1/2 (165.10)	3 3/8 (85.73)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	1	27.3 (12.38)
HVEDST2040G9012	2-12	4	6 1/4 (158.75)	3 (76.20)	23 3/8 (593.73)	1/2 (12.70)	27 (685.80)	1	28.4 (12.88)
HVEDST2050G9012	2-12	5	6 (152.40)	3 (76.20)	28 5/8 (727.08)	1/2 (12.70)	27 (685.80)	1	30.9 (14.02)

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# SUBSTATION STUD CONNECTORS

## TYPE HVEDST-90/EVEDST-90 WELDED EXPANSION STUD CONNECTORS FOR TUBE - (CONTINUED)

HUBBELL® Power Systems

### 345 kV AND 500 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	STUD DIA. IN./ THD.	ALUMINUM CONDUCTOR SIZE IPS	DIMENSIONS - INCHES (MM)					INSTALLATION CHART LINE NUMBER	APPROX. WT. EA. LBS. (KG)
			A	B	F	J	L		
<b>345 KV APPLICATIONS</b>									
HVEDST2060G9012	2-12	6	65/8 (168.28)	3 (82.55)	285/8 (727.08)	1/2 (12.70)	27 (685.80)	1	33.2 (15.06)
HVEDST2220G9012	2 1/4-12	2	53/4 (146.05)	3 (82.55)	233/8 (593.73)	1/2 (12.70)	27 (685.80)	2	25.0 (11.34)
HVEDST2224G9012	2 1/4-12	2 1/2	53/4 (146.05)	3 (82.55)	233/8 (593.73)	1/2 (12.70)	27 (685.80)	2	26.5 (12.02)
HVEDST2230G9012	2 1/4-12	3	61/4 (158.75)	25/8 (66.68)	233/8 (593.73)	1/2 (12.70)	27 (685.80)	1	27.5 (12.47)
HVEDST2240G9012	2 1/4-12	4	61/4 (158.75)	3 (82.55)	285/8 (727.08)	1/2 (12.70)	27 (685.80)	1	29.2 (13.25)
HVEDST2250G9012	2 1/4-12	5	61/2 (165.10)	3 (82.55)	285/8 (727.08)	1/2 (12.70)	27 (685.80)	1	32.8 (14.88)
HVEDST2260G9012	2 1/4-12	6	65/8 (168.28)	3 (82.55)	285/8 (593.73)	1/2 (12.70)	27 (685.80)	1	35.6 (16.15)
<b>500 KV APPLICATIONS</b>									
EVEDST1430G9012	1 1/2-12	3	615/16 (176.21)	37/8 (98.43)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	3	24.1 (10.93)
EVEDST1434G9012	1 1/2-12	3 1/2	611/16 (169.86)	41/4 (107.95)	243/4 (628.65)	1/2 (12.70)	31 (787.40)		
EVEDST1440G9012	1 1/2-12	4	611/16 (169.86)	31/2 (88.90)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	2	26.5 (12.02)
EVEDST1450G9012	1 1/2-12	5	69/16 (166.69)	31/8 (79.38)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	29.8 (13.52)
EVEDST2030G9012	2-12	3	53/4 (146.05)	25/8 (66.68)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	29.6 (13.43)
EVEDST2034G9012	2-12	3 1/2	57/8 (149.23)	3 (76.20)	243/4 (628.65)	1/2 (12.70)	31 (787.40)		
EVEDST2040G9012	2-12	4	61/8 (155.58)	3 (76.20)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	31.4 (14.24)
EVEDST2050G9012	2-12	5	61/4 (158.75)	31/4 (82.55)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	33.9 (15.38)
EVEDST2230G9012	2 1/4-12	3	57/8 (149.23)	25/8 (66.68)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	30.5 (13.83)
EVEDST2240G9012	2 1/4-12	4	61/4 (158.75)	3 (76.20)	243/4 (628.65)	1/2 (12.70)	31 (787.40)	1	32.2 (14.61)

EHV  
65

# SUBSTATION END BELLS

## EHV BOLTED END BELLS FOR TUBE TYPE HVTEB/EVTEB



**ALUMINUM  
HVTEB/EVTEB**

Aluminum alloy tubular end bells are corona free at 345 and 500 KV levels respectively. The spheres are finished free of nicks, burrs and scratches.

**Material:** **Sphere** - 356-F aluminum alloy  
**Clamping Ring** - 356-T6 aluminum alloy  
**Hardware** - stainless steel

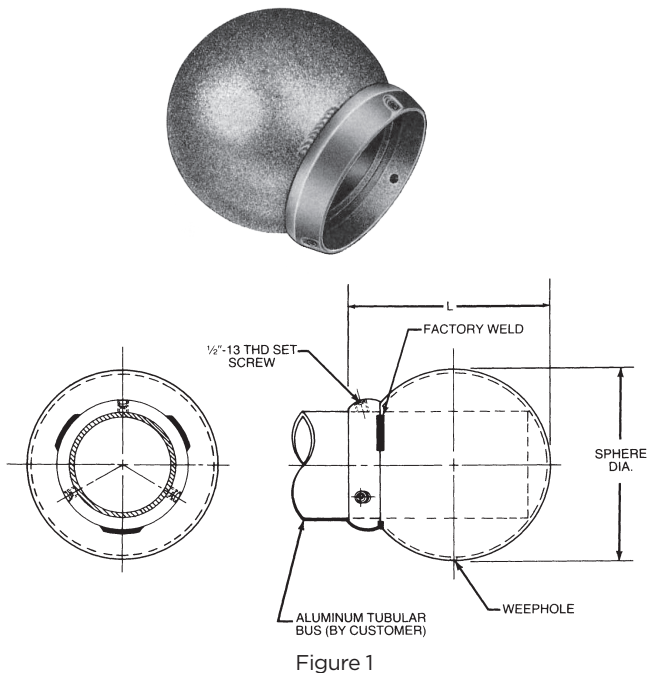


Figure 1

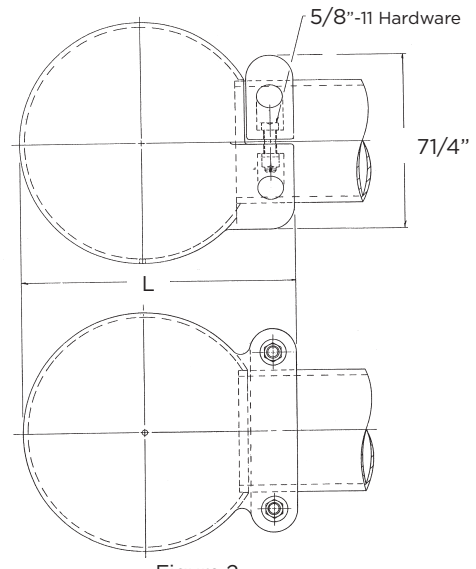


Figure 2

### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS/EHIPS	FIGURE	SPHERE DIAMETER IN.	DIMENSIONS - INCHES (MM) L	APPROX. WT. EA. LBS. (KG)
<b>345 KV APPLICATIONS</b>					
HVTEB24	2 1/2	1	77/8 (200.03)	87/8 (225.43)	5.7 (2.59)
HVTEB30	3	1	77/8 (200.03)	81 1/16 (220.66)	5.7 (2.59)
HVTEB34	3 1/2	1	77/8 (200.03)	81/2 (215.90)	5.7 (2.59)
HVTEB40	4	1	77/8 (200.03)	85/16 (211.14)	5.7 (2.59)
HVTEB50	5	1	77/8 (200.03)	73/4 (196.85)	5.7 (2.59)
HVTEB60	6	1	77/8 (200.03)	71/8 (100.98)	5.7 (2.59)
<b>500 KV APPLICATIONS</b>					
EVTEB30	3	1	10 (254.00)	11 (279.40)	8.5 (3.86)
EVTEB34	3 1/2	1	10 (254.00)	10 13/16 (274.64)	8.5 (3.86)
EVTEB40	4	1	10 (254.00)	10 5/8 (269.88)	8.5 (3.86)
EVTEB4013	4	2	13 (330.20)	15 1/4 (387.35)	17.8 (8.08)
EVTEB50	5	1	10 (254.00)	10 1/4 (260.35)	8.5 (3.86)
EVTEB60	6	1	10 (254.00)	9 7/8 (250.83)	8.5 (3.86)

**EHV  
66**



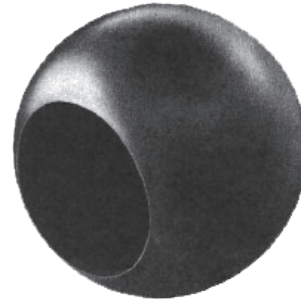
# SUBSTATION END BELLS

HUBBELL® Power Systems

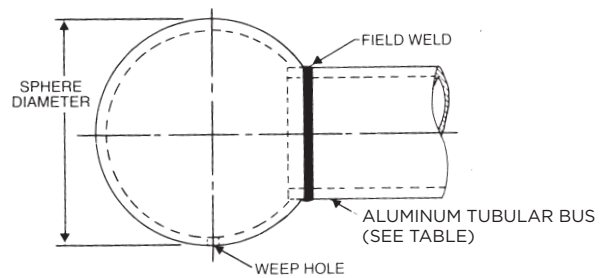
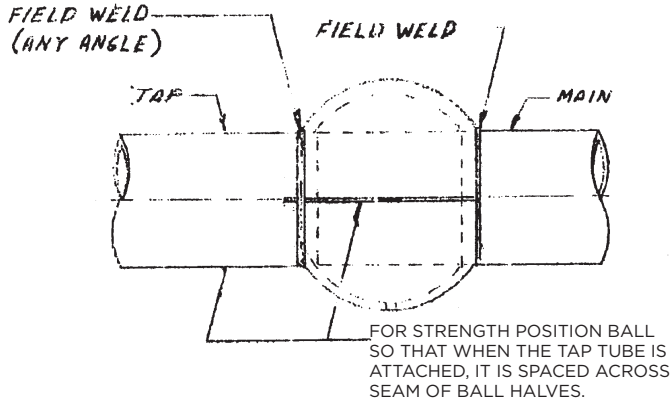
## EHV WELDED END BELLS FOR TUBE WELDED ANGLE COUPLER TYPE HVWTEB/EVWTEB

ALUMINUM  
HVWTEB/  
EVWTEB

Aluminum alloy tubular end bells are corona free at 345 and 500 KV levels respectively. The spheres are finished free of nicks, burrs and scratches. May be used as variable angle coupler. When used as coupler, specify heat treated, HVWTEB-50-HT.



**Material:** Sphere - 356-F aluminum alloy



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

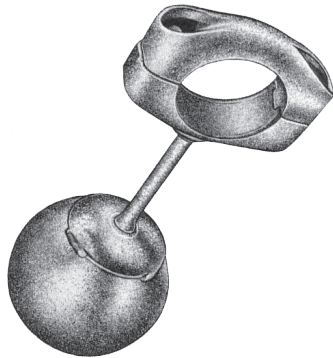
CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS/EHIPS	SPHERE DIAMETER IN.	APPROX. WT. EA. LBS. (KG)
<b>345 KV APPLICATIONS</b>			
HVWTEB20	2	77/8 (200.03)	3.8 (1.72)
HVWTEB24	2 1/2	77/8 (200.03)	3.8 (1.72)
HVWTEB30	3	77/8 (200.03)	3.8 (1.72)
HVWTEB34	3 1/2	77/8 (200.03)	3.8 (1.72)
HVWTEB40	4	77/8 (200.03)	3.8 (1.72)
HVWTEB50	5	77/8 (200.03)	3.8 (1.72)
HVWTEBH60	6	77/8 (200.03)	6.6 (2.99)
<b>500 KV APPLICATIONS</b>			
EVWTEB30	3	10 (254.00)	6.3 (2.86)
EVWTEB34	3 1/2	10 (254.00)	6.3 (2.86)
EBWTEB40	4	10 (254.00)	6.3 (2.86)
EVWTEB50	5	10 (254.00)	6.3 (2.86)
EVWTEB5013	5	13 (330.20)	13.3 (6.04)
EVWTEB60	6	10 (254.00)	6.3 (2.86)

EHV  
67



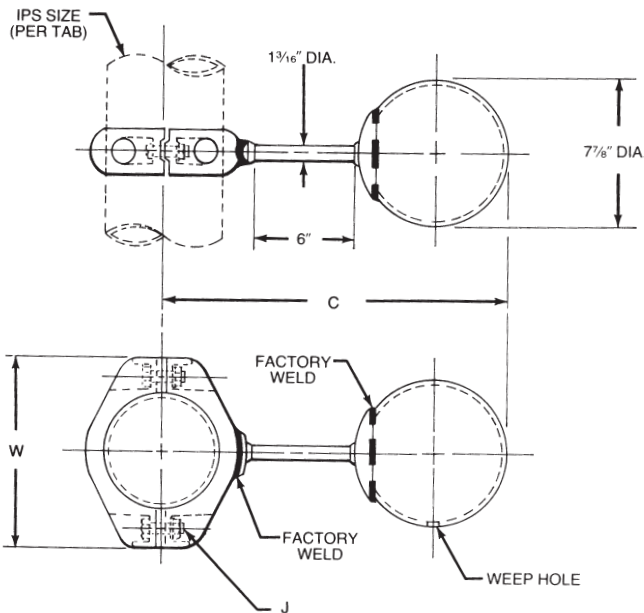
**EHV BOLTED GROUNDING STUDS FOR TUBE TYPE EVTGS**

**ALUMINUM  
EVTGS**



Aluminum alloy grounding studs are designed for corona free service at 345 and 500 KV. This assembly is finished free of nicks, burrs and scratches. Contact sealant is recommended.

- Material:**
- Connector** - 356-T6 aluminum alloy
  - Corona Ball** - 356-F aluminum alloy
  - Clamping Hardware** - aluminum alloy



**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE IPS/EHIPS	DIMENSIONS INCHES (MM)			APPROX. WT. EA. LBS. (KG)
		C	W	J	
EVTGS24	2 1/2	17 1/2 (444.50)	6 5/8 (168.28)	5/8 (15.88)	4.2 (1.91)
EVTGS30	3	18 (457.20)	7 1/4 (184.15)	5/8 (15.88)	4.6 (2.09)
EVTGS34	3 1/2	18 (457.20)	7 3/4 (196.85)	5/8 (15.88)	5.6 (2.54)
EVTGS40	4	18 1/16 (458.79)	8 1/2 (215.90)	5/8 (15.88)	8.1 (3.67)
EVTGS50	5	18 5/8 (473.08)	9 1/2 (241.30)	5/8 (15.88)	8.5 (3.86)
EVTGS60	6	19 1/8 (484.19)	10 3/8 (263.53)	5/8 (15.88)	9.1 (4.13)

EHV  
68

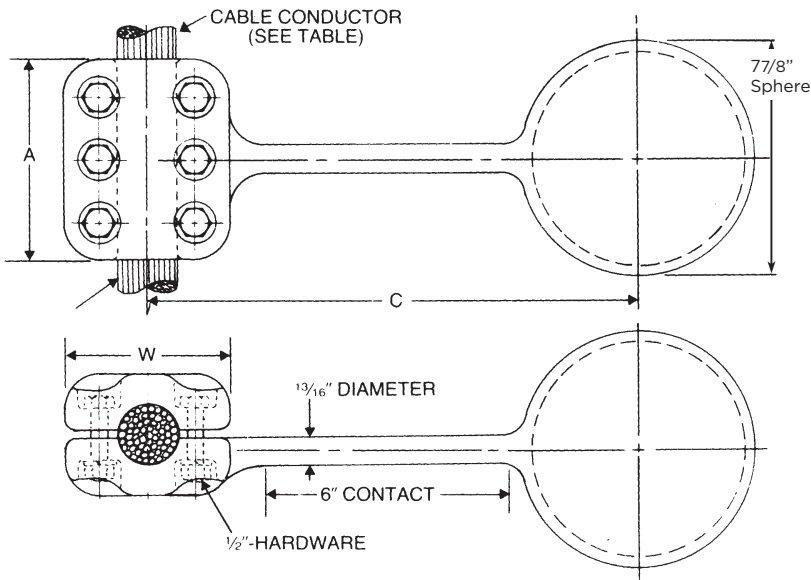
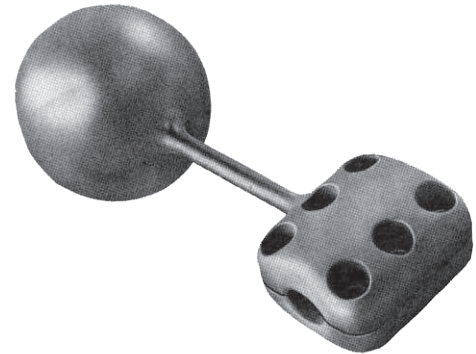


# EHV BOLTED GROUNDING STUDS FOR CABLE TYPE HVCGS

ALUMINUM
HVCGS

Aluminum alloy grounding studs are designed for corona free service at 345 KV. Single cable diameter under 1.76 inch for 345 KV may not be corona free unless conductors are bundled. Contact sealant is recommended.

**Material:** **Connector** - 356-T6 aluminum alloy  
**Clamping Hardware** - aluminum alloy



## 345 kV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE		DIMENSIONS INCHES (MM)			NUMBER OF BOLTS	APPROX. WT. EA. LBS. (KG)
	CABLE	DIA. IN.	A	C	W		
HVCGS1028	795 MCM ALUM.	1.028	4 (101.60)	1311/16 (347.66)	41/4 (107.95)	4	9.2 (4.18)
HVCGS1108	795 MCM (26/7) ACSR	1.108	4 (101.60)	1311/16 (347.66)	41/4 (107.95)	4	9.2 (4.18)
HVCGS1196	954 MCM (59/7) ACSR	1.196	4 (101.60)	1313/16 (350.84)	47/16 (112.71)	4	9.3 (4.22)
HVCGS1300	1.200 - 1.300	-	4 (101.60)	133/4 (349.25)	45/8 (117.48)	4	9.6 (4.35)
HVCGS1379	1431 MCM ALUM.	1.379	4 (101.60)	133/4 (349.25)	45/8 (117.48)	4	9.6 (4.35)
HVCGS1382	1272 (54/19) ACSR	1.382	4 (101.60)	133/4 (349.25)	45/8 (117.48)	4	9.6 (4.35)
HVCGS1545	1590 (54/19) ACSR	1.545	6 (152.40)	143/16 (360.36)	51/4 (133.35)	6	12.8 (5.81)
HVCGS1762	2156 (84/19) ACSR	1.762	6 (152.40)	143/16 (360.36)	51/4 (133.35)	6	12.8 (5.81)
HVCGS1824	2500 MCM ALUM.	1.824	6 (152.40)	143/16 (360.36)	51/4 (133.35)	6	12.8 (5.81)

Contact factory for sizes not shown.

EHV  
69



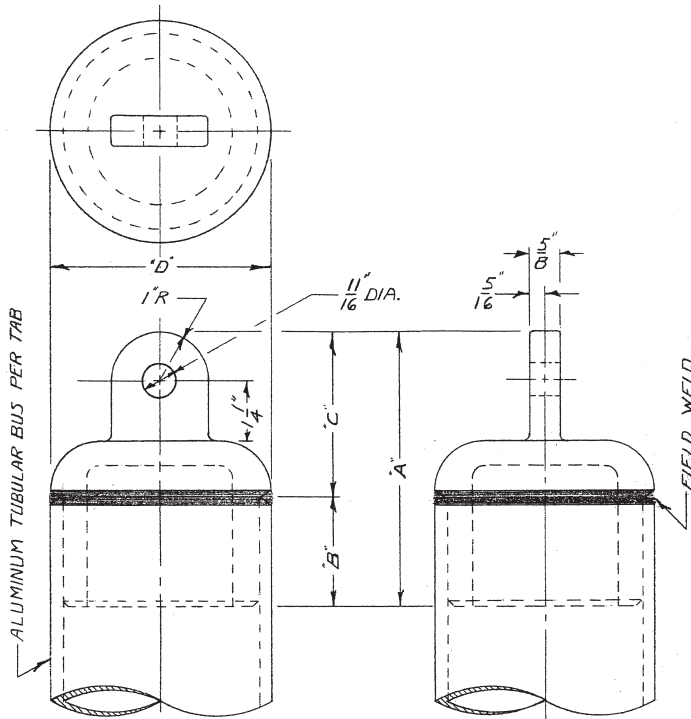


# EHV TUBE TERMINAL WELDED END PLUG-EYE TYPE WEPE

ALUMINUM
WEPE

Terminate a tubing run to insulator with 5/8" clevis pin. Corona free performance of this item is dependent upon the use of grading rings on the insulators.

**Material:** 356-T6 Aluminum Alloy



## 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	BUS SIZE	DIMENSIONS INCHES				APPROX. WT. EA. LBS. (KG)
		A	B	C	D	
WEPE24	2 1/2" IPS	4 31/32	1 1/2	3 15/32	2 7/8	.9 (.41)
WEPE40	4" IPS	5 3/4	2 1/4	3 1/2	4 1/2	2.7 (1.23)

EHV  
70

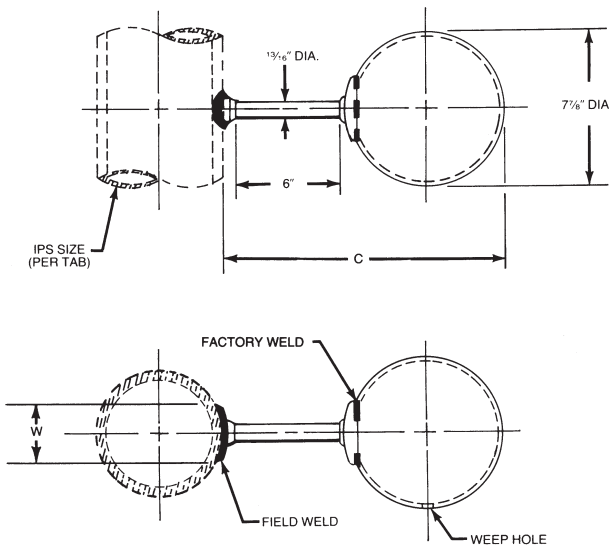
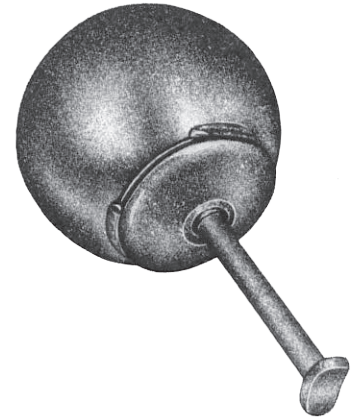


# EHV WELDED GROUNDING STUDS FOR TUBE TYPE EVWTGSR

ALUMINUM
EVWTGSR

Aluminum alloy, range-taking, tubular grounding studs are designed for corona free service at 345 and 500 KV. The EVWTGSR is finished free of nicks, burrs and scratches.

**Material:** **Connector** - 356-T6 aluminum alloy  
**Ball** - 356-T6 aluminum alloy



## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR SIZE TUBING IPS/EHIPS	DIMENSIONS - INCHES (MM)		APPROX. WT. EA. LBS. (KG)
		W	C	
*EVWTGSR2034	2-31/2	11/8 (28.58)	1413/16 (376.24)	4.6 (2.09)
EVWTGSR4060	4-6	11/8 (28.58)	1413/16 (376.24)	4.8 (2.18)

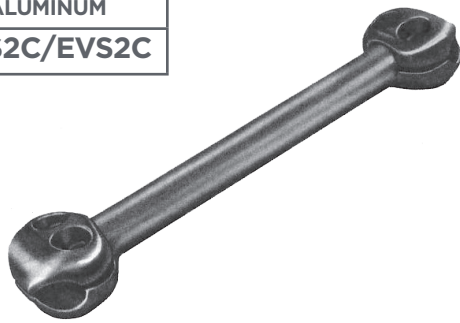
\*Conductor smaller than 2 1/2" IPS may not be corona free at 500 KV.

EHV  
71



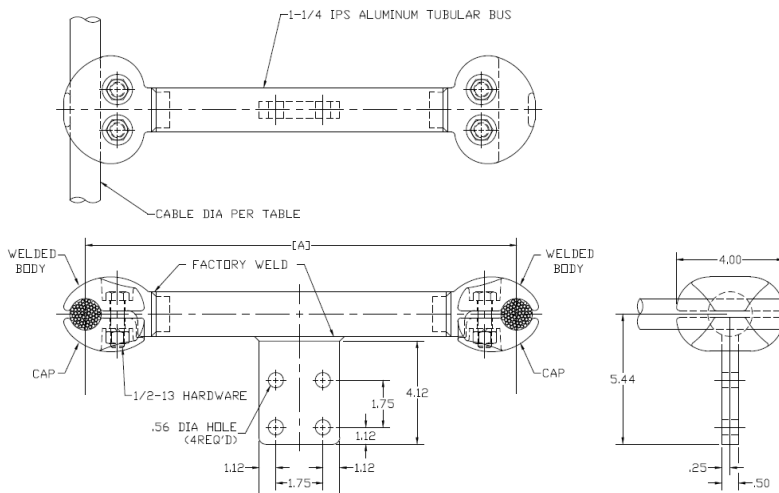
# EHV BOLTED CONDUCTOR SPACERS TYPE HVS2C/EVS2C

**ALUMINUM**  
**HVS2C/EVS2C**



Aluminum alloy spacers for two cables are designed for corona free service at 345 and 500 KV respectively. The grooves are fully rounded at entry to prevent conductor damage. Cable spacing other than shown may be ordered by changing catalog number suffix (example: HVS2C-1108-16 for 1.108 diameter cable at 16" center line to center line). *Not for use on overhead transmission lines.*

- Material:**
- Caps** - 356-T6 aluminum alloy
  - Cross Braces** - 6061-T6 aluminum alloy
  - Bolts, Nuts and Lockwashers** - aluminum alloy
  - Hardware Retaining Grommet** - neoprene



## 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIM - IN (MM)	APPROX. WT. EA. LBS. (KG)
	DIAMETER IN.	AAC (MIN.MAX.)	ACSR (MIN.MAX.)	A	
<b>345 KV APPLICATIONS</b>					
HVS2C10368	1.019 - 1.036	795 (37 Str.) - 800 (61 Str.)	636 30/19 - 715.5 54/7	8 (203.2)	2.8 (1.26)
HVS2C103612	1.019 - 1.036	795 (37 Str.) - 800 (61 Str.)	636 30/19 - 715.5 54/7	12 (304.8)	3.0 (1.36)
HVS2C103618	1.019 - 1.036	795 (37 Str.) - 800 (61 Str.)	636 30/19 - 715.5 54/7	18 (457.2)	3.3 (1.49)
HVS2C11088	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	8 (203.2)	3.5 (1.61)
HVS2C110812	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	12 (304.8)	3.7 (1.68)
HVS2C110818	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	18 (457.2)	4.0 (1.81)
HVS2C116212	1.124 - 1.162	954 (37 Str.) - 1000 (61 Str.)	900 45/7 - 900 54/7	12 (304.8)	3.8 (1.72)
HVS2C11968	1.165 - 1.196	1033.5 (37 Str.) - 1033.5 (61 Str.)	954 45/7 - 954 54/7	8 (203.2)	3.6 (1.66)
HVS2C119612	1.165 - 1.196	1033.5 (37 Str.) - 1033.5 (61 Str.)	954 45/7 - 954 54/7	12 (304.8)	3.8 (1.72)
HVS2C119618	1.165 - 1.196	1033.5 (37 Str.) - 1033.5 (61 Str.)	954 45/7 - 954 54/7	18 (457.2)	4.2 (1.93)
HVS2C12468	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.5 45/7 - 1113 45/7	8 (203.2)	3.7 (1.68)
HVS2C124612	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.5 45/7 - 1113 45/7	12 (304.8)	3.9 (1.77)
HVS2C124618	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.5 45/7 - 1113 45/7	18 (457.2)	4.3 (1.98)

EHV  
72



**EHV BOLTED CONDUCTOR SPACERS  
TYPE HVS2C/EVS2C  
(CONTINUED)**

**345 kV AND 500 kV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIM - IN (MM)	APPROX. WT. EA. LBS. (KG)
	DIAMETER IN.	AAC (MIN.MAX.)	ACSR (MIN.MAX.)	C	
<b>345 KV APPLICATION</b>					
HVS2C12998	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	1113 45/7 - 1113 54/19	8 (203.2)	3.8 (1.75)
HVS2C129912	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	1113 45/7 - 1113 54/19	12 (304.8)	4.0 (1.81)
HVS2C129918	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	1113 45/7 - 1113 54/19	18 (457.2)	4.4 (2.00)
HVS2C13828	1.345 - 1.385	1400 (91 Str.) - 1431 (61 Str.)	1272 45/7 - 1351.5 45/7	8 (203.2)	3.7 (1.68)
HVS2C138212	1.345 - 1.385	1400 (91 Str.) - 1431 (61 Str.)	1272 45/7 - 1351.5 45/7	12 (304.8)	3.9 (1.77)
HVS2C138218	1.345 - 1.385	1400 (91 Str.) - 1431 (61 Str.)	1272 45/7 - 1351.5 45/7	18 (457.2)	4.2 (1.93)
HVS2C14658	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351 54/19 - 1510 45/7	8 (203.2)	3.6 (1.66)
HVS2C146512	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 1510 45/7	12 (304.8)	3.8 (1.72)
HVS2C146518	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 1510 45/7	18 (457.2)	4.1 (1.85)
HVS2C15458	1.502 - 1.545	1700 (127 Str.) - 1750 (127 Str.)	1590 45/7 - 1590 54/19	8 (203.2)	3.7 (1.68)
HVS2C154512	1.502 - 1.545	1700 (127 Str.) - 1750 (127 Str.)	1590 45/7 - 1590 54/19	12 (304.8)	3.9 (1.77)
HVS2C154516	1.502 - 1.545	1700 (127 Str.) - 1750 (127 Str.)	1590 45/7 - 1590 54/19	16 (406.4)	4.1 (1.85)
HVS2C154518	1.502 - 1.545	1700 (127 Str.) - 1750 (127 Str.)	1590 45/7 - 1590 54/19	18 (457.2)	4.2 (1.93)
<b>500 KV APPLICATION</b>					
EVS2C16507	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	7 (177.8)	3.9 (1.77)
EVS2C16508	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	8 (203.2)	4.0 (1.81)
EVS2C165012	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	12 (304.8)	4.2 (1.93)
EVS2C165018	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	18 (457.2)	4.5 (2.04)
EVS2C168118	1.681	-	2034.5 72/7	18 (457.2)	4.5 (2.04)
EVS2C172912	1.682 - 1.729	2250 (91 Str.)	-	12 (304.8)	4.1 (1.85)
EVS2C172918	1.682 - 1.729	2250 (91 Str.)	-	18 (457.2)	4.5 (2.04)
EVS2C17629	1.737 - 1.762	-	2167 72/7 - 2156 84/19	8 (203.2)	3.9 (1.77)
EVS2C176212	1.737 - 1.762	-	2167 72/7 - 2156 84/19	12 (304.8)	4.1 (1.85)
EVS2C176218	1.717 - 1.762	-	2167 72/7 - 2156 84/19	18 (457.2)	4.5 (2.04)
EVS2C18248	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	8 (203.2)	3.8 (1.75)
EVS2C182412	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	12 (330.2)	4.0 (1.81)
EVS2C182418	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	18 (457.2)	4.4 (2.00)

**EHV  
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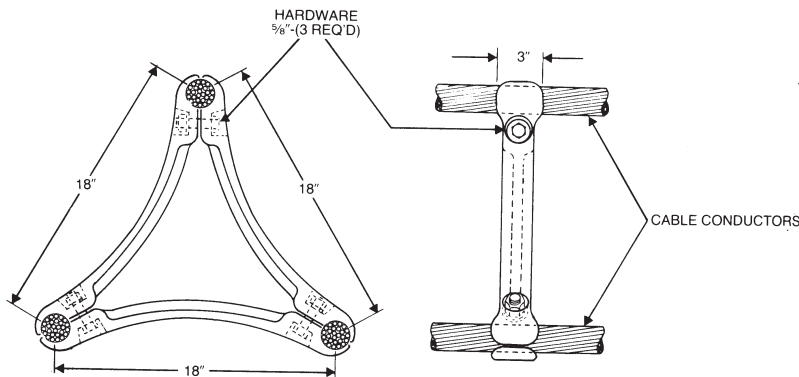
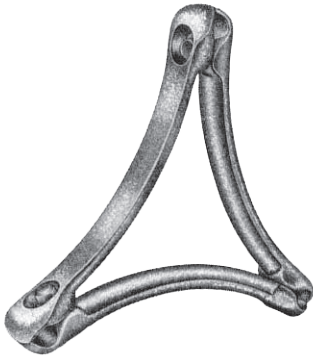


# EHV BOLTED CONDUCTOR SPACERS TYPE EVS3C

ALUMINUM
EVS3C

Aluminum alloy spacers for three cables are designed for corona free service at 500 KV. The cable grooves are fully rounded at entry to prevent conductor damage. *Not for use on overhead transmission lines.*

**Material:** Casting - 356-T6 aluminum alloy  
Bolts, Nuts and Lockwashers - aluminum alloy



## 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			APPROX. WT. EA. LBS. (KG)
	DIAMETER IN.	AAC	ACSR	
EVS3C1196	1.165 - 1.196	1033.5 (37 Str.) - 1033.5 (61 Str.)	95445/7 - 95454/7	10.9 (4.94)
EVS3C1246	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.545/7 - 111345/7	10.4 (4.72)
EVS3C1299	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	111345/7 - 111354/19	10.4 (4.72)
EVS3C1382	1.345 - 1.385	1400 (91 Str.) - 1431 (61 Str.)	127245/7 - 1351.545/7	10.4 (4.72)
EVS3C1465	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 151045/7	10.4 (4.72)
EVS3C1650	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	10.5 (4.76)
EVS3C1762	1.737 - 1.762	-	2167 72/7 - 2156 84/19	11.4 (5.17)
EVS3C1824	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	11.4 (5.17)

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# SUBSTATION SPECIALTIES

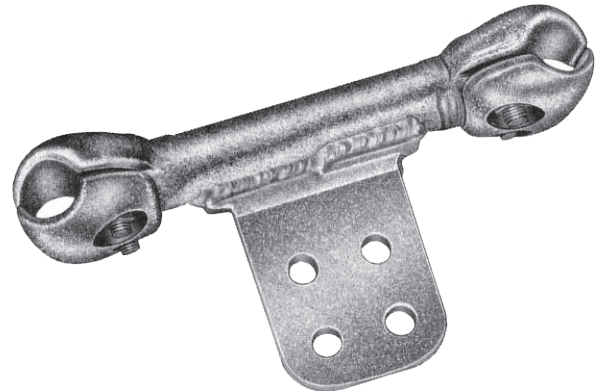
## EHV CABLE SPACER TERMINALS TYPE HVS2CT/EVS2CT

HUBBELL® Power Systems

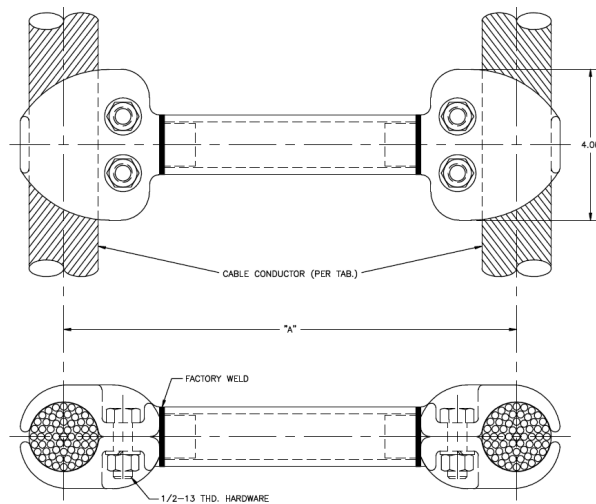
ALUMINUM  
**HVS2CT/  
EVS2CT**

Aluminum alloy spacer terminals are designed for corona free service at 345 and 500 KV respectively. Cable spacing other than shown may be ordered by changing catalog number suffix. (example: HVS2C-1036-18 for 1.036" diameter cable at 18" center line to center line.) For 90° terminal pads add suffix -90 to catalog number (example: HVS2CT-1036-12-90).

- Material:**
- Casting** - 356-T6 aluminum alloy
  - Spacer Tube** - aluminum alloy
  - Pad** - aluminum alloy
  - Bolts, Nuts and Lockwashers** - aluminum alloy.
  - Hardware Retaining Grommet** - neoprene



**Note:** Extended pad is *not corona free* unless it is protected by equipment rings or hardware shields. For limited current use like lightning arrester tap.



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIM - IN (MM)	APPROX. WT. EA. LBS. (KG)
	DIAMETER IN.	AAC (MIN.MAX.)	ACSR (MIN.MAX.)	A	
<b>345 KV APPLICATIONS</b>					
HVS2CT103610	1.019 - 1.036	795 (37 Str.) - 800 (61 Str.)	636 30/19 - 715.5 54/7	10 (254)	4.4 (2.00)
HVS2CT103612	1.019 - 1.036	795 (37 Str.) - 800 (61 Str.)	636 30/19 - 715.5 54/7	12 (305)	4.6 (2.07)
HVS2CT110810	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	10 (254)	5.1 (2.30)
HVS2CT110812	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	12 (305)	5.3 (2.39)
HVS2CT110818	1.070 - 1.108	874.5 (37 Str.) - 900 (61 Str.)	715.5 30/19 - 795 54/7	18 (457)	5.4 (2.43)
HVS2CT116212	1.124 - 1.162	954 (37 Str.) - 1000 (61 Str.)	900 45/7 - 900 54/7	12 (305)	5.4 (2.43)
HVS2CT116218	1.124 - 1.162	954 (37 Str.) - 1000 (61 Str.)	900 45/7 - 900 54/7	18 (457)	5.2 (2.34)

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# SUBSTATION SPECIALTIES

## EHV CABLE SPACER TERMINALS

### TYPE HVS2CT/EVS2CT

#### (CONTINUED)



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE			DIM - IN (MM)	APPROX. WT. EA. LBS. (KG)
	DIAMETER IN.	AAC (MIN.MAX.)	ACSR (MIN.MAX.)	C	
<b>345 KV APPLICATIONS</b>					
HVS2CT119610	1.165 - 1.196	1033.5 (Str.) - 1033.5 (Str.)	954 45/7 - 954 54/7	10 (254)	5.7 (2.57)
HVS2CT119612	1.165 - 1.196	1033.5 (Str.) - 1033.5 (Str.)	954 45/7 - 954 54/7	12 (305)	5.4 (2.43)
HVS2CT119618	1.165 - 1.196	103.35 (Str.) - 1033.5 (Str.)	954 45/7 - 954 54/7	18 (457)	5.7 (2.57)
HVS2CT124610	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.5 45/7 - 1113 45/7	10 (254)	5.5 (2.48)
HVS2CT124612	1.209 - 1.263	1100 (91 Str.) - 1200 (91 Str.)	1033.5 45/7 - 1113 45/7	12 (305)	5.3 (2.39)
HVS2CT129910	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	1113 45/7 - 1113 54/19	10 (254)	5.4 (2.43)
HVS2CT129912	1.258 - 1.300	1192 (61 Str.) - 1272 (61 Str.)	1113 45/7 - 1113 54/19	12 (305)	5.6 (2.52)
HVS2CT138212	1.345 - 1.385	1400 (91 Str.) - 1431 (61 Str.)	1272 45/7 - 1351.5 45/7	12 (305)	5.5 (2.48)
HVS2CT146510	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 1510 45/7	10 (254)	5.3 (2.39)
HVS2CT146512	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 1510 45/7	12 (305)	5.4 (2.43)
HVS2CT146518	1.412 - 1.466	1500 (91 Str.) - 1600 (127 Str.)	1351.5 54/19 - 1510 45/7	18 (457)	5.7 (2.57)
HVS2CT154512	1.502 - 1.545	1700 (127 Str.) - 1750 (127 Str.)	1590 45/7 - 1590 54/19	12 (305)	5.5 (2.48)
HVS2CT154518	1.502 - 1.545	1700 (127 Str.) - 1750(127 Str.)	1590 45/7 - 1590 54/19	18 (457)	5.7 (2.57)
<b>500 KV APPLICATION</b>					
EVS2CT165012	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	12 (305)	5.9 (2.66)
EVS2CT165018	1.602 - 1.650	2000 (91 Str.) - 2000 (127 Str.)	1780 84/19	18 (457.2)	6.1 (2.75)
EVS2CT172918	1.682 - 1.729	2250 (91 Str.)	-	18 (457)	6.0 (2.70)
EVS2CT176212	1.737 - 1.762	-	2167 72/7 - 2156 84/19	12 (305)	5.7 (2.57)
EVS2CT176218	1.737 - 1.762	-	2167 72/7 - 2156 84/19	18 (457)	6.0 (2.70)
EVS2CT182412	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	12 (305)	5.6 (2.52)
EVS2CT182418	1.763 - 1.824	2500 (91 Str.) - 2500 (127 Str.)	-	18 (457)	6.0 (2.70)

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# SUBSTATION SPECIALTIES

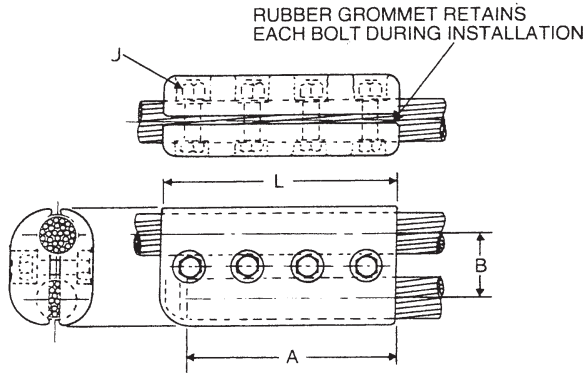
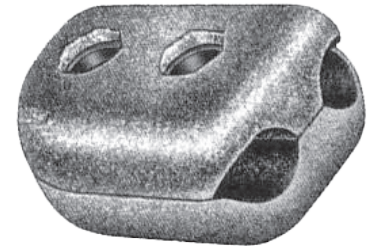
## EHV PARALLEL CONNECTORS TYPE HVPC/EVPC

HUBBELL® Power Systems

**ALUMINUM**  
**HVPC/EVPC**

Aluminum alloy parallel connectors are designed for corona free service at 345 and 500 KV respectively. Single cable diameter under 1.76 inch for 345 KV and 2.5 inch diameter for 500 KV may not be corona free unless conductors are bundled. Contact sealant is recommended.

- Material:**
- Casting** - 356-T6 aluminum alloy
  - Clamping Hardware** - aluminum alloy
  - Hardware Retaining Grommet** - neoprene



### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	ALUMINUM CONDUCTOR RANGE (MAIN & TAP)			DIMENSIONS - INCHES (MM)				NUMBER OF BOLTS	APPROX. WT. EA. LBS. (KG)
	DIA. IN.	AAC	ACSR	B	L	A	J		
<b>345 KV LINE-TO-LINE APPLICATIONS</b>									
HVPC10361036	1.036	795 (37 Str./61 Str.)	715.5 54/7	21/4 (57.15)	53/4 (146.05)	37/8 (98.43)	5/8 (15.88)	2	4.0 (1.81)
HVPC11081108	1.108	-	795 26/7	21/4 (57.15)	53/4 (146.05)	37/8 (98.43)	5/8 (15.88)	2	4.0 (1.81)
HVPC13001300	1.300	1272 (61 Str.)	-	21/4 (57.15)	53/4 (146.05)	37/8 (98.43)	5/8 (15.88)	2	4.0 (1.81)
HVPC13821382	1.382	-	1272 54/19	21/4 (57.15)	53/4 (146.05)	37/8 (98.43)	5/8 (15.88)	2	4.0 (1.81)
<b>500 KV LINE-TO-LINE APPLICATIONS</b>									
EVPC11961196	1.196	-	954 54/7	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC12591259	1.259	-	1113 45/7	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC13821382	1.382	-	1272 54/7	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC14651465	1.465	-	1431 54/19	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC15451545	1.545	-	1590 54/19	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC16321632	1.632	2000 (91 Str.)	-	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC16811681	1.681	-	2034.5 72/7	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC17621762	1.762	-	2156 84/19	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC18021802	1.802	-	2312 76/19	213/16 (71.44)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	8.7 (3.95)
EVPC18241824	1.824	2500 (127 Str.)	-	31/8 (79.38)	10 (254.00)	71/2 (190.50)	5/8 (15.88)	4	9.0 (4.09)

Contact factory for sizes not shown.

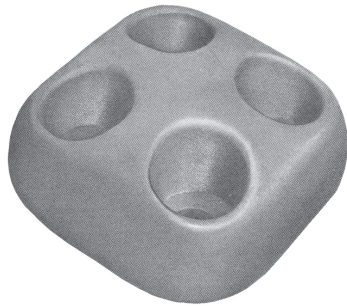
**EHV  
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## EHV HARDWARE SHIELDS TYPE EVHS

ALUMINUM  
EVHS



Aluminum alloy hardware shields for flat pad are designed for corona free service at 500 KV. The EVHS is a cast, one piece shield for easy installation. The EVHS-D may also be used to shield a 3 inch by 3 inch contact pad, providing adequate clearance is allowed. The catalog numbers provide one shield only without hardware.

**Material:** Shield - 356-T6 aluminum alloy

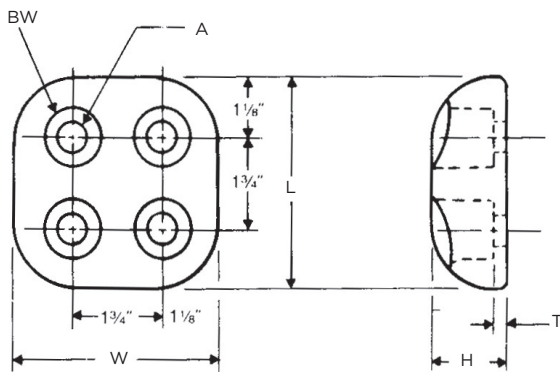


Figure 1

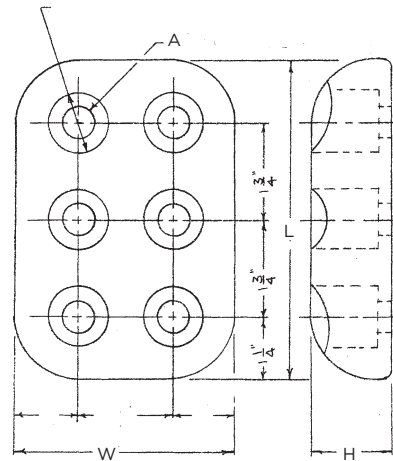


Figure 3

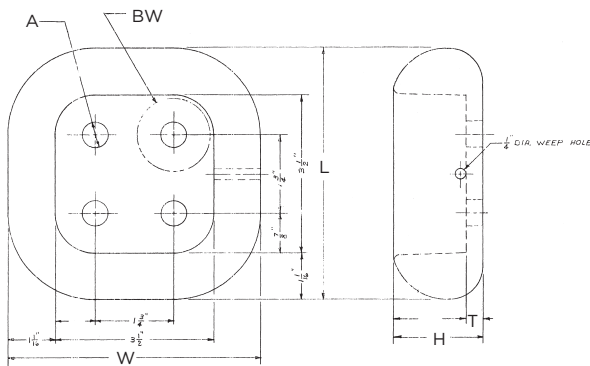


Figure 2

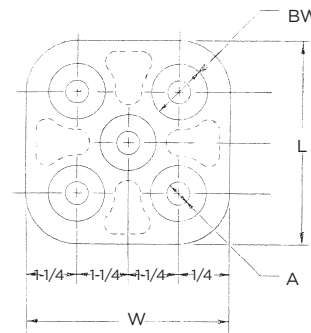


Figure 4

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### 345 KV AND 500 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	FIG	A HOLE DIA.	PAD APPLICATIONS	H	BOLT WELL DIA *	W	T	L	APPROX. WT. EA. LBS. (KG)
EVHSD	1	9/16"	4" X 4" (101.60)	11/2 (38.1)	13/16	4 (101.60)	1/4 (6.35)	4 (101.60)	.9 (.41)
EVHSDBW15	2	9/16"	4" X 4" (101.60)	2 (50.8)	11/16	55/8 (142.88)	3/8	55/8 (142.88)	2.8 (1.27)
EVHSN	3	9/16"	4" X 6" (101.6 X 152.4)	11/2 (38.1)	11/8	4 (101.60)	1/4 (6.35)	6 (152.40)	1.4 (.64)
EVHSK	4	11/16"	5" X 5" (127)	11/16 (42.93)	13/8	5 (127.00)	1/4 (6.35)	5 (127.00)	1.9 (.86)

\* At bottom of bolt well.



# SUBSTATION SPECIALTIES

## EHV HARDWARE SHIELDS

### TYPE HVHS-90-D

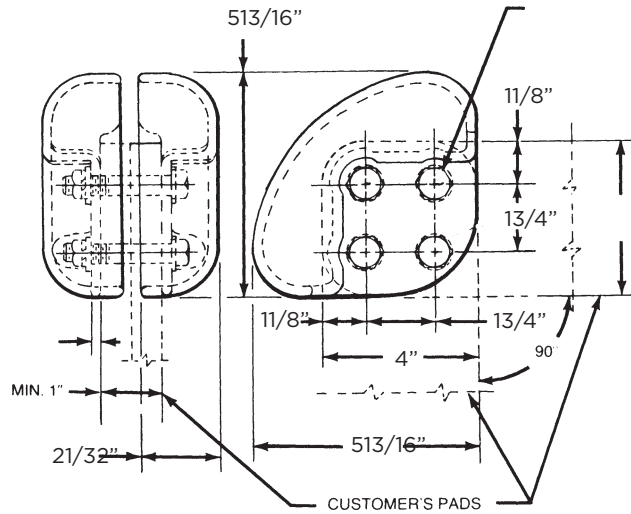
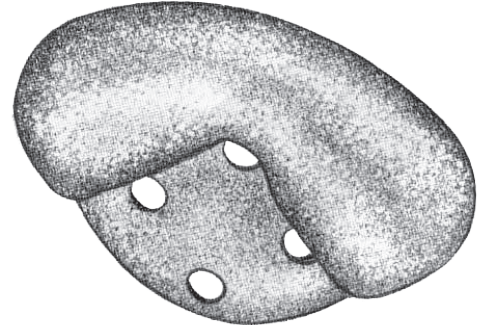
HUBBELL® Power Systems

ALUMINUM
<b>HVHS-90-D</b>

Aluminum alloy 90° hardware shield for flat pads are designed for corona free service at 345 KV. The HVHS-90-D is a cast, one piece shield for easy installation. This shield is used to shield hardware and provide protection to a 90° flat connection. The catalog numbers provide one shield only without hardware. Normally used in sets of two (2).

**Material:** Shield - 356-T6 aluminum alloy

**Note:** Maximum washer clearance is 1/4".



### 345 KV LINE-TO-LINE APPLICATIONS

CATALOG NUMBER	PAD APPLICATION	APPROX. WT. EA. LBS. (KG)
HVHS90D	4" x 4" (101.60)	1.2 (.54)

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## EHV EXTENSION PAD TYPE EVEF-D

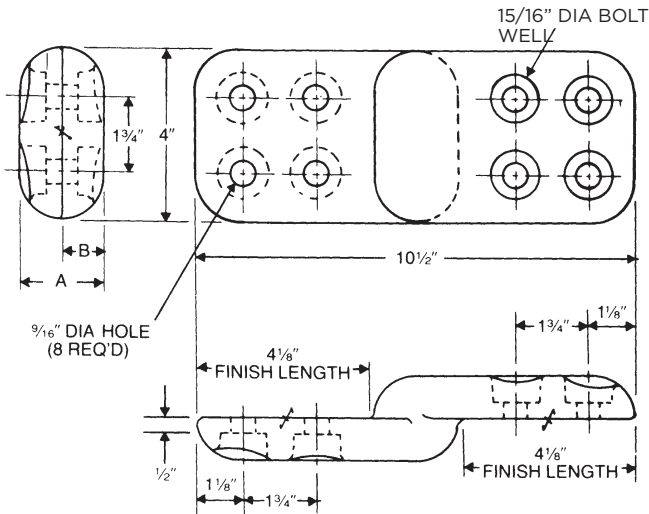
ALUMINUM
EVEFD



Aluminum alloy extension pad is designed for corona free service at 500 KV. This connector can be used in conjunction with Type EVETF terminal connector where additional pad clearance is required. Contact sealant is recommended.

**Material:** Shield - 356-T6 aluminum alloy

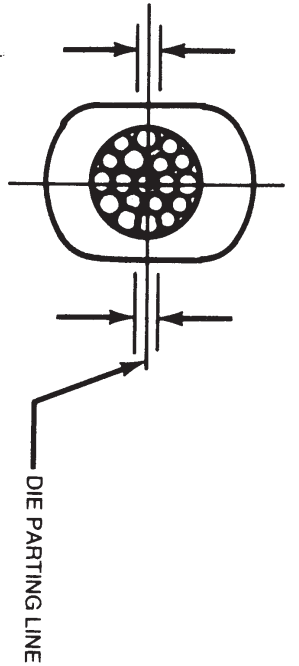
**Note:** To assure corona free operation of extension terminal, bolts must be inserted from extension terminal side and nuts on equipment pads must be protected by equipment or hardware shields (see Type EVHS-D).



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**345 KV AND 500 KV LINE-TO-LINE APPLICATIONS**

CATALOG NUMBER	PAD APPLICATION	DIMENSIONS IN INCHES		APPROX. WT. EA. LBS. (KG)
		A	B	
EVEFD	4" x 4" Each End (101.60)	3 (76.20)	1 1/2 (38.10)	4.7 (2.13)



CRIMPING DETAIL

**CONVENTIONAL COMPRESSION TOOL AND DIE INFORMATION FOR TYPE CCL-EHV**

DIE REF.	INDEX	BURNDY TOOLS, DIES & NUMBER OF CRIMPS										KEARNEY TOOLS, DIES & NO. OF CRIMPS				ALCOA TOOLS, DIES & NUMBER OF CRIMPS					
		Y34A DIES CR.	Y35 DIES CR.	Y48B DIES CR.	Y486RB DIES CR.	Y60B DIES CR.	DIE SIZE	WH-1 DIES CR.	WH-2 DIES CR.	PH-60 DIES CR.	12A, 12HA DIES CR.	B DIES CR.	60A DIES CR.	FL,H,H2,H2H DIES CR.							
.640	243	A243 3	U243 3	C243 2		L243	5/8 18865	7			B73AH 2										
.840	249	A249 4	U249 4	C249 2		L249	.840 18868	7	36476	7		B74AH 2									
1.000	251	A251 6	U251 6	C251 3	F251	L251	1.000 26565	4	36465	4		B75AH 3	75A 2								
1.125	316	A316 6	U316 6	C316 2	F316	L316	11/8 20636	6	36463	5		B76AH 4									
1.312	327	U327 7	U327 7	C327 3	F327	L327			40424	7											
1.500	318-261 608	U261* 7	U608* 7	C261 3	F261	L261						6024 6024AH	3 3	4424 4424AH							
1.625	301			C39AR 4	F39AR 4	L724 L39ART						6026 6027AH	3 3	4426 4427AH							
1.843	292-578 302 319			C292 C44AR C319	F292 F44AR F319	L292 L44ART L319						6028 6030AH	3 3	4428 4430AH							
2.125	422 575			C575 4	F422 F575	L422 L575						6034AH 4	4	4429 4434AH							
2.375	478				F46AR 4							6031 6036AH	4 4	4431 4436AH							
2.937														C3655-3 4448AH							

**NOTES:**

1. The recommended number of crimps per connector is shown following each die number.
  2. It is recommended that a light coat of lubricant (such as Anderson's #155 Grease) be applied to the crimping face of the dies.
  3. Crimps should start from the inside working outward with the last crimp extending past the end of the connector.
- \* For use on aluminum connectors ONLY.



TECHNICAL DATA  
**DIE REFERENCE CHART**  
**CC-4872**

# TECHNICAL DATA

## DIE REFERENCE CHART

### C-13282



#### CONVENTIONAL COMPRESSION TOOL AND DIE INFORMATION FOR TYPE CCLS-EHV

DIE REF.	INDEX	BURNDY TOOLS & DIES					ANDERSON	ALCOA TOOLS & DIES		
		Y34A	735	748B	7486RB	Y60B	VC TOOLS	12A, 12HA	60A	F1, H, H2, H2H
1.625	301			C39AR	F39AR	L39ART	VC 8		6027AH	4427AH
1.844	302			C44AR	F44AR	L44ART	VC 8		6030AH	4430AH
2.062	479				F48AR	L48ART			6034AH	4434AH
2.375	478			C46AR	F46AR	L46ART			6038AH	4438AH
2.625										4442AH
2.750										4444AH

**Notes:**

1. It is recommended that a light coat of lubricant (such as Anderson's No. 155 grease) be applied to the crimping face of the dies.
2. For Alcoa and Burndy tooling, crimps should start from inside crimp line, work outwards with the crimps overlapped, and the last crimp extending past the end of the connectors.
3. For Anderson VC tooling, crimps should start from inside crimp line, work outwards with the crimps spaced 1/8" apart, and the last crimp spaced 1/4" from the end of barrel.
4. VC tools not recommended for extra high voltage.

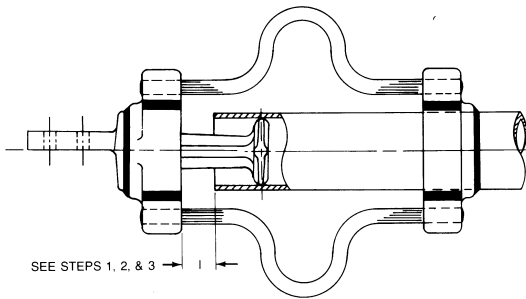


# TECHNICAL DATA

## INSTALLATION CHART

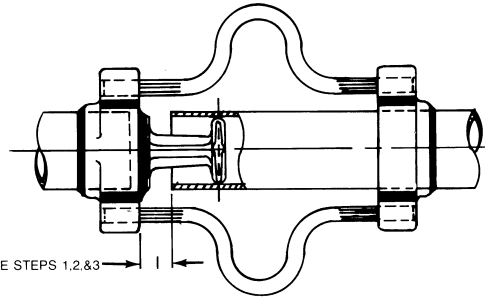
### DC-9295

#### FOR TYPES EVKET AND HVWETT/EVWETT



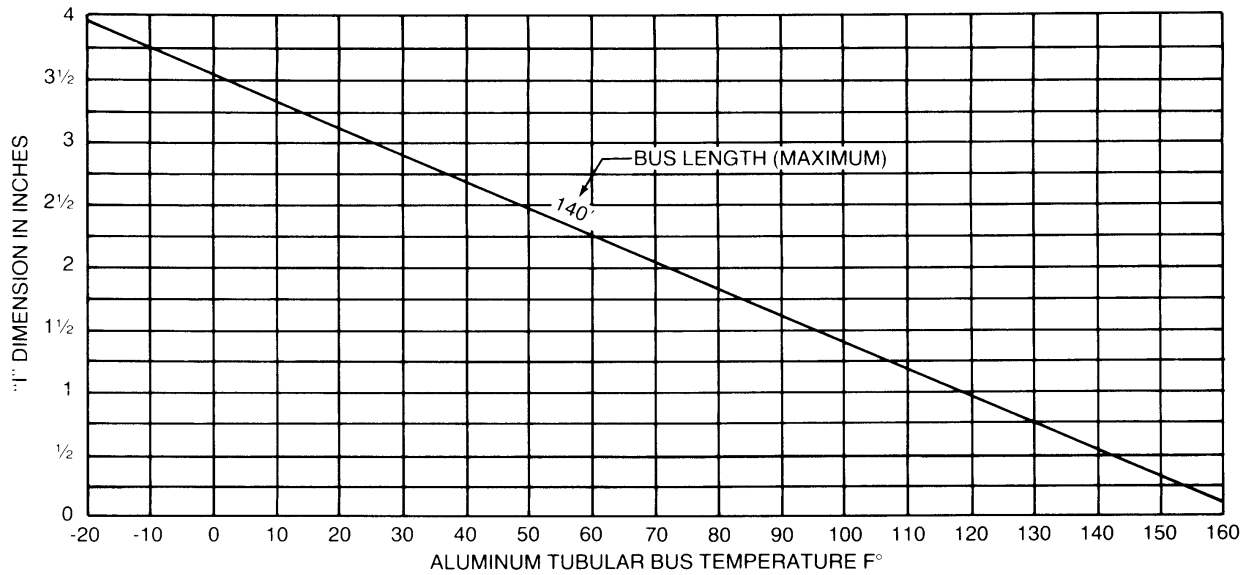
SEE STEPS 1, 2, & 3

TYPICAL FLEXIBLE TERMINAL



SEE STEPS 1,2.&3

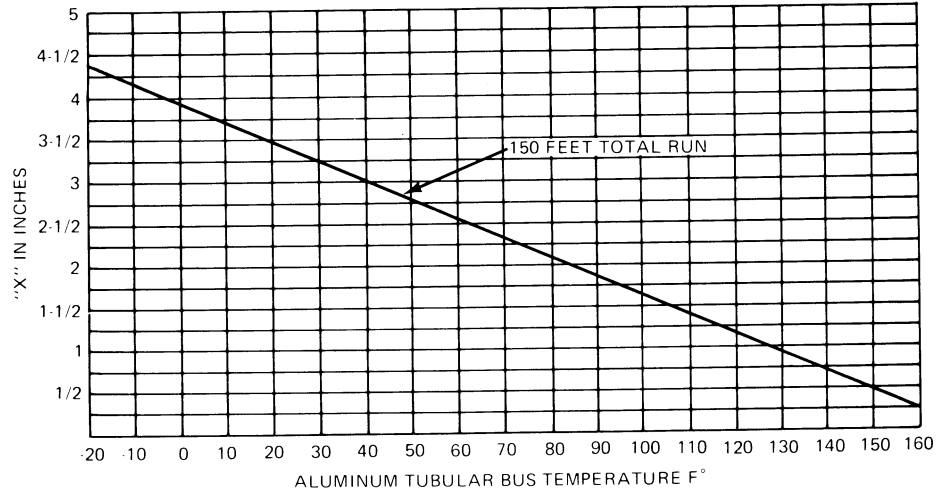
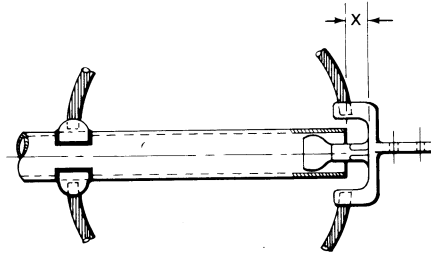
TYPICAL FLEXIBLE COUPLER



### HOW TO USE CHART

1. Determine tubular bus temperature and locate on temperature scale.
2. Using 140 ft. bus length, locate the intersection of the bus length and the temperature reading.
3. Read "I" dimensions setting from this intersection point.
4. Total tubular bus length must not exceed 140 feet.

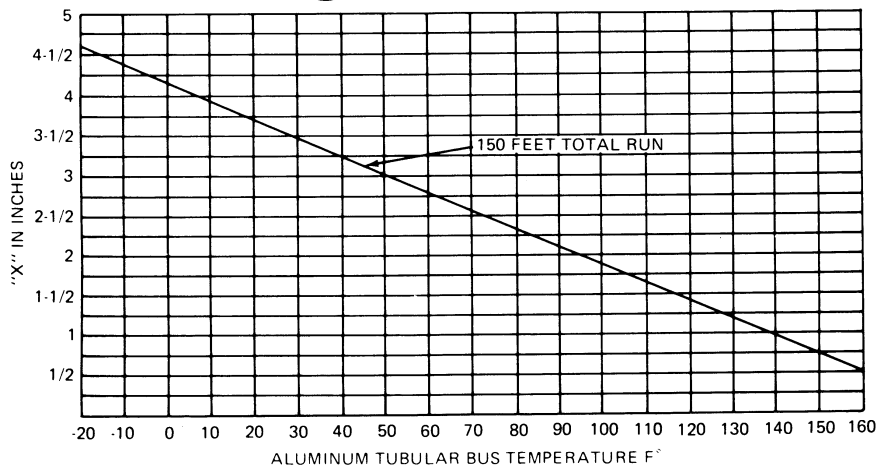
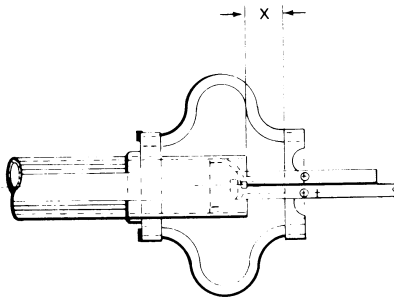
# TECHNICAL DATA INSTALLATION CHART DC-11853 FOR TYPES HVRTE



## DC-6750 FOR TYPES HVETF/EVETF

### HOW TO USE CHARTS

1. Determine tubular bus temperature and locate on the temperature scale.
2. Using given bus length, locate the intersection of the bus length and the temperature reading.
3. Read "X" dimensions setting from this intersection point.



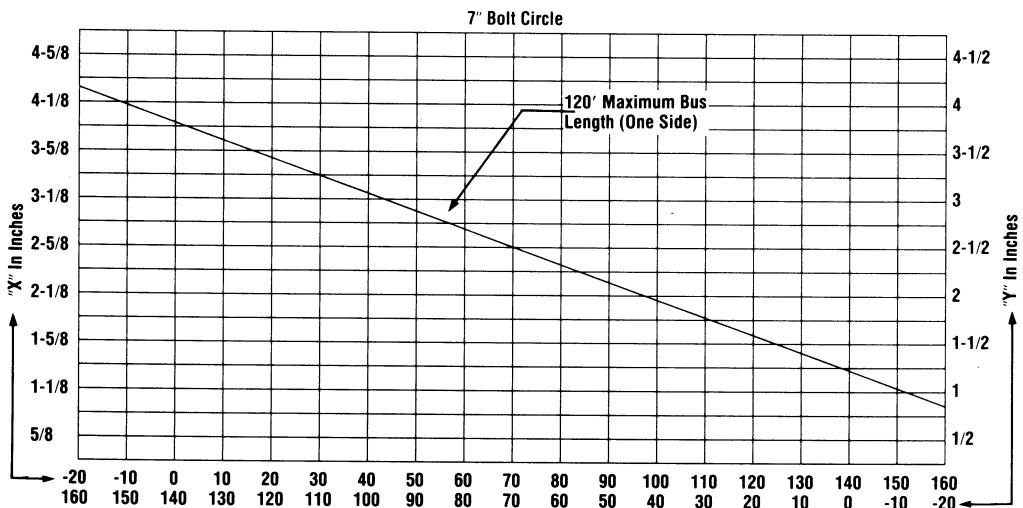
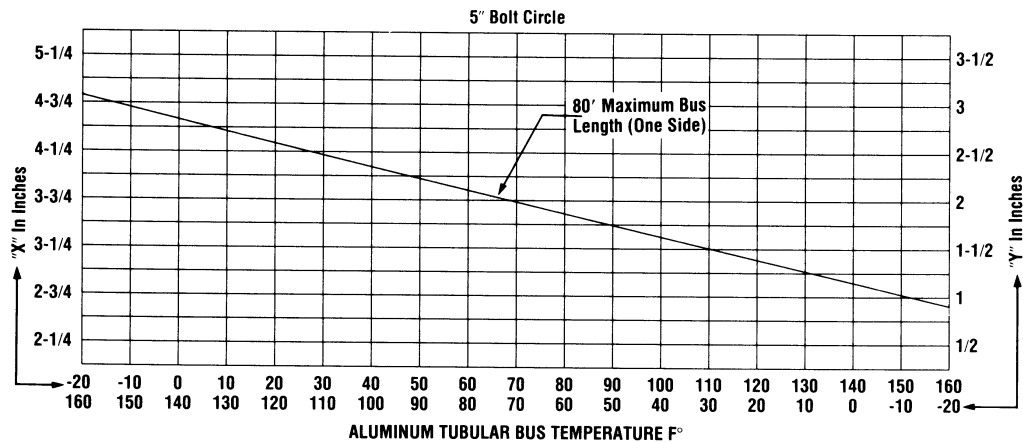
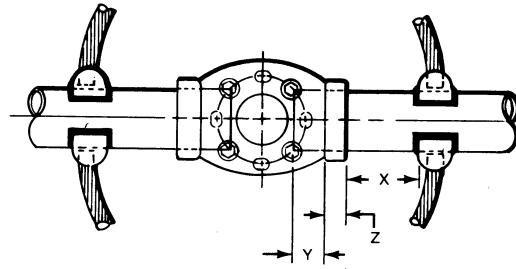
EHV  
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# TECHNICAL DATA

## INSTALLATION CHART

### DC-11852

### FOR TYPE HVRTS

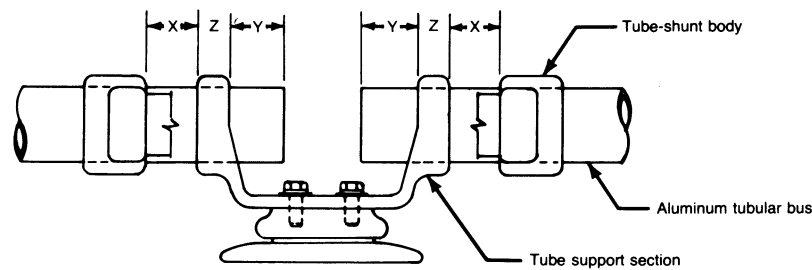


### HOW TO USE CHARTS

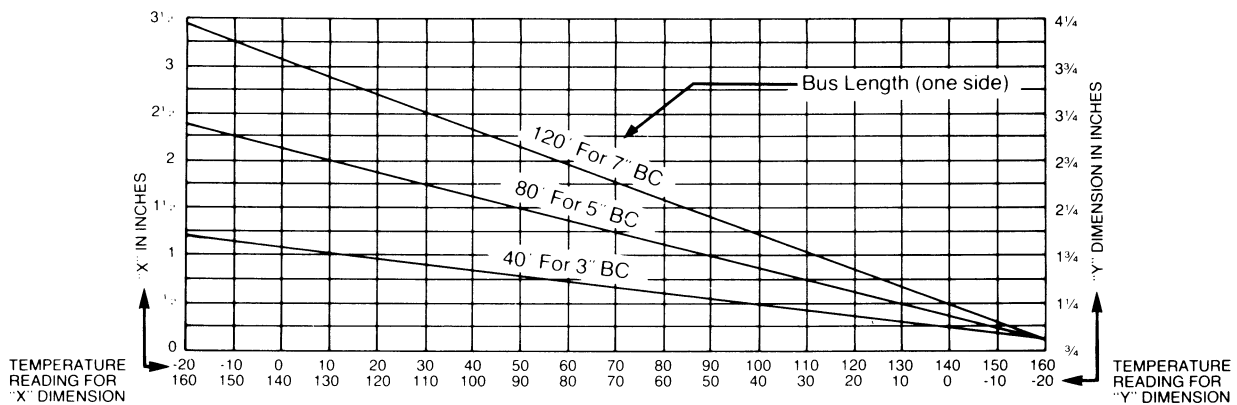
1. Determine tubular bus temperature and locate this temperature on the "Temperature Reading For "X" dimension scale.
2. Using given bus length for one side of the connector, locate the intersection of the bus length and the temperature reading.
3. Read "X" dimension setting from this intersection point.
4. Determine "Y" dimension in a similar manner.
5. Determine "Z" dimension from applicable ANDERSON Assembly Dwg. The location of the tube-shunt body from the end of the tube may be determined by adding  $X + Y + Z$ .
6. Repeat this procedure for the tubular bus on the other side of the connector.



# TECHNICAL DATA INSTALLATION CHART DC-6536 FOR TYPES EVKES, HVETS/EVETS



TYPICAL FLEXIBLE BUS SUPPORT



ALUMINUM TUBULAR BUS TEMPERATURE °F

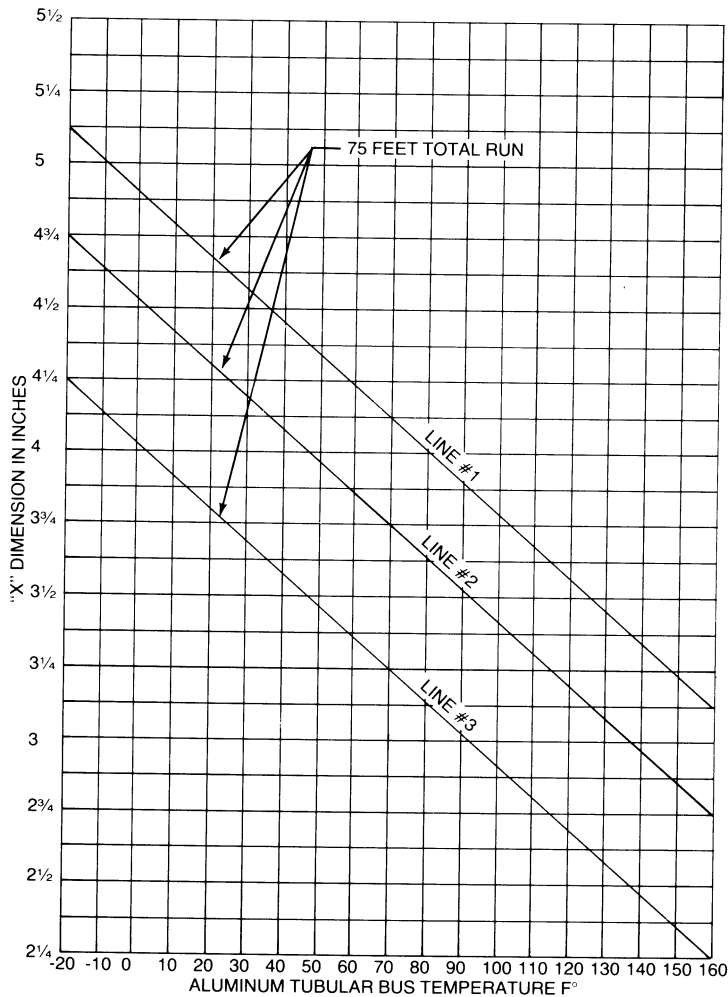
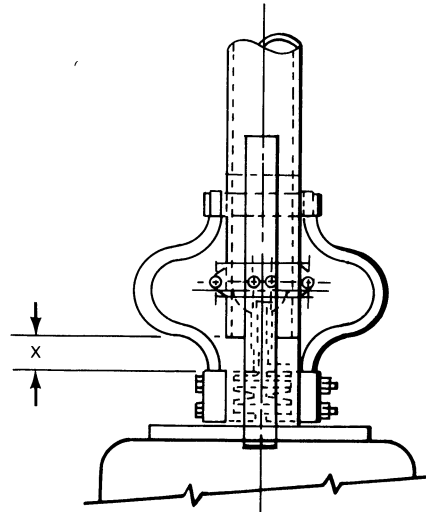
### HOW TO USE CHART

1. Determine tubular bus temperature and locate this temperature on the "Temperature Reading for "X" Dimension" scale.
2. Locate the intersection of the given bus length and the temperature reading.
3. Read "X" dimension setting from this intersection point.
4. Determine "Y" dimension in a similar manner.
5. Determine "Z" dimension from applicable ANDERSON connector assembly. The location of the tube-shunt body from the end of the tube may be determined by adding X + Y + Z.
6. Repeat this procedure for the tubular bus on the other side of the connector.
7. Do not exceed given bus length for each particular bolt circle.

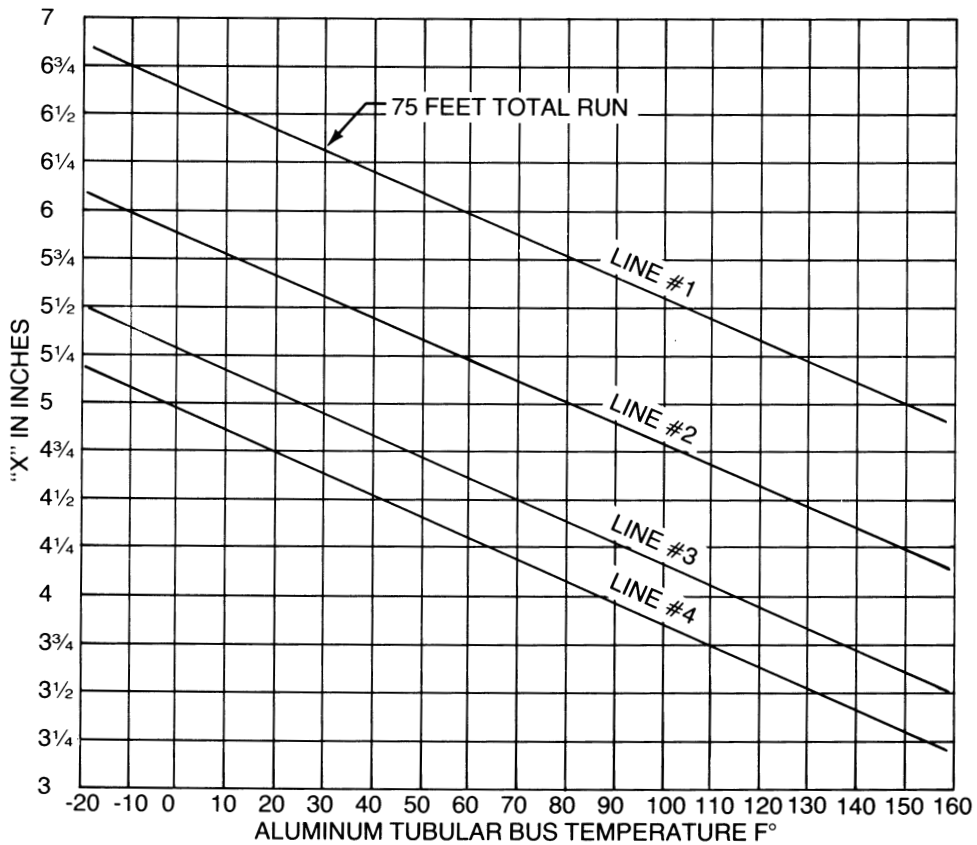
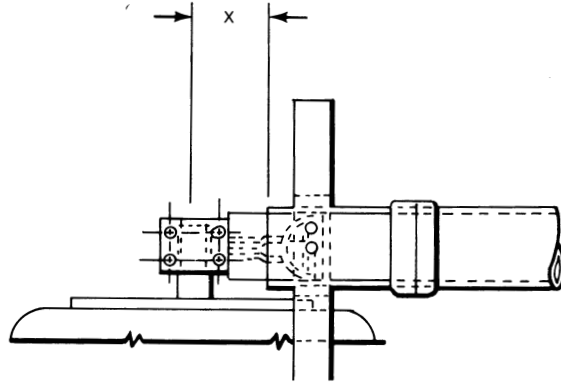
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TECHNICAL DATA  
INSTALLATION CHART  
DC-6788  
FOR TYPES HVEDST/EVEDST



# TECHNICAL DATA INSTALLATION CHART DC-6790 FOR TYPES HVEDST-90/EVEDST-90



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## WELDING ALUMINUM BUSES AND CONNECTORS

Recommended welding procedures to ensure a sound weld are as follows:

Pure aluminum melts at 1220°F while aluminum alloys melt in the range of 1020°F depending on the alloy content of the particular metal involved. When aluminum alloys are heated there is no color change. This makes it difficult, if not impossible, to tell if the metal is near the welding temperature.

The ever present surface oxide films on aluminum have a melting point of 3600°F. The parent aluminum or aluminum alloy can therefore be melted without fusing the surface oxides. Unless the film is removed, cleanliness of the molten filler metal and the parent metal cannot be complete and both strength and conductivity may be sacrificed. Therefore, it is of prime importance that the aluminum oxides be removed from the aluminum alloys before welding is started. In the shielded arc welding method the shielding gas has a tendency to clean the material as welding progresses.

### CLEANING OF BUSES AND FITTINGS

It is very important to remove all greases and oxides from the surfaces to be welded. This can be accomplished by using a mild alkaline solution or standard degreasing solution. The preferred method is to use a stainless steel wire brush and vigorously scrub the surfaces to be welded. The stainless steel brushes are specified because the stainless steel has less of a tendency to pick up particles of aluminum and aluminum oxides.

### WELDING METHODS

Anderson recommends the following two types of welding methods for welding aluminum fittings and buses:

**1. TUNGSTEN-ARC WELDING (TIG).** The inert gas shielded tungsten-arc process is widely used for welding aluminum bus fittings. In this process the arc is established between a non-consumable tungsten electrode and the section to be welded. Inert gas envelopes the arc to prevent oxidation during welding. Hence, no flux is required. A bare filler rod supplies filler

metal to the weld area. To initiate the arc the tungsten electrode is placed in contact with the component and then withdrawn to establish an arc length of approximately 3/16". The arc is given a circular motion until the base metal liquifies and the weld puddle is established. Filler metal is added by hand as required. In this process, if more than one pass is required for a sufficient weld, the weld should be wire brushed between passes to remove any surface dirt or oxides which have accumulated from the previous pass. Since no flux is used the finished weld does not require cleaning. In this process the heat of the tungsten arc is concentrated in a smaller area and is much faster than the conventional type of welding and distortion of the weld is negligible since the heat is concentrated in a small area. In this process, if thicknesses greater than 1/2" are to be welded, preheating of the parts before welding will increase the welding speed.

### 2. METALLIC-ARC INERT-GAS SHIELDED WELDING.

The consumable electrode inert-gas shielded metal arc (MIG) welding process combines the advantages of tungsten-arc welding with increased welding speed. Welding can be done from any position and the process can be either manual or automatic. Manual welding techniques are somewhat different from other methods. However, a welder can be trained to use the MIG process with only a few days concentrated training. In the MIG process the bare filler rod is supplied as a coil of bare wire. In the commercially available equipment this wire is added to the weld at a predetermined rate by a motor-driven feed that can be adjusted to the magnitude of the welding current. In this process, as well as the tungsten-arc process, gas forms a shield around the arc to prevent oxidization during welding. Either helium, argon or a mixture of helium and argon are suitable shielding gases. Pure argon is most widely used on sections less than 3/4" thick. On sections over 3/4" thick the gases are usually mixed to combine the hotter arc characteristics of helium with the stabilizing effect of argon. If exceptionally hot arc characteristics are required, pure helium can be substituted for the gas mixture. Precaution should be exercised if this substitution is made in that it is very easy to burn through the items that are to be welded with a pure helium atmosphere.

## WELDING ALUMINUM BUSES AND CONNECTORS

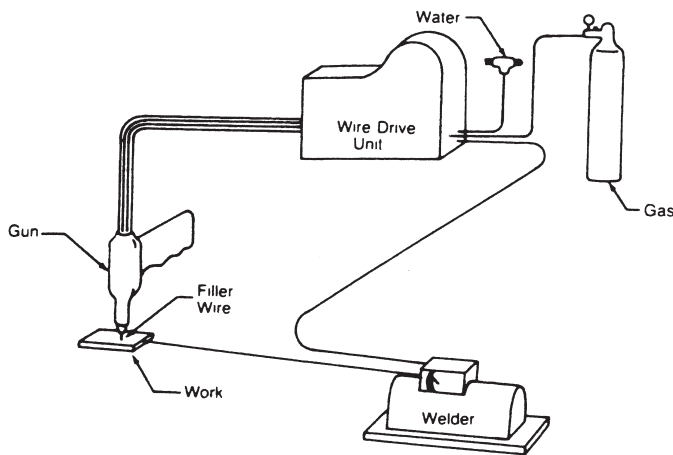


Fig 1. Metallic-arc inert-gas shielded welding (MIG)

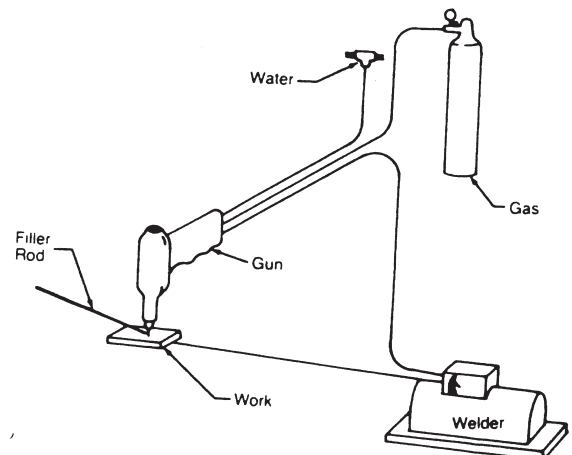


Fig 2. inert-gas shielded tungsten-arc welding (TIG)

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## GENERAL WELDING SPECIFICATIONS FOR CONSUMABLE ELECTRODE WELDING METHOD

**SCOPE:**

This specification applies primarily to welded aluminum connectors for substation construction.

inert-gas shielding (MIG). A 400 amp welding machine with reverse polarity is capable of handling the majority of aluminum welding jobs.

**MATERIAL:**

**CASTINGS** - As furnished by Anderson are molded from 356 aluminum alloy and heat treated to T6 condition, or #99 pure aluminum depending on the application.

**PROCEDURES:**

It is of the utmost importance to remove oil, grease, water and oxide from the surfaces to be welded. All surfaces to be welded should be wire brushed with a stainless steel brush prior to welding. If more than one weld pass is required, the original weld should be wire brushed before applying additional weld.

**FILLER ROD** - 4043 aluminum alloy 1/16" diameter for all joints as shown in the Anderson catalog.

Pre-heating of surfaces to 400°F is optional, but by preheating the surfaces before welding it is possible for the operator to weld easily and faster.

**SHIELDING GAS** - Argon.

**WELDING APPARATUS** - Tungsten-arc (TIG) or metallic-arc

### METALLIC-ARC INERT-GAS CONSUMABLE ELECTRODE

IPS SIZE	WALL THICKNESS	AMPERES	4043 FILLER ROD SIZE	APPROX. ARGON FLOW CFH	PREHEAT °F	WIRE SPEED INCHES PER MIN.	NO. PASSES
1/2	.108	125-150	1/16	20	None	170	1
3/4	.113	125-150	1/16	20	None	180	1
1	.133	125-150	1/16	30	None	180	1
1-1/4	.140	160-170	1/16	30	None	180	1
1-1/2	.144	160-170	1/16	30	None	180	1
2	.154	170-190	1/16	30	None	180	1
2-1/2	.203	170-190	1/16	40	None	180	1
3	.216	170-190-	1/16	40	Optional to 400° F	180	1
3-1/2	.226	170-190	1/16	40	Optional to 400° F	200	1
4	.237	180-200	1/16	50	Optional to 400° F	200	1
4-1/2	.247	180-200	1/16	50	Optional to 400° F	200	1
5	.258	180-200	1/16	50	Optional to 400° F	200	1 or 2
6	.280	180-200	1/16	50	Optional to 400° F	200	1 or 2

### FLAT BAR

FLAT BAR THICK-NESS	AMPERES	4043 FILLER ROD SIZE	APPROX. ARGON FLOW CFH	PREHEAT °F	WIRE SPEED INCHES PER MIN.
1/8	125-150	1/16	30	None	180
1/4	180-200	1/16	50	Optional to 400° F	180
3/8	300	1/16	50	Optional to 400° F	200
1/2	340	1/16	60	400° F	200
3/4	375	1/16	60	400° F	200

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**TUNGSTEN - ARC**

IPS SIZE	WALL THICKNESS	AMPERES	GAS CUP DIA. INCHES	TUNGSTEN DIA.	ARGON FLOW CFH	PREHEAT °F	NO. PASSES	4043 FILLER ROD SIZE
1/2	.108	125-150	3/8	1/8	20	None	1	1/8
3/4	.113	125-150	3/8	1/8	20	None	1	1/8
1	.133	125-150	3/8	1/8	30	None	1	1/8
1-1/4	.140	160-170	3/8	1/8	30	None	1	1/8
1-1/2	.144	160-170	3/8	1/8	30	None	1	1/8
2	.154	170-190	1/8	1/8	30	None	1	3/16
2-1/2	.203	170-190	1/2	3/16	40	None	1	3/16
3	.216	170-190	1/2	3/16	40	Optional to 400°F	1	3/16
3-1/2	.226	170-190	1/2	3/16	40	Optional to 400°F	1	3/16
4	.237	180-200	1/2	3/16	50	Optional to 400°F	1	3/16
4-1/2	.247	180-200	1/2	3/16	50	Optional to 400°F	1	3/16
5	.258	180-200	1/2	3/16	50	Optional to 400°F	1 or 2	3/16
6	.280	180-200	1/2	3/16	50	Optional to 400°F	1 or 2	3/16

**FLAT BAR**

FLAT BAR THICKNESS	AMPERES	GAS CUP DIA. INCHES	TUNGSTEN DIA.	ARGON FLOW CFH	PREHEAT °F	NO. PASSES	4043 FILLER ROD SIZE
1/8	125	3/8	1/8	30	None	1	1/8
1/4	150	1/2	3/16	30	None	1	3/16
3/8	300	1/2	3/16	50	Optional to 400°F	1	1/4
1/2	400	5/8	1/4	50	400°F	1 or 2	1/4
3/4	450	5/8	1/4	50	400°F	2	5/16
1	500	5/8	5/16	50	400°F	2	5/16

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**See Substation General Reference Data Section for additional information on installation procedures, hardware applications, and recommended torque values for bolted connectors.**





## EHV SUBSTATION CONNECTORS- TECHNICAL REFERENCE

### Nature of Corona and RIV

Corona is the primary element which must be considered and controlled when designing connectors for Extra High Voltage applications. Corona is a result of a condition where the electrostatic flux density in the air exceeds a critical value near an adjacent metal surface. Air and other vapors in this area become ionized and serve as a conductor of electricity. When the voltage is increased, a brush discharge takes place, until the whole thickness of the dielectric layer is broken down and disruptive discharges (sparks) jump from electrode to electrode. Corona involves power loss, radio noise and can have an injurious effect on fibrous insulation. Sharp edges, bubbles, nonhomogeneous insulation, etc., aggravate this condition.

Positive corona can be seen as a plume and is the principal source of radio influence voltage (RIV). Negative corona is seen as a glow and has no significant radio influence. EHV connectors must be free of audible and visible corona at the rated line voltage plus ten percent. At these voltage levels the RIV level should not exceed 200 microvolts.

### Design Criteria

The design of Extra High Voltage connectors and fittings must meet critical field gradient configurations in conjunction with the mechanical and/or electrical load carrying requirements. Failure to meet this prerequisite can result in unacceptable visible or audible corona.

We control corona on substation connectors by providing recessed hardware, generous mass and radii, high quality surface finish, and shielding rings. Any or all of these designs could be used in any given application requirement. All Extra High Voltage components are manufactured within our facilities, utilizing proven production techniques. These procedures plus final assembly, inspection and packaging, are geared to preserve quality and acceptable connector performance.

As a result of our design efforts, testing and experience, EHV connectors and connector assemblies are free of audible and visible brush type corona at voltages ten percent above rated system operating voltages.

Years of experience in the EHV substation connector field has indicated it is most advantageous to the purchaser to obtain all EHV substation connectors for a single station from one manufacturer. This not only provides design and manufacturing integrity through all the connectors, it also provides unit responsibility. This single source minimizes the amount of effort on the part of the customer and should any questions arise during construction or

subsequent operation, experienced factory personnel are available to assist in resolving questions concerning our connectors.

Various standards, test and experience in the EHV field indicates there are minimum conductor sizes which should be considered in the design of 345 KV and 500 KV substations. Tubing smaller than 1 1/2" IPS or cable less than 1.76 inch diameter should be bundled for 345 KV application. Conductors smaller than 2 1/2" IPS or 2.50 inch cable diameter should be bundled for 500 KV application.

Based on extensive laboratory testing and many years of experience, we can recommend the most efficient connector and conductor system to meet your requirements.

### Radio Influence Voltage (R.I.V.) and Corona Testing

Corona observations are made in a darkened laboratory using binoculars. A voltage is impressed upon test specimens to cause sufficiently violent corona discharge to identify areas of high electrical stress. Corona observations are made and recorded as the impressed voltage is decreased in small increments. Observers also monitor the absence or presence of audible corona.

All of our basic designs have been tested for satisfactory corona free performance and have consistently performed above the minimum acceptable limits currently specified by every utility and consultant with whom we have worked. Without exception, all material which we propose to furnish is capable of corona free performance within normal R.I.V. limits at specified voltages.

### Conclusion

We have frequently been called upon to custom design for special applications at various voltages. Many customers have found that our catalog listing is only a small segment of the vast collection of connectors and fittings which we have produced for utilities across the country. We have the production capability for producing to customer specifications and the design knowledge and experience to make sound recommendations for connector application.

Our capabilities have been proven by the outstanding field performance record enjoyed to date and we are justifiably proud of this record. We sincerely appreciate your interest in our Extra High Voltage connectors and will welcome the opportunity to provide further information in any area in which questions may arise.