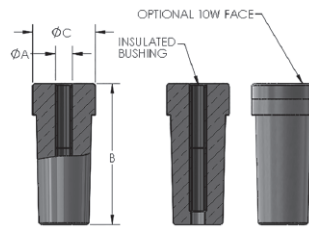


This style holder found at top of page 32



The various types and sizes of TUFFALOY stud-and-nut welding electrodes and holders are described below. For excessive wear applications any of these electrodes may be ordered with refractory metal facings, such as TUFFALOY 10W.

STUD ELECTRODES

A	B	C	Description	Part No.	With 10W Face Refractory - Item Number
.150	2-1/4	1	400	175-4001	175-4001-10W
.164			401	175-4011	175-4011-10W
.190			402	175-4021	175-4021-10W
.216			403	175-4031	175-4031-10W
1/4			404	175-4041	175-4041-10W
5/16 & 8mm			405	175-4051	175-4051-10W
3/8			406	175-4061	175-4061-10W
6mm			506	175-5061	175-5061-10W
7mm			507	175-5071	175-5071-10W
9mm			509	175-5091	175-5091-10W
10mm			510	175-5101	175-5101-10W
3/8	2-3/4	1-1/2	436	175-4361	175-4361-10W
7/16			437	175-4371	175-4371-10W
1/2			438	175-4381	175-4381-10W
9/16			439	175-4391	175-4391-10W
5/8			440	175-4401	175-4401-10W
11/16			441	175-4411	175-4411-10W
3/4			442	175-4421	175-4421-10W
10mm			510-2	175-5102	175-5102-10W
12mm			512-2	175-5122	175-5122-10W

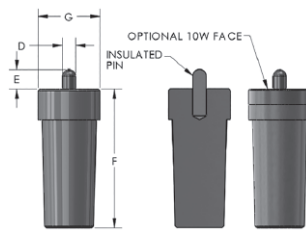
ELECTRODES

Stud Electrodes

Tuffaloy stud electrode tips are for projection-welding screws, bolts or pins, whether they pass through the sheet or are to be attached directly to its face.

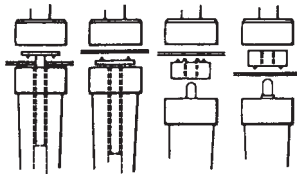
Nut Electrodes

Tuffaloy projection weld nut electrodes are designed for either self-piloted or non-piloted nuts. The pilots of the non-piloted-nut electrodes are spring-loaded so they can't interfere with the contacting of nut and sheet under welding pressure.



SELF-PILOTED-NUT ELECTRODES

D For Nut Size	E Pin Length	F Electrode Length	G Electrode Diameter	Description	Part No.	With 10W Face Refractory - Item Number
.164	3/16	2-1/4	1	411	175-4111	175-4111-10W
.190	3/16			412	175-4121	175-4121-10W
.216	1/4			413	175-4131	175-4131-10W
1/4	5/16			414	175-4141	175-4141-10W
5/16 & 8mm	5/16			415	175-4151	175-4151-10W
3/8	3/8			416	175-4161	175-4161-10W
6mm	1/4			606	175-6061	175-6061-10W
7mm	5/16			607	175-6071	175-6071-10W
9mm	3/8			609	175-6091	175-6091-10W
10mm	3/8			610	175-6101	175-6101-10W
3/8	3/8			2-3/4	1-1/2	456
7/16	3/8	457	175-4571			175-4571-10W
1/2	7/16	458	175-4581			175-4581-10W
9/16	7/16	459	175-4591			175-4591-10W
5/8	1/2	460	175-4601			175-4601-10W
11/16	1/2	461	175-4611			175-4611-10W
3/4	5/8	462	175-4621			175-4621-10W
10mm	3/8	610-2	175-6102			175-6102-10W
12mm	7/16	612-2	175-6122			175-6122-10W

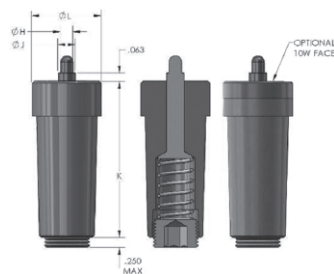


Welding a stud through a hole in sheet metal.

Welding a stud directly to face of sheet metal.

Self-piloted nut aligns itself with the hole in sheet.

Non-piloted-nut is guided by specially designed electrode.



NON-PILOTED-NUT ELECTRODES

H For Nut Size	J Pin Diameter	K Electrode Length	L Electrode Diameter	Description	Part No.	With 10W Face Refractory - Item Number
.164	0.18	2-1/4	1	421	175-4211	175-4211-10W
.190	0.215			422	175-4221	175-4221-10W
.216	0.24			423	175-4231	175-4231-10W
1/4	0.275			424	175-4241	175-4241-10W
5/16 & 8mm	0.345			425	175-4251	175-4251-10W
3/8	0.405			426	175-4261	175-4261-10W
6mm	0.261			706	175-7061	175-7061-10W
7mm	0.3			707	175-7071	175-7071-10W
9mm	0.385			709	175-7091	175-7091-10W
10mm	0.425			710	175-7101	175-7101-10W
3/8	0.437			2-3/4	1-1/2	476
7/16	0.562	477	175-4771			175-4771-10W
1/2	0.625	478	175-4781			175-4781-10W
9/16	0.687	479	175-4791			175-4791-10W
5/8	0.75	480	175-4801			175-4801-10W
10mm	0.453	710-2	175-7102			175-7102-10W
12mm	0.595	712-2	175-7122			175-7122-10W



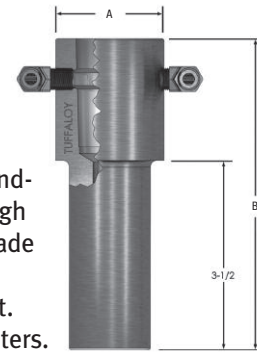
ELECTRODE HOLDERS

U.S. Pat. No. 3,504,159 Canada Pat. No. 858,060

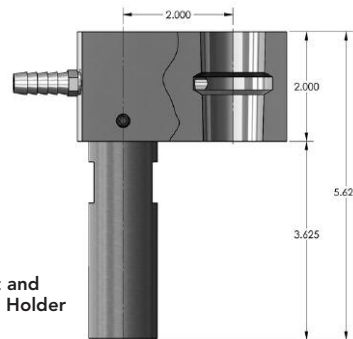
Several standard electrode holders are manufactured by Tuffaloy to accommodate all the Tuffaloy stud-and nut electrode tips.

Straight Holders Barrel Diameter	A Dia.	B Length	For 1" Dia. Electrodes		For 1-1/2" Dia. Electrodes	
			Description	Part No.	Description	Part No.
1	1-3/4	5-5/8	4530	350-4530		
1-1/4	1-3/4	5-5/8	4531	350-4531		
1-1/2	1-3/4	5-5/8	4532	350-4532		
1	2	5-3/4			4535	350-4535
1-1/4	2	5-3/4			4536	350-4536
1-1/2	2	5-3/4			4537	350-4537

Straight Holders - Tuffaloy straight nut-and-stud-electrode holders are of the same high quality as the standard straight holders made for spot welder arm mounting. Coolant is brought to the tip and circulated around it. Holders are available in three barrel diameters.



Straight Holder



Offset Nut and Stud Welding Holder

OFFSET NUT AND STUD WELDING HOLDERS

Shank OD	For 1" Dia. Electrodes		For 1.5" Dia. Electrodes	
	Description	Part No.	Description	Part No.
1.00	4540	350-4540		
1.25	4541	350-4541	4546	350-4546
1.50	4542	350-4542	4547	350-4547

ARCTIC HOLDERS

ARCTIC STUD ELECTRODES

A For Stud Diameter	B Electrode Length	C Electrode Diameter	Description	Part Number	Shank Size
0.150	3	1-1/4	115	175-1151-X	
0.164			116	175-1161-X	
0.190			119	175-1191-X	
0.216			122	175-1221-X	
1/4			125	175-1252-X	
5/16 & 8mm			131	175-1312-X	
3/8			138	175-1382-X	
7/16			144	175-1442-X	
6mm			106	175-1061-X	
7mm			107	175-1072-X	
9mm	109	175-1092-X			
10mm	110	175-1102-X			
1/2	3	1-1/2	150	175-1503-X	
9/16			156	175-1563-X	
5/8			163	175-1633-X	
11/16			169	175-1693-X	
12mm			112	175-1123-X	

Arctic Electrodes - The Arctic system is a compact stud-and-nut electrode with internal water cooling. Also available with optional air expulsion and platen mounts.

Patent Pending



ARCTIC NON-PILOTED-NUT ELECTRODES

H For Nut Diameter	J Pilot Diameter	K Electrode Length	L Electrode Diameter	Description	Part Number	Shank Size
0.164	0.180	4	1-1/4	216	175-2162-X	
0.190	0.215			219	175-2192-X	
0.216	0.240			222	175-2222-X	
1/4	0.275			225	175-2252-X	
5/16 & 8mm	0.345			231	175-2312-X	
3/8	0.405			238	175-2382-X	
6mm	0.261			206	175-2062-X	
7mm	0.300			207	175-2072-X	
9mm	0.385			209	175-2092-X	
10mm	0.425			210	175-2102-X	
7/16	0.562	4	1-1/2	244	175-2443-X	
1/2	0.625			250	175-2503-X	
9/16	0.687			256	175-2563-X	
12mm	0.595			212	175-2123-X	

