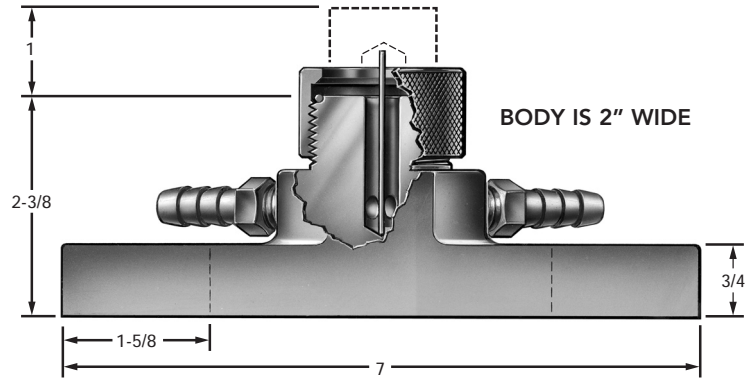
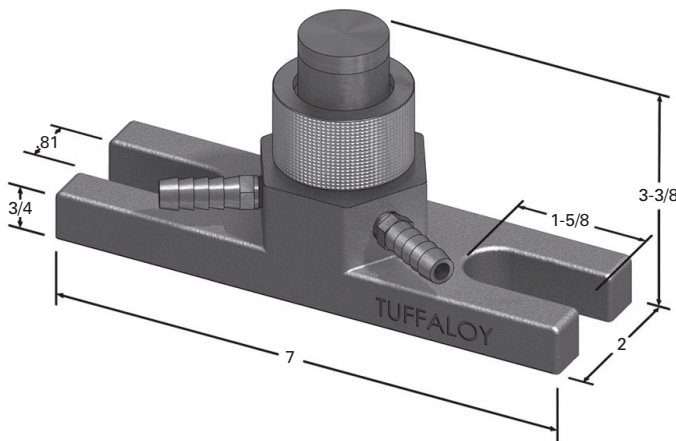


Size 1 PM holder (9/16-in. mounting bolts)
4510 holder, Part No. 350-4510



Size 2 PM holder (3/4-in. mounting bolts)
4520 holder, Part No. 350-4520



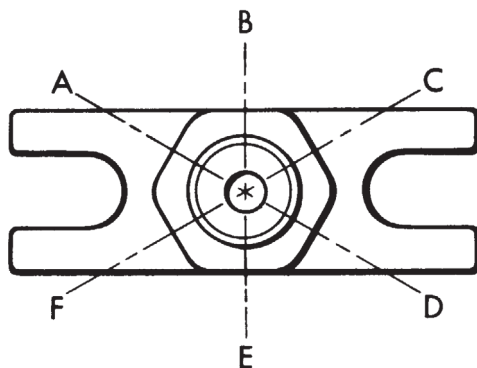
PM HOLDERS

TUFFALOY PM holders may be mounted directly to press-type welder platens, or they can be used as components of special weld fixturing. They come in two sizes, which match standard T-slot spacings (either of which can be furnished to hold any of the four standard tips: 4, 5, 6 or 7 RW). The smaller holder is for use on RWMA Size 1 welders, which have the 3-1/2" spacing. The larger one is for the Size 2 and 3 welders, which have the 5- and 6-inch spacing.

Big, half-inch mounting bolts may be used to assure good conductivity. The holders may be used one-to-one or in multiples closely bunched. PM holders make special fixture building easy. They can be bolted to a fixture or back-up base as easily as to a platen. They are compact and have self-contained coolant systems. These PM holders are made of Class 2 (C18200) alloy.

Fixture Building: PM holders make special fixture building easy too. They can be bolted to a fixture or backup base as easily as to a platen. They are compact and have self-contained coolant systems that eliminate making a coolant manifold out of the fixture.

Hose Connections: You may specify where you want the hose connectors in the hexagonal base. Select any two of the six possible locations and specify by using the symbols shown on the diagram (connector locations: A-B, or A-D, etc.). Position A-C is standard. (A-F and C-D are not possible.)



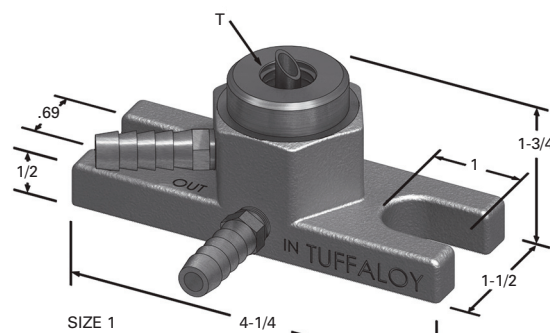
Hose Connection Orientation Options



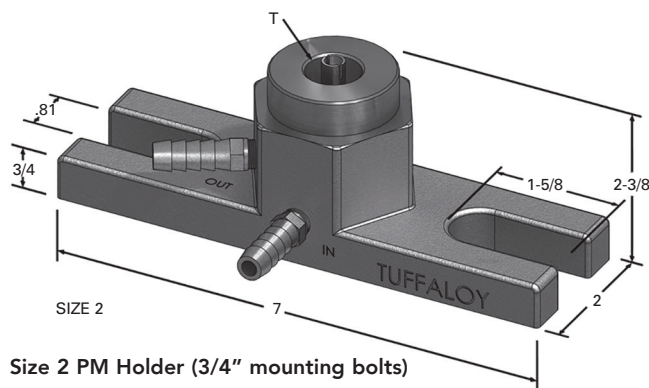
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Size 1 PM Holder (5/8" mounting bolts)



Size 2 PM Holder (3/4" mounting bolts)

STANDARD TIP PM HOLDERS

RW Tip Socket	Size 1 (Small)		Size 2 (Large)	
	Descrip-tion	Part No.	Descrip-tion	Part No.
4	4560	350-4560	4570	350-4570
5	4561	350-4561	4571	350-4571
6	4562	350-4562	4572	350-4572
7	4563	350-4563	4573	350-4573

FOR THREADED ELECTRODES

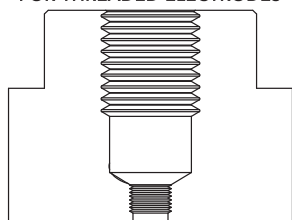
Thread Size	Size 1	Size 2
5/8-11	350-4580	350-4590
3/4-10	350-4581	350-4591

FOR THREADED ADAPTERS

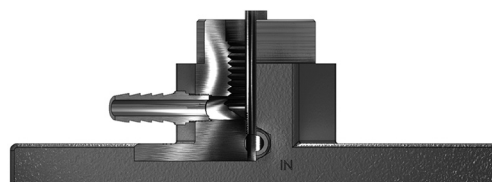
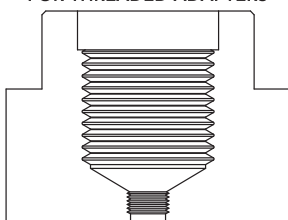
Thread Size	Size 1	Size 2
7/8-14	350-4582	350-4592
1-12	350-4583	350-4593

See adapters [page 17](#)

FOR THREADED ELECTRODES

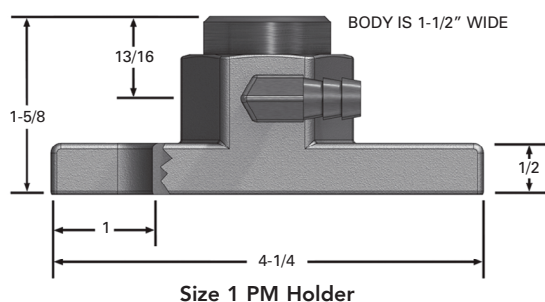


FOR THREADED ADAPTERS

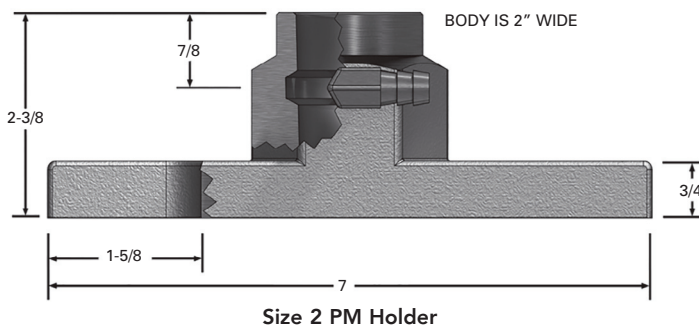


NUT AND STUD PM HOLDERS

PM Holders T-Slot Spacing	Holder Size	For 1" Dia. Electrodes		For 1-1/2" Dia. Electrodes	
		Description	Part No.	Description	Part No.
3-1/2	1PM	4515	350-4515	4526	350-4526
5 & 6	2PM	4525	350-4525		

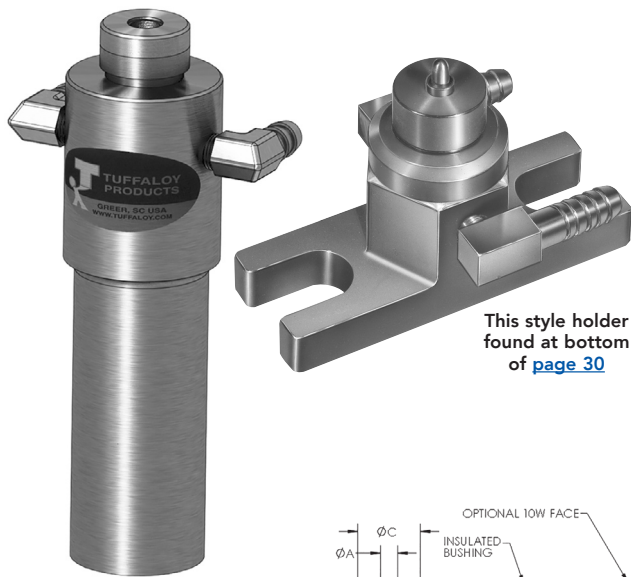


Size 1 PM Holder



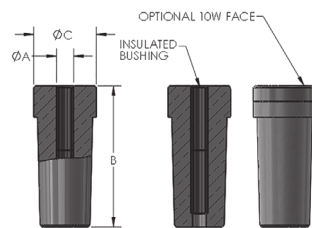
Size 2 PM Holder





This style holder found at bottom of [page 30](#)

This style holder found at top of [page 32](#)



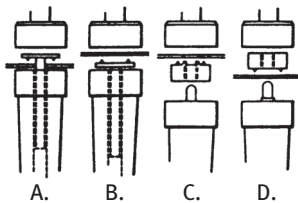
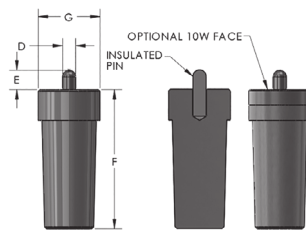
ELECTRODES

Stud Electrodes

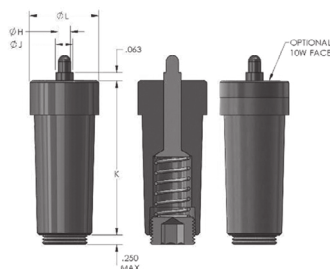
Tuffaloy stud electrode tips are for projection-welding screws, bolts or pins, whether they pass through the sheet or are to be attached directly to its face.

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.



- A. Welding a stud through a hole in sheet metal.
 B. Welding a stud directly to face of sheet metal.
 C. Self-piloted nut aligns itself with the hole in sheet.
 D. Non-piloted-nut is guided by specially designed electrode.



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 can be ordered with refractory alloy facings, such as TUFFALOY 10W.

STUD ELECTRODES

A	B	C	Description	Part No.	With 10W Face Refractory - Item Number
#06 (.150)	2-1/4	1	400	175-4001	175-4001-10W
#08 (.164)			401	175-4011	175-4011-10W
#10 (.190)			402	175-4021	175-4021-10W
#12 (.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

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
#08 (.164)	3/16	2-1/4	1	411	175-4111	175-4111-10W
#10 (.190)	3/16			412	175-4121	175-4121-10W
#12 (.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	175-4561	175-4561-10W
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

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
#08 (.164)	0.18	2-1/4	1	421	175-4211	175-4211-10W
#10 (.190)	0.215			422	175-4221	175-4221-10W
#12 (.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	175-4761	175-4761-10W
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