

# TUFFALOY STRAIGHT WELDING TIP HOLDERS

## GOLDCROWN® AND STANDARD EJECTOR HOLDERS

with self-adjusting water tubes

TUFFALOY straight tip-ejecting holders deliver dependable, first class performance. They are designed with maximum simplicity to require minimum maintenance.

All TUFFALOY straight holders now feature exclusive spring-loaded self-adjusting water tubes to ensure the proper flow of coolant through resistance welding electrodes. The larger ejector holders incorporate bigger fittings for higher coolant flow rates.

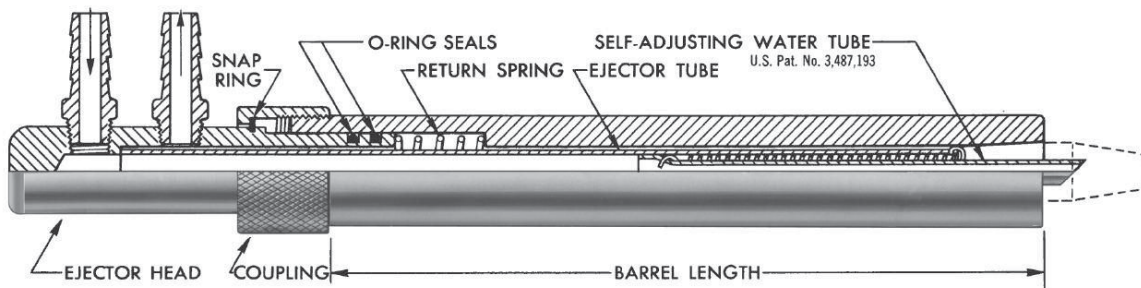
Goldcrown premium holders are made of extra-strength Class 2 alloy and are ground and polished to yield greatest conductivity.

ADAPTER SIZE FOR THREADED BARRELS			
Part No.	Description	Taper	THD Size
195-8550	8550	4RW	5/8-14 NPT
195-8551	8551	5RW	5/8-14 NPT
190-3615	AD-346-1.5	6RW	3/4-14 NPT

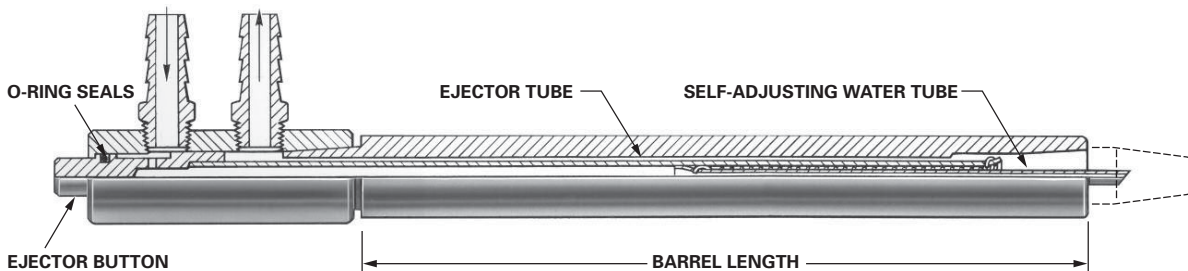
**THESE ADAPTERS ARE SUPPLIED**  
with the holder

Barrel Dia.	Tip Socket RW	Barrel Length	GOLDCROWN		STANDARD	
			Description	Part No.	Description	Part No.
5/8	4	8	E-05084	320-0100		
5/8	4	12	E-05124	320-0120		
3/4	4	8	E-06084	320-0140		
3/4	5	8	E-06085	320-0150		
3/4	4	12	E-06124	320-0160		
3/4	5	12	E-06125	320-0170*		
7/8	4	8	E-07084	320-0180		
7/8	5	8	E-07085	320-0190		
7/8	4	12	E-07124	320-0200		
7/8	5	12	E-07125	320-0210		
1	4	8	E-08084	320-0220	SHE-08084	321-0220
1	5	8	E-08085	320-0230	SHE-08085	321-0230
1	6	8	E-08086	320-0240*	SHE-08086	321-0240*
1	4	12	E-08124	320-0250	SHE-08124	321-0250
1	5	12	E-08125	320-0260	SHE-08125	321-0260
1	6	12	E-08126	320-0270*	SHE-08126	321-0270*
1-1/4	4	8	E-10084	320-0280	SHE-10084	321-0280
1-1/4	5	8	E-10085	320-0290	SHE-10085	321-0290
1-1/4	6	8	E-10086	320-0300*	SHE-10086	321-0300*
1-1/4	7	8	E-10087	320-0310	SHE-10087	321-0310
1-1/4	4	12	E-10124	320-0320	SHE-10124	321-0320
1-1/4	5	12	E-10125	320-0330	SHE-10125	321-0330
1-1/4	6	12	E-10126	320-0340*	SHE-10126	321-0340*
1-1/4	7	12	E-10127	320-0350	SHE-10127	321-0350
1-1/2	4	8	E-12084	320-0360*	SHE-12084	321-0360
1-1/2	5	8	E-12085	320-0370	SHE-12085	321-0370
1-1/2	5	8	E-12085-A	320-0375*	SHE-12085-A	321-0375*
1-1/2	6	8	E-12086	320-0380	SHE-12086	321-0380
1-1/2	6	8	E-12086-A	320-0385	SHE-12086-A	321-0385
1-1/2	7	8	E-12087	320-0390	SHE-12087	321-0390
1-1/2	4	12	E-12124	320-0410	SHE-12124	321-0410
1-1/2	4	12	E-12124-A	320-0415*	SHE-12124-A	321-0415*
1-1/2	5	12	E-12125	320-0420	SHE-12125	321-0420
1-1/2	5	12	E-12125-A	320-0425*	SHE-12125-A	321-0425*
1-1/2	6	12	E-12126	320-0440*	SHE-12126	321-0440*
1-1/2	7	12	E-12127	320-0450	SHE-12127	321-0450

Suffix 'A' in holder description denotes a threaded tip adapter is supplied  
\*Item not normally stocked



Cross-section of holders with barrels 1 inch or more in diameter.



Cross-section of holders with barrels 7/8 inch or less in diameter.



## GOLDSPOT® AND STANDARD NON-EJECTOR HOLDERS

### with self-adjusting water tubes

TUFFALOY straight non-ejector holders are now equipped with the same springloaded self-adjusting water tubes as the Goldcrown ejector unit, so electrode cooling is facilitated and improved. They are low in initial cost and inexpensive to maintain. Simple design and few parts contribute to low maintenance cost and excellent performance. Holders are heavy-duty and built to withstand very high welding rates.

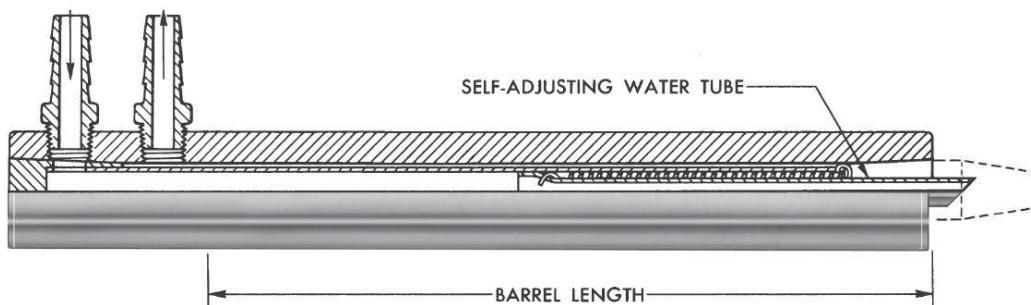
**Goldspot** premium holders have barrels of Class 2 alloy, ground and polished for best conductivity.

ADAPTER SIZE FOR THREADED BARRELS			
Part No.	Description	Taper	THD Size
195-8550	8550	4RW	5/8-14 NPT
195-8551	8551	5RW	5/8-14 NPT
190-3615	AD-346-1.5	6RW	3/4-14 NPT

**THESE ADAPTERS ARE SUPPLIED**  
with the holder

Barrel Dia.	Tip Socket RW	Barrel Length	GOLDSPOT		STANDARD	
			Description	Part No.	Description	Part No.
5/8	4	8	N-05084	325-0100		
5/8	4	12	N-05124	325-0120*		
3/4	4	8	N-06084	325-0140		
3/4	5	8	N-06085	325-0150*		
3/4	4	12	N-06124	325-0160*		
3/4	5	12	N-06125	325-0170*		
7/8	4	8	N-07084	325-0180		
7/8	5	8	N-07085	325-0190*		
7/8	4	12	N-07124	325-0200		
7/8	5	12	N-07125	325-0210*		
1	4	8	N-08084	325-0220	SHN-08084	326-0220
1	4	8	N-08084-A	325-0225	SHN-08084-A	326-0225
1	5	8	N-08085	325-0230	SHN-08085	326-0230
1	5	8	N-08085-A	325-0235*	SHN-08085-A	326-0235*
1	6	8	N-08086	325-0240*	SHN-08086	326-0240*
1	4	12	N-08124	325-0250	SHN-08124	326-0250
1	4	12	N-08124-A	325-0255	SHN-08124-A	326-0255
1	5	12	N-08125	325-0260	SHN-08125	326-0260
1	5	12	N-08125-A	325-0265	SHN-08125-A	326-0265
1	6	12	N-08126	325-0270*	SHN-08126	326-0270*
1-1/4	4	8	N-10084	325-0280*	SHN-10084	326-0280*
1-1/4	4	8	N-10084-A	325-0285	SHN-10084-A	326-0285
1-1/4	5	8	N-10085	325-0290	SHN-10085	326-0290
1-1/4	5	8	N-10085-A	325-0295	SHN-10085-A	326-0295
1-1/4	6	8	N-10086	325-0300*	SHN-10086	326-0300*
1-1/4	7	8	N-10087	325-0310*	SHN-10087	326-0310*
1-1/4	4	12	N-10124	325-0320	SHN-10124	326-0320
1-1/4	4	12	N-10124-A	325-0325*	SHN-10124-A	326-0325*
1-1/4	5	12	N-10125	325-0330	SHN-10125	326-0330
1-1/4	5	12	N-10125-A	325-0335	SHN-10125-A	326-0335
1-1/4	6	12	N-10126	325-0340*	SHN-10126	326-0340*
1-1/4	7	12	N-10127	325-0350*	SHN-10127	326-0350*
1-1/2	4	8	N-12084	325-0360*	SHN-12084	326-0360*
1-1/2	4	8	N-12084-A	325-0365*	SHN-12084-A	326-0365*
1-1/2	5	8	N-12085	325-0370	SHN-12085	326-0370
1-1/2	5	8	N-12085-A	325-0375	SHN-12085-A	326-0375
1-1/2	6	8	N-12086	325-0380*	SHN-12086	326-0380*
1-1/2	7	8	N-12087	325-0390	SHN-12087	326-0390
1-1/2	4	12	N-12124	325-0410*	SHN-12124	326-0410*
1-1/2	5	12	N-12125	325-0420	SHN-12125	326-0420
1-1/2	5	12	N-12125-A	325-0425*	SHN-12125-A	326-0425*
1-1/2	6	12	N-12126	325-0440*	SHN-12126	326-0440*
1-1/2	7	12	N-12127	325-0450*	SHN-12127	326-0450*

Suffix "A" in holder description denotes a threaded tip adapter is supplied  
\*Item not normally stocked



Cross-section view of holders with barrels 1 inch or more in diameter.



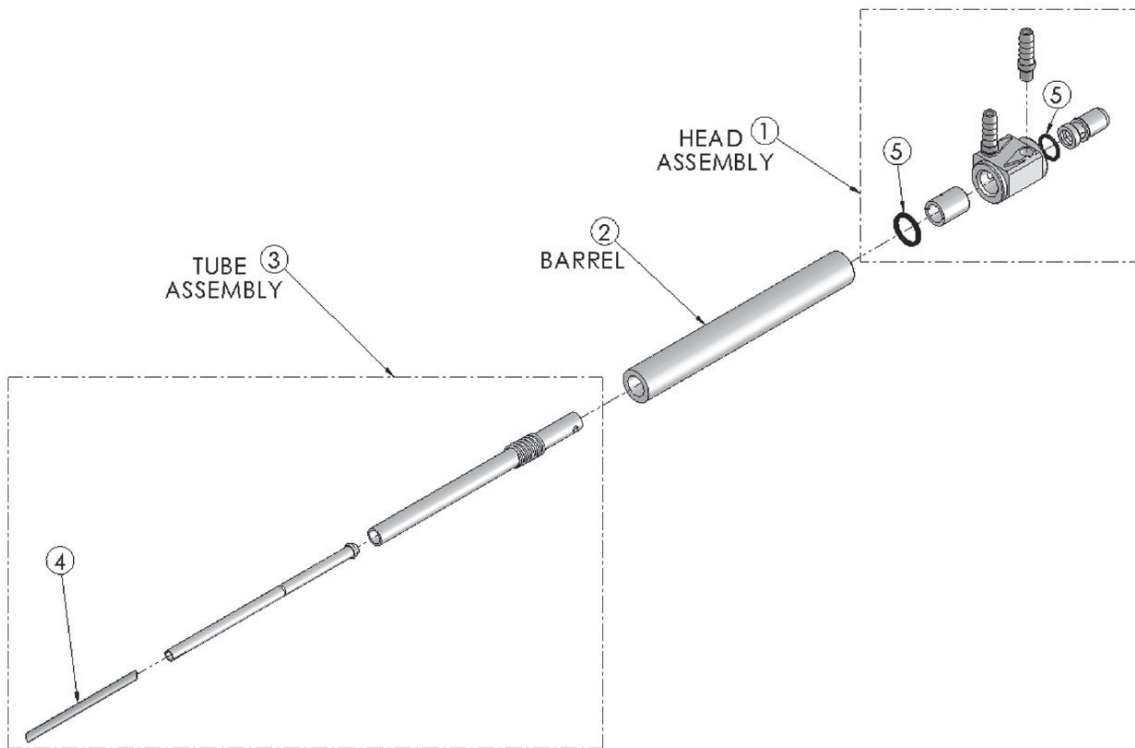
# TUFFALOY NICKEL PLATED EJECTOR HOLDERS



Barrel Diameter	Tip Socket RW	Barrel Length	Description	Holder Assy.
1	4	8	NHE-08084	319-0213
1-1/4	4	8	NHE-10084	319-0214
1	5	8	NHE-08085	319-0216
1-1/4	5	8	NHE-10085	319-0217
1	4	12	NHE-08124	319-0233
1-1/4	4	12	NHE-10124	319-0234
1	5	12	NHE-08125	319-0236
1-1/4	5	12	NHE-10125	319-0237

## TUFFALOY NICKEL PLATED EJECTOR HOLDERS

TUFFALOY nickel plated ejector holders feature high conductivity copper with nickel plated surfaces for corrosion resistance and super conductivity. These holders also feature adjustable water tubes to insure proper water flow for all electrodes.



Description	Holder Assy.	1 Head Assy.	2 Barrel	3 Tube Assy.	4 Water Tube	5 Hose O-Ring Kit
NHE-08084	319-0213	195-0101	001-213B	195-0210	195-0017	037-0105
NHE-10084	319-0214	195-0101	001-214B	195-0210	195-0017	037-0105
NHE-08085	319-0216	195-0100	001-216B	195-0208	195-0015	037-0106
NHE-10085	319-0217	195-0100	001-217B	195-0208	195-0015	037-0106
NHE-08124	319-0233	195-0101	001-233B	195-0211	195-0017	037-0105
NHE-10124	319-0234	195-0101	001-234B	195-0211	195-0017	037-0105
NHE-08125	319-0236	195-0100	001-236B	195-0212	195-0015	037-0106
NHE-10125	319-0237	195-0100	001-237B	195-0212	195-0015	037-0106

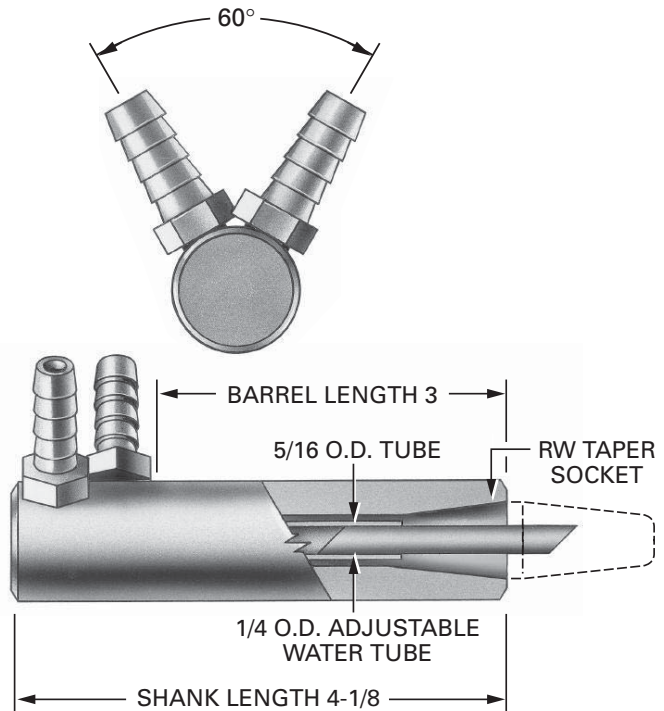


**CLOSED-COUPLED HOLDERS**

For use where welding space is limited. Standard body length is 3 inches. Other lengths are made on request; minimum length 2 inches.

Body Dia.	Tip Socket	Description	Part No.
3/4	4RW	N-06034	330-0140
7/8	4RW	N-07034	330-0180
7/8	5RW	N-07035	330-0190
1	4RW	N-08034	330-0220
1	5RW	N-08035	330-0230
1-1/4	4RW	N-10034	330-0280
1-1/4	5RW	N-10035	330-0290
1-1/2	4RW	N-12034	330-0360*
1-1/2	5RW	N-12035	330-0370*

\*Item not normally stocked

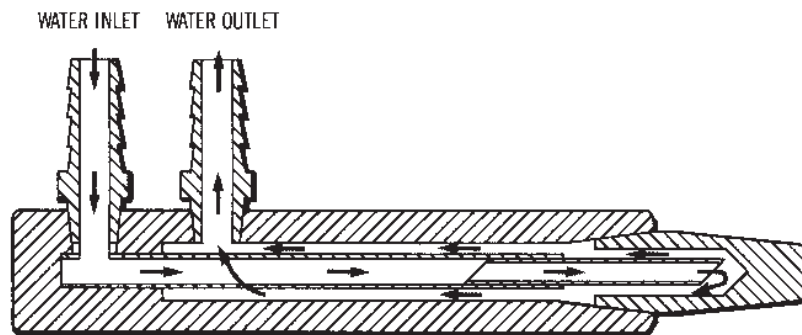


**ADJUSTABLE WATER TUBE USE**

It is very important that resistance welding electrodes be kept as cool as possible; excessive heat softens them, allowing the nose to mushroom and weld quality to drop.

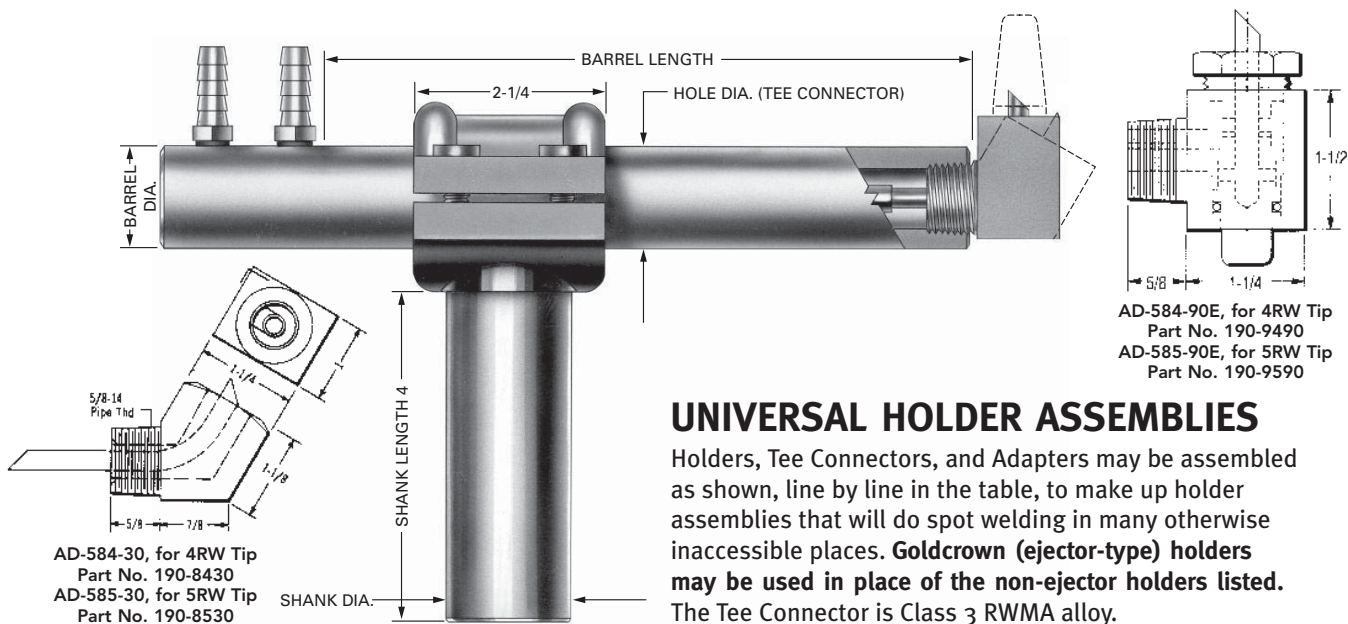
Adjustable water tubes are used to deflect incoming coolant water to the full extent of the water hole in the electrode. Before installing a tip, check that there is an adjustable water tube in place and that it is pulled out far enough so that it will contact the end of the water hole in the tip.

The drawing shows a typical straight holder, but the principle is the same for all types of holders.



Adjustable water tube correctly positioned in tip. Cold water will strike the hottest part of the tip first.

# TUFFALOY OFFSET HOLDERS



## UNIVERSAL HOLDER ASSEMBLIES

Holders, Tee Connectors, and Adapters may be assembled as shown, line by line in the table, to make up holder assemblies that will do spot welding in many otherwise inaccessible places. **Goldcrown (ejector-type) holders may be used in place of the non-ejector holders listed.** The Tee Connector is Class 3 RWMA alloy.

HOLDERS				TEE CONNECTORS				ADAPTERS TO CHOOSE FROM			
Barrel Dia.	Barrel Length	Description.	Part No.	Hole Dia.	Shank Dia.	Description	Part No.	Tip Socket	Angle Degrees	Description	Part No.
1	8	N-08085-A	325-0235	1	1	T-1-1	192-1100	4RW	90	AD-584-90	190-8490
1-1/4	8	N-10085-A	325-0295	1-1/4	1	T-1	192-1000	4RW	30	AD-584-30	190-8430
1-1/4	8	N-10085-A	325-0295	1-1/4	1	T-1	192-1000	5RW	90	AD-585-90	190-8590
1-1/4	8	N-10085-A	325-0295	1-1/4	1-1/4	T-125	192-1250	5RW	30	AD-585-30	190-8530
1-1/4	8	N-10085-A	325-0295	1-1/4	1-1/4	T-125	192-1250	6RW	90	AD-586-90	190-8690
1-1/4	8	N-10085-A	325-0295	1-1/4	1-1/4	T-125	192-1250				
1-1/2	8	N-12085-A	325-0375	1-1/2	1-1/2	T-15	192-1500				
1-1/2	8	N-12085-A	325-0375	1-1/2	1-1/2	T-15	192-1500				
1-1/2	8	N-12085-A	325-0375	1-1/2	1-1/2	T-15	192-1500				

## WELDER ARMS TUFFALOY

Class 2 spot welding machine arms made by Tuffaloy reduce set up time and give longer life.

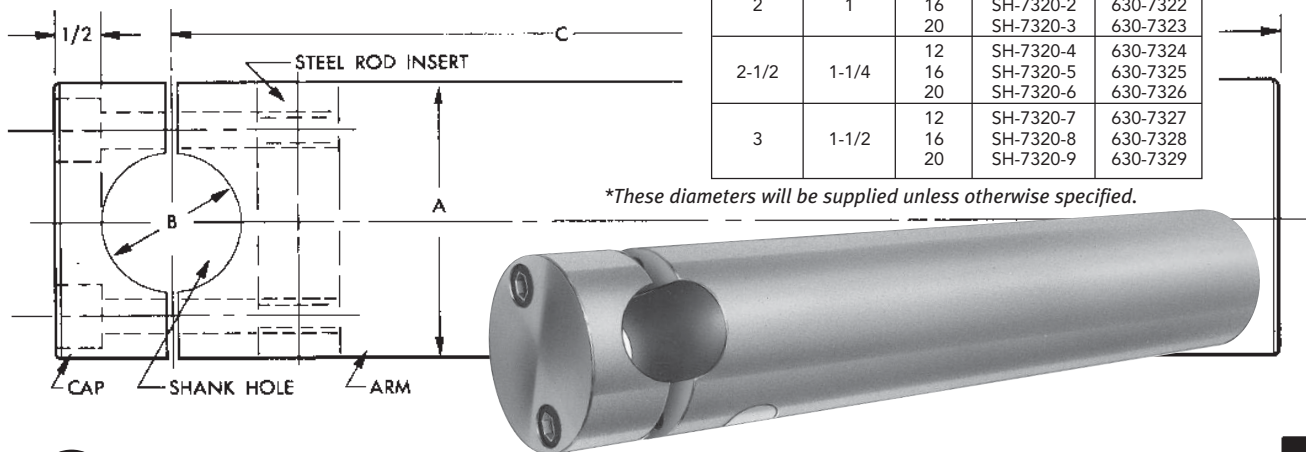
Electrode holder shanks can be attached to these arms from the front, by bolting the cap over them. This means no extra clearance is required between the arms to allow running a shank up (or down) into a hole in the arm. It makes the insertion of Tuffaloy multiple-welding holders much easier.

One of the most common failures of welder arms is the destruction of the bolt hole threads, due to the relatively soft copper involved. Tuffaloy arms have a transverse steel bar insert in which the bolt hole threads are cut. This provides greatly increased thread life.

Standard arm configurations are shown in the table. Special arms are also available.

A Arm Diameter	B Hole Diameter*	C Arm Length	Description	Part No.
2	1	12	SH-7320-1	630-7321
		16	SH-7320-2	630-7322
		20	SH-7320-3	630-7323
2-1/2	1-1/4	12	SH-7320-4	630-7324
		16	SH-7320-5	630-7325
		20	SH-7320-6	630-7326
3	1-1/2	12	SH-7320-7	630-7327
		16	SH-7320-8	630-7328
		20	SH-7320-9	630-7329

\*These diameters will be supplied unless otherwise specified.



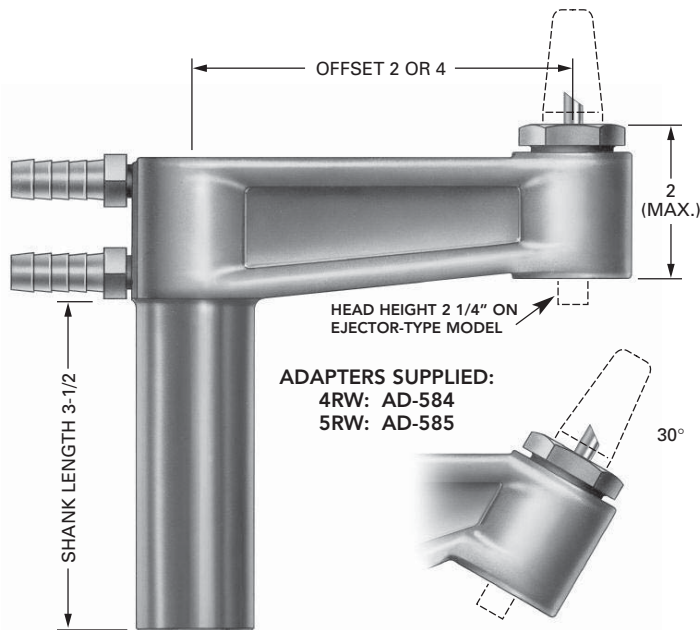


**STANDARD OFFSET HOLDERS**

TUFFALOY Cast Class 3 Alloy offset holders combine long life with good conductivity. Threaded tip adapters are easily replaced when tip socket is worn beyond use, or when you wish to change to a different taper size.

TUFFALOY offset holders are made in 2- and 4-inch offsets, and in four shank sizes, with 90° and 30° heads. They are supplied with adapters for No. 4 or No. 5 RW taper tips.

Tip Ejector mechanisms are available on all 90° head holders and the 30° head 4-in. offset holders. **When ordering this feature change order number prefix from 'ON' to 'OE'.** Example: OE-874-290.



ADAPTERS SUPPLIED:  
4RW: AD-584  
5RW: AD-585

TWO-INCH OFFSET HOLDERS											
Adapter Tip Socket	Socket Angle	3/4" SHANK DIA.		7/8" SHANK DIA.		1" SHANK DIA.		1-1/4" SHANK DIA.		1-1/2" SHANK DIA.	
		Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.
4RW	30°	ON-754-230	335-1300	ON-874-230	335-1400*	ON-14-230	335-1000	ON-1254-230	335-1100	ON-154-230	335-1200*
4RW	90°	ON-754-290	335-1310*	ON-874-290	335-1410*	ON-14-290	335-1010	ON-1254-290	335-1110	ON-154-290	335-1210*
5RW	30°	ON-755-230	335-1350*	ON-875-230	335-1450*	ON-15-230	335-1050	ON-1255-230	335-1150	ON-155-230	335-1250*
5RW	90°	ON-755-290	335-1360*	ON-875-290	335-1460*	ON-15-290	335-1060	ON-1255-290	335-1160	ON-155-290	335-1260

FOUR-INCH OFFSET HOLDERS											
Adapter Tip Socket	Socket Angle	3/4" SHANK DIA.		7/8" SHANK DIA.		1" SHANK DIA.		1-1/4" SHANK DIA.		1-1/2" SHANK DIA.	
		Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.
4RW	30°	ON-754-430	335-1320*	ON-874-430	335-1420*	ON-14-430	335-1020	ON-1254-430	335-1120	ON-154-430	335-1220*
4RW	90°	ON-754-490	335-1330*	ON-874-490	335-1430*	ON-14-490	335-1030	ON-1254-490	335-1130	ON-154-490	335-1230*
5RW	30°	ON-755-430	335-1370*	ON-875-430	335-1470*	ON-15-430	335-1070	ON-1255-430	335-1170	ON-155-430	335-1270
5RW	90°	ON-755-490	335-1380*	ON-875-490	335-1480*	ON-15-490	335-1080	ON-1255-490	335-1180	ON-155-490	335-1280

TWO-INCH EJECTOR STYLE OFFSET HOLDERS											
Adapter Tip Socket	Socket Angle	3/4" SHANK DIA.		7/8" SHANK DIA.		1" SHANK DIA.		1-1/4" SHANK DIA.		1-1/2" SHANK DIA.	
		Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.
4RW	90°	OE-754-290	335-0315*	OE-874-290	335-0410*	OE-14-290	335-0010	OE-1254-290	335-0110	OE-154-290	335-0210
5RW	90°	OE-755-290	335-0360*	OE-875-290	335-0460*	OE-15-290	335-0060	OE-1255-290	335-0160	OE-155-290	335-0260

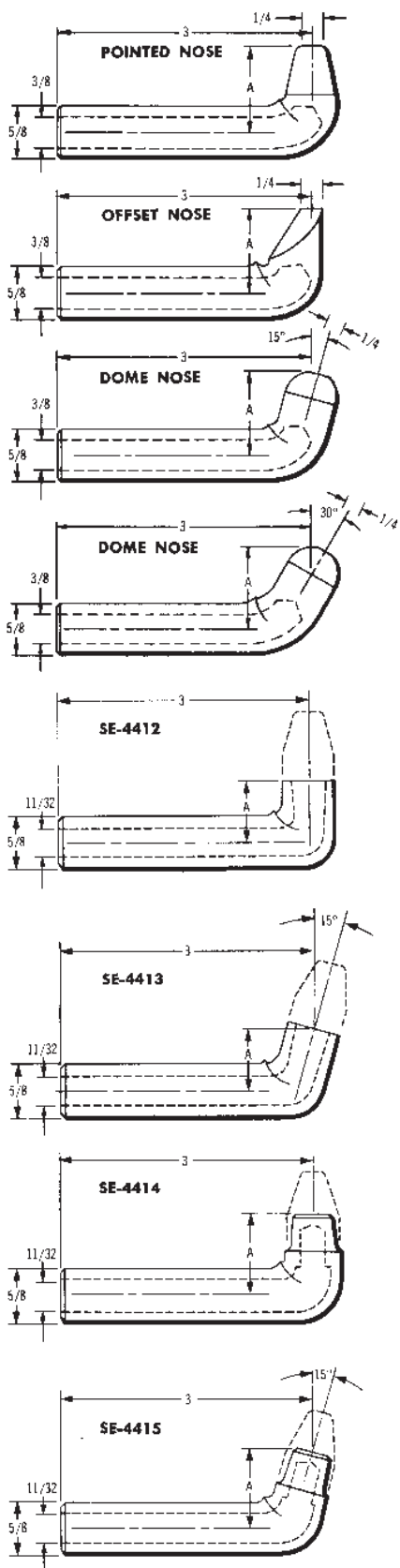
  

FOUR-INCH EJECTOR STYLE OFFSET HOLDERS											
Adapter Tip Socket	Socket Angle	3/4" SHANK DIA.		7/8" SHANK DIA.		1" SHANK DIA.		1-1/4" SHANK DIA.		1-1/2" SHANK DIA.	
		Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.	Description	Part No.
4RW	30°	OE-754-430	335-0320*	OE-874-430	335-0420*	OE-14-430	335-0020	OE-1254-430	335-0120	OE-154-430	335-0220
4RW	90°	OE-754-490	335-0330*	OE-874-490	335-0430*	OE-14-490	335-0030	OE-1254-490	335-0130	OE-154-490	335-0230
5RW	30°	OE-755-430	335-0370*	OE-875-430	335-0470*	OE-15-430	335-0070	OE-1255-430	335-0170	OE-155-430	335-0270
5RW	90°	OE-755-490	335-0380*	OE-875-490	335-0480*	OE-15-490	335-0080	OE-1255-490	335-0180	OE-155-490	335-0280

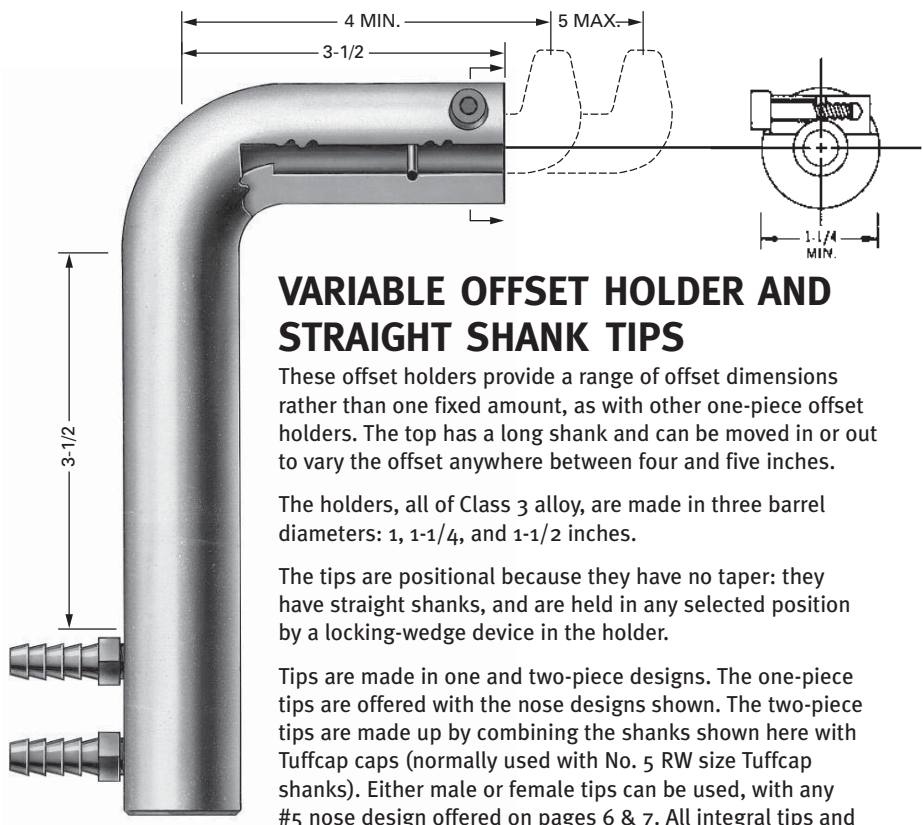
\*May not be in stock



# TUFFALOY VARIABLE-OFFSET HOLDERS



VARIABLE-OFFSET HOLDERS		
Shank Dia.	Description	Part No.
1	SH-7223	345-7223
1-1/4	SH-7224	345-7224
1-1/2	SH-7225	345-7225



## VARIABLE OFFSET HOLDER AND STRAIGHT SHANK TIPS

These offset holders provide a range of offset dimensions rather than one fixed amount, as with other one-piece offset holders. The top has a long shank and can be moved in or out to vary the offset anywhere between four and five inches.

The holders, all of Class 3 alloy, are made in three barrel diameters: 1, 1-1/4, and 1-1/2 inches.

The tips are positional because they have no taper: they have straight shanks, and are held in any selected position by a locking-wedge device in the holder.

Tips are made in one and two-piece designs. The one-piece tips are offered with the nose designs shown. The two-piece tips are made up by combining the shanks shown here with Tuffcap caps (normally used with No. 5 RW size Tuffcap shanks). Either male or female tips can be used, with any #5 nose design offered on pages 6 & 7. All integral tips and shanks shown here are of Class 2 alloy.

STRAIGHT-SHANK TIPS			
Type of Tip	Nose Length 'A'	Description	Part No.
Pointed	1"	SE-4408-1	170-4408
Offset	1"	SE-4409-1	170-4409
15° Dome	1"	SE-4410-1	170-4410
30° Dome	1"	SE-4411-1	170-4411
Pointed	2"	SE-4408-2	170-4418
Offset	2"	SE-4409-2	170-4419
15° Dome	2"	SE-4410-2	170-4420
30° Dome	2"	SE-4411-2	170-4421

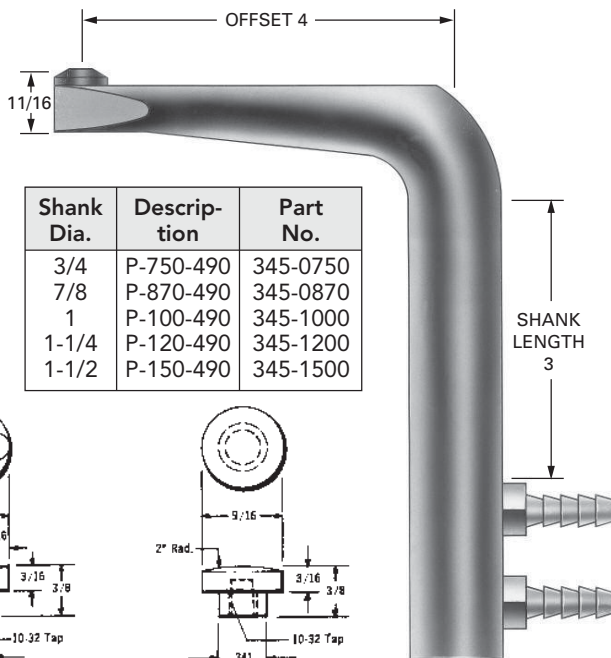
STRAIGHT-SHANK TUFFCAP SHANKS				
Tuffcap Cap Type	Nose Length 'A'	Angle	Description	Part No.
Male	3/4"	90°	SE-4412	170-4422
Male	3/4"	15°	SE-4413	170-4423
Female	1"	90°	SE-4414	170-4424
Female	1"	15°	SE-4415	170-4425



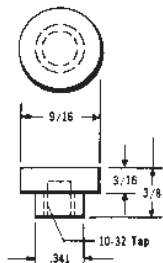
**TUFFALOY PADDLE-TYPE HOLDERS AND SOCKET-TYPE TIPS**

This holder is for welding in very restricted areas. It provides a very low head height and a four-inch offset. It is made in shank diameters of 3/4, 7/8, 1, and 1-1/4 inches. An adapter bushing is used to add a 1-1/2-in. dia. model to the line. Each holder comes complete with a socket-type tip (SE-3101) and holding screw. The tip may be inserted in either side of the paddle. Holders are of Class 2 alloy. Tips are available in Class 1, Class 2, Class 3 alloy, or Z alloy.

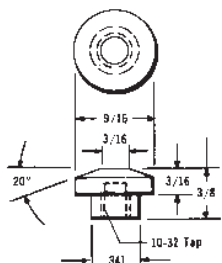
The four socket-type tips shown here can be used in special welding fixtures and dies as well as in the paddle-type holders.



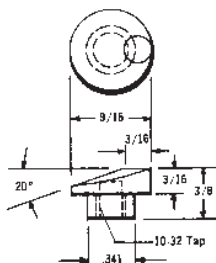
Shank Dia.	Description	Part No.
3/4	P-750-490	345-0750
7/8	P-870-490	345-0870
1	P-100-490	345-1000
1-1/4	P-120-490	345-1200
1-1/2	P-150-490	345-1500



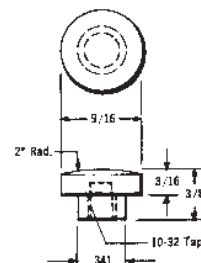
**FLAT FACED**  
 Class 1 SE-3099-1  
 Part No. 170-3099-1  
 Class 2 SE-3099  
 Part No. 170-3099  
 Class 3 SE-3111  
 Part No. 170-3111  
 ZIRC SE-3099-Z  
 Part No. 170-3099-Z



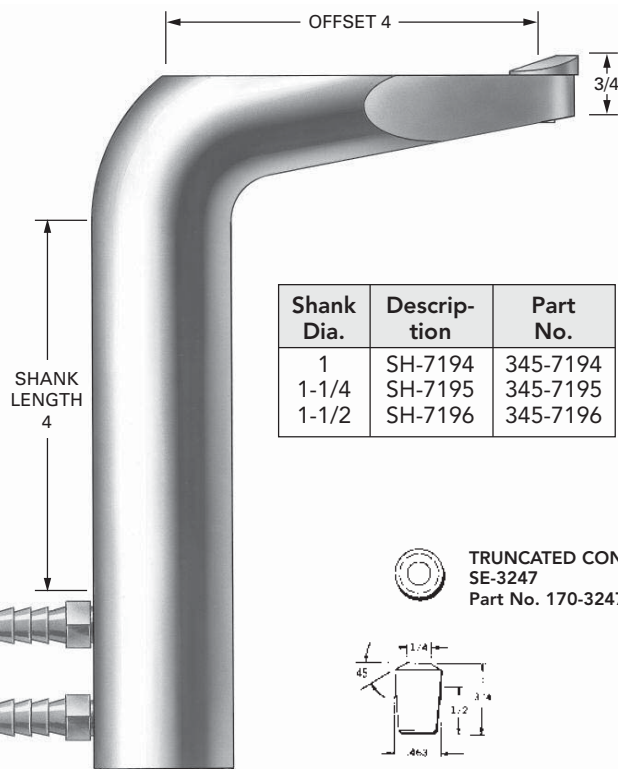
**TRUNCATED CONE**  
 Class 1 SE-3101-1  
 Part No. 170-3101-1  
 Class 2 SE-3101  
 Part No. 170-3101  
 Class 3 SE-3113  
 Part No. 170-3113  
 ZIRC SE-3101-Z  
 Part No. 170-3101-Z



**OFFSET**  
 Class 1 SE-3102-1  
 Part No. 170-3102-1  
 Class 2 SE-3102  
 Part No. 170-3102  
 Class 3 SE-3123  
 Part No. 170-3123  
 ZIRC SE-3102-Z  
 Part No. 170-3102-Z



**RADIUS FACED**  
 Class 1 SE-3110-1  
 Part No. 170-3110-1  
 Class 2 SE-3110  
 Part No. 170-3110  
 Class 3 SE-3133  
 Part No. 170-3133  
 ZIRC SE-3110-Z  
 Part No. 170-3110-Z



Shank Dia.	Description	Part No.
1	SH-7194	345-7194
1-1/4	SH-7195	345-7195
1-1/2	SH-7196	345-7196

**TUFFALOY HEAVY-DUTY PADDLE-TYPE HOLDERS AND TIPS**

TUFFALOY heavy-duty paddle-type holders are made of the stronger Class 3 alloy, for greater rigidity and minimum deflection, even under loads of 1000 pounds and more. Class 3 alloy provides 154% more tensile strength. Head height is a low 3/4-in. and the shank length is a usable 4 inches.

Three low-profile electrodes of Class 2 alloy are offered for use in this heavy-duty holder. If applications permit greater head height, any standard No. 4 RW tip may be used.

