

The ANCHOR<sup>®</sup> RIVET BUSH (ARB) is a captive threaded bush designed to suit a wide range of sheet thicknesses. Its serrated shank when riveted, achieves high torque and push out resistance. A standoff version (ARBSO) allows the body length to be specified, thus providing a captive threaded spacer.

## ADVANTAGES

- IDEAL FOR BOTH THINNER AND HARDER SHEET METALS
- IDEAL FOR LIGHT ALLOYS, ALUMINUM, MAGNESIUM ETC.
- CAN BE INSTALLED BY HAND OR AUTOMATIC METHODS
- SUITABLE FOR USE IN PUNCHED OR DRILLED HOLES
- CAN BE USED FOR SHEET THICKNESSES UP TO 6MM
- CAN BE USED TO JOIN TWO SHEETS TOGETHER

## DESIGN GUIDE

### HOLE SIZE IN SHEET

Holes may be punched or drilled and a tolerance of -0.00 +0.1mm should be maintained.

### INSTALLATION

To reduce the projection on the reverse side of the sheet it is essential that the correct design of riveting punch is always used (see Assembly Punch data).

For consistent results a press is recommended, however small quantities may be installed using hand tools.

### STAND OFF TYPES

Where minimum projection is not essential there are performance advantages in specifying the next larger shank code.

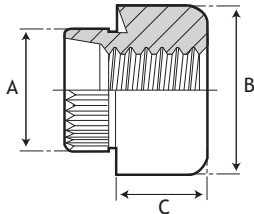
### DIRECTION OF LOAD

Although the mating component can be fastened to either side of the bush, maximum performance will be achieved when fastening to the riveted shank side.



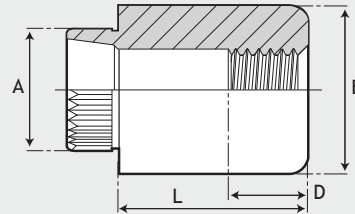
## TECHNICAL DATA

### BUSHES



Product Code ARB

### STAND OFFS



Product Code ARBSO

**STANDARD MATERIAL**- Mild Steel (S)  
**STANDARD FINISH**- Zinc & Clear Trivalent Passivation (Z)  
 Other materials and finishes possible on quotation.

## DIMENSIONS

INTERNAL THREAD SIZES		Dia. of Shank A	Dia. of Body B	Depth of Body C	Thread Length D	Rec Hole Size -0.00+0.10
Unified	ISO Metric	mm	mm	mm	ARBSO	mm
4	2.5/3	5.8	7.9	3.2	3.3	5.90
6	3.5	6.9	9.5	3.8	3.9	6.95
8	4	6.9	9.5	3.8	3.9	6.95
10	5	8.3	11.1	4.4	4.6	8.35
1/4	6	9.5	12.7	5.7	5.9	9.65
5/16	8	13.0	15.9	6.4	6.5	13.10
3/8-7/16	10	15.4	19.1	7.6	7.9	15.50
1/2	12	19.4	25.4	10.2	10.4	19.50

## ARBSO - Lengths Available('L')

LENGTH	3	4	5	6	8	10	12	14	16	18	20	25
SHANK CODE	001	003	004	006	008	010	012	013	014			
SHEET THICKNESS	0.5-0.6	0.7-0.8	0.9-1.0	1.1-1.3	1.4-1.6	1.7-1.9	2.0-2.2	2.3-2.5	2.6-2.8			
SHANK CODE	016	017	018	019	020	022	023	024	026			
SHEET THICKNESS	2.9-3.1	10swg	3.2-3.4	3.5-3.7	3.8-4.0	4.1-4.3	4.4-4.6	4.7-4.9	5.0-6.0			

## HOW TO SPECIFY

ARB	
PRODUCT CODE	ARB-M4-008-S-Z
THREAD SIZE	ARB-M4-008-S-Z
SHANK CODE	ARB-M4-008-S-Z
MATERIAL CODE	ARB-M4-008-S-Z
FINISH	ARB-M4-008-S-Z

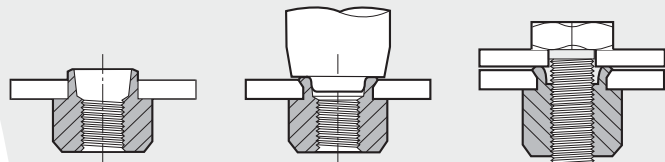
ARBSO	
PRODUCT CODE	ARBSO-M4-008-S-12MM-Z
THREAD SIZE	ARBSO-M4-008-S-12MM-Z
SHANK CODE	ARBSO-M4-008-S-12MM-Z
MATERIAL CODE	ARBSO-M4-008-S-12MM-Z
LENGTH	ARBSO-M4-008-S-12MM-Z
FINISH	ARBSO-M4-008-S-12MM-Z



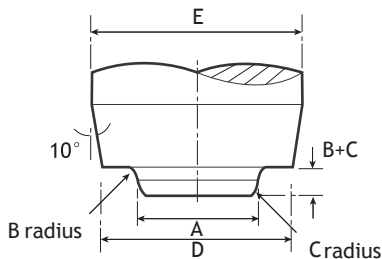
**ANCHOR<sup>®</sup> RIVET BUSHES** can be installed using both an “impact” and a “squeeze” action, allowing both hand and machine installation. Sheet hardness is not critical as the bush deforms rather than the sheet, during installation.

## METHOD OF ASSEMBLY

1. Punch a hole in the metal sheet to the size recommended in our technical data table. De-burring of the hole is not recommended.
2. Insert the serrated shank through the hole in the sheet.
3. Using the profiled punch detailed below, rivet the shank, spreading and flattening it onto the face of the sheet.



## PUNCH DETAIL



Thread Size		ARB & ARBSO PUNCH				
Unified	Metric	A mm	B mm	C mm	D mm	E mm
4	M2.5 / M3	4.3	0.5	0.5	7.1	12.0
6 / 8	M3.5 / M4	5.3	0.6	0.5	8.7	12.0
10	M5	6.8	0.8	0.5	10.3	16.0
1/4	M6	8.0	0.9	0.6	11.9	16.0
5/16	M8	11.1	1.0	0.6	15.5	19.0
3/8 / 7/16	M10	13.5	1.1	0.6	18.3	19.0
1/2	M12	17.1	1.3	0.6	22.2	25.0

Punch material 1% C/Mn Steel (Silver Steel)  
Water quench pilot end from 820° C, Temper at 260° C

## PERFORMANCE DATA

### ARB METRIC

Thread Size	Cold Rolled Steel		Aluminum	
	Pushout (N)	Torque-out (Nm)	Pushout (N)	Torque-out (Nm)
M2.5 / M3	1100	3.0	800	2.1
M3.5 / M4	1600	6.0	1100	4.5
M5	2500	9.0	1700	6.8
M6	4000	16.0	2850	11.5
M8	5500	24.0	3800	16.2
M10	6800	40.0	4200	28.5
M12	7500	60.0	5500	42.5

Tests conducted using a Steel Rivet Bush - 008 shank code into 1.5mm sheet. For unified values see equivalent metric size.

*Note: The above values are averages when correct installation is performed. Variations in holes size, material and installation will affect these results. For specific advice we strongly recommend consultation with your PSM Technology Centre.*