

Drilled Hole

- The drilled hole must be within the tolerances shown on the dimensional sheets.
- The counterbored hole (**D2**) must be properly sized for the through hole (**D3**) according to the dimensional sheets.
- Holes must be round within 0.05 mm.
- With hard materials the bore roughness should be from $R_z = 10 - 30 \mu\text{m}$ for best results.
- Longitudinal rifles and spiral grooves should be avoided. These influence the sealing effectiveness.
- The bore must be free of oil, grease and chips.

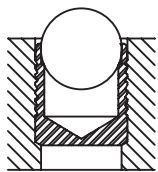


FIG. 1

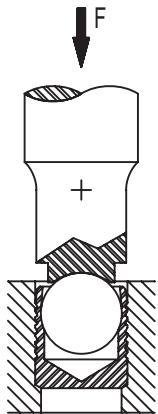


FIG. 2

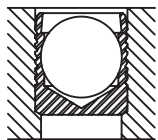


FIG. 3

Setting Procedure

- With the ball facing out, the **EIS-11, EIS-31 or EIS-33 Series** plug is inserted in the counterbored hole. The top sleeve should not be above the surface of the basematerial. (**FIG. 1**)
- With only a slight or no counterbore, the base of the sleeve must be adequately supported during installation.
- The ball can now be pressed in until the top of the ball is below the edge of the sleeve. (**FIG. 2 and 3**) Corresponding approximate values for stroke **S** as well as the dimensions **X** are from the table below.
- Note: Use the proper size setting tool for the **EIS-11, EIS-31 or EIS-33 Series** plug according to the data sheet.

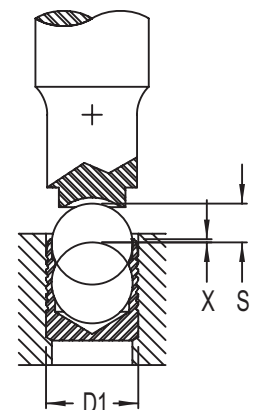
Press

Small quantities or single parts can be installed with a hammer and setting tool. Installation can also be done with an arbor press. It is preferred to limit travel when using a press because insertion force is difficult to control.

The **EIS-11, EIS-31 or EIS-33 Series** plugs are also ideal for automated installation because they are problem-free.

Installation Chart

		EIS-11, EIS-31 and EIS-33 Series													
D1 (mm)		3	4	5	6	7	8	9	10	12	14	16	18	20	22
S (mm)	Stroke	1.2	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.5	6.35	7.0	8.0	9.0	10.0
X (mm)	Position of top of ball relative to top of sleeve +/- .2	0.4	0.2	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.8	0.8



Engineered Inserts & Systems, Inc.

Certified ISO/TS 16949-2002

RoHS Compliant

Phone: 203-301-3334

Fax: 203-301-3335

Web: eisinserts.com