

EYSR RETROFIT SEALING FITTINGS

Installation & Maintenance Information

IF 1093

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

Crouse-Hinds EYSR Retrofit Sealing Fittings are installed in rigid metal conduit runs, in Class I Division 2, Groups C and D hazardous (classified) locations, to replace installed Crouse-Hinds type EYS or EYD Sealing Fittings. EYSR Retrofit Sealing Fittings are installed in vertical or horizontal positions without disassembly of the conduit system to replace or add conductors in the existing conduit systems.

CAUTION

EYSR Retrofit Sealing Fittings are designed to replace only installed Crouse-Hinds type EYS or EYD Sealing Fittings.

INSTALLATION

1. Remove existing Crouse-Hinds EYS/EYD sealing fitting from the conduit system making sure not to damage the conduit or cables/conductors.
2. Carefully remove all Chico A sealing compound and Chico X fiber from the conduit and cables/conductors. Be sure not to damage cable/conductor installation.
3. Remove foreign matter from the conduit threads and cables/conductors. Clean conduit threads to remove any Chico A sealing compound, dried-on grease, paint or dirt from the threads.
4. Separate cables/conductors to permit the flow of Chico A sealing compound between and around them.
5. For vertical installations, install a new Chico X fiber dam in the bottom conduit; for horizontal installations, install a Chico X fiber dam in both conduits. Make sure that the cables/conductors are not touching each other. A hardwood stick may be used to assist in packing Chico X fiber between and around cables/conductors in the conduit. DO NOT use metal tools as they can damage cables/conductors. Table 1 shows the approximate amount of fiber required per conduit size.

NPT Size	Cat. No.	Approx. Amount of Fiber per Conduit (Ounces Required)	
		Vertical	Horizontal
3/4	EYSR2	1/16	1/8
1	EYSR3	1/8	1/4
1 1/4	EYSR4	1/4	1/2
1 1/2	EYSR5	1/2	1
2	EYSR6	1	2
2 1/2	EYSR7	1 1/2	3
3	EYSR8	2	4
3 1/2	EYSR9	4 1/2	9
4	EYSR10	4 1/2	9

TABLE 1 - Approximate Amount of Fiber Per Conduit

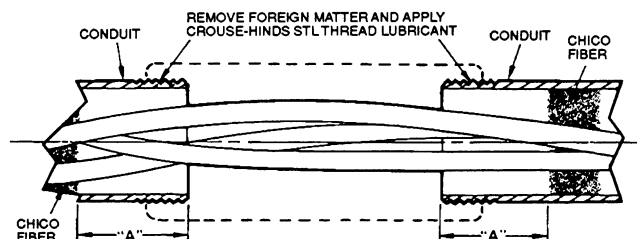
Pack Chico X fiber into the conduits far enough so that when the Chico A Sealing Compound is poured, the depth of the compound inside the conduit(s) is equal to the trade size of the conduit(s). In vertical installations, if this depth puts the compound below grade, make sure that the conduit is filled with a minimum of 1" sealing compound.

NOTE

If cables/conductors are stiff, insert temporary wooden wedges between them to aid in holding them apart during pouring and setting of the Chico A sealing. It is important that the cables/conductors are separated from each other so the sealing compound surrounds each.

CAUTION

Do not leave shreds of fiber sticking to the inside wall of the conduit or cables/conductors. Shreds may form channels in the sealing compound that allow leakage.



"A" Minimum Trade Size of Conduit

FIGURE 1

6. For vertical installations mix and pour Chico A Sealing Compound in the bottom conduit before installing fitting. For horizontal installations Chico A Sealing Compound should not be poured until the EYSR retrofit sealing fitting has been installed.
7. Separate EYSR sealing fitting halves by removing the cap screws; coat threads and flange joints with STL Lubricant. See Figure 2.

SURFACES: COAT THREADED END AND FLANGES WITH CROUSE-HINDS STL THREAD LUBRICANT

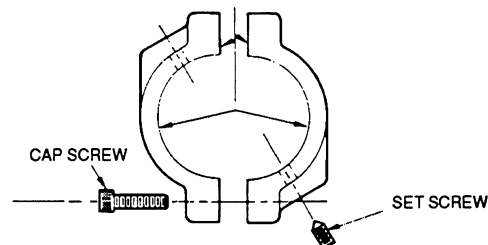


FIGURE 2

8. Loosen the four small grounding set screws, 2 in each half, to ensure that they do not come in contact with the conduit threads.
9. Place EYSR halves around conduit, enclosing all cables/conduits. Carefully match the threads of the EYSR with the threads on the conduit. The threaded end of the EYSR should be located towards the enclosure containing the arcing and sparking device, or towards the hazardous area when installed at the boundary between a Division 2 and non-hazardous area. If installed at the boundary, the fitting should be on the non-hazardous side. The opposite end of the fitting

(gasketed end) is installed towards the ordinary location area. See Figure 3.

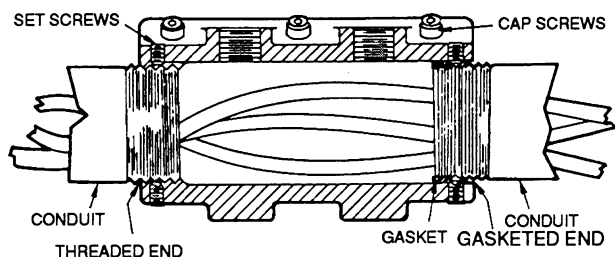


FIGURE 3

CAUTION

- EYSR seal halves are matched and marked at the factory. Install only matched marked sets to ensure proper thread alignment.
- Be careful not to cross thread the EYSR and conduit.
- The threads on the EYSR should be as far onto the conduit as practical, while ensuring that the flange joint can be clamped tightly with no gap between flanges.
- Do not wrench the EYSR to tighten the sealing fitting on the conduit threads.

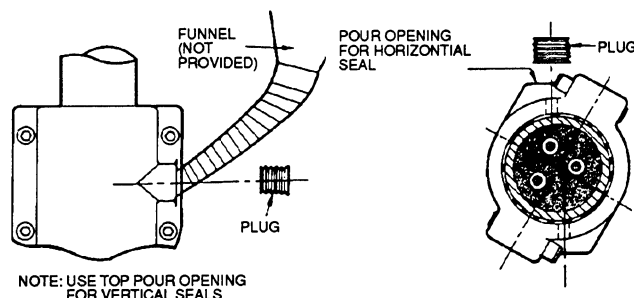


FIGURE 4

FIGURE 5

Cat. No.	Vertical	Horizontal
EYSR2	3 1/2	5 3/4
EYSR3	4 3/4	9 1/2
EYSR4	7	13 1/2
EYSR5	12 1/4	24 1/4
EYSR6	25 3/4	40 1/2
EYSR7	48	75 1/2
EYSR8	86 1/2	126
EYSR9	147	210
EYSR10	186	252

TABLE 3
Approximate Internal Vol. of EYSR's in Cubic Inches

NOTE

For vertical seals an initial pour of about 1" should be made to aid in damming for the full pour. The initial pour should be made by partially filling the lower conduit prior to assembling the replacement seal (see step 6). The remainder can be mixed and poured after the initial pour has set (approx. 1 hour).

- Loosely replace the cap screws and adjust the EYSR so that the pour opening(s) are located for convenient pouring of sealing compound.
- Clamp the flanges together by tightening the cap screws.
- Tighten the four set screws against the conduit to assure grounding continuity through the conduit system.
- Remove pipe plug(s) from pour opening(s). For vertical seals remove the top plug, for horizontal seals remove both plugs. See Figures 4 & 5.
- Mix Chico A Sealing Compound according to instructions furnished with compound. Refer to Table 3 for the approximate internal volume of each EYSR to determine how much compound to mix. (It is better to mix too much than too little Chico A sealing compound). For horizontal installations, pour compound into the fitting until it is completely filled. For vertical installations, pour compound in the top pour opening and fill until the compound is flush with the threads of the pour opening. Puddle Chico as necessary to help fill air pockets.
- Clean pipe plug openings to remove excess Chico A sealing compound. Replace pipe plugs in openings. Allow Chico to set for approximately 1 hour.
- For vertical installations an ECD15 drain is recommended to drain water in the conduit system. The drain fitting is installed in the pour opening (top pipe plug opening) as shown in Figure 6.

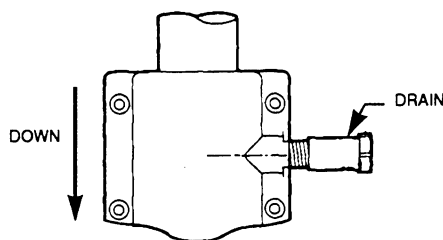


FIGURE 6

Compliances: EYSR Retrofit Sealing Fittings are suitable for use in the following hazardous (classified) locations:

NEC: Class I, Division 2, Groups C, and D
Class II, Division 2, Groups E, F, and G
Class III

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Crouse-Hinds "Terms and Conditions of Sale", and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.

COOPER Crouse-Hinds

Cooper Industries Inc.
Crouse-Hinds Division
PO Box 4999
Syracuse, New York 13221 • U.S.A.

IF 1093
Revised 6/95
Supersedes 1/91
Copyright© 1995, Cooper Industries, Inc.