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Installation Instructions for Anvil EPS Constant Support Hangers Fig. 81-H & Fig. 80-V





ASC
Engineered Solutions

PE-217-1

Rev. 11

Date 9/15/2023

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**INSTALLATION INSTRUCTIONS
STANDARD SUPPORTS**

**INSTALLATION INSTRUCTIONS
FOR
STANDARD SUPPORTS**



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RECORD OF REVISIONS

<u>Date</u>	<u>By</u>	<u>Rev.</u>	<u>Comments</u>
3/5/84	R.A.R.	5	Noted that one division equals 1% adjustment on Size 84-110 constant supports.
12/22/87	New	6	Revised Jam Nut Torque Values in Sections I and II. Deleted ref. to ITT, added PH-87 Catalog information to appendices. Editorial reorganization of paragraphs.
6/10/93	F.J.B.	7	Removed Variable Spring Hangers and Constant from scope of procedure.
6/26/95	R.T.W.	8	Removed Sway Struts from scope of procedure.
2/26/02	R.K.T.	9	Updated to reflect company name change from <i>Grinnell Corporation</i> to <i>Anvil International, Inc.</i>
2/6/15	R.T.W.	10	Added Installation Procedure for Figure 3306N / 3307N and Figure 81-H, Type F
9/15/23	J.L	11	Updated to reflect company name change from <i>Anvil International, Inc.</i> to <i>ASC Engineered Solutions.</i>



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1.0 GENERAL

- 1.1 ASC Standard Supports are designed and engineered to support piping systems and piping system components. Standard Pipe Supports, either singly or in combination with other standard or special supports, are arranged according to the Hanger Assembly Drawing at each support point. During installation, each assembly must be installed in the location shown on the Hanger Assembly Drawing, within the tolerances listed. Any deviation outside the allowed tolerances shall be justified by the piping erector.

CAUTION

Use of pipe supports as erection devices or in any applications other than those for which they were designed can cause hanger failure resulting in property damage and personal injury. If in doubt concerning a particular application, contact your ASC representative.

- 1.2 Each Hanger Assembly is made of three parts, a structural attachment, a pipe attachment, and an intermediate assembly. Structural attachments shall be installed by welding, clamping, or bolting to structural beams, columns, or embedded plates. Welding of structural attachments shall be done in accordance with the rules of the ASME B & PV Code, Section IX. NDE requirements shall be as shown on the Hanger Assembly Drawing.
- 1.3 Pipe attachments shall be either standard pipe clamps, special clamps, or integral attachments. Integral attachments shall be made according to the rules governing the component and are not covered in these instructions. Special installation instructions for double bolt pipe clamps are covered in Section 4.
- 1.4 Special clamps shall be installed in accordance with the hanger assembly drawing requirements. Intermediate assemblies shall be either rigid or resilient and shall be arranged as shown on the Hanger Assembly Drawings.



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- 1.5 General support storage and installation instructions are found in MSS SP-58, Pipe Hangers and Supports, Manufacture and Installation (Manufacturer's Standardization Society of the Valves and Fittings Industry, Inc.).
- 1.6 Hanger assemblies are pre-assembled as far as practical, except that Constant Supports and larger Variable Springs are shipped separate from the rest of the assembly. Structural steel, large formed products and long hanger rods are shipped loose or banded to skids. Individual cartons, skids, or loose material may weigh up to 2000# per item and may be handled by fork lift.
- 1.7 After final adjustments of the support are made, all threaded fasteners shall have thread engagements which meet the following requirements.
- 1.7.1 For nuts, clevises, forged turnbuckles, threaded eye nuts, and other similar devices, the male thread shall fully engage the female thread.
- 1.7.2 For load couplings and other devices having sight holes, the male thread must be visible in the sight hole. For three hole fabricated turnbuckles, the center hole should be clear.

For single hole rod couplings, both male threaded parts must be visible in the sight hole and they must be tightened against each other to prevent loosening.

CAUTION

Failure to have proper thread engagement before application of load can result in release of load and possible property damage or personal injury.



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1.8 Locknuts are supplied with many products to prevent threaded members from turning during erection, adjustment, and service. In order for the locknuts to perform, they should be installed hand tight and then wrench tightened at least 1/8 turn. For course threads, where this requirement would be excessive, wrench tight is sufficient. The security of the locknut should be verified after hydrostatic testing.

1.9 Threaded rods may have to be chased with a die for simplified assembly.

2.0 VARIABLE SPRINGS HANGERS

2.1 See ASC Procedure PE-217-82.

3.0 CONSTANT SUPPORTS

3.1 See ACS Procedure PE-217-80 and PE-217-81F.

4.0 DOUBLE BOLT PIPE CLAMPS (Except Clamps for Snubbers & Struts)

4.1 The purpose of the double bolt pipe clamp is to provide a load carrying attachment to the pipe without welding to the pipe.

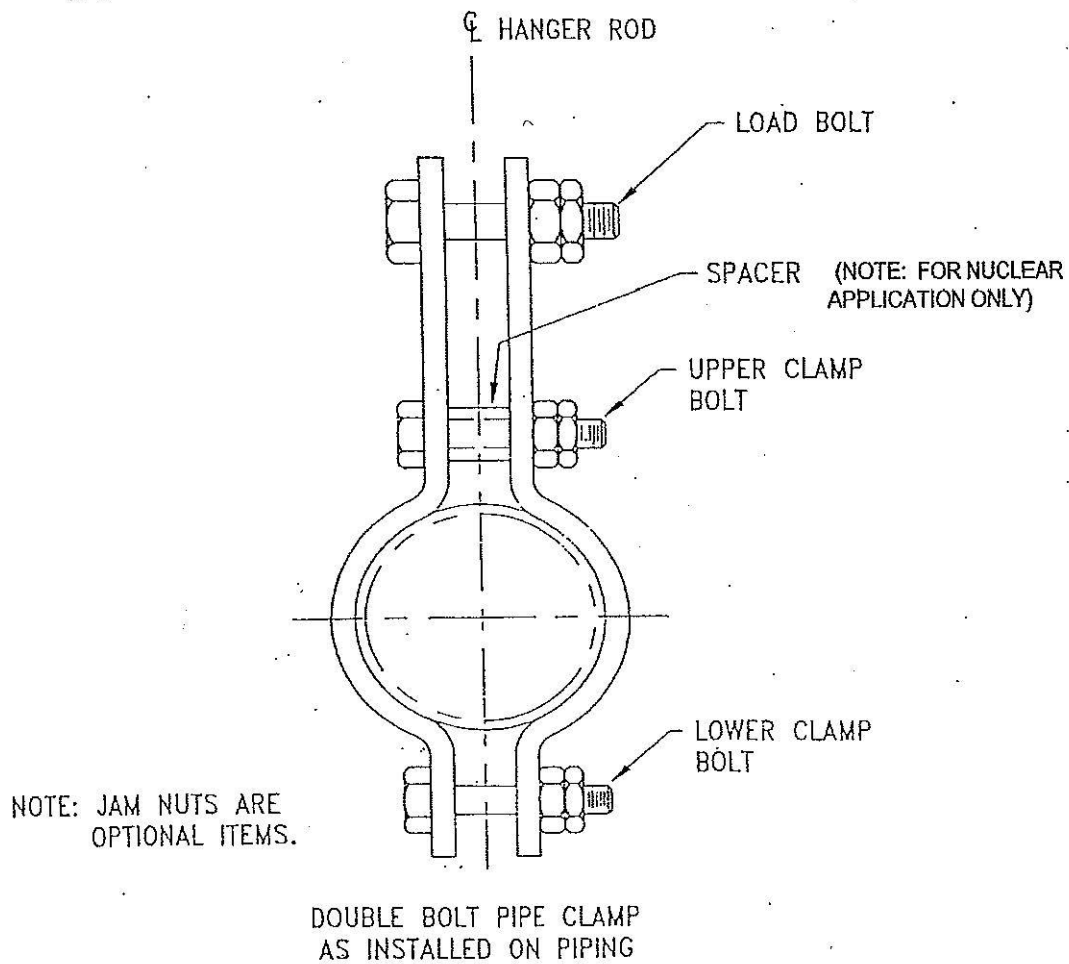
The design of the double bolt pipe clamp is such that the load bolt is completely outside the insulation surrounding the pipe with up to 4" of insulation.

Dimensions and details of the double bolt pipe clamps for Non-Safety Related Applications may be found in the ASC Pipe Hanger Catalog. Dimensions and details of clamps for Safety Related Applications may be found in the ASC Pipe Hangers-Nuclear Qualified (DRS/LCD Package).



**INSTALLATION INSTRUCTIONS
STANDARD SUPPORTS**

Figure 1





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4.2 Installing the Double Bolt Pipe Clamp

- 4.2.1 Refer to the hanger assembly drawing for the location of the pipe attachment.
- 4.2.2 Remove the bolts from the nested clamp and arrange around the pipe as shown in Figure 1.
- 4.2.3 Insert the upper clamp bolt and spacer and tighten the upper clamp bolt until the spacer is in contact with both clamp halves. (**Note:** Spacer used in nuclear application.)
- 4.2.4 Insert the lower clamp bolt and tighten until the clamp is in contact with the pipe.
- 4.2.5 Insert the load bolt (with the rod attachment in place) and tighten until the gap is as specified in the ASC catalog or DRS/LCD Package.
- 4.2.6 For nuclear applications, install all locknuts and tighten as specified in Section 1.8.

5.0 SWAY STRUTS

- 5.1 See ASC Procedure PE-217-640.

6.0 MECHANICAL SNUBBERS

- 6.1 See ASC Procedure PE-217-306.

7.0 HYDRAULIC SNUBBERS

- 7.1 See ASC Procedures PHD-6511-7, -8, or -76N.
- 7.2 See ASC Procedure PE-217-3306



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8.0 LIMIT STOP

8.1 See ASC Procedure PE-217-1306.

9.0 TAPERED PINS

9.1 See ASC Procedure PE-217-312.

10.0 TAPERED STUDS

10.1 See ASC Procedure PE-217-313.

Rev 11: Updated to reflect company name change from
Anvil International to ASC Engineered Solutions.

About ASC Engineered Solutions

ASC Engineered Solutions is defined by quality—in its products, services and support. With nearly 2,000 employees, the company's portfolio of precision-engineered piping support, valves and connections provides products to more than 4,000 customers across industries, such as mechanical, industrial, fire protection, oil and gas, and commercial and residential construction. Its portfolio of leading brands includes ABZ Valve®, AFCON®, Anvil®, Anvil EPS, Anvil Services, Basic-PSA, Beck®, Catawissa, Cooplet®, FlexHead®, FPPI®, Gruvlok®, J.B. Smith, Merit®, North Alabama Pipe, Quadrant®, SCI®, Sharpe®, SlideLOK®, SPF®, SprinkFLEX®, Trenton Pipe and VEP. With headquarters in Oak Brook, IL, ASC also has ISO 9001:2015 certified production facilities in PA, TN, IL, TX, AL, LA, KS, and RI.



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