



Designation: F 708 – 92 (Reapproved 1997)

An American National Standard

Standard Practice for Design and Installation of Rigid Pipe Hangers¹

This standard is issued under the fixed designation F 708; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This practice covers acceptable methods of fabricating and installing rigid pipe hangers used to support shipboard piping systems with temperatures of 650°F (343°C) or less.

1.2 This practice provides guidance for the design of hanger caps, straps and standoffs, selection of hanger and hanger liner materials, hanger bolting, and hanger spacing.

1.3 Other hanger designs may be used provided they result in an adequately supported vibration free piping system and are compatible with the intended system service and temperature limitations.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

A 307 Specification for Carbon Steel Bolts and Studs,
60 000 psi Tensile Strength²

3. Terminology

3.1 Definitions:

3.1.1 *liner*—the material used to isolate a pipe from its hanger.

3.1.2 *rider bar*—a protective strip of material installed between the pipe and the hanger where frequent linear movement of the pipe is expected.

3.1.3 *rigid pipe hanger*—a device that transfers the load imposed by the piping, insulation, and system medium to the supporting structure.

3.1.4 *standoff*—the rigid member that connects the hanger strap, saddle, or band to the supporting structure. A standoff is usually made up of one or more pieces of flat bar, pipe, angle bar, or flanged plate to suit a specific location.

4. List of Pipe Hanger Styles

4.1 This practice incorporates 26 pipe hanger assemblies as shown on Figs. 1-12(c) as follows:

Hanger	Fig. No.
Split cap hanger (single leg standoff)	1(a)
Split cap hanger (dual leg standoff)	1(b)
Split cap hanger (chair type)	1(c)
Strap hanger	2(a)
Strap hanger (assembled for clearance with rider bar)	2(b)
Strap hanger (assembled for clearance with TFE-fluorocarbon strip)	2(c)
Welded hanger (flat bar U-type)	3(a)
Welded hanger (round bar U-type)	3(b)
Welded hanger (square bar U-type)	3(b)
U-bolt hanger	4(a)
U-bolt hanger (assembled for clearance with rider bar)	4(b)
U-bolt hanger (assembled for clearance with TFE-fluorocarbon strip)	4(c)
Welded hanger (single leg standoff welded direct to pipe)	5(a)
Welded hanger (dual leg standoff welded direct to pipe)	5(b)
“J” band type hanger (insulated pipe)	6(a)
“J” band type hanger (bare pipe)	6(b)
Nelson® hanger ³	7
Clamp hanger assembled with mounting channel	8
Poly-block twin clamp hanger (assembled with welding plate) ^{4,5}	9(a)
Poly-block twin clamp hanger (assembled with welding stud) ^{4,5}	9(b)
Poly-block twin clamp hanger (assembled with mounting channel) ^{4,5}	9(c)
Crimp-on weld stud-type hangers	10
Banded weld stud-type hanger	11
Poly-block single-clamp hanger (assembled with welding plate) ⁵	12(a)
Poly-block single-clamp hanger (assembled with welding stud) ⁵	12(b)
Poly-block single-clamp hanger (assembled with mounting channel) ⁵	12(c)

5. Hanger Designs

5.1 Figs. 1-5 and Fig. 6(a) hangers are designs generally manufactured by shipyards or their subcontractors. See also Tables 1-6.

¹ This practice is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping Systems.

Current edition approved July 15, 1992. Published September 1992. Originally published as F 708 – 81. Last previous edition F 708 – 81 (1986).

² *Annual Book of ASTM Standards*, Vol 15.08.