H-Style Strainer

INTRODUCTION

This specification covers the design, manufacture, and testing of 1-1/2 in. (40 mm) through 48 in. (1200 mm) H-style Strainers.

PART 1 - GENERAL

1. Standard products - use the same manufacturer for multiple units of same type.

2. "Tying" of equipment into packages for the purpose of thwarting competition shall be considered to be in non-compliance with these specifications.

3. Manufacturers shall price items under different subsections or sections separately.

PART 2 - PRODUCTS

A. FUNCTION

The H-style Strainer shall be capable of preventing unwanted debris and sold particles from passing through the internal mesh and continuing downstream. The strainer shall have a compact H-style pattern. The strainer shall have a flow area equal to or greater than 150 percent of the inlet flow area of the strainer. The H-style Strainer shall be designed for installing with cover up for easy maintenance and cleaning of the strainer mesh screen and support frame.

B. MATERIALS

1. Material Specification for the H-style Strainer as follows:

Component	Material
Body & Cover	Ductile Iron-ASTM A536
Support Frame	Ductile Iron-ASTM A536
Strainer	316 Stainless Steel
Strainer Mesh	10 mesh / 2000 Micron / Opening 0.078 inch (Standard) *18 mesh / 1000 Micron / Opening 0.039 inch (Optional)* *14 mesh / 1410 Micron / Opening 0.059 inch (Optional)*
Cover Fasteners	Stainless Steel
Cover Vent	Stainless Steel
Drain Blow-Off Plug	Stainless Steel
Seal	Buna-N® Rubber
End Detail	Flanged (1-1/2” – 48”)
Pressure Rating	Class 150 lb. (250psi Max.) Class 300 lb. (400psi Max.) (1-1/2” – 24”)
Temperature Range	Water to 175°F
Any other wetted metallic parts	Stainless Steel; Bronze; Brass
Coating	Fusion Bonded Epoxy Coating (Interior and Exterior); ANSI / NSF 61 Approved / AWWA coating specifications C116-03.
Optional Accessories	*Differential Pressure Switch, Differential Pressure Gauge, Battery Powered Programmable Flushing Valve*

C. MANUFACTURE

1. Strainer Body and Cover:
   a. The body shall have a compact H-Style pattern with internal locating ribs for locating strainer mesh screen and support frame perpendicular to the flow direction. The strainer shall have a flow area equal to or greater than 150 percent of the inlet flow area of the strainer. A rectangular cover shall be provided with a stainless-steel air elimination valve. The strainer cover seal shall be Buna-N O-ring. Strainer body shall have two blow-off drain ports, with pipe plugs located perpendicular to the flow, one on each side of the strainer body. The strainer shall have threaded side boss ports for optional accessories.

2. End Connections:

   a. End Connections for H-style Strainer shall be flanged per ASME/ANSI B16.42, Class 150 (1-1/2" – 48") or Class 300 (1-1/2" thru 24").

3. Strainer Support Frame:

   a. A removable, mesh-support frame shall be located behind the strainer mesh screen to support it during normal flow use and constructed of same material as strainer body. The mesh-support frame shall have sufficiently large openings to allow full flow without deformation of the strainer mesh screen. Strainer mesh screen and support frame shall be installed from the top into the internal locating ribs of the strainer body, perpendicular to the flow, to minimize pressure drop.

4. Strainer Mesh Screen:

   a. The strainer mesh screen shall have contoured arch design to withstand flowing pressure distortions. The standard 10 mesh (2000 Micron) screen element shall have 0.078 inch openings and the manufacturer shall offer optional mesh elements. All strainer mesh screen elements shall be constructed of 316 SS and be of rectangular-trapezoidal shape with a one-piece 316 SS reinforcement edge covering and securely fastened to the entire screen. All necessary inspection and/or cleaning of the strainer screen shall be possible by removing the top cover only; without removing the H-style Strainer from the pipeline. Screen shall also be capable of being cleaned with the cover attached by reverse fluid flow thru the strainer to atmosphere through one of the two provided blow-off drain plug ports.

5. Accessories:

   a. The H-style Strainer can be equipped with optional battery-powered programmable flushing valve (Cla-Val Model 136-AM or Model 139-10) allowing for automatic cleaning operation. Consult factory for details.
   b. Optional Differential Pressure Switch.
   c. Optional Differential Pressure Gauge Assembly.

6. Nameplates:

   a. Each H-style Strainer shall be provided with an identifying nameplate.

   b. Nameplates shall be mounted in the most practical position possible.

   c. Nameplates shall be brass and a minimum of 3/32" thick, ¾" high and 2-3/4" long.

   d. Pertinent strainer data shall be etched or stamped into the nameplate. Data shall include Catalog number, size, material, pressure rating and end-connection details.

7. Factory Assembly:

   a. Each H-style strainer shall be factory assembled.

   b. The Quality Management System of the factory shall be certified in accordance with ISO 9001: 2008.

8. Factory Testing:
   a. Each H-style Strainer shall be factory tested.

   b. Tests shall conform to approved test procedures.

   c. H-style Strainers with both ends closed off with blind flanges shall be subject to a hydrostatic test. The pressure shall be applied for a minimum of 5 minutes. No visible leakage is permitted through the pressure boundary walls of the strainer or the body-cover joint.

D. PRODUCT DATA

1. The following information shall be provided:

   a. H-style Strainer manufacturer's technical product data.

   b. H-style Strainer manufacturer's Installation, Operation and Maintenance manual (IOM).

2. The H-style Strainer manufacturer shall be able to supply a complete line of equipment from 1-1/2" through 48" sizes.

PART 3 - EXECUTION

A. DELIVERY, STORAGE AND HANDLING

1. Delivery

   a. The Manufacture shall deliver the H-style Strainers to:

      Address, City, State, Zip. Attention: Phone number:
      Call 48 hours prior to delivery.

   b. Upon delivery, H-style Strainers to be unloaded and stored by the:

      Owner, district or municipality.

2. Packing and Shipping

   a. H-style Strainers specified herein shall be factory assembled. Strainers shall be packaged and tagged in a manner that will protect the equipment from damage and facilitate the final assembly in the field.

   b. Care shall be taken in loading, transporting and unloading to protect the H-style Strainers. Equipment shall not be dropped. All H-style Strainers shall be examined before installation and no piece shall be installed which is found to be defective. Any damage(s) shall be repaired.

   c. Prior to shipping, the H-style Strainers shall be acceptably packaged and covered to prevent entry of foreign material.

   d. All packaged H-style Strainers shall be shipped, remain covered and stored on site until they are installed and put into use.

B. FIELD TESTING

1. A direct factory representative shall be made available by the equipment supplier for start-up service and inspection.

The manufacturer shall warrant the H-style Strainer to be free of defects in material and workmanship for a period of one year from date of shipment provided the strainer is installed and used in accordance with all applicable instructions.

The H-style Strainer shall be **CLA-VAL Company Model No. X43H,** H-style Strainer, as manufactured by Cla-Val Co., Costa Mesa, CA 92627-4416.

END OF SECTION