

## NONMETALLIC SEAWATER STRAINER

### **MATERIAL SPECIFICATION**

4 INCH 3-POD (TRIPLEX) HELIX STRAINER SYSTEM CONSISTS OF THE FOLLOWING ITEMS: 3 INCH HELIX STRAINERS, 1/4" DIAMETER HOLE PVC STRAINER SCREENS, 3 INCH ISOLATION BALL VALVES, 4 INCH x 3 INCH MANIFOLDS, 4 INCH ANSI CLASS 150 FLANGED INLET AND OUTLET CONNECTIONS, FABRICATED FROM POLYVINYL CHLORIDE (PVC) AND HIGH DENSITY POLYETHYLENE MATERIALS, MOUNTED ON A STAINLESS STEEL SKID WITH FORKLIFT POCKETS.

This strainer shall be installed in the weather in a continuously operating seawater system. Interior and exterior components shall be compatible with flowing and stagnant seawater and shall be designed for continuous exposure to the weather and prolonged UV from the sun without deterioration.

The strainer shall be a Miller-Leaman, Inc.: Helix Filter System with Isolation Valves, Model # HS3(3)x4-0.25 PVC-MOD1 or equal.

**1. SUGGESTED SOURCE:**

MILLER- LEAMAN, Incorporated, 800 Orange Avenue, Daytona Beach, Florida 32114 USA, 1-800-881-0320, Chris Schuster Vice-President, Cage Code 1UN88.

**2. Or Equal Criteria:**

1. There shall be three 3" minimum strainer housings with 3" inlet and outlet isolation valves.
2. The strainers housings shall have 1/4" diameter hole on 5/16" centers strainer screens fabricated from Schedule 40 PVC.
3. Each strainer housing shall have two 1/4" NPT/F ports to allow for the installation of a pressure differential gauge; the ports shall be shipped with pipe plugs installed.
4. Each strainer housing lid shall have one 1/4" NPT/F minimum port on strainer lid for venting the strainer with pipe plugs installed for shipping.
5. The strainer housings shall have 1/4" NPT/F drain ports on the housing with brass plugs installed for shipping.
6. 4" NPS HDPE manifolds shall be used.
7. The skid/frame shall include robust forklift lifting slots at the bottom. The two slots shall be measure at least three inches tall by six inches wide.
8. The height of skid/frame shall be that there is about six inches clearance between the frame and the lowest part of the filter housing.
9. Connection Size: 4 Inch IPS, ANSI Class 150, flanged inlet and outlet.

10. "INLET" and "OUTLET" or flow direction arrow shall be prominently indicated on the strainer, near the inlet and outlet connections.
11. Design Pressure: 150 PSIG Minimum.
12. Flow: 300 GPM.
13. Maximum permitted pressure drop: 2 PSI at 300GPM when one strainer is screen is isolated for cleaning.
14. Strainer Area: 750 Square Inches, Minimum.
15. Material:
  - A. Strainer Body and Covers: Plastic or composite, no metal.
  - B. Isolation Valves: PVC
  - C. Screen: Schedule 40 PVC with 1/4" hole perforations on 5/16" centers.
  - D. Strainer parts not exposed to fluid flow shall be plastic or 304 Stainless Steel.
  - E. Fasteners, pipe clamps: Stainless Steel or Hot dipped Galvanized Steel.
  - F. The skid/ frame shall be constructed of stainless steel.
16. The strainer shall be assembled and hydro-tested at 187.5 PSIG minimum for 10 minutes with no leaks prior to shipment.
17. Price quotes will not be accepted without an original manufacturer's cut sheet, product description sheet, or drawing attached, with the original manufacturer's sales/engineers point of contacts name, address, telephone, and fax number. The price quote must reference the manufacturer's part or model number for the item being quoted.
18. All quoting vendors when requested must submit a sample to PSNS & IMF Shop 99 at the vendor's expense, for non-destructive testing analysis prior to Engineering Code 260.5 approval for purchase.
19. **All "or equal"** offers must have Engineering Code 260.5 review and approval prior to purchase. The Code 260.5 point of contact is Phil Kostelac or Robert Kellogg at 360-476-7060 or Fax 476-5717.