TRUMBULL
Trumbull Manufacturing
3850 Hendricks Road, Youngstown, Ohio 44515
Phone: 330.270.7888 | Toll Free: 877.504.1507 | Fax: 330.392.0756
www.trumbull-mfg.com

STAINLESS STEEL MUD VALVES

FOR USE WITH INDICATING FLOORSTAND OR VALVE POSITION INDICATOR

Suggested Specifications

Mud Valves. Mud valves shall be stainless steel with resilient seats as described herein. Valves shall be the non-rising stem type and be a heavy duty design.

The body flange, yoke, guides and gate shall be cast stainless steel, type 316. After machining, all castings shall be passivated in accordance with ASTM A-380. Valves which include components welded from stainless steel are not acceptable. The resilient seat shall be of SBR rubber and mechanically retained. Resilient seats which are retained to the gate by adhesive or tension are not acceptable. Fasteners shall be stainless steel.

The valve stem shall be one piece with an integral thrust collar and be cast or machined from type 316 stainless steel. Designs which pin a collar to the stem are not acceptable. The valve stem shall have Acme threads with the minimum diameters as shown below:

Valve Size	Minimum Stem Diameter
4”	1-1/4”
6”	1-1/4”
8”	1-1/2”
10”	1-1/2”
12”	1-1/2”
16”	1-1/2”
18”	1-3/4”
20”	1-3/4”
24”	1-3/4”

The valve shall be capable of withstanding a minimum input torque of 450 foot pounds, without damage to the valve. The valve shall not leak more than one quart per hour, when the valve is closed to a stem torque of 35 foot pounds. The manufacturer shall support leakage and torque testing with a report from an independent test laboratory.

The stem shall be coupled to the extension stem with a stainless steel machined coupling or a cast stainless 2” square operating nut and retained with a 5/16” stainless steel spring pin. No welded components of stainless are permitted for this connection or to the valve stem. Stems shall be retained with stainless fasteners assembled through holes drilled in the valve guide and yoke and retained with stainless hex nuts. Valve designs which retain the valve stem by threading stainless screws into tapped holes are not acceptable.

The stem shall have a permanently bonded coating to prevent galling with other stainless components. The coating shall be safe for potable water use and capable of enduring a minimum of 15,000 open-close cycles without galling or excessive wear. The manufacturer shall support cycle testing with a report from an independent test laboratory.

The base flange shall be drilled per ANSI 125# standard and have a minimum thickness of ¾”. The base flange shall be machined to provide a smooth seating surface. Mud valves shall be as manufactured by Trumbull Manufacturing, Youngstown, Ohio.

TRUMBULL
Trumbull Manufacturing
3850 Hendricks Road, Youngstown, Ohio 44515
Phone: 330.270.7888 | Toll Free: 877.504.1507 | Fax: 330.392.0756
www.trumbull-mfg.com

The extension stem shall be type 316 stainless steel, of either schedule 40 pipe or solid round bar. The top nut, bottom coupling and connecting couplings shall be either cast or machined from type 316 stainless steel, but not include any welded components.

Position Indication (Indicating Floorstand or Position Indicator)
The position of the mud valves shall be visible by one of the following installations, as shown on the drawings:

a. Indicating Floorstand, Stainless Steel. The pedestal shall be cast stainless steel, type 316 and have a vertical indicating slot. The indicating slot shall be covered with a Lexan window and sealed. A bronze indicator shall travel on a threaded stem to indicate the position of the valve. The floorstand shall be operated by a 14" diameter handwheel of cast stainless steel, type 316. The word "OPEN" shall be cast in the pedestal at the top of the indicating slot. A"CLOSED" tag will be field mounted to the pedestal, to indicate the closed position of the valve. Floorstands fabricated by welding flanges to pipe shall not be accepted. The coupling used to connect the floorstand stem to the extension stem shall be stainless steel, type 316. Where a floor is not directly over the valve and extension stem, position indicators or floorstands shall be supported by a cast stainless wall bracket mounted to the side wall. Wall brackets shall contain a plate designed to support the floorstand.

b. Valve Position Indicator (If a floorstand is not shown on the drawings)

i) Installed in Floor Box. Where there is a floor directly over the valve and extension stem, the position indicator shall be installed in a cast iron floor box. The floor box shall be designed with internal flat sides to prevent rotation of the position indicator during operation. The adapter shall be provided with a bronze bushing to support and center the extension stem. The bronze bushing shall be retained in the cast iron floor box by 2 stainless steel screws and drilled to an inside diameter 1/16" larger than the outside diameter of the extension stem. A non-corrosive debris shield shall be furnished and installed into the cast iron floor box. The debris shield shall be designed to fit tightly inside of the cast iron floor box.

ii) Installed on Wall Bracket. Where a floor is not directly over the valve and extension stem, position indicator shall be supported by a cast stainless wall bracket mounted to the side wall. Wall brackets shall contain a plate designed to support the position indicator. The adapter shall have internal opposing flat sides to match the flat sides of the position indicator, to prevent rotation of the position indicator during operation.

An extension stem shall be provided by the manufacturer of the position indicator. The extension stem shall connect to a 2" square nut on the valve, extend through the position indicator, and terminate in a 2" square nut, operable by a standard waterworks tee-handle wrench. The position of the valve, from fully open to fully closed, shall be easily identified at ground level. The movement of the indicating arrow shall be visible through a window covering a minimum of 300 degrees of the circumference of the indicator. The scale plate shall be clear polycarbonate with characters and numerals that are a minimum of 3/16" to facilitate identification by the operator.

The position indicator shall be of the planetary gear design. The sun gear, planet gear and ring gears will be constructed of non-corrosive Delrin. All Delrin components shall be white in color, to enhance visibility. The scale plate will be clear polycarbonate. Housings of carbon steel or aluminum will not be accepted. Fasteners shall be stainless steel. The top scale plate shall have markings representing the number of turns, contain the word "Closed", and a directional arrow. The markings shall be permanently recessed, embossed or engraved in the scale plate. The use of adhesive labels is not acceptable. The "open" line shall be marked on a transparent polycarbonate window, which will be field adjusted to the exact number of turns of each valve. After calibration, the position of the adjustable "open" window shall be secured to the top

surface of the scale plate by the outside diameter of three stainless button head cap screws. Position indicators that are factory calibrated without the valve, rather than calibrated to the installed valve, are not acceptable.

The position indicator shall be sealed with (2) Neoprene O-rings. The position indicator shall not admit more than 0.5 ounce of water, after 7 days of submergence. The position indicator shall be cycle tested by the manufacturer, to insure successful operation of a minimum of 1 million revolutions. Drop testing shall be performed by dropping an 18 # weight from 4 feet, to insure accidental impact will not crack or damage the position indicator. The manufacturer shall support submergence, cycle and impact testing with a report from an independent test laboratory.

Position indicators shall be as manufactured by Trumbull Manufacturing, Youngstown, Ohio.

Stem Guides

Stem Guides shall be constructed of cast stainless steel, type 316. Stem guides fabricated by welding stainless steel shall not be permitted. Stem guides shall include a bronze bushing with an inside diameter 1/16” larger than the outside diameter of the extension stem and shall be retained with two stainless steel screws.

The stem guide shall be of the adjustable design for plumb alignment. The adjusting bolt and washer shall be type 316 stainless. Stem guides shall be spaced so that the unsupported length between extension stems shall not exceed 7 feet. Mud valves shall be operated with extension stems, stem guides and either position indicators or indicating floorstands, as shown on the valve schedule or drawings. Stem guides shall be as manufactured by Trumbull Manufacturing, Youngstown, Ohio.