

TELESCOPING VALVES

WATERMAN TELESCOPING VALVES MODEL TS-2

Telescoping valves are designed to control the height of liquid within a pond, reservoir, or other holding chamber.

In modern sewage treatment facilities, one specific use is to control the level of effluent in settling basins. Also called Decanting Valves or Sludge Draw-off Valves, the assembly consists of a drain tube which can slip up and down inside a stationary vertical pipe. Through a lifting device, the tube is raised and lowered to maintain the desired level within the chamber.

CONSTRUCTION FEATURES

TUBE:

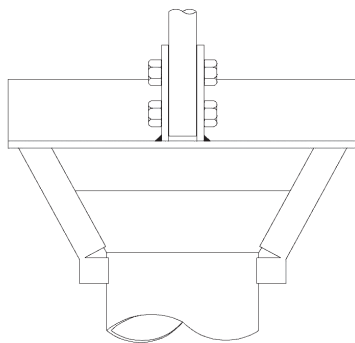
Waterman manufactures telescoping valves in a range of sizes from 4" tube diameter to 36" tube diameter. Valve body material is stainless steel or epoxy coated mild steel. Lifting straps (bails) are the same material as tube and rigidly welded to tube. V notches or flared tube tops can be provided when requested. Also nonrising stem tube design is available.

SEAL AND FLANGE:

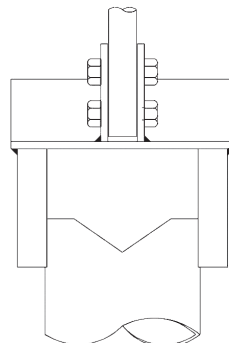
At the point where the sliding tube enters the vertical stationary pipe a seal is effected by means of a wiper gasket retained by a holding flange. The retaining flange shall be made of stainless steel. The wiper gasket is generally of Neoprene and is of such dimension as to provide a friction seal around the sliding tube.

STEM and OPERATOR:

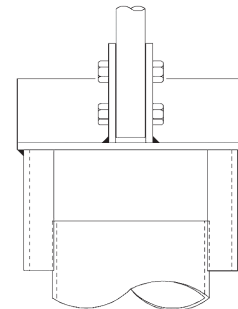
Stems are manufactured from solid type 304 or 316 stainless steel rod and are available in rising or non-rising styles. The standard operator is the Waterman Threaded Stem Type Lift mounted on an upright or offset pedestal. Other mounting options are also available when required. Position indicators may be furnished for either model.



PLAIN STYLE



VNOTCH STYLE



FLARED STYLE

Waterman Industries
of Egypt

TS-2 TELESCOPING VALVES

TYPICAL SPECIFICATIONS

GENERAL

Telescoping valves are used primarily for sludge removal, or liquid level control, and are considered to be fully open when in the lowermost position. The valve tube travels inside a cast iron or stainless steel riser pipe as shown in the plan drawings provided by the customer. The nominal riser pipe diameter determines the valve tube diameter. Vee notch, flared, or baffled tube tops shall be provided when required by the plan drawings. Valves shall be Waterman or approved equal in quality, characteristics and performance, of a manufacturer regularly engaged with a previous experience in manufacturing similar valves.

TUBE

Stainless steel or steel tubes up through 24" size shall be manufactured from seamless pipe or tube. Steel tubes are to be epoxy coated. Tube lengths shall be as shown or noted on the drawings and must be of sufficient length to facilitate valve travel and maintain an appropriate insert depth. Valve tubes are to be a minimum 3mm thick and are attached to connecting stems by use of a lifting bail.

SEAL FLANGE

A stainless steel companion flange and neoprene slip seal gasket shall be provided. The gasket must be a minimum 3mm thick. The inside diameter of the gasket is to be 1/8" smaller than the outside diameter of the valve tube to provide a friction seal. The gasket is to be sandwiched between the riser pipe flange and the companion flange. The gasket and companion flange shall include a 125# standard drilling pattern to match the riser pipe.

LIFTING BAIL

The bail shall be the same material as the tube and be rigidly welded to the tube.

LIFT AND STEMS (RISING)

Lifts shall be handwheel type, with a stub acme threaded type 304 or 316 stainless steel stem to provide automatic self-locking, infinite valve positioning. The standard rising stem lift shall use a galvanized steel square tube with torque nut design to prevent telescoping valve tube rotation. Alternately, where conditions require, a vee keyed shaft, with torque plate, shall be used to prevent valve tube rotation. Handwheels shall be a minimum of 300mm diameter and shall include a clear plastic stem cover with a Mylar strip type position indicator, graduated in 10mm increments to illustrate valve position. The Mylar strip shall be affixed by the contractor after installation to provide a true and accurate indication of the tube elevation by comparing it to the top of the rising stem. Stainless steel anchor bolts shall be provided for all pedestals.

LIFT (NON-RISING STEM)

Lifts shall be handwheel type with position indicator, mounted to a fabricated steel non-rising stem pedestal. The pedestal shall be manufactured with a square, main vertical member and a telescoping type torque tube. The torque tube shall incorporate a square thrust pocket at the top to house a square thrust nut, to prevent rotation of the valve tube assembly. The bottom of the torque tube shall be attached to the lifting bail with bolts & nuts, same as rising stem lift.

NON-RISING STEM

Where mounting conditions do not permit standard rising or non-rising stem lifts, a non-rising stem telescoping valve shall be provided. The valve bail design shall include nut pocket for NRS

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TYPICAL SPECIFICATIONS

thrust nut and guides to prevent tube rotation. Stems shall be stub acme threaded type 304 or 316 stainless steel non-rising stem, threaded and keyed to either pedestal mounted type lift, or floor box type lift. Lift shall have a position indicator and 2" square nut to be operated by T-handle.

MATERIALS

Frames, Rails, Cover Slides, Yokes

Stainless Steel - ASTM A-240/A-276, Type 304L or 316L, as specified

Mild Steel - ASTM A-36 or DIN 17100 St. 37-2

Torque Nut

Manganese bronze ASTM B-584 Al 865

Fasteners and Anchor Bolts

Stainless Steel - ASTM F-593 and F-594, Type 304 or 316, as specified

Stem

Stainless Steel - ASTM A-276, Type 304 or 316, as specified

Gasket

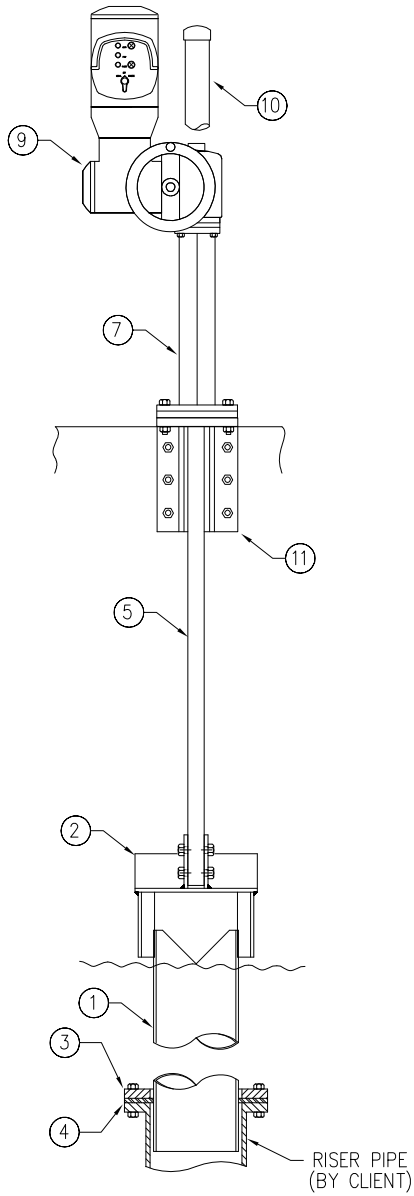
Neoprene Rubber - ASTM D-2000

Finish

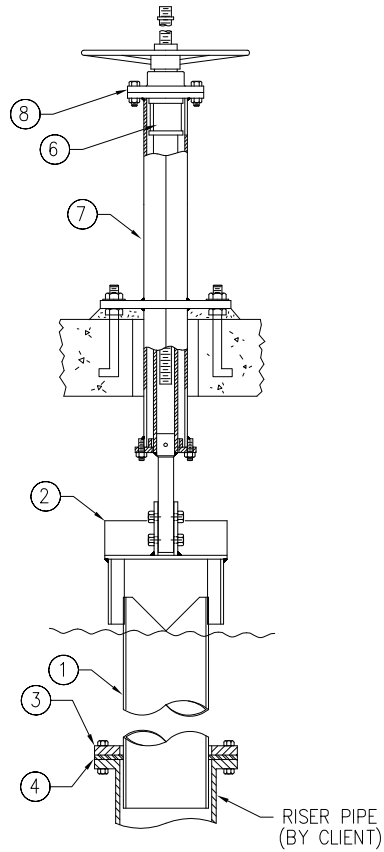
Mill finish on all stainless steel surfaces

Epoxy paint on all cast iron or steel surfaces

NO.	NAME
1	VALVE BODY
2	LIFTING STRAP
3	RETAINER FLANGE
4	WIPER GASKET
5	LIFTING STEM
6	TORQUE NUT
7	PEDESTAL
8	MANUAL HANDWHEEL LIFT
9	ELECTRIC ACTUATOR
10	STEM COVER
11	TOP OF WALL BRACKET



TS-2 TELESCOPING VALVE
WITH RISING STEM
ELECTRICALLY OPERATED



TS-2 TELESCOPING VALVE
WITH NON-RISING STEM
MANUALLY OPERATED

FOR ILLUSTRATION PURPOSES ONLY
ACTUAL PARTS MAY VARY ACCORDING TO REQUIREMENTS
EXACT CONFIGURATION AND PARTS LIST WILL BE SHOWN IN SUBMITTAL DRAWINGS

PARTS LIST

TS-2 TELESCOPING
VALVES

WATERMAN INDUSTRIES OF EGYPT

REVISION	DATE	APPROVED
DRAWN BY MK	CHECKED BY	
SCALE NONE	DATE 29-06-07	
DRAWING NO.	100680	