



Series
301

Top Mount — Float Type

Single Stage for Alarms, Depth to 12 ft. Hermetically Sealed Switches



Level

NOTE

Float travel is limited by the lower extremity of the armature tube, or when provided, by the end of the support extension. Float rods and extensions may be altered to obtain the minimum and maximum operating levels shown in the tables.

If control has been furnished for specified operating levels, the float rod supplied will provide $\pm 2"$ adjustment of such levels.

If tank depth is critical a section of float rod below lower clamp (stop) may be cut off.

CHART D
Float Actuation
Switch Level Change — Single Stage Operation

SPECIFIC GRAVITY	FLOAT C = COPPER SS = STAINLESS STEEL	THE OPERATING DEPTH MUST BE SPECIFIED BETWEEN THESE LIMITS		FIXED LEVEL CHANGE "D" BETWEEN ON AND OFF	MINIMUM TANK DEPTH REQUIRED BELOW LOW OPERATING POINT "TB"
		MINIMUM HIGH LEVEL OPERATING POINT (ON RISE) FROM TOP OF FLANGE	MAXIMUM LOW LEVEL OPERATING POINT (ON DROP) FROM TOP OF FLANGE		
1.0	4 1/2" C	9" 22.9 cm	96" 2.44 M	3/4" 19 mm	5 3/4" 14.6 cm
	4 1/2" SS	9 3/8" 23.8 cm	144" 3.66 M	3/4" 19 mm	5 3/4" 14.6 cm
	7" SS	10 3/4" 27.3 cm	144" 3.66 M	1/2" 13 mm	6" 15.2 cm
	3 1/2" x 6" SS	9 7/8" 25 cm	144" 3.66 M	7/8" 22 mm	7 5/8" 19.4 cm
.90	4 1/2" C	8 3/4" 22.2 cm	84" 2.13 M	7/8" 22 mm	6 1/8" 15.6 cm
	4 1/2" SS	9 1/4" 23.5 cm	144" 3.66 M	1" 25 mm	6 1/8" 15.6 cm
	7" SS	10 5/8" 27 cm	144" 3.66 M	1/2" 13 mm	6 1/4" 15.9 cm
	3 1/2" x 6" SS	9 3/8" 23.8 cm	96" 2.44 M	1 1/8" 29 mm	7 7/8" 20.0 cm
.82	4 1/2" C	8 1/2" 21.6 cm	72" 1.83 M	1" 25 mm	6 1/4" 15.9 cm
	4 1/2" SS	8 3/4" 22.9 cm	108" 2.74 M	7/8" 22 mm	6 1/4" 15.9 cm
	7" SS	10 1/2" 26.7 cm	144" 3.66 M	1/2" 13 mm	6 3/4" 17 cm
	3 1/2" x 6" SS	9 1/8" 23.2 cm	72" 1.83 M	1 1/4" 32 mm	8" 20.3 cm
.75	4 1/2" SS	8 3/8" 21.3 cm	72" 1.83 M	1" 25 mm	6 1/2" 16.5 cm
	7" SS	10 3/8" 26.4 cm	144" 3.66 M	5/8" 16 mm	6 7/8" 17.5 cm
	3 1/2" x 6" SS	8 7/8" 22.5 cm	48" 1.22 M	1 1/2" 38 mm	8" 20.3 cm
.50	7" SS	9 3/4" 23.5 cm	144" 3.66 M	3/4" 19 mm	6 3/4" 17 cm

Repeatability $\pm 1/4"$

The reliable 301 Series has proven to be a rugged economical choice for top mounting on tanks where side mounting is not practical, or for use in sumps. These units feature a fixed deadband for high or low alarm or shutdown. This control can be mounted on top of any closed or open tank or sump by use of the 3/4" NPT connection. Flanges are also available in various sizes, pressure rating and material to meet any installation. Several size floats are available to accommodate liquids to a specific gravity of 0.5 and depths to 12 feet.

Electrical switch actions, SPST (SPDT) (DPDT) or (DPST), can be ordered to satisfy most applications. Two-stage operation available, consult factory. Hermetically sealed snap action or mercury contacts provide for high or low current or voltage requirements. Enclosures include general purpose NEMA-1, weatherproof NEMA-4, explosion-proof NEMA-7, 9. The explosion-proof, vapor proof version combines weatherproof, vapor proof, and explosion-proof NEMA-4, 7, 9 construction in one enclosure. The 301 Series can be used on pressurized vessels.

APPLICATIONS

Oil refineries, chemical plants, power generating stations, pumping stations, sanitary/waste water facilities, sumps, open or closed tanks and vessels.

SPECIFICATIONS

Minimum Specific Gravity: Dependent on float size and rod length. See chart A.

Switch Type: Snap action or mercury. See charts D and E.

Electrical Rating: See charts D and E.

Wiring Connection: G, WT or E enclosure, terminal board. EV enclosure 18" (460 mm) leads.

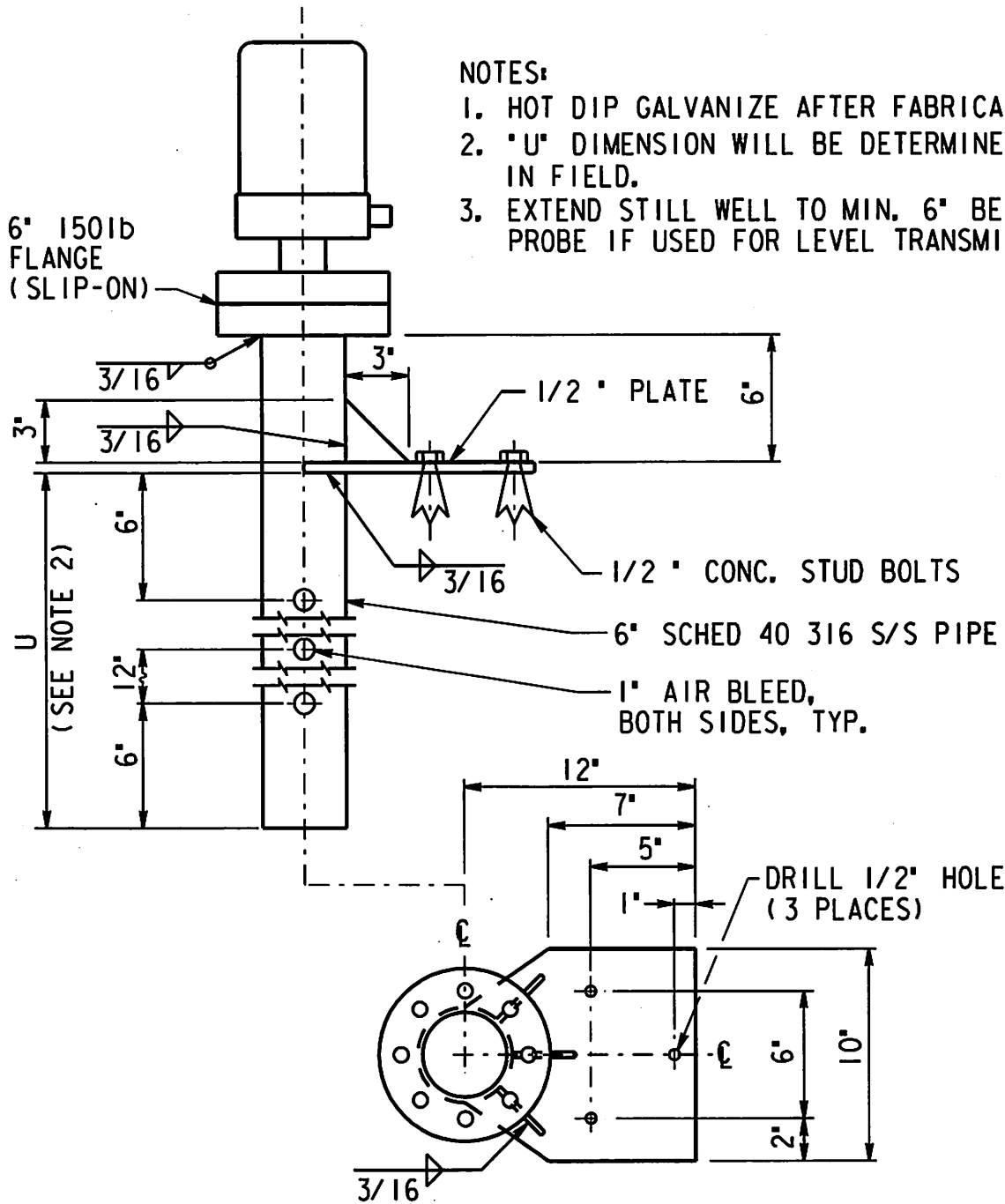
Enclosures: G, painted steel and aluminum. WT, painted steel, aluminum and neoprene. E, aluminum. EV, aluminum and neoprene.

Wetted Parts: See model chart.

Approximate Weight: 301G, WT with 4 1/2" SS float, 8 ft. rod, 5" 125# cast iron flange. Approximately 35 lb (16 kg) with E, EV enclosure 39 lb (17.7 kg).

Suggested Specification


Liquid level control shall be top mount, float operated with fixed deadband for alarm service, (insertion depth, float and flange type to be specified). Circuit shall be hermetically sealed (SPST) (SPDT) DPDT snap action (mercury) switch. Enclosure shall be general purpose (weatherproof) (explosion-proof) (explosion-proof - vapor proof).



- NOTES:
1. HOT DIP GALVANIZE AFTER FABRICATION.
 2. "U" DIMENSION WILL BE DETERMINED IN FIELD.
 3. EXTEND STILL WELL TO MIN. 6" BEYOND PROBE IF USED FOR LEVEL TRANSMITTER.

LEVEL SWITCH AND TRANSMITTER INSTALLATION

17250

DESIGNED:	CHKD:	 King County	Department of Natural Resources	DATE: Apr 30/98
DRAWN:	SCALE: None		LEVEL SWITCH AND TRANSMITTER INSTALLATION	FILE NO:
RECOMMENDED:	CONTRACT:			STANDARD DETAIL NO.
APPROVED:				SD17250