

# Radial diaphragm™ Tangential valve

## FEATURES AND BENEFITS

- Off-centre outlet for full drainability when installed on the slope of a vessel head
- Patented radial diaphragm, eliminates entrapment for easy cleaning
- Simple Tri-Clamp assembly makes maintenance 80% faster
- No readjustment or retightening



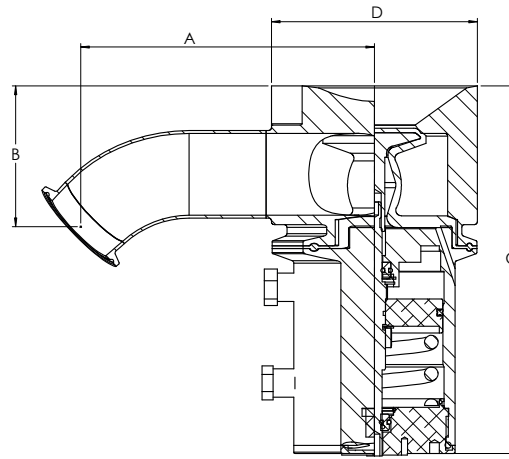
## TECHNICAL DATA

Valves					
Material	316L, AL6XN, Hastelloy Machined from solid, hot-rolled, bar stock				
Surface Finish	Max. 0.5 µm Ra (20 micro-inch Ra), electropolished Max. 0.375 µm Ra (15 micro-inch Ra), electropolished Max. 0.25 µm Ra (10 micro-inch Ra), electropolished				
Sizes	1 inch through 3 inches				
Outlet Connections	Standard: Hygienic clamp, tube end, (others available)				
Maximum Pressure	ASME vessels: 17 bar (250 psi) PED vessels: 12 bar (175 psi)				
Maximum Temperature	Varies from 135C/275F to 200C/400F depending on diaphragm material				
Marking	Each valve is serialized and marked for full material traceability				
ISO	All product and procedures are governed by our ISO Quality Assurance Program				
Standards	BPE, CE-PED, ASME				
Actuators					
Types	Manual or compact pneumatic Fail open or closed				
Material	304 stainless steel housing, can be made in 316L				
Sizes	1 inch through 3 inches				
Operating Air Pressure	7 bar (100 psi) max. for pneumatic actuators				
Seals	Teflon bushings and O-rings				
Fitting	1/8-inch NPT air connection (for pneumatic)				
Possible Instrumentation	Switched With or without solenoids With or without DeviceNet cards				
Diaphragms					
Materials	Silicone	Silicone Plus	EPDM	EPDM Plus	Viton
Temperature Range	-51 to 135C (-60 to 275F)	-51 to 135C (-60 to 275F)	-35 to 135C (-30 to 275F)	-35 to 135C (-30 to 275F)	-20 to 204C (-4 to 400F)
Class	USP Class VI, 21 CFR 177.2600	USP Class VI, 21 CFR 177.2600	USP Class VI, 21 CFR 177.2600	USP Class VI, 21 CFR 177.2600	USP Class VI, 21 CFR 177.2600
Parylene Treatment	-	√	-	√	-

## PERFORMANCE DATA

Tangential valve flow rates	
Size inches	Cv at 0.07 bar (1 psi) LPM (USGPM)
1.00	59.8 (15.8)
1.50 (True)	180 (48)
1.50	212 (56)
2.00	272 (72)
2.50	340 (90)
3.00	643 (170)

## DIMENSIONS



TR/TLXX-100-X: Flush-mounted Tangential valve					
Size	A	B	C - with Pneumatic Actuator	C - with Manual Actuator	D
inches	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
1.00	111 (4.37)	52 (2.04)	173 (6.82)	134 (5.26)	76 (2.98)
1.50 (True)	132 (5.19)	66 (2.60)	189 (7.42)	144 (5.65)	66 (2.60)
1.50	152 (6.00)	83 (3.25)	213 (8.40)	193 (7.59)	120 (4.71)
2.00	171 (6.72)	82 (3.22)	213 (8.40)	193 (7.59)	120 (4.71)
2.50	192 (7.54)	102 (4.00)	274 (10.77)	214 (8.43)	125 (4.91)
3.00	171 (6.75)	101 (3.97)	274 (10.77)	214 (8.42)	125 (4.91)

## TECHNICAL SPECIFICATION

Weights			
Size inches	Valve Body kg (lb)	Total Weight with Manual Actuator kg (lb)	Total Weight with Pneumatic Actuator kg (lb)
1.00	1.63 (3.60)	3.5 (7.80)	3.92 (8.65)
1.50 (True)	2.15 (4.75)	3.78 (8.35)	4.44 (9.80)
1.50	4.76 (10.50)	7.73 (17.05)	8.55 (18.85)
2.00	7.43 (16.38)	10 (22.93)	11.22 (24.73)
2.50	17.50 (38.59)	21 (45.59)	28.28 (62.34)
3.00	17.50 (38.59)	21 (45.58)	28.27 (62.33)

## ORDERING INFORMATION

Model Code	Part Description
TL10-100-1	Radial valve, 1" Flush Tank, Tangential Left EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 1" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TL17-100-1	Radial valve, 1.5" Flush Tank, Tangential Left EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 1.5" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TL20-100-1	Radial valve, 2" Flush Tank, Tangential Left EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 2" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TL30-100-1	Radial valve, 3" Flush Tank Tangential Left EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 3" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TR10-100-1	Radial valve, 1" Flush Tank, Tangential Right EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 1" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TR15-100-1	Radial valve, 1.5" Flush Tank, Tangential Right EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 1.5" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TR20-100-1	Radial valve, 2" Flush Tank, Tangential Right EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 2" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
TR30-100-1	Radial valve, 3" Flush Tank Tangential Right EN 1.4435 body/EN1.4404 fittings, Fits 0.375" thick or less head, 3" 45° clamp-end outlet, Flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp

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