



Note: D6/D7 is now D8

# D6/D7, T6/T7 SERIES **DIVERTER, 3 WAY BALL VALVES**

**Size Range:**

1/2" - 2"

**Valve Materials:**

316 Stainless Steel

Carbon Steel

**End Connections:**

NPT

Butt Weld

Socket Weld

**Ball and Stem Materials:**

316 Stainless Steel

**Service Applications:**

Hydraulics

Steam

Oxygen

Vacuum

Thermal Fluids

Chemical

Oil / Gas

Food Processing

Dry / Liquid Chlorine

**Seat Materials:**

Teflon

Reinforced Teflon

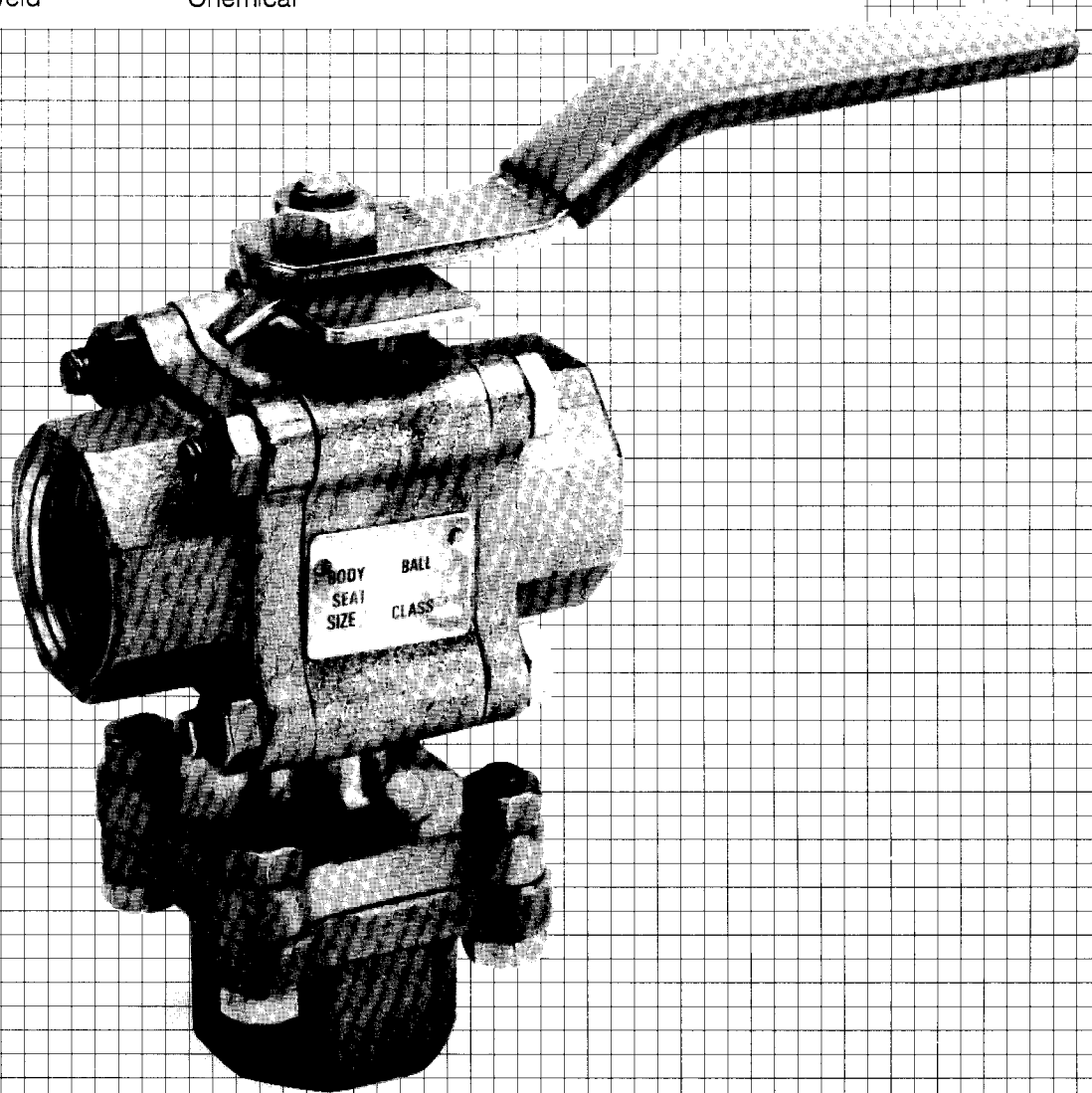
NRG

Delrin

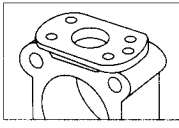
VXI

Tempre K (PEEK)

UHMWPE

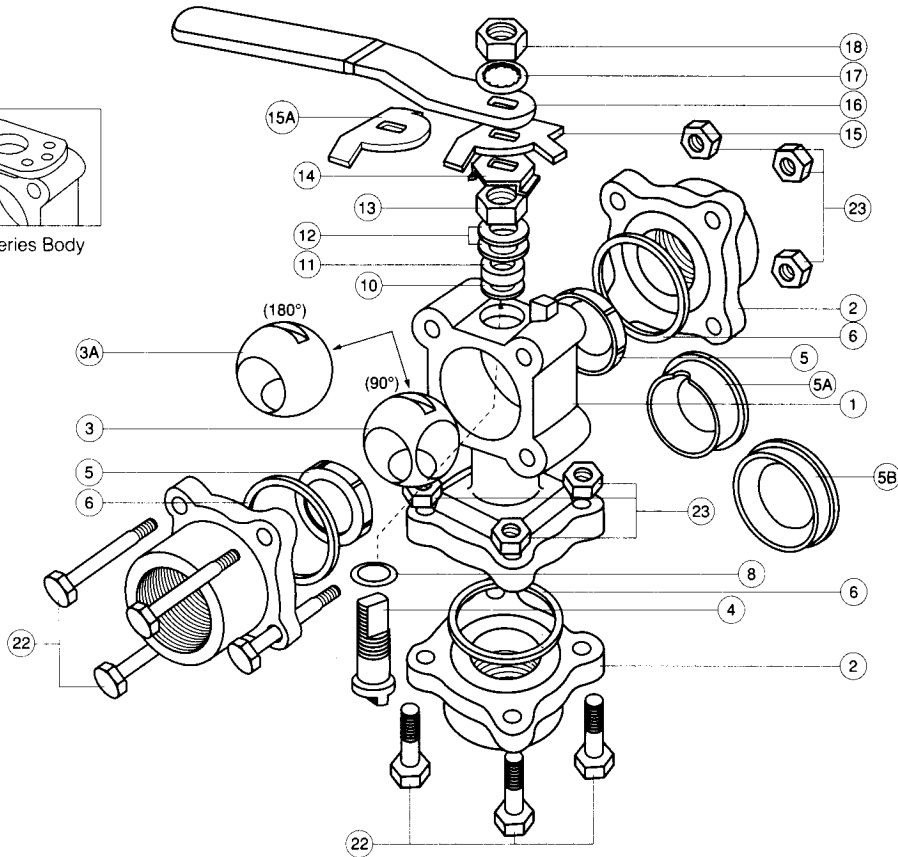


# D6/D7, T6/T7 VALVE COMPONENTS



D7, T7 Series Body

**1/2" - 2"**



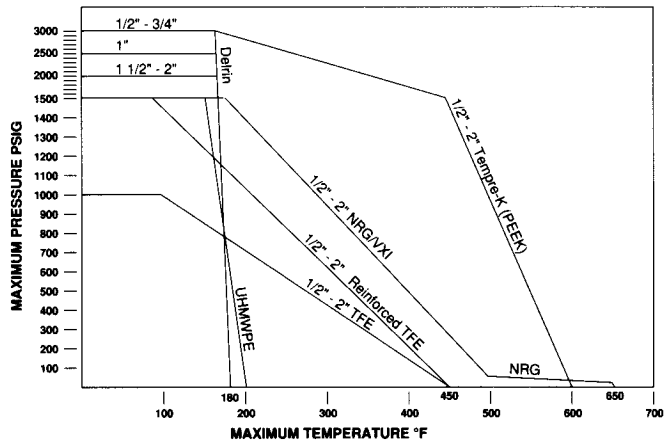
Item No.	Description	Material
1	Body	Carbon Steel 316 Stainless Steel
2	Body Connector/Pipe End	Carbon Steel 316 Stainless Steel
3	Ball 90°	316 Stainless Steel
3A	Ball 180°	316 Stainless Steel
4	Stem	316 Stainless Steel
5	Valve Seat	TFE Reinforced TFE NRG Delrin UHMWPE PEEK VXI
5A	Cavity Filled Seat	TFE
5B	3 Way Seat	TFE NRG
6	Body Connector Seal	TFE Neoprene UHMWPE Viton Buna N Graphoil
8	Stem Thrust Ring	NRG

Item No.	Description	Material
10	Stem Packing	NRG
11	Gland Packing	Stainless Steel
12	Belleville Washers	Stainless Steel
13	Packing Nut	Cad Plate C. St. Stainless Steel
14	Lock Tab	Stainless Steel
15	Handle Stop 90°	Cad Plate C. St. Stainless Steel
15A	Handle Stop 180°	Cad Plate C. St. Stainless Steel
16	Handle	Cad Plate C. St. Stainless Steel
17	Lock Washer	Stainless Steel
18	Handle Nut	Cad Plate C. St. Stainless Steel
19		
20		
21		
22	Body Connector Bolt	Cad Plate C. St. Stainless Steel
23	Body Connector Nut	Cad Plate C. St. Stainless Steel

## PERFORMANCE DATA

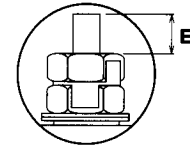
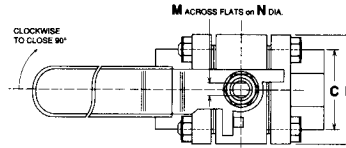
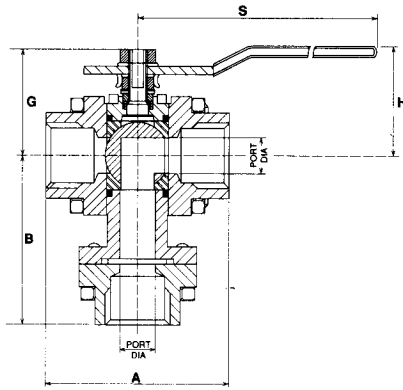
VALVE SIZE	TEFLON BREAKAWAY TORQUE in/lbs	APPROX. FLOW CV. U.S. gpm	EQUIV. LENGTH OF SCHED. 40 PIPE feet
1/2"	45	5	30.4
3/4"	45	5	30.4
1"	100	10	27.8
1-1/2"	300	24	43.5
2"	400	36	22.7

## PRESSURE-TEMPERATURE DATA



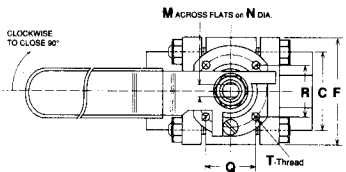
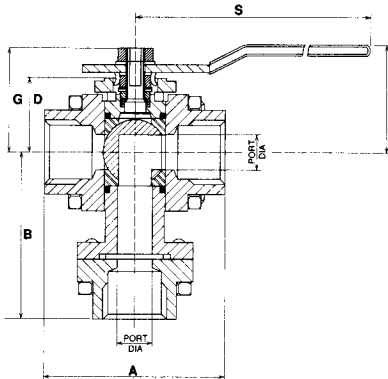
## DIMENSIONS & WEIGHT 1/2"- 2"

**D6, T6**



Stem arrangement for actuated valves.  
Items 14, 15, 16, 17 omitted.  
Item 14 replaced by lock tabs.

**D7, T7**



VALVE SIZE	SIDE PORT	BOTTOM PORT	APPROX. WEIGHT lbs.
1/2"	0.56	0.47	2.5
3/4"	0.56	0.47	2.5
1"	0.81	0.63	4.5
1-1/2"	1.25	1.05	9.0
2"	1.50	1.40	12.5

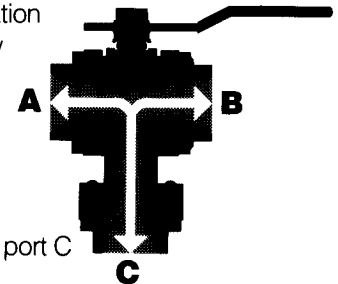
SIZE	A	B	C	D	E	F	G	H	M	N	Q	R	S	T
1/2"	2.80	2.75	1.50	1.240	.25	2.05	1.59	1.87	.22	3/8"UNF	1.00	1.00	4.49	M5
3/4"	2.80	2.75	1.50	1.240	.25	2.05	1.59	1.87	.22	3/8"UNF	1.00	1.00	4.49	M5
1"	3.66	3.45	1.75	1.504	.35	2.45	2.19	2.40	.29	7/16"UNF	1.17	1.17	5.75	M5
1-1/2"	4.56	4.15	2.25	1.713	.47	3.15	2.87	3.15	.34	9/16"UNF	1.39	1.39	7.00	M6
2"	5.04	4.50	2.62	1.870	.51	3.55	3.07	3.31	.34	9/16"UNF	1.39	1.39	7.00	M6

\*Dimensions and weights subject to change without notice.

## FLOW PATTERN

**Diverter Valve** - D6/D7 valve consists of a 2-piece seat and body seal. This combination allows the valve to be utilized in a wide range of pressure, temperature, and media. Flow pattern is port C to port A or port C to port B. Port A or B can not have pressure greater than port C.

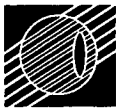
**Three-way Valve** - T6/T7 valve consists of a 1 piece seat and body seal. Available seat/seal materials are TFE or NRG. Seat/seal materials determine maximum pressure/temperature and media compatibility. Flow pattern is port C to port A or port C to port B. Port A or port B can have pressure greater than port C. This will allow flow form port A to port C or port B to port C.



**Operation** - The Diverter Valve or Three way valve can be supplied with either 90° or 180° operation (S1 or S2). The 90° operation (S1) will have continuous flow to both ports in the 45° position with diverter or three way valve. The 180° operation (S2) will isolate both ports in the 90° position, before flow will resume. The three way valve can maintain an off-position with pressure at all three ports.

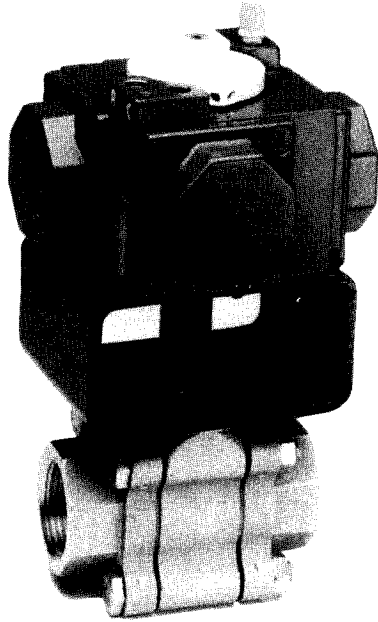
## GENERAL NOTES

- All weld end valves are supplied with Buna "O" ring body connector seals. Body seals are attached loose. This provision is made to enable valve testing by factory prior to shipping. Weld ends are disassembled by customer to weld in line, and then re-assembled with provided seals. Complete instructions are supplied with valve.
- Stainless Steel valves are fitted with stainless steel body bolts, nuts and gland nuts as standard.
- Delrin and UHMWPE are unsuitable for steam service.
- Delrin is not suitable for oxygen service.
- Specifications subject to change.



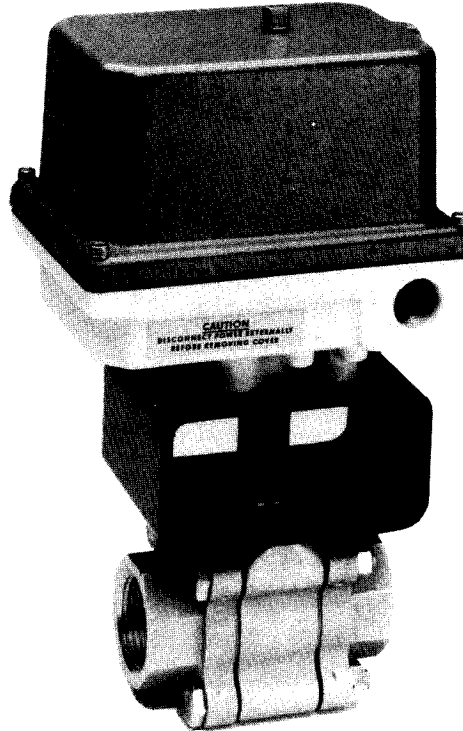
## AUTOMATED PRODUCTS

Three piece construction of the D6/D7, T6/T7 Series readily lends itself to automation with either factory assembly or infield retrofit. All SVF actuators may be removed for inspection or repair without affecting valve integrity.



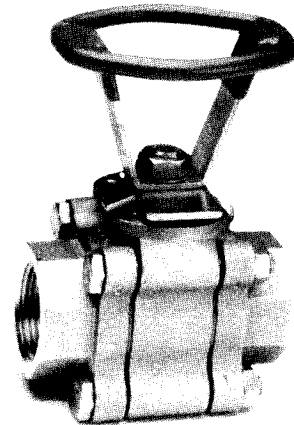
### Pneumatic Actuators

- Double Acting
- Spring Return
- Solenoid
- Limit Switch
- Positioners 3 - 15 psi
- Positioners 4 - 20 MA



### Electric Actuator

- 120 VAC
- 12/24 VDC
- NEMA 4/7
- Positioners 4 - 20 MA
- Reversing



### Manual Valves

- Oval Handle
- Spring-Return
- Stem Extensions
- Fusible Link
- Locking Device

## HOW TO ORDER

1" T7 6 6 6 6 T T - SE - S1

SIZE	STYLE	BODY & END MATERIAL	BALL & STEM MATERIAL	SEAT	SEAL	ENDS	OPTIONS
1/2"	Diverter;	4 - Carbon Steel	3 - Monel	T - Virgin Teflon	B - Buna "N"	SE - Screwed (NPT)	S1 - 90° Operation
3/4"	D6	6 - 316 Stainless Steel	6 - 316 Stainless Steel	R - Reinforced Teflon®	N - Neoprene	BW - Butt Weld	S2 - 180° Operation
1"	D7 (ISO)			N - N-R-G	E - EPDM	SW - Socket Weld	
1-1/2"	3-way;		8 - Alloy 20	D - Delrin	V - Viton®	BWO-Tube OD	
2"	T6		9 - Hastelloy C	V - VX1	T - Virgin Teflon®	Butt Weld	
	T7 (ISO)			U - UHMWPE	U - UHMWPE		
				K - Tempre K (PEEK)	G - Graphoil		

Note: Ball available only in 316 stainless steel.

Note: T6/T7 only available with NRG or TFE seat/seal.

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