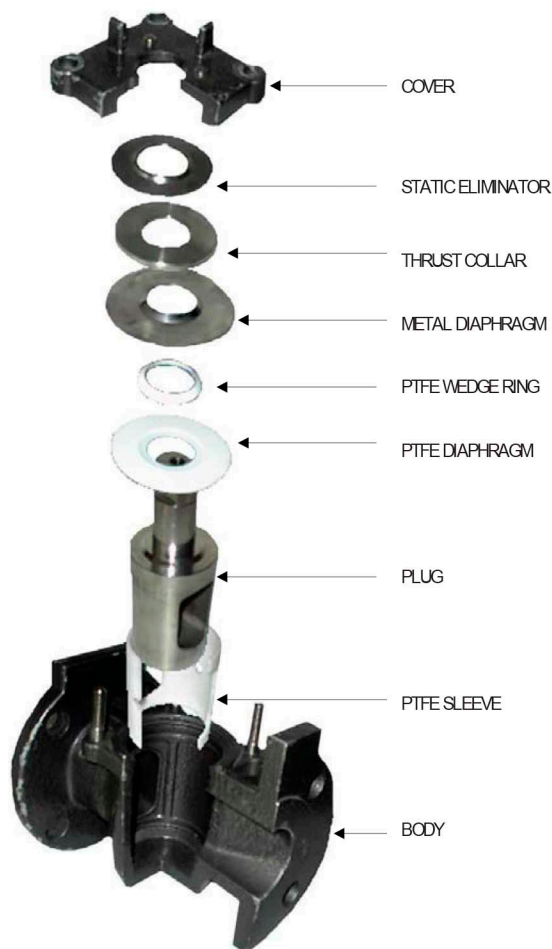


PLUG VALVES

PTFE SLEEVE PLUG VALVES

Series 10S



FEATURES

- TFV LINE OF PTFE SLEEVE PLUG VALVES ARE DESIGNED FOR HIGH STANDARD OF PERFORMANCE.
- THESE TIGHT SHUT – OFF, BI – DIRECTIONAL VALVES WITH CAVITY – FREE PASSAGE CAN BE USED ON BOTH PRESSURE AND VACUUM SERVICES. VALVES INSURE LONG – TERM RELIABLE OPERATIONS WITH SIMPLIFIED IN – LINE MAINTENANCE.
- INVESTMENT CAST BODY
- 360° LIPS TO AVOID PLUG ROTATES
- HIGH PRESSURE SEALING RIBS.
- TOP AND DOWN RETENTION OF SLEEVE.
- SLEEVE RELIEF AREA.
- FULLY ADJUSTABLE IN LINE SEAL (THREE TOP BOLTS)
ADVANTAGE THREE INDEPENDENT ENVIRONMENTAL SEAL.
- DESIGN STD API 599 & BS 5353
- TESTING STD API 598
- **NO DEAD SPACE** PLUG IS ALWAYS SURROUNDED BY PTFE SLEEVE 360 AROUND AND THEREFORE THE LIQUID IN THE PLUG INTERNAL CANNOT FLOW IN TO NO DEAD SPACE WHETHER IT'S OPEN OR CLOSE. WHEN THE VALVE IS OPEN THE LINE FLOW WOULD FLUSH OUT THE LIQUID IN THE PLUG INTERNALS.
- **ZERO MAINTENANCE** OWED TO THE MERITS OF ITS STRUCTURE THE VALVE IS ZERO LEAKAGE AND NO MAINTENANCE IS REQUIRED. WHEN SEAL PRESSURE ADJUSTMENT IS REQUIRED DUE TO PTFE SLEEVE WEAR, A QUARTER TURN OF ADJUSTMENT BOLTS PUSHES THE PLUG DOWN REGENERATING A SEALING PRESSURE AS IF IT IS A NEW VALVE. THEREFORE NO DISASSEMBLES, NO REPAIR IS REQUIRED FOR MORE THAN 10 YEARS FOR THE MOST OF CASES.. NO LINE REPAIR IS POSSIBLE BECAUSE THE PLUG IS THE TOP ENTRY TYPE.. NO MAINTENANCE ELIMINATES REPAIR EXPENSES LABOR COST AND INCREASES PRODUCTIVITY OF PLANT.
- **ZERO LEAKAGE** THE THEREEFOLD STEM SEAL SYSTEM THE ZERO LEAKAGE STEM SEALING IS ACHIEVED BY THREEFOLD SEALING SYSTEM. THE PRIMARY SEAL IS PROVIDED BY THE SLEEVE. THE SEALING IS SO TIGHT THAT NO LEAKAGE CAN BE OBSERVED EVEN WITHOUT A VALVE COVER. THE SECONDARY AND TERTIARY SEAL (TOP SEAL PACKAGE) ARE PROVIDED BY A PTFE TEFLON DELTA RING AND A DIAPHRAGM. THE SEALING IS ALSO SO TIGHT THAT NO LEAKAGE CAN BE OBSERVED EVEN WITHOUT A SLEEVE. A TEST REPORT IS AVAILABLE AT REQUEST.

PLUG VALVES

PTFE SLEEVE PLUG VALVES

FEATURES

ABSOLUTE PRESSURE SEALING IS INDEPENDENT TO LINE PRESSURE. SEALING IS ESTABLISHED BY THE ME-CHANCEL FORCES (ADJUSTING BOLTS) INDEPENDENT TO THE LINE PRESSURE, THEREFORE SEALING IS MADE UP STREAM, DOWN STREAM, UPPER PART, AND LOW PART OF THE PLUG.

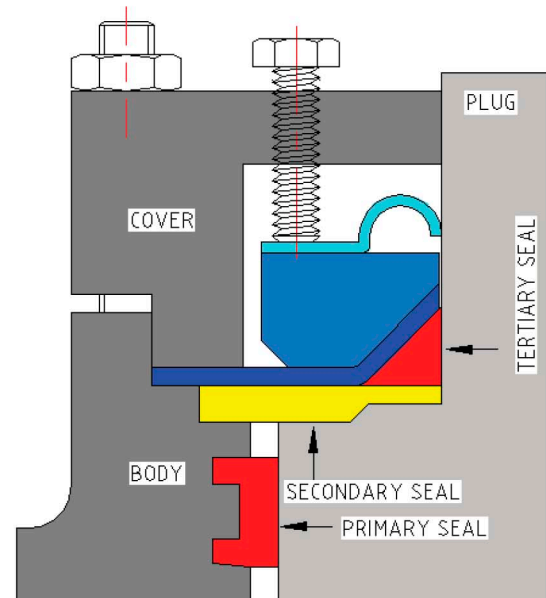
THE LOWER THE PLUG POSITION IS THE HIGHER SEALING PRESSURE. THE SEALING PRESSURE IS ALWAYS CONSTANT. REGARDLESS OF LINE PRESSURE.

AREA SEAL SYSTEM SEALING IS ESTABLISHED BY AN AREA OF TEFLON SLEEVE 360 CIRCUMFERENTIAL SURFACES. EVEN THOUGH THERE IS SCRATCH ON THE SLEEVE DURING OPERATION THE SCRATCH OF 90°, CONDENSATION AREA IS LARGE, SCALING AREA IS STABILIZED AND THEREFORE HAS LONG LIFE.

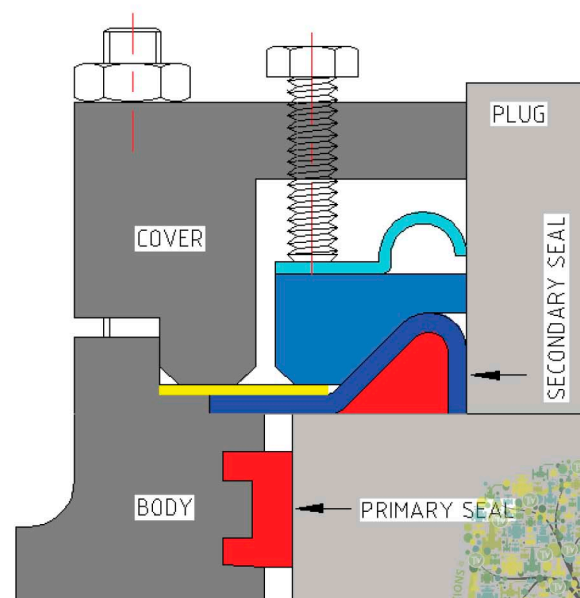
OPTIONS & CONFIGURATIONS

- JACKETED CONSTRUCTION FOR HEATING OR COOLING MEDIA AVAILABLE.
- MULTIPORT ARRANGEMENTS AVAILABLE
- CAGED PLUG CAN BE USED FOR HIGH PRESSURE DROP, HIGH VELOCITY THROTTLING AND SLURRY APPLICATIONS.
- FIRE SAFE DESIGN

ATMOSPHERIC SEAL DESIGN 1



ATMOSPHERIC SEAL DESIGN 2



PLUG VALVES

PTFE SLEEVE PLUG VALVES

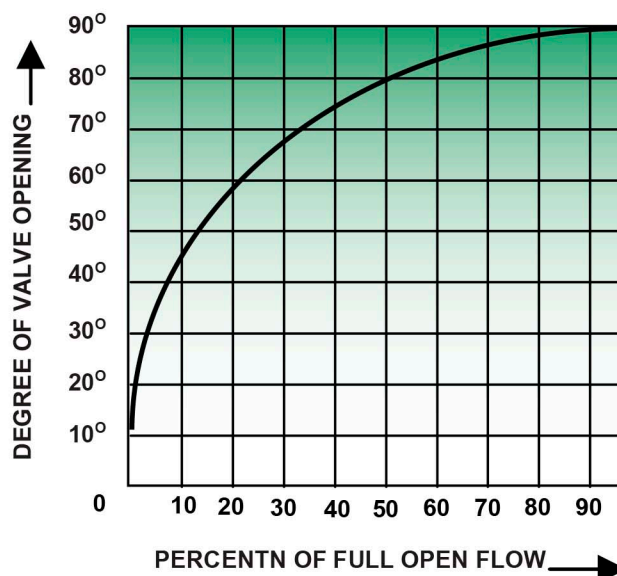
MATERIAL LIST

NO.	PART NAME	MATERIAL
01	BODY	DI ²⁾ WCB CF8 CF8M CN7M
02	PLUG	CA15 CF8 CF8M CN7M
03	COVER	DI ²⁾ WCB CF8 CF8M CN7M
04	SLEEVE	PTFE
05	PTFE DIAPHRAGM	PTFE
07	METAL DIAPHRAGM	ASTM A240 TP.304
08	THRUST COLLAR	ASTM A276 TP.304
09	STATIC ELIMINATOR	ASTM A240 TP.304
9A	STATIC ELMTR. PLATE	ASTM A276 TP.304
10	STUD -BODY	A193 Gr. B7 A193 Gr. B8
	NUT -BODY	A194 Gr. 2H A194 Gr. 8
13	ADJ. SCREW	SS 304
14	LEVER	STEEL
15	ADAPTER	STEEL
16	WASHER	ALUMINUM
17	HEX. SCREW	STEEL
19	BRACKET	STEEL
20	GEAR ACTUATOR	C.I. HOUSING
29	WEDGE RING	GRAFOIL
30	BODY GASKET	GRAFOIL
31	CAGE	CA15 CF8 CF8M CN7M
32	ADJUSTER BOLT	ASTM A276 TP.304
33	PLUG ADJUSTER	WCB
46	GLAND	WCB
50	ADJUSTER BOLT	ASTM A276 TP.304

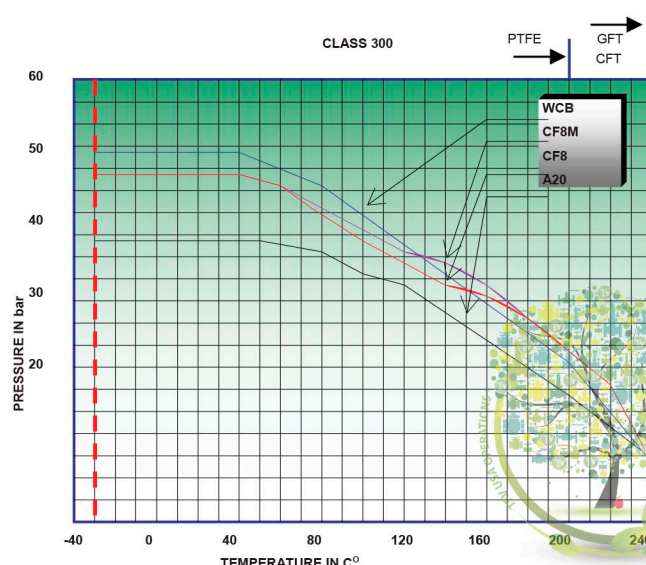
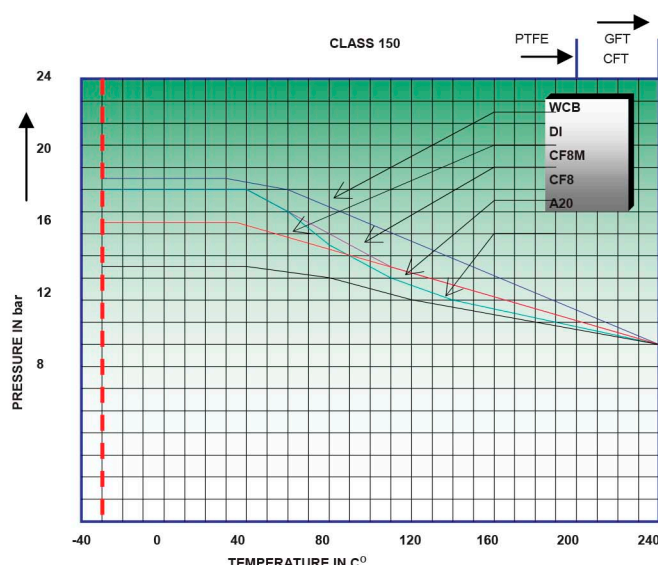
NOTE :

- 1) OTHER MATERIALS AVAILABLE UPON REQUEST
- 2) FOR CLASS 150 ONLY, FLAT FACE AVAILABLE ON REQUEST.
- 3) FIRE SAFE DESIGN IS ONLY FOR EXTERNAL LEAKAGE AS PER API : 607 - IV EDITION, NOT FOR THROUGH SEAT LEAKAGE.

FLOW CHARACTERISTIC

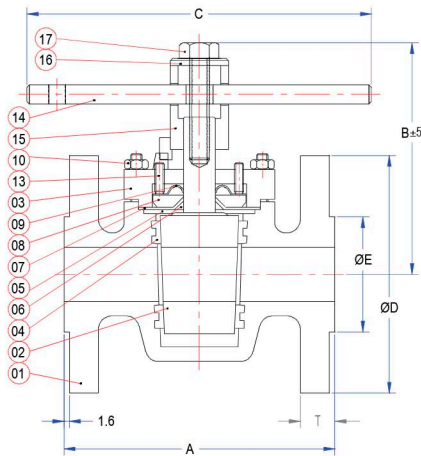


PRESSURE-TEMPERATURE CHART

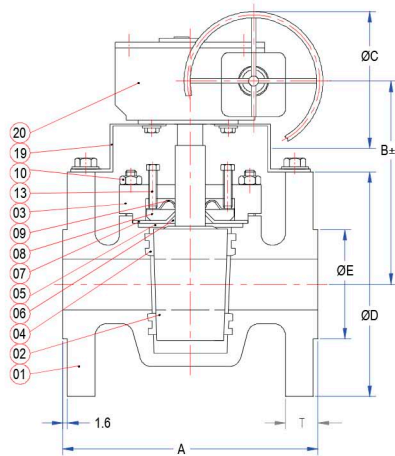


PLUG VALVES

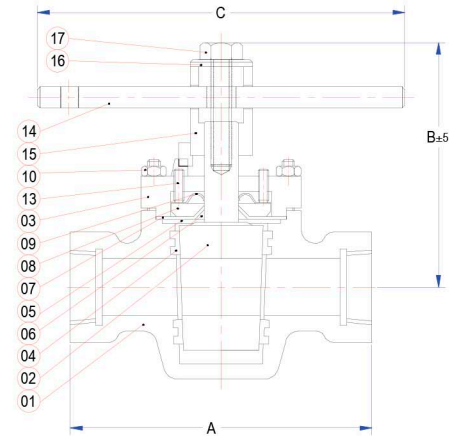
PTFE SLEEVE PLUG VALVES



NOTE: FROM 1/2" TO 4"

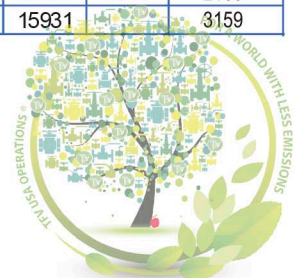


NOTE: FROM 6 TO ABOVE



DIMENSION (INCHES)

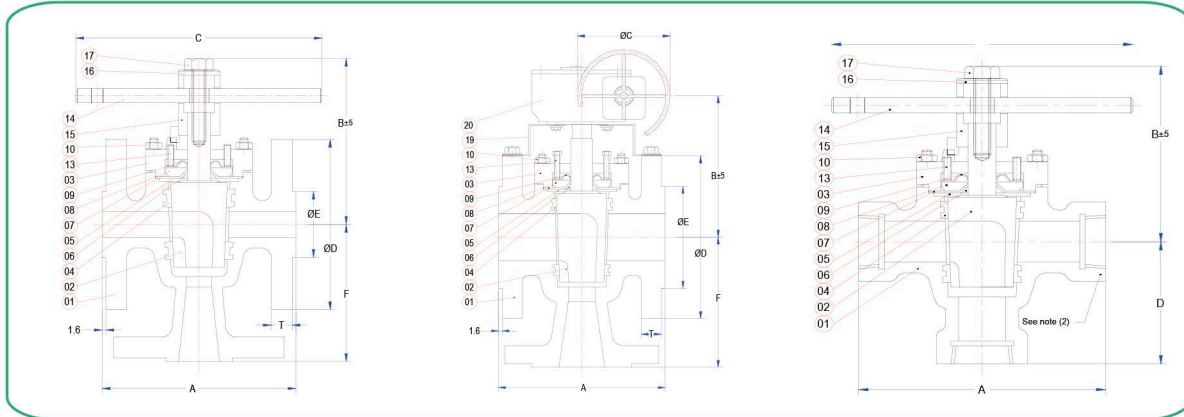
SIZE	A				B	C	D		E	T		WEIGHT (LBS)				TORQUE (IN-LB)		CV VALUE CLASS 150 & 300
	Flanged Class	150#	300#	SE, SW, BW	Extended BW		Flanged Class	150#	300#	Flanged Class	150#	300#	Flanged Class	150#	300#	SE, SW, BW	Extended BW	
1/2"	4.25	5.51	3.27	9.84	3.74	8.86	3.54	3.74	1.38	0.45	0.57	4.40	7.70	3.74	4.40	177	221	9
3/4"	4.61	5.98	3.27	9.84	3.94	8.86	3.94	4.72	1.69	0.45	0.63	5.50	11.00	4.18	5.06	212	336	4
1"	5.00	6.50	4.61	11.02	4.33	8.86	4.33	4.92	2.01	0.45	0.69	9.90	14.30	7.70	8.80	266	345	44
1 1/2"	6.50	7.48	5.51	12.99	4.72	12.80	5.12	6.10	2.87	0.57	0.83	16.50	24.20	9.90	11.00	354	372	92
2"	7.01	8.50	6.50	14.17	5.71	17.72	5.91	6.50	3.62	0.63	0.89	26.40	35.20	16.50	17.60	531	664	175
2 1/2"	7.48	9.49	7.48	15.75	6.89	23.62	7.09	7.48	4.13	0.69	1.00	33.00	41.80	20.90	20.90	797	974	245
3"	7.99	11.14	7.99	16.73	6.30	17.72	7.48	8.27	5.00	0.77	1.14	39.60	48.40	24.20	26.40	1106	1328	290
4"	9.02	12.01	—	—	7.68	29.53	9.06	10.04	6.18	0.94	1.26	66.00	96.80	—	—	1947	2390	545
6"	10.51	15.87	—	—	9.45	12.20	11.02	12.60	8.50	1.00	1.46	143.00	211.20	—	—	3717	4425	1070
8"	11.50	16.50	—	—	10.63	17.72	13.58	14.96	10.63	1.14	1.63	233.20	332.20	—	—	6903	8231	1580
10"	12.99	17.99	—	—	11.81	19.69	15.94	17.52	12.76	1.20	1.89	352.00	495.00	—	—	12833	15931	2165
12"	14.02	—	—	—	14.57	19.69	19.09	0.00	15.00	1.26	—	462.00	—	—	—	15931	—	3159



PLUG VALVES

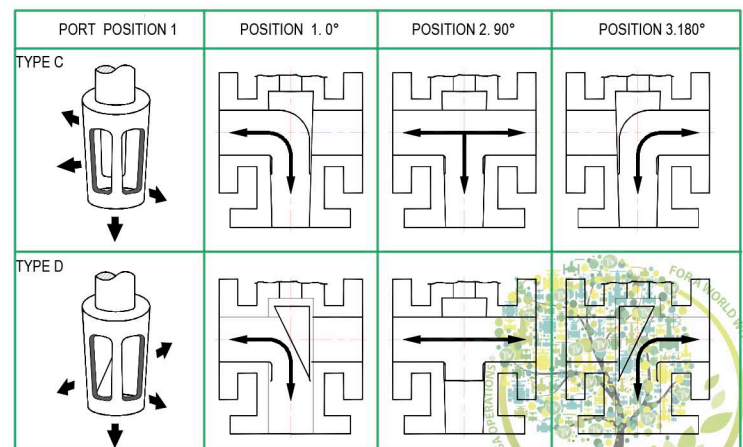
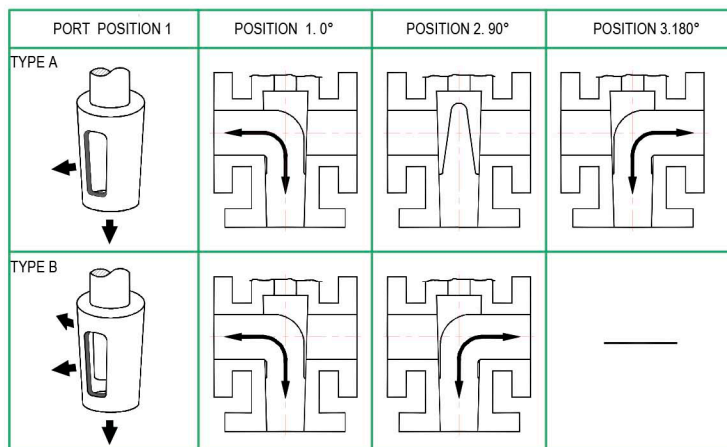
PTFE SLEEVE PLUG VALVES

3 WAYS FLOW ARRANGEMENTS



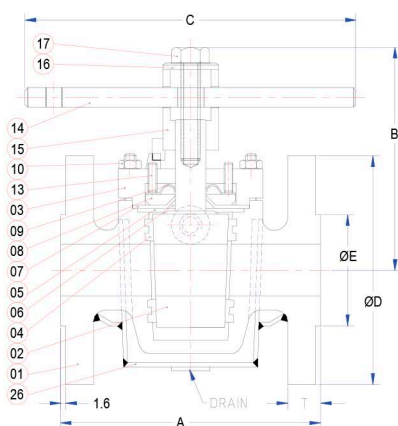
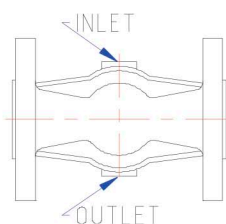
DIMENSION (INCHES)

SIZE	A (Face to face Dimensions)				B	C	D		E	F			T		WEIGHT (LBS)		
	Class 150#	Class 300#	THR	SW			BW	Class 150#		Class 300#	Class 150#	Class 300#	SE, SWE	Flanged	Class	Flanged	THR SW BW
1/2"	4.25	5.51	3.27	9.84	3.74	8.86	3.54	3.74	1.38	2.76	2.87	1.69	0.45	0.57	4.40	7.70	3.74
3/4"	4.61	5.98	3.27	9.84	3.94	8.86	3.94	4.72	1.69	2.87	2.99	2.24	0.45	0.63	5.50	11.00	4.18
1"	5.00	6.50	4.61	11.02	4.33	8.86	4.33	4.92	2.01	3.50	3.74	2.36	0.45	0.69	9.90	14.30	7.70
1 1/2"	6.50	7.48	5.51	12.99	4.72	12.80	5.12	6.10	2.87	4.13	4.33	2.87	0.57	0.83	16.50	24.20	9.90
2"	7.01	8.50	6.50	14.17	5.71	17.72	5.91	6.50	3.62	4.49	4.72	—	0.63	0.89	26.40	35.20	16.50
2 1/2"	7.48	9.49	7.48	15.75	6.89	23.62	7.09	7.48	4.13	5.12	5.51	—	0.69	1.00	33.00	41.80	20.90
3"	7.99	11.14	7.99	16.73	6.30	17.72	7.48	8.27	5.00	5.12	5.51	—	0.77	1.14	39.60	48.40	24.20
4"	9.02	12.01	—	—	7.68	29.53	9.06	10.04	6.18	5.98	6.69	—	0.94	1.26	66.00	96.80	—
6"	10.51	15.87	—	—	9.45	12.20	11.02	12.60	8.50	7.48	8.50	—	1.00	1.46	143.00	211.20	—
8"	11.50	16.50	—	—	10.63	17.72	13.58	14.96	10.63	9.06	10.04	—	1.14	1.63	233.20	332.20	—
10"	12.99	17.99	—	—	11.81	19.69	15.94	17.52	12.76	11.02	12.20	—	1.20	1.89	352.00	495.00	—
12"	14.02	—	—	—	14.57	19.69	19.09	—	15.00	12.60	—	—	1.26	—	462.00	—	—

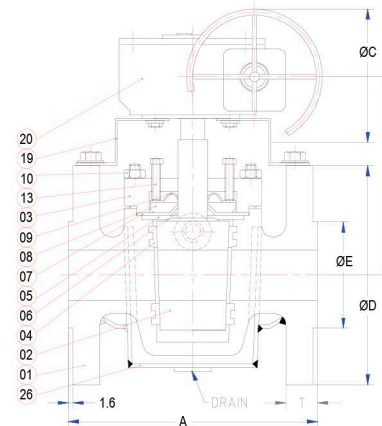


PLUG VALVES

PTFE SLEEVE PLUG VALVES

FULLY JACKETED

FULLY & PARTIALLY JACKETED


JACKET INLET, OUTLET & DRAIN CONNECTIONS WILL BE
 1/4"NPT FOR SIZES 15 TO 40. 1/2"NPT FOR SIZES 50 TO 100.
 & 3/4"NPT FOR SIZES 150 TO 300.

PARTIALLY JACKETED


DIMENSION (INCHES)

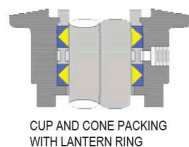
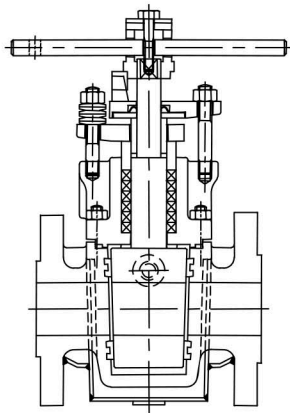
SIZE		CLASS 150#							CLASS 300#						
Port	Flange (FJ)	A	B	C	D	E	T	WEIGHT (LBS)	A	B	C	D	E	T	WEIGHT (LBS)
1/2"	1"	4.25	3.74	8.86	4.33	2.01	0.45	6.60	—	—	—	—	—	—	—
3/4"	1 1/2"	4.61	3.94	8.86	5.12	2.87	0.57	9.90	5.98	3.94	8.86	6.10	2.87	0.83	17.60
1"	2"	5.00	4.33	8.86	5.91	3.62	0.63	16.50	6.50	4.33	8.86	6.50	3.62	0.89	22.00
1 1/2"	2 1/2"	6.50	4.72	12.80	7.09	4.13	0.69	22.00	7.48	4.72	12.80	7.48	4.13	1.00	35.20
2"	3"	7.01	5.71	17.72	7.48	5.00	0.77	33.00	8.50	5.71	17.72	8.27	5.00	1.14	44.00
2 1/2"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3"	4"	7.99	6.30	17.72	9.06	6.18	0.94	52.80	11.14	6.30	17.72	10.04	6.18	1.26	66.00
4"	6"	9.02	7.68	29.53	11.02	8.50	1.00	81.40	12.01	7.68	29.53	12.60	8.50	1.46	118.80
6"	8"	10.51	9.84	13.78	13.58	10.63	1.14	176.00	15.87	9.84	13.78	14.96	10.63	1.63	275.00
8"	10"	11.50	11.02	13.78	15.94	12.76	1.20	275.00	16.50	11.02	13.78	17.52	12.76	1.89	420.20
10"	12"	12.99	12.60	15.75	19.09	15.00	1.26	440.00	17.99	12.60	15.75	20.51	15.00	7.52	858.00
12"	14"	14.02	15.35	19.69	21.02	16.26	1.38	550.00	—	—	—	—	—	—	—



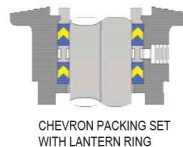
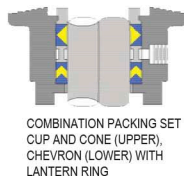
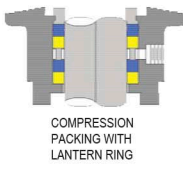
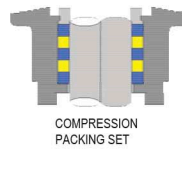
PLUG VALVES

PTFE SLEEVE PLUG VALVES

SPECIALS VALVES FOR TOXIC SERVICES


 CUP AND CONE PACKING
WITH LANTERN RING


CHEVRON PACKING SET

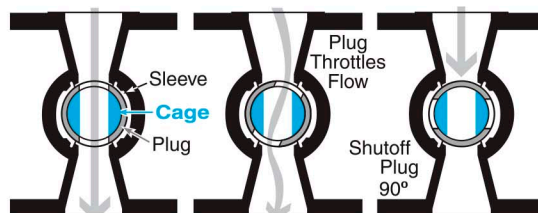

 CHEVRON PACKING SET
WITH LANTERN RING

 COMBINATION PACKING SET
CUP AND CONE (UPPER),
CHEVRON (LOWER) WITH
LANTERN RING

 COMPRESSION
PACKING WITH
LANTERN RING

 COMPRESSION
PACKING SET

FEATURES

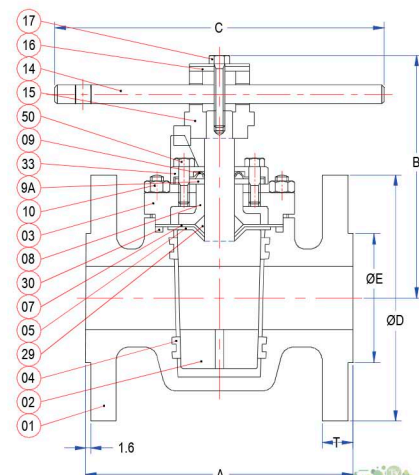
- LIVE LOADED DESIGN
- DESIGNED AND MANUFACTURED TO ELIMINATE FUGITIVE EMISSIONS AND TO HANDLE THE TOUGHEST SERVICES SUCH AS:
HYDROFLUORIC ACID
CHLORINE
ANHYDROUS HCl
- THE STUFFING BOX DESIGN WITH ALL THE POSITIVE SHUT – OFF, CORROSION RESISTING FEATURES.
- WILL ACCOMMODATE ALL STANDARD PACKING.
- MANY OPTIONS SUCH AS BONNET TAP FOR INSERTION OF CHLORINE COMPATIBLE LUBRICANT OR OTHER GREASES, FOR INERT GAS PAD, OR AS A LEAK – OFF CONNECTION.
- 3 WAY PLUG CONFIGURATIONS ARE AVAILABLE AS OPTION.

CAGED PLUG VALVE

- PROVIDES SOFT SLEEVE PROTECTION FOR THROTTLING APPLICATIONS.
- CAGED PLUG CAN BE USED FOR HIGH PRESSURE DROP SERVICES.
- RECOMMENDED FOR HIGH VELOCITY THROTTLING FLUIDS AND SLURRY APPLICATIONS.



FIRE SAFE API 607 IV EDITION



FIRE SAFE DESIGN IN ONLY FOR EXTERNAL LEAKAGE AS PER API 607 IV EDITION. NOT FOR THROUGH SEAT LEAKAGE



PLUG VALVES

PTFE SLEEVE PLUG VALVES

HOW TO ORDER

VALVE BODY DESIGN (SERIES)		FEATURES		MATERIAL				ENDS	CLASS	SIZE ⁽²⁾		OPERATION					
				BODY	TRIM	SEAT											
10S	Sleeve Plug valve	NONE	None	6	DI / CI	C	CA15	P	PTFE	F	Flanged RF	0	ANSI 150#	0.5	1/2"	L	Lever Operator
		CC	Caged Control valve	2	WCB	3	316SS	R	RPTFE	R	Flanged RTJ	3	ANSI 300#	0.75	3/4"		
		F	Fire Safe	3	CF8M	4	304SS	C	PTFE carbon filled	B	Butt Weld	6	ANSI 600# ⁽¹⁾	01	1"	G	Gear Operator ⁽³⁾
		G	Fire Safe / NACE	5	CF3M	5	316SL			T	Threaded			01.5	1 1/2"		
		O	Oxygen Service	8	Alloy 20	8	Alloy 20	H	HIGH TEMPERATURE (475°F)	S	Socket weld			02	2"	E	Electric Actuator
		FE	Fugitive Emissions	0	Monel	0	Monel							02.5	2 1/2"		
		N	NACE							03	3"	P	Pneumatic Actuator				
		FJ	Full Jacketed							04	4"						
		PJ	Partial Jacketed							06	6"	B	Bare Shaft				
		FW	3 way Full Jacketed							08	8"						
										10	10"	O	Oval operator				
										12	12"						
										14	14"						
										16	16"						
		WA	3 Ways Port "A"														
		WB	3 Ways, Port "B"														
		WC	3 Ways Port "C"														
		WD	3 Ways Port "D"														

Example

3 Ways Sleeve Plug Valve Port "A", Body WCB, Trim 316SS, Sleeve PTFE, Flanged RF ANSI Class 300#, Size 6" with Gear Operator.

10S-23P-F306G

(1) Under Design for flanged ends Only

(2) Threaded from 1/2" to 3" Only

(3) Mandatory from 6" and above

