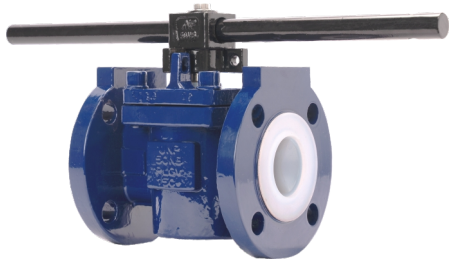


LINED PLUG VALVE





PLUG VALVE





Valve Solutions For Corrosive Applications

ABOUT US

Incepted in 1988, UNP Polyvalves is manufacturing and supplying valves and piping solutions for the corrosive and aggressive chemical applications.

Taking up the challenge of changing market trends and industry requirements, UNP Polyvalves entered into manufacturing of solid plastic and lined valves and piping systems. Beginning with small manufacturing facility and variety of valves, today UNP Polyvalves is a leading brand in providing most reliable solutions for lined as well as solid plastic valves and piping systems.

UNP Polyvalves has been working very closely with the end users of various plants, understanding different application requirements and difficulties, UNP Polyvalves provided solutions for the same with their in-depth understanding of processes and its safety requirements.

UNP Polyvalves possesses most knowledgeable, experienced and skill set of workforce, resulting in manufacturing of products of high performance and unmatched quality with reliability. Having vision for quality with reliability, UNP aims for highest level of customer satisfaction at every level.

UNP Polyvalves has customer base across the globe, having establishments in North America. UNP Polyvalves has presence in more than 45 countries.

ACHIEVEMENTS

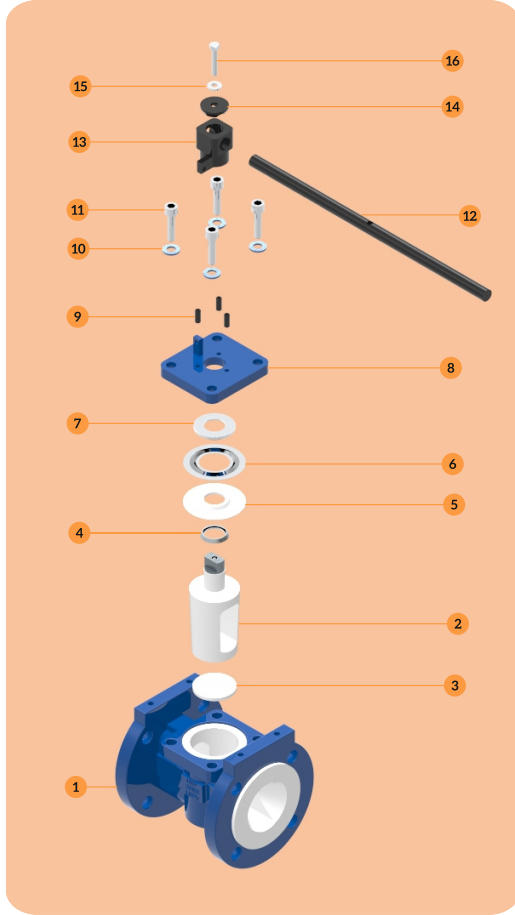
UNP Polyvalves possesses knowledge of the exact process requirements and with technical skill set of people we have resolves process related issues in various plants such as chlor-alkali plants, steel industry, pickling and ARPs, chemical injection skid manufacturing OEMs for Oil & Gas industries, mining and other chemical related plants.

UNP Polyvalves is approved by worlds leading consultants and EPC contractors such as ThyssenKrupp, Worley, Mott McDonald, TOYO Engineering, FLUOR, EIL, etc.

UNP has major product and system qualifications such as ISO 9001:2015, PED, FE (ISO 15848-1), EN 14432, ATEX, SIL 3 compliance, etc.

LINED PLUG VALVE

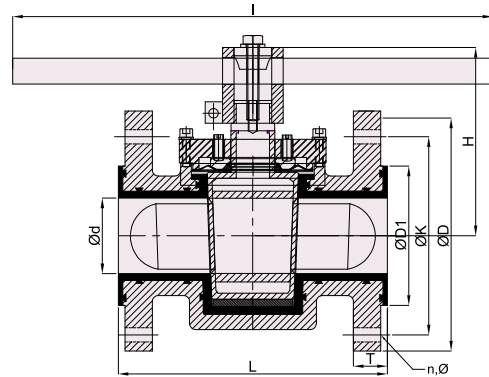
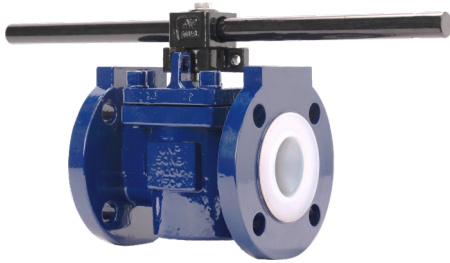
LEVER OPERATED



PART LIST

PART NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	Body *	ASTM A 216 GR. WCB + PFA
2	Plug **	I7-4PH + PFA
3	Bearing Washer	PTFE / MPTFE
4	Wedge Ring	PTFE / MPTFE
5	Diaphragm	PTFE / MPTFE
6	Shim***	SS 304
7	Thrust Collar***	SS 304
8	Cover Plate	ASTM A 216 GR. WCB / SS 304 / SS 316
9	Grub Screw	SS 304
10	Allen Bolt Spring Washer	HT STEEL / SS 304 / SS 316
11	Allen Bolt	ASTM A 193 GR. B7 / SS 304 / SS 316 / HC - 276
12	Lever	MS
13	Lever Holding Block	ASTM A 216 GR. WCB
14	Lever Locating Washer	MS GALVANISED
15	Lever Holding Bolt Washer	SS 304 / SS 316
16	Lever Holding Bolt	SS 304 / SS 316

SECTIONAL VIEW



DIMENSIONS

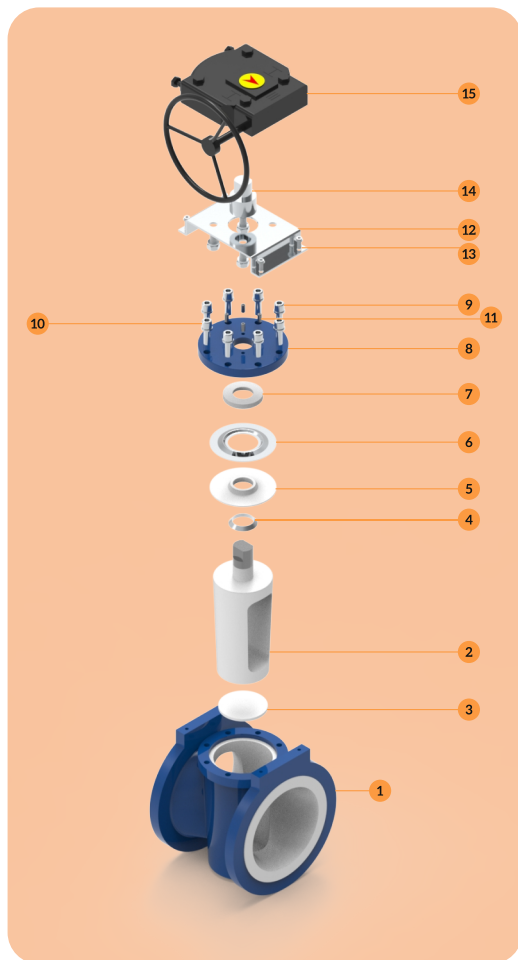
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INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM		INCH	MM
1/2"	15	4.25	108	3.50	89	0.51	13	0.59	15.0	1.38	35	3.19	81	8.86	225	2.36	60	04	5/8	16
3/4"	20	5.00	127	4.25	108	0.98	25	0.63	16.0	2.01	51	4.09	104	12.80	325	2.76	70	04	5/8	16
1"	25	5.00	127	4.25	108	0.98	25	0.63	16.0	2.01	51	4.09	104	12.80	325	3.11	79	04	5/8	16
1.5"	40	6.50	165	5.00	127	1.46	37	0.75	19.0	2.87	73	4.33	110	17.72	450	3.86	98	04	5/8	16
2"	50	7.01	178	5.98	152	1.97	50	0.81	20.5	3.62	92	5.00	127	17.72	450	4.76	121	04	3/4	19
3"	80	7.99	203	7.48	190	2.99	76	0.98	25.0	5.00	127	5.55	141	17.72	450	5.98	152	04	3/4	19
4"	100	9.02	229	9.02	229	3.70	94	0.98	25.0	6.18	157	6.93	176	29.53	750	7.52	191	08	3/4	19

NOTE:

- ALL DIMENSION ARE IN INCHES & MM. 2. FUGITIVE EMISSION/ SIL 3 CERTIFIED VALVES AVAILABLE. 3. TOLERANCES ARE GIVEN IN INCHES.
- * BODY MOC OPTIONS: CF8, CF8M, CF3M, HASTELLOY C, INCONEL.
- ** TRIM INSERT MOC OPTIONS : CF8M, CF3M, CD3MN.
- *** SHIM / THRUST COLLAR MOC OPTIONS : SS316, MONEL, HC-276

LINED PLUG VALVE

GEAR OPERATED

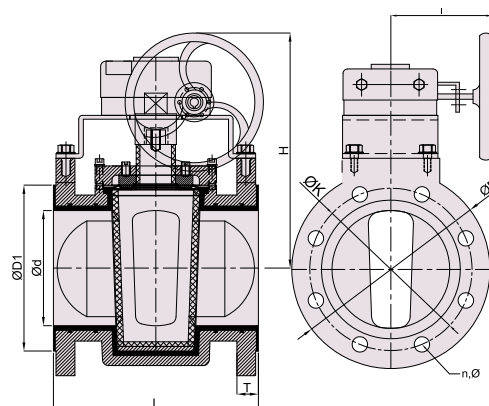


PART LIST

PART NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	Body*	ASTM A 216 GR. WCB + PFA
2	Plug**	I7-4PH + PFA
3	Bearing Washer	PTFE / MPTFE
4	Wedge Ring	PTFE / MPTFE
5	Diaphragm	PTFE / MPTFE
6	Shim***	SS 304
7	Thrust Collar****	SS 304
8	Cover Plate	ASTM A 216 GR. WCB / SS 304 / SS 316
9	Allen Bolt	B7 / SS 304 / SS 316 / HC - 276
10	Allen Bolt Spring Washer	HT STEEL / SS 304 / SS 316
11	Grub Screw	SS 304
12	Gearbox Mounting Bracket	SS 304
13	Bracket Mounting Bolts	HT 12.9
14	Coupler	SS 304
15	Gearbox	CAST IRON



SECTIONAL VIEW



DIMENSIONS

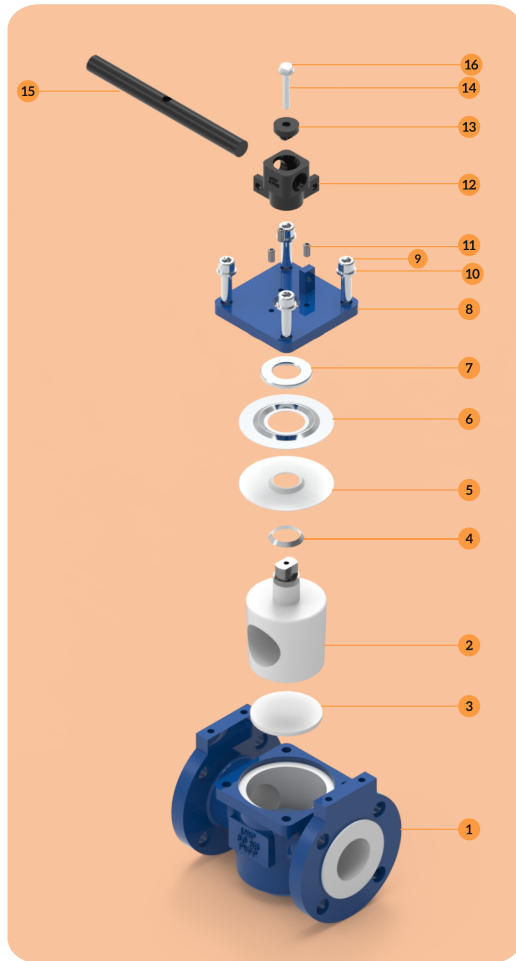
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	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM		INCH	MM	
6	150	10.51	267	11.02	280	5.91	150	1.10	28	8.50	216	17.60	447	7.87	200	9.49	241	08	6/7	22
8	200	11.69	297	13.50	343	7.64	194	1.18	30	10.55	268	20.16	512	10.24	260	11.73	298	08	6/7	22
10	250	12.99	330	15.98	406	9.84	250	1.34	34	12.76	324	23.23	590	11.02	280	14.25	362	12	1	25
12	300	24.00	610	19.00	483	11.81	300	1.41	36	15.00	381	26.77	680	13.77	350	17.00	432	12	1	25

NOTE:

- ALL DIMENSION ARE IN INCHES & MM. 2. FUGITIVE EMISSION/ SIL 3 CERTIFIED VALVES AVAILABLE. 3. TOLERANCES ARE GIVEN IN INCHES.
- * BODY MOC OPTIONS: CF8, CF8M, CF3M, HASTELLOY C, INCONEL.
- ** TRIM INSERT MOC OPTIONS : CF8M, CF3M, CD3MN.
6. LINING OPTIONS: ANTI-STATIC PFA, FEP, PVDF, PPH. 7. **** SHIM / THRUST COLLAR MOC OPTIONS : SS316, MONEL, HC-276

FULL PORT LINED PLUG VALVE

LEVER OPERATED

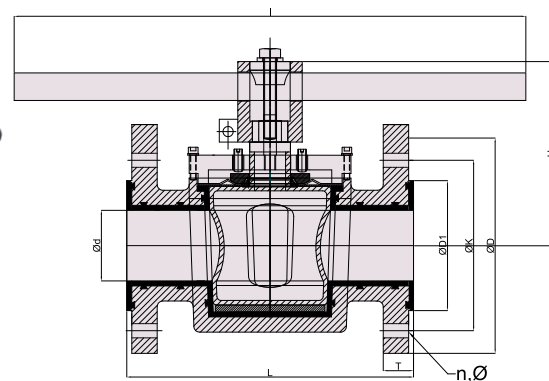


PART LIST

PART NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	Body*	ASTM A 216 GR. WCB + PFA
2	Plug**	17-4PH + PFA
3	Bearing Washer	PTFE / MPTFE
4	Wedge Ring	PTFE / MPTFE
5	Diaphragm	PTFE / MPTFE
6	Shim***	SS 304
7	Thrust Collar***	SS 304
8	Cover Plate	ASTM A 216 GR. WCB / SS 304 / SS 316
9	Allen Bolt	ASTM A 193 GR. B7 / SS 304 / SS 316 / HC - 276
10	Allen Bolt Spring Washer	HT STEEL / SS 304 / SS 316
11	Grub Screw	SS 304
12	Lever Holding Block	ASTM A 216 GR. WCB
13	Lever Locating Washer	MS GALVANISED
14	Lever Holding Bolt	SS 304 / SS 316
15	Lever	MS
16	Lever Holding Bolt Washer	SS 304 / SS 316



SECTIONAL VIEW



DIMENSIONS

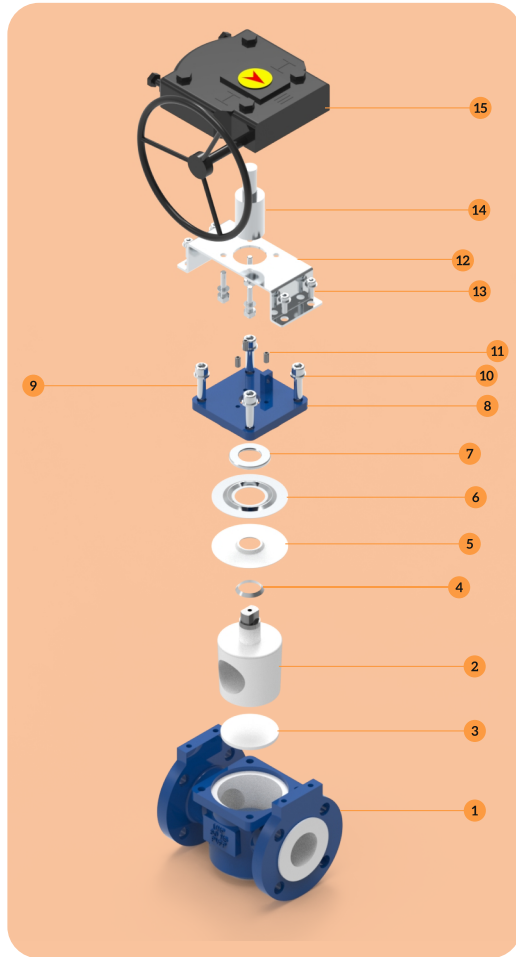
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INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM		INCH	MM
1/2"	15	5.12	130	3.50	89	0.51	13	0.59	15	1.38	35	3.19	81	8.86	225	2.36	60	04	5/8	16
3/4"	20	5.51	140	4.25	108	0.98	25	0.63	16	2.01	51	4.09	104	12.80	325	2.76	70	04	5/8	16
1"	25	5.51	140	4.25	108	0.98	25	0.63	16	2.01	51	4.09	104	12.80	325	3.11	79	04	5/8	16
1.5"	40	6.49	165	5.00	127	1.5	38	0.78	20	2.87	73	4.33	110	17.75	451	3.85	98	04	5/8	16

NOTE:

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- * BODY MOC OPTIONS: CF8, CF8M, CF3M, HASTELLOY C, INCONEL. 5. ** TRIM INSERT MOC OPTIONS : CF8M, CF3M, CD3MN.
6. LINING OPTIONS: ANTI-STATIC PFA, FEP, PVDF, PPH. 7. *** SHIM / THRUST COLLAR MOC OPTIONS : SS316, MONEL, HC-276

FULL PORT LINED PLUG VALVE

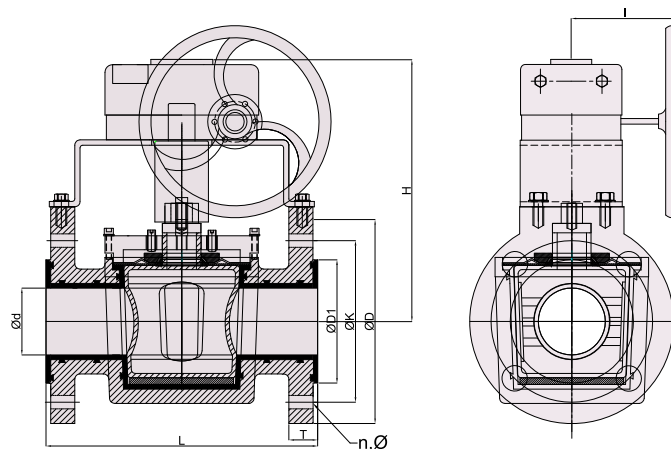
GEAR OPERATED



PART LIST

PART NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	Body*	ASTM A 216 GR.WCB + PFA
2	Plug**	I7-4PH + PFA
3	Bearing Washer	PTFE / MPTFE
4	Wedge Ring	PTFE / MPTFE
5	Diaphragm	PTFE / MPTFE
6	Shim	SS 304
7	Thrust Collar	SS 304
8	Cover Plate	ASTM A 216 GR.WCB / SS 304 / SS 316
9	Allen Bolt	B7 / SS 304 / SS 316 / HC - 276
10	Allen Bolt Spring Washer	HT STEEL / SS 304 / SS 316
11	Grub Screw	SS 304
12	Gearbox Mounting Bracket	SS 304
13	Bracket Mounting Bolts	HT 12.9
14	Coupler	SS 304
15	Gearbox	CAST IRON

SECTIONAL VIEW



DIMENSIONS

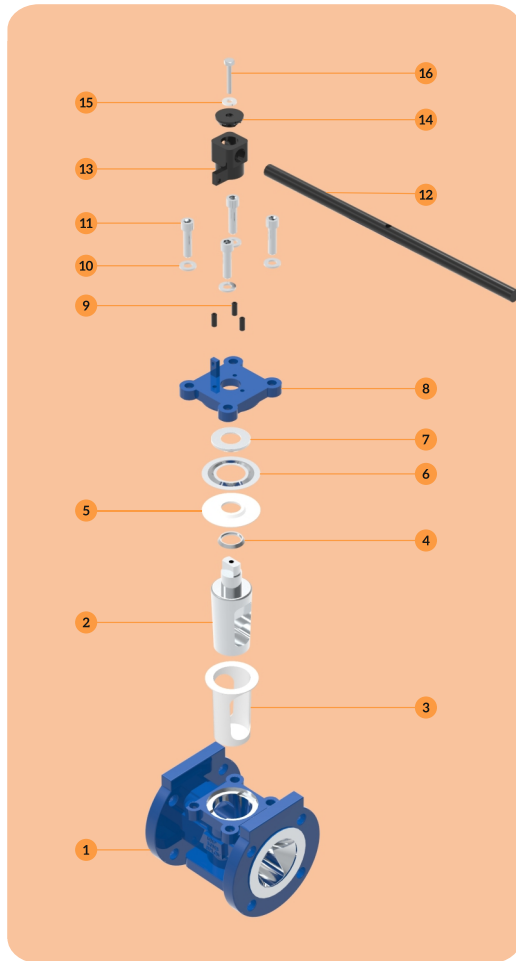
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INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM		INCH	MM
2"	50	7.99	203	5.98	152	1.97	50	0.81	20.50	3.62	92	7.52	191	5.31	135	4.76	121	04	3/4	19
3"	80	12.20	310	7.48	190	2.99	76	0.98	25.00	5.00	127	8.27	210	5.31	135	5.98	152	04	3/4	19
4"	100	13.78	350	9.02	229	3.70	94	1.08	27.50	6.18	157	9.88	251	7.87	200	7.52	191	08	3/4	19

NOTE:

1. ALL DIMENSION ARE IN INCHES & MM. 2. FUGITIVE EMISSION/ SIL 3 CERTIFIED VALVES AVAILABLE. 3. TOLERANCES ARE GIVEN IN INCHES.
4. * BODY MOC OPTIONS: CF8, CF8M, CF3M, HASTELLOY C, INCONEL. 5. ** TRIM INSERT MOC OPTIONS : CF8M, CF3M, CD3MN.
6. LINING OPTIONS: ANTI-STATIC PFA, FEP, PVDF, PPH. 7. *** SHIM / THRUST COLLAR MOC OPTIONS : SS316, MONEL, HC-276

SLEEVED PLUG VALVE

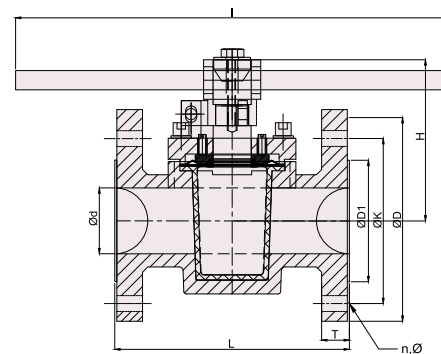
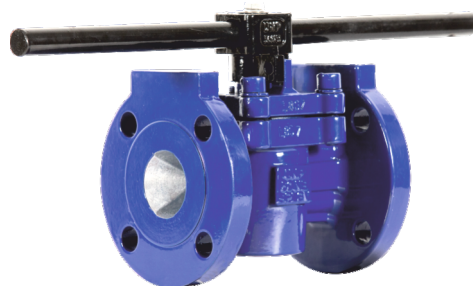
LEVER OPERATED



PART LIST

PART NO.	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	Body *	ASTM A 216 GR. WCB / SS 304 / SS 316
2	Plug **	ASTM A 890 GR. 4A (CD3MN) / CF8M
3	Sleeve	PTFE / MPTFE
4	Wedge Ring	PTFE / MPTFE
5	Diaphragm	PTFE / MPTFE
6	Shim	SS 304
7	Thrust Collar	SS 304
8	Cover Plate	ASTM A 216 GR. WCB / SS 304 / SS 316
9	Grub Screw	SS 304
10	Allen Bolt Spring Washer	B7 / SS 304 / SS 316
11	Allen Bolt	ASTM A 193 GR. B7
12	Lever	MS
13	Lever Holding Block	ASTM A 216 GR. WCB
14	Lever Locating Washer	MS GALVANISED
15	Lever Holding Bolt Washer	SS 304
16	Lever Holding Bolt	SS 304

SECTIONAL VIEW



DIMENSIONS

Size		L ±0.11 IN.		ØD ±0.04 IN.		ØD1 ±0.04 IN.		Ød ±0.04 IN.		T ±0.11/0.00 IN.		H ±0.19 IN.		ØK ±0.062 IN.		I ±0.19V IN.		n	Ø	
INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM		INCH	MM
1"	25	5.00	127	4.25	108	2.00	51	0.98	25	0.62	16.0	4.17	106	3.11	79	12.79	325	04	5/8	16
1.5"	40	6.49	165	5.00	127	2.87	73	1.57	40	0.74	19.0	4.29	109	3.86	98	17.71	450	04	5/8	16
2"	50	7.00	178	5.98	152	3.62	92	1.96	50	0.80	20.5	5.47	139	4.76	121	17.71	450	04	3/4	19
3"	80	7.99	203	7.48	190	5.00	127	2.99	76	0.98	25.0	5.78	147	5.98	152	17.71	450	04	3/4	19
4"	100	9.01	229	9.01	229	6.18	157	3.93	100	0.98	25.0	6.92	176	7.52	191	29.52	750	08	3/4	19

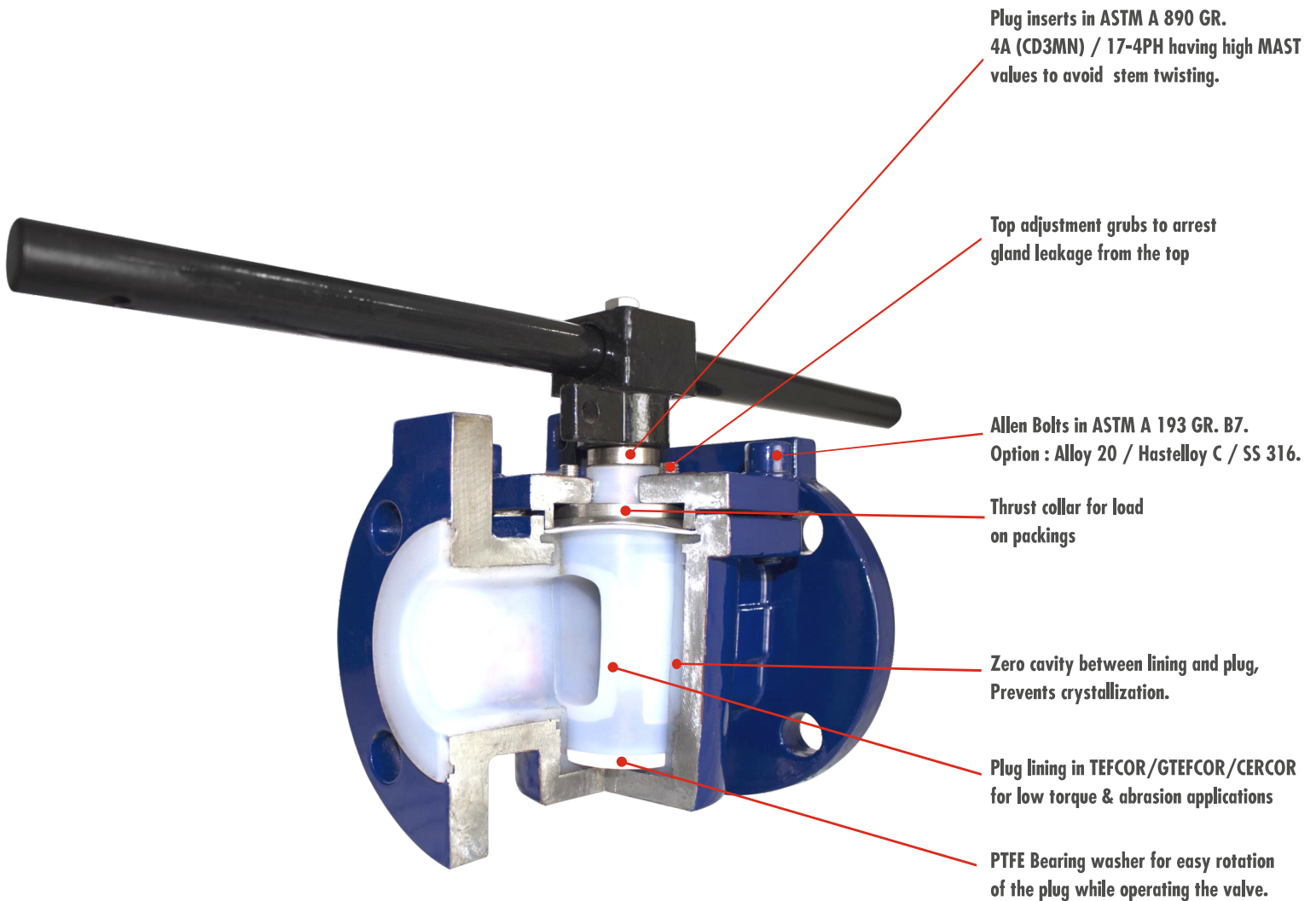
NOTE:

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4. * BODY MOC OPTIONS: CF8, CF8M, CF3M, HASTELLOY C, INCONEL. 5. ** TRIM INSERT MOC OPTIONS : CF8M, CF3M, CD3MN.

6. LINING OPTIONS: ANTI-STATIC PFA, FEP, PVDF, PPH. 7. *** SHIM / THRUST COLLAR MOC OPTIONS : SS316, MONEL, HC-276

PLUG VALVE FEATURES



TORQUE & Cv VALUES

SIZE	TORQUE IN Nm		TORQUE IN in-lb	
	PFA PLUG	TEFCOR PLUG	PFA PLUG	TEFCOR PLUG
0.5"	25	-	221	-
1"	35	-	310	-
1.5"	50	30	443	266
2"	75	40	664	354
3"	140	50	1239	443
4"	235	100	2080	885
6"	525	238	4646	2100
8"	800	-	7080	-
10"	1900	-	16815	-
12"	4100	-	36285	-

VALVE NET WEIGHTS

SIZE	WEIGHT	
	kg	lb
0.5"	2.40	5.30
1"	4.60	10.15
1.5"	7.40	16.30
2"	11.50	25.35
3"	17.55	38.70
4"	29.90	65.90
6"	60.00	132.30
8"	99.00	219.00
10"	160.00	353.00
12"	315.00	695.00

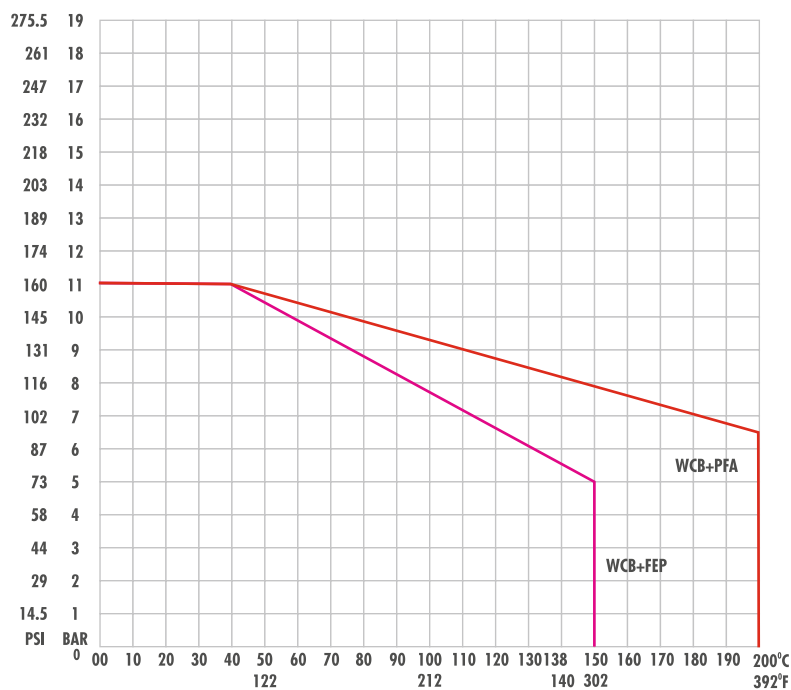
PRODUCT DESIGN AND TESTS PERFORMED

DESIGN PARAMETERS	STANDARD
VALVE DESIGN	API 599
SHELL DESIGN	ANSI B 16.34
FACE TO FACE	ANSI B 16.10 / EN 558-1 / EN 558-12 / EN 558-3
FLANGE CONNECTION RATING	ANSI B 16.5, 150#, 300# / DIN PN 10 / JIS
TESTING STANDARD	API 598 / BS EN 12266-1
CONNECTION	FLANGED, RF

SIZES	0.5" TO 10"		12"	
HIGH PR. SHELL TEST HYDRO	225 PSI	15 kg/cm ²	128 PSI	9 kg/cm ²
HIGH PR. SEAT TEST HYDRO	165 PSI	11 kg/cm ²	94 PSI	6.6 kg/cm ²
LOW PR. SEAT TEST PNEUMATIC	85 PSI	6 kg/cm ²	43 PSI	3 kg/cm ²

SPARK TEST	KVDC
SPARK TEST	20 KVDC

PRESSURE - TEMPERATURE GRAPH



UNP - PLUG VALVE DE-CODE

PVBC - C01 - T02 - L1 - F5 - XX - XL - Y - E0 - K0 - 01

VALVE TYPE

PVBC	Plug Valve - Bottom Closed
PVSL	Plug Valve - Sleeved
PVFE	Plug Valve - Fugitive Emission
PVVP	Plug Valve - V Port
PVFP	Plug Valve - Full Port

BODY CASTING

C01	ASTM A216 Gr. WCB	C07	Hastelloy C276
C02	ASTM A351 Gr. CF8 (Ss304)	C08	ASTM A351 Gr. CF3M (SS316L)
C03	ASTM A351 Gr. CF8M (Ss316)	C10	Inconel
C04	Alloy 20	C11	Monel
C05	Duplex	C12	ASTM A352 Gr. LCB
C06	Super Duplex		

VALVE TRIM INSERT

T05	Duplex	T14	Monel
T06	Super Duplex	T20	I7-4PH
T09	Nickel		
T11	Hastelloy C		
T12	Titanium		
T13	Inconel		

INTERNAL LINING

L1	PFA
L7	Antistatic PFA

FASTENERS

F2	SS304	F6	Hastelloy C
F3	SS316	F10	SS316L
F5	ASTM A193 Gr. B7	F15	ASTM A193 Gr. B8
F8	ASTM A193 Gr. B7M		
F9	Alloy 20		

SEAT

NA

OPERATION

XB	Bare Stem	PD	Pneumatic Actuated Double Acting
XL	Lever	ES	Elec. Actuated Single Acting
XG	Gear	EM	Elec. Actuated Modulating
PS	Pneumatic Actuated Single Acting		

LOCKING ARRANGEMENT

Y REQUIRED

END TO END DIMENSION

E0	ANSI B16.10 150 #
E1	DIN EN 558-1
E2	ANSI B16.10 300 #

FLANGE DRILLING STANDARD

K0	ANSI B16.5 150 #
K1	DIN PN10/16
K2	ANSI B16.5 300 #

SIZE

0H	1/2"	06	6"
75	3/4"	08	8"
01	1"	10	10"
1H	1-1/2"	12	12"
32	1-1/4"		
02	2"		
2H	2-1/2"		
03	3"		
04	4"		

For Control Valves ADD "CV" before code. Example: CV-PVBC-C01-T02-L1-F5-XX-XL-Y-E0-K0-01

PLUG LINING & TYPE OPTIONS



TEFCOR PLUG



TFM PLUG



GTEFCOR PLUG



CHARACTERIZED PLUG



CERCOR PLUG



V PORT PLUG



FULL PORT PLUG

Note :

A series of horizontal dotted lines for writing notes.

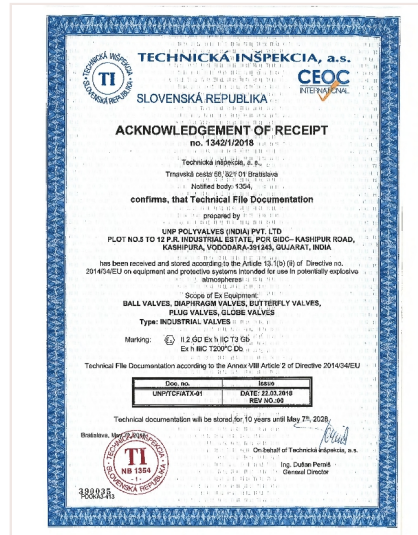
LIST OF CONSULTANT

 <p>TATA PROJECTS Simplify.Create</p>	 <p>AkerSolutions</p>	 <p>CHEMTEX</p>	 <p>METITO Commitment to a Cleaner Environment</p>
 <p>CHEMPRO EXPERTISE PVT. LTD.</p>	 <p>Mott MacDonald</p>	 <p>FURNACE FABRICA</p>	 <p>TATA TATA CONSULTING ENGINEERS LIMITED</p>
 <p>EIL A Navratna Company</p>	 <p>IBI CHEMATUR (Engineering and Consultancy) Ltd.</p>	 <p>P Petrofac</p>	 <p>TOYO ENGINEERING</p>
 <p>thyssenkrupp</p>	 <p>PROTECH PROJECT CONSULTANTS</p>	 <p>Worley energy chemicals resources</p>	 <p>wood.</p>
 <p>FLUOR</p>	 <p>tr TECNICAS REUNIDAS</p>	 <p>Maire Tecnimont</p>	 <p>SIMON India</p>
 <p>L&T Hydrocarbon Engineering</p>	 <p>THERMAX</p>	 <p>WABAG</p>	 <p>Shroff ENGINEERING CONSULTANTS</p>

CERTIFICATION



ISO CERTIFICATE



ATEX CERTIFICATE



CE (VALVES) CERTIFICATE



CE (VALVES) CERTIFICATE



CE (PIPE & FITTINGS) CERTIFICATE



CE (PIPE & FITTINGS) CERTIFICATE

APPROVED
ISO 15848-1
FUGITIVE EMISSION CERTIFICATION
PFA LINED SIDE SPLIT
FULL PORT BALL VALVES
 Size Range : 1/2" to 8"

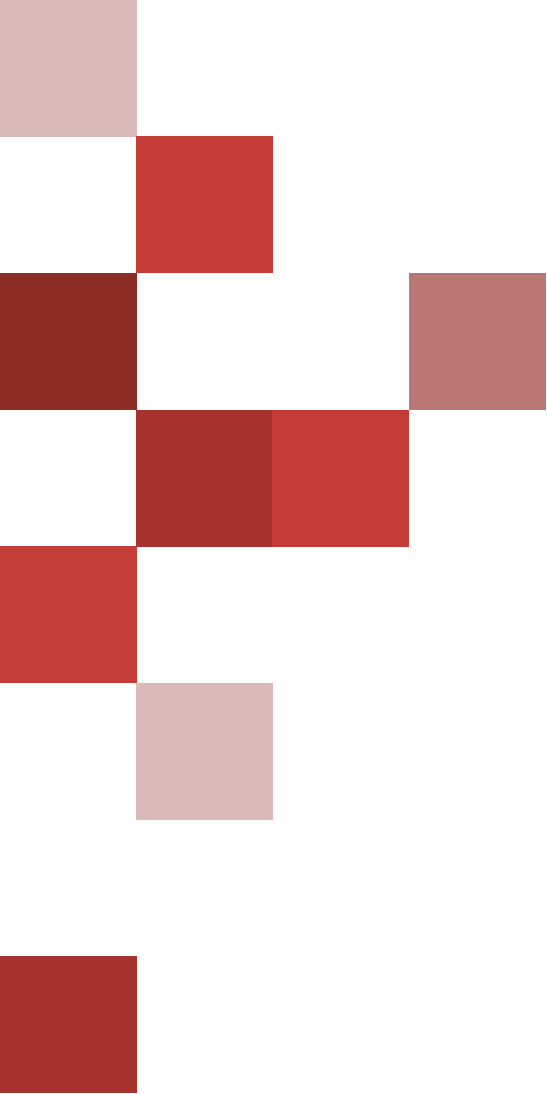
APPROVED
ISO 15848-1
FUGITIVE EMISSION CERTIFICATION
PFA LINED PLUG VALVES
 Size Range : 1/2" to 8"

APPROVED
ISO 15848-1
FUGITIVE EMISSION CERTIFICATION
PFA LINED BUTTERFLY VALVE
 Size Range : 2" to 24"

APPROVED
IEC 61508:2010 PARTS 1-7
SIL 3 CAPABLE
Lined Ball Valve
Lined Butterfly Valve
Lined Plug Valve

APPROVED
DIN EN 14432:2014
PFA LINED BUTTERFLY VALVES
 Size Range : 2" to 8"

APPROVED
DIN EN 14432:2014
PFA LINED SIDE SPLIT
DESIGN BALL VALVES
 Size Range : 1" to 4"



UNPPolyvalves

Valve Solutions For Corrosive Applications

VADODARA

CORPORATE OFFICE

5 to 16 PR Industrial Estate,
Por GIDC - Kashipura Road,
Moje : Kashipura - 391 243,
Dist. Vadodara. INDIA
Phone : +91 70434 30467/77 , 70430 20707
Email : sales.baroda@polyvalve.com

MUMBAI - THANE

207, Orion Business Park,
Next to Cine Max, Kapurbawdi,
Ghodbunder Road, Thane (W) - 400 607. INDIA.
Phone : +91 22 2589 6422, 2589 6524 /25
Fax : + 91 22 2589 4221
Email : sales.thane@polyvalve.com



USA

BRANCH OFFICE

13201 NW Fwy, Suite 800, Houston Texas - 77040, USA
Phone : +1 832 213 9674 | **Email :** Dj@djvalvespumps.com

ISO 9001:2015



QUICK CONTACT :



Distributor

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