



different needs
one solution



Manufacturer of Sleeved Plug Valves, PFA/FEP Lined Valves & Fittings



An ISO 9001:2015 Certified Company



Quality Policy

G M Flowlines is well equipped with specialized production facilities & special purpose machines to manufacture world class Quality Products. We at G M Flowlines strictly follows stringent quality checks at each & every stage of production, right from procurement of raw materials to the finished product as per respective international standards to ensure consistent Quality in the product. In addition to this, to put cross check on the actual practice, G M Flowlines follows a systematic documentation & management practice as per ISO 9001:2015 standards which has a complete backbone of comprehensive ERP.

Our quality system is further backed by superior quality control facilities like HVDC Spark Test, Hydraulic Bench Test, Pneumatic Bench Test, Lining Thickness Measurement Meter & Colour Thickness Measurement Gauge. All products are tested individually which gives complete peace of mind to our valued customers. All quality control facilities are being calibrated regularly as per ISO requirements against National Standards to ensure accuracy. We also provide Third Party inspection Certification on request.



Company

G M Flowlines Pvt. Ltd. was **Founded in the Year 2008** as a group company of G M Engineering Pvt. Ltd. which is in the business of manufacturing Ball, Gate, Globe, Check, Butterfly, Forged Steel Valves since 1996. A customer driven organizational philosophy, Investment in the best technology and human resources has enabled us to constantly meet high standards set by our customers. G M Flowlines is accredited with **ISO 9001:2015 Certification by TUV.**

We offers complete range of **Plug Valves, PFA / FEP Lined Valves & Fittings**, Meeting to International Standards like ASME, ANSI, ASTM, API. As a part of our primary objective, we have developed full range of Polymer Lined Valves & Fittings in PTFE/FEP/PFA for the complete range of products. The products are widely used in Chemical, Refinery, Petrochemical, Fertilizer, Pharmaceuticals, Oil Exploration, Thermal & Nuclear Power, Mining, Food & Beverage, Effluent Treatment & Sewerage, Water Treatment, Cooling Water & Water Supply & Process Industries.

G M Flowlines Strength is quality products at affordable prices, prompt delivery and the unflinching commitment to excel. The products of our group companies have been enjoying a sustained presence in the national market since 1996. Our Core Strength of manufacturing, adequate in house manufacturing facility, timely investment in technology up gradation & process innovation, shorter product development cycles, a rigorous & disciplined process based approach to continual improvement in all aspects of business, has helped to constantly meet the exacting standards set by the customers.

G M Group has 5 main operating companies

- G M Flowlines Pvt. Ltd.
- G M Engineering Pvt. Ltd.
- G M Valve Pvt. Ltd.
- G M Flowtech Pvt. Ltd.
- G M APE Automation (India) Pvt. Ltd.





Sleeved Plug Valve



TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	ASME B 16.10
Flange End	:	ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	:	API 598
MOC	:	Gmonite, Nickel, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Sleeve MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, RBC 006, TFM
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-810	Flange End	150#	15-300
GM-815	Flange End	300#	15-200

Sleeved Jacketed Plug Valve



TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	ASME B 16.10
Flange End	:	ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	:	API 598
MOC	:	Gmonite, Nickel, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Sleeve MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, RBC 006, TFM
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-810	Flange End	150#	15-300
GM-815	Flange End	300#	15-200



Sleeved Plug Valve



TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	Mfr. Std.
End Connection	:	Screwed To Suit BSP, Socket Weld (ASME B 16.11), Buttweld End (ASME B 16.25)
Testing STD	:	API 598
MOC	:	Gmonite, Nickel, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Sleeve MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, RBC 006, TFM
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-811	Screwed	150#	15-100
GM-812	Socket Weld	150#	15-100
GM-813	Buttweld	150#	15-100

Sleeved Plug Valve



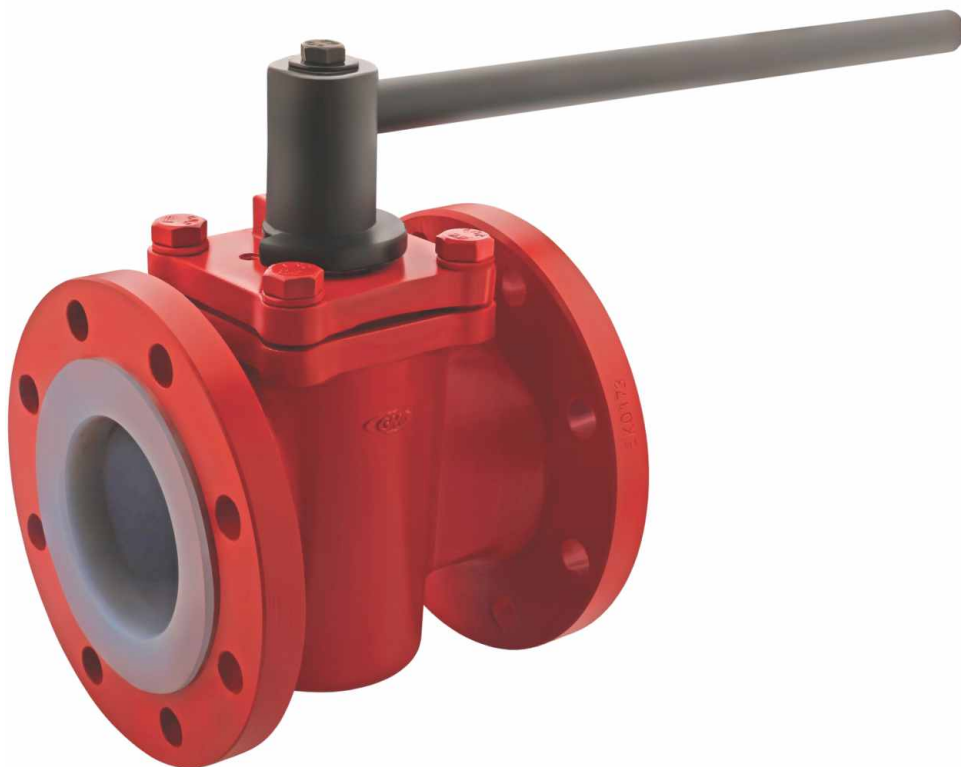
TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	Mfr. Std.
End Connection	:	Screwed To Suit BSP, Socket Weld (ASME B 16.11), Buttweld End (ASME B 16.25)
Testing STD	:	API 598
MOC	:	Gmonite, Nickel, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Sleeve MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, RBC 006, TFM
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-816	Screwed	300#	15-100
GM-817	Socket Weld	300#	15-100
GM-818	Buttweld	300#	15-100



Lined Plug Valve



TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	ASME B 16.10
Flange End	:	ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	:	API 598
Lining Material	:	PFA, FEP
MOC	:	Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	:	Min 3 MM
Spark Test	:	20 K.V.
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-830	Flange End	150#	15-200



Lined Jacketed Plug Valve



TECHNICAL SPECIFICATION

Design STD	:	API 599
Face to Face	:	ASME B 16.10
Flange End	:	ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	:	API 598
Lining Material	:	PFA, FEP
MOC	:	Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	:	Min 3 MM
Spark Test	:	20 K.V.
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-830	Flange End	150#	15-200



Soft Seat Butterfly Valve



TECHNICAL SPECIFICATION

Design STD	:	API 609 Cat A
Face to Face	:	API 609 Cat A
End Connection	:	Wafer Semi Lug Type
Design	:	Centric - Replaceable seat
Testing STD	:	API 598
MOC	:	Nickel, Titanium, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Seat MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, TFM, UHMWPE
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-820	Wafer	150#	50-250
GM-821	Wafer	150#	300

Lined Butterfly Valve



TECHNICAL SPECIFICATION

Design STD.	:	API 609 Cat A
Face to Face	:	API 609 Cat A
End Connection	:	Wafer Semi Lug Type
Design	:	Centric - Replaceable seat
Testing STD.	:	API 598
Lining Material	:	PFA, FEP
MOC	:	Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	:	Min 3 MM
Spark Test	:	20 K.V.
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-850	Wafer	150#	50-250
GM-851	Wafer	150#	300-400

Soft Seat Butterfly Valve



TECHNICAL SPECIFICATION

Design STD	:	API 609 Cat A
Face to Face	:	API 609 Cat A
End Connection	:	Wafer Full Lug Type
Design	:	Centric - Replaceable seat
Testing STD	:	API 598
MOC	:	Nickel, Titanium, Inconel, Hastelloy, Monel, Super Duplex, Alloy Steel, Stainless Steel, Carbon Steel
Seat MOC	:	PTFE, Glass PTFE, Carbon PTFE, Graphite PTFE, TFM, UHMWPE
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-822	Full Lug	150#	50-250
GM-823	Full Lug	150#	300

Lined Butterfly Valve



TECHNICAL SPECIFICATION

Design STD.	:	API 609 Cat A
Face to Face	:	API 609 Cat A
End Connection	:	Wafer Full Lug Type
Design	:	Centric - Replaceable seat
Testing STD.	:	API 598
Lining Material	:	PFA, FEP
MOC	:	Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	:	Min 3 MM
Spark Test	:	20 K.V.
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	END	CLASS	SIZE IN MM
GM-852	Full Lug	150#	50-250
GM-853	Full Lug	150#	300-400



Lined Ball Valve



TECHNICAL SPECIFICATION

Design STD	:	BS 5351 / BS EN ISO 17292 : 2004
Face to Face	:	ASME B 16.10
Flange End	:	ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	:	API 598
Lining Material	:	PFA, FEP
MOC	:	Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	:	Min 3 MM
Spark Test	:	20 K.V.
Operation	:	Manual Lever, Gear Box, Actuator

MODEL No.	BORE	END	CLASS	SIZE IN MM
GM-840	Full	Flange End	150#	15-200

Lined Diaphragm Valve



TECHNICAL SPECIFICATION

Design STD.	: BS EN 13397:2002 (BS 5156)
Face to Face	: BS EN 558
Flange End	: ASME B16.5, BS10 Table D, E, F, DIN PN 10
Testing STD.	: API 598, BS EN 12266
Lining Material	: PFA, FEP
MOC	: Stainless Steel, Carbon Steel, Ductile Iron
Lining Thickness	: Min 3 MM
Spark Test	: 20 K.V.
Operation	: Manual Wheel

MODEL No.	END	CLASS	SIZE IN MM
GM-890	Flange End	150#	25-100



Lined Ball Check Valve



TECHNICAL SPECIFICATION

Design STD	: Mfr. Std.
Face to Face	: ASME B 16.10
Flange End	: ASME B 16.5, Table D, E, F, DIN PN 10, JIS 10K
Testing STD	: API 598
Lining Material	: PFA, FEP
MOC	: Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	: Min 3 MM
Spark Test	: 20 K.V.

MODEL No.	END	CLASS	SIZE IN MM
GM-860	Flange End	150#	15-100

Lined Swing Check Valve



TECHNICAL SPECIFICATION

Design STD.	: Mfr. Std.
Face to Face	: BS EN 558 (Series 20)
End Connection	: Wafer Type
Testing STD.	: API 598
Lining Material	: PFA, FEP
MOC	: Alloy Steel, Stainless Steel, Carbon Steel
Lining Thickness	: Min 3 MM
Spark Test	: 20 K.V.

MODEL No.	END	CLASS	SIZE IN MM
GM-870	Wafer	150#	50-300



P P / PVDF Ball Valve



TECHNICAL SPECIFICATION

Design STD	: Mfr. Std.
Face to Face	: DIN 3302
Flange End	: ASME B 16.5, Table D, E, F, DIN PN 10
Testing STD	: API 598
MOC	: ISO Tactic P.P., PVDF
Operation	: Manual Lever, Gear Box, Actuator

MODEL No.	BORE	END	CLASS	SIZE IN MM
GM-891	Full	Flange End	150#	15-100

Lined Fittings



TECHNICAL SPECIFICATION

Base Material	: Stainless Steel, Carbon Steel
Lining Material	: PFA, FEP, PTFE
Lining Thickness	: Min 3 MM
Spark Test	: 20 K.V.

MODEL No.	DESCRIPTION	SIZE IN MM
GM-880	Reducing Flange	25-100
GM-881	Reducer	25-100
GM-882	45 Degree Bend	25-80
GM-883	90 Degree Bend	25-80
GM-884	Tee	25-100
GM-885	Reducing Tee	25-100
GM-886	Equal Tee	25-100
GM-887	Blind Flange	25-200
GM-888	Pipe	25-200



End Connection (ASME B16.5) & Face To Face (ASME B16.10)

CLASS 150

SIZE NPS (")	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
SIZE DN (mm)	15	20	25	40	50	65	80	100	150	200	250	300	350	400
RAISED FACE DIA	34.9	42.9	50.8	73	92.1	104.8	127	157.2	215.9	269.9	323.8	381	412.8	469.9
BORE DIA	13	19	25	38	51	64	76	102	152	203	254	305	337	387
OUT SIDE DIA	90	100	110	125	150	180	190	230	280	345	405	485	535	595
THICKNESS	10	10.9	11.6	14.7	16.3	17.9	19.5	24.3	25.9	29	30.6	32.2	35.4	37
PCD	60.3	69.9	79.4	98.4	120.7	139.7	152.4	190.5	241.3	298.5	362	431.8	476.3	539.8
NO. OF HOLES	4	4	4	4	4	4	4	8	8	8	12	12	12	16
DRILL DIA	15.9	15.9	15.9	15.9	19.1	19.1	19.1	19.1	22.2	22.2	25.4	25.4	28.6	28.6
FACE TO FACE	108.0	117.0	127.0	165.0	178.0	190.0	203.0	229.0	267.0	292.0	330.0	265.0	381.0	406.5

CLASS 300

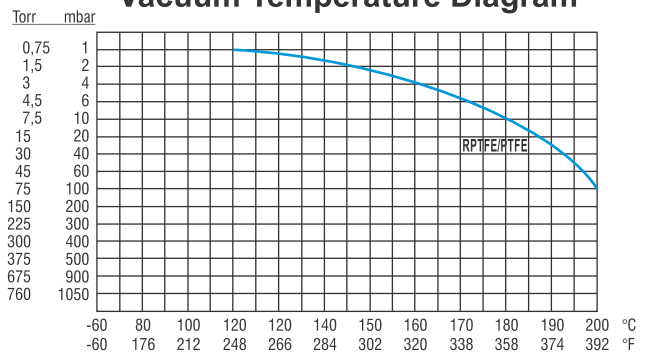
SIZE NPS (")	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
SIZE DN (mm)	15	20	25	40	50	65	80	100	150	200	250	300	350	400
RAISED FACE DIA	34.9	42.9	50.8	73	92.1	104.8	127	157.2	215.9	269.9	323.8	381	412.8	469.9
BORE DIA	13	19	25	38	51	64	76	102	152	203	254	305	337	387
OUT SIDE DIA	95	115	125	155	165	190	210	255	320	380	445	520	585	650
THICKNESS	14.7	16.3	17.9	21.1	22.7	25.9	29	32.2	37	41.7	48.1	51.3	54.4	57.6
PCD	66.7	82.6	88.9	114.3	127	149.2	168.3	200	269.9	330.2	387.4	450.8	514.4	571.5
NO. OF HOLES	4	4	4	4	8	8	8	8	12	12	16	16	20	20
DRILL DIA	15.9	19.1	19.1	22.2	19.1	22.2	22.2	22.2	22.2	25.4	28.6	31.8	31.8	34.9
FACE TO FACE	140.0	152.0	165.0	190.0	216.0	241.0	282.0	305.0	403.0	419.0	457.0	502.0	762.0	838.0

Test Pressures To ASME B 16.34 /API 598

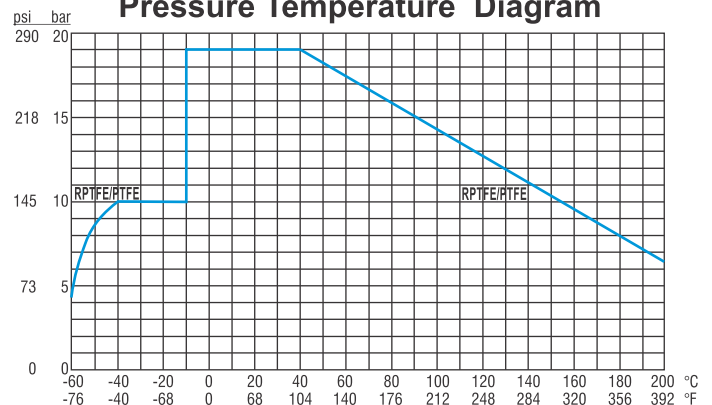
Hydrostatic Test

RATING	150#		300#	
	Shell	Seat	Shell	Seat
MATERIAL	kg/cm2		kg/cm2	
A216 WCB	32	23	79.5	58.5
A352-LCB	28.5	21.5	74	54.5
A217-WC4	32	23	79.5	58.5
A217-WC5				
A217-WC6	32	23.7	9.5	58.5
A217-WC9	32	23.7	9.5	58.5
A217-C5	32	23.7	9.5	58.5
A351-CF3	30	23	77.5	56.5
A351-CF8				
A351-CF3A	30	23	77.5	56.5
A351-CF8A				
A351-CF3M				
A351-CF8M				
A351-CN7M	25	19.5	63.5	49.5

Vacuum Temperature Diagram



Pressure Temperature Diagram





Fluoroplastic Comparison - Typical Properties

Mechanical Properties

Property	ASTM Standard	Unit	PTFE	FEP	PFA
Specific Gravity	D792	-	2.15	2.15	2.15
Tensile Strength	D1457 D1708 D638	Mpa(psi)	21-34(3,000-5,000)	23 (3,400)	25 (3,600)
Elongation	D1457 D1708 D638	%	300-500	325	300
Flexural Modulus	D790	Mpa(psi)	496(72,000)	586(85000)	586(85000)
Folding Endurance	D2176	(MIT)Cycles	>10 ⁶	5-80 x 10 ³	10-500x 10 ³
Impact Strength	D256	J/M(ft-lb/in)	189(3.5)	No Break	No Break
Hardness	D2240	Shore D Pencil	50-60 HB	56 HB	60
Coefficient Of Friction, Dynamic	D1894	-	0.05-0.10	0.08-0.3	-

Thermal Properties

Property	ASTM Standard	Unit	PTFE	FEP	PFA
Melting Point	D3418C	(°F)	327(621)	260(500)	360(582)
Cure Temperature	--C	(°F)	379-429(715-805)	360-385(680-725)	379-399(715-750)
Flame Rating*	UL94	--	V0	V0	V0
Limiting Oxygen Index	D2863	%	>95	>95	>95
Heat Of Combustion	D240	MJ/Kg. (Btu/Lb)	5.1 (2,200)	5.1(2,200)	5. (2,300)
Theoretical Max. Temp.	-	°C	260	205	260
Recommended Max. Temp.	-	°C	200	150	200

*Statements Regarding Behavior in a Flame Situation are not intended to Reflect Hazards Presented by This or any Other Material When Under Actual Fire Conditions

Chemical Properties

Property	ASTM Standard	Unit	PTFE	FEP	PFA
Chemical/Solvent Resistance	D543	--	Excellent	Excellent	Excellent
Water Absorption. 24 h	D570	%	<0.01	<0.01	<0.03
Salt Spray Resistance (1)					
-on Aluminum	B-117	Hours	744+	744+	1000
-on Steel		Hours	192	---	---
Detergent Resistance (2)					
-on Aluminum		Hours	264	744	
-on Grit - Blasted Aluminum	---	Hours	624	600	---
-on Grit - Blasted Steel		Hours	24	480	
Weather Resistance	Florida Exposure	Years Unaffected	20	20	10

Notes:- 1. Salt Spray Resistance : 5% NaCl at 35°C/95 °F, Hours To Failure

2. Detergent Resistance : Hours To Failure

Electrical Properties

Property	ASTM Standard	Unit	PTFE	FEP	PFA
Dielectric Constant	D150	1 MHz	2.1	2.1	2.1
Dielectric Strength*	D149	V/□m	18	53	80
Dissipation Factor	D1501	MHz	<0.0001	0.0006	0.0001
Arc Resistance	D495	Sec	>300	300	>180
Volume Resistivity	D257	Ohm Cm	>10 ¹⁸	>10 ¹⁸	>10 ¹⁸
Surface Resistivity	D257	Ohm/sq	>10 ¹⁸	>10 ¹⁶	>10 ¹⁷





Our Reputed Clients



G M FLOWLINES PVT. LTD.

Manufacturer of Sleeved Plug Valves, PFA/FEP Lined Valves & Fittings

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*In the process of continuous R&D of the product, the information given is subject to change.

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