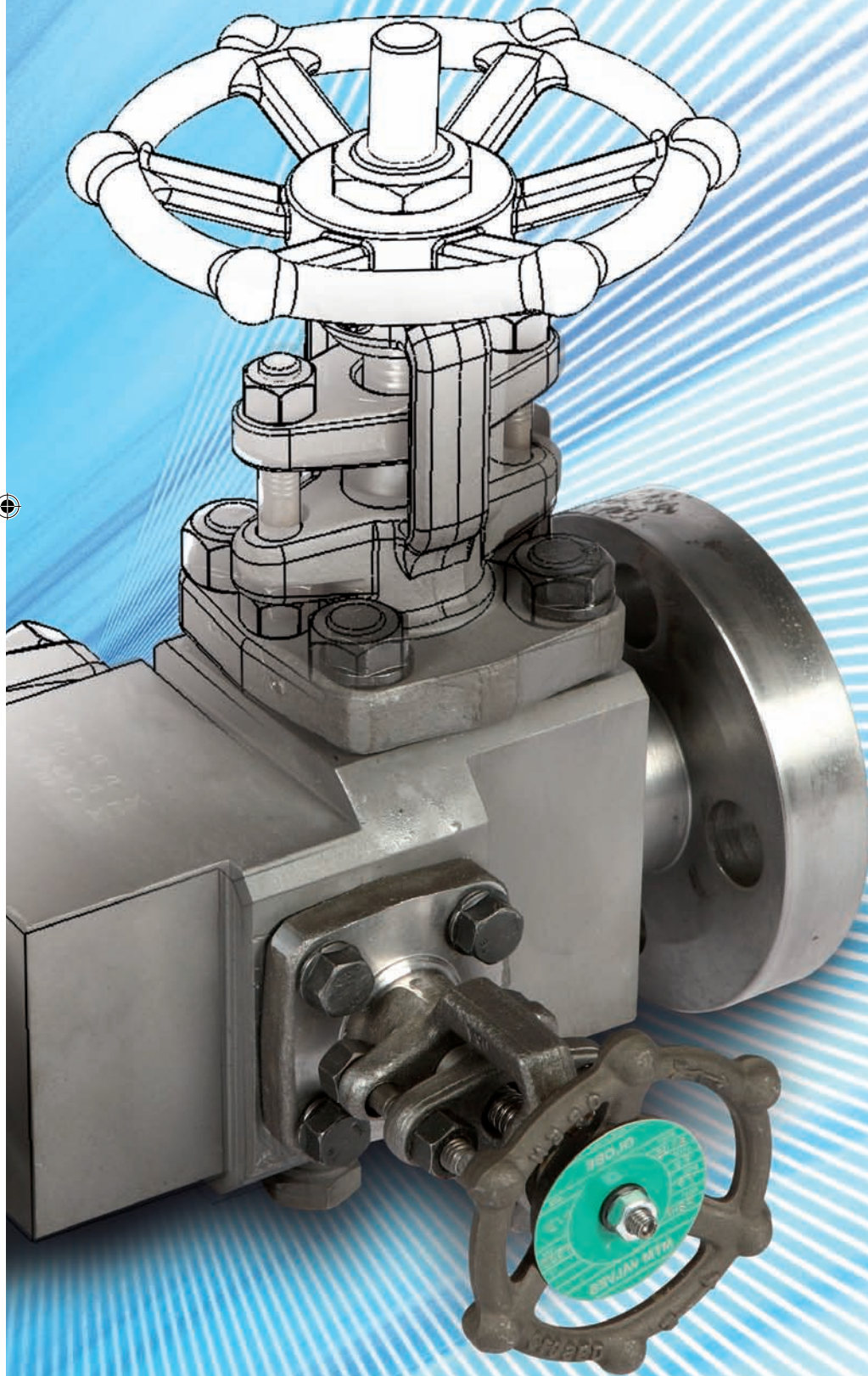




M.T.M. VALVES



Edition 02-2011

SPECIAL FORGED VALVES



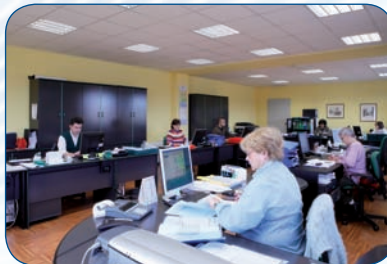


COMPANY PROFILE

M.T.M. VALVES srl is manufacturing company of forged steel valves for petrochemical industry, chemical and refining plants, energy power production stations, extraction plants, oil pipeline, off-shore and on-shore plants.

Established in 1996, in spite of the young age, **M.T.M. VALVES** has a staff with pluriannual experience in designing and manufacturing of forged steel gate, globe, piston, ball and swing check valves in size from 1/4" through 4".

The production range includes valves in execution BOLTED BONNET, WELDED BONNET and PRESSURE SEAL whit threaded ends NPT, SOCKET WELDING, BUTT WELDING, NIPPLES and INTEGRALLY FLANGED, in class 150 - 300 - 600 - 800 - 1500 - 2500 - 4500 Lbs, fully in accordance with design and construction standard as API 602, BS EN ISO 15761 , ANSI B16.34, ANSI B16.5, ANSI B16.10, API 600, MSS SP84.



M.T.M. VALVES are manufactured in the following materials:

carbon steel ASTM A105 and low carbon steel ASTM A350 Gr. LF2, alloy steel ASTM A182 F5, F11, F9, F22, inox stainless steel ASTM A182 F316, F316L, F304, F304L, F347, F321 duplex stainless steel ASTM A182 F51, F53, F55 and austenitic steel 6Mo ASTM A182 F44, and high nickel alloy steel as MONEL, HASTELLOY, INCOLOY, TITANIUM, INCONEL, strictly in accordance with NACE MR-01-75 standard, when required.





QUALITY SYSTEM

Experience, quality, service, flexibility, and reduced delivery times are the strenght points of the company, which intends satisfy all customer's exigencies and requirements, in the market of forged steel valves where to have a valve is necessary waiting for long times.

The delivery time depends by the required material and by the availability of raw pieces in stock with a minimum of 30/40 days and a maximum of 8/10 weeks.

Quality system is in strict osservance of UNI EN ISO 9001:2008 certified by **T.U.V. ITALIA SRL**.

Every **M.T.M. VALVES** gate and globe valve is subjected to shell backseat and high and low pressure closure tests. Check valves are given shell and high pressure closure tests fully in accordance with API 598 and ANSI B16.34 standards. Also, under request, it is possible check the valves with magnetic particle inspection, dye penetrant, ultrasonic test, mechanical and chemical analysis, positive material identification, destructive tests, fugitive emission test, low temperature test.

All valves are furnished with identification nameplates in which are marked the type of valve, the rating, the size, the maximum operating temperature and the material of body, bonnet and trim according to MSS SP25 specification.

On each body and bonnet is clearly stamped the material and the heat code number, and, obviously, the own trade-mark.

M.T.M. VALVES are particularly suitable for high pressure temperature services, especially for steam; in the cryogenic service and low temperatures we assure the maximum safety until 196°C.

For chlorine and oxygen service the valves follow particular degreasing, cleaning and packaging procedures and warrant the perfect use.

For dangerous and toxic fluids we suggest the employment of bellows seal valves.

For sour oil and gas services the valves are manufactured and tested in strictly osservance of NACE MR-01-75 standard.

The continuous growth of the company, the seriousness, the professionalism and the high tecnological machinery are bringing **M.T.M. VALVES** to take the own space in the market, satisfying the different customer's exigencies and requirements.

APPLICABLE STANDARDS

- ISO 9000 QUALITY ASSURANCE
- API 602 FORGED STEEL GATE VALVES - EXTENDED BODY
- BS 15761 FORGED STEEL GLOBE AND CHECK VALVES
- ANSI B16.10 FACE TO FACE AND END TO END DIMENSION OF FERROUS VALVES
- ANSI B16.5 STEEL PIPE FLANGES AND FITTINGS
- ANSI B16.9 STEEL BUTT WELDING FITTINGS
- ANSI B16.11 FORGED STEEL FITTINGS, SOCKET WELDING AND THREADED
- ANSI B16.34 STEEL VALVES, FLANGED AND BUTT WELDED ENDS
- API 598 VALVE INSPECTION AND TEST
- ISO UNI EN 12266-2 TESTING OF VALVES
- DIN 3202 END TO END DIMENSIONS
- MSS SP 25 STANDARD MARKING SYSTEM FOR VALVES
- MSS SP 84 VALVES, SOCKET WELDING AND THREADED ENDS
- NACE MR-01-75 MATERIAL REQUIREMENT FOR OIL FIELD EQUIPMENT SULFIDE STRESS CRACKING RESISTANT



PRODUCT RANGE

TYPE

GATE - GLOBE - BALL CHECK - PISTON CHECK - SWING CHECK VALVES

SIZES

FROM ¼" TO 4"

CLASSES

150 - 300 - 600 - 800 - 1500 - 2500 - 4500 - API 10000 - API 15000

ENDS

SOCKET WELDING AS PER ANSI B16.11
 N.P.T. AS PER ANSI B1.20.1
 BUTT WELDING AS PER ANSI B16.5
 INTEGRALLY FLANGED AS PER ANSI B16.10 & ANSI B16.5 SPECIAL CLAMP

EXECUTIONS

BOLTED & WELDED BONNET - PRESSURE SEAL - REDUCE & FULL PORT
 BELLOWS SEAL - CRYOGENIC TYPE - EXTENDED BODY - "Y" PATTERN - INSIDE SCREW STEM
 DOUBLE BLOCK & BLEED - MANUAL OR ACTUATED VALVES

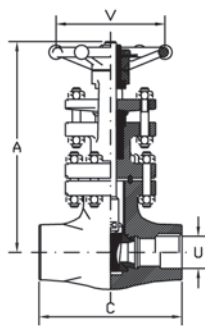
MATERIALS

CARBON STEEL
 LOW CARBON STEEL
 ALLOY STEEL
 AUSTENITIC STEEL

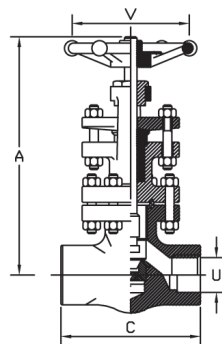
DUPLEX STEEL
 DUPLEX STAINLESS STEEL
 HIGH AUSTENITIC STEEL
 SUPER ALLOY

ASTM A105
 ASTM A350 GR. LF2
 ASTM A182 F5, F11, F22, F9
 ASTM A182 F316, F316L, F304,
 F304L, F321, F347

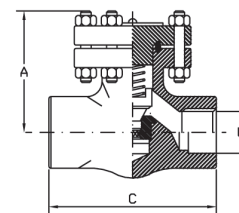
ASTM A182 F51, F53, F55
 ASTM F44
 MONEL, INCONEL, INCOLOY,
 HASTELLOY, TITANIUM



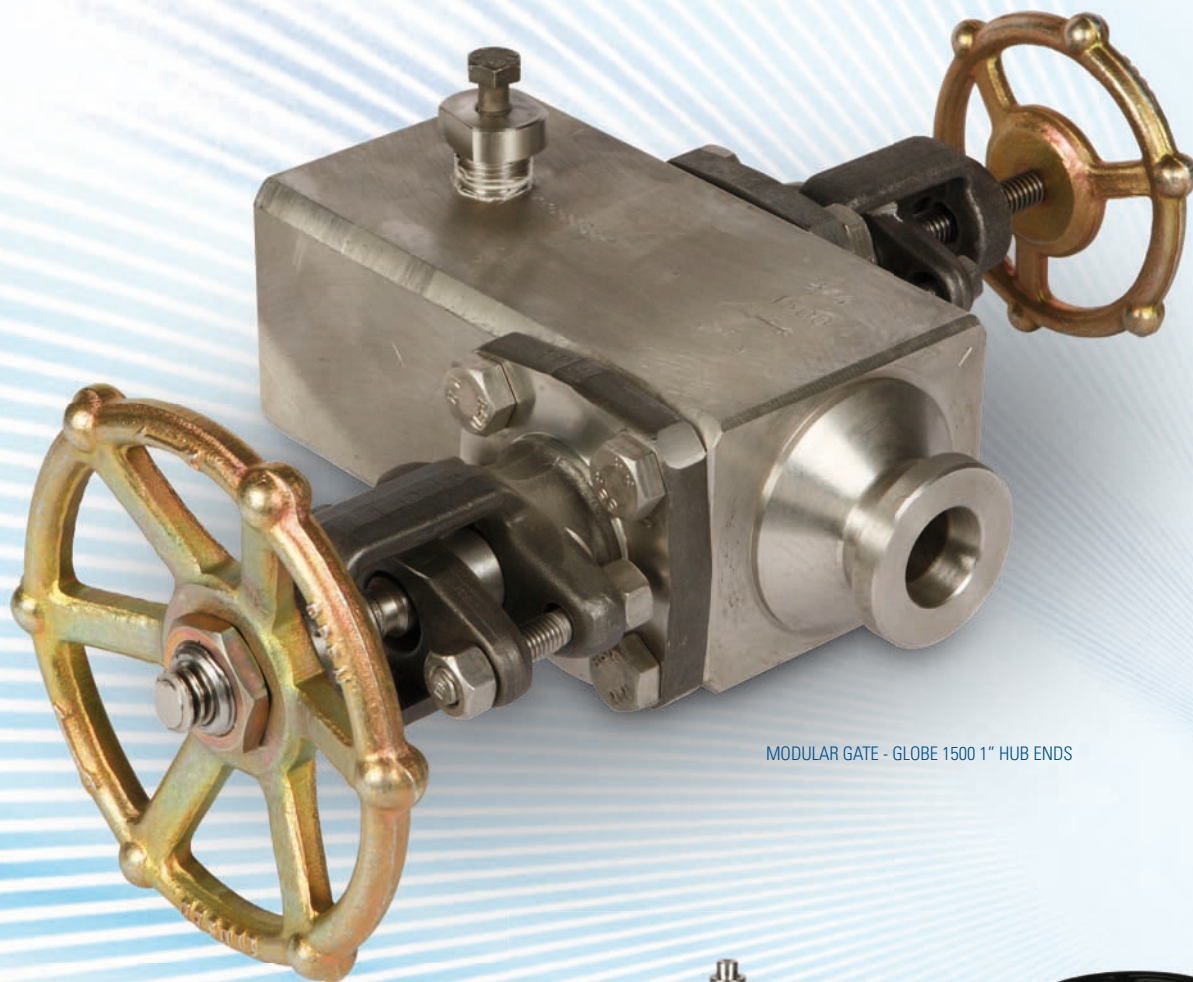
Gate_800-1500-2500
 Gate_FL150-300-600
 Gate_FL1500-2500



Globe_800-1500-2500
 Globe_FL150-300-600
 Globe_FL1500-2500



Check_800-1500-2500
 Check_FL150-300-600
 Check_FL1500-2500



MODULAR GATE - GLOBE 1500 1" HUB ENDS



GATE 800 RE-IN-FORCED EXTENDED BODY



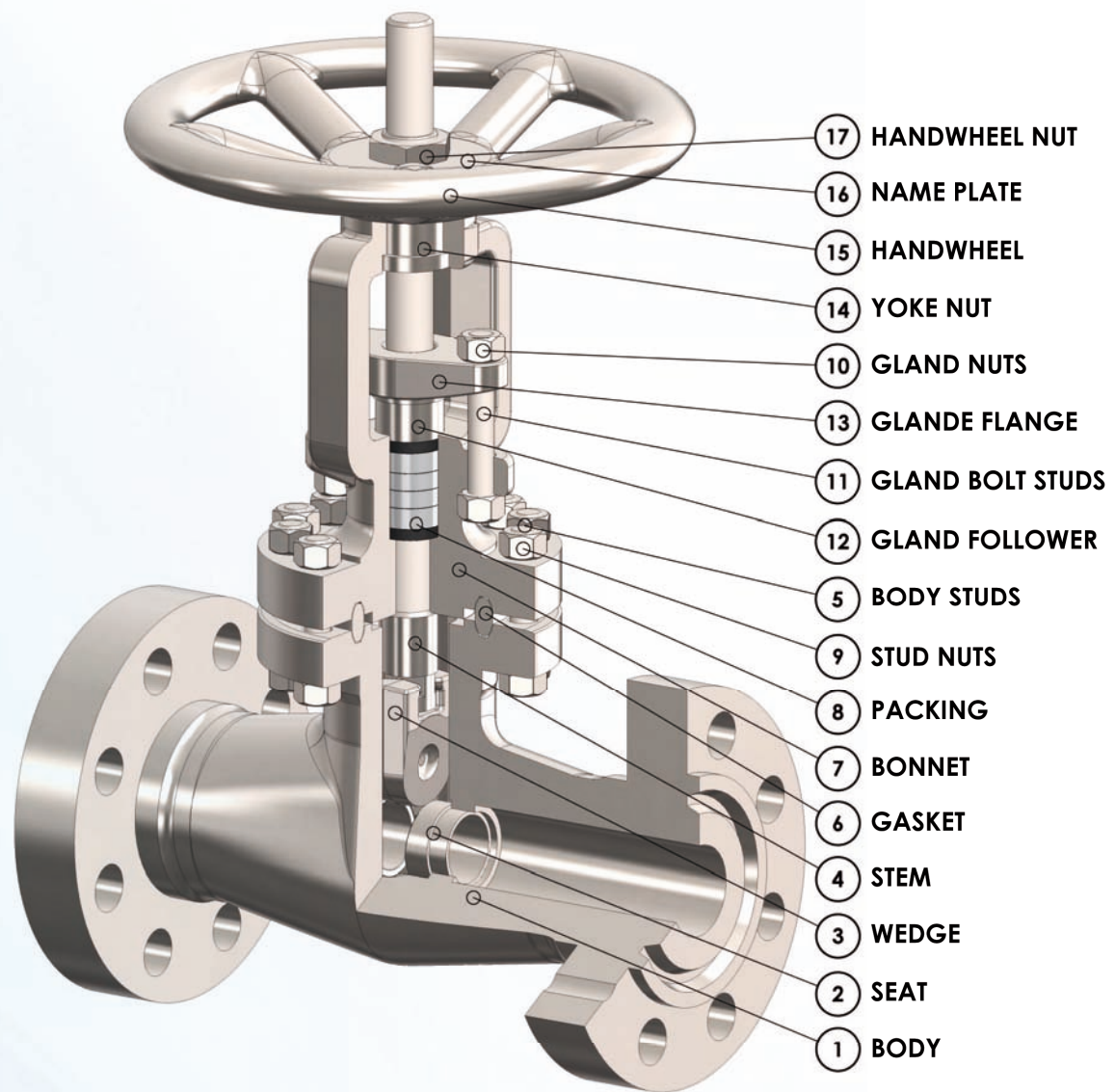
GATE FL 150 COMPLETE WITH LOCKING DEVICE + PROTECTION STEM ASTM A182 F44 MATERIAL



GATE 1500 2" EXTENDED BONNET



GATE VALVES



MODULAR GATE - GATE-NEEDLE 1500 1"



GATE 800 INSIDE SCREW



GATE 1500 2" PRESSURE SEAL TITANIUM MATERIAL

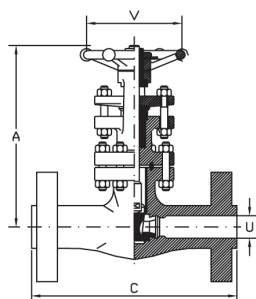


GATE API 15000 DOUBLE BLOCK & BLEED



GATE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

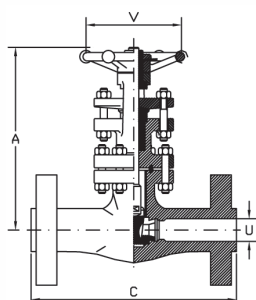
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	291	264	18	22	140	15
3/4"	291	273	18	22	140	16
1"	330	308	24	28	250	26
1.1/2"	446	384	29	43	300	54.5
2"	483	451	36.5	49	300	90

MOD: 251RF - 251RJ



CLASS. 1500

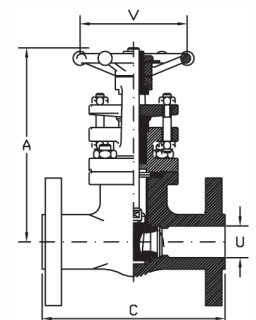
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	225	216	12	18	120	10
3/4"	245	228	15	19	140	11.2
1"	297	254	22	24	140	17.4
1.1/2"	343	305	34	38	180	31
2"	446	368	38	49	300	54.5

MOD: 151RF - 151RJ



CLASS. 600

REDUCE BORE

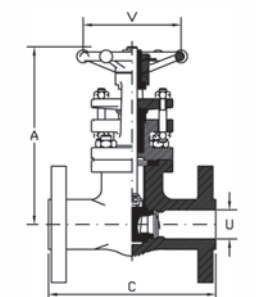
SIZE	A open	C	PORT	U	V	Kg
1/2"	148	165	10	18	78	3.8
3/4"	199	191	14	19	78	5.6
1"	199	216	18	24	98	8.4
1.1/2"	266	241	29	38	140	16.2
2"	296	292	36.5	49	140	20.6

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	165	14	18	78	4.5
3/4"	199	191	18	22	98	6.5
1"	220	216	21	27	120	10
1.1/2"	278	241	36.5	43	140	18
2"	352	292	50	54	140	22

MOD: 81C R.B.

MOD: 61C FB.



CLASS. 300

REDUCE BORE

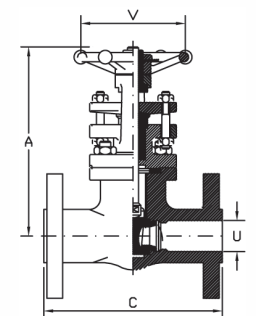
SIZE	A open	C	PORT	U	V	Kg
1/2"	148	140	10	18	78	3.2
3/4"	165	152	14	19	78	4.1
1"	199	165	18	24	98	6.6
1.1/2"	295	190	29	38	140	12.5
2"	314	216	36.5	49	140	19

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	140	14	19	78	4
3/4"	199	152	18	22	98	6
1"	266	165	24	28	120	11
1.1/2"	311	190	36.5	43	140	15
2"	336	216	50	54	180	21

MOD: 81B R.B.

MOD: 61B FB.



CLASS. 150

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	171	108	10	18	78	2.9
3/4"	181	118	14	19	78	3.7
1"	209	127	18	24	98	6.3
1.1/2"	266	165	29	38	140	11
2"	324	178	36.5	49	140	17.5

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	181	108	14	18	78	3.7
3/4"	209	118	18	22	98	6.3
1"	219	127	24	27	140	7
1.1/2"	281	165	36.5	43	140	12
2"	346	178	50	54	140	18

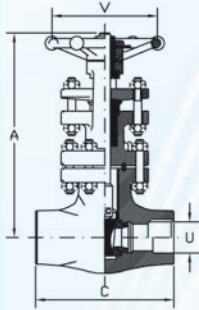
MOD: 81A R.B.

MOD: 61A FB.

C = F to F RF - FOR RTJ SEE B16.10

GATE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

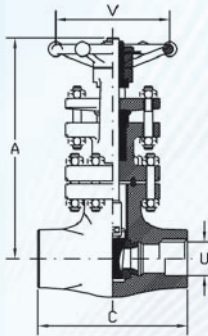
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	245	92	14	21.8	140	5.1
3/4"	291	114	18	27.2	140	8.5
1"	341	128	24	33.9	180	12.6
1.1/2"	443	184	29	48.8	300	29.7
2"	451	228	36.5	61.2	300	44

MOD: 251SW - 251TH - 251BW - FB.



CLASS. 1500 ROUND BONNET RTJ GASKET

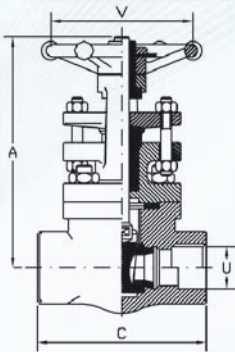
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	225	80	12	21.8	120	3.8
3/4"	245	92	15	27.2	140	4.9
1"	297	114	22	33.9	140	8.1
1.1/2"	343	165	34	48.8	180	15
2"	446	184	38	61.2	300	28.5

MOD: 151SW - 151TH - 151BW - FB.



CLASS. 1500 SQUARE BONNET SPIRAL WOUND GASKET

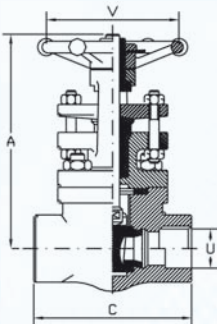
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	90	14	21.8	78	2.6
3/4"	199	110	14	27.2	98	3.5
1"	252	130	18	33.9	140	6.5
1.1/2"	280	130	29	48.8	140	8.8
2"	353	165	36.5	61.2	180	15

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

MOD: 051SW - 051TH - 051BW R.B.



CLASS. 800

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	154	80	10	21.8	78	1.7
3/4"	165	90	14	27.2	78	2.6
1"	199	110	18	33.9	98	3.5
1.1/2"	266	130	29	48.8	140	7.2
2"	292	130	36.5	61.2	140	8.8

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	90	14	21.8	78	2.6
3/4"	199	110	18	27.2	98	3.5
1"	266	130	24	33.9	140	6.5
1.1/2"	292	130	36	48.8	140	8.8
2"	346	165	50	61.2	180	15

MOD: 081SW - 081TH - 081BW R.B.

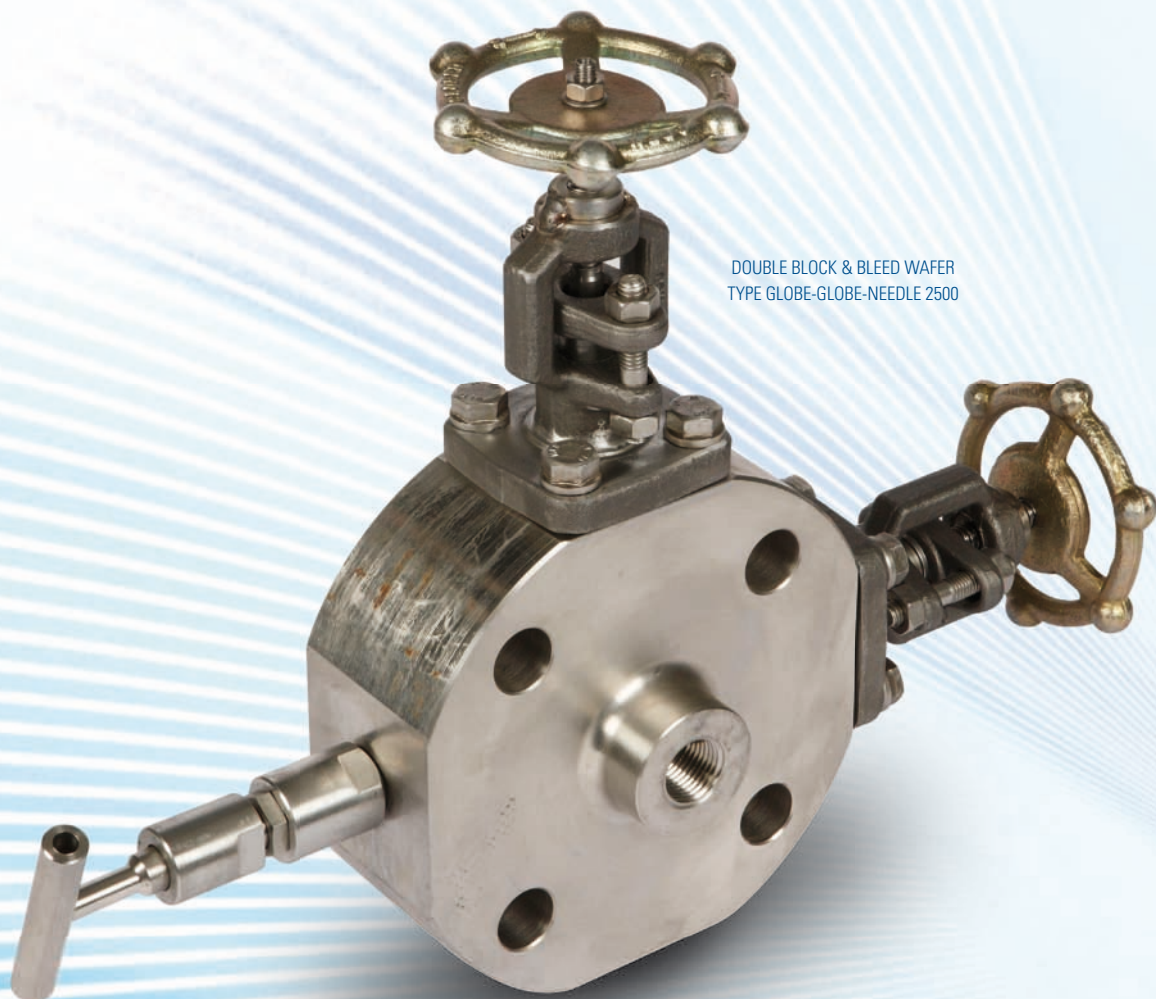
MOD: 061SW - 061TH - 061BW FB.

APPLICABLE STANDARDS:

- API 602
- API 600
- UNI EN ISO 15761
- ASME B16.34
- ASME B16.10
- ASME B16.5

OTHER STANDARDS ON REQUEST

MTM reserves to make modifications to improve valves performance without notice



DOUBLE BLOCK & BLEED WAFER
TYPE GLOBE-GLOBE-NEEDLE 2500



CRYOGENIC GLOBE EXTENDED BONNET
ASTM A182 F316 MATERIAL



GLOBE FL 600 2" ASTM A182 F51 MATERIAL
COMPLETE WITH POSITION INDICATOR



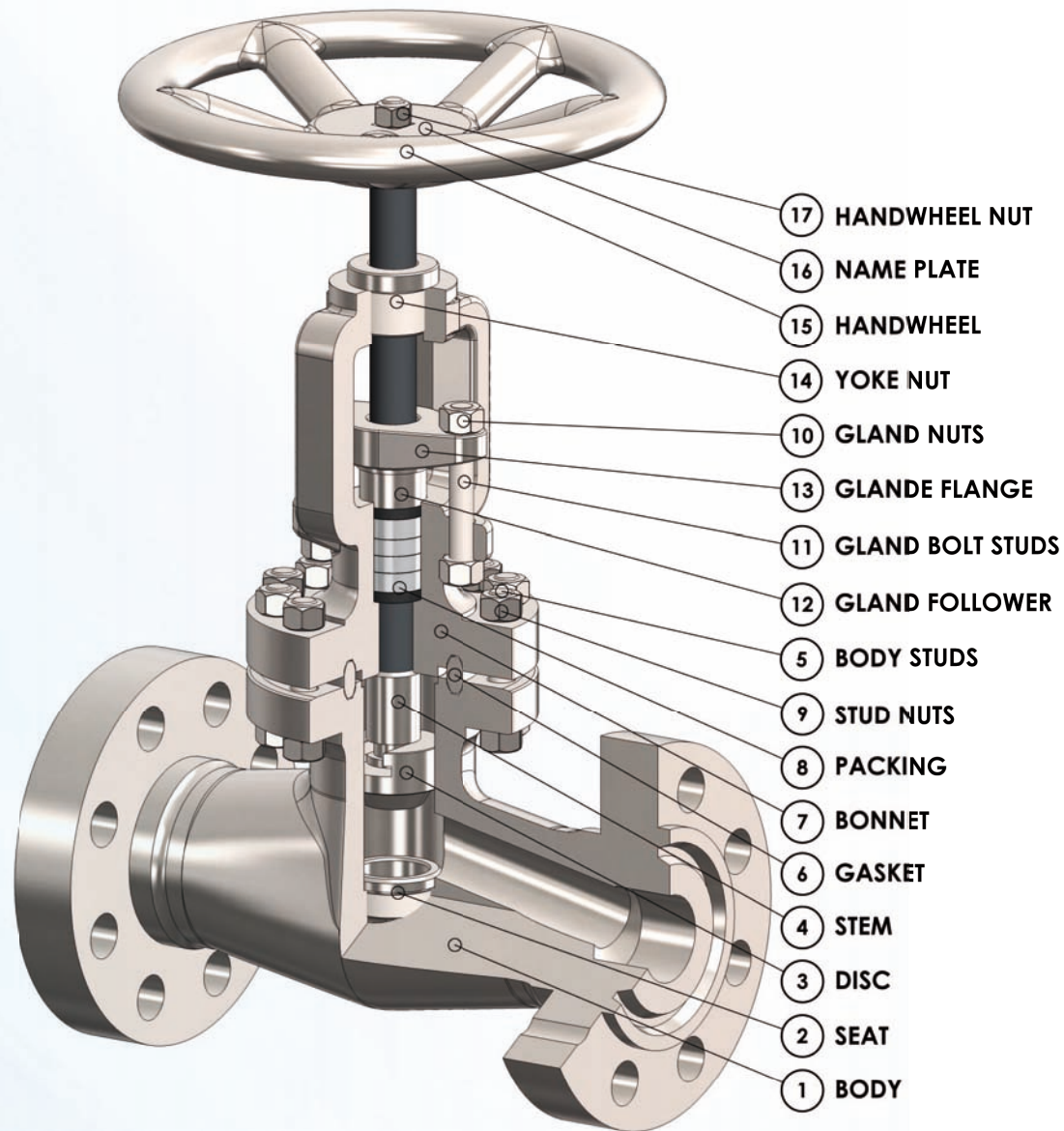
GLOBE Y TYPE 1500 ASTM A182 F51 MATERIAL



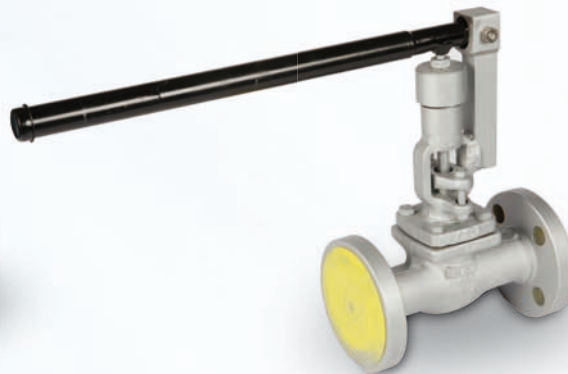
GLOBE 1500 1" SUB SEA
ASTM A182 F53 MATERIAL



GLOBE VALVES



JACKETED GLOBE 150 2"



GLOBE SELF CLOSING LEVER OPERATED

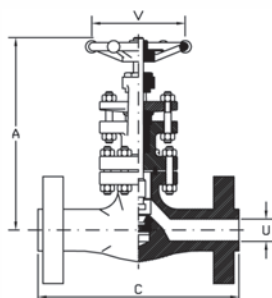


GLOBE Y TYPE 1500 2" BELLOWS SEAL ASTM A182 F91 MATERIAL



GLOBE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

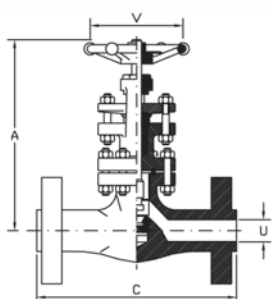
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	309	264	12	22	140	15
3/4"	313	273	14	22	140	16
1"	364	308	19	28	250	26
1.1/2"	474	384	26	43	300	54.5
2"	507	451	34	49	300	90

MOD: 251RF - 251RJ



CLASS. 1500

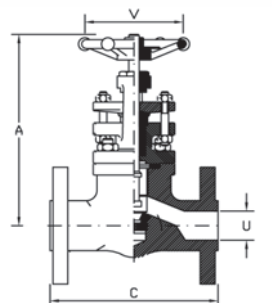
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	247	216	12	18	120	10
3/4"	265	229	14	22	140	11.2
1"	309	254	19	24	140	17.4
1.1/2"	364	305	26	38	180	31
2"	474	368	34	49	300	54.5

MOD: 153RF - 153RJ



CLASS. 600

REDUCE BORE

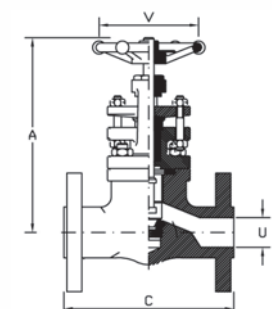
SIZE	A open	C	PORT	U	V	Kg
1/2"	154	165	10	18	78	3.8
3/4"	196	191	14	22	98	5.6
1"	200	216	17	24	98	8.4
1.1/2"	255	241	29	38	140	16.2
2"	283	292	36	49	140	20.6

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	162	165	12	18	78	4.5
3/4"	196	191	17	22	98	6.5
1"	206	216	22	27	98	10
1.1/2"	265	241	35	43	140	18
2"	368	292	44	54	250	22

MOD: 83C R.B.

MOD: 63C FB.



CLASS. 300

REDUCE BORE

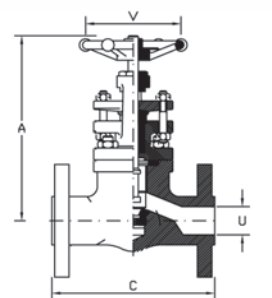
SIZE	A open	C	PORT	U	V	Kg
1/2"	154	152	10	18	78	3.2
3/4"	196	178	15	19	78	4.1
1"	200	203	19	24	98	6.6
1.1/2"	255	229	29	38	140	12.5
2"	283	267	35	49	140	19

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	162	152	12	18	78	4
3/4"	196	178	17	22	98	6
1"	206	203	22	28	120	11
1.1/2"	265	229	35	43	140	15
2"	368	267	44	54	180	21

MOD: 83B R.B.

MOD: 63B FB.



CLASS. 150

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	174	108	10	18	78	2.9
3/4"	176	118	15	19	78	3.7
1"	206	127	19	24	98	6.3
1.1/2"	254	165	29	38	140	11
2"	316	203	35	49	140	17.5

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	176	108	12	18	78	3.7
3/4"	206	118	17	22	98	6.3
1"	219	127	22	28	140	7
1.1/2"	316	165	35	43	140	12
2"	328	203	44	54	140	18

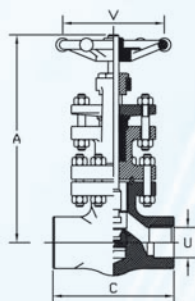
MOD: 83A R.B.

MOD: 63A FB.

C = F to F RF - FOR RTJ SEE B16.10

GLOBE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

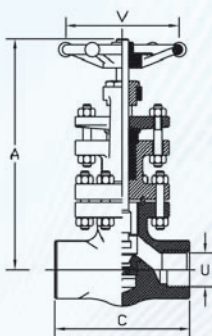
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	265	92	12	21.8	140	6.2
3/4"	309	114	14	27.2	140	8.5
1"	364	128	19	33.9	180	12.6
1.1/2"	474	184	26	48.8	300	29.7
2"	484	228	34	61.2	300	44

MOD: 253SW - 253TH - 253BW - FB.



CLASS. 1500 ROUND BONNET RTJ GASKET

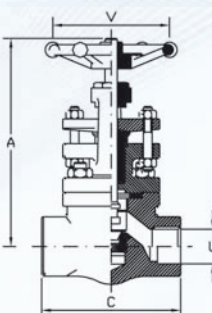
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	247	80	9	21.8	120	3.8
3/4"	265	92	14	27.2	140	4.9
1"	309	114	19	33.9	140	8.1
1.1/2"	364	160	26	48.8	180	15
2"	474	184	34	61.2	300	28.5

MOD: 153SW - 153TH - 153BW - FB.



CLASS. 1500 SQUARE BONNET SPIRAL WOUND GASKET

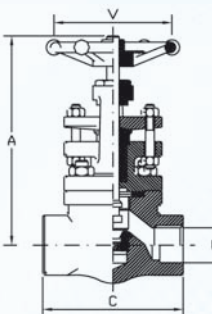
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	164	90	9	21.8	78	2.6
3/4"	196	110	12	27.2	98	3.5
1"	254	130	18	33.9	140	6.5
1.1/2"	279	130	25	48.8	140	8.8
2"	350	165	28	61.2	180	15

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

MOD: 053SW - 053TH - 053BW R.B.



CLASS. 800

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	154	80	9	21.8	78	1.7
3/4"	164	90	12	27.2	78	2.6
1"	196	110	17	33.9	98	3.5
1.1/2"	254	130	28	48.8	140	7.2
2"	279	130	35	61.2	140	8.8

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	164	90	12	21.8	78	2.6
3/4"	196	110	17	27.2	98	3.5
1"	254	130	22	33.9	140	6.5
1.1/2"	279	130	35	48.8	140	8.8
2"	350	165	44	61.2	180	15

MOD: 083SW - 083TH - 083BW R.B.

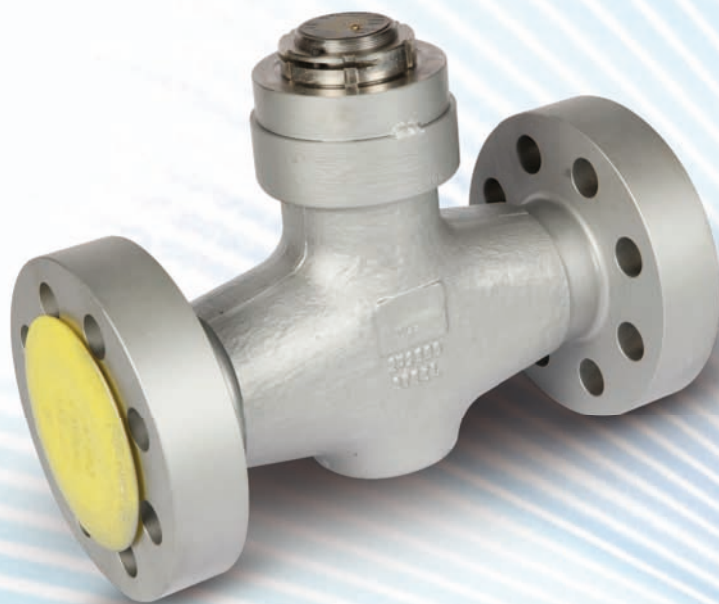
MOD: 063SW - 063TH - 063BW FB.

APPLICABLE STANDARDS:

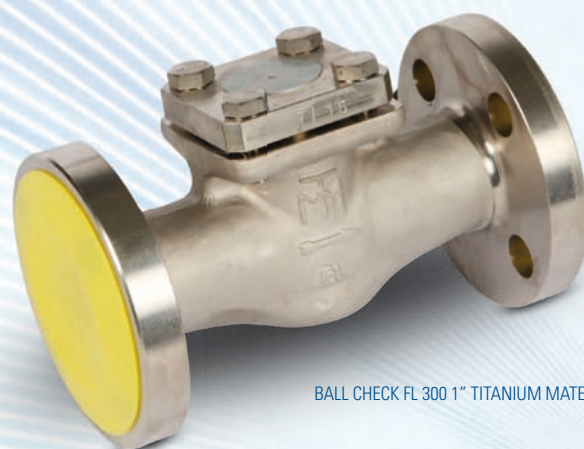
- API 602
- API 600
- UNI EN ISO 15761
- ASME B16.34
- ASME B16.10
- ASME B16.5

OTHER STANDARDS ON REQUEST

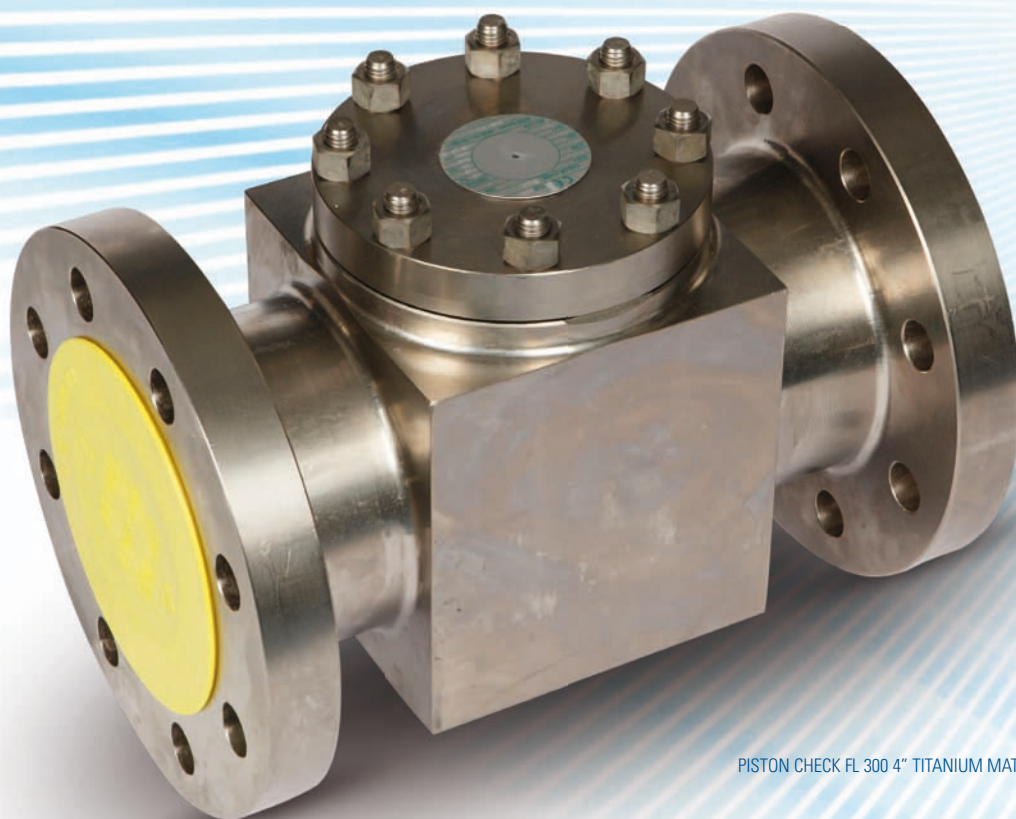
MTM reserves to make modifications to improve valves performance without notice



SWING CHECK 2500 2" PRESSURE SEAL
ASTM A350 LF2 MATERIAL

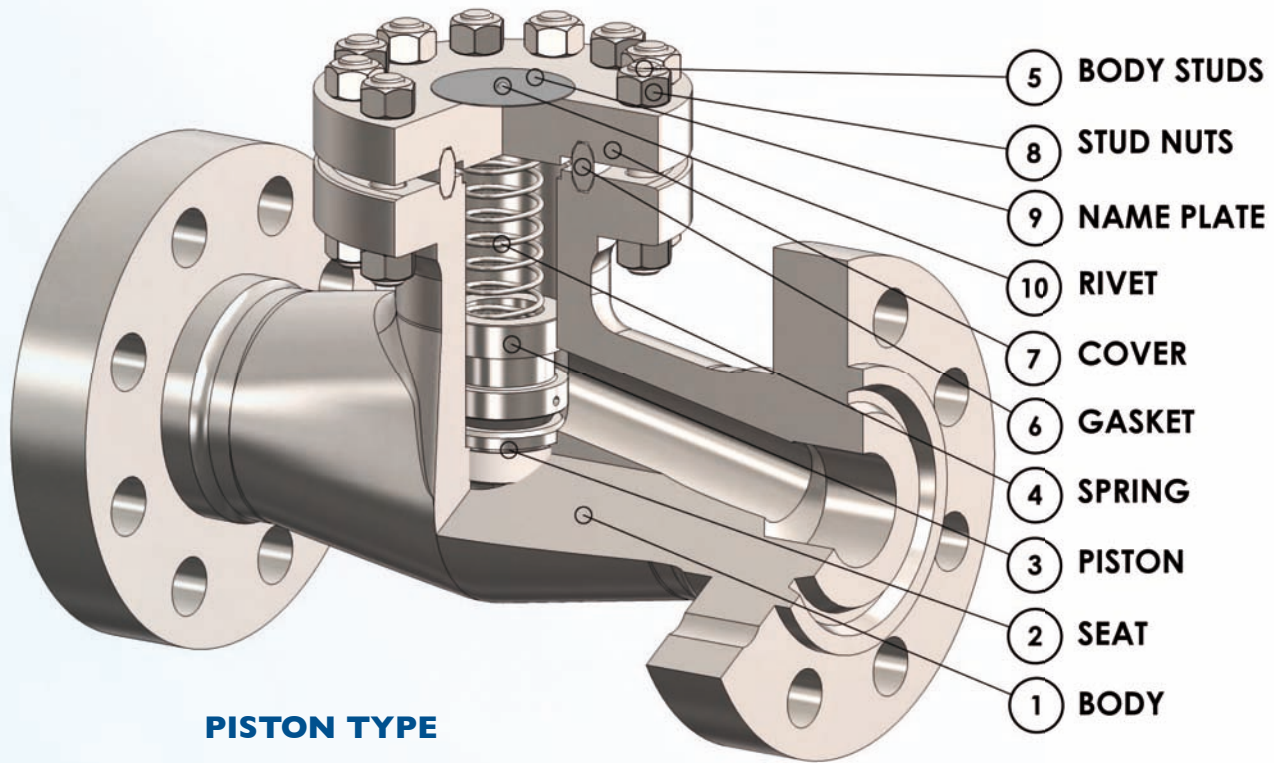


BALL CHECK FL 300 1" TITANIUM MATERIAL

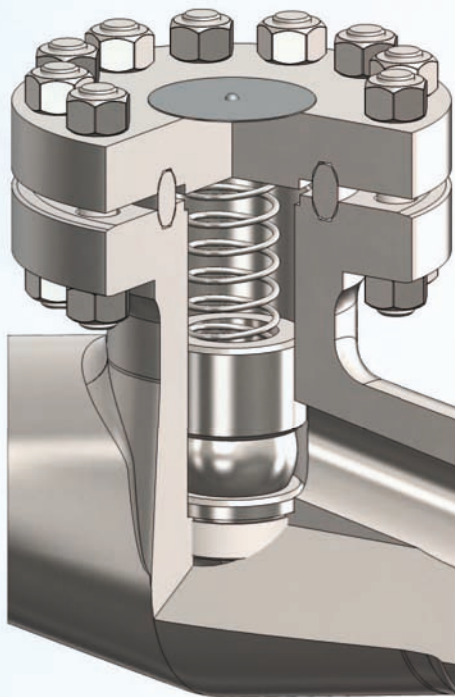


PISTON CHECK FL 300 4" TITANIUM MATERIAL

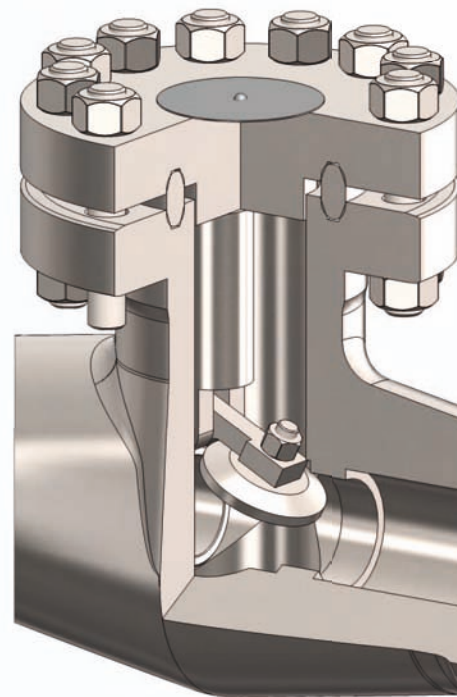
CHECK VALVES



PISTON TYPE



BALL TYPE



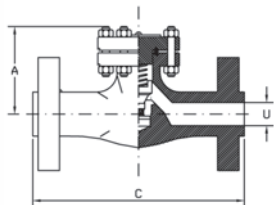
SWING TYPE



CHECK VALVES

BOLTED OR WELDED BONNET

CLASS. 2500



REDUCE BORE

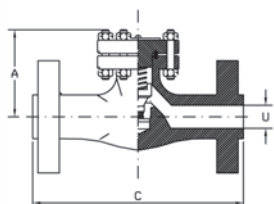
SIZE	A	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	115	264	12	18	22	10.4
3/4"	115	273	14	18	22	12.6
1"	144	308	19	24	27	22
1.1/2"	178	384	26	29	43	43.5
2"	221	451	34	36.5	49	80

MOD: 254RF/RJ = PISTON TYPE
 MOD: 255RF/RJ = BALL TYPE
 MOD: 256RF/RJ = SWING TYPE

CLASS. 1500



REDUCE BORE

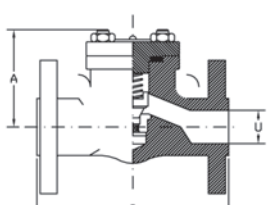
SIZE	A	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	96	216	12	12	18	9.2
3/4"	107	229	14	15	22	11.1
1"	115	254	19	22	27	14.7
1.1/2"	144	305	26	34	43	30
2"	178	368	34	38	49	42.5

MOD: 154RF/RJ = PISTON TYPE
 MOD: 155RF/RJ = BALL TYPE
 MOD: 156RF/RJ = SWING TYPE

CLASS. 600



REDUCE BORE

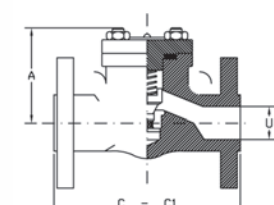
SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	54	165	10	10	18	3.4
3/4"	72	191	14	14	22	4.5
1"	72	216	17	18	27	7
1.1/2"	105	241	29	29	43	12.3
2"	105	292	36	36.5	49	16.7

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	62	165	12	14	18	3.4
3/4"	72	190	17	18	22	7
1"	72	216	22	21	27	7
1.1/2"	105	241	35	36.5	43	12.3
2"	128	292	44	50	54	24

MOD: 64C = PISTON TYPE FB.
 MOD: 65C = BALL TYPE FB.
 MOD: 66C = SWING TYPE FB.

CLASS. 300



REDUCE BORE

SIZE	A	C	* C1	PORT	PORT 1	U	Kg
1/2"	54	152	152	8.5	10	18	3.4
3/4"	72	178	178	12.5	14	22	4.5
1"	72	203	216	17	18	27	7
1.1/2"	105	229	241	24	29	43	12.3
2"	105	267	267	29	36.5	49	16.4

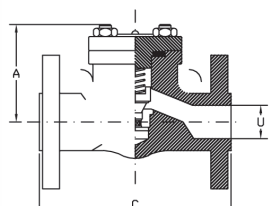
FULL BORE

SIZE	A	C	* C1	PORT	PORT 1	U	Kg
1/2"	62	152	152	12	14	18	3.4
3/4"	72	178	178	17	18	22	7
1"	72	203	216	22	24	27	7
1.1/2"	105	229	241	32	36.5	43	12.3
2"	128	267	267	36	50	54	24

MOD: 84B = PISTON TYPE R.B.
 MOD: 85B = BALL TYPE R.B.
 MOD: 86B = SWING TYPE R.B. * C1 = SWING TYPE

MOD: 64B = PISTON TYPE FB.
 MOD: 65B = BALL TYPE FB.
 MOD: 86B = SWING TYPE FB. * C1 = SWING TYPE

CLASS. 150



REDUCE BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	74	108	10	10	18	3.2
3/4"	74	118	15	14	22	3.9
1"	80	127	17	18	27	4.7
1.1/2"	105	165	24	29	43	9.5
2"	105	203	29	36.5	49	14.3

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	74	108	12	14	18	3.8
3/4"	80	118	16	18	22	4.7
1"	82	127	21	24	27	4.7
1.1/2"	105	165	29	36.5	43	10
2"	128	203	38	50	54	15

MOD: 84A = PISTON TYPE R.B.
 MOD: 85A = BALL TYPE R.B.
 MOD: 86A = SWING TYPE R.B.

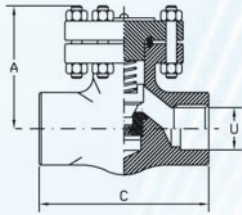
MOD: 64A = PISTON TYPE FB.
 MOD: 65A = BALL TYPE FB.
 MOD: 86A = SWING TYPE FB.

PORT = PISTON/BALL SEAT BORE - PORT 1 = SWING SEAT BORE

CHECK VALVES

BOLTED OR WELDED BONNET

CLASS. 2500



REDUCE BORE

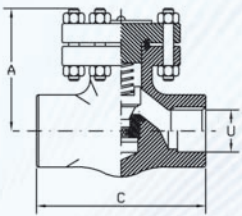
SIZE	A	C	PORT	PORT 1	U	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	108	92	12	14	21.8	5
3/4"	115	114	14	18	27.2	7.3
1"	131	128	19	24	33.9	8
1.1/2"	176	184	26	29	48.8	23.5
2"	188	228	34	36.5	61.2	28.5

MOD: 254SW - 254TH - 254BW FB. = PISTON TYPE
 MOD: 255SW - 255TH - 255BW FB. = BALL TYPE
 MOD: 256SW - 256TH - 256BW FB. = SWING TYPE

CLASS. 1500 ROUND BONNET RTJ GASKET



REDUCE BORE

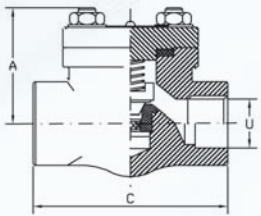
SIZE	A	C	PORT	PORT 1	U	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	96	80	9	12	21.8	5.5
3/4"	107	92	14	15	27.2	6.8
1"	115	114	19	22	33.9	7.5
1.1/2"	144	160	26	34	48.8	17.5
2"	178	184	34	38	61.2	20.2

MOD: 154SW - 154TH - 154BW FB. = PISTON TYPE
 MOD: 155SW - 155TH - 155BW FB. = BALL TYPE
 MOD: 156SW - 156TH - 156BW FB. = SWING TYPE

CLASS. 1500 SQUARE BONNET SPIRAL WOUND GASKET



REDUCE BORE

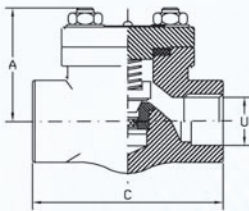
SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	65	90	12.5	14	21.8	1.8
3/4"	72	110	17	14	27.2	2.5
1"	105	130	24	18	33.9	6.5
1.1/2"	105	130	29	29	48.8	9.5
2"	128	160	38	36.5	61.2	14

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"						
3/4"						
1"						
1.1/2"						
2"						

MOD: 054SW - 054TH - 054BW R.B. = PISTON TYPE
 MOD: 055SW - 055TH - 055BW R.B. = BALL TYPE
 MOD: 056SW - 056TH - 056BW R.B. = SWING TYPE

CLASS. 800



REDUCE BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	54	80	8.5	10	21.8	1.5
3/4"	62	90	12.5	14	27.2	1.8
1"	72	110	17	18	33.9	2.5
1.1/2"	105	130	24	29	48.8	6.5
2"	105	130	29	36.5	61.2	9.5

FULL BORE

SIZE	A	C	PORT	PORT 1	U	Kg
1/2"	62	90	12	14	21.8	1.8
3/4"	72	110	16	18	27.2	2.5
1"	105	130	21	24	33.9	6.5
1.1/2"	105	130	29	36	48.8	9.5
2"	128	165	38	50	61.2	14.0

MOD: 084SW - 084TH - 084BW R.B. = PISTON TYPE
 MOD: 085SW - 085TH - 085BW R.B. = BALL TYPE
 MOD: 086SW - 086TH - 086BW R.B. = SWING TYPE

MOD: 064SW - 064TH - 064BW FB. = PISTON TYPE
 MOD: 065SW - 065TH - 065BW FB. = BALL TYPE
 MOD: 066SW - 066TH - 066BW FB. = SWING TYPE

PORT = PISTON/BALL SEAT BORE - PORT 1 = SWING SEAT BORE

APPLICABLE STANDARDS:

- API 602
- API 600
- UNI EN ISO 15761
- ASME B16.34
- ASME B16.10
- ASME B16.5

OTHER STANDARDS ON REQUEST

MTM reserves to make modifications to improve valves performance without notice



M.P.I. FACILITY



L.P.I. TEST



HYDRO - PNEUMATIC TEST UP TO 600 bar



HYDRAULIC PUMP



HYDRO - PNEUMATIC TEST UP TO 1000 bar



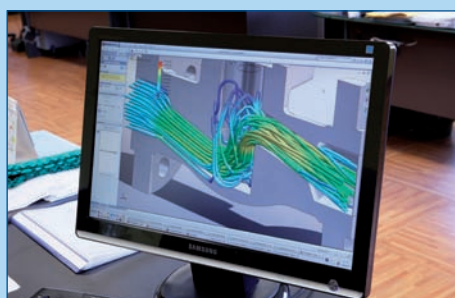
HYDRO - PNEUMATIC TEST UP TO 600 bar FOR CHECK VALVES



HYDRO - PNEUMATIC TEST UP TO 600 bar



DESIGN DEPARTMENT - CAD STATION



FERRITSCOPE FISHER FOR FERRITE DETERMINATION

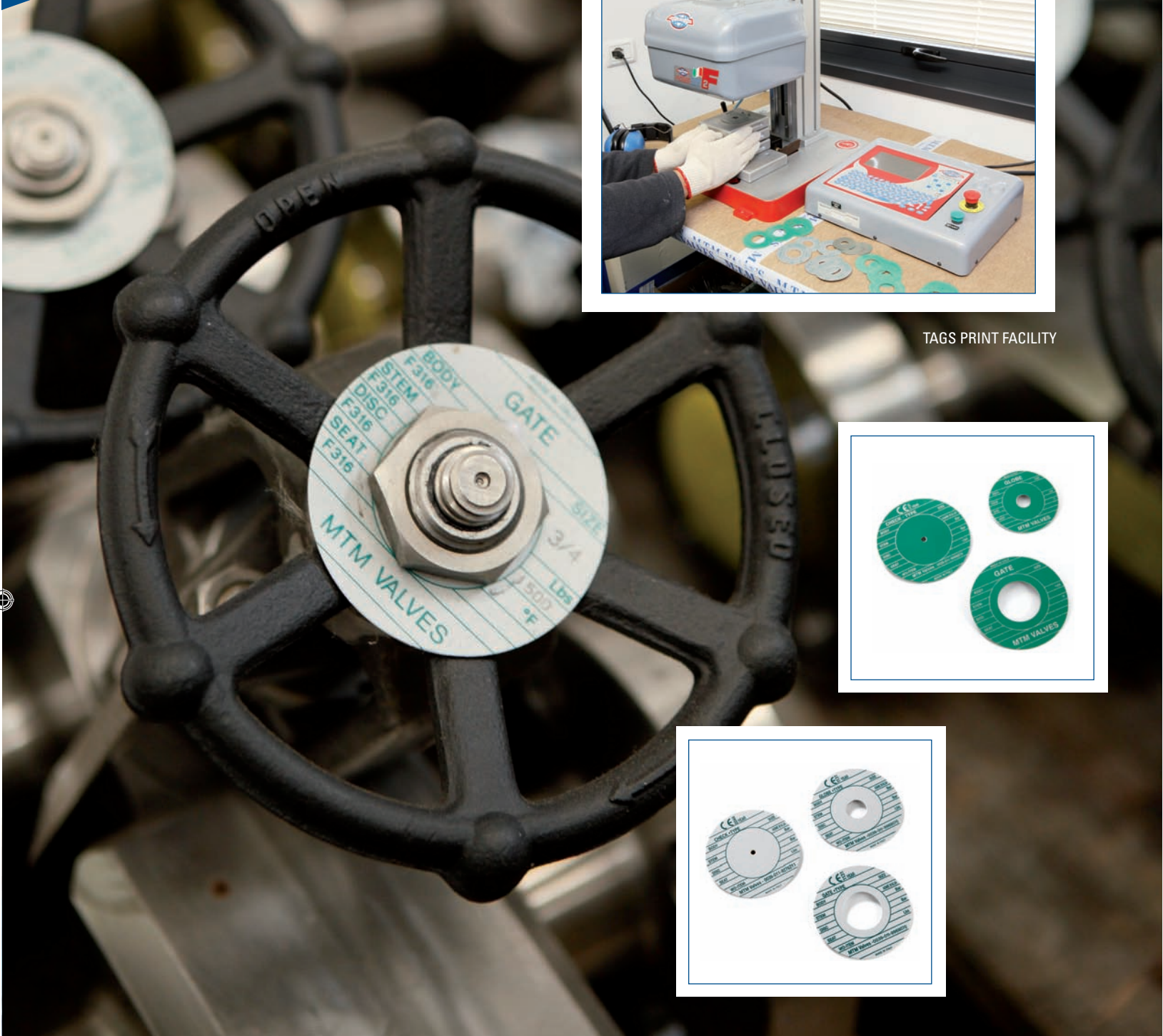
FACILITY



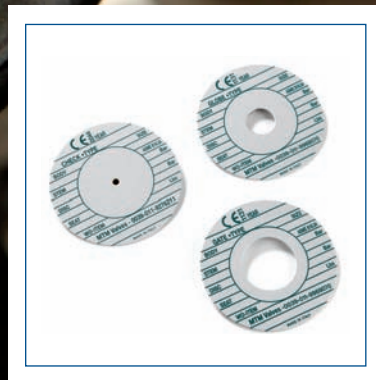
HP GAS TEST FACILITY AND FUGITIVE EMISSION HELIUM LEAK DETECTOR TEST



SPECTROMETER OPTICAL EMISSION FOR P.M.I. AND CHEMICAL ANALYSIS



TAGS PRINT FACILITY



ASSEMBLING DEPARTMENT



CV VALUES

VALVE TYPE	BORE	RATING	SIZE							
			1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
GATE	REDUCE	150-800	/	/	5.6	12	23.5	44	68	101
GATE	FULL	150-800	2.3	5.6	12	23.5	44	68	101	203
GATE	REDUCE	1500	/	/	5.6	10.6	24.5	/	68	95
GATE	FULL	1500	2.3	5.6	10.6	24.5	38	56	80	150/200
GATE	FULL	2500	2.3	5.6	5.6	10.6	24.5	/	68	95
GLOBE	REDUCE	150/800	/	/	1.6	3.6	6.5	11	17.2	22
GLOBE	FULL	150/800	1.5	1.5	3.2	5.8	11.5	15.2	20.9	38.3
GLOBE	REDUCE	1500	/	/	1.6	3	5.6	11	16	20
GLOBE	FULL	1500	/	/	2.7	5.9	12.2	14	19.8	23.3
GLOBE	FULL	2500	/	/	2.7	5.9	12.2	14	19.8	23.3
PISTON/BALL CHECK	REDUCE	150-800	/	/	1.2	3.4	6.2	/	14.9	18.2
PISTON/BALL CHECK	FULL	150-800	1	1.1	2.8	5.2	11	13	17.8	31
PISTON/BALL CHECK	REDUCE	1500	/	/	1.2	3.4	6.2	/	14.9	18.2
PISTON/BALL CHECK	FULL	1500	1	1.1	2.8	5.2	11	13	17.8	31
PISTON/BALL CHECK	FULL	2500	1	1.1	2.8	5.2	11	13	17.8	31
SWING CHECK	REDUCE	150-800	/	/	4	6.3	13.5	18.3	28.3	53.4
SWING CHECK	FULL	150-800	/	/	5.4	12.6	16.7	26.2	54.6	98
SWING CHECK	REDUCE	1500	/	/	4	6.3	13.5	18.3	28.3	53.4
SWING CHECK	FULL	1500	/	/	5.4	12.6	16.7	26.2	54.6	98
SWING CHECK	FULL	2500	/	/	5.4	12.6	16.7	26.2	54.6	98

FLOW-RATE

$$Q = C_v \sqrt{\frac{\Delta p}{S}}$$

For liquids other than water

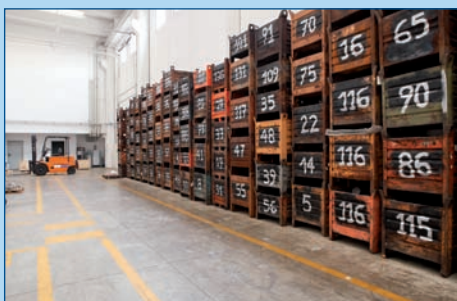
- Δp = Pressure drop (p.s.i.)
- Q = Liquid flow in gallons per minute (GPM)
- S = Specific gravity of liquid relative to water (60°F)
- C_v = Valves flow coefficient

The data shown in the above table are approximative as several factors can modify the values (as special type of piston, gate, spring etc.).

PRESSURE DROP

$$\Delta p = S \left(\frac{Q}{C_v} \right)^2$$

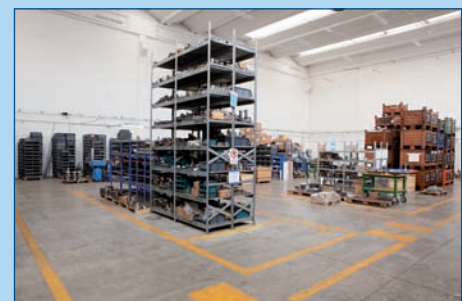
MTM reserves to make modifications to improve valves performance without notice



FORGED RAW PARTS

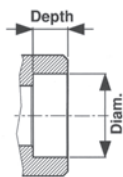


MACHINED PARTS



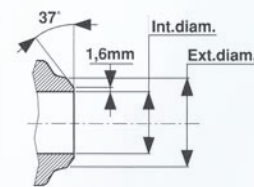


SW - BW - NPT DIMENSIONS



SW - ANSI B16.11

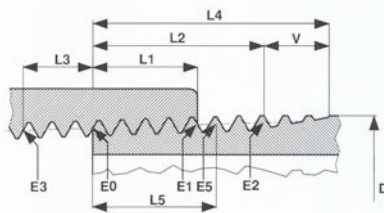
Size		Min. Diam.	Max. Diam.	Min. Depth.
1/4"	mm	14.2	14.6	9.5
3/8"	mm	17.6	18.0	9.5
1/2"	mm	21.8	22.2	9.5
3/4"	mm	27.2	27.6	12.5
1"	mm	38.9	34.3	12.5
1 1/4"	mm	42.7	43.1	12.5
1 1/2"	mm	48.8	49.2	16.0
2"	mm	61.2	61.7	16.0
2 1/2"	mm	73.9	74.4	16.0
3"	mm	89.8	90.3	16.0
4"	mm	115.2	115.7	19.0



BW - ANSI B16.25

Size		Ext.diam.	sch.5	sch.10	sch.40	sch.80	sch.160	sch.XXS
1/4"	mm	13.72	/	10.41	9.25	7.67	/	/
3/8"	mm	17.15	/	13.84	15.52	10.74	/	/
1/2"	mm	21.34	18.03	17.12	15.8	13.87	11.84	6.40
3/4"	mm	26.67	23.37	22.45	20.93	18.85	15.60	11.02
1"	mm	33.40	30.10	27.86	26.64	24.31	20.70	15.21
1 1/4"	mm	42.16	38.86	36.63	33.05	32.46	29.46	22.76
1 1/2"	mm	48.26	44.96	42.72	40.89	38.10	33.99	27.94
2"	mm	60.33	57.02	54.79	52.50	49.25	42.90	38.18
2 1/2"	mm	73.02	66.78	66.90	62.71	59.01	53.97	44.98
3"	mm	88.90	84.60	82.8	78.0	73.65	66.65	58.4
4"	mm	114.0	110.0	108.0	102.0	97.0	87.0	80.0

- D** = O.D. of pipe
- n** = Threads/in
- P** = Pitch of thread
- E0** = Pitch diam. at beginning of external thread
- L1** = Length of handtight engagement
- E1** = Diam. of handtight engagement
- L2** = Length of effective thread, external
- E2** = Diam. of effective thread, external



- L3** = Length of wrench makeup, internal
- E3** = Diam. of wrench makeup, internal
- V** = Vanish thread
- L4** = Overall length external thread
- L5** = Length of nominal complete external threads
- E5** = Diam. of nominal complete external threads
- h** = Height of thread

NPT - ANSI B1.20.1

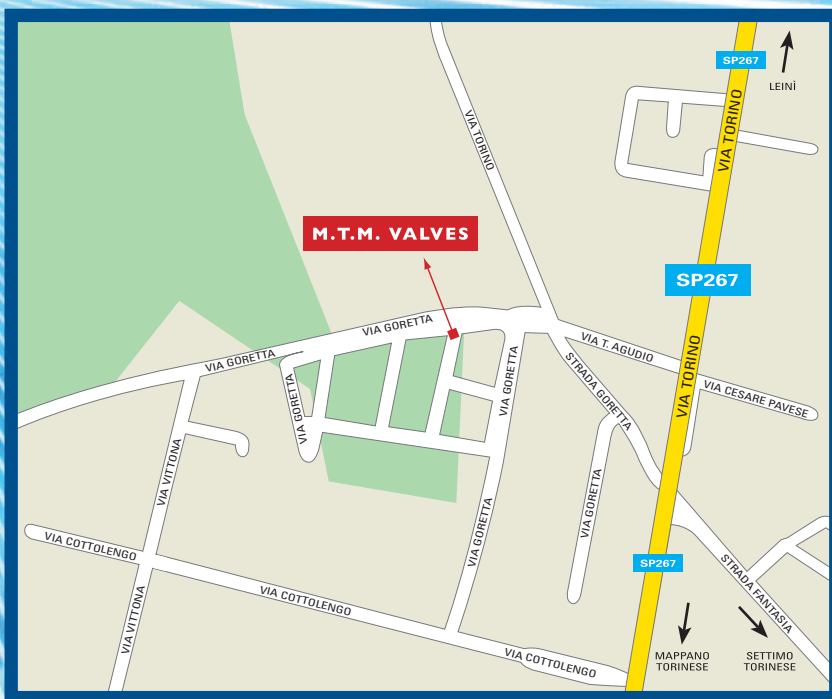
Size		D	n	P	E0	L1	E1	L2	E2	L3	E3	V	L4	L5	E5	h
1/4"	mm	13.72	18	1.41	12.13	5.79	12.49	10.21	12.76	4.23	11.86	4.9	15.1	7.38	12.59	1.13
3/8"	mm	17.15	18	1.41	15.55	6.1	15.93	10.36	16.19	4.23	15.28	4.9	15.26	7.54	16.02	1.13
1/2"	mm	21.34	14	1.81	19.26	8.13	19.77	13.56	20.11	5.44	18.92	6.29	19.85	9.93	19.88	1.45
3/4"	mm	26.67	14	1.81	24.58	8.61	25.12	13.86	25.45	5.44	24.24	6.29	20.15	10.23	25.22	1.45
1"	mm	33.4	11.5	2.21	30.83	10.6	31.46	17.34	31.91	6.63	30.41	7.66	25.01	12.93	31.63	1.77
1 1/4"	mm	42.16	11.5	2.21	39.55	10.67	40.22	17.95	40.67	6.63	39.14	7.66	25.63	13.54	40.4	1.77
1 1/2"	mm	48.26	11.5	2.21	45.62	10.67	46.29	18.38	46.77	6.63	45.21	7.66	26.04	13.96	46.49	1.77
2"	mm	60.33	11.5	2.21	57.63	11.07	58.33	19.22	58.83	6.63	57.22	7.66	26.88	14.8	58.56	1.77
2 1/2"	mm	73.02	8	3.17	69.07	17.32	70.16	28.89	71.02	6.35	68.68	11.02	39.91	22.54	70.48	2.54
3"	mm	88.9	8	3.17	84.85	19.46	86.07	30.48	86.76	6.35	84.45	11.02	41.5	24.13	86.36	2.54

MTM reserves to make modifications to improve valves performance without notice



M.T.M. VALVES srl

Strada Goretta, 86 - 10072 Mappano di Caselle (To) Italy
 Tel. +39 011 9969070 - Fax +39 011 9910340
mtmvalves@mtmvalves.net - www.mtmvalves.net





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mtmvalves@mtmvalves.net

www.mtmvalves.net

www.immagine3000.it

