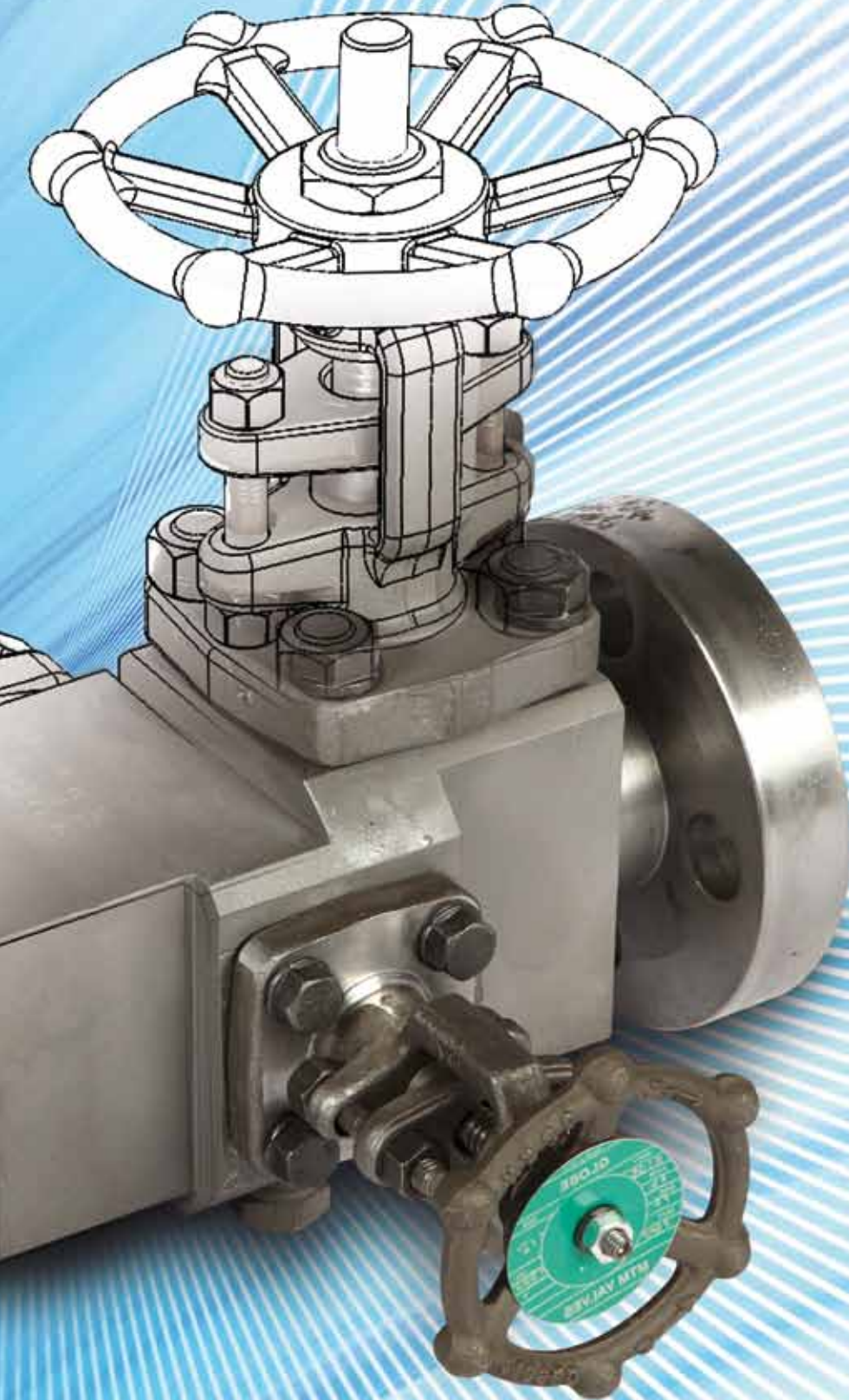


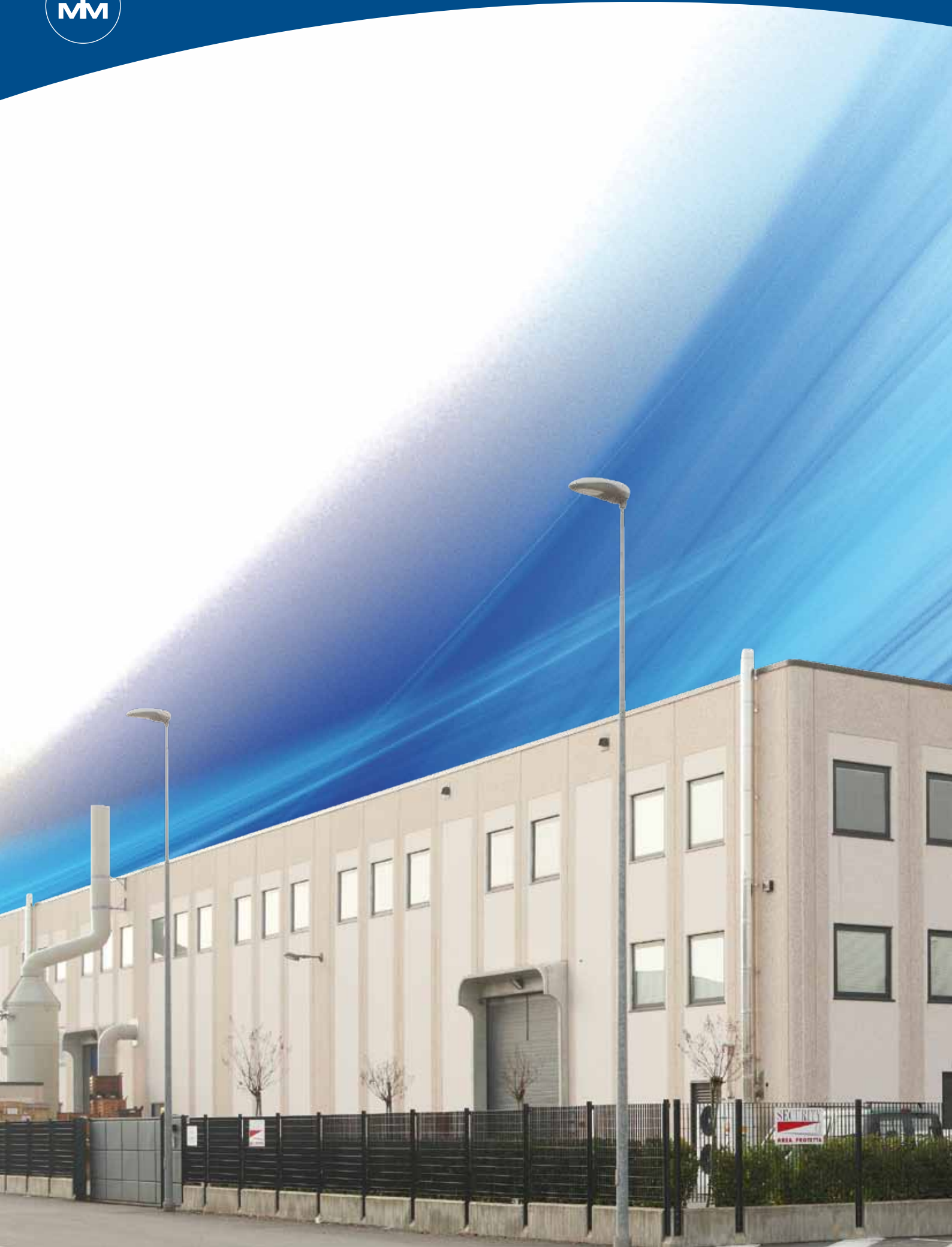


M.T.M. VALVES



Edition 01-2010

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 1995, 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 ¼" 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.

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 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 technological 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 | • ANSI B16.34 | STEEL VALVES, FLANGED AND BUTT WELDED ENDS |
| • API 602 | FORGED STEEL GATE VALVES - EXTENDED BODY | • API 598 | VALVE INSPECTION AND TEST |
| • BS 15761 | FORGED STEEL GLOBE AND CHECK VALVES | • ISO UNI EN 12266-2 | TESTING OF VALVES |
| • ANSI B16.10 | FACE TO FACE AND END TO END DIMENSION OF FERROUS VALVES | • DIN 3202 | END TO END DIMENSIONS |
| • ANSI B16.5 | STEEL PIPE FLANGES AND FITTINGS | • MSS SP 25 | STANDARD MARKING SYSTEM FOR VALVES |
| • ANSI B16.9 | STEEL BUTT WELDING FITTINGS | • MSS SP 84 | VALVES, SOCKET WELDING AND THREADED ENDS |
| • ANSI B16.11 | FORGED STEEL FITTINGS, SOCKET WELDING AND THREADED | • 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 & WELDE BONNET - PRESSURE SEAL - REDUCE & FULL PORT
 BELLOWS SEAL - CRYOGENIC TYPE - EXTENDED BODY - "Y" PATTERN - INSIDE SCREW STEM
 DOUBLE BLOCK & BLEED MANUAL OR ACTUATED VALVES

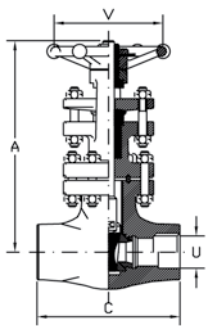
MATERIALS

CARBON STEEL
 LOW CARBON STEEL
 ALLOY STEEL
 AUSTENITIC STEEL

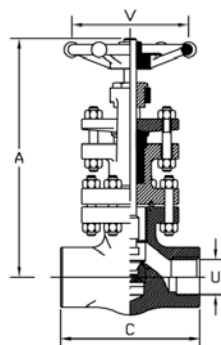
DUPLEX STEEL
 DUPLEX STAINLESS STEEL
 HIGH AUSTENITIC STEEL
 SUPER ALLOY

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

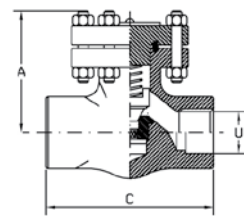
ASTM A182 F51, F53, F55
 ASTM F44
 MONEL, INCONEL, INCOLOY,
 HASTELLOY, TITANIUM



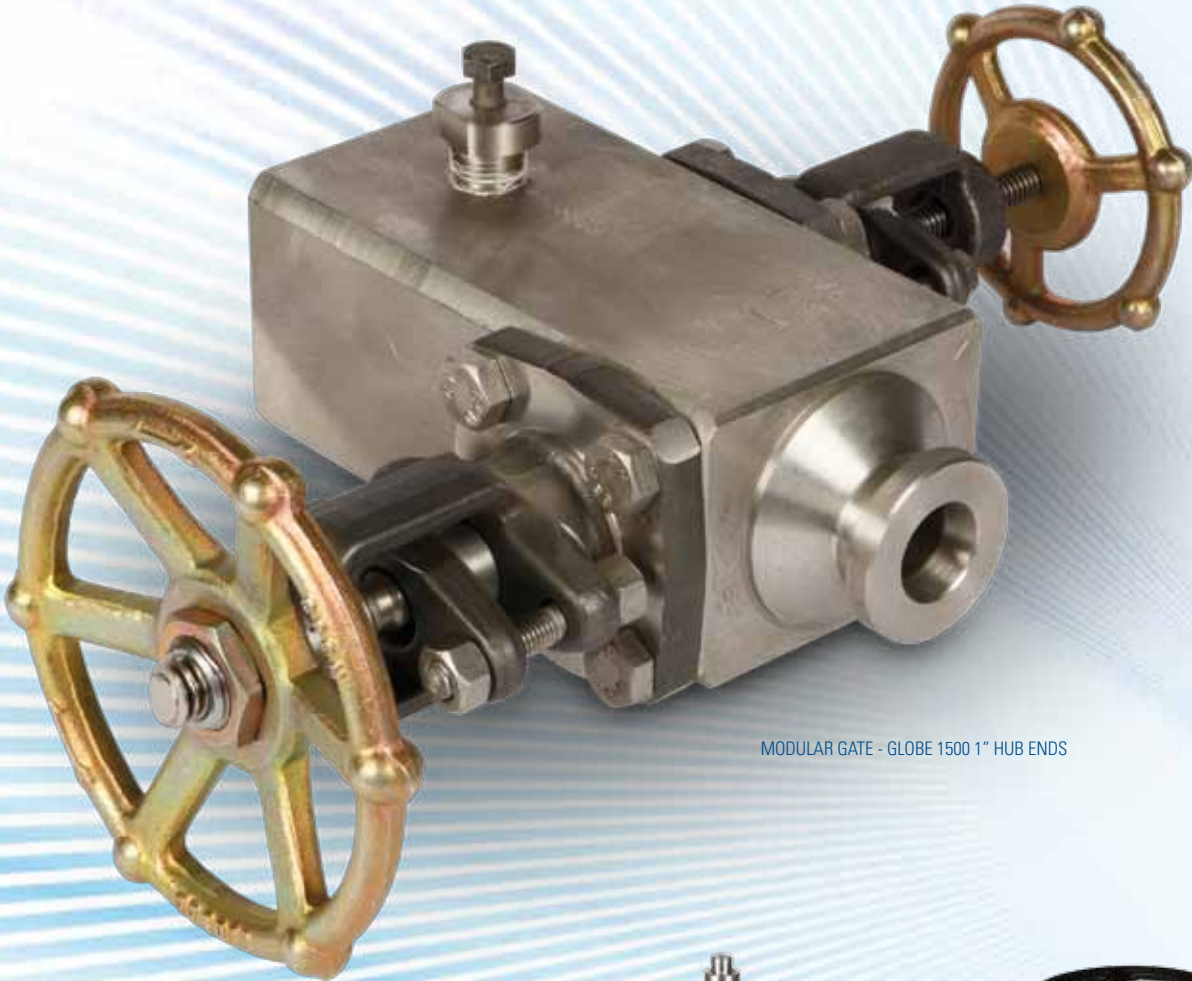
Gate_800-1500-2500
 Gate_FL150-300-600
 Gate_FL1500-2500



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

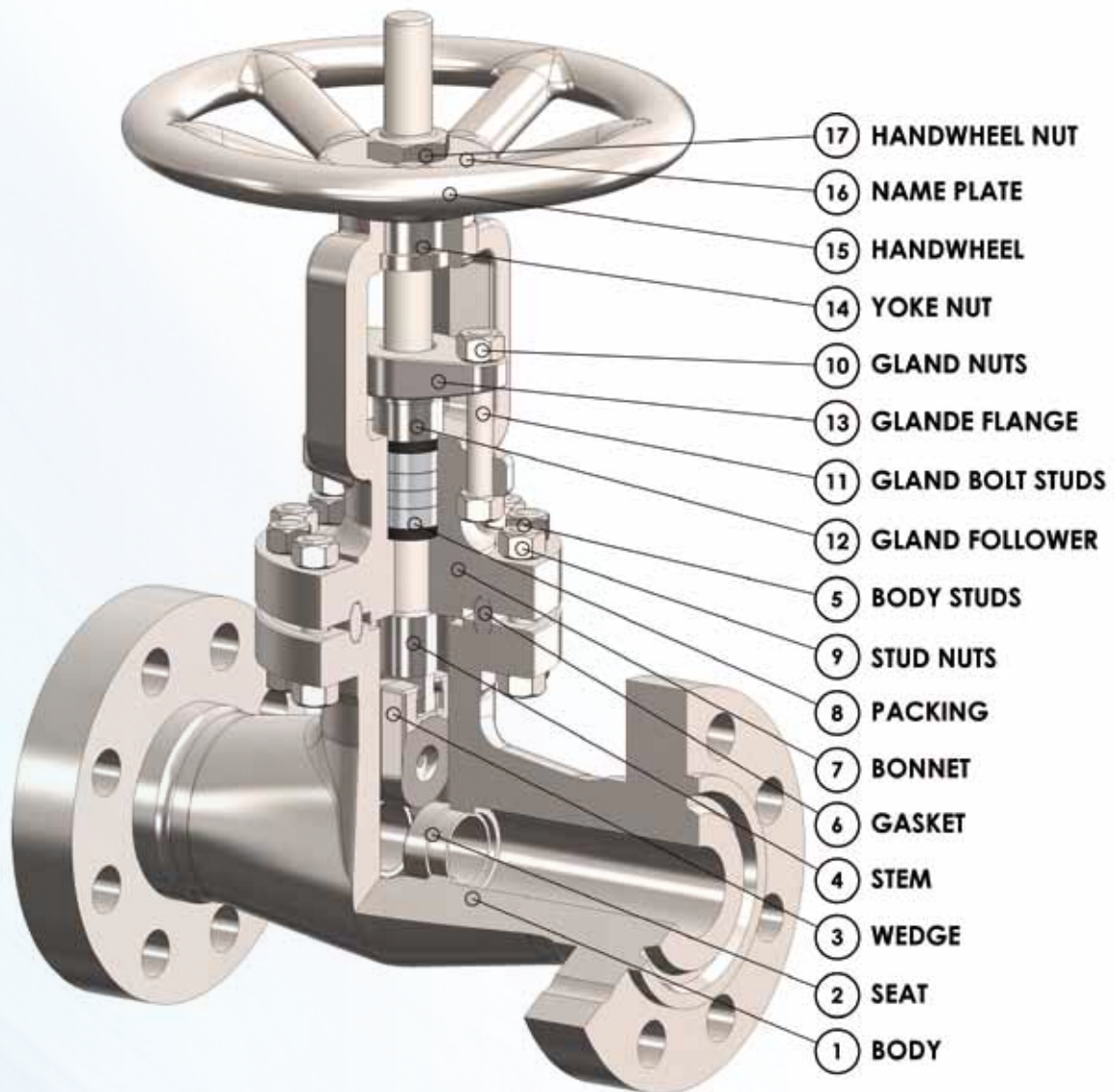


GATE 800 RE-IN-FORCED EXTENDED BONNET

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

GATE 1500 2" EXTENDED BONNET

GATE VALVES



- 17 HANDWHEEL NUT
- 16 NAME PLATE
- 15 HANDWHEEL
- 14 YOKE NUT
- 10 GLAND NUTS
- 13 GLANDE FLANGE
- 11 GLAND BOLT STUDS
- 12 GLAND FOLLOWER
- 5 BODY STUDS
- 9 STUD NUTS
- 8 PACKING
- 7 BONNET
- 6 GASKET
- 4 STEM
- 3 WEDGE
- 2 SEAT
- 1 BODY



MODULAR GATE - GATE-NEEDLE 1500 1"



GATE 800 INSIDE SCREW



GATE 1500 2" PRESSURE SEAL TITANIUM MATERIAL

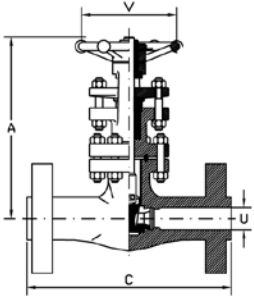


GATE API 15000 DOUBLE BLOCK & BLEED



GATE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

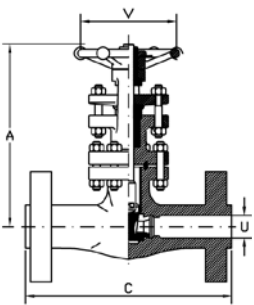
REDUCE BORE

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	9.2
3/4"	291	273	18	22	140	12.3
1"	343	308	24	28	180	18
1.1/2"	446	384	36.5	43	300	38.5
2"	483	451	36.5	49	300	63

MOD: 251RF - 251RJ



CLASS. 1500

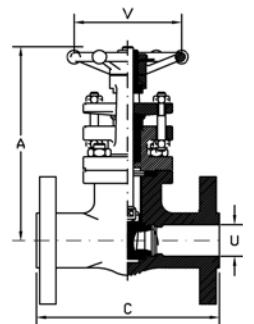
REDUCE BORE

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	10	18	120	7.8
3/4"	245	228	14	19	140	11.2
1"	291	254	18	24	140	17.4
1.1/2"	343	305	32	38	180	31
2"	446	368	36.5	49	300	54.5

MOD: 151RF - 151RJ



CLASS. 600

REDUCE BORE

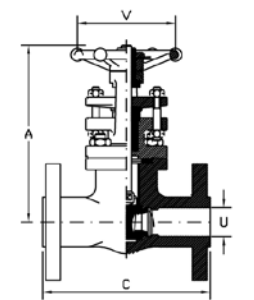
SIZE	A open	C	PORT	U	V	Kg
1/2"	148	165	10	18	78	3.8
3/4"	199	191	14	19	78	5.6
1"	199	216	18	24	98	8.4
1.1/2"	257	241	29	38	140	16.2
2"	284	292	36.5	49	140	20.6

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	165	14	18	78	3.8
3/4"	199	191	18	22	78	5.6
1"	240	216	21	27	98	8.4
1.1/2"	257	241	32	43	140	16.2
2"	338	292	50	54	250	20.6

MOD: 81C R.B.

MOD: 61C F.B.



CLASS. 300

REDUCE BORE

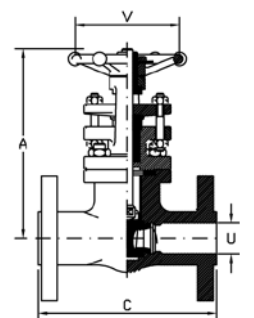
SIZE	A open	C	PORT	U	V	Kg
1/2"	148	140	10	18	78	3.2
3/4"	165	152	14	19	78	4.1
1"	199	165	18	24	98	6.6
1.1/2"	257	190	29	38	140	12.5
2"	299	216	36.5	49	140	19

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	140	14	19	78	4
3/4"	165	152	18	22	98	6
1"	257	165	24	28	120	11
1.1/2"	311	190	36.5	43	140	15
2"	316	216	50	54	180	21

MOD: 81B R.B.

MOD: 61B F.B.



CLASS. 150

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	176	108	10	18	78	2.9
3/4"	176	118	14	19	78	3.7
1"	209	127	18	24	98	6.3
1.1/2"	257	165	29	38	140	11
2"	311	178	36.5	49	140	17.5

FULL BORE

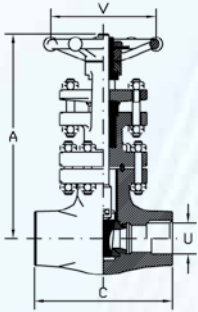
SIZE	A open	C	PORT	U	V	Kg
1/2"	176	108	14	18	78	2.9
3/4"	209	118	18	22	98	3.7
1"	209	127	21	27	140	6.3
1.1/2"	257	165	32	43	140	11
2"	328	178	50	54	140	17.5

MOD: 81A R.B.

MOD: 61A F.B.

GATE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

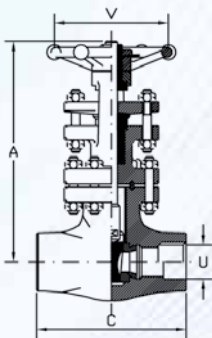
REDUCE BORE

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	33.8	180	12.6
1.1/2"	443	184	29	48.7	300	29.7
2"	451	228	36.5	61.1	300	44

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



CLASS. 1500 ROUND BONNET

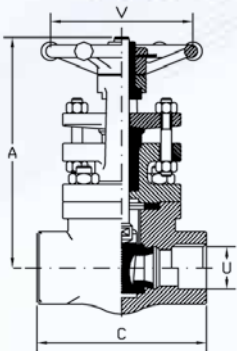
REDUCE BORE

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	14	21.8	120	3.8
3/4"	245	92	18	27.2	140	4.9
1"	291	114	24	33.9	140	8.1
1.1/2"	343	165	36.5	48.8	180	11.2
2"	446	184	40	61.2	300	28.5

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



CLASS. 1500 SQUARE BONNET

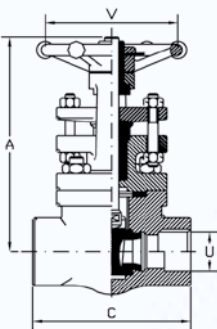
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	90	14	21.8	78	2.6
3/4"	197	110	14	27.2	98	3.5
1"	252	130	18	33.9	140	6.5
1.1/2"	287	130	29	48.8	140	8.8
2"	340	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"	257	130	29	48.8	140	7.2
2"	280	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"	257	130	24	33.9	140	6.5
1.1/2"	280	130	33	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

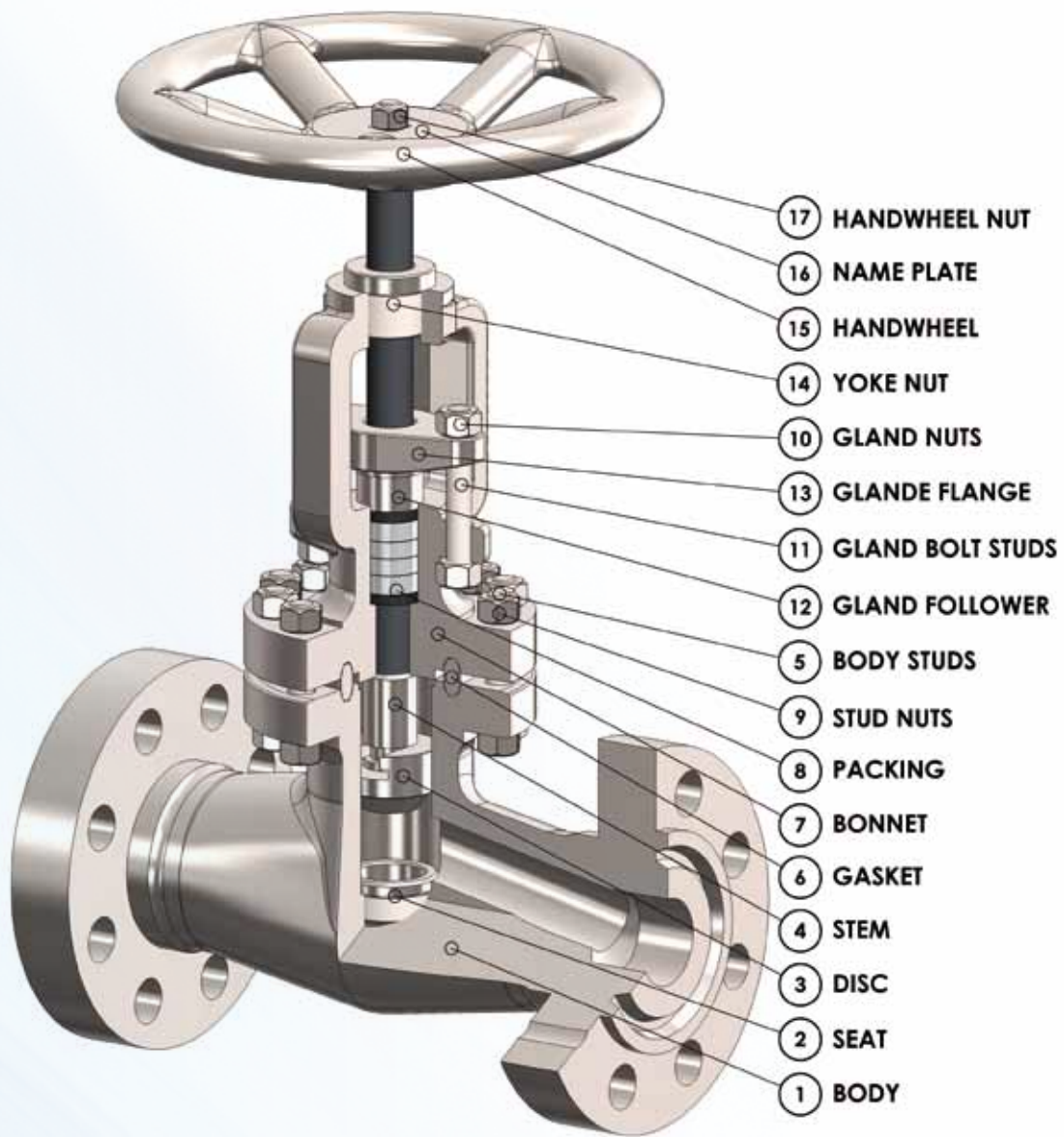


GLOBE Y TYPE 1500 ASTM A182 F51 MATERIAL



GLOBE 1500 1" SUB SEA
ASTM A182 F53 MATERIAL

GLOBE VALVES



JACKET GLOBE 150 2"



GLOBE SELF CLOSING LEVER OPERATED

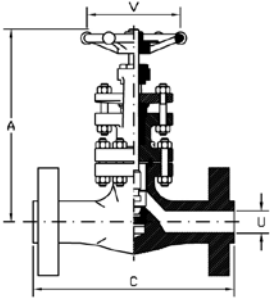


GLOBE Y TYPE 1500 2" BELLOWS SEAL ASTM A182 F91 MATERIAL



GLOBE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

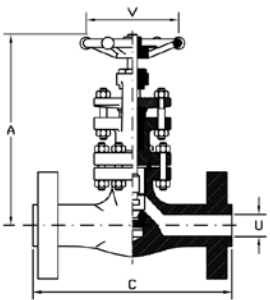
REDUCE BORE

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	9.2
3/4"	309	273	14	22	140	12.3
1"	364	308	19	28	180	18
1.1/2"	518	384	26	43	300	38.5
2"	559	451	34	49	300	63

MOD: 251RF - 251RJ



CLASS. 1500

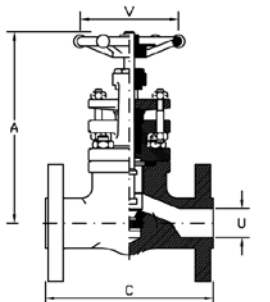
REDUCE BORE

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	7.8
3/4"	265	228	14	19	140	11.2
1"	309	254	19	24	140	17.4
1.1/2"	364	305	26	38	180	31
2"	518	368	34	49	300	54.5

MOD: 153RF - 153RJ



CLASS. 600

REDUCE BORE

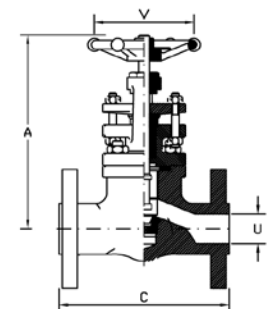
SIZE	A open	C	PORT	U	V	Kg
1/2"	175	165	9.7	18	78	3.8
3/4"	206	191	19	19	78	5.6
1"	206	216	19	24	98	8.4
1.1/2"	271	241	29	38	140	16.2
2"	300	292	35	49	140	20.6

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	165	12	18	78	3.8
3/4"	199	191	17	22	78	5.6
1"	240	216	22	27	98	8.4
1.1/2"	257	241	35	43	140	16.2
2"	338	292	44	53	250	20.6

MOD: 83C R.B.

MOD: 63C F.B.



CLASS. 300

REDUCE BORE

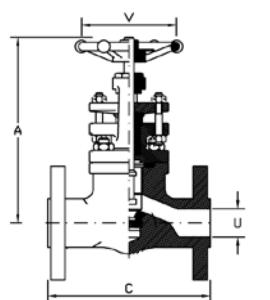
SIZE	A open	C	PORT	U	V	Kg
1/2"	175	140	9.7	18	78	3.2
3/4"	206	152	19	19	78	4.1
1"	206	165	19	24	98	6.6
1.1/2"	271	190	29	38	140	12.5
2"	300	216	35	49	140	19

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	165	140	12	19	78	4
3/4"	165	152	17	22	98	6
1"	257	165	22	28	120	11
1.1/2"	311	190	35	43	140	15
2"	316	216	44	54	180	21

MOD: 83B R.B.

MOD: 63B F.B.



CLASS. 150

REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	187	108	14	18	78	2.9
3/4"	187	118	14	19	78	3.7
1"	216	127	19	24	98	6.3
1.1/2"	271	165	29	38	140	11
2"	316	178	35	49	140	17.5

FULL BORE

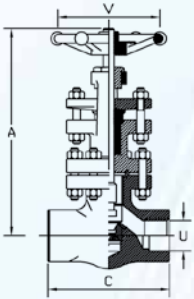
SIZE	A open	C	PORT	U	V	Kg
1/2"	176	108	12	18	78	2.9
3/4"	209	118	17	22	98	3.7
1"	209	127	22	27	140	6.3
1.1/2"	257	165	35	43	140	11
2"	328	178	44	54	140	17.5

MOD: 83A R.B.

MOD: 63A F.B.

GLOBE VALVES

BOLTED OR WELDED BONNET



CLASS. 2500

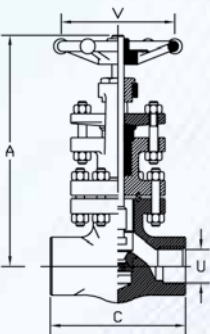
REDUCE BORE

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	9	21.8	140	5.1
3/4"	309	114	14	27.2	140	8.5
1"	364	128	19	33.9	180	12.6
1.1/2"	518	184	26	48.8	300	29.7
2"	523	228	34	61.2	300	44

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



CLASS. 1500 ROUND BONNET

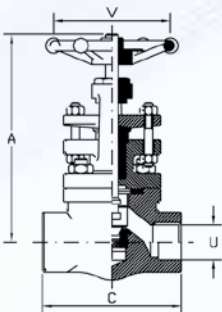
REDUCE BORE

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	165	26	48.8	180	11.2
2"	518	184	34	61.2	300	28.5

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



CLASS. 1500 SQUARE BONNET

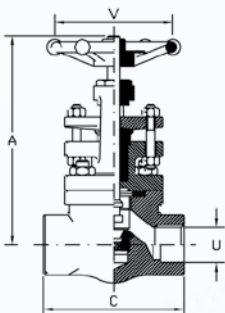
REDUCE BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	175	90	14	21.8	78	2.6
3/4"	206	110	14	27.2	98	3.5
1"	271	130	19	33.9	140	6.5
1.1/2"	296	130	29	48.8	140	8.8
2"	360	165	35	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"	159	80	9.7	21.8	78	1.7
3/4"	175	90	14	27.2	78	2.6
1"	206	110	19	33.9	98	3.5
1.1/2"	271	130	29	48.8	140	7.2
2"	296	130	35	61.2	140	8.8

FULL BORE

SIZE	A open	C	PORT	U	V	Kg
1/2"	175	90	12	21.8	78	2.6
3/4"	206	110	17	27.2	98	3.5
1"	271	130	22	33.9	140	6.5
1.1/2"	296	130	35	48.8	140	8.8
2"	360	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

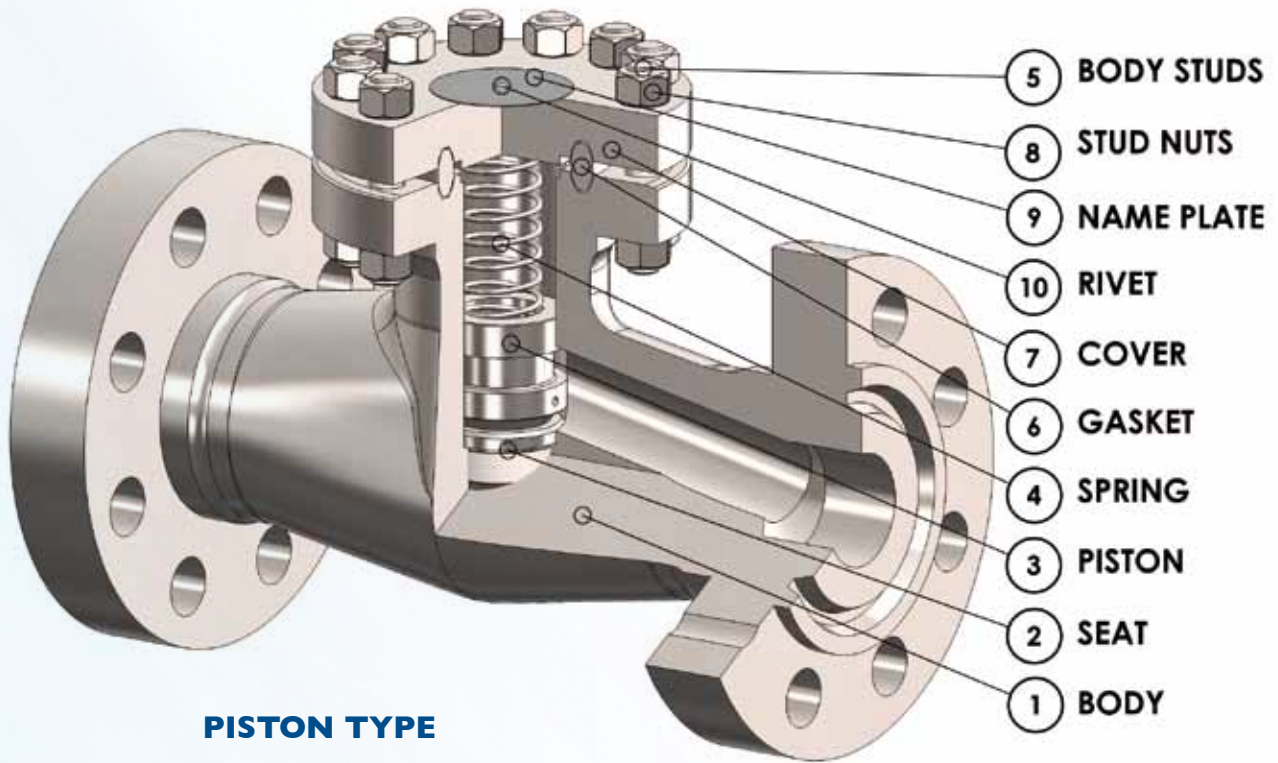


BALL CHECK FL 300 1" TITANIUM MATERIAL

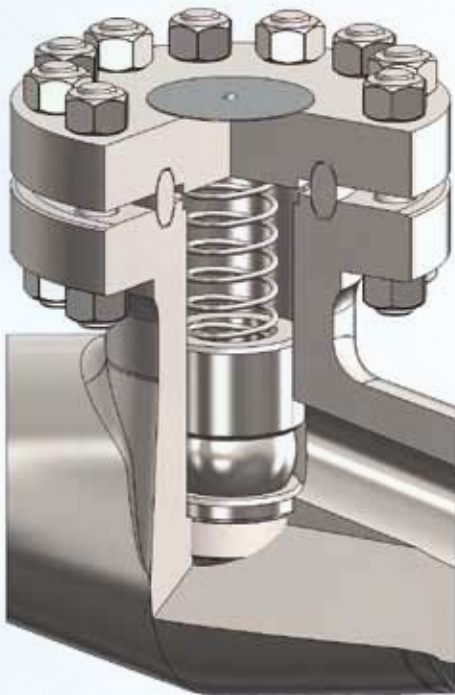


PISTON CHECK FL 300 4" TITANIUM MATERIAL

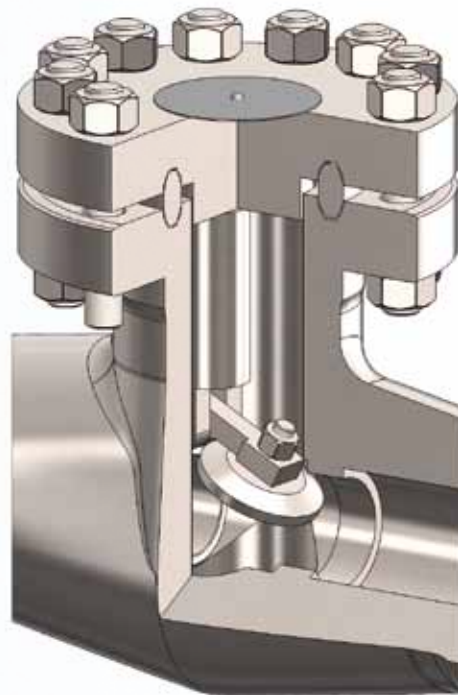
CHECK VALVES



PISTON TYPE



BALL TYPE



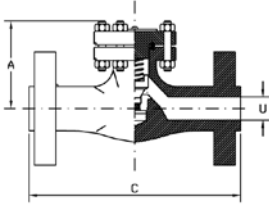
SWING TYPE



CHECK VALVES

BOLTED OR WELDED BONNET

CLASS. 2500



REDUCE BORE

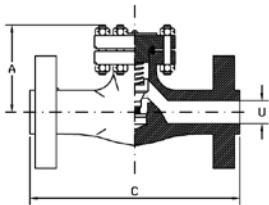
SIZE	A open	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	85	264	11	18	10.4
3/4"	95	273	14.5	22	12.6
1"	110	308	19	27	18.2
1.1/2"	165	384	31	43	43.5
2"	190	451	37.5	49	53

MOD: 254RF/RJ - 255RF/RJ - 256RF/RJ

CLASS. 1500



REDUCE BORE

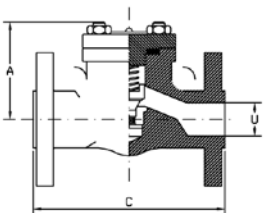
SIZE	A open	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	75	216	11	18	9.2
3/4"	90	229	14.5	22	11.1
1"	105	254	19	27	14.7
1.1/2"	140	305	31	43	36.5
2"	160	368	37.5	49	42.5

MOD: 154RF/RJ - 155RF/RJ - 156RF/RJ

CLASS. 600



REDUCE BORE

SIZE	A open	C	PORT	U	Kg
1/2"	54	165	8.5	18	3.4
3/4"	65	190	12.5	22	4.5
1"	72	216	17	27	5.8
1.1/2"	105	241	24	43	12.3
2"	110	292	29	49	16.7

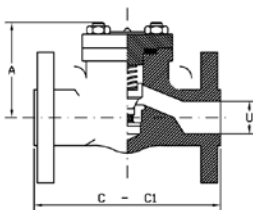
MOD: 84C - 85C - 86C R.B.

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	65	165	12	18	3.4
3/4"	72	190	17	22	4.5
1"	72	216	22	27	5.8
1.1/2"	105	241	32	43	12.3
2"	110	292	36	49	16.7

MOD: 64C - 65C - 66C F.B.

CLASS. 300



REDUCE BORE

SIZE	A open	C	* C1	PORT	U	Kg
1/2"	54	152	153	8.5	18	3.5
3/4"	65	178	178	12.5	22	4.2
1"	72	203	216	17	27	5.4
1.1/2"	105	229	241	24	43	11
2"	110	267	267	29	49	16.4

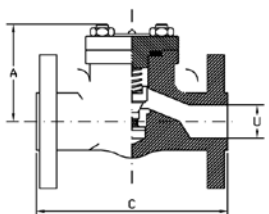
MOD: 84B - 85B - 86B R.B.
* C1 = SWING TYPE

FULL BORE

SIZE	A open	C	* C1	PORT	U	Kg
1/2"	65	152	153	12	18	3.5
3/4"	72	178	178	17	22	4.2
1"	72	203	216	22	27	5.4
1.1/2"	105	229	241	32	43	11
2"	110	267	267	36	49	16.4

MOD: 64B - 65B - 66B F.B.
* C1 = SWING TYPE

CLASS. 150



REDUCE BORE

SIZE	A open	C	PORT	U	Kg
1/2"	54	108	8.5	18	3.2
3/4"	65	118	12.5	22	3.9
1"	72	127	17	27	4.7
1.1/2"	105	165	24	43	9.5
2"	110	203	29	49	14.3

MOD: 84A - 85A - 86A R.B.

FULL BORE

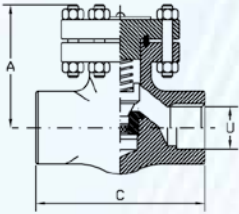
SIZE	A open	C	PORT	U	Kg
1/2"	54	108	12	18	3.0
3/4"	65	118	16	22	3.7
1"	72	127	21	27	4.5
1.1/2"	105	165	29	43	9.0
2"	110	203	38	49	14.0

MOD: 64A - 65A - 66A F.B.

CHECK VALVES

BOLTED OR WELDED BONNET

CLASS. 2500



REDUCE BORE

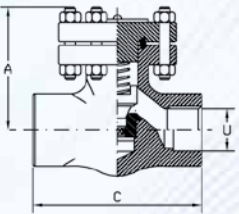
SIZE	A open	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	85	92	11	21.8	6.2
3/4"	95	114	14.5	27.2	7.3
1"	110	128	19	33.9	8
1.1/2"	160	184	31	48.8	23.5
2"	175	228	37.5	61.2	28.5

MOD: 254SW - 254TH - 254BW

CLASS. 1500 ROUND BONNET



REDUCE BORE

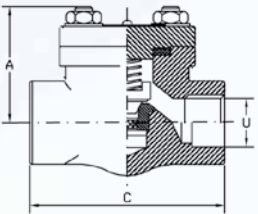
SIZE	A open	C	PORT	U	Kg
1/2"					
3/4"					
1"					
1.1/2"					
2"					

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	75	80	11	21.8	5.5
3/4"	90	92	14.5	27.2	6.8
1"	105	114	19	33.9	7.5
1.1/2"	140	160	31	48.8	17.5
2"	160	184	37.5	61.2	20.2

MOD: 154SW - 154TH - 154BW - FB.

CLASS. 1500 SQUARE BONNET



REDUCE BORE

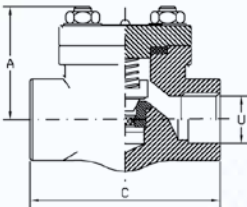
SIZE	A open	C	PORT	U	Kg
1/2"	65	90	12.5	21.8	1.7
3/4"	72	110	17	27.2	2.5
1"	105	130	24	33.9	5.8
1.1/2"	105	130	29	48.8	6.9
2"	140	160	38	61.2	16

FULL BORE

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

MOD: 054SW - 054TH - 054BW R.B.

CLASS. 800



REDUCE BORE

SIZE	A open	C	PORT	U	Kg
1/2"	54	108	8.5	21.8	3.2
3/4"	65	118	12.5	27.2	3.9
1"	72	127	17	33.9	4.7
1.1/2"	105	165	24	48.8	9.5
2"	110	203	29	61.2	14.3

FULL BORE

SIZE	A open	C	PORT	U	Kg
1/2"	54	108	12	21.8	3.0
3/4"	65	118	16	27.2	3.7
1"	72	127	21	33.9	4.5
1.1/2"	105	165	29	48.8	9.0
2"	110	203	38	61.2	14.0

MOD: 084SW - 084TH - 084BW R.B.

MOD: 064SW - 064TH - 064BW 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



M.P.I. FACILITY



L.P.I. TEST



HYDRO - PNEUMATIC TEST UP TO 600 bar



HYDRAULIC PUMP



HYDRO - PNEUMATIC TEST UP TO 1000 bar



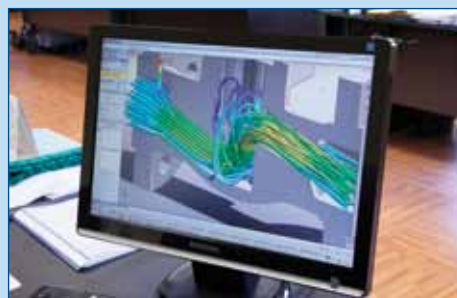
HYDRO - PNEUMATIC TEST UP TO 600 bar FOR CHECK VALVES



HYDRO - PNEUMATIC TEST UP TO 600 bar



DESIGN DEPARTMENT - CAD STATION



FERRITESCOPE 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

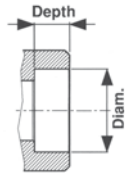


MACHINED PARTS



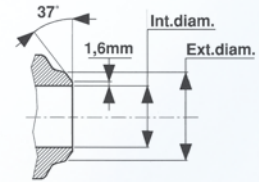


SW - BW - NPT DIMENSIONS



SW - ANSI B16.11

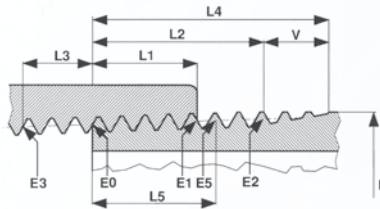
Size		Min. Diam.	Max. Diam.	Min. Depth.
1/4"	mm	14.2	14.6	9.5
3/8"	mm	17.6	18.0	9.5
1/2"	mm	21.8	22.2	9.5
3/4"	mm	27.2	27.6	12.5
1"	mm	38.9	34.3	12.5
1 1/4"	mm	42.7	43.1	12.5
1 1/2"	mm	48.8	49.2	16.0
2"	mm	61.2	61.7	16.0
2 1/2"	mm	73.9	74.4	16.0
3"	mm	89.8	90.3	16.0
4"	mm	115.2	115.7	19.0



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

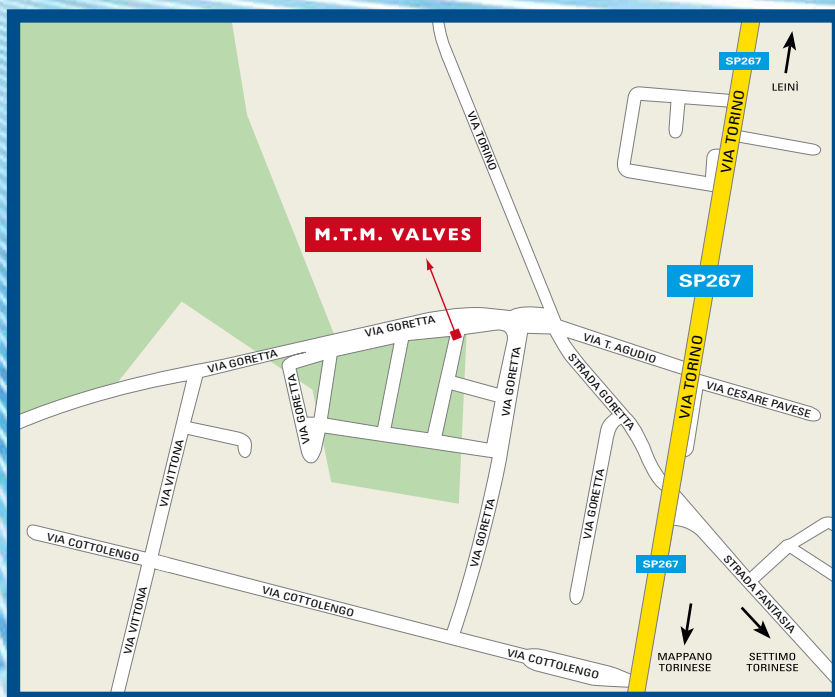


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