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Top Works Dimension Model B

Top Works Dimension Model C

Technical Characteristics

GWC Italia

Worldwide Network

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ph: +86-21.597.987.99 fax: +86-21.597.987.90 Email: sales@gwcitalia.com GWC Italia SpA with its Headquarters in Milan, Italy designs, manufacturers and markets valves with one of the most extensive lines you will find in the Industry today. GWC Italia SpA which is founded by an Italian Group & USA Entrepreneurial Management team, has become the Parent Company of the long standing GWC Worldwide Companies. This Italian & USA team has a history of building and managing successful valve manufacturing companies over the past 40 years. The valves manufactured in Italy will be complementary to the existing GWC line consisting of diversified flow control packages in a variety of alloys, trims, configurations, sizes and pressure classes, from general to severe applications. GWC Valves are used in major applications for Upstream, Downstream & Transportation Segments of the Oil & Gas Industry, E&P, Petrochemical, Chemical, Mining/Minerals, Power, Marine and Industrial markets.

GWC Italia SpA extensive line of valve and flow control products include but not limited to:

- Trunnion Mounted Ball Valves (soft & metal seated)
 - Split Body
 - Top Entry
 - Welded Body
 - Subsea
 - Cryogenic & High Temperature
 - Two Balls One Body DBBV
- Pipeline Gate and Check Valves
- Floating Ball Valves
- Gate, Globe and Check Valves including Cast & Forged
- Butterfly Valves including Triple Offset, High Performance and Resilient Seated
- Dual Plate Check Valves
- Needle and Gauge Valves
- Wellhead Gate Valves

GWC Italia Spa products are designed, engineered and manufactured to exceed its customer's stringent process requirements including API 6D, API 6A, API 6DSS, API 600, API 602, API 608, ISO 9001, PED, ATEX, SIL 3 and TA – Luft.



Proven technology for individual valve solutions worldwide

CERTIFICATIONS & STANDARDS

American Standards

American Petroleum Institute

API-6D	Specification for Pipeline Valves				
API-6D SS	Specification for Subsea Pipeline Valves				
API-6A	Specification for Wellhead				
	and Christmas Tree Equipment				
API-6FA	Specification for Fire Test for Valves				
API-594	Check Valves: Wafer, Wafer-Lug, and				
	Double Flanged Type				
API-598	Valve Inspection and Testing				
API-600	Bolted Bonnet Steel Gate Valves for				
	Petroleum and Natural Gas Industries				
API-602	Compact Steel Gate Valves-				
	Flanged, Threaded,				
	Welding and Extended-Body Ends				
API-607	Fire Test for Soft-Seated				
	Quarter-Turn Valves				
API-608	Metal Ball Valves - Flanged,				
	Threaded, and Welding End				
API-609	Butterfly Valves: Double Flanged, Lug				
	and Wafer-Type				
API-Q1	Specification for Quality Programs for the				
	Petroleum, Petrochemical & Natural Gas				

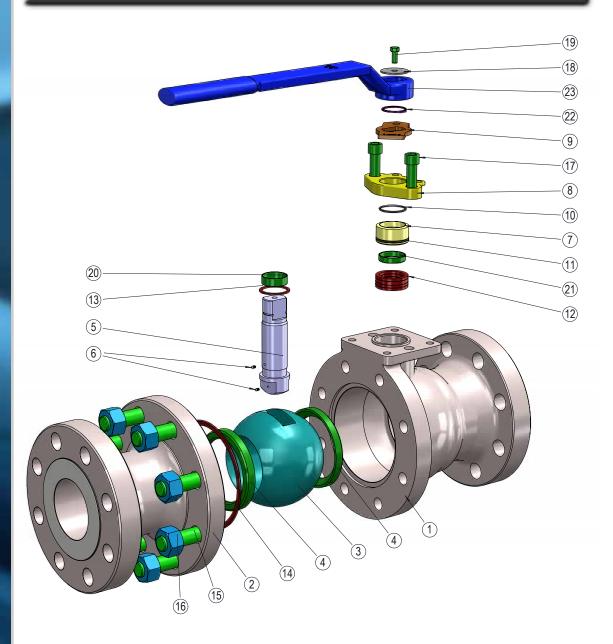
American Society of Mechanical Engineers

-	
ASME-B1.20.1	Pipe Threads, General Purpose (inch)
ASME-B16.11	Forged Fittings, Socket-Welding and Threaded
ASME-B16.10	Face to Face and End to End Dimensions of Valves
ASME-B16.5	Pipe Flanges and Flanged Fittings NPS 1/2 ~ NPS 24
ASME-B16.47	Large Diameter Steel Flanges NPS 26 ~ NPS 60
ASME-B16.25	Buttwelding Ends
ASME-B16.34	Valves - Flanged, Threaded and Welding End

International Standards

ISO 9001:2008	Quality Management Systems
ISO 14001	Environmental Management
OHSAS 18001:2007	Occupational Health and Safety
	Management System
ISO/TS 29001	Petroleum, Petrochemical and
	Natural Gas Industries - Sector Specific
	Quality Management Systems
CE/PED	Pressure Equipment Directive
CU-TR	Technical Reglament Conformity Certificate TRCU
CRN	Canadian Registration Number
Z245.15.96	Pipeline Steel Valves
ATEX	European for explosive atmosphere
SIL3	Measurement of performance required
	for safety instrument function

STANDARD FEATURES - Split Body Ball Valves



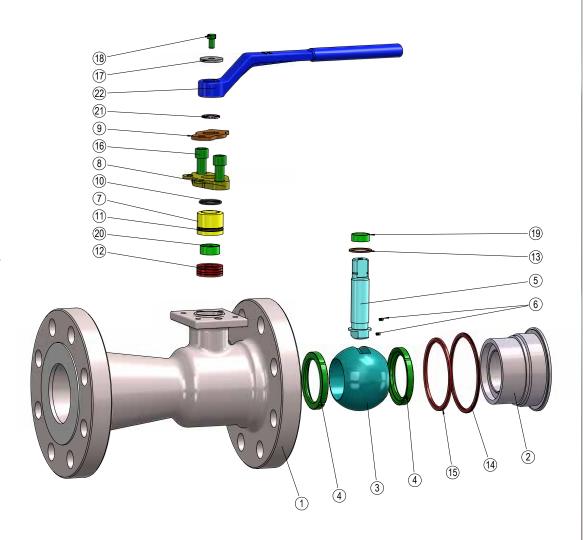
The GWC SPLIT BODY ball valves are designed, constructed and tested according to the most recent international standards, such as API, ASME, BS, DIN, etc.

- 1. Body
- 2. Closure / Cap
- 3. Ball
- 4. Cavity Relieving Seat
- 5. Stem
- 6. Anti-Static Spring and Ball
- 7. Gland Bushing
- 8. Gland Flange

- 9. Combination Lock Stop
- 10. Stem O-Ring
- 11. Gland O-Ring
- 12. Packing
- 13. Stem Thrust Washer
- 14. Spiral Wound Gasket
- 15. Body Stud
- 16. Body Nut

- 17. Gland Screw
- 18. Stem Washer
- 19. Stem Bolt
- 20. Stem Bearing
- 21. Gland Bearing
- 22. Snap Ring / Circlip
- 23. Handle

STANDARD FEATURES — Unibody Ball Valves



The GWC UNIBODY ball valves are designed, constructed and tested according to the most recent international standards, such as API, ASME, BS, DIN, etc.

- 1. Body
- 2. Closure / Cap
- 3. Ball
- 4. Cavity Relieving Seat
- 5. Stem
- 6. Anti-Static Spring and Ball
- 7. Gland Bushing
- 8. Gland Flange
- 9. Combination Lock Stop

- 10. Stem O-Ring
- 11. Gland O-Ring
- 12. Packing
- 13. Stem Thrust Washer
- 14. Graphite Gasket
- 15. PTFE Gasket
- 16. Gland Screw
- 17. Stem Washer
- 18. Stem Bolt

- 19. Stem Bearing
- 20. Gland Bearing
- 21. Snap Ring / Circlip
- 22. Handle

SPLIT BODY & UNIBODY BALL VALVES

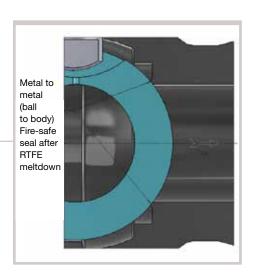
Body to stem anti-static spring and ball Ball to stem anti-static spring and ball

Figure 1

Ball valves present a particular problem with the build up of static electricity around the ball. All GWC ball valves have anti-static devices which provides contact between stem and ball, and stem and body to eliminate static electricity.

Figure 2

In the event of a fire the valve is required to make a downstream seal. Even after the disintegration of the RTFE seats, GWC ball valves have an excellent metal to metal seal.



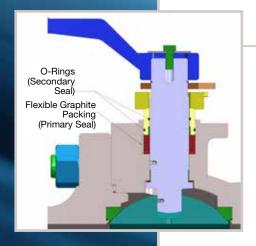
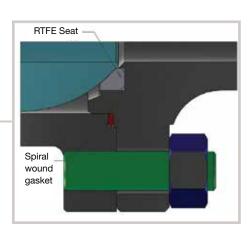


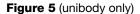
Figure 3

The combination of stem packing and o-rings guarantee zero emissions even at a low pressure. The primary seal is made out of flexible graphite, a material with extremely good resistance to fire conditions. The anti-blow out stem is inserted from inside the valve body.

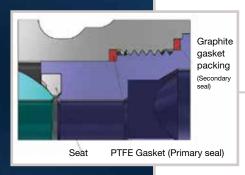


Special attention has been paid to the mechanical strength and sealing efficiency of the central flanged joint in the valve body.





The PTFE gasket packing acts as a primary seal for the Unibody ball valves. The secondary seal has been made out of flexible graphite, a material with extremely good resistance to fire conditions.



ORDERING GUIDE

Example: 4" Figure B150-1-BC-G2-L

B 15 0 - 1 - BC - G 2 - L

1. 2. 3. 4. 5.

4" CLASS 150 FLOATING BALL VALVE, FLG-RF, FULL BORE, A216 WCB BODY x 316SS TRIM, RTFE SEAT, VITON-B O-RINGS, NACE, FIRESAFE, LEVER OP.

1. MODEL

A - FLOATING BALL, UNIBODY, REDUCED BORE C - FLOATING BALL, SPLIT BODY, REDUCED BORE

B - FLOATING BALL, SPLIT BODY, FULL BORE

2. RATING

15 - CLASS 150 90 - CLASS 900 *
30 - CLASS 300 150 - CLASS 1500 *
60 - CLASS 600 * 1/2" - 1" SIZES ONLY

3. END CONNECTION

0 - RF FLANGED 9 - RING JOINT 7 - BUTTWELD (SCHEDULE REQUIRED) X - SPECIAL

4. TYPE

1 - FIRE-SAFE

5. MATERIAL (BODY + TRIM)

AC - WCB + 304 HC - LCB + LF2/ENP NC - CF3M + 316L BC - WCB + 316 OC - CN7M + A/20 IC - LCB + F6A/13CR CC - WCB + A105/ENP JC - LCB + 316 PC - A890-4A + F51 DC - WCB + F6A/13CR KC - CF8 + 304 QC - A890-5A + F53 EC - LCC + LF2/ENP LC - CF8M + 316 RC - A890-6A + F55 FC - LCC + F6A/13CR MC - CF3 + 304L X - SPECIAL GC - LCC + 316

6. MATERIAL (SEAT)

 G - RTFE
 V - PEEK
 X - SPECIAL

 B - NYLON
 J - DELRIN

 E - DEVLON
 M - METAL

7. MATERIAL (O-RING SEAL)

 1 - HNBR
 4 - EPDM
 7 - GRAPHITE

 2 - VITON -B
 5 - AFLAS
 X - SPECIAL

 3 - VITON-GLT
 6 - PTFE

8. OPERATOR

L - HANDWHEEL OPERATOR GO - WORM GEAR OPERATOR B - BARE STEM

9. SPECIAL REQUIREMENTS

EB - EXTENDED BONNET S - SUPPLY COMPLETE INFORMATION

UNIBODY FLOATING BALL VALVE — Model A150/A300



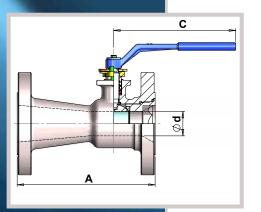
Construction

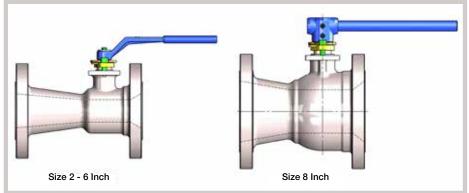
Unibody, reduced bore, free floating ball, fire-safe certified to API-607, blow-out proof stem, cavity relieving seats, anti-static device, designed and tested according to ASME B16.34, BS5351 and API-6D.

Dimension

Face to Face	ASME B16.10 Short Pattern			
End Flange	ASME B16.5			
Rating	ASME Class 150-300			

^{**}NACE MR-01-75 Certified**





Standard Materials

Fig. No.	A150-1-BC-G1-L, A300-1-BC-G1-L	A150-1-LC-G1-L, A300-1-LC-G1-L
Body/Retainer	A216 WCB	A351 CF8M
Ball/Stem	316SS	316SS
Seats	RTFE	RTFE
O-Rings	HNBR	HNBR

Class 150

DIMENSIONS IN INCHES							
VALVE SIZE	2" 50mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm		
Bore Size (d)	1.50	2.50	3.00	4.00	6.00		
Face to Face (A)	7.00	8.00	9.00	10.50	11.50		
Length of Lever (C)	9.84	9.84	13.78	18.11	-		
Approx. Weight (lbs.)	16	28	54	84	160		

Class 300

DIMENSIONS IN INCHES								
VALVE SIZE	2" 3" 4" 6" 50mm 80mm 100mm 150mm 2							
Bore Size (d)	1.50	2.00	3.00	4.00	6.00			
Face to Face (A)	8.50	11.15	12.00	15.88	16.50			
Length of Lever (C)	9.84	9.84	13.78	18.11	-			
Approx. Weight (lbs.)	24	50	85	132	200			

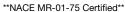
SPLIT BODY FLOATING BALL VALVE — Model B150/B300

Construction

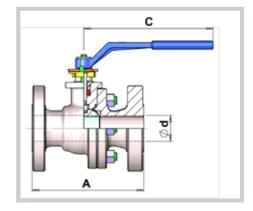
Split body, full bore, free floating ball, fire-safe certified to API-607, blow-out proof stem, cavity relieving seats, anti-static device, designed and tested according to ASME B16.34, BS5351 and API-6D.

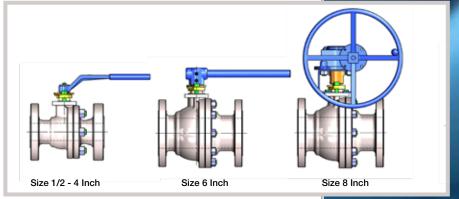
Dimension

Face to Face	ASME B16.10 Long Pattern			
End Flange	ASME B16.5			
Rating	ASME Class 150-300			









Standard Materials

Fig. No.	B150-1-BC-G1-L, B300-1-BC-G1-L	B150-1-LC-G1-L, B300-1-LC-G1-L
Body/Retainer	A216 WCB	A351 CF8M
Ball/Stem	316SS	316SS
Seats	RTFE	RTFE
O-Rings	HNBR	HNBR

Class 150

	DIMENSIONS IN INCHES									
VALVE SIZE	1/2" 15mm	3/4" 20mm	1" 25mm	1-1/2" 40mm	2" 50mm	2-1/2" 65mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm
Bore Size (d)	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	6.00	8.00
Face to Face (A)	4.25	4.625	5.00	6.50	7.00	7.50	8.00	9.00	15.50	18.00
Length of Lever (C)	5.91	5.91	5.91	9.84	9.84	9.84	13.78	18.11	29.53	-
Wheel Diameter (F)	-	-	-	-	-	-	-	-	-	23.62
Approx. Weight (lbs.)	5	7	10	20	26	35	56	80	172	378

Class 300

	DIMENSIONS IN INCHES								
VALVE SIZE	1/2" 15mm	3/4" 20mm	1" 25mm	1-1/2" 40mm	2" 50mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm
Bore Size (d)	0.50	0.75	1.00	1.50	2.00	3.00	4.00	6.00	8.00
Face to Face (A)	5.50	6.00	6.50	7.50	8.50	11.125	12.00	15.875	19.75
Length of Lever (C)	5.91	5.91	5.91	9.84	9.84	13.78	18.11	29.53	-
Wheel Diameter (F)	-	-	-	-	-	-	-	-	23.62
Approx. Weight (lbs.)	9	11	15	28	38	75	110	230	481

SPLIT BODY FLOATING BALL VALVE — C150/C300



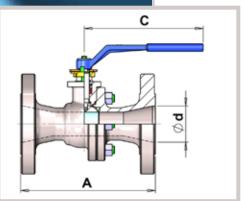
Construction

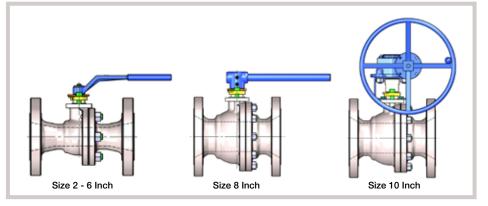
Split body, reduced bore, free floating ball, fire-safe certified to API-607, blow-out proof stem, cavity relieving seats, anti-static device, designed and tested according to ASME B16.34, BS5351 and API-6D.

Dimension

Face to Face	ASME B16.10 Short Pattern			
End Flange	ASME B16.5			
Rating	ASME Class 150-300			

^{**}NACE MR-01-75 Certified**





Standard Materials

Fig. No.	C150-1-BC-G1-L, C300-1-BC-G1-L	C150-1-LC-G1-L, C300-1-LC-G1-L
Body/Cap	A216 WCB	A351 CF8M
Ball/Stem	316SS	316SS
Seats	RTFE	RTFE
O-Rings	HNBR	HNBR

Class 150

DIMENSIONS IN INCHES										
VALVE SIZE	2" 50mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm	10" 250mm				
Bore Size (d)	1.50	2.00	3.00	4.00	6.00	8.00				
Face to Face (A)	7.00	8.00	9.00	10.50	11.50	13.00				
Length of Lever (C)	9.84	9.84	13.80	18.10	29.50	-				
Wheel Diameter (F)	-	-	-	-	-	23.62				
Approx. Weight (lbs.)	21	48	69	124	189	446				

Class 300

DIMENSIONS IN INCHES										
VALVE SIZE	2" 50mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm	10" 250mm				
Bore Size (d)	1.50	2.00	3.00	4.00	6.00	8.00				
Face to Face (A)	8.50	11.125	12.00	15.875	16.50	18.00				
Length of Lever (C)	9.84	9.84	13.80	18.10	29.50	-				
Wheel Diameter (F)	-	-	-	-	-	23.62				
Approx. Weight (lbs.)	30	58	97	208	370	581				

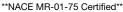
SPLIT BODY FLOATING BALL VALVE - Model B600/C600

Construction

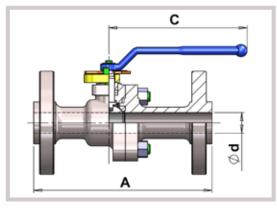
Split body, full bore or reduced bore, free floating ball, fire-safe certified to API-607, blow-out proof stem, cavity relieving seats, anti-static device, designed and tested according to ASME B16.34, BS5351 and API-6D.

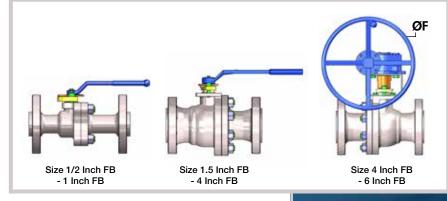
Dimension

Face to Face	ASME B16.10 Long Pattern
End Flange	ASME B16.5
Rating	ASME Class 600









Standard Materials

Fig. No.	B600-1-BC-J1-L, C600-1-BC-J1-L	B600-1-LC-J1-L, C600-1-LC-J1-L
Body/Cap	A216 WCB	A351 CF8M
Ball/Stem	316SS	316SS
Seats	DELRIN	DELRIN
O-Rings	HNBR	HNBR

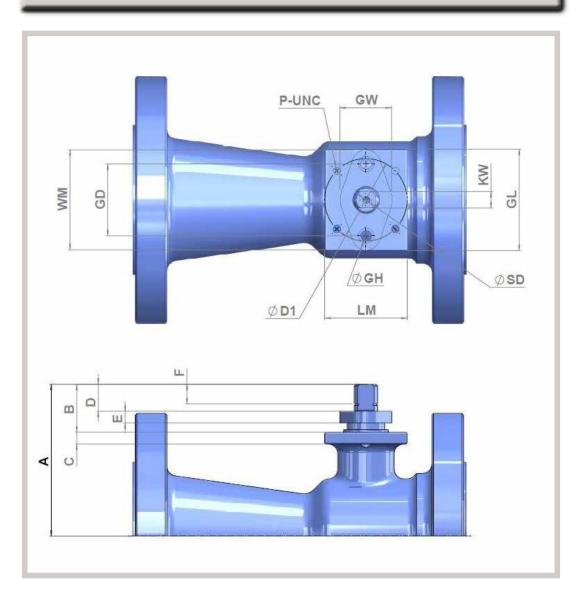
Class 600 - Full Bore

	DIMENSIONS IN INCHES								
VALVE SI	2" 50mm	3" 80mm	4" 100mm						
Bore Size (d)		0.50	0.75	1.00	1.50	2.00	3.00	4.00	
E . E . (A)	RF	6.50	7.50	8.50	9.50	11.50	14.00	17.00	
Face to Face (A)	RTJ	6.50	7.50	8.50	9.50	11.62	14.12	17.12	
Length of Lever (C)		5.90	5.90	5.90	17.13	17.13	21.65	-	
Wheel Diameter (F)		-	-	-	-	-	-	18.11	
Approx. Weight (lbs.)		10	12	16	31	44	104	183	

Class 600 - Reduced Bore

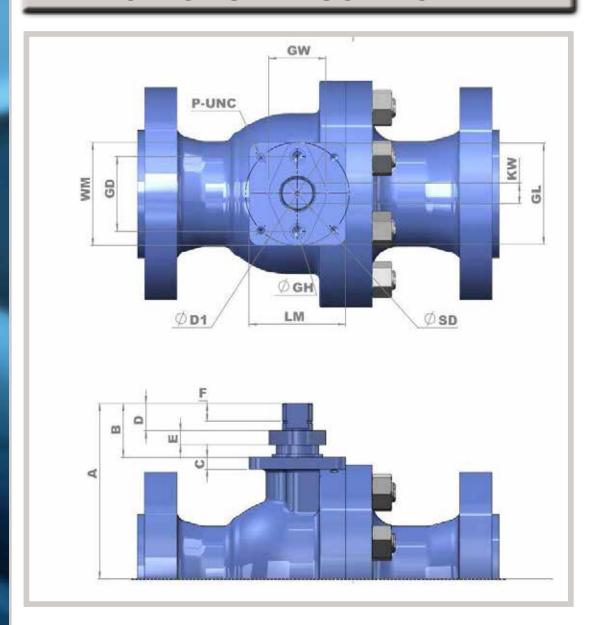
DIMENSIONS IN INCHES									
VALVE SIZ	4" 100mm	6" 150mm							
Bore Size (d)		1.50	2.00	3.00	4.00				
E . E . (A)	RF	11.50	14.00	17.00	22.00				
Face to Face (A)	RTJ	11.62	14.12	17.12	22.11				
Length of Lever (C)		17.13	17.13	21.65	-				
Wheel Diameter (F)		-	-	-	18.11				
Approx. Weight (lbs.)		42	81	131	271				

TOP WORKS DIMENSION - MODEL A



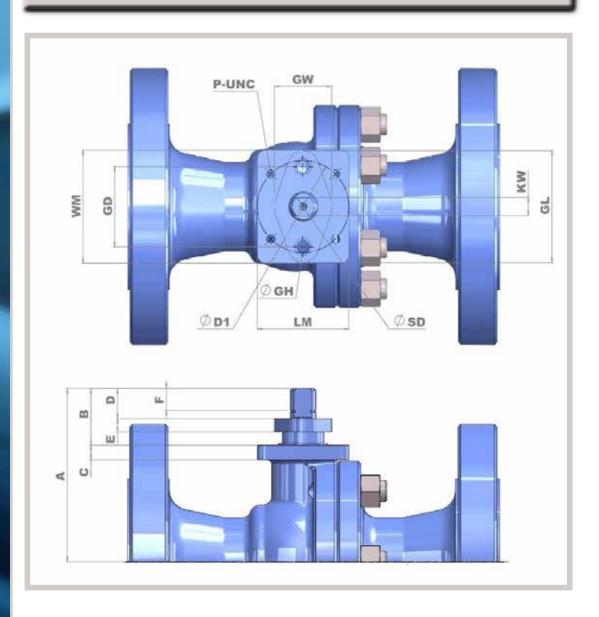
	TOP WORKS DIMENSION FOR MODEL A - INCH																	
Size	CLASS	Α	В	С	D	E	F	WM	GD	GW	P-UNC	KW	GL	LM	ØSD	ØGН	ØD1	MSS SP-101 TYPE
2" x 1.5"	150	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.4	2.8	0.8	0.7	2.8	FA07
[DN 50 X DN40]	300	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.4	2.8	0.8	0.7	2.8	FA07
3" x 2"	150	4.7	1.6	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.4	2.8	0.8	0.7	2.8	FA07
[DN 80 X DN40]	300	4.7	1.6	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.4	2.8	0.8	0.7	2.8	FA07
4" x 3"	150	6.6	2.1	0.6	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	4.0	3.7	1.2	0.7	4.0	FA10
[DN 100 X DN 80]	300	6.6	2.1	0.6	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	4.0	3.7	1.2	0.7	4.0	FA10
6" x 4"	150	7.2	2.1	0.6	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	4.0	3.7	1.2	0.7	4.0	FA10
[DN 150 X DN 100]	300	7.2	2.1	0.6	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	4.0	3.7	1.2	0.7	4.0	FA10
					TC	P WO	RKS D	IMENS	ION F	OR MC	DEL A	- MM						
Size	CLASS	Α	В	С	D	E	F	WM	GD	GW	P-UNC	кw	GL	LM	ØSD	ØGН	ØD1	MSS SP-101 TYPE
2" x 1.5"	150	103.5	39.0	10.5	20.4	10.0	14.8	86.0	61.0	44.0	4-5/16	14.0	86.0	70.0	19.8	17.0	70	FA07
[DN 50 X DN40]	300	103.5	39.0	10.5	20.4	10.0	14.8	86.0	61.0	44.0	4-5/16	14.0	86.0	70.0	19.8	17.0	70	FA07
3" x 2"	150	120.5	41.0	10.5	22.4	10.0	16.5	86.0	61.0	44.0	4-5/16	14.0	86.0	70.0	19.8	17.0	70	FA07
[DN 50 X DN40]	300	120.5	41.0	10.5	22.4	10.0	16.5	86.0	61.0	44.0	4-5/16	14.0	86.0	70.0	19.8	17.0	70	FA07
4" x 3"	150	168.0	53.0	12.0	27.1	14.0	18.5	102.0	74.0	56.0	4-3/8	20.0	102.0	95.0	29.8	19.0	102	FA10
[DN 100 X DN 80]	300	168.0	53.0	12.0	27.1	14.0	18.5	102.0	74.0	56.0	4-3/8	20.0	102.0	95.0	29.8	19.0	102	FA10
6" x 4"	150	183.0	53.0	12.0	27.9	14.0	18.5	102.0	74.0	56.0	4-3/8	20.0	102.0	95.0	29.8	19.0	102	FA10
[DN 150 X DN 100]	300	183.0	53.0	12.0	27.9	14.0	18.5	102.0	74.0	56.0	4-3/8	20.0	102.0	95.0	29.8	19.0	102	FA10

TOP WORKS DIMENSION - MODEL B



					TO	D WAE	K C DI	MENC	ONEC	P MA	DEL B -	INCH						
21	01.400												-			~au	~~.	MSS SP-101
Size	CLASS	Α	В	С	D	E	F	WM	GD	GW	P-UNC	KW	GL	LM	ØSD	ØGH	ØD1	TYPE
1/2"	150	2.3	0.8	0.3	0.4	0.2	0.3	2.2	1.8	1.7	4-1/4	0.3	2.4	1.7	0.5	0.4	1.7	FA04
[DN 15]	300	2.3	0.8	0.3	0.4	0.2	0.3	2.3	1.8	1.7	4-1/4	0.3	2.4	1.4	0.5	0.4	1.7	FA04
	600 150	2.3	0.8	0.4	0.4	0.2	0.2	2.3	1.8	1.7	4-1/4 4-1/4	0.3	2.4	1.4	0.5	0.4	1.4	FA03
3/4"	300	2.4	0.9	0.3	0.5	0.2	0.2	2.3	1.8	1.7	4-1/4	0.3	2.4	1.4	0.5	0.4	1.4	FA03
[DN 20]	600	2.3	0.8	0.3	0.4	0.2	0.2	2.3	1.8	1.7	4-1/4	0.3	2.4	1.4	0.5	0.4	1.4	FA03
	150	2.7	0.9	0.4	0.4	0.2	0.2	2.5	2.0	1.7	4-1/4	0.3	2.7	1.6	0.5	0.5	1.7	FA04
1"	300	2.7	0.9	0.4	0.4	0.2	0.2	2.5	2.0	1.7	4-1/4	0.3	2.7	1.6	0.5	0.5	1.7	FA04
[DN 25]	600	2.7	0.9	0.4	0.5	0.2	0.2	2.5	2.0	1.7	4-1/4	0.3	2.7	1.6	0.5	0.5	1.7	FA04
	150	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
1-1/2" [DN 40]	300	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
[DN 40]	600	4.1	1.5	0.5	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
	150	8.1	1.5	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
2" [DN 50]	300	5.0	1.5	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
[Silver]	600	4.9	1.5	0.5	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
	150	5.6	1.6	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.5	3.3	2.8	0.8	0.6	2.8	FA07
2-1/2" [DN 65]	300	5.3	1.6	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.5	3.3	2.8	0.8	0.6	2.8	FA07
	600	6.1	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
3"	150	6.6	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
[DN 80]	300	6.6	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
	600	6.8	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
4"	150	7.4	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
[DN 100]	300	7.4	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
	600	9.0	3.0	0.6	1.6	0.7	1.2	5.2 5.2	3.9	3.1	4-1/2 4-1/2	1.2	5.2 5.2	4.5	1.6	0.9	4.9	FA12 FA12
6" [DN 150]	150 300	10.5	3.0	0.7	1.7	0.7	1.2	5.2	3.9	3.1	4-1/2	1.2	5.2	4.5 4.5	1.6 1.6	0.9	4.9 4.9	FA12 FA12
-	150	12.6	3.1	0.7	1.7	0.7	1.2	5.9	4.4	3.3	4-1/2	1.4	5.7	5.3	2.0	0.9	5.5	FA14
8" [DN 200]	.00	12.0	0	0		0.0		0.0		0.0	. 0, 0			0.0		0.0	-	17.11
[514 200]	300	12.6	3.1	0.7	1.9	0.9	1.2	5.9	4.4	3.3	4-5/8	1.4	5.7	5.3	2.0	0.9	5.5	FA14
[514 200]	300	12.6	3.1	0.7							4-5/8 DEL B		5.7	5.3	2.0	0.9	5.5	FA14
Size	300	12.6	3.1 B	0.7 C									5.7 GL	5.3 LM	2.0 ØSD	0.9 ØGH	5.5 ØD1	MSS SP-101
	CLASS	A	В	С	T C	P WO	RKS D	IMENS WM	GD GD	OR MC	DEL B	- MM ĸw	GL	LM	ØSD	ØGН	ØD1	MSS SP-101 TYPE
Size	CLASS 150	A 58.0	B 21.0	c	D 11.1	P WO	RKS D F 7.0	WM 55.0	GD 46.5	OR MC GW 42.0	P-UNC 4-1/4	- MM KW 8.0	GL 60.0	LM 42.0	ØSD 12	ØGH 10.0	ØD1	MSS SP-101 TYPE FA04
Size	CLASS	A 58.0 59.5	B 21.0 21.5	c 8.0 8.0	D 11.1	P WO	F 7.0 7.0	WM 55.0 58.0	GD 46.5 46.5	GW 42.0 42.0	DEL B	- MM ĸw	GL 60.0 60.0	LM 42.0 36.0	ØSD	ØGН	ØD1 42 42	MSS SP-101 TYPE
Size	CLASS 150 300	A 58.0	B 21.0	c	D 11.1	E 6.0 6.0	RKS D F 7.0	WM 55.0	GD 46.5	OR MC GW 42.0	P-UNC 4-1/4 4-1/4	- MM KW 8.0 8.0	GL 60.0	LM 42.0	ØSD 12 12	ØGH 10.0 10.0	ØD1	MSS SP-101 TYPE FA04 FA04
Size 1/2" [DN 15]	CLASS 150 300 600	A 58.0 59.5 59.5	B 21.0 21.5 21.5	8.0 8.0 9.0	TC D 11.1 11.1 11.1	E 6.0 6.0 6.0	F 7.0 7.0 5.9	WM 55.0 58.0 58.0	GD 46.5 46.5 46.5	GW 42.0 42.0 42.0	P-UNC 4-1/4 4-1/4 4-1/4	- MM KW 8.0 8.0 8.0	GL 60.0 60.0	LM 42.0 36.0 36.0	ØSD 12 12 12 12	ØGH 10.0 10.0 10.0	ØD1 42 42 36	MSS SP-101 TYPE FA04 FA04 FA03
Size 1/2" [DN 15]	CLASS 150 300 600 150	A 58.0 59.5 59.5 60.0	B 21.0 21.5 21.5 22.0	8.0 8.0 9.0 8.0	TC D 11.1 11.1 11.1 11.9	6.0 6.0 6.0 6.0	7.0 7.0 5.9 6.0	WM 55.0 58.0 58.0 58.0	46.5 46.5 46.5 46.5	GW 42.0 42.0 42.0 42.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4	- MM KW 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0	LM 42.0 36.0 36.0 36.0	ØSD 12 12 12 12	ØGH 10.0 10.0 10.0 10.0	ØD1 42 42 36 36	MSS SP-101 TYPE FA04 FA04 FA03 FA03
Size 1/2" [DN 15]	CLASS 150 300 600 150 300	A 58.0 59.5 59.5 60.0 59.3	B 21.0 21.5 21.5 22.0 21.5	8.0 8.0 9.0 8.0	TC D 11.1 11.1 11.1 11.9 11.1	6.0 6.0 6.0 6.0	F 7.0 7.0 5.9 6.0 6.0	55.0 58.0 58.0 58.0 58.0	46.5 46.5 46.5 46.5 46.5	GW 42.0 42.0 42.0 42.0 42.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4	- MM KW 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0 60.0	LM 42.0 36.0 36.0 36.0 36.0	ØSD 12 12 12 12 12 12	ØGH 10.0 10.0 10.0 10.0 10.0	ØD1 42 42 36 36 36	MSS SP-101 TYPE FA04 FA04 FA03 FA03
Size 1/2" [DN 15] 3/4" [DN 20]	CLASS 150 300 600 150 300 600	A 58.0 59.5 59.5 60.0 59.3 59.5	B 21.0 21.5 21.5 22.0 21.5 21.5	8.0 8.0 9.0 8.0 9.0	TC D 11.1 11.1 11.1 11.9 11.1	E 6.0 6.0 6.0 6.0 6.0	7.0 7.0 5.9 6.0 6.0	55.0 58.0 58.0 58.0 58.0	GD 46.5 46.5 46.5 46.5 46.5 46.5	GW 42.0 42.0 42.0 42.0 42.0 42.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4	- MM KW 8.0 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0 60.0 60.0	LM 42.0 36.0 36.0 36.0 36.0	ØSD 12 12 12 12 12 12	ØGH 10.0 10.0 10.0 10.0 10.0 9.5	ØD1 42 42 36 36 36 36	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03
Size 1/2" [DN 15] 3/4" [DN 20]	CLASS 150 300 600 150 300 600 150 300 600 150	8.0 59.5 59.5 60.0 59.3 59.5 69.5	B 21.0 21.5 21.5 22.0 21.5 21.5 23.5	8.0 8.0 9.0 8.0 8.0 9.0	TC D 11.1 11.1 11.1 11.9 11.1 11.1 11.1	E 6.0 6.0 6.0 6.0 6.0 6.0	F 7.0 7.0 5.9 6.0 6.0 5.9 5.9	55.0 58.0 58.0 58.0 58.0 58.0 64.0	46.5 46.5 46.5 46.5 46.5 46.5	GW 42.0 42.0 42.0 42.0 42.0 42.0 42.0 43.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4	- MM	GL 60.0 60.0 60.0 60.0 60.0 60.0 68.0	LM 42.0 36.0 36.0 36.0 36.0 36.0 40.0	### 05D 12 12 12 12 12 12 12 12 12	ØGH 10.0 10.0 10.0 10.0 10.0 12.0	ØD1 42 42 36 36 36 36 42	MSS SP-101 TYPE FA04 FA03 FA03 FA03 FA03 FA03 FA04
Size 1/2" [DN 15] 3/4" [DN 20]	CLASS 150 300 600 150 300 600 150 300 600	58.0 59.5 59.5 60.0 59.3 59.5 69.5	B 21.0 21.5 21.5 22.0 21.5 21.5 23.5	8.0 8.0 9.0 8.0 9.0 9.0 9.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0	7.0 7.0 7.0 5.9 6.0 6.0 5.9 5.9	55.0 58.0 58.0 58.0 58.0 58.0 64.0	46.5 46.5 46.5 46.5 46.5 46.5 50.0	9	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4	8.0 8.0 8.0 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0 60.0 60.0 60.0 68.0	LM 42.0 36.0 36.0 36.0 40.0 40.0	ØSD 12 12 12 12 12 12 12 12 12	ØGH 10.0 10.0 10.0 10.0 10.0 10.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04
Size 1/2" [DN 15] 3/4" [DN 20]	CLASS 150 300 600 150 300 600 150 300 600 600	\$8.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5	B 21.0 21.5 21.5 22.0 21.5 21.5 23.5 23.5	8.0 8.0 9.0 8.0 8.0 9.0 9.0 9.0	11.1 11.1 11.1 11.9 11.1 11.1 11.1 11.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9	55.0 58.0 58.0 58.0 58.0 64.0 64.0	46.5 46.5 46.5 46.5 46.5 46.5 50.0	GW 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0 60.0 60.0 60.0 68.0 68.0	LM 42.0 36.0 36.0 36.0 40.0 40.0 40.0	### DESTRICT OF STREET OF	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 42 42	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 39.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 10.5 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3	55.0 58.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0	46.5 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0	GW 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 43.0 44.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	GL 60.0 60.0 60.0 60.0 60.0 60.0 68.0 68.0	LM 42.0 36.0 36.0 36.0 36.0 36.0 40.0 40.0 40.0 70.0	ØSD 12 12 12 12 12 12 12 12 12 1	### 000	ØD1 42 42 36 36 36 42 42 70 70 70	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 150	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 39.0 39.0 37.0 38.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3	55.0 58.0 58.0 58.0 58.0 64.0 64.0 64.0 86.0 86.0	46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0	9	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0	### ### ### ### #### #### ############	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 16.5 16.5 16.5	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 103.5 103.5	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 23.5 39.0 39.0 38.0 38.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 120.4 19.9 21.8 22.2	6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3	55.0 58.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0	46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0	9 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0	### ### ### ### #### #### ############	ØGH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 16.5 16.5 16.5 16.5	ØD1 42 42 36 36 36 36 42 42 70 70 70 70	MSS SP-101 TYPE FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA07 FA07 FA07 FA07 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5	B 21.0 21.5 22.0 21.5 22.5 23.5 23.5 39.0 39.0 38.0 38.5	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5 11.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3	6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3	55.0 58.0 58.0 58.0 58.0 64.0 64.0 64.0 86.0 86.0 86.0	46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0	9 42.0 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0	### ### ### ### ### ### #### #### #### ####	ØGH 10.0 10.0 10.0 10.0 10.0 9.5 12.0 12.0 16.5 16.5 16.5 16.5 16.5	ØD1 42 42 36 36 36 36 42 42 40 70 70 70 70 70	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300	A 58.0 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 206.0 127.0 124.5 143.5	B 21.0 21.5 22.0 21.5 22.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 11.0 13.5 10.5	11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.	6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3	WM 55.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 86.0 86.0 86.0	46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0	9	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 70.0	### ### ### ### ### #### #### ########	ØGH 10.0 10.0 10.0 10.0 9.5 12.0 12.0 16.5 16.5 16.5 16.5 16.5	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 70	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5	B 21.0 21.5 22.0 21.5 22.5 23.5 23.5 39.0 37.0 38.0 38.5 41.0 41.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5 11.0 13.5 10.5	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3 16.3	55.0 58.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 86.0 86.0	GD 46.5 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0	9 42.0 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 14.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 70.0 70.0	### ### ### ### ### #### #### #### #####	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 70 70	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5 135.5	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 39.0 37.0 38.0 38.5 41.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 11.0 13.5 10.5 10.5	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 16.3 17.7	### SECOND 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 61.0 61.0	9 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0 44	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 13.9 13.9 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0	### ### ### ### ### ### #### #### #### ####	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 70 102	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5 155.5 168.0	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5 11.0 13.5 10.5 12.0 12.0	11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.	6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7	### SEND SEND	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 61.0 74.0	98 MO 98 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0 44.0 56.0 56.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 13.9 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 85.0 85.0 85.0 85.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0	### ### ### ### ### ### ### ### ### ##	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 70 102 102	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5 155.5 168.0 168.0	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 13.5 10.5 12.0 12.0 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3 16.3 17.7 17.7	MENS WM 55.0 58.0 58.0 58.0 58.0 64.0 64.0 64.0 86.0 86.0 86.0 86.0 102.0 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 61.0 74.0	9 42.0 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0 56.0 56.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/18 4-5/18 4-3/8 4-3/8	8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 13.9 20.0 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 100.0 100.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0	### ### ### ### ### ### ### ### ### ##	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 102 102 102	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA07 FA07
1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5 155.5 168.0	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 13.5 10.5 12.0 12.0 12.0 12.0	11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.	6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7	MENS WM 55.0 58.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 86.0 102.0 102.0 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 61.0 74.0	98 MO 98 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0 44.0 56.0 56.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16	8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 13.9 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 100.0 100.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0	### ### ### ### ### ### ### ### ### ##	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 70 70 70 70 70 70 70 102 102	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA04 FA04 FA04 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 600 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 206.0 127.0 124.5 143.5 155.5 168.0 173.0	B 21.0 21.5 21.5 22.0 21.5 23.5 23.5 23.5 23.5 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 13.5 10.5 12.0 12.0 12.0	11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3 16.3 17.7 17.7	MENS WM 55.0 58.0 58.0 58.0 58.0 64.0 64.0 64.0 86.0 86.0 86.0 86.0 102.0 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0	9 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 44.0 56.0 56.0 56.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/18 4-3/8 4-3/8	8.0 8.0 8.0 8.0 8.0 8.0 8.0 14.0 14.0 14.0 14.0 14.0 13.9 20.0 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 100.0 100.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0	### ### ### ### ### ### ### ### ### ##	9GH 10.0 10.0 10.0 10.0 10.0 12.0 12.0 12.0	ØD1 42 42 36 36 36 36 42 42 42 70 70 70 70 70 70 102 102 102	MSS SP-101 TYPE FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 124.5 143.5 135.5 155.5 168.0 168.0 173.0 188.0	B 21.0 21.5 22.0 21.5 22.5 23.5 23.5 39.0 39.0 37.0 38.0 41.0 41.0 53.0 53.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 10.5 12.0 13.5 10.5 12.0 12.0 12.0 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 120.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1 27.1 29.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7 17.7	WM 55.0 58.0 58.0 58.0 64.0 64.0 64.0 86.0 86.0 86.0 102.0 102.0 102.0 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0	9 A S S S S S S S S S S S S S S S S S S	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/18 4-3/8 4-3/8 4-3/8 4-3/8	- MM - KW - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 13.9 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 100.0 100.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0 95.0	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600	A 58.0 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 124.5 135.5 155.5 168.0 168.0 173.0 188.0	B 21.0 21.5 21.5 22.0 21.5 21.5 23.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0 53.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 10.5 12.0 13.5 10.5 12.0 12.0 12.0 12.0 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1 27.1 29.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7 17.7 17.7	WM 55.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 86.0 102.0 102.0 102.0 102.0 102.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0 74.0	9 A S S S S S S S S S S S S S S S S S S	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/18 4-3/8 4-3/8 4-3/8 4-3/8 4-3/8	- MM - KW - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 13.9 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 85.0 100.0 100.0 100.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0 95.0	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 600	A 58.0 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 127.0 124.5 143.5 155.5 168.0 173.0 188.0 229.0	B 21.0 21.5 22.0 21.5 22.5 23.5 23.5 23.5 39.0 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0 53.0 53.0 53.0 75.5	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1 27.1 29.1 41.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7 17.7 17.7 17.7 29.5	WM 55.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 102.0 102.0 102.0 102.0 133.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0 74.0	9 A S S S S S S S S S S S S S S S S S S	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16	- MM - KW - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 20.0 - 20.0 - 20.0 - 20.0 - 30.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 100.0 100.0 100.0 100.0 132.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0 95.0 91.0	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80] 4" [DN 100]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 127.0 124.5 143.5 155.5 168.0 173.0 188.0 188.0 229.0 267.0	B 21.0 21.5 22.0 21.5 22.0 21.5 23.5 23.5 23.5 39.0 37.0 38.0 38.5 41.0 41.0 53.0 53.0 53.0 53.0 53.0 53.0 53.0 53	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 12.0 9.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1 27.1 27.1 29.1 41.1 43.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7 17.7 17.7 17.7 29.5	WM 55.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 102.0 102.0 102.0 102.0 133.0 133.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0 74.0 74.0 100.0	9 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 56.0 56.0 56.0 56.0 78.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-5/16 4-3/8 4-3/8 4-3/8 4-3/8 4-1/2 4-1/2	- MM - KW - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 8.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 14.0 - 20.0 - 20.0 - 20.0 - 20.0 - 30.0 - 30.0 - 30.0	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 100.0 100.0 100.0 132.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0 95.0 91.0 114.0	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07
Size 1/2" [DN 15] 3/4" [DN 20] 1" [DN 25] 1-1/2" [DN 40] 2" [DN 50] 2-1/2" [DN 65] 3" [DN 80] 4" [DN 100]	CLASS 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600 150 300 600	A 58.0 59.5 59.5 60.0 59.3 59.5 69.5 69.5 103.5 103.5 103.5 127.0 124.5 143.5 155.5 168.0 173.0 188.0 188.0 229.0 266.5	B 21.0 21.5 22.0 21.5 22.0 21.5 23.5 23.5 23.5 39.0 37.0 38.0 38.5 41.0 53.0 53.0 53.0 53.0 53.0 75.5 75.0 75.5	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 10.5 11.0 13.5 10.5 12.0 13.5	TC D 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 20.4 20.4 19.9 21.8 22.2 22.3 23.2 22.4 27.1 27.1 27.1 27.1 29.1 41.1 43.1 49.1	E 6.0 6.0 6.0 6.0 6.0 6.0 6.0 10.0 10.0 10	RKS D F 7.0 7.0 5.9 6.0 6.0 5.9 5.9 5.9 14.3 14.3 16.3 16.3 16.3 17.7 17.7 17.7 17.7 17.7 29.5 29.5	WM 55.0 58.0 58.0 58.0 64.0 64.0 86.0 86.0 86.0 102.0 102.0 102.0 102.0 133.0 133.0 133.0	GD 46.5 46.5 46.5 46.5 46.5 50.0 50.0 61.0 61.0 61.0 61.0 74.0 74.0 74.0 74.0 74.0 100.0	9 42.0 42.0 42.0 42.0 42.0 42.0 43.0 43.0 44.0 44.0 44.0 44.0 56.0 56.0 56.0 56.0 78.0 78.0	P-UNC 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-1/4 4-5/16	- MM 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	GL 60.0 60.0 60.0 60.0 60.0 68.0 68.0 85.0 85.0 85.0 85.0 100.0 100.0 100.0 132.0 132.0	LM 42.0 36.0 36.0 36.0 36.0 40.0 40.0 70.0 70.0 70.0 70.0 70.0 95.0 95.0 95.0 91.0 114.0 114.0	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	MSS SP-101 TYPE FA04 FA04 FA03 FA03 FA03 FA03 FA04 FA04 FA04 FA07 FA07 FA07 FA07 FA07 FA07 FA07 FA07

TOP WORKS DIMENSION - MODEL C

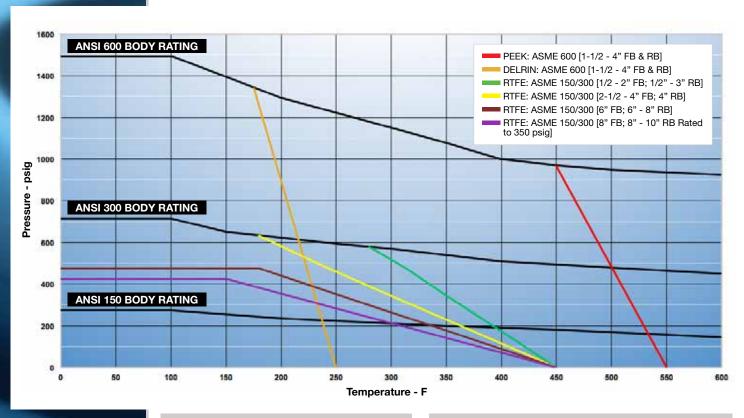


					ТО	P WOF	RKS DI	MENS	ON FC	R MO	DEL C -	INCH						
Size	CLASS	Α	В	С	D	E	F	WM	GD	GW	P-UNC	KW	GL	LM	ØSD	ØGН	ØD1	MSS SP-101 TYPE
	150	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
2" x 1.5" [DN 50 x DN 40]	300	4.1	1.5	0.4	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
	600	4.1	1.5	0.5	0.8	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
	150	4.8	1.5	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
3" x 2" [DN 80 x DN 50]	300	5.0	1.5	0.4	0.9	0.4	0.6	3.4	2.4	1.7	4-5/16	0.6	3.3	2.8	0.8	0.6	2.8	FA07
	600	4.9	1.5	0.6	0.9	0.4	0.6	3.7	2.4	1.7	4-5/16	0.6	3.3	3.0	0.8	0.6	2.8	FA07
	150	6.6	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
4" x 3" [DN 100 x DN 80]	300	6.6	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
	600	6.8	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
	150	7.4	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
6" x 4" [DN 150 x DN 100]	300	7.4	2.1	0.5	1.1	0.6	0.7	4.0	2.9	2.2	4-3/8	0.8	3.9	3.7	1.2	0.7	4.0	FA10
	600	9.0	3.0	0.6	1.6	0.7	1.2	5.2	3.9	3.1	4-1/2	1.2	5.2	4.5	1.6	0.9	4.9	FA12
8" x 6"	150	10.3	3.0	0.6	1.6	0.7	1.2	5.2	3.9	3.1	4-1/2	1.2	5.2	4.5	1.6	0.9	4.9	FA12
[DN 200 x DN 150]	300	10.3	3.0	0.6	1.7	0.7	1.2	5.2	3.9	3.1	4-1/2	1.2	5.2	4.5	1.6	0.9	4.9	FA12
10" x 8"	150	12.6	3.1	0.7	1.7	0.9	1.2	5.9	4.4	3.3	4-5/8	1.4	5.7	5.3	2.0	0.9	5.5	FA14
[DN 250 x DN 200]	300	12.6	3.1	0.7	1.9	0.9	1.2	5.9	4.4	3.3	4-5/8	1.4	5.7	5.3	2.0	0.9	5.5	FA14
					TC	P WO	RKS D	IMENS	ION F	OR MC	DEL C	- MM						
Size	CLASS	A	В	С	D	E	F	WM	GD	GW	P-UNC	кw	GL	LM	ØSD	ØGН	ØD1	MSS SP-101 TYPE
	150	103.5	39.0	10.5	20.4	10.0	14.3	86.0	61.0	44.0	4-5/16	14.0	85.0	70.0	19.8	16.5	70	FA07
2" x 1.5" [DN 50 x DN 40]	300	103.5	39.0	10.5	20.4	10.0	14.3	86.0	61.0	44.0	4-5/16	14.0	85.0	70.0	19.8	16.5	70	FA07
	600	103.5	37.0	12.0	19.9	10.0	14.3	86.0	61.0	44.0	4-5/16	14.0	85.0	70.0	19.8	16.0	70	FA07
	150	122.0	38.0	9.5	21.8	10.0	16.3	86.0	61.0	44.0	4-5/16	14.0	85.0	70.0	19.8	16.5	70	FA07
3" x 2" [DN 80 x DN 50]	300	128.0	39.0	11.0	22.8	10.0	16.3	86.0	61.0	44.0	4-5/16	14.0	85.0	70.0	19.8	16.5	70	FA07
	600	124.5	38.5	16.0	22.3	10.0	16.3	94.0	61.0	44.0	4-5/16	14.0	85.0	76.0	19.8	16.0	70	FA07
	150	168.0	53.0	12.0	27.1	14.0	17.7	102.0	74.0	56.0	4-3/8	20.0	100.0	95.0	29.8	19.0	102	FA10
4" x 3" [DN 100 x DN 80]	300	168.0	53.0	12.0	27.1	14.0	17.7	102.0	74.0	56.0	4-3/8	20.0	100.0	95.0	29.8	19.0	102	FA10
	600	173.0	53.0	12.0	27.1	14.0	17.7	102.0	74.0	56.0	4-3/8	20.0	100.0	95.0	29.8	18.0	102	FA10
	150	188.0	53.0	12.0	27.9	14.0	17.7	102.0	74.0	56.0	4-3/8	20.0	100.0	95.0	29.8	19.0	102	FA10
6" x 4" [DN 150 x DN 100]	300	188.0	53.0	12.0	27.9	14.0	17.7	102.0	74.0	56.0	4-3/8	20.0	100.0	95.0	29.8	19.0	102	FA10
	600	229.0	75.5	16.0	41.1	18.0	29.5	133.0	100.0	78.0	4-1/2	30.0	132.0	114.0	39.8	24.0	125	FA12
8" x 6"	150	262.0	75.5	16.0	41.1	18.0	29.5	133.0	100.0	78.0	4-1/2	30.0	132.0	114.0	39.8	24.0	125	FA12
[DN 200 x DN 150]	300	262.0	75.5	16.0	43.1	18.0	29.5	133.0	100.0	78.0	4-1/2	30.0	132.0	114.0	39.8	24.0	125	FA12
	150	319.0	79.0	18.0	42.6	22.0	30.3	150.0	113.0	85.0	4-5/8	36.0	145.0	134.0	49.8	24.0	140	FA14
10" x 8"	130	319.0	73.0	16.0	42.0	22.0	30.3	130.0	113.0	00.0	4-3/0	00.0	145.0	134.0	43.0	24.0	140	.,,,,

TECHNICAL CHARACTERISTICS

PRESSURE / TEMPERATURE CHART

The following chart indicates the pressure and temperature ratings for commonly used seat material used in ASME 150# – 600# GWC floating ball valves. Other materials are available upon request.



TORQUE VALUES [INCH-LBS]

		ANSI Class#	
BORE Size	150	300	600
(In.)		Pressure (PSI)	
	285 PSI	740 PSI	1480 PSI
1/2" FP	48	60	204
3/4" FP	60	84	324
1" FP	132	240	540
1-1/2" FP 2" RP	180	264	1140
2" FP 3" RP	240	492	1332
2-1/2" FP	372	852	-
3" FP 4" RP	624	1500	3144
4" FP 6" RP	1332	2916	6912
6" FP 8" RP	4944	11064	-
8" FP 10" RP	9996	25092	-

^{*} No Safety factor added in the above torque. GWC recommends Min. 25% (or) more to be considered based on application.

FLANGED FLOATING VALVE Cv VALUES

Cv is a number measured in gallons/minute, which is calculated from the flow of water through the valve with a 1 psi pressure drop across the valve length.

CIZE (Im.)		ANSI Class#	
SIZE (In.)	150	300	600
1/2" FP	20	20	20
3/4" FP	50	50	50
1" FP	95	95	95
1-1/2" FP 2" RP	240 133	240 133	240 133
2" FP 3" RP	460 245	460 245	460 245
2-1/2" FP	720	720	-
3" FP 4" RP	1150 590	1150 590	1150 590
4" FP 6" RP	2125 850	2125 850	2125 850
6" FP 8" RP	5450 2200	5450 2200	-
8" FP 10" RP	10225 3900	10225 3900	- -

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