

# One and Two-Piece Carbon Steel Flanged Ball Valves Illustrated Index

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## Flanged Ball Valves

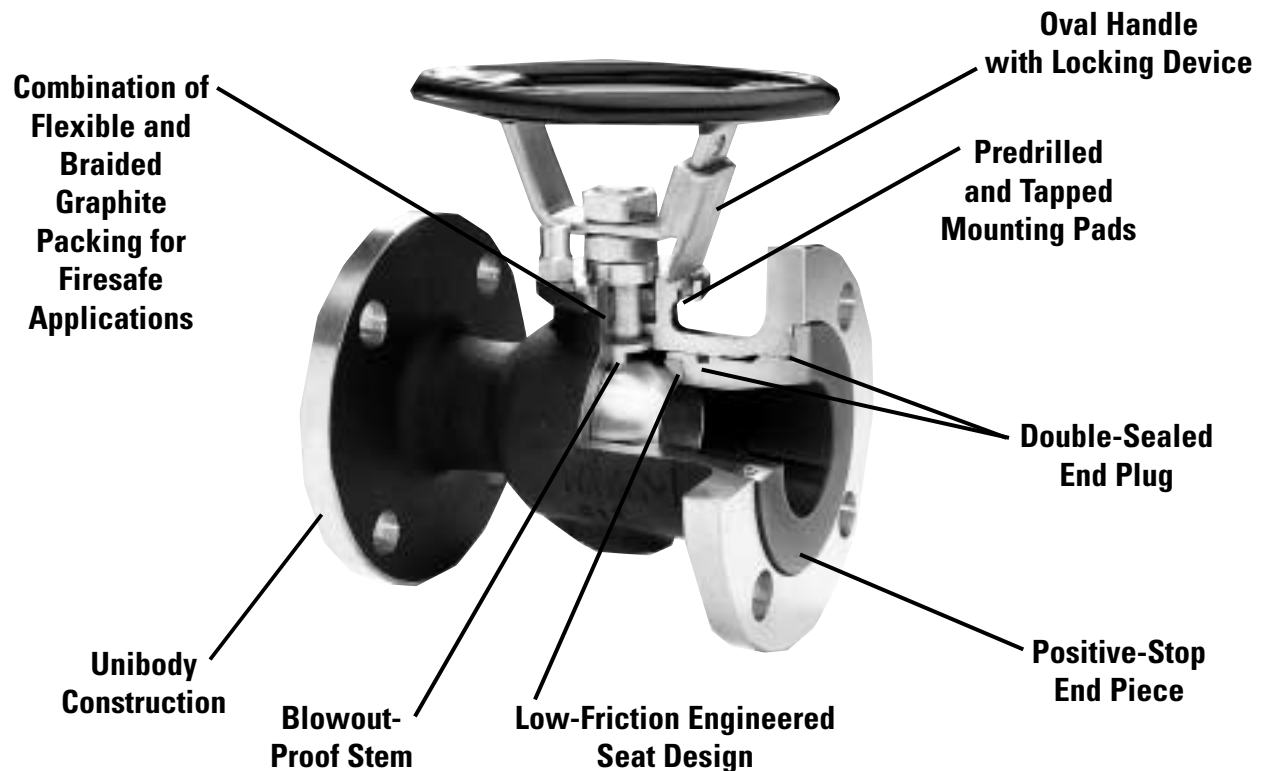
### The Positive Solution For All Your Flow Control Applications.

NIBCO flanged ball valves provide precision, performance and value for industrial flow control applications. The unibody and split-body valves are designed and manufactured to meet or exceed ANSI, MSS and API specifications. And both styles offer these outstanding features:

- A pressure-safe stem shoulder design that protects against failure under excess pressure.
- Tight, leakproof engineered seals and bi-directional operation.
- Low-friction engineered seat design for consistent and predictable low-torque operation.
- Pre-drilled and tapped mounting pads that allow universal mounting of actuators.
- Lock-out capability in either open or closed position for added safety.
- Available in a wide range of materials and sizes.

### Unibody Flanged Ball Valves

- A unibody design eliminates unnecessary joint faces where leakage may occur, and features a double-sealed end plug.
- Increased packing depth allows adequate V-ring packing to prevent leakage around the stem.
- Large-diameter stem provides extra protection from stresses that cause failure in smaller stems.



# Flanged Ball Valves

**The Positive Solution For All Your Flow Control Applications.**

## Split-Body Full-Bore Flanged Ball Valves

- Split-body design allows greater serviceability – disassembles easily for repair or replacement of internal components.
- Full-bore design provides exceptional flow control.
- Multiple V-ring packing, combined with live loading, maintains packing compression under high-cycle and severe service applications.

## Applicable Standards

NIBCO flanged ball valves conform to ASME/ANSI B16.34, ANSI B16.5, ANSI B16.10, MSS SP 72, API 598, API 607, API 608 and MSS SP 25. Complies to API 6D relating to materials, dimensions and testing when specified.

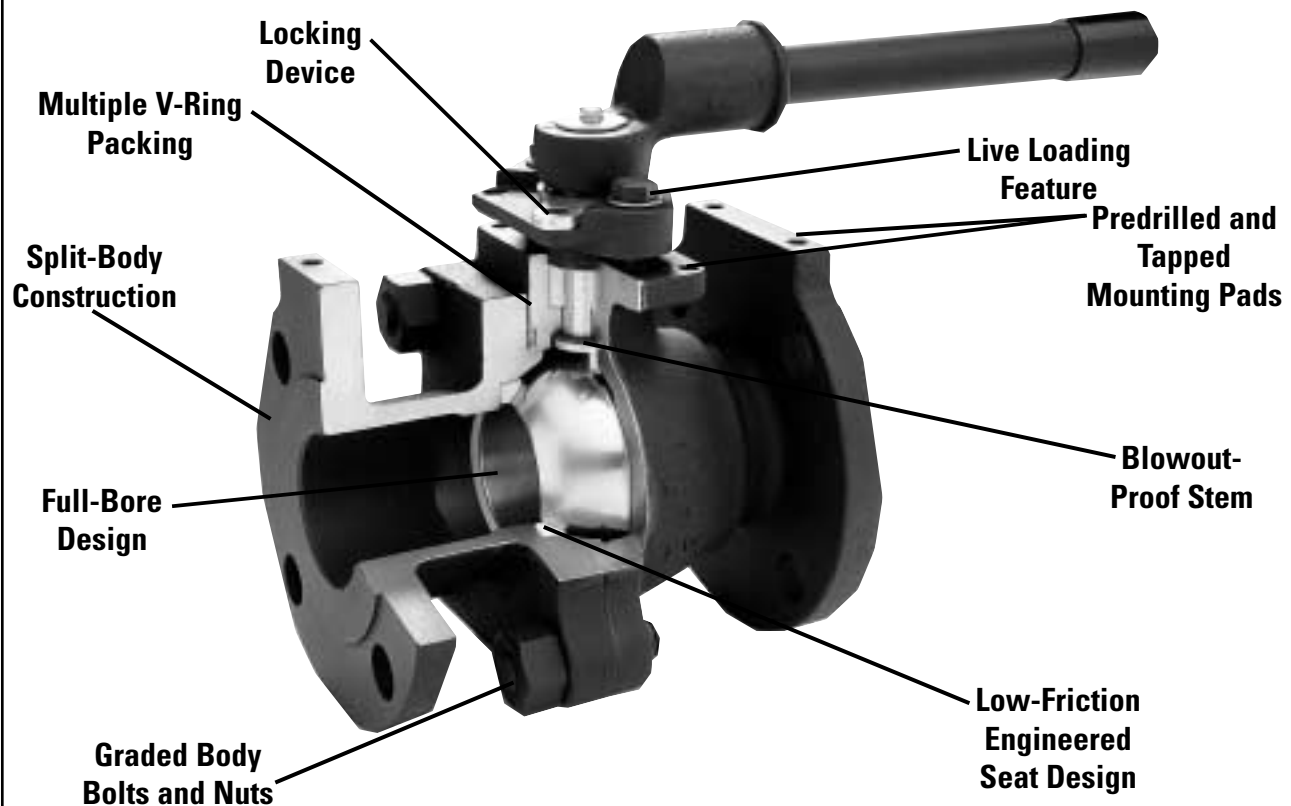
## Special Service Applications

**Fire Safe** – Secondary metal-to-metal seal acts as backup if primary seal is destroyed by fire. Valves ordered for compliance with API 607 will be provided with graphite packing and gaskets.

**Chlorine Service** – Valves can be provided to meet all specifications listed by the Chlorine Institute pamphlet No. 6, including the provision of a vented ball, a flow directional arrow, and are cleaned and bagged to prevent contamination.

**Oxygen Service** – Valves can be provided cleaned and bagged for oxygen or other special services.

**NACE** – For sour gas or corrosive service, valves provide standard conformance to NACE MR-01-75.



# Class 150 Carbon Steel Flanged Ball Valves

Unibody Design • Blowout-Proof Stem • CS Trim • Mounting Pad • Fire Safe • Vented Ball

**285 PSI/19.7 Bar Non-Shock Cold Working Pressure♦**

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175

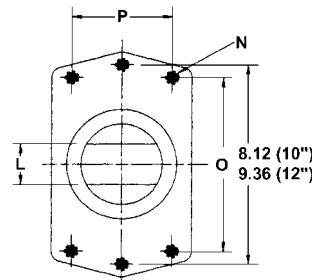


**F-510-CS-R-25-FS**

Carbon x Carbon  
Flanged

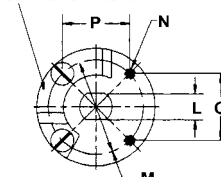
MATERIAL LIST	
PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Carbon Steel ASTM A 216 Type WCB
3. Stem	Carbon Steel ASTM A 108
4. Seat	Glass Filled Teflon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Stainless Steel 304 SS
7. Pack Gland Nut	Carbon Steel Plated
8. O-Ring	Fluorocarbon Encapsulated
9. Gasket	304 SS/Graphite Spiral Wound

† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.

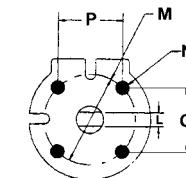


TOP FLANGE FOR  
10" & 12"

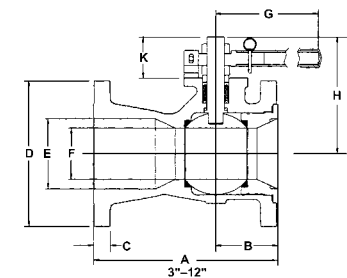
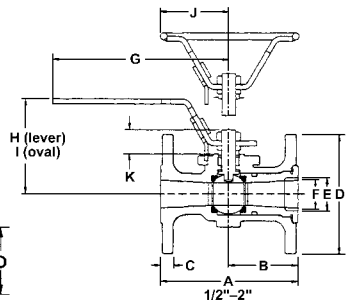
STOP PLATE  
REMOVEABLE  
FOR ACTUATION



TOP FLANGE FOR  
3" THRU 8"



TOP FLANGE FOR  
1/2" THRU 2"



## DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions													
	A	B	C	D	E	F	A	B	C	D	E	F		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	
1/2	15 4.25	108 2.13	54 .47	12 3.56	90 .50	13 .43	11	15 4.25	108 2.13	54 .47	12 3.56	90 .50	13 .43	11
3/4	20 4.63	118 2.31	50 .47	12 3.94	100 .75	19 .63	16	20 4.63	118 2.31	50 .47	12 3.94	100 .75	19 .63	16
1	25 5.00	127 2.50	54 .47	12 4.31	109 1.00	25 .81	21	25 5.00	127 2.50	54 .47	12 4.31	109 1.00	25 .81	21
1 1/2	40 6.50	165 3.25	83 .56	14 5.00	127 1.50	38 1.19	30	40 6.50	165 3.25	83 .56	14 5.00	127 1.50	38 1.19	30
2	50 7.00	178 3.00	76 .62	16 6.00	132 2.00	51 1.50	38	50 7.00	178 3.00	76 .62	16 6.00	132 2.00	51 1.50	38
3	80 8.00	203 4.00	102 .75	19 7.50	191 3.00	76 2.38	60	80 8.00	203 4.00	102 .75	19 7.50	191 3.00	76 2.38	60
4	100 9.00	229 4.25	108 .94	24 9.00	229 4.00	102 3.00	76	100 9.00	229 4.25	108 .94	24 9.00	229 4.00	102 3.00	76
6	150 10.50	267 5.25	133 1.00	25 11.00	279 6.00	152 4.38	111	150 10.50	267 5.25	133 1.00	25 11.00	279 6.00	152 4.38	111
8	200 11.50	297 5.50	140 1.13	29 13.50	343 8.00	203 5.68	144	200 11.50	297 5.50	140 1.13	29 13.50	343 8.00	203 5.68	144
10	250 13.00	330 6.50	165 1.19	30 16.00	406 10.00	254 7.50	190	250 13.00	330 6.50	165 1.19	30 16.00	406 10.00	254 7.50	190
12	300 14.00	356 7.38	187 1.25	32 19.00	483 12.00	305 9.50	241	300 14.00	356 7.38	187 1.25	32 19.00	483 12.00	305 9.50	241

Size	Dimensions											F-510-CS-R-25-FS	
	G	H	I	J	K	L	M	N	O	P	Lbs.	Kg.	
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.			
1/2	15 6.63	168 2.84	72 3.16	80 2.56	65 .59	15 .25	6 1.68	43 250-20	1.19	30 1.19	30 3.00	1.36	
3/4	20 6.63	168 3.20	81 3.58	91 2.56	65 .76	19 .25	6 1.68	43 250-20	1.19	30 1.19	30 5.00	2.27	
1	25 6.63	168 3.45	88 3.83	97 2.56	65 .93	24 .31	8 1.68	43 250-20	1.19	30 1.19	30 6.00	2.72	
1 1/2	40 9.13	232 4.75	121 5.25	133 3.31	84 1.22	31 .56	14 2.06	52 250-20	1.46	37 1.46	37 13.00	5.91	
2	50 9.13	242 4.88	124 5.38	137 3.31	84 1.36	35 .56	14 2.06	52 250-20	1.46	37 1.46	37 17.00	7.73	
3	80 16.60	422 6.16	156 — — — —	1.97	50 .68	17 3.00	76 .375-16	2.12	54 2.12	54 42.00	19.09		
4	100 16.60	422 7.22	183 — — — —	2.16	55 .68	17 3.00	76 .375-16	2.12	54 2.12	54 64.00	29.09		
6	150 32.80	833 10.09	256 — — — —	3.59	91 1.13	29 4.50	114 .500-13	3.18	81 3.18	81 126.00	57.27		
8	200 — — — —	— — — —	3.43	87 1.13	29 4.50	114 .500-13	3.18	81 3.18	81 198.00	90.00			
10	250 — — — —	— — — —	5.56	141 1.75	44 — — .625-11	7.24	184 3.66	93 296.00	134.55				
12	300 — — — —	— — — —	5.63	143 2.00	31 — — .625-11	8.10	205 4.68	119 477.00	216.82				

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 150 Carbon Steel Flanged Ball Valves

Unibody Design • Blowout-Proof Stem • 316 SS Trim • Mounting Pad • Fire Safe • Vented Ball

**285 PSI/19.7 Bar Non-Shock Cold Working Pressure♦**

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175



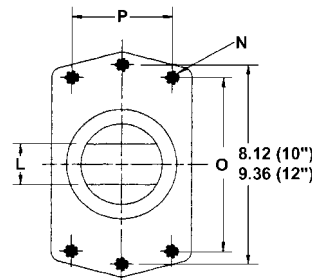
**F-510-CS-R-66-FS**  
Carbon x Stainless  
Flanged

MATERIAL LIST	
PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Stainless Steel ASTM A 351 Type CF8M
3. Stem	Stainless Steel ASTM A 276 Type 316
4. Seat	Glass Filled Teflon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Stainless Steel 304 SS
7. Pack Gland Nut	Carbon Steel Plated
8. O-Ring	Fluorocarbon Encapsulated
9. Gasket	304 SS/Graphite Spiral Wound

† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.

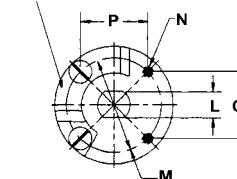
## DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions												
	A		B		C		D		E		F		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.		
1/2	15	4.25	108	2.13	54	.47	12	3.56	90	.50	13	.43	11
3/4	20	4.63	118	2.31	50	.47	12	3.94	100	.75	19	.63	16
1	25	5.00	127	2.50	54	.47	12	4.31	109	1.00	25	.81	21
1 1/2	40	6.50	165	3.25	83	.56	14	5.00	127	1.50	38	1.19	30
2	50	7.00	178	3.00	76	.62	16	6.00	132	2.00	51	1.50	38
3	80	8.00	203	4.00	102	.75	19	7.50	191	3.00	76	2.38	60
4	100	9.00	229	4.25	108	.94	24	9.00	229	4.00	102	3.00	76
6	150	10.50	267	5.25	133	1.00	25	11.00	279	6.00	152	4.38	111
8	200	11.50	297	5.50	140	1.13	29	13.50	343	8.00	203	5.68	144
10	250	13.00	330	6.50	165	1.19	30	16.00	406	10.00	254	7.50	190
12	300	14.00	356	7.38	187	1.25	32	19.00	483	12.00	305	9.50	241

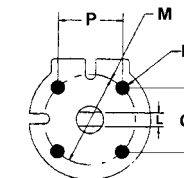


TOP FLANGE FOR  
10" & 12"

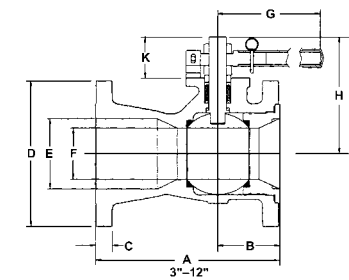
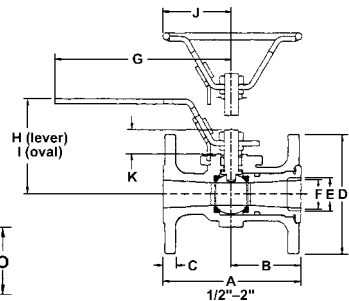
STOP PLATE  
REMOVEABLE  
FOR ACTUATION



TOP FLANGE FOR  
3" THRU 8"



TOP FLANGE FOR  
1/2" THRU 2"



Size	Dimensions											F-510-CS-R-66-FS										
	G	H	I	J	K	L	M	N	O	P	Lbs.	Kg.										
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.												
1/2	15	6.63	168	2.84	72	3.16	80	2.56	65	.59	15	.25	6	1.68	43	.250-20	1.19	30	1.19	30	3.00	1.36
3/4	20	6.63	168	3.20	81	3.58	91	2.56	65	.76	19	.25	6	1.68	43	.250-20	1.19	30	1.19	30	5.00	2.27
1	25	6.63	168	3.45	88	3.83	97	2.56	65	.93	24	.31	8	1.68	43	.250-20	1.19	30	1.19	30	6.00	2.72
1 1/2	40	9.13	232	4.75	121	5.25	133	3.31	84	1.22	31	.56	14	2.06	52	.250-20	1.46	37	1.46	37	13.00	5.91
2	50	9.13	232	4.88	124	5.38	137	3.31	84	1.36	35	.56	14	2.06	52	.250-20	1.46	37	1.46	37	17.00	7.73
3	80	16.60	422	6.16	156	—	—	—	—	1.97	50	.68	17	3.00	76	.375-16	2.12	54	2.12	54	42.00	19.09
4	100	16.60	422	7.22	183	—	—	—	—	2.16	55	.68	17	3.00	76	.375-16	2.12	54	2.12	54	64.00	29.09
6	150	32.80	833	10.09	256	—	—	—	—	3.59	91	1.13	29	4.50	114	.500-13	3.18	81	3.18	81	126.00	57.27
8	200	—	—	—	—	—	—	—	—	3.43	87	1.13	29	4.50	114	.500-13	3.18	81	3.18	81	198.00	90.00
10	250	—	—	—	—	—	—	—	—	5.56	141	1.75	44	—	—	.625-11	7.24	184	3.66	93	296.00	134.55
12	300	—	—	—	—	—	—	—	—	5.63	143	2.00	31	—	—	.625-11	8.10	205	4.68	119	477.00	216.82

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 300 Carbon Steel Flanged Ball Valves

Unibody Design • Blowout-Proof Stem • 316 SS Trim • Mounting Pad • Fire Safe • Vented Ball

**740 PSI/51 Bar Non-Shock Cold Working Pressure♦**

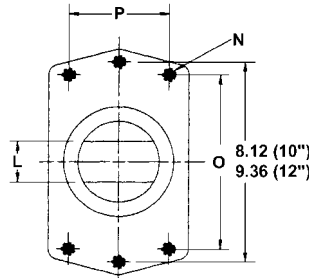
CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175



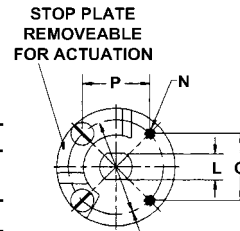
**F-530-CS-R-66-FS**  
Carbon x Stainless  
Flanged

MATERIAL LIST	
PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Stainless Steel ASTM A 351 Type CF8M
3. Stem	Stainless Steel ASTM A 276 Type 316
4. Seat	Glass Filled Teflon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Stainless Steel 304 SS
7. Pack Gland Nut	Carbon Steel Plated
8. O-Ring	Fluorocarbon Encapsulated
9. Gasket	304 SS/Graphite Spiral Wound

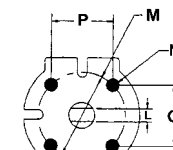
† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.



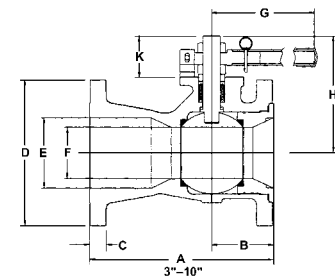
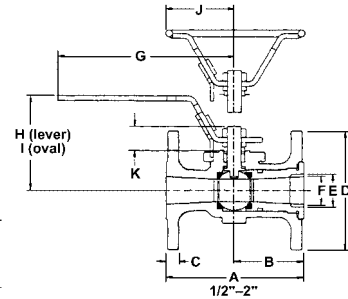
TOP FLANGE FOR  
10" & 12"



STOP PLATE  
REMOVEABLE  
FOR ACTUATION



TOP FLANGE FOR  
1/2" THRU 2"



## DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions												
	A		B		C		D		E		F		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	
1/2	15	5.50	140	2.13	54	.59	15	3.81	97	.50	13	.43	11
3/4	20	6.00	152	2.31	59	.65	17	4.68	119	.75	19	.63	16
1	25	6.50	165	2.50	64	.71	18	4.94	125	1.00	25	.81	21
1 1/2	40	7.50	191	3.25	83	.81	21	6.13	156	1.50	33	1.19	30
2	50	8.50	216	3.00	76	.87	22	6.50	165	2.00	51	1.50	38
3	80	11.13	283	4.00	102	1.13	29	8.25	210	3.00	76	2.38	60
4	100	12.00	305	4.25	103	1.25	32	10.00	254	4.00	102	3.00	76
6	150	15.88	403	5.25	133	1.44	37	12.50	318	6.00	152	4.38	111
8	200	16.50	419	5.50	140	1.63	41	15.00	381	8.00	203	5.68	144
10	250	18.00	457	6.50	165	1.88	48	17.50	443	10.00	254	7.50	190

Size	Dimensions											F-530-CS-R-66-FS										
	G	H	I	J	K	L	M	N	O	P	Lbs.	Kg.										
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.												
1/2	15	6.63	168	2.84	72	3.16	80	2.56	65	.59	15	.25	6	1.68	43	.250-20	1.19	30	1.19	30	5.00	2.27
3/4	20	6.63	168	3.20	81	3.58	91	2.56	65	.76	19	.25	6	1.68	43	.250-20	1.19	30	1.19	30	8.00	3.64
1	25	6.63	168	3.45	88	3.83	97	2.56	65	.93	24	.31	8	1.68	43	.250-20	1.19	30	1.19	30	10.00	4.55
1 1/2	40	9.13	232	4.75	121	5.25	133	3.31	84	1.22	31	.56	14	2.06	52	.250-20	1.46	37	1.46	37	20.00	9.09
2	50	9.13	232	4.88	124	5.38	137	3.31	84	1.36	35	.56	14	2.06	52	.250-20	1.46	37	1.46	37	23.00	10.45
3	80	16.60	422	6.16	156	—	—	—	—	1.97	50	.68	17	3.00	76	.375-16	2.12	54	2.12	54	54.00	24.55
4	100	16.60	422	7.22	183	—	—	—	—	2.16	55	.68	17	3.00	76	.375-16	2.12	54	2.12	54	91.50	41.59
6	150	32.80	833	10.09	256	—	—	—	—	3.59	91	1.13	29	4.50	114	.500-13	3.18	81	3.18	81	181.50	82.50
8	200	—	—	—	—	—	—	—	—	3.43	87	1.13	29	4.50	114	.500-13	3.18	81	3.18	81	257.00	116.82
10	250	—	—	—	—	—	—	—	—	5.56	141	1.75	44	—	—	.625-11	7.24	184	3.66	93	429.00	195.00

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 300 Carbon Steel Flanged Ball Valves

Unibody Design • Blowout-Proof Stem • Monel Trim • Mounting Pad • Vented Ball

**740 PSI/51 Bar Non-Shock Cold Working Pressure♦**

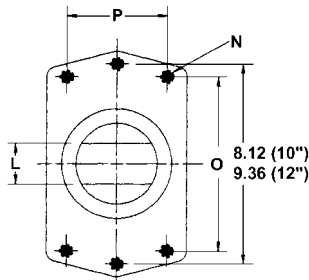
CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 608, API 598, MSS SP 25, NACE MR0175,  
CHLORINE INSTITUTE PAMPHLET NO. 6



**F-530-CS-R-33-CL**  
Carbon x Monel  
Flanged

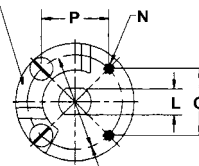
MATERIAL LIST	
PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Monel ASTM A 494 Grade M35 1
3. Stem	Monel B 164
4. Seat	Glass Filled Teflon
5. Packing Set	Virgin TFE
6. Pack Gland	Monel B 164
7. Pack Gland Nut	Monel
8. O-Ring	Fluorocarbon Encapsulated
9. Gasket	Monel/TFE

† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.

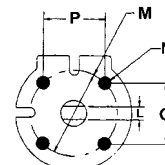


TOP FLANGE FOR  
10" & 12"

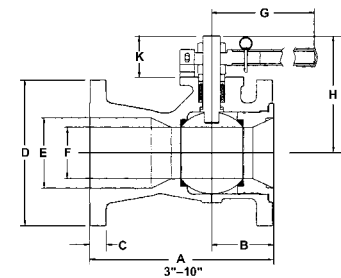
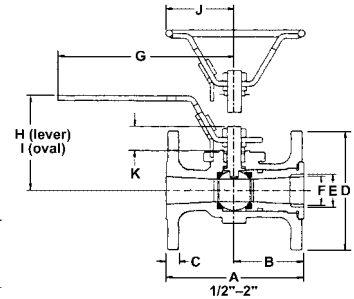
STOP PLATE  
REMOVABLE  
FOR ACTUATION



TOP FLANGE FOR  
3" THRU 8"



TOP FLANGE FOR  
1/2" THRU 2"



## DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions						
	A	B	C	D	E	F	
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	
1/2	15 5.50	140 2.13	54 .59	15 3.81	97 .50	13 .43	11
3/4	20 6.00	152 2.31	59 .65	17 4.68	119 .75	19 .63	16
1	25 6.50	165 2.50	64 .71	18 4.94	125 1.00	25 .81	21
1 1/2	40 7.50	191 3.25	83 .81	21 6.13	156 1.50	33 1.19	30
2	50 8.50	216 3.00	76 .87	22 6.50	165 2.00	51 1.50	38
3	80 11.13	283 4.00	102 1.13	29 8.25	210 3.00	76 2.38	60
4	100 12.00	305 4.25	103 1.25	32 10.00	254 4.00	102 3.00	76
6	150 15.88	403 5.25	133 1.44	37 12.50	318 6.00	152 4.38	111
8	200 16.50	419 5.50	140 1.63	41 15.00	381 8.00	203 5.68	144
10	250 18.00	457 6.50	165 1.88	48 17.50	443 10.00	254 7.50	190

Size	Dimensions											F-530-CS-R-33-CL	
	G	H	I	J	K	L	M	N	O	P	Lbs.	Kg.	
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.			
1/2	15 6.63	168 2.84	72 3.16	80 2.56	65 .59	15 .25	6 1.68	43 .250-20	1.19	30 1.19	30	5.00	2.27
3/4	20 6.63	168 3.20	81 3.58	91 2.56	65 .76	19 .25	6 1.68	43 .250-20	1.19	30 1.19	30	8.00	3.64
1	25 6.63	168 3.45	88 3.83	97 2.56	65 .93	24 .31	8 1.68	43 .250-20	1.19	30 1.19	30	10.00	4.55
1 1/2	40 9.13	232 4.75	121 5.25	133 3.31	84 1.22	31 .56	14 2.06	52 .250-20	1.46	37 1.46	37	20.00	9.09
2	50 9.13	242 4.88	124 5.38	137 3.31	84 1.36	35 .56	14 2.06	52 .250-20	1.46	37 1.46	37	23.00	10.45
3	80 16.60	422 6.16	156 — —	— —	1.97	50 .68	17 3.00	76 .375-16	2.12	54 2.12	54	54.00	24.55
4	100 16.60	422 7.22	183 — —	— —	2.16	55 .68	17 3.00	76 .375-16	2.12	54 2.12	54	91.50	41.59
6	150 32.80	833 10.09	256 — —	— —	3.59	91 1.13	29 4.50	114 .500-13	3.18	81 3.18	81	181.50	82.50
8	200 — —	— —	— —	— —	3.43	87 1.13	29 4.50	114 .500-13	3.18	81 3.18	81	257.00	116.82
10	250 — —	— —	— —	— —	5.56	141 1.75	44 — —	.625-11	7.24	184 3.66	93	429.00	195.00

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 150 Carbon Steel Flanged Ball Valves

Split-Body, Full-Bore Design • Blowout-Proof Stem • 316 SS Trim •  
Multiple V-Ring Packing • Mounting Pad • Fire Safe • Vented Ball

**285 PSI/19.7 Bar Non-Shock Cold Working Pressure♦**

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175



**F-515-CS-F-66-FS**  
Carbon x Stainless  
Flanged

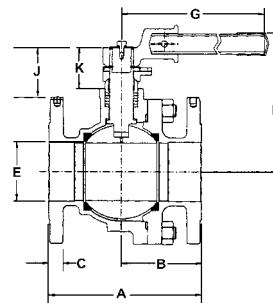
## MATERIAL LIST

PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Stainless Steel ASTM A 351 Type CF8M
3. Stem	Stainless Steel ASTM A 276 Type 316
4. Seat	Carbon Filled Teflon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Carbon Steel Plated
7. Gasket	304 SS/Graphite Spiral Wound
8. Body Stud	Carbon Steel A 193 Grade B7M
9. Heavy Hex Body Nut	Carbon Steel A 194 Grade 2HM
10. Belleville Washer	Stainless Steel

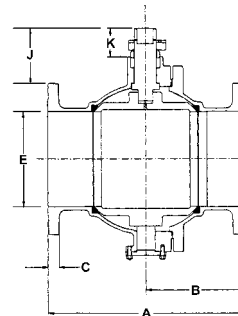
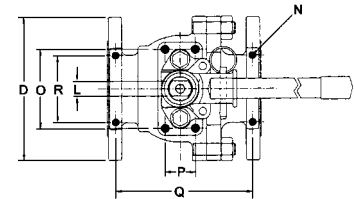
† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.

## DIMENSIONS—WEIGHTS—QUANTITIES

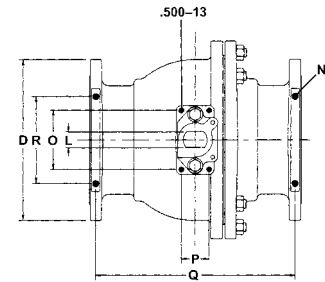
Size	Dimensions										
	A		B		C		D		E		
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
½	15	4.25	108	2.52	64	.44	11	3.50	89	.59	15
¾	20	4.63	118	2.74	70	.50	13	3.88	99	.78	20
1	25	5.00	127	2.80	71	.56	14	4.25	109	.98	25
1½	40	6.50	165	3.54	90	.56	14	5.00	127	1.57	40
2	50	7.00	178	3.99	101	.62	16	6.00	152	2.00	51
3	80	8.00	203	4.19	106	.75	19	7.50	190	3.00	76
4	100	9.00	229	4.50	114	.94	24	9.00	229	4.00	102
6	150	15.50	394	8.00	203	1.00	25	11.00	279	6.00	152
8	200	18.00	457	9.00	229	1.12	28	13.50	343	8.00	203
10	250	21.00	533	10.50	267	1.19	30	16.00	406	10.08	256
12	300	24.00	670	12.00	305	1.25	32	19.00	483	12.09	307



½"-8"



10"-12"



Size	Dimensions											F-515-CS-F-66-FS										
	G	H	J	K	L	N	O	*P	Q	R	Lbs.	Kg.										
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.									
½	15	5.12	130	3.52	89	.47	12	1.00	25	.19	5	.250-20	—	—	—	—	3.75	95	2.00	51	4.00	1.82
¾	20	6.10	155	4.13	105	.69	18	1.26	32	.31	8	.250-20	—	—	—	—	3.94	100	2.00	51	6.00	2.72
1	25	6.10	155	4.25	109	.63	17	1.26	32	.31	8	.312-18	—	—	—	—	4.19	105	1.75	44	8.00	3.64
1½	40	9.06	230	4.97	126	1.50	38	1.68	43	.47	12	.312-18	—	—	—	—	5.63	143	1.75	44	17.00	7.73
2	50	9.03	230	5.66	144	1.81	46	1.66	42	.63	16	.312-18	—	—	—	—	6.32	161	2.25	57	26.00	11.82
3	80	12.63	321	7.38	187	2.65	67	2.13	54	.78	20	.375-16	4.13	105	1.57	40	7.12	181	3.50	89	49.00	22.27
4	100	15.75	400	8.09	205	2.59	66	2.13	54	.78	20	.437-14	4.13	105	1.57	40	8.00	203	4.00	102	75.00	34.09
6	150	31.50	800	10.65	271	3.68	93	2.58	66	1.10	28	.437-14	4.96	126	2.36	60	14.44	367	4.00	102	171.00	77.73
8	200	—	—	—	—	4.53	115	2.53	65	1.17	30	.500-13	4.96	126	2.36	60	16.81	427	7.62	104	322.00	146.36
10	250	—	—	—	—	5.83	148	3.01	76	1.57	40	.625-11	5.90	150	2.75	70	19.75	502	8.66	220	483.00	219.55
12	300	—	—	—	—	5.69	145	3.01	76	1.57	40	.625-11	5.90	150	2.75	70	22.69	576	9.45	240	659.00	298.55

\*Not drilled and tapped on ½"-2".

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.



# Class 300 Carbon Steel Flanged Ball Valves

Split-Body, Full-Bore Design • Blowout-Proof Stem • 316 SS Trim •  
Multiple V-Ring Packing • Mounting Pad • Fire Safe • Vented Ball

**740 PSI/51 Bar Non-Shock Cold Working Pressure♦**

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175



**F-535-CS-F-66-FS**

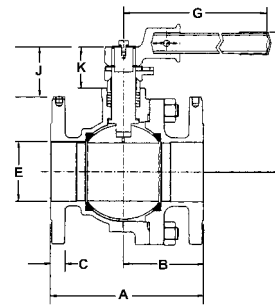
Carbon x Stainless  
Flanged

MATERIAL LIST	
PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Stainless Steel ASTM A 351 Type CF8M
3. Stem	Stainless Steel ASTM A 276 Type 316
4. Seat	Carbon Filled Teflon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Carbon Steel Plated
7. Gasket	304 SS/Graphite Spiral Wound
8. Body Stud	Carbon Steel A 193 Grade B7M
9. Heavy Hex Body Nut	Carbon Steel A 194 Grade 2HM
10. Belleville Washer	Stainless Steel

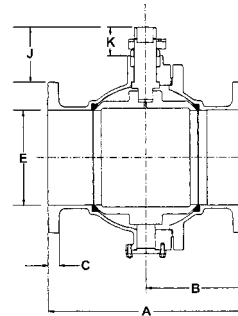
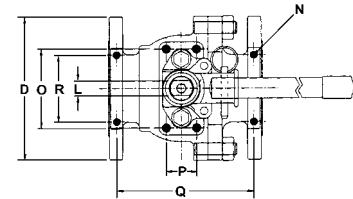
\* Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.

## DIMENSIONS—WEIGHTS—QUANTITIES

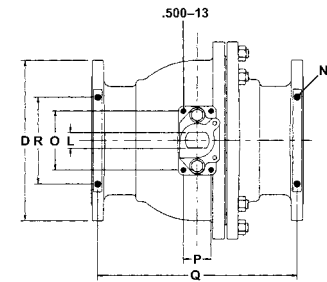
Size	Dimensions										
	A		B		C		D		E		
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
1/2	15	5.50	140	3.14	80	.56	14	3.75	95	.59	15
3/4	20	6.00	152	3.43	87	.62	16	4.63	118	.78	20
1	25	6.50	165	3.55	90	.69	18	4.88	124	.98	25
1 1/2	40	7.50	191	4.13	105	.81	21	6.13	156	1.57	40
2	50	8.50	216	4.74	120	.88	22	6.50	165	2.00	51
3	80	11.12	253	5.56	141	1.12	28	8.25	210	3.00	76
4	100	12.00	305	6.01	156	1.25	32	10.00	254	4.00	102
6	150	15.87	403	7.96	202	1.44	37	12.50	318	6.00	152
8	200	19.75	502	9.87	251	1.62	41	15.00	381	8.00	203
10	250	22.38	569	11.19	234	1.88	48	17.50	445	10.08	256
12	300	25.50	649	12.75	324	2.00	51	20.50	521	12.09	307



1/2"-8"



10"-12"



Size	Dimensions											F-535-CS-F-66-FS										
	G	H	J	K	L	N	O	*P	Q	R	Lbs.	Kg.										
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.									
1/2	15	5.12	130	3.52	89	.34	9	1.00	25	.19	5	.250-20	—	—	—	—	4.85	123	2.00	51	7.00	3.18
3/4	20	6.10	155	4.13	105	.43	11	1.26	32	.31	8	.250-20	—	—	—	—	5.28	134	2.00	51	9.00	4.09
1	25	6.10	155	4.25	109	.45	11	1.26	32	.31	8	.312-18	—	—	—	—	5.69	145	1.75	44	11.00	5.00
1 1/2	40	9.06	230	4.97	126	.92	23	1.68	43	.47	12	.312-18	—	—	—	—	6.56	167	1.75	44	24.50	11.14
2	50	9.06	230	5.66	144	1.58	40	1.66	42	.63	16	.312-18	—	—	—	—	7.50	191	2.25	57	33.00	15.00
3	80	15.75	400	7.38	187	2.26	57	2.13	54	.78	20	.375-16	4.13	105	1.57	40	9.94	252	3.50	89	72.00	32.73
4	100	15.75	400	8.09	205	2.10	53	2.13	54	.78	20	.437-14	4.13	105	1.57	40	10.69	272	4.00	102	116.00	52.73
6	150	—	—	—	—	2.93	74	2.58	66	1.10	28	.437-14	4.96	126	2.36	60	14.38	365	4.00	102	228.00	103.64
8	200	—	—	—	—	4.43	113	2.53	65	1.17	30	.500-13	4.96	126	2.36	60	18.06	459	6.46	154	352.00	160.00
10	250	—	—	—	—	5.08	129	3.01	76	1.57	40	.625-11	5.90	150	2.75	70	20.43	514	8.66	220	560.00	254.53
12	300	—	—	—	—	4.97	126	3.01	76	1.57	40	.625-11	5.90	150	2.75	70	23.44	595	9.45	240	765.00	347.73

\*Not drilled and tapped on 1/2"-2".

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 600 Carbon Steel Flanged Ball Valves

Split-Body, Full-Bore Design • Blowout-Proof Stem • CS Trim •  
Multiple V-Ring Packing • Mounting Pad • Fire Safe • Vented Ball

**1480 PSI/102 Bar Non-Shock Cold Working Pressure**♦

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175

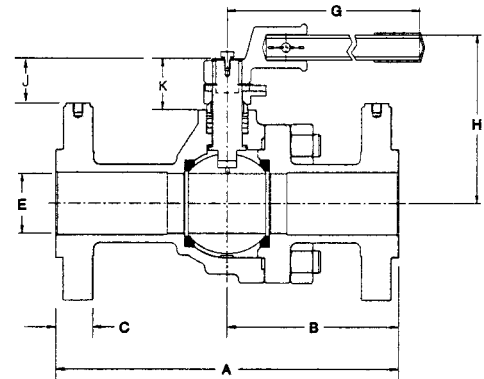
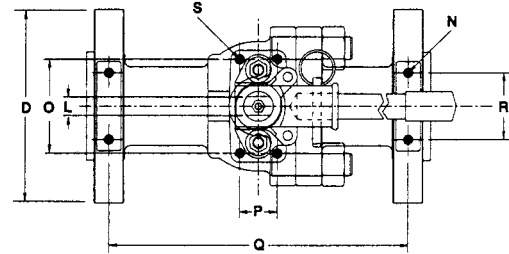


**F-565-CS-N-25-FS**  
Carbon x Carbon  
Flanged

### MATERIAL LIST

PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. 1Ball (Vented)	Carbon Steel ASTM A 216 Type WCB (Plated)
3. Stem	Carbon Steel ASTM A 108
4. Seat	Nylon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Carbon Steel Plated
7. Gasket	304 SS/Graphite Spiral Wound
8. Body Stud	Carbon Steel A 193 Grade B7M
9. Heavy Hex Body Nut	Carbon Steel A 194 Grade 2HM
10. Belleville Washer	Stainless Steel

† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.



### DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions										
	A		B		C		D		E		G
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.
1	25 8.50	216 4.68	119 5.09	121 1.13	29 6.12	155 1.50	38 9.06	230 1.00	25 6.10	155 3.81	155 3.81
1½	40 9.50	241 5.09	121 5.09	121 1.13	29 6.12	155 1.50	38 9.06	230 1.50	38 9.06	230 1.50	230 1.50
2	50 11.50	292 5.75	146 5.75	146 1.25	32 6.50	165 2.00	57 17.50	445 2.00	57 17.50	445 2.00	445 2.00
3	80 14.00	356 7.00	168 7.00	168 1.50	38 8.25	210 3.00	76 15.75	400 3.00	76 15.75	400 3.00	400 3.00
4	100 17.00	432 8.27	210 8.27	210 1.75	44 10.75	273 4.00	102 15.75	400 4.00	102 15.75	400 4.00	400 4.00

Size	Dimensions											F-565-CS-N-25-FS						
	H		J		K		L		O		P		Q		R		S	
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	Lbs.	Kg.
1	25 3.38	86 .57	14 1.04	26 .47	12 .312-18	—	—	—	—	7.32	186 2.36	60 2.36	60 2.36	—	—	—	13.00	5.91
1½	40 5.04	128 1.04	26 1.71	43 .47	12 .312-18	—	—	—	—	8.12	206 2.99	76 2.99	76 2.99	—	—	—	27.00	12.27
2	50 5.66	144 1.57	40 1.66	42 .63	16 .312-18	—	—	—	—	10.00	254 2.24	57 2.24	57 2.24	—	—	—	43.00	19.55
3	80 7.38	187 2.27	58 2.13	54 .78	20 .375-16	4.13	105 1.57	40 1.57	40 1.57	12.25	311 3.50	84 3.50	84 3.50	.437-14	.437-14	—	89.50	40.68
4	100 8.09	205 1.72	44 2.13	54 .78	20 .437-14	4.13	105 1.57	40 1.57	40 1.57	15.00	331 4.00	102 4.00	102 4.00	.437-14	.437-14	—	149.00	67.73

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.

# Class 600 Carbon Steel Flanged Ball Valves

Split-Body, Full-Bore Design • Blowout-Proof Stem • 316 SS Trim •  
Multiple V-Ring Packing • Mounting Pad • Fire Safe • Vented Ball

**1480 PSI/102 Bar Non-Shock Cold Working Pressure♦**

CONFORMS TO ASME/ANSI B16.34, B16.5, MSS SP 72,  
API 607 FOURTH EDITION, API 608, API 598,  
MSS SP 25, NACE MR0175



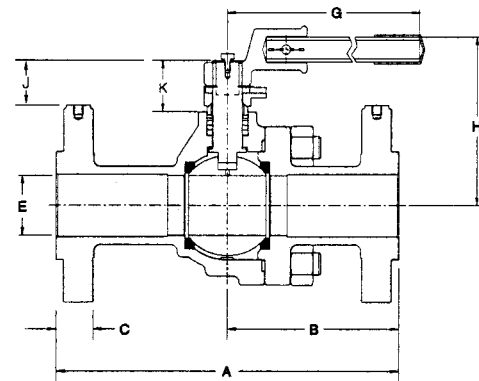
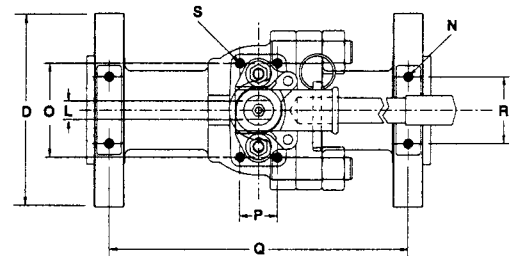
## F-565-CS-N-66-FS

Carbon x Stainless  
Flanged

### MATERIAL LIST

PART	SPECIFICATION
1. Body and End Piece	Carbon Steel ASTM A 216 Type WCB
2. Ball (Vented)	Stainless Steel ASTM A 351 Type CF8M
3. Stem	Stainless Steel ASTM A 276 Type 316
4. Seat	Nylon
5. Packing Set	Graphite and Braided Graphite
6. Pack Gland	Carbon Steel Plated
7. Gasket	304 SS/Graphite Spiral Wound
8. Body Stud	Carbon Steel A 193 Grade B7M
9. Heavy Hex Body Nut	Carbon Steel A 194 Grade 2HM
10. Belleville Washer	Stainless Steel

† Cast specifications shown. Smaller sizes may be manufactured from equivalent bar stock specifications.



### DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions												
	A		B		C		D		E		G		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.		
1	25	8.50	216	4.68	119	.94	24	4.88	124	1.00	25	6.10	155
1½	40	9.50	241	5.09	121	1.13	29	6.12	155	1.50	38	9.06	230
2	50	11.50	292	5.75	146	1.25	32	6.50	165	2.00	57	17.50	445
3	80	14.00	356	7.00	168	1.50	38	8.25	210	3.00	76	15.75	400
4	100	17.00	432	8.27	210	1.75	44	10.75	273	4.00	102	15.75	400

Size	Dimensions											F-565-CS-N-66-FS									
	H	J	K	L	O	P	Q	R	S	N	Lbs.	Kg.									
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.											
1	25	3.38	86	.57	14	1.04	26	.47	12	.312-18	—	—	—	—	7.32	186	2.36	60	—	13.00	5.91
1½	40	5.04	128	1.04	26	1.71	43	.47	12	.312-18	—	—	—	—	8.12	206	2.99	76	—	27.00	12.27
2	50	5.66	144	1.57	40	1.66	42	.63	16	.312-18	—	—	—	—	10.00	254	2.24	57	—	43.00	19.55
3	80	7.38	187	2.27	58	2.13	54	.78	20	.375-16	4.13	105	1.57	40	12.25	311	3.50	84	.437-14	89.50	40.68
4	100	8.09	205	1.72	44	2.13	54	.78	20	.437-14	4.13	105	1.57	40	15.00	331	4.00	102	.437-14	149.00	67.73

Note: Valves are static grounded by thrust washer.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 91.