

# **V**iWtrol®

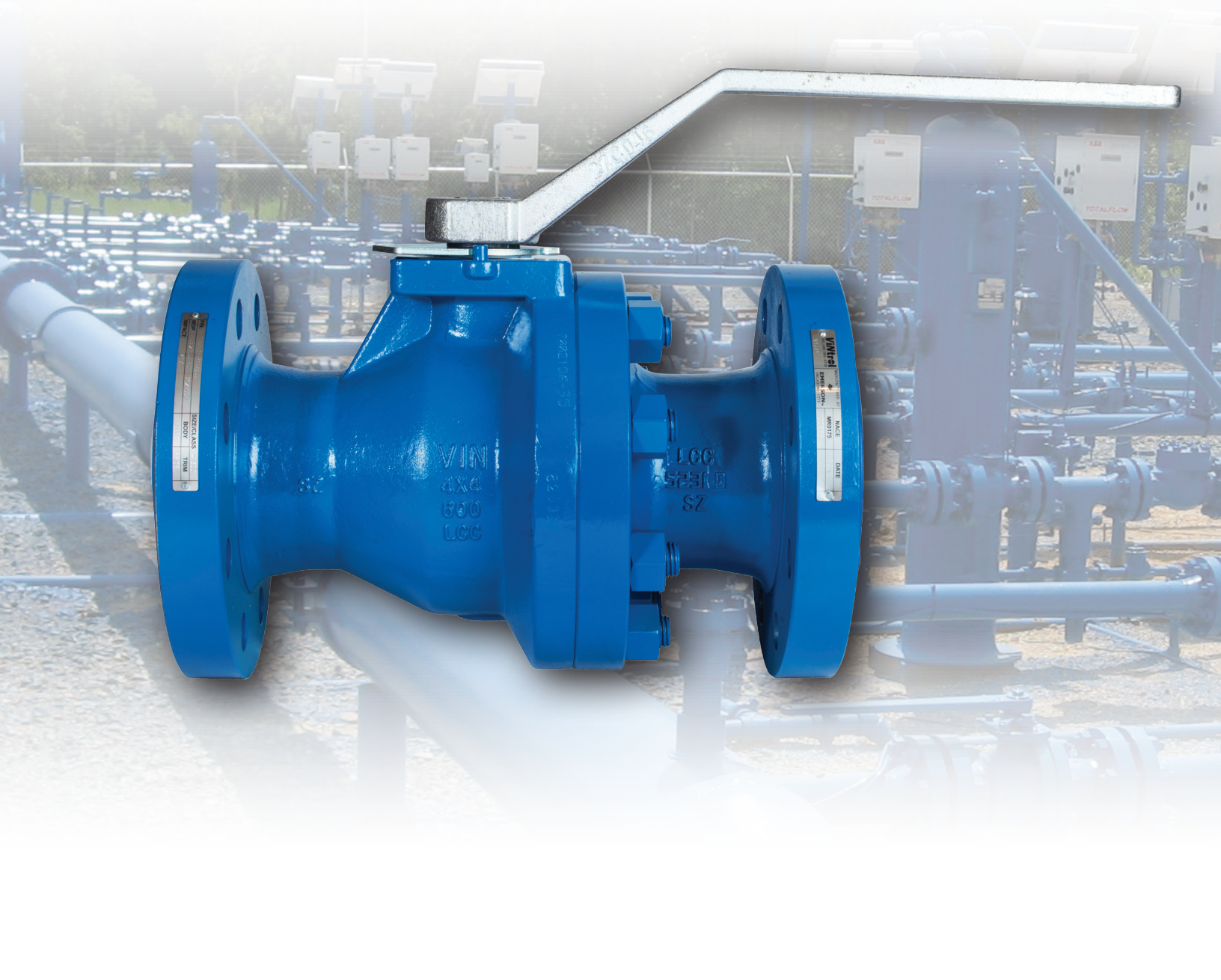
## **BALL VALVES**

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## **FLANGED FLOATING**

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# **SERIES DF**



## Custom Engineered and Off-the-Shelf Solutions

ViNtrol, headquartered in Oklahoma City, manufactures flow control products tailored to meet the needs of various industry requirements with a primary focus within the oil and gas industry. ViNtrol provides a comprehensive line of valve products to accommodate and service the Upstream, Midstream and Downstream market segments. ViNtrol continues to make strides in elevating our company beyond industry standards and customer expectations by consistently providing superior quality, maintaining expansive inventory levels, and being immediately responsive to customer needs.

While Off-the-Shelf inventory has been a key factor to the growth of ViNtrol, our Sales and Engineering teams are ready to provide engineered solutions customized for your application requirements. Ranging from Single Source Fully Automated Valve packages, Metal-to-Metal Sealing, Stem Extensions, Coatings, Off-the-Shelf Upgrades and Built-to- Order. ViNtrol's vast expertise in valve manufacturing is backed by a team with over 100 plus years of experience collectively serving the oil and gas industry.



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ViNtrol offers a complete line of two piece Flanged Floating ball valves. Available in forged steels with a variety of seats, seals and end connections. All are assembled to standard Fire Safe design and NACE certified. Optional gear operators, pneumatic, hydraulic or electric actuation to ideally suit your application requirements.

## Size Range:

Size Range: ½" thru 8"

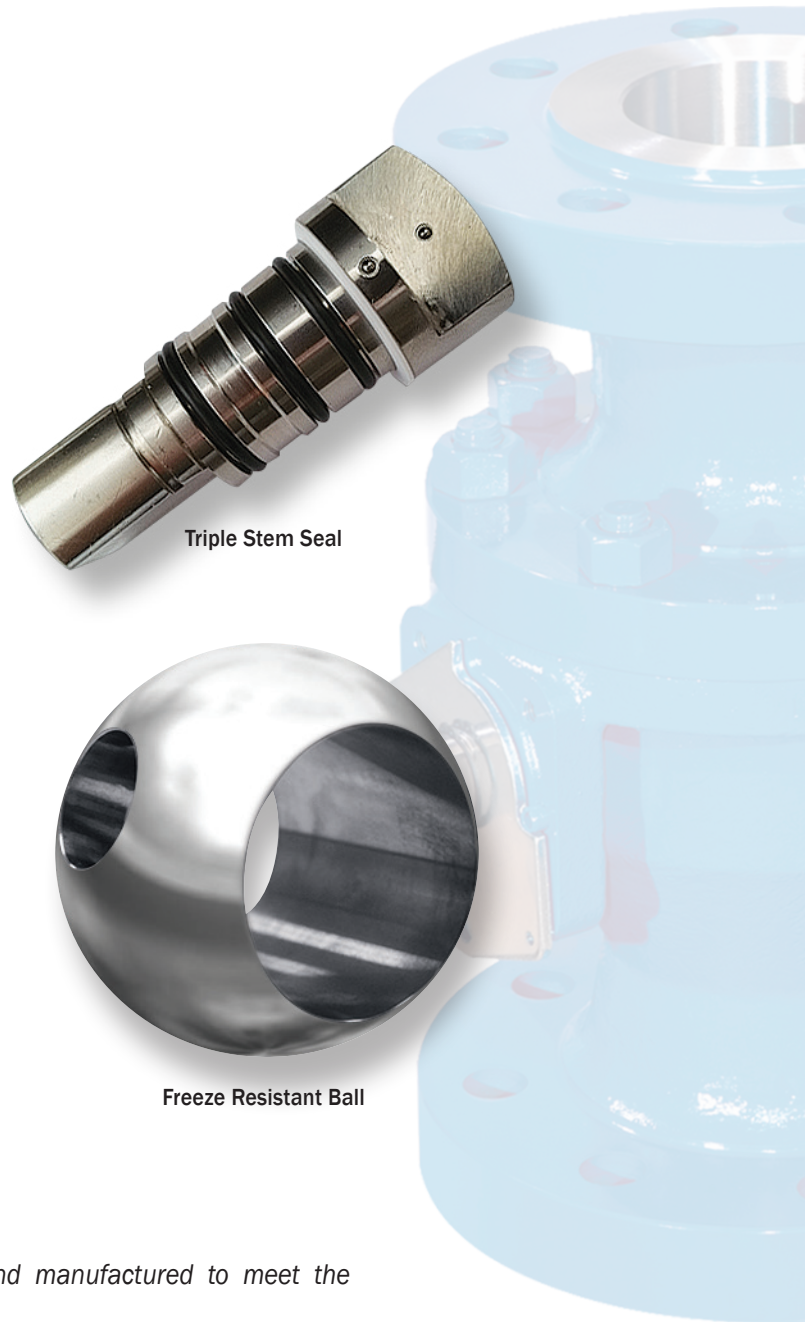
ANSI Pressure Class 150 thru 1500

Reduced or Full Ports

Temperature rating: Up to 500°F/260°C

## Standard Features:

- Anti-static Design: provides continuity throughout the entire valve
- Ball has pressure equalization hole to prevent trapped pressure in the body cavity
- Blowout proof back seated stem
- Fire safe per API 607 / API 6FA
- NACE MR0175 / ISO 15156 (All Parts)
- Stainless Steel Trim for corrosion protection
- Standard locking handle
- ISO 5211 mounting pad which simplifies actuator or gear operator mounting
- Self-relieving seat design
- Triple stem seal: multiple seals for added reliability
- Freeze resistant design available



Triple Stem Seal

Freeze Resistant Ball

## Standards and Specifications:

ViNtrol Series DF Flanged End Ball Valves are designed and manufactured to meet the requirements of the following industry standards

**ANSI B16.10** Face-To-Face Dimensions for Ferrous Valves  
**ANSI B16.34** Valves, Flanged & Butt Weld  
**ANSI B16.5** Steel Pipe Flanges and Flange Fittings  
**API 598** Valve Inspection and Testing  
**API 6D** Pipeline Valves  
**API 641** Fugitive Emission Testing

**API 607/6FA** Fire Test Specification  
**MSS-SP-25** Standard Marking System for Valves  
**MSS-SP-55** Quality Standard for Steel Castings  
**MSS-SP-72** Flanged Ball Valves for General Service  
**MSS-S-SP-6** Standard Finishes for Pipe Flanges  
**NACE MR0175/ISO 15156** Standard Material Requirements 2002 Edition

**Bubble Tight**

ViNtrol flanged end floating ball valve feature bubble tight seat sealing at high and low pressures with excellent torque performance.

**Firesafe**

Loss of seat insert results in metal-to-metal sealing for fire safe reliability.

**Triple Seal Stem**

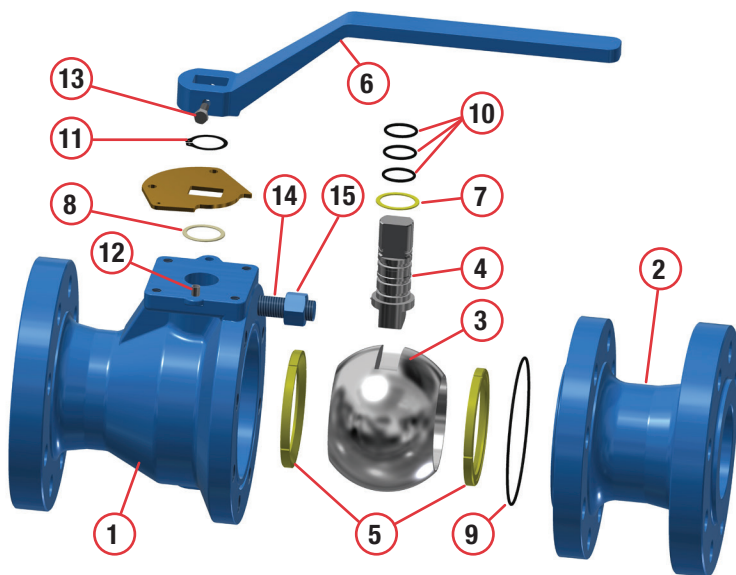
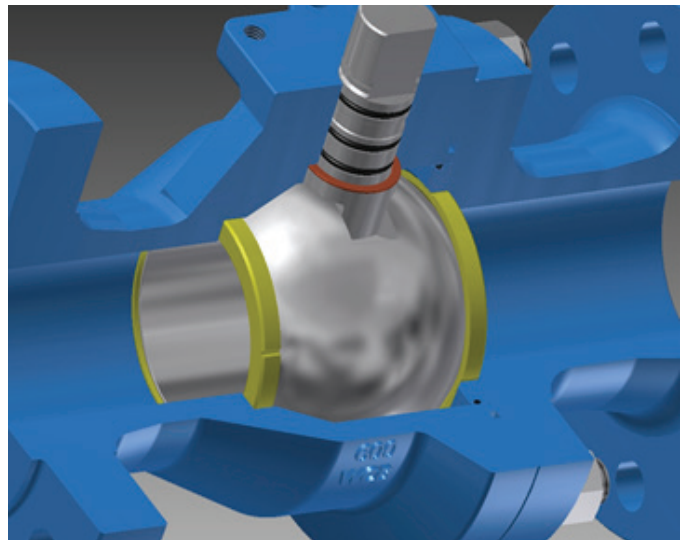
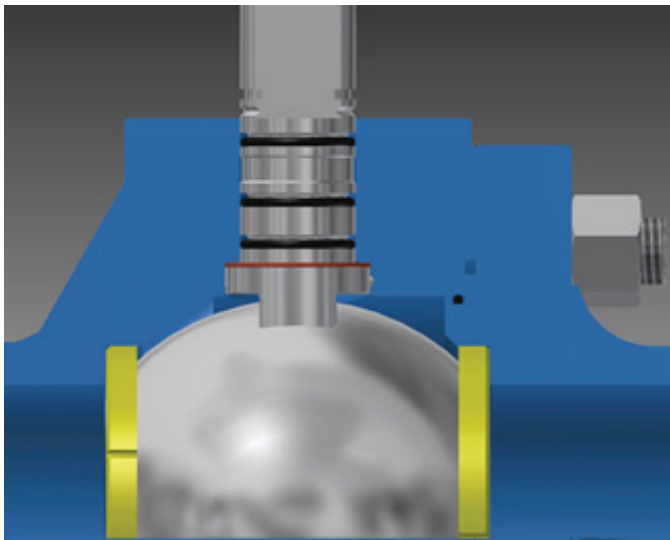
Triple Seal Stem design ensures effective stem sealing and protection from external corrosion/contamination.

**UNI-Directional Option**

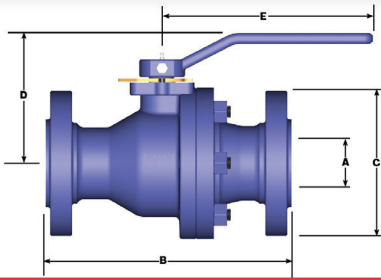
ViNtrol offers a UNI-Directional option that reduces the risk of a freeze resulting in permanent damage to the valve. This design modification incorporates a relief hole in the upstream side of the closed ball. When liquid trapped inside the ball cavity freezes and expands, the relief hole allows expansion of the increased internal pressure.

**Seal Options**

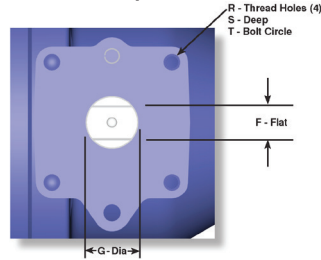
Emerson designs incorporate a wide range of seals and O-rings to withstand explosive decompression service conditions. Please consult ViNtrol with specific service requirements..



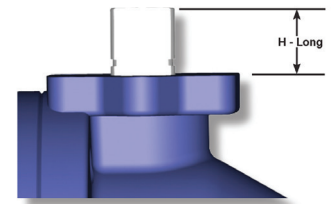
PART DESCRIPTION	AVAILABLE MATERIALS
1 BODY	A352 LCC, A351 CF8M, WCB
2 ADAPTER	A352 LCC, A351 CF8M, WCB
3 BALL	ASTM A276 316 SS, A105/ENP, Tungsten Carbide
4 STEM	Plated carbon steel, 316SS, 17-4
5 SEAT	RTFE, Delrin, Devlon, PEEK, TFM, Tungsten Carbide
6 HANDLE	Ductile Iron
7 THRUST BEARING	Reinforced Teflon
8 STEM SPACER	Nylon
9 BODY SEALS	HNBR, FKM A, FKM B, FKM GLT, Aflas
10 STEM SEALS	HNBR, FKM A, FKM B, FKM GLT, Aflas,
11 RETAINER RING	Spring Steel
12 STOP PIN	Spring Steel
13 HANDLE BOLT	Plated Carbon Steel
14 STUD	ASTM A193 B7 & B7M, ASTM A320 L7&L7M
15 NUT	ASTM A194 2H & 2HM, ASTM A320 L7&L7M



**CLASS 150/300**



**CLASS 600/900/1500**



**Dimensional Data**

DIMENSIONS IN INCHES

SIZE	1/2" FP	3/4" FP	1" FP	1.5" FP	2" RP	2" FP	3" RP	3" FP	4" RP	4" FP	6" RP	6" FP	8" RP	8" FP
<b>A PORT</b>	0.5	0.75	1.0	1.5	2x1.5	2	3x2	3	4x3	4	6x4	6	8x6	8
<b>B 150 RF</b>	4.25	4.61	5	6.5	7	7	8	8	9	9	10.5	15.5	11.5	18
<b>B 300 RF</b>	5.51	5.98	6.5	7.5	8.5	8.5	11.12	11.12	12	12	15.88	15.88	16.5	19.75
<b>B 600 RF</b>	6.5	7.48	8.5	9.5	11.5	11.5	14	14	17	17	22	-	-	-
<b>B 600 RTJ</b>	-	-	8.5	9.5	11.62	11.62	14.12	14.12	17.12	17.12	22.12	-	-	-
<b>B 900 RF</b>	-	-	10	12	14.5	14.5	15	-	-	-	-	-	-	-
<b>B 900 RTJ</b>	-	-	10	12	14.62	14.62	15.12	-	-	-	-	-	-	-
<b>B 1500 RF</b>	8.5	9.02	10	12	14.5	14.5	-	-	-	-	-	-	-	-
<b>B 1500 RTJ</b>	-	-	10	12	14.62	14.62	-	-	-	-	-	-	-	-
<b>C 150</b>	3.5	3.51	4.25	5	6	6	7.5	7.5	9	9	11	11	13.5	13.5
<b>C 300</b>	3.75	4.53	4.88	6.12	6.5	6.5	8.25	8.25	10	10	12.5	12.5	15	15
<b>C 600</b>	3.75	4.53	4.88	6.12	6.5	6.5	8.25	8.25	10.75	10.75	14	-	-	-
<b>C 900</b>	-	-	5.88	7	8.5	8.5	9.5	-	-	-	-	-	-	-
<b>C 1500</b>	4.75	5.12	5.88	7	8.5	8.5	-	-	-	-	-	-	-	-
<b>D</b>	3.5	4.5	3.74	4.94	4.94	5.31	5.31	6.75	6.75	8.4	8.4	8.73	8.25	10.77
<b>E</b>	6	6	6	8	8	10	10	15	15	18	18	-	-	-

**Top Works Dims - Class 150 / 300**

SIZE	1/2" FP	3/4" FP	1" FP	1.5" FP	2" RP	2" FP	3" RP	3" FP	4" RP	4" FP	6" RP	6" FP	8" RP	8" FP
<b>F-FLAT</b>	0.293	0.374	0.374	0.560	0.560	0.560	0.560	0.622	0.622	0.745	0.745	0.945	0.945	4.73 keyed
<b>G-DIA</b>	0.492	0.63	0.622	0.873	0.873	0.873	0.873	1.240	1.240	1.365	1.365	1.418	1.418	1.654
<b>H-LONG</b>	0.689	0.87	0.81	0.99	0.99	0.99	0.99	1.33	1.33	1.48	1.48	2.05	2.05	2.21
<b>R</b>	1/4-20 UNC	1/4-20 UNC	10-24 UNC	1/4-20 UNC	1/4-20 UNC	1/4-20 UNC	1/4-20 UNC	3/8-16 UNC	3/8-16 UNC	1/2-13 UNC	1/2-13 UNC	M12X1.75	M12X1.75	M16X2
<b>S</b>	0.315	0.31	0.30	0.40	0.40	0.40	0.40	0.44	0.44	0.56	0.56	0.78	0.78	1.00
<b>T</b>	1.653	1.653	1.417	1.969	1.969	1.969	1.969	4.016	4.016	4.921	4.921	4.921	4.921	5.512

**Top Works Dims - 600 / 900 / 1500**

SIZE	1/2" FP	3/4" FP	1" FP	1.5" FP	2" RP	2" FP	3" RP	3" FP	4" RP	4" FP	6" RP
<b>F-FLAT</b>	0.51	0.56	0.374	0.560	0.560	0.560	0.560	0.745	0.745	1.003	1.003
<b>G-DIA</b>	0.807	0.87	0.622	0.873	0.873	0.873	0.873	1.365	1.365	1.505	1.505
<b>H-LONG</b>	0.866	0.87	0.81	0.99	0.99	0.99	0.99	1.48	1.48	1.48	1.48
<b>R</b>	1/4-20 UNC	5/16-18 UNC	10-24 UNC	1/4-20 UNC	1/4-20 UNC	1/4-20 UNC	1/4-20 UNC	3/8-16 UNC	3/8-16 UNC	1/2-13 UNC	1/2-13 UNC
<b>S</b>	0.354	0.47	0.30	0.40	0.40	0.40	0.40	0.44	0.44	0.56	0.56
<b>T</b>	1.968	2.755	1.417	1.969	1.969	1.969	1.969	4.016	4.016	4.921	4.921

**Weights**

SIZE	1/2" FP	3/4" FP	1" FP	1.5" FP	2" RP	2" FP	3" RP	3" FP	4" RP	4" FP	6" RP	6" FP	8" RP	8" FP
<b>150</b>	-	8	10.0	20.0	22	28	40	62	70	88	104	193	224	372
<b>300</b>	-	11	12	26.0	26	34	48	78	100	122	170.0	273.0	346.0	544
<b>600</b>	-	16	14.0	28.0	34.0	40.0	60.00	100.00	100	180	270.00	-	-	-
<b>900</b>	-	24	28.0	60.0	68.0	86.0	100	-	-	-	-	-	-	-
<b>1500</b>	-	24	28.0	60.0	70.00	86.00	-	-	-	-	-	-	-	-

## CV Table

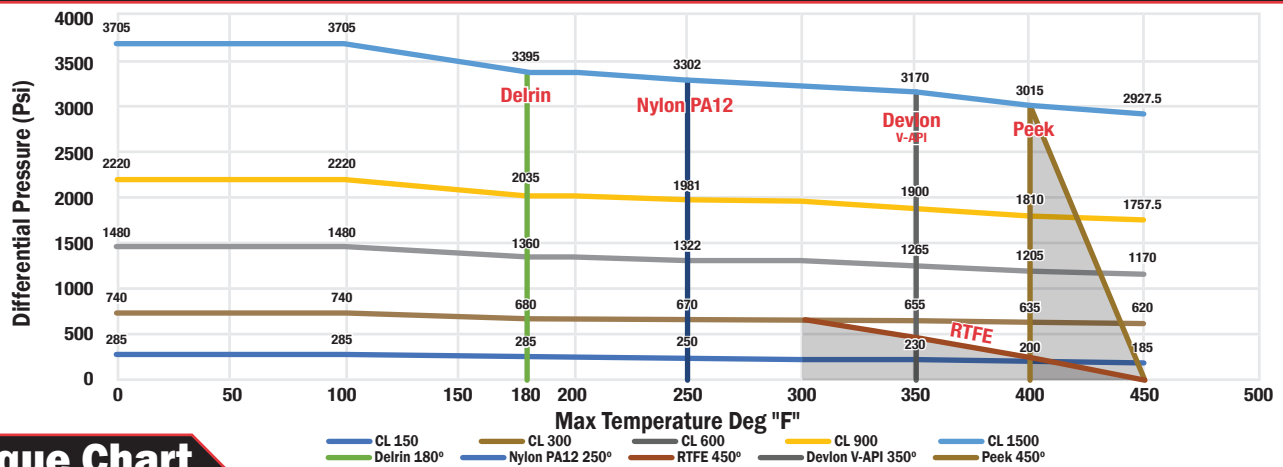
SIZE	CL 150	CL 300	CL 600	CL 900	CL 1500
0.5" FP	20	18	17	15	15
0.75" FP	49	44	40	37	37
1" FP	89	79	68	70	70
2" RP	137	128	117	119	119
2" FP	490	422	368	365	365
3" RP	238	216	203	175	
3" FP	1380	1055	1000		
4" RP	635	610	580		
4" FP	2560	2100	1850		
6" RP	925	905	895		
6" FP	5350	5300			
8" RP	2500	2400			
8" FP	10750	10750			

Technical data provided for customer convenience and is subject to change without notice. Please consult factory for specific application and additional product information.

Pressure/Temperature ratings are based on ANSI 816.34 and the trim materials selected for the valve.

Torque values are based on clean lubricating fluids. A service factor should be applied for all other conditions.

## Pressure/Temperature Chart



## Torque Chart

SIZE NPS (DN)	TORQUE TYPE	PRESSURE CLASS							
		150		300		600		900	
		in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
1/2"	BTO	88	10	88	10	257	30	292	33
	ETC	70	8	70	8	206	24	233	27
3/4"	BTO	168	19	168	19	292	33	345	39
	ETC	134	16	134	16	233	27	276	32
1	BTO	164	19	182	21	234	27	270	31
	ETC	131	15	146	17	187	22	216	25
1.5	BTO	288	33	416	48	450	51	727	83
	ETC	230	26	333	38	360	41	582	66
2	BTO	360	41	533	61	576	66	1267	144
	ETC	288	33	442	50	461	53	1014	115
3	BTO	727	83	792	90	1512	171		
	ETC	582	66	634	72	1210	137		
4	BTO	1320	150	2016	228	2989	338		
	ETC	1056	120	1613	183	2391	271		
6	BTO	2496	283	6336	716				
	ETC	1997	226	5069	573				
8	BTO	7392	836	11505	1300				
	ETC	7096	802	9204	1040				

**BTO = Break to open torque (under rated pressure)**

**ETO = End to close torque (reseating Torque)**

- Torque Values are in in-lbs/Nm and are for standard Seat material:
  - RTFE #150 & #300
  - Delrin #600, #900, #1500
  - Nylon 1" #150, #300 & #600

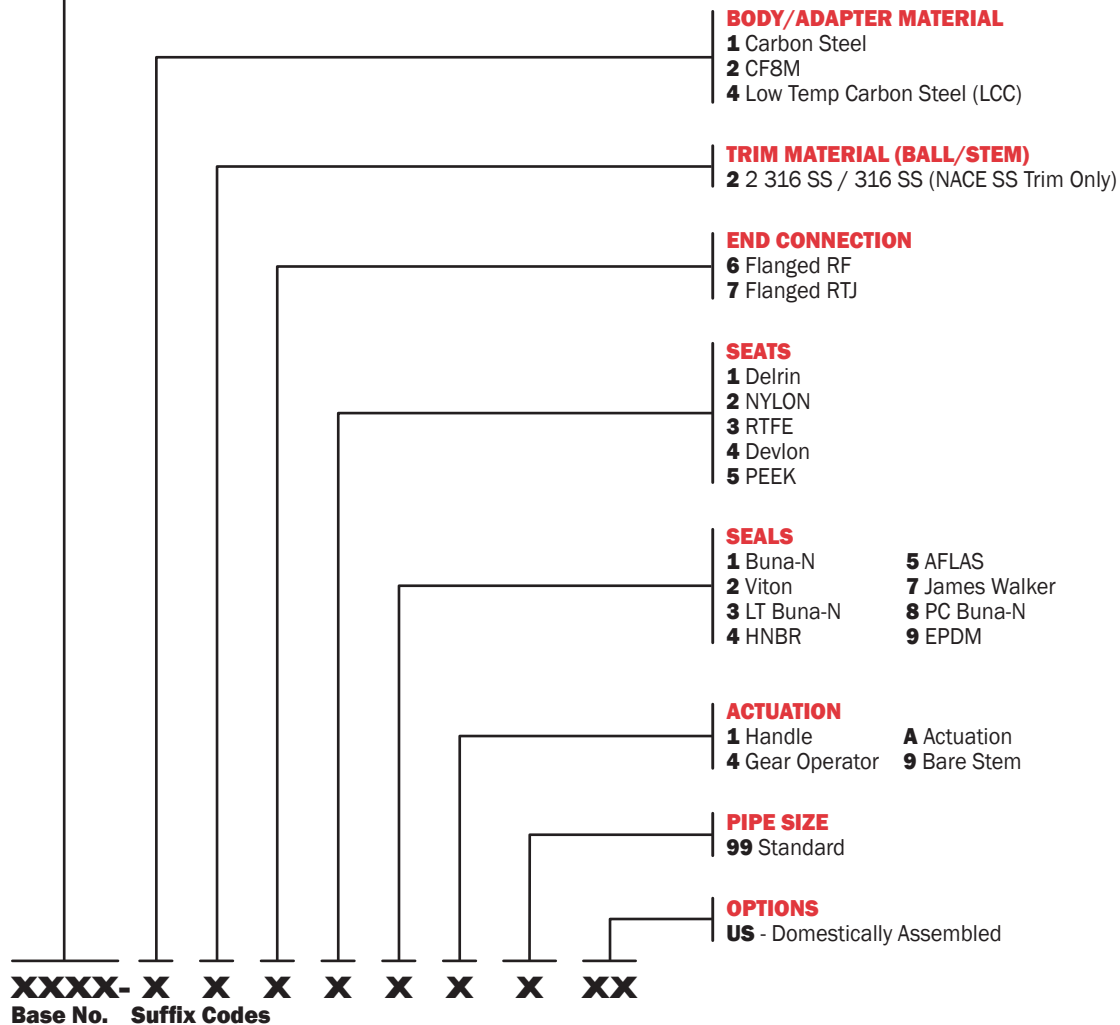
**NOTE:** Other seat materials increase torque. Please use the following as guidance

- Torque Values with PEEK seat insert are 1.5 times the RTFE/Delrin material
- Torque Values are at Ambient temperature, media is clear water
- Use a 1.3 multiplier for dry gas service
- BTO values are at maximum rated differential as per valve class
- For Reduced Bore Valves, take torque values corresponding to the lower size (ball bore size) e.g.: for 14" x 10" Reduced Bore Valve, take torque values corresponding to a 10"

**PART NUMBER CODES**

**BASE PART NUMBERS**

SIZE	CL 150	CL 300	CL 600	CL 900	CL 1500
1/2" FP	4150	4350	4650	4950	4550
3/4" FP	4175	4375	4675	4975	4575
1" FP	4100	4300	4600	4900	4500
1.5" FP	4101	4301	4601	4901	4501
2" RP	4102	4302	4602	4902	4502
2" FP	4103	4303	4603	4903	4503
3" RP	4105	4305	4605	4905	-
3" FP	4106	4306	4606	-	-
4" RP	4107	4307	4607	-	-
4" FP	4108	4308	4608	-	-
6" RP	4109	4309	4609	-	-
6" FP	4110	4310	-	-	-
8" RP	4111	4311	-	-	-
8" FP	4112	4312	-	-	-



# **V**iNtrol®

## ***Proven Performance***

***ViNtrol valves are designed, assembled  
and tested in Oklahoma City***

**Ask us about our full product line**



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