

Vtek

Controls™

SERIES 2F

2-Piece Flanged Ball Valve



Series 2F - 2Pc Flanged

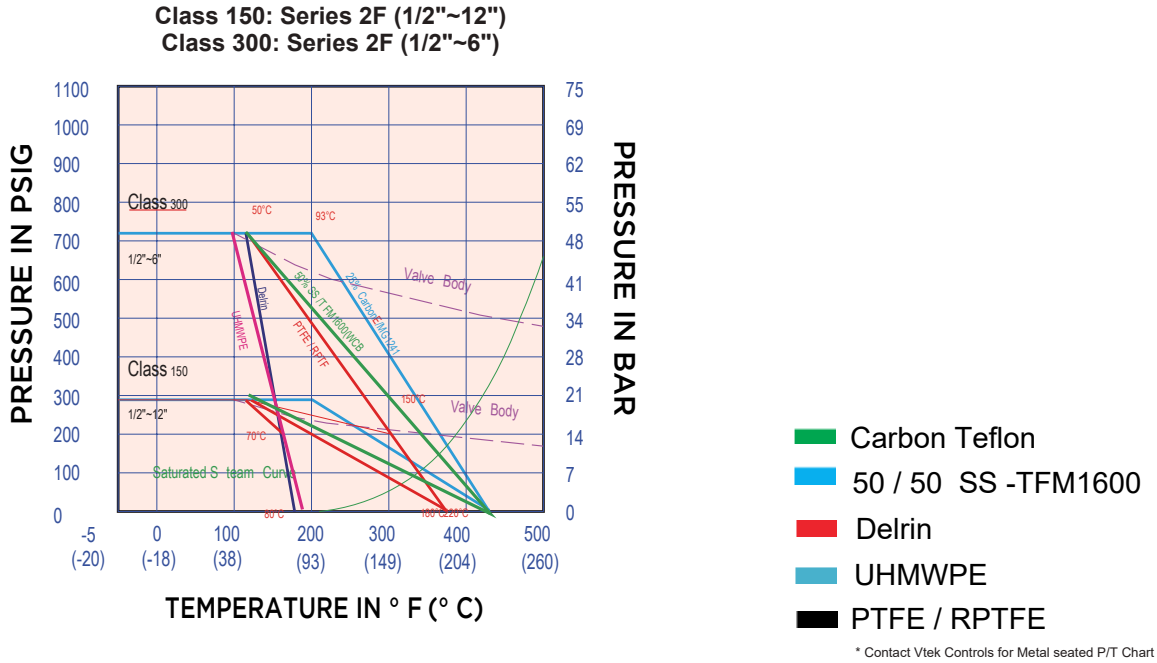
Design Specifications

- Full Port Sizes : (1/2" – 12" / DN 15 – DN 300)
- Body Materials: CF8M / WCB / CF3M / 316L / Alloy 20 / Duplex / Hastelloy C / Titanium / Monel
- Seats: RTFE, CARBON-PEEK, TFM1600, UHMWPE, CTFE (25%Carbon / 75% TFE), 50/50 S/S filled PTFE, & Metal Seats Available
- ISO 5211 Direct Mount
- ANSI 150 / 300
- Blow-Out Proof Stem
- Flanged End
- General & Industrial Applications

Standards

- Compliance Standard:
ASME B16.34 Fully conforms
ASME B16.5, B16.10, DIN 3202 F1/
F4, API 607, ISO 5211, ISO 5209, EN
1092-1, MSS SP-55, EN 10204-3.1
- Quality Assurance: ISO 9001, 5209
- Inspection and Test: API 598
- API607 7th Edition, ISO 10497 3rd Edition
- TA-Luft, ISO-15848
- CE 2014 /34/ EU

Pressure Vs. Temperature Chart



Breakaway Torque (RTFE) & Cv Value

SIZE.	DN	ANSI 150		
		Inch-Lb	Nm	Cv
1/2 "	15	89	10	15
3/4"	20	124	14	40
1"	25	151	17	70
1-1/4"	32	204	23	110
1-1/2"	40	301	34	250
2"	50	346	39	430
2-1/2"	65	514	58	700
3"	80	833	94	1100
4"	100	895	101	2000
5"	125	2073	234	3700
6"	150	2188	247	5400
8"	200	7263	819	9800
10"	250	12105	1365	16400
12"	300	24209	2730	23800

ANSI 300	
Break Away Torque w/ RTFE Seats	
SIZE	IN-LBS
1/2"	45
3/4"	73
1"	101
1-1/2"	233
2"	360
2-1/2"	577
3"	852
4"	1,553
6"	6,198

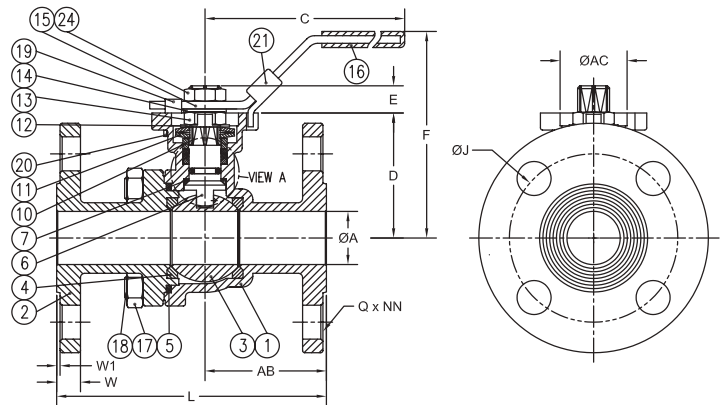
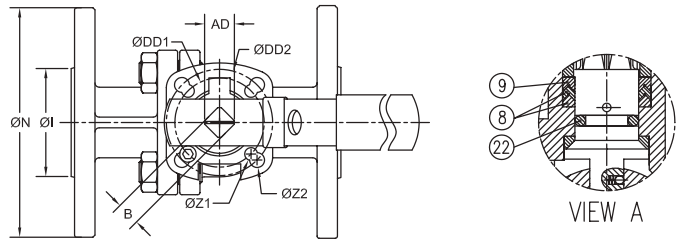
Break Away Torque 30% safety factor included. Standard valves are assembled with silicon-free based lubricant.
 Torque for dry gas applications, please consult factory.

Materials & Dimensions ANSI 150 (1/2" to 6"):

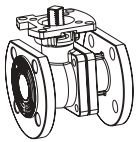
Materials

NO.	QTY	STAINLESS STEEL	CARBON STEEL	
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	END CAP	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
3	BALL	1	ASTM A351 GRADE CF8M	ASTM A351 GRADE CF8M
4	SEAT	2	RTFE	RTFE
5	JOINT GASKET	1	TFM™-1600	TFM-1600
6	STEM	1	ASTM A276 SS316	ASTM A276 SS316
7	STEM SEAL	1	TFM™-1600	TFM-1600
8	GLAND PACKING	1	PTFE (SET)	PTFE (SET)
9	GLAND WASHER	1	RTFE	RTFE
10	GLAND BUSHING	1	AISI 304	AISI 304
11	BELLEVILLE WASHER	2	AISI 301	AISI 301
12	LOCK SADDLE	1	AISI 304	AISI 304
13	STEM NUT	1	AISI 304	AISI 304
14	STEM WASHER	1	AISI 304	AISI 304
15	HANDLE	1	AISI 304	AISI 304
16	HANDLE SLEEVE	1	VINYL	VINYL
17	BODY NUT	*	ASTM A194 GRADE 8	ASTM A194 GRADE 8
18	BODY STUD	*	ASTM A193 GRADE B8	ASTM A193 GRADE B8
19	STOP BOLT	1	AISI 304	AISI 304
20	STOP BOLT NUT	1	AISI 304	AISI 304
21	HANDLE LOCK	1	AISI 304	AISI 304
22	O-RING	1	FKM	FKM
23	ANTI-STATIC DEVICE	2	AISI 316	AISI 316
24	HANDLE NUT	1	AISI 304	AISI 304

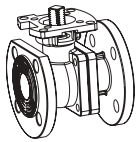
1/2" to 6"



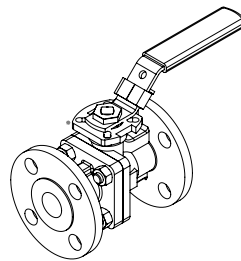
- * 1/2" - 2" Qty = 4 Pcs.
- * 2-1/2" - 4" Qty = 8 Pcs.
- * 6" Qty = 10 Pcs.



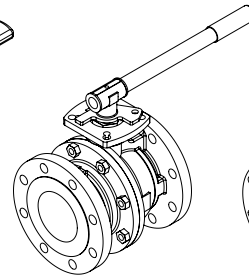
1/2", 3/4"



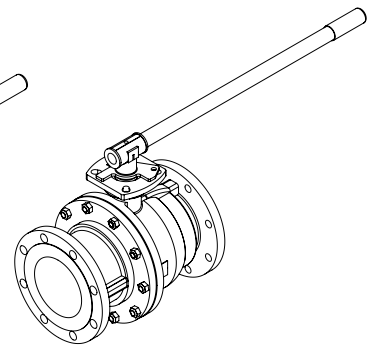
1"~2"



SIZES 1/2" - 2-1/2"



SIZE 3" - 4"
PIPE HANDLE



SIZE 6"
PIPE HANDLE

Dimensions (IN)

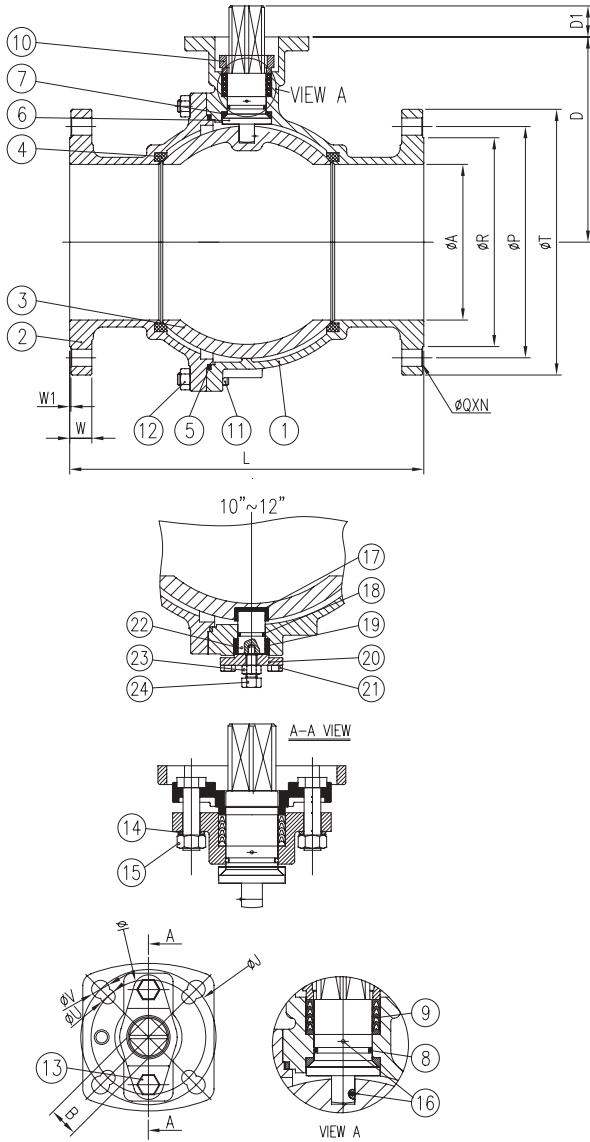
SIZE	A	B	C	D	E	F	I	J	L	N	Q	W	W1	Z1	Z2	AB	AC	AD	DD1	DD2	NN	ISO 5211	(LBS)
1/2"	0.59	0.433	6.50	1.84	0.39	3.30	1.38	2.38	4.26	3.50	0.63	0.44	0.06	0.26	0.28	1.84	1.26	0.55	1.654	1.969	4	F04/F05	4.0
3/4"	0.79	0.433	6.50	2.02	0.39	3.45	1.69	2.74	4.62	3.88	0.63	0.44	0.06	0.26	0.28	2.18	1.26	0.55	1.654	1.969	4	F04/F05	5.0
1"	0.98	0.433	6.50	2.31	0.41	3.81	2.00	3.12	5.00	4.25	0.63	0.44	0.06	0.26	0.28	2.21	1.26	0.55	1.654	1.969	4	F04/F05	7.0
1-1/2"	1.50	0.669	10.32	3.51	0.75	5.60	2.88	3.88	6.50	5.00	0.63	0.56	0.06	0.39	0.47	2.83	2.09	0.94	2.756	4.016	4	F07/F10	14.5
2"	1.97	0.669	10.32	3.80	0.75	5.78	3.62	4.75	7.02	6.00	0.75	0.63	0.06	0.39	0.47	3.38	2.09	0.94	2.756	4.016	4	F07/F10	20.5
2-1/2"	2.56	0.669	10.32	4.57	0.75	6.75	4.12	5.50	7.48	7.00	0.75	0.69	0.06	0.39	0.47	3.06	2.09	0.94	2.756	4.016	4	F07/F10	31.0
3"	3.15	0.866	14.37	5.22	0.91	8.05	5.00	6.00	8.01	7.50	0.75	0.75	0.06	0.47	0.55	4.01	2.55	1.18	4.016	4.921	4	F10/F12	41.0
4"	3.94	0.866	14.37	6.18	0.91	9.00	6.19	7.50	9.00	9.00	0.75	0.94	0.06	0.47	0.55	4.07	2.55	1.18	4.016	4.921	8	F10/F12	67.5
6"	5.91	1.063	29.53	8.28	1.12	12.50	8.50	9.50	15.50	11.0	0.87	1.00	0.06	0.55	0.71	7.00	2.97	1.41	4.921	5.511	8	F12/F14	145.0

Vtek Controls reserves the right to change product designs and dimensional specifications without notice.

Materials & Dimensions ANSI 150 (8" to 12"):

8" to 12"

Materials



NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	END CAP	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
3	BALL	1	ASTM A351 GRADE CF8M	ASTM A351 GRADE CF8M
4	SEAT	2	RTFE	RTFE
5	JOINT GASKET	1	PTFE	PTFE
6	STEM	1	ASTM A276 SS316	ASTM A276 SS316
7	STEM SEAL	1	RTFE	RTFE
8	STEM O-RING	1	FKM	FKM
9	STEM PACKING	1	PTFE (SET)	PTFE (SET)
10	GLAND	1	ASTM A193 GRADE CF8	ASTM A193 GRADE CF8
11	BODY BOLT	*	ASTM A193 GRADE B8	ASTM A193 GRADE B8
12	BODY BOLT NUT	*	ASTM A193 GRADE 8	ASTM A193 GRADE 8
13	GLAND BOLT	2	AISI 304	AISI 304
14	BOLT WASHER	2	AISI 304	AISI 304
15	BOLT NUT	2	AISI 304	AISI 304
16	ANTI-STATIC DEVICE	2	AISI 316	AISI 316
17	TRUNNION BEARING	1	50/50 STFE	50/50 STFE
18	TRUNNION O-RING	1	FKM	FKM
19	STEM PACKING	1	RTFE (SET)	RTFE (SET)
20	SUPPORT GLAND	1	AISI 304	AISI 304
21	TRUNNION GLAND BOLT	4	AISI 304	AISI 304
22	SUPPORT GLAND PIN	1	AISI 316	AISI 316
23	SET NUT	1	AISI 304	AISI 304
24	TUNING SCREW	1	AISI 304	AISI 304

MATERIALS LISTED ABOVE ARE FOR THE STANDARD CONFIGURATION, OTHER MATERIALS ARE AVAILABLE UPON REQUEST. CONSULT VTEK CONTROLS FOR ADDITIONAL OPTIONS.

* FOR 8"=12 PCS OF BOLTS AND BOLT NUTS

* FOR 10"=16 PCS OF BOLTS AND BOLT NUTS

* FOR 12"=24 PCS OF BOLTS AND BOLT NUTS

Dimensions (IN)

SIZE	Ø A	B	D	D1	ØI	ØJ	L	N	ØP	ØQ	ØR	ØT	W	W1	ØU	ØV	ISO 5211	(LBS)
8"	7.91	1.417	10.43	1.57	5.512	6.496	18.00	8	11.75	0.87	10.62	13.50	1.12	0.06	0.71	0.87	F14/F16	208
10"	9.92	1.811	11.81	1.77	—	6.496	21.00	12	14.25	1.00	12.76	16.00	1.19	0.06	—	0.87	F16	447
12"	11.93	1.811	13.39	1.77	—	6.496	24.00	12	17.00	1.00	15.00	19.00	1.25	0.06	—	0.87	F16	750

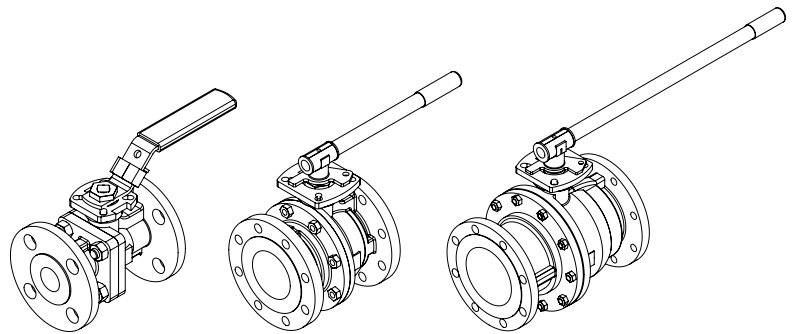
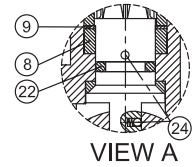
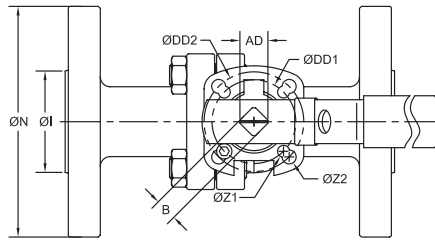
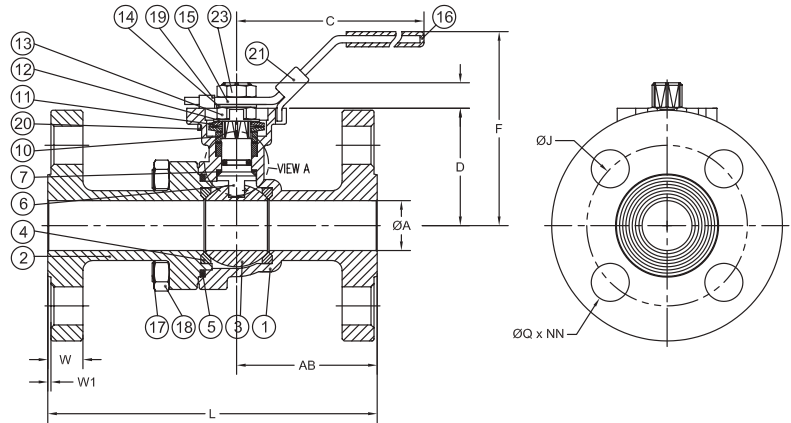
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Materials & Dimensions ANSI 300 (1/2" to 6"):

Materials

NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	END CAP	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
3	BALL	1	ASTM A351 GRADE CF8M	ASTM A351 GRADE CF8M
4	SEAT	2	RTFE	RTFE
5	JOINT GASKET	1	GRAPHITE	GRAPHITE
6	STEM	1	ASTM A276 SS316	ASTM A276 SS316
7	STEM SEAL	1	TFM™-1600	TFM™-1600
8	GLAND PACKING	1	GRAPHITE	GRAPHITE
9	GLAND WASHER	1	RTFE	RTFE
10	GLAND BUSHING	1	AISI 304	AISI 304
11	BELLEVILLE WASHER	2	AISI 301	AISI 301
12	LOCK SADDLE	1	AISI 304	AISI 304
13	STEM NUT	1	AISI 304	AISI 304
14	STEM WASHER	1	AISI 304	AISI 304
15	HANDLE	1	AISI 304	AISI 304
16	HANDLE SLEEVE	1	VINYL	VINYL
17	BODY STUD	*	ASTM A193 GRADE B8M	ASTM A193 GRADE B7M
18	BODY NUT	*	ASTM A194 GRADE 8M	ASTM A194 GRADE 2HM
19	STOP BOLT	1	AISI 304	AISI 304
20	STOP BOLT NUT	1	AISI 304	AISI 304
21	HANDLE LOCK	1	AISI 304	AISI 304
22	STEM O-RING	1	FKM	FKM
23	HANDLE NUT	1	AISI 304	AISI 304
24	ANTI-STATIC DEVICE	2	AISI 316	AISI 316

* 1/2" THRU 2" QTY = 4 PCS
 * 2-1/2" THRU 4" QTY = 8 PCS
 * 6" QTY = 12 PCS



BENT HANDLE
SIZES 1/2" - 2-1/2"

PIPE HANDLE
SIZES 3" - 4"

PIPE HANDLE
SIZE 6"

DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	I	J	L	N	Q	W	W1	Z1	Z2	AB	AC	AD	DD1	DD2	NN	ISO 5211	LBS
1/2"	0.59	0.433	6.50	1.92	0.39	3.40	1.38	2.62	5.50	3.75	0.63	0.56	0.06	0.26	0.28	2.32	1.17	0.55	1.654	1.969	4	F04/F05	5
3/4"	0.79	0.433	6.50	2.50	0.41	4.04	1.69	3.25	6.00	4.62	0.75	0.62	0.06	0.26	0.28	2.59	1.17	0.55	1.654	1.969	4	F04/F05	8
1"	0.98	0.433	6.50	2.50	0.41	4.06	2.00	3.50	6.50	4.88	0.75	0.69	0.06	0.26	0.28	2.78	1.17	0.55	1.654	1.969	4	F04/F05	10.5
1-1/2"	1.50	0.669	10.32	3.51	0.75	5.41	2.88	4.50	7.50	6.12	0.87	0.81	0.06	0.39	0.47	3.13	2.08	0.94	2.756	4.016	4	F07/F10	22
2"	1.97	0.669	10.32	3.80	0.75	5.87	3.62	5.00	8.50	6.50	0.75	0.88	0.06	0.39	0.47	3.81	2.08	0.94	2.756	4.016	8	F07/F10	28.5
2-1/2"	2.56	0.669	10.32	4.57	0.75	6.44	4.12	5.88	9.50	7.50	0.87	1.00	0.06	0.39	0.47	4.20	2.08	0.94	2.756	4.016	8	F07/F10	42
3"	3.15	0.866	14.37	5.22	0.91	8.10	5.00	6.62	11.12	8.25	0.87	1.12	0.06	0.47	0.55	5.10	2.55	1.17	4.016	4.921	8	F10/F12	59
4"	3.94	0.866	14.37	6.18	0.91	8.70	6.19	7.88	12.00	10.00	0.87	1.25	0.06	0.47	0.55	5.50	2.55	1.17	4.016	4.921	8	F10/F12	96
6"	5.91	1.063	29.53	8.28	1.12	13.00	8.50	10.62	15.87	12.50	0.87	1.44	0.06	0.55	0.71	7.30	3.07	1.40	4.921	5.512	12	F12/F14	213

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V-Ball Control & Options:

Series 2F Performance V-Port Control Ball Valves

V-Port ball valves are used to control the flow. It delivers a precise flow control while retaining the durability and tight shutoff characteristics of a ball valve, excellent for regulating service. It is a compact and economical solution compared to traditional systems.

Available in 15°, 30°, 60°, and 90° V-notch configurations. V-Port ball valves feature an integrated V-notch machined directly into the ball, not a seat insert, this design not only improves flow characteristics but also eliminates the need for frequent seat replacement.

Options:

Spring Handle



Fugitive Emissions



V-Ball *



Ordering:

Series	Port	Body Material	Ball	Stem	End Connection	Size
2F F-2F **	FP - Full Port V1 - V-port 15 Deg V3 - V-port 30 Deg V6 - V-port 60 Deg V9 - V-port 90 Deg	S - Stainless Steel C - Carbon Steel L - 316L St. Steel F - Duplex St. St. M - Monel H - Hastelloy A - Alloy 20	S - 316 SS L - 316 L M - Monel I - Inconel D - Duplex St. St. A - Alloy 20	S - 316 SS L - 316 L M - Monel P - 17-4PH I - Inconel D - Duplex St. St. A - Alloy 20	F1 - ANSI. 150 RF F3 - ANSI. 300 RF	0050 - 1/2" 0075 - 3/4" 0100 - 1" 0125 - 1-1/4" 0150 - 1-1/2" 0200 - 2" 0250 - 2-1/2" 0300 - 3" 0400 - 4" 0600 - 6" 0800 - 8" 1000 - 10" 1200 - 12"
Seats	Packing	Body Seal	Operator	Options	Stem O-ring	
R - RTFE S - 50/50 STFE C - CTFE T - TFM™-1600 U - UHMWPE M - Metal Seat	P - PTFE T - TFM™-1600 U - UHMWPE G - GRAPHITE	R - RTFE P - PTFE C - CTFE T - TFM™-1600 U - UHMWPE G - GRAPHITE	Blank - Bare Stem L - Locking Handle G - Gear Operated O - Oval Handle S - Spring Return Handle	Blank - No Options V - Vented Ball O - Oxygen Cleaned F - Fugitive Emissions Bonnet	Blank - Viton Standard 4 - Kalrez E - EPDM S - Silicone	

* V-Ball = Sizes 1/2" thru 6"

** F-2F = Firesafe Design

Vtek
Controls™

Vtek Controls, LLC reserves the right to make revisions to its products, specifications, literature, and related information without notice. Please visit our Website for the latest information and updates.

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