



TECHNICAL DATASHEET

ASME DESIGN

**HIGH CV VALVE WITH CAVITY FREE DESIGN THAT PROVIDES ZERO
LEAKAGE SHUTOFF**

**CRANE® FK-TrieX™
Full Port Triple Offset Isolation
Valves For Severe Service**

CRANE®

v in www.cranecpe.com

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Features and Benefits

CRANE® FK-TRIEXTM Full Port Triple Offset Isolation Valves For Severe Service

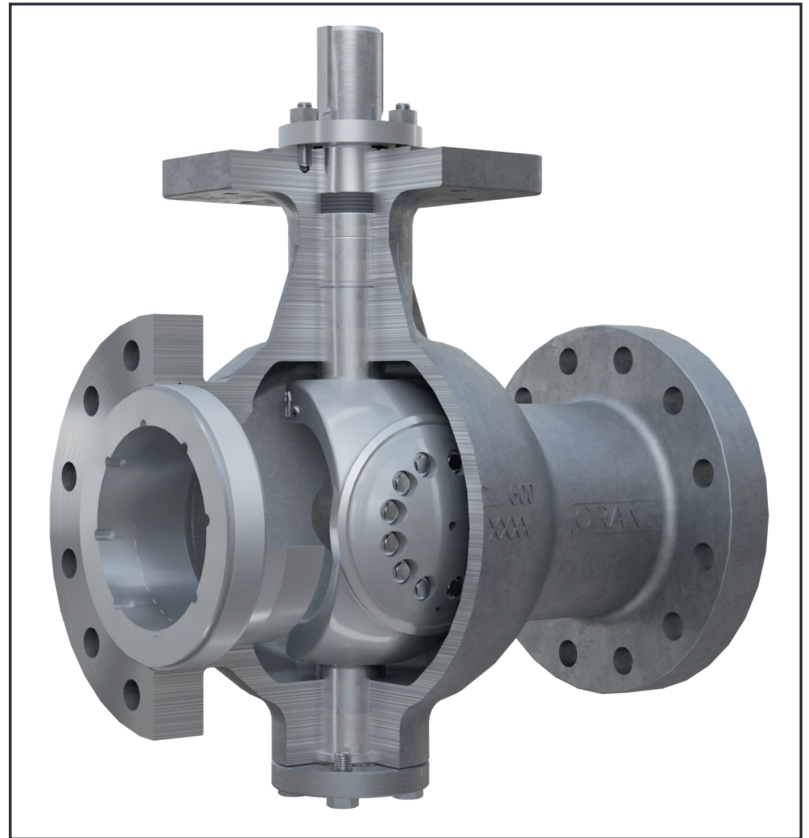
CRANE® FK-TrieXTM an innovative quarter turn technology that provides unparalleled reliability with it's bidirectional shutoff, unobstructed flow and cavity free design, at low overall cost.

STANDARD DESIGN

- Zero Leakage per API 598
- Dimensional compliance to API6D & Piggable per section 6.2.1
- Cavity free self cleaning design
- Fugitive Emissions Control per ISO 15848-1 AH CO2 & API 641
- Fire Safe Design per API 607
- ASME B16.10 Double Flanged Long - Ball Valve
- Vacuum Rated
- ISO 5211 Integral Mounting Flange
- Pressure Tight Bearing Design

OPTIONAL DESIGN

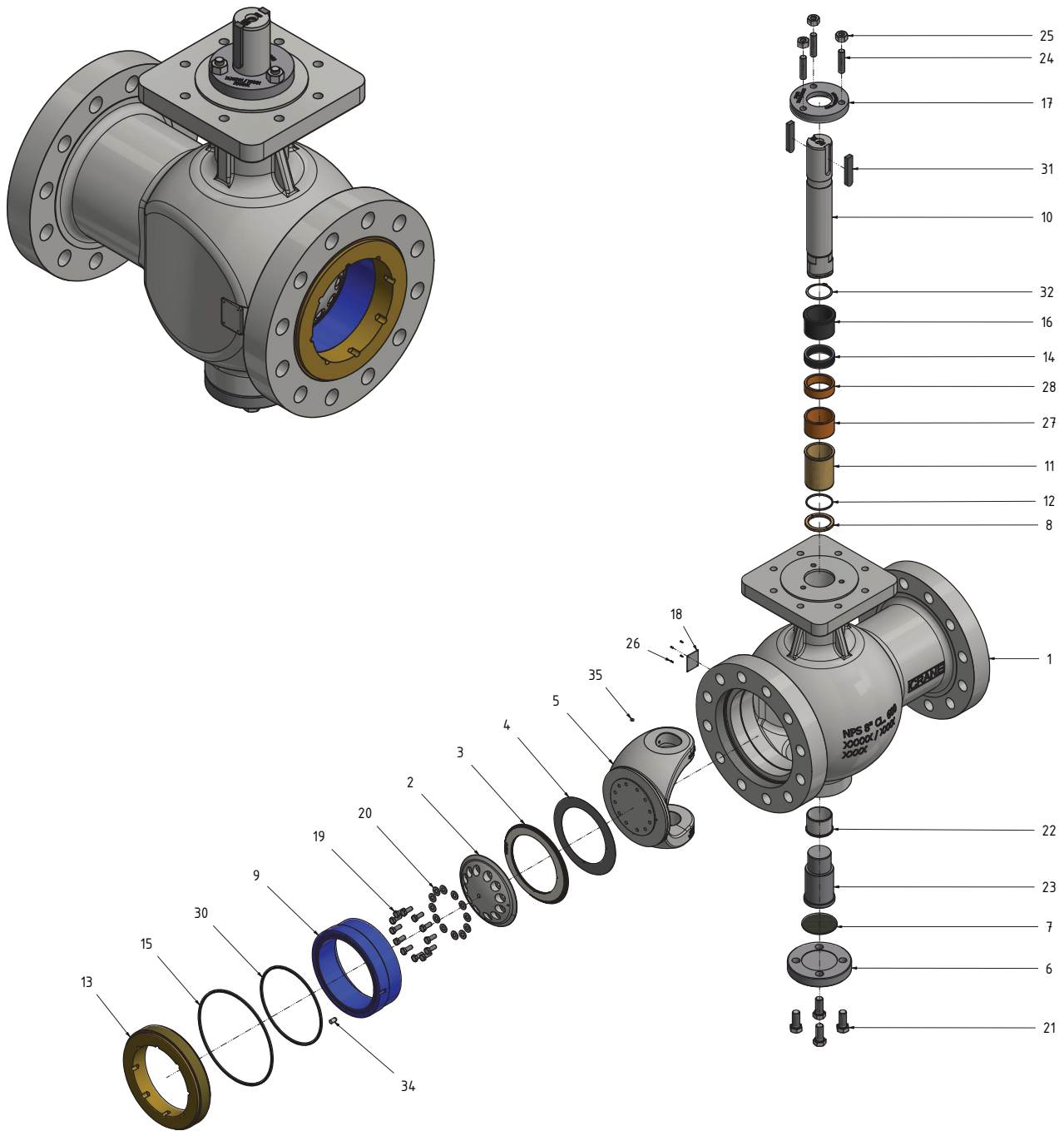
- Heating Jacket
- Design compliant to NACE MR0175 and NACE MR0103
- High temperature Graphite packing
- Single packing with Pressure Tight Bearing & Monitoring port
- Bearing protector for bottom stem
- Welded bottom cover for hazardous & toxic media
- Capping valve design



Product Range

Size	Class	Body Design	Face-to-Face Dimension
3"-24" DN 150-900	Class 150-600	Single Piece Body Design Double Flanged Long	ASME B16.10 Long Pattern (Ball Valve)

Exploded View



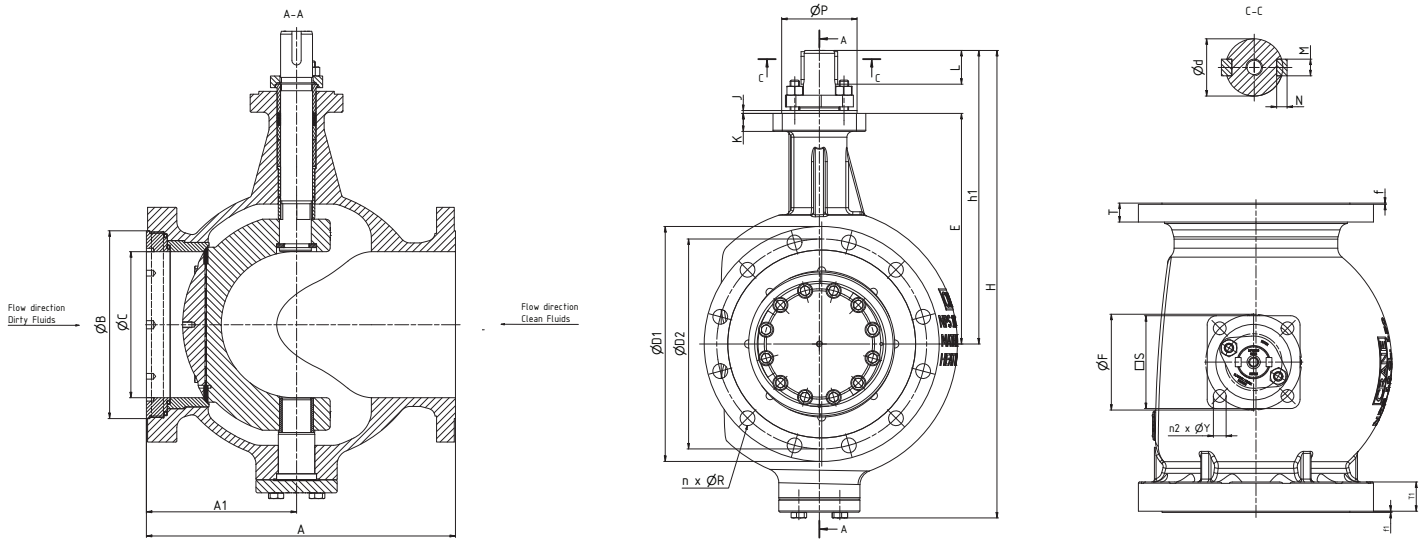
Materials of Construction

Item	Description	Carbon Steel max. 700°F / 371°C*		Stainless Steel max. 700°F / 371°C*	
		ASTM	DIN	ASTM	DIN
1	Body	A216 Gr.WCB	1.0619	A351 Gr CF8M	1.4408
2	Seal Retainer Ring	A515 Gr.60	1.0425	A240 Gr.321	1.4541
3	Laminated seal	Titanium Gr. 5 / Graphite			
4	Seal gasket	1.404 Rainforced Graphite			
5	Disc	A216 Gr.WCB	1.0619	A351 Gr CF8M	1.4408
6	Cover	A516 Gr.60/A105	1.0425	A240 Gr.321	1.4541
7	Cover Gasket	Graphite			
8	Split Ring	A182 Gr. F51	1.4462	A182 Gr. F51	1.4462
9	Triex Ring	A105 / A216 Gr. WCB	1.0482 / 1.0619	A182-F316 / A351 Gr CF8M	1.4408
10	Shaft	A564 Gr. 630 (17-4 PH)	1.4542	A564 Gr. 630 (17-4 PH)	1.4542
11	Bearing	A582 Gr.303 coated	1.4305 coated	A582 Gr.303 coated	1.4305 coated
12	Bearing Protector	Graphite			
13	Insert	A105 / A216 Gr. WCB	1.0482 / 1.0619	A182-F316/ A351 Gr CF8M	1.4408
14	Packing	Graphite			
15	C-Seal	Inconel 718	Inconel 718	Inconel 718	Inconel 718
16	Gland	A582 Gr.303	1.4305	A582 Gr.303	1.4305
17	Gland Flange	A516 Gr.60	1.0425	A240 Gr.321	1.4541
18	Name Plate	A240 Gr.304	1.4301	A240 Gr.304	1.4301
19	Retainer Screw	A193 Gr.B8	A4-70	A193 Gr.B8	A4-70
20	Spring Washer	A4/ASTM 316			
21	Cover Screws	A193 Gr.B8	A4-70	A193 Gr.B8	A4-70
22	Disc bearing	A582 Gr. 303 coated	1.4305 coated	A582 Gr. 303 coated	1.4305 coated
23	Bottom shaft	A564 Gr. 630 (17-4 PH)	1.4542	A564 Gr. 630 (17-4 PH)	1.4542
24	Gland Stud	A193 Gr.B8	A4-70	A193 Gr.B8	A4-70
25	Gland Nut	A194 Gr.8	A4-70	A194 Gr.8	A4-70
26	Notched Nail	A29,Gr1012 Zinc plated	A4-70	A29,Gr1012 Zinc plated	A4-70
27	Upper Spacer	A582 Gr.304	1.4305	A582 Gr.304	1.4305
28	Lower Spacer	A582 Gr.304	1.4305	A582 Gr.304	1.4305
30	C-Seal	Inconel 718	Inconel 718	Inconel 718	Inconel 718
31	Drive key	A194 Gr.2	1.1191	A194 Gr.2	1.1191
32	Circlip	1.4310/1.4122/ ASTM 301			
34	Dowel Pin	SS316	1.4401	SS316	1.4401
35	Threaded Pin	A193 Gr.B8	A4-70	A193 Gr.B8	A4-70

* consult factory for higher temperatures

**Coated:- Electroplated with PTFE dispersion chem. Ni. Base

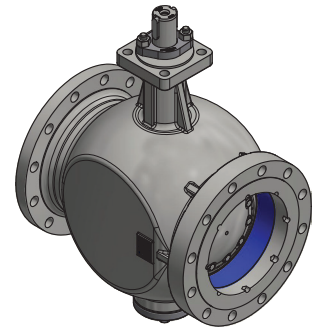
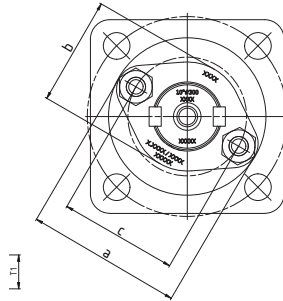
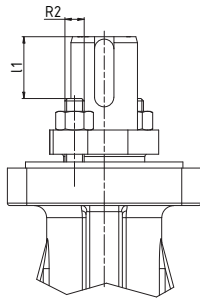
Dimensions and Weights Class 150



DN	NPS	Dimensions (inch)														
		A	ØC	H	h1	E	ØD1	ØD2	n	ØR	ØB	T	f	T1	f1	A1
100	4"	9	3.9	19	12	9	9	8	8	0.75	6	0.9	0.08	1.3	0.08	4.7
150	6"	16	5.9	24	16	12	11	10	8	0.87	8	1.0	0.08	1.5	0.08	6.4
200	8"	18	7.9	26	17	13	14	12	8	0.88	11	1.1	0.08	1.7	0.08	8.4
250	10"	21	9.9	32	20	16	16	14	12	1.00	13	1.2	0.08	2.0	0.08	10.2
300	12"	24	12	37	23	17	19	17	12	1.00	15	1.3	0.08	2.1	0.08	12.0
350	14"	27	13	42	26	20	21	19	12	1.12	16	1.4	0.08	2.3	0.08	13.1
400	16"	30	15	44	27	21	23	21	16	1.13	19	1.5	0.08	2.4	0.08	13.8
450	18"	34	17	48	29	22	25	23	16	1.26	21	1.6	0.08	2.4	0.08	15.7
500	20"	36	19	52	31	24	28	25	20	1.26	23	1.7	0.08	2.5	0.08	18.4
600	24"	42	23	64	39	30	32	30	20	1.38	27	1.9	0.08	2.9	0.08	20.7

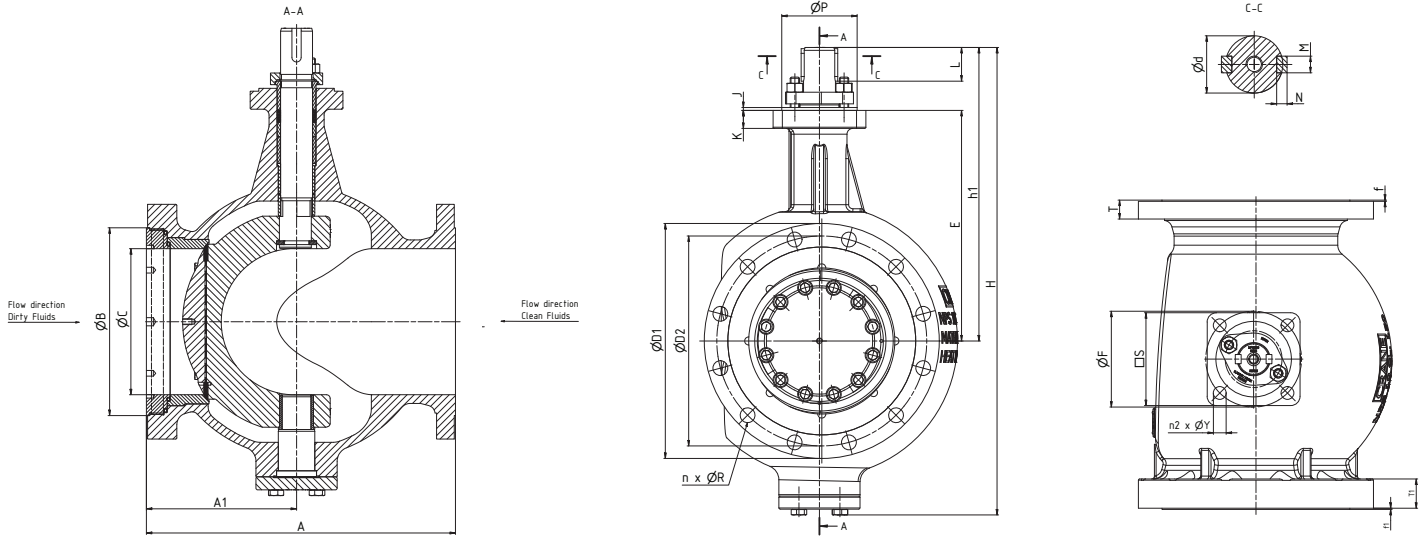
DN	NPS	Dimensions (inch)												
		ISO 5211	S(sq.)	ØP	ØF	n2	ØY	K	J	Ød	L	M	N	
100	4"	F16	6.7	5.1	6.5	4	0.9	1.4	0.2	1.8	2.0	0.6	0.4	
150	6"	F16	6.7	5.1	6.5	4	0.9	1.4	0.2	1.8	2.0	0.6	0.4	
200	8"	F16	6.7	5.1	6.5	4	0.9	1.4	0.2	1.8	2.0	0.6	0.4	
250	10"	F16	6.3	5.1	6.5	4	0.9	1.2	0.2	2.2	2.3	0.6	0.4	
300	12"	F25	11	8	10	8	0.7	1.3	0.2	2.6	2.8	0.7	0.4	
350	14"	F25	11	8	10	8	0.7	1.3	0.2	3.0	2.8	0.8	0.5	
400	16"	F25	11	8	10	8	0.7	1.3	0.2	3.0	3.1	0.8	0.5	
450	18"	F30	13	9	12	8	0.8	1.5	0.2	3.5	4.1	1.0	0.5	
500	20"	F30	13	9	12	8	0.8	1.5	0.2	3.5	4.1	1.0	0.5	
600	24"	F35	16	10	14	8	1.3	1.9	0.2	4.3	6.3	1.1	0.6	

Dimensions and Weights Class 150



DN	NPS	Dimensions (inch)					Weights (lb)
		a	b	c	l1	R2	
100	4"	5.0	3.3	3.7	1.5	9/16-12 UNC	104
150	6"	5.1	3.5	4.0	1.7	5/8-11 UNC	191
200	8"	5.1	3.5	4.0	1.8	5/8-11 UNC	330
250	10"	5.1	3.5	3.9	2.0	5/8-11 UNC	506
300	12"	6.7	4.7	5.1	2.2	3/4-10 UNC	847
350	14"	7.8	5.5	5.9	2.2	1-8 UNC	1136
400	16"	7.8	5.5	5.9	2.2	1-8 UNC	1401
450	18"	8.9	6.7	6.9	3.7	1-8 UNC	1857
500	20"	8.9	6.7	6.9	3.7	1-8 UNC	2309
600	24"	10.2	-	8.0	5.3	1-1/8-8 UNC	3931

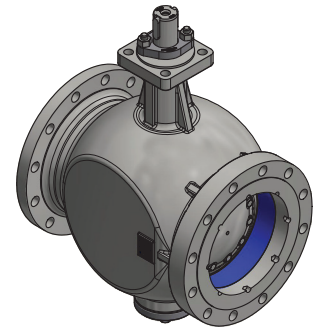
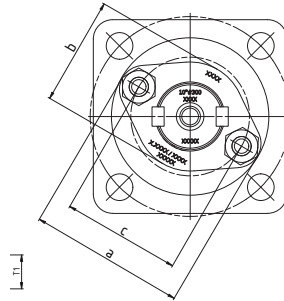
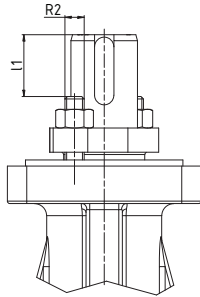
Dimensions and Weights Class 150



DN	NPS	Dimensions (mm)														
		A	ØC	H	h1	E	ØD1	ØD2	n	ØR	ØB	T	f	T1	f1	A1
100	4"	229	100	471	310	224	230	190.5	8	19	157	22	2	32	2	120.1
150	6"	394	150	597	395	299	280	241	8	22	216	26	2	39	2	163
200	8"	457	201	663	423.74	327	345	299	8	22	270	29	2	44	2	213
250	10"	533	252	806	506	398	405	362	12	25	324	31	2	51	2	259
300	12"	610	304.64	931.41	572	435	485	432	12	25	381	32	2	52	2	306
350	14"	686	334	1059	659	506	535	476	12	29	413	35	2	58	2	333
400	16"	762	372.81	1113	680	527	595	540	16	29	470	37	2	61	2	352
450	18"	864	436	1223	740	567	635	578	16	32	533	40	2	61	2	400
500	20"	914	487	1333	800	607	700	635	20	32	584	43	2	63	2	468
600	24"	1067	589	1621	995	774	815	749	20	35	692	48	2	74	2	527

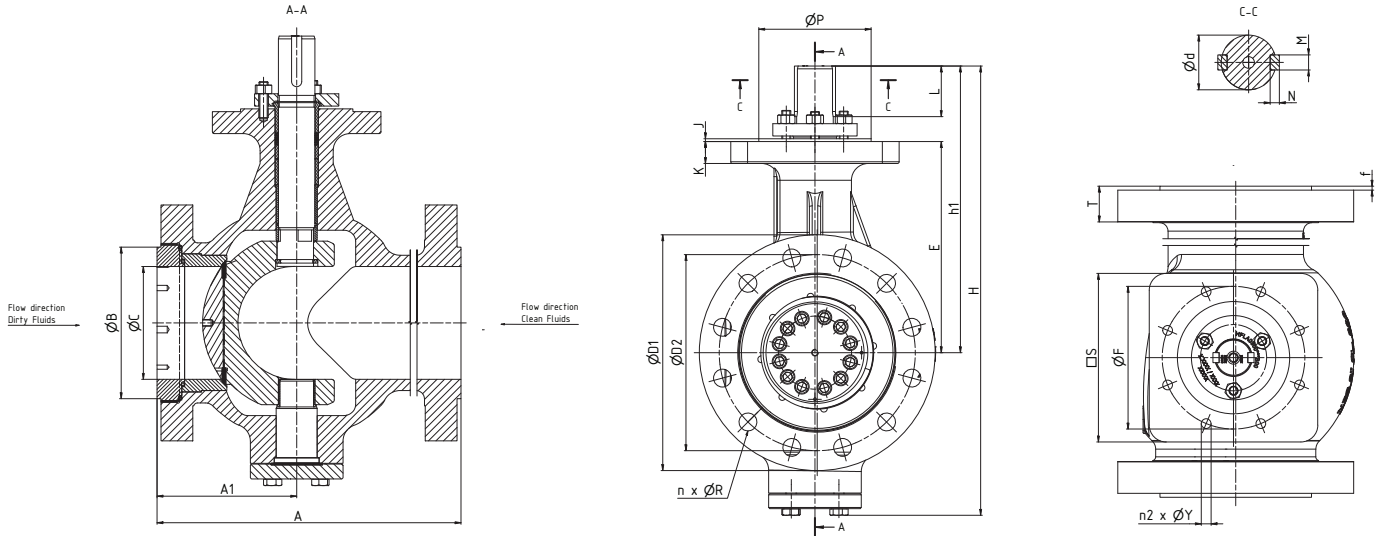
DN	NPS	Dimensions (mm)											
		ISO 5211	S (sq.)	ØP	ØF	n2	ØY	K	J	Ød	L	M	N
100	4"	F16	160	130	165	4	21	30	5	40	46	12	8
150	6"	F16	170	130	165	4	22	35	5	45	52	14	9
200	8"	F16	170	130	165	4	22	35	5	45	52	14	9
250	10"	F16	160	130	165	4	22	31	5	55	58	16	10
300	12"	F25	270	200	254	8	17.5	34	5	65	72	18	11
350	14"	F25	280	200	254	8	17.5	33	5	75	72	20	12
400	16"	F25	280	200	254	8	17	33	5	75	80	20	12
450	18"	F30	330	230	298	8	21	38	5	90	103	25	12
500	20"	F30	330	230	298	8	21	38	5	90	103	25	12
600	24"	F35	410	260	356	8	33	49	5	110	160	28	16

Dimensions and Weights Class 150



DN	NPS	Dimensions (mm)					Weights (kg)
		a	b	c	l1	R2	
100	4"	126	84	94	37	9/16-12 UNC	47
150	6"	129	90	102	44	5/8-11 UNC	87
200	8"	129	90	102	45	5/8-11 UNC	150
250	10"	129	90	98	51	5/8-11 UNC	230
300	12"	170	120	130	56	3/4-10 UNC	384
350	14"	198	140	150	56	1-8 UNC	515
400	16"	198	140	150	56	1-8 UNC	636
450	18"	225	170	175	95	1-8 UNC	843
500	20"	225	170	175	95	1-8 UNC	1048
600	24"	258	-	204	136	1-1/8-8 UNC	1783

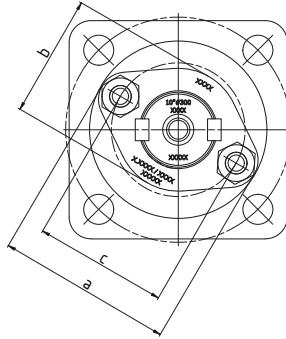
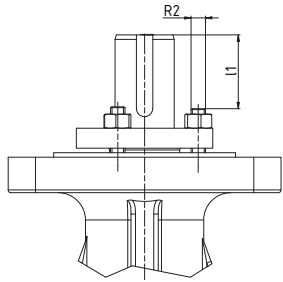
Dimensions and Weights Class 300



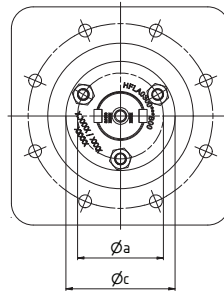
DN	NPS	Dimensions (inch)												
		A	$\varnothing C$	H	h1	E	$\varnothing D_1$	$\varnothing D_2$	n	$\varnothing R$	$\varnothing B$	T	f	A1
80	3"	11	3	17	11	8	8	7	8	0.9	5	1.1	0.08	5
100	4"	12	4	18	12	9	10	8	8	0.9	6	1.3	0.08	5
150	6"	16	6	23	15	12	13	11	12	0.9	9	1.5	0.08	6
200	8"	20	8	26	17	13	15	13	12	1.0	11	1.7	0.08	8
250	10"	22	10	32	20	16	18	15	16	1.1	13	1.9	0.08	10
300	12"	26	12	37	23	17	20	18	16	1.3	15	2.0	0.08	12
350	14"	30	13	42	26	20	23	20	20	1.3	16	2.1	0.08	13
400	16"	33	15	44	27	21	26	23	20	1.4	18	2.3	0.08	14
450	18"	36	17	51	31	25	28	25	24	1.4	21	2.4	0.08	16
500	20"	39	19	53	32	26	31	27	24	1.4	23	2.5	0.08	18
600	24"	45	23	57	34	25	36	32	24	1.7	27	2.8	0.08	21

DN	NPS	Dimensions (inch)											
		ISO 5211	S(sq.)	$\varnothing P$	$\varnothing F$	n2	$\varnothing Y$	K	J	$\varnothing d$	L	M	N
80	3"	F14	5.1	3.9	5.5	4	0.7	0.7	0.2	1.4	1.6	0.4	0.3
100	4"	F16	6.3	5.1	6.5	4	0.8	1.2	0.2	1.6	1.8	0.5	0.3
150	6"	F16	6.7	5.1	6.5	4	0.9	1.4	0.2	1.8	2.0	0.6	0.4
200	8"	F17	6.3	5.1	6.5	4	0.9	1.4	0.2	1.8	2.0	0.6	0.4
250	10"	F18	6.3	5.1	6.5	4	0.9	1.2	0.2	2.2	2.3	0.6	0.4
300	12"	F19	10.6	7.9	10.0	8	0.7	1.3	0.2	2.6	2.8	0.7	0.4
350	14"	F20	11.0	7.9	10.0	8	0.7	1.3	0.2	2.8	2.8	0.8	0.5
400	16"	F21	11.0	7.9	10.0	8	0.7	1.3	0.2	3.0	3.1	0.8	0.5
450	18"	F22	12.6	9.1	11.7	8	0.8	1.5	0.2	3.5	3.7	1.0	0.5
500	20"	F23	13.0	10.2	11.7	8	0.9	1.5	0.2	3.5	3.7	1.0	0.5
600	24"	F24	16.3	10.2	14.0	8	1.2	1.7	0.2	4.3	6.3	1.1	0.6

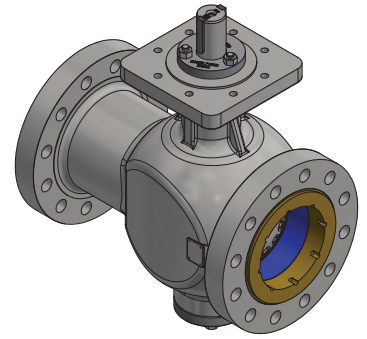
Dimensions and Weights Class 300



Sizes 6"-20"

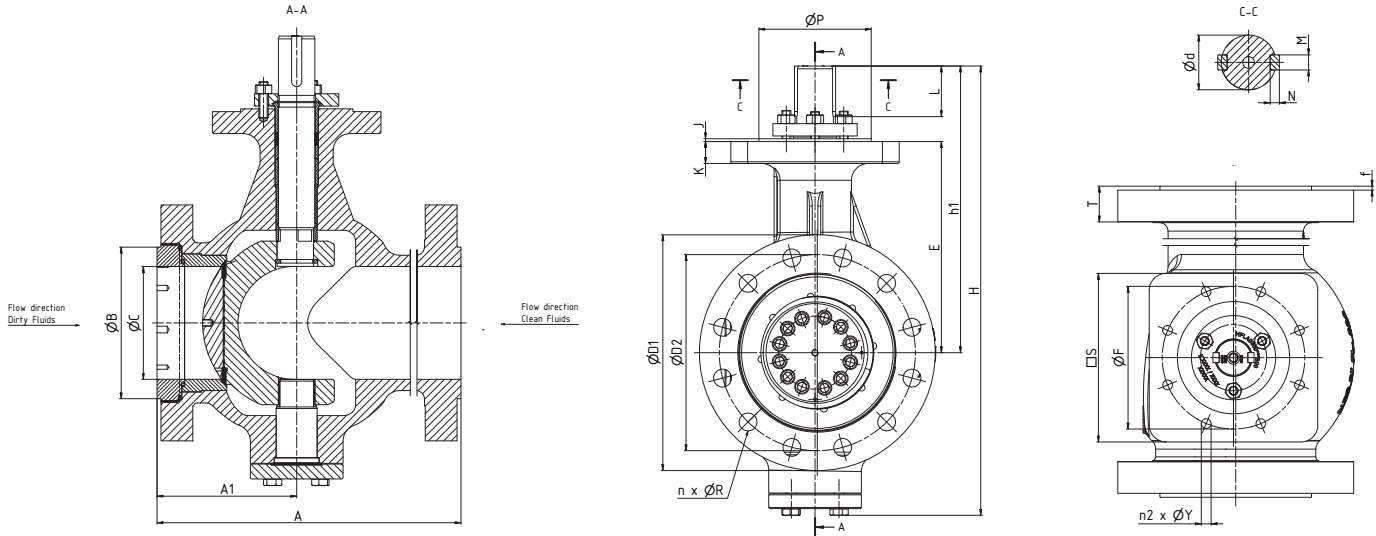


Sizes 24"-36"



DN	NPS	Dimensions (inch)					Weights (lb)
		a/Øa	b	c/Øc	l1	R2	
80	3"	3.9	2.6	2.9	1.5	9/16-12 UNC	93
100	4"	5.0	3.3	3.7	1.3	9/16-12 UNC	132
150	6"	5.1	3.5	4.0	1.7	5/8-11 UNC	230
200	8"	5.1	3.5	4.0	1.7	5/8-11 UNC	398
250	10"	5.1	3.5	3.9	2.0	5/8-11 UNC	615
300	12"	6.7	4.7	5.1	2.2	3/4-10 UNC	986
350	14"	7.8	5.5	5.9	1.9	1-8 UNC	1368
400	16"	7.8	5.5	5.9	2.0	1-8 UNC	1770
450	18"	8.9	6.7	6.9	2.0	1-8 UNC	2484
500	20"	8.9	6.7	6.9	2.0	1-8 UNC	3142
600	24"	8.3	-	6.4	6.0	1-8 UNC	6226

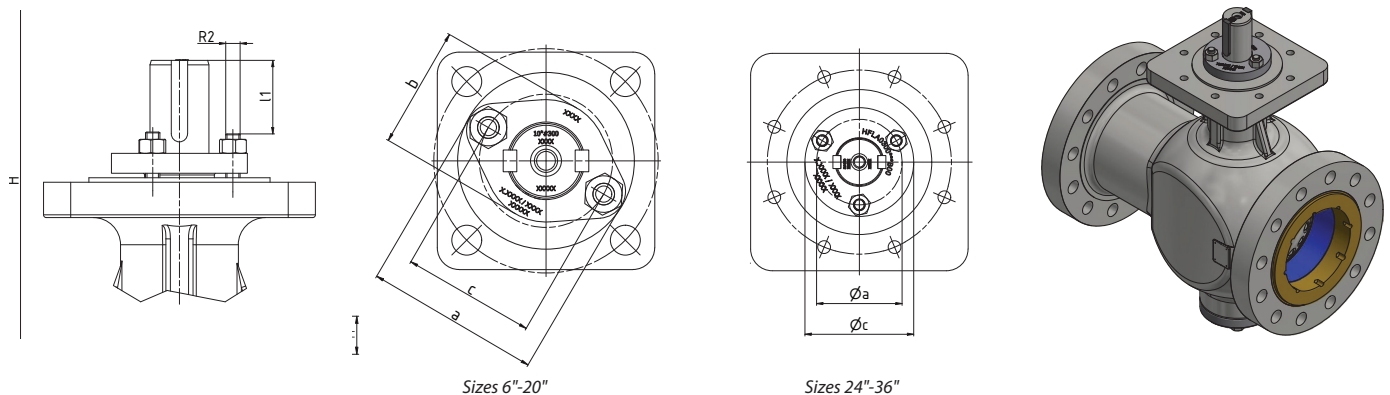
Dimensions and Weights Class 300



DN	NPS	Dimensions (mm)												
		A	Ø C	H	h1	E	Ø D1	Ø D2	n	Ø R	Ø B	T	f	A1
80	3"	283	74	439	289	210	210	168.3	8	22.5	127	29	2	118
100	4"	305	100	466	305	224	255	200	8	22.5	157	32	2	135
150	6"	403	152	596	393	299	320	270	12	22	216	37	2	163
200	8"	502	203	662	423	329	380	330	12	25	270	43	2	203
250	10"	568	254	807	507	399	445	387	16	29	324	48	2	259
300	12"	648	305	931	572	435	520	451	16	32	381	51	2	316
350	14"	762	336	1059	659	506	585	514	20	32	413	54	2	323
400	16"	838	387	1127	687	534	650	572	20	35	470	58	2	364
450	18"	914	432	1290	777	625	710	629	24	35	533	61	2	414
500	20"	991	487	1356	814	662	775	686	24	35	584	64	2	451
600	24"	1143	589	1443	860	647	915	813	24	42	692	72	2	526

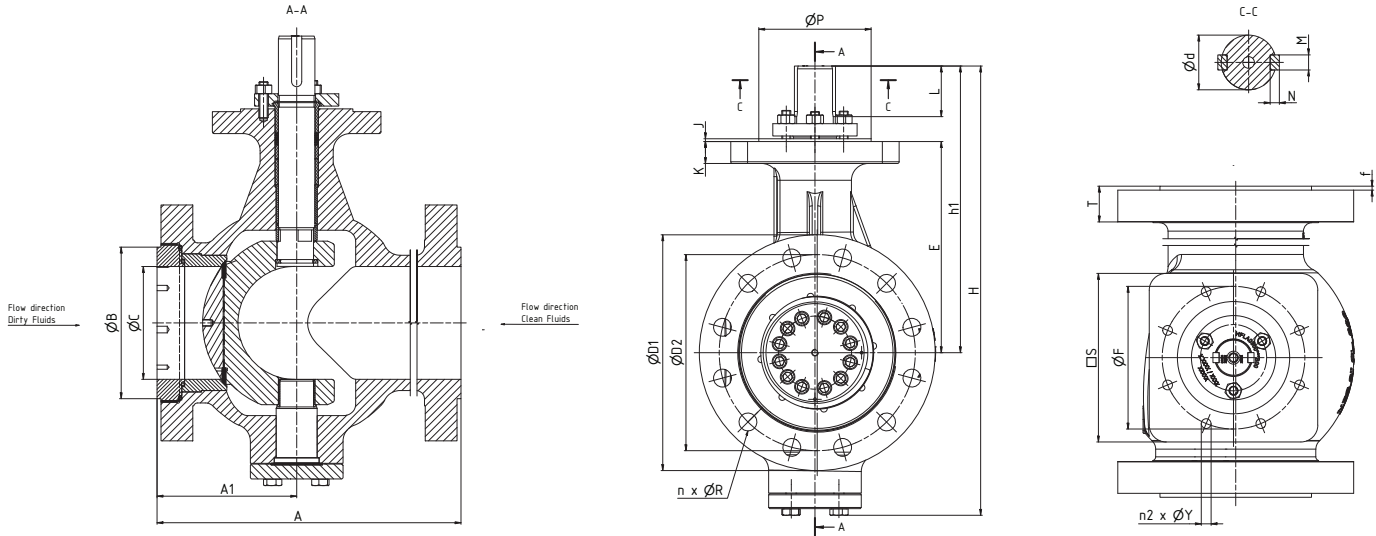
DN	NPS	Dimensions (mm)											
		ISO 5211	S (sq.)	Ø P	Ø F	n2	Ø Y	K	J	Ø d	L	M	N
80	3"	F14	130	100	140	4	17.5	19	5	35	40	10	8
100	4"	F16	160	130	165	4	21	30	5	40	46	12	8
150	6"	F16	170	130	165	4	22	35	5	45	52	14	9
200	8"	F16	160	130	165	4	22	35	5	45	52	14	9
250	10"	F16	160	130	165	4	22	31	5	55	58	16	10
300	12"	F25	270	200	254	8	17.5	34	5	65	72	18	11
350	14"	F25	280	200	254	8	17.5	33	5	70	72	20	12
400	16"	F25	280	200	254	8	17	33	5	75	80	20	12
450	18"	F30	320	230	298	8	21	38	5	90	94	25	12
500	20"	F30	330	260	298	8	22	38	5	90	94	25	12
600	24"	F35	415	260	356	8	31	44	5	110	160	28	16

Dimensions and Weights Class 300



DN	NPS	Dimensions (mm)					Weights (kg)
		a/Øa	b	c/Øc	l1	R2	
80	3"	98	65	74	37	9/16-12 UNC	42
100	4"	126	84	94	32	9/16-12 UNC	60
150	6"	129	90	102	42	5/8-11 UNC	105
200	8"	129	90	102	44	5/8-11 UNC	181
250	10"	129	90	98	52	5/8-11 UNC	279
300	12"	170	120	130	56	3/4-10 UNC	447
350	14"	198	140	150	49	1-8 UNC	621
400	16"	198	140	150	52	1-8 UNC	803
450	18"	225	170	175	52	1-8 UNC	1127
500	20"	225	170	175	52	1-8 UNC	1426
600	24"	210	-	162	152	1-8 UNC	2825

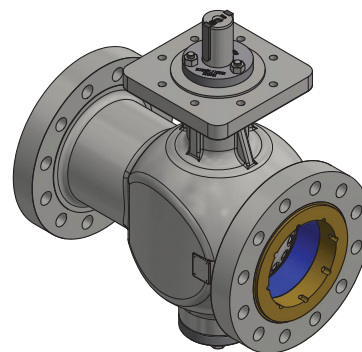
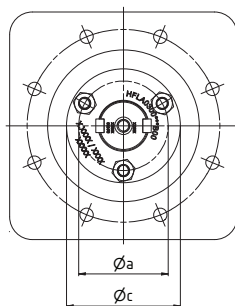
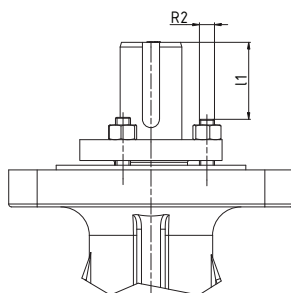
Dimensions and Weights Class 600



DN	NPS	Dimensions (inch)												
		A	$\varnothing C$	H	h1	E	$\varnothing D1$	$\varnothing D2$	n	$\varnothing R$	$\varnothing B$	T	f	A1
80	3"	14	3	18	12	8	8	7	8	0.9	5.0	1.6	0.28	5
100	4"	17	4	22	15	10	11	9	8	1	6.2	1.9	0.28	6
150	6"	22	6	25	16	12	14	11	12	1.1	8.5	2.0	0.28	8
200	8"	26	8	31	20	15	17	14	12	1.3	10.6	2.2	0.28	10
250	10"	31	10	37	24	18	20	17	16	1.4	13	2.6	0.28	12
300	12"	33	12	41	26	20	22	19	20	1.4	15	2.7	0.28	13
350	14"	35	13	45	27	20	24	21	20	1.5	16	2.8	0.28	13
400	16"	39	15	49	31	23	27	24	20	1.6	19	3.1	0.28	15
450	18"	43	17	55	35	26	29	26	20	1.8	21	3.3	0.28	18
500	20"	47	19	60	37	28	32	29	24	1.7	23	3.5	0.28	19
600	24"	55	22	69	42	30	37	33	24	2.0	27	4.1	0.28	21

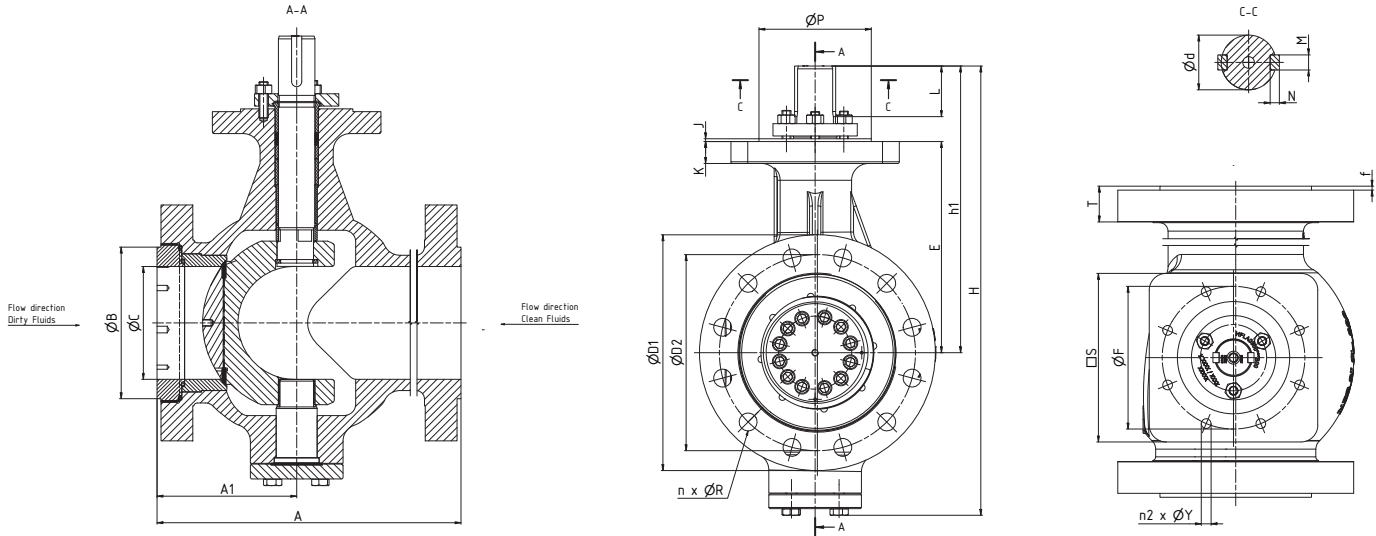
DN	NPS	Dimensions (inch)											
		ISO 5211	S (sq.)	$\varnothing P$	$\varnothing F$	n2	$\varnothing Y$	K	J	$\varnothing d$	L	M	N
80	3"	F14	5	4	6	4	0.7	1.0	0.20	1.6	1.8	0.5	0.3
100	4"	F16	6	5	7	4	0.8	1.2	0.20	1.8	2.5	0.6	0.4
150	6"	F16	6	5	6	4	0.9	0.8	0.20	1.8	2.5	0.6	0.4
200	8"	F25	12	8	10	8	0.7	1.5	0.20	2.6	3.5	0.7	0.4
250	10"	F30	14	9	12	8	0.9	1.6	0.20	2.8	3.9	0.8	0.5
300	12"	F30	14	9	12	8	0.9	1.6	0.20	3.1	3.9	0.9	0.6
350	14"	F30	14	9	12	8	0.9	1.6	0.20	3.5	4.9	1.0	0.6
400	16"	F35	16	10	14	8	1.3	2.1	0.20	3.9	5.5	1.1	0.6
450	18"	F40	16	10	14	8	1.3	2.1	0.20	4.3	6.3	1.1	0.6
500	20"	F48	19	12	16	8	1.5	2.4	0.39	4.7	7.1	1.3	0.7
600	24"	F48	22	15	19	12	1.5	2.8	0.39	5.5	8.7	1.4	0.8

Dimensions and Weights Class 600



DN	NPS	Dimensions (inch)					Weights (lb)
		Ø a	b	Ø c	l1	R2	
80	3"	3.9	-	3.0	1.8	7/16-14 UNC	104
100	4"	4.8	-	3.7	2.2	9/16-12 UNC	201
150	6"	4.8	-	3.7	2.6	9/16-12 UNC	366
200	8"	5.9	-	4.6	3.2	5/8-11 UNC	674
250	10"	6.8	-	5.3	3.7	3/4-10 UNC	1106
300	12"	8.3	-	6.4	3.5	1-8 UNC	1496
350	14"	8.7	-	6.8	4.2	1-8 UNC	1720
400	16"	9.1	-	7.2	4.6	1-8 UNC	2617
450	18"	10	-	8.0	5.3	1-8 UNC	3640
500	20"	11	-	8.7	7.0	1 1/2-8 UNC	4788
600	24"	13	-	10.4	9.0	1 1/2-8 UNC	7022

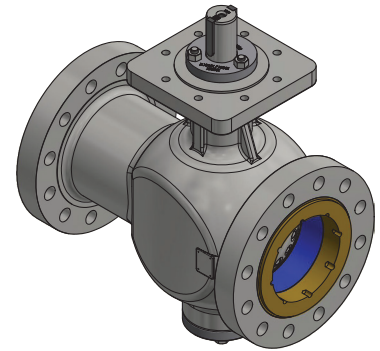
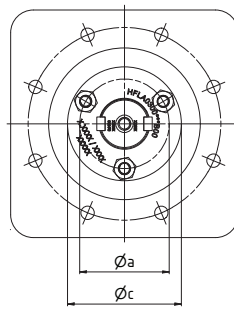
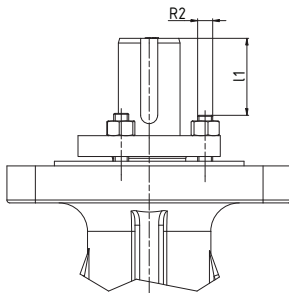
Dimensions and Weights Class 600



DN	NPS	Dimensions (mm)												
		A	ØC	H	h1	E	ØD1	ØD2	n	ØR	ØB	T	f	A1
80	3"	356	74	451	298	213	210	168.3	8	22.5	127	40	7	129
100	4"	432	100	552	372	264	275	215.9	8	25.4	157	47.1	7	161.5
150	6"	559	152	634	416	308	355	292.03	12	28	215.9	49.7	7	211
200	8"	660	201	800	510.5	376	420	349.2	12	32	269.9	55.6	7	249
250	10"	787	252	949	608	450	510	431.8	16	35	323.65	65.5	7	293
300	12"	838	303	1051.4	671	506	560	489	20	35	381	68.7	7	328
350	14"	889	327	1136	698.3	510	605	527	20	38	412.8	71	7	327
400	16"	991	385	1249.44	775	578	685	603.2	20	41	469.9	78.2	7	387
450	18"	1092	436	1409	880	664	745	654	20	45	533.24	84.6	7	451
500	20"	1194	487	1519	940	704	815	723.9	24	44	584.2	88.9	7	490
600	24"	1397	561	1750	1076.4	755	940	838.2	24	51	692.2	105	7	526

DN	NPS	Dimensions (mm)											
		ISO 5211	S (sq.)	ØP	ØF	n2	ØY	K	J	Ød	L	M	N
80	3"	F14	130	100	140	4	17.5	25	5	40	45	12	8
100	4"	F16	160	130	168	4	21	31	5	45	63	14	9
150	6"	F16	160	130	165	4	22	20	5	45	63	14	9
200	8"	F25	300	200	254	8	17.5	39	5	65	90	18	11
250	10"	F30	350	230	298	8	22	40	5	70	100	20	12
300	12"	F30	350	230	298	8	22	40	5	80	100	22	14
350	14"	F30	350	230	298	8	22	40	5	90	125	25	14
400	16"	F35	410	260	356	8	33	53	5	100	140	28	16
450	18"	F40	415	260	356	8	33	53	5	110	160	28	16
500	20"	F40	475	300	406	8	39	60	10	120	180	32	18
600	24"	F48	560	370	483	12	39	72	10	140	220	36	20

Dimensions and Weights Class 600



DN	NPS	Dimensions (mm)					Weights (kg)
		Ø a	b	Ø c	l1	R2	
80	3"	99	-	76	45	7/16-14 UNC	47
100	4"	122	-	94	57	9/16-12 UNC	91
150	6"	122	-	94	63.4	9/16-12 UNC	166
200	8"	150	-	118	79	5/8-11 UNC	306
250	10"	172	-	134	91	3/4-10 UNC	502
300	12"	210	-	162	86	1-8 UNC	679
350	14"	220	-	172	102	1-8 UNC	781
400	16"	230	-	182	113	1-8 UNC	1187
450	18"	258	-	204	130	1-8 UNC	1652
500	20"	280	-	222	172	1 1/2-8 UNC	2173
600	24"	334	-	264	220	1 1/2-8 UNC	3186

Pressure/Temperature Ratings

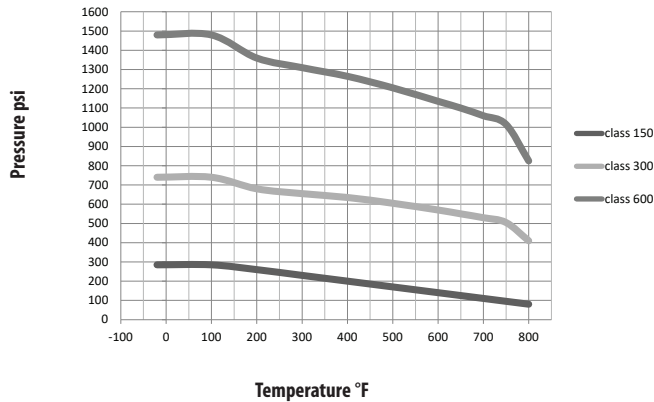
Temperature	Max working pressure ASME class 150	Max working pressure ASME class 300	Max working pressure ASME class 600
	ASTM A216 Gr. WCB*		
°F	psi		
-20	285	740	1480
100	285	740	1480
200	260	680	1360
300	230	655	1310
400	200	635	1265
500	170	605	1205
600	140	570	1135
650	125	550	1100
700	110	530	1060
750**	95	505	1015
800**	80	410	825

*according ASME B16.34 - Material Group 1.1
 ** Consult factory for appropriate material selection

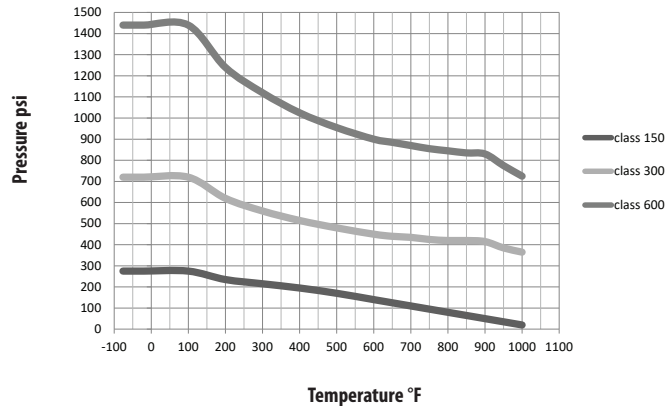
Temperature	Max working pressure ASME class 150	Max working pressure ASME class 300	Max working pressure ASME class 600
	ASTM A351 Gr. CF8M*		
°F	psi		
-76	275	720	1440
-20	275	720	1440
100	275	720	1440
200	235	620	1240
300	215	560	1120
400	195	515	1025
500	170	480	955
600	140	450	900
650	125	440	885
700**	110	435	870
750**	95	425	855
800**	80	420	845
850**	65	420	835
900**	50	415	830
950**	35	385	775
1000**	20	365	725

*according ASME B16.34 - Material Group 2.2
 ** Consult factory for appropriate material selection

**Pressure & Temperature
ASTM A216 Gr. WCB**



**Pressure & Temperature
ASTM A351 Gr. CF8M**



Pressure/Temperature Ratings

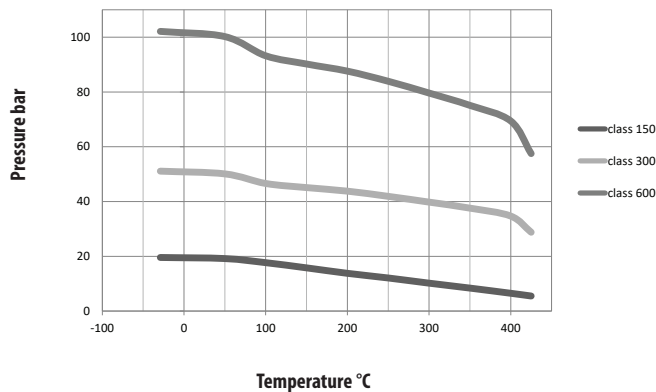
Temperature	Max working pressure ASME class 150	Max working pressure ASME class 300	Max working pressure ASME class 600
	ASTM A216 Gr. WCB*		
°C	bar		
-29	19,6	51,1	102,1
50	19,2	50,1	100,2
100	17,7	46,6	93,2
150	15,8	45,1	90,2
200	13,8	43,8	87,6
250	12,1	41,9	83,9
300	10,2	39,8	79,6
350	8,4	37,6	75,1
400**	6,5	34,7	69,4
425**	5,5	28,8	57,5

*according ASME B16.34 - Material Group 1.1
 ** Consult factory for appropriate material selection

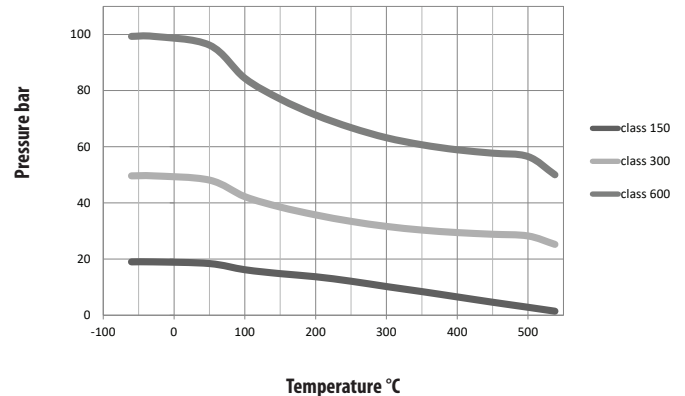
Temperature	Max working pressure ASME class 150	Max working pressure ASME class 300	Max working pressure ASME class 600
	ASTM A351 Gr. CF8M*		
°C	bar		
-60	19,0	49,6	99,3
-29	19,0	49,6	99,3
50	18,4	48,1	96,2
100	16,2	42,2	84,4
150	14,8	38,5	77,0
200	13,7	35,7	71,3
250	12,1	33,4	66,8
300	10,2	31,6	63,2
350	8,4	30,3	60,7
400**	6,5	29,4	58,9
450**	4,6	28,8	57,7
500**	2,8	28,2	56,5
538**	1,4	25,2	50,0

*according ASME B16.34 - Material Group 2.2
 ** Consult factory for appropriate material selection

**Pressure & Temperature
ASTM A216 Gr. WCB**



**Pressure & Temperature
ASTM A351 Gr. CF8M**



MAST Class 150

Maximum Allowable Stem Torque Class 150

Code		MAST [in-Lb]								
		Stem Material								
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
100	4"	28207	23339	20613	17498	23334	14193	26831	12056	40250
150	6"	62592	51803	45758	38846	51803	31508	59565	26765	89356
200	8"	62592	51803	45758	38846	51803	31508	59565	26765	89356
250	10"	119511	98907	87365	74178	98907	60167	113740	51104	170612
300	12"	198123	163968	144833	122972	163968	99747	188564	84719	282838
350	14"	248023	205257	181315	153940	205257	124866	236048	106049	354074
400	16"	312474	258600	228428	193945	258600	157312	297384	133610	446084
450	18"	540309	447155	394989	335362	447155	272017	514226	231030	771337
500	20"	540309	447155	394989	335362	447155	272017	514226	231030	771337
600	24"	1051428	870148	768630	652615	870148	529343	1000669	449580	1501004

Code		MAST [Nm]								
		Stem Material								
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
100	4"	3187	2637	2329	1977	2636	1604	3031	1362	4548
150	6"	7072	5853	5170	4389	5853	3560	6730	3024	10096
200	8"	7072	5853	5170	4389	5853	3560	6730	3024	10096
250	10"	13503	11175	9871	8381	11175	6798	12851	5774	19277
300	12"	22385	18526	16364	13894	18526	11270	21305	9572	31957
350	14"	28023	23191	20486	17393	23191	14108	26670	11982	40005
400	16"	35305	29218	25809	21913	29218	17774	33600	15096	50401
450	18"	61047	50522	44628	37891	50522	30734	58100	26103	87150
500	20"	61047	50522	44628	37891	50522	30734	58100	26103	87150
600	24"	118796	98314	86844	73736	98314	59808	113061	50796	169592

MAST Class 300

Maximum Allowable Stem Torque Class 300

		MAST [in-Lb]								
		Stem Material								
Code		A	B	C	D	E	F	H	M	N
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
80	3"	16276	13468	11895	10097	13462	8190	15482	6956	23223
100	4"	28207	23339	20613	17498	23330	14193	26830	12054	40245
150	6"	62591	51800	45756	38850	51800	31511	59569	26763	89354
200	8"	62591	51800	45756	38850	51800	31511	59569	26763	89354
250	10"	119510	98905	87366	74178	98905	60167	113740	51101	170610
300	12"	198126	163967	144837	122975	163967	99746	188561	84716	282842
350	14"	248020	205258	181311	153944	205258	124865	236047	106050	354070
400	16"	312471	258596	228427	193947	258596	157313	297386	133608	446079
450	18"	540309	447152	394985	335364	447152	272018	514225	231029	771338
500	20"	540309	447152	394985	335364	447152	272018	514225	231029	771338
600	24"	1051432	870151	768633	652613	870151	529342	1000673	449578	1501010

		MAST [Nm]								
		Stem Material								
Code		A	B	C	D	E	F	H	M	N
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
80	3"	1839	1522	1344	1141	1521	925	1749	786	2624
100	4"	3187	2637	2329	1977	2636	1604	3031	1362	4547
150	6"	7072	5853	5170	4389	5853	3560	6730	3024	10096
200	8"	7072	5853	5170	4389	5853	3560	6730	3024	10096
250	10"	13503	11175	9871	8381	11175	6798	12851	5774	19276
300	12"	22385	18526	16364	13894	18526	11270	21305	9572	31957
350	14"	28023	23191	20486	17393	23191	14108	26670	11982	40005
400	16"	35305	29218	25809	21913	29218	17774	33600	15096	50400
450	18"	61047	50522	44628	37891	50522	30734	58100	26103	87150
500	20"	61047	50522	44628	37891	50522	30734	58100	26103	87150
600	24"	118796	98314	86844	73736	98314	59808	113061	50796	169592

MAST Class 600

Maximum Allowable Stem Torque Class 600

Code		MAST [in-Lb]								
		Stem Material								
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
80	3"	43545	36038	31833	27028	36038	21923	41443	18619	62165
100	4"	62591	51800	45756	38850	51800	31511	59569	26763	89354
150	6"	89489	51800	45756	38850	51800	31511	59569	40116	127754
200	8"	198126	163967	144837	122975	163967	99746	188561	84716	282842
250	10"	248020	205258	181311	153944	205258	124865	236047	106050	354070
300	12"	363190	225428	265504	225428	300571	182847	345657	155295	518485
350	14"	540309	447152	394985	335364	447152	272018	514225	231029	771338
400	16"	741180	613390	541828	460043	613390	373146	705399	316918	1058098
450	18"	986073	816060	720853	612045	816060	496437	938469	421631	1407704
500	20"	1319974	1092392	964946	819294	1092392	664538	1256251	564403	1884376
600	24"	2145000	1775172	1568069	1331379	1775172	1079897	2041448	917172	3062173

Code		MAST [Nm]								
		Stem Material								
DN	NPS	ASTM A564 Gr. 630 (17-4PH)	ASTM A276 Gr. 431	ASTM A182 Gr. F55	ASTM A182 Gr. F51	ASTM A453 Gr. 660	ASTM A479 Gr. XM-19 (Nitronic 50)	ASTM UNS N06022 (Hastelloy C22)	ASTM B865 Monel K500	ASTM B 637 UNS N07718 Inconel 718
		1.4542	1.4057	1.4501	1.4462	1.4980	1.3964	2.4602	2.4375	
80	3"	4920	4072	3597	3054	4072	2477	4682	2104	7024
100	4"	7072	5853	5170	4389	5853	3560	6730	3024	10096
150	6"	10111	5853	5170	4389	5853	3560	6730	4533	14434
200	8"	22385	18526	16364	13894	18526	11270	21305	9572	31957
250	10"	28023	23191	20486	17393	23191	14108	26670	11982	40005
300	12"	41035	25470	29998	25470	33960	20659	39054	17546	58581
350	14"	61047	50522	44628	37891	50522	30734	58100	26103	87150
400	16"	83743	69304	61219	51978	69304	42160	79700	35807	119550
450	18"	111412	92203	81446	69152	92203	56090	106033	47638	159050
500	20"	149138	123424	109025	92568	123424	75083	141938	63769	212907
600	24"	242354	200569	177169	150426	200569	122013	230654	103627	345981

Kv / Cv Values & Torques

Kv / Cv Values Class 150

DN	NPS	Opening Angle	
		90°	
		Kv	Cv
100	4"	894	1040
150	6"	2276	2647
200	8"	4893	5689
250	10"	7565	8796
300	12"	11272	13107
350	14"	14766	17170
400	16"	19915	23157
450	18"	24894	28946
500	20"	31906	37100
600	24"	45798	53254

Kv / Cv Values Class 300

DN	NPS	Opening Angle	
		90°	
		Kv	Cv
80	3"	447	520
100	4"	865	1006
150	6"	2176	2530
200	8"	4874	5667
250	10"	7495	8715
300	12"	11165	12982
350	14"	14310	16639
400	16"	19647	22845
450	18"	22882	26607
500	20"	30186	35100
600	24"	44899	52208

Kv / Cv Values Class 600

DN	NPS	Opening Angle	
		90°	
		Kv	Cv
80	3"	422	491
100	4"	816	949
150	6"	2219	2481
200	8"	4300	5000
250	10"	7093	8248
300	12"	9963	11585
350	14"	13198	15347
400	16"	18656	21693
450	18"	21586	25100
500	20"	27606	32100
600	24"	44309	51522

#150 & #300 CV values are calculated using Pipe Schedule 40
 #600 CV values are calculated using Pipe Schedule 80

Torques Class 150

DN	NPS	MA [Nm]	MA [lbf-in]
100	4"	499	4416
150	6"	970	8584
200	8"	1419	12557
250	10"	2365	20932
300	12"	3512	31084
350	14"	5489	48576
400	16"	6716	59441
450	18"	10861	96123
500	20"	13050	115492
600	24"	19202	169933

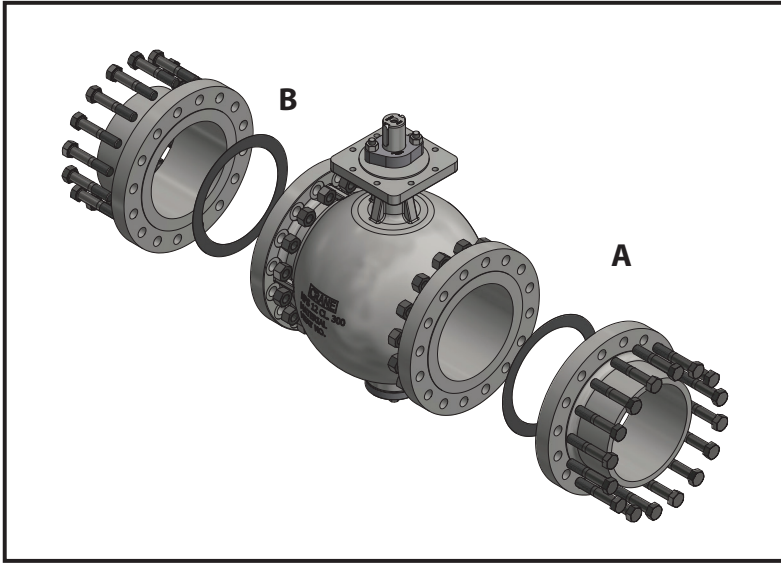
Torques Class 300

DN	NPS	MA [Nm]	MA [lbf-in]
80	3"	585	5177
100	4"	857	7584
150	6"	1771	15670
200	8"	2836	25095
250	10"	4537	40155
300	12"	7169	63442
350	14"	11270	99737
400	16"	14740	130449
450	18"	21044	186238
500	20"	26690	236209
600	24"	40401	357551

Torques Class 600

DN	NPS	MA [Nm]	MA [lbf-in]
80	3"	971	8593
100	4"	1942	17190
150	6"	3606	31912
200	8"	6570	58147
250	10"	10787	95465
300	12"	19235	170232
350	14"	22710	200980
400	16"	33372	295346
450	18"	41735	369359
500	20"	59398	525671
600	24"	92085	814951

Flange Bolting



General remark:
 Quantities of required screws and nuts for the whole valve
 Counterflange according to AMSE B16.5
 Flange gasket thickness 2mm
 Screws according ASME B18.2.1

Class 150

Flange Face Raised RF acc. ASME B16.5							
DN	NPS	Thread	A Side	Qty	B Side	Qty	Qty nuts
100	4"	5/8-11 UNC	3 1/4"	8	4 1/4"	8	16
150	6"	3/4-10 UNC	3 1/2"	8	4 1/2"	8	16
200	8"	3/4-10 UNC	3 1/2"	8	4 3/4"	8	16
250	10"	7/8-9 UNC	3 3/4"	12	5 1/4"	12	24
300	12"	7/8-9 UNC	4"	12	5 1/2"	12	24
350	14"	1-8 UNC	4 1/4"	12	6"	12	24
400	16"	1-8 UNC	4 1/4"	16	6 1/4"	16	32
450	18"	1 1/8-8 UN	4 3/4"	16	6 1/2"	16	32
500	20"	1 1/8-8 UN	5"	20	7"	20	40
600	24"	1 1/4-8 UN	5 1/2"	20	7 1/2"	20	40

Class 300

Flange Face Raised RF acc. ASME B16.5				
DN	NPS	Thread	L	Qty nuts
80	3"	3/4-10 UNC	3 1/4"	16
100	4"	3/4-10 UNC	4 1/4"	16
150	6"	3/4-10 UNC	4 1/4"	24
200	8"	7/8-9 UNC	4 3/4"	24
250	10"	1-8 UNC	5 1/4"	32
300	12"	1 1/8-8 UN	5 1/2"	32
350	14"	1 1/8-8 UN	6"	40
400	16"	1 1/4-8 UN	6 1/4"	40
450	18"	1 1/4-8 UN	6 1/2"	48
500	20"	1 1/4-8 UN	7"	48
600	24"	1 1/2-8 UN	7 1/2"	48

Class 600

Flange Face Raised RF acc. ASME B16.5				
DN	NPS	Thread	L	Qty nuts
80	3"	3/4-10 UNC	4 3/4"	16
100	4"	7/8 - 9 UNC	5 1/2"	16
150	6"	1-8 UNC	6 1/2"	24
200	8"	1 1/8-8 UN	7"	24
250	10"	1 1/4-8 UN	8 1/4"	32
300	12"	1 1/4-8 UN	8 1/2"	40
350	14"	1 3/8-8 UN	9"	40
400	16"	1 1/2-8 UN	9 3/4"	40
450	18"	1 5/8-8 UN	10 1/2"	40
500	20"	1 5/8-8 UN	11"	48
600	24"	1 7/8-8 UN	12 3/4"	48

Mounting Kits

Class 150

DN	NPS	ISO 5211		Mounting Kit
Class 150		Valve	Actuator	Item Number
100	4"	F16	F12	MTXLR1F12V036A
			F14	MTXLR1F14V036A
			F16	MTXLR1F16V036A
			F25	MTXLR1F25V036A
150	6"	F16	F10	MFXSP1F10V022A
			F12	MFXSP1F12V027A
			F14	MFXSP1F14V036A
			F16	MFXSP1F16V046A
			F25	MFXSP1F25V055A
200	8"	F16	F12	MFXTP1F12V027A
			F14	MFXTP1F14V036A
			F16	MFXTP1F16V046A
			F25	MFXTP1F25V055A
250	10"	F16	F14	MFXUP1F14V036A
			F16	MFXUP1F16V046A
			F25	MFXUP1F25V055A
300	12"	F25	F12	MFXVP1F12V027A
			F14	MFXVP1F14V036A
			F16	MFXVP1F16V046A
			F25	MFXVP1F25V055A
			F30	MFXVP1F30V075A
350	14"	F25	F16	MFXWP1F16V046A
			F25	MFXWP1F25V055A
			F30	MFXWP1F30V075A
400	16"	F25	F14	MFXXP1F14V036A
			F16	MFXXP1F16V046A
			F25	MFXXP1F25V055A
			F30	MFXXP1F30V075A
450	18"	F30	F16	MFXYP1F16V046A
			F25	MFXYP1F25V055A
			F30	MFXYP1F30V075A
500	20"	F30	F16	MFXZN3F16V046A
			F25	MFXZN3F25V055A
			F30	MFXZN3F30V075A
600	24"	F35	F16	MFXZN3F16V046A
			F25	MFXZN3F25V055A
			F30	MFXZN3F30V075A
			F35	MFXZN3F35R120A

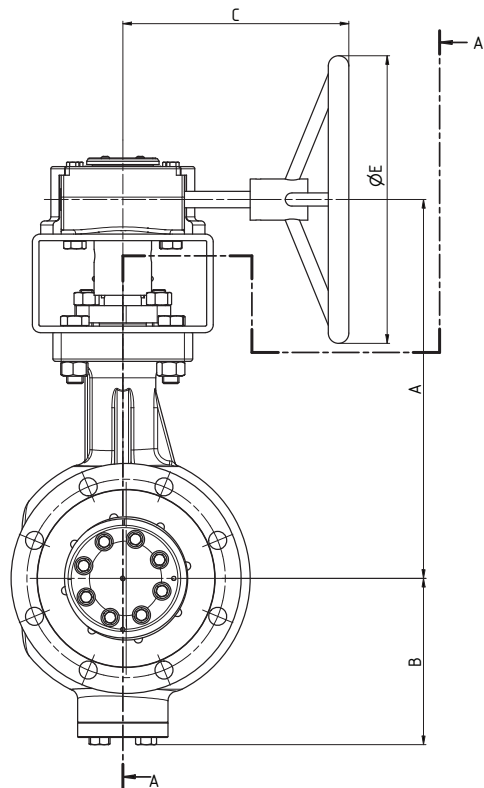
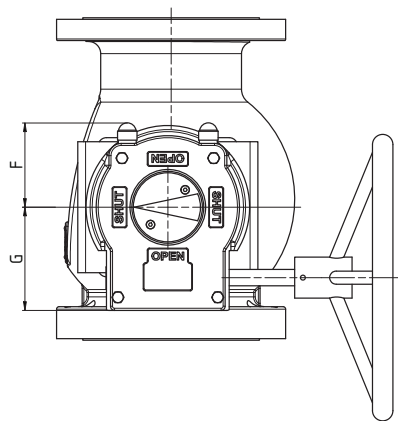
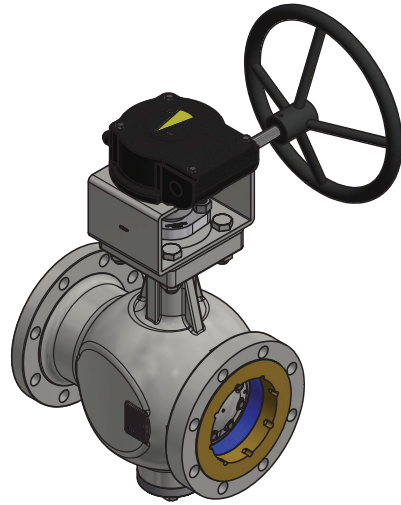
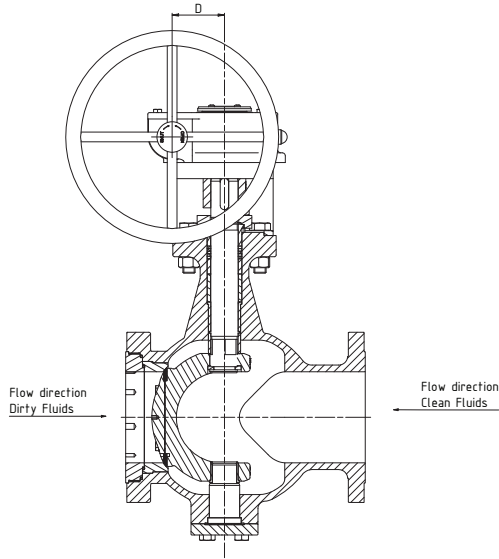
Class 300

DN	NPS	ISO 5211		Mounting Kit
Class 300		Valve	Actuator	Item Number
80	3"	F14	F12	MTXLP1F12V036A
			F14	MTXLP1F14V036A
			F16	MTXLP1F16V036A
100	4"	F16	F12	MTXLR1F12V036A
			F14	MTXLR1F14V036A
			F16	MTXLR1F16V036A
			F25	MTXLR1F25V036A
150	6"	F16	F10	MFXSP1F10V022A
			F12	MFXSP1F12V027A
			F14	MFXSP1F14V036A
			F25	MFXSP1F25V055A
200	8"	F16	F12	MFXTP1F12V027A
			F14	MFXTP1F14V036A
			F16	MFXTP1F16V046A
			F25	MFXTP1F25V055A
250	10"	F16	F14	MFXUP1F14V036A
			F16	MFXUP1F16V046A
			F25	MFXUP1F25V055A
			F30	MFXUP1F30V075A
300	12"	F25	F12	MFXVP1F12V027A
			F14	MFXVP1F14V036A
			F16	MFXVP1F16V046A
			F25	MFXVP1F25V055A
350	14"	F25	F16	MFXWP1F16V046A
			F25	MFXWP1F25V055A
			F30	MFXWP1F30V075A
			F30	MFXWP1F30V075A
400	16"	F25	F14	MFXXP1F14V036A
			F16	MFXXP1F16V046A
			F25	MFXXP1F25V055A
			F30	MFXXP1F30V075A
450	18"	F30	F16	MFXYP1F16V046A
			F25	MFXYP1F25V055A
			F30	MFXYP1F30V075A
			F30	MFXYP1F30V075A
500	20"	F30	F16	MFXZN3F16V046A
			F25	MFXZN3F25V055A
			F30	MFXZN3F30V075A
			F30	MFXZN3F30V075A
600	24"	F35	F16	MFXZN3F16V046A
			F25	MFXZN3F25V055A
			F30	MFXZN3F30V075A
			F35	MFXZN3F35R120A

Class 600

DN	NPS	ISO 5211		Mounting Kit
Class 600		Valve	Actuator	Item Number
80	3"	F16	F12	MTXLR1F12V036A
			F14	MTXLR1F14V036A
			F16	MTXLR1F16V036A
			F25	MTXLR1F25V036A
100	4"	F16	F12	MTXLR1F12V036A
			F14	MTXLR1F14V036A
			F16	MTXLR1F16V036A
			F25	MTXLR1F25V036A
150	6"	F16	F12	MTXRP1F12V027A
			F16	MTXRP1F14V036A
			F25	MTXRP1F16V046A
			F30	MTXRP1F25V055A
200	8"	F25	F16	MFXTR1F16V046A
			F25	MFXTR1F25V055A
			F30	MFXTR1F30V075A
250	10"	F30	F25	MFXUR1F25V055A
			F30	MFXUR1F30V075A
			F35	MFXUR1F35R120A
300	12"	F30	F25	MFXVR1F25V055A
			F30	MFXVR1F30V075A
			F35	MFXVR1F35R120A
350	14"	F35	F25	MFXVR1F25V055A
			F30	MFXVR1F30V075A
			F35	MFXVR1F35R120A
400	16"	F35	F25	MFXZP3F25V055A
			F30	MFXXR1F30V075A
			F35	MFXXR1F35R120A
			F40	MFXXR1F40R160A
450	18"	F40	F30	MFXYR1F30V075A
			F35	MFXYR1F35R120A
			F40	MFXYR1F40R160A
			F48	MFXYR1F48R180A
500	20"	F48	F35	MFXR1F35R120A
			F40	MFXR1F40R160A
			F48	MFXR1F48R180A
600	24"	F48	F35	MF2R1F35R120A
			F40	MF2R1F40R160A
			F48	MF2R1F48R180A

Geometry Tables for Gear Operated Valves



Geometry Tables for Gear Operated Valves

Class 150

DN	NPS	Dimensions (inch)							Weights (lb)
		A	B	C	D	øE	F	G	
100	4"	15.0	6.3	9.9	3.0	7.9	3.9	5.0	143.3
150	6"	17.1	8.0	10.4	3.4	9.8	3.9	5.0	245.8
200	8"	18.1	9.4	10.8	3.4	13.8	3.9	5.0	372.7
250	10"	22.5	11.6	12.4	4.1	13.8	4.3	5.8	580.7
300	12"	25.3	13.3	13.6	4.1	19.7	4.3	5.8	917.7
350	14"	25.4	15.6	12.5	5.1	13.8	5.6	5.9	1196.2
400	16"	29.5	17.0	14.8	5.1	9.8	5.6	7.1	1553.2
450	18"	33.5	19.0	15.6	5.5	11.8	6.9	7.8	2070.7
500	20"	35.8	21.0	17.1	7.2	11.8	8.2	9.4	2723.0
600	24"	38.2	23.0	17.3	7.2	13.8	8.2	9.4	3984.8

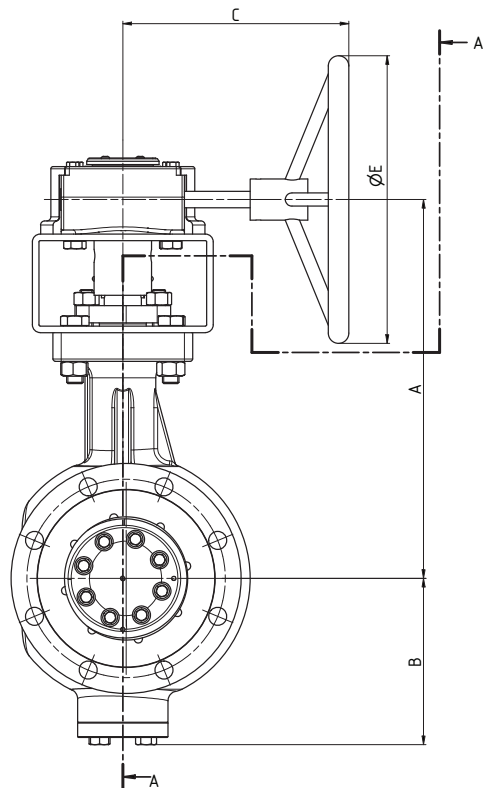
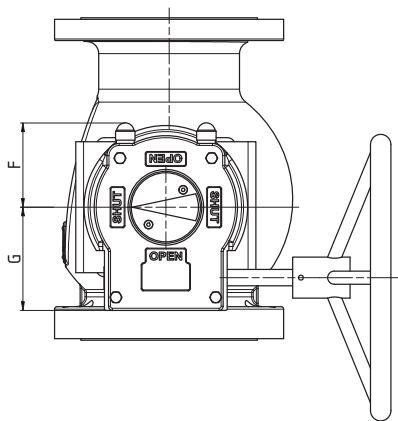
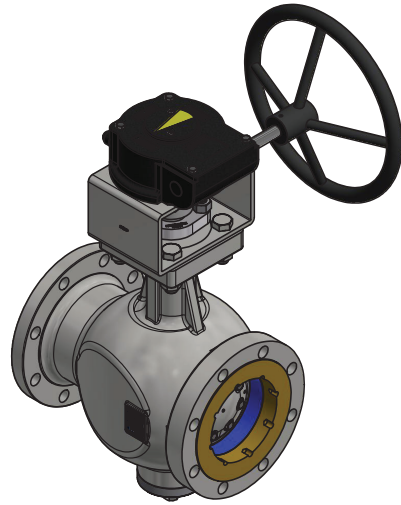
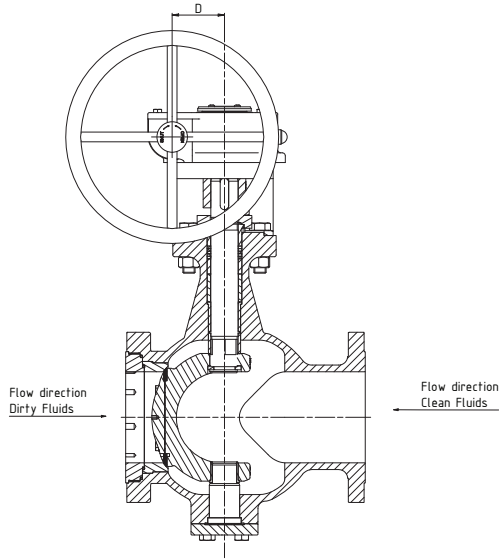
Class 300

DN	NPS	Dimensions (inch)							Weights (lb)
		A	B	C	D	øE	F	G	
80	3"	17.6	5.9	9.7	2.8	7.9	3.9	5.0	123.4
100	4"	18.9	6.3	9.7	2.8	7.9	3.9	5.0	167.5
150	6"	17.1	8.0	10.4	3.4	9.8	3.9	5.0	406.7
200	8"	18.1	9.4	10.8	3.4	13.8	3.9	5.0	648.6
250	10"	22.5	11.6	12.4	4.1	13.8	4.3	5.8	1015.3
300	12"	25.3	13.3	13.6	4.1	19.7	4.3	5.8	1530.3
350	14"	25.4	15.6	12.5	5.1	13.8	5.6	5.9	1771.5
400	16"	29.5	17.0	14.8	5.1	9.8	5.6	7.1	2818.8
450	18"	33.5	19.0	15.6	5.5	11.8	6.9	7.8	4665.9
500	20"	35.8	21.0	17.1	7.2	11.8	8.2	9.4	5263.2
600	24"	38.2	23.0	17.3	7.2	13.8	8.2	9.4	10120.8

Class 600

DN	NPS	Dimensions (inch)							Weights (lb)
		A	B	C	D	øE	F	G	
80	3"	18.1	6.1	10.4	3.4	9.8	3.9	5.0	145.5
100	4"	20.5	7.1	10.4	3.4	9.8	3.9	5.0	264.5
150	6"	24.4	8.6	14.8	5.1	9.8	5.6	7.1	493.2
200	8"	26.5	11.4	15.6	5.5	11.8	6.9	7.8	876.1
250	10"	28.7	13.4	17.3	7.2	13.8	6.7	9.4	1332.5
300	12"	33.3	14.6	17.8	8.2	9.8	8.2	11.2	1938.6
350	14"	34.6	17.2	18.0	8.2	11.8	8.2	11.2	2218.3
400	16"	36.0	18.7	20.1	10.1	15.7	9.3	13.8	3174.2
450	18"	40.4	20.7	27.0	18.0	19.7	11.6	19.0	5865.9
500	20"	48.2	22.6	30.1	17.3	27.6	15.7	24.8	6732.1
600	24"	51.4	26.5	30.1	17.3	31.5	15.7	24.8	12923.2

Geometry Tables for Gear Operated Valves



Geometry Tables for Gear Operated Valves

Class 150

DN	NPS	Dimensions (mm)							Weights (kg)
		A	B	C	D	øE	F	G	
100	4"	380	161	252	76	200	100	126	65
150	6"	435	202	265	86	250	100	126	112
200	8"	460	239	275	86	350	100	126	169
250	10"	572	295.5	316	105	350	110	148	263
300	12"	642	339	346	105	500	110	148	416
350	14"	646	397.4	318	130	350	142	150	543
400	16"	750	433	377	130	250	142.5	180	705
450	18"	850	483	395	140	300	175	197	940
500	20"	910	533	435	182	300	207.5	237.5	1236
600	24"	970	583	440	182	350	207.5	237.5	1808

Class 300

DN	NPS	Dimensions (mm)							Weights (kg)
		A	B	C	D	øE	F	G	
80	3"	446	150	247	71	200	100	126	56
100	4"	480	161	247	71	200	100	126	76
150	6"	435	202	265	86	250	100	126	185
200	8"	460	239	275	86	350	100	126	294
250	10"	572	296	316	105	350	110	148	461
300	12"	642	339	346	105	500	110	148	694
350	14"	646	397	318	130	350	142	150	804
400	16"	750	433	377	130	250	143	180	1279
450	18"	850	483	395	140	300	175	197	2117
500	20"	910	533	435	182	300	208	238	2388
600	24"	970	583	440	182	350	208	238	4592

Class 600

DN	NPS	Dimensions (mm)							Weights (kg)
		A	B	C	D	øE	F	G	
80	3"	460	155	265	86	250	100	126	66
100	4"	520	180	265	86	250	100	126	120
150	6"	620	218	377	130	250	142.5	180	224
200	8"	674	289.5	395	140	300	175	197	398
250	10"	730	340	440	182	350	170	237.5	605
300	12"	845	371.6	451	209	250	207.5	284	880
350	14"	880	437.7	456	209	300	207.5	284	1007
400	16"	915	475	511	256	400	235	350	1440
450	18"	1025	525	687	458	500	295	483	2662
500	20"	1225	575	765	440	700	398	631	3055
600	24"	1305	673.6	765	440	800	398	631	5864

Product Coding

PRODUCT LINE	VALVE TYPE			MATERIAL GROUP		
Valve	Size	Pressure	Body Style	Body Material	Disc Material	Shaft Material

PRODUCT LINE

Valve
FKT

VALVE TYPE

Size		
80	3"	03
100	4"	04
150	6"	06
200	8"	08
250	10"	10
300	12"	12
350	14"	14
400	16"	16
450	18"	18
500	20"	20
600	24"	24

Pressure	
Class 150	N
Class 300	P
Class 600	R

Body Style	
Double flanged ASME B16.10 (Ball Valve) long pattern	DL
Other	XX

MATERIAL

Body Material	
ASTM A216 Gr. WCB Carbon steel	A
ASTM A351 Gr. CF8M Stainless steel	B
ASTM A216 Gr. WCC Low alloy steel	C
ASTM A352 Gr. LCB Low temperature CS	E
ASTM A352 Gr. LCC Low temperature CS	F
ASTM A216 Gr. WC6 Low alloy steel	G
ASTM A494 Gr. N7M Hastelloy B-2	H
A217 Gr. C5	K
ASTM A351 Gr. CF3M	L
A494 Gr. Monel M35-1	M
Inconel 600	N
ASTM A995 Gr. 6A Superduplex	R
ASTM A216 Gr. WC9 Low alloy steel	W
Other	X
Zirconium 705C	Z

Disc Material	
ASTM A216 Gr. WCB Carbon steel	A
ASTM A351 Gr. CF8M Stainless steel	B
ASTM A216 Gr. WCC Low alloy steel	C
ASTM A352 Gr. LCB Low temperature CS	E
ASTM A352 Gr. LCC Low temperature CS	F
ASTM A216 Gr. WC6 Low alloy steel	G
ASTM A494 Gr. N7M Hastelloy B-2	H
A217 Gr. C5	K
ASTM A351 Gr. CF3M	L
A494 Gr. Monel M35-1	M
Inconel 600	N
ASTM A995 Gr. 6A Superduplex	R
ASTM A216 Gr. WC9 Low alloy steel	W
Other	X
Zirconium 705C	Z

Shaft Material	
ASTM A564 Gr. 630 17-4 PH, double heat treated	A
ASTM A276 Gr. 431 Stainless steel	B
ASTM A479 F51/ 1.4462	D
ASTM A453 Gr. 660 for high temperatures	E
ASTM A276 Gr. XM-19 Nitronic 50*	F
Hastelloy C276*	H
ASTM A638 Gr 660/ 1.4980 (Incoloy A-286)	I
ASTM B335 Hastalloy B2*	K
ASTM A494 Gr. M30H Monel 500	M
Inconel 718	N
Other	X
Zirconium 705C*	Z

Seal Ring / TriEX Seat Combination	
Titanium Gr. 5/Graphite	T
Titanium gr. 5/ PTFE	P
Monel K500 /Graphite	M
Monel K500 / PTFE	N
Inconel 625 /Graphite	I
Hastelloy B3 + PTFE	H
Other	X

* Contact Engineering for shaft material offering

** 3" Class 150 is not possible to offer

Product Coding

	FLANGE FACE	GLAND / PACKING / TOP WORK OPTIONS			ACTUATION	OPTIONS
Seal Ring / TrieX Seat Combination	Flange Type	Gland Packing	Packing Box	Gland Flange Design	Operator Type	Options

FLANGE FACE

Flange Type	
Flat face FF acc. ANSI B16.5 Flat face FF acc. ANSI B16.47, series A	6
Raised face RF acc. ANSI B16.5 Raised face RF acc. B 16.47, series A	A
Other	X

GLAND / PACKING / TOP WORK OPTIONS

Gland Packing	
Standard graphite packing (ISO 15848 AH CO2 / TA-Luft and API 641)	1
High temperature graphite packing (TA-Luft)	5
High temperature graphite packing (non-FE / non-TA-Luft / EN12266 A / API598)	6

Packing Box	
Single packing	A
Single packing with monitoring port with STD design	C
Single packing with pressure tight bearing	G
Single packing with monitoring port and pressure tight bearing protector	R
Other	X

Gland Flange ype	
Standard design	A
Live loaded	L
Other	X

ACTUATION

Operator Type	
Electric	E
Bare shaft	F
Manual, gear operated	G
Hydraulic	H
Mounting kit	M
Pneumatic, rack and pinion	R
Pneumatic, scotch yoke	Y
Other	X

OPTIONS

Options	
With CE Marking	CE
According DT91 Standard	D9
Tested according EN15848-2	E2
Tested according ASTMG93	G93
High temperature up to 550°C	H5
High temperature up to 700°C	H7
Heating jacket	HJ
Nace MR0103	N3
Nace MR0175	N5
All internal components made from 316 stainless steel	SS
Stem Extension	ST



CRANE®

CRANE CHEMPHARMA & ENERGY

Xomox International GmbH & Co. OHG
Marburger Str. 364
57223 Kreuztal, Germany
Tel.: +49 2732 520 00

4526 Research Forest Drive,
Suite 400
The Woodlands
Texas 77381, U.S.A.
Tel.: +1 936 271 6500

ARMATURE d.o.o.
Koroška cesta 55
2366 Muta, Slovenia
Tel: +386 2 87 70 500
quote-armature@cranecpe.com

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