ELARA - Butterfly valve DN 2-24"

Description

High performance double eccentric butterfly valve with interchangeable seats for working pressures up to 725 psi (ANSI Class 300).
With 3 different sealing options:
• TM Modified PTFE seat
• M4 Modified PTFE / Stainless steel, fire safe seat
• IN with metal seat

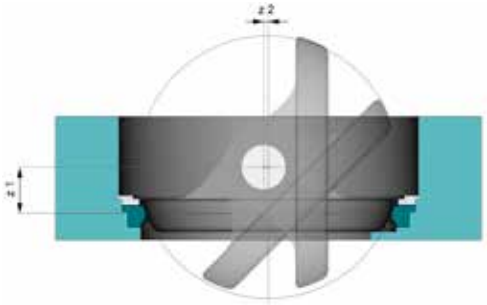
Product features

• Body construction	EH1 Wafer, EH3 Lug
• Face to face dimension	according to ISO 5752/20, EN558-1/5, API 609, MSS-SP-68
• Top flange	according to EN ISO 5211
• Flange connection	PN10, PN 16, PN 25, PN 40, ANSI class 150, class 300
• Temperature range	-84.2°F ÷ 500°F (up to 1004°F on request)
• Tightness	For TM and M4 seats: Tightness according to EN 12266-1/P12 leakage rate A / API 598 For IN seat: Tightness according to ANSI/ FCI 70-2-2005, Class V 2"- 8", Class IV DN 250-600
CE	The butterfly valves ELARA meet the safety requirements of the pressure Equipment Directive 2014/68/UE (PED) appendix 1 for fluids of the groups 1 and 2
• Fire safe	Certified according API 607 and ISO 10497
• ATEX	Certified according to ATEX 2014/34/EU, on request
• Fugitive emission	ISO 15848-1, DIN3780, MSS-SP-143, on request

Double eccentric function:

The ELARA is a double eccentric butterfly valve. The double eccentricity results from:
- Offset of the disc to the shaft (z 1) and
- Offset of the disc centre to the shaft (z 2)

Consequently, when opening, the disc is immediately disengaged from the seat and thus, the friction and the torque remain very low.

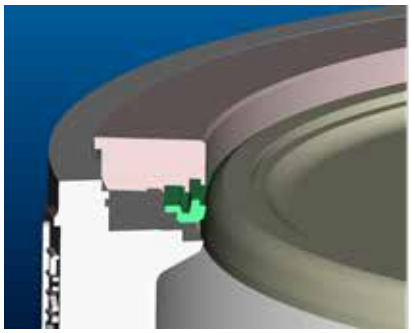


InterApp

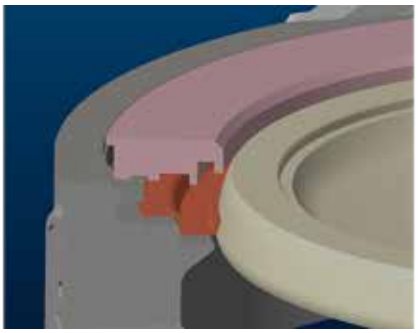
Member of the AVK Group

Replaceable seats

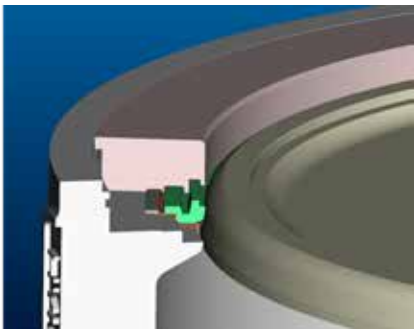
Elara available with different seats, which can be interchanged by the customer. This offers and advantage as it allows the change of the seat even on site.



Modified PTFE seat



Metal seat

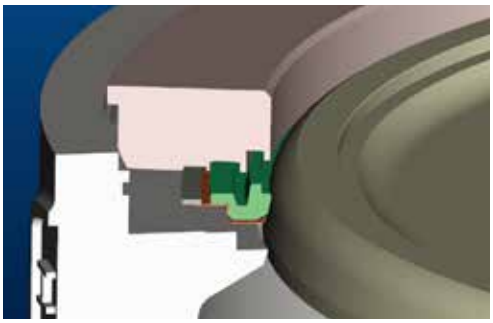


Fire safe seat

Fire Safe function:

According to API 607 / ISO 10497

1. Under normal working conditions, the tightness is done by the MPTFE seat ring.
2. In case of fire, the MPTFE seat ring is destroyed and the tightness is ensured by the metal seat ring.



Low Fugitive Emission Gland Packing System

A low fugitive emission gland packing system designed to prevent the leakage along the valve shaft:

- Gland Flange and Gland Bush
  A fully adjustable two-piece gland with spherical mating surfaces to make sure an even packing load over 360°

- Long Gland Bush for Positioning
  The long gland bush ensures that the gland flange always keeps centred while adjusting the packing gland. Preventing gland bush away from rubbing and jamming condition with shaft.

Gland Flange and Gland Bush

Long Gland Bush for Positioning

Torque at requested working pressure [Nm]

Modified PTFE seat

Inches	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
232 psi	33	35	43	55	94	126	238	381	598	791	1156	1499	2171	3372
290 psi	38	42	49	82	141	206	363	527	985	1458	2273	3089	4246	6606
362.5 psi	49	54	63	112	192	280	506	871	1358	1999	3086	4221	5785	8984
580 psi	60	66	77	142	243	354	650	1115	1731	2541	3899	5353	7324	11362
725 psi	66	73	89	173	295	433	796	1371	2121	3109	4758	6568	8961	13963

Fire safe seat

Inches	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
232 psi	39	52	64	83	135	183	274	435	661	944	1343	1748	2453	3710
290 psi	45	54	76	126	207	297	531	886	1349	1939	2900	3922	5285	8034
362.5 psi	53	67	90	156	258	371	674	1130	1721	2481	3712	5054	6823	10412
580 psi	62	79	104	186	309	445	818	1375	2094	3022	4525	6187	8362	12789
725 psi	69	87	121	215	354	512	954	1605	2450	3544	5319	7304	9884	15176

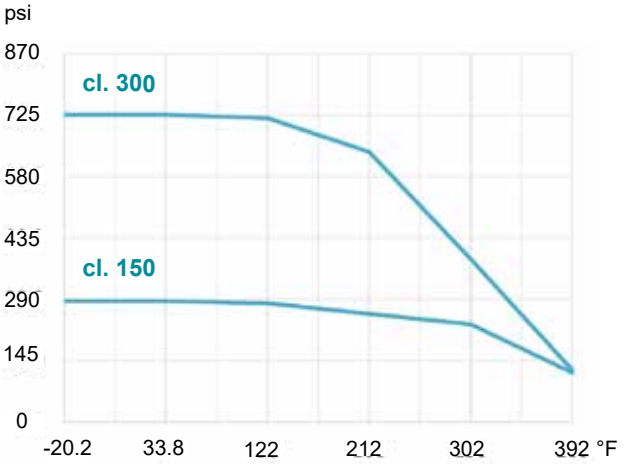
Metal seat

Inches	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
232 psi	39	52	64	83	135	183	274	435	661	944	1343	1748	2453	3710
290 psi	45	54	76	126	207	297	531	886	1349	1939	2900	3922	5285	8034

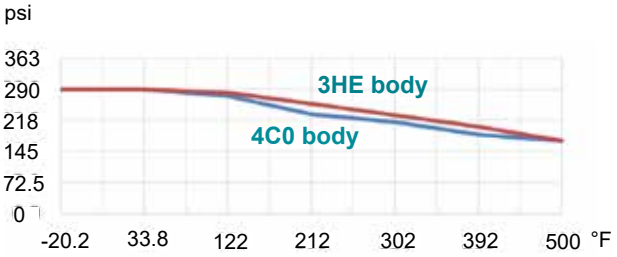
Remarks:
- Above Torques value (Nm) including 30% safety coefficient.
- Torques value in above chart is measured with water media under listed pressure.
- Installing Upstream direction will result in lower torque and better life cycle.

Pressure / Temperature

Modified PTFE (TM) and fire safe (M4) seat



Metal seat (IN)



Higher temperatures up to 1004 °F are available on request

Flow values Cv [gpm]

ANSI cl. 150

Inches	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
10°	0	2	6	16	20	41	66	139	204	264	384	508	626	1048
20°	8	16	34	58	94	147	237	390	548	674	864	1093	1294	2251
30°	22	38	62	106	167	242	368	596	820	972	1197	1552	1792	3179
0°	36	61	94	155	230	335	509	807	1138	1386	1766	2342	2651	4564
45°	44	71	108	178	263	382	606	963	1357	1658	2155	2882	3305	5544
50°	51	83	118	213	310	422	712	1168	1591	1995	2612	3524	4083	6569
60°	60	109	143	274	391	560	985	1606	2219	2841	3755	5126	5920	9279
70°	69	135	176	350	488	730	1296	2134	3068	3925	5106	7135	8257	12934
80°	72	146	208	434	561	925	1641	2814	4086	5165	6976	9512	11430	17095
85°	71	152	230	465	604	975	1715	3181	4485	5829	7921	10600	13128	18331
90°	71	150	227	473	605	1011	2004	3199	4672	5948	8183	11550	13815	19024

ANSI cl. 300

Inches	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
10°	0	2	6	16	20	37	62	130	190	246	357	473	583	975
20°	8	16	34	58	94	138	220	362	510	627	804	1015	1204	2093
30°	22	38	62	106	167	226	343	554	762	904	1112	1442	1667	2957
40°	36	61	94	155	230	312	473	750	1059	1289	1642	2177	2466	4245
45°	44	71	108	178	263	355	563	896	1263	1542	2004	2679	3073	5156
50°	51	83	118	213	310	393	663	1087	1480	1855	2428	3276	3797	6108
60°	60	109	143	274	391	522	916	1493	2064	2641	3493	4767	5505	8628
70°	69	135	176	350	488	678	1206	1985	2852	3650	4749	6634	7679	12028
80°	72	146	208	434	561	860	1525	2618	3799	4804	6488	8846	10630	15899
85°	71	152	230	465	604	908	1596	2958	4171	5420	7366	9858	12209	17047
90°	71	150	227	473	605	939	1864	2975	4345	5531	7610	10740	12848	17691

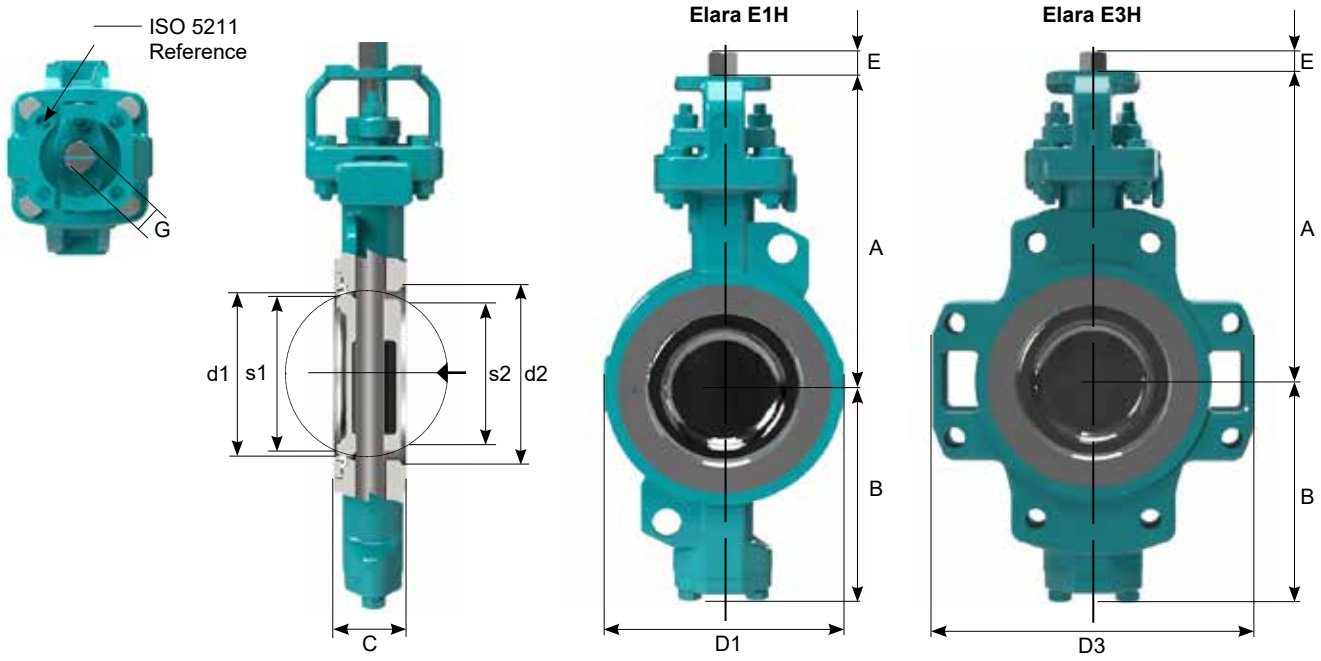
Type code

EH1	0150	.	4	5	-	3HE	.	4L	.	4C0	.	TM	-	FF
❶	❷		❸	❹		❺		❻		❼		❽		❾

❶	**Body type**	EH1	Wafer			2"-24"
		EH3	Lug			2"-24"
❷	**Nominal diameter**	2-24"	inches			
❸	**Working pressure**	4	290 psi / ANSI class 150			6"-24" (Wafer) 2"- 24" (Lug)
		7	725 psi / ANSI class 300			2"-24"
❹	**Flange connection**	**For EH1 (Wafer)**		**Body class**		
		2	PN 10	ANSI cl. 150		14"- 24"
		3	PN 16	ANSI cl. 150		14"- 24"
			PN 10/16/25, ANSI cl. 150	ANSI cl. 150		6"-12"
			PN 10/16/25/40, ANSI cl. 150 / 300	ANSI cl. 300		2"- 5"
		5	PN 25	ANSI cl. 150		14"- 24"
		6	PN 40	ANSI cl. 300		10"- 24"
		A	ANSI cl. 150	ANSI cl. 150		14"- 24"
		B	PN 40, ANSI cl. 300	ANSI cl. 300		6"- 8"
			ANSI cl. 300	ANSI cl. 300		10" - 24"
		For EH3 (Lug)				
		2	PN 10	ANSI cl. 150		8" - 24"
		3	PN 10/16/25	ANSI cl. 150		2" -3"
			PN 10/16	ANSI cl. 150		2½", 4"-6"
			PN16	ANSI cl. 150		8"-24"
		5	PN 25	ANSI cl. 150		2½", 4"-10", 14", 18"-24"
		6	PN 40	ANSI cl. 300		2"-5", 8", 12"
		A	ANSI cl. 150	ANSI cl. 150		2"-24"
		B	ANSI cl. 300	ANSI cl. 300		2"-24"
❺	**Body**	3HE	Carbon steel, A216WCB / 1.0619, Epoxy coated (80 µm)			up to 800°F
		4C0	Stainless steel A351 Gr. CF8M / 1.4408			up to 1112°F
❻	**Shaft**	4L	Stainless steel A564 Gr. 630 17-4 PH / 1.4542			
❼	**Disc**	4C0	Stainless steel A351 Gr. CF8M / 1.4408			
❽	**Seat**	TM	Modified PTFE			max. 725 psi
		M4	Modified PTFE / Stainless steel, Fire Safe			max. 725 psi
		IN	Metal seat, Inconel			max. 290 psi
❾	**Option**	ATEX	Certified according to ATEX 2014/34/EU, II 2GD c Tx			
		180	Fugitive emission according to ISO 15848-1, DIN3780, MSS-SP-143			
		FF	Fat free execution on request (not with carbon steel body, not for oxygene service)			

Mounting the valve at the end of a line on request
Pressure and temperature limits of application are dependent of the working conditions

Dimensions



ANSI cl. 150

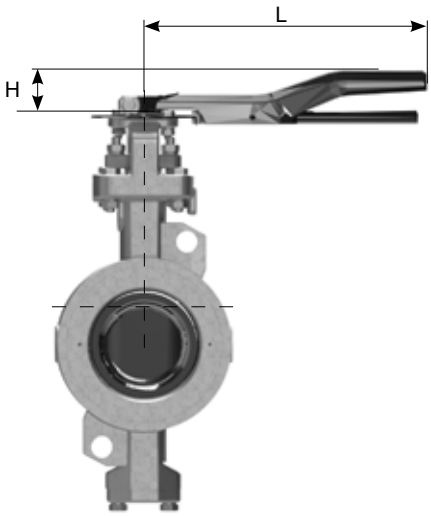
Inches	A	B	C	D1	D3	d1	d2	s1	s2	E	G	ISO 5211	y	b	E1H [lb]	E3H [lb]
2"	= ANSI cl. 300															
2½"																
3"																
4"																
5"																
6"	10.04	7.48	2.24	8.54	10.63	5.63	6.3	5.2	5.35	0.75	0.67	F07	4 x 0.37	2.76	33.07	46.3
8"	11.61	8.43	2.44	10.59	12.83	7.4	8.27	6.97	7.2	0.83	0.75	F10	4 x 0.43	4.02	48.5	68.34
10"	13.39	10	2.76	12.91	16.54	9.29	10.24	8.86	9.06	0.94	0.87	F10	4 x 0.43	4.02	74.96	108.03
12"	15.35	11.73	3.19	14.84	18.43	11.06	12.2	10.63	10.79	1.14	1.06	F12	4 x 0.51	4.92	112.44	158.73
14"	16.54	12.91	3.62	16.46	20.31	12.6	13.78	12.09	12.24	1.34	1.26	F12	4 x 0.51	4.92	149.91	209.44
16"	19.29	14.84	4.02	18.98	23.23	14.61	15.75	14.06	14.25	1.5	1.42	F14	4 x 0.71	5.51	227.08	313.06
18"	20.28	15.83	4.49	21.1	25.2	16.54	17.72	15.87	16.14	1.5	1.42	F14	4 x 0.71	5.51	299.83	392.42
20"	21.65	17.2	5	23.27	28.03	18.46	19.69	17.8	17.99	1.89	1.81	F14	4 x 0.71	5.51	388.01	544.54
24"	24.8	19.37	6.06	27.4	32.68	21.61	23.62	20.71	21.02	3.54	Ø 2.56	F16	4 x 0.87	6.5	639.34	866.42

ANSI cl. 300

Inches	A	B	C	D1	D3	d1	d2	s1	s2	E	G	ISO 5211	y	b	E1H [lb]	E3H [lb]
2"	7.8	4.65	1.77	4.65	4.76	1.81	2.4	0.71	1.18	0.63	0.55	F07	4 x 0.37	2.76	15.43	17.64
2½"	8.11	4.96	1.89	5.12	5.31	2.4	2.99	1.57	1.85	0.63	0.55	F07	4 x 0.37	2.76	17.64	19.84
3"	8.27	5.28	1.89	5.51	5.63	2.99	3.54	2.4	2.6	0.63	0.55	F07	4 x 0.37	2.76	19.84	22.05
4"	8.66	5.67	2.13	6.18	8.5	3.78	4.41	3.15	3.35	0.63	0.55	F07	4 x 0.37	2.76	22.05	30.86
5"	9.45	7.01	2.24	7.32	9.92	4.65	5.35	4.09	4.29	0.75	0.67	F07	4 x 0.37	2.76	28.66	41.89
6"	11.02	7.83	2.24	8.9	12.05	5.63	6.3	5.12	5.35	0.83	0.75	F10	4 x 0.43	4.02	44.09	61.73
8"	12.6	9.21	2.44	11.1	14.33	7.4	8.27	6.85	7.01	0.94	0.87	F10	4 x 0.43	4.02	66.14	99.21
10"	14.57	10.94	2.76	13.66	17.17	9.29	10.24	8.74	8.9	1.14	1.06	F12	4 x 0.51	4.92	121.25	163.14
12"	16.14	12.52	3.19	15.63	19.53	11.06	12.2	10.51	10.67	1.34	1.26	F12	4 x 0.51	4.92	165.35	231.49
14"	18.9	14.45	3.62	17.4	22.2	12.6	13.78	11.97	11.77	1.5	1.42	F14	4 x 0.71	5.51	242.51	365.97
16"	19.88	15.43	4.02	19.57	24.72	14.61	15.75	13.82	13.78	1.89	1.81	F14	4 x 0.71	5.51	337.31	491.63
18"	22.64	17.2	4.49	22.13	26.93	16.54	17.72	15.67	15.55	3.54	Ø 2.56	F16	4 x 0.87	6.5	504.86	729.73
20"	23.62	18.31	5	24.61	29.13	18.46	19.69	17.56	17.52	3.74	Ø 2.95	F16	4 x 0.87	6.5	630.52	903.9
24"	28.74	21.06	6.06	28.43	34.25	21.61	23.62	20.47	20.67	4.33		F25	8 x 0.71	10	1009.72	1474.89

Dimensions

Handlever:



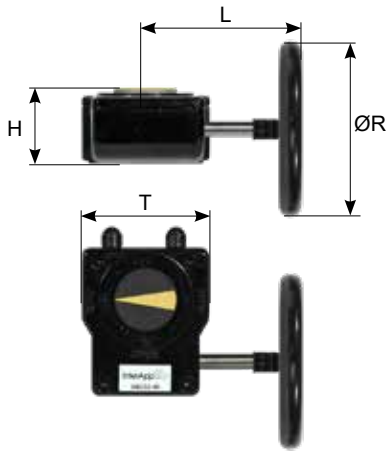
Inches	Code	pmax [psi]	H	L	[lb]*
2"	**HLSH.F0714.220**	290	1.97	8.66	2.21
2½"	**HLSH.F0714.220**	290	1.97	8.66	2.21
3"	**HLSH.F0714.220**	290	1.97	8.66	2.21
4"	**HLSH.F0714.220**	290	1.97	8.66	2.21
5"	**HLSH.F0717.300**	290	1.97	11.81	4.41
6"	**HLSH.F0717.300**	145	1.97	11.81	4.41
8"	**HLSH.F1019.400**	145	2.17	15.75	6.61

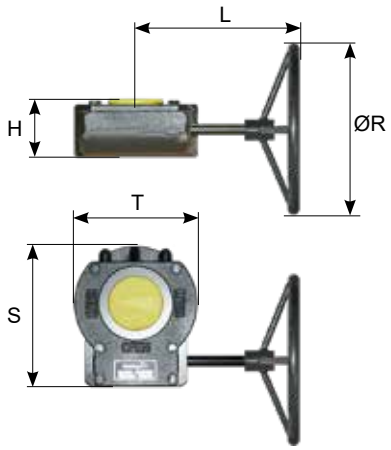
6" + 8" only with ANSI class 150 body

[lb]* weight without butterfly valve

Dimensions

Gearbox:





ANSI class 300 / with PTFE seat at 50 bar
Aluminium gearbox:

Inches	GB232	H	L	R	S	T	n**	[lb]*
2"	**GB232-05.F05-F0714.100**	2.09	4.76	3.94	4.49	3.15	10	1.76
2½"	**GB232-05.F05-F0714.100**	2.09	4.76	3.94	4.49	3.15	10	1.76
3"	**GB232-05.F05-F0714.100**	2.09	4.76	3.94	4.49	3.15	10	1.76
4"	**GB232-06.F05-F0714.160**	2.32	7.05	6.30	4.49	3.15	10	1.98
5"	**GB232-08.F07-F1017.250**	2.64	8.23	9.84	5.16	3.94	9.25	3.42
6"	**GB232-08.F07-F1017.250**	2.64	8.23	9.84	5.16	3.94	9.25	3.42
8"	**GB232-13.F10-F1219.400**	3.31	14.80	15.75	8.23	6.89	10	11.9

[lb]* weight without butterfly valve
n** = Handwheel turns ON/OFF

ANSI class 300 / with PTFE seat at 50 bar
Cast Iron gearbox:

Inches	GBN	H	L	R	S	T	n**	[lb]*
2"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.6	4.41
2½"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.6	4.41
3"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.6	4.41
4"	**GB210N.F05-F07-F1014.160**	2.48	7.6	6.3	5.02	4.02	11.6	8.82
5"	**GB210N.F05-F07-F1017.160**	2.48	7.6	6.3	5.02	4.02	11.6	8.82
6"	**GB215N.F05-F07-F1017.250**	2.48	8.19	9.84	5.02	4.02	11.6	8.82
8"	**GB550N.F10-F1219.400**	3.46	12.09	15.75	6.85	5.43	12	19.84
10"	**GB880N.F12-F1622.600**	3.64	12.4	23.62	8.9	7.87	13.2	30.86
12"	**GB1250N.F1227.600**	4.02	14.02	23.62	10.16	8.66	13.75	48.5
14"	**GB2000N.F1432.500**	4.76	14.09	19.69	10.04	8.43	27	52.91
16"	**GB1950N/PR4.F1436.400**	4.96	16.02	15.75	12.7	11.22	54	85.98
18"	**GB1950N/PR4.F1665.500**	4.96	16.81	19.69	12.7	11.22	54	85.98
20"	**GB3000N/PR4.F1675.600**	6.02	17.32	23.62	13.27	11.54	61	108.03
24"	**GB6800N/PR6.F25-F3090.500**	6.26	18.9	19.69	16.02	14.57	117	141.54

[lb]* weight without butterfly valve
n** = Handwheel turns ON/OFF

ANSI class 150 / With Metal seat at 20 bar
Cast Iron gearbox:

Inches	GBN	H	L	R	S	T	n**	[kg]*
2"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.6	4.41
2½"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.9	4.41
3"	**GB150N.F05-F0714.160**	2.15	5.26	6.3	4.88	3.15	9.6	4.41
4"	**GB210N.F05-F07-F1014.160**	2.48	7.6	6.3	5.02	4.02	11.6	8.82
5"	**GB210N.F05-F07-F1017.160**	2.48	7.6	6.3	5.02	4.02	11.6	8.82
6"	**GB215N.F05-F07-F1017.250**	2.48	8.19	9.84	5.02	4.02	11.6	8.82
8"	**GB550N.F10-F1219.400**	3.46	12.09	15.75	6.85	5.43	12	19.84
10"	**GB880N.F1022.500**	3.64	12.4	19.69	8.9	7.87	13.2	30.86
12"	**GB880N.F12-F1627.700**	3.64	12.4	27.56	8.9	7.87	13.2	30.86
14"	**GB1250N.F1232.700**	4.02	14.02	27.56	10.16	8.66	13.75	48.5
16"	**GB2000N.F1436.600**	4.76	14.09	23.62	10.04	8.43	27	52.91
18"	**GB1950N/PR4.F1436.400**	4.96	16.02	15.75	12.7	11.22	54	85.98
20"	**GB1950N/PR4.F1446.600**	4.96	16.81	23.62	12.7	11.22	54	85.98
24"	**GB6800N/PR4.F1665.600**	6.26	18.9	23.62	16.02	14.57	81	137.79

[kg]* weight without butterfly valve
n** = Handwheel turns ON/OFF