ELARA

Description

High performance double eccentric butterfly valve with interchangeable seats for working pressures up to 50 bar (ANSI Class 300).
With 3 different sealing options:
- TM Modified PTFE seat
- M4 Modified PTFE / Stainless steel, fire safe seat
- IN with metal seat

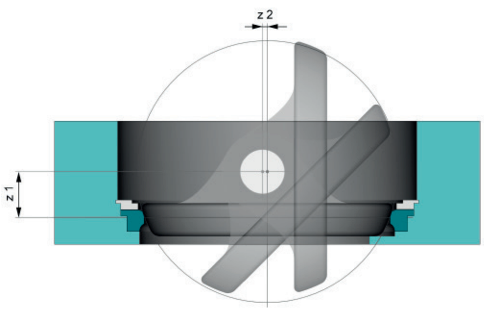
Product features

• 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	PN 10, PN 16, PN 25, PN 40, PN 50 ANSI class 150, class 300
• 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 DN 50-200, 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)

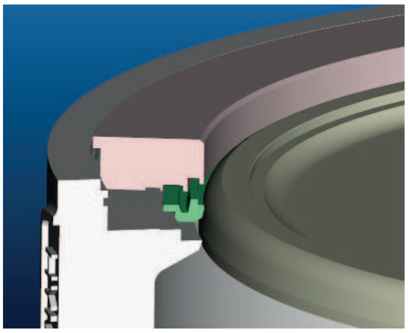
Consequently, when opening, the disc is immediately disengaged from the seat and thus, the friction and the torque remain very low.



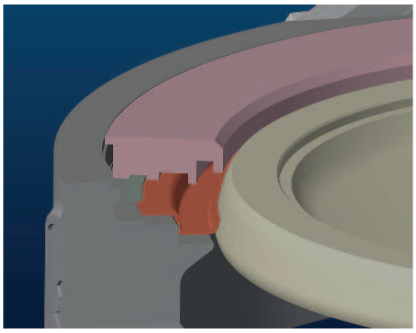
ELARA

Replaceable seats

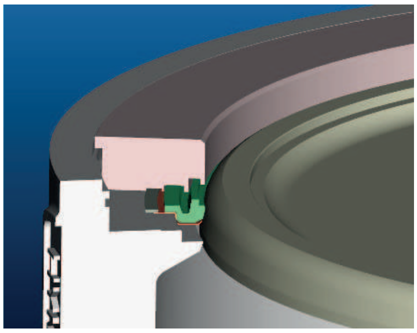
Elara available with different seats, which can be interchanged by the customer. This offers and advantage as it allows the change of the seat even on site.



Modified PTFE seat



Metal seat

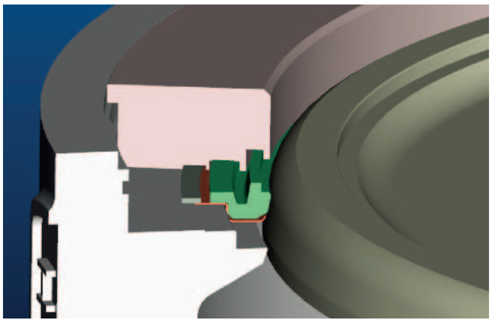


Fire safe seat

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.

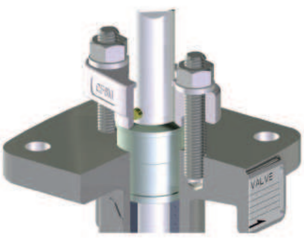


Low Fugitive Emission Gland Packing System

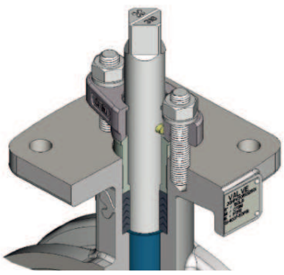
A low fugitive emission gland packing system designed to prevent the leakage along the valve shaft:

- 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

InterApp

ELARA

TECNOFLUID

Torque at requested working pressure [Nm]

Modified PTFE seat

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
16 bar	33	35	43	55	94	126	238	381	598	791	1156	1499	2171	3372
20 bar	38	42	49	82	141	206	363	527	985	1458	2273	3089	4246	6606
25 bar	49	54	63	112	192	280	506	871	1358	1999	3086	4221	5785	8984
40 bar	60	66	77	142	243	354	650	1115	1731	2541	3899	5353	7324	11362
50 bar	66	73	89	173	295	433	796	1371	2121	3109	4758	6568	8961	13963

Fire safe seat

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
16 bar	39	52	64	83	135	183	274	435	661	944	1343	1748	2453	3710
20 bar	45	54	76	126	207	297	531	886	1349	1939	2900	3922	5285	8034
25 bar	53	67	90	156	258	371	674	1130	1721	2481	3712	5054	6823	10412
40 bar	62	79	104	186	309	445	818	1375	2094	3022	4525	6187	8362	12789
50 bar	69	87	121	215	354	512	954	1605	2450	3544	5319	7304	9884	15176

Metal seat

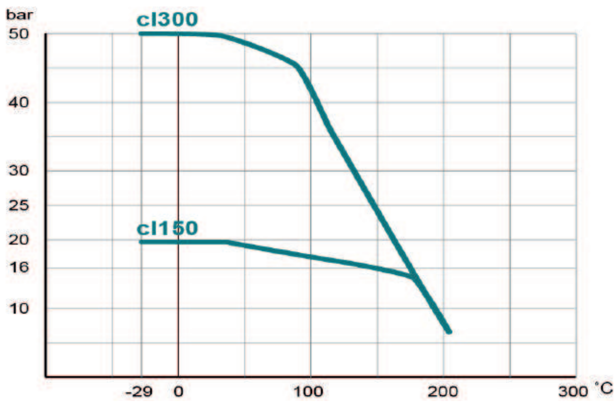
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
16 bar	39	52	64	83	135	183	274	435	661	944	1343	1748	2453	3710
20 bar	45	54	76	126	207	297	531	886	1349	1939	2900	3922	5285	8034

Remarks:

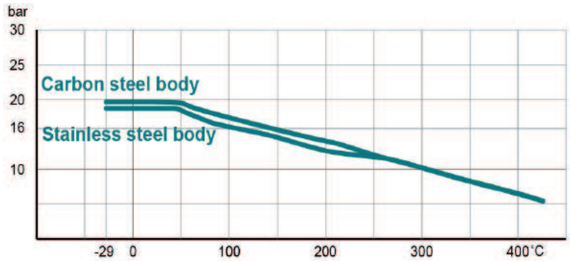
- Above Torques value (Nm) including 30% safety coefficient.
- Torques value in above chart is measured with water media under listed pressure.
- Installing Upstream direction will result in lower torque and better life cycle.

Pressure / Temperature

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



Metal seat (IN)



ELARA

Flow values Kv [m³/h]

ANSI cl. 150

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
10°	0	2	5	14	17	35	57	120	176	228	332	439	541	906
20°	7	14	29	50	81	127	205	337	474	583	747	945	1119	1947
30°	19	33	54	92	144	209	318	515	709	841	1035	1342	1550	2749
40°	31	53	81	134	199	290	440	698	984	1199	1527	2025	2293	3947
45°	38	61	93	154	227	330	524	833	1174	1434	1864	2492	2858	4795
50°	44	72	102	184	268	365	616	1010	1376	1725	2259	3047	3531	5681
60°	52	94	124	237	338	484	852	1389	1919	2457	3248	4433	5120	8025
70°	60	117	152	302	422	631	1121	1846	2653	3395	4416	6171	7141	11186
80°	62	126	180	375	485	800	1419	2434	3534	4467	6033	8227	9886	14785
85°	61	131	199	402	522	843	1483	2751	3879	5041	6851	9168	11354	15854
90°	61	130	196	409	523	874	1733	2767	4041	5144	7077	9989	11948	16453

ANSI cl. 300

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
10°	0	2	5	14	17	32	54	112	164	213	309	409	504	843
20°	7	14	29	50	81	119	190	313	441	542	695	878	1041	1810
30°	19	33	54	92	144	195	297	479	659	782	962	1247	1442	2557
40°	31	53	81	134	199	270	409	649	916	1115	1420	1883	2133	3671
45°	38	61	93	154	227	307	487	775	1092	1334	1733	2317	2658	4459
50°	44	72	102	184	268	340	573	940	1280	1604	2100	2833	3284	5283
60°	52	94	124	237	338	451	792	1291	1785	2284	3021	4123	4761	7462
70°	60	117	152	302	422	586	1043	1717	2467	3157	4107	5738	6641	10403
80°	62	126	180	375	485	744	1319	2264	3286	4155	5611	7651	9194	13751
85°	61	131	199	402	522	785	1380	2558	3607	4688	6371	8526	10559	14744
90°	61	130	196	409	523	812	1612	2573	3758	4784	6582	9289	11112	15301

ELARA

Type code

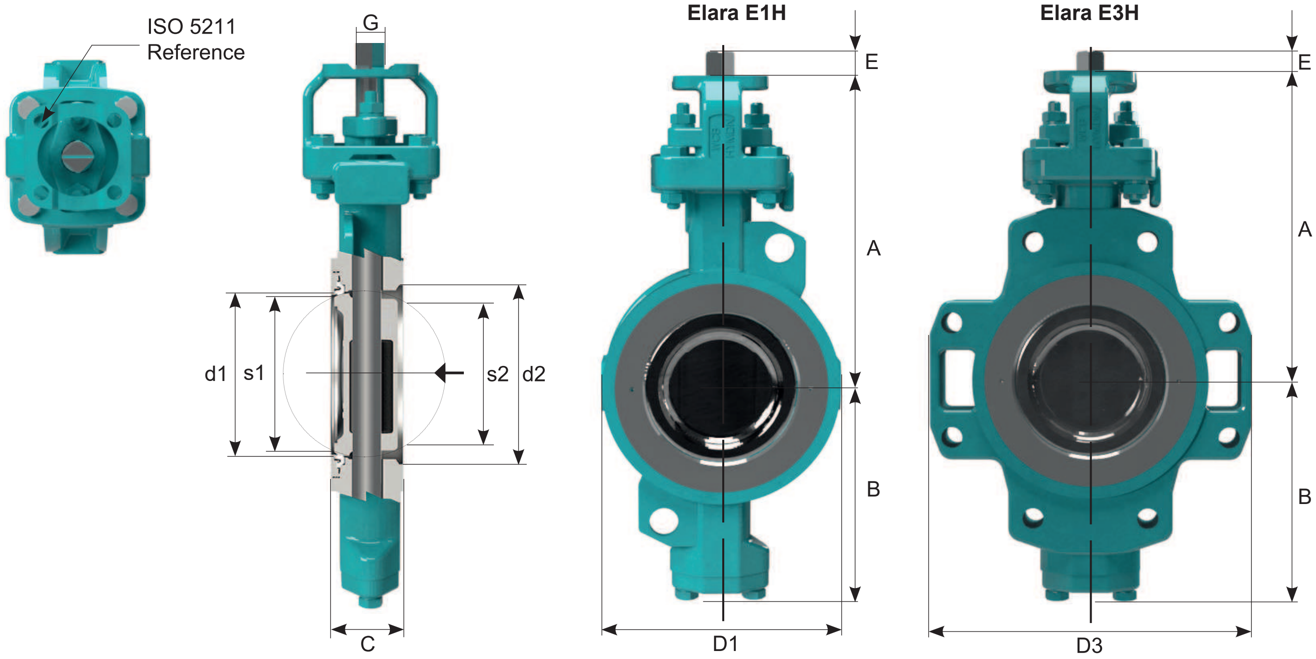
EH1	0150	.	4	5	-	3HE	.	4L	.	4C0	.	TM	-	FF
❶	❷		❸	❹		❺		❻		❼		❽		❾

❶	**Body type**	**EH1**	Wafer		DN 50-600
		EH3	Lug		DN 50-600
❷	**Nominal diameter**	**050-600**	mm		
❸	**Working pressure**	**4**	20 bar / ANSI class 150		DN 150-600 (Wafer) DN 50-600 (Lug)
		7	50 bar / ANSI class 300		DN 50-600
❹	**Flange connection**	**For EH1 (Wafer)**		**Body class**	
		2	PN 10	ANSI cl. 150	DN 350-600
		3	PN 16	ANSI cl. 150	DN 350-600
			PN 10/16/25, ANSI cl. 150	ANSI cl. 150	DN 150-300
			PN 10/16/25/40, ANSI cl. 150 / 300	ANSI cl. 300	DN 50-125
		5	PN 25	ANSI cl. 150	DN 350-600
		6	PN 40	ANSI cl. 300	DN 250-600
		A	ANSI cl. 150	ANSI cl. 150	DN 350-600
		B	PN 40, ANSI cl. 300	ANSI cl. 300	DN 150-200
			ANSI cl. 300	ANSI cl. 300	DN 250-600
		For EH3 (Lug)			
		2	PN 10	ANSI cl. 150	DN 200-600
		3	PN 10/16/25	ANSI cl. 150	DN 50-80
			PN 10/16	ANSI cl. 150	DN 65, 100-150
			PN16	ANSI cl. 150	DN 200-600
		5	PN 25	ANSI cl. 150	DN 65, 100-250, 350, 450-600
		6	PN 40	ANSI cl. 300	DN 50-125, 200, 300
		A	ANSI cl. 150	ANSI cl. 150	DN 50-600
		B	ANSI cl. 300	ANSI cl. 300	DN 50-600
❺	**Body**	**3HE**	Carbon steel, A216WCB / 1.0619, Epoxy coated (80 µm)		
		4C0	Stainless steel A351 Gr. CF8M / 1.4408		
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. 50 bar
		M4	Modified PTFE / Stainless steel, Fire Safe		max. 50 bar
		IN	Metal seat, Inconel		max. 20 bar
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

ELARA

Dimensions



ANSI cl. 150

DN	A	B	C	D1	D3	d1	d2	s1	s2	E	G	ISO 5211	y	b	E1H [kg]	E3H [kg]
50																
65																
80	= ANSI cl. 300															
100																
125																
150	255	190	57	217	270	143	160	132	136	19	17	F07	4 x 9.5	70	15	21
200	295	214	62	269	326	188	210	177	183	21	19	F10	4 x 11	102	22	31
250	340	254	70	328	420	236	260	225	230	24	22	F10	4 x 11	102	34	49
300	390	298	81	377	468	281	310	270	274	29	27	F12	4 x 13	125	51	72
350	420	328	92	418	516	320	350	307	311	34	32	F12	4 x 13	125	68	95
400	490	377	102	482	590	371	400	357	362	38	36	F14	4 x 18	140	103	142
450	515	402	114	536	640	420	450	403	410	38	36	F14	4 x 18	140	136	178
500	550	437	127	591	712	469	500	452	457	48	46	F14	4 x 18	140	176	247
600	630	492	154	696	830	549	600	526	534	90	Ø 65	F16	4 x 22	165	290	393

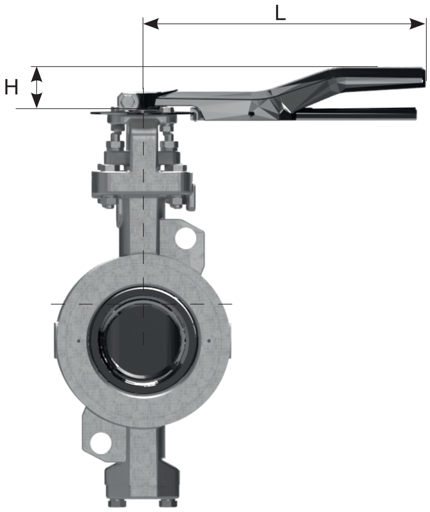
ANSI cl. 300

DN	A	B	C	D1	D3	d1	d2	s1	s2	E	G	ISO 5211	y	b	E1H [kg]	E3H [kg]
50	198	118	45	118	121	46	61	18	30	16	14	F07	4 x 9.5	70	7	8
65	206	126	48	130	135	61	76	40	47	16	14	F07	4 x 9.5	70	8	9
80	210	134	48	140	143	76	90	61	66	16	14	F07	4 x 9.5	70	9	10
100	220	144	54	157	216	96	112	80	85	16	14	F07	4 x 9.5	70	10	14
125	240	178	57	186	252	118	136	104	109	19	17	F07	4 x 9.5	70	13	19
150	280	199	57	226	306	143	160	130	136	21	19	F10	4 x 11	102	20	28
200	320	234	62	282	364	188	210	174	178	24	22	F10	4 x 11	102	30	45
250	370	278	70	347	436	236	260	222	226	29	27	F12	4 x 13	125	55	74
300	410	318	81	397	496	281	310	267	271	34	32	F12	4 x 13	125	75	105
350	480	367	92	442	564	320	350	304	299	38	36	F14	4 x 18	140	110	166
400	505	392	102	497	628	371	400	351	350	48	46	F14	4 x 18	140	153	223
450	575	437	114	562	684	420	450	398	395	90	Ø 65	F16	4 x 22	165	229	331
500	600	465	127	625	740	469	500	446	445	95	Ø 75	F16	4 x 22	165	286	410
600	730	535	154	722	870	549	600	520	525	110	Ø 90	F25	8 x 18	254	458	669

ELARA

Dimensions

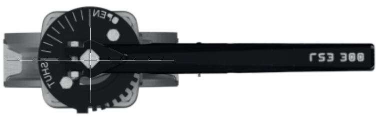
Handlever:



DN	Code	pmax [bar]	H	L	[kg]*
50	**HLSH.F0714.220**	20	50	220	1
65	**HLSH.F0714.220**	20	50	220	1
80	**HLSH.F0714.220**	20	50	220	1
100	**HLSH.F0714.220**	20	50	220	1
125	**HLSH.F0717.300**	20	50	300	2
150	**HLSH.F0717.300**	10	50	300	2
200	**HLSH.F1019.400**	10	55	400	3

DN 150 + 200 only with ANSI class 150 body

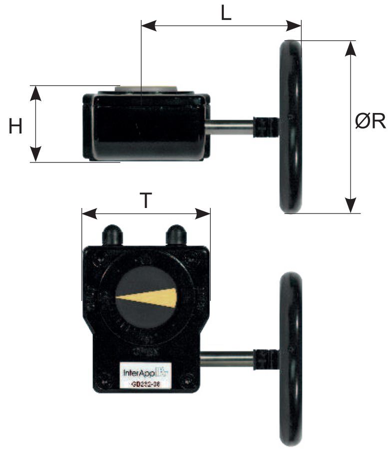
[kg]* weight without butterfly valve



ELARA

Dimensions

Gearbox:



With PTFE seat at 50 bar

Aluminium gearbox:

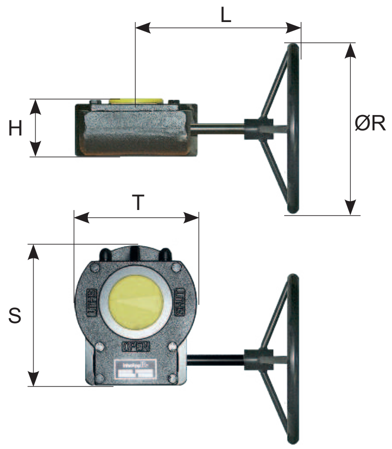
DN	GB232	H	L	R	S	T	n**	[kg]*
50	**GB232-05.F05-F0714.100**	53	121	100	114	80	10	0.8
65	**GB232-05.F05-F0714.100**	53	121	100	114	80	10	0.8
80	**GB232-05.F05-F0714.100**	53	121	100	114	80	10	0.8
100	**GB232-06.F05-F0714.160**	59	179	160	114	80	10	0.9
125	**GB232-08.F07-F1017.250**	67	209	250	131	100	9.25	1.55
150	**GB232-08.F07-F1017.250**	67	209	250	131	100	9.25	1.55
200	**GB232-13.F10-F1219.400**	84	376	400	209	175	10	5.4

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

Cast Iron gearbox:

DN	GBN	H	L	R	S	T	n**	[kg]*
50	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.6	2
65	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.6	2
80	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.6	2
100	**GB210N.F05-F07-F1014.160**	63	193	160	127.5	102	11.6	4
125	**GB210N.F05-F07-F1017.160**	63	193	160	127.5	102	11.6	4
150	**GB215N.F05-F07-F1017.250**	63	208	250	127.5	102	11.6	4
200	**GB550N.F10-F1219.400**	88	307	400	174	138	12	9
250	**GB880N.F12-F1622.600**	92.5	315	600	226	200	13.2	14
300	**GB1250N.F1227.600**	102	356	600	258	220	13.75	22
350	**GB2000N.F1432.500**	121	358	500	255	214	27	24
400	**GB1950N/PR4.F1436.400**	126	407	400	322.5	285	54	39
450	**GB1950N/PR4.F1665.500**	126	427	500	322.5	285	54	39
500	**GB3000N/PR4.F1675.600**	153	440	600	337	293	61	49
600	**GB6800N/PR6.F25-F3090.500**	159	480	500	407	370	117	64.2

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



With Metal seat at 25 bar

Cast Iron gearbox:

DN	GBN	H	L	R	S	T	n**	[kg]*
50	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.6	2
65	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.9	2
80	**GB150N.F05-F0714.160**	54.5	133.5	160	124	80	9.6	2
100	**GB210N.F05-F07-F1014.160**	63	193	160	127.5	102	11.6	4
125	**GB210N.F05-F07-F1017.160**	63	193	160	127.5	102	11.6	4
150	**GB215N.F05-F07-F1017.250**	63	208	250	127.5	102	11.6	4
200	**GB550N.F10-F1219.400**	88	307	400	174	138	12	9
250	**GB880N.F1022.500**	92.5	315	500	226	200	13.2	14
300	**GB880N.F12-F1627.700**	92.5	315	700	226	200	13.2	14
350	**GB1250N.F1232.700**	102	356	700	258	220	13.75	22
400	**GB2000N.F1436.600**	121	358	600	255	214	27	24
450	**GB1950N/PR4.F1436.400**	126	407	400	322.5	285	54	39
500	**GB1950N/PR4.F1446.600**	126	427	600	322.5	285	54	39
600	**GB6800N/PR4.F1665.600**	159	480	600	407	370	81	62.5

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