



## Fully Welded

Ball Valves

## Fully Welded

FULLY WELDED type ball valves are cut off devices suitable for use both on natural gas distribution network and for liquid service when high performance on tightness and low pressure drop are required.

### Reference standards for all valves

- API 6D ( ISO 14313 ) design & monogrammed,
- Fire-Safe design and certificated according to API 607 / API 6 FA / BS 6755,
- Face to Face dimensions according to ASME B 16.25,
- Tight shut off according to API 598 & API 6D,
- Flanged RF or RTJ according to ASME B16.5, above 24" according to MSS SP44,
- Butt weld ends according to ASME 16.25,

### Common features

- Double block and bleed facility, in open and closed position;
- Self-relieving seats design;
- Anti-blow out stem design;
- Antistatic device;
- Each valve can be equipped with, manual lever, gear operator, or actuator;
- Triple barrier stem seals;
- Emergency seats sealant injection for size 12" and above;
- Emergency stem sealant injection for size 16" and above;



Fully Welded

Designed With Your Needs In Mind

**Fully Welded**

**1 Triple-barrier stem seals**

Repackable online under pressure in both open and close position

**2 Anti blow-out stem**

**3 Emergency sealant injection stem and seat**

High pressure grease fitting with triple metal to metal seal for reverse flow prevention

**4 Sealant groove**

All the way around on the external side of the seat ring

**5 Heavy metal seat ring with soft insert**

**6 Preloaded elicoidal springs**

Around the seal unit provide maximum operational safety minimizing torque value

**7 Two self regulating fork shaped bushings**

Reduce stress concentration on stem-ball connection

**8 Body bleed fitting**

Body cavity may be drained in open and close position

**9 Forged body and ball**

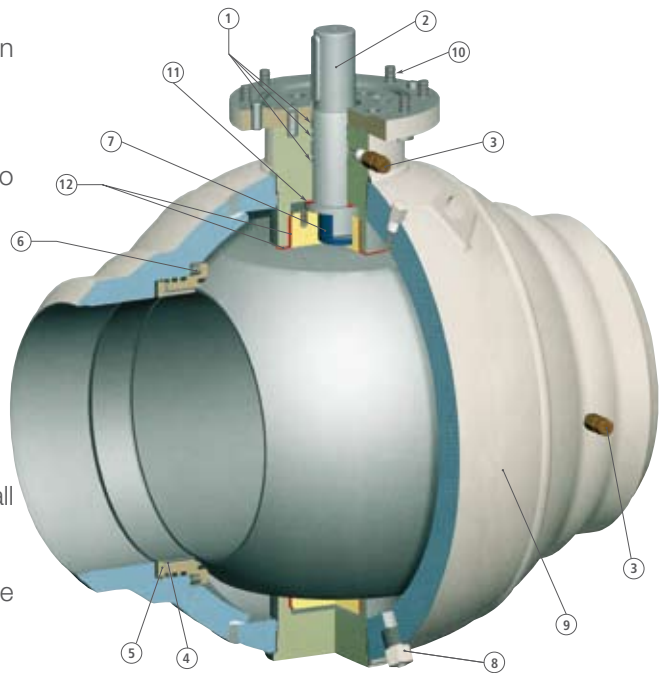
**10 Standard bonnet construction**

For easy fitting at job-site of extensions, gearing and power operators

**11 Stem-thrust plate**

**12 Trunnions thrust plate**

PTFE impregnated steel bearings assure smooth non-sticking operation without lubrication



**Each kind of valve can be customized upon request, several features applicable**

- Primary metal secondary Soft seats with delta-ring insert;
- Double piston effect seats;
- Anti-blow out stem design;
- Special materials;
- Under ground applications;
- Design, high and low temperature application;
- Low fugitive emissions certificate according to TA – Luft VDI 2440, SIL 3 Certificate Available

**Ball Valves**

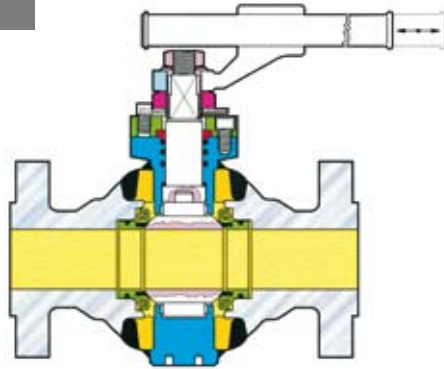
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Full and reduced bore valve

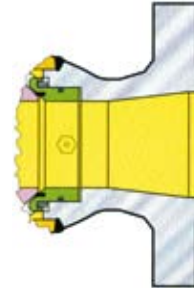
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**Fig. 450** Full bore

DN 2" Class 150 + 1500  
 DN 3" Class 150 + 600  
 DN 4" Class 150 + 300



**Fig. 460** Reduced bore

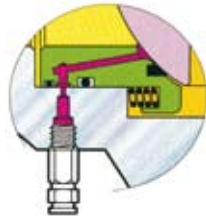


**CUT WAY X-X**



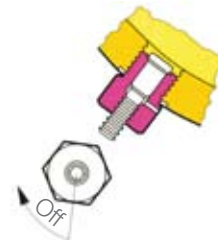
Stem ball connections

**CUT WAY Y-Y**

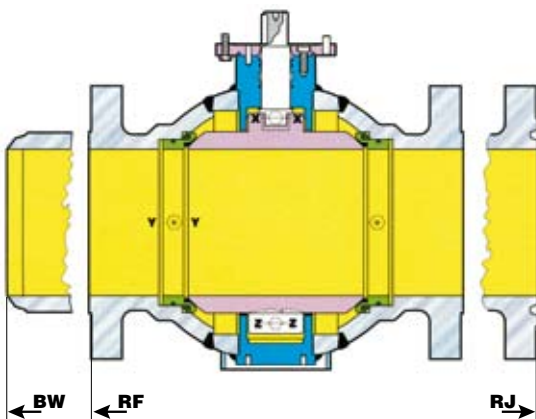


Emergency sealing  
 (upon request)

**DRAIN PLUG**

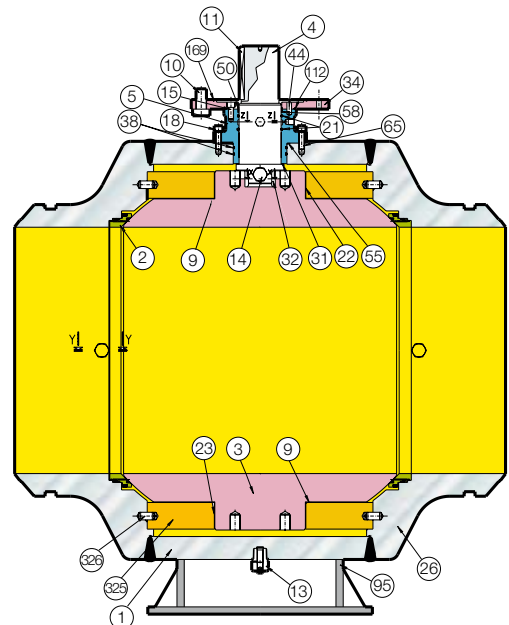


**Fig. 450** Full bore



DN 4" ÷ 24" Class 600  
 DN 4" Class 900 ÷ DN 6" 1500

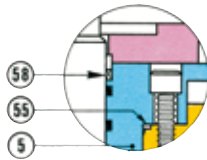
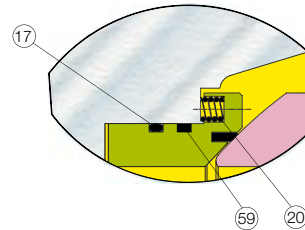
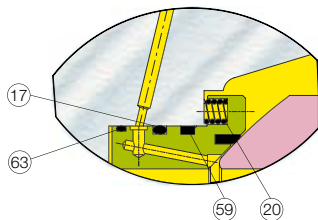
**Fig. 450** Full bore



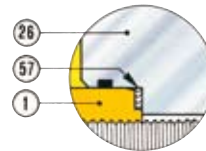
DN 8" Class 900 ÷ DN 16" Class 1500  
 DN 26" ÷ DN 36" Class 150 ÷ 600

**FEATURES DESCRIPTION**
**Fully Welded**
**Standard safe - Fire safe execution**

Fire safe seat API 607- Bs 6755



Stem



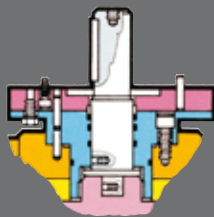
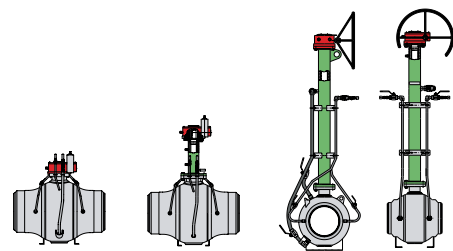
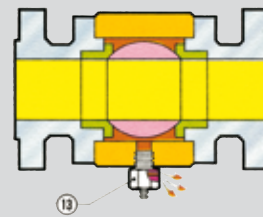
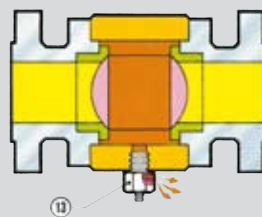
Body

**Automatic body Overpressure Relief**

The Pietro Fiorentini valves are designed to bleed automatically downwards every overpressure beyond 8 bars (115 PSI), which develops in the body cavity.


**Antistatic device**
**Blow out proof stem**

The stem can be assembled only from the internal side of the valve. A stout collar keeps it inside the body. This solution allows to replace the outside gasket on the stem in case it is damaged.

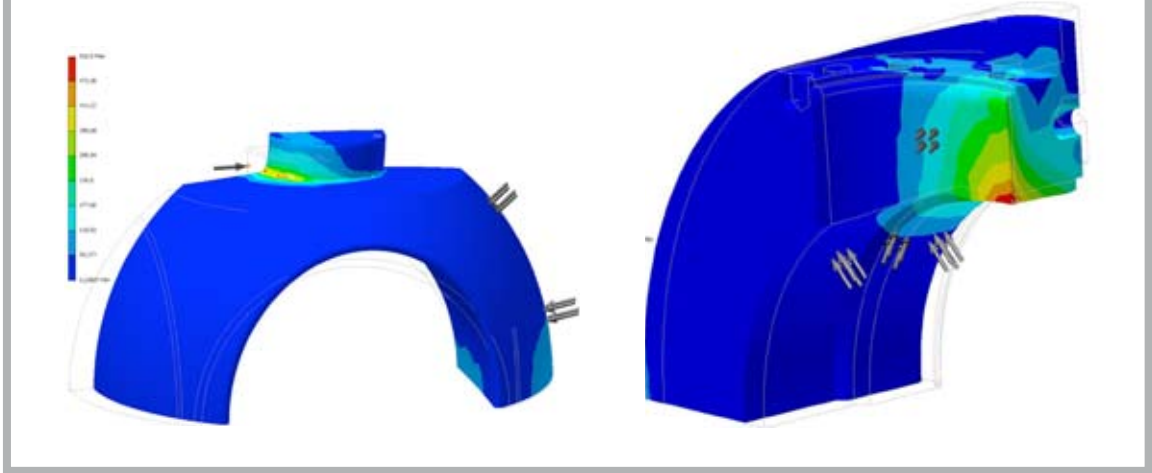

**Extended Stem**

**Double block and bleed**


The Pietro Fiorentini valves guarantee the double block of the seats when pressure is applied on both sides of the valve with the drain plug open.

## FINITE ELEMENT METHOD (FEM) ANALYSIS

## Fully Welded

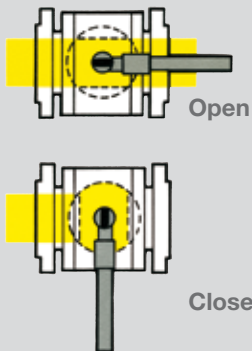
### FEM Analysis



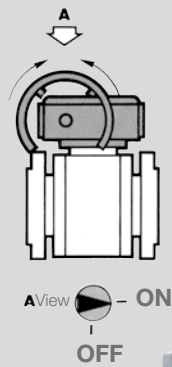
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The valve shall be used in fully "open" or "closed" position only. It is not allowed to operate the valve in partially open position.

### Hand lever

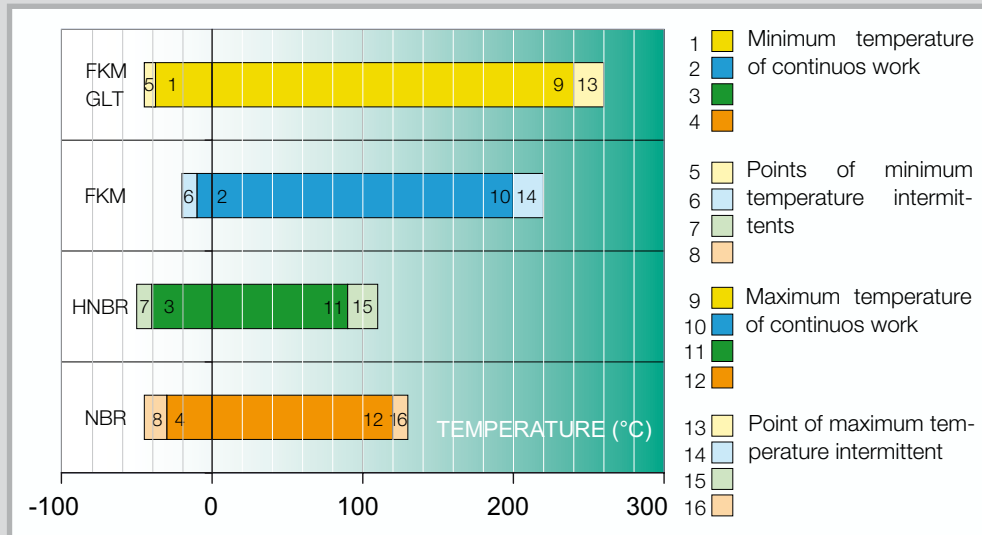
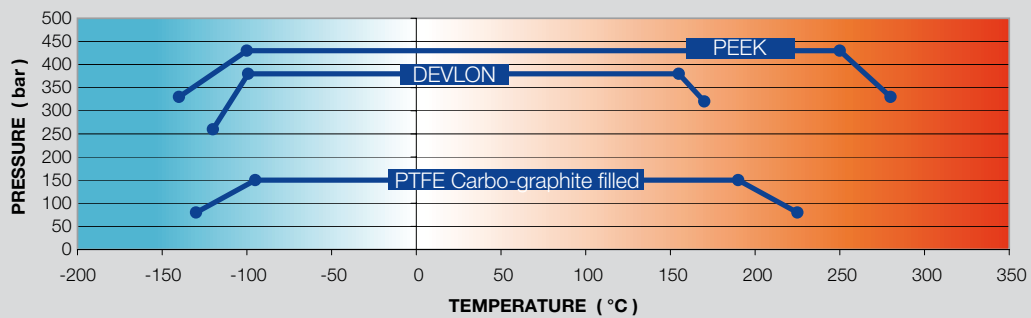


### Gear operated



Gas over oil operated valves



**TECHNICAL INFORMATION**
**Fully Welded**
**O.RING TEMPERATURE RANGE**

**SEAT INSERT**


Solutions available with special materials for **non-standard conditions**

BODY GROUP		TRIM NUMBAR		
POS-ITEM	DESCRIPTION	10	11	12
1	BODY	ASTM A350 LF2	ASTM A350 LF2	ASTM A350 LF2
5	BONNET (UP)	ASTM A350 LF2	ASTM A350 LF2	ASTM A350 LF2
10-35	CAP SCREW	ISO 898/1-8.8"	ISO 898/1-8.8"	ISO 898/1-8.8"
11	STEM KEY	AISI 4140	AISI 4140	AISI 4140
12	BONNET (LOW) $\leq$ DN24"	ASTM A 350 LF2	ASTM A350 LF2	ASTM A 350 LF2
13	DRAIN PLUG	ASTM A105	ASTM A105 RC22	AISI 316
14	PLUG	ASTM A105	ASTM A105 RC22	AISI 316
25	STOP PIN	ISO 898/1-8.8"	AISI 316	AISI 316
26	TAIL PIECE	ASTM A350 LF2	ASTM A350 LF2	ASTM A350 LF2
34	FLANGE	ASTM A350 LF2	ASTM A350 LF2	ASTM A350 LF2
47	HAND LEVER	ASTM A 106*	ASTM A 106*	ASTM A 106*
48-52	NUT	ISO 898/1-6S*	ISO 898/1-6S*	ISO 898/1-6S*
49	SPING WASHER	AISI 1075	AISI 1075	AISI 1075
62	GREASE NIPPLE	ASTM A105	ASTM A105 RC22	AISI 316
65-36	PIN	AISI 4140*	AISI 4140*	AISI 4140*
66	STEM STOP	AISI 1040*	AISI 1040*	AISI 1040*
74	WRENCH HEAD	ASTM A105*	ASTM A105*	ASTM A105*
75	WASHER	ASTM A 283=GrC*	ASTM A 283=GrC*	ASTM A 283=GrC*
	BALL BRACKET $\geq$ 26"	EN10025-P335 NH	FOR ALL TRIM	
	TEMPERATURE LIMIT	-29° C (-20° F)	-29° C (-20° F)	-46° C (-50° F)

INTERNAL GROUP		TRIM NUMBER			
POS-ITEM	DESCRIPTION	STANDARD	NACE	LOW TEMPERATURE	
		30	31	32	35
2	SEAL	ASTM A350 LF2+ENP	ASTM A 350 LF2+ENP	ASTM A 350 LF2+ENP	AISI 316+ENP
3	BALL	ASTM A105+ENP	ASTM A105+ENP RC22	ASTM 350 LF2+ENP	AISI 316
4	STEM	AISI 410	AISI 410 RC22	AISI 410	AISI 316*
9-31	THRUST PLATE	CS-DRY BEARNING	CS-DRY BEARNING RC22	AISI 316-DRY BEARNING	AISI 316-DRY BEARNING
20-43	SPRING	AISI 302	INCONEL X 750 RC22	INCONEL X 750	INCONEL X 750
22-23	THRUST BEARNING	CS-DRY BEARNING	CS-DRY BEARNING RC22	AISI 316-DRY BEARNING	AISI 316-DRY BEARNING
32	THRUST BUSHING	ASTM A105+ENP	ASTM A105+ENP RC22	AISI 316	AISI 316
50	GLAND	AISI 1018*	AISI 1018+ENP RC22	AISI 316	AISI 316
	TEMPERATURE LIMIT	-29° C (-20° F)	-29° C (-20° F)	-46° C (-50° F)	-46° C (-50° F)



SEAL GROUP		TRIM NUMBER				
ITEM	DESCRIP- TION	RATING	NBR	FKM	HNBR	FKM GLT
2	SEAT INSERT - CLASS	150 ÷ 600	PTFE/NBR •	PTFE/FKM •	PTFE/HNBR •	PTFE/FKM GLT •
		900 ÷ 1500	DEVLON	PEEK	DEVLON	PEEK
31	THRUST PLATE UP TO DN3"		PTFE	PTFE	PTFE	PTFE
45	PACKAGING		PTFE	PTFE	PTFE	PTFE
6-17-21-24- 38-56-63	O RING		NBR	FKM	HNBR	FKM GLT
58-59-99	FIRE SAFE RING		GRAFITE - GRAPHITE	GRAFITE - GRAPHITE	GRAFITE - GRAPHITE	GRAFITE - GRAPHITE
55-57	FIRE SAFE RING		AISI 316 + GRAPHITE	AISI 316 + GRAPHITE	AISI 316 + GRAPHITE	AISI 316 + GRAPHITE
	<b>TEMPERATURE LIMIT</b>		- 29° C to + 121° C (- 20° F to + 250° F)	- 10° C to + 200° C (+ 14° F to + 392° F)	- 46° C to + 121° C (- 50° F to + 250° F)	- 40° C to + 240° C (- 40° F to + 464° F)

**Note:**

\* zinc coated

\*\* alternative ASTM A 564 VI74 (17-4-PH)

ENP: electroless nickel plated

CS: carbon steel

RC: hardness Rockwell C

• Seat insert alternative (Consult our technical dep. for temperature limit).

ADVICE		CRUDE OIL	NACE ■	LOW TEMP. (-50°F)	NATURAL GAS
TRIM N°	MATERIAL				
<b>BODY GROUP</b>					
10	CARBON STEEL	○	NR	NR	○
11	CARBON STEEL (NACE)	○	○	NR	○
12	CARBON STEEL LOW TEMP.	○	NR	○	○
<b>INTERNAL GROUP</b>					
30	CARBON STEEL	○	NR	NR	○
31	CARBON STEEL (NACE)	○	○	○	○
32	CARBON STEEL LOW TEMP.	○	NR	NR	○
35	STAINLESS STEEL	○	○	○	○
<b>SEALS GROUP</b>					
NBR	NBR	○	○	NR	○
FKM	FKM	○	○	NR	○
HNBR	HNBR	○	○	○	○
FKM GLT	FKM GLT	○	○	○	○

**NR: NOT RECOMMENDED**

○ GOOD

■ NACE: MR-01-75 - SULFIDE STRESS CRACKING RESISTANT MATERIAL FOR OIL FIELD EQUIPMENT

**TRIM APPLICATION INFORMATION**

The indicated table is based on the Pietro Fiorentini experience and on the application experiences with our valves at the values fixed by the ASTM/ASME/ ANSI/API regulations. The indications can be considered as a guide for the choice of the trim, but they are not an explicit or implicit guarantee for the proper application of our products or for their adaptability for a particular use.

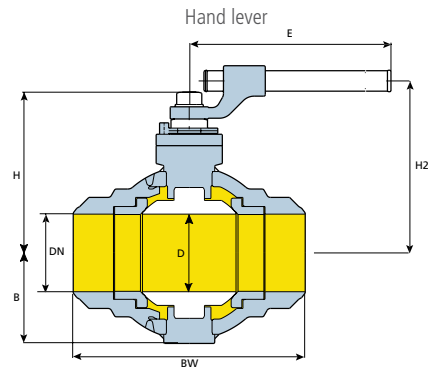
**Overall Dimensions valves FULL BORE**

**Fully Welded**

**FIG. 450-1**

**CLASS 150**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT	GEAR
									BW	OPERATOR
2"	216	100	51	400	205				19	LEVER
3"	283	125	76	550	225				44	LEVER
4"	305	145	102	550	250				61	LEVER
6"	457	230	152	76		265	300	263	101	MG 987/S
8"	521	265	203	70		360	500	320	249	MG 50
10"	559	315	254	92		400	500	345	367	MG 100
12"	635	355	305	125		450	700	415	542	MG 180
14"	762	385	336	125		485	700	415	675	MG 180
16"	838	420	387	137		500	700	440	785	MG 250
18"	914	470	438	137		600	700	440	1215	MG 250
20"	991	555	489	137		680	700	440	1540	MG 250/80
24"	1143	610	590	164		780	700	540	2465	MG 350
26"	1245	640	635	853		853	700	585	2628	MG 450
28"	1346	680	686	888		888	700	585	3009	MG 450
30"	1397	750	737	928		928	700	585	3580	MG 450
32"	1524	790	781	973		973	700	585	4080	MG 450
36"	1727	870	876	1043		1043	700	585	6087	MG 450
<b>INCH</b>	<b>MILLIMETERS</b>								<b>KG.</b>	<b>TYPE</b>

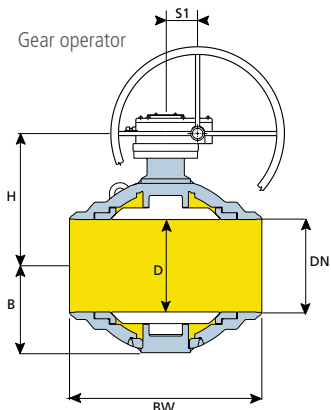
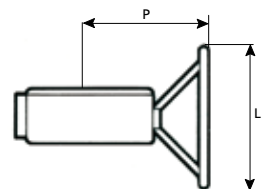


**FIG. 450-3**

**CLASS 300**

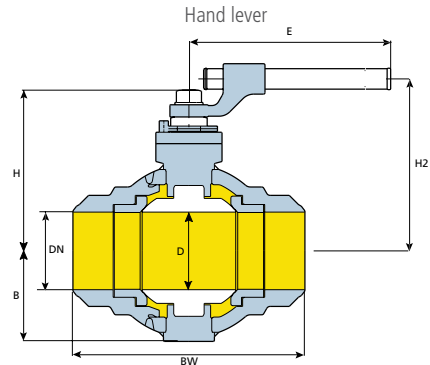
SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT	GEAR
									BW	OPERATOR
2"	216	100	51	400	205				21	LEVER
3"	283	125	76	550	225				43	LEVER
4"	305	145	102	60		206		135	73	MG 984/S
6"	457	230	152	76		265	300	263	107	MG 987/S
8"	521	265	203	92		375	500	345	257	MG 100
10"	559	315	254	92		400	500	345	363	MG 100
12"	635	355	305	125		450	700	415	525	MG 180
14"	762	385	336	125		485	700	415	679	MG 180
16"	838	420	387	137		500	700	440	956	MG 250
18"	914	470	438	137		600	700	440	1335	MG 250/80
20"	991	555	489	164		680	700	540	1604	MG 350
24"	1143	610	590	164		780	700	540	2914	MG 550
26"	1245	680	635	225		855	700	585	2870	MG 450
28"	1346	750	686	240		945	700	655	3379	MG 550
30"	1397	790	737	240		1015	700	655	4136	MG 550
32"	1524	815	781	240		1062	700	655	4619	MG 550
36"	1727	910	876	160		1170	700	760	6715	RG 3800
<b>INCH</b>	<b>MILLIMETERS</b>								<b>KG.</b>	<b>TYPE</b>

Side view gear operator



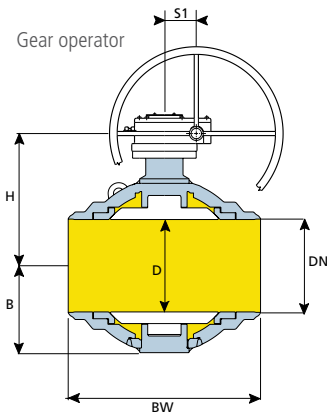
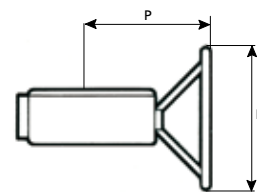
**FIG. 450-6**
**CLASS 600**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
2"	292	100	51	550	205				21		LEVER	
3"	356	125	76	550	225				48		LEVER	
4"	432	145	102	76		210	300	263	93		MG 987	
6"	559	230	152	70		295	500	320	190		MG 50	
8"	660	265	203	101		390	600	284	332		MG 150	
10"	788	315	254	125		435	700	415	442		MG 180	
12"	838	355	305	137		460	700	440	612		MG 250	
14"	889	385	336	137		490	700	440	853		MG 250/80	
16"	991	420	387	164		540	700	540	1063		MG 350	
18"	1092	470	438	240		615	700	600	1631		MG 550	
20"	1194	555	489	240		705	700	600	1982		MG 550	
24"	1397	610	590	240		810	700	600	2561		MG550/115	
26"	1448	720	635	240		855	700	585	3828		MG 550	
28"	1549	790	686	240		883	700	655	4479		MG 550	
30"	1651	890	737	160		962	700	655	4965		RG 3800	
32"	1778	905	781	160		977	700	655	5799		RG 3800	
36"	2083	1040	876	160		1092	700	760	8508		RG 3800	
INCH	MILLIMETERS							KG.	TYPE			


**FIG. 450-9**
**CLASS 900**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
2"	368	110	51	700	215				35		LEVER	
3"	381	130	76	70		190	400	310	78		MG 50	
4"	457	155	102	90		230	400	360	130		MG 50	
6"	610	191	152	90		340	550	360	305		MG 150	
8"	737	225	203	105		410	700	430	450		MG 180	
10"	838	280	254	130		490	700	545	650		MG 250	
12"	925	332	305	162		510	700	650	1020		MG 250/80	
14"	1029	375	324	162		560	700	650	1290		MG 250/80	
16"	1130	425	375	118		655	700	650	1650		MG 550	
INCH	MILLIMETERS							KG.	TYPE			

Side view gear operator


**FIG. 450-15**
**CLASS 1500**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
2"	368	110	51	700	215				34		LEVER	
3"	470	135	76	70		210	400	310	114		MG 50	
4"	546	160	102	90		240	400	360	146		MG 50	
6"	705	230	146	90		360	700	430	445		MG 150	
8"	832	270	194	130		445	700	545	560		MG 250	
10"	991	325	241	162		522	700	650	850		MG 250/80	
12"	1130	365	289	118		550	700	660	1270		MG 550	
14"	1257	418	318	200		652	700	670	2105		MG 550	
16"	1384	460	362	200		705	700	670	3190		MG 550	
INCH	MILLIMETERS							KG.	TYPE			

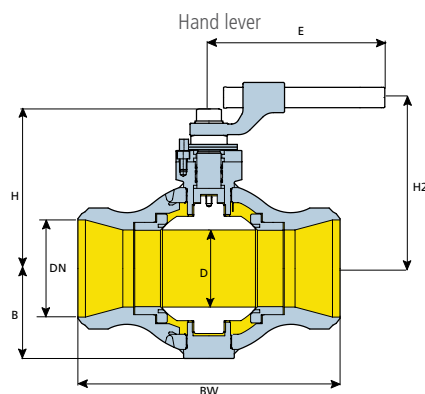
Overall Dimensions valves REDUCED BORE

Fully Welded

FIG. 460-1

CLASS 150

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR
									BW	KG.	
3" X 2"	283	100	51	400	205				21		LEVER
4" X 3"	305	125	76	550	225				47		LEVER
6" X 4"	457	145	102	550	250				66		LEVER
8" X 6"	521	230	152	76		265	300	263	122		MG 987/S
10" X 8"	559	265	203	70		360	500	320	257		MG 50
12" X 8"	635	265	203	70		360	500	320	308		MG 50
12" X 10"	635	315	254	92		400	500	345	399		MG 100
14" X 10"	762	315	254	92		400	500	345	505		MG 100
14" X 12"	762	355	305	125		450	700	415	537		MG 180
16" X 14"	838	385	336	125		485	700	415	735		MG 180
18" X 16"	914	420	387	137		500	700	440	881		MG 250
20" X 18"	991	470	438	137		600	700	440	283		MG 250
22" X 20"	1092	505	489	137		680	700	440	1283		MG 250/80
24" X 20"	1143	555	489	137		680	700	440	1564		MG 250/80
26" X 24"	1245	610	590	164		780	700	540	1759		MG 350
28" X 24"	1346	640	590	225		780	700	585	2425		MG 450
30" X 28"	1397	680	686	225		888	700	585	2840		MG 450
32" X 28"	1524	750	686	225		888	700	585	3251		MG 450
36" X 32"	1626	790	781	225		973	700	585	3867		MG 450
INCH	MILLIMETERS								KG.		TYPE



Side view gear operator

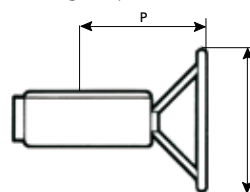
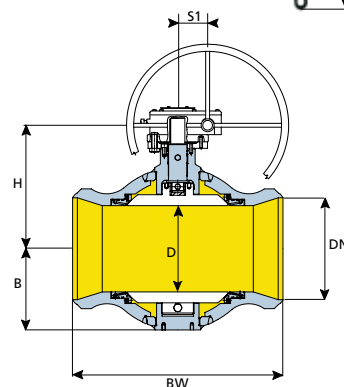


FIG. 460-3

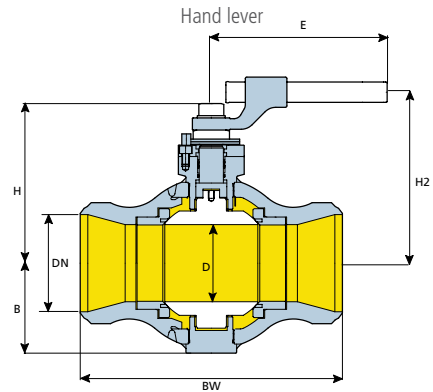
CLASS 300

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR
									BW	KG.	
3" X 2"	283	100	51	400	205				22		LEVER
4" X 3"	305	125	76	550	225				47		LEVER
6" X 4"	457	145	102	60		206	300	135	78		MG 984/S
8" X 6"	521	230	152	76		265	300	263	115		MG 987/S
10" X 8"	559	265	203	92		375	500	345	277		MG 100
12" X 8"	635	265	203	92		375	500	345	296		MG 100
12" X 10"	635	315	254	92		400	500	345	393		MG 100
14" X 10"	762	315	254	92		400	500	345	418		MG 100
14" X 12"	762	355	305	125		450	700	415	567		MG 180
16" X 14"	838	385	336	125		485	700	415	734		MG 180
18" X 16"	914	420	387	137		500	700	440	1033		MG 250
20" X 18"	991	470	438	137		600	700	440	1442		MG 250/80
22" X 20"	1093	505	489	164		680	700	540	1733		MG 350
24" X 20"	1143	555	489	164		680	700	540	1985		MG 350
26" X 24"	1245	610	590	164		780	700	540	2925		MG 550
28" X 24"	1346	610	590	225			700	585	3100		MG 550
30" X 28"	1397	750	686	240			700	655	3650		MG 550
32" X 28"	1524	750	686	240			700	655	4468		MG 550
36" X 32"	1727	815	781	240			700	655	5887		MG 550
INCH	MILLIMETERS								655		TYPE



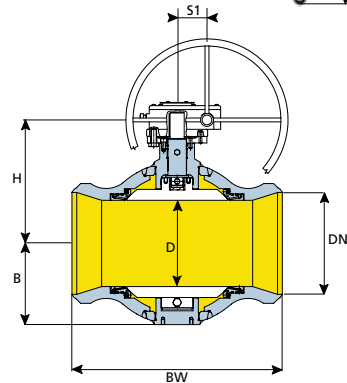
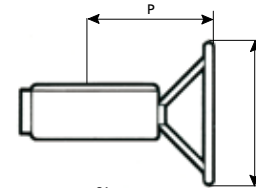
**FIG. 460-6**
**CLASS 600**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
3"X 2"	356	100	51	550	205				23		LEVER	
4"X 3"	432	125	76	550	225				52		LEVER	
6" X 4"	559	145	102	76		210	300	263	100		MG 987	
8"X 6"	660	230	152	70		295	500	320	205		MG 50	
10"X 8"	788	265	203	101		390	600	284	359		MG 150	
12"X 8"	838	265	203	101		390	600	284	382		MG 150	
12"X 10"	838	315	254	125		435	700	415	478		MG 180	
14"X 10"	889	315	254	125		435	700	415	509		MG 180	
14"X 12"	889	355	305	137		460	700	440	661		MG 250	
16"X14"	991	385	336	137		490	700	440	921		MG 250/80	
18"X16"	1092	420	387	164		540	700	540	1148		MG 350	
20"X18"	1194	470	438	240		615	700	600	1762		MG 550	
22"X 20"	1296	505	489	240		705	700	600	2141		MG 550	
24"X20"	1397	555	489	240		705	700	600	2452		MG 550	
26"X 24"	1448	610	590	240		810	700	600	3575		MG 550/115	
28"X 24"	1448	610	590	240		810	700	600	4134		MG 550	
30"X 28"	1651	790	686	240		883	700	655	4838		MG 550	
32"X 28"	1651	790	686	240		883	700	655	5363		MG 550	
36"X 32"	2083	915	781	160		977	700	655	6762		RG 3800	
INCH	MILLIMETERS					KG.	TYPE					


**FIG. 460-9**
**CLASS 900**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
3"x 2"	381	110	51	700	215				51		LEVER	
4"x 3"	457	130	76	70		190	400	310	85		MG 50	
6"x 4"	610	155	102	90		230	400	360	190		MG 50	
8"x 6"	737	191	152	90		340	550	360	345		MG 150	
10"x 8"	838	225	203	105		410	700	430	560		MG 180	
12"x 10"	965	280	254	130		490	700	545	790		MG 250	
14"x 10"	1029	280	254	130		490	700	545	990		MG 250	
16"x 12"	1130	332	305	162		510	700	650	1710		MG 250/80	
18"x 14"	1219	375	324	162		560	700	650	1750		MG 250/80	
20"x 16"	1321	425	375	118		655	700	650	1920		MG 550	
INCH	MILLIMETERS					KG.	TYPE					

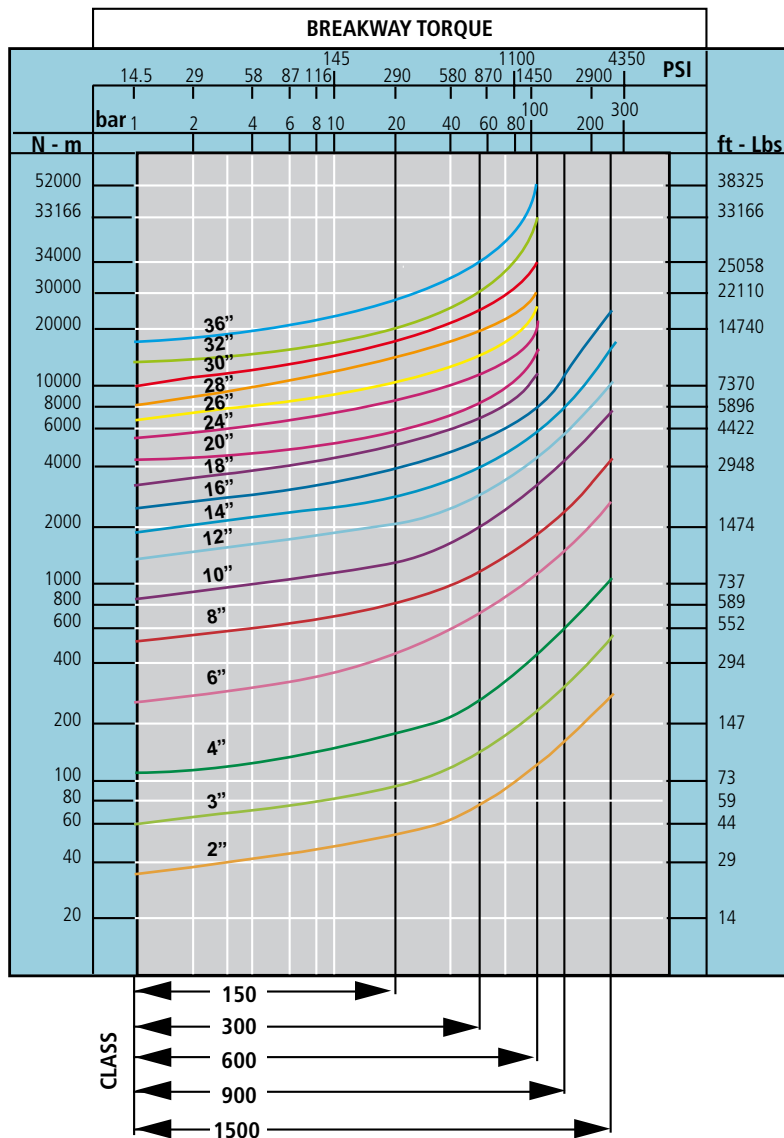
Side view gear operator


**FIG. 460-15**
**CLASS 1500**

SIZE	BW	B	D	E(S1)	H2	H1	L	P	WEIGHT		GEAR OPERATOR	
									BW	KG.		
3"x 2"	470	110	51	700	215				79		LEVER	
4"x 3"	546	135	76	70		210	400	310	738		MG 50	
6"x 4"	705	160	102	90		240	400	360	255		MG 50	
8"x 6"	832	230	146	90		360	700	430	495		MG 150	
10"x 8"	991	270	194	130		445	700	545	590		MG 250	
12"x 10"	1130	325	241	162		522	700	650	910		MG 250/80	
14"x 10"	1257	325	241	162		522	700	650	1190		MG 250/80	
16"x 12"	1384	365	289	118		550	700	660	1310		MG 550	
18"x 14"	1537	418	318	200		652	700	670	2350		MG 550	
INCH	MILLIMETERS					KG.	TYPE					

# Breakway of the ball valve

Fully Welded



The table shows the breakway of the ball valve Pietro Fiorentini in working conditions at room temperature. For the scaling of the actuator or for the high/low temperature service it is recommended to consider a factor of safety. Breakway torque of reduced bore valves refers to the lower nominal diameter.

**EXAMPLE:**

Fig. 130.6 DN 10" Class 600 = 2850 Nm (2100 ft. lbs)

Fig. 160.6 DN 12"x10" Class 600 = 2850 Nm (2100 ft. lbs)

**REFERENCE STANDARD**
**Fully Welded**

<b>ASTM</b>	American Society for Testing and Materials
<b>ASME</b>	American Society of Mechanical Engineers
<b>NACE</b>	National Association of Corrosion Engineers
MR-01-75	Sulfide Stress Cracking Resistant material For Oil Field Equipment
<b>API</b>	American Petroleum Institute
Spec. 6D	Specification for pipeline valves
Spec. RP-6FA	Recommended Practice for Fire Test for Valves
Std. 607	Fire test for soft-seated quarter turn valves
Std. 598	Valve Inspection and Test
<b>ANSI</b>	American National Standard Institute
B16.5	Steel Pipe Flanges and Flanged Fittings
B16.10	Face to Face and End to End Dimension of Ferrous Valves
B16.25	Butt-Welding End
B16.34	Steel Valves
B31.8	Gas Transmission and Distribution Piping System
<b>MSS-SP</b>	Manufacturers Standardization Society of the valve Fitting industry
SP6	Standard Finish for Contact Face of Pipe Flangers and Connecting End Flanges of Valves and Fittings
SP25	Standard marking System for Valves Fittings Flanges and Unions
SP61	Hydrostatic Testing of Steel Valves
SP72	Ball Valves with Flanged or Butt Welding Ends for general service
<b>BRITISH STANDARD</b>	
BS4504	Flanges and Bolting for pipes, Valves and Fittings
BS5351	Steel ball Valves for the Petroleum Petrochemicals and Allied Industries
BS6755	Testing of Valves
	Part. 1 Specification for production Pressure Testing Requirements
	Part. 2 Specification for Fire Type - Testing Requirements



Trunnion



HIPPS



Pressure reducing stations



**Pietro  
Fiorentini**

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The data contained is not binding. We reserve the right to changes without prior notice.

CT-s519-E February 13