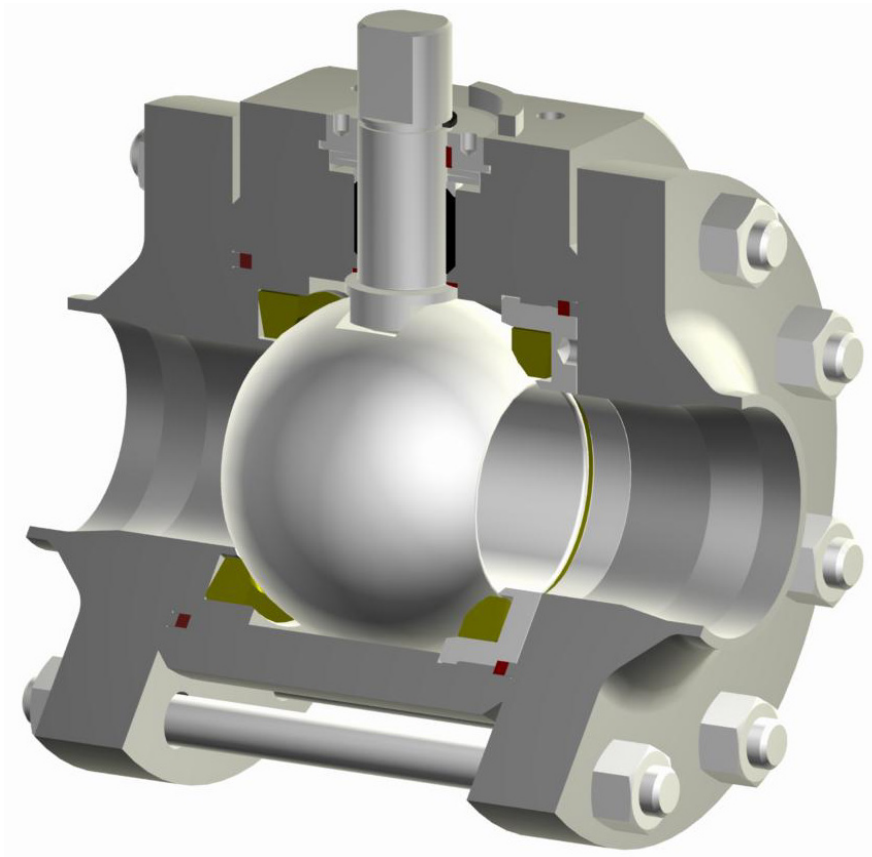




Two-Way Soft Seated Ball Valve Type 11-S



Design Characteristics

- ✓ Three piece body
- ✓ Floating ball
- ✓ Blow out proof stem
- ✓ Live loaded stem packing

Design Standards

- ✓ EN 12516, EN 1983, ISO 5211, AD-2000
- ✓ ASME B16.34, API 608

Range of Application

- ✓ Diameter ½" to 4" / DN 15 to 100
- ✓ Class 150 to 300 / PN 10 to 40
- ✓ -20°F to +400°F / -60°C to +200°C

Approvals

- ✓ "TA-Luft" certified for low fugitive emissions

Testing Standards

- ✓ EN 12266-1/2
- ✓ API 598



Main Parts

- 1 Body
- 2 Body End Connection
- 4 Retainer Ring
- 5 Ball
- 6 Stem
- 8 Gland Washer
- 10 Threaded Ring
- 16 Plate Spring
- 21 Seat Ring
- 23 Body Gasket
- 24 Stem Packing
- 25 Bearing Ring
- 26 Sealing Ring
- 28 Stud Bolt / Screw
- 32 Nut
- 44 Locking Ring

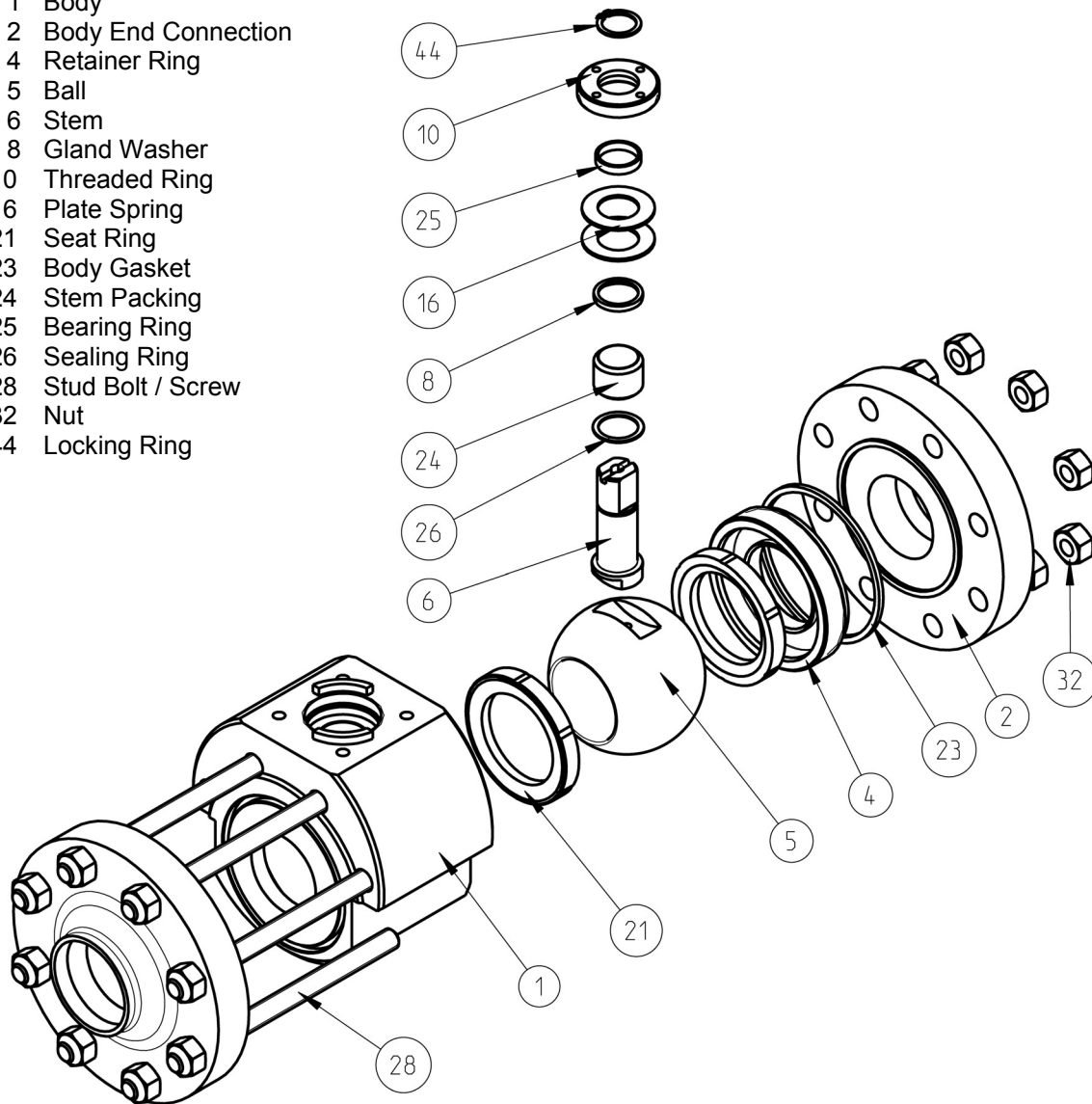


Fig.1

Description

This PERRIN ball valve design features a three piece body and a floating, seat supported ball. The stem packing is spring loaded and the seat rings with pressure relief warranty are pre-loaded. Through dismantling the central piece the interior parts could be exchanged comfortably. The pipe remains stable.

The valve is equipped with an integral actuator mounting flange for actuator connection according to ISO 5211. Stem extensions, locking devices and actuators with accessories, can be attached without operating interruptions.

The ball valve has an antistatic design with blow out proof stem and Fire Safe approval. The stem packing and sealings are "TA-Luft" certified for low fugitive emissions.

Parts List / Materials

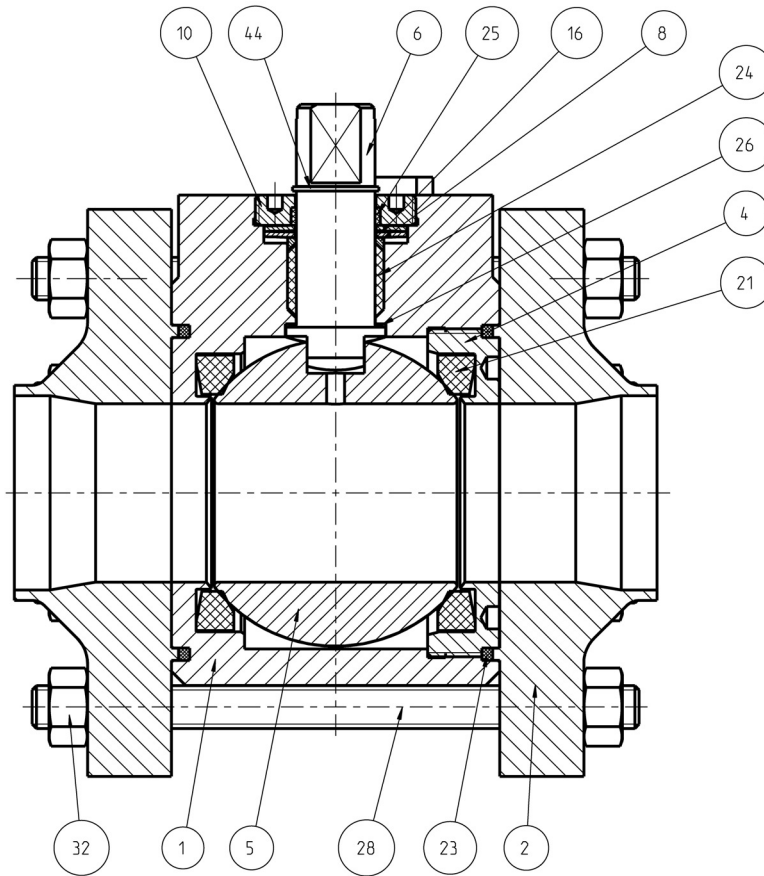


Fig.2

Item	Designation	ASME		DIN EN	
		-20°F up to +400°F	-20°F up to +400°F	-60°C up to +200°C	-10°C up to +200°C
1	Body	A351 CF8M	A216 WCB	1.4408	1.0619
2	Body End Connection	Type 316 (up to 2")	A105 (up to 2")	1.4571 (up to 2")	1.0460 (up to 2")
4	Retainer Ring	Type 316	Type 316	1.4571	1.4571
5	Ball	Type 316 A351 CF8M	Type 316 A351 CF8M	1.4571 1.4408	1.4571 1.4408
6	Stem	Type 51 Type 316	Type 51 Type 316	1.4462 1.4571	1.4462 1.4571
8	Gland Washer	Type 316	Type 316	1.4571	1.4571
10	Threaded Ring	Type 316	A105	1.4571	1.0460
16	Plate Spring	Type 301	Type 301	1.4310	1.4310
21	Seat Ring	Mod. PTFE TFM 1600	Mod. PTFE TFM 1600	Mod. PTFE TFM 1600	Mod. PTFE TFM 1600
23	Body Gasket	Graphite	Graphite	Graphite	Graphite
24	Stem Packing	PTFE-Con. Pigment	PTFE-Con. Pigment	PTFE-Con. Pigment	PTFE-Con. Pigment
25	Bearing Ring	Graphite	Graphite	Graphite	Graphite
26	Sealing Ring	PTFE-Glass	PTFE-Glass	PTFE-Glass	PTFE-Glass
28	Stud Bolt / Screw	SS	SS	SS	SS
32	Nut	SS	SS	SS	SS
44	Locking Ring	SS	SS	SS	SS

Tab.1



Technical Data

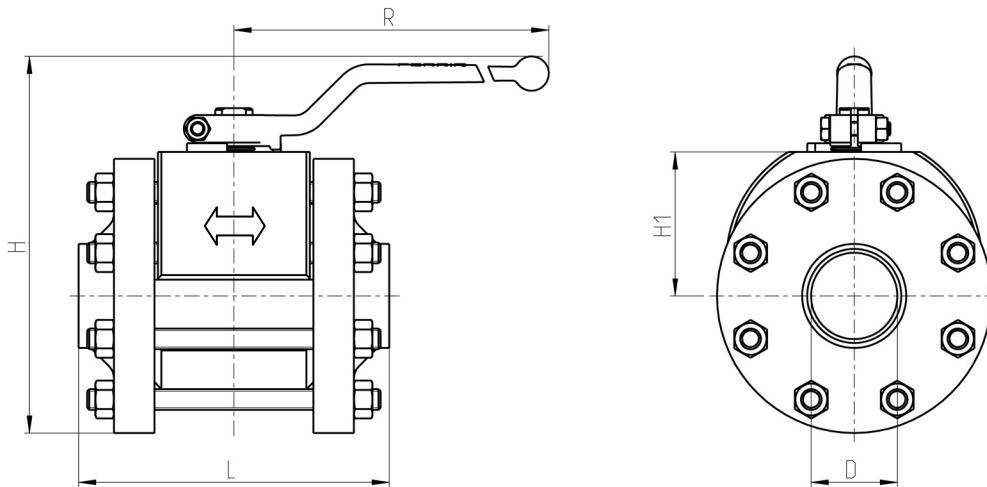


Fig.3

D = NPS = DN = Nominal Size
m = Weight

CLASS 150 - Full Bore

NPS [inch]	DN [mm]	H		H1		R		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
½	15	5,8	147	1,9	48	7	180	4,3	110	27	10	4,5
¾	20	5,8	147	1,9	48	7	180	4,3	110	47	10	4,5
1	25	6,3	160	2	50	7	180	4,3	110	74	13	6
1¼	32	7	178	2,2	56	7	180	5,5	140	123	18	8
1½	40	7,9	201	3	76	12	300	5,5	140	191	24	11
2	50	8,7	221	3,3	84	12	300	6,3	160	298	40	18
2½	65	9,5	242	3,7	94	12	300	7,1	180	504	57	26
3	80	11,7	297	4	113	18	450	7,9	200	763	70	32
4	100	13	329	5	127	18	450	8,5	215	1192	106	48

Tab.2

CLASS 150 - Reduced Bore

NPS [inch]	NPS-R [inch]	H		H1		R		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
¾	½	6	152	1,9	48	7	180	4,3	110	24	10	4,5
1	¾	6	152	1,9	48	7	180	4,3	110	43	13	6
1¼	1	6,5	165	2	50	7	180	4,3	110	67	18	8
1½	1¼	7,2	183	2,2	56	7	180	5,5	140	110	24	11
2	1½	8,4	213	3	76	12	300	5,5	140	172	40	18
2½	2	9,2	234	3,3	84	12	300	6,3	160	268	57	26
3	2½	9,8	249	3,7	94	12	300	7,1	180	454	70	32
4	3	12,4	316	4,4	113	18	450	8,5	215	687	106	48
6	5	14	356	5	127	18	450	11,7	296	1676	185	84

Tab.3



CLASS 300 - Full Bore

NPS [inch]	DN [mm]	H		H1		R		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
½	15	5,9	151	1,9	48	7	180	4,3	110	27	10	4,5
¾	20	6,2	157	1,9	48	7	180	4,3	110	47	11	5
1	25	6,6	168	2	50	7	180	4,3	110	74	13	6
1¼	32	7,3	186	2,2	56	7	180	5,5	140	123	18	8
1½	40	8,5	217	3	76	12	300	5,5	140	191	29	13
2	50	9	228	3,3	84	12	300	6,3	160	298	46	21
2½	65	9,7	247	3,7	94	12	300	7,1	180	504	64	29
3	80	12	305	4,4	113	18	450	7,9	200	763	79	36
4	100	13,5	343	5	127	18	450	8,5	215	1192	119	54

Tab.4

CLASS 300 - Reduced Bore

NPS [inch]	NPS-R [inch]	H		H1		R		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
¾	½	6,1	156	1,9	48	7	180	4,3	110	24	10	4,5
1	¾	6,4	162	1,9	48	7	180	4,3	110	43	13	6
1¼	1	6,8	173	2	50	7	180	5,5	140	67	18	8
1½	1¼	7,5	191	2,2	56	7	180	5,5	140	110	24	11
2	1½	9	229	3	76	12	300	6,3	160	172	40	18
2½	2	9,5	241	3,3	84	12	300	7,1	180	268	57	26
3	2½	10	253	3,7	94	12	300	7,9	200	454	70	32
4	3	12,8	324	4,4	113	18	450	8,5	215	687	106	48
6	5	14,5	368	5	127	18	450	11,7	296	1676	185	84

Tab.5

PN 16 – PN 40

DN [mm]	H [mm]	H1 [mm]	R [mm]	L [mm] Perrin Standard	Kv [m³/h]	m [kg]
15	147	48	180	110	23	4,5
20	147	48	180	110	41	4,5
25	160	50	180	110	64	6
32	178	56	180	140	106	8
40	201	76	300	140	165	11
50	221	84	300	160	258	18
65	242	94	300	180	436	26
80	297	113	450	180	660	32
100	337	127	450	215	1031	48

Tab.6

Other dimensions and pressure classes on request.



Top Works

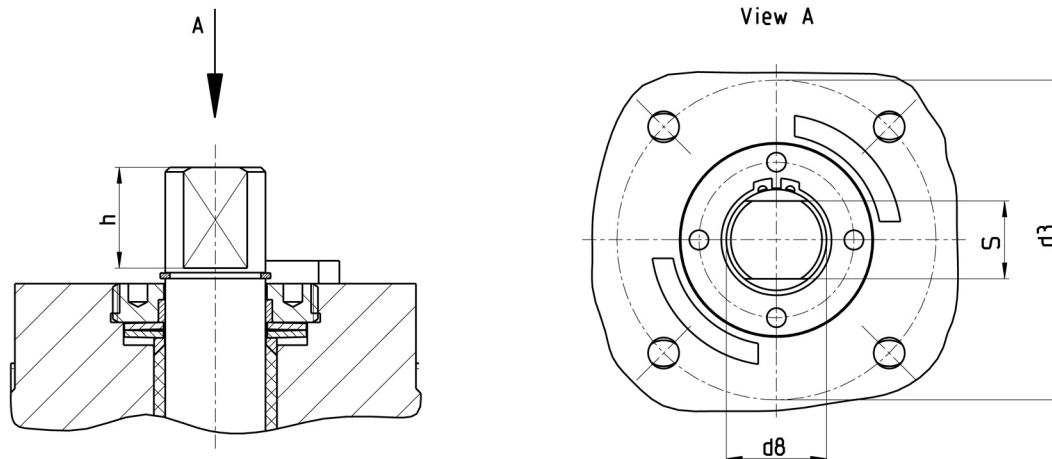


Fig.4

F	h		s		d3		d8	
	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
F05	14	0,6	14	0,6	50	2	18	0,7
F07	17	0,7	17	0,7	70	2,8	22	0,9
F10	22	0,9	22	0,9	102	4	28	1,1

Tab.7

Actuator-Connection ISO 5211 Full Bore

NPS [inch]	DN [mm]	CLASS / PN	
		150 / 16	300 / 40
½	15	F05	F05
¾	20	F05	F05
1	25	F05	F05
1¼	32	F05	F05
1½	40	F07	F07
2	50	F07	F07
2½	65	F07	F07
3	80	F10	F10
4	100	F10	F10
6	150	F14	F14

Reduced Bore

NPS [inch]	NPS-R [inch]	CLASS	
		150	300
½	-	-	-
¾	½	F05	F05
1	¾	F05	F05
1¼	1	F05	F05
1½	1¼	F05	F05
2	1½	F07	F07
2½	2	F07	F07
3	2½	F07	F07
4	3	F10	F10
6	4	F10	F10

Tab.8

Pressure / Temperature Diagrams

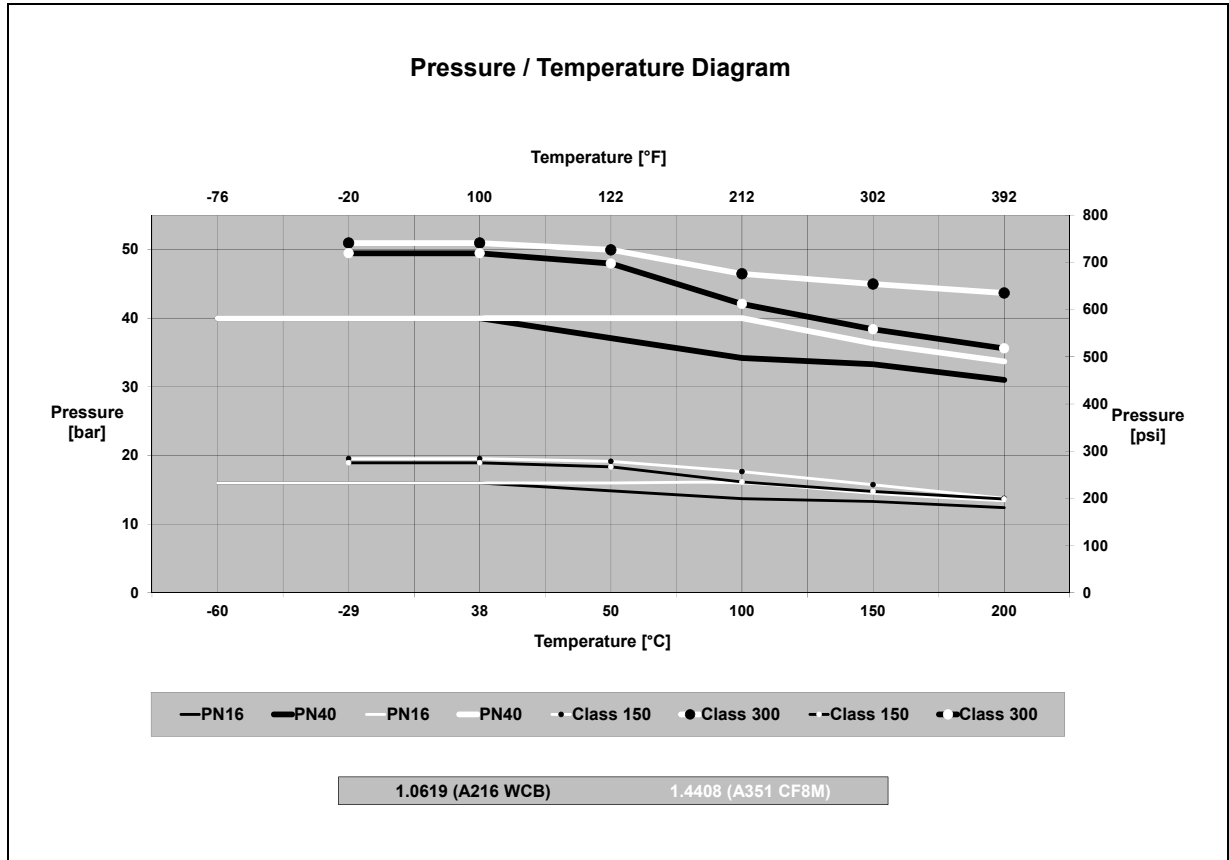


Fig.5

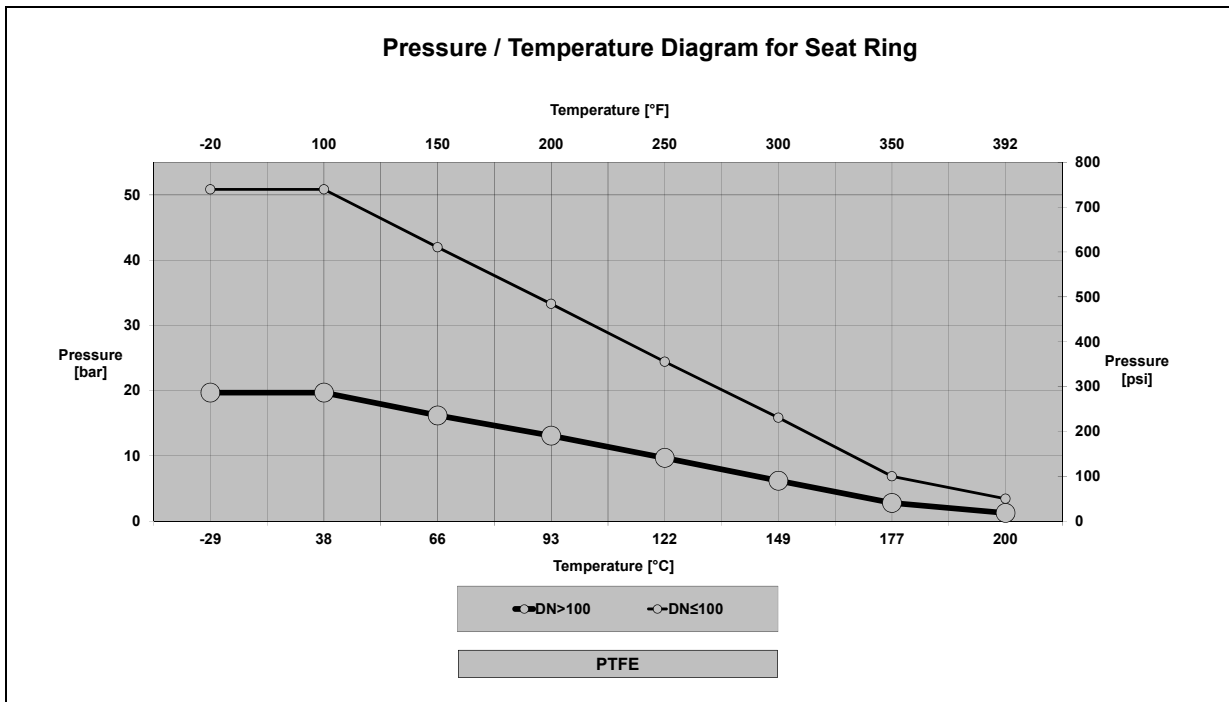


Fig.6



Options

1) Adjustable stem packing

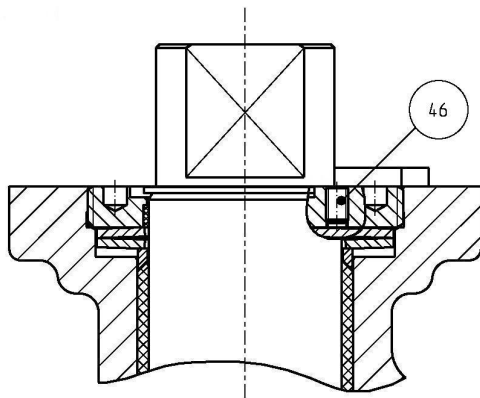


Fig.7

Additionally the live loaded stem packing may be equipped with hexagon socket screws (46). To fasten these screws it is possible to increase the spring force on the packing in the event of leakage.

Technical modifications are reserved.