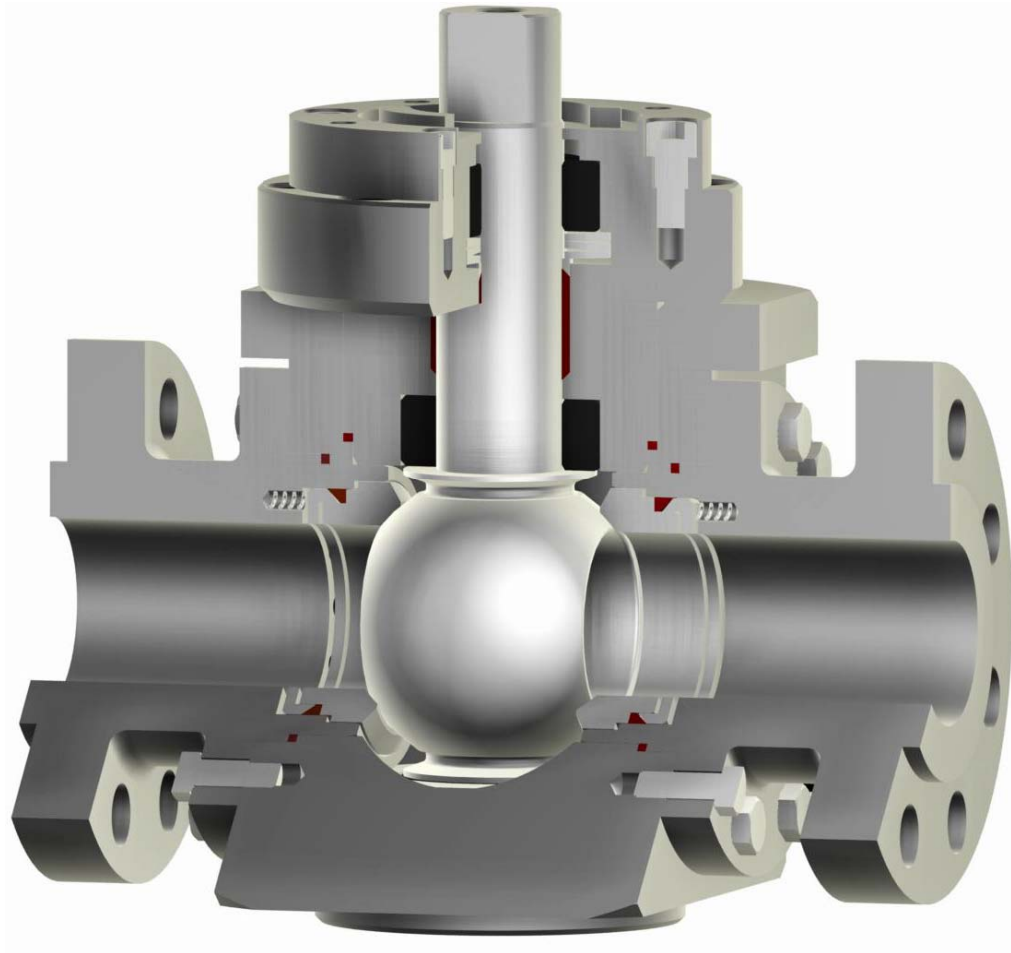




两通金属硬密封球阀16-M



结构特征

- ✓ 分体式结构
- ✓ 阀球阀杆一体式设计
- ✓ 动负载阀杆填料
- ✓ 弹簧加载阀座密封结构
- ✓ 消防火烧安全设计（选项）

设计参照标准

- ✓ EN 12516, EN 1983, ISO 5211, AD-2000
- ✓ ASME B 16.34, API 608

应用范围

- ✓ 设计通径 ½" to 12" / DN 15 to 300
- ✓ 压力等级 Class 150 to 1500 / PN 10 to 250
- ✓ 操作温度 -20°F to +1000°F / -60°C to +550°C

环保认证

- ✓ “TA-Luft” 低逸散性排放认证

测试参照标准

- ✓ EN 12266-1/2
- ✓ API 598



主要部件清单

- 1 主阀体
- 2 副阀体
- 4 弹簧挡圈
- 5 阀杆一体式阀球
- 8 填料压环
- 10 填料压盖
- 12 阀盖
- 13 轴套
- 16 碟簧
- 17 柱簧
- 20 阀座密封环
- 21 阀座
- 23 阀体垫片
- 24 阀杆填料
- 25 阀杆轴套
- 26 阀杆轴套
- 27 阀体垫片
- 28 螺钉
- 29 螺钉
- 30 螺钉

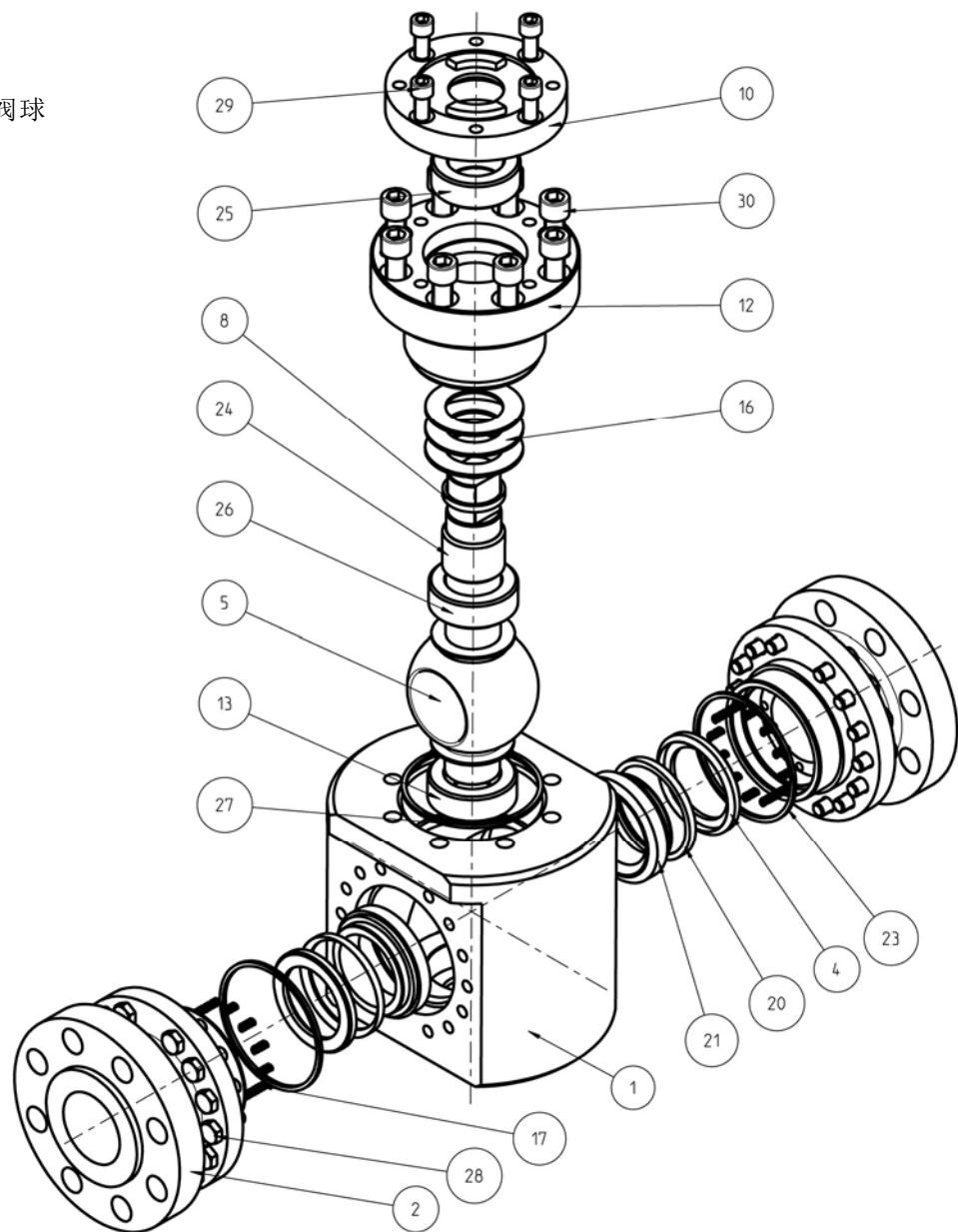


Fig.1

产品介绍

Perrin 16-M系列球阀是带底轴装配的固定球球阀，阀体为分体式结构，球阀阀杆一体式设计。弹簧预紧的金属硬密封阀座以及动负载阀杆填料确保在使用温度和压力变化时能提供连续可靠的密封性能。

阀门按照ISO5211标准设计了一体式执行机构安装法兰，便于装配阀门驱动机构，阀杆加长件以及阀位锁定机构。

阀门采用防静电和防喷出式阀杆设计，阀杆填料和密封取得了“TA-Luft”低逸散性排放认证。

部件及材质列表

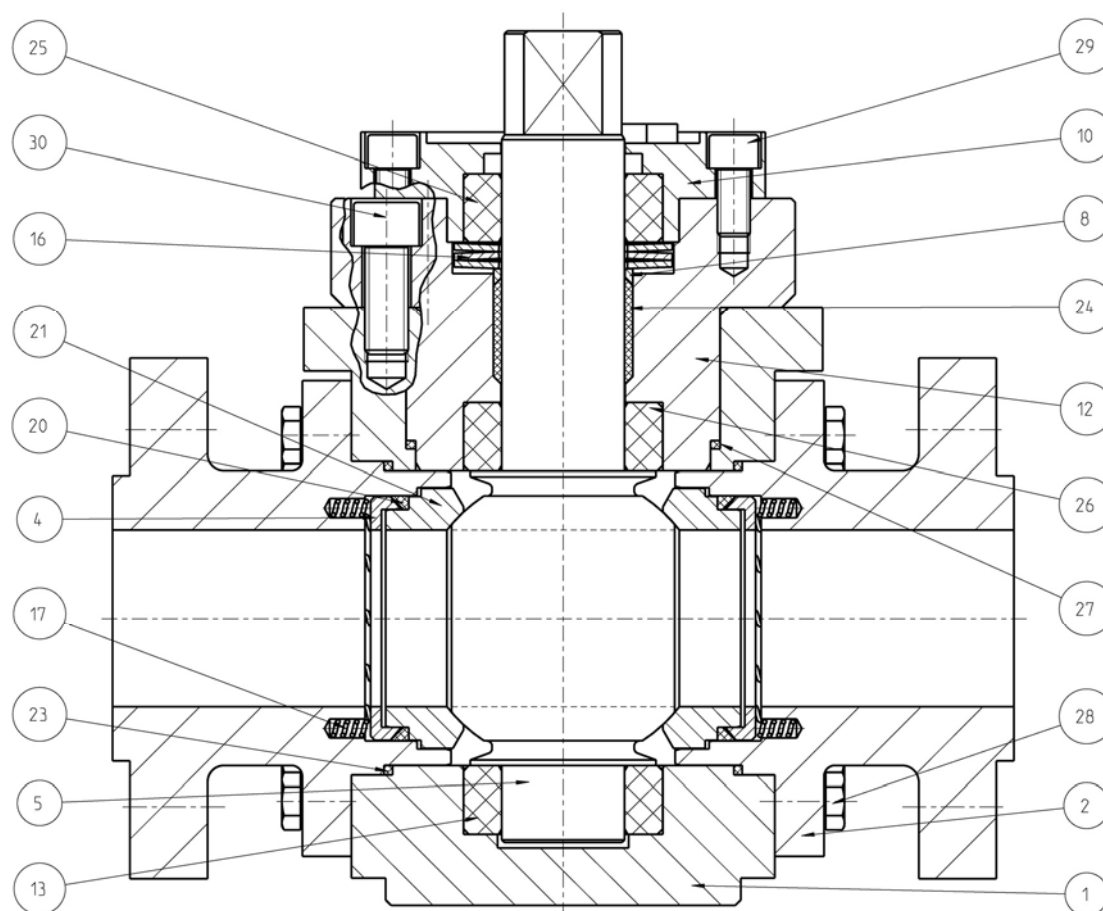


Fig.2

Item	Designation	ASME		DIN EN	
		-20°F up to +1000°F	-20°F up to +1000°F	-60°C up to +550°C	-10°C up to +450°C
1	主阀体	A351 CF8M	A216 WCB	1.4408 ¹⁾	1.0619
2	副阀体	Type 316 (up to 2")	A105 (up to 2")	1.4571 (up to 2")	1.0460 (up to 2")
4	弹簧挡圈	Type 316	Type 316	1.4571	1.4571
5	阀杆一体式阀球	Type 316 coated A351 CF8M coated	Type 316 coated A351 CF8M coated	1.4571 coated 1.4408 ¹⁾ coated	1.4571 coated 1.4408 ¹⁾ coated
8	填料压环	Type 316	Type 316	1.4571	1.4571
10	填料压盖	Type 316	A216 WCB	1.4571	1.0619
12	阀盖	Type 316 / A351 CF8M	A105 / A216 WCB	1.4571 / 1.4408 ¹⁾	1.0460 / 1.0619
13	轴承套	Carbon-Antimony	Carbon-Antimony	Carbon-Antimony	Carbon-Antimony
16	碟簧 ²⁾	Type 301	AISI 6150	1.4310	1.8159
17	柱簧	Type 316	Type 316	1.4571	1.4571
20	阀座密封环	Graphite	Graphite	Graphite	Graphite
21	阀座	Type 316 coated	Type 316 coated	1.4571 coated	1.4571 coated
23	阀体垫片	Graphite	Graphite	Graphite	Graphite
24	阀杆填料				
25	阀杆轴套	Carbon-Antimony	Carbon-Antimony	Carbon-Antimony	Carbon-Antimony
26	阀杆轴套	Graphite with SS	Graphite with SS	Graphite with SS	Graphite with SS
27	阀体垫片	Graphite	Graphite	Graphite	Graphite
28	螺钉	SS	SS	SS	SS
29	螺钉	SS	SS	SS	SS
30	螺钉	SS	SS	SS	SS

Tab.1

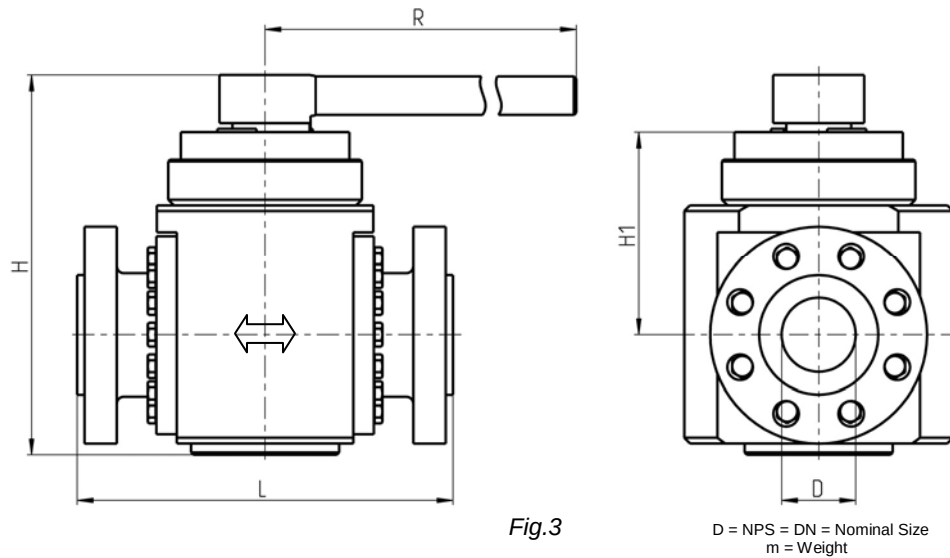
1) Temperature limitation 300°C [576°F] acc. to German technical rule AD-2000 W5 if intercrystalline corrosion resistant is required

2) Material 2.4668 (Inconel 718) is generally required for operating temperature over 200°C [392°F]

3) Materials for lower / higher temperature on request



技术数据



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	6,2	158	3,5	89	12	300	6,5	165	27	23	51
¾	20	6,8	173	3,7	95	12	300	7,5	190	48	26	57
1	25	7,4	188	4,1	105	12	300	8,5	216	75	28	62
1¼	32	8,3	210	4,7	120	12	300	9	229	124	36	79
1½	40	9,4	238	5,3	135	12	300	9,5	241	193	46	101
2	50	10	255	5,8	147	18	450	11,5	292	302	61	134
2½	65	12,6	320	7	178	18	450	13	330	510	93	205
3	80	13,5	343	7,5	191	28	700	14	356	772	120	264
4	100	14,3	363	7,9	201	28	700	17	432	1206	227	499

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	6,2	158	3,5	89	12	300	7	190	27	54	25
1	¾	6,8	173	3,7	95	12	300	9	216	48	59	27
1¼	1	7	188	4,1	105	12	300	9	229	75	75	34
1½	1¼	8,3	210	4,7	120	12	300	9	241	124	96	44
2	1½	9,4	238	5,3	135	12	300	11	292	193	128	58
2½	2	10,0	255	5,8	147	18	450	13	330	302	195	89
3	2½	12,6	320	7,0	178	18	450	14	356	510	251	114
4	3	13,5	343	8	191	28	700	17	432	772	476	216

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	6,2	158	3,5	89	12	300	6,5	165	27	53	24
¾	20	6,8	173	3,7	95	12	300	7,5	190	48	59	27
1	25	7,4	188	4,1	105	12	300	8,5	216	75	66	30
1¼	32	8,3	210	4,7	120	18	450	9	229	124	84	38
1½	40	9,4	238	5,3	135	18	450	9,5	241	193	108	49
2	50	10	255	5,8	147	18	450	11,5	292	302	141	64
2½	65	12,6	320	7	178	18	450	13	330	510	216	98
3	80	13,5	343	7,5	191	28	700	14	356	772	277	126
4	100	14,3	363	7,9	201	28	700	17	432	1206	524	238

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	6,2	158	3,5	89	12	300	7	190	27	57	26
1	¾	6,8	173	3,7	95	12	300	9	216	48	64	29
1¼	1	7,4	188	4,1	105	12	300	9	229	75	79	36
1½	1¼	8,3	210	4,7	120	18	450	9	241	124	103	47
2	1½	9,4	238	5,3	135	18	450	11	292	193	134	61
2½	2	10	255	5,8	147	18	450	13	330	302	205	93
3	2½	12,6	320	7	178	18	450	14	356	510	264	120
4	3	13,5	343	7,5	191	28	700	17	432	772	499	227

Tab.5

PN 16 – PN 40

DN [mm]	H [mm]	H1 [mm]	R [mm]	L [mm] Perrin Standard	Kv [m³/h]	m [kg]
15	158	89	300	210	23	24
20	173	95	300	230	41	27
25	188	105	300	230	64	30
32	210	120	300	230	106	38
40	238	135	450	260	165	48
50	255	147	450	300	258	63
65	320	178	450	340	436	95
80	343	191	700	380	660	122
100	363	201	700	430	1031	229

Tab.6

Other dimensions and pressure classes on request.

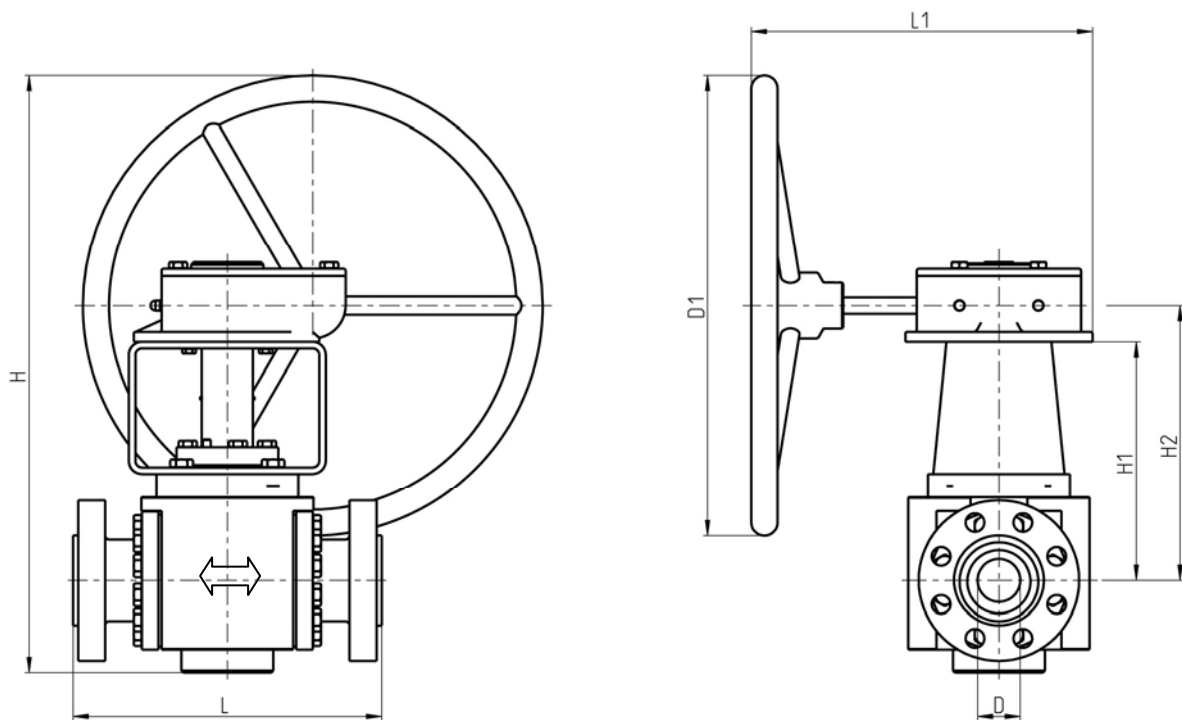


Fig.4

D = NPS = DN = Nominal Size
m = Weight

CLASS 150 - Full Bore

NPS [inch]	DN [mm]	H		H1		H2		L1		D1		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
6	150	33	850	10	265	19	485	20	515	18	450	22	559	2448	605	275
8	200	41	1044	12	303	21	523	23	588	28	700	26	660	4351	840	382
10	250	45	1133	14	360	23	580	29	725	28	700	31	787	7070	1267	576
12	300	51	1306	16	415	24	615	30	770	35	900	33	850	9789	1749	795

Tab.7

CLASS 150 - Reduced Bore

NPS [inch]	NPS-R [inch]	H		H1		H2		L1		D1		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
6	4	31,9	811	7,9	201	16,6	421	19,4	492	20	500	22	559	1699	594	270
8	6	39,6	1006	10,4	265	19,1	485	20,3	515	28	700	26	660	2448	779	354
10	8	40,4	1026	11,9	303	20,6	523	23,1	588	24	600	31	787	4351	1173	533
12	10	46,1	1171	14,2	360	22,8	580	28,5	725	28	700	33	838	7070	1619	736

Tab.8

CLASS 300 - Full Bore

NPS [inch]	DN [mm]	H		H1		H2		L1		D1		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
6	150	37	940	12	307	17	431	24	610	28	700	22	559	2448	726	330
8	200	43	1098	14	366	20	507	31	790	31	800	26	660	4351	1397	635
10	250	45	1155	18	452	25	633	28	718	24	600	31	787	7070	1976	898
12	300	53	1338	24	610	33	828	31	792	20	500	33	850	9789	2583	1174

Tab.9

CLASS 300 - Reduced Bore

NPS [inch]	NPS-R [inch]	H		H1		H2		L1		D1		L Perrin Standard		Cv [gal/min]	m	
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		[lbs]	[kg]
6	4	32	820	7,9	201	14	361	22	560	24	600	22	559	1699	678	308
8	6	34	872	12,1	307	17	431	24	610	20	500	26	660	2448	926	421
10	8	40,5	1029	14,4	366	20	507	31	790	24	600	31	787	4351	1607	730
12	10	51	1293	17,8	452	24,9	633	28	718	31	800	33,5	850	7070	2272	1033

Tab.10

PN 16

DN [mm]	H [mm]	H1 [mm]	H2 [mm]	L1 [mm]	D1 [mm]	L [mm] Perrin Standard	Kv [m³/h]	m [kg]
150	757	265	389	435	450	550	2320	269
200	964	303	444	526	700	650	4124	370
250	1094	360	541	600	700	775	6701	561
300	1319	421	639	687	900	850	9279	790

Tab.11

PN 40

DN [mm]	H [mm]	H1 [mm]	H2 [mm]	L1 [mm]	D1 [mm]	L [mm] Perrin Standard	Kv [m³/h]	m [kg]
150	889	265	389	506	700	550	2320	315
200	1032	303	444	585	800	650	4124	617
250	1066	360	541	682	600	775	6701	879
300	1147	421	639	768	500	850	9279	1142

Tab.12

Other dimensions and pressure classes on request.



Top Works

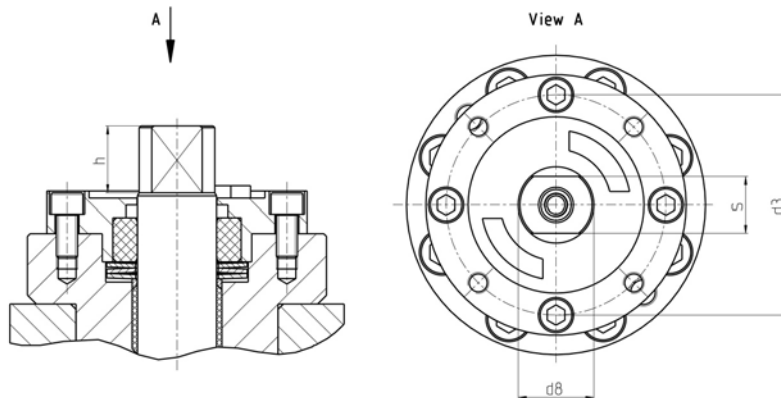


Fig.5

F	h		s		d3		d8	
	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
F07	22	0,9	12	0,5	70	2,8	17	0,7
F10	27	1,1	18	0,7	102	4	27	1,1
F12	38	1,5	32	1,3	125	4,9	40	1,6
F14	38	1,5	38	1,5	140	5,5	57	2
F16	48	1,9	44	1,7	165	6,5	68	2,7
F25	48	1,9	55	2,2	254	10	82	3,2

Tab.13

Antriebsschnittstelle ISO 5211

Full Bore

Reduced Bore

NPS [inch]	DN [mm]	CLASS / PN		NPS [inch]	NPS-R [inch]	CLASS	
		150 / 16	300 / 40			150	300
½	15	F07	F07	½	-	-	-
¾	20	F07	F07	¾	½	F07	F07
1	25	F07	F07	1	¾	F07	F07
1¼	32	F07	F10	1¼	1	F07	F07
1½	40	F07	F10	1½	1¼	F07	F10
2	50	F10	F10	2	1½	F07	F10
2½	65	F10	F10	2½	2	F10	F10
3	80	F12	F12	3	2½	F10	F12
4	100	F12	F12	4	3	F12	F12
6	150	F12	F14	6	4	F12	F14
8	200	F14	F16	8	6	F12	F14
10	250	F16	F25	10	8	F14	F16
12	300	F16	F25	12	10	F16	F25

Tab.14



Pressure / Temperature Diagram

Pressure / Temperature Diagram

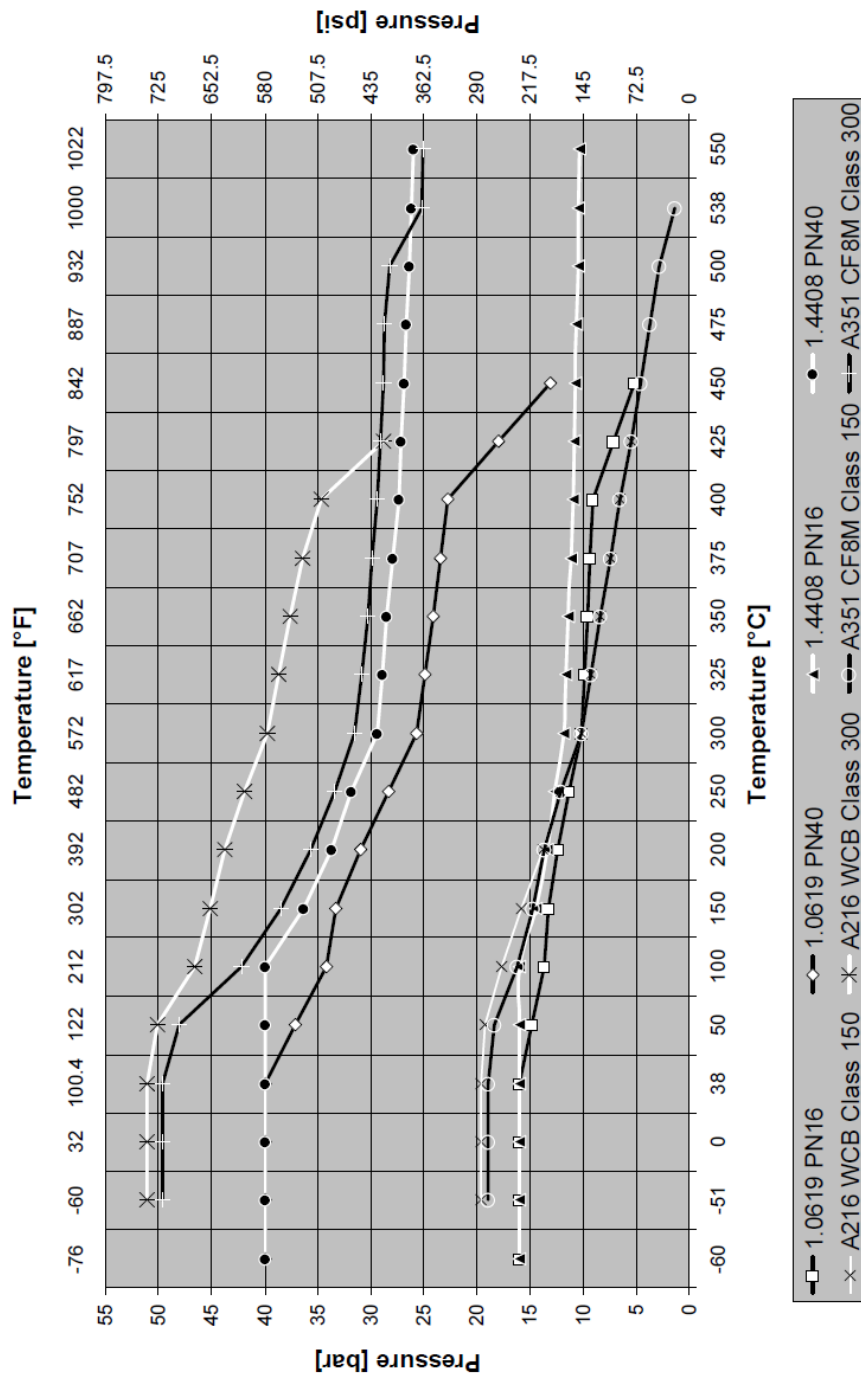


Fig.6

阀门配置选项

1) 具有弹簧防护功能的阀座系统:

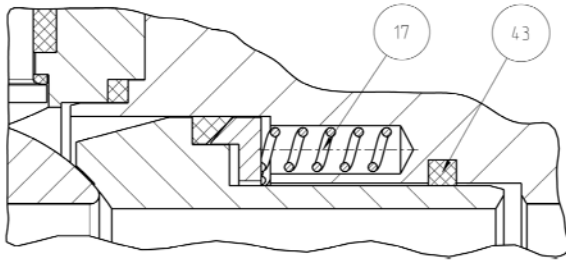


Fig.7

密封线（43）可保护阀座系统的弹簧（17）区域。

密封线可阻挡管路介质中的泥浆或颗粒进入弹簧区域，同时又能使管线压力进入以保证阀座单元的密封比压。

2) 带可调压紧机构的填料压盖

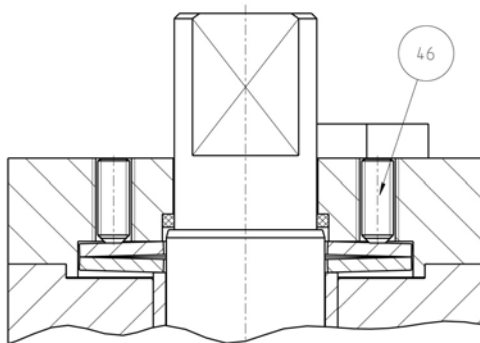


Fig.8

可为动负载阀杆填料配置带调整螺钉（46）的填料压盖。填料发生泄漏时，拧紧这些调整螺钉可增加填料的压紧力。

3) 高差压工况下使用的强化阀座密封结构

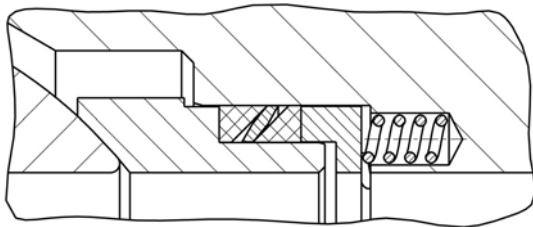


Fig.9

4) 带探测接口的双级填料结构

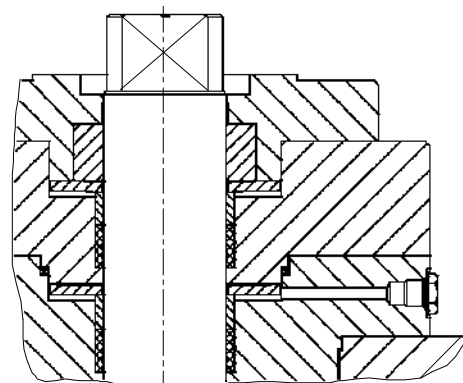


Fig.10



5) 带伴热夹套的球阀

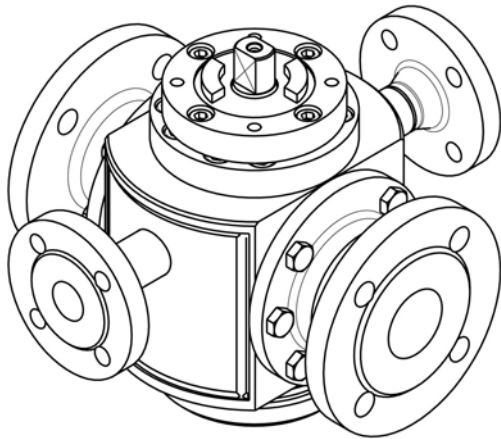


Fig.11

Technical modifications are reserved.