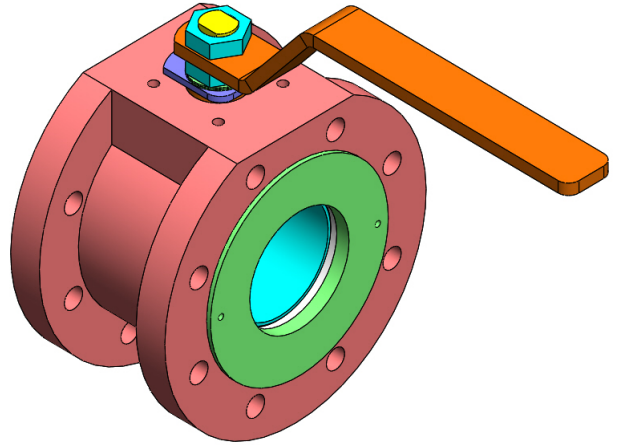




Monoblock Ball Valve MB1, MB2, MB3 DN15 - DN100 Full Bore, Flanged



Wall Thickness : EN 12516-1
Flange Connection : PN16 EN 1092-2
PN25 - PN40 EN 1092-1
Flange Type : RF (Raised Face)
Sealing Class : EN 12266-1-A
Actuator Connection : ISO 5211.
Connection kit (bracket and adapter stem) is used.

- Fluids used: water, oil, steam, compressed air, various gases...
- It is economically due to its compact structure and small size.
- If there is limited space in the installation, it provides ease of application.
- Connection kit protects the actuator from high heat by removing it from the valve.

Order Examples

MB2.CS.PN16.DN80.LV

MB2 : Monoblock Ball Valve Type
CS : Carbon Steel
PN16 : Flange Connection and Pressure Class
DN80 : Valve Size
LV : Manual On and Off Lever

MB1.SS316.PN40.DN50.F07-14

MB1 : Monoblock Ball Valve Type
SS316 : 316 Quality Stainless Steel
PN40 : Flange Connection and Pressure Class
DN50 : Valve Size
F07 : Flange type according to ISO 5211 for actuator connection.
14 : Size per square stem for actuator connection. (mm)

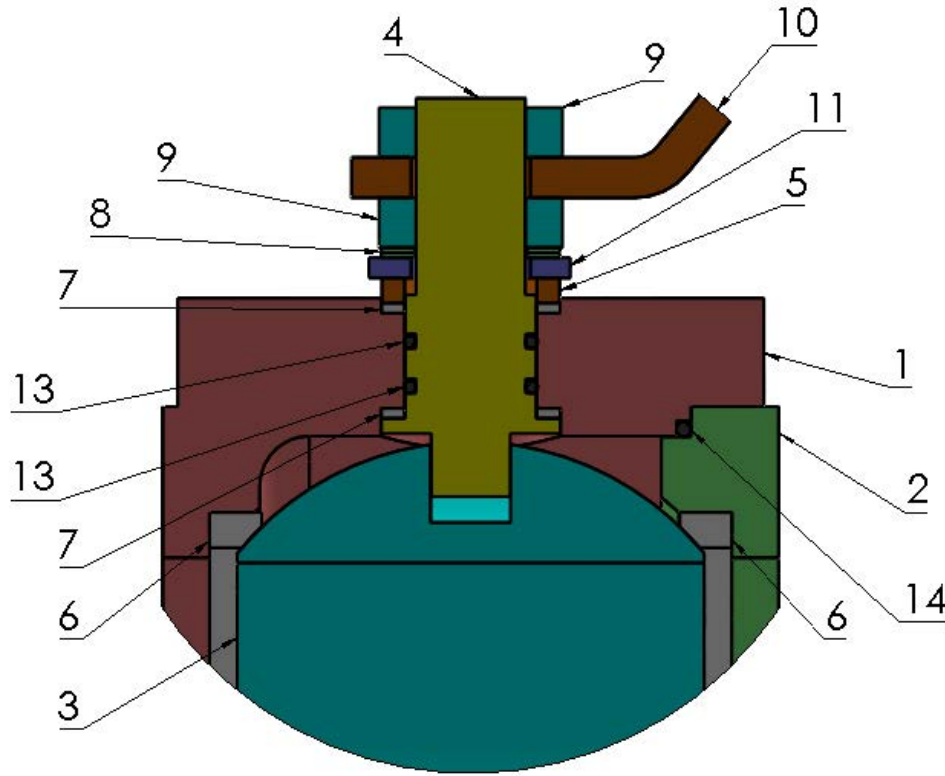
Comparison of MB1, MB2 and MB3

On/Off Life : MB1 > MB2 > MB3
Maximum temperature resistance : MB3 > MB2 > MB1
On/Off torque : MB3 > MB2 ~ MB1
Various gases compatibility : MB1 > MB2 > MB3
Suitability for minus temperature applications : MB2 > MB3 > MB1

- Although MB1 has a longer lifespan than the other two types, its maximum operating temperature is lower than the other two types.
- Although the maximum operating temperature of the MB3 is higher than the other two types, it is more difficult to open and close. Requires higher opening/closing torque.

Monoblock Ball Valve - MB1

Maximum Temperature : +150°C



Parts List

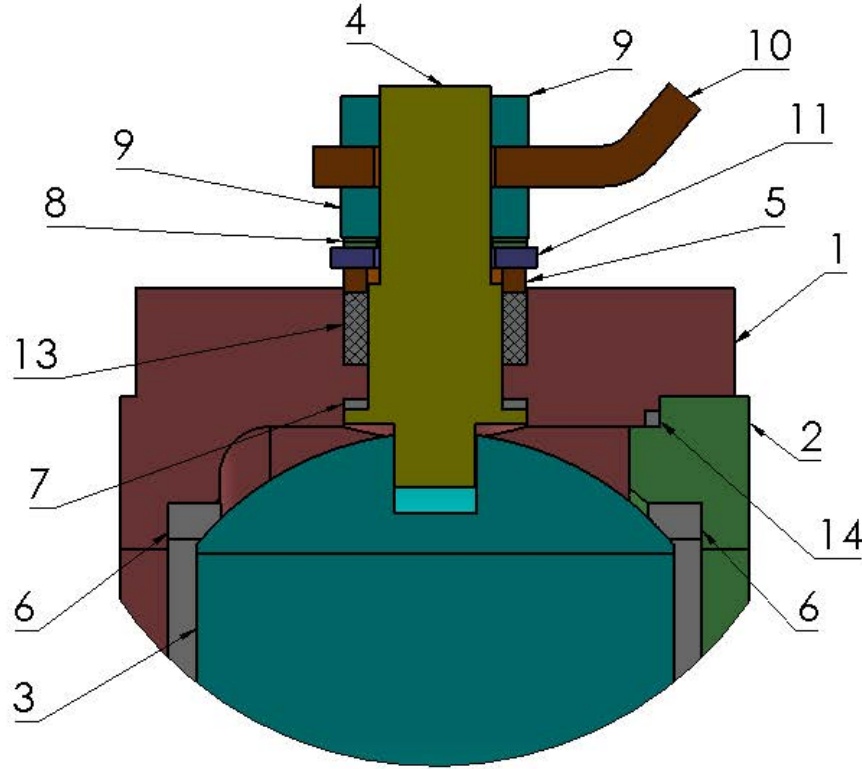
DN15 - DN32

DN40 - DN100

No	Part Name	Cast Steel	St. Steel 304	St. Steel 316	Cast Steel	St. Steel 304	St. Steel 316
1	Body	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
2	Bonnet	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
3	Ball	1.4021	1.4301	1.4401	1.4016	1.4308	1.4408
4	Valve Stem	1.4021	1.4301	1.4401	1.4021	1.4301	1.4401
5	Gland Retainer	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
6	Sealing Ring	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
7	Gasket washer	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
8	Belleville Washer	50CrV4	1.4310	1.4310	50CrV4	1.4310	1.4310
9	Nut	8.8	A2-70	A2-70	8.8	A2-70	A2-70
10	Handle	St 42	1.4301	1.4301	St 42	1.4301	1.4301
11	Washer	St 42	1.4301	1.4301	St 42	1.4301	1.4301
12	Pin	AISI 1030	1.4301	1.4301	AISI 1030	1.4301	1.4301
13	O-Ring	Viton	Viton	Viton	Viton	Viton	Viton
14	Bonnet O-Ring	Viton	Viton	Viton	Viton	Viton	Viton

Monoblock Ball Valve - MB2

Maximum Temperature : +180°C



Parts List

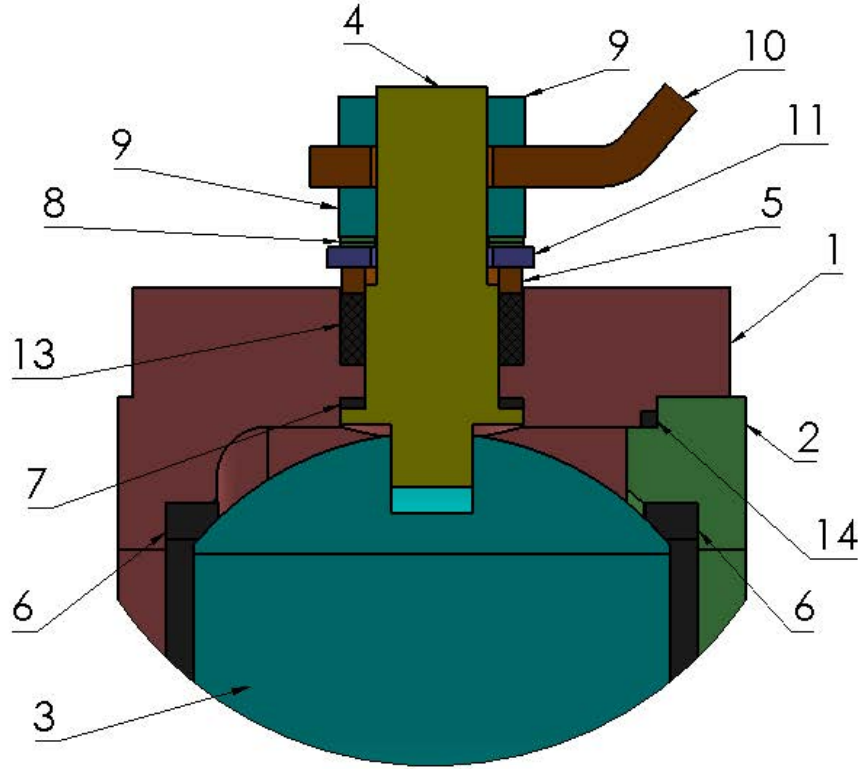
DN15 - DN32

DN40 - DN100

No	Part Name	Cast Steel	St. Steel 304	St. Steel 316	Cast Steel	St. Steel 304	St. Steel 316
1	Body	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
2	Bonnet	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
3	Ball	1.4021	1.4301	1.4401	1.4016	1.4308	1.4408
4	Valve Stem	1.4021	1.4301	1.4401	1.4021	1.4301	1.4401
5	Gland Retainer	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
6	Sealing Ring	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
7	Gasket washer	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
8	Belleville Washer	50CrV4	1.4310	1.4310	50CrV4	1.4310	1.4310
9	Nut	8.8	A2-70	A2-70	8.8	A2-70	A2-70
10	Handle	St 42	1.4301	1.4301	St 42	1.4301	1.4301
11	Washer	St 42	1.4301	1.4301	St 42	1.4301	1.4301
12	Pin	AISI 1030	1.4301	1.4301	AISI 1030	1.4301	1.4301
13	Packing Group	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
14	Bonnet Gasket	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE

Monoblock Ball Valve - MB3

Maximum Temperature : +200°C



Parts List

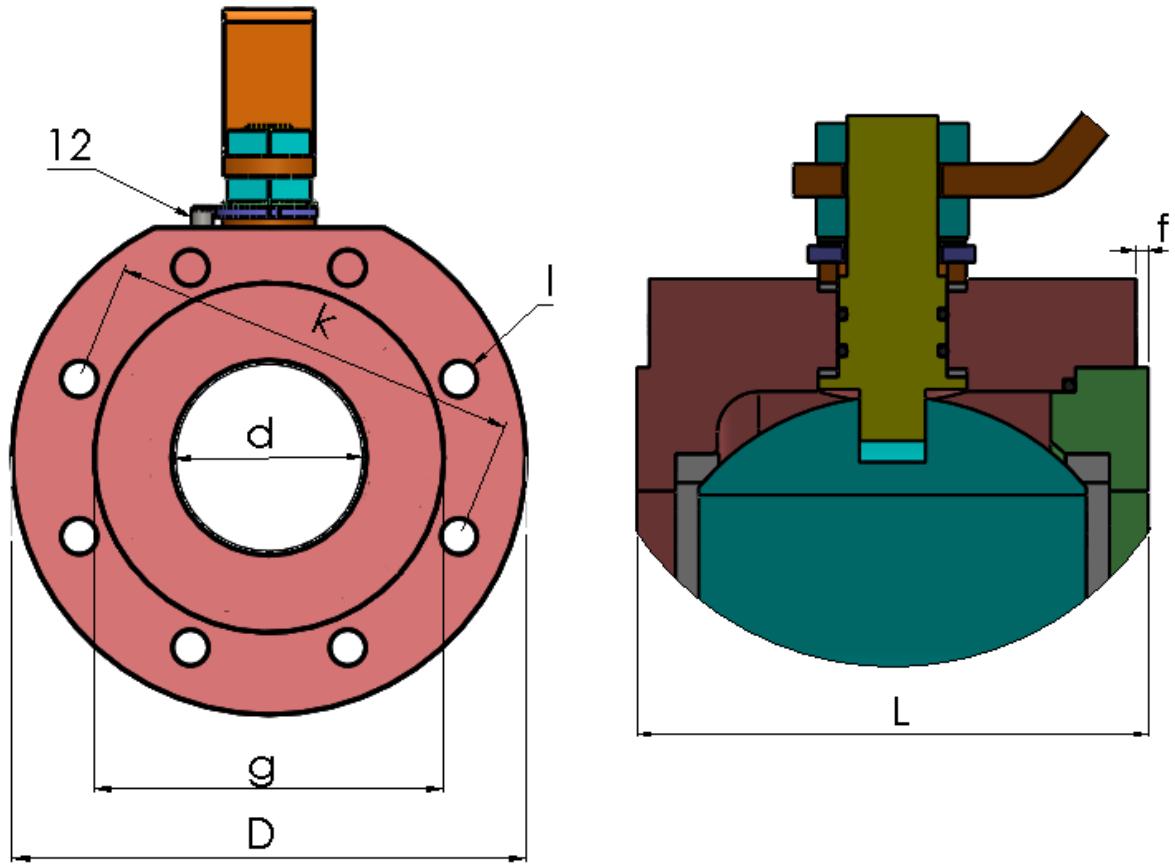
DN15 - DN32

DN40 - DN100

No	Part Name	Cast Steel	St. Steel 304	St. Steel 316	Cast Steel	St. Steel 304	St. Steel 316
1	Body	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
2	Bonnet	AISI 1040	1.4301	1.4401	1.0619	1.4308	1.4408
3	Ball	1.4021	1.4301	1.4401	1.4016	1.4308	1.4408
4	Valve Stem	1.4021	1.4301	1.4401	1.4021	1.4301	1.4401
5	Gland Retainer	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
6	Sealing Ring	YFC	YFC	YFC	YFC	YFC	YFC
7	Gasket washer	YFC	YFC	YFC	YFC	YFC	YFC
8	Belleville Washer	50CrV4	1.4310	1.4310	50CrV4	1.4310	1.4310
9	Nut	8.8	A2-70	A2-70	8.8	A2-70	A2-70
10	Handle	St 42	1.4301	1.4301	St 42	1.4301	1.4301
11	Washer	St 42	1.4301	1.4301	St 42	1.4301	1.4301
12	Pin	AISI 1030	1.4301	1.4301	AISI 1030	1.4301	1.4301
13	Packing Group	YFC	YFC	YFC	YFC	YFC	YFC
14	Bonnet Gasket	YFC	YFC	YFC	YFC	YFC	YFC

YFC : Graphite Reinforced PTFE

Monoblock Ball Valve - MB1, MB2, MB3



Connection Dimensions [mm]

MB1, MB2, MB3

N : Bolt/Stud Number of holes

Pressure Class : PN16

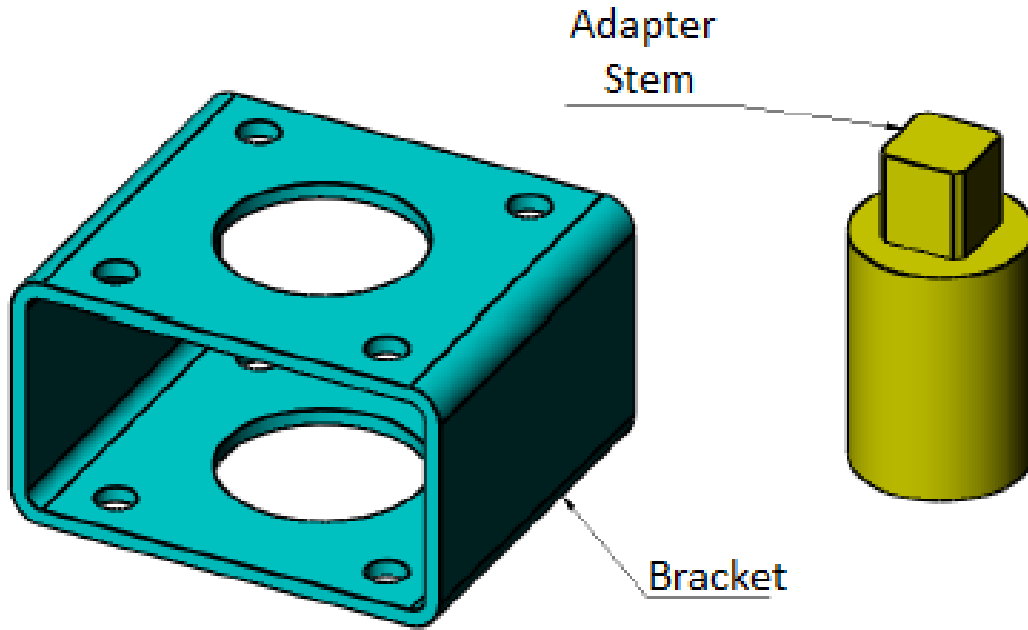
Pressure Class: PN25 - PN40

Dimensions	L	D	d	g	f	k	N	I
DN15	38	95	12.5	46	2	65	4	M12
DN20	42	105	17	56	2	75	4	M12
DN25	46	115	24	65	3	85	4	M12
DN32	60	140	30	76	3	100	4	M16
DN40	68	150	37	84	3	110	4	M16
DN50	84	165	47	99	3	125	4	M16
DN65	106	185	62	118	3	145	4	M16
DN80	124	200	74	132	3	160	8	M16
DN100	150	220	92	156	3	180	8	M16

L	D	d	g	f	k	N	I
38	95	12.5	45	2	65	4	M12
42	105	17	58	2	75	4	M12
46	115	24	68	2	85	4	M12
60	140	30	78	2	100	4	M16
68	150	37	88	3	110	4	M16
84	165	47	102	3	125	4	M16
106	185	62	122	3	145	8	M16
124	200	74	138	3	160	8	M16
153	235	98	162	3	190	8	M20

Monoblock Ball Valve - MB1, MB2, MB3

Actuator Connection Kit



Recommended torque values for actuator selection [Nm]

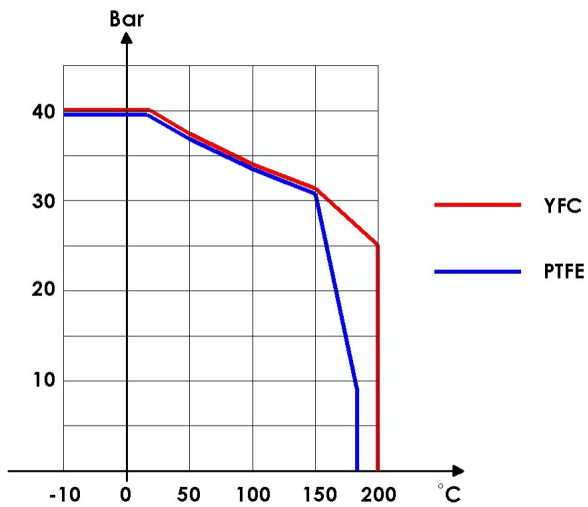
Dimensions	Flange Type	[mm] Square Heat	MB1, MB2			MB3		
			PN16 Torque	PN25 Torque	PN40 Torque	PN16 Torque	PN25 Torque	PN40 Torque
DN15	F04	9	12	13	14	15	16	18
DN20	F04	9, 11	25	28	31	31	35	39
DN25	F04	9, 11	29	35	42	36	44	53
DN32	F05	11, 14	40	49	59	50	61	73
DN40	F05	11, 14	50	60	72	62	75	90
DN50	F07	14, 17	78	93	112	97	116	140
DN65	F07	14, 17	102	122	147	127	152	184
DN80	F10	17, 19	172	210	280	215	262	350
DN100	F10	17, 19, 22	280	340	400	350	425	500

Fluid's viscosity, friction coefficient, etc. Depending on the characteristics and frequency of use of the valve, the recommended values may be increased by a safety factor.

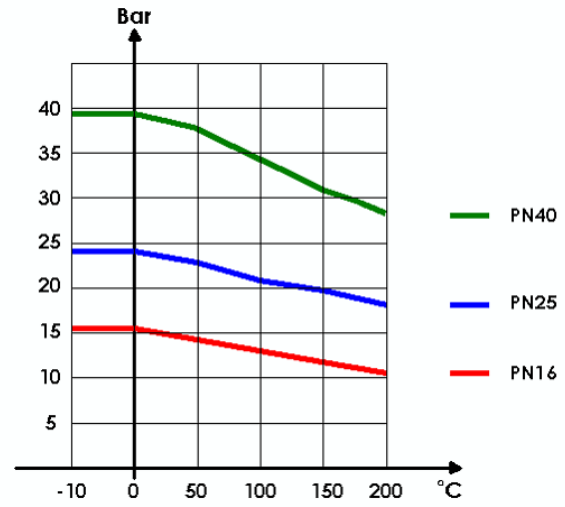
Ball valves that remain open or closed for too long may require higher than normal torque during initial opening/closing operations.

Monoblock Ball Valve - MB1, MB2, MB3

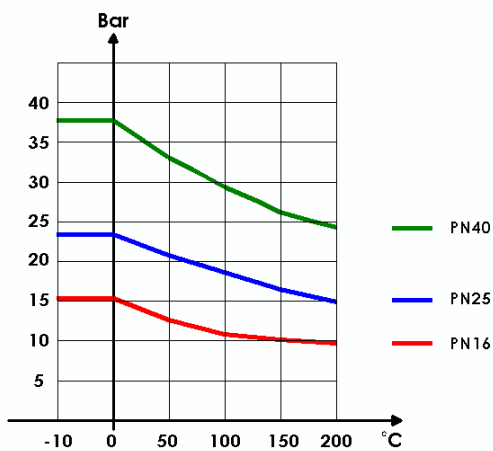
Pressure - Temperature Graphics



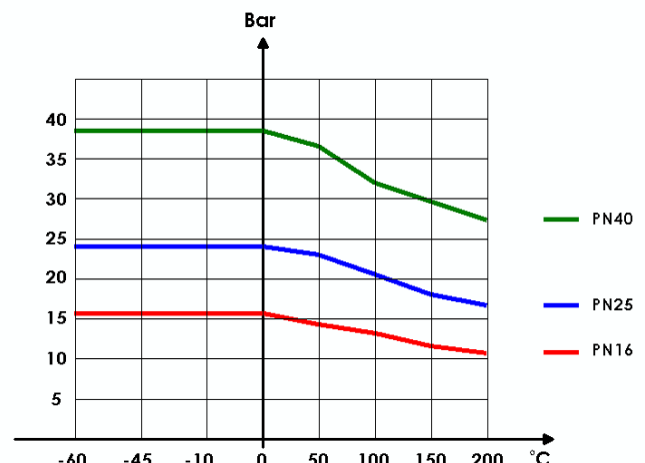
PTFE and YFC



Cast Steel - 1.0619



Stainless Steel - 304
1.4301 and 1.4308



Stainless Steel - 316
1.4401 and 1.4408