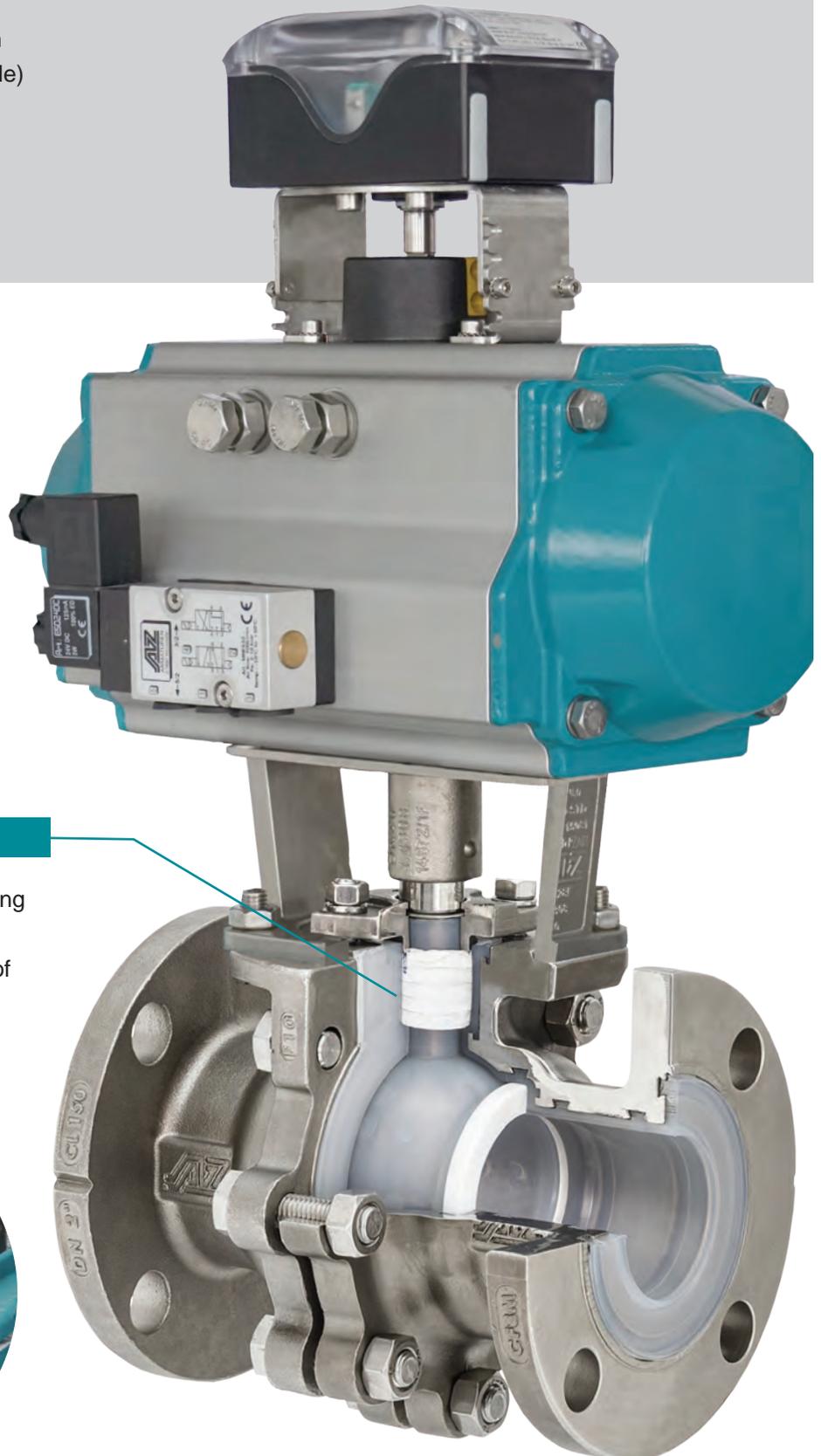


Product range AZ ball valves

Design overview and options

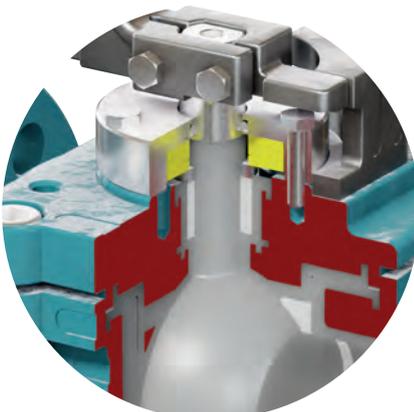
Type NVN-EXTRA

- split body design
- cavity minimized
- full bore design (optional with reduced bore design available)



Sealing systems

- adjustable triple packing (sealing system CAS)
- disc springs for initial tension of packing "live-loaded" (sealing system CAS-SL)



other types

Type NEO-VAL

- split body design (short face to face dimensions)



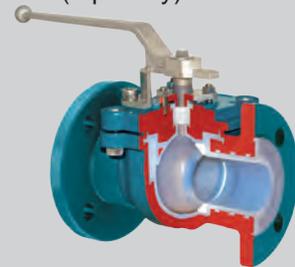
Type KA

- split body design
- vessel bottom outlet valve



Type Monobloc

- one-piece body design (top entry)



one-piece ball

- anti blow-out design in case of high pressure or disassembly
- no risk of wear and tear between ball and shaft
- no danger for the lining
- constant torque
- optional: precise control with linear or equal percentage characteristics (type RH)
- customized solutions



safe lining

- chemical resistant PFA/FEP lining
- minimum 3mm FEP/PFA lining
- locked in lining
- suitable for toxic and aggressive chemicals

Standard materials

Body:

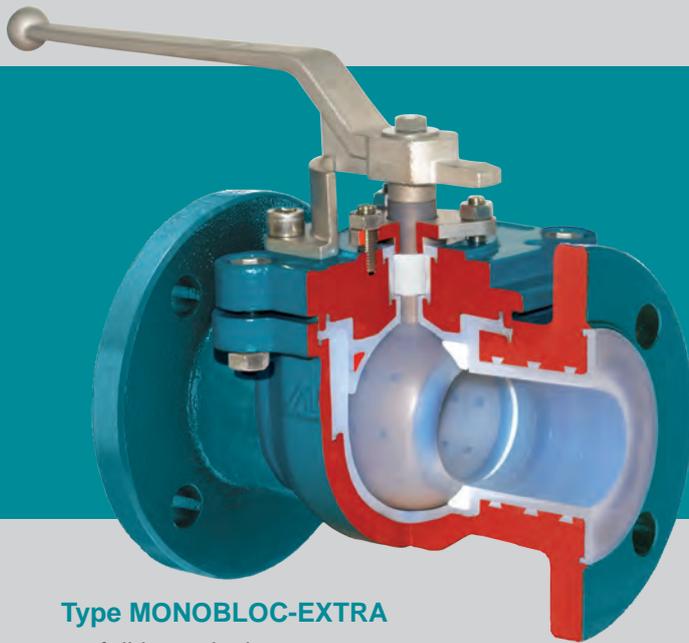
- Stainless Steel 1.4408 / A351/CF8M
- Ductile Iron EN-GJS-400-18 / ASTM A395 (DN \geq 8")
- Carbon Steel 1.0619 / ASTM A216 WCB

Ball:

- ASTM A995 - CD4MCUN (DN \leq 4")
- Carbon Steel 1.0619 / ASTM A216 WCB (DN \geq 6")

Type MONOBLOC / MONOBLOC-EXTRA

Fully lined ball valve, one piece body and ball design



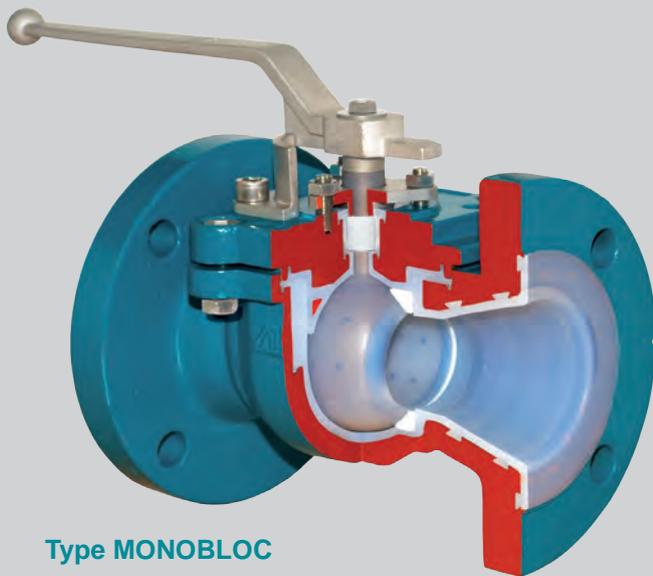
- one-piece body
- one-piece ball

DN 25 - 200 / PN 10-25
NPS 1 - 8 / Class 150

Range of application:
 $-10 < T < 150/210^{\circ}\text{C}$

Type MONOBLOC-EXTRA

- full bore design
- maximum flow rates - no pressure loss



Type MONOBLOC

- reduced bore
- less torque = smaller actuator

Design characteristics

- top entry design
- easy inline replacement
- chemical resistance
- adjustable stem packing
- reduced cavity between ball and body
- PFA / FEP lining of body, ball and cover

Options

- other materials



PT diagram, plug types, sealing systems, material selection: see catalogue part ENGINEERING

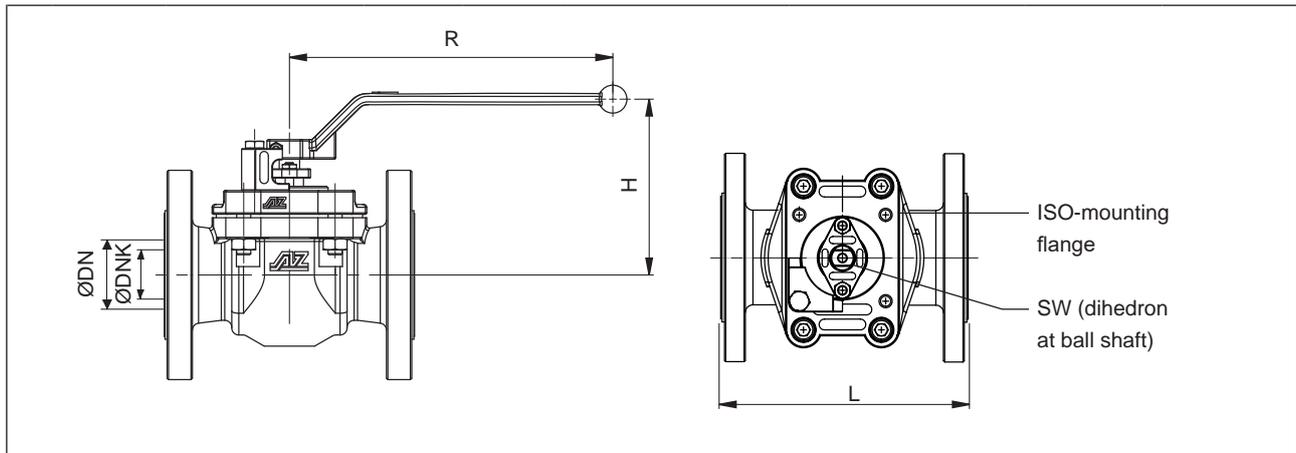
Top entry design

- fast exchange of sealings and ball with repair kit
- no disassembling of the complete valve in case of service
- flange sealings remain
- final in-line leak test for the whole piping system



Type MONOBLOC / MONOBLOC-EXTRA

Technical information



Type MONOBLOC-EXTRA

DIN EN 558	DN	PN	L [mm]	R [mm]	H [mm]	ISO-5211 flange	SW [mm]	torque* [Nm]	weight [kg]	K _{vs} value [m ³ /h]	C _v value [US.gal/min]
	25	16	160	230	119	F07	11	45	**	70	81
	40	16	200	230	126	F07	11	45	**	193	223
	50	10-16	230	320	143	F10	14	50	**	323	374
	80	10-16	310	600	199	F12	22	120	**	947	1095
	100	10-16	350	600	202	F14	22	120	**	1446	1672
	150	10-16	350	600	227	F16	27	160	**	3338	3859
	200	10-16	400	600	277	F16	27	270	**	6362	7356
ASME B16.10	NPS	Class	L [mm]	R [mm]	H [mm]	ISO-5211 flange	SW [mm]	torque* [Nm]	weight [kg]	K _{vs} value [m ³ /h]	C _v value [US.gal/min]
	1	150	160	230	119	F07	11	45	**	70	81
	1½	150	200	230	126	F07	11	45	**	193	223
	2	150	230	320	143	F10	14	50	**	323	374
	3	150	310	600	199	F12	22	120	**	947	1095
	4	150	350	600	202	F14	22	120	**	1446	1672
	6	150	350	600	227	F16	27	160	**	3338	3859
	8	150	400	600	277	F16	27	270	**	6362	7356

Type MONOBLOC

EN 1558	DN	ØDNK***	PN	L [mm]	R [mm]	H [mm]	ISO-5211 flange	SW [mm]	torque* [Nm]	weight [kg]	K _{vs} value [m ³ /h]
	50	40	10-16	230	170	128	F07	11	45	**	**
	80	50	10-16	310	230	143	F10	14	50	**	**
	100	80	10-16	350	320	174	F12	19	120	**	**
	150	100	10-16	350	420	200	F14	22	120	**	**
	200	150	10-16	457	530	250	F16	27	160	**	**
ASME B16.10	NPS	ØDNK	Class	L [mm]	R [mm]	H [mm]	ISO-5211 flange	SW [mm]	torque* [Nm]	weight [kg]	K _{vs} value [m ³ /h]
	2	40	150	178	170	128	F07	11	45	**	**
	3	50	150	203	230	143	F10	14	50	**	**
	4	80	150	229	320	174	F12	19	120	**	**
	6	100	150	267	420	200	F14	22	120	**	**
	8	150	150	292	530	250	F16	27	160	**	**

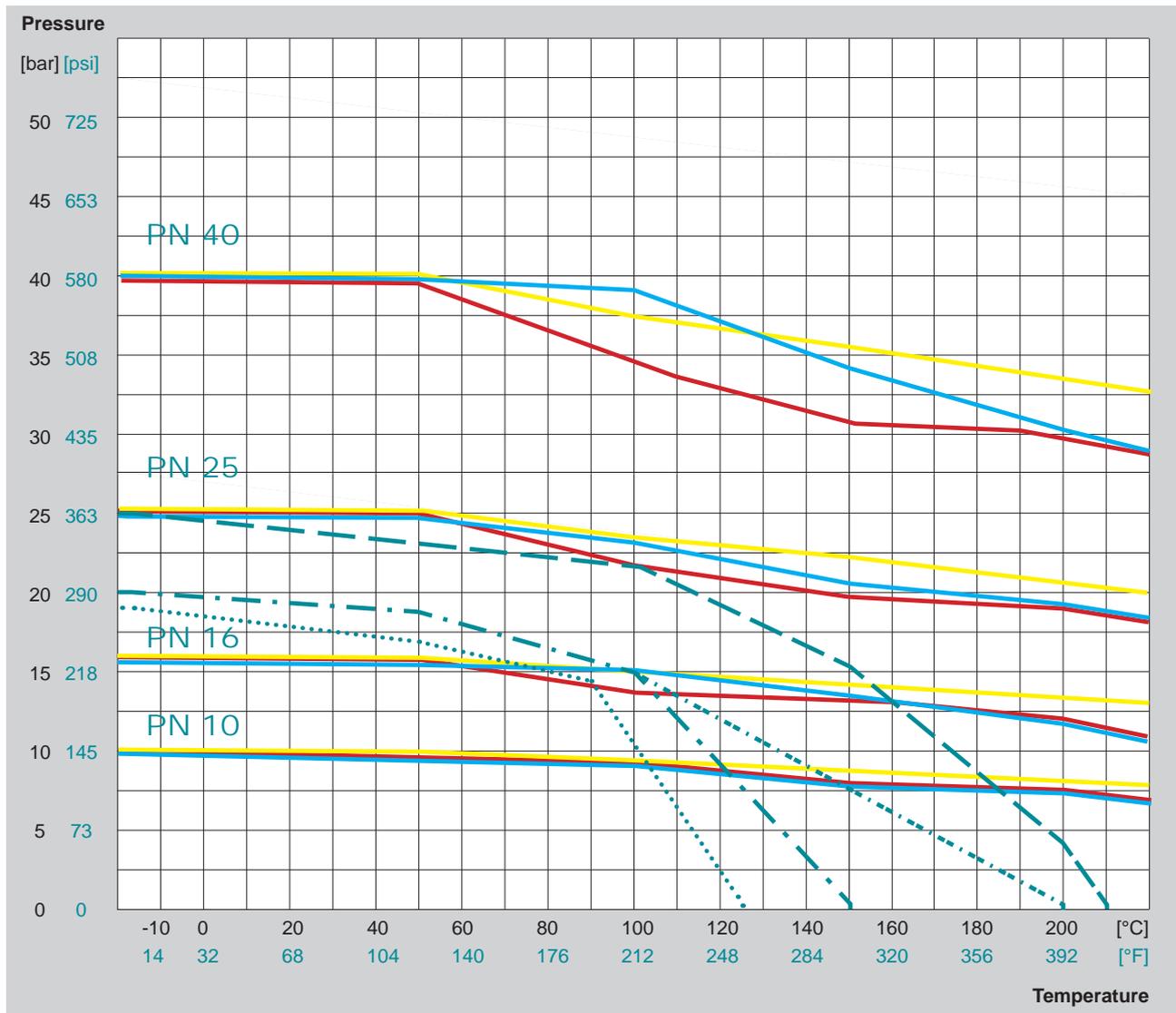
*) Δp=10 bar, recommended safety factor for actuator: +40 %

**) on request

***) reduced bore of the ball (only type MONOBLOC)

Some designs, sizes and/or configurations may be fitted with threaded flange holes.

PT Diagram, PN 10 - PN 40 lined valves



Body material

- EN 10213 - 1.0619 / Carbon Steel
 - EN 10213 - 1.4408 / Stainless Steel
 - EN 1563 - EN-GJS-400-18-LT / Ductile Iron
- other body materials on request

Lining combination

	Body	Plug / Ball	T _{MAX}
- - -	PFA	PTFE or special*	210°C / 410°F
.	PFA	PFA	200°C / 392°F
- . - . -	all combinations with PFA and FEP		150°C / 302°F
.	PFA conductive	PFA conductive**	125°C / 257°F

*) Special materials (metallic) for plugs without lining on request

**) Material combination PFA / FEP possible

The data given are max. values according to EN 12516-4.

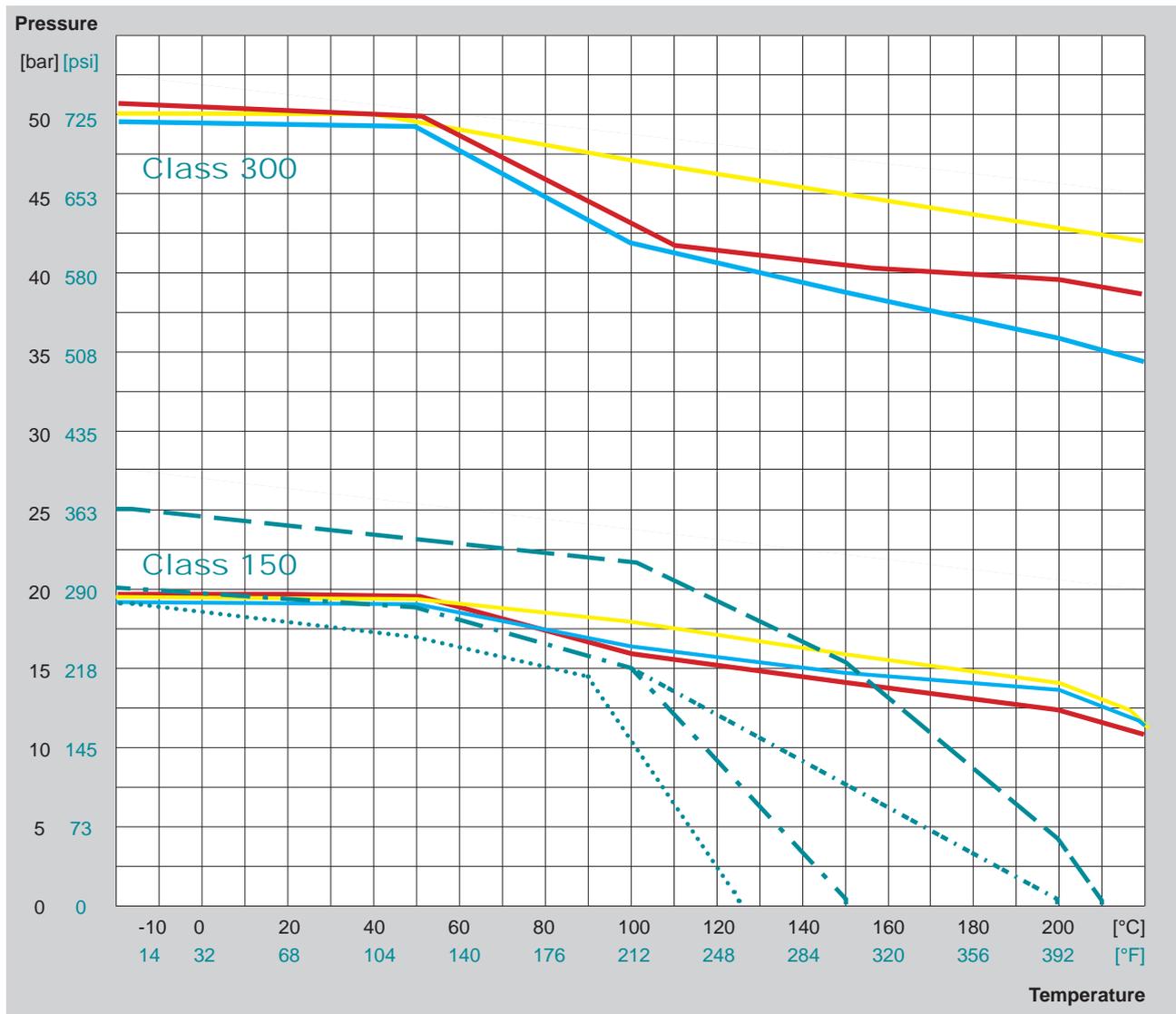
IMPORTANT NOTE

for demanding conditions, such as process temperatures exceeding 150°C / 302°F: Valve size, media phase, plug position & temperature (constant or fluctuating) may have an impact on the lifetime. Consult factory for proper selection of lining material, cover sealing type and special features.

Maximum breakaway torque depending on material combinations according to the technical data sheets of the plug valve.

Subject to technical change without notice.

PT Diagramm, Class 150 - Class 300 lined valves



Body material

- ASTM A216 - WCB
- ASTM A351 - CF8M / Stainless Steel
- ASTM A395 / Ductile Iron
- other body materials on request

Lining combination

	Body	Plug / Ball	T _{MAX}
- - -	PFA	PTFE or special*	210°C / 410°F
.	PFA	PFA	200°C / 392°F
-	all combinations with PFA and FEP		150°C / 302°F
.	PFA conductive	PFA conductive**	125°C / 257°F

*) Special materials (metallic) for plugs without lining on request

***) Material combination PFA / FEP possible

The data given are max. values according to EN 12516-4.

IMPORTANT NOTE

for demanding conditions, such as process temperatures exceeding 150°C / 302°F: Valve size, media phase, plug position & temperature (constant or fluctuating) may have an impact on the lifetime. Consult factory for proper selection of lining material, cover sealing type and special features.

Maximum breakaway torque depending on material combinations according to the technical data sheets of the plug valve.

Subject to technical change without notice.



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- Russia (St. Petersburg)

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