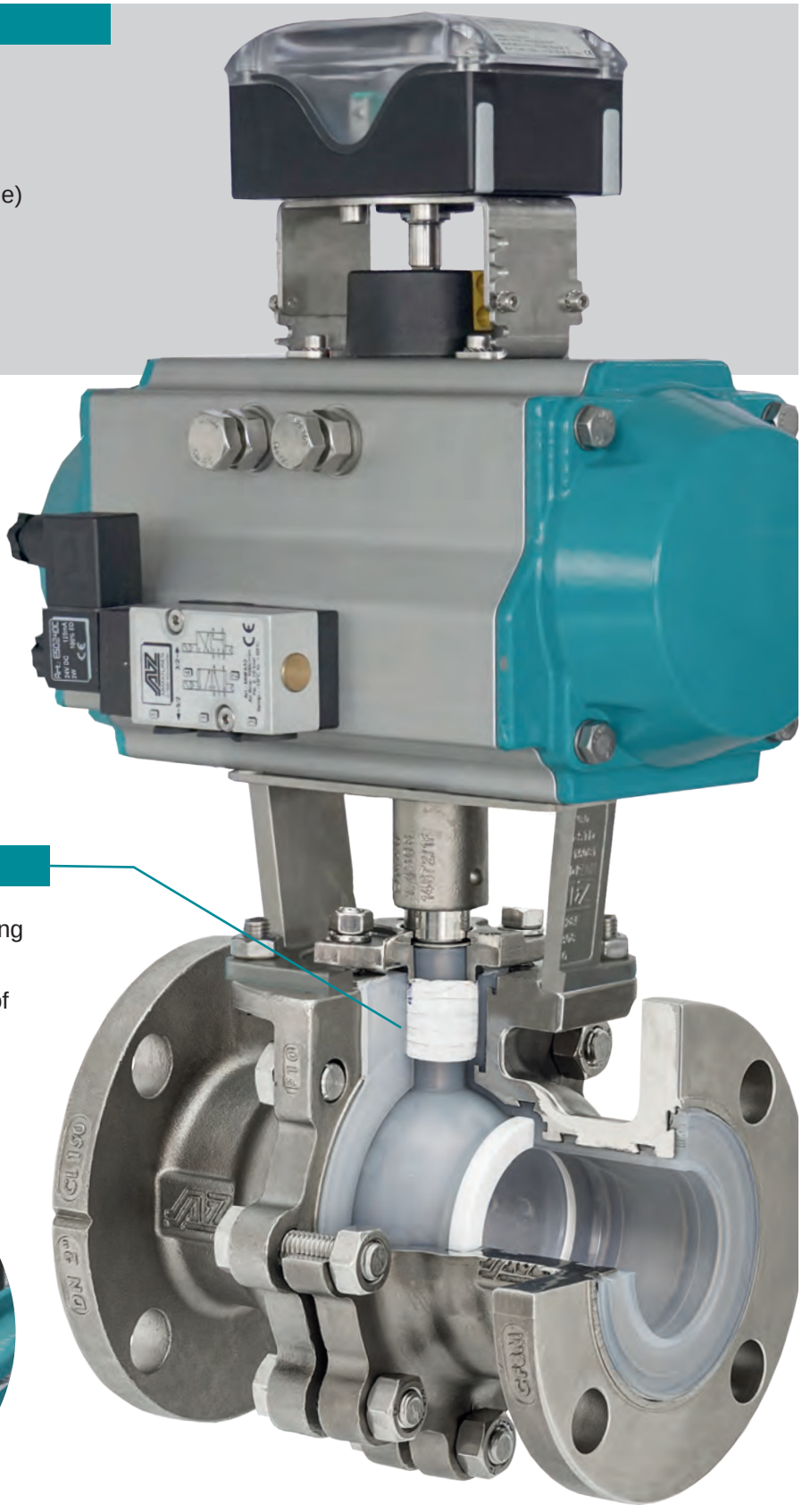
Product range AZ ball valves
Design overview and options

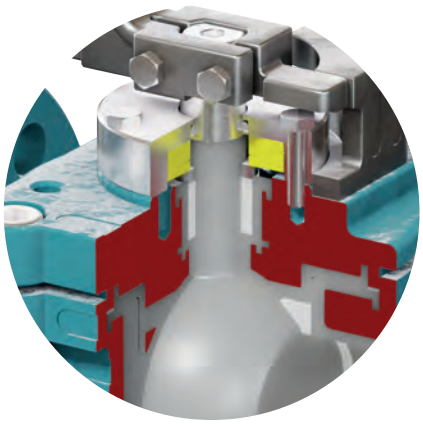
Type NVN-EXTRA

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



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

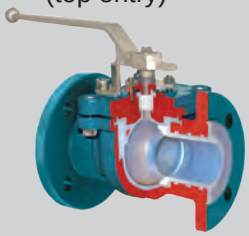
- split body design (short face to face dimensions)

Type KA

- split body design
- vessel bottom outlet valve

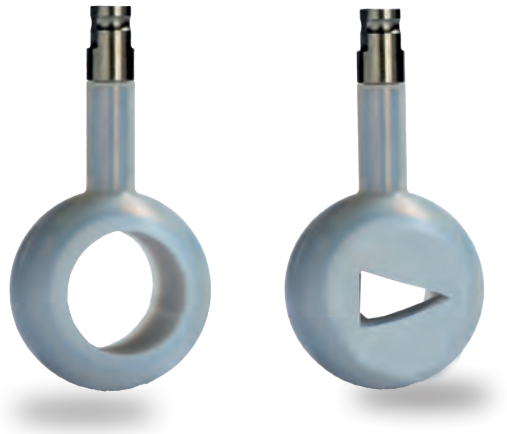
Type Monobloc

- 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

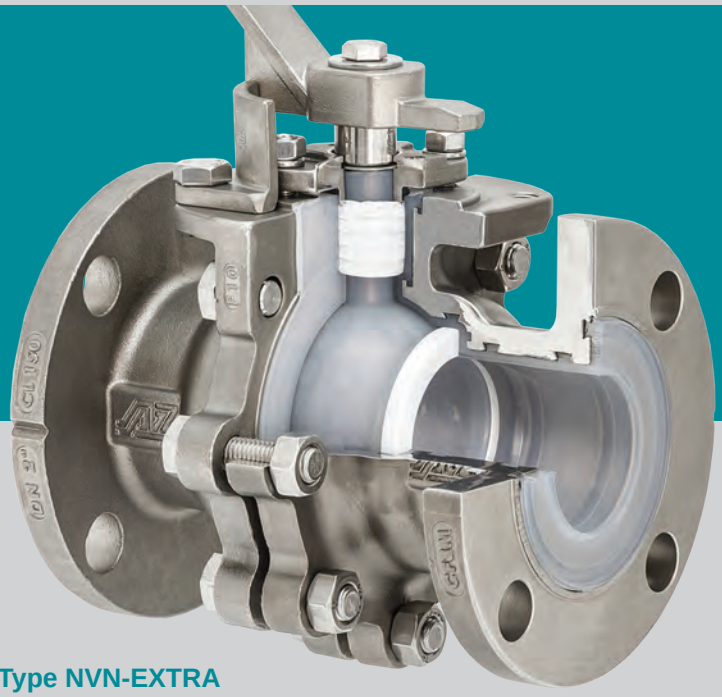
Body:

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

Ball:

- ASTM A995 - CD4MCUN (DN ≤ 4")
- Carbon Steel 1.0619 / ASTM A216 WCB (DN ≥ 6")

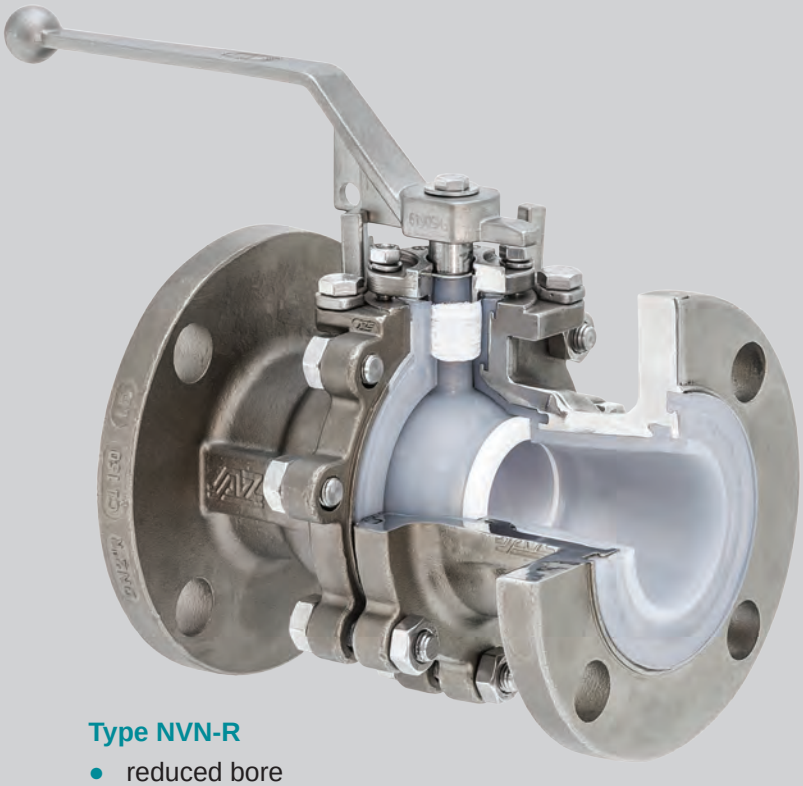
Type NVN-EXTRA / NVN-R
Fully lined ball valve



- **NVN-EXTRA**
  DN 15 - 250 / PN 10 - 40
  NPS ½ - 10 / Class 150- 300
- **NVN-R**
  DN 40 - 250 / PN 10 - 40
  NPS 1½ - 10 / Class 150

Range of application:
14 < T < 302/410°F

Type NVN-EXTRA
- full bore design
- maxium flow rates - no pressure loss



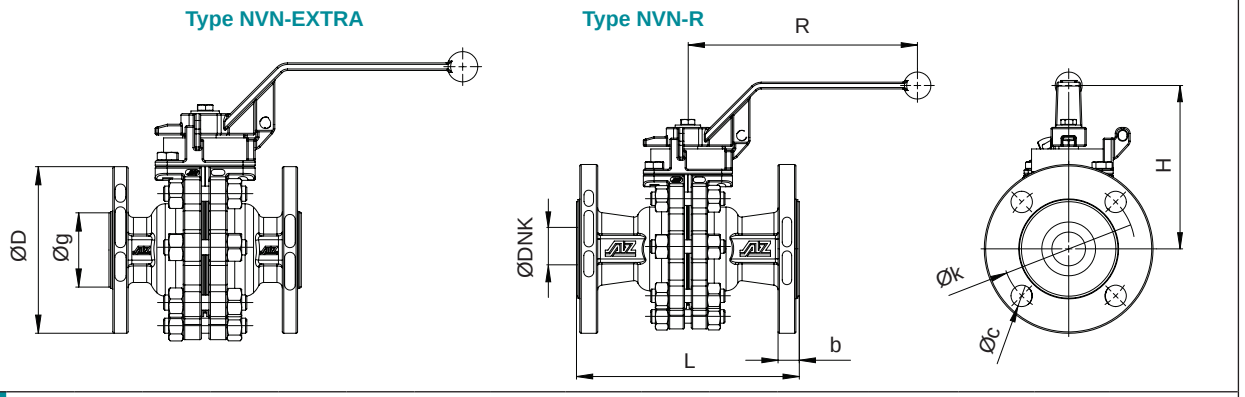
Type NVN-R
- reduced bore
- less torque = smaller actuation

Design characteristics
- cavity minimized
- ball and ball shaft one-piece no blow-out, robust!
- body material optional
  - Carbon Steel 1.0619, ASTM A216 WCB
  - Stainless Steel 1.4308, ASTM A341 CF8
- mounting-flange for actuators acc. to ISO 5211
- closing-off with double-sided sealing
- adjustable shaft sealing
- antistatic-ring
- minimum 3 mm lining

Options
- locking device

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

Type NVN-EXTRA / NVN-R
Technical Information



	NPS	Class	L [mm] [Inch]	R [mm] [Inch]	H [mm] [Inch]	ØD [mm] [Inch]	ØDNk [mm] [Inch]	Øg [mm] [Inch]	Øk [mm] [Inch]	Øc [mm] [Inch]	b [mm] [Inch]	SW [mm] [Inch]	torque* [Nm] [ft lb]	weight [kg] [lb]	K_{vs} [m³/h]	C_v [US.gal/min]
Type NVN-EXTRA																
ASME B16.10	½	150	108 4.25	170 6.69	109 4.29	90 3.54		34,9 1.37	60,3 2.37	15,7 5/8	10,0 0,39	11 0.433	9 7	2,3 5.0	20	23
	¾	150	117 4,60	170 6.69	114 4.49	100 3,94		42,9 1,69	69,9 2.75	15,7 5/8	10,9 0.43	11 0.433	13 19	2,9 6.4	41	47
	1	150	127 5.00	170 6.69	121 4.76	110 4.33		50,8 2.00	79,4 3.13	15,7 5/8	11,6 0.47	11 0.433	18 13	3,8 8.4	61	71
	1½	150	165 6.50	170 6.69	128 5.04	125 4.92		73,0 2.87	98,4 3.87	15,7 5/8	14,7 0.58	11 0.433	21 15	5,7 13	171	198
	2	150	178 7.00	230 9.06	143 5.63	150 5.91		92,1 3.63	120,7 4.75	19,1 3/4	16,3 0.64	14 0.551	40 30	10 22	280	324
		300	216 8.50			165 6.50			127,0 5.00		22,7 0.89			13 29	270	312
	3	150	203 8.00	320 12.60	184 7.24	190 7.48		127,0 5.00	152,4 6.00	19,1 3/4	19,5 0.77	19 0.748	113 83	23 51	785	906
		300	282 11.10		184 7.24	210 8.27			168,3 6.63	22,3 7/8	29,0 1.14		113 83	29 64	746	862
	4	150	229 9.00	420 16.54	203 7.99	230 9.06		157,2 6.19	190,5 7.50	19,1 3/4	24,3 0.96	22 0.866	150 111	36 79	1265	1462
		300	305 12.00			255 10.04			200,0 7.87	22,3 7/8	32,2 1.27			45 99	1220	1410
	6	150	267 10.50	600 23.62	250 9.84	280 11.02		215,9 8.50	241,3 9.50	22,3 7/8	24,3 0,96	27 1.063	200 148	65 143	3021	3492
		300	403 15.87			320 12.60			269,9 10.63		35,4 1.39			92 203	2880	3329
	8	150	457 18.00	-	-	345 13.58		269,9 10.63	298,5 11.75	22,4 0.88	29,0 1.14	36 1.417	563 415	173 381	5368	6206
	10	150	533 21.00	-	-	405 15.94		323,8 12.75	362,0 14.25	25,4 1	30,6 1.20	36 1.417	688 507	257 567	8582	9921
Type NVN-R																
ASME B16.10	1½	150	165 6.50	170 6.69	121 4.76	125 4.92	25 0.98	73,0 2.87	98,4 3.87	15,7 7/8	14,7 0.58	11 0.433	18 13	5,0 11	44	51
	2	150	178 7.00	170 6.69	128 5.04	150 5.91	40 1.57	92,1 3.63	120,7 4.75	19,1 3/4	16,3 0.64	11 0.433	21 15	7,4 16	127	147
	3	150	203 8.00	230 12.60	143 5.63	190 7.48	50 1.97	127,0 5.00	152,4 6.00	19,1 3/4	19,5 0.77	14 0.551	40 29	13 28	159	184
	4	150	229 9.00	320 12,69	184 7.24	230 9.06	80 3.15	157,2 6.19	190,5 7.50	19,1 3/4	24,3 0.96	19 0.748	113 83	28 61	483	535
	6	150	267 10.50	420 16.54	203 7.99	280 11.02	100 3.94	215,9 8.50	241,3 9.50	22,3 7/8	24,3 0.96	22 0.866	150 110	42 92	638	738
	8	150	457 18.00	-	-	345 13.58	150 5.91	269,9 10.53	298,5 11.75	22,4 7/8	29,0 1.14	27 1.063	200 147	80 176	1380	1595
	10	150	533 20.98	-	-	405 19.94	200 7.87	323,8 12.75	362,0 14.25	25,4 1	30,6 1.20	36 1.417	563 415	190 418	3105	3590

*) Δp=10 bar, manufacturer recommended sizing torque (incl. 40% safety)

**) on request

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