



3-PIECE BALL VALVES SERIES A20D / AF20D

**3-piece ball valve with
with full or reduced bore
antistatic, with
ISO-top flange for direct
mounting of an actuator.**

**Stainless steel 1.4408 / CF8M
Carbon steel 1.0619 / A216 WCB**

DN 08 - DN 25 full bore PN 125
DN 32 - DN 40 full bore PN 100 CE0036
DN 50 - DN100 full bore PN 64 CE0036

Inspections / Certificate

- Fire-Safe certified acc. to BS 6755
- ATEX 94/9/EG
- SIL2
- Elastomeres acc. to FDA 21CFR 177.1550
- TA-Luft acc. to TÜV/VDI 2440
- CE/PED 97/23/EG

Basic DN8 – DN40



Basic DN 50



Basic DN 65 - DN100



with stem extension



with actuator

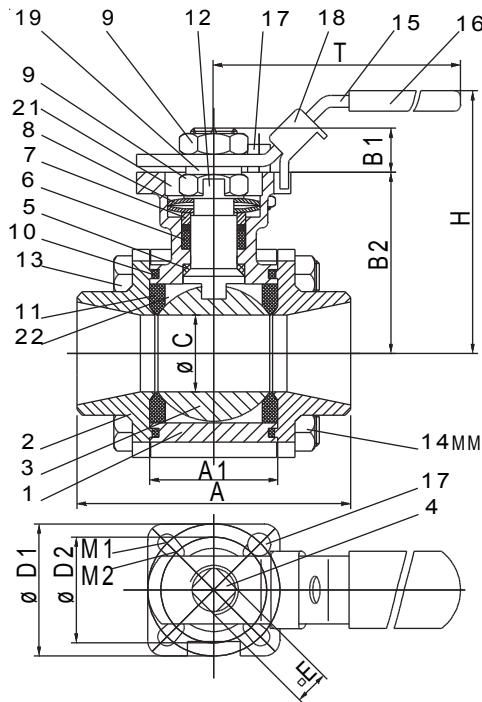


with actuator + stem extension

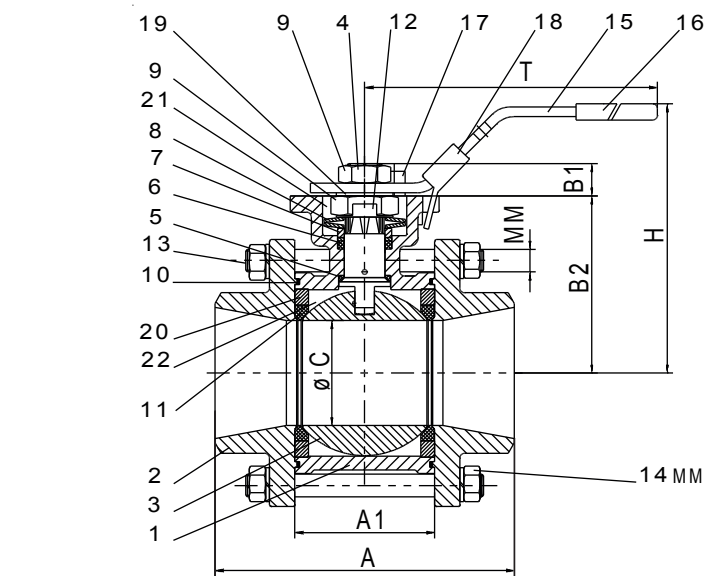


Subject to change 10.2014

Series A20D anti-static /AF20D anti-static, fire-safe



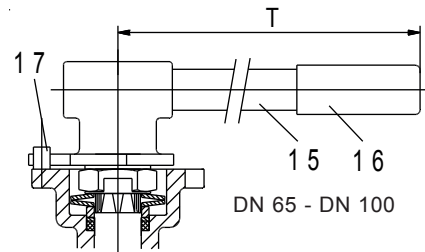
DN 08 - DN 40 full bore
DN 20 - DN 50 reduced bore
encapsulated bolts



Shape A
DN 50 - 100 full bore
outside screws

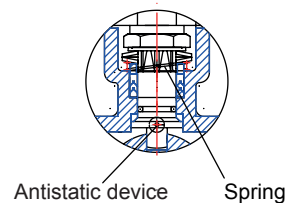
Shape B
DN 50 - 100 full bore
outside screws

	Bal valve Stainless steel	Bal valve Carbon steel
1	Body	1.4408 CF8M / A216 WCB
2	Threaded connection	1.4408 CF8M / A213 WCB
2.1	Weld connection	1.4404 CF3M / A216 WCB
3	Ball	1.4401
4	Stem	1.4401
5	Sealing	PTFE
6	Stuffing box packing	CPTFE
	V-Ring	Graphite
6.1	O-Ring	Viton®**
7	Pressure ring	1.4401
8	Bellevill spring washer	1.4310
9	Nut	1.4301
10	Body sealing	RPTFE/Graphite*
11	Seat ring	RPTFE
12	Protection plate	1.4301
13/14	Hexagon screw/nut	A2-70
15/16	Handlever	1.4301/PVC
17	Lock/Nut	1.4301
18	Locking device	1.4301
19	Distance ring	1.4401
20	Supporting ring (DN 65-100)	1.4401
21	View chamber	
22	Body cavity fillers (optional)	PTFE
23	2x Anti-static balls	1.4401



DN08 - DN15

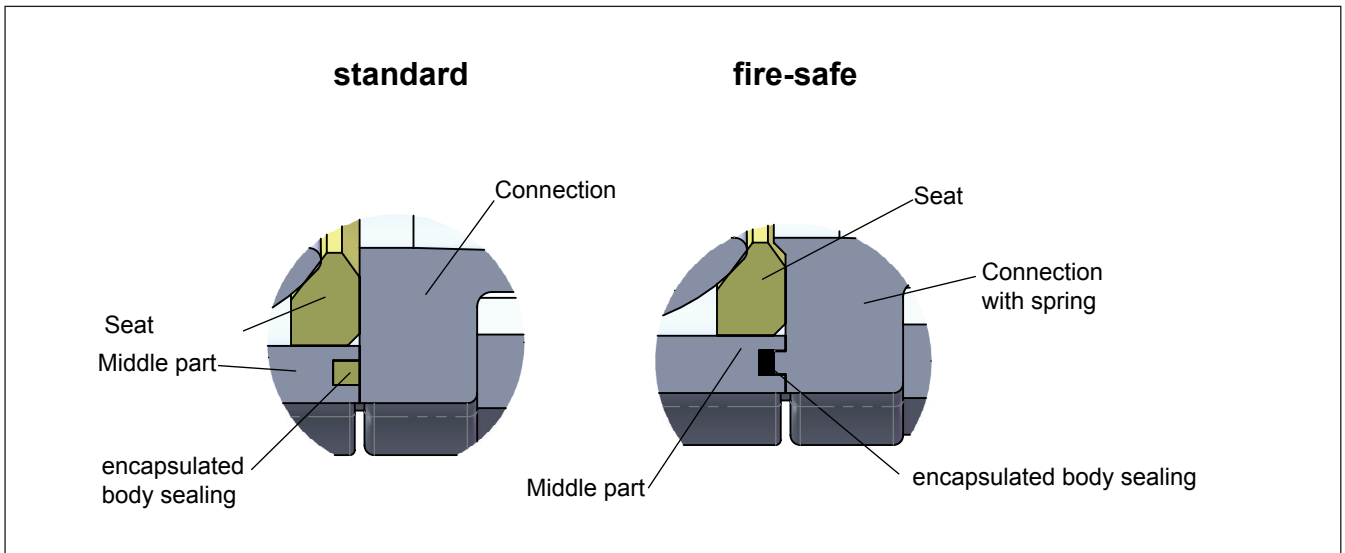
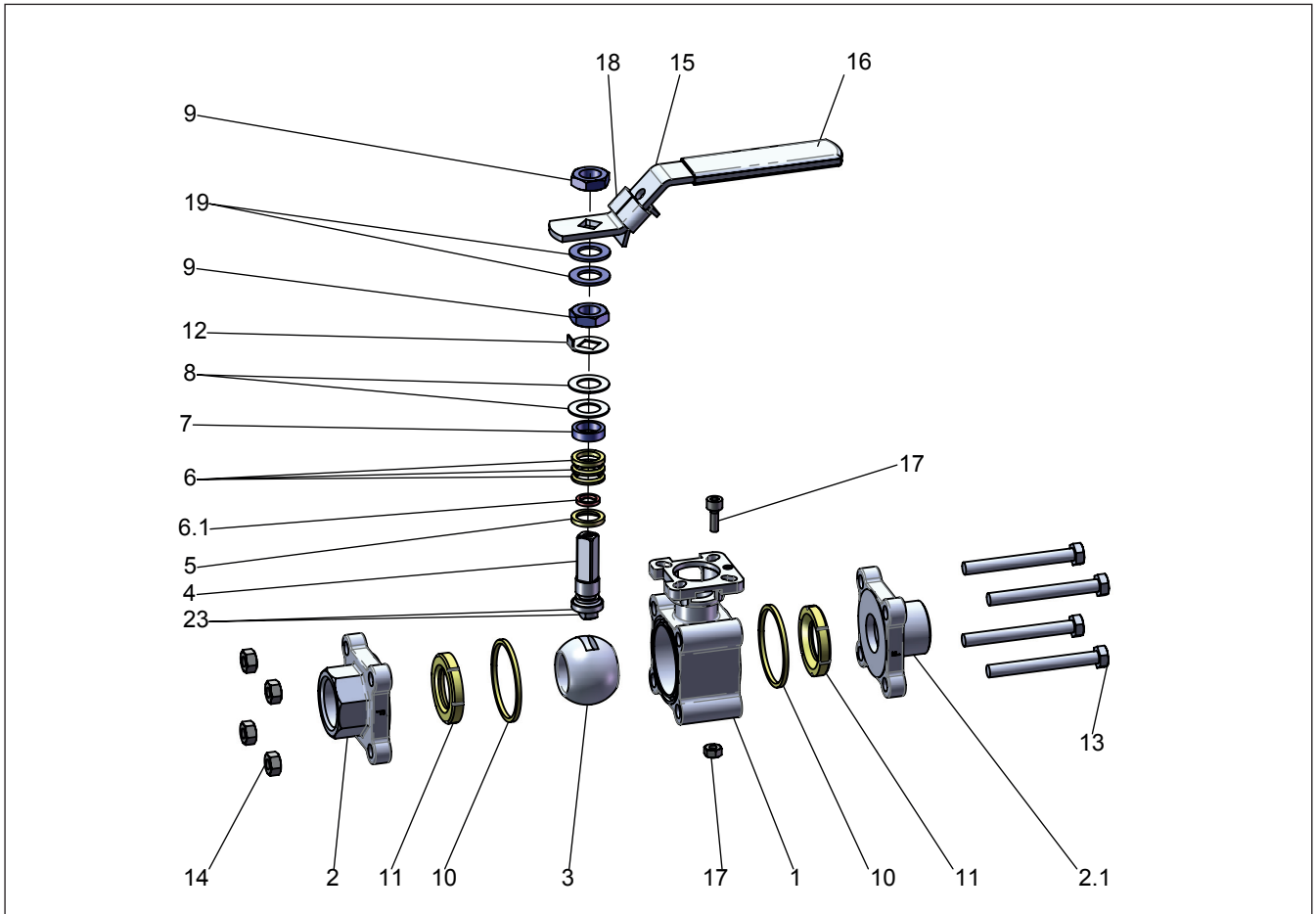
DN20 - DN100



Stem with 2 anti-static devices

Subject to change 10.2014

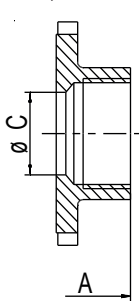
Exploded assembly drawing and body sealing details



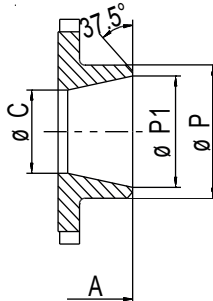
Reduced bore (Venturi)

DN	A SW BSP NPT	A BW	A1	B1	B2	ØC	E-thread	H	T	ØF	G	MM	ISO TOP	ØP	ØP1 DIN/ SCH40	ØP1 ISO/ 1127/1	ØR	N
20 - 3/4"	72.5	75	24.5	7.6	42.6	15	9 - 7/16 UNF	76.6	140	-	19.1	M6	F03 F04	27.2	20.96	23.7	27.3	13
25 - 1"	85.4	90	31.4	8.6	46.8	20	9 - 7/16 UNF	81.7	140	-	22.1	M8	F03 F04	34	26.64	29.7	33.8	13
32 1 1/4"	105.3	110	41.3	10.4	59.3	25	11 - 9/16 UNF	98.3	170	-	25.1	M8	F04 F05	42.7	35.08	38.4	42.8	13
40 - 1 1/2"	111	115	48.4	10.4	62.6	32	11 - 9/16 UNF	101.6	170	-	28.6	M10	F04 F05	48.6	40.94	44.3	48.9	13
50 - 2"	127.3	130	56.3	13.4	79	38	14 - M18x2.5	128	230	-	33.3	M12	F05 F07	60.5	52.51	56.3	61.3	16
65 - 2 1/2"	145	145	71.4	13.4	87.7	50	14 - M18x2.5	137	230	114	-	M14	F05 F07	76.3	69.7	72.1	76.9	16
80 - 3"	185	185	86.6	16.8	108.7	65	17 - M24x3.0	167.5	380	139	-	M16	F07 F10	88.9	81.2	84.3	90.0	16
100 - 4"	205	205	99	17.8	117.7	80	17 - M24x3.0	176.5	520	160	-	M16	F07 F10	114.3	106.3	109.1	115.5	20

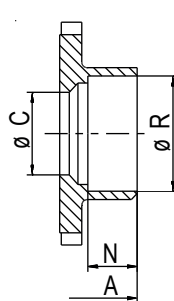
Threaded connection
BSP, NPT



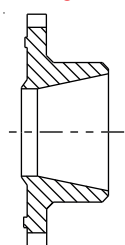
BW-buttweld
connection



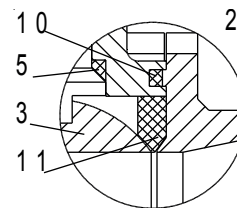
SW = Socket weld
connection



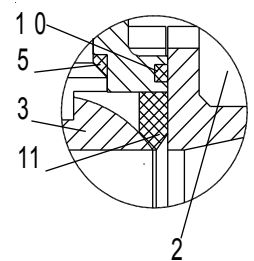
Fire-safe
design



AF20D
anti-static, fire-safe



A20D
anti-static



Full bore (Integral)

DN	A SW BSP NPT	A BW	A1	B1	B2	ØC	E-thread	H	T	ØF	G	MM	ISO TOP	ØP	ØP1 DIN/ SCH40	ØP1 ISO/ 1127/1	ØR	N
8 - 1/4"	75	75	24.5	7.6	42.6	10	9 - 7/16 UNF	76.6	140	-	19.1	M6	F03 F04	13.7	9.24	10.3	14.4	10
10 - 3/8"	75	75	24.5	7.6	42.6	10	9 - 7/16 UNF	76.6	140	-	19.1	M6	F03 F04	17.5	12.53	14	17.5	10
15 - 1/2"	72.5	75	24.5	7.6	42.6	15	9 - 7/16 UNF	76.6	140	-	19.1	M6	F03 F04	21.7	15.76	18.1	21.9	10
20 - 3/4"	85.4	90	31.4	8.6	46.8	20	9 - 7/16 UNF	81.7	140	-	22.1	M8	F03 F04	27.2	20.96	23.7	27.3	13
25 - 1"	105.3	110	41.3	10.4	59.3	25	11 - 9/16 UNF	98.3	170	-	25.1	M8	F04 F05	34	26.64	29.7	33.8	13
32 - 1 1/4"	111	115	48.4	10.4	62.6	32	11 - 9/16 UNF	101.6	170	-	28.6	M10	F04 F05	42.7	35.08	38.4	42.8	13
40 - 1 1/2"	127.3	130	56.3	13.4	79	38	14 - M18x2.5	128	230	-	33.3	M10	F05 F07	48.6	40.94	44.3	48.9	13
50 - 2"	143	143*	71.4	13.4	87.7	50	14 - M18x2.5	137	230	114	-	M12	F05 F07	60.5	52.51	56.3	61.3	16
65 2 1/2"	185	185	86.6	16.8	108.7	65	17 - M24x3.0	167.5	380	139	-	M14	F07 F10	76.6	69.7	72.1	76.9	16
80 - 3"	205	205	99	17.8	117.7	80	17 - M24x3.0	176.5	520	160	-	M16	F07 F10	88.9	81.2	84.3	90.0	16
100 - 4"	240	240	127	16.8	133.7	100	17 - M24x3.0	192.5	520	193	-	M16	F07 F10	114.3	106.3	109.1	115.5	20

Weight in Kg

Full bore

Reduced bore

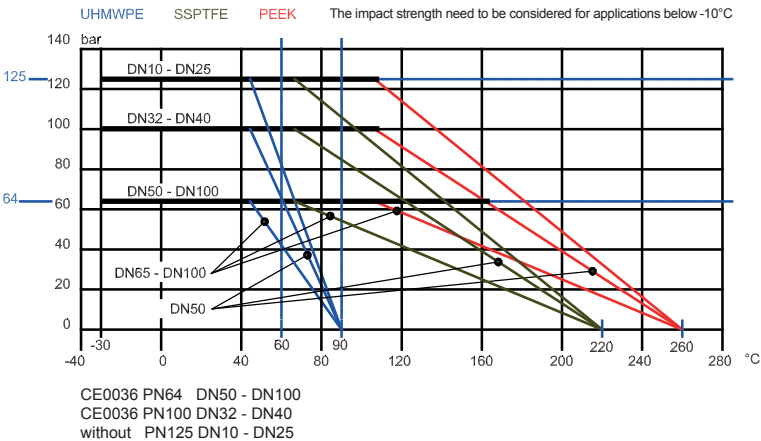
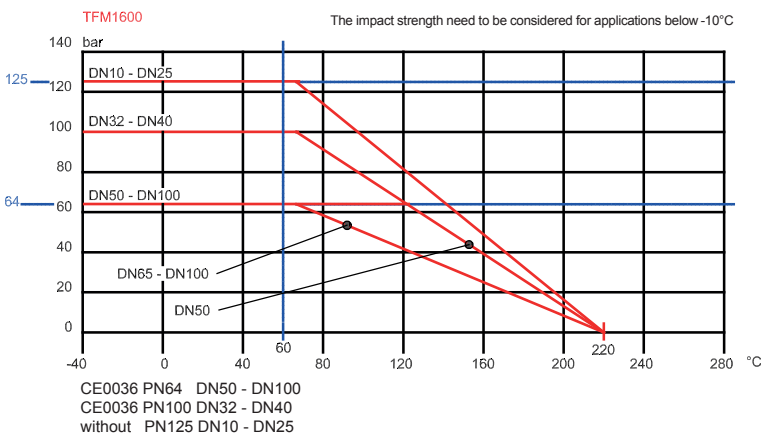
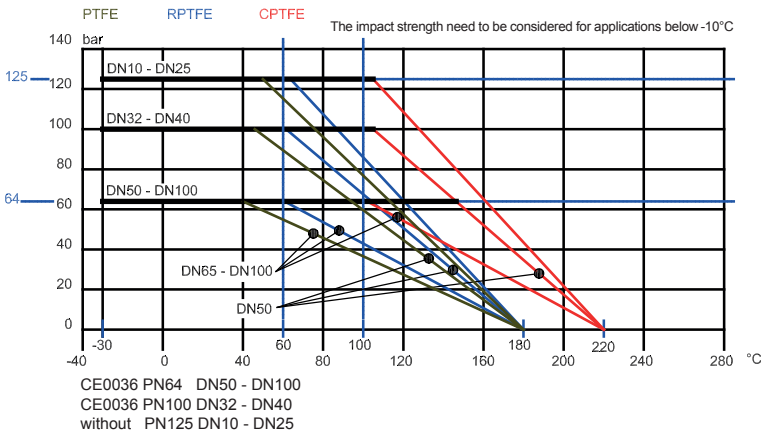
	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
Full bore	0.8	0.9	0.9	1.4	2.1	2.9	4.4	4.5	11.3	14.8	23.3
Reduced bore				0.9	1.4	2.2	3.5	2.9	7.2	13.0	17.8

*Shape A (Shape B=145)

Subject to change 10.2014

20D_10_2014/TIT

Pressure / Temperature chart, Series A20D / AF20D



Material specification / application area

pure PTFE	Pure PTFE PTFE (Teflon®) is the most used sealing material for ball valves, with excellent resistance against almost all medias Colour: pale white
RPTFE	Pure PTFE, reinforced with a portion of glass fibre of 15 %, same chemical resistance as pure PTFE, higher resistance of load changes consistency compared to PTFE and use at higher p/T values Colour: white
CPTFE	Pure PTFE, reinforced with a portion of carbon fibre of 25 %, used at higher temperature range, higher consistency of load changes compared to RPTFE Colour: black
SSPTFE	Pure PTFE, reinforced with a portion of stainless steel powder of 50 %, high resistance against abrasion, RPTFE use at higher p/T values copared to RPTFE Colour: grey
TFM™ 1600	TFM™ is the evolution from traditional PTFE. TFM is almost universally chemically resistant and can be used at higher temperatures and higher pressures. TFM has an extremely smooth and non-porous surface. Color: white
UHMW	Ultra high molecular weight Polyethylene Perfect for use in slightly radioactive environment, fulfills the requirements for use in tobacco industry, high resistance against abrasion Colour: opaque
PEEK	Polyethers Ether Ketone Partially crystalline material with high strength, high form stiffness, radiation resistant and good sliding behaviour. Colour: light-brown

Kv- Values (m³/h) for ball valves with full bore Kv = Flow value in m³/h at pressure loss of 1 bar

DN	8/10	15	20	25	32	40	50	65	80	100
K _v	8	11	28	50	71	96	205	275	500	800

Starting torques (Nm) for lubricating medias

DN	8/10	15	20	25	32	40	50	65	80	100
Nm	8	10	11	18	30	37	55	61	90	106

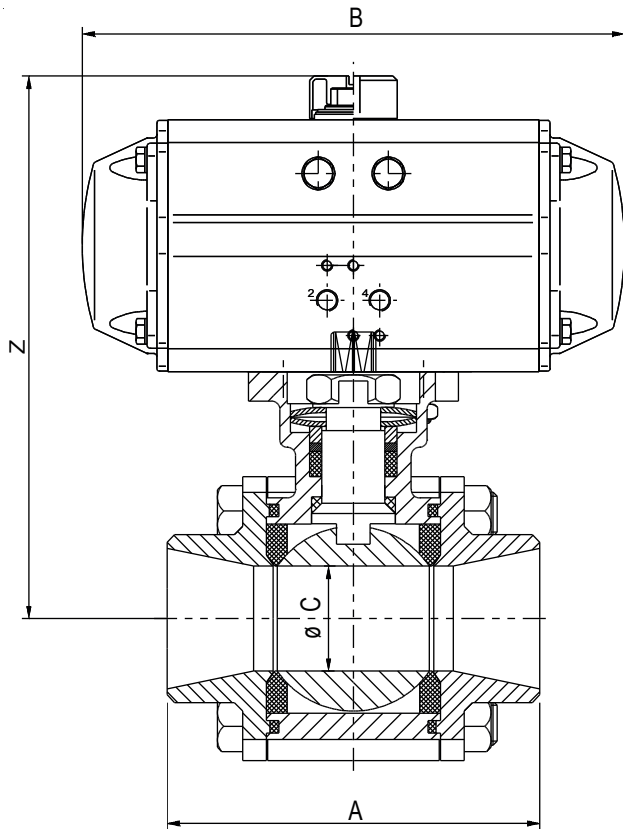
20D_10_2014/TIT
Pressure- and leak tight test
P10/P12 acc. to DIN EN 12266-1

Subject to change 10.2014

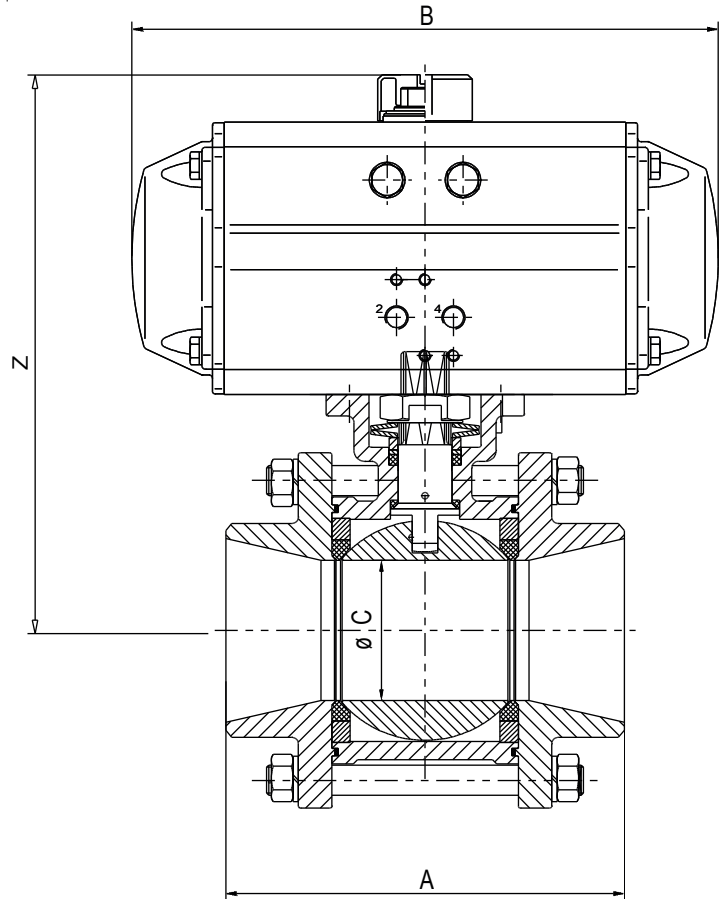
Actuation

Series A20D / AF20D with pneumatic actuator, brand Air Torque
 Actuator design: Set pressure 6bar, lubricating media, max. delta p 10 bar

DN08 - DN40
full bore



DN50 - DN100
full bore



DN (full bore)	8	10	15	20	25	32	40	50	65	80	100
A (BW)	75	75	75	90	110	115	129.6	142.8	185	205	240
B (single/double acting)	141	141	141	159/141	211/159	211/159	248/211	269/211	315/248	315/248	315/248
Z (single/double acting)	132/132	132/132	132/132	152/136	182/165	165/168	235/210	223/110	256/244	293/253	309/269
Actuator Air Torque	AT050 S8	AT050 S8	AT050 S8	AT100 S12	AT200 S12	AT200 S12	AT250 S12	AT300 S12	AT300 S12	AT350 S12	AT350 S12
Actuator Air Torque	AT050D	AT050D	AT050D	AT050D	AT100D	AT100D	AT200D	AT200D	AT250D	AT250D	AT250D

Coding system 3-piece ball valve Series A20D/AF20D

0 2 7 1 3 D . 7 0 0 R

Material

- 02 Carbon steel
- 2 Stainless steel

Connection 1

- 4 Threaded female connection BSP
- 5 Threaded female connection NPT
- 6 Butt weld ends acc. to DIN/SCH40 (BW)
- 7 Butt weld ends acc. to ISO (BW)
- 9 Socket weld end acc. to (SW)

Size Code

DN	reduced bore	full bore
8 -1/4"	-	11
10 -3/8"	-	12
15 -1/2"	-	13
20 - 3/4"	04	14
25 - 1"	05	15
32 - 1 1/4"	06	16
40 - 1 1/2"	07	17
50 - 2"	08	18
65 - 2 1/2"	09	19
80 - 3"	36	35
100 - 4"	46	45

D suitable for direct mounting of an actuator

Connection 2

- 4 Threaded female connection BSP
- 5 Threaded female connection NPT
- 6 Butt weld ends acc. to DIN/SCH40 (BW)
- 7 Butt weld ends acc. to ISO (BW)
- 9 Socket weld end acc. to (SW)

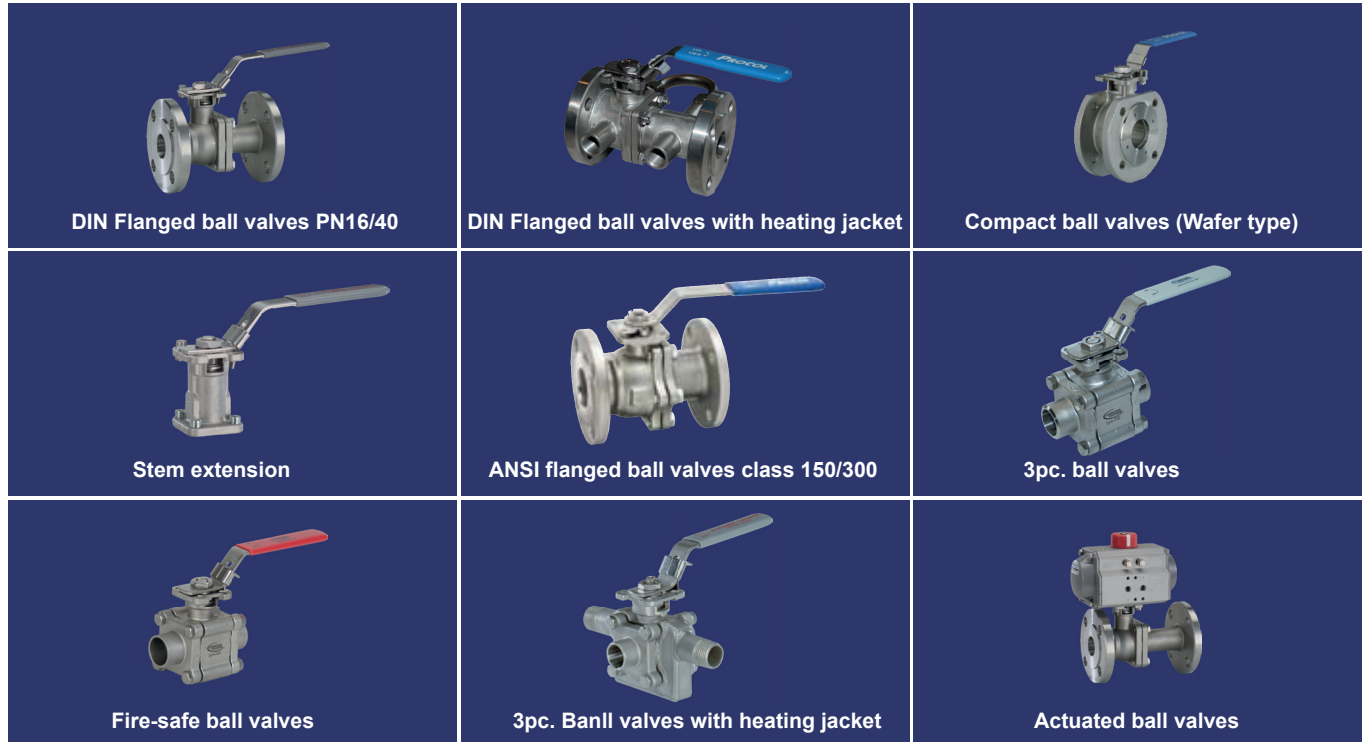
Design

- 00 Standard
- 01 Helium application
- 02 Stem with Viton®
O-Ring TA Luft
- 03 Stem with FEP
O-Ring TA Luft

Code of available	Seat	Body sealing	Packing	Remarks
Seal materials				
R RRC	R: PTFE glass	R: PTFE glass	C: PTFE carbon	Standard SS
C CRC	C: PTFE carbon	R: PTFE glass	C: PTFE carbon	Standard WCB
T TRC	T: Pure PTFE	R: PTFE glass	C: PTFE carbon	
F CGG	C: PTFE carbon	G: Graphite	G: Graphite	Standard firesafe
P PGG	P: PEEK	G: Graphite	G: Graphite	fires-afe
FR RGG	R: PTFE glass	G: Graphite	G: Graphite	fire-safe
FT TGG	T: PTFE pure	G: Graphite	G: Graphite	fires-afe

Product range

Samples of our delivery programme
of system ball valves:



I am also available Digital.
Scan me!