TOPI 220

ball valve
soft seated
maintenance-free
ball guided by bearings

Flanged ends
DN 80 – PN 16/40
DN 100 – PN 16/40
DN 150 – PN 16/40
DN 200 – PN 10/40

The sealing variants are approved in accordance with the german clear air regulations „TA-Luft 2002“

Typ VFD

Fields of application

General industry, power plants,chemical, oil and petrochemical industry

Operating data

Temperature range, depending on the operating pressure: -10°C to +200°C
See table at page 6

Design

Two-piece body, full bore
Encapsulated seat rings
Antistatic (as) – feature

Pressure equipment directive
(PED) 97/23/EG (category III)
TRB 801 Nr. 45
VdTÜV 1065, VbF, Gas-HL-VO, WHG
„TA-Luft 2002“ approved
Fire-Safe acc. to BS 67 55 part 2 and ISO 10497
Mounting flange acc. to DIN ISO 5211

Coating

Alkyd resin lacquer, pacific blue- RAL 5002
Stainless steel without coating

Materials (acc. to DIN)

body:	casted steel	- 1.0619
	casted stainless steel	- 1.4408
ball:	stainless steel-	- 1.4408

sealings:
seatrings - pure TFM

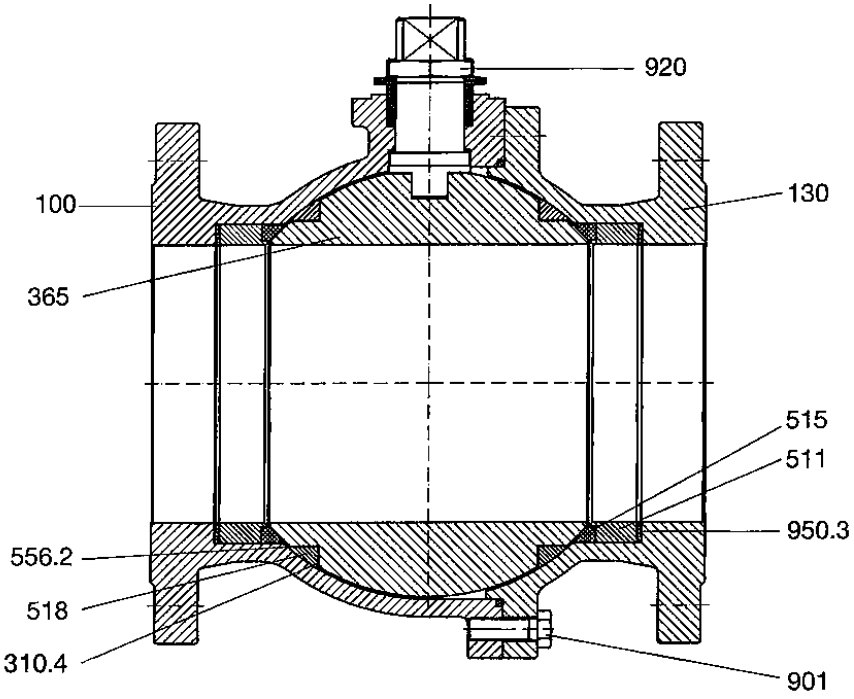
other sealing materials on request.

Order specification

Ball valve Topi 220
Nominal diameter DN
Nominal pressure PN
Operating conditions
Flow media, temperature, pressure
Connection acc. to DIN EN
Identification number

VH Armaturen GmbH
Ringstraße 22
67245 Lambsheim (Germany)

Telefon ++49 (0) 62 33 512-0
Telefax ++49 (0) 62 33 512 110
E-Mail info@vh-armaturen.de



Ball valve with full bore

Table 1: materials

Part no.	designation	material	
100	body	GS-C25 N G-X6CrNiMo 18.10	1.0619 1.4408
130	Body part	GS-C25 N G-X6CrNiMo 18.10	1.0619 1.4408
310.4	ball bearing		1.4401/PTFE-tissue
365	ball	G-X6CrNiMo 18.10	1.4408
515	Seat		TFM, pure (standard)
518	Bearing-ring for ball		1.4404
556.2	Sliding disc		1.4401/PTFE
901	Hex head bolt		A4 – 70
511	Supporting ring for seat	G-X2CrNiMoN 18.10	1.4404
920	nut		A2 – 70
950.3	Disc spring		1.4310

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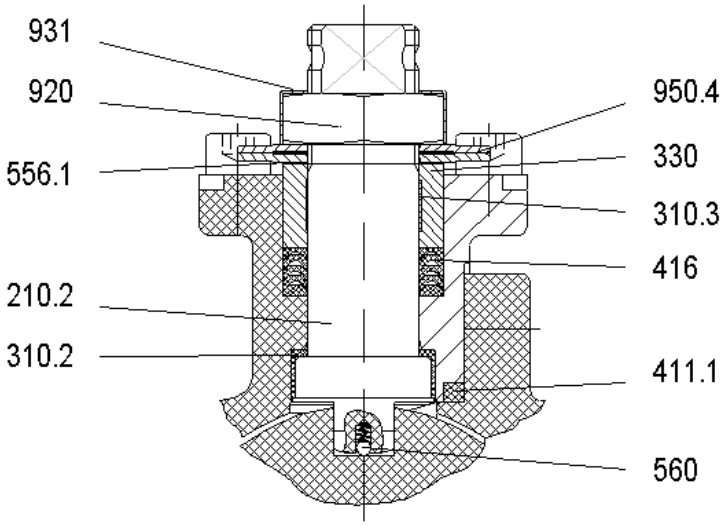
Stem sealing variants („TA-Luft2002“ approved)



Variante 1: cup seal (grafite free)

Table 1: materials (part 2)

Part no.	designation	material
210.2	Stem	1.4462
310.2	Lower stem bearing	pure TFM / PTFE + 25% glass
310.3	Upper stem bearing	1.4401 / PTFE
330	Bearing bracket	1.4404
411.1	jointring	Pure PTFE
416	Cup seal	Pure PTFE/ PTFE G25
556.1	Sliding disc	1.4401 / PTFE
560	Antistatic device	1.4310
920	nut	A2 – 70
931	Safety plate	1.4301
950.4	Disc spring	1.4310

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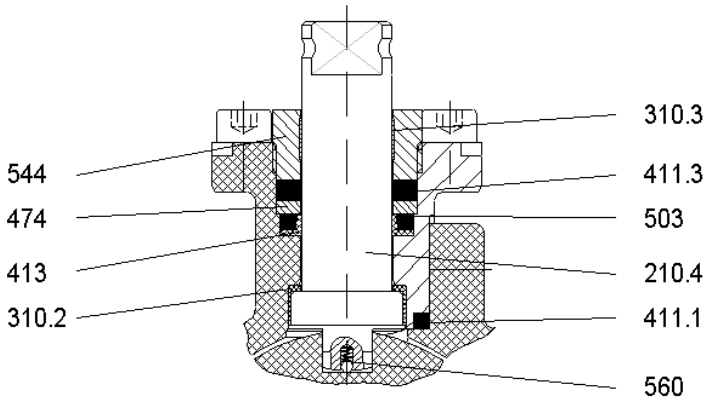
Fire-Safe-Variante („TA-Luft2002“ approved)

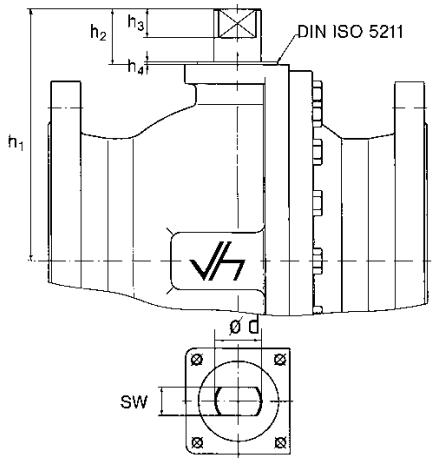


Variante 3: wedge ring sealing (fire-safe)

Table 1: materials(part 3)

Part no.	designation	material
210.4	stem	1.4462
310.2	Lower stem bearing	pure TFM / PTFE + 25% glass
310.3	Upper stem bearing	1.4401 / PTFE
411.1/.3	wedge ring	grafite
413	seal	pure PTFE / PTFE + 33% grafite
474	thrustring	1.4404
503	Wedge ring	graphite
544	Stuffing box screw	1.4404
560	Antistatic device	1.4310

Dimensions: connection flange



DN	h_1	h_2	h_3	h_4	ø d	SW	DIN ISO 5211
80	142,5	41	19	3	26	19	F 10
100	160	41	19	3	26	19	F 10
150	213	53	25	2	40	27	F 12
200	263	58	30	3	50	30	F 12

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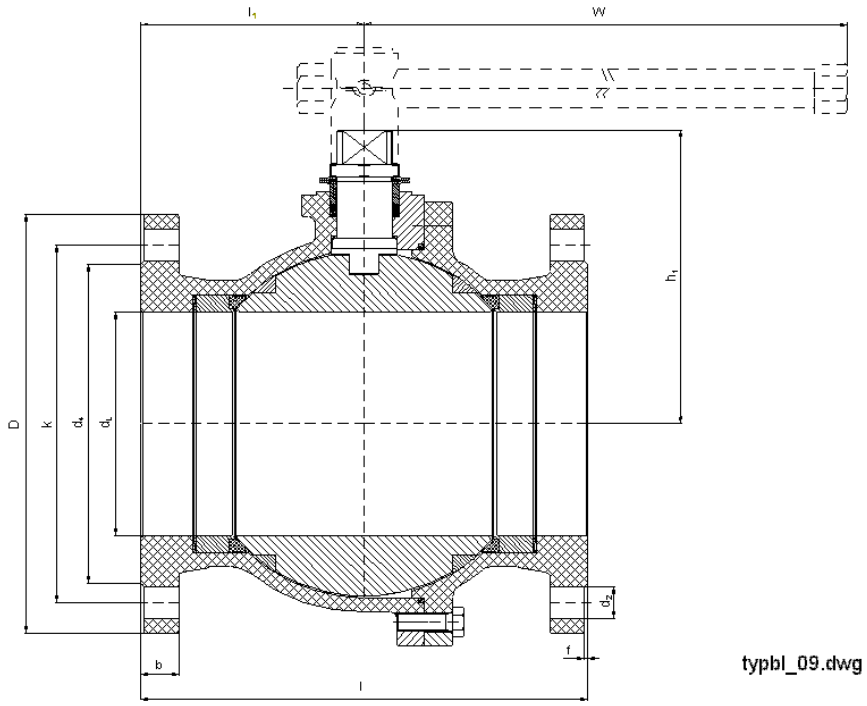

full bore ball valve with connectionflange acc. to DIN EN1092-1 form B1; face to face length row 27 acc.to EN 558-1 (F18 acc. to DIN 3202 part 1)

Table 3: dimensions, weight (pic. 3)

main dimensions														
Full bore														weight
PN	**DN**	**d_L**	**l**	**l_1**	**h**	**W**	**D**	**b**	**k**	**z**	**d_2**	**d_4 x f**	**ISO 5211**	**kg**
10	200	200	400	200	263	1000	340	24	295	8	22	268 x 3	F 12	135,0
16	80	77	180	83	142,5	500	200	24	160		18	138 x 3	F 10	23,0
	100	100	190	87	160	500	220	20	180		18	158 x 3		31,0
	150	150	350	124	213	700	300	28	250	12	26	218 x 3	F 12	79,0
	200	200	400	200	263	1000	340	24	295		22	268 x 3		141,0
25	200	200	400	200	263	1000	360	30	310		26	278 x 3		146,0
40	80	77	180	83	142,5	500	200	24	160	8	18	138 x 3	F 10	23,0
	100	100	190	87	160	500	235	24	190		22	162 x 3		32,5
	150	150	350	124	213	700	300	28	250	12	26	218 x 3	F 12	79,0
	200	200	400	200	263	1000	375	34	320		30	285 x 3		157,0

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connection

DIN flange		
nom. pressure	**connection**	**flange**
DN 80 -PN 40 DN 100 - PN 16, 40 DN 150 - PN 16, 40 DN 200 - PN 10,16, 25, 40	Flanged ends acc. to DIN EN 1092 part 1	acc. DIN EN 1092-1 Form B 1 [1]) $R_{a\ max}$: 12,5 µm $Rz_{\ max}$: 50 µm

Please note:
the ball valve can be installed in any position and irrespective of flow direction.

ball valves DN 150 and DN 200 should be equiped with gearbox

[1]) other connection features on request

technical data

flow characteristics – k_v (m³/h)

DN	80	100	150	200
k_v	930	1900	3500	6500

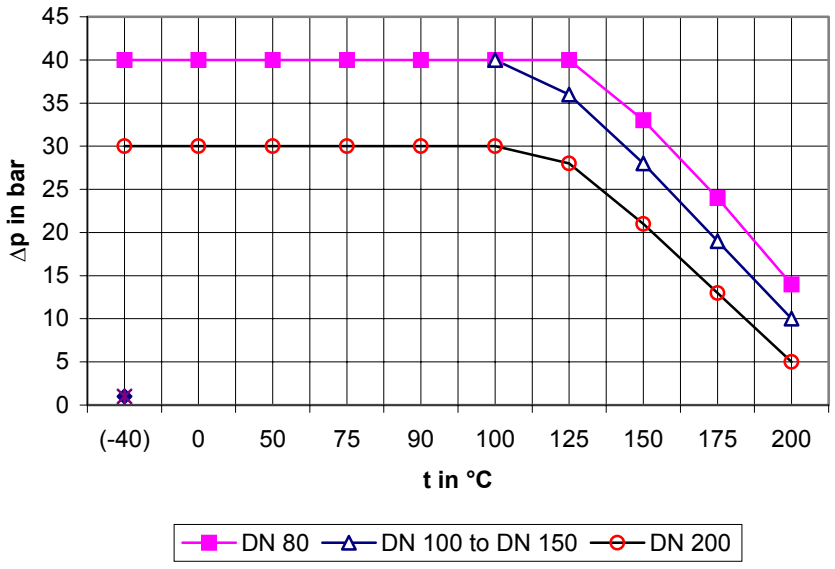
torque in Nm

Δ p bar	diameter			
	80	**100**	**150**	**200**
0	40	60	120	180
10	80	120	244	320
16	150	160	335	450
25	130	200	460	650
40	160	220	615	1010

Maximum torque [Nm]

DN	80	100	150	200
$M_{d\ max}$	430	430	1495	2620

Pressure-temperature rating for TOPI 210 VFD pure TFM, (minimum value [2])



[2]) for operating conditions above limit please contact VH Armaturen GmbH

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