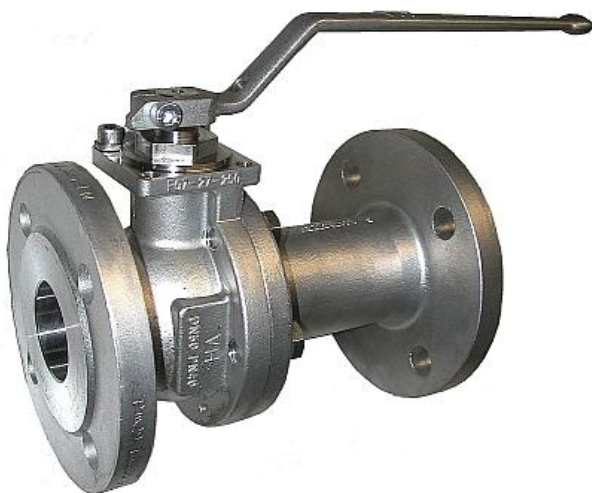




**ball valve
soft seated
maintenance-free
with floating ball**

Flanged ends

**PN 10 – 40
DN 15; 25; 40; 50; 80; 100;
(150)**

Type VFD

The sealing variants are approved in accordance with the German clear air regulations „TA-Luft 2021“

Fields of application

General industry, power plants, chemical, oil and petrochemical industry.
The chemical resistance of the hard metal coating of the ball and the metallic seat rings must be taken into account.

Operating data

Temperature range, depending on the operating pressure: -10°C to +300°C
Temperatures out of range?
Contact VH Armaturen GmbH

Design

Two-piece body, full bore
90° swivel fitting.
Lapped ball-seal combination.
Antistatic (as) – feature

**Pressure equipment directive
(PED) 2014/68/EU (category III)**
VdTÜV approval mark TÜV.A.217 (since 1994)
VdTÜV Armatur 100, VbF, Gas-HL-VO, WHG
TA-Luft 2021 certified (Version 2021 acc. to ISO15848-1)
Fire-Safe acc. to BS 6755-2 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: - 1.4571
 with hard metal coating
 made of chromium carbide
 (Ni/Cr) with additional
 coating in "Diamond like
 carbon" design (DLC layer).

sealings:
seatings - 1.4571
 With hard metal coating
 Made of chromium carbide –
 Ni/Cr

Ball and sealing rings
lapped.

other materials on request.

Order specification

Ball valve TOPI 210
Nominal diameter DN
Nominal pressure PN
Operating conditions
Flow media, temperature, pressure
Connection acc. to DIN EN
Identification number

additional testing i.e. DIN EN 12266-2/DIN 3230-5
on customers request

Bildbezeichnung: "AAB Z160142 0 – OB 2a"

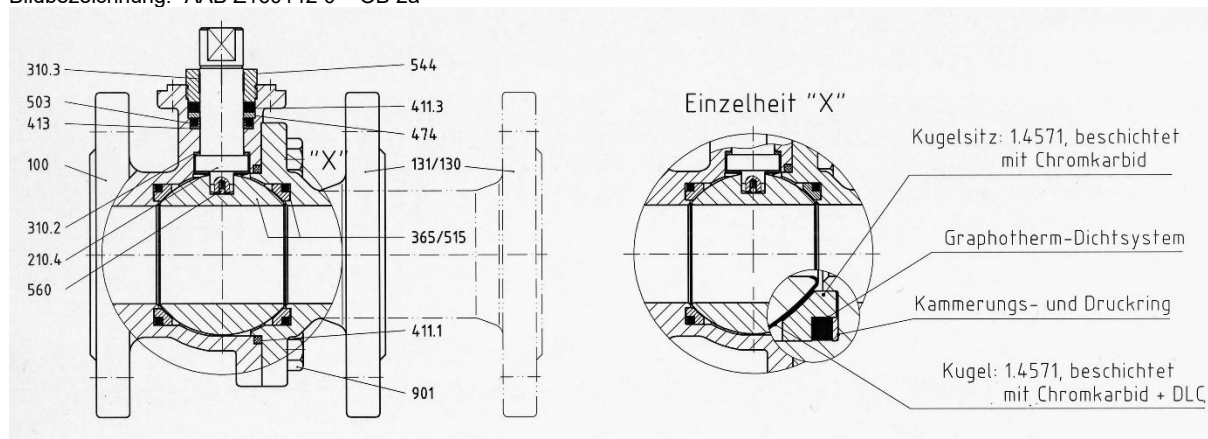
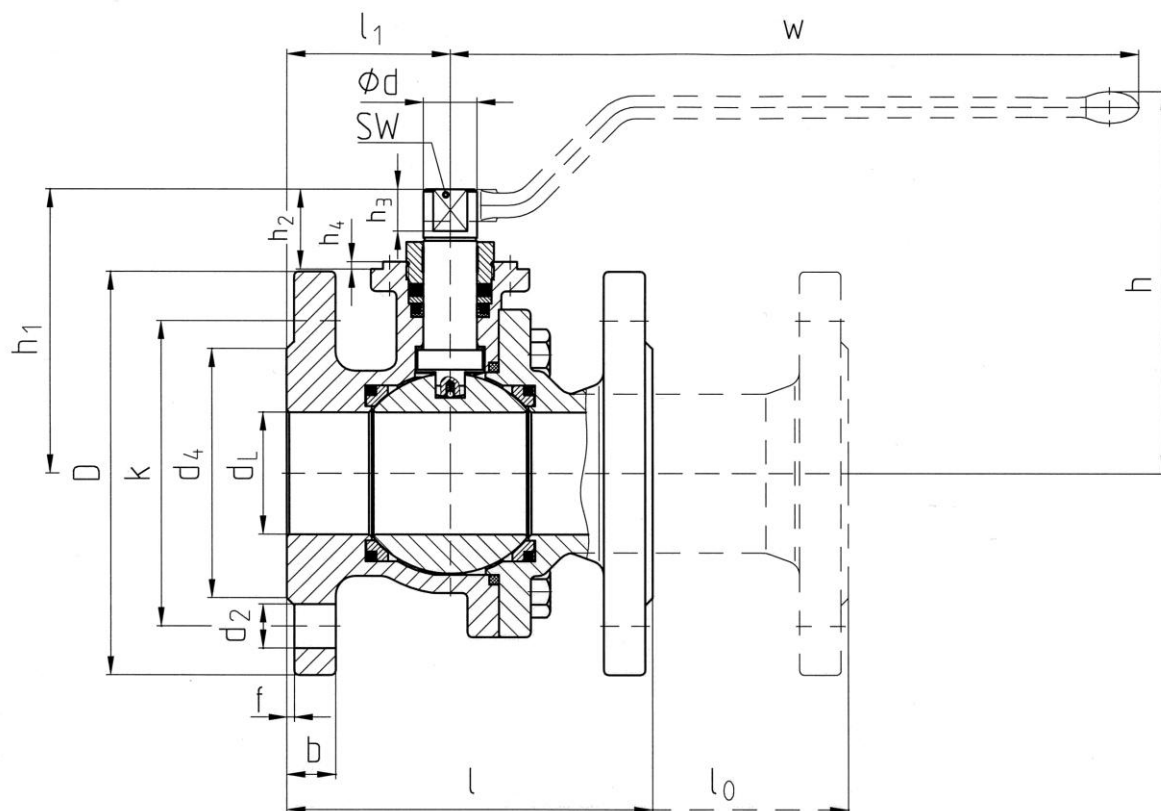


Bild 1: Kugelhahn mit vollem Durchgang

Table1: materials

Item no.	designation	material
100	Body	GP240GH+N (GS-C 25 N)1.0619 G-X5CrNiMo 19-11-2 1.4408
130/131	Body part – F17/F18	GP240GH+N (GS-C 25 N)1.0619 G-X5CrNiMo 19-11-2 1.4408
365	Ball	X6CrNiMoTi 17-12-2 1.4571, with Ni/Cr- + DLC-Coating
515	Seat ring	X6CrNiMoTi 17-12-2 1.4571, with Ni/Cr-Coating
411.1	Joint ring	Graphite
210.4	Stem	X2CrNiMoN 22-5-3 1.4462
310.2	Lower control shaft bearing	PEEK CF-30
413	Wedge-facing ring	PEEK CF-30
503	Wedge ring	Graphite
411.3	Joint ring	Graphite
474	Thrusting	X6CrNiMoTi 17-12-2 1.4571/1.4404
544	Stuffingbox screw	X6CrNiMoTi 17-12-2 1.4571
310.3	Upper control shaft bearing	1.4401/PTFE
560	Antistatic device	X6CrNiMoTi 17-12-2 1.4571
901	Hex. head bolt	A4 – 70



Picture 2: Ball valve with flanged connection according to DIN EN 1092-1, form B1; face-to-face dimensions: basic series 27 (short) and 28 (long) according to DIN EN 558-1

Table2: Dimensions and weights for ball valve with flange connection (Picture 2)

PN	DN	d _L	l F18	l ₀ F17	l ₁	h	h ₁	h ₂	h ₃	h ₄	Ød	SW	w	D	b	k	z	d ₂	d ₄ x f	ISO 5211	Gew. kg
16 to 40	15	15	115	130	52,5	108	55	20	9	2	12	9	210	95	16	65	4	14	45 x 2	F 05	2,6
	25	25	125	160	57,0	124	75	25	14		18	14		115	18	85			68 x 2		4,8
	40	40	140	200	64,5	151	108	32,5	17	3	22	17	282	150	20	110		18	88 x 3	F 07	8,6
	50	50	150	230	67,0	159	116							165		102 x 3			12,5		
40	80	77	180	310	83,0	139	139	37,5	19		26	19	500	200	24	160	8	22	138 x 3	F 10	24,0
	100	100	190	350	87,0	157	157							235		190			162 x 3		35,5
16	150	150	350	-	124,0	-	213	53	25		40	27	-	300	28	250		26	218 x 3	F 12	79,0
	100	100	190	350	87,0	157	157	37,5	19		26	19	500	220	20	180		18	158 x 3	F 10	32,8
	150	150	350	-	124,0	-	213	53	25		40	27	-	285	22	240		22	212 x 3	F 12	76,0

The hand levers of the DN80, DN100 and DN150 are not cranked.

Connection types

DIN flange		
nom. pressure	Connection	Shapes of the sealing surfaces
PN 10/16 PN 40	Flanged ends acc. to DIN EN 1092 part 1	acc. DIN EN 1092-1 Form B 1 ¹⁾ Ra max: 12,5 µm Rz max: 50 µm

¹⁾ other connection features on request

Please note:

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

technical data

flow characteristics – k_v (m³/h)

DN	15	25	40	50	65	80	100	150
k_v	12	60	175	360	620	930	1900	3500

Torque in Nm

	Nominal diameter						
Δp bar	15	25	40	50	80	100	150
16	12	52	62	95	160	360	640

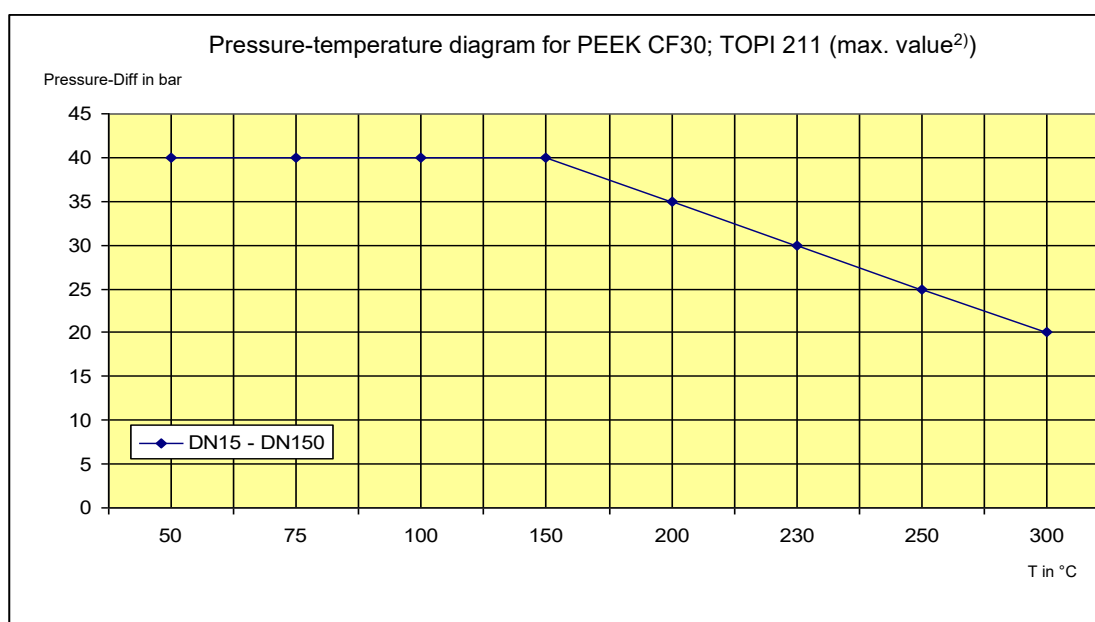
If the operating conditions deviate from the specified operating conditions, consultation with the manufacturer is required.

Max. torque stem in Nm

DN	15	25	40	50	65	80	100	150
$M_{d \max}$	30	336	600	600	600	1000	1000	3500

Max. allowed torque for the Stem

DN	15	25	40	50	80	100	150
$M_{d \max}$ Nm	50	336	600	600	1000	1000	3500



²⁾ Maximum temperature load of PEEK CF-30 components during continuous operation: 260 °C; 300 °C for short periods! Operating conditions exceeding the pressure-temperature limit are not permitted!