

### Fields of application

General industry, power plants, chemical, oil, petrochemical industry and related industries.

### Operating data

Temperature range, depending on the operating pressure: -30°C to +200°C: 1.4571(not suitable for use as shut-off valve)

For temperatures < -30°C please contact with VH Armaturen GmbH.  
open-close valve

### Design

Six-piece body, full bore,  
90° swivel fitting (L-bore),  
90°-180° swivel fitting (T-bore).

Encapsulated seat rings

ANTI STATIC (as) - feature

**TA-Luft 2021 certified** (version 2021 according to ISO15848-1)

**Optional Fire-Safe according to BS 67 55 Part 2 and ISO 10497.**

### Materials [acc. to DIN EN (DIN)]

body: - 1.4571/1.4404  
other materials on request

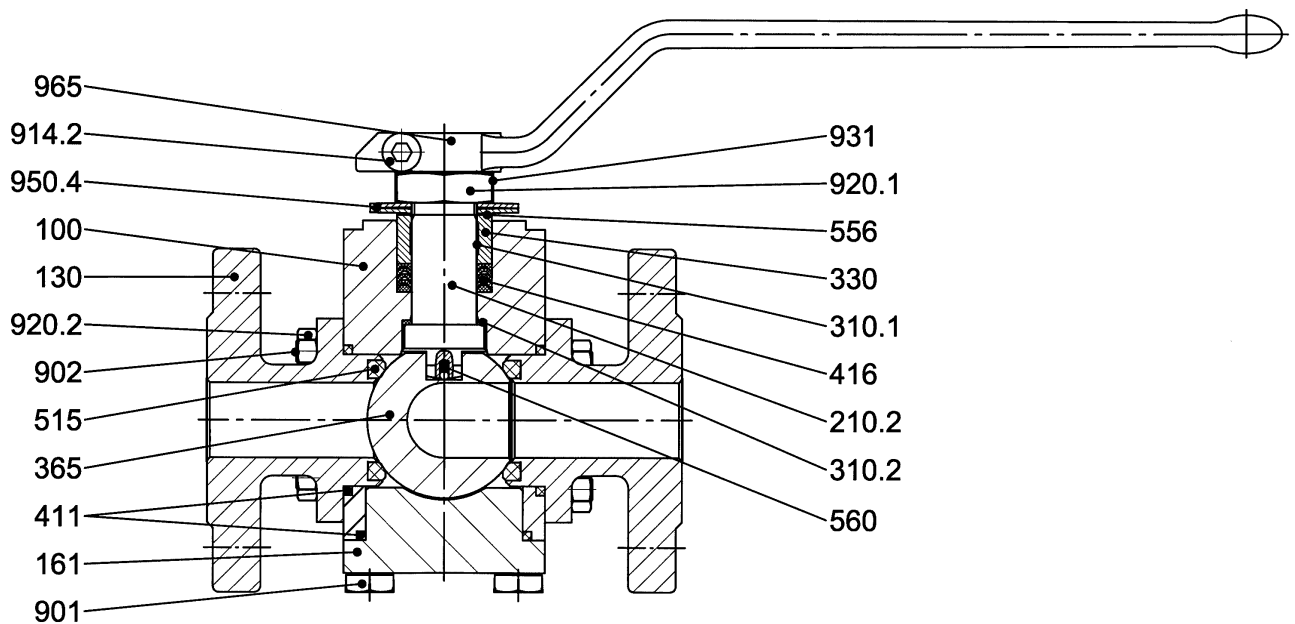
ball: - 1.4404/08  
- 1.4571  
other materials on request

sealings:  
seatrings - pure TFM  
other sealing materials on request

### Order specification

Ball valve Topi 310  
Nominal diameter DN  
Nominal pressure PN  
Operating conditions  
Flow media, temperature, pressure  
Connection acc. to DIN EN  
Identification number  
Ball bore "L" or "T"  
Switching position

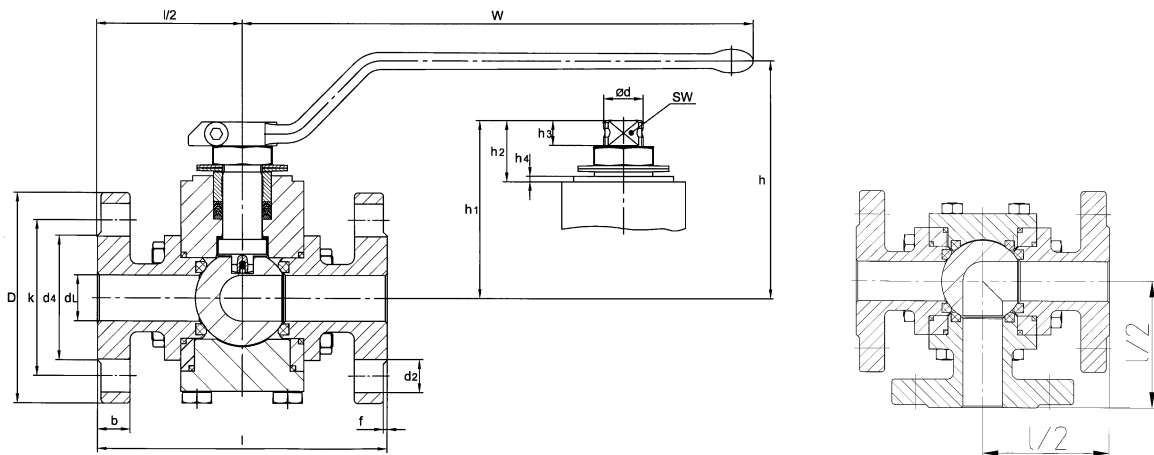
Special designs such as 4 or 5 outlets and special materials on request.



Picture 1: 3-way ball valve L-port with full bore (shift shaft seal V1)

Table 1: materials

DN	Item no.	designation	material	
15	100	Body		
25	130	Body part	X 6 CrNiMoTi 17 12 2	1.4571
40	161	Bottom cover	X 2 CrNiMo 17 12 2	1.4404
50	161.1	Back cover		
80	210.2	Stem	X 2 CrNiMoN 22 5 3	1.4462
100	310.1	Upper controlshaft bearing	1.4401 / PTFE	
150	310.2	Lower controlshaft bearing	pure TFM	
	330	Bearing bracket	X 2 CrNiMo 17 12 2	1.4404
	365	Ball	X 2 CrNiMo 17 12 2	1.4404/08
			X6 CrNiMoTi 17 12 2	1.4571
	411	Joint ring	pure PTFE	
	416	Cup seal	pure PTFE (PTFE G25)	
	515	Seat ring	pure TFM (standard)	
	556	Sliding disc	1.4401 / PTFE	
	560	antistatic device	1.4571	
	901	Hex. head bolt	A 4-70	
	902	Stud bolt		
	914.2	Hex. socket bolt	A 2-70	
	920.1/2	Nut	A 2 / A 4	
	931	Safety plate		1.4301
	950.4	Disc spring		1.4310
	965	Handle	1.4308	



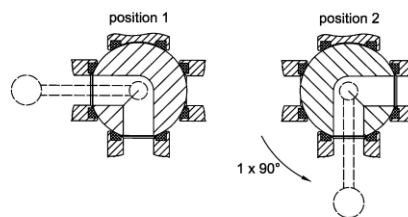
Picture 2: 3-way ball valve L-port with full bore and connection flange acc. to DIN EN 1092-1 Form B1; face to face length row 28 acc. to DIN EN 588-1 (F17 according to DIN 3202 Part 1)

Table 2: Dimensions and weights for ball valves Topi 310 (pic.2)

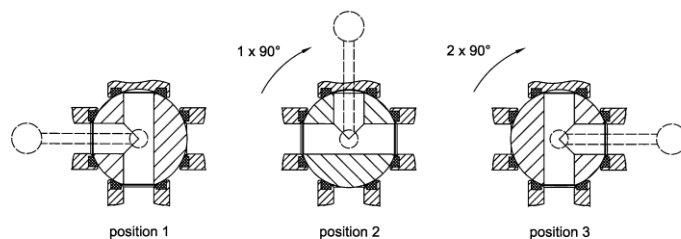
Main dimensions																		weight		
DN	PN	d <sub>L</sub>	l	l/2	h	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	ød	SW	W	D	b	k	z	d <sub>2</sub>	d <sub>4</sub> x f	ISO 5211	kg
15	40	15	130	65	104	58	22,5	9	2	12	9	210	93	15	65	4	14	45 x 2	F05	
25	40	25	160	80	133	111	36	17	3	22	17	282	115	18	85	4	14	68 x 2	F07	9,8
40	40	40	206	103	147	117	37	17,5	3	22	17	282	150	18	110	4	18	88 x 3	F07	
50	40	50	230	115	156	142	41	19	3	26	19	500	165	20	125	4	18	102 x 3	F10	28,0
80	40	80	310	155	175	160	41	19	3	26	19	500	200	24	160	8	18	138 x 3	F10	64,0
100	16	100	350	175	246	176	53	25	3	40	27	700	220	20	180	8	22	153 x 3	F12	94,2
	235												24	190	8	22	162 x 3	F12	99,5	
150 *)	16	150	480	240									285	22	240	8	22	212 x 3	F12	

\*) = reduced bore to Ø100 mm

Ball with L-port



Ball with T-port



## connection

DIN flange		
nom. pressure	Anschlussmaße	shapes of the sealing surfaces
PN 10/16 PN 40	nach DIN EN 1092-1	acc. to DIN EN 1092-1 Form B1 <sup>1)</sup>  Ra max: 12,5 µm Rz max: 50 µm

### Please note:

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

<sup>1)</sup> Standard

## technical data

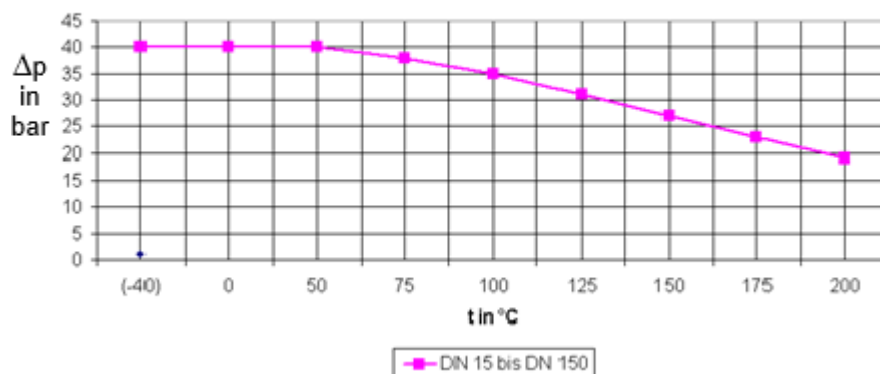
### Torque in Nm

Δ p bar	Nominal diameter							
	15	25	40	50	65	80	100	150
0	6	25	30	35	35	80	130	130
10	8	32	40	50	50	105	170	170
16	9	35	45	63	63	138	221	221
25	10	38	58	85	85	180	287	287
40	12	48	88	115	115	230	430	430

### Max. torque in Nm for the selector shaft

DN	15	25	40	50	65	80	100	150
M <sub>d</sub> max	50	600	600	1000	1000	1500	3500	3500

Pressure-temperature rating for pure TFM TOPI 310



For operating conditions above the pressure-temperature limit, please contact VH-Armaturen GmbH