

## Fig 450 Stainless Steel Ball Valve PN16/25



### Application

This ball valve is a shut-off and control valve that seals tightly in both flow directions.

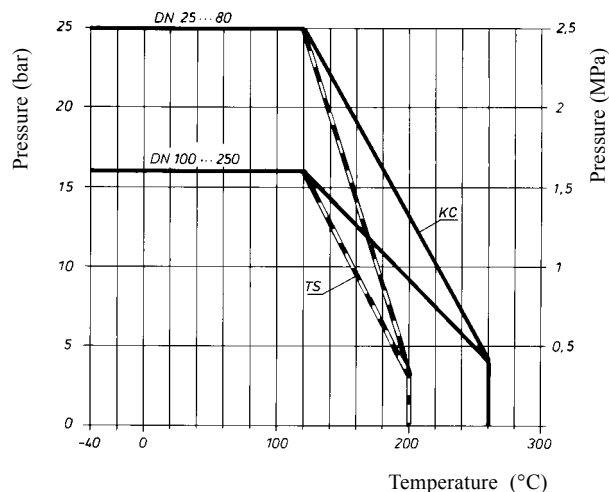
It is used, for instance in

- industrial and ship's pipework
- oil pipelines

**Nominal pressure**      PN 25      DN 25 ... 80  
    PN 16      DN 100 ... 250

**Operating temperature**    **KC**      **TC**  
    max +260 °C    +200 °C  
    min -40 °C      -40 °C

### Pressure/ temperature graph



### Design

The fig 450 is a full bore valve of floating ball design manufactured in 316 stainless steel with a two piece body, the stem design is blow out proof with self adjusting gland packing, seats are available in virgin PTFE or stellite (used in conjunction with a hard chromed ball).

The valve can be equipped with

- a drain plug
- an actuator
- Fire-safe construction BS 6755 (**452KC**\_\_)
- ANSI 150 flanges

### Face to face lengths

DN 25...100 according to DIN 3202 F4 = ISO 5752 series 14

DN 125...250 according to DIN 3202 F5 = ISO 5752 series 15

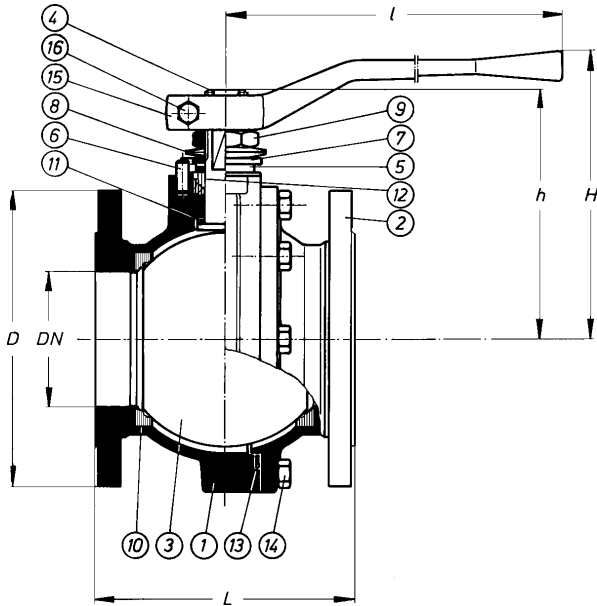
**Flange drillings** according to DIN 2501 PN 16

**Nominal sizes** DN 25 ... 250

Conform with the requirements of the Council Directive 97/23/EC on Pressure Equipment, marking: **CE**<sub>0434</sub>

Code number		Seat
<b>450KC</b> __	with manual lever	<b>Stellite</b>
<b>450KC</b> __ <b>Z</b>	with bare shaft	<b>Stellite</b>
<b>450KC</b> __ <b>M</b>	with gear	<b>Stellite</b>
<b>450TS</b> __	with manual lever	<b>PTFE</b>
<b>450TS</b> __ <b>Z</b>	with bare shaft	<b>PTFE</b>
<b>450TS</b> __ <b>M</b>	with gear	<b>PTFE</b>

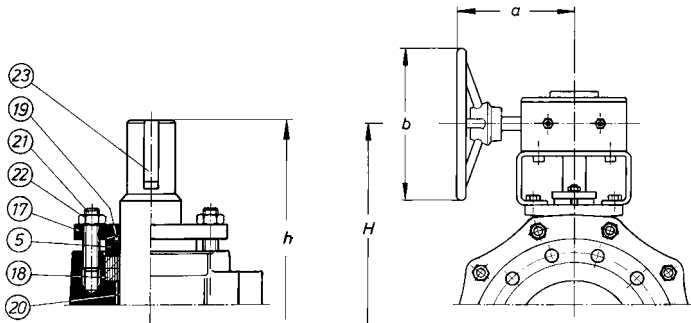
## Fig 450 Stainless Steel Ball Valve



### Parts

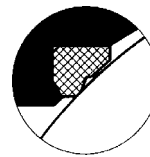
1. Body	CF-8M
2. Body flange	CF-8M
3. Ball	W:no 4401 (AISI 316)
4. Stem	W:no 4401 (AISI 316)
5. Spacer ring	W:no 4401 (AISI 316)
6. Retaining pin	W:no 4401 (AISI 316)
7. Retaining disc	W:no 4401 (AISI 316)
8. Cup spring	W:no 4401 (AISI 316)
9. Hexagonal nut	W:no 4401 (AISI 316)
10. Ball seat	PTFE or AISI 316 STELLITED
11. Counterplate	PTFE
12. Packing (DN25 ...150)	PTFE
13. Body gasket	PTFE
14. Bolt	W:no 4401 (AISI 316)
15. Hand lever	DN 25... 65 AISI 316 DN 80 ...150 GRP 400
16. Hexagonal screw and nut	Fe (8.8)
17. Gland	W:no 4401 (AISI 316)
18. Packing (DN200 ...250)	Graphite
19. O-ring	EPDM
20. Bearing	Pampus
21. Stud bolt	AISI 316
22. Hexagonal nut	W:no 4401 (AISI316)
23. Key	Fe

Ball (part 3) hard chromed with stellite seat.

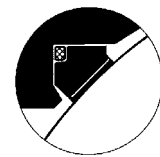


DN 200 ... 250

### Seat alternatives



**PTFE**  
**450TS**

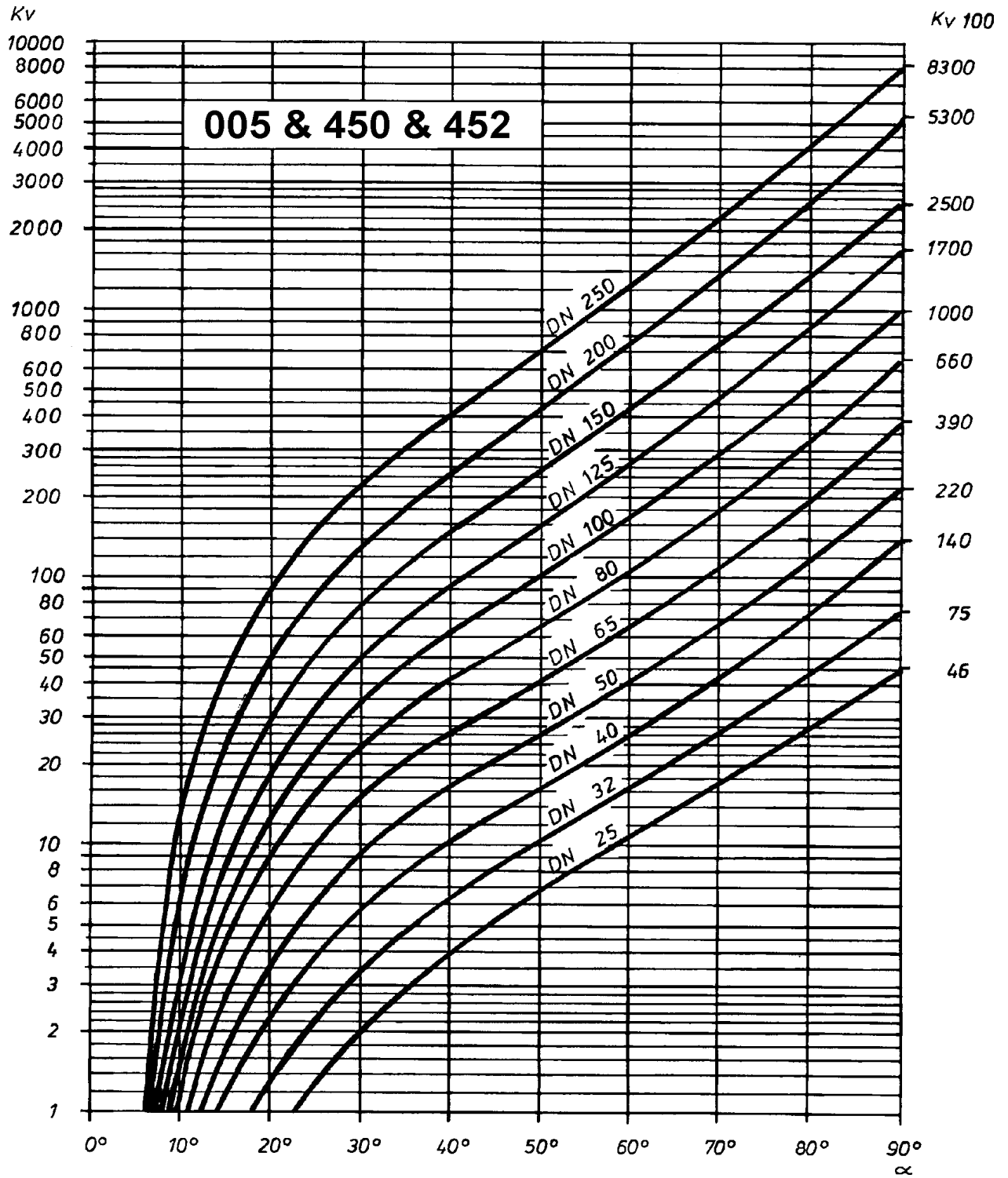


**Stellite**  
**450KC**

### Dimensions

DN	PN	$\xi$ -drag coeff.	$K_{v100}$	L	D	h	H	l	a	b	Weight kg
25	25	0,3	46	125	115	78	90	140	-	-	5
32	25	0,3	75	130	140	93	115	180	-	-	7
40	25	0,2	140	140	150	99	122	180	-	-	9
50	25	0,2	220	150	165	122	157	250	-	-	11
65	25	0,2	390	170	185	133	168	250	-	-	14
80	25	0,2	660	180	200	171	215	400	-	-	20
100	16	0,2	1000	190	220	184	228	400	-	-	24
125	16	0,1	1700	325	250	236	269	600	-	-	50
150	16	0,1	2500	350	285	254	287	600	-	-	59
200	16	0,1	5300	400	340	400	370	-	362	457	140
250	16	0,1	8300	450	405	436	405	-	362	457	177

## Regulation curves



**WATER:**

**Volume flow:**

$$Q = K_v \sqrt{\frac{\Delta p}{\rho}}$$

**Flow velocity:**

$$v = 354 \frac{Q}{DN^2}$$

- $K_v$  = kv-value — Capacity factors
- $DN$  = nominal valve size (mm)
- $\alpha$  = disc opening angle
- $Q$  = volume flow  $m^3/h$
- $\Delta p$  = pressure difference bar
- $\rho$  = density of liquid  $kg/dm^3$
- $v$  = flow velocity  $m/s$