

## WAFER PATTERN V-PORT BALL VALVE stainless steel

### 465 series



## Description

Edition 24-05-2016

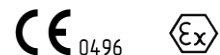
Högfors ball sector valve series 465 is specially designed for control applications of various medium like liquids, pulps and steam.

465KC is used for sticky and crystallizing mediums, because of cleaning function of metal seat for both control and on/off applications where std PTFE seated valves do not last. If the medium contains solid particles, the geometry of metal seat and segment will warranty better function as std. valves.

These valves are tight to one direction which is shown by an arrow according to EN 12266-1.

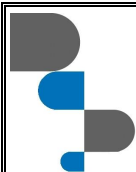
The wafer pattern ball sector valve is a reduced bore valve manufactured in stainless steel throughout with a hard chromed ball sector and Stellite or PTFE seat. The V-port gives an excellent control characteristic which is intermediate between linear and equal percentage. The shaft packing box has tightable graphite seals.

Nominal dimensions:	DN 25 – 200	
Nominal pressure	PN 63 DN 25 - 200	
Pressure difference ( $\Delta P$ )	16 bar	63 / 40 / 25 / 16 bar
Ball seal alternatives	Stellite (KC)	PTFE (TC)
Tightness class ISO 5208, EN 12266-1	RATE D	RATE A
* Working temperature of liquid media	+260°C -40°C	+200°C -40°C
Connection	Connection between flanges EN1092-1, Facing Type B. ANSI B 16.5	
Safety	<p>Conform to the requirements of the Council Directive 97/23/EC on Pressure Equipment, marking: Class: gas, group 1.</p> <p>Explosion-proof design is available as per special order. Marking in accordance to ATEX Directive 94/9/EC: group II 2 GD, protection concept of non-electrical components: c T6.</p>	

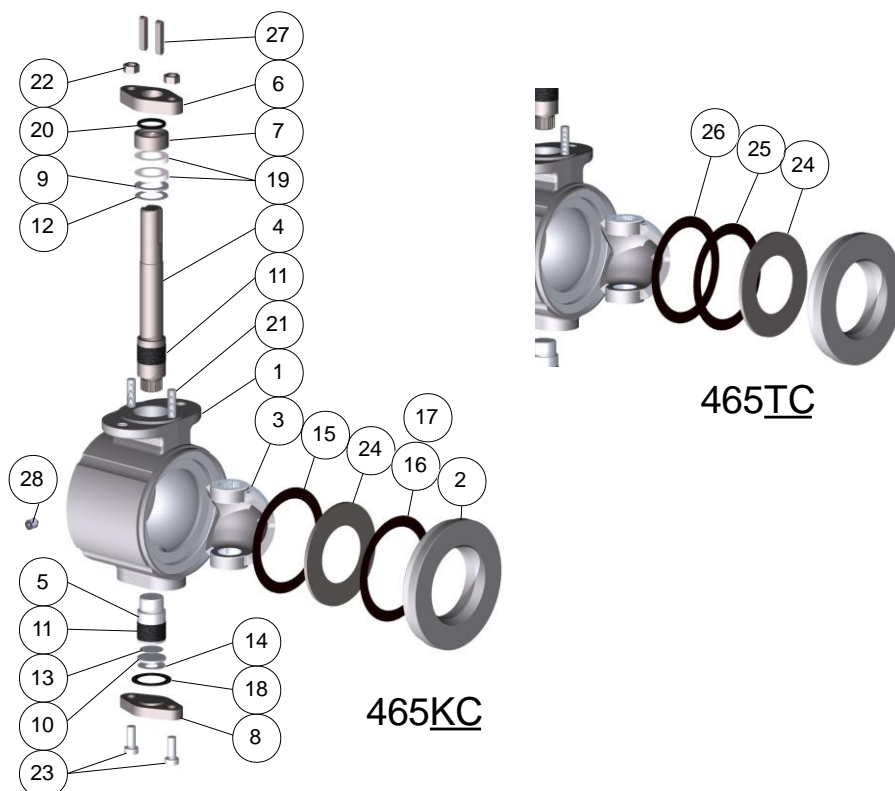


\*) The max pressure difference depends on the working temperature.

Consult factory for details.

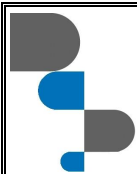


## Exploded view

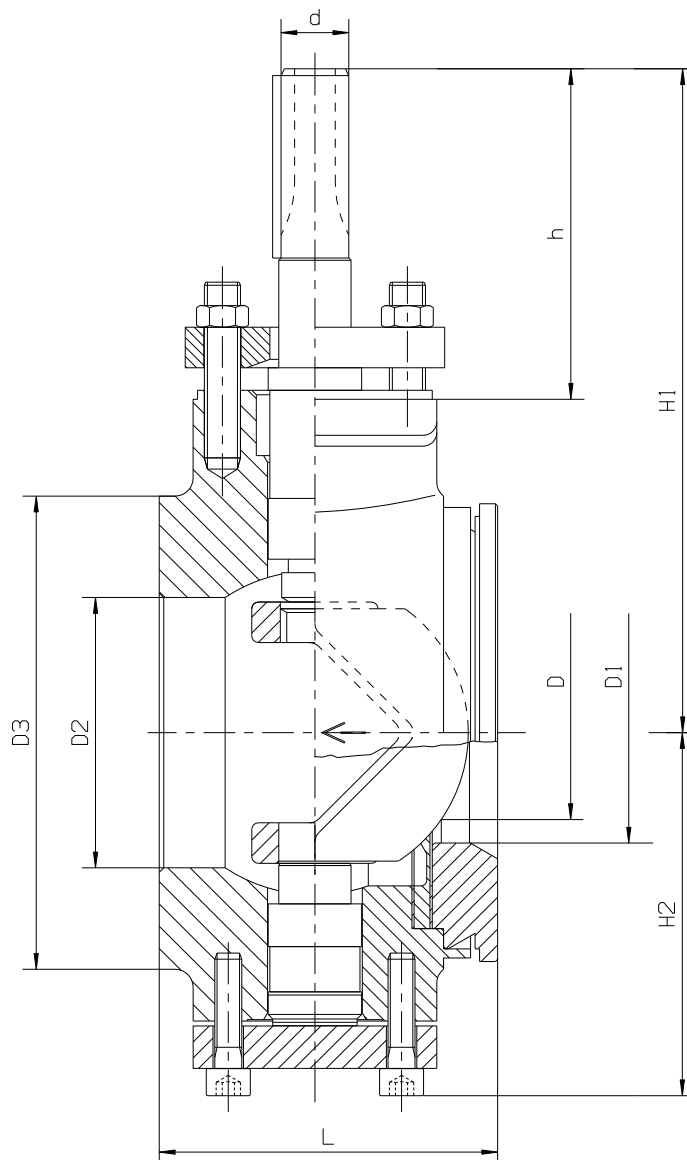


## Parts list and standard materials

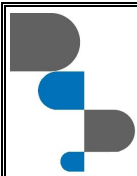
Part	Material	
1	Body	Stainless steel ASTM A351 CF8M / 1.4462
2	End piece	Stainless steel ASTM A351 CF8M / 1.4462
3	V-ball	Stainless steel ASTM A351 CF8M
4	Stem	Stainless steel 1.4418
5	Subshaft	Stainless steel 1.4418
6	Gland	Stainless steel 1.4404
7	Spacer ring	Stainless steel 1.4404
8	Subshaft cover	Stainless steel 1.4404
9	Thrust bearing ring	Stainless steel 1.4404
10	Thrust bearing plate	Stainless steel 1.4404
11	Shaft bearing	PTFE on stainless steel net ("Pampus")
12	Upper thrust bearing	PTFE on stainless steel net ("Pampus")
13	Lower thrust bearing	PTFE on stainless steel net ("Pampus")
14	Cup spring	Stainless steel 1.4404
15, 16, 17	Shim	Carbon Fibre SFS5811/ Graphite
18	Subshaft cover packing	Carbon Fibre SFS5811/ Graphite
19	Packing	Graphite
20	O-ring	EPDM or FPM
21, 22	Bolt or stud and nut	Stainless steel ISO 3506 A4-80
23	Hexagonal socket screw	Stainless steel ISO 3506 A4-80
24	T-seat	PTFE
24	K-seat	Stellite
25	Support ring	Stainless steel 1.4404
26	Shim	Carbon Fibre SFS5811/ Graphite
27	Key	Carbon steel
28	Screw (for version with screw)	Stainless steel A4 DIN914



Dimensions: 465 series valve



DN	L	D	D1	D2	D3	d	h	H1	H2
25	50	20	25	30	65	11	85	143	58
32	55	27	32	36	75	11	85	143	65
40	60	35	40	48	90	15	95	165	79
50	75	45	49	60	105	15	95	169	83
65	100	53	65	73	123	20	110	195	87
80	100	72	77	87	140	20	110	213	97
100	115	89	96	112	160	25	115	233	126
150	160	112	118	162	216	25	115	263	135
200	200	167	170	213	273	30	150	342	194



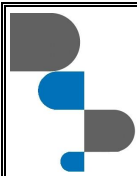
## Operation

Högfors valves can be equipped with an actuator to your specification.

- bare shaft,
- hand lever,
- manual gear,
- electric actuator,
- pneumatic or hydraulic actuator.

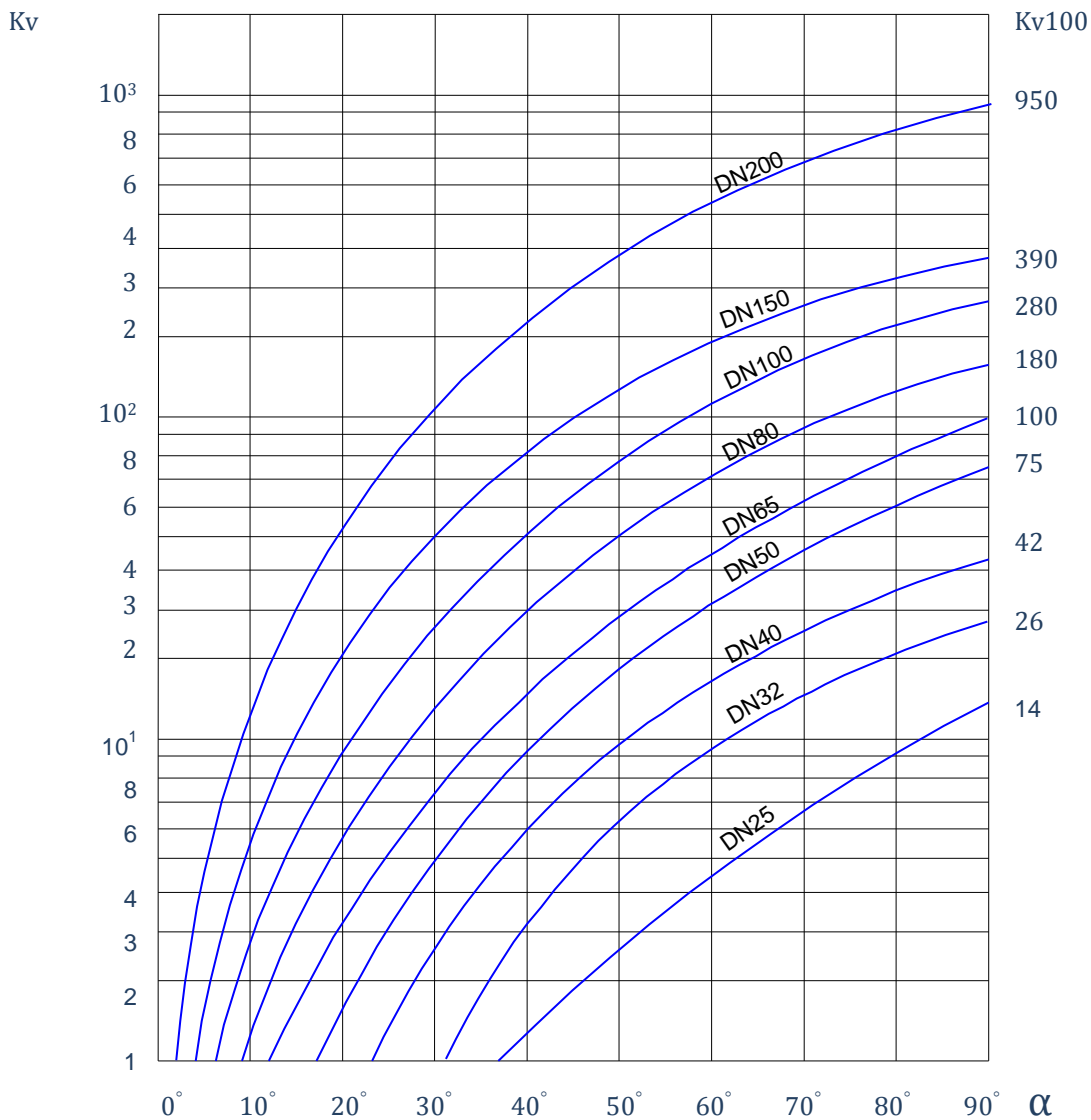
## How to order

		4	65	01	T	C	200	M
Body material:	4 – Stainless steel							
Valve type:	65 – ball sector valve wafer pattern							
Special options:	_ _ – standard							
Ball seal	(K) - Stellite, (T) - PTFE							
Ball surface treatment	C – hard chrome							
Size DN								
Operation:	( _ ) - handlever, (Z) - bare shaft, (M) - manual gear							



### Flow curves

Indicating typical Kv values.



**WATER:**

**Volume flow:**

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

**Flow velocity:**

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

$K_v$  = KV value – Capacity factor

DN = nominal valve size, mm

$\alpha$  = disc opening angle

$\Delta p$  = pressure difference, bar

$\rho$  = density of liquid, kg/dm<sup>3</sup>

V = flow velocity, m/s

Q = volume flow, m<sup>3</sup>/h