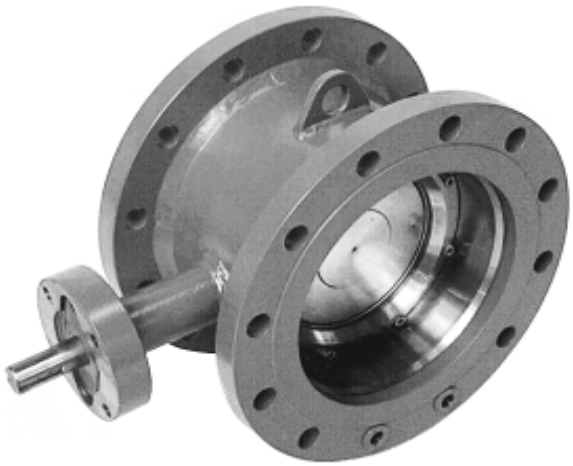
SENTO OY HÖGFORS
P.O.BOX 13, FIN-24101 SALO, FINLAND
TEL + 358 2 727 7200
FAX + 358 2 727 7201
Business ID 0518420-8

HÖGFORS

31500

05.12.2001

Butterfly valve with flanges of carbon steel PN 25

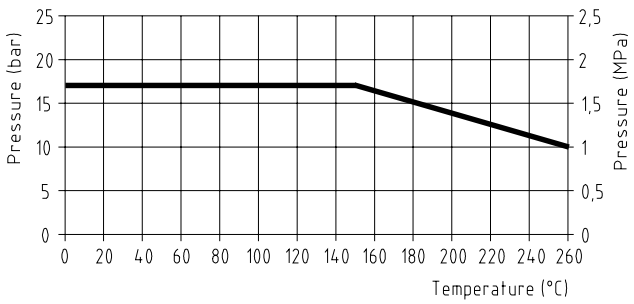


Operation

The butterfly valve with flanges is intended amongst others for district heating- and water pipes as a stop- and control valve.

Nominal pressure	25 bar	
Closing pressure difference	max	16 bar
Operating temperature	max	+260 °C
	min	0 °C

Maximum closing pressure difference depends on the working temperature



Design

Carbon steel butterfly valve is furnished with flanges.
The double eccentric disk of stainless steel is rigidly mounted to the shafts with tangential conical locking pins.
The seat of the valve in the body is replaceable.
The shaft packing box is a combination of graphite rings and O-rings, maintenance free - but also possible to tighten.
The construction allows direct mounting of actuator with ISO standard flange.

Options

- gear and handwheel as standard
- electric, pneumatic or hydraulic actuator to customer specification

Nominal sizes DN 200 ... 800

Conform with the requirements of the Council Directive 97/23/EC on Pressure Equipement, marking: CE 0434

Code number:	**31500CS_ _ _Z**	with bare shaft
	31500CS_ _ _M	with gear

For steam on special order. Code number: 31501CS

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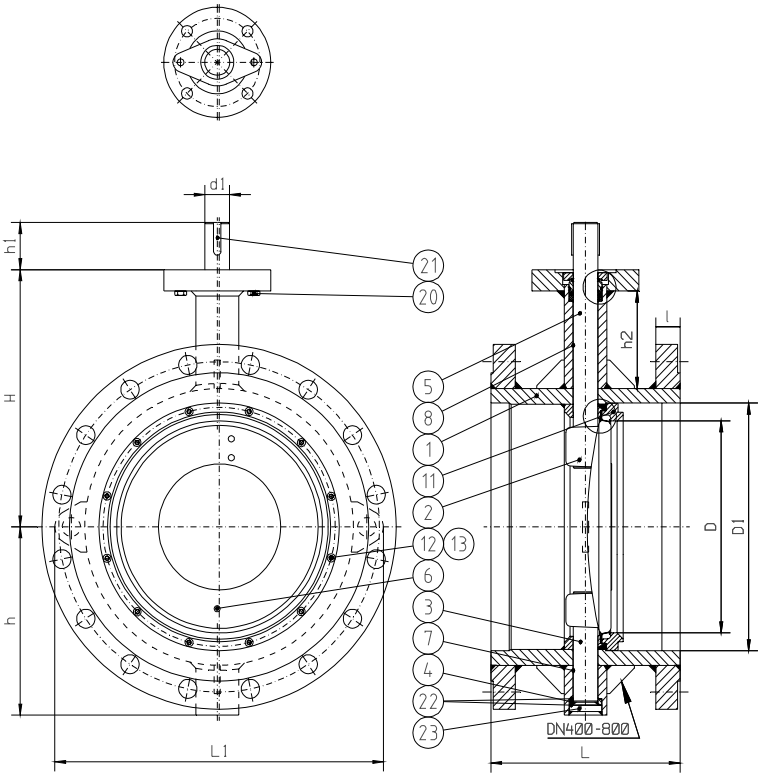
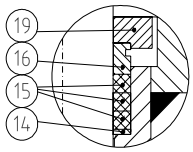
Butterfly valve with flanges



Parts

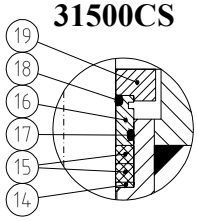
1.	Body	H II
2.	Disc	W:no 4408
3.	Subshaft	W:no 4460
4.	Subshaft cover	W:no 4401
5.	Main shaft	W:no 4460
6.	Conical pin	W:no 4460
7.	Subshaft bearing	PTFE+AISI316
8.	Main shaft bearing	PTFE+AISI316
9.	Shim (31500CS)	SFS5811 carbon fibre
	(31501CS)	Graphite
10.	Seat ring	AISI316
11.	Retaining ring	St 37.0
12.	Socket screw	Stainless steel
13.	Washer	Stainless steel
14.	Back-up-ring	AISI316L
15.	Box packing	Graphite
16.	Shaft seal bushing	Wn:o 4401
17.	O-Ring	EPDM
18.	O-Ring	EPDM
19.	Gland	AISI316L
20.	Hexagonal screw	
21.	Key	St
22.	Bearing disc	PTFE+AISI316
23.	Subshaft cover	St 37.0
24.	Shim (31500CS)	SFS5811 carbon fibre
	(31501CS)	Graphite

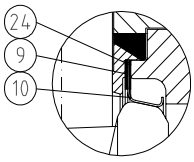
31501CS



Graphite-and O-ring packing

31500CS





Replaceable seat ring

Dimensions

DN	L	D	D1	l	h	H	h1	d1	h2	L1	Flange ISO5211
200	230	137,5	210,1	30	154	259	58	25	115	233	F10
250	250	187	263,0	32	193	298	63	30	125	385	F12
300	270	238	312,7	34	229	323	69	35	125	435	F12
350	290	286	344,4	38	255	352	75	40	125	465	F14
400	310	337	393,8	40	300	409	75	40	155	540	F14
450	330	386	444,4	42	326	445	86	50	163	590	F16
500	350	437	495,4	44	351	470	86	50	163	660	F16
600	390	483	593,6	46	376	548	103	60	186	760	F16
700	430	582	693,6	46	440	601	119	70	186	860	F25
800	470	682	795,2	47	490	651	119	70	187	955	F30

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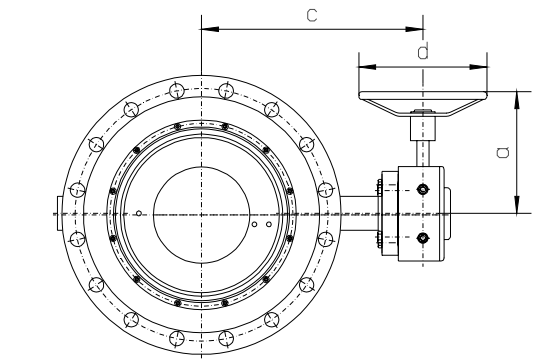
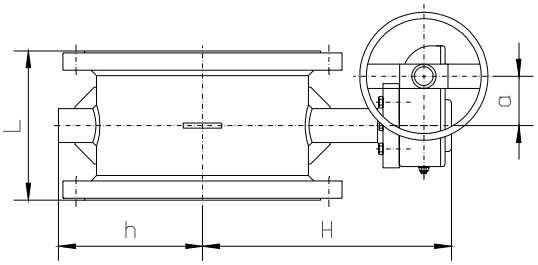
Butterfly valves
Actuators





Butterfly valves are supplied with following actuator options:

- gear and handwheel
- electric
- pneumatic
- hydraulic

Manual gear

The valves are supplied with gearbox and handwheel. The disc position is shown by a mechanical indicator on the actuator.

Dimensions

DN	H	h	L	a	b	c	d	Weight*) kg
200	340	154	230	202	67	301	203	71
250	379	193	250	247	67	340	305	87
300	417	229	270	264	90	373	305	109
350	446	255	290	264	90	402	305	158
400	503	300	310	264	90	459	305	194
450	551	326	330	362	123	495	457	268
500	576	351	350	362	123	520	457	326
600	675	376	390	387	154	598	457	505
700	761	440	430	505	181	687	457	628
800	811	490	470	505	181	737	457	758

*) With manual gear

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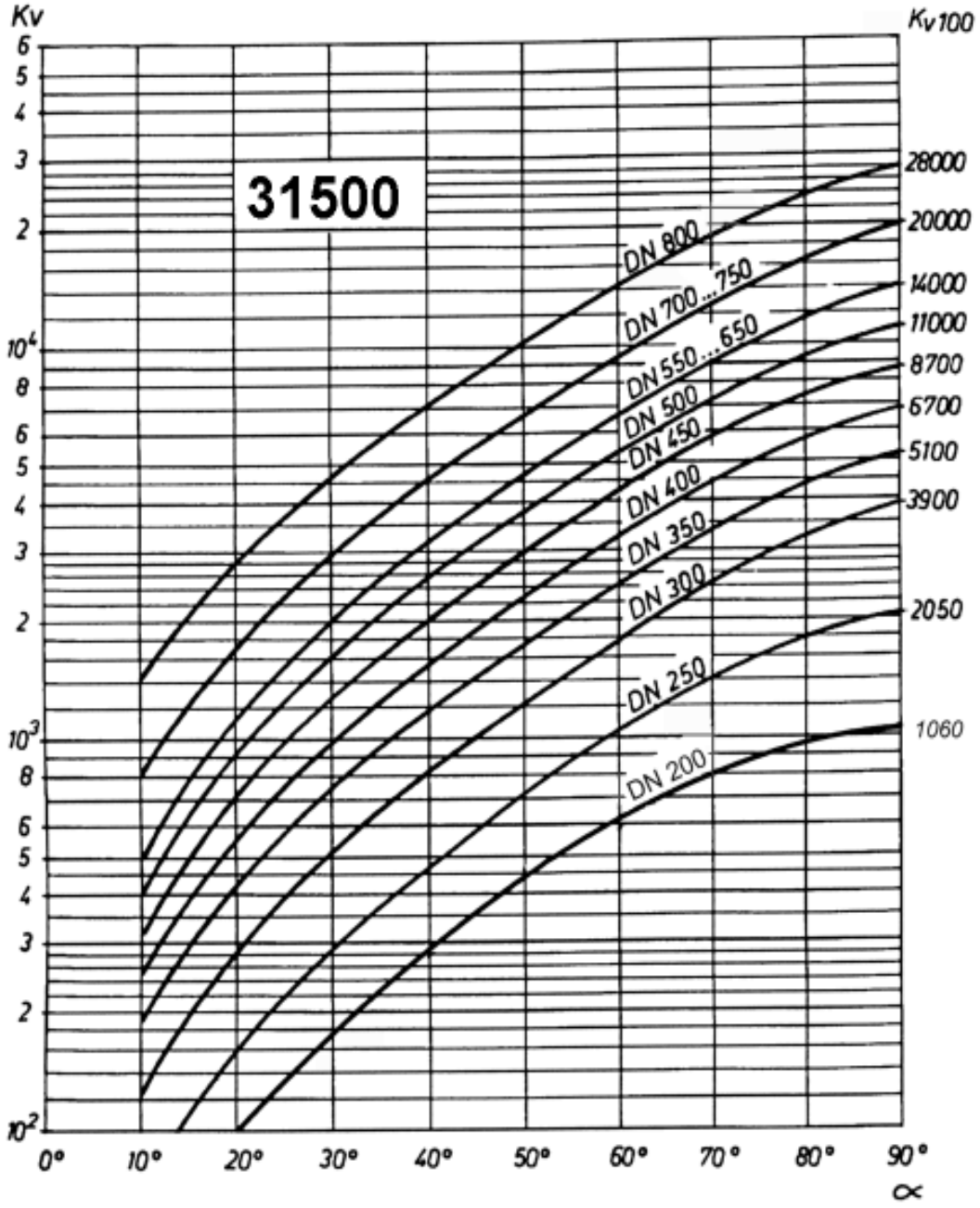
Regulating curves

The diagram presents the Kv-values of butterfly valves
- the capacity factors for different disc positions



WATER:

Volume flow:

$$Q = K_V \sqrt{\frac{\Delta p}{\varrho}}$$

Flow velocity:

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

K_V	=	kv-value — Capacity factors
DN	=	nominal valve size (mm)
∝	=	disc opening angle
Q	=	volume flow m³/h
Δp	=	pressure difference bar
ϱ	=	density of liquid kg/dm³
v	=	flow velocity m/s