

## Butterfly valve with weld ends of carbon steel PN 25

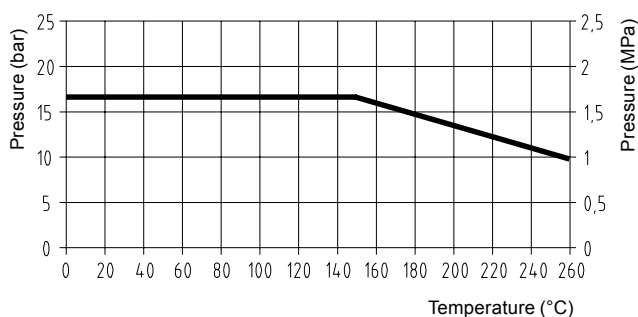


### Operation

The butterfly valve with weld ends is intended amongst others for district heating a stop- and control valve that seals tightly in both flow directions.

<b>Nominal pressure</b>	25 bar
<b>Closing pressure difference</b>	max 16 bar
<b>Operating temperature</b>	max +260°C

**Maximum closing pressure difference** depends on the working temperature



### Design

Carbon steel butterfly valve with weld ends according to GOST-standard.

The double eccentric disc 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 ... 1000

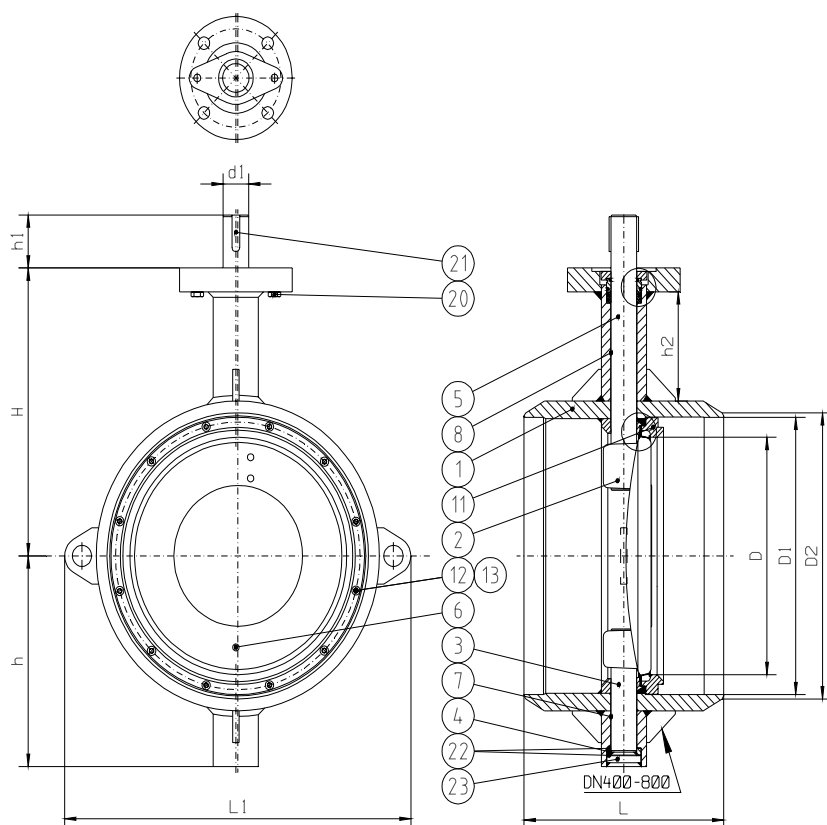
### Code number:

<b>31300CS</b> __ __ <b>Z</b>	with bare shaft	DN200 ... 300
<b>31300CS</b> __ __ <b>M</b>	with gear	DN200 ... 300
<b>31300CS</b> __ __ <b>ZG</b>	with bare shaft	DN350 ... 1000
<b>31300CS</b> __ __ <b>MG</b>	with gear	DN350 ... 1000

**For steam on special order. Code number:**

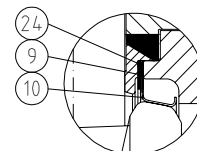
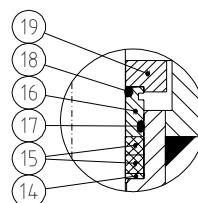
<b>31301CS</b> __ __	DN200 ... 300
<b>31301CS</b> __ __ <b>G</b>	DN350 ... 1000

## Butterfly valve with weld ends



### 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                | SFS5811 carbon fibre |
| 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               | SFS5811 carbon fibre |



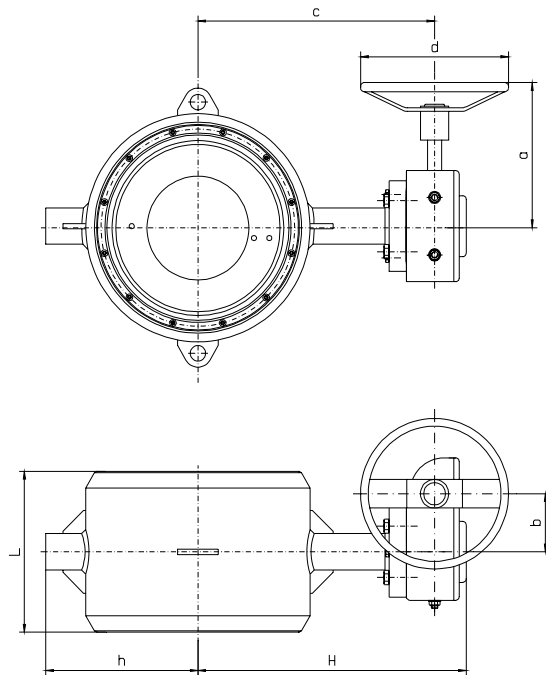
### Replaceable seat ring

### Dimensions

DN	L	D	D1	D2	h	H	h1	d1	h2	L1	Flange ISO5211
200	230	137,5	210,1	219,1	154	259	58	25	115	233	F10
250	250	187	263,0	273,0	193	298	63	30	125	385	F12
300	270	238	312,7	323,9	229	323	69	35	125	435	F12
350	290	286	365,0	377,0	255	352	75	40	125	465	F14
400	310	337	414,0	426,0	300	409	75	40	155	540	F14
500	350	437	516,0	530,0	351	470	86	50	163	660	F16
600	390	483	616,0	630,0	376	548	103	60	186	760	F16
700	430	582	704,0	720,0	440	601	119	70	186	860	F25
800	470	682	804,0	820,0	490	651	119	70	187	955	F30
900	510	775	902,0	920,0	575	718	125	90	200	1070	F30
1000	550	855	1000	1020	636	764	130	100	183	1200	F30

# 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.

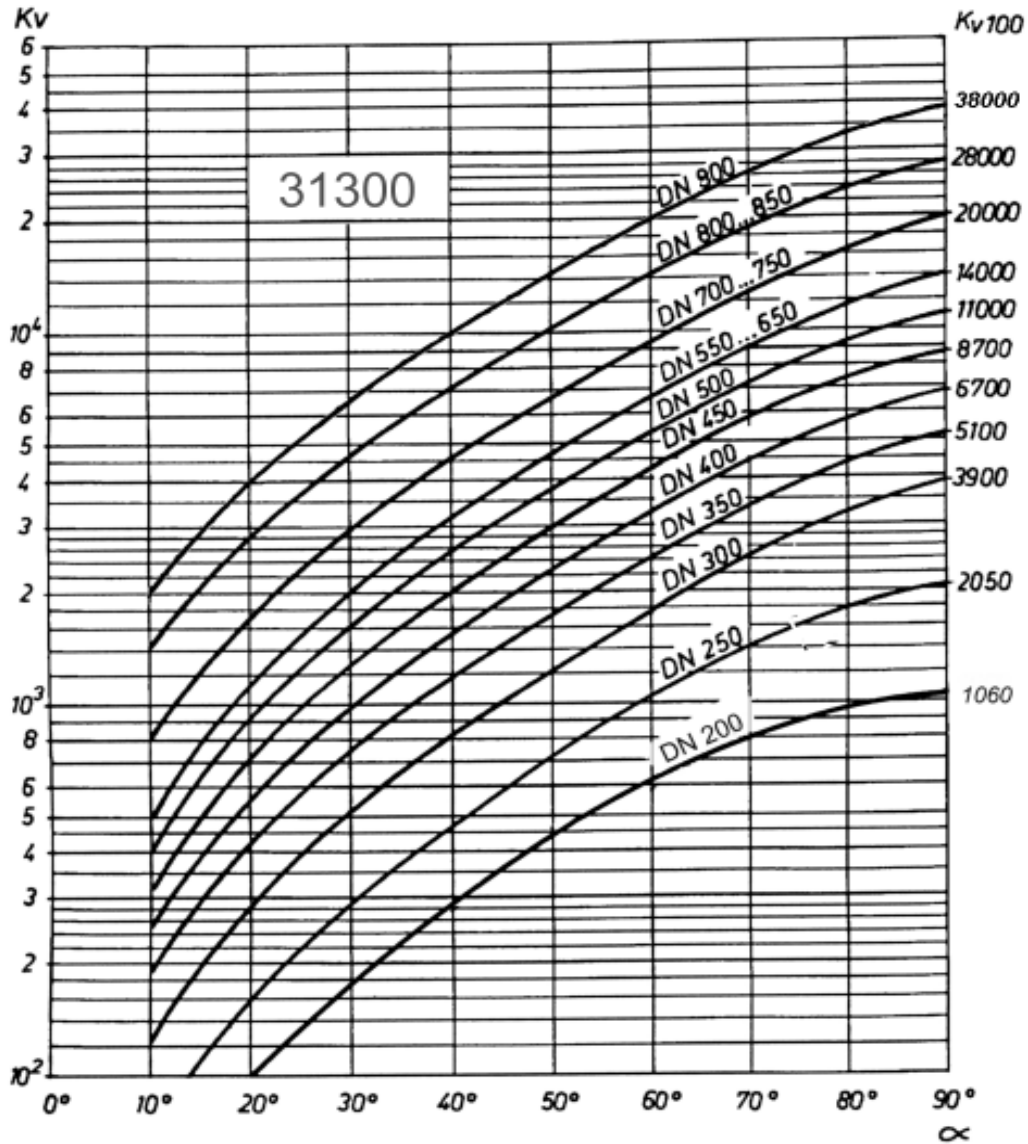
### Dimensions

DN	H	h	L	a	b	c	d	Weight <sup>*)</sup> kg
200	340	154	230	202	67	301	203	50
250	379	193	250	247	67	340	305	57
300	417	229	270	264	90	373	305	70
350	446	255	290	264	90	402	305	107
400	503	300	310	264	90	459	305	131
500	576	351	350	362	123	520	457	219
600	675	376	390	387	154	598	457	350
700	761	440	430	505	181	687	457	485
800	811	490	470	505	181	737	457	574
900	887	575	510	592	237	792	457	975

\*) With manual gear

## Regulating curves

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



**WATER:**

**Volume flow:**

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

**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