

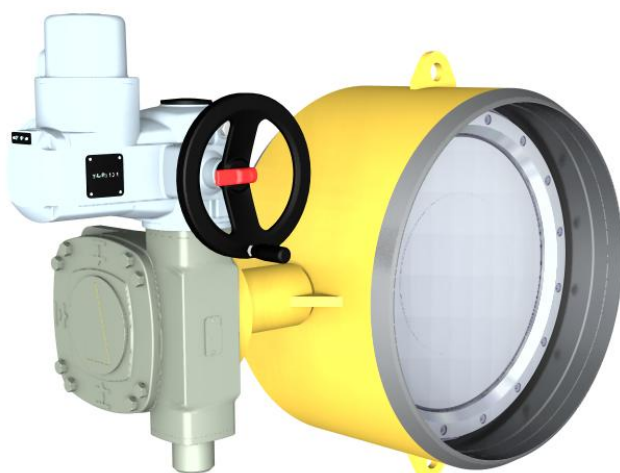
**BUTTERFLY VALVES**  
of carbon steel  
**FOR GAS APPLICATIONS**

**31150, 31350 and 31550 series**

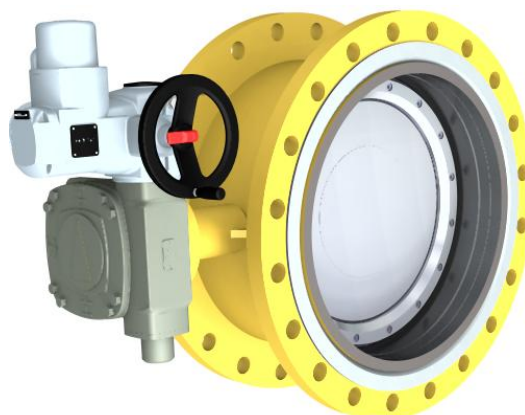
CONTROL



**31150 series**  
**Wafer type**



**31350 series**  
**with welded ends**



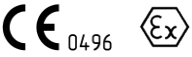
**31550 series**  
**with flanges**



## 31150 series (31050, 31150, 31250)

### Description

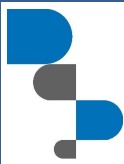
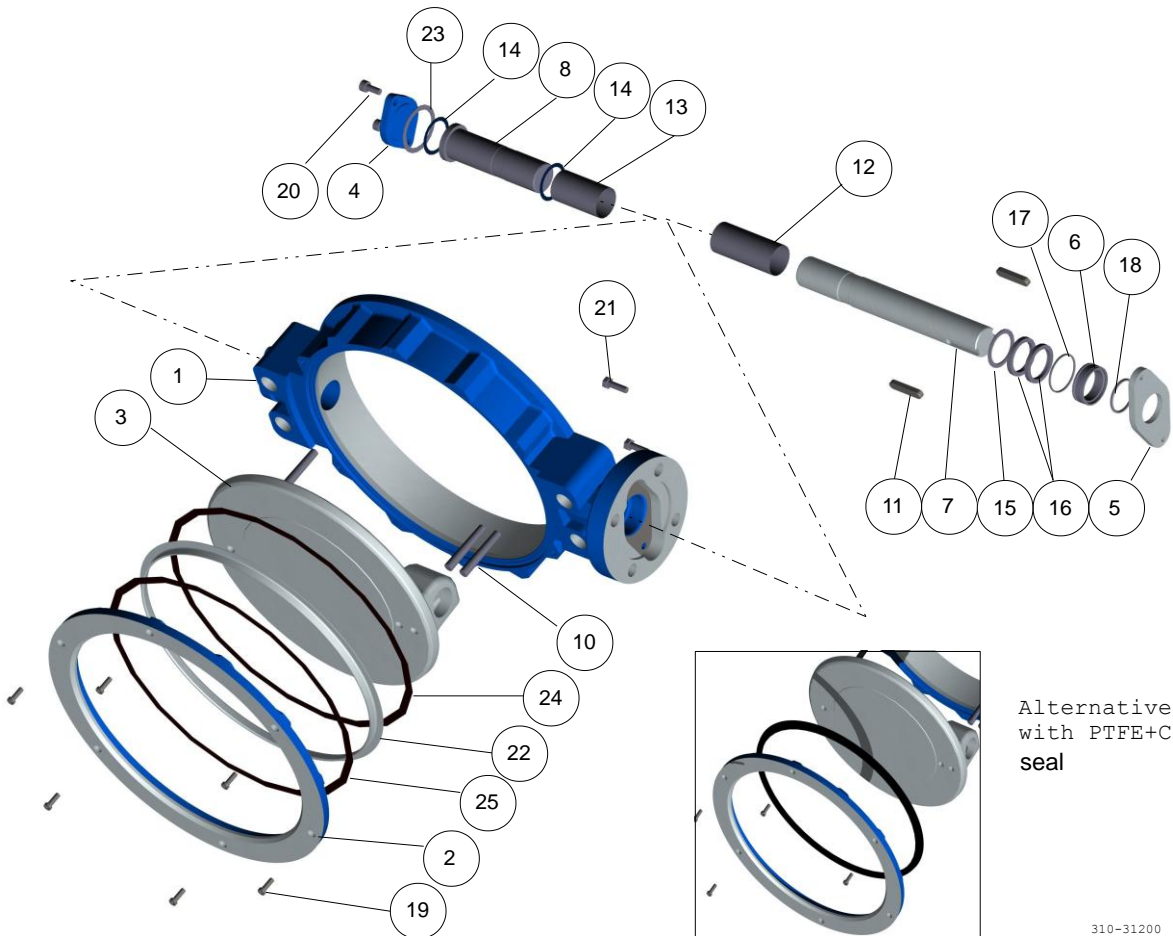
The body material is cast carbon steel. The eccentric disc and shaft are stainless steel. The shaft packing box is a combination of graphite rings and O-rings which are possible to tighten while in pipeline and are also replaceable.

Nominal dimensions *	DN 80 – 800	
Nominal pressure	PN 25 bar	
Disk seal alternatives	Stainless steel (CS)	PTFE+C (TS)
Closing pressure ( $\Delta P$ )	16 bar	16 bar
Tightness class ISO 5208, EN 12266-1	RATE A	RATE A
Working temperature of liquid media **	+260°C -40°C	+180°C -40°C
Connection ***	Between neck-type flanges: EN1092-1 Type 11, Facing Type B, PN25, PN16, PN10, ANSI CLASS 150, or GOST12821 (must be specified in order)	
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> 	

\*) Valves fulfill the structural integrity requirements of the EN 488:2011.

\*\*) Wider temperature range is available.

\*\*\*) For the valves DN450 and higher the design pressure (PN10, PN16, PN25) of flanges on the pipeline must be specified in order.

**Exploded view, 311 series****Parts list and standard materials**

Part	Material	
1	Body	Cast carbon steel GP240GH/ WCB
2	Counter flange	Carbon steel P265GH
3	Disk	Stainless steel EN10213-4 1.4408, ASTM A351 CF8M, SS2324
4	Subshaft cover	Stainless steel
5	Gland	Stainless steel 1.4404
6	Shaft seal bushing	Stainless steel
7	Main shaft	Stainless steel 1.4460 / 1.4418+QT900
8	Subshaft	Stainless steel 1.4460 / 1.4418+QT900
10	Pins	Stainless steel 1.4462 / 1.4418+QT900
11	Key	Carbon steel
12	Stem bearing	PTFE on stainless steel net
13	Subshaft bearing	PTFE on stainless steel net
14	Bearing plate	PTFE on stainless steel net
15	Back-up-ring	Stainless steel
16	Box packing	Graphite
17,18	O-ring	FPM
19	Socket screw	Stainless steel ISO 3506 A4-80
20	Socket screw	Stainless steel ISO 3506 A4-80
21	Hexagonal screw	Stainless steel ISO 3506 A4-80
22	Seat ring	Hard chrome plated stainless steel AISI 316 or PTFE+C
23	Bottom cover gasket	Carbon Fibre / Graphite
24, 25	Shim	Carbon Fibre / Graphite



## 31350 series

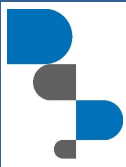
### Description

The body of the butterfly valve with weld ends is carbon steel. The eccentric disc and shafts are made of stainless steel. Replaceable seat ring is hard chrome plated stainless steel. The shaft packing box is a combination of graphite rings and O-rings which are possible to tighten while in pipeline and are also replaceable.

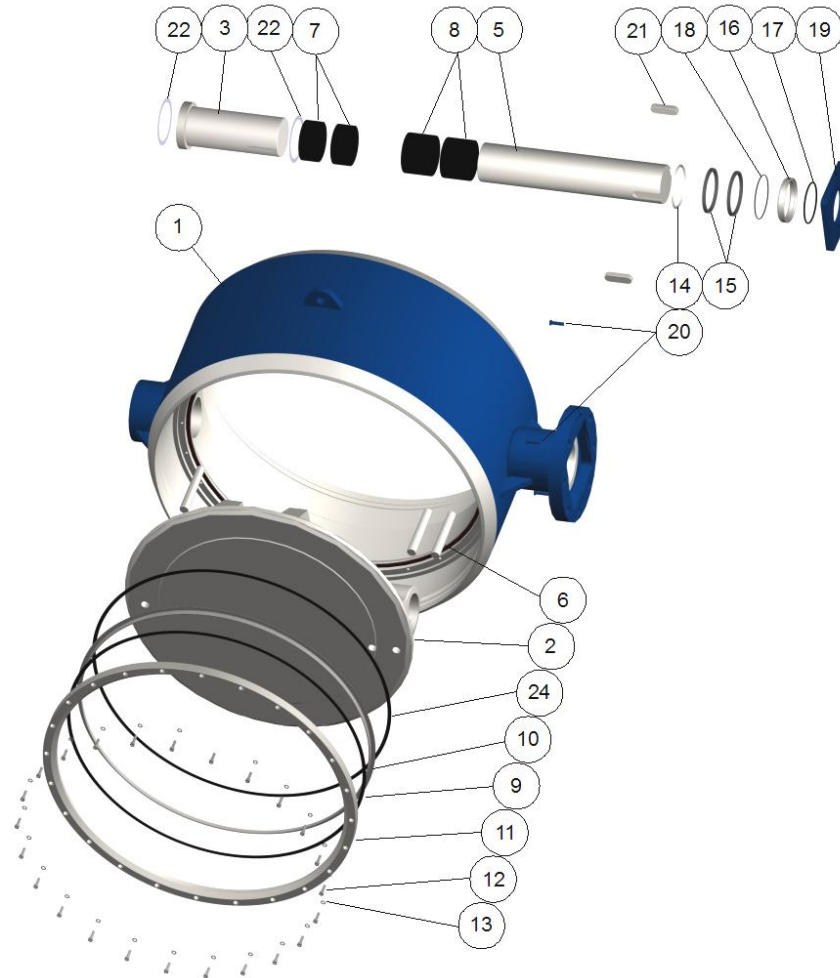
Nominal dimensions *	DN 200 - 1400	DN 200 - 800
Nominal pressure	PN 25 bar	PN 25 bar
Disk seal	Stainless steel (CS)	PTFE+C (TS)
Closing pressure ( $\Delta P$ )	16 bar	16 bar
Tightness class ISO 5208, EN 12266-1	RATE A	RATE A
Working temperature of liquid media **	+260°C -40°C	+180°C -40°C
Connection	Weld end: The pipe according to standard DIN or GOST	
Safety	Conform to the requirements of the Council Directive 97/23/EC on Pressure Equipment, marking:  0496 Class: gas, group 1.	

\*) Valves fulfill the structural integrity requirements of the EN 488:2011.

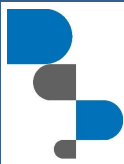
\*\*) Wider temperature range is available.



**Exploded view**



Part	Material
1 Body	Carbon steel EN 10028-2 P265GH
2 Disk	Stainless steel ASTM A351 CF8M, SS2324
3 Subshaft	Stainless steel 1.4460 / 1.4418+QT900
5 Main shaft	Stainless steel 1.4460 / 1.4418+QT900
6 Pin	Stainless steel 1.4462 / 1.4418+QT900
7 Subshaft bearing	PTFE on stainless steel net
8 Stem bearing	PTFE on stainless steel net
9,24 Shim	Carbon Fiber / Graphite
10 Seat ring	Hard chrome plated stainless steel AISI 316 or PTFE+C
11 Retaining ring	Carbon steel
12, 13 Socket screw and washer	Stainless steel ISO 3506 A4-80
14 Back-up-ring	Stainless steel 1.4404
15 Box packing	Graphite
16 Shaft seal bushing	Stainless steel 1.4404
17,18 O-ring	FPM
19 Gland	Stainless steel 1.4436 / 1.4404
20 Hexagonal screw	Stainless steel ISO 3506 A4-80
21 Key	Carbon steel
22 Bearing plate	PTFE on stainless steel net



## 31550 series

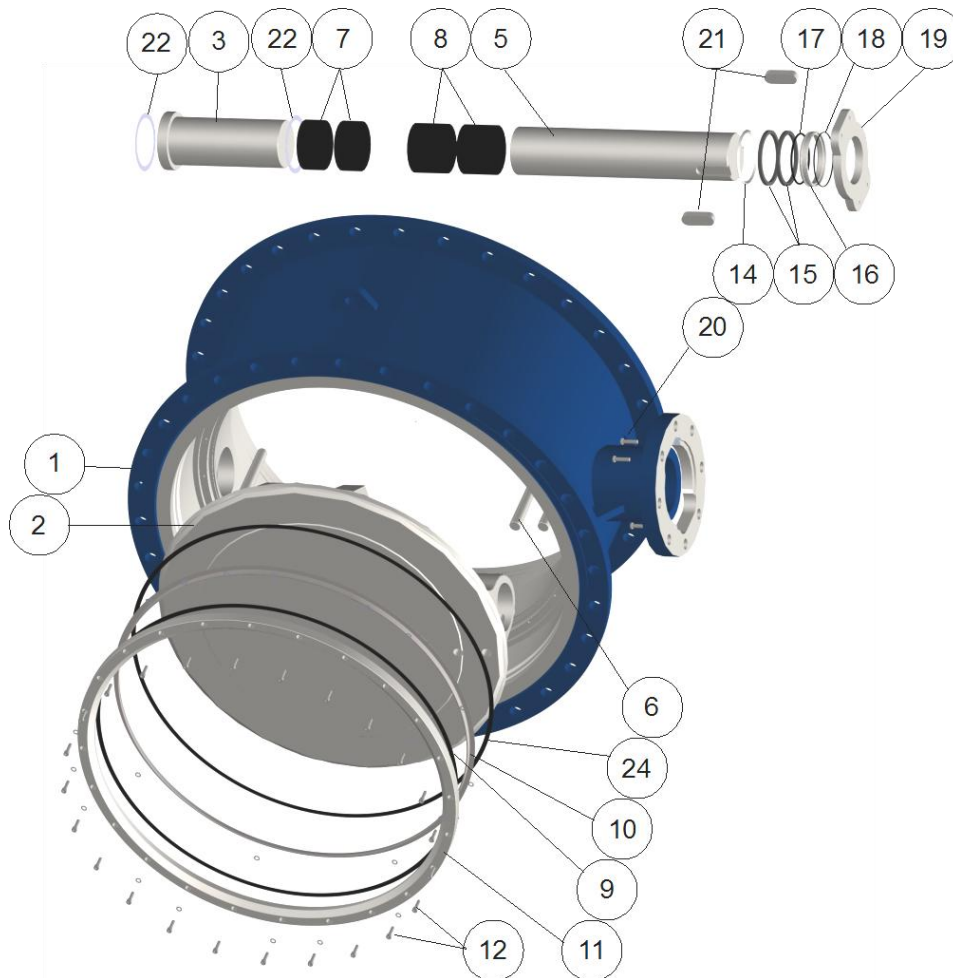
### Description

The body of the butterfly valve is of carbon steel. The eccentric disc and shafts are made of stainless steel. Replaceable seat ring is hard chrome plated stainless steel. The shaft packing box is a combination of graphite rings and O-rings which are possible to tighten while in pipeline and are also replaceable.

Nominal dimensions *	DN 200 - 1200	DN 200 - 800
Nominal pressure	PN 25 bar	PN 25 bar
Disk seal	Stainless steel (CS)	PTFE+C (TS)
Closing pressure ( $\Delta P$ )	16 bar	16 bar
Tightness class ISO 5208, EN 12266-1	RATE A	RATE A
Working temperature of liquid media **	+260°C / -40°C	+180°C / -40°C
Face-to-face length according to EN 558-1	series 14	
Connection	flanges: EN1092-1 Type B, PN 25, PN 16 and PN 10 ANSI CLASS 150, GOST	
Safety	Conform to the requirements of the Council Directive 97/23/EC on Pressure Equipment, marking: Class: gas, group 1.	

\*) Valves fulfill the structural integrity requirements of the EN 488:2011.

\*\*) Wider temperature range is available.

**Exploded view****Parts list and standard materials**

Part	Material
1	Carbon steel EN 10028-2 P265GH
2	Stainless steel ASTM A351 CF8M, SS2324
3	Stainless steel 1.4460 / 1.4418+QT900
5	Stainless steel 1.4460 / 1.4418+QT900
6	Stainless steel 1.4462 / 1.4418+QT900
7	PTFE on stainless steel net
8	PTFE on stainless steel net
9,24	Carbon Fiber / Graphite
10	Hard chrome plated stainless steel AISI 316 or PTFE+C
11	Carbon steel
12	Stainless steel ISO 3506 A4-80
13	Stainless steel
14	Stainless steel 1.4404
15	Graphite
16	Stainless steel 1.4404
17,18	EPDM
19	Stainless steel 1.4436 / 1.4404
20	Stainless steel ISO 3506 A4-80
21	Carbon steel
22	PTFE on stainless steel net