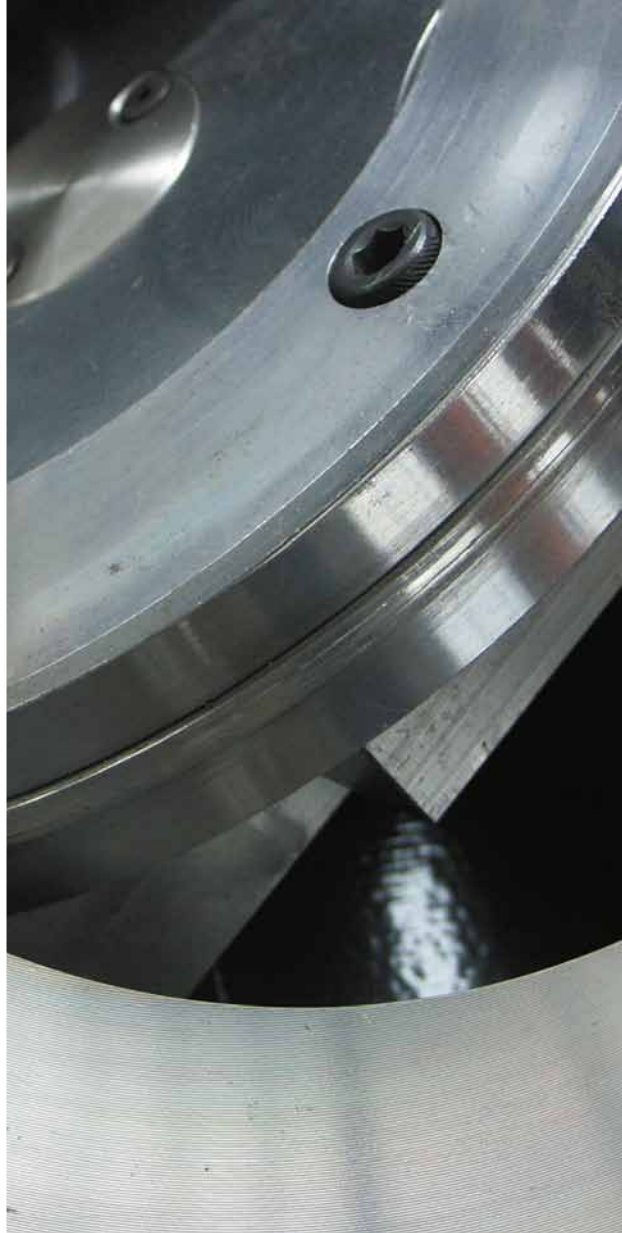


EN ASME



Triple Offset Butterfly Valves

Triple Offset Butterfly Valves

APPLICATIONS

The triple offset butterfly valves are used for shut off and regulating purposes.

Typical applications are:

- water
- chemicals
- petrochemicals
- district heating
- gases
- liquid gases (cryogenic service)

CONSTRUCTION DETAILS

Body

The body geometry is designed as the result of stress calculations according to current engineering standard and rules.

The body material is high quality steel.

The seats surface is covered by a wear resistance stainless steel deposited by welding overlay. On request the seat surface can be covered also with stellite or other special material overlays.

The body desing can be wafer or lug or flanged or butt welding ends type.

Disc

The disc is designed to reduce at the minimum possible the pressure drop and the cavitation effects. In full open position the disc is rotated by 90° in respect of full close position.

The disc seat is made with a metallic and graphoil composite ring that can be replaced. This sealing don't contain PTFE, rubber or other plastic components that





can be susceptible to high temperatures limiting the use of the valve only in the allowable range for the body material.

The triple offset design of the disc seats permits a friction free operation and a superior tightness performance without the need of a resilient seat. This feature guarantees a long life of the seat with reduced maintenance.

This full metal construction of the seat make the valve inherently fire safe then the ideal choice to handle flammable fluids.

Shaft

The shaft is one piece and full length type permitting to use the valve also for high differential pressure. Different shaft materials are available for all kind of applications or service condition.

The shaft is supported by two long length

bearings that reduce the torque and increase the reliability. To avoid any leakage the stem has a high finish degree and a strict diametrical clearance.

The torque is transmitted from the stem to the disc means two or more keys to assure a high resistance to static and dynamic force.

Gaskets

The standard gaskets used for sealing are in pure graphite stainless steel reinforced. This type of gasket is suitable for many different applications. For special applications (cryogenic gases, high corrosion acids etc.) we can supply special gaskets designed for the specific application or according to customer specifications.

Triple Offset Butterfly Valves



Packing

The standard packing is made of four or more pure graphite rings with square section. The first and the last ring are reinforced with stainless steel to avoid the extrusion.

Other materials like PTFE are available on request. The graphite is always treated with special corrosion inhibitors to prevent the corrosion of ferritic stainless steel stem due to galvanic cell action.

For special applications (cryogenic gases, high corrosion acids, etc.) we can supply special packings designed for the specific application or according to customer requirements.

To meet the TA-Luft requirements, on request, we can supply valves with special design of stem and packing. The stuffing

box housing is produced with a high finish degree and a strict clearance to guarantee a perfect tight of the packing.

Bracket

The standard valves are provided bracket with ISO 5211 connection suitable to apply on the valve a quarter turn gearbox or an actuators. On request we can provide a full range of gearbox already assembled on the valve suitable for all service conditions. One or more keys transmit the torque from the operator to the stem.

WARNINGS

- The triple offset butterfly valves are not suitable for media that tend to produce high sedimentation or encrustation, as well as fluids containing

foreign solids that, due to their hardness, present the risk to damage the seat faces.

- The triple offset butterfly valves are not suitable for media that can be solidified due to temperature variations.
- In case of gas service please advise always the type of the medium and the service condition for a correct choice of the valve design.
- The triple offset butterfly valves can be installed in all positions but optimal performances are achieved when the valves are installed with horizontal shaft in horizontal pipelines.
- Triple offset butterfly valves can be supplied also for bi-directional serv-

ice: this feature is enclosed only if expressly requested

- The triple offset butterfly valves can be used also for regulating purposes if supplied in suitable version with appropriate operating devices: please ask always for "regulating version" in such cases.

INSTALLATION

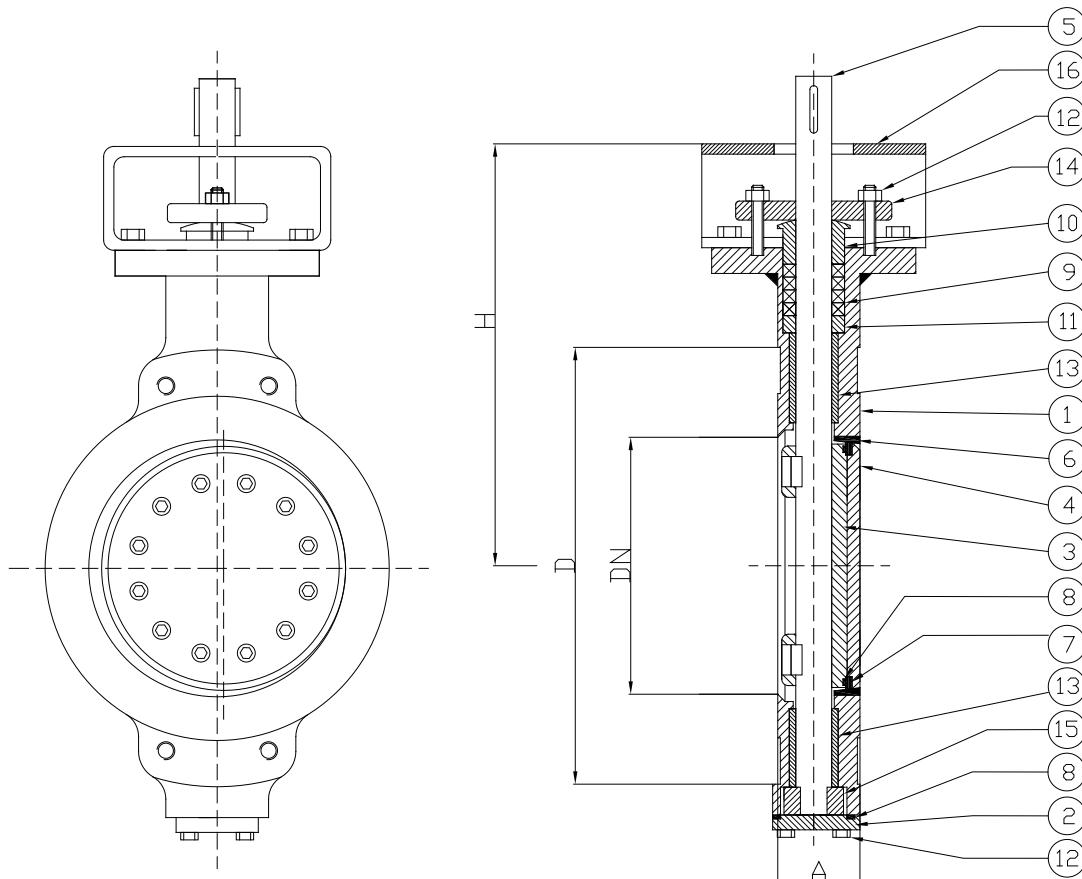
The best installation position for triple offset butterfly valves is with the stem horizontal to the ground. This installation position reduce the deposit of particles in the bearing area and permits to obtain the best tightness performances because avoid the adverse influence of the gravity on the disc.



Triple Offset Butterfly Valve

PN 25 DN 80 - DN 1000

Wafer type drilling PN 25 or PN 16 or PN 10



0948

Standard features:

- ☒ Design EN 12516
 EN 593
- ☒ Face to face ISO 5752 series 25
 EN 558-1 series 25
 DIN 3202 K2
- ☒ Materials EN 10025
 EN 10028
 EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
 EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3 x	Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5 x	Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7 x	Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8 O	Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9 O	Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10 x	Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11 x	Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13 x	Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

PN 25	DN	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
	80	49	200	250	14	25	10
	100	56	235	280	18	25	10
	125	64	270	305	23	25	10
	150	70	300	315	25	25	10
	200	71	360	380	40	25	10
	250	76	425	420	50	25	10
	300	83	485	480	85	25	10
	350	92	555	515	120	25	10
	400	102	620	540	160	25	10
	450	114	670	570	200	25	10
	500	127	730	630	260	25	10
	600	154	845	680	380	25	10
	700	165	960	830	580	25	10
	800	190	1085	895	890	25	10
	900	203	1185	1015	1130	25	10
	1000	216	1320	1070	1420	25	10

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1										
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1	15.0	14.4	11.8	9.2						
25			25.0	25.0	25.0	25.0	24.1	20.6	19.2	17.8	16.9	16.1	15.3	14.4	14.2	13.9	13.6	13.3	13.1	12.8		
25	25.0	25.0	25.0	25.0	25.0	25.0	23.6	17.8	15.8	13.9	13.1	12.2										
25					25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.9	22.2	15.7	9.2	11.1	13.0	9.6	6.1			
25					25.0	25.0	25.0	24.4	22.2	21.1	20.0	19.4	18.9									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

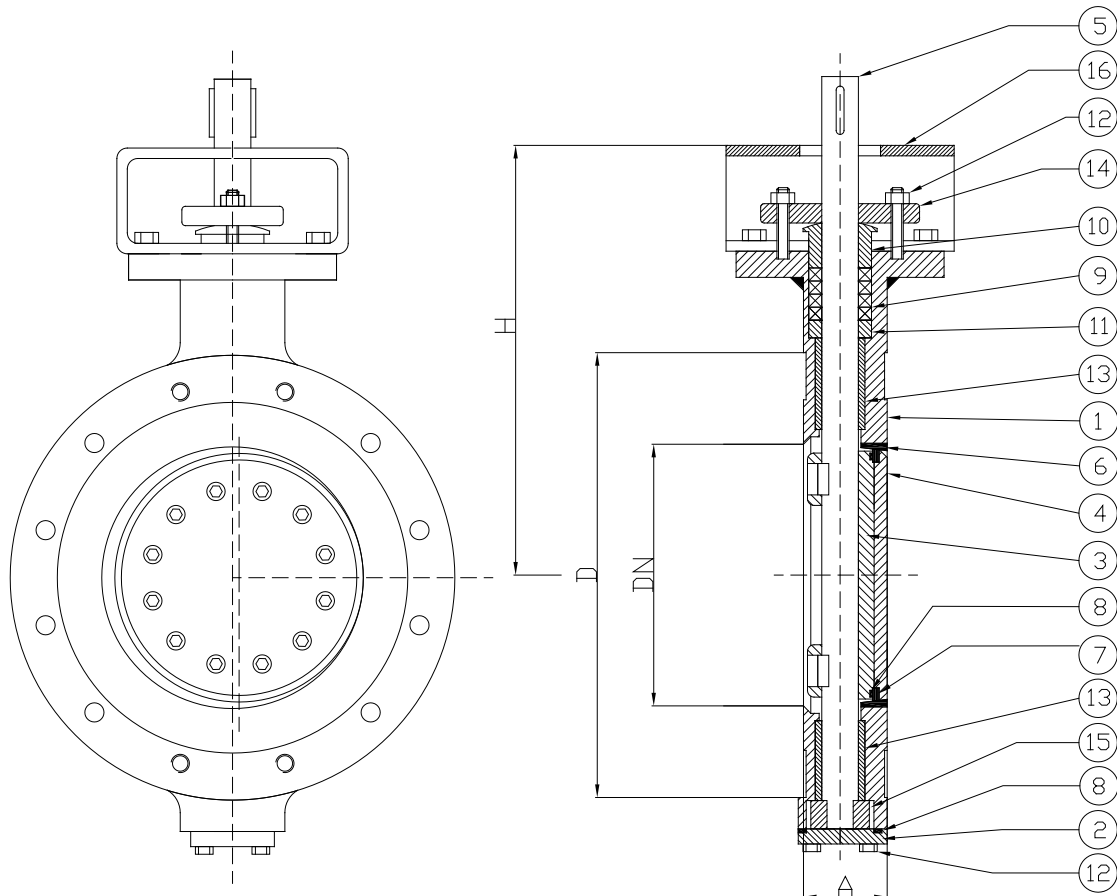
If the valves are provided with connection PN 16 or PN 10 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 25 DN 80 - DN 1000

Lug - single flange type drilling PN 25 or PN 16 or PN 10



0948

Standard features:

- ☒ Design EN 12516
EN 593 (Fig. 3b)
- ☒ Face to face ISO 5752 series 25
EN 558-1 series 25
DIN 3202 K2
- ☒ Materials EN 10025
EN 10028
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices
- ☐ All tapped holes (EN 593 Fig. 3d)
- ☐ Lightweight lug type (EN 593 Fig. 3a or 3c)

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
PN 25	80	49	200	250	19	25	10
	100	56	235	280	20	25	10
	125	64	270	305	24	25	10
	150	70	300	315	26	25	10
	200	71	360	380	40	25	10
	250	76	425	420	55	25	10
	300	83	485	480	90	25	10
	350	92	555	515	125	25	10
	400	102	620	540	170	25	10
	450	114	670	570	205	25	10
	500	127	730	630	280	25	10
	600	154	845	680	395	25	10
	700	165	960	830	690	25	10
	800	190	1085	895	1010	25	10
	900	203	1185	1015	1260	25	10
	1000	216	1320	1070	1680	25	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1										
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1	15.0	14.4	11.8	9.2						
25			25.0	25.0	25.0	25.0	24.1	20.6	19.2	17.8	16.9	16.1	15.3	14.4	14.2	13.9	13.6	13.3	13.1	12.8		
25	25.0	25.0	25.0	25.0	25.0	25.0	23.6	17.8	15.8	13.9	13.1	12.2										
25					25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.9	22.2	15.7	9.2	11.1	13.0	9.6	6.1		
25					25.0	25.0	25.0	24.4	22.2	21.1	20.0	19.4	18.9									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

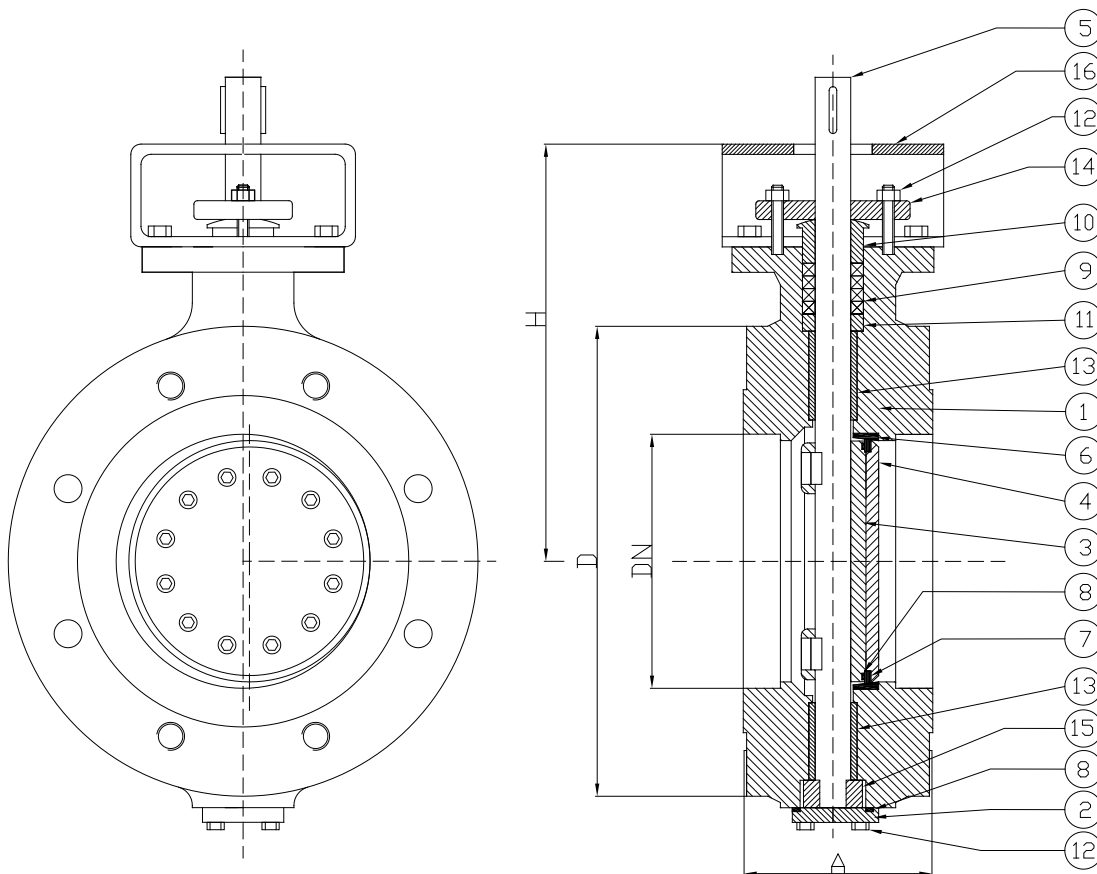
If the valves are provided with connection PN 16 or PN 10 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 25 DN 80 - DN 1000

Flanged PN 25 or PN 16 or PN 10



0948

Standard features:

- | | |
|---|---|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 13
EN 558-1 series 13
BS 2080 series 13 |
| ☒ Flanges | EN 1092-1/21/B1 |
| ☒ Materials | EN 10213
EN 10025 / EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
EN 593 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0619	1.4581	1.4308	1.7357	1.1138
2	Cover	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4571 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4571	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1^{(4)}$	$\Delta p2^{(4)}$
PN 25	80	114	200	250	22	25	10
	100	127	235	280	28	25	10
	125	140	270	305	32	25	10
	150	140	300	315	34	25	10
	200	152	360	380	65	25	10
	250	165	425	420	94	25	10
	300	178	485	480	132	25	10
	350	190	555	515	180	25	10
	400	216	620	540	225	25	10
	450	222	670	570	260	25	10
	500	229	730	630	345	25	10
	600	267	845	680	490	25	10
	700	292	960	830	940	25	10
	800	318	1085	895	1350	25	10
	900	330	1185	1015	1810	25	10
	1000	410	1320	1070	2350	25	10

⁽⁴⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1										
25					25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1	15.0	14.4	11.8	9.2						
25			25.0	25.0	25.0	25.0	24.1	20.6	19.2	17.8	16.9	16.1	15.3	14.4	14.2	13.9	13.6	13.3	13.1	12.8		
25	25.0	25.0	25.0	25.0	25.0	25.0	23.6	17.8	15.8	13.9	13.1	12.2										
25					25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.9	22.2	15.7	9.2	11.1	13.0	9.6	6.1			
25					25.0	25.0	25.0	24.4	22.2	21.1	20.0	19.4	18.9									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

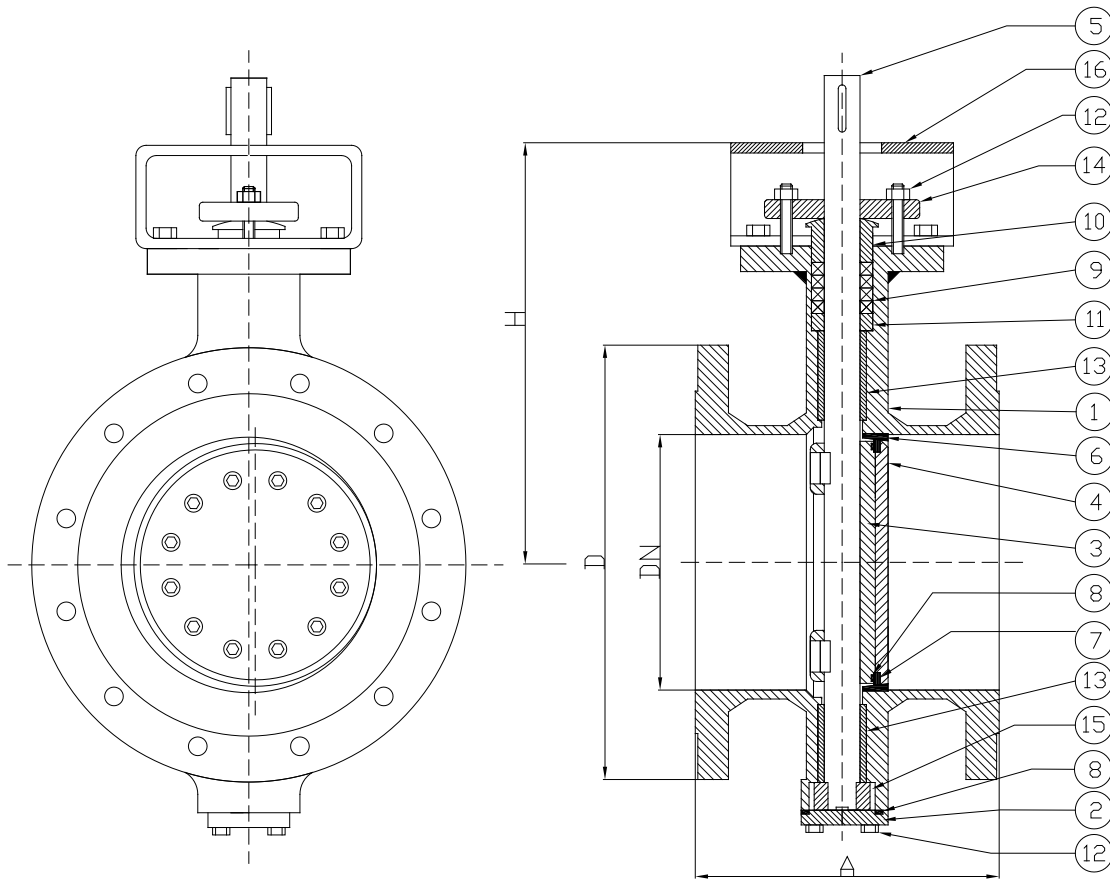
If the valves are provided with flanged connection PN 16 or PN 10 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 25 DN 80 - DN 1000

Flanged PN 25 or PN 16 or PN 10



0948

Standard features:

- ☒ Design EN 12516
EN 593
- ☒ Face to face EN 558-1 series 14
ISO 5752 series 14
DIN 3202 F4
- ☒ Flanges EN 1092-1/21/B1
- ☒ Materials EN 10213
EN 10025 / EN 10028
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices

Material Specification

1	Body	1.0044	1.0619	1.4581	1.4308	1.7357	1.1138
2	Cover	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4571 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4571	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
PN 25	80	180	200	250	22	25	10
	100	190	235	280	28	25	10
	125	200	270	305	32	25	10
	150	210	300	315	34	25	10
	200	230	360	380	65	25	10
	250	250	425	420	102	25	10
	300	270	485	480	145	25	10
	350	290	555	515	195	25	10
	400	310	620	540	245	25	10
	450	330	670	570	265	25	10
	500	350	730	630	380	25	10
	600	390	845	680	510	25	10
	700	430	960	830	815	25	10
	800	470	1085	895	1230	25	10
	900	510	1185	1015	1550	25	10
	1000	550	1320	1070	2090	25	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
25				25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1											
25				25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1	15.0	14.4	11.8	9.2							
25			25.0	25.0	25.0	24.1	20.6	19.2	17.8	16.9	16.1	15.3	14.4	14.2	13.9	13.6	13.3	13.1	12.8			
25	25.0	25.0	25.0	25.0	25.0	23.6	17.8	15.8	13.9	13.1	12.2											
25				25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.9	22.2	15.7	9.2	11.1	13.0	9.6	6.1				
25				25.0	25.0	25.0	24.4	22.2	21.1	20.0	19.4	18.9										

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

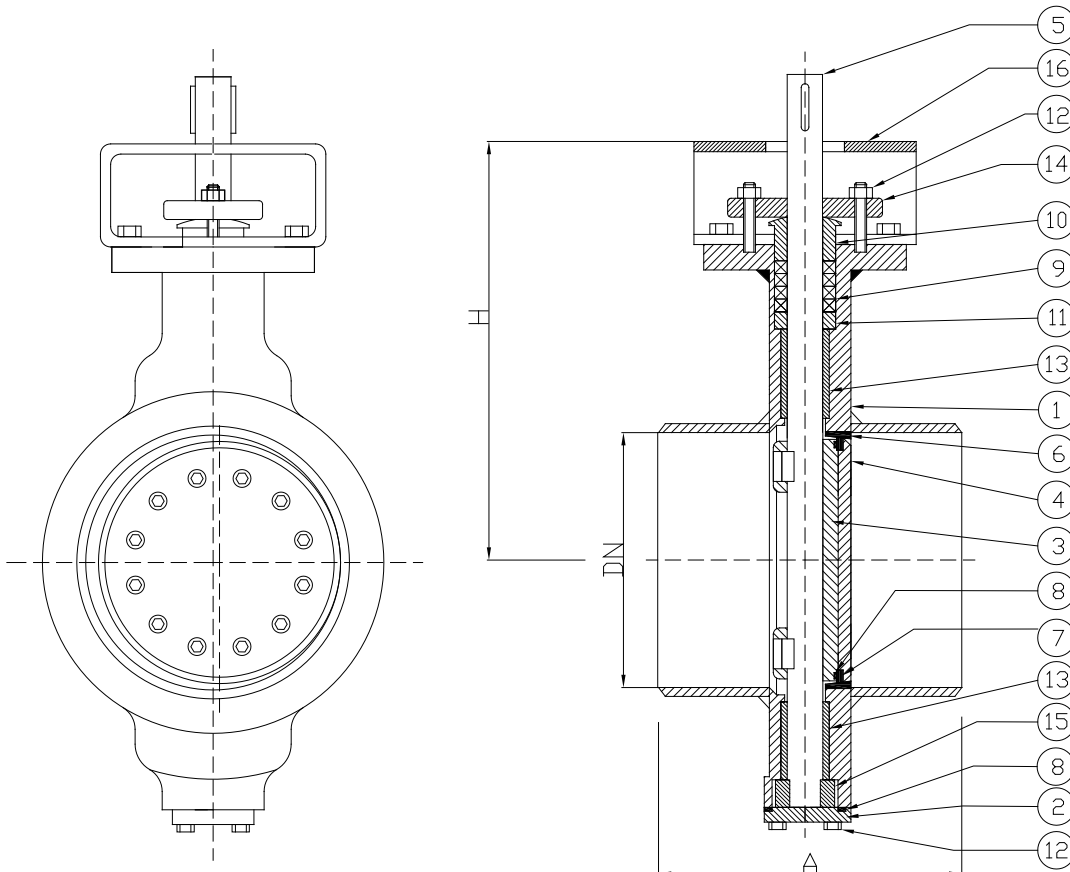
If the valves are provided with flanged connection PN 16 or PN 10 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 25 DN 80 - DN 1000

Butt Welding Ends type



0948

Standard features:

- | | |
|---|---------------------------------|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | EN 12627 |
| ☒ Materials | EN 10025
EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

PN 25	DN	A	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	180	250	18	25	10
	100	190	280	23	25	10
	125	200	300	26	25	10
	150	210	315	29	25	10
	200	430	380	58	25	10
	250	450	420	82	25	10
	300	470	480	120	25	10
	350	490	515	175	25	10
	400	510	540	205	25	10
	450	530	570	245	25	10
	500	550	630	320	25	10
	600	590	680	440	25	10
	700	630	830	750	25	10
	800	670	895	1050	25	10
	900	710	1015	1320	25	10
	1000	750	1070	1910	25	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
25				25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1											
25				25.0	25.0	24.7	23.3	21.4	19.4	17.8	16.1	15.0	14.4	11.8	9.2							
25			25.0	25.0	25.0	25.0	24.1	20.6	19.2	17.8	16.9	16.1	15.3	14.4	14.2	13.9	13.6	13.3	13.1	12.8		
25	25.0	25.0	25.0	25.0	25.0	25.0	23.6	17.8	15.8	13.9	13.1	12.2										
25				25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.9	22.2	15.7	9.2	11.1	13.0	9.6	6.1			
25				25.0	25.0	25.0	24.4	22.2	21.1	20.0	19.4	18.9										

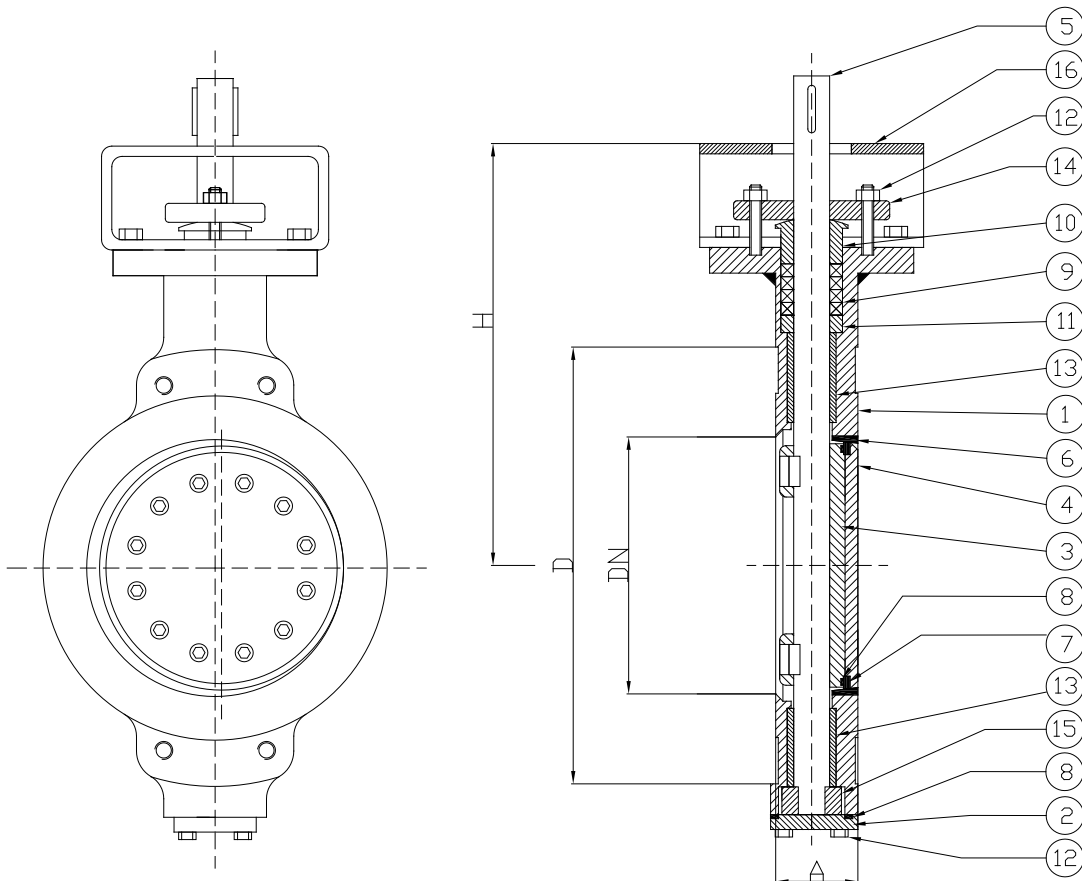
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

Class 150 NPS 3" - NPS 40"

Wafer type



0948

Standard features:

- | | |
|---|-------------------------------|
| ☒ Design | API 609
EN 12516
EN 593 |
| ☒ Face to face | API 609 CL 150 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 150	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	48	165	250	14	20	10
	100	4	54	220	280	18	20	10
	150	6	57	285	315	25	20	10
	200	8	64	340	380	40	20	10
	250	10	71	395	420	50	20	10
	300	12	81	445	480	85	20	10
	350	14	92	505	515	120	20	10
	400	16	102	565	540	160	20	10
	450	18	114	615	570	200	20	10
	500	20	127	670	630	260	20	10
	600	24	154	780	680	380	20	10
	700	28	165	890	830	540	20	10
	750	30	190	984	870	790	20	10
	800	32	190	1060	895	925	20	10
	900	36	203	1168	1015	1180	20	10
	1000	40	216	1289	1070	1520	20	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3										
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3							
150			19.6	19.6	19.6	19.6	19.6	16.7	15.2	14.1	13.2	12.5	12.0	11.8	11.5	11.4	11.3	10.8	10.0	9.4		
150	19.6	19.6	19.6	19.6	19.6	19.6	19.6	16.1	14.7	13.6	12.8	12.1										
150					20.4	20.4	20.4	20.3	19.6	18.9	18.2	16.9	15.9	14.4	13.8	13.3	12.5	10.0	7.2	5.0		
150					20.2	20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3						

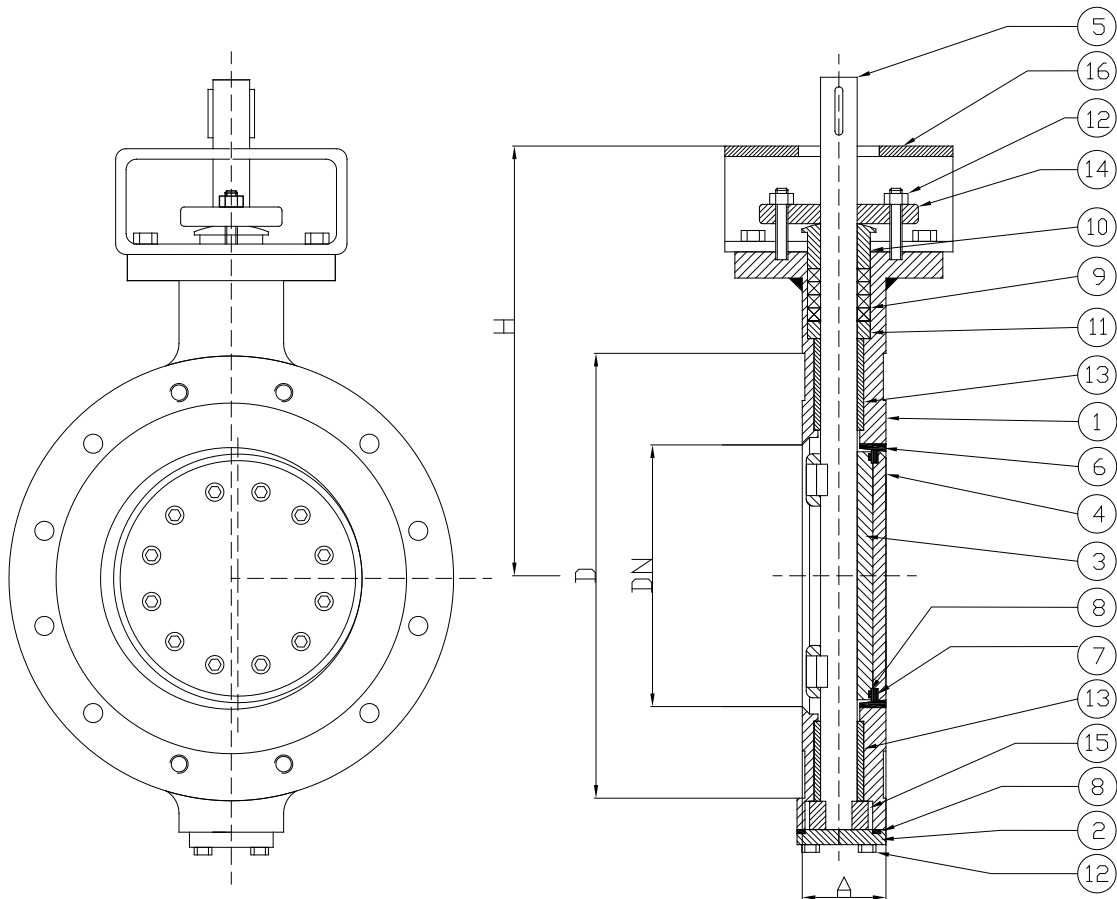
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 150 NPS 3" - NPS 40"

Lug - single flange type



0948

Standard features:

- | | |
|---|---|
| ☒ Design | API 609
EN 12516
EN 593 (Fig. 3b) |
| ☒ Face to face | API 609 CL 150 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|--|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |
| ☐ All tapped holes (EN 593 Fig. 3d) |
| ☐ Lightweight lug type (EN 593 Fig. 3a or 3c) |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Scews	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Scews (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 150	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	48	165	250	19	20	10
	100	4	54	220	280	20	20	10
	150	6	57	285	315	26	20	10
	200	8	64	340	380	40	20	10
	250	10	71	395	420	55	20	10
	300	12	81	445	480	90	20	10
	350	14	92	505	515	125	20	10
	400	16	102	565	540	170	20	10
	450	18	114	615	570	205	20	10
	500	20	127	670	630	280	20	10
	600	24	154	780	680	395	20	10
	700	28	165	890	830	560	20	10
	750	30	190	984	870	810	20	10
	800	32	190	1060	895	950	20	10
	900	36	203	1168	1015	1210	20	10
	1000	40	216	1289	1070	1550	20	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3										
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3							
150			19.6	19.6	19.6	19.6	19.6	16.7	15.2	14.1	13.2	12.5	12.0	11.8	11.5	11.4	11.3	10.8	10.0	9.4		
150	19.6	19.6	19.6	19.6	19.6	19.6	19.6	16.1	14.7	13.6	12.8	12.1										
150					20.4	20.4	20.4	20.3	19.6	18.9	18.2	16.9	15.9	14.4	13.8	13.3	12.5	10.0	7.2	5.0		
150					20.2	20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3						

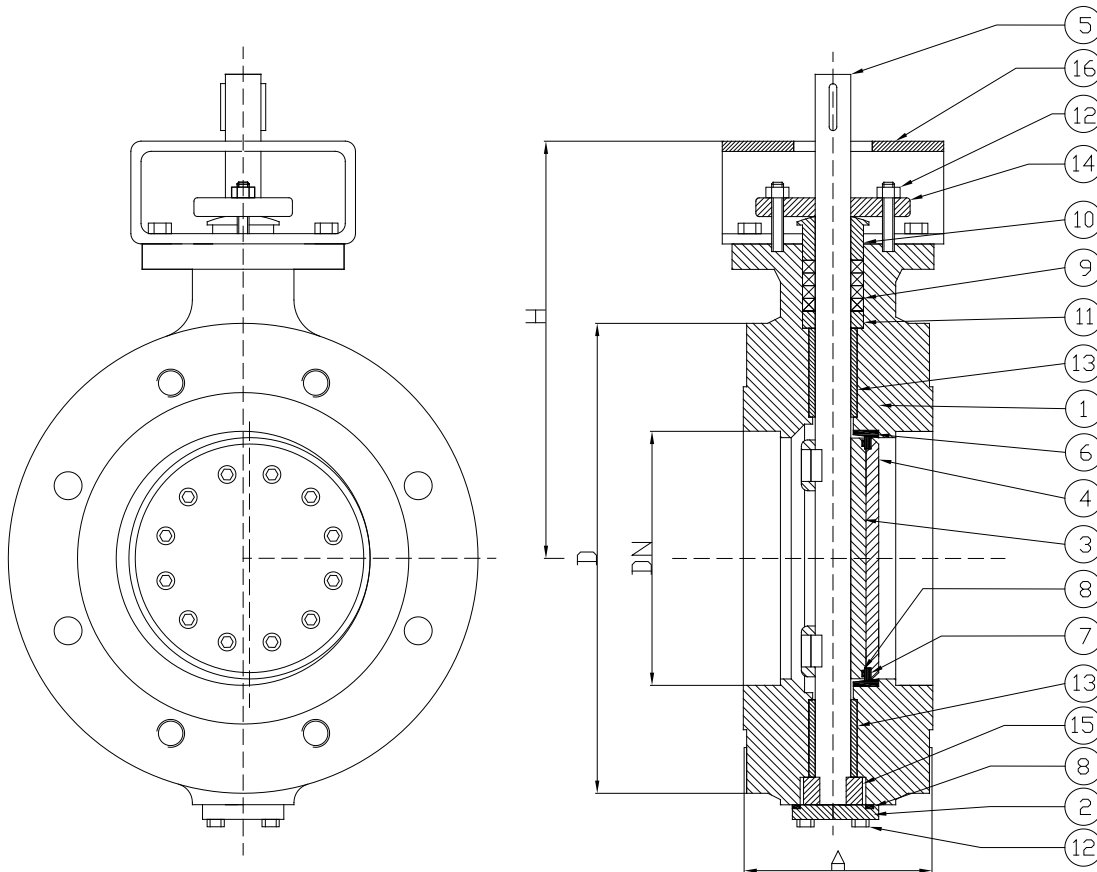
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 150 NPS 3" - NPS 40"

Flanges ANSI Class 150



0948

Standard features:

- | | |
|---|---|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 13
EN 558-1 series 13
BS 2080 series 13 |
| ☒ Flanges | ASME B 16.5 (EN 1759-1) |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 216 WCB	A 351 CF8M	A 351 CF8	A 216 WC6	A 352 LCC
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite + UNS S 31803 (duplex), PTFE + A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 150	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	114	190	250	22	20	10
	100	4	127	229	280	28	20	10
	150	6	140	279	315	34	20	10
	200	8	152	343	380	65	20	10
	250	10	165	406	420	94	20	10
	300	12	178	483	480	132	20	10
	350	14	190	433	515	180	20	10
	400	16	216	597	540	225	20	10
	450	18	222	635	570	260	20	10
	500	20	229	698	630	345	20	10
	600	24	267	813	680	490	20	10
	700	28	292	890	830	940	25	10
	750	30	318	984	870	1250	25	10
	800	32	318	1060	895	1350	25	10
	900	36	330	1168	1015	1810	25	10
	1000	40	410	1289	1070	2350	25	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3										
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3							
150			19.6	19.6	19.6	19.6	19.6	16.7	15.2	14.1	13.2	12.5	12.0	11.8	11.5	11.4	11.3	10.8	10.0	9.4		
150	19.6	19.6	19.6	19.6	19.6	19.6	19.6	16.1	14.7	13.6	12.8	12.1										
150					20.4	20.4	20.4	20.3	19.6	18.9	18.2	16.9	15.9	14.4	13.8	13.3	12.5	10.0	7.2	5.0		
150					20.2	20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3						

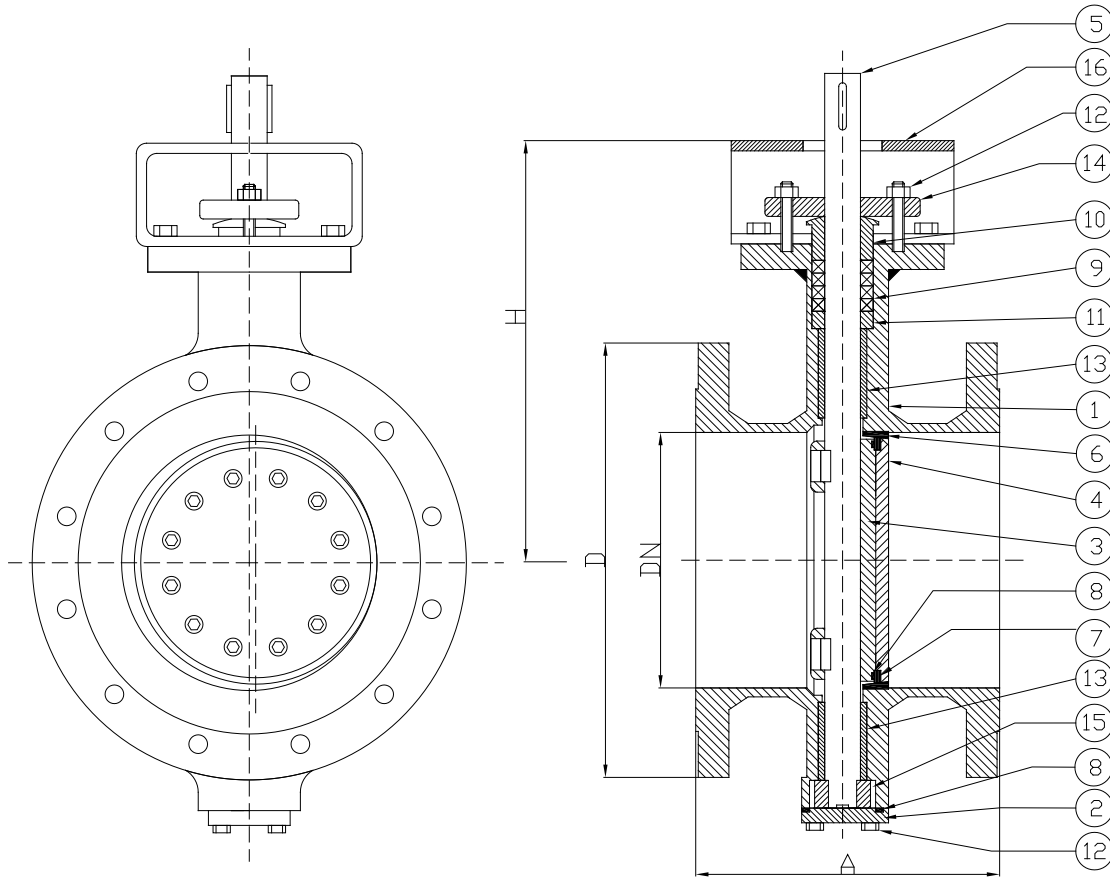
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 150 NPS 3" - NPS 40"

Flanges ANSI Class 150



0948

Standard features:

- | | |
|---|---|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 3
ANSI B16.10 Tab.1 Col.7
EN 558-1 series 3 |
| ☒ Flanges | ASME B 16.5 (EN 1759-1) |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 216 WCB	A 351 CF8M	A 351 CF8	A 216 WC6	A 352 LCC
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	X Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	X Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	X Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	X Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	X Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	X Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
ANSI 150	80	3	203	190	250	31	20	10
	100	4	229	229	280	38	20	10
	150	6	267	279	315	45	20	10
	200	8	292	343	380	85	20	10
	250	10	330	406	420	115	20	10
	300	12	356	483	480	162	20	10
	350	14	381	433	515	205	20	10
	400	16	406	597	540	265	20	10
	450	18	432	635	570	305	20	10
	500	20	437	698	630	390	20	10
	600	24	503	813	680	560	20	10
	700	28	610	890	830	1075	25	10
	750	30	610	984	870	1415	25	10
	800	32	660	1060	895	1512	25	10
	900	36	711	1168	1015	2010	25	10
	1000	40	811	1289	1070	2570	25	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3										
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3							
150			19.6	19.6	19.6	19.6	19.6	16.7	15.2	14.1	13.2	12.5	12.0	11.8	11.5	11.4	11.3	10.8	10.0	9.4		
150	19.6	19.6	19.6	19.6	19.6	19.6	19.6	16.1	14.7	13.6	12.8	12.1										
150					20.4	20.4	20.4	20.3	19.6	18.9	18.2	16.9	15.9	14.4	13.8	13.3	12.5	10.0	7.2	5.0		
150					20.2	20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3						

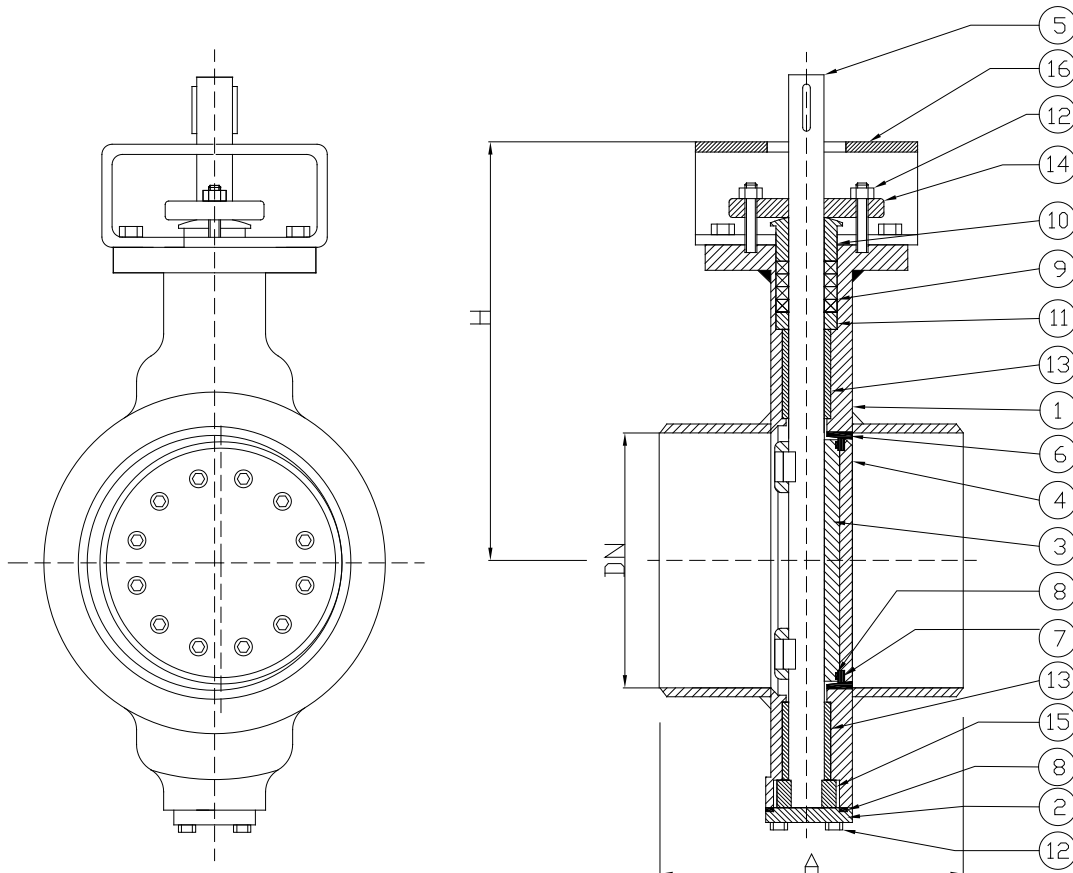
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 150 NPS 3" – NPS 40"

Butt Welding Ends type



0948

Standard features:

- | | |
|---|------------------------------------|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | ASME B 16.25 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+ UNS S 31803 (duplex), PTFE + A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A105 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	NPS	A	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
ANSI 150	80	3	180	250	18	20	10
	100	4	190	280	23	20	10
	150	6	210	315	29	20	10
	200	8	430	380	58	20	10
	250	10	450	420	82	20	10
	300	12	470	480	120	20	10
	350	14	490	515	175	20	10
	400	16	510	540	205	20	10
	450	18	530	570	245	20	10
	500	20	550	630	320	20	10
	600	24	590	680	470	20	10
	700	28	630	830	750	20	10
	750	30	670	895	980	20	10
	800	32	710	895	1050	20	10
	900	36	750	1015	1320	20	10
	1000	40	200	1070	1910	20	10

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3										
150					20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3							
150			19.6	19.6	19.6	19.6	19.6	16.7	15.2	14.1	13.2	12.5	12.0	11.8	11.5	11.4	11.3	10.8	10.0	9.4		
150	19.6	19.6	19.6	19.6	19.6	19.6	19.6	16.1	14.7	13.6	12.8	12.1										
150					20.4	20.4	20.4	20.3	19.6	18.9	18.2	16.9	15.9	14.4	13.8	13.3	12.5	10.0	7.2	5.0		
150					20.2	20.2	19.8	19.8	18.3	17.8	17.3	16.5	15.3	14.6	13.6	11.3						

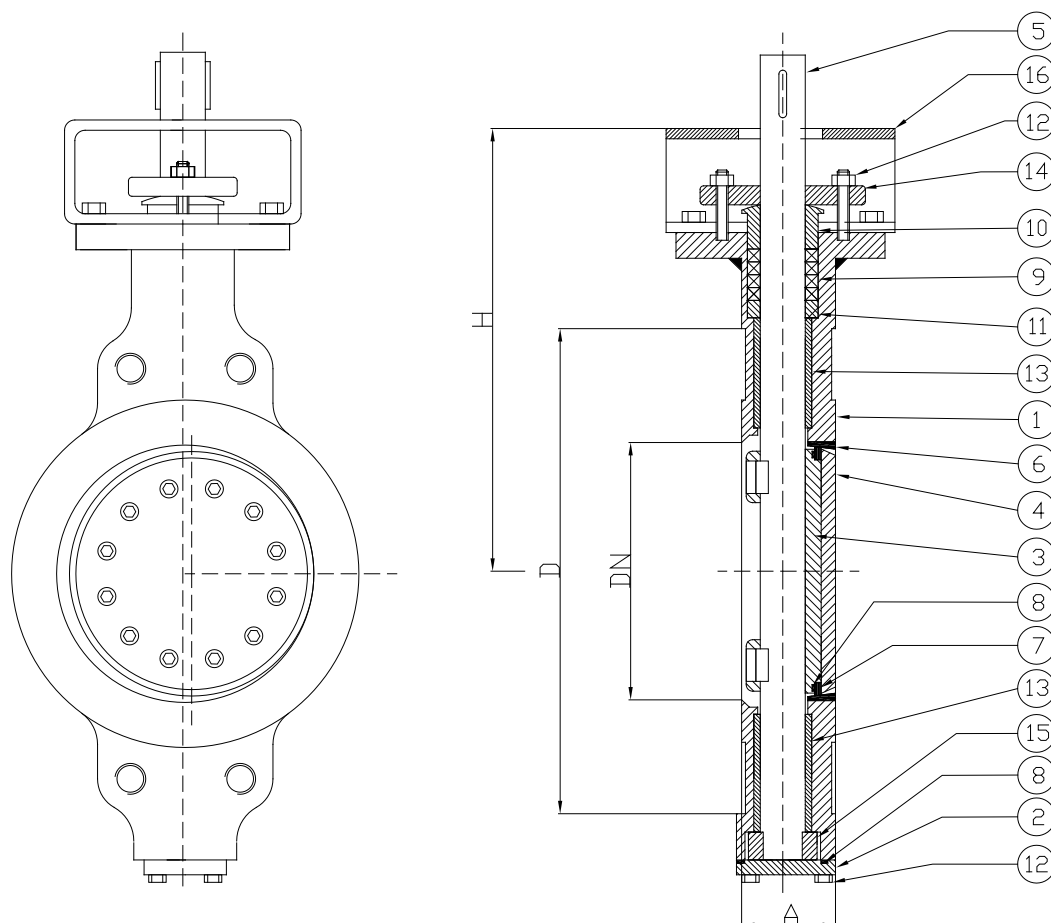
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

PN 63 DN 80 - DN 800

Wafer type drilling PN 63 or PN 40



0948

Standard features:

- ☒ Design EN 12516
EN 593
- ☒ Face to face ISO 5752 series 16
EN 558-1 series 16
DIN 3202 K3
- ☒ Materials EN 10213
EN 10025 / EN 10028
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
PN 63	80	64	215	225	24	63	26
	100	64	250	285	26	63	26
	125	70	295	325	42	63	26
	150	76	345	350	49	63	26
	200	89	415	420	65	63	26
	250	114	470	460	85	63	26
	300	114	530	510	140	63	26
	350	127	600	570	205	63	26
	400	140	670	590	285	63	26
	450	152	685	680	370	63	26
	500	152	800	720	425	63	26
	600	178	930	810	610	63	26
	700	229	1045	1150	820	63	26
	800	241	1164	1320	980	63	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6										
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6	37,8	36,4	29,8	23,2						
63			63,0	63,0	63,0	63,0	60,8	51,8	48,3	44,8	42,7	40,6	38,5	36,4	35,7	35,0	34,3	33,6	32,9	32,2		
63	63,0	63,0	63,0	63,0	63,0	63,0	59,4	44,8	39,9	35,0	32,9	30,8										
63					63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	60,2	56,0	54,6	53,2	43,0	32,8	24,1	15,4		
63					63,0	63,0	63,0	61,6	56,0	53,2	50,4	49,0	47,6									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

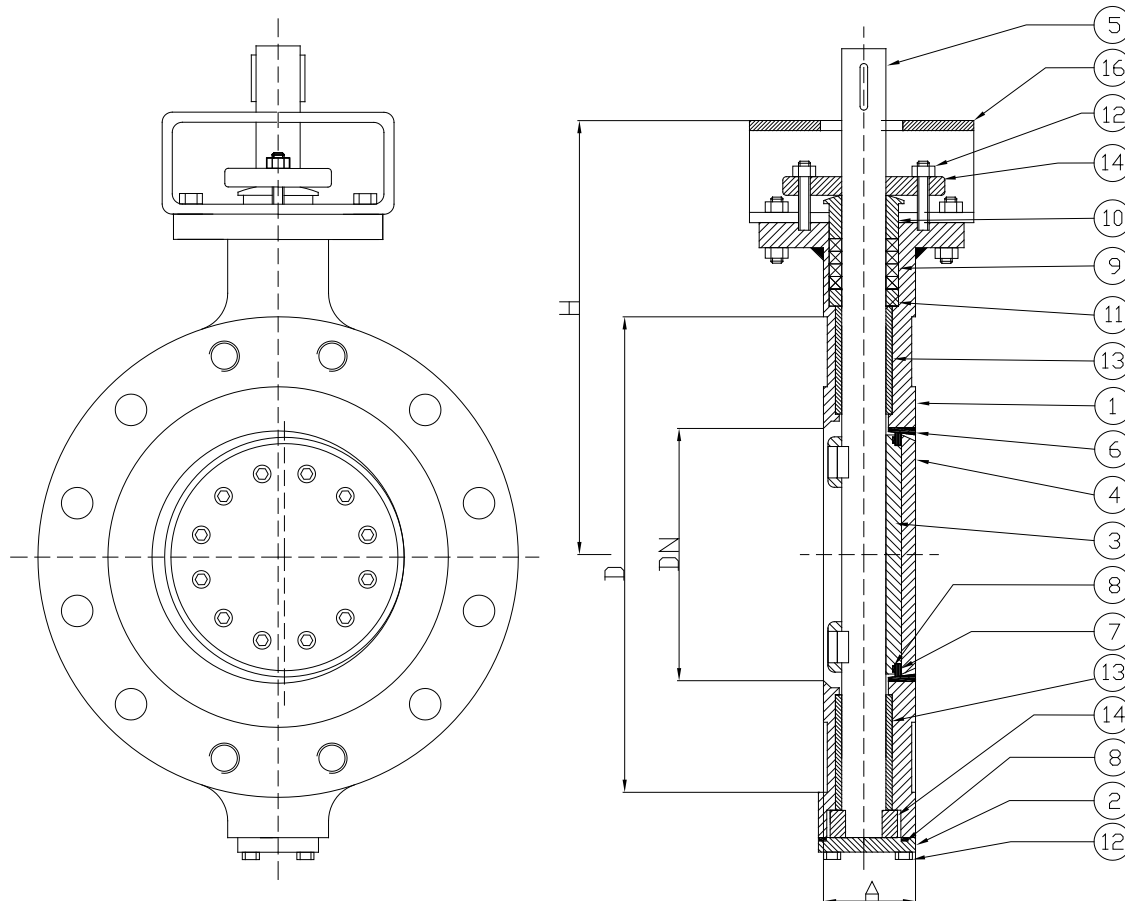
If the valves are provided with connection PN 40 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 63 DN 80 - DN 800

Lug - single flange type drilling PN 63 or PN 40



0948

Standard features:

- ☒ Design EN 12516
EN 593 (Fig. 3b)
- ☒ Face to face ISO 5752 series 16
EN 558-1 series 16
DIN 3202 K3
- ☒ Materials EN 10025
EN 10028
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices
- ☐ All tapped holes (EN 593 Fig. 3d)
- ☐ Lightweight lug type (EN 593 Fig. 3a or 3c)

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
PN 63	80	64	215	225	25	63	26
	100	64	250	285	30	63	26
	125	70	295	325	48	63	26
	150	76	345	350	55	63	26
	200	89	415	420	71	63	26
	250	114	470	460	95	63	26
	300	114	530	510	155	63	26
	350	127	600	570	295	63	26
	400	140	670	590	360	63	26
	450	152	685	680	540	63	26
	500	152	800	720	580	63	26
	600	178	930	810	890	63	26
	700	229	1045	1150	1060	63	26
	800	241	1164	1320	1110	63	26

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6										
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6	37,8	36,4	29,8	23,2						
63				63,0	63,0	63,0	60,8	51,8	48,3	44,8	42,7	40,6	38,5	36,4	35,7	35,0	34,3	33,6	32,9	32,2		
63	63,0	63,0	63,0	63,0	63,0	63,0	59,4	44,8	39,9	35,0	32,9	30,8										
63					63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	60,2	56,0	54,6	53,2	43,0	32,8	24,1	15,4		
63					63,0	63,0	63,0	61,6	56,0	53,2	50,4	49,0	47,6									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

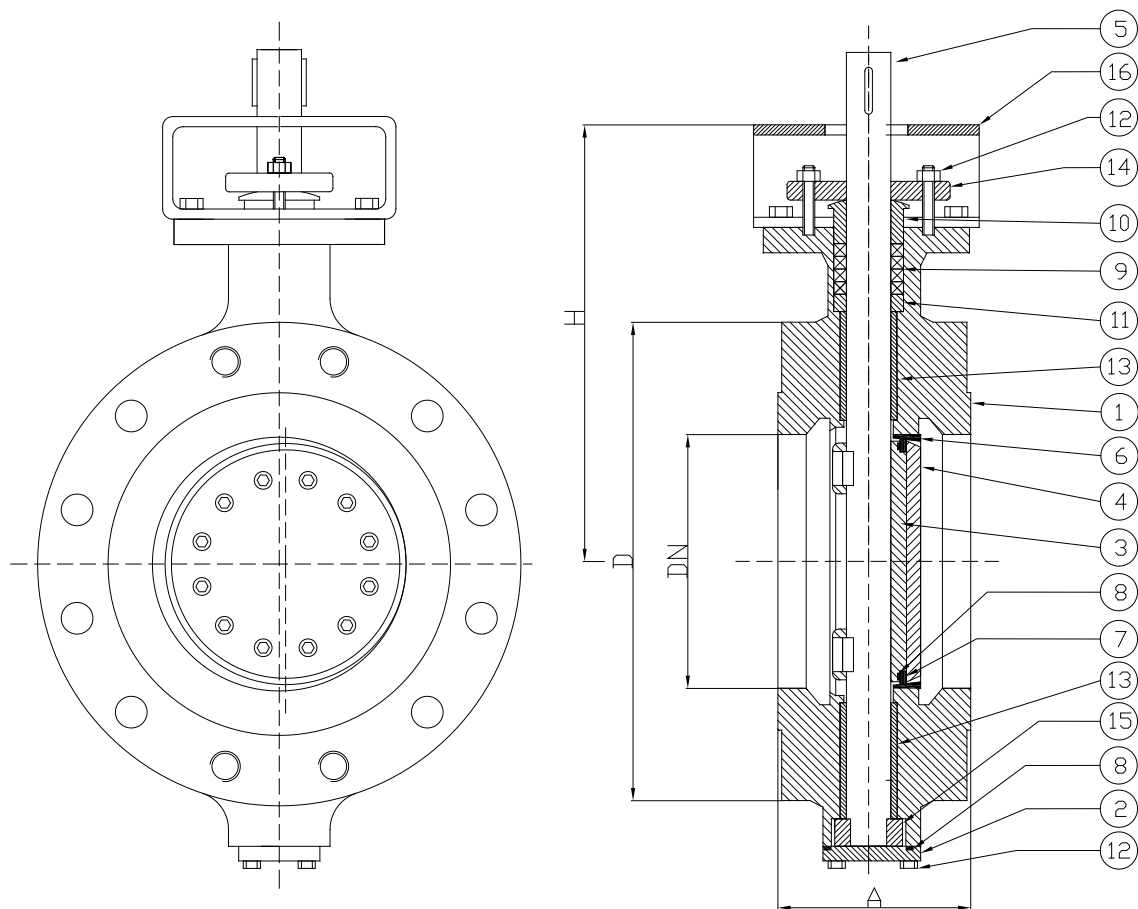
If the valves are provided with connection PN 40 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 63 DN 80 - DN 800

Flanged PN 63 or PN 40



0948

Standard features:

- | | |
|---|---|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 13
EN 558-1 series 13
BS 2080 series 13 |
| ☒ Flanges | EN 1092-1/21/B2 |
| ☒ Materials | EN 10213
EN 10025 / EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
EN 593 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0619	1.4581	1.4308	1.7357	1.1138
2	Cover	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4571 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4571	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

(1) Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

(²) Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

(3) Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

(4) Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

(⁵) Also available on request Graphite+1.4462 (duplex), PTFE+1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

0 recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1(^{\circ})$	$\Delta p2(^{\circ})$
PN 63	80	114	215	225	30	63	26
	100	127	250	285	42	63	26
	125	140	295	325	61	63	26
	150	140	345	350	72	63	26
	200	152	415	420	102	63	26
	250	165	470	460	115	63	26
	300	178	530	510	205	63	26
	350	190	600	570	320	63	26
	400	216	670	590	390	63	26
	450	222	685	680	580	63	26
	500	229	800	720	610	63	26
	600	267	930	810	920	63	26
700	292	1045	1150	1100	63	26	
800	318	1164	1320	1350	63	26	

⁽⁶⁾ Δp_1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp_2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

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Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

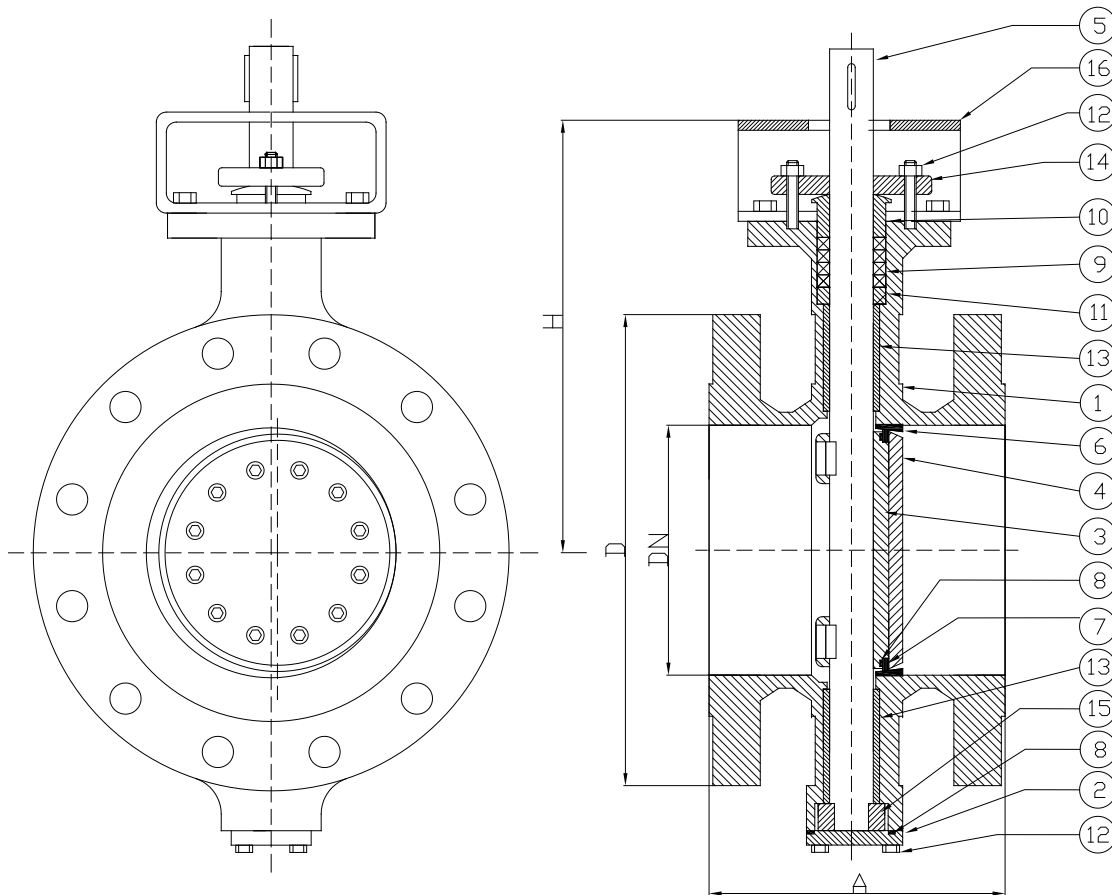
If the valves are provided with flanged connection PN 40 the maximum allowable pressure should be proportionally reduced.

(7) Suitable over 450 °C only if provided with stellite segt. (8) Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 63 DN 80 - DN 800

Flanged PN 63 or PN 40



0948

Standard features:

- ☒ Design EN 12516
EN 593
- ☒ Face to face ISO 5752 series 14
EN 558-1 series 14
DIN 3202 F4
- ☒ Flanges EN 1092-1/21/B2
- ☒ Materials EN 10213
EN 10025 / EN 10028
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
EN 593
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices

Material Specification

1	Body	1.0044	1.0425	1.4581	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4571 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4571	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

PN 63	DN	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	180	215	225	32	63	26
	100	190	250	285	45	63	26
	125	200	295	325	67	63	26
	150	210	345	350	78	63	26
	200	230	415	420	110	63	26
	250	250	470	460	120	63	26
	300	270	530	510	210	63	26
	350	290	600	570	330	63	26
	400	310	670	590	405	63	26
	450	330	685	680	600	63	26
	500	350	800	720	630	63	26
	600	390	930	810	950	63	26
	700	430	1045	1150	1120	63	26
	800	470	1164	1320	1380	63	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6										
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6	37,8	36,4	29,8	23,2						
63			63,0	63,0	63,0	63,0	60,8	51,8	48,3	44,8	42,7	40,6	38,5	36,4	35,7	35,0	34,3	33,6	32,9	32,2		
63	63,0	63,0	63,0	63,0	63,0	63,0	59,4	44,8	39,9	35,0	32,9	30,8										
63					63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	60,2	56,0	54,6	53,2	43,0	32,8	24,1	15,4		
63					63,0	63,0	63,0	61,6	56,0	53,2	50,4	49,0	47,6									

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

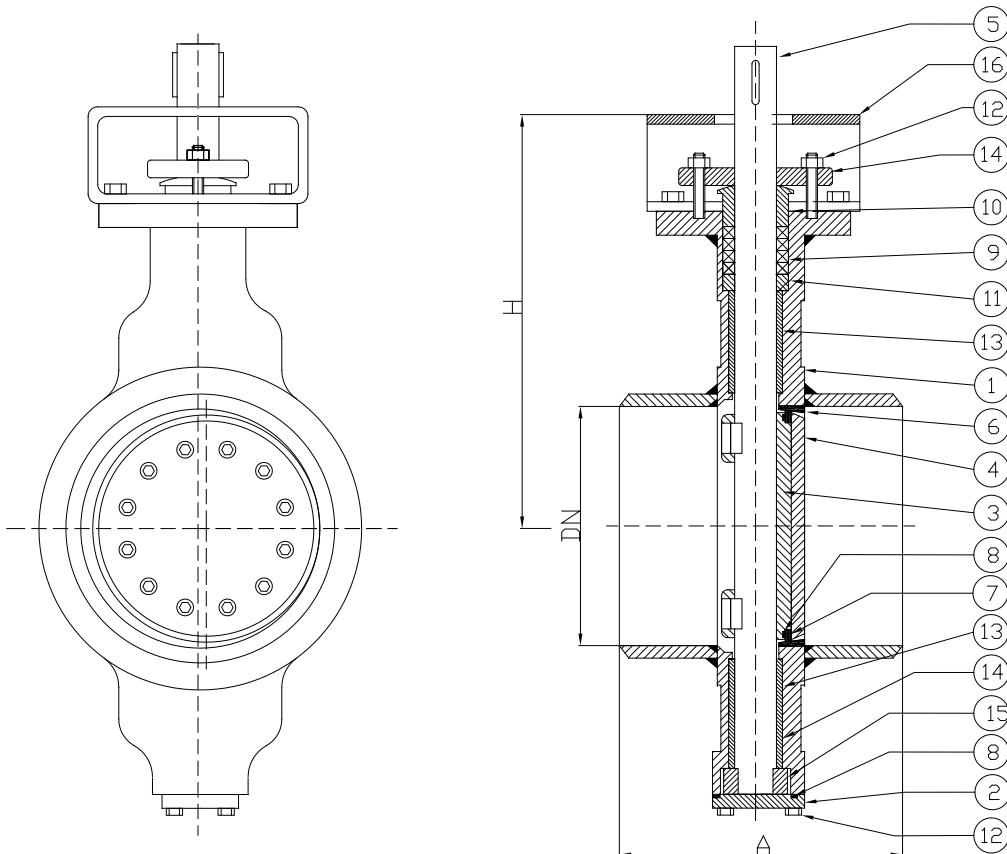
If the valves are provided with flanged connection PN 40 the maximum allowable pressure should be proportionally reduced.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 63 DN 80 - DN 800

Butt Welding Ends type



0948

Standard features:

- | | |
|---|---------------------------------|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | EN 12627 |
| ☒ Materials | EN 10025
EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
PN 63	80	180	225	25	63	26
	100	190	285	28	63	26
	125	200	325	35	63	26
	150	210	350	38	63	26
	200	430	420	65	63	26
	250	450	460	90	63	26
	300	470	510	130	63	26
	350	490	570	185	63	26
	400	510	590	220	63	26
	450	530	680	260	63	26
	500	550	720	340	63	26
	600	590	810	490	63	26
	700	630	1150	820	63	26
	800	670	1320	1100	63	26

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6										
63					63,0	63,0	62,2	58,8	53,9	49,0	44,8	40,6	37,8	36,4	29,8	23,2						
63			63,0	63,0	63,0	63,0	60,8	51,8	48,3	44,8	42,7	40,6	38,5	36,4	35,7	35,0	34,3	33,6	32,9	32,2		
63	63,0	63,0	63,0	63,0	63,0	63,0	59,4	44,8	39,9	35,0	32,9	30,8										
63					63,0	63,0	63,0	63,0	63,0	63,0	63,0	60,2	56,0	54,6	53,2	43,0	32,8	24,1	15,4			
63					63,0	63,0	63,0	61,6	56,0	53,2	50,4	49,0	47,6									

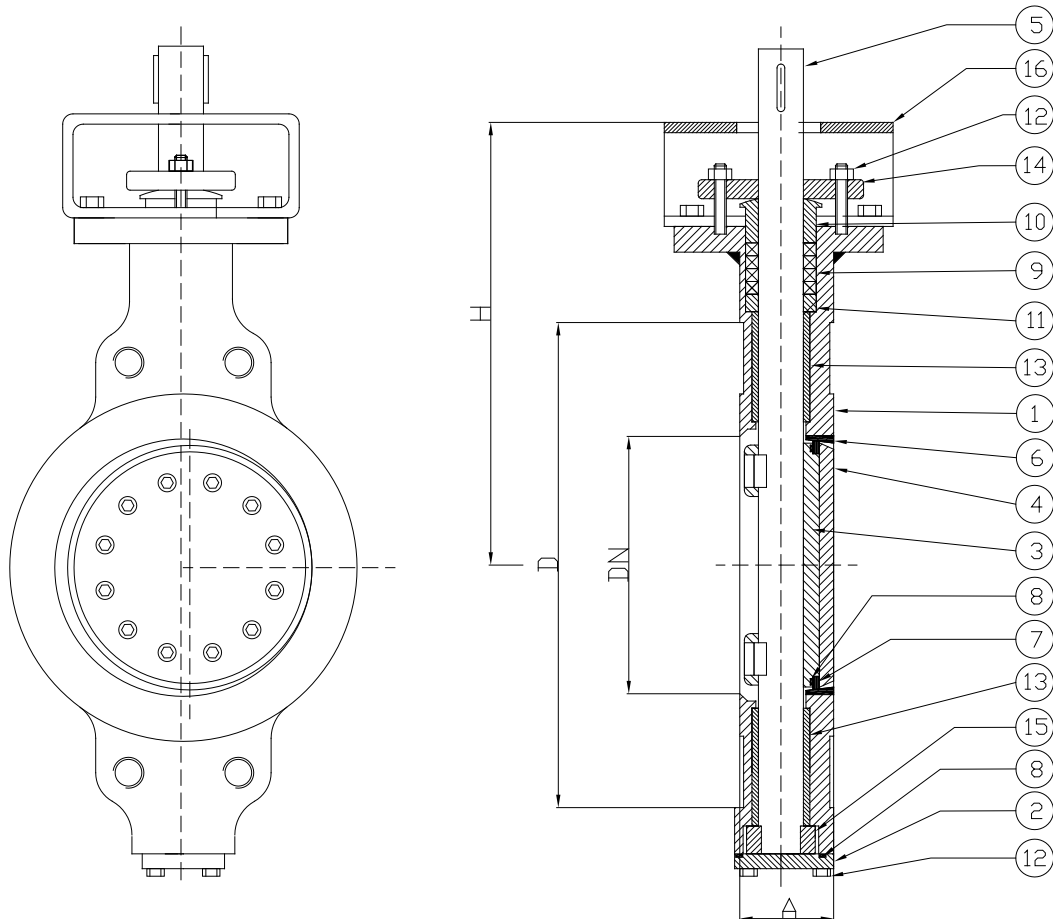
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

Class 300 NPS 3" - NPS 24"

Wafer type



0948

Standard features:

- | | |
|---|-------------------------------|
| ☒ Design | API 609
EN 12516
EN 593 |
| ☒ Face to face | API 609 CL 300 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 300	DN	NPS	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
	80	3	48	210	250	22	50	26
	100	4	54	254	280	24	50	26
	150	6	59	318	350	45	50	26
	200	8	73	381	420	60	50	26
	250	10	83	444	460	80	50	26
	300	12	92	521	510	130	50	26
	350	14	117	584	570	195	50	26
	400	16	133	648	590	270	50	26
	450	18	149	711	680	355	50	26
	500	20	159	775	720	405	50	26
	600	24	181	914	810	605	50	26
	700	28	229	1045	1150	800	50	26
	800	32	241	1164	1320	960	50	26

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in A420 or XM 19. $\Delta p2$ maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0										
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0	36.5	34.5	28.7							
300			49.6	49.6	49.6	49.6	49.6	42.2	38.5	35.7	33.4	31.6	30.5	29.4	29.1	28.8	28.7	27.4	25.3	23.9		
300	49.6	49.6	49.6	49.6	49.6	49.6	49.6	40.9	37.2	34.5	32.5	30.7										
300					51.7	51.7	51.7	51.5	49.7	48.0	46.2	42.9	40.2	36.6	35.1	33.8	31.7	25.2	18.2	12.7		
300					51.1	51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0									

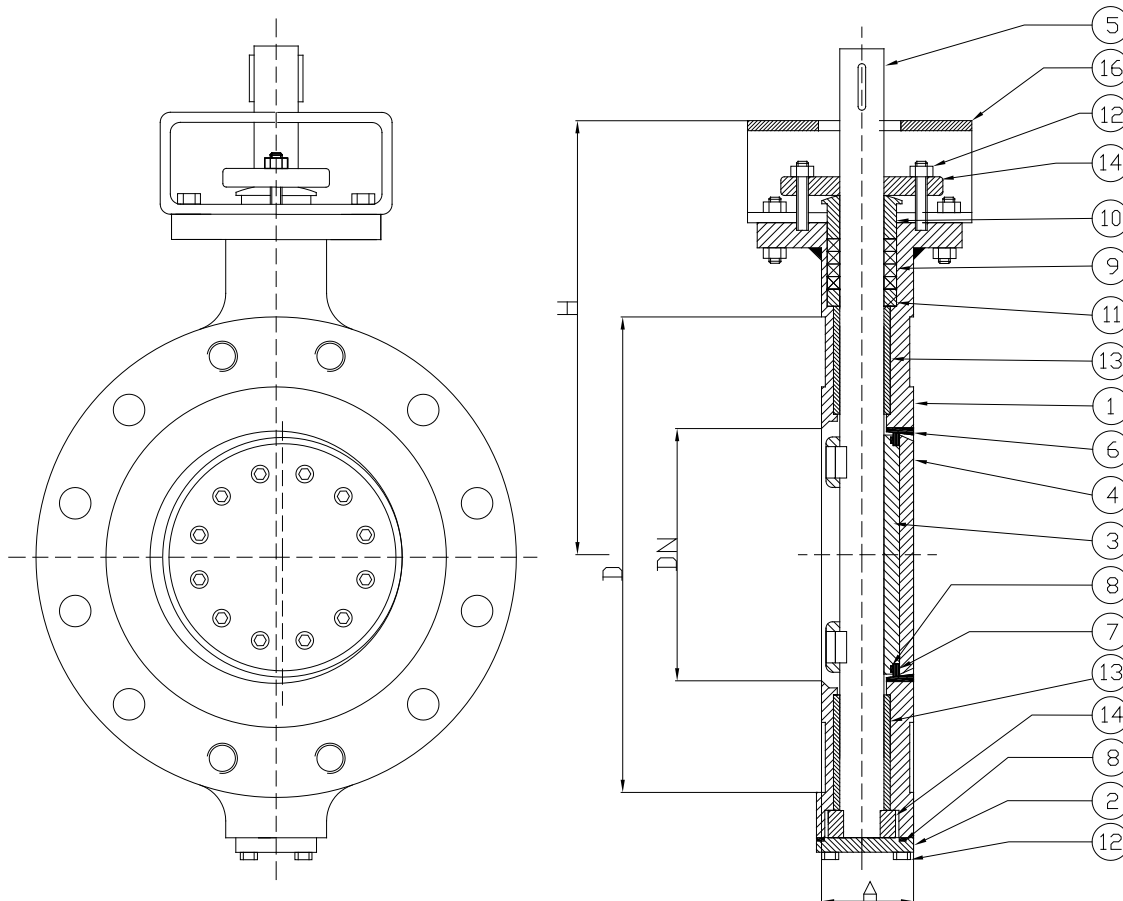
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 300 NPS 3" - NPS 32"

Lug - single flange type



0948

Standard features:

- | | |
|---|---|
| ☒ Design | API 609
EN 12516
EN 593 (Fig. 3b) |
| ☒ Face to face | API 609 CL 300 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|--|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |
| ☐ All tapped holes (EN 593 Fig. 3d) |
| ☐ Lightweight lug type (EN 593 Fig. 3a or 3c) |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Scews	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Scews (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 300	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	48	210	225	23	50	26
	100	4	54	254	285	28	50	26
	150	6	59	318	350	53	50	26
	200	8	73	381	420	68	50	26
	250	10	83	444	460	90	50	26
	300	12	92	521	510	148	50	26
	350	14	117	584	570	285	50	26
	400	16	133	648	590	350	50	26
	450	18	149	711	680	525	50	26
	500	20	159	775	720	565	50	26
	600	24	181	914	810	875	50	26
	700	28	229	1045	1150	1060	50	26
	800	32	241	1164	1320	1110	50	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0										
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0	36.5	34.5	28.7							
300			49.6	49.6	49.6	49.6	49.6	42.2	38.5	35.7	33.4	31.6	30.5	29.4	29.1	28.8	28.7	27.4	25.3	23.9		
300	49.6	49.6	49.6	49.6	49.6	49.6	49.6	40.9	37.2	34.5	32.5	30.7										
300					51.7	51.7	51.7	51.5	49.7	48.0	46.2	42.9	40.2	36.6	35.1	33.8	31.7	25.2	18.2	12.7		
300					51.1	51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0									

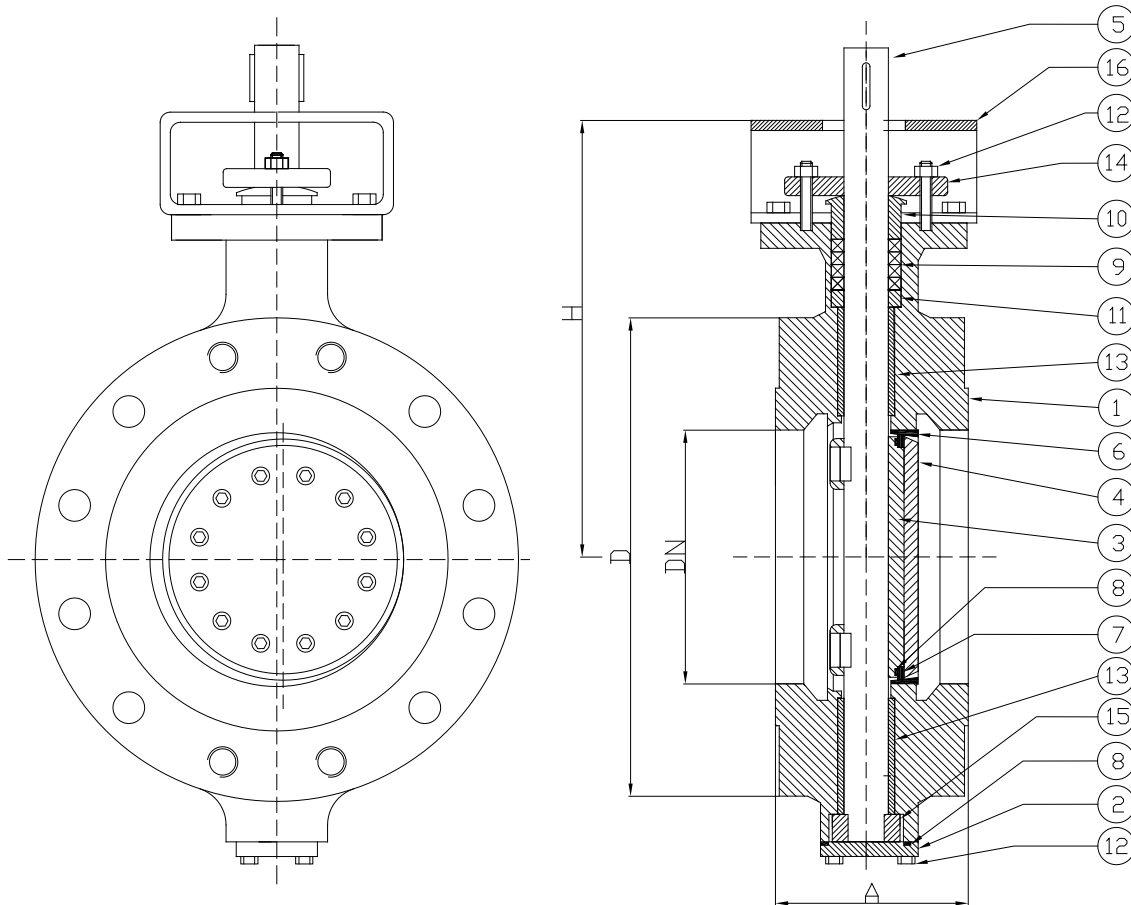
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 300 NPS 3" - NPS 32"

Flanges ANSI Class 300



0948

Standard features:

- | | |
|---|---|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 13
EN 558-1 series 13
BS 2080 series 13 |
| ☒ Flanges | ASME B 16.5 (EN 1759-1) |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 216 WCB	A 351 CF8M	A 351 CF8	A 216 WC6	A 352 LCC
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A 193 B8M / A 193 Gr. 8M, A 193 B8 / A 193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 300	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	114	210	225	30	50	26
	100	4	127	254	285	42	50	26
	150	6	140	318	350	72	50	26
	200	8	152	381	420	102	50	26
	250	10	165	444	460	115	50	26
	300	12	178	521	510	205	50	26
	350	14	190	584	570	320	50	26
	400	16	216	648	590	390	50	26
	450	18	222	711	680	580	50	26
	500	20	229	775	720	610	50	26
	600	24	267	914	810	920	50	26
	700	28	292	1035	1150	1100	50	26
	800	32	318	1022	1320	1350	50	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0										
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0	36.5	34.5	28.7							
300			49.6	49.6	49.6	49.6	49.6	42.2	38.5	35.7	33.4	31.6	30.5	29.4	29.1	28.8	28.7	27.4	25.3	23.9		
300	49.6	49.6	49.6	49.6	49.6	49.6	49.6	40.9	37.2	34.5	32.5	30.7										
300					51.7	51.7	51.7	51.5	49.7	48.0	46.2	42.9	40.2	36.6	35.1	33.8	31.7	25.2	18.2	12.7		
300					51.1	51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0									

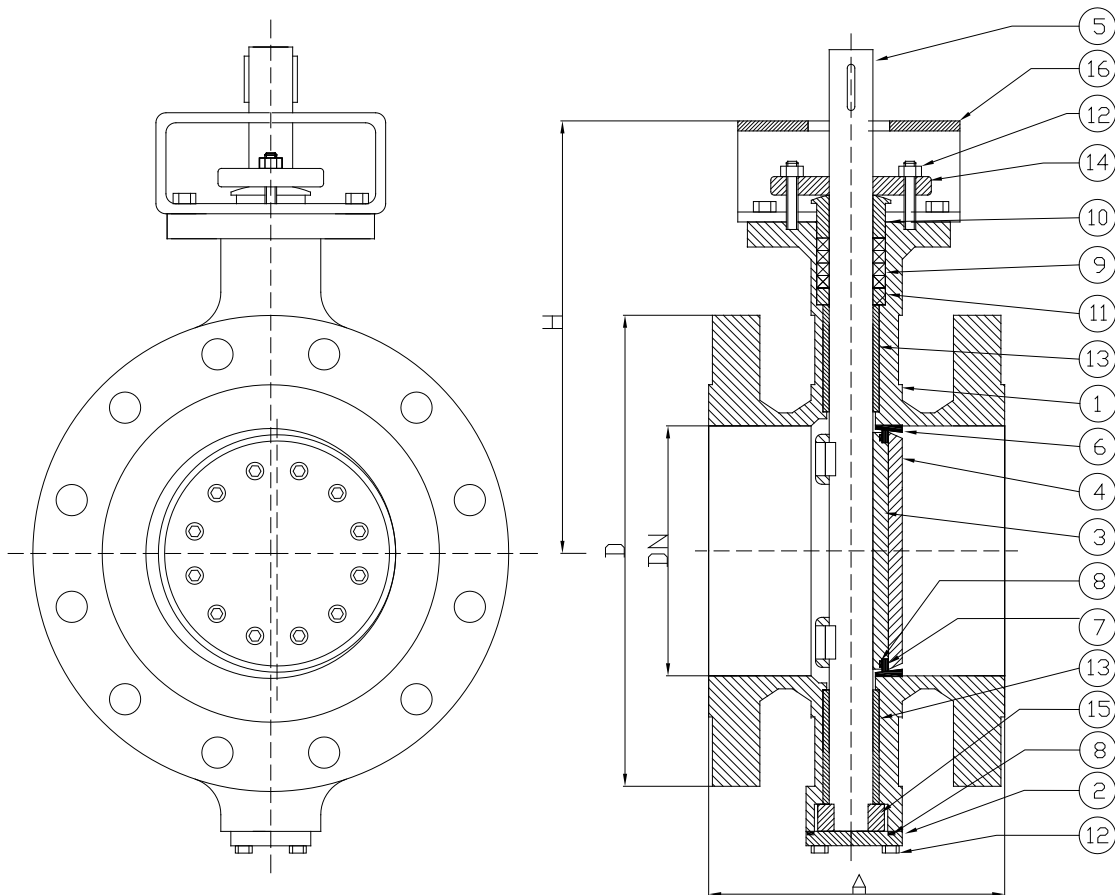
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 300 NPS 3" - NPS 32"

Flanges ANSI Class 300



0948

Standard features:

- ☒ Design ASME B 16.34
EN 12516
EN 593
- ☒ Face to face ISO 5752 series 4
ASME B16.10 Tab.2 Col.10
EN 558-1 series 4
- ☒ Flanges ASME B 16.5 (EN 1759-1)
- ☒ Materials ASME B 16.34
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
API 598
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices

Material Specification

1	Body	A 36	A 216 WCB	A 351 CF8M	A 351 CF8	A 216 WC6	A 352 LCC
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A 193 B8M / A 193 Gr. 8M, A 193 B8 / A 193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 300	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	282	210	225	35	50	26
	100	4	305	254	285	50	50	26
	150	6	403	318	350	90	50	26
	200	8	419	381	420	130	50	26
	250	10	457	444	460	150	50	26
	300	12	502	521	510	270	50	26
	350	14	762	584	570	435	50	26
	400	16	838	648	590	540	50	26
	450	18	914	711	680	785	50	26
	500	20	991	775	720	840	50	26
	600	24	1143	914	810	1242	50	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0										
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0	36.5	34.5	28.7							
300			49.6	49.6	49.6	49.6	49.6	42.2	38.5	35.7	33.4	31.6	30.5	29.4	29.1	28.8	28.7	27.4	25.3	23.9		
300	49.6	49.6	49.6	49.6	49.6	49.6	49.6	40.9	37.2	34.5	32.5	30.7										
300					51.7	51.7	51.7	51.5	49.7	48.0	46.2	42.9	40.2	36.6	35.1	33.8	31.7	25.2	18.2	12.7		
300					51.1	51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0									

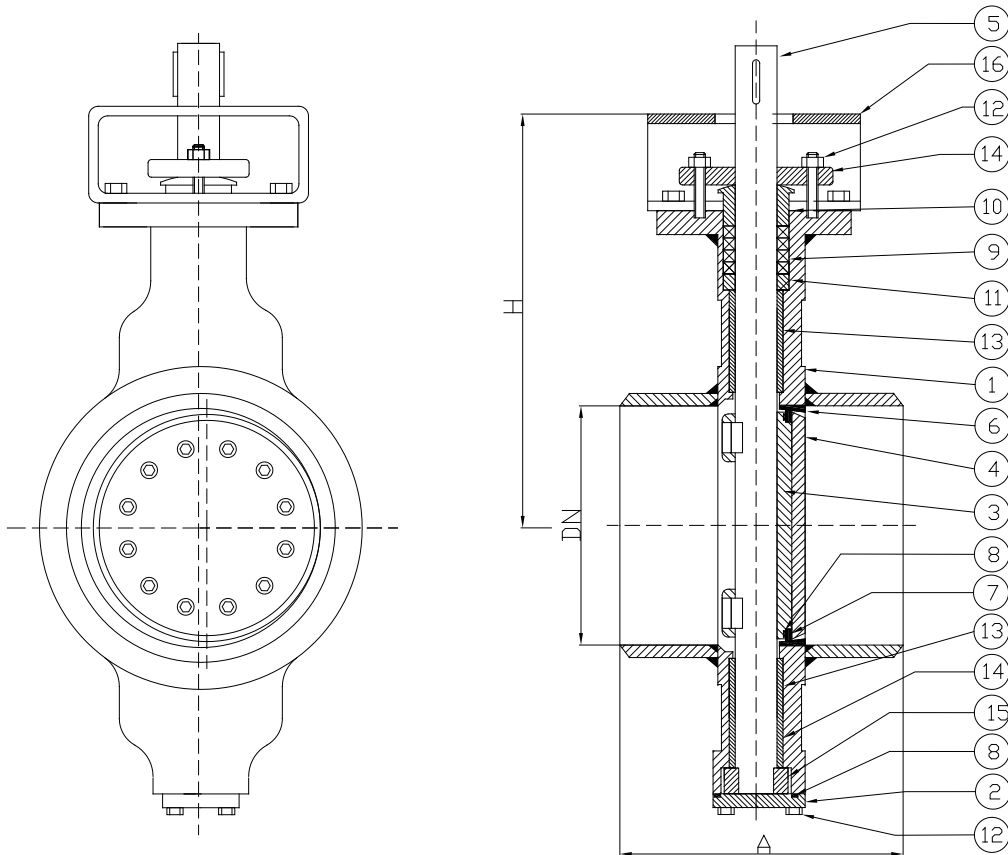
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 300 NPS 3" - NPS 32"

Butt Welding Ends type



0948

Standard features:

- | | |
|---|------------------------------------|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | ASME B 16.25 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A316 ⁽⁵⁾	Graphite + A316 ⁽⁵⁾	Graphite + A316 ⁽⁵⁾	Graphite + A316 ⁽⁵⁾	Graphite + A316 ⁽⁵⁾	Graphite + A316 ⁽⁵⁾
8	O Gasket	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾
9	O Packing	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾	Graphite + A316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A 515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 300	DN	NPS	A	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	180	225	25	50	26
	100	4	190	285	28	50	26
	150	6	200	325	35	50	26
	200	8	210	350	38	50	26
	250	10	430	420	65	50	26
	300	12	450	460	90	50	26
	350	14	470	510	130	50	26
	400	16	490	570	185	50	26
	450	18	510	590	220	50	26
	500	20	530	680	260	50	26
	600	24	550	720	340	50	26
	700	28	590	810	490	50	26
	800	32	630	1150	820	50	26

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0										
300					51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0	36.5	34.5	28.7							
300			49.6	49.6	49.6	49.6	49.6	42.2	38.5	35.7	33.4	31.6	30.5	29.4	29.1	28.8	28.7	27.4	25.3	23.9		
300	49.6	49.6	49.6	49.6	49.6	49.6	49.6	40.9	37.2	34.5	32.5	30.7										
300					51.7	51.7	51.7	51.5	49.7	48.0	46.2	42.9	40.2	36.6	35.1	33.8	31.7	25.2	18.2	12.7		
300					51.1	51.1	50.1	46.4	45.2	43.8	41.7	38.7	37.0									

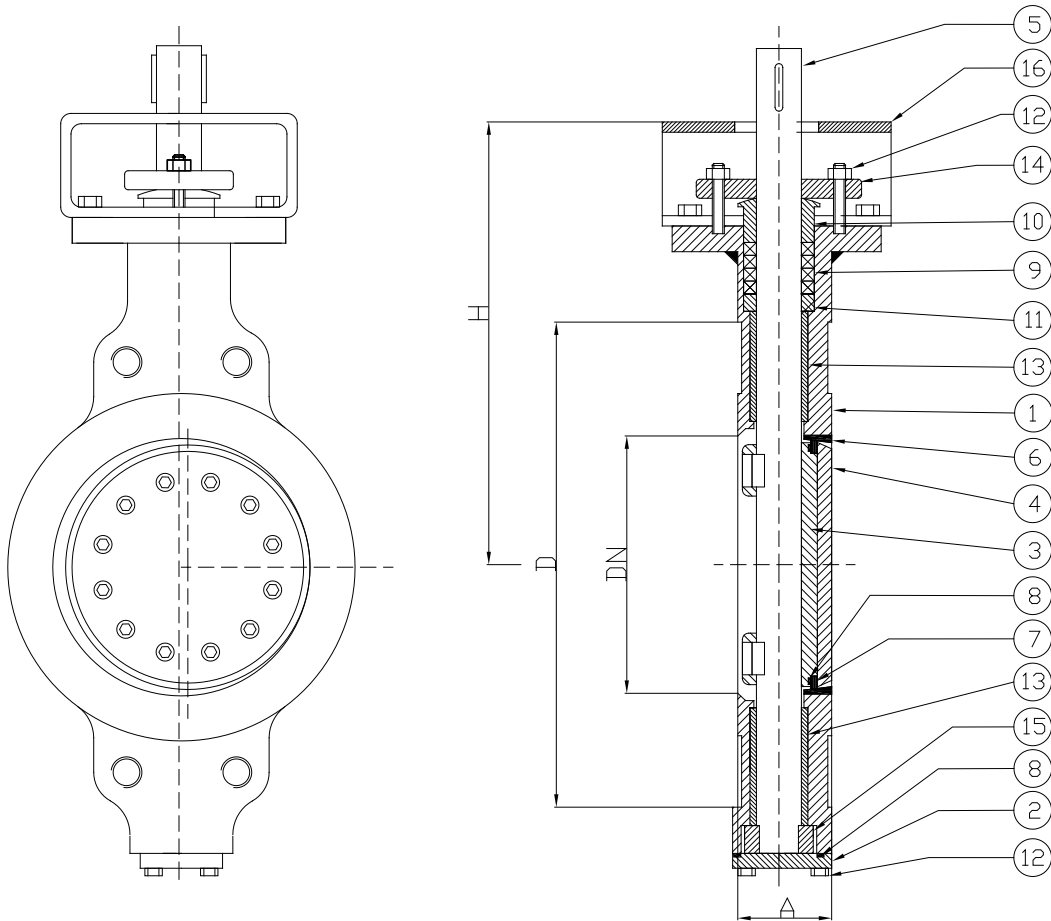
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

PN 100 DN 80 - DN 350

Wafer type drilling PN 100



0948

Standard features:

- | | |
|---|---------------------------------|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | API 609 CL 600 |
| ☒ Materials | EN 10025
EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
EN 593 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1$ (⁶)	$\Delta p2$ (⁶)
PN 100	80	64	230	260	25	100	42
	100	64	265	280	30	100	42
	125	78	315	305	52	100	42
	150	78	355	315	60	100	42
	200	102	430	380	70	100	42
	250	117	505	420	95	100	42
	300	140	585	480	145	100	42
	350	155	655	515	285	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
100					100	100	98,7	93,3	85,6	77,8	71,1	64,4										
100					100	100	98,7	93,3	85,6	77,8	71,1	64,4	60,0	57,8	47,3	36,9						
100			100	100	100	100	96,4	82,2	76,7	71,1	67,8	64,4	61,1	57,8	56,7	55,6	54,4	53,3	52,2	51,1		
100	100	100	100	100	100	100	94,2	71,1	63,3	55,6	52,2	48,9										
100					100	100	100	100	100	100	100	100	95,6	88,9	86,7	84,4	68,2	52,0	38,2	24,4		
100				100	100	100	97,8	88,9	84,4	80,0	77,8	75,6										

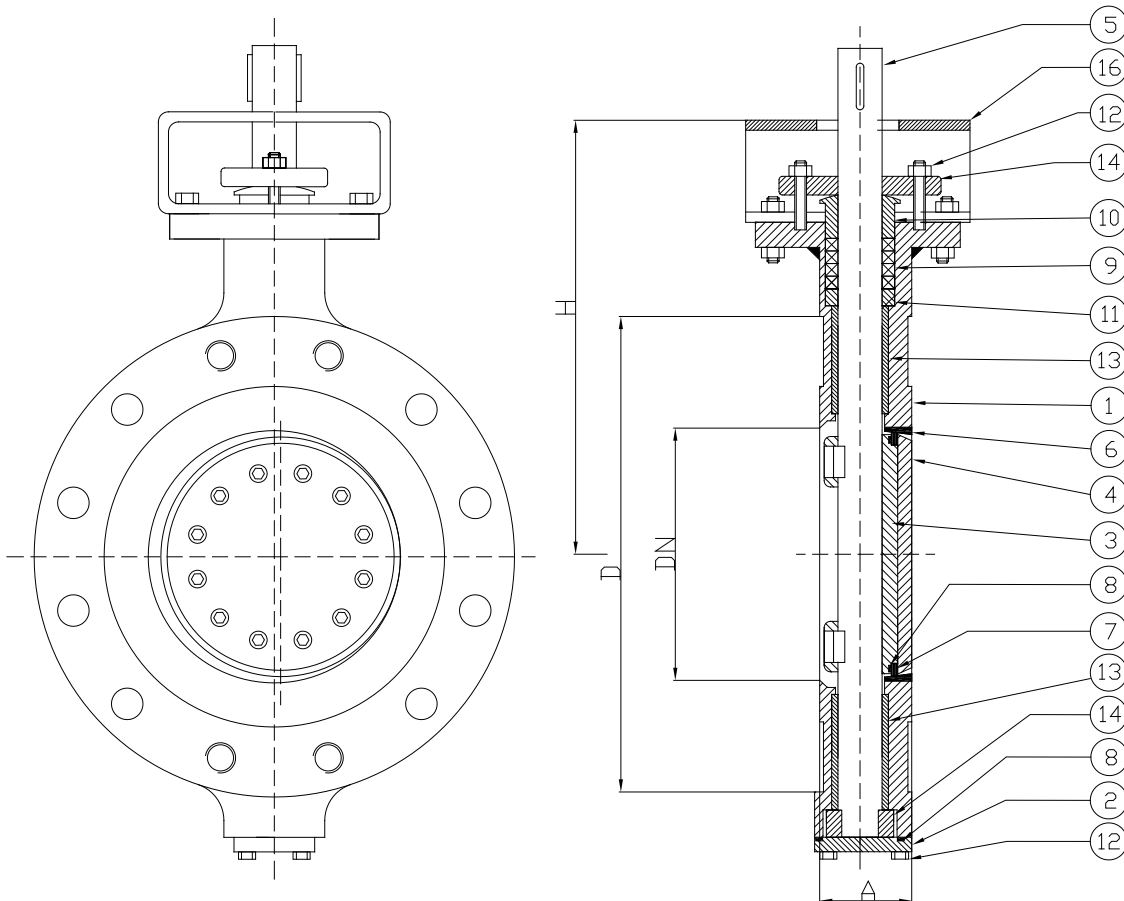
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 100 DN 80 - DN 350

Lug - single flange drilling PN 100



0948

Standard features:

- | | |
|---|---------------------------------|
| ☒ Design | EN 12516
EN 593 (Fig. 3b) |
| ☒ Face to face | API 609 CL 600 |
| ☒ Materials | EN 10025
EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
EN 593 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|--|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |
| ☐ All tapped holes (EN 593 Fig. 3d) |
| ☐ Lightweight lug type (EN 593 Fig. 3a or 3c) |

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
PN 100	80	64	230	260	28	100	42
	100	64	265	280	35	100	42
	125	78	315	305	60	100	42
	150	78	355	315	70	100	42
	200	102	430	380	80	100	42
	250	117	505	420	110	100	42
	300	140	585	480	160	100	42
	350	155	655	515	300	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

	PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
	100					100	100	98,7	93,3	85,6	77,8	71,1	64,4										
	100					100	100	98,7	93,3	85,6	77,8	71,1	64,4	60,0	57,8	47,3	36,9						
	100			100	100	100	100	96,4	82,2	76,7	71,1	67,8	64,4	61,1	57,8	56,7	55,6	54,4	53,3	52,2	51,1		
	100	100	100	100	100	100	100	94,2	71,1	63,3	55,6	52,2	48,9										
	100					100	100	100	100	100	100	100	100	95,6	88,9	86,7	84,4	68,2	52,0	38,2	24,4		
	100					100	100	100	97,8	88,9	84,4	80,0	77,8	75,6									

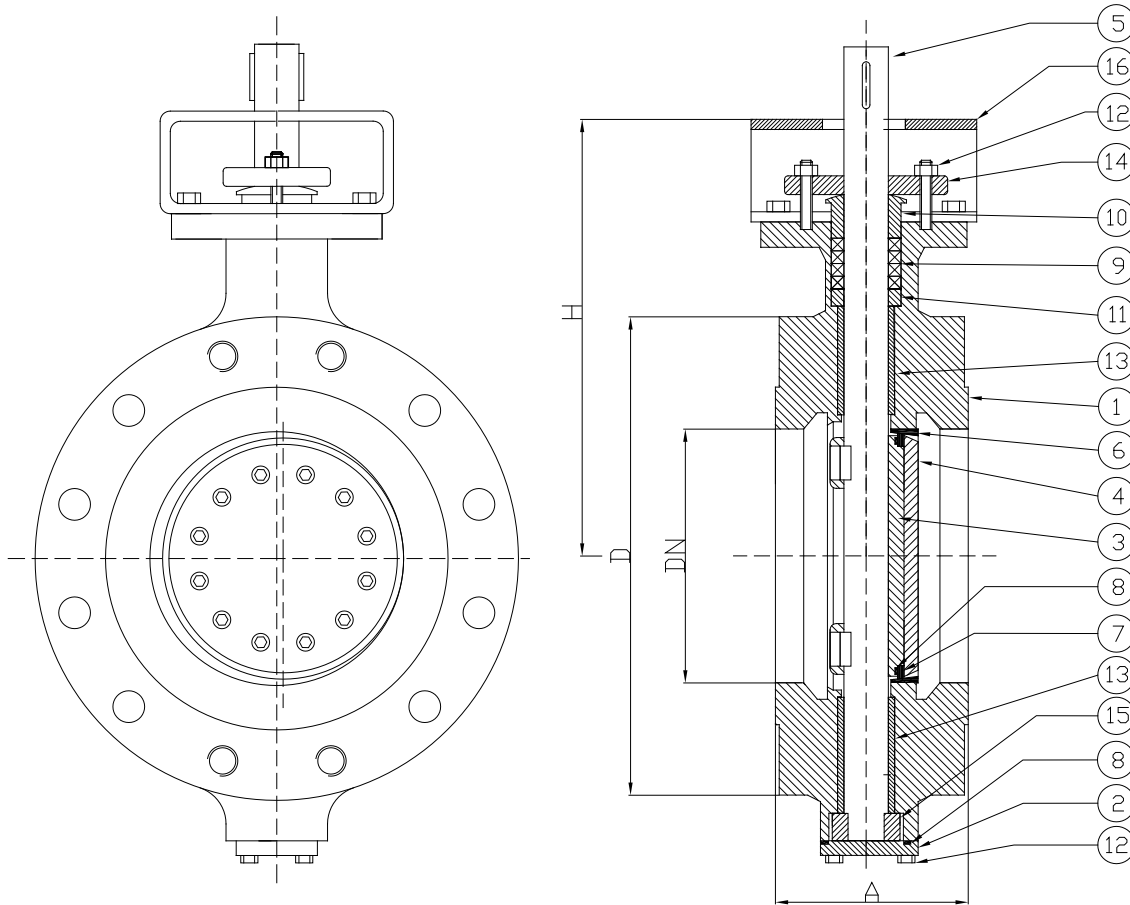
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 100 DN 80 - DN 600

Flanged PN 100



0948

Standard features:

- | | |
|---|---|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 14
EN 558-1 series 14
DIN 3202 F4 |
| ☒ Flanges | EN 1092-1/21/B2 |
| ☒ Materials | EN 10213
EN 10025/ EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
EN 593 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0425	1.4581	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4571	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4571 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾	Graphite + 1.4401 ⁽⁵⁾
8	O Gasket	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
9	O Packing	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾	Graphite + 1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4571	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

⁽⁵⁾ Also available on request Graphite + 1.4462 (duplex), PTFE + 1.4401, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	A	D	H	Kg	$\Delta p1$ ⁽⁶⁾	$\Delta p2$ ⁽⁶⁾
PN 100	80	180	230	250	28	100	42
	100	190	265	280	33	100	42
	125	200	315	305	55	100	42
	150	210	355	315	65	100	42
	200	230	430	380	90	100	42
	250	250	505	420	105	100	42
	300	270	585	480	180	100	42
	350	290	655	515	290	100	42
	400	310	715	540	340	100	42
	450	330	745	570	480	100	42
	500	350	870	630	520	100	42
	600	390	990	680	625	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in 1.4021 or 1.3964. $\Delta p2$ maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

	PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
	100					100	100	98,7	93,3	85,6	77,8	71,1	64,4										
	100					100	100	98,7	93,3	85,6	77,8	71,1	64,4	60,0	57,8	47,3	36,9						
	100			100	100	100	100	96,4	82,2	76,7	71,1	67,8	64,4	61,1	57,8	56,7	55,6	54,4	53,3	52,2	51,1		
	100	100	100	100	100	100	100	94,2	71,1	63,3	55,6	52,2	48,9										
	100					100	100	100	100	100	100	100	100	95,6	88,9	86,7	84,4	68,2	52,0	38,2	24,4		
	100					100	100	100	97,8	88,9	84,4	80,0	77,8	75,6									

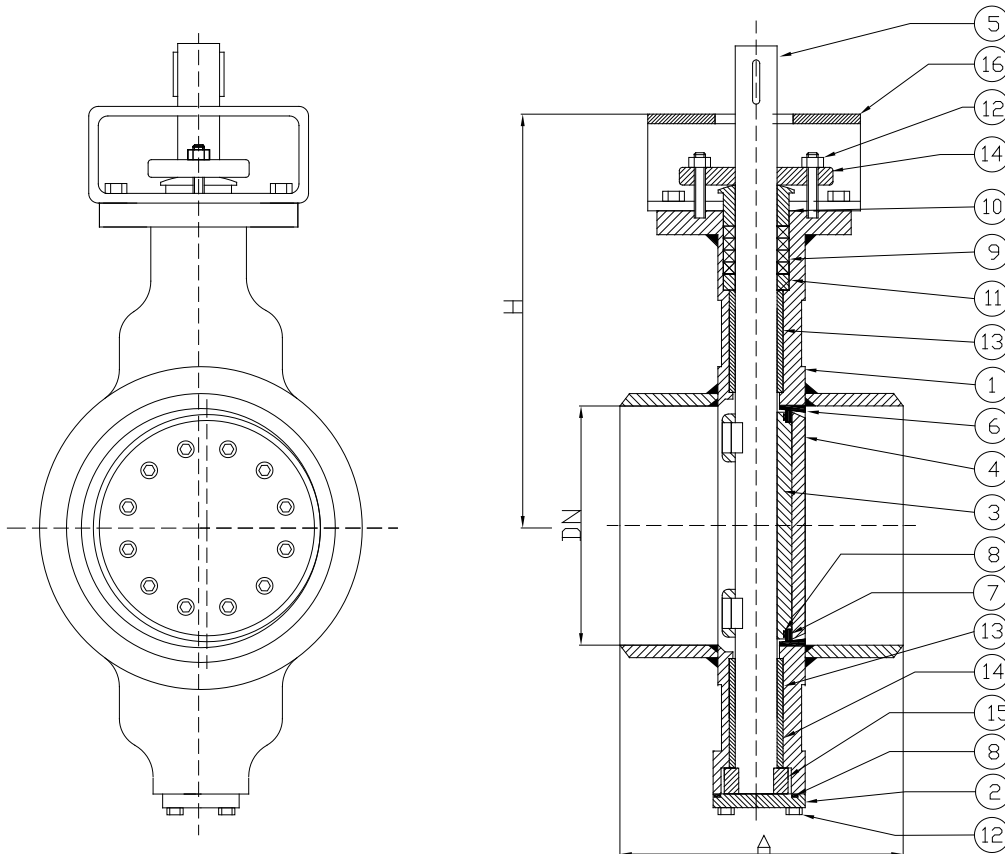
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

PN 100 DN 80 - DN 600

Butt Welding Ends type



0948

Standard features:

- | | |
|---|---------------------------------|
| ☒ Design | EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | EN 12627 |
| ☒ Materials | EN 10025
EN 10028
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
2	Cover	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
3	x Disc	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
4	Retainer flange	1.0044	1.0425	1.4401	1.4301	1.7335	1.0488
5	x Shaft	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4401 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4502 ⁽²⁾	1.4401 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	1.4502 ⁽²⁾
7	x Seal ring	Graphite+1.4401 ⁽⁵⁾	Graphite+1.4401 ⁽⁵⁾	Graphite+1.4401 ⁽⁵⁾	Graphite+1.4401 ⁽⁵⁾	Graphite+1.4401 ⁽⁵⁾	Graphite+1.4401 ⁽⁵⁾
8	O Gasket	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾
9	O Packing	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾
10	x Gland	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
11	x Spacer	1.0402	1.0402	1.4401	1.4301	1.0402	1.0402
12	Bolts & Screws	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.1191 ⁽⁴⁾	1.1191 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
13	x Bush	1.0402 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT	1.4401 NHT
14	Gland flange	1.0425	1.0425	1.4301	1.4301	1.0352	1.0488
15	Autolock	1.0402	1.0402	1.4401	1.4301	1.4021	1.0402
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.
⁽²⁾ Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.
⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).
⁽⁴⁾ Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.
⁽⁵⁾ Also available on request Graphite+1.4462 (duplex), PTFE+1.4401, or other materials.
Equivalent or superior materials can be supplied if the listed material is not available (e.g. 1.0619 can replace 1.0425 for some sizes).
O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

PN 100	DN	A	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	180	250	28	100	42
	100	190	280	33	100	42
	125	200	300	40	100	42
	150	210	345	45	100	42
	200	430	410	75	100	42
	250	450	450	105	100	42
	300	470	480	140	100	42
	350	490	540	205	100	42
	400	510	570	235	100	42
	450	530	655	280	100	42
	500	550	690	360	100	42
	600	590	780	510	100	42

⁽⁶⁾ Δp1 maximum differential pressure with shaft in 1.4021 or 1.3964. Δp2 maximum differential pressure with shaft in 1.4401 or 1.4571 or 1.4301.

Pressure Temperature Ratings (°C / bar)

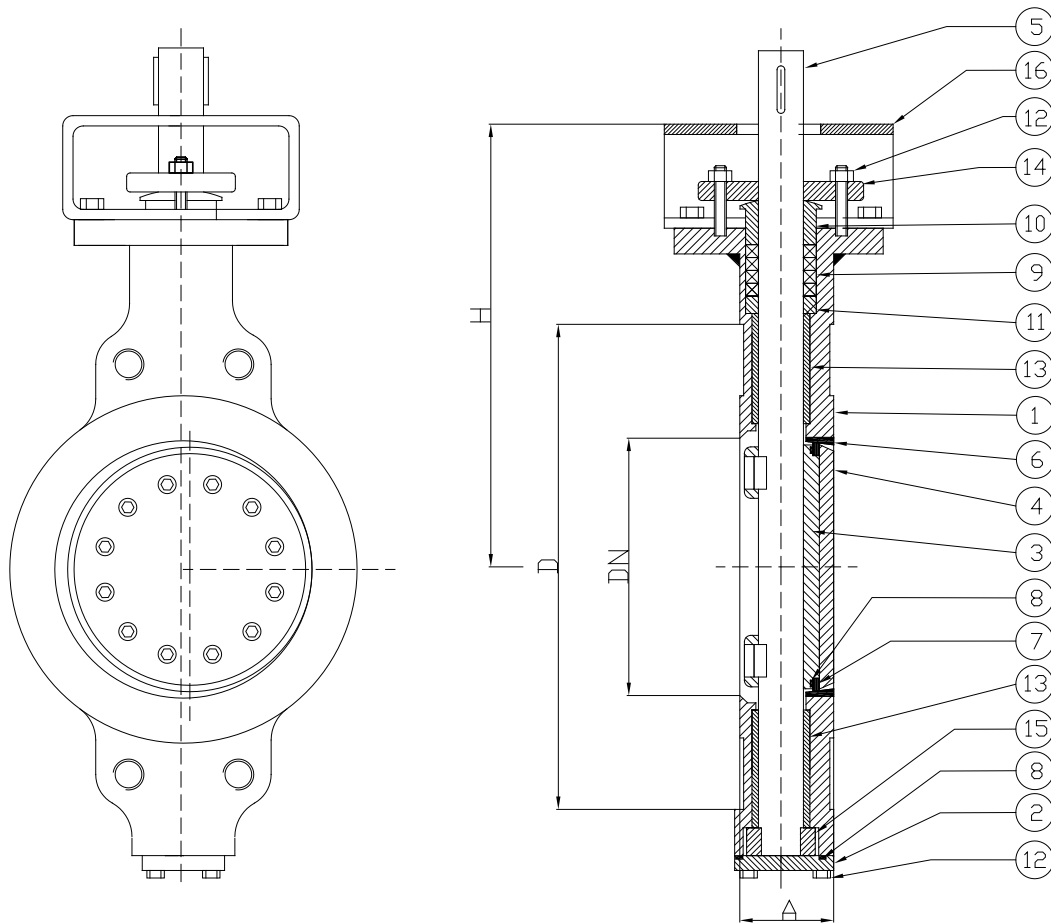
PN	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
100					100	100	98,7	93,3	85,6	77,8	71,1	64,4										
100					100	100	98,7	93,3	85,6	77,8	71,1	64,4	60,0	57,8	47,3	36,9						
100			100	100	100	100	96,4	82,2	76,7	71,1	67,8	64,4	61,1	57,8	56,7	55,6	54,4	53,3	52,2	51,1		
100	100	100	100	100	100	100	94,2	71,1	63,3	55,6	52,2	48,9										
100					100	100	100	100	100	100	100	100	95,6	88,9	86,7	84,4	68,2	52,0	38,2	24,4		
100				100	100	100	97,8	88,9	84,4	80,0	77,8	75,6										

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.
⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with 1.3964 shaft.

Triple Offset Butterfly Valve

Class 600 NPS 3" - NPS 14"

Wafer type



0948

Standard features:

- | | |
|---|-------------------------------|
| ☒ Design | API 609
EN 12516
EN 593 |
| ☒ Face to face | API 609 CL 600 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+ A316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	NPS	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
ANSI 600	80	3	54	210	260	25	100	42
	100	4	64	273	280	30	100	42
	150	6	78	356	315	60	100	42
	200	8	102	419	380	70	100	42
	250	10	117	508	420	95	100	42
	300	12	140	559	480	145	100	42
	350	14	155	603	515	285	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in A420 or XM 19. $\Delta p2$ maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
600					102	102	102	93.7	90.4	87.6	83.4	77.4										
600					102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5							
600			99.3	99.3	99.3	99.3	99.3	84.4	77.0	71.3	66.8	63.2	60.9	58.9	58.3	57.7	57.3	54.7	50.6	47.8		
600	99.3	99.3	99.3	99.3	99.3	99.3	99.3	81.7	74.3	69.0	65.0	61.3										
600					103	103	103	103	99.5	95.9	92.3	85.7	80.4	73.1	70.2	67.6	63.3	50.4	36.3	25.4		
600					102	102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5						

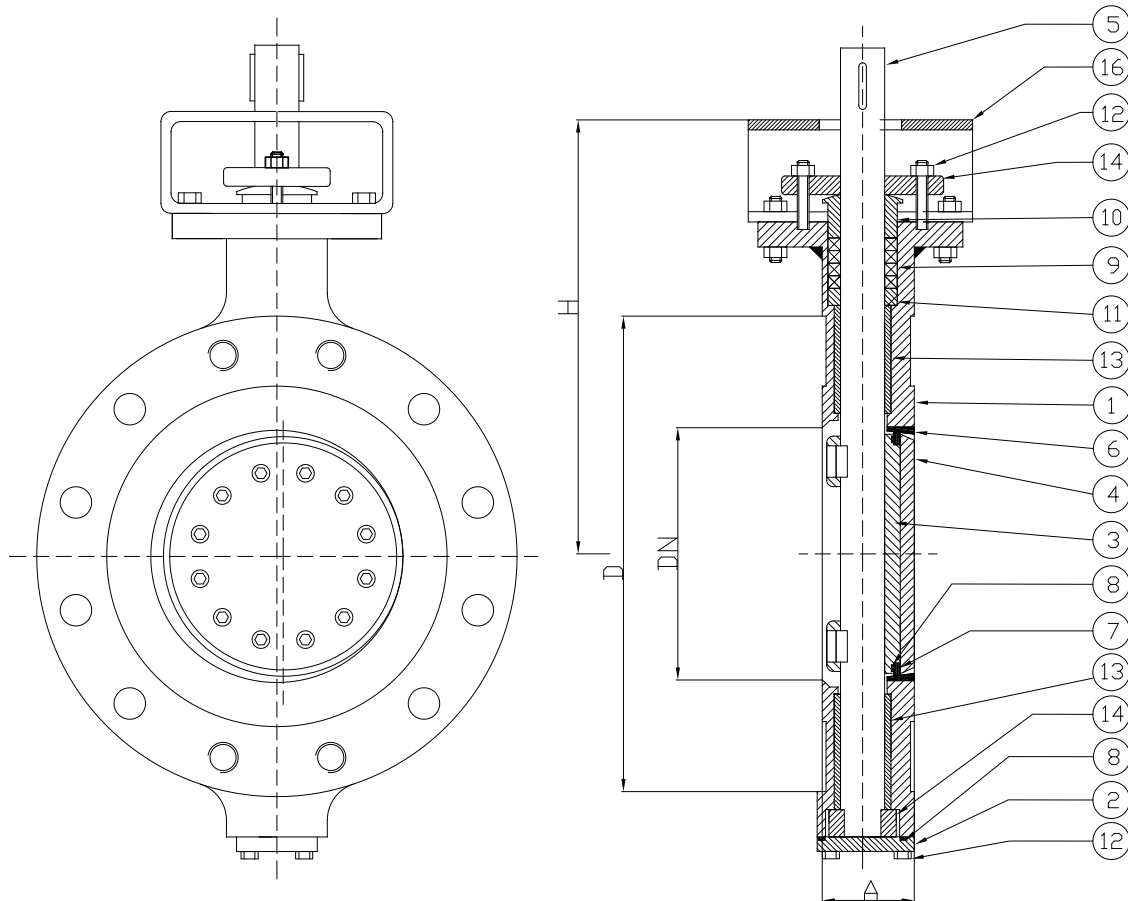
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 600 NPS 3" - NPS 14"

Lug - single flange type



0948

Standard features:

- ☒ Design API 609
EN 12516
EN 593 (Fig. 3b)
- ☒ Face to face API 609 CL 600
- ☒ Materials ASME B 16.34
EN 1503
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 12266
API 598
- ☒ Marking EN 19
- ☒ Certificates EN 10204

Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ ATEX compliant
- ☐ TA-Luft
- ☐ ISO 15848
- ☐ With special devices
- ☐ All tapped holes (EN 593 Fig. 3d)
- ☐ Lightweight lug type (EN 593 Fig. 3a or 3c)

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Scews	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Scews (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+ UNS S 31803 (duplex), PTFE + A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

	DN	NPS	A	D	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
ANSI 600	80	3	54	210	260	28	100	42
	100	4	64	273	280	35	100	42
	150	6	78	356	315	70	100	42
	200	8	102	419	380	80	100	42
	250	10	117	508	420	110	100	42
	300	12	140	559	480	160	100	42
	350	14	155	603	515	300	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in A420 or XM 19. $\Delta p2$ maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
600					102	102	102	93.7	90.4	87.6	83.4	77.4										
600					102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5							
600			99.3	99.3	99.3	99.3	99.3	84.4	77.0	71.3	66.8	63.2	60.9	58.9	58.3	57.7	57.3	54.7	50.6	47.8		
600	99.3	99.3	99.3	99.3	99.3	99.3	99.3	81.7	74.3	69.0	65.0	61.3										
600					103	103	103	103	99.5	95.9	92.3	85.7	80.4	73.1	70.2	67.6	63.3	50.4	36.3	25.4		
600					102	102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5						

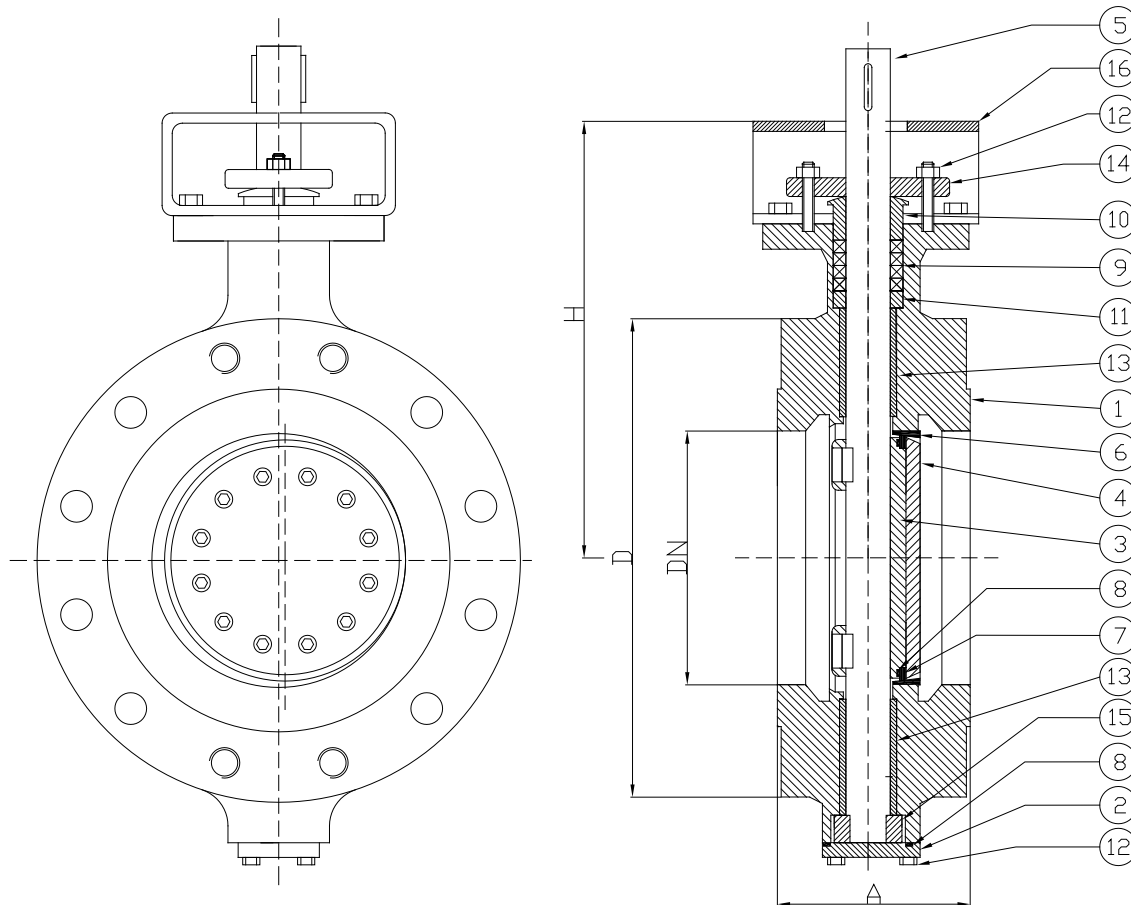
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 600 NPS 3" - NPS 24"

Flanges ANSI Class 600



0948

Standard features:

- | | |
|---|---|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | ISO 5752 series 14
EN 558-1 series 14
DIN 3202 F4 |
| ☒ Flanges | ASME B 16.5 (EN 1759-1) |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 216 WCB	A 351 CF8M	A 351 CF8	A 216 WC6	A 352 LCC
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (wetted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A515 Gr. 60 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 600	DN	NPS	A	D	H	Kg	Δp1 ⁽⁶⁾	Δp2 ⁽⁶⁾
	80	3	180	210	250	21	100	42
	100	4	190	273	280	33	100	42
	150	6	210	356	315	58	100	42
	200	8	230	419	380	84	100	42
	250	10	250	508	420	98	100	42
	300	12	270	559	480	175	100	42
	350	14	290	603	515	280	100	42
	400	16	310	686	540	335	100	42
	450	18	330	743	570	480	100	42
	500	20	350	813	630	530	100	42
	600	24	390	940	680	830	100	42

⁽⁶⁾ Δp1 maximum differential pressure with shaft in A420 or XM 19. Δp2 maximum differential pressure with shaft in A316 or A304.

Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
600					102	102	102	93.7	90.4	87.6	83.4	77.4										
600					102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5							
600			99.3	99.3	99.3	99.3	99.3	84.4	77.0	71.3	66.8	63.2	60.9	58.9	58.3	57.7	57.3	54.7	50.6	47.8		
600	99.3	99.3	99.3	99.3	99.3	99.3	99.3	81.7	74.3	69.0	65.0	61.3										
600					103	103	103	103	99.5	95.9	92.3	85.7	80.4	73.1	70.2	67.6	63.3	50.4	36.3	25.4		
600					102	102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5						

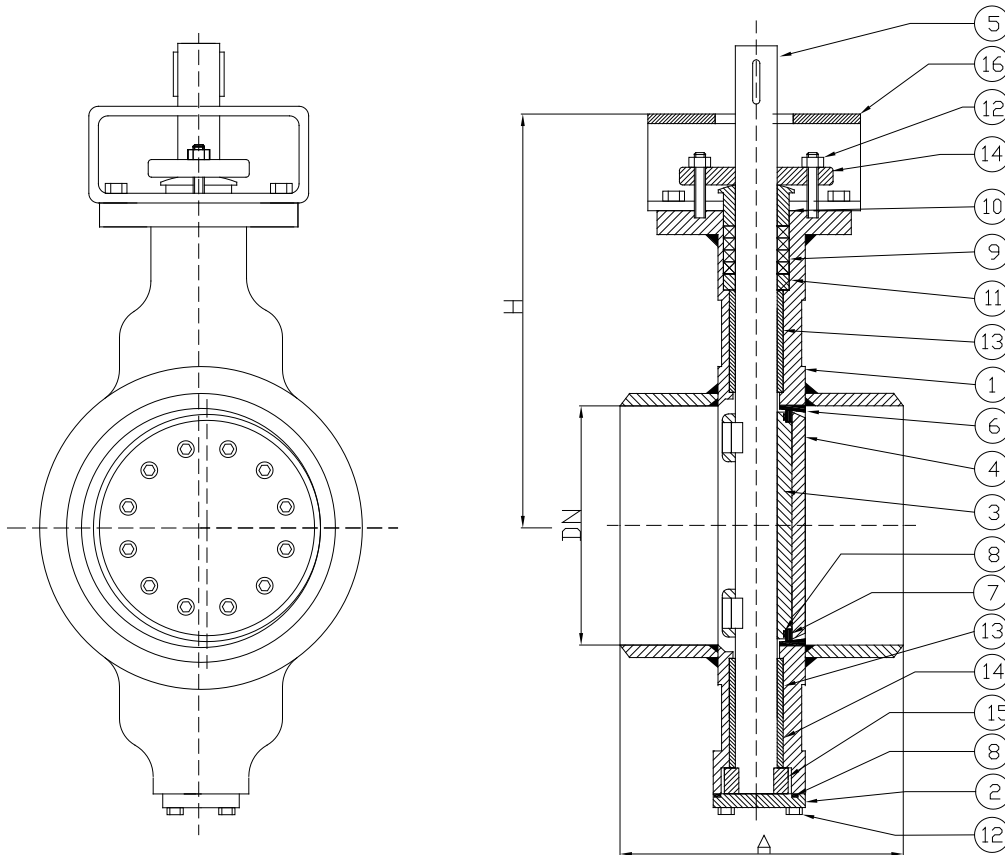
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

Triple Offset Butterfly Valve

Class 600 NPS 3" - NPS 24"

Butt Welding Ends type



0948

Standard features:

- | | |
|---|------------------------------------|
| ☒ Design | ASME B 16.34
EN 12516
EN 593 |
| ☒ Face to face | EN 12982 series 66 |
| ☒ Butt welding ends | ASME B 16.25 |
| ☒ Materials | ASME B 16.34
EN 1503 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266
API 598 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|---|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ ATEX compliant |
| ☐ TA-Luft |
| ☐ ISO 15848 |
| ☐ With special devices |

Material Specification

1	Body	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
2	Cover	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
3	x Disc	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
4	Retainer flange	A 36	A 515 Gr. 60	A 316	A 304	A 182 F11	A 516 Gr. 60
5	x Shaft	A 420 ⁽¹⁾	A 420 ⁽¹⁾	A 316 ⁽¹⁾	A 304 ⁽¹⁾	A 420 ⁽¹⁾	A 420 ⁽¹⁾
6	Body seats	A 430 ⁽²⁾	A 430 ⁽²⁾	A 316 ⁽²⁾	A 304 ⁽²⁾	A 430 ⁽²⁾	A 430 ⁽²⁾
7	x Seal ring	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾	Graphite + A 316 ⁽⁵⁾
8	O Gasket	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
9	O Packing	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾	Graphite + A 316 ⁽³⁾
10	x Gland	M 1023	M 1023	A 316	A 304	M 1023	M 1023
11	x Spacer	M 1023	M 1023	A 316	A 304	M 1023	M 1023
12	Bolts & Screws	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
12	Nuts	8.8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A 194 8 ⁽⁴⁾	A 194 8 ⁽⁴⁾	A194 2H ⁽⁴⁾	A194 7 ⁽⁴⁾
12	Screws (weeted)	8.8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A 193 B8M ⁽⁴⁾	A 193 B8 ⁽⁴⁾	A193 B7 ⁽⁴⁾	A193 L7 ⁽⁴⁾
13	x Bush	M1023 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT	A 316 NHT
14	Gland flange	A 105 N	A 105 N	A 304	A 304	A 105 N	A 516 Gr. 60
15	Autolock	M 1023	M 1023	A 316	A 304	A 420	M 1023
16	Bracket	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel	Pressed steel

⁽¹⁾ Also available on request A 316, A 304, XM 19, Hastelloy, or other materials.

⁽²⁾ Also available on request stellite, UNS S 31803 (duplex), A 316L, A 304L, Hastelloy, or other materials.

⁽³⁾ Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

⁽⁴⁾ Also available on request A 193 B16 / A 194 Gr. 7, A 193 L7 / A 194 Gr. 7, A193 B8M / A193 Gr. 8M, A193 B8 / A193 Gr. 8 or other materials.

⁽⁵⁾ Also available on request Graphite+UNS S 31803 (duplex), PTFE+A 316, or other materials.

Equivalent or superior materials can be supplied if the listed material is not available (e.g. WCB can replace A105 for some sizes).

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

Dimensions

ANSI 600	DN	NPS	A	H	Kg	$\Delta p1^{(6)}$	$\Delta p2^{(6)}$
	80	3	180	250	28	100	42
	100	4	190	280	33	100	42
	150	6	210	345	45	100	42
	200	8	430	410	75	100	42
	250	10	450	450	105	100	42
	300	12	470	480	140	100	42
	350	14	490	540	205	100	42
	400	16	510	570	235	100	42
	450	18	530	655	280	100	42
	500	20	550	690	360	100	42
	600	24	590	780	510	100	42

⁽⁶⁾ $\Delta p1$ maximum differential pressure with shaft in A420 or XM 19. $\Delta p2$ maximum differential pressure with shaft in A316 or A304.

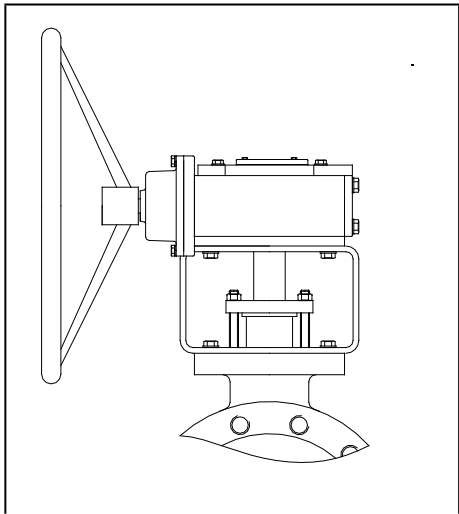
Pressure Temperature Ratings (°C / bar)

Class	-195	-150	-100	-46	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
600					102	102	102	93.7	90.4	87.6	83.4	77.4										
600					102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5							
600			99.3	99.3	99.3	99.3	99.3	84.4	77.0	71.3	66.8	63.2	60.9	58.9	58.3	57.7	57.3	54.7	50.6	47.8		
600	99.3	99.3	99.3	99.3	99.3	99.3	99.3	81.7	74.3	69.0	65.0	61.3										
600					103	103	103	103	99.5	95.9	92.3	85.7	80.4	73.1	70.2	67.6	63.3	50.4	36.3	25.4		
600					102	102	102	102	93.7	90.4	87.6	83.4	77.4	73.9	69.0	57.5						

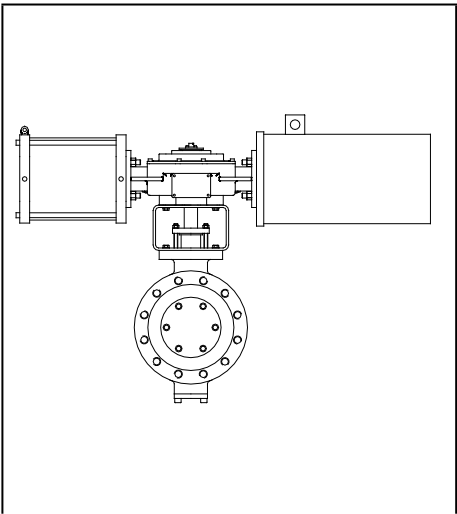
Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

⁽⁷⁾ Suitable over 450 °C only if provided with stellited seat. ⁽⁸⁾ Suitable over 530 °C only if provided with XM 19 shaft.

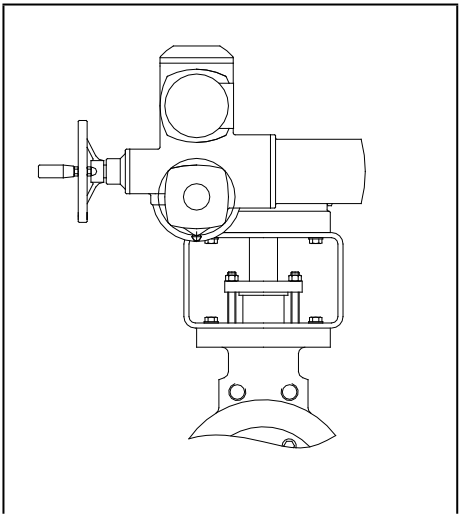
Variants & Devices



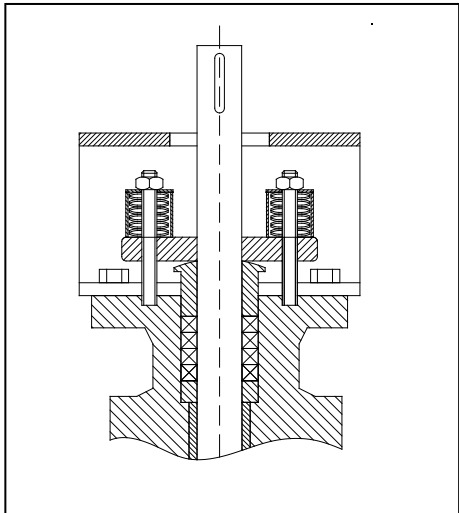
Var. 3510
Worm gear box



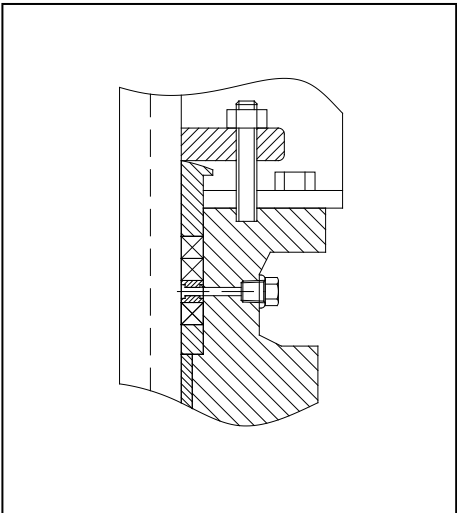
Var. 3520
Pneumatic or hydraulic actuator



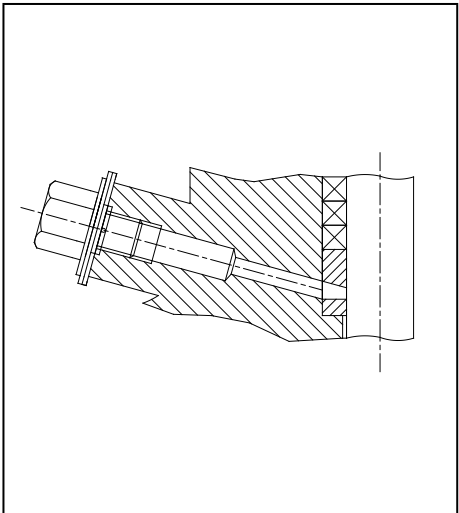
Var. 3530
Electric actuator



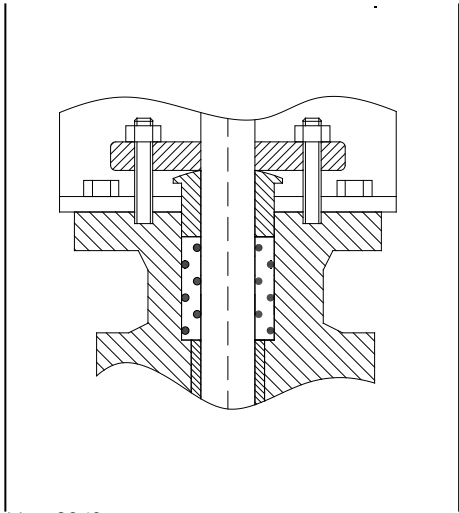
Var. 3020
Live loading packing



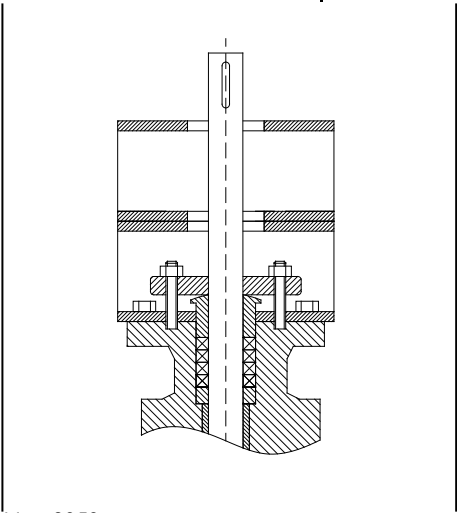
Var. 3025
Lantern ring



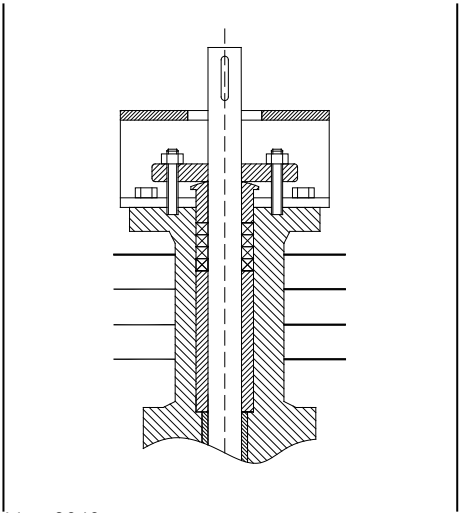
Var. 3030
Packing extraction system



Var. 3040
O - ring packing



Var. 3050
Stem extension



Var. 3060
Cryogenic extension

Comparison of Standards

Steel No. (EN)	EN (DIN - UNI - BS - AFNOR)	AISI - SAE - ASTM	AFNOR (old name)	BS (old name)	JIS	GOST
1.0044	S275JR	A 570 Gr 40 / A 36	E 28-2	Fe 430 B	SM 400 B	St4ps
1.0352	P245GH	A 105 N	XC18	-	-	-
1.0402	C22	M 1023	AF42C20	055 M 15	S 20 C	20
1.0425	P265GH	A 515 Gr 60	A42-CP	1501-161 400	SB 410	-
1.0460	C22.8	-	-	-	-	-
1.0478	P285QH	A350 LF2	A42CP	1501 Gr 161-400	SPV315	16K
1.0486	P275N	A 106 / A 234 WPB	-	-	SM 400 A	-
1.0487	P275NH	A 516 Gr 60	-	224 - 400 A	-	-
1.0488	P275NL1	A516 Gr 60	A42AP	1501-224 400	SGV 410	-
1.0511	C40	1040	1 C 40	080 M 40	-	-
1.0562	P355N	A 350 LF1 / A 516 Gr70	A 510 AP	225 - 490 A	SM 490 A	-
1.0565	P355NH	A 516 Gr 70	A510 AP	225 - 490 A	-	-
1.0566	P355NL1	A 516 Gr 70	A510 FP	225 - 490 A	STK 490	-
1.0619	GP240GHN	A 216 WCB	A480CP-M	1504-161 Gr B	-	-
1.1104	P275NL2	-	A 510 AP	224 - 400 A	STK 400	-
1.1106	P355NL2	-	-	225 - 490 A	STK 490	-
1.1131	G17Mn5	-	-	-	-	-
1.1138	GS21Mn5	A 352 LCC	-	-	-	-
1.1156	GSCk24	A 352 LCB	-	-	-	-
1.1181	C35E	-	-	-	-	-
1.1191	C45E	A 194 2H	AF65C45	162	-	-
1.3964	X2CrNiMnMoNb21-16-5-3	A479 XM-19	-	-	-	-
1.4021	X20Cr13	A 420	Z20C13	420 S 37	SUS420J1	20Ch13
1.4107	GX8CrNi12	-	-	-	-	-
1.4301	X5CrNi18-9	A 304 / B8	Z7CN18-09	304S31	SUS304	08Ch18N10
1.4305	X12CrNiS18-8	A 303	Z8CNF18-09	303S31	SUS303	-
1.4306	X2CrNi19-11	A 304L	Z1CN19-11	304S11	SUS304L	03Ch18N11
1.4308	GX5CrNi18-9	A 351 CF8	Z6CN18-10M	304C15	SCS13	07Ch18N9L
1.4309	GX2CrNi19-11	A 351 CF3	Z3CN19-9M	-	-	-
1.4311	X2CrNiN18-10	A 304 LN	Z3CN18-10Az	304S61	SUS 304LN	-
1.4317	GX4CrNi13-4	A 352 CA6NM	-	425 C11	-	-
1.4362	X2CrNiN23-4	S32304 (2304)	Z2CN23-04AZ	-	-	-
1.4401	X5CrNiMo17-12-2	A 316 / B8M	Z7CND17-11-02	316S31	SUS316	-
1.4404	X2CrNiMo17-13-2	A 316L	Z3CND17-11-02	316S11	SUS316L	-
1.4405	GX4CrBiMo16-5	-	-	-	-	-
1.4408	GX5CrNiMo19-11-2	A 351 CF8M	-	316 C 16	SCS 14	07Ch18N10G2S2M2L
1.4409	GX2CrNiMo19-11-2	A 351 CF3M	Z2CND18-12-3M	-	-	-
1.4410	X2CrNiMoN25-7-4	A 182 F53 (2507)	Z5CND20.10M	-	SCS 14A	-
1.4430	X2CrNiMo19-12	AWS A5.9 ER 316L	Z2CND20.10	316S92	-	-
1.4458	GX2NiCrMo28-20-2	-	-	-	-	-
1.4462	X2CrNiMoN22-5-3	A 182 F51 (2205)	Z3 CND 25-06-3	318 S13	-	-
1.4469	GX2CrNiMo26-7-4	A890 Gr 5A (2507)	-	-	-	-
1.4470	GX2CrNiMoN22-5-3	A890 Gr 4A (2205)	-	-	-	-
1.4500	GX7NiCrMoCuNb25-20	Uranus B6M	Z3CNUD25-20M	-	-	-
1.4502	X8CrTi18	AWS A5.9 ER 430	Z8CT17	-	-	-
1.4517	GX3CrNiMoCuN25-6-3-3	A890 Gr 1A	-	-	-	-
1.4529	X1CrMoCuN25-20-6	A744CK3MOUN(254SMO)	-	-	-	-
1.4539	X1NiCrMoCu25-20-5	UNS N08 904 L	Z1NCUD25-20	-	SUS329J3L	-
1.4541	X6CrNiTi18-10	A 321	Z6CNT18-10	321S31	SUS321	06Ch18N10T

Steel No. (EN)	EN (DIN - UNI - BS - AFNOR)	AISI - SAE - ASTM	AFNOR (old name)	BS (old name)	JIS	GOST
1.4550	X6CrNiNb18-10	A 347	A6CNNb18-10	347S31	SUS347	-
1.4552	GX5CrNiNb19-11	A 351 CF8C	Z6CNNb18-10M	347C17	SCS21	-
1.4563	X1NiCrMoCu31-27-4	Sanicro 28	-	-	-	-
1.4571	X6CrNiMoTi17-12-2	A 316Ti	Z6CNDT17-12	320S17	-	10Ch17N13M2T
1.4580	X6CrNiMoNb17-12-2	A 316Cb	Z6CNDNb18-12	318S17	-	-
1.4581	GX5CrNiMoNb19-11-2	-	Z4CNDNb18-12M	318C17	SCS 22	OTA 10NbMoNiCr170
1.4903	X10CrMoVNb9-1	A 182 F91	-	-	-	-
1.4931	GX23CrMoV12-1	-	-	-	-	-
1.5415	16Mo3	A 204 Gr A	15 D 3	-	-	-
1.5419	G20Mo5	A 217 WC1	-	-	-	-
1.5422	G18Mo5	-	-	-	-	-
1.5636	G9Ni10	-	-	-	-	-
1.5637	12Ni14	A 203 Gr D / A350 LF3	12 N 14	503	SL3N255	-
1.5638	G10Ni14	A 352 LC3	-	-	-	-
1.5662	X8Ni9	A 333 Gr 8 / A533 Gr I	9 Ni	502 - 650	SL9N520	-
1.5680	X12Ni5	A 2515 / A 645	5 Ni	-	SL5N590	-
1.6220	G20Mn5	A 352 LCC	-	-	-	-
1.6228	15NiMn6	-	15 N 6	-	-	-
1.6781	G17NiCrMo13-6	-	-	-	-	-
1.6982	GX3CrNi13-4	-	-	-	-	-
1.7219	26CrMo4	-	-	-	-	-
1.7225	42CrMo4	A 193 B7 / L7 / 7 / 4	42CD4	-	-	-
1.7258	24CrMo5	-	-	-	-	-
1.7219	G26CrMo4	A 352 LC1	FC1-M	-	-	-
1.7335	13CrMo4-5	A182 F11	15CD4-05	620-470	SFVA F 12	15ChM
1.7353	G12CrMo19-5	A 217 C5	Z13CD5	-	-	-
1.7357	G17CrMo5-5	A 217 WC6	15CD4-05-M	-	-	-
1.7362	12CrMo19-5	A182 F5	-	-	-	-
1.7365	GX15CrMo5	-	-	625	-	-
1.7379	G19CrMo9-10	A 217 WC9	-	-	-	-
1.7380	10CrMo9-10	A182 F22	12 CD 9.10	1501-622	SFVA F22 A	12Ch8
1.7383	11CrMo9-10	A182 F22	15 CD 4.05	-	-	-
1.7389	G-X12CrMo10-1	A217 C12	-	B6	-	-
1.7706	G17CrMoV5-10	A 356 Gr 9	-	-	SPCH 23	-
1.7709	21CrMoV5-7	-	-	-	-	-
1.7711	40CrMoV4-6	A 193 B16	42CDV4	670-860	-	-
1.7720	G12MoCrV5-2	-	-	-	-	-
2.4066	Ni 99.2	CZ100 (Nickel 200)	-	-	-	-
2.4360	NiCu30Fe	M-35-1 (Monel 400)	-	-	-	-
2.4537	NiMo16CrW	CW-12M (Hastelloy C)	-	-	-	-
2.4602	NiCr21Mo14W	Hastelloy C22	-	-	-	-
2.4617	NiMo28	Hastelloy B2	-	-	-	-
2.4810	NiMo30	N-7M (Hastelloy B)	-	-	-	-
2.4816	NiCr15Fe	CY40 (Inconel 600)	-	-	-	-
2.4819	NiMo16Cr15W	Hastelloy C276	-	-	-	-
2.4856	NiCr22Mo9Nb	CW6MC (Inconel 625)	-	-	-	-
2.4858	NiCr21Mo	Incolloy 825	-	-	-	-