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Поворотные обратные клапаны 296, 396, 396-J, 496, 496-H, 496-K

APPLICATIONS

The swing check valves are used to prevent flow reversal in piping systems. The swing check is the most efficient non-re-turn valve due to the minimum pressure drop because his "full open" design. Typical applications are:

- § water
- § chemicals
- § petrochemicals
- § steam
- § gases
- § liquid gases (cryogenic service)

CONSTRUCTION DETAILS

Body

The body geometry is designed as the result of stress calculations to achieve the most regular distribution of the internal forces due to pressure action.

The body material is high quality cast steel.

The seat surface is covered by a wear resistance stainless steel deposited by welding overlay with a hardness difference of +50 HB in comparison with the disk seats. On request the seat surface can be covered also with stellite or other special material overlays.



Swing Check Valves



Lever and counterweight on

request the swing check valve can be provided with lever with counterweight to balance the weight of the disk and make the closing more soft.

This optional device is suggested for diameters over 200 mm where the weight of the disk is relevant. Also in vertical installation the counterweight can reduce the adverse influence of gravity on the functioning of the swing check valve.

On request the counterweight can be adjustable to be easily adapted to the specific operating conditions.

Hydraulic brake

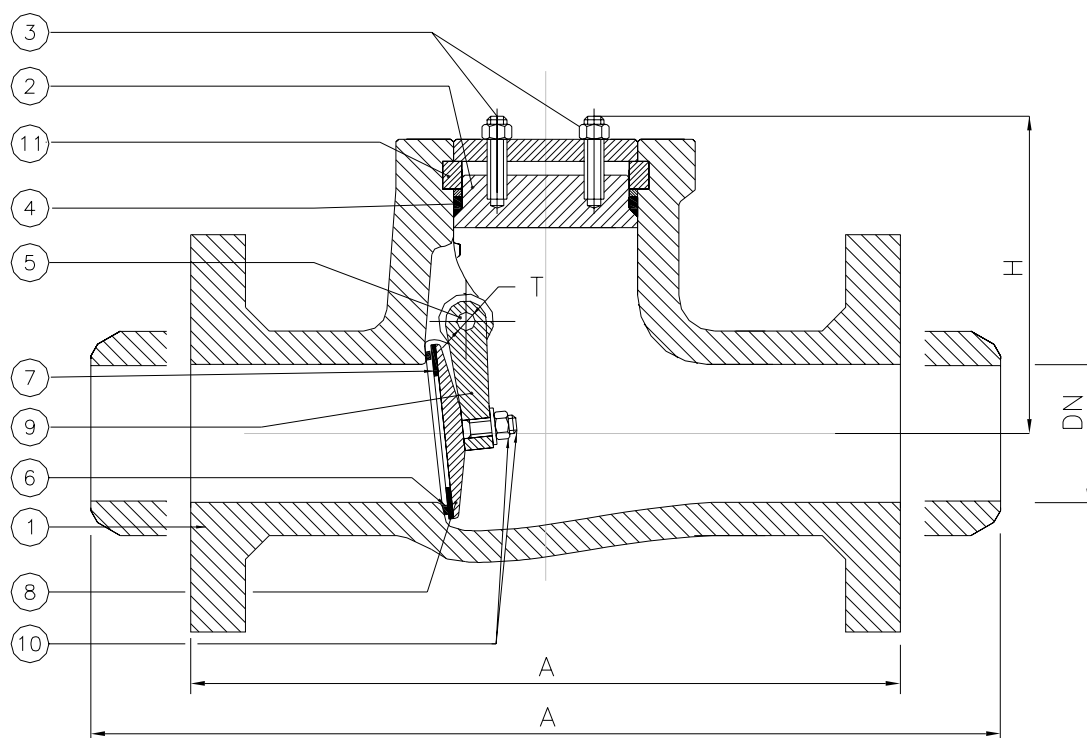
Where the flow reversal is very quick the swing check valve shall be provided with a hydraulic brake connected to the lever. The brake, lengthening the time of closing to the selected value, avoids the risk that the swing check valve, due to the quick closing of the disk, can cause a water hammer in the pipeline. Different types of brake are available depending on customer requirements.

All the brakes are provided by a pin valve to set-up the closing time to the required value.

Swing Check Valve

PN 250 DN 50 - DN 300

PD special ratings for BWE version



0948

Rel. 5.0

Standard features:

- | | |
|---|----------------------------------|
| ☒ Design | EN 12516
EN 14341 |
| ☒ Face to face | EN 558 series 91
DIN 3202 F9 |
| ☒ With flanges | EN 1092-1/21/B2 |
| ☒ Materials | EN 10213
EN 10269
EN 10088 |
| ☒ Bolts and nuts | EN 1515-1 |
| ☒ Welding overlay | AD-M HP 0 |
| ☒ Testing | EN 12266 |
| ☒ Marking | EN 19 |
| ☒ Certificates | EN 10204 |

Optional versions:

- | |
|--|
| ☐ AD 2000 – A4 |
| ☐ TRD 110 |
| ☐ DIN 3230 Part 4 |
| ☐ DIN 3230 Part 5 |
| ☐ DIN 3230 Part 6 |
| ☐ TRbF 131 |
| ☐ TRbF 301 or 302 |
| ☐ ATEX |
| ☐ TA-Luft |
| ☐ With butt welding ends EN 12627 |
| ☐ With flanges form A, B1, B2, C, D, E, F, G, H |
| ☐ With special devices (see page 52) |

	DESCRIPTION	FIG. 296	FIG. 396	FIG. 396-J	FIG. 496	FIG. 496-H	FIG. 496-K
1	Body	1.0619	1.4581	1.4308	1.7357	1.7379	1.4931
2	Cover	1.0425 ⁽⁵⁾	1.4571	1.4301	1.7335	1.7380	1.4931
3	Bolts	1.7225 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7225 ⁽⁴⁾
3	Nuts	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
4	O Gasket	Graphite + SS ⁽³⁾	Graphite + SS ⁽³⁾	PTFE ⁽³⁾	Graphite + SS ⁽³⁾	Graphite + SS ⁽³⁾	Graphite + SS ⁽³⁾
5	X Hinge pin	1.4021 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4923 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4581 ⁽²⁾	1.4308 ⁽²⁾	1.4502 ⁽²⁾	Stellite ⁽²⁾	Stellite ⁽²⁾
7	Disk seats	1.4502 ⁽²⁾	1.4430 ⁽²⁾	1.4301 ⁽²⁾	1.4502 ⁽²⁾	Stellite ⁽²⁾	Stellite ⁽²⁾
8	X Disk	1.0425 ⁽⁵⁾	1.4571	1.4301	1.7335	1.7380	1.4903
9	Hinge	1.0619	1.4581	1.4308	1.7357	1.7379	1.4903
10	Stud	1.7225 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7225 ⁽⁴⁾
10	Nut	1.1191 ⁽⁴⁾	1.4401 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
11	Segmented ring	1.0425 ⁽⁵⁾	1.4571	1.4301	1.7335	1.7380	1.4903

⁽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.

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

⁽⁵⁾ 1.0044 for swing check valves with DN over 125 mm.

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

Dimensions

	DN	A	D	H	T	Kg
PN 250	50	350	200	180	10	40
	80	470	255	215	15	80
	100	550	300	285	15	135
	125	650	340	325	18	250
	150	750	390	340	18	310
	200	950	485	435	18	525
	250	1150	585	520	24	830
	300	1350	690	580	24	1250

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
Fig. 296 ⁽⁶⁾	250					250	250	250	233	214	194	178	161	150	144	118	92						
Fig. 396 ⁽⁷⁾	250			250	250	250	250	250	206	192	178	169	161	153	144	142	139	136	133	131	128		
Fig. 396-J	250	250	250	250	250	250	250	250	178	158	139	131	122										
Fig. 496 ⁽⁸⁾	250					250	250	250	250	250	250	250	250	239	222	217	211	180	130	96	61		
Fig. 496-H ⁽⁸⁾	250					250	250	250	250	250	250	250	250	250	250	246	242	197	151	112	73	52	31
Fig. 496-K ⁽⁸⁾	250					250	250	250	250	250	250	250	250	250	250	250	250	240	230	181	131	93	54

Special ratings for butt welding ends versions only (desing pressure)

	PD	-195	-150	-100	-50	-10	0	20	100	150	200	250	300	350	400	425	450	475	500	525	550	575	600
Fig. 496-BW ⁽⁸⁾	350					350	350	350	350	314	278	267	256	239	222	217	211	171	130	96	61		
Fig. 496-H-BW ⁽⁸⁾	444					444	444	444	444	419	394	389	383	367	350	296	242	197	151	112	73	52	31
Fig. 496-K-BW ⁽⁸⁾	600					600	600	600	600	550	500	489	478	456	433	388	343	287	230	181	131	93	54

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

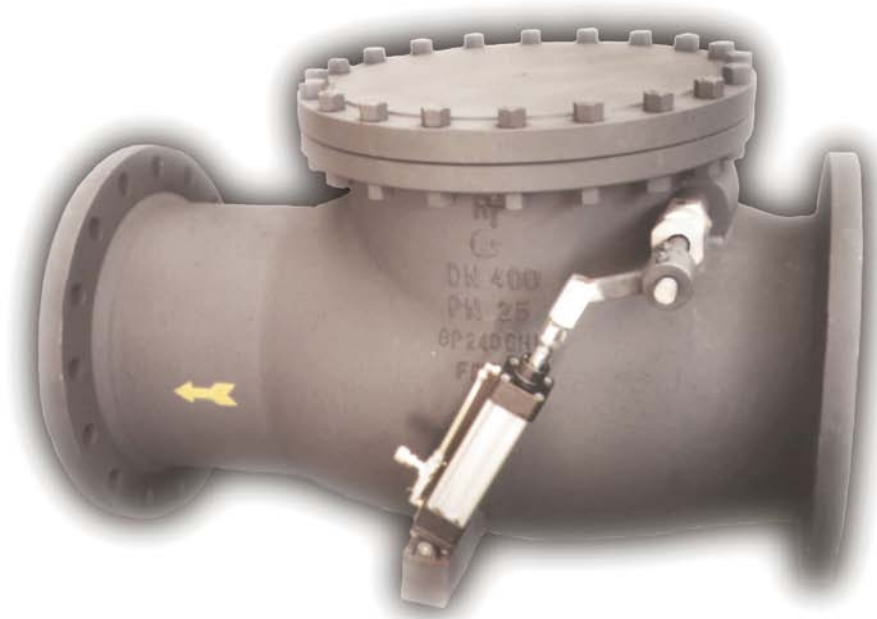
If the valves are provided with flanged connection PN 100 the maximum allowable pressure should be proportionally reduced.

⁽⁶⁾ Supplied suitable for service temperature up to 300°C and for higher temperatures only on request.

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

General sale and delivery conditions and product guarantee as specified at pages 56 and 57.

Due to constant improvement all data and details contained in this catalogue are purely indicative and they can be subjected to change without notice.



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