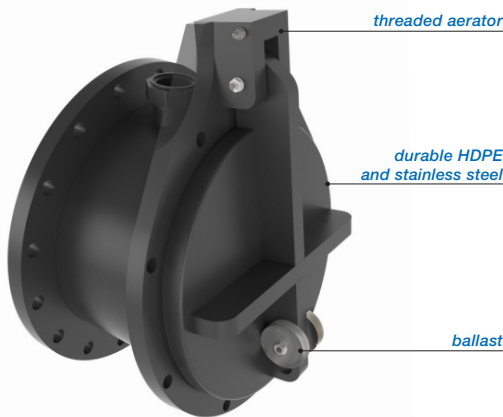


## FLAP VALVE - HDPE / SS316L TYPE PUMP VALVE WITH FLANGE CONNECTION PN10 (PF), Ø150 - 400 MM.



The Freedrain® non-return valve is standard mounted at an angle of 10 degrees. The flap valve will mostly installed partly or completely submerged at the end of high pressure pipelines. These special designed heavy duty flap valves are manufactured in our own factory from high quality HDPE and Stainless Steel and will be equipped with a special aerator for smooth opening and closing of the flap valve door, when the pump starts or stops. This reinforced flap valve with SS316L hinge pins will be equipped with extra ballast weight to prevent the flap valve door from floating. The larger flap valves will be equipped with SS316L reinforcement profiles.

The On-seating tightening shall be effected by means of a special EDPM lip seal to withstand 1 meter water column (long duration - 50 years) above the culvert and 5 meter water column from bottom invert (short duration - 72 hours) without any visible deformation. The flap valves shall be water tight in on-seating situation.

The ATK-PF version with flange connection is suitable high pressure pipelines. However, the flap valve can also be supplied with a spigot (model S or model BS), or for standard wall mounting (model G or A).

### Advantages:

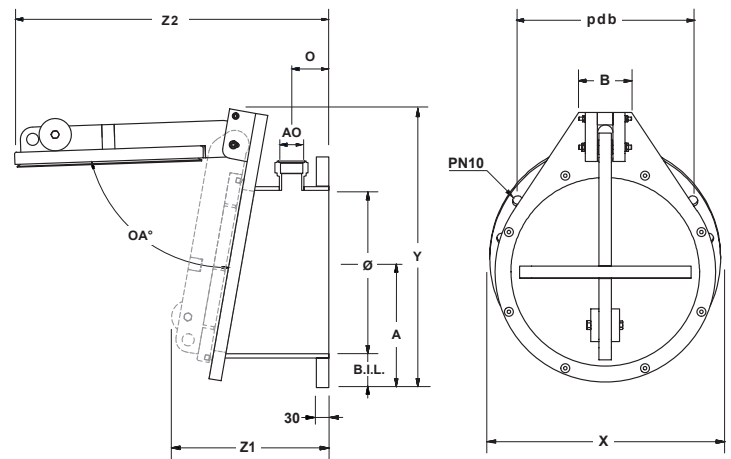
- Made of durable material, HDPE and SS316L.
- Light weight, easy to install.
- Design life of 50 years.
- Maintenance free
- As from Ø 500 mm the flap valve will be equipped with 2 hinge systems.
- Will act as double hung, by means of special designed sleeve in hinge frame.
- Opening angle is limited, so it can't remain open.
- High UV protection.
- Easy replaceable lip seal.

### Other options:

- Wall mounting (model ATK-G and ATK-A).
- Flange connection (model ATK-F).
- Spigot end for connecting with socket/coupling (model ATK-S) or to be inserted in existing pipe (model ATK-BS).

### Installation:

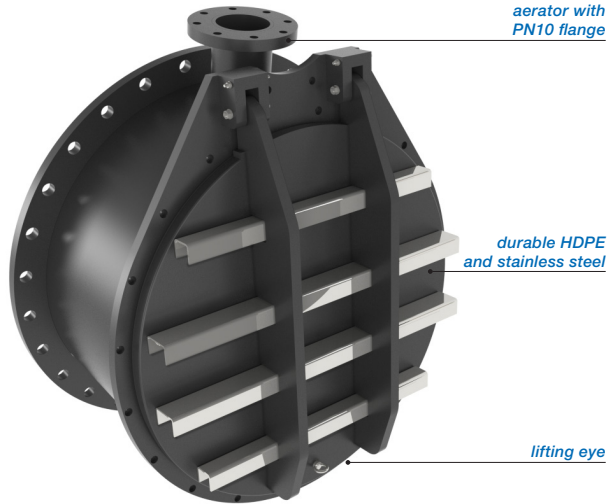
- The flap valve shall be suitable for flange connection DIN EN 1092-2 PN10. (Other flange drillings on request).



type Freedrain®	Ø mm.	B.I.L. mm.	X mm.	Y mm.	Z1 mm.	Z2 mm.	O mm.	AO inch	A mm.	B mm.	opening angle	pdb mm.	PN10 drilling	approx. weight
670.ATK.0150PF	Ø 150	73	300	430	300	± 488	75	1"	148	130	± 78°	Ø 240	Ø 23 ( 8x)	±6 kg.
670.ATK.0200PF	Ø 188	76	340	475	320	± 545	80	1"	170	130	± 78°	Ø 295	Ø 23 ( 8x)	±8 kg.
670.ATK.0250PF	Ø 235	80	390	525	340	± 610	85	1,5"	198	130	± 78°	Ø 350	Ø 23 (12x)	±12 kg.
670.ATK.0300PF	Ø 296	75	445	575	380	± 690	100	2"	223	130	± 78°	Ø 400	Ø 23 (12x)	±12 kg.
670.ATK.0400PF	Ø 400	83	565	685	405	± 790	100	2"	283	130	± 78°	Ø 515	Ø 28 (16x)	±19 kg.

Dimensions in millimeters, weights in kilograms. Subject to changes in images, dimensions and description. Placement, installation and use in accordance with our regulations.

## FLAP VALVE - HDPE / SS316L TYPE PUMP VALVE WITH FLANGE CONNECTION PN10 (PF), Ø500 - 1000 MM.



The Freedrain® non-return valve is standard mounted at an angle of 10 degrees. The flap valve will mostly installed partly or completely submerged at the end of high pressure pipelines. These special designed heavy duty flap valves are manufactured in our own factory from high quality HDPE and Stainless Steel and will be equipped with a special aerator for smooth opening and closing of the flap valve door, when the pump starts or stops. This reinforced flap valve with SS316L hinge pins will be equipped with extra ballast weight to prevent the flap valve door from floating. The larger flap valves will be equipped with SS316L reinforcement profiles.

The On-seating tightening shall be effected by means of a special EDPM lip seal to withstand 1 meter water column (long duration - 50 years) above the culvert and 5 meter water column from bottom invert (short duration - 72 hours) without any visible deformation. The flap valves shall be water tight in on-seating situation.

The ATK-PF version with flange connection is suitable high pressure pipelines. However, the flap valve can also be supplied with a spigot (model S or model BS), or for standard wall mounting (model G or A).

### Advantages:

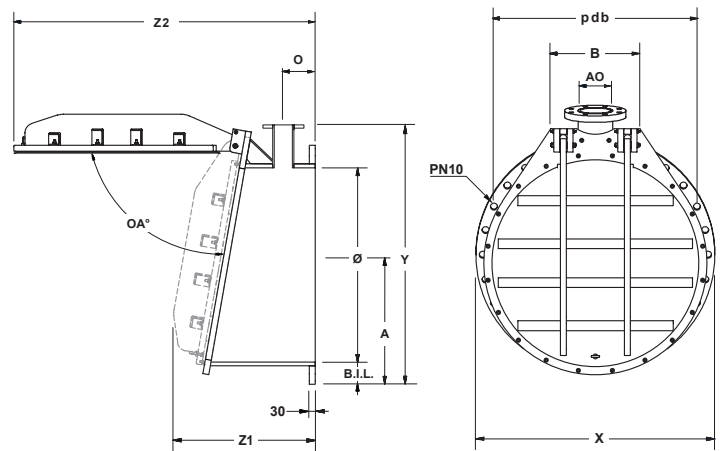
- Made of durable material, HDPE and SS316L.
- Light weight, easy to install.
- Design life of 50 years.
- Maintenance free
- As from Ø 500 mm the flap valve will be equipped with 2 hinge systems.
- Will act as double hung, by means of special designed sleeve in hinge frame.
- Opening angle is limited, so it can't remain open.
- High UV protection.
- Easy replaceable lip seal.

### Other options:

- Wall mounting (model ATK-G and ATK-A).
- Flange connection (model ATK-F).
- Spigot end for connecting with socket/coupling (model ATK-S) or to be inserted in existing pipe (model ATK-BS).

### Installation:

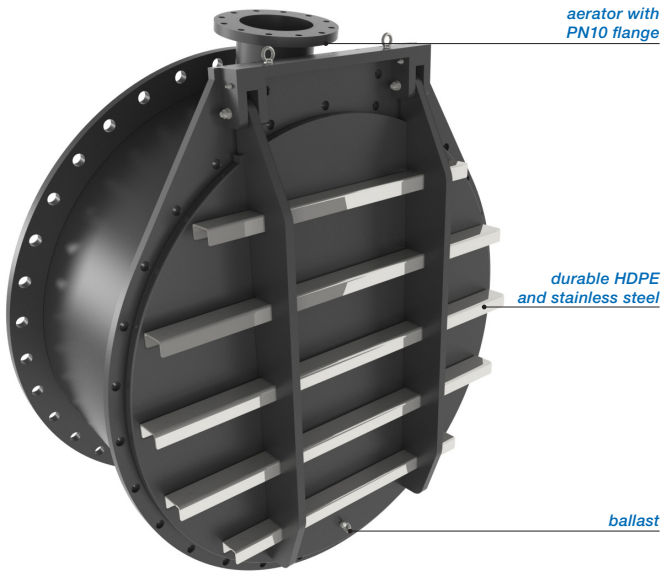
- The flap valve shall be suitable for flange connection DIN EN 1092-2 PN10. (Other flange drillings on request).



type Freedrain®	Ø mm.	B.I.L. mm.	X mm.	Y mm.	Z1 mm.	Z2 mm.	O mm.	AO DN	A mm.	B mm.	opening angle	pdb mm.	PN10 drilling	approx. weight
670.ATK.0500PF	Ø 500	85	670	790	450	± 900	110	DN 66,2	335	378	± 78°	Ø 620	Ø 28 (20x)	±29 kg.
670.ATK.0600PF	Ø 600	90	780	895	555	± 1075	150	DN 79,4	390	378	± 78°	Ø 725	Ø 31 (20x)	±39 kg.
670.ATK.0700PF	Ø 700	98	895	1030	630	± 1235	175	DN 97,1	448	378	± 78°	Ø 840	Ø 31 (24x)	±53 kg.
670.ATK.0800PF	Ø 800	108	1015	1140	715	± 1395	200	DN 110	508	478	± 78°	Ø 950	Ø 34 (24x)	±75 kg.
670.ATK.0900PF	Ø 900	108	1115	1240	725	± 1495	200	DN 110	558	438	± 78°	Ø 1050	Ø 34 (28x)	±88 kg.
670.ATK.1000PF	Ø 1000	115	1230	1355	770	± 1595	200	DN 110	615	458	± 80°	Ø 1160	Ø 37 (28x)	±108 kg.

Dimensions in millimeters, weights in kilograms. Subject to changes in images, dimensions and description. Placement, installation and use in accordance with our regulations.

## FLAP VALVE - HDPE / SS316L TYPE PUMP VALVE WITH FLANGE CONNECTION PN10 (PF), Ø1200 - 2000 MM.



The Freedrain® non-return valve is standard mounted at an angle of 10 degrees. The flap valve will mostly installed partly or completely submerged at the end of high pressure pipelines. These special designed heavy duty flap valves are manufactured in our own factory from high quality HDPE and Stainless Steel and will be equipped with a special aerator for smooth opening and closing of the flap valve door, when the pump starts or stops. This reinforced flap valve with SS316L hinge pins will be equipped with extra ballast weight to prevent the flap valve door from floating. The larger flap valves will be equipped with SS316L reinforcement profiles.

The On-seating tightening shall be effected by means of a special EDPM lip seal to withstand 1 meter water column (long duration - 50 years) above the culvert and 5 meter water column from bottom invert (short duration - 72 hours) without any visible deformation. The flap valves shall be water tight in on-seating situation.

The ATK-PF version with flange connection is suitable high pressure pipelines. However, the flap valve can also be supplied with a spigot (model S or model BS), or for standard wall mounting (model G or A).

### Advantages:

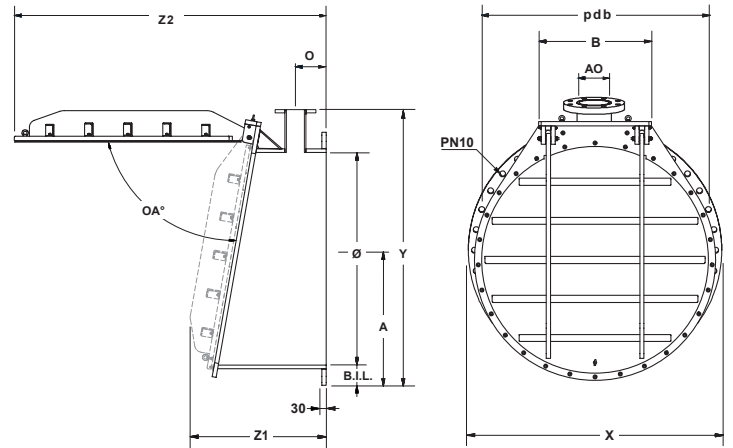
- Made of durable material, HDPE and SS316L.
- Light weight, easy to install.
- Design life of 50 years.
- Maintenance free
- As from Ø 500 mm the flap valve will be equipped with 2 hinge systems.
- Will act as double hung, by means of special designed sleeve in hinge frame.
- Opening angle is limited, so it can't remain open.
- High UV protection.
- Easy replaceable lip seal.

### Other options:

- Wall mounting (model ATK-G and ATK-A).
- Flange connection (model ATK-F).
- Spigot end for connecting with socket/coupling (model ATK-S) or to be inserted in existing pipe (model ATK-BS).

### Installation:

- The flap valve shall be suitable for flange connection DIN EN 1092-2 PN10. (Other flange drillings on request).



type Freedrain®	Ø mm.	B.I.L. mm.	X mm.	Y mm.	Z1 mm.	Z2 mm.	O mm.	AO DN	A mm.	B mm.	opening angle	pdb mm.	PN10 drilling	approx. weight
670.ATK.1200PF	Ø 1200	128	1455	1590	890	± 1890	245	DN 188	728	645	± 80°	Ø 1380	Ø 41 (32x)	±155 kg.
670.ATK.1500PF	Ø 1500	148	1785	1920	950	± 2195	245	DN 235	893	795	± 80°	Ø 1700	Ø 44 (36x)	±230 kg.
670.ATK.1600PF	Ø 1600	158	1915	2025	1010	± 2315	245	DN 235	958	845	± 80°	Ø 1820	Ø 50 (40x)	±290 kg.
670.ATK.1800PF	Ø 1800	158	2115	2236	1200	± 2615	290	DN 296	1058	945	± 80°	Ø 2020	Ø 50 (44x)	±380 kg.
670.ATK.2000PF	Ø 2000	168	2325	2433	1235	± 2815	290	DN 296	1163	1045	± 80°	Ø 2230	Ø 50 (48x)	±497 kg.

Dimensions in millimeters, weights in kilograms. Subject to changes in images, dimensions and description. Placement, installation and use in accordance with our regulations.