

PRODUCT CATALOGUE 2023

ABOUT US:

Vortico is a company created by engineers of many specialties, such as Chemical and Process Engineering, Mechanics, Environmental Engineering or Automation and Control Systems. Taking a task-oriented approach and flexible selection of project teams, we implement projects in various fields where technical and managerial knowledge and the ability to use specialized software are required. Supporting our own production, we cooperate with many companies dealing with the processing and welding of metals and plastics, obtaining virtually unlimited possibilities of order fulfilment. Without having a complicated organizational structure, we are effective and efficient in delivering projects and finished products to clients.

We have a range of standard products that are only a part of our business. We invite you to familiarize yourself with our offer and contact us to agree on the terms of cooperation. If you do not find in our catalogue the products or services that interest you, it does not mean that we cannot implement them. We are happy to provide more complex systems such as pumping stations, washing machines, filtration systems etc., as well as all kinds of structures such as service platforms, supporting structures, etc. We offer installation and service of the offered devices. Feel free to contact us also (or maybe especially) in the case of any unusual inquiries. We approach each one individually and with full commitment.

CONTACT

VORTICO SP. Z O.O.

ul. Szosa Jadowska 51

05-200 Wołomin

POLAND

VAT: 1251712649

REGON: 387688002

KRS: 0000872786

BDO: 000570857

e-mail: biuro@vortico.pl

www.vortico.pl

Sales department:

Dominik Rosłaniec

mob. 794 525 578

e-mail: dr@vortico.pl

Technical department:

Piotr Szymański

mob. 786 818 186

e-mail: ps@vortico.pl

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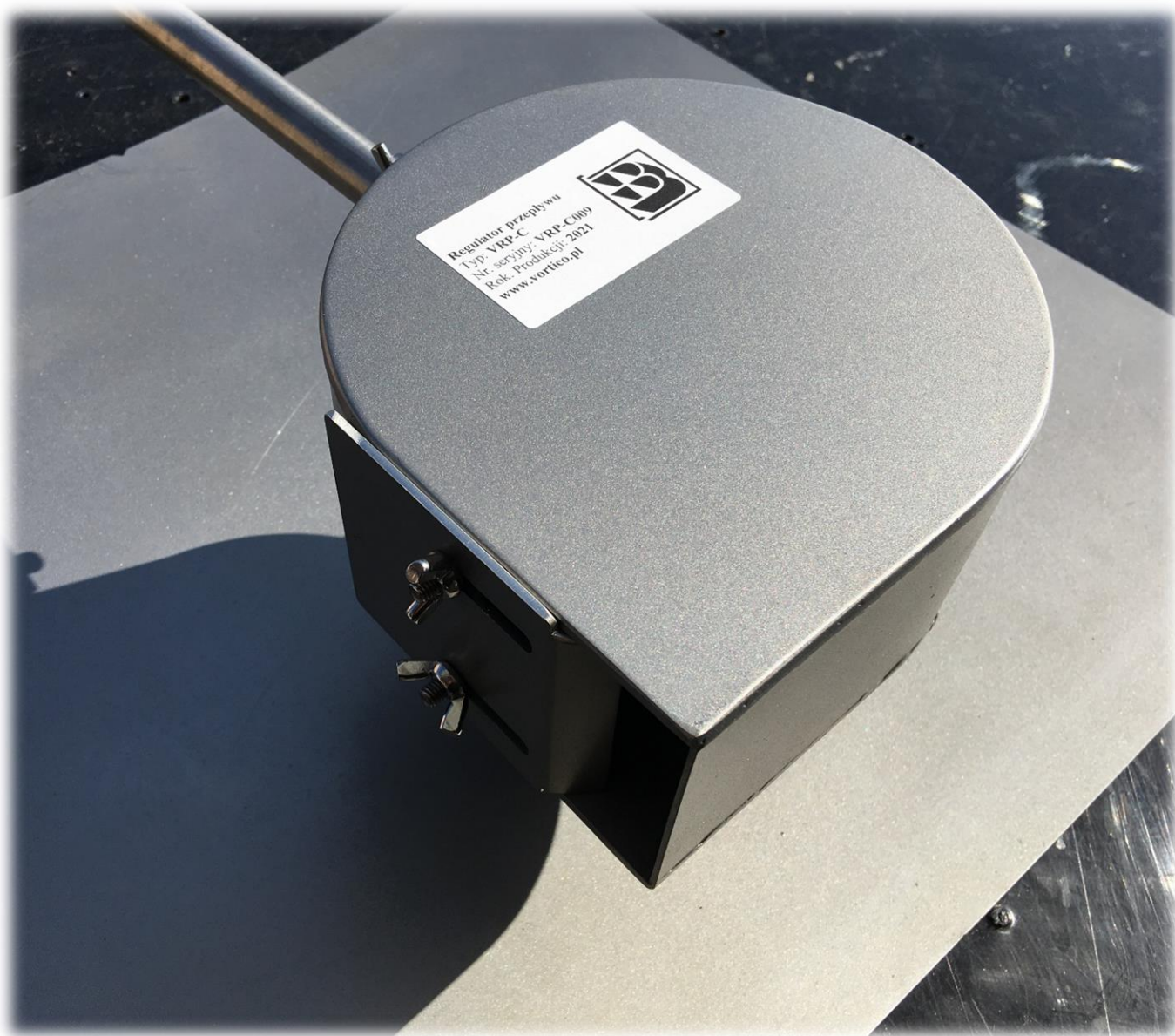
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FLOW REGULATORS:

Flow regulators are used to limit the flow rate of water and sewage in sewage systems. A properly designed installation with a flow regulator prevents flooding and inundation of areas as a result of heavy rains. Vortico offer includes many types of regulators that allow you to match the right device to a given application. We also make non-standard constructions adapted to specific assembly conditions,



Cylindrical Steel Vortex Flow Regulator VRP-C



DESCRIPTION:

Flow regulators are used wherever it is required to limit and control the flow in order to protect objects and devices below the place of installation against excessive amount of water. Cylindrical flow regulators are used when outlet pipe from the sump is located above the bottom of the sump.

MATERIALS:

VRP-C regulators are made of stainless steel (e.g. AISI 304/304L – 1.4301/1.4307), acid-resistant steel (e.g. AISI 316/316L – 1.4401/1.4404) or any other, depending on customer requirements and conditions at the installation site.

MOUNTING:

The VRP-C regulator is mounted by screwing it to the chamber wall using anchors. The seal between the wall and the regulator is provided by a porous EPDM gasket or one of the commonly available sealing compounds. Other mounting methods are possible, such as clamping on the pipe, sliding into the socket or spigot end of the pipe, etc.

ADDITIONAL OPTIONS:

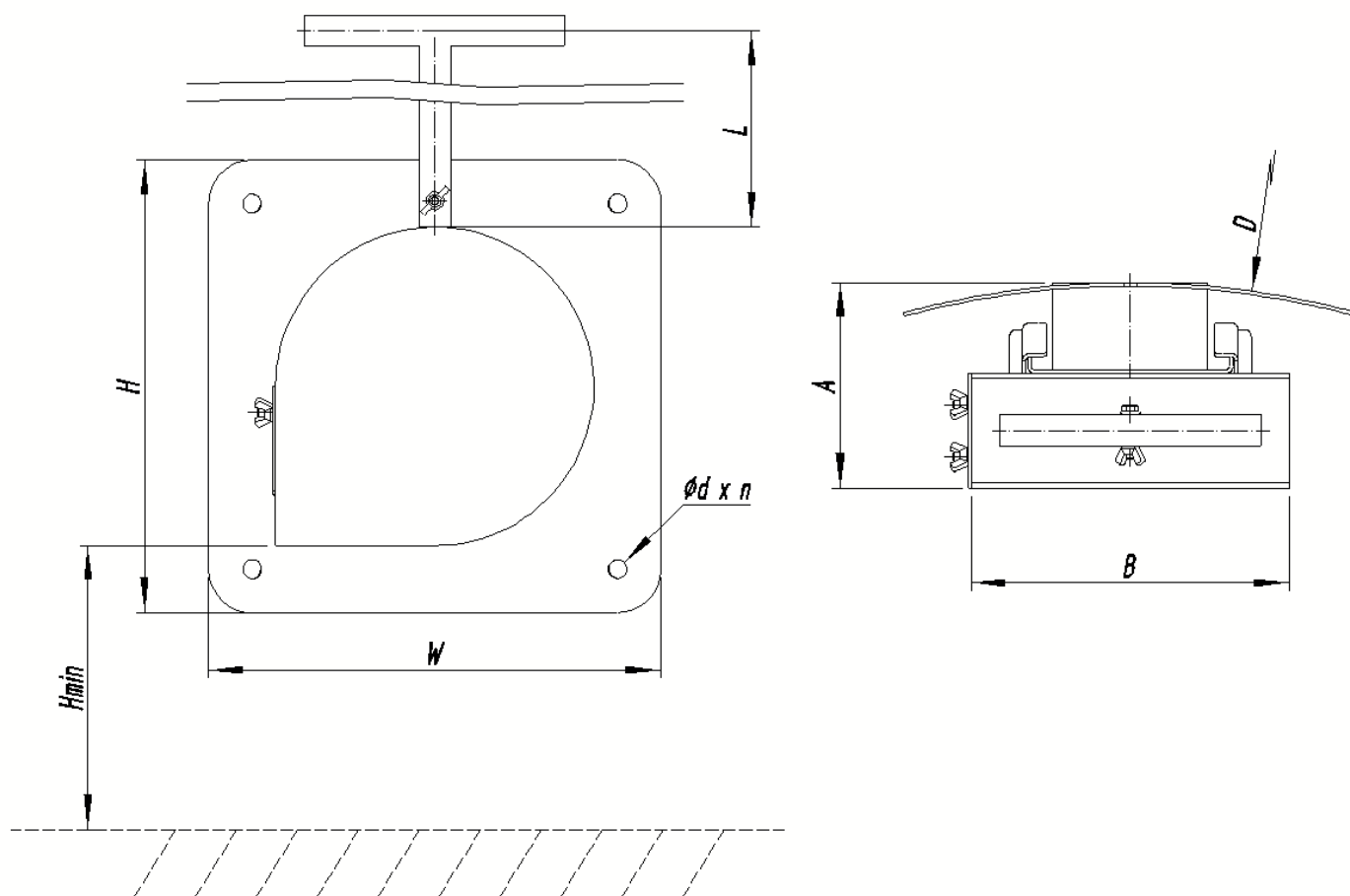
A number of additional options are available, such as the possibility of removing the regulator using a handle, emergency closure, inspection hole or adjustable plate changing the characteristics of the regulator.

DOCUMENTATION:

Standard documentation supplied with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide dimensional drawings, characteristic curves, material certificates, etc.

STANDARD DIMENSIONS:

Regulators are sized individually depending on the flow parameters and the place of installation. Contact your Vortico representative for regulator selection.

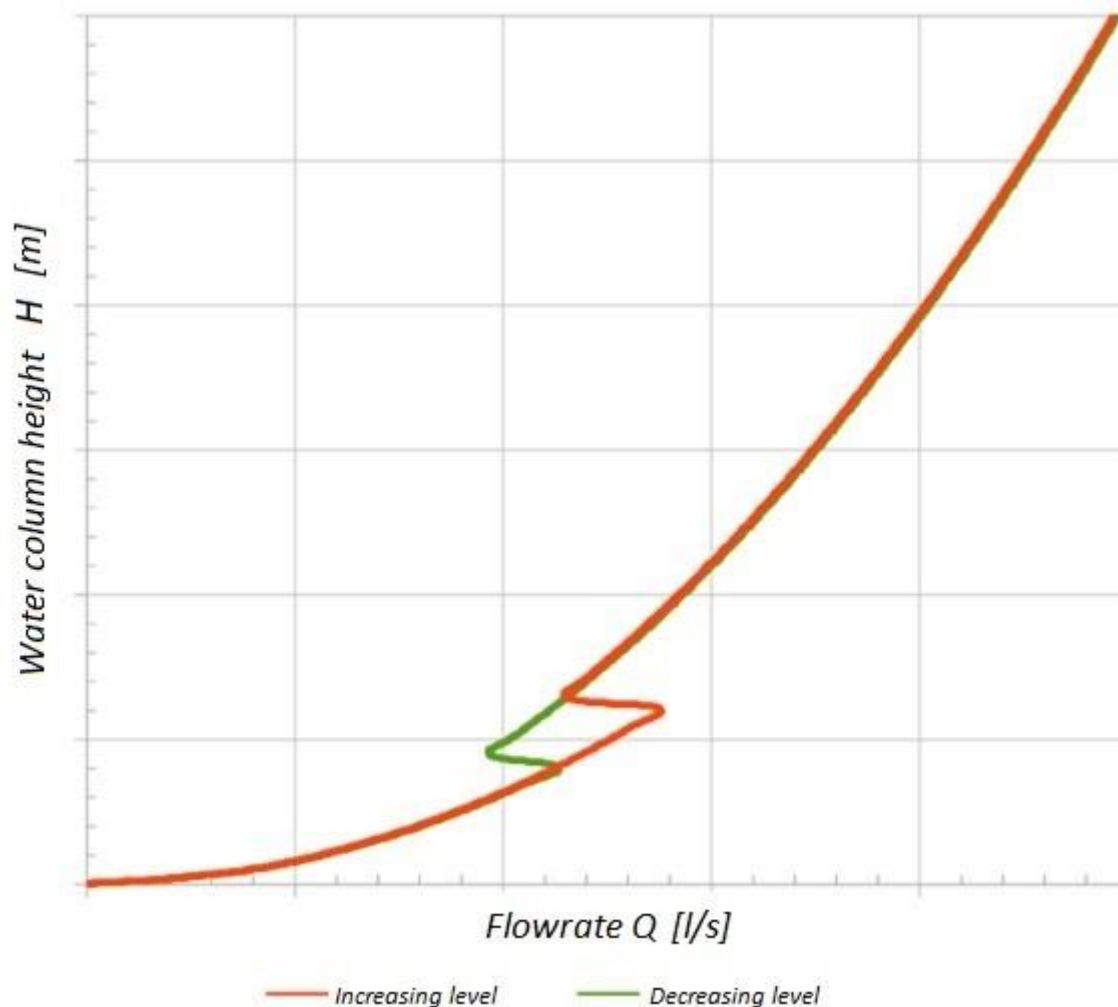


REGULATOR SIZING:

Each regulator is sized individually for a specific application.

The following data is required for the selection of the regulator:

Flow chart of Cylindrical Vortex Flow Regulator VRP-C



- Required maximum flow [l/s] for a given water column in front of the regulator [m],
- Diameter of the outlet in which the regulator is mounted [mm]
- Chamber diameter / flat wall.
- Preferred method of installation (if other than standard)
- Material (if specific requirements apply)
- Additional options (if required)

Orifice Flow Regulator VRP-K



DESCRIPTION:

Flow regulators are used wherever it is required to limit and control the flow in order to protect objects and devices below the place of installation of the regulator against excessive amount of water.

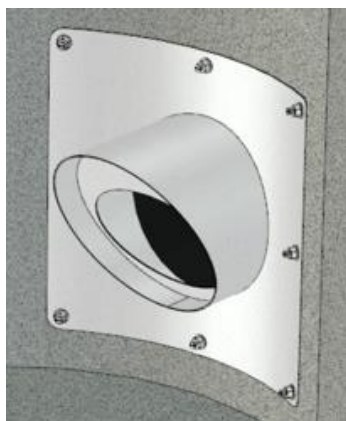
MATERIALS:

VRP-K regulators are made of stainless steel (e.g. AISI 304/304L – 1.4301/1.4307), acid-resistant steel (e.g. AISI 316/316L – 1.4401/1.4404) or any other, depending on customer requirements and conditions at the installation site.

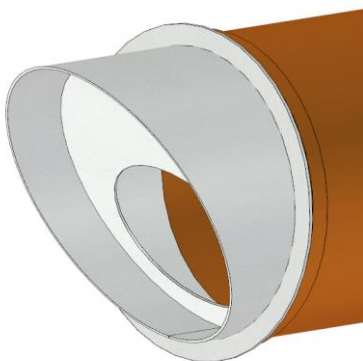
MOUNTING:

The VRP-K regulator is mounted by screwing it to the chamber wall using anchors. The seal between the wall and the regulator is provided by a porous EPDM gasket or one of the commonly available sealing compounds. Other mounting methods are possible, such as clamping on the pipe, sliding into the socket or spigot end of the pipe, etc.

Mounting options:



a) Screwed to the wall



b) Inserted into the pipe



c) Clamped to the spigot end of the pipe

ADDITIONAL OPTIONS:

A number of additional options are available, such as a grid at the regulator's inlet, additional fastening elements, an emergency shut-off, or an adjustable plate that changes the regulator's characteristics.

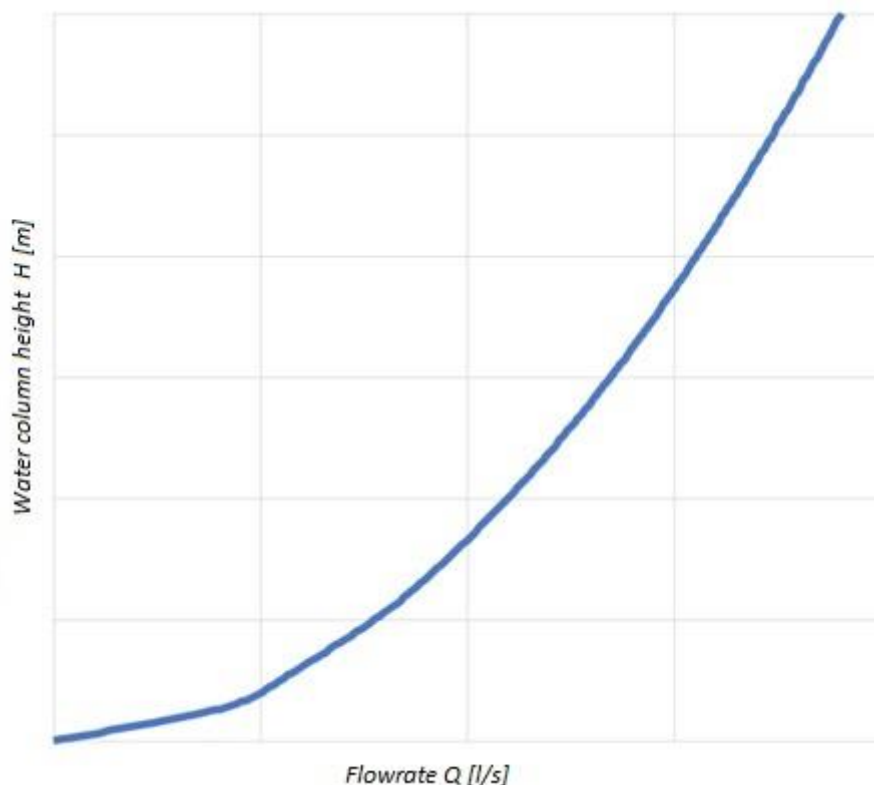
DOCUMENTATION:

Standard documentation supplied with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide dimensional drawings, characteristic curves, material certificates, etc.

REGULATOR SIZING:

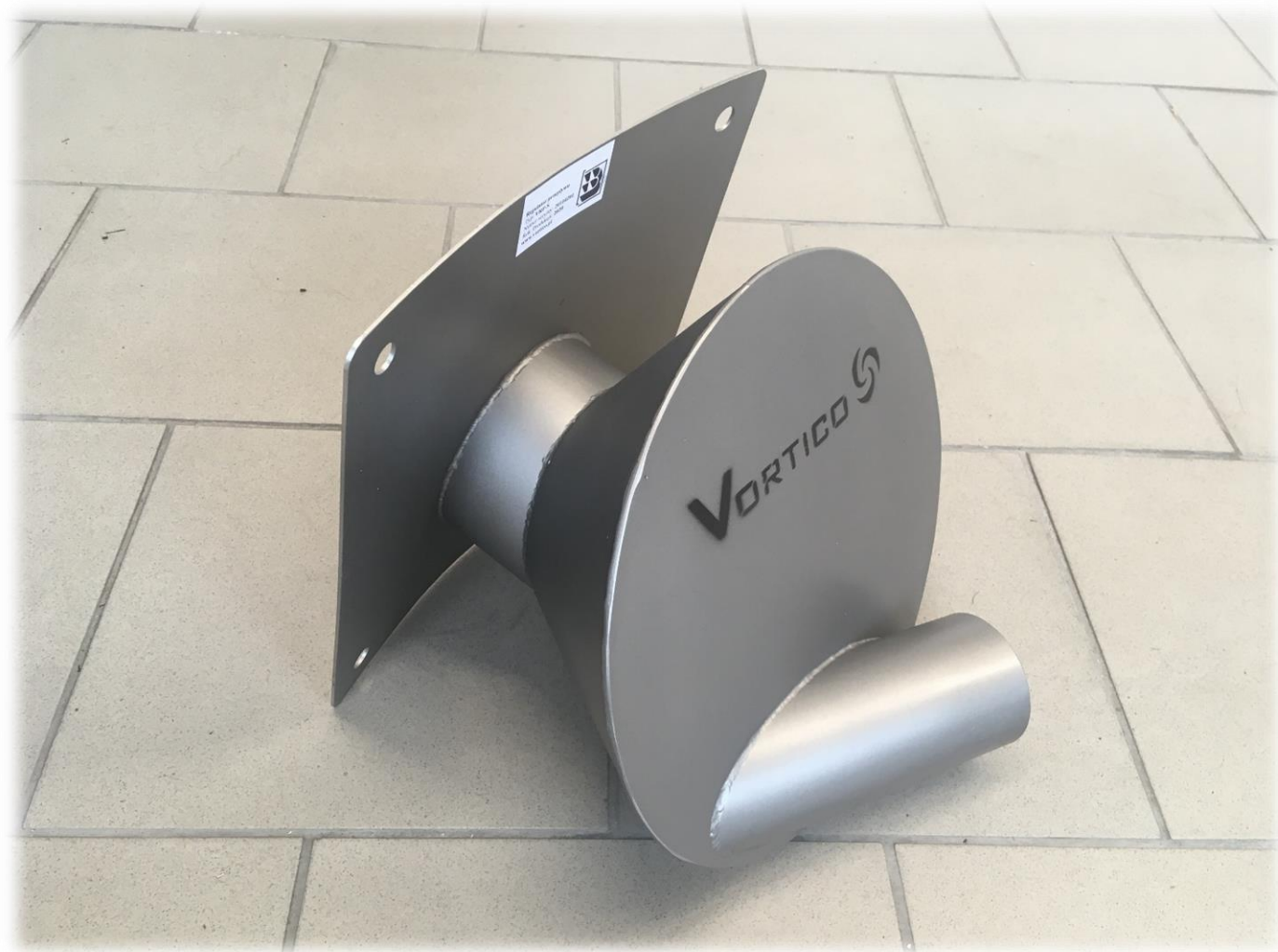
Each regulator is sized individually for a specific application.

Flow Chart of Orifice Flow Regulator VRP-K



The following data is needed to select the regulator: Required maximum flow [l/s] for a given water column in front of the regulator [m], diameter of the outlet pipe in which the regulator is installed [mm] and information on the location of the regulator's installation: round chamber - specify the diameter, or a flat wall.

Conical Steel Vortex Flow Regulator VRP-S



DESCRIPTION:

Flow regulators are used wherever it is required to limit and control the flow in order to protect objects and devices below the place of installation against excessive amount of water.

MATERIALS:

VRP-S regulators are made of stainless steel (e.g. AISI 304/304L – 1.4301/1.4307), acid-resistant steel (e.g. AISI 316/316L – 1.4401/1.4404) or any other, depending on customer requirements and conditions at the installation site.

MOUNTING:

The VRP-S regulator is mounted by screwing it to the chamber wall using anchors. The seal between the wall and the regulator is provided by a porous EPDM gasket or one of the commonly available sealing compounds. Other mounting methods are possible, such as clamping on the pipe, sliding into the socket or spigot end of the pipe, etc.

ADDITIONAL OPTIONS:

A number of additional options are available, such as the possibility of removing the regulator using the handle, emergency closure, inspection hole, strainer at the inlet, adjustable plate changing the characteristics of the regulator or emergency overflow in the form of a tee behind the regulator.

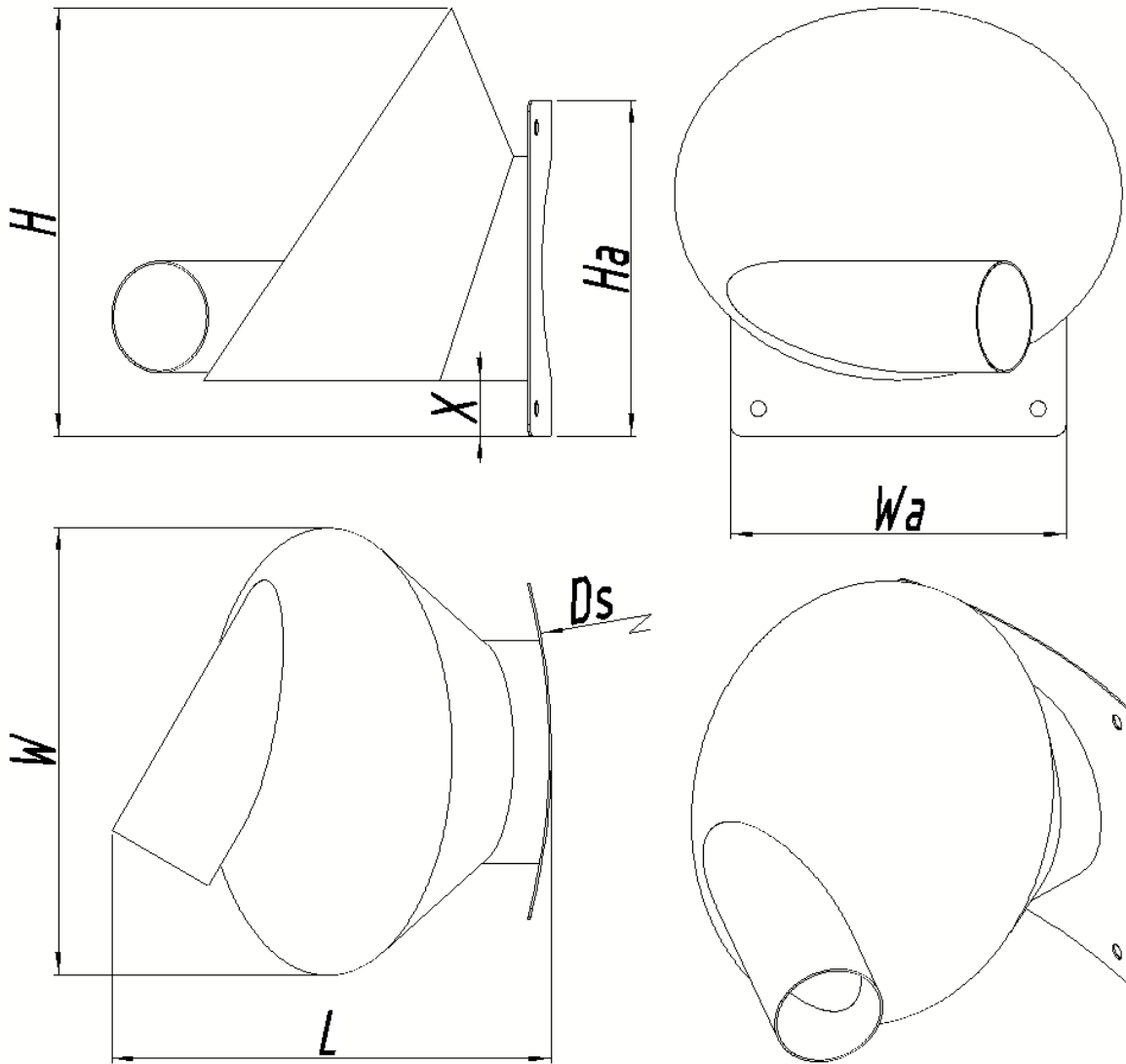
DOCUMENTATION:

Standard documentation supplied with the delivery includes: the national declaration of performance,

technical and operational documentation along with the operating and assembly instructions. On request, we provide dimensional drawings, characteristic curves, material certificates, etc.

STANDARD DIMENSIONS:

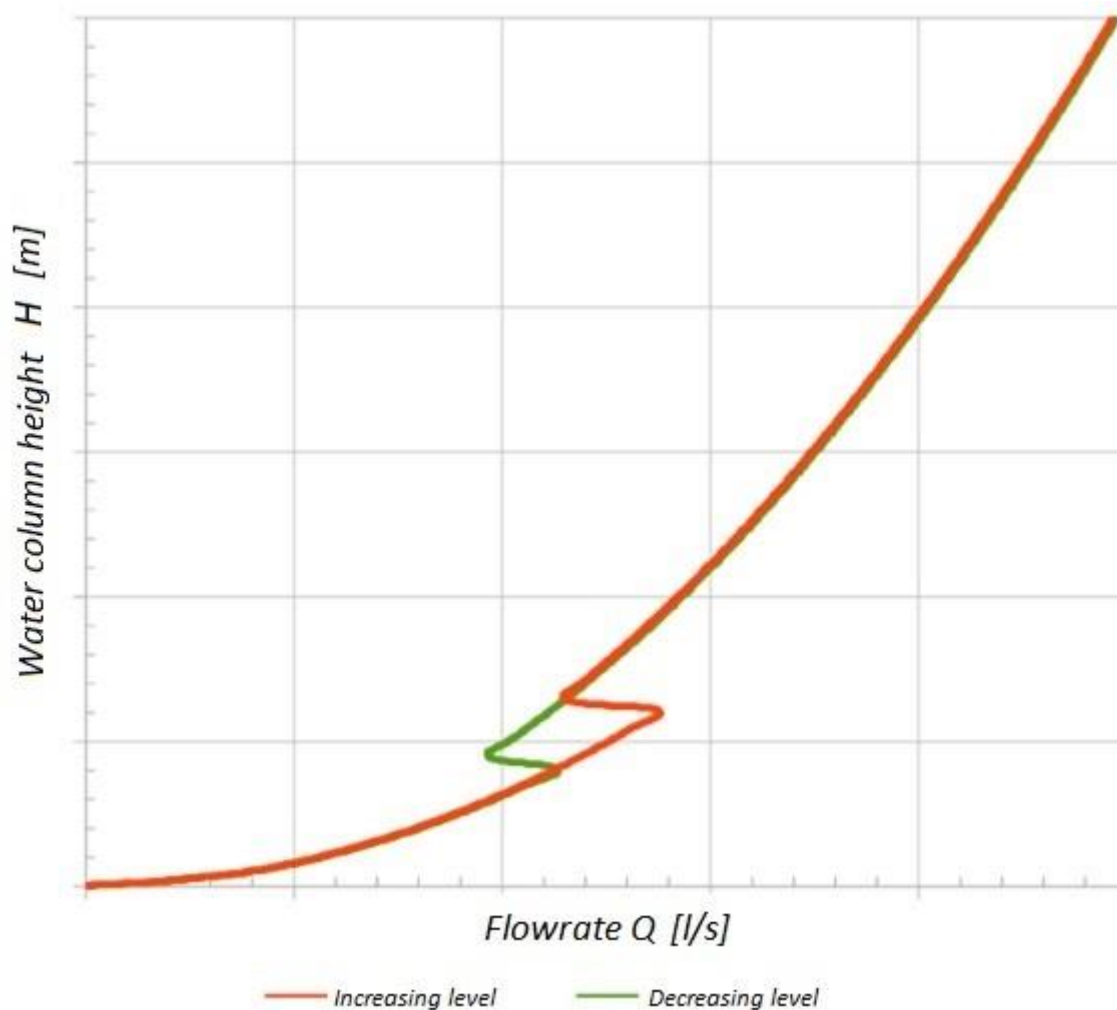
Regulators are sized individually depending on the flow parameters and the place of installation. Contact your Vortico representative for regulator selection.



REGULATOR SIZING:

Each regulator is selected individually for a specific application.

Flow Chart of Conical Vortex Flow Regulator VRP-S



The following data is required for the selection of the regulator:

- Required maximum flow [l/s] for a given water column in front of the regulator [m],
- Diameter of the outlet in which the regulator is mounted [mm]
- Chamber diameter / flat wall.
- Preferred method of installation (if other than standard)
- Material (if specific requirements apply)
- Additional options (if required)

FLAP VALVES:

Flap Valves prevents backflow in sewage systems. They are mounted on pipelines, in chambers or at sewage outlets. Vortico's offer includes flaps made of high-density polyethylene (PEHD) as well as steel valves made of stainless and acid-resistant steel. We have flat, oblique, with counterbalance, emergency closing, float, flaps for installation on a flat or round wall, or spigot end of a pipe, and also inserted into a pipe with an o-ring seal.



Flat PEHD Flap Valve **VKZ-PP**



DESCRIPTION:

VKZ-PP check valves are used wherever protection against backflow is required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Flaps are mounted on a flat wall.

MATERIALS:

Body, Flap: PEHD

Hinge, ribs: Stainless steel 1.4301 (or any other depending on customer requirements).

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

Fasteners: A2 (or A4 if required)

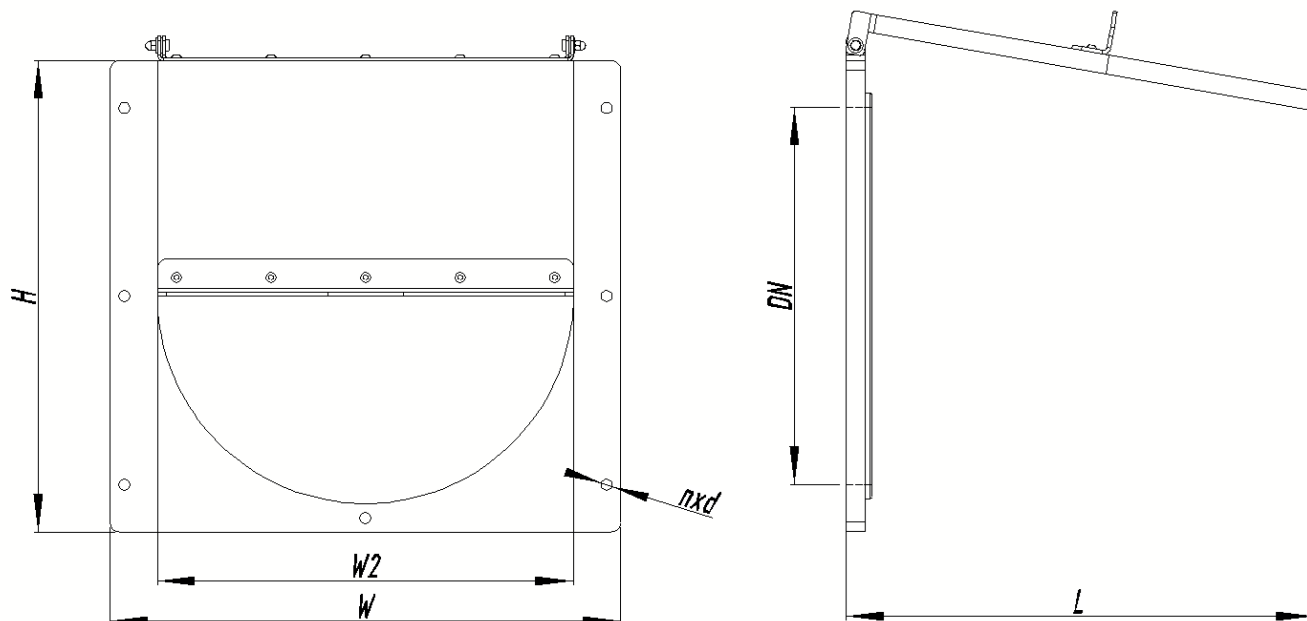
MOUNTING:

Flap valves are mounted on a flat wall using anchors. It is recommended to use adhesive anchors. Sealing to the wall using a porous EPDM gasket or SIKAFLEX type sealant.

ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These include, among others, the opening lock, opening degree limiter, closing spring, etc.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Base Width W [mm]	Flap Width W2 [mm]	Base Height H [mm]	Length of Opened Flap L [mm]	Anchors qty x size nxd [mm]
VKZ-PP 200	200	340	240	300	300	4 x M10
VKZ-PP 250	250	390	290	350	350	4 x M10
VKZ-PP 315	315	455	355	415	415	6 x M10 + 1 x M10(s)
VKZ-PP 400	400	540	440	500	500	6 x M10 + 1 x M10(s)
VKZ-PP 500	500	640	540	600	600	6 x M12 + 2 x M10(s)
VKZ-PP 630	630	770	670	730	730	8 x M12 + 2 x M10(s)
VKZ-PP 710	710	850	750	810	810	8 x M12 + 2 x M10(s)
VKZ-PP 800	800	940	840	900	900	8 x M12 + 2 x M10(s)
VKZ-PP 900	900	1040	940	1000	1000	10 x M12 + 2 x M10(s)
VKZ-PP 1000	1000	1140	1040	1100	1100	10 x M12 + 2 x M10(s)
VKZ-PP 1200	1200	1340	1240	1300	1300	12 x M12 + 3 x M10(s)

*Other sizes available on individual request. It is possible to make a flap of any size.

** Vortico reserves the right to make changes to suit a specific order.

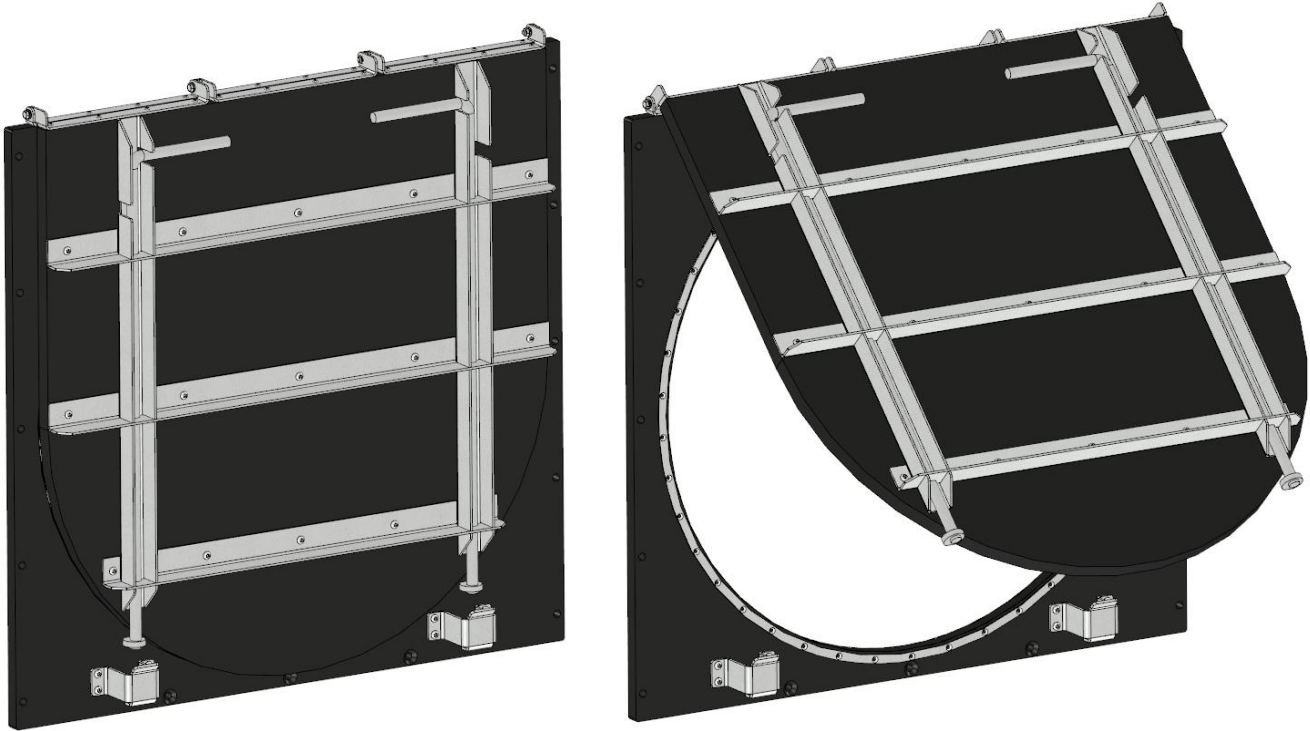
(s) - Anchor with countersunk head to be installed in a chamfered hole.

DOCUMENTATION:

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Flat PEHD Flap Valve with Closure

VKZ-PPZ



DESCRIPTION:

The VKZ-PPZ flap valves are used wherever protection against backflow is required and the need for permanent closing of the valve is periodically required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Flaps are mounted on a flat wall.

MATERIALS:

Body, Flap: PEHD

Hinge, ribs: Stainless steel 1.4301 (or any other depending on customer requirements).

Closing mechanism: Stainless steel 1.4301 (or any other depending on customer requirements).

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

Fasteners: A2 (or A4 if required)

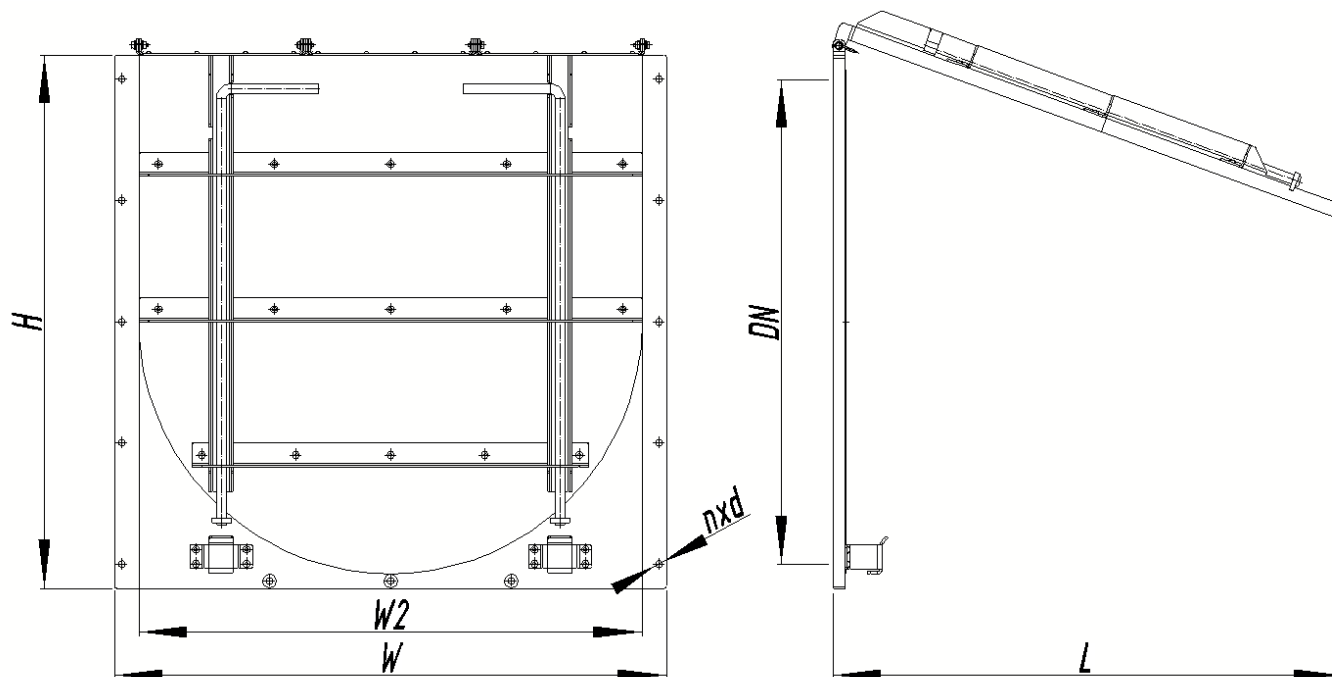
MOUNTING:

Flap valves are mounted on a flat wall using anchors. It is recommended to use adhesive anchors. Sealing to the wall using a porous EPDM gasket or SIKAFLEX type sealant.

ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These include, among others, the opening lock, opening degree limiter, closing spring, etc.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Base Width W [mm]	Flap Width W2 [mm]	Base Height H [mm]	Length of Opened Flap L [mm]	Anchors qty x size nxd [mm]
VKZ-PPZ 200	200	340	240	300	300	4 x M10
VKZ-PPZ 250	250	390	290	350	350	4 x M10
VKZ-PPZ 315	315	455	355	415	415	6 x M10 + 1 x M10(s)
VKZ-PPZ 400	400	540	440	500	500	6 x M10 + 1 x M10(s)
VKZ-PPZ 500	500	640	540	600	600	6 x M12 + 2 x M10(s)
VKZ-PPZ 630	630	770	670	730	730	8 x M12 + 2 x M10(s)
VKZ-PPZ 710	710	850	750	810	810	8 x M12 + 2 x M10(s)
VKZ-PPZ 800	800	940	840	900	900	8 x M12 + 2 x M10(s)
VKZ-PPZ 900	900	1040	940	1000	1000	10 x M12 + 2 x M10(s)
VKZ-PPZ 1000	1000	1140	1040	1100	1100	10 x M12 + 2 x M10(s)
VKZ-PPZ 1200	1200	1340	1240	1300	1300	12 x M12 + 3 x M10(s)

*Other sizes available on individual request. It is possible to make a flap of any size.

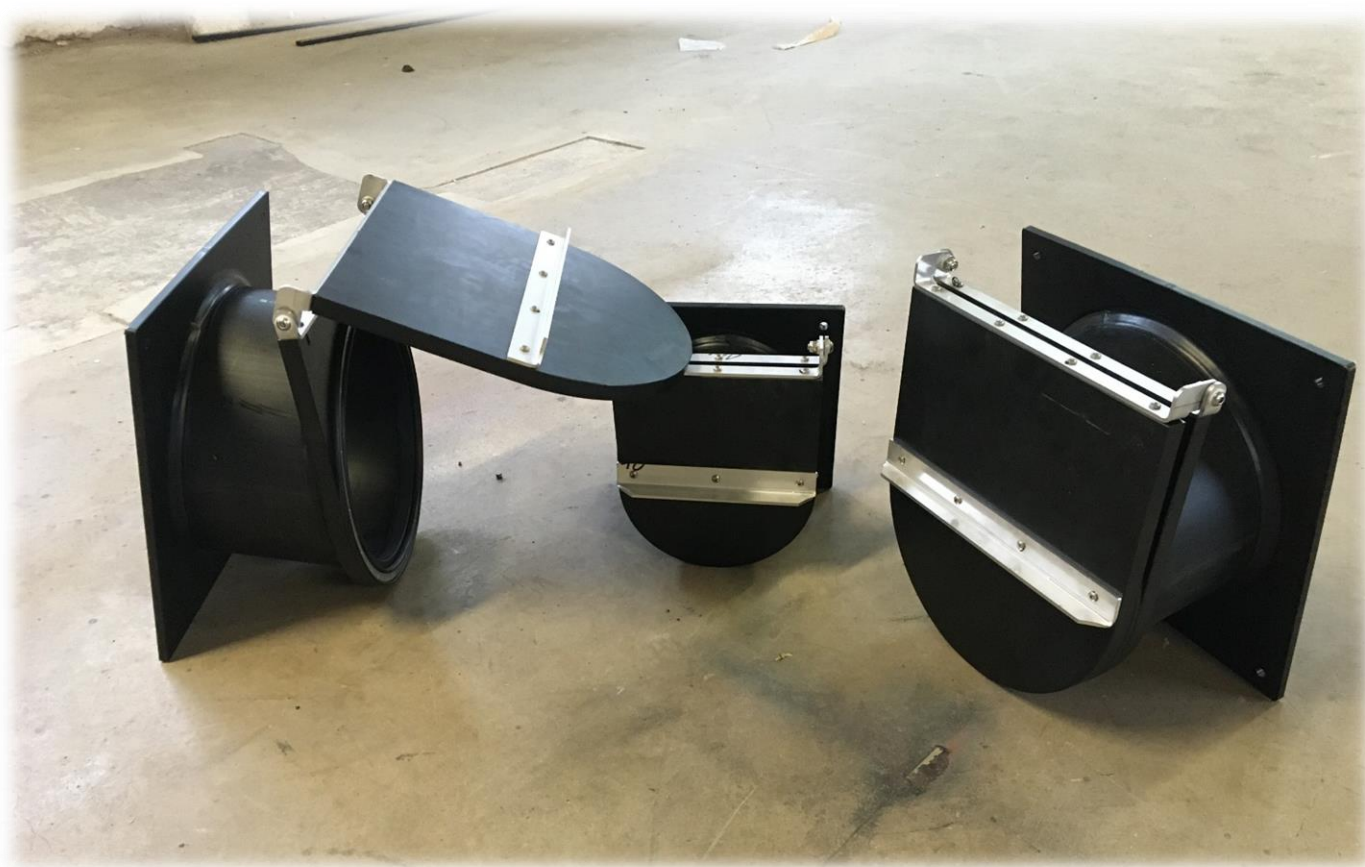
** Vortico reserves the right to make changes to suit a specific order.

(s) - Anchor with countersunk head to be installed in a chamfered hole.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Oblique PEHD Flap Valve VKZ-PS



DESCRIPTION:

VKZ-PS flap valves are used wherever protection against backflow is required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. The dampers are installed at the end of the pipe or on the wall.

Due to the method of mounting, the flaps are available in 3 types:

VKZ-PS-A - with an adapter for a flat or round wall

VKZ-PS-B - with spigot end,

VKZ-PS-K - with flange drilled according to PN10 (or according to customer requirements),

MATERIALS:

Body, Flap: PEHD

Hinge, ribs: Stainless steel 1.4301 (or any other depending on customer requirements).

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

Fasteners: A2 (or A4 if required)

MOUNTING:

Flaps are installed depending on the selected type:

VKZ-PS-A - to the wall through the holes in the adapter using adhesive or mechanical anchors.

VKZ-PS-B - at the end of the pipe by pressing into the socket of the pipe or through a sleeve.

VKZ-PS-K - by flange connection using bolts with a gasket between the flanges.

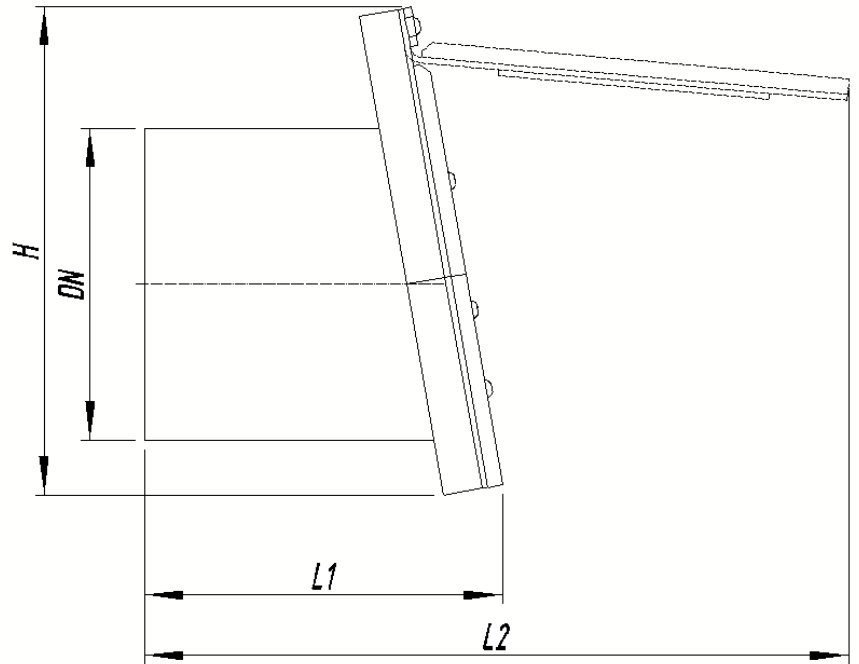
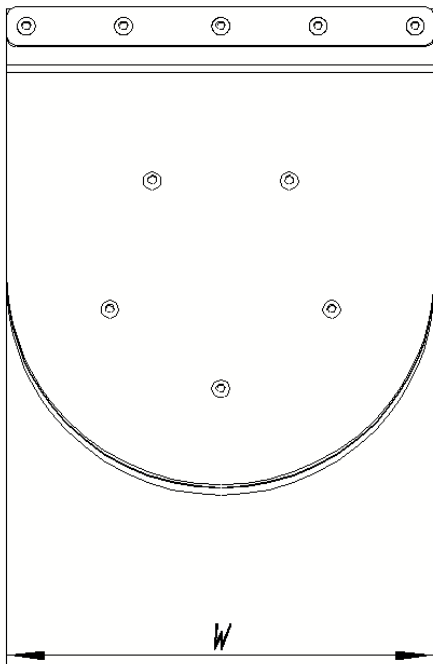
When mounting to the wall, the seal should be made of a porous EPDM gasket or SIKAFLEX type sealant.

ADDITIONAL OPTIONS:

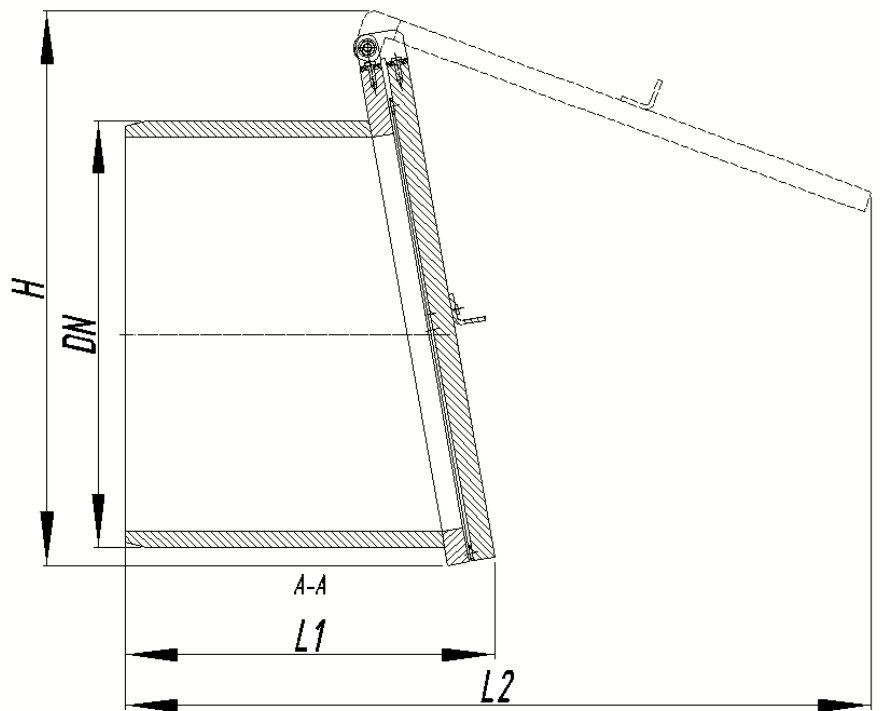
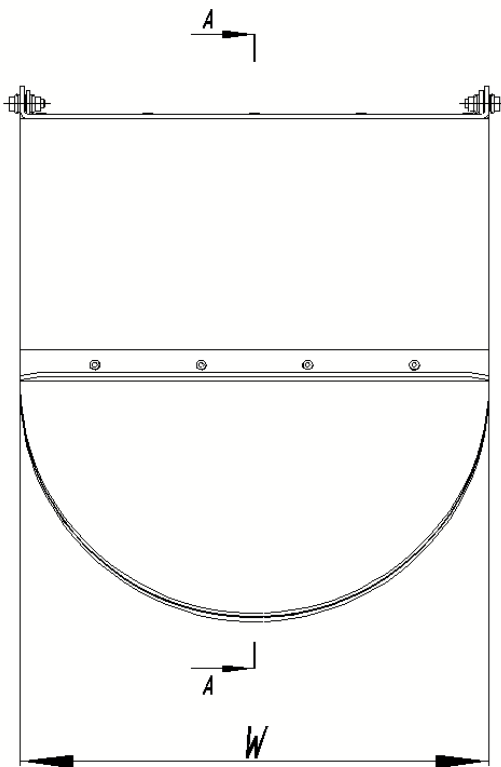
A number of additional options are available depending on customer requirements. These include, among others, a counterweight for the flap, an opening lock, an opening degree limiter, a closing spring, etc.

STANDARD DIMENSIONS (VERSION A):

Up to DN315



DN400 and bigger:



Type	Nominal Diameter DN [mm]	Flap Width W [mm]	Flap Height H [mm]	Length of the Closed Flap L1 [mm]	Length of the Opened Flap L2 [mm]
VKZ-PS 110	110	150	210	160	300
VKZ-PS 160	160	200	260	190	350
VKZ-PS 200	200	240	310	200	400
VKZ-PS 250	250	290	360	220	450
VKZ-PG 315	315	355	425	250	550
VKZ-PS 400	400	440	510	350	750
VKZ-PS 500	500	540	610	400	1000
VKZ-PS 630	630	670	750	450	1100
VKZ-PS 710	710	750	830	500	1200
VKZ-PS 800	800	840	930	500	1300
VKZ-PS 900	900	940	1030	500	1400
VKZ-PS 1000	1000	1040	1050	500	1500

*Other sizes available on individual request. It is possible to make a flap of any size.

** Vortico reserves the right to make changes to suit a specific order.

DOCUMENTATION:

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Oblique Steel Flap Valve **VKZ-SS**



DESCRIPTION:

VKZ-SS flap valves are used wherever protection against backflow is required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches.

Due to the method of mounting, the flaps are available in 3 types:

VKZ-SS-A - with an adapter for a flat or round wall

VKZ-SS-B - with spigot end,

VKZ-SS-K - with flange drilled according to PN10 (or according to customer requirements),

MATERIALS:

Body, flap and hinge: Stainless steel AISI 304/304L - 1.4301/1.4307 or acid-resistant AISI 316/316L - 1.4401/1.4404 or any other depending on customer requirements.

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

MOUNTING:

Flaps are installed depending on the selected type:

VKZ-SS-A - to the wall through the holes in the adapter using adhesive or mechanical anchors.

VKZ-SS-B - at the end of the pipe by pressing into the socket of the pipe or through a sleeve.

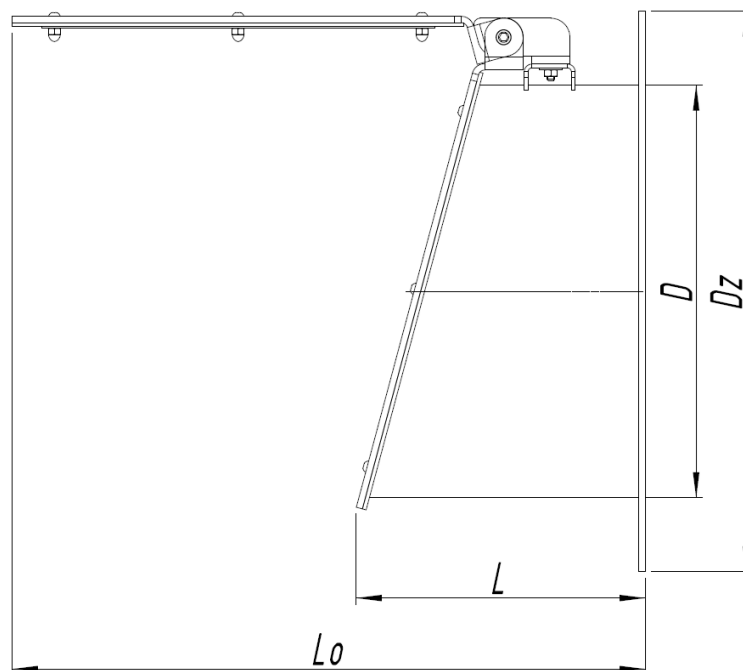
VKZ-SS-K - by flange connection using bolts with a gasket between the flanges.

When mounting to the wall, the seal should be made of a porous EPDM gasket or SIKAFLEX type sealant.

ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These include, among others, a counterweight for the flap, an opening lock, an opening degree limiter, a closing spring, etc.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	External Diameter of Pipe D [mm]	Size of the Adapter/Flange Dz [mm]	Length of Closed Flap L [mm]	Length of Opened Flap Lo [mm]
VKZ-SS 200	200	219,1	320	185	375
VKZ-SS 250	250	273	375	210	440
VKZ-SS 315	315	323,9	440	225	545
VKZ-SS 400	400	406,4	540	255	650
VKZ-SS 500	500	508	645	290	755
VKZ-SS 600	600	600	755	350	790
VKZ-SS 800	800	800	975	525	1150
VKZ-SS 1000	1000	1000	1175	555	1335

*Other sizes available on individual request. It is possible to make a flap of any size.

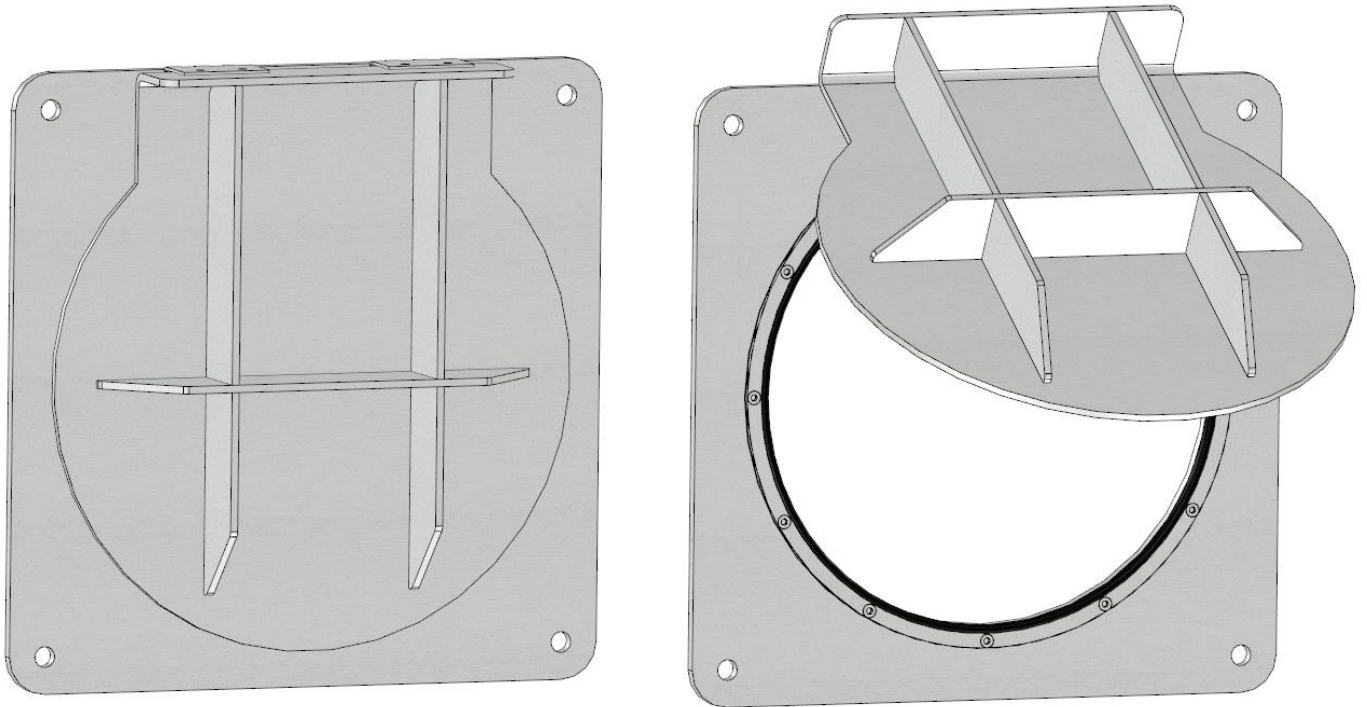
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DOCUMENTATION:

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Flat Steel Flap Valve

VKZ-SP



DESCRIPTION:

VKZ-SP flap valves are used wherever protection against backflow is required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches.

MATERIALS:

Body, flap and hinge: Stainless steel AISI 304/304L - 1.4301/1.4307 or acid-resistant AISI 316/316L - 1.4401/1.4404 or any other depending on customer requirements.

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

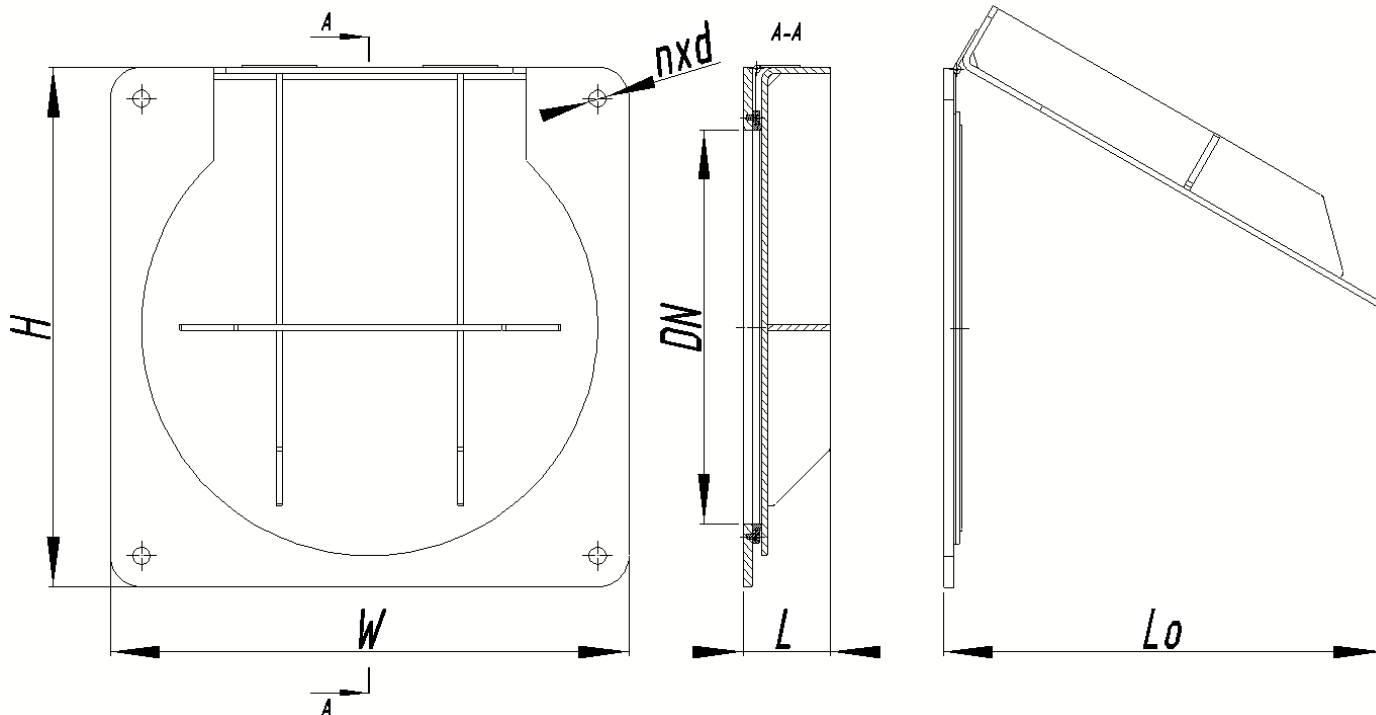
MOUNTING:

Flap valves are mounted on a flat wall using anchors. It is recommended to use adhesive anchors. Sealing to the wall using a porous EPDM gasket or SIKAFLEX type sealant.

ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These include, among others, the opening lock, opening degree limiter, closing spring, etc.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Flap Height H [mm]	Flap Width W [mm]	Length of the Closed Flap L [mm]	Length of the Closed Flap Lo [mm]	Qty x Size of Anchors
VKZ-SP 200	200	300	300	60	285	4xM10
VKZ-SP 250	250	350	350	65	335	4xM10
VKZ-SP 315	315	415	415	70	400	4xM10
VKZ-SP 400	400	500	500	75	485	4xM10
VKZ-SP 500	500	600	600	80	590	4xM12
VKZ-SP 630	630	730	730	90	730	4xM12

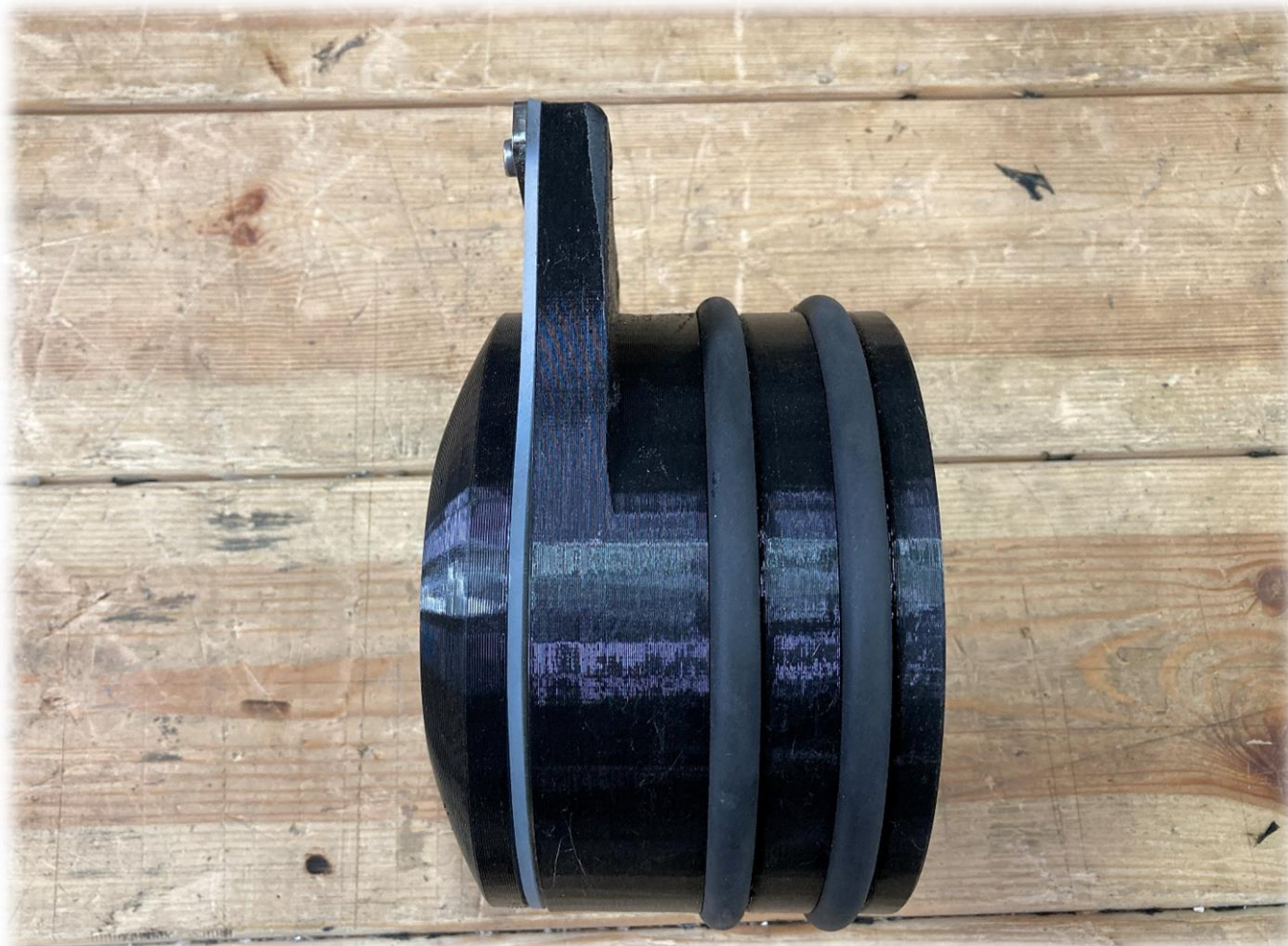
*Other sizes available on individual request. It is possible to make a flap of any size.

** Vortico reserves the right to make changes to suit a specific order.

DOCUMENTATION:

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Push-in Flap Valve **VKZ-W**



DESCRIPTION:

VKZ-W flap valves are used wherever protection against backflow is required. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Their design allows for push-fit installation into the hole in the chamber or into the spigot end of the pipe.

MATERIALS:

Body, flap and hinge: PET-G

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

MOUNTING:

Flaps are fitted with a push fit into a hole in the wall or spigot end of the pipe. Flap body is equipped with o-ring seals ensuring tightness. Silicone can be used to seal if necessary.

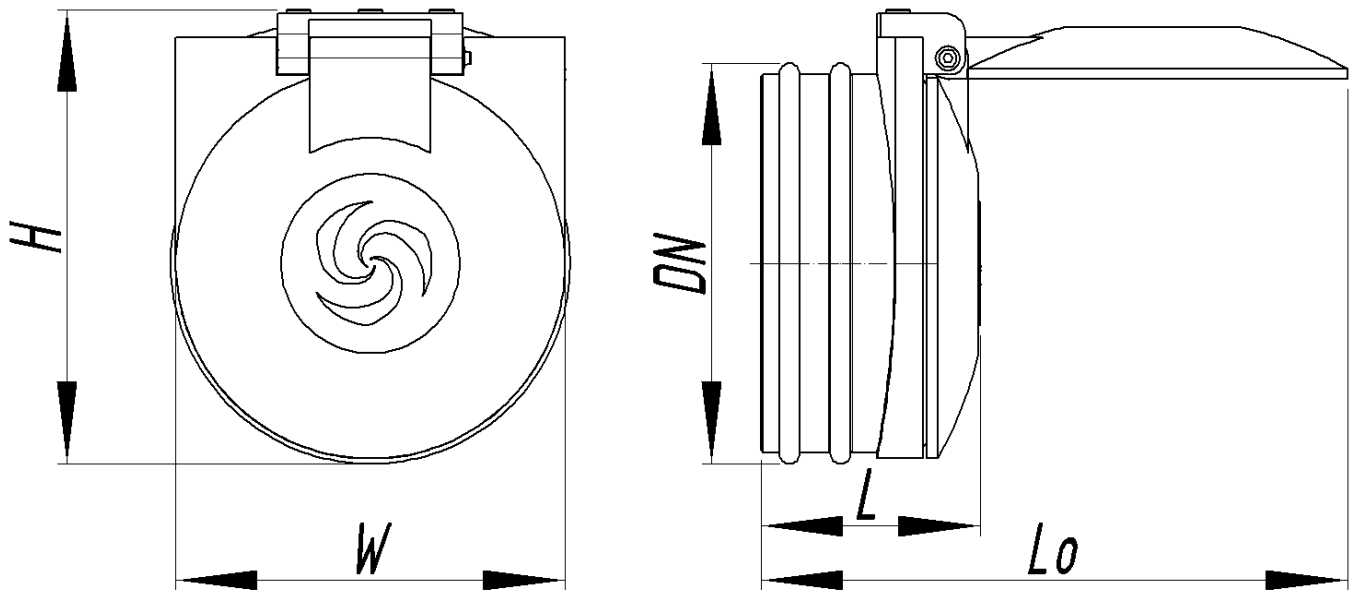
ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These are, for example, mounting plates for screwing the flap to the bottom of the base, closing spring, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Flap Height H [mm]	Flap Width W [mm]	Length of the Closed Flap L [mm]	Length of the Closed Flap Lo [mm]
VKZ-W 110	110	130	110	90	190
VKZ-W 160	160	180	160	100	250
VKZ-W 200	200	220	200	110	290
VKZ-W 250	250	270	250	120	360
VKZ-W 315	315	340	315	130	440
VKZ-W 400	400	425	400	150	540

*Other sizes available on individual request. It is possible to make a flap of any size.

** Vortico reserves the right to make changes to suit a specific order.

Push-in Flap Valve with Float **VKZ-WP**



DESCRIPTION:

VKZ-WP flap valves are used wherever protection against backflow is needed in case of water accumulation behind the valve, while ensuring free flow when the chamber is empty. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Their design allows for push-fit installation into the hole in the chamber or into the spigot end of the pipe.

MATERIALS:

Body, flap and hinge: PET-G

Float arm: Stainless steel 1.4301

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

MOUNTING:

Flaps are fitted with a push fit into a hole in the wall or spigot end of the pipe. Flap body is equipped with o-ring seals ensuring tightness. Silicone can be used to seal if necessary.

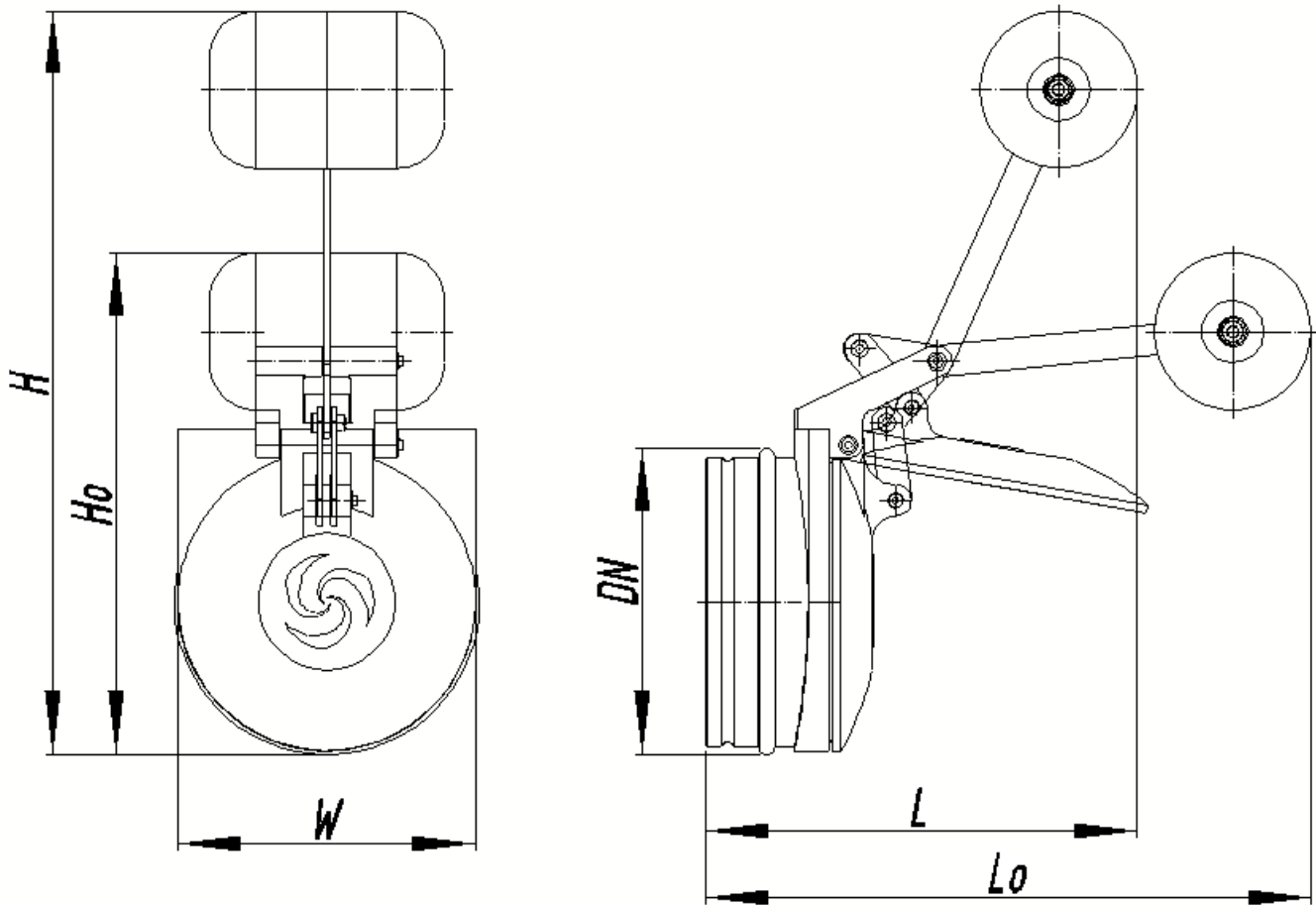
ADDITIONAL OPTIONS:

A number of additional options are available depending on customer requirements. These are, for example, mounting plates for screwing the flap to the bottom of the base etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Height of the Closed Flap H [mm]	Height of the Opened Flap H [mm]	Flap Width W [mm]	Length of the Closed Flap L [mm]	Length of the Closed Flap Lo [mm]
VKZ-WP 110	110	280	240	110	230	280
VKZ-WP 160	160	360	290	160	255	360
VKZ-WP 200	200	480	320	200	275	390
VKZ-WP 250	250	580	390	250	310	450
VKZ-WP 315	315	680	480	315	360	540
VKZ-WP 400	400	890	590	400	400	630

*Other sizes available on individual request. It is possible to make a flap of any size.

** Vortico reserves the right to make changes to suit a specific order.

PENSTOCKS AND KNIFE GATES:

Penstocks are used to cut off the flow or regulate the accumulation of water in the tank. We offer penstocks made of stainless and acid-resistant steel, and PEHD in versions for mounting on a wall or in a channel, as well as stop-log closures used for water accumulation or as repair closures made of aluminum, stainless steel and plastics. In addition to standard sizes, we offer penstocks made for specific needs with dimensions and parameters tailored to the user's needs.

The Vortico company also offers knife gate valves made of PEHD for installation on pipelines and with an adapter to the wall.



Spindle Penstock PEHD

VZP-A



DESCRIPTION:

VZP-A penstocks are used wherever it is necessary to cut off the flow or accumulate water. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Made of PEHD and stainless steel ensures full resistance to weather conditions.

MATERIALS:

Frame and ribs: Stainless steel AISI 304/304L - 1.4301/1.4307 or acid resistant AISI 316/316L - 1.4401/1.4404 or any other depending on customer requirements

Shut-off plate: PEHD (High Density Polyethylene).

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

Spindle: A2 or A4 stainless steel.

TIGHTNESS:

The penstock is tight up to 3m of water column.

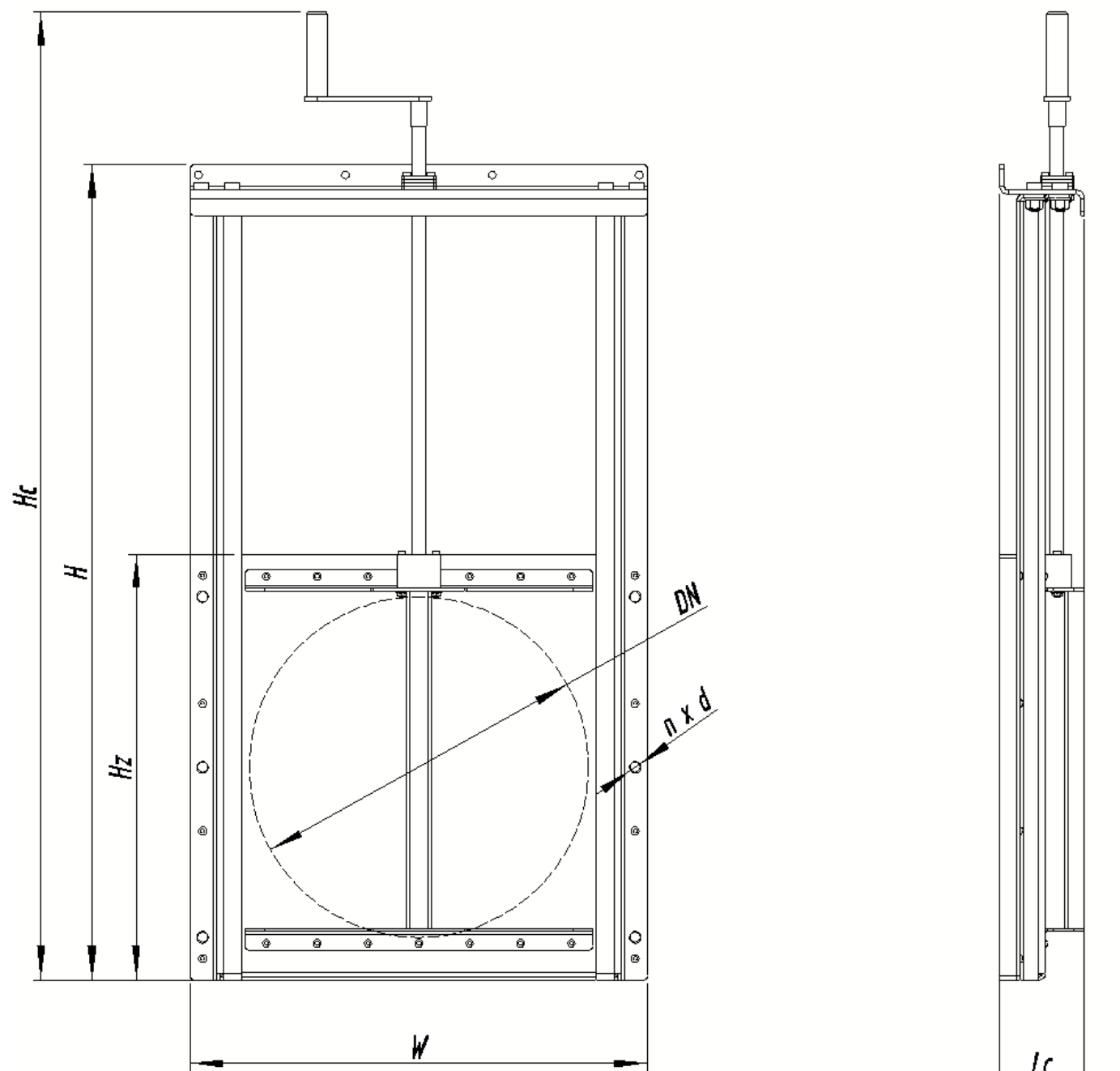
It is possible to make penstocks for higher water columns on request.

Tightness class: class G (2.0mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

On the wall using anchors. It is recommended to use adhesive anchors. Sealing between the penstock frame and the wall is provided by a porous EPDM gasket or SIKAFLEX type sealant.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Penstock Width W [mm]	Shut-off Plate Height Hz [mm]	Frame Height H [mm]	Total Height Hc [mm]	Thickness Lc [mm]	Anchors Qty x Size nxd [mm]
VZP-A 200	200	340	300	550	750	100	4 x M10
VZP-A 250	250	390	350	650	850	100	4 x M10
VZP-A 315	315	455	415	780	980	100	6 x M10 + 1 x M10(s)
VZP-A 400	400	540	500	950	1150	100	6 x M10 + 1 x m10(s)
VZP-A 500	500	640	600	1150	1350	100	6 x M12 + 2 x m10(s)
VZP-A 630	630	770	730	1410	1610	120	8 x M12 + 2 x m10(s)
VZP-A 710	710	850	810	1570	1770	120	8 x M12 + 2 x m10(s)
VZP-A 800	800	940	900	1750	1950	120	8 x M12 + 2 x m10(s)
VZP-A 900	900	1040	1000	1950	2150	120	10 x M12 + 2 x m10(s)
VZP-A 1000	1000	1140	1100	2150	2350	120	10 x M12 + 2 x m10(s)

*Other sizes available on individual request. It is possible to make penstock of any size.

** Vortico reserves the right to make changes to suit a specific order.

(s) - Anchor with countersunk head to be installed in a chamfered hole

DOŚTĘPNE OPCJE:

It is possible to make a penstock with non-standard dimensions, including a rectangular instead of a round hole, with an elongated frame, an adapter for a round chamber, etc. Penstocks can be made in a version with a knob in the upper part of the penstock, finished with a turnkey square as well as with an electric or pneumatic actuator

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Hand Penstock PEHD VZP-C



DESCRIPTION:

VZP-C penstocks are used wherever it is necessary to cut off the flow or accumulate water. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Made of PEHD and stainless steel ensures full resistance to weather conditions.

MATERIALS:

Frame, handle: Stainless steel AISI 304/304L - 1.4301/1.4307 or acid-resistant AISI 316/316L - 1.4401/1.4404 or any other depending on customer requirements

Shut-off plate: PEHD (High Density Polyethylene).

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

The penstock is tight up to its height

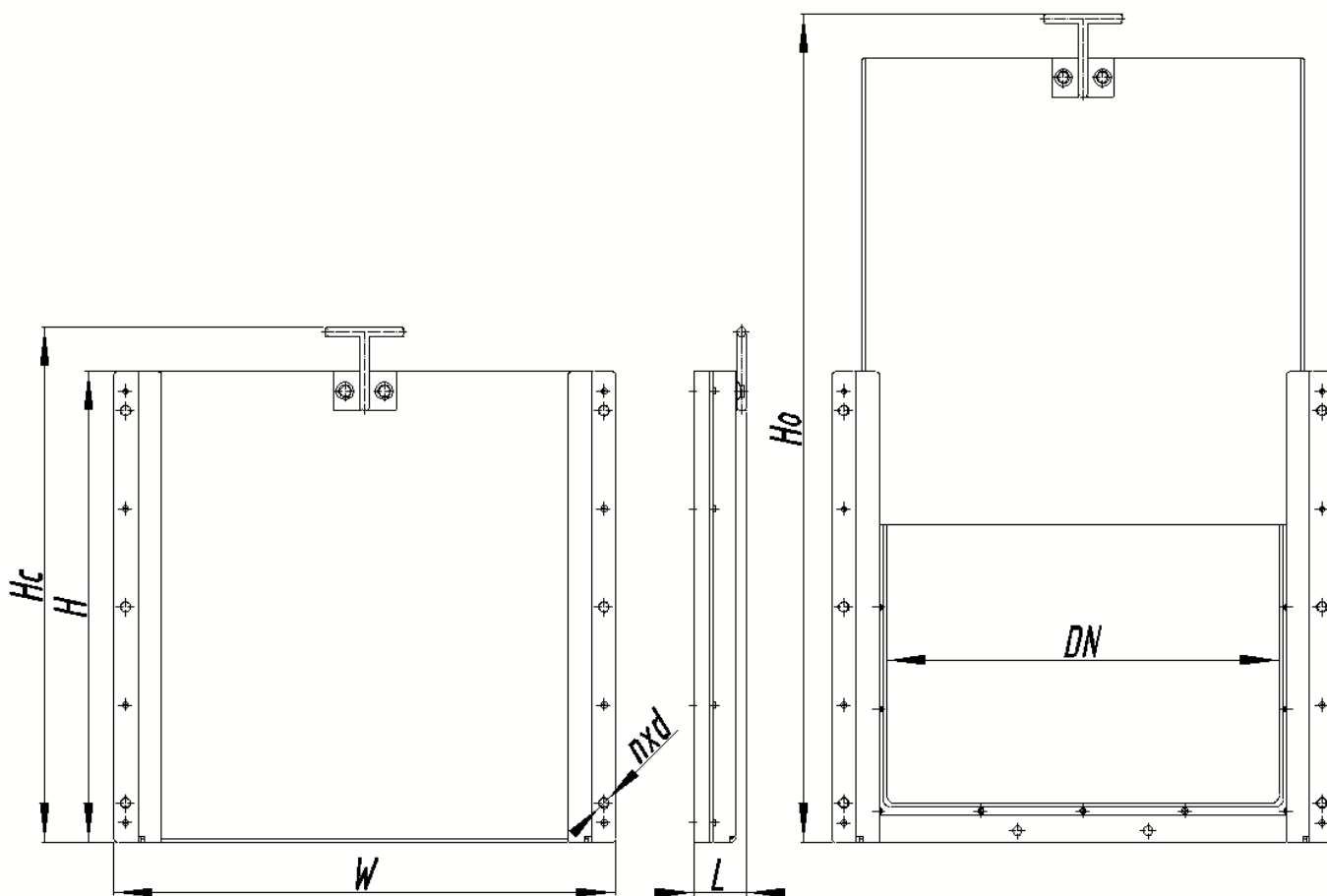
It is possible to make penstocks for higher water columns on request.

Tightness class: class G (2.0mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

On the wall using anchors. It is recommended to use adhesive anchors. Sealing between the penstock frame and the wall is provided by a porous EPDM gasket or SIKAFLEX type sealant.

STANDARD DIMENSIONS:



Type	Nominal Size DN [mm]	Penstock Width W [mm]	Penstock Height H [mm]	Total Height Hc [mm]	Opened Height Ho [mm]	Penstock Thickness L [mm]	Anchors Qty x Size nxd [mm]
VZP-C 200	200x200	340	300	360	510	70	4 x M10
VZP-C 250	250x250	390	350	410	595	70	4 x M10
VZP-C 315	315x315	455	415	475	815	70	6 x M10 + 1 x M10(s)
VZP-C 400	400x400	540	500	560	935	70	6 x M10 + 1 x M10(s)
VZP-C 500	500x500	640	600	660	1110	70	6 x M12 + 2 x M10(s)

*Other sizes available on individual request. It is possible to make penstock of any size.

** Vortico reserves the right to make changes to suit a specific order.

(s) - Anchor with countersunk head to be installed in a chamfered hole

DOSTĘPNE OPCJE:

It is possible to make a penstock with non-standard dimensions, including an elongated frame, an adapter for a round chamber, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Steel Penstock

VZS-A



DESCRIPTION:

VZS-A penstocks are used wherever it is necessary to cut off the flow or accumulate water. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Made of stainless steel for full resistance to weather conditions.

MATERIALS:

Frame, shut-off plate and spindle: Stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L – 1.4401/1.4404 or any other depending on customer requirements and conditions at the mounting site

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

The penstock is tight up to 3m of water column.

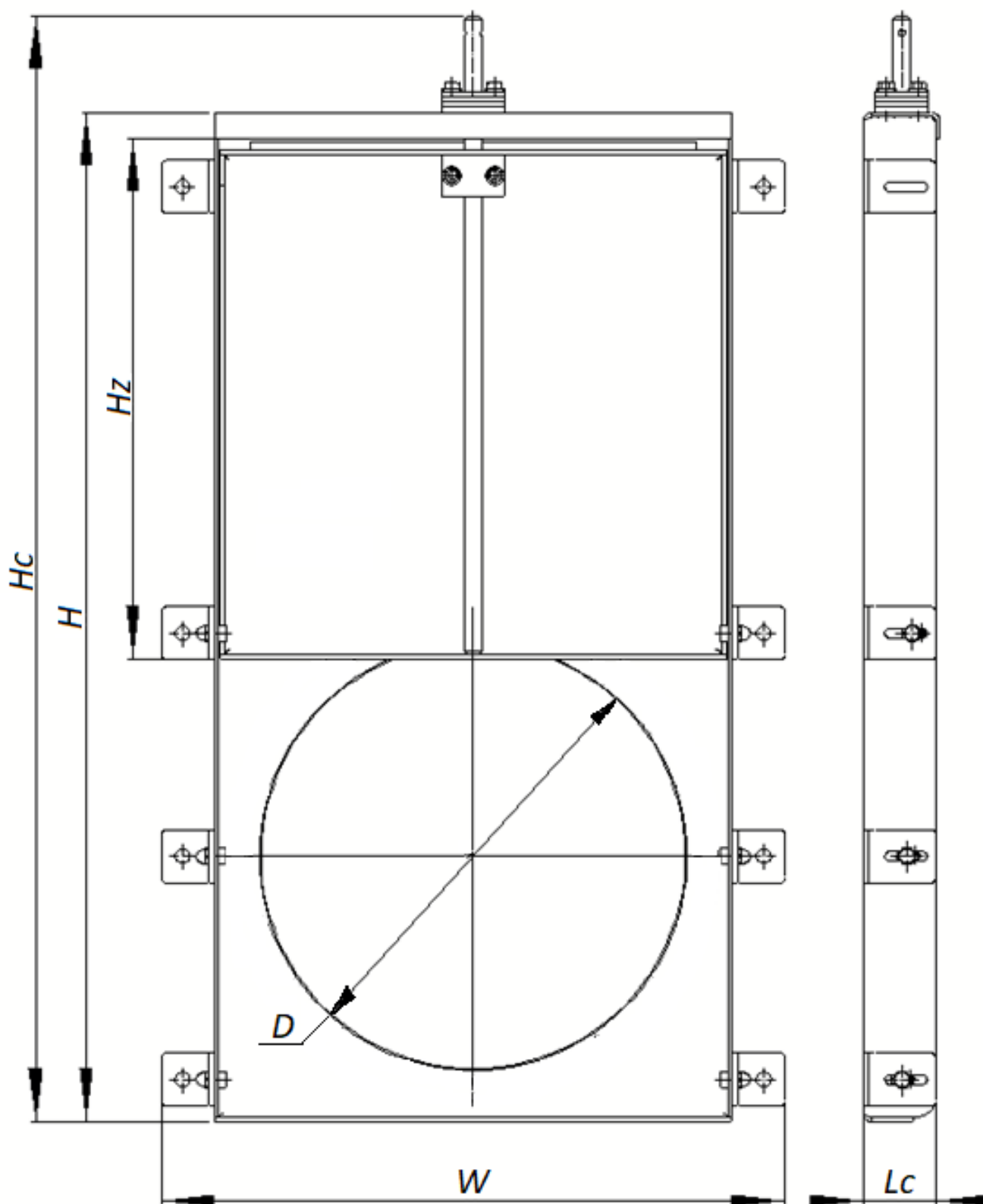
It is possible to make penstocks for higher water columns on request.

Sealing class: class C (0.03mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

On the wall using anchors. It is recommended to use adhesive anchors. Sealing between the penstock frame and the wall is provided by a porous EPDM gasket or SIKAFLEX type sealant.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Penstock Width W [mm]	Shut-off Plate Height Hz [mm]	Frame Height H [mm]	Total Height Hc [mm]	Thickness Lc [mm]	Anchors Qty x Size nxd [mm]
VZS-A 200	200	360	300	550	750	100	4 x M12
VZS-A 250	250	410	350	650	850	100	4 x M12
VZS-A 315	315	475	415	780	980	100	4 x M12
VZS-A 400	400	560	500	950	1150	100	6 x M12
VZS-A 500	500	660	600	1150	1350	100	6 x M12
VZS-A 630	630	790	730	1410	1610	120	6 x M12
VZS-A 710	710	870	810	1570	1770	120	8 x M12
VZS-A 800	800	960	900	1750	1950	120	10 x M12
VZS-A 1000	1000	1160	1100	2150	2350	120	10 x M12

*Other sizes available on individual request. It is possible to make penstock of any size.

** Vortico reserves the right to make changes to suit a specific order.

DOŚTĘPNE OPCJE:

The penstock is available with a seal mounted on the frame or on the shut-off plate. It is possible to make a penstock with non-standard dimensions, including a rectangular instead of a round passage, with an elongated frame, an adapter for a round chamber, etc. The penstocks can be made in a manually lifted version by pulling the handle, or in a spindle version with a knob in the upper part of the penstock, as well as with an electric or pneumatic actuator.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Steel Penstock VZS-B



DESCRIPTION:

VZS-A penstocks are used wherever it is necessary to cut off the flow or accumulate water. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Made of stainless steel for full resistance to weather conditions.

MATERIALS:

Frame, shut-off plate and spindle: Stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L – 1.4401/1.4404 or any other depending on customer requirements and conditions at the mounting site

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

The penstock is tight up to 4m of water column.

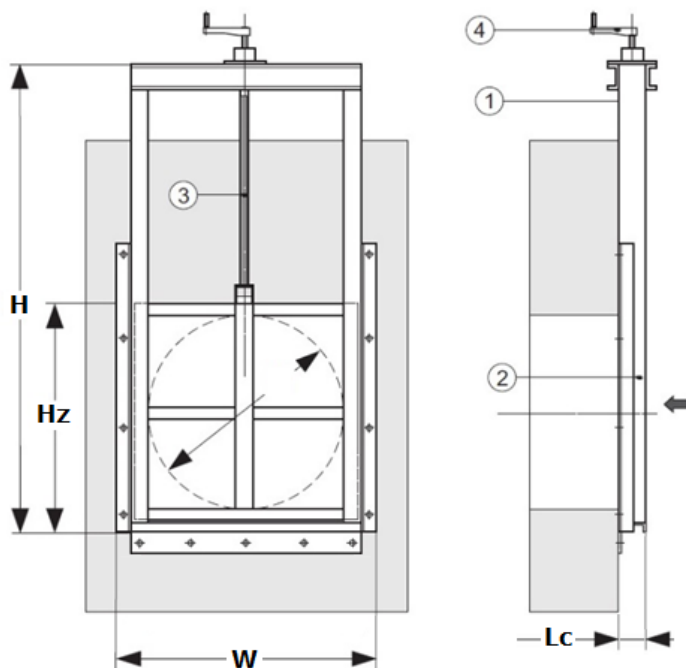
It is possible to make penstocks for higher water columns on request.

Sealing class: class C (0.03mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

Using anchors to the wall and bottom of the concrete channel. It is recommended to use adhesive anchors. Sealing between the penstock frame and the wall and bottom is ensured by a porous EPDM gasket or SIKAFLEX type sealant.

STANDARD DIMENSIONS:



Type	Nominal Diameter DN [mm]	Pendstock Width W [mm]	Shut-off plate height Hz [mm]	Frame Height H [mm]	Penstock Thickness Lc [mm]
VZS-B 200	200	420	300	650	120
VZS-B 300	300	520	400	900	120
VZS-B 400	400	620	440	980	120
VZS-B 500	500	720	640	1380	120
VZS-B 600	600	820	700	1500	120
VZS-B 700	700	920	800	1700	120
VZS-B 800	800	1020	900	1900	120
VZS-B 900	900	1120	1000	2100	150
VZS-B 1000	1000	1220	1100	2300	150
VZS-B 1100	1100	1320	1200	2500	150
VZS-B 1200	1200	1420	1300	2700	150
VZS-B 1400	1400	1620	1400	2900	150
VZS-B 1500	1500	1720	1600	3300	150
VZS-B 1600	1600	1820	1700	3500	200
VZS-B 1800	1800	2020	1900	3900	200
VZS-B 2000	2000	2220	2100	4300	200

* The manufacturer reserves the right to change dimensions

Steel Penstock VZS-X



DESCRIPTION:

VZS-A penstocks are used wherever it is necessary to cut off the flow or accumulate water. Used for surface water, rainwater or sewage in sewage systems, canals and drainage ditches. Made of stainless steel for full resistance to weather conditions.

MATERIALS:

Frame, shut-off plate and spindle: Stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L – 1.4401/1.4404 or any other depending on customer requirements and conditions at the mounting site

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

The penstock is tight up to 4m of water column.

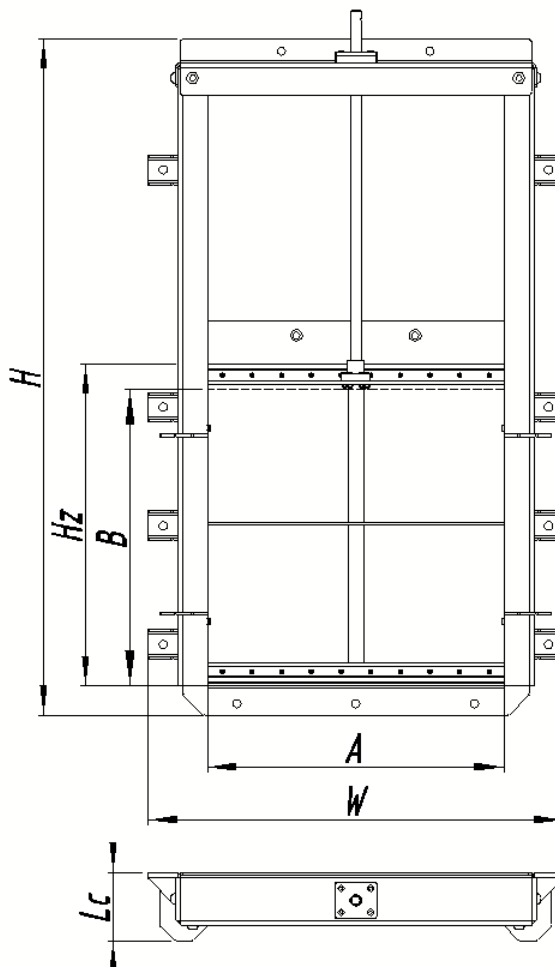
It is possible to make penstocks for higher water columns on request.

Sealing class: class C (0.03mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

On the wall using anchors. It is recommended to use adhesive anchors. Sealing between the penstock frame and the wall is provided by a porous EPDM gasket or SIKAFLEX type sealant.

STANDARD DIMENSIONS:



Type	Size AxB [mm]	Penstock Width W [mm]	Shut-off Plate Height Hz [mm]	Frame Height H [mm]	Penstock Thickness Lc [mm]
VZS-X 200	200x200	400	250	540	85
VZS-X 250	250x250	450	300	640	85
VZS-X 300	300x300	500	350	740	85
VZS-X 400	400x400	600	450	940	85
VZS-X 500	500x500	700	550	1140	115
VZS-X 600	600x600	800	650	1340	115
VZS-X 700	700x700	900	750	1540	115
VZS-X 800	800x800	1000	850	1740	115
VZS-X 900	900x900	1100	950	1940	115
VZS-X 1000	1000x1000	1200	1050	2140	125
VZS-X 1100	1100x1100	1300	1150	2340	125
VZS-X 1200	1200x1200	1400	1250	2540	125

*Other sizes available on individual request. It is possible to make penstock of any size.

** Vortico reserves the right to make changes to suit a specific order.

Stop-log Closure

VZR



DESCRIPTION:

VZR stop-log closures are used wherever it is necessary to cut off the flow or accumulate water. Used as permanent water damming devices or temporary repair closures for surface water, rainwater or sewage in drainage channels and ditches. Made of aluminum, plastic and stainless steel, it is fully weatherproof.

MATERIALS:

Frame: Stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404 aluminum or any other depending on customer requirements and conditions at the mounting site

Logs: Aluminum, Stainless steel, GRP plastic, Wood or other according to customer requirements.

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

Tightness class: class G (2.0mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.5 up to the height of the closure.

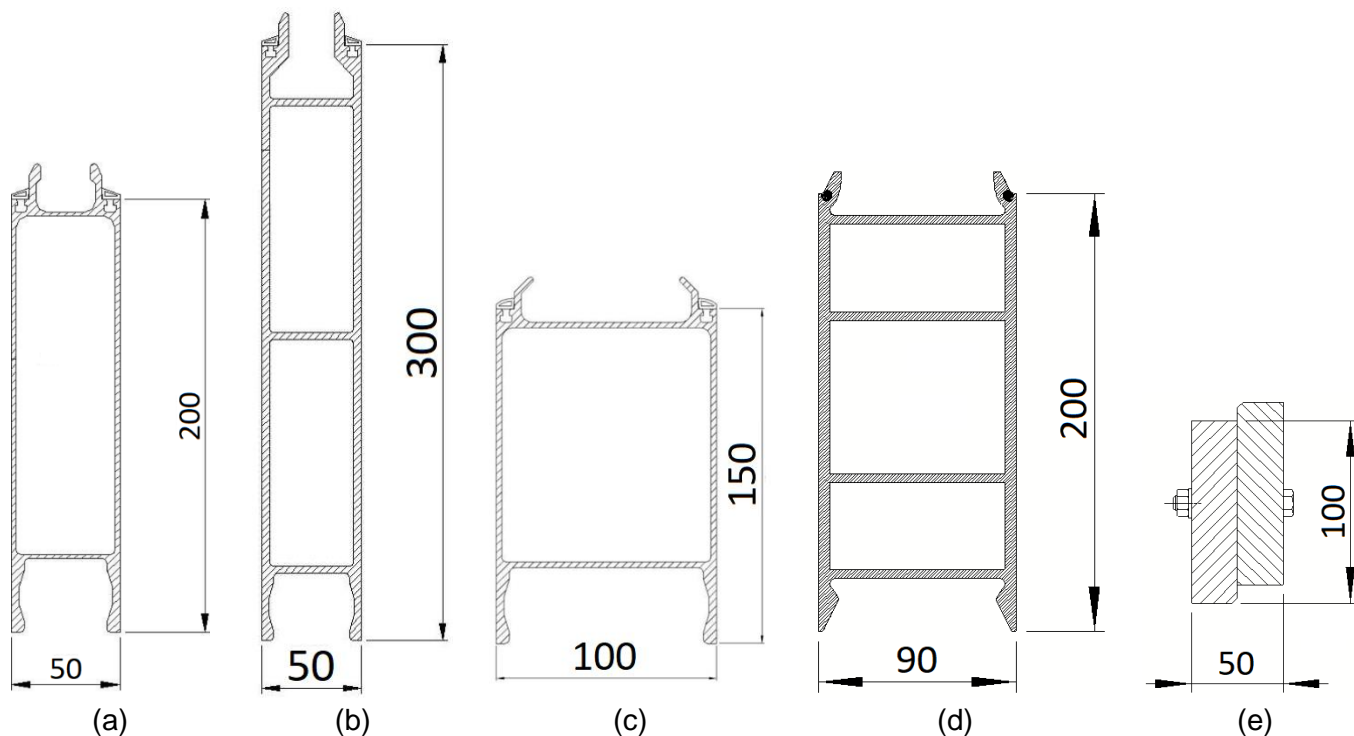
MOUNTING:

The frame is anchored to the wall and the bottom using anchors. The frame is mounted in grooves in the wall to be filled with concrete or to a flat wall. It is possible to make a frame adapted to installation in a round chamber. The logs are inserted into the vertical guides and then pressed down using compression wrenches in order to compress the seals and ensure the tightness of the system.

TYPY BELEK SZANDOROWYCH:

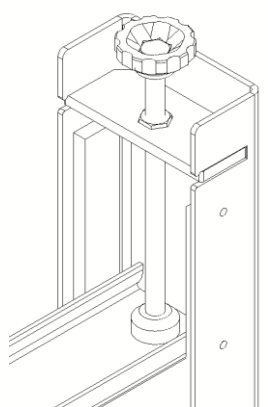
The following standard beam types are available:

- a) Aluminum beam 50x200
- b) Aluminum beam 50x300
- c) Aluminum beam 100x150
- d) PVC beam 90x200
- e) PEHD beam 50x100

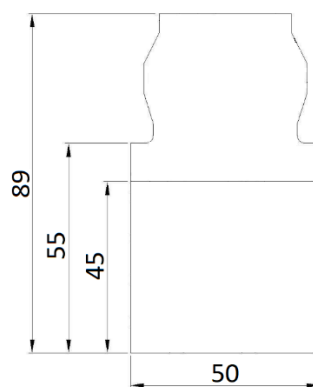


AVAILABLE OPTIONS:

Where it is necessary to provide pressure, compression keys are available mounted in sockets in the guides. The bottom beam is equipped with a bottom seal ensuring tightness and adjusting to any unevenness and impurities on the bottom.



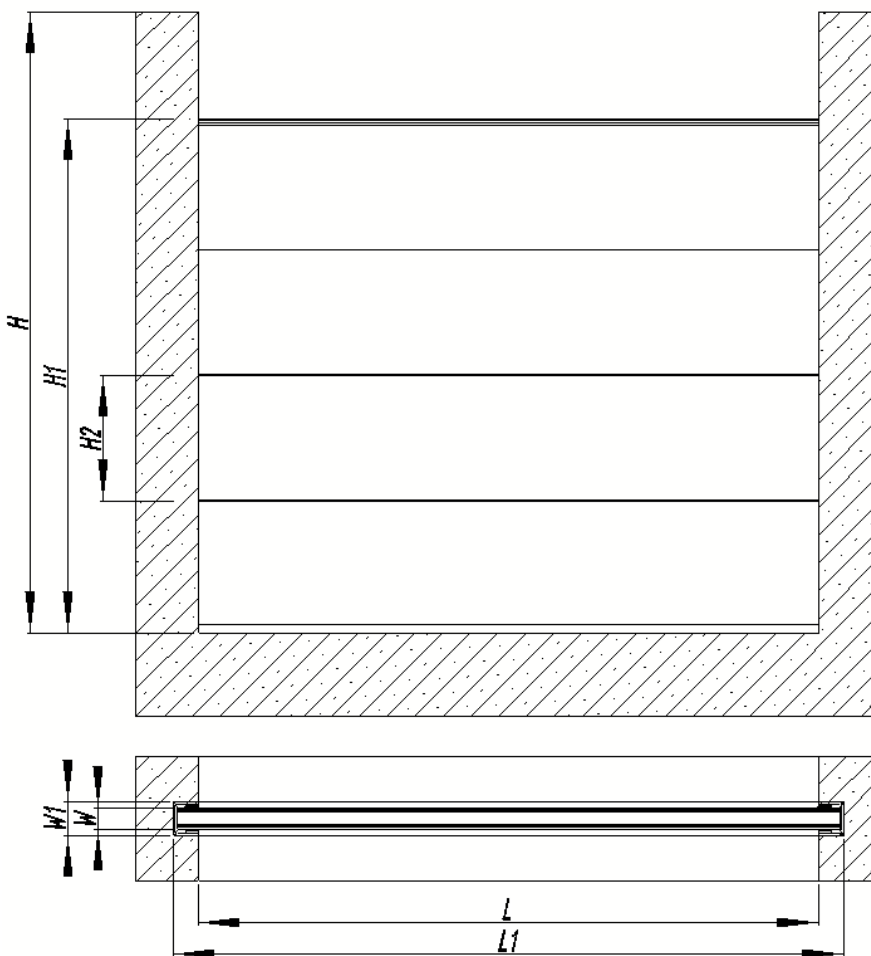
Compression key



Bottom gasket

It is possible to make a penstock of any size, adapted to the mounting location. We make stop-log closures with beams connected into panels, with a flow regulator mounted in a panel, with a mechanism for lifting beams, etc.

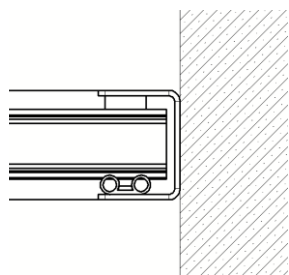
DIMENSIONS:



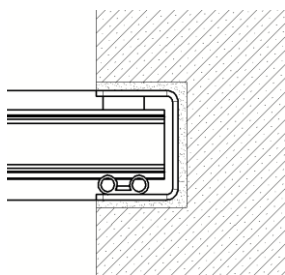
All gate valves are made for a specific order. Basic dimensions are:

- | | | | |
|-----|----------------|-----|-----------------|
| L: | Channel width | L1: | Total width |
| W: | Beam thickness | W1: | Total thickness |
| H: | Channel height | H1: | Damming height |
| H2: | Beam height | | |

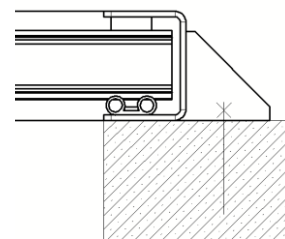
MOUNTING:



Flat channel mounting



Groove mounting



Front wall mounting

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Knife Gate Valve PEHD VZN-A



DESCRIPTION:

Knife gate valves PEHD VZN-A are used wherever it is necessary to cut off the flow in sewage systems. Mounted directly on pipelines or to the chamber wall in the version with an adapter. Made of PEHD and stainless steel ensures full resistance to weather conditions.

MATERIALS:

Body: PEHD

Shut-off plate, ribs and spindle: Stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L – 1.4401/1.4404 or any other depending on customer requirements and conditions at the mounting site

Gaskets: EPDM (or other material depending on working conditions, e.g. NBR, VITON or silicone).

TIGHTNESS:

Valve is tight up to 1 bar. It is possible to make valve for higher pressure on request.

Sealing class: class C (0.03mm³/s x DN) acc. PN-EN 12266-1:2012 Tab. A.

MOUNTING:

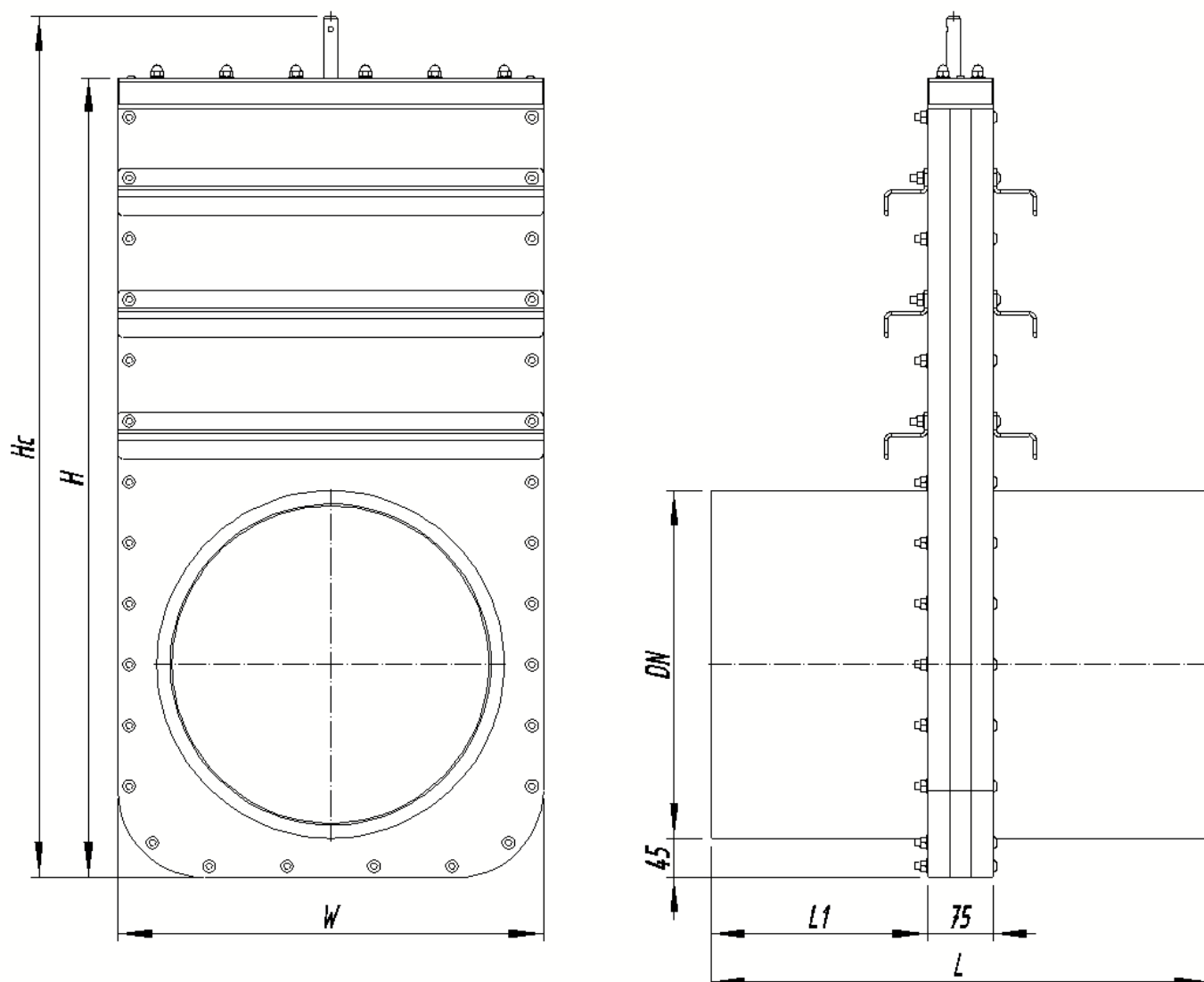
Gate valves are installed depending on the selected type:

VZN-A-A - to the wall through the holes in the adapter using glued or mechanical anchors.

VZN-A-B - at the end of the pipe by pressing into the socket of the pipe or through a sleeve.

VZN-A-K - by flange connection using bolts with a gasket between the flanges.

STANDARD DIMENSIONS:



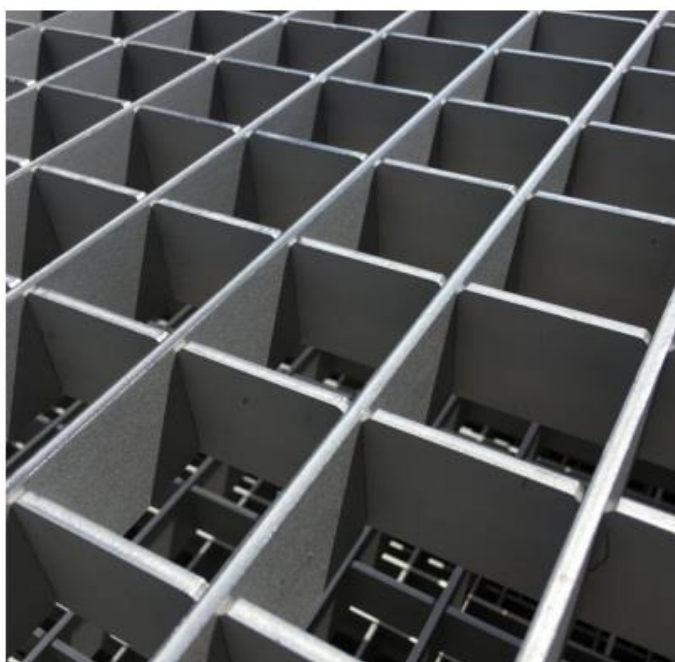
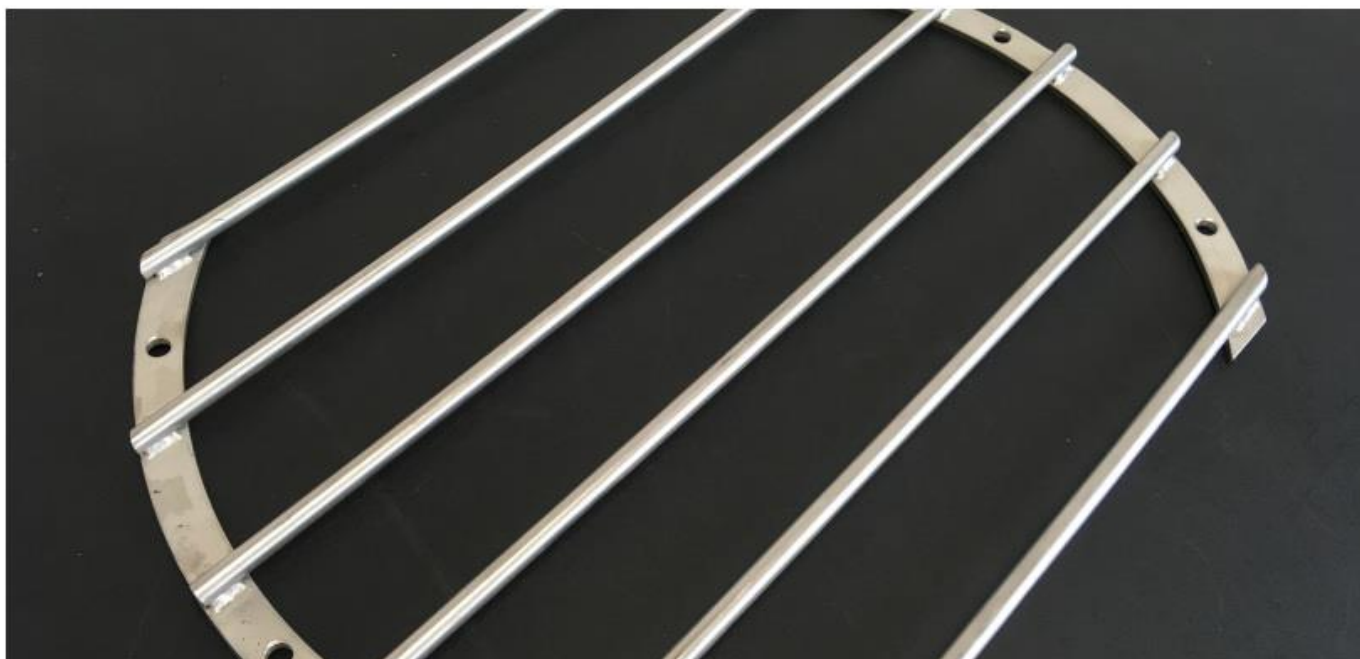
Type	Nominal Diameter DN [mm]	Valve Height H [mm]	Total Height Hc [mm]	Valve Width W [mm]	Valve Length L [mm]
VZN-A 200	200	520	590	290	375
VZN-A 250	250	620	690	340	435
VZN-A 300	315	750	820	405	495
VZN-A 400	400	920	990	490	575
VZN-A 500	500	1120	1190	590	675
VZN-A 600	630	1380	1450	720	815

* Vortico reserves the right to make changes to suit a specific order.

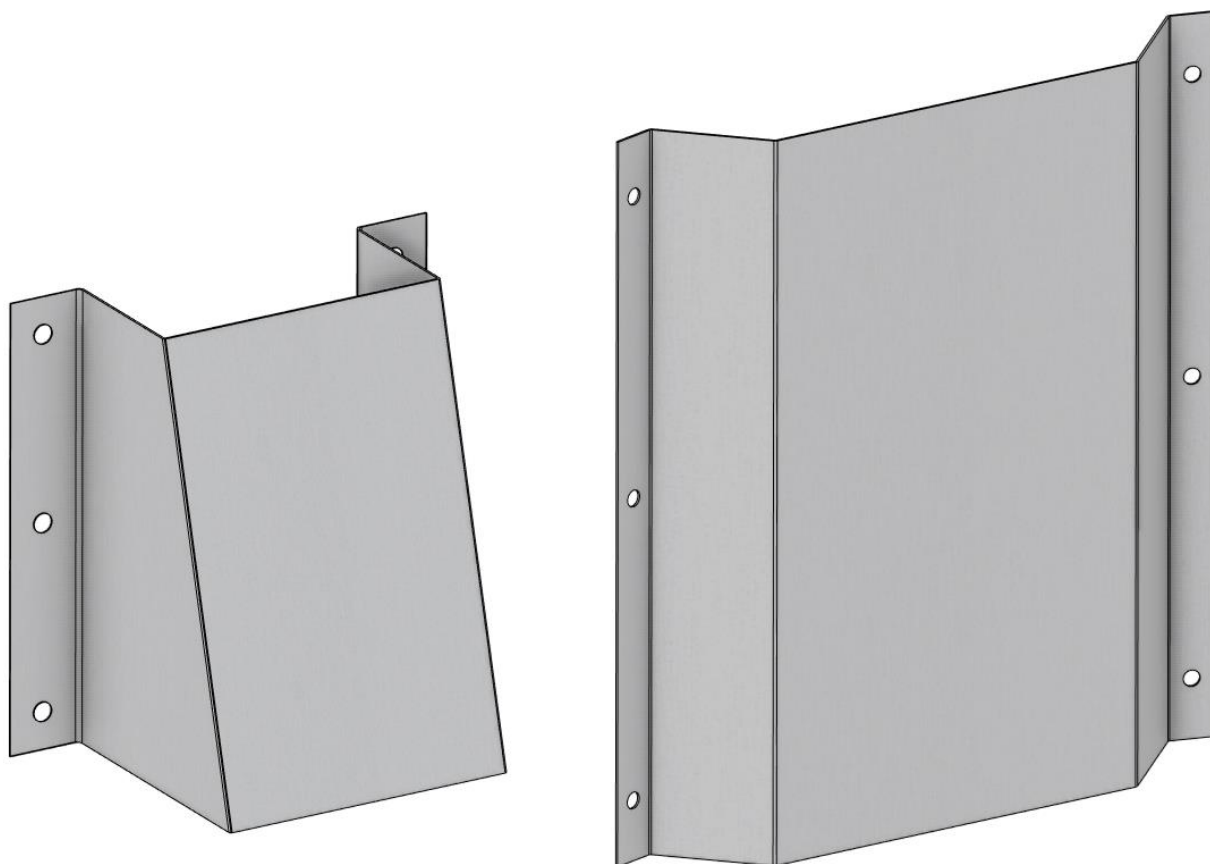
**Other sizes available on individual request. It is possible to make valve of any size.

DEFLECTORS AND GRATINGS:

Deflectors are used at inlets to limit the inflow to the opposite wall and calm the flow in the chamber. Protective gratings are used wherever it is necessary to protect the pipeline outlet against access by people and animals or to protect devices downstream from big solids. We offer devices adapted to a specific mounting place of any size.



Deflector VDE



DESCRIPTION:

VDE deflectors used at inlets to limit the inflow to the opposite wall and calm the flow in the chamber.

MATERIALS:

Construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, aluminum or any other, depending on customer requirements and mounting conditions.

MOUNTING:

Deflectors mounted to the wall using adhesive or expansion anchors.

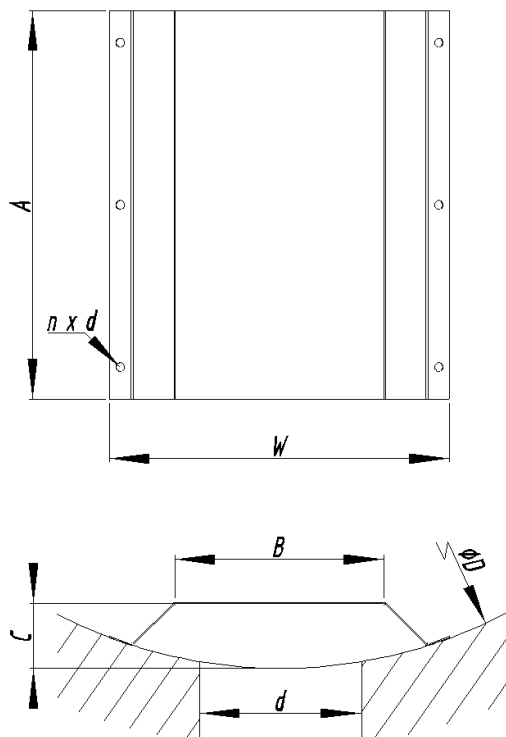
ADDITIONAL OPTIONS:

A number of additional options are available, such as the possibility of removal, blades that allow directing the flow in a specific direction, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



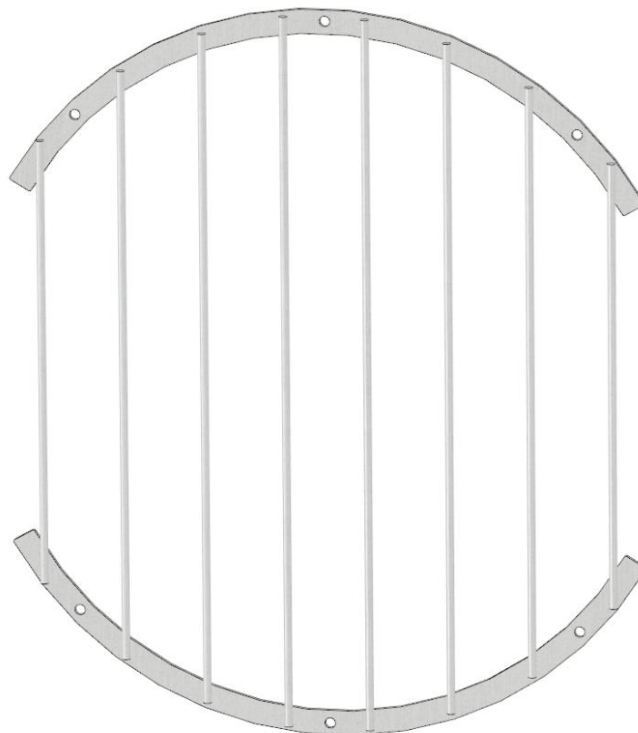
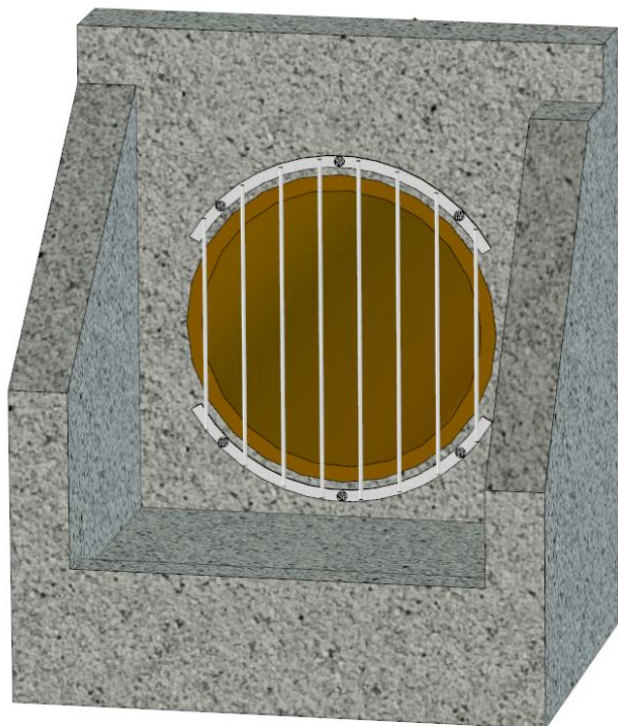
Type	Height A [mm]	Width B [mm]	Length C [mm]	Mounting Width W [mm]	Anchors Qty x Size
VDE 50	250	150	50	Depending on D	4 x M10
VDE 100	300	200	50	Depending on D	4 x M10
VDE 160	360	260	80	Depending on D	6 x M10
VDE 200	400	300	100	Depending on D	6 x M10
VDE 250	450	350	125	Depending on D	6 x M10
VDE 315	500	415	160	Depending on D	8 x M10
VDE 400	600	500	200	Depending on D	8 x M10

*Other sizes available on individual request. It is possible to make a deflector of any size and geometry.

In the order, as a minimum, the diameter of the chamber D , the diameter of the inlet pipe d and the material from which the regulator is to be made should be specified. You can also specify additional requirements, if any. On this basis, we will select the optimal deflector.

Protective Grating

VKR



DESCRIPTION:

VKR protective gratings are used wherever it is necessary to protect the pipeline outlet against access by people and animals or protect equipment downstream from solids. Mainly used at the outlets of rainwater drainage collectors. Available in round and rectangular versions.

MATERIALS:

Welded construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, galvanized or painted carbon steel, or any other, depending on customer requirements and mounting conditions.

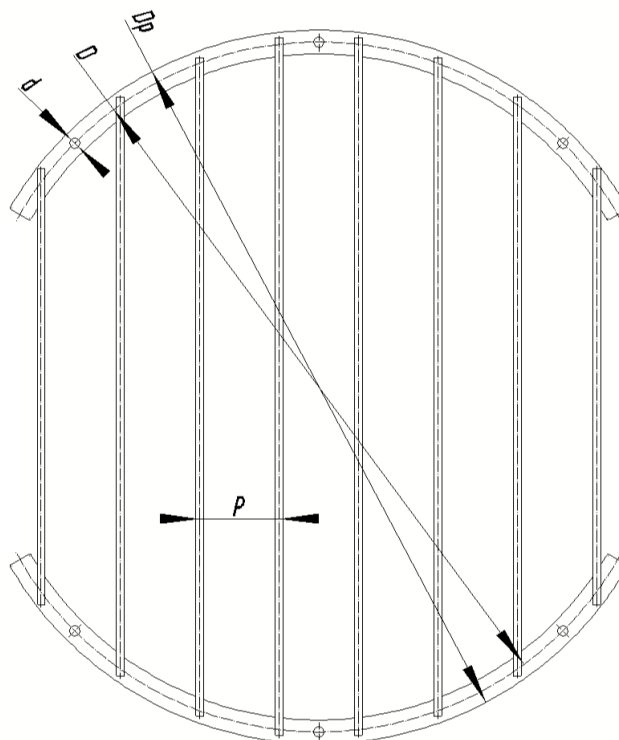
MOUNTING:

Gratings mounted to the wall using adhesive or expansion anchors.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:

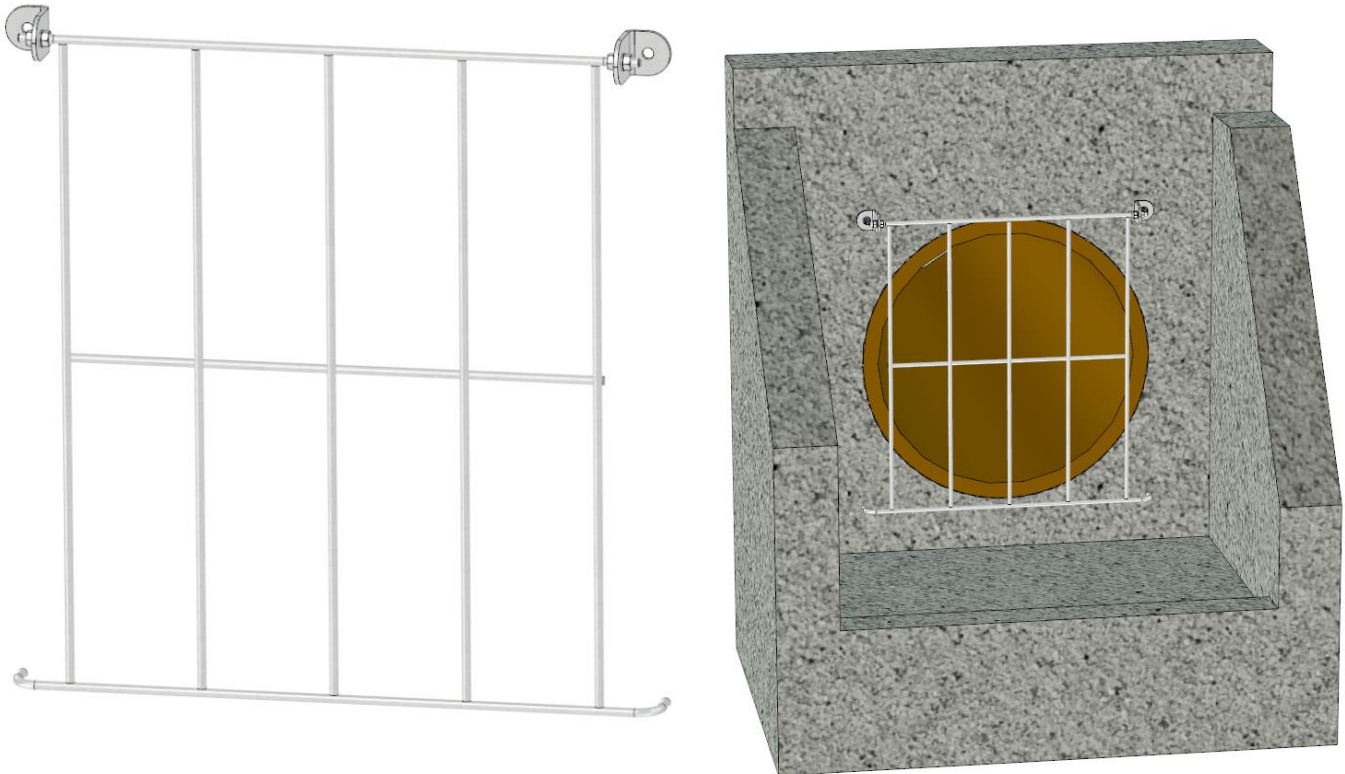


Type	External Diameter D [mm]	Pitch Circle Diameter Dp [mm]	Spacing P [mm]	Anchors Qty x Size n x d
VKR 200	300	270	150	4 x M10
VKR 250	350	320	150	4 x M10
VKR 315	415	385	150	4 x M10
VKR 400	500	460	150	4 x M10
VKR 500	600	560	150	6 x M10
VKR 600	700	660	150	6 x M10
VKR 730	830	790	150	6 x M12
VKR 800	900	860	150	6 x M12
VKR 1000	1100	1060	150	10 x M12

*Other sizes available on individual request. It is possible to make gratings of any size and bar spacing.

Protective Grating Openable

VKR-O



DESCRIPTION:

VKR protective gratings are used wherever it is necessary to protect the pipeline outlet against access by people and animals or protect equipment downstream from solids. Mainly used at the outlets of rainwater drainage collectors. Available in round and rectangular versions.

MATERIALS:

Welded construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, galvanized or painted carbon steel, or any other, depending on customer requirements and mounting conditions.

MOUNTING:

Gratings mounted to the wall using adhesive or expansion anchors.

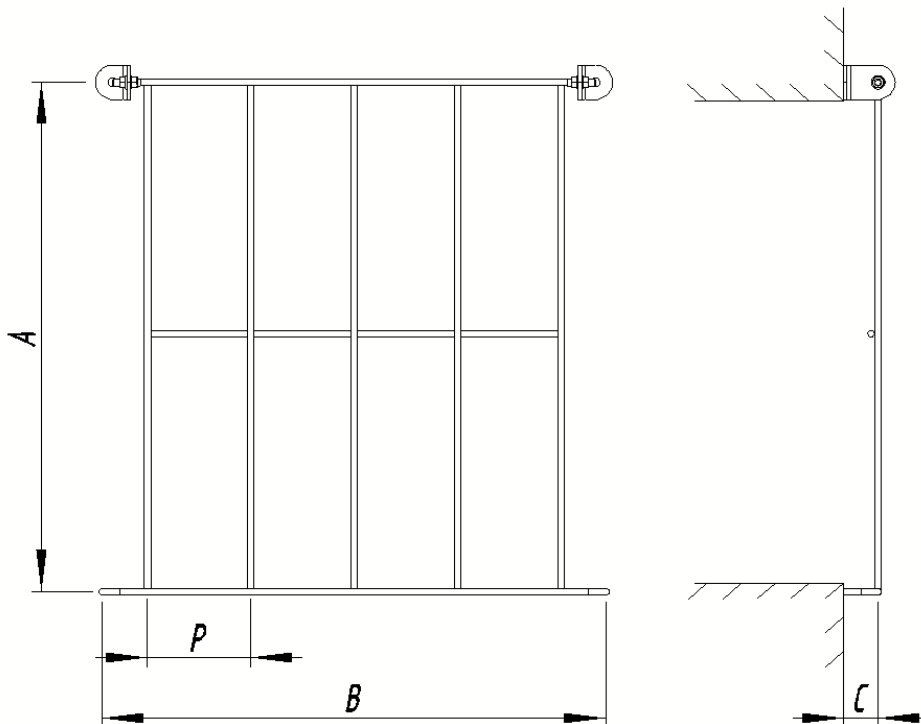
ADDITIONAL OPTIONS:

A number of additional options are available, such as closing spring, key lock, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Height A [mm]	Width B [mm]	Thicknes C [mm]	Spacing P [mm]
VKR-O 200	200	200	50	150
VKR-O 250	250	250	50	150
VKR-O 315	315	315	50	150
VKR-O 400	400	400	50	150
VKR-O 500	500	500	50	150
VKR-O 600	600	600	50	150
VKR-O 730	730	730	50	150
VKR-O 800	800	800	50	150
VKR-O 1000	1000	1000	50	150

*Other sizes available on individual request. It is possible to make gratings of any size and bar spacing.

Protective Basket

VKR-KZ



DESCRIPTION:

VKR-KZ protective baskets are used wherever it is necessary to catch impurities flowing in the sewage system. The basket allows you to collect solids falling into the chamber and remove them by periodically pulling out and emptying the basket.

MATERIALS:

Welded construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, galvanized or painted carbon steel, or any other, depending on customer requirements and mounting conditions.

MOUNTING:

The protective basket is mounted on guides made of steel pipes anchored to the bottom and walls of the chamber. A steel cable is attached to the basket, which allows the basket to be pulled out and.

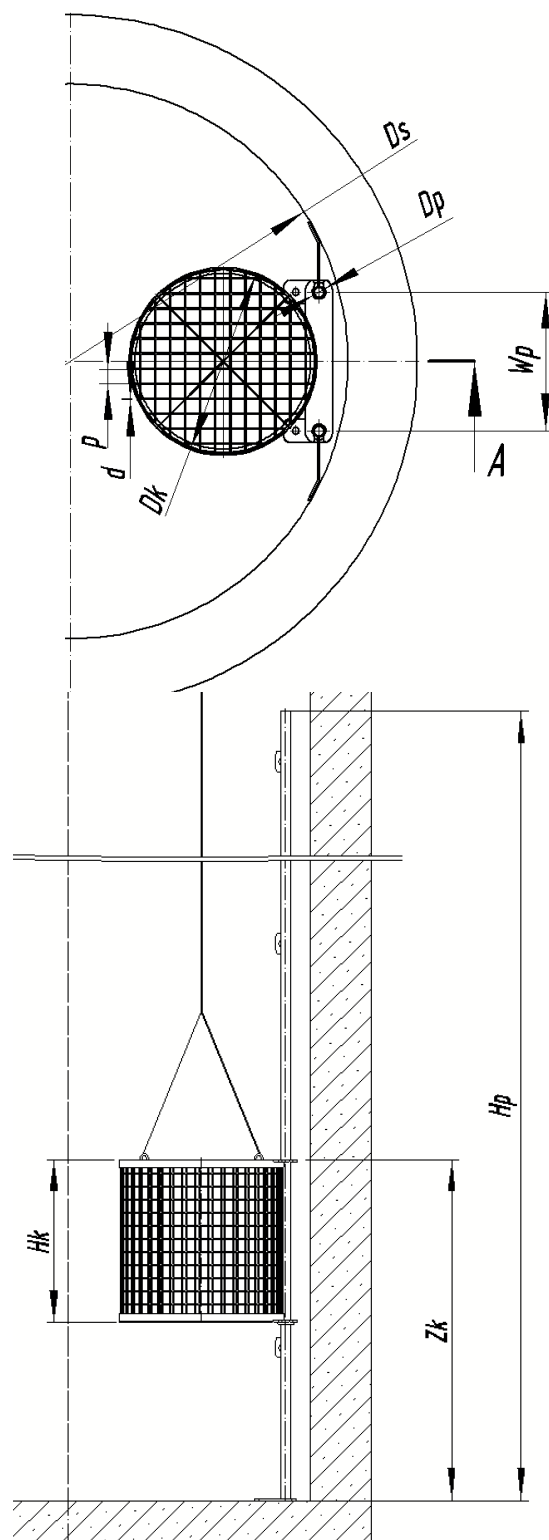
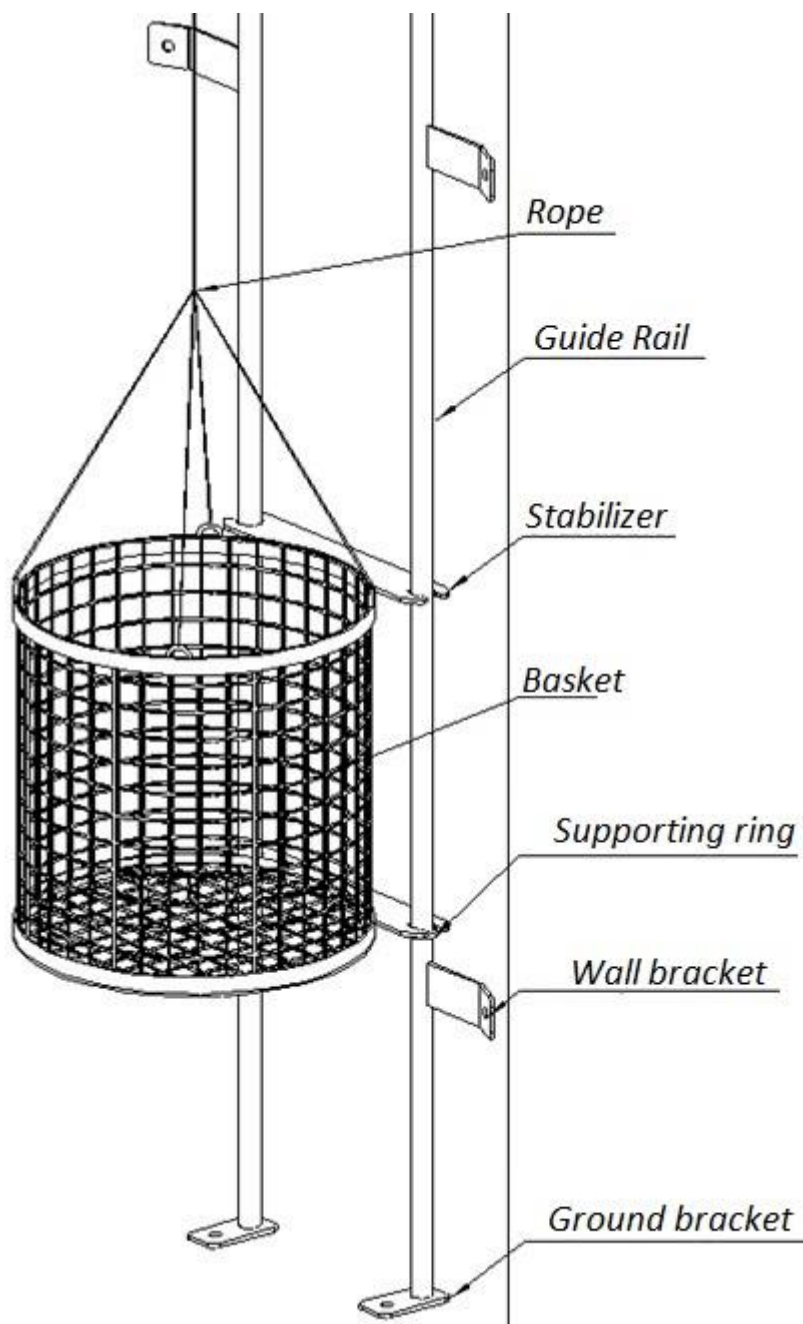
ADDITIONAL OPTIONS:

A number of additional options are available, such as a manual winch mounted in the well, height adjustment of the basket or replaceable mesh inserts that allow you to change the size of the mesh without replacing the basket.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



STANDARD DIMENSIONS:

$D_k=400\text{mm}$ – basket diameter

$H_k=400\text{mm}$ – basket height

$p=30\times30\text{mm}$ – basket mesh size

$d=2,5\text{mm}$ - mesh wire thickness

$D_p=25\text{mm}$ – guide rail diameter

$W_p=300\text{mm}$ – guide rails distance

Z_k - basket height above the bottom - specify in the order

H_p – guide rail length - specify in the order

*Other sizes available on individual request. It is possible to make a basket of any size.

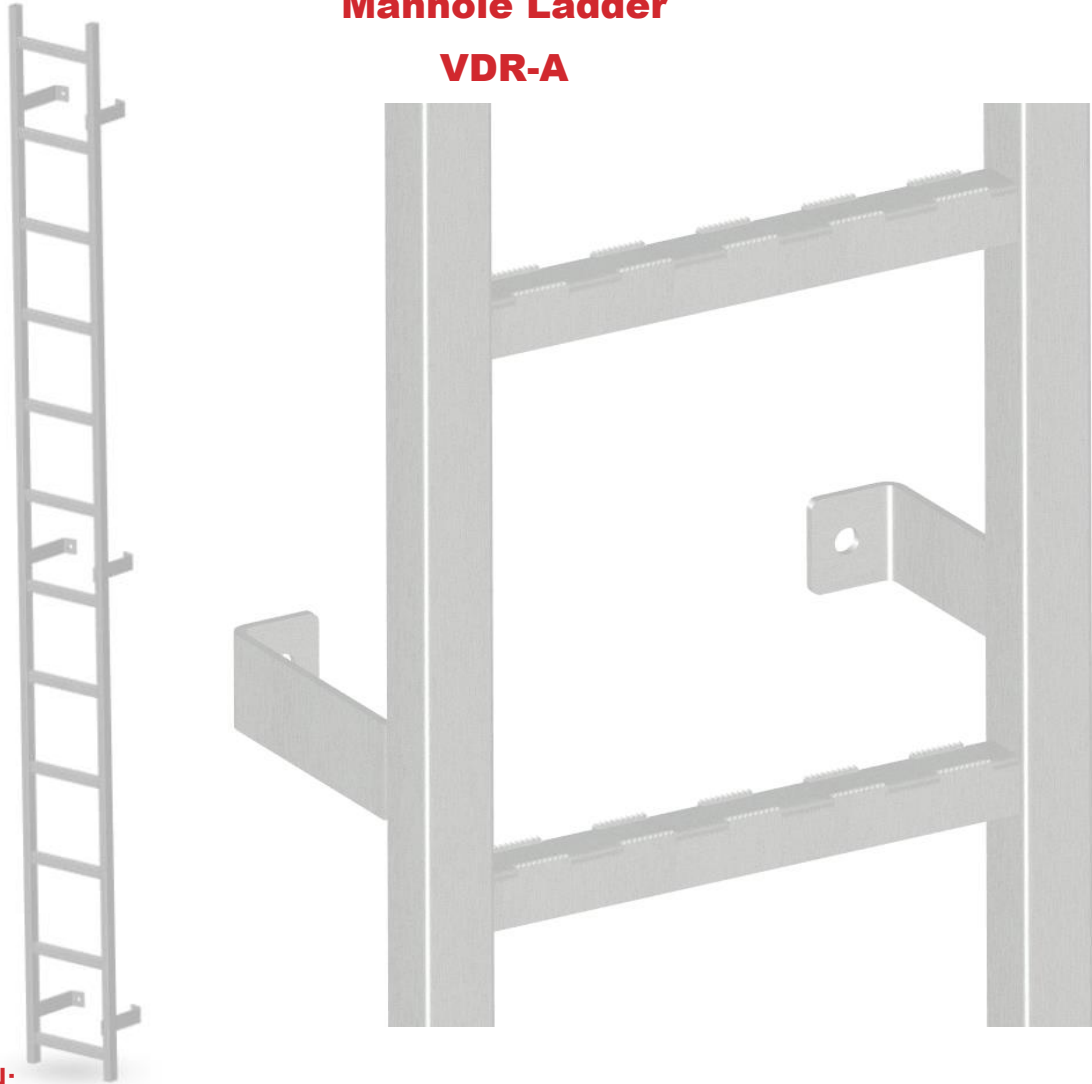
LADDERS AND MAINTENANCE PLATFORMS:

Ladders provide access to places inaccessible from ground level. They are used as climbing ladders for mounting in chambers and as access ladders for installation on walls and structures. We also offer the design and construction of entire systems of service platforms with ladders, handrails and other necessary equipment.



Manhole Ladder

VDR-A



DESCRIPTION:

Manhole ladders are installed in chambers to which access is required. Made in accordance with the PN-EN 14396:2006 standard. Available in various sizes, materials and with a wide range of additional options.

MATERIALS:

Welded construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, galvanized or painted carbon steel, or any other, depending on customer requirements and mounting conditions.

MOUNTING:

Ladders mounted to the wall using adhesive or expansion anchors, screwed to steel structures using screws or welded.

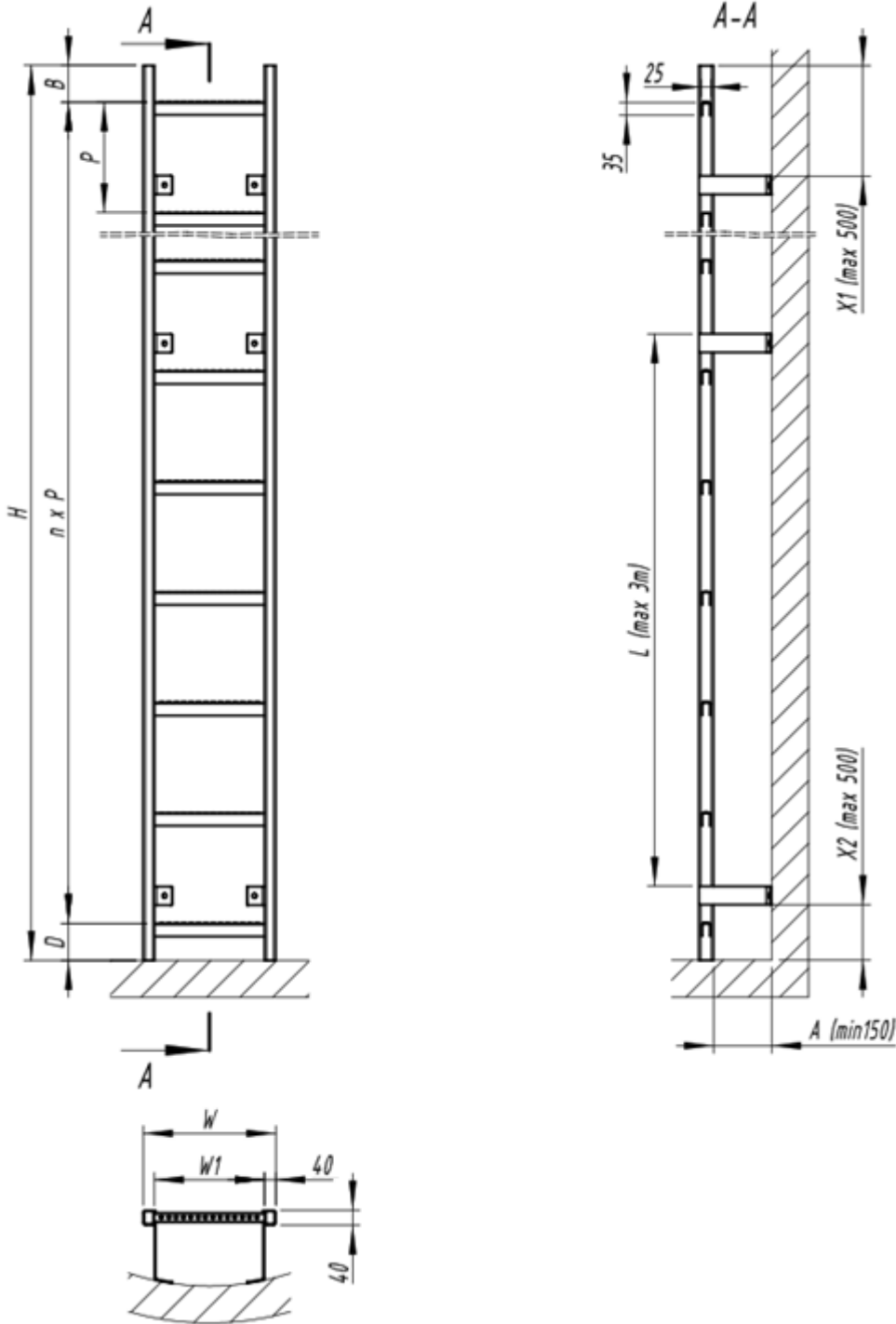
ADDITIONAL OPTIONS:

A number of additional options are available, such as adjustable protrusion from the wall, anti-slip steps, safety rail, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

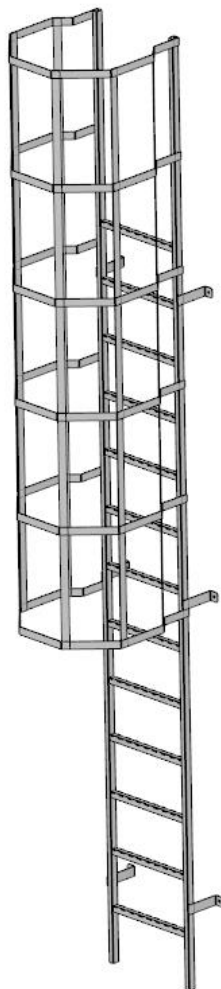
STANDARD DIMENSIONS:



STANDARD DIMENSIONS: $W=380$ mm, $W1=300$ mm, $P=300$ mm, $A=150$ mm. When other dimensions are needed, please specify in the order. It is required to specify the length of the ladder H . Please also specify the diameter of the chamber in order to match the mounting brackets.

Access Ladder

VDR-B



DESCRIPTION:

Access ladders are mounted to the walls of buildings and to steel structures to provide access to higher levels. Made in accordance with DIN 14094-41, DIN 18799-1. Available in various sizes, materials and with a wide range of additional options.

MATERIALS:

Welded construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, galvanized or painted carbon steel, or any other, depending on customer requirements and mounting conditions.

MOUNTING:

Ladders mounted to the wall using adhesive or expansion anchors, screwed to steel structures using screws or welded.

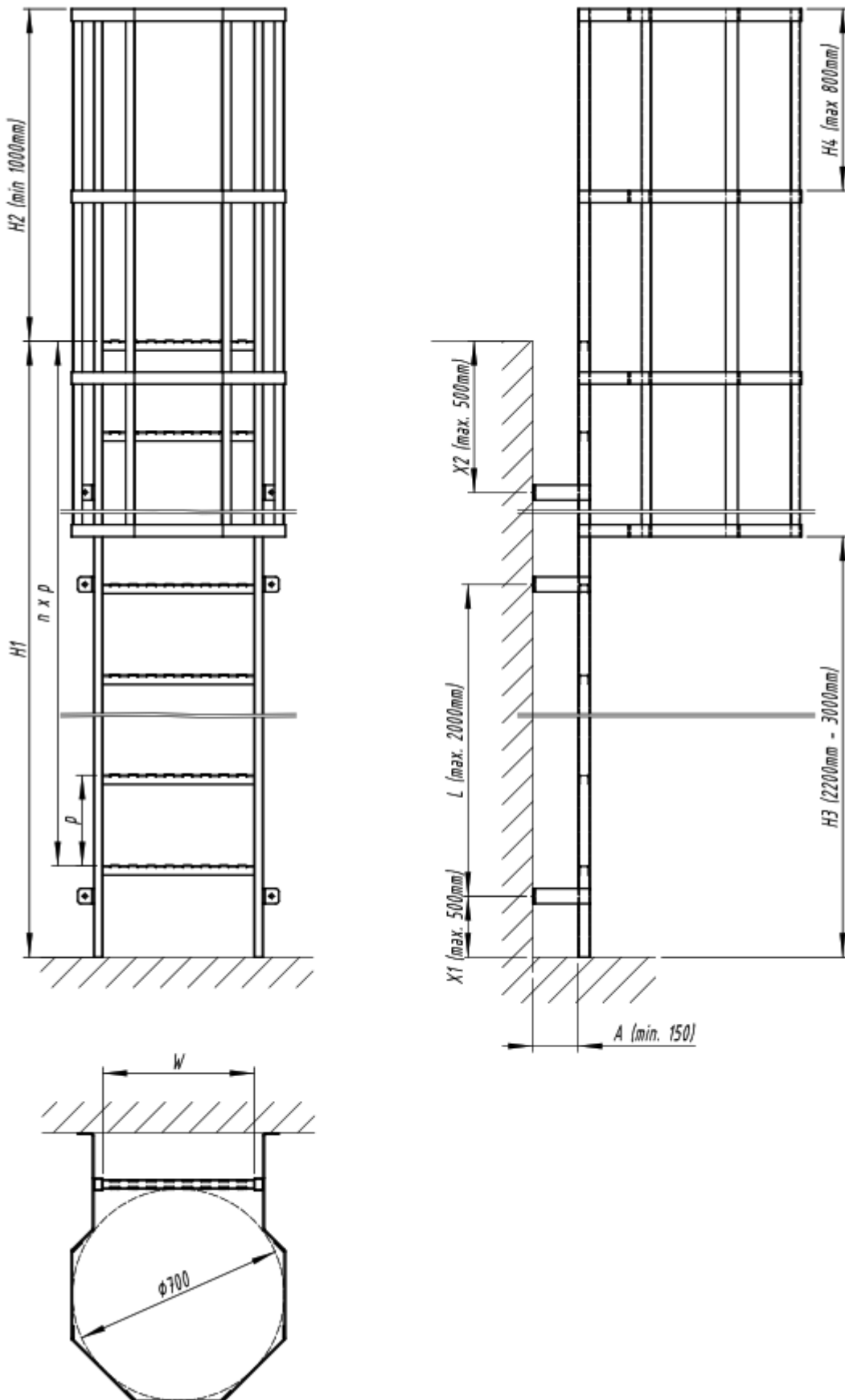
ADDITIONAL OPTIONS:

A number of additional options are available, such as a self-closing gate, adjustable offset from the wall, anti-slip steps or safety rail, etc.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

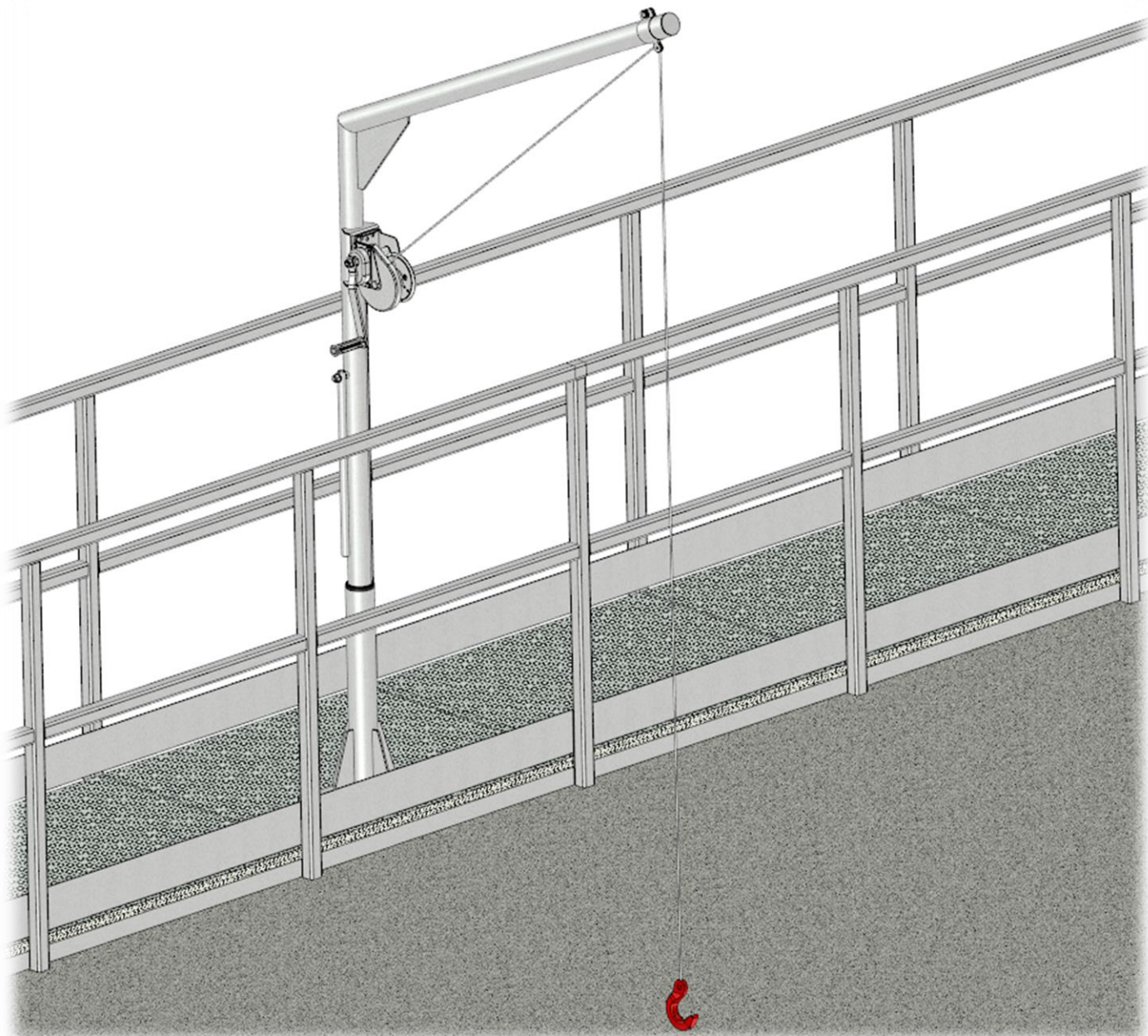
STANDARD DIMENSIONS:



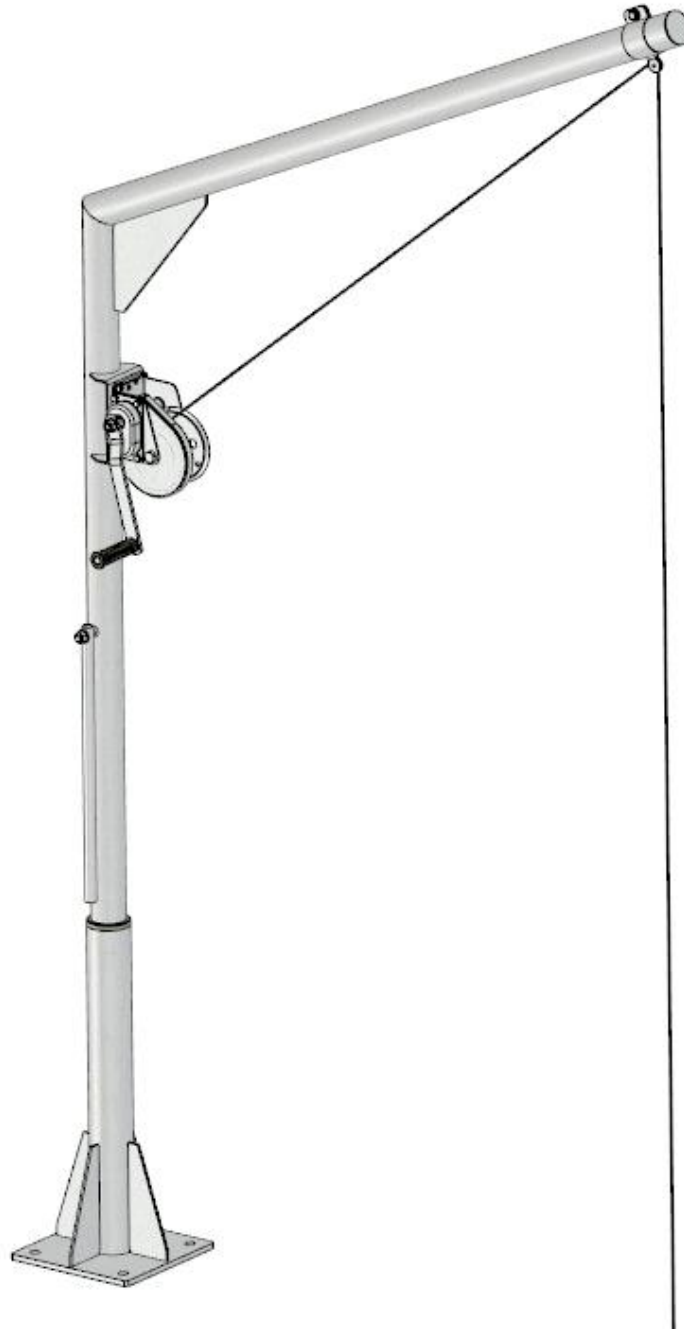
STANDARD DIMENSIONS: W=500mm, P=300mm, A=150mm, H2=1100mm. When other dimensions are needed, please specify in the order. It is required to specify the length of the ladder H.

PILLAR CRANES:

Pillar cranes are used wherever lifting/lowering or suspending devices is required. They comes in different variants of load capacity, dimensions and materials, with a manual or electric.



Pillar Crane VPC-A



DESCRIPTION:

Fixed rotary crane. The base is anchored to concrete or fixed to a steel structure. Column with 360° rotating arm. Manual winch. Additional articulated handle for turning the crane. Smooth adjustment of the position of the suspension point.

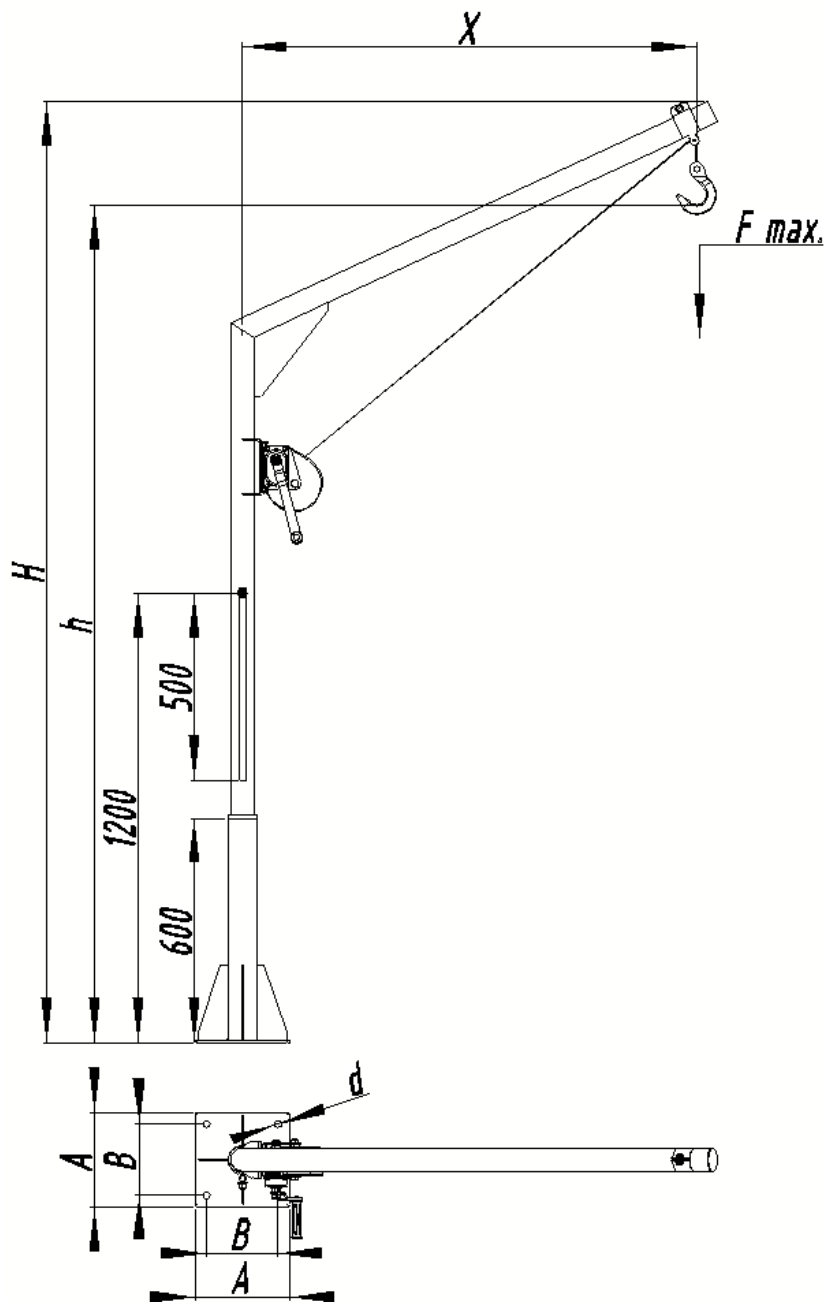
MATERIALS:

Construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404 or any other, depending on customer requirements and mounting conditions.

NON-STANDARD VERSIONS:

It is possible to make a crane of any size and load capacity, depending on the customer's requirements and the place of MOUNTING. Can be fixed to a wall/vertical structure.

DIMENSIONS STANDARD:



Type	Max Load F_{max} [kg]	Max Reach X [mm]	Height H/h [mm]	Base Dimensions $A/B/d$ [mm]
VPC-A 100	100	300-1200	2600/2300	250/190/14
VPC-A 200	200	400-1200	2660/2300	250/190/14
VPC-A 300	300	500-1200	2600/2300	250/190/18
VPC-A 500	500	600-1200	2600/2300	300/250/22

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

SUCTION PIPELINES:

Suction pipelines are required to enable water intake from underground fire water tanks. They are made in accordance with current regulations and have all the necessary documents allowing them to be used.



Fire water Suction Pipeline

VRS 110



DESCRIPTION:

Suction pipeline in accordance with the PN-B-02857 standard, consisting of a pipeline with a nominal diameter of DN100 equipped with a non-return valve with a suction strainer and an anti-vortex plate. In order to empty the pipeline, a ½" drain valve or a mechanism for lifting the valve plug with a cord is installed.

CONNECTIONS:

Coupling 110 acc. PN-91/M-51038 + cover 110 acc. PN-91/M-51024.

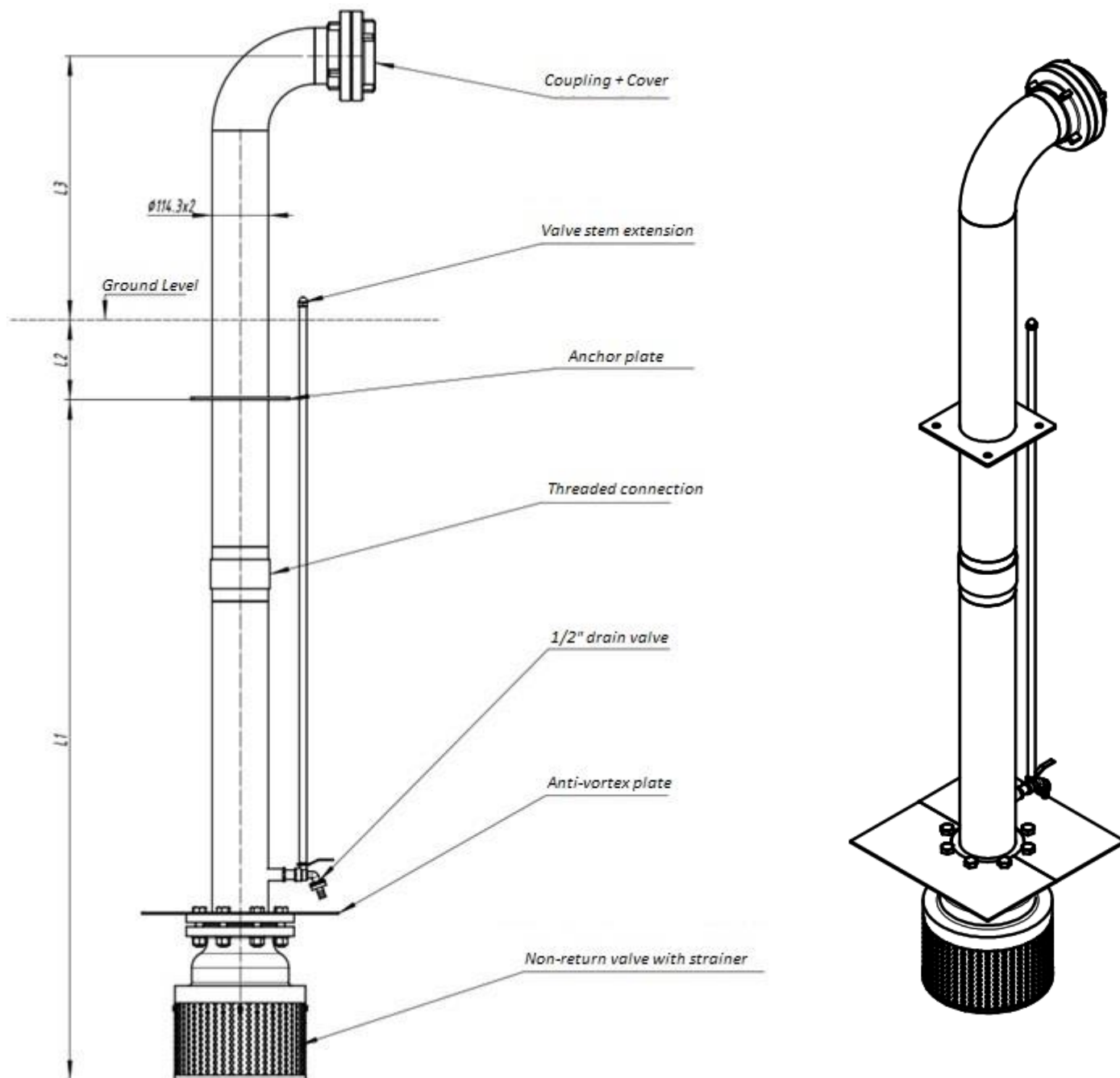
MATERIALS:

Pipeline: 1.4301 (AISI304), Coupling and Cover: Aluminum, Non-return Valve: cast iron + stainless steel.

NON-STANDARD VERSIONS:

We make suction pipelines in other dimensional and material configurations. We can design the layout according to the customer's requirements. Please contact us for details. It is possible to make a non-return valve plug lifting mechanism with a steel cable instead of the drain valve.

DIMENSIONS STANDARD:



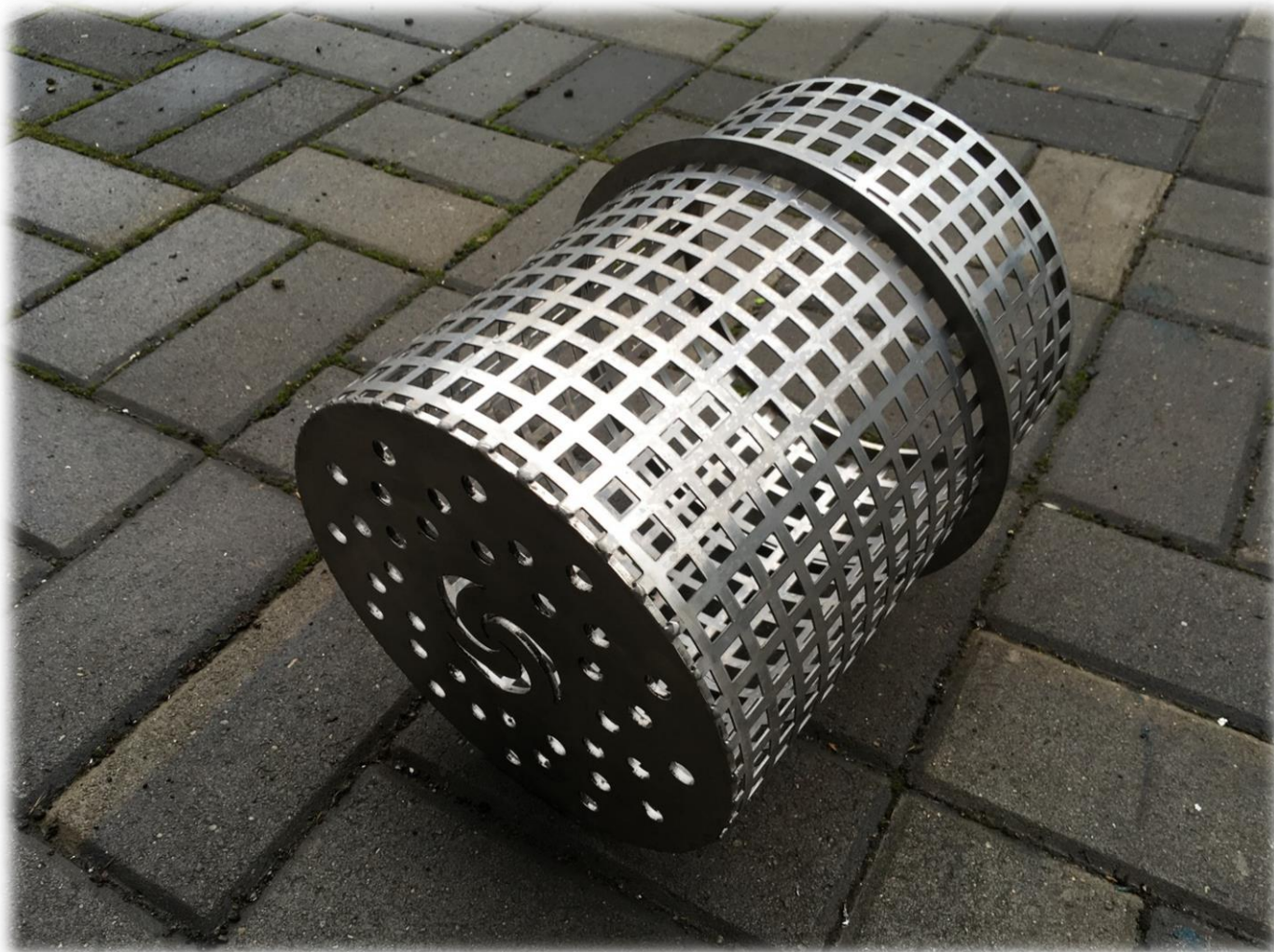
In the order, specify dimensions L1, L2, L3 and or if the pipeline route is different from the standard one (exit through the chamber wall and not through the cover, etc.) send a drawing or sketch showing the dimensions and pipeline route.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

Strainer Basket

VKS



DESCRIPTION:

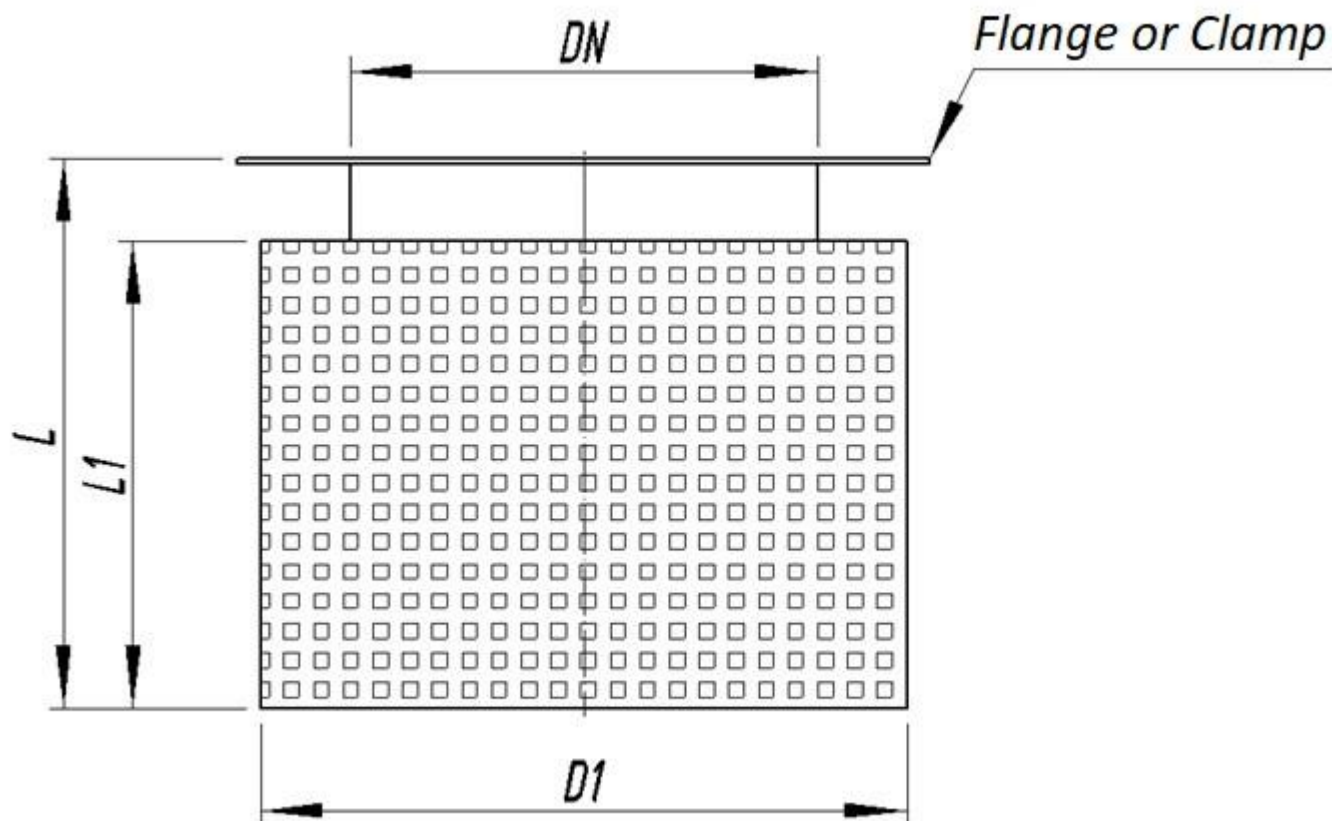
Strainer baskets are used to protect pumps, valves and other devices from solids or debris, which would otherwise damage the equipment. Mounted directly on valves or pipelines.

MATERIALS:

Stainless steel AISI 304/304L – 1.4301/1.4307, AISI 316/316L – 1.4401/1.4404 or any other required by customer and process conditions.

DIMENSIONS:

Type	DN [mm]	D1 [mm]	L [mm]	L1 [mm]
VKS 80	80	180	110	80
VKS 100	100	200	130	100
VKS 150	150	250	190	150
VKS 200	200	300	240	200
VKS 250	250	350	300	250
VKS 300	300	415	350	300
VKS 400	400	500	460	400



These are standard dimensions. We can produce strainer with other dimensions according to customer requirements. Perforation of the basket can be adjusted acc. to requirements.

CONNECTIONS:

Strainer baskets can be mounted with flange, clamp on spigot end of the pipe or inserted into pipe socket.

Anti-Vortex Plate

VRS-PA

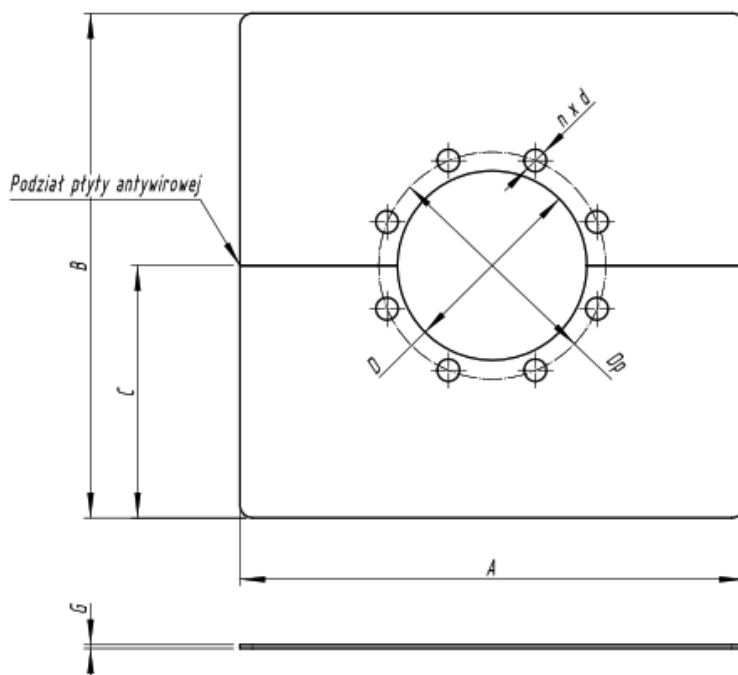
DESCRIPTION:

Anti-vortex plates are used at the water intake point to avoid the formation of a vortex causing air to be sucked from the surface. They come in different variants. Standard as a horizontal plate fixed with PN10 flange bolts. Other versions are possible with clamping, welded to the pipeline or fixed to the ground or wall.

MATERIALS:

Construction made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404 or any other, depending on customer requirements and MOUNTING conditions.

DIMENSIONS:

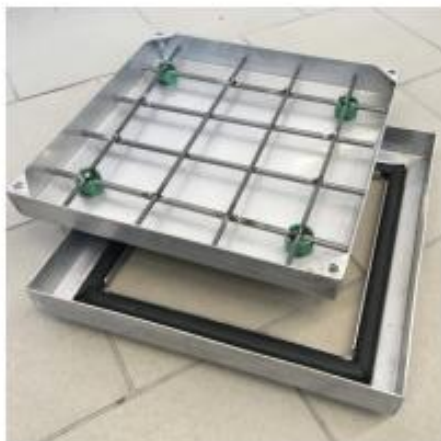


Type	DN [mm]	A [mm]	B [mm]	C [mm]	G [mm]	D [mm]	Dp [mm]	n	d [mm]
VRS-PA 50	50	200	200	100	2	85	125	4	18
VRS-PA 65	65	260	260	130	2	105	145	8	18
VRS-PA 80	80	320	320	160	2	120	160	8	18
VRS-PA 100	100	400	400	200	3	140	180	8	18
VRS-PA 125	125	500	500	250	3	170	210	8	18
VRS-PA 150	150	600	600	300	3	195	240	8	22
VRS-PA 200	200	800	800	400	4	250	295	8	22
VRS-PA 250	250	1000	1000	500	4	305	350	12	22
VRS-PA 300	300	1200	1200	600	5	355	400	12	22

These are standard dimensions. We can make baskets of any dimensions tailored to the customer's requirements.

INSPECTION HATCHES:

Inspection hatches are used to provide access to the space under the floor. They come in various forms, from simple flaps with a sheet metal cover to filled cover hatches with actuators. We offer delivery of hatches according to customer requirements in standard and non-standard sizes, made of stainless steel, acid-resistant steel, galvanized carbon steel and aluminum, in various load classes. We also offer hatches covered with a hinged or unhinged grate made of steel or plastic.



Inspection Hatch with Filling

VWR-A



DESCRIPTION:

Vortico VWR-A inspection hatches are used wherever access to the space under the floor is required. They come in many variants tailored to the customer's needs. In addition to the range of standard inspection hatches, we offer custom-made hatches that can be adapted to non-standard dimensions or with additional equipment.

MATERIALS:

Inspection hatches are made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, or any other, depending on the customer's requirements and mounting conditions. The seal is made of EPDM or other material adapted to external conditions, such as silicone, NBR or VITON.

LOAD CAPACITY:

Hatches are available in load classes: up to A15 to D400 according to EN 1253-2.

ADDITIONAL EQUIPMENT:

We manufacture hatches with manually removable covers with handles, dedicated keyholes, as well as hinged covers, equipped with pneumatic actuators or electric drives.

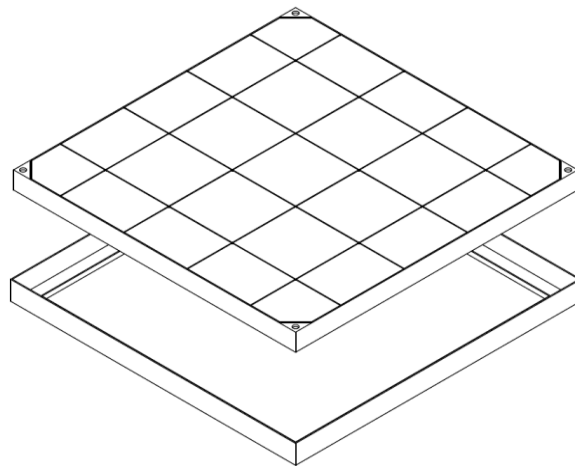
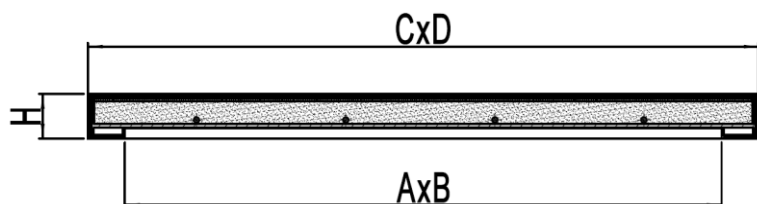
FILLING:

We make inspection hatches ready to be filled with concrete and covered with various materials, including ceramic tiles, paving stones, granite slabs, etc. according to customer requirements. On request, we can fill with concrete and glue the tiles.

DOCUMENTATION:

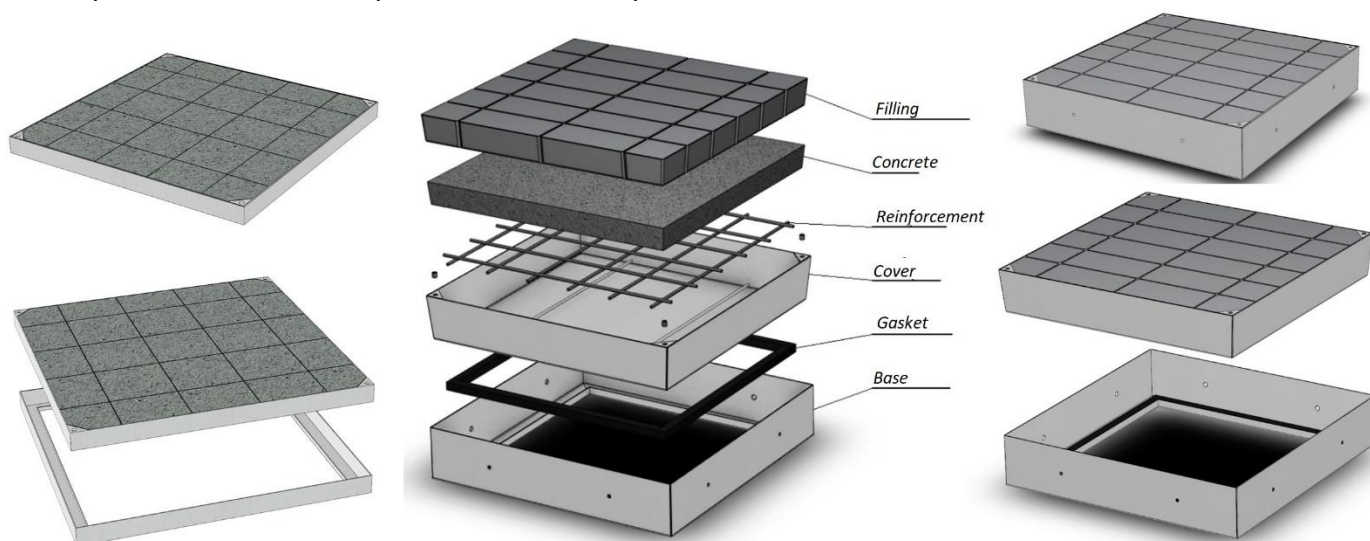
Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Access Dimensions Ax B [mm]	External Dimensions Cx D [mm]	Height H [mm]
VWR-A 300x300	300x300	400x400	60/120*
VWR-A 400x400	400x400	500x500	60/120*
VWR-A 500x500	500x500	600x600	60/120*
VWR-A 600x600	600x600	700x700	60/120*
VWR-A 700x700	700x700	800x800	60/120*
VWR-A 800x800	800x800	900x900	60/120*
VWR-A 900x900	900x900	1000x1000	60/120*
VWR-A 1000x1000	1000x1000	1100x1100	60/120*

* given standard height for filling with tiles/paving stones. The height depends on the type of cover filling, the required load class and specific customer requirements.



Inspection Hatch with Diamond Plate Cover VWR-B



DESCRIPTION:

Vortico VWR-B inspection hatches with a diamond plate cover are used wherever access to the space under the floor is required. They come in many variants tailored to the customer's needs. In addition to the range of standard inspection hatches, we offer custom-made hatches that can be adapted to non-standard dimensions or with additional equipment. Standard in class A15 but it is possible to strengthen and adapt to higher classes.

MATERIALS:

Inspection hatches are made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, aluminum or any other, depending on the customer's requirements and mounting conditions. The seal is made of silicone or other material adapted to external conditions, such as EPDM, NBR or VITON.

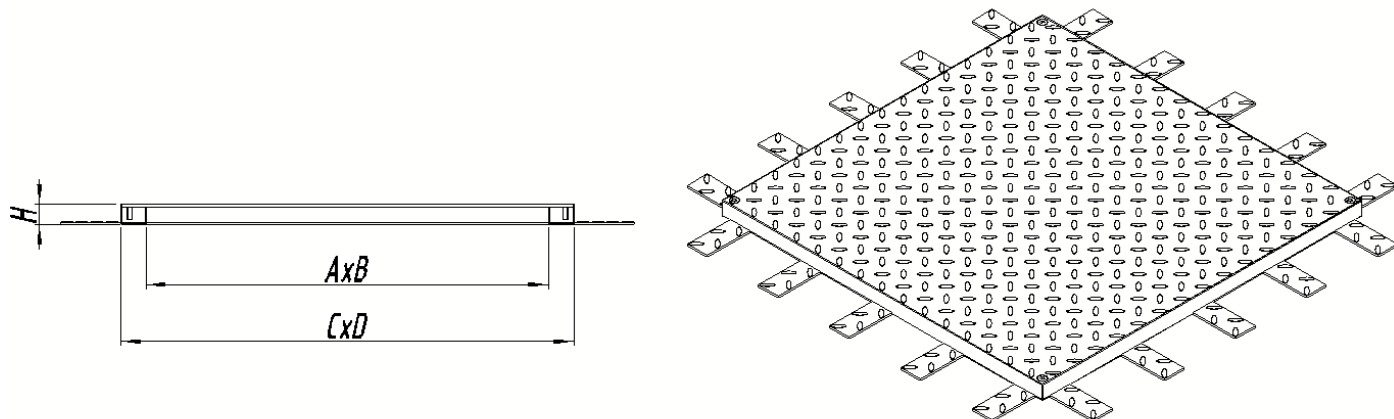
ADDITIONAL EQUIPMENT:

We manufacture manually removable inspection hatches with handles, dedicated keyholes, as well as hinged covers, equipped with pneumatic actuators or electric drives.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Access dimensions AxB [mm]	External Dimensions CxD [mm]	Height H [mm]
VWR-B 300x300	300x300	400x400	50*
VWR-B 400x400	400x400	500x500	50*
VWR-B 500x500	500x500	600x600	50*
VWR-B 600x600	600x600	700x700	50*
VWR-B 700x700	700x700	800x800	50*
VWR-B 800x800	800x800	900x900	50*
VWR-B 900x900	900x900	1000x1000	50*
VWR-B 1000x1000	1000x1000	1100x1100	50*

* This is standard height. The height depends on the customer's specific requirements.

Inspection Hatch Economical VWR-E



DESCRIPTION:

Vortico VWR-E inspection hatches are used wherever access to the space under the floor is required. They come in many variants tailored to the customer's needs. In addition to the range of standard inspection hatches, we offer custom-made hatches that can be adapted to non-standard dimensions or with additional equipment. Hatches are not suitable for pedestrian or vehicular traffic. After installation, they protrude above the floor.

MATERIALS:

Inspection hatches are made of stainless steel, e.g. AISI 304/304L - 1.4301/1.4307, acid-resistant AISI 316/316L - 1.4401/1.4404, aluminum or any other, depending on the customer's requirements and mounting conditions. The seal is made of silicone or other material adapted to external conditions, such as EPDM, NBR or VITON.

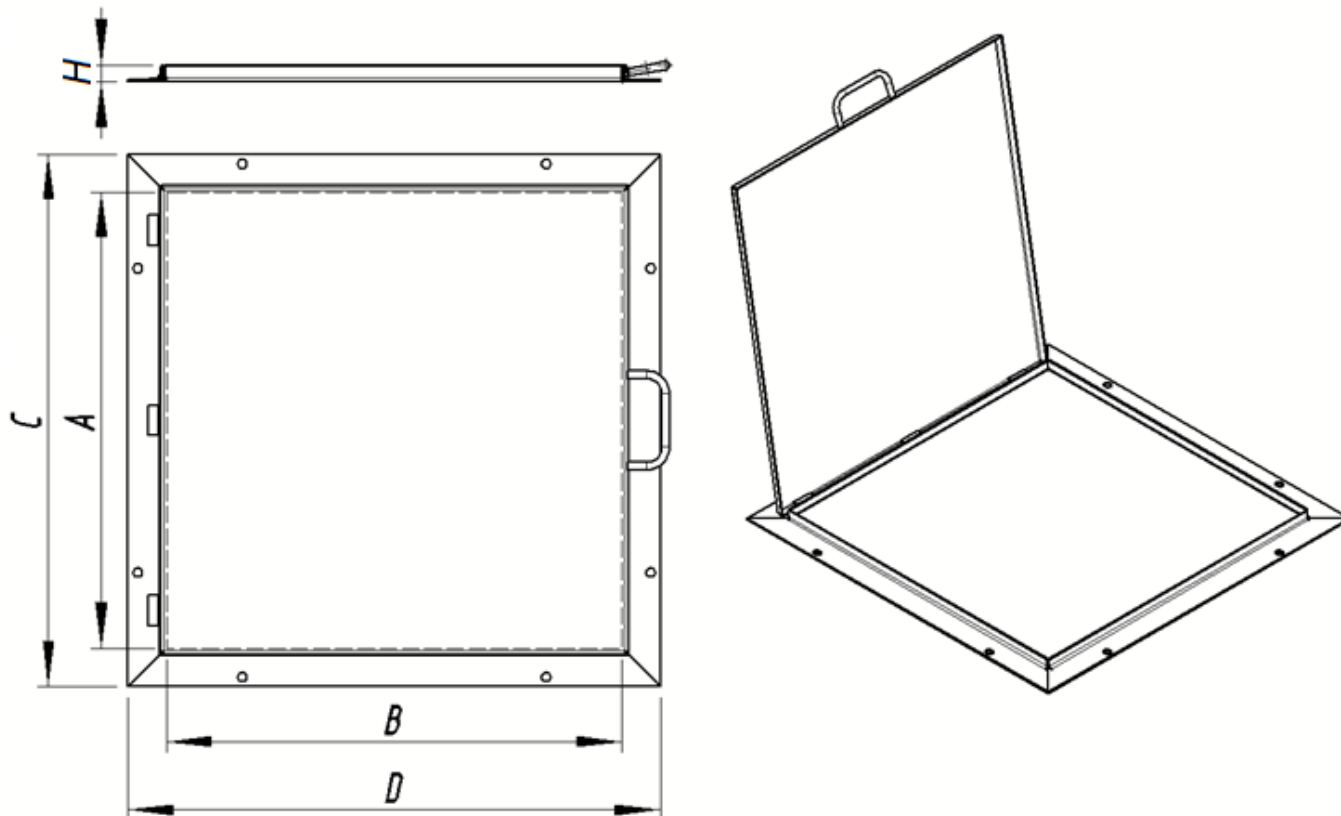
ADDITIONAL EQUIPMENT:

We manufacture manually removable inspection hatches with handles, dedicated keyholes, as well as hinged covers, equipped with pneumatic actuators or electric drives.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Access Dimensions AxB [mm]	External Dimensions Cx D [mm]	Height H [mm]
VWR-E 300x300	300x300	400x400	25*
VWR-E 400x400	400x400	500x500	25*
VWR-E 500x500	500x500	600x600	25*
VWR-E 600x600	600x600	700x700	25*
VWR-E 700x700	700x700	800x800	25*
VWR-E 800x800	800x800	900x900	25*
VWR-E 900x900	900x900	1000x1000	25*
VWR-E 1000x1000	1000x1000	1100x1100	25*

* This is standard height. The height depends on the customer's specific requirements.

Inspection Hatch with Grating

VWR-K



DESCRIPTION:

Vortico VWR-K inspection hatches are used wherever access to the space under the floor is required. They come in many variants tailored to the customer's needs. In addition to the range of standard dimensions of inspection hatches, we offer hatches made for special orders with the possibility of adjusting to non-standard dimensions or with additional equipment.

MATERIALS:

Inspection hatches are made of various materials depending on the customer's needs. Hatch frame Structure made of stainless steel, acid-proof steel, painted carbon steel, galvanized steel or any other type, depending on customer requirements and mounting conditions. Grating can be made from Stainless steel, galvanized carbon steel or plastics.

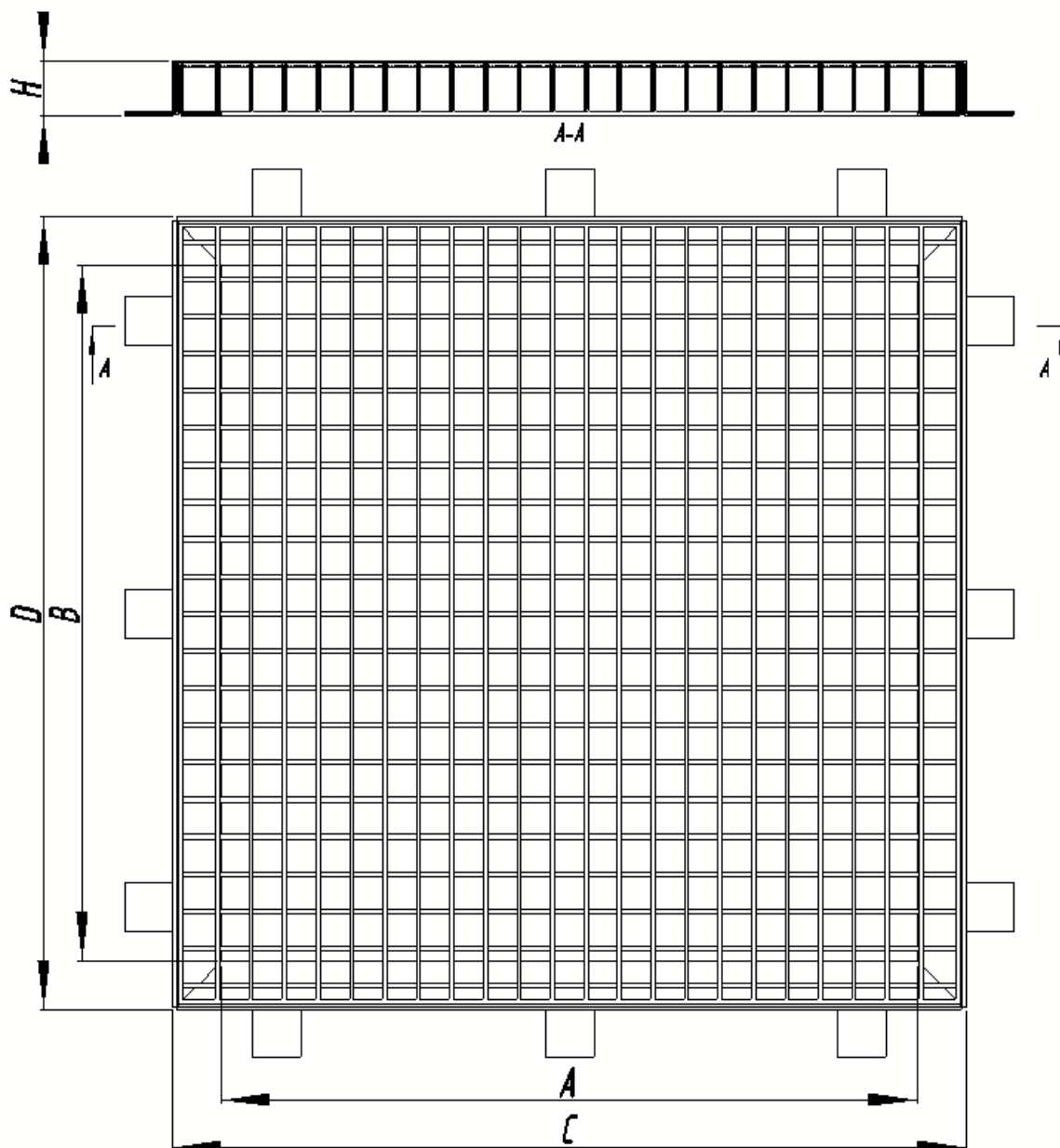
ADDITIONAL EQUIPMENT:

We manufacture manually removable inspection hatches with handles, dedicated keyholes, as well as hinged covers, equipped with pneumatic actuators or electric.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Access Dimensions AxB [mm]	External Dimensions Cx D [mm]	Height H [mm]
VWR-K 400x400	400x400	515x515	35*
VWR-K 500x500	500x500	615x615	35*
VWR-K 600x600	600x600	715x715	35*
VWR-K 700x700	700x700	815x815	35*
VWR-K 800x800	800x800	915x915	35*
VWR-K 900x900	900x900	1015x1015	35*
VWR-K 1000x1000	1000x1000	1115x1115	45*
VWR-K 1100x1100	1100x1100	1215x1215	45*

* This is standard height. The height depends on the customer's specific requirements.

Inspection Hatch PEHD

VWR-P



DESCRIPTION:

Vortico VWR-P inspection hatches are used wherever access to the space under the floor is required. They come in many variants tailored to the customer's needs. In addition to the range of standard dimensions of inspection hatches, we offer hatches made for special orders with the possibility of adjusting to non-standard dimensions or with additional equipment.

MATERIALS:

VWR-P inspection hatches are made of high-density polyethylene HDPE.

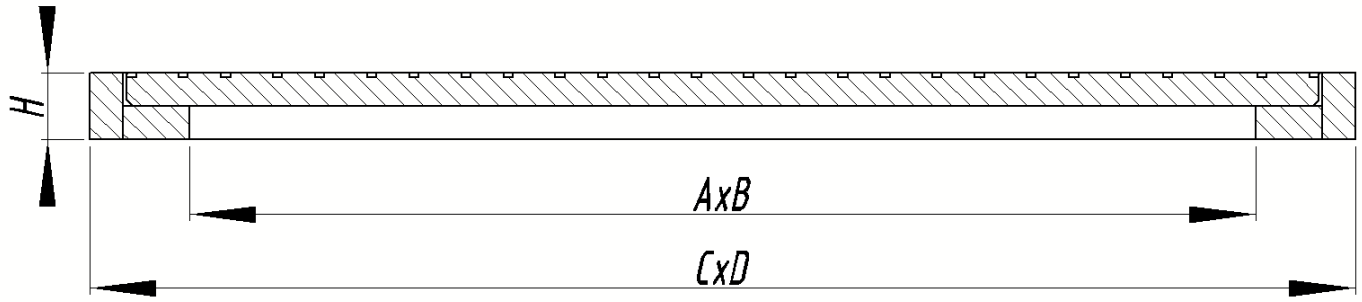
ADDITIONAL EQUIPMENT:

We manufacture manually removable inspection hatches with handles, dedicated keyholes, as well as hinged covers, equipped with pneumatic actuators or electric.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

STANDARD DIMENSIONS:



Type	Access Dimensions Ax B [mm]	External Dimensions Cx D [mm]	Height H [mm]
VWR-P 400x400	400x400	550x550	50*
VWR-P 500x500	500x500	650x650	50*
VWR-P 600x600	600x600	750x750	50*
VWR-P 700x700	700x700	850x850	50*
VWR-P 800x800	800x800	950x950	50*
VWR-P 900x900	900x900	1050x1050	50*
VWR-P 1000x1000	1000x1000	1150x1150	50*

* This is standard height. The height depends on the customer's specific requirements.

PIPELINE SUPPORTS:

Each and every pipeline must be supported. The correct selection of the types of supports and their arrangement is extremely important for the safety and functionality of the entire system. Compensation of stresses when changing the direction of the pipeline, fixing it in a fixed point and the possibility of installing insulation or adjusting the height of pipelines that require a technological slope are important factors that should be taken into account when designing supports.

We offer the manufacturing and supply of supports according to the customer's calculations and design, as well as assistance in the selection and design of appropriate supports based on the data provided by the customer.



Pipeline Supports

VPR



DESCRIPTION:

Vortico VPR supports are used to support pipelines while maintaining the appropriate freedom of movement of the pipeline, depending on its mounting location.

- Vortico VPR-S: Fixed supports immobilize the pipeline in the place of attachment, creating a fixed point of the pipeline.
- Vortico VPR-P: Where, as a result of stresses in the pipeline caused by thermal expansion or other external forces, movable (directional) supports are used, which fix the pipeline while maintaining freedom of movement in the axial direction, protecting against the accumulation of stresses between the support points.
- Vortico VPR-L: In places where the direction of the pipeline changes, loose (free) supports are used, whose task is to take the weight of the pipeline while allowing movement in horizontal directions.
- Vortico VPR-R: Height adjustable supports. Used for pipelines with a slope, run at different distances from the ground, or in any other case where it is required to adjust the height of the support.

Appropriate configuration of the pipeline with the use of fixed, sliding and free supports allows for adequate compensation of stresses in the pipeline.

MATERIALS:

The supports can be made of any materials. Supports are available in stainless and acid-resistant steel as well as in hot-dip galvanized or painted carbon steel.

NON-STANDARD VERSIONS:

This card shows examples of types of supports, however, Vortico provides supports tailored to the customer's needs according to own or customer's drawings. The supports differ in construction for insulated and non-insulated pipelines, as well as depending on the mounting location and pipeline operating conditions. We deliver supports with clamps to be screwed to the pipeline or prepared for welding. We provide accurate drawings and 3D models of supports to be placed in the project.

DOCUMENTATION:

Standard documentation delivered with the delivery includes: the national declaration of performance, technical and operational documentation along with the operating and assembly instructions. On request, we provide material certificates, welding documents and other according to the customer's needs.

SERIES:

Part No: VPR-X DNXXX-K-M-Y-Z

VPR-X – Type of support:

VPR-S – Fix point
VPR-P – Directional sliding support
VPR-L – Free sliding support
VPR-R – Adjustable height support

M – Material:

N – Stainless Steel 1.4301 (304)
K – Acid Resistant Steel 1.4401/1.4404 (316/316L)
W – Carbon Steel
? – Other

DNXXX – Nominal diameter of pipeline:

DN100: Dz=114,3mm
DN125: Dz=139,7mm
DN150: Dz=168,3mm
DN200: Dz=219,1mm
DN250: Dz=273,0mm
DN300: Dz=323,9mm
DN350: Dz=355,6mm
DN400: Dz=406,4mm
DN500: Dz=508,0mm
DN???: Inna

Y – Type of attachment to the pipeline

A – Welded to pipeline
B – Clamped to pipeline.
C – Support with saddle
? – Other

Z – Type of attachment to the base

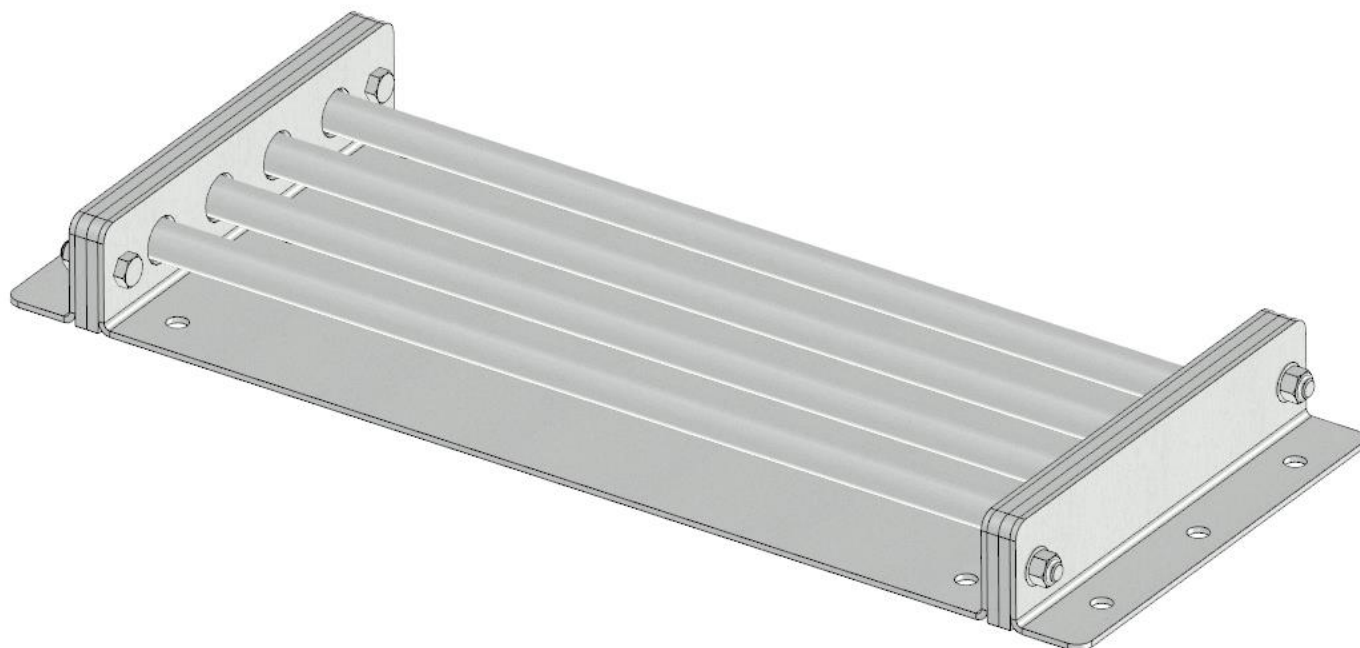
K – Anchored
S – Welded
? – Other

K – Direction of pipeline

H – Horizontal
V – Vertical

Example of Part No.: VPR-P DN300-N-A-K: Directional sliding support, for a pipe with an outer diameter of 323.9 mm, made of stainless steel 1.4301 (304), welded to the pipeline and fixed to the foundation with anchors.

Roller Base VPR-PR



DESCRIPTION:

Roller bases for sliding supports are used to reduce the friction of the support against the base. They facilitate the movement of the support, thereby reducing the stresses acting on the pipeline. They are applicable for directional sliding supports. They can operate in the axial or transverse direction depending on the needs.

ZASADA DZIAŁANIA:

The support of the pipeline rests on bearing bars. Bearings mounted on both ends of the rods are placed in sockets on the sides of the base. Bearings ensure low resistance and smooth movement of the support.

MATERIALS:

The bases can be made of any materials. Bases are available in stainless and acid-resistant steel as well as in hot-dip galvanized or painted carbon steel.

MOUNTING:

The bases should be attached to concrete foundations using anchors, or screwed/welded to a steel structure with adequate load capacity.

HEAT EXCHANGERS:

Heat exchangers allow heat transfer between fluids. Widely used in industry. Our heat exchangers are calculated individually to match the process requirements. The modular structure and the possibility of determining construction details at the order stage allows for adaptation to the specific requirements of customers.

We offer manufacturing and delivery of devices based on customer documentation or according to our own design.



Tube-in-Tube Heat Exchanger

VWC-RR



DESCRIPTION:

Tube-in-tube heat exchanger with modular design. Vortico VWR-RR exchanger modules can work as separate devices or be combined into larger devices. Thanks to the modular structure, it is possible to optimally select the size of the heat exchanger, enabling the device to be adapted to the available space. Exchangers are individually designed for specific process parameters. At the customer's request, we provide thermal and mechanical calculations of the exchanger as well as drawings and 3D models to be included in the installation project.

MATERIALS:

We supply heat exchangers made of stainless and acid-resistant steel as well as other materials in accordance with the customer's requirements and appropriate to the medium used.

CONNECTIONS:

As standard, the exchangers are supplied with flanged connections according to EN 1092-1 or ASME B16.5. Other connections are also available such as Tri-Clamp ISO 2852, threaded connections or others specified by the customer.

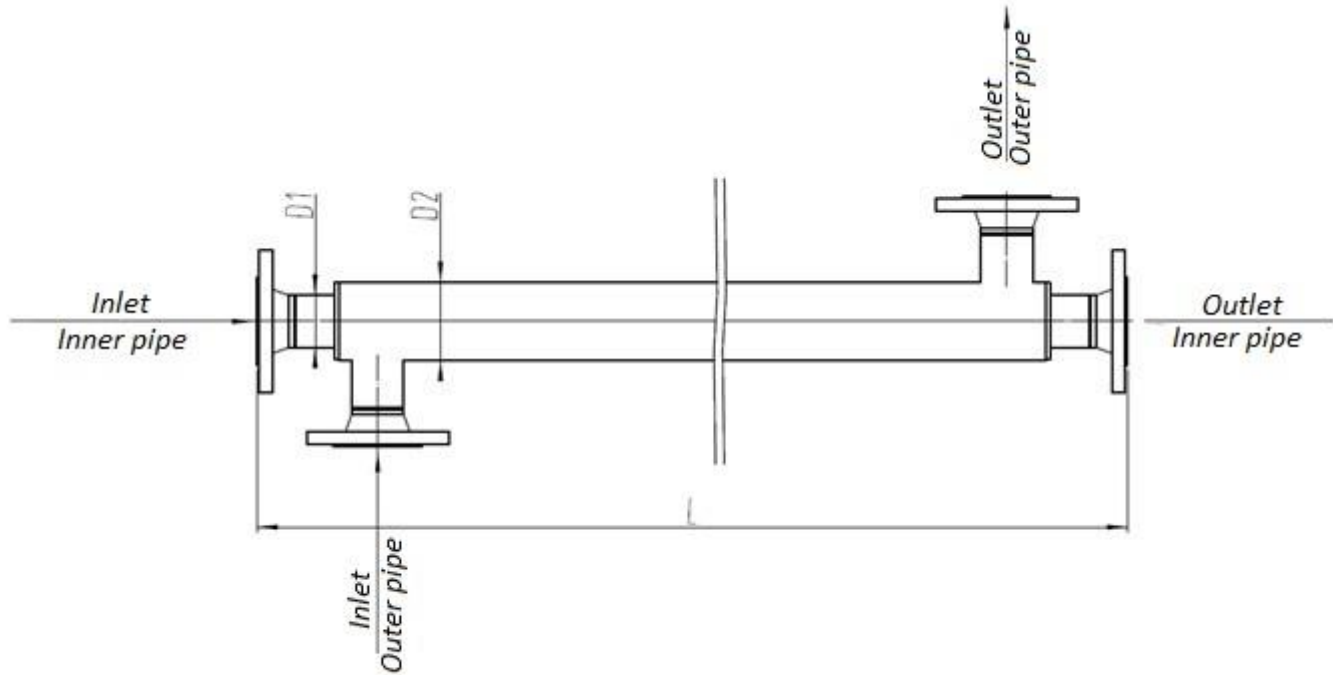
ADDITIONAL EQUIPMENT:

As an option, the exchangers are supplied with a stand for placing the exchanger on the floor or a hanger for hanging on the wall. Depending on the customer's requirements, we can deliver the exchanger with or without insulation.

DOCUMENTATION:

The standard documentation delivered with the delivery includes: declaration of conformity, technical and operational documentation along with the installation manual. On request, we provide material certificates, welding documents and other according to the customer's wishes.

STANDARD DIMENSIONS OF MODULES:



Type	External Diameter of inner Pipe D1 [mm]	External Diameter of Outer Pipe D2 [mm]	Inner Connection	Outer Connection
VWC-RR 32/50	42,4	60,3	DN32 PN10	DN50 PN10
VWC-RR 50/80	60,3	88,9	DN50 PN10	DN80 PN10
VWC-RR 80/100	88,9	114,3	DN80 PN10	DN100 PN10
VWC-RR 100/150	114,3	168,3	DN100 PN10	DN150 PN10

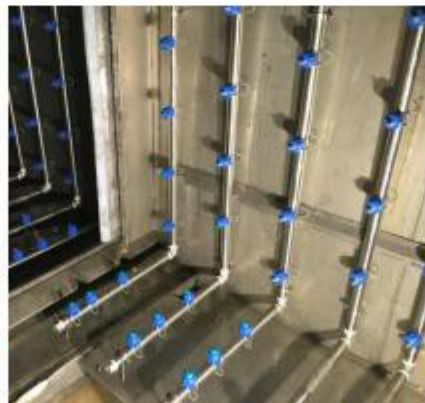
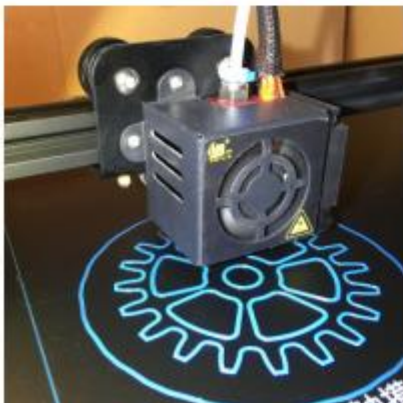
* The length of the L module is selected individually depending on the required heat exchange area.

ADDITIONAL EQUIPMENT:

A number of additional accessories are available, such as static mixers to improve heat exchange in the case of laminar flows, insulation, brackets for mounting on the wall and many others.

ADDITIONAL EQUIPMENT AND NON-STANDARD PRODUCTS:

The offered products are available with a number of additional elements that facilitate/enable the installation of devices or improve their functionality.



Examples of additional elements include:

- Adapters for round walls
- Spindle extensions
- Steering columns
- Keys to open the penstocks
- Anchors
- Gaskets
- Brackets
- Gears
- Handles for mounting manholes
- Hatch cover trolleys
- Various piping and structures
- 3D printing services
- Site installation and device service
- Other according to customer needs.

