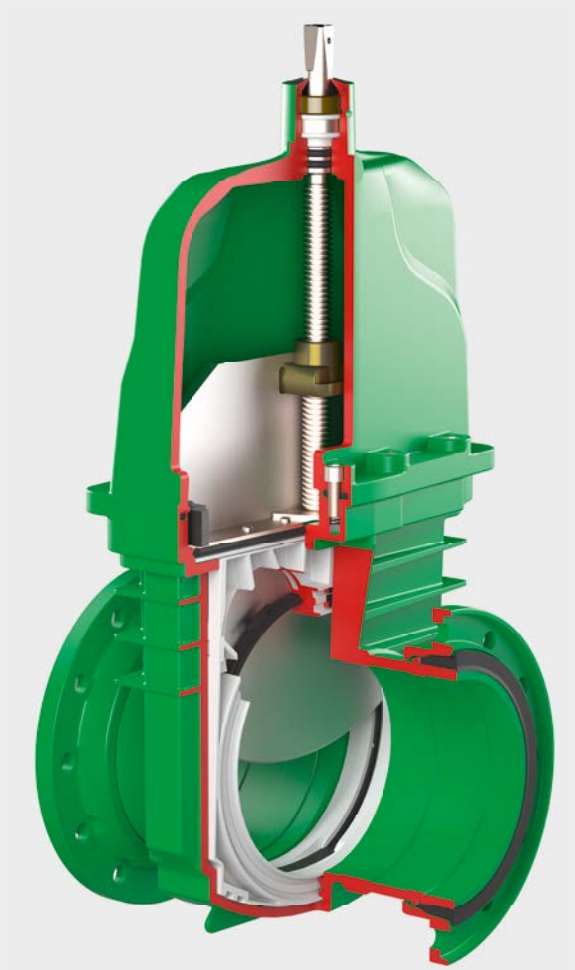


Sewage program

An excerpt from the sewage range

08/2023

Explanations

The scope of medium can be restricted within the product data sheets. In case of any inquiry or order point out the medium of each project.

In case of any questions, don´t hesitate to contact our application engineers.

	sewage water products
	Here you can register for our free newsletter, which provides you with regular information (only in german): **www.hawle.de/newsletter**

Air Release Valves & Air Release Valve Sets

Water conveying systems have to be protected by appropriate means against accumulating air and the formation of negative pressure. Air pockets may lead to reduced flow, pressure variations, more pump capacity required, and pressure hammers in line systems.

The lack of air, too, leads to malfunctions. If water is drained too fast on emptying the line or in case of a pipe break, negative pressure will build up. The water flow will break. Air has to be admitted to limit the negative pressure and prevent damage to the line system.

In sewage pressure pipes, gas will also accumulate because of putrefaction and the systematic blowing in of air for aerating the sewage water.

Air release takes place at high points, on long ascending and descending pipe sections, downstream of pumps, upstream of restrictions, and at places where lower operating pressures occur than in the neighbouring line sections. Air intake takes place at each point where negative pressure may occur (e.g. downstream of quick-action stop valves).

Air release valves are mainly installed in manholes. These are not only expensive to make but also expensive to maintain. Moreover, manholes require additional safety measures for entering, which are not necessary with air valve sets, as the letter can be serviced and maintained from ground level. The air valve set combines the advantages of a shaft with the technology of a venting valve. The valve, the manhole, and the integral isolation valve are one unit. This not only reduces construction costs, but also reduces time-consuming planning.

Air release valves contain compressed air. Prior to any maintenance work air release valves shall be put out of operation and depressurized via a ball valve! For maintenance information please refer to the respective operating and maintenance instructions.


986-00


985-00


985-01


988-00


989-00


989-01

Technical features

- Air valve operates continuously with unique roll-on membrane technology
- Air intake and air release of pressure lines in systems and manholes
- Corrosion-resistant materials
- The valve seat is not in contact with the medium
- Simple in maintenance
- Easy cleaning due to connection of flushing lines
- Long-proven technology for the waste water sector
- Connections internal thread or flange
- Special functions „only air intake“ oder „only air release“ on request
- Special function air release stop for lines purged with compressed air on request

Air Release Valves & Air Release Valve Sets

986-00
Air valve for sewage water 2“

986-04
Digital Air-Release valve, Sensor version with data logger

985-01
Air valve with shut-off unit

988-00
Air valve for sewage water 4“

989-00
Air valve of plastic

989-01
Air valve for sewage water PN 10

No.	Description	Operating pressure max.	Dimension
986-00	Air valve for sewage water 2“	16 bar	DN 50 - DN 200, female thread 2“ (with Storz coupling on request)
986-04	Digital Air-Release valve, Sensor version with data logger	16 bar	female thread 2“, DN 50 - DN 100 (flange)
985-01	Air valve with shut-off until	16 bar	DN 80 (flange)
988-00	Air valve for sewage water 4“	16 bar	DN 100, DN 150, DN 200
989-00	Air valve of plastic	6 bar	female thread 3“, DN 50, DN 80 (flange)
989-01	Air valve for sewage water PN 10	10 bar	female thread 2“

Air Release Valves & Air Release Valve Sets

985-00
Air valve set for sewage water

985-03
Flushing and water tapping set
for air valve set „985“

985-08
Valve lifting device for the air valve set

986-01
Air release stop for air valve
1: fits„986-00“,
„989-00“, „989-01“
2: fits air valve set „985-00“

205-00
Manhole cover
(frame and cover)

No.	Description	Operating pressure max.	Dimension
985-00	Air valve set for sewage water	16 bar	1,00 m*; 1,25 m; 1,50 m; flange DN 80 bzw. BAIO® spigot end DN 80 *flange version only
985-03	Flushing and water tapping set for air valve set „985“	16 bar	male thread 2“
985-08	Valve lifting device for the air valve set	-	-
986-01	Air release stop for air valve „986-00“, „989-00“, „989-01“ and air valve set „985-00“	16 bar	Material: Body and gasket cone: POM Axle/spring/adjusting nut: stainless steel
205-00	Manhole cover (frame and cover)	-	Material: Material: Frame/cover: GJS 400/500, primed and lacquered

Flushing valves

985-02
Flushing valve for sewage water DN 100
(Storz A coupling oder Perrot coupling NW 108)

985-04
Flushing valve for sewage water

985-06
Standpipe for flushing valve 985-04

212-00
Surface box with cover, rectangular

No.	Description	Operating pressure max.	Dimension
985-02	Flushing valve for sewage water DN 100 Storz A coupling or Perrot NW 108	10 bar	DN 100 pipe cover depth: 1,10m; 1,25 m; 1,50 m
985-04	Flushing valve for sewage water Connections: - flange DN 50, DN 80 optional: 45°-outlet, push-fit elbow d 63, 90°	16 bar	Upper outlet: C-coupling pipe cover depth: 1,00 m; 1,25 m; 1,50 m; 2,00 m
985-06	Standpipe for flushing valve 985-04	16 bar	connection: C-coupling
212-00	Surface box with cover, rectangular	-	Material: Surface box: GJL-250, bituminized Cover and gripping pins: GJS-400, with anti-rust priming coat

Sewage water flushing DN 80

The sewage water flushing hydrant is an adapted freeflow underground hydrant. Through the free medium pipe in opened position, this flushing hydrant allows the efficient introduction of flushing water into the sewage pressure pipe, while sewage water can be removed, for example, when a temporary bypass pipe is to be installed.

The sewage water flushing hydrant is provided with a Storz B coupling of stainless steel.

The flushing hydrant is not provided with a drainage mechanism to avoid sewage water from seeping away. Shut-off is effected via a teflon-coated shut-off blade of stainless steel.

Technical features

- No complex shaft structures required
- The dangers of walking in shafts are eliminated
- Special lengths on request
- Free passage 62 mm (Storz B)

Technical data

Medium:	sewage water
Operating pressure max.	16 bar
Lower connection:	flange DN 80
Material:	cast iron components: GJS-400, Hawle-epoxy-powder coated Medium pipe: stainless steel Storz coupling B: stainless steel Sealings: EPDM

985-09
sewage water flushing hydrant DN 80

No.	Description	Operating pressure max.	Connection	Pipe cover depth
985-09	Sewage water flushing hydrant DN 80	16 bar	DN 80 (flange)	1,00 m; 1,25 m; 1,50 m

ZAK®-System

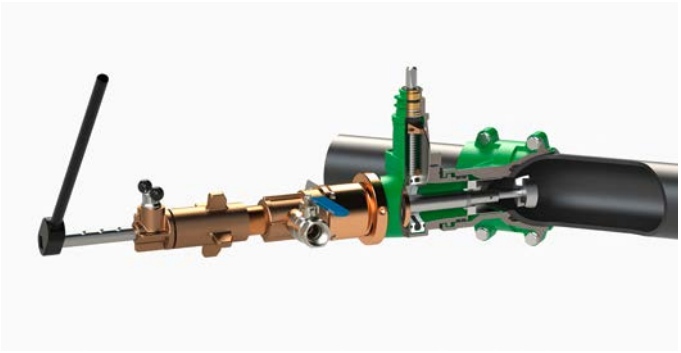
Threaded connections tend to corrode because the threads remain uncovered during assembly and are permanently exposed to the medium. Contact corrosion occurs in the bare metal transition area - the effects are cross-sectional restrictions due to incrustations. The consequence: the domestic service connection must be renewed.

The ZAK® system (ZAK: tension-proof, locked, corrosion-protected) is a bayonet connection consisting of a corrosion-protected sleeve with internal bayonet locking and a corrosion-protected spigot end with locking lugs and double O-ring seal.

During assembly, the ZAK® spigot end is pushed into the ZAK® socket, locked by 90° clockwise and pulled back as far as it will go. To fix the ZAK® spigot end in the ZAK® socket, the connection must then be secured against unintentional unlocking by means of a locking ring for ZAK® connections.

Following the flangeless BAIO® system, the threadless ZAK® system is now replacing conventional joining technology. The decisive factor for this simplified and optimised type of connection was our customers' request to reduce subsequent costs by extending the service life. The ZAK 69 is the ideal threadless connection for wastewater in domestic service connections.

House connection sewage line ZAK 69



Drilling a sewage pressure line with pipe drilling device „Hawlomat" (ZAK 69)

Technical features

- Easy and quick installation
- Threadless connection technology
- Stress relief due to movability of the connection
- Reliable double O-ring sealing of the connection
- Long service life due to integral corrosion protection
- No tools required for installation

Technical Data

max. operating pressure:	sewage water (Standard): 16 bar
Material:	Body / Flange: GJS-400 corrosion protection: Hawle-epoxy-powder coated locking ring: POM

ZAK®-System

536-01
Transition fitting BAIO® spigot end / ZAK® socket

616-00
Push-fit fitting with ZAK® spigot end

618-00
ZAK® PE fusion end

649-00
Elbow 45° with ZAK® spigot end and push-fit socket

651-00
Tee branch fitting with ZAK® sockets at all ends

651-03
Connector with ZAK® outlet (ZAK 69), 45°

No.	Description	Operating pressure max.	Dimension
536-01	Transition fitting BAIO® spigot end / ZAK® socket	16 bar	ZAK 46, 69
616-00	Push-fit fitting with ZAK® spigot end	16 bar	ZAK 69 d 25 mm, d 32 mm, d 40 mm, 50 mm, d 63 mm
618-00	ZAK® PE fusion end	16 bar	ZAK 34, 46, 69 32 mm, d 40 mm, 50 mm, d 63 mm
649-00	Elbow 45° with ZAK® spigot end and push-fit socket	16 bar	ZAK 69 d 50 mm, d 63 mm
651-00	Tee branch fitting with ZAK® sockets at all ends	16 bar	ZAK 46, 69
651-03	Connector with ZAK® outlet (ZAK 69), 45°	16 bar	ZAK 69, d 63 mm

ZAK®-System

524-00
HAKU pipe saddle with 45° ZAK® outlet

372-01
Shut-off adaptor with ZAK® outlets

551-00
Adaptor with flange and ZAK® socket

626-00
Transition fitting with ZAK® socket

No.	Description	Operating pressure max.	Dimension
524-00	HAKU pipe saddle with 45° ZAK® outlet	16 bar	ZAK 69 d 63 mm, d 75 mm, d 90 mm, d 110 mm, d 140 mm, d 160 mm, d 225 mm
372-01	Shut-off adaptor with ZAK® outlets	16 bar	ZAK 46, 69
551-00	Adaptor with flange and ZAK® socket	16 bar	ZAK 46, 69 DN 40 - 80
626-00	Transition fitting with ZAK® socket	16 bar	ZAK 69 d 75 mm

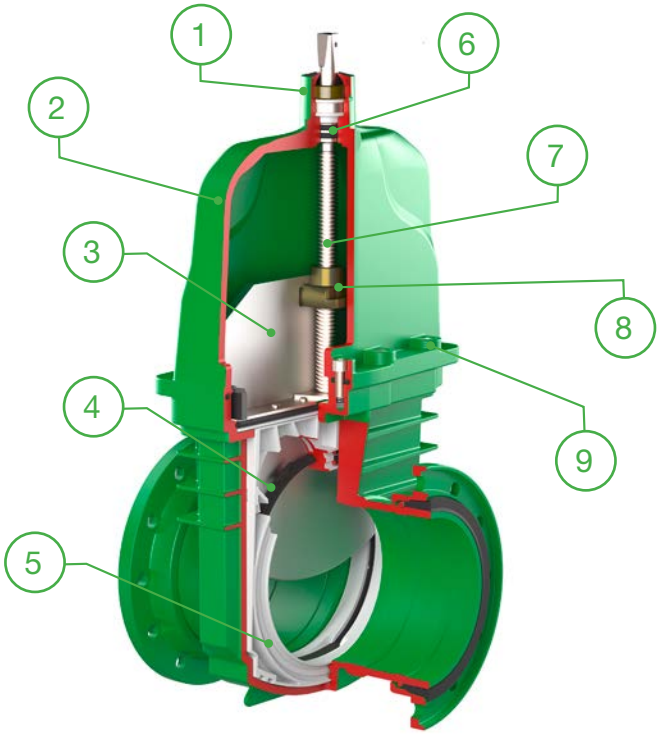
Sewage water valve

Pressure drainage systems in sewage water plants require gate valves that are suitable for buried installation, on the one hand, and that are equipped with a shut-off element resistant to sewage water and durably functioning, on the other hand.

The Hawle gate valves for sewage water are provided with a shut-off blade of hard-rolled stainless steel and an O-ring package for shutting off. The sealing system prevents solids from sticking to the spindle and permits the exchange of the valve bonnet without taking the pressure line out of order.

Technical features

- Ideal for sewage pressure pipes
- Suitable for burled installation
- Spindle not in contact with the medium
- Rellable shut-off function due to shut-off blade of stainless steel and O-ring profile gasket
- Bonnet exchangeable „under pressure“
- Pinless fixing of extension spindle via round thread adaptor to DN 200
- Long service life due to Hawle epoxy powder coating



Structure sewage water knife gate valve

Figure: Sewage water knife gate valve DN 250 with loose flanges

No.	Component
1.	Spindle bearing
2.	Chambered bonnet - spindle outside flow, free from solids
3.	Shut-off blade of stainless steel
4.	Sealing element of sewage-resistant NBR
5.	Sealing carrier of plastic
6.	Double O-ring gasket
7.	Spindle of stainless steel
8.	Spindle nut of bronze
9.	Sealed screws

Technical Data

Medium:	municipal sewage (acc. to EN 1085:2007)
max. operating pressure	sewage water 10 bar
Material:	body: GJS-400 bonnet: GJS-400 corrosion protection: Hawle epoxy powder coated shut-off element: hard-rolled, stainless steel spindle seal: brass-O-Ring-Adapter (from DN 80 replaceable) gaskets: wastewater-resistant elastomer

Sewage water valve

DN 50 - DN 200 (face to face 15)
DN 80 - DN 200 (face to face 14)
DN 250 - DN 300 (face to face 14 +15)

481-00 / 482-00
Sewage water knife gate valve with loose flanges

480-00 / 483-00
Sewage water knife gate valve with sockets and sewage water knife gate valve spigot/socket - BAIO® system

483-01
Service valve for sewage water with ZAK® spigot end and ZAK® socket

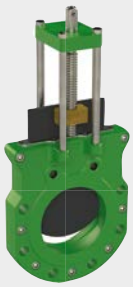
364-00
Double strap saddle and knife gate valve combination with flanged outlet

480-01
Service valve for sewage water with push-fit sockets

No.	Description	Operating pressure max.	Dimension
481-00 482-00	Sewage water knife gate valve with loose flanges DIN EN 558-1	10 bar	DN 50 - DN 300
480-00 483-00	Sewage water knife gate valve with sockets and sewage water knife gate valve spigot/socket - BAIO® system	10 bar	DN 80, DN 100, DN 150* * sewage water knife gate valve spigot/socket only
483-01	Service valve for sewage water with ZAK® spigot end and ZAK® socket	10 bar	ZAK 69
364-00	Douple strap saddle and knife gate valve combination with flanged outlet	10 bar	DN 80
480-01	Service valve for sewage water with push-fit sockets	10 bar	d 40 mm, d 50 mm, d 63 mm

Sewage water valve

390-00
Knife gate valve with non-rising spindle



392-00
Knife gate valve HaPUR® with PUR-coated shut-off blade

900-00 - 962-00
Rigid extension spindle for gate valve / Telescopic extension spindle

780-00
Handwheel for gate valves and butterfly valves

187-01 / 207-01
Surface box for gate valves with cover, for rolling in

864-00
Drive unit with control

No.	Description	Operating pressure max.	Dimension
390-00	Knife gate valve with non-rising spindle	10 bar 6 bar*	Nominal diameters 10 bar: DN 50, DN 65, DN 80, DN 100, DN 125, DN 150, DN 200 Nominal diameters 6 bar: DN 250, DN 300, DN 350, DN 400
392-00	Knife gate valve HaPUR® with PUR-coated shut-off blade	10 bar	Nominal diameters: DN 80, DN 100, DN 150, can also be used as end fitting
900-00 - 962-00	Rigid extension spindle for gate valve / Telescopic extension spindle	-	Standard or stainless steel versions are available in various nominal diameters and with diverse pipe coverings
780-00	Handwheel for gate valves and butterfly valves	-	Material: DN 25 - DN 40: Kunststoff, DN 50 - DN 600 Guss
187-01 207-01	Surface box for gate valves with cover, for rolling in	-	Material: Surface box: GJL-200, bituminized Drawing ring: GJL-250, bituminized Cover: GJS-400, Hawle epoxy powder coated Positioning pin: stainless steel
864-00	Drive unit with control	-	Distribution for control unit 230 V Distribution box for control unit 24 V

Ball check valve

The ball check valve is provided with one loose flange which considerably facilitates the exchange of existing valves.

The ball check valve can be installed either horizontally or vertically. For horizontal installation, the ball check valve is open at 0 bar. For vertical installation, the opening pressure is 0.02 bar, e.g. for a nominal diameter of DN 100.

A retrofitted wastewater gate valve facilitates maintenance.

Technical Features

Loose flange:

- Ideal for replacing existing valves
- Saves a dismantling piece.

Hinged cover with joint function:

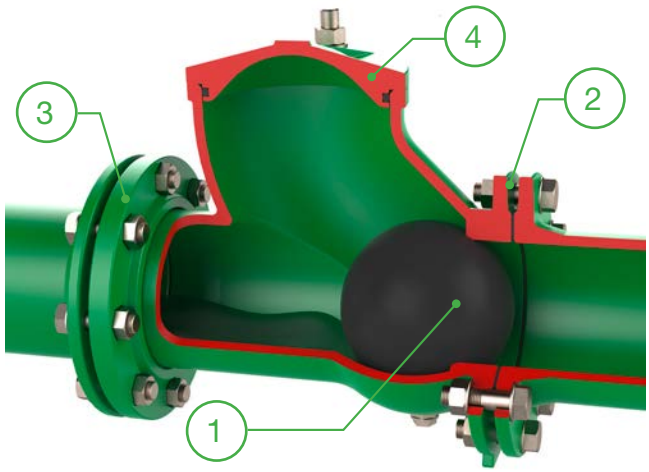
- Easy to install and dismantle
- Due to the eyebolt there is no danger of the bolt/nut/ washer falling into the manhole.

Stainless steel drain opening (optional):

- For emptying or flushing the ball check valve.

No.	Component
1.	ball
2.	fixed flange
3.	loose flange
4.	hinged cover

984-03
Ball check valve with loose flange



No.	Description	Operating pressure max.	Dimension
984-03	Ball check valve with loose flange or female thread 2“	16 bar	DN 50 - DN 300, female thread 2“

Further sewage water solutions

854-01
Hatchbox with ZAK® outlet

854-02
Cleaning and controlling box

854-00
Y-fitting

983-00
Check valve without lever and weight

Sewage fitting manhole Hawle-Kunststoff*
*Further information: www.hawle-kunststoff.de

No.	Description	Operating pressure max.	Dimension
854-01	Hatchbox with ZAK® outlet	10 bar	DN 80 - DN 300
854-02	Cleaning and controlling box	10 bar	DN 80 - DN 300
854-00	Y-fitting	16 bar	DN 80, DN 100, DN 150
983-00	Check valve without lever and weight	16 bar	DN 50 - DN 200

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