

hawle

# HAWLE-AIR RELEASE VALVES



HAWLE. **MADE FOR GENERATIONS.**



# HAWLE-AIR RELEASE VALVES

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## Recommended sizing of HAWLE-Air Release Valves:

Pipe	Valve
DN ≤ 80	DN 1"
DN 100 - 250	DN 2" (DN 50)
DN 300 - 400	DN 80
DN 450 - 500	DN 100
DN 600 - 900	DN 150
DN ≥ 1000	DN 200

Specialist information for planners and technicians - see [www.hawle.at](http://www.hawle.at)

Includes all essential information about: range of applications, calculations, installation and assembly, design of connections, maintenance intervals, frost protection, flushing stand pipe, back flow preventer, etc.

## HAWLE - QUALITY

Our quality and environmental management is certified by **qualityaustria**, the Austrian Training, Certification and Evaluation company, according to ISO 9001 and ISO 14001.



# Why use Air Release Valves?

## The problems:

### Air inclusion and vacuum

#### ○ Air trapped at various points including cavities can cause:

- Unforeseeable changes in water pressure
- Water hammer
- Damage to the pipeline, valves, etc.

#### ○ Vacuum:

- Danger of collapse of the pipe
- Cavitation

## The solution:

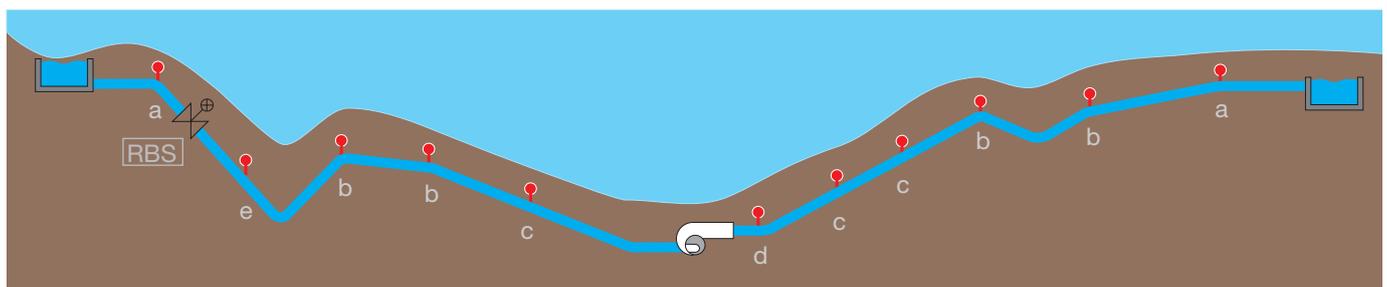
### Automatic Air Release Valve

#### ○ The valve releases air:

- At all highest points
- At all secondary high points
- On long rising or falling pipe lines (recommended installation interval approx. 800 m)
- After pumps

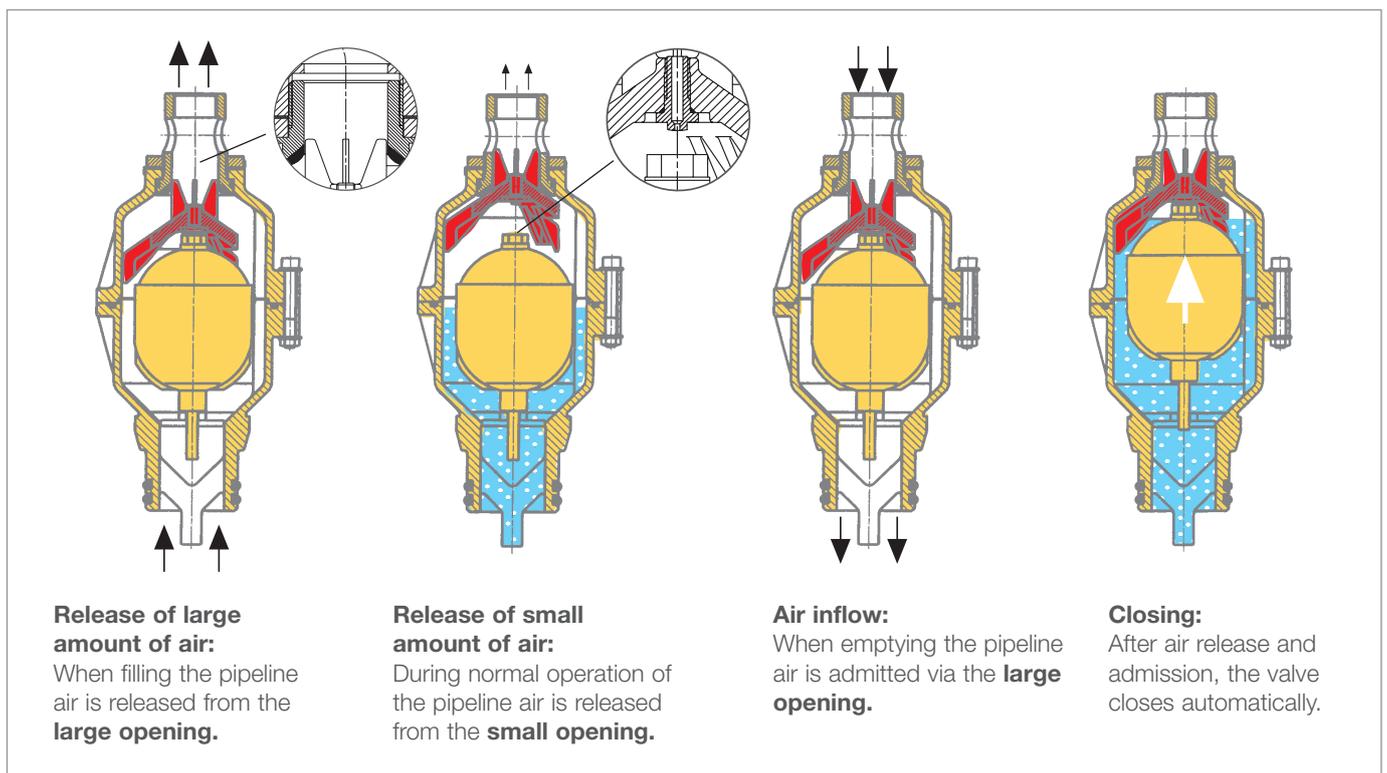
#### ○ The valve admits the necessary quantity of air:

- At every point in the pipeline, which is vulnerable to vacuum (for example: after quick shut-off pipe-break safety valves)



## The functions of the Air Release Valve

Example: Hawle no. 9876, DN 2"



# AIR RELEASE VALVES

for installation in plants, buildings and chambers

Application: potable water



**Order no. 9876  
with internal thread**  
PN 6 or PN 16



**Order no. 9876  
with internal thread**  
PN 6 or PN 16



**Order no. 9874 with flange  
connection**  
acc. to EN 1092-2, PN 16  
**DN 50 or DN 80**  
PN 6 or PN 16

## Material:

Body:	POM (Polyoxymethylen)
Valve seat:	brass
Float:	POM (Polyoxymethylen)
Seal:	elastomer (for potable water)
UV shield:	PE
Flange:	ductile cast iron, epoxy powder coated

Standard equipment for DN 2": protective insect grid

- PN 16
- Easy maintenance
- Corrosion free materials
- PE shield for UV protection
- Possible Connections: Flange DN 50, DN 80, internal thread 1" und 2"
- With protective insect grid (2")
- Air release only (on request)

## Technical details:

Dimension	DN 1"	DN 2"
Test pressure (body)	24 bar	
Working pressure	PN 16: 0,8 - 16 bar PN 6: 0,1 - 6 bar	PN 16: 1 - 16 bar PN 6: 0,1 - 6 bar
Max. air release capacity	7,8 m³/h	192 m³/h
Size of the opening	1,77 mm²	900 mm² / 2,0 mm²
Connection	1" internal thread	2" internal thread or DN 50 and 80 flange
Weight	0,9	DN 2"/2,8    DN 50/6,0    DN 80/7,3

On request: valve with air release function only

# AIR RELEASE VALVE HaVent

high performance air release valve with special nozzle mechanism for the optimal absorption of high pressures

**Application:** potable water

- PN 25
- Low wear and tear due to optimum geometry
- Easy maintenance
- High-quality materials
- UV resistance
- Connecting versions: Flange DN 50, DN 80, internal thread 2"
- With protective insect grid
- Air release only (on request)



**No. 9859**  
Ill.: with internal thread

## Material:

Body:	stainless steel
Float:	made of foam PP
Seal:	elastomer (for potable water)
Outlet elbow:	PE
Flange:	ductile cast iron, epoxy powder coated

## Technical details:

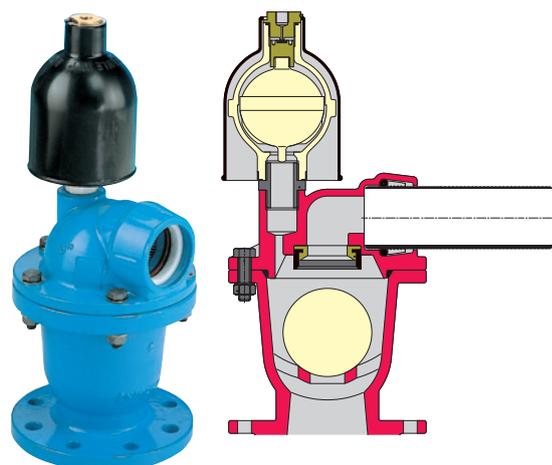
Dimension	DN 50	DN 80	2"
Test pressure (body)	35 bar		
Working pressure	0,2 - 25 bar		
Max. air release capacity	700 m³/h		
Size of the opening	1500 mm² / 3,15 mm²		
Connection	Flange DN 50	Flange DN 80	IT 2"
PE pipe	d 63		
Weight	12,50	14,50	10,0
H	455	455	420
Ø D	160	160	160

# AIR RELEASE VALVES

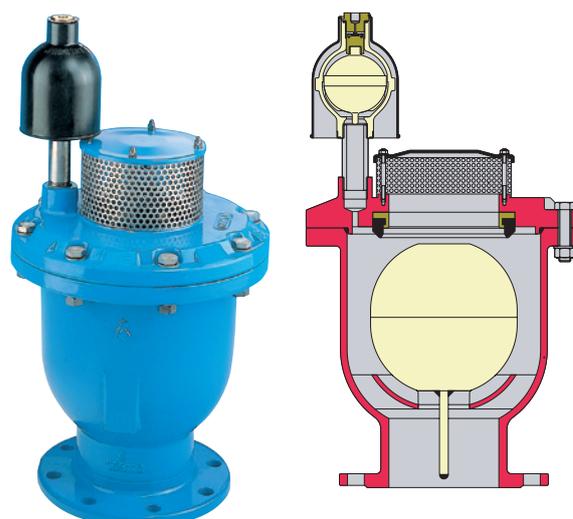
for installation in plant, buildings and chambers

Application: potable water

DN 80 / DN 100



DN 150 / DN 200



## Material:

Body and cap:	ductile cast iron, epoxy powder coated
Seat:	brass / elastomer (for potable water)
Float:	DN 80 / DN100: Polycarbonate DN 150 / DN200: stainless steel passivated
Connecting nipple:	stainless steel
Bolts, nuts and washers:	stainless steel
Travelling valve:	see page 4; no. 9876 1"

## Versions:

- **Order no. 9835**  
DN 80 - DN 200      PN 16 (0,8 - 16 bar)  
   PN 6 (0,2 - 6 bar)
- **Order no. 9836**  
with PE pipe and protective insect grid  
DN 80 - DN 100      PN 16 (0,8 - 16 bar)  
   PN 6 (0,2 - 6 bar)
- **Order no. 9837**  
single orifice (without travelling valve)  
DN 80 - DN 200      PN 16 (0,2 - 16 bar)
- **Order no. 9838**  
single orifice (without travelling valve)  
with PE pipe and protective insect grid  
DN 80 - DN 100      PN 16 (0,2 - 16 bar)

## Technical details:

Dimension	DN 80	DN 100	DN 150	DN 200 *
Test pressure (body)	24 bar			
Working pressure (body)	PN 6 0,2 - 6 bar / PN 16 1-16 bar			
Max. air release capacity	1305 m <sup>3</sup> /h	2450 m <sup>3</sup> /h	7500 m <sup>3</sup> /h	7500 m <sup>3</sup> /h
Size of the opening basic valve:	1810 mm <sup>2</sup>	3320 mm <sup>2</sup>	17670 mm <sup>2</sup>	17670 mm <sup>2</sup>
Size of the opening travelling valve 1":	1,77 mm <sup>2</sup>			
PE pipe:	d 63	d 75		
Weight	17,0	26,0	69,0	77,0

\* Flange drilled to PN 10 - EN 1092-2 (PN 16 - EN 1092-2 for DN 200 please specify on order)

# AIR RELEASE VALVES

dynamic PN 10, 16, 25, 40

**Application:** potable water

## Automatic 3-way air release valve with cylindrical floats

- DN 50 - DN 250
- Ventilation outlet in nominal size (large opening cross-section according to the flange size)
- Flange pursuant to EN 1092-2 (DN 50 can also be provided with 2" threaded connection)
- Efficient, high performance ventilation protects pipeline from vacuum related damages
- High velocity air discharge prevents premature closure, thus safeguarding optimum ventilation during the process of filling pipe lines or containers
- 2-level ventilation system provides effective protection against pressure shocks during high ventilation speeds through a small opening
- Continuously reliable ventilation of air inlets under normal operating conditions
- Compact construction, low volume and weight
- Robust and reliable technology
- The housing is made of ductile iron and coated with high quality epoxy powder
- All uncoated metal is high grade stainless steel



Order no. 9842

### Material:

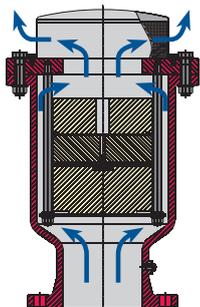
**Body:** ductile cast iron, epoxy powder coated

**Sealing rings:** elastomer (for potable water)

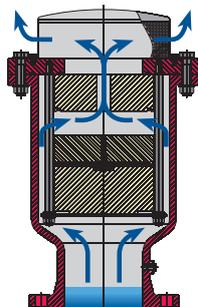
**Float:** PE (HPDE = high density polyethylen)

All uncoated metal is high grade stainless steel

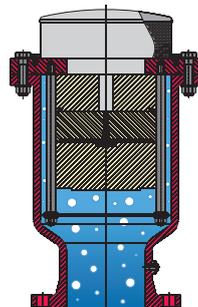
Other materials upon request



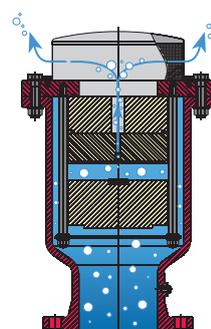
**Release of large amount of air:**  
During filling, the line will be ventilated via the large cross-section.



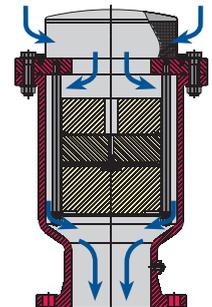
**Release of high air velocity through small opening:**  
Prevention of pressure shocks or premature closure.



**Closing:** After ventilation the valve will close automatically.



**Release of small amount of air:**  
During operation of a line, ventilation is carried out via the small cross-section.



**Air inflow:**  
During drainage of a line, ventilation is carried out via the large cross-section.

# COMBINED AIR RELEASE VALVE

## A superior solution for releasing and admitting air from and into pipelines

Application: potable water

### Summary of advantages

- unsurpassed efficiency
- easy maintenance
- reliability

The Combined Air Release Valve from HAWLE represents the outstanding alternative, technically and economically, to high cost chamber construction.

#### Technical advantages:

- air valve, chamber and shut-off device in one unit
- completely reliable functionality due to high grade materials

#### Cost advantages:

- huge reduction in costs compared with normal chamber construction
- minimum maintenance costs for the Combined Air Release Valve

Hood (PE) with air release slots

Stand pipe in stainless steel replaces the chamber and enables simple maintenance of the Combined Air Release Valve

Combined Air Release Valve in high grade materials (POM and bronze) ensures corrosion resistance.

- Functions see page 3
- Technical details see page 4 - DN 2"

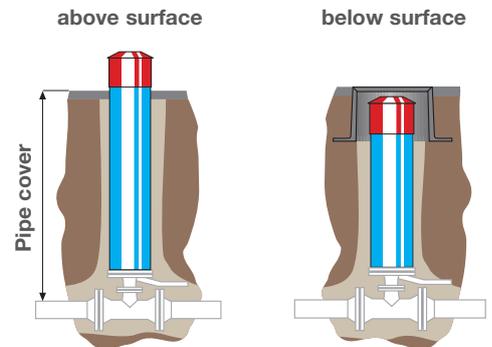
Automatic shut-off device by spring and pressure acting foot valve



Order no. 9822 PN 16 (1 - 16 bar) DN 50 / DN 80  
 Order no. 9823 PN 6 (0,1 - 6 bar) DN 50 / DN 80

L*	Weight	Pipe cover above-ground	Pipe cover below-ground
755	23,0	0,75 m	1,00 m
1055	27,0	1,00 m	1,25 m
1305	30,0	1,25 m	1,50 m
1555	33,0	1,50 m	1,75 m

\* Length can be reduced by 100 mm



### Accessories:

#### Flushing Stand Pipe Order no. 9824

- With integrated shut-off valve
- The flushing stand pipe allows water to be extracted, or the pipeline can be flushed
- It replaces the air release valve



Order no.	L	Weight
9824	755	4,70
	1055	5,80
	1305	6,75
	1555	7,60

#### Surface Box Order no. 1790

- Cast iron, bitumen coated



#### Sicker-Pipe no. 5067

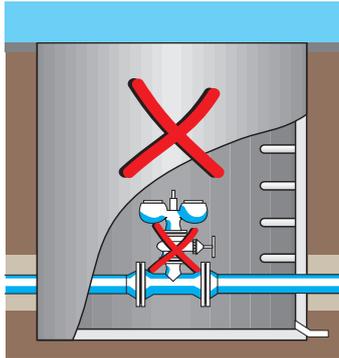


# UNSURPASSED IN EASE OF INSTALLATION AND MAINTENANCE

For lower cost and less effort

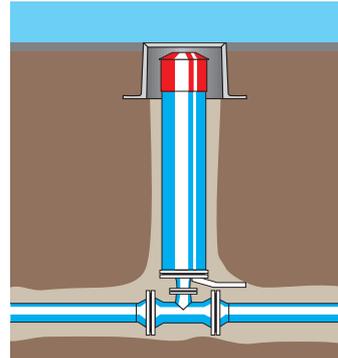
## Installation:

With the Combined Air Release Valve the construction of the customary type of shaft is no longer necessary. It is simple to install both below and above ground.



**The conventional shaft design involves high costs:**

- For the construction and maintenance of the shaft
- For the additional shut-off device



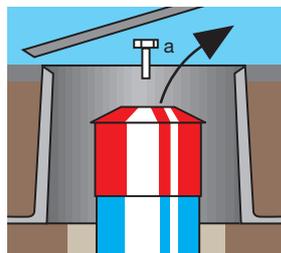
**The Combined Air Release Valve lowers costs by 3 functions in one unit:**

- Chamber,
- Air valve,
- Shut-off device

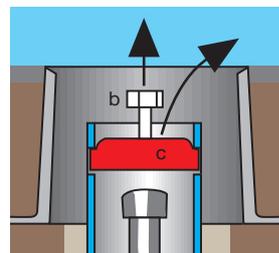
## Maintenance:

The Combined Air Release Valve can be maintained by just one person. The valve can be removed under pressure and cleaned, and if necessary taken away for testing.

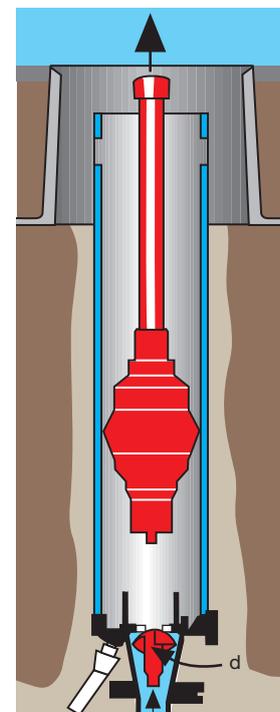
## Dismantling:



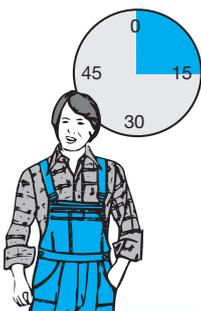
- Open surface box
- Loosen screw **a**
- Remove the hood



- Loosen screw **b**
- Remove spindle retainer **c**
- Sealing plug **d**



- Lift the valve out from the tube
- The foot valve immediately shuts-off the system



**Installation/ Commissioning**  
Reverse the above procedure

# AIR RELEASE VALVES

for installation in plants, buildings and chambers

**Application:** domestic wastewater

**Order no. 9864 stainless steel**  
with flanged connection DN 50 - 200 or  
internal thread connection 2"

**Order no. 9863 of steel**  
epoxy powder coated  
with flanged connection DN 50 - 200 or internal thread connection 2"

## Technical features

- direct automatic air inflow and release valve for domestic waste water
- operates automatically
- sealing face is not in contact with the wastewater
- due to the direct operation, the release of large quantities of air is possible, even under full working pressure



### Material:

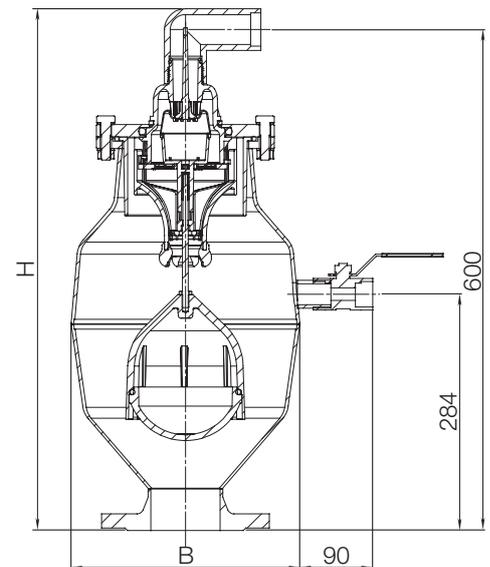
**Body:** no. 9864 stainless steel  
no. 9863 steel  
epoxy powder coated

**Float:** POM

**Outlet elbow with dirt sieve:** PE / stainless steel

**Ball valve outlet 1":** stainless steel

all mechanical parts are made of corrosion resistant materials



## Technical details

<b>Test pressure (body)</b>	24 bar					
<b>Working pressure</b>	PN 16 / 0 - 16 bar					
<b>max. air release capacity</b>	230 m <sup>3</sup> /h					
<b>Size of the opening</b>	480 mm <sup>2</sup>					
<b>Connection ID 2" / Flange DN</b>	2"	50	80	100	150	200*
<b>Weight</b>	23,0	23,5	25,0	26,0	28,0	33,0

\* Flange drilled to PN 10 - EN 1092-2 (PN 16 - EN 1092-2 for DN 200 please specify on order)

# AUTOMATIC AIR RELEASE VALVE

**Application:** domestic wastewater

**Order no. 9827 BAIO-spigot end DN 80**

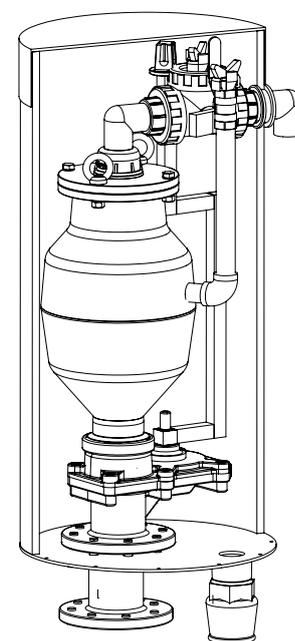
Pipe cover 1,25 / 1,50 m

**Order no. 9828 Flange DN 80**

Pipe cover 1,25 / 1,50 m

## Technical features

- The air valve assembly consists of a PE chamber pipe with a shut-off valve and air valve, thus eliminating expensive chamber constructions
- All maintenance and service work can be done from the road surface, thus avoiding the dangers arising from entering manhole chambers
- Excess water is drained away through the drainage system. We recommend to backfill the installation with coarse gravel from the road surface down to the drainage pipe. If installed in groundwater, additional measures are necessary (closing the drain hole)
- The air release pipe is laterally guided through the chamber pipe



### Material:

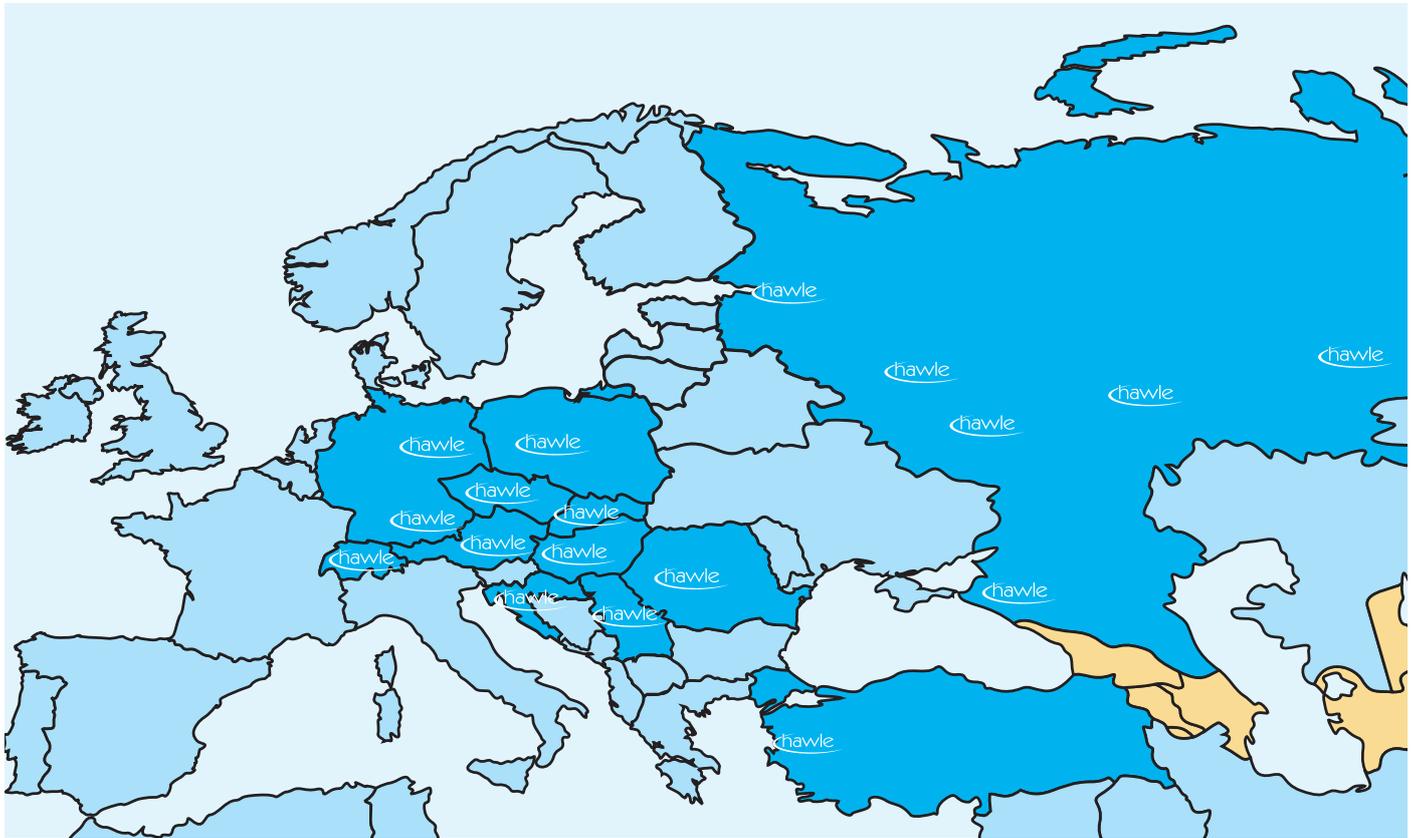
<b>Body:</b>	no. 9863 steel
<b>Chamber pipe:</b>	PE
<b>Shut-off valve:</b>	ductile iron, epoxy powder coated
<b>Three-way ball valve:</b>	PVC
<b>Ball valve outlet:</b>	brass
<b>Spigot end or flange connection:</b>	ductile iron, epoxy powder coated

## Technical details:

<b>Test pressure (body)</b>	24 bar	
<b>Working pressure</b>	PN 16 / 0 - 16 bar	
<b>Max. air release capacity</b>	230 m <sup>3</sup> /h	
<b>Size of the opening</b>	480 mm <sup>2</sup>	
<b>Connection</b>	Flange DN 80	BAIO-spigot end DN 80
<b>Weight PC 1,25</b>	62,0	62,0
<b>Weight PC 1,50</b>	80,0	80,0

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