



Air Release Valves



hawle



Recommendation for the sizing of HAWLE Air Release Valves:

<u>Pipe</u>	<u>Valve</u>
DN \leq 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 \geq 1000	DN 200

Illustrations, technical data, dimensions and weights are subject to alteration without notices.

Why use Combined Air Release Valves

The problem:

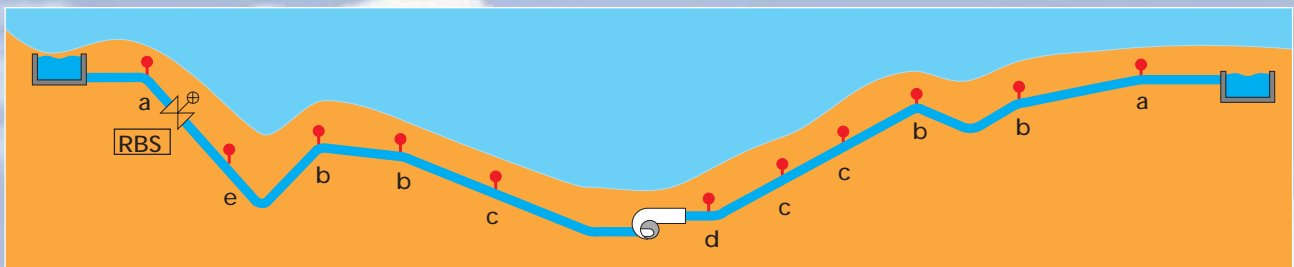
Air inclusion and vacuum

- 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

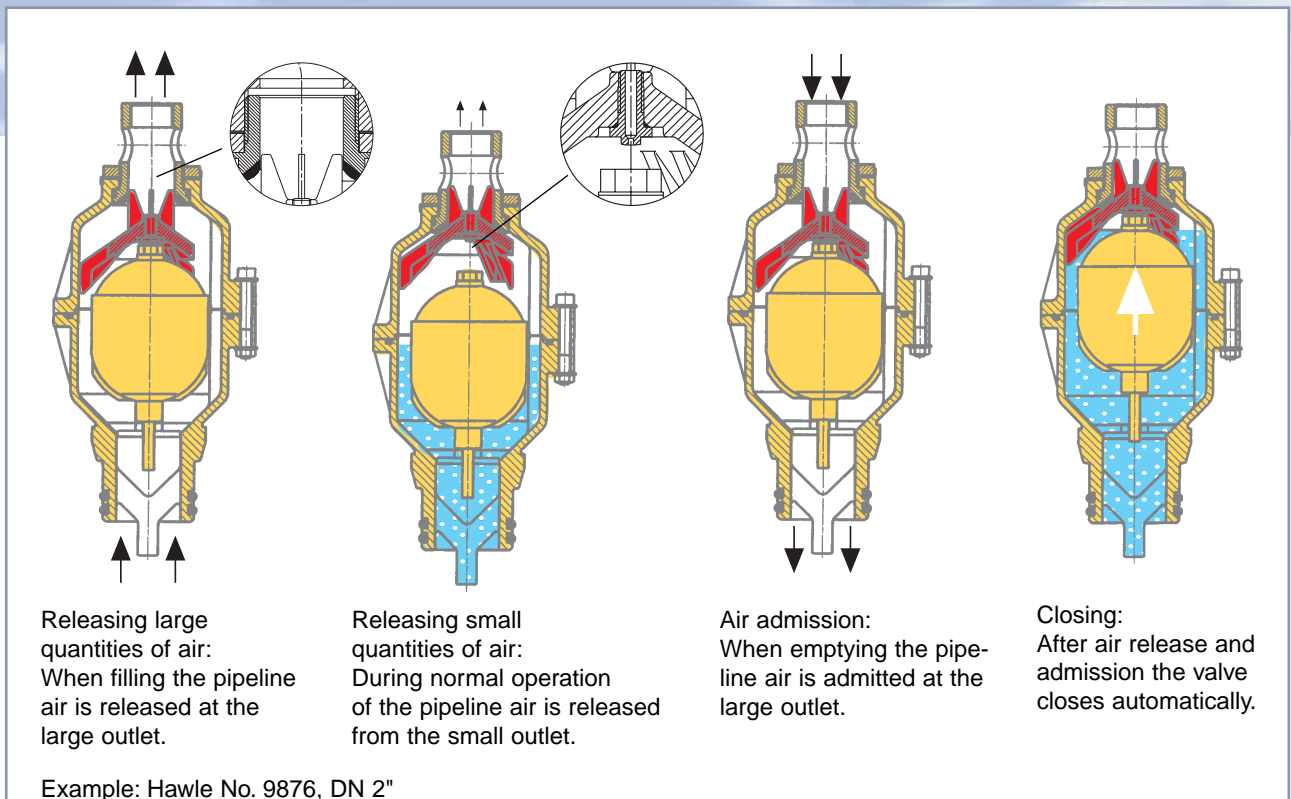
The solution:

Automatic Combined Air Release Valve

- the valve releases air:
 - at all the highest points
 - at all the secondary high points
 - on long rising or falling pipe lengths (recommended installation interval approx. 800 m)
 - after pumps
- the valve admits the necessary quantity of air:
 - at every point in the pipeline which is endangered by vacuum (after quick shut-off pipe-break safety valves (RBS), for example)



The functions of the Combined Air Release Valve



Specialist information for planners and technicians - see 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.

Air Release Valve *Application: potable water for installation in plant, buildings and chambers*



Order no. 9876
with female thread
PN 6 or PN 16



Order no. 9876
with female thread
PN 6 or PN 16



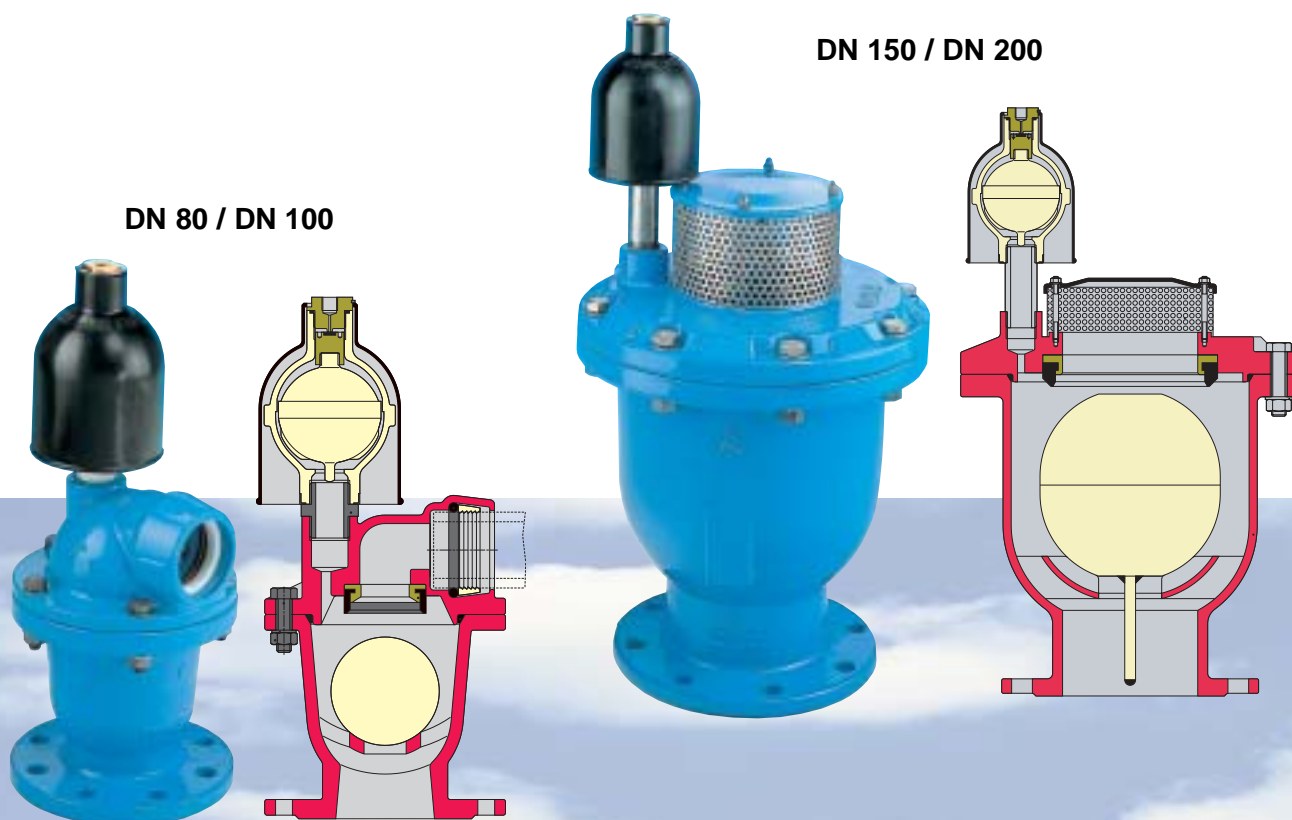
Order no. 9874
with flange connection
DN 50 or DN 80
PN 6 or PN 16

Material:

Body	POM (Polyoxymethylen)
Valve seat	Ms 58 (CuZn35Pb3As)
Float	POM (Polyoxymethylen)
Seal	Elastomer
UV shield	PE
Flange	Ductile cast iron

Standard equipment for DN 2": insect protective grid

Technical details:	DN 1"	DN 2"
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
Test pressure (body)	24 bar	24 bar
Max. air release capacity	0,13 m ³ /min	3,2 m ³ /min
Size of the opening	1,77 mm ²	900 bzw. 2,0 mm ²
Connection	1" female thread	2" female thread or DN 50 and 80 flange
Weight	0,9 kg	DN 2" 2,8 kg DN 50 6,0 kg DN 80 7,3 kg
On request: valve with air release function only		



Material:

Body and cap	Cast iron, epoxy powder coated
Seat	Ms 58 / Elastomer
Float	DN 80 / DN 100: polycarbonat DN 150 / DN 200: A 2 passivated
Connecting nipple basic valve / travelling valve	DN 80 / DN 100: POM DN 150 / DN 200: stainless steel A 2
Bolts, nuts and washers	A 2
Travelling valve	see no. 9876 1" page 4

Versions:

Order no. 9835

- DN 80 - DN 200 PN 16 (0,8 - 16 bar)
PN 6 (0,2 - 6 bar)

Order no. 9836

- DN 80 - DN 100 PN 16 (0,8 - 16 bar)
PN 6 (0,2 - 6 bar)
with insect protective grid and PE pipe

Order no. 9837

- DN 80 - DN 200 PN 16 (0,2 - 16 bar)
single orifice (without travelling valve)

Order no. 9838

- DN 80 - DN 100 PN 16 (0,2 - 16 bar)
single orifice (without travelling valve)
with insect protective grid and PE pipe

Technival details:

Working pressure (body)	PN 6 0,2 - 6 bar / PN 16 0,8 - 16 bar			
Test pressure (body)	24 bar			
Dimensions:	DN 80	DN 100	DN 150	DN 200 *
max. air release capacity	1562 m ³ /h	3250 m ³ /h	16900 m ³ /h	27800 m ³ /h
Size of the opening basic valve:	1810 mm ²	3320 mm ²	17670 mm ²	17670 mm ²
Size of the opening travelling valve 1":	1,77 mm ²	1,77 mm ²	1,77 mm ²	1,77 mm ²
PE pipe:	d 63	d 75	—	—
Weight kg	17,0	26,0	69,0	77,0

* Flange drilled to PN 10 - DIN 2501 (PN 16 - DIN 2501 for DN 200 please specify on order)

Combined Air Release Valve *Application: potable water*

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



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:**
- valve, shaft and shut-off device in one unit
- completely reliable functioning 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

The components

Fail-safe operation through superior quality

Hood (PE) with air release slots

Stand pipe in stainless steel replaces the shaft 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

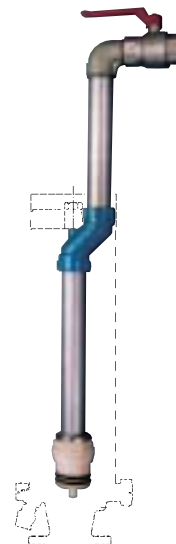
L*	kg	Pipe cover above-ground	Pipe cover below-ground
755	23,0	0,75 m	1,00 m
1055	27,0	1,00 m	1,25 m
1305	30,0	1,25 m	1,50 m
1555	33,0	1,50 m	1,75 m

* Length can be reduced by 100 mm

Accessories:

Flushing Stand Pipe

with integral shut-off valve
 With the flushing stand pipe water can be extracted, or the pipeline can be flushed.
 It replaces the air release valve.



Order no. 9824

- L 755 kg 4,70
- L 1055 kg 5,80
- L 1305 kg 6,75
- L 1555 kg 7,60

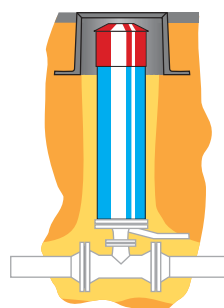
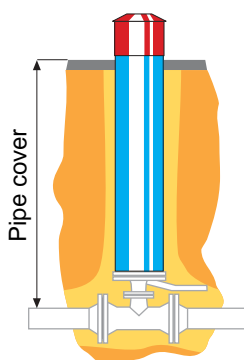
Surface Box Order no. 1790

Cast iron, bitumen coated
 wide bottom flange avoids the need for a base plate



above-ground

below-ground

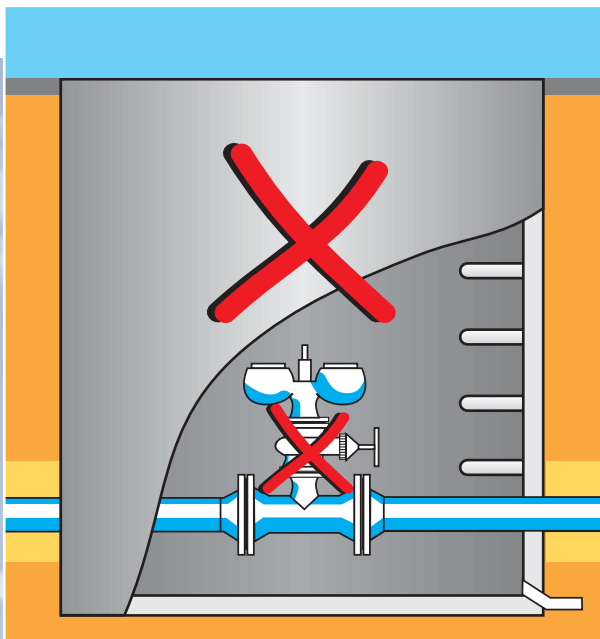


Unsurpassed in ease of installation and maintenance

For lower cost and less effort

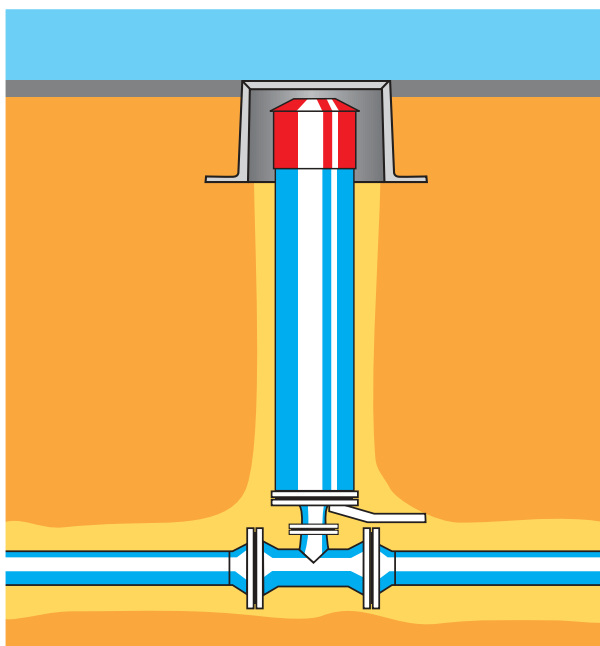
Installation

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



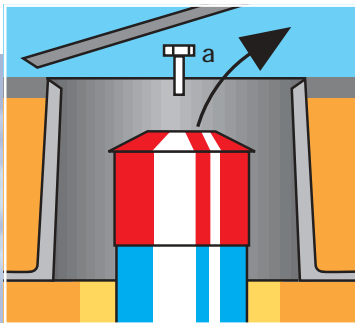
The Combined Air Release Valve lowers costs:

- shaft
- valve and
- shut-off device in one unit

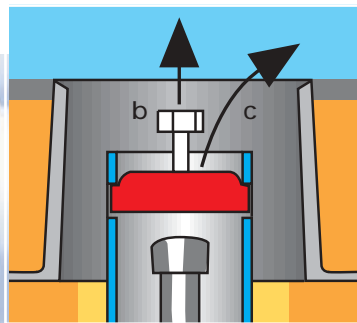
Maintenance:

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.

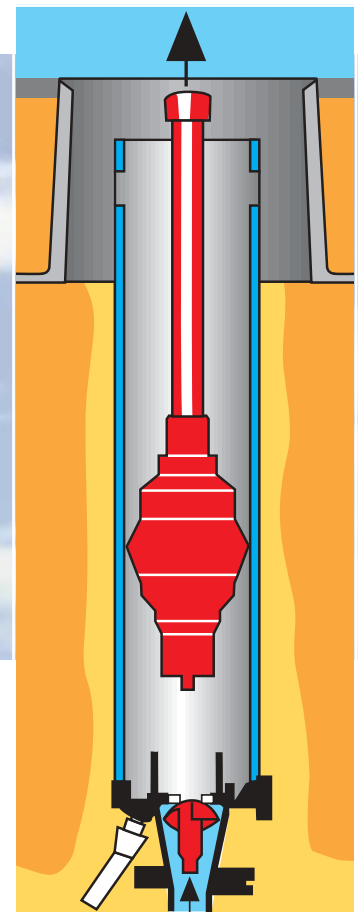
Dismantling:



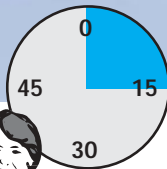
- open surface box
- unscrew bolt a
- remove hood



- unscrew bolt b
- remove spindle support c



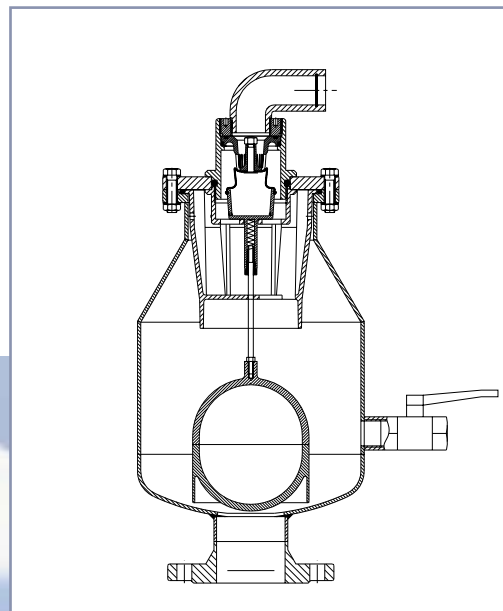
- lift the valve out with the tube
- the foot valve immediately shuts-off the system



Installation/ Commissioning:

Reverse the above procedure

Air Release Valve *Application: domestic wastewater* for installation in plants, buildings and chambers



Order no. 9864 stainless steel

with flanged connection DN 50 - 200 or female thread connection 2"

Order no. 9863 of St 37, epoxy powder coated

with flanged connection DN 50 - 200 or female thread connection 2"

- direct automatic air inflow and release valve for domestic wastewater
- 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 1.4571 no. 9863 St 37, epoxy powder coated
Float	POM
Outlet elbow with dirt sieve:	PE 100 /1.4301
Ball valve outlet 1"	stainless steel

all mechanical parts are of corrosion resistant materials

Technical details:

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

* Flange drilled to PN 10 - DIN 2501 (PN 16 - DIN 2501 for DN 200 please specify on order)

Automatic Air Valve *Application: domestic wastewater*



Order no. 9827 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 shaft 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 shafts.
- The air valve assembly can be installed later onto the sewage pipes via a saddle. For covering we recommend a commercial ventilating cover (the saddle and the cover are not included in the scope of supply).
- Excess water is drained away through the drain off system. We recommend the installation of coarse gravel backfill from the road surface down to the piping. If installed in groundwater, additional measures are necessary (closing the drain hole).
- For easier installation we recommend the use of the spigot end version. Please use dirt protection and locking device !
- The pipe lead through laterally is responsible for the flow of air.

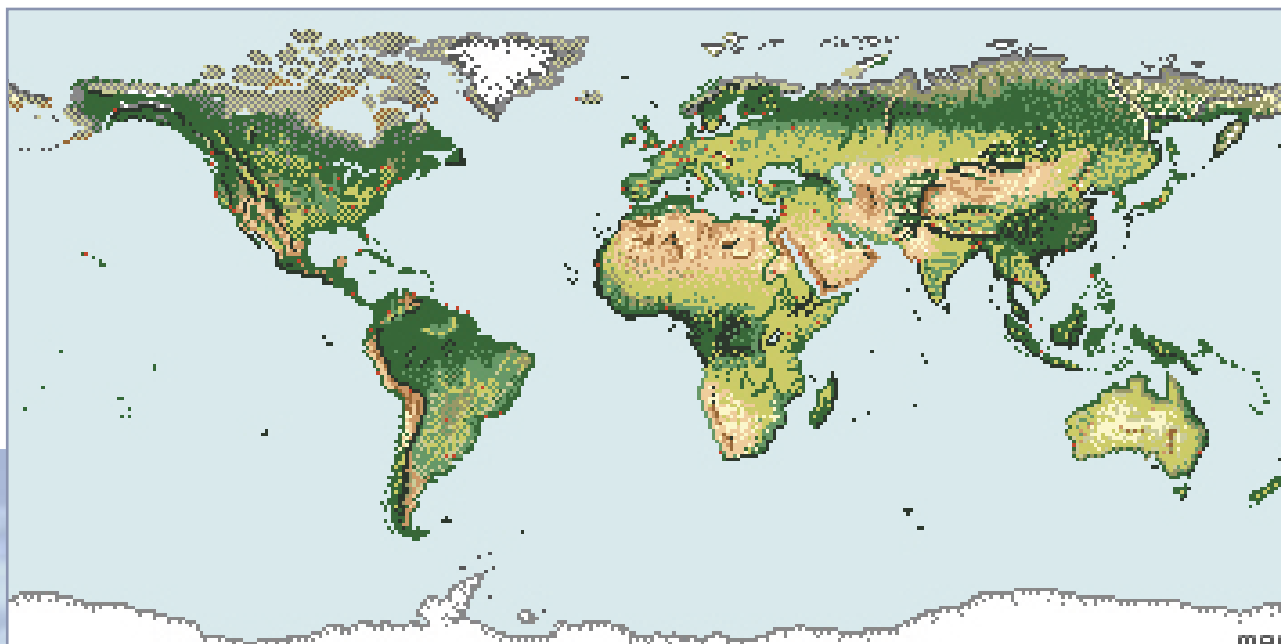
Material:

Body	see page 10
Shaft pipe	PE-HD
Shut-off valve	ductile iron, epoxy powder coated
Three-way ball valve	PVC
Ball valve outlet	Brass
Spigot end or flange connection	ductile iron, epoxy powder coated

Technical detail:

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

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- Licensees in all continents
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- Recognized for service, reliability and adaptability

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ISO 9001

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