

Pallas[®]

Magnetic Filter



CLARIFIES WATER
IN CLOSED HEATING,
COOLING & CHILLED
WATER CIRCUITS



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Pallas Magnetic bag filter housings are devices for clarifying water in closed heating and cooling circuits. They are constructed of stainless steel and feature a high strength magnetic core with bag filter.

Closed water systems may contain suspended particulates of iron and other system materials. Deposition of these particulates can cause:

- Heat transfer loss – increase in energy usage
- Under-deposit corrosion – asset failures, downtime.
- Absorption of chemical treatment, making it difficult to maintain desired residuals.
- Pump seal leaks – water loss/makeup allowing oxygen ingress and system corrosion cycle.
- Bacterial habitat.

Pallas Magnetic bag filter housing are an effective response to these problems.



**INDUSTRIAL
SOLUTIONS**



**COMMERCIAL
SOLUTIONS**

Advantages

Pallas Magnetic Bag Filters clarify water in closed heating and cooling circuits. The filters are made of stainless steel and feature a high strength magnetic core with a bag filter.

1

OPTIMUM PROTECTION

- Reduce sludge from closed heating, cooling and chilled water circuits
- Increase life cycle of the circuit
- Isolation of the filter is possible

2

LOW COST

- Optimum efficiency & energy savings (+20%)
- Low operational cost (filter bags)

3

CONVENIENT

- Remove sludge while the system remains in service
- No moving parts
- Maintenance-free
- Easy installation
- No start-up

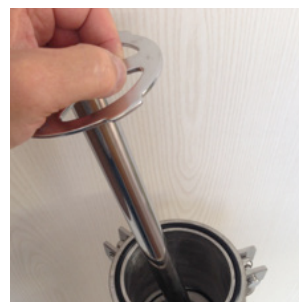
Features

- | | | |
|--|---|---|
| <ul style="list-style-type: none">• Reduced energy consumption of the heating system• Energy savings• Resistance to acids, salts, many acids, acids and fats• Uniform heat distribution throughout the pump• Protection against energy | <ul style="list-style-type: none">• Non-polluting for groundwater, without foaming product, without formaldehyde• Recyclable up to 100%Reduced energy consumption of the heating system• Energy savings• Resistance to acids, salts, | <ul style="list-style-type: none">many acids, acids and fats• Uniform heat distribution throughout the pump• Protection against energy• Non-polluting for groundwater, without foaming product, without formaldehyde• Recyclable up to 100% |
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Accessories

The Pallas Magnetic Bag Filter consist of:

- Polished 304 stainless steel treatment chamber with stainless steel magnetic bars for magnetic metaloxide capture
- Magnet
 - DN 20 and DN 32 model: 1 magnet 300 mm
 - DN 40 model: 2 magnets 300 mm
 - DN 50 model: 2 magnets 600 mm
 - DN 80 and DN 80 Flange models: 2 magnets 600 mm
- EPDM O'ring sealing D. 124 mm torus D.6 mm
- Stainless steel inlet and outlet, manometers pipes & bottom drain
- Adjustable stainless steel feet
- Stainless steel M12 wing bolt with ball joints and clips, fully dismountable
- Stainless steel basket and basket holder for holding the filter bag
- 0-10 bars Glycerin Pressure gauge with brass pipe and air vent valve with D.4-6 mm cannula and compression
- Connection 1/4" male radial
- Delivered with T adaptor, ball valve purge and air bleed/filling valve or corrosion inhibitor /scaling for PE pipe 4-6 mm



Thermal insulation jacket

Allows the measurement of the pocket's soiling and transmits the status of the pocket filter in real time via a dry contact.



Circulation pump

Protects the filtration unit from heat losses in heating installations and condensation in ice water installations.



Fouling box

Provides motive flow through the filter housing.



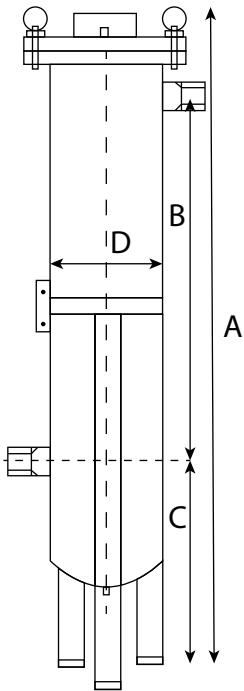
Insulation shell

For the thermal insulation of the pump body in heating applications

Technical info

Every kind of particles with a size greater than 50 microns will be stopped by the filter bag while the high magnetic field magnetic bars will capture all the ferrous particles resulting from the corrosion of the circuit. In addition, the bag filter housing will allow the introduction of conditioning products such as corrosion inhibitors or antiscalant.

Filtration thickness	50microns are stopped by filter bag
Max. pressure	10 bar
Max. temperature	90°C
Drain with plug	1/2" F 15x21
Fitting event	1/4" F8/13
Recommended water quality	14°dH Class 3 (or 25°F).



Technical data

Model	DN 20	DN 32	DN 40	DN 50	DN 50F	DN 80F
Flow Rate m³/h	5 - 7 m³/h	8 - 10 m³/h	15 - 20 m³/h	25 - 40 m³/h	25 - 40 m³/h	32 - 50 m³/h
Pressure drop bar	0.15	0.15	0.21	0.21	0.21	0.21
Diameter mm	202	202	312	312	380	380
Diameter Lid mm	202	202	312	312	312	312
Dimensions	A min: 730 mm B: 355 mm C min: 190 mm C max: 440 mm D: 114 mm	A min: 730 mm B: 355 mm C min: 190 mm C max: 420 mm D: 114 mm	A min: 830 mm B: 480 mm C min: 165 mm C max: 495 mm D: 219 mm	A min: 1120 mm B: 800 mm C min: 165 mm C max: 485 mm D: 219 mm	A min: 1120 mm B: 800 mm C min: 188 mm C max: 858 mm D: 219 mm	A min: 1120 mm B: 800 mm C min: 188 mm C max: 858 mm D: 219 mm

Depending on the height position of the adjustable belt, the dimension "C" is variable.

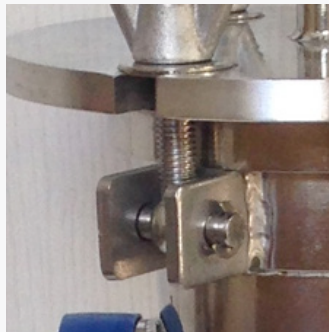
Choice of the model following the circuit to be treated in derivation

- DN20 model: A bypass circuit with 8 m³ flow (5 to 20 rooms - 2m³)
- DN32 model: A bypass circuit with 26 m³ flow (5 to 50 rooms - 8m³)
- DN40 Model: A bypass circuit with 52 m³ flow (50 to 200 rooms - 17m³)
- DN50 Model: A bypass circuit with 103 m³ flow (200 to 400 rooms - 34m³)
- DN80 Model: A bypass circuit with 180 m³ flow (400 to 600 rooms - 48m³)

The must that makes the difference in quality



Ground fixing



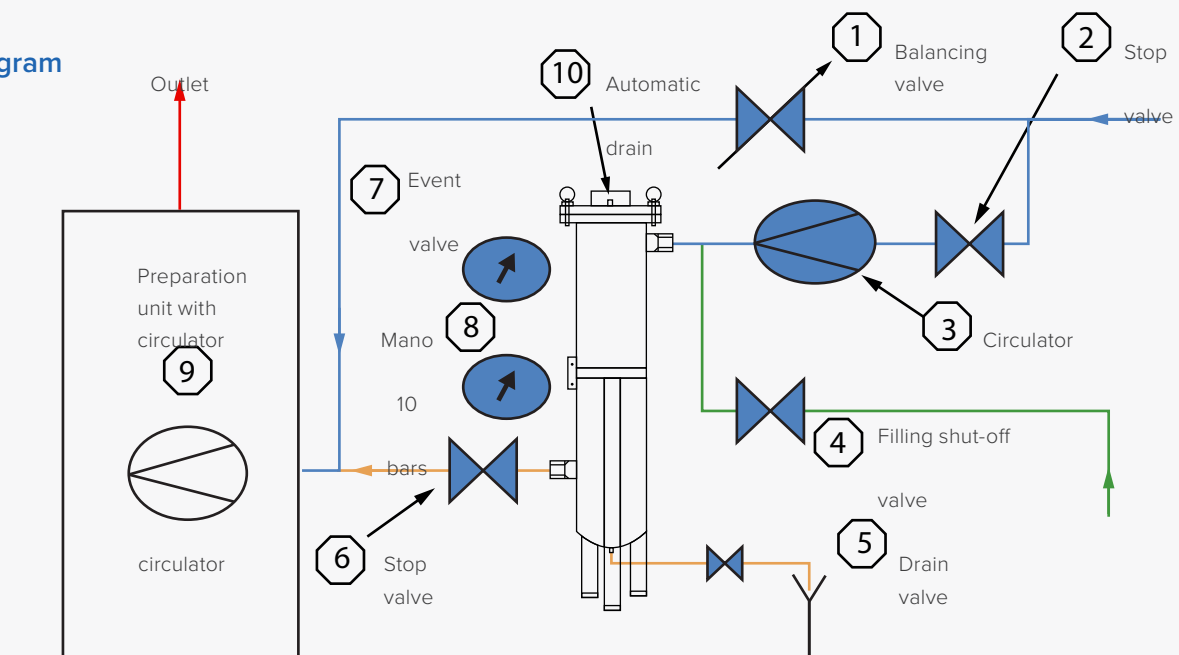
Demontable axes



Fittings

Installation & maintenance

Diagram



With balancing valve on primary and/or circulator (not supplied)

Set up

Magnetic Bag Filter Housing is set up in derivation on the return of the circuit to be treated. Mounting a balancing valve or a charge pump will force the flow of the fluid in the filter.

The inlet and outlet isolation valves will also allow to use the filter as a pot for introducing products for the punctual treatments of the circuit.

Draining a low point to facilitate loading of the filter bag and cleaning of the magnetic bars.

Ideal installation

- The filtration station is placed and fixed on the ground by its 3 feet
- The filtration station is placed close to the preparation unit (9) (boiler,...), on the loop return circuit and at a suitable height in order to enable its connection to the unit of preparation and, on the other hand, its emptying by the drain present on its lower wall (shut off valve (5) and drainage of this drainage water.)
- A shut-off valve will be mounted upstream (2) and downstream (6) of the filtration station to allow for maintenance without interrupting the operation of the plant.
- A water inlet will be provided for filling with a shut-off valve (4).
- An event ball valve (7) and a 10 bar pressure gauge (8) will be mounted on the cover with a 2 way connection.
- A balancing valve (1) and a circulator (3) will be mounted in the loop return circuit.

Maintenance

Once a year*, clean the collector by changing the filter bag or cleaning it by turning it up and cleaning the magnetic bars with a dry rag.

Dismantling

1. Close the inlet and outlet valve.
2. Depressurize by opening the drain valve at the bottom.
3. Open event on top.
4. Loosen the wing bolts to pivot the lid.
5. Take out the spring and the magnetic system and clean with a rag.
6. Remove the filter bag from the stainless steel basket, clean it and/or replace it with a new one.

Reassembly

7. Repositioning the filter bag in the stainless steel basket as well as the bars.
8. Close the filter cover.
9. Close the drain valve.
10. Open the inlet valve until overflow by the event.
11. Close the event.
12. Open the outlet valve.

*For the technical reasons, the sludge collecting filters must be drained regularly according to the state and quantity of water in the circuit, at least once a year. At the time of this maintenance, clean the magnetic bars as well as the stainless steel sieve basket and change the filter bag.

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