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# prime-phin

STAINLESS STEEL BAG FILTER

- QUICK BOLTS SYSTEM
- DRINKING WATER GASKETS
- SHOT-PEENING TREATMENT
- PASSIVATION TREATMENT
- MAGNET KIT
- DIFFERENTIAL PRESSURE KIT

MADE IN ITALY

# prime-phin

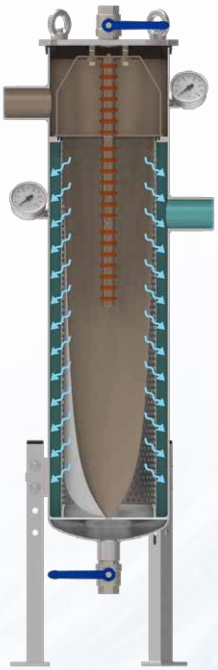
**prime-phin** is a stainless steel dirt separator which protects closed-circuit systems from circulating impurities. These impurities, mainly consisting of sand and mud, are retained by a wide filtering bag which reduces the frequency of required cleaning operations. Each filter is designed to accomodate Neodymium magnetic candles ideal for removing ferrous contamination. The valve installed on the top cover can potentially be used to add chemicals for system cleaning. Thanks to the wide range of available filtering bags, **prime-phin** efficiently removes even the smallest particles with minimum pressure loss.

## INSTALLATION

In closed-circuit applications it is advised to install **prime-phin** on a side-stream pipe. This layout ensures non-stop protection to the system and no interruptions of the flow to the end users.

## FILTERING PROCESS

Raw water enters through the inlet connection (IN) , flows through the filtering bag and exits from the outlet connection (OUT). Separated particles remain trapped inside the filtering bag, while ferrous impurities are captured by the magnets.



## MAINTENANCE

Filtering bags must be cleaned or replaced once the progressive build-up of suspended solids causes an excessive increase of the pressure loss (> 0.7bar) which can be checked on the pressure gauges installed on the filter. To proceed with the maintenance it is sufficient to isolate the filter, remove the cover by loosening the quick-unlock bolts and extract the filtering bag.

Size 02 (Ø178 x L 810 mm)

**prime-phin** can be equipped with standard SIZE 02 filter bags .

We supply various types of certified felt filter bags available in different filtration degrees:
1µm - 5µm - 10µm - 25µm -50µm -100µm - 200µm

# TECHNICAL SPECIFICATION

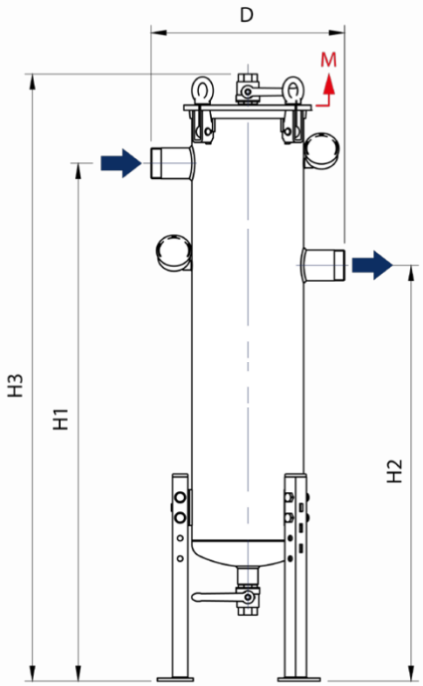
| MATERIALS | | DESIGN DATA | |
|---|---|---|---|
| Filter housing | Steinless steel AISI 304 - AISI 316L | Flow rate | up to 70 $m^3/h$ |
| Filter bag | PET | Design pressure [bar] | PN 10 |
| Gasket | EPDM* | Max Temperature [°C] | 90 |
| Drain/Vent valve | Nickel-plated Brass - AISI 316L | Salinity [TDS] | <10.000 ppm |
| Pressure Gauges | Steinless steel AISI 304 - AISI 316L | pH range | 3-9 |
| Surface finish | Microshot Peening and Passivation | Design Code | PED 68/2014/EU |

* Certified for the following European Drinking Water regulations: UBA, DVGW-standard W-270, WRAS och ACS.

## CONNECTIONS

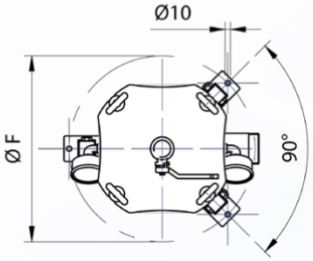
**prime-phin**'s Inlet and Outlet connections can be BSPP Threaded or Grooved. Flanged UNI-EN 1092-1 PN 10/16 connections are also available upon request.

## FLOW RATES




| MODEL | IN/OUT Ø | MAX FLOW* [$m^3/h$] | FILTERING AREA [$cm^2$] | DRAIN Ø |
|---|---|---|---|---|
| PRPH 2" Z S2 | 2" BSPP | 38 $m^3/h$ | 4500 | 1" BSPP |
| PRPH 2" Z S2 GR | 2" Grooved | | | |
| PRPH 50 Z S2 | DN50 Flanged | | | |
| PRPH 3" Z S2 | 3" BSPP | 70 $m^3/h$ | 4500 | 1" BSPP |
| PRPH 3" Z S2 GR | 3" Grooved | | | |
| PRPH 80 Z S2 | DN80 Flanged | | | |

* Max flow rates are referring to the filter without filtering element.

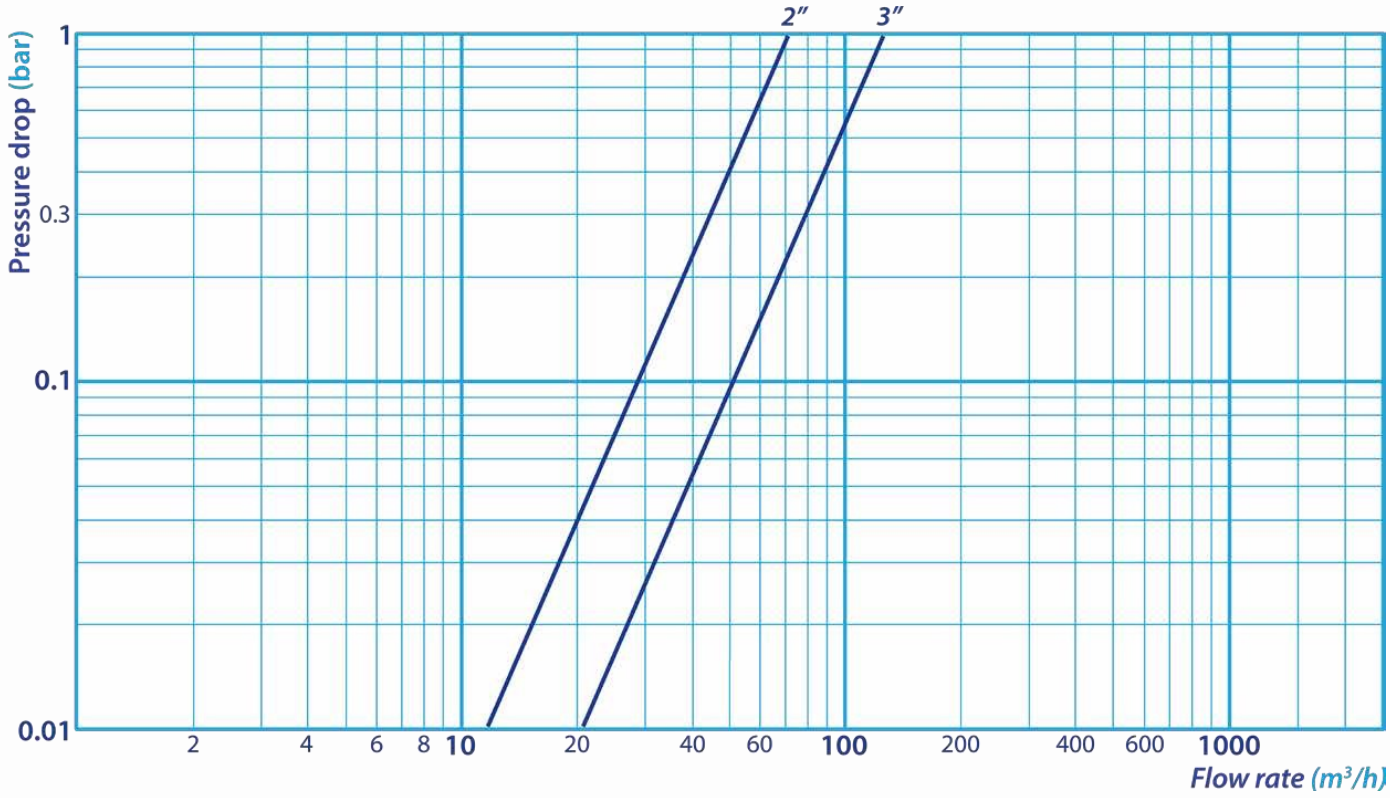



## DIMENSIONS

| MODEL | H1 | H2 | H3 | D | M* | Ø | ØF | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| PRPH 2" Z S2 | 1015 | 815 | 1190 | 379 | 850 | 2" | 364 | 32 |
| PRPH 2" Z S2 GR | 1015 | 815 | 1190 | 379 | 850 | 2"grooved | 364 | 32 |
| PRPH 50 Z S2 | 1015 | 815 | 1190 | 379 | 850 | DN50 | 364 | 32 |
| PRPH 3" Z S2 | 1015 | 815 | 1190 | 379 | 850 | 3" | 364 | 32 |
| PRPH 3" Z S2 GR | 1015 | 815 | 1190 | 379 | 850 | 3"grooved | 364 | 32 |
| PRPH 80 Z S2 | 1015 | 815 | 1190 | 379 | 850 | DN80 | 364 | 33 |

*M = Minimum free space required for maintenance operations.

# HEAD LOSS




# FILTER BAGS & FLOW RATES

Size 02 (Ø178 x L 810 mm)

| MODELL | MAX FLOW RATE [$m^3/h$] | FILTERING AREA [$cm^2$] | Ø [mm] | LENGHT [mm] |
|---|---|---|---|---|
| BAG 1 µm | 16 | 4500 | 178 | 810 |
| BAG 5 µm | 22 | 4500 | 178 | 810 |
| BAG 10 µm | 36 | 4500 | 178 | 810 |
| BAG 25 µm | 45 | 4500 | 178 | 810 |
| BAG 50 µm | 51 | 4500 | 178 | 810 |
| BAG 100 µm | 62 | 4500 | 178 | 810 |
| BAG 200 µm | 70 | 4500 | 178 | 810 |

# ACCESSORIES

MAGNETIC KIT

**prime-phin** is designed to accomodate special Neodymium magnetic candles, coated with stainless steel to ensure optimal corrosion resistance, that attract and trap ferrous particles. Modular kits with different lenghts are available to be factory-installed or subsequently purchased.

Magnetic Flux Density: 9000 Gauss (each candle).

**prime-phin** can be equipped with an automatic air-relief valve which expels potential air bubbles that can form inside the pipeline and facilitates emptying and filling operations.

VENT VALVE

DIFFERENTIAL PRESSURE KIT

**prime-phin** can be equipped with a differential pressure control kit which detects the pressure difference between the filter's inlet and outlet connections.
This greatly facilitates maintenance operations by measuring the degree of clogging of the filtering element and helps the operator to plan its replacement.

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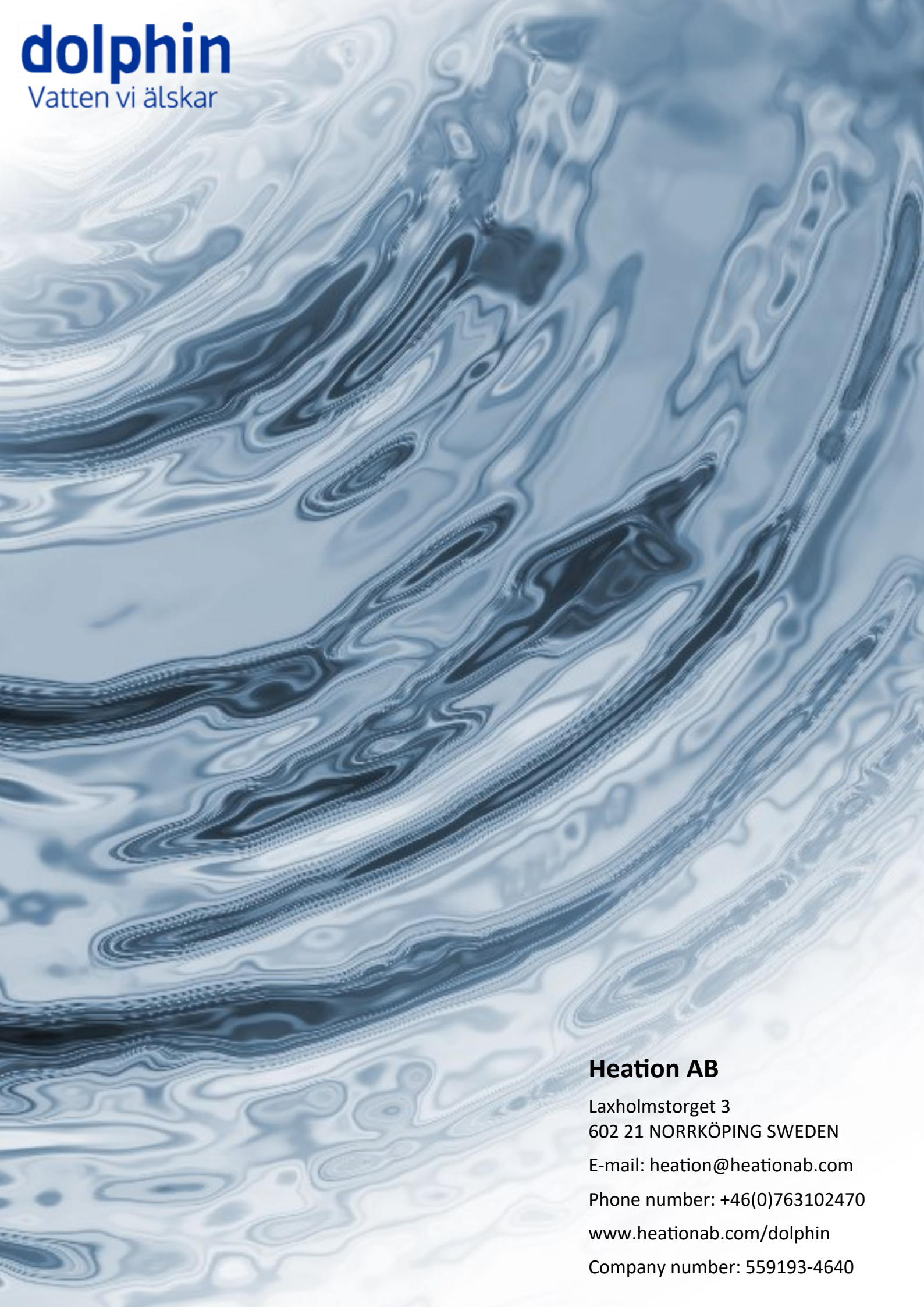


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