



ARBO
Pompen en Filters b.v.



ARBO chemical filter chambers

for cartridges, discs or bags Product group 7.0





ARBO Filter chambers

Applications

For all duties that require accurate removal of organic or an-organic particles from corrosive liquids with maximum efficiency.

Can be used as in-line or off-line process filter.

Wide variety of standard configurations for in-line pump protection available (refer to “pump protection”).

Materials

Machined of massive **PP** that covers a very wide range of duties – there is no metal to liquid contact. All reinforcement parts are made of SS-316.

For highly abrasive liquids (high % of solids) housing parts of High modulus **HMPE** may be ordered.

For highly corrosive mixtures at higher temperatures even a housings entirely made of virgin **PVDF** are available.

Bag filters can be produced from PVC-CAW for liquids that contain high percentage of Chlorine.

Safety

The system is designed to ensure **by-pass free** filtration.

The cover closure is provided with firm hand wheels on swing bolts so that there are no loose parts.

The transparent cover enables simple air lock inspection in order to make full use of your filter elements. An air release valve is standard and the rotatable diaphragm gauge gives insight in your filter load.



Technical details filters

| | |
|----------------------|--------------------------------|
| Design pressure | PN4 |
| Max. system pressure | 4 Bar at 20 °C, 6 Bar optional |
| Max. flow | 80 m3/h |
| Filter retention | 0,5 - 1200 mm |

| Materials of construction | Abbreviation | T min. °C | T max. °C |
|---------------------------|--------------|-----------|-----------|
| Polypropylene | PP | 0 | 80 |
| Polyvinylchloride | PVC-CAW | -20 | 60 |
| High Modulus Polyethylene | HMPE | -50 | 80 |
| Polyvinylidenfluoride | PVDF | -30 | 120 |

| Materials of elastomers | Abbreviation | T min. °C | T max. °C |
|-------------------------|--------------|-----------|-----------|
| EPDM | E | -40 | 150 |
| Viton | V | -25 | 220 |
| Polytetrafluorethene | T | -190 | 260 |

| Materials of connections | Abbreviation |
|--------------------------|--------------|
| DIN2501 PN10 Flanges | F |
| 3-D Unions +GF+ or FIP | U |

Ordering code (P.I.C.)

| Model | Filtersystem | | | | Materials | | Execution | |
|-------|--------------|-------------|---------------------|--------------|-----------|---------|--------------------|----------------|
| | filter Q'ty | filter type | filter package size | housing type | housing | gaskets | Gauge/ air release | mounting plate |
| FI | 1-18 | K | 10-30" | IC | PP | E | MMO | D |
| | 26-59 | S | 160-350mm | MP | PVC-CAW | V | O | DSP |
| | 1 | B | 410-820 | FIB | PVDF | T | MM | |
| | 1-4 | KO | 369x175mm | KO | HMPE | | MKMO | |





ARBO separate Filter chambers

In order to give the best possible solution for each customer's specific filtration requirement, there are several ranges of filter systems available.

Every system has its own advantages. Please, consult our sales department to discuss and select the best system for your application.

Roughly speaking we offer following systems that shall be explained further on:

- ☞ **Model IC** => for wound cartridges only
- ☞ **Model MP** => with separate filter package holder with cartridges or discs
- ☞ **Model HD** => heavy duty filter for max. pressure of 6 Bar
- ☞ **Model FIB** => for filter bags
- ☞ **Model KO** => for active carbon filtration

Model IC => Individual Cartridge holding

Product group 7.0

◆ **Filter chambers specifically designed for wound filter cartridges**

- ☞ enabling the use of either inch or metric sizes
- ☞ each cartridge is mounted over a solid center rod and individually fixed with lock nut – therefore very easy to load and **absolutely by-pass free**
- ☞ the maximum filter cartridge **diameter** is restricted to **62 mm**
- ☞ **Max. operating pressure at 20 °C is 4 Bar**
- ☞ separate mounting plate so besides standard dimensions, **customized sizes** are rather simple to fulfill



Selection table for model IC based on wound cartridges of 10" and water

| Filter flow L/h | Filter chamber | Cartridge Length | Area Dm ² | In/outlet Dn |
|--------------------|-------------------|---------------------|-------------------------|-----------------|
| 1200 | FI-1K | 10" | 35 | Dn15 |
| 2500 | FI-1K | 20" | 70 | Dn15 |
| 3000 | FI-1K | 30" | 105 | Dn15 |
| 4000 | FI-3K | 10" | 105 | Dn25 |
| 6000 | FI-3K | 20" | 210 | Dn25 |
| 8000 | FI-7K | 10" | 245 | Dn25 |
| 14000 | FI-7K | 20" | 490 | Dn25 |
| 18000 | FI-15K | 10" | 525 | Dn32 |
| 30000 | FI-15K | 20" | 1050 | Dn32 |





Model MP => Multi Purpose filter package
Product group 7.1

The filter media are mounted on a separate holder, that is fixed to the bottom, independently from the housing cover

- ☞ Cartridge holders are available for all kinds of cartridges like membrane, active carbon, pleated etc. with **max. diameter < 72mm**
- ☞ Filter disc holders are suited for paper, cardboard or cloth
- ☞ Very easy to load – **1 central wing nut**
- ☞ The filter package can be prepared entirely before inserting it into the filter housing – **therefore it is very efficient and user friendly**
- ☞ Very low internal pressure loss so high flow rates possible
- ☞ Optional available with IC construction to lock every cartridge individually
- ☞ Covers of the larger models are provided with hinge for easy opening
- ☞ **Max. operating pressure at 20 °C is 4 Bar**



Selection table for model MP based on wound cartridges of 10" and water

| Filter flow L/h | Filter chamber | Filter System | Filter package | Area Dm2 | In/outlet Dn |
|-----------------|----------------|--------------------|----------------|----------|--------------|
| 6000 | MP-6 | Pleated cartridges | FI-3K-10" | 150 | Dn25 |
| | MP-6 | Wound cartridges | FI-5K-10" | 170 | Dn25 |
| | MP-6 | Filter discs | FI-26S/160 | 50 | Dn25 |
| 9000 | MP-9 | Pleated cartridges | FI-7K-10" | 350 | Dn40 |
| | MP-9 | Wound cartridges | FI-9K-10" | 300 | Dn40 |
| | MP-9 | Filter discs | FI-35S/290 | 220 | Dn40 |
| 15000 | MP-15 | Pleated cartridges | FI-7K-20" | 700 | Dn40 |
| | MP-15 | Wound cartridges | FI-9K-20" | 600 | Dn40 |
| | MP-15 | Filter discs | FI-70S/290 | 440 | Dn40 |
| 20000 | MP-20 | Pleated cartridges | FI-15K-10" | 750 | Dn40 |
| | MP-20 | Wound cartridges | FI-18K-10" | 600 | Dn40 |
| | MP-20 | Filter discs | FI-20S/350 | 190 | Dn40 |
| 30000 | MP-30 | Pleated cartridges | FI-15K-20" | 1500 | Dn40 |
| | MP-30 | Wound cartridges | FI-18K-20" | 1200 | Dn40 |
| | MP-30 | Filter discs | FI-40S/350 | 380 | Dn40 |
| 50000 | MP-50 | Pleated cartridges | FI-15K-30" | 1500 | Dn50 |
| | MP-50 | Wound cartridges | FI-18K-30" | 1800 | Dn50 |
| | MP-50 | Filter discs | FI-59S/350 | 550 | Dn50 |



Model NK-HD =>Heavy Duty cartridge filter for max. operating pressure at 20 °C of 6 Bar

Product group 7.2

◆ **The filter basically has the same features as Model IC but the filter housing is even more rigid.**

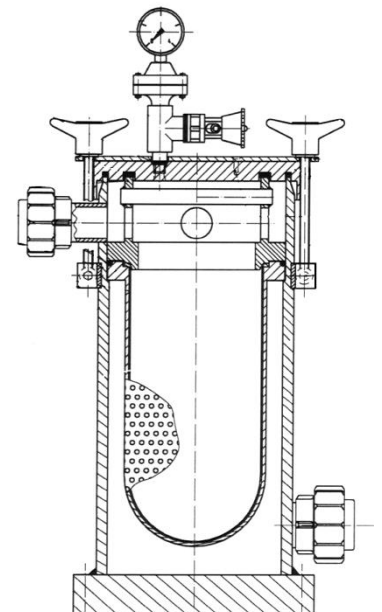
- ☞ The welded bottom construction is reinforced with 8 pull rods that go all the way along the filter housing to the top cover. These ensure that even at the high pressure of 6 Bar the housing remains stable.
- ☞ **For selection table we refer to model IC or MP and ask you to mention in your enquiry that you require the higher pressure rate of 6 Bar.**



Model FI-B =>Filter Bag chambers Product group 7.3

◆ **Are an effective alternative for cartridge filter systems thanks to following advantages:**

- ☞ Wide variety of filter bags available
 - Needle felt (multi-filament)
 - Single layer (mono-filament)
 - Retention rates from 1-1200 micron
- ☞ In standard execution suited for “ARBORing” bags
- ☞ Single layer bags >100 micron are washable and save material- and disposal costs
- ☞ Large effective filtration area and big storage capacity provides a long filter life span
- ☞ Easy to handle filter bag
- ☞ Removable perforated bag holder for maximum support – therefore the maximum differential pressure of the filter bag is allowed
- ☞ Very low initial pressure drop of 0.07 Bar
- ☞ Can be supplied without bottom for “in-tank” use with immersible pump
- ☞ Maximum pressure allowed at 20 °C is 3 Bar
- ☞ Maximum temperature allowed is 75 °C



Selection table for model FIB based on needle felt bag of 10 micron and water.

| Filter flow L/h | Filter chamber | No. of Bags x size | Bag Dimension | Area Dm ² | In/outlet Dn |
|-----------------|----------------|--------------------|---------------|----------------------|--------------|
| 20000 | FI-1B | 1 x 1 | Ø170x410 | 19 | Dn40 |
| 40000 | FI-2B | 1 x 2 | Ø170x820 | 40 | Dn40 |

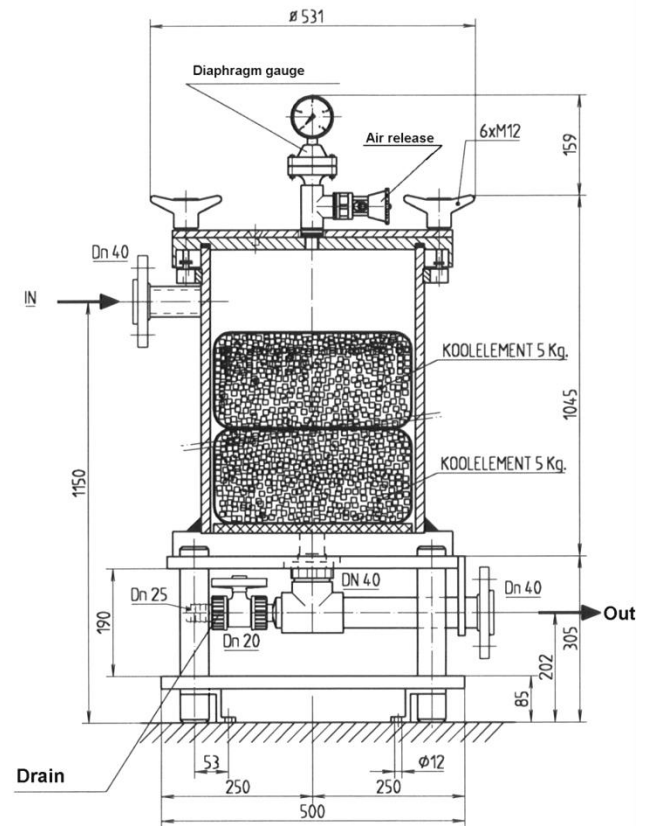




Model KO =>Active Carbon Filter chamber
Product group 7.4

◆ **Specifically designed for active carbon granular to remove organic contamination from corrosive liquids.**

- ☞ Basically all kinds of active carbon can be used, as long as it is **granular** and not powder.
- ☞ May be used for other filter media like **crystals or oil absorbent materials** too.
- ☞ The filter media are packed in a **washable PP filter bag of 5 micron** that both functions as pre- and post-filter. The pre-filter ensures that the active carbon is not polluted with particles; the post-filter ensures that no active carbon is slipping into your working tank.
- ☞ **Very easy to maintain** – because the filter packages are pre-packed available in modules of 20 Ltr these are very easy to install.



Selection table for model KO filters

| Filter flow L/h | Filter chamber | No. of Bags x Ltr. | Weight Kg |
|-----------------|----------------|--------------------|-----------|
| 1000 | 20L | 1 x 20 | 5 |
| 2000 | 40L | 2 x 20 | 10 |
| 4000 | 80 | 4 x 20 | 20 |

Optional available for all models:

- SS-316 or PP pedestal
- pre-coat dosing unit
- diaphragm switch gauge for flow and/ or pressure monitoring (see leaflet pump protection)
- customized mounting plates
- duo filter units with combinations of all mentioned filter chambers
- units with centrifugal pumps as complete filter pump with all necessary piping and control valves.