# LMP 124 series
## MULTIPORT

**Maximum working pressure up to 8 MPa (80 bar) - Flow rate up to 120 l/min**

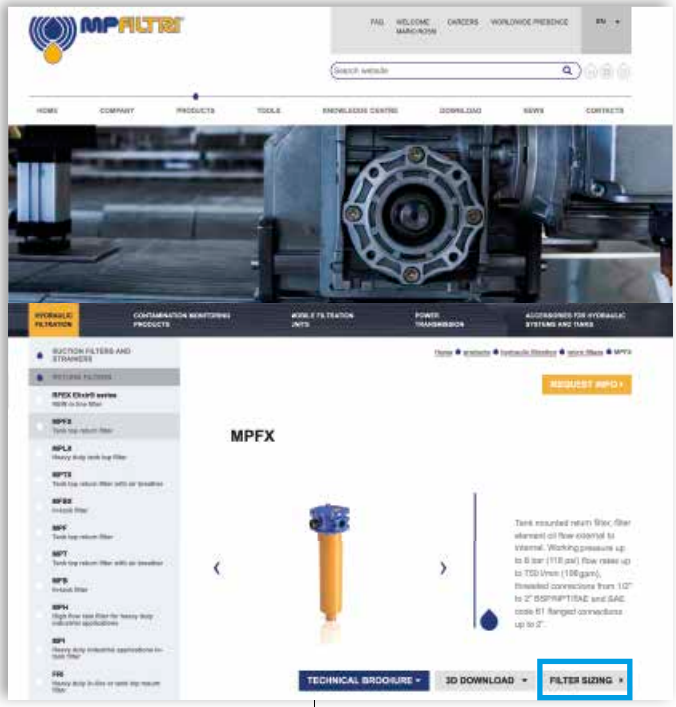
# TYPICAL FILTER SIZING Selection Software

**Step 1**

Select “FILTER SIZING SOFTWARE” after login

OR

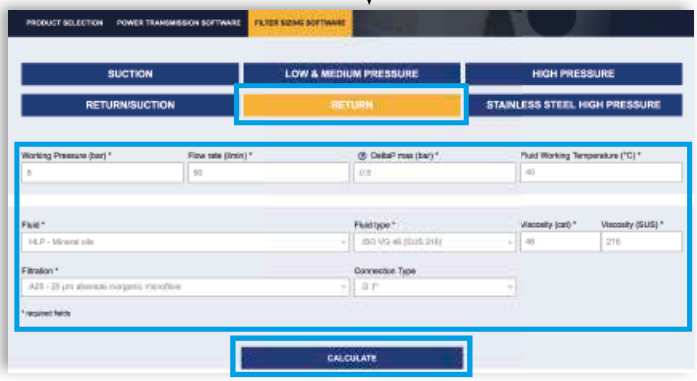
Select “FILTER SIZING” after login from a product page

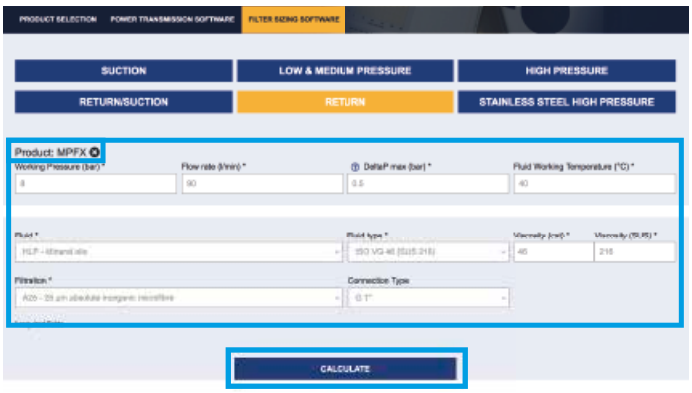




Choose the type of filter family.
Enter the main data for sizing the filter
then push CALCULATE.

**Step 2**

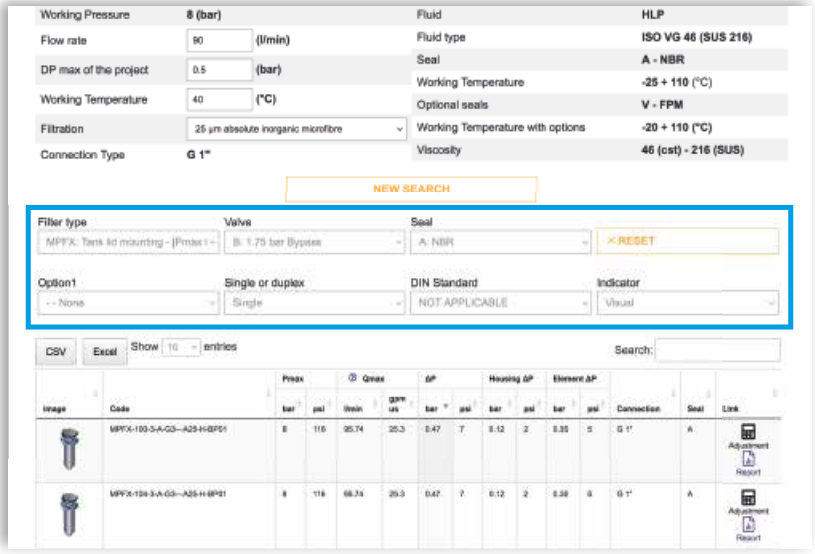
Enter the main data for sizing the filter
then push CALCULATE.



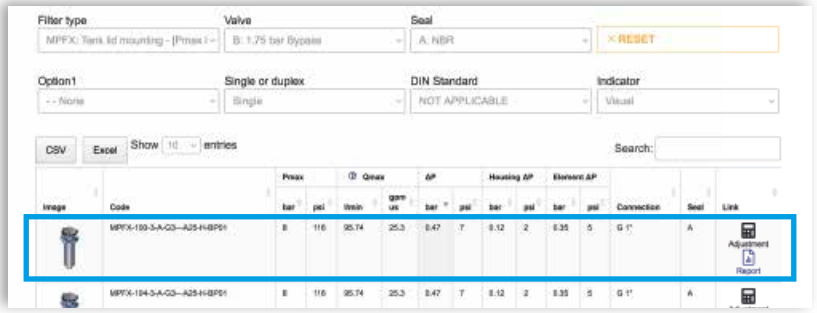

**Step 3**

Select the desidered options to choose the appropriate filter type for the application.



## Step 4

Choose the most suitable filter from the proposed list.




## Step 5

**A** SAVE YOUR FILTER'S REPORT


SAVE IN YOUR ARCHIVE
typing your reference data and then SAVE AS PDF

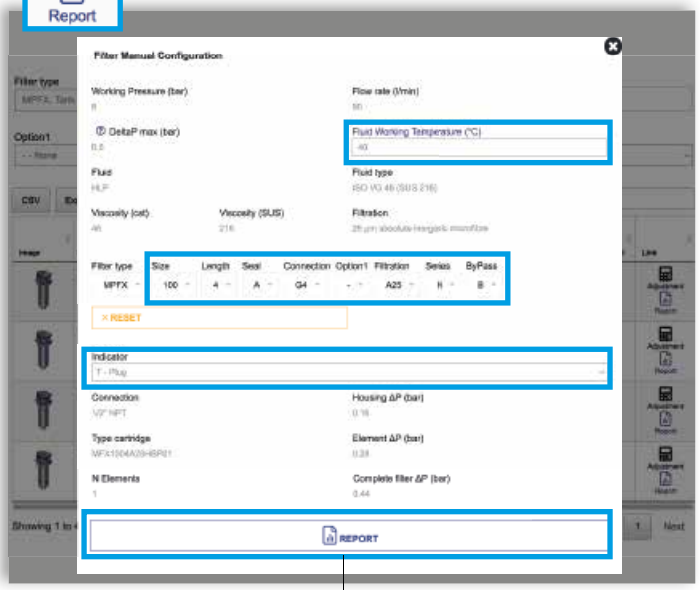


A new
browser window
displays the pdf

Close the report window

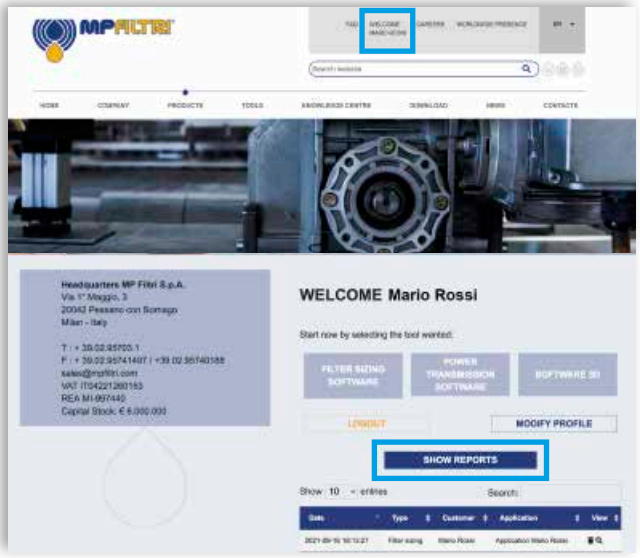

**B** MANUAL EDIT

It is possible to change the filter
modifying every parameter.




see **A**

By clicking your WELCOME button,
the SHOW REPORTS is displayed: select it to see your filters list.



MYCLEAN

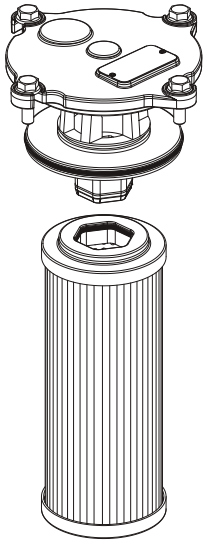
THE NEW FILTER CONCEPT

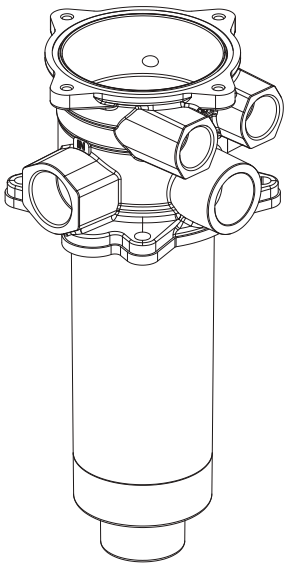
# MRSX RSX series

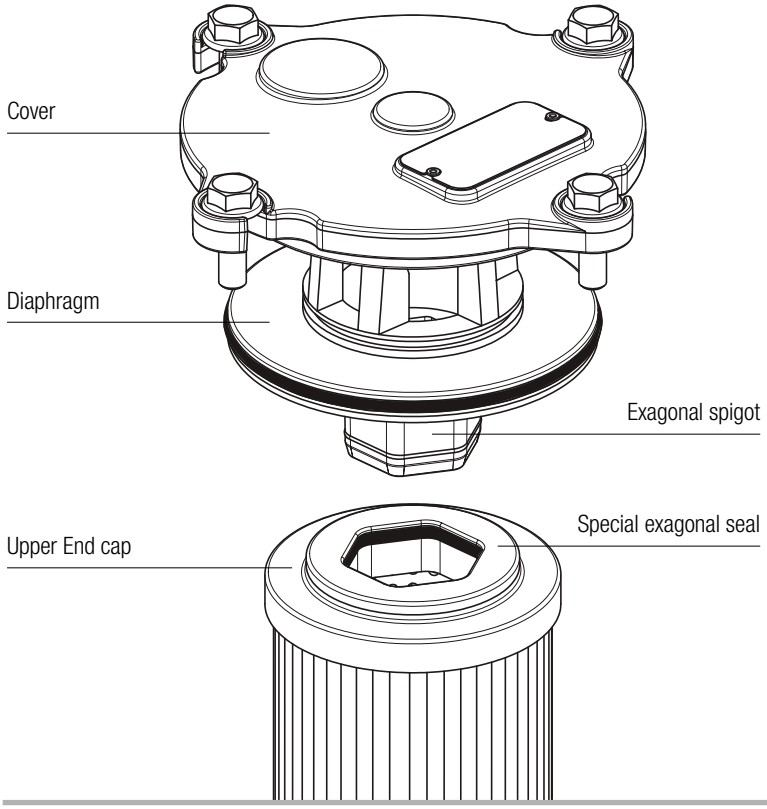
## NEW FILTER ELEMENT WITH EXCLUSIVE INTERFACE CONNECTION

- **Protects the machine from improper use of non-original products.**
- **Safety of constant quality protection & reliability**

With exclusive filter element you are sure that only MP Filtri filter elements can be used, ensuring the best cleaning level of the oil due to the use of originals filter elements.








The products identified as MRSX and RSX are protected by:
Italian Patent n° 102014902261205
Canadian Patent n° 2,937,258

and by the following patent applications:
European Patent n° 16181725.9
US Patent Pending n° 15/224,337

# LMP 124 GENERAL INFORMATION
MULTIPORT

## Description

Return / Suction filter | In-line

**Maximum working pressure up to 8 MPa (80 bar)**
**Flow rate up to 120 l/min**

LMP124 is a range of return/suction filters for hydraulic systems with two or more circuits (both open and closed loops). They are able to provide pressurized oil cleaned by fine filtration to the feed pump of the hydrostatic systems.
They are directly connected to the lines of the system through the hydraulic fittings.

**Available features:**
- Female threaded connections up to 1", for a maximum return flow rate of 200 l/min
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve to the tank, to relieve excessive pressure drop across the filter media when the return flow is enough higher than the suction flow
- Bypass valve to the suction line with additional suction filter element, to relieve excessive pressure drop across the filter media when the return flow is not enough higher than the suction flow
- De-pressurization valve, to reduce the pressure inside the filter during the maintenance operations
- Visual, electrical and electronic differential clogging indicators

**Common applications:**
Mobile machines with hydrostatic systems on board.
(i.e. skid steer loaders, telehandlers, dumpers, road sweepers)

## Technical data

**Filter housing materials**
- Head: Aluminium
- Housing: Cataphoresis - Painted Steel
- Bypass valve: Brass - Aluminium

**Pressure**
- Test pressure: 12MPa (120 bar)
- Burst pressure: 38 MPa (380 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 80 bar (8 MPa)

**Bypass valve**
- Opening pressure 250 kPa (2.5 bar) ±10%
- Other opening pressures on request.

**Δp element type**
- Microfibre filter elements - series N - W: 20 bar
- Fluid flow through the filter element from OUT to IN.

**Seals**
- Standard NBR series A
- Optional FPM series V

**Temperature**
From -25 °C to +110 °C

**Note**
LMP124 filters are provided for vertical mounting

## Weights [kg] and volumes [dm³]

| Filter series | Weights [kg] | | | | | Volumes [dm³] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Length | 1 | 2 | 3 | 4 | Length | 1 | 2 | 3 | 4 |
| **LMP 124** | | 1.70 | 1.90 | 2.20 | 2.70 | | 0.75 | 0.81 | 1.11 | 1.53 |

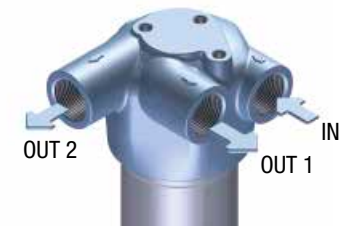
## FILTER ASSEMBLY SIZING
Flow rates [l/min]

| Filter series | Length | Filter element design - N series | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A03 | A06 | A10 | A16 | A25 | M25 M60 M90 | P10 | P25 |
| LMP 124 | 1 | 39 | 41 | 58 | 60 | 69 | 99 | 84 | 85 |
| | 2 | 47 | 53 | 68 | 69 | 77 | 99 | 90 | 91 |
| | 3 | 59 | 61 | 73 | 77 | 86 | 99 | 92 | 93 |
| | 4 | 70 | 78 | 84 | 86 | 93 | 100 | 94 | 95 |

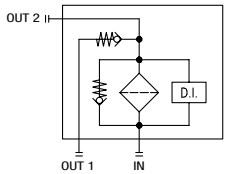
**Maximum flow rate for a complete return/suction filter with a pressure drop Δp = 1.2 bar.**
The reference fluid has a kinematic viscosity of 30 $mm^2/s$ (cSt) and a density of 0.86 $kg/dm^3$.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.
Please, contact our Sales Department for further additional information.

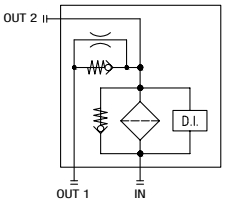
## Hydraulic symbols - Multiport styles

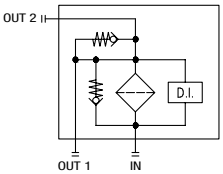
| Multiport | Valves C option | Valves D option | Valves E option | Valves F option |
|---|---|---|---|---|

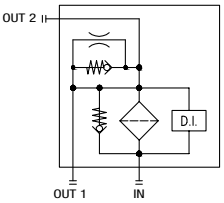



**IN** - Return
**OUT 1** - Tank
**OUT 2** - Pump



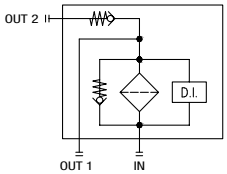



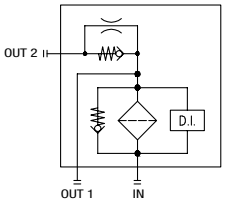




| Multiport | Valves G option | Valves H option |
|---|---|---|

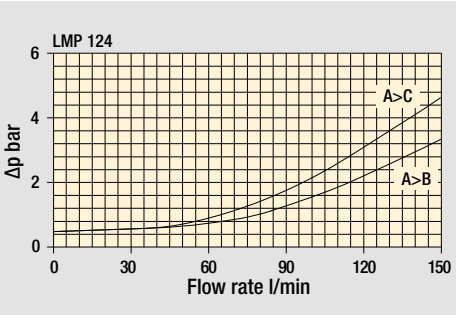

**IN** - Return
**OUT 1** - Tank
**OUT 2** - Pump



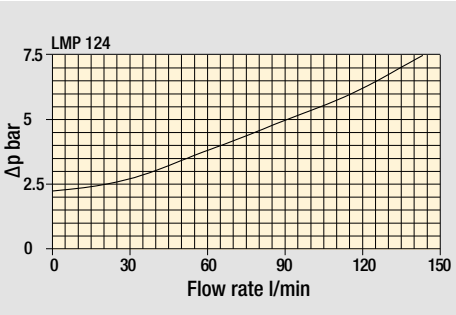



## Pressure drop

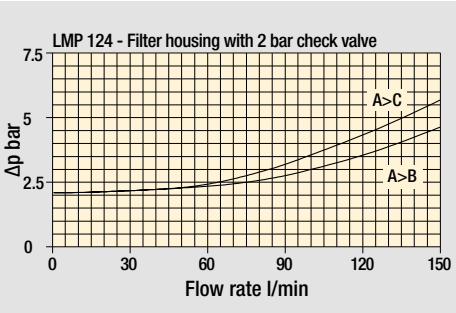
Filter housings Δp pressure drop

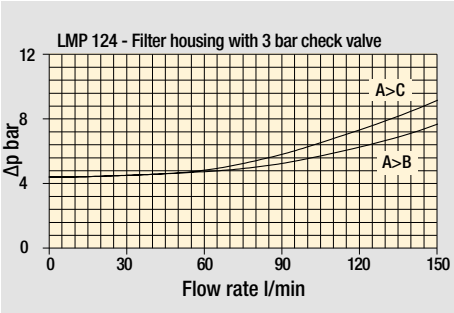



Bypass valve pressure drop



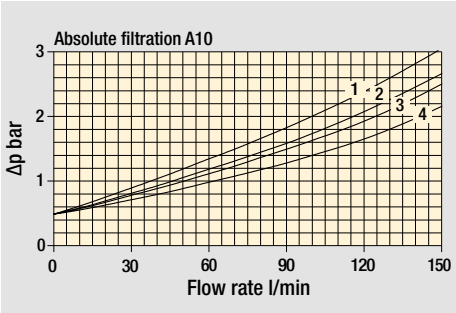

Valves

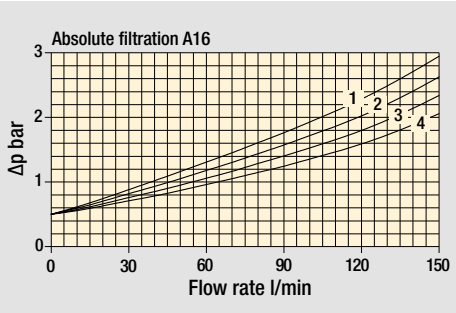


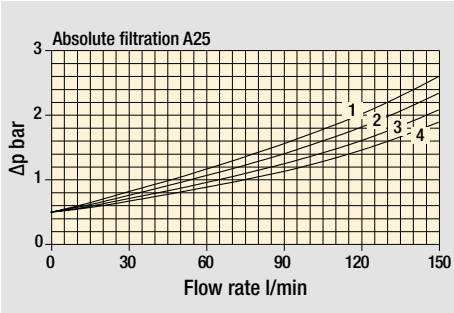




Filter length: **1 - 2 - 3 - 4**

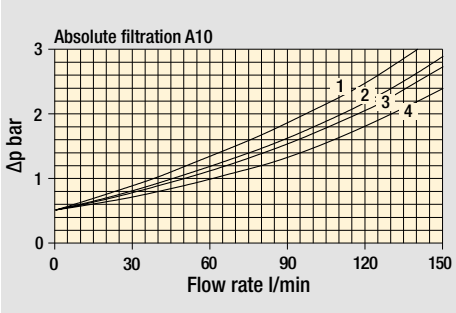
STYLE **C - D - E - F**

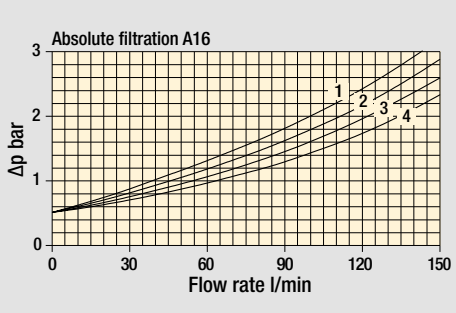


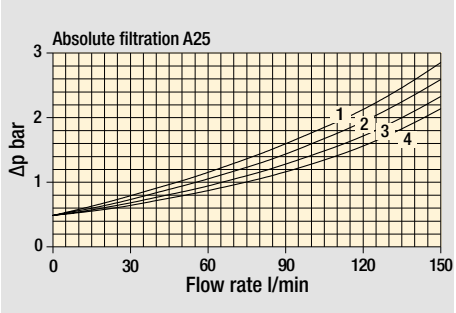




STYLE **G - H**




The curves are plotted using mineral oil with density of 0.86 kg/dm$^3$ in compliance with ISO 3968. Δp varies proportionally with density.

# Designation & Ordering code

## COMPLETE FILTER

Configuration example: LMP124 | 4 | C | A | F | 1 | A10 | N | P01

**Series and size**
**LMP124**

**Filter length**
**1** | **2** | **3** | **4**

**Hydraulic diagram configuration** - see page 268
**C** | **D** | **E** | **F** | **G** | **H**

| Seals and treatments | | Filtration rating Axx | Mxx | Pxx |
|---|---|---|---|---|
| **A** | NBR | • | • | • |
| **V** | FPM | • | • | • |
| **W** | NBR compatible with fluids HFA-HFB-HFC | • | • | |

**Connections**
**B** G 1”
**F** SAE 16 - 1 5/16” - 12 UN

**Connection for indicator**
**1** Without
**2** With connection G 1/8” for clogging indicator
**3** With connection G 1/4” for clogging indicator
**4** With connection for differential indicator

**Filtration rating (filter media)**

| | | | |
|---|---|---|---|
| **A03** | Inorganic microfiber 3 µm | **M25** | Wire mesh 25 µm |
| **A06** | Inorganic microfiber 6 µm | **M60** | Wire mesh 60 µm |
| **A10** | Inorganic microfiber 10 µm | **M90** | Wire mesh 90 µm |
| **A16** | Inorganic microfiber 16 µm | **P10** | Resin impregnated paper 10 µm |
| **A25** | Inorganic microfiber 25 µm | **P25** | Resin impregnated paper 25 µm |

**Element Δp**
**N** 20 bar

**Execution**
**P01** MP Filtri standard
**Pxx** Customized

## FILTER ELEMENT

Configuration example: CU110 | 4 | A10 | A | N | P01

**Element series and size**
**CU110**

**Element length**
**1** | **2** | **3** | **4**

**Filtration rating (filter media)**

| | | | |
|---|---|---|---|
| **A03** | Inorganic microfiber 3 µm | **M25** | Wire mesh 25 µm |
| **A06** | Inorganic microfiber 6 µm | **M60** | Wire mesh 60 µm |
| **A10** | Inorganic microfiber 10 µm | **M90** | Wire mesh 90 µm |
| **A16** | Inorganic microfiber 16 µm | **P10** | Resin impregnated paper 10 µm |
| **A25** | Inorganic microfiber 25 µm | **P25** | Resin impregnated paper 25 µm |

| Seals | | Filtration rating Axx | Mxx | Pxx |
|---|---|---|---|---|
| **A** | NBR | • | • | • |
| **V** | FPM | • | • | • |
| **W** | NBR compatible with fluids HFA-HFB-HFC | • | • | |

**Element Δp**
**N** 20 bar

**Execution**
**P01** MP Filtri standard
**Pxx** Customized

## ACCESSORIES

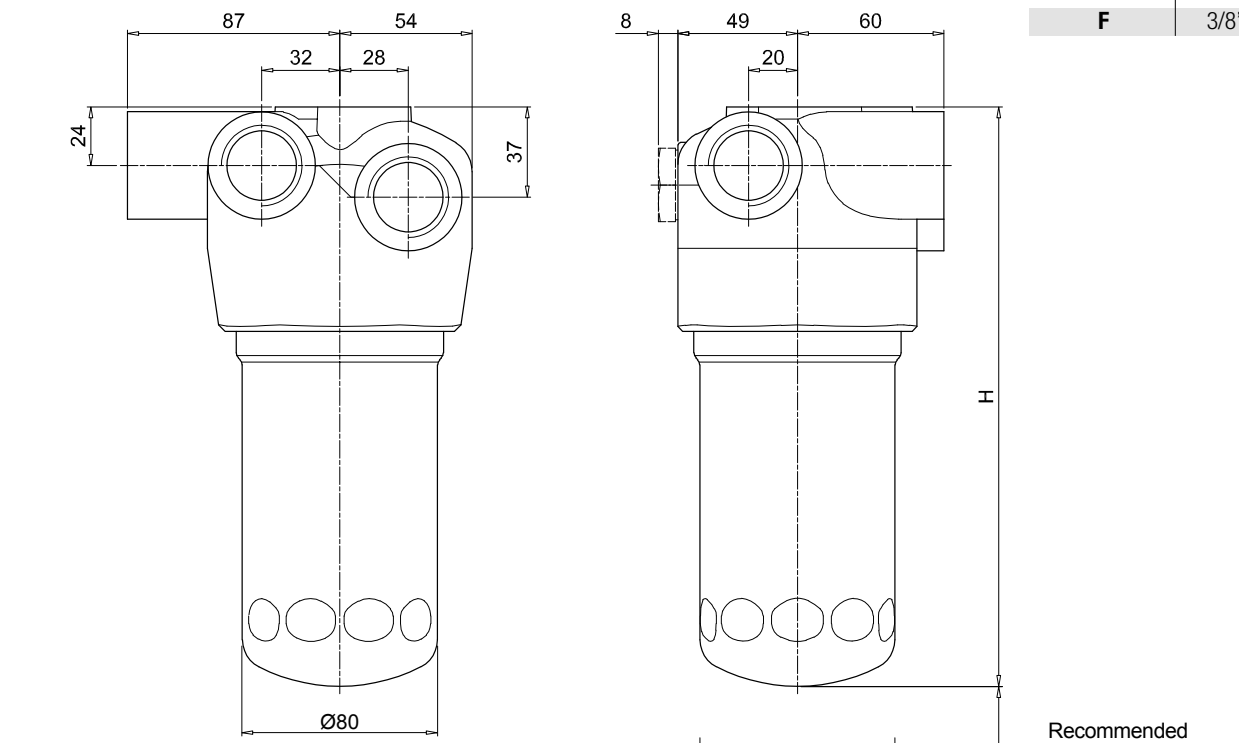
| Indicators on Return Line | | page |
|---|---|---|
| **BVA** | Axial pressure gauge | 278 |
| **BVR** | Radial pressure gauge | 278 |
| **BVP** | Visual pressure indicator with automatic reset | 279 |
| **BVQ** | Visual pressure indicator with manual reset | 279 |
| **BEA** | Electrical pressure indicator | 276 |
| **BEM** | Electrical pressure indicator | 276 |
| **BET** | Electrical pressure indicator | 276-277 |
| **BLA** | Electrical / visual pressure indicator | 277-278 |

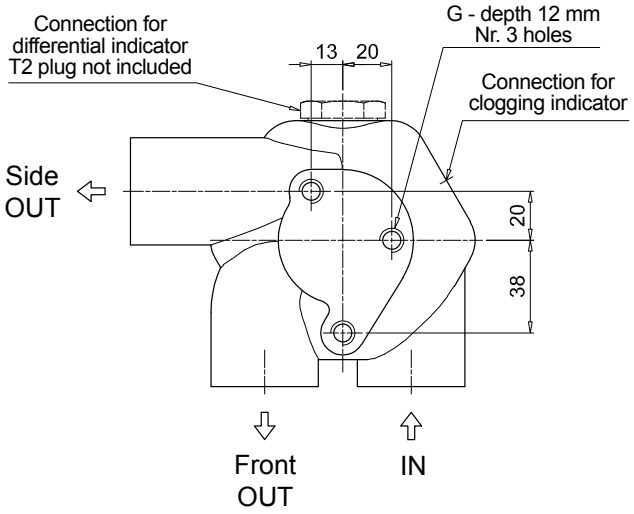
| Differential indicators | | page |
|---|---|---|
| **DEA** | Electrical differential indicator | 280 |
| **DEM** | Electrical differential indicator | 280-281 |
| **DLA** | Electrical / visual differential indicator | 281-282 |
| **DLE** | Electrical / visual differential indicator | 282 |
| **DTA** | Electronic differential indicator | 283 |
| **DVA** | Visual differential indicator | 283 |
| **DVM** | Visual differential indicator | 283 |

| Additional features | | page |
|---|---|---|
| **T2** | Plug | 284 |

| LMP 124 MULTIPORT | |
|---|---|
| **Filter length** | **H [mm]** |
| **1** | 182 |
| **2** | 215 |
| **3** | 265 |
| **4** | 365 |

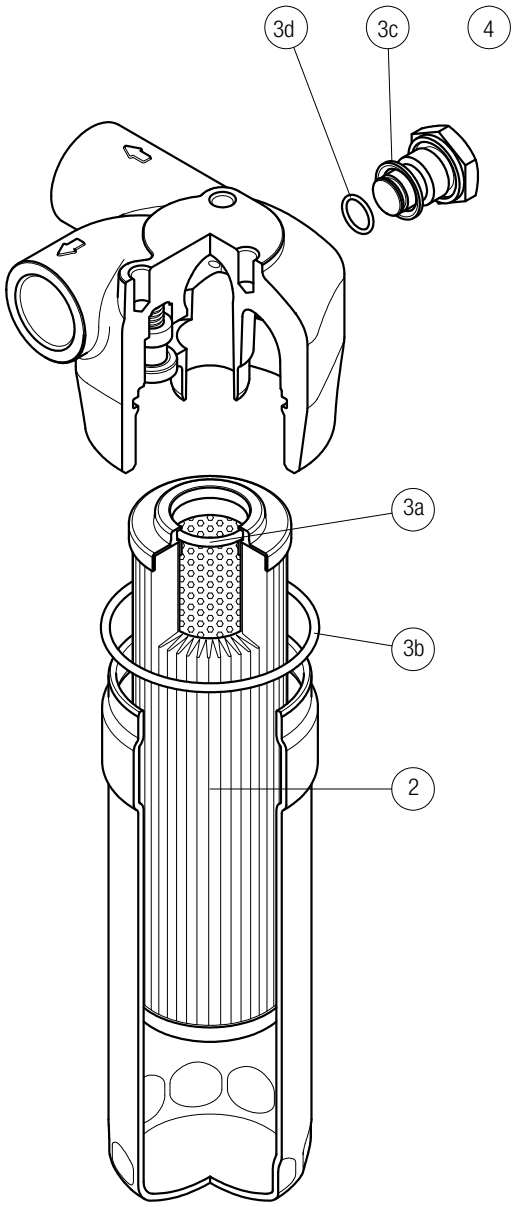
| **Connections** | **R** |
|---|---|
| **B** | M10 |
| **F** | 3/8" UNC |



Order number for spare parts

**LMP 124 MULTIPORT**




| Item: | Q.ty: 1 pc. 2 | Q.ty: 1 pc. 3 (3a ÷ 3d) | | Q.ty: 1 pc. 4 | |
|---|---|---|---|---|---|
| Filter series | Filter element | Seal Kit code number NBR | FPM | Indicator connection plug NBR | FPM |
| **LMP 124 MULTIPORT** | See order table | 02050478 | 02050479 | T2H | T2V |