

# LMP 124 series

MULTI PORT

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



## Description

## Technical data

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 120 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)

### Filter housing materials

- Head: Aluminium
- Housing: Cathaphoresis - 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 [dm<sup>3</sup>]

| Filter series  | Weights [kg] |      |      |      | Volumes [dm <sup>3</sup> ] |        |      |      |      |      |
|----------------|--------------|------|------|------|----------------------------|--------|------|------|------|------|
|                | Length       | 1    | 2    | 3    | 4                          | Length | 1    | 2    | 3    | 4    |
| <b>LMP 124</b> |              | 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<br>M60<br>M90 | P10 | P25 |
| <b>LMP 124</b> | <b>1</b> | 39                               | 41  | 58  | 60  | 69  | 99                | 84  | 85  |
|                | <b>2</b> | 47                               | 53  | 68  | 69  | 77  | 99                | 90  | 91  |
|                | <b>3</b> | 59                               | 61  | 73  | 77  | 86  | 99                | 92  | 93  |
|                | <b>4</b> | 70                               | 78  | 84  | 86  | 93  | 100               | 94  | 95  |


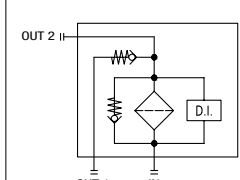
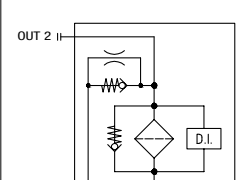
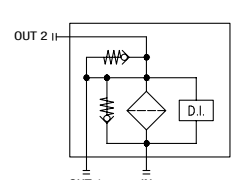
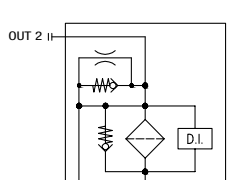

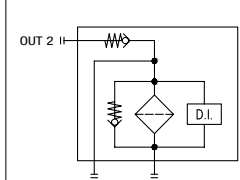
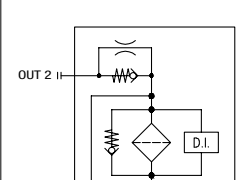
### Maximum flow rate for a complete return/suction filter with a pressure drop $\Delta p = 1.2$ bar.

The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

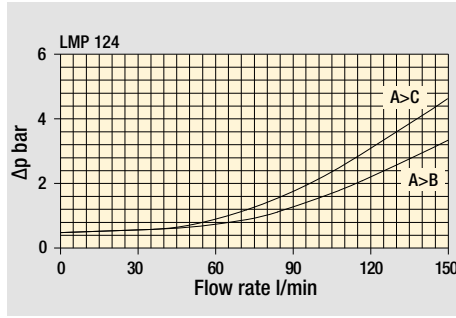
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

### Hydraulic symbols - Multiport styles

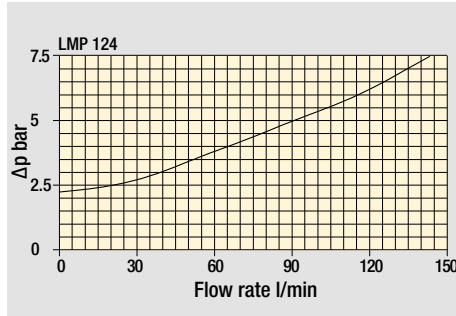
| Multiport   | Valves C option   | Valves D option   | Valves E option  | Valves F option   |
|---|---|---|--|---|
|  <p><b>IN</b> - Return<br/><b>OUT 1</b> - Tank<br/><b>OUT 2</b> - Pump</p> |  |  |  |  |
| Multiport   | Valves G option   | Valves H option   |  |   |
|  <p><b>IN</b> - Return<br/><b>OUT 1</b> - Tank<br/><b>OUT 2</b> - Pump</p> |  |  |  |   |

## Pressure drop

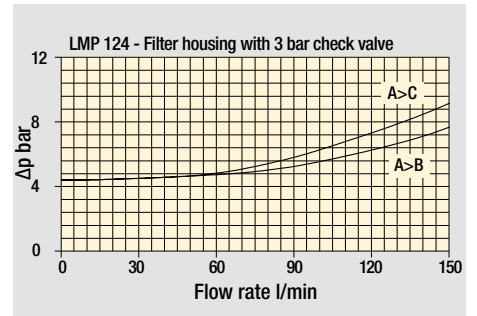
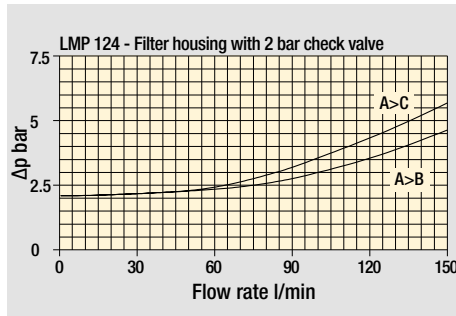
### Filter housings $\Delta p$ pressure drop



### Bypass valve pressure drop

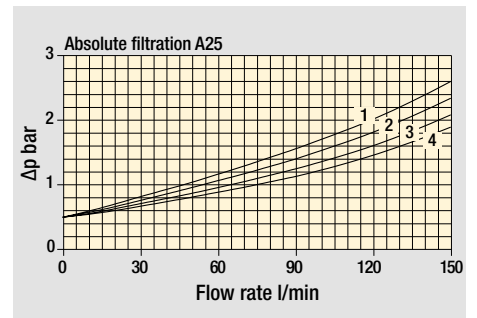
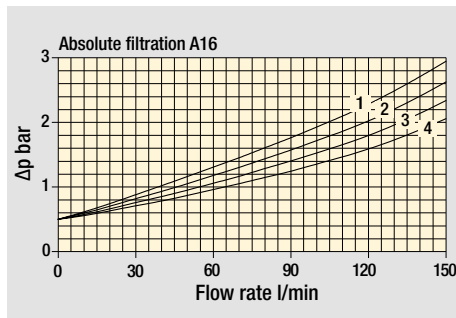
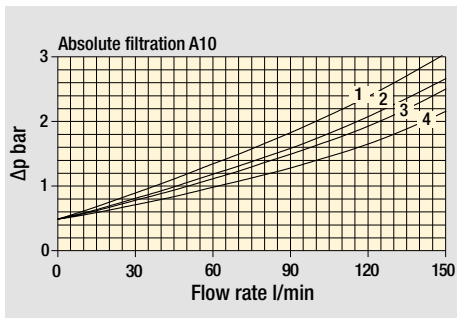


### Valves

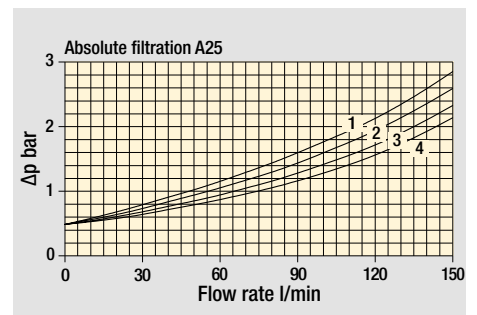
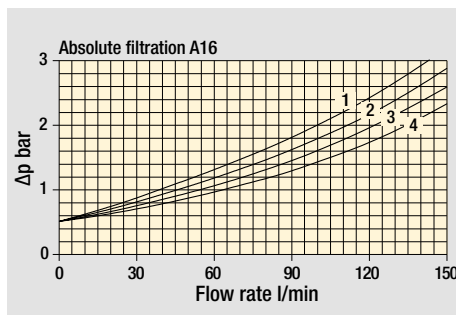
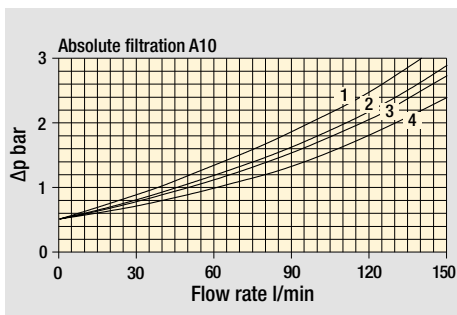


### Filter length: 1 - 2 - 3 - 4

#### STYLE C - D - E - F



#### STYLE G - H



The curves are plotted using mineral oil with density of  $0.86 \text{ kg/dm}^3$  in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.



## Designation & Ordering code

### COMPLETE FILTER

|  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|
| <b>Series and size</b><br><b>LMP124</b>  | Configuration example: <b>LMP124</b>   <b>4</b>   <b>C</b>   <b>A</b>   <b>F</b>   <b>1</b>   <b>A10</b>   <b>N</b>   <b>P01</b> |  |  |  |  |  |  |  |  |  |
| <b>Filter length</b><br><b>1</b>   <b>2</b>   <b>3</b>   <b>4</b>  |  |  |  |  |  |  |  |  |  |  |
| <b>Hydraulic diagram configuration</b> - see page 300<br><b>C</b>   <b>D</b>   <b>E</b>   <b>F</b>   <b>G</b>   <b>H</b>   |  |  |  |  |  |  |  |  |  |  |
| <b>Seals and treatments</b><br><b>A</b> NBR<br><b>V</b> FPM  |  |  |  |  |  |  |  |  |  |  |
| <b>Connections</b><br><b>B</b> G 1"<br><b>F</b> SAE 16 - 1 5/16" - 12 UN   |  |  |  |  |  |  |  |  |  |  |
| <b>Connection for indicator</b><br><b>1</b> Without<br><b>2</b> With connection G 1/8" for clogging indicator<br><b>3</b> With connection G 1/4" for clogging indicator<br><b>4</b> With connection for differential indicator   |  |  |  |  |  |  |  |  |  |  |
| <b>Filtration rating (filter media)</b><br><b>A03</b> Inorganic microfiber 3 µm<br><b>A06</b> Inorganic microfiber 6 µm<br><b>A10</b> Inorganic microfiber 10 µm<br><b>A16</b> Inorganic microfiber 16 µm<br><b>A25</b> Inorganic microfiber 25 µm<br><b>M25</b> Wire mesh 25 µm<br><b>M60</b> Wire mesh 60 µm<br><b>M90</b> Wire mesh 90 µm<br><b>P10</b> Resin impregnated paper 10 µm<br><b>P25</b> Resin impregnated paper 25 µm |  |  |  |  |  |  |  |  |  |  |
|  | <b>Element Δp</b><br><b>N</b> 20 bar   |  |  |  |  | <b>Execution</b><br><b>P01</b> MP Filtri standard<br><b>Pxx</b> Customized |  |  |  |  |

### FILTER ELEMENT

|  |  |  |                                      |  |  |  |  |
|--|--|--|--------------------------------------|--|--|--|--|
| <b>Element series and size</b><br><b>CU110</b>   | Configuration example: <b>CU110</b>   <b>4</b>   <b>A10</b>   <b>A</b>   <b>N</b>   <b>P01</b> |  |                                      |  |  |  |  |
| <b>Element length</b><br><b>1</b>   <b>2</b>   <b>3</b>   <b>4</b>   |  |  |                                      |  |  |  |  |
| <b>Filtration rating (filter media)</b><br><b>A03</b> Inorganic microfiber 3 µm<br><b>A06</b> Inorganic microfiber 6 µm<br><b>A10</b> Inorganic microfiber 10 µm<br><b>A16</b> Inorganic microfiber 16 µm<br><b>A25</b> Inorganic microfiber 25 µm<br><b>M25</b> Wire mesh 25 µm<br><b>M60</b> Wire mesh 60 µm<br><b>M90</b> Wire mesh 90 µm<br><b>P10</b> Resin impregnated paper 10 µm<br><b>P25</b> Resin impregnated paper 25 µm |  |  |                                      |  |  |  |  |
|  | <b>Seals</b><br><b>A</b> NBR<br><b>V</b> FPM   |  | <b>Element Δp</b><br><b>N</b> 20 bar |  |  | <b>Execution</b><br><b>P01</b> MP Filtri standard<br><b>Pxx</b> Customized |  |

### CLOGGING INDICATORS

See page 682-683

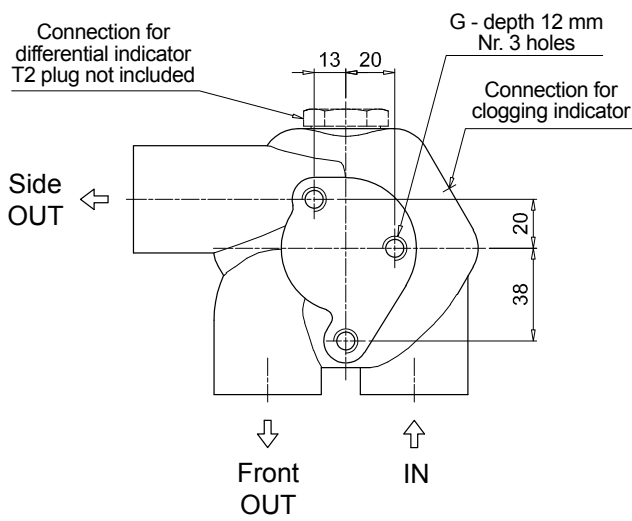
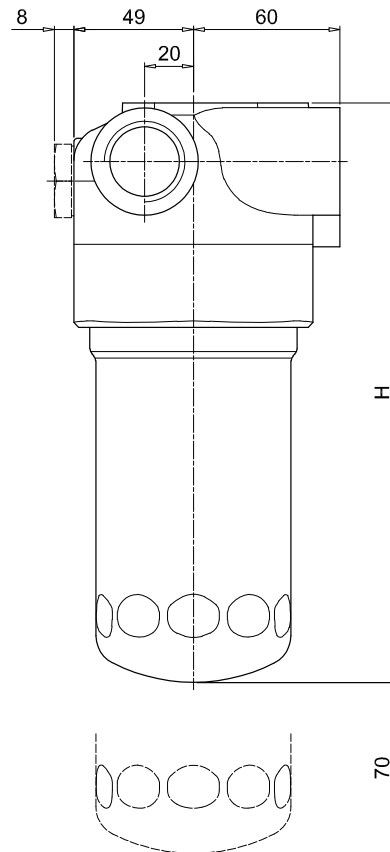
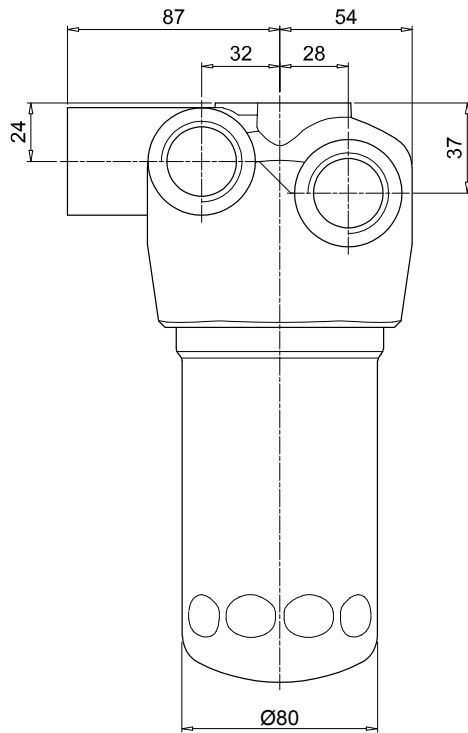
|   |   |
|---|---|
| <b>Indicators on Return Line</b>                          |   |
| <b>BVA</b> Axial pressure gauge                           | <b>BEA</b> Electrical pressure indicator          |
| <b>BVR</b> Radial pressure gauge                          | <b>BEM</b> Electrical pressure indicator          |
| <b>BVP</b> Visual pressure indicator with automatic reset | <b>BET</b> Electrical pressure indicator          |
| <b>BVQ</b> Visual pressure indicator with manual reset    | <b>BLA</b> Electrical / visual pressure indicator |
| <b>Differential indicators</b>                            |   |
| <b>DEA</b> Electrical differential indicator              | <b>DTA</b> Electronic differential indicator      |
| <b>DEM</b> Electrical differential indicator              | <b>DVA</b> Visual differential indicator          |
| <b>DLA</b> Electrical / visual differential indicator     | <b>DVM</b> Visual differential indicator          |
| <b>DLE</b> Electrical / visual differential indicator     |   |

### PLUGS

See page 706

|  |
|--|
| <b>T2</b> Differential indicator plug (not included) |
|--|

| LMP 124       |          |
|---------------|----------|
| MULTIPORT     |          |
| Filter length | H [mm]   |
| 1             | 182      |
| 2             | 215      |
| 3             | 265      |
| 4             | 365      |
| Connections   | R        |
| B             | M10      |
| F             | 3/8" UNC |

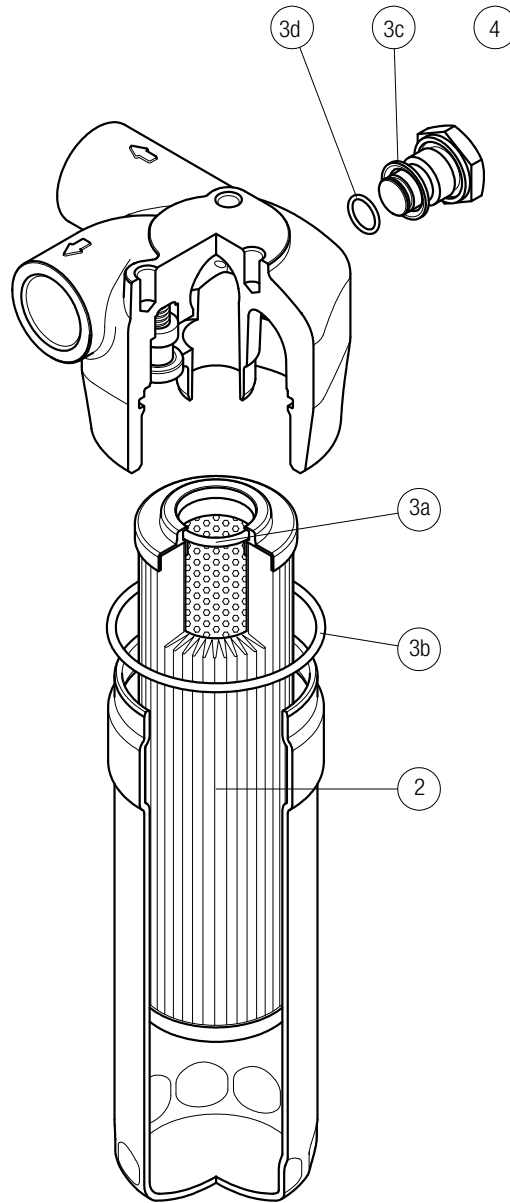


# LMP 124 MULTIPOINT

MULTIPOINT

Order number for spare parts

## LMP 124 MULTIPOINT



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