

LMP 902-903 series

Filters featuring filter elements designed according to DIN 24550

Maximum working pressure up to 2 MPa (20 bar) - Flow rate up to 3000 l/min



LMP 902-903 GENERAL INFORMATION

Filters featuring filter elements designed according to DIN 24550

Description

Low & Medium Pressure filters

Maximum working pressure up to 2 MPa (20 bar)

Flow rate up to 3000 l/min

LMP902 and LMP903 are ranges of low pressure filter with large filtration surface mainly suitable for lubrication, off-line filtration of the reservoirs and filtration equipment.

Multiple LMP950 filters are connected to a manifold to reduce the pressure drop caused by the filter media and to increase the life time of the filter element.

They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- 4" flanged connections, for a maximum flow rate of 3000 l/min
- Filter element designed in accordance with DIN 24550 regulation
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid.
For further information, see the Contamination Management document and the dedicate leaflet.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Vent ports, to avoid air trapped into the filter going into the system
- Drain ports, to remove the fluid from the housing prior the maintenance work
- Visual, electrical and electronic differential clogging indicators

Common applications:

- Off-line filtration of reservoirs
- Filtration systems

Technical data

Filter housing materials

- Head: Anodized aluminium
- Housing: Anodized aluminium
- Manifolds: Welded - Phosphatized steel
- Bypass valve: Steel
- Size 1000 filter elements complying with DIN 24550 standard

Pressure

- Test pressure: 3.5 MPa (35 bar)

Bypass valve

- Opening pressure 350 kPa (3.5 bar) $\pm 10\%$
- Other opening pressures on request.

Number of filter elements

LMP 902: 4 filter elements CU900

LMP 903: 6 filter elements CU900

Filter elements

Filter element designed in accordance with DIN 24550

Size: 1000

Δp element type

- Microfibre filter elements - series N: 20 bar
- Fluid flow through the filter element from OUT to IN

Connections

LMP 902-903: In-line Inlet/Outlet

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

From -25 °C to +110 °C

Note

LMP 902 - 903 filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

| Filter series | Weights [kg] | | Volumes [dm ³] | |
|----------------|--------------|-------|----------------------------|----|
| | Length | 2 | Length | 2 |
| LMP 902 | | 89.6 | | 58 |
| LMP 903 | | 129.2 | | 87 |

GENERAL INFORMATION LMP 902-903

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Flow rates [l/min]

| Filter series | Length | Filter element design - N Series | | | | | |
|----------------|----------|----------------------------------|------|------|------|------|-------------------|
| | | A03 | A06 | A10 | A16 | A25 | M25 M60 M90 |
| LMP 902 | 2 | 2217 | 2576 | 3241 | 3282 | 3506 | 3987 |
| LMP 903 | 2 | 2838 | 3170 | 3720 | 3755 | 3926 | 4278 |

Maximum flow rate for a complete low and medium pressure filter with a pressure drop $\Delta p = 0.7$ bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

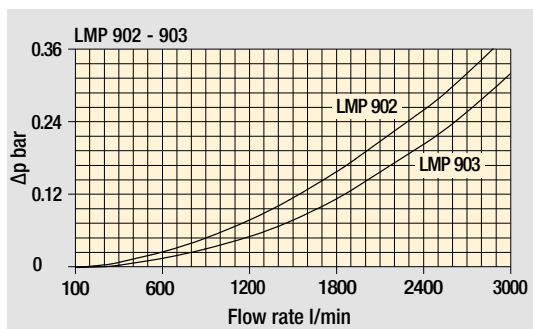
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

Hydraulic symbols

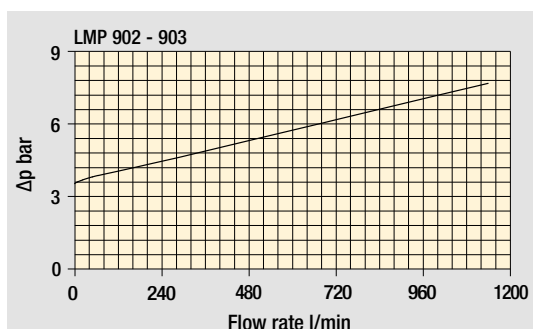
| Filter series | Execution S | Execution B | Execution S | Execution B |
|----------------|-------------|-------------|-------------|-------------|
| LMP 902 | • | • | - | - |
| LMP 903 | - | - | • | • |

Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop

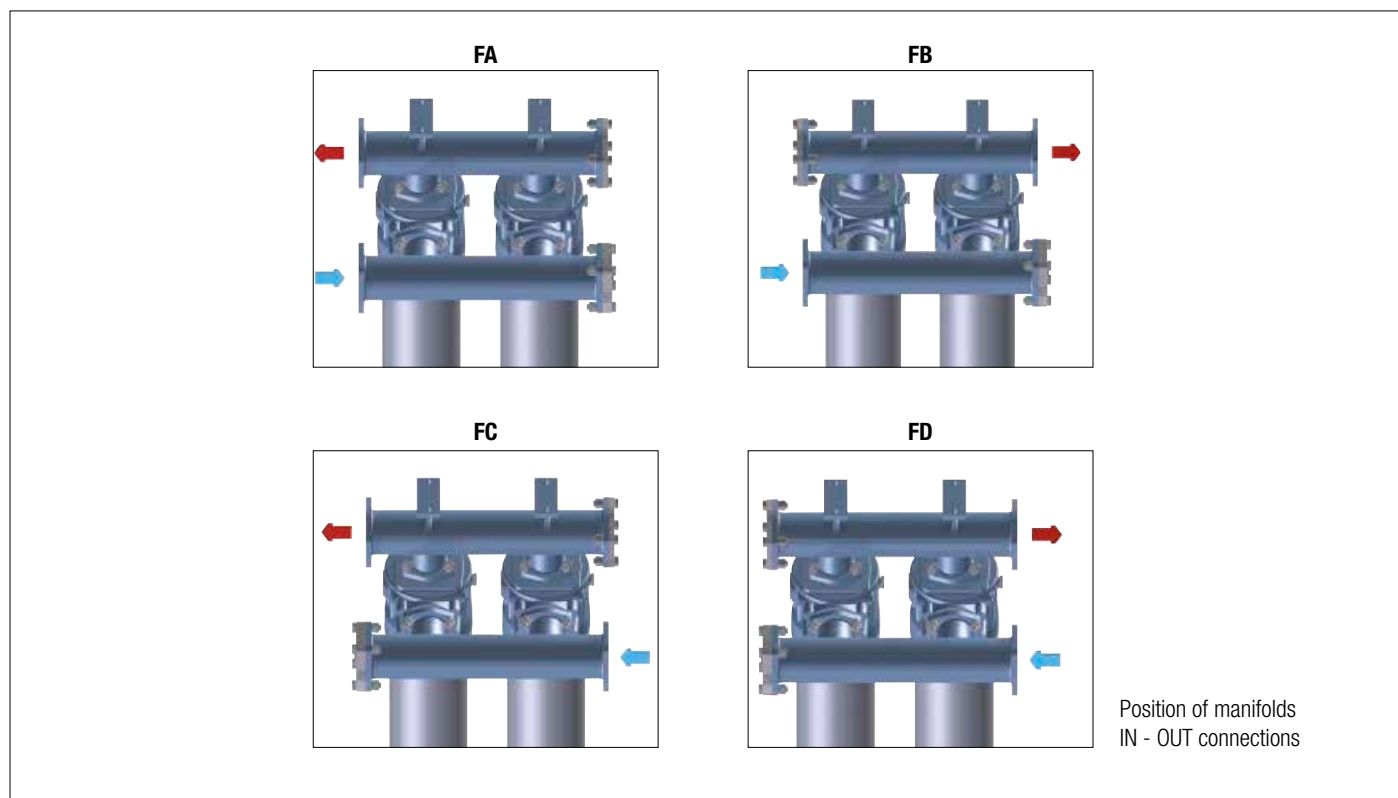


The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

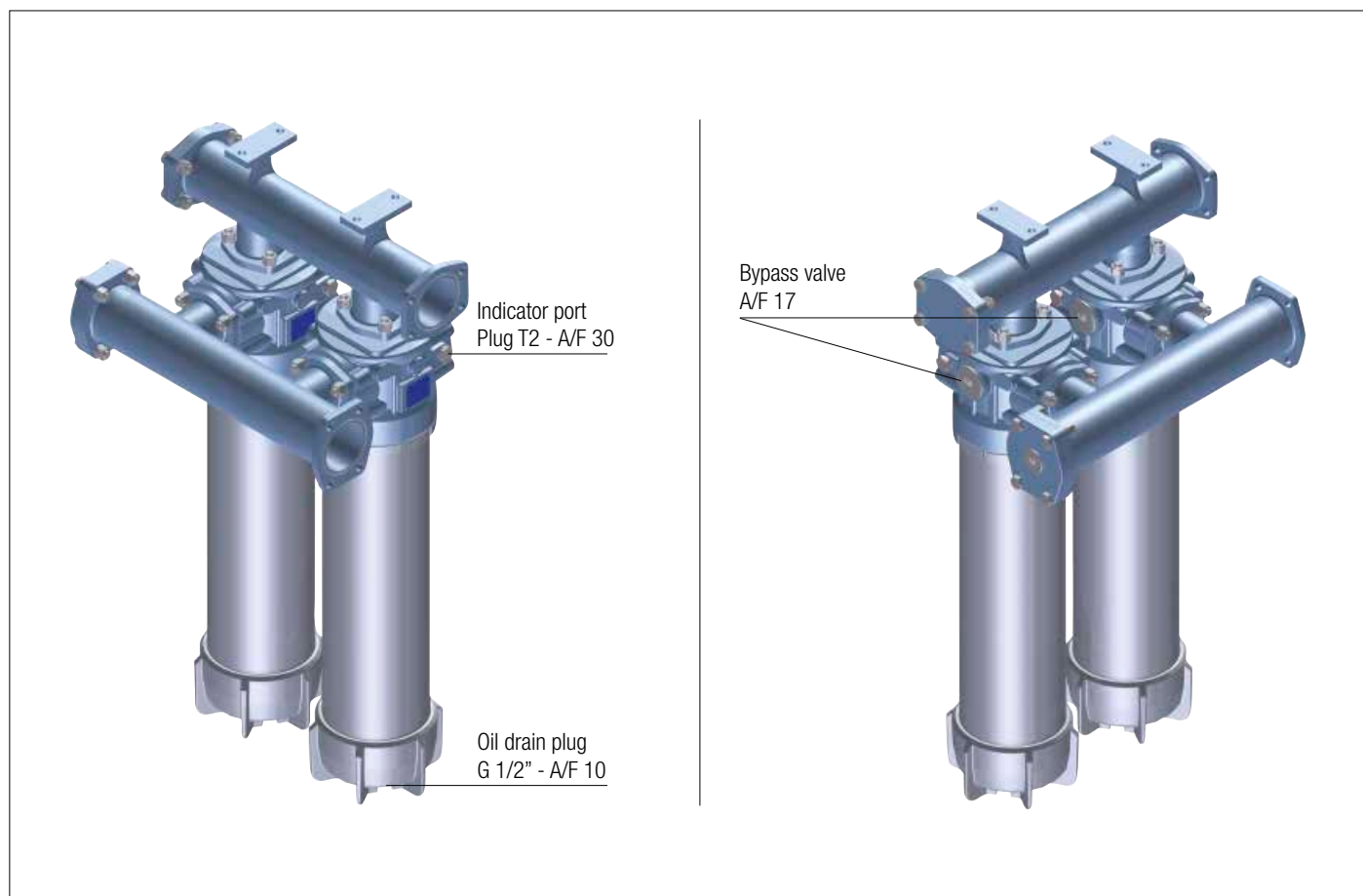
LMP 902-903 GENERAL INFORMATION

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Manifolds



Focus on



Designation & Ordering code

COMPLETE FILTER

Configuration example: **LMP902** **2** **B** **A** **FA** **A10** **N** **P01**

Series and size
LMP902 | **LMP903**

Length
2

Bypass valve
S Without bypass | **B** With bypass 3.5 bar

Seals and treatments
A NBR
V FPM

| Connections | IN | OUT |
|---------------------------|-------|-------|
| FA 4" SAE 3000 psi | left | left |
| FB 4" SAE 3000 psi | left | right |
| FC 4" SAE 3000 psi | right | left |
| FD 4" SAE 3000 psi | right | right |

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 | |
| A25 Inorganic microfiber 25 µm | |

WA025 Water absorber inorganic microfiber 25 µm

Element Δp
N 20 bar

Execution
P01 MP Filtri standard
Pxx Customized

FILTER ELEMENT

Configuration example: **CU900** **A10** **A** **N** **P01**

Element series and size
CU900

Filter series and size
LMP902 Nr. 4 filter elements
LMP903 Nr. 6 filter elements

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 | |
| A25 Inorganic microfiber 25 µm | |

WA025 Water absorber inorganic microfiber 25 µm

Seals
A NBR
V FPM

Element Δp
N 20 bar

Execution
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CLOGGING INDICATORS

See page 726

DEA Electrical differential pressure indicator
DEM Electrical differential pressure indicator
DEU Electrical differential pressure indicator
DLA Electrical / visual differential pressure indicator

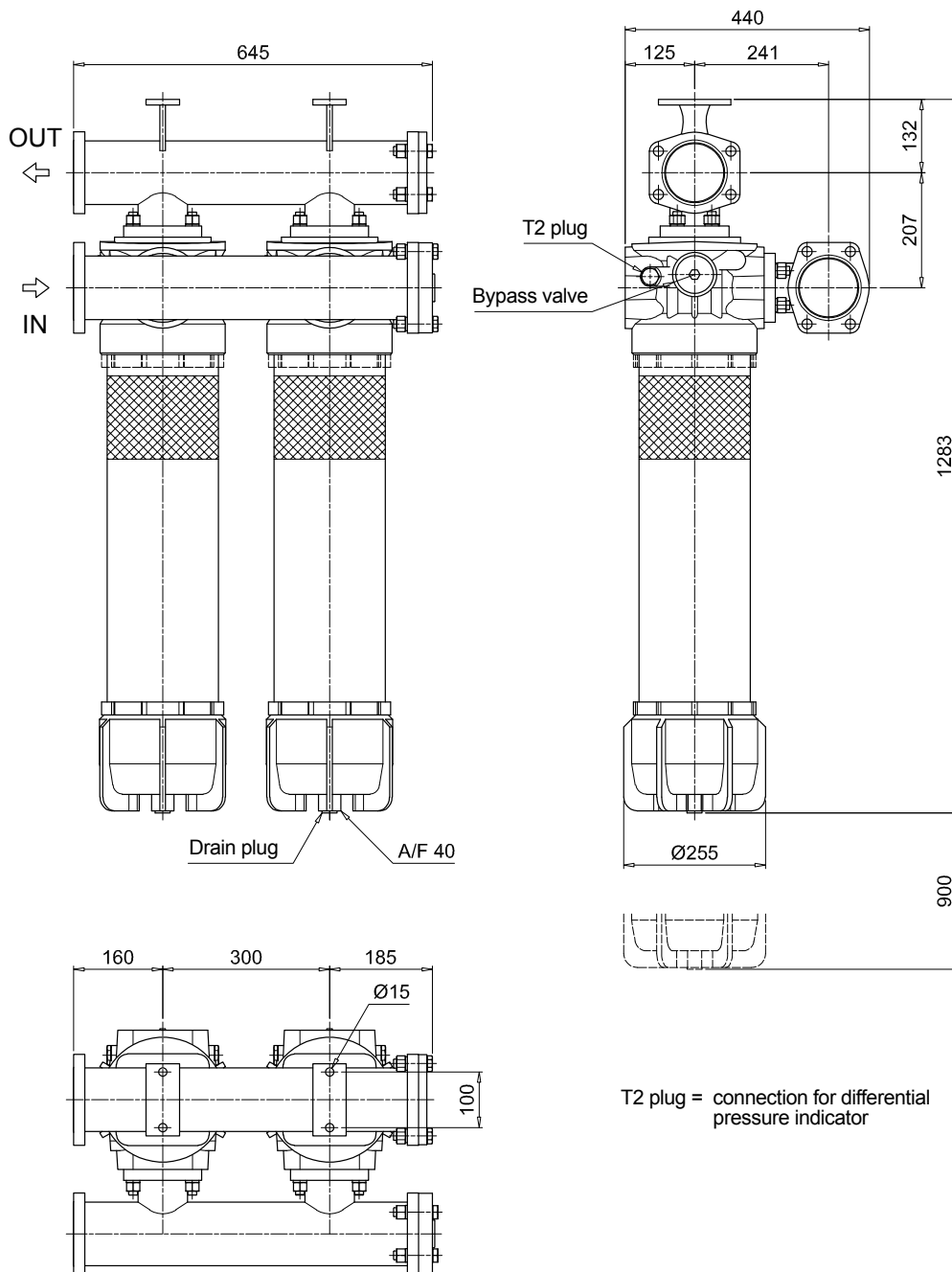
DLE Electrical / visual differential pressure indicator
DTA Electronic differential pressure indicator
DVA Visual differential pressure indicator
DVM Visual differential pressure indicator

PLUGS

See page 747

T2 Plug

LMP902

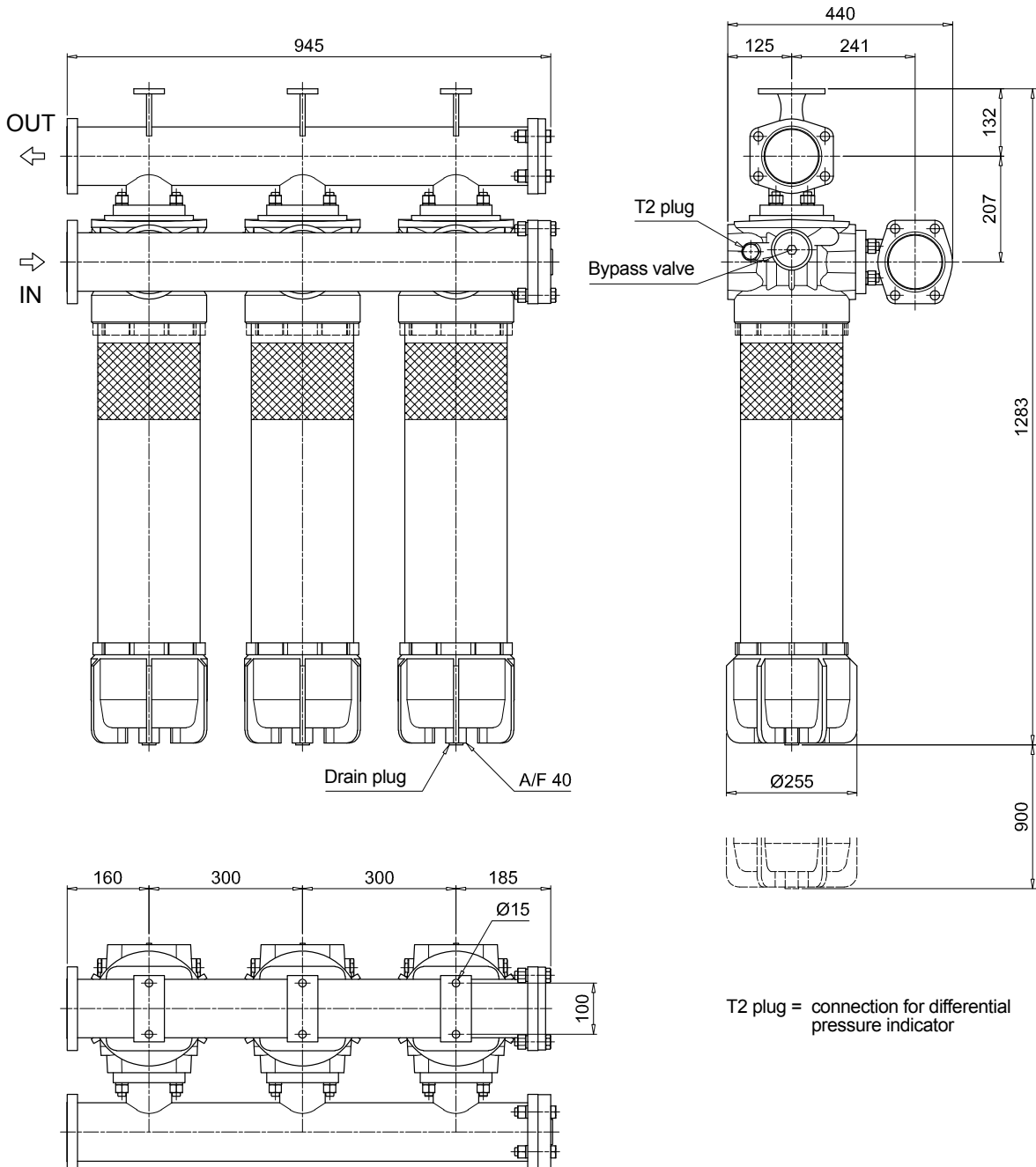


T2 plug = connection for differential pressure indicator

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Dimensions

LMP903

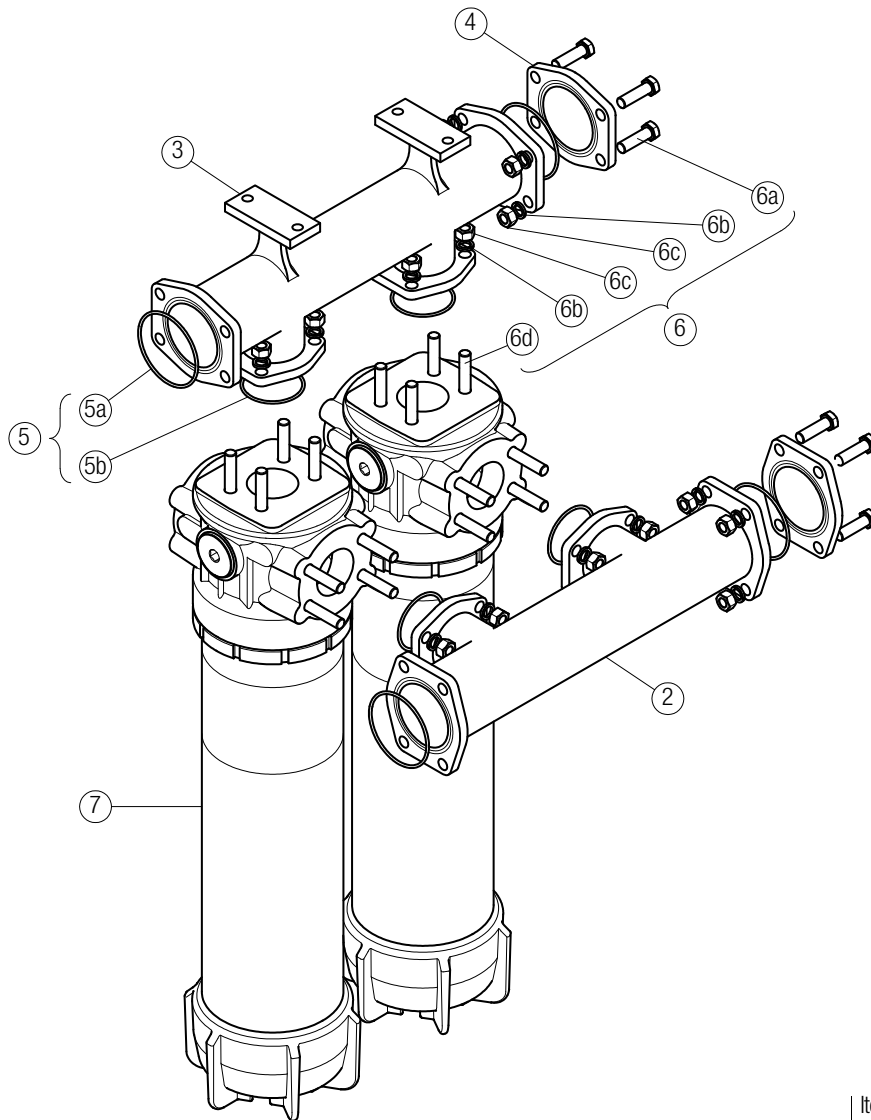


T2 plug = connection for differential pressure indicator

SPARE PARTS LMP 902-903

Order number for spare parts

LMP 902 - 903



Item 7:
for complete filter code and
spare parts, see
LMP 900 - 901 series chapter

Quantity:
- filter spare parts:
LMP 902 - 2 pcs.
LMP 903 - 3 pcs.

- filter seal kit:
LMP 902 - 2 pcs.
LMP 903 - 3 pcs.

| Item: | 2 | | 3 | 4 | | 5 (5a-5b) | | | 6 (6a ÷ 6c) | | 7 | |
|---------------|-------|-------------|----------|--------|--------------------------------|-----------|------------------------|----------|-------------|------------------------|--------|--------------------|
| Filter series | Q.ty | Manifold IN | OUT | Q.ty | 4" SAE 3000 psi plugged flange | Q.ty | Manifolds seal kit NBR | FPM | Q.ty | Threaded fasteners kit | Q.ty | Filter |
| LMP 902 | 1 pc. | 01039270 | 01039271 | 2 pcs. | 01042012 | 1 pc. | 02050404 | 02050405 | 1 pc. | 02049051 | 2 pcs. | LMP9012xxF1xxxNP02 |
| LMP 903 | 1 pc. | 01039337 | 01039338 | 2 pcs. | | 1 pc. | 02050404 | 02050405 | 1 pc. | 02049052 | 3 pcs. | |

CLOGGING INDICATORS LOW & MEDIUM PRESS. FILTERS

Designation & Ordering code

DIFFERENTIAL PRESSURE INDICATORS

| Series | Configuration example 1: | DE | M | 20 | H | F | 50 | P01 | |
|---|--------------------------|----|---|----|---|---|----|-----|----|
| DE Electrical differential pressure indicator | Configuration example 2: | DE | U | 50 | V | A | 50 | P01 | UL |
| DL Electrical/Visual differential pressure indicator | Configuration example 3: | DL | E | 50 | V | A | 71 | P01 | |
| DT Electronic differential pressure indicator | Configuration example 4: | DT | A | 20 | H | F | 70 | P01 | |
| DV Visual differential pressure indicator | Configuration example 5: | DV | M | 50 | V | | | P01 | |

| Type | DE | DL | DT | DV |
|--|----|----|----|-------------------------------|
| A Standard type | • | • | • | A With automatic reset |
| M With wired electrical connection | • | - | - | M With manual reset |
| U Standard type 210 bar, UL certified | • | - | - | S With automatic reset |
| E For high power supply | - | • | - | |
| S Compact version | • | - | - | |

| Pressure setting | DEA | DEM | DEU | DES | DLA | DLE | DTA | DVA | DVM | DVS |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12 1.2 bar | • | • | - | • | • | • | • | • | • | • |
| 20 2.0 bar | • | • | • | - | • | • | • | • | • | - |
| 25 2.5 bar | - | - | - | - | - | - | - | - | - | • |
| 40 4.0 bar | - | - | - | • | - | - | - | - | - | • |
| 50 5.0 bar | • | • | • | - | • | • | • | • | • | - |

| Seals | DEA | DEM | DEU | DES | DL | DT | DVA | DVM | DVS |
|---------------|-----|-----|-----|-----|----|----|-----|-----|-----|
| H HNBR | • | • | - | • | • | • | • | • | • |
| V FPM | • | • | • | - | • | • | • | • | - |

| Thermostat | DEA | DEM | DEU | DES | DLA | DLE | DT |
|-----------------------------|-----|-----|-----|-----|-----|-----|----|
| A Without thermostat | • | • | • | • | • | • | - |
| F With thermostat | - | • | - | - | - | • | • |

| Electrical connections | DEA | DEM | DEU | DES | DLA | DLE | DT |
|--|-----|-----|-----|-----|-----|-----|----|
| 10 Connection AMP Superseal series 1.5 | - | • | - | • | - | - | - |
| 20 Connection AMP Timer Junior | - | • | - | - | - | - | - |
| 30 Connection Deutsch DT-04-2-P | - | • | - | • | - | - | - |
| 35 Connection Deutsch DT-04-3-P | - | • | - | - | - | - | - |
| 50 Connection EN 175301-803 | • | - | • | - | - | • | - |
| 51 Connection EN 175301-803, transparent base with lamps 24 Vdc | - | - | - | - | • | - | - |
| 52 Connection EN 175301-803, transparent base with lamps 110 Vdc | - | - | - | - | • | - | - |
| 70 Connection IEC 61076-2-101 D (M12) | - | - | - | - | - | - | • |
| 71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc | - | - | - | - | • | - | - |
| 80 Connection Stud #10-32 UNF | - | - | - | • | - | - | - |

| Option |
|-------------------------------|
| P01 MP Filtri standard |
| Pxx Customized |

| Certifications | DEU | OTHERS |
|----------------------------|-----|--------|
| Without | - | • |
| UL UL certification | • | - |

PLUGS

| Series | Configuration example | T2 | H |
|----------------|-----------------------|----|---|
| T2 Plug | | | |
| T4 Plug | | | |

| Seals | T2 | T4 |
|---------------|----|----|
| A NBR | - | • |
| H HNBR | • | - |
| V FPM | • | - |