



**PRODUCT RANGE**

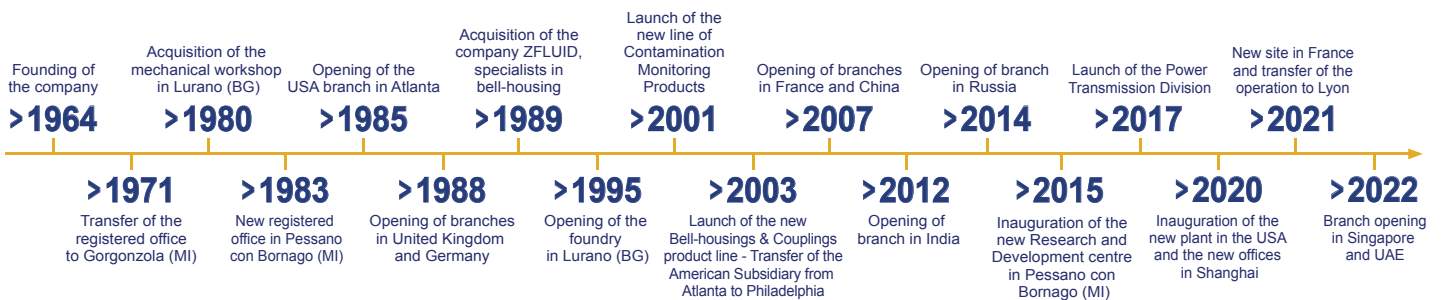
**PASSION TO PERFORM**

# PASSION CREATES OUR HISTORY

From over **55** years MP Filtri is an Italian multinational company specialising in the hydraulic sector, founded by Bruno Pasotto.

Most of the production is carried out in Italy. It currently has **10** trading and operational subsidiaries in Germany, France, United Kingdom, the United States, Canada, Russia, India, China, Singapore and UAE and a global network of retailers and distributors in over **100 countries**.

Over **500** highly qualified people are employed across the world. There are two production facilities in Italy and one in United Kingdom. **20 per cent of our products** satisfy the needs of customers in the Italian market, while the remaining **80 per cent goes to the international customers**.





CONSTANT  
**RESEARCH**

CONTINUOUS  
**DEVELOPMENT**

Renowned for Innovative and Flexibility, MP Filtri has, since launch, paid an obsessive attention to the **research and development of cutting-edge technological solutions**. Its research and development laboratory is considered one of the best in Europe.

The sectors that MP Filtri's products are aimed at range from industrial to mobile operating machines, such as earthmoving machinery, wind turbine generators and machinery for the plastic industry made by the most prestigious global manufacturers.

### OUR VALUES

Integration and Competency in creating value-added solutions for our Customers, and Passion for innovation constitute the fundamentals of the MP Filtri heritage. Values that are fully shared by the entire organisation.

### VISION

The essence of MP Filtri is embodied in its claim "Passion to perform": an entrepreneurial business which continuously strives towards excellence, where the ability to innovate, while remaining loyal to its own identity, represents the strategic asset of the Company.

### MISSION

Establishing itself as the best partner in the world in the design and production of complete solutions and offering a superior operating continuity of hydraulic systems.



# HYDRAULIC FILTRATION PRODUCT RANGE



## SUCTION FILTERS AND STRAINERS

STR - MPA - MPM - SF2 - SFEX

**FLOW RATES** max 1000 l/min 264 gpm

Suction filters and Strainers protect pumps from contamination, while also providing additional flow diffusion in the suction line.



## RETURN FILTERS

MPFX - MPLX - MPTX - MFBX - RFEX - MPH - MPI - FRI - RF2

**FLOW RATES** max 3500 l/min 925 gpm - **PRESSURE** max 20 bar 290 psi

Return filters perform the task of filtering fluid and preventing particles from entering the system externally or from internal wear and tear of components - as per ISO 4406.



## RETURN/SUCTION FILTERS

MRSX - LMP 124 MULTIPORT

**FLOW RATES** max 250 l/min 66 gpm - **PRESSURE** max 80 bar 1160 psi

Hydraulic combined filters for installation on the return and suction lines of hydrostatic transmissions (HSTs) for commercial vehicles, construction machinery, agricultural vehicles, and mobile work equipment with a hydrostatic drive.



## SPIN-ON FILTERS

MPS - MSH

**FLOW RATES** max 365 l/min 96 gpm - **PRESSURE** max 35 bar 508 psi

Spin-on filters are used as process and safety filters to protect individual pumps, valves or the entire hydraulic circuit from contamination - as per ISO 4406.





## LOW & MEDIUM PRESSURE FILTERS

LFEX - LMP 110/120/123 MULTIPORT - LMP - LMD - LDP - LDD

FLOW RATES max 4500 l/min 1189 gpm - PRESSURE max 80 bar 1160 PSI

Low and medium pressure filters are used as process filters to protect pumps, pressure reducers and the most sensitive hydraulic system components from contamination - as per ISO 4406.



## HIGH PRESSURE FILTERS

FMP - FHP - FMM - FHA - FHM - FHB - FHF - FHD - HPB

FLOW RATES max 630 l/min 166 gpm - PRESSURE max 560 bar 8122 PSI

High pressure filters are designed to withstand the maximum pressure of the system and are sized according to the specific flow rate required. They offer exceptional protection to sensitive components downstream of the filters - as per ISO 4406.



## STAINLESS STEEL FILTERS

FZP - FZH - FZX - FZM - FZB - FZD

FLOW RATES max 160 l/min 42 gpm - PRESSURE max 1000 bar 14504 PSI

Stainless steel construction ensures peak protection when operating in corrosive environments or aggressive fluids. High pressure stainless steel filters are used to protect individual valves or the entire hydraulic circuit from contamination - as per ISO 4406.



## CLOGGING INDICATORS

Maximum filter element Dirt Holding Capacity (DHC) and life are achieved with the use of clogging indicators. These devices signal when the clogging causes an increase in pressure drop across the filter element.

# CONTAMINATION CONTROL SOLUTIONS



## LPA3 - LPA2 (Aviation Edition) - CML2

Portable solutions to automatically measure and display particulate contamination, moisture and temperature levels a in variety of hydraulic fluids.

## ICM 2.0 - ICM 4.0 - AZ2 - ICU - ACMU

A complete range of products to count particles, designed specifically to be mounted directly to systems, where ongoing measurement or analysis are required.



## BS110 & BS500 - PIK Patch Imaging Kit

Kit for fluid sampling and the visual and digital analysis of solid contaminants. The bottle samplers are suitable for our portable devices.

## UFM - FTU

**FLOW RATES max 180 l/min 48 gpm**  
Mobile transfer and filtration units are the perfect solution for the oil maintenance of lubrication and hydraulic fluids in off-line filtration applications.

# POWER TRANSMISSION PRODUCT RANGE

## BELL-HOUSING

LMG - LMC - LDC - LMS - LDS - MULTI COMPONENTS

Bell-Housings are used as connecting elements between IEC electric motors and a wide range of hydraulic pumps available on the international market.



## COUPLINGS

SGEG - SGEA - SGES - SGEK - EGE - AKG - SGDR - EGR

Drive couplings provide the means by which power is transmitted from the electric motor to the hydraulic pump.



## ACCESSORIES

PDMA - ANMA - MPDR - CLEANING COVERS

Our accessories line completes the range, adding value and features to the motor pump unit. It includes by Foot brackets - PDMA, Damping rings ANMA and Damping rods - MPDR, Cleaning covers.



# TANK ACCESSORIES

- STRAINERS
- AIR BREATHERS AND FILLER PLUGS
- FILLER AND DRAINER PLUGS
- VISUAL OIL LEVEL INDICATORS
- ELECTRICAL OIL LEVEL INDICATORS
- ACCESSORIES





# Hydraulic Filtration Product Range



**PASSION TO PERFORM**





Positioned on the return line to the tank, return filters perform the task of filtering fluid and preventing particles entering the system - externally or from internal wear and tear of components.

These filters are normally fixed to the reservoir and are positioned fully or semi-immersed.

The position of the filters ensures returning fluid takes place in an immersed condition in all operating conditions - preventing the creation of foams and vortexes in the tank that can cause malfunctions or cavitation in the pumps.

The correct filter size will depend on the presence of accumulators or cylinders which can increase the return flow considerably.

As working pressures are relatively low, these filter ranges are normally light yet still robust.

For convenience it is possible to extract the filter element without disconnecting the filter from the rest of the system.

Key features:

- Inorganic microfibre from 3  $\mu\text{m}$  to 25  $\mu\text{m}$
- Wire mesh from 25  $\mu\text{m}$  to 90  $\mu\text{m}$
- Resin impregnated paper from 10  $\mu\text{m}$  to 25  $\mu\text{m}$

Find your solution using our selection software on [mpfitri.com](http://mpfitri.com)



THE NEW FILTER CONCEPT



**MPFX**  
**MPTX**  
**MFBX**

Connections:

- from G3/4" to G2"
- from 3/4" NPT to 2" NPT
- from SAE 6 - 9/16" - 18 UNF to SAE 32 - 2 1/4" - 12 UN
- from 1 1/4" SAE 3000 psi/M to 4" SAE 3000 psi/M
- from 1 1/4" SAE 3000 psi/UNC to 4" SAE 3000 psi/UNC
- hose barb  $\varnothing$ 12
- UNI 2223 DN 100 PN 10/16

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
<b>MPFX - MPF 020, 030, 100, 104, 110, 181, 182, 184, 191, 192, 194, 400, 410, 450, 451, 750</b>	Tank top semi-immersed filter, standard filter element removal	8	116	750	198
<b>MPLX 250, 660</b>	Tank top semi-immersed filter, standard filter element removal	10	145	1800	476
<b>MPTX - MPT 025, 027, 110, 114, 116, 120</b>	Tank top semi-immersed filter, standard filter element removal	8	116	300	79
<b>MFBX - MFB 020, 030, 100, 180, 190</b>	Element and bowl assembly with optional cover and hold-down spring for dirtbox or molded tank applications	8	116	500	132
<b>MPH 110, 114, 116, 120, 250, 630, 660, 850</b> <b>MPI 100, 250, 630, 850</b>	Tank top semi-immersed filter, standard filter element removal	10	145	3000	793
<b>FRI 025, 040, 100, 250, 255, 630, 850</b>	Tank top semi-immersed filter, standard filter element removal; can also be used as an in-line filter	20	290	1500	396
<b>RF2 250, 350</b>	Semi-immersed filter with shut-off valve for side tank mounting, easy filter element removal	20	290	350	92

# Low & Medium Pressure Filters

Designed as in-line return or off-line recirculation filtration protecting the most sensitive regulation and control components such as servo and proportional valves, LMP series filters deliver maximum protection from contamination. Boasting a robust design, in-line housing and a wide choice of accessories, the LMP series offers a diverse range of models to suit all needs. Available in low and medium pressure, customers can also specify small to large flow rates and choose from a selection of different filter elements. Mounted in-line along the hydraulic circuit in a variety of low or medium pressure applications, the LMP series has been designed for a wide range of industrial sectors, like steelworks, test bench, mobile and maritime applications. LMP filters are available with threaded or flanged connections directly integrated into circuit control blocks / manifolds. They are also available in a duplex configuration to allow the contaminated section to be maintained without disruption even when the system is fully operational. They can also be used 'offline' for recirculation or lubrication lines.



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Key features include:

- Inorganic microfibre from 3 µm to 25 µm
- Wire mesh from 25 µm to 90 µm
- Resin impregnated paper from 10 µm to 25 µm  
(Not LMP900-901/902-903/950-951/952-953-954)

Connections:

- from G3/4" to G4"
- from 3/4" NPT to 2" NPT
- from SAE 12 - 1 1/16" - 12 UN to SAE 24 - 1 7/8" - 12 UN
- from 1 1/4" SAE 3000 psi/Metric to 4" SAE 3000 psi/Metric
- from 1 1/4" SAE 3000 psi/UNC to 4" SAE 3000 psi/UNC

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
<b>LMP MULTIPOINT 110, 112, 116, 118, 119, 120, 122, 123</b>	In-line filter with Multiport design for multiple choice connection and integral valving	80	1160	200	53
<b>LMP 210, 211</b>	In-line low & medium pressure filter, low flow rate	60	870	330	87
<b>LMP 400, 401, 430, 431</b>	In-line low & medium pressure filter, high flow rate	60	870	740	195
<b>LMP 950, 951</b>	In-line filters, available with between 2-6 different heads	30	435	2400	634
<b>LMP 952, 953, 954</b>	In-line low pressure filter specifically designed to be mounted in series	25	363	3000	793
<b>LMD 211</b>	In-line duplex medium pressure filter	60	870	330	87
<b>LMD 400, 401, 431</b>	In-line duplex low pressure filter	16	232	590	156
<b>LMD 951</b>	In-line duplex filters, available with between 2-6 different heads	16	232	1200	317
<b>LDP - LDD 016, 025, 040</b>	In-line and duplex medium pressure filter, filter elements designed according to DIN 24550	60	870	330	87
<b>LMP 900, 901</b>	In-line low pressure filter, filter elements designed according to DIN 24550	30	435	2000	528
<b>LMP 902, 903</b>	In-line filter specifically designed to be mounted in series, filter elements designed according to DIN 24550	20	290	3000	793



# High Pressure Filters

Located downstream of the pump, High Pressure Filters are designed to withstand the maximum pressure of the system and are sized according to the specific flow rate of the pressure line where they are positioned.

Featuring robust build quality, these filters have been specially designed to thrive under high working pressures and offer exceptional protection to sensitive components located directly downstream of the filters, such as servovalves.

A wide range of models is available to satisfy all needs - from small to large flow rates - with a choice of filter elements to ensure maximum circuit protection.

High Pressure Filters are available with threaded, flanged or manifold connections which are directly integrated into circuit control blocks / manifolds.

They are also available in duplex configuration to enable the contaminated section to be maintained even when the plant or system is in operation without any interruptions to the working cycle.

These filters have been created for high pressure circuits in a wide variety of applications, including: steelworks, mobile, test benches and the maritime and industrial sectors.

Key features include:

- Inorganic microfibre from 3 µm to 25 µm
- Wire mesh from 25 µm to 90 µm



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#### Connections:

- from G3/4" to G1"
- from 3/4" NPT to 1" NPT
- from SAE 6 - 9/16" - 18 UNF to SAE 24 - 1 7/8" - 12 UN
- from 3/4" SAE 3000 psi/M to 4" SAE 3000 psi/M
- from 3/4" SAE 3000 psi/UNC to 2" SAE 3000 psi/UNC
- from 1 1/2" SAE 6000 psi/M to 2" SAE 6000 psi/M
- from 1 1/2" SAE 6000 psi/UNC to 2" SAE 6000 psi/UNC
- M18x1.5 - ISO 6149
- M22x1.5 - ISO 6149
- manifold side "A"
- manifold side "B"
- direct mounting bowl & element into manifold block

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
FMP 039	High pressure filter for industrial applications, low flow rate	110	1595	80	21
FMP 065, 135, 320	High pressure filters for industrial applications, low flow rate	320	4641	475	125
FHP 010, 011, 065, 135, 350, 500	Typical high pressure filters for industrial applications, high flow rate	420	6092	750	198
FMM 050, 150	Typical high pressure filter for mobile applications	420	6092	250	66
FHA 051	Filter optimized for use in high pressure operating systems, low flow rate	560	8122	140	37
FHM 006, 007, 010, 050, 065, 135, 320, 500	High pressure filter with intermediate manifold construction, CETOP design	320	4641	450	119
FHB 050, 065, 135, 320	High pressure filters for manifold mounting	320	4641	485	128
FHF 325	In-line or manifold mounting filters designed to assemble HF4 filter elements according to SAE J2066	350	5076	500	132
FHD 021, 051, 326, 333	In-line duplex high pressure filters	350	5076	345	91



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Stainless steel construction ensures peak protection when operating in corrosive environments or when dealing with aggressive fluids.

Featuring robust build quality, these filters have been specially designed to thrive under high working pressures and offer exceptional protection to sensitive components located directly downstream of the filters, such as servovalves.

A wide range of models is available to satisfy all needs - from small to large flow rates - with a selection of filter elements to guarantee maximum circuit protection.

They are also available with threaded, flanged or manifold connections which are directly integrated into circuit control blocks / manifolds, or in duplex configuration to enable the contaminated section to be maintained even when the plant or system is in operation with interrupting the working cycle.

These filters have been created for high pressure circuits in a variety of applications, including: steelworks, mobile, test benches and the maritime and off-shore sectors.

Key features include:

- Inorganic microfibre from 3  $\mu\text{m}$  to 25  $\mu\text{m}$

#### Connections:

- from G3/4" to G1"
- from 3/4" NPT to 1" NPT
- from SAE 5 - 1/2" - 20 UNF to SAE 20 - 1 5/8" - 12 UN
- manifold
- manifold, with connection for differential indicator
- with autoclave 20k psi: 9/16" - 18 UNF and 3/4" - 14 NPS

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
FZP 039, 136	In-line pressure filter with threaded mount	420	6092	150	40
FZH 010, 011, 039	In-line pressure filter with threaded mount for higher pressure	700	10153	50	13
FZX 011	In-line pressure filter with threaded mount up to 1000 bar	1000	14504	10	3
FZB 039	Manifold side mounting	320	4641	75	20
FZM 039	Manifold top mounting	320	4641	70	18
FZD 010, 021, 051	Duplex pressure filter for continuous operation	350	5076	90	24

THE NEW FILTER CONCEPT



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Designed for use in systems with two or more circuits, MRSX and LMP124 series filters are commonly used in hydrostatic transmission machines where they have a dual filtration function - serving both the return line and the suction line of the hydraulic transmission pump.

They are equipped with a valve which maintains 0.5 bar (7.25 PSI) within the filter. A percentage of the fluid that returns to tank is filtered by the return line filter, this is usually an absolute rated filter. This fluid is then returned to the transmission charge pump.

The internal pressure of the filter and the absolute filtration offer outstanding protection from pump cavitation.

MRSX 116, 165, and 166 key features include:

- Inorganic microfibre from 10 µm to 25 µm

LMP124 key features include:

- Inorganic microfibre from 3 µm to 25 µm
- Wire mesh from 25 µm to 90 µm
- Resin impregnated paper from 10 µm to 25 µm

Connections:

- from G 1 1/4" to G1"
- from 1 1/4" NPT to 1" NPT
- from SAE 16 - 1 5/16" - 12 UN to SAE 20 - 1 5/8" - 12

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
MRSX 116, 165, 166	Unique TANK TOP filter for mobile machinery, with combined filtration on return and suction to the inlet at the hydrostatic transmissions in closed circuit	10	145	300	79
LMP MULTIPOINT 124	Unique IN-LINE filter for mobile machinery, with combined filtration on return and suction to the inlet at the hydrostatic transmissions in closed circuit	80	1160	200	53

Created especially for mobile applications, MP Filtri's spin-on filters are designed to limit maximum flow rates to around 365 l/min, 96 gpm and keep pressure no higher than 35 bar, 508 psi. The head is positioned directly in-line with the circuit and is equipped with a bypass valve and / or clogging indicators. The filtration cartridge includes a filter element contained within a durable metal cannister. The element is made up of either cellulose or synthetic filter media dependent on the required level of filtration. The element is then attached to the filter head by screwing it into position hence the term 'spin-on' can.

The advantage of this type of filtration is the speed and ease with which the filter can be changed - reducing downtime and labour costs. This is especially advantageous in mobile machinery where a filter change often needs to be done in the field. Spin-on filters are used on suction lines, and return lines.



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Key features include:

- Inorganic microfibre from 3 µm to 25 µm
- Wire mesh from 25 µm to 90 µm
- Resin impregnated paper from 10 µm to 25 µm

Connections:

- from G3/4" to G1"
- from 3/4" NPT to 1" NPT
- from SAE 8 - 3/4" - 16 UNF to SAE 24 - 1 7/8" - 12 UN
- 1 1/2" SAE 3000 psi/M
- 1 1/2" SAE 3000 psi/UNC

TYPE	DESCRIPTION	Pmax		Qmax	
		bar	psi	l/min	gpm
MPS 050, 051, 070, 071, 100, 101, 150, 151, 200, 250, 300, 301, 350, 351	Low pressure filter, available with single or dual CSG, CSGW, CS elements for in-line or flange mounting	12	174	365	96
MSH 050, 070, 100, 150	In-line low and medium pressure filter available with single element (CH)	35	508	195	52





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Positioned ahead of the pump, Suction Filters and strainers protect it from contamination, while providing additional flow diffusion to the pump suction line.

They are equipped with a magnetic column for retaining ferrous particles and are normally placed under the fluid head to take advantage of the piezometric thrust of the fluid and to reduce the risk of cavitation.

There are two types of suction filters:

- Suction strainer - a simple filter element screwed onto the suction pipe
- Tank wall-mounted suction filters - which are easier to maintain when the element needs replacing due to anti-drain valve

Key features include:

- Wire mesh from 25  $\mu\text{m}$  to 250  $\mu\text{m}$

Connections:

- from 3/8" (G/NPT) to 3" (G/NPT)
- from 3/4" NPT to 1" NPT
- from SAE 16 - 1 5/16" - 12 UN to SAE 24 - 1 7/8" - 12 UN
- from 1 1/2" SAE 3000 psi/Metric to 4" SAE 3000 psi/Metric
- from 1 1/2" SAE 3000 psi/UNC to 4" SAE 3000 psi/UNC
- hose barb from 2" Metric to 4" Metric

TYPE	DESCRIPTION	Qmax	
		l/min	gpm
STR 045, 050, 065, 070, 086, 100, 140, 150	Suction strainer, with or without bypass or magnetic column, internal tank mounting	875	231
MPA - MPM 012, 015, 025, 030, 045, 050, 075, 095, 120, 150, 180, 220, 280, 300, 380, 430	Suction strainer, with or without bypass or magnetic column	875	231
SF2 250, 350	Semi-submerged positive head suction filter, low flow rate, tank side or bottom mount	160	42
SF2 500, 501, 503, 504, 505, 510, 535, 540	Semi-submerged positive head suction filter, high flow rate, tank side or bottom mount	800	211



Filter elements are only efficient if their dirt-holding capacity is fully exploited.

This can be achieved by using filter housing equipped with clogging indicators which trip when the clogging causes an increase in pressure drop across the element.

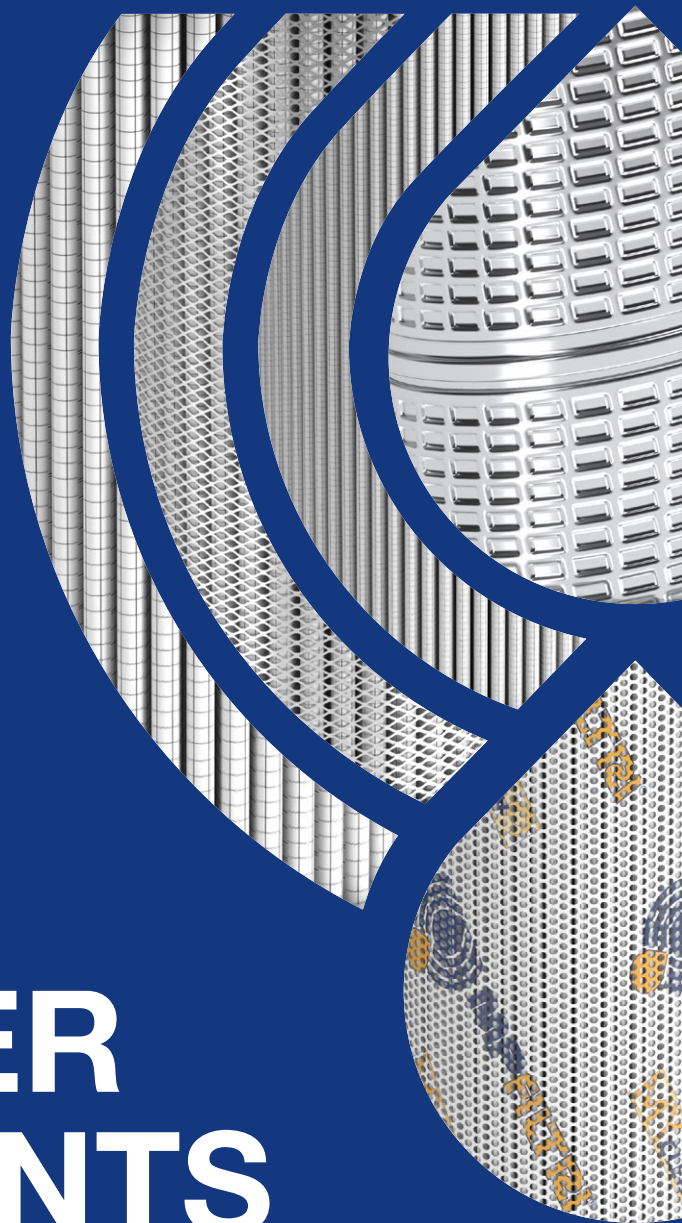
The alarm indicator is set to activate before the element becomes fully clogged.

MP Filtri can supply a selection of indicators including:

- Vacuum switches and gauges
- Pressure switches and gauges
- Differential pressure indicators and transmitter

These devices can be specified with either visual and electrical signals or both.

Our technologies make the world pure



# FILTER ELEMENTS

# MAXIMUM PROTECTION FROM CONTAMINATION

MP Filtri's filter elements protect hydraulic and lubrication systems from contamination and solid particulates. Particulate contamination is the primary cause of failures and malfunctions in these systems.

One range of elements can also protect from water ingress which leads to degradation of the lubrication capability and the surface protection provided by the fluid.

The most effective method of controlling contamination within the systems is usually achieved by mechanical processes.

## SURFACE FILTRATION

The surface filtration prevents any particles greater than the pore size entering the system by direct intervention. This filter media normally comprises metal mesh material.

## DEPTH FILTRATION

Depth filters are composed of overlapping fiber mats, which form flow-paths in various shapes and dimensions. The particles are retained in the pores, which are smaller than the diameter of the particles. The filter materials are normally fabricated with phenol resin impregnated cellulose fibres, metal fibres or inorganic fibres. During filtering with inorganic fibres (commonly called microfibrils) the filter layers are often placed on top of each other to increase the element's efficiency to retain contamination.

## WATER ABSORBER

MP Filtri's water-absorbing filter element is available with a filtration ability of 25 µm (identified with the material designation WA025) and guarantees the absolute filtering of the solid particles at  $\beta_{25(\text{C})} = 1000$ . The absorbing material is comprised of water absorbing fibres, which expand during absorption; the free water bound to the filter media is completely removed from the system and is no longer released.

Exclusive filter element



## THE NEW FILTER CONCEPT



Quality and efficiency are fundamental for MP Filtri.

This exclusive new filter element possesses polygon shape geometry and specific seal that ensures only original spare parts can be used - ensuring correct operation and higher system reliability.

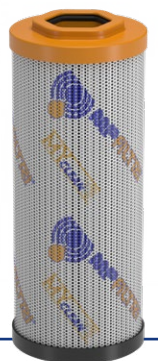
The products identified as MPFX, MPTX, MRSX, MPLX, MFBX, MFX, RSX and SFEX, RFEX, LFEX of the series ELIXIR<sup>®</sup> are protected by the following patents:

- Italian Patent: n° 102014902261205
- European Patent: n° 16181725.9
- Canadian Patent: n° 2,937,258

Furthermore, it is protected by the following patent application:

- US Patent Pending: n° 15/224,337

Protect the performance of your system with MYclean.





# MAXIMUM TECHNOLOGY UNDER THE SURFACE



1

PET layer for external protection of the filter element assembly during installation and service. The design ensures an effective open area for maximum flow capacity. Customer-specific logo adaptations are possible.

2

External metal mesh support for protection of the filtration medias from flow and pressure fluctuations and also to protect the integrity of the element's pleated structure.

3

External pre-filtration layer made of synthetic fibres available in two types:

- polyester material for protection of filter medias manufactured in microfibre (ultra-fine and fine);
- microfibre material (fibreglass) for elements retaining large size solid particulates.

4

Primary microfibre filtration  $\beta_{25(c)} = 1000$  beta efficiency for ultra-fine and fine applications ensuring maximum dirt holding capacity combined with low pressure drop characteristics.

5

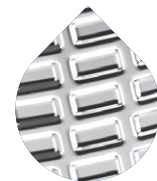
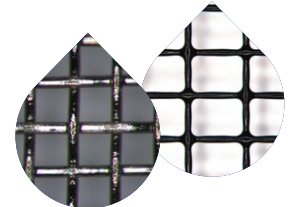
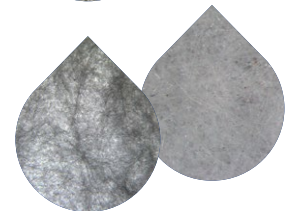
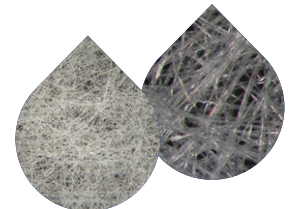
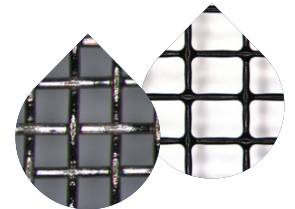
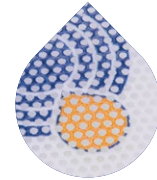
Polyester downstream layer support for protection of the filter media pleat structure.

6

Metal mesh for internal support of the filter medias to maintain the integrity of the overall element pleat pack. The mesh is available in stainless steel, or carbon steel with epoxy resin coating.

7

Enhanced protection of the element assembly from differential pressures is provided by the perforated inner support tube ensuring the integrity of the filter element pleat pack therefore preventing its collapse.



# ALL OF OUR FILTERS COMPLY WITH ALL HYDRAULIC SECTOR REGULATIONS

- ISO 10771-1 Fatigue pressure testing of metal pressure-containing envelopes
- ISO 16860 Test method for differential pressure devices
- ISO 16889 Multi-pass method for evaluating filtration performance of a filter element
- ISO 18413 Cleanliness of components - Inspection document and principles related to contaminant extraction and analysis, and data reporting
- ISO 23181 Determination of resistance to flow fatigue using high viscosity fluid
- ISO 2941 Verification of collapse/burst pressure rating
- ISO 2942 Verification of fabrication integrity and determination of the first bubble point
- ISO 2943 Verification of material compatibility with fluids
- ISO 3724 Determination of resistance to flow fatigue using particulate contaminant
- ISO 3968 Evaluation of differential pressure versus flow characteristics
- ISO 4405 Determination of particulate contamination by the gravimetric method
- ISO 4406 Method for coding the level of contamination by solid particles
- ISO 4407 Determination of particulate contamination by the counting method using an optical microscope
- ISO 16232-7 Particle sizing and counting by microscopic analysis
- DIN 51777 Determination of water content using titration according to Karl Fischer

## MULTI-PASS ISO 16889

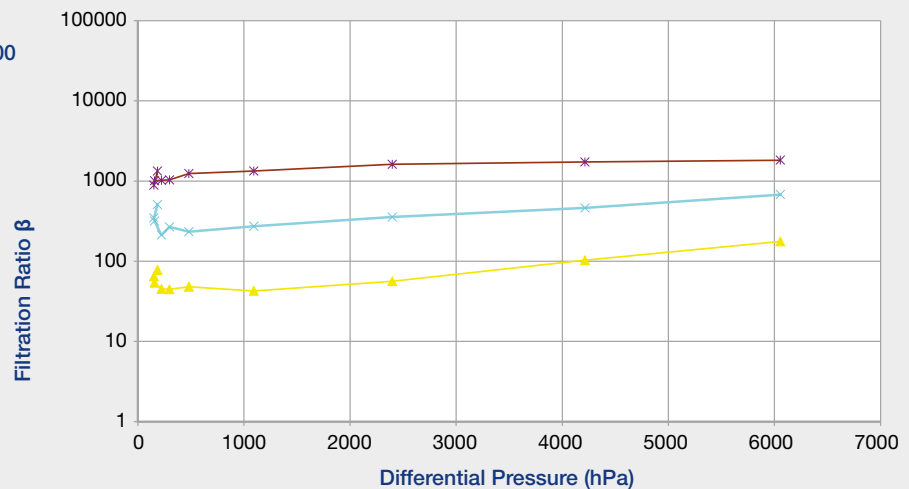
The ISO Multipass test is to evaluate filtration performance of a filter element. This standard provides reproducible test methods and data determining filtration efficiency, contamination holding capacity, and differential pressure characteristics. The test can be used on filter media which have a filtration quotient (Beta value) of  $\beta_{25(c)} \geq 75$  and a gravimetric end level in the tank of less than 200 mg/l. The test is done using a constant supply of a contaminant ISO MTD (Medium Test Dust).

Filtration ISO standard Comparison		
$\beta_{x(c)} > 1000$ ISO 16889	$\beta_x > 200$ ISO 4572	MP Filtri Filter media code
5 $\mu\text{m}_{(c)}$	3 $\mu\text{m}$	A03
7 $\mu\text{m}_{(c)}$	6 $\mu\text{m}$	A06
10 $\mu\text{m}_{(c)}$	10 $\mu\text{m}$	A10
16 $\mu\text{m}_{(c)}$	18 $\mu\text{m}$	A16
21 $\mu\text{m}_{(c)}$	25 $\mu\text{m}$	A25

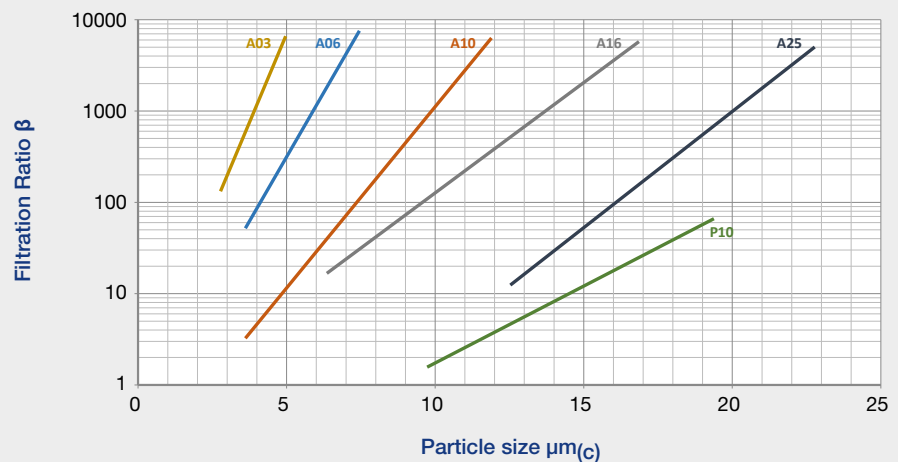
## BETA VALUE STABILITY

FILTRATION RATING A10,  $\beta_{10} \mu\text{m}_{(c)} > 1000$

- ▲  $d > 5 \mu\text{m}_{(c)}$
- ×  $d > 8 \mu\text{m}_{(c)}$
- \*  $d > 10 \mu\text{m}_{(c)}$



## FILTER FINENESS





## MICROFIBER RETURN ELEMENT

SERIES: N      TYPES: A

The standard series with filter medias made of at least 5 layers presents the best combination of separation performance and differential pressure resistance ( $\Delta P = 10$  bar,  $\Delta P = 5$  bar for spin-on only).

MFX use H series.

**RETURN FILTERS:**

**MPFX | MPLX | MPTX | MFBX | MPF | MPT | MFB | MPH - MPI | FRI | RF2**

**RETURN/SUCTION FILTERS:**

**MRSX**

**SPIN-ON FILTERS:**

**MPS | MSH**



## MICROFIBER ELEMENT IN LINE

SERIES: N      TYPES: A

The standard series filter media pleat pack, comprised with at least 5 layers and a reinforced inner support tube, provides high filtration efficiency performance and differential pressure collapse resistance ( $\Delta P = 20$  bar / 290 psi).

FEX use N series - 8 bar instead of N - 10 bar.

**INLINE RETURN FILTERS:**

**RFEX**

**INLINE RETURN/SUCTION FILTERS:**

**LMP 124 MULTIPOINT**

**LOW AND MEDIUM PRESSURE FILTERS:**

**LFEX | LMP MULTIPOINT 110 - 120 - 123 | LMP 210 - 211 | LMP 400 - 401 - 430 - 431 | LMP 950 - 951 | LMP 952 - 953 - 954 | LMD 211 | LMD 400 - 401 - 431 | LMD 951 | LDP - LDD | LMP 900 - 901 | LMP 902 - 903**



## WATER REMOVAL

SERIES: N      TYPES: WA

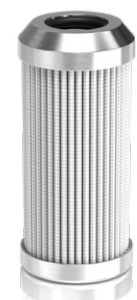
Featuring a special polymer layer for absorbing free water in the oils, and a unique composition of layers, the element filters solid particles with water retention.

**SPIN-ON FILTERS:**

**MPS (CW filter element)**

**LOW AND MEDIUM PRESSURE FILTERS:**

**LFEX | LMP 210 - 211 | LMP 400 - 401 - 430 - 431 | LMP 900 - 901 | LMP 902 - 903 | LMP 950 - 951 | LMP 952 - 953 - 954 | LMD 211 | LMD 400 - 401 - 431 | LMD 951 | LDP - LDD**



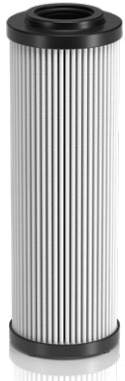
## STAINLESS STEEL HIGH-PRESSURE ELEMENT

SERIES: U      TYPES: A

Filter media pleat packs with high filtration efficiency performance and reinforced inner support tube provides differential pressure resistance ( $\Delta P = 210$  bar / 3000 psi); element metal components are made of stainless steel.

**HIGH PRESSURE FILTERS MADE OF STAINLESS STEEL:**

**FZP | FZH | FZX | FZB | FZM | FZD**



### MICROFIBER ELEMENT HIGH-PRESSURE (N Series)

SERIES: N      TYPES: A

Filter media pleat packs with high filtration efficiency performance and increased strength for the best operating performance for pressure lines ( $\Delta P = 20$  bar / 290 psi).

HIGH PRESSURE FILTERS:

**FMP 039 | FMP | FHP | FMM | FHA 051 | FHM | FHB | FHF 325 | HPB**

HIGH PRESSURE FILTERS MADE OF STAINLESS STEEL:

**FZP | FZH | FZB | FZM**



### MICROFIBER ELEMENT HIGH-PRESSURE (H Series)

SERIES: H      TYPES: A

High separation performance with high differential pressure resistance. The filter medias include a reinforced inner support tube with a fine mesh external layer for complete support of the element pleat pack ( $\Delta P = 210$  bar / 3000 psi).

HIGH PRESSURE FILTERS:

**FMP | FHP | FHM | FHB | HPB | FHD**

HIGH PRESSURE FILTERS MADE OF STAINLESS STEEL:

**FZP | FZH | FZX | FZB | FZM | FZD**



### MICROFIBER ELEMENT HIGH-PRESSURE (R Series)

SERIES: R      TYPES: A

Filter media pleat packs with high filtration efficiency performance and strengthened inner support tube provides differential pressure collapse resistance to ( $\Delta P = 20$  bar / 290 psi) are used with back flow prevention check valve and reverse flow circuits with bypass valve.

HIGH PRESSURE FILTERS:

**FMP | FHP | FHA 051 | FHD | FMM**

HIGH PRESSURE FILTERS MADE OF STAINLESS STEEL:

**FZD | FZP**



### MICROFIBER ELEMENT HIGH-PRESSURE (S Series)

SERIES: S      TYPES: A

Filter media pleat packs with high filtration efficiency performance and strengthened inner support tube provides differential pressure collapse resistance ( $\Delta P = 210$  bar / 3000 psi), used in filters without bypass, with back flow prevention check valve, and reverse flow circuits.

HIGH PRESSURE FILTERS:

**FMP | FHP | FHA 051 | FHM | FHB | FHD | FMM**

HIGH PRESSURE FILTERS MADE OF STAINLESS STEEL:

**FZD | FZP**





## PAPER ELEMENT

SERIES: N      TYPES: P

Single-layer of cellulose fiber reinforced with resins, filtration efficiency  $\beta_x = 2$  nominal rating.

### SUCTION FILTERS:

SFEX | SF2 250 - 350

### RETURN FILTERS:

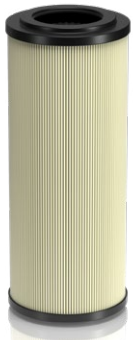
RFEX | MPFX | MPLX | MPTX | MFBX | MPF | MPT | MFB | MPH - MPI | FRI | RF2

### SPIN-ON FILTERS:

MPS | MSH

### LOW AND MEDIUM PRESSURE FILTERS:

LFEX



## REINFORCED PAPER ELEMENT

SERIES: N      TYPES: R

Filter medias made of resin-reinforced cellulose fibre and supported with metal mesh element for increase of the differential pressure resistance.

### LOW AND MEDIUM PRESSURE FILTERS:

LMP MULTIPORT 110 - 120 - 123 | LMP 210 - 211 | LMP 400 - 401 - 430 - 431 | LMD 211 | LMD 400 - 401 - 431 | LDP - LDD



## METAL MESH

SERIES: N      TYPES: M

Metal mesh with nominal filtration grade ranging from 25  $\mu\text{m}$  to 250  $\mu\text{m}$  for maximum mechanical strength against differential pressure or special fluids.

### SUCTION FILTERS:

SFEX | STR - MPA - MPM | SF2 250 - 350 | SF2 500

### RETURN FILTERS:

RFEX | MPFX | MPLX | MPTX | MFBX | MPF | MPT | MFB | MPH - MPI | FRI | RF2

### SPIN-ON FILTERS:

MPS | MSH

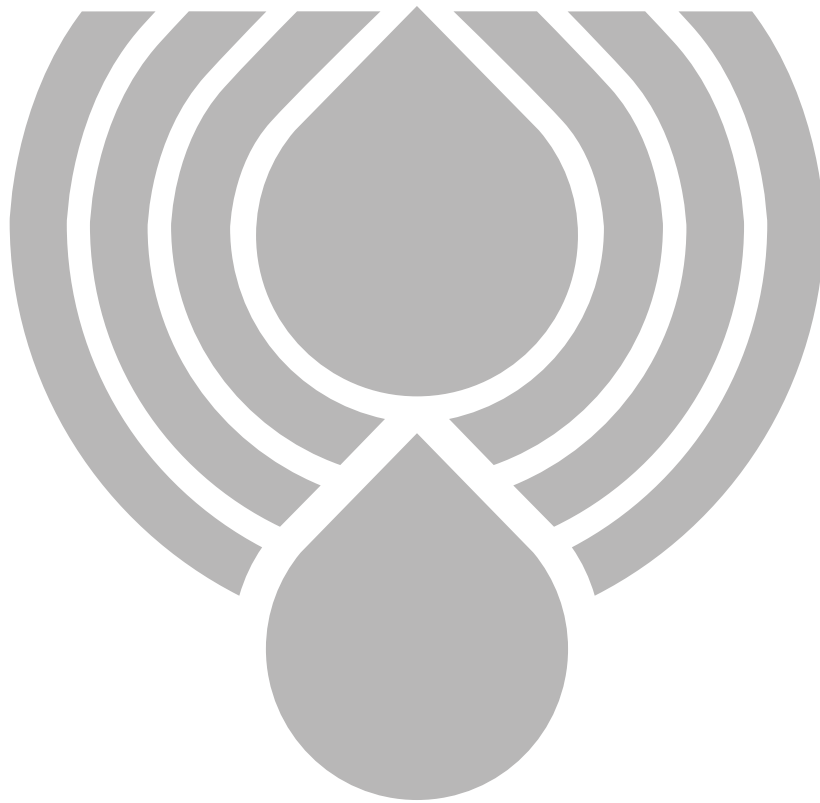
### LOW AND MEDIUM PRESSURE FILTERS:

LFEX | LMP MULTIPORT 110 - 120 - 123 | LMP 210 - 211 | LMP 400 - 401 - 430 - 431 | LMP 900 - 901 | LMP 902 - 903 | LMP 950 - 951 | LMP 952 - 953 - 954 | LMD 211 | LMD 400 - 401 - 431 | LMD 951 | LDP - LDD

### HIGH PRESSURE FILTERS:

FMP 039 | FMP | FHP | FMM | FHA 051 | FHM | FHB | FHF 325 | FHD

# Power Transmission Product Range



**PASSION TO PERFORM**

## LMG

One-piece bell-housing, especially suitable for gear pumps and small piston pumps.



## LDC

Consist of two mounted parts with screws for motor and pumps.



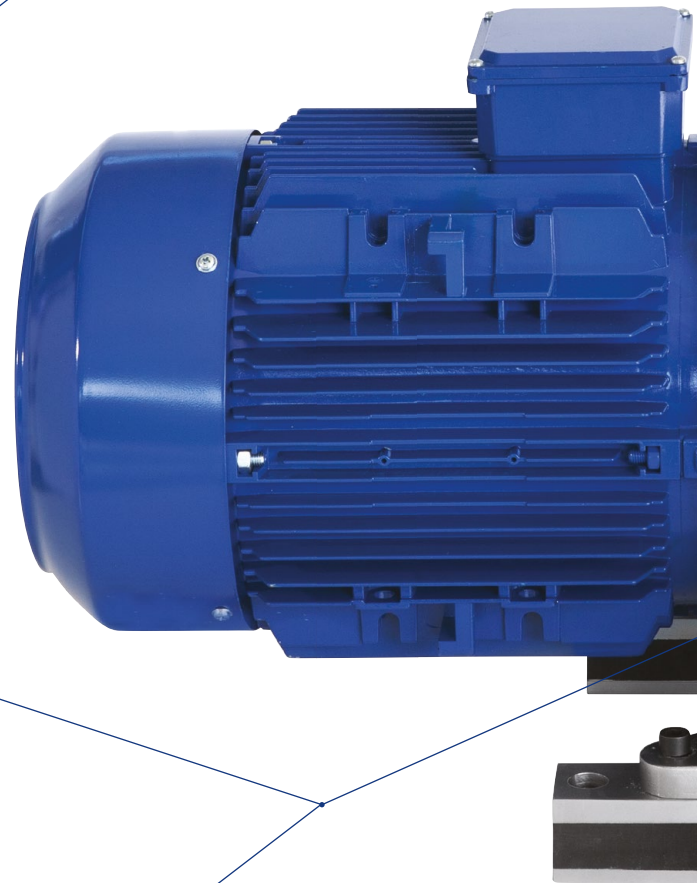
## LMS

Featuring octagonal damping ring to reduce the noise generated by vibration between pumps and motors.



## MULTI-COMPONENTS

Modular systems for large pumps. Comprised of a motor flange, an adaptor and a pump flange, the system is highly flexible offering multiple assembly combinations.



## SGEA-SGEG-SGES-SGEK-SGDR

Flexible couplings for IEC electric motors and hydraulic pumps:

- SGEA Series in Aluminum
- SGEG Series in Cast Iron
- SGES Series in Steel
- SGEK Series in Aluminum
- SGEK Series in Cast Iron
- SGDR Series in Steel

**ROTAFIT**

## AKG

Complete couplings for hydraulic pumps and IEC electric motors:

- AKG Series in Aluminum
- AKG Series in Cast Iron
- AKG Series in Steel

ATEX 2014/34/UE & U.K. Regulation  
S.I. 2016 No. 1107 (as amended)



## EGE

Spider for torque transmission:

- EGE Series in NBR
- EGE RR Series in Polyurethane



## ACCESSORIES

### PDMA

Mounting feet to support the motor-pump units, assembled on bell-housings.



### MPDR

Damping rods, mounting rails with NBR insert, suitable to reduce the vibrations.



## CLEANING COVERS

Cleaning covers with diameter 275, 350, 400 and 475 mm conforming to DIN 24339.



## ANMA

Damping rings for vertical installation of the motor-pump units.





## BELL-HOUSING

For gear, piston, vane and screw pumps.



### Gear pumps

IEC Electric Motors	European std						German std - Bosch		
	0,5	1	2	3	3,5	4	ZB	ZF	ZG
IEC 63 Ø140 - d.11x23	•	•	•				•		
IEC 71 Ø160 - d.14x30	•	•	•				•		
IEC 80 Ø200 - d.19x40	•	•	•	•			•	•	
IEC 90 Ø200 - d.24x50	•	•	•	•			•	•	
IEC 100 Ø250 - d.28x60		•	•	•	•		•	•	
IEC 112 Ø250 - d.28x60		•	•	•	•		•	•	
IEC 132 Ø300 - d.38x80		•	•	•	•	•		•	•
IEC 160 Ø350 - d.42x110			•	•	•	•	•	•	•
IEC 180 Ø350 - d.48x110			•	•	•	•	•	•	•
IEC 200 Ø400 - d.55x110			•	•	•	•	•	•	•
IEC 225 Ø450 - d.60x140			•	•	•	•	•	•	•

IEC Electric Motors	Flange ISO 3019-2							Flange SAE J 744									
	50 B2/B4	63 B2/B4	80 B2/B4	100 B2/B4	125 B2/B4	160 B2/B4	200 B2/B4	50-2 (A-A)	82-2 (A)	101-2 (B)	127-2 (C)	152-2 (D)	165-2 (E)	101-4 (B)	127-4 (C)	152-4 (D)	165-4 (E)
IEC 80 Ø200 - d.19x40	•	•	•	•				•	•								
IEC 90 Ø200 - d.24x50	•	•	•	•				•	•								
IEC 100 Ø250 - d.28x60	•	•	•	•	•			•	•	•				•			
IEC 112 Ø250 - d.28x60	•	•	•	•	•			•	•	•	•			•			
IEC 132 Ø300 - d.38x80			•	•	•	•			•	•	•			•	•		
IEC 160 Ø350 - d.42x110			•	•	•	•			•	•	•			•	•		
IEC 180 Ø350 - d.48x110			•	•	•	•	•		•	•	•			•	•		
IEC 200 Ø400 - d.55x110			•	•	•	•	•		•	•	•	•		•	•	•	
IEC 225 Ø450 - d.60x140			•	•	•	•	•			•	•	•	•	•	•	•	•
IEC 250 Ø550 - d.65x140			•	•	•	•	•				•	•	•	•	•	•	•
IEC 280 Ø550 - d.75x140					•	•	•				•	•	•	•	•	•	•
IEC 315 Ø660 - d.80x170					•	•	•				•	•	•	•	•	•	•
IEC 355 Ø800 - d.90x170					•	•	•				•	•	•	•	•	•	•

## COUPLINGS

- 100% shaft covering
- Noise reduction by spider inclusion
- Spider available with different material



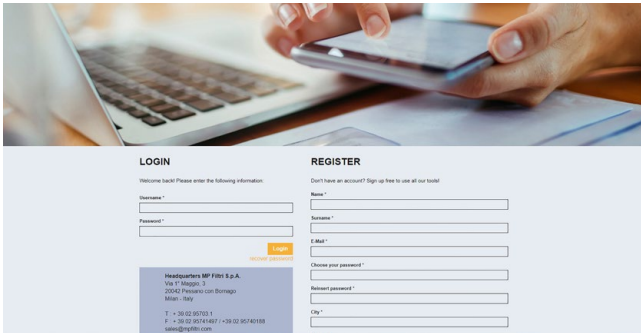
IEC Electric Motors	Aluminium ENAB 46100	G25 UNI 5007 Cast Iron - C40 Carbon Steel				
	Shaft ISO 3019-2	Shaft ISO 3019-2	Shaft ANSI B92.1A1976	Shaft DIN 5480	Shaft DIN 5481	Shaft DIN 5482
IEC 80 Ø200 - d.19x40	•	•	•	•	•	•
IEC 90 Ø200 - d.24x50	•	•	•	•	•	•
IEC 100 Ø250 - d.28x60	•	•	•	•	•	•
IEC 112 Ø250 - d.28x60	•	•	•	•	•	•
IEC 132 Ø300 - d.38x80	•	•	•	•	•	•
IEC 160 Ø350 - d.42x110	•	•	•	•	•	•
IEC 180 Ø350 - d.48x110	•	•	•	•	•	•
IEC 200 Ø400 - d.55x110	•	•	•	•	•	•
IEC 225 Ø450 - d.60x140		•	•	•	•	•
IEC 250 Ø550 - d.65x140		•	•	•	•	•
IEC 280 Ø550 - d.75x140		•	•	•	•	•
IEC 315 Ø660 - d.80x170		•	•	•	•	•
IEC 355 Ø800 - d.90x170		•	•	•	•	•

## EASY TO MASTER SOFTWARE

Our simple to use yet sophisticated software system takes you step-by-step through the selection process making it easy for you to find the ideal coupling for your needs.

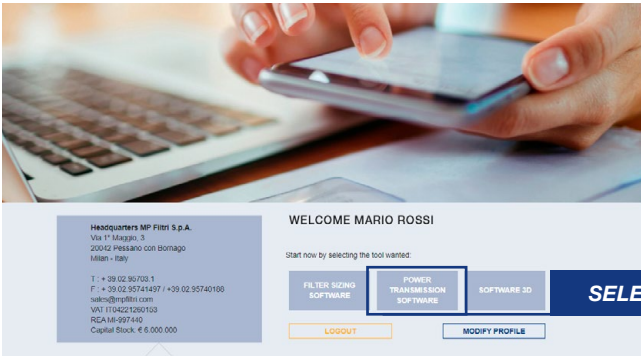
### STEP 1

Go to our software selection site portal at: <https://www.mpfiltri.com/registration.html>



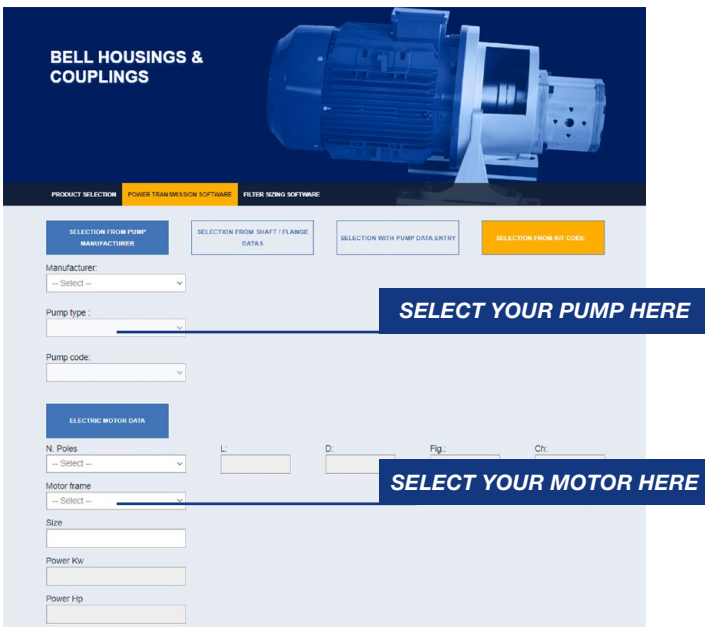
### STEP 2

Log in and select Power Transmission Software.



### STEP 3

Select your pump and motor.



### STEP 4

Confirm your specification and receive the coupling datasheet complete with dimensional 2D drawing.

MP Filtri S.p.A. - Via 1° Maggio, 3  
20060 Pessano con Bornago - Milano - Italy  
Ph: 02.95703.1 - Fax: 02.95741497-95740188  
sales@mpfiltri.com - www.mpfiltri.com

MP Filtri S.p.A. - Via 1° Maggio, 3  
20060 Pessano con Bornago - Milano - Italy  
Ph: 02.95703.1 - Fax: 02.95741497-95740188  
sales@mpfiltri.com - www.mpfiltri.com

Pump		Pump data	
Manufacturer	BOSCH REXROTH	L1	60
Pump model	A10VSO71/31-1-PA	Thickness	10
Electric Motor		d1	32
N. Poles	4	Ch1	10
Power Kw	11	i2	0
Power Hp	15	C	125
Size	160M	In	160
Electric Motor Data		Nr	2
L	110	F	M16
D	42		
Ch	12		
Fig	350		

Optional with polyurethane spider red colour - 98 Shore A		
P/n Bell Housing kit: AKGBMMS2023ARR	NOT AVAILABLE	Max torque (Nm): Temperature °C:
P/n Complete kit: AKMMMS2023ARR01	AKGBMMS2023ARR	1050 -30 + 90
Ordering code Bell-Housing LMC350AFSU082DI	Half coupling code SGEA51M07109FG EGE 0RR SGEA51D0404FG	Ordering codes Foot bracket: PDMA350 Damping rods for foot bracket: MPDRPDMA350

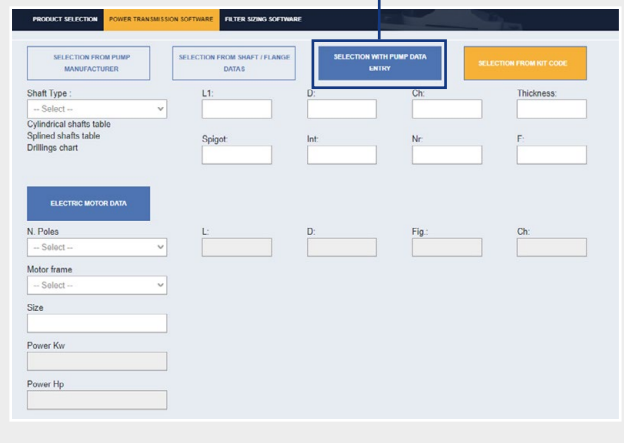
## NEW FEATURE

## YOU CAN'T FIND THE PUMP ON THE SYSTEM?

Insert pump's dimension on the section

### SELECTION WITH PUMP DATA ENTRY

and follow the instructions to achieve the couplings components code.





## WORLDWIDE NETWORK



HEADQUARTERS

10 BRANCHES

OVER 100 DISTRIBUTORS

Germany

France

USA

Russian

China Federation

United Kingdom

India

Canada

Singapore

United Arab Emirates

**PASSION TO PERFORM**