MT010 SERIES

TANK MOUNTED RETURN LINE FILTERS

FILTER ELEMENT ACCORDING TO DIN 24550

MT010-040, 063, 100, 160, 250

Operating Conditions

Operating Pressure:	10 bar [145 psi]
Operating Flow:	Up to 250 l/min.[lpm]
Connection Types:	Up to G1 1/2 , SAE 1 ½, SAE 24
Operating Temperature:	-10℃- +100℃ [14℉- +212℉]
Filter Ratings:	3, 6, 10, 20 and 25 µ

Features

- Compatible with tank mounted
- High efficiency filter elements
- Durable housing and filter element
- High dirt holding capacity
- Low pressure differential loss
- Bypass minimizing pressure loss
- Extending service and maintenance time intervals

Usage Areas

- Industrial Hydraulic
- Mobile Hydraulic
- Marine Hydraulic
- Open-Sea Hydraulic
- Aircraft Hydraulic
- Space Hydraulic

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Filtration

Return line filters are positioned on the return line of fluid at hydraulic systems.It filters the materials formed in the system like dirt, filth, etc. and ensures that the hydraulic fluid in the tank is clean.

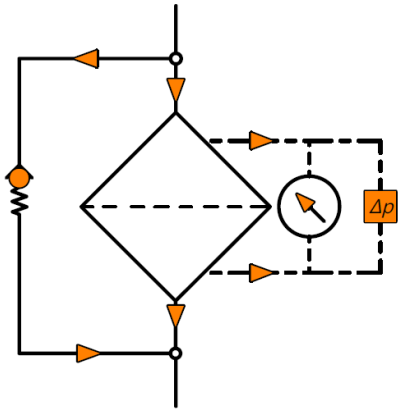
Keeping the oil in the tank clean by being filtered continuously ensures long life of hydraulic system elements and filters.

Cleaning by filtering the oil inside hydraulic tank extends the oil tank cleaning and maintenance period. Periodic maintenance of the systems becomes the quicker and the easier.

MT010 SERIES TANK MOUNTED RETURN LINE FILTERS

TECHNICAL SPECIFICATIONS AND STANDARDS

MT010-040, 063, 100, 160, 250



MT010 SERIES

040-400 Series	Weight	Volume	Burst Pressure	Body Materials	
	Assembly	*Housing*	*bar*	*Head*	*Housing*
040	1,5 kg	0,50 lt	25 bar	Aluminium Alloy	Strengthened Polyamide
063	1,65 kg	0,70 lt			
100	1,90 kg	1,20 lt			
160	5,00 kg	2,00 lt			
250	5,30 kg	3,20 lt			

STANDARDS

ISO 3968	Hydraulic Fluid Power — Filters — Evaluation of Differential Pressure Versus Flow Characteristics
DIN 24550	Fluid Power – Hydraulic Filters – Part 1: Definitions, Nominal Pressures, Nominal Sizes, Fitting Dimensions
,	
ISO 16889	Hydraulic Fluid Power – Filters – Multi-Pass Method for Evaluating Filtration Performance of a Filter Element
ISO 2943	Hydraulic Fluid Power - Filter Elements - Verifying Material and Fluid Compatibility in Filter Elements
ISO 2941	Hydraulic Fluid Power - Verification of Collapse/Burst Pressure Rating of Filter Elements

PREFERRED TYPES

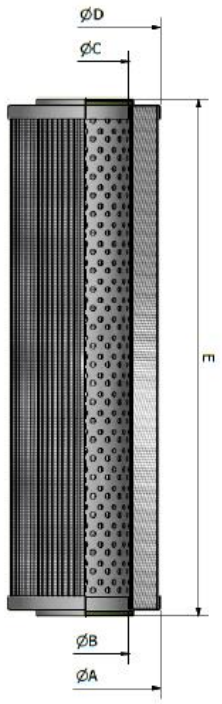
With 10-micron filter element including bypass valve at 30mm^2/s kinematic viscosity;

MT010 TYPES

040- 400	Δp=0,5 bar Flow Rate (lpm)	Product Code	Filter Element Code
MT010-040-10MGFR-P2.2-N-D2	47	GDF040.00	MT00060
MT010-063-10MGFR-P2.2-N-D3	66	GDF063.00	MT00078
MT010-100-10MGFR-P2.2-N-D3	88	GDF100.00	MT00080
MT010-160-10MGFR-P2.2-N-D4	193	GDF160.00	MT00068
MT010-250-10MGFR-P2.2-N-D5	265	GDF250.00	MT00084

FİLTER ELEMENT (According to DIN24550)

Dimensions And Technical Specifications



Technical Specifications

Collapse/Burst Pressure	30bar (ISO2941)
Operating Temperature	-20°C...+110°C
Flow Direction	Outside to Inside
Filter Material	Fiberglass
Filter Sensivity (ISO 16889)	3 µm β>200
	6 µm β>200
	10 µm β>200
	20 µm β>200
	25 µm β>200
Compatibility with Fluids	HH-HL-HM
	HR-HV-HG
Standards;	
ISO 2941, ISO 2942, ISO 16889, ISO 6743-4	

DIMENSIONS

Filter Element	A	B	C	D	E
MT010-040-...	58	32.2	32.2	58	100
MT010-063-...	58	32.2	32.2	58	159
MT010-100-...	58	32.2	32.2	58	249
MT010-160-...	99	52.8	52.8	99	159
MT010-250-...	99	52.8	52.8	99	249

*All Dimensions are in mm.

FILTER ORDERING CODE

Example of Ordering Code:

Standard	-	Model	-	Filtering Rating	-	Diff. Pressure	-	Clogging Indicator	-	Sealing Element	-	Connection
MT010	-	160	-	10MGFR	-	M0.0	-	P2.2	-	N	-	D4

MT010

Models*	Flow Rate	40 lpm	**040**
		63 lpm	**063**
		100 lpm	**100**
		160 lpm	**160**
		250 lpm	**250**
Filter Element (DIN24550)	Filter Rating	3 microns	**03MGFR**
		6 microns	**06MGFR**
		10 microns	**10MGFR**
		20 microns	**20MGFR**
		25 microns	**25MGFR**
Pressure Gauge	Without Pressure Gauge		**M0.0**
	Measuring Range	0-6 bar	**M6.0**
Clogging Indicator	Without Indicator		**P0.0**
	Signal Pressure	0,8 bar	**P0.8**
		1,5 bar	**P1.5**
		2,2 bar	**P2.2**
Sealing Elements	Material	NBR	**N**
		EPDM	**E**
Ports For optional connections,please check below ports table	040	G3/4	**D2**
	063-100	G1	**D3**
	160	G1 1/4	**D4**
	250	G1 1/2	**D5**

* Volumetric flow rate in lpm is the values specified for 25-micron filtration precision according to DIN24550

OPTIONAL PORT CONNECTIONS TABLE

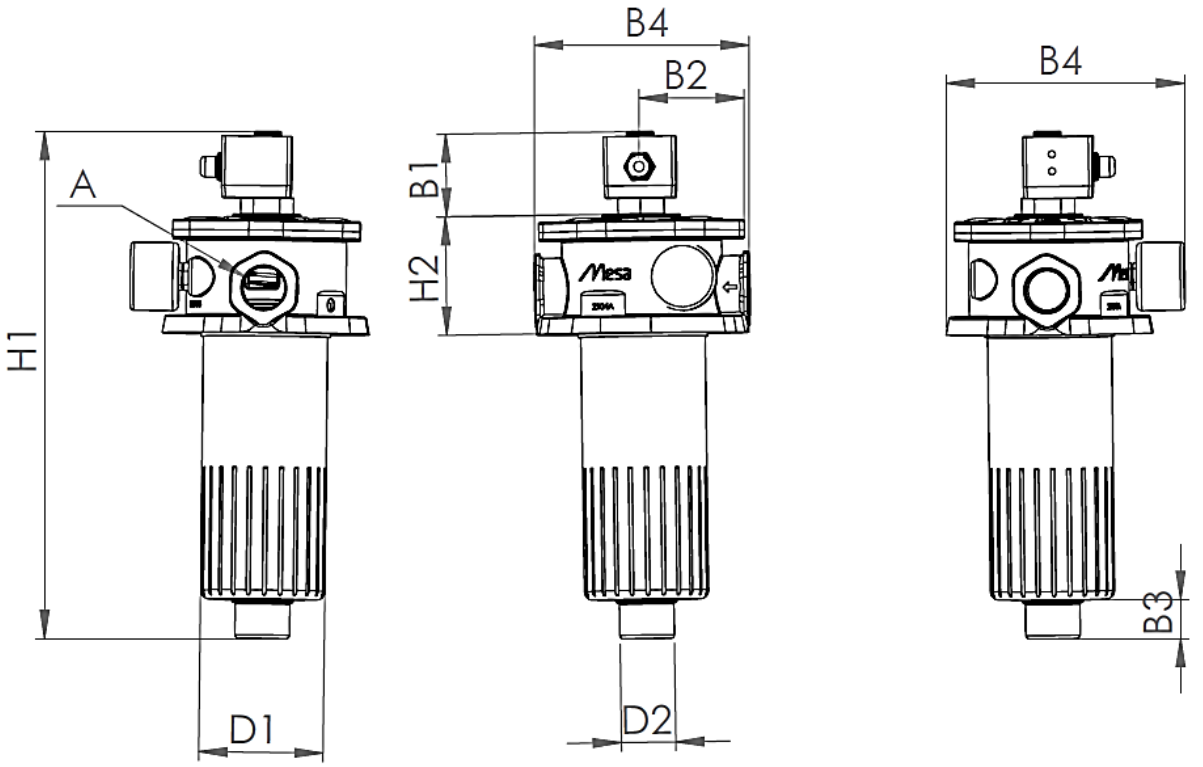
Connections	Connection Standard	Filter Types				Ordering Code
		040	063-0100	160	250	
G3/4	ISO 228	**S**	**O**			D2
G1		**O**	**S**			D3
G1 1/4				**S**	**O**	D4
G1 1/2				**O**	**S**	D5
SAE 1 1/4	SAE FLANGE 3.000 psi			**O**	**O**	F1
SAE 1 1/2				**O**	**O**	F2
1 1/16 -12 UN 2B	SAE 12	**O**	**O**			P1
1 5/16 -12 UN 2B	SAE 16	**O**	**O**			P2
1 7/8 -12 UN 2B	SAE 24			**O**	**O**	P3

Standard Connection : **S** Optional Connection : **O**

DIMENSIONS

MT010-040/063/100 SERIES

Along with Mechanical Pressure Indicator, Electronic Pressure Gauge and Pollution Manometer.

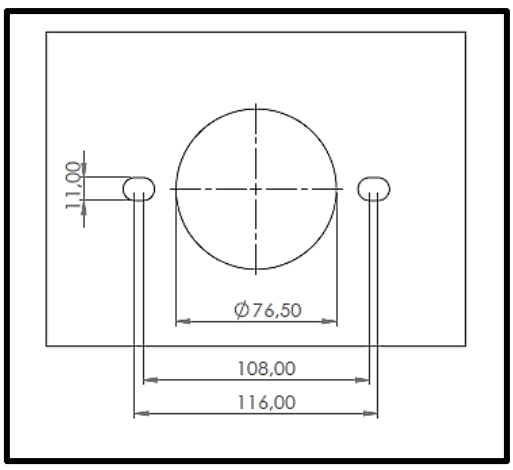


MT010

	A	B1	B2	B3	B4	D1	D2	H1	H2
040	G3/4	55	62	22,5	125	73	32	250	70
063	G1	55	62	22,5	125	73	32	300	70
100	G1	55	62	22,5	125	73	32	400	70

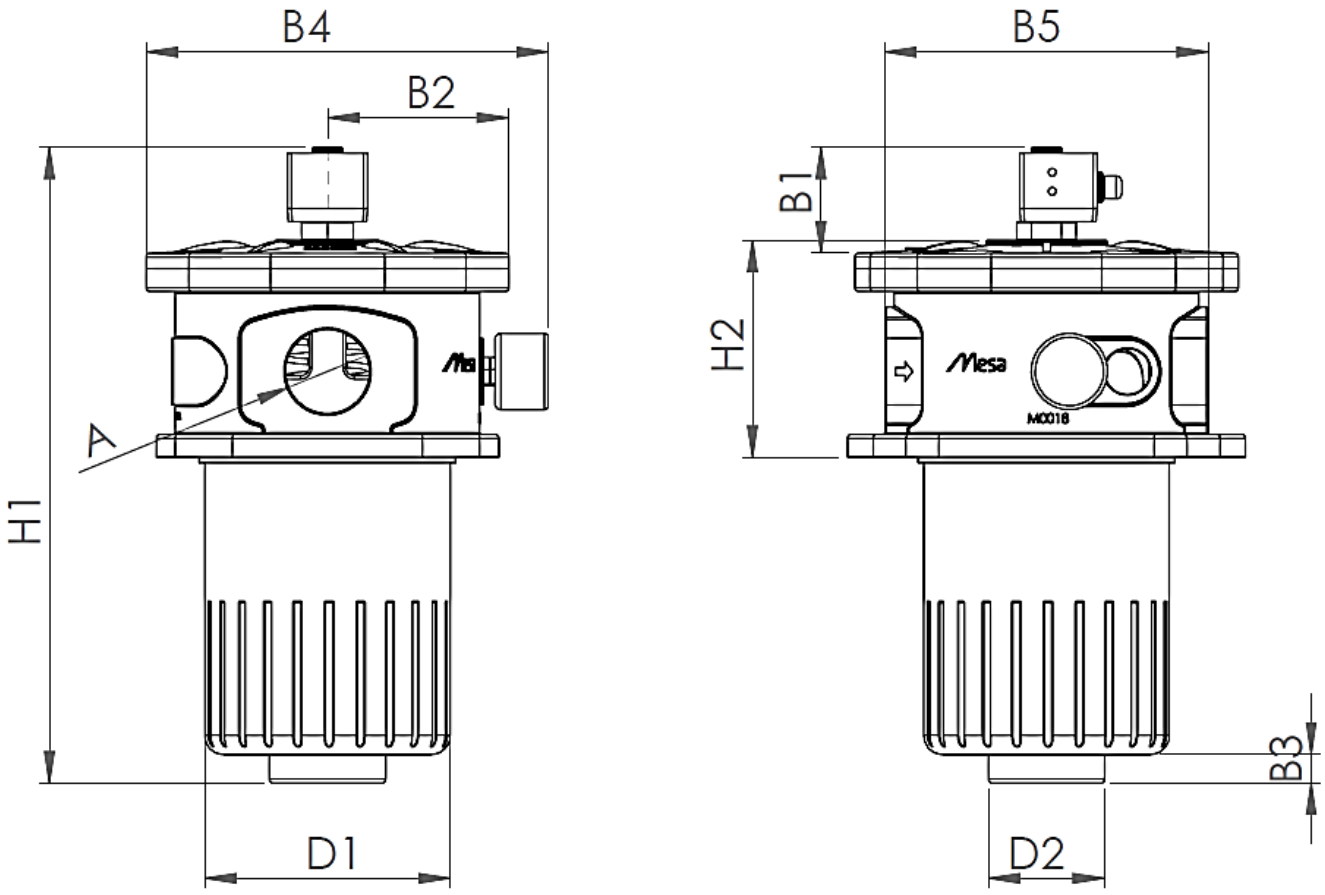
*All Dimensions are in mm.

Mounting Dimensions



MT010-160/250 SERIES TANK MOUNTED RETURN LINE FILTERS

Along With Mechanical Pressure Indicator, Electronic Pressure Gauge and Pollution Manometer.

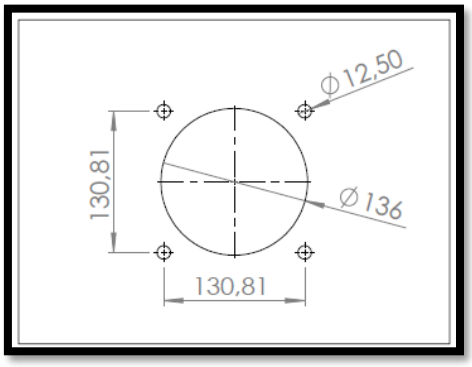


MT010 SERIES

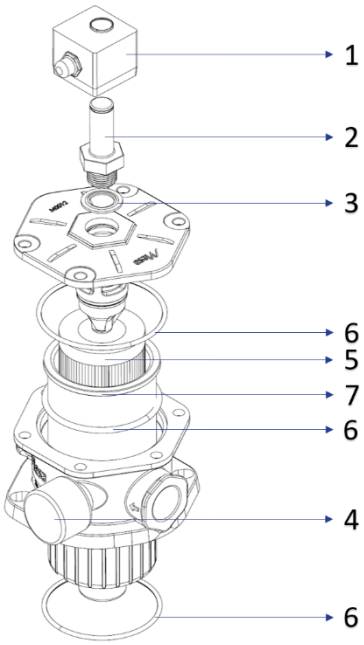
	A	B1	B2	B3	B4	B5	D1	D2	H1	H2
160	G1 1/4	55	95	15	210	170	129	61	335	114
250	G1 1/2	55	95	15	210	170	129	61	435	114

*All Dimensions are in mm.

Mounting Dimensions



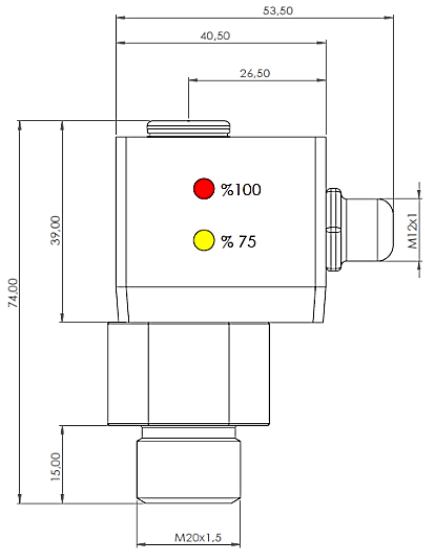
MT010 SERIES SPARE PARTS LIST

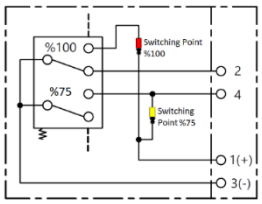


SPARE PARTS LIST

No	Spare Part Name	Details of Model	Part Number
1	M12 x1 4-PIN Electronic Switch	MT010-040/063/100/160/250	ES01
2	M20 x 1,5 Clogging Indicator		MBG01
3	M20 Washer		MT00034
4	Pressure Gauge	MT010-040/063/100/160/250	M010GP6
5	10µ Glass Fiber Filter Element	MT010-040	MT00060
		MT010-063	MT00078
		MT010-100	MT00080
		MT010-160	MT00068
		MT010-250	MT00084
6	Filter Cover O-Ring	MT010-040/063/100	MT00058
		MT010-160/250	MT00070
	Filter Housing O-Ring	MT010-040/063/100	MT00056
		MT010-160/250	MT00071
	Filter Tank Mounting O-Ring	MT010-040/063/100	MT00057
		MT010-160/250	MT00072
7	Filter Housing	MT010-040	M0014
		MT010-063	M0015
		MT010-100	M0016
		MT010-160	M0019
		MT010-250	M0020

MT010 SERIES MECHANICAL AND ELECTRONIC MAINTENANCE INDICATORS





Specifications

Operating Pressure	Up to 10 bar [145 psi]
Signal Pressure	2,2 bar
Optional Signal Pressure	0,8 – 1,5 bar
Bypass Cracking Pressure	3,5 bar
Electronic Switch Connection	M12x1 4-PIN

* Further details, please check section of filter order code

MT010 SERIES INSTALLATION, COMMISSIONING AND MAINTENANCE CONDITIONS

More than 80% of the malfunctions in hydraulic systems are caused by the contamination of the used oil in the system. In order to prevent these malfunctions, the used oils have to be filtered, continuously. Ensuring continuous filtration will indicate over time that the filter element is clogged and need to be replaced the new one. When the filter element reaches 100% clogging, it must be replaced in order for the system to work efficiently and the operating conditions of the system do not deteriorate. In MT010 Tank Mounted Return Line Filters, the obstruction of the filter is visually presented to the user with an electrical signal.

How to do Maintenance of Filter?

Before servicing the hydraulic filter in the system, make sure that the system is completely closed and that the filter is not under pressure. Then Please follow the steps below;

- With the help of a wrench, unscrew the 6 fasteners that connect the filter cover and the filter body, counter clockwise. The cover will be separated from the body as a result of the loosened connection due to the assembly spring.
- Disassemble bypass system with filter cover, filter element and filter housing upwards.
- When disassembling the filter housing, use the lifting handles, if any. (Except MT010-040 and MT010-063 Series)
- Disassemble the filter element from the filter housing by applying light force with the bypass system to the separation direction.
- Clean the other parts of the hydraulic filter. (Filter head, housing, etc.)
- Assemble the new (clean) filter element like you removed the dirty filter element. Make sure that the new filter element is compatible with your filter (according to DIN24550).
- Before mounting the filter housing, visually check that it is not damaged and that the sealing elements are healthy.
- Assemble the filter housing carefully.

NOTE: Environmental and performance tests were carried out under optimum conditions. Please contact us for extreme environmental conditions.

Power of Regeneration

Regeneration of Hydraulic