

MDHC series

Maximum working pressure up to 1 MPa (10 bar) - Flow rate up to 500 l/min



MDHC250 GENERAL INFORMATION

Description

Return filter

Maximum working pressure up to 1 MPa (10 bar)
Flow rate up to 500 l/min

MDHC, is a technically advanced filtration product line for efficient and compact, hydraulic reservoir management. Designed to ensure overall system cleanliness, the filters are either installed in a semi immersed or fully immersed position. This new design reduces the volume of the air coming into the tank space and dramatically reduces the velocity of the air through the filter which in turn allows the separation of the air from the fluid. This insures that the system is protected against the effects caused by air contamination such as incorrect system response, cavitation, foaming and fluid degradation. The filtration from inside to outside allows for a cleaner filter element replacement which insures that any contaminated fluid remains within the used filter element.

Available features:

- Female threaded connections up to 1 1/2" and flanged connections up to 1 1/2", for a maximum flow rate of 500 l/min
- Multiple connections, to connect several return lines or drains
- In to Out filtration, to reduce the risk of residual contamination going into the system during the maintenance works
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve, to relieve excessive pressure drop across the filter media
- Flat Seal to suit a variety of reservoir surfaces
- Oil dipstick, to easily check the level of the fluid into the reservoir (separate item)
- Anti-drain membrane, to reduce the volume of air coming to the tank
- Optimized flow path, to reduce the speed of the fluid through the filter
- Diffuser with optimized output, to promote the air separation and to reduce the risk of foaming and noise
- Optional filler plug, to fill cleaned fluid into the tank without an additional plug
- Visual, electrical and electronic clogging indicators and differential pressure clogging indicators

Common applications:

Heavy duty industrial equipment
 Large mobile machines with limited space for the tank

Technical data

Filter housing materials

- Head and cover: Aluminium
- Anti-drain membrane: Polyamide
- Diffuser: AISI 430
- Valve: Polyamide / Steel

Pressure

- Test pressure: 1.5 MPa (15 bar)
- Min. Burst pressure: 3 MPa (30 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 1 MPa (10 bar)

Bypass valve

- Opening pressure 0.175 MPa (1.75 bar) ±10%
- Opening pressure 0.3 MPa (3 bar) ±10%

Filter element features

Filter MDHC		Filter element DHC	
Δp Element type			
Element media	Construction	Δp Series	Δp
A - Microfiber	Standard	D	10 bar
M - Wire mesh	Standard	D	10 bar
P - Paper	Standard	D	10 bar
<i>Please see ordering code tables to check element Δp series availability based on filter features.</i>			
Flow direction through the filter element:			
From IN to OUT			

Seals

- Standard NBR series A or W
- Optional FPM series V or Z

Temperature

From -25 °C to +110 °C

Note

MDHC filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Length	Weights [kg]		Length	Volumes [dm ³]	
		20	40		20	40
MDHC 250		3.80	4.55		4.65	6.90

Flow rates [l/min]

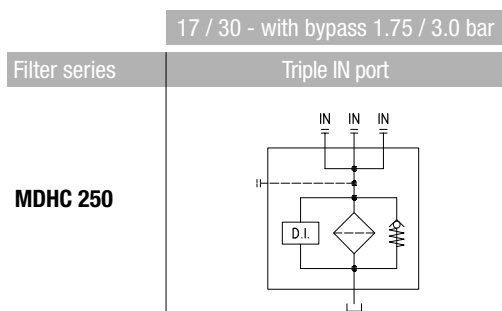
Filter series	Length	Filter element design - D series					Filter element design - D series		
		A0003	A0006	A0010	A0016	A0025	M0025 M0060 M0090	P0010	P0025
MDHC 250	20	134	120	244	255	303	480	326	370
	40	217	256	338	419	487	465	437	694

Maximum flow rate for a complete return filter with a pressure drop $\Delta p = 0.5$ bar.

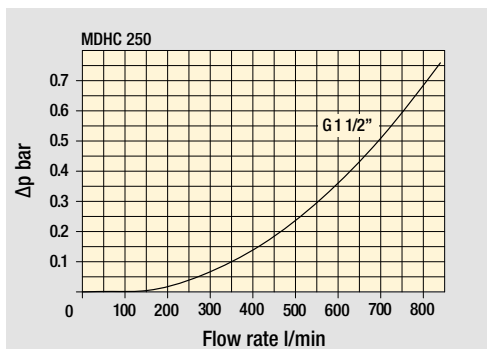
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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

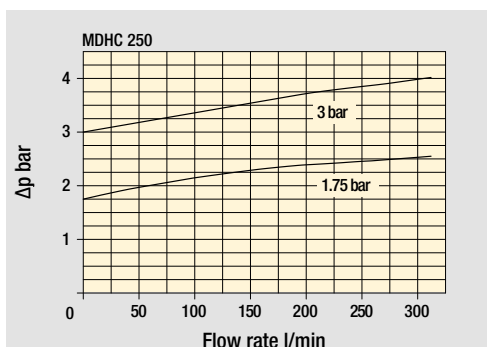
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.



Hydraulic diagram



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.

MDHC250

Designation & Ordering code

COMPLETE FILTER

Example: **MDHC** **250** **20** **A0025** **D** **W** **30** **FS024** **1** **9T** **DA** **P01** **NN**

Series
MDHC

Size
250

Length
20

40

Filtration rating (filter media)

A0003	Inorganic microfiber	3 µm
A0006	Inorganic microfiber	6 µm
A0010	Inorganic microfiber	10 µm
A0016	Inorganic microfiber	16 µm
A0025	Inorganic microfiber	25 µm
M0025	Wire mesh	25 µm
M0060	Wire mesh	60 µm
M0090	Wire mesh	90 µm
P0010	Resin impregnated paper	10 µm
P0025	Resin impregnated paper	25 µm

Element Δp

D 10 bar

Seals and treatments

	A0xxx	M0xxx	P0xxx
A NBR	•	•	•
V FPM	•	•	•
W NBR with filter and components surface treatment	•	•	-
Z FPM with filter and components surface treatment	•	•	-

By-pass valve

17 1.75 bar

30 3.0 bar

Connections

FG112 G 1 1/2" **FN112** 1 1/2" NPT **FS024** SAE 24 - 1 7/8" - 12 UN

Additional connections

		Left flange + thread	Right flange + thread
1 With additional connections	Front thread: FG112	1 1/2" SAE 3000 psi/M + G 1 1/4"	1 1/4" SAE 3000 psi/M + G 1"
	Front thread: FN112	1 1/2" SAE 3000 psi/UNC + 1 1/4" NPT	1 1/4" SAE 3000 psi/UNC + 1" NPT
	Front thread: FS024	1 1/2" SAE 3000 psi/UNC + SAE 20 - 1 5/8" - 12 UN	1 1/4" SAE 3000 psi/UNC + SAE 16 - 1 5/16" - 12 UN

Connections for clogging indicator

0N Without indicator connection

9T With multiple indicator connections, with metal plugs

Additional features

DA With diffuser

Execution

P01 Standard catalogue item

Certificates

NN None

CLOGGING INDICATORS

See pages 776-777

BVA Axial pressure gauge

BVR Radial pressure gauge

BVP Visual pressure indicator with automatic reset

BVQ Visual pressure indicator with manual reset

BEA Electrical pressure indicator

BEM Electrical pressure indicator

BLA Electrical / visual pressure indicator

DES Electrical differential pressure indicator

DVS Visual differential pressure indicator

PLUG

See page 807

T4 Plug

FILTER ELEMENT

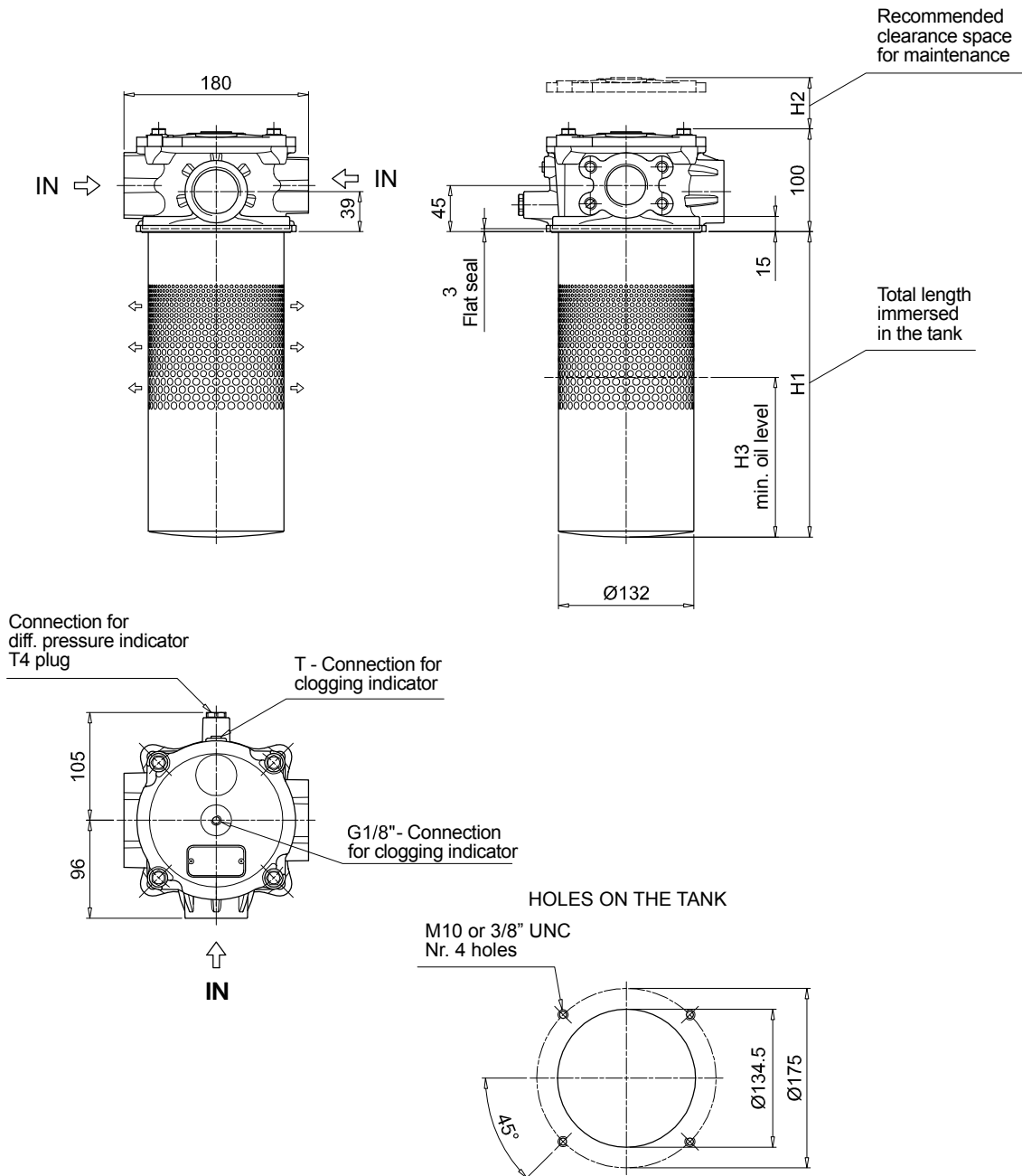
Series DHC	Example 1: DHC	250	20	A0025	D	A	00	NN	P01	NN
Size 250										
Length 20 40										
Filtration rating (filter media)										
A0003 Inorganic microfiber		3 µm								
A0006 Inorganic microfiber		6 µm								
A0010 Inorganic microfiber		10 µm								
A0016 Inorganic microfiber		16 µm								
A0025 Inorganic microfiber		25 µm								
M0025 Wire mesh		25 µm								
M0060 Wire mesh		60 µm								
M0090 Wire mesh		90 µm								
P0010 Resin impregnated paper		10 µm								
P0025 Resin impregnated paper		25 µm								
Element Δp D 10 bar										
Seals and treatments										
A NBR										
V FPM										
Bypass 00 Without bypass										
Additional features NN Without additional features										
Execution P01 Standard catalogue item										
Certificates NN None										

MDHC250

Dimensions

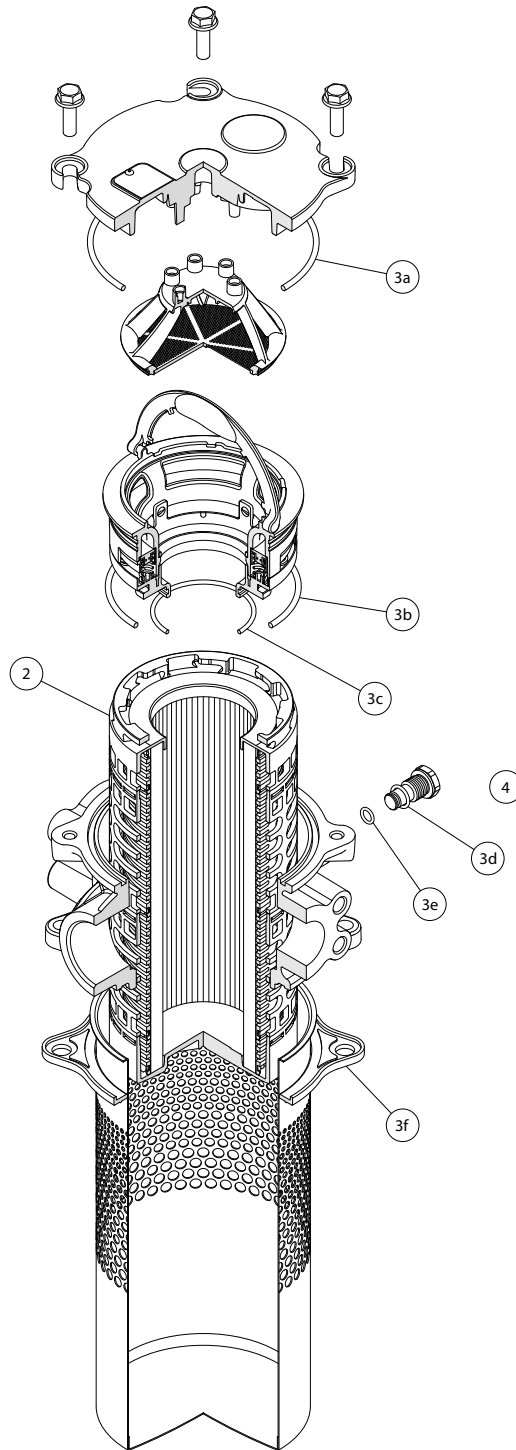
MDHC250			
Filter length	H1 [mm]	H2 [mm]	H3 [mm]
20	300	380	145
40	485	565	320

Connections	T
FG112	G 1/8"
FN112	1/8" NPT
FS024	1/8" NPT



SPARE PARTS MDHC250

Order number for spare parts



Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3f)	Q.ty: 1 pc. 4
Filter series	Filter element	Seal Kit code number NBR	Indicator connection plug NBR
MDHC 250	See order table	02050850	T4A