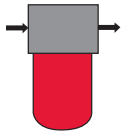


# MEDIUM PRESSURE FILTERS

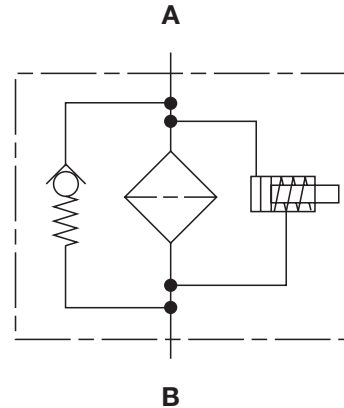
## MFX Series

Inline Filters

725 psi • up to 35 gpm



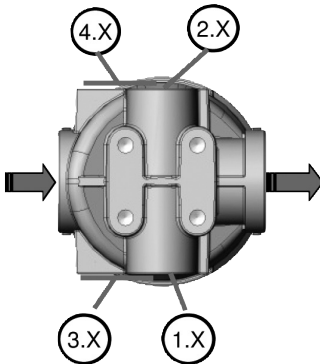
### Hydraulic Symbol



### Features

- Eco-friendly, cost-effective alternative to spin-on filters
- Integrated retrofit protection
- Longer service life of the filter bowl because of fatigue resistant up to 725 psi
- High level of operational safety - Bowl seal and bypass valve are integrated in the filter element and therefore replaced at every element change
- "Missing Element Protection" - cannot operate without element installed.
- Many choices of clogging indicators available
- Various port connection types (SAE-12, G 3/4, SAE-16, G 1, M33x2)

### Clogging Indicator Assignment



### Technical Specifications

<b>Mounting Method</b>	4 Mounting holes (3/8-16UNC) or (M10-13) Ref. Drawing
<b>Port Connection</b>	SAE-12, G 3/4 SAE-16, G 1, M33x2
<b>Flow Direction</b>	Inlet: Side      Outlet: Side (opposite each other)
<b>Construction Materials</b>	Head: Die Cast Aluminum Bowl: Extruded Aluminum
<b>Flow Capacity</b>	100: 26 gpm (100 lpm) 200: 35 gpm (130 lpm)
<b>Housing Pressure Rating</b>	Max. Allowable Working Pressure: 725 psi (50 bar) Fatigue Pressure: 725 psi (50 bar) @ 1 million cycles Burst Pressure: 2600 psi (183 bar)
<b>Element Collapse Pressure Rating</b>	BN4HC: 290 psid (20 bar) ECON2, MM: 145 psid (10 bar)
<b>Fluid Temperature Range</b>	-22°F to 212°F (-30°C to 100°C) Consult HYDAC for applications below -22°F (-30°C)
<b>Fluid Compatibility</b>	Compatible with all hydrocarbon based, synthetic, and high water based fluids compatible with Nitrile Rubber (NBR) seals
<b>ΔP Indicator Trip Pressure</b>	ΔP = 36.25 psid (2.5 bar) -10% (standard). ΔP = 14.5 psid (1 bar) -10% (optional)
<b>Bypass Valve Cracking Pressure</b>	ΔP = 50.75 psid (3.5 bar) +10% (standard) ΔP = 25 psid (1.7 bar) +10% (optional)

### Applications



Agricultural



Automotive



Construction



Commercial  
Municipal



Railways

## Model Code

**Filter Type** \_\_\_\_\_ **MFX** **BN/HC** **100** **G** **I** **10** **BF** **4** **.** **0** **/** **B3.5**

MFX = In-Line Medium Pressure Filter

**Filter Media** \_\_\_\_\_  
BN/HC, **ECON2**, MM

**Size** \_\_\_\_\_  
100, 200

**Operating Pressure** \_\_\_\_\_  
G = 725 psi (50 bar)

**Type of Connection** \_\_\_\_\_  
C = G 3/4"  
I = 3/4" (SAE 12 straight thread)  
D = G 1"  
K = 1" (SAE 16 straight thread)  
L = M33x2

**Filtration Rating (microns)** \_\_\_\_\_  
3, 5, 10, 20 = BN4HC    **3, 5, 10, 20 = ECON2**    10, 15 = MM

**Type of Clogging Indicator** \_\_\_\_\_  
A, W, BM, C, D, M, BF (Others available upon request, see Clogging Indicators section.)

**Indicator Location** \_\_\_\_\_  
1-4 = 3 + 4 BF Indicator only  
1 + 2 not with BF indicator

**Type Modification Number** (latest version always supplied) \_\_\_\_\_

**Supplementary Details** \_\_\_\_\_  
B1.7 = Cracking pressure (bypass valve) 25 psi (1.7 bar)  
B3.5 = Standard, cracking pressure bypass valve 50 psi (3.5 bar)  
KB = Non-bypass option  
L... = Lamp for relevant voltage (24V, 48V, 110V, 220V)  
LED = 2 LEDs up to a voltage of 24 Volt  
cRUus = Electrical Indicator with underwriter's recognition

## Replacement Element Model Code

**Size** \_\_\_\_\_ **0100** **MX** **010** **BN4HC** **/** **-** **B3.5**

0100, 0200

**Type** \_\_\_\_\_  
MX

**Filtration Rating (micron)** \_\_\_\_\_  
3, 5, 10, 20 = BN4HC  
**3, 5, 10, 20 = ECON2**  
10, 15 = MM

**Filter Material** \_\_\_\_\_  
BN4HC, **ECON2**, MM

**Supplementary Details** \_\_\_\_\_  
**Seals:**  
(omit) = Nitrile rubber (NBR) (standard)  
B1.7 = Cracking pressure (bypass valve) 25 psi (1.7 bar)  
B3.5 = Standard, cracking pressure (bypass valve) 50 psi (3.5 bar)  
KB = Non-bypass option

## Clogging Indicator Model Code

**Indicator Prefix** \_\_\_\_\_ **VL** **2.5** **BF** **.** **X** **/**

VM = G 1/2 3000 psi  
VL = BF only

**Trip Pressure** \_\_\_\_\_  
2.5 = 36 psid (2.5 bar)  
1 = 14.5 psid (1 bar)

**Type of Indicator** \_\_\_\_\_  
A = No indicator, plugged port  
W = No indicator, without port  
BM = Pop-up indicator (manual reset)  
C = Electric switch - SPDT  
M = Electric switch, single pole  
D = Electric switch and LED light - SPDT  
BF = Visual analog

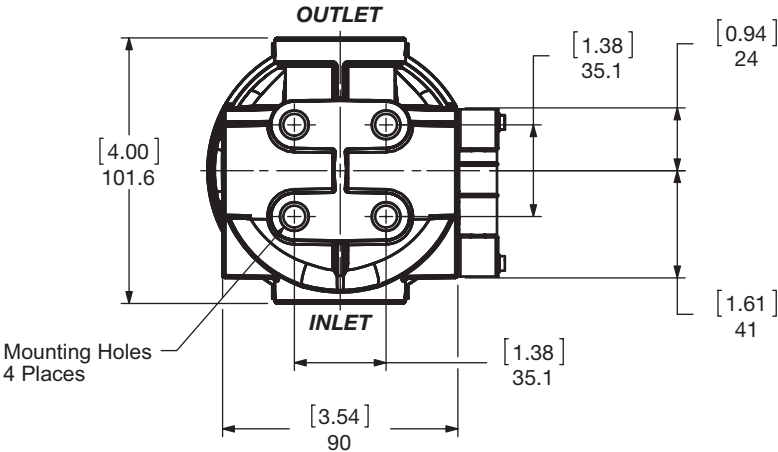
**Modification Number** \_\_\_\_\_

**Supplementary Details** \_\_\_\_\_  
**Seals**  
(omit) = Nitrile rubber (NBR) (standard)  
**Light Voltage** (D type indicators only) \_\_\_\_\_  
L24 = 24V    L110 = 110V  
**Thermal Lockout** (VM, VD types C, D, J, and J4 only) \_\_\_\_\_  
T100 = Lockout below 100°F  
**Underwriters Recognition** (VM, VD types C, D, J, and J4 only) \_\_\_\_\_  
cRUus = Electrical Indicator with underwriter's recognition  
(For additional details and options, see Clogging Indicators section.)

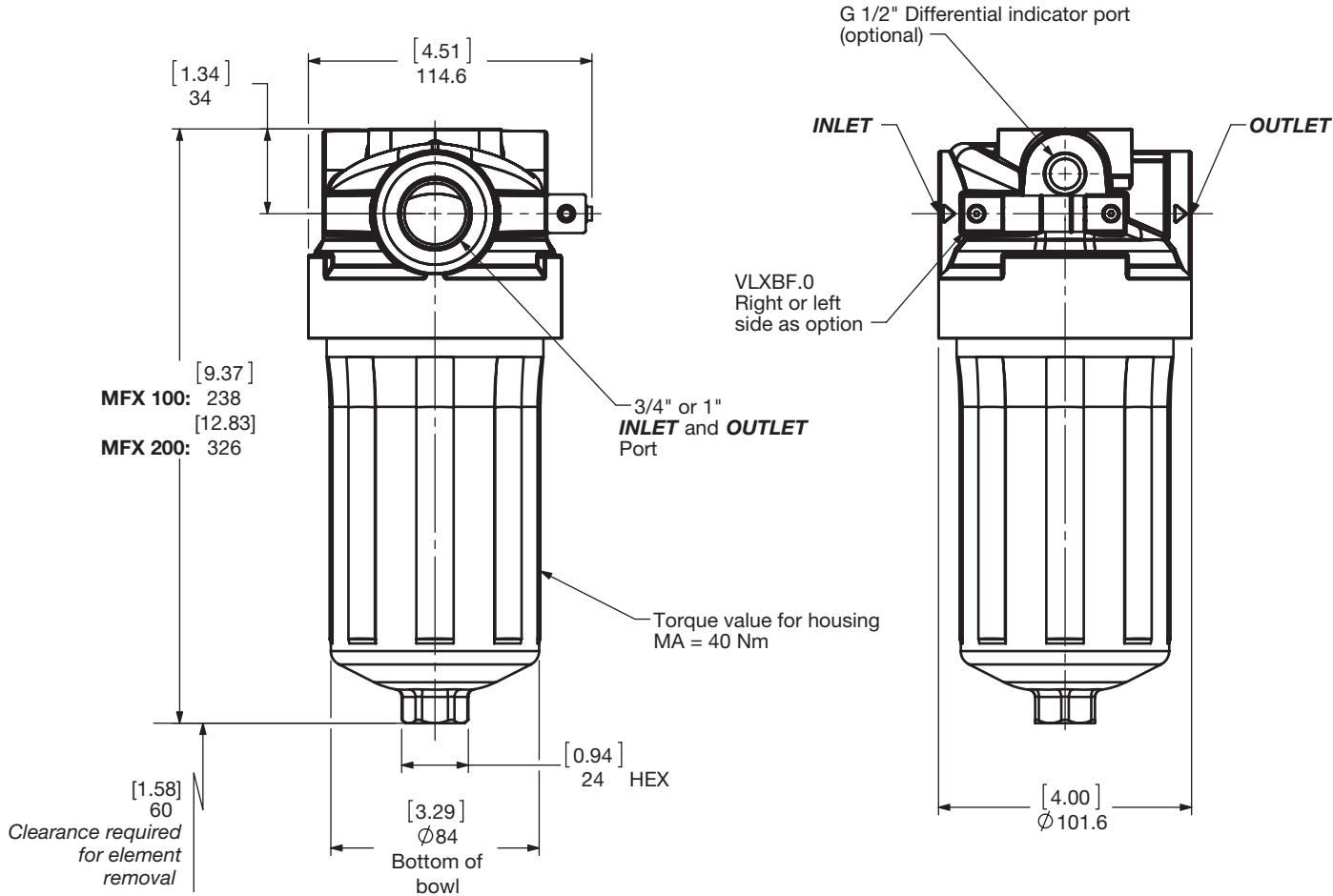
Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

# MEDIUM PRESSURE FILTERS

Dimensions  
MFX 100 / 200



MFX 100/200...	Mounting x
...G C...	M10-13 [0.5] Deep
...G D...	M10-13 [0.5] Deep
...G I...	3/- 16UNC. 13 [0.5] Deep
...G K...	3/8-16UNC. 13 [0.5] Deep
...G L...	M10-13 [0.5] Deep



Size	100	200
Weight (lbs.)	3.3	3.9

Dimensions shown are [inches] millimeters for general information and overall envelope size only. Weights listed include element.  
For complete dimensions please contact HYDAC to request a certified print.

## Sizing Information

Total pressure loss through the filter is as follows:

Assembly  $\Delta P$  = Housing  $\Delta P$  + Element  $\Delta P$

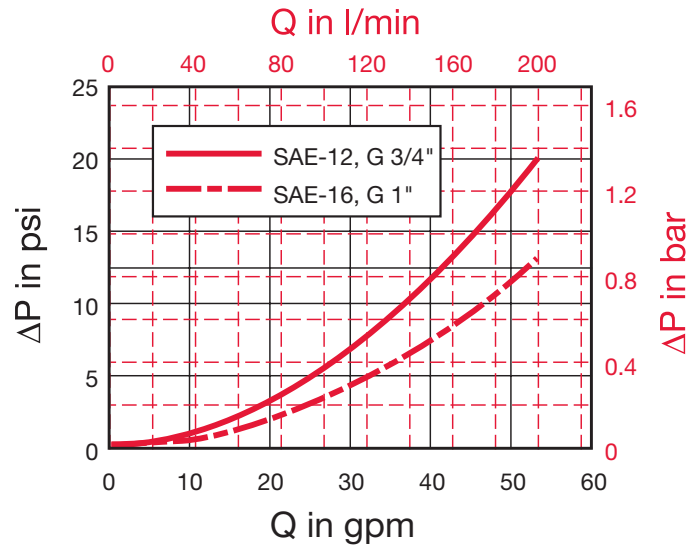
### Housing Curve:

Pressure loss through housing is as follows:

Housing  $\Delta P$  = Housing Curve  $\Delta P \times \frac{\text{Actual Specific Gravity}}{0.86}$

Adjustments must be made for viscosity & specific gravity of the fluid to be used! (see "Sizing HYDAC Filter Assemblies" in Section B - Overview)

## MFX 100/200 Housing



## Element K Factors

$\Delta P$  Elements = Elements (K) Flow Factor x Flow Rate (gpm) x  $\frac{\text{Actual Viscosity (SUS)}}{141 \text{ SUS}} \times \frac{\text{Actual Specific Gravity}}{0.86}$   
(From Tables Below)

Betamicon	...MX...BN4HC (Betamicon® Low Collapse)			
Size	3 μm	5 μm	10 μm	20 μm
0100 MX XXX BN4HC	0.659	0.494	0.252	0.187
0200 MX XXX BN4HC	0.384	0.291	0.148	0.110

ECOMICRON	...MX...ECON2			
Size	3 μm	5 μm	10 μm	20 μm
0100 MX XXX ECON2	0.713	0.549	0.357	0.263
0200 MX XXX ECON2	0.439	0.324	0.209	0.154

MOBILEMICRON	...MX...MM		
Size	8 μm	10 μm	15 μm
0100 MX XXX MM	0.148	0.148	0.121
0200 MX XXX MM	0.088	0.088	0.071

All Element K Factors in psi / gpm.

## Notes

