

# SET SERIES FILTERS – MEDIUM PRESSURE

## MFX Set Series

Manifold Cartridge Filters

725 psi • up to 35 gpm



Manifold cavity is only for representation and not HYDAC's scope of supply

### Features

- Integrated retrofit (quality) protection
- 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.
- Non-welded housing design reduces stress concentrations and prevents fatigue failure.
- Aluminum alloy is water tolerant - anodization is not required for water based fluids (HWBF).
- Screw-in bowl requires minimal clearance to remove the element for replacement, and contaminated fluid cannot be washed downstream when element is serviced.
- HYDAC differential Pressure Indicators (*optional*) have no external dynamic seal. This results in a high system reliability due to magnetic actuation, thus eliminating a potential leak point.
- For special finishes and coatings – consult HYDAC for minimum quantities, availability and pricing.

### Applications



Agricultural



Automotive



Construction



Commercial Municipal



Railways

### Installation

The MFX Set Manifold Cartridge Filter is installed into a threaded cavity that is machined in the manifold (*manifold not included - see cavity drawing*). A bushing is provided for proper element installation. The bushing holds the element in place during filtration operation, and facilitates easy removal for element change out.

More than one SET may be installed in the manifold if required for capacity. A differential pressure clogging indicator, to warn of high upstream pressure (*element clogged*), can be attached to the manifold as well (*cavity drawings for that upon request*). For additional information, contact HYDAC.

### Technical Specifications

<b>Mounting Method</b>	Threaded
<b>Flow Direction</b>	Out-to-in
<b>Construction Materials</b>	
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> ( <i>optional</i> )	
ΔP = 36.25 psid (2.5 bar) -10% (standard).	
ΔP = 14.5 psid (1 bar) -10% (optional)	
<b>Bypass Valve Cracking Pressure</b>	
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	

## Model Code

**MFX BN/HC 100 SET 10 W 1 . 0 /**

### Filter Type

MFX = Manifold cartridge filter

### Element Media

BH/HC = Betamicon® (High Collapse)

ECON2 = ECOmicron®

MM = Mobilemicron®

### Size

100, 200

### Type of Mounting

SET = Manifold cartridge

### Filtration Rating (microns)

BN4HC = 3, 5, 10, 20

ECON2 = 3, 5, 10, 20

MM = 10, 15

### Type of ΔP Clogging Indicator

W = Without indicator (Indicators can be installed in manifold, cavity drawing upon request).  
(For additional details and options, see Clogging Indicators section)

### Type Number

1 = Sizes 100, 200

### Modification Number (latest version always supplied)

### Seals

(omit) = Nitrile rubber (NBR) (standard)

### Supplementary Details

SFREE = Element specially designed to minimize electrostatic charge generation

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

## Replacement Element Model Code

**0100 MX 010 BN4HC / - B3.5**

### Size

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)

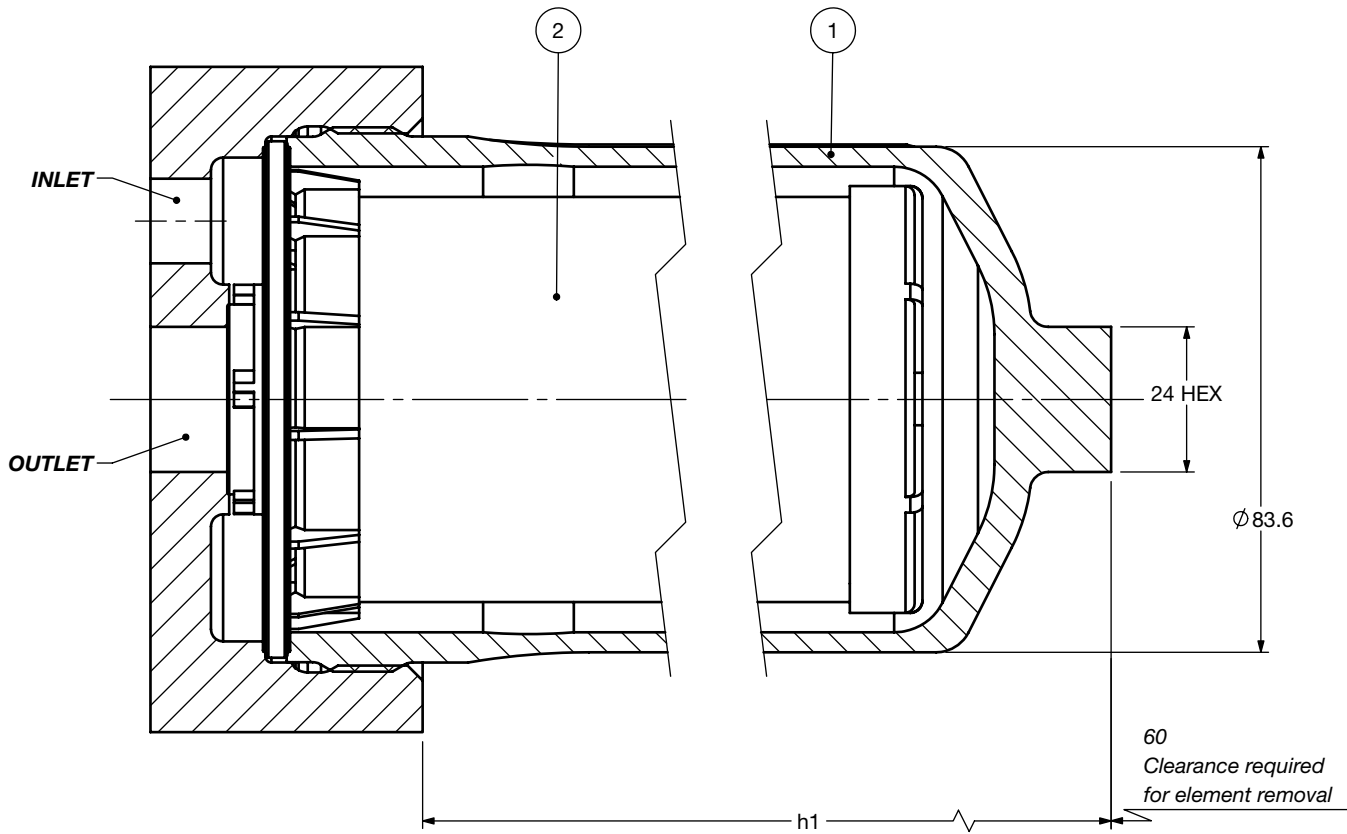
KB = Non-bypass option

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

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## Dimensions

MFX Set 100 / 200



Item No	SET Components
1	Bowl
2	Element (integral bowl seal and bushing)

Size	h1
MFX 100 SET	154.5
MFX 200 SET	242.5

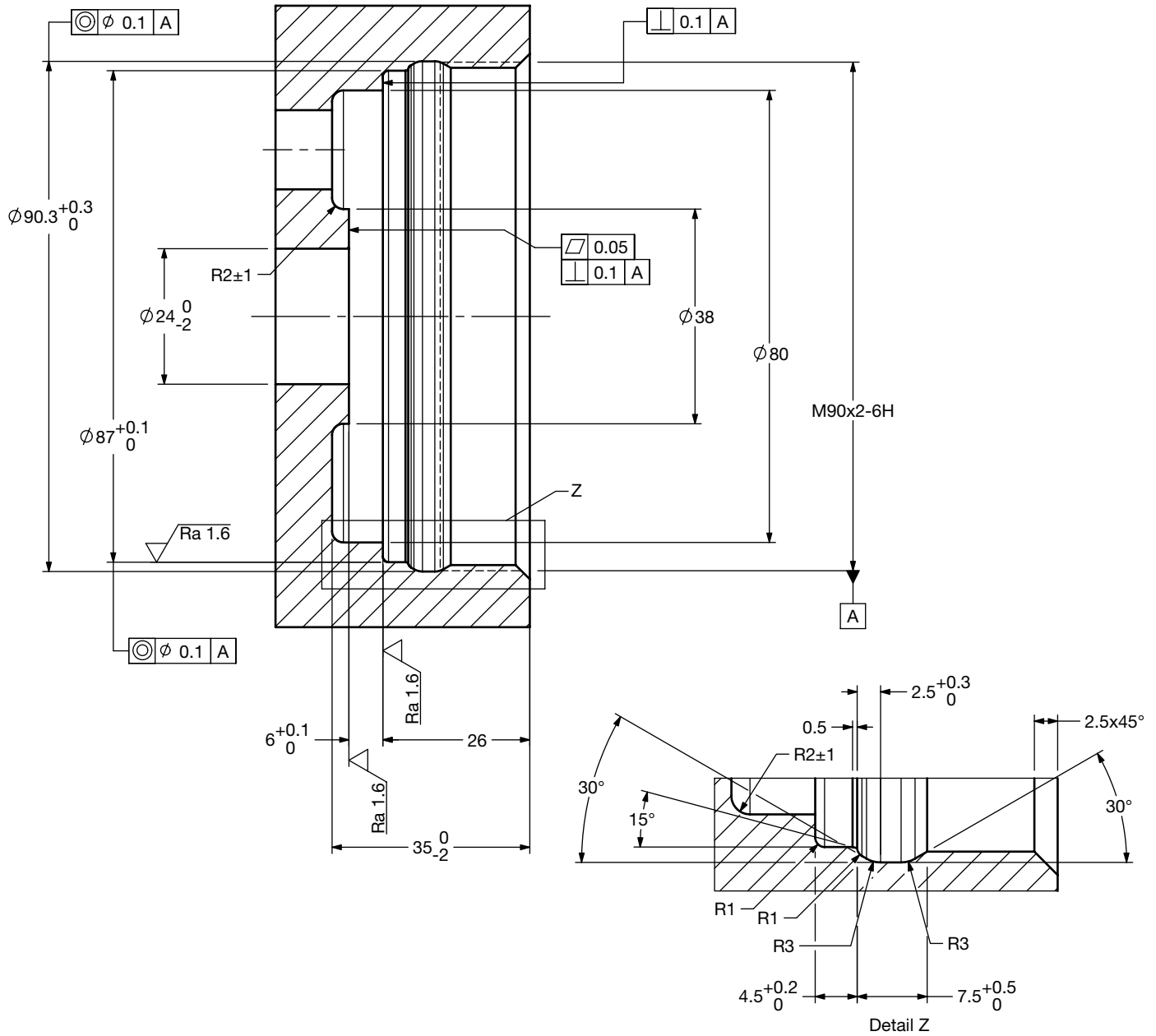
## Unspecified Tolerances

From	0.5	6	30	120
To	6	30	120	400
	±0.1	±0.2	±0.3	±0.5

Size	100	200
Weight (lbs.)	2	2.9

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

## Customer Manifold Machining MFX Set 100 / 200



### Element K Factors

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

ECOMicon	...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.