

## Additional Data/Spec Sheet

### FI-HYDAC Filter Element

Fluidco code: FI-0165R010-ON | Hydac Return Element: 0165 R 010 BN/HC | Betamicron Absolute Element  
 Filtration Rating: Micron 10µm | Size: 0165 | Filtration Material: Betamicron -N element Low Collapse

## Overview of Elements Betamicron® Absolute Elements



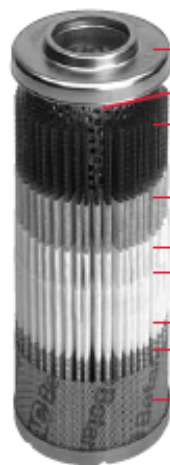
- BN3HC - Low Collapse (250 psid)
- BH3HC - High Collapse (3000 psid)
- Fiberglass
- Depth Filtration
- 3, 5, 10, & 20 micron
- Disposable
- Absolute Filtration Rating  $B_{x(c)} \geq 1000$
- Structurally Designed for Dynamic Flow Conditions

## Element K Factors: Return Elements "R"

Size	...R...BN3HC (Betamicron® Low Collapse)			
	3 µm	5 µm	10 µm	20 µm
0165	0.547	0.418	0.390	0.216

### Element Construction:

#### Betamicron®



- 1 Nickel or tin coated end caps and support tube
- 2 Inner screen to stabilize deep pleats
- 3 Support layer to back up active media layers
- 4 Final active depth layer to remove fine particles
- 5 Pre-filter depth layer to remove coarse articles
- 6 Diffusion layer to equalize flow across surface
- 7 Outer screen to stabilize pleats (*under cover*)
- 8 Multi-Protection cover (*for high pressure elements*)

#### Betamicron® Return Element

Return filters include Bypass in the endcap - insures proper bypass operation at all times.



- End Cap with Bypass (*plastic*)
- Support Tube (*metal or plastic*)
- O-Ring End Cap (*plastic*)
- Mesh Pack
- Contamination Basket (*plastic*)



## Hydraulic Data

### Permissible $\Delta p$ across element

- Betamicon®-N (BN/HC): 145 psid (10 bar)

### Temperature Range

- -22° to 250°F (-30° to 100°C) (*only possible with NBR seals*)

### Compatibility with Hydraulic Media

- Suitable for use with mineral oils, lubrication oils, non-flammable fluids, synthetic and rapidly biodegradable oils.

### Flow Fatigue Stability to ISO 3724

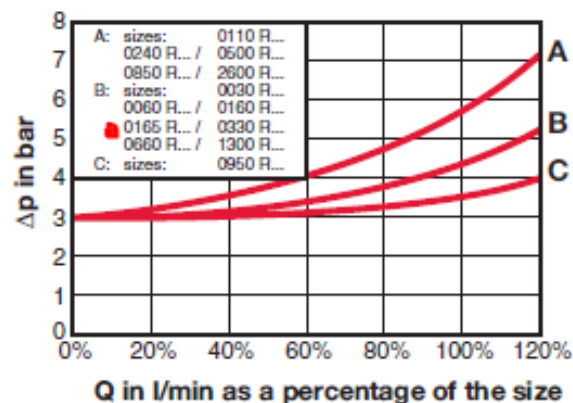
- High fatigue resistance due to solid filter media supports on upstream and downstream sides and high inherent stability of filter layers.

### Cracking Pressure of Bypass Valve (..R.. only)

- $\Delta p_0 = 3 \text{ bar} + 0.5 \text{ bar}$

### Graphs of Bypass Valve (..R.. only)

- The bypass valve graphs apply to mineral oils with a density of 0.86 kg/dm<sup>3</sup>. The differential pressure of the valves changes proportionally to the density.



## Technical Details:

- Absolute filtration typically  $\beta_{x(c)} \geq 1000$
- High  $\beta_x$  value stability across a wide range of differential pressures
- High contamination retention capacity
- Disposable elements and cleanable elements
- Compatible for filtration of mineral oils, non-flammable fluids, rapidly biodegradable fluids, phosphate esters, water glycols, and high water based fluids
- Elements pleated
- Flow direction from out to in to maximize stability
- Return elements include integral bypass in endcap
- Good fluid compatibility due to the use of epoxy resin for impregnation and bonding
- Element protection resulting from high collapse burst pressure resistance (*i.e. during cold start and differential pressure surges*)
- Excellent flow fatigue stability due to solid filter material support
- Standard filtration ratings: 3 $\mu$ m, 5 $\mu$ m, 10 $\mu$ m, and 20 $\mu$ m absolute