

## Aquamicron® Series Water Removal Elements



### Description

Aquamicron® filter elements are specially designed to separate free water from mineral oils. They are only supplied in the dimensions of HYDAC return line filter elements from size 330 and larger. This means that they can be installed in all HYDAC filter housings from size 330 which are fitted with return line filter elements.

The increasing pressure loss in a filter element which is being saturated with water indicates, by means of standard clogging indicators, that it is time to change the element. When the Aquamicron® technique is employed, particle contaminants are also separated from the hydraulic medium as a by-product. This means that the Aquamicron® element doubles as a safety filter.

In order to guarantee the greatest efficiency, it is recommended that these elements be installed in an off-line recirculation loop configuration.

Note: All Aquamicron® elements are disposable.

### How Water Does Damage

The presence of water in hydraulic systems cause many problems. For example, the saturation of very fine filters or jamming of valves. These problems are often wrongly attributed to high levels of particle contamination. Added to this, the build-up of rust and the reduction in lubricating properties on bearings and slides can lead to considerable impairment in the effective functioning of a system. This goes to show that water, too, represents a serious "contaminant" in a hydraulic system.

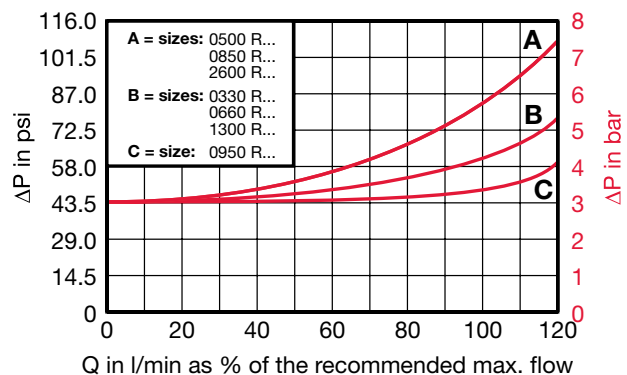
Previously, methods commonly used for extraction of water, have, on the whole, proven to be uneconomical in relation to the purchase price of a system. The HYDAC Aquamicron® technique offers an economically sound and yet an effective method of separating free water from hydraulic media.

### Technical Details

Operating pressure	360 psi (25 bar)
Max permissible across element	145 psi (10 bar)
Temperature range	32° to 160°F (0° to 71°C)
Compatibility with hydraulic media	Mineral oils: Test criteria to ISO 2943 Lubricating oils: Test criteria to ISO 2943 Other media available on request
Opening pressure of by-pass valve	$\Delta p_0 = 43 \text{ psi} \pm 7 \text{ psi}$ $\Delta p_0 = 3 \text{ bar} \pm 0.5 \text{ bar}$
By-pass valve curves	The by-pass valve curves apply to mineral oils with a specific gravity of 0.86. The differential pressure of the valve changes proportionally with the specific gravity.

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## Model Code

**0330 R 040 AM /**

**Size** \_\_\_\_\_  
 0330, 0500, 0660, 0850, 0950, 1300, 2600

**Type** \_\_\_\_\_  
 R = Return Line Element

**Filtration Rating (microns)** \_\_\_\_\_  
 040

**Element Media** \_\_\_\_\_  
 AM = Aquamicron® water removal

**Seal** \_\_\_\_\_  
 (omit) = Nitrile (NBR) (standard)  
 V = Fluoroelastomer (FPM) (optional)

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

## Aquamicron® Element Size Recommendations

Size	Recommended Flow rate	Water retention capacity C <sub>w</sub> at ΔP = 36 psi (2.5 bar) with an oil viscosity of 141 SUS (30mm <sup>2</sup> /sec)	Part No.
0330	3.4 gpm (13 l/min) advised 26.4 gpm (100 l/min) max.	0.27 quarts (260cm <sup>3</sup> ) 0.19 quarts (180cm <sup>3</sup> )	00315268
0500	5 gpm (19 l/min) advised 40.9 gpm (155 l/min) max.	0.42 quarts (400cm <sup>3</sup> ) 0.30 quarts (280cm <sup>3</sup> )	00315355
0660	7.4 gpm (28 l/min) advised 67.4 gpm (255 l/min) max.	0.60 quarts (570cm <sup>3</sup> ) 0.42 quarts (400cm <sup>3</sup> )	00315356
0850	9.2 gpm (35 l/min) advised 75.6 gpm (286 l/min) max.	0.77 quarts (730cm <sup>3</sup> ) 0.55 quarts (520cm <sup>3</sup> )	00315357
0950	10.3 gpm (39 l/min) advised 83 gpm (314 l/min) max.	0.85 quarts (800cm <sup>3</sup> ) 0.60 quarts (570cm <sup>3</sup> )	00315358
1300	14.3 gpm (54 l/min) advised 115.4 gpm (437 l/min) max.	1.18 quarts (1120cm <sup>3</sup> ) 0.83 quarts (790cm <sup>3</sup> )	00315269
2600	28.2 gpm (109 l/min) advised 229.9 gpm (870 l/min) max.	2.36 quarts (2230cm <sup>3</sup> ) 1.66 quarts (1570cm <sup>3</sup> )	00316102