

# Aquamicon® Series

## Water Removal Elements



### Description

Aquamicon® 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 drop 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 Aquamicon® technique is employed, particle contaminants are also separated from the hydraulic medium as a by-product. This means that the Aquamicon® 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 Aquamicon® elements are disposable.

### How Water Damages Systems and Components

The presence of water in hydraulic systems causes many problems. Examples would be the saturation of very fine filters or the jamming of valves and rod components. 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 shows that water, too, represents a serious "contaminant" in a hydraulic system.

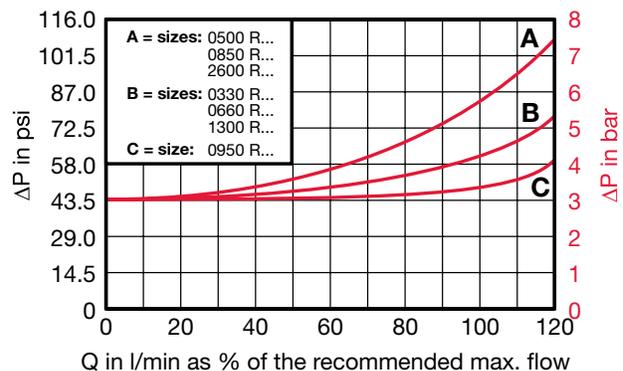
Previously, methods commonly used for extraction of water have proven to be uneconomical in relation to the purchase price of a water removal system. The HYDAC Aquamicon® technique offers an economically sound and yet an effective method of separating free water from hydraulic fluids.

### Technical Specifications

<b>Collapse Rating</b>	145 psid (10 bar)
<b>Temperature range</b>	32°F to 212°F (0°C to 100°C)
<b>Compatibility with hydraulic media</b>	Mineral oils: Test criteria to ISO 2943 Lubricating oils: Test criteria to ISO 2943 Other media available on request
<b>Opening pressure of by-pass valves</b>	$\Delta P_0 = 43 \text{ psid} \pm 7 \text{ psi}$ (3 bar $\pm 0.5$ bar)
<b>Bypass valve curves</b>	The bypass 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.

### Bypass Valve Curves

The bypass 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.



## Model Code

<b>Size</b> _____	<b>0330</b>	<b>R</b>	<b>040</b>	<b>AM /</b>
0330, 0500, 0660, 0850, 0950, 1300, 2600				
<b>Type</b> _____				
R = Return Line Element				
<b>Filtration Rating (microns)</b> _____				
040				
<b>Element Media</b> _____				
AM = Aquamicron® water removal				
<b>Seal</b> _____				
(omit) = Nitrile rubber (NBR) (standard)				
V = Fluorocarbon elastomer (FKM)				

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