



WATER & AIR REMOVAL

FOR EFFICIENT DEHYDRATION AND
DRAINAGE OF INDUSTRIAL FLUIDS

WATER ABSORPTION

WE100 ELEMENT



The original and still the best.

Triple R's continuous investment in research and development delivers the highest standard of efficiency in oil filtration. Protecting your investments while boosting productivity.

Our filter elements are designed to cleanse industrial oils, removing everything from solid particles to water to sludge, varnish and oxidation residues. 3-in-1 oil purification, all within a single element. A Triple R unique, unmatched by any filter manufacturer worldwide.

Special WE100 water absorbing element.

For applications with higher needs of water removal TRIPLE R offers a special water filter element, the WE100-element. This unique WE100 element absorbs free and emulsified water, up to 900ml. It can be used in every TRIPLE R 100 series filter system.

A wide range to fit every application.

All Triple R filter elements are Multipass-tested and guarantee consistent and reproducible micron ratings and filtration efficiency.

The filter element range comes in 4 sizes (30, 50, 100 and 300 size), in various filter materials from cellulose to polyester to PP, and in 2 different setups (standard setup or 'double stage' D-series setup).



◀ WE100



- 1st stage**
big particles are retained on the top of the filter
- 2nd stage**
small particles are trapped in the mid stage of the filter element
- 3rd stage**
the smallest particles are trapped in the lower and compressed part of the filter.

2,0 - 3,0 L/MIN

WATER SEPARATION

WS-WD



Very compact water separator based on the coalescent water separation principle.

Separates the water from oil based fluids and allows draining the water easily and quickly.

2-in-1 : water separation and oil filtration.

Using the coalescent technology, the filter elements agglomerate water molecules into droplets, which then drop to the bottom of the fluid.

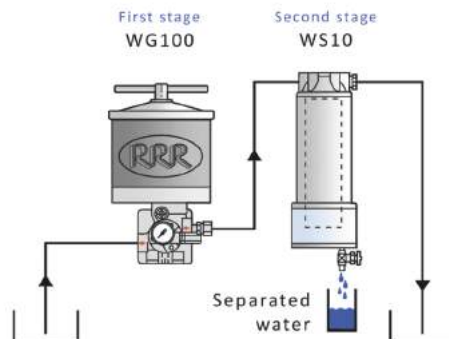
Built around a very compact power pack, the WSWD-filter connects to the oil reservoir.

Low running cost, easy installation & maintenance.

The optional pre-heater allows for a better water separation.

Benefits

- Avoids imminent oil changes, allows immediate extension of the oil usage and oil life.
- Avoids creation of Rust.
- Improves productivity and machine reliability.
- Assures longer life of all hydraulic components and prevents breakdowns to the hydraulic equipment.
- Saves significantly on maintenance and oil change related labor cost, and production loss.
- Extends oil life up to 50.000 hrs.
- Very important reduction of waste oil and oil disposal expenses.



1,5 - 10,0 L/MIN

WATER & AIR REMOVAL

Vacuum dehydrator



Very fast and highly effective water and air removing device, meant for high duty applications.

Easy full automatic operation.

Removes water, moisture and air bubbles:

- Dissolved water: 80%
- Free water: 100%
- Air bubbles: 100%

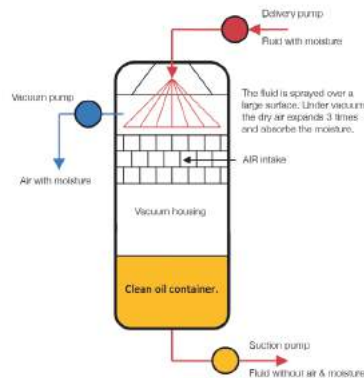
Viscosity range from 10 ~ 600 cSt.

Oil temperature from 15°C ~ 60°C.

On demand, all systems can be supplied with ATEX/EX certification.

Benefits

- Extends oil life
 - Important reduction of waste oil & disposal cost.
 - Reduces the purchasing cost of oil.
- Prevents machines failures and extends the machine life:
 - Prevents pump cavitations.
 - Prevents machine wear caused by rust.
 - Reduces maintenance cost.
 - Improves the productivity.
- Low running cost
 - No consumables, one-time investment.



TRVS-10E ▶
TRVS-30E ▶

10 L/MIN
30 L/MIN

AIR BUBBLE REMOVAL

QUICKTORON



Quicktoron is a device to remove **air bubbles** from liquids.

It's based on the cyclone principle, and very efficiently eliminates all the fine air bubbles trapped and mixed inside the fluid.

Quicktoron also helps to retain the filtration performance of filter elements. Most air bubbles have a larger size than solid contaminants. When these air bubbles go through the filter elements, they create bigger channels, allowing contaminants to pass through without being captured, and dropping filtration performance of the oil filters.

Quicktoron devices are very compact, easy to install, and offer a very economical solution to remove air bubbles quickly and efficiently.

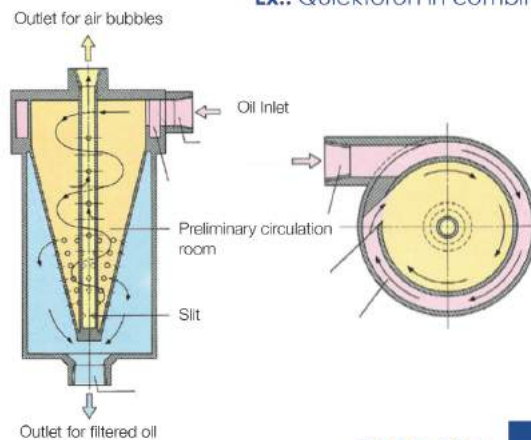
Available in 2 flow rates, with aluminum and stainless steel casing.

Benefits

- Eliminates up to 95% of all air bubbles!
- Allows to use a small oil reservoir, very common in case of mobile equipment.
- Avoids pump cavitation and improves machine reliability and component life.
- Extends oil life.
- Improves oil filters efficiency.
- Improves coolers efficiency.
- Improves power transmission and saves on energy



Ex.: Quicktoron in combination with OSCA-system



TRQT-50 ▶

9 - 50 L/MIN

TRQT-100 ▶

50 - 100 L/MIN

WHY REMOVE WATER?

The effect of water on oil oxidation is very dramatic, especially in presence of catalysts like copper (CU) or iron (FE). The longer the **oxidation** continues, the more the acidity level (T.A.N.) of the oil will rise.

Water reduces the life of hydraulic machinery by more than 50%!

Tolerances in the modern machinery are usually so small that moving parts alternately produce pressure and vacuum. In a vacuum, moisture will expand considerably and will cause **cavitation**, explosions against the surface areas. This will produce new wear particles, and surface areas will lose their coating of lubricant as a result.

Water attacks metal surfaces (**corrosion**) and will slowly penetrate microscopic pores, thus causing wear by fatigue.

EFFECT OF WATER

- Rust
- Corrosion
- Increased oil oxidation
- Oil degradation
- Cavitation of pumps
- Change in viscosity
- Loss of lubricating properties

Moisture has the tendency to form **rust** inside the tank top. Vibrations during operation will knock the rust particles into the oil, where they are picked up by the pump and distributed throughout the system. New **rust** particles form where the old ones fell off and the endless contamination cycle continues.

Water is also the ideal environment in which **bacteria** can break down the additives.

EFFECT OF PARTICLES

Metal particles act as catalysts and accelerate the oil oxidation.

- **FE** = oxydation **x 48**
- **CU** = oxydation **x 66**
- **+10°C** = oxydation **x 2**



Test	Metal	Water	Time	T.A.N.
1	-	-	+3500	0,17
2	-	+++	+3500	0,9
3	FE	-	+3500	0,65
4	FE	+++	400	8,1
5	CU	-	3000	0,89
6	CU	+++	100	11,20



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