

# TeknoFluida

Your Solutions Partner for  
Fluid Technology

# FUEL WATER SEPARATOR

TeknoFluida provides reliable fuel polishing,  
sludge and water removal to maintain your  
biodiesel quality as best possible

## Daily Tank Series

Utilized for Following  
Applications:

Pulp and Paper  
Steel Work  
Marine  
Mining and Gas  
Power Generation



# TeknoFluida

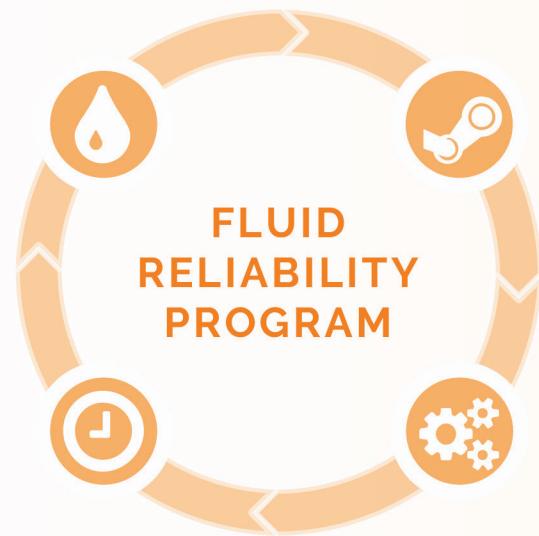
## Fuel Water Separator



### Technical Specification

Unit types	FWS-15	FWS-25	FWS-40
Flow rates*	15 l/min	25 l/min	40 l/min
Permitted fluids*	Fluids compatibility: ⌘ HSD fuel ⌘ MFO ⌘ Biodiesel blend ⌘ Other fluids		
Sealing material	Viton (or equivalent)		
Filtration rating	3 micron	6 micron	10 micron
Pump type	Gear Pump or Air Operated Diaphragm Pump		
Operating temperature	2...45 degree C		
Operating pressure	4-6 bar		
Pressure level at suction port (with suction hose)	-0.2...+1 bar		
Operation viscosity range*	2...6 cST / up to 380 cST (MFO)		
Water removal	less than 130 ppm		
Accessories	Contamination Sensor : Particle Counter or Water Sensor		
Hoses material	Viton (other on request)		
Inlet port	G1/2"	G3/4"	G1"
Outlet port	G1/2"	G3/4"	G1"
Weight (empty)	~ 75 kg	~ 100 kg	~ 150 kg
Dimensions** (L x W x H)	700 x 700 x 1500	900 x 800 x 1600	900 x 850 x 100

\* For other fluids, flow rate or viscosities ranges, please contact us



### Product Description

TeknoFluida and Industrie filtration group supplies fuel treatment systems with a wide range of flow capacities. The systems consist of a pump with a downstream depth filter or filter coalescer and an optional permanent separator.

It can be installed on the storage tank to continuously treat the medium or used to clean the fuel prior used, i.e. before it is pumped into the day tank or the engine.

Fuel Water Separator systems can be used to treat all types diesel fuel and specified biodiesel blend. For all the most common contaminations in these media, including solid and suspended particles, such as dust, sediments, rust, and water, our systems represent the most efficient and cost-effective solution.

We offer a number of combined filter and coalescer with varying degrees of fineness. These systems can be optimally adapted to meet specific requirements and technical configuration. An optional downstream separator membrane can be used to reduce the water content down to dissolved state or below saturation point in order to prevent microbial growth.

### Advantages

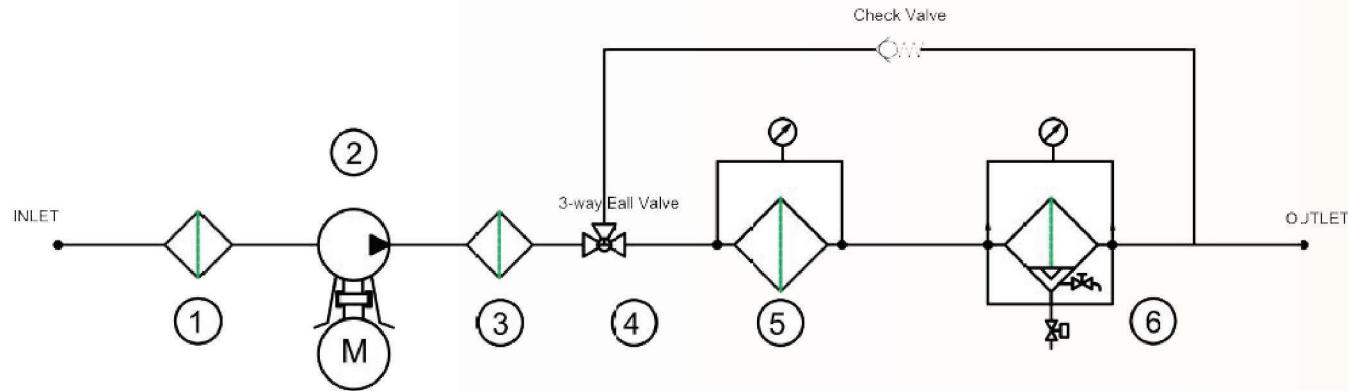
FWS is utilized to reduce the water content below fuel saturation point order to prevent microbial contamination, so that:

- ⌘ Fuel quality maintained
- ⌘ High quality protection of components
- ⌘ Desire machine operation
- ⌘ Minimized maintenance cost due to early failure

### Applications

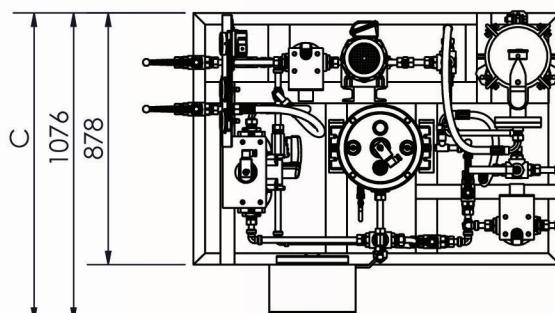
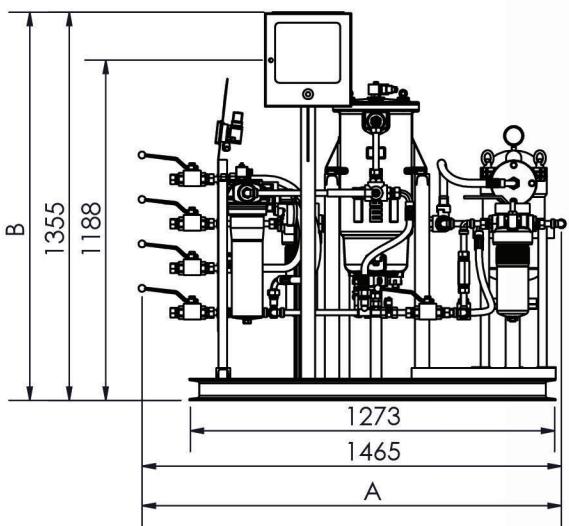
- ⌘ General industrial
- ⌘ Steam turbine
- ⌘ Marine
- ⌘ Mining and gas

## System Diagram



## Working Principle

The first phase, fuel from the main tank or daily tank will flow through combined filter. It is combination between bag filter for sludge removal and fine filter to remove solid particulates with varying degrees of fineness, these systems can be optimally adapted to meet specific requirements and technical configuration. The second phase, fuel will be flow through coalescer. At this stage, there will be separation process from fuel and water contaminant. An optional downstream separator membrane can be used to reduce the water content from fuel below its saturation point in order to prevent microorganisms growth. To treat heavy contamination, it is recommend to use a dual-phase version of the filter Coalescer. This version has an upstream filter that can be exchanged independently.



Minimum Space Requirement for Installation:

A = 1600 mm  
B = 1700 mm  
C = 1800 mm

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## Order Code

1	2	3	4	5	6	7	8
FWS-M	25	-	2X	/	20	-	10

### 1. Basic Model

S = stationary (with feet)  
M = mobile with caster

### 2. Flow Rate\*

15 = 15 liter/min  
25 = 25 liter/min  
40 = 40 liter/min

### 3. Component Series

#### 4. Bag Filter

10 = 10 micron  
20 = 20 micron  
25 = 25 micron

#### 5. Main Filter

3 = 3 micron  
6 = 6 micron  
10 = 10 micron

### 6. Sealing Material

P = PTFE  
F = FKM/Viton

### 7. Power Supply

01 = 3Phase; 380V; 50Hz  
02 = 3Phase; 415V; 50Hz

### 8. Accessories

W = Standard without onboard sensor  
WP = Water sensor and particle contamination sensor  
SO = Special order

\*Other flow rate and information source please inform us



## Filtering Result

In a hydraulic or lubrication system, filter main duty is to achieve a particle contamination to the required cleanliness level and keeping the level constantly during a long period. For identification of the solids contaminant in industrial hydraulic, the reading of particles quantity according to the ISO Code 4406. With the new definition of the test dust and number of particles, the standard ISO 4406 has been revised in 1987.

### Water Sensor (ppm)

### TFC-1500

### WS-1500

### Cleanliness Class According ISO 4406:1999

Filter Element	Cleanliness Class
2µm	13/11/08
3µm	14/12/09
6µm	16/13/10
10µm	17/15/11
16µm	20/17/12
25µm	23/19/13

This standard has been newly published as ISO 4406 in 1999. The new edition now uses a 3-digit code for particles > 4 µm(c), > 6 µm(c), and > 14 µm(c). The particle sizes > 6 µm(c) and > 14 µm(c) corresponds to approx. 0.9 µm referring to the obsolete. In the following, the achieved cleanliness class with MAHLE COMEX filter elements for all standardized ranges are stated. These values are based on long-term experiences with filter sizing and are considered as an approximate value.