

Mobile Media Filtration Unit

APPLICATIONS

- Onshore produced water treatment
- Secondary or tertiary process treatment step
- Treatment for recycle, reuse, injection, or permitted discharge

BENEFITS

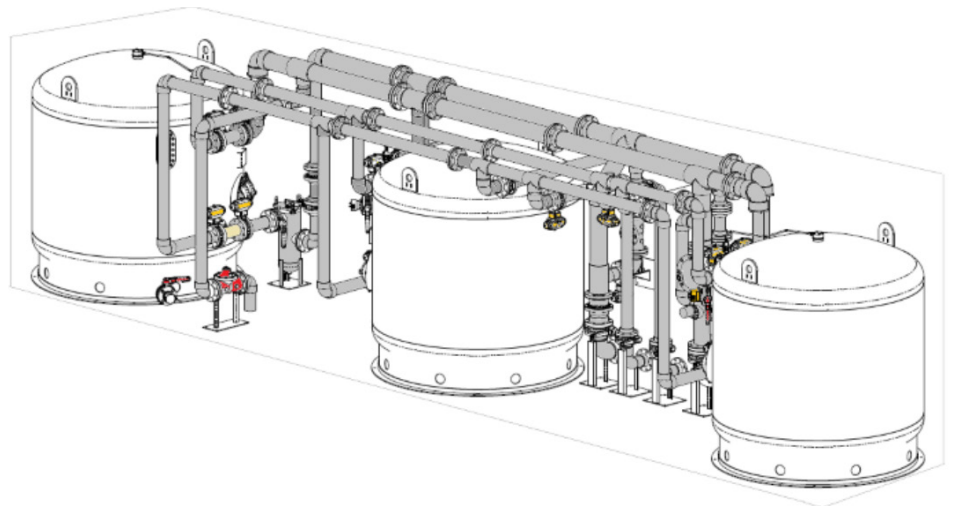
- Mobility
- Removal of free and dispersed oil (>3-um droplet size), solids (>4-um particle size), and oil-coated solids when used with our proprietary media and requiring no additional chemical feed
- Minimal personnel needed for operation

FEATURES

- Three parallel single-pass vertical pressure filters that each produce on average 10,000 bbl/d [1,590 m³/d] of frac-grade water*
- High influent loading of 500 ppm of oil and 500 ppm of solids
- Capable of operating with extended excursions exceeding 2,000 ppm of oil by increasing backwash frequency

The Schlumberger mobile media filtration (MMF) unit filters produced water and flowback for recycle, reuse, injection, or permitted discharge. The MMF unit is used for secondary or tertiary processing to deliver clean brine. When the filter vessels are filled with our proprietary media, the MMF unit produces on average 30,000 bbl/d [4,770 m³/d] of frac-grade water.^{†‡}

The MMF unit is designed for overseas transportation. Within the MMF unit are three 84-in- [213-cm-] diameter vessels with internals rated at 100-psi [6.9-bar] gauge pressure and three Rosedale® 7-in [18-cm] media trap bag filter housings rated at 100-psi [6.9-bar] gauge pressure. Operation of the unit is either automatic, semiautomatic, or manual and is dependent on the unit in stock at time of mobilization.



The compact, self-contained MMF unit is used for secondary or tertiary processing to deliver clean brine.

[†] Filtration media is not included with the MMF

[‡] Influent quality affects flow rate

Mobile Media Filtration Unit

Influent Operating Parameters

Water temperature	34–99 degF [1–37 degC]
Feed pressure	25–100 psi [1.7–6.9 bar] gauge pressure
Product flow	Max.: 21 bbl/min [200 m ³ /h]
Oil in water (OIW)	<500 ppm
Total suspended solids (TSS)	<500 ppm
Feed loading rate	8–12 galUS/min per ft ²
Backwash loading rate	15–18 galUS/min per ft ²

Note: 25-psi [1.7-bar] minimum customer constant pressure to the filter inlet is required. Water temperature will affect backwash loading rates. Exceeding the feed OIW or TSS limit will shorten run between backwashes.

Standard Measurement Components

Flowmeter	Raw water inlet (turbine, local reading), backwash waste outlet (paddle wheel, transmitter)
Pressure	MMF unit feed and outlet, media trap vessels feed and outlet, local indication
Conductivity	Effluent water

Construction Materials

Media filter vessels	Coated carbon steel: 100 psi [6.9 bar] gauge pressure Fiberglass-reinforced plastic: 100 psi [6.9 bar] gauge pressure
Rosedale media trap bag filter vessels	316 stainless steel: 100 psi [6.9 bar] gauge pressure
Piping	PVC schedule 80
Ball valves	PVC with Buna seals
Butterfly valves	PVC with polypropylene discs and Buna seals

Physical Specifications

Power	480 V, 60 Hz, three phase 380 V, 50 Hz, three phase
Container dimensions	480 in × 96 in × 114 in [12,192 mm × 2,438 mm × 2,896 mm]
Shipping weight	60,000 lbm [27,216 kg]
Operating weight	100,000 lbm [45,359 kg]

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