



NSF

Nutshell Filter

Flexible deep-bed filtration for aggressive oil and solids removal

NOV's NSF technology is a deep bed media filtration system capable of removing dispersed oil and solids down to very low levels. The technology can operate at high flux rates resulting in a reduced footprint and CAPEX investment relative to other designs. Typically applied in a polishing capacity the system can also handle high loads of both oil and suspended solids for short periods. Our filters are a further refinement of the design standard with several improvements in backwash system design included to allow greater backwash efficiency, and a reduction in media consumption. Our agitator-type NSF is supplied with a custom-made and proprietary NOV Chemineer agitator.

Benefits:

- Simple, automatic and compact design
- Removal of 95% of oil droplets and solid particles greater than 3 microns
- Fast and reliable backwashing process which offers rapid media cleaning without excessive degradation
- Pressure-Guard™ design ensures that the screens and scrubber tube cannot be over-pressurized and damaged
- Agitator based design also available using NOV's Chemineer systems
- Can handle other elements such as iron and mineral scales without any media damage
- Symmetrical design and flow pattern ensures that the media bed settles uniformly without heaping
- Retrofittable technology into both vertical and horizontal systems

Design specifications

Parameter	Value (per unit)
Operating ranges	4-500 m ³ /h
Maximum typical inlet OiW concentration (deoilng/polishing)	200 ppmv / 50 ppmv
Typical outlet concentration (deoilng/polishing)	<10 ppmv / <<5 ppmv
Lowest achievable outlet concentration	<1 ppmv
Operating pressure range	2.75 barg or above
Nominal backwash rate	1-2 v%
Associated products	Backwash handling systems