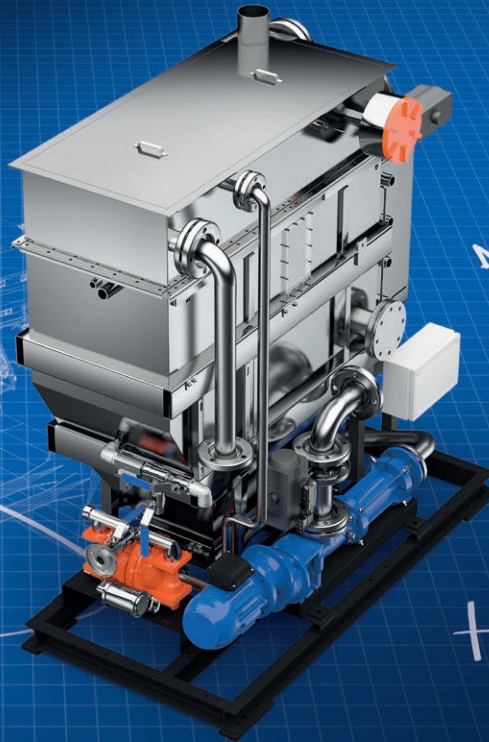


ENERGY  
ENVIRONMENT  
ECONOMY

## WÄRTSILÄ SLOP WATER TREATMENT SYSTEM FOR OFFSHORE UNITS



Diminished waste stream from offshore activities

REDUCES DISPOSAL EXPENSES

Payback time less than 1 year

Easy to retrofit

SMALL FOOTPRINT

Rigorous environmental regulations on discharge in the offshore industry have focused attention on drilling wastes. Drilling with both oil-based mud and synthetic based mud generates waste streams, often referred to as 'slop mud' or 'slop water', is produced when an oil/synthetic/diesel-based drilling fluid becomes contaminated with water, and are amongst the most significant waste streams from exploration and development activities. Hydrocarbon contamination renders these slops ineligible for overboard discharge. The unusable mud is typically sent for disposal or reconditioning. For operators, large volumes of slop mud result in enormous disposal expenses and represent a potentially significant environmental issue.

Wärtsilä Slop Water Treatment System is designed to clean mud or water (deck washing water or rain) contaminated with slop or drilling mud from offshore units - particularly drilling rigs and drilling ships.

With the understanding that different rig configurations and operating practices greatly influence the produced slop volume, it is safe to say that an average of 500 bbl of slop (or contaminated water) is produced on a daily basis during normal drilling activities. After contamination the drilling fluid may contain 50- 90% loosely emulsified water and 10-50% non-aqueous drilling fluid.

### FEATURES & BENEFITS

Wärtsilä Slop Water Treatment System enables drill slop water to be discharged into the sea without further treatment. The unit also significantly reduces drill slop sent onshore for treatment by as much as 80-90%.

### CORE COMPETENCES

- Small footprint
- Easy to retrofit and install during operation, no yard time needed
- OPEX (payback time less than 1 year)
- Cost competitive
- Environmentally sound
- Proven technology
- Availability
- Worldwide support through Wärtsilä Sales & Service network

**THE PROCESS**

The processing principles are based on a combination of chemical treatment and dissolved air flotation. The chemicals flocculate and bind together particles, making them easier to separate, which then allows flotation by dissolved air to separate both particles and oil from the water. The result is clear water free of particles and oil, acceptable to be discharged to the environment or reused on the rig. The discharge is monitored by a, in-line, oil-in-water content meter that will ensure that no water with less than 5 PPM gets pumped into the environment.

With a small foot print and modular build the Wärtsilä Slop Water Treatment system is easy to retrofit to any rig. The system is designed to be able to operate 24 hours a day with minimal operational work, maintenance and downtime.

**SERVICE AND SUPPORT**

Wärtsilä supports its customers throughout the lifecycle of their installations by optimizing efficiency and performance. We offer expertise, proximity and responsiveness for all our customers in the most environmentally sound way.

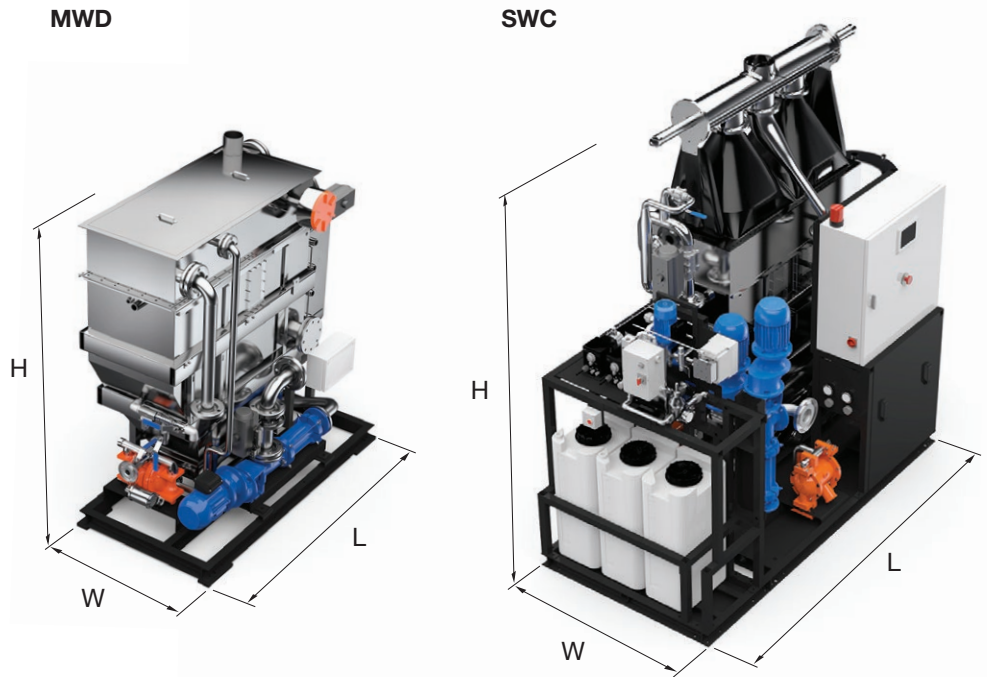
Our Services & Support solutions range from basic support, installation and commissioning, performance optimization, upgrades and conversions to service projects and agreements focusing on overall equipment performance and asset management.

We deliver aftersales support through our network of service centres in over 70 countries worldwide.

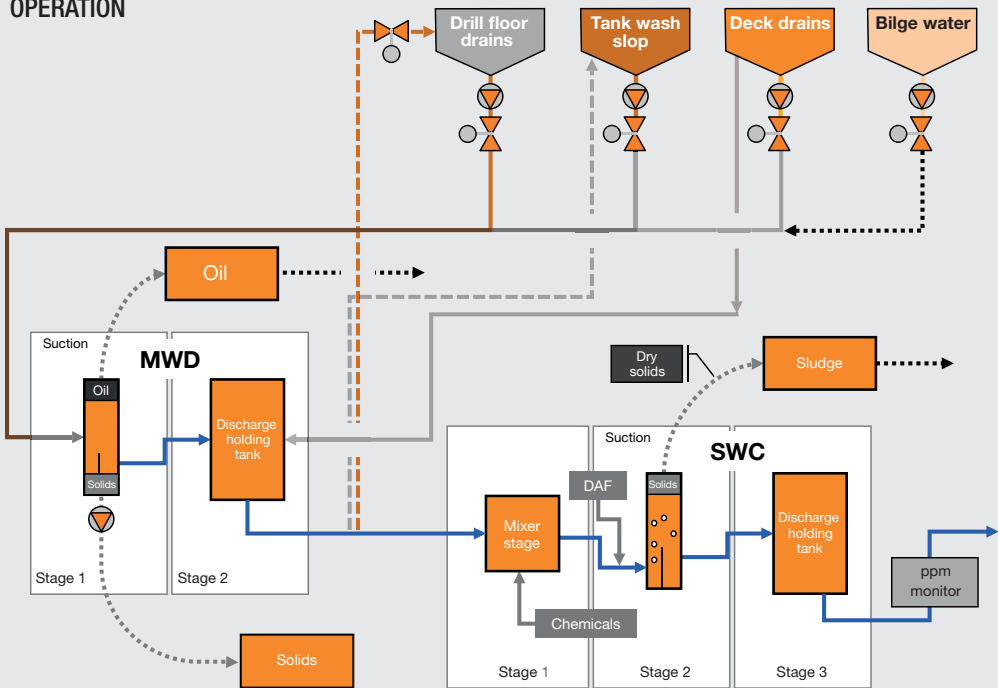


**FOOTPRINT MWD/SWC MODELS**

Model	Capacity m³/h	Capacity gal/h	Size (mm)			Size (inches)		
			Length (L)	Width (W)	Height (H)	Length (L)	Width (W)	Height (H)
MWD	5.0	1320	1600	800	1780	63.0	31.5	70.1
SWC	5.0	1320	2760	1100	2565	108.7	43.3	101.0



**OPERATION**



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