Brandt

iNOVaTHERM

Portable Thermal Treatment Solutions

Improve your environmental performance by treating drilling waste at source, reducing your carbon footprint, while lowering your operating costs.

Increasing global awareness of Environmental, Social, and Governance (ESG) is driving the energy sector to adapt to evolving environmental policies. Enhanced waste management and disposal methods are essential to achieving these goals.

Our iNOVaTHERM is an advanced, electrical, non-friction-based, thermal separation technology designed to efficiently process various drilling wastes, including contaminated drill cuttings, oily sludge, spent muds, slops, heavier oil waste, legacy waste, crude oil spills, tank bottoms, and refinery waste.

Offshore drilling operations have traditionally involved transporting drilling waste to shore for treatment and disposal.

Onsite thermal treatment of oil-based drilling waste eliminates unnecessary transportation costs while ensuring lower emissions and compliance with environmental standards for the safe and responsible disposal of drilling waste.

Our iNOVaTHERM technology has proven effective in recovering oil and water from drilling waste, consistently delivering less than 0.1%* oil on cuttings (OOC) for safe disposal. Independent third-party testing has confirmed that the recovered oil is undamaged during the thermal process, allowing for its complete reuse.

Unlike previous technologies, iNOVaTHERM uses non-frictional indirect heating to maintain constant temperatures with lower energy requirements, which improves efficiency with quicker startup and shutdown times.

In addition to reducing environmental impact, the system's higher treatment capacities, decreased energy consumption, and reduced manpower requirements will lower your operating expenses. Further cost savings can be recognized through recovery of high value base oil and the elimination of skip rentals and transportation.

Contact your local NOV representative to learn how the iNOVaTHERM can ensure optimum processing performance for the treatment of your drilling waste.

*North Sea Legislation allows discharges of up to 1% of OOC, Norwegian sector 0.3%

Features and Benefits

Treatment of waste onsite

- Environmental compliant waste management practice.
- Reduced health and safety exposure from lifting skips and material handling associated to traditional "Skip & Ship" operations.
- Reduced skip rentals, associated transport and treatment costs.
- Non-productive time due to waiting on weather / logistical issues during offshore drilling operations is eliminated.

Advanced technology, Compact design

- Non-frictional, indirect, electrical heating, improving startup and shutdown times.
- Reduced mobilization, installation time, and associated costs.
- Lower footprint and deck loading.
- Reduced wear & tear and maintenance requirements.
- Suitable for offshore and onshore applications.

Higher capacity and reduced manpower

- Processing capacity of 7.5MT per hour, based on a waste composition of 15% oil, 15% water, and 70% solids by weight.
- Higher throughput +/-10MT per hour has been achieved (depending on waste composition).
- Simplified process control system, reduced manning, and enabling to operate day or night shifts.
- Remote monitoring and support.

Treatment of a wide range of waste streams

- Reduced volumes of untreated waste required to be transported offsite for treatment and disposal at a remote location.

Recovery of high value base oil for reuse at the rig site

- Lower cost of drilling fluids.

Scalable power requirements and overall fuel consumption

- Electric motors, PLC controls, scalable system from 500 kW to 1,500 kW, can be powered from the rig, generators or grid.

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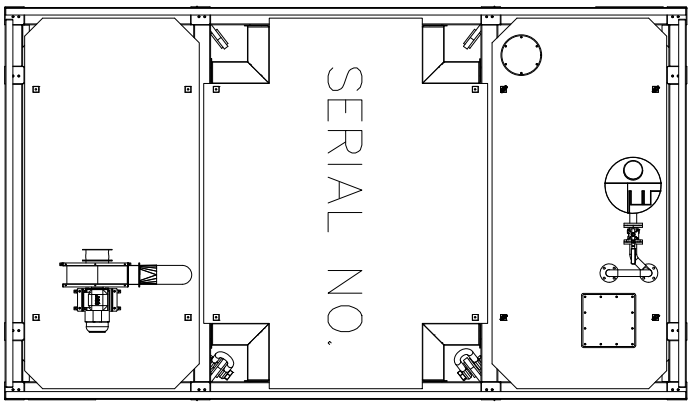
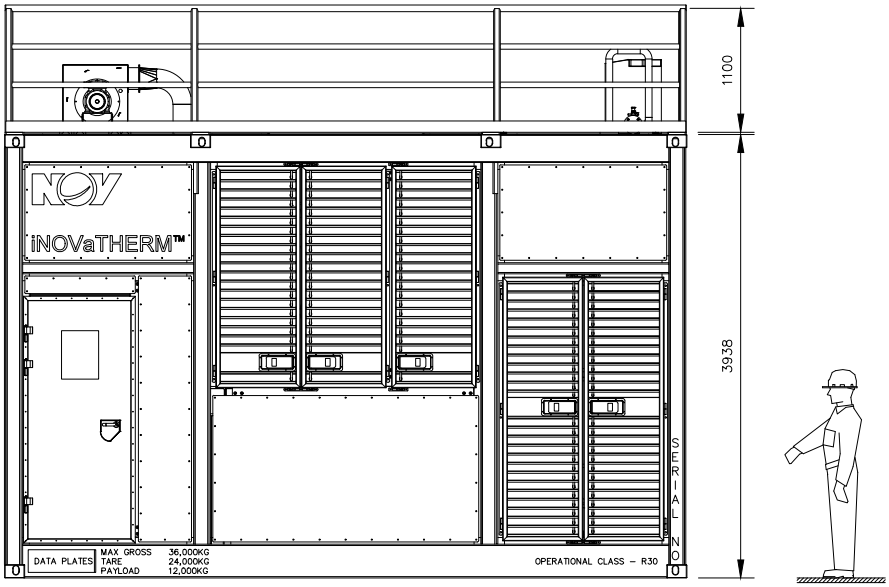
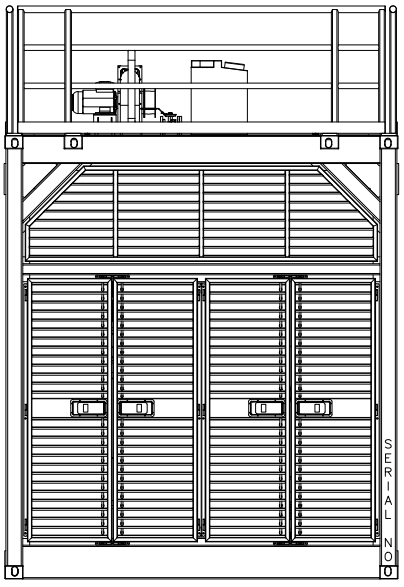
Technical Data Sheet



PLAN



ELEVATION



END ELEVATION

Process Module						
Description	**Length**	**Width**	**Height**	**Footprint**	**Dry Weight**	**Max Operational Weight**
1.5 MW	6,058mm (20′)	3,490mm (11.5′)	3,938mm (13′)	21m² (226.04 ft²)	32,500 kg (71,650 lb.)	35,500 kg (78,264 lb.)

Feed Module						
10MT	3,600mm (12′)	2,438mm (8′)	3,048mm (10")	8.8m² (94.72 ft²)	10,000 kg (22,046 lb.)	20,000 kg (44,092 lb.)
70 MT	6,058mm (20′)	3,490mm (11.5′)	3,938mm (13′)	21m² (226.04 ft²)	22,500 kg (49,604 lb.)	92,000 kg (202,825 lb.)

Equipment Specifications	
Multiple power supplies, 400 – 690V, 50/60 Hz	Norsok Z-015
DNV approved modules	Typical start-up time from cold 1 hour
CE marked	Low noise - electrically powered process
ATEX Zone 2 compliant	Recovered base oil qualities unaffected by process
Inbuilt system contingencies: 2x independent feed pumps, 2x independent feed lines, 2x independent feed inlets, multiple mixing rotors, 2x discharge rotary valves	Typically, 8% solids required in feed stock however lower solids content % has been processed historically.