



**WATER TREATMENT EQUIPMENT**

# Water-Based Neutra-Mill 1015/6P

## MOBILE MULTI-REAGENT MIXING AND DOSING SYSTEMS

The Neutra-Mill 1015 systems are water-based portable multi-reagent mixing and dosing systems for long-term water treatment or emergency response. The systems are suitable for use with any dry powder reagent or dense solution, allowing the systems to be used to treat a wide range of water quality issues. Reagent can be dispensed from a fixed point or evenly dispensed over the entire water body.

- Acid and metalliferous drainage (AMD)
- Lowering dissolved metals and salinity
- Turbidity control
- Algal control
- Nutrient pollution control
- Disinfection and chlorination
- Cyanide destruction
- pH control
- Metal control

In-situ water treatment involves mixing and dosing reagent into a water body, rather than pumping water for treatment through a water treatment plant. The water-based Neutra-Mill systems allow treatment of a water body to be conducted in situ.

The Neutra-Mill 1015 can complete a range of water treatment assignments by varying the reagents used. Unit can be used not only for routine treatment, but also for remediation, supplementary treatment or for rapid emergency response treatment in situations such as treatment plant failure or extreme weather events.

Based on patented Neutra-Mill technology, the Neutra-Mill 1015 is capable of dispensing up to 5 tonnes of powdered reagent per hour. These units can be driven across the water body while mixing and dosing reagent to disperse reagent across the water surface, or alternatively can be moored at a fixed location, depending on the application and site conditions.

### MODE OF OPERATION

The Neutra-Mill 1015 consists of a horizontal mixing drum supported by pontoons, and can be propelled around a water body for controlled reagent dispersion, allowing access to the entire surface area of the water body.

During manual operation, 25 kg bags of dry reagent are loaded into the water-flushed feed chute and washed into the horizontal mixing drum. The process can be automated by mooring the unit and feeding the mixing drum directly from a silo or auger. A concentrated suspension of reagent exits the mixing drum directly into the water body being treated.

The rotating mixing drum

- provides agitation to thoroughly mix and dissolve a range of highly soluble to sparingly soluble reagents;
- continually removes precipitate surface coatings that reduce reagent efficiency;
- minimises the release of large undissolved or surface-coated reagent particles;
- can be easily cleaned by opening the cleaning ports and operating the drum in the reverse direction.



### ADVANTAGES

- Suitable for potable water, wastewater, process water, stormwater, contaminated drainage/seepage, lakes, pit lakes and tailing dams.
- Ideal for routine or rapid/emergency response dosing.
- Low running and maintenance costs.
- Suitable for a wide range of reagents to address multiple water quality issues across a single or multiple sites.
- Suitable for correcting water quality issues in large tanks, dams, lakes, pit lakes, tailings facilities, stormwater ponds, process ponds, etc.
- Portable – can be used at multiple locations on a single site or across several sites.
- Rapid setup.
- Simple operation and control systems.
- Fully self-contained diesel (or petrol) generator, electric pump and mixer – no external power requirements.
- Ideal for remote sites.



For further information, contact Jeff Taylor on +61-3-9810-7500 or [jeff.taylor@earthssystemsglobal.com.au](mailto:jeff.taylor@earthssystemsglobal.com.au)



**WATER TREATMENT EQUIPMENT**

**Water-Based Neutra-Mill 1015/6P**

Technical Specifications		
General Arrangement		
Power Options	Petrol or diesel generator (~5 kW) or single-phase grid power.	
Mixing Drum	Design volume	1.2 m <sup>3</sup> (1,200 L)
Major Components	Mixing drum and 6 buoyancy pontoons	
Construction Materials	304 stainless steel hollow tube frame and handrails Acid / alkaline / UV resistant polystyrene-filled HDPE pontoons	
Mixing System	Mixing direction	Forward (dosing mode) & reverse (cleaning mode)
	Mixing rotating speed	0–25 rpm
	Drive Belts	5/8-inch round urethane belting
	Control system	AC-DC inverter, variable speed, forward and reverse DC controller
	Drive motor	1.1 kW IP54 180 V DC
	Gearbox	161 gear ratio
Dispensing Pump	Type	Stainless steel, self-priming, flexible impeller
	Flow rate	~50–75 L/min
	Pump drive motor	0.75 kW, 240 VAC, 50 Hz
	Maximum solid content	~30 wt% solids
	Hoses and fittings	1-inch BSP and camlock fittings
Dosing System	Dosing options	1. Direct dosing from drum outlet 2. Hand-held dosing via hose 3. Dosing from spray bar (optional)
Power System	Generator motor	8–10 hp (depending on make)
	Continuous output	4.7 kW
	Power outlets	2 × 15 amp weatherproof sockets
	Standard fuel tank	6.5 L (optional 25 L long-range tank)
	Fuel efficiency	~2 L/hr (80% load)
Other	Empty weight	~600 kg
	Working weight	~1,200 kg
	Total dimensional size	4.6 m (L) × 1.9 m (W) × 2.4 m (H)
Equipment Options	Outboard motor (unleaded petrol or electric)	
	Trailer or support frame for flat-bed truck transport	
	Spray bar for more uniform reagent distribution if required	
	A variety of site-specific optional accessories can be provided to meet site conditions and treatment requirements	
Spare Parts	Various spare parts kits can be provided to minimise potential down-time.	





**WATER TREATMENT EQUIPMENT**

**Water-Based Neutra-Mill 1015/6P**

