HIGH VOLUME PUMPS
The Dutch shaftless electric pump solution

WASTEWATER TREATMENT

PROJECT CASE

FIELDTEST RANDWIJK



Waterschap Rivierenland

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About the project

The High Volume mixer was tested at the wastewater treatment plant in Randwijk under real operating conditions. The test focused on evaluating the performance of the High Volume mixer in comparison with the existing Sulzer pump.

Operational data was collected and analysed to provide clear insight into the differences in performance, energy consumption and service intervals.

Monitored parameters

- Water conditions
- Energy consumption
- Rotational speed (RPM)
- Controller temperature
- Motor temperature
- Basin conditions
- Basin measurements

Parameter	Sulzer XEW3032 PA28/6 CR	High Volume Mixer - 212
Power consumption (average)	2.70kW	1.20kW
Annual operating hours	8,760 h	8, 760h
Annnual energy use	23,652.0 kWh	10,512.00 kWh
Electricy price	€ 0.2219/ kWh	€ 0.2219 / kWh
Annual electricity costs	€ 5,248.38	€ 2,332.61
Annual maintenance costs	€ 518.00	€ 200.00



Field test results

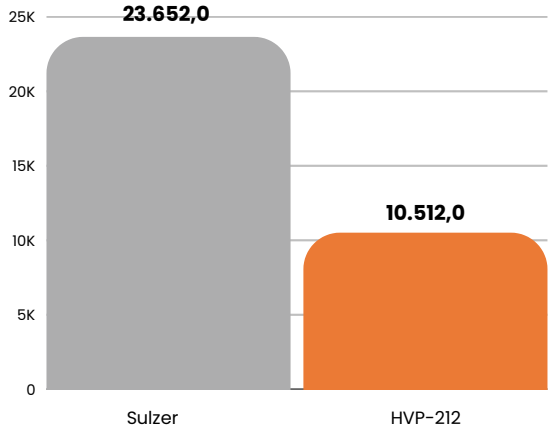
13.140,0 kWh

Annual energy savings

Lower power consumption results in reduced annual energy use.

Annual energy use

kWh



56%

Annual energy savings

CO_2 footprint

62%

Annual maintenance cost savings



Self cleaning system

The self-cleaning system uses reverse propeller rotation to help dislodge accumulated debris and reduce the risk of blockages. This supports reliable pump operation in demanding wastewater areas.

How it works

The pump temporarily reverses the propeller rotation to help remove accumulated debris. After the cleaning cycle, the propeller returns to its normal operating direction.



1.Normal operation

The propeller rotates in the normal direction to deliver high flow efficiency.



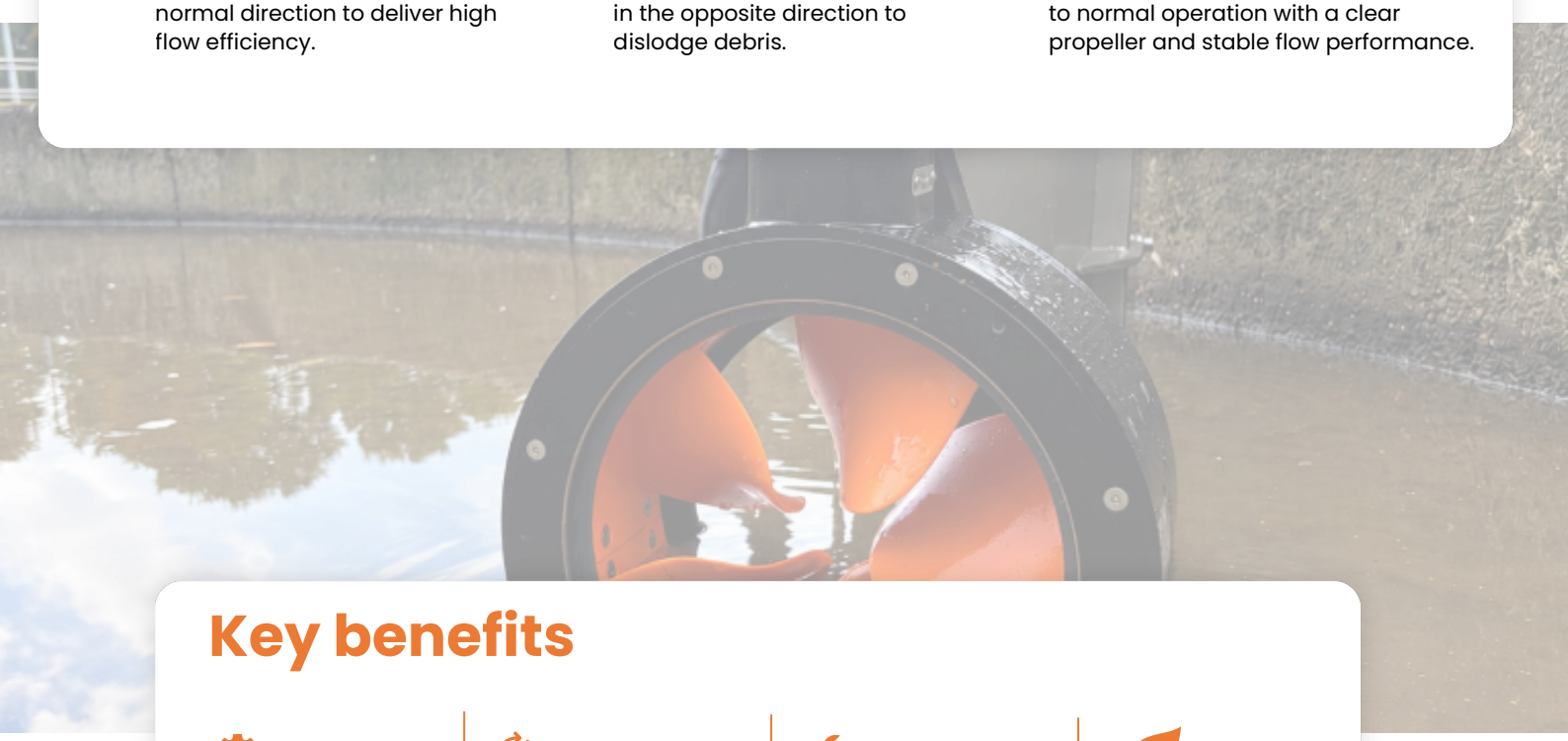
2.Reverse rotation

The propeller temporarily rotates in the opposite direction to dislodge debris.



3.Clean operation

After cleaning cycle, the pump returns to normal operation with a clear propeller and stable flow performance.



Key benefits

Reduces risk of blockages

Helps prevent buildup of fibres, solids and other debris on the propeller and in the pump housing.

Supports reliable operation

Maintans consistent flow performance in demanding wastewater environments.

Less manual cleaning required

Decrease the need for physical intervention and helps reduce down time.

Optimised efficiency

A clean propeller supports high hydraulic efficiency and stable energy consumption.

Mixer technical specifications

Compare the technical specifications of our High Volume Mixers to indentify the most suitable model for your application.

Product	Power range (kW)	Voltage (V)	Thrust range (N)	Maximum capacity m3/h	Total weight (kg)	Propeller diameter (mm)	Outside diameter (mm)	Standard cable length (m)
Mixer 133	0.5 - 5.0	400V or on request	118-608	412	50	133	191	2.5
Mixer 168	0.5 - 8.0	400V or on request	78-1196	750	55	168	239	2.5
Mixer 212	0.5 - 11.0	400V or on request	181-1578	1062	63	212	290	2.5
Mixer 212-PRO	0.5 - 15.0	400V or on request	186-1912	1179	70	212	290	2.5
Mixer 290	0.5 - 22.0	400V or on request	127-2844	1939	115	290	378	2.5
Mixer 341-3	0.5 - 30.0	400V or on request	147-4265	2677	141	341	470	2.5
Mixer 341-5	0.5 - 50.0	400V or on request	147-6374	3602	144	341	470	2.5
Mixer 341-PRO	0.5 - 75.0	400V or on request	118-8090	4128	171	341	470	2.5



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Shaftless
Electric pumps

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