

Complete.
Compact.
Compliant.

The OMNIPURE™ Series 64 Marine Sewage Treatment System



Compliant in Every Port, Harbor, Ocean and Sea

With MEPC.227(64), the International Maritime Organization formally adopted a new standard for the treatment of offshore sewage. More specifically, the guidelines call for a reduction in the amount of TSS, or total suspended solids. Obviously, maritime vessels and offshore platforms are compelled to comply. In doing so, they are also compelled to find a solution that achieves the benchmark using proven technology that integrates easily with the simplest long-term operation, minimal maintenance and most sensible economic impact.

For many, the solution to this new guideline is the OMNIPURE™ Series 64 from De Nora.

Already proven around the world. Now improved aboard your ship or platform.

De Nora didn't turn to new, untested ideas when creating the OMNIPURE™ Series 64. No, we have achieved compliance to the MEPC.227(64) requirements by utilizing the same real-world, proven electrolytic processes that can be found in nearly 3000 OMNIPURE treatment units installed in marine vessels and offshore platforms around the world. Combining electroflotation to our already successful DSA® electrode technology further ensures treatment compliance. While De Nora, the inventor of DSA® coatings, has not changed its core electrolytic technology, the footprint and maintenance requirements for this new OMNIPURE™ Series 64 have been minimized.

Removing the mess and maintenance of filters.

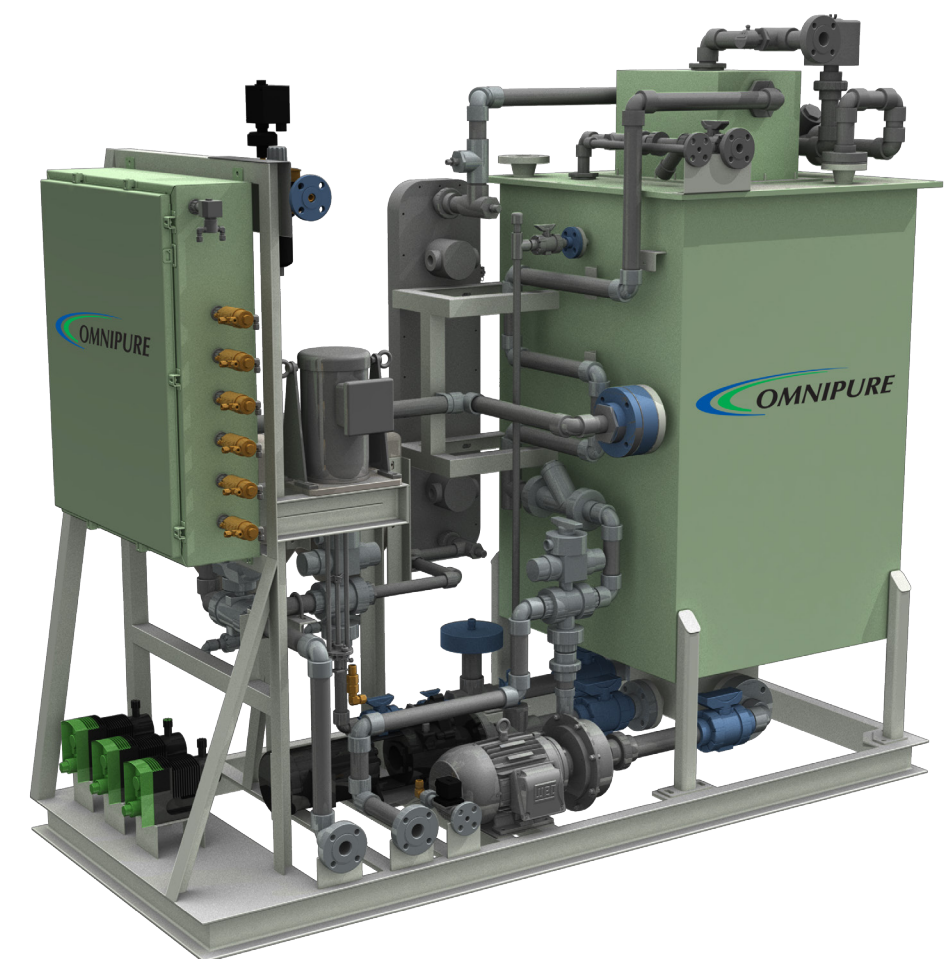
Far different from the majority of options available for meeting the new IMO standard, the hands-off OMNIPURE™ Series 64 does not rely upon raw sewage inlet screens and filters.

Messy, cumbersome and a disgusting task to service, the presence of pre-screens or filters makes a sewage treatment system a much larger burden to operate.

Instead of pre-screens or filters, the OMNIPURE™ Series 64 is a hands-off system that employs maceration for solids break-down, electrolytic treatment and finally electroflotation to effectively treat the waste stream to, or beyond regulatory requirements.

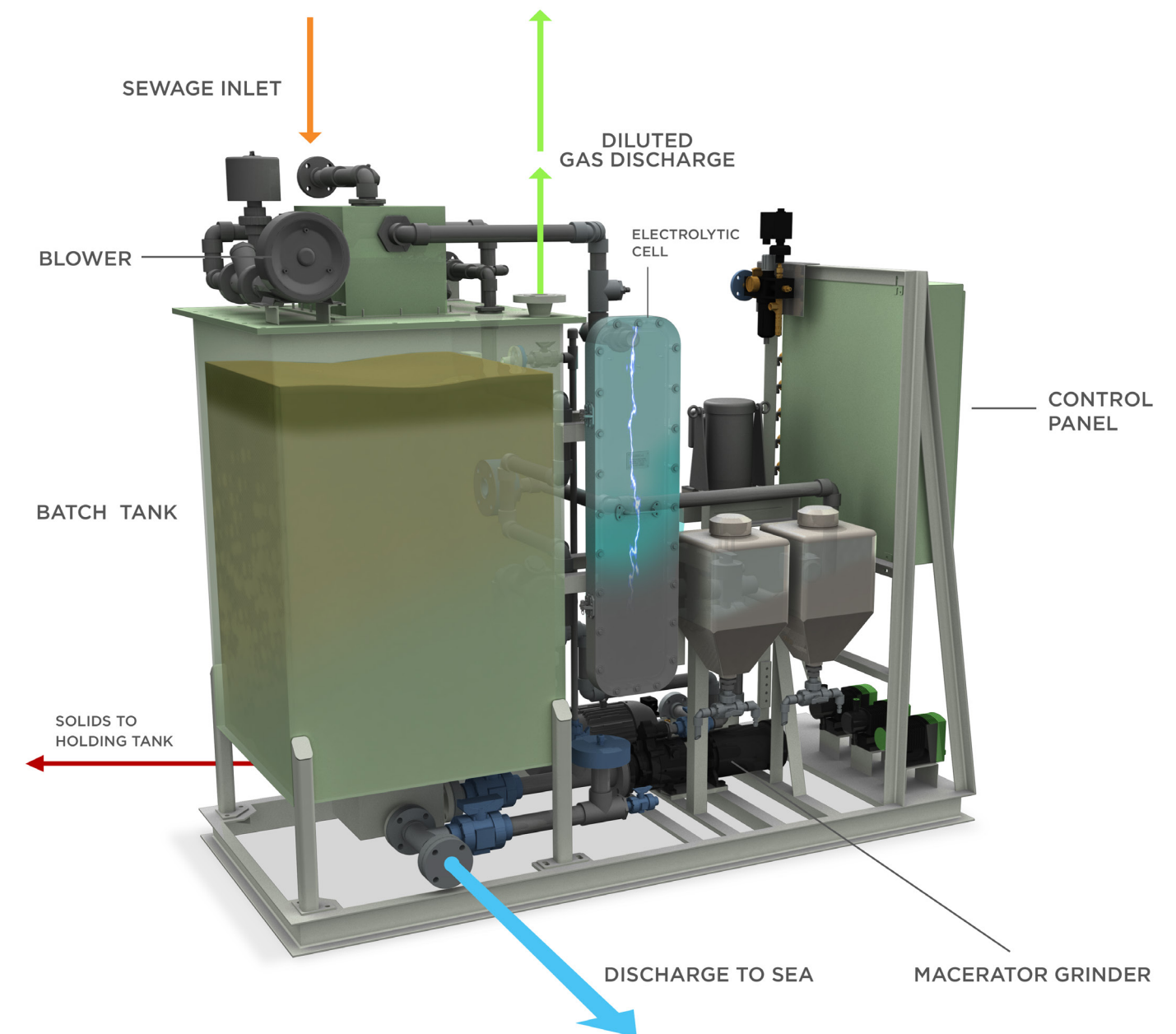
One Small Footprint, One Big Step for Simplicity

The OMNIPURE™ Series 64 treats raw sewage to, or beyond the now more stringent MEPC.227(64) guideline while taking up less space than its predecessor. Not just a system smaller in size, it is easier to operate with simplified controls, minimal instrumentation, less maintenance and a completely hands-off solids management process.



Processing Raw Sewage into Compliant Effluent

1. A metered amount of seawater is added to the OMNIPURE™ Series 64 batch tank. At the same time, a concentrated polymer is mixed into solution with potable water in an automatic mixing chamber on the unit for use later.
2. Untreated sewage is pumped from the vessel's or platform's holding tank and into the OMNIPURE™ Series 64 batch tank, filling it to a precise, sensor-controlled volume.
3. The sewage and seawater mixture is recirculated through the electrolytic cell to oxidize and kill the pathogens in the wastewater. A de-foaming agent is also added to keep foaming to a minimum.
4. During treatment, any process gases are vented safely away by the integral dilution blower unit.
5. After the pathogens have been eliminated using the electrolytic cell, the pre-mixed polymer solution is injected into a 'mix spool' which begins an agglomeration process.
6. In addition to killing pathogens, the use of the electrolytic cell encourages an electroflotation effect to occur at the surface of the wastewater in the batch tank.
7. Agglomerated solids form a floating 'solids layer' in the batch tank without the use of externally induced air, or large air blowers.
8. After a brief separation time, the clear effluent below this solids layer is pumped overboard after de-chlorination, meeting or exceeding the MEPC.227(64) guideline.
9. Remaining solids in the batch tank are pumped out through a macerator pump, and sent to the solids holding tank for later disposal. As an enhanced option, or when a wet solids holding tank is not feasible, De Nora also offers a self-contained centrifuge solids handling system that effectively concentrates the wet solids waste to a dewatered, class 'B' solids level, which can be safely disposed of in a traditional landfill.



Multiple Models to Accommodate Your Capacity Requirements

Solid waste treatment is not a one-size-fits-all scenario. Invest in too big of a system, and you end up wasting precious floor space and using more consumables than needed. Go with something that’s just big enough and you might not always be able to keep up with demand. That’s why the OMNIPURE™ Series 64 is available in eight different treatment capacities to match your offshore platform or marine vessel waste processing demand. With the OMNIPURE™ Series 64 you get the right solution for your particular application.

Models	6405	6408	6413	6417	6424	6430	6440*	6450*
Daily Treatment Capacities	4,845 L/day	8,042 L/day	13,149 L/day	17,206 L/day	24,145 L/day	30,470 L/day	40,431 L/day	49,950 L/day
	1,280 Gal/day	2,124 Gal/day	3,474 Gal/day	4,545 Gal/day	6,378 Gal/day	8,049 Gal/day	10,681 Gal/day	13,195 Gal/day

** Larger units incorporate dual macerators and electrolytic cells.*

Why stop at meeting spec?

When guidelines change, as they did with MEPC.227(64), De Nora adapts to comply beyond specification. This was achieved with the OMNIPURE™ Series 64, that meets or surpasses IMO guidelines. The proof is in the numbers, and the numbers favor the OMNIPURE™ Series 64.

Discharge	MEPC.227(64) IMO Guidelines	OMNIPURE Series 64™ Performance
BOD (mg/L)	< 25 x Qi/Qe	< 17 (25 x .67)
TSS (mg/L)	< 35 x Qi/Qe	< 23 (35 x .67)
Fecal Coliform (MPN/100 mL)	< 100	< 100
COD (mg/L)	< 125 x Qi/Qe	< 84 (125 x .67)
pH	Between 6-8.5	Between 6-8.5
Chlorine Residual	0.5 mg/L (max)	0.5 mg/L (max)

The Leader in Electrolytic Technology — and So Much More

Across the seven seas and five oceans, no company has accomplished more in the area of electrolytic water treatment and expanded its industrial applications than De Nora.

Founded in 1923 when Oronzio De Nora obtained his first industrial patent for a tilted electrode cell, De Nora has built its legacy upon innovation, holding more than 349 international intellectual property patents.

The De Nora of today is a global company and a leading designer, manufacturer and supplier of electrodes, coatings and complete electrochemical, disinfection and filtration solutions to serve a wide range of markets.



