

WÄRTSILÄ ENDURAPAC

Increase the reliability and
extend the lifespan of your
propulsion equipment



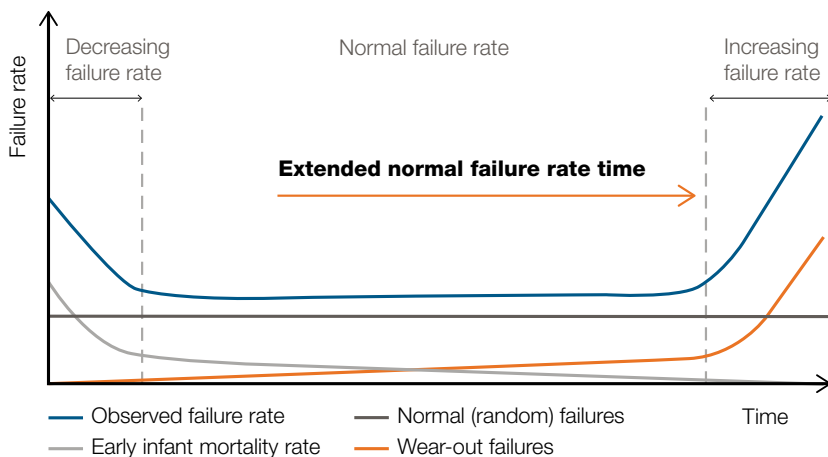
For propulsion equipment such as thrusters, reliability and availability are critical. As equipment ages, the failure rate increases and reliability decreases. Wärtsilä EnduraPac improves the condition of lubrication oil by reducing contamination levels, including water-in-oil saturation caused by leaks at sea-to-oil interfaces. This increases equipment reliability and lifetime and also reduces maintenance costs.

The solution is suitable for all propulsion equipment that uses oil for transmission or lubrication, including controllable pitch propellers and transverse and steerable thrusters, and can be used with both mineral oils and environmentally acceptable lubricants (EALs).

KEY BENEFITS

- Increases reliability of propulsion equipment and extends its lifetime
- Reduces maintenance costs
- Compact design ensures easy transportation through the vessel
- Suitable for use with mineral oils and EALs

Wärtsilä EnduraPac extends the normal failure rate time



Wärtsilä Steerable Thruster WST-14

Ensure cleaner oil

Lubrication oil condition has a significant influence on the lifetime of propulsion equipment. Reducing the contamination level of the oil by one ISO cleanliness code may increase the lifetime of components significantly. The water content of oil is often overlooked as another major contributing factor in premature component failure.

Water ingress in propulsion equipment can occur at sea-to-oil interfaces around propeller shaft seals, steering seals and controllable pitch propeller blade foot seals. Up to 0.1% of the volume of oil can be water in a dissolved state without being visible, and this dissolved water can reduce the lifetime of bearings significantly.

The EnduraPac family

Wärtsilä EnduraPac is available in four versions: EnduraPac N-Eco and N-Expert with nitro-dry technology, and Endurapac D-Eco and D-Expert with desorber technology.

EnduraPac N-Eco includes a nitro-dryer for water removal, a double-executed circulation pump, and heaters. An optional change-over valve can be included to enable connection to two separate propulsion units.

EnduraPac N-Expert uses the same principles for the water separation process but uses two separate frequency-driven pumps instead of a double-executed pump to keep the oil inside the tank at the right level. An extra-fine filter (5 µm) removes non-dissolved particles – such as metals from corrosion and/or wear – from the oil.

EnduraPac D-Eco includes a desorber dryer for water removal, a supply pump and a transfer pump, and a condensing system with a fan-cooled radiator. An optional change-over valve can be included to enable connection to two separate propulsion units. A fine in-line filter (3 µm) removes particles and other contaminants.

EnduraPac D-Expert uses the same principles for the water separation process but includes a condensing system with a refrigerator-type cooling unit. A separate fine filter (3 µm) with designated pump removes particles and other contaminants.

Scope of supply

The delivery includes the Wärtsilä EnduraPac unit and operating manuals. Installation is easy and straightforward, so there is no need for a Wärtsilä field service engineer at start-up. Consumable spare parts for one or two years of operation are available as an option.



Wärtsilä EnduraPac D-Eco



Wärtsilä EnduraPac N-Expert

Technical specifications

		D-Eco	D-Expert	N-Eco	N-Expert
Technology		Desorber	Desorber	Nitro-dry	Nitro-dry
Continuous water removal capacity*	ml/24 hr	55	840	500	500
Maximum system volume	litres	1200	4000	7000	7000
Dimensions (W × D × H)	mm	538 × 584 × 866	570 × 570 × 1635	739 × 882 × 996	600 × 600 × 1780
Weight	kg	100	170	176	240
Absolute filtration rating	µm	3	3	–	5
Change-over valve		Optional	Optional	Optional	–

*below 70% saturation level

© 2020 Wärtsilä Corporation – All rights reserved.

No part of this publication may be reproduced or copied in any form or by any means (electronic, mechanical, graphic, photocopying, recording, taping or other information retrieval systems) without the prior written permission of the copyright holder. Neither Wärtsilä Finland Oy, nor any other Wärtsilä Group Company, makes any representation or warranty (express or implied) in this publication and neither Wärtsilä Finland Oy, nor any other Wärtsilä Group Company, assumes any responsibility for the correctness, errors or omissions of information contained herein. Information in this publication is subject to change without notice. No liability, whether direct, indirect, special, incidental or consequential, is assumed with respect to the information contained herein. This publication is intended for information purposes only.