

Wärtsilä High Friction Couplings

**Easy installation for
maximum efficiency**

PRODUCT DATASHEET



Wärtsilä High Friction Couplings have been created to increase torque capacity and reduce costs. Using the latest, innovative technology, maximum propulsion efficiency can be achieved without changing the simplicity of the shaft connection method.

DESIGNED WITH DURABILITY AT ITS CORE

At Wärtsilä, we endeavour to provide our customers with products that ensure longevity and reliability. That's why through years of research and development, we have engineered a specialised design approach towards our Wärtsilä High Friction Couplings. In doing so, we have produced an improved friction coefficient which increases the standard value from 0.14 to 0.30.

The innovative technology developed by Wärtsilä increases the torque transmission capacity. This can produce substantial cost-savings for the shaft line. Thanks to this technology, customers can avoid the use of costly reinforcement sleeves and large connection couplings can be substituted for more compact solutions.

Making it better for you

At Wärtsilä, we're continuously designing, engineering and improving our products so they deliver the best to our customers. That's why our Wärtsilä High Friction Couplings have a range of additional benefits, including:

- A range of options which are quick and easy to install.
- Optimal performance in operations.
- Approval with major classification societies.

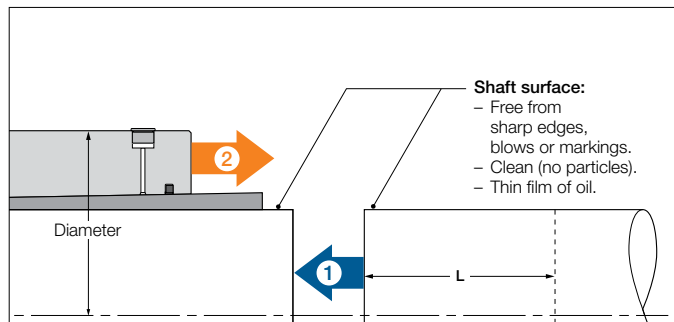


Maximum propulsion, minimum spend

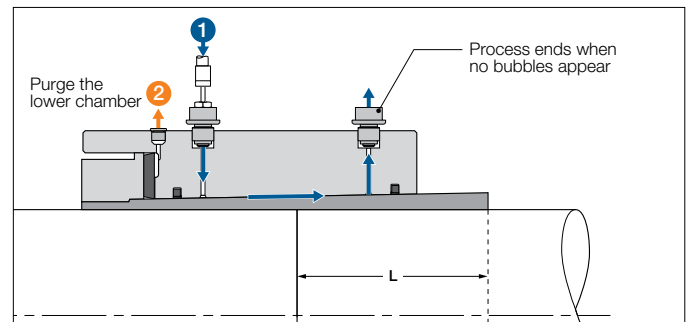
FEATURES	ADVANTAGES	BENEFITS
High quality design.	Carefully engineered to ensure the best performances in servicing and operations.	Approved with major classification societies and designed with the most effective service life.
Special high friction treatment.	No added material.	Greater resistance and no surface damages. Improved manufacturing tolerances control. Minimum shaft preparation.
Friction coefficient.	High friction coefficients.	Reduced coupling dimensions with higher torque capacity.
Reduced surface contact pressure.	Reduced shaft material stress.	Allows a higher hollow shaft. Expensive reinforcement sleeves on hollow shafts are not required. Reduced shaft material properties.
Sealing system.	No oil leakages on mount-dismount process.	Simple, quick and clean installation. Minimum staff required. No seizure problems.
Increased distance between shafts.	Allows a degree of axial misalignments on shaft line assemblies.	Expensive distance rings between shafts are not required.

Installation and operation

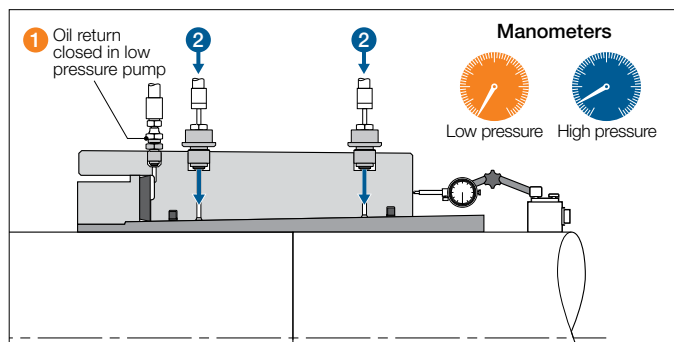
Step one – coupling position



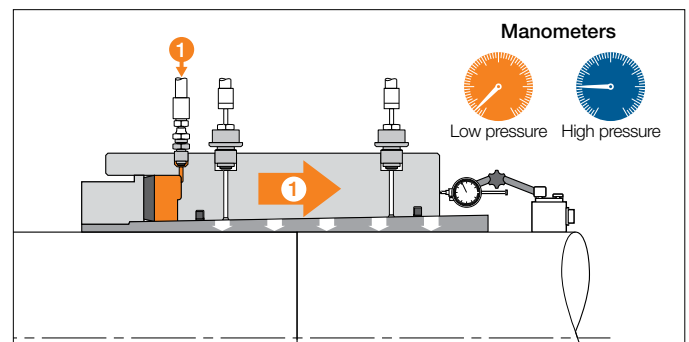
Step two – coupling purge



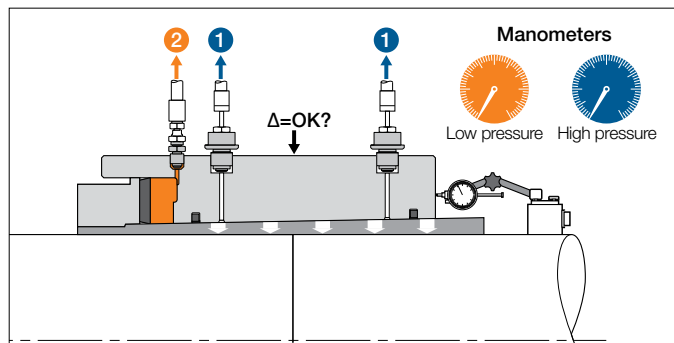
Step three – coupling starting position



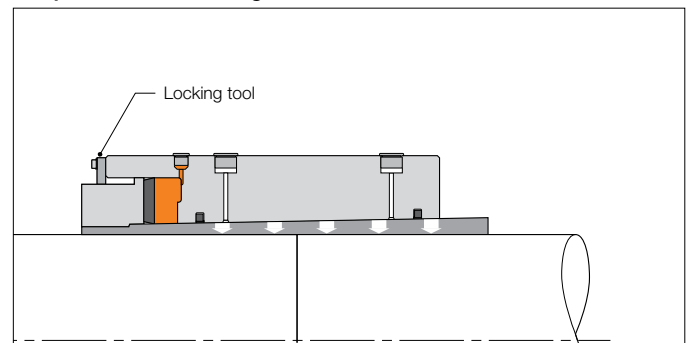
Step four – coupling installation process



Step five – coupling installation check



Step six – concluding installation



During installation, the process must be recorded. It's therefore important to take note of pressures in low and high pressure pumps at every step as well as the diametric expansion and/or pull-up length achieved at the end of the process. Wärtsilä provide a data record table in the technical manual to help with this.

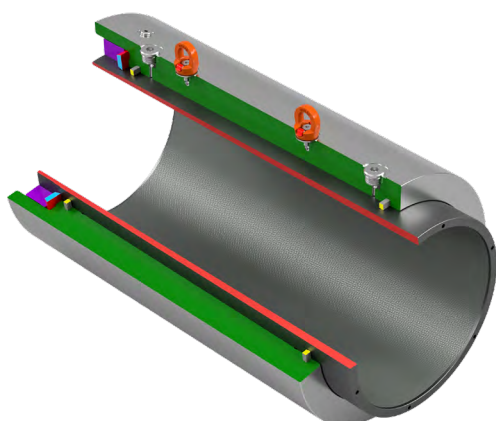
Wärtsilä High Friction Couplings

Coupling types

We have a range of Wärtsilä High Friction Couplings, all of which are ready to install, with a clean and easy installation/uninstallation process.

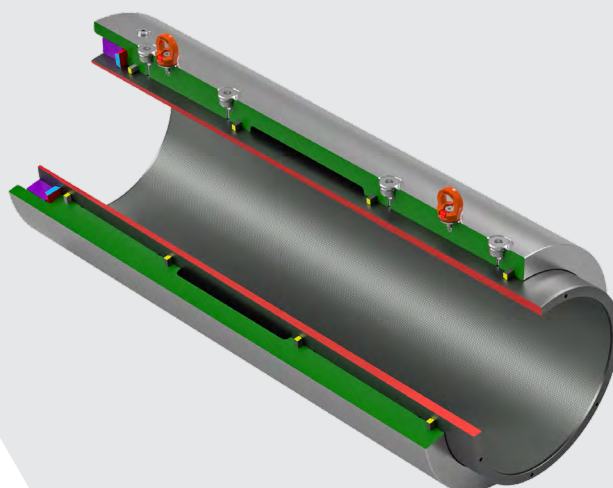
WÄRTSILÄ OHSN-X HIGH FRICTION COUPLINGS

- Cylindrical shaft end to cylindrical shaft end connection.
- Supports a small gap between shafts without losing effectiveness.
- For all kind of installations.



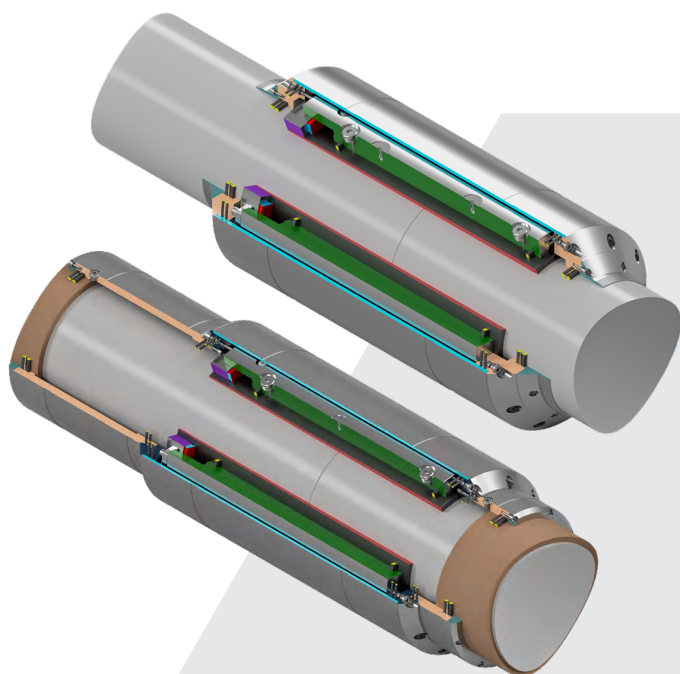
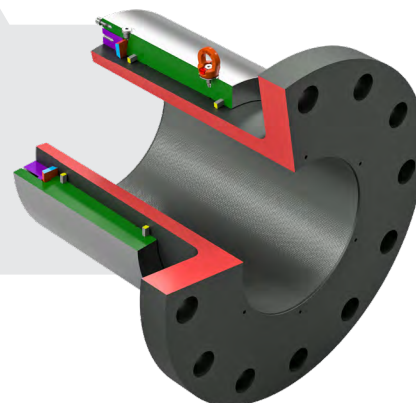
WÄRTSILÄ OHSN-BX HIGH FRICTION COUPLINGS

- Cylindrical shaft end to cylindrical shaft end connection.
- Specially designed for installations with cross pitch propellers (CPP).
- Allows a greater distance between shafts, avoiding the use of distance rings.



WÄRTSILÄ OHSM-VX AND OHSM-VXD HIGH FRICTION COUPLINGS

- Cylindrical shaft end to flanged shaft end connection.
- Fixed through the flange and integrated in the sleeve to the connection flange before coupling installation.
- Enables a perfect alignment between flanges, with minimum effort.



All the protection you need

Wärtsilä manufactures and provides protection cover for installations with alloyed steel shaft with bronze liners. Both the coupling and the shaft length need to mount and dismount the coupling over the shafts between the bronze liners, offering protection from contact with seawater. This provides easier access to the coupling during maintenance procedures.

We also manufacture and provide protection cover for installations with stainless steel shaft or alloyed steel shaft with glass refined plastic (GRP) protection material. This solution protects the coupling from contact with seawater.

Wärtsilä High Friction Couplings

TECHNICAL SPECIFICATION			METRIC	IMPERIAL
COUPLING TYPE	OHSN-X	Shaft size: standard design	Ø200 – Ø700mm	
		Shaft size: custom engineered	Any dimension	
		Coupling materials*: Boss	Alloy steel (standard)	
		Coupling materials*: Sleeve	Alloy steel (standard)	
		Hydraulic connections* (size from 200mm to end): high pressure	G3/4 (standard)	
		Hydraulic connections* (size from 200mm to end): low pressure	G1/4 (standard)	
		Hydraulic equipment required pressure: high pressure	2500bar	
		Hydraulic equipment required pressure: low pressure	400bar	
	OHSN-BX	Shaft size: standard design	Ø200 – Ø700mm	
		Shaft size: custom engineered	Any dimension	
		Coupling materials*: Boss	Alloy steel (standard)	
		Coupling materials*: Sleeve	Alloy steel (standard)	
		Hydraulic connections* (size from 200mm to end): high pressure	G3/4 (standard)	
		Hydraulic connections* (size from 200mm to end): low pressure	G1/4 (standard)	
		Hydraulic equipment required pressure: high pressure	2500bar	
		Hydraulic equipment required pressure: low pressure	600bar	
	OHSM-VX & OHSM-VXD	Shaft size: standard design	Ø200 – Ø500mm	
		Shaft size: custom engineered	Dimensions higher than Ø700mm	
		Coupling materials*: Boss	Alloy steel (standard)	
		Coupling materials*: Sleeve	Alloy steel (standard)	
		Hydraulic connections* (size from 200mm to end): high pressure	G3/4 (standard)	
		Hydraulic connections* (size from 200mm to end): low pressure	G1/4 (standard)	
		Hydraulic equipment required pressure: high pressure	2500bar	
		Hydraulic equipment required pressure: low pressure	400bar	

*Other coupling materials and hydraulic connections are available on request.

An industry leader in shaft line components Wärtsilä Shaft Line Solutions delivers a portfolio of end-to-end services and integrated solutions for the marine markets that builds on our core values: lifecycle efficiency, risk reduction, environmental leadership and design excellence. As an original equipment manufacturer operating in 75 countries, we have the capabilities to support customers on a global scale, and remain committed to providing in-country and round-the-clock expertise.

wartsila.com/shaft-line-solutions

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