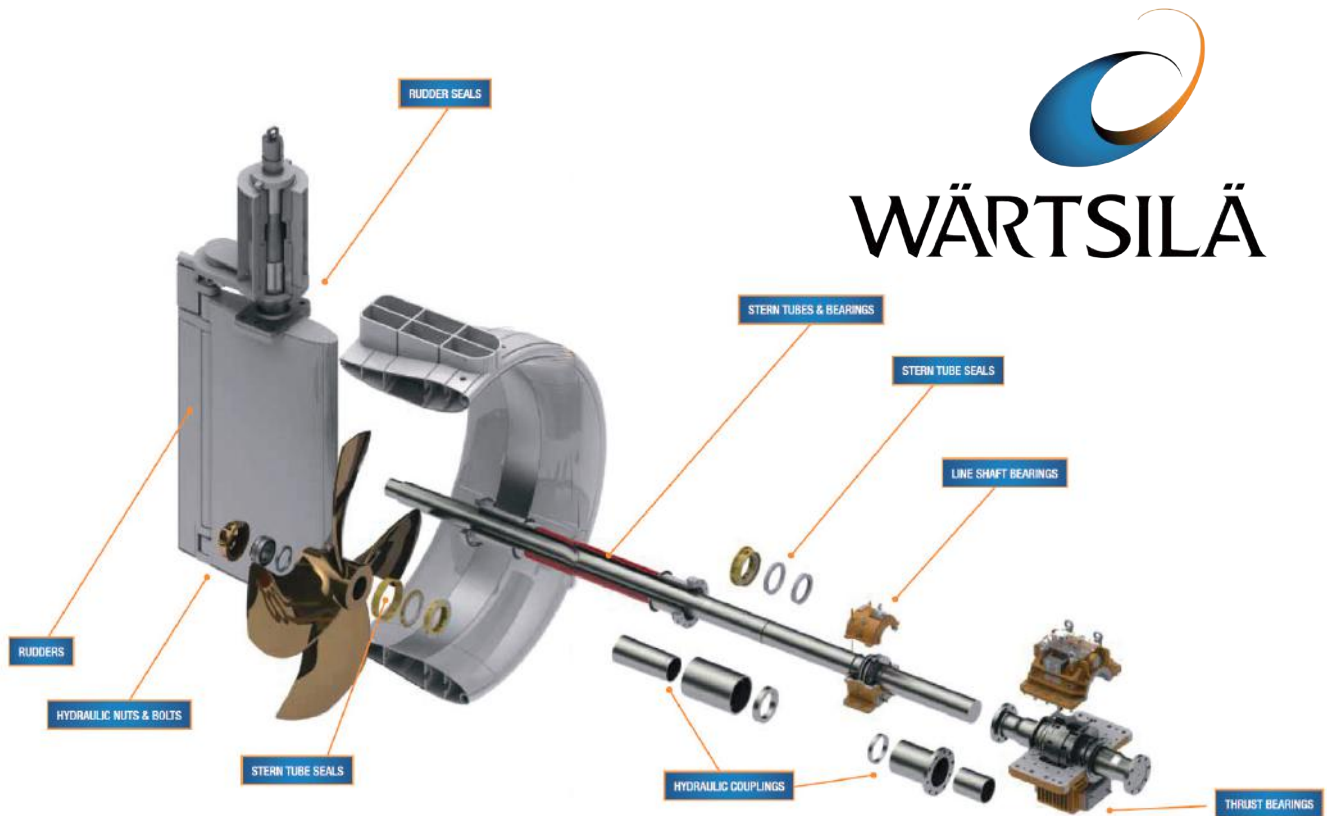




MAUCOUR now represents Wärtsilä products on the French territory. So you can directly contact us for your spare parts requirements but also the supply for original equipment on new ships.



## HYDRAULIC COUPLINGS

### OVERVIEW

All shaft lines are designed on a basis of torque transmission from the motor/engine to the propeller. This torque rotates the propeller and create the thrust that generate the ship movement. For this reason torque must be transmitted ensuring the maximum propulsion efficiency.

In scenarios where there is no possibility to install a flanged shaft, or where conventional shaft connections result in a costly installation or cannot fulfil the requirements of the shaftline, Wärtsilä can offer the Hydraulic Coupling solution.

Hydraulic couplings are a very simple method of shaft connection. They reduce the requirement of shaft preparation due to no need for the use of keyways, tapers or thrust rings at the end of the shaft. Also **ensures a safe transmission** of torque to the propeller and **support very high thrusts by friction force**.

The hydraulic couplings are available in a **wide range of sizes**.





Hydraulic couplings consist of an internally tapered boss which presses over an externally tapered sleeve during its axial displacement. This contact forms the shrink pressing force. A good combination between sleeve, boss and shaft installation, in conjunction with the hydraulic injection method, allows the achievement of the desired torque and thrust transmission.

Wärtsilä hydraulic couplings are available in four executions.

Hydraulic couplings are made with high quality standard materials and comply with all requirements of the most exigent international societies standards. Also detailed manufacture and control procedures gives a perfect-ready to install product.

In case of installations under corrosive environments with coupling material, a external protection can be provided to avoid damages to the hydraulic coupling.

## FEATURES & BENEFITS

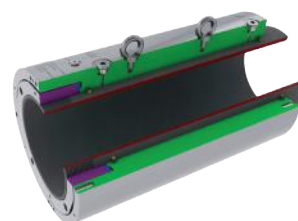
- ➔ Allow installations between a cylindrical shaft end to a cylindrical/flanged shaft end.
- ➔ Small gaps between connected shafts are accepted in coupling installation.
- ➔ Designed to ensure the shortest installation/un-installation time with the minimum resource.
- ➔ Equipped with a sealing system that allows an easy and clean installation/uninstallation process.
- ➔ Requires minimal shaft preparation.
- ➔ Avoid the risk of fretting and fatigue due to the lack of keyway stress raisers.
- ➔ No costly component substitution required throughout the whole life of the installation.
- ➔ Allows transmission of very high torques and thrusts.

## CYLINDRICAL SHAFT END – CYLINDRICAL SHAFT END CONNECTION OHSN (CSR)



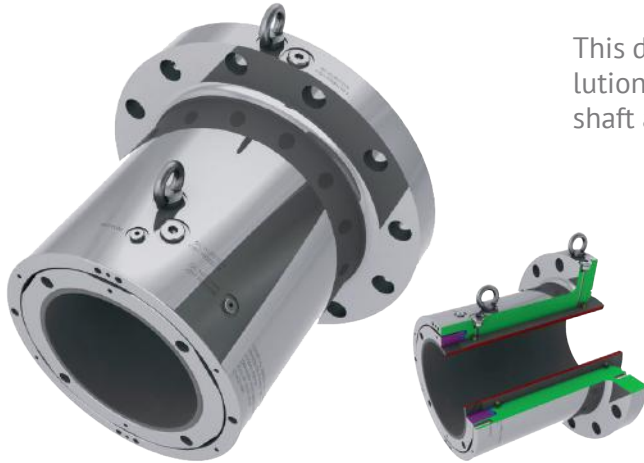
Its design allows the joining of two cylindrical shafts. It can also support a small gap between shafts without losing effectiveness. When this gap exceeds the maximum allowable, a distance ring must be installed.

<b>Shaft Ø</b>	Ø100 to 700 mm
<b>Hydraulic connections</b>	<b>Size from 100 to 170:</b>
	High pressure: M16x1.5 (Std)
	Low pressure: G1/4" (Std)
	<b>Size from 170 to end:</b>
	High pressure: G3/4" (Std)
	Low pressure: G1/4" (Std)





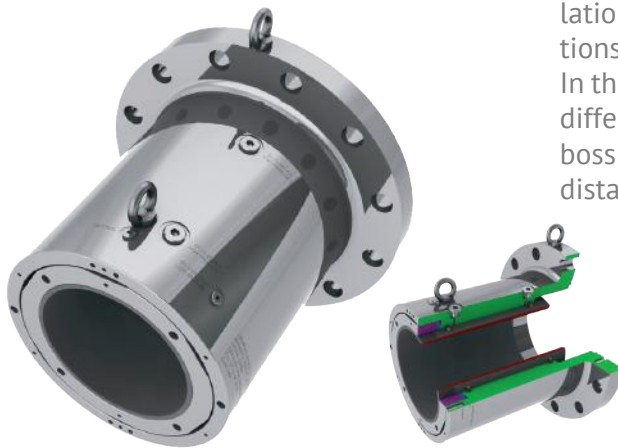
## CYLINDRICAL SHAFT END – FLANGED SHAFT END CONNECTION - OHSM (CSF)



This design includes a flanged coupling boss providing a solution for those connections between a straight cylindrical shaft and a flanged shaft, motor or gearbox.

<b>Shaft Ø</b>	Ø100 to 500 mm
<b>Hydraulic connections</b>	<b>Size from 100 to 170mm:</b>
	High pressure: M16x1.5 (Std)
	Low pressure: G1/4" (Std)
	<b>Size from 170 mm to end:</b>
High pressure: G3/4" (Std)	
Low pressure: G1/4" (Std)	

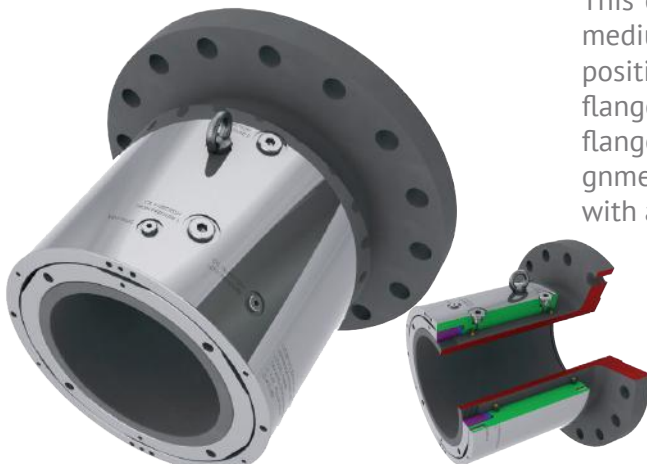
## CYLINDRICAL SHAFT END – FLANGED SHAFT END CONNECTION (LONGER BODY) - OHSM-B (CFH)



There are a variety of OHSM couplings designed for installations with controllable pitch propellers and other installations where greater distance between the shafts is required. In this kind of coupling, the coupling boss is also flanged but difference to the OHSM coupling by means of an enlarged boss so the flange is at a greater distance from the shrink fitted part.

<b>Shaft Ø</b>	Ø100 to 500 mm
<b>Hydraulic connections</b>	<b>Size from 100 to 170mm:</b>
	High pressure: M16x1.5 (Std)
	Low pressure: G1/4" (Std)
	<b>Size from 170mm to end:</b>
	High pressure: G3/4" (Std)
	Low pressure: G1/4" (Std)

## CYLINDRICAL SHAFT END – FLANGED SHAFT END CONNECTION (FLANGE IN SLEEVE) - OHSM-V (CSB)



This coupling version was developed for installations with medium torque transmission requirement where the shaft position cannot be adjusted. They are fixed through the flange which is integrated in the sleeve to the connection flange before coupling installation. In this way, a perfect alignment between flanges can be achieved with a minimum effort.

<b>Shaft Ø</b>	Ø100 to 500 mm
<b>Hydraulic connections</b>	<b>ØAPH 100 à 170mm:</b>
	Haute pression: M16x1.5 (Std)
	Basse pression: G1/4" (Std)
	<b>ØAPH 170 à 500mm:</b>
	Haute pression: G3/4" (Std)
	Basse pression: G1/4" (Std)