

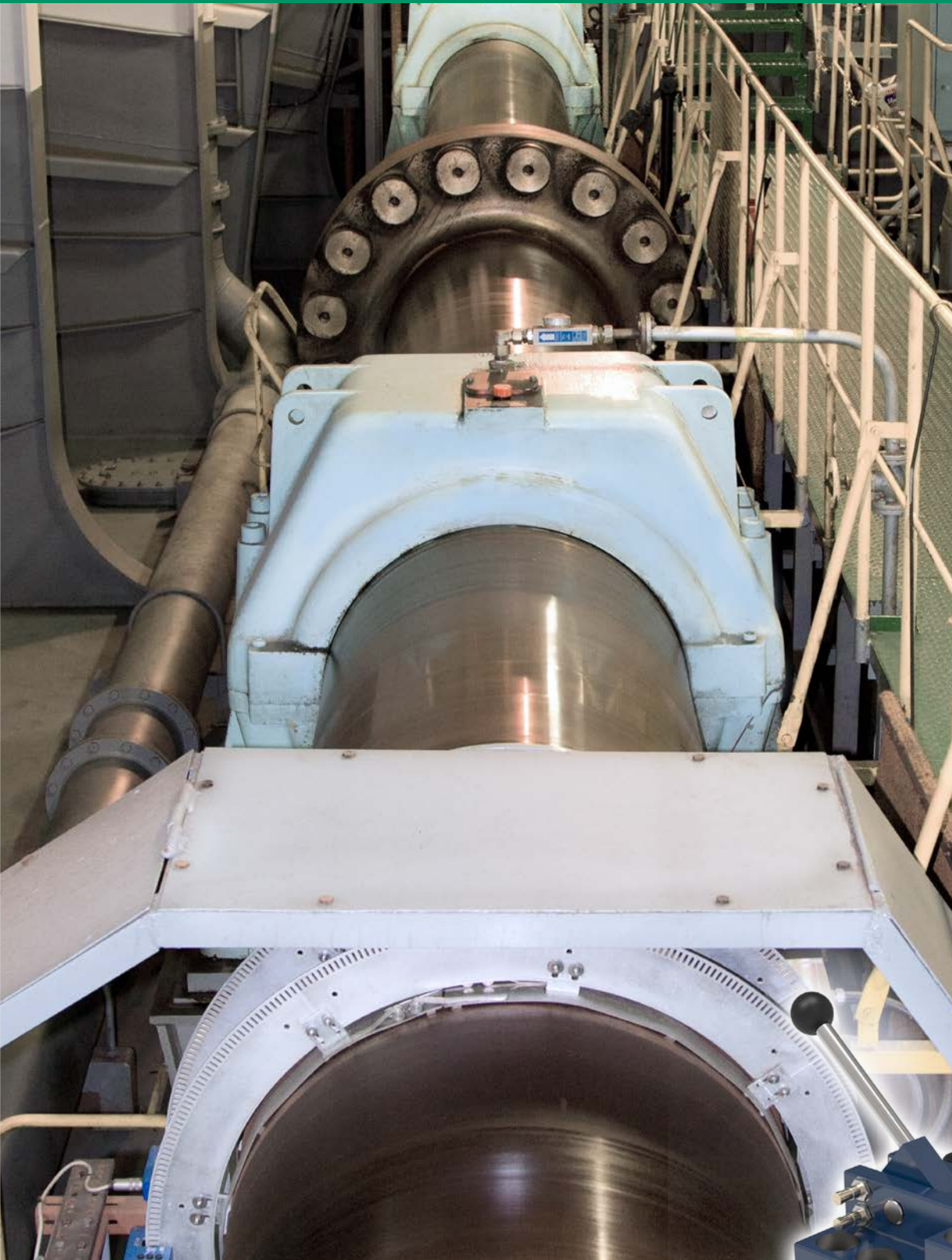


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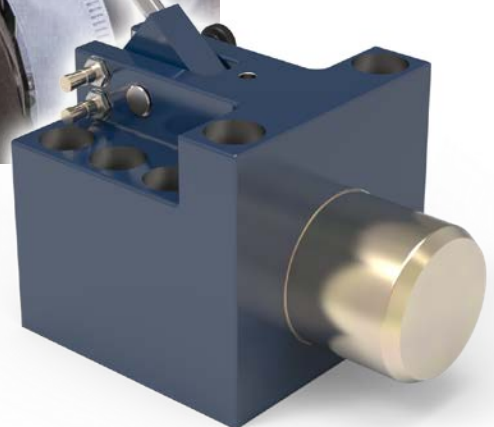
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Altra Motion



## Locking Devices for Marine Propulsion



 **Twiflex**<sup>®</sup>  
Altra Industrial Motion



## ALTRA MOTION PROVIDES POWER TRANSMISSION SOLUTIONS FOR THE MARINE MARKET

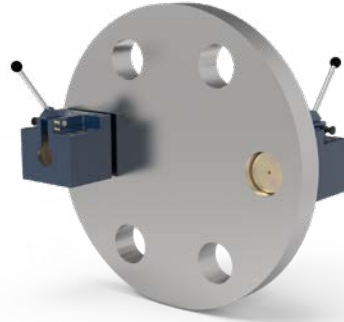
As a leading multinational designer and producer of a wide range of electromechanical power transmission equipment, Altra offers products for marine applications where reliability and accuracy are necessary to avoid costly downtime, assure safe operation and consistent performance.

With a full complement of products for the marine market such as clutches, brakes, couplings, gearing, geared motors, and linear actuators, the Altra brands have supported many prominent marine customers for years by providing decades of marine market expertise in a variety of marine applications such as deck machinery (various winches and crane/hoist systems), propulsion systems and auxiliary drives (such as dredge pumps, jet pumps, cutter heads and generator drives).

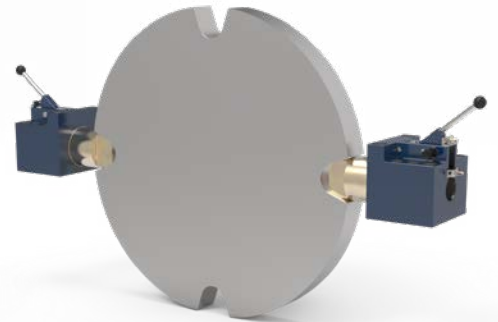
Altra brands are able to supply products to meet requirements of marine societies including: Lloyds Register of Shipping (LRS), Germanischer Lloyd, Chinese Classification Society, American Bureau of Shipping (ABS), Det Norske Veritas (DNV) Bureau Veritas, RINA (Italian), Russian Register, and Nippon Kaiji Keneteki Kyokai (NK).

[www.AltraMarine.com](http://www.AltraMarine.com)

With the continuing requirement for increased safety, Twiflex offer a range of devices to manually lock the shaft during maintenance providing a safer working environment. The devices are available as either axial locking using holes in the disc face (or gearwheel as part of the Twiflex Turning, Locking, Braking TLB system) or radially locking using a tapered pawl which is designed to engage in slots machined in the outer disc or coupling periphery.



**Axial Locking Example**



**Radial Locking Example**

## FEATURES

**Increased Safety:** Enables safe locking of the shaft for maintenance and to stop propeller rotation caused by a flow stream when stationary

**Improved Fuel Efficiency:** Used to lock the shaft to prevent 'wind milling' whilst in operation (twin or multiple screw)

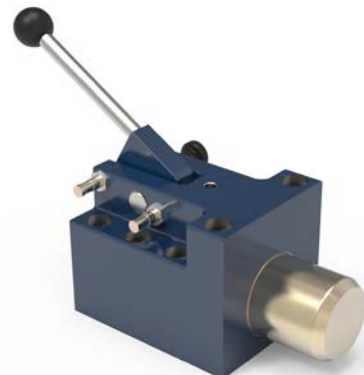
**Shaft Line Protection:** Locking to protect redundant or damaged shaft lines whilst at sea

## BENEFITS

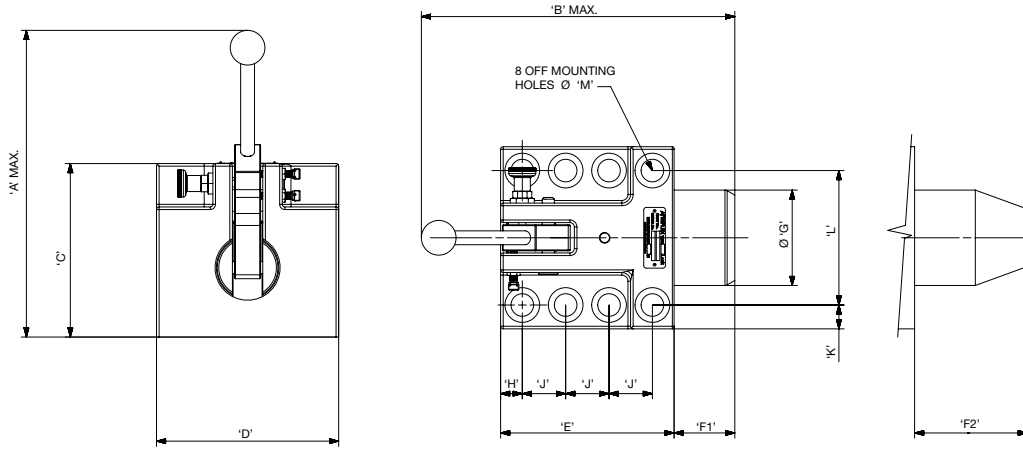
- Full range of locking forces available up to 500 kN
- Axial and radial engagement as standard
- Positive lever actuation which remains locked when engaged
- Design offers a more cost effective and compact solution when holding is the only requirement for safety critical applications
- Available as either base or face mount
- All devices equipped with lock on/ lock off status sensors
- Multiple devices used together will provide higher locking torques
- High capacity, custom solutions on request



**AL65: 75 kN**



**AL80: 125 kN**



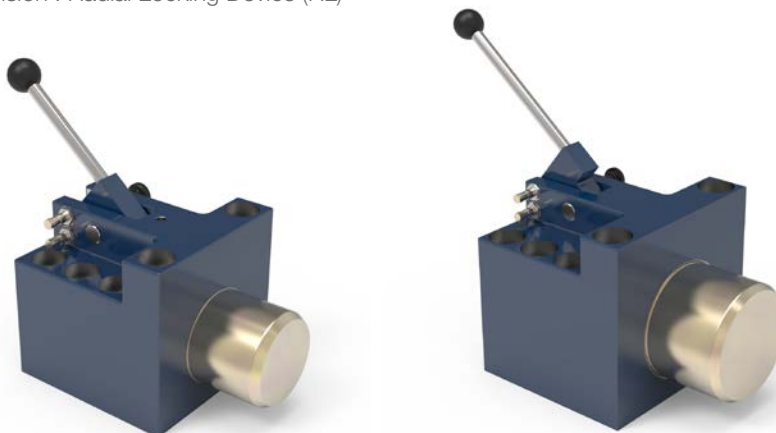
## AXIAL LOCKING DEVICE (AL) – OVERALL SIZE AND MOUNTING

Base mounted model shown – details of face mounting version available on request  
 Radial Locking Device (RL) is identical to Axial Locking Device (AL) apart from pin details – see table

Model Number	Disc Groove Depth (mm)	Nominal Locking Force (kN)	Minimum Disc Thickness (mm)	Maximum Locking Force (kN)	Minimum Disc Thickness (mm)	Mass (kg)
AL 65	NA	75	15	100	30	16
AL 80	NA	125	20	175	40	21
AL 110	NA	250	30	350	50	51
AL 150	NA	500	40	750	65	78
RL 65	55	75	20	90	25	16
RL 80	67	125	25	150	30	22
RL 110	85	250	40	300	50	54
RL 150	109	500	60	600	75	85

Axial Model Number	Radial Model Number	A Max. (mm)	B Max. (mm)	C (mm)	D (mm)	E (mm)	F1 (mm)	F2 (mm)	ØG (mm)	H (mm)	J (mm)	K (mm)	L (mm)	ØM (mm)
AL 65	RL 65	341	285	133.5	150	120	50	90	65	15	30	20	110	13
AL 80	RL 80	357	299	145	150	150	60	110	80	21	36	17.5	115	18
AL 110	RL 110	398	361	200	210	200	70	130	110	25	50	27.5	155	26
AL 150	RL 150	523	441	240	255	215	85	160	150	28	53	26	203	32

All dimensions in mm  
 Dimension 'F1' = pin extension : Axial Locking Device (AL)  
 Dimension 'F2' = pin extension : Radial Locking Device (RL)



**AL110: 250 kN**

**AL150: 500 kN**



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**Wichita Clutch**  
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**Delroyd Worm Gear**  
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P-8762-TF 5/19