



MARINE CONTROL DRIVES (MCD)





ACCURATE POSITIONING. SLOW SPEED

With over 30 years of research, development and operation, the versatile Twin Disc Marine Control Drive (MCD) has proven its worth in a wide variety of work boat applications, including tugs, OSV, ferries, research vessels, icebreakers, dredges and fire fighting vessels.

The MCD provides distinct operating advantages for any vessel requiring highly accurate positioning or extreme slow speed maneuverability while splitting main engine power to another operation — driving pumps, lifting cargo, hauling lines, turning generators. Often the MCD is used in conjunction with fixed pitch azimuth thruster systems to achieve both precise primary propulsion and independent maneuvering control.

Twin Disc offers the MCD in different sizes, with numerous models for each size, up to 4500 kW (6035 hp). Recent clutch enhancements on the largest series enable it to transmit high torque values with full modulation without any time restriction.

TWO-IN-ONE OPERATION

The Twin Disc MCD performs as a fixed ratio drive when continuously under way or in bollard pull conditions, and it operates as a variable ratio drive that will match propeller speed to the operator's requirements, while maintaining engine speed at maximum output.

For example, an engine-driven fire-fighting pump can operate at full capacity while the boat maneuvers around the fire scene at virtually any required propeller speed. The MCD represents a real alternative to controllable pitch propellers (CPP).

MAXIMUM EFFICIENCY

The basic torque transmission components of the MCD are similar to those of the multi-disc clutch. A stack of friction discs compressed to a greater or lesser degree is mounted alternately on the driving and driven shafts.

An oil film flows continuously between these discs. Consequently, the torque is transmitted through a hydro viscous media without wear, as the discs are not in contact during the slipping phase.

When lock-up is achieved, the input and output speeds are synchronized; efficiency is at maximum (99%). This advantage is important since other types of hydraulic coupling units cannot achieve full synchronization, which leads to lower performance.





MANEUVERABILITY. MULTITASKING.

PROVEN ADVANTAGES

- Smooth, gradual propeller speed change resulting in improved maneuverability
- Safer and easier vessel control during slow speed maneuvering and docking
- Adjustment of propeller speeds below engine speed rating
- Divides the power from the main propulsion engine to eliminate the need for auxiliary engines
- Delivers an instant response when required
- Bearing calculated for high universal joint angles at maximum power
- Dynamic positioning (DP) capable
- PTO to drive auxiliary equipment is standard
- Emergency “come home” device per classification requirements

FIND OUT MORE

To learn more about how a Twin Disc marine control drive can improve your vessel's productivity, efficiency and performance, contact applications@twindisc.com.



WWW.TWINDISC.COM





ACCURATE POSITIONING
SLOW SPEED MANEUVERABILITY
MULTITASKING

For more information, visit www.twindisc.com



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