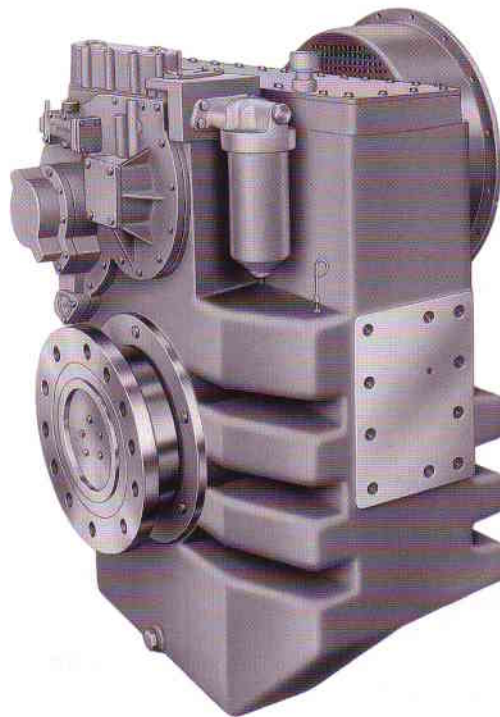
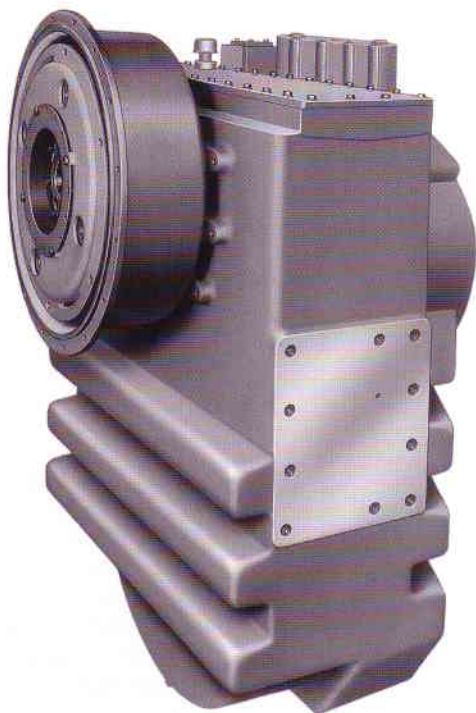


Twin Disc Reverse Reduction Marine Transmission 597 to 1127 kW 800 to 1511 hp



MG-5301DC shown with torsional coupling, standard selector valve and oil cooling/filter system.

The MG-5301DC Marine Transmission is for use in propulsion systems utilizing heavy-duty, medium-to-high speed diesel engines and is configured to give boat owners more hours of efficient, trouble-free operation, thus favorably impacting the operation's bottom line.

The transmission's design is based on the use of CAD/FEA software and cell manufacturing technologies. The transmission utilizes hardened and ground single helical gearing, oil-controlled/oil-cooled clutches, conserva-

tively rated antifriction bearings and a heavy-duty cast iron one-piece main housing. Also used is Twin Disc's patented pinion-bearing support arrangement, and heavy-duty, but space-saving manifolded main oil pump and raw/fresh water heat exchangers.

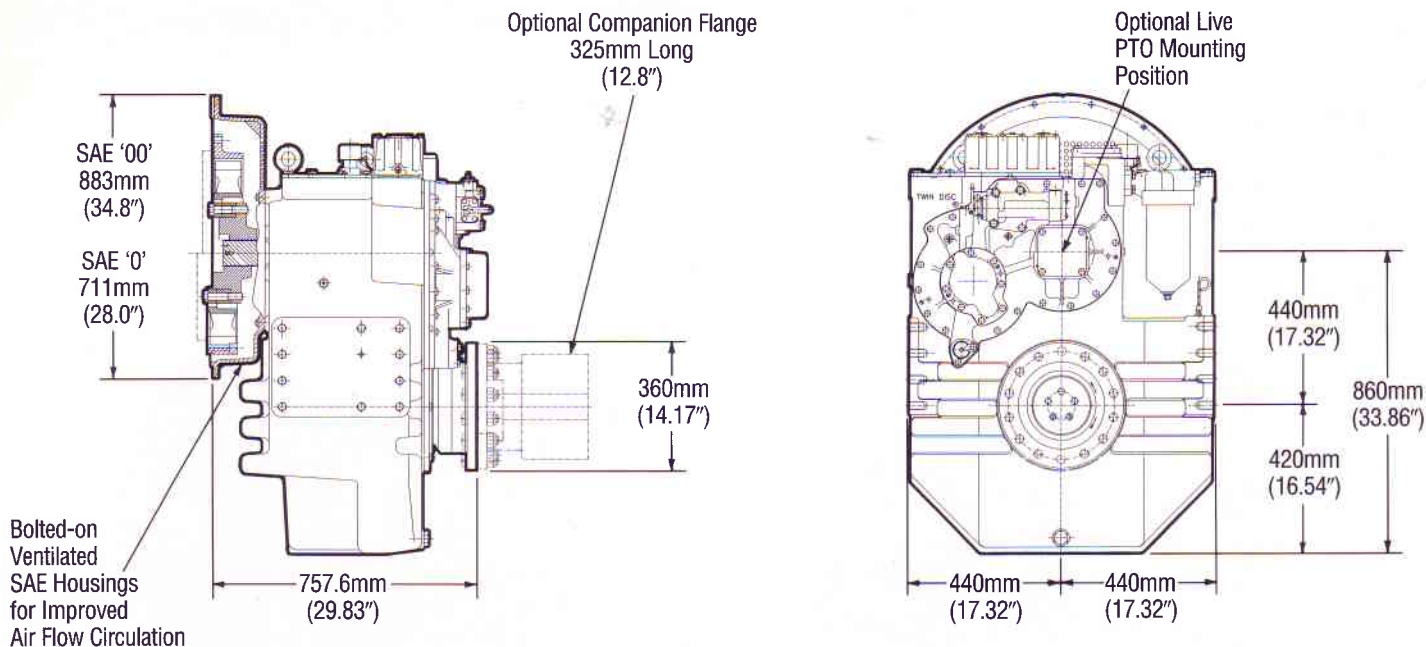
This transmission can be operated in either forward or reverse at its full rated power capacity when installed on standard right-hand rotation engines. Reduction ratios are identical for either drive train. There are no external

hoses as the MG-5301DC encloses all plumbing except that required for the externally connected water lines to/from the oil heat exchanger and connections to monitoring devices and propulsion control systems. In-boat maintenance accessibility is another feature of the MG-5301DC. It is not necessary to remove the transmission or disturb alignment for most service functions, provided sufficient space exists aft of the transmission.

MODEL ASSY. DWG.	REDUCTION RATIOS :1	INPUT RATINGS – KILOWATTS (HORSEPOWER)					MAX. RATED INPUT SPEED RPM	MIN. ENGINE IDLE SPEED RPM
		CONTINUOUS DUTY			INTERMEDIATE DUTY			
		1200 RPM	1600 RPM	1800 RPM	1800 RPM	2100 RPM		
1017020	4.06, 4.42, 4.96, 5.96	597 (800)	796 (1067)	895 (1200)	957 (1295)	1127 (1511)	2400	450
	6.39	—	712 (955)	802 (1075)	835 (1120)	975 (1307)		

Please refer to back cover for service classification definitions.

*Ratings shown for use with standard rotation engines. Consult Twin Disc for use with non-standard rotation engines.



MG-5301DC Marine Transmission

Specifications:

- Dry Weight – 1405 kg (3090 lbs)
- SAE Housing Sizes – '0' and '00'
- Input Couplings – 18"/21" Torsional Type with/without Torsional Stop
- Oil Strainer/Oil Filter – Standard
- Oil Pressure Gauge Standard
- Fresh and/or Raw Water Heat Exchangers
- SKF Taper Joints – Output Components

Options:

- Less Heat Exchanger
- Companion Flange/Bolt Set
- Live SAE 'C-C' 2 Bolt/4 Bolt PTO – 875 lb-ft Torque Capacity
- Also SAE 'C' 2 Bolt/4 Bolt PTO – 437 lb-ft Torque Capacity
- PTOs run at Engine Speed/Direction
- Metric-to-NPTF Adapter Kit
- Oil Temperature Gauge/Switch
- Mounting Brackets
- 12 V/24 V Electric Selector Valves

Specifications subject to change without prior notice, in the interest of continual product improvements.

Service Classification Definitions

Continuous Duty

Commonly called "Workboat Duty," these marine transmission applications are expected to operate continuously at full engine governed speed. The propulsion engine power setting must be known and must be within the marine transmission's allowable input rating for continuous daylong or around-the-clock service.

Most displacement hull vessels are powered for Continuous Duty service. However, the actual engine (and marine transmission) power loading depends on:

- The propeller used
- The vessel's work assignment
- The captain's choice of throttle setting during continuous service

Twin Disc recommends that all displacement and semi-displacement hull commercial applications be classed as Continuous Duty usage of the marine transmission.

Examples: Fishing Trawlers, Purse Seiners Lobster Boats and Crab Boats, Tugs, Tow Boats, Buoy Tenders, Offshore Supply Boats, Ferries, Research Vessels, Ocean Freighters

Intermediate Duty

Commercial usage of semi-displacement hull craft can qualify for Intermediate Duty Service Classification if full throttle operation will average only a few hours per day with major portion of usage at partial throttle and total annual usage will be 2000 hours or less.

Examples: Long Range Cruisers, Party Fishing Boats, Harbor and Coastal Patrol Boats, Fire Boats, and Coastal Freighters.

Important Notice: Torsional Vibration

Disregarding propulsion system torsional compatibility could cause damage to components in the drive train resulting in loss of mobility. At minimum, system incompatibility could result in gear clatter at low speeds.

The responsibility for ensuring that the torsional compatibility of the propulsion system is satisfactory rests with the assembler of the drive and driven equipment.

Torsional vibration analysis can be made by the engine builder, marine survey societies, independent consultants and others. Twin Disc is prepared to assist in finding solutions to potential torsional problems that relate to the marine transmission.

Twin Disc, Incorporated reminds users of these products that their safe operation depends on use in compliance with engineering information provided in this bulletin. Users are also reminded that safe operation depends on proper installation, operation and routine maintenance and inspection under prevailing conditions. It is the responsibility of users (and not Twin Disc, Incorporated) to provide and install guards or safety devices which may be required by recognized safety standards or by the Occupational Safety and Health Act of 1970 and its subsequent provisions.



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