



PRM1750 Gearbox

Full hydraulic operation, drop centre output shaft with two stage reduction gearing.

PRM1750 series marine transmissions are the ideal choice for pleasure and commercial craft applications with engines rated at up to 620 hp (463 kW).

They are available in both shallow and deep case form - corresponding to reduction ratios ranging from 1.22:1 to 3.0:1 and 3.12:1 to 4.9:1 respectively - and are supplied with integral SAE housings as standard.

All PRM1750 series transmissions feature a twin countershaft design compatible with left or right hand propeller rotations - making them equally suitable for both single or twin engine installations. In addition, the PRM1750's two-stage reduction gearing enables maximum input torque of 1750 Nm to be transmitted continuously in either direction at engine speeds of up to 2500 rev/min.



Simple Operation

Operation is by a single lever compatible with proprietary remote control operating systems.

The need for special purpose automatic transmission fluid is eliminated by the use of engine oil specification lubricant.

Durable and Reliable

PRM1750 utilises a maintenance-free oil-operated, self-adjusting multi-disc clutches for consistent reliability and in-service performance.

The gearcase is manufactured from high grade cast iron and is internally ribbed for extra rigidity and strength.

The oil pump, oil filter and hydraulic control valve on all PRM1750 models are mounted externally for easy access and servicing.

Optional equipment

Two optional clutched power take-offs - compatible with SAE classification hydraulic pumps - are available to drive on-board machinery. Further ancillary equipment for PRM1750 gearboxes includes an oil pressure gauge and oil cooler kit.

Nominal Power Ratings - PRM1750 Deep Case Marine Gearbox

Model	Ahead Ratio	Pleasure		Light Commercial		Heavy Commercial	
		kW	BHP	kW	BHP	kW	BHP
1750D31SAE1 1750D31SAE2	3.12:1	18.33	24.58	17.04	22.85	15.76	21.13
1750D39SAE1 1750D39SAE2	3.88:1	18.33	24.58	17.04	22.85	15.76	21.13
1750D45SAE1 1750D45SAE2	4.50:1	18.33	24.58	17.04	22.85	15.76	21.13
1750D49SAE1 1750D49SAE2	4.90:1	16.76	22.48	15.58	20.89	14.41	19.32

Ratings are based upon engines with a maximum operating speed of 2500 rev/min

D denotes Deep Case: manufactured only with integral SAE1 or SAE2 adaptor housings.

Nominal Power Ratings - PRM1750 Shallow Case Marine Gearbox

Model	Ahead Ratio	Pleasure		Light Commercial		Heavy Commercial	
		kW	BHP	kW	BHP	kW	BHP
1750S12SAE3	1.22:1	18.33	24.58	17.04	22.85	15.76	21.13
1750S15SAE3	1.56:1	18.33	24.58	17.04	22.85	15.76	21.13
1750S19SAE3	1.94:1	18.33	24.58	17.04	22.85	15.76	21.13
1750S22SAE3	2.25:1	18.33	24.58	17.04	22.85	15.76	21.13
1750S24SAE3	2.45:1	18.33	24.58	17.04	22.85	15.76	21.13
1750S30SAE3	3.00:1	18.33	24.58	17.04	22.85	15.76	21.13

Ratings are based upon engines with a maximum operating speed of 2500 rev/min

S denotes Shallow Case: manufactured only with integral SAE3 adaptor housings.

Note: These powers are expressed in BHP and kW per 100 rev/min engine speeds, and are measured at the engine flywheel. Ratings have been established to ensure the long, trouble-free life of the gearbox and should not therefore, be exceeded.

Operating Pressure

Minimum – 28.27 bar (410 lb/in²), maximum 31.03 bar (450 lb/in²). Two tapped holes, 1 hole 1/8" BSP on the top and 1 hole M18 on the side of the valve block are provided so that a pressure gauge can be fitted if required.

Oil Cooling

The normal operating temperature of the oil should be in the 50°C - 80°C range, and should not be permitted to exceed 90°C. An oil cooler is necessary to ensure that correct operating temperatures are maintained, and two 1/2" BSP connections are provided on the valve block to allow it to be fitted. The size of the cooler required depends on a number of factors including the transmitted horsepower, operating speed, duty cycle, inlet water temperature and ambient temperature.

Propeller Thrust

Both ahead and astern thrust is carried by the output shaft taper roller bearings which are of ample capacity for all factory approved ratings.

Approximate Weight & Oil Capacity

Gearbox	Approximate dry weight	Oil capacity
PRM1750D	300kg (663lb)	10 litres (17.6 pints)
PRM1750S	260kg (570lb)	8 litres (14 pints)

excluding adaptor, drive coupling and oil cooler.
plus the amount required to fill the cooling circuit

Flexible Input Couplings for PRM1750

	Flywheel Size	Part No.
Centa Transmissions Ltd.	SAE 11.5 in	MT8462
	SAE 14 in	MT8459
R & D Marine Ltd.	SAE 11.5 in	MT8463
	SAE 14 in	MT8464
Vulkan Industries Ltd.	SAE 11.5 in	MT8465
	SAE 14 in	MT8466

Other Accessories

Part No	Description
MT8330S/A	Oil cooler for engines up to 340kW
MT8331S/A	Oil cooler for engines over 340kW
MT0205S/A	Clutched power take-off for SAE 'B' hydraulic pump
MT0497-KIT	Adaptor ring for PRM1750S to SAE1 flywheel
MT0514-KIT	Adapter ring for PRM1750DSAE1 to SAE2 flywheel

Note: When ordering it is necessary to specify the flywheel size.

The choice of coupling must be made by the engine manufacturer/boat builder to ensure vibratory torque levels within the driveline are kept to a minimum within the engine operating speed range. This is particularly important as PRM1750 uses two stage gear reduction