



# PRM 80



## Simple Mechanical Operation

### Lightweight, Compact & Rugged

The PRM 80 gearbox is designed for use in pleasure craft where a simple lightweight transmission is required. The cone clutches for both ahead and astern are mechanically operated and require no adjustment.

The gearbox is purpose built to operate with standard rotation engines i.e. providing a clockwise rotation of the gearbox input shaft when viewed on input. In forward drive the output shaft rotates opposite to input shaft therefore requiring a right hand propeller. The reduction ratios offered are 2.04:1 and 2.5:1 with a common astern ratio of 2.5:1.

The heavy duty aluminium gear case is externally ribbed for strength and heat dissipation. Direction actuation is by a lever with positive detent positions for ahead, neutral and astern. It is suitable for use with proprietary remote control operation systems which must be of the single lever dual action type.

### PRM 80 Marine Gearbox - Nominal Power Ratings

Ahead Ratio	Pleasure		Light Commercial	
	BHP	kW	BHP	kW
2.04:1	1.12	0.84	0.74	0.55
2.50:1	0.98	0.73	0.65	0.48
Max. Input Power	47	35	32	24

### Maximum Operating Speeds: 5000 rev/min

Note: These powers are expressed in BHP and kW per 100 rev/min engine operating speed, and are measured at the engine flywheel. Ratings have been established to ensure the long trouble free life of the gearbox which should not, therefore, be used at powers in excess of those shown.

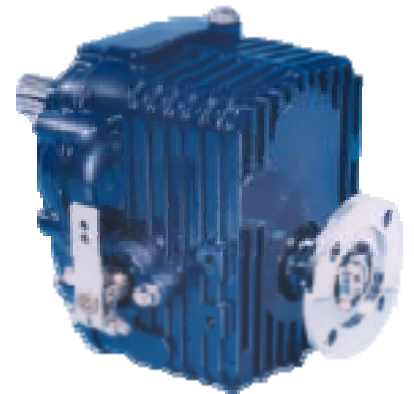


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### Service Classification Definitions - Pleasure

Limited to craft used excessively for pleasure boating; operation at full throttle should not exceed 5% of total time with balance of usage at 90% of full throttle engine speed or less. Maximum operation 500 hours per year. The selection of PRM 80 according to this classification for any commercial boat is not approved by PRM Marine Ltd

### Service Classification Definitions - Light Commercial

Planing or semi-displacement craft used in pleasure or commercial applications may qualify for light commercial rating of annual usage is less than 1500 hours and full throttle operation is limited, with most operating time at partial throttle.

### **Important Note:**

- 1) It is essential for the engine, transmission model, reduction ratio and propeller size to be correctly matched so that the engine can attain it's rated speed appropriate to the relevant service classification without labouring.**
- 2) It is also necessary to ensure the torsional compatibility of the complete propulsion system from engine through to propeller, since disregarding this may result in gear noise, particularly at low speed operation, and may even result in damage to the engine as well as the transmission components.**

### Oil Cooling

The normal operating temperature should be in the range of 50°C to 20°C using good quality lubricating oil of the same viscosity as that used in the engine. Automatic Transmission Fluid (ATF) is recommended.

### Propeller Free Wheeling

The PRM 80 output shaft can be rotated continuously with the gearbox in neutral. It is therefore not necessary to fit a propshaft brake when running with the engine shut down, for example, when sailing.



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### Approximate Weight & Oil Capacity

Approx. dry weight	11.25kg (24.5lb)
Oil Capacity	0.56 litres / (1 pint)

### Adaptor Flanges for PRM 80

Part Number	Description	Weight	
		kg	lb
MT4901S/A	SAE5 Adaptor	7.5kg	16.5lb
MT8083S/A	B/W (Velvet Drive) adaptor	1.4kg	3.1lb

### Other Accessories for PRM 80

Part Number	Description	Weight	
		kg	lb
MT3054	Tailshaft half coupling (pilot bored)	1.3kg	2.9lb
MT3056	Tailshaft flexible coupling	0.7kg	1.5lb

### Flexible Input Coupling for PRM 80

Part Number	Outside Diameter		Mounting Hole Pattern				Remarks	
	in	mm	No.	Diameter		Pitch Circle Diameter		
				in	mm	in		mm
MT8109	8.50	215.90	6	0.344	8.74	7.875	200.0	SAE 6 ½ in
MT8110	9.50	241.30	8	0.344	8.74	8.750	222.25	SAE 7 ½ in
MT8111	11.75	298.5	6	0.320	8.13	7.875	200.0	
			6	0.320	8.13	9.843	250.0	
			6	0.320	8.13	10.625	269.9	
			6	0.320	8.13	10.75	273.1	
MT8112	6.12	156.0	5	0.250	6.35	5.593	142.1	
MT8113	5.965	151.5	8	0.256	6.5	5.512	140.0	Hawker Siddeley Marine
MT8114	10.50	266.7	6	0.32	8.10	9.625	244.5	Mitsubishi
MT8115	7.48	190.0	6	0.32	8.410	6.693	170.0	Nanni/Yanmar



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