



PRM150 Gearbox

Full hydraulic operation, lightweight, compact & rugged

The PRM150 marine gearbox is purpose built for use with both pleasure craft and commercial boats; its twin countershaft design provides separate oil-operated multi-disc clutches (which need no adjustment) for ahead or astern drive allowing full rated power to be transmitted continuously in either direction.

The reduction ratios offered (1.53:1, 2.09:1 and 2.82:1) are all available for left-hand or right-hand propeller rotation in "ahead", making PRM150 particularly well suited to twin engine installations.

The heavy duty aluminium alloy gearcase is internally ribbed for rigidity and strength and consists of two separate halves to facilitate servicing.

The hydraulic operating system functions on normal multigrade engine oil, avoiding the need to use automatic transmission fluid, and ensures rapid response to movements of the operating lever for good boat handling. The operating lever has a positive neutral detent and is suitable for use with proprietary single lever remote control operating systems.

Robust and reliable, the hydraulic system is nevertheless provided with a mechanical lock up device for added security, so that in the unlikely event of a hydraulic failure the boat can be brought safely back to port. Access to this device is via the detachable manifold on the rear of the gearcase which also houses the hydraulic control valve.



Nominal Power Ratings, PRM150 Marine Gearbox

Model	Ahead Ratio	Pleasure		Light Commercial	
		kW	BHP	kW	BHP
150D1.5	1.53:1	1.57	2.10	1.12	1.50
150D2	2.09:1	1.57	2.10	1.12	1.50
150D3	2.82:1	1.57	2.10	1.12	1.50

Maximum operating speeds: 5000 rev/min intermittent, 4500 rev/min continuous

Note: These powers have been 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.

Operating Pressure

Minimum – 25.51 bar (370 lb./in²), Maximum – 28.96 bar (420 lb/in²). A tapped hole 1/8" BSP is provided in the rear manifold 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 the gearbox is provided with two ¼" BSP connectors to allow it to be fitted. The size of the cooler depends on a number of factors including the transmission horsepower, operating speed, duty cycle, inlet water temperature and ambient temperature.

Propeller Free Wheeling

The PRM150 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, e.g. in multi-engine installations or when sailing.

Approximate Weight & Oil Capacity

Approximate dry weight	21kg (46lb) excluding drive coupling, adaptor flange and oil cooler
Oil capacity	1.4 litres (2.5 pints) plus the amount necessary to fill the oil cooling circuit.

Flexible Input Coupling for PRM150

Part Number	Outside Diameter		Mounting Hole Pattern				Remarks	
	mm.	in.	No.	Diameter		Pitch Circle Dia.		
				mm	in	mm		in
MT4904	215.9	8.50	6	8.74	0.344	200.0	7.875	SAE 6 ½ in
MT4905	241.3	9.50	8	8.74	0.344	222.25	8.750	SAE 7 ½ in
MT4906	298.5	11.75	6	8.13	0.320	200.0	7.875	
			6	8.13	0.320	250.0	9.843	
			6	8.13	0.320	269.9	10.625	
			6	8.13	0.320	273.1	10.750	
MT4907	156.0	6.12	5	6.35	0.250	142.1	5.593	
MT4908	151.5	5.965	8	6.50	0.256	140.0	5.512	Hawker Siddeley Marine
MT4909	266.7	10.50	6	8.10	0.320	244.5	9.625	Mitsubishi
MT4910	190.0	7.48	6	8.10	0.320	170.0	6.693	Nanni / Yanmar

Adaptor Flanges for PRM150

Part Number	Description	Weight	
		kg	lb
MT4902S/A	Special SAE4 adaptor, Volvo Penta 2000 series	10.0	22.0
MT4901S/A	SAE5 adaptor	7.5	16.5
MT4903S/A	Special SAE5adaptor, Volvo Penta 2000 series	2.7	6.0
MT8083S/A	B/W (Velvet Drive) adaptor	1.4	3.1

Other Accessories for PRM150

Part Number	Description	Weight	
		kg	lb
MT0149	Oil cooler, complete with pipes and bracket	1.5	3.3
MT3054	Tail shaft half coupling (pilot bored)	1.3	2.9
MT3056	Tail shaft flexible coupling	0.7	1.5
MT5036	Oil pressure gauge, direct mounting	0.1	0.2
MT0156	Neutral safety start switch	0.04	0.1

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