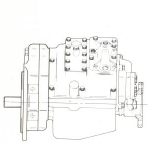
PRM MARINE GEARBOXES BY NEWAGE

EFFICIENT DESIGN

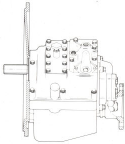
Thanks to their twin countershaft design, PRM gearboxes carry full rated power ahead or astern, with right-hand or left-hand propellers, at low power loss and therefore less wasted fuel.

Correctly matched to engine and propeller, all PRM reverse gears will give many hours of trouble-free service, components being amply dimensioned for long life and reliability. All running gear is carefully designed and machined to the highest standards for quiet, smooth operation.

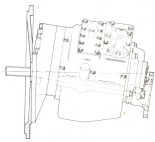
Engine/gearbox matching lists are available on request.



IN-LINE



DROP-CENTRE



DOWN-ANGLE

INSTALLATION FLEXIBILITY

Specifically designed for marine use, not only in pleasure boats but also in fishing and other working boats of all kinds, the standard versions of all PRM transmissions have output shafts vertically offset from the crankshaft centreline, but to cater for the installation demands of the widest possible variety of hulls the PRM402 is optionally available in in-line configuration, whilst down-angle options are offered on the PRM402 (8°) and PRM601 (10°).

A wide selection of mounting adaptors is available, enabling gearboxes to be fitted to most of the popular engine models around the world.

CEMPEP

NEWAGE

NEWAGE TRANSMISSIONS plc
Barlow Road Coventry CV2 2LD England
Telephone 0203-617141 Telex 31333
Cables 'Supagears' Coventry Fax 0203-611845

001

PRM GEARBOXES BY NEWAGE

EASY OPERATION

Hydraulically operated adjustment - free multidisc clutches ensure rapid response to shifts of the operating lever for good boat handling and manoeuvrability. All models are designed for use with proprietary single lever remote control operating systems.

CONVENIENCE

Ratios and performance are identical whether left-hand or right-hand propellers are used, making PRM marine gears ideal for twin installations. Propellers can be trailed indefinitely, e.g. when sailing or under tow, or in multi-engined boats where one or more engine is shut down. All transmissions operate best on normal engine oil of the same viscosity as that used in the engine, saving the bother of carrying special automatic transmission fluid on board (with the exception of gearboxes fitted with trolling valves which require a "wet brake" oil - see separate leaflet).

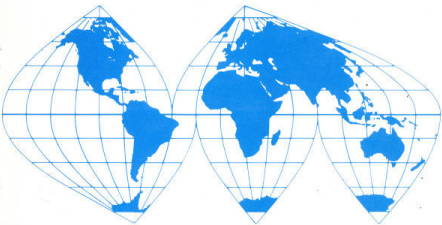
SAFETY

Built for reliability, PRM gearboxes are nevertheless all provided with a " get you home," device, so that in the unlikely event of hydraulic failure the clutches can be mechanically locked in engagement, enabling the boat to be brought safely home to port.

In addition, a safety start switch is available as an option; this prevents the engine from being started unless the gearbox is in neutral, reducing the possibility of inadvertent damage due to uncontrolled boat movement on start - up.

PRODUCT SUPPORT

To ensure the correct level of after - sales support for PRM marine gearboxes in terms of adequate servicing facilities and spare parts availability, Newage Transmissions plc has established a comprehensive network of distributors and dealers around the world. A copy of our current worldwide or UK distributor lists will gladly be made available on request.



SERVICING

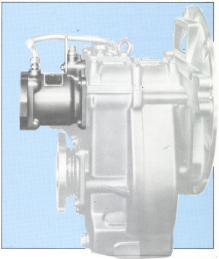
All PRM gearboxes allow easy access to major components, such items as oil pumps and hydraulic control valves being externally mounted to allow rapid inspection and, if necessary, repair.

Gearboxes are constructed in two separate halves, to facilitate major overhaul when required.

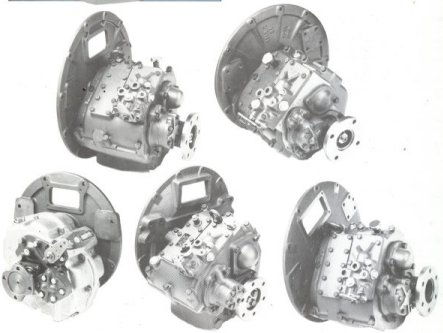
Routine maintenance is kept to a minimum, being restricted to checking oil levels, verifying operating temperatures and pressures, and occasional checking of seals for leaks.

ADDITIONAL OPTIONAL FEATURES

A clutched power take-off, suitable for driving an SAE 'B' hydraulic pump (29 bhp per 1000 rev/min) is offered as an option on the PRM601; a "live" (i.e. constantly driven) PTO can also be fitted to the PRM302, PRM402 and PRM601. These provide low cost space-efficient methods of driving on-board machinery such as pumps, winches etc.



Another option now offered on the PRM402 is a trolling valve, which allows a boat to be driven very slowly whilst the engine operates at speeds where it runs smoothly and can also power on-board machinery if required; this is particularly valuable in certain kinds of commercial fishing.



BASIC SELECTION GUIDE - PRM HYDRAULIC REVERSE/REDUCTION MARINE GEARBOXES

MODEL	Shaft arrangement	Ratio ahead/ astern	Input rotation	Output rotation	Maximum input speed rev/min		Approximate power rating kW (BHP) per 100 rev/min		
					Con-tinuous	Inter-mittent	Pleasure	Light commercial	Heavy commercial
DELTA	OFFSET	1.53:1	LH	LH or RH	3600	4000	1.6 (2.1)	1.1 (1.5)	
		2.09:1	LH	LH or RH	3600	4000	1.6 (2.1)	1.1 (1.5)	
		2.82:1	LH	LH or RH	3600	4000	1.6 (2.1)	1.1 (1.5)	
PRM160	OFFSET	1.963:1	LH or RH	LH or RH	3600	4000	2.56 (3.43)	2.56 (3.43)	2.27 (3.05)
		2.941:1	LH or RH	LH or RH	3600	4000	2.56 (3.43)	2.56 (3.43)	2.27 (3.05)
PRM302	OFFSET	1.459:1	LH or RH	LH or RH	3600	4000	4.76 (6.38)	4.62 (6.19)	4.40 (5.90)
		1.935:1	LH or RH	LH or RH	3600	4000	4.76 (6.38)	4.62 (6.19)	4.40 (5.90)
		2.565:1	LH or RH	LH or RH	3600	4000	4.62 (6.19)	4.40 (5.90)	4.40 (5.90)
		2.904:1	LH or RH	LH or RH	3600	4000	4.62 (6.19)	4.40 (5.90)	4.40 (5.90)
PRM402	OFFSET IN-LINE 8° DOWN ANGLE	1.09:1	LH or RH	LH or RH	3600	4000	7.17 (9.62)	5.68 (7.62)	5.39 (7.23)
		1.459:1	LH or RH	LH or RH	3600	4000	7.17 (9.62)	5.68 (7.62)	5.39 (7.23)
		1.935:1	LH or RH	LH or RH	3600	4000	6.53 (8.76)	5.39 (7.23)	5.11 (6.85)
		2.565:1	LH or RH	LH or RH	3600	4000	5.97 (8.0)	5.39 (7.23)	5.11 (6.85)
		2.904:1	LH or RH	LH or RH	3600	4000	5.68 (7.62)	5.11 (6.85)	4.82 (6.47)
		3.952:1	LH or RH	LH or RH	3600	4000	5.68 (7.62)	5.11 (6.85)	4.82 (6.47)
PRM601	OFFSET 10° DOWN ANGLE	1.19:1	LH or RH	LH or RH	2800	3200	9.66 (12.95)	7.10 (9.52)	6.67 (8.95)
		1.528:1	LH or RH	LH or RH	2800	3200	9.66 (12.95)	7.10 (9.52)	6.67 (8.95)
		2.033:1	LH or RH	LH or RH	2800	3200	9.09 (12.19)	7.10 (9.52)	6.67 (8.95)
		2.857:1	LH or RH	LH or RH	2800	3200	7.67 (10.28)	6.82 (9.14)	6.39 (8.57)
		4.000:1	LH or RH	LH or RH	2800	3200	7.67 (10.28)	6.82 (9.14)	6.39 (8.57)

NOTE: Ratings are for diesel engines, and powers are measured at the engine flywheel.

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 its 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 to transmission components.

Newage Transmissions plc will provide all possible information and assistance to help find solutions to potential torsional problems, but it is the ultimate responsibility of the person assembling the drive and driven equipment to ensure that they are torsionally compatible.

All information given in this leaflet is correct at the time of going to press. However, in the interests of technical progress, design specifications are subject to change without notice. Accordingly, data given herein should be regarded as a general guide only and does not form part of any contract. Any specific performance requirements must be made known to us in writing with customer orders for goods.

Illustrations are approximate only and do not form part of any contract with us; certified installation drawings are available on request. All goods are supplied in accordance with our standard terms and conditions of sale.

Registered in England, Reg. No. 345283
Registered Office: Pentagon House, Sir Frank Whittle Road, Derby DE2 4EE
Ultimate Holding Company - Williams Holdings PLC

Printed in England
Publication No. MG/89/3