



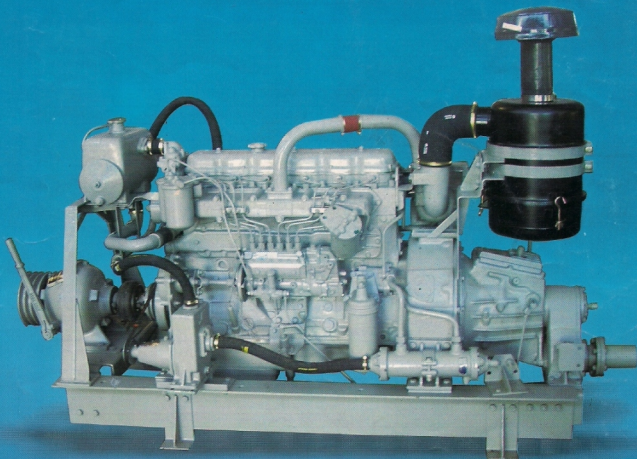
Ashok Leyland

Marine Diesel Engines

Range 42 PS to 193 PS

IDEAL CHOICE FOR

- ▶ Trawling, Purse Seining, Gilnetting ▶ Sailing Vessels
- ▶ Marine Generating Sets ▶ Auxiliary Drive-in Vessels
- ▶ Speed Boats ▶ Passenger Launches ▶ Ferries



MODELS

ALM WO4D | ALM 370 | ALM 400 | ALM 402
ALM 412 | ALM 412 MKI | ALM 680 | ALM 680 TC

Ashok Leyland's high efficiency Marine Diesel Engines incorporate the latest design and are technically superior. These engines are designed and built to withstand the rigorous conditions at sea and with an eye to reducing operating costs.

DESIGN FEATURES

COMBUSTION CHAMBER

- Spheroidal Combustion Chamber / Hino Micro Mixing Systems ensure efficient combustion and greater fuel economy.

WATER COOLED ENGINES AND EXHAUST MANIFOLD

- Ensures that the optimum operating temperature is maintained.
- Lower engine room temperature enables operation for longer periods continuously.
- Keeps the catch in good condition.

MARINISED ELECTRICAL STARTER

- For prevention against corrosion and for Quick Start.

FRONT MOUNTED PTO

- Easy tapping of engine power for Winching operations. (For all models except WO4D)

REVERSE REDUCTION GEAR BOX

- For dependable and long hours of running with ratios of 3:1 and 4:1 for ALM 370 / 400 / 402 / 412 / 412 MKI.
- Rugged & Robust.

HEAVY DUTY OIL BATH TYPE AIR CLEANER

- For efficient air filtering to ensure long engine life.

HIGH TORQUE ENGINE OF SIMPLE CONSTRUCTION

- Less wear and tear on parts due to its low speed.
- Easy maintenance due to its simple construction.

PRESSURISED LUBRICATION

- At idling speed also.
- Enhances component life by minimizing wear and tear.

POWER RATING

RPM	1500		1800		2000		REFERENCE STANDARDS
	POWER OUTPUT						
MODEL	PS MAX	PS CONT	PS MAX	PS CONT	PS MAX	PS CONT	
WO4D	50	42	62.5	52.5	68	57	IS 10002
370	76	69	89	81	98	89	BS 649
400	84	76	99	90	109	99	BS 649
402	90	82	110	100	118	106	BS 649
412	100	90	122	110	135	122	BS 5514
412 MK1	110	100	131	119	140	127	BS 5514
680	142	129	164	148	172	156	BS 649
680 TC	161	146	184	167	193	175	BS 5514

TECHNICAL SPECIFICATIONS

TYPE : Direct Injection, Four Stroke, In Line Water Cooled Diesel Engine.

Specifications	ALM WO4D	ALM 370 / 400 / 402	ALM 412 / ALM 412 MKI	ALM 680	ALM 680 TC
No. of Cylinders	4	6	6	6	6
Aspiration	NA	NA	TC	NA	TC
Bore	104 mm	107.18 mm	107.18 mm	127 mm	127 mm
Stroke	118 mm	120.65 mm	120.65 mm	146 mm	146 mm
Cubic Capacity	4.009 Litres	6.54 Litres	6.54 Litres	11.1 Litres	11.1 Litres
Compression Ratio	17.9 : 1	16 : 1	16 : 1/17.25 : 1	15.8 : 1	15.8 : 1
Weight of Engine [Kgs]	540*	1160*	1180*	1220*	1240*
Max PTO Ratings	PTO Not Provided	25 HP	25 HP	45 HP	45 HP

* Weight with Gear Box

Weight without Gear Box

INCLUSIVE EQUIPMENT

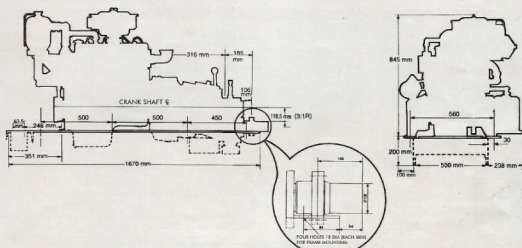
► Heavy Duty Air Cleaner ► Marineised electric equipment comprising Starter Motor and Fuel Injection equipment with mechanical governor ► Fuel Lift Pump ► Fuel Oil Filter ► Lub. Oil Filter ► Sub frame for engine mounting ► Thermostat ► Water Separator ► Seawater Pump ► Fresh water Pump ► Sump draining Pump (hand operated) ► Sea water cooled Oil Cooler ► Heat Exchanger ► Mech. operated forward / reverse reduction gear box for ALM 370 / 400 / 402 / 412 / 412 MKI Marine Engines

SUPPLEMENTARY EQUIPMENT

► Instrument panel with RPM indicator-cum-hour counter, Ammeter, Oil pressure gauge, Water temperature gauge, Starter Button and Toggle switches ► Silencer

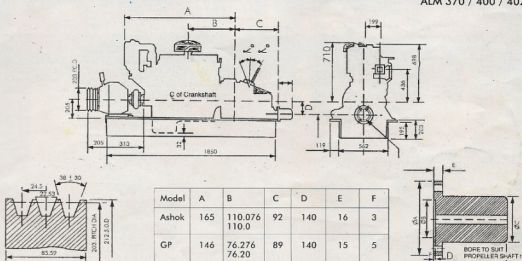
ENGINE INSTALLATION

ALMWO4D

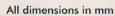


All dimensions in mm

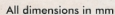
ALM 370 / 400 / 402



ALM 412/
ALM 412 MKI



ALM 680 TC



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The specifications are liable to change due to continuous improvement and are for reference only. Ashok Leyland Limited reserves the right to revise the specifications or dimensions without notice.