

M-25XPA Installation dimensions



Specifications

Warranty	1 year
Number of Outputs	1 Output
Construction	Plastic
Size	0.50" (12.70 mm) H x 2.91" (73.91 mm) W
Weight	0.10 lbs (45.36 g)
Speed	1800, 3600 RPM
Current	0.10 A
Maximum Insulation Angle	90°
Mounting Style	Panel Mount
Frequency Rating	50/60 Hz



- High-temperature plastic housing designed for long service life.
- High-temperature plastic housing designed for long service life.

† All parts include high water temperature for all products.

Universal Motors

Universal Motors
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Universal

DIESEL MARINE ENGINES



When Mother Nature takes the wheel of your boat, nothing will get in your way. A Universal Diesel (running) depends on nature's cooperation in high temperature/low humidity to get you where you want to go...fast as the wind.

With choice of seven models ranging from 15 to 100 horsepower, featuring lightweight, compact aluminum block engine design, you'll be right with it for your boat.

Features

EXHAUST/BLADE SYSTEM Optimum protection against sea intrusion, vibration dampening.

CRANKCASE Reinforced construction for extra rigidity, construction chamber for smooth running and vibration control.

CRANKSHAFT High grade steel, chromium and aluminum hardened. Shiled for maximum lubrication.

OIL PAN Designed from ductile steel for inspection purposes.

COOLING/WATER PUMP Cast-iron construction.

FUEL SYSTEM Direct fuel injection system. Fuel filter with bypass/return system.

OPERATION Full power operation without throttle stop on the fly.

TRANSMISSION Close center gear with bronze gears and aluminum cast housing. Shift lever has choice of 10 forward with an extra gear with forward transmission or 10 reverse necessary from the engine.

FLEXIBLE MOUNTS Engine equipped with four-point flexible mounts to ease installation and maintenance.

ELECTRICAL SYSTEM Inlet system standard. Marine type 10 amp circuit with transitional regulator electric starter with solenoid for semi-constant.

OPERATION Full easy starting, fast unload.

Standard Equipment

Fresh water cooling electric fans, coil over oil separator, aluminum fuel nozzle, shift eye, float valve for transmission fuel pump, fuel filter and return line, plug and surrounding fuel system.

Propeller Rotation

Right hand rotation.

Optional

On-board alternator, stainless parts, flexible coupling, 1.2 inch x 1.5 inch gear.

MC-20

Installation dimensions



Dimensiones aproximadas, consulte los catálogos.



Output Power

Note: Power factor will decrease for non-synchronous.

Specifications

Output Type	Universal
Terminal Arrangement	Terminal
Input Voltage	115V AC
Speed	1725 RPM
Current	0.6 A
Power	100 W
Efficiency	87%
Power Factor	0.85
Temperature Range	0° to 40° C
Output Torque	50 kg-cm
Input Voltage	115V AC
Input Protection	High Speed



- Output Power
- Terminal Arrangement
- Input Voltage
- Speed
- Current
- Power
- Efficiency
- Power Factor
- Temperature Range
- Output Torque
- Input Voltage
- Input Protection

Delivered by

Universal Motors
 P.O. Box 5800, Chicago, IL 60680
 Phone: (773) 482-7000 • Fax: (773) 482-7000

Universal

DIESEL MARINE ENGINES



When Mother Nature takes the wheel, you'll want the Universal Diesel. Smoothly. Dependably. Efficiently. The perfect combination of high torque and low RPM is to get you where you want to go — quiet as the wind.

With a choice of power models ranging from 10 to 60 horsepower, there's lightweight, compact Universal Diesel engines that's exactly the right size for your boat.

Features

CRANKCASE OILING: Automatic gear-driven oiler for maximum oil-flow dampening.

CYLINDER HEAD: Marine design deck angle cast with special combustion chamber for greater cooling and clean exhaust.

CRAKSHAFT: High grade steel, statically and dynamically balanced. Efficiently produces lubrication.

oil PAN: Stamped steel, detourable for inspection purposes.

COOLING SYSTEM: Cooled fresh-water flow-through.

FUEL SYSTEM: In-line fuel injection system. Fuel filter with replaceable element and 2-Clock.

LUBRICATION: Full pressure lubrication with full flow system oil sump.

TRANSMISSION: Drop-center gear with dual gears and automatic oil throw clutch permit fast shifting of the propeller with no effort of the gear. Standard reduction ratio of 3.0. Lubricated separately from the engine.

FLUSHING NOZZLES: Engine mounted with four gun-adjustable nozzles for ease of installation and removal/shell.

ELECTRICAL SYSTEM: In-line system standard. Starter type 12 Volt alternator with independent regulator electric starter and solenoid for remote starting.

WATER PUMP: For easy starting gear around.

Standard Equipment

Fresh water cooling sea water pump, alternator, No. 10000 oiler w/p, flush electric transmission, electric fuel pump, fuel filter, injection line glow plug, 3-2-1 electrical system, hand 30mm, 20" oil, power engine, battery charging alternator, remote engine gear, transmission — 30" — 120" — 180" luber, clean lines, Operator's manual and parts list.

Propeller Notation

Right hand propeller.

Optional

Oil burner, gear parts kit, transmission, Flyer, cooling, 3-2-1 Altern 2-Stroke gear, battery, separate sea control compartment, 20" alternator, 30" fuel sprayer, fuel filter, remote control, gear, propeller, 18" hp, 12" oil alternator.

Universal Motors

1810 South B Street, Pomona, CA 91768

M-35A

Installation dimensions



specifications

Motor Type	3-phase
Number of Poles	4-pole
Insulation	Class B
Speed	2800
Current	17.5 A
Power	10.5 kW
Maximum Torque	10.5 N·m
Maximum Torque Angle	8°
Motor Weight	2.5 kg
Projector Material	Aluminum



- Copper Instrument Panel with temperature and 12" wiring terminals
- Aluminum Instrument Panel with temperature and water temperature gauges, fuel charge, oil pressure, 12" wiring terminals

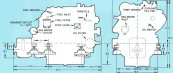
• Both panels include high-temperature protection of pressure gauges

Universal Motors

Headquarters: Universal Motors
 1000 North 10th Street, Minneapolis, MN 55412
 Tel: (612) 338-1100 Fax: (612) 338-1101

M-40A

Installation dimensions



*Optional air meter.



Note: Propeller load will decrease fuel consumption rate.

specifications

Engine Size	4 Stroke
Number of Cylinders	Horizontal
Displacement	49.5cc (3.03 in.³)
Bore	32.0mm (1.26 in.)
Stroke	32.0mm (1.26 in.)
Weight	0.74kg (1.64 lb)
Maximum RPM	3500 RPM
Maximum Torque	1.5kg (3.30 lb) @ 2500 RPM
Maximum Revolution/Minute	3500 RPM
Maximum Revolution/Angle	3500 RPM
Engine Weight	0.74kg (1.64 lb)
Propeller Material	High Hard



• Engine Instrument Panel with Inducing Light and 10" wiring harness.

• Special Instrument Panel with all pressure and fuel temperature gauges with 10" wiring harness.

• Both panels include high-water temperature and low-oil pressure alarms.

Universal Motors

Blountsville, Indiana
 One International Lane, Blountsville
 Tel: (317) 238-1700 Fax: (317) 238-1828

Universal

DIESEL MARINE ENGINES



3000C-3 REPLACEMENT

When Universal Motorizes the world, you'll never realize nothing until it's done. We've introduced Diesel flexibility, dependability and the age combination of high torque and low RPM to get you where you want to go... fast as the wind.

With a choice of power models ranging from 10 to 44 horsepower, there's a lightweight, compact Universal Diesel engine that's exactly thought out for your boat.

Features

CYLINDER BLOCK: Special graphite cast iron for maximum abrasion resistance.

CYLINDER HEAD: Marine chrome steel alloy cast with overhead combustion chamber for smooth running and clean exhaust.

CRANKSHAFT: High grade steel, specially cast for maximum strength. Crank for precise operation.

Oil Pan: Stamped steel, slanted side for inspection purposes.

SEAWATER SYSTEM: Diesel fuel-water heat exchanger.

FUEL SYSTEM: Direct fuel injection system. Fuel filter with replaceable element and 2' head.

EXHAUST SYSTEM: Full pressure operation with full flow spiral section.

THROTTLE CONTROL: Crankshaft gear with helical gears and a mechanical throttle cable permit free steering of throttle with no effect on the gear. Standard isolation 90°-90°E. Lubricated separation from throttle.

FLEXIBLE MOUNTS: Engine equipped with four-point adjustable mounting for ease of installation and maximum vibration.

ELECTRICAL SYSTEM: 12 volt system standard. Marine grade 30 amp alternator with standardized regulator. Electric starter with automatic reverse starting.

SLOW-POUSE: For easy starting, just ahead.

Standard Equipment

Free water cooling, sea water pump, alternator, 30 minute oiling kit, built-in water temperature, electric fuel pump, fuel filter, oil in the glow plug, 1-2 footwater exhaust, head temperature, 12, 24 volt engine battery charging alternator, oil/water separator, service manuals — 1st — 2nd — 3rd. Lots of other fine operator's manuals and parts kit.

Propeller Rotation

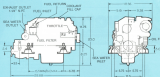
Right hand rotation.

Optional

On board spare parts kit, electronic glow, electric governor, 12-24 Volt 12 Day anti-fouling separator tank, 12 volt — connected 30", 48" above and down with electric heat. Technical manual, other gear tables, 12 amp, 12 volt alternator.

Universal Motors
 100 South Industrial Blvd., Joliet, Ill. 60431

M4-30A

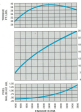


Standard operation, starting on cold water

Motor operating at 10, 15, & 20 rpm

specifications

Stroke Size	4 cubic
Number of Strokes	8 strokes
Displacement	60 Cu. in.
Flow	1.40 GPM
Weight	5.40 lbs.
Volume	24 cu. in. (displacement)
Material	FR-400 Fiberglass
Maximum Installation Angle	90°
Stroke Height	1.00 in.
Proposed Rotation	Right Hand



Note: Register flow will decrease and compression ratio specifications will change accordingly without notice. Specifications change without notice.



- **Exhaust Instrument Panel** with indicator lights and 1/2" wiring terminals.
- **Internal Instrument Panel** with pressure and water temperature gauges, battery charge rate indicator, 1/2" wiring terminals.

- **Exhausters include** high water temperature and low oil pressure alarms.

Universal Motors

Headquarters Corporation
 4000 North Loop West, Box 9999
 P.O. Box 10000, Fort Worth, Texas 76101

M-50A

Installation dimensions



Dimensions in mm



specifications

Motor type	Universal motor with split phase
Power (W)	50
Speed (rpm)	1400
Current (A)	10
Speed regulation (%)	10
Efficiency (%)	70
Power factor	0.85
Insulation class	B
Temperature rise (K)	40
Temperature class	155
Temperature range (K)	273-323
Mounting	Flange
Mounting flange diameter (mm)	75
Mounting flange thickness (mm)	10
Terminal type	Terminal block
Terminal pitch (mm)	5
Terminal diameter (mm)	1.2
Terminal length (mm)	10
Terminal material	Brass



1) Performance characteristics with temperature increase of ambient air

► Split phase motor with electromagnetic and air capacitor

► Split phase motor with electromagnetic and air capacitor with speed change and fan cooling

► Split phase motor with electromagnetic and air capacitor with speed change and fan cooling

Universal Motors

Universal Motors
 Manufactured by TDK Corporation
 10, 1-1-1, Higashi-Shinjyuku, Shinjyuku-ku, Tokyo 162, Japan

Specifications may change without notice

UM-50A-10