SUN STAR TYPE “M” OIL-FILLED MOTOR

We have incorporated the very best industry designs and standards into our Type “M” oil-filled motor. The Sun Star Type “M” motor is a statically balanced, oil-filled submersible motor with a double mechanical seal. Standard sizes from 40 thru 600 HP at 460, 2300 and 4160 volts. The standard material construction is stainless-steel with epoxy coated cast iron reservoir. Special material construction is available in 316 stainless steel, super duplex stainless steel, and nickel-aluminum-bronze. All motors are VFD compatible and are made to fit directly on a Byron Jackson pump.

MANUFACTURING & REPAIR OF OIL FILLED MOTORS SINCE 1977

ENGINEERING & DESIGN

Type “M” motors are engineered products and can be custom designed to fit most applications.

NSF Certified to NSF/ANSI/CAN 61 & NSF/ANSI 372

FACILITY CAPABILITES & CAPACITY

All welding, machining, component fabrication, winding, assembly, electrical and run testing accomplished in house.

EXPERIENCE

Sun-Star Electric has been designing and manufacturing motors for over 40 years. Our combined expertise with submersible motors culminates to hundreds of years of experience.

FRAME	H.P.	VOLT
10”	40 50 60 75 100 125	460
12”	125 150 200	460 2300
14”	150 200 250 300	460 2300
16”	250 300 350 400 450 500 600	2300 4160
SPEEDS		
3600RPM / 1800RPM (2P / 4P)		
AMBIENT TEMP		
32°C ambient standard w/Hi-Temp options available		
MATERIALS OF CONSTRUCTION		
300 series SS with epoxy coated cast iron 316SS, Super Duplex, and NiAlBr available		

Different configurations on request

HYDRAULIC INSTITUTE PROUD MEMBER

Feb 2021

SINCE 1977

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SUN STAR TYPE “M” OIL-FILLED MOTOR

The sturdy design of the Type “M” motor allows for “across the line” and reduced voltage starting.

PLUG-IN LEAD ASSEMBLY

The lead assembly is a detachable plug vulcanized to three separate lead cables. The cables and plug are oil and water resistant, forming a positive compression seal between the motor terminals and power supply conductors. The lead plug clamp is fabricated from 304 stainless steel to guarantee corrosion resistance. The Sun Star plug-in lead assembly can be directly substituted and used on other manufacturer’s Type “M” and Type “H” motors.

TERMINATIONS

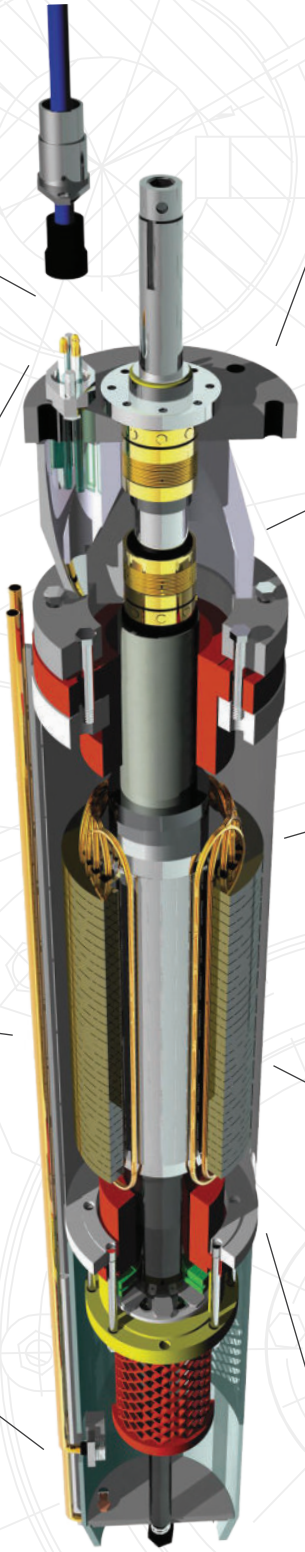
The configuration of the electrical terminations on the Sun Star Type “M” oil-filled motor match other Byron Jackson oil-filled submersible motors. With this configuration existing lead assemblies can be used on both Sun Star and Byron Jackson motors.

INTERNAL FLUID

The Sun Star Type “M” motor uses only FDA approved, food grade, white mineral oil. The mineral oil acts as a dielectric insulation and prevents corrosion to internal components. The oil also provides excellent bearing lubrication. Oil is constantly circulated throughout the motor and is continuously cleaned by the internal filter. The oil reservoir acts as a heat exchanger while providing a lifetime supply of oil.

STATIC BALANCING SYSTEM

The static balancing system utilizes two vents, or balancing tubes. The primary balancing tube connects to the bottom of the motor at the oil reservoir and vents to the top of the motor. The secondary vent tube is connected to the oil reservoir on the bottom end of the motor and to the seal chamber in the mount bracket. These vent lines equalize internal and external pressures without requiring the use of elastomer diaphragms.



MOUNT BRACKET

The mounting bracket is a two chamber, single piece casting. It is precision machined for alignment and fit. The mounting configuration requires no adaptation or modification when replacing Byron Jackson oil-filled submersible motors.

SEALING SYSTEM

The motor employs a double mechanical seal configuration for sealing at the shaft. These mechanical seals are tungsten-carbide face seals. Our special configuration prevents water from pooling at inner seal faces and ensures that the seals are lubricated by internal oil for a prolonged operating life.

WINDING

Our winding wire and other winding components are all oil resistant, class F or higher materials, and inverter duty rated. These materials and our winding methods will provide reliable and efficient service. All windings are tested to meet applicable NEMA and IEEE standards.

STATOR

The standard stator casing material is corrosion resistant 304 stainless steel. This provides for a casing with superior heat dissipation. These features combine for reduced operating temperatures. 316SS available upon request.

THRUST BEARING

The Kingsbury thrust bearing is an oil lubricated self-aligning, thrust bearing. This self-aligning feature provides maximum support from all pivot shoes.

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