



AMERICAN-MARSH PUMPS

"PUMPS AND PUMPS ONLY SINCE 1873"

900 Series Submersible Motors

Sizes: Single Phase
1/2 to 7-1/2 HP
Three Phase
5 to 125 HP

Voltages: 230, 380, 460 & 575 Volt
Frequencies: 50 & 60 Hz

A detailed technical cutaway diagram of a pump assembly, showing the internal components such as the impeller, shaft, and housing. The diagram is rendered in a light, semi-transparent style, allowing the text to be overlaid clearly. The impeller is shown with multiple vanes, and the shaft is supported by bearings. The housing is shown with various ports and seals.

130 Years of Pump & Motor Manufacturing

American-Marsh Pumps, one of the oldest pump lines in America, are pump and motor-products steeped in heritage. Since 1873, the American-Marsh line of pumps and motors have withstood the test of time. During the last 130 years, over 100 varieties of pumps have been designed and built. From steam pumps to centrifugal pumps, American-Marsh pumps have been built to meet the ever changing requirements of society. Over the last century through continuous product development, more American-Marsh models have been retired than most other pump manufacturers have ever produced. Hundreds of thousands of pumps have been made, all designed for longevity, allowing many of them to continue servicing customers over 50 years.

All of our pumps and motors have three superior characteristics; Design, Performance, and Durability. Our engineering department, which includes an in-house pattern shop, designs each pump and motor so that installation and maintenance is easy. Our performances are engineered to meet or beat the competition in each

category. For 130 years, American-Marsh Pumps products have provided cost effective solutions by building pumps to last. Durability by design is always the most cost effective solution. From engineering and design to final assembly, experienced people control each step of the manufacturing process with quality control inspections performed at each step. All pumps shafts are heat straightened. All impellers are computer balanced. Pump testing is done in our new state of the art test facility. All of these factors ensure you receive consistent quality product every time.

American-Marsh Pumps has provided quality pump and motor products for over 130 years. At American-Marsh Pumps, we know that long life and superior performance are the keys to satisfied customers. By understanding your needs, we can design products that meet those needs. Our product family reflects years of customer input, product upgrades, redesign and new product development, all focused on meeting and exceeding your expectations.



AMERICAN-MARSH PUMPS

Specifications 900 Series

4 Inch "E" Series - 2-Wire & 3-Wire Variants

Exterior Shell: The 4" "E" series motors are designed to fit completely within a 4" inner diameter well. The exterior is completely shrouded in 304 stainless steel to provide maximum protection against corrosion and allowing for maximum motor life.

Top End Bell: To maximize motor life, all "E" Series motors feature an integral Nitrile-Buna rubber sand boot to keep large solids from settling on and eventually entering the motor during operation. For additional protection, all "E" Series motors feature a double lip seal construction to minimize contaminants from entering the motor cavity. This double lip seal construction allows fluid, not solids, to enter the motor maximizing motor life. This double lip seal construction is a significant upgrade over other mechanically sealed designs due to the fact that it can handle solids more efficiently. Other motor designs prohibit external fluid from entering the motor without causing significant motor damage or failure. The unique design of the "E" series motor allows for external liquid to enter the motor without causing this significant damage or failure.

The top of the motor is also constructed of 304 stainless steel for maximum corrosion protection and also features a standardized, NEMA pump flange connection. This allows the motor to be easily connected to a wide variety of pump manufacturers and ensures maximum flexibility in the field. All motor leads are of the field serviceable type, PVC insulated and feature 2/3 conductors with a separate ground. All leads are encased within the insulation allowing for a clean and professional installation.

Shaft Assembly: The oversized shaft assembly is constructed of 431 stainless steel allowing for maximum corrosion protection without sacrificing strength requirements. The drive end of the shaft is constructed of 300 stainless steel and is splined to allow for easy coupling to the pump end. At various locations within the motor, the shaft is supported by oversized, carbon graphite radial bearings allowing for maximum life. Each carbon graphite radial bearing is fluted on the inner diameter allowing for adequate lubrication.

Motor Windings: All "E" Series motors feature fully encapsulated, hermetically sealed stator windings designed for long life and durability. More winding material is available standard in the American-Marsh motor as compared to the competition allowing for higher power factors, higher operating speeds and lower overall amperages. The windings are water filled for superior lubrication and cooling. All 2 wire "E" Series motors also feature an integral lightning arrestor protecting the motor from high surges due to weather conditions.

Bottom End Bell: On 2-wire, single phase variants the bottom end bell is constructed out of a high impact, plastic polymer housing that houses the start/run capacitor. On 3-wire variants, the bottom end bell is constructed out of heavy gauge, corrosion resistant, 304 stainless steel. For superior motor protection, a three shoe, Kingsbury-type thrust bearing constructed of stainless steel and carbon graphite is located in the lower end bell. The "E" Series thrust bearing has three shoes (as compared to the competition's two) and chamfered corners minimizing bearing wear and maximizing bearing life. "E" Series thrust bearings have load ratings that are significantly greater than the competition.

The bottom end bell also houses the pressure equalizing diaphragm. This diaphragm equalizes water pressure within the motor during times when the motor operates. During operation, as the motor generates heat the windings expand and contract. The pressure equalizing diaphragm expands and contracts ensuring that minimal amounts of external liquid enter the motor.

6 & 8 Inch "H" Series - 2-Wire & 3-Wire Variants

Exterior Shell: The 6" & 8" "H" series motors are designed to fit completely within a 6" or 8" inner diameter well. The exterior is completely shrouded in 304 stainless steel to provide maximum protection against corrosion and allowing for maximum motor life.

Top End Bell: To maximize motor life, all "H" Series motors feature an integral Nitrile-Buna rubber sand boot to keep large solids from settling on and eventually entering the motor during operation. For additional protection, all "H" Series motors feature a double lip seal construction to minimize contaminants from entering the motor cavity. This double lip seal construction allows fluid, not solids, to enter the motor maximizing motor life. This double lip seal construction is a significant upgrade over other mechanically sealed designs due to the fact that it can handle solids more efficiently. Other motor designs prohibit external fluid from entering the motor without causing significant motor damage or failure. The unique design of the "H" series motor allows for external liquid to enter the motor without causing this significant damage or failure.

The top end bell of the motor is constructed of nickel plated cast iron clad in 304 stainless steel for maximum corrosion protection and also features a standardized, NEMA pump flange connection. This allows the motor to be easily connected to a wide variety of pump manufacturers and ensures maximum flexibility in the field. All motor leads are of the permanently installed type, PVC insulated and feature 3/6 conductors with a separate ground. All leads are encased within the insulation allowing for a clean and professional installation.

Shaft Assembly: The oversized shaft assembly is constructed of 431 stainless steel allowing for maximum corrosion protection without sacrificing strength requirements. The drive end of the shaft is constructed of 300 stainless steel and is splined to allow for easy coupling to the pump end. At various locations within the motor, the shaft is supported by oversized, carbon graphite radial bearings allowing for maximum life. Each carbon graphite radial bearing is fluted on the inner diameter allowing for adequate lubrication.

Motor Windings: All "H" Series motors feature individually insulated, multiple conductor windings designed for long life and durability. All "H" Series motors are designed to be completely re-windable significantly extending motor life and reducing operational costs over the life of the motor. More winding material is available standard in the American-Marsh motor as compared to the competition allowing for higher power factors, higher operating speeds and lower overall amperages. The windings are water filled for superior lubrication and cooling.

Bottom End Bell: The bottom end bell of the motor is constructed of nickel plated cast iron clad in 304 stainless steel for maximum corrosion protection. For superior motor protection, a six shoe, Kingsbury-type thrust bearing constructed of stainless steel and carbon graphite is located in the lower end bell. The "H" Series thrust bearing has six shoes (as compared to the competition's four) and chamfered corners minimizing bearing wear and maximizing bearing life. "H" Series thrust bearings have load ratings that are significantly greater than the competition.

The bottom end bell also houses the pressure equalizing diaphragm. This diaphragm equalizes water pressure within the motor during times when the motor operates. During operation, as the motor generates heat the windings expand and contract. The pressure equalizing diaphragm expands and contracts ensuring that minimal amounts of external liquid enter the motor.

4 Inch "E" Series

2-Wire Single Phase

Sizes: Single Phase
1/2 to 2 HP w/Integral
Lighting Arrestor

Voltages: 230 Volt

Frequencies: 50 & 60 Hz

Services:

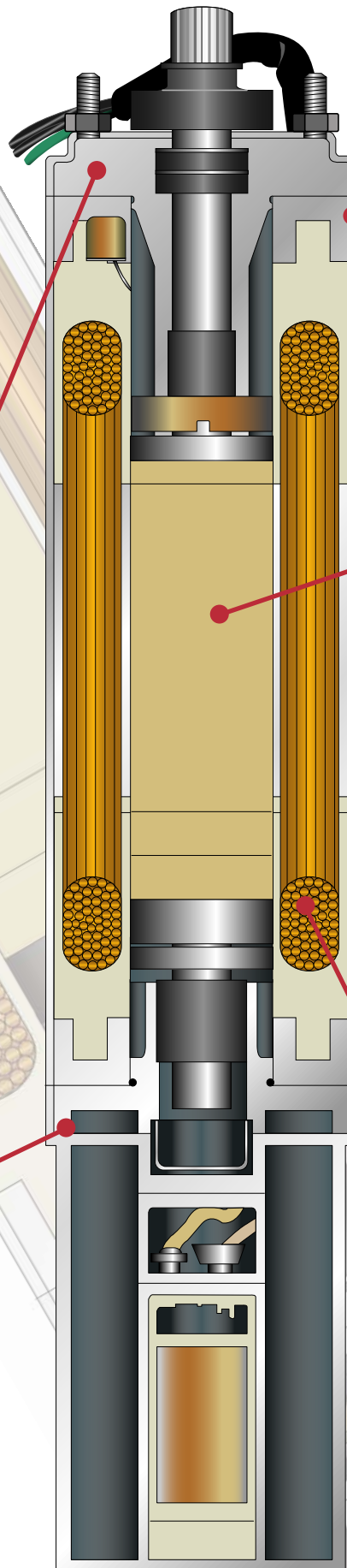
-  Building Trades
-  General Industry
-  Marine
-  Mining & Aggregate
-  OEM
-  Water & Waste Water

Top End Bell

- Integral NBR sand boot to reduce sand entrance into motor
- The mounting flange on top of the motor meets NEMA dimensional standards
- The end bell is constructed of all 304 stainless steel for maximum corrosion protection
- Double lip seal construction to minimize contaminants from entering the motor
- Field serviceable, PVC insulated, 2 conductor motor lead standard

Bottom End Bell

- Houses high thrust, three shoe, Kingsbury-type thrust bearing constructed of stainless steel and carbon graphite
- Integral pressure equalizing diaphragm designed specifically for 4 inch motor applications
- Integral capacitor on two wire models simplifying motor installation



Exterior Shell

- Constructed of corrosion resistant 304 stainless steel
- The unit completely fits within a 4" well for ease in installation

Shaft Assembly

- The oversized shaft is constructed of 431 stainless steel for maximum corrosion protection
- Splined for ease in coupling to various pump ends
- Supported by oversized carbon graphite bearings reducing shaft whip and extending motor life

Windings

- Hermetically sealed for long life and durability
- More winding material as compared to the competition allowing for higher power factors and higher operating speeds
- All single phase motors have an integral lightning arrestor for maximum motor protection
- Water filled and lubricated to ensure long motor life

4 Inch "E" Series

3-Wire Single/Three Phase

Sizes: Single Phase
1/2 to 2 HP w/Integral
Lighting Arrestor
Three Phase
1/2 to 7-1/2 HP

Voltages: 230 & 460 Volt

Frequencies: 50 & 60 Hz

Services:



Building Trades



General Industry



Marine



Mining & Aggregate



OEM



Water & Waste Water

Top End Bell

- Integral NBR sand boot to reduce sand entrance into motor
- The mounting flange on top of the motor meets NEMA dimensional standards
- The end bell is constructed of all 304 stainless steel for maximum corrosion protection
- Double lip seal construction to minimize contaminants from entering the motor
- Field serviceable, PVC insulated, 3 conductor motor lead standard

Bottom End Bell

- Houses high thrust, three shoe, Kingsbury-type thrust bearing constructed of stainless steel and carbon graphite
- Integral pressure equalizing diaphragm designed specifically for 4 inch motor applications
- The end bell is constructed of all 304 stainless steel for maximum corrosion protection

Exterior Shell

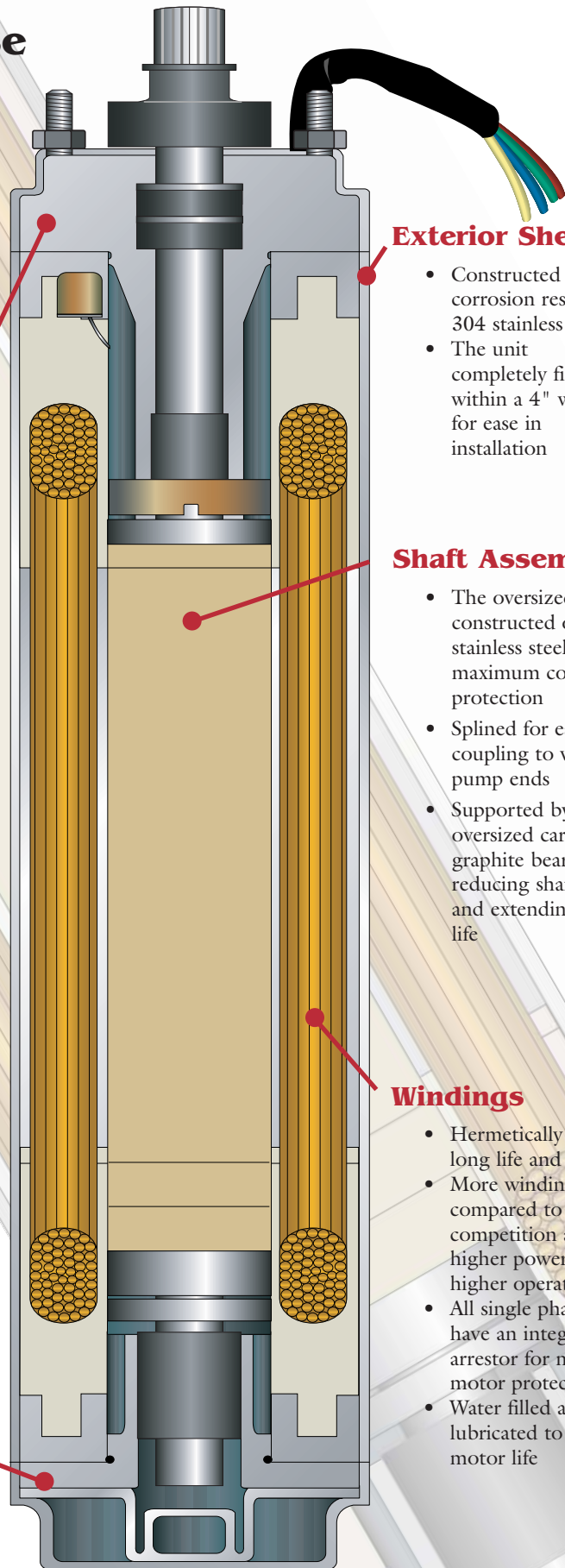
- Constructed of corrosion resistant 304 stainless steel
- The unit completely fits within a 4" well for ease in installation

Shaft Assembly

- The oversized shaft is constructed of 431 stainless steel for maximum corrosion protection
- Splined for ease in coupling to various pump ends
- Supported by oversized carbon graphite bearings reducing shaft whip and extending motor life

Windings

- Hermetically sealed for long life and durability
- More winding material as compared to the competition allowing for higher power factors and higher operating speeds
- All single phase motors have an integral lightning arrestor for maximum motor protection
- Water filled and lubricated to ensure long motor life



6 & 8 Inch "H" Series

3-Wire Single/Three Phase

Sizes: Single Phase

5 to 7-1/2 HP

Three Phase

5 to 125 HP

Voltages: 230, 380, 460 & 575 Volt

Frequencies: 50 & 60 Hz

Services:



Building Trades



General Industry



Marine



Mining & Aggregate



OEM



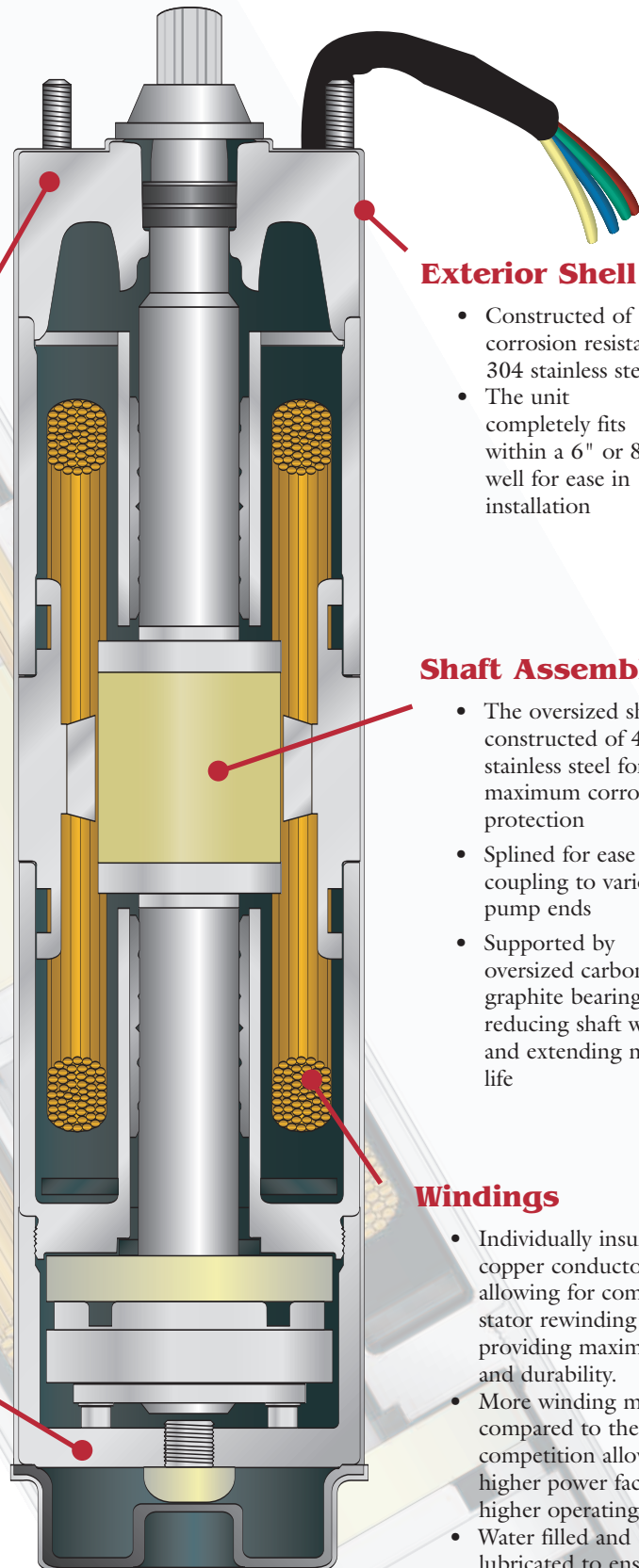
Water & Waste Water

Top End Bell

- Integral NBR sand boot to reduce sand entrance into motor
- The mounting flange on top of the motor meets NEMA dimensional standards
- The end bell is constructed of nickel plated cast iron clad in 304 stainless steel for maximum corrosion protection
- Double lip seal construction to minimize contaminants from entering the motor
- Permanently installed type, PVC insulated, 3/6 conductor motor lead standard

Bottom End Bell

- Houses high thrust, six shoe, Kingsbury-type thrust bearing constructed of stainless steel and carbon graphite
- Integral pressure equalizing diaphragm designed specifically for 6 and 8 inch motor applications
- The end bell is constructed of nickel plated cast iron clad in 304 stainless steel for maximum corrosion protection



Exterior Shell

- Constructed of corrosion resistant 304 stainless steel
- The unit completely fits within a 6" or 8" well for ease in installation

Shaft Assembly

- The oversized shaft is constructed of 431 stainless steel for maximum corrosion protection
- Splined for ease in coupling to various pump ends
- Supported by oversized carbon graphite bearings reducing shaft whip and extending motor life

Windings

- Individually insulated copper conductors allowing for complete stator rewinding providing maximum life and durability.
- More winding material as compared to the competition allowing for higher power factors and higher operating speeds
- Water filled and lubricated to ensure long motor life

Submersible Motors

Single Phase Control Panel

Sizes: Single Phase
1 to 5 HP

Voltages: 230 Volt

Frequencies: 60 Hz

Services:



Building Trades



General Industry



Marine



Mining & Aggregate



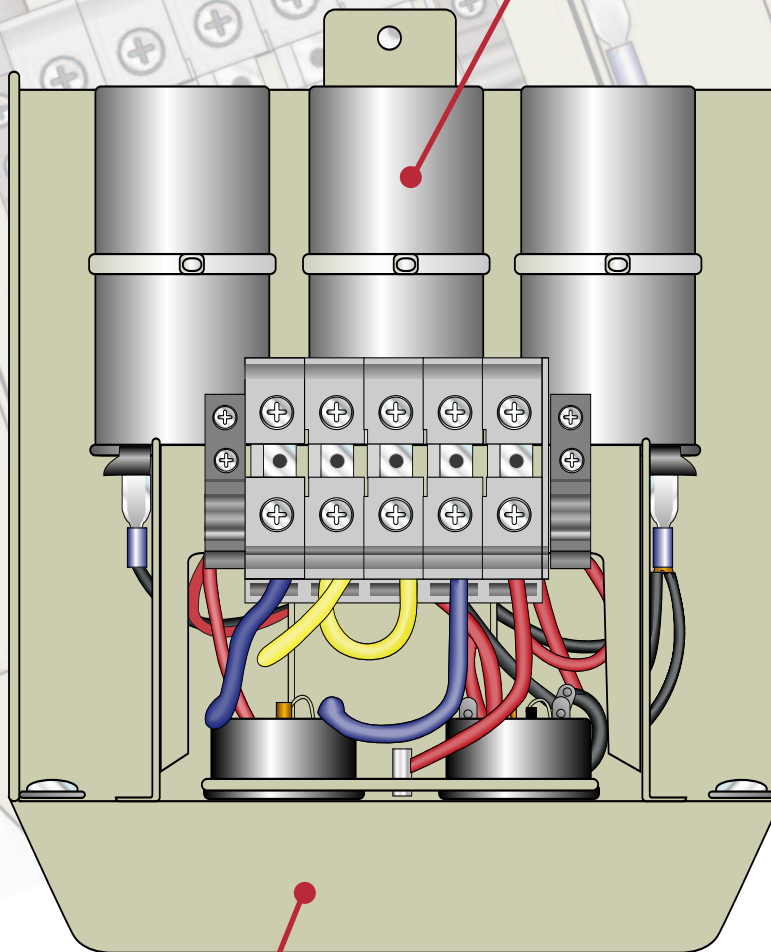
OEM



Water & Waste Water

Electrical

- Capacitor Start/Capacitor Run allows for high starting torque while motor matched run capacitors offer smooth, quiet and efficient motor operation
- Heavy duty box type terminals accept up to #2 AWG wire
- User friendly wiring diagrams for easy connection to electrical system
- Easy access to grounding lugs



Exterior Shell

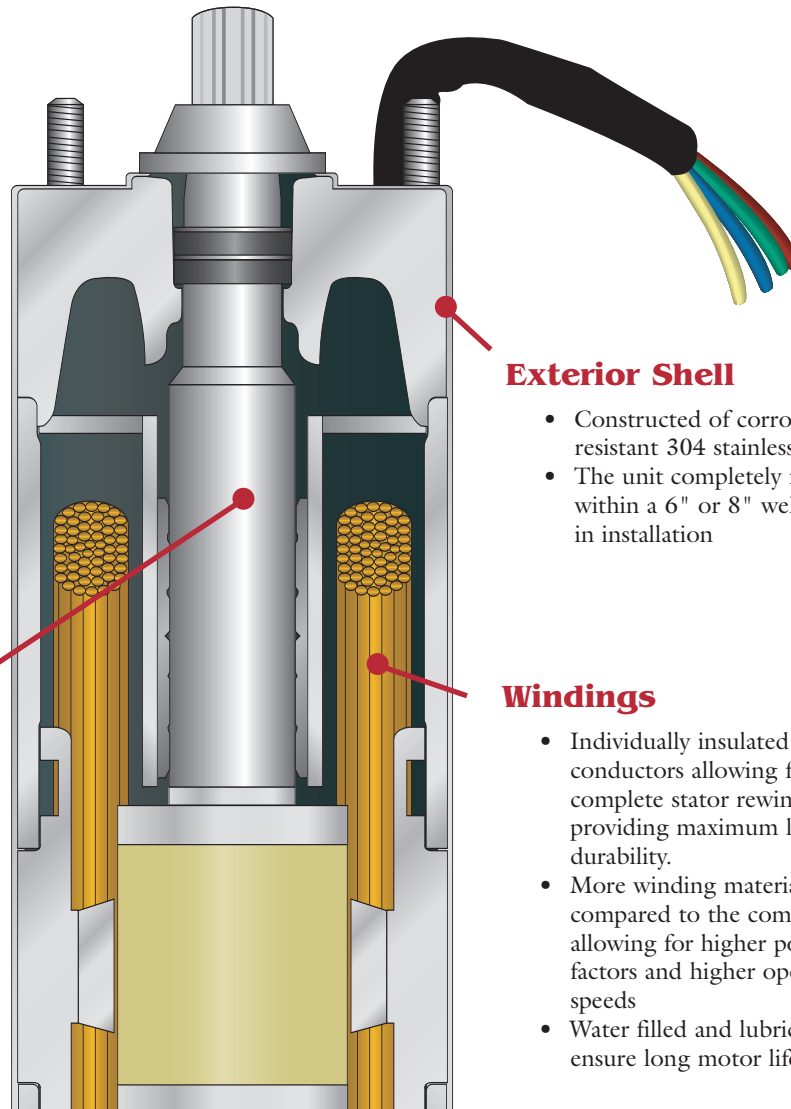
- Powder coated mild steel for mounting outdoors
- Multiple size knockouts for various conduit sizes

Our long tradition of quality pump and motor manufacturing began in 1873 making us one of the first pump and motor manufacturers in this country. *American-Marsh Pumps* provides the user dependability and durability. Durability by design is always the most cost effective solution.

6 & 8 Inch "H" Series

Top End Bell

- Integral NBR sand boot to reduce sand entrance into motor
- The mounting flange on top of the motor meets NEMA dimensional standards
- The end bell is constructed of nickel plated cast iron clad in 304 stainless steel for maximum corrosion protection
- Double lip seal construction to minimize contaminants from entering the motor
- Field serviceable, PVC insulated, 3/6 conductor motor lead standard



Exterior Shell

- Constructed of corrosion resistant 304 stainless steel
- The unit completely fits within a 6" or 8" well for ease in installation

Shaft Assembly

- The oversized shaft is constructed of 431 stainless steel for maximum corrosion protection
- Splined for ease in coupling to various pump ends
- Supported by oversized carbon graphite bearings reducing shaft whip and extending motor life

Windings

- Individually insulated copper conductors allowing for complete stator rewinding providing maximum life and durability.
- More winding material as compared to the competition allowing for higher power factors and higher operating speeds
- Water filled and lubricated to ensure long motor life

OTHER PUMP PRODUCTS

SPLIT CASE

To 30+" Discharge
30,000+ GPM, 550'

VERTICAL TURBINE

To 42+" Bowl
45,000+ GPM, 1400+'

SELF PRIMER

To 12" Discharge
6400 GPM, 260'

REGENERATIVE TURBINE

To 2-1/2" Discharge
140 GPM, Heads to 750'

END SUCTION

To 12" Discharge
9000 GPM, 450'

American-Marsh Pumps

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