



MARCH PUMPS

1819 PICKWICK AVE., GLENVIEW, IL 60026-1306, U.S.A

821

HOT WATER PUMPS

DESCRIPTION & OPERATION: The March 821 Series hot water booster units are centrifugal magnetic drive pumps that are built to handle liquid transfer in heating and cooling operations. Contact the factory for application assistance. Pumps are not self-priming, lack a suction lift, and thus require a flooded suction. Pumps cannot be run dry.

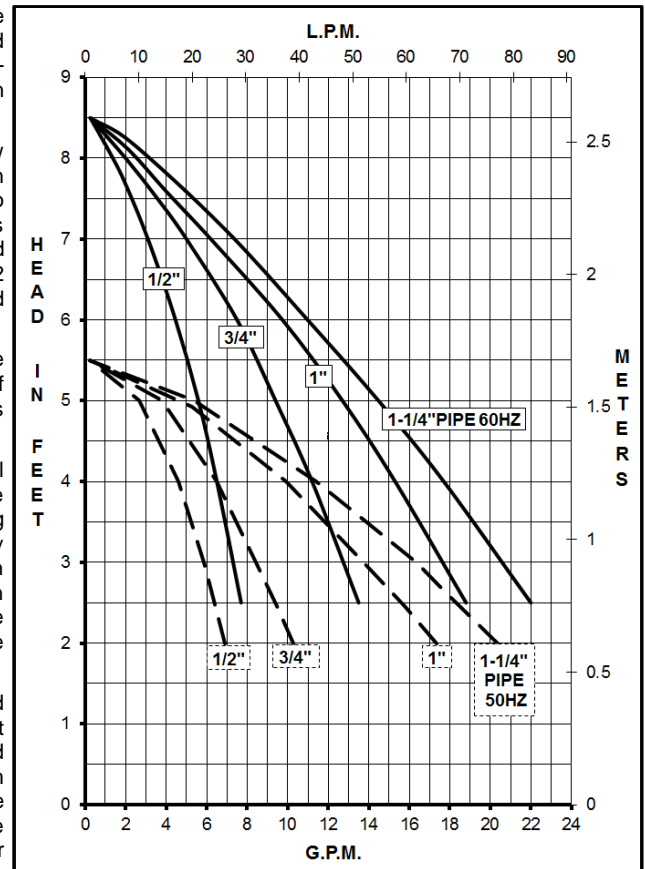
INSTALLATIONS: The pumps should be installed with the pump housing arrow pointing in the direction of flow within the system. If the arrow indicating flow is not in the direction required, remove the socket head housing screws holding the housing to the motor bracket and rotate the housing assembly as required. Replace the screws and tighten. The pump is composed of a wet end assembly, which can be separated by unscrewing the socket head housing screws. The pump will then separate into 2 parts. The liquid will be contained within the wet end assembly unless the flat head connecting screws on the rear housing are loosened.

LUBRICATION: The 821 motor should be oiled at least once a year at the start of the heating season with 4 or 5 drops of SAE 20 weight non-detergent oil in each bearing. If the pump is used daily, it should be oiled every six months. Do not over oil. No oiling is required on ball bearing motors.

GENERAL SAFETY INFORMATION: Follow all local safety codes & the Occupational Safety and Health Act (OSHA). Make certain that the power source conforms to the requirements of your equipment. Always disconnect power source before performing any work on or near the electric motor. Caution must be exercised to relieve any pressure in the system & in draining hot liquid from the pump or the system. March cannot recommend the 821 Series out of bronze where the liquid is used for human consumption per California Law due to the presence of lead. 821 pumps are recognized under the component program of Underwriters Laboratories Inc. File E80954. UL Recognition on 821 pumps, file E80954, is for water only.

DISASSEMBLY & REASSEMBLY: The motor can be removed from the wet end assembly without draining the liquid from the system. To do so remove four socket head housing screws and slide the motor assembly away. If parts inside the wet end assembly must be removed, isolate the pump or drain the system. When the system is drained and cool, remove the four flat head connecting screws from the rear of the housing. The rear housing can now be removed. Remaining pump parts can be removed. Replace any worn or damaged parts. Replace the gasket anytime the rear housing is removed.

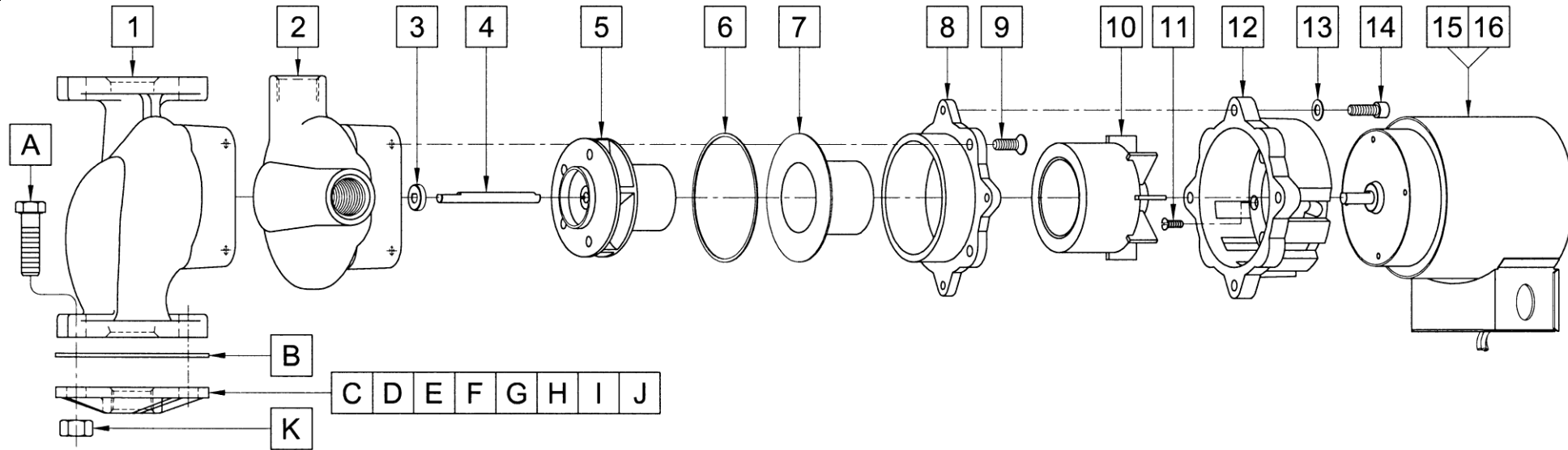
ELECTRICAL: Motors are air cooled and have a conduit box for electrical connections.



| Model Abbreviations | | BR: Bronze, CI: Cast Iron | | | | BR: Bronze, CI: Cast Iron, T: Threaded | | | | | | | | | | |
|-------------------------|---------------|---------------------------|---------------|-----------------|--------------|--|---------------|-------------------|---------------|---------------------|--------------|---------------|---------------|--------------|---------------|------------|
| SPECIFICATIONS | | | | | | | | | | | | | | | | |
| | | 821-BR | | 821-CI | | 821-BR-T | | 821-CI-T | | | | | | | | |
| Product # | 115 V | 0821-0084-0500 | | 0821-0084-0100 | | 0821-0084-0700 | | 0821-0084-0200 | | | | | | | | |
| | 230 V | 0821-0084-0600 | | 0821-0084-0300 | | 0821-0084-0800 | | 0821-0084-0400 | | | | | | | | |
| UNITS | | 60 Hz | | 50 Hz | | 60 Hz | | 50 Hz | | 60 Hz | | 50 Hz | | | | |
| Max Flow | | 22 gpm | | 75.7 lpm | | 22 gpm | | 75.7 lpm | | 14 gpm | | 45.4 lpm | | | | |
| Max Head | | 8.5 ft / 3.7 psi | | 1.6 m | | 8.5 ft / 3.7 psi | | 1.6 m | | 8.5 ft / 3.7 psi | | 1.6 m | | | | |
| Inlet - Outlet | | Flange - Flange | | | | Flange - Flange | | | | 3/4" FPT - 3/4" FPT | | | | | | |
| Max Internal Pressure | | 150 psi / 1034 kPa | | | | 150 psi / 1034 kPa | | | | 150 psi / 1034 kPa | | | | | | |
| Liquid Temperature | | 250 °F / 121 °C Max | | | | 250 °F / 121 °C Max | | | | 250 °F / 121 °C Max | | | | | | |
| Packed Weight | | 14.5 lbs / 6.5 kg | | 14 lbs / 6.3 kg | | 12 lbs / 5.4 kg | | 11.5 lbs / 5.2 kg | | | | | | | | |
| ELECTRICAL 60 Hz | W | A | Hp | Rpm | W | A | Hp | Rpm | W | A | Hp | Rpm | W | A | Hp | Rpm |
| 115 V | 113 | 1.6 | 1/20 | 1600 | 113 | 1.6 | 1/20 | 1600 | 101 | 1.6 | 1/20 | 1600 | 101 | 1.6 | 1/20 | 1600 |
| 230 V | 113 | 0.8 | 1/20 | 1600 | 113 | 0.8 | 1/20 | 1600 | 101 | 0.8 | 1/20 | 1600 | 101 | 0.8 | 1/20 | 1600 |
| ELECTRICAL 50 Hz | W | A | kW | Rpm | W | A | kW | Rpm | W | A | kW | Rpm | W | A | kW | Rpm |
| 115 V | 108 | 1.8 | 0.037 | 1350 | 108 | 1.8 | 0.037 | 1350 | 102 | 1.8 | 0.037 | 1350 | 102 | 1.8 | 0.037 | 1350 |
| 230 V | 108 | 0.9 | 0.037 | 1350 | 108 | 0.9 | 0.037 | 1350 | 102 | 0.9 | 0.037 | 1350 | 102 | 0.9 | 0.037 | 1350 |
| OVERALL SIZE | Height | Width | Length | Height | Width | Length | Height | Width | Length | Height | Width | Length | Height | Width | Length | |
| | 6.31" | 4.87" | 9.68" | 6.31" | 4.87" | 9.68" | 6.19" | 5.37" | 9.28" | 6.19" | 5.37" | 9.28" | 6.19" | 5.37" | 9.28" | |
| | 16.0 cm | 12.3 cm | 24.5 cm | 16.0 cm | 12.3 cm | 24.5 cm | 15.7 cm | 13.6 cm | 23.5 cm | 15.7 cm | 13.6 cm | 23.5 cm | 15.7 cm | 13.6 cm | 23.5 cm | |

All specifications & data are based on pumping water & are intended as a guideline only. Specifications may vary with different motors.

PARTS LIST



| # | DESCRIPTION | MATERIAL | SIZE (Inches) | QTY. | PART # | ONLY USED ON | # | DESCRIPTION | MATERIAL | SIZE (Inches) | QTY. | PART # |
|---|--------------------|---------------|------------------------|------|----------------|--------------|----|----------------------------|-----------|------------------|------|----------------|
| 1 | Pump Housing | Bronze | Flanged | 1 | 0821-0064-0000 | 821 BR | 8 | Housing Connecting Ring | Aluminum | | 1 | 0821-0044-0001 |
| 1 | Pump Housing | Cast Iron | Flanged | 1 | 0821-0025-0001 | 821 CI | 9 | Flat Head Connecting Screw | Steel | 1/4-20 x 3/4 Lg. | 4 | 1043-0009-1000 |
| 2 | Pump Housing | Bronze | 3/4 Threaded | 1 | 0821-0075-0000 | 821 BR-T | 10 | Drive Magnet | | | 1 | 0821-0086-0100 |
| 2 | Pump Housing | Cast Iron | 3/4 Threaded | 1 | 0821-0080-0001 | 821 CI-T | 11 | Screw Flat Head | Stainless | #8-32 x 1/2 Lg. | 4 | 0210-0028-1000 |
| 3 | Thrust Washer | Ceramic | | 1 | 0821-0079-1000 | | 12 | Motor Bracket | Plastic | | 1 | 0821-0104-1000 |
| 4 | Shaft | Stainless | | 1 | 0821-0036-1000 | | 13 | Washer | Stainless | 1/2 O.D. | 4 | 0155-0021-1000 |
| 5 | Impeller w/Bushing | Ryton/Carbon | 2.875 Dia. | 1 | 0821-0023-0200 | | 14 | Socket Head Housing Screw | Steel | 1/4-20 x 3/4 Lg. | 4 | 0804-0052-1000 |
| 6 | Gasket | Nitrile/Fibre | 2.968 ID x 0.031 Thick | 1 | 0804-0050-1000 | | 15 | Motor, 115 V, 50/60 Hz | | | 1 | 0821-0084-1000 |
| 7 | Rear Housing | Stainless | | 1 | 0821-0035-0100 | | 16 | Motor, 230 V, 50/60 Hz | | | 1 | 0821-0088-1000 |

OPTION PARTS FOR ALL MODELS

| # | DESCRIPTION | MATERIAL | SIZE (Inches) | QTY. | PART # | # | DESCRIPTION | MATERIAL | SIZE (Inches) | QTY. | PART # |
|---|----------------|----------|---------------------|------|----------------|---|-------------|-----------|---------------|------|----------------|
| A | Hex Head Screw | Steel | 7/16-14 x 1-1/2 Lg. | 4 | 0804-0054-1000 | G | Flange | Bronze | 1-1/4 | 2 | 0821-0072-0000 |
| B | Gasket, Flange | EPDM | | 1 | 0821-0105-1000 | H | Flange | Steel | 1-1/4 | 2 | 0821-0048-0000 |
| C | Flange | Bronze | 3/4 | 2 | 0821-0069-0000 | I | Flange | Bronze | 1-1/2 | 2 | 0821-0066-0000 |
| D | Flange | Steel | 3/4 | 2 | 0804-0047-0000 | J | Flange | Cast Iron | 1-1/2 | 2 | 0821-0049-0000 |
| E | Flange | Bronze | 1 | 2 | 0821-0065-0000 | K | Hex Nut | Steel | 7/16-14 | 4 | 0804-0055-1000 |
| F | Flange | Steel | 1 | 2 | 0821-0045-0000 | | | | | | |

NOTE: Contact Factory for other materials and/or parts not listed.

0821-0063-1000 R20

LIMITED WARRANTY: March pumps are guaranteed only against defects in workmanship or materials for a period of one year from date of manufacture pumping water.