



# MARCH PUMPS

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

## 809-HS

## HOT WATER PUMPS

**DESCRIPTION & OPERATION:** 809-HS Series hot water booster centrifugal magnetic drive pumps 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.

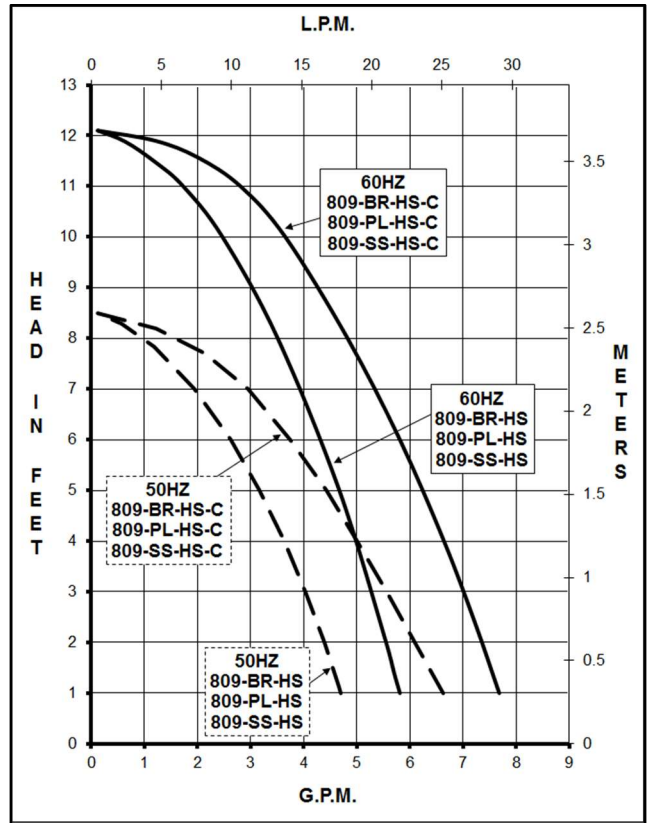
**INSTALLATION:** 809-HS pumps should be installed with the pump housing arrow pointing in the direction of flow within the system. If the arrow indicating flow is not in the direction required, remove the housing screws holding the housing to the motor bracket and rotate the housing assembly as required. Replace the screws and tighten. The pump is composed of a wet end assembly which can be separated by unscrewing the housing screws. The pump will then separate into 2 parts. The liquid will be contained within the wet end assembly unless the rear housing screws on the rear housing are loosened.

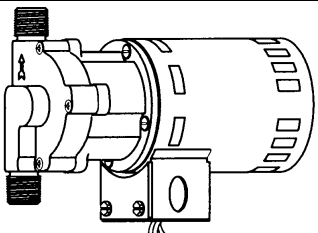
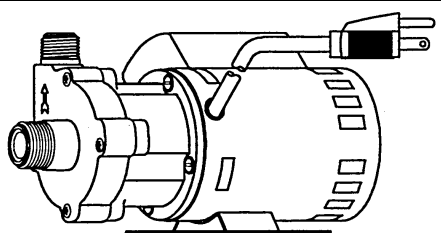
**LUBRICATION:** The motor should be oiled annually at the start of the heating season with 4 or 5 drops of SAE 20 weight non-detergent oil in each bearing. If the pump is used year round it should be oiled every six months. Do not over oil.

**GENERAL SAFETY INFORMATION:** Follow all local electrical and safety codes, and 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 and in draining hot water from the pump or the system. March cannot recommend the 809 Series out of bronze where the liquid is used for human consumption per California Law due to the presence of lead.

\*UL Recognition on pumps, file E80954, is for water only. (809-BR-HS, 809-PL-HS) Motors are U.L. Yellow Card listed, impedance protected or thermal overload protected. Complete pump under U.L. file E80954.

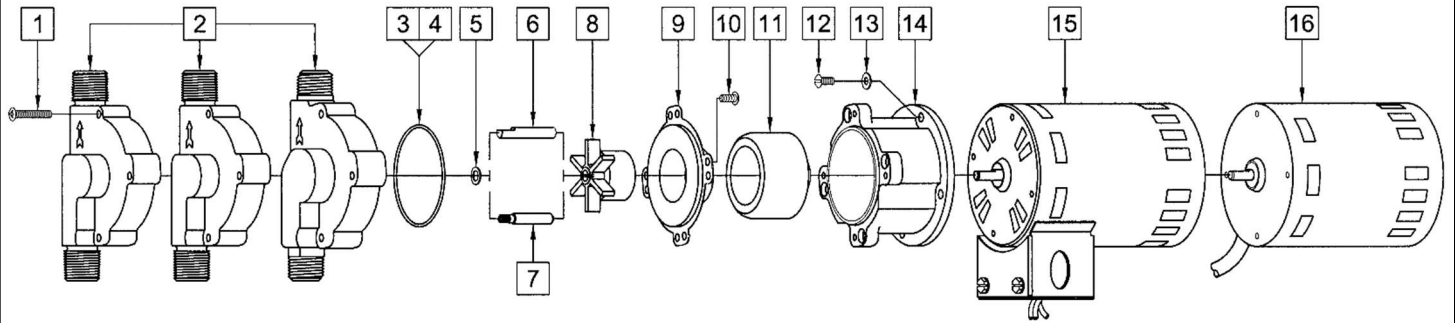
**ELECTRICAL:** Motors are available in different electrical configurations such as 115V 50/60 Hz or 230 Volt 50/60 Hz, 1 Phase and rated for continuous duty. 115 Volt models 809-BR-HS, 809-PL-HS, & 809-SS-HS have a conduit box, 230 Volt have a 3 foot (0.9 m) cord. 115 Volt models 809-BR-C-HS, 809-PL-C-HS, & 809-SS-C-HS have a 6 foot (1.8 m) cord with plug, 230 Volt have a 3 foot (0.9 m) cord. Motors are air cooled.



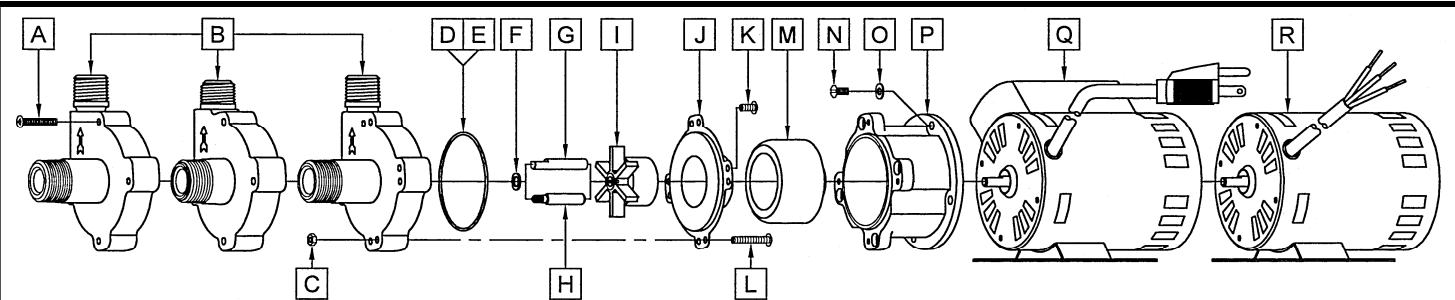
| SPECIFICATIONS      |       |  |                  |  |                  |  |                  |  |                    |                                    |                    |                                  |                    |      |
|---------------------|-------|---|------------------|--|------------------|--|------------------|---|--------------------|------------------------------------|--------------------|----------------------------------|--------------------|------|
|                     |       | 809-BR-HS   |                  | 809-PL-HS                                |                  | 809-SS-HS                              |                  | 809-BR-HS-C   |                    | 809-PL-HS-C                        |                    | 809-SS-HS-C                      |                    |      |
| Product #           | 115 V | 0809-0058-0100  | 0809-0058-0300   | 0809-0215-0700                           | 0809-0058-0200   | 0809-0180-0100                         | 0809-0177-0100   | 0809-0058-0200  | 0809-0180-0200     | 0809-0177-0200                     | 0809-0177-0100     | 0809-0177-0200                   |                    |      |
|                     | 230 V | 0809-0059-0100  | 0809-0059-0300   | 0809-0215-0800                           | 0809-0059-0200   | 0809-0180-0200                         | 0809-0177-0200   | 0809-0059-0200  | 0809-0180-0200     | 0809-0177-0200                     | 0809-0177-0200     | 0809-0177-0200                   |                    |      |
| Model Abbreviations |       | BR: Bronze<br>Inline Inlet & Outlet   |                  | PL: Polysulfone<br>Inline Inlet & Outlet |                  | SS: Stainless<br>Inline Inlet & Outlet |                  | BR: Bronze<br>C: Center Inlet   |                    | PL: Polysulfone<br>C: Center Inlet |                    | SS: Stainless<br>C: Center Inlet |                    |      |
| UNITS               |       | 60 Hz   | 50 Hz            | 60 Hz                                    | 50 Hz            | 60 Hz                                  | 50 Hz            | 60 Hz   | 50 Hz              | 60 Hz                              | 50 Hz              | 60 Hz                            | 50 Hz              |      |
| Max Flow            |       | 6 gpm / 18.9 lpm  | 6 gpm / 18.9 lpm | 6 gpm / 18.9 lpm                         | 6 gpm / 18.9 lpm | 6 gpm / 18.9 lpm                       | 6 gpm / 18.9 lpm | 7.5 gpm / 26.4 lpm  | 7.5 gpm / 26.4 lpm | 7.5 gpm / 26.4 lpm                 | 7.5 gpm / 26.4 lpm | 7.5 gpm / 26.4 lpm               | 7.5 gpm / 26.4 lpm |      |
| Max Head            |       | 12.1 ft / 5.23 psi  | 2.5 m            | 12.1 ft / 5.23 psi                       | 2.5 m            | 12.1 ft / 5.23 psi                     | 2.5 m            | 12.1 ft / 5.23 psi  | 2.5 m              | 12.1 ft / 5.23 psi                 | 2.5 m              | 12.1 ft / 5.23 psi               | 2.5 m              |      |
| Inlet               |       | 1/2" MPT  |                  | 1/2" MPT                                 |                  | 1/2" MPT                               |                  | 3/4" MPT  |                    | 3/8" FPT & 3/4" MPT                |                    | 3/4" MPT                         |                    |      |
| Outlet              |       | 1/2" MPT  |                  | 1/2" MPT                                 |                  | 1/2" MPT                               |                  | 1/2" MPT  |                    | 1/2" MPT                           |                    | 1/2" MPT                         |                    |      |
| Internal Pressure   |       | 150 psi / 10 bar Max  |                  | 50 psi / 3.4 bar Max                     |                  | 150 psi / 10 bar Max                   |                  | 150 psi / 10 bar Max  |                    | 50 psi / 3.4 bar Max               |                    | 150 psi / 10 bar Max             |                    |      |
| Liquid Temperature  |       | 250 °F / 121 °C Max   |                  | 250 °F / 121 °C Max                      |                  | 250 °F / 121 °C Max                    |                  | 250 °F / 121 °C Max   |                    | 250 °F / 121 °C Max                |                    | 250 °F / 121 °C Max              |                    |      |
| Packed Weight       |       | 5.80 lbs / 2.63 kg  |                  | 5 lbs / 2.3 kg                           |                  | 6 lbs / 2.7 kg                         |                  | 6.20 lbs / 2.81 kg  |                    | 5 lbs / 2.3 kg                     |                    | 6 lbs / 2.7 kg                   |                    |      |
| ELECTRICAL 60 Hz    |       | A   | Hp               | Rpm                                      | A                | Hp                                     | Rpm              | A   | Hp                 | Rpm                                | A                  | Hp                               | Rpm                |      |
| 115 V               |       | 1.4   | 1/25             | 3450                                     | 1.4              | 1/25                                   | 3450             | 1.4   | 1/25               | 3450                               | 0.5                | 1/25                             | 3450               |      |
| 230 V               |       | 0.7   | 1/25             | 3450                                     | 0.7              | 1/25                                   | 3450             | 0.7   | 1/25               | 3450                               | 0.7                | 1/25                             | 3450               |      |
| ELECTRICAL 50 Hz    |       | A   | kW               | Rpm                                      | A                | kW                                     | Rpm              | A   | kW                 | Rpm                                | A                  | kW                               | Rpm                |      |
| 115 V               |       | 1.4   | 0.029            | 2850                                     | 1.4              | 0.029                                  | 2850             | 1.4   | 0.029              | 2850                               | 0.4                | 0.022                            | 2850               |      |
| 230 V               |       | 0.7   | 0.029            | 2850                                     | 0.7              | 0.029                                  | 2850             | 0.7   | 0.029              | 2850                               | 0.7                | 0.029                            | 2850               |      |
| Overall Pump Size   |       | H   | W                | L  | H                | W                                      | L                | H   | W                  | L                                  | H                  | W                                | L                  |      |
| 115 V               |       | Inches  | 5.31             | 3.33                                     | 7.74             | 5.31                                   | 3.38             | 7.74  | 5.31               | 3.33                               | 7.74               | 4.50                             | 4.18               | 8.69 |
|                     |       | cm  | 13.4             | 8.4                                      | 19.6             | 13.4                                   | 8.5              | 19.6  | 13.4               | 8.4                                | 19.6               | 11.4                             | 10.6               | 22.0 |
| 230 V               |       | Inches  | 4.87             | 3.33                                     | 7.74             | 4.88                                   | 3.38             | 7.74  | 4.87               | 3.33                               | 7.74               | 4.50                             | 3.50               | 8.62 |
|                     |       | cm  | 12.3             | 8.4                                      | 19.6             | 12.3                                   | 8.5              | 19.6  | 12.3               | 8.4                                | 19.6               | 11.4                             | 8.8                | 21.8 |

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

**PARTS LIST**



| #  | DESCRIPTION           | 809-BR-HS | 809-PL-HS          | 809-SS-HS | SIZE (Inches)         | QTY. | 809-BR-HS      | 809-PL-HS      | 809-SS-HS      |
|----|-----------------------|-----------|--------------------|-----------|-----------------------|------|----------------|----------------|----------------|
| 1  | Screw (Housing)       | Steel     | Steel              | Stainless | #8-32 x 1 Lg.         | 4    | 0923-0003-1000 |                |                |
| 2  | Pump Housing          | Bronze    | Polysulfone        | Stainless | Inline Inlet & Outlet | 1    | 0809-0013-0000 | 0809-0079-0100 | 0809-0211-0010 |
| 3  | "O" Ring              | Silicone  |                    | Silicone  | 0.070 CS x 2.441 ID   | 1    | 0809-0165-1000 |                | 0809-0165-1000 |
| 4  | "O" Ring              |           | Silicone           |           | 1/16 CS x 2-3/8 ID    | 1    |                | 0809-0027-1000 |                |
| 5  | Thrust Washer         |           | Teflon             |           |                       | 1    |                | 0809-0043-1000 |                |
| 6  | *Shaft                |           | Stainless          |           | "D" Flat              | 1    |                | 0809-0161-1000 |                |
| 7  | *Shaft                |           | Stainless          |           | Left-Hand Thread      | 1    | 0809-0214-1000 |                | 0809-0214-1000 |
| 8  | Impeller              |           | Ryton/Teflon/Glass |           | 1-11/16 Dia.          | 1    |                | 0809-0005-0200 |                |
| 9  | Rear Housing          |           | Stainless          |           |                       | 1    |                | 0809-0012-1000 |                |
| 10 | Screw (Rear Housing)  |           | Stainless          |           | #8-32 x 3/8 Lg.       | 4    | 0135-0040-1000 |                |                |
| 11 | Drive Magnet          |           |                    |           |                       | 1    |                | 0125-0083-0100 |                |
| 12 | Screw                 |           | Stainless          |           | #8-32 x 3/8 Lg.       | 4    | 0135-0040-1000 |                |                |
| 13 | Washer                |           | Stainless          |           | #8                    | 4    | 0858-0004-1000 |                |                |
| 14 | Motor Bracket         |           | Plastic            |           |                       | 1    | 0809-0058-1000 |                |                |
| 15 | Motor 115 V, 50/60 Hz |           |                    |           | Conduit Box           | 1    | 0809-0090-1000 |                |                |
| 16 | Motor 230 V, 50/60 Hz |           |                    |           | w/Cord, No Base       | 1    | 0135-0037-1000 |                |                |



| # | DESCRIPTION           | 809-BR-HS-C | 809-PL-HS-C        | 809-SS-HS-C | SIZE (Inches)       | QTY. | 809-BR-HS-C    | 809-PL-HS-C    | 809-SS-HS-C    |
|---|-----------------------|-------------|--------------------|-------------|---------------------|------|----------------|----------------|----------------|
| A | Screw (Housing)       | Steel       | Steel              | Stainless   | #8-32 x 1 Lg.       | 4    | 0923-0003-1000 |                |                |
| B | Pump Housing          | Bronze      | Polysulfone        | Stainless   | Center Inlet        | 1    | 0809-0142-0000 | 0809-0179-0100 | 0809-0150-0010 |
| C | Hex Nut               |             |                    | Stainless   | #8-32               | 4    |                |                | 9991-0004-1000 |
| D | "O" Ring              | Silicone    |                    | Silicone    | 0.070 CS x 2.441 ID | 1    | 0809-0165-1000 |                | 0809-0165-1000 |
| E | "O" Ring              |             | Silicone           |             | 1/16 CS x 2-3/8 ID  | 1    |                | 0809-0027-1000 |                |
| F | Thrust Washer         |             | Teflon             |             |                     | 1    |                | 0809-0043-1000 |                |
| G | *Shaft                |             | Stainless          |             | "D" Flat            | 1    |                | 0809-0161-1000 |                |
| H | *Shaft                |             | Stainless          |             | Left-Hand Thread    | 1    | 0809-0214-1000 |                | 0809-0214-1000 |
| I | Impeller              |             | Ryton/Teflon/Glass |             | 1-11/16 Dia.        | 1    |                | 0809-0005-0200 |                |
| J | Rear Housing          |             | Stainless          |             |                     | 1    |                | 0809-0012-1000 |                |
| K | Screw (Rear Housing)  |             | Stainless          |             | #8-32 x 3/8 Lg.     | 4    | 0135-0040-1000 |                |                |
| L | Screw                 |             | Stainless          |             | #8-32 x 1 Lg.       | 4    |                |                | 0809-0205-1000 |
| M | Drive Magnet          |             |                    |             |                     | 1    |                | 0125-0083-0100 |                |
| N | Screw                 |             | Stainless          |             | #8-32 x 3/8 Lg.     | 4    | 0135-0040-1000 |                |                |
| O | Washer                |             | Stainless          |             | #8                  | 4    | 0858-0004-1000 |                |                |
| P | Motor Bracket         |             | Plastic            |             |                     | 1    | 0809-0058-1000 |                |                |
| Q | Motor 115 V, 50/60 Hz |             |                    |             | w/Cord,Base,Plug    | 1    | 0809-0218-1000 |                |                |
| R | Motor 230 V, 50/60 Hz |             |                    |             | w/Cord & Base       | 1    | 0809-0124-1000 |                |                |

**DISASSEMBLY & REASSEMBLY**

The motor can be removed from the wet end assembly without draining the liquid from the system. To do so remove four 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 rear housing 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 "O" ring anytime the rear housing is removed.

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

0809-0053-1100 R12

\*Check shaft type before ordering replacement parts.

**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.