Keco’s 800 Series diaphragm pump, also known as the “Double Pump,” is designed to pump out multiple vessels at one time, charter vessels, and other high capacity requirements. The 800 Series is also an effective high output transfer pump in the industrial field. This series uses the same diaphragm concept seen throughout Keco’s diaphragm pumps, but uses two diaphragms to create twice the volume.

Keco’s 800 Series is available in 3 Suction / Discharge configurations. The Model 800 comes with a single Suction Inlet / Single Discharge Outlet Manifold. This configuration can be used as the platform for a centralized sanitation system, with remote pumping centers for suction receptacles. The Model 810 comes with two separate Inlet Pipes / Single Outlet Manifold. This configuration allows for two separate suction receptacles to discharge into one outlet. The third configuration, the Model 820, comes with two suction pipes / two discharge pipes. The Model 820 is great for pumping two types of liquids to separate locations.
The 800 Series pump comes standard with an attractive white fiberglass enclosure to protect it from the elements. If mounting the 800 Series onto a dock, remote pumping centers are available for easy pumpout operation.

The 800 Series pump is able to maintain optimal suction by using alternating pump strokes. The gear box used on the 800 Series controls two eccentrics that drive the respective diaphragms into an up and down motion. Since the motion of the two diaphragm counter each other, the pump maintains constant Suction/ Discharge with little pulsation. The 800 Series has established itself as a high volume, high output, powerful diaphragm pump and is ideal for strenuous marine applications or industrial jobs.

**FIBERGLASS ENCLOSURE**

**POWER OPTIONS**

<table>
<thead>
<tr>
<th>MOTOR OPTIONS</th>
<th>CONTROL OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1-HP 115/230-Volt</td>
<td>• Push to Start With Timer</td>
</tr>
<tr>
<td>• 1-HP Exp.Proof</td>
<td>• On/Off Switch</td>
</tr>
<tr>
<td></td>
<td>• Explosion-Proof Push to Start W/Timer</td>
</tr>
<tr>
<td></td>
<td>• Explosion-Proof On/Off Switch</td>
</tr>
<tr>
<td></td>
<td>• Explosion-Proof Key On/Off</td>
</tr>
</tbody>
</table>
Specifications

Double Diaphragm Pump

Design Considerations

- Double Diaphragm – Single or Dual Suction and Discharge.
- The pump shall be designed for viscous material handling, sanitary waste, slurries and solids up to 1 ½" spherical diameter.
- The diaphragm is to be of Neoprene** reinforced with 2-ply nylon. The diaphragm to be supported by two cast aluminum plates coated and secured to the drive rod using 316-grade stainless steel hardware.
- An eccentric and stainless steel drive rod plunges the diaphragms using a lubricated spherical rod end bearing.
- Weighted encapsulated inlet and discharge valves are replaceable.
- Valves seat against a raised bezel on a replaceable encapsulated seating plate. Valves are held in place using ½” stainless steel hardware.
- 1.0-1.5 HP motor: TEFC 120-240V Single or Three phase 50/60Hz AC motor. Optional Explosion Proof XPFC or 3 HP Honda 4 stroke gasoline engine.

Capacity & Dimensions

Pump 20” x 18 ½” x 18 ½” (L x W x H)
Pump with Gasoline Engine: 28”x18.5”x30”
Suction / Discharge Manifolds not included in dimensions
See Materials for Enclosure Dimensions

Weight 225 lbs.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>GPM</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Hg</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>35</td>
<td>1</td>
<td>1</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>810</td>
<td>18 (2)</td>
<td>2</td>
<td>1</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>820</td>
<td>18 (2)</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>13</td>
</tr>
</tbody>
</table>

Materials

The pump shall include but not be limited to the following components

- All metal surfaces shall be sandblasted (SP10), zinc, epoxy and urethane coated.
- Steel Frame with above coating
- Cast aluminum (marine grade) pump bowls, retaining ring, suction and discharge flanges, and diaphragm reinforcement plates shall be coated with above mentioned finish. Brass castings optional.
- Fiberglass enclosure (36 ½ ” x 18 ½ “ x 21”) Optional: Security keyed lock or Stainless Steel Cover with hinged doors and hose rack(s)
- Manifold assembly shall be schedule 40/80 PVC, and include unions to allow disconnection.
- Encapsulated valves, seating plates and gaskets to be Nitrile rubber.
- **Diaphragm to be neoprene reinforced with 2-ply nylon. Nitrile or Hypalon Diaphragm available.
- Stainless steel parts including nuts, bolts and washers to be a minimum of grade 304
- Consult factory for electrical components.

The compatibility and/or application information is presented as a guide only. Other system factors may effect this information. Proper installation and selection of equipment, components, operation and maintenance are not the responsibility of KECO.
NOTES:

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UNLESS OTHERWISE SPECIFIED:

TOLERANCES:

X.X +/- 0.200
X.XX +/- 0.063
X.XXX +/- 0.032
WELDING +/- 0.125
HOLE SIZING + 0.063
MACHINED SURFACE +/- 0.032
MATERIAL

SCALE: 1:8

DATE: 10/27/2015

PART NUMBER - TITLE
PAH800 - DBL Pump Model 800 Single Suct

DIMENSION: INCHES / [ MM ]

KECO PUMP AND EQUIPMENT
WWW.PUMPAHEAD.COM

KAMBLOCK GUARDS
CAM BLOCK ASSEMBLIES
ELECTRIC MOTOR
MOTOR SUPPORT FRAME
PUMP FRAME
ROD ASSEMBLIES
RETAINING RINGS
PUMP BOWL ASSEMBLIES
GEARBOX
<table>
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<th>ITEM NO.</th>
<th>PART NUMBER - DESCRIPTION</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D3032.000 - CAMBLOCK</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>B6025.500 - STUD FOR CAM BLOCK</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>B3014.025 - FLAT WASHER .25&quot; X .625&quot; SS</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>B3028.500 - LOCK WASHER .5&quot; SS</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>B2020.500 - LOCKNUT W/ NYL INSERT .5-13</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>B2020.025 - LOCKNUT W/NYL INST .25-20</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>D2001.XXX - CAM BLOCK KEY</td>
<td>1</td>
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<tr>
<td>8</td>
<td>B4003.250 - SET SCREW SHARP TIP .25 X 20 X .5</td>
<td>1</td>
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<tr>
<td>9</td>
<td>B1025.250 - HBOLT 0.2500-20x2.5x0.75-N</td>
<td>1</td>
</tr>
</tbody>
</table>

**NOTES:**

**CAMBLOCK ASSEMBLY**

**DOUBLE DIAPHRAGM PUMPS**

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**UNLESS OTHERWISE SPECIFIED:**

DIMENSIONS ARE IN INCHES

TOLERANCES:

- FRACTIONAL: ±1/32
- ONE PLACE DECIMAL: ±.1
- TWO PLACE DECIMAL: ±.03
- THREE PLACE DECIMAL: ±.020
- ANGULAR: ±.5°

**MATERIAL**

**DIMENSION: INCHES / (XX) MM**

**SCALE: 1:2**

**PART NUMBER - TITLE**

D3032.000 CAMBLOCK ASSEMBLY

**AWS**

**REVISION #**

1.0

**PREVIOUS**

1.0

**CURRENT**

**DATE:** 10/27/2015

**COMMENTS:**

**KECO PUMP AND EQUIPMENT**

**WWW.PUMPAHEAD.COM**
### Available Diaphragms*
- V0022.000 - Neoprene
- V0022.HYP - Hypalon
- V0022.NIT - Nitrile (Buna-N)

### BOM Table

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER - DESCRIPTION</th>
<th>QTY.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>B6029.500 - ROD END BEARING</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>B6070.500 - S/S CONNECTING ROD</td>
<td>1</td>
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<tr>
<td>3</td>
<td>B2021.500 - Hex Nut 0.5-20</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>B2013.500 - Hex Nut 0.5-13</td>
<td>1</td>
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<tr>
<td>5</td>
<td>B3028.500 - Lock Washer</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>K1023.000 - ALUMINUM REINFORCING PLATE</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>V1040.003</td>
<td>2</td>
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<tr>
<td>8</td>
<td>V0022.XXX</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>B2022.500 - HEX NUT 0.5-20</td>
<td>1</td>
</tr>
</tbody>
</table>

### Notes:

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**Unless Otherwise Specified:**
- Dimensions are in inches
- Tolerances:
  - Fractional: ±1/32
  - One Place Decimal: ±.1
  - Two Place Decimal: ±.03
  - Three Place Decimal: ±.020
  - Angular: ±.5°

**Material:**

**Drawing:**

- Scale: 1:4
- Date: 10/27/2015
- AWS
- Revision: 1.0

**Company:**

KECO Pump and Equipment

**Website:**

www.pumpahead.com

**Part Number - Title**

Diaphragm Rod Assembly Exploded View

**Dimensions:**

- Inches / (XX) MM

**Comments:**
A SINGLE DIAPHRAGM PUMP
* Excludes "Pumpmate" 90 Series.

A DOUBLE DIAPHRAGM PUMP

B2022.500 (Half Nut w/ Nylon Insert) must be flush with bottom of connecting rod.

SECTION A-A
SCALE 1:2

FINE THREAD

COARSE THREAD

CRITICAL DIMENSIONS

MATERIAL

DIMENSIONS ARE IN INCHES

TOLERANCES:
- FRACTIONAL: ±1/32
- ONE PLACE DECIMAL: ±.1
- TWO PLACE DECIMAL: ±.03
- THREE PLACE DECIMAL: ±.020
- ANGULAR: ±.5°

ANGLES: 90°

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AWS
WWW.PUMPAHEAD.COM

PART NUMBER - TITLE
DIAPHRAGM ROD ASSEMBLY
CRITICAL DIMENSIONS
DIMENSION: INCHES / (XX) MM

DRAWN
AWS
DATE: 10/27/2015

REVISION #
PREVIOUS CURRENT
1.0 1.0

COMMENTS:

NOTES:
CRITICAL DIMENSION
SINGLE DIAPHRAGM PUMP 3.875"
DOUBLE DIAPHRAGM PUMP 3.75"
NOTES:
STRAIGHT (2.0" X 2.0")

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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES TOLERANCES:
FRACTIONAL ± 1/32
ONE PLACE DECIMAL ± .1
TWO PLACE DECIMAL ± .03
THREE PLACE DECIMAL ± .020
ANGULAR ± .5°

MATERIAL

DRAWN
AWS

REVISION #
PREVIOUS
CURRENT

1.0
1.0

DATE: 10/27/2015

COMMENTS:

PART NUMBER - TITLE
ABOWL #4 ASSEMBLY

DIMENSION: INCHES / (XX) MM

SCALE: 1:2

SHEET 8 OF 11
(3) P/N B-FLANGE HARDWARE
Stainless Steel Flange Fasteners/Hardware Kit, Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut

(1) P/N B-RING 2 BOWL
Retaining Ring to Bowl Fasteners/Hardware Kit, Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut

STAINLESS STEEL FASTENERS NOT DEPICTED

5-1
3-1
4

ITEM NO. | PART NUMBER - DESCRIPTION                  | QTY. |
---------|--------------------------------------------|------|
1        | K1021.000 - Pump Bowl                      | 1    |
2-1      | V2043.015 - Valve Seating Plate            | 2    |
3        | V0041.015 - Valve                         | 2    |
4        | V3045.015 - Square Center Gasket           | 1    |
5        | K3034.020 - Suction Flange 2.0"           | 2    |
6        | K2032.015 - Suction Flange Adapter        | 1    |
7        | K1024.000 - Retaining Ring                | 1    |

NOTE:
STAINLESS STEEL FASTENERS NOT DEPICTED

REVISION # | PREVIOUS | CURRENT |
------------|----------|---------|
1.0         | 1.0      |         |

DATE: 10/27/2015

ABBOWL #4 EXPLODED VIEW

MATERIAL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN Inches
TOLERANCES:
FRAC TIONAL ± 1/32
ONE PLACE DECIMAL ± .1
TWO PLACE DECIMAL ± .03
THREE PLACE DECIMAL ± .020
ANGULAR ± .5

AWS
Suction Valve Replacement
(Single / double diaphragm models)

Important Note: *Do not over tighten valves or gasket!!*
Torque Specification is $55"/lbs$ or $4.5'/lbs$
without a torque wrench, this is approximately hand tight
plus $3/4$ turn for valves and gaskets.

Important Note:
Ensure aluminum pump flanges are
smooth and clean before installing new valves.
If pitted or corroded, use a steel brush or
grinding wheel to smooth and clean flange faces.
If severely pitted, castings should be replaced.

---

**NOTES:**
STAINLESS STEEL FASTENERS NOT DEPICTED

(3) P/N B-FLANGE HARDWARE
Stainless Steel Flange Fasteners/Hardware Kit,
Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut

(1) P/N B-RING 2 BOWL
Retaining Ring to Bowl Fasteners/Hardware Kit,
Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut
Discharge Valve Replacement
(Single / double diaphragm models)

Important Note: *Do not over tighten valves or gasket!!*
Torque Specification is 55"/lbs or 4.5'/lbs without a torque wrench, this is approximately hand tight plus 3/4 turn for valves and gaskets.

Important Note:
Ensure aluminum pump flanges are smooth and clean before installing new valves. If pitted or corroded, use a steel brush or grinding wheel to smooth and clean flange faces. If severely pitted, castings should be replaced.

**NOTES:**
STAINLESS STEEL FASTENERS NOT DEPICTED

(3) P/N B-FLANGE HARDWARE
Stainless Steel Flange Fasteners/Hardware Kit, Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut

(1) P/N B-RING 2 BOWL
Retaining Ring to Bowl Fasteners/Hardware Kit, Includes 4 Bolts, 8 Washers, 4 Nylon Lock Nut

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**UNLESS OTHERWISE SPECIFIED:**
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL 1/32
ONE PLACE DECIMAL 0.1
TWO PLACE DECIMAL 0.03
THREE PLACE DECIMAL 0.020
ANGULAR ± 0.5°

**MATERIAL**

**AWS**

**DIMENSION:** INCHES / (XX) MM

**DISCHARGE VALVE REPLACEMENT**

**SCALE:** 1:2.5

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