



## DIAPHRAGM PUMPS

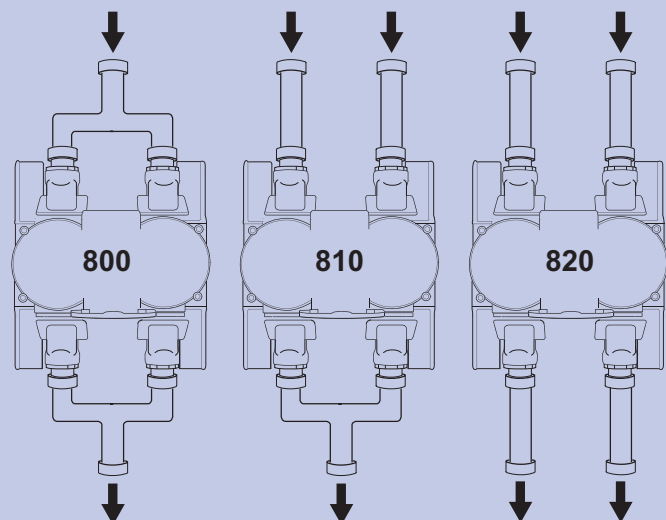
## 800 SERIES



**Keco's 800 Series** diaphragm pump, also known as the "Double Pump," is designed to pumpout 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.

## SUCTION & DISCHARGE OPTIONS

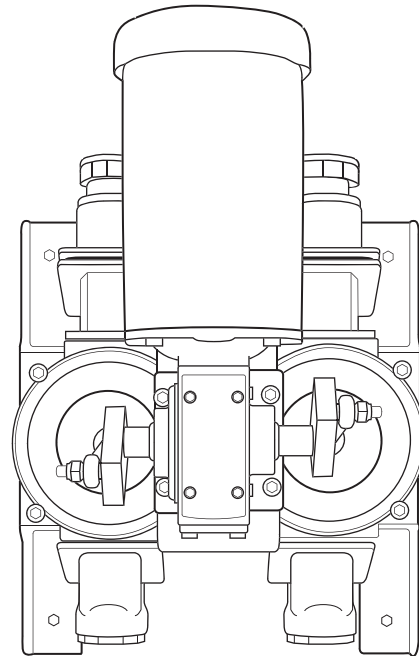
**Keco's 800 Series** is available in 3 Suction / Discharge configurations. The *Model 800* comes with a single Suction Inlet / Single Discharge Outlet Manifold. This configuration can be used as the platform for a centralized sanitation system, with remote pumping centers for suction receptacles. The *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.





## MODEL 810 / 820

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

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.



## POWER OPTIONS

### MOTOR OPTIONS

- 1-HP 115/230-Volt
- 1-HP Exp.Proof

### R.P.C



### CONTROL OPTIONS



- Push to Start With Timer



- On/Off Switch



- Explosion-Proof Push to Start W/Timer



- Explosion-Proof On/Off Switch



- Explosion-Proof Key On/Off



## 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.

Model	GPM	Inlet	Outlet	Hg	PSI
800	35	1	1	23	15
810	18 (2)	2	1	20	13
820	18 (2)	2	2	20	13

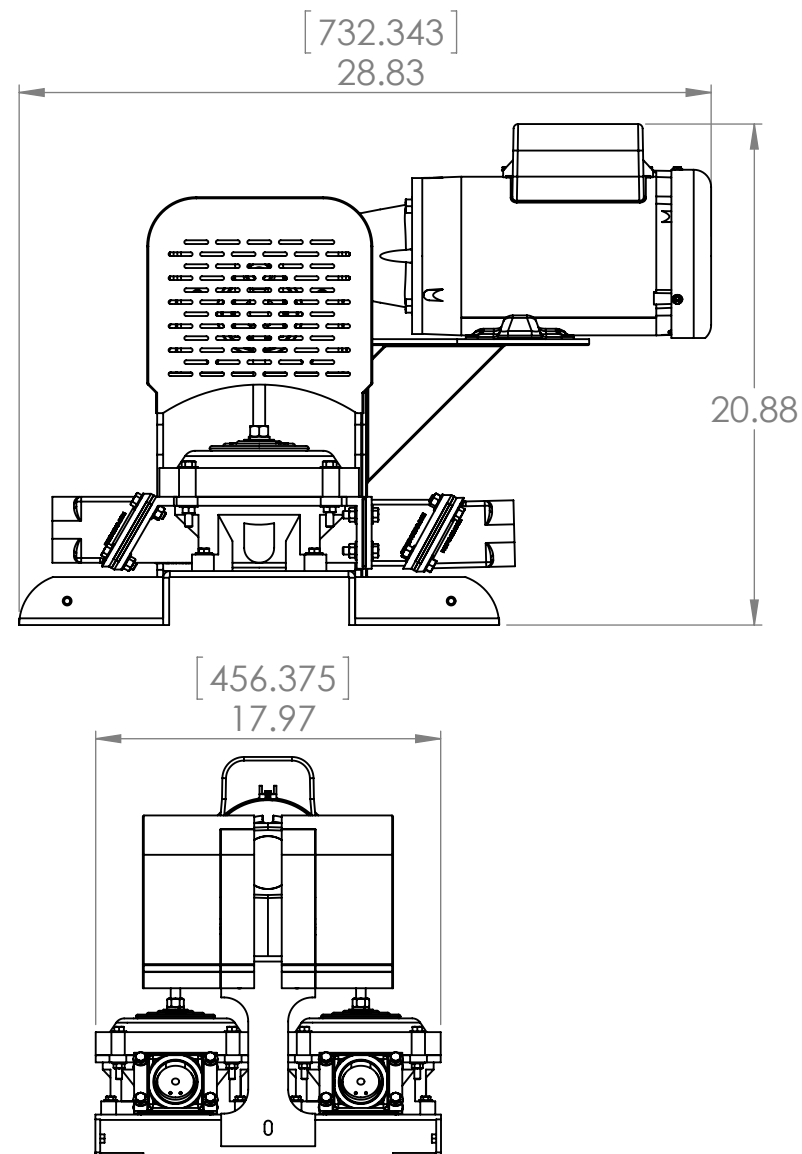
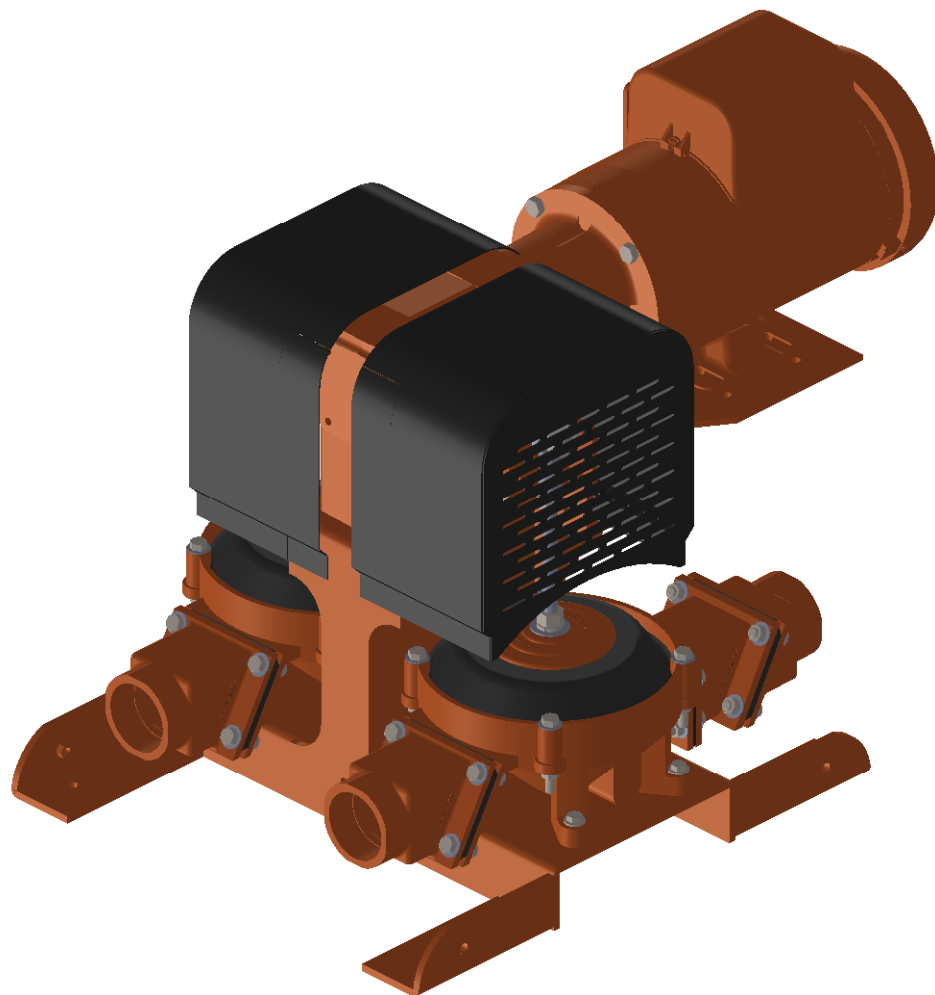
### Materials

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.

F:\SPECS\Specifications Model 800 with



# 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

DRAWN	AWS	
	PREVIOUS	CURRENT
REVISION #	1.0	1.0

DATE: 10/27/2015

COMMENTS:



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PART NUMBER - TITLE

PAH800 - DBL Pump Model 800Single Suct

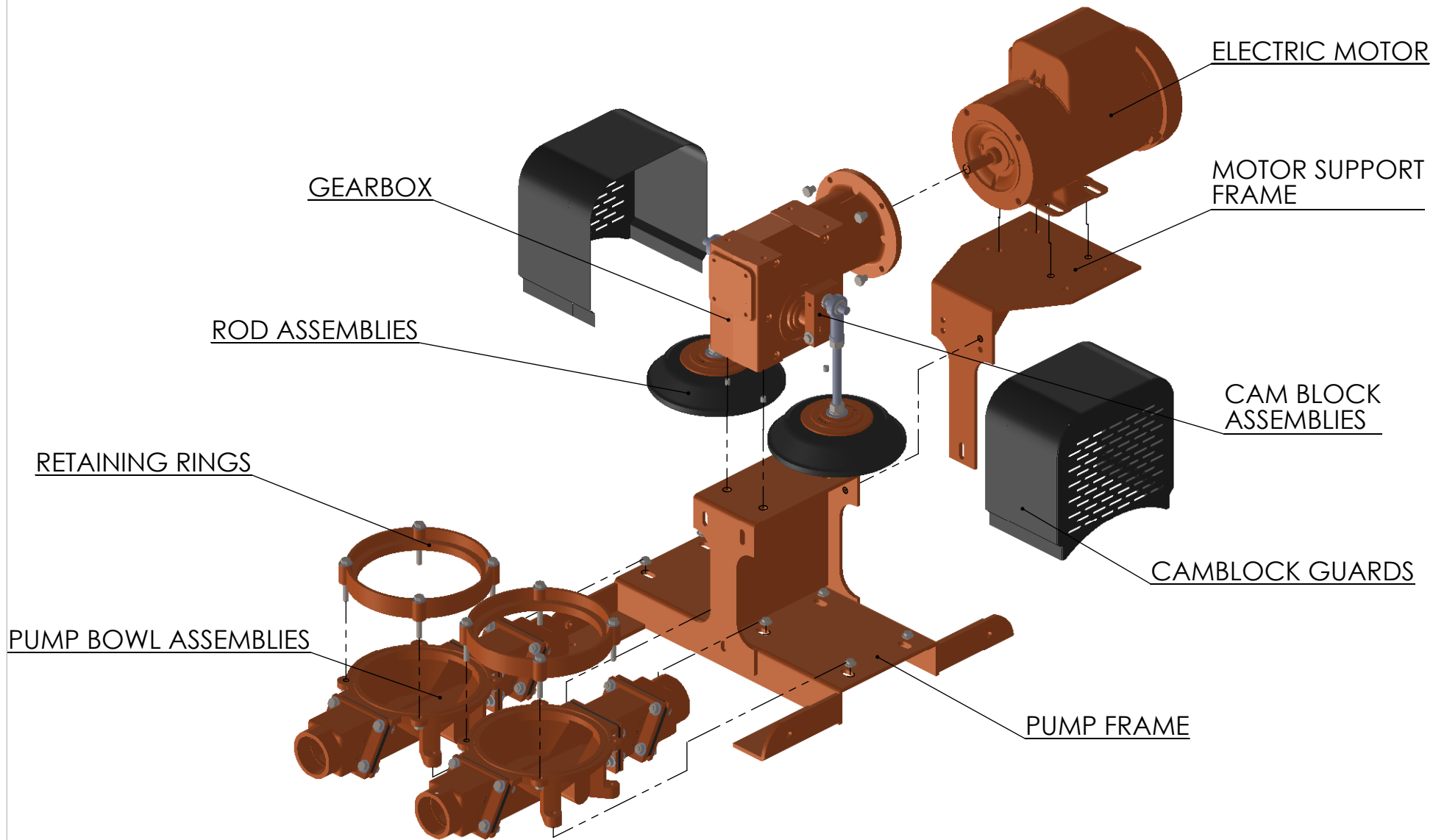
DIMENSION: INCHES / [ MM ]

SCALE: 1:6

SHEET 1 OF 11

A detailed technical line drawing of a mechanical assembly, possibly a pump or motor. The central component is a large, rectangular housing with a prominent, curved, fan-like structure on its front face. This housing is mounted on a base plate. To the right, a cylindrical motor unit is connected to the main assembly. Various mounting brackets, pipes, and structural supports are shown, indicating a complex mechanical system. The drawing is a perspective view, showing the top, front, and side of the assembly.

This diagram illustrates the exploded view of the microscope assembly. It shows the motor unit at the top, the main body with a large lens, and two eyepieces. The components are shown in their relative positions for assembly.



NOTES:

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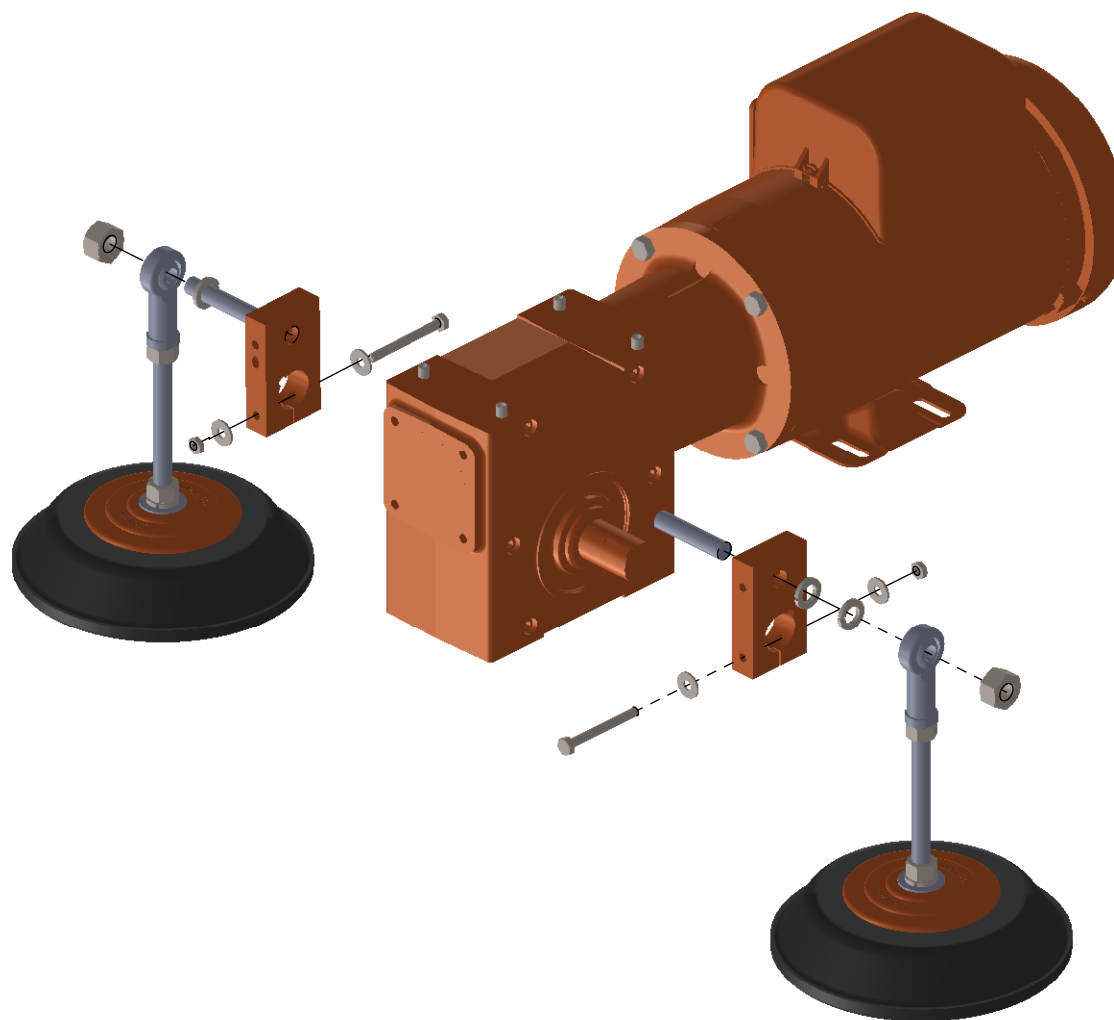
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X.X +/- 0.200  
X.XX +/- 0.063  
X.XXX +/- 0.032  
WELDING +/- 0.125  
HOLE SIZING + 0.063  
MACHINED SURFACE +/- 0.032

MATERIAL

DRAWN	AUS		KECO PUMP AND EQUIPMENT WWW.PUMPAHEAD.COM	
REVISION #	PREVIOUS	CURRENT		
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DATE: 10/27/2015			PART NUMBER - TITLE	
COMMENTS:			PAH800 - DBL Pump Model 800Single Suct	
			DIMENSION: INCHES / [ MM ]	
			SCALE: 1:8	SHEET 3 OF 11

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HOLE SIZING + 0.063  
MACHINED SURFACE +/- 0.032

## MATERIAL

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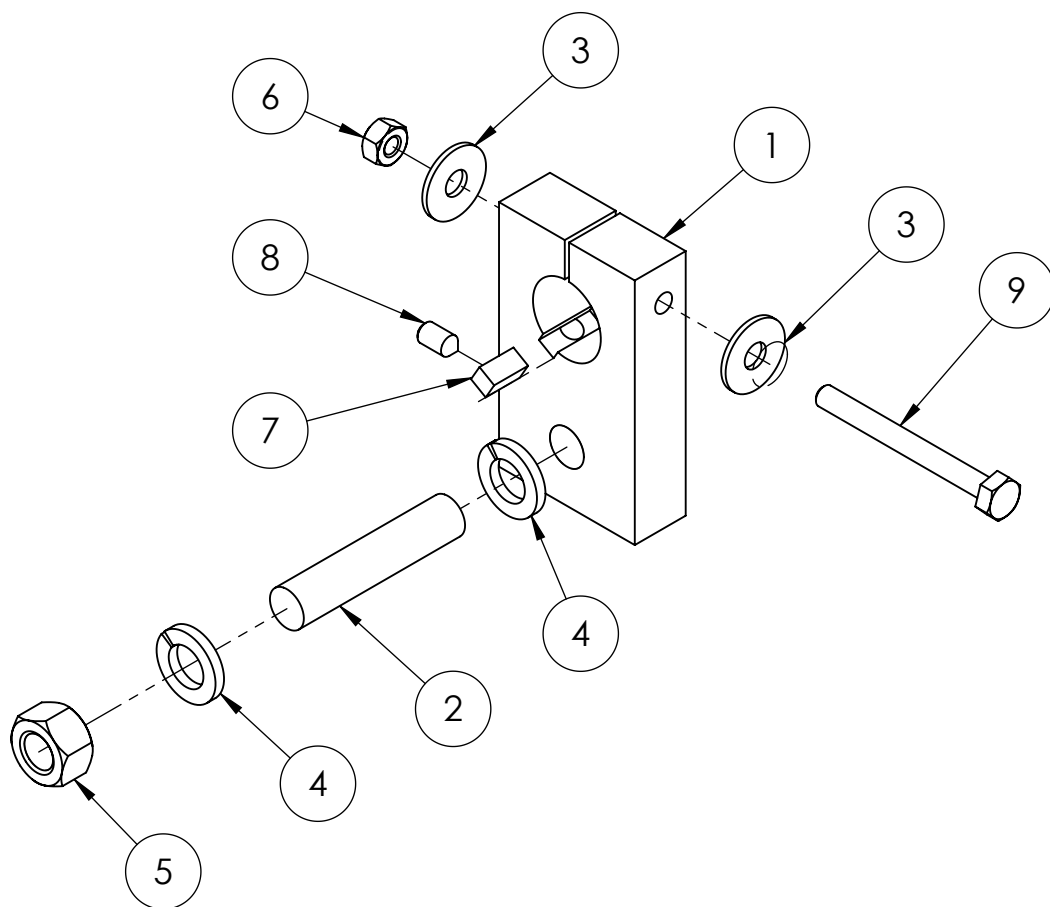
DBL Diaphragm Camblock Assembly

DIMENSION: INCHES / [ MM ]

SCALE: 1:5

SHEET 4 OF 11





ITEM NO.	PART NUMBER - DESCRIPTION	QTY.
1	D3032.000 - CAMBLOCK	1
2	B6025.500 - STUD FOR CAM BLOCK	1
3	B3014.025 - FLATWASHER .25" X .625" SS	2
4	B3028.500 - LOCK WASHER .5" SS	2
5	B2020.500 - LOCKNUT W/ NYL INSERT .5-13	1
6	B2020.025 - LOCKNUT W/NYL INST .25-20	1
7	D2001.XXX - CAM BLOCK KEY	1
8	B4003.250 - SET SCREW SHARP TIP .25 X 20 X .5	1
9	B1025.250 - HBOLT 0.2500-20x2.5x0.75-N	1

NOTES:  
CAMBLOCK ASSEMBLY  
DOUBLE DIAPHRAGM PUMPS

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TOLERANCES:  
FRACTIONAL  $\pm 1/32$   
ONE PLACE DECIMAL  $\pm .1$   
TWO PLACE DECIMAL  $\pm .03$   
THREE PLACE DECIMAL  $\pm .020$   
ANGULAR  $\pm .5^\circ$

MATERIAL

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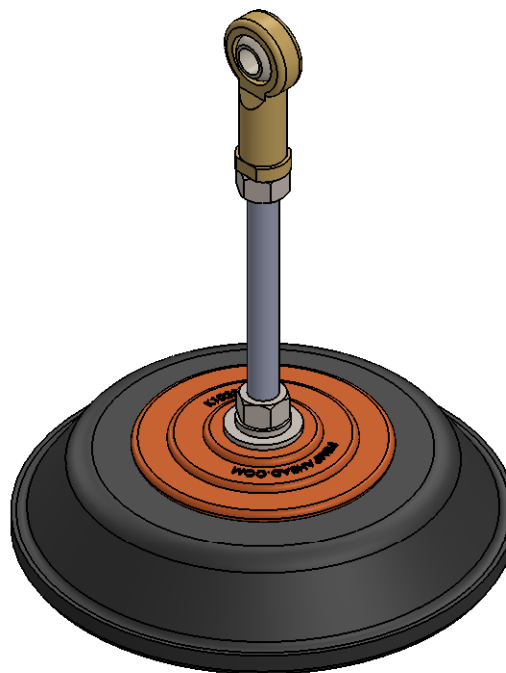
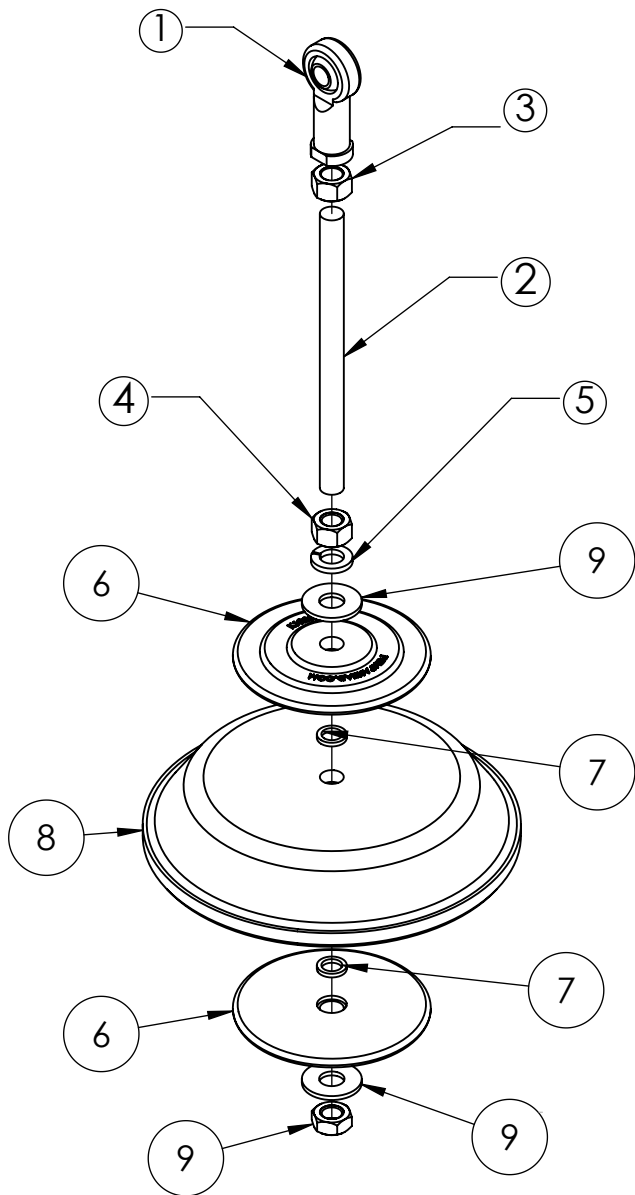
D3032.000 CAMBLOCK ASSEMBLY

DIMENSION: INCHES / (XX) MM

SCALE: 1:2

SHEET 5 OF 11





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

#### NOTES:

#### Available Diaphragms\*

V0022.000 - Neoprene

V0022.HYP - Hypalon

V0022.NIT - Nitrile (Buna-N)

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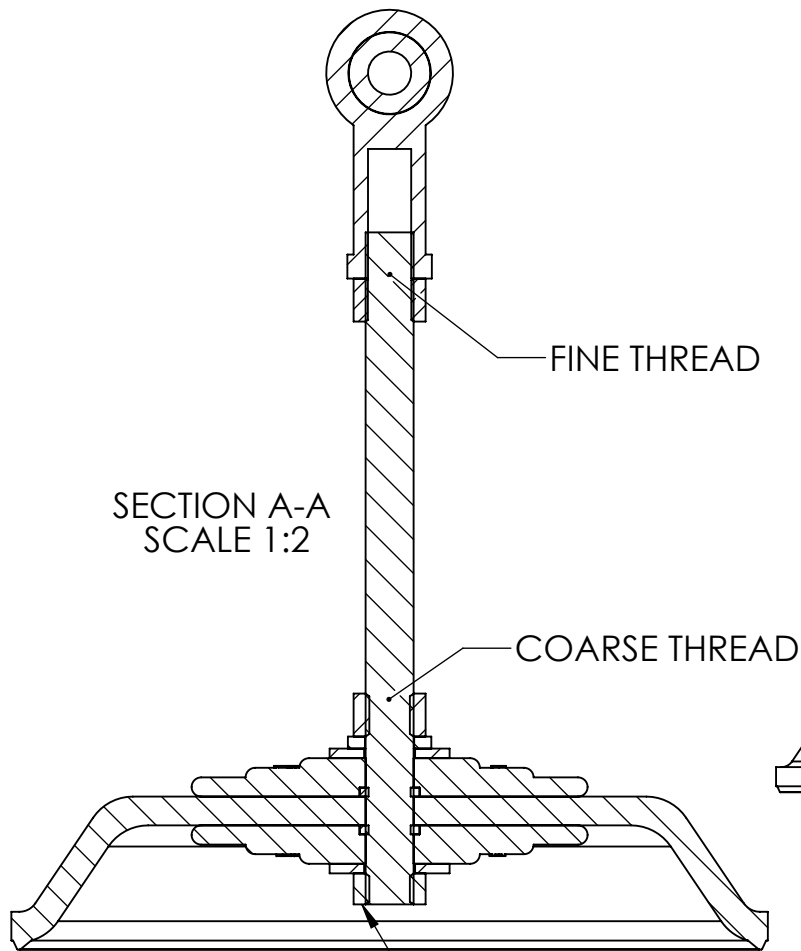
PART NUMBER - TITLE

DIAPHRAGM ROD ASSEMBLY  
EXPLODED VIEW

DIMENSION: INCHES / (XX) MM

SCALE: 1:4

SHEET 6 OF 11

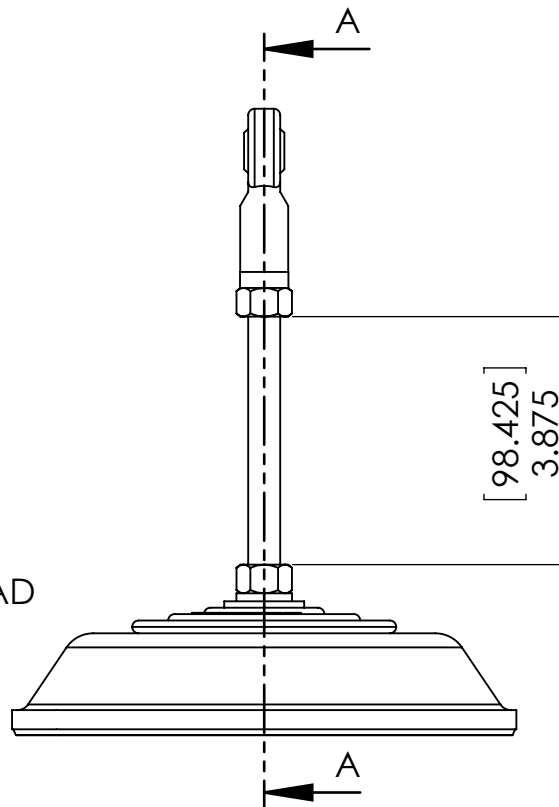


SECTION A-A  
SCALE 1:2

FINE THREAD

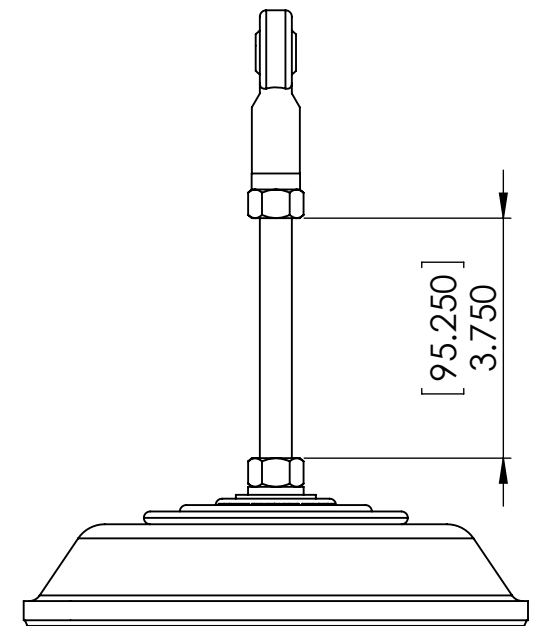
COARSE THREAD

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



**SINGLE DIAPHRAGM PUMP**

\* Excludes "Pumpmate" 90 Series.



**DOUBLE DIAPHRAGM PUMP**

**NOTES:**

**CRITICAL DIMENSION**

SINGLE DIAPHRAGM PUMP 3.875"  
DOUBLE DIAPHRAGM PUMP 3.75"

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ANGULAR  $\pm .5^\circ$

MATERIAL

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COMMENTS:		



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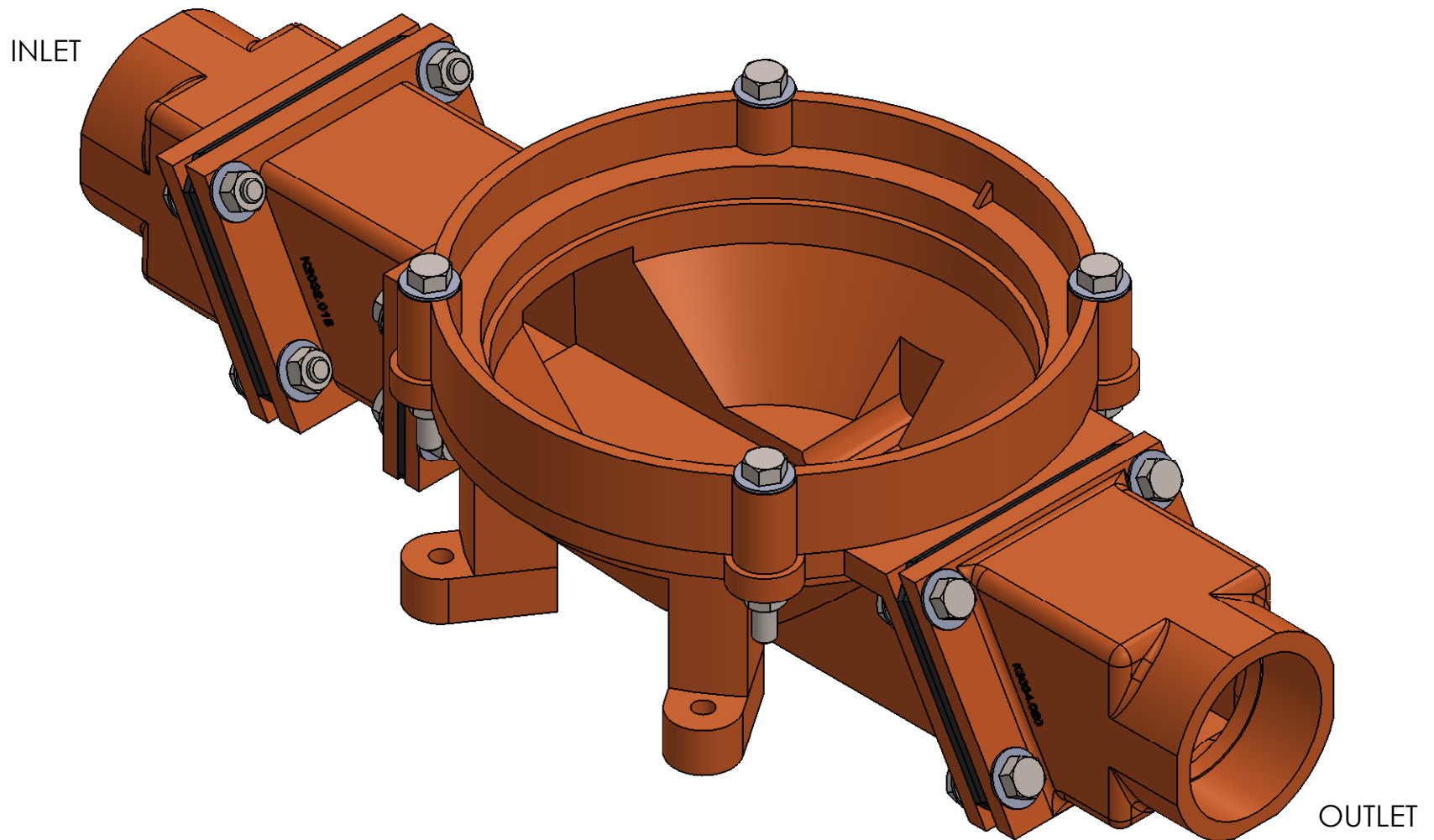
PART NUMBER - TITLE

DIAPHRAGM ROD ASSEMBLY  
CRITICAL DIMENSIONS

DIMENSION: INCHES / (XX) MM

SCALE: A

SHEET 7 OF 11



NOTES:  
STRAIGHT (2.0" X 2.0")

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ANGULAR  $\pm .5^\circ$

MATERIAL

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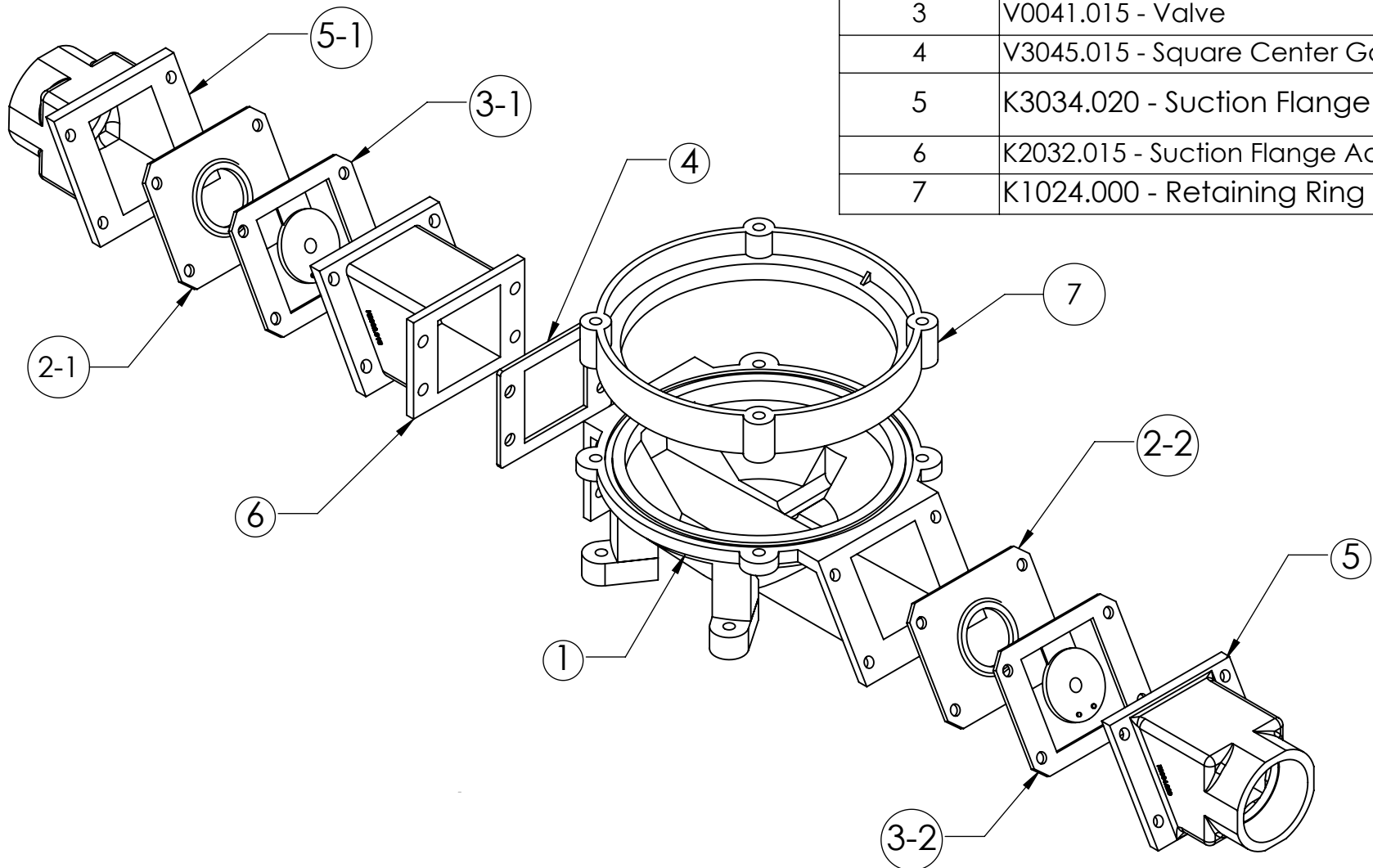
ABOWL #4 ASSEMBLY

DIMENSION: INCHES / (XX) MM

SCALE: 1:2

SHEET 8 OF 11

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



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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ANGULAR  $\pm .5^\circ$   
  
MATERIAL

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DATE: 10/27/2015		
COMMENTS:		



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PART NUMBER - TITLE
ABOWL #4 EXPLODED VIEW
DIMENSION: INCHES / (XX) MM
SCALE: 1:4

# Suction Valve Replacement

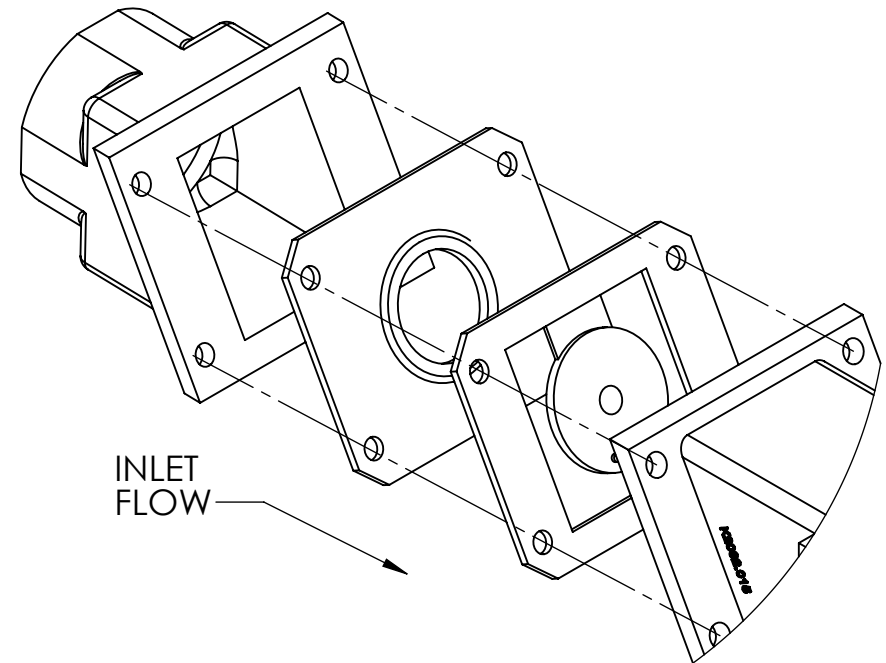
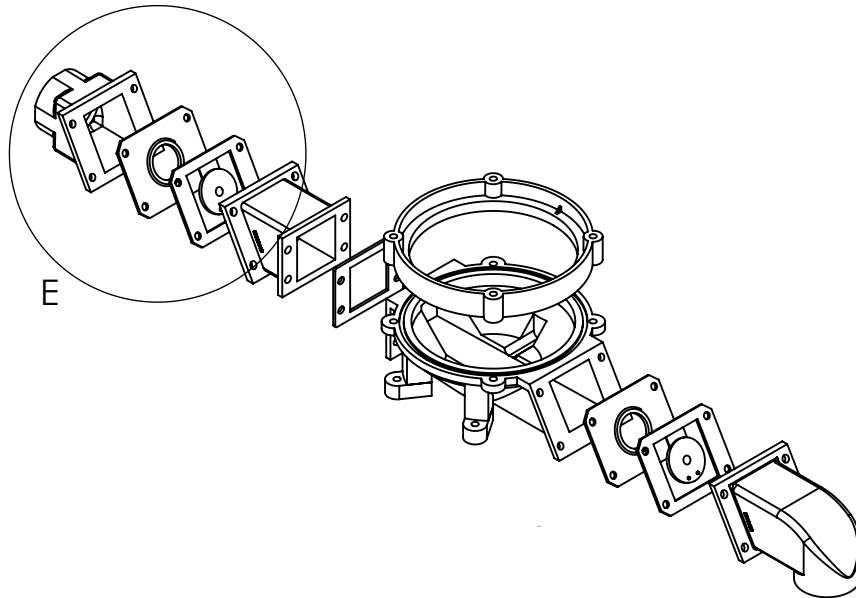
(Single / double diaphragm models)

## 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.



DETAIL E  
SCALE 1 : 2.5

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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### MATERIAL

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DATE: 10/27/2015		
COMMENTS:		

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PART NUMBER - TITLE

SUCTION VALVE REPLACEMENT

DIMENSION: INCHES / (XX) MM

SCALE: 3.5

SHEET 10 OF 11

# Discharge Valve Replacement

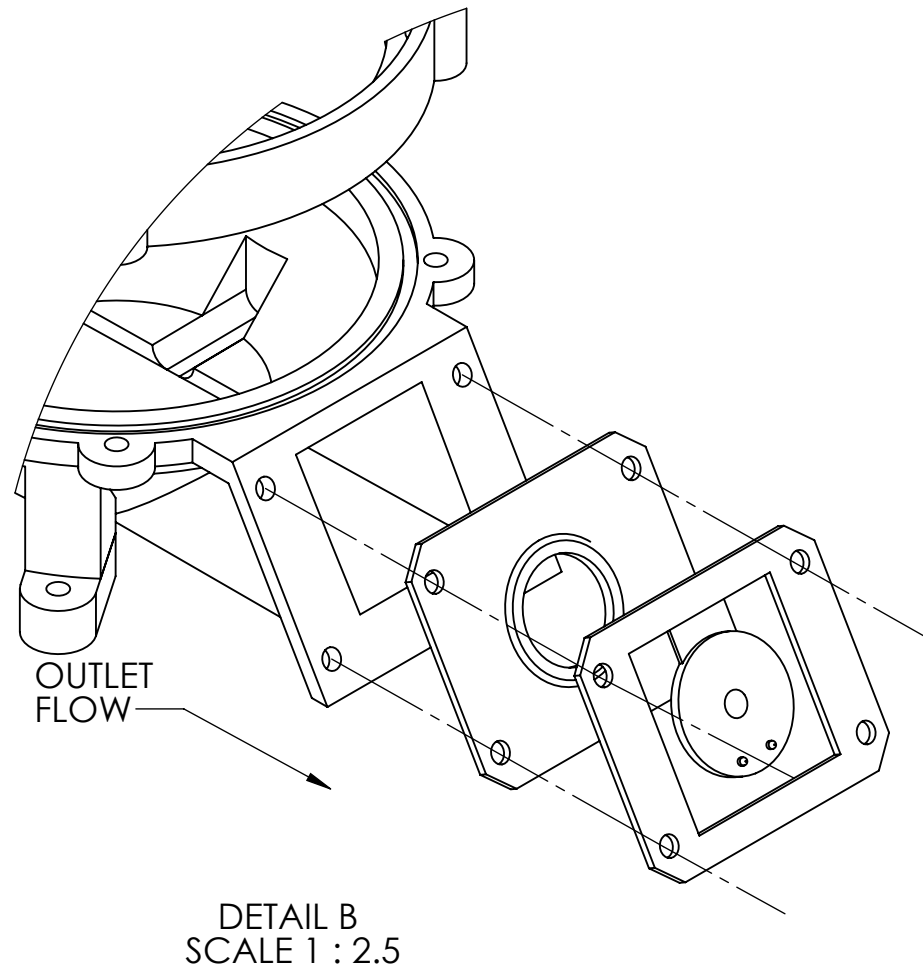
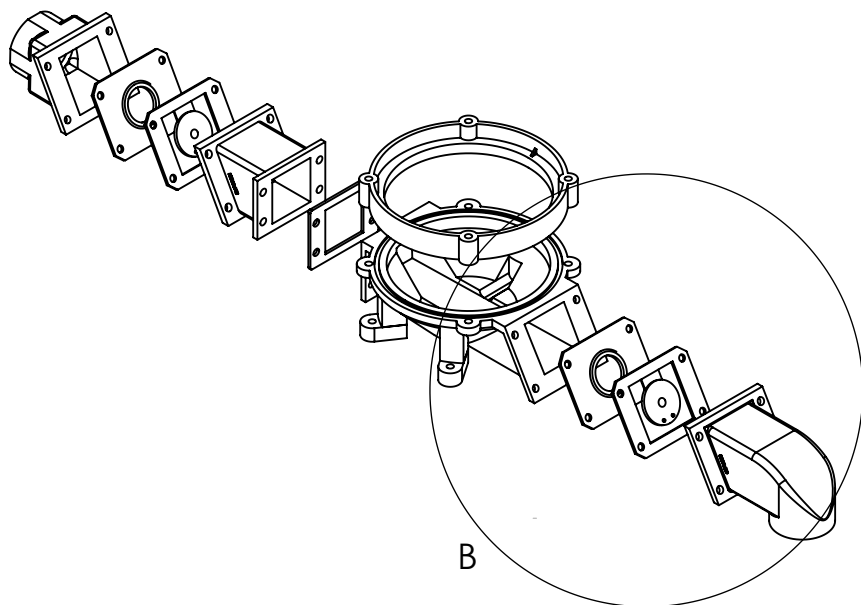
(Single / double diaphragm models)

## 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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COMMENTS:		

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PART NUMBER - TITLE		
DISCHARGE VALVE REPLACEMENT		
DIMENSION: INCHES / (XX) MM		
SCALE: 1:2.5		SHEET 11 OF 11