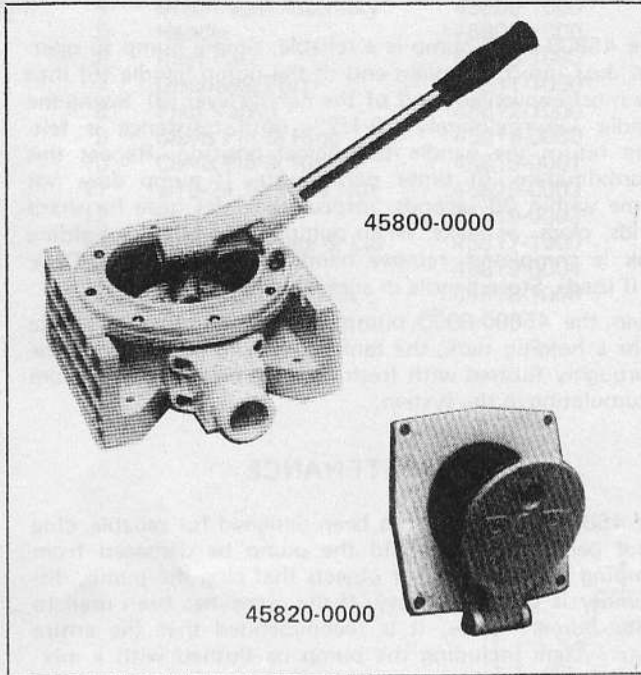


**PAR**

# Models 45800-0000 45820-0000



## APPLICATION

The PAR 45800-0000 HAND DIAPHRAGM PUMP is designed of high quality, corrosion resistant materials suitable for bilge water and waste holding tank evacuation. The high priming ability and large capacity of this pump evacuates a bilge or holding tank quickly and easily. This pump is not to be used for use in the transfer of flammable, highly acidic, or highly caustic liquids. Maximum recommended discharge head is 25 feet. Greater discharge head may distort discharge flapper valve.

## INSTALLATION

When selecting hoses, clamps, "Y" valves, deck fittings, etc. to complete your pump system installation, it is important to select only high quality items. The evacuation of bilge water or holding tank waste should be done only with high quality accessories. A failure of one of these systems could lead to an unpleasant, unhealthy environment on board.

In bilge evacuation systems, all hoses should be non-collapsible and oil resistant. All hose connections should be clamped with two stainless steel band type clamps per connection. Hoses should be routed to prevent sharp bends. Hull outlets should be located to prevent sea water from flowing into the pump system and flooding the boat.

In holding tank or human waste handling systems, hoses should be heavy wire-reinforced rubber construction. This type hose resists collapse and will prevent unpleasant sewage gases from permeating through the hose material into the boat interior. Ordinary vinyl or other plastic

## HAND DIAPHRAGM PUMP AND THRU-DECK MOUNTING

### FEATURES

#### 45800-0000 PUMP

- Large Capacity Design
- Corrosion Resistant Components
- Designed for Easy Installation
- Dual-Position Handle
- Self-Priming

#### 45820-0000 THRU-DECK KIT

- Splash Proof Lid
- Corrosion Resistant Materials
- Easy Installation

### SPECIFICATIONS

#### 45800-0000 PUMP

Ports: 1-1/2" (38mm) ID Hose

Materials: Body Components - White Celcon  
Diaphragm and Flap Valves - Nitrile  
Fasteners and Handle - 300 Series  
Stainless Steel

Mounting Fasteners: Four 1/4" (not included)

Capacity: 1 to 1-1/4 Quarts/Stroke  
(1 to 1-1/4 Litres/Stroke)

Weight: 4 lb (1,8 kg)

#### 45820-0000 THRU-DECK KIT

Materials: Body/Lid - White Celcon  
Boot - EPDM - Black

Mounting Fasteners: Six 1/4" (not included)

Weight: 1/2 lb (0,2 kg)

(vacuum type) hose will allow considerable quantities of sewage gas to escape. All hose connections should be clamped with two stainless steel band type clamps per connection. It is recommended that nylon type hose-to-thread and hose-to-hose fittings be used instead of the P V C (gray) type fittings. These P V C fittings have oversized hose barbs that will not properly fit the 1-1/2" ID reinforced hose that is recommended above.

The 45800-0000 HAND DIAPHRAGM PUMP has been designed to offer the installer a variety of ways of installation. All fasteners should be 1/4" diameter and made of corrosion resistant material. The pump can be mounted on a vertical or horizontal surface (see Diagrams 1 and 2). The 45800-000 pump can be mounted independently in an area that is readily accessible to the operator (Diagram 1), or mounted with the 45800-0000 Thru-Deck Kit behind bulkheads, etc. (Diagram 2).

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Select a location to mount the pump where there is adequate room to route the intake and discharge hoses and to allow full swing of the pump handle. The surface that the pump is to be mounted on must be flat to prevent damage to the pump when it is securely fastened. When selecting the location, be sure to allow adequate room to mount the through deck mounting kit assembly and the pump. Note that this pump may be used in emergency situations for long periods of time. The pump location should be selected to minimize operator fatigue and injury to hands and arms during operation. The bulkhead chosen must be between 3/8" and 3/4" thick.

The handle position may be changed after noting which direction the intake and discharge ports must be arranged to connect with the intake and discharge hoses. This may be accomplished by removing the eight machine screws (11) and rotating the handle and diaphragm assembly to appropriate position.

Position the mounting plate and lid (13) on the bulkhead chosen and mark the location for 4 mounting holes and the 3-3/4" diameter handle access hole. Remove the mounting plate. Drill the four holes with 9/32" diameter drill. Cut out 3-3/4" access hole.

Note that the two mounting screws located next to the lid hinge on the mounting plate also serve as two of the four mounting screws for the pump. The pump must be fastened securely by a total of four screws. Temporarily mount the Thru-Deck Kit and pump. Locate the two remaining fastener slots on the pump body and mark their location on the bulkhead. Remove the pump and Thru-Deck Kit and drill these two fastener holes using a 9/32" diameter drill.

Inspect and remove all sharp corners from the 3-3/4" diameter handle access hole to prevent abrasion of the Thru-Deck Kit boot (15) during use. Mount the Thru-Deck Kit and pump on the bulkhead using corrosion resistant fasteners. Be sure that the Thru-Deck Kit lid swings downward when it is opened by the operator. The Thru-Deck Kit boot (15) must fit inside the groove in the mounting plate and lid. To assure the installation is water resistant, fit the boot over the neck of the lever-handle (3) (see diagram 2). Attach intake and discharge hoses. The use of two, stainless steel, hand-type clamps per connection is recommended.

#### **INSTALLATION WITHOUT 45820-0000 THRU-DECK KIT**

Select a location to mount the pump where there is adequate room to run the intake and discharge hoses and to allow full swing of the pump handle. The pump must be mounted on a flat surface to prevent damage to the pump when it is securely fastened. When selecting the location, the installer has the option of orienting the diaphragm ring (2), diaphragm (4), and handle lever (3) assembly in eight different positions relative to the pump body. This is done by removing the eight #10 machine screws and nuts (11), rotating the diaphragm assembly (2), (3), (4) to the desired position and reassembling the eight #10 screws and nuts (tighten evenly). In addition, the handle (5) may be inserted into the handle lever (3) in two different positions (see dimensional drawings).

After a flat surface is prepared and the pump handle is oriented as needed, mount the pump with four 1/4" corrosion resistant fasteners inserted through the four mounting slots located on each side of the pump, or the four holes located in the bottom of the pump body. Route the hoses to prevent sharp bends and fasten to the pump with two stainless steel hand-type clamps. Store handle in accessible location.

#### **OPERATION**

The 45800-0000 pump is a reliable, simple pump to operate. Just insert the plain end of the pump handle (5) into the most convenient end of the handle lever (3). Swing the handle (approximately 10-1/2") until resistance is felt, then return the handle to original position. Repeat this approximately 30 times per minute. If pump does not prime within 30 seconds, inspect the inlet hose for sharp bends, clogs or leaks. When pumping the bilge or holding tank is completed, remove handle (and close Thru-Deck lid if used). Store handle in accessible location.

When the 45800-0000 pump is used for pumping waste from a holding tank, the tank, hoses and pump should be thoroughly flushed with fresh water to prevent sludge from accumulating in the system.

#### **MAINTENANCE**

The 45800-0000 pump has been designed for reliable, clog proof performance. Should the pump be damaged from pumping sharp objects or objects that clog the pump, disassembly is quick and easy. If the pump has been used to pump human waste, it is recommended that the entire waste system including the pump be flushed with a mixture of water and bactericide. Handling of pump components should be done with rubber gloves. Be sure to disinfect anything that comes in contact with holding tank liquids.

#### **DIAPHRAGM REPLACEMENT**

To remove the diaphragm assembly (4), remove the clevis pin and split ring (10) from diaphragm assembly. Remove the eight #10 machine screws and nuts (11) from the diaphragm ring (2) and the body (1). Lift the diaphragm ring (2) and handle lever (3) from pump and diaphragm assembly. Remove the diaphragm assembly (4) (note that the complete assembly must be replaced — see Parts List).

While pump is disassembled inspect the flap valves (8) for damage or clogging. Place the new diaphragm assembly into place by placing diaphragm bead into the groove designed into the pump body (1). Replace the diaphragm ring (2) and handle-lever (3) on the pump body. Replace the eight #10 screws and nuts (11) (tighten evenly). Replace the clevis pin and split ring.

#### **FLAP VALVE REPLACEMENT**

Loosen and remove the eight inlet and discharge port screws (12). Remove the inlet and discharge ports (6) (7). Be careful to note the manner in which the flap valves are assembled to the pump body. Remove old flap valves and assemble new flap valves. Replace ports and eight screws. Do not over tighten the port screws.

To winterize the pump, thoroughly flush the system with clean water. Flush system again with clean water and ethylene glycol mixture.

## PARTS LIST

KEY	DESCRIPTION	PART NUMBER	QTY
1	Body	45803-1000	1
2	Diaphragm Ring	45804-1000	1
3	Handle Lever	45805-1000	1
4	Diaphragm Assembly	45806-1000	1
5	Handle	45809-1000	1
6	Inlet Port	45810-1000	1
7	Discharge Port	45811-1000	1
8	Flap Valves	45812-1000	2
9	Clevis Pin & Ring	45819-0000	1
10	Clevis Pin & Ring	45819-0001	1
11	#10-24 Screw & Nut	45819-0002	8
12	Port Screws	45819-0003	8
13	Mounting Plate & Lid	45817-1000	1
14	Lid C-Ring	45819-0004	1
15	Mounting Kit Boot	45818-1000	1

