

HP SERIES HAND DIAPHRAGM PUMP

ABI
irrigation

70 Grady Knight Industrial Court
Villa Rica, Georgia 30180
770-459-4401
www.abi-irrigation@att.net

HP700

HP900



DIMENSIONS

14" x 9" x 4½" (Unit, Without Handle)
Shipping Wt. - Approx. 16 lbs



DIMENSIONS

17¾" x 11⅝" x 4⅝" (Unit, Without Handle)
Shipping Wt. - Approx. 23 lbs

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THE **HAND DIAPHRAGM PUMP** is a single-chamber air and liquid pump. The chamber has 2 opening flapper valves for suction and discharge. The diaphragm is actuated by the fulcrum handle bracket, air and/or liquid is pulled into the chamber through the suction valve and expelled through the discharge valve.

VOLUME PER STROKE: HP700 - approx. ½ Gallon
HP900 - approx. 1 Gallon

FEATURES:

- Lightweight, durable and portable
- Ideal for priming pumps or as portable pump
- Large inlets allow transfer of many types of liquids
- Upon request, unit can be provided with a wooden base to optimize stability for tough primes
- Easily delivers up to 30 GPM
- Maximum leverage design facilitates easier pumping

INSTALLATION & OPERATION:

1. Insert handle into fulcrum, making sure that fulcrum and handle holes align before inserting the fulcrum pin.
2. Place pump on a solid foundation that is as close as possible to the fluid that is going to be pumped. (*This positioning should make the suction line as short and direct as possible.*)
3. Attach suction pipes to the suction inlet and to the discharge outlet.
4. Suction line must be sloped upward in order to provide continual feed into the pump.





























SAFETY & RECOMMENDATIONS:

- For longer lasting diaphragms and valves, flush the pump with several gallons of water after each use.
- Replace the diaphragms and valves that show signs of water, cracking or corrosion.

TROUBLESHOOTING:

If you cannot get the HP to prime, try one of the following:

- Make sure there is no debris left inside where the valves are. Any debris can cause clogging, or prevent the valve from sealing properly.
- Inspect the diaphragm for any tears or cracks.
- Check the line for any blockage or loops. The line must be straight and not twisted in any way.
- Check any strainers for blockage.
- Check all sections of the suction line for air leaks.
- If the eyebolt assembly becomes loose from the diaphragm assembly:
 1. Remove the bolts which connect the retainer ring and pump body so that the diaphragm assembly can be removed.
 2. Remove the diaphragm assembly and tighten the jam nut located on the underside of the diaphragm assembly until the bottom jam nut is even with the bottom of the eyebolt.
 3. Re-assemble the pump by reversing the dis-assembling process. **When re-assembling the pump, have the pump's discharge side to your left, and make sure that the opening of the eyebolt is facing you.*

		HP700		HP900	DESCRIPTION
1	H0701		H0901		Pump Body
3	H0703		H0903		Retainer Ring
4	H0704		H0904		Fulcrum
<i>H0704 & H0904 Includes:</i>			D0347A		Clevis Pin Assembly
			X0D01		Thumb Screw
5	H0705		H0905		Suction Flange
6	H0706		H0906		Discharge Flange
7	H0707C		H0907C		Diaphragm (Neoprene Diaphragm available upon request.)
8	H0709		H0709		Diaphragm Plate (2 Req.)
9	H0710		H0910		Discharge Valve
10	H0714		H0910		Suction Valve
11	H0902		H0902		Fulcrum Pin Assembly
12	H0912		H0912		Handle w/ Grip Assembly
<i>H0904 Includes:</i>			H0712		Grip
			H0911		Handle Pipe
13	X0019		X0019		Eyebolt Assembly

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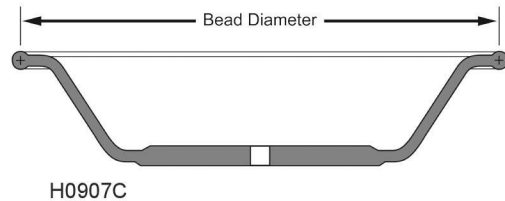
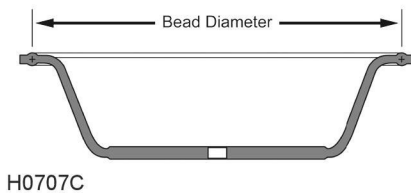
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REPAIR KITS		
HP7RK	HP9RK	DESCRIPTION
H0707C	H0907C	Diaphragm
H0709	H0709	Diaphragm Plate (2 Req.)
H0710	H0910 (2 Req.)	Discharge Valve (Also Suction Valve for HP900)
H0714		Suction Valve (HP700/HP7RK Only)
H0902	H0902	Fulcrum Pin
D0347A	D0347A	Clevis Pin Assembly
X0019	X0019	Eyebolt w/ Nuts
X0D11	X0D11	3/8-16 Jam Nut (2 Req.)
X0H21	X0H21	5/16-18" x 2" Hex Head Bolt (4 Req.)
X0H31	X0H31	5/16-18" x 1" Hex Head Bolt (8 Req.)
X0H41	X0H41	5/16-18" Nut (4 Req.)

DIAPHRAGM ASSEMBLY - #H0707 & H0907		
PART#	DESCRIPTION	
H0707C/ H0907C	Diaphragm	
H0709	Diaphragm Plate (2 Req.)	
X0019	Eyebolt w/ Nuts	

*Neoprene Diaphragms for the HP700 are available upon request under the part# **H0707C NEO** (See page 17).



DIAPHRAGM DIMENSIONS					
PART#	USED IN	BEAD DIA	OUTSIDE DIA	HEIGHT	ADD'L MARKINGS
H0707C	HP700	7 1/2" (7.5)	8" (8.00)	2 3/32" (2.09)	H0707C
H0907C	HP900	9 1/2" (9.5)	9 27/32" (9.84)	2 5/32" (2.16)	None

PRIMER CAPACITY CHART					
MODEL#	INLET/ OUTLET	CAPACITY	MAXIMUM SUCTION LIFT	MAXIMUM DISCHARGE HEAD	APPROX. NET WEIGHT
HP700	1-1/2" NPT	1/2 gal./Stroke	20 ft.	10 ft.	15 lbs.
HP900	2" NPT	1 gal./Stroke	15 ft.	10 ft.	18 lbs.