

# DP SERIES HAND DIAPHRAGM PRIMER

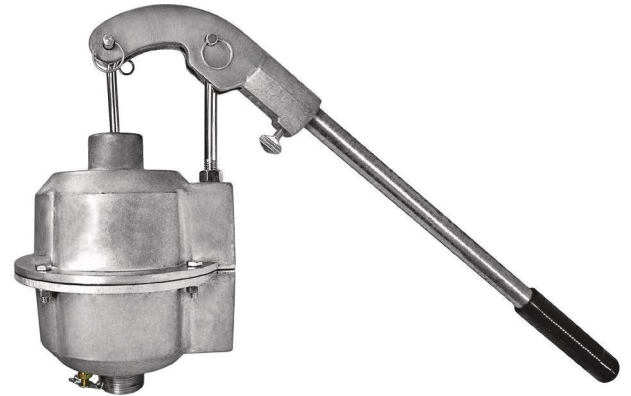
**ABI**  
irrigation

70 Grady Knight Industrial Court  
Villa Rica, Georgia 30180  
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DP5

### DIMENSIONS

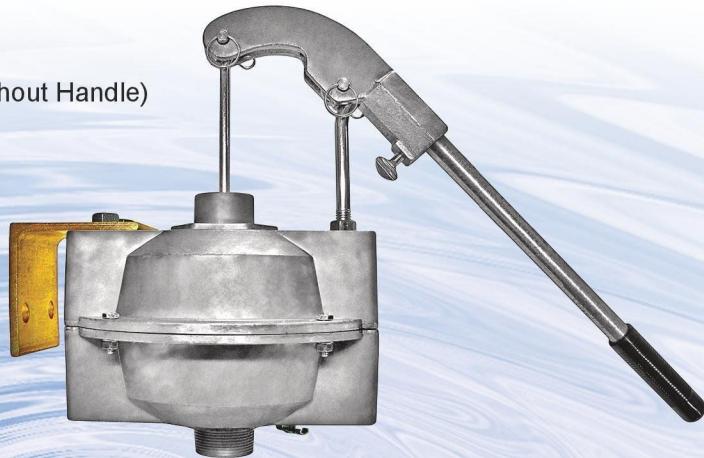
7" x 7" x 13" (Unit, Without Handle)  
ID: ¾ NPT  
OD: 1-¼ NPT  
Shipping Wt. - Approx. 12 lbs



DP7

### DIMENSIONS

10<sup>7</sup>/<sub>8</sub>" x 9<sup>5</sup>/<sub>16</sub>" x 12<sup>1</sup>/<sub>4</sub>" (Unit, Without Handle)  
ID: ¾ NPT  
OD: 1-½ NPT  
Shipping Wt. - Approx. 21 lbs



DP9

### DIMENSIONS

10<sup>1</sup>/<sub>2</sub>" x 11<sup>7</sup>/<sub>16</sub>" x 12<sup>1</sup>/<sub>2</sub>" (Unit, Without Handle)  
ID: ¾ NPT  
OD: 1-½ NPT  
Shipping Wt. - Approx. 19 lbs



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The **HAND DIAPHRAGM PRIMER** is an air pump that creates vacuum in a centrifugal pump priming line and pulls water up into the pump to prime it. The Diaphragm Primer has a flapper check valve in the diaphragm and a disk check valve at the bottom of the unit. Air flows through the bottom check valve on the diaphragm up stroke then through the diaphragm valve on the down stroke. Diaphragm is actuated through a connecting rod eyebolt attached to a fulcrum handle bracket.

## **FEATURES:**

- Lightweight aluminum alloy body
- Easily mounted on most centrifugal pumps
- Tough and durable rubber diaphragm
- Units have a drain valve

## **INSTALLATION & OPERATION:**

1. Attach mounting bracket to centrifugal pump or skid.
2. Use non-collapsible hose or flexible tubing to connect primer suction inlet to pump.
3. Install cut-off valve between the primer suction inlet and pump.
4. Close cut-off valve immediately after priming.
5. Make sure primer drain valve is closed.
6. A cut-off valve should be used at the pump discharge to prevent air from being drawn through the discharge line while priming.




































## **MAINTENANCE:**

- Remove any debris under the diaphragm after each use.
- Clear all fluids from inside the unit after each use.


## **TROUBLESHOOTING:**

If the Diaphragm Primer is not priming the pump, check the following:

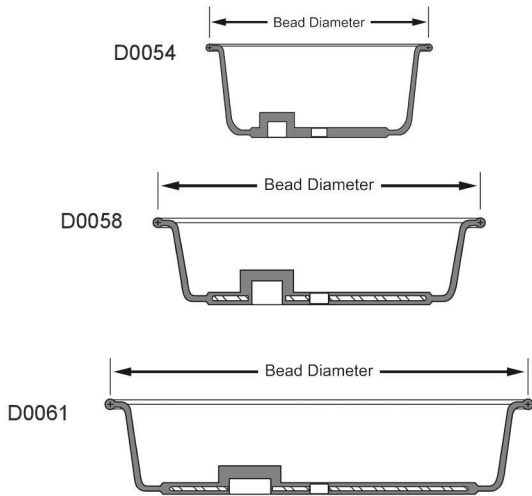
- Make sure drain valve is closed.
- Inspect check valve for blockage and free movement. Any debris can cause clogging, or prevent the valve from sealing properly.
- Connecting hoses should be straight and clear of debris.
- Check suction side for air leaks.
- Call Protek Technical Support for additional help.

	DP5		DP7		DP9	PARTS	
1	D0055		D0087		D0062		Lower Housing
2	D0056		D0088		D0063		Upper Housing
3	D0054 old part#: B183		D0058 old part#: C-106		D0061 old part#: B61		Diaphragm
4					D0003		1-1/2" Locknut
5	D0004		D0004		D0004		Check Valve
6	D0050		D0050		D0051		Fulcrum Eyebolt
7	D0093		D0093		D0093		Handle Bracket
<i>D0093 Includes:</i>					D0347A		Clevis Pin Assembly (2 Req.)
					X0D01		Thumb Screw
8	D0095		D0095		D0095		Handle w/ Grip Assembly
<i>D0095 Includes:</i>					D0094		Grip
					D0094-5		Handle Pipe
9			D0107		D0104		Mounting Bracket
10	D0127-A		D0127-A		D0127-A		Connecting Rod Assembly
11	D0303						Diaphragm Plate (2 Req.)
12	D0340		D0340		D0340		Drain Valve

HANDLE w/ BRACKET ASSEMBLY - #D0047	
PART#	DESCRIPTION
D0093	Handle Bracket *Includes: 2 Fast Pins (Part# D0347A) Thumb Screw (Part# X0D01)
D0095	Handle w/ Grip Assembly *Includes: Handle Pipe (Part# D0094-5) Handle Grip (Part# D0094)



PRIMER SELECTION CHART	
PRIMER	PIPE SIZE
DP5	2", 3", 4"
DP7	4", 5", 6"
DP9	6", 8", or Larger



REPAIR KITS - D05RK, D07RK, & D09RK	
PART#	DESCRIPTION
D0004	Check Valve (Disk)
D0054, D0058, D0061	Diaphragm
D0303 (DP5 Only)	Diaphragm Plate (2 Req.)
D0340	Drain Valve
X0D04	1/4-20 x 1" Bolt (4 Req.)
X0D10	3/8" Flat Washer (2 Req.)
X0D11	Jam Nut (2 Req.)
X0D12	1/4 Self Locking Nut (4 Req.)

DIAPHRAGM DIMENSIONS					
PART#	USED IN	BEAD DIA	OUTSIDE DIA	HEIGHT	ADD'L MARKINGS
D0054	DP5	5 29/64" (5.45)	5 39/64" (5.61)	2 17/64" (2.27)	B-183
D0058	DP7	7 1/2" (7.5)	7 3/4" (7.75)	1 31/32" (1.97)	C-106
D0061	DP9	9 19/32" (9.59)	9 27/32" (9.84)	1 7/16" (1.44)	B-61

PRIMER CAPACITY CHART									
	# of Strokes to Prime Through 25' of 4" Suction			# of Strokes to Prime Through 25' of 6" Suction			# of Strokes to Prime Through 25' of 8" Suction		
PRIMER	5" HG	10" HG	15" HG	5" HG	10" HG	15" HG	5" HG	10" HG	15" HG
DP5	10	27	55						
DP7	6	15	32	12	33	65			
DP9	4	9	20	10	23	45	17	37	77

\* Hg = Inches of Mercury