




Product	Description	Part Number	Weight	List Price
JUMBO SCREEN - SINGLE 	With slide:	Height x Width		
		6" 18" x 13 5/8"	8-0750	17.0 349.00
		8" 18" x 13 5/8"	8-0751	18.0 349.00
	10" 18" x 13 5/8"	8-0752	18.5 349.00	
	Without slide:	6" 18" x 13 5/8"	8-0760	14.5 295.00
		8" 18" x 13 5/8"	8-0761	14.0 295.00
10" 18" x 13 5/8"		8-0762	13.5 295.00	


-1/4" Standard Round Holes (also available in 1/8", 1/2", 3/4" or 1" @ additional cost)
 -.080 Standard Wall Thickness (also available in .125) @ additional cost
 -Easily and quickly attaches to the end of the aluminum suction pipe by drilling three holes in the tubing and inserting bolts.

JUMBO SCREEN - DOUBLE 	With slide:	Height x Width		
		6" 36" x 13 5/8"	8-0770	38.0 570.00
		8" 36" x 13 5/8"	8-0771	38.0 570.00
	10" 36" x 13 5/8"	8-0772	40.0 570.00	
	Without slide:	6" 36" x 13 5/8"	8-0780	21.5 460.00
		8" 36" x 13 5/8"	8-0781	21.0 460.00
10" 36" x 13 5/8"		8-0782	21.0 460.00	

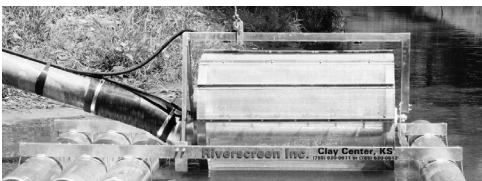
-1/4" Standard Round Holes (also available in 1/8", 1/2", 3/4" or 1" @ additional cost)
 -.080 Standard Wall Thickness (also available in .125) @ additional cost
 -Easily and quickly attaches to the end of the aluminum suction pipe by drilling three holes in the tubing and inserting bolts.

LIQUID MANURE SCREEN 	4" 18"long x 14"wide	6-8095	17.0	365.00
	6" 18"long x 14"wide	6-8096	17.0	365.00
	8" 36"long x 14"wide	6-8097	25.0	465.00

-* 1" holes, .125" thick screen w/corrosion resistant alloy and stainless steel bolts & nuts.
 -Easily and quickly attaches to the end of the aluminum suction pipe by drilling three holes in the tubing and inserting bolts.

SELF-CLEANING SCREEN (PERFECTION) 		Hole Size	Ship		
				Flow Rate	Part Number
2"	50 gpm	.093	UPS	9-7623	4.0 227.00
3"	160 gpm	.093	UPS	9-7624	15.0 456.00
4"	325 gpm	.093	UPS	8-0785	13.0 525.00
6"	625 gpm	.093	UPS	8-0786	25.0 1,145.00
8"	1150 gpm	.093	UPS	8-0787	34.0 1,430.00
10"	1500 gpm	.093	UPS	8-0788	55.0 1,980.00
10" BB	1900 gpm	.093	CC	9-7625	65.0 2,335.00
10" XL	2500 gpm	.093	CC	9-7626	90.0 2,645.00
12" XL	2500 gpm	.093	CC	9-7627	90.0 2,736.00


IMPORTANT: A partially closed gate valve on the discharge side of pump is required to provide adequate working pressure to the strainer while filling the irrigation line.

SELF-CLEANING SCREEN (RIVERSCREEN) 		Hole Size	Ship		
				Flow Rate	Part Number
4"	4' pontoon	.097	CC	9-5428	200.0 2,250.00
6"	6' pontoon	.097	CC	9-5429	225.0 3,000.00
8"	8' pontoon	.097	CC	9-5430	250.0 3,250.00
10"	10' pontoon	.097	CC	9-5431	275.0 3,500.00
12"	10' pontoon	.097	CC	9-5438	240.0 4,000.00
	Power Drive		UPS	9-5432	200.00
	Foot Valve			9-6849	525.00

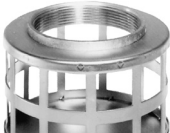
Floating screen. Requires only 4" of water. Must have current to operate, otherwise order the optional power drive.
 8 mesh (.097") stainless steel screen. All SS Screws & Bolts

Pumps & Accessories


FOOT VALVE PARTS


Product	Description	Part Number	Weight	List Price
ROUND HOLE SCREEN 	1-1/2"	6-9590		18.00
	2"	6-9591		20.00
	2-1/2"	6-9592		22.00
	3"	6-9593	2.7	29.00
	4"	6-9594		38.00
	6"	6-9595		81.00
	8"	6-9596	9.6	127.00


-Female pipe thread connection.


Product	Description	Part Number	Weight	List Price
SQUARE HOLE SCREEN 	1-1/2"	6-9597		23.00
	2"	6-9598		29.00
	2-1/2"	6-9599		36.00
	3"	6-9600		43.00
	4"	6-9601		45.00
	6"	6-9602	6.1	93.00

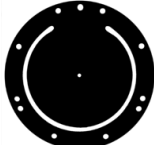
-Female pipe thread connection.


Product	Description	Part Number	Weight	List Price
SUCTION FLANGE (CAST ALUMINUM) 	4"	8-0818		16.00
	6"	8-0819	1.3	27.00
	8"	8-0820	1.6	43.00
	10"	8-0821	2.4	63.00

Product	Description	Part Number	Weight	List Price
RING GASKET 	4"	6-6484		3.00
	6"	6-6486		4.30
	8"	6-6488		11.50
	10"	6-6480		16.00


Product	Description	Part Number	Weight	List Price
STANDARD FV BODY (CAST ALUMINUM) 	4" x 45°	8-0824		126.00
	6" x 45°	8-0825		195.00
	8" x 45°	8-0826		305.00
	10" x 45°	8-0827		495.00

Product	Description	Part Number	Weight	List Price
VALVE FLAPPER COVER 	4"	8-0828	0.8	8.50
	6"	8-0829		12.50
	8"	8-0830	3.0	22.00
	10"	8-0831		36.00


Product	Description	Part Number	Weight	List Price	
VALVE FLAPPER/GASKET 	Rubber	2"	8-0713	10.50	
		3"	8-0714	0.2	14.50
		4"	8-0715	0.3	17.00
		5"	8-0716	0.3	20.00
		6"	8-0717	0.6	34.00
		8"	8-0718		53.00
		10"	8-0725	1.5	108.00





Product	Description	Part Number	Weight	List Price
VALVE FLAPPER WEIGHT 	4"	8-0832	0.2	5.00
	6"	8-0833		9.00
	8"	8-0834		12.50
	10"	8-0835		22.00

Product	Description	Part Number	Weight	List Price
VALVE SEAT RING (CAST ALUMINUM) 	4"	8-0837	3.5	29.00
	6"	8-0838		52.00
	8"	8-0839		58.00
	10"	8-0840		102.00

Product	Description	Part Number	Weight	List Price
FOOT VALVE SCREEN 	6-1/2" high x 7-1/4" wide 4"	8-0842	1.5	15.50
	8-3/8" high x 9-1/4" wide 6"	8-0843		25.00
	13-1/2" high x 11-1/4" wide 8"	8-0844		48.00
	21" high x 13-5/8" wide 10"	8-0845		70.00

1/4" Standard Round Holes (also available in 1/8", 1/2", 3/4" or 1")
0.050 Standard Wall Thickness (also available in .080)

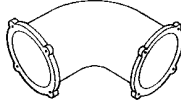



Product	Description	Part Number	Weight	List Price
BOTTOM DISC (CAST ALUMINUM) 	4"	8-0846	1.4	23.00
	6"	8-0847		46.00
	8"	8-0848		55.00
	10"	8-0849		97.00

Product	Description	Part Number	Weight	List Price
BOLT/NUT/WASHER 	Screen Bolt/Nut 4" (3 req.) 1/4"x8"	8-0850		2.50
	6" (3 req.) 1/4"x10"	8-0851		3.00
	8" (3 req.) 1/4"x15-3/8"	8-0852		3.50
	10" (4 req.) 1/4"x22-7/8"	8-0853		5.00
	Flange 2"-8" (4 req.) 5/16"x2-1/4"	8-0822		1.50
	10" (4 req.) 5/16"x2-1/2"	8-0823		1.70
	Seat Body Bolt/Nut 4" (5 req.) 1/4"x1-1/2"	8-0841		1.00
	6" (8 req.) 1/4"x1-1/2"	8-0841		1.00
	8" (11 req.) 1/4"x1-1/2"	8-0841		1.00
	10" (12 req.) 1/4"x1-1/2"	8-0841		1.00
	Cover Weight 1/4"x3/4"	8-0836		1.00

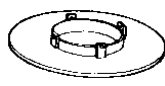


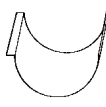
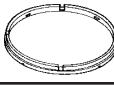

Pumps & Accessories

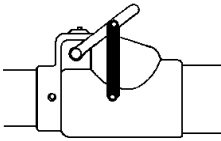
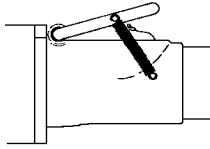
SUCTION FITTINGS & PARTS



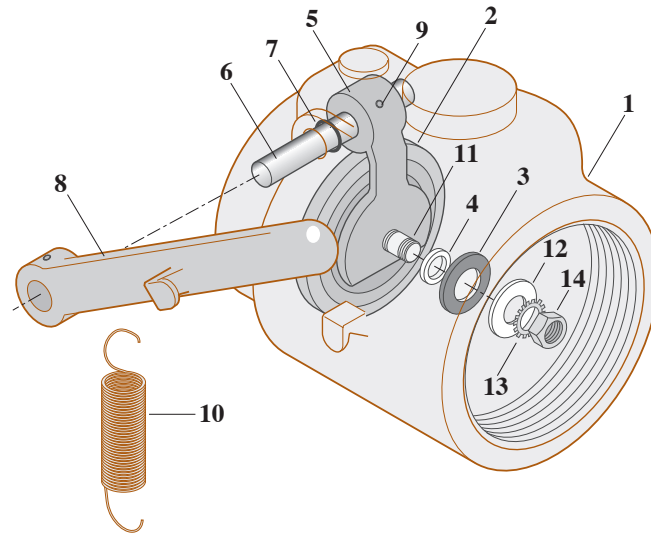
Product	Description	Part Number	Weight	List Price	
ELBOW PARTS					
ELBOW (CAST ALUMINUM)		4"x 90°		8-0810	115.00
		6"x 90°		8-0811	168.00
		8"x 90°		8-0812	249.00
		10" x 90°		8-0813	425.00
		4" x 45°		8-0814	100.00
		6" x 45°		8-0815	160.00
		8" x 45°		8-0816	329.00
	10" x 45°		8-0817	400.00	
FLANGE					
FLANGE (CAST ALUMINUM)		4"		8-0818	16.00
		6"	1.3	8-0819	27.00
		8"	1.6	8-0820	43.00
		10"	2.4	8-0821	63.00
RING GASKET					
		4"		6-6484	3.00
		6"		6-6486	4.30
		8"		6-6488	11.50
		10"		6-6480	16.00
FLANGE BOLT/NUT/WASHER					
		For 4", 6", 8" (4 req)	5/16"x2-1/4"	8-0822	1.50
		For 10" (4 req.)	5/16"x2-1/2"	8-0823	1.70

INTAKE STRAINER PARTS					
	Ring Casting	6"		8-0736	28.00
		8"		8-0737	47.00
		10"		8-0738	52.00
	Bottom Disc Casting	6"		8-0739	23.00
		8"		8-0740	46.00
		10"		8-0741	55.00
	Strainer Screen	6"	10-5/8" h x 7-1/4" w	8-0742	24.00
		8"	16-1/2" h x 9-1/4" w	8-0743	1.5 36.00
		10"	23" h x 11-1/2" w	8-0744	2.5 81.00
	Strainer Bolt & Nut	6"	12" long	8-0745	3.50
		8"	18" long	8-0746	4.00
		10"	25-1/4" long	8-0747	5.00
	Slide	6"		8-0748	22.00
		8"		8-0749	38.00
		10"		8-0753	66.00
	Ring Bolt			8-0754	0.1 1.00

JUMBO STRAINER PARTS					
JUMBO STRAINER RING		4"		8-0859	117.00
		6"		8-0860	117.00
		8"		8-0861	117.00
		10"		8-0862	117.00
JUMBO STRAINER SCREEN		18" h x 13-5/8" wide		8-0854	96.00
JUMBO BOTTOM DISC				8-0858	97.00
JUMBO SLIDE		For Single Jumbo Strainer		8-0855	4.3 55.00
		For Double Jumbo Strainer		8-0856	108.00
JUMBO D-RING				8-0863	2.4 102.00
JUMBO STRAINER BOLT		4 required 1/4" x 19-3/8" long		8-0857	5.00

Product	Description	Part Number	Weight	List Price	
DISCHARGE PRIMING VALVE					
 3" x 4"	 4", 5", 6"	3" x 4"	8-0640	20.0	496.00
		4"	8-0650	36.0	673.00
		5"	8-0655	55.0	731.00
		6"	8-0660	70.0	745.00

REPLACEMENT PARTS FOR DISCHARGE PRIMING VALVE



Item	Description	Part #	Key	List Price
Clack	3" x 4" 4" OD	8-0641	2	88.00
	4" x 4" 4.75" OD	8-0651	2	170.00
	5" x 5" 5.75" OD	8-0656	2	198.00
	6" x 6" 6.75" OD	8-0661	2	215.00
Valve Body	3" x 4"	8-1002	1	302.00
	4" x 4"	8-1003	1	467.00
	5" x 5"	8-1004	1	955.00
	6" x 6"	8-1005	1	848.00
Clack Hinge Handle Assembly	3" x 4"	8-1009	5, 6, 8	218.00
	4" x 4"	8-1010	5, 6, 8	221.00
	5" x 5"	8-1011	5, 6, 8	228.00
	6" x 6"	8-1012	5, 6, 8	233.00
'O' Ring	--	8-1013	7	5.50
Spring Pin (2 required)	--	8-1014	9	5.50
Spring	3" x 4"	8-1015	10	12.50
Spring	4"-5"-6"	8-1016	10	14.00
Grommet	--	8-1007	3	5.50
Spacer	--	8-1008	4	16.50
Bolt Stud	--	8-1017	11	7.60
Nut	--	6-0902	14	0.08
External Tooth Washer	--	8-1018	13	3.30
Flat Washer	--	9-6762	12	3.20

Pumps & Accessories

POWER & HAND-D PRIMERS



Product	Description	Part Number	Weight	List Price
POWER PRIMER	35AC	6-9715	88.0	3,330.00
	35DC (battery)	6-9716	85.0	3,465.00

Features:

- Converts centrifugal pumps to self-primers.
- Fast, efficient primer for pumps with high suction lifts.
- Requires minimum maintenance.
- Ideal for diesel or gasoline-powered engines.



HAN-D PUMPERS

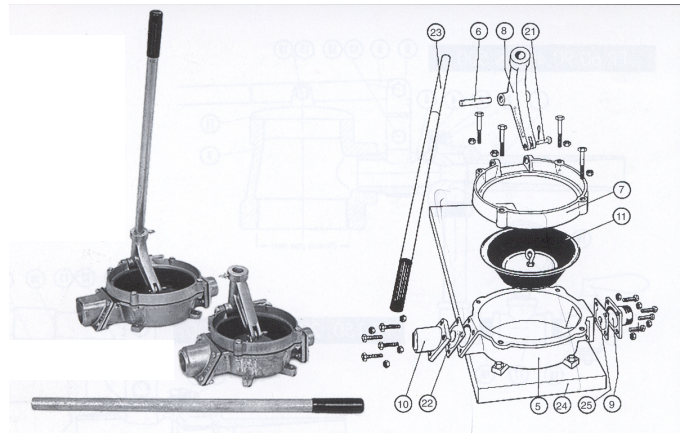
#700 Han-D Pumper	6-9760	18.0	560.00
#900 Han-D Pumper	6-9762	20.0	650.00
#700 Diaphragm	6-9761	1.0	69.00
#900 Diaphragm	6-9763	1.0	72.00

Uses include small or occasional jobs where it takes too long to setup on engine driven pump.

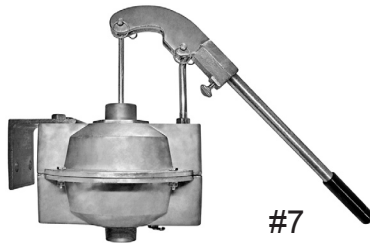
	Inlet / Outlet	Capacity	Max. Suction Lift	Max Discharge Head
Model 700	1.5" FPT	.5 gal/Stroke	20 feet	10 feet
Model 900	2" FPT	1 gal/Stroke	15 feet	10 feet

Features:

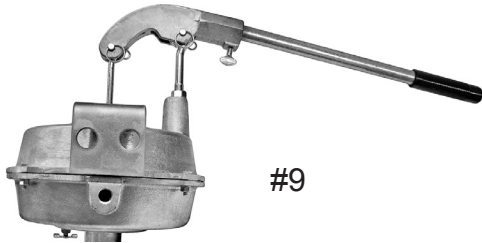
- Complete dewatering portable unit
- Lightweight, easy to use
- Cast aluminum body
- Pumps air, water, sewage, mud and many chemical products
- Ideal for priming large diameter pipes (i.e. 8", 10", 12" sizes)



Product	Description	Part Number	Weight	List Price
HAND PRIMER	#7	8-0610	7.0	290.00
	#9	8-0620	20.0	415.00



*3/4" FPT & 1-1/2" MPT Base



*3/4" FPT Base

Call for prices on the #5 Hand Primer, part # DP5

Features:

- Quick hand priming of any type of centrifugal pump, siphon tube or pump situation
- Lightweight and easy to install
- Durable and dependable
- Reinforced diaphragms are long-lasting
- Provides up to 20 feet of suction lift with ease and leverage
- New style allows for Fulcrum Bracket to be adjusted at various angles for your convenience.

Primer Capacity Chart

Primer	# 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		
	6.5' Lift	13' Lift	19.5' Lift	6.5' Lift	13' Lift	19.5' Lift	6.5' Lift	13' Lift	19.5' Lift
#7	6	15	32	12	33	65			
#9	4	9	20	10	23	45	17	37	77

Primer Selection Chart:

Primer	Pipe Size
#7	4", 5", & 6"
#9	6", 8" or larger

Features:

Lightweight and durable solid-cast aluminum body.
Reinforced diaphragms are long-lasting.
Steel mounting bracket allows for easy and dependable installation.
Fulcrum eyebolt can be adjusted at various angles for your convenience.

**SCREEN FILTER, GALVANIZED
(FLANGE X FLANGE)**

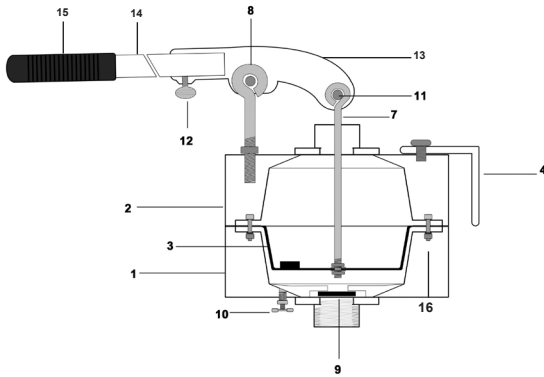
Size	GPM	Screen		
8"	1200	1/16"	9-7312	1,850.00
8"	1200	3/32"	9-7313	1,850.00
8"	1750	1/16"	9-7314	2,780.00
8"	1750	3/32"	9-7315	2,780.00



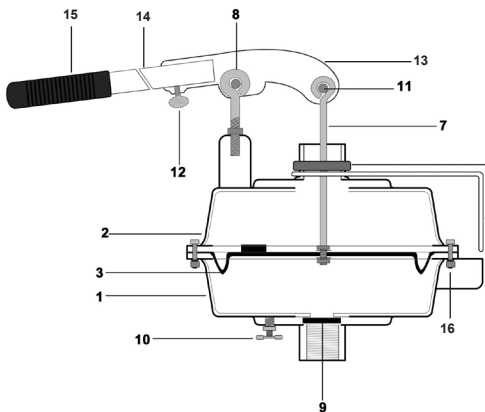
HAND PRIMERS



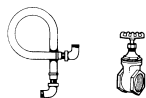
Product	Description	Part Number	Weight	List Price
PARTS FOR #7 HAND PRIMER	Item	Item #	Part #	List Price
	Diaphragm - #7	3	8-0631	56.00
	Lower Housing	1	9-5353	112.00
	Check Valve (Disc)	9	9-5355	3.70
	Drain Cock	10	8-1102	9.00
	Upper Housing	2	9-5354	112.00
	Connecting Rod Assembly	7	8-1108	14.00
	Handle Bracket	13	8-1111	66.00
	Fast Pin (2 required)	11	8-1112	3.50
	Fulcrum Eyebolt	8	9-5357	15.20
	Mounting Bracket	4	9-5358	41.00
	Thumb Screw	12	9-5359	3.00
	Handle (Pipe)	14	9-5360	15.00
	Handle Grip	15	9-5361	10.00
	Bolt, Hex, 1/4"-20 x 1" (4 Required)	16	9-7655	1.00
	Nut, Hex, 1/4"-20 (4 Required)	16	9-7656	0.20
Washer, Split Lock, 1/4" (4 Required)	16	9-7657	0.50	



PARTS FOR #9 HAND PRIMER	Item	Item #	Part #	List Price
	Diaphragm - #9	3	8-0621	79.00
	Lower Housing	1	8-1100	129.00
	Check Valve (Disc)	9	9-5355	3.70
	Drain Cock	10	8-1102	9.00
	Upper Housing	2	8-1103	128.00
	Connecting Rod Assembly	7	8-1108	14.00
	Lock Nut, 1-1/2"	6	8-1109	15.00
	Fulcrum Eyebolt	8	8-1110	24.00
	Handle Bracket	13	8-1111	66.00
	Fast Pin (2 required)	11	8-1112	3.50
	Mounting Bracket	4	8-1113	41.00
	Thumb Screw	12	9-5359	3.00
	Handle (Pipe)	14	9-5360	15.00
	Handle Grip	15	9-5361	10.00
	Bolt, Hex, 1/4"-20 x 1" (4 Required)	16	9-7655	1.00
Nut, Hex, 1/4"-20 (4 Required)	16	9-7656	0.20	
Washer, Split Lock, 1/4" (4 Required)	16	9-7657	0.50	



Primer Side	Pump Side	Part Number	Weight	List Price
3/4" MPT	1/2" MPT	8-0622		59.00



Diaphragm	Part Number	Weight	List Price
#5 Diaphragm B-183	8-0629	0.2	45.00
#6 Diaphragm	8-0611	0.4	30.00
#7 Diaphragm C-106	8-0631	1.0	56.00
#9 Diaphragm B-61	8-0621	1.9	79.00
Wade Rain #9-30-3	8-0613	0.3	24.00
Travis WPP-1D	8-0614	1.0	35.00



INTAKE MANIFOLD PRIMER EXHAUST PRIMER

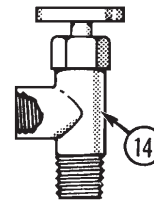
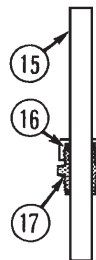
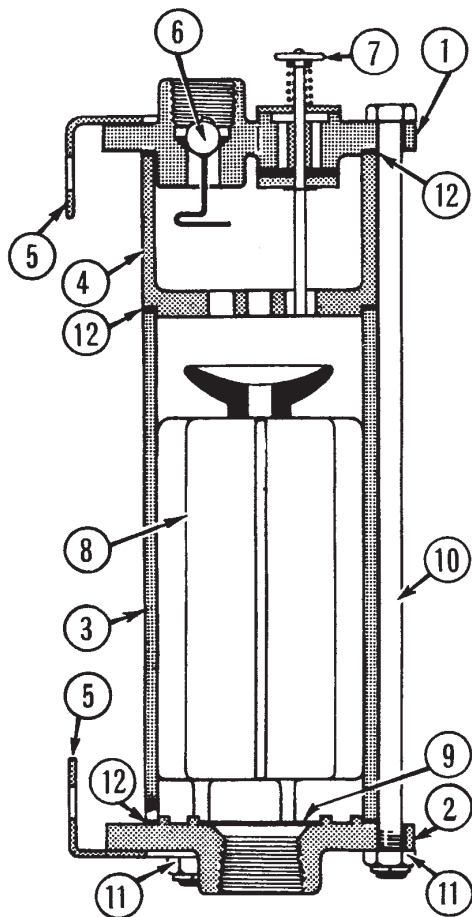
Product	Description	Part Number	Weight	List Price
INTAKE MANIFOLD PRIMER	Intake Manifold Primer	8-0630	2.7	307.00



Features:

- Fast, efficient priming using engine manifold vacuum while engine runs at low speed.
- All working parts enclosed in fully transparent plastic housing permits observation of primer operation at all times.
- Lightweight plastic float with rubber "cup type" valve provides instant and positive closure as soon as priming is completed.
- Check valve prevents reverse flow during normal pump operation.
- Easy to operate...simply start engine and open one valve to begin priming.
- Can be readily installed on any gasoline or LPG engine of four or more cylinders to provide suction lifts up to 20 feet.
- Complete operation instructions are permanently attached to the primer, and detailed instructions for installation and maintenance are supplied with each unit.
- Connection hoses not included.

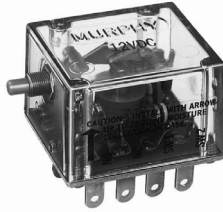
PARTS FOR INTAKE MANIFOLD PRIMER



Item	Item #	Part #	List Price
Upper Housing	4	8-0633	31.00
Lower Housing	3	8-0634	36.00
Gaskets	12	8-0635	3.20
Top Cover Assembly	1/6/7	8-1120	110.00
Lower Cover Assembly	2/9	8-1121	66.00
Brackets	5	8-1122	13.00
Tie Bolts & Nuts	10/11	8-1123	10.50
Float Assembly	8	8-1124	39.00
Angle Valve	14	8-1125	37.00
Packing Gland Assembly	15/16/17	8-1126	20.00

MURPHY SWITCHES

Product	Description	Part Number	Weight	List Price
MAGNETIC SWITCH	Murphy #117 DC (12/24 Volt)	6-0020	0.8	52.00
	Murphy #518APH (12 Volt) (has 6 prongs for Deutz diesels)	6-0021	0.7	63.00



A manually reset magnetic Circuit Breaker which is tripped by a switch gauge when a malfunction is detected. It is commonly used to break the ignition circuit of a distributor ignition engine or break power to a solenoid fuel valve when it receives a signal from the switch gauge.

OIL PRESSURE GAUGE

75 psi Murphy, #20P75	6-0022	0.5	69.00
100 psi Murphy, #20P100	6-0023	0.9	66.00



This is a basic engine or pump oil pressure switch gauge.

ENGINE TEMPERATURE GAUGE

Murphy 20T254, 250°F Water	6-0024	0.8	82.00
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This Temperature switch gauge is available in various models and ranges to prevent engine damage from high water oil or cylinder head temperature.

VACUUM/LOAD GAUGE

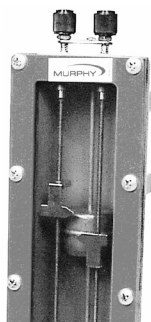
Murphy 20V3	6-0025	0.6	85.00
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Commonly used to monitor manifold vacuum for loss of load or overload on spark ignition engines, vacuum switch gauges are recommended for preset limit shutdown of irrigation engines.

OIL LEVEL SAFETY GAUGE

Murphy L129	6-0026	3.0	150.00
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Combination high and low engine oil level switch gauge gives continuous indication of the oil level and condition. No need to shut down to check oil level. Adjustable high and low level contacts operate to shutdown engine or operate alarm when improper level exists.

MURPHY SWITCHES

Product	Description	Part Number	Weight	List Price
WATER LEVEL SAFETY GAUGE	Murphy , L150	6-0027	1.8	108.00



Coolant level SWICHGAUGE can be visually checked with this water level SWICHGAUGE. If the water level falls too low, contact is made and the engine shutdown system is activated (or alarm is sounded.)

FUEL STOP SOLENOID	Murphy, SV12	6-0028	1.4	113.00
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- Solenoid Fuel Valve to shut off the fuel to Diesel engines upon engine or driven equipment malfunction.

TIMER	Murphy, 12T w/case (12 hour)	6-0019	4.7	489.00
	Murphy, 12T wo/case (12 hour)	6-0031	0.8	365.00



Murphy, 24T w/case (24 hour)	6-0017	4.7	489.00
Murphy, 24T wo/case (24 hour)	6-0018	1.5	365.00

- Timer switches are designed to automatically shut down engine when a pre-determined operating time is set.
- Weatherproof case

PUMP PRESSURE GAUGE	Murphy, 20P7-15	9-5252	0.5	76.00	
	Murphy, 20P7-30	9-5254		68.00	
	Murphy, 20P7-50	9-5256	0.5	68.00	
	Murphy, 20P7-75	In stock	9-5257	0.5	66.00
	Murphy, 20P7-100	In stock	9-5251	0.5	62.00
	Murphy, 20P7-150	In stock	9-5253		68.00
	Murphy, 20P7-300		9-5255		68.00



Monitors Discharge Pressure to detect water supply failure or parted couplings.

STANDARD MURPHY MOUNT PANEL	Murphy, WA17	6-0030	5.0	555.00
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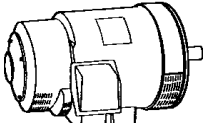


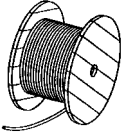
- Designed for mobile equipment such as trucks, tractors, and fork lifts
-Open panel for under dash mounting.
-Pressure, temperature, visual and audible alarms, before shutdown.

Murphy Toggle Switch, TF	6-9704	18.50
Murphy Amp Meter, 60060	6-9705	23.00
Murphy Stop Button, PB1285	6-9706	11.00

GENERATORS - WIRE





Product	Description	Part Number	Weight	List Price
LIMA GENERATOR 	5 KW	6-8010	150.0	3,750.00
	7.5 KW	6-8011	165.0	4,350.00
	10 KW	6-8012	245.0	4,150.00
	12 KW	6-8013	260.0	4,470.00
	15 KW	6-8014	275.0	5,060.00
	20 KW	9-7687	560.0	8,300.00

WIRE 	Aluminum, Single	6-6800		Call
	Aluminum, Triplexed	6-6801		Call
	Aluminum, Quadraplexed	6-6802		Call
	Aluminum, Tuf-Hide	6-6803		Call
	Underground Feeder, UF	6-6804		Call

ELECTRIC MOTOR 	Marathon			Call
	Baldor			Call
	Others			Call

Base is not included.


GEAR HEAD 	Amarillo			Call
	Johnson			Call
	Randolph			Call

PROP-SHAFT GUARD 	7" dia x 10" - 18"	6-9822	6.0	53.00
	7" dia x 24" - 42"	6-9823	12.0	60.00
	7" dia x 36" - 54"	6-9824	15.0	63.00
	7" dia x 36" - 66"	6-9825	18.0	65.00
	12" dia x 14" - 24"	6-9826	13.0	79.00
	12" dia x 36" - 66"	6-9827	27.0	115.00
	12" dia x 28" - 54"	6-9828	28.0	125.00

Unprotected prop-shaft on your irrigation wells can maim or kill almost instantly. Prevent potential tragedy, rest easy during pumping season with a Hastings Prop-Shaft guard permanently in place at each of your wells. They are simple and fast to install - using existing bolts on most pumps and engines. Once on, they stay on. You have easy full access for lubrication through a 2" slot on the underside. Formed from heavy-gauge galvanized steel, the guard will give your well a neat, clean appearance - and you will be assured of safety around the clock!

Special Features:

- Meets OSHA requirements
- Endorsed by farm safety authorities
- Protection against loss of life or limb
- Adapts to any internal combustion engine, gear head installation
- Slips easily over prop-shaft and bolts to engine and pump
- Complete access for lubrication through 2" wide opening running the length of guard
- Rigid construction from galvanized steel. Withstands abuse and stays neat-appearing year after year.

AUTOMATIC TURBINE PUMP OILER 	4 Gallon	6-8098	11.0	410.00
	7 Gallon	6-8099	15.0	465.00
	11 Gallon	9-7665		530.00
	Brass Needle Valve	9-7554		55.00

Advantages: Automatic operation assures lubrication whenever the pump is pumping, this helps avoid inadequate oil dripping which is the leading cause of turbine pump failure.

Inadequate drip oiling is the leading cause of pump failure. Continuous dripping wastes oil and causes contamination. This automatic valve assures lubrication when pump is running. Saves costly trips into the well. Manual mode for pre-season lubrication.

Product	Description	Part Number	Weight	List Price
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Municipal/Industrial Hose & Fittings

Schumacher Irrigation, Inc. is "Your Liquid Solutions Provider"

We fabricate and distribute a full line of hose and accessories, couplings, clamps, fittings, valves, pumps, and suction and vacuum accessories for industry and liquid / waste water handling applications.

We pride ourselves on our same day service on both standard and custom parts. Please call us for quick and quality liquid solutions.



Conversions	
1 U.S. Gallon	= 231.00 cu. In
	= 0.1370 cu. Ft
	= 3.7850 liters
	= 0.0038 cu. Meters
	= 0.8330 Imp. Gal.
	= 0.0238 42-gal. Barrel
1 Imperial Gallon	= 1.20 U.S. Gal.
1 Cubic Foot	= 7.48 U.S. Gal.
	= 0.0283 cu. Meters
1 Barrel (Oil)	= 42.00 U.S. Gal.
1 Litre	= 0.2642 U.S. Gal.
1 Cubic Meter	= 35.3140 cu. Ft
	= 264.20 U.S. Gal.
1 Acre Foot	= 43,560.00 cu. Ft
	= 325,829.00 U.S. Gal.
1 Acre Inch	= 3,630.00 cu. Ft
	= 27,100.00 U.S. Gal.
Capacity	
1 Cubic Foot Per Second	= 449.00 GPM
1 Acre Foot Per Day	= 227.00 GPM
1 Acre Inch Per Hour	= 454.00 GPM
1 Litre Per Second	= 15.85 GPM
1 Cubic Meter Per Min.	= 264.20 GPM
1 Miner's Inch	= 9.00 GPM
1,000,000 Gal. Per Day	= 695.00 GPM
Head	
1 PSI	= 2.31 Ft. Head of Water
	= 2.04 In. Mercury
	= 0.07 Kg. Per sq. cm.
1 Foot of Water	= 0.43 PSI
	= 0.89 In. Mercury
1 Inch of Mercury (Vacuum)	= 1.13 Ft. of Water
1 Kilogram Per Square Cm	= 14.22 PSI
1 Atmosphere (at sea level)	= 14.70 PSI
	= 34.00 Ft. of Water
	= 10.35 Meters of Water
Weight	
1 U.S. Gallon of Water	= 8.33 Lbs
1 Cubin Foot of Water	= 62.35 Lbs
1 Kilogram or Litre	= 2.20 Lbs
1 Imperial Gallon	= 10.20 Lbs

Length	
1 Inch	= 2.54 Centimeters
1 Meter	= 3.28 Feet
1 Rod	= 16.50 Feet
1 Mile	= 5,280.00 Feet
Horsepower	
1 Horsepower	= 7.46 Kilowatts or 746 watts
	= 33,000.00 Ft lbs per minute
	= 550.00 ft lbs per second
Horsepower Input	= Horsepower input to motor 1.34 x kilowatts input to motor
Water Horsepower	= H.P. required to lift water at a definite rate to a given distance assuming 100% efficiency:
	$\frac{\text{GPM} \times \text{Total Head (in. ft.)}}{3960}$
	= H.P. delivered by motor H.P. required by pump H.P. input x motor efficiency 1.34 x KW input x motor efficiency
Brake Horsepower	= $\frac{\text{Water H.P.}}{\text{Pump efficiency}}$
	= $\frac{\text{GPM times total head (ft)}}{3960 \times \text{pump efficiency}}$
	= $\frac{\text{GPM times total head (psi)}}{103,000 \times \text{pump efficiency}}$
	= $\frac{\text{Power output}}{\text{Power input}}$
Efficiency	
Efficiency	= Power output / Power input
Motor Efficiency	= H.P. output / K.W. input x 1.34
Pump Efficiency	= GPM x Total Head (Ft) / 3930 x B.H.P
Plant Efficiency	= GPM x Total Head (Ft) / 5300 x KW input

Pumps & Accessories

Product	Description	Part Number	Weight	List Price
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PIPE DIMENSION CHART

PIPE TYPE	LHD	80	100	125	CL63	CL100	CL125	CL160	CL200	SCH40 PVC	SCH80 PVC	C-900	SEWER	CASING
O.D. SIZE	PIP	PIP	PIP	PIP	IPS	IPS	IPS	IPS	IPS	IPS	IPS		PVC	PVC
SDR	91	51	41	32.5	64	41	32.5	26	21	DWV/LP	DWV/LP	DR-18	SDR 35	SDR26
4" O.D.					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.8	4.215	4.5
4" I.D.					4.35	4.26	4.2	4.134	4.046	3.998	3.786	4.22	3.89	4.154
4" WALL					0.07	0.11	0.138	0.173	0.214	0.237	0.337	0.267	0.125	0.173
4" PSI					63	100	125	160	200	100/130	100/130	150	117.5	160
4 1/2" O.D.														4.95
4 1/2" I.D.														4.57
4 1/2" WALL														0.19
4 1/2" PSI														160
5" O.D.					5.563	5.563	5.563	5.563	5.563	5.563	5.563			5.563
5" I.D.					5.37	5.27	5.19	5.109	4.99	5.017	4.767			5.135
5" WALL					0.087	0.136	0.171	0.214	0.265	0.258	0.375			0.214
5" PSI					63	100	125	160	200	100/130	100/130			160
6" O.D.	6.14	6.14	6.14	6.14	6.625	6.625	6.625	6.625	6.625	6.625	6.625	6.9	6.275	6.625
6" I.D.	6	5.88	5.81	5.73	6.4	6.27	6.18	6.07	5.94	6.031	5.709	6.08	5.742	6.115
6" WALL	0.07	0.12	0.15	0.189	0.087	0.162	0.204	0.255	0.316	0.28	0.432	0.383	0.18	0.255
6" PSI	43	80	100	125	63	100	125	160	200	100/130	100/130	150	117.5	160
8" O.D.	8.16	8.16	8.16	8.16	8.625	8.625	8.625	8.625	8.625	8.625	8.625	9.05	8.4	8.625
8" I.D.	7.984	7.81	7.73	7.62	8.33	8.17	8.05	7.921	7.74	7.943	7.565	7.97	7.665	7.962
8" WALL	0.088	0.16	0.199	0.251	0.135	0.21	0.265	0.332	0.41	0.322	0.5	0.503	0.24	0.332
8" PSI	43	80	100	125	63	100	125	160	200	100/130	100/130	150	117.5	160
10" O.D.	10.2	10.2	10.2	10.2	10.75	10.75	10.75	10.75	10.75	10.75	10.75	11.1	10.5	10.75
10" I.D.	9.98	9.77	9.66	9.52	10.41	10.18	10.04	9.86	9.65	9.976	9.492	11.63	9.563	9.87
10" WALL	0.11	0.2	0.249	0.314	0.168	0.262	0.331	0.413	0.511	0.365	0.593	0.733	0.3	0.413
10" PSI	43	80	100	125	63	100	125	160	200	100/130	100/130	150	117.5	160
12" O.D.	12.24	12.24	12.24	12.24	12.75	12.75	12.75	12.75	12.75	12.75	12.75	13.2	12.5	12.75
12" I.D.	11.97	11.72	11.6	11.43	12.32	12.08	11.91	11.7	11.45	11.89	11.29	11.63	11.36	11.7
12" WALL	0.132	0.24	0.299	0.377	0.199	0.311	0.392	0.49	0.606	0.406	0.687	0.733	0.36	0.49
12" PSI	43	80	100	125	63	100	125	160	200	100	100	150	117.5	160
14" O.D.						after 12"		14		14	14	15.3	same	
14" I.D.						is pip		12.86		13.07	12.41	13.48	OD as	
14" WALL						size		0.538		0.437	0.75	0.85	pip after	
14" PSI								160		100	100	235	12"	
15" O.D.	15.3	15.3	15.3	15.3	15.3	15.3							15.3	
15" I.D.	14.97	14.65	14.5	14.29	14.82	14.5							13.89	
15" WALL	0.165	0.3	0.373	0.471	0.239	0.373							0.44	
15" PSI	43	80	100	125	63	100							117.5	
16" O.D.								16		16	16	17.4		
16" I.D.								14.696		14.94	14.21	15.33		
16" WALL								0.615		0.5	0.843	0.967		
16" PSI								160		100	100	235		
18" O.D.	18.36	18.701	18.701	18.701		18		18		18	18	19.5	18.701	
18" I.D.	17.964	17.91	17.72	17.47		17.07		16.534		16.809	16.014	17.18	17.629	
18" WALL	0.198	0.367	0.456	0.575		0.439		0.692		0.562	0.937	1.083	0.536	
18" PSI	43	80	100	125		100		160		100	100	235	117.5	
20" O.D.	20.4					20		20		20	20	21.6		
20" I.D.	19.962					18.97		18.37		18.743	17.814	19.03		
20" WALL	0.219					0.488		0.769		0.593	1.031	1.2		
20" PSI	43					100		160		100	100	235		
21" O.D.		22.047	22.047	22.047									22.047	
21" I.D.		21.12	20.89	20.59									20.783	
21" WALL		0.432	0.538	0.678									0.632	
21" PSI		80	100	125									117.5	
24" O.D.		24.803	24.803	24.803		24		24		24	24		24.8	
24" I.D.		23.76	23.5	23.17		22.748		22.043		22.54	21.418		23.381	
24" WALL		0.486	0.605	0.763		0.585		0.923		0.687	1.218		0.711	
24" PSI		80	100	125		100		160		100	100		117.5	