

Solar Pumps

Ranchers, farmers and remote home owners can use these pumps for livestock or domestic water needs. Even utility connected homes can enjoy the benefits of solar water pumping. There are no utility lines to bury and no electric bills to pay. The well casing must be at least 4 inches in diameter. Using a tracker will increase the amount of water pumped per day by approximately 40% in summer and 15% in winter.

For array direct operation, use a pump controller or a Linear Current Booster (LCB). The pumps on this page all have a one-year warranty.

Tech Note: Pressurizing Applications. The Lorentz PS200 & PS600 below are appropriate for automatic water pressurizing when powered by a battery system. If you are raising water vertically and pressurizing, incorporate the relationship: 1 PSI = 2.31 ft. Example: A pump that lifts 100 vertical feet and pressurizes to 60 PSI must pump the equivalent of 240 feet.

Submersible Pumps

LORENTZ Pumps

Helical Rotor and Centrifugal Type Pumps for Solar and Battery Operation

Characteristics

- *high reliability and life expectancy
- *helical rotor or centrifugal pump, brushless motor
- *high resistance to sand and corrosion
- *fits 4" and larger well casings
- *drains back

Application

- *deep well pumping
- *drinking water supply
- *livestock watering
- *ideal for winter watering applications (no frozen lines - drains back)
- *etc.

Pump & Controller: **2 year warranty**

PS150 Series

PS150 CPS 150 C

- *lift up to 22 m
- *flow rate up to 5.0 m³/h (1100 gal/h)
- *12-24 VDC nominal voltage

75-662 PS 150 \$ 1,899



LORENTZ PS
left: Centric (C)
right: Helical Rotor (HR)

PS200 Series - Solar Direct or Battery Applications (24 to 48 DC volts)

PS200 HR/CPS200 HR/C

- *lift up to 50m
- *flow rate up to 2.7 m³/H (600 gal/h)
- *24-48 VDC nominal voltage

75-663	HR04w/PS200	Pump & Controller	\$ 2,459
	@ 24V (1 - 1.5 gpm @ 25 to 100 ft.) Power Requirement: 24 to 48 watts		
	@ 48V (2.5 - 3 gpm @ 25 to 100 ft.) Power Requirement: 55 to 110 watts		

75-664	HR07w/PS200	Pump & Controller	\$ 2,459
	@ 24 V (1.7 - 2 gpm @ 10 to 65 ft.) Power Requirement: 37 to 60 watts		
	@ 48V (4 - 4.5 gpm @ 10 to 65 ft.) Power Requirement: 90 to 160 watts		

PS600 Series - Solar Direct or Battery (48 VDC) Applications

PS600 HR/CPS600 HR/C

- *lift up to 180 m
- *flow rate up to 11 m³/h (2400 gal/h)
- *48-72 VDC nominal voltage in solar operation
- *48 VDC in battery operation

75-665	HR14w/PS600	Pump & Controller (2 - 2.5 gpm @ 25 to 100 ft.)	\$ 3,229
75-666	HR20w/PS600	Pump & Controller (10 gpm @ 100 to 200 ft.)	\$ 3,229
	PV requirement: minimum 300 watts @ 48 - 72 volts (4-6 solar modules in series)		

Submersible Pumps

Grundfos SQ Series AC Pumps

High Efficiency, Low Cost, Great Features The SQ series pump features a permanent magnet motor controlled by an electronic frequency converter developed by Grundfos. It starts slowly, without surge so it can be run on a much smaller inverter or generator than a conventional AC submersible pump.

This is the ideal pump to use if you are pumping some distance from a well, and into a pressure tank, especially for solar powered homes. Works on 120V AC modified sine wave or sine wave inverters. Highest volume pumps run on 230Vac. They can be powered by inverter systems with 240VAC output, or by using an autotransformer to step 115VAC from an inverter to 240 to run the pump. Minimum well diameter of 3" is required. Use 2-conductor with ground pump cable. Warranty: 5 years



Grundfos SQ Series Pumps

Flowrate at various depths (ft) in gal per min @ 0lbs pressure

Pump model	HP	ACV Item #	Price	60	80	100	120	140	160	180	200	220	240	280	300	340	400
5SQ05-110	1/3	115 75-701	\$ 989	7.3	6.7	6.1	5.5	4.7	3.7	2.6	1						
5SQ05-180	1/2	115 75-703	\$1,015	7.9	7.5	7.1	6.7	6.2	5.6	5.1	4.4	3.6	2.6	1.1			
5SQ07-270	3/4	230 75-705	\$1,139			8	7.8	7.5	7.2	6.8	6.5	6.1	5.8	4.9	4.4	3.4	1.2
10SQ05-110	1/2	115 75-710	\$ 795	13.5	12.5	11.0	9.0	6.0									
10SQ05-160	1/2	115 75-712	\$ 810	14.8	14.0	13.0	12.0	11.0	10.0	8.0	5.0						
10SQ05-200	3/4	230 75-714	\$ 965		14.8	14.0	13.5	12.8	12.0	11.0	10.0	9.0	7.0	5.0			
10SQ10-290	1	230 75-716	\$1,184				14.7	14.3	13.8	13.3	12.8	12.3	11.8	10.5	9.5	7.7	3.0
15SQ05-70	1/3	115 75-720	\$ 815	16.5	13.0	8.5											
15SQ05-110	1/2	115 75-722	\$ 839	19.5	17.5	16.0	13.5	11.0	7.5								
15SQ07-150	3/4	230 75-724	\$ 998		19.0	18.0	17.0	15.5	14.0	12.0	10.0	7.0					
15SQ07-180	3/4	230 75-725	\$1,093				19.5	18.5	17.5	16.5	15.5	14.0	12.5	11.0	6.5		
15SQ10-250	1	230 75-727	\$1,248					20.0	19.5	18.0	17.5	16.5	15.5	14.0	13.0	11.0	5.5
22SQ05-80	1/2	115 75-732	\$1,049	27.5	22.5	19.5											
22SQ10-160	1	230 75-735	\$1,135	32.0	30.5	28.5	26.5	24.0	21.0	17.5	12.0	3.0					
22SQ10-190	1	230 75-736	\$1,198	33.0	31.5	30.5	29.5	27.5	25.5	23.5	21.5	18.0	14.5	3.5			
30SQ05-90	1/2	230 75-742	\$1,138	36.5	31.5	31.0	23.0	9.0									
30SQ10-130	1	230 75-743	\$1,280	41.5	38.5	35.5	31.5	27.0	21.0	11.0							

Note: add 2.31 ft per PSI of your pressure system to the depth of the water level to find the actual flowrate (example: 60 PSI system and 100ft depth equals to 240ft depth @ 0 PSI)



Submersible Pumps

Grundfos SQFlex - Solar Water Pump

The SQFlex system is truly a flexible and reliable water supply system based on renewable and alternate energy sources, such as solar, wind turbines, generators and batteries. It is designed for continuous as well as intermittent operation, and is especially suitable for water supply applications in remote locations.

Features include:

- Up to 600 feet of head - Built-in dry run protection - Operates from 30-300 VDC or 90-240 VAC power supply
- Overload protection - Over temperature protection - Over/under voltage protection
- Maximum Power Point Tracking to optimize pump operation according to available DC Power

Item #	Model	Description	Max.Head ft	Nom. Pump GPM	Pump length	Disch. size	Pump type/ diam. inches
75-770	3 SQF-2	Solar Pump	360	3	47	1	helical rotor/3
75-771	3 SQF-3	Solar Pump	600	3	48	1	helical rotor/3
75-772	6 SQF-2	Solar Pump	360	6	48	1	helical rotor/3
75-773	11 SQF-2	Solar Pump	300	11	49	1-1/4	helical rotor/3
75-774	16 SQF-10	Solar Pump	210	16	38	1-1/2	helical rotor/3
75-775	25 SQF-3	Solar Pump	45	25	33	1-1/2	centrifugal/ 4
75-776	25 SQF-6	Solar Pump	90	25	35	1-1/2	centrifugal/ 4
75-777	40 SQF-3	Solar Pump	45	40	37	2	centrifugal/ 4
75-778	40 SQF-5	Solar Pump	90	40	40	2	centrifugal/ 4
75-779	60 SQF-3	Solar Pump	45	60	39	2	centrifugal/ 4

Price all models: \$ 2,369

Accessories

75-781	IQ 101	SQFlex Gen. Interface Box	\$ 589
75-782	IQ 102	SQFlex Wind Gen. Breaker Box	\$ 519
75-783	CU 200	SQFlex Control Box (control and system monitor)	\$ 485
75-784		SQFlex Water Level Switch	\$ 27



Shurflo 9300 Submersible Well Pump

The Shurflo 9300 pump is the most efficient and maintenance-free submersible DC pump we offer. It works well with its pump control and an appropriate pair of PV modules to make a low-cost pumping system. Choose solar modules with an amperage rating higher than required for the head you will be pumping. It can run at 12 or 24 volts. Flow at 12 volts is approximately 1/2 of the 24 volt flow. Electrical connection is made with a quick disconnect, so no splicing is required. The connector accepts a variety of jacketed cables. The strong, yet lightweight corrosion proof plastic housing keeps the weight to only 6 pounds. The pump can run dry without damage, can be easily repaired in the field and is the best pump we've found for use in wells where highly corrosive iron is present. Order complete repair kits below.

Shurflo 9300 Pump Specifications

Maximum submersion: 100 feet (30 meters)
 Inlet: 50 mesh stainless steel screen
 Net weight: 6 pounds (2.7 Kg)
 Dimensions: 3.75" (95 mm) x 12" (305 mm)

75-605	Shurflo 9300 Pump	\$ 995
75-026	9300 O Ring Kit	\$ 39
75-025	9300 Pump Rebuild Kit	\$ 59
75-606	LCB Contr. 24V only (902-100)	\$ 189
75-607	LCB Contr. 12/24V (902-200)	\$ 427

Total Vertical Lift Feet	Flow Rate Gallons/Hr	Solar Array Size (Minimum)	Amps @ 30 Volts
20	117	2 x 32 Watts	1.5
40	114	2 x 32 Watts	1.7
60	109	2 x 45 Watts	2.1
80	106	2 x 45 Watts	2.4
100	103	2 x 50 Watts	2.6
120	101	2 x 50 Watts	2.8
140	99	2 x 64 Watts	3.1
160	98	2 x 64 Watts	3.3
180	93	2 x 75 Watts	3.6
200	91	2 x 75 Watts	3.8
230	82	2 x 90 Watts	4.1



Amazon LVM Submersible Pumps

LVM pumps are constructed of polyacetal plastic, enabling them to pump almost any liquids including diesel fuel. They are small enough to fit in the opening of a 45 gallon fuel drum or a 2" well casing. The outlet is 1/2" hose barb. The intake is 1/2" hose barb with a removable strainer. Use these pumps for filling portable water tanks, hosing down cars, boats, vans and pumping into and out of most any container. The LVM 105 has a flow rate of 4 Imp. GPM and uses 7 amps at a maximum head of 42 ft, and comes with 15 ft. leads with alligator battery clips. The LVM 107 has a flow rate of 2.65 Imp. GPM and uses 2.5 amps at a maximum head of 16 ft. and has 3 foot lead wires attached.

75-105	LVM 105 12V Submersible Pump	\$ 129
75-107	LVM 107 12V Submersible Pump	\$ 105
75-113	LVM 111 12V Submersible Pump	\$ 165
75-117	LVM 117 12V Submersible Pump	\$ 148



Pressure Pumps

Flojet 4000 DC Pressure Pump



Flojet designed this quad-head diaphragm pump for marine use, to supply household water pressure on large boats. It delivers 4.5 GPM, has a totally sealed motor and can run dry without harm. It has an automatic pressure control switch which shuts off the pump at 45 PSI and on again at 20 PSI. It comes with an intake-strainer and two quick connect 3/4" hose barbs and two garden hose adapters allowing several connecting options. Home pressure systems require a precharged water pressure tank. This is the most efficient, economical on power and affordable pump we offer. It is rugged, tolerates variable voltage inputs, is easily serviceable and dependable under most pumping conditions. It is available in 12 and 24 volt models and weighs just 4 pounds.

75-145	Flojet Marine Quad Pump -12V	\$ 198
75-147	Flojet Marine Quad Pump - 24V	\$ 210
75-061	Bearing	\$ 9
75-125	Diaphragm Repair Kit	\$ 49
75-126	Seal Kit	\$ 19
75-149	Shurflo 2088-24V Pump	\$ 159

Flowlight™ Booster Pumps

The Flowlight Booster Pumps provide "town pressure" for home water systems where 12 and 24 volt battery power is available. They have a longer life and greater flow rate than the Flojet pump and use less than 1/2 the energy consumed by an AC jet pump running on an inverter. The Booster Pump cannot run dry and it will be ruined by rusty or dirty water. Use a 5 micron filter (part 75-280) and a dry-run switch (75-250) to protect the pump. Hose connectors with 3/4" adapters are included.

To make your installation easy and simple, order the E-Z Installation Kit. We supply it with all the parts you'll need to install and use your Booster Pump. It includes an accessory 'T', adjustable pressure switch, pressure gauge, check valve, drain valve, shut-off valve, pipe-nipples and flexible hoses. All components are copper and brass.

The Standard Booster Pump model has the highest flow and should be used where suction lift is less than 10 feet. The Low flow model has a higher pressure capacity and should be used where suction lift is greater than 10 feet or where suction pipe is less than 1" inside diameter. Maximum suction lift is 20 feet at sea level.



Flowlight™ Booster Pump, with optional E-Z Installation Kit and 5 Micron Filter & Housing

Type	Pressure PSI	Flow GPM	12 Volt Amps	24 Volt Amps
Standard	30	4.5	13	6.5
	40	4.5	15	7.5
	50	4.5	16	8
	65	4.1	22	11
Low Flow	30	3.4	10	5
	40	3.3	11	7.5
	50	3.1	12	8
	65	2.7	15	11

75-560	Standard Booster Pump 12 Volt	\$ 939
75-562	Standard Booster Pump 24 Volt	\$ 939
75-564	Low Flow Booster Pump 12 Volt	\$ 899
75-566	Low Flow Booster Pump 24 Volt	\$ 899
75-255	E-Z Installation Kit	\$ 155
75-563	Standard Booster Pump 48V	\$1,396

Flowlight Booster Pump Accessories

Inline Filter

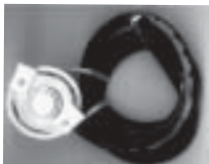
This is a plastic filter housing with 3/4" female pipe thread inlet and outlet fittings. Dimensions are 11.5" long x 5" diameter. A 5 micron filter element is included. Order spare elements below.



75-280	Inline Filter w/Element	\$ 69.00
75-754	5 Micron Filter Element	\$ 9.95

Dry Run Switch

This switch allows the Booster Pump to automatically shut-off in case the pump runs dry. This will prevent costly damage to the pump.



75-250	Dry Run Switch	\$ 99
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Surface Pumps

Suncentric Centrifugal™ Pumps

This centrifugal pump is designed for agricultural, irrigation and swimming pool use. It can tolerate silty water and it can lift from a shallow well, river, lake pond or tank and deliver up to 50 gallons per minute. Maximum suction is 10 feet at sea level. It is simple and serviceable cast-iron and bronze head with a 24 volt or 36 volt DC motor. The Flowlight Centrifugal pump is 19" long, 7" in diameter and weighs 50 pounds. The intake is 1-1/4" FPT and the outlet is 1" FPT.

We supply models designed for solar array-direct operation and models for operating from battery power. A Linear Current Booster (LCB) is not required.

75-115 **Model 7322 - 24V Pump (specs: 25ft lift - 5 gpm, 5ft lift - 25 gpm)** \$ 1,049
Many Models Available Call with Pumping Requirements (feet of lift, gallons per day).



Solar Force™ Piston Pump

The long-life Solar Force Piston Pump utilizes solar-electric or battery power to draw surface water from a shallow well, spring, pond, river or tank. It can push water uphill and over long distances. It may be used for domestic or irrigation pressurizing. Suction capacity is 25 feet (subtract 1 foot for every 1000 feet elevation above sea level). It is dirt tolerant, very long-lasting, and reliable. It can be repaired or rebuilt by a 3rd world mechanic using simple tools. The pump uses less electrical energy per gallon of water delivered than any pump we sell. The pump head is cast iron with a brass cylinder.

75-321 **Model 3010 Piston Pump 12/24 Volt** \$ 1,649
 75-322 **Model 3020 Piston Pump 12/24 Volt** \$ 2,199
 75-323 **Model 3040 Piston Pump 12/24 Volt** \$ 2,325



V = Voltage • Specify 12, 24, 48, 90 115ac, 230ac

Total Vertical Lift				Model # 3010 -V- B			Model # 3020 -V- B or PV			Model # 3040 -V- B or PV		
Feet	Meters	PSI	kg/ sqcm	GPM	lpm	Watts	GPM	lpm	Watts	GPM	lpm	Watts
20	6.1	8.7	0.61	5.9	22.3	77	5.2	19.7	110	9.3	35.2	168
40	12.2	17.4	1.22	5.6	21.3	104	5.2	19.7	132	9.3	35.2	207
60	18.3	26	1.83	5.3	20.2	123	5.1	19.3	154	9.2	34.9	252
80	24.4	35	2.44	5.0	19.7	152	5.1	19.3	182	9.2	34.9	286
100	30.5	43	3.05	5.1	09.2	171	5.0	18.9	202	9.1	34.5	322
120	36.6	52	3.66	4.9	18.7	200	5.0	18.9	224	9.1	34.5	364
140	42.7	60	4.27	4.9	18.7	226	5.0	18.9	252	9.1	34.5	403
160	48.8	70	4.88	Specifications vary ± 10%			4.9	18.6	269	PV models are measured at 14, 28, or 56V (array-direct)		
180	54.9	78	5.49				4.9	18.6	280			
200	61.0	87	6.10				4.8	18.2	308			
220	67.1	96	6.71				4.7	17.8	314			

High Lifter Water Powered Pumps

The High Lifter is designed for many years of continuous use and can lift 750 to 1500 gallons of water per day up to 1000 feet high without using gasoline or electricity. By harnessing the energy from a head of water, the High Lifter drives a portion of this water uphill. Pistons provide the pumping action and water is the only lubricant used. Use it for domestic water supplies, livestock watering, irrigation and garden water supply. Two pump models, with different pump ratios, are available. Write or call for specifications.

75-910 **H44 High Lifter Ram Pump** \$ 1,449
 75-940 **H49 High Lifter Ram Pump** \$ 1,449



Surface Pumps

Solaram Surface Pump

The Solaram is made by Dankoff Solar Products, a world leader in solar pump manufacturing. This is their most powerful surface pump. It pushes water uphill as high as 1000 vertical feet, to supply as much as 5400 US gallons of water per day. Prices range from \$4000 to \$6400. Use the performance chart below to determine the model best suited for your application. For solar array-direct applications (non-battery) the PV arrays rated power must exceed the watts requirement by 25% and a Linear Current Booster added. Contact us for specifications and pricing on all components. The Solaram Surface Pump is dirt tolerant, dry run tolerant and has a 20 year life expectancy. **Reading the chart below:** Use the chart to determine a 4-digit model number. Make note of the voltage indicated.



- Total Lift = Vertical Distance from surface of the water source to the pipe outlet or top of storage tank, plus pipeline friction loss
- GPM = U.S. Gallons per Minute
- LPM = Liters per Minute

8000 Series Solaram™ Surface Pump Performance Chart

Model Numbers: First 2 digits → Second 2 digits →

TOTAL LIFT		___ 21			___ 22			___ 23			___ 41			___ 42			___ 43			Model # Volts
Feet	Meters	GPM	LPM	Watts	GPM	LPM	Watts	GPM	LPM	Watts	GPM	LPM	Watts	GPM	LPM	Watts	GPM	LPM	Watts	
0-80	24	3.0	11.4	170	3.7	14.0	207	4.6	17.4	285	6.2	23.5	258	7.5	28.4	339	9.4	35.6	485	← 81 24V
120	37	2.9	11.0	197	3.7	14.0	238	4.5	17.1	319	6.0	22.7	305	7.3	27.7	396	9.1	34.5	539	
180	49	2.9	11.0	225	3.6	13.6	268	4.5	17.1	352	5.8	22.0	354	7.2	27.3	453	8.9	33.7	619	
200	61	2.9	11.0	247	3.6	13.6	296	4.5	17.1	388	5.7	21.6	400	7.1	26.9	513	8.9	33.7	693	← 82 24V
240	73	2.8	10.6	265	3.6	13.6	327	4.5	17.1	427	5.6	21.2	453	7.0	26.5	572	8.6	32.6	724	
280	85	2.8	10.6	286	3.6	13.6	356	4.4	16.7	466	5.5	20.8	499	6.9	26.2	628	8.4	31.8	801	
320	98	2.8	10.6	315	3.5	13.3	388	4.4	16.7	496	5.4	20.5	548	6.8	25.8	686	8.3	31.5	869	← 83 180V
360	110	2.8	10.6	342	3.5	13.3	416	4.4	16.7	536	5.4	20.5	562	6.6	25.0	733	8.2	31.1	927	
400	122	2.7	10.2	363	3.4	12.9	450	4.4	16.7	572	5.3	20.1	649	6.5	24.6	782	8.1	30.0	1122	
480	146	2.7	10.2	416	3.4	12.9	505	4.3	16.3	649	5.3	20.1	717	6.5	24.6	900	8.0	30.2	1265	← 84 180V
560	171	2.7	10.2	456	3.3	12.5	570	4.3	16.3	693	5.2	19.7	800	6.5	24.6	1045	8.4	31.8	1397	
640	195	2.7	10.2	502	3.3	12.5	623	4.2	15.9	774	5.1	19.3	893	6.5	24.6	1116	8.2	31.1	1540	
720	220	2.6	9.9	551	3.2	12.1	690	4.1	15.5	856	5.1	19.3	1031	6.4	24.3	1287	8.1	30.7	1683	← 85 180V
800	244	2.6	9.9	589	3.2	12.1	715	4.1	15.5	931	5.1	19.3	1114	6.4	24.3	1408	8.0	30.3	1815	
880	268	2.6	9.9	647	3.2	12.1	774	4.0	15.2	1082	5.1	19.3	1208	6.3	23.9	1529	8.0	30.3	1958	
960	293	2.6	9.9	705	3.1	11.7	838	4.0	15.2	1190	5.0	18.9	1289	6.1	23.1	1650	8.0	30.3	2145	

Performance may vary ± 10 %

Hot Water Pumps

Hartell MD3DCL Hot Water Pump

This is a state-of-the-art universal DC pump which is used extensively as a circulating pump between a tank and solar collectors in domestic hot water heating systems. It is magnetically driven so heat from the pump won't effect the highly efficient DC brushless motor. It may be used with 12 or 24 volts battery systems, or powered directly by an 18 watt 12 volt PV module. It also functions as a circulating pump in a radiant floor heating system that requires less than 5 gallons per minute of circulation. It has a 7,000 hour life expectancy.

75-185

Hartell MD3DCL Hot Water Pump

\$ 379



Hartell MD10HEH Hot Water Pump

This magnetic drive pump has an electronically commutated, high efficiency brushless motor with a 30,000 hour life expectancy. It may be operated from an 18 to 22 watt solar module or directly from a 12 volt battery system. They work well for closed loop solar hot water heating systems and radiant floor heating systems. It will pump 5 gallons per minute at 11 feet of head with 17 volts input to the motor. Median rate is 5 GPM at 6.5 foot head at 13 volts input.

75-182

Hartell MD10HEH 12V Pump

\$ 619



Pump Accessories

Linear Current Boosters (LCBs)

Linear Current Boosters greatly improve the performance of pumps, fans and similar motorized loads that are operated directly on a solar array, by matching the peak power of the solar array to the current and voltage requirements of a loaded motor. In a well matched system, on a sunny day, a 30% increase in daily power delivery can be expected. On mismatched systems or in cloudy weather, there will be a much greater increase in performance. The PV array should be sized so that in full sun the motor can be driven to full voltage without the LCB. Any time the sun is not at brightness, the LCB will improve the power transfer efficiency to the motor. The result will be much earlier start-up in the morning and longer running time in the evening. Positive displacement pumps will deliver water at a reduced rate with the LCB at times that they would not start at all without it. Use an LCB with a current rating equal to or greater than the solar module or array being used.

Dankoff LCBs

Dankoff LCBs are a variable voltage converter with MPPT (Maximum Power Point Tracking) to draw the most available power from a PV array. They feature: - LED indicators, for input and output; - Built in fuse holder, and choice of two fuses included; - Remote switch terminals (normally open contacts) with bypass switch; - Flexible input; 12/24 V models except 12 - 36 V array. This allows an array of 12, 24 or 36 V to match or step down to a 12 or 24 V pump or fan. Increasing the array voltage reduces wire sizing requirements. Doubling the voltage allows the run to be increased 4 times for a given wire size. If you have a long wire run, place the controller at the pump so the long run is at the higher voltage.

Rain tight enclosure. 5 year warranty.

75-590	LCB, 8 amp, 12/24V	\$ 249
75-591	LCB, 16 amp, 12/24V	\$ 315
75-592	LCB, 10 amp, 48V	\$ 425



Pressure Drop in Pipe (head loss) in feet per 100 feet of pipe in PVC type Class 160 plastic pipe

Flow (GPM)	Nominal Pipe Diameter (inches)						
	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
3	.32	.09	.05				
4	.53	.16	.09	.02			
5	.81	.25	.12	.05			
6	1.13	.35	.18	.07	.02		
8	1.94	.58	.3	.09	.05		
10	2.93	.88	.46	.16	.07	.02	
12	3.51	1.04	.53	.18	.07	.02	
14	4.11	1.22	.65	.21	.09	.02	
16	5.47	1.64	.85	.28	.12	.05	
18	7.02	2.1	1.09	.37	.14	.05	
20		2.61	1.34	.46	.18	.07	.02
24		3.79	1.96	.67	.25	.09	.04
26		4.43	2.31	.79	.3	.12	.05
28		5.15	2.66	.9	.35	.14	.05
30		5.91	3.05	1.04	.42	.16	.11
35			3.46	1.18	.46	.18	.12
40			4.62	1.57	.62	.23	.13
45				1.99	.79	.3	.15
50				2.49	.79	.3	.20
55				3.03	1.2	.46	.25
60				3.6	1.43	.55	.30
65					1.66	.65	.35
70					1.94	.74	.40
75					2.22	.85	.45
80					2.52	.97	.50
85					2.84	1.09	.60
100						1.36	.80
150						1.5	1.6
200						1.66	2.7
300							5.8
400							9.9

Flows higher than listed represent turbulent flow, which causes excessive friction loss.

Float Switch

This SPDT float switch can be used to control a pump in tank filling or tank emptying operations. Contacts in the float switch at 12 degrees above or below horizontal. A pipe clamp secures the cable to something in the tank. The length of cable from the clamp to float determines the difference between turn-on and turn-off level. Maximum current is 5 amps. For larger pumps, use this float switch to turn a relay on and off and let relay contacts control the pump. 2 year warranty.

75-111 Float Switch \$ 79

Available as a pump up or pump down.



Water Level Sensor

This sensor can be used with any LCB on the previous page with the RC option. Depending on how you wire it, this sensor can signal an LCB to turn the pump on or off when water comes in contact with it. Use it to stop a pump from running dry, or turn a pump off when a tank is full. Use 22 gauge wire for distances of up to 300 feet between the sensor and the LCB. Use with RC suffix LCBs.

25-135 Water Level Sensor \$ 89