

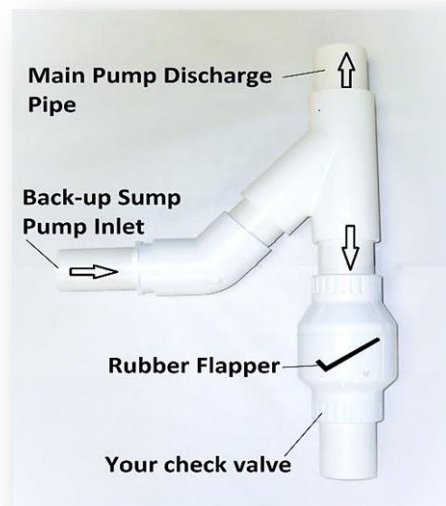
# FACT SHEET

# WATER POWERED BACK-UP SUMP PUMPS

**Fact #1: Can a water powered sump pump be piped into the same discharge pipe of my main sump pump? Answer: NO**

First, we need to understand the operating principal. When discharging into the main pump pipeline, the check valve on your main sump pump line closes and water is then forced upward to the outdoors. Here are points to consider.

- Should the main sump pump line be clogged or frozen, the main pump cannot operate, nor can the back-up pump.
- Your check valve has a rubber flapper inside and is subject to continuous force by the operation of the main pump. Should the check valve fail, and they do, the back-up sump pump water will flow backwards and flood the basement.
- Lastly, it is against the National Plumbing Code to connect a water powered back-up pump into the main discharge line.



**Fact #2: Do water powered sump pumps deliver the volume of pumping as stated in some of the manufacturer's literature? Answer: NO**

- Some water powered sump pump manufacturers create their pumping chart with a water pressure statement that says "water pressure with valve open and water flowing". There is a 20 psi pressure loss when the pump is operating. This means that you need to read the pumping chart at the point 20 psi less than what your gauge reads with the pump off.
- Example: The pressure in your house is 50 psi. Then you must read the pumping chart at 30 psi, not 50 psi to determine the actual volume.



**Fact #3: Do I need a battery operated high water alarm with my water powered back-up pump? Answer: YES**

Water powered sump pumps may operate quietly, unknown to the homeowner. Here are a couple of points for consideration:

- A water alarm will notify you of a high sump water condition.
- The homeowner must be notified that the main sump pump has failed to operate and corrective action must be taken.
- Water powered pumps may operate quietly unbeknown to the homeowner until they receive their water bill.
- A water alarm may be connected to an alarm/security system for further notification.



**Fact #4: How much water does the water powered sump pump use?**

**Answer:** All water powered back-up sump pumps use the same volume of city water in spite of how the different manufacturers state it. Water pressure, height of pumping all factor into the volume.

Water usage as follows:

Water Pressure	City Water	= Sump Water
40 psi	1-gal	1-gal
60 psi	1-gal	1-1/2 gal
90 psi	1-gal	2-gal

**Fact #5: Do I need a backflow preventer to meet my local plumbing code?**

**Answer: YES**

All municipalities require some form of backflow preventer with a water powered pump.

- Back-up sump pumps that are mounted inside the sump pit require a testable backflow preventer called a Reduced Pressure Zone, aka: RPZ. Approximate cost \$300.00
- The RPZ has a pressure drop of 12 psi and it will affect the pumping volume.
- The RPZ requires annual inspection by an authorized testing company.
- Refer to Fact Sheet- "Backflow Prevention"
- A ceiling mounted back-up sump pump that is discharged independently outdoors typically only requires the minimum backflow device called a Dual Check Valve. aka: DCV. Approximate cost \$30.00
- Refer to Fact Sheet- "Backflow Prevention"



**Fact #6: Is there a simple product comparison guide for water powered pumps?**

**Answer: YES**

Pump Manufacturer	Model No.	Published Pumping Volume	Actual Pumping Volume	Actual Pumping w/ RPZ	Pipe Connection	Water Alarm	Pit Diameter	Float Action	Warranty Period
		40-90PSI	50PSI	50PSI					
Basepump	RB750	700-900	725	600-700	1/2" or 3/4"	Yes	10"	Hydraulic	5-Years
Basepump	HB1000	900-1,400	950	900-1000	3/4"	Yes	10"	Hydraulic	5-Years
Basepump	CB1500	1,400-2,000	1,450	1400-1500	3/4" or 1"	Yes	10"	Hydraulic	5-Years
Liberty	SJ10	654-966	435	N/A	3/4"	No	18"	Mechanical	3-Years
HomeGuard	503	762-1,200	600	350	3/4"	No	18"	Mechanical	NA

Note: Some manufacturer's pumps may not operate with an RPZ when the city water pressure is below 50psi