

## Installation Manual

5824000H

# SumpJet® Water Powered Backup System

## Models

**SJ10**

*No Alarm*

**SJ10A**

*With Alarm*

**SJ10A-EYE**

*With NightEye® Alarm*



**SJ10A**



**SJ10A-EYE**





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## Safety Guidelines

	This safety alert symbol is used in the manual and on the pump to alert of potential risk for serious injury or death.
	This safety alert symbol identifies <b>risk of electric shock</b> . It is accompanied with an instruction intended to minimize potential risk of electric shock.
	This safety alert symbol identifies <b>risk of fire</b> . It is accompanied with an instruction intended to minimize potential risk of fire.
	This safety alert symbol identifies <b>risk of serious injury or death</b> . It is accompanied with an instruction intended to minimize potential risk of injury or death.
<b>⚠ DANGER</b>	Warns of hazards, which if not avoided, <b>will</b> result in serious injury or death.
<b>⚠ WARNING</b>	Warns of hazards, which if not avoided, <b>could</b> result in serious injury or death.
<b>⚠ CAUTION</b>	Warns of hazards, which if not avoided, could result in minor or moderate injury.
<b>NOTICE</b>	Signals an important instruction related to the pump. Failure to follow these instructions could result in pump failure or property damage.

<b>⚠ WARNING</b>	<b>Read every supplied manual before using pump system. Follow all the safety instructions in manual(s) and on the pump. Failure to do so could result in serious injury or death.</b>
<b>NOTICE</b>	<b>Installer: manual must remain with owner or system operator/maintainer.</b>
<p>Keep this manual handy for future reference.</p> <p>For replacement manual, visit <a href="http://libertypumps.com">libertypumps.com</a>, or contact Liberty Pumps at 1-800-543-2550.</p> <p>Retain dated sales receipt for warranty.</p>	<p>Record information from pump nameplate:</p> <p>Pump Model #: _____</p> <p>Pump Serial #: _____</p> <p>Manufacture Date: _____</p> <p>Install Date: _____</p>

## Safety Precautions

### **⚠️ WARNING** **RISK OF ELECTRIC SHOCK**

- Always disconnect any electric pumps from the power source before handling, installing, or adjusting the SumpJet.

### **⚠️ WARNING** **RISK OF SERIOUS INJURY OR DEATH**

- Sump water is non-potable. To reduce the risk of contamination of the potable water supply, additional backflow protection must be provided by the installer to meet the requirements of the local plumbing code or the requirements of the local water authority. As per the Uniform Plumbing Code® and per the Plumbing Codes of some states, including the State of Michigan, installation of this product requires the use of an RP/RPZ (Reduced Pressure device/Reduced Pressure Zone device) backflow protection device. Contact your local plumbing or water authority for more information regarding the requirements for your specific area.

### **⚠️ CAUTION**

- The SumpJet is designed for use in clear water only. It is not designed to remove waste water, sewage, effluent, or water with debris in it.

### **NOTICE**

- The SumpJet is designed for use with municipal water supply, and is intended to be used as an emergency backup to an existing pump system.
- The SumpJet comes with a foot valve installed and therefore does not require a check valve on the discharge. The foot valve has a removable poppet. Where freezing discharge pipes are a problem, simply unscrew the strainer screen, remove the poppet and spring, and replace the strainer. The SumpJet will now allow water to flow back into the pit, eliminating discharge pipe freezing.
- Maximum water pressure = 100 psi (690 kPa) with the valve closed.

- Recommended minimum water pressure (ahead of backflow prevention device) = 30 psi (207 kPa) with the valve open (less pressure may not eject water from basement adequately).
- For nominal backflow protection, the SumpJet is pre-equipped with an internal check valve certified to ASME A112.18.3 and ASME A112.18.1/CSA B125.1.
- Discharge of the SumpJet must not be connected to the primary sump pump.
- Discharge of the SumpJet must not be directly connected to the municipal drain.
- An air gap with a minimum 1" gap should be used, or the discharge should be directed outside of the building, with the end of the pipe between 150 and 610 mm (6 and 24 in) above the ground or the flood level of the area receiving the discharge.
- The inlet of the SumpJet is factory-equipped with a SharkBite® push-type pipe connector. This fitting can be used with various approved 3/4" potable water tubing and pipe, such as PEX tubing (ASTM F876, CSA B137.5), copper pipe (ASTM B 88), or CTS pipe (ASTM D 2846, CSA B137.6). For more details on using the SharkBite, visit [www.sharkbite.com](http://www.sharkbite.com).
- Do not use paste-type sealant on inlet threads, and do not sweat copper fittings within 18" of SumpJet body. Use PTFE (Teflon®) sealing tape only when assembling threaded fittings into SumpJet inlet. Do not overtighten threaded inlet fitting, and do not hold onto float plunger shroud when tightening.
- Purge water line prior to connection to SumpJet to ensure debris does not enter unit and clog the operating valve.
- The SumpJet utilizes a quick-acting valve which, per UPC, requires the use of an approved water pressure absorbing device to prevent water hammer.
- Do not use SumpJet in water greater than 130 °F.

Table 1. SumpJet Specifications

Water pressure at inlet of SumpJet with valve open and water flowing		Sump water removal at various heads. (static head in 1-1/2" pipe or larger)											
		4 ft		1.21 m	8 ft		2.4 m	12 ft		3.6 m	15 ft		4.5 m
PSI	KPA	GPM	GPH	M <sup>3</sup> /hr	GPM	GPH	M <sup>3</sup> /hr	GPM	GPH	M <sup>3</sup> /hr	GPM	GPH	M <sup>3</sup> /hr
20	138	11.0	660	2.5	5.8	348	1.3						
30	207	12.8	765	2.9	9	540	2.0	5.5	330	1.2			
40	276	15.4	924	3.5	12.5	750	2.8	9.3	558	2.1	7.2	432	1.6
50	345	17.2	1032	3.9	14.5	870	3.3	12	720	2.7	10	600	2.3
60	414	19.8	1185	4.5	17	1020	3.9	15.2	912	3.5	13.5	810	3.1

**Note:** For optimal performance, minimum recommended operating pressure is 30 psi. Use of an RP/RPZ may lower operating pressure.

## General Information

Ensure this manual is read and understood prior to installing and using this pump. Each Liberty Pumps pump is individually factory tested to ensure proper performance. Closely following these instructions will eliminate potential operating problems, assuring years of trouble-free service.

Liberty Pumps products are designed for minimal maintenance. However, regular checks will ensure longer life and greater operating reliability.

**WARRANTY:** No repair work should be carried out during the warranty period without prior factory approval. To do so may render the warranty void.

**PUMP SERIAL NUMBER:** In all correspondence and reports, make certain that the pump serial number is given.

## Pump Design

The Liberty Pumps SumpJet is designed for emergency backup to an existing pump system. It uses the municipal water supply to evacuate water from the sump. It is **not** intended to be used as the primary sump water removal pump. It is intended to remove clear sump water only.

Prolonged use of the SumpJet will result in increased municipal water consumption. The SumpJet uses approximately 1 gallon of water to remove 2 gallons of sump water, depending on elevation.

## Optional Alarm

Liberty Pumps recommends the use of an audible high water alarm. The model SJ10A features an alarm system to warn when the SumpJet is activated. The model SJ10A-EYE features the NightEye® Alarm for wireless alarm protection. If the model SJ10 was purchased without an alarm, an alarm (ALM-P1 or ALM-P1-EYE) may be ordered from your local distributor or contact Liberty Pumps for more information.

## Inspection Upon Receipt

The shipping container should be immediately inspected for damage that may have occurred in shipment. Exercise care in opening the shipping container to avoid damage to the pump. Remove any blocking and cushioning from within the container.

Check all cushioning for spare parts before discarding. Visually check the pump and any parts for damage. Report any damage or shortage of parts.

## Storage Before Use

Liberty Pumps products are shipped from the factory ready for installation and use. They should be held in storage if the pump station is not complete. If storage is necessary, the pump should remain in its shipping container. It should be stored in a warehouse or storage shed that has a clean, dry, temperature-stable area where the pump and its container should be covered to protect it from water, dirt, dust, etc.

### NOTICE

- ◆ At no time should the pump be stored within an incomplete wet pit. The pump should not be placed into the pit until it can be fully operational.

## Long Term Storage

If long term storage of the SumpJet is required, it should be stored indoors in a clean, dry temperature-stable environment. The pump should be covered to protect it from water, dirt, dust, etc. Do not allow the pump to freeze.

## Maintenance

Installed pumps which are idle for long periods of time should be manually operated once a month to ensure proper operation. Check for proper operation of the float and clean any debris that may be on the float or the suction screen. Make sure that the float operates freely without any restrictions.

## Installation

### **⚠ WARNING** **RISK OF ELECTRIC SHOCK**

- Always disconnect any electric pumps from the power source before handling, installing, or adjusting the SumpJet.

### **NOTICE**

- ◆ The SumpJet comes fully assembled. Only placement and connection is required.
- ◆ Do not use a garden hose. Garden hose is not designed to hold municipal pressure indefinitely. It could leak or burst and cause flooding. The SumpJet requires permanent piping methods such as copper, PEX, or CTS, or any other permanent plumbing method, be used for installation. To achieve maximum performance from the SumpJet, it is recommended that the unit is plumbed with 3/4" pipe. All water supply piping shall be made of materials and methods approved by the local plumbing codes.
- ◆ For nominal backflow protection, the SumpJet is pre-equipped with an internal check valve certified to ASME A112.18.3 and ASME A112.18.1/CSA B125.1. Additional backflow protection must be provided by the installer to meet the requirements of the local plumbing code or the requirements of the local water authority. As per the Uniform Plumbing Code and per the Plumbing Codes of some states, including the State of Michigan, installation of this product requires the use of an RP/RPZ backflow protection device. Contact your local plumbing or water authority for more information regarding the requirements for your specific area.
- ◆ Discharge of the SumpJet must not to be connected to the primary sump pump.
- ◆ Discharge of the SumpJet is not to be directly connected to the municipal drain.
- ◆ An air gap with a minimum 1" gap should be used, or the discharge should be directed outside of the building, with the end of the pipe between 150 and 610 mm (6 and 24 in) above the ground or the flood level of the area receiving the discharge.
- ◆ The inlet of the SumpJet is factory-equipped with a push-type pipe connector, SharkBite, and can be used with PEX, CTS, or copper pipe.

## Installation Steps

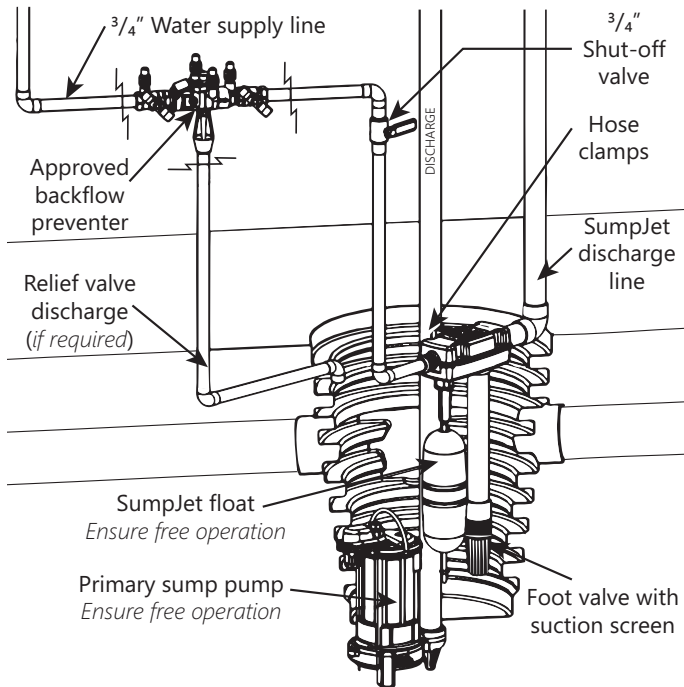


Figure 1. Typical installation

1. Using the hose clamps provided, mount the SumpJet to the existing discharge pipe. Place the unit so the float level will operate a few inches above the turn-on level of the primary sump pump. (Refer to Figure 2). Tighten hose clamps on discharge pipe.

**Note:** If this type of installation will not work, refer to alternate installation in Step 10.

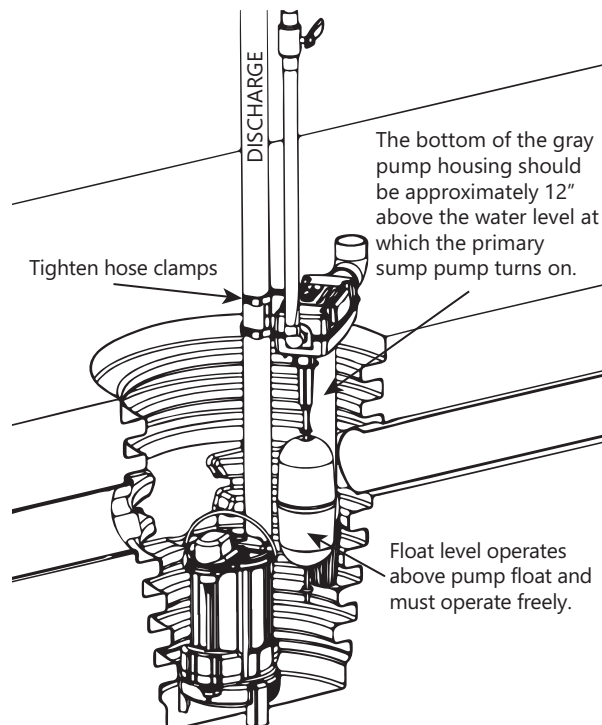


Figure 2. SumpJet Placement

2. After mounting the SumpJet, prepare to hook into the existing municipal water supply line. Shut off the municipal water supply, and plumb the tubing or piping into the municipal water supply line. Use the appropriate backflow prevention per local codes and jurisdiction.

The water supply and discharge piping each require a union or other quick-disconnect fitting to make the pump accessible for servicing, and a dedicated shut-off valve installed on the water supply line within 6 ft. (1.8 m) of the pump. All water supply piping shall be made of materials and methods approved by local plumbing codes.

3. Prior to connecting the water supply line to the SumpJet, purge the water line to ensure it is free from debris, solder, pipe sealant, etc.
4. To connect the water supply line to the SharkBite, cut the pipe or tubing end square. Ensure that there are no burrs or scratches 1" from the cut end.
  - 4a. Mark the pipe or tubing 1" from the cut end to indicate proper insertion depth. If using PEX tubing, the tube liner in the end of the SharkBite must be used. For copper and CTS piping, the tube liner must be removed (use fingers or pliers).
  - 4b. Insert the tubing or pipe into the SharkBite through the release collar to rest against the grab ring.
  - 4c. Push the tube or pipe firmly until it reaches the tube stop.
  - 4d. To ensure the tube or pipe is correctly inserted, check that the depth mark is up to the end of the release collar.
5. If the SharkBite fitting is removed for connection to other types of 3/4" NPT threaded fittings, make sure all sealing tape is removed from the threaded inlet of the SumpJet. Use a small pick-type tool if necessary. Do not allow any debris to enter the valve body.

### NOTICE

- ◆ If reconnecting the SharkBite or other threaded fitting, use PTFE (Teflon®) sealing tape only when assembling threaded fittings into SumpJet inlet.
  - ◆ Do not over-tighten threaded inlet fitting, and do not hold onto float plunger shroud when tightening.
  - ◆ Do not sweat pipes or fittings directly connected to the SumpJet. Heat transferred from the copper will damage plastic parts.
6. Determine the length of discharge pipe required to the discharge exit point. Using schedule 40 PVC pipe, glue the discharge pipe into the socket elbow of the SumpJet. Complete all discharge piping. Discharge piping should be routed to the yard outside the building.

**Note:** The SumpJet comes complete with a foot valve. There is no need to install a check valve on the discharge pipe.

**Note:** The foot valve has a removable poppet. Where freezing discharge pipes are a problem, simply unscrew the strainer screen, remove the poppet and spring, and replace the strainer. The SumpJet will now allow water to flow back into the pit, eliminating discharge pipe freezing.

7. Turn the municipal water supply back on and open the shut-off valve. Check for leaks. Test the SumpJet to ensure that it is operational by filling the sump pit with water from a garden hose or bucket.
8. Re-connect primary electric sump pump to power supply.
9. If sump cover is desired, it will be necessary to add additional holes and slots to make access for the SumpJet suction pipe and float rod. Refer to the template provided in Figure 4.
10. If the SumpJet cannot be mounted to the primary sump pump discharge pipe, a piece of wood may be used to mount the SumpJet. Cut holes as per Figure 4. There are four screw holes to fasten the SumpJet to the wood. Use #8 x 2.5" long wood screws. Refer to Figure 3.

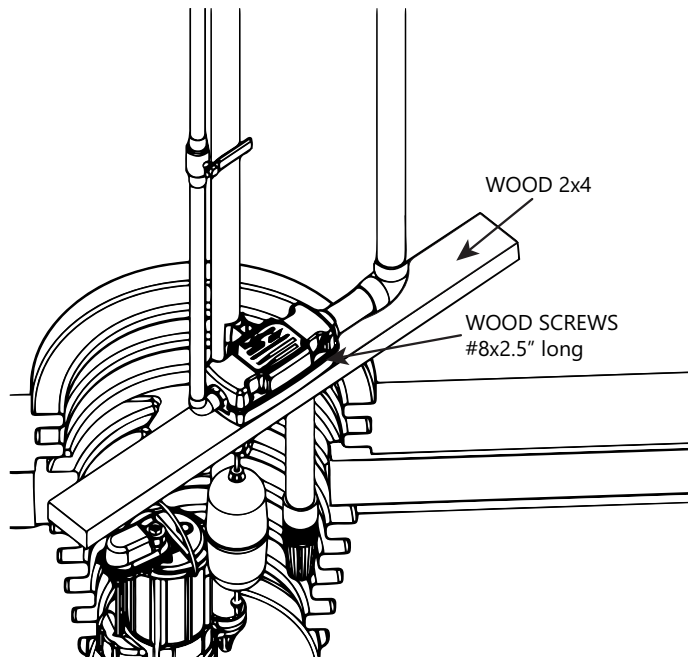


Figure 3. Alternate SumpJet Installation

## Warranty

### Liberty Pumps Wholesale Products Limited Warranty

Liberty Pumps, Inc. warrants that Liberty Pumps wholesale products are free from all factory defects in material and workmanship for a period of three (3) years from the date of purchase (excluding batteries). The date of purchase shall be determined by a dated sales receipt noting the model and serial number of the pump. The dated sales receipt must accompany the returned pump if the date of return is more than three years from the date of manufacture noted on the pump nameplate.

The manufacturer's sole obligation under this Warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided the part or assembly is returned freight prepaid to the manufacturer or its authorized service center, and provided that none of the following warranty-voiding characteristics are evident:

The manufacturer shall not be liable under this Warranty if the product has not been properly installed, operated, or maintained per manufacturer instructions; if it has been disassembled, modified, abused, or tampered with; if the electrical cord has been cut, damaged, or spliced; if the pump discharge has been reduced in size; if the pump has been used in water temperatures above the advertised rating; if the pump has been used in water containing sand, lime, cement, gravel, or other abrasives; if the product has been used to pump chemicals, grease, or hydrocarbons; if a non-submersible motor has been subjected to moisture; or if the label bearing the model and serial number has been removed.

Liberty Pumps, Inc. shall not be liable for any loss, damage, or expenses resulting from installation or use of its products, or for indirect, incidental, and consequential damages, including costs of removal, reinstallation or transportation.

**There is no other express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three years from the date of purchase. This Warranty contains the exclusive remedy of the purchaser, and, where permitted, liability for consequential or incidental damages under any and all warranties are excluded.**



**Hole Template**

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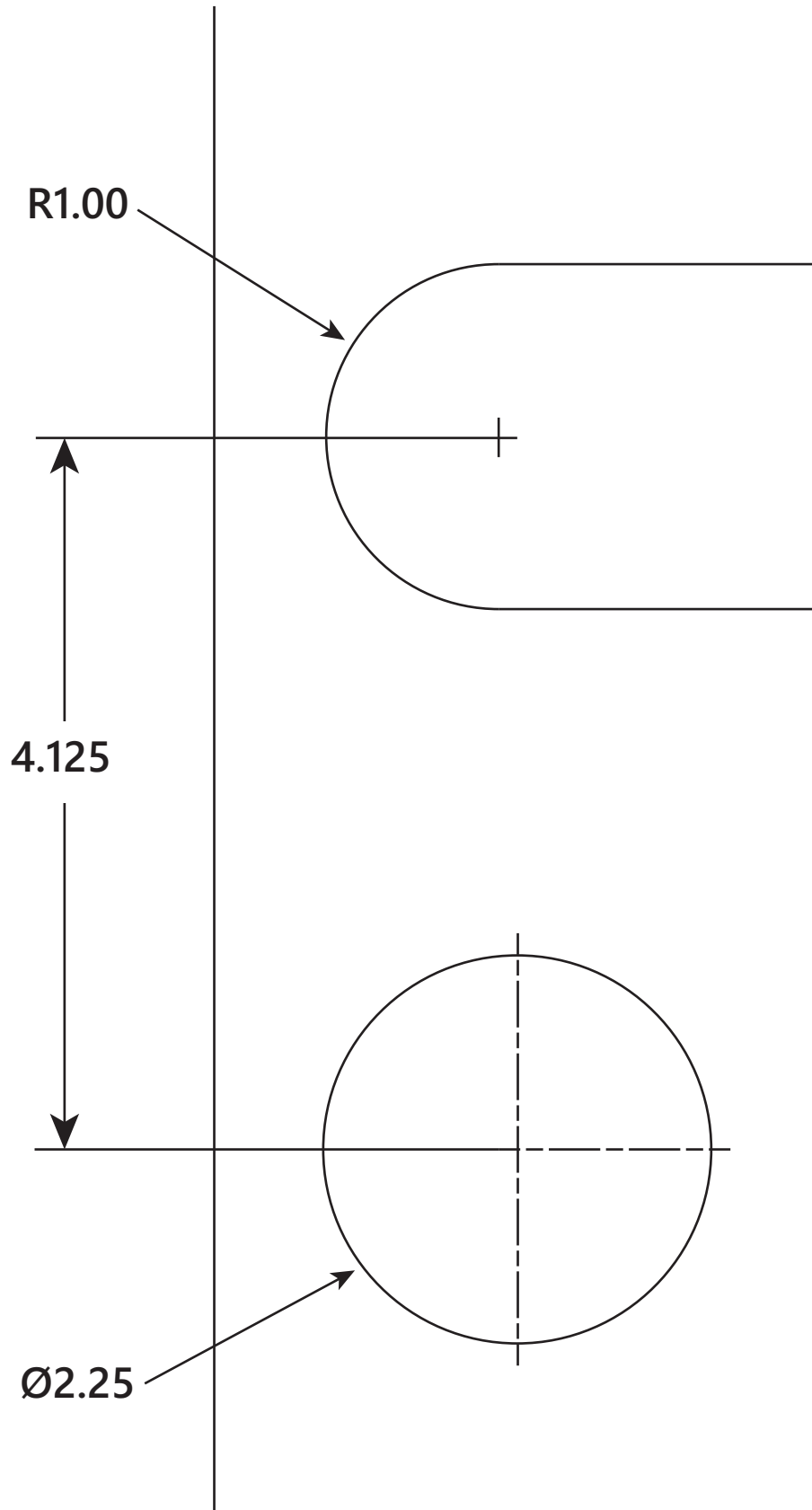


Figure 4. SumpJet Hole Template



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