Size the suction and discharge pipes as shown in Chart 1.

- Make sure the suction line always slopes up to the pump inlet and that there are no sags (which can form air pockets and prevent priming) in the pipe.
- Install a foot valve the same size as the suction pipe on the pipe's inlet. Fill the foot valve with water to make sure that it closes and does not leak. Make sure that the valve will open.
- Screw the foot valve onto the end of the suction pipe and lower it into the water. The foot valve should be at a least one foot deep in the water to avoid cavitation (sucking air). Maximum vertical distance to water from the center of the pump's inlet port is 25 feet.
- 4. Add pipe to reach the pump. Include a union close to the pump for ease of service.

Be sure all joints in the suction pipe are air-tight. The pump cannot prime or operate if there are air leaks in the suction pipe.

Install discharge pipe as required, using Chart 1 for sizing. Install a tee (tail up, with a plug in the tail) close to the pump discharge port to allow for priming.

Keep hands away from drive pulleys while pump is operating. Install quards to fit your installation.

The pump comes from the factory with the correct diameter pulley installed. DO NOT CHANGE THE PULLEY. See Bulletin 4163 for more information.

- 1. Bolt the motor and pump to a steel or heavy wood base plate.
- Connect the incoming power to the motor and check the motor rotation. Do this BEFORE installing the V-belt. Match motor rotation to the direction of the rotation arrow on the pump case.

Rotating the pump in the direction opposite to the rotation arrow will cause severe damage to the impeller and shaft.

- 3. Align the V-belt. The belt should be just tight enough to prevent slippage; overtightening the belt will overload the motor.
- 4. All pump bearings are sealed and do not require lubrication for the life of the bearing.
- Through the tee in the discharge line, fill the pump and the suction pipe full of water. If the pump body is rotated so that the discharge isn't on top of the pump, be sure to open a vent in the body to allow it to fill as completely as possible.

with the discharge up. Trapped air can prevent the pump from priming or from lifting water into the pump suction for operation.

pump body.

trapped air.

- 2. Replace the plug in the tee and start the pump.
- 3. If the pump fails to prime, repeat the priming process.

of water and that the suction pipe does not have any air leaks in it.

farther than it was designed to do.

