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## BLOW BY BLOW

**A**s with everything, there is a right and a wrong way to winterize an irrigation system. Due to their size, golf course irrigation systems require a specialized approach to keep from damaging the system and to conduct the winterization in a safe manner.

First, air compresses and water does not. Therefore, air is dangerous. When using compressed air in a system you need a way for the air to escape. There should be no dead ends for the air pressure to build up against. The danger is why air-release valves are installed on mainlines. When air is compressed the pressure builds until something breaks. To be safe and damage free, caution should be taken.

When winterizing, volume (cfm) is important, not pressure. The system can be as easily blown out with 40 psi as with 80 or 100 psi. Higher pressure will allow you to winterize the system faster, but it can do damage and causes a dangerous situation. With valve-in-head sprinklers higher pressures are more apt to launch the internal out of the case. Toro recommends a blowout pressure of only 35-50 psi. If you do not have a compressor that produces enough volume, the air will only remove part of the water and then ride over the remaining water in the pipe because it is compressible. You need enough air to move all of the water out of the way so there is a slug of water moving down the pipe ahead of the air. A compressor of 800 cfm or larger for 18 holes is a good start.

Heat is another important consideration. Many compressors produce hot, not cold, air. Make sure the tempera-

ture is low to prevent damage – like melting diaphragms and other plastic pieces. If your compressor produces hot air, then you must run the air through metal pipe or a long length of hose to absorb the heat. You need to make sure the air is cool as it enters the PVC piping. If your blow out on a connection is in your steel pump discharge piping, it won't be an issue. Entering your system through a metal quick coupler helps, but is not ideal.

Many people think the quicker the winterization/blow out process can be done, the better. This is not the case.

your drains and drain out the mainline as much as it will let you. Close the drains from high point to low point and close the air release valves. If you don't close the air release valves, the air will vacate through them and not the sprinklers. Turn on each sprinkler until a light mist is achieved and then shut the sprinkler off. Quick couplers should be activated to clear them of water during the process. It's best to use a remote control as the amount of time each sprinkler should operate will vary. At the beginning of the process, the sprinklers will operate longer

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Like the tortoise and the hare, slow and steady is best. Be consistent and blow out the system slowly, taking several days. The bigger the pipe the bigger the compressor will be needed to keep the water moving through the piping network in front of the air.

There are varying opinions on where to blow out from. Some say the high point, some the low point. Some move the compressor around from high point to high point. I like the air to take the same path as the water, that way you know you have been through all the piping. The easiest way to do that is to blow from your water source. Many pump stations have a blowout connection built in to the discharge zee fitting to connect to.

To blowing out efficiently, open your air release valves and then open

and at the end less depending on how you lateral piping is configured. When the blowout is complete shut off the compressor and allow several hours for any remaining water to settle into the low points. Go back to low areas and activate the sprinklers again. If there is water and not a mist operate them till a fine mist is present as before. Do not operate sprinklers not producing a flow of water. The air will damage components.

When completed, open your air release valves so they are ready for the spring start up. If you know from experience that you have an area or two that collects water over the winter there should be a drain there and leave them open for the winter, but closed if water will back up into the piping through the open drain. **GCI**

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