

Compressed-Air Winterization (Cold Climates)

Irrigation professionals across the country need to understand how the HydroKnot impacts seasonal compressed air blow-outs.

We recommend referring to [The Blown/Compressed Air Method](#) to review standard methods used for blowing out irrigation lines with compressed-air. And please remember, this is not a method for amateurs or average "do-it-yourselfers". Almost all big sprinkler systems such those at golf courses and parks are winterized using compressed air. One small mistake can cause severe line blowouts regardless of what products are installed. HydroKnot LLC recommends that only experienced professionals perform Compressed Air Blow-Outs.

Further, HydroKnot LLC recommends the following standard industry procedures:

RainBird: http://www.rainbird.com/pdf/turf/ASC_Fall00.pdf

Hunter: <http://www.hunterindustries.com/resources/pdfs/technical/domestic/lit086w.pdf>

Irrigation Tutorials: <http://www.irrigationtutorials.com/winter.htm>

Expected test outcome is that the HydroKnot allows compressed-air to push water out of the lines when standard blow-out procedures are followed. When standard blow-out procedures are not followed, all line segments and components are at risk of severe damage, and this risk is independent of whether a HydroKnot is installed in a zone or not.

Test Results: Passed repeatedly across many different zone configurations. The HydroKnot **reliably enables compressed air blow-out cycles** to be conducted as they are normally and typically performed under standard industry procedures.

Maximum CFM and Pressure Performance:

Consistent with standard procedures, HydroKnot LLC does not recommend exceeding 50PSI line pressure during compressed-air blow outs. However, some professionals do exceed this.

To assure professionals that reliable blow-out performance continues even under aggressive procedures, this chart outlines maximum PSI and CFM settings that were repeatedly and reliably achieved during the testing program:

Compressor Hose Diameter	Max PSI	Max CFM
1-inch hose	100	80
½-inch hose	180	35

The One Key Operating Note:

- 1) Build line pressure slowly across the first 10 to 15 seconds of the blow-out procedure.
 - a. Do not 'slam' the compressed air on; increase the air flow gradually.
 - b. That's all you need to remember!
 - i. 'Slamming' the air open is outside standard procedures anyway, and places all line components at risk of failure.

100% Fail-Safe Approach

- 1) Observing the one Key Note above yields repeatable and reliable blow-out performance.
- 2) However, to address professionals who may remain concerned, HydroKnot LLC recommends this:
 - a. When installing HydroKnot units, leave one sprinkler unprotected per zone.
 - b. This guarantees an unobstructed blow-out path under any procedure.