



- Flushing Using the Pump
- Flushing Using the Pump Bypass Valve

### Flushing Procedure: Option #1 Using the “Pump”

Flushing all high pressure lines prior to system startup prevents fines and debris from the installation process from fouling or interfering with maximum atomization and avoids accumulation of those fines on the nozzle filter which would otherwise restrict full flow through the filter and the nozzle. Therefore this is an important short term and long term maintenance function that preserves the natural life of the nozzle filter with optimum nozzle performance.

#### Equipment and Supplies Resourced Locally:

1) Scissor Lift or equivalent; 2) Several 5 gallon buckets; and 3) 3/8” OD x 1/4” ID plastic clear tube to be fitted over a nozzle port to drain water down to floor level in a bucket (2-3 gallons drained/fan). *You may need to hold the plastic tube firmly in place until the 2-3 gallons are drained. You also have the option to use one drain line / mist ring with attached threaded nozzle wand provided by IHC.*

#### Work as a Team of Three Persons:

- Person A: Positioned at the pump continuously to run the pump on/off as instructed by person B.  
*A & B will need to work out a communication process such as using cell phones like walkie talkies, texting etc.*
- Person B: Positioned on a lift at each fan to control the sequencing of person A running the on/off operation of the pump.
- Person C: Located on the floor to manage filling and emptying buckets under each fan.

*The flushing process is intuitively simple. Working one zone at a time, as the pump is turned on and seeks to pressurize the water supply, only low pressure will be realized because during each time the pump is on for the flushing procedure, a single removed nozzle per ring are leaving an open port automatically preventing line pressure to build high pressure – leaving the entire line in a low pressure level under the threshold of nozzles opening @ 350 psi.*

*You will begin working the flushing procedure by daisy chaining from the fan closest to the pump until all fans in a zone are flushed clean. **Begin first** by the high pressure system having been fully installed and ready for full operation with all wiring connections and water lines completed. Review the “Pre-Startup” and “Startup” procedures before initiating the flushing procedures one zone at a time. Note: do not run the system at high pressure until all flushing is completed.*

*Additionally as a reminder, you will want to have flushed the ScaleX2 according to it’s flushing procedure.*

#### Each Zone to be Completed by the Following Procedural Steps:

1. Beginning with the first zone to flush, set the zone humidstat “RH Set-Point” to a setting higher than the humidity level in the building to initiate the pump to pressurize water; the other zone humidstat set-point is to be set lower than building RH level. At completion of zone flushing, reset humidistat to low RH setting.
2. Person B is at the first fan and removes one or two of the lowest nozzles (closest to floor level). Turn fan switch to off position. Insert the 3/8” drain line over nozzle port to drain water to bucket with person C. Confirm mist ring ball valve is in open position. Signal person A to turn on pump. Water will not reach high pressure because the nozzle port is open and prevents line from fully pressurizing; nozzles will stay closed. Maintain pump on until about 2-3 gallons are drained. Signal person A to turn pump off. Close ball valve, remove plastic tube, reinsert nozzle(s), turn fan switch to on position, leave ball valve in open position and move to next fan. This procedure at each fan is leaving the fan and mist ring ready for system startup as you complete each individual fan and zone, one at a time.
3. Move to the next fan and proceed but first making sure the ball valve is closed so that in removing the nozzle, you do not have water spurting out. Repeat the process with each fan on to the last fan in the line/zone.



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### Flushing Procedure: Option #2 (Recommended) Using the “Pump Bypass Flushing Valve”

This procedure is recommended for flushing as it requires less steps and can be done at any time once the high pressure lines to the mist rings are completed.

This procedure bypasses the pump altogether and uses the low pressure supply water to the pump routed directly to the high pressure 3/8” tube. This approach does not require the pump to be operational nor any of the electrical for the humidistat or fans completed.

A flushing valve is provided by Industrial Humidity Control for this procedure. Connect the Flushing Valve to the incoming water supply tube (1/2” tube x 10’) which is feeding treated water to the pump. Insert the 1/2” tube into the Flushing Valve. On the outlet end of the flushing valve, insert the 3/8” high pressure tube for each zone, one zone at a time, into the 3/8” slip-lok connection of the flushing valve. If your high pressure lines are already connected to the pump “Outlet” connections, disconnect and insert into the flushing valve. Upon completion of each zone, reconnect the high pressure line into the designated pump “Outlet”.

Open all valves controlling water to the pump and leave open the flushing valve to be fully operational. Just make sure that you have completed all of the high pressure line connections to the fans in each zone. Leave the flushing valve in open position and your control for water flow is at the ball valve for each fan. Equipment and supplies needed are the same as Option #1. Use the one screw in type drop down for this procedure OR use the drop down type recommended for Option 1.

#### Work as a Team of Two Persons:

- Person A: Positioned on a lift at each fan to control the line draining
- Person B: Located on the floor to manage filling and emptying buckets under each fan.

*Line pressure for the drain process will always be no greater than the incoming supply line pressure which will be between 20 to 60 psi. You will begin working the flushing procedure by daisy chaining from the fan closest to the pump until all fans in a zone are flushed clean. Additionally as a reminder, you will want to have flushed the ScaleX2 according to it’s flushing procedure.*

#### Each Zone to be Completed Individually by the Following Procedural Steps:

- Person A is at the first fan and confirms the ball valve is closed and then removes one of the lowest nozzles (closest to floor level). Screw in the 3/8” drain line into the nozzle port to drain water to bucket with person B. Open the ball valve and drain about 2-3 gallons. Close ball valve, remove plastic tube, and reinsert nozzle. Leave ball valve in open position and move to next fan. Move to the next fan and repeat the process with each fan on to the last fan in the line/zone.

- Note: The Pumps will be shipped fully and extensively tested including no debris in the pump station. Therefore the pump does not need to be flushed prior to system startup.

