



## OPERATION AND SAFETY INSTRUCTIONS

# Sprayvectors™

MODEL 1703, 1707, 1713  
1703BSP, 1707BSP, 1713BSP

### IMPORTANT

READ ALL INSTRUCTIONS BEFORE ATTEMPTING TO OPERATE THIS PRODUCT.

### GENERAL SAFETY CONSIDERATIONS

#### WARNING

**COMPRESSED AIR COULD CAUSE DEATH, BLINDNESS OR INJURY.**

1. Do not operate a Sprayvector at compressed air pressures above 150 PSIG (10.3 Bar).
2. Do not operate a Sprayvector at line temperatures above 110°F (43°C).
3. Avoid direct contact with compressed air.
4. Do not direct compressed air at any person.
5. When using compressed air, wear safety glasses with side shields.

#### NOTE

THERE IS NO NEED TO LIMIT COMPRESSED AIR PRESSURE TO A MAXIMUM OF 30 PSIG (2 BAR).  
IT IS NOT POSSIBLE TO BLOCK THE FLOW OF AIR FROM A SPRAYVECTOR  
TO REGISTER 30 PSIG (2 BAR) ON A TEST GAUGE.

### INTRODUCTION

Sprayvectors are two fluid nozzles that use up to 12 SCFM of 100 PSIG compressed air to atomize up to 0.5 GPM of liquid (liquid pressure up to 20 PSIG maximum) for evaporative cooling, moisturization, coating and area humidification. Atomizing and fogging Sprayvectors can spray liquids with viscosities up to 1100 CPS. Humidifying Sprayvectors can spray liquids with viscosities up to 100 CPS. Maximum liquid flow rate for the Humidifying Sprayvector (model 1707) is .25 GPM.

### AIR SUPPLY

A Sprayvector must be connected to a compressed air source that is filtered (5 micron maximum) to remove water, particulate and oil. Failure to use a filter will cause internal clogging and loss of airflow. Filter elements must be changed on a regular basis. Frequency of change is determined by the condition of the compressed air supply. Filters should be installed in the compressed air supply line as close as possible to the Sprayvector.

Compressed air line must be selected to ensure adequate supply and optimal performance.

## **LIQUID SUPPLY**

A Sprayvector must be connected to a filtered liquid source (40 mesh Y-type strainer minimum recommended) to remove particulate. Liquid supply must be pressurized, but not to exceed 20 PSIG.

## **INSTALLATION**

A Sprayvector can be installed by directly plumbing to the appropriately-sized hard piped compressed air source that does not exceed 150 PSIG (10.3 Bar).

## **OPERATION**

Sprayvectors use compressed air (up to 12 SCFM) to atomize pressurized liquids (up to 20 PSIG). Dripless operation requires use of a 3-way solenoid in the liquid supply line (the compressed air supply remains on while the third port of the solenoid in the liquid supply line is either vented to atmosphere or pressurized with compressed air to forcibly evacuate the liquid line).

Liquid droplet size is controlled by liquid pressure, compressed air pressure, and the (black) liquid control knob.

## **MAINTENANCE**

Sprayvectors have no moving parts, and require only filtered compressed air and pressurized liquid for proper operation. Sprayvectors can be disassembled for cleaning, if necessary. Ensure that all eight internal air passages are not clogged. The external snap ring on the Humidifying Sprayvector nozzle must be removed prior to cleaning.

## **TROUBLESHOOTING**

Insufficient performance can be caused by the following:

1. Undersized compressed air or liquid supply line.
2. Compressed air pressure or liquid pressure too low or too high.
3. Insufficient compressed air volume (SCFM, SLPM).
4. Partial or complete blockage of internal compressed air or pressurized liquid path due to dirt.
5. Loose nozzle tip (if disassembled for cleaning).
6. Improper adjustment on (black) liquid flow control knob.

## **LIMITED WARRANTY**

Vortec compressed air products manufactured by ITW Air Management will be replaced or repaired if found to be defective due to manufacture within ten years from the date of invoice. Refer to our website [itwvortec.com](http://itwvortec.com) for complete warranty details and limitations. ITW Air Management makes no specific warranty of merchantability or warrant of fitness for a particular purpose.

For more information contact your local authorized distributor or:

**Vortec**

**ITW Air Management**

**10125 Carver Road**

**Cincinnati, Ohio 45242-4798**

**TEL: 513-891-7474, TOLL FREE: 800-441-7475**

**FAX: 513-891-4092 website: [www.itwvortec.com](http://www.itwvortec.com) e-mail: [techsupport@vortec.com](mailto:techsupport@vortec.com)**