

# Steam Lines...



## COMPRESSED AIR

Welcome to Steam Lines, in this issue we will be dealing with Moisture in Compressed Air Lines and how best to remove it. Now that the warm weather is here, we need to focus our attention towards our compressed air systems. Of major concern is water in our compressed air lines that must be removed. When combined with the oxygen present in the compressed air, water can create rust in piping and other pieces of equipment. This rust destroys the integrity of mating metal surfaces and can flake off and be carried downstream as an abrasive contaminant to create other serious problems. Water will also displace any lubrication from bearing surfaces and cause accelerated wear. We need to keep in mind that when air is compressed it gets hot, and when it cools water condenses out of it. This water can cause numerous expensive problems to develop, not the least of which is the water backing up into the compressor and wrecking the machinery. How do we remove moisture from the air? There are several methods the first being aftercoolers, which cool air, discharged from air compressors via the heat exchanger. Another method would be moisture separators which are installed at the discharge of the aftercooler they remove most of the liquid moisture from compressed air lines. A third method would be to use refrigerant or desiccant air dryers, which lowers the dew point of the gas and converts the excess water vapor into a liquid. The resultant liquid is usually discharged through a small automatic drain device integral to the dryer. These small automatic drains are

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usually prone to clogging and failure. Regardless of the method of moisture removal it is important to ensure that the liquid is actually discharged from the system.

## FACTS ABOUT COMPRESSED AIR

- For every 20°F, 11°C drop in compressed air temperature, the moisture holding capacity of air is reduced by 50%.
- One cubic foot of air at atmospheric pressure contains:
  - Liquids - Water droplets
  - Solids - Dust and pipe scale
  - Gases - Oil and water vapors

## DRAINALL 1700 FEATURES

### **AUTOMATIC:**

No timers to manually adjust. Automatically accumulates and ejects condensate from any point along the compressed air system. Protects valuable equipment from costly water damage.



### **PNEUMATIC:**

Requires no electricity. Can be used in remote and explosive areas.

### **ADAPTABLE:**

Fits unusual applications and chemically hostile environments through the use of stainless steel, specialized coatings and unique design options.

## Food For Thought

“Whoever follows a crowd will never be followed by a crowd.” (Chinese Proverb).

**Tel: (905) 821-9600 <> Fax: (905) 821-8554**  
**[www.mentec.on.ca](http://www.mentec.on.ca) <> [sales@mentec.on.ca](mailto:sales@mentec.on.ca)**