

**APPLICATION NOTE**

# Plastic Dryers Dewpoint Application



**Featured Product**  
XTR-65

## Instrument: In-Line/Portable

### Description

Plastic dryers now account for approximately 10% of our business and are one of the most rapidly expanding segments. Hopper dryers are of the twin tower, heat reactivated type. Dry air is circulated by a fan at slightly above atmospheric pressure. An external heater takes the -40°F dry air and raises the temperature as high as 450°F. The hot dry air enters the bottom of the cone shaped hopper and exits the top.

### Problem

The dryer the inlet air, the faster the polymer dries. Most manufacturers of polymers specify drying times based on the inlet temperature and a -40°F dewpoint. High dewpoints will increase drying time and may cause manufacturing defects.

### Points to Consider

Two potential problems exist with this application. First, excessive temperatures may reach the sensor. The use of a cooling coil can bring this temperature close to ambient. Second, many polymers give off chemical vapors when heated. One family of compounds are the acetaldehydes. These are aggressive and will attack the moisture sensor. However, dryer desiccant will remove most of these compounds. Therefore, return (wet) leg sampling can not be recommended on a continuous basis.

### Sensor Range

XTR-65 (-85 - +68°F)

### Contact Person(s)

Plant Engineer  
Molding Supervisor

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#### COSA Xentaur

4140 World Houston Parkway  
Suite 180  
Houston, TX 77032  
USA  
+1 713 947 9591  
[www.cosaxentaur.com](http://www.cosaxentaur.com)  
[service@cosaxentaur.com](mailto:service@cosaxentaur.com)

#### Process Insights – The Americas

4140 World Houston Parkway  
Suite 180  
Houston, TX 77032  
USA  
+1 713 947 9591  
[info@process-insights.com](mailto:info@process-insights.com)

#### Process Insights – EMEA

ATRICOM  
Lyoner Strasse 15  
60528 Frankfurt  
Germany  
+49 69 20436910  
[info@process-insights.com](mailto:info@process-insights.com)

#### Process Insights – APAC

Wujiang Economic and Technology  
Development Zone  
No. 258 Yi He Road, 215200 Suzhou  
Jiangsu Province China  
+86 400 086 0106  
[info@process-insights.com](mailto:info@process-insights.com)

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