



# Microwave Compressed Air Desiccant Dryers

## fact sheet

This new type of compressed air dryer regenerates its desiccant beds by directly heating the water molecules with microwave energy. Direct heating reduces energy input and decreases the amount of purge air compared to resistance-heated and "heatless" regenerative air dryers. This technology can achieve a dew point of -40° F.

### REPORTED BENEFITS

- Reduced energy input
- Requires less than two percent of total compressed air flow for purging, compared to about 7.5 percent for heated and 15 percent for "heatless" dryers.

### Barriers to Market Acceptance

1. price
2. risk of failure
3. benefits not understood
4. priorities not on benefits of new technology
- ➔ 5. lack of technology awareness
6. lack of available capacities

This is a new product on market.

### Development Stage

1. need for the technology identified
2. technology concept developed
3. initial research findings reported
4. research on concept completed
- ➔ 5. commercial pilot completed
6. introduction to commercial market
7. immature market demand
8. mature market demand
9. market saturation

### WISCONSIN APPLICATIONS

Microwave desiccant dryers can be applied in any process that requires dried compressed air—such as instrumentation and cold-weather applications.

*SIC codes:* 20 Food and kindred products; 22 Textile mill products; 24 Lumber and wood products except furnitures; 25 Furniture and fixtures; 26 Paper and allied products; 27 Printing publishing and allied industries; 30 Rubber and misc. plastic products; 34 Fabricated metal products; 35 Industrial and commercial machinery and

computer equipment; 36 Electronic and other electrical equipment and components except computer equipment; 39 Misc. manufacturing industries

*NAICS codes:* 31-33 Manufacturing

### TYPICAL PAYBACK

A payback of one to two years is possible for most new installations. The payback of replacing a working system could possibly be as long as ten years.

### MORE INFORMATION

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