



INDUSTRIAL PROCESS AND  
COMMERCIAL VENTILATION SYSTEMS



**ATEX**

FANS FOR EUROPEAN EXPLOSIVE ATMOSPHERES



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## ATEX Directive Explained

ATEX (ATmosphères EXplosibles) is a conglomeration of European Union (EU) directives outlining equipment installed and operated in potentially explosive atmospheres. The ATEX directive coordinates various technical and legal conditions throughout Europe to ensure a high level of safety for the end-user by reducing the explosion risk through established design methods.

Since July 1, 2003, equipment manufactured for operation in potentially explosive environments has been required to comply with the EU's ATEX Manufacturer's Directive (94/9/EC). The ATEX Directive applies to all countries in the EU and the European Economic Area (EEA).



Model EPFN High Efficiency  
Plenum Fan



Model BC Backward  
Inclined Centrifugal Fan

## How Does ATEX Affect the End-User?

The ATEX Directive places the burden directly on the end-user. The end-user is responsible for the following:

- **Prevention of the formation of explosive atmospheres and possible ignition threats**
- **Evaluating the risk of explosion for their specific atmosphere and process**
- **Eliminating or reducing the level of risk for a specific atmosphere and/or process**
- **Classifying the work and equipment environment into "zones/categories" for determining preparation of documentation for explosion protection**
- **Identifying hazardous areas and utilizing warning signs to alert personnel and equipment suppliers of the potential hazard**
- **Specifying suitably safe equipment for use in the zone to the engineer or equipment supplier**

The end-user is required to evaluate the environment where equipment is to be located and operated. When evaluating hazardous locations, it is important to consider the hazardous material (gases or dusts) itself, how the material may interact with the surroundings (atmosphere, equipment and personnel), likelihood of explosion due to the surroundings, and the level of any anticipated effects.

The close evaluation of the hazards will allow the end-user to provide Twin City Fan & Blower with a specification for equipment located in the hazardous location. When specifying equipment for hazardous locations in compliance with ATEX Directive 94/9/EC, the end-user or the user's representative is **REQUIRED** to complete the ATEX Customer Inquiry Form provided at <http://www.tcf.com/industries-applications/applications/atex>.

## Implications for Manufacturers

Since the introduction of the ATEX Directives in 2003, mechanical equipment manufacturers have been subject to similar certification requirements as electrical equipment manufacturers. Fan manufacturers have been allowed to subscribe to the manufacturing process as detailed in the European Standard EN 14986:2006, "Design of fans working in potentially explosive atmospheres," which provides a guide for meeting the ATEX Directive (94/9/EC).

European Standard EN 14986 outlines manufacturing and design criteria for fan manufacturers to adhere to. Such design requirements include, but are not limited to, permissible material pairings, minimum clearances between rotating elements and the fan casing, casing design, bearing selection, impeller-to-shaft attachment and motor/electrical selection. As long as the fan manufacturer meets the requirements of the European Standard EN 14986:2006, they are in compliance with the ATEX directive (94/9/EC).

## ATEX Products



**BCPL** - Plug Fan, BC Backward Inclined Wheel

**BC** - Flat-blade Backward Inclined Centrifugal Fan

**BAF** - Airfoil Centrifugal Fan

**BAE** - Airfoil Centrifugal Fan

**BCS** - Backward Curved High Volume/Pressure Fan

**TSL** - Tubular Inline Centrifugal Fan

**EPFN** - Plenum Fan, High Efficiency

**RBO/R** - Industrial Radial Blade Fan, Paddle Wheel

**RBA** - Industrial Radial Blade Fan, Air Handling Wheel

**TBR** - Turbo Pressure Blower, Radial Blade Wheel

**TCVX** - Vaneaxial Fan, Adjustable Pitch

## Twin City Fan & Blower Capabilities

Currently Twin City Fan & Blower offers fans suitable for Zone 2 and 22, Category 3 environments. Contact Twin City Fan & Blower for specific applications in alternative environments. Consult a Twin City Fan & Blower sales representative for all of your applications needs.



Model TCVX Adjustable Pitch Vaneaxial Fan



Model RBO Industrial Radial Blade Fan





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RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS  
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



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