

## **ENVIRA-NORTH SYSTEMS LTD.**

### **General Specifications**

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#### **THE POWER UNIT**

- The Motor
  - The Gear Reducer
  - The Hub
  - The Power Unit Frame
  - The Blades**
  - The Universal Mounting System**
  - The Control Panel**
  - Safety**
    - Safety Clips, Safety Links and Drive Collet
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#### **THE POWER UNIT**

##### **The Motor**

Baldor and Nord, two of the world's leading motor manufacturers, supply Envira-North with motors built especially for this application. Designed for use with variable frequency drives; they are wound with 392°F moisture resistant Inverter Spike Resistant (ISR) magnetic wire which dramatically extends the life of the motor compared to motors wound with non-ISR wire. They have a three year limited warranty.

##### **The Gear Reducer**

Envira-North fans are driven through Nord Helical Gear reducers. Nord is the best gear reducer for our particular application in terms of precision, durability, efficiency, reliability and quiet operation.

##### **The Hub**

Envira-North's unique aluminum alloy hub is made by the sand casting process, which in conjunction with a proprietary alloy, produces a very strong, ductile casting within the close tolerances necessary to maintain precision balance and accuracy.

##### **The Power Unit Frame**

The Motor Frame is MIG welded from a steel tubing and 36 gauge steel plate. It is powder coated for maximum resistance to rust and chemical corrosion.

## THE BLADES

Our highly researched airfoil shaped blades now available with our new improved **WhalePower Technology** that can generate up to **397,701 CFM's** in the **24 ft.** diameter size fan. The airfoil blades are designed for maximum efficiency and quietness, with a minimum air disruption directly below the fan. All our blade shapes are extruded from 6063-aluminum alloy and heat-treated to T-5 condition. They are anodized to .0004 10 Microns clear for corrosion resistance, appearance and ease of cleaning. They can be special ordered in a variety of colors (at additional cost). The blades have a lifetime warranty.

## THE UNIVERSAL MOUNTING SYSTEM

The Universal Mounting System is designed to minimize vibration or horizontal movement from being transferred back into the building structure. The mounting system is easily installed in almost any industrial, commercial or agricultural building and where necessary, will allow fans to hang level from sloping beams.

## THE CONTROL PANEL

Envira-North has a variety of control panels engineered to control either single or multiple fans running on any of the following electrical services: 240V single phase or 208V/460V/600V 3 phase. Other configurations are also available. Each control panel contains a variable frequency drive (VFD) which provides soft start/stop, variable speed control and overload protection for the motors. The VFD also allows fan control to be automated and/or integrated with other systems (i.e. fire sprinkler systems, etc.). Certain control panels contain load reactors, filters, or other devices as needed. The control panels come with a three year warranty. Envira-North can also provide you with controllers for wet locations.

## SAFETY

Envira-North's "**safety clips**" and "**blade safety links**" prevent a rotor from falling or a blade from coming off even in the unlikely event of a catastrophic failure of the hub or drive system. The "**collet-type friction drive bushing**" connecting the hub to the reducer shaft allows controlled slippage in the event of a seizure of the reducer mechanism, or a failure of the "soft start" feature in the control panel.