ID Technology

Using Label Printer Applicators in Harsh Operating Environments

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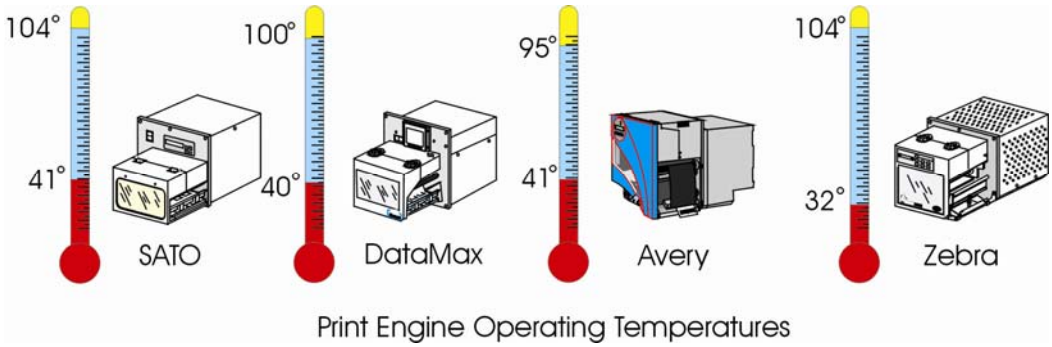
Most Label Printer Applicators are used in moderate environmental conditions. But sometimes the ideal operating environment, a clean warehouse, ambient temperatures in the 60 to 70 degree range, air filters keeping the air free of debris, and no water spray, is not available. In these cases labeling equipment must adapt to the environment where it is needed to accomplish the required product identification. Innovations in labeling equipment design allow label printer applicators to be installed in harsh environments with great results.

Cold Temperatures:

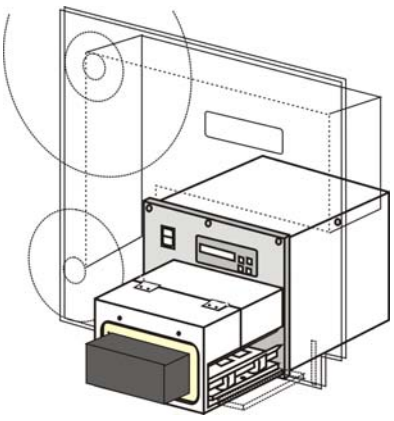
The OEM Print Engines used in label printer applicators have a recommended operating temperature range. Anything above or below that can affect the operations of the engine and the ability to properly print information onto a label. The engines are fairly consistent in effective temperature ranges.



Print Engine Operating Temperatures

Print Engine Heaters

If you are operating in an environment where the ambient temperature is in the lower 30 degree range, then a simple print engine heater may be the solution. The print engine heater mounts to the door of the engine (Avery excluded). The door window is removed and the heater is installed in its place. The heater blows warm air into the print engine and raises the internal operating temperature of the engine into the required range.



Cold Temperature Enclosures

Once you are below 30 degrees, a print engine heater will not suffice. A Cold Environment Enclosure would be the next step. There are different types that can be used, depending on the exact environmental conditions. If your operating temperature is in the mid 20 degree range, a simple Lexan enclosure with an industrial light bulb will bring the engine into the required operating temperature range.

The Printer Applicator is encased in the Lexan box with an opening (removable or hinged) through which the application module extends and retracts. A high wattage light bulb mounted in the enclosure radiates enough heat to warm the inside of the enclosure. For the low 20 degree temperatures, a bulb and a door heater work well.

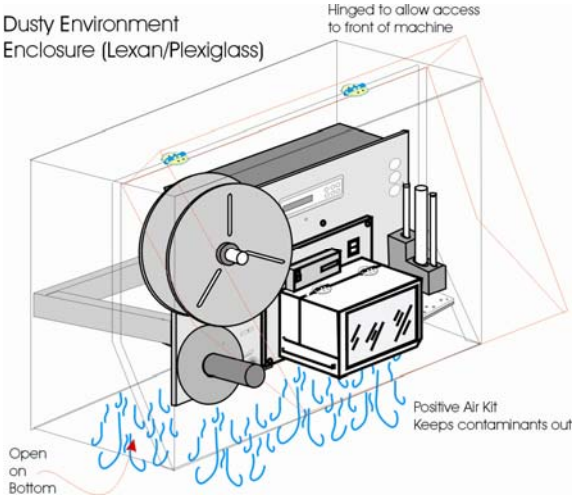
Once you get below the 20 degree mark you will need to move up to an industrial heater. An electric heater that blows hot air is mounted in the enclosure to raise the ambient temperature of the enclosure the 20 or so degrees needed, and then keeps the temperature constant. At this point it is beneficial to upgrade to a stainless steel enclosure. The stainless steel enclosure provides a higher degree of protection, is more durable, and can support a heater while limiting the number of openings exposed to the cold environment.

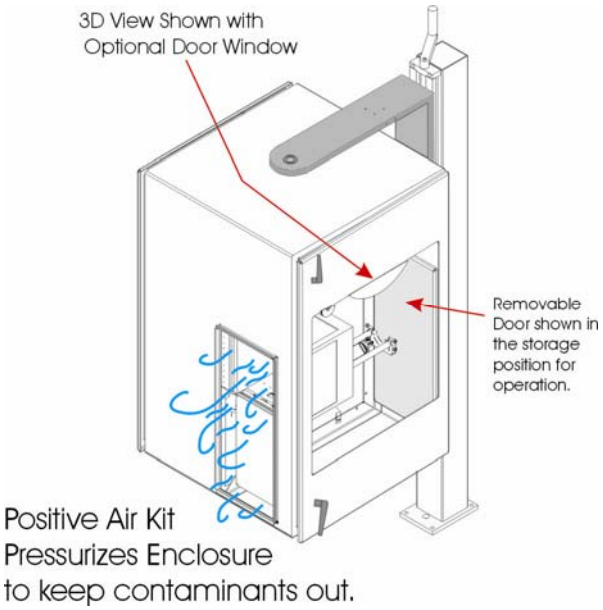
These enclosures can be used in reels up or reels out applicator orientation.

Dusty/Acidic Environments:

In a dusty or corrosive environment, whatever particles are floating in the environment are going to get inside the print engine, onto the label stock and into the vacuum ports of a tamp pad.

The amount and kind of dust in the air will dictate the best method of prevention. A light concentration can be countered with a Positive Air Kit mounted just inside the print engine. This redirects part of the plant air into the print engine compartment that holds the ribbon and print head. The air being routed into the compartment forces air to circulate within the compartment while forcing air out of the openings in the print engine. Light dust is prevented from entering the print engine compartment extending the life of the print head and components.



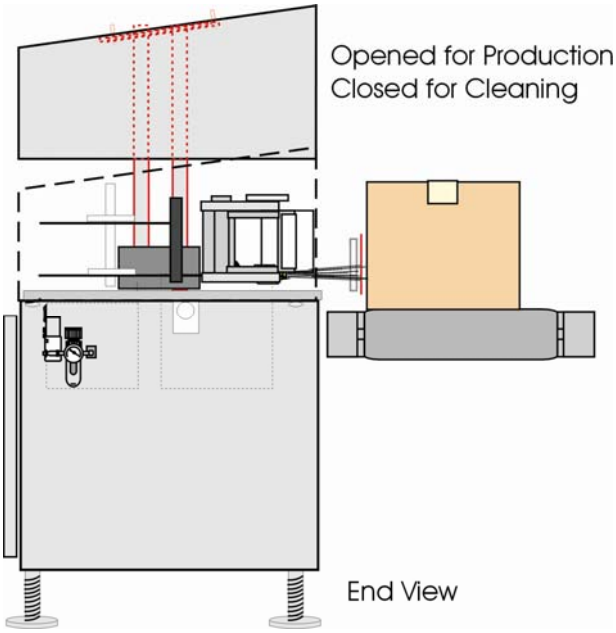


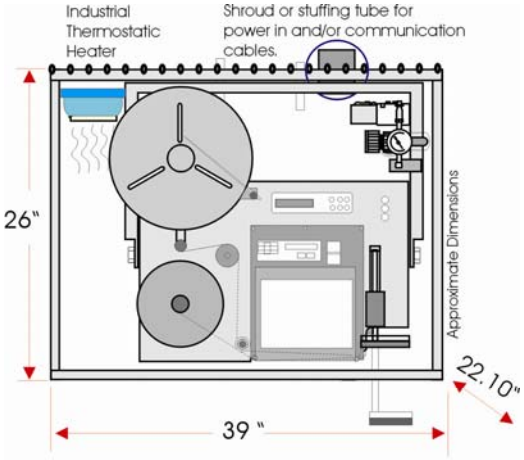
When the dust gets heavier, it requires a larger enclosure with a positive air kit installed. The entire enclosure is pressurized to prevent particles from entering the machinery. Lexan enclosures allow the operator to easily view the printer applicator.

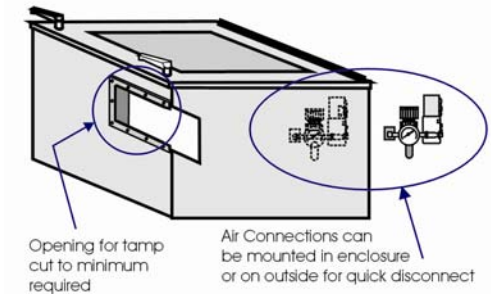
Wash Down Environment:

Many plants go through a cleaning process at the end of each day. Equipment must be able to withstand the wet environment and function properly day in and day out. The degree of protection required is dependent on the force of the water spray. For equipment that only receives a light spray, a Lexan cover may suffice.

For more intense wash down environments, stainless steel enclosures are designed to protect the machinery with minimal shutdown requirements.







All cabling is run through a stuffing tube. The cabinet doors shut and seal against direct spray and a door can be placed over the application module opening. A wet and cold environment may also require a heating unit.

Whatever the environment, there is a labeling solution to fit your product identification needs.

About ID Technology

ID Technology, a division of Pro Mach, designs, manufactures, and integrates custom identification systems and is recognized as a leading single-source provider for labeling, coding and marking equipment, expertise, service, and supplies. ID Technology is based in Fort Worth, Texas, and operates 16 regional offices across the United States. For more information or to locate one of the ID Technology nationwide sales and service centers, call 888.438.3242 or visit www.idtechnology.com.