

**hibon**<sup>®</sup>

PRESSURE & VACUUM  
SOLUTIONS

**vp package**



WORLD-CLASS EXPERTS IN

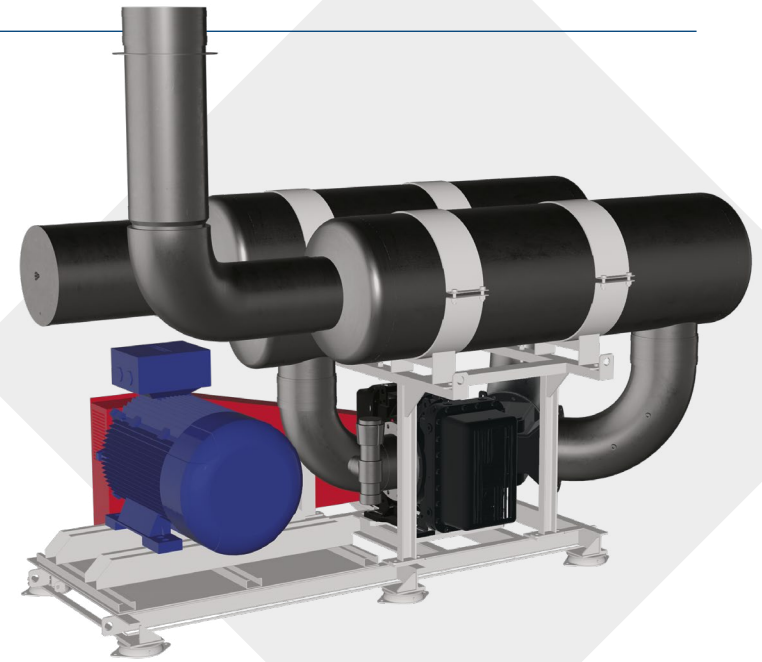
**VACUUM  
BLOWER  
TECHNOLOGY  
SOLUTIONS**

**IR** Ingersoll Rand<sup>®</sup>



PRESSURE & VACUUM  
SOLUTIONS

**FIRST CHOICE**  
FOR PROCESSES  
REQUIRING  
DRY VACUUM  
TECHNOLOGY.



### OVER 100 YEARS EXPERIENCE

**Hibon has over 100 years' experience in providing technology leading industrial vacuum solutions.**

Over the year we have built up a reputation of excellence and innovation. Our goal is to always improve and provide product with higher quality level, service and technical solution than what our customers expect in their business challenges.

Using innovative air cooling injection technology vacuum packages are able to achieve high levels of performance and efficiency.

OVER  
**100**  
YEARS



# CASE STUDY

## INDUSTRIAL KNOW-HOW

Thanks to years of field experience with our customer processes, we ensure that the correct vacuum pump and accessories are designed and sized to match customer expectations. Reliable and robust, our products are sized to meet the needs of each plant circumstance.

## MAIN INDUSTRY APPLICATIONS

**We design and manufacture fit for purpose, high performing solutions for a wide range of industrial needs.**

- Liquid/solid separation
- Pneumatic conveying
- Centralised cleaning systems
- Plastic extrusion
- Pick & Place
- Drying



## BOTTLE PLANT: MANUFACTURING

### SPECIFICATIONS

Glass bottle plants require a quality and dependable vacuum to support the bottle forming production process. The aim was to not only improve the energy performance of the complete system, but to also make the vacuum level as stable as possible.

### SOLUTIONS

#### REDUCED CONSUMPTION FOR INCREASED PRODUCTIVITY:

The frequency drive continually regulates motor speed without additional utilities meaning optimum economy and efficiency. These energy improvements work to support overall production speed, reduce energy consumption and guarantee surface quality of finished glass bottles.

**OIL FREE:** Vacuum packages do not need oil to run avoiding the likelihood of contamination through the process.





PRESSURE & VACUUM SOLUTIONS

WHY HIBON DRY VACUUM TECHNOLOGY PACKAGES ARE THE BEST CHOICE FOR YOUR BUSINESS.

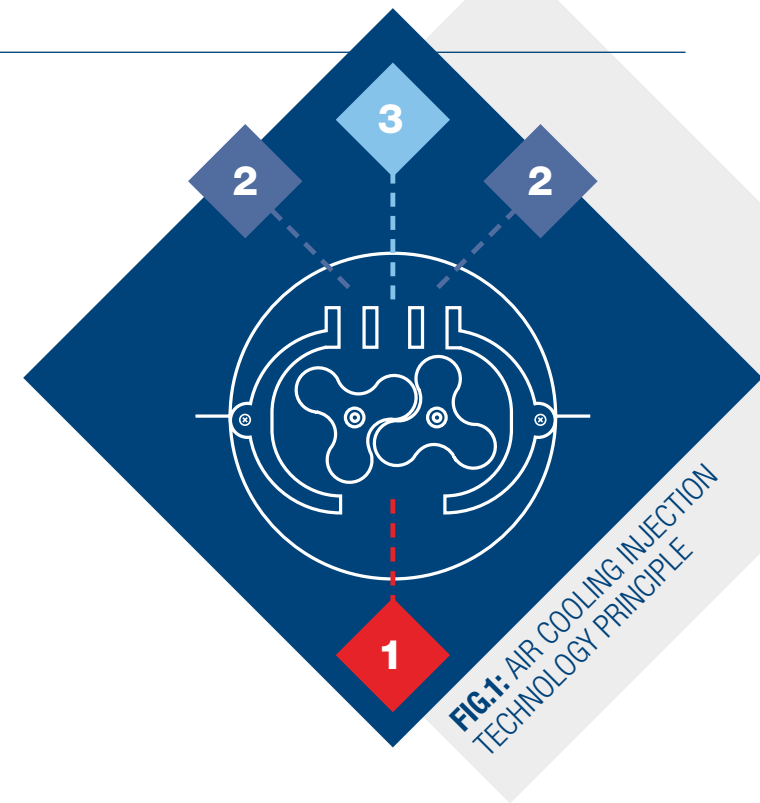


FIG.1: AIR COOLING INJECTION TECHNOLOGY PRINCIPLE

**OIL & WATER FREE:**

Vacuum packages do not need water or oil to run. All the parts in contact with the gas are dry, so avoiding retro diffusion too in the process.

**LOW UPKEEP & MAINTENANCE:**

Dry technology not only means there is less upkeep and maintenance involved it also makes solutions really reliable.



# CASE STUDY

## OPERATING PRINCIPLE (FIG.1):

The air coming from the process (1. INLET) is displaced then cooled by air injection (2. AIR INJECTION) and discharged at outlet (3. OUTLET).

## LESS ENERGY CONSUMPTION, BETTER EFFICIENCY:

Thanks to the air injection design, the vacuum package can achieve vacuum level up to 100 mbar (abs);  
The no contact technology means less power is needed to run and maintain a constant flow and vacuum level.

## INNOVATIVE AIR COOLING INJECTION TECHNOLOGY.



## 2

## WOODWORKING: FURNITURE MAKER

### SPECIFICATIONS

High precision woodworking tools and CNC machines/routers use vacuum throughout the production line. It is an effective way to reliably load and hold workpieces during the process. Stable and consistent vacuum levels guarantee the stability of the workpiece which delivers a high-quality end product.

### SOLUTIONS

**FLOW ADAPTATION:** Trilobe VP packages are ideal for this application. The frequency converter is able to counter-balance leakages that increase during the machining cycle. Adapting the flow stabilises the vacuum meaning motors match the actual load required increasing its operating life.

**INCREASED EFFICIENCY:** Air injection design means the vacuum package is able to meet the demand for faster performance, greater precision and quality required by woodworking. Less filter changes are needed due to the robustness of the machine and its ability to handle wood dust and fine particles.





PRESSURE & VACUUM  
SOLUTIONS

FLEXIBLE VACUUM  
PACKAGE  
SOLUTIONS,  
DESIGNED  
**FIT FOR  
PURPOSE.**

UP TO  
**100**  
MBAR ABS

## WIDE RANGE OF OPTIONS

Vacuum packages are designed, developed and assembled as complete technology solutions where everything needed is included.

These packages can be optimised for each project or application thanks to a wide range of accessories and options.

### STANDARD SUPPLY

- Blower
- Motor
- Base frame silencer
- Belt guard
- Base frame
- Motor support
- Inlet filter
- Anti-vibration plots
- Safety valve
- Sound enclosure

### ACCESSORIES/ OPTIONS

- ATEX 22
- Coating against corrosion
- Painting on specification
- Special filtration
- Vacuum analogue gauge
- Tropicalised motor

# CASE STUDY

3

## METAL PACKAGING: CANNING SPECIFICATIONS

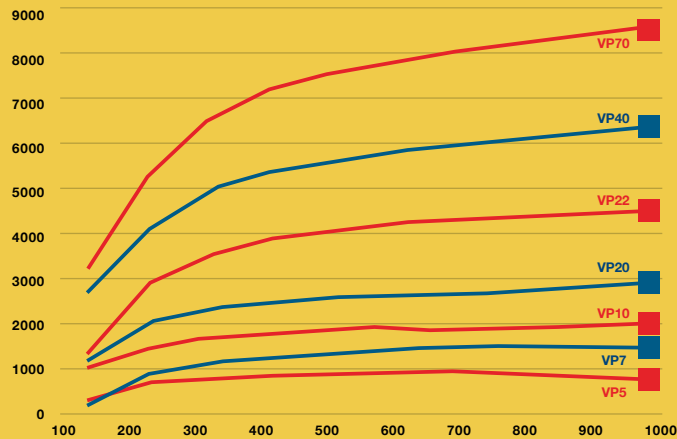
Vacuum is the most practical way to hold cans during the production process with a large vacuum system required to maintain high speed productivity. Vacuum is used during all stages of production from, formation, trimming, holding and conveying. For quality assurance the vacuum ensures stability during the pick and place application at key stages such as decoration. Leakages may occur as cans are never 100% sealed. The vacuum system is able to counter-balance this by adapting speed and stabilize vacuum level inside the network.

### SOLUTIONS

**OIL FREE:** Vacuum packages do not need oil to run avoiding contamination through the process.

**LOW ANNUAL MAINTENANCE:** Downtime for maintenance is only 30-60 minutes, per year, to allow for a belt and oil change, meaning the VP package delivers 24/7 productivity.

**REDUCED CONSUMPTION FOR INCREASED PRODUCTIVITY:** The frequency drive continually regulates motor speed without additional utilities meaning optimum economy and efficiency.



## VARIABLE SPEED

### VARIABLE SPEED CAPABILITY

Hibon vacuum packages use a frequency inverter. Since the power consumed is proportional to the machine's speed, adapting speed to pressure directly increase energy efficiency.





**Ingersoll Rand Inc.** (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity and efficiency. For more information, visit [www.IRCO.com](http://www.IRCO.com).



GLASS BOTTLE  
MANUFACTURING



WOODWORKING



METAL PACKAGING

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