



## Compressors for P.E.T. Bottle Blowing



Intelligent Air Technology



## PET H5000 Series Oil Free Compressors

P.E.T. Perfection.

Which is the best bottle ever blown?

The ideal P.E.T. container isn't difficult to specify - appealing design, better performance with excellent barrier properties, reliable consistency bottle after bottle, trouble free, high speed production and a lower cost per bottle.

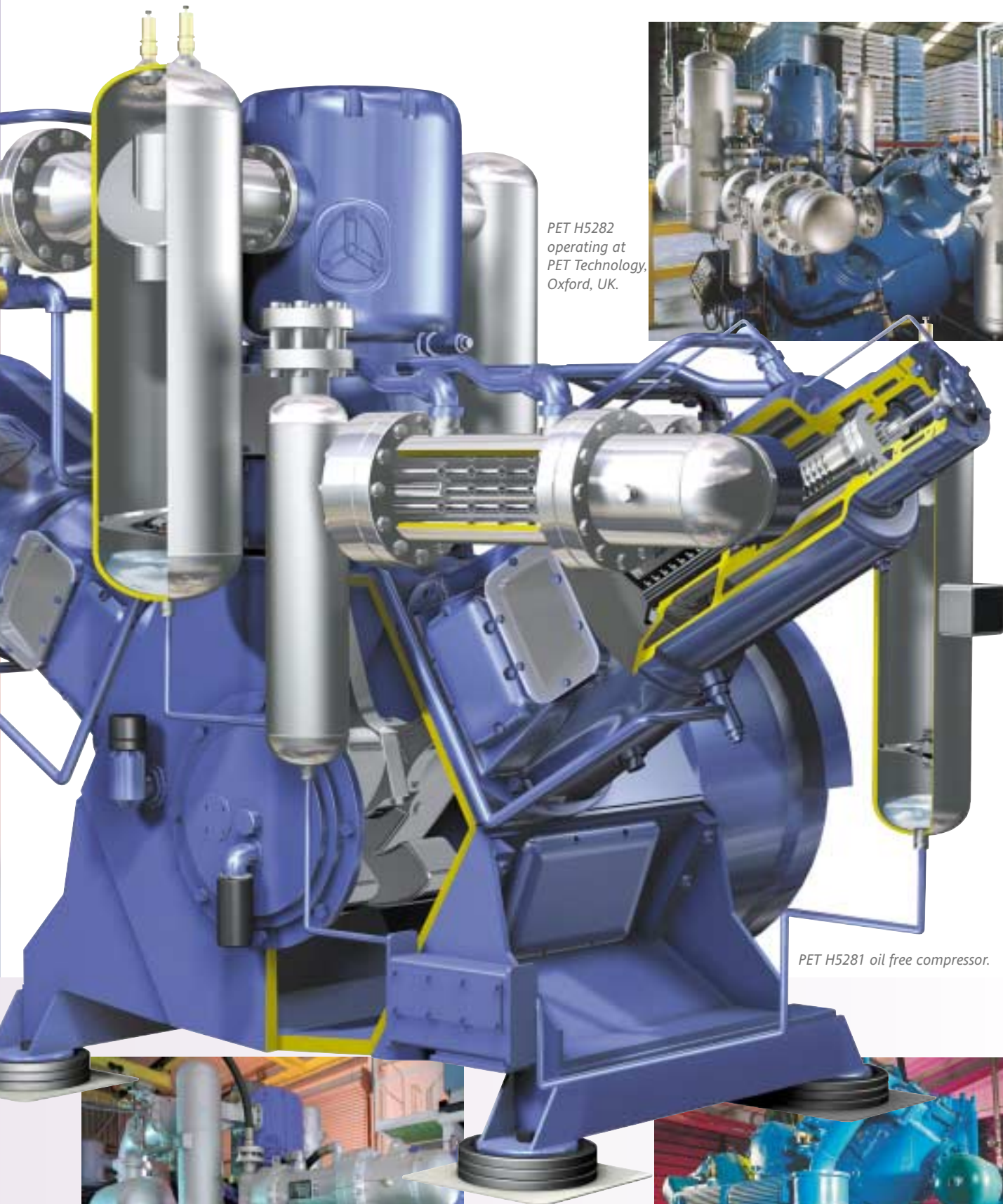
Producing exactly this container, more efficiently and cost effectively, is the inspiration behind the PET H5000 series of oil free air compressors and the lower flow rate lubricated machines at CompAir.

Three years of research and development bringing together experts in P.E.T. bottle production with some of the UK's leading engineers and industrial designers has resulted in an exceptional range of oil free compressors. The PET H5000 series delivers oil free air with the utmost reliability at pressures up to 50 bar g and features many technical advances that combine to enhance operation with improved

- *efficiency*
- *economy*
- *flexibility*
- *control*

For over 100 years CompAir have built up a name for compressed air systems based on experience, quality and reliability. This brochure is an introduction to the advanced technology at the heart of the CompAir P.E.T. compressor range.





*PET H5282  
operating at  
PET Technology,  
Oxford, UK.*



*PET H5281 oil free compressor.*



*PET H5283 at Silver Springs, Folkstone, UK.*



*PET H5280 supplying oil-free high pressure air to Plysu Personal Care's PET bottle manufacturing centre, UK.*



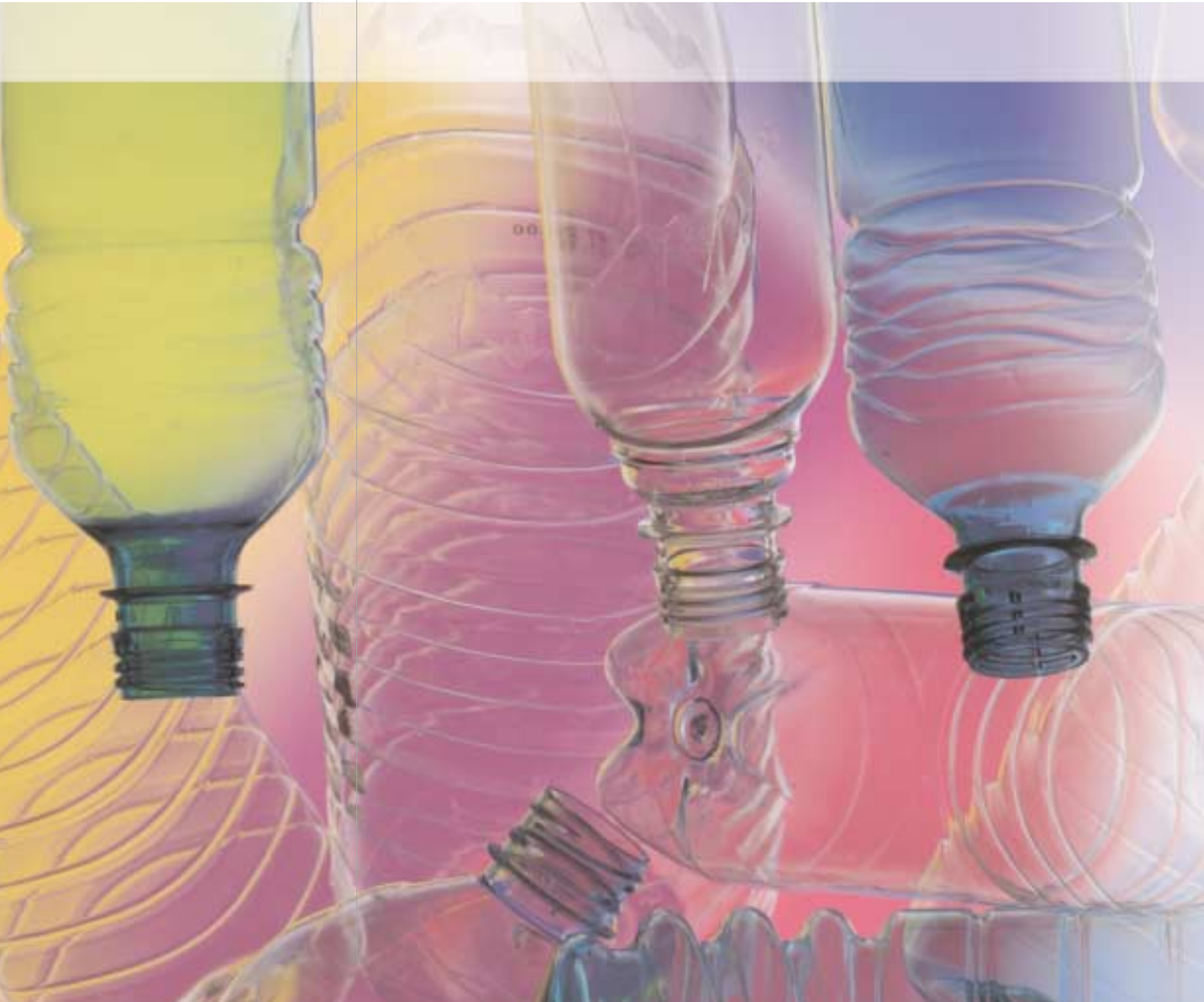
*Consistent compressor performance helps maintain P.E.T. bottle quality control.*



## Optimum reliability and performance at the heart of the PET H5000 series design

Central to the success of the PET H5000 three stage compression design is a balance between the best of proven CompAir technology and enhanced components in the running gear and lower pressure stages, along with a series of unique developments in the high pressure third stage.

The result is exceptional reliability and constant unrivalled performance throughout working life which take the PET H5000 into a class of its own.



# PET H5000 series

Drive system - efficiency and reliability with reduced downtime

A direct-coupled, shaftless motor avoids power loss and, by reducing the number of wearing parts, significantly reduces maintenance. The compact design with resulting reduced stroke and increased rotational speed also serves to lower the overall cost of the motor.

Running gear - perfectly balanced, enabling simple installation.

The "W" configuration formed by the 3 double acting compression cylinders ensures that there are no out of balance forces, providing good stability and low vibration.

A distance piece separates the running gear from the compression cylinders, preventing oil contamination of the compressed air. Perfectly linear reciprocating motion is guaranteed by the incorporation of a crosshead between each connecting rod and piston rod.

As a result, each PET H5000 is exceptionally simple to install onto the P.E.T. bottle blowing line, using a four-point anti vibration mounting system, with no need for special foundations.

Lower pressure compression cylinders - proven technology matched by advanced design.

With millions of trouble-free trial hours behind them, Stage 1 and Stage 2 compression units typify CompAir's flair for taking the best of proven technology and adding enhanced design features. The result is your guarantee of reliable performance together with greater wearing capacity.



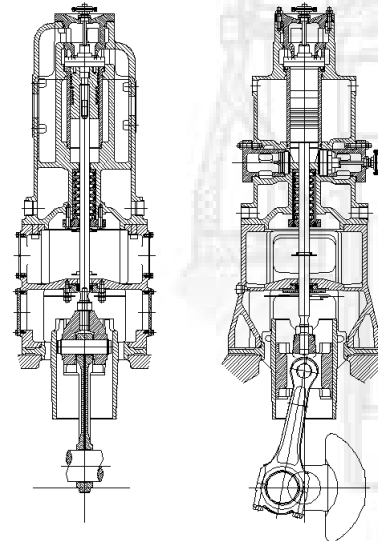
Unique corrosion free Ni-resist cylinder liners are used at all compression stages.

Final stage cylinder - delivering a new dimension in P.E.T. bottle blowing.

Providing high pressure at high performance levels demands an extreme tolerance to high temperature and wear. The PET H5000 incorporates state-of-the-art, high temperature PTFE composite piston rings and glands, together with a high pressure gland design which significantly improves operating life.

The unique "CD Ring" double acting piston ring design, actively seals the piston in both directions. Four key benefits result when compared with alternative piston ring designs:

- a volume increase of 2%
- an overall improvement in efficiency of 3%
- an improvement in part load efficiency of 4%
- the maintenance of flow rate throughout life.



Minimising downtime - through reliability and ease of maintenance access.

Unique corrosion free Ni-resist cylinders at all compression stages are a typical example of CompAir's advanced technology, actively preventing the rust and corrosion which can quickly build up on iron casting whenever the compressor is not in operation.

The extended service life of the patented 'CD' ring, ensures maximum running time availability.

When maintenance is required, there is easy access to valves, piston and liner at each stage.



Improved heat transfer using high efficiency single pass



heat exchangers with internal turbulators.

### Extending operating life through advanced technology.

The PET H5000 series operate at low valve speed, minimising valve plate damage and wear due to impact velocity. Each valve is also protected by integrated, computer modelled inter-stage pulsation vessels, which smooth the pattern of airflow through each stage of compression. The result is reduced stress on every valve, improved compressor efficiency and extended valve life.

### Delivering drier air at lower temperatures.

The compact inter stage coolers and after cooler are all compressor mounted eliminating unnecessary field installation. Cooling is achieved using high efficiency single pass heat exchangers, with internal turbulators, to increase the cooling surfaces and improve heat transfer.

Inter stage and final stage moisture separators, efficiently remove condensed water to prevent corrosion and damage to valves and cylinders. At the same time they increase the effectiveness of the downstream refrigerant dryer.

An automatic moisture drain system which removes free water collected by interstage and final separator is another feature standard to CompAir compressors.

### Integral control panel - total control and protection fitted as standard.

All controls and protection fail-safes and gauges are integral to the PET H5000 - a complete system with no hidden extras.

PET H5000 machines are compatible with remote monitoring systems and/or multiple compressor/load selection systems.



Valves are designed for long life with direct access for faster servicing.



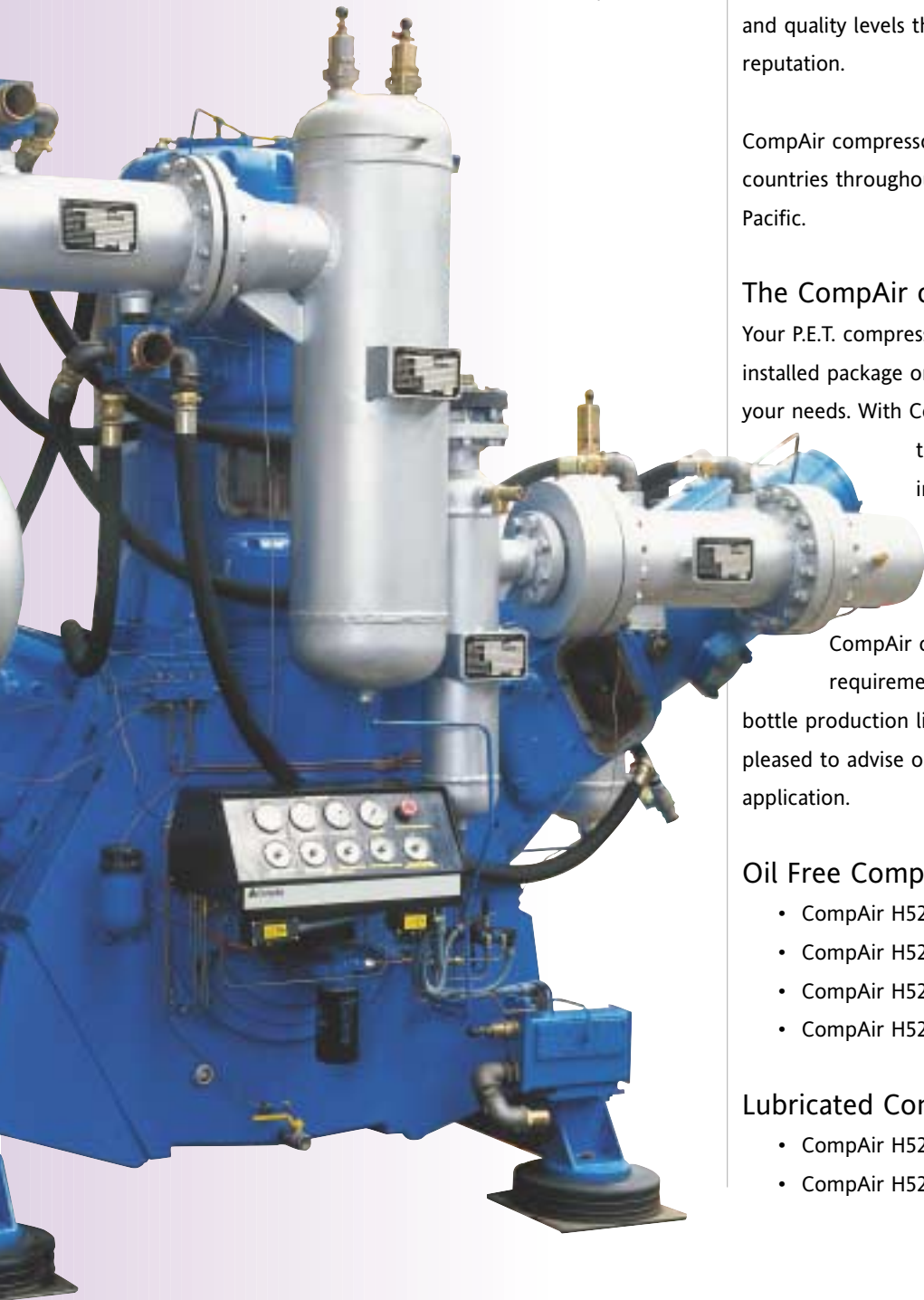
Integral control and protection panel.



PET H5281 Oil Free Compressor.



*Three H5236 compressors working in parallel at M & H Plastics in Beccles Norfolk, UK.*



## Global commissioning, expertise, support and service.

CompAir is recognised as a world leader in the application and manufacture of high pressure compressor systems, dedicated to delivering excellence in innovation, design, quality and speed.

Even more important is acknowledged leadership in providing post-installation technical service and on-site backup at speed and quality levels that are the cornerstone of our global reputation.

CompAir compressors are sold and serviced in over 120 countries throughout Europe, the Americas, Africa and the Pacific.

## The CompAir complete package.

Your P.E.T. compressor can be supplied as a completely installed package or to a minimal configuration dependant on your needs. With CompAir you have full support including technical service and back-up from installation to eventual replacement.

## The right compressor for your application.

CompAir offer a range of compressors to match the requirements and output of the most modern P.E.T. bottle production lines. Our sales representatives will be pleased to advise on the most suitable model for your application.

## Oil Free Compressors

- CompAir H5280
- CompAir H5281
- CompAir H5282
- CompAir H5283

## Lubricated Compressors

- CompAir H5280L
- CompAir H5236

# Intelligent Air Technology

Compressed air solutions for every application

## Compressors

0.1 - 43m<sup>3</sup>/min  
0.75 - 450kW  
up to 414 bar g

## Lubricated

Rotary Vane  
Single Stage Screw  
Speed Regulated Screw  
Piston  
Portable

## Oil-Free

Two Stage Screw  
Water-Sealed Screw  
Piston  
Portable

## Complete Accessories Programme

Filters and Dryers  
Cooling Systems  
Heat Recovery  
Condensate Management  
Air Receivers  
Multi-Set Controllers  
Lubricants

## Value Added Services

Air Audit  
Performance Reporting  
Utility Air  
Performance Contracting

## Complete Service for Compressed Air Technology

Engineering of Complete Compressor Stations  
Local Service Centres  
Guaranteed Parts Availability



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