CompAir

GREEN COMPRESSED AIR
FOR A SUSTAINABLE FUTURE

THE IMPORTANCE OF YOUR COMPRESSED AIR SYSTEMS
FOR MORE ENVIRONMENTALLY FRIENDLY PRODUCTION

SUSTAINABLE MANUFACTURING

Climate protection concerns us all!

With the **right compressed air solution**, you actively protect the climate

10 % and in extreme cases even up to 40 % [1]: this considerable share of total energy costs can be attributable to compressed air generation and treatment alone in an average European industrial company. In figures: in total, this corresponds to approx. 10 TWh of electricity and emissions of around 4.3 million tonnes of CO_2.

Energy costs = **up to 80 %** of total lifecycle costs

And did you know that around 80% of the total lifecycle costs of compressor technologies are due to energy costs. This means: environmentally friendly **new investments** and technical upgrades of existing compressed air systems can significantly **reduce** your total cost of ownership (TCO) and **CO_2 emissions**.

[1] https://pwemag.co.uk/news/fullstory.php/aid/4276/The_hidden_value_of_compressed_air_heat_recovery.html

Oil-free or **oil-lubricated** compressor technology?

The **application** decides

Don’t let yourself be (only) dazzled by efficiency

The key question must not be: How efficient is your compressed air system? **What really matters is:** How much compressed air do you actually need – and in what quality?

Efficient compressors are generally more environmentally friendly. However, they only protect your budget and the environment if you choose the right model for your compressed air generation.

It is essential to clarify **when**, **how much** air is needed and in **what quality**. Once this is defined, you are free to choose from state-of-the-art technologies – either oil-lubricated or oil-free.

Oil-free ULTIMA compressor technology

The new definition of **oil-free** efficiency

The oil-free **ULTIMA** compressor is equipped with two permanent magnet motors that replace the traditional gearbox. These variable-speed motors reach speeds of up to 22,000 rpm and offer higher efficiencies than IE4 motors.

The compressor stages can be operated at different speeds depending on demand.

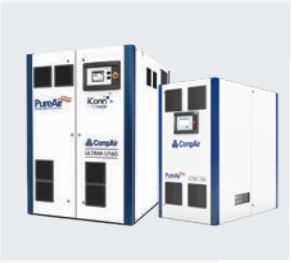
ULTIMA operates 100% oil-free; component cooling is provided by a closed water circuit.

What does that mean in practice?

* Comparative calculations with a conventional variable-speed oil-free compressor showed: installing an air-cooled **ULTIMA** compressor corresponds to an indirect reduction of CO_2 emissions by 52 tonnes per year.

A comparable amount of CO_2 is absorbed by 5,207 trees!

Oil-free screw compressor **ULTIMA**



U55 to **U160 – ULTIMA**
4 to 10 bar
4.4 to 24 m³/min
55 to 160 kW

Two-stage, oil-free screw compressors; optional variable speed

Click here:

Contact us for a no-obligation **consultation**

PureAir
ISO CLASS: ZERO PLUS SILICONE FREE

Maximum air purity and sustainability **in sensitive industries:**

In many industries – for example, in the production of electronic components, food and beverages or pharmaceuticals – there are clear and strict regulations that also impact the quality of compressed air generation, including:

- Good Manufacturing Practice (GMP) protocols
- European Pharmacopoeia
- Various guidelines of the U.S. Food and Drug Administration (FDA)
- International Council for Harmonisation
- Technical Requirements for Pharmaceuticals for Human Use (ICH3)
- European Food Hygiene Regulation 852/2004

In these sectors, our comprehensive portfolio of oil-free compressed air solutions supports you in achieving maximum air purity and greater sustainability.

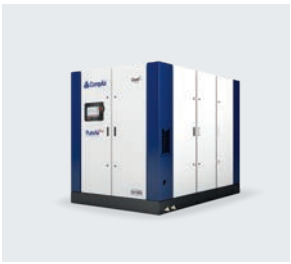
Further oil-free screw compressors and **compressed air technologies** complete the CompAir product range

D15H to **D37H**
5 to 10 bar
0.32 to 5.86 m³/min
15 to 37 kW

Single-stage, 100% oil-free, water-injected screw compressors; optional variable speed

D37 to **D75**
7 to 10 bar
6 to 12.7 m³/min
37 to 75 kW

Two-stage, oil-free screw compressors; optional variable speed

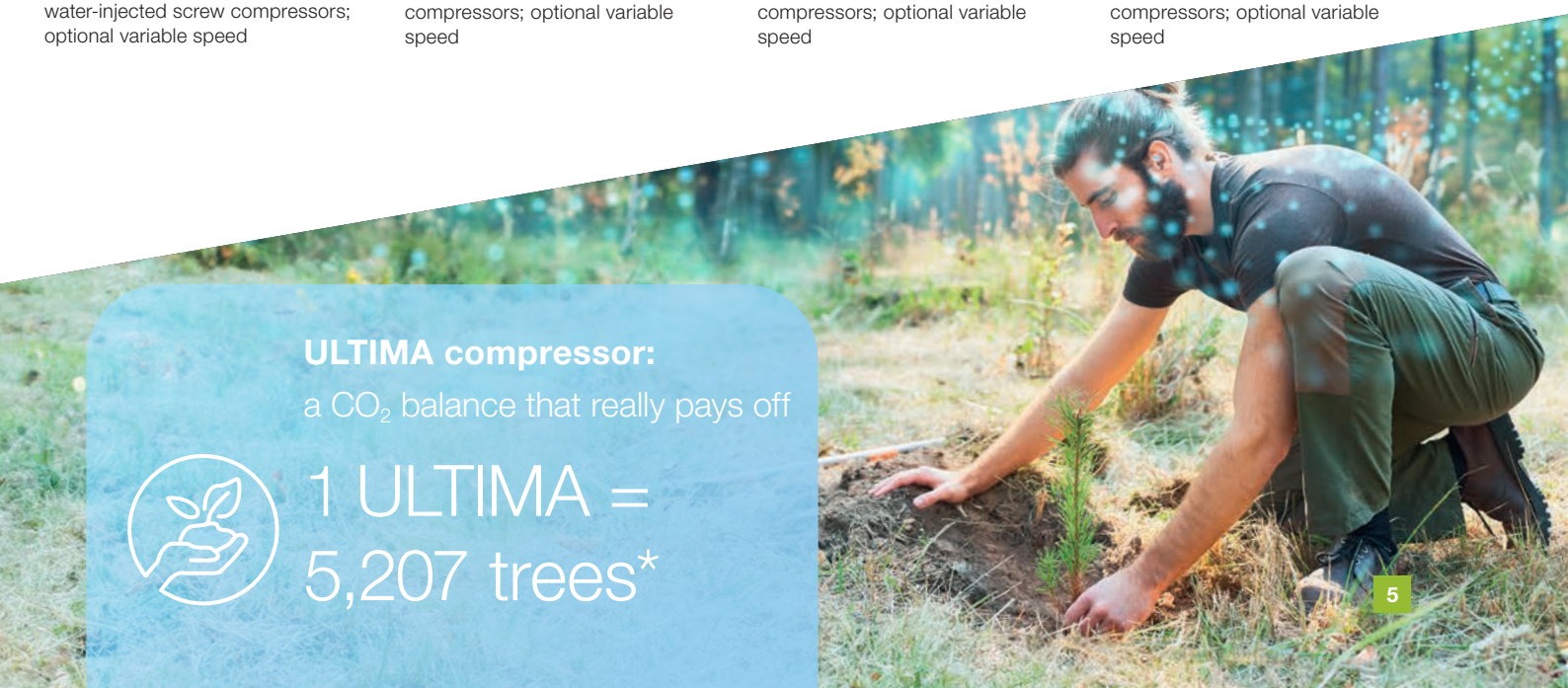


DX90 to **DX160**
4 to 10.7 bar
6.7 to 28.3 m³/min
90 to 160 kW

Two-stage, oil-free screw compressors; optional variable speed

DX200 to **DX355**
4 to 10 bar
11.4 to 53.4 m³/min
200 to 355 kW

Two-stage, oil-free screw compressors; optional variable speed



ULTIMA compressor:
a CO_2 balance that really pays off

1 ULTIMA =
5,207 trees*

CompAir

Sustainability – even when conditions are **far from clean**

As in many areas of life, there are two sides to the story. Especially where industrial production, civil engineering, waste management, mining or recycling are involved, conditions are often dusty, dirty and harsh.

Here, **oil-lubricated compressors** not only operate reliably, but also increase profitability.

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Oil-lubricated compressor technology

Even in these industries, **sustainability** has its chance – with the right **compressed air solution**

A prime example: **FourCore** technology. With this solution, environmentally conscious companies can use an oil-lubricated compressor that has been optimised for sustainability over its entire life cycle.

FOURCORE
ADVANCED COMPRESSION TECHNOLOGY

And that's not all:

- **FourCore** requires only the footprint of a single-stage unit.
- Compared to conventional two-stage 200 kW compressors, the technology uses up to 22 % less material.
- Consumable usage is reduced by around 19 %.

CompAir's range of **oil-lubricated screw compressors**:

L02 to **L06**
10 bar
0.18 to 0.89 m³/min
2.2 to 7.5 kW

Single-stage, oil-lubricated screw compressors; optional variable speed [1)]

L07 to **L22**
7 to 13 bar
0.45 to 3.54 m³/min
7.5 to 22 kW

Single-stage, oil-lubricated screw compressors; optional variable speed [1)]

L23 to **L29**
5 to 13 bar
1.03 to 5.52 m³/min
22 to 30 kW

Single-stage, oil-lubricated screw compressors; optional variable speed

L30 to **L37**
5 to 13 bar
1.33 to 7.15 m³/min
30 to 37 kW

Single-stage, oil-lubricated screw compressors; optional variable speed

[1)] also available as **AirStation** including receiver and dryer

L45 to **L55**
5 to 13 bar
1.6 to 11.1 m³/min
45 to 55 kW

Single- or two-stage, oil-lubricated screw compressors; optional variable speed

L75
5 to 13 bar
2.1 to 14.8 m³/min
75 kW

Single-stage, oil-lubricated screw compressors; optional variable speed

L90 to **L132**
5 to 13 bar
5.1 to 24.79 m³/min
90 to 132 kW

Single- or two-stage, oil-lubricated screw compressors; optional variable speed

L160 to **L250**
5 to 13 bar
5.83 to 47.1 m³/min
160 to 250 kW

Single- or two-stage, oil-lubricated screw compressors; optional variable speed

CompAir

A clean solution – for the environment too!

Compressed air treatment from CompAir stands for clean, high-quality compressed air in accordance with ISO 8573-1:2010 – independently tested and certified in line with ISO 12500-1, and produced in an energy-efficient, low-emission manner.

Only lets through what is allowed to pass

Compressed air treatment from CompAir

Click here:

Contact us for a no-obligation **consultation**

Compressed air treatment

Filtration, drying and condensate management

Modern production systems and processes require compressed air of ever-increasing purity. CompAir compressed air treatment systems use the latest technologies to provide energy-efficient solutions with minimal lifecycle costs.

- The integration of a heat recovery system and advanced master controls helps maximise efficiency.
- The right filtration and drying systems ensure continuous protection of your equipment.
- CompAir nitrogen generators offer numerous advantages over external supply, such as higher flexibility, lower costs and reduced downtime.

With in-house manufacturing of the entire treatment portfolio, CompAir designs and produces carefully matched products and components. Everything fits together – ensuring maximum efficiency with minimum energy consumption.

High-quality consumables, such as long-life filter elements, ensure low resource wear and consistently low differential pressure.

Click here:

For more information about
compressed air treatment

The comprehensive **compressed air treatment** range from CompAir offers components for almost every application and requirement profile:

Filtration
– Cyclone separator
– Threaded filter
– Flanged filter

Removes free water, dirt particles and aerosols

Refrigerant dryers
PDP: + 3 °C
ISO class: 4
Technology: refrigeration circuit
Compressors: oil-free / CC

Sub-freezing dryers
PDP: -20 °C
ISO class: 3
Technology: refrigeration circuit
Compressors: oil-free / CC

Heated blower dryers
PDP: -40 °C / -70 °C
ISO class: 2 / 1
Technology: pressure swing adsorption
Compressors: oil-free / CC

Elec50 – emission-free, efficient, reliable

The construction site **of tomorrow**

This CompAir series brings the benefits of electrically driven screw compressors to the construction site

Features and benefits

- Working pressure **5 to 12 bar**
- Volume flow **3.5 m³/min** at 12 bar **5.0 m³/min** up to 7 bar
- Motor power **30 kW**
- Unbraked weight: < 750 kg – towable **by passenger car**
- **FPM – Flexible Power Management** with 16A to 63A
- **Variable-speed screw compressor**
- New **DELCOS** controller and **iConn** for GPS tracking
- AirPlus – the **right compressed air** for your application
- Service kits for **cost-effective maintenance**
- 60 % shared components with existing ranges – for **secure spare parts supply**
- **Energy savings of up to 46 % and up to 36 % savings in maintenance and service costs** compared to a comparable diesel compressor
- Mobile 5 warranty – **up to 5 years' protection** for your investment
- **German engineering,** design & manufacture
- **Protects employee health**
- Ideal for **urban construction sites** or **indoor** applications
- Plug & Play **on the public power grid**

ZERO EMISSIONS ELECTRIC DRIVEN

Click here:

Contact us for a no-obligation **consultation**

CompAir portable compressors have proven their reliability and efficiency under the toughest conditions. The **Elec50** compressors combine these strengths with the advantages of an emission-free, extremely quiet and economical electric drive:

The **Elec50** is ideal for use in environmentally or noise-sensitive areas, such as tunnels, narrow excavations or inside buildings. Wherever a suitable power supply is available, the compressor can be connected to the public grid.

Compared to a comparable diesel unit, the **Elec50** offers **potential savings of up to 46% in energy costs and up to 36% in maintenance and service costs.**

Click here:

Video **Elec50**

Click here:

Complete portofolio CompAir **construction compressors**

Elec50 (DLT0501)
5 to 12 bar
3.5 at 12 bar 5.0 up to 7 bar
30 kW

Single-stage, oil-lubricated screw compressor, electrically driven and variable speed

Typical applications

- Breakers and demolition tools
- Blow-out work
- Drilling
- Displacement hammers and earth rockets
- Spray painting and coating
- Sand and dry ice blasting
- Environmental or noise protection zones
- Applications in urban areas or indoors, e.g. in tunnels, narrow excavations or buildings

CompAir

Service agreements, proactive maintenance, genuine spare parts

Greater safety for industry and the environment

An intelligent maintenance strategy avoids unplanned production interruptions, unnecessary wear and increased use of materials in servicing. In addition, optimal system efficiency lowers energy consumption and reduces both environmental impact and operating costs.

Comparison of energy costs

C **Compressor maintained with genuine CompAir spare parts**, 110 kW, oil-lubricated

X **Compressor maintained with spare parts from other manufacturers**, 110 kW, oil-lubricated

A compressed air system is more than the sum of its parts:

Assure service agreements

A sound monitoring strategy with iConn and proactive maintenance is essential to avoid unplanned downtime.

Our Assure service agreements ensure a consistently efficient compressed air supply by keeping filters, wear parts and lubricants in perfect condition and tuning the controls for optimal performance.

Click here:

All about **Assure service agreements**

Ensure efficiency. Reduce risk. Act with foresight.

IIoT connectivity & proactive maintenance

With **ECOPLANT**, you can use your compressor data to:

- improve performance
- reduce the workload on your service team
- gain transparency on energy consumption
- increase process efficiency

ECOPLANT monitor
as **standard** with Assure service agreements

Upgrade option:

ECOPLANT optimisation
Compressed air management with these **upgrades:**

- Live energy dashboard
- Dynamic control algorithm
- Leak detection & system auditing
- Real-time savings verification

Powered by ECOPLANT

Click here:

Further information about **ECOPLANT**

Don't save in the wrong place:

Genuine spare parts

Saving money on non-original spare parts is saving in the wrong place. "Cheap" often turns out to be expensive.

Purchasing genuine spare parts at a fair price pays off, because:

- the cost risk of frequent repairs or production disruptions is reduced
- system efficiency is maintained over the long term

Those who use genuine spare parts secure an optimal price-performance ratio.

Assure Genuine OEM Parts

Click here:

Go here for **original spare parts**

CompAir

Know-how saves energy

Use your compressed air technology as a **sustainable energy source**

Choose smart – and efficient:

The **right technology** for your application

To select the right compressor, you should not only know your compressed air demand, but also parameters such as:

- operating pressure
- volume flow
- required compressed air quality in accordance with ISO 8573-1:2010

Whoever reduces, acts sustainably:

Environmentally friendly technologies

For example: 100% oil-free DH series compressors feature a highly efficient water purification system, which uses reverse osmosis filtration to produce injection water of particularly high quality. This makes lubrication, sealing and cooling easier. Another advantage: using a permeate pump reduces water – and thus energy – consumption to an absolute minimum.

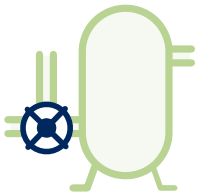
The complete package:

Efficient compressed air treatment

Since downstream equipment makes a significant contribution to the overall system's quality and efficiency – and therefore reduces environmental impact – there should be no compromise when selecting these components. CompAir's new compressed air treatment solutions are developed and manufactured in-house. You can be confident that their quality is monitored according to the highest standards.

Click here:

Contact us for a no-obligation **consultation**



Economy starts with the receiver:

Correct sizing of the air receiver

The size of the air receiver has a direct impact on reliability and energy efficiency. The receiver must therefore be correctly matched to the application.
Basic rule:

- The better the compressor control matches actual demand (variable-speed systems), the smaller the air receiver can be.
- Load/idle-controlled systems require larger vessel volumes to reduce the switching cycles of the compressor drives. This reduces wear and improves energy efficiency.

Take a closer look more often:

Compressed air audits

When purchasing a new compressor or upgrading an existing system, an energy audit should be carried out. There is hardly a simpler way to identify inefficiencies.

Put real pressure on it:

Correct sizing of downstream components

When selecting filters, not only validated separation efficiency (ISO 12500-1) is important, but also the lowest possible flow resistance. This directly affects your compressor's energy requirements. Equally important: line pressure. The higher the operating pressure, the more clearly it appears on your electricity bill.

Tip: It makes sense to optimise all components in the network for the lowest possible differential pressure. With filter elements, differential pressure increases with service life – early replacement helps.

Gaps don't pay off:

Leakage prevention

Leaks are highly unfavourable from an energy perspective – for both your budget and the environment.

- Check the system regularly for open shut-off valves.
- Inspect manual condensate drains.
- Look for faulty couplings, pipes or flanges.

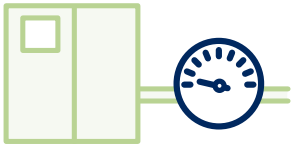
This helps avoid leaks and thus indirectly reduce CO_2 emissions.

Stay flexible:

Variable speed

If sustainability and environmental awareness rank high on your agenda, compressors with variable-speed drive are the most efficient solution.

The drive system continuously adjusts motor speed to the actual compressed air demand – ensuring your compressed air supply is always demand-driven and energy optimised.



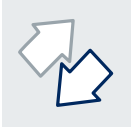
So costs don't run idle:

Avoiding **idle running**

Idle running is one of the main cost drivers and can quickly make a compressor "unsustainable".

Check whether idle operation and the associated frequent starts and stops are really necessary. Improved control or the use of variable-speed compressors can significantly reduce both costs and energy consumption.

Click here:



Contact us for a no-obligation **consultation**

A **compressed air system** is only as good as the **sum** of its **genuine parts** and **services:**

The biggest levers for you are operating costs and power consumption. **Assure service agreements** ensure a long service life with optimal operation through regular inspection of genuine parts such as filters and fluids, and by keeping control parameters optimally adjusted.

Assure

Powered by ECOPLANT

iConn

Click here:
All about **Assure service agreements**

Click here:
Further information about **ECOPLANT**

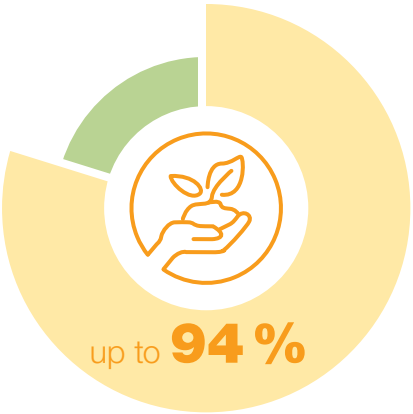
Click here:
More information about **iConn**

Don't waste anything:

Heat recovery

Did you know that around 70 % to 94 % of the energy absorbed by air compressors can be recovered using heat recovery systems?

This reduces running costs, since little or no additional electricity, gas or oil needs to be purchased. At the same time, you reduce your company's CO_2 emissions and improve your CO_2 footprint.



Potential savings
with heat recovery systems

Click here:

Discover
heat recovery

Video about
heat recovery

Energy savings calculator

Typical uses of recovered heat:

Heat recovery solutions for

Space heating

Hot water

Industrial process heat & steam generation

Room heating

Heat recovery with **oil-free ULTIMA compressors**

The ULTIMA compressor range offers various heat recovery options to meet individual customer requirements.

Air-cooled ULTIMA:
the only oil-free compressor with integrated heat recovery

Water-cooled ULTIMA + E-max:
the turnkey heat recovery module for oil-free compressors

Now it’s your turn!

Make a forward-thinking decision about your compressed air system. The climate, our environment, future generations – and your budget – will thank you.

CompAir

SUSTAINABLE MANUFACTURING

Innovation & Engineering Excellence

A leading global manufacturer of a wide range of world-class compressed air solutions, CompAir is dedicated to providing a complete solution for our industry partners. From the latest advances in oil-free and oil-lubricated technologies to a complete range of downstream equipment, air treatment and accessories.

An extensive network of dedicated CompAir sales companies and premium partners across all continents provide global expertise with a truly local service, ensuring our advanced technology is backed up with the right support.

CompAir has consistently been at the forefront of compressed air systems development, culminating in some of the most energy efficient and low environmental impact compressors on the market today, helping customers achieve or surpass their sustainability targets.

CompAir product range

ADVANCED COMPRESSOR TECHNOLOGY

Lubricated

- Rotary Screw
  – Fixed and Regulated Speed
- Portable
- Vane

Oil-free

- Water Injected Screw
  – Fixed and Regulated Speed
- Two Stage Screw
  – Fixed and Regulated Speed
- Ultima®

COMPLETE AIR TREATMENT RANGE

- Filter
- Refrigerant and Desiccant Dryer
- Condensate Management
- Heat of Compression Dryer
- Nitrogen Generator

MODERN CONTROL SYSTEMS

- CompAir DELCOS Controllers & Monitoring
- SmartAir Master Plus Sequencer
- iConn – Smart Compressor Service
- Ecoplant

VALUE ADDED SERVICES

- Professional Air Audit
- Performance Reporting
- Leak Detection

LEADING CUSTOMER SUPPORT

- Heat Recovery
- Assure Service Agreements
- Custom Engineered Solutions
- Local Service Centres
- Genuine CompAir Parts and Lubricants

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