

Gardner Denver

Performance, Reliability & Sustainability - All in One.

Experience the Next Generation of Ultima Oil-Free Compressors
Ultima™ 55 - 160kW
Variable Speed Air and Water Cooled

PureAir
ISO CLASS: ZERO PLUS SILICONE FREE



Industry 4.0

IOT



Innovative Oil-Free
Compressed Air Technologies



Ultima™ redefines efficiency

Ultima™ delivers on every level

Ultima is a groundbreaking oil-free PureAir compressor from Gardner Denver. Its unique design features two dry screw airends, each driven by a variable-speed, IE5 permanent magnet synchronous motor, offering exceptional efficiency compared to traditional oil-free technology.

With energy being the highest lifecycle cost, Ultima combines ultimate performance and efficiency while delivering a footprint 34% smaller than conventional two-stage oil-free compressors.




CLASS 
CERTIFIED

- ▶ **Pressure range**
4 to 10 bar
- ▶ **Volume flow**
?? to 24 m³/min
- ▶ **Nominal power**
55 to 160kW

100% oil and silicone-free for clean air critical applications

The Ultima compressors are 100% oil and silicone-free and meet ISO 8573-1 Class Zero (2010), making them the ideal choice for stringent oil-free applications within food and beverage, pharmaceutical, electronic and the automotive industries.

GERMAN 
ENGINEERING
DESIGN&MANUFACTURE



“Achieving **substantial efficiency gains** while surpassing environmental targets”

Why Choose **Ultima™**?

The unique patented design delivers numerous benefits to compressed air users:

▶ **Unrivalled Energy Efficiency**

The Ultima’s advanced 2-stage airend design and high-speed permanent magnet (PM) motors deliver best-in-class efficiency, exceeding IE5 and IES2 standards—significantly lowering energy costs.

▶ **Space-Saving, Compact Design**

With a 34% smaller footprint than its predecessor and up to 50% smaller than competing models, Ultima maximises valuable floor space while delivering powerful performance.

▶ **Direct-Drive, Gearbox-Free Technology**

A fully integrated airend-drive system removes the need for a gearbox, reducing friction losses, wear and tear, and overall maintenance needs.

▶ **Advanced Heat Recovery for Cost Savings**

All models support heat recovery – producing hot water up to 90°C, allowing industries to reuse waste heat for process heating, water heating, and facility warming, dramatically cutting operational costs.

▶ **Whisper-Quiet Operation**

Ultima creates a quieter working environment designed for ultra-low noise levels, making it ideal for noise-sensitive applications.

▶ **Smart Digital Control & Remote Monitoring**

The intuitive Delcos XL SE7 Controller provides a real-time overview of compressor performance, remote connectivity, and predictive maintenance insights—enhancing uptime and efficiency.

▶ **Eco-Friendly Powered Breather System**

Ultima’s advanced oil mist separation technology prevents emissions into the atmosphere, ensuring a cleaner work environment and reducing oil consumption.

▶ **Future-Ready Power Upgrades**

Ultima can be scaled up with on-demand power upgrades as your business grows, eliminating the need for costly additional compressors.

▶ **Multiple energy saving** dryer options for lowest pressure dew points – e.g. Subfreezing, Drum dryer, HOC.

▶ **Comprehensive Service & Predictive Maintenance**

Built-in iConn connectivity provides proactive service alerts and real-time system monitoring powered by Ecoplant, minimising downtime and ensuring continuous operation.

Ultima: Performance, Reliability, and Sustainability – **All in One!**

Oil-Free Clean Air Premium Technology

User Friendly
Saving
Contaminant

Ultima™ truly superior, however you look at it

The **unique drive design**

Traditional oil-free compressors use:

- A single motor
- A gearbox to drive both airends
- This leads to **energy loss due to friction**

Ultima offers a more efficient solution by:

- Replacing the gearbox with ultra-high-efficiency motors
- Using sealed-for-life bearings to reduce maintenance and improve reliability

Each airend operates:

- At **variable speeds** based on demand.
- Independently controlled by **Ultima's intelligent "digital gearbox"**

This design ensures:

- **Maximum efficiency** at all times
- **Optimal pressure ratios**, adjusting in real-time

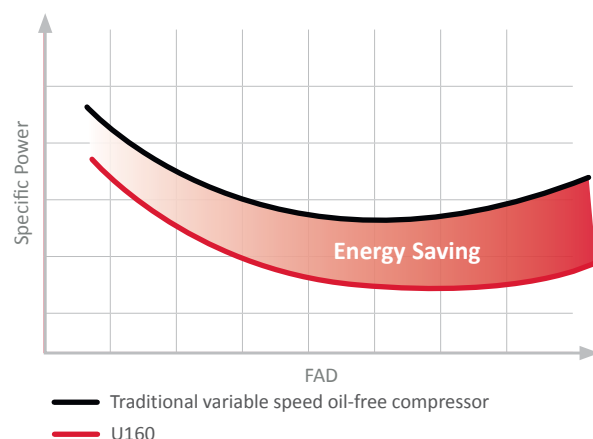
Even greater **efficiency**

- Regulated speed compressors go into idle run at minimum speed, wasting energy
- Ultima uses 45% less energy in idle run compared to conventional two-stage compressors
- A 160kW Ultima compressor uses less than 8kW in idle run



Ultima Water Cooled

Efficiency - 160kW at 10 bar (g)





Simple Reliable
Serviceable Efficient
Quiet Superior Design

“Highest efficiency levels throughout the life of the compressor.”

In-Built Power Upgrades

Are you prepared for your future compressed air needs?

As your business grows, so will your demand! The next-generation Ultima is available now, offering flexible adjustment of power and air delivery to match changing requirements.

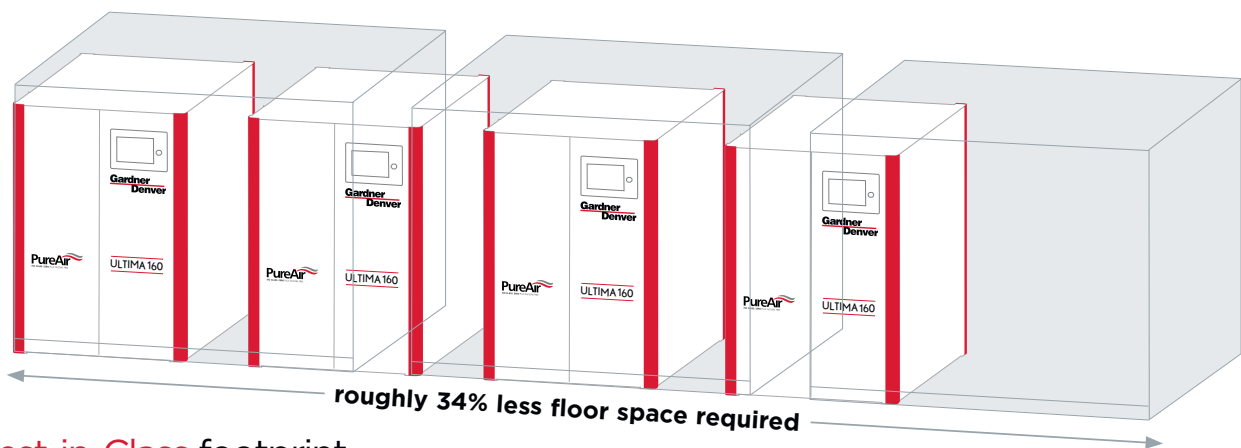
- Much cheaper than an investment in new or additional compressors
- No waiting period for build and delivery
- No downtime for installation and commissioning

Premium efficiency airends

Unlike most oil-free airends that quickly lose performance, the German-engineered and manufactured airends in Ultima use a special coating to ensure maximum efficiency and protection throughout the compressor’s lifetime.

Lowest noise levels

Ultima is exceptionally quiet, with 160 kW models reaching just 69 dB(A) (water-cooled) and 70 dB(A) (air-cooled) — far quieter than any comparable oil-free compressor, making it ideal for point-of-use operation.



Best-in-Class footprint

The second-generation Ultima compressors need 34% less floor space than their predecessors and up to 50% less than other brands, allowing easy installation even in tight spaces — saving both space and property costs.



Heat Recovery - with oil-free Ultima compressors

All models support heat recovery – producing hot water up to 90°C, allowing industries to reuse waste heat for process heating, water heating, and facility warming, dramatically cutting operational costs.

Use waste
heat to heat:



Space-heating



Industrial process heat



Hot water



Pre-heating for steam generation

The Ultima compressor range offers various heat recovery options to meet individual customer needs

1. **Integrated heat recovery** - Heat exchanger for heat recovery integrated inside the compressor package. It can be either factory fitted or supplied as retrofit kit including all necessary pipe-work and fittings.
2. **Air-Cooled Ultima with heat recovery**
3. **Water-Cooled Ultima + Emax**

Air-cooled Ultima with heat recovery

The air-cooled ULTIMA is the only air-cooled oil-free compressor that is available with integrated heat recovery – delivering significant energy and costs savings.



Ultima Air Cooled

Water-cooled Ultima + E-max

The turnkey heat recovery box for oil-free compressors.

E-max includes all the main components required for a heat recovery system. The installation of a heat recovery system using E-max is very straightforward and virtually maintenance-free.



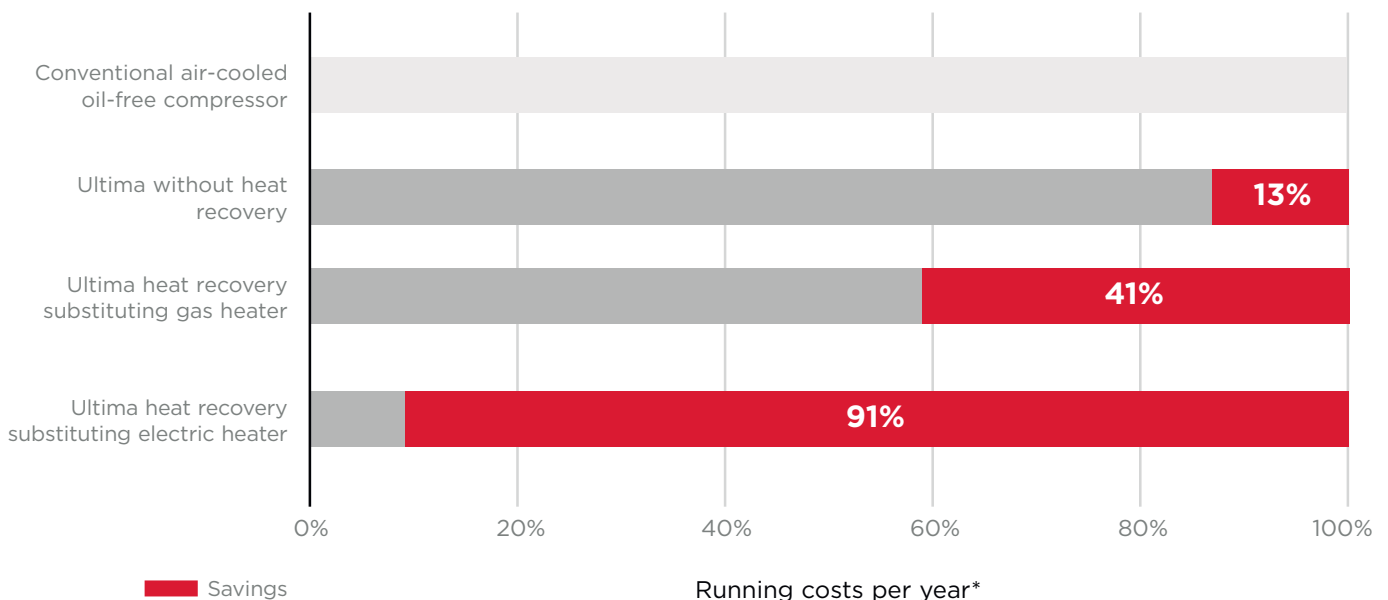
Benefits

Give your compressed air system an **efficiency upgrade**

With a Gardner Denver heat recovery system, the heat generated by the compressor can be reused.

- Extremely short payback time
- Reduced CO₂ emissions
- Turnkey solutions available
- Simple installation
- Improved environmental footprint
- No impact on compressed air supply

Comparison of **annual running costs**



*Operation @ 20m³/min 8 bar, 4.000 hours per year, electricity price 15 ct/kWh, gas price 5 ct/kWh



Ultima™ – driving the perfect compressed air solution

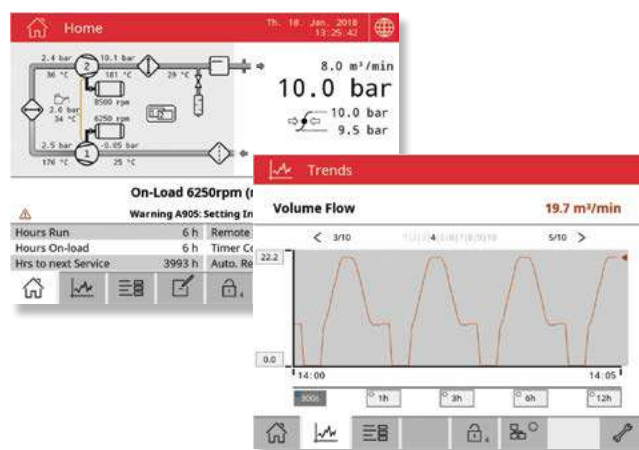
Delcos XL SE7 controller

Features

- 7" high resolution touch screen display (1024 x 600 pixels)
- 5 standard screens
- 5 trend graphs available
- Constant control of all relevant parameters
- Fully compatible with SmartAir Master
- Optional Base Load Sequencing
- Interfaces: RS-485 connectivity, Modbus RTU, integrated Webserver, onboard SD card and embedded iConn

Benefits

- Increased operational efficiency due to intuitive, easy-to-use interface
- Intuitive operation with a user-friendly touch screen and clear menu structure
- Improved global accessibility thanks to multilingual support
- Lower operational costs through continuous monitoring of key parameters
- Enhanced investment protection by ensuring reliable performance and minimising downtime



Options

- Hot air discharge for the connection of heat-of-compression dryers and rotating drum dryers
- Canopy stand still heater
- U-Cooler (External cooling module for water-cooled models including pump station)
- Heat Recovery for air-cooled models
Integrated heat exchanger for heat recovery including control and backup cooling system
- Heat Recovery for water-cooled models
Different heat recovery options accounting for individual customer needs
- Various controller options

And many more...



More than just compressors...

Single Source Air Treatment Systems – Air Quality Assured

Designed and manufactured by
Gardner Denver

- **Air dryers** to improve productivity, system efficiency and product / process quality
- Leak-free, low pressure drop **EPL Piping**
- **Drain Valves** remove contaminants from the system without losing compressed air
- **Flow and system controllers** for compressed air system optimisation
- **Filtration products** like high-quality in-line filters and activated carbon towers ensure clean air and improve productivity
- **Oil Water Separators** remove lubricant from compressed air condensate for an environmentally friendly disposal
- **On-site nitrogen** generators to support your in-house nitrogen production needs

Meeting & exceeding expectations

Single Source Air Treatment
Systems – The Latest Innovation

The NEW Sub-Freezing Dryer from Gardner Denver

- **Revolutionary & UNIQUE** design concept sub-freezing dryer.
- **-20°C sub-zero pressure dew point (PDP)** meeting Class 3 requirements according to ISO 8573-1
- **Low operating, energy and upfront investment**
- The first of its kind – delivers -20°C (-4°F) PDP at **70% lower costs compared to desiccant technologies!**



Industry 4.0



Predictive Maintenance

Machine intelligence drives greater energy efficiency

Ecoplant is an AI-driven energy efficiency solution that optimises compressed air systems. It continuously monitors, analyses, and adjusts compressor operations to reduce energy waste, lower CO₂ emissions, and cut costs by up to 20%. Integrated with iConn, it ensures:

- Minimised outages & stable pressure
- ISO quality standards compliance
- Proactive issue detection to prevent downtime and enhance reliability
- Optimised energy use and reduced costs

Powered by



iConn Compressed Air Service 4.0

The Ultima Series is equipped with iConn as standard. iConn is the smart, proactive real-time monitoring service that delivers in-depth and real-time knowledge on the system to compressed air users.

- Advanced remote analysis
- Predictive – evaluates historic data
- Maximises energy efficiency
- Optimises compressor performance
- Reduces downtime
- Works as an open standard
- Free on new compressors – can be retrofitted
- Proactive maintenance

...that is why you cannot ignore iConn!



Analytical → Predictive → Cognitive

PureCARE

PUREAIR SERVICING & MAINTENANCE PROGRAMME

PureCare

Specifically developed to support our oil-free product range, the Gardner Denver PureCARE service programmes go beyond traditional service schemes to ensure uninterrupted quality compressed air supply coupled with optimum compressor performance, giving you peace of mind for your production and budgeting processes.

PureCARE Service plans are delivered by factory-trained Gardner Denver technicians specifically to keep your oil-free compressed air system at peak performance, supported by the unrivalled quality and performance of Gardner Denver genuine parts. Each PureCare Service plan is tailored to your specific application and site circumstances, ensuring system reliability and productivity at optimum cost.

It all adds up to **Peace of Mind**

Lower Cost of Ownership

Service and Warranty Agreements provide the most cost-effective solutions based on your customised maintenance strategy.

Quality Results

Factory trained technicians allows you to focus on your core business, while they take care of your compressor system.

Increased Uptime

Service Agreements help decrease unplanned downtime and costly production interruptions.

Efficient Energy Use

Peak system efficiency is achieved through properly performed maintenance and inspection.

Peace of Mind

A Service agreement ensures an extended warranty. Depends on duration.



Gardner Denver genuine spare parts

Enjoy complete peace of mind.

Genuine Gardner Denver parts and lubricants ensure that compressed air plant reliability and efficiency is maintained at the highest standards. Gardner Denver spare parts and lubricants are distinguished by:

- Long service life, even under harshest conditions
- Minimum losses contributing to energy savings



- High reliability improves plant up-time
- Products manufactured with the strictest Quality Assurance Systems



Technical data

Ultima™ U55 - U160

Model	Cooling Method	Working Pressure	Drive Motor	FAD at 8 bar g ¹⁾	FAD at 10 bar g ¹⁾	Noise Level ²⁾	Dimensions	Weight
		bar g	kW	m ³ /min	m ³ /min	dB(A)	L x W x H mm	[kg]
U55s	Water	5 - 10	55	4.4 - 10.4	4.3 - 8.9	64	1831 x 1081 x 1998	1750
U75	Air	4 - 10	75	6.7 - 11.9	7.7 - 9.9	64	3244 x 1394 x 1992	3360
	Water					63	2044 x 1394 x 1992	2750
U75s	Water	5 - 10	75	4.4 - 14.4	4.3 - 12.8	67	1831 x 1081 x 1998	1750
U90	Air	4 - 10	90	6.7 - 14.9	7.7 - 12.7	65	3244 x 1394 x 1992	3360
	Water					64	2044 x 1394 x 1992	2750
U90s	Water	5 - 10	90	4.4 - 17.0	4.3 - 15.5	68	1831 x 1081 x 1998	1750
U110	Air	4 - 10	110	6.7 - 18.5	7.7 - 16.3	65	3244 x 1394 x 1992	3360
	Water					64	2044 x 1394 x 1992	2750
U110s	Water	5 - 10	110	4.4 - 19.6	4.3 - 18.5	69	1831 x 1081 x 1998	1750
U132	Air	4 - 10	132	6.7 - 22.2	7.7 - 19.9	67	3244 x 1394 x 1992	3360
	Water					66	2044 x 1394 x 1992	2750
U160	Air	4 - 10	160	6.7 - 23.9	7.7 - 23.6	70	3244 x 1394 x 1992	3360
	Water					69	2044 x 1394 x 1992	2750

¹⁾ Data measured and stated in accordance with ISO 1217, Ed. 4, Annex C & E at the following conditions:
Air Intake Pressure: 1 bar a / 14.5 psia, Air Intake Temperature: 20°C / 68°F, Humidity: 0% (dry)

²⁾ Measured in free field conditions in accordance with the ISO 2151 test code, tolerance ± 3dB(A)



Gardner Denver in Action

Einbecker Brewery cut energy cost by 25% with Gardner Denver's ULTIMA

One of the oldest breweries in the world, Einbecker Brewery, has upgraded its existing compressed air units to the Ultima technology.

With limited on-site space, the Einbecker Brewery required a compact new solution that could provide reliable and energy-efficient compressed air, while also meeting the stringent air quality requirements demanded by the site's operations. In order to meet these demands, Gardner Denver has supplied two new 110kW Ultima compressors to the site.

"We needed a new compressed air solution to deliver improved operational efficiencies, help reduce our energy costs, and it had to be accommodated in the very tight installation space that was available on-site."

Christoph Benseler, Technical Manager, Einbecker Brewery

13% increase in efficiency plus 100% sterile production guaranteed for Schwan Cosmetics 17,000m² production facility in Germany

Schwan Cosmetics, an internationally renowned cosmetics company came to the conclusion that only one compressor technology could fulfil their requirements – and that was the Ultima.

The Ultima from Gardner Denver is the only compressor on the market where the low pressure and high pressure air ends are driven and controlled separately without being connected by a gearbox. We see this as a benefit because we can achieve significantly higher efficiency levels in the intermediate and partial load range.

"When we made the decision to invest in a new compressor to replace the previous 160 kW device, we wanted to take a step forwards."

Gerhard Bottner, Head of Mechanical Plant Maintenance, Schwan Cosmetics

Gardner Denver guarantees more process reliability for Fresenius Kabi

Fresenius Kabi, a large healthcare company in Friedberg/Hesse, Germany commissioned a new oil-free compressed air and adsorption dryer system from Gardner Denver, replacing a cost-intensive rental compressor.

The company had been working long-term with an established compressor manufacturer, but decided on a new technology partner in Gardner Denver. A key reason was the cooling capabilities of the ULTIMA and the technical design of Gardner Denver's adsorption dryers.

"If the positive results we are achieving continue, this package of compressor and dryers will continue to be a positive addition to our business for the future."

Axel zur Strassen, Head of Utilities (Media supply), Fresenius Kabi in Friedberg



Click here to see more reasons why **you cannot ignore ULTIMA!**

Global Expertise

The GD rotary screw compressor range from 2.2 – 500 kW, available in both variable and fixed speed compression technologies, are designed to meet the highest requirements which the modern work environment and machine operators place on them.



The oil-free EnviroAire range from 15 – 355 kW provides high quality and energy efficient compressed air for use in a wide range of applications. The totally oil-free design eliminates the issue of contaminated air, reducing the risk and associated cost of product spoilage and rework.



A modern production system and process demands increasing levels of air quality. Our complete **Air Treatment Range** ensures the highest product quality and efficient operation.



Compressor systems are typically comprised of multiple compressors delivering air to a common header. The combined capacity of these machines is generally greater than the maximum site demand. To ensure the system is operated to the highest levels of efficiency, the **GD Connect** air management system is essential.



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For additional information please contact Gardner Denver or your local representative.

Specifications subject to change without notice.