Unicla® EST. 1964

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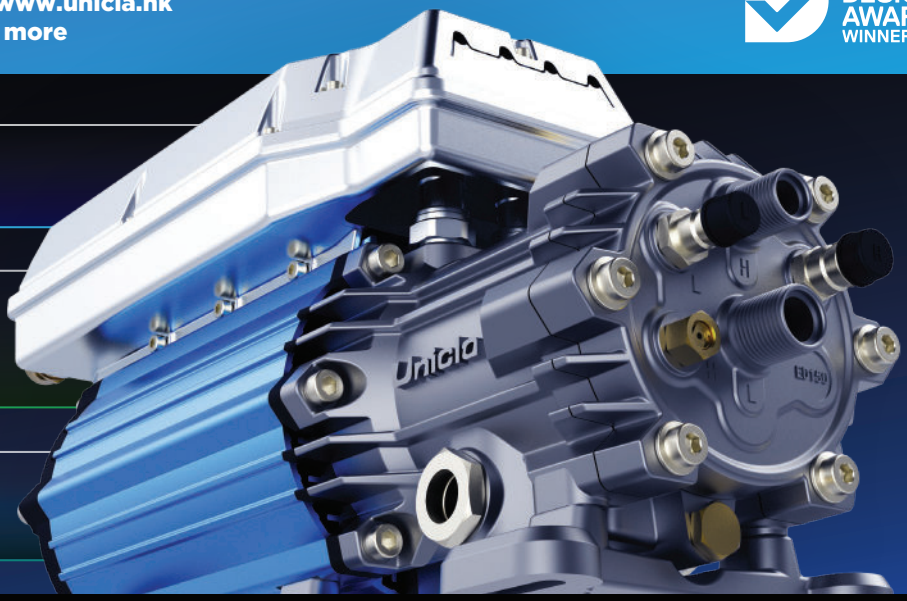
GOOD DESIGN AWARD® WINNER

Unicla eDrive™
The revolutionary electric compressor.

Unicla eConnect™
The primary communication interface between the technician and compressor.

Unicla eControl™
The intelligent compressor firmware.

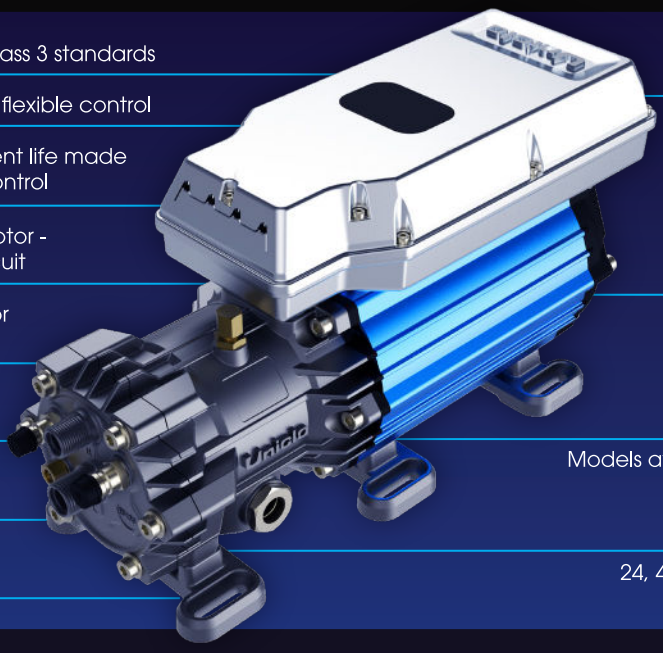


Unicla eDrive™

The revolutionary electric compressor.

Unicla eDrive is an intelligent, industrial-grade electric air-conditioning and refrigeration compressor. Its patented, award-winning design with dual onboard pressure and temperature transducers is designed for both OEM and retrofit applications in mining, locomotive, industrial and off-highway machinery.

- PCB and components manufactured to Class 3 standards
- eControl firmware provides complete and flexible control
- Extreme reliability and extended component life made possible by active thermal and pressure control
- Brushless, sensor-less long-life air-cooled motor - completely separate to the refrigerant circuit
- 10-cylinder long-life swashplate compressor with single piece, leak-free crankcase
- Balanced internals with high volumetric and isentropic efficiency
- Multi-refrigerant and multi-lubricant capable for ultimate flexibility
- Smooth, vibration-free operation with low noise generation and transmission



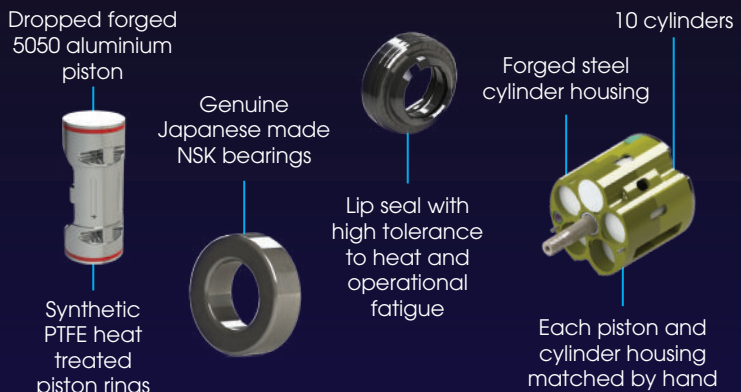
Communication
CAN, RS485, USB, Ethernet, Bluetooth, 0-10 V dc, 420 mA, Run/Stop

Refrigerants
R134a, R404A, R513a, R452a, R1234yf or R1234yz

Displacement
Models available in 150 and 200 cc

Voltages
24, 48, 72, 400, 600 or 800 V dc

Critical compressor components



Unconventional engineering for exceptional performance, reliability and efficiency.

- Variable speed
- Flexible and adaptable mounting
- Retrofit to existing systems
- eConnect interface included
- eControl firmware included
- No additional firmware required
- Simple power connection
- Multiple control systems
- CANbus, USB and ethernet enabled

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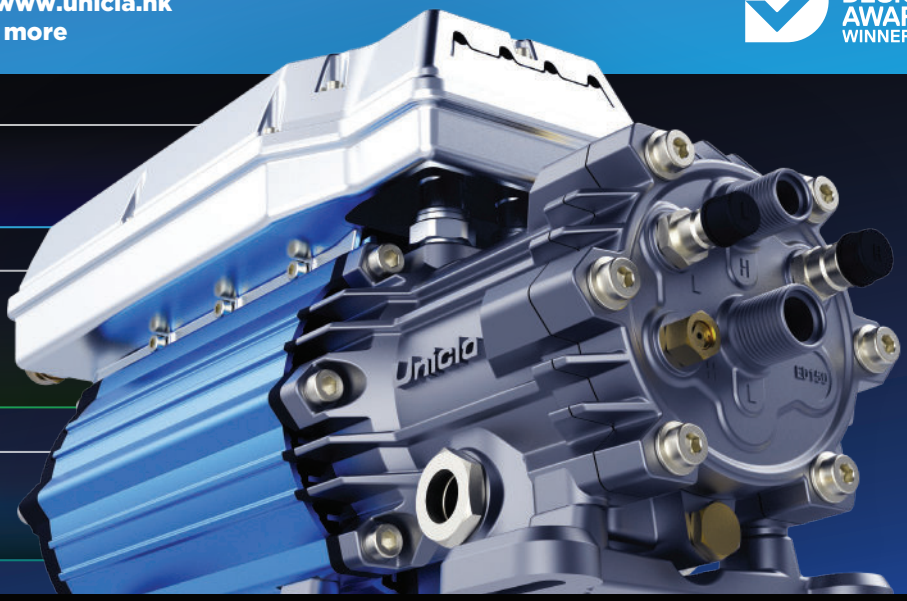


Unicla eConnect™

The primary communication interface.

Unicla eConnect is the primary communication interface that allows the technician to view, log and configure the eControl pressure, temperature and electrical operational parameters of the eDrive compressor and the system.

Dashboard

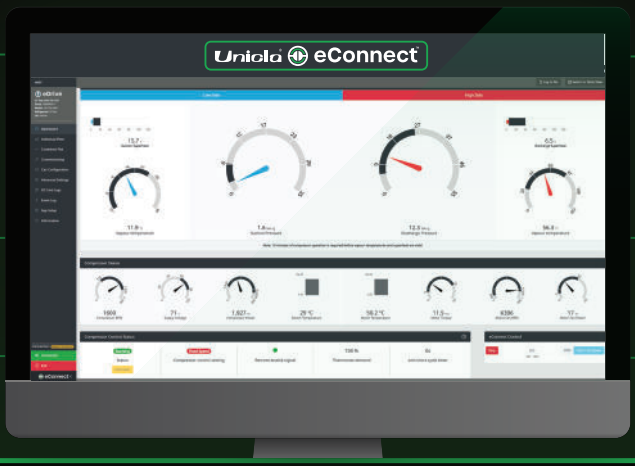
A simple, intuitive interface that provides total oversight and primary control of the compressor

Plots (individual & combined)

A viewing portal for all metrics of the eDrive in graphical form

Information

Important factory and statistical information regarding this eDrive



Event Log

A list of critical and non-critical events to help diagnose operational sequences and faults

App Setup

Configure app preferences and settings

Commissioning

Configure the desired operational behaviour

Unicla eControl™

The intelligent compressor firmware.

eControl is a Unicla proprietary firmware split in three sections – Control, Protect and Adapt. It is embedded in the eDrive compressor hardware and is configurable via the eConnect communication interface. eControl uses the eDrive system measurements from on board dual pressure temperature transducers and various mechanical sensors from the DC motor and PCB hardware to manage the compressor and influence the desired system reliability, safety and operating behaviour.

Control

The primary layer of eDrive operational logic that is accessible and configurable in the eConnect commissioning tab.

- Fixed speed
- Variable speed
- Communication

Protect

A suite of user-configurable and factory-fixed safety limits that maintain the compressor durability and lifespan.

- Pressure
- Temperature
- Superheat
- Oil Balance System (OBS)

Adapt

A set of discrete functions that overlay the primary logic for a high-level control intervention.

- High Side Pressure protection
- Low Side Pressure protection
- Low Side Pressure control
- Power protection

Cat No. C2501