

# OIL-FREE DIESEL DRIVEN COMPRESSED AIR SOLUTION

## T3|Portable Power



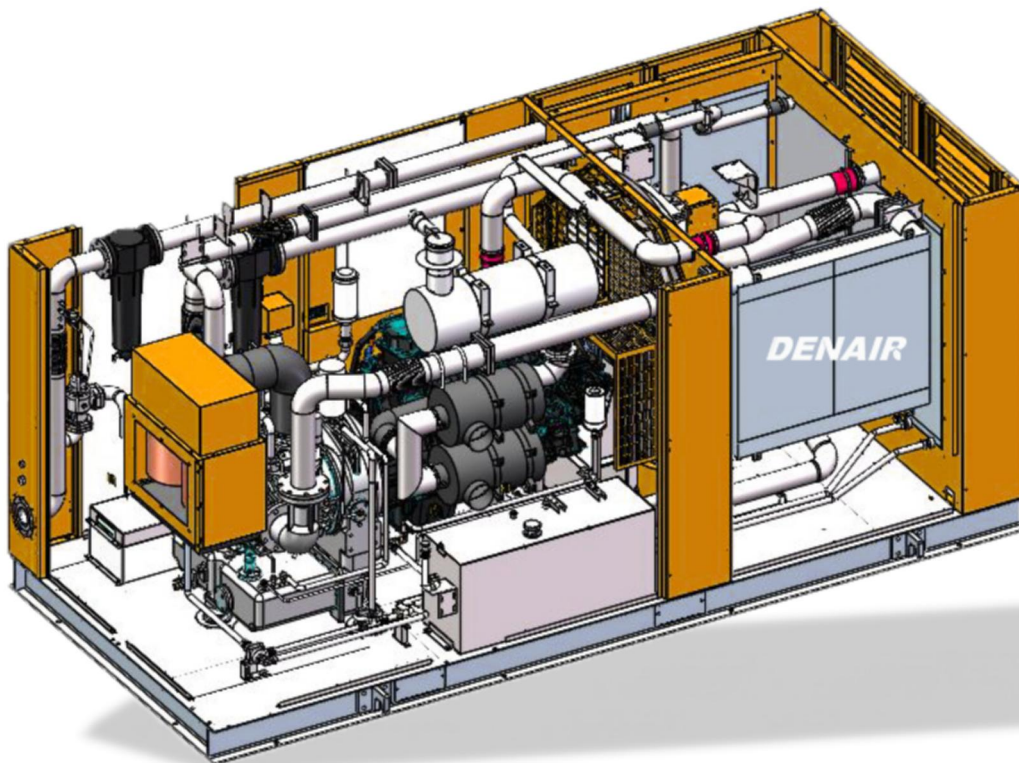
# OIL FREE – WHERE YOU NEED IT TO BE

More air compressor applications than ever require oil free air. Sensitive plant operations require a reliable source of oil free backup air. DENAIR compressors, based on diesel engines, have updated the main system to achieve a combination of diesel mobile units and oil-free compressor performance.

## Oil free air in a portable package

DENAIR air compressor is built for long-lasting performance and brings Class 0 Oil Free Air directly where it is needed — Oilfield, refinery, outdoor factory.

The Portable air compressors provide Class 0 oil-free air in a package designed for both short-term and long-term use. GHH oil-free two-stage air end provides you with sufficient oil-free air and is equipped with a powerful CUMMINS Tier 3 diesel engine drive.



## KEY FEATURES

### Touch Screen Controller

- ◆ Provides easy access to all compressor operation data and pressure adjustment.

### ISO Sea Container Housing

- ◆ Meets standards for operation in environmentally sensitive areas

### Easy-Operation External Fuel Valve

- ◆ Extends runtime beyond ten plus hours onboard fuel capability

### GHH Two-Stage Air End with High-efficiency Rotors

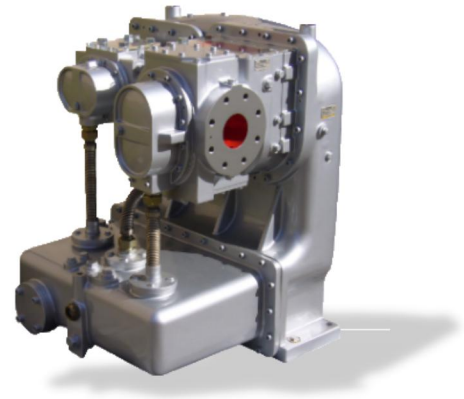
- ◆ Provides easy access to all compressor operation data and pressure adjustment

### Running Gear with Steerable Front Axle

- ◆ For quick and easy transport onsite

# DESIGN DETAILS

- ◆ The engine is connected to the air end using a highly elastic coupling, ensuring high transmission efficiency.
- ◆ The high elastic coupling helps mitigate engine impact, ensuring smooth operation of the air end.
- ◆ A high-power engine model is selected, with adjustable displacement ranging from 65% to 100%, providing substantial torque at low speeds for easy starting.



## Clean Technology

### Convincing oil-free details



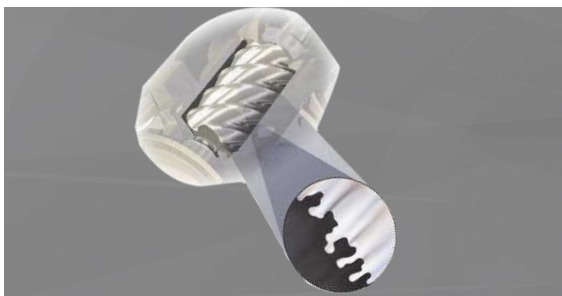
#### Stainless steel rotors

The second section of the rotor is designed with stainless steel, which is suitable for high temperature operating environment and greatly increases the life of the rotor.



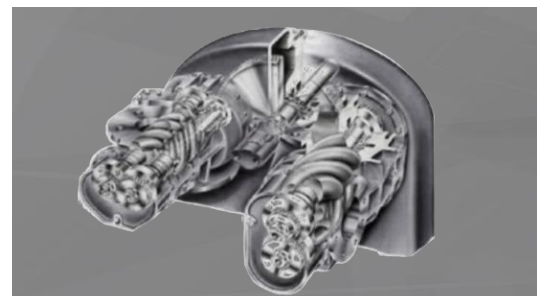
#### Efficient Bearings

Cylindrical roller bearings provide radial support and ball bearings provide axial support. Ensure the safest operation and the best precise positioning of the rotor.



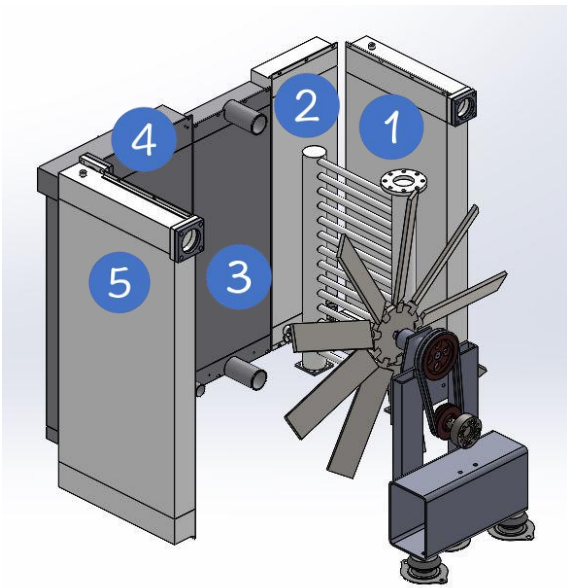
#### Super coating

Optimum adjustment of compression with controlled friction during the first test run  
Clearance in cavity, high temperature resistance (up to 300°C), excellent anti-corrosion effect.



#### Lubricating oil flows inside oil jacket

The casing compartment of the GHH second-stage main engine is cooled by an oil jacket, which prevents scale from affecting the heat exchange efficiency and greatly improves the reliability of operation.



- ◆ The engine cooling fan and the compressor cooling fan are integrated into one
- ◆ Utilizing a high-flow fan
- ◆ The capacity of up to 100,000 cubic meters per hour
- ◆ All coolers are arranged on the same side, with a single fan cooling all of them
- ◆ The unique cooling air duct design
- ◆ Allows cold air intake from the front and sides of the main unit
- ◆ Reducing the impact of heat sources on the compressor's intake temperature
- ◆ Enhancing compressor efficiency

## Cooling System

### Triple Cooling details

#### Cooling fan

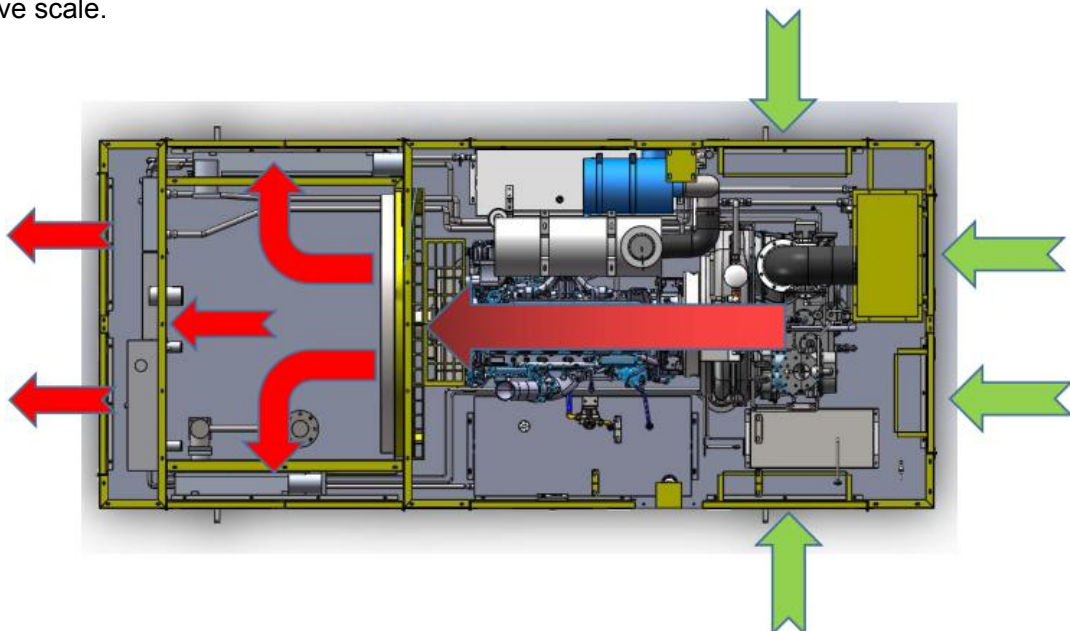
Use a cooling fan with large air volume and high air pressure to draw cold air (ambient temperature) into the unit from the four louvered door panels at the front of the machine.

#### 5 coolers

Compressor inter cooler+Compressor oil cooling+Engine inter cooling+Engine water cooling+Compressor after cooling.

#### Coolant

Anti-freeze, anti-rust and anti-boiling coolant can not only prevent the water jacket and water tank of the cylinder block and head from freezing due to freezing in winter, but also can prevent rust and remove scale.



## Control System

### Smart control details

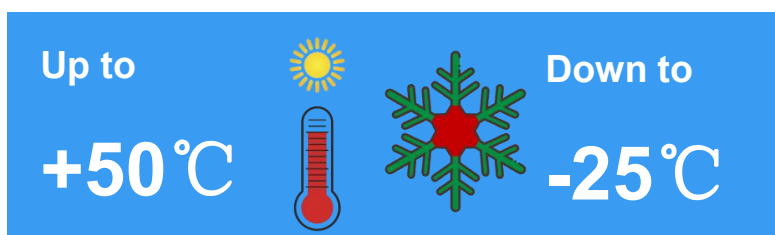


## Communication interface

1. Equipped with RS485 communication interface, "three remote" functions can be achieved using the MODBUS protocol.
2. Features CANBUS interface for monitoring common data of the fuel injector, such as RPM, water temperature, oil pressure, engine load, fuel consumption, etc.

## Adjustment function

1. Adjustable speed function that automatically adjusts stable speed based on the air compressor exhaust pressure.
2. Wide operating voltage range DC (8~35)V, adaptable to different starting battery voltage environments.
3. All parameters are digitally adjustable, eliminating conventional potentiometer analog adjustment methods, improving overall reliability and stability.





## ***Portable Power with 100% Oil Free Air***

DENAIR's technology and R&D have been constantly updated and evolved to keep up with market trends, and have always occupied a place in the market by designing and manufacturing some of the most durable oil-free screw compressors.

L1600 high-end screw compressors are born from this strong tradition and are ideally suited for industries where high quality oil-free air is critical, offering the highest reliability and safety combined with low energy costs.

### **Oil & gas**

- Years of experience in providing compressed air for the oil & gas industry.
- 100% oil-free compressed air for control instrument air or buffer air.
- Strong global support network to provide 24/7 assistance.

### **Chemical**

- High-purity compressed air is required.
- High demands for gas supply stability and reliability.
- Energy-efficient and high-performance air compressors are crucial for reducing energy costs and minimizing environmental impact.



## TECHNICAL SPECIFICATIONS

Machine	
Model	L1600
Free air delivery	45m <sup>3</sup> /min(1600cfm)
Working pressure	10bar(145psi)
Atmospheric pressure	0.1013MPa(a)
Ambient temperature	≤46℃
Relative humidity	80%
Operating temperature	Ambient temperature+15℃
Engine	
Manufacturer	CUMMINS
Model	QSZ13-C550-30
Rated power	410kW/550hp
Type	Turbocharging, charge air cooling
Bore*Stroke*No. Of cylinders	130mm*163mm*6mm
Engine speed(nominal)	1800RPM
Engine speed(unloaded)	1300RPM
Engine oil capacity	620L
Coolant capacity	160L
Storage battery current CCA	930
Air end	
Manufacturer	GHH
Model	CD26D
No. of compression stage	2
The rotor material	Non-alloy steel/stainless steel
Tooth	Asymmetrical 4:6
Compressor	
Lubricant capacity	72L
Oil grade	68#
Noise level	90±3
Air Outlet size	DN100
Weight	8500kg
Dimension	5000mm*2500mm*2500mm



P-DNR202401-28 Specifications are subject to change without prior notice.  
Never use compressed air as breathing air without prior purification in accordance with local legislation and standards.



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