

# Product Reference V21, H23 Sd S5 APP

## Portable Compressor



### Standard Scope of Supply

The Atlas Copco **V21 and H23** are silenced, two-stage, oil-injected screw-type air compressors powered by a liquid-cooled, five-cylinder turbocharged Scania diesel engine.

The unit hosts the new generation C146 + J34 screw element in its air end, combined with a Scania made diesel engine model DC9 complying with the EU Stage 5 emission standard. Along with DPF, DOC and SCR in the exhaust treatment system, cooling circuit, air/oil separation and control systems. The unit is mounted on support beams and the engine is supported by rubber buffers in a spillage-free frame.

An undercarriage, with a fixed towbar, brakes, and pintle eye, is available as an option.

Special attention has been given to the overall product quality, user-friendliness, ease of serviceability, and economical operation to ensure best-in-class cost of ownership.

### Features

- Designed with environmental protection in mind
- Compact, sound-attenuated, corrosion resistant enclosure
- 2-layer painting

### Benefits

- The unit comes with a spillage-free frame as standard with 110% fluid containment and a Stage 5 emission-compliant engine; this makes the compressor suitable for use in all areas of the EU.
- For OND compliance, the unit is enclosed in a sound-attenuated Zincor steel enclosure. The large U-Flex canopy doors allow superior access and make maintenance easy.  
Compact and maneuverable, saving valuable space on your job site, and during transportation, less than 750 kg
- High residual value

## Main data

Model		V21	H23
Minimum effective receiver pressure	bar(g)	16	11.5
Maximum effective receiver pressure (Unloaded)	bar(g)	27	22
Actual free air delivery			
at pressure setting 13 bar	l/s	-	402
at pressure setting 17 bar	l/s	-	402
at pressure setting 20 bar (P1-H23)	l/s	370	385
at pressure setting 25 bar (P1-V21)	l/s	355	-
Fuel consumption @ P1			
at 100% FAD (full load)	kg/h	43.3	40.9
at 75% FAD	kg/h	32.1	30.7
at 50% FAD	kg/h	27.5	25.4
at 25% FAD	kg/h	21.3	20.1
at 0% FAD	kg/h	22.8	17.5
Specific fuel consumption at P1-100% FAD	g/m <sup>3</sup>	34.2	29.7
Maximum typical oil content of compressed air	mg/m <sup>3</sup>	5	5
Max. sound pressure level (Lw @ 2000/14/EC)	dB(A)	100	100
Compressed air temp. at outlet valve standard (ambient+)	°C (°F)	105 (221)	105 (221)
Max. ambient temp. at outlet valve with aftercooler (ambient+)	°C (°F)	60 (140)	60 (140)
Min. starting temperature with cold weather equipment	°C (°F)	-25 (-13)	-25 (-13)
Min. starting temperature without cold weather equipment	°C (°F)	-10 (14)	-10 (14)
Number of compression stages		2	2
<b>Engine</b>		Scania	Scania
Type		DC09	DC09
Emission stage		Stage V	Stage V
Coolant		Liquid	Liquid
Number of cylinders		5	5
Bore	mm	130	130
Stroke	mm	140	140
Swept volume	l	9.3	9.3
Engine power at normal shaft speed @ ISO 9249G	kW	232	232
Full Load	rpm	1725	1725
Unload	rpm	1300	1300
Capacity of oil sump	l	36	36
Capacity of cooling system	l	73	73
Capacity of compressor oil system	l	78	78
Net capacity of air receiver	l	159	159
Air volume at inlet grating (approx.)	m <sup>3</sup> /s	9.7	9.7
Capacity of standard fuel tanks	l	600	600
Capacity of DEF tank	l	70	70

## Dimensions

See dimension drawing.

## Principle Data

### Compressor Element

The quality of a compressor can be measured through the reliability, efficiency and durability of the compressor element used. Through decades of expertise in the design of compressor elements, the result is the production of most efficient and reliable compressors in the market. When the screw element is efficient, durability excels, maintenance intervals decrease and fuel consumption goes down.

The **V21 and H23** compressors utilize an Atlas Copco C146 + J34 element and are driven by the diesel engine. Inlet air is filtered through a heavy-duty, two-stage air filter.

### Air/Oil Separator

Air and oil separation is achieved through a centrifugal oil separator combined with a filter element. The vessel is ASME/CRN approved and stamped accordingly.

Designed for a higher maximum working pressure, the separator is equipped with a high-pressure sealed and certified safety relief valve and an automatic blow-down valve.

### Cooling System

The cooling system consists of an integrated side-by-side aluminum oil cooler with an axial fan to ensure optimum cooling. The fan is protected by a guard for operator safety. There is an access port for easy cleaning of the coolers

The cooling system is suitably designed for continuous operation in ambient conditions up to 47°C (116°F) and 45°C (113°F) with aftercooler, with canopy doors closed.

### Compressor Regulating System

The compressor is provided with the AirXpert 2.0 regulating system.

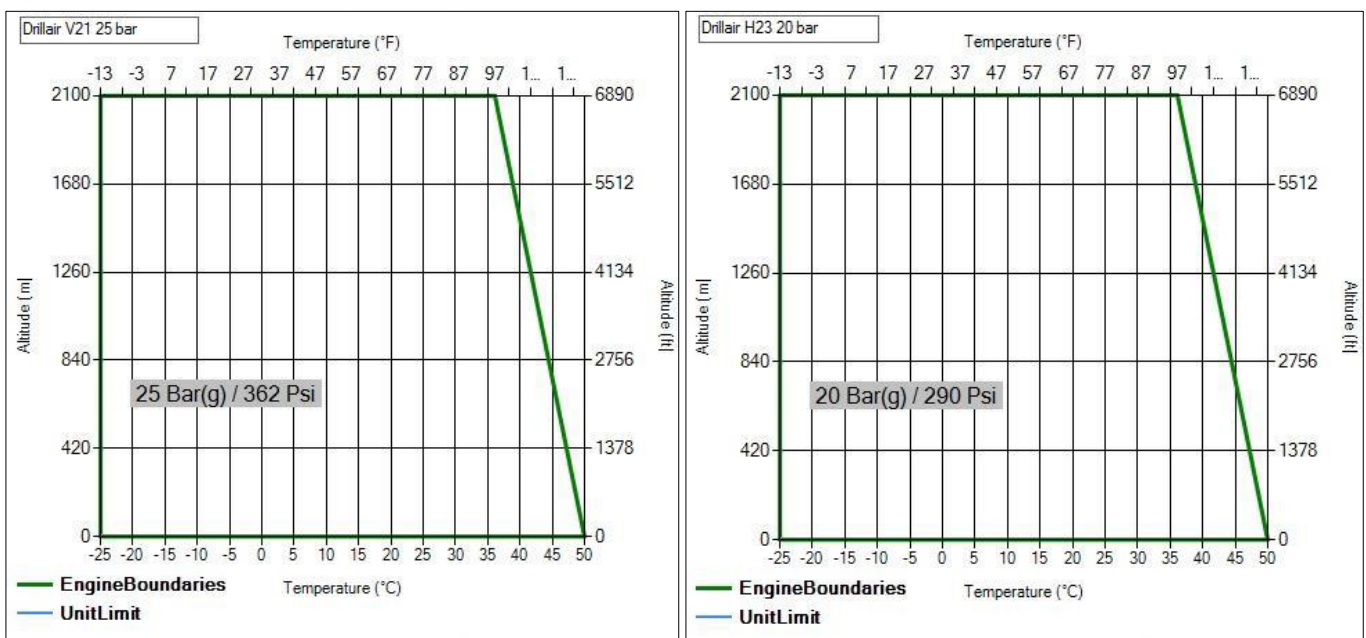
The AirXpert 2.0 variable regulating system gives full control of compressor pressure and flow.

It controls vessel pressure and outlet flow by measuring air pressure and air temperature at several points and steering the air inlet valve, engine speed and blow-off valve corresponding the values measured.

## Engine

### Scania

The Scania DC09, turbocharged, five-cylinder, liquid-cooled diesel engine provides ample power to operate the compressor continuously at full load. Cold start options are available for temperatures up to -25°C (-13°F).



## Electrical System

The **V21 and H23** are equipped with a 24 volt negative ground electrical starting system.

## Instrumentation

The instrument control panel is located on the front of the compressor canopy.

The intuitive Atlas Copco Xc4004 controller is easy to operate, with all functions conveniently at your fingertips. The controller also manages the engine ECU operating system and a number of safety warnings and shutdowns on various parameters (listed below).



### XC4004 Controller Functionality:

- Main Screen
  - Vessel Pressure
  - Fuel level
  - Running Hours
  - RPM
  - Air Flow CFM
- Measurements
  - Fuel Consumption
  - Engine Coolant Temperature
  - Compressor Element Temperature
  - Vessel Pressure
  - Engine Load
  - Engine Oil Pressure
  - DPF Soot Load
  - Fuel Temperature
  - Battery Voltage
  - Regulatory Pressure
  - Loaded/Unloaded Hours
  - Successful/Unsuccessful Starts
  - Service Timers (2)
- Service
  - Data trending
  - Project Backup
- General Settings
  - DPF Stationary Regeneration
  - Engine Diagnostics
  - Auto Start/Load/Stop
  - Languages
  - Units of Measure
- Operational Controls
  - Preset flow or operating pressure
- Alarm
  - Active Alarms
  - Event Log History
  - Alarm Log History

## Bodywork

The compressor's frame comes standard with ASTM A653 Zincor steel platework with a powder coat paint finish, providing excellent corrosion protection. The canopy is sound attenuated to meet the most current legal noise requirements. U-flex canopy offers easy service access to all components from both sides of the machine.

## Undercarriage

The **V21 and H23** compressors are available with an undercarriage alternative, providing the utmost flexibility in installation or towing requirements.

- Single axle trailer setup with:
  - Undercarriage with road homologation and a fixed towbar
  - 205R14C wheels for trailer use
  - Hydraulic trailer brakes
  - Heavy-duty torsion axle
  - Jockey wheel
  - Single-point lifting structure
  - Pintle eye

## Supplied Documentation

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The unit is delivered with documentation regarding:

- Hard copies of the Atlas Copco Operators Safety and Instruction Manual and Parts Book as well as electronic copies are available on request. Electronic copies of the Scania Engine Manual and Parts book are also available on request.
- Warranty registration card for engine and Atlas Copco Compressor (units must be registered upon receipt).
- Certificate for air/oil separator vessel and safety valve approval (upon request only).

## Warranty Coverage

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Please refer to the product presentation for warranty information.

Extended warranty programs are available; please contact your local sales representative for more information.