# 400 Series CD T4F

Portable compressor

## Standard Scope of Supply

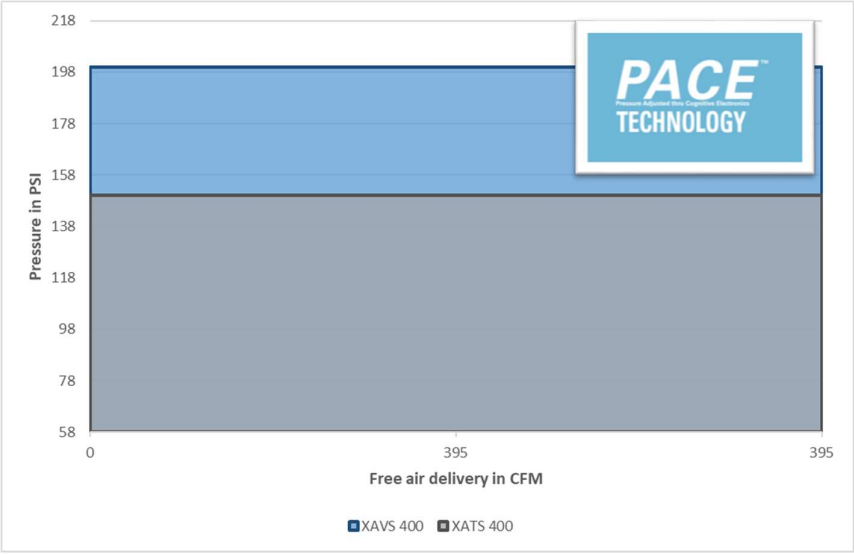
The Atlas Copco **400 Series CD T4F** is single-stage, oil-injected, air compressors, powered by a liquid-cooled, four-cylinder turbocharged diesel engine.

The units consist of an air end, diesel engine with exhaust treatment, cooling circuit, air/oil separation and control systems - all enclosed within a sound dampened HardHat™ enclosure.

A range of undercarriage formats, factory and locally installed options are available.

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.

## Pressure and Flow




## Available Models

| | |
|---|---|
| XATS 400 CD8 PE T4F | single stage – max. 150 psi – Caterpillar engine |
| XAVS 400 CD8 PE T4F | single stage – max. 200 psi – Caterpillar engine |

| Features | Benefits |
|---|---|
| • Caterpillar T4F engine | • Meets all current T4F emission regulations.<br>• Integrated exhaust aftertreatment makes T4F integration easy<br>• Extended warranty available through Caterpillar dealer |
| • Atlas Copco Controller XC2003 PACE<br>Pressure Adjusted through Cognitive Electronics | • Proven controller for easy operation and diagnostics of the compressor and engine.<br>• Allows operator to view compressor parameters including: Pressure setting, reading engine codes, two programmable service timers, all temperatures and pressures of compressor, fuel levels and consumptions, and load/unload compressor. |
| • Cold Weather Package | • Improved cold weather starting, includes synthetic compressor oil & |
| • Spillage Free Containment Frame<br>(Standard XAVS, Optional XATS) | • Protects environment, avoids costly clean up liability |
| • Low Fuel Shutdown | • Reduces downtime on site when operator runs out of fuel as there is no longer a need to “re-prime” the fuel system |
| • Heavy Duty Single Axle Trailer w/ 15" tires | • Well balanced for safer towing or moving around site<br>• High ground clearance for rough site and road conditions |
| • HardHat™ heavy duty ¼” polyethelene enclosure | • Dent and UV Resistant<br>• Keeps looking new for longer and adds to resale value<br>• Click here to watch our HardHat video online!!! |
| • Aftercooler, water separator w/ filters<br>(Standard XAVS) | • Provides cool, dry, clean air for applications where instrument quality air is required. |

| Optional Features | Benefits |
|---|---|
| • Special color doors (white only) | • Alternative to standard yellow door color scheme |

## Technical Data

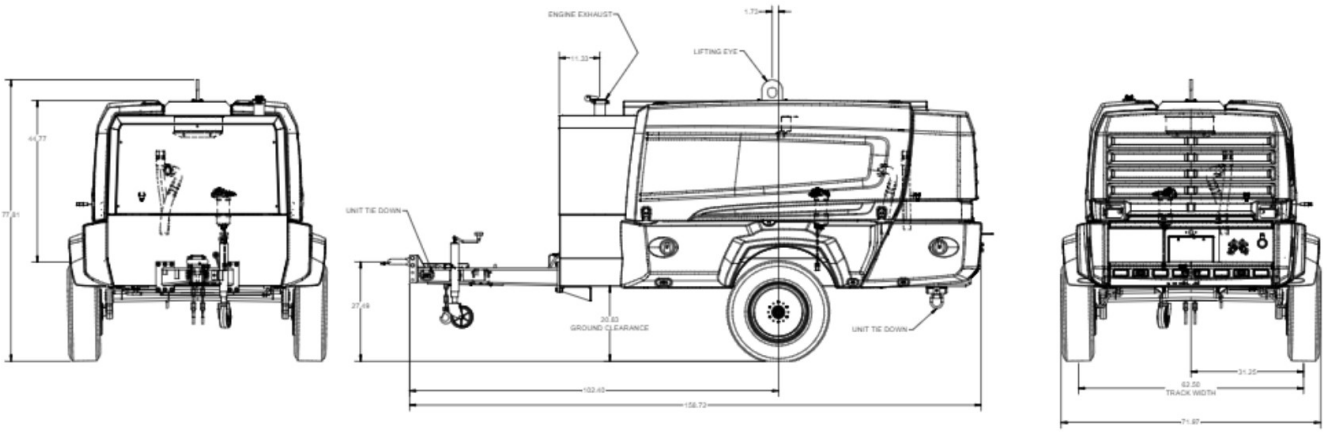
| Compressor | | XAVS 400 CD8 | XATS 400 CD8 |
|---|---|---|---|
| | | With PFF & Cold Start | Basic Unit |
| Normal effective working pressure (pre-set 200 psig and 150 psig) | Psi | 200 | 150 |
| Actual free air delivery[1] (FAD) at pre-set pressure setting | Cfm | 395 | 395 |
| Maximum unloading pressure | Psi | 225 | 225 |
| Minimum working pressure | Psi | 58 | 58 |
| Max. sound pressure level @ 23' (7m) at normal working speed & pressure[2] | dB(a) | 76 | 76 |
| Compression Stages | | 1 | 1 |
| Air Receiver Capacity | US Gal (L) | 11 (41.6) | 11 (41.6) |
| Compressor oil capacity | US Gal (L) | 7.3 (27.4) | 7.3 (27.4) |
| Approximate air outlet temperature | °F (°C) | 200 (93) | 200 (93) |
| Air Compressor outlets | | 2 x ¾" & 1 x 1 ½" | 2 x ¾" & 1 x 1 ½" |
| Max. ambient temperature (at sea level)[3] | °F (°C) | 125 (51) | 125 (51) |
| Maximum altitude | Ft (m) | 9843 (3000) | 9843 (3000) |
| Minimum starting temperature (without cold weather options) | °F (°C) | 14 (-10) | 14 (-10) |
| Minimum starting temperature (with cold weather options) | °F (°C) | -4 (-20) | -4 (-20) |

| Engine | Caterpillar | C 4.4 | C 4.4 |
|---|---|---|---|
| Emissions Regulation | US EPA Tier | T4F | T4F |
| US EPA Engine Family | | HPKXL04.4MT1 | |
| Output at rated speed (2200 rpm) | HP | 148 | 148 |
| Number of cylinders | | 4 | 4 |
| Aspiration | | Turbocharged | Turbocharged |
| Displacement | cu in (L) | 269 (4.4) | 269 (4.4) |
| Engine speed (Unloaded) | Rpm | 1500 | 1500 |
| Engine speed (Maximum loaded) | Rpm | 2200 | 2200 |
| Engine oil capacity | US Gal (L) | 2.4 (9.2) | 2.4 (9.2) |
| Engine oil required | | Low Ash Oil per API CJ-4, ACEA C9 | |
| Engine coolant capacity | US Gal (L) | 6.4 (24.2) | 6.4 (24.2) |
| Fuel tank capacity | US Gal (L) | 52 (197) | 52 (197) |
| Fuel consumption at 0% load | Gal/Hr (L/Hr) | 1.7 (6.4) | 1.7 (6.4) |
| Fuel consumption at 100% load | Gal/Hr (L/Hr) | 6.8 (25.7) | 6.8 (25.7) |
| DEF tank capacity | US Gal (L) | 5.0 (19.0) | 5.0 (19.0) |
| DEF consumption at 100% load | Gal/Hr (L/Hr) | 0.18 (0.68) | 0.14 (0.53) |
| Battery Capacity (Cold Cranking Amps[4]) | A | 1100 | 1100 |

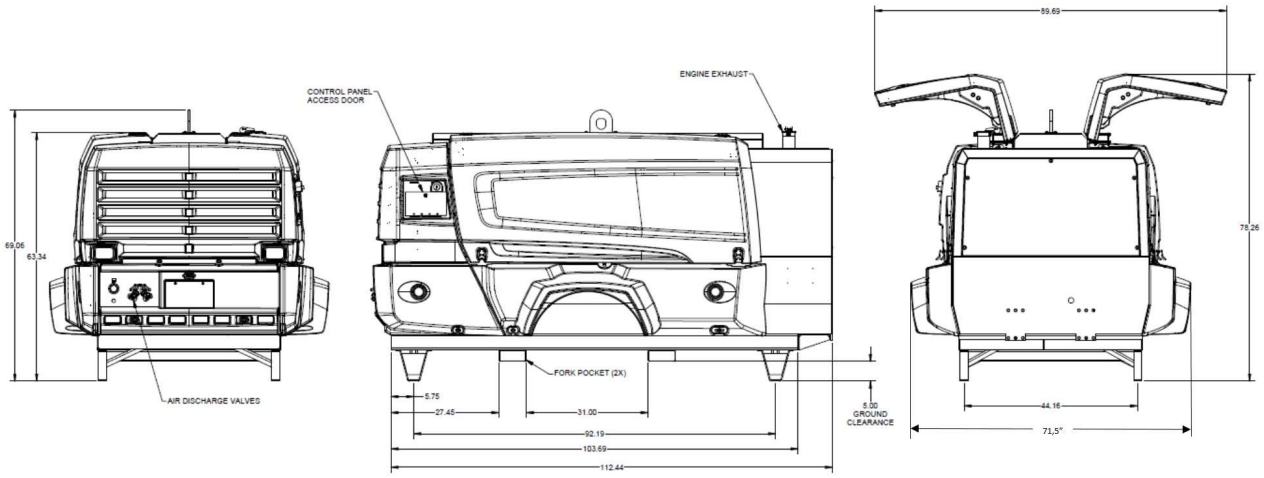
*1 According to ISO 1217 ed.3 1996 annex D*
*2 Measured in accordance with ISO 2151 under free field conditions @ 7m distance*
*3 Consult Atlas Copco for proper de-rating instructions for operation beyond ambient limitations*
*4 According to DIN 72311*

## Dimensions

### Trailer mounted




### Support mounted




## Weight (Wet - Ready-to-operate)

| | | XATS 400 CD8 PE T4F<br>XAVS 400 CD8 PE T4F |
|---|---|---|
| Trailer mounted | lb (Kg) | 4620 (2095) |
| Support mounted | lb (Kg) | 4528 (2053) |

## Dimensions

| | | XATS 400 CD8 PE T4F<br>XAVS 400 CD8 PE T4F |
|---|---|---|
| Trailer mounted (Inches) | L x W x H | 158 ¾ x 72 x 77 ¾ |
| Support mounted (Inches) | L x W x H | 113 x 72 x 72 |

## 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, Atlas Copco remains a world leader in designing the most efficient and reliable compressors on the market. With air-end efficiency, maintenance intervals are extended and fuel consumption is reduced.

The 400 Series CD T4F compressors utilize Atlas Copco's C106 element and is driven from the diesel engine through a gear box with a rubber disc coupler.

The compressor system comes with Atlas Copco PAR Oil compressor oil. The oil cooler comes equipped with a standard thermostatic by-pass valve for superior cold weather lubrication.

### Air/Oil Separator

Air and oil separation is achieved through a centrifugal oil separator combined with a filter element. Separators are available in ASME/CRN approved versions and are stamped accordingly.

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

Air/Oil Separator Tank:

| | |
|---|---|
| Volume | 11 US Gal / 42 L |
| Certifications | ASME / CRN |
| MAWP | 261psi @ 266°F |

### Cooling System

The cooling system consists of integrated side-by-side aluminum oil cooler with axial fan to ensure optimum cooling. The cooling system is suitably designed for continuous operation in ambient conditions up to 125°F, with canopy doors closed.

### Compressor Regulating System

The compressor regulating system consists of an air filter, air receiver/oil separator, compressor element, unloader assembly with unloader valve, blow down valve and loading valve.

Economic power consumption is assured by the fully automatic 100% step-less speed regulator that adapts engine speed to air demand.

### Discharge Outlets

Compressed air is available from 2 x 3/4" claw type (Chicago) outlet valves (XATS version only) and 1 x 1 ½" NPT valve.

## Engine

### Caterpillar C4.4

Caterpillar C4.4 T4F turbo charged four-cylinder, liquid-cooled diesel engine provides ample power to operate the compressor continuously at full-load.

Meets all US EPA and Environment Canada exhaust legislations with Final Tier 4 compliance.

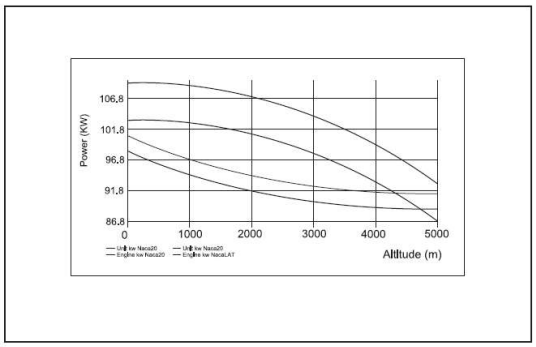
US EPA engine family is "HPKXL04.4MT1" and rated at 148hp at 2200 rpm, in accordance to SAE Standard for the XATS 400 CD8 PE T4F.

US EPA engine family is "HPKXL04.4MT1" and rated at 148hp at 2200 rpm, in accordance to SAE Standard for the XAVS 400 CD8 PE T4F.

Engine starting capacity at 14°F (-10°C) without the addition of cold start options. Cold start options are available up to -4°F (-20°C).

The 52Gal (192L) fuel tank enables operation for over 8 hours at full load and comes standard with a low fuel shutdown at 5%.

ALTITUDE UNIT PERFORMANCE CURVE




Max. allowable working pressure as a function altitude and ambient temperature.
Limitations for start-up in terms of altitude are provided by the engine manufacturer.
Limitations might differ in reality.

### Emissions Treatment

Caterpillar C4.4 T4F engine after treatment consists of a Diesel Oxidization Catalyst (DOC) and Selective Catalytic Reduction (SCR).

## Electrical System

The **400 Series CD T4F** is equipped with a 12 Volt negative ground electrical starting system.

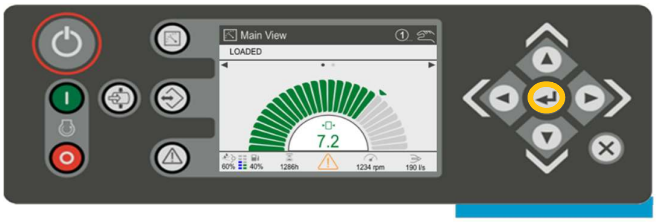
### Instrumentation

The instrument control panel is located on the back, curbside of the compressor canopy with easy access.

Standard instrument package includes fully diagnostic ECU controller with large 3.5" display. The intuitive Atlas Copco XC2003 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, shut downs on various parameters (listed below) and full digital pressure control with PACE.

**XC2003 Controller Functionality:**

- Displayed while running
  - Hours
  - Fuel level
  - RPM
  - Outlet pressure
- Operational Buttons
  - Start and stop of the unit
  - View measurements, settings and alarms
  - Multi position cursor to navigate menus
  - PACE digital pressure control
- Compressor measurements displayed
  - Running hours
  - Fuel level
  - Clock
  - Battery voltage
  - Running hours
  - Regulating pressure
  - Emergency stop count
  - Average fuel consumption
  - Minor/major service counters in hours and days
- Engine measurements displayed
  - Fuel consumption per hour tally
  - Engine coolant temperature
  - Engine oil pressure
  - Engine RPM
- Warnings and Shutdowns
  - High temperature engine coolant
  - High temperature compressor oil
  - Engine oil pressure
  - Low fuel level
  - Low coolant
- Alarms
  - View current & historical alarms present
  - History of last 20 alarms and events with time and date stamps
  - DM1 & DM2: View current engine codes (SPN/FMI)
- Settings
  - Reset service timers
  - Diagnostics for engine ECU
  - Language settings
  - Unit of measure changes
  - Electronic pressure adjustment (**PACE**)
  - Presetting two (high/low) pressure setting



## Bodywork

**HardHat™:** Our HardHat™ version comes standard with dual wall, ¼" thick, Polyethylene material providing superior corrosion, and UV protection against fading and discoloration. As well as unmatched dent and damage resistance. The canopy is sound attenuated to meet the most current legal noise requirements. A clamshell style hood offers easy service access to all components.

## Undercarriage & Frame

The **400 Series CD T4F** compressors are available with two undercarriage alternatives, providing utmost flexibility in installation or towing requirements.

- Single axle trailer setup with:
  - DOT approved light package
  - Adjustable height pintle hitch (3" lunette)
  - 5,200 lbs torsional axle
  - 15" Rims w/ ST225/75D15 8 Ply Tires (weight rating 2,540 lbs @ 65psi)
  - Electric trailer brakes as standard (with 7 pin flat blade connector)
  - 750lbs jack leg stand, with wheel
- Support mounted version, on steel frame, less undercarriage is available

## Factory Options Available

- Skid mounted
- Loose Ball Couplings 2" or 2-5/16" and Loose Bulldog 2" coupling
- OSHA ¾" valve
- Aftercooler & Water Separator (optional XATS only)
- Aftercooler & Water Separator & DD/PD coalescing & high efficiency filters (Standard XAVS, optional XATS only)
- Special color canopy doors
- Lojack anti-theft device

## Manufacturing & Environmental Standards

The **400 Series CD T4F** are manufactured following stringent ISO 9001 regulations, and a fully implemented Environmental Management System fulfilling ISO 14001 requirements.

Attention has been given to ensure minimum negative impact to the environment.

The **400 Series CD T4F** meets all current EPA and Environment Canada exhaust and noise emission directives.

## Supplied Documentation

The unit is delivered with documentation regarding:

- Hard copies of the Atlas Copco Operators Safety and Instruction Manual, Caterpillar Engine Operators Manual, as well as electronic copies, available upon request.
- Warranty Registration card for Caterpillar Engine and Atlas Copco Compressor (Units must be registered upon receipt).
- Test certificate for air delivery pressure and capacity, acc. ISO 1217 (Upon request only).
- Certificate for air/oil separator vessel and safety valve approval, ASME (Upon request only).

## Warranty Coverage

**Caterpillar Engine:** Caterpillar Diesel engines are warranted to be free from defects with regard to materials and workmanship for the period of twelve (12) months from the date of initial startup without limitation in running hours or for the period of thirty six (36) months from the date of initial startup prior to the accumulation of 4000 running hours.

**Atlas Copco Compressor:** Warrantied to be free from defects with regard to material and workmanship for the period of eighteen (18) months from date of shipment from the factory, or twelve (12) months from date of initial start-up, whichever occurs first, without limitation of running hours.

Air compressor element assemblies used in Atlas Copco portable air compressors, is warranted to be free from defects with regard to materials and workmanship for the period of thirty (30) months from date of shipment from the factory, or twenty four (24) months from date of initial start up, whichever occurs first, without limitation of running hours. Atlas Copco service kits including parts and oils (PAR Oil's) must be used to maintain warranty. Failure to register warranty upon initial start-up may cause warranty claim delays or rejection of claims.

| | |
|---|---|
| **PRODUCT: Portable Compressors** | EXTENDED WARRANTY PERIOD*: 24 months from date of end of initial standard warranty term. For the compressor's air system **, the warranty period is an additional 96 months from the end of the 24 month extended warranty term. For the engine, see Footnote 1 below. |

* Requirements for Extended Warranty;

- Service maintenance must be completed according to published intervals while utilizing genuine Atlas Copco/Chicago Pneumatic/American Pneumatic Tool parts and lubricants. Record of such maintenance must be entered onto Machines Online for the specific serial number and include all required information including date service performed, service interval performed, and part numbers used.
- Oil sample (engine or compressor) to be taken at any time of failure and available upon request
  - Oil sample kit part number 9753300442 available for purchase
- Unit must be available for onsite inspection by a representative of Power Technique North America if required
- Unit must be available for transport to a Power Technique North America service center location if required
- Failed components must be retained and available for return and inspection if required

** Air end system component exclusions: Electrical components (i.e. Sensors, wiring), Perishable items (i.e. Rubber, plastics), Wear and air regulation items (i.e. Check valves, couplings)

Note: End users are authorized to complete the required preventative maintenance utilizing genuine parts and lubricants purchased from an authorized dealer. Service maintenance recorded into Machines Online are to be completed by the authorized dealer where products purchased or another authorized dealer after providing proof of purchase for genuine parts and fluids utilized..

Note: Equipment/machinery/components/Accessories/parts/items sold by SELLER but not manufactured by SELLER or an affiliate (including but not limited to a Product's engine, alternator, tires, battery, carrier, electrical equipment, and hydraulic transmission, if applicable) are not warranted by SELLER and shall carry whatever warranty (if any) which the manufacturer has conveyed to SELLER to the extent it can be passed on to the purchaser.