

CPS 850 JD8 T4F

Portable compressor



Standard Scope of Supply

The Chicago Pneumatic **CPS 850 JD8 T4F** is a single-stage, oil-injected, rotary screw type air compressor, powered by a liquid-cooled, six-cylinder turbocharged diesel engine.

The unit consists of an air end, diesel engine with exhaust treatment, cooling circuit, air/oil separation and control systems - all enclosed within a sound dampened powder coated galvanealed steel 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.

Available Models

CPS 850 JD8 T4F

single stage – 58 to 150 psi – John Deere engine

Features

- Variable operating pressure and flow settings
- Designed with environmental protection in mind
- Industry Leading Fuel Economy
- Compact, sound attenuated, corrosion resistant enclosure

Benefits

- The versatility of the Xc2003 controller gives you the flexibility to tune your machine to a wider range of applications. The machine will match the air flow with the desired operating pressure to maximize output and keep the engine as fuel efficient as possible. In turn it will increase your utilization rate and ROI as it is adaptable to many more applications than a standard machine.
- Standard with 100% fluid containment and Tier 4 Final emissions the compressor is designed for use in all areas of the US and to meet stringent local site environmental concerns.
- Seamlessly trims engine power under varying load conditions to reduce fuel consumption up to 15%.
- Ensures best in class fuel consumption, reducing operational cost.
- Galvanealed steel enclosure with very large doors for superior access, makes maintenance easy.
- Compact and maneuverable, saving valuable space on your job site, and during transportation.

Optional Features

- Portable Full Feature (filtered air)

Benefits

- Chicago Pneumatic's PFF system ensures cool, clean and dry air. The PFF system is plumbed through a secondary outlet so you can isolate the hoses and hardware requiring this purity of air. The PFF system comes standard with a three way valve the operator can select various air quality levels and optimal cold weather configuration.

Technical Data

Compressor	Units	CPS 850 JD T4F	
Actual free air delivery ¹ (FAD)	cfm	750	850
Normal effective working pressure	Psi	150	100
Maximum unloading pressure	Psi	175	
Minimum working pressure	Psi	58	
Max. sound pressure level @ 23' (7m) at normal working speed & pressure ²	dB(a)	76	
Compression Stages		1	
Air Receiver Capacity	US Gal (L)	16.7 (63.2)	
Compressor oil capacity	US Gal (L)	4.2 (15.9)	
Approximate air outlet temperature	°F (°C)	Ambient + 120 (49)	
Air Compressor outlets		1 x 1.5" NPT & 2 x ¾" Chicago	
Max. ambient temperature (at sea level) ³	°F (°C)	122 (50)	
Maximum altitude	ft (m)	14,000 (4,267)	
Minimum starting temperature (without cold weather options)	°F (°C)	14 (-10)	
Minimum starting temperature (with cold weather options)	°F (°C)	-14 (-26)	

Engine	John Deere	6068HFC08	
Emissions Regulation	US EPA	Tier 4 Final	
US EPA Engine Family		FJDXL06.8302	
Output at rated speed (2700 rpm) ⁴	HP	250	
Number of cylinders		6	
Aspiration		Turbocharged	
Displacement	cu in (L)	415 (6.8)	
Engine speed (Unloaded)	rpm	1300	
Engine speed (Maximum loaded)	rpm	2100	
Engine oil capacity	US Gal (L)	8.5 (32.2)	
Engine oil required		Low Ash Oil per API CJ-4, ACEA C9	
Engine coolant capacity	US Gal (L)	11.3 (42.8)	
Fuel tank capacity	US Gal (L)	88 (333)	
Fuel consumption at 0% load	Gal/Hr (L/Hr)	2.2 (8.3)	
Fuel consumption at 100% load	Gal/Hr (L/Hr)	10.1 (38.2)	10.5 (39.7)
Fuel type required		Ultra Low Sulfur Diesel < 15 PPM	
DEF Consumption		Apx 3.5% of diesel consumption	
DEF tank capacity	US Gal (L)	11.3 (42.5)	
DEF Autonomy		≥ 24 hours	
Electrical System (Negative Ground)	V	24	
Alternator	A	60	
Battery Capacity (Cold Cranking Amps)	A	2 @ 725	

¹ According to ISO 1217 ed.3 1996 annex D

² Measured in accordance with ISO 2151 under free field conditions @ 7m distance

³ Aftercooler approach temperature is dependent on site conditions. Measured at reference conditions of 72°F with 0% humidity

⁴ Consult Chicago Pneumatic for proper de-rating instructions for operation beyond ambient limitations

⁵ Horsepower limited by Engine ECU

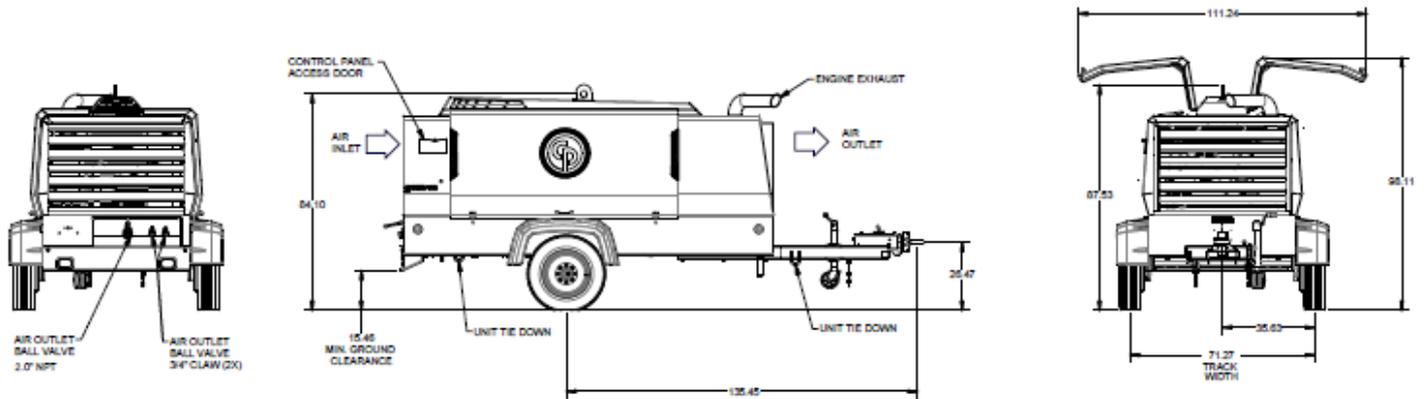
⁶ Engine and emissions require the use of Ultra Low Sulfur Diesel in accordance to ASTM-D975 Grade No.1-D S15 & No.2-D S15

⁷ Diesel Exhaust Fluid in accordance with ISO 2224, consumption rate is dependent on DEF age, quality and site conditions

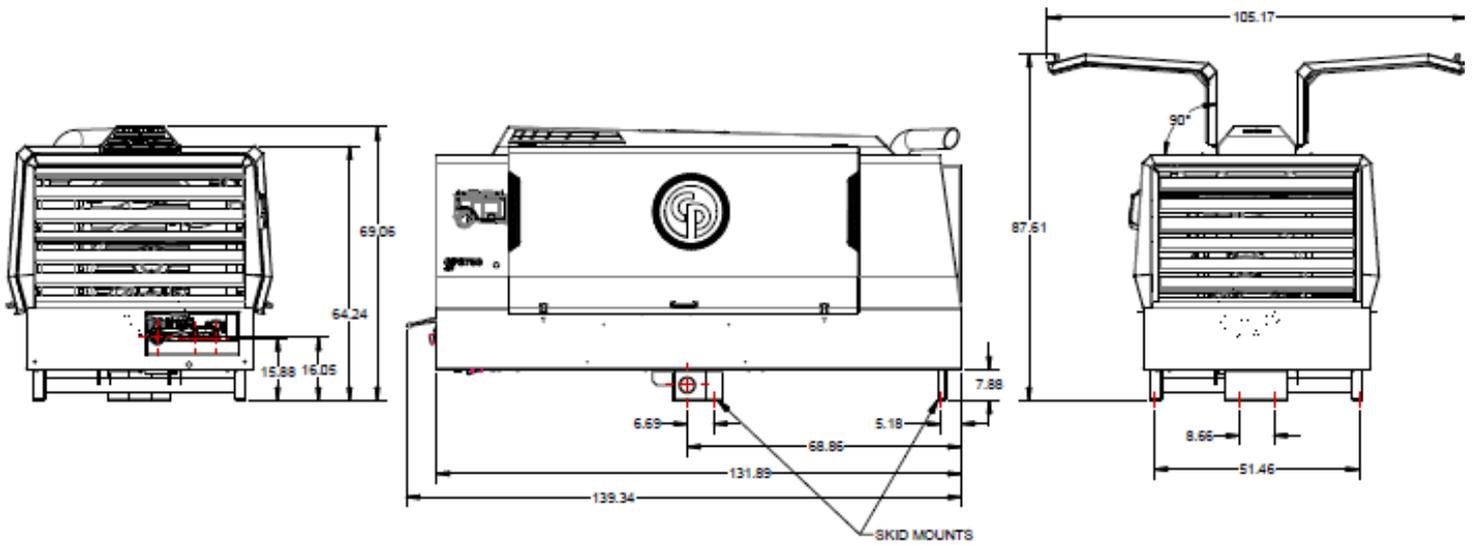
⁸ According to DIN 72311

Dimensions

Trailer mounted



Support mounted



Weight (Wet - Ready-to-operate)

		CPS 850 JD T4F
Trailer mounted	lb (Kg)	7,980 (3,620)
Support mounted	lb (Kg)	7,695 (3,490)

Dimensions

		CPS 850 JD T4F
Trailer mounted (Inches)	L x W x H	203 x 80 x 86
Support mounted (Inches)	L x W x H	145.5 x 66.5 x 78

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 CPS 850 JD8 T4F compressor utilizes a Chicago Pneumatic C146 element and is driven from 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. Separators are 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, sonic nozzle, automatic blow-down valve, and pressure regulator.

Air/Oil Separator Tank:

Volume	24 US Gal / 91 L
Certifications	ASME / CRN
MAWP	304.6 psi @

Cooling System

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

The cooling system is suitably designed for continuous operation in ambient conditions up to 122°F, with canopy doors closed.

Compressor Regulating System

The compressor regulating system consists of two stage air filter, air receiver/oil separator, compressor element, blow down valve, and pressure safety valve.

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

Discharge Outlets

Standard compressed air is available from a 1 ½" NPT ball valve and two ¾" Chicago Fittings. Units with the optional PFF (Portable Full Feature) systems receive a fourth outlet for the filtered air.

Standard Air	1 x 1 ½" NPT / 2 x ¾" Chicago
Filtered Air (optional)	1 x 1 ½" NPT

Engine

John Deere

John Deere 6068HFC08 Tier 4 Final, turbocharged, six-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 Tier 4 Final compliance. The US EPA engine family is "FJDXL06.8302". The engine utilizes a Diesel Particulate Filter (DPF) with active regeneration, a Diesel Oxidation Catalyst (DOC) and a Selective Catalytic Reduction (SCR) system to help meet Tier 4 Final emissions. All functionality of the engine and exhaust after treatment are controlled automatically on the XC2003 controller.

Engine output at rated speed, in accordance to SAE Standard, is 250hp at 2100 rpm.

The engine has the capability to start the compressor to 14°F (-10°C) with standard glow-plug aid. Cold start options are available for up to -14°F (-26°C).

The 88 Gal (333L) fuel tank is sufficiently sized to operate the unit for minimum of 8 hours at full-load condition. As well the unit requires Diesel Exhaust Fluid (DEF). There is a DEF tank sufficiently sized to operate the unit for a minimum of 24 hours.

Electrical System

The **CPS 850 JD T4F** is equipped with a 24 Volt negative ground electrical starting system.

Instrumentation

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

Standard instrument package includes an operating pressure gauge, and fully diagnostic ECU controller with large display. The intuitive Chicago Pneumatic 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 and shut downs on various parameters (listed below).

XC2003 Controller Functionality:

- Displayed while running
 - Hours
 - Fuel level
 - DEF level
 - RPM
 - Outlet pressure
- Operational Buttons
 - Start and stop of the unit
 - View measurements, settings and alarms
 - Multi position cursor to navigate menus
- Compressor measurements displayed
 - Running hours
 - Fuel level
 - DEF level
 - Clock
 - Battery voltage
 - Running hours
 - Regulating pressure
 - Emergency stop count
 - Average fuel consumption
 - Minor and major service counters in hours and days
- Engine measurements displayed
 - Current fuel rate
 - Engine coolant temperature
 - Engine oil pressure
 - DPF Soot level
 - Engine RPM
- Warnings and Shutdowns
 - High temperature engine coolant
 - High temperature compressor oil
 - Engine oil pressure
 - Low fuel level
 - Low DEF Level
 - High DPF soot level
- 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
 - Manual regeneration of DPF
 - Reset service timers
 - Diagnostics for engine ECU
 - Language settings
 - Unit of measure changes



Bodywork

The compressor comes standard with ASTM A653 Galvannealed steel canopy with powder coat paint finish providing excellent corrosion protection. The canopy is sound attenuated to meet the most current legal noise requirements. Gullwing style doors offer easy service access to all components from both sides of the machine.

Undercarriage

The **CPS 850 JD T4F** compressor is available with two undercarriage alternatives, providing utmost flexibility in installation or towing requirements.

- Single axle trailer setup with:
 - US DOT/Federal MVSS 49CFR571 approved light package
 - Adjustable height pintle hitch (3" lunette)
 - 17.5" Rims w/ 215/75R17.5 Tires for trailer use (load range H)
 - Trailer brakes not standard (can be added as option)
 - Heavy Duty torsion axle rated at 8,000 lbs
 - Safety chains
 - Screw jack leveling
 - Single point lifting structure

- Support mounted frame

Factory Options Available

- PFF System (Aftercooled, filtered air)
- Support Undercarriage
- Dual Regulator (with toggle switch)
- LoJack
- ZTR Telematics

Manufacturing & Environmental Standards

The **CPS 850 JD T4F** is manufactured following stringent ISO 9001 regulations, and by a fully implemented Environmental Management System fulfilling ISO 14001 requirements.

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

The **CPS 850 JD T4F** meets all current US EPA, CARB and Environment Canada exhaust and noise emission directives.

Supplied Documentation

The unit is delivered with documentation regarding:

- Hard copies of the Chicago Pneumatic Operators Safety and Instruction Manual, Chicago Pneumatic Parts Book, John Deere Engine Manual and Parts book, as well as electronic copies available on request.
- Warranty Registration card for engine and Chicago Pneumatic Compressor (Units must be registered upon receipt).
- Certificate for air/oil separator vessel and safety valve approval, ASME/CRN (Upon request only).

Warranty Coverage

John Deere Engine: John Deere Diesel engines are warranted to be free from defects with regard to materials and workmanship for the period of twelve (12) months without limitations in running hours, or twenty-four (24) months prior to the accumulation of 2,000 hours from the date of invoicing from Chicago Pneumatic. John Deere's limited warranty extends to sixty (60) months or 5,000 hours of use, whichever occurs first (some conditions apply*). Unit must be registered directly with John Deere upon receipt to be eligible for warranty. Failure to register warranty upon initial start-up may cause warranty claim delays or rejection of claim by John Deere.

Chicago Pneumatic Compressor: Warranted 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 startup, whichever occurs first, without limitation of running hours.

Air compressor element assemblies used in Chicago Pneumatic 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 startup, whichever occurs first, without limitation of running hours. Chicago Pneumatic service kits including parts and oils (Paroil's) must be used to maintain warranty. Failure to register warranty upon initial startup may cause warranty claim delays or rejection of claims.

Extended Warranty Programs: Programs are available; please contact your local sales representative for more info.