

# CPS 650 - 900 JD8 T4F

Portable compressor



## Standard Scope of Supply

The Chicago Pneumatic **CPS 650 & 900 JD8 T4F** is a single-stage, oil-injected, rotary screw type air compressor, powered by a John Deere 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 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 900 JD8 T4F  
CPS 650 JD8 T4F

single stage – 58 to 150 psi – John Deere engine  
single stage – 58 to 250 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 110% 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.
- 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 900 JD8 T4F		CPS 650 JD8 T4F	
Actual free air delivery <sup>1</sup> (FAD)	cfm	750	867	575	650
Normal effective working pressure	Psi	150	100	250	200
Maximum unloading pressure	Psi	175		275	
Minimum working pressure	Psi	58		58	
Max. sound pressure level @ 23' (7m) at normal working speed & pressure <sup>2</sup>	dB(a)	76		76	
Compression Stages		1		1	
Air Receiver Capacity	US Gal (L)	16.7 (63.2)		16.7 (63.2)	
Compressor oil capacity	US Gal (L)	12.5 (47.5)		12.5 (47.5)	
Approximate air outlet temperature, above ambient (standard air)	°F (°C)	Ambient +120 (49)		Ambient +130 (54)	
Approximate air outlet temperature, above ambient (aftercooled air) <sup>3</sup>	°F (°C)	Ambient +20 (11)			
Air Compressor outlets		1 x 2" NPT & 2 x ¾" Chicago			
Max. ambient temperature (at sea level) <sup>4</sup>	°F (°C)	120 (49)			
Maximum altitude	ft (m)	14,000 (4,267)			
Minimum starting temperature (with cold weather options)	°F (°C)	-13 (-25)			

Engine	John Deere		6068HFC08			
Emissions Regulation	US EPA		Tier 4 Final			
US EPA Engine Family			FJDXL06.8302			
Output at rated speed (@2100 rpm) <sup>5</sup>	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		1850	2100	1850	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 (41.8)			
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)	10.6 (40.2)	10.6 (40.2)
Fuel type required <sup>6</sup>			Ultra Low Sulfur Diesel < 15 PPM (mg/KG)			
DEF Consumption <sup>7</sup>			Apx 3.5% of diesel consumption			
DEF tank capacity	US Gal (L)		11 (41.8)			
DEF Autonomy			≥ 24 hours			
Electrical System (Negative Ground)	V		24			
Alternator	A		60			
Battery Capacity (Cold Cranking Amps <sup>8</sup> )	A		2 @ 725			

<sup>1</sup> According to ISO 1217 ed.3 1996 annex D

<sup>2</sup> Measured in accordance with ISO 2151 under free field conditions @ 7m distance

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

<sup>4</sup> Consult Chicago Pneumatic for proper de-rating instructions for operation beyond ambient limitations

<sup>5</sup> Horsepower limited by Engine ECU

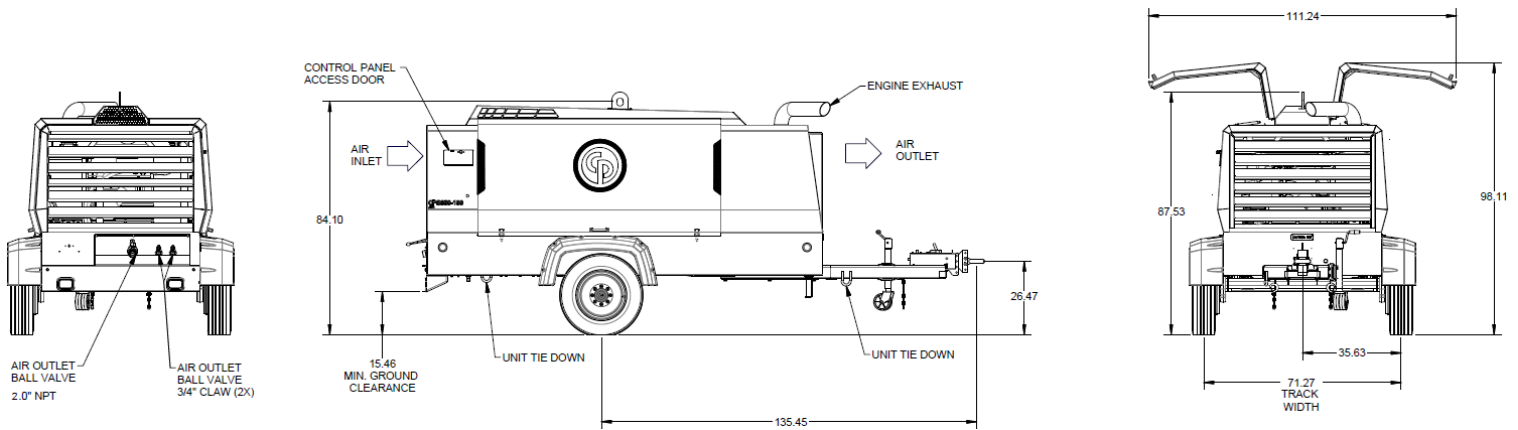
<sup>6</sup> Engine and emissions require the use of Ultra Low Sulfur Diesel in accordance to ASTM-D975 Grade No.1-D S15 & No.2-D S15

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

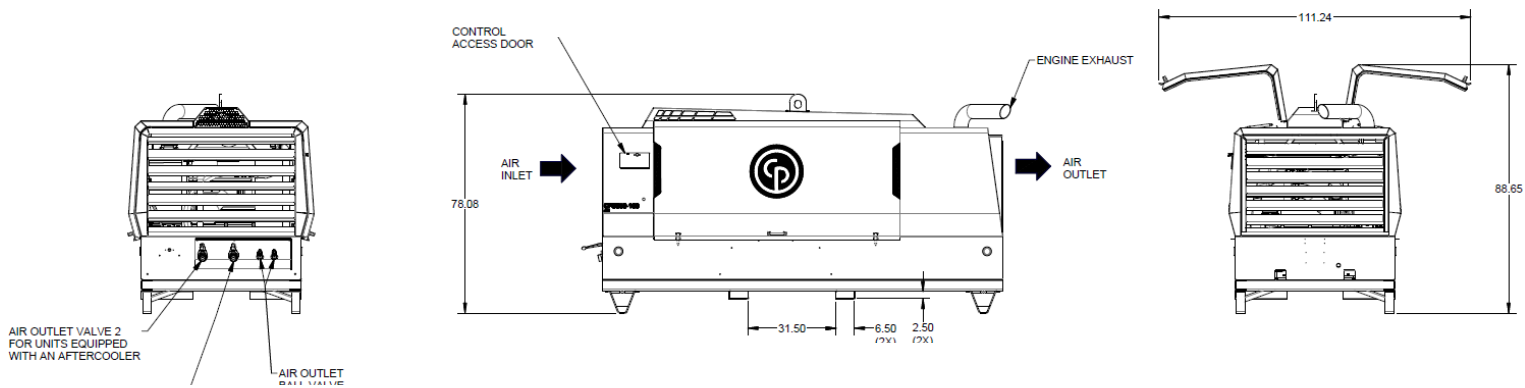
<sup>8</sup> According to DIN 72311

## Dimensions

### Trailer mounted



### Support mounted



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

		CPS 650-900 JD T4F
Trailer mounted	lb (Kg)	7,980 (3,620)
Support mounted	lb (Kg)	7,695 (3,490)

### Dimensions

		CPS 650-900 JD T4F
Trailer mounted (Inches)	L x W x H	203 x 82 x 87.5
Support mounted (Inches)	L x W x H	145.5 x 67 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 650-900 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 @ 248°F

### 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 120°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 2" 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.

Discharge air temperature from the aftercooler service valve runs at 35°F above ambient

Standard Air	1 x 2" NPT / 2 x ¾" Chicago
Filtered Air (optional)	1 x 2" 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 -13°F (-25°C) with standard glow-plug aid, synthetic compressor oil and 120V block heater.

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.

## Emissions Treatment

The John Deere 6068HFC08 after treatment consists of a Diesel Oxidation Catalyst (DOC), passive Diesel particulate Filter (DPF) and Selective Catalytic Reduction (SCR). The SCR utilizes the temperature of the exhaust to passively regenerate during normal use.

## Electrical System

The **CPS 650-900 JD T4F** is equipped with a 24 Volt negative ground electrical starting system.

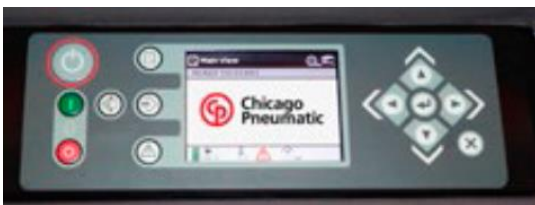
## Instrumentation

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
- 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
- Warnings and Shutdowns
  - High temperature engine coolant
  - High temperature compressor oil
  - Engine oil pressure
  - Low fuel level
  - Low DEF Level
  - High DPF soot level
- Settings
  - Manual regeneration of DPF
  - Reset service timers
  - Diagnostics for engine ECU
  - Language settings
  - Unit of measure changes
- Operational Buttons
  - Start and stop of the unit
  - View measurements, settings and alarms
  - Multi position cursor to navigate menus
- Engine measurements displayed
  - Current fuel rate
  - Engine coolant temperature
  - Engine oil pressure
  - DPF Soot level
  - Engine RPM
- 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)



## Bodywork

The compressor comes standard with metal canopy that has a 2 layer protective coating (Primer base and Powder Coated top layer) 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

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The **CPS 650-900 JD T4F** compressor is available with single axle trailer setup, providing utmost flexibility in installation or towing requirements.

- 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)
- Hydraulic Trailer brakes (Electric can be added as option)
- Heavy Duty torsion axle rated at 8,000 lbs
- Safety chains
- Screw jack leveling
- Single point lifting structure

## Factory Options Available

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- Support Mount
- Electric Trailer Brakes
- PFF System (Aftercooled, filtered air)
- Inlet Shutdown Valve
- LoJack

## Manufacturing & Environmental Standards

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The **CPS 650-900 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 650-900 JD T4F** meets all current US EPA, CARB and Environment Canada exhaust and noise emission directives.

## Supplied Documentation

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The unit is delivered with documentation regarding:

- Hard copies of the Chicago Pneumatic Operators Safety and Instruction Manual, 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 start-up, 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 start up, whichever occurs first, without limitation of running hours. Chicago Pneumatic 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.

<p><b>PRODUCT: Portable Compressors</b></p>	<p>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.</p>
<p>* Requirements for Extended Warranty;</p> <ul style="list-style-type: none"> <li>· Service maintenance must be completed according to published intervals while utilizing genuine Chicago Pneumatic 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.</li> <li>· Oil sample (engine or compressor) to be taken at any time of failure and available upon request             <ul style="list-style-type: none"> <li>· Oil sample kit part number 9753300442 available for purchase</li> </ul> </li> <li>· Unit must be available for onsite inspection by a representative of Power Technique North America if required</li> <li>· Unit must be available for transport to a Power Technique North America service center location if required</li> <li>· Failed components must be retained and available for return and inspection if required</li> </ul>	
<p>** 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)</p>	
<p>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..</p>	
<p>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.</p>	