



Doosan XXHP1270/ XHP1500FCAT Bid Specifications

MANUFACTURER	Doosan Infracore
MODEL	XXHP1270-XHP1500FCAT
ENGINE	TIER 3 CATERPILLAR
Make	CATERPILLAR
Model	C-18
Number of Cylinders	6
Cylinder Bore (in/mm)	5.71 (146)
Cylinder Stroke (in/mm)	7.2 (183)
Displacement (cu in/l)	1,104 (18.1)
Rated Speed (rpm) @ 500/350 psi	1625 / 1850
Idle Speed (rpm)	1350
BHP @ Rated Speed	700
Fuel/Cooling	Diesel/Water
Electrical Volts/Batteries, CCA	Optional: 24 / (2) 1400 CCA
Engine Oil Capacity US Quarts/Litres	40 (37.9)
Radiator Coolant Capacity US Gal/Litres	12.1 (45.8)
Altitude Capability (Feet/Metres)	14500 (4419)
Fuel: GPH/LPH	
50% Load	30.2 / 28.7 (114 / 99)
100% Load	33.4 / 34.9 (126 / 124)
COMPRESSOR	
Type	ROTARY SCREW TWO STAGE
Make	Ingersoll Rand
Model	HR4
Free-Air Delivery (cfm/m ³ /min) @ 500/350 psi	1270/1500 (36.8/42.5)
Rated Operating Press (psig/bar)	500/350 / (34.0/24.1)
Pressure Range (psig/bar)	200-525/ (13.6-35.7)
Air Discharge Outlet Size (inches NPT/mm)	3.0 NPT / (77)
Air Discharge Outlet Quantity	1
Oil Capacity (US Gal/Litres)	85 / (321)
DIMENSIONS	Open Frame
Overall Length (in/mm)	184.1 (4676)
Overall Width (in/mm)	89.2 (2266)
Overall Height (in/mm)	89.5 (2273)
Shipping Weight (lb/kg) no fuel	16,120 (7327)
Working weight (lb/kg) with fuel	NA
	Aftercooler Included





Doosan XXHP1270/ XHP1500FCAT Bid Specifications

FEATURES

ENGINE FEATURES

- Diesel engine with electronic controls to comply with USA/EPA Tier 3 exhaust emission requirements.
- Three-stage, heavy-duty, dry-type air cleaner with replaceable primary and secondary elements. Air filters have maintenance indicator lamp on the control panel.
- Fuel/water separator.
- Engine block heater - standard.
- Electric starting system, 00 battery cables with battery disconnect switch.
- Starter protection system.
- Ether cold start system.
- Exhaust rain cap.
- Unloaded warm up, start/run valve.

PACKAGE FEATURES

- Hinged instrument panel with lockable door.
- Shock mounted engine and compressor.
- Side-by-side coolers for easy cleaning along with an access door.
- Low coolant level shutdown.
- Low fuel level shutdown.
- Convenient perimeter drains
- Single point internal lifting bail.
- Blower fan design for lower engine temperature.
- One year or 2000 hour warranty on all components, except engine and battery (optional), which carry standard manufacturer's warranty.

SAFETY FEATURES

- Automatic safety shutdowns: high discharge air temperature, low engine oil pressure, and high engine coolant temperature.
- Manual and automatic blowdown valves.
- Minimum pressure device.
- ASME safety relief valve.
- Fan and belt guards.
- Battery disconnect switch
- Operating and maintenance manuals.
- Operating and safety decals.

COMPRESSOR

- The compressor is a two stage, oil flooded asymmetrical rotary screw.
- The actual air delivery is 1500 cfm (42.5 m³/min) or 1270 cfm.
- The rated operating pressure is 350 psig (24.1 bar) or 500 psig (34.0 bar)
- The pressure range is 200-525 psig (13.6-35.7 bar).
- The regulation system is 100% stepless.
- The air service valve is 3" NPT, ¼ turn.

COMPRESSOR FEATURES

- Three-stage, heavy-duty, dry-type air cleaner with replaceable primary and safety elements.
- Air filters have maintenance indicator lamp on the control panel.
- 25 micron spin-on oil filter.
- Oil separation system - two stage vertical tank with sight gauge and over-fill protection.
- Fin and tube coolers.
- Engine driven flexible drive coupling.
- Two year or 4000 hour airend warranty.
- Optional 5 year, 10,000 hour airend warranty available.
- Standard cold weather starting down to 10° F.
- Starting and running capability below 10° F requires changing of compressor oil and 5 minute warm up period of the unit before loading.



Doosan XXHP1270/ XHP1500FCAT Bid Specifications

INSTRUMENTS AND CONTROLS

- Gauges shall be backlit for night operations.
- Air discharge pressure gauge.
- Hour meter.
- Tachometer.
- Engine water temperature gauge.
- Engine oil pressure gauge.
- Discharge air temperature gauge.
- Voltmeter.
- 350/500 psi switch.
- Indicator warning lights for low engine coolant level, low fuel level, alternator malfunction and air filter maintenance.
- Gauges shall be backlit for night operations.
- Indicator lights for shutdown due to low engine oil pressure, high engine coolant temperature, high discharge air temperature and low fuel level.
- Engine and compressor malfunction fault indicator display (digital).
- Electronic microprocessor control interface for maintenance fault code read out.

AFTERCOOLER SYSTEM - Standard

- Integral aftercooler with water separator, 30° F approach to ambient temperature.
- (Note: This system adds 90 kg to weight)

OPTIONAL EQUIPMENT - FACTORY INSTALLED

- Battery heater.
- Batteries - 8D 1400CCA (2)
- Day Fuel Tank - 14.7 gallons / 55.6 litres (non-pressurised).
- Special paint - lead free only (requires DuPont paint number for Centari® or Imron®)



Doosan XXHP1270/ XHP1500FCAT Bid Specifications

SPECIFICATIONS

TYPE

- Self-contained, diesel engine-driven, heavy-duty portable air compressor mounted on an open frame with a minimum rated capacity of 1500 cfm, free air delivery, at an operating pressure of 350 psi or 1270 cfm, free air delivery, at an operating pressure of 500 psi in accordance with ISO 1217.
- The rated pressure shall be measured after oil separation.

GENERAL

- The equipment shall be a standard product of the manufacturer.
- The compressor air end shall be completely manufactured and assembled by the manufacturer of the compressor unit.
- The manufacturer shall have local parts and service facilities capable of complete machine overhaul, ensuring minimum down time.
- Additionally, the compressor manufacturer shall have a flexible air end repair program; i.e., parts and training may be obtained to make repairs or the air end may be exchanged for a new or remanufactured unit.
- The equipment shall adhere to the specifications contained herein.

ENGINE

- The diesel engine shall be a turbocharged and aftercooled, industrial, water-cooled six cylinders, with a continuous duty rating of no less than 700 SAE brake horsepower, at 1800 rpm.
- The engine shall have electronic controls and comply with USA/EPA Tier 3 exhaust emission requirements.
- The engine shall have a 24 Volt electrical system and each battery (optional from Ingersoll Rand) shall have a minimum rating of 1400 cold cranking amps in accordance with SAE J537 specifications for 30 second test. A battery disconnect switch is required.
- A dedicated heavy-duty, three-stage, dry-type air cleaner, with replaceable primary and secondary elements and an automatic filter maintenance indicator, shall be used to filter intake air.
- The fuel system shall have a fuel/water separator and a replaceable fuel filter.
- The engine exhaust shall have a rain cap.

COMPRESSOR AIREND

- The compressor air end shall be an oil flooded rotary screw type with asymmetrical rotor profiles incorporating tapered roller thrust bearings.
- The air end shall be driven through a flexible coupling to isolate engine and compressor vibrations.
- The regulation system shall permit low load engine starting and warm up. It will also provide stepless engine speed control.
- A dedicated heavy-duty, three-stage, dry-type air cleaner, with replaceable primary and secondary elements and an automatic filter maintenance indicator, shall be used to filter intake air.

COOLING SYSTEM

- The engine heat exchangers and air end heat exchangers shall be fin and tube type coolers arranged in a side-by-side configuration for easy cleaning.
- The cooling air fan shall draw air into the cooling package from the air end and engine direction and then expel it through the heat exchangers.
- There shall be low engine coolant level shutdown and an indicator on the control panel.

AFTERCOOLING

- An aftercooler and water separator shall be incorporated in the design to cool the compressed air to within 30° F of the ambient air temperature.
- A valve system shall be supplied to bypass the aftercooler and water separator.



Doosan XXHP1270/ XHP1500FCAT Bid Specifications

COMPRESSOR OIL SYSTEM

- The compressor oil system shall incorporate a vertical separator tank, a temperature bypass valve, oil cooler, and a 25 micron spin-on oil filter.
- The separator tank shall meet ASME Section VIII Code requirements, have a minimum oil capacity of 322 litres, and include an oil level sight gauge and over-fill protection.

INSTRUMENTS & CONTROLS

- The instruments and controls shall be clearly labelled and located on the front of the unit, accessible without opening the main side doors, and protected with a separate lockable door. Gauges shall be backlit for night operations.
- The instrument panel shall be hinged for easy access and it shall include the following gauges: hourmeter, tachometer, voltmeter, discharge air pressure, discharge air temperature, engine water temperature, engine oil pressure, and fuel level.
- An electronic microprocessor control interface system shall provide digital data on operation, control, warning, and fault signal diagnosis of the compressor and engine. The system shall be in a NEMA 6 enclosure.
- The instrument panel shall include indicator warning lights for low engine coolant, alternator malfunction; air filter service indicator, and a low fuel level light with delayed shutdown.
- The instrument panel shall include shutdown indicator lights for low engine oil pressure, high engine coolant temperature, and high air discharge temperature.
- The instrument panel shall have engine and compressor malfunction fault indicator display (digital)
- The instrument panel shall have an electronic control interface to show maintenance fault codes.

SAFETY FEATURES

- The compressor unit shall incorporate the following features to ensure operator safety and to protect the equipment: fan guards meeting OSHA recommendations, operating and maintenance manuals, operating and safety decals in accordance with ANSI Z535.4-1996, automatic and manual blowdown valves, an ASME approved pressure relief valve on the oil separator tank, safety shutdown devices in case of high compressor discharge temperature, low engine oil pressure, high engine coolant temperature, low coolant level, and low fuel level.
- The engine starting motor shall be protected from excessive wear by the presence of a starter protection system.

WARRANTY

- The air compressor package shall be warranted to be free of defects in material and workmanship for a period of one year or 2000 operating hours, whichever occurs first.
- The airend itself shall be warranted for 2 years or 4000 hours, whichever occurs first.
- Engine shall be warranted by their respective manufacturers.
- Extended warranty on the air end for 5 years / 10,000-hours with use of Doosan filters and fluids with documentation and maintenance schedule adherence.