



AIR COMPRESSOR SPECIFICATIONS

Air Compressor Specifications			
Engine		Compressor	
Model	XHP1070WCAT-T1	Air End	Rotary Screw Two Stage
Serial No.	463302UDY456	Free Air Delivery	1070 / 3.13 (cfm / m3/min)
Engine bore & stroke	5.4" X 6.5" / 13.7cm X 16.5cm	Rated Operating Pressure	350 / 24.1 (psig / bar)
Engine speed idle/full	1200/1800 rpm	Pressure Range	150 – 375 / 10.3 – 25.9 (psi / bar)
Power Train	CAT 3406TA 4 Stroke Diesel Engine 465bhp/347kw	Air Discharge Outlet Size	3.0 / 76.2 (inches NPT/mm)
Fuel tank capacity	180 gal / 680 L	Air Discharge Outlet Qty	1
Fuel Consumption Rate (75%)	18.1 gph / 68.5L/h		
Fuel Consumption Rate(100%)	21.2 gph / 80.2L/h		
Shipping weight (without fuel)	6305kg		
Working weight	6895 kg		
Dimensions	5182 (L) x 2248 (W) x 2580 (H) mm		
No of Units	3		



AIR COMPRESSOR

OCS's Air compressor is used for starting the jet pump engines, air tuggers, providing compressed air for eduction airlift as required and Pipeline pre-commissioning dewatering and drying services.

The Diesel driven Air compressors employed in the OCS's pipeline post trenching spread is a Doosan XHP series (Model:XHP1070WCAT-T1) with a capacity of 1070cfm (30.2m³/min). The main features of this compressor are an oil-flooded screw air end, dual 25 micron air filter for optimum oil filtration and an oil separation system. The power train used for this air compressor is a Caterpillar 3406TA engine. This engine is a 6 cylinder water cooled engine with a displacement of 14.6L. This engine is equipped with an automatic air filter maintenance indicator signals to alert the operator when to service the elements and a flexible coupling which isolates engine vibration from compressor for longer life.

SPECIFICATIONS TYPE

Self contained, fully enclosed, diesel engine driven, heavy duty portable air compressor mounted on a four wheel trailer with a minimum rated capacity of 1070 cfm, free air delivery, at operating pressure of 350 psi and 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 airend shall be completely manufactured and assembled by the manufacturer of the compressor unit. The compressor unit shall meet the EPA noise level regulations of 76 dBA at 7 metres. 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 airend repair program; i.e., parts and training may be obtained to make repairs, or the airend 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 after cooled, industrial, water cooled six cylinder, with a rating of no less than 465 SAE brake horsepower, at 1800 rpm. The engine shall have a 24 Volt electrical system and each battery shall have a minimum rating of 1400 cold cranking amps in accordance with SAE J537 specifications for 30 second test. A dedicated heavy duty, two stages, dry type air cleaner, with replaceable element and an automatic filter maintenance indicator, shall be used to filter intake air. The fuel system shall have a capacity of at least 680 litres and a replaceable fuel filter.

COMPRESSOR

The compressor airend shall be two stage oil flooded rotary screw type with asymmetrical rotor profiles incorporating tapered roller thrust bearings. The airend 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, two stage, dry type air cleaner, with replaceable element and automatic filter maintenance indicator, shall be used to filter intake air.

COOLING SYSTEM

The engine and compressor oil heat exchangers shall be arranged in a side by side configuration for easy cleaning. The cooling air fan shall draw air into the unit, across the air-end and engine and then expel it through the coolers. This routing shall be used to maintain internal package temperatures of no more than 20 F above that of the ambient. There shall be a low coolant indicator on the control panel.

COMPRESSOR OIL SYSTEM

The compressor oil system shall incorporate a vertical separator tank, a temperature bypass valve, oil cooler, and a 25 micron spinon oil filter. The separator tank shall meet ASME Section VIII Code requirements, have a minimum capacity of 350 litres and include an oil level sight gauge and overflow protection.

ENCLOSURE

Sheet metal housing shall fully enclose the compressor unit providing protection as well as noise Attenuation. Access for routine maintenance shall be provided through the large doors located on all sides of the Compressor. These doors shall be lockable and equipped with no rust aluminum hinges.

INSTRUMENTS & CONTROLS

The instruments and controls shall be clearly labeled and located on the front of the unit, accessible without opening the main side doors, and protected with a separate lockable door. The instrument panel shall be hinged for easy access and it shall include the following gauges: hour meter, tachometer, discharge air pressure, discharge air temperature, engine water temperature, voltmeter, fuel level and engine oil pressure.

The instrument panel shall also include indicator lights for low engine coolant, alternator malfunction, air cleaner service indicators and all safety shutdowns.

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 blow down 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 and low fuel level. The engine starting motor shall be protected from excessive wear by the presence of a starter protection system. This system will not allow the engine to be cranked while there is more than 20 psi in the separator tank.

OCS has Equipment passports for individual equipments which must be reviewed before each project to assess the status. The equipment passport gives the working history, maintenance and certification history of equipment.

It is important to regularly review the list of critical spare parts of the equipment before each project.

Where failures occur during operations Equipment bulletins will be issued to document the problem and the remediation solutions applied. The equipment bulletin will be circulated to all field engineers to be informed about the possible failure that can occur during the operation and thereby avoid future failure.

This equipment file remains a live document and will be constantly updated by the equipment department.

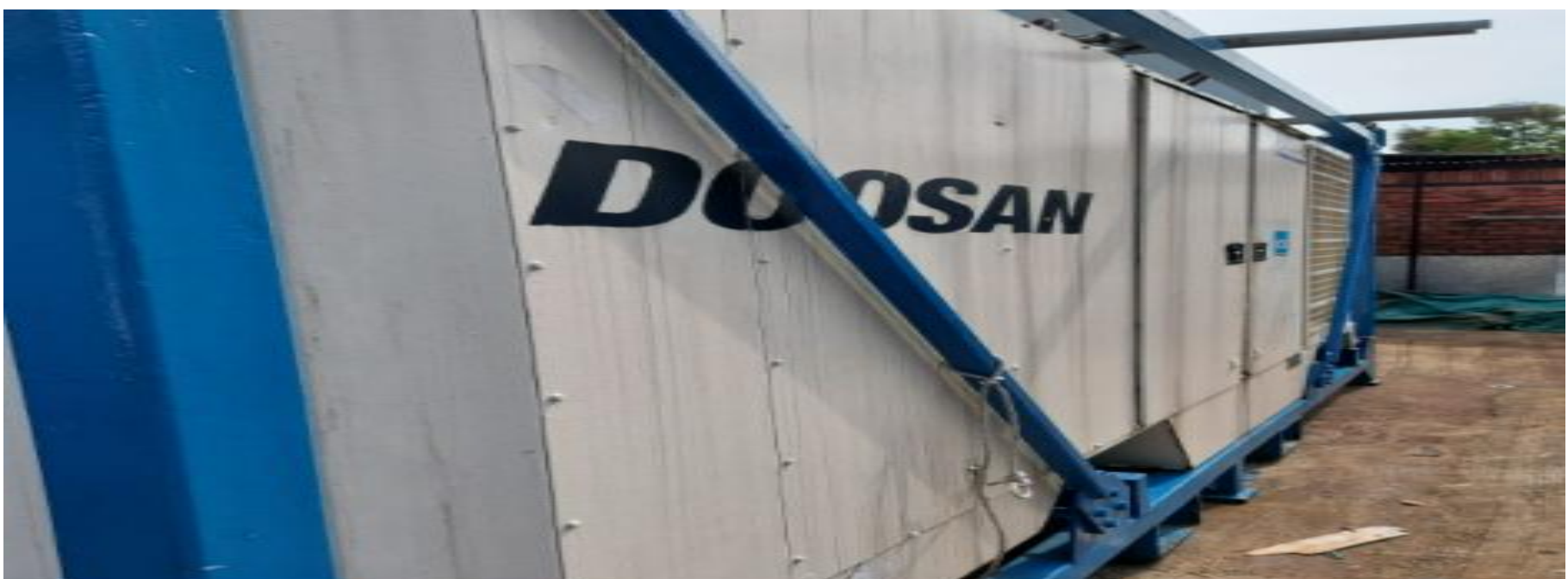
Covered battery isolation



Exhaust System complete with Spark Arrestor



Fully Enclosed with DNV Skid frame



XHP1070WCAT Tier1 Flow Capacity vs Discharge Pressure at 1800 rpm

