COVIS

MISSION CRITICAL FACILITIES
DESIGN AND CONSTRUCTION

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WARRANTY

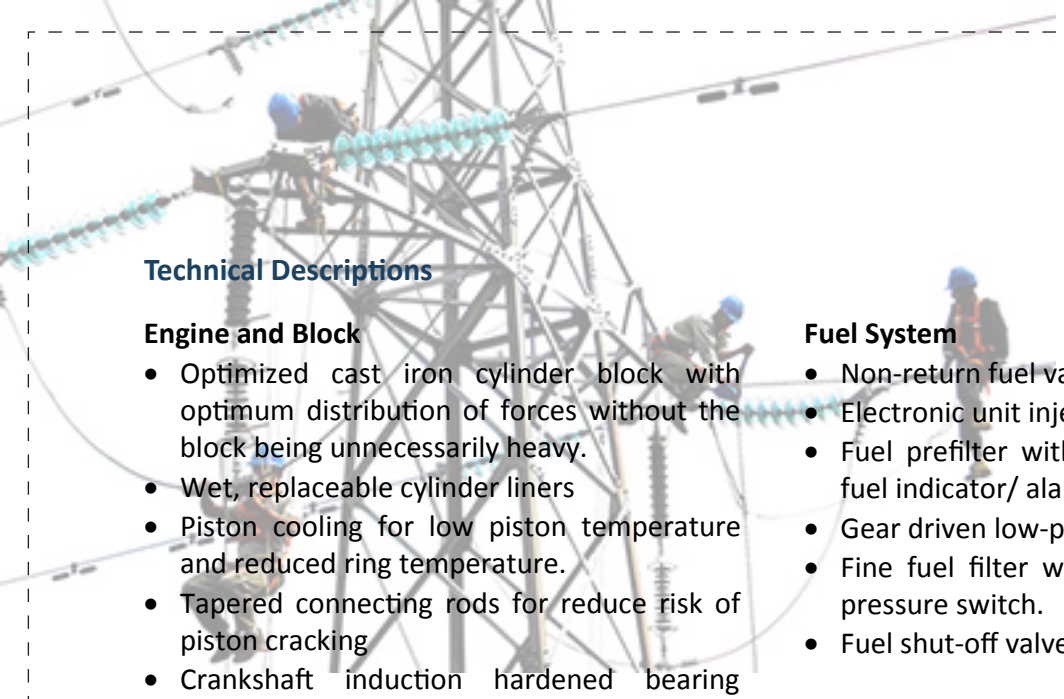
• 1 Year Warranty •

Covis Generator Set

Generating Set Diesel Engine

Features

- Tropical cooling system (55°C)
- Fully electronic
- Dual frequency switch (between 1500 rpm and 1800 rpm)
- High power density
- Powerful, reliable and economical Generating Set Diesel Engine built on the dependable in-line six designs
- Emission complaint
- Low noise levels
- Low fuel consumption
- Gen Pac configuration
- Compact design for the power class
- Comes with one year warranty include labour and parts



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Technical Descriptions

Engine and Block

- Optimized cast iron cylinder block with optimum distribution of forces without the block being unnecessarily heavy.
- Wet, replaceable cylinder liners
- Piston cooling for low piston temperature and reduced ring temperature.
- Tapered connecting rods for reduce risk of piston cracking
- Crankshaft induction hardened bearing surfaces and fillets with seven bearings for moderate load on main and high-end bearings.
- Case hardened and Nitrocarburized transmission gears for heavy duty operation
- Keystone top compression rings for long service life.
- Viscous type crankshaft vibration dampers to withstand single bearing alternator torsional vibrations
- Replaceable valve guides and valve seats
- Overhead camshaft and four valves per cylinder

Turbo Charger

- Efficient and reliable dual stage turbo chargers.
- Intermediate charge air coolers for both turbo chargers
- Waste gate system for the high pressure turbo charger.

Lubrication System

- Full flow oil cooler
- Full flow disposable spin-on oil filter, for extra high filtration
- The lubricating oil level can be measured during operation
- Gear type lubricating oil pump, gear driven by the transmission.

Fuel System

- Non-return fuel valve
- Electronic unit injectors
- Fuel prefilter with water separator and water-in-fuel indicator/ alarm.
- Gear driven low-pressure fuel pump.
- Fine fuel filter with manual feed pump and fuel pressure switch.
- Fuel shut-off valve.

Electrical System

- Engine Management System 2 (EMS 2), an electronically controlled processing system which optimizes engine performance. It also includes advanced facilities for diagnostics and fault tracing.
- The instruments and controls connect to the engine via the CAN SAE J1939 interface, either through the Control Interface Unit (CIU) or the Display Control Unit (DCU). The CIU converts the digital CAN bus signal to an anolog signal, making it possible to connect a variety of instruments. The DCU is a control, monitoring, alarm, parameter setting and diagnostic functions. The DCU also presents error codes in clear text.
- Sensors for oil pressure, oil temp, boost pressure, exhaust temp, coolant temp, fuel temp, water in fuel, fuel pressure and two speed sensors.

Cooling System

- New GenSet-cooling system with optimized priority and cold start valves
- Two water cooled charge air coolers
- Efficient cooling with accurate coolant control through a water distribution duct in the cylinder block. Reliable sleeve thermostat with minimum pressure drop
- Gear driven, maintenance-free coolant pump with high degree of efficiency.
- Coolant filters as standard.

*Specification subjects to change without prior notice

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Standard Unit Specifications & Technical Data

Technical Data	
General	
No of cylinders & Configuration	In-line 6
Method of Operation	4-stroke
Bore, mm (in.)	144 (5.67)
Stroke, mm (in.)	165 (6.50)
Displacement, l(in³)	16.12 (983.7)
Compression Ratio	16.5:1
Dry Weight, kg (lb)	1700(3748)
Dry Weight with Gen Pac, kg (lb)	2200 (4850)
Wet Weight, kg (lb)	1770 (3902)
Wet Weight with Gen Pac, kg (lb)	2370 (5225)

Performance	1500 rpm	1800 rpm
With fan, kW (hp) at:		
Prime Power	536 (729)	585 (796)
Max Standby Power	596 (811)	644 (876)

Lubrication System	1500 rpm	1800 rpm
Oil Consumption, Liter/h (US gal/h) at :		
Prime Power	0.10 (0.026)	0.10 (0.029)
Max Standby Power	0.11 (0.029)	0.11 (0.032)
Oil system capacity incl filters, liter		48

Fuel System	1500 rpm	1800 rpm
Specific fuel consumption at:		
Prime Power, g/kWh (lb/hph)		
25%	215 (0.349)	224(0.363)
50%	196(0.318)	201(0.326)
75%	196(0.318)	197(0.319)
100%	199(0.323)	202(0.327)
Max Standby Power, g/kWh (lb/hph)		
25%	210(0.340)	220(0.357)
50%	195(0.316)	200(0.324)
75%	196(0.318)	198(0.321)
100%	200(0.324)	204(0.331)

Intake and Exhaust System	1500 rpm	1800 rpm
Air consumption, m³/min(cfm) at :		
Prime Power	44(1541)	53(1874)
Max Standby Power	47(1658)	55(1937)
Max allowable air intake restriction kPa (In wc)	5(20.1)	5(20.1)
Heat rejection to exhaust, kW (BTU/min) at:		
Prime Power	415(23601)	472(26842)
Max Standby Power	463(26330)	540(30709)
Exhaust gas temperature after low pressure turbine, °C(°F) at:		
Prime Power	450(842)	422(792)
Max Standby Power	463(865)	461(862)
Max allowable back-pressure in exhaust line, kPa (In wc)	10(40.2)	10(40.2)
Exhaust gas flow, m³/min(cfm) at :		
Prime Power	101.6(3586)	119(4201)
Max Standby Power	111.8(3949)	130.1(4593)

Standard Equipment	Engine	Gen Pac
Engine		
Automatic belt tensioner	•	•
Lift eyelets	•	•
Flywheel		
Flywheel housing with conn. Acc. To SAE 1	•	•
Flywheels for 14" flex. Plate & flexible coupling	•	•
Vibration dampers	•	•
Engine Suspension		
Fixed front suspension	•	•
Lubricant System		
Oil dipstick	•	•
Full-flow oil filter of spin-on type	•	•
By-pass oil filter of spin-on type	•	•
Oil cooler, side mounted	•	•
Low noise oil sump	•	•
Fuel system		
Fuel filters of spin-on type	•	•
Electronic unit injectors	•	•
Pre-filter with water separator	•	•
Intake and exhaust system		
Air filter without rain cover	•	•
Air restriction indicator	•	•
Air cooled exhaust manifold	•	•
Connecting flange with v-clamp	•	•
Turbo chargers, dual stage, right side	•	•
Cooling System		
TWD-cooling system, tropical	•	•
Gear driven coolant pump	•	•
Fan hub	•	•
Pusher fan	•	•
Fan guard	•	•
Belt guard	•	•
Control system		
Engine Management System (EMS) with CAN-bus interface SAE J1939	•	•
CIU, Control Interface Unit	-	-
DCU, Display Control Unit	-	-
Alternator		
Alternator 80A/24V	•	•
Starting system		
Starter motor, 7.0kW, 24V	•	•
Connection facility for extra starter motor	•	•
Instruments and senders		
Temp. and pressure for automatic stop/alarm	•	•
Other equipment		
Expandable base frame	-	•
Engine Packing		
Plastic wrapping	•	•

- Optional equipment or not applicable
- • Included in standard specification

- Note: Not all models, standard equipment and accessories are available in all countries.
- All specifications are subject to change without notice
- The engine illustrated may not be entirely identical to production standard engines.

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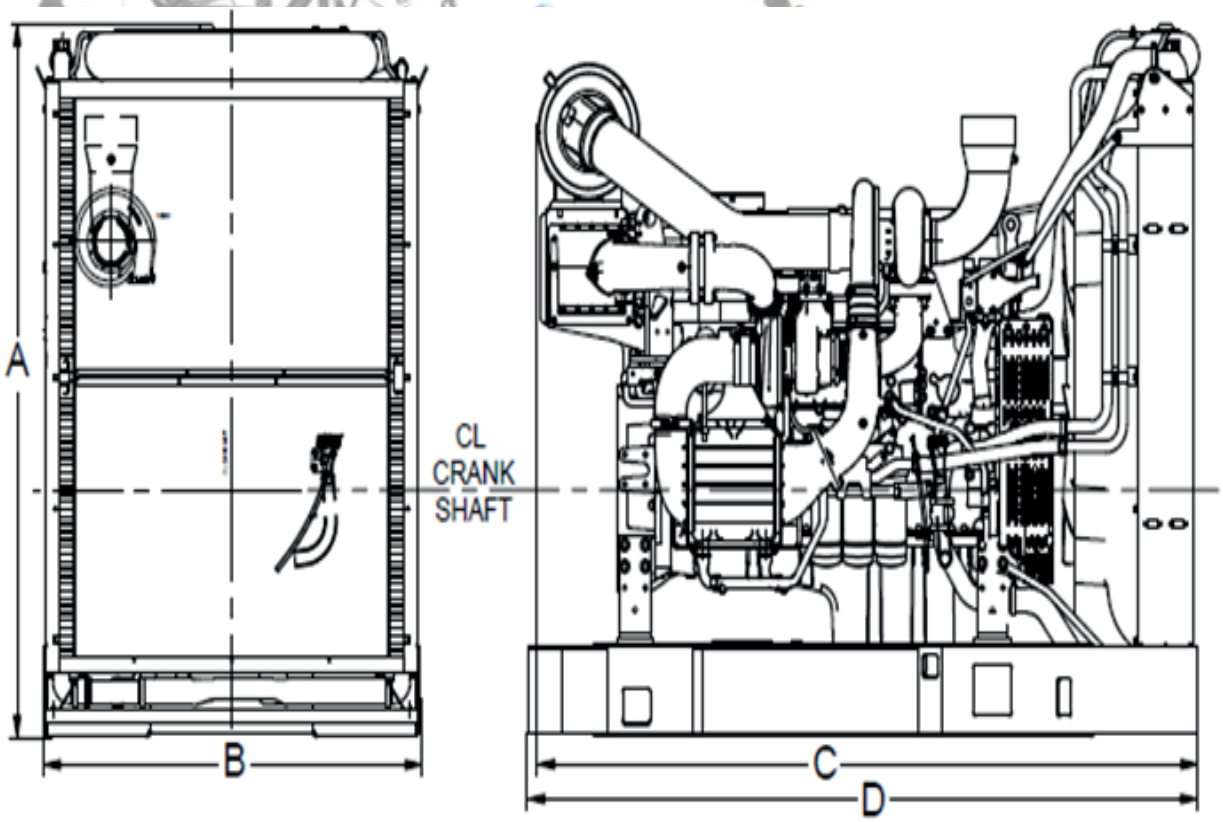

A* = 1930 mm/ 76 in
B* = 1350 mm/ 53.1 in
C = 2362 mm/ 93 in
D = 2399 mm/ 94.5 in (During Transport)
D = Max 3255 mm/ 128.2in
*Including radiator and intercooler

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