Diesel generator set
X 1.3 series

Specification sheet
6-8kWe, 7.5-10 kVA Prime

Our energy working for you.™

Power Generation

Ready to use, silent, compact and light weight

The ready to use **Cummins® 'DXP series'** DG sets are smaller and lighter than any other DG set in it's class, thus giving you the advantage of optimising your valuable space.

Environment friendly power

The **Cummins® 'DXP series'** base DG sets are available with the lowest noise levels in it's range and are CPCB certified for emissions compliance, thus offering you environment friendly power.

CPCB Compliant

The genset powered by the reliable **Cummins® 'X series'** diesel engine meets stringent exhaust emission tests as per MOEF norms without sacrificing fuel efficiency at normal operating loads.

Unmatched warranty

The **Cummins® 'DXP series'** DG sets are backed by the industry aknowledged best-in-class comprehensive warranty on the entire package including rubber components.

Lowest operating costs

All elements of the **Cummins® 'DXP series'** DG sets are designed from the start to work together to maximize efficiency, even at part loads, thus offering you the advantage of lowest operating costs.

Single source power assurance

The rugged and reliable **Cummins® 'DXP series'** DG sets are unique, because all the major components – the engine, alternator, control system and canopy are designed, manufactured and tested by Cummins India. This, complemented by the largest customer support network in India, capable of providing round-the-clock service and spares support, offers you *SINGLE SOURCE POWER ASSURANCE* from the world leaders in power generation.

Standard scope

Engine: Cummins® 'DXP series' diesel generating sets, powered by Cummins® 'X series' engines, are rated at 1500 RPM and conform to ISO 8528 specifications. The engines are radiator cooled, four stroke and multi-cylinder, conforming to BS 5514 / ISO 3046.

The scope of supply includes:
- Electrical starter motor 12V DC
- Electronic governor
- Spin-on fuel filter
- Spin-on full flow lub oil filter
- Residential silencer
- Dry type air cleaner
- Recovery bottle
- Safeties for LLOP/HWT
- Flywheel and flywheel housing
- First fill of lube oil and coolant

PGBU/CIL/001/X 1.3 Domestic/CPG/Sept. 2009

Alternator: Stamford alternator from Cummins Generator Technologies, suitable for operation at 1500 RPM, 415 Volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase, 4 wire system and 230 volts. 1.0 pf (lag) suitable for 50 Hz, 1 phase, 2 wire system conforming to BS 5000 / IS 4722. The Alternator is brushless type, screen protected, revolving field, self excited, self regulated through an AVR. The alternator has the following features:

- ± 1.0 % Voltage regulation (max.) in static conditions
- IP: 23 Enclosure
- Permissible overload of 10% for one hour in 12 hours of operation

Mounting arrangement: Engine and alternator are mounted on a common MS fabricated base frame with AVM pads.

Control panel: The control panel is manufactured with 14/16 gauge CRCA sheet and is powder coated for a weather-proof, long lasting finish.

The control panel consists of following parts:

- Standard engine instrumentation
- PSO 500 control panel that measures:
  1) Individual phase current (Amps)
  2) Phase voltages (V)
  3) Generator output frequency (Hz)
  4) Engine water temperature (Deg.C)
  5) Lube oil pressure (kpa)
  6) Working hours
- MCB of suitable rating
- Push button (Starter)
- LED indications for main functions
- Current transformers
- Instrument fuses duly wired and ferruled

Others:

- Fuel tank suitable for 30 hours at 75% of operation
- One dry and uncharged battery with battery leads

Acoustic enclosure:

The acoustic enclosure is made of 2 mm thick CRCA sheets and structural/ sheet metal base frame painted in Munsel green shade. The walls of the enclosure are insulated with fire retardant foam so as to comply with the 75 dBA at 1mtr sound levels specified by Ministry of Environment & Forest.

The enclosure has the following features:

- Specially designed to meet stringent MOEF/ CPCB norms of 75 dBA @ 1mtr at 75% load under free field conditions
- Single point lifting for easy handling at customer site
- Designed to have optimum serviceability
- Air inlet louvers specially designed to operate at rated load
- Made on special purpose CNC machines for consistency in quality and workmanship
- Powder coated for long lasting service life and superior finish
- With UV resistant powder coating, can withstand extreme environments
- Use of special hardware for longer life
- Insulation material meets exacting IS 8183 specifications for better sound attenuation
- Flush styling - no projections
- Fluid drains for lube oil and fuel on engine
- Fuel filling point onside canopy

Optionals

- Coolant heater
- Alternator space heater
- PCC 1302
- 500 ltrs. base tank
- Excitation Boost System (EBS)

www.cumminsindia.com

Our energy working for you.™

PGBU/CIL/001/X 1.3 Domestic/CPG/Sept. 2009

Cummins Power Generation

Technical data

Generator set specifications

Model	C 7.5 D5	C 10 D5
Prime Power Rating kVA / kW	1 phase - 7.5/7.5 & 3 phase - 7.5/6	1 phase - 9.2/9.2 & 3 phase - 10/8
Current (Amps)	1 phase - 26 & 3 phase - 10.5	1 phase - 34.78 & 3 phase - 14
Power Factor	1 phase - 1.0 & 3 phase - 0.8 (lag)	1 phase - 1.0 & 3 phase - 0.8 (lag)
No. of Phases	1 Phase/ 3 Phase	1 Phase/ 3 Phase

Engine specifications

Make	Cummins	Cummins
Model	X 1.3 G2	X 1.3 G2
BHP	15.78	15.78
Cooling	Water Cooled	Water Cooled
Aspiration	Natural	Natural
No. of Cylinders	2	2
RPM	1500	1500
Bore (mm) x Stroke (mm)	95 x 91	95 x 91
Compression Ratio	18.1 (± 0.3):1	18.1 (± 0.3):1
Displacement (Ltrs.)	1.29	1.29
Fuel	HSD	HSD
Fuel Consumption (Ltr/hr) @ 75% Load with Radiator & Fan	2.4	2.7
Governor	Electronic	Electronic
Starting System	12 V Electrical	12 V Electrical
Lube oil Specification	CH4 15W40	CH4 15W40
Lube oil Sump Capacity (Ltrs.)	4	4
Lube oil consumption (LPH)	0.3% of fuel consumption	0.3% of fuel consumption
Total Coolant Capacity (Ltrs.)	4.65	4.65
Exhaust Pipe Size (mm)	34.1	34.1
Battery Capacity / Rating	32 Ah 12 V	32 Ah 12 V

Alternator specifications

Make (Brand)	CGT (Stamford)		CGT (Stamford)	
Enclosure	IP 23		IP 23	
Voltage Regulation (Max.)	+/- 1%		+/- 1%	
Class of Insulation	H Class		H Class	
RPM / Frequency	1500 / 50 Hz		1500 / 50 Hz	
Power Factor	0.8 (lag)		0.8 (lag)	
No. of Phases	3 Phase	1 Phase	3 Phase	1 Phase
Frame Size	PI 044 D	PI 044 F	PI 044 E	PI 044 G
Voltage	415 V	230 V	415 V	230 V
Recommended Cable size sq. mm. x No. of Runs (Allum. Armoured AYFY 3 ½ Core)	6 x 1	35 x 1	10 x 1	50 x 1

Conformance standards

IS 4722, BS 5000, IS 1460, ISO 8528, BS 5514, ISO 3046

Rating definitions

Prime Power (PRP):
Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Emergency Standby Power (ESP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

- Fuel consumption data is based on diesel having specific gravity of 0.85 and conforming to IS:1460
- Oil consumption data is based on oil having specific gravity of 0.89 and meeting CH4 API categories
- Fuel consumption tolerance is +5%

www.cumminsindia.com

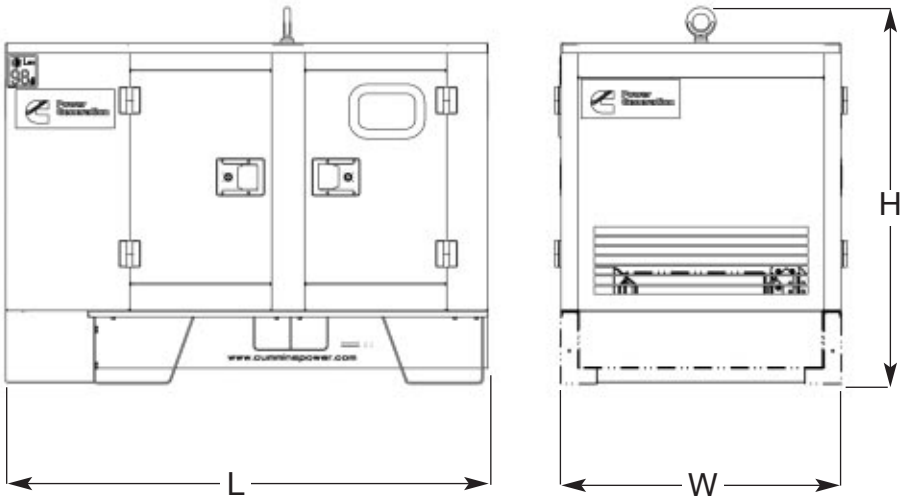
Our energy working for you.™

PGBU/CIL/001/X 1.3 Domestic/CPG/Sept. 2009

Power Generation

Typical enclosed genset dimensions*

Genset Model	Rating (kVA)	Length (mm)	Width (mm)	Height (mm)	Weight (kgs.) (Dry)	Std. Fuel Tank Capacity (Ltrs)
C 7.5 D5 (1 phase)	7.5	1456	847	1032	575	100
C 7.5 D5 (3 phase)	7.5	1456	847	1032	546	100
C 10 D5 (1 phase)	10	1456	847	1032	587	100
C 10 D5 (3 phase)	10	1456	847	1032	556	100



Cummins Power Generation Offices:

Location:	Tel:	Fax:	Location:	Tel:	Fax:
Bangalore:	(080) 2361 3831/ 2361 1958	(080) 2361 4552	Jaipur:	(0141) 236 4944	(0141) 403 8794
Chandigarh:	(0172) 2240373	(0172) 224 0371	Kolkata:	(033) 2287 8065/ 2247 2481	(033) 2290 3839
Chennai:	(044) 2446 8110/ 2446 8113	(044) 2491 1120	Lucknow:	(0522) 278 6718/ 278 8959	(0522) 278 7880
Delhi:	(011) 4161 8357/ 61	(011) 4161 8357/ 61	Mohali:	(0172) 224 0373	(0172) 224 0371/ 72
Hyderabad:	(040) 2766 3017	(040) 2767 8892	Mumbai:	(022) 2756 6351/ 52/ 53/ 54	(022) 2756 6355
Indore:	(0731) 645 1042/ 09826 42717		Vadodara:	(0265) 232 4207/ 654 0390/	(0265) 308 3010

Cummins India Limited
Power Generation Business Unit
35A/1/2, Erandawana,
Pune 411 038. India
Tel.: (91) 020-6602 7525/ 3024 8600
Fax: (91) 020-6602 8090

Authorised Representative

www.cumminsindia.com

Our energy working for you.™

PGBU/CIL/001/X 1.3 Domestic/CPG/Sept. 2009

Power Generation