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2361 1958

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1st Street, Tigar Varada Chari Road,
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098402 07633

Hyderabad
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Hyderabad 500029
Tel.: 040 - 2766 3017

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503 A, 5th Floor,
Industry House
A. B. Road,
Indore 452001
Tel.: 0731 - 6451042

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405 & 406, Geeta Enclave,
G8, Vinoba Marg,
C Scheme,
Jaipur 302001
Tel.: 0141 - 2364 944

Kolkata
94, Tivoli Court, IC Ballygunge
Circular Road,
Kolkata 700019
Tel.: 033 - 2287 8065,
2247 2481

Lucknow
B -191 Nirala Nagar,
Opp. Ramakrishnamath,
Lucknow 226020
Tel.: 0522 - 2787 514,
2786 718

Mumbai
Unit No. 603 & 604, Raheja Arcade,
Plot No. 61,Sec No.11, CBD Belapur,
Navi Mumbai 400 614
Tel.: 022 - 2756 6351-52-53-54

Mohali
SCF - 58, Second Floor, Sector 65,
Phase - 11 (XI)
Mohali 160062
Tel: 0172 - 2240373
Telefax: 0172 - 2240371/72

New Delhi
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98, Nehru Place,
New Delhi 110019
Tel.: 011- 4161 8357 / 61

Pune (Head Office)
35A/1/2, Erandwana
Pune 411038
Tel.: 020 - 6602 7525,
3024 8600

Vadodara
301, 3rd Floor, "Tithi " Complex, Opp.
BPC, Baroda Productivity Council
Road,
Vadodara 390007
Tel.: 0265 - 6540 390, 2324 207

Dependable

> Diesel generator sets
Ranging from 15 - 2000 kVA
Acoustically enclosed
Emission compliant
Low fuel consumption
Extended maintenance period

Our energy working for you.™

Cummins Power Generation

Our energy working for you.™
www.cumminspower.com

PGBU/CIL/002/Diesel Range/FC/September 2007/1500

Cummins Power Generation

Cummins is a global leader in engine technology and service solutions across Power Generation, Industrial and Automotive applications. Its technology and pioneering initiatives are bringing innovative solutions and reliable services at the best possible value to users across the globe. Its high performance outlook is based on customer focus, integrity and capability if its people.

Cummins Inc., USA is a leader in the design and manufacture of power generation equipment and one of the most integrated providers of power solutions in the world.

Cummins in India, a part of the USD 10.2 billion Cummins Inc., is a group of 11 entities across 200 locations in the country with a combined turnover of almost Rs. 3000 crore and employing more than 5000 people.

Cummins India Limited (CIL), the country's leading manufacturer of diesel and natural gas engines has produced more than 1,67,000 engines till date at its state-of-the-art manufacturing facilities in Pune and Daman. The company manufactures nearly 20,000 engines and silent gensets on an annual basis.

Cummins Power Generation, a business unit of CIL, is the market leader in the diesel genset segment, offering a single window for complete power solutions, with top-of-the-line products and services. From simple generator sets to turnkey, onsite power stations, Cummins has the expertise to successfully meet the power requirements of a variety of individual and institutional users. Important sectors for power generation solutions include telecom, construction, IT/ITES, realty, hospitality, textiles, auto & auto ancillaries, food processing, government, pharma, oil & gas and manufacturing.

The Cummins edge
Owning to its long standing presence of over 40 years in India, Cummins' team of competent and highly skilled engineers fully understand the needs of its customers. Over the years the company has:

- Built an impressive population of more than 75,000 Cummins engines/ generating sets
- Acquired skills in Application Engineering, R&D and Service
- Achieved well established operational consistency in systems and processes

Most economical power solution

Cummins engine powered generating sets are available at competitive prices and offer the best fuel economy, best warranty terms and lowest cost of maintenance, replacement and overhaul parts, thereby proving to be the most economical power solution.

Export range

Cummins India has exported over 25,000 diesel and gas engines to countries like USA, UK, Singapore, Belgium and Australia. Besides being the sole exporter of the V28 engine, it also exports the NTA-855 Big Cam, K38, K50 and QSK 60 engines to countries worldwide.

Consistent focus on quality

Cummins India has been acclaimed for its high quality standards by leading national and international bodies like BVQI (ISO 9001-2000), Factory Mutual & Underwriter's Laboratory Inc., Indian Register of Shipping, Lloyd's Register of Shipping, Korean Register of Shipping, Materials Laboratory Accredition, Directorate General of Quality Assurance, Standards Laboratory Accreditation, Engineering Export Promotion Council and American Bureau of Shipping. In addition to these, Cummins India has also been the recipient of prestigious awards like; the National Export Award, the Industrial Safety Performance Award and the Rajiv Gandhi National Quality Award.

When you opt for a Cummins power system, whether it is just an engine or a complete powerhouse, you get the benefits of decades of experience and expertise of Cummins' inhouse research and engineering facility.

Diesel generator sets

Complete product range

Cummins - powered diesel generator sets are available in sizes ranging from 15 to 2000 kVA. Whether your application is for prime or continuous power, or if reliable standby power is critical to your business, we provide standard features that have no equal. Heavy-duty Cummins engines are known for fuel efficiency, responsive transient performance and rugged reliability. Each generator set includes a cooling system that is designed to provide guaranteed performance in high ambient temperatures, so you get all the power you pay for. High performance Cummins - manufactured alternators offer optimum performance in demanding applications, such as data centers and industrial plants.

User-friendly operation and maintenance features include:

- Heavy-duty engines and high performance alternators
- Mechanical or electronic governing systems and electronic voltage regulation
- Optional control systems for automatic, local or remote-start applications
- Weather-protective and sound attenuated enclosures, coolant heaters and other features to enhance performance and reliability in extreme ambient environments
- Complete set of accessory devices designed for use with the generator set to simplify installation and enhance reliability

'X' series (15 to 25 kVA)
The 'X' series Ready-To-Use gensets with 2 and 3 cylinder inline configuration diesel engines are the most compact, light weight and easy to service products. Built-in vibration mounts, a completely wired control system including engine protection, instrumentation, residential silencer and integral fuel tank constitute its special features. Engines in this series are naturally aspirated, fuel efficient and with low lube oil consumption.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 15 D5 P	X 1.7 G1	20	15	91.44	127	1.7
C 20 D5 P	X 2.5 G2	32	20	91.44	127	2.5
C 25 D5 P	X 2.5 G2	32	25	91.44	127	2.5

'S' series (30 to 62.5 kVA)
The 'S' series are 4 cylinder naturally aspirated, turbocharged and after cooled models. Engines in this series are simple, compact, reliable, fuel efficient and exhibit minimal noise and vibration levels.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 30/35 D5 P	S 3.8 G3	45	30/35	97	128	3.8
C 40 D5 P	S 3.8 G4	58	40	97	128	3.8
C 50 D5 P	S 3.8 G6	69	50	97	128	3.8
C 62.5 D5 P	S 3.8 G7	80	62.5	97	128	3.8

‘B' series (75 to 140 kVA)

The 'B' series 6 cylinder inline configuration engines are light weight, easy to service with fewer parts leading to lower maintenance cost. Advanced stress analysis techniques have been able to accommodate all these features in a simple yet powerful metric package.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 75/82.5 D5 P	6 BT 5.9 G1	105	75/ 82.5	102	120	5.88
C 100 D5 P	6 BTA 5.9 G1-I	124	100	102	120	5.88
C 125 D5 P	6 BTA 5.9 G2	154	125	102	120	5.88
C 140 D5 P	6 BTAA 5.9 G1-I	170	140	102	120	5.88

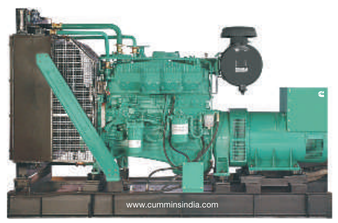
'C' series (160 to 250 kVA)

The 'C' series 6 cylinder inline configuration engines with 'unitized' block design have been developed to exhibit high levels of durability and reliability. This combined with high power to weight ratio and small footprints make the 'C' series engine powered gensets the obvious choice for mission critical power needs.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 160 D5 P	6 CTA 8.3 G1-I	205	160	114	135	8.3
C 180 D5 P	6 CTA 8.3 G2-1	220	180	114	135	8.3
C 200 D5 P	6 CTA 8.3 G1-I	245	200	114	135	8.3
C 250 D5 P	6 CTA 8.3 G4	310	250	114	135	8.3

'N' series (320 and 380 kVA)

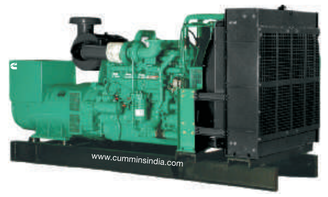
The 'N' series 6 cylinder, inline engines are simple in design and are available in both turbocharged and turbocharged – after cooled versions. Engines in this series are the real workhorses which have clocked millions of hours, operating in some of the world's most demanding applications and climatic conditions. These engines are available with advancements like; pulse tuned manifold, low temperature after cooling and large capacity gear pump for pressure lubrication. Large volume coolant passages provide an even flow of coolant. All these contribute to higher thermal efficiencies and durability.



Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 320 D5 P	NTA 855 G2-I	380	320	140	152	14.0
C 380 D5 P	NTA 14 G3	450	380	140	152	14.0

‘K 19' series (500 kVA)

The 'K 19” series, 6 cylinder, inline engine design features have made Cummins diesel the standard for comparison of operating economy, reliability and long life. When all cost factors like initial capital investment, fuel, maintenance and overhaul are considered, the bottom line shows that this compact Cummins engine delivers the lowest life cycle cost.



Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 500 D5 P	KTA 19 G9	600	500	159	159	18.6

'V 28' series (600 and 625 kVA)

The 'V 28' series 12 cylinder engines are proven for their reliability and durability. Upgraded with new technologies for greater performance and economy; these are exported to various Cummins entities across the world.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 600 D5 P	VTA 28 G3-I	710	600	140	152	28.0
C 625 D5 P	VTA 28 G5-I	750	625	140	152	28.0

‘K 38' series (750 to 1010 kVA) and 'K 50' series (1250 and 1500 kVA)

12 and 16 cylinder 'K' series 'V' configuration engines perform with maximum durability and economy. Individual cylinder head, gear driven water pump, self tensioning fan drive and easy serviceability are some of the features. To help you increase your profits is higher fuel efficiency and superior performance over a wide range of operating loads.

Genset Model	Engine Model	BHP Rating at 1500 RPM	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 750 D5 P	KTA 38 G2-I	890	750	159	159	37.8
C 800 D5 P	KTA 38 G3-I	950	800	159	159	37.8
C 1010 D5 P	KTA 38 G5	1180	1010	159	159	37.8
C 1250 D5 P	KTA 50 G3	1470	1250	159	159	50.3
C 1500 D5 P	KTA 50 G8-I	1735	1500	159	159	50.3

SilentPower™

Acoustic enclosures for diesel gensets ranging from 15 to 750 kVA.

For thousands of small and midsize projects standby power is delivered silently with the help of our acoustic enclosures branded 'SilentPower™'. Manufactured for gensets rating between 15 kVA to 750 kVA, these enclosures meet stringent industry norms for emission specified by the Ministry of Environment and Forest [MOEF], Government of India [GOI], as per notification no. GSR 371 (E) dated May 17, 2002 and are certified for noise control levels of 75 dbA at 1meter distance by the MOEF, GOI appointed nodal agencies. Developed by a team of highly skilled and proficient engineers from Cummins Power Generation and its channel partners, these acoustic enclosures are designed to meet world-class sound attenuation levels. In addition, these compact weatherproof enclosures offer easier serviceability and maintenance and a host of other user-friendly features such as an instrument panel viewing window, single point lifting for easy handling, and a built-in fuel tank.

State-of-the-art manufacturing facilities such as, CNC machines and automated welding, painting and powder coating processes, ensure uniform paint quality and superior finish for a longer and more durable life even at outdoor applications. The 1.6/2mm gauge CRCA sheets provide greater strength and longer shelf life whilst the specially manufactured EPDN gasket fittings help prevent sound leakage. Specially designed lifting points on the base frame assist in load sharing during lifting. Provision of an emergency push button on the outside of the enclosure is in adherence to the required safety measures.

Typical acoustic enclosure dimensions*

Genset Model	Prime Rating (kVA)	Engine Model	Enclosure Dimensions		
			Length (mm)	Width (mm)	Height (mm)
C 15 D5 P	15	X 1.7 G1	2200	900	1375
C 20 D5 P	20	X 2.5 G2	2200	900	1375
C 25 D5 P	25	X 2.5 G2	2200	900	1375
C 30 D5 P	30	S 3.8 G2	2800	1150	1450
C 35 D5 P	35	S 3.8 G3	2800	1150	1450
C 40 D5 P	40	S 3.8 G4	2800	1150	1575
C 50 D5 P	50	S 3.8 G6	2800	1150	1575
C 62.5 D5 P	62.5	S 3.8 G7	2950	1150	1575
C 75 D5 P	75	6BT 5.9 G1	3850	1150	1700
C 82.5 D5 P	82.5	6BT 5.9 G1	3850	1150	1700
C 100 D5 P	100	6BTA 5.9 G1-I	4000	1150	1700
C 125 D5 P	125	6BTA 5.9 G2-I	4000	1150	1700
C 140 D5 P	140	6BTAA 5.9 G1-I	4000	1150	1700
C 160 D5 P	160	6CTA 8.3 G1-I	4500	1500	1850
C 180 D5 P	180	6CTA 8.3 G2-I	4500	1500	1850
C 200 D5 P	200	6CTAA 8.3 G1-I	4500	1500	1850
C 250 D5 P	250	6CTAA 8.3 G4	4650	1700	2050
C 320 D5 P	320	NTA 855 G2-I	5500	2000	2520
C 380 D5 P	380	NTA 14 G3	5500	2000	2520
C 500 D5 P	500	KTA 19 G9	6500	2000	2300
C 600 D5 P	600	VTA 28 G3-I	7000	2500	2925
C 625 D5 P	625	VTA 28 G5-I	7000	2500	2925
C 750 D5 P	750	KTA 38 G2-I	7500	2500	2925

*Dimensions of the enclosure are excluding the silencer. The information contained in this publication is typical only. It does not form part of any contractual commitment and is subject to change without notice.

Design and features

1. Single point lifting for easy handling at customer site (up to 380 kVA)
2. Wide access doors for easy maintenance
3. Instrument panel viewing window
4. Compact design
5. Long lasting acoustic insulation behind perforated steel for attenuation
6. Every enclosure is certified to meet the Emission norms
7. Recessed, easily accessible emergency stop button
8. Cable entry provision for easy installation at site

PowerCommand® controls

Optimise performance with PowerCommand® controls

Only gensets from Cummins Power Generation are available with integrated PowerCommand® controls. PowerCommand® controls offer the capability of integrated digital paralleling, substituting less reliable, complex and expensive paralleling equipment with simple, off the shelf solutions.

Main features	Model				
	PCC 0300/01	PCC 1301	PCC 2100	PCC 3100	PCC 3201
General					
AVR	x	•	•	•	•
Electronic governing	x	o	•	•	•
Glow plug control	•/x	•	•	x	x
Cycle cranking	•	•	•	•	•
Full authority engine control	x	o	o	x	•
Networking (LonWorks)	x	x	o	o	o
Fault history	x	•	•	•	•
Operator interface					
Manual start/stop	•	•	•	•	•
Auto/remote start	•	•	•	•	•
Exercise function	x	x	x	x	•
Auto led	x	•	x	x	x
Not in auto LED	x	•	•	•	•
Manual LED	x	•	•	x	•
Common shutdown LED	x	•	•	•	•
Common warning LED	x	•	•	•	•
Exercise LED	x	x	x	x	•
Fail to start LED	•	x	•	x	x
Emergency stop (local & remote)	•	•	•	•	•
Alpha/numeric screen	x	•	•	•	•
Remote start input active led	x	•	•	x	•
Fault reset	•	•	•	•	•
Threshold warning indicators					
Low oil pressure	x	•	•	•	•
Low engine coolant temperature	x	•	•	•	•
High engine coolant temperature	x	•	•	•	•
Low coolant level	x	x	•	•	•
Low battery voltage	x	•	•	•	•
High battery voltage	x	•	•	•	•
Battery alt. charge fault	•	•	x	x	x
Over current	x	•	•	•	•
Overload	x	x	•	•	•

Main features	Model				
	PCC 0300/01	PCC 1301	PCC 2100	PCC 3100	PCC 3201
Paralleling capability					
Auto synchronising (isolated bus)	x	x	x	•	•
kWe & VAr load sharing control	x	x	x	•	•
Auto synchronising (utility bus)	x	x	x	•	•
Base load (utility bus)	x	x	x	•	•
Synchroscope	x	x	x	•	•
Power transfer function					
Open transition transfer	x	x	x	x	o
Hard closed transition	x	x	x	x	o
Soft closed transition (ramping)	x	x	x	x	o
Transfer & base load (utility)	x	x	x	x	o
Gen/mains breaker control	x	x	x	x	o
Gen/mains breaker status protection	x	x	x	x	o
Environment					
Operating temperature range -40°C to +70°C	-25 to +50°C	•	•	•	•
Humidity up to 95% (non condensing)	90%	•	•	•	•
Shutdown protection & indication – Engine					
Low fuel level	x	o	o	•	•
High fuel level	x	x	o	x	x
Low oil pressure	•	•	•	•	•
High engine coolant temperature	•	•	•	•	•
Failure to crank shutdown	x	•	•	•	•
Over crank (failure to start)	•	•	•	•	•
Overspeed	•	•	•	•	•
Shutdown protection & indication – Alternator					
Under & over voltage	x	•	•	•	•
Under & over frequency	•*	•	•	•	•
Overcurrent	x	•	•	•	•
Earth leakage	x	o	o	o	o
Reverse power	x	x	•	•	•
Reverse VAr	x	x	•	x	•

PCC0300

PCC0301

PCC1301

PowerCommand® controls

Main features	Model				
	PCC 0300/01	PCC 1301	PCC 2100	PCC 3100	PCC 3201
Codes & standards					
CE compliant	•	•	•	•	•
NFPA110	x	•	•	•	•
UL 508-listed/recognized	x	•	•	•	•
UL-certified	•	•	•	•	•
Customer configurable inputs & outputs					
Digital inputs-2 (shutdown, warning or status)	x	•	N/A	N/A	N/A
Digital inputs-4 (shutdown, warning or status)	x	x	•	•	•
Relay outputs-2	x/•*1	•	N/A	N/A	N/A
Relay outputs-4	x	x	•	•	•
Measurement & instrumentation – Engine					
Oil pressure	x	•	•	•	•
Oil temperature	x	x	o	o	o
Water temperature	x	•	•	•	•
Engine speed	x	•	•	•	•
Hours run	•	•	•	•	•
Number of starts	x	•	•	•	•
Battery voltage	x	•	•	•	•
Exhaust temperature	x	x	x	o	o
Measurement & instrumentation – Alternator					
3 Phase L-L & L-N voltage & frequency	x	•	•	•	•
3 Phase current	x	•	•	•	•
kWh	x	x	•	•	•
Total kVA	x	•	•	•	•
Total kWe & kVAr	x	x	•	x	•
PF	x	x	•	•	•
Per phase kVAr, kWe	x	x	•	x	•
Per phase kVA	x	x	•	x	•

• Standard
x Not Available
o Option
N/A Not Applicable
* Under frequency
*1 Common shutdown fault (single output)

PCC2100

PCC3100

PCC3201

PowerCom® control

PowerCom® control is a microprocessor based generator set monitoring, protection and electronic governing system that offers an advanced level of functions for reliability and optimum generator set performance. The controller is designed in such a way that it supports a wide range of genset configurations. PowerCom® is offered as a standard for gensets in the 320 kVA to 625 kVA range.

Standard features

Governor and speed / frequency regulation
- Integrated electronic governing (adjustable up to 5%)

Operator interface
- Manual Stop / Start
- Remote Start / Stop
- Cyclic cranking
- Alpha numeric screen
- Alternator trim adjustment
- Model specific calibration
- Field trim adjustment

AC instruments
- 3-Phase AC Amps
- 3-Phase AC Volts
- kW
- kVA
- Power factor
- Frequency

Measurements / Instrumentation
- Lube oil pressure
- Coolant temperature
- Engine speed
- Hours run
- Battery Voltage

Engine protection
- High coolant temperature (warning & shutdown)
- Low lube oil pressure (warning & shutdown)
- Fail to crank (shutdown)
- Fail to start (shutdown)
- Over speed (shutdown)
- Low / High battery voltage (warning)
- Low coolant level shutdown

AC protection
- Over frequency (shutdown)
- Over current (shutdown)
- Over Voltage (shutdown)
- Under Voltage (warning)
- Under frequency (warning)

Miscellaneous
- Operating temperature range 0-60°C
- Common fault alarm
- Common shutdown
- Date and time stamps for alarms
- Dimensions (in mm) are 267*378*157

Additional features
- Speed bias or raise / lower inputs are provided for paralleling
- Remote monitoring capability through separate interface modules
- Engineering tool / manufacturing tool / service tool compatibility with existing tools
- 6 configurable discrete outputs
- 2 configurable discrete inputs
- Fault indication on front panel display using fault LEDs
- Smooth transition to rated speed
- Programmable fault thresholds
- Controlled ramping to restrict start up smoke

PowerCom® Control

Global range of diesel generator sets

As a user of Cummins products, you can expect a face-to-face relationship with someone worthy of your trust and fast access to reliable service, engineering expertise and parts support. CSS service outlets are spread strategically across the Country with technicians trained to the highest Cummins standards.

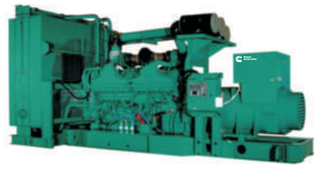
The QSK 23, QST 30 and QSK 60 models with higher capacities come armed with electronic controls and PC based service tool software for better genset protection, prognosis and diagnosis that translates into lower downtime and higher productivity.

Genset Model	Engine Model	kVA (Prime)	Bore (mm)	Stroke (mm)	Disp. (ltrs)
C 840 D5 P	**QSK 23 G3**	760	170	170	23.15
C 900 D5 P	**QSK 23 G3**	820	170	170	23.15
C 1100 D5 P	**QST 30 G4**	1000	140	165	30
C 2000 D5 P	**QSK 60 G3**	1875	159	190	60
C 2250 D5 P	**QSK 60 G4**	2000	159	190	60

QSK 23

QST 30

QSK 60



Dependable after-market support

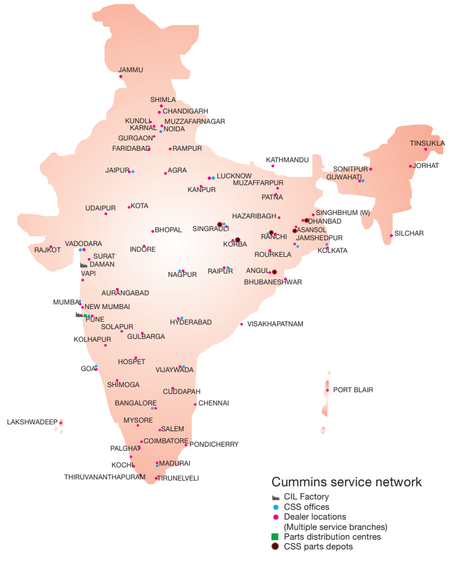
Cummins helps your business achieve greater success by providing unmatched support and service through every phase of your power application project. Whether it is maintenance, repairs or an overhaul, Cummins is with you. The round-the-clock service support provided by the Company's very own Distribution Business Unit-Cummins Sales and Service (India) Limited (CSS), sees to it that you receive prompt service. This task is supported by more than 79 authorized dealers located across the Country.

Our toll free number 1-800-2332000 will put you in touch with one of our helpful, trained engineers, who will guide you through the servicing and maintenance of your Cummins gensets.

At Cummins your need is our priority, which is why you can depend on us to implement the solutions to your needs effectively and efficiently.

Key facts about Cummins services:

- 79 authorized dealers across the Country
- After sales support for over 20,000 customers with over 100,000 engine installations



*For BSNL / MTNL lines

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- 79 authorized dealers across the Country
- After sales support for over 20,000 customers with over 100,000 engine installations