# Sterling Generators Pvt Ltd (Formerly known as Sterling and Wilson Powergen Pvt Ltd)

Genset Range : 250 kVA to 4000 kVA

A Shapoorji Pallonji Company

THITHE



## Sterling Generators Pvt Ltd (A Shapoorji Pallonji Company)

Sterling Generators has one of Asia's largest diesel generator manufacturing plant at Silvassa. Spread over a vast 10.25 acres property, the plant is equipped with the most technically advanced infrastructure for fabrication. This includes a 14 tank pre-treatment plant for surface treatment, a powder coating plant and a state of the art PLC based testing facility (up to 4000 kVA), which is the first of its kind in the country. Our successful partnering with the global leaders in diesel engine manufacturing, namely Baudouin-France, MTU-Germany, Volvo- Sweden has helped us set benchmarks in fuel efficiency, reliability and adherence to global emission norms. Sterling & Wilson, the parent company, is a leading MEP engineering group with over 90+ years of experience in project engineering and execution.

Sterling Generators is headquartered in Mumbai and has its regional & branch offices spread across the country. It is managed by the best minds in the industry, who bring in a solution based approach towards its customers. Today Sterling Generators is known for its endearing project management skills and service capabilities that help them provide round the clock support across India, Middle-East, Africa, Australia & New Zealand with tailor-made solutions.

## Shapoorji Pallonji

Shapoorji Pallonji is one of India's oldest and most respected construction groups, operating for over 145 years. With a group turnover of over USD 2 Billion, the company has its operations spread across India, Middle-East, Africa and the Caribbean Following ISO standards for "Design & Build" & EPC, its construction activities include power plants, industries, five star hotels, refineries, atomic energy establishments, airports, educational institutions, commercial and residential buildings, complexes and prestigious palaces, skyscrapers, villas and stadiums. The Mistry family that owns SP is also the largest private Shareholder (18.4%) of TATA Sons Limited, the holding company

## **Sterling and Wilson**

Sterling and Wilson was established in 1927 as Wilson Electric Works. Sterling and Wilson was formed in 1973. Between 1973-1993, the company focused on various projects in the Middle-East before becoming an active player in the local market. Having executed over 1500 high-value projects since, Sterling & Wilson, has evolved as India's leading MEP (Mechanical, Electrical & Plumbing) services company that has a pan-India presence. With excellent project management capabilities, 200 in-house design engineers, the company is today 2300 employees strong and has another 3500 personnel on contract.

## Sterling and Wilson Middle-East

Sterling and Wilson Middle-East Electro Mechanical is registered as a MEP Contracting company in Dubai. The generator business is handled by Sterling and Wilson Powergen LLC with its head office in Dubai and warehouse in SAIF Zone, UAE.

## **Sterling and Wilson Powergen**

Sterling and Wilson Powergen Pvt. Ltd., is headquartered in Mumbai and has its regional & branch offices spread across 18 cities in India. It is managed by the best minds in the industry, who bring in a solution based approach towards its customers. Today SWPPL is known for its endearing project management skills and service capabilities that help them provide round the clock support across India, Middle-East and Africa with tailor-made solutions.

## Sterling and Wilson Co-Gen Solutions

Sterling and Wilson Co-Gen provides highly optimized gas based Combined Heat and Power (CHP) turn-key solutions for commercial buildings and process industries, meeting reliable and quality power requirement in the most cost effective manner. Sterling and Wilson, with leading OEMs like MTU and Kawasaki, offers world renowned power generation equipment - Gas Engines / Turbines, reducing carbon foot print of industries and establishment by mitigating their impact on the environment.



#### STERLING GENERATORS-OFFICES

**Sterling Generators Private Limited** 

Ratnakar Bagh, Behind Radhika Tower,

Tankapani Road, Bhubaneswar, Khordha,

A Shapoorii Pallonii Company

Plot no. 1153/2075 House no. 3.

#### BANGALORE

**JHARKHAND** 

Sterling and Wilson Powergen Pvt.Ltd. 4A/14,6th Main, Chikka Adugodi New, Extension, Thavarekere Main Road, Bengaluru 560029, Tel: +91-80-67178601-09 Fax: +91-80-67178675

#### **KOLKATA**

Sterling and Wilson Powergen Pvt.Ltd. 3rd Floor. Benfish IT Tower. Plot G. N. 31, Sector V. Salt Lake City, Kolkata 700091. Tel: +91-33-30118100 Fax: +91-33-30118159

**ODISHA** 

Odisha-751018

Mob:+91-9748414919

## **MUMBAI**

Sterling and Wilson Powergen Pvt.Ltd. 10th Floor, Universal Majestic Building, P.L. Lokhande Marg, Chembur(West), Mumbai-400043. Tel: +91-22-2552 6100 Fax: +91-22-2552 6200

#### BHIHAR

**Sterling Generators Private Limited** Shubanker Puram villa, c/o mr. Abhishek Srivastava. Railway Hunder road, east Lohanipur, Patna, Bihar-800003 Mob: +91-9748414919

#### NOIDA

Sterling and Wilson Powergen Pvt.Ltd. A-7, Sector-6, Ground Floor, Noida-201 301 (UP). Tel: +91-120-4515600 Fax: +91-120-4515610

#### RAIPUR

**Sterling Generators Private Limited** 2nd Floor. "Tara Sadan". House No. C17/5, Sector-5, Devendra Nagar, Raipur-492 009. Tel: 09424200245

**Sterling Generators Private Limited** 16/1 Co-Operative Colony, KG Ashram, Chanakya Nagar, Dhanbad, Jharkhand-826001 Tel:+91-9748414919

#### ANDAMAN AND NICOBAR ISLANDS

**Sterling Generators Private Limited** 16/1, M G Road Dean Street Junglee-Ghat, Blair, South Andaman, Andaman and Nicobar Islands 744103 Mob: +91-9748414919

#### **JAMMU & KASHMIR**

Sterling Generators Private Limited Sterling Generators Private Limited Exchange Road, Road, Exchange Road, Jammu and Kashmir 190001 Mob:+91-8800691244

#### HIMACHAL PRADHESH

**Sterling Generators Private Limited** Adjoining Pushpa Complex Sector-2. Kasauli Road, Parwanoo. Tehsil Kasauli, Distt-Solan, Himachal Pradesh-173212 Mob:+91-8800691244

## PUNJAB

Village- Mullanpur Garibdas, Sas Nagar, Mohali, Punjab-140901 Mob:+91-8800691244

396230

**KOLKATA** 

7th Floor, Tower-li,

Block Dn. Sector-V.

Meb:+91-9748414919

HAVELI, SILVASSA

Dadra Nagar & Haveli

Kolkata - 700091

**Sterling Generators Private Limited** 

Millennium City It Park, Plot No.62,

**Sterling Generators Private Limited** 

Near Dear Park, Khanvel, Silvassa,

Survey No 28, Ground Floor, Kherdi Road,

Khanvel Complex, Shop No.1,

#### UTTARKHAND

Sterling Generators Private Limited Araghar, 74/3,

Haridwar Road. Dehradun, Uttarkhand-248001 Mob: +91-8800691244

#### RAJASTHAN

**Sterling Generators Private Limited** Near Jaipur Dairy, Plot No.1, JIn Link Road. Opposite Vidhya Ashram School, Jaipur, Rajasthan-302023 Mob:+91-9810531262 **Sterling Generators Private Limited** C-56/38. Sector 62.Noida. Uttar Pradesh-201307 Mob:+91-9810531262

UTTAR PRADHESH

#### HARYANA

**Sterling Generators Private Limited** 2nd Floor. Batra House. House, Plot No 52, Sector-32, Gurgaon, Haryana-122001 Mob:+91-9810531262

#### **NEW DELHI**

**Sterling Generators Private Limited** G.K. House, 202-205, 187 a, Sant Nagar, East of Kailash, New Delhi-110065 Mob:+91-9810531262

REGIONAL OFFICES

EAST

#### **BRANCH OFFICES - SOUTH**

#### TELANGANA

Sterling Generators Private Limited No.4a/14,6th Main, Chikka Adugodi New Extention, Thavarekere Main Road, Bangalore, Telangana-560029 Tel: 080-67596168 Mob: +91-6364877707

#### CHENNAI

Sterling Generators Private Limited 8th A and B wing, no.29, Riaz Gardens, Kodambakkam Road, Nungambakkam, Chennai, Tamilnadu-600034 Mob: +91-9789976541

#### **BRANCH OFFICES - WEST**

#### ANDHRA PRADESH

Sterling Generators Private Limited 1,Tadakandriga Village,Tada, Nellore,Sri Potti Sriramulu Nellore, Andhra Pradesh-524401 Tel:040-2314 1014 Mob:+91-8008276276

#### KERALA

Sterling Generators Private Limited G, Building No.25/243, Kudiyirikkal Building, Puthuppallipuram, Changampuzha Nagar P.O, Cochin, Ernakulam, Kerala-682033 Tel:080-67596168 Mob:+91-8129533036

#### MUMBAI

TELANGANA

Sterling Generators Private Limited Unit No.1001-1006,10Th Floor, Universal Magestic Building, Pl Lokhande Marg, Chembur West, Mumbai-400043 Tel:022-25526161 Mob: +91-9372647216

**Sterling Generators Private Limited** 

Q4, 10th Floor, A1, Cyber Towers,

Hitech City, Hyderabad,

Mob: +91-8008276276

Telangana-500081

Tel:040-2314 1014

#### **GUJARAT**

Sterling Generators Private Limited Sudhan Apt, 301, Near Tejas Vidyalaya, Ellora Park, Vadodara, Gujarat-390023 Tel: 022-25526161 Mob:+919727754383

#### GOA

Sterling Generators Private Limited Flat No 3D,3rd Floor, Neelkamal Neelkamal Arcade, Dr Ab Road,, Panjim, Goa-403001 Tel:022-25526161 Mob:+91-9923902180

#### MADHYA PRADESH

Sterling Generators Private Limited Zone II, 159 MP Nagar,, Bhopal, Madhya Pradesh-462011 Tel:022-25526161 Mob: +91-9923902180

#### INTERNATIONAL OFFICES - MIDDLE EAST

#### DUBAI, UAE

Sterling and Wilson Powergen( L.L.C) PO Box 98960, Dubai 637 Business Village B, Diera, Dubai UAE. Ahmedabad-380015.

Tel: +97142369787 Fax: +97142989189

#### SHARJAH, UAE

Sterling Generators Pvt.Ltd. Q4-009 Sharjah Airport Free Zone, (SAIF ZONE),PO Box 121533,Sharjah,UAE.

#### NIGERIA

Sterling and Wilson Powergen( L.L.C) 5th Floor, Office# 20, Biro Eleganza Plaza, Adeyemo Alakija Street, Victoria Island, Lagos, Nigeria.

#### QATAR

Sterling Generators Private Limited Mr. Ashwin Khairnar, Tel: +97477236756 Email: ashwin@sterlinggenint.com

### **OUR FACTORY SETUP**



- State-of-the-art plant spread over 12 acres of land
- Equipped with world class fabrication facilities
- Automated powder coating shop with 14 tank pre-treatment plant as well as shot blasting and metallizing setup
- Fully automated testing facilities for D. G. sets along with PLC based resistive load banks and equipment to create ambient temperatures up to 50 Deg C
- Modern switchboard assembly shop equipped with pneumatic tools and finest testing equipment

- Sheet metal processing
- Fabrication
- Assembly
- Busbar processing
- Shot blasting
- Pre-treatment
- Powder coating
- Insulation
- Assembly
- Testing





Our passion for perfection and our mission of continuous improvement has resulted in the factory being equipped with 3 of the most advanced test cells for D. G. set testing and validation.

Being the only company with 3 test cells which are equipped to create, simulate and hold an ambient temperature of 50 Deg C is an achievement in itself. These test cells are used to test our wide range of D. G. sets, right from 10 kva to 4000 kVA in realistic conditions, real values with reliable results. •Standard test rig

- •High Voltage testing lab
- •Low voltage testing lab

•Chemical laboratory for pre-treatment and powder coating •PLC based load banks

•Test cells for simulated ambient conditions



## Sterling Generators Pvt. Ltd.

Survey No.: 59, 343/1, Village Kala, Kherdi, Khanvel, Silvassa, UT of Dadra & Nagar Haveli. Tel: +91-022-2552 6100 Fax: +91-022-2552 6200

An ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 Certified Company

## **INDUSTRIES WE SERVE**

- Sterling Wilson is the First Indian DG Manufacturer go to Global.
- Across 50 + Countries with 3000 + Projects.
- A total of 6000 + MW Installed Globally.
- Asia's Largest Integrated DG Sets and HT/LT Panel Manufacturing Plants at Silvassa, India.
- Pan Indian Networks and Distribution.
- Ability to execute orders of any size, with financial strength and support of parent group
- Excellent customer support with a single-window solution for all types of Diesel Generators, Panels, and services

**POWER GRIDS** 

Turnkey execution of power management and SCADA solution for 66MVA DG-based captive plant at Delhi Airport T-3











BANKS

50+





**METRO STATIONS** 

**INTERNATIONAL HOTELS** 



DATA CENTERS







FACTORIES



CRUSHERS



LUXURY FLATS



6000+ Megawatt Diesel Generator Commissioned.









www.baudouin.com

# **Baudouin**

## POWERKIT G - DRIVE DIESEL GENSETS





#### Weifang, China Factory





Pune, India Factory





MAKE IN INDIA MADE FOR INDIA

## **BAUDOUIN POWERKIT DIESEL FOR POWER GENERATION**

Sterling Generators constant endeavour has been to bring in the best Quality with Latest Technology Product into the Indian market, be it prime movers or Generators or advance control system or associated small items like canopy, base frame etc.

Over 100 years, Baudouin has been manufacturing the highest quality engines for marine, power generation and a host of other applications. The continuous need to provide durable, robust and long-lasting engines for land- based power generation and the high sea have led to Baudouin being the preferred engine supplier to the most prominent generator manufacturers in the world.

The Baudouin range of G Drive engines are available from 250 KVA to 3400 KVA and are manufactured in Pune, Maharashtra India.

Baudouin leverages its competencies and global manufacturing capabilities to provide the best solutions for customers, while retaining a high level of efficiency and competitiveness. Baudouin maintains global quality standards across all factories, backed by ISO certifications in France, Russia, China, and India.

Global Standards & Certifications

Every Baudouin products is designed and built to the highest quality and safety standards, with certifications from major marine and powerkit diesel engines classification societies worldwide including ;



## Global Headquarters : Technoparc du Brégadan, CS 50001, 13711 Cassis, France

## 250 KVA TO 4000 KVA



# **BAUDOUIN ?**



## **Understanding HP-Common Rail Fuel Systems**

Reducing particulates and optimizing fuel consumption are primary reasons for adding <u>High</u> <u>Pressure Common Rail (HPCR)</u> systems to an engine. The HPCR is used in diesel engines across our range, providing improved fuel efficiency through a more efficient combustion process.

#### What do HPCR fuel systems do?

Fuel is distributed to the fuel injectors from a high-pressure accumulator, called the rail, which isled by a high-pressure fuel pump. Rail pressure and injection timing are electronically controlled. HPCR fuel systems can provide a cleaner and more fuel-efficient combustion process with improved performance, fuel efficiency and particulate matter reduction.

#### What are the strengths of HPCR fuel systems?

HPCR fuel systems improve engine performance through more efficient combustion and can be more fuel efficient than other systems.

Due to stable pilot injections, your engine will be quieter and produce fewer nitrogen oxides (NOx), reducing the aftertreatment requirements to meet various global emission standards.

#### **Fast facts**

## A High-Pressure Common Rail:

- One of the only two engine manufacturer having this inbuilt Feature, other being MTU.
- Optimizes fuel consumption and reduces particulate emissions
- All other manufacturers are have still not developed this system.
- Is a very common fuel system at Stage IV/Tier 4 Final
- HPCRDI maintains constant injection pressure which results in complete combustion, leading to better emissions and increased fuel efficiency.
- Fewer Moving Parts. Does not require extreme lift rate.
- which cause noise. Therefore, less noise.
- No variation in the rate of injection between BOI & EOI.
- No Mechanical Adjustments Required
- Reduction in Parasitic Losses
- Reduced Emissions

## FUEL SYSTEM OVERVIEW

## Baudouin

## High Pressure Common Rail Direct Injection (HPCR)



## **Engine Control & Management Unit**

- Standby Governor on Engine
  - (Baudouin is the only machines which has Master and Slave electronic governor giving additional protection and lower down time for engine in terms of ECU failure)
- Optimum operating Characteristics.
- Dual Layer protections provides extra protection for engines
- Outstanding load response characteristics
- Communication with auxiliary systems via CAN bus (and appropriate interface module)
- Master-Slave ECU option as standard in 12-, 16- & 20-Cylinder Engines
- Self-monitoring and diagnosis and Maintenance-free design.
- Engine monitoring and management.

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**Our engines are ready for CPCB IV +** (Upcoming emission standard)



Genset Range : 250 kVA to 4000 kVA

DURABLE | ROBUST | BUILT TO LAST

STERLING GENERATOR RANGE										
SL.NO	Rated kVA	Engine Model	Number of Cylinder	Bhp	Fuel Consumption		Genset Size			
					100 % load	75 % load	Length	Width	Height	weight
PRIME DUTY RATINGS										
1	250 KVA	6M12G6D2/5	6 In-Line	315	54.1	41.2	4500 mm	1800 mm	2530 mm	3492 kg
2	320 KVA	6M16G4D2/5	6 In-Line	388.9	67.2	51.3	5500 mm	1800 mm	2650 mm	4231 kg
3	400 KVA	6M21G500/5 E3	6 In-Line	549	85	63.5	5950 mm	1800 mm	2890 mm	4338 kg
4	450 KVA	6M21G500/5 E3	6 In-Line	549	88.3	64.7	5950 mm	1800 mm	2890 mm	4338 kg
5	500 KVA	6M21G6D2/5	6 In-Line	604	102.5	72.2	5950 mm	1800 mm	5319 mm	5319 kg
6	625 KVA	8M21G688/5 E3	8 Vee-type	736.9	127.8	92.6	5950 mm	2200 mm	3286 mm	7500 kg
7	750 KVA	6M33D660E310	6 In-Line	885	158.2	121.5	7200 mm	2200 mm	3290 mm	10200 kg
8	910 KVA	8M33G5D2/5	8 Vee-type	1066	181.3	133.2	8200 mm	2400 mm	3080 mm	9400 kg
9	1010 KVA	12M26D968E200	12 Vee-Type	1192	202.7	153.8	5950 mm	2300 mm	2515 mm	10424 kg
10	1250 KVA	12M33D968E200	12 Vee-Type	1475	251.6	187.2	7200 mm	2200 mm	2836 mm	13475 kg
11	1500 KVA	12M33G1650/5	12 Vee-Туре	1810	303	228.9	7200 mm	2500 mm	2836 mm	14146 kg
12	1750 KVA	16M33G2000/5	16 Vee-Type	2052	337.9	252.4	9250 mm	3000 mm	3600 mm	19133 kg
13	1850 KVA	16M33G2000/5	16 Vee-Type	2253	351	265	9250 mm	3000 mm	3600 mm	19133 kg
14	2000 KVA	16M33G2250/5	16 Vee-Туре	2414	378	274	9250 mm	3500 mm	4000 mm	22915 kg
15	2250 KVA	20M33G2500/5	20 Vee-Type	2696	425.1	332	11000 mm	3500 mm	4000 mm	26414 kg
DCP RATINGS										
1	2000 KVA	16M33G2250/5	16 Vee-Type	2414	N/A	N/A	9250 mm	3500 mm	4000 mm	22915 kg
2	2250 KVA	20M33G2500/5	20 Vee-Type	2696	N/A	N/A	11000 mm	3500 mm	4000 mm	26414 kg
3	2500 KVA	20M33G2500/5	20 Vee-Type	2745	N/A	N/A	11000 mm	3500 mm	4000 mm	N/A
4	2750 KVA	16M55G3300/5	16 Vee-Type	3055	N/A	N/A	11000 mm	3500 mm	4000 mm	N/A
5	3000 KVA	16M55G3300/5	16 Vee-Type	3155	N/A	N/A	11000 mm	3500 mm	4000 mm	N/A
6	3600 KVA	16M55G3750/5	16 Vee-Type	3872	N/A	N/A	11000 mm	3500 mm	4000 mm	N/A
7	4000 KVA	16M55G4000/5	16 Vee-Type	4344	N/A	N/A	11000 mm	3500 mm	4000 mm	N/A

1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of ±5%.

2) All Prime ratings shall have a minimum 60% of block loading capacity, 110% step loading capacity and Class G3 Fuel Governing System

3) Test conditions: 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.85 kg/L. Derating may be required for conditions outside these; please contact the factory for details.

## Prime Rated Power (PRP)

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available, however, this is limited to 1 hour within every 12 hour period.

## **Emergency Standby Power (ESP)**

Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating. Typical operational hours of the engine is 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

## Step Loading Capacity Explained!

The generator set is going to be limited during its start-up by what is called the *first step load*, that is: the total transient load that the genset is initially capable of enduring until reaching its stable regime with some transient variations in voltage and frequency.

This is why it's important to verify the characteristics in the nameplates of the equipment connected to the generator set, and to be aware of the **possible** transient effects which they may suffer during its start-up processes.

Certain equipment such as pumps or motors with variable drives, for instance, may increase their current temporarily during commissioning.

Likewise, elements such as UPS's (uninterruptable power supplies) can cause harmonic distortions which must be contemplated in our calculations.

## Data Centre Power (DCP)

Data Centre Power is defined as being the maximum power which a generating set is capable of delivering while supplying a variable or continuous electrical load and during unlimited run hours. Depending on the sites to supply and the availability of reliable utility, the generating set manufacturer is responsible to define what power level he is able to supply to fulfil that requirement including hardware or software or maintenance plan adaptation

### Block loading capacity explained!

Block loading means that the engine runs normally when setting up the generator, but experiences a sudden load increase that goes beyond the planned requirements. A large block load reduces engine speed, generator frequency and voltage drop, and discharging the motor shortens recovery time. DIP is crucial and excess due to heavy block load can shut down the engine and cause the generator voltage to collapse.

In the case of block loading, an external electrical load is applied to the generator, which attempts to meet the increased electricity demand by extracting more mechanical energy from the motor and converting it into electrical energy. When a larger load is added to the set generators, the engine speed slows down or decreases, bringing it back to a stable state.

The load response is defined and tested in ISO 8528-12 for diesel generators, where the maximum load is applied at a speed drop of more than 10%. These standards allow organizations to define their own systems and procedures but it is hard to argue with the concept that a product has a load capacity on the nameplate that indicates a power factor of 0.8%, even if it has not been tested with the nameplate rating.



#### **Sterling Generators Pvt Ltd**

Formerly known as Sterling and Wilson Pvt Ltd (Shapoorji Pallonji Company)

Head Office: 10<sup>th</sup> Floor, Universal Majistic Building, Chembur, Mumbai, Maharashtra, 400043, Email: dgmumbai@sterlingwilson.com
Factory: Survey no: 59, 343/1, Village Kala, Kherdi, Khanvel, Silvassa, UT of Dadra & Nagar Haveli, India
South Reg. Office: 6th Main, Chikka Adugodi New, Thavarekere Main Road, Bengaluru 560029. India Email: dgbangalore@sterlingwilson.com

Kerala Branch Office: No.25/243, Kudiyirikkal Building, Changampuzha Nagar P.O, Cochin, Kerala-682033, India Web: www.sterlinggenerators.com | Email: vinoy.av@sterlingwilson.com Mob: +91 8129533036 Ph: 0484 25760295 Toll Free: 1800 5723 383

## 

## Moteurs Baudouin – Global

Global Headquarters : Technoparc du Brégadan, CS 50001, 13711 Cassis, France Web: www.baudouin.com Factories : France, China, Russian

## Moteurs Baudouin – India

Survey No. 280,281 Village- Maan, Taluka- Mulshi, Hinjawadi Phase II, Pune, Maharashtra 411057, India www.baudouinindia.com