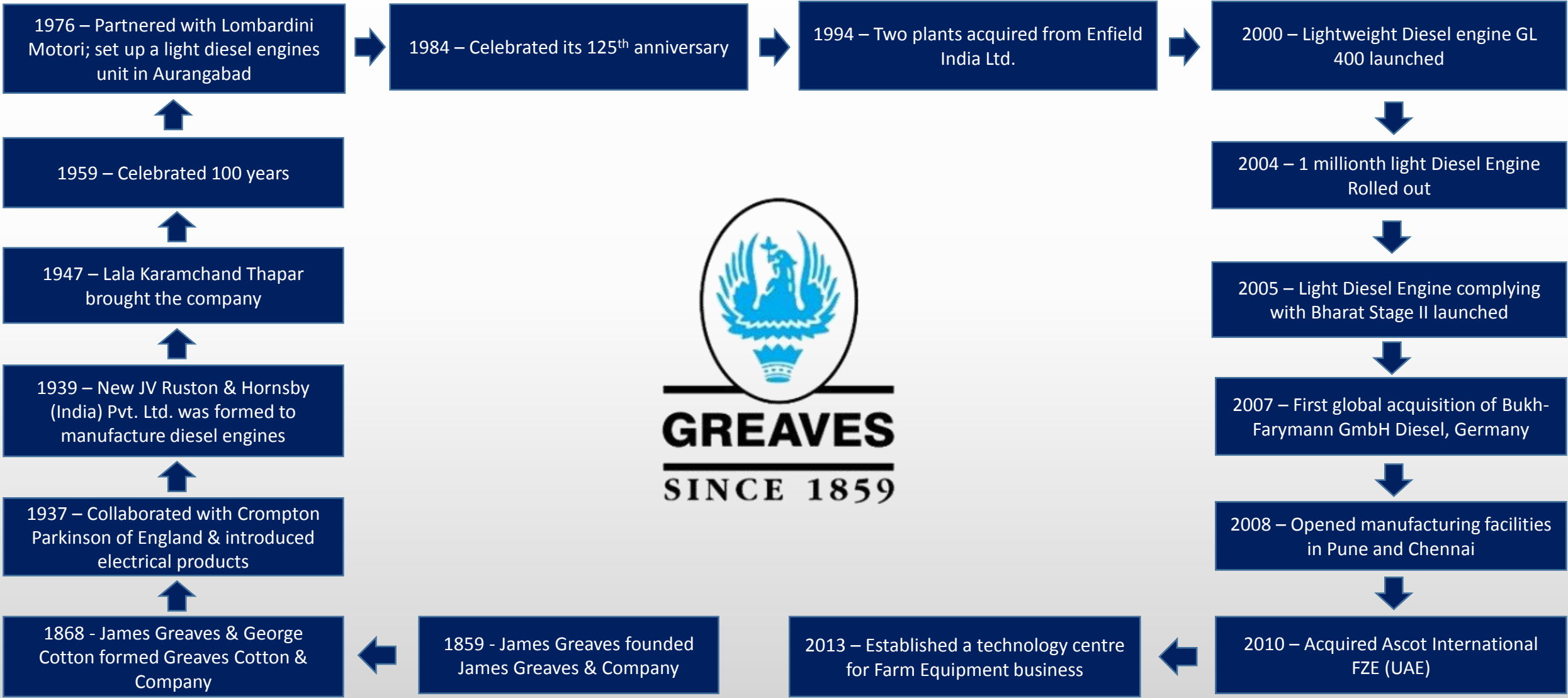


**GREAVES COTTON LIMITED**  
LEADERS IN ENGINES & INFRASTRUCTURE EQUIPMENT

# POWERING PROGRESS



# OUR HISTORY



# OUR VALUES



## Transparency

There are no hidden agendas and conditions in fine print when we deal with anybody – be it an employee, a customer, a partner / vendor / associate, a shareholder or any other stakeholder. Through our actions, policies and procedures we deliver what we promise and vice versa. We always comply with disclosure norms.



## Integrity

We always conduct business with a deep-rooted sense of fair play. We adhere to the highest ethical standards and comply with all statutory laws and regulations, in both letter and spirit.



## Responsibility

We have a finely developed sense of ownership of our own work and its consequences. We are emotionally and intellectually involved in translating organisational goals into reality.



## Passion for Excellence

We do not compromise. We never settle. Second best, for us, is simply not an option. With enormous energy, motivation and enthusiasm we strive to achieve best-in-class in all that we do. Across function. Across profile. Across the organisation.



## Respect

We celebrate our differences. We respect one another. We value the opinions of all those we interact with. We treat our ecosystem – both business as well as natural – with deference and humility.

# COMPANY SNAPSHOT



- Leader in manufacturing and marketing of Diesel / Petrol Engines, Gensets, Pump-sets & Construction Equipment
- 7 state-of-the-art manufacturing facilities across India
- Manufacturing over 400,000 engines annually
- Turnover of more than USD 265 Million
- World class R&D setup with over 200 skilled professionals
- Extensive pan-India network of over 1200 sales & service centres
- Global footprint with local presence in South-East Asia and the Middle-East

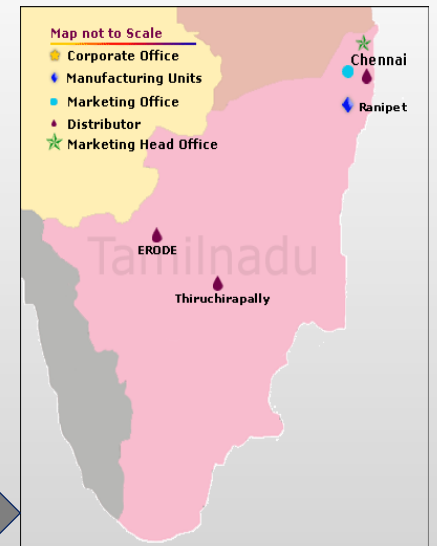
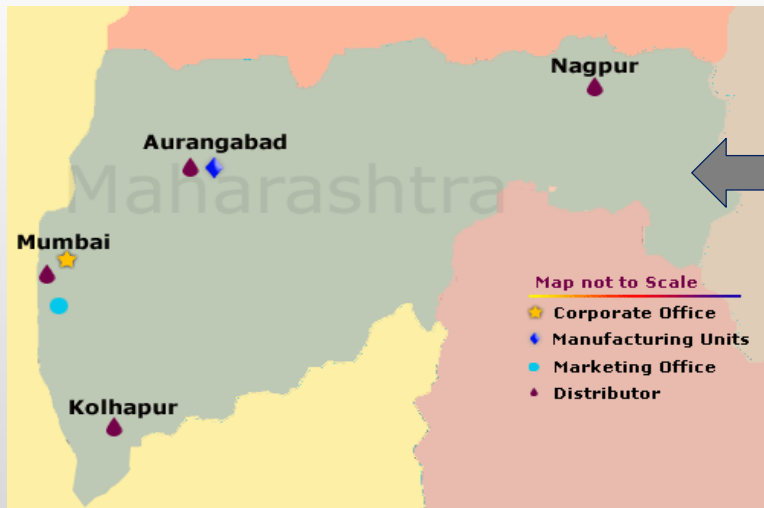


**GREAVES**  
SINCE 1859

# NATION-WIDE PRESENCE

2500+  
DEALERS  
150+  
EXCLUSIVE  
DISRIBUTORS NATION-  
WIDE

LEADING  
EXPORTER  
TO BANGLADESH, NEPAL  
AND SRI LANKAN  
MARKETS





**GREAVES**  
SINCE 1859

# OUR BUSINESSES



Engines Business



Auxiliary Power Business



Farm Equipment Business



Aftermarket Business

International Business



# ENGINES BUSINESS



**400,000+**  
LIGHT DIESEL ENGINES  
PRODUCED ANNUALLY

**81% Market  
Share**  
ACROSS 3-WHEELER  
DIESEL MARKET

**5 Million +**  
LIGHT DIESEL ENGINES  
SOLD TO VARIOUS  
CLIENTS

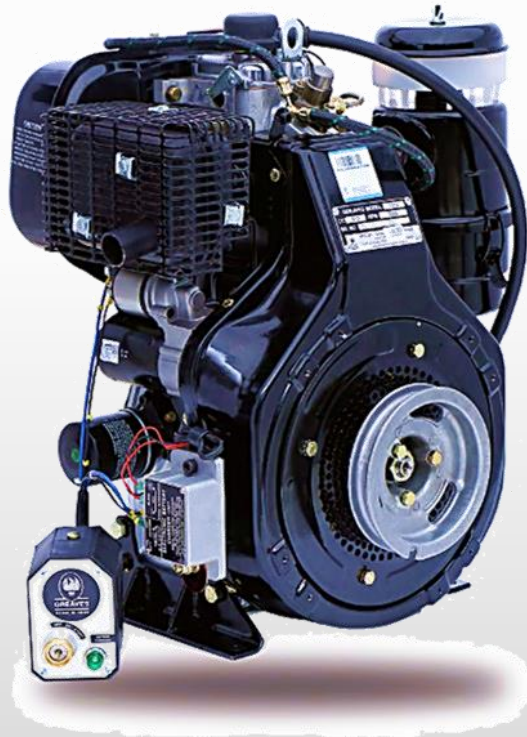
**15+ Engine**  
VARIANTS FROM 4HP  
TO 700HP RANGE



**GREAVES**  
SINCE 1859

# AUTOMOTIVE ENGINE

## Engine Model G 1510



Air Cooled Diesel Engine

“Vertical, Single Cylinder, Air-Cooled, Cold Starting, Compression Ignition, 4 stroke, High Speed Diesel Engines”

Model		1451	1510
Bore	mm	85	85
Stroke	mm	80	90
Displacement	cm <sup>3</sup>	454	510
Compression ratio		17.5:1	17.5:1
Fuel tank capacity	litres	5.5	5.5
Oil Sump capacity	litres	1.75	1.75
Lub. Oil Consumption	kg/hr	0.020	0.022
Dry Weight	kg	62	64
Maximum torque	kgm	2.85	3.00
<b>RPM</b>		<b>3000</b>	<b>3000</b>
Standard rotation of engine	Looking towards PTO	Clockwise	Anti clockwise
N DIN 70020		10	11
HP NB DIN 6270		9	10
NA DIN 6270		8	9
BS 5514:1987		8	9
IS 10001:1981		7.4	8.3
SFC gm/bhp/hr		200	205



# AUTOMOTIVE ENGINE

## Engine Model G 1520/1530



Air Cooled Diesel Engine

“Vertical, Single Cylinder, Air-Cooled, Cold Starting, Compression Ignition, 4 stroke, High Speed Diesel Engines”

Model		1520	1530	1523	1533
Bore	mm	78	82	78	82
Stroke	mm	68	68	68	68
Displacement	cm <sup>3</sup>	325	359	325	359
Compression ratio	--	18:1	18:1	18:1	18:1
Fuel tank capacity	litres	4.5	4.5	4.5	4.5
Oil Sump capacity	litres	1.0	1.0	1.0	1.0
Lub. Oil Consumption	kg/hr	0.013	0.015	0.013	0.015
Dry Weight	kg	43	46	43	46
RPM		3600	3600	1800	1800
	NB DIN 6270	6.0	7.0	6.0	7.0
HP	NA DIN 6270	5.4	6.4	5.4	6.4
	BS5514:1987	5.4	6.4	5.4	6.4
	IS 10001:1981	5.0	6.0	5.0	6.0
SFC	gm/bhp/hr	220	220	220	220



**GREAVES**  
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# AUTOMOTIVE ENGINE

## Engine Model G 600 WII



Air Cooled Diesel Engine

“Lightweight, Compact, Powerful Engines For Various Applications.”

TYPE OF ENGINE	Single cylinder, four stroke, direct
Bore – mm	92
Stroke – mm	92
Displacement – cm <sup>3</sup>	611
Compression ratio	18:01
RATED RPM	3000
H.P. (CMVR)	11
Max. Torque – Nm	31 @ 1600 – 1800 RPM
Lub oil consumption – gm/hr	7 max .( 340 ml / 1000 km )
Capacity of lub.oil sump – Liter	1.9
Dry weight – kg	65 Kg
Fuel Injection Pump	PF type
Governor	Centrifugal governor-mechanical



**GREAVES**  
SINCE 1859

# AUTOMOTIVE ENGINE

## Engine Model GL 400



Air Cooled Diesel Engine

“Vertical, Single Cylinder, Air-Cooled, Cold Starting Compression Ignition, 4 Stroke, High Speed Diesel Engine.”

MODEL		GL - 400
Bore	mm	86
Stroke	mm	68
Displacement	cm <sup>3</sup>	395
Compression Ratio	-	18:1
Oil Sump Capacity	litres	1.2
Lub Oil consumption	kg/hr	0.010
Dry weight	Kg	54
Maximum torque	kgm	1.7 @ 2200 RPM
RPM	-	3600
HP	NB	8.0
	CMVR*	7.5
SFC	gms/bhp/hr	220

\*HPs indicate are valid for fully run in engines fitted with standard air cleaner & standard exhaust silencer. The maximum HP is guaranteed with a tolerance of 5%. The HP must be derated for ambient conditions as per the relevant standard.

\*CMVR is Central Motor Vehicles Rule.



# AUTOMOTIVE ENGINE

## Engine Model 2G 870W



Air Cooled Diesel Engine

“Engines Are Designed To Meet Critical Performance Requirement Like Direct Injection, High Power & Weight Ratio, Low Maintenance, Environment Friendliness”

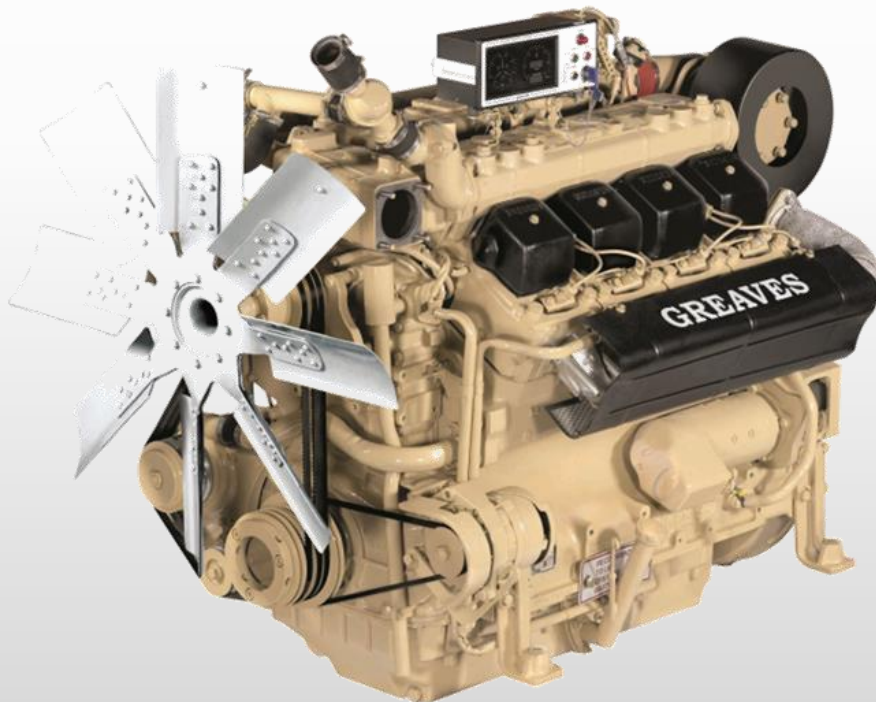
Model		2G 870WIII
Number of cylinders	mm	2
Type of cooling		Water
Bore/Stroke	mm	86/75
Displacement	cc	871
Compression ratio	---	18:1
Rated speed	rpm	3000
Mean piston speed	m/s	9
Power rating at rated speed for automotive engine	hp	17
Mean effective pressure	bar	4.94
Max. Torque at speed	Nm rpm	43 2400-2600
Minimum idle speed	rpm	1150-1250
Specific fuel consumption at rated speed	g/hphr	190-196
Weight dry	kg	115



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# NON-AUTOMOTIVE ENGINE

## 12 Cylinder Engine



No. of Cylinders	12
Cylinder arrangements	V60
Cycle	4 stroke, compression ignition
Induction system	Turbocharged aftercooled
Cubic Capacity	16.8 Ltrs
Net engine power (kWm)	279.6 - 422



**GREAVES**  
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# NON-AUTOMOTIVE ENGINE

## 3 Cylinder Engine



No. of Cylinders	3
Cylinder arrangements	Inline
Cycle	4 stroke, compression ignition
Induction system	Turbocharged aftercooled
Cubic Capacity	3.375 Ltrs
Net engine power (kWm)	31.77- 40.6

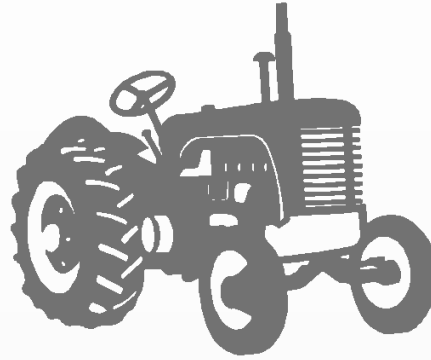


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# PRODUCT APPLICATIONS



3W Passenger Vehicle



Mini Tractor



4W Light Commercial Vehicle



Marine Applications



Genset Applications



Fire fighting Equipment

# PRESTIGIOUS OEM CLIENTS



**GREAVES**  
SINCE 1859



**PIAGGIO**®



**TATA MOTORS**



**ATUL**



**Mahindra**



**TVS**





# AUXILIARY POWER BUSINESS



**50+ YEARS**  
OF EXPERTISE IN  
MANUFACTURING  
DIESEL GENSETS

**2.5 kVA**  
– **500 kVa**  
WIDEST RANGE OF  
GENSET OFFERING

**CPCB II**  
COMPLIANT  
ENVIRONMENT  
FRIENDLY STATE-OF-  
THE-ART GENSETS

**COMPACT**  
ON-SITE FOOTPRINT  
WITH  
**LOWEST**  
NOISE LEVELS

# GENSET FEATURES & BENEFITS



- CPCBII compliant environment friendly Gensets with lowest exhaust emissions
- Very low engine noise level of 75 dB (A) @ 1 meter range
- Next-gen design offers ease of maintenance
- Integrated DG Set Controller for ease of access

# AUXILIARY POWER PRODUCT OFFERINGS



PORTABLE GENSETS



STATIONARY GENSETS

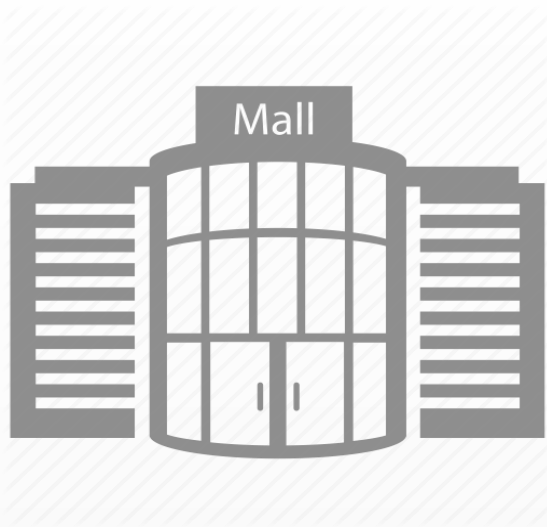


LIGHT TOWERS



**GREAVES**  
SINCE 1859

# PRODUCT APPLICATIONS



Malls



Factories



Residential Complex



Railways



Airports



Infrastructure Projects

# GENSET PRODUCT FAMILY



Model	LDA 510 1B1(1510)*	G-15-II	G-30-II	4G11TAG22	4G11TAG24	6G11TAG24	12V14TAG23	12V14TAG23	12V14TAG23
Power Rating kVA/kW	2.5/2	10/08	25/20	75/60	125/100	200/160	320/256	400/320	500/400
No. of Phases	1/3	1/3	1/3	3	3	3	3	3	3
BHP	8.3	21.6	42	101.3	155	243.1	604	604	604
Fuel Capacity	15	100	100	150	250	360	990	990	990
Voltage	415	415	415	415	415	415	415	415	415



# FARM EQUIPMENT BUSINESS



**1-4 HP**

WIDEST LIGHTWEIGHT  
PETROL / DIESEL /  
KEROSENE ENGINE  
RANGE

**MOST  
TRUSTED  
BRAND**

ACROSS RURAL INDIA

**ISO 9001**

CERTIFIED STATE-OF-  
THE-ART FACILITY TO  
MANUFACTURE FARM  
EQUIPMENT

**LEADING  
EXPORTER**  
TO BANGLADESH,  
NEPAL AND SRI  
LANKAN MARKETS

# PRODUCTS FOR EVERY CROP CYCLE



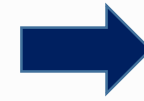
**GREAVES**  
SINCE 1859



Portable Pumpset



Power Tiller



Inter Cultivator



Brush Cutter



Reaper



Mini Combine Harvester

# FARM EQUIPMENT PRODUCTS

## MK10 - Portable Pumpset



## MK10 HSP

Continuous HP	2@3600 rpm
Max Torque (Nm)	4.6@2000 rpm
Fuel (Starting Fuel)	Kerosene (Petrol)
Dry Weight in Kg	14

## MK10 HSP

Continuous HP	2@3600 rpm
Max Torque (Nm)	4.6@2000 rpm
Fuel (Starting Fuel)	Petrol (Petrol)
Dry Weight in Kg	14



# FARM EQUIPMENT PRODUCTS

**MK20 - Portable Pumpset**



**MK12 HSPP/H SMP**

Continuous HP	1.5@3000 rpm
Max Torque (Nm)	5.8@2800 rpm
Fuel (Starting Fuel)	Kerosene/Diesel (Petrol)
Dry Weight in Kg	17

**MK12 HSP**

Continuous HP	2@3400 rpm
Max Torque (Nm)	5.8@2800 rpm
Fuel (Starting Fuel)	Petrol (Petrol)
Dry Weight in Kg	17

# FARM EQUIPMENT PRODUCTS

MK20 - Mounted



## MK20 HSP

Continuous HP	3.1@3600 rpm
Max Torque (Nm)	9.0@3200 rpm
Fuel (Starting Fuel)	Kerosene (Petrol)
Dry Weight in Kg	18

## MK20 HSP

Continuous HP	3.8@3600 rpm
Max Torque (Nm)	10.1@3200 rpm
Fuel (Starting Fuel)	Petrol (Petrol)
Dry Weight in Kg	18

# FARM EQUIPMENT PRODUCTS

## Power Tiller Powered by 14.6 HP Engine



### ENGINE SPECIFICATIONS

Bore X Stroke	100 x 115 mm
Displacement	903 cc
Dry Weight	160 kgs
Fuel Tank Capacity	16 litres
Oil Capacity	3.6 litres

### TILLER SPECIFICATIONS

L x W x H	2990 x 980 x 1270
Gross Weight	515 kgs
Rotovator	Provided
No. of Tynes	20
Speed (km/hr)	6 forward / 2 Reverse

# FARM EQUIPMENT PRODUCTS

## Inter Cultivator Powered by 4 HP Engine



### SPECIFICATIONS

Engine Power	4.0 HP Diesel Engine
Type	Horizontal, 4-stroke 170F Model
Displacement	289 cc
Rated Speed r/min	2600
Cooling Method	Air-Cooled
Speed (km/hr)	Forward 1.20, 4.69, 9.56 Backward 0.60, 2.50, 5.10
Maximum Cultivator Diameter	340 mm
Gear Location	Forward 3 Backward 3
Maximum Cultivating Amplitude	Rear Distance 500mm Front Distance 900mm
Crop	Paddy / Wheat / Ragi /Soya/ Jowar/Barley/Grass
Size (m) (L x W x H)	2.00 x 1.10 (1.30) x 1.00

# FARM EQUIPMENT PRODUCTS

## Mini Combine Harvester



### SPECIFICATIONS

Engine Power	7.0 – 7.35
Size (mm) (L x W x H)	3400 x 1400 x 1300
Feeding Rate (kg/s)	0.5
Effective Cutting Width (mm)	1100
The Rate of Loss (%)	≤ 3
The Rate of Broken (%)	< 1.0
The Rate of Mingle (%)	< 7
Fuel Consumption (ltr/Acre)	1.2
Deep of Clay (mm)	< 250
Reliability (%)	95
Structural Weight (kgs)	500

# FARM EQUIPMENT PRODUCTS

Reaper Powered by 4 HP Engine



## SPECIFICATIONS

Engine Power	4.0 HP Diesel Engine
Type	Horizontal, 4-stroke 170F Model
Displacement	289 cc
Rated Speed r/min	2600
Cooling Method	Air-Cooled
Productivity Per Hour	1.20 – 1.50 acres per hour
Total Crop Loss Rate %	Wheat < 0.5      Rice <1.0
Minimum Cutting Height	<50 mm
Total Weight	168 kgs
Crop	Paddy / Wheat / Ragi /Soya/ Jowar/Barley/Grass
Size (m) (L x W x H)	2.00 x 1.10 (1.30) x 1.00

# FARM EQUIPMENT PRODUCTS

## Brush Cutter



## SPECIFICATIONS

Engine Power	2.10 HP @ 8000 RPM
Type	Air Cooled: 2 Stroke: Vertical piston Value: Petrol Engine
Displacement	42.7cc
Maximum Speed of Gear Shaft	7000/9000
Cooling Method	Air-Cooled
Fuel Tank Capacity (L)	1.1
Dry Weight	4.2 kg
Crop	Paddy / Wheat / Maize/Mulberry/ Sunflower/Sugarcane/Grass



# AFTERMARKET PRODUCTS



**4 MILLION**  
CUSTOMERS REACHED  
WORLD-WIDE

**2500+**  
DEALERS  
**150+**  
EXCLUSIVE  
DISRIBUTORS NATION-  
WIDE

**5000+**  
MECHANICS TRAINED  
ANNUALY BY GREAVES

**MORE THAN**  
**90%**  
RATING ON CUSTOMER  
SATISFACTION INDEX,  
BEST IN THE INDUSTRY





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# AFTERMARKET PRODUCTS



Engine Oil



Engine Lubrication



Engine Spares

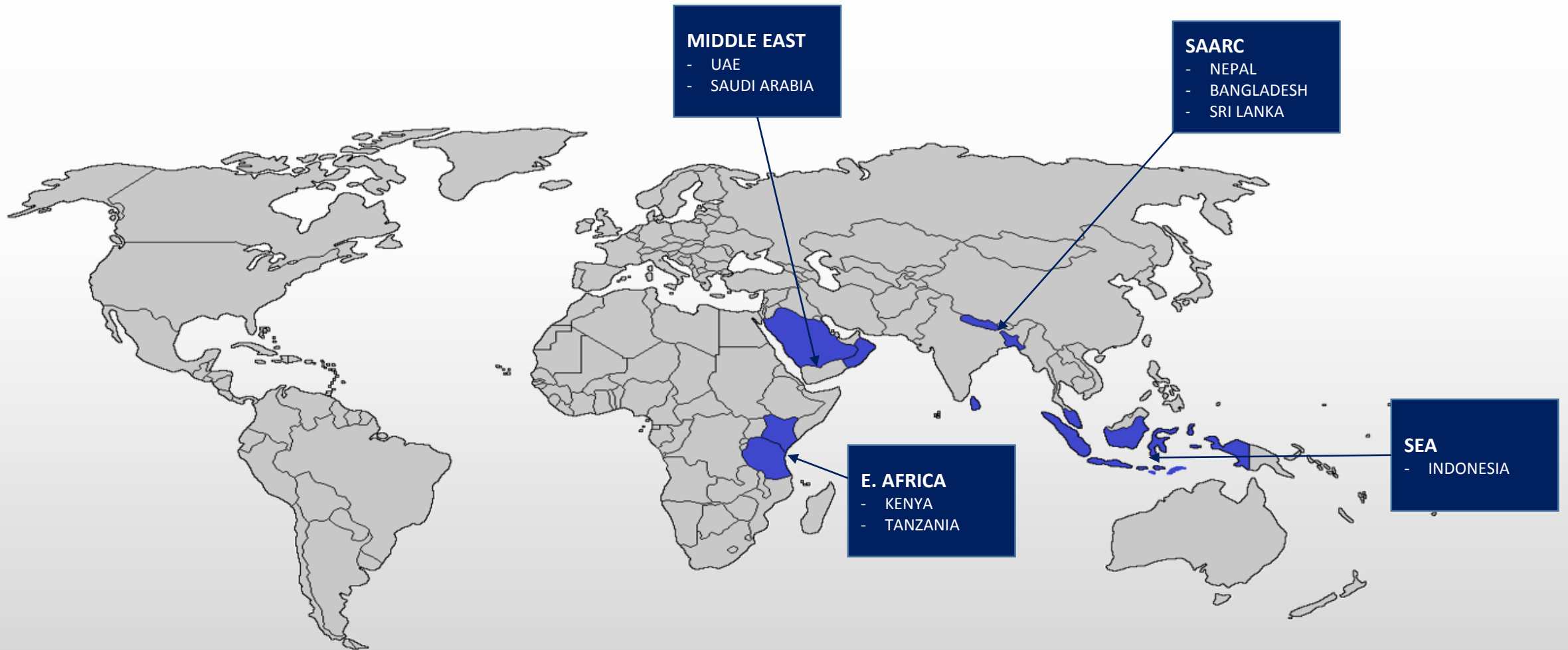
# INTERNATIONAL BUSINESS

- Greaves exports to more than 8 countries and has aggressive plans to expand to more territories
- Greaves has a wide presence in strategic markets of Middle East, Africa, South and South East Asia, with Middle East and East Africa accounting for over 60% of its export revenue
- The International Business manages marketing and after sales support activities for KYB-CONMAT made construction equipment
- A similar overseas marketing and after sales support alliance is in place with ESCORTS for their Construction equipment product range

# GREAVES INTERNATIONAL PRESENCE



**GREAVES**  
SINCE 1859



# GREAVES-THE WAY AHEAD



**GREAVES**  
SINCE 1859

## Greaves Cotton to expand product range

Special Correspondent

**CHENNAI:** Keen on expanding the product range of its construction equipment division, Greaves Cotton has forged a technology agreement with Samil Korea Co Ltd.

Using the technology provided by the Korean firm, the division will manufacture S-Valve concrete pump and boom pump at its facility in Gummidipoondi, near Chennai. Announcing this, Sunil Pahilajani, Managing Director and CEO, Greaves Cotton, said: "In two or three quarters, we will start production of the two products."

"It is a very good agreement and purely for technology participation. These are products that we do not have today. We already have the

plant capacity [in Gummidipoondi], which was not being utilised," he told *The Hindu* in an interview here recently.

The agreement, Mr. Pahilajani added, was part of the strategy of Greaves Cotton to reinvent and strengthen its construction equipment division, which is one of its five divisions. Though the company was a pioneer in manufacturing construction equipment, it was overtaken by competitors, particularly those with foreign collaborations. Hence, the emphasis was on finding technology suppliers.

### To tap export market

Apart from catering to the huge demand for the two products in the country, the company intends to tap the

export market. Samil has also agreed to source the products manufactured in Gummidipoondi for its customers in other countries. In terms of export markets, the Middle

East construction area... it is a very large space," Mr. Pahilajani said, adding that the construction division had a technical collaboration with Bomag GmbH to manufac-

## Greaves Cotton Eyes Bigger Play in Diesel Engine Space

Co in talks with car makers, truck makers for engine supply

**KETAN THAKKAR**  
MUMBAI

Greaves Cotton, the country's largest small engine supplier to the three-wheeler space, is proposing to diversify into making small diesel engines for the fast growing passenger car space and bigger engines for light, medium and heavy duty trucks in the country.

The company had recently conducted a feasibility study to make an entry into passenger vehicle space (cars, utility vehicles and vans) and



it has already started talking to some of the big players in the market.

Confirming this, Sunil Pahilajani, MD & CEO, Greaves Cotton told ET, "We have approached passenger car makers, it may not be appropriate to name anyone, but these are all the names you know. We hope to power the passenger vehicles in three to four years time."

The plan to enter the passenger car

**COS LOOK TO CASH IN ON THE DEMAND FOR DIESEL VEHICLES AS PETROL PRICES SHOOT UP**

## Greaves Cotton Keen to Supply Engines to Car, Utility Vehicle Cos

Company is already in talks with some of the

their own compact diesel engines. In a market which grew just 4-5% in 2011-12, the diesel-powered passenger vehicle space grew by a whopping 30-40%. But it's not passenger vehicles alone.

The company has entered into a contract with Tata Motors to supply engines for the next 10 years.

The company has also got into a contract with Piaggio to supply engine for the next eight years.

The new engine unit set up at a capex of ₹50 crore in Aurangabad will take the company's total automotive engine manufacturing capacity to 4 lakh units per annum. The automotive engine business constitutes approximately 60% of the ₹1,800-crore Greaves Cotton Group's turnover.

Apart from automotive engines, Greaves Cotton has a diversified business with presence in construction equipment, agri equipment, genset power solutions and industrial engine business which makes up for the balance 40% of the business.

The automotive business has been growing at a rate of 15-20% over the last few years and, with the plans to diversify into new segments, the company sees the revenues of the automotive engine business doubling in the next three to four years to almost \$500 million or ₹2,500 crore.

Today Greaves Cotton has over 6,000 touch points across the country which is more than what the likes of Maruti Suzuki or Tata Motors have.

### Shifting Gears

In talks with car makers to supply diesel engines, may power a passenger car in the next three to four years

Conducted a feasibility study to develop engines for small cars and trucks

Greaves Cotton is the largest supplier of small diesel engines in the three wheeler space

Expanding its portfolio, the co has developed a 900cc twin-cylinder diesel engine & 265cc water-cooled petrol engine for small trucks and 3 wheelers

Greaves Cotton rolled out its 3 millionth small engine in the first quarter of 2012



Sales of diesel powered cars zoomed 30-40% in 2011-12

SANDEEP

**Thank You!**