



# India's first Smart Genset series with free 5 years warranty\* 10 kVA to 500 kVA





Access Via









# **Smart Power Solution for the Genius Generation**

Greaves Power presents the Smart Series Gensets with futuristic features like a Remote Monitoring System (RMS) with exhaustive usage data logging through rapid data transmission for monitoring various parameters such as - power generated, battery voltage, run hours, fuel level and more. Now you can prevent data loss, get accurate failure analytics, increased Genset life with predictive maintenance, and increased Genset uptime. Simply log on to Greaves1 app or web application and view generator parameters, create reports - anywhere - and anytime.



No. No. Connect metrol. 13/A	140	45	00	l os	Loo	140	45	150	Loo 5	75	l 00 5	100	105	100	100	000	050	000	400	500
Gr. No.   Genset rated - kVA →  Genset specification ↓	10	15	20	25	30	40	45	50	62.5	75	82.5	100	125	160	180	200	250	320	400	500
1 Genset rating	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime
2 Genset output (kVA/kWe)	10 / 8*	15 / 12	20 / 16	25 / 20	30 / 24	40 / 32	45 / 36	50 / 40	62.5 / 50	75 / 60	82.5 / 66	100 / 80	125 / 100	160 / 128	180 / 144	200 / 160	250 / 200	320 / 256	400 / 320	500 / 400
3 Genset model	GPWII - PII - 10S	GPWII - PII - 15F	GPWII - PII - 20F	GPWII - PII - 25F	GPWII - PII - 30F	GPWII - PII - 40V-I	GPWII - PII - 45V-I	GPWII - PII - 50V	GPWII - PII - 62.5S	GPWII -PII - 75S	GPWII -PII - 82.5S	GPWII -PII - 100	GPWII - PII - 125S	GPWII - PII - 160F	GPWII - PII - 180S	GPWII - PII - 200S	GPWII - 250S	GPWII - 320E	GPWII - PII - 400	GPWII - PII - 500
4 Gross engine power (kWm)	13.2	15.9	18.5	31.2	31.2	59	59	59	59	74.5	74.5	93	114	144.5	178.8	178.8	227	284	444	444
5 Engine model	G12 - II	G15 - II	G20 - II	G30 - II	G30 - II	3G11TAG25	3G11TAG25	3G11TAG25	3G11TAG25	3G11TAG26	3G11TAG26	4G11TAG25	4G11TAG26	6G11TAG26	6G11TAG29	6G11TAG29	D3V6TAG21	D3V8TAG21	12V14TAG23	12V14TAG23
6 Aspiration / Cooling	NA** / Water cooled	NA** / Water cooled	NA** / Water cooled	TCAC	TCAC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC	TCIC
7 No. of cylinders / arrangement	2 / inline		3 / inline	3 / inline	3 / inline	3 / inline	3 / inline	3 / inline	3 / inline	3 / inline	3 / inline	4 / inline	4 / inline	6 / inline	6 / inline	6 / inline	6 / Vee	8 / Vee	12 / Vee	12 / Vee
8 Displacement (L)	1.43		2.14	2.14	2.14	3.66	3.66	3.66	3.66	3.66	3.66	4.87	4.87	7.31	7.31	7.31	10.04	13.38	16.83	16.83
9 Bore X Stroke (mm)	91 X 110		91 X 110	91 X 110	91 X 110	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	108 X 133	128 X 130	128 X 130	115 X 135	115 X 135
10 Compression ratio	17.5	17.5	17.5	17.5	17.5	16.8	16.8	16.8	17.2	17.2	17.2	17.2	17.2	16.8	17.2	17.2	16.8	16.8	17	17
11 Rated RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
12 Overspeed trip (RPM)	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
13 Governor type / DG performance clas		Mech / G2	Mech / G2	Mech / G2	Mech / G2	Mech / G2	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Mech / G2***	Elec / G3	Elec / G3	Elec / G3	Elec / G3
14 Air cleaner type / Qty	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 01	Dry / 02	Dry / 02
B Exhaust system								,		,										
Max allowable backpressure (kPa)	4	4	4	5.5	5.5	5	5	5	5	4.5	5	5.5	5.5	6	6	6	5.5	5.5	7	7.5
2 Exhaust temperature (Deg C)	550	550	550	550	550	550	550	550	500	525	525	500	525	550	550	550	550	550	550	550
3 Silencer type	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
C Engine electrical system																				
1 Charging alternator VDC / Amps	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	12 V / 35 A	24 V / 30 A	24 V / 30 A	24 V / 44 A	24 V / 44 A
2 Starter motor rated voltage (DC)	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	24	24	24	24
3 Battery voltage (DC) / Capacity (AH)	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 88 AH	12V / 130 AH	12V / 130 AH	12V / 130 AH	24 V / 180 AH X 2			
D Fuel System																				
1 Recommended fuel	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD	IS 1460, HSD
2 Fuel tank capacity (L)	30	30	60	60	60	85	85	105	105	130	130	200	200	260	320	320	385	520	740	740
E Fuel consumption @ % load (LPH)(Ind	cluding radiator fan + ot	her accessories)																		
1 LPH @ 100%	3	4.05	5	6.3	7.4	9	11	12	14.9	17.5	19.1	23.6	28.6	36.5	44.8	44.8	58.2	76.5	89.7	107.9
2 LPH @ 75%	2.3	3.06	3.8	5	5.9	7	8.5	9.2	11	12.6	14	17.4	20.8	27.2	33	33	42.3	57.7	68.6	82.5
F Lubricating Oil System																				
1 Lube oil sump capacity (L)	5.5	5.5	6.5	6.5	6.5	7	7	7	7.6	7.6	7.6	10	10	17.5	17.5	17.5	27.5	40	40	50
2 Lube oil change period (Hrs)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
3 Lube oil consumption (% of SFC)	≤0.1%	≤0.1%	≤0.1%	≤0.1%	≤0.1%	≤0.15%	≤0.15%	≤0.15%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%
4 Lube oil filter type / Qty	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 01	Spin on / 02			
5 Recommended lube oil grade	15W40, API CI4	15W40, API CI4	15W40, API CI4	15W40, API CI4	15W40, API CI4	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+	15W40, API CI4+
6 Recommended lube oil	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm	Greaves Maxtherm
G Alternator Specification																				
1 Alternator Make	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	LS / MECCALTE	MECCALTE	MECCALTE	MECCALTE	MECCALTE	LS / MECCALTE	LS / MECCALTE
2 Voltage (1P / 3P)	230 / 415	230 / 415	230 / 415	230 / 415	230 / 415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415
3 Frequency (Hz)	50	50	50	50	50	55.6	50	50	50	50	50	50	50	50	50	50	50	50	50	50
4 Current (1P / 3P) (Amps)	43.47/13.91	65.21/20.86	86.95/27.82	108.69/34.78	130.43/41.73	55.6	62.6	69.56	86.95	104.34	114.77	139.12	173.9	222.4	250	278.24	347.8	445.18	556.48	695.6
5 Type	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field	4P, rotating field
6 Voltage regulator	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
7 Voltage regulation - %	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
8 Insulation class	H		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
9 Temperature rise (Deg C)	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
10 Bearing (Qty / type)	1, sealed	-	1, sealed	1, sealed	1, sealed Flex disc	1, sealed	-	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed	1, sealed
11 Coupling 12 Unbalanced lead canability	Flex disc	Flex disc	Flex disc	Flex disc		Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc	Flex disc
12 Unbalanced load capability H Cooling System	25% of rated amps	20% of rated amps	20% of rated amps	20% OF TAILED AMPS	20% of rated amps	20% of rated amps	20% of rated amps	20% of rated amps	20% of rated amps	25% of rated amps	20% of rated amps	20% of rated amps	25% of rated amps	25% of rated amps	20% of rated amps	20% OF TAILED AMPS	20% of rated amps	20% of rated amps	20% of rated amps	20% of rated amps
1 Max ambient capability (Deg C)	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
2 Coolant capacity (Eng. + Rad.) (L)			11.5	12.5	12.5	14		14	20	20	20	25	40	40	40	40	45	110	120	120
Controller	7.0	7.5	11.0	12.0	12.0	14	10	14	20	20	20	20	70	- U	- TO	70	7-0	110	120	120
1 Controller Model	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE 4522	DSE4522	DSE4522	DSE 4522				
J Genset Outer Dimensions	DOL 7022	DOL 7022	DOL 7022	DUL 7022	DUL 7022	DUL 1022	DUL 1022	DOL 7022	DOL TOLL	JUL 7022	JUL 7022	DUL TULL	DUL 7322	DOLTGEE	DULTULL	DUL 7022	DUL 7022	DOL 4022	DOL 7022	JUL 7022
1 Length(L) X Width(W) X	1420X930X1242	1420X930X1242	1650X930X1243	1650X930X1242	1650X930X1242	1887X1080X1322	1887X1086X1335	1887X1086X1335	2500X1150X1555	2500X1150X1555	2500X1150X1555	3000X1350X1885	3000X1350X1875	3800X1350X1900	4000X1600X1840	4000X1600X1840	4505X1800X2087	5000X2000X2165	5600X2000X2300	5600X2000X2300
Height(H) (mm)	L=1912 incl ducts		L=1970 incl ducts			L=2425 incl ducts		L=2425 incl ducts	2300/1130/1303	2000/11/00/1000	2000/1100/1000	2000/1000/1000	2000/1000/10/0	2000/1000/1000			.000/1000/2007	H=3096	H=3096	5000/12000/12000
noight(i) (iiiii)	2-1012 moi uuoto	2-1012 1101 0000	2-1070 1101 00013	2-1002 11101 00013	2-1002 1101 0000	2-2-120 mol duoto	2-2-120 mior duoto	2-2-120 1/101 00013							1000 iiidi uudis	2-1000 11101 00013		incl of silencer	incl of silencer	
					945	1170	1170	1170	1230	1260	1270	1600	1800	2150	2300	2300	4050	4300	5490	5610
2 Dry Weight (Approx.) - (kg)	595	660	810	860																

- 1. Ref : \*Genset can also be used for PF = 1.
- 2. Ref: \*\*Natural aspirated.
- 3. Ref: \*\*\*G3 Class for DG Performance is available on request.
- 4. PRIME POWER RATING as per ISO 8528.
- Specific fuel consumption depends on fuel density, load available on DG set & power factor. Tolerances for SFC will be as per ISO 3046 & ISO 8528.
- Conformance standards: Engine BS 5514, ISO 3046, Alternator IS 13364 (I & II), Genset - ISO 8528 and Tolerances as applicable. Please refer our GA drawing for overall dimension with add on components like silencer, ducts etc.
- Product specifications are subject to change without prior notice due to the policy of continuous improvement.

### **Greaves Factory Built DG Sets**

- Compact footprint
- Low noise level
- Economical operation
- Environment friendly
- Extensive services & parts network
- DG set parameters at fingertips



#### **Engine**

- 10 kVA to 30 kVA Escort Engine
   40 and above Greaves Engine make
- Rated speed is 1500 RPM
- A2 and better engine governing class with Mechanical / Electronic governor
- G2 and better DG performance class
- Fuel and lube oil filters
- Dry type air cleaner with vacuum indicator
- Suitable electric starting system

#### Recommended Oil & Fuel

- Recommended HSD quality as per latest norms of IS 1460
- · Recommended Greaves make lube oil

#### **Control Panel**

- Suitable circuit breaker
- Controller with multi-feature display
- Load ON and DG set running indication lamps
- Aluminium conductor cables between alternator and control panel
- Uninywin cables between alternator and switchgear
- In-built battery charger

#### **Alternator**

- · Offering advance technology for alternator
- Brushless type
- IP 23 protection with class 'H' insulation & temperature limited to class 'H'
- Permissible overload of 10% for one hour in hours of operation of alternator
- Automatic Voltage Regulator
- Digital Voltage Regulator optional (250 kVA & above)
- 25% unbalance load capability
- · Fixed disk closed coupling



#### **Digital DG Set Controller**

- AMF enabled controller
- Digital controller with soft buttons for operations
- Automatically transfers between mains (utility) and generator for convenience
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements
- Synchronising controller (optional)

# Features

- · Remote monitoring
- Remote start
- Compact and microprocessor based fully configurable control unit
- · Graphic display
- Unique integrated DG set controller
- Incorporates both engine and alternator parameters in a single console

# Features Displayed

- Engine oil pressure
- Coolant temperature
- Fuel level indicator (%)
- Engine RPM
- DG set running hours
- Battery voltage
- Voltage



- · Phase to neutral voltage
- · Phase to phase voltage
- · Current (amps)
- Power factor
- kWh
- kW

#### **Audio Visual Warning**

- · Low oil pressure
- High coolant temperature
- Low battery voltage
- · Low fuel level

#### **Mounting Arrangement**

- Engine and Alternator are mounted on rigid base frame. Also, AVM pads are placed between base frame and engine alternator assembly to restrict vibrations.
- Fuel tank is at base of canopy

#### Silencer

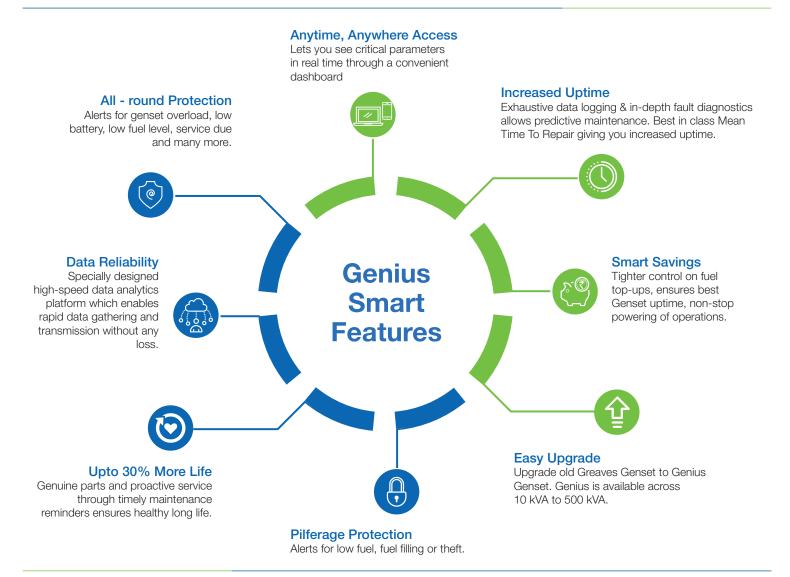
Residential type

#### Shutdown with Audio Visual Annunciation

- Low oil pressure
- High coolant temperature
- Engine overspeed
- Engine underspeed
- Low fuel level
- Overload
- Over voltage
- Under voltage

## **Acoustic Enclosure**

- Powder coated weather proof canopy. Engine and alternator mounted on AV mounts, with silencer and SS exhaust bellow optimised to meet stringent norms for sound and emission.
- Baserail with draw-out type fuel tank, drain plug, inlet and outlet connections, air vent, level gauge



#### Remote Monitoring System (RMS) Features

- Separate microcontroller
- Onboard memory with SD card
- Input and output for easy integration
- Battery backup
- RS 485 Port
- Dual SIM support
- Surge and reverse power protection
- Wall and DIN mounting
- 3 LED indicator for GPS, GSM and data capture
- Secure by design and predefined access control

- Temper proof design
- Dynamic data collection
- Multi-protocol and controller support
- Cross-platform compatibility
- Real-time clock
- External GSM and GPRS antenna support
- Rapid data gathering



# Greaves Cotton - A Legacy of Excellence

- India's leading diversified engineering company with over 162 years of legacy
- Core competencies: Generator Sets, Pump Sets, Diesel/Petrol Engines and Farm Equipments
- Manufacturing 5 lakh engines annually
- Strong team of more than 300 R&D professionals
- Significant strengths: Technology, Value, Reach
- Extensive marketing and service network: Over 1200 sales & service centres across India
- Global footprint with local presence in SAARC, Africa and Middle-East







**Driving Business** 



Enhancing Productivity



Engines of Growth

#### **Power Generation Business**

- Over 5 decades of experience in generator sets.
   1 Lakh+ Gensets population in operation.
- New Genset manufacturing facility at Pune with annual capacity of more than 7500 Gensets (5 kVA to 2500 kVA)
- Fuel-efficient, rugged and reliable
- Total solutions by single point of contact for engineering design, sales, service & spare parts
- ARAI approved testing facility equipped with sophisticated equipment is among the best in the industry and can test engines up to 2 MW
- State-of-the-art manufacturing facilities at Pune for multi-cylinder / higher HP engines and Gensets



Powering Missions



Supporting Large Infrastructure Projects



## **GREAVES COTTON LIMITED**

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