GREAVES SINCE 1859

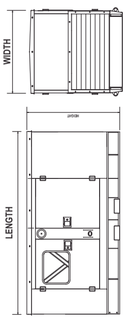
GREAVES POWER
NEW GENERATION POWER SOLUTIONS

GENSETS

TECHNICAL DATA

GENSET kVA	ENGINE MODEL	MAXIMUM L x W x H (MM)	DRY WEIGHT kg
10	GPW10	1775 x 950 x 1400	650
15	GPW15	2000 x 950 x 1400	790
20	GPW20	2000 x 950 x 1400	860
25/30	GPW25/30	2230 x 1280 x 1900	1180
40/45/50	GPW40/45/50	2330 x 1325 x 2100	1495
62.5/75	GPW62.5/75	2740 x 1320 x 2100	1670
82.5/100	GPW82.5/100	3040 x 1320 x 2100	1860
125	GPW125	3530 x 1580 x 2320	2300
160	GPW160	4500 x 1600 x 2000	3025
180	GPW180	4500 x 1600 x 2000	3400
250	GPW250	3850 x 1670 x 2050	4050
320	GPW320	5645 x 2200 x 2350	6250
380	GPW380	5645 x 2200 x 2350	6400
400	GPW400	5645 x 2200 x 2350	6400
500	GPW500	5645 x 2200 x 2350	6500
600	GPW600	5600 x 2300 x 2900	6600
750	GPW750	6900 x 2600 x 3750	7000
1010	GPW1010	8300 x 2600 x 3760	10500
1250	GPW1250	9100 x 3000 x 3300	13000
1500	GPW1500	9100 x 3000 x 3300	13300
1700	GPW1700	9100 x 3000 x 3300	13900
1850	GPW1850	9400 x 3300 x 3900	16800
2000	GPW2000	9400 x 3300 x 3900	16900
2250	GPW2250	9400 x 3300 x 3900	17300

(Due to continuous product improvements, specifications mentioned in this document are subject to change without prior notice)



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Greaves Power 50 Hz DG Set Technical Information

Genset

Model	GPW 600	GPW 750	GPW 1010	GPW 1250	GPW 1500	GPW 1700	GPW 1850	GPW 2000	GPW 2250
Power Rating kVA/Kw	600	750	1010	1250	1500	1700	1850	2000	2250
No. of Phases	3	3	3	3	3	3	3	3	3
Power Factor	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Max. load current @ 0.8 PF (Amps)	834	1042.5	1403.9	1737.5	2085	2363	2571.5	2780	3127.5
Battery Rating	2 Nos. 180 AH	2 Nos. 180 AH	2 Nos. 180 AH	4 Nos. 180 AH	4 Nos. 180 AH	4 Nos. 180 AH	4 Nos. 180 AH	4 Nos. 180 AH	4 Nos. 180 AH
Integral Fuel Tank Capacity (Ltrs)	916	990	990	990	990	990	990	990	990

Engine

Make	Volvo Penta	Perkins	Perkins	Perkins	Perkins	Perkins	Perkins	Perkins	Perkins
Model	TAD 1642 GE	4006 23 TAG 2A	4008 TAG 2A	4012 46 TAG 0A	4012 46 TAG 2A	4012 46 TAG 3A	4016 61 TRG 1	4016 61 TRG 2	4016 61 TRG 3
Cooling	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled	Radiator Cooled
Aspiration charged	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled	Turbo Charged After Cooled
No. of Cylinders	6 Inline	6 Inline	8 Inline	12 V	12 V	12 V	16 V	16 V	16 V
RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500
Compression Ratio	16.5:1	13.6 :1	13.6 :1	13.6 :1	13.6 :1	13.6 :1	13.6 :1	13.6 :1	13.6 :1
Bore x Stroke mm	144 X 165	160 X190	160 X190	160 X190	160 X190	160 X190	160 X190	160 X190	160 X190
Cubic Capacity (Ltrs)	16.12	22.921	30.581	45.842	45.842	45.842	61.123	61.123	61.123
Power (BHP)	699	882	1206	1497	1756	2006	2208	2377	2647
Power kW	514	658	899	1117	1309	1496	1648	1779	1975
Governing	Eletronic/EMS II	Eletronic	Eletronic	Eletronic	Eletronic	Eletronic	Eletronic	Eletronic	Eletronic
Starting System	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric	24 V DC Electric
Lube Oil Specification	SAE 15 W /40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40	API CG4 15 W/40
Lube Oil Sump capacity (ltr)	42	113.5	165.6	177	177.6	177.6	237.2	237.2	237.2
Fuel Consumption at 75 % load in Ltrs./Hr.	90	121	150.37	199	227	260	300	318	346

Alternator

Voltage: (440-480 with 220 voltage tapping)*	415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V
Frequency	50 HZ	50 HZ	50 HZ	50 HZ	50 HZ	50 HZ	50 HZ	50 HZ	50 HZ
Voltage Regulation (Max.)	± 1 % From no load to full load at lagging power factor of 0.1 to 1.0						± 1 % From no load to full load at lagging power factor of 0.1 to 1.0 & speed drop of less than or equal to 4 %		
Insulation	Class H	Class H	Class H	Class H	Class H	Class H	Class H	Class H	Class H
Enclosure	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23

Genset Installation

Exh.Pipe Size (mm) (In Case of Standard 1 Meter Tail Pipe)	8"	10"	10"	14"	14"	20"	20"	20"	20"

GREAVES
DIESEL GENSETS

Engine Features and Benefits

- Very low basic engine noise level. Contributes to bettering the statutory MoEF stipulated noise level of 75 dB(A) for the DG set.
- Lowest exhaust emissions. Meets the next generation CPCB and US Tier-2 norms.
- Individual Cylinder head design. Savings on maintenance cost and time.
- Modular design. High degree of commonality of hardware and components over entire range.
- Easy accessibility of all maintenance parts.
- Deep skirted crank case design. High degree of rigidity and ruggedness.
- Higher reserve margins in the lube and cooling circuits – gives the benefit of increased wear life of the engine, extended period between overhauls and hassle-free operation especially at high ambient temperatures commonly seen across the Indian sub-continent. Operates efficiently at temperatures from -20˚ C to 50˚ C.
- Wet Liner construction eliminates time consuming and expensive block re-boring during overhauls.
- Gear drive for water pump improves the reliability of the cooling system.
- Easy fitment of electronic governor when required.

DG sets — State-of-the-art Acoustic Enclosures

- Most compact acoustic enclosures. Best-in-class in India. Have the smallest foot print and space envelope. Their low height make installation in low-headroom situations an easy task. Saves space, a very precious resource in an increasingly crowded world.
- Top-lift capability and suitable for fork lift handling.
- Liberally designed doors with easy access for maintenance.
- Easy access to radiator for maintenance and wide cable entry provision.
- Toughened glass inspection window for clear view of control panel.
- Green Passivated / Die-cast aluminium fasteners and hardware for trouble-free operation.
- Fabricated out of 1.6 mm CRCA steel after 9 tank surface pre-treatment and pure polyester powder coating in a fully automated process with CNC / Laser machines.
- Excellent UV resistance. High retention of surface finish in outdoor installations and corrosive environments.
- Acoustic insulation with foam material conforming to IS 8183.
- Water and lube oil drain outlets located on the outer surface – Leading to ease of maintenance and cleanliness.
- Lowest vibrations – Better than 30 microns. Most suitable for roof-top installations.

Integrated DG set controller

The unique Integrated DG set controller incorporates both engine and alternator parameters in one console. This micro-processor based controller provides the most exhaustive display of critical engines and alternator performance parameters with alarm and safety features.

Integral DG set Controller

Display Parameters	Audio-Visual warning	Shut-down with Audio-Visual annuciation
Engine Oil pressure	Low Oil pressure	Low Oil pressure
Coolant temperature	High Coolant temperature	High Coolant temperature
Fuel level indication %	Low Battery Voltage	Engine over speed
Battery Voltage	Low fuel level	Engine under speed
Engine rpm		Under Voltage
DG set hours run		Over Voltage
Gen. Volts (phase-neutral and phase-phase)		Over frequency
Gen. Current (Amps.)		Under frequency
Power factor		
kWhr.		
kW		

The contoller has data logging facility for the latest 50 faults recorded and option for RS232 / RS485 connectivity for remote monitoring / BMS integration.

Scope of Supply:

The RTU DG set is supplied with the following standard accessories

- Inbuilt control panel with complete internal wiring/cabling
- Residential silencer - mounted with complete exhaust piping
- 12V 88 AH battery
- Inbuilt fuel tank

Optional:

- Electronic Governor in lieu of Mech. Governor
- AMF Control Panel with Auto over Change-feature
- Single phase alternator in lieu of 3 phase
- Cold Starting Aid
- Trailer / Trolley mounted Mobile sets

Greaves Power 50 Hz DG Set Technical Information

Genset

Model	GPW 10	GPW 15	GPW20	GPW25	GPW30	GPW40	GPWT45	GPWT50	GPW62.5	GPW75
Power Rating kVA/kW	10/8	15/12	20/16	25/20	30/24	40/32	45/36	50/40	62.5/50	75/60
No. of Phases	1/3	1/3	1/3	3	3	3	3	3	3	3
Power Factor	1/0.8 (lag)	1/0.8 (lag)	1/0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)
Max. Load Current @ 0.8 PF (Amps)	43.4/13.9	65.2/20.8	86.9/27.8	35	42	56	63	70	87	104
Battery Rating	12 V 1x88 AH	12 V 1x88 AH	12 V 1x120 AH	12V 88AH	12V 88AH	12V 88AH	12V 88AH	12V 88AH	12V 88AH	12V 88AH
Integral Fuel Tank Capacity (Ltrs.)	100	100	100	100	100	100	100	100	150	150

Engine

Make	Escorts	Escorts	Escorts	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves
Model	G12	G15	G20	3G11NAG1	3G11NAG2	3G11TG1	3G11TG2	3G11TG3	4G11TG1	4G11TG2
Cooling	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Aspiration	Naturally aspirated	Naturally aspirated	Naturally aspirated	Naturally aspirated	Naturally aspirated	Turbocharged	Turbocharged	Turbocharged	Turbocharged	Turbocharged
No. of Cylinders	2	2	3	3	3	3	3	3	4	4
RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Compression Ratio	17.5	17.5	17.5	18	18	16.2	16.2	16.2	16.2	16.2
Bore x Stroke mm.	91 x 110	102 X 120	91 X 110	105 x 130	105 x 130	105 x 130	105 x 130	105 x 130	105 x 130	105 x 130
Cubic Capacity (Ltrs.)	1.43	1.96	2.14	3.38	3.38	3.38	3.38	3.38	4.50	4.50
Power (HP)	18	22	28	33	38	52	59	64	83	94
Governing	Mech./A1	Mech./A1	Mech./A1	Mech./A1	Mech./A1	Mech./A1	Mech. /A1	Mech./A1	Mech./A1	Mech./A1
Starting System	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE	12V ESE
Lube Oil Specification	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4
Lube Oil Sump capacity (Ltrs.)	5.5	5.7	5.8	8	8	8	8	8	10	10
Fuel Consumption at 75% load In ltrs./hr.	2.12	3.11	3.95	4	5	6	7	7	9	12

Alternator

Voltage	230/415 V	230/415 V	230/415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Voltage Regulation (max.)	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Insulation	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H
Enclosure	IP 23	IP 23	IP 23	IP23	IP23	IP23	IP23	IP23	IP23	IP23
Excitation	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control

Genset Installation

Al. Armoured cable (3,5 C, Sq.mm.)	16 x 2/2.5 x 4 Cu. single core	25 x 2/4 x 4 Cu. single core	35 x 2/6 x 4 Cu. single core	50 x 1	50 x 1	70 x 1	95 x 1	95 x 1	120 x 1	150 x 1
Exh. Pipe Size (mm.)	50 NB	50 NB	50 NB	75 NB	75 NB	100 NB	100 NB	100 NB	100 NB	125 NB

The DG Set Prime Power ratings mentioned above are in line with ISO 8528 with provision for 10% Overload
Conformance standards: IS 4722, BS 5000 (For Alternator), BS 5514, ISO 3046 (For Engine) and ISO 8528 (For DG Set)

Greaves Power 50 Hz DG Set Technical Information

Genset

Model	GPW82.5	GPW100	GPW125	GPW160	GPW180	GPW200	GPW250	GPW320	GPW400	GPW500
Power Rating kVA/Kw (prime power)	82.5/66	100/80	125/100	160/128	180/144	200/160	250/200	320/256	400/320	500/400
No. of Phases	3	3	3	3	3	3	3	3	3	3
Power Factor	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)	0.8 (lag)
Max. Load Current @ 0.8 PF (Amps)	115	139	173	222.6	250.4	278.2	347.8	445.2	556.5	695.6
Battery Rating	12V 88AH	12V 88AH	12V 88AH	12 V 1x150 AH	12 V 1x150 AH	24 V 2x180 AH	24 V 2x180 AH	24 V 2x180 AH	24 V 2x180 AH	24 V 2x180 AH
Integral Fuel Tank Capacity (Ltrs.)	150	150	220	360	360	400	500	625	850	850

Engine

Make	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves	Greaves
Model	4G11TAG1	4G11TAG2	4G11TAG3	6G11TAG2	6G11TAG3	TBD3V6-MK-1	TBD3V8	TBD2V12-MK-2	TBD3V12-MK-1	TBD4IV12
Cooling	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Aspiration	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled	Turbocharged and Aftercooled
No. of Cylinders	4	4	4	6	6	6	8	12	12	12
RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Compression Ratio	16.2	16.2	16.2	16.2	16.2	14.6	14.6	17	14.6	16
Bore x Stroke mm.	105 x 130	105 x 130	105 x 130	105 x 130	105 x 130	128 x 130	128 x 130	120 x 130	128 x 130	132 x 140
Cubic Capacity (Ltrs.)	4.50	4.50	4.50	6.75	6.75	10.03	13.38	17.64	20.07	23
Power (HP)	105	127	155	196.5	221.6	253	313	396	484	604
Power (kW)	77.2	93.4	114	144.5	163	186	230	291	356	444
Governing	Mech./A1	Mech./A1	Mech./A1	Mech. /A1	Mech. /A1	Mech. /A1	Electronic /A1	Electronic /A1	Electronic /A1	Electronic/A1
Starting System	12V ESE	12V ESE	12V ESE	12V ESE	24V ESE	24V ESE	24V ESE	24V ESE	24V ESE	24V ESE
Lube Oil Specification	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4	Greaves Maxtherm API CF4
Lube Oil Sump capacity (Ltrs.)	10	10	10	17	17	22.5	29	41	60	70
Fuel Consumption at 75% load In ltrs./hr.	13	15	20	25.92	29.2	34	43	52	62	77

Alternator

Voltage	415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V	415 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Voltage Regulation (max.)	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Insulation	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H	Class - H
Enclosure	IP23	IP23	IP23	IP23	IP23	1P23	1P23	1P23	1P23	1P23
Excitation	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control	Brushless with AVR Control

Genset Installation

Al. Armoured cable (3,5 C, Sq.mm.)	95 x 1	120 x 1	150 x 1	185 x 1	240 x 1	300 x 1	185 x 2	300 x 2	240 x 3	300 x 3
Exh. Pipe Size (mm.)	100 NB	100 NB	125 NB	125 NB	125 NB	125 NB	125 NB	150 NB	150 NB	150 NB