

KOEL GREEN ENGINE - SPECIFICATIONS

ENGINE DATA											
GENSET MODEL	UNIT	KG1-200WS	KG1-250WS	KG1-320WS	KG1-380WS	KG1-400WS	KG1-500WS	KG1-600WS	KG1-625WS	KG1-750WS	
kVA RATING	kVA	200	250	320	380	400	500	600	625	750	
ENGINE MODEL		6SL1500TAG2	6SL1500TAG3	DV8TAG1	DV8TAG2	DV8TAG3	DV10TAG1	DV12TAG1	DV12TAG2	DV12ETAG1	
Rated output (prime power rating as per ISO 3046)	kW	183	228	294	346	360	447	532	552	662	
Rated output (prime power rating as per ISO 3046)	HP	248	310	400	470	490	608	723	750	900	
Rated speed	RPM	1500									
No. of cylinders		6	6	8	8	8	10	12	12	12	
Engine configuration		Inline Type			V Type						
Operating cycle		4 Stroke DI								4 Stroke CRDI	
Displacement (Cubic capacity)	Ltrs.	8.86	8.86	15.92	15.92	15.92	19.90	23.88	23.88	23.88	
Bore x Stroke	mm	118 x 135			130 x 150						
Aspiration		TA (Turbocharged After-cooled)									
Compression Ratio		15.5:1			16.5 ± 1 :1					15.5 ± 1 :1	
Piston speed	m/s	6.75			7.50						
Brake Mean Effective Pressure (BMEP) @ 100 % load (Gross)	bar	16.8	21	15.10					22.6		
Firing order (Starting from flywheel end)		1-5-3-6-2-4			1-5-7-2-6-3-4-8			1-6-5-10-2-7-3-8-4-9	1-12-5-8-3-10-6-7-2-11-4-9		
Overall dimension (L x W x H) Incl. flywheel & excl. radiator	mm	1634.4 x 1228 x 1380			1410 x 1185 x 1202			1600 x 1185 x 1202	1790 x 1185 x 1202		1833 x 1185 x 1202
Block loading capacity (as per ISO 3046-Part4)	%	57%	52%	70%	60%	55%	55%	55%	55%	50	
Engine weight (Dry weight of bare engine)	Kg	880			1620			1840	2060		
Fuel Type		Diesel									
Fuel Static Injection timing	° BTDC	16+/-1 °	10+/-1 °	11 ° BTDC					ECU Controlled		
Fuel Oil		HSD IS 1460									
Fuel Filter Type		Spin on									
Filtration Capacity	Micron	5.00									
Fuel transfer pump pressure	kPa	100			250						
Max lift of fuel transfer pump	meter	1.00									
Nozzle opening pressure	Kg/cm ²	260+/-10 bar									
LUBE OIL SYSTEM											
Recommended lube oil grade		K-Oil Premium									
Lube oil pump		Gear Pump									
Lube oil sump capacity (Max)	Ltr	27	27	41	41	41	45	50	50	50	
Lube oil sump capacity (Min)	Ltr	24	24	37	37	37	40	40	40	40	
Lube oil system capacity	Ltr	29.5	29.5	47	47	47	50	57	57	57	
Angularity Limit of oil sump	Deg	30 °			15 °						
Lube oil Pressure range at rated load	Bar	3.5 - 5.5	3.5 - 5.5	4 - 4.5							
Lube oil filter type		Paper filter with bypass provision & spin on type filter canisters								Spin on	
Filtration capacity	Micron	30	30	30	30	30	30	30	30	12	
Lube oil pump flow rate (At 2935 RPM with 3.5 bar pressure)	LPM	156 (At 1500 RPM with 4 bar pressure)			130 (At 2935 RPM with 3.5 bar pressure)					190	
Lube oil change period	Hrs	500									

(Contd...)

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COOLING SYSTEM										
Type of cooling		Liquid cooled								
Engine coolant flow rate	LPM	240			530				700	
Coolant pressure	bar	0.4								
GOVERNOR DATA										
Type		Electronic: Integral with FIP & Isochronous capability								
Whether adjustable droop provided		Yes			Optional				Yes	
Transient speed increase for sudden loading	%	≤12			7				12	
Transient speed decrease for permissible sudden loading	%	≤10			≤10				10	
Increase of load recovery time	Sec	3							4	
Speed raise / lower from panel provided		Yes			Optional					
VALVE MECHANISM										
Type		Over head								
Valve clearance at cold: Inlet / Exhaust	mm	0.24 mm / 0.4 mm			0.35 mm / 0.35 mm					
Valve Timing: Inlet open	Deg	11° 30' ATDC			1° 27' BTDC					
Valve Timing: Inlet close	Deg	0° 30' ABDC			11°27'ABDC					
Valve Timing: Exhaust open	Deg	35° BBDC			21°30'BBDC					
Valve Timing: Exhaust close	Deg	11° BTDC			13° BTDC					
OTHER INFORMATION										
Maximum time to start from cold & attain rated Speed & ready to take load	Sec	5			30					
Overload capacity	%	10% overload for one hour once every 12 hours								

Note

- *Specific gravity of diesel to be considered as 0.845 for LPH calculations (+5 % tolerance on LPH)
- All canopy dimensions have tolerance of ± 50 mm.
- Prime Power Rating is the maximum power available continuously for a variable electrical load for unlimited number of hours per year under standard operating conditions.
- Genset ratings are as per ISO 8528.
- Width of genset considered without base plate lifting hook.
- **First oil change at 50 hrs.
- For the site conditions other than standard operating conditions, consult KOEL for available prime power.
- Genset weight tolerance +50 Kg.