

Features:

- Excitation system: self-excited (AREP and PMG are optional)
- ATS (automatic transfer switch) receptacle
- Lockable battery isolator switch
- Stainless galvanized zinc plates with strong corrosion resistance
- Vibration isolators between the engine/alternator and base frame
- Integrated wiring design
- Base fuel tank for at least 8 hours running
- Equipped with an industrial muffler
- Engine oil pump
- 50 C radiator
- Top lifting and steel base frame with forklift holes
- Drainage for fuel tank
- Complete protection functions and safety labels
- IP54 (soundproof sets), IP56 (control system)
- Water jacket preheater, oil heater and double air cleaner, etc. are available.



Output Ratings

Generating Set Model	Prime	Standby
X500C6/S	563kVA/ 450kW	619kVA/495kW

Ratings at 0.8 power factor.

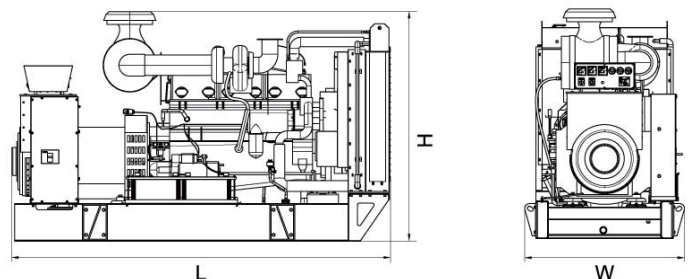
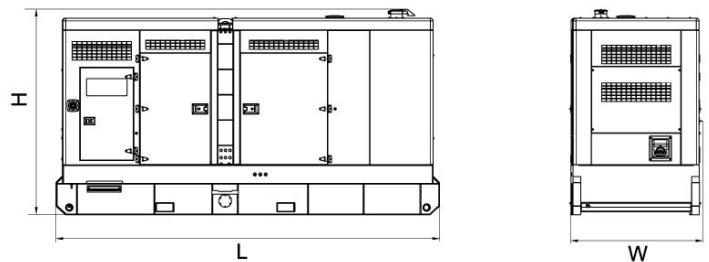
Ratings and Performance Data

Engine Make & Model:	KTA19-G4	
Alternator Model:	HCI544C	
Alternator Brand:	STAMFORD	
Control System:	PLC-920 / PLC-7420	
Noise Level@7m:	72.9	
Frequency & Phase:	60Hz & 3PH	
Engine Speed: RPM	1800	
Structure Type:	X500C6	A
	X500C6S	R
Fuel Tank Capacity: L	X500C6	940
	X500C6S	1020
Fuel Consumption: l/hr (100% Load)	Prime	122
	Standby	136

Dimensions and Weights

Generating Set Model	Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)
X500C6	3384	1458	2194	4250
X500C6S	4512	1500	2553	6129

Dry = With Lube Oil Wet = With Lube Oil and Coolant



Also available in the following voltages: 415/240V-380/220V-220/127V-200/115V;

ESP: Standby Power Standby duty, operation under variable load, without over load;

PRP: Prime Power-Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

The data is only for your reference but not for use of sales.

M: Mechanical speed governor, E/ECU: Electronic speed governor;

NA: Naturally aspirated, TC: Turbocharged, TCA: Turbocharged and air-air aftercooled. TCW: Water-cooled Turbocharged;

The weights are approximate and without fuel.

Engine model: KTA19-G4

Description

The KTA19-Series benefits from years of technical development and improvement to bring customers an innovative and future proof diesel engine that keeps pace with ever changing generator set requirements.

Recognised globally for its performance under even the most severe climatic conditions, the KTA19-Series is widely acknowledged as the most robust and cost-effective diesel engine in its power range for the generator set market.



This engine has been built to comply with CE certification.



This engine has been designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

Features

Turbocharger – Cummins Turbo technologies (CTT) exhaust gas driven turbocharger mounted at top of engine.

Fuel System – Cummins PT™ self-adjusting system. Integral dual flyweight governor provides overspeed protection independent of main governor.

Aftercooler – Large capacity aftercooler results in cooler, denser intake air for more efficient combustion and reduced internal stresses for longer life.

Cylinder Block – Alloy cast iron with removable wet liners. Cross bolt support to main bearing cap provides extra strength and stability.

Service and Support – G-Drive products are backed by an uncompromising level of technical support and after sales service, delivered through a world class service network.

1500 rpm (50 Hz Ratings)

Gross Engine Output			Net Engine Output			Typical Generator Set Output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
504/675	488/600	355/475	479/642	428/573	335/449	440	550	400	500	315	393

1800 rpm (60 Hz Ratings)

Gross Engine Output			Net Engine Output			Typical Generator Set Output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
563/755	507/680	429/575	520/697	470/630	392/525	500	625	455	569	368	460

Engine model: KTA19-G4

General Engine Data

Type	4 cycle, in-line, Turbo Charged
Bore mm	159
Stroke mm	159
Displacement Litre	18.9 litre
Cylinder Block	Cast iron, 6 cylinder
Battery Charging Alternator	35A
Starting Voltage	24V
Fuel System	Direct injection
Fuel Filter	Spin-on fuel filters with water separator
Lube Oil Filter Type(s)	Spin-on full flow filter
Lube Oil Capacity (l)	50
Flywheel Dimensions	SAE 0

Coolpac Performance Data

Cooling System Design	Jacket Water After Cooled
Coolant Ratio	50% ethylene glycol; 50% water
Coolant Capacity (l)	Engine only – not applicable
Limiting Ambient Temp (°C)**	
Fan Power (kWm)	
Cooling System Air Flow (m ³ /s)**	
Air Cleaner Type	Dry replaceable element with restriction indicator

** @ 13 mm H₂O

Ratings Definitions

Emergency Standby Power (ESP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Limited-Time Running Power (LTP):
Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

Prime Power (PRP):
Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Base Load (Continuous) Power (COP):
Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

Weight & Dimensions

Length	Width	Height	Weight (dry)
mm	mm	mm	kg
1859	868	1728	1855

Fuel Consumption 1500 rpm (50 Hz)

%	kWm	BHP	L/ph	US gal/ph
Standby Power				
100	504	675	121	31.9
Prime Power				
100	448	600	107	28.4
75	336	450	82	21.6
50	224	300	57	14.9
25	112	150	30	8.1
Continuous Power				
100	355	475	86	22.8

Fuel Consumption 1800 rpm (60 Hz)

%	kWm	BHP	L/ph	US gal/ph
Standby Power				
100	563	755	136	35.9
Prime Power				
100	507	680	122	32.3
75	380	510	94	24.8
50	254	340	65	17
25	127	170	36	9.6
Continuous Power				
100	429	575	104	27.3

Alternator model: HCI544C

CONTROL SYSTEM	SEPARATELY EXCITED BY P.M.G.							
A.V.R.	MX321	MX341						
VOLTAGE REGULATION	± 0.5 %	± 1.0 %	With 4% ENGINE GOVERNING					
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES (page 7)							
CONTROL SYSTEM	SELF EXCITED							
A.V.R.	AS440							
VOLTAGE REGULATION	± 1.0 %	With 4% ENGINE GOVERNING						
SUSTAINED SHORT CIRCUIT	SERIES 4 CONTROL DOES NOT SUSTAIN A SHORT CIRCUIT CURRENT							
INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER LAP							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	12							
STATOR WDG. RESISTANCE	0.0065 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	1.55 Ohms at 22°C							
EXCITER STATOR RESISTANCE	17 Ohms at 22°C							
EXCITER ROTOR RESISTANCE	0.092 Ohms PER PHASE AT 22°C							
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. refer to factory for others							
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
MAXIMUM OVERSPEED	2250 Rev/Min							
BEARING DRIVE END	BALL. 6220 (ISO)							
BEARING NON-DRIVE END	BALL. 6314 (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	1263 kg				1275 kg			
WEIGHT WOUND STATOR	584 kg				584 kg			
WEIGHT WOUND ROTOR	502 kg				473 kg			
WR ² INERTIA	6.8928 kgm ²				6.6149 kgm ²			
SHIPPING WEIGHTS in a crate	1355 kg				1395 kg			
PACKING CRATE SIZE	166 x 87 x 124(cm)				166 x 87 x 124(cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	1.035 m ³ /sec 2202 cfm				1.312 m ³ /sec 2780 cfm			
VOLTAGE SERIES STAR	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
VOLTAGE PARALLEL STAR	190/110	200/115	208/120	220/127	208/120	220/127	230/133	240/138
VOLTAGE SERIES DELTA	220/110	230/115	240/120	254/127	240/120	254/127	266/133	277/138
KVA BASE RATING FOR REACTANCE VALUES	455	500	455	450	525	550	581	594
X _d DIR. AXIS SYNCHRONOUS	3.30	3.28	2.77	2.44	3.94	3.69	3.57	3.35
X' _d DIR. AXIS TRANSIENT	0.18	0.18	0.15	0.13	0.18	0.17	0.16	0.15
X'' _d DIR. AXIS SUBTRANSIENT	0.13	0.13	0.11	0.10	0.13	0.12	0.12	0.11
X _q QUAD. AXIS REACTANCE	2.69	2.67	2.25	1.98	3.12	2.92	2.82	2.65
X'' _q QUAD. AXIS SUBTRANSIENT	0.27	0.26	0.22	0.20	0.34	0.32	0.31	0.29
X _L LEAKAGE REACTANCE	0.07	0.07	0.06	0.05	0.08	0.07	0.07	0.07
X ₂ NEGATIVE SEQUENCE	0.19	0.19	0.16	0.14	0.23	0.22	0.21	0.20
X ₀ ZERO SEQUENCE	0.11	0.11	0.09	0.08	0.11	0.10	0.10	0.09
REACTANCES ARE SATURATED				VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED				
T' _d TRANSIENT TIME CONST.	0.08s							
T'' _d SUB-TRANSTIME CONST.	0.012s							
T' _{do} O.C. FIELD TIME CONST.	2s							
T _a ARMATURE TIME CONST.	0.017s							
SHORT CIRCUIT RATIO	1/X _d							