EC Series

X95C6 / X95C6S

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℃ 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
X95C6/S	110kVA/88kW	121kVA/97kW

Ratings at 0.8 power factor.

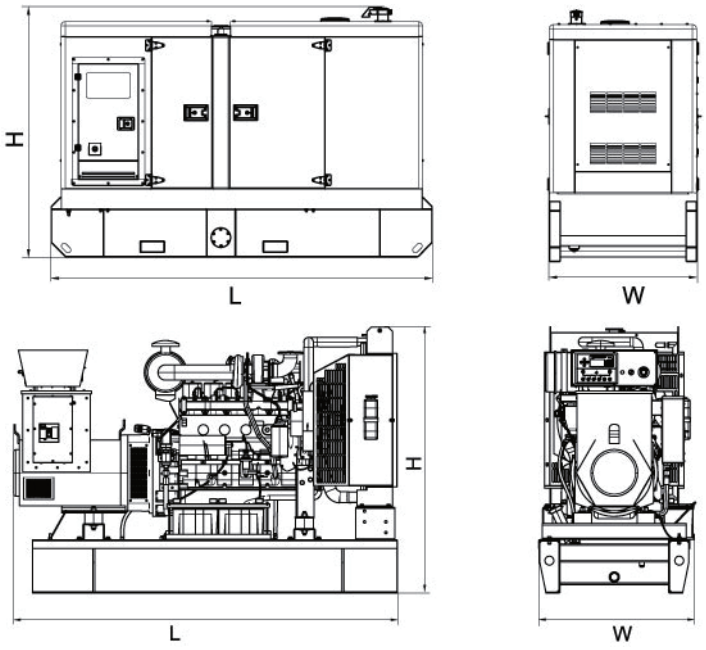
Ratings and Performance Data

Engine Make & Model:		6BT5.9-G2
Alternator Model:		UCI274C
Alternator Brand:		STAMFORD
Control System:		PLC-920 / PLC-7420
Noise Level@7m:		63.6
Frequency & Phase:		60Hz & 3PH
Engine Speed: RPM		1800
Structure Type:	**X95C6**	A
	X95C6S	R
Fuel Tank Capacity: L	**X95C6**	213
	X95C6S	300
Fuel Consumption: l/hr (100% Load)	**Prime**	22
	Standby	25

Dimensions and Weights

Generating Set Model	Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)
X95C6	2106	884	1540	1241
X95C6S	3312	1205	1834	2081

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.

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Engine model: 6BT5.9-G2

Typical engine data		
Net weight	kg	411
Rotate part instantaneous inertia _ without flywheel	kg.m2	0.25
Distance between gravity center and rear surface of cylinder block	mm	544
Distance between gravity center and center line above of crankshaft	mm	155
Engine installation		
Static bent torque permitted—rear surface of cylinder block	N.m	1356
Static bent torque permitted—front surface of cylinder block	N.m	435
Static bent torque permitted—flank surface of cylinder block	N.m	365
Exhaust system		
Max. back pressure	mmHg	76
Diameter of exhaust pipe recommended	mm	75
Air intake system		
Max. air intake resistance		
Dirty filter	mmH2O	635
Normal air cleaner and clean filter	mmH2O	254
Heavy duty cleaner and clean filter	mmH2O	381
Diameter of intake pipe recommended	mm	100
Lubrication system		
Normal oil pressure range		
Low idle	kPa	207
Rated speed	kPa	345
Max. oil temperature permitted in oil pan	℃	121
Oil pan capacity (Max _ Min)	L	14.2_12.3
Lubrication system Min. capacity (oil pan + oil filter)	L	16.4
Usage inclining degree permitted (any direction)	°	40
Fuel system		
Fuel injection pump model	A pump _ GAC governor/ BYC ASIMCO	
Max. fuel input resistance of transfer pump	mmHg	102
Max. overflow fuel resistance at overflow pipe of injector	mmHg	254
Total fuel overflow amount	L/h	202
Cooling system		
Coolant capacity-engine only	L	9.9
Max. coolant cycling resistance exterior engine	kPa	28
Thermostat adjusting temperature (range)	℃	82_95
Min. opening pressure of radiator cap	kPa	69
Max. coolant temperature permitted _ Standby Power/Base output Power	℃	104/100
Electric system		
Starter	12V	24V
Battery charging system	63A	40A
Max. starting circuit resistance	0.00075Ω	0.002Ω
Min. battery capacity_ -12℃ (CCA：Cold Cranking Ampere)	800CCA	400CCA

Technical data _ under standard fuel delivery rate FR 91589	**Base output Power**	**Standby Power**
Engine speed _ RPM	1500	1500
Output Power _ kW	86	92
Torque _ Nm	548	586
Low idle _ RPM	750-950	750-950
Friction energy output _ kW	12.7	12.7
Piston speed _ m/s	6.0	6.0
Engine coolant flow _ L/sec	2.0	2.0
Air intake flow _ L/sec	100	108
Exhaust flow _ L/sec	250	280
Exhaust temperature _ ℃	526	565
Environment energy output _ kW	N/A	N/A
Coolant energy output _ kW	49	55
Fuel energy output _ kW	N/A	N/A

All data's error within ±5%.

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Alternator model: UCI274C

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.	SX460	AS440	
VOLTAGE REGULATION	± 1.0 %	± 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 CONCENTRIC							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	12							
STATOR WDG. RESISTANCE	0.059 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	1.12 Ohms at 22°C							
EXCITER STATOR RESISTANCE	20 Ohms at 22°C							
EXCITER ROTOR RESISTANCE	0.091 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. 6315-2RS (ISO)							
BEARING NON-DRIVE END	BALL. 6310-2RS (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	406 kg				420 kg			
WEIGHT WOUND STATOR	131 kg				131 kg			
WEIGHT WOUND ROTOR	133.78 kg				122.82 kg			
WR² INERTIA	1.0288 kgm^2				0.9781 kgm^2			
SHIPPING WEIGHTS in a crate	439 kg				452 kg			
PACKING CRATE SIZE	105 x 67 x 103(cm)				105 x 67 x 103(cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	0.514 m³/sec 1090 cfm				0.617 m³/sec 1308 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	100	100	100	N/A	112.5	117.5	117.5	125
Xd DIR. AXIS SYNCHRONOUS	2.45	2.21	2.05	-	2.76	2.58	2.36	2.30
X'd DIR. AXIS TRANSIENT	0.20	0.18	0.17	-	0.24	0.22	0.21	0.20
X"d DIR. AXIS SUBTRANSIENT	0.14	0.13	0.12	-	0.16	0.15	0.14	0.13
Xq QUAD. AXIS REACTANCE	1.59	1.43	1.33	-	1.58	1.48	1.35	1.32
X"q QUAD. AXIS SUBTRANSIENT	0.18	0.16	0.15	-	0.23	0.21	0.20	0.19
X_L LEAKAGE REACTANCE	0.07	0.06	0.06	-	0.08	0.07	0.07	0.07
X_2 NEGATIVE SEQUENCE	0.16	0.14	0.13	-	0.19	0.18	0.16	0.16
X_0 ZERO SEQUENCE	0.10	0.09	0.08	-	0.12	0.11	0.10	0.10
REACTANCES ARE SATURATED	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED							
T'd TRANSIENT TIME CONST.	0.028 s							
T"d SUB-TRANSTIME CONST.	0.001 s							
T'do O.C. FIELD TIME CONST.	0.8 s							
Ta ARMATURE TIME CONST.	0.007 s							
SHORT CIRCUIT RATIO	1/Xd							