

ژنراتور : Stamford

موتور دیزل : Cummins


Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
110	88	100	80	



موتور دیزل		
Manufacturer	Cummins	تولید کننده
Type	6BT5.9-G2	تیپ
Number of cylinders	6	تعداد سیلندر ها
Cylinder arrangement	Vertical in-line	آرایش سیلندر ها
Displacement , Liters	5.9	جا به جایی
Bore × Stroke , mm	102 x 120	قطر سیلندر × کورس پیستون
Compression Ratio	17.5:1	نسبت تراکم
Aspiration	Turbocharged	سیستم تنفس
Gross engine power, kWb	80	قدرت ناخالص موتور
Combustion air flow, L/sec	100	جریان هوای احتراق
Exhaust gas temp.(after turbo) , °C	526	دمای گاز خروجی از اگزوز
Exhaust gas flow (after turbo) , L/sec	2.0	جریان هوای خروجی از اگزوز
Mean Piston Speed , m/s	6.0	میانگین سرعت پیستون

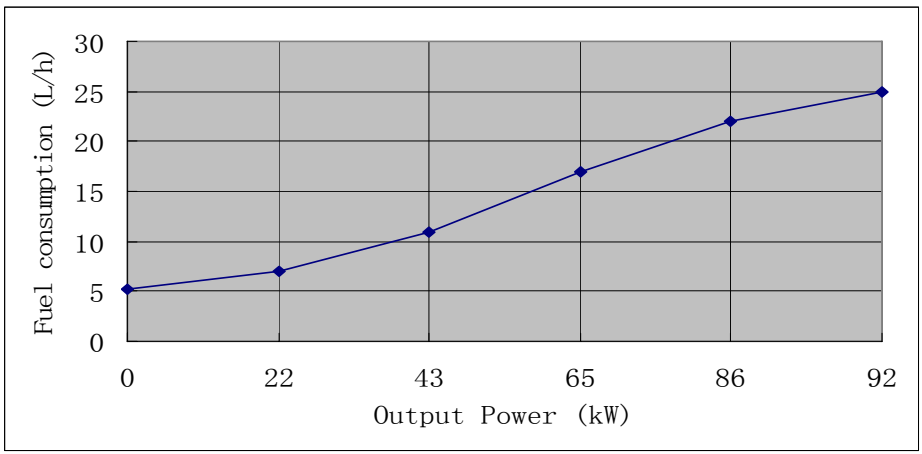
ژنراتور


Manufacturer	Stamford	تولید کننده
Type	UCI274C	تیپ
Standby power at rated voltage ,KVA	100	توان standby در ولتاژ نامی
Efficiency, %	90.7	راندمان
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Speed, Rpm	1500	سرعت
Voltage, V	380	ولتاژ
Stator windings	Double layer concentric	سیم پیچ استاتور
Voltage Regulation, %	± % 1.0	تنظیم ولتاژ
Over speed, Rpm	2250	مداکثر سرعت مجاز
Short circuit ratio	1/Xd	جریان اتصال کوتاه
Insulation class	H	کلاس عایق
Protection class	IP23	کلاس حفاظتی
Cooling air volume,m ³ / sec	0.514	دبی هوای فنک کننده

	DONGFENG CUMMINS ENGINE Co., Ltd. XiangFan HuBei P.R.CHINA ENGINE DATASHEET—for G-drive		ENGINE MODEL 6BT5.9-G2		FREFORMANCE CURVE FR 9317-02
			ENGINE FAMILY D40	CPL 1189-02	2005/12
Displacement	5.9 L	Air intake way	turbo-charged		
Cylinder bore	102 mm	Cylinder quantity	6	kW(BHP)	@RPM
Stroke	120 mm			86(115)	1500
Fuel system	A pump _ GAC governor/ BYC ASIMCO			Speed-droop	5%
Engine testing with fuel system, water pump and oil pump, without air compressor, alternator, fan, other options and driving accessory. Testing condition: air intake resistance 250 mmHg, exhaust back pressure 50 mmHg.					

Engine Speed-RPM	Standby Power		Base Output Power		Continuous Power	
	kW	HP	kW	HP	kW	HP
1500	92	123	86	115	N/A	N/A

Output Power			Fuel consumption	
%	kW	HP	g/kW.h	L/h
Standby Power				
100	92	123	221	25
Base Output Power				
100	86	115	214	22
75	65	87	216	17
50	43	58	217	11
25	22	29	248	7
Continuous Power				
N/A	N/A	N/A	N/A	N/A



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Typical engine data

Net weight	kg	411
Rotate part instantaneous inertia _ without flywheel	kg.m ²	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	mmH ₂ O	635
Normal air cleaner and clean filter	mmH ₂ O	254
Heavy duty cleaner and clean filter	mmH ₂ O	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	°C	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)	°C	82_95
Min. opening pressure of radiator cap	kPa	69
Max. coolant temperature permitted _ Standby Power/Base output Power	°C	104/100

Electric system

Starter	12V	24V
Battery charging system	63A	40A
Max. starting circuit resistance	0.00075Ω	0.002Ω
Min. battery capacity_ -12°C (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 _ °C	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 $\pm 5\%$.

UCI274C WINDING 311

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	SX440	SX421					
VOLTAGE REGULATION		± 1.5 %	± 1.0 %	± 0.5 %	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							
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			
WR ² 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 m ³ /sec 1090 cfm				0.617 m ³ /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-TRANS TIME CONST.		0.001 s							
T'do O.C. FIELD TIME CONST.		0.8 s							
T _a ARMATURE TIME CONST.		0.007 s							
SHORT CIRCUIT RATIO		1/Xd							

UCI274C

Winding 311 / 0.8 Power Factor

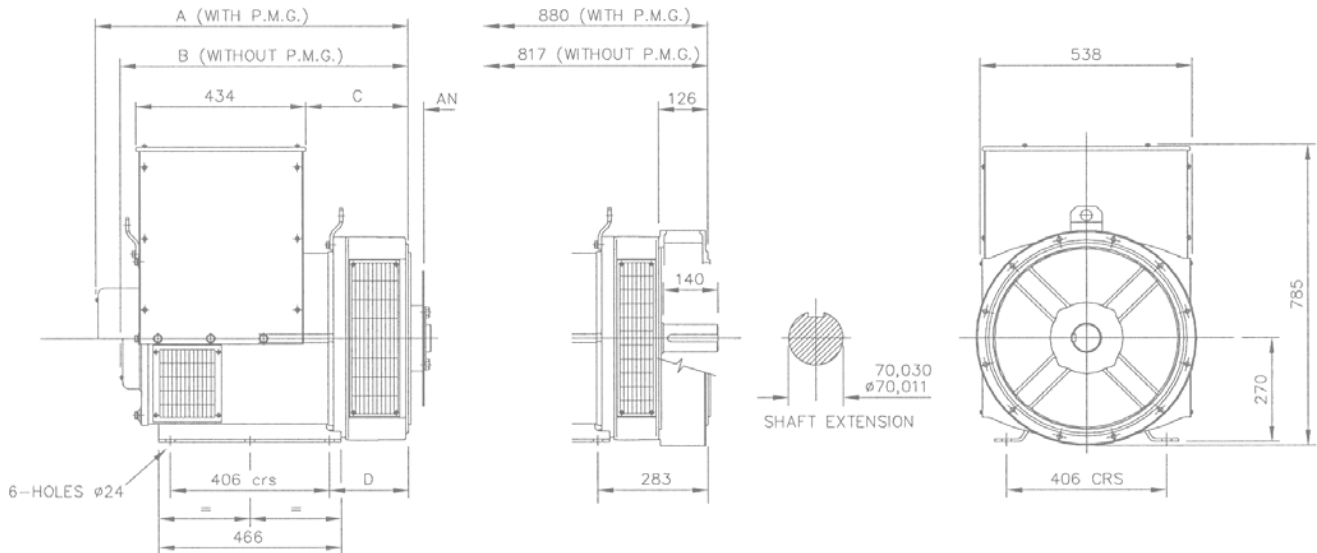


RATINGS

Class - Temp Rise	Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C				
50 Hz	Series Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
	Parallel Star (V)	190	200	208	220	190	200	208	220	190	200	208	220	190	200	208	220
	Series Delta (V)	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
	kVA	84.0	84.0	84.0	n/a	100.0	100.0	100.0	n/a	106.0	106.0	106.0	n/a	110.0	110.0	110.0	n/a
	kW	67.2	67.2	67.2	n/a	80.0	80.0	80.0	n/a	84.8	84.8	84.8	n/a	88.0	88.0	88.0	n/a
	Efficiency (%)	90.7	91.1	91.3	n/a	89.8	90.3	90.6	n/a	89.5	90.0	90.4	n/a	89.2	89.8	90.2	n/a
	kW Input	74.1	73.8	73.6	n/a	89.1	88.6	88.3	n/a	94.7	94.2	93.8	n/a	98.7	98.0	97.6	n/a

60 Hz	Series Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
	Parallel Star (V)	208	220	230	240	208	220	230	240	208	220	230	240	208	220	230	240
	Series Delta (V)	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
	kVA	97.5	106.3	106.3	112.5	112.5	117.5	117.5	125.0	116.3	125.0	125.0	132.5	120.0	127.5	127.5	137.5
	kW	78.0	85.0	85.0	90.0	90.0	94.0	94.0	100.0	93.0	100.0	100.0	106.0	96.0	102.0	102.0	110.0
	Efficiency (%)	90.9	91.0	91.4	91.5	90.2	90.6	91.0	91.1	90.0	90.2	90.7	90.8	89.8	90.1	90.6	90.6
	kW Input	85.8	93.5	93.0	98.4	99.8	103.8	103.3	109.8	103.4	110.9	110.3	116.7	106.9	113.2	112.6	121.4

DIMENSIONS



SINGLE BEARING ADAPTORS				
ADAPTOR	A	B	C	D
SAE 1	813,3	750,3	274,3	216,3
SAE 2	799	736	260	202
SAE 3	799	736	260	202

COUPLING DISCS	
DISC	AN
SAE 10	53,98
SAE 11,5	39,68
SAE 14	25,40