موتور دیزل : Cummins	ژنراتور : Stamford

	Prime		Standby	
	KW	KVA	KW	KVA
دیزل ژنراتور	40	50	44	**55**

موتور دیزل		
Manufacturer	Cummins	تولید کننده
Type	4BTA3.9-G2	تیپ
Number of cylinders	4	تعداد سیلندر ها
Cylinder arrangement	in Line	آرایش سیلندر ها
Displacement , Liters	3.9 L	جا به جایی
Bore × Stroke , mm	102 mm×120 mm	قطر سیلندر × کورس پیستون
Aspiration	T-charged & Intercooled	سیستم تنفس
Gross engine power, kWb	40	قدرت ناخالص موتور
Combustion air flow, L/sec	48	جریان هوای احتراق
Exhaust gas temp.(after turbo) , °C	460	دمای گاز خروجی از اگزوز
Exhaust gas flow (after turbo) , L/sec	130	جریان هوای خروجی از اگزوز
Mean Piston Speed , m/s	7.2	میانگین سرعت پیستون

ژنراتور

Manufacturer	Stamford	تولید کننده
Type	UCI224C	تیپ
Standby power at rated voltage ,KVA	50	توان standby در ولتاژ نامی
Efficiency, %	87.3	راندمان
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Speed, Rpm	1500	سرعت
Voltage, V	380	ولتاژ
Voltage Regulation, %	Regulation	تنظیم ولتاژ
Over speed, Rpm	Rotor	حداکثر سرعت مجاز
Insulation class	H	کلاس عایق
Connection	Curve current value X2	اتصال
Protection class	IP 23	کلاس حفاظتی
Cooling air volume,m^3 / sec	air volume	دبی هوای خنک کننده

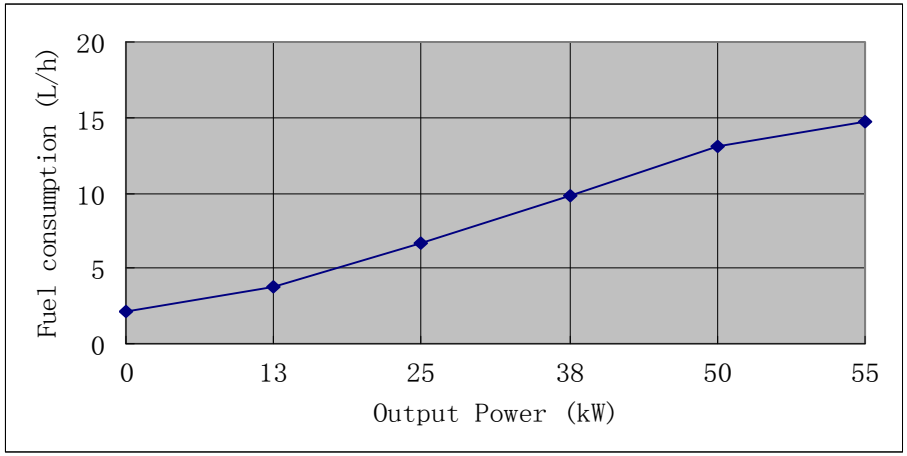
	DONGFENG CUMMINS ENGINE Co., Ltd. XiangFan HuBei P.R.CHINA ENGINE DATASHEET—for G-drive	ENGINE MODEL 4BTA3.9-G2		FREFORMANCE CURVE FR9272-02
		ENGINE FAMILY D38	CPL PP857-02	2005/12

Displacement	3.9 L	Air intake way	After-cooled, turbo-charged		
Cylinder bore	102 mm	Cylinder quantity	4	kW(BHP)	@RPM
Stroke	120 mm			50(67)	1500
Fuel system	A pump _ GAC governor/ NYC 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	55	74	50	67	N/A	N/A

Output Power			Fuel consumption	
%	kW	HP	g/kW.h	L/h
Standby Power				
100	55	74	220	14.7
Base Output Power				
100	50	67	216	13.1
75	38	51	214	9.8
50	25	34	221	6.7
25	13	17	240	3.8
Continuous Power				
N/A	N/A	N/A	N/A	N/A



	DONGFENG CUMMINS ENGINE Co., Ltd. XiangFan HuBei P.R.CHINA ENGINE DATASHEET—for G-drive	ENGINE MODEL 4BTA3.9-G2		FREFORMANCE CURVE FR9272-02
		ENGINE FAMILY D38	CPL PP857-02	2005/12

Typical engine data		
Net weight	kg	350
Rotate part instantaneous inertia _ without flywheel	kg.m2	0.143
Distance between gravity center and rear surface of cylinder block	mm	373
Distance between gravity center and center line above of crankshaft	mm	163
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	75
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	9.5_8.5
Lubrication system Min. capacity (oil pan + oil filter)	L	10.9
Usage inclining degree permitted (any direction)	°	40

Fuel system

Fuel injection pump model	NYC A pump with GAC governor	
Max. fuel input resistance of transfer pump	mmHg	102
Max. overflow fuel resistance at overflow pipe of injector	mmHg	508
Total fuel overflow amount	L/h	30

Cooling system

Coolant capacity-engine only	L	7.9
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)	625CCA	312CCA

Technical data _ under standard fuel delivery rate FR9272-02	**Base output Power**	**Standby Power**
Engine speed _ RPM	1500	1500
Output Power _ kW	50	55

Torque _ Nm	318	350
Low idle _ RPM	950-1050	950-1050
Friction energy output _ kW	8.2	8.2
Piston speed _ m/s	7.2	7.2
Engine coolant flow _ L/sec	2.2	2.2
Air intake flow _ L/sec	48	57
Exhaust flow _ L/sec	130	155
Exhaust temperature _ ℃	460	485
Environment energy output _ kW	N/A	N/A
Coolant energy output _ kW	25.9	29
Fuel energy output _ kW	N/A	N/A

All data’s error within ±5%.

STAMFORD
power generation

UCI224C

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	0.181 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	0.59 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. 6312-2RS (ISO)							
BEARING NON-DRIVE END	BALL. 6309-2RS (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	271 kg				280 kg			
WEIGHT WOUND STATOR	75 kg				75 kg			
WEIGHT WOUND ROTOR	78.95 kg				70.58 kg			
WR² INERTIA	0.3987 kgm^2				0.3667 kgm^2			
SHIPPING WEIGHTS in a crate	294 kg				301 kg			
PACKING CRATE SIZE	97 x 57 x 96(cm)				97 x 57 x 96(cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	0.216 m³/sec 458 cfm				0.281 m³/sec 595 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	42.5	42.5	42.5	40	50	52.5	52.5	55
Xd DIR. AXIS SYNCHRONOUS	2.42	2.19	2.03	1.70	3.03	2.84	2.60	2.50
X'd DIR. AXIS TRANSIENT	0.19	0.17	0.16	0.13	0.22	0.21	0.19	0.18
X"d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	0.08	0.15	0.14	0.13	0.12
Xq QUAD. AXIS REACTANCE	1.12	1.01	0.94	0.79	1.40	1.31	1.20	1.16
X"q QUAD. AXIS SUBTRANSIENT	0.16	0.14	0.13	0.11	0.14	0.13	0.12	0.12
X_L LEAKAGE REACTANCE	0.08	0.08	0.07	0.06	0.10	0.09	0.09	0.08
X_2 NEGATIVE SEQUENCE	0.14	0.13	0.12	0.10	0.14	0.13	0.12	0.12
X_0 ZERO SEQUENCE	0.10	0.09	0.08	0.07	0.10	0.09	0.09	0.08
REACTANCES ARE SATURATED	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED							
T'd TRANSIENT TIME CONST.	0.025 s							
T"d SUB-TRANSTIME CONST.	0.006 s							
T'do O.C. FIELD TIME CONST.	0.65 s							
Ta ARMATURE TIME CONST.	0.005 s							
SHORT CIRCUIT RATIO	1/Xd							

UCI224C

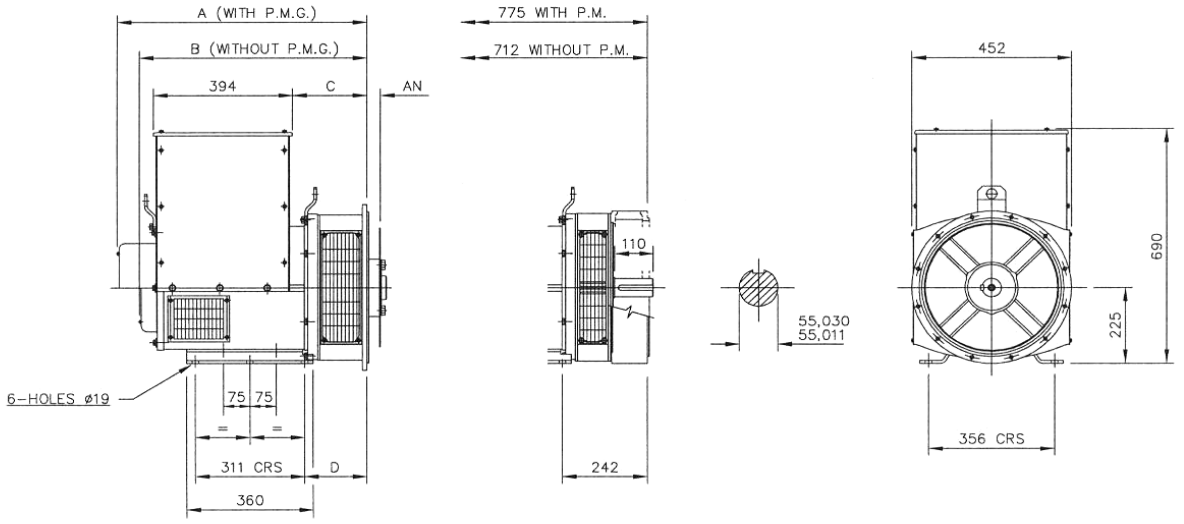
Winding 311 / 0.8 Power Factor

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	37.5	37.5	37.5	27.0	42.5	42.5	42.5	30.0	45.0	45.0	45.0	31.7	46.8	46.8	46.8	33.0
	kW	30.0	30.0	30.0	21.6	34.0	34.0	34.0	24.0	36.0	36.0	36.0	.5.4	37.4	37.4	37.4	26.4
	Efficiency (%)	87.3	87.7	88.0	88.4	86.6	87.1	87.4	88.1	86.2	86.8	87.1	87.9	86.0	86.6	86.9	87.7
	kW Input	34.4	34.2	34.1	32.6	39.3	39.0	38.9	36.3	41.8	41.5	41.3	38.4	43.5	43.2	43.1	40.1

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
	Delta (V)	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
	kVA	45.0	46.3	46.3	48.0	50.0	52.5	52.5	55.0	53.1	55.0	55.0	58.1	55.0	56.3	56.3	60.0
	kW	36.0	37.0	37.0	38.4	40.0	42.0	42.0	44.0	42.5	44.0	44.0	46.5	44.0	45.0	45.0	48.0
	Efficiency (%)	87.7	88.1	88.4	88.6	87.1	87.5	87.9	88.1	86.7	87.2	87.7	87.8	86.5	87.1	87.5	87.6
	kW Input	41.0	42.0	41.9	43.3	45.9	48.0	47.8	49.9	49.0	50.5	50.2	52.9	50.9	51.7	51.5	54.8

DIMENSIONS



SINGLE BEARING MACHINES ONLY						
ADAPTOR	A	B	C	D	COUPLING DISCS	AN
SAE 1	724,3	661,3	224,3	191,3	SAE 8	61,90
SAE 2	710	647	210	177	SAE 10	53,98
SAE 3	710	647	210	177	SAE 11,5	39,68
SAE 4	710	647	210	177	SAE 14	25,40