

ژنراتور : Stamford

موتور دیزل : Cummins

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
80	64	72.5	58.5	



موتور دیزل		
Manufacturer	Cummins	تولید کننده
Type	S3.8G7	تیپ
Number of cylinders	4	تعداد سیلندر ها
Cylinder arrangement	In line	آرایش سیلندر ها
Displacement , Liters	3.8	جا به جایی
Bore × Stroke , mm	97 mm × 128 mm	قطر سیلندر × کورس پیستون
Compression Ratio	16.4:1	نسبت تراکم
Aspiration	Turbocharged	سیستم تنفس
Gross engine power, kWb	58.5	قدرت نافالص موتور
Fan Power, kWm	2	قدرت فن
Combustion air flow, m ³ /sec	2.69	جریان هوای امتراق
Protection class	IP23	کلاس حفاظتی
Mean Piston Speed , m/s	7.2	میانگین سرعت پیستون

ژنراتور

Manufacturer	Stamford	تولید کننده
Type	UCI224F	تیپ
Standby power at rated voltage ,KVA	72.5	توان standby در ولتاژ نامی
Efficiency, %	90.0	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, %	$\pm 1.0 \%$	تنظیم ولتاژ
Over speed, Rpm	2250	مداکثر سرعت مجاز
Short circuit ratio	1/Xd	جریان اتصال کوتاه
Insulation class	H	کلاس عایق
Protection class	IP 23	کلاس حفاظتی
Cooling air volume,m ³ / sec	0.216	دبی هوای فنک کننده

S3.8 G7



> Specification sheet

Our energy working for you.™



Description

The Cummins 'S Series' engine powered CoolPac sets offer the lowest cost of maintenance thereby proving to be the most economical power solution. With the robust design and integrated technologies, the 'S Series' CoolPac can command an unrivalled reputation for reliability and performance.

The Cummins 'S Series' engine powered CoolPac sets give you the advantage of optimising your valuable space. All elements of the CoolPac sets are designed from the start to work together to maximize efficiency, even at part loads, thus offering you the advantage of lowest operating costs.

The rugged and reliable Cummins 'S Series' CoolPac sets are unique, because all the major components – the engine and cooling system are manufactured by Cummins India. This integral approach means each element of a CoolPac set is designed to work in harmony from the start.



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

Engine : Cummins 'S Series' CoolPac, powered by Cummins 'S Series' engines, are rated at 1500 RPM and conform to ISO 8528 specifications. The engines are radiator cooled, four stroke and multi-cylinder, conforming to BS 5514/ISO 3046.

The scope of Supply includes :

- Battery Charging Alternator
- Bosch In-line fuel system with mechanical governor
- Dual spin-on fuel filters
- Lube oil filter
- Turbocharger
- Charge Air Cooler (CAC)
- Dry type Air Cleaner
- Coolant recovery bottle
- Fuel pump shut-off coil with Temperature, Pressure & Magnetic Speed sensors
- Flywheel and flywheel housing
- CE compliant guarding
- Oil drain valve

Integrated Design - CoolPac products are supplied fitted with cooling package and medium duty air cleaner for a complete power package. Each component has been specifically developed and rigorously tested for G-Drive products, ensuring high performance, durability and reliability.

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
64.9/87	59.6/79.9	41.7/55.9	62.9/84.2	57.6/77.1	39.7/53.1	52.8	66	48	60	33.6	42

General Engine Data

Type	In line, Radiator cooled
Bore mm	97
Stroke mm	128
Displacement Litre	3.8
Cylinder Block	Cast Iron, 4 Cylinder
Battery Charging Alternator	12V, 35 Amps
Starting Voltage	12V
Fuel System	Direct Injection
Fuel Filter	Spin on
Lube Oil Filter Type(s)	Spin on
Lube Oil Capacity (l)	11
Flywheel Dimensions	SAE3/10

CoolPac Performance Data

Cooling System Design	Charge Air & Jacket Water Cooled
Coolant Ratio	50:50
Coolant Capacity (l)	11
Limiting Ambient Temp. (degC)**	50
Fan Power (Kw)	2
Cooling System Air Flow (m ³ /s)**	0.99
Air Cleaner Type	Dry Type, Replaceable, medium duty

** @ ¼" H₂O

Weight & Dimensions

Length	Width	Height	Weight (dry)
mm	mm	mm	kg
1290	910	1080	500

Fuel Consumption 1500 (50 Hz)

%	kWm	BHP	L/ph	US gal/ph
Standby Power				
100	64.9	87	16.1	4.3
Prime Power				
100	59.6	79.9	14.7	3.9
75	44.7	59.9	11.0	2.9
50	29.8	40	6.1	1.6
25	14.9	20	4.5	1.2
Continuous Power				
100	41.7	55.9	10.6	2.8

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):

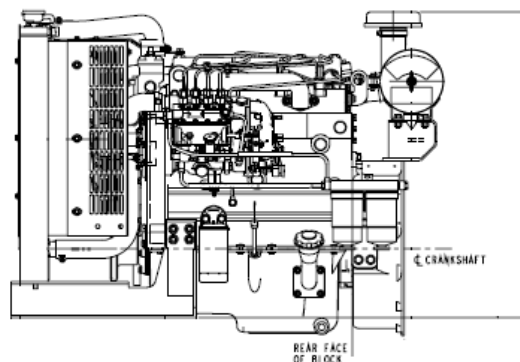
Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

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.



UCI224F

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			

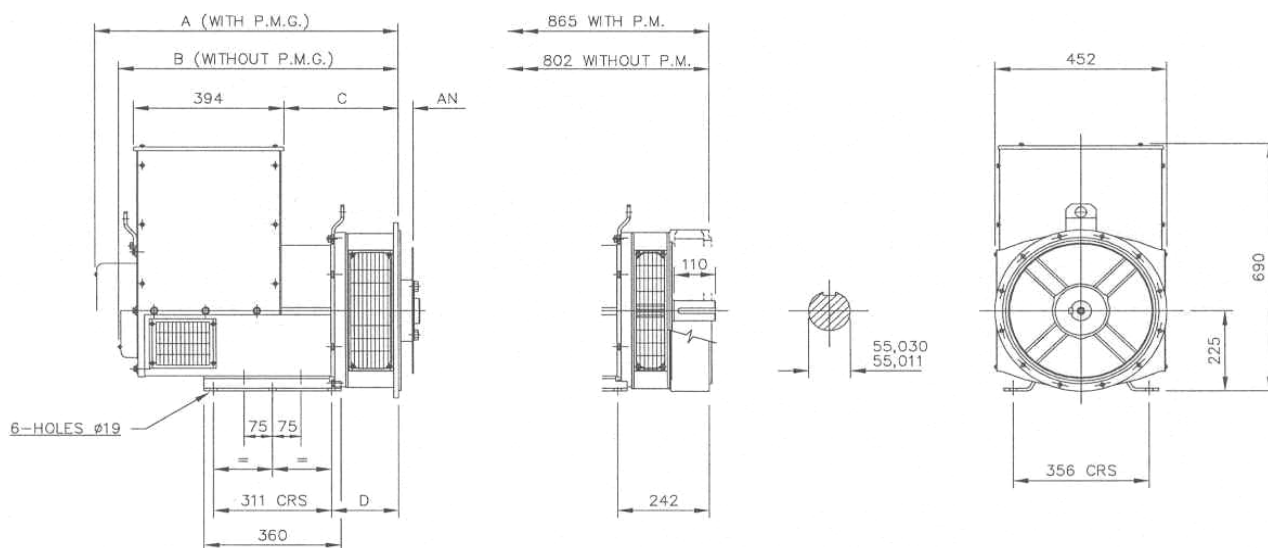
INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER CONCENTRIC							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	12							
STATOR WDG. RESISTANCE	0.065 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	0.83 Ohms at 22°C							
EXCITER STATOR RESISTANCE	20 Ohms at 22°C							
EXCITER ROTOR RESISTANCE	0.078 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. 6312-2RS (ISO)							
BEARING NON-DRIVE END	BALL. 6309-2RS (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	337 kg				350 kg			
WEIGHT WOUND STATOR	120 kg				120 kg			
WEIGHT WOUND ROTOR	110.69 kg				102.32 kg			
WR² INERTIA	0.6071 kgm²				0.5754 kgm²			
SHIPPING WEIGHTS in a crate	360 kg				371 kg			
PACKING CRATE SIZE	105 x 57 x 96(cm)				105 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	72.5	72.5	72.5	70	83.8	87.5	87.5	93.8
Xd DIR. AXIS SYNCHRONOUS	2.29	2.07	1.92	1.65	2.52	2.35	2.15	2.12
X'd DIR. AXIS TRANSIENT	0.18	0.16	0.15	0.13	0.21	0.20	0.18	0.18
X" d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	0.09	0.14	0.13	0.12	0.12
Xq QUAD. AXIS REACTANCE	1.05	0.95	0.88	0.76	1.16	1.08	0.99	0.98
X" q QUAD. AXIS SUBTRANSIENT	0.16	0.14	0.13	0.11	0.13	0.12	0.11	0.11
Xl LEAKAGE REACTANCE	0.07	0.06	0.06	0.05	0.08	0.07	0.07	0.07
X2 NEGATIVE SEQUENCE	0.14	0.13	0.12	0.10	0.13	0.12	0.11	0.11
Xo ZERO SEQUENCE	0.11	0.10	0.09	0.08	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.	0.03 s							
T" d SUB-TRANSTIME CONST.	0.008 s							
T'do O.C. FIELD TIME CONST.	0.75 s							
Ta ARMATURE TIME CONST.	0.0065 s							
SHORT CIRCUIT RATIO	1/Xd							

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Class - Temp Rise																	
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	65.0	65.0	65.0	48.7	72.5	72.5	72.5	55.0	77.0	77.0	77.0	58.0	80.0	80.0	80.0	60.5
	kW	52.0	52.0	52.0	39.0	58.0	58.0	58.0	44.0	61.6	61.6	61.6	46.4	64.0	64.0	64.0	48.4
	Efficiency (%)	90.0	90.3	90.4	90.7	89.6	89.9	90.1	90.4	89.4	89.7	89.9	90.3	89.2	89.6	89.8	90.2
	kW Input	57.8	57.6	57.5	54.7	64.7	64.5	64.4	61.9	68.9	68.7	68.5	65.6	71.7	71.4	71.3	68.3

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	75.0	78.1	78.1	82.5	83.8	87.5	87.5	93.8	88.8	92.5	92.5	100.0	91.9	95.0	95.0	102.5
	kW	60.0	62.5	62.5	66.0	67.0	70.0	70.0	75.0	71.0	74.0	74.0	80.0	73.5	76.0	76.0	82.0
	Efficiency (%)	90.5	90.7	90.9	91.0	90.0	90.3	90.6	90.6	89.8	90.1	90.4	90.4	89.6	89.9	90.3	90.3
	kW Input	66.3	68.9	68.7	72.5	74.5	77.5	77.3	82.8	79.1	82.1	81.9	88.5	82.1	84.5	84.2	90.8



SINGLE BEARING MACHINES ONLY						
ADAPTOR	A	B	C	D	COUPLING DISCS	AN
SAE 1	814,3	751,3	314,3	191,3	SAE 8	61,90
SAE 2	800	737	300	177	SAE 10	53,98
SAE 3	800	737	300	177	SAE 11,5	39,68
SAE 4	800	737	300	177	SAE 14	25,40