

Mecc alte : ژنراتور

Cummins : دیزل

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
125	100	114	91	



موتور دیزل		
Manufacturer	cummins	تولید کننده
Type	6BTA5.9-G5	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	16.5 : 1	نسبت تراکم
Aspiration	Turbocharged	سیستم تنفس
Gross engine power, kWb	91	قدرت نافالص موتور
Combustion air flow, m ³ /sec	3.59	میان هواي احتراق
Mean Piston Speed , m/s	7.2	میانگین سرعت پیستون

ژنراتور

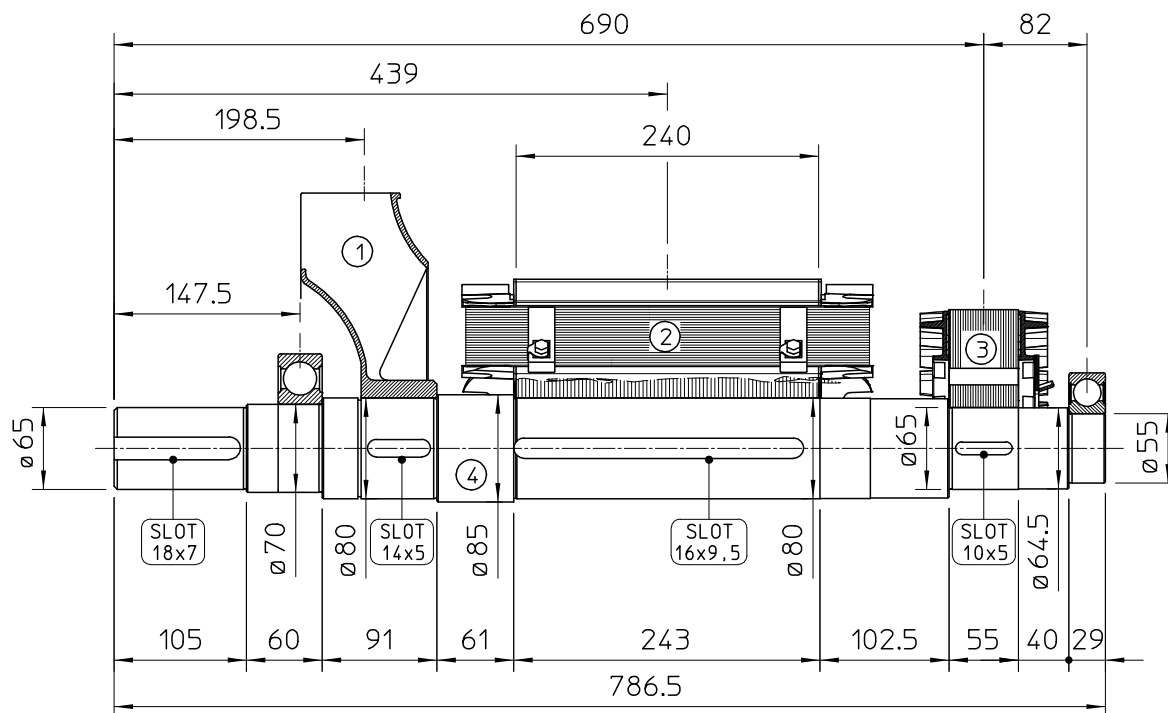
Manufacturer	Mecc alte	تولید کننده
Type	ECP _{34-2S}	تیپ
Standby power at rated voltage ,KVA	114	توان standby در ولتاژ نامی
Efficiency, %	90.7	راندمان
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Speed, Rpm	1500	سرعت
Voltage, V	380	ولتاژ
Stator windings	12 ends	سیم پیچ استاتور
Voltage Regulation, %	± % 1.0	تنظیم ولتاژ
Over speed, Rpm	2250	مداکثر سرعت مجاز
Short circuit ratio	0.41	جریان اتصال کوتاه
Insulation class	H	کلاس عایق
Protection class	IP ₂₃	کلاس حفاظتی
Rotor	with damping cage	روتور

Electrical Characteristics										
Frequency		Hz	50				60			
Voltage (series star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	105	105	105	85	115	126	126	126
		kW	84	84	84	68	92	101	101	101
Rated power class F		kVA	95	95	95	77	104	114	114	114
		kW	76	76	76	61,6	83,2	91,2	91,2	91,2
Regulation with DSR			±1% with any power factor and speed variations between -5% +30%							
Insulation class			H							
Execution			Brushless							
Stator winding			12 ends							
Rotor			with damping cage							
Efficiencies class H	4/4	%	92,1	92,2	91,9	91,7	93,1	93,6	93,7	93,8
(see graph. for details)	3/4	%	92,2	92,5	92,4	92,1	93,6	93,8	93,9	94,1
	2/4	%	90,6	90,7	90,7	90,5	92	92,1	92,2	92,3
	1/4	%	87,2	87	86,8	86,8	88,2	88,2	88,2	88
Reactances (f. l.cl. F)										
	Xd	%	254,8	230	213,7	153,9	280,8	273,7	250,4	230
	Xd'	%	19,5	17,6	16,4	11,8	21,5	20,9	19,2	17,6
	Xd''	%	6,3	5,7	5,3	3,8	7,0	6,8	6,2	5,7
	Xq	%	165,8	149,6	139,0	100,1	182,7	178,0	162,9	149,6
	Xq'	%	165,8	149,6	139,0	100,1	182,7	178,0	162,9	149,6
	Xq''	%	34,6	31,2	29,0	20,9	38,1	37,1	34,0	31,2
	X ₂	%	20,5	18,5	17,2	12,4	22,6	22,0	20,1	18,5
	X ₀	%	3,9	3,5	3,3	2,3	4,3	4,2	3,8	3,5
Short Circuit Ratio	Kcc		0,41	0,47	0,61	0,90	0,32	0,35	0,41	0,47
Time Constants	Td'	sec.	0,0393							
	Td''	sec.	0,0055							
	Tdo'	sec.	1,70							
	Tα	sec.	0,0146							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,5	0,6	0,8	1,1	0,2	0,3	0,4	0,5
Excitation at full load	Amp.		2	2,2	2,3	2,6	1,7	1,9	2	2,2
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20 °C)	Ω	0,02								
Rotor Winding Resistance (20 °C)	Ω	2,951								
Exciter Resistance (20 °C)	Ω	Rotor : 0,410				Stator : 15,28				
Heat dissipation at f.l.cl.H	W	7205	7106	7404	6155	6818	6892	6777	6663	
Telephone Interference		THF < 2%					TIF < 40			
Radio interference		EN61000-6-3, EN61000-6-2. For others standards apply to factory								
Waveform Distors.(THD) at f. load	LL/LN %	1,8 / 1,9								
Waveform Distors.(THD) at no load	LL/LN %	2,8 / 2,9								
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6314.2RS							
NDE bearing			6311.2RS							
Weight of wound stator assembly	kg		126							
Weight of wound rotor assembly	kg		81							
Weight of complete generator	kg		409							
Maximun overspeed	rpm		2250							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		5,1							
Cooling air requirement	m³/min		19,3				23			
Inertia Constant (H)	sec.		0,111				0,133			
Noise level at 1m/7m	dB(A)		79 / 65				83 / 69			

All technical data are to be considered as a reference and they can be modified without any notice.

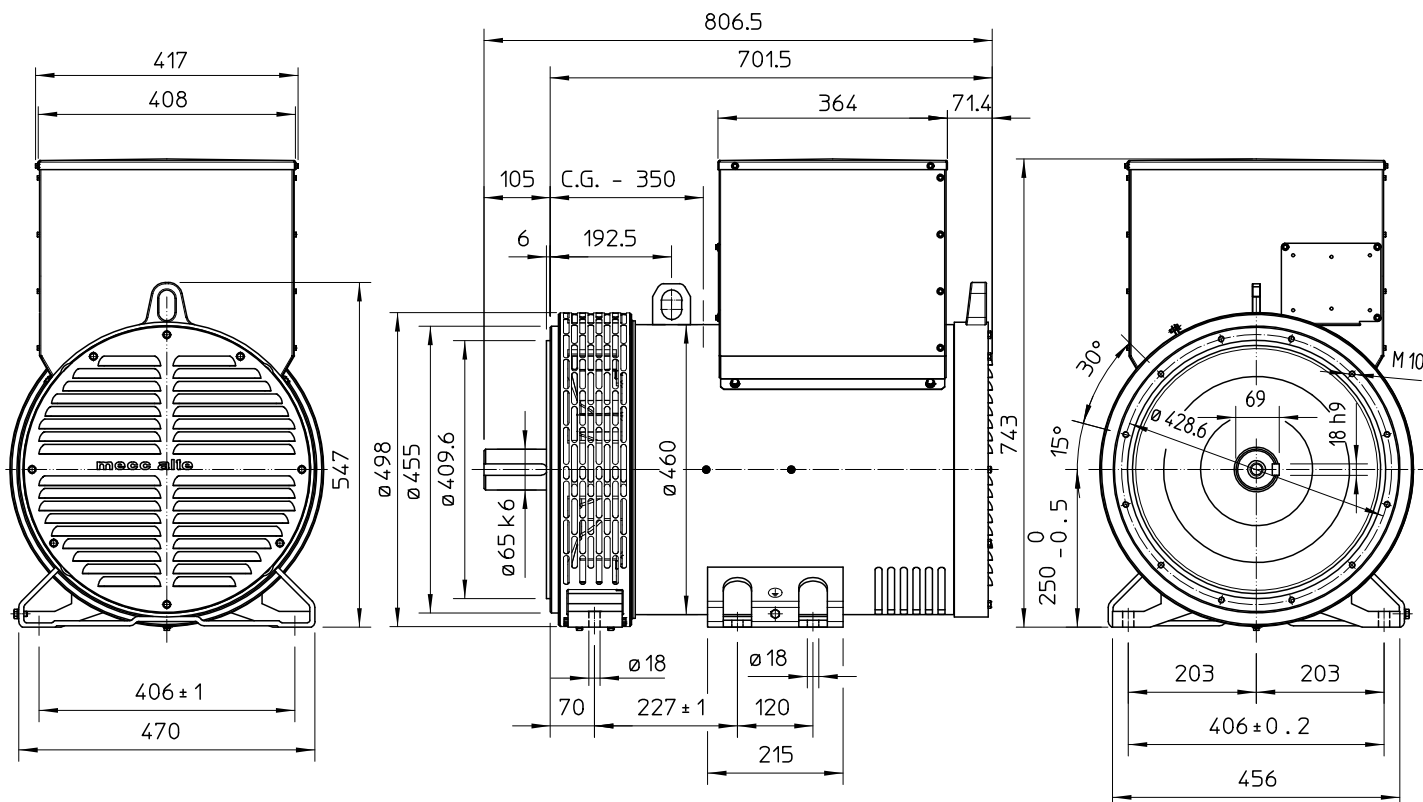
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TWO BEARING MOMENTS OF INERTIA



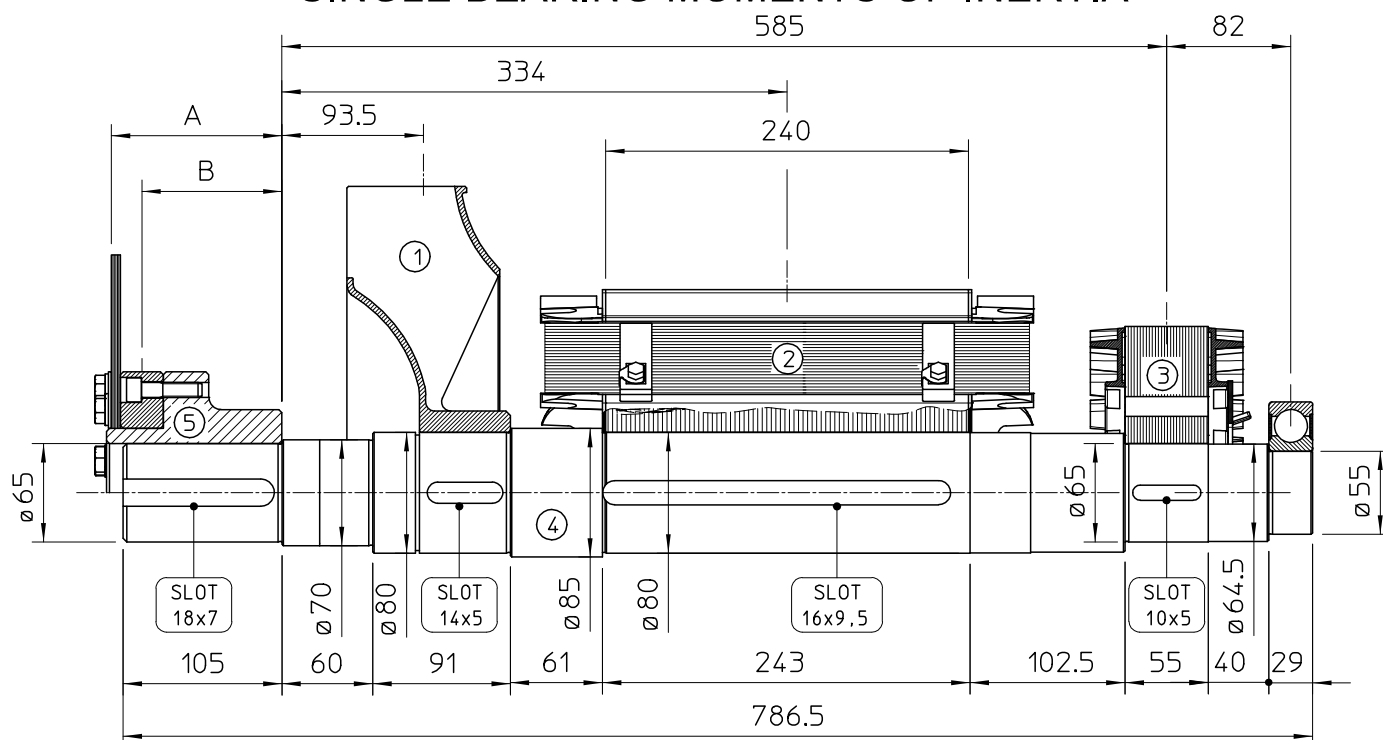
POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	3.6	0.0451
2	MAIN ROTOR	83.7	0.7539
3	EX. ROTOR	14.5	0.0874
4	SHAFT	26.8	0.0196
TOTAL		128.6	0.906

TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

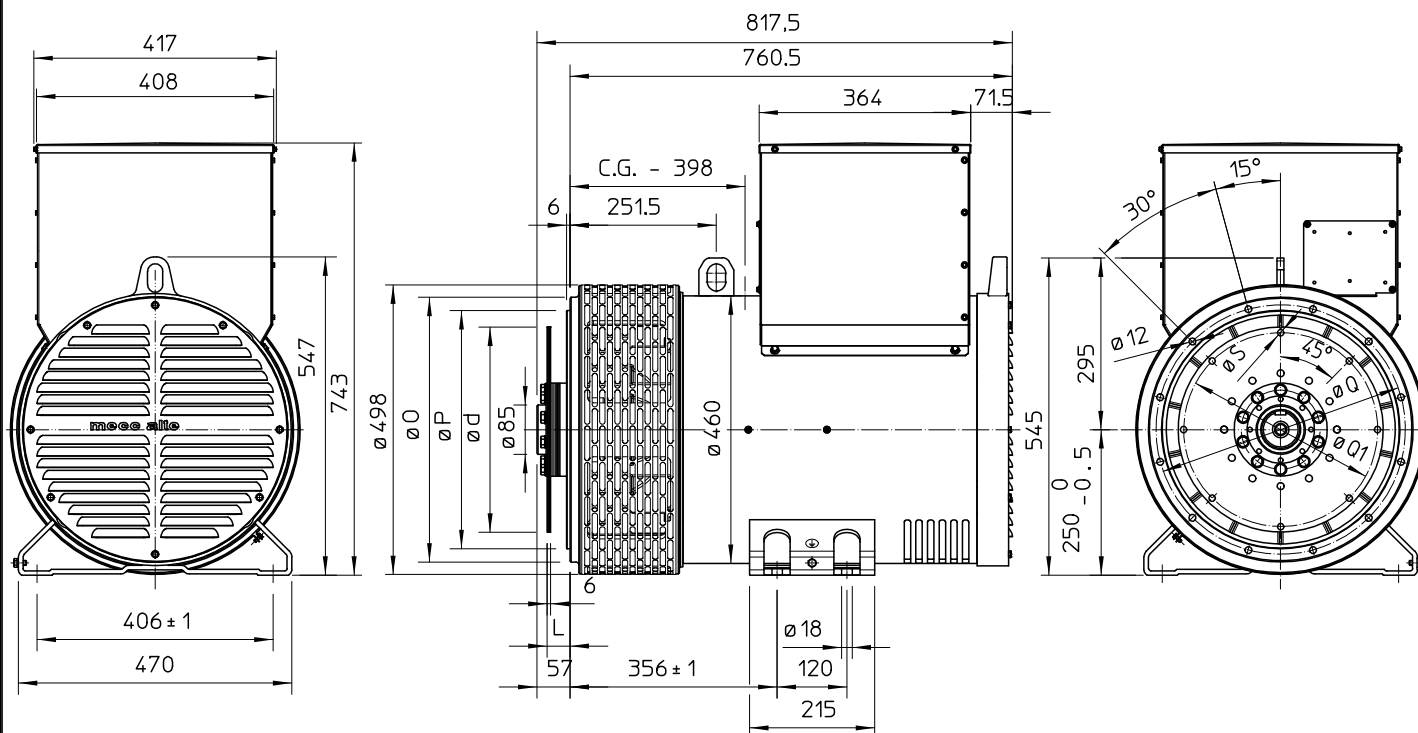
SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	3.6	0.0451
2	MAIN ROTOR	83.7	0.7539
3	EX. ROTOR	14.5	0.0874
4	SHAFT	26.8	0.0196
TOTAL		128.6	0.906

SAE N°	5	SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm ²	
10	112.8	35.6	13.5	0.0770	
11 1/2	98.6	71.5	12.4	0.0956	
14	84.4	68.6	14.8	0.2360	

SINGLE BEARING DIMENSIONS

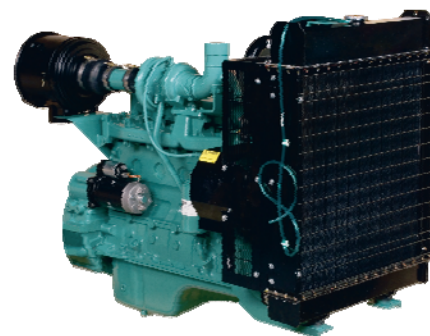


SAE N.	FLANGIA / FLANGE BRIDE / FLANSCH		
	O	P	Q
3	451	409.6	428.6
2	489	447.7	466.7
1	552	511.2	530.2

SAE N.	GIUNTI A DISCHI / DISC COUPLING DISQUE DE MONOPALIER / SCHEIBENKUPPLUNG			
	L	d	Q1	S
10	53.8	314.32	295.27	11
11 1/2	39.6	352.42	333.37	11
14	25.4	466.72	438.15	14

C.G.= GRAVITY CENTER

6BTA5.9-G5



> Specification sheet

Our energy working for you.™



Description

The B5.9 engine has established an unrivalled reputation for reliability, incorporating features designed to maximise engine integration within OEM installation.

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 ISO 9002 or TS16949.

Features

Single Poly Vee belt drive for fan, alternator and water pump, with self-tensioning idler for minimum maintenance.

Inline-type Bosch A-Series pump operates at high injection pressures for cleaner combustion and lower emissions.

Spin-on fuel filter and full-flow lubricating oil filter.

Top mounted Holset HX35 turbocharger for increased power, fuel economy, and lower smoke and noise levels.

Coolpac Integrated Design - Products are supplied complete with cooling package and air cleaner kit 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
102/137	93/125	82/110	98/131	90/121	79/106	88	110	80	100	64	80

General Engine Data

Type	4 cycle, in-line, Turbo Charged
Bore mm	102 mm (4.02 in.)
Stroke mm	120 mm (4.72 in.)
Displacement Litre	5.9 litre (359.0 in. ³)
Cylinder Block	Cast iron, 6 cylinder
Battery Charging Alternator	55 amps
Starting Voltage	12 volt, 55 Amp negative ground
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)	16.4
Flywheel Dimensions	3/11.5

Coolpac Performance Data

Cooling System Design	Jacket Water After Cooled
Coolant Ratio	50% ethylene glycol; 50% water
Coolant Capacity (l)	19.75
Limiting Ambient Temp.**	56.0
Fan Power(hp)	10.7
Cooling System Air Flow (m ³ /s)**	3.59
Air Cleaner Type (Normal Duty)	Dry replaceable element with restriction indicator

** @ 13 mm H₂O at 100% Prime

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
Engine only*	1065	698	981	402
Coolpac	1526	817	1262	505

*Fan to flywheel

Fuel Consumption 1500 (50 Hz)

%	kWm	BHP	L/ph	US gal/ph
Standby Power				
100	102	137	27	7.2
Prime Power				
100	93	125	25	6.6
75	70	94	18	4.8
50	47	63	12	3.3
25	23	31	7	1.9
Continuous Power				
100	82	110	21	5.6

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