

ژنراتور : Meccalte

موتور دیزل : IVECO

Standby		Prime		دیزل ژنراتور
KW	KVA	KW	KVA	
159.5	127.6	145	116	



موتور دیزل

Manufacturer	IVECO	تولید کننده
Type	TM2A	تیپ
Number of cylinders	6	تعداد سیلندر ها
Cylinder arrangement	inline	آرایش سیلندر ها
Displacement , Liters	6.7	جا به جایی
Bore × Stroke , mm	104X132	قطر سیلندر × کورس پیستون

ژنراتور

Manufacturer	Mecc Alte	تولید کننده
Type	ECP _{34-2L}	تیپ
Frequency, Hz	50	فرکانس
Speed, Rpm	1500	سرعت
Voltage, V	380	ولتاژ
Excitation	Brushless	سیستم تمریک
Stator windings	12	سیم پیچ استاتور
Rotor	with damping cage	روتور
Over speed, Rpm	2250	مداکثر سرعت مجاز
Short circuit current	0,40	جریان اتصال کوتاه
Insulation class	H	کلاس عایق
Protection class	IP 21	کلاس حفاظتی
Cooling air volume,m ³ / sec	19,3	دبی هوای فنک کننده

TM2A

125 kW@1500 rpm

140 kW@1800 rpm

EU 2002/88/EC

Specifications

Thermodynamic cycle		Diesel 4 stroke	
Air intake		TAA	
Arrangement		6, in line	
Bore x Stroke	mm	104 x 132	
Total displacement	l	6.7	
Valves per cylinder		2	
Injection system		direct	
Speed governor		mechanical	
Cooling system		liquid (water + 50% Paraflu11)	
Flywheel housing/flywheel	type	SAE3 / 11" 1/2	
Flywheel rotation		CCW	
Lube oil specifications		ACEA E3-E5	
Lube oil consumption		<0.1% of fuel consumption	
Fuel specifications		EN 590	
Oil and filters intervals for replacement	hours	600	
Fuel consumption at:	rpm	1500	1800
	100% load l/h (g/kWh)	29.0 (207.0)	35.0 (218.0)
	80% load l/h (g/kWh)	24.0 (212.6)	29.0 (223.7)
	50% load l/h (g/kWh)	16.0 (223.8)	19.0 (240.4)
Coolant capacity: engine only	l	~10.5	
engine+radiator	l	~25.5	
ATB (without canopy)	°C	61	
No remote cooling radiator allowed			
Lube oil total system capacity including pipes, filters etc.	l	~17.2	
Electrical system		12Vcc	
Starting batteries: recommended capacity	Ah	1x100	
Discharge current (EN 50342)	A	800	
Cold starting: without air preheating	°C	-10	
with air preheating	°C	-25	

Performances

Ratings ¹		1500 rpm		1800 rpm	
		PRIME	STAND-BY	PRIME	STAND-BY
Rated Output ²	kWm	114	125	127	140

1) Ratings in accordance with ISO 8528. For duty at temperature over 40°C and/or altitude over 1000 meters must be considered a power derating factor. Contact the FPT sales organization.

2) Net power at flywheel available after 50 hours running with a $\pm 3\%$ tolerance.

PRIME POWER: The prime power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER: The stand-by power is the maximum power available for a period of 500 hours/year with a mean load factor of 90% of the declared stand-by power. No kind of overloads is permissible for this use.

CONTINUOUS POWER: Contact the FPT sales organization.

Standard configuration

FPT engine N67 TM2A equipped with:

- Mounted radiator incorporating air-to-air charge cooler
- Mounted belt driven pusher fan
- Fan guard
- Mounted air filter with replaceable cartridges
- Fuel filter
- Primary fuel filter/water separator
- Replaceable oil filter
- Front engine mounting brackets
- Flywheel housing SAE3 and flywheel 11" 1/2
- Re-directable exhaust gas elbow
- Recirculed oil breather system
- Oil dipstick
- HWT and LOP sensors
- 12Vdc electrical system
- User's handbook

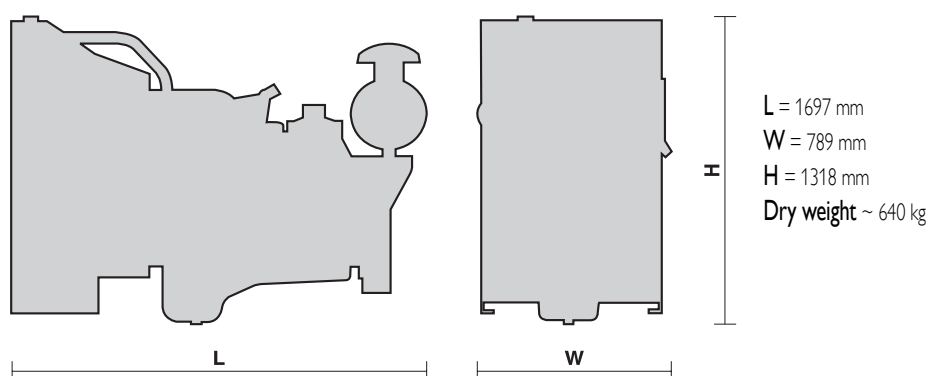
THE ENGINE IS SUPPLIED WITHOUT LIQUIDS

Optional equipment:

On request the engine can be supplied with:

- Oil drain pump
- Oil drain valve
- 120/230 Volt water jacket heater
- WT and OP sensors for gauges
- Low water level sensor
- Turbo and exhaust gas guards
- Exhaust gas flexible joint
- 24Vdc electrical system

Overall dimensions:

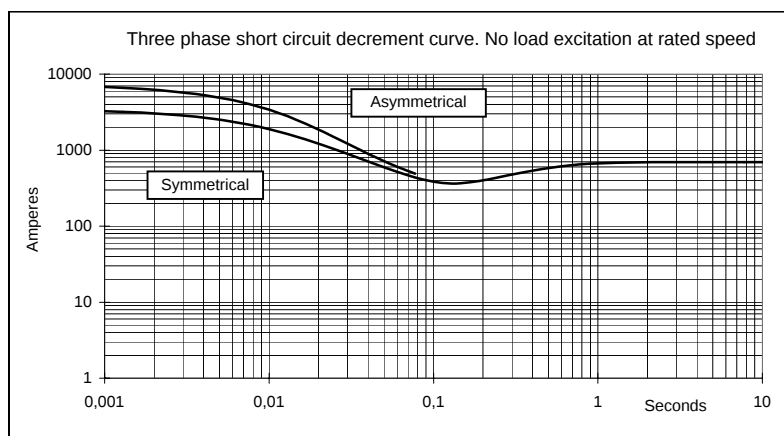
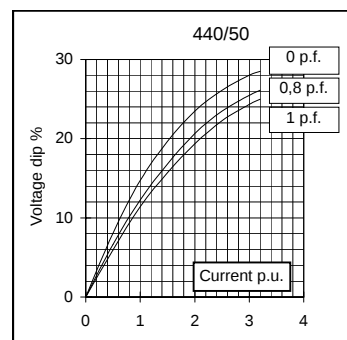
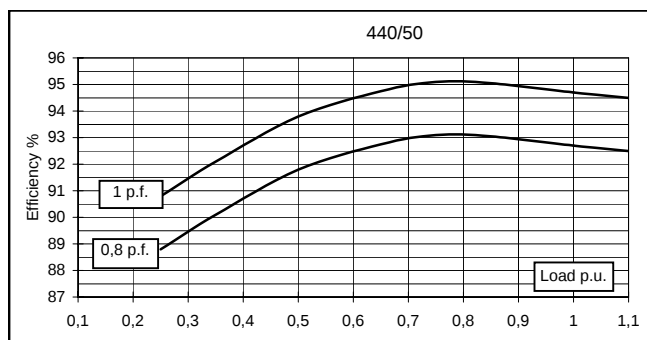
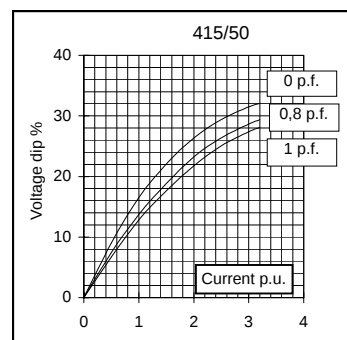
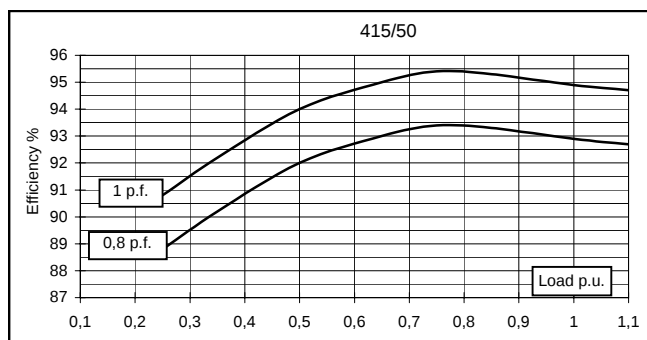
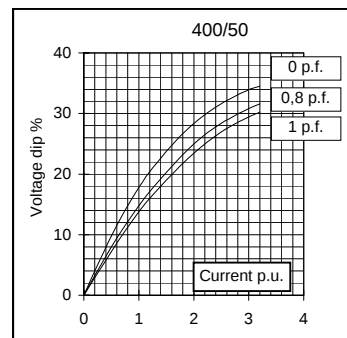
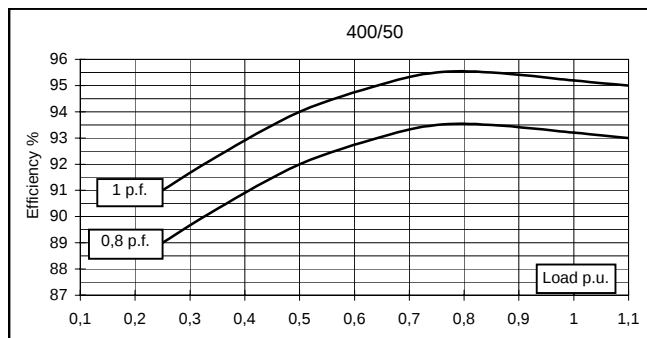
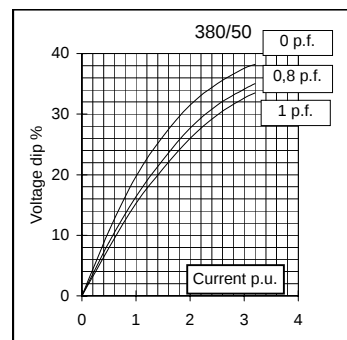
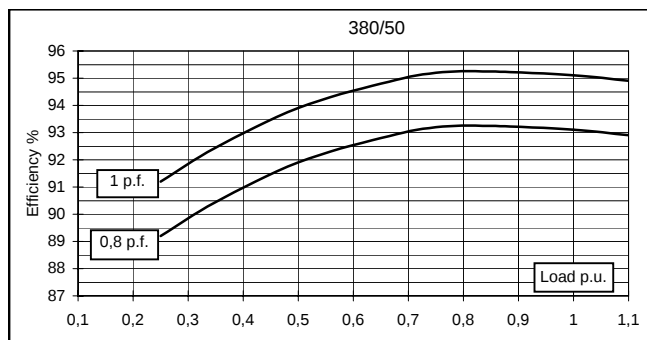


Electrical Characteristics										
Frequency		Hz	50				60			
Voltage (series star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	150	150	150	125	150	170	180	180
		kW	120	120	120	100	120	136	144	144
Rated power class F		kVA	136	136	136	113	132	150	163	163
		kW	109	109	109	90,4	106	120	130	130
Regulation with		SR7/2	±1,5 % 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	%	93,1	93,2	92,9	92,7	94,3	94,8	94,9	95
(see graph. for details)	3/4	%	93,2	93,5	93,4	93,1	94,7	94,9	95	95,2
	2/4	%	91,9	92	92	91,8	93,5	93,6	93,7	93,8
	1/4	%	89,2	89	88,8	88,8	90,2	90,2	90,2	90
Reactances (f. l.cl. F)	Xd	%	265,9	240	223,0	165,3	267,6	269,8	261,3	240
	Xd'	%	16,4	14,8	13,7	10,2	16,5	16,6	16,1	14,8
	Xd''	%	6,9	6,2	5,8	4,3	6,9	7,0	6,8	6,2
	Xq	%	135,3	122,1	113,4	84,1	136,1	137,2	132,9	122,1
	Xq'	%	135,3	122,1	113,4	84,1	136,1	137,2	132,9	122,1
	Xq''	%	29,4	26,5	24,6	18,3	29,5	29,8	28,9	26,5
	X ₂	%	18,3	16,5	15,3	11,4	18,4	18,5	18,0	16,5
	X ₀	%	2,8	2,5	2,3	1,7	2,8	2,8	2,7	2,5
Short Circuit Ratio	Kcc		0,40	0,48	0,55	0,91	0,30	0,35	0,40	0,48
Time Constants	Td'	sec.	0,0401							
	Td''	sec.	0,0095							
	Tdo'	sec.	1,90							
	Tα	sec.	0,017							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,3	0,4	0,5	0,7	0,2	0,3	0,4	0,5
Excitation at full load	Amp.		2,3	2,4	2,5	2,7	2,1	2,3	2,4	2,6
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20°C)	Ω	0,015								
Rotor Winding Resistance (20°C)	Ω	3,577								
Exciter Resistance (20 °C)	Ω	Rotor : 0,410				Stator : 15,28				
Heat dissipation at f.l.cl.H	W	8894	8755	9171	7875	7253	7460	7739	7579	
Telephone Interference		THF < 2%				TIF < 40				
Radio interference		EN50081-1; EN50082-1; VDE0875K. For others standards apply to factory								
Waveform Distors.(THD) at f. load	LL/LN %	1,7 / 1,8								
Waveform Distors.(THD) at no load	LL/LN %	2,3 / 2,4								
Mechanical characteristics										
Protection		IP 21 (other protection on request)								
DE bearing		6314.2RS								
NDE bearing		6311.2RS								
Weight of wound stator assembly	kg	168								
Weight of wound rotor assembly	kg	106								
Weight of complete generator	kg	491								
Maximun overspeed	rpm	2250								
Unbalanced magnetic pull at f.l.cl.F	kN/mm	5,6								
Cooling air requirement	m³/min	19,3				23				
Inertia Constant (H)	sec.	0,098				0,117				
Noise level at 1m/7m	dB(A)	79 / 65				83 / 69				

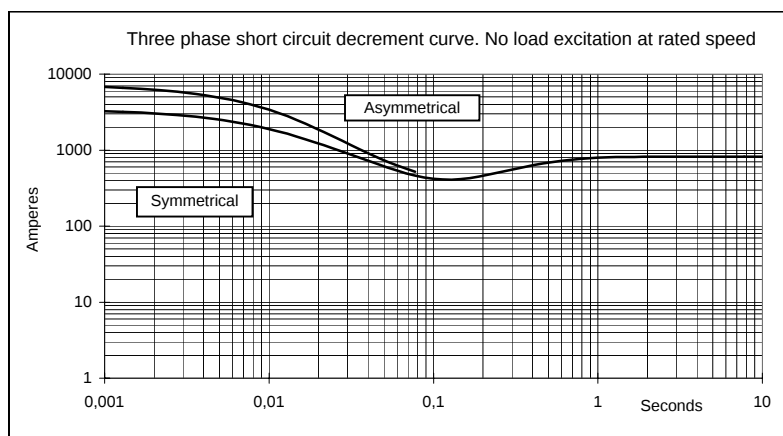
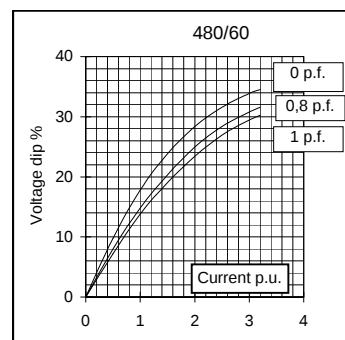
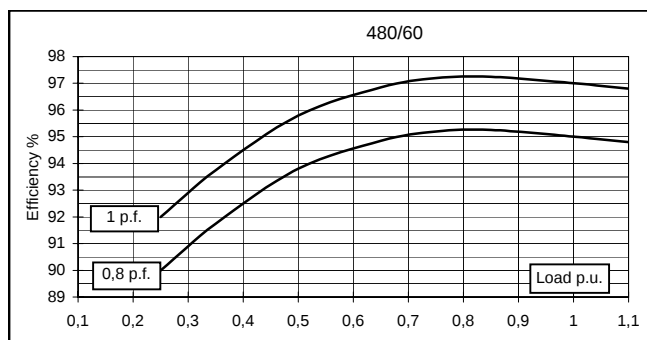
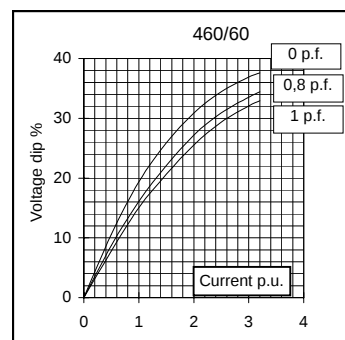
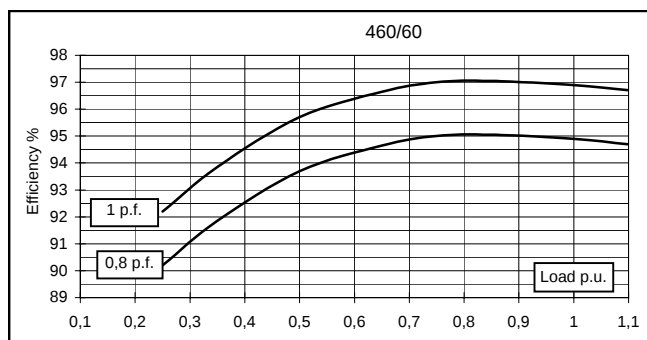
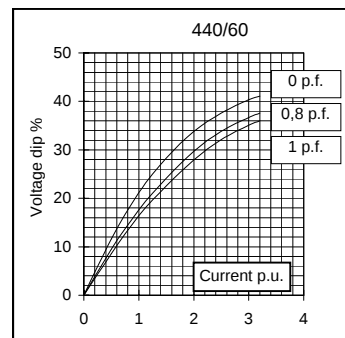
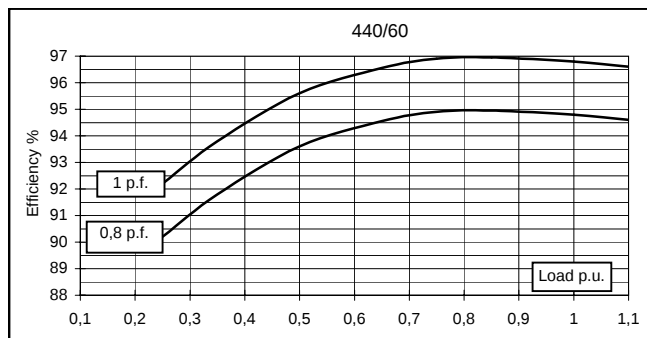
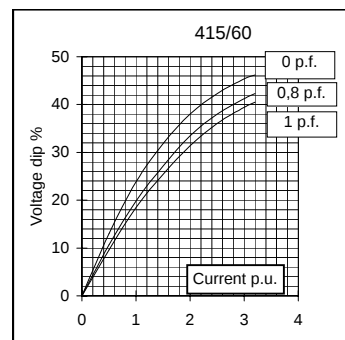
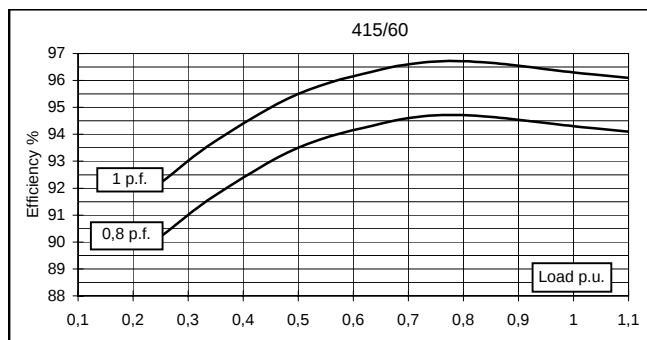
All technical data are to be considered as a reference and they can be modified without any notice

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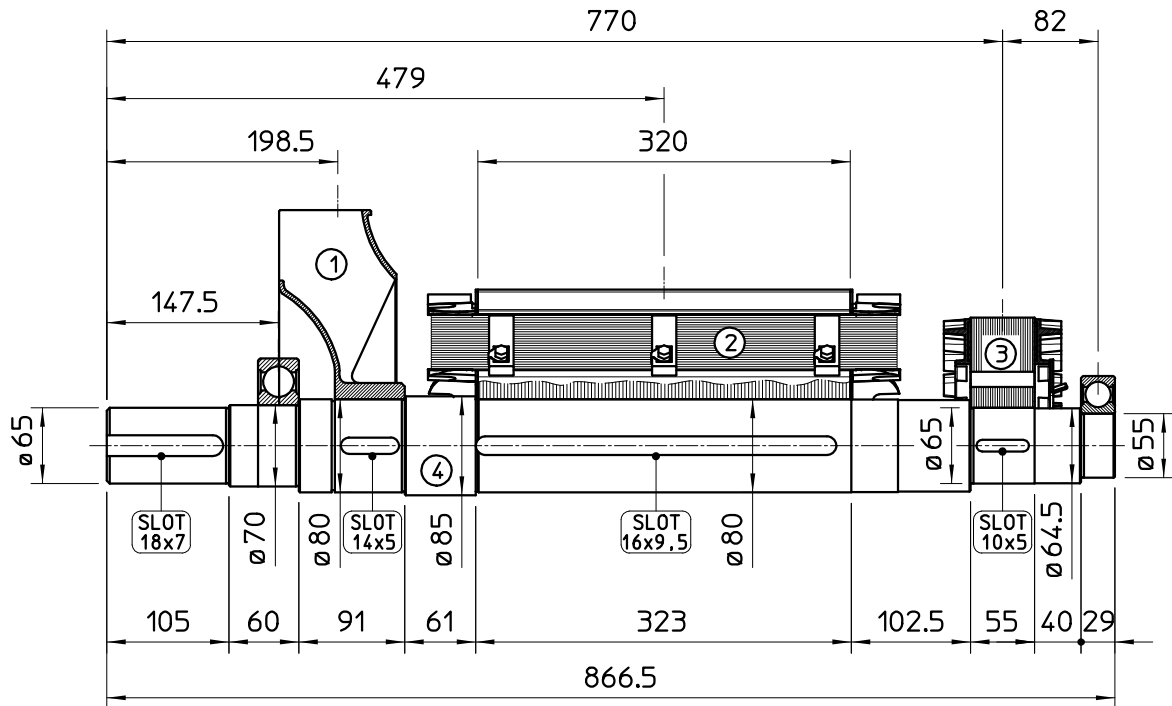
50 Hz



60 Hz

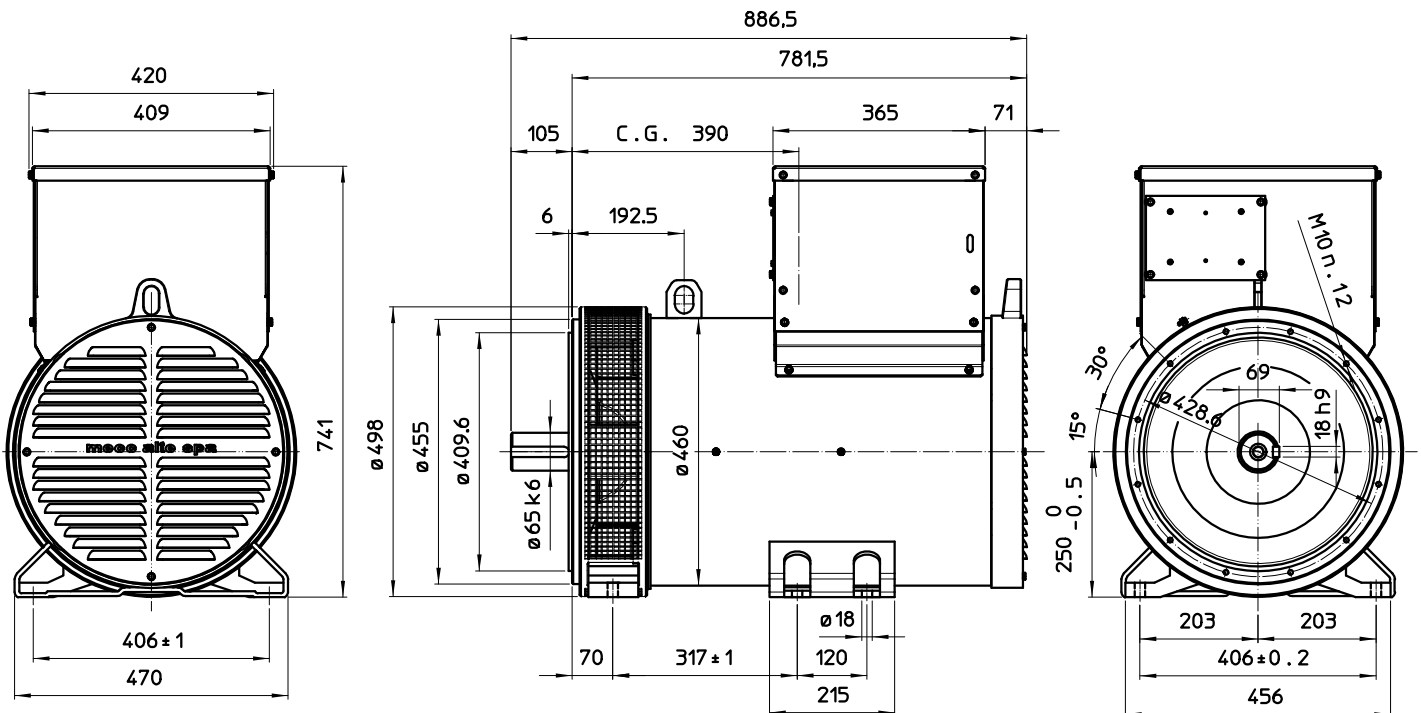


TWO BEARING MOMENTS OF INERTIA

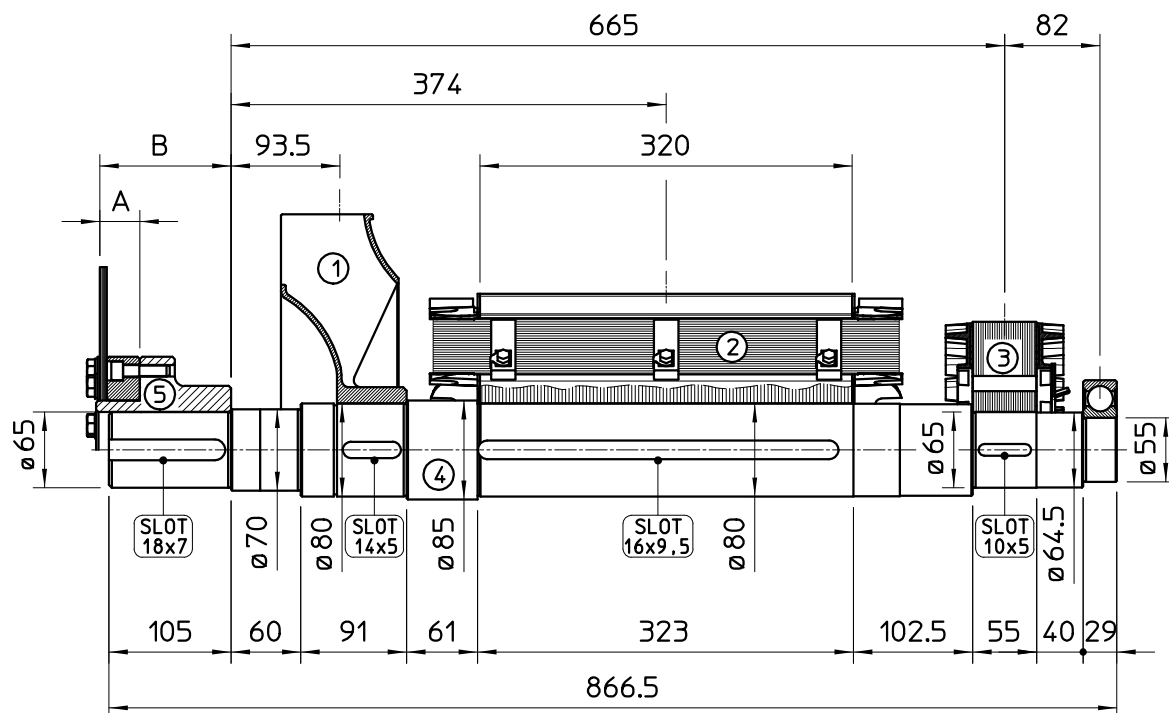


COMPONENT	WEIGHT kg	J kgm ²
1 FAN	3,3	0,0451
2 MAIN ROTOR	106	1,0320
3 EX. ROTOR	14,5	0,0874
4 SHAFT	29,6	0,0218
TOTAL	153,4	1,1863

TWO BEARING DIMENSIONS



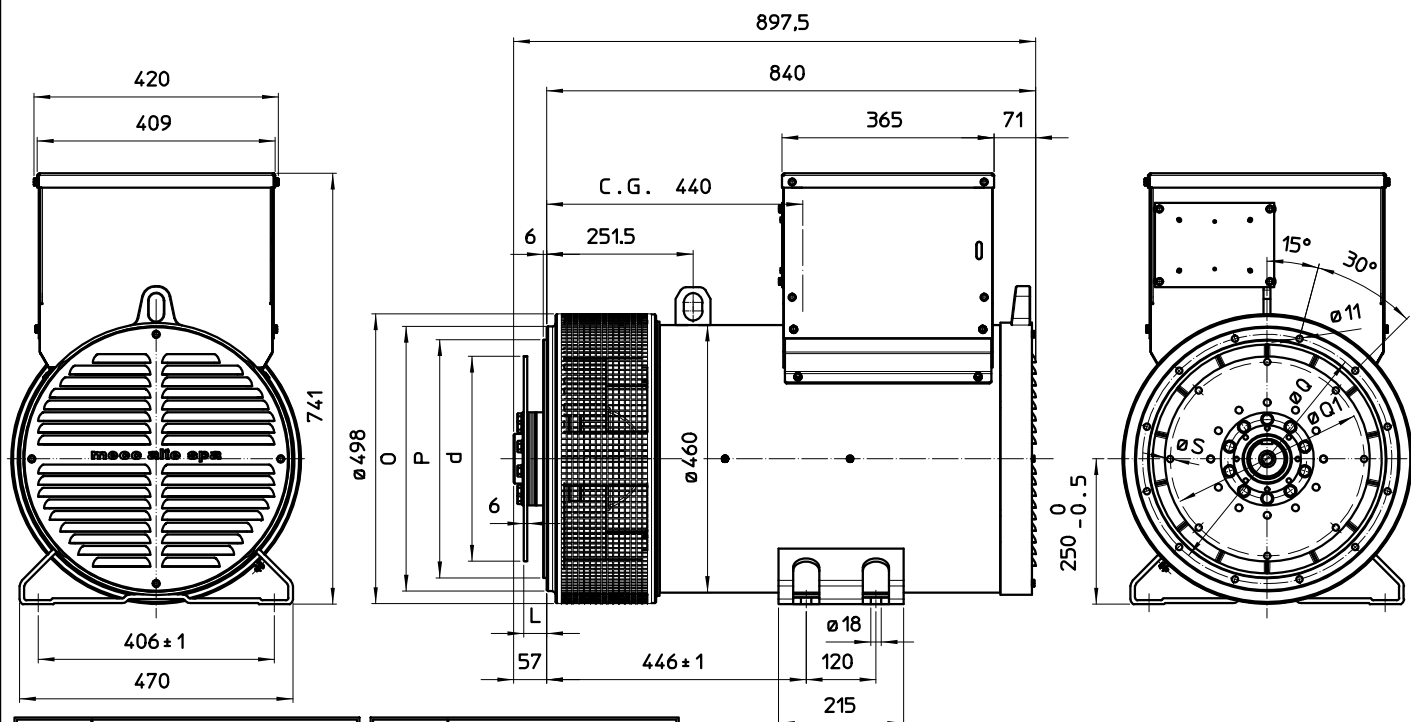
SINGLE BEARING MOMENTS OF INERTIA



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3	EX. ROTOR	14,5	0,0874
4	SHAFT	29,6	0,0218
	TOTAL	153,4	1,1863

SAE N°	5	SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT Kg	J kgm ²	
10	34,4	112,8	13,5	0,0770	
11,5	20	98,6	12,5	0,0956	
14	6	84,4	14,8	0,2360	

SINGLE BEARING DIMENSIONS



SAE N.	GIUNTI A DISCHI DISC COUPLING DISQUE DE MONOPALIER SCHEIBENKUPPLUNG					
	L	d	Q1	N. fori	S	
10	53,8	314,32	295,27	8	11	
11 1/2	39,6	352,42	333,37	8	11	
14	25,4	466,72	438,15	8	14	

SAE N.	FLANGIA/FLANGE BRIDE/FLANSCH			
	O	P	Q	N. fori
3	451	409,6	428,6	12
2	489	447,7	466,7	12
1	552	511,2	530,2	12

C.G.= GRAVITY CENTER