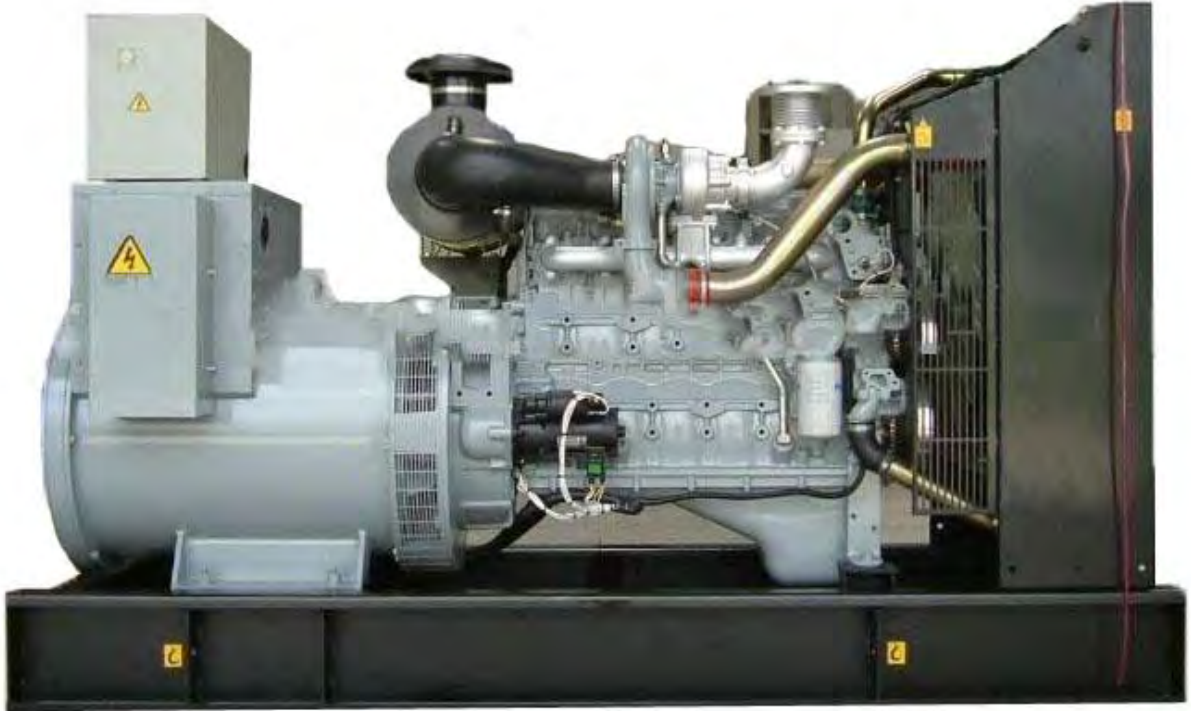


**ژنراتور : MeccAlte**

**موتور دیزل : Iveco**

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
440	-	400	320	



# C13 TE3A

387 kW@1500 rpm

398 kW@1800 rpm

EU 2002/88/EC

## Specifications

Thermodynamic cycle	Diesel 4 stroke		
Air intake	TAA		
Arrangement	6, in line		
Bore x Stroke	mm	135 x 150	
Total displacement	l	12.9	
Valves per cylinder	4		
Injection system	electronic unit injector		
Speed governor	electronic		
Cooling system	liquid (water + 50% Paraflu11)		
Flywheel housing/flywheel	type	SAE1 / 14"	
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)	87.5 (208)	91.8 (214.3)
	80% load l/h (g/kWh)	72.5 (203.6)	82.5 (222.1)
	50% load l/h (g/kWh)	48.6 (205)	55 (222.1)
Coolant capacity: engine only	l	~19.5	
	engine+radiator	l	~67
ATB (without canopy)	°C	50	
<b>No remote cooling radiator allowed</b>			
Lube oil total system capacity including pipes, filters etc.	l	~35	
Electrical system	24Vcc		
Starting batteries: recommended capacity	Ah	2x185	
Discharge current (EN 50342)	A	1200	
Cold starting: without air preheating	°C	-10	
	with air preheating	°C	-25

## Performances

Ratings <sup>1</sup>	kWm	1500 rpm		1800 rpm	
		PRIME	STAND-BY	PRIME	STAND-BY
Rated Output <sup>2</sup>		352	387	362	398

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 ±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 C13 TE3A equipped with:

- Mounted radiator incorporating air-to-air charge cooler
- Front radiator guard
- Oil drain pump
- Mounted belt driven pusher fan
- Fan guard
- Mounted air filter with replaceable cartridges
- Fuel filter
- Primary fuel filter / water separator
- Replaceable oil filter
- Electronic engine control unit, pump injector unit with wiring loom and sensors
- Box relays
- WT and OP sensors for gauges
- HWT and LOP sensors
- Front engine mounting brackets
- Flywheel housing SAE1 and flywheel 14"
- Re-directable exhaust gas elbow
- Recircled oil breather system
- Oil dipstick
- 24 Vdc electrical system
- User's handbook

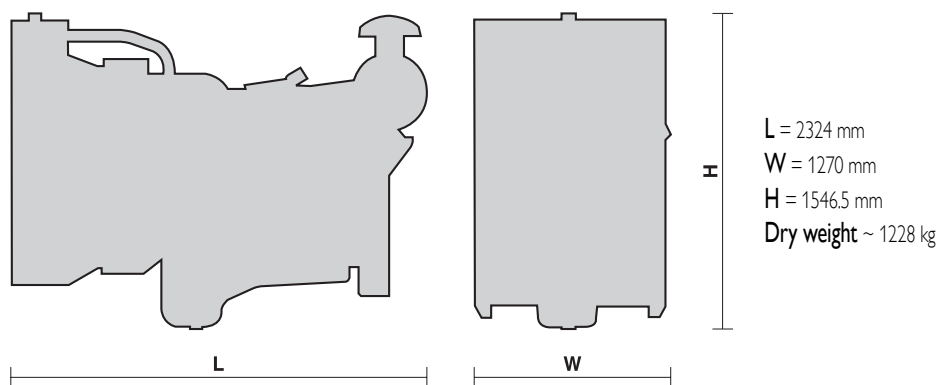
THE ENGINE IS SUPPLIED WITHOUT LIQUIDS

## Optional equipment:

On request the engine can be supplied with:

- 230 Volt water jacket heater
- Turbo and exhaust gas guards
- Exhaust gas flexible joint
- Low water level sensors

## Overall dimensions:

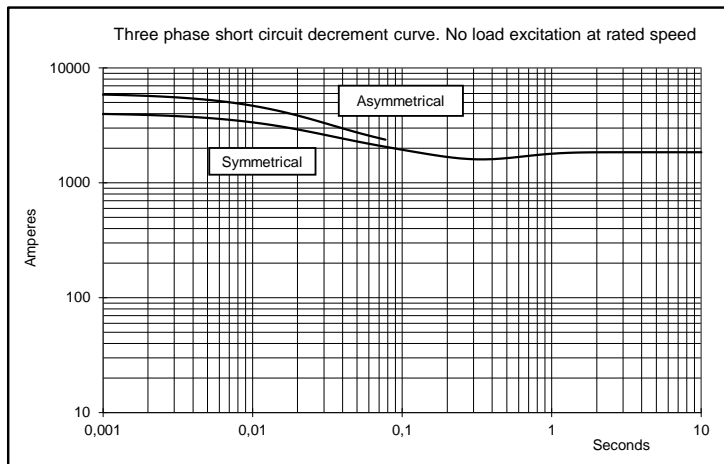
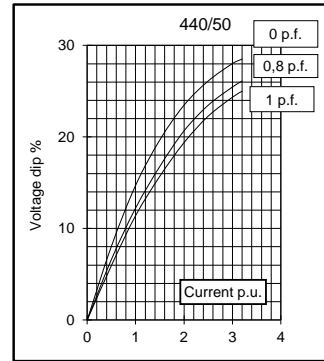
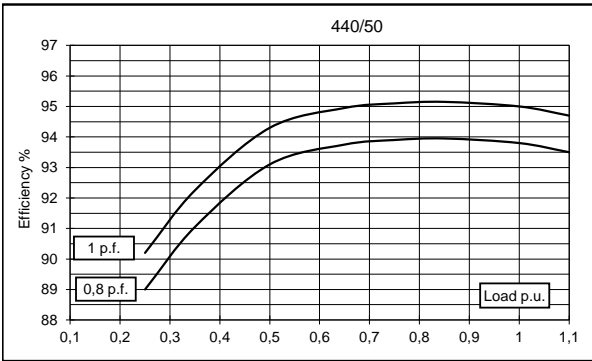
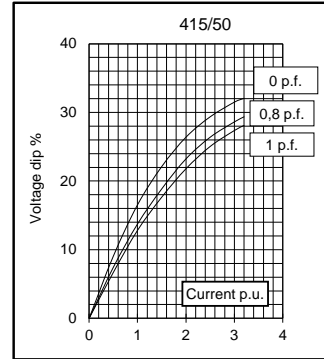
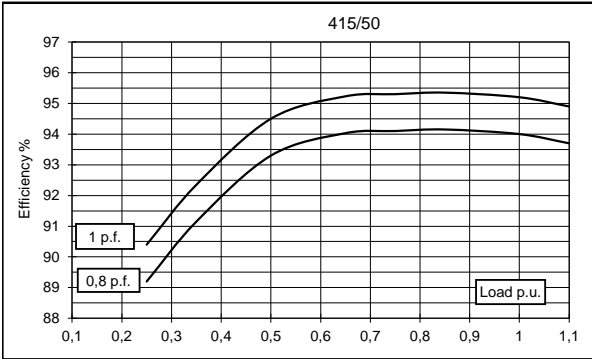
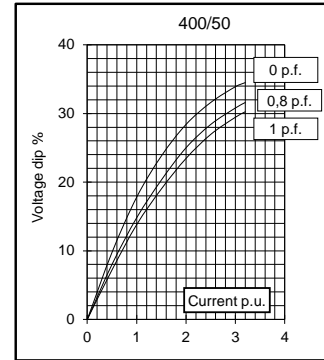
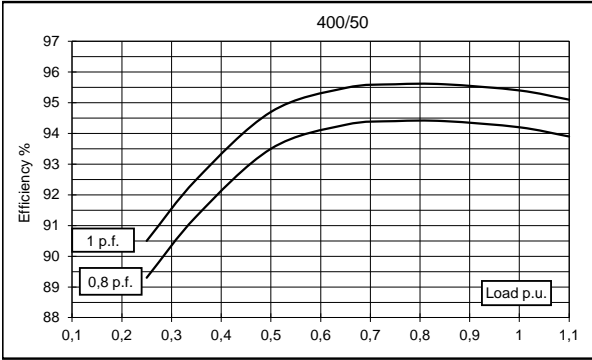
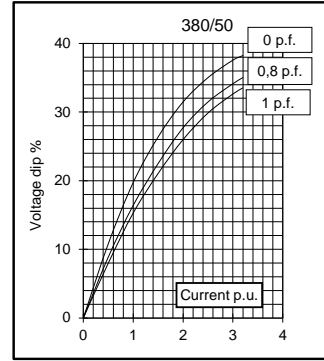
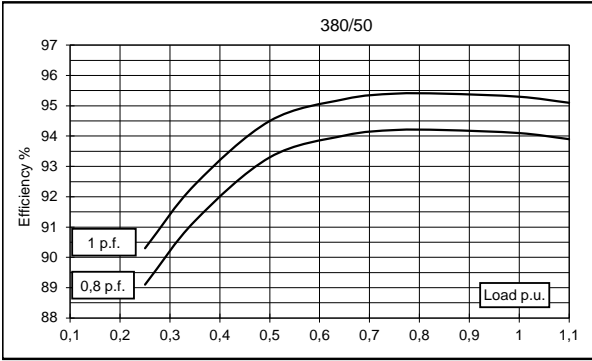


<b>Electrical Characteristics</b>										
Frequency	Hz	50				60				
Voltage (parallel star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	400	400	400	370	420	450	480	480	
	kW	320	320	320	296	336	360	384	384	
Rated power class F	kVA	370	370	370	342	383	410	440	440	
	kW	296	296	296	274	306	328	352	352	
Regulation with	DER1	±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	%	94,1	94,2	94	93,8	94,4	94,8	95,1	95,2
(see graph. for details)	3/4	%	94,2	94,4	94,1	93,9	94,5	94,9	95,2	95,3
	2/4	%	93,3	93,5	93,3	93,1	93,3	93,8	94	94,2
	1/4	%	89,1	89,3	89,2	89	90,4	90,6	90,8	91
Reactances (f. l.cl. F)	Xd	%	333	277	185	115	406	365	333	277
	Xd'	%	27,4	22,5	20,4	18,6	29,7	28,5	27,4	22,5
	Xd''	%	16,2	14,2	12,1	10,4	19,2	18,1	16,2	14,2
	Xq	%	121	112	104	97	145	131	121	112
	Xq'	%	121	112	104	97	145	131	121	112
	Xq''	%	29,4	28,2	26,7	24,2	31,7	30,6	29,4	28,2
	X <sub>2</sub>	%	19,7	18,5	17,2	15,6	21,8	20,4	19,7	18,5
	X <sub>0</sub>	%	3,7	3,5	3,1	2,7	4,1	3,9	3,7	3,5
Short Circuit Ratio	Kcc		0,30	0,36	0,55	0,90	0,24	0,27	0,30	0,36
Time Constants	Td'	sec.	0,16							
	Td''	sec.	0,019							
	Tdo'	sec.	2,55							
	Tα	sec.	0,017							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,7	0,8	0,9	1,1	0,5	0,6	0,7	0,8
Excitation at full load	Amp.		3,4	3,6	3,7	3,8	3,1	3,3	3,4	3,5
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)	Ω		0,018							
Rotor Winding Resistance (20°C)	Ω		4,488							
Exciter Resistance (20 °C)	Ω		Rotor : 0,317				Stator : 8,85			
Heat dissipation at f.l.cl.H	W		20064	19703	20426	19565	19932	19747	19785	19361
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 %		2,6 / 2,6							
Waveform Distors.(THD) at no load	LL/LN %		2,9 / 2,9							
<b>Mechanical characteristics</b>										
Protection			IP 21 (other protection on request )							
DE bearing			6322							
NDE bearing			6318.2RS							
Weight of wound stator assembly	kg		327							
Weight of wound rotor assembly	kg		211							
Weight of complete generator	kg		1040							
Maximun overspeed	rpm		2250							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		5							
Cooling air requirement	m <sup>3</sup> /min		54				64,8			
Inertia Constant (H)	sec.		0,176				0,212			
Noise level at 1m/7m	dB(A)		94 / 82				98 / 88			

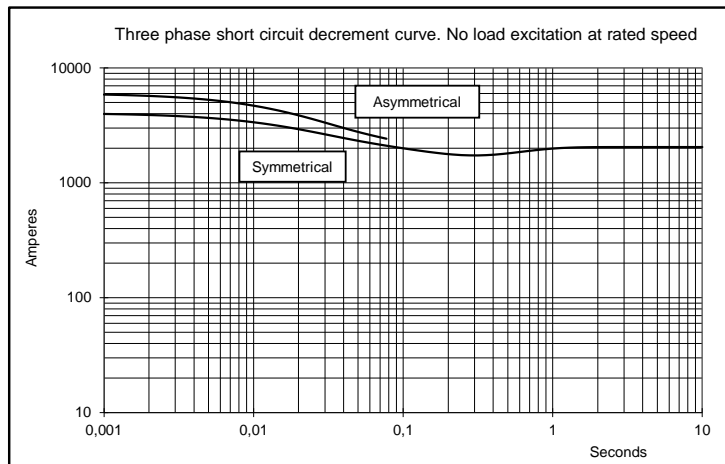
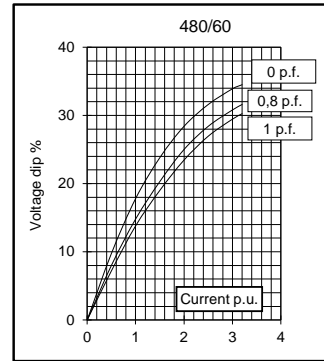
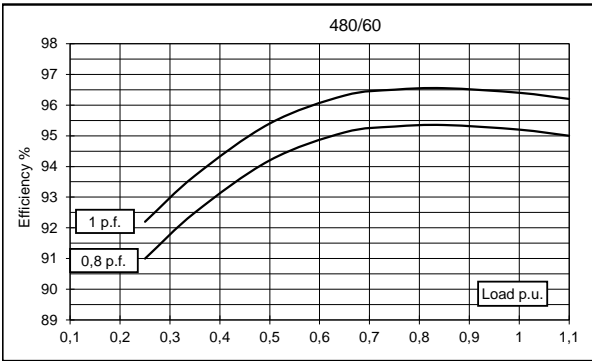
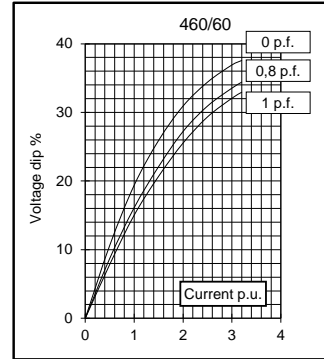
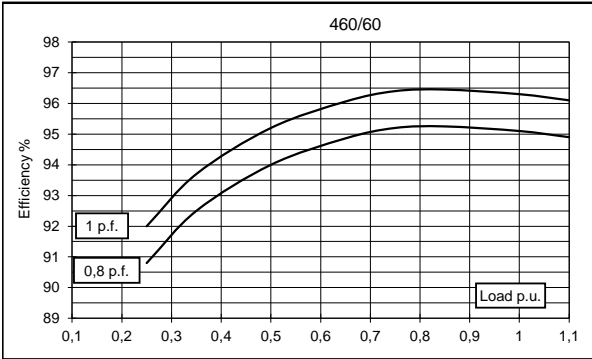
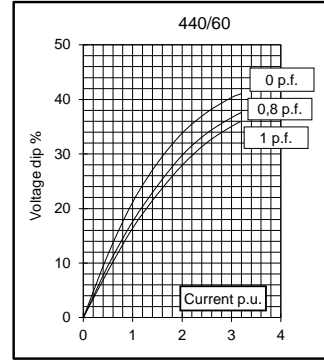
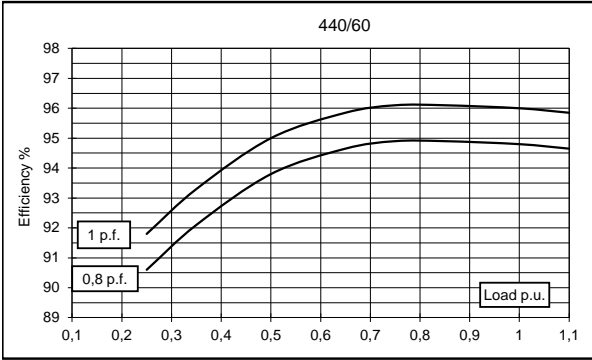
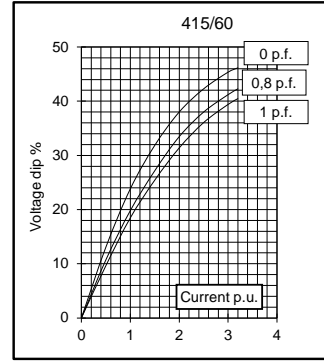
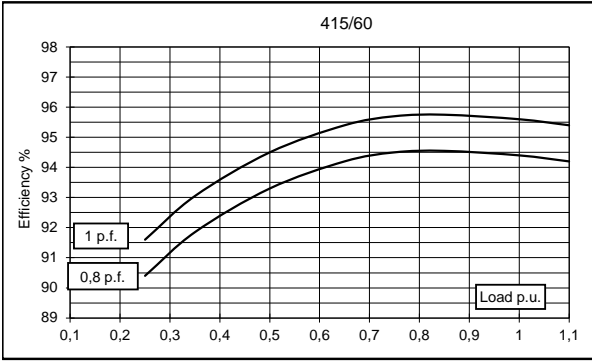
All technical data are to be considered as a reference and they can be modified without any notice.

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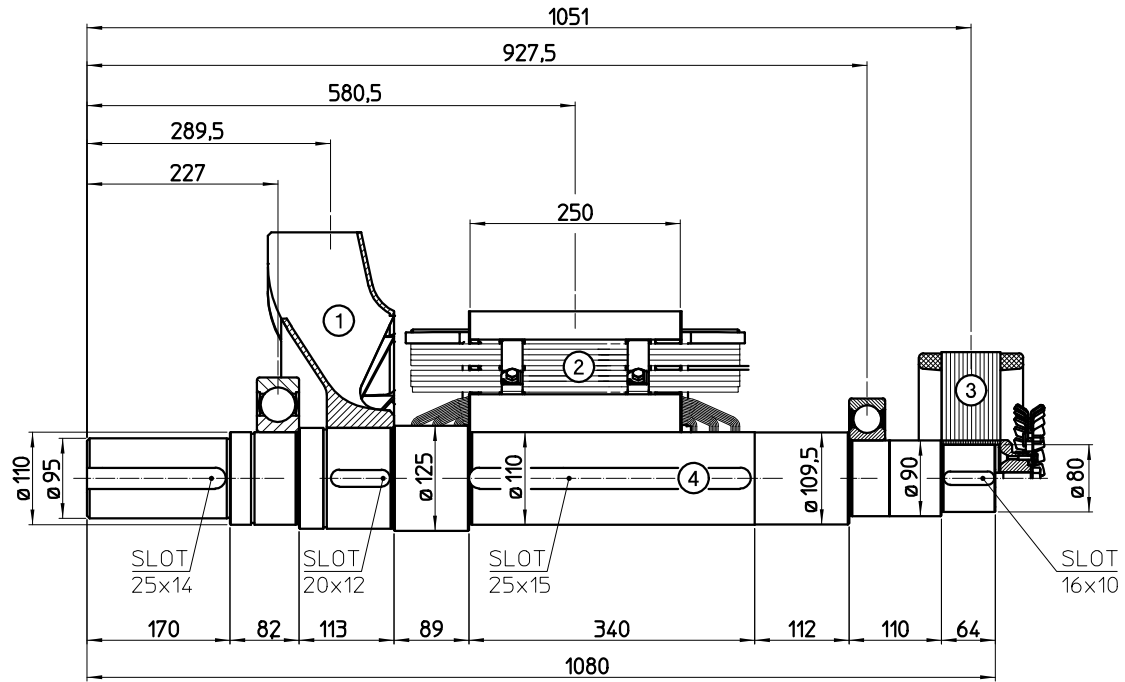
**50 Hz**



**60 Hz**

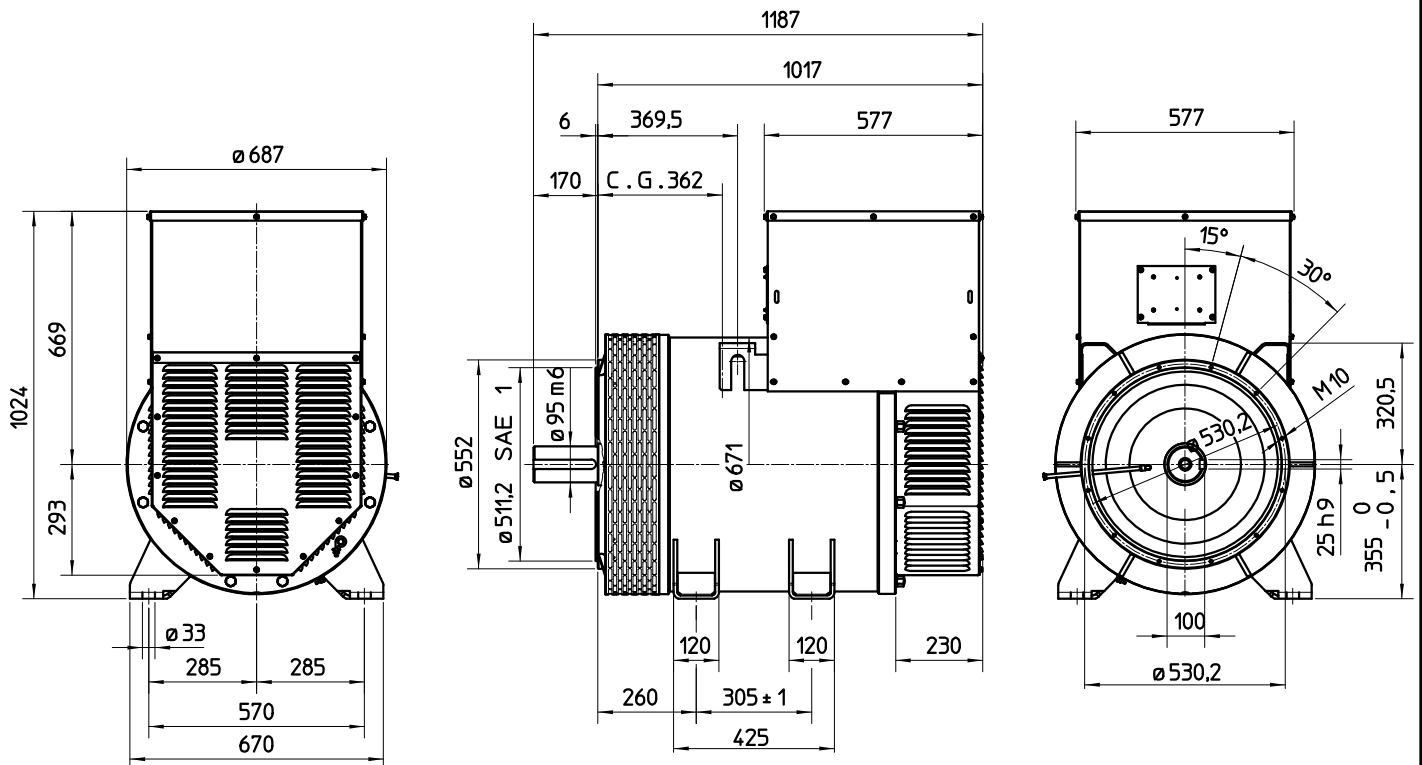


TWO BEARING MOMENTS OF INERTIA

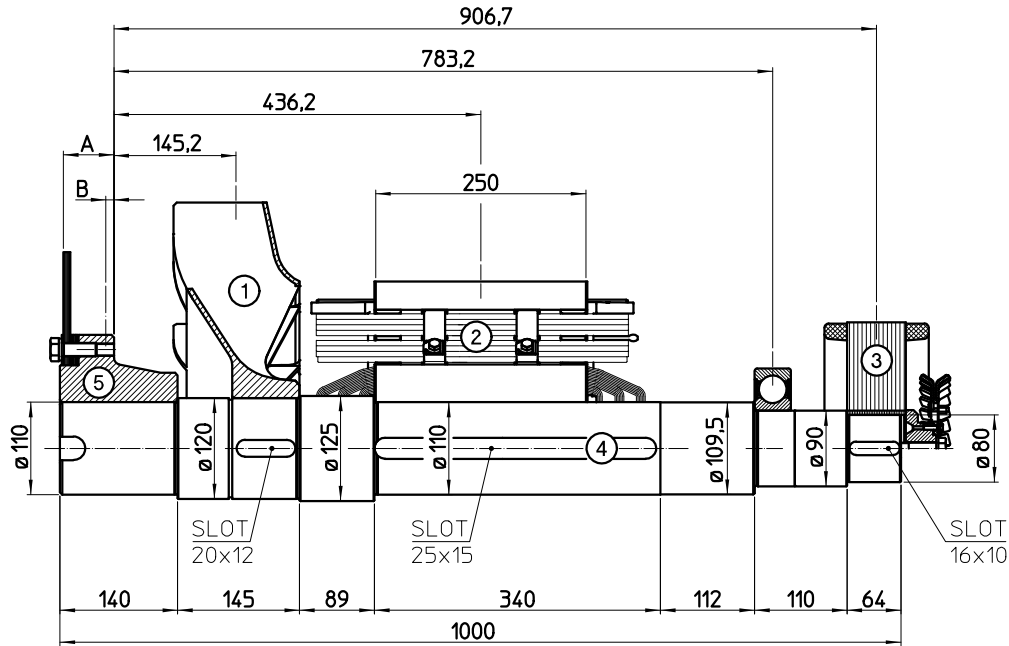


COMPONENT	WEIGHT kg	J kgm <sup>2</sup>
1 FAN	10,2	0,335
2 MAIN ROTOR	211	4,498
3 EX. ROTOR	35	0,562
4 SHAFT	73,6	0,109
TOTAL	329,8	5,504

TWO BEARING DIMENSIONS



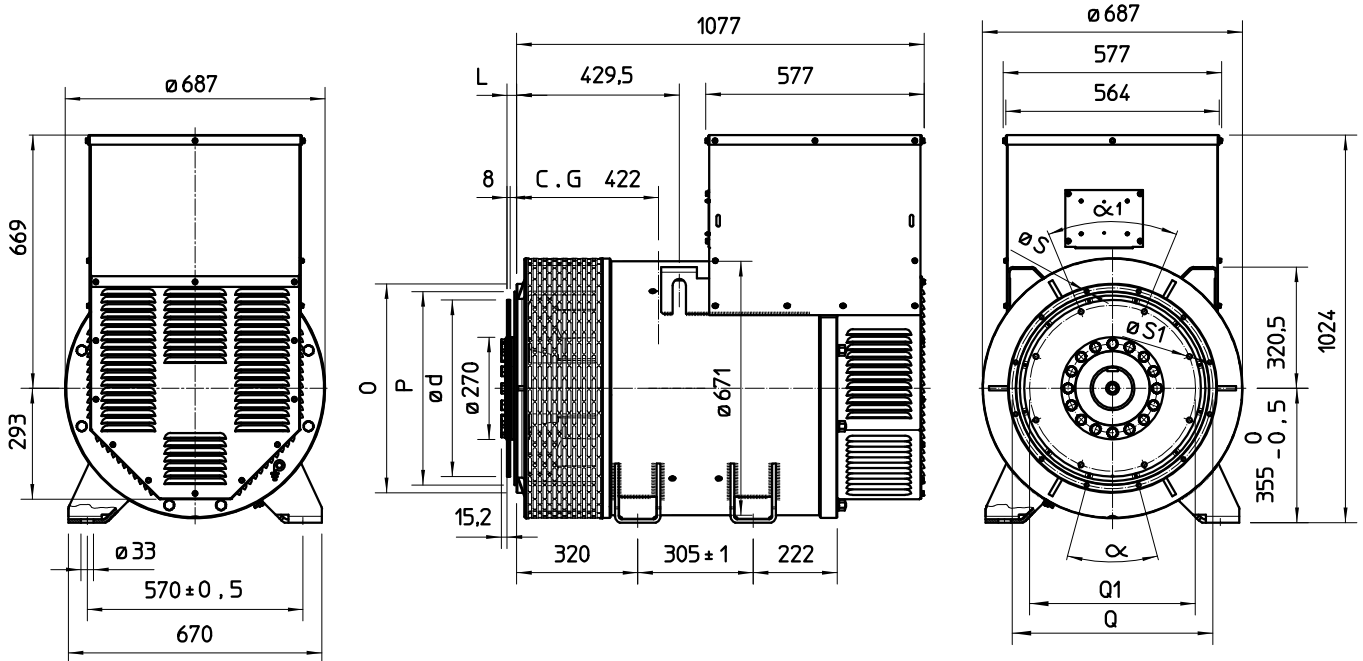
## SINGLE BEARING MOMENTS OF INERTIA



COMPONENT	WEIGHT kg	J kgm <sup>2</sup>
1 FAN	10,2	0,335
2 MAIN ROTOR	211	4,498
3 EX. ROTOR	35	0,562
4 SHAFT	72	0,111
TOTAL	328.2	5.506

Sae No	SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm <sup>2</sup>
14	60	9,6	41,4	0,511
18	50	6,6	45,1	0,858

## SINGLE BEARING DIMENSIONS



SAE N.	FLANGIA / FLANGE BRIDE / FLANSCH					
	O	P	Q	N. FORI	S	α
1	552	511,2	530,2	12	11	30°
1/2	648	584,2	619,1	12	14	30°
0	711	647,7	679,5	16	14	22,5°
00	883	787,4	850,9	16	14	22,5°

VOL. N.	GIUNTI A DISCHI / DISC COUPLING DISQUE DE MONOPALIER / SCHEIBENKUPPLUNG						
	L	d	Q1	N. FORI	S1	α1	
14	25,4	466,72	438,15	8	14	45°	
18	15,7	571,5	542,92	6	17	60°	

C.G.= GRAVITY CENTER