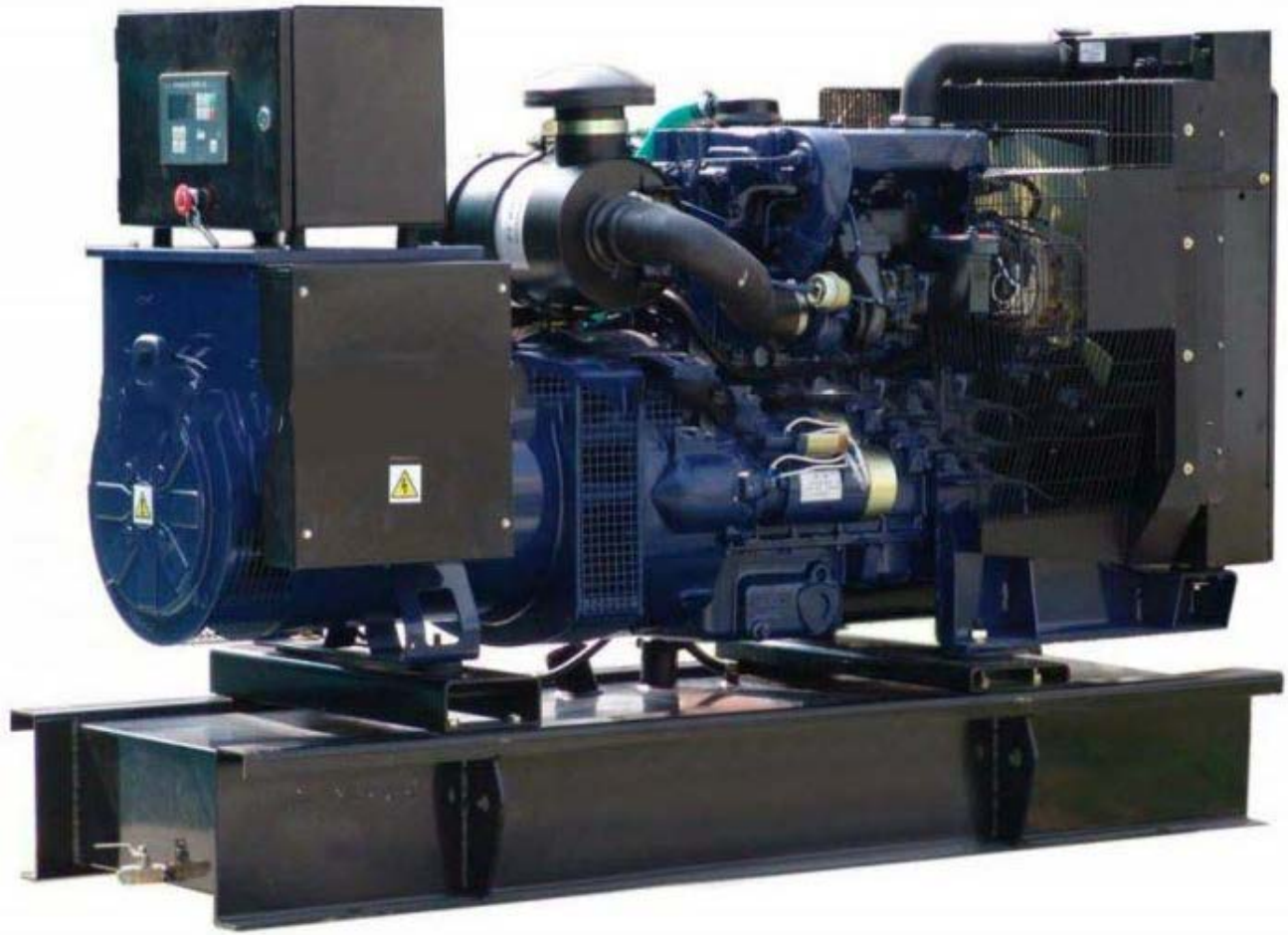


ژنراتور : Mecc Alte

موتور دیزل : Deutz

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
94	75	85	68	



### موتور دیزل

Manufacturer	Deutz	تولید کننده
Type	BF4M1013E	تیپ
Number of cylinders	4	تعداد سیلندر ها
Cylinder arrangement	in-line	آرایش سیلندر ها
Cycle	4 stroke	چرخه
Aspiration	Turbo charged	سیستم تنفس
Bore × Stroke, mm	105X120	قطر سیلندر × کورس پیستون
Displacement, Liters	7.15	جا به جایی
Speed Governor	Mechanical	سرعت گاورنر
Cooling System	LIQUID	سیستم خنک کننده
Frequency	50Hz	فرکانس
Starter Motor	12V	استارتر موتور

### ژنراتور

Manufacturer	Mecc Alte	تولید کننده
Type	ECP34-1S	تیپ
Exciter type	Brushless	نوع کانتر
Power factor	0.8	ضریب قدرت
Voltage	380	ولتاژ
Frequency	50 Hz	فرکانس
Speed, Rpm	1500	سرعت
Insulation class	H	کلاس عایق
Protection class	IP21	کلاس حفاظتی
Excitation	Brushless	سیستم تمریک

**(DEUTZ BF4M1013E)**

**1.500 R.P.M. 50 Hz**

<b>ENGINE</b>	MAKE	MODEL	<b>CONTINUOUS POWER</b> PRP norma ISO 8528-1	<b>85 kVA</b>
	DEUTZ	BF4M1013 E	<b>STAND-BY POWER</b> LTP norma ISO 8528-1	<b>95 kVA</b>
<b>ALTERNATOR</b>	MECC-ALTE	ECP 34-1S/4	<b>400/230 V</b>	

VOLTAGE	HZ	PHASE	COS	PRP KVA/KW	LTP KVA/KW	AMPERAGE A
415/240	50	3	0,8	85,0/68,0	93,5/74,8	130,23
400/230	50	3	0,8	85,0/68,0	93,5/74,8	135,12
380/220	50	3	0,8	85,0/68,0	93,5/74,8	142,23
240/139	50	3	0,8	85,0/68,0	93,5/74,8	225,19
230/133	50	3	0,8	85,0/68,0	93,5/74,8	234,98
220/127	50	3	0,8	85,0/68,0	93,5/74,8	245,66

## ENGINE CHARACTERISTICS/ BF4M1013E

### GENERAL DATA

POWER PRP (kWm)	78.50
POWER LTP (kWm)	82.50
No CYLINDERS	4
CYLINDERS CAPASITY (L)	1.20
DIAMETER PER STROKE (mm)	-
COMPRESSION RATIO	-
COOLING SYSTEM	LIQUID
INJECTION	direct
SUCTION	TURBO
SERIES REGULATOR	Mechanical
FLY WHEEL COUPLING	3 - 11,5"

### LUBRICATION SYSTEM

OIL CAPACITY (L)	11
OIL CONSUMPTION (%)	0,30
MIN. ALARM OIL PRESSURE (BAR)	2,70

### VENTILATION SYSTEM

AIR COOLING FLOW(m <sup>3</sup> /h)	5400
COMBUSTION AIR FLOW (m <sup>3</sup> /h)	285

### ELECTRICAL SYSTEM

VDC (V)	12
BATTERY (Ah)	96

## ALTERNATOR CHARACTERISTICS/ ECP 34-1S/4

### GENERAL DATA

POWER PRP (kVA)	85
POWER LTP (kVA)	93,50
EFFICIENCY ALT. 3/4%	91,90
EFFICIENCY ALT. 4/4%	91,50
No POLES	4
VOLTAGE REGULATOR	DSR
No WIRES	12
INSULATION	H
X <sub>d</sub> (%)	325
X' <sub>d</sub> (%)	22,30
X	7,40
DEGREE OF PROTECTION	IP21

### GENERATOR SET CONSUMPTION

% POWER USED	LITRES / HOUR
50%	10
75%	15
100%	21

### DIMENSIONS (MM)

LENGTH	WIDTH	HEIGHT
2950	1100	1759

### CAPACITIES

FUEL TANK (litres)	220.00
WEIGHT (kg)	1680.00
NOISE LEVEL (dB (A)) 7 m	64



# GENERATOR TYPE ECP 34-1S/4 A

Document : DS272A/1

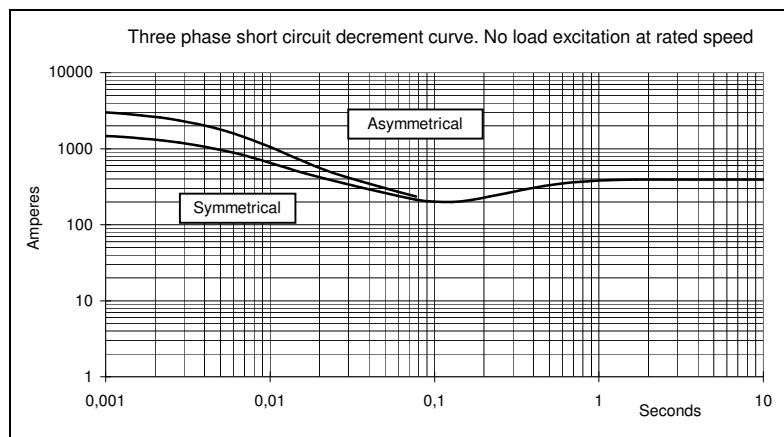
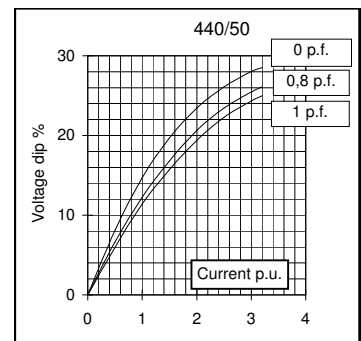
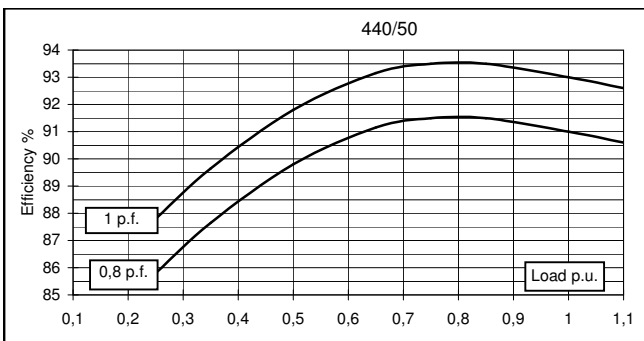
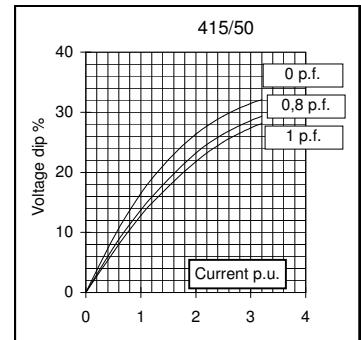
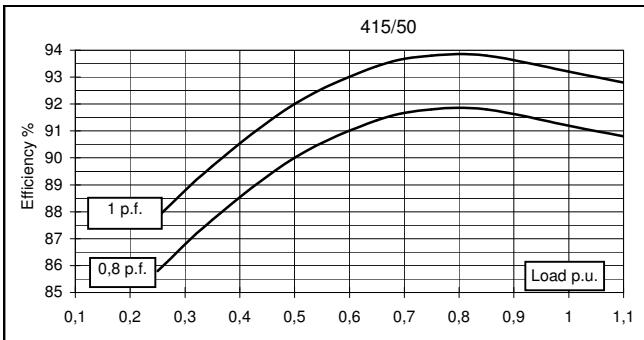
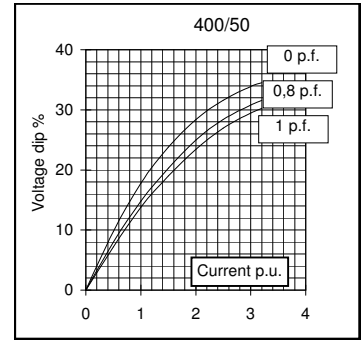
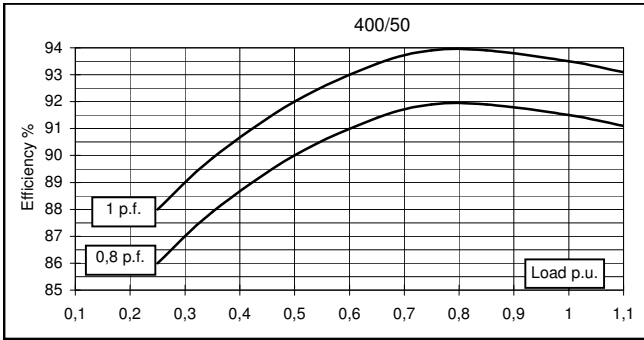
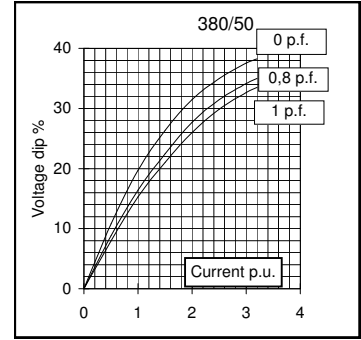
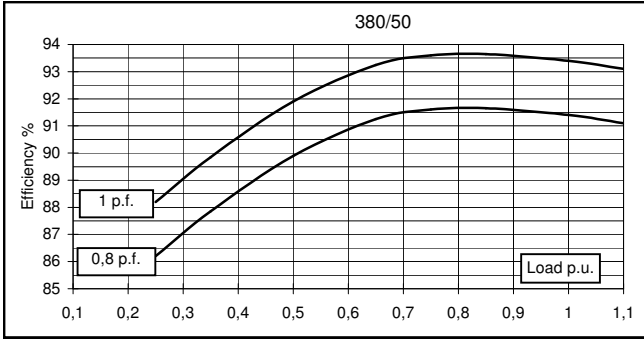
issue 000 date 11/10/2013

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (series star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	85	85	85	70	95	102	102	102	
	kW	68	68	68	56	76	81,6	81,6	81,6	
Rated power class F	kVA	77	77	77	63	85,5	92	92	92	
	kW	61,6	61,6	61,6	50,4	68,4	73,6	73,6	73,6	
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	%	91,4	91,5	91,2	91	92,7	93,2	93,3	93,4
(see graph. for details)	3/4	%	91,6	91,9	91,8	91,5	93,3	93,5	93,6	93,8
	2/4	%	89,9	90	90	89,8	91,5	91,6	91,7	91,8
	1/4	%	86,2	86	85,8	85,8	87,7	87,7	87,7	87,5
Reactances (f. l.cl. F)	Xd	%	360,1	325	301,9	221,2	404,9	386,8	353,9	325
	Xd'	%	24,7	22,3	20,7	15,2	27,8	26,5	24,3	22,3
	Xd''	%	8,2	7,4	6,9	5,0	9,2	8,8	8,1	7,4
	Xq	%	188,9	170,5	158,4	116,0	212,4	202,9	185,6	170,5
	Xq'	%	188,9	170,5	158,4	116,0	212,4	202,9	185,6	170,5
	Xq''	%	32,7	29,5	27,4	20,1	36,8	35,1	32,1	29,5
	X <sub>2</sub>	%	21,3	19,2	17,8	13,1	23,9	22,8	20,9	19,2
	X <sub>0</sub>	%	4,0	3,6	3,3	2,5	4,5	4,3	3,9	3,6
Short Circuit Ratio	Kcc		0,45	0,50	0,62	1,07	0,35	0,40	0,45	0,50
Time Constants	Td'	sec.	0,04192							
	Td''	sec.	0,00575							
	Tdo'	sec.	1,50							
	Tα	sec.	0,0154							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,4	0,5	0,7	1	0,2	0,3	0,4	0,7
Excitation at full load	Amp.		2,2	2,3	2,5	2,8	1,9	2	2,1	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		0,03							
Rotor Winding Resistance (20 °C)	Ω		2,477							
Exciter Resistance (20 °C)	Ω		Rotor : 0,410				Stator : 15,28			
Heat dissipation at f.l.cl.H	W		6398	6317	6561	5538	5985	5954	5860	5766
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 %		1,6 / 1,8							
Waveform Distors.(THD) at no load	LL/LN %		2,9 / 3							
<b>Mechanical characteristics</b>										
Protection			IP 21 ( other protection on request )							
DE bearing			6314.2RS							
NDE bearing			6311.2RS							
Weight of wound stator assembly	kg		97							
Weight of wound rotor assembly	kg		63							
Weight of complete generator	kg		331							
Maximun overspeed	rpm		2250							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		4,9							
Cooling air requirement	m <sup>3</sup> /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.

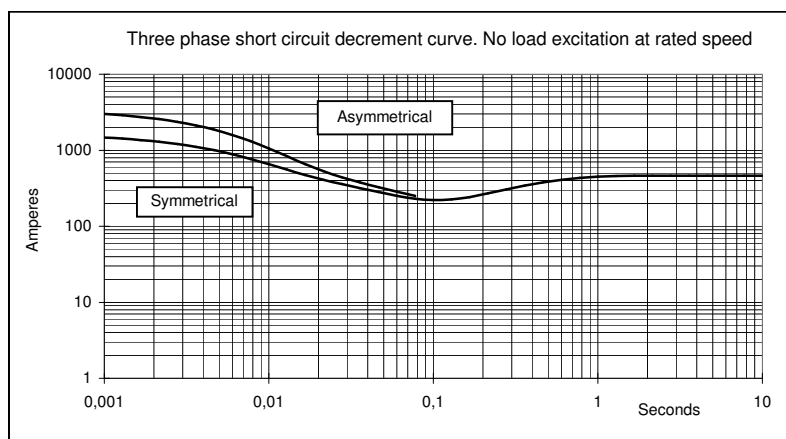
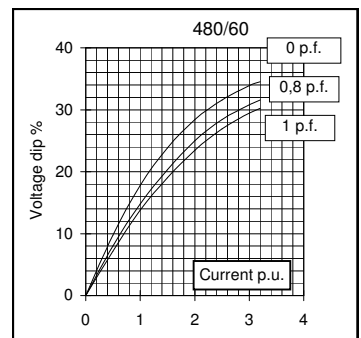
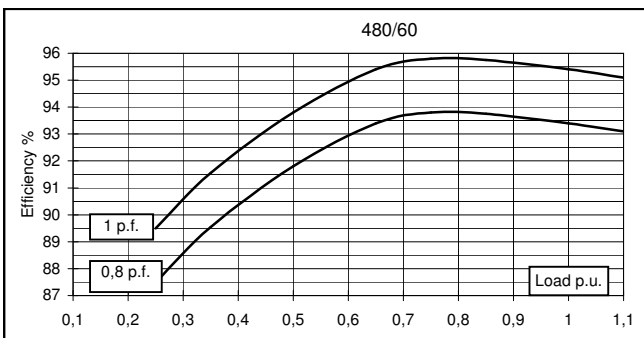
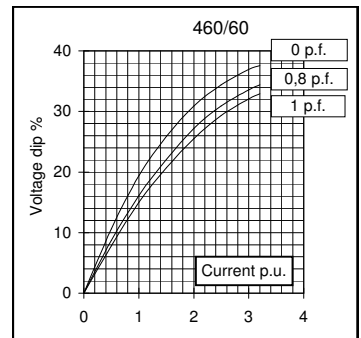
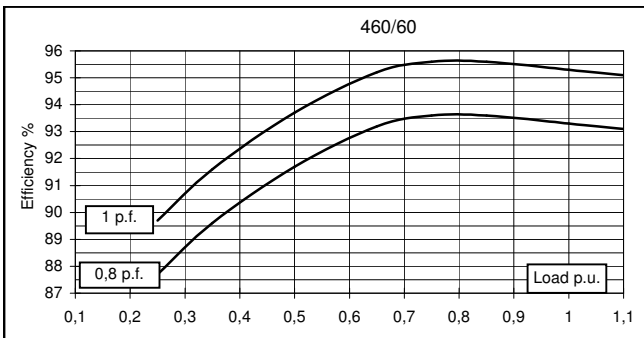
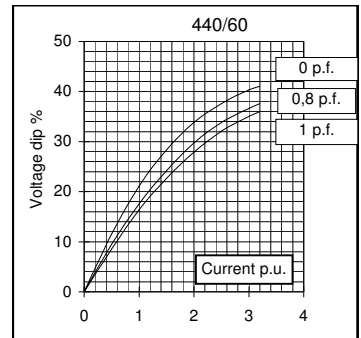
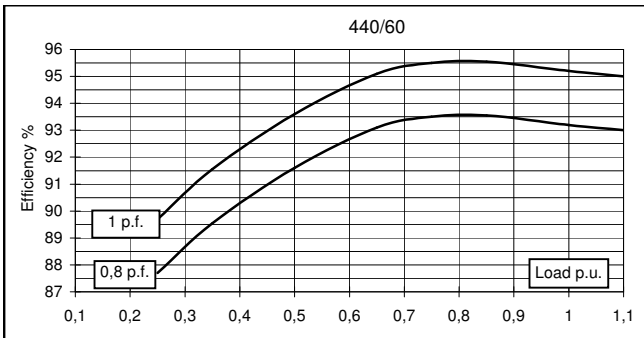
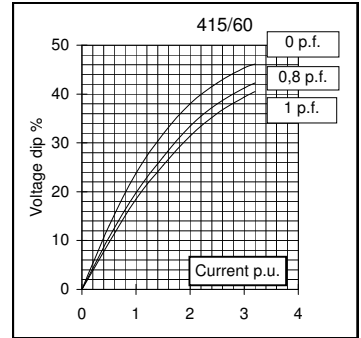
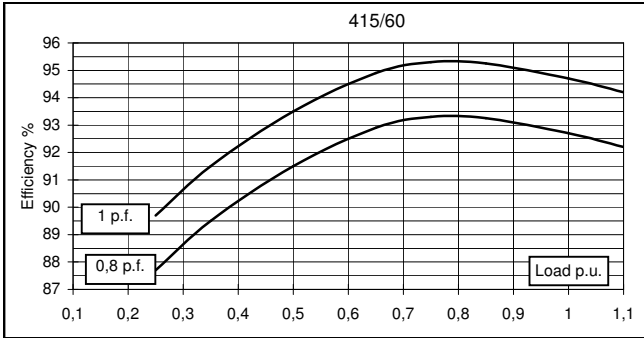
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**50 Hz**

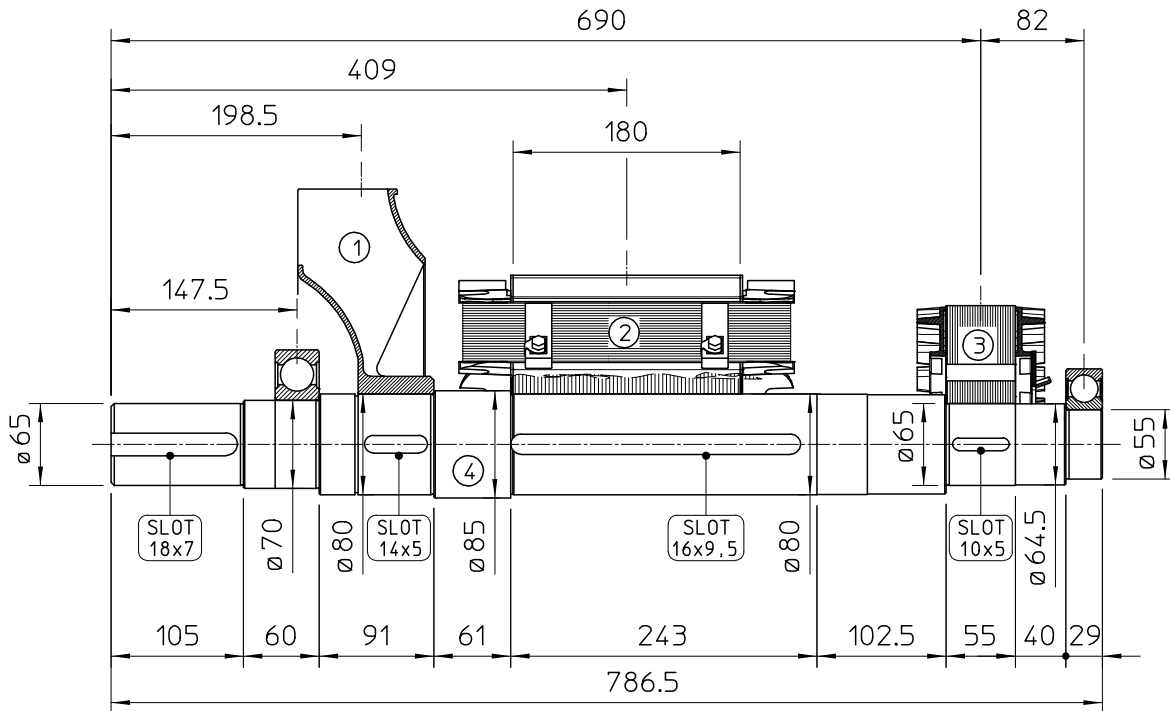




**60 Hz**

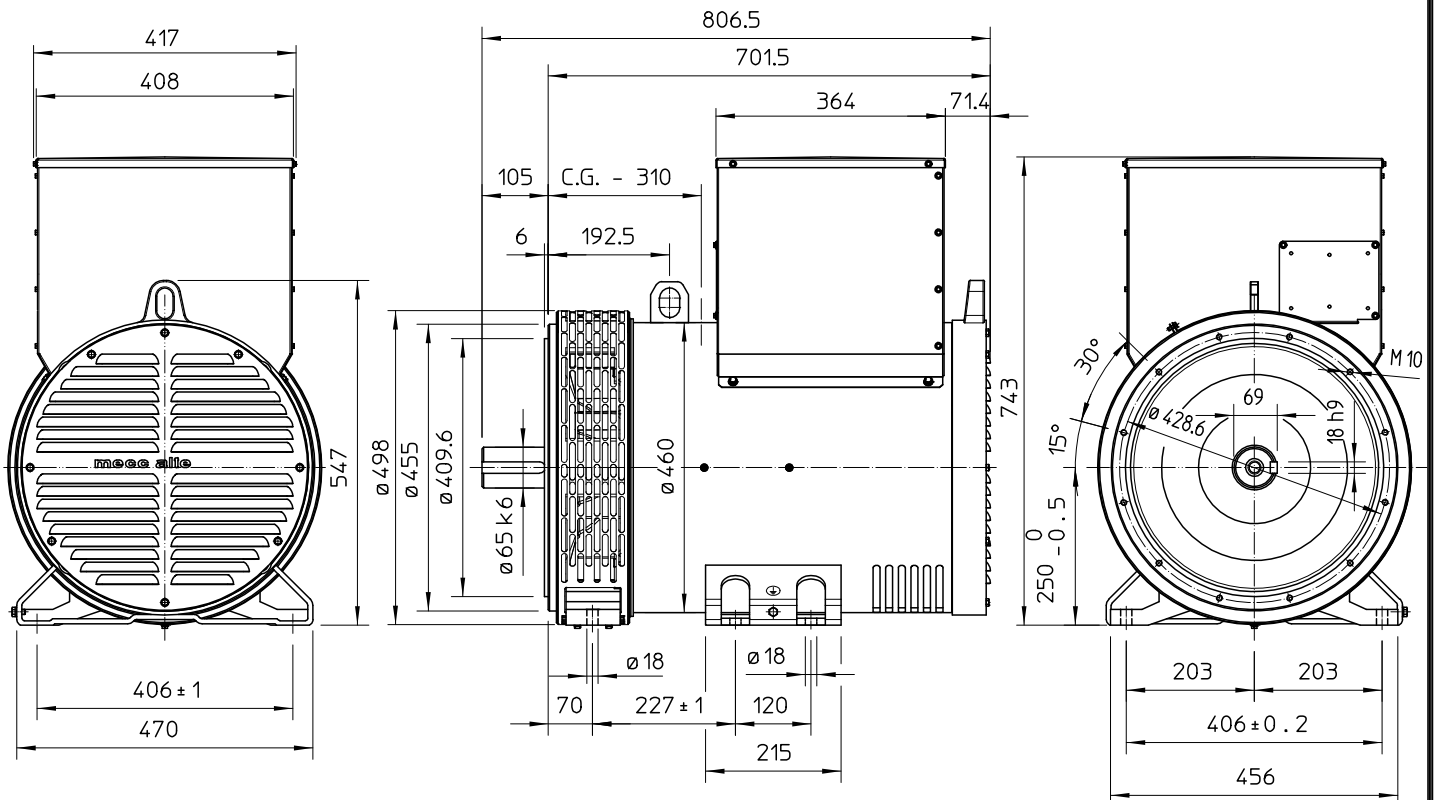


### TWO BEARING MOMENTS OF INERTIA



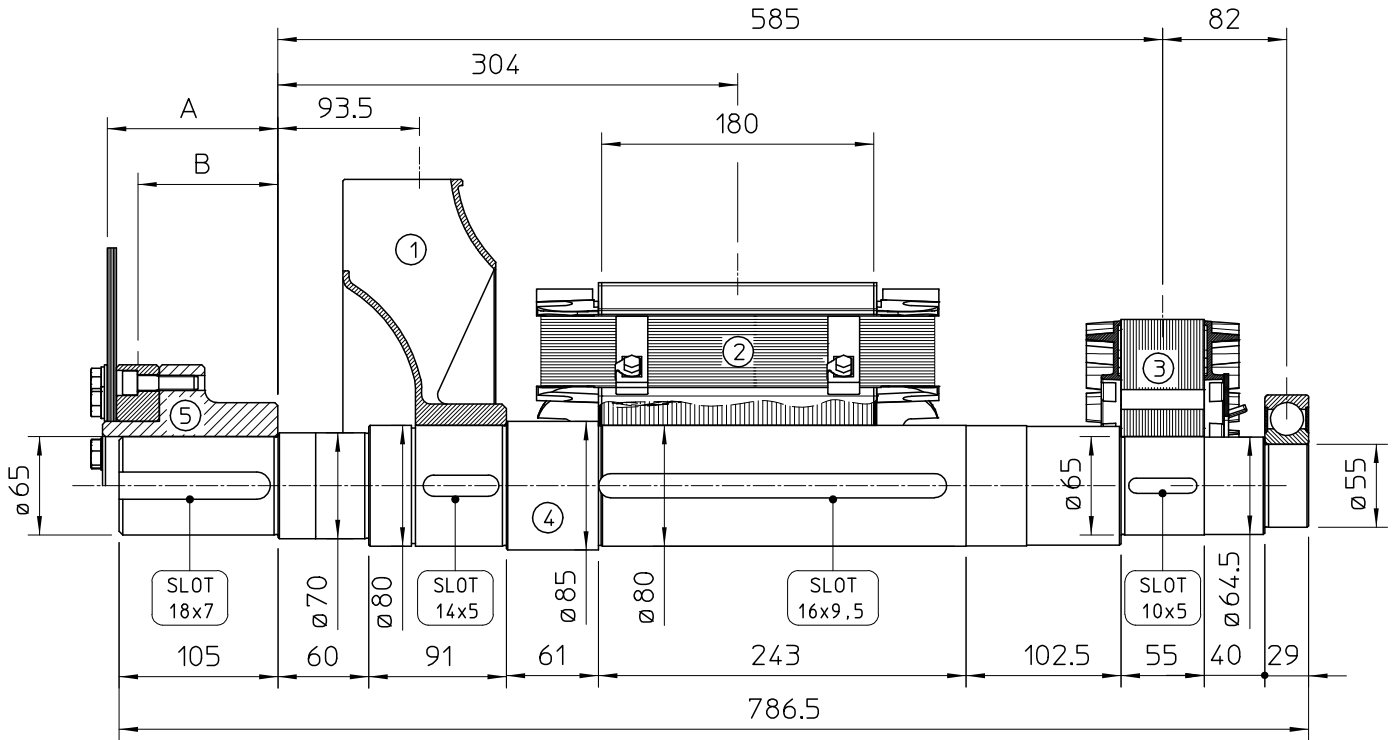
POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	3.6	0.0451
2	MAIN ROTOR	64.8	0.5847
3	EX. ROTOR	14.5	0.0874
4	SHAFT	26.8	0.0196
TOTAL		109.7	0.7368

### TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

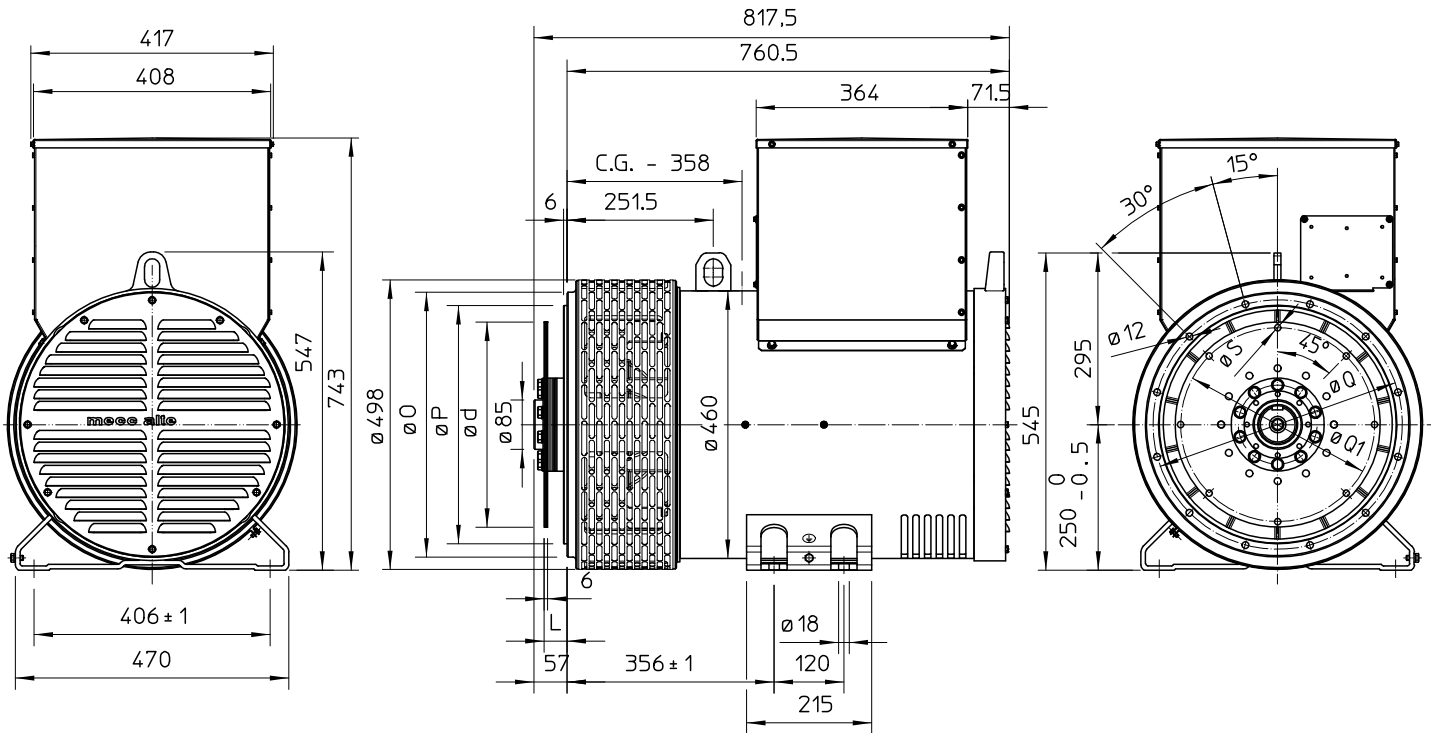
### SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	3.6	0.0451
2	MAIN ROTOR	64.8	0.5847
3	EX. ROTOR	14.5	0.0874
4	SHAFT	26.8	0.0196
TOTAL		109.7	0.7368

SAE N°	5		SHAFTS COUPLING FLEX PLATE	
	A	B	WEIGHT kg	J kgm <sup>2</sup>
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 DISCQUE 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