

ژنراتور : Mecc Alte

موتور دیزل : Benz

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
55	44	50	40	



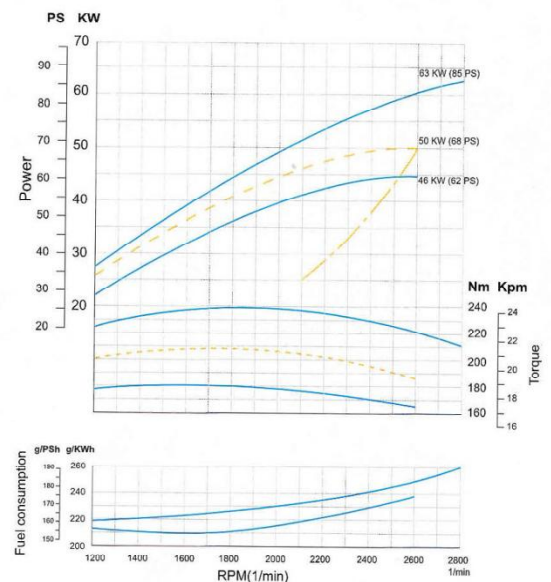
موتور های چهار سیلندر OM 314 در تیپ مختلف قابلیت نصب روی شاسی های مینی بوس و کامیونت های تا ظرفیت شش تن را دارا بوده و علاوه بر آن با تغییراتی جهت کاربرد های صنعتی ، کشاورزی نیز قابل استفاده می باشد . قطعات و لوازم یدکی این محصول جزو تولیدات شرکت می باشد.

This 4 -cylinder engine in various versions can be installed on both minibuses as well as mini-trucks (6 tons). In addition , it also can be used in agricultural and industrial applications. Spare parts of this engine are part of company's production.

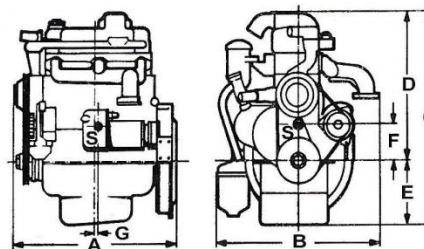
Technical Specification

NO.OF CYLINDERS	4	تعداد سیلندر
MAX (rpm)	2800	ماکزیم دور بر دقیقه
MAX POWER	85 h.p.	حداکثر قدرت
MAX TORQUE	235 N.m	حداکثر گشتاور
COMPRESSION RATIO	17:1	نسبت تراکم
CYLINDER BORE	97 mm	قطر سیلندر
STROKE	128 mm	کورس پیستون
VOLUME	3.784 lit	حجم جابجایی
MEAN PISTON SPEED	11.9 m/s @ 2800 rpm	سرعت متوسط پیستون
MEAN Eff. PRESSURE	6.8 bar @ 2800 rpm	فشار متوسط موثر
TOTAL ENGINE WEIGHT	325 kg	وزن کلی موتور
POWER / WEIGHT RATIO	4.87 kg/kw	نسبت وزن به قدرت
ROTATION	c.c.w	جهت چرخش (خلاف عقربه های ساعت)
COOLING WATER CAPACITY	7.7 lit.	ظرفیت سیال خنک کننده
MAX LUBRICATING OIL CAPACITY	8 lit.	حداکثر ظرفیت روغن
AIR CONSUMPTION	4.1 m ³ / min @ 2800 rpm	مصرف هوا
EMISSION STANDARD	Euro 1 S< 0.05%	استاندارد آلاینده با سوخت گوگرد کمتر از ۰.۰۵٪

Output, torque and fuel consumption



A= 710 m/m
B= 695 m/m
C= 890 m/m
D= 615 m/m
E= 275 m/m
F= 150 m/m
G= 15 m/m
S= center of gravity



ژنراتور

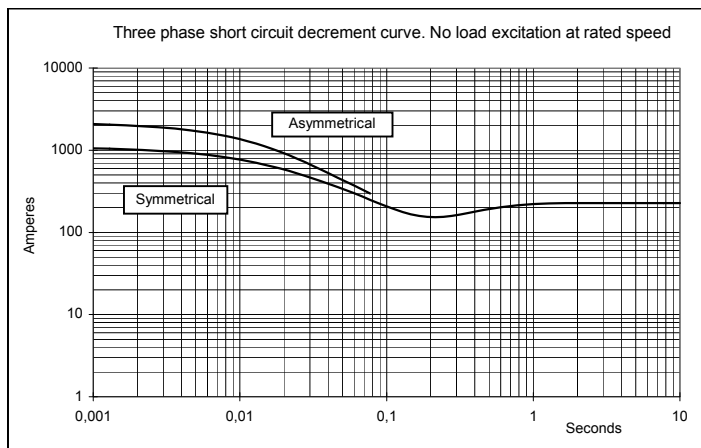
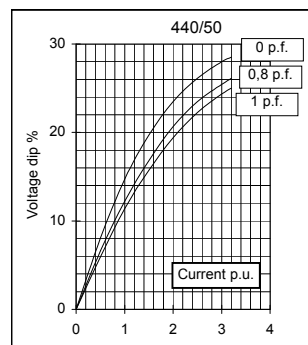
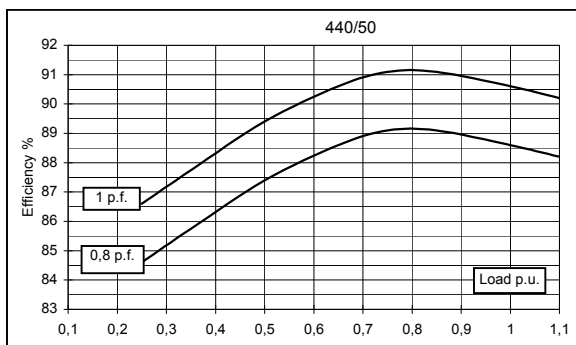
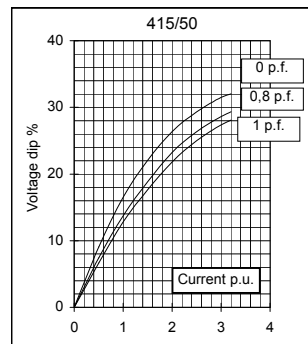
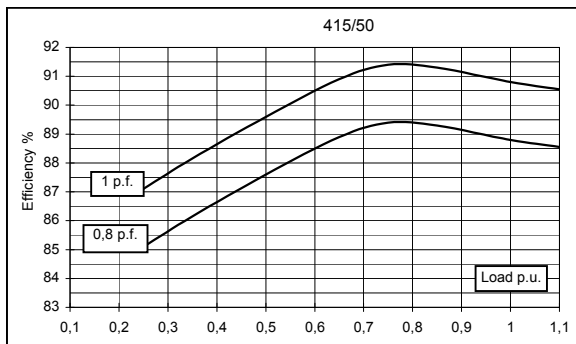
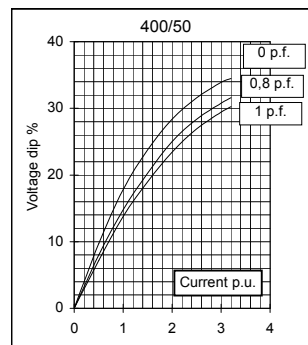
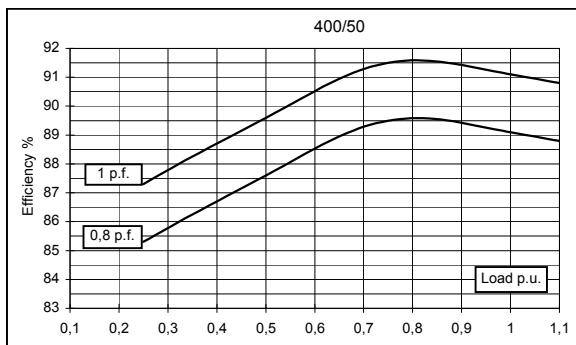
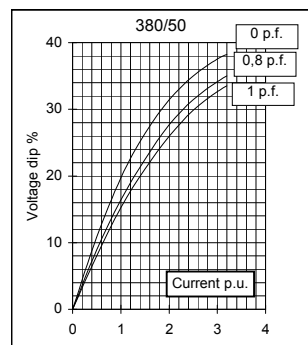
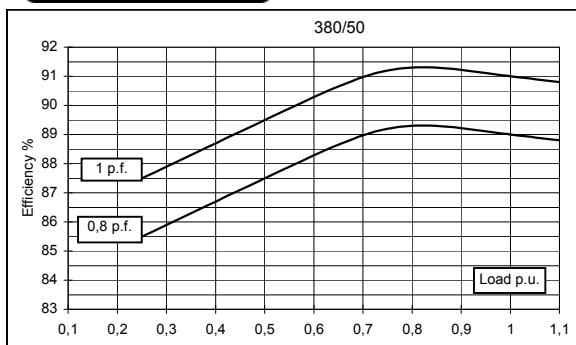
Manufacturer	Mecc Alte	تولید کننده
Type	ECO32-1L/4	تیپ
Maximum over Speed	2250 rev/min	مداکثر سرعت مجاز
Standby power at rated voltage ,KVA	50	توان Standby در ولتاژ نامی
Power factor	0.8	ضریب قدرت
Phase	3	فاز
Frequency, Hz	50	فرکانس
Voltage, V	380~440	ولتاژ
Rotor	with damping cage	روتور
Stator windings	12 ends	سیم پیچ استاتور
Voltage Regulation, %	$-1 < x < +1$	تنظیم ولتاژ
Rotor WDG. Resistance	2.473 اهم	مقاومت سیم پیچ روتور
Short circuit ratio	0.7~1.30	نسبت اتصال کوتاه
Protection	IP21	کلاس حفاظتی
Insulation Class	H	کلاس عایق

Electrical Characteristics										
Frequency		Hz	50				60			
Voltage (series star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	50	50	50	40	58	60	60	60
		kW	40	40	40	32,0	46,4	48	48	48
Rated power class F		kVA	48	48	48	38	56	58	58	58
		kW	38,4	38,4	38,4	30,4	44,8	46,4	46,4	46,4
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	%	89	89,1	88,8	88,6	91,1	91,6	91,7	91,8
(see graph. for details)	3/4	%	89,2	89,5	89,4	89,1	91,5	91,7	91,9	92,1
	2/4	%	87,5	87,6	87,6	87,4	88,8	88,9	89	89,1
	1/4	%	85,5	85,3	85,1	84,6	85,4	85	85,5	85,4
Reactances (f. l.cl. F)	Xd	%	271,5	245	227,6	162,0	316,8	291,6	266,8	245
	Xd'	%	14,96	13,5	12,54	8,93	17,46	16,07	14,70	13,5
	Xd"	%	8,20	7,4	6,87	4,89	9,57	8,81	8,06	7,4
	Xq	%	113,0	102	94,8	67,4	131,9	121,4	111,1	102
	Xq'	%	113,0	102	94,8	67,4	131,9	121,4	111,1	102
	Xq"	%	34,9	31,5	29,3	20,8	40,7	37,5	34,3	31,5
	X ₂	%	23,27	21	19,51	13,88	27,16	24,99	22,87	21
	x ₀	%	3,21	2,9	2,69	1,92	3,75	3,45	3,16	2,9
Short Circuit Ratio	Kcc		0,62	0,71	0,73	1,30	0,40	0,48	0,62	0,71
Time Constants	Td'	sec.	0,059							
	Td"	sec.	0,013							
	Tdo'	sec.	1,40							
	Tα	sec.	0,035							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,6	0,7	0,8	1,2	0,3	0,4	0,5	0,6
Excitation at full load	Amp.		2,2	2,4	2,3	2,7	2,1	1,9	2,1	2,3
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20°C)	Ω	0,061								
Rotor Winding Resistance (20°C)	Ω	2,473								
Exciter Resistance (20 °C)	Ω	Rotor : 0,442				Stator : 11,35				
Heat dissipation at f.l.cl.H	W	4944	4893	5045	4117	4533	4402	4345	4288	
Telephone Interference		THF < 2%					TIF < 45			
Radio interference		EN61000-6-3, EN61000-6-1. For others standards apply to factory								
Waveform Distors.(THD) at f. load	LL/LN %	3,8 / 3,6								
Waveform Distors.(THD) at no load	LL/LN %	3,3 / 3,2								
Mechanical characteristics										
Protection		IP 21 (other protection on request)								
DE bearing		6312-2RS								
NDE bearing		6309-2RS								
Weight of wound stator assembly	kg	78								
Weight of wound rotor assembly	kg	53								
Weight of complete generator	kg	248								
Maximun overspeed	rpm	2250								
Unbalanced magnetic pull at f.l.cl.F	kN/mm	4,1								
Cooling air requirement	m³/min	11,8					14,5			
Inertia Constant (H)	sec.	0,105					0,125			
Noise level at 1m/7m	dB(A)	75 / 60					79 / 64			

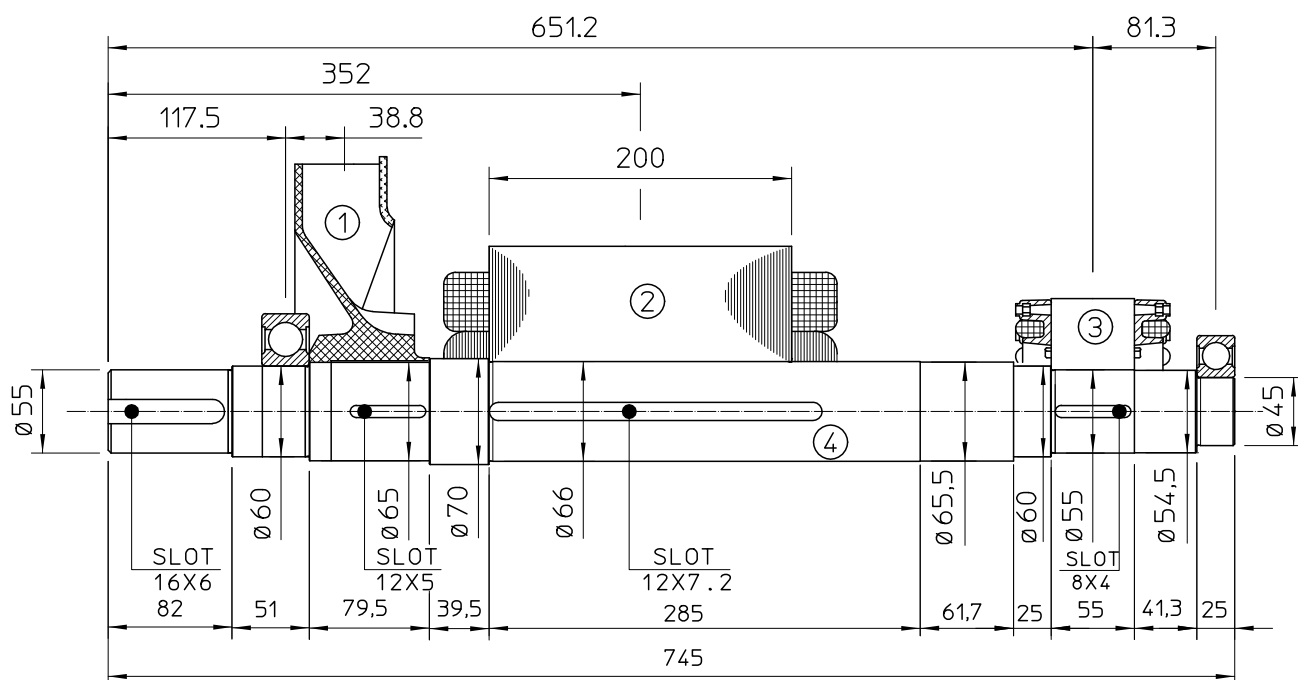
All technical data are to be considered as a reference and they can be modified without any notice.

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50 Hz

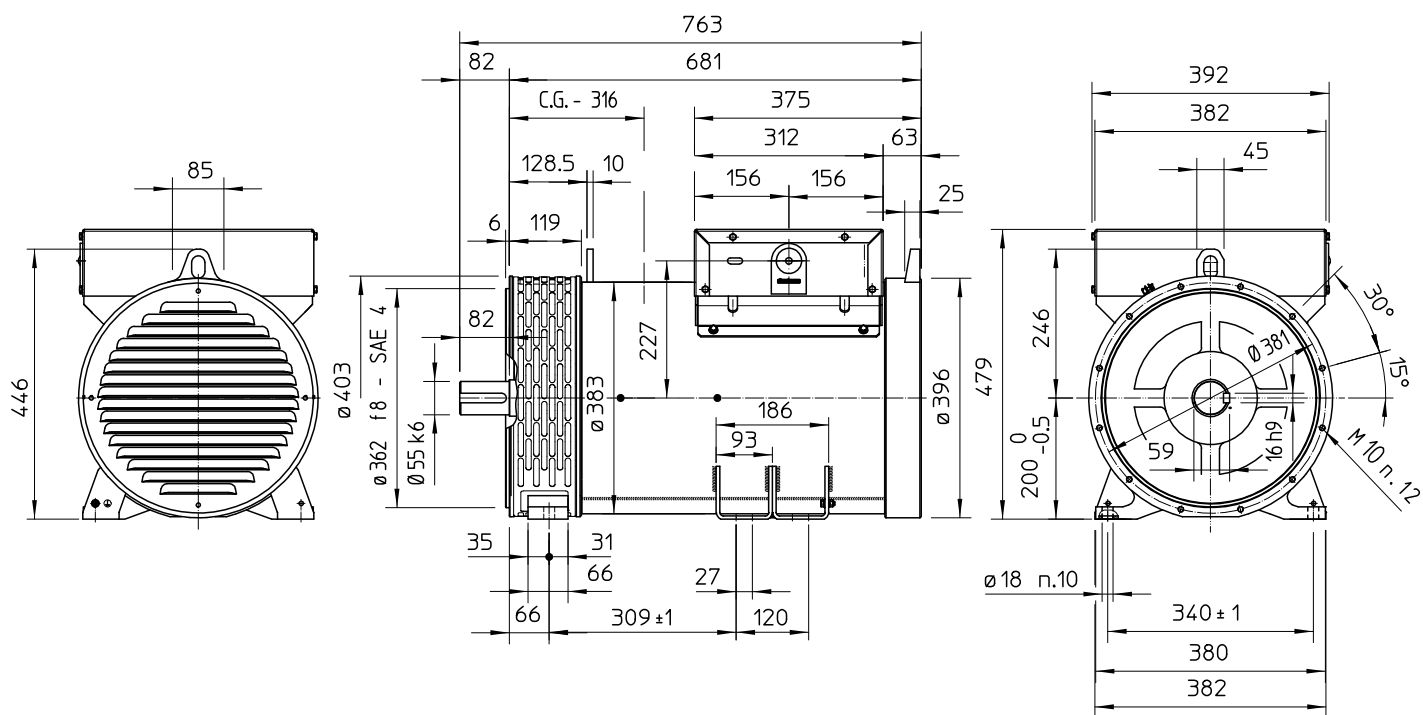


TWO BEARING MOMENTS OF INERTIA

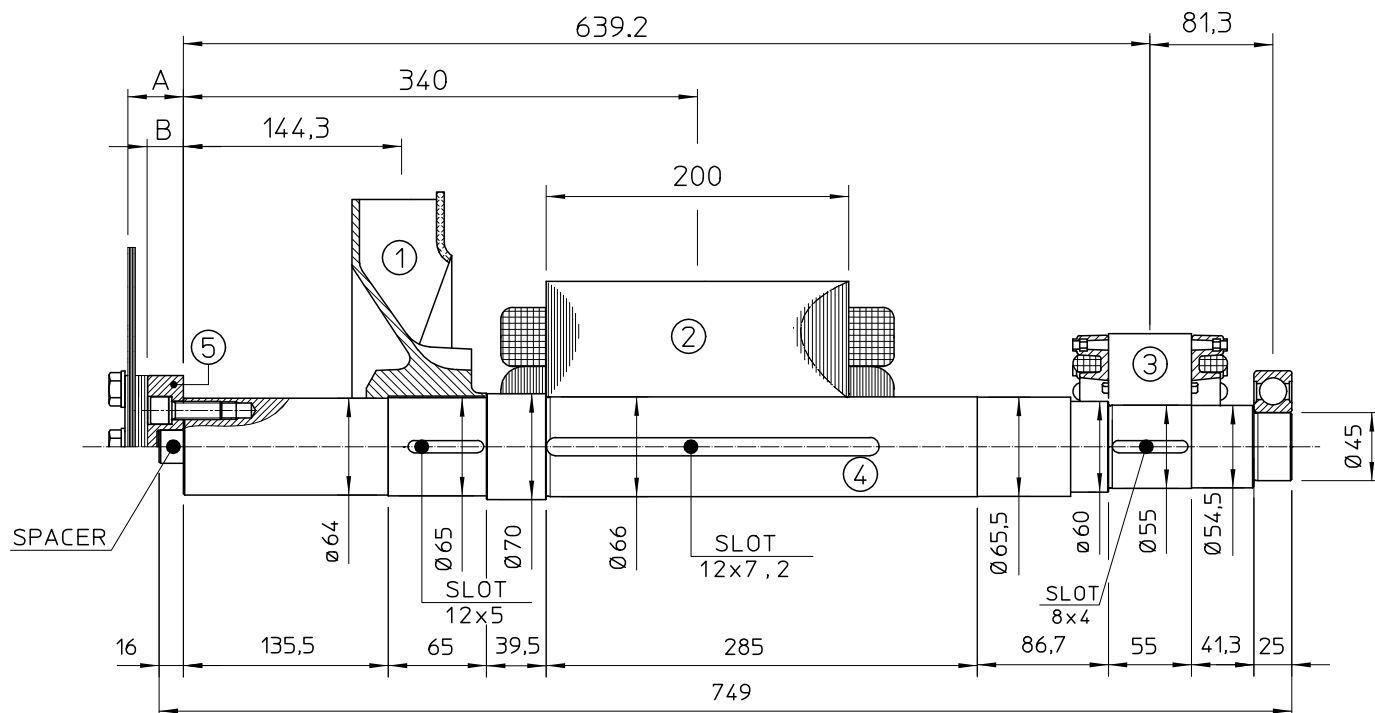


POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	2.3	0.0224
2	MAIN ROTOR	53	0.3763
3	EX. ROTOR	7	0.016
4	SHAFT	17.3	0.0067
TOTAL		79.6	0.4214

TWO BEARING DIMENSIONS



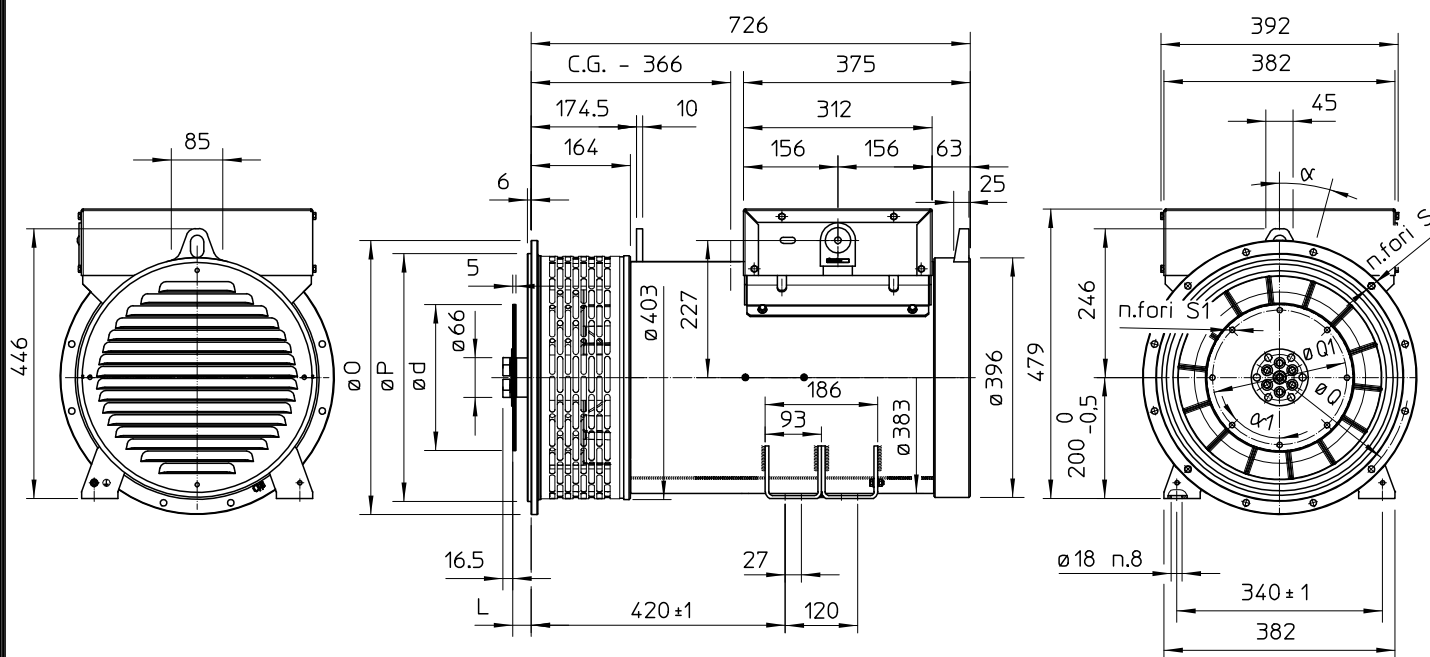
SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	2.3	0.0224
2	MAIN ROTOR	53	0.3763
3	EX. ROTOR	7	0.016
4	SHAFT	17.6	0.0090
TOTAL		79.9	0.4237

SAE N°	5	SHAFTS COUPLING FLEX PLATE		
A	B	WEIGHT kg	J kgm ²	
6.5	5	2.5	1.74	0.0084
7.5	5	2.5	2.1	0.013
8	36.6	28.1	3.9	0.02
10	28.6	21.6	4.47	0.038
11.5	15	11.5	4.51	0.059

SINGLE BEARING DIMENSIONS



SAE N.	O	P	Q	S	N. FORI HOLES N°	α
5	356	314.3	333.4	11	8	45
4	403	362	381	11	12	30
3	451	409.6	428.6	11	12	30
2	490	447.7	466.7	11	12	30
1	552	511.2	530.2	11	12	30

SAE N.	d	L	Q1	S1	N. FORI HOLES N°	α ₁
6 1/2	215.9	30.2	200	9	6	60
7 1/2	241.3	30.2	222.25	9	8	45
8	263.52	62	244.47	11	6	60
10	314.32	53.8	295.27	11	8	45
11 1/2	352.42	39.6	333.37	11	8	45

C.G.= GRAVITY CENTER