GENERATOR TYPE ECO 3-2SN/2

Document : **DS045A/1**
issue 003 date 25/07/2007

Electrical Characteristics									
Frequency		Hz	50				60			
Voltage (star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	10	10	10	8,5	10,5	12	12	12
		kW	8	8	8	6,8	8,4	9,6	9,6	9,6
Rated power class F		kVA	9	9	9	7,5	9	10,2	10,8	10,8
		kW	7,2	7,2	7,2	6	7,2	8,2	8,6	8,6
Regulation with		SR7/2	±1,5 % with any power factor and speed variations between -5% +30%							
Insulation class			H							
Execution			Brushless							
Stator winding			6 ends							
Rotor			with damping cage							
Efficiencies class H	4/4	%	80,4	80,5	80,2	80	82,1	82,6	82,7	82,8
(see graph. for details)	3/4	%	80,7	81	80,9	80,6	82,6	82,8	83	83,2
	2/4	%	77,4	77,5	77,5	77,2	79,5	79,6	79,7	79,8
	1/4	%	72,1	72	71,8	71,3	72,8	72,6	72,7	73
Reactances (f. l.cl. F)	Xd	%	346,8	313	290,8	219,9	366,4	372,5	340,8	313
	Xd'	%	35,79	32,3	30,01	22,69	37,81	38,44	35,17	32,3
	Xd"	%	18,50	16,7	15,51	11,73	19,55	19,87	18,18	16,7
	Xq	%	108,0	97,5	90,6	68,5	114,1	116,0	106,2	97,5
	Xq'	%	108,0	97,5	90,6	68,5	114,1	116,0	106,2	97,5
	Xq"	%	41,7	37,6	34,9	26,4	44,0	44,7	40,9	37,6
	X_2	%	20,72	18,7	17,37	13,14	21,89	22,25	20,36	18,7
	X_0	%	7,53	6,8	6,32	4,78	7,96	8,09	7,40	6,8
Short Circuit Ratio	Kcc		0,36	0,48	0,69	1,31	0,23	0,31	0,36	0,48
Time Constants	Td'	sec.	0,072							
	Td"	sec.	0,012							
	Tdo'	sec.	0,63							
	Tα	sec.	0,006							
Short Circuit Current Capacity		%	>300				>320			
Excitation at no load		Amp.	0,2	0,25	0,3	0,4	0,16	0,17	0,2	0,23
Excitation at full load		Amp.	1	1,06	1,1	1,2	0,8	0,85	0,9	1
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	1,084							
Rotor Winding Resistance (20°C)		Ω	7,364							
Exciter Resistance (20 °C)		Ω	Rotor : 1,453				Stator : 15,71			
Heat dissipation at f.l.cl.H		W	1950	1938	1975	1700	1831	2022	2008	1994
Telephone Interference			THF < 2%				TIF < 45			
Radio interference			EN60034-1, VDE0875K. For others standards apply to factory.							
Waveform Distors.(THD) at f. load		LL/LN %	4,8 / 4,6							
Waveform Distors.(THD) at no load		LL/LN %	4,1 / 3,9							
Mechanical characteristics										
Protection			IP 23 (other protection on request)							
DE bearing			6308-2RS							
NDE bearing			6305-2RS							
Weight of wound stator assembly		kg	19,4							
Weight of wound rotor assembly		kg	10,5							
Weight of complete generator		kg	63							
Maximun overspeed		rpm	4500							
Unbalanced magnetic pull at f.l.cl.F		kN/mm	2,6							
Cooling air requirement		m³/min	6,3				7,8			
Inertia Constant (H)		sec.	0,195				0,234			
Noise level at 1m/7m		dB(A)	85 / 70				89 / 73			

GENERATOR TYPE ECO 3-2SN/2

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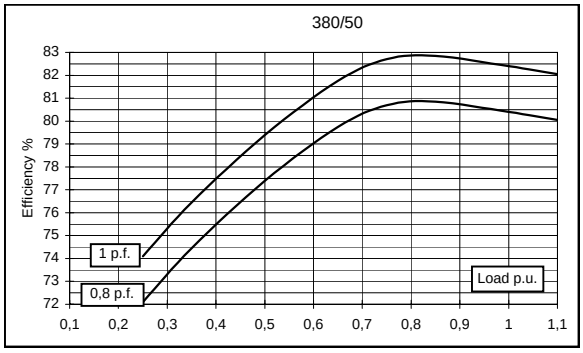
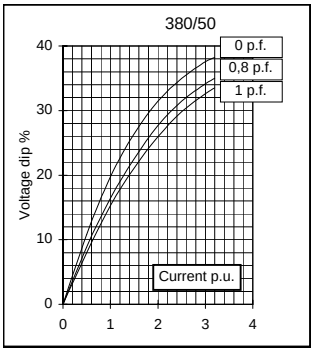
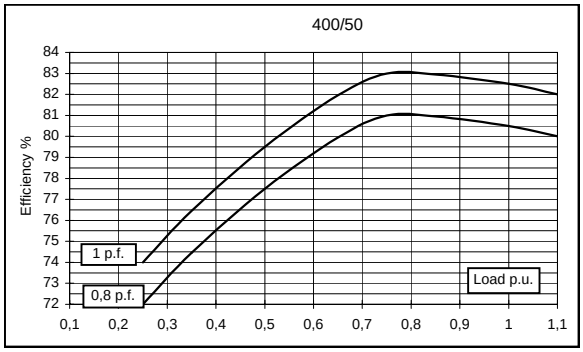
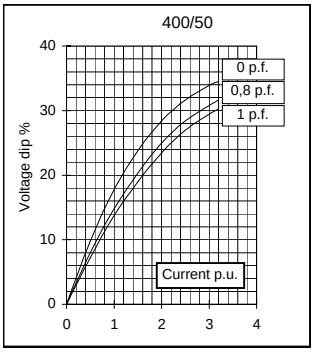
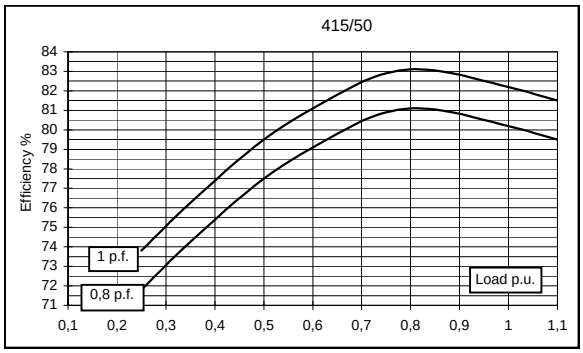
50 Hz

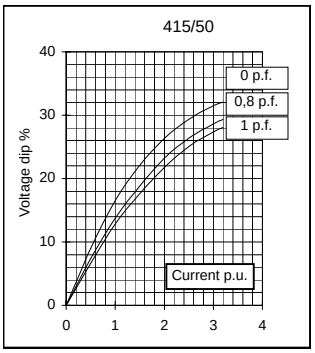


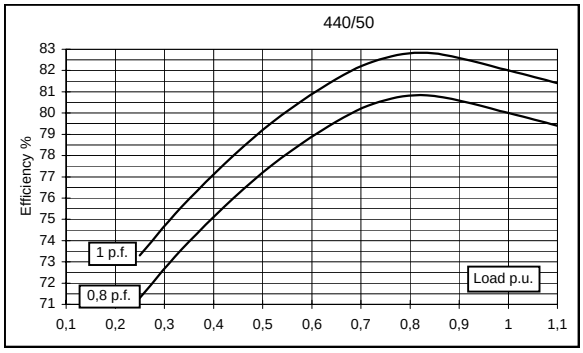


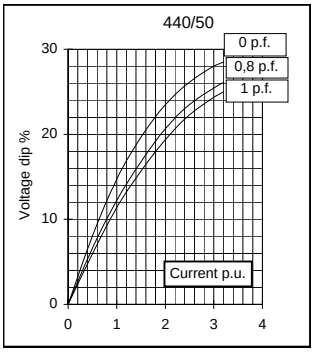


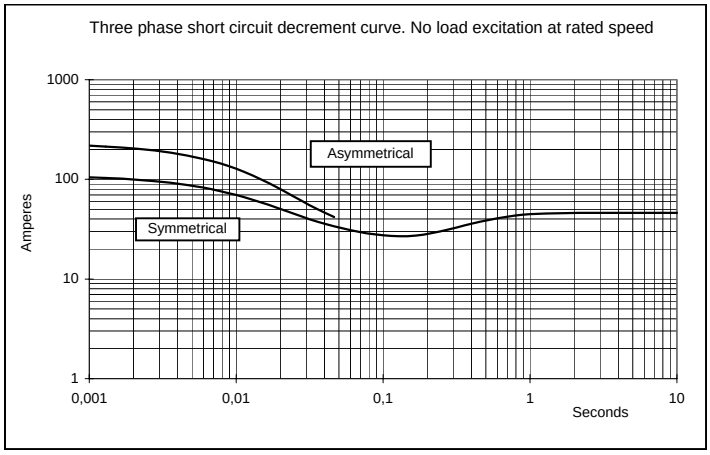












GENERATOR TYPE ECO 3-2SN/2

Document : **DS045A/3**

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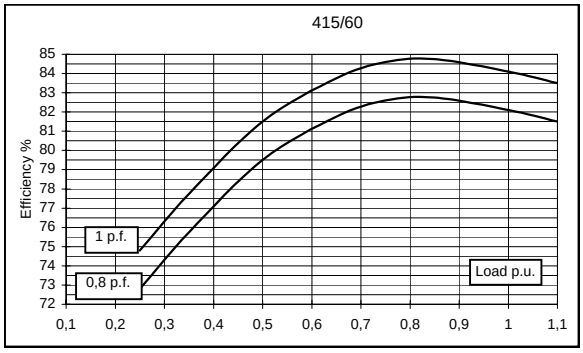
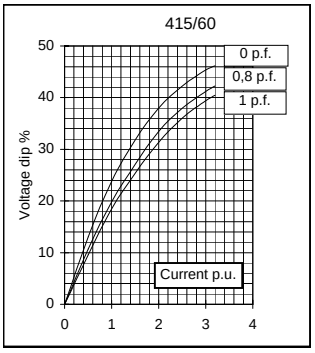
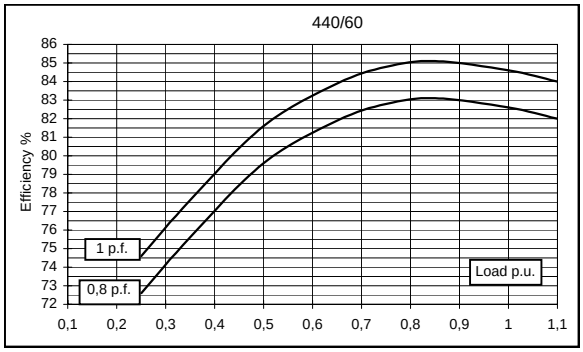
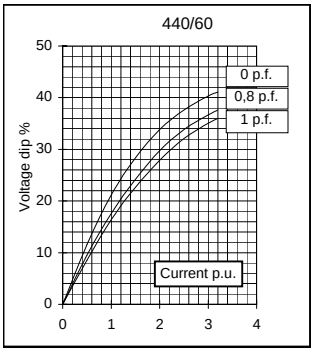
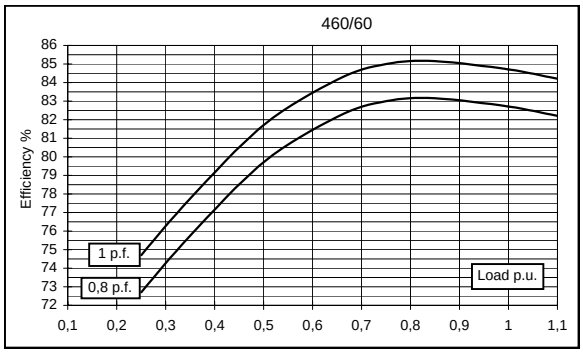
60 Hz

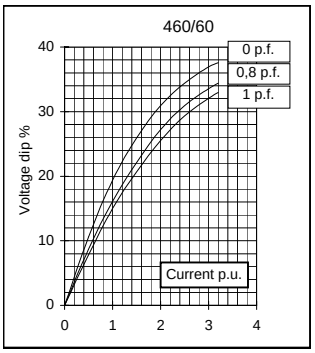


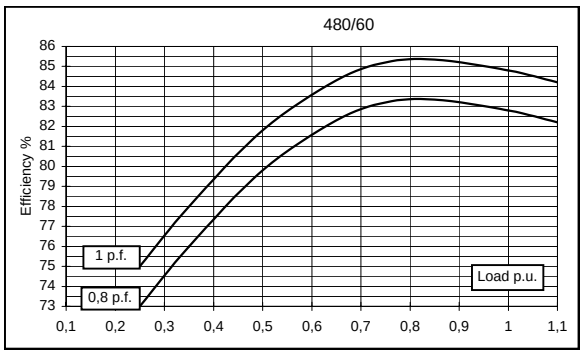


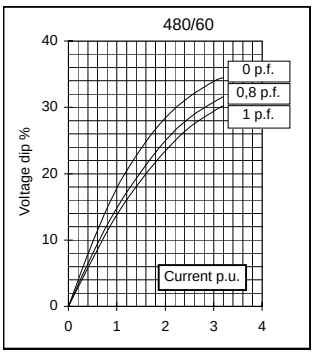


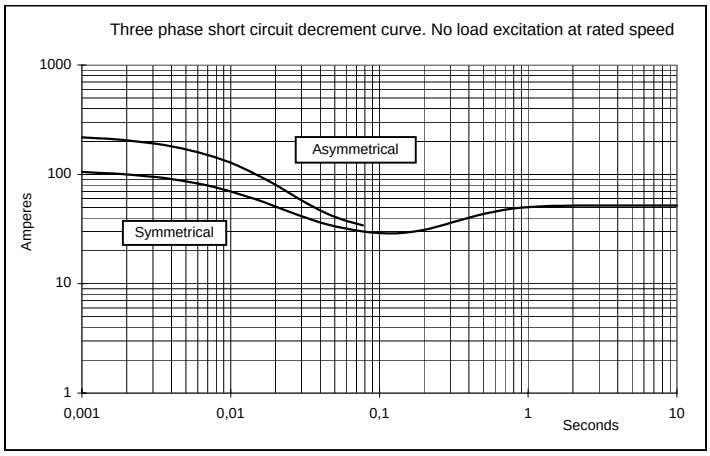




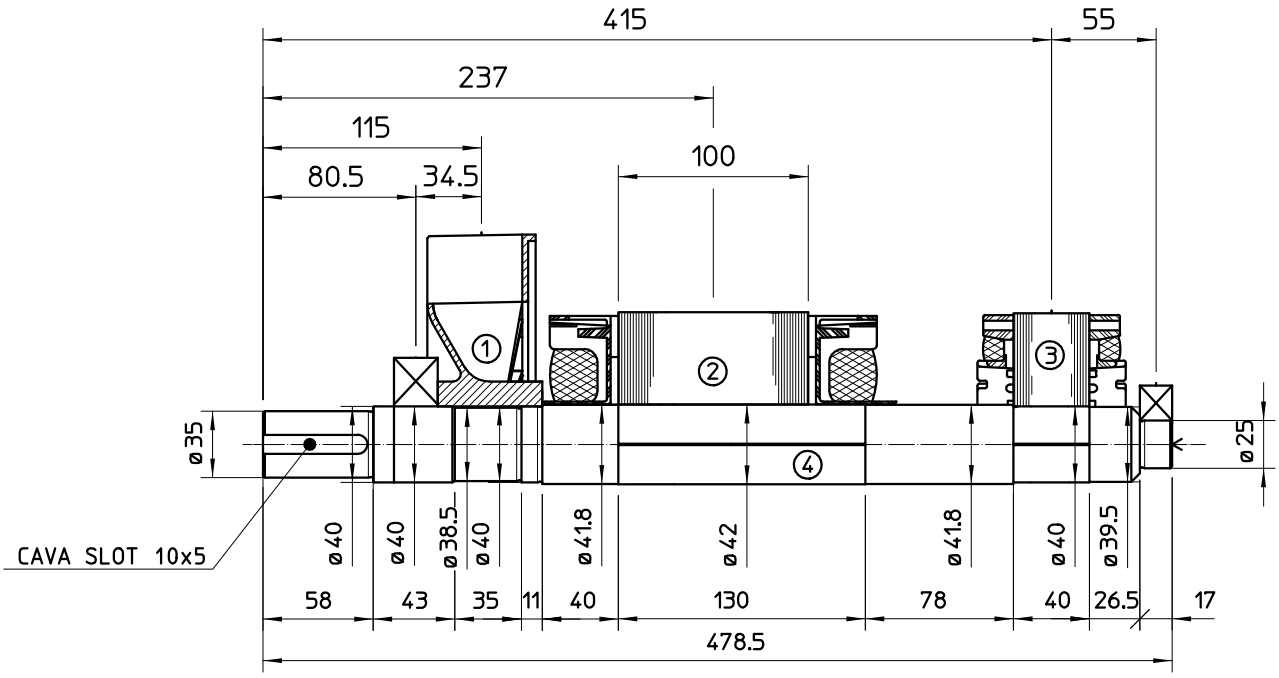






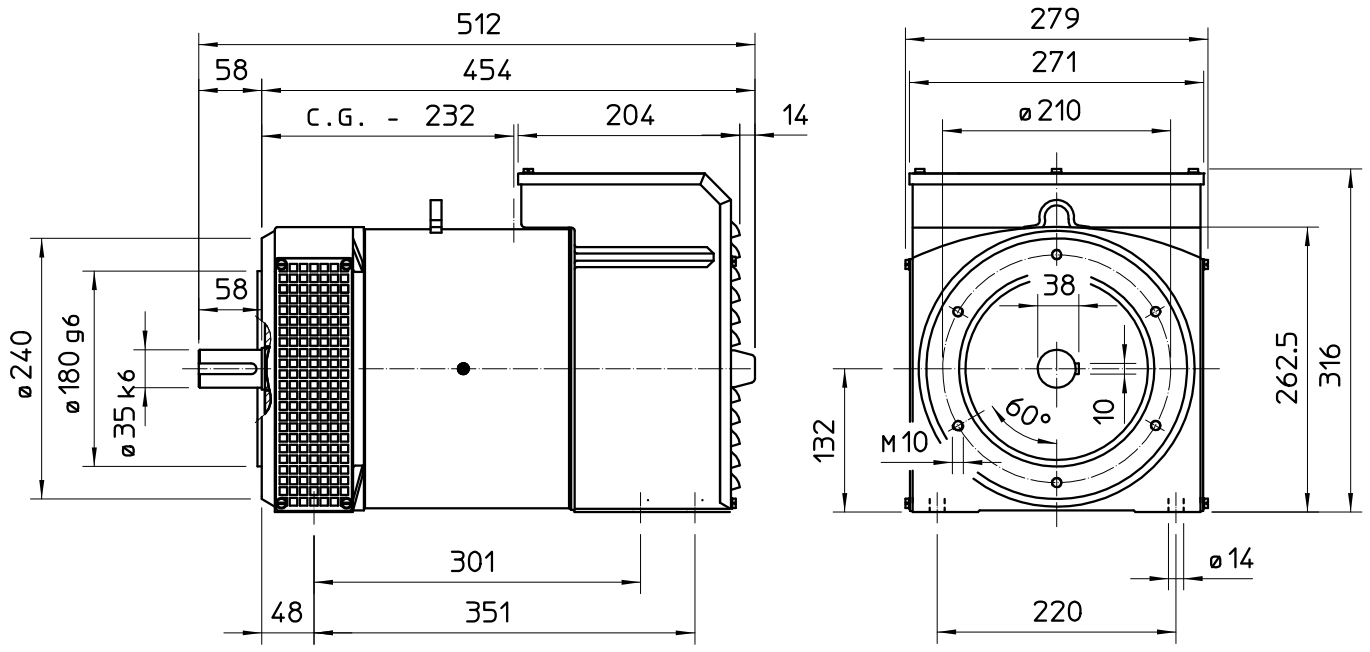


TWO BEARING MOMENTS OF INERTIA



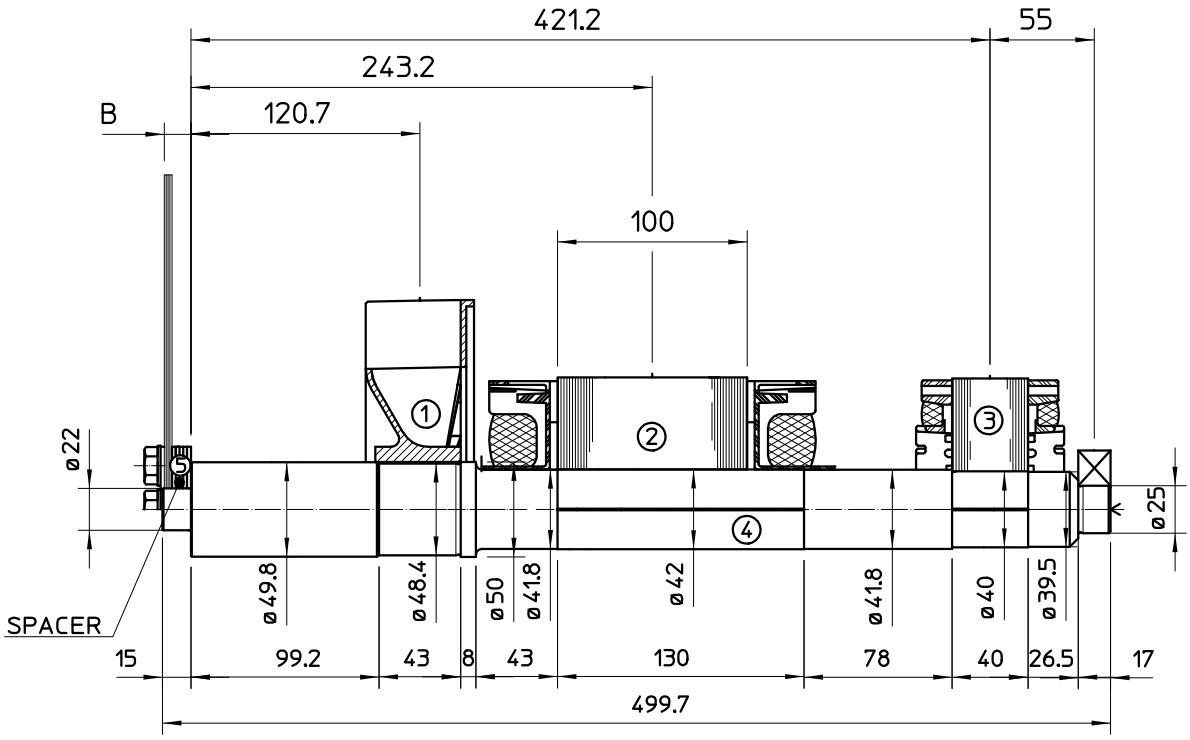
	COMPONENT	WEIGHT Kg	J Kgm²
1	FAN	0.93	0.0036
2	MAIN ROTOR	10.25	0.024
3	EX ROTOR	4.12	0.011
4	SHAFT	4.7	0.00097
6	TOTAL	20	0.03957

TWO BEARING DIMENSIONS



C.G. = GRAVITY CENTER

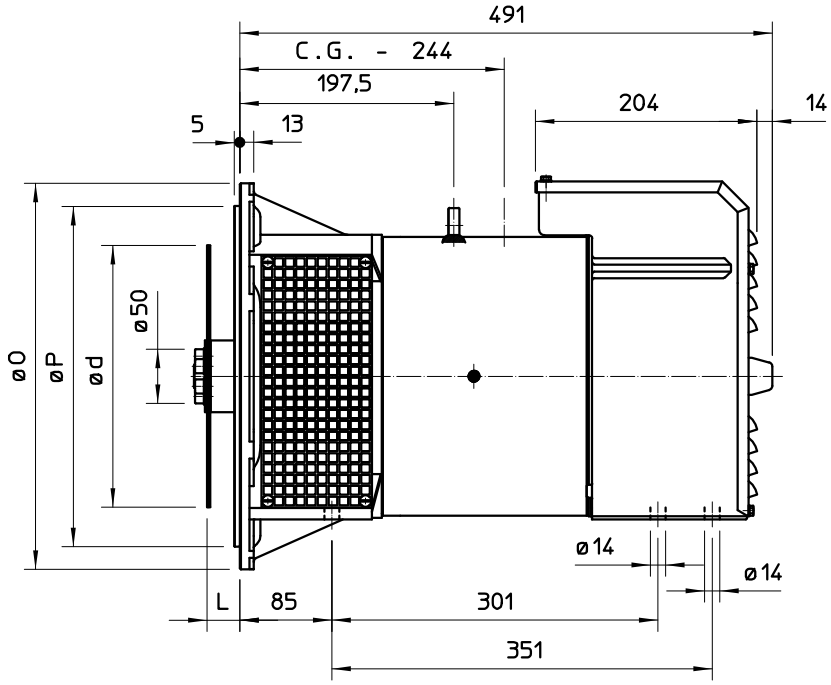
SINGLE BEARING MOMENTS OF INERTIA

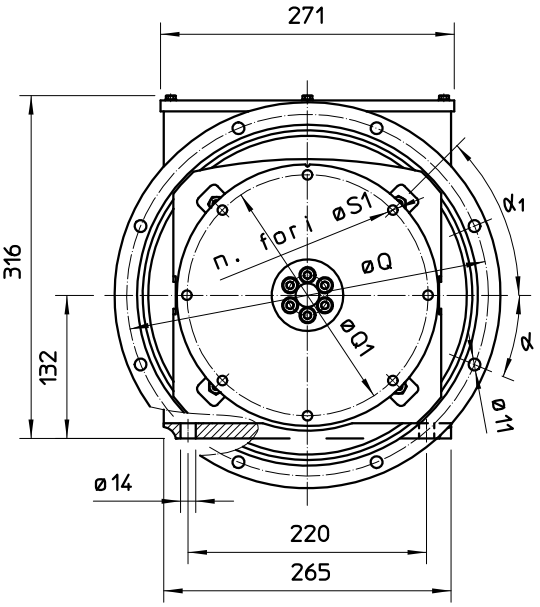


	COMPONENT	WEIGHT Kg	J Kgm²
1	FAN	0.82	0.0032
2	MAIN ROTOR	10.25	0.024
3	EX ROTOR	4.12	0.011
4	SHAFT	5.6	0.0012
6	TOTAL	20.79	0.0394

SAE N.	5	SHAFT COUPLING FLEX PLATE	
	B(mm)	WEIGHT kg	J kgm²
6 1/2	4	1.14	0.0067
7 1/2	4	1.42	0.0103
8	35.6	1.97	0.0171
10	27.6	2.59	0.0319
11 1/2	14	3.1	0.0481

SINGLE BEARING DIMENSIONS





FLANGIA FLANGE BRIDE FLANSCHE BRIDAS	SAE N.	O	P	Q	n. fori	α
	6	308	266.7	285.75	8	22°30'
	5	356	314.3	333.4	8	22°30'
	4	403	362	381	12	15°
	3	451	409.6	428.6	12	15°

GIUNTI A DISCO COUPLING DISC PLATEX
DISQUE DE MONOPALIER SCHEIBENKUPPLUNG
JUNTAS A DISCOS

SAE N.	L	d	Q1	n. fori	S1	α1
6 1/2	30.2	215.9	200	6	9	60°
7 1/2	30.2	241.3	222.25	8	9	45°
8	62	263.52	244.47	6	11	60°
10	53.8	314.32	295.27	8	11	45°
11 1/2	39.6	352.42	333.37	8	11	45°

C.G. = GRAVITY CENTER