mecc alte spa

GENERATOR TYPE ECO 32-3S/4

Document :**DS007A/1**
issue 005 date 15/05/2003

Electrical Characteristics										
Frequency		Hz	50				60			
Voltage (series star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	40	40	40	32	47	48	48	48
		kW	32	32	32	25,6	37,6	38,4	38,4	38,4
Rated power class F		kVA	37	37	37	30	45	46	46	46
		kW	29,6	29,6	29,6	24	36	36,8	36,8	36,8
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	%	88,5	88,6	88,3	88,1	89,1	89,6	89,8	90
(see graph. for details)	3/4	%	88,8	89,1	89	88,7	89,9	90,2	90,4	90,6
	2/4	%	87,2	87,3	87,3	87,3	88,7	88,8	88,9	89
	1/4	%	84,9	85	84,8	84,3	87	87	87	87
Reactances (f. l.cl. F)	Xd	%	210,5	190	176,5	125,6	248,9	226,1	206,9	190
	Xd'	%	15,84	14,3	13,28	9,45	18,73	17,02	15,57	14,3
	Xd"	%	11,08	10	9,29	6,61	13,10	11,90	10,89	10
	Xq	%	108,6	98	91,0	64,8	128,4	116,6	106,7	98
	Xq'	%	108,6	98	91,0	64,8	128,4	116,6	106,7	98
	Xq"	%	33,9	30,6	28,4	20,2	40,1	36,4	33,3	30,6
	X_2	%	23,82	21,5	19,97	14,21	28,16	25,59	23,41	21,5
	X_0	%	2,99	2,7	2,51	1,79	3,54	3,21	2,94	2,7
Short Circuit Ratio	Kcc		0,70	0,80	0,90	1,30	0,40	0,60	0,70	0,80
Time Constants	Td'	sec.	0,061							
	Td"	sec.	0,015							
	Tdo'	sec.	1,32							
	Tα	sec.	0,031							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load		Amp.	0,6	0,7	1	1,3	0,3	0,4	0,5	0,6
Excitation at full load		Amp.	2,1	2,2	2,4	2,8	2	1,9	2	2,1
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	0,078							
Rotor Winding Resistance (20°C)		Ω	2,163							
Exciter Resistance (20 °C)		Ω	Rotor : 0,64				Stator : 10,6			
Heat dissipation at f.l.cl.H		W	4158	4117	4240	3458	4600	4457	4362	4267
Telephone Interference			FHT < 2%				TIF < 45			
Radio interference			EN50081-1, EN50082-1, VDE0875K. For others standards apply to factory							
Waveform Distors.(THD) at f. load		LL/LN %	3,7 / 3,6							
Waveform Distors.(THD) at no load		LL/LN %	3,2 / 3,1							
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6312-2RS							
NDE bearing			6309-2RS							
Weight of wound stator assembly		kg	62,5							
Weight of wound rotor assembly		kg	43							
Weight of complete generator		kg	214							
Maximun overspeed		rpm	2250							
Unbalanced magnetic pull at f.l.cl.F		kN/mm	4,5							
Cooling air requirement		m^3/min	11,8				14,5			
Inertia Constant (H)		sec.	0,108				0,13			
Noise level at 1m/7m		dB(A)	75 / 60				79 / 64			

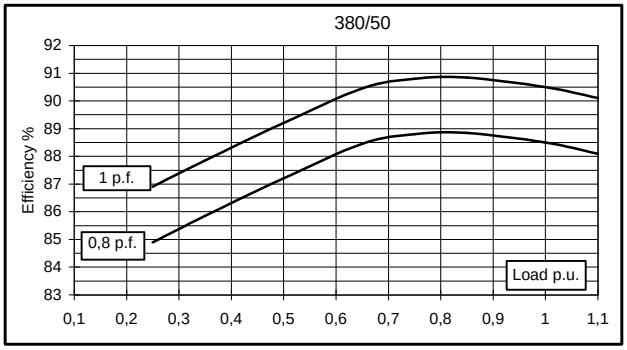
mecc alte spa

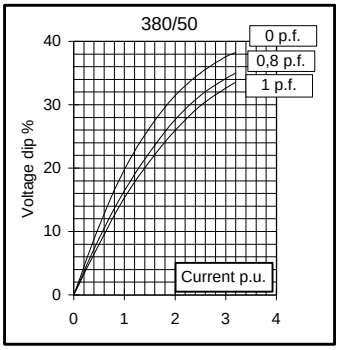
GENERATOR TYPE ECO 32-3S/4

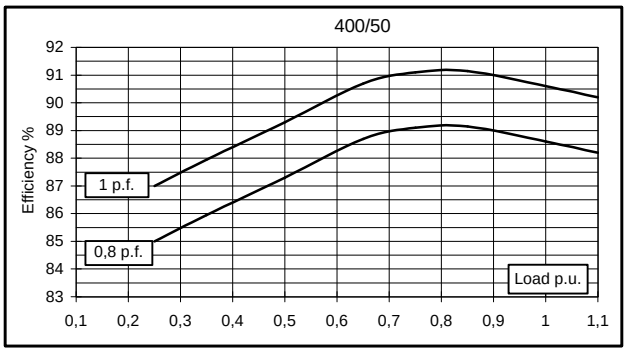
Document : **DS007A/2**

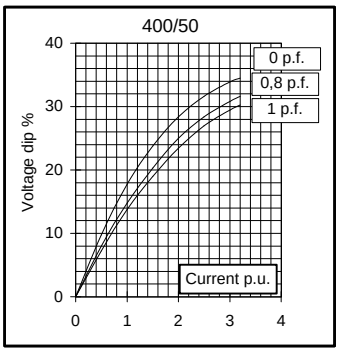
issue 005 date : 15/05/03

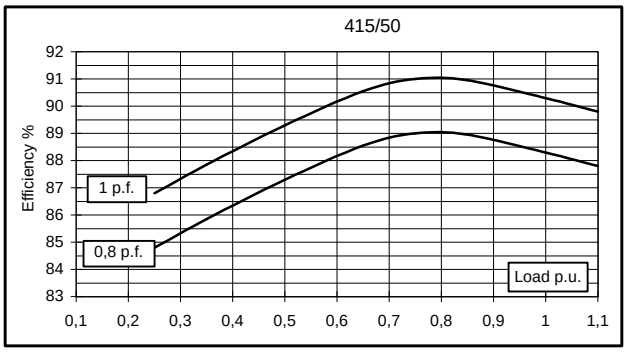
50 Hz

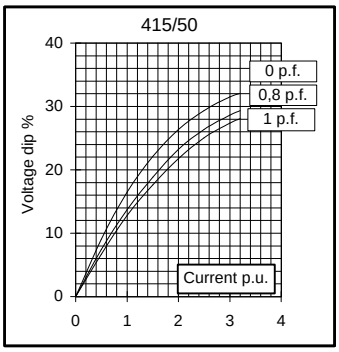


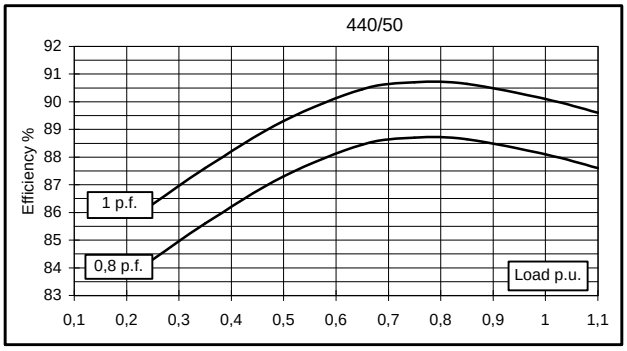


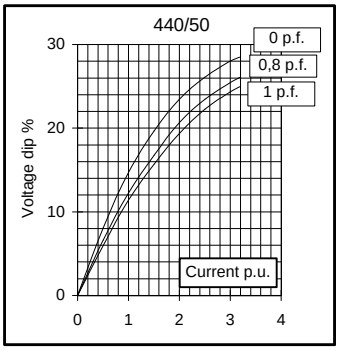


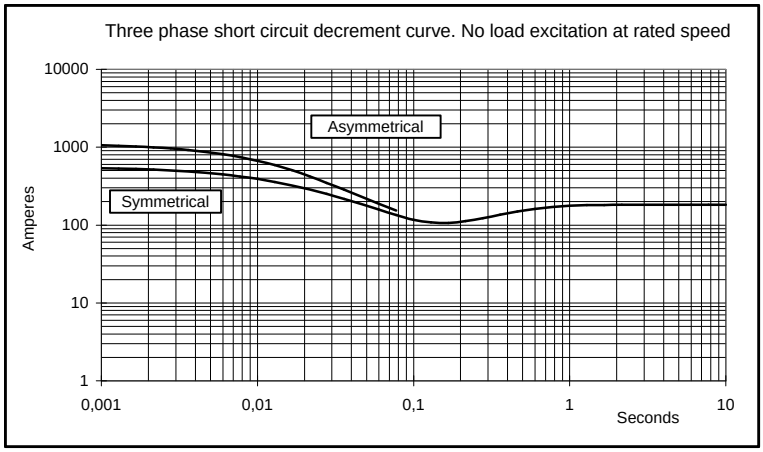












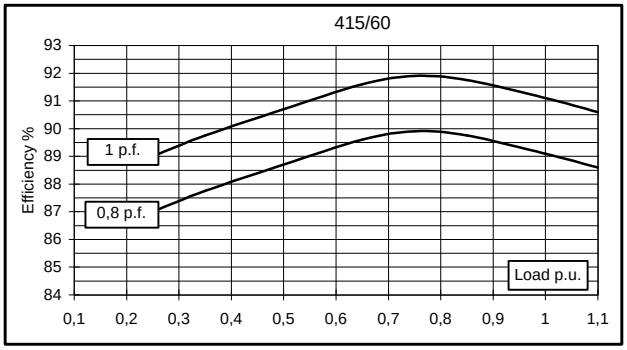
mecc alte spa

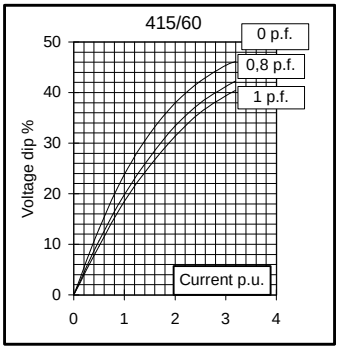
GENERATOR TYPE ECO 32-3S/4

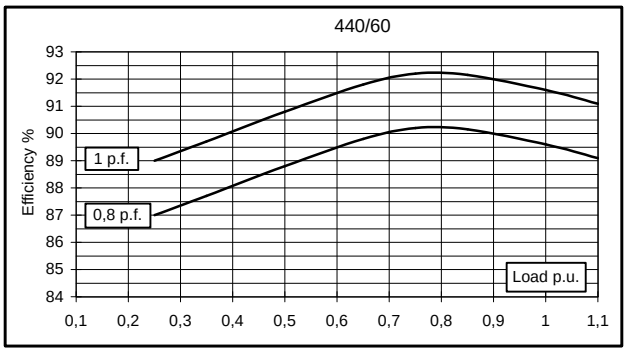
Document : **DS007A/3**

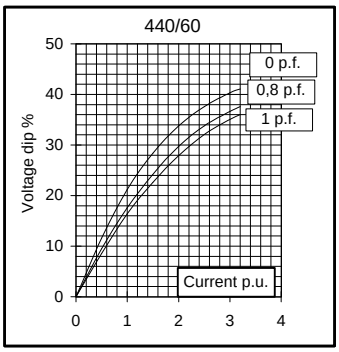
issue 005 date : 15/05/03

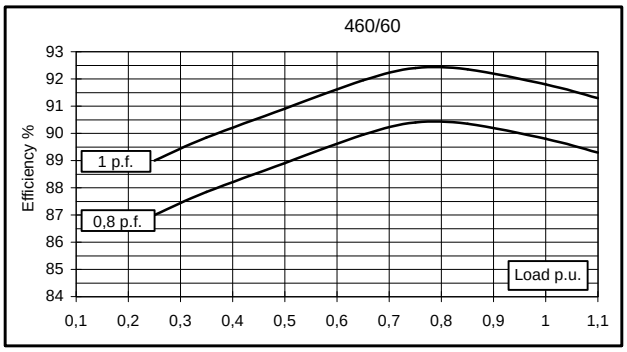
60 Hz

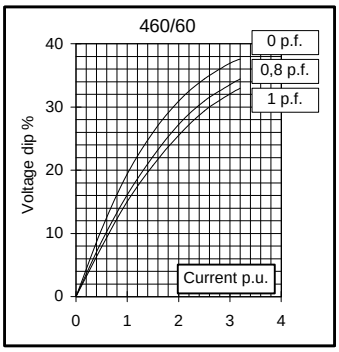


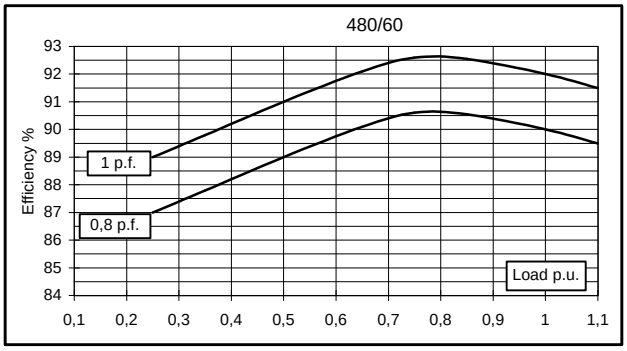


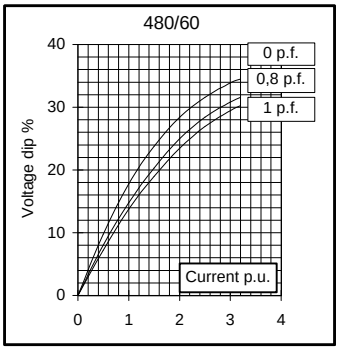


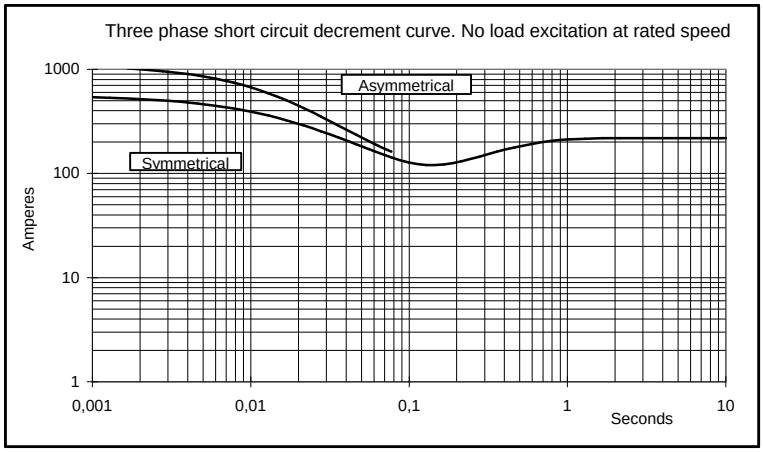




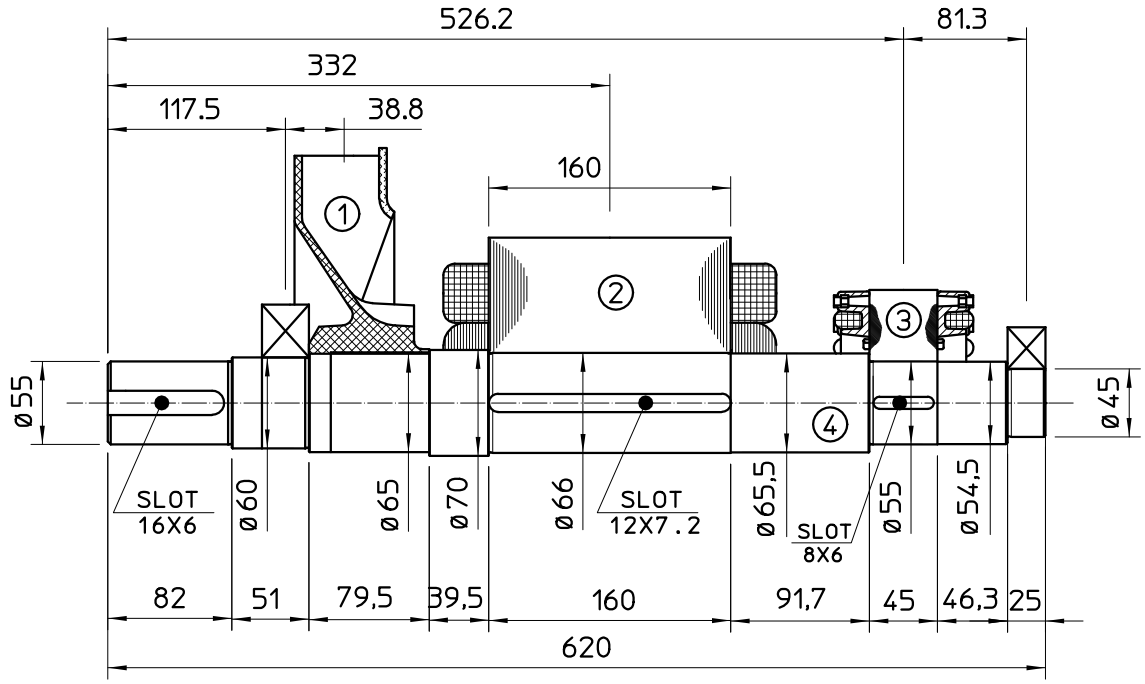






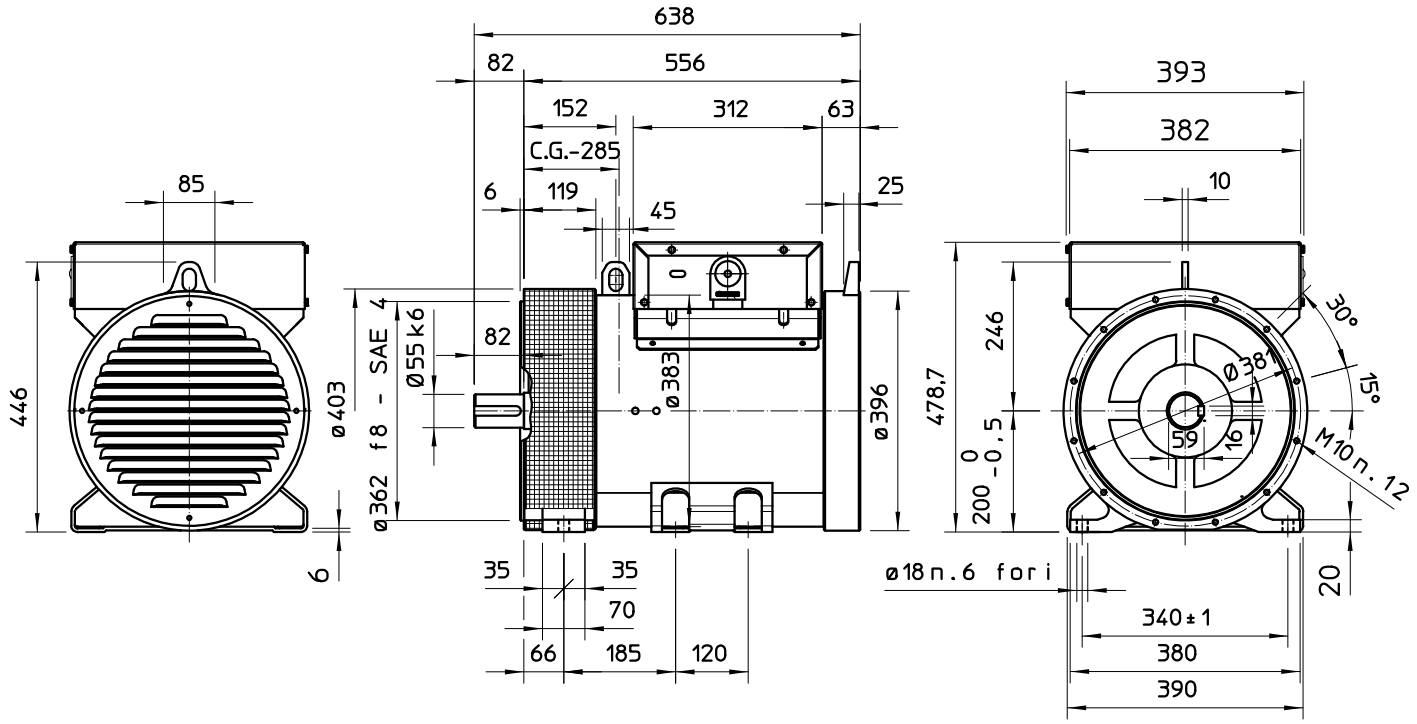


TWO BEARING MOMENTS OF INERTIA



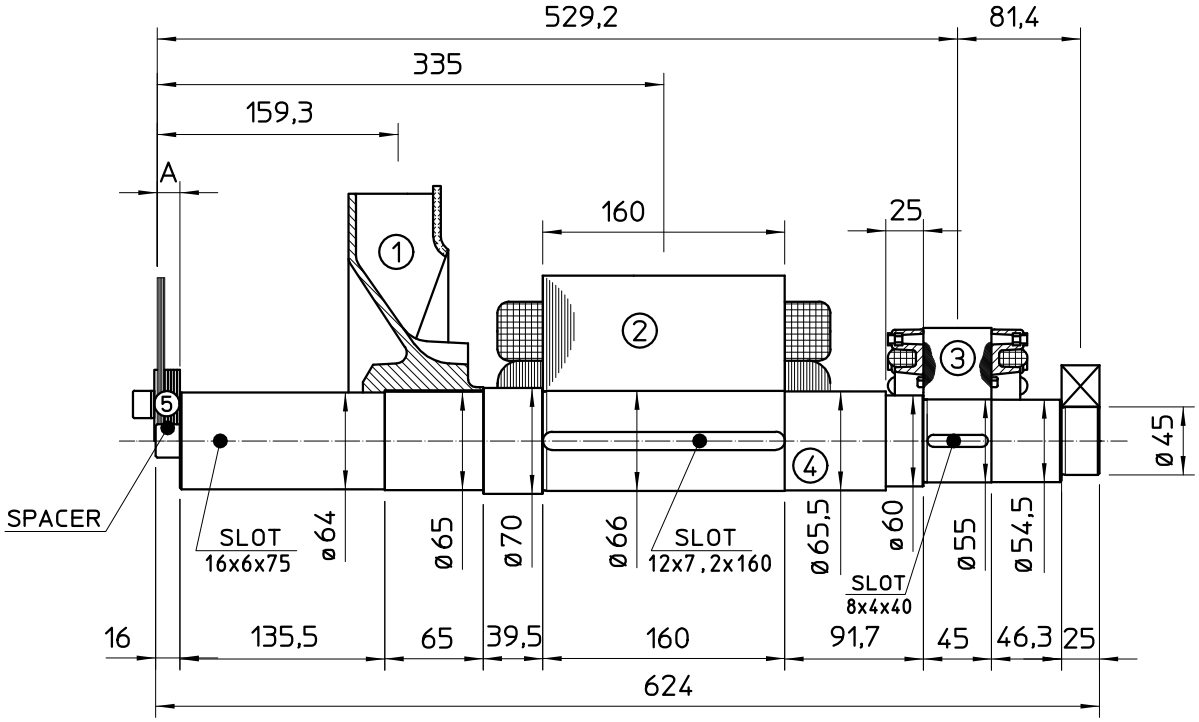
	COMPONENT	WEIGHT kg	J kgm²
1	FAN	2,3	0.0224
2	MAIN ROTOR	43.5	0.3088
3	EX. ROTOR	5.4	0.012
4	SHAFT	14.6	0.0062
	TOTAL	65.8	0.3494

TWO BEARING DIMENSIONS



C.G. = GRAVITY CENTER

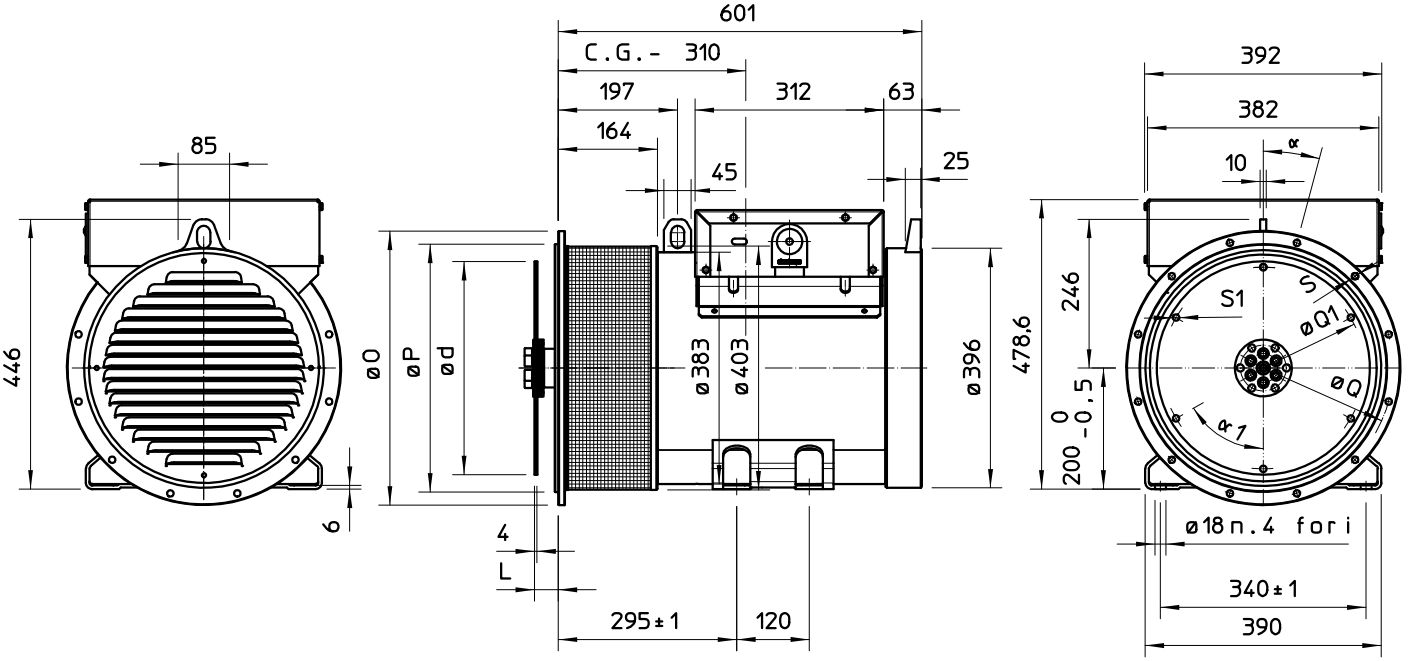
SINGLE BEARING MOMENTS OF INERTIA



	COMPONENT	WEIGHT kg	J kgm²
1	FAN	2,3	0,0224
2	MAIN ROTOR	43,5	0,3088
3	EX. ROTOR	5,4	0,012
4	SHAFT	14,4	0,0071
	TOTAL	65,6	0,3503

SAE No	S	SHAFTS COUPLING FLEX PLATE	
	A (mm)	WEIGHT kg	J kgm²
6,5	5	1,74	0,0084
7,5	5	2,1	0,013
8	36,6	3,9	0,02
10	28,6	4,47	0,038
11,5	15	4,51	0,059

SINGLE BEARING DIMENSIONS



SAE No	DISC COUPLING					
	L	d	Q1	No holes	S1	a1
6,5	30,2	215.9	200	6	9	60°
7,5	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°
11,5	39,6	352,42	333,37	8	11	45°

SAE No	FLANGE					
	O	P	Q	No holes	S	a
5	356	314,3	333,4	8	11	22°30'
4	403	362	381	12	11	15°
3	451	409,6	428,6	12	11	15°
2	489	447,7	466,7	12	11	15°
1	552	511.2	530.2	12	11	15°

C.G. = GRAVITY CENTER