



GENERATOR TYPE ECO 28-VL/2

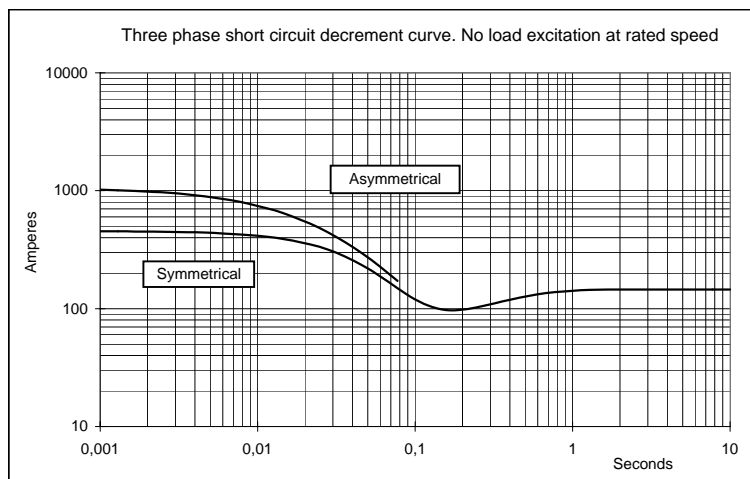
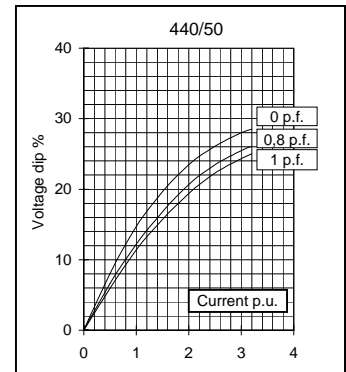
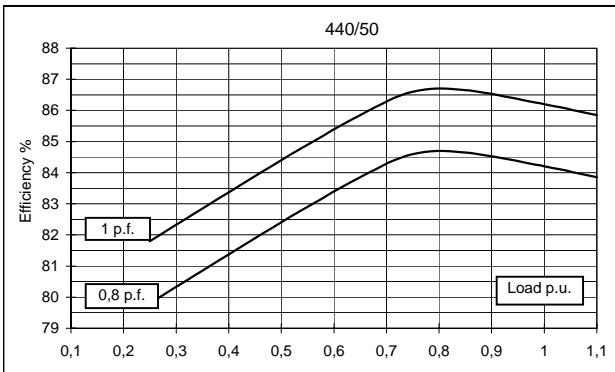
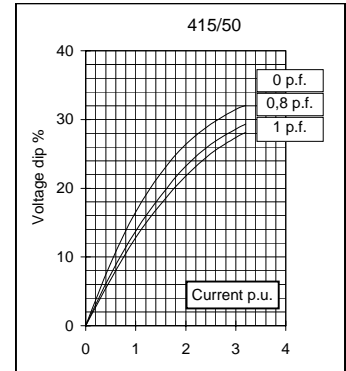
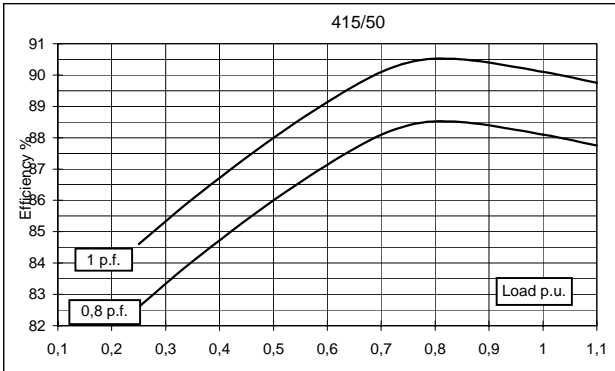
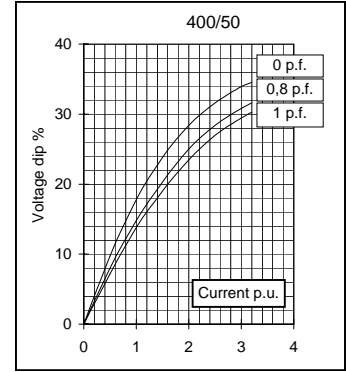
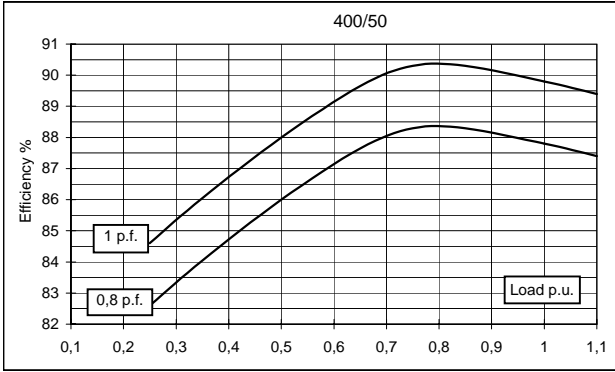
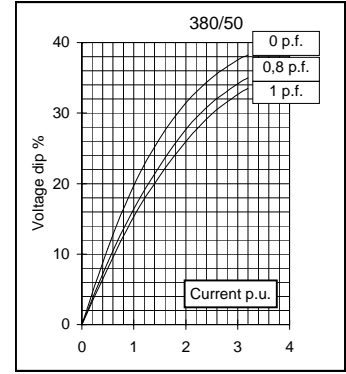
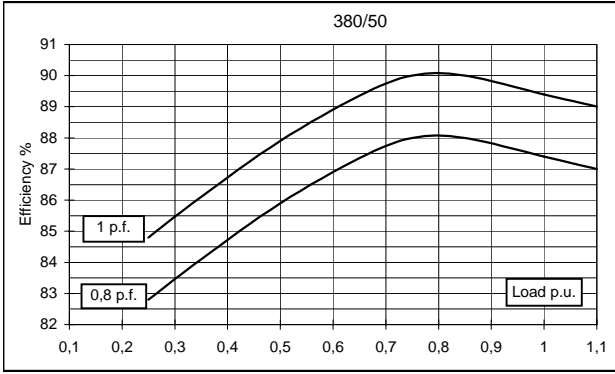
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Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	40	40	40	34	40	45	48	48	
	kW	32	32	32	27,2	32,0	36	38,4	38,4	
Rated power class F	kVA	37	37	37	31,5	37,5	41,5	44	44	
	kW	29,6	29,6	29,6	25,2	30	33,2	35,2	35,2	
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	%	87,4	87,8	88,1	84,2	88,8	89,1	89,3	89,7
(see graph. for details)	3/4	%	88	88,3	88,4	84,6	89,5	89,7	89,9	90,1
	2/4	%	85,9	86	86	82,4	87,7	87,8	87,9	88
	1/4	%	82,8	82,6	82,6	79,8	83,8	83,8	83,8	83,6
Reactances (f. l.cl. F)	Xd	%	260,4	235	218,3	165,1	262,0	262,2	255,9	235
	Xd'	%	8,09	7,3	6,78	5,1	8,14	8,14	7,95	7,3
	Xd''	%	4,21	3,8	3,53	2,7	4,24	4,24	4,14	3,8
	Xq	%	145,2	131	121,7	92,0	146,0	146,2	142,6	131
	Xq'	%	145,2	131	121,7	92,0	146,0	146,2	142,6	131
	Xq''	%	22,7	20,5	19,0	14,4	22,9	22,9	22,3	20,5
	X ₂	%	13,85	12,5	11,61	8,8	13,94	13,95	13,61	12,5
	X ₀	%	4,54	4,1	3,81	2,9	4,57	4,57	4,46	4,1
Short Circuit Ratio	Kcc		0,8	0,9	1,1	1,2	0,68	0,73	0,8	0,9
Time Constants	Td'	sec.	0,042							
	Td''	sec.	0,015							
	Tdo'	sec.	0,74							
	Tα	sec.	0,049							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,35	0,4	0,6	0,75	0,2	0,25	0,3	0,35
Excitation at full load	Amp.		1,2	1,3	1,4	1,5	1,3	1,4	1,3	1,2
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	0,056							
Rotor Winding Resistance (20°C)		Ω	6,5							
Exciter Resistance (20 °C)		Ω	Rotor : 0,417				Stator : 10,60			
Heat dissipation at f.l.cl.H	W		4613	4446	4322	5104	4036	4404	4601	4409
Telephone Interference			THF < 2%				TIF < 45			
Radio interference			EN60034-1. For others standards apply to factory							
Waveform Distors.(THD) at f. load	LL/LN %		2,9 / 3,1							
Waveform Distors.(THD) at no load	LL/LN %		2,8 / 3							
Mechanical characteristics										
Protection			IP 23 (other protection on request)							
DE bearing			6309-2RS							
NDE bearing			6207-2RS							
Weight of wound stator assembly	kg		57							
Weight of wound rotor assembly	kg		30							
Weight of complete generator	kg		156							
Maximun overspeed	rpm		4500							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		3,6							
Cooling air requirement	m³/min		9,7				11			
Inertia Constant (H)	sec.		0,151				0,181			
Noise level at 1m/7m	dB(A)		86 / 74				90,5 / 78			

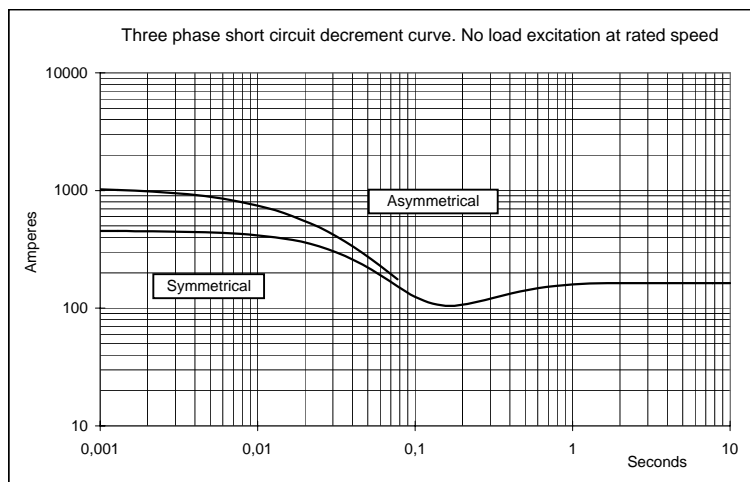
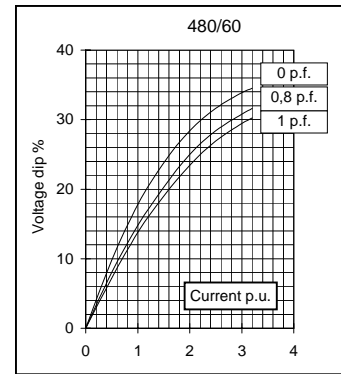
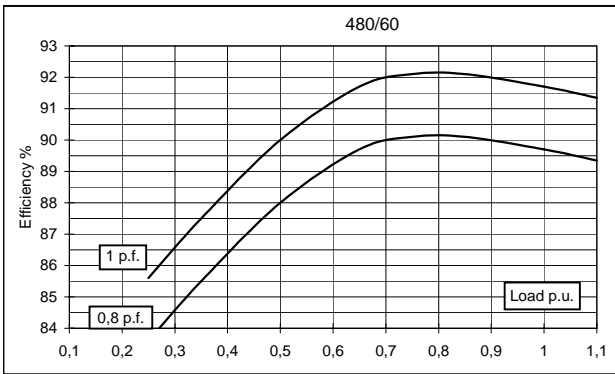
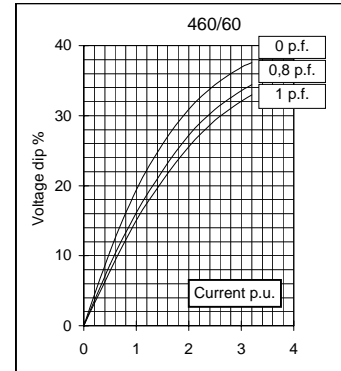
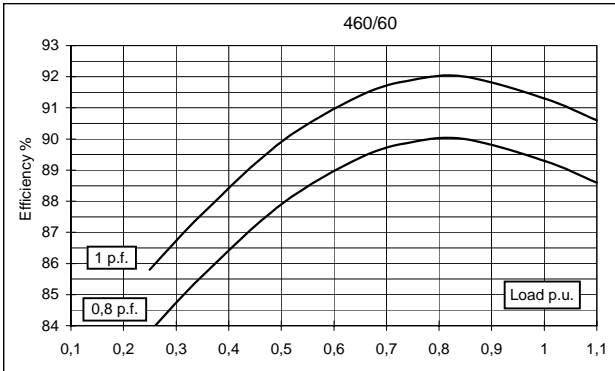
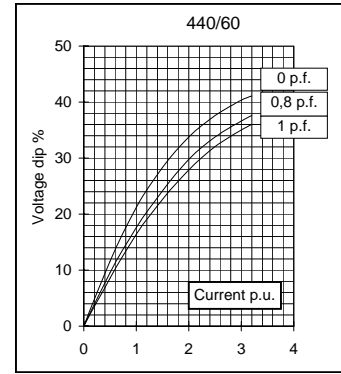
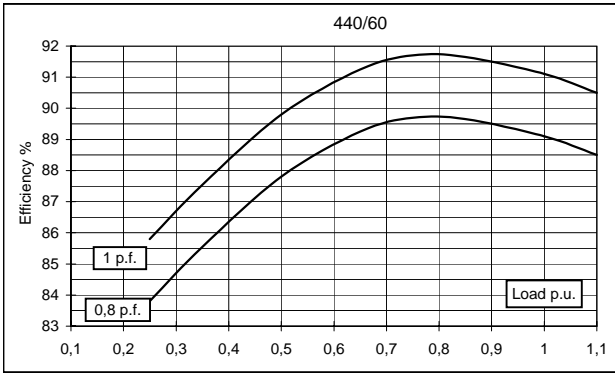
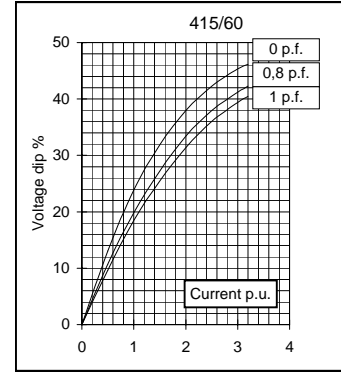
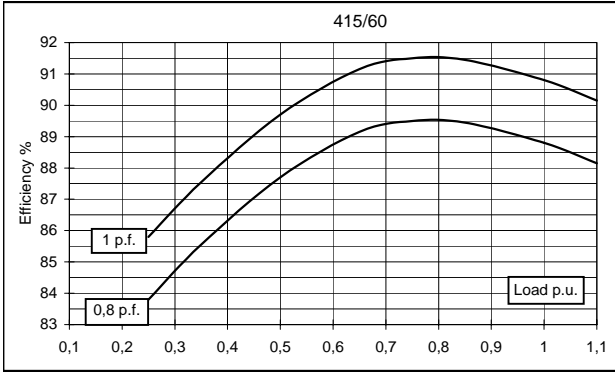
All technical data are to be considered as a reference and they can be modified without any notice

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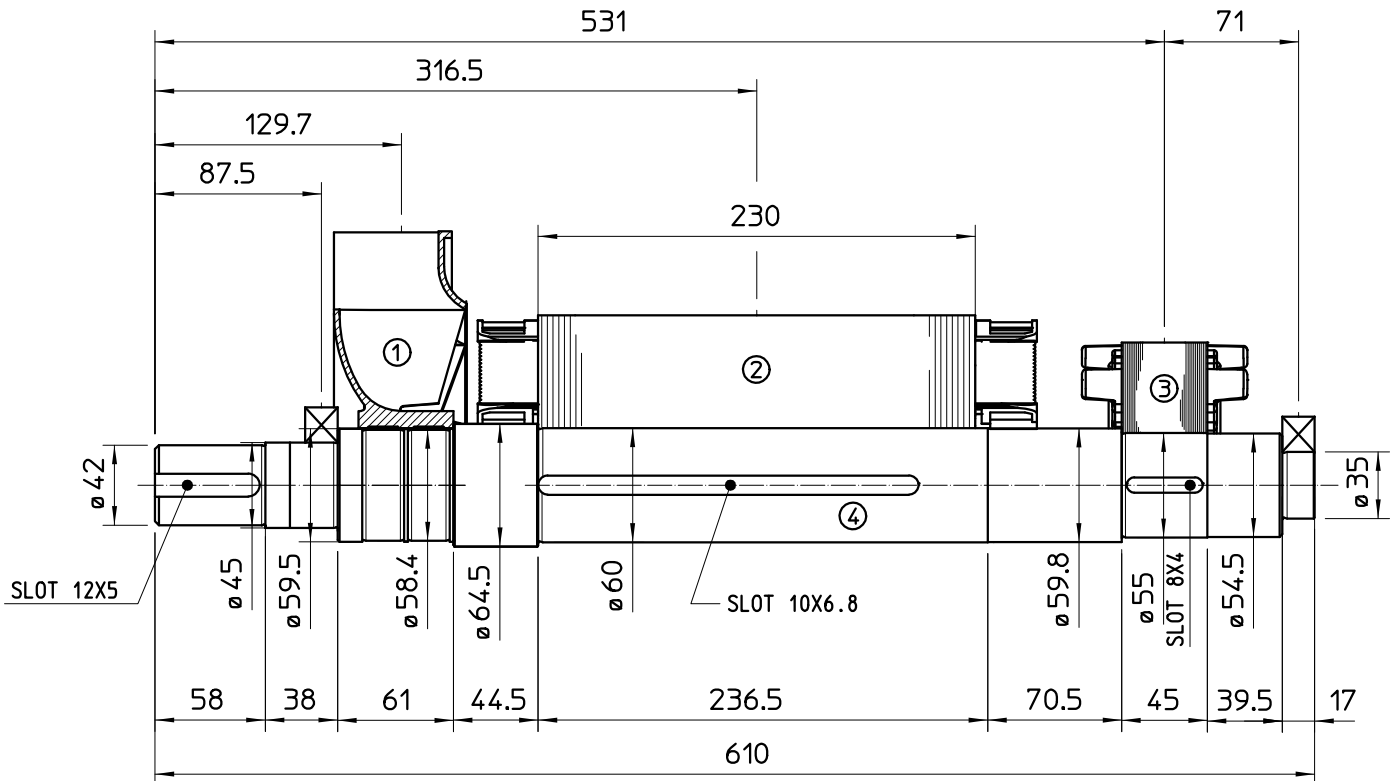
50 Hz



60 Hz

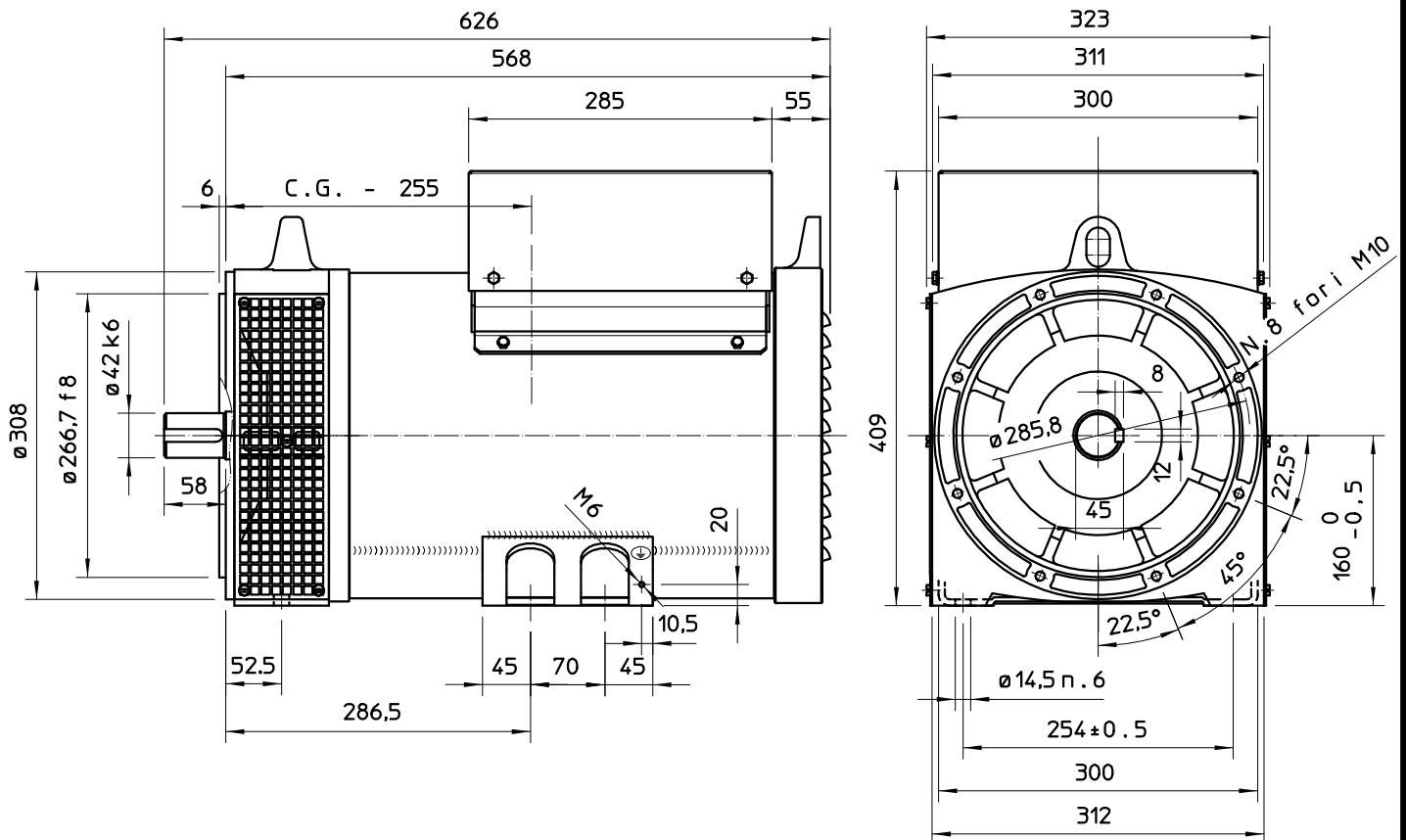


TWO BEARING MOMENTS OF INERTIA



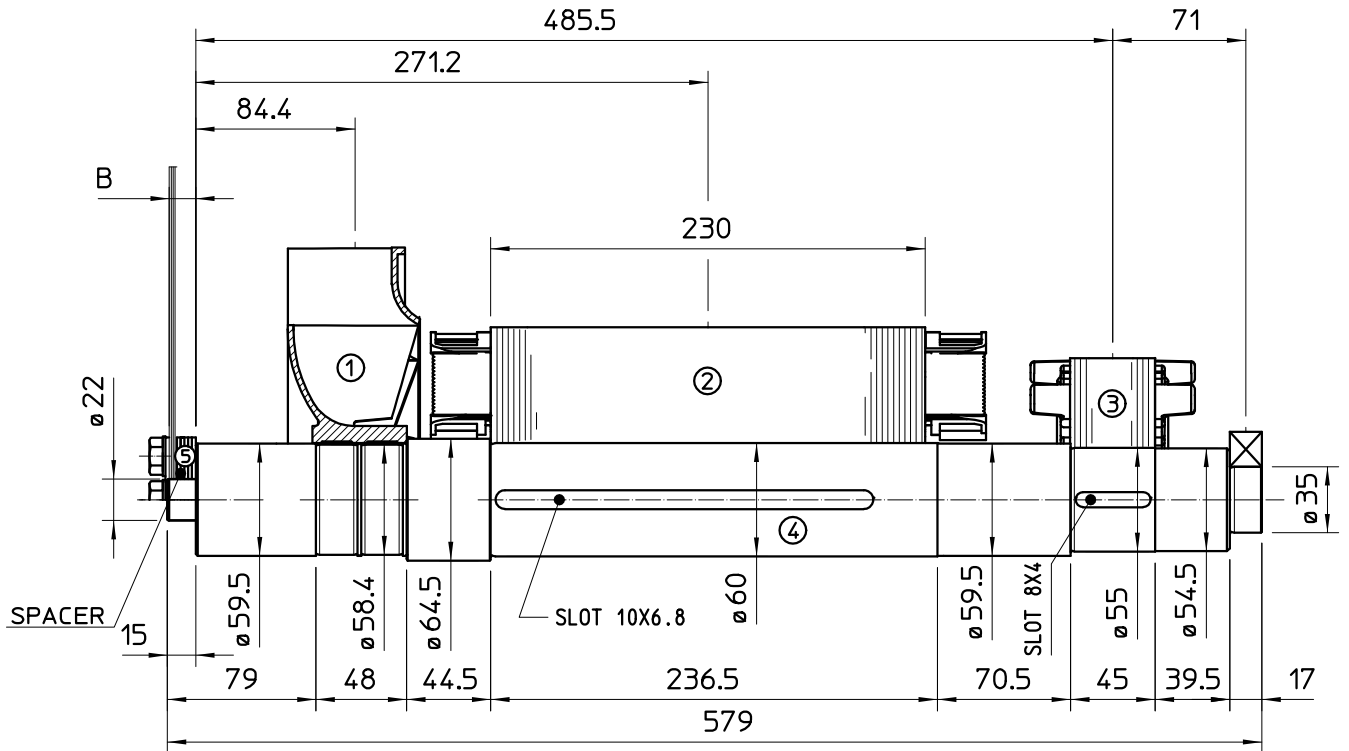
COMPONENT	WEIGHT Kg	J Kg ²
1 FAN	1.2	0.0102
2 MAIN ROTOR	30	0.095
3 EX ROTOR	5.4	0.012
4 SHAFT	11.9	0.0050
6 TOTAL	48.5	0.1222

TWO BEARING DIMENSIONS



C.G. = GRAVITY CENTER

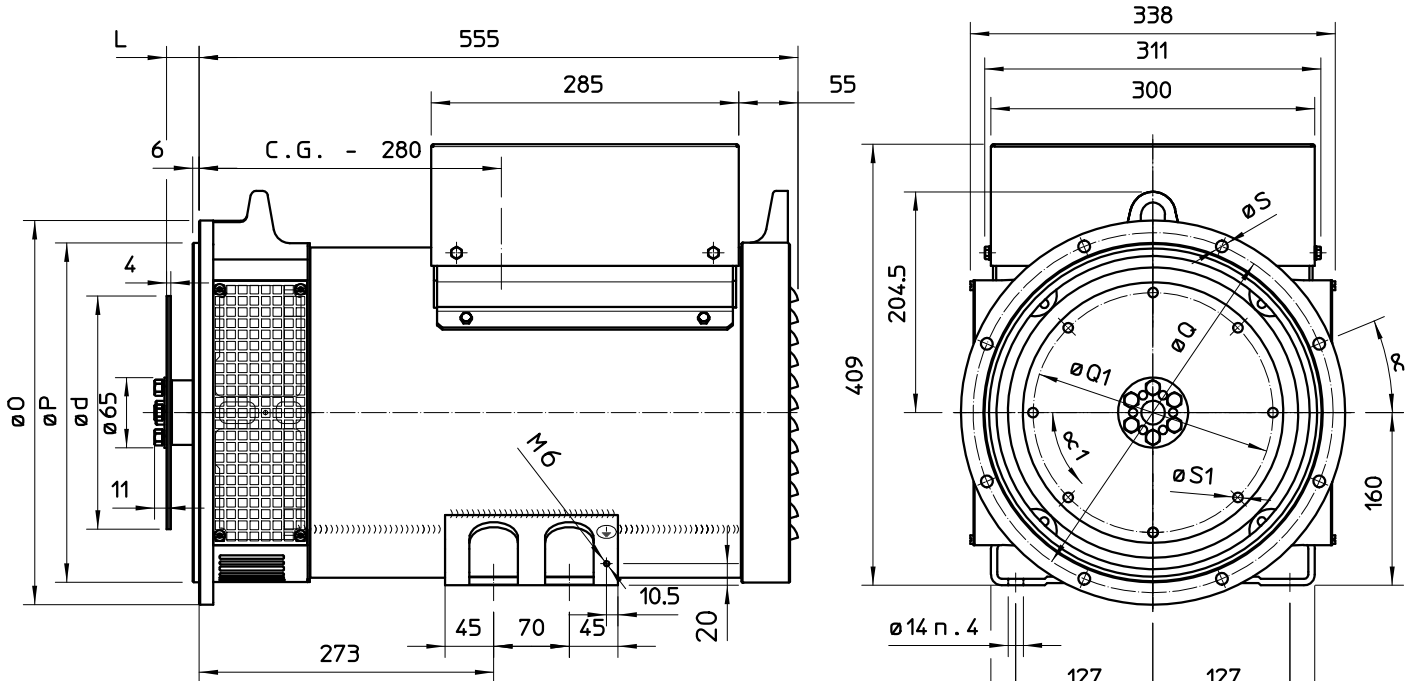
SINGLE BEARING MOMENTS OF INERTIA



COMPONENT	WEIGHT Kg	J Kg ²
1 FAN	1.2	0.0102
2 MAIN ROTOR	30	0.095
3 EX ROTOR	5.4	0.012
4 SHAFT	12	0.0050
6 TOTAL	48.6	0.1222

SAE N.	B (mm)	SHAFT COUPLING FLEX PLATE	
		WEIGHT kg	J kgm ²
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



SAE N.	FLANGIA/FLANGE BRIDE/FLANSCH				
	O	P	Q	n. fori	S
5	356	314.3	333.4	8	11
4	403	362	381	12	11
3	451	409.6	428.6	12	11
2	489	447.7	466.7	12	11

SAE N.	GIUNTI A DISCHI DISC COUPLING DISQUE DE MONOPALIER SCHEIBENKUPPLUNG				
	L	d	Q1	n. fori	S1
6 1/2	30.2	215.9	200	6	9
7 1/2	30.2	241.3	222.25	8	9
8	62	263.52	244.47	6	11
10	53.8	314.32	295.27	8	11
11 1/2	39.6	352.42	333.37	8	11

C.G. = GRAVITY CENTER