



# GENERATOR TYPE ECO 40-1L/4

Dedicated Winding

Document : DS270A/1

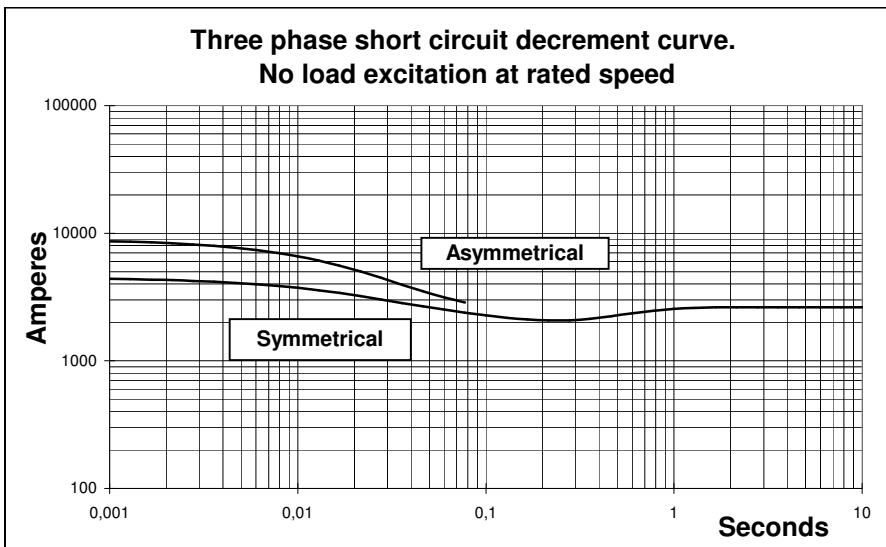
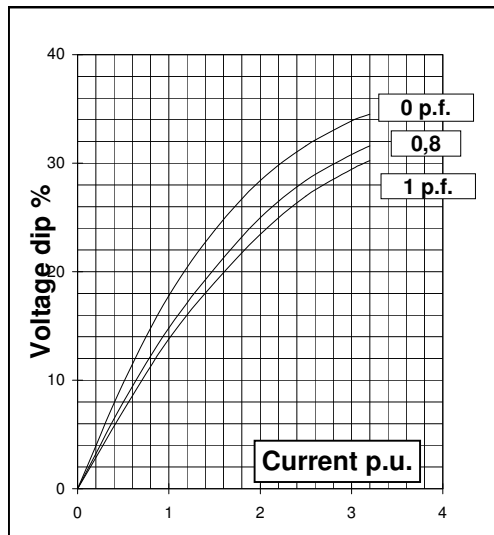
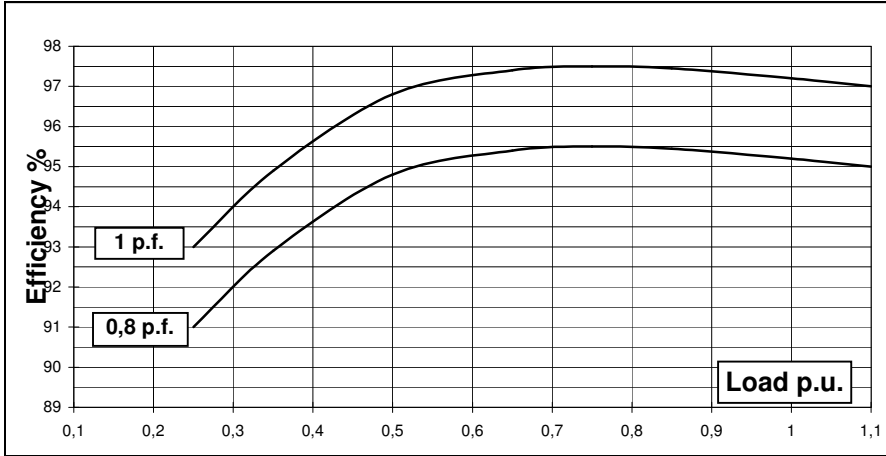
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Electrical Characteristics			
Frequency	Hz		60
Voltage (parallel star)	V		600
Rated power class H	kVA		660
	kW		528
Rated power class F	kVA		600
	kW		480
Regulation with	DER1		±1% with any power factor and speed variations between -5% +30%
Insulation class			H
Execution			Brushless
Stator winding			12 ends
Rotor			with damping cage
Efficiencies class H	4/4	%	95,2
(see graph. for details)	3/4	%	95,5
	2/4	%	94,8
	1/4	%	91
<b>Reactances (f. l.cl. F)</b>			
	Xd	%	282
	Xd'	%	28,2
	Xd''	%	18,7
	Xq	%	152
	Xq'	%	152
	Xq''	%	24,2
	X <sub>2</sub>	%	21,4
	X <sub>0</sub>	%	3,2
Short Circuit Ratio	Kcc		0,42
<b>Time Constants</b>			
	Td'	sec.	0,138
	Td''	sec.	0,0185
	Tdo'	sec.	2,85
	Tα	sec.	0,03
Short Circuit Current Capacity		%	>350
Excitation at no load	Amp.		0,7
Excitation at full load	Amp.		3,2
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load
Overload per 20 sec.		%	300
Stator Winding Resistance (20 °C)	Ω		0,010
Rotor Winding Resistance (20 °C)	Ω		6,025
Exciter Resistance (20 °C)	Ω		Rotor : 0,317                      Stator : 8,85
Heat dissipation at f.l.cl.H	W		26622
Telephone Interference			THF < 2%                      TIF < 40
Radio interference			EN61000-6-3, EN61000-6-1. For others standards apply to factory
Waveform Distors.(THD) at f. load	LL/LN %		2,3 / 2,4
Waveform Distors.(THD) at no load	LL/LN %		2,5 / 2,5
<b>Mechanical characteristics</b>			
Protection			IP 21 (other protection on request)
DE bearing			6322
NDE bearing			6318.2RS
Weight of wound stator assembly	kg		477
Weight of wound rotor assembly	kg		297,5
Weight of complete generator	kg		1324
Maximun overspeed	rpm		2250
Unbalanced magnetic pull at f.l.cl.F	kN/mm		6,1
Cooling air requirement	m³/min		64,8
Inertia Constant (H)	sec.		0,204
Noise level at 1m/7m	dB(A)		98 / 88

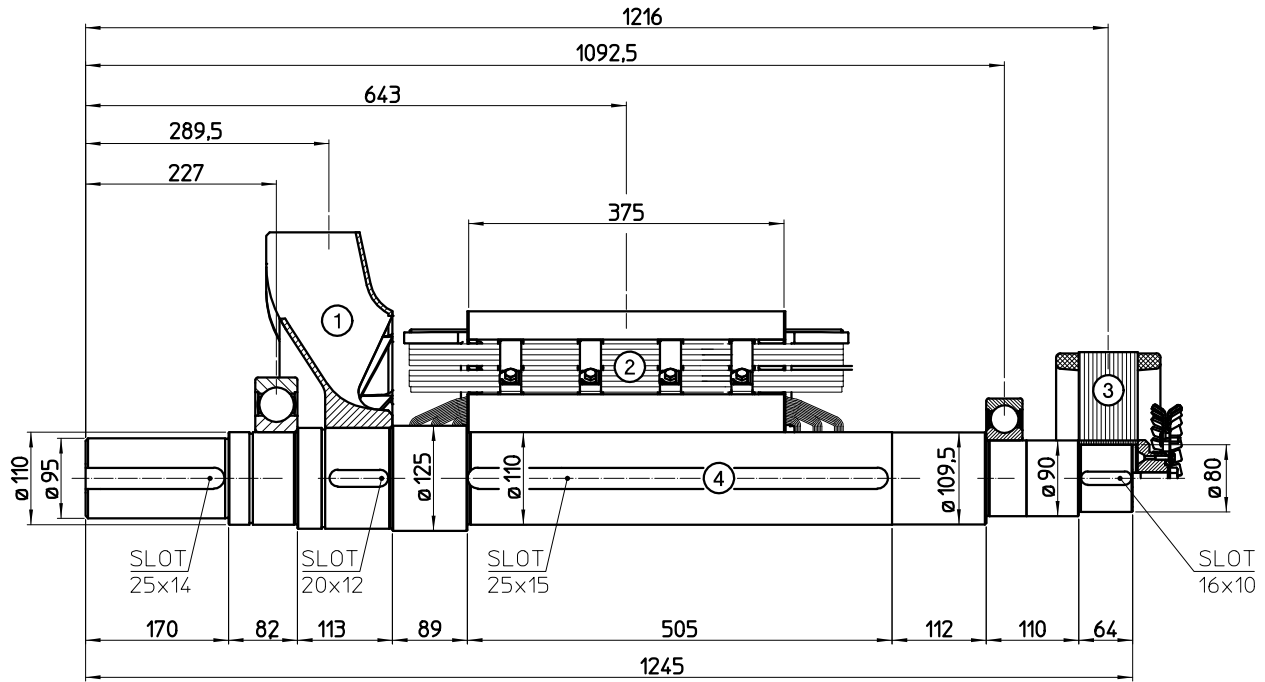
All technical data are to be considered as a reference and they can be modified without any notice.

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**600V - 60Hz**

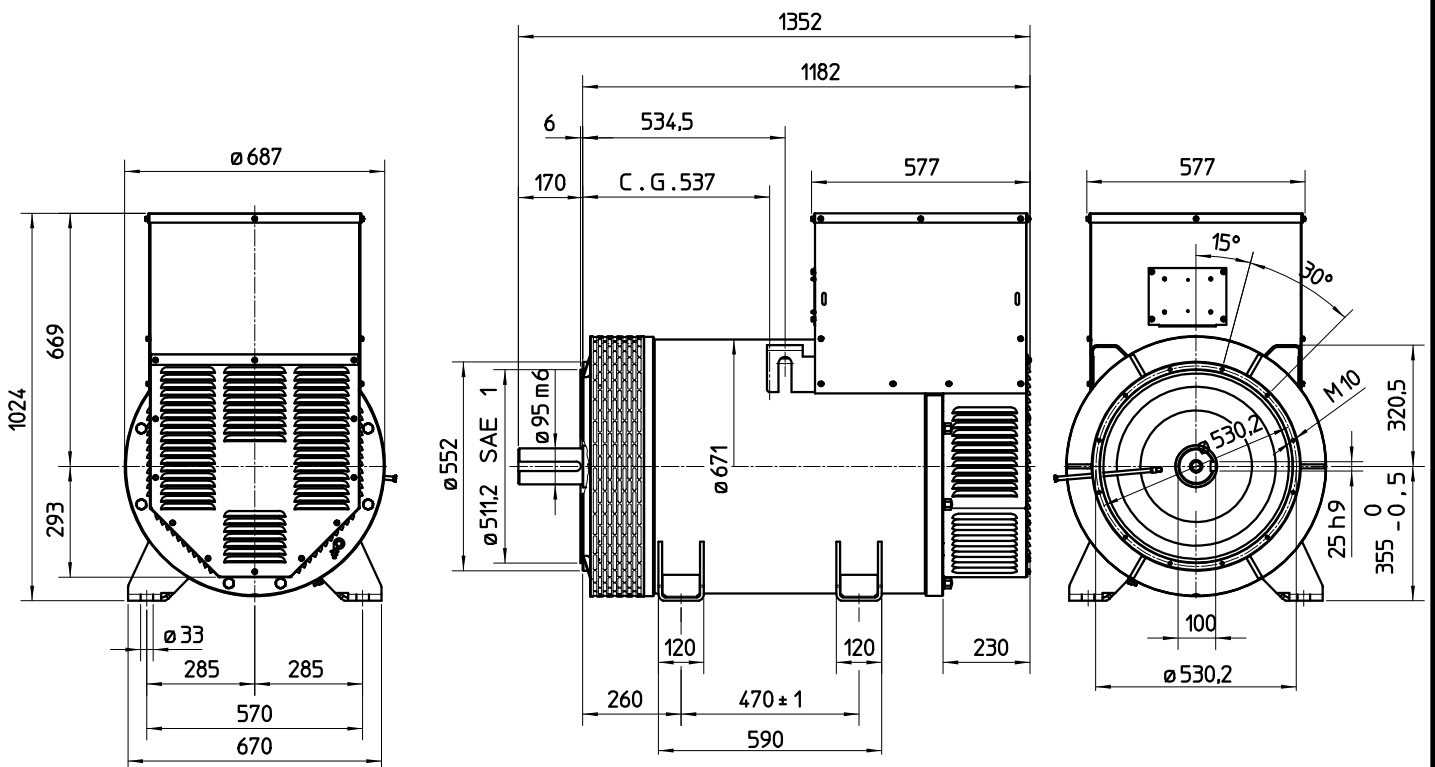


## TWO BEARING MOMENTS OF INERTIA

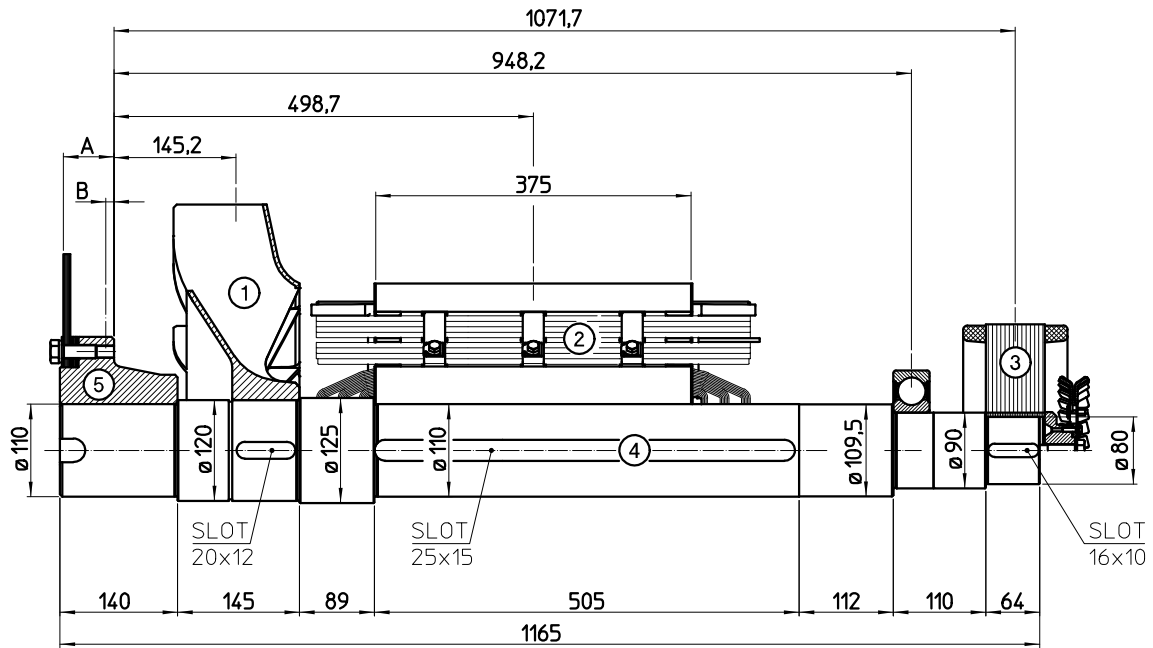


COMPONENT	WEIGHT kg	J kgm <sup>2</sup>
1 FAN	10,2	0,335
2 MAIN ROTOR	297,5	6,332
3 EX. ROTOR	35	0,562
4 SHAFT	85,7	0,127
TOTAL	428,4	7,356

## TWO BEARING DIMENSIONS



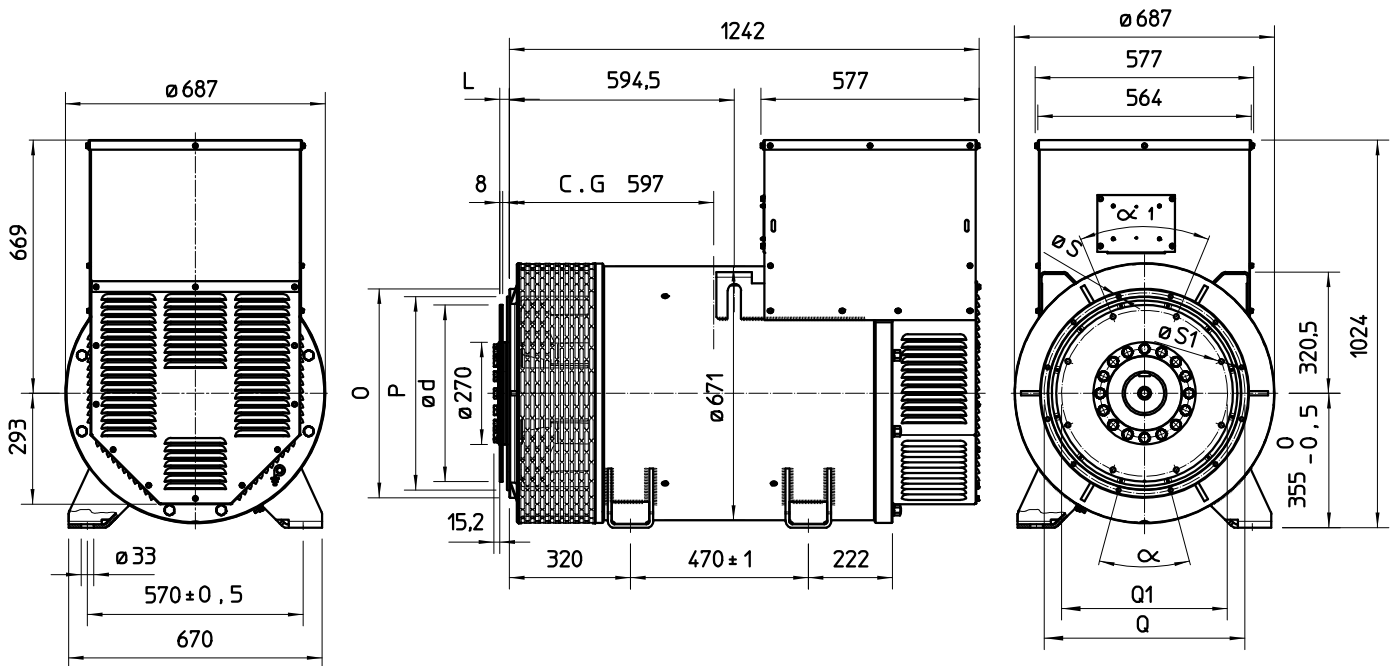
### SINGLE BEARING MOMENTS OF INERTIA



COMPONENT	WEIGHT kg	J kgm <sup>2</sup>
1 FAN	10,2	0,335
2 MAIN ROTOR	297,5	6,332
3 EX. ROTOR	35	0,562
4 SHAFT	84,2	0,129
TOTAL	426,9	7,358

Sae No	SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm <sup>2</sup>
14	60	9,6	41,4	0,511
18	50	6,6	45,1	0,858

### SINGLE BEARING DIMENSIONS



SAE N.	FLANGIA / FLANGE BRIDE / FLANSCH					
	O	P	Q	N. FORI	S	α
1	552	511,2	530,2	12	11	30°
1/2	648	584,2	619,1	12	14	30°
0	711	647,7	679,5	16	14	22,5°
00	883	787,4	850,9	16	14	22,5°

VOL. N.	GIUNTI A DISCHI / DISC COUPLING DISQUE DE MONOPALIER / SCHEIBENKUPPLUNG					
	L	d	Q1	N. FORI	S1	α1
14	25,4	466,72	438,15	8	14	45°
18	15,7	571,5	542,92	6	17	60°

C.G.= GRAVITY CENTER