



GENERATOR TYPE ECO 40-1S/4

Document : DS104A/1

dedicated winding

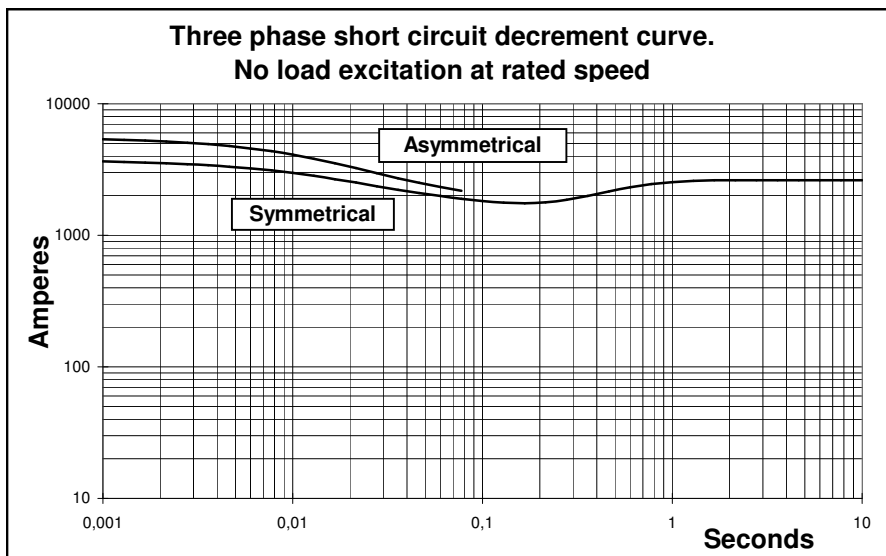
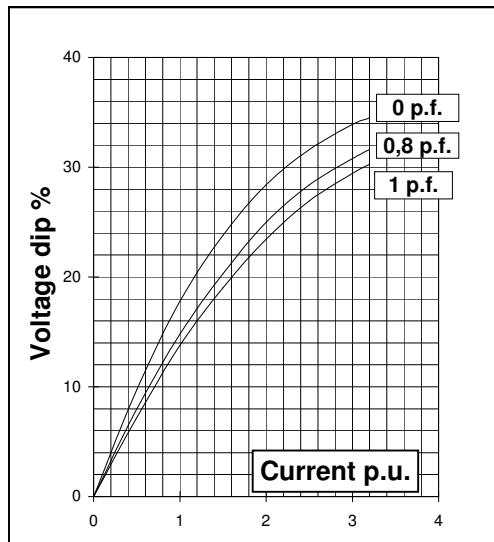
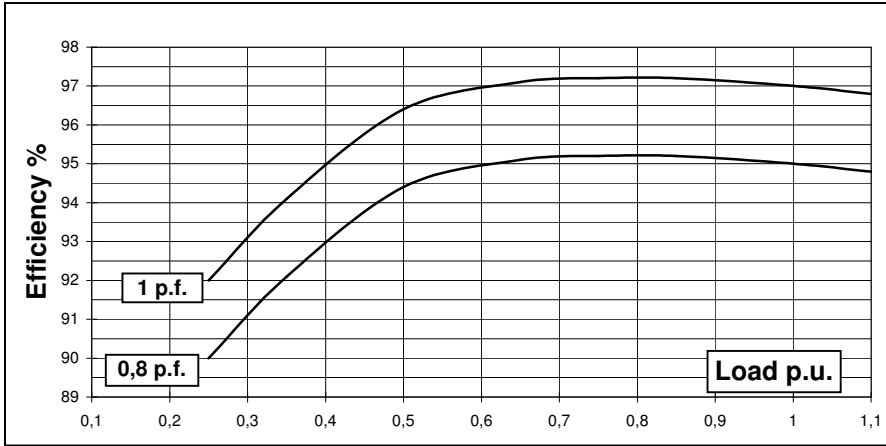
issue 001 date 08/11/2013

Electrical Characteristics			
Frequency	Hz		60
Voltage (series star)	V		380
Rated power class H	kVA		480
	kW		384
Rated power class F	kVA		440
	kW		352
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
(see graph. for details)	3/4	%	95,2
	2/4	%	94,4
	1/4	%	90
Reactances (f. l.cl. F)			
	Xd	%	290,0
	Xd'	%	29,5
	Xd''	%	19,5
	Xq	%	131,0
	Xq'	%	131,0
	Xq''	%	36,0
	X ₂	%	28,0
	X ₀	%	3,80
Short Circuit Ratio	Kcc		0,35
Time Constants			
	Td'	sec.	0,1
	Td''	sec.	0,012
	Tdo'	sec.	2,40
	Tα	sec.	0,011
Short Circuit Current Capacity		%	> 350
Excitation at no load	Amp.		0,8
Excitation at full load	Amp.		3,5
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load
Overload per 20 sec.		%	300
Stator Winding Resistance (20 °C)	Ω		0,0036
Rotor Winding Resistance (20 °C)	Ω		4,488
Exciter Resistance (20 °C)	Ω		Rotor : 0,317 Stator : 8,85
Heat dissipation at f.l.cl.H	W		20211
Telephone Interference			FHT < 2% TIF < 40
Radio interference			EN61000-6-3, EN61000-6-2. For others standards apply to factory
Waveform Distors.(THD) at f. load	LL/LN %		2,6 / 2,6
Waveform Distors.(THD) at no load	LL/LN %		2,9 / 2,9
Mechanical characteristics			
Protection			IP 21 (other protection on request)
DE bearing			6322
NDE bearing			6318.2RS
Weight of wound stator assembly	kg		327
Weight of wound rotor assembly	kg		211
Weight of complete generator	kg		1040
Maximun overspeed	rpm		2250
Unbalanced magnetic pull at f.l.cl.F	kN/mm		5
Cooling air requirement	m³/min		64,8
Inertia Constant (H)	sec.		0,212
Noise level at 1m/7m	dB(A)		98 / 88

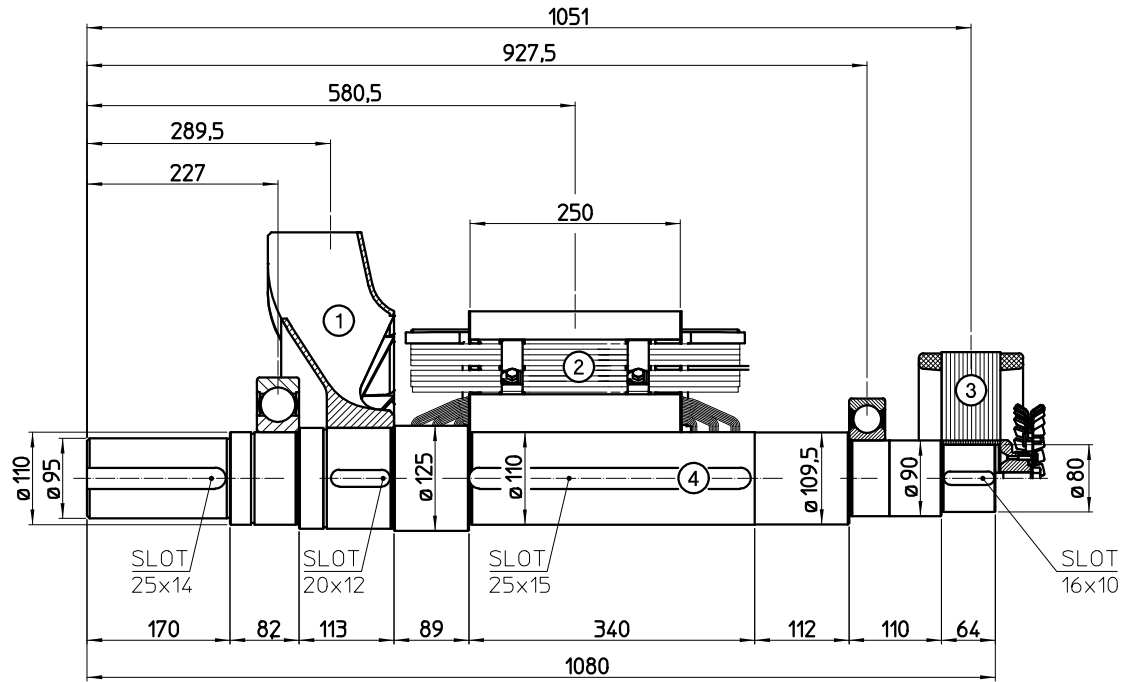
All technical data are to be considered as a reference and they can be modified without any notice.

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380V - 60 Hz

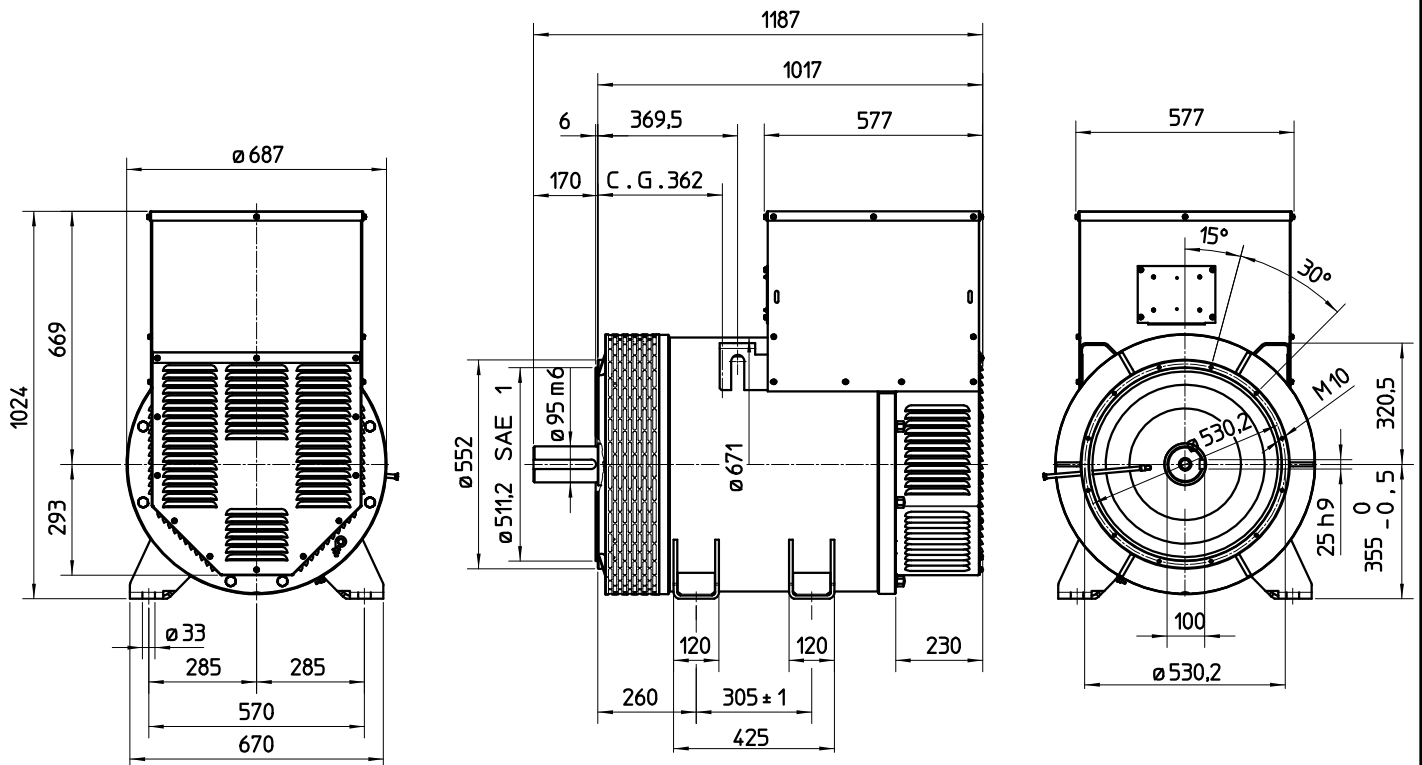


TWO BEARING MOMENTS OF INERTIA



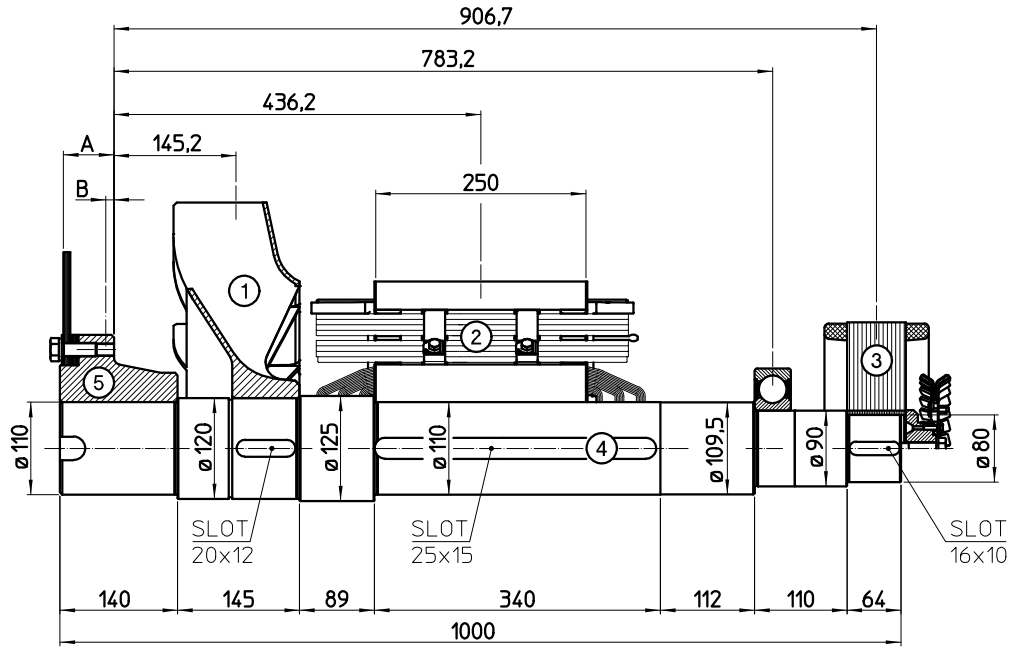
COMPONENT	WEIGHT kg	J kgm ²
1 FAN	10,2	0,335
2 MAIN ROTOR	211	4,498
3 EX. ROTOR	35	0,562
4 SHAFT	73,6	0,109
TOTAL	329,8	5,504

TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

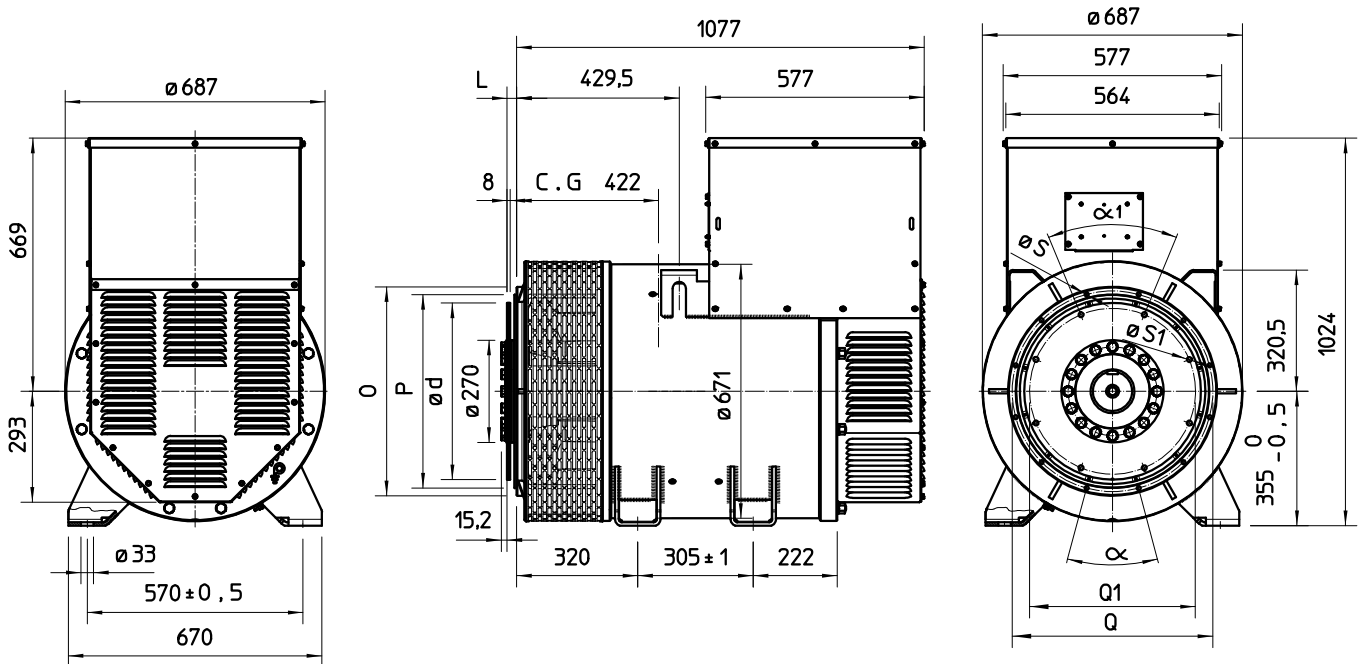
SINGLE BEARING MOMENTS OF INERTIA



COMPONENT	WEIGHT kg	J kgm ²
1 FAN	10,2	0,335
2 MAIN ROTOR	211	4,498
3 EX. ROTOR	35	0,562
4 SHAFT	72	0,111
TOTAL	328.2	5.506

Sae No	SHAFTS COUPLING FLEX PLATE		
	A	B	WEIGHT kg
14	60	9,6	41,4
18	50	6,6	45,1

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