



# GENERATOR TYPE ECO 46-1.5S/4

Document : DS329A/1

dedicated winding

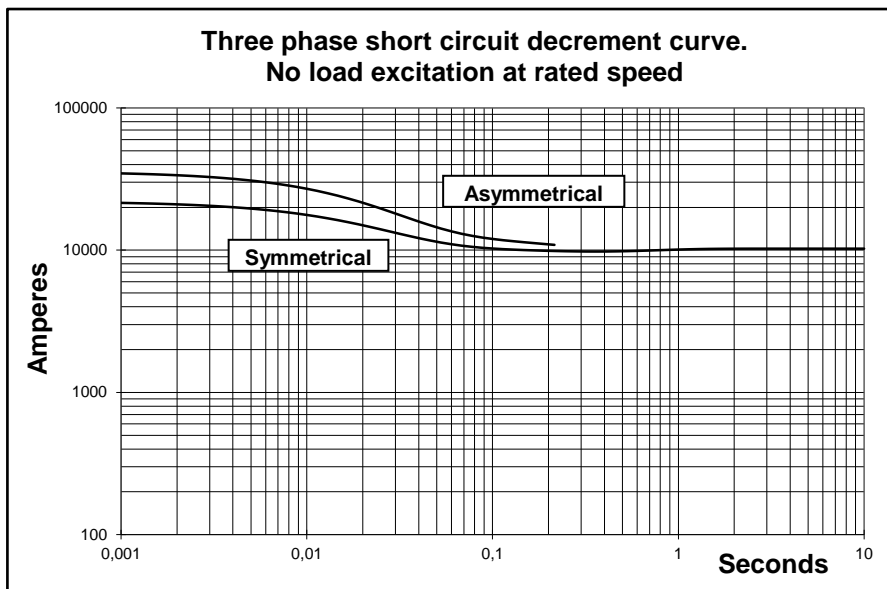
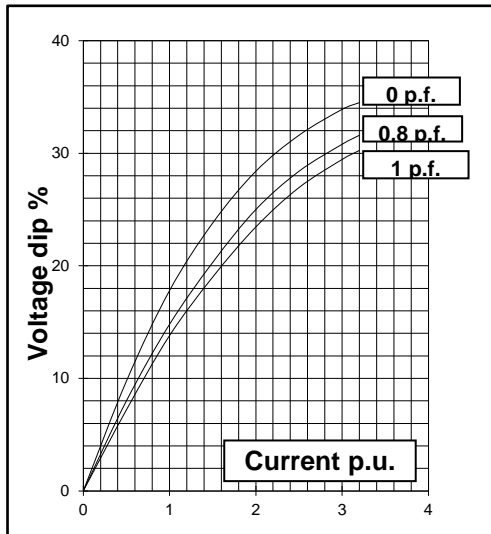
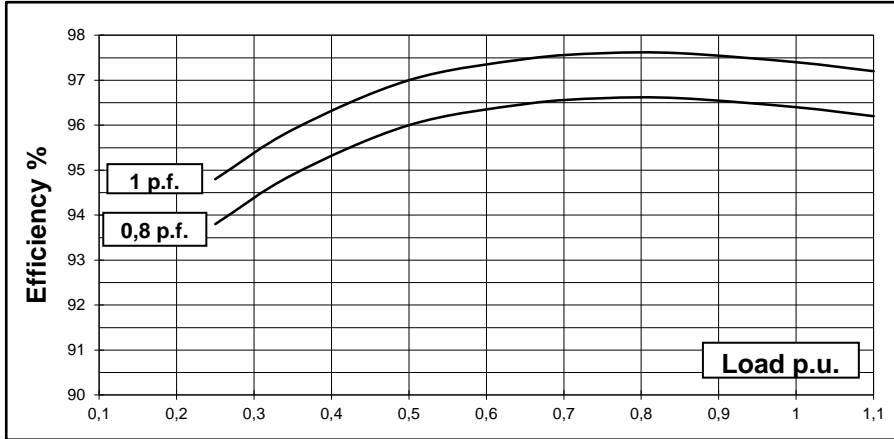
issue 000 date 05/05/2014

Electrical Characteristics			
Frequency	Hz		60
Voltage (parallel star)	V		380
Rated power class H	kVA		1900
	kW		1520
Rated power class F	kVA		1708
	kW		1366
Rated Stand by power (150°/40°)	kVA		1958
	kW		1566
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 (see graph. for details)	4/4	%	96,4
	3/4	%	96,5
	2/4	%	96
	1/4	%	93,8
Reactances (f. l.cl. F)	Xd	%	270,0
	Xd'	%	26,8
	Xd''	%	13,1
	Xq	%	173
	Xq'	%	173
	Xq''	%	29,8
	X <sub>2</sub>	%	18,7
	X <sub>0</sub>	%	4,4
Short Circuit Ratio	Kcc		0,37
Time Constants	Td'	sec.	0,25
	Td''	sec.	0,021
	Tdo'	sec.	9,80
	Tα	sec.	0,03
Short Circuit Current Capacity		%	> 300
Excitation at no load	Amp.		0,7
Excitation at full load	Amp.		2,9
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load
Overload per 20 sec.		%	300
Stator Winding Resistance (20°C)	Ω		0,0029
Rotor Winding Resistance (20°C)	Ω		3,319
Exciter Resistance (20 °C)	Ω		Rotor : 0,120                      Stator : 12,90
Heat dissipation at f.l.cl.H	W		56.763
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 %		3,3 / 3,2
Waveform Distors.(THD) at no load	LL/LN %		2,5 / 2,4
Mechanical characteristics			
Protection			IP 21 (other protection on request )
DE bearing			6330
NDE bearing			6324
Weight of wound stator assembly	kg		1295
Weight of wound rotor assembly	kg		845
Weight of complete generator	kg		3380
Maximun overspeed	rpm		2250
Unbalanced magnetic pull at f.l.cl.F	kN/mm		6,4
Cooling air requirement	m <sup>3</sup> /min		162
Inertia Constant (H)	sec.		0,37
Noise level at 1m/7m	dB(A)		100 / 91

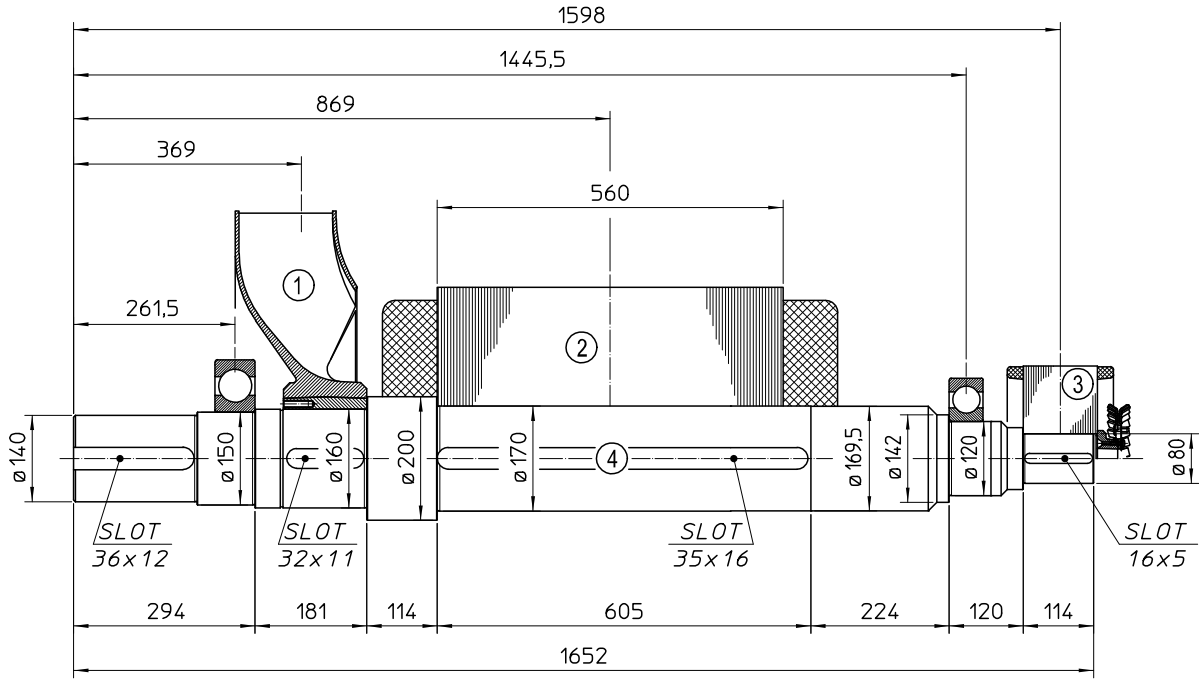
All technical data are to be considered as a reference and they can be modified without any notice.

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**380V - 60 Hz**

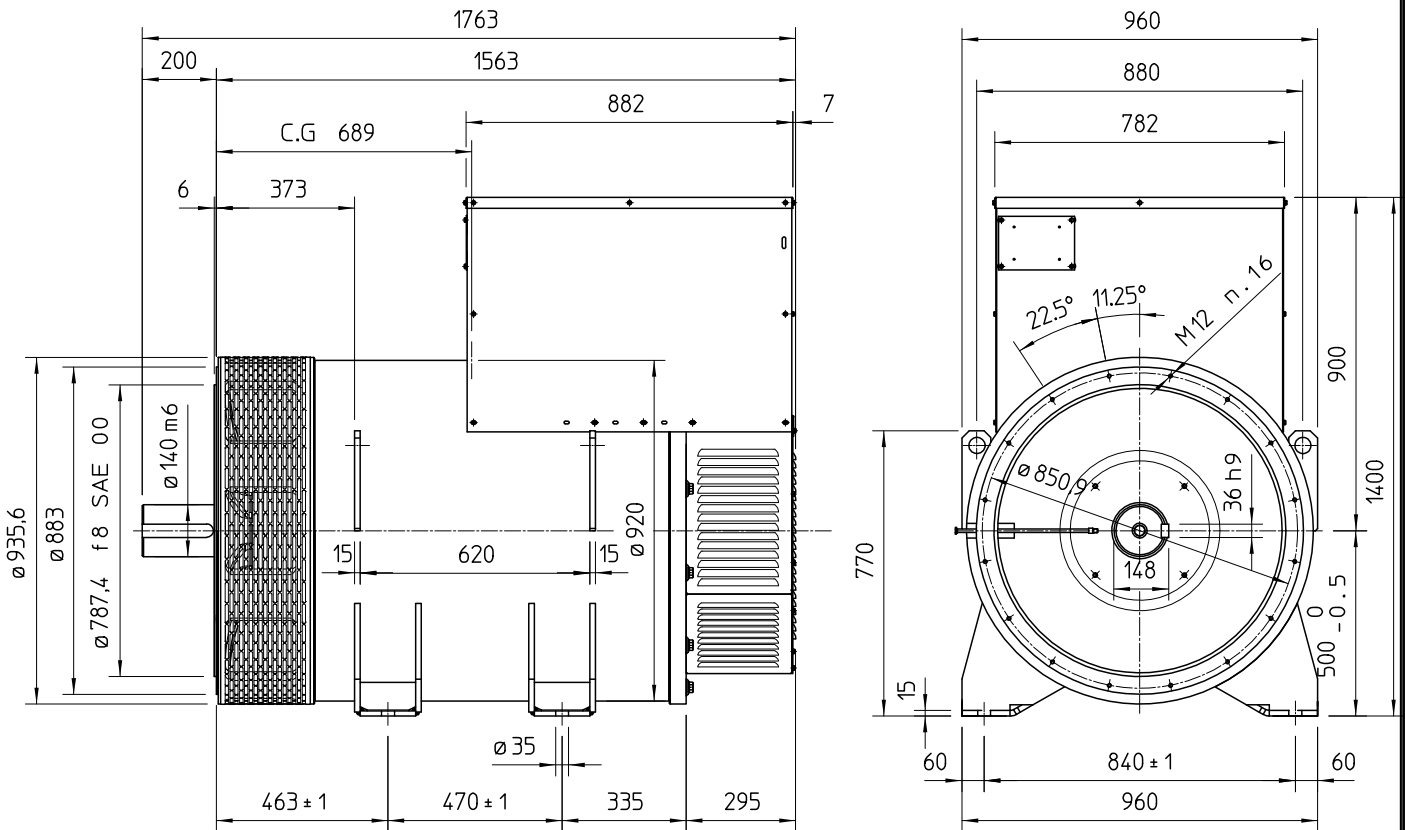


### TWO BEARING MOMENTS OF INERTIA



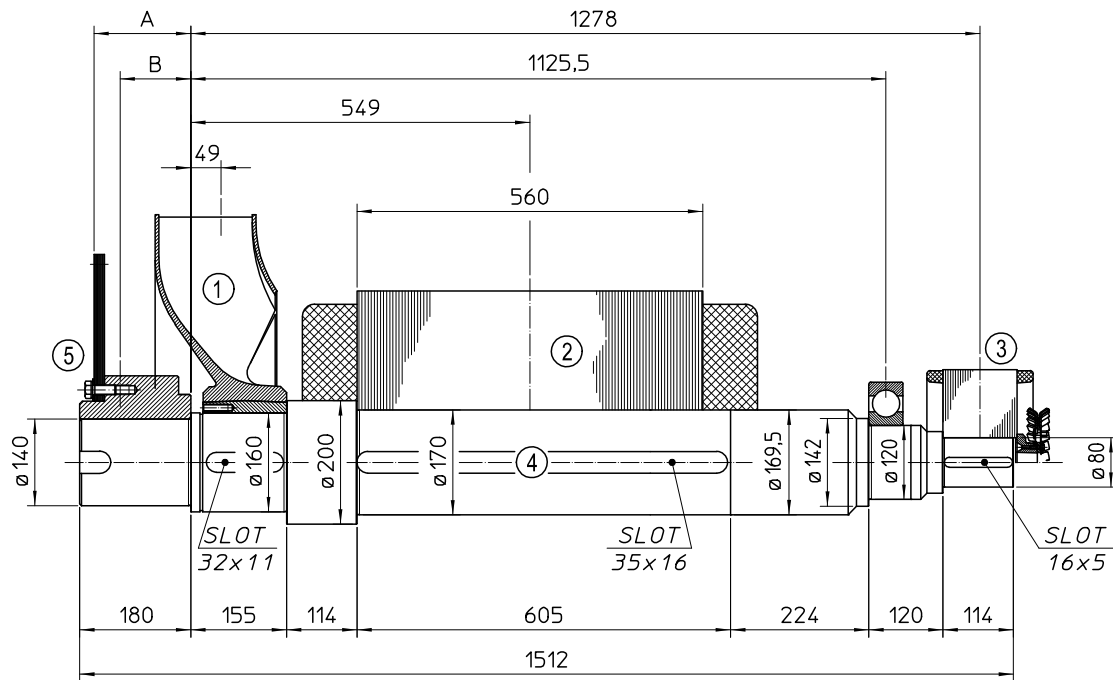
POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	42.7	2,250
2	MAIN ROTOR	845	32,91
3	EX. ROTOR	60	0,730
4	SHAFT	248.3	0,844
TOTAL		1196	36.734

### TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

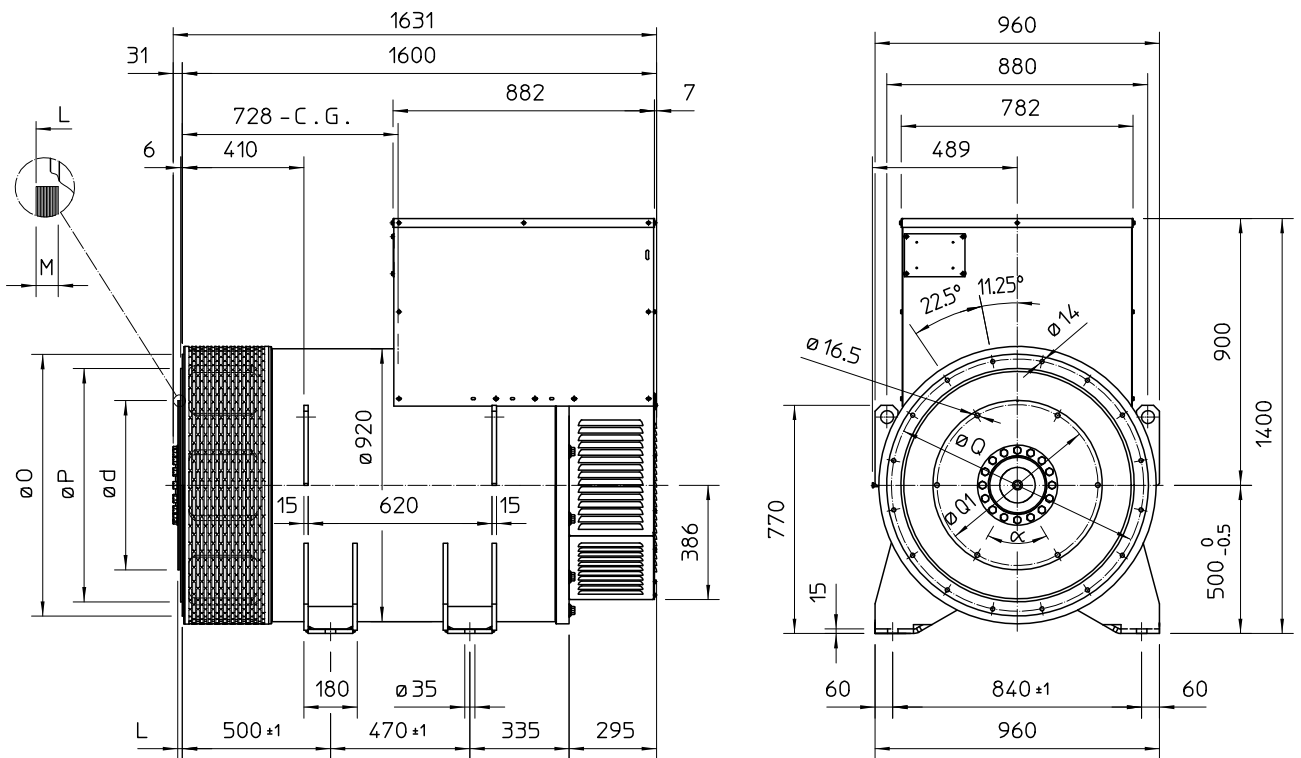
### SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	42.7	2,250
2	MAIN ROTOR	845	32,91
3	EX. ROTOR	60	0,730
4	SHAFT	230	0,792
TOTAL		1177.7	36.682

SAE N°	5		SHAFTS COUPLING FLEX PLATE		
	A	B	WEIGHT kg	J kgm <sup>2</sup>	
18	172.7	113.4	82.7	1.863	
21	157	114.6	93.6	3.206	

### SINGLE BEARING DIMENSIONS



SAE N°	FLANGE		
	O	P	Q
0	711	647.7	679.5
00	883	787.4	850.9

SAE N°	DISC COUPLING						
	d	L	M	Q1	HOLES N°	α	
18	571.5	15.7	15	542.92	6	60°	
21	673.1	0	17	641.35	12	30°	

C.G.= GRAVITY CENTER