



# GENERATOR TYPE ECO 38-1SN/4

Dedicated Winding

Document : DS265A/1

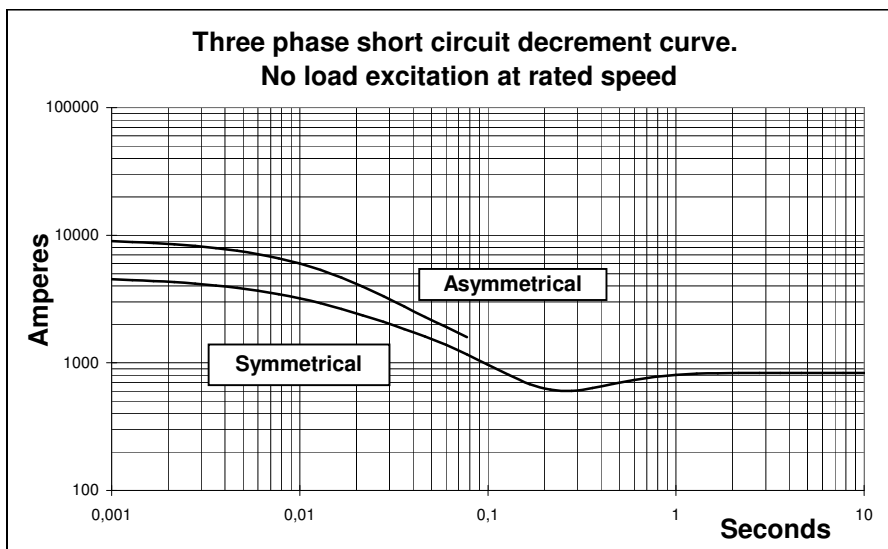
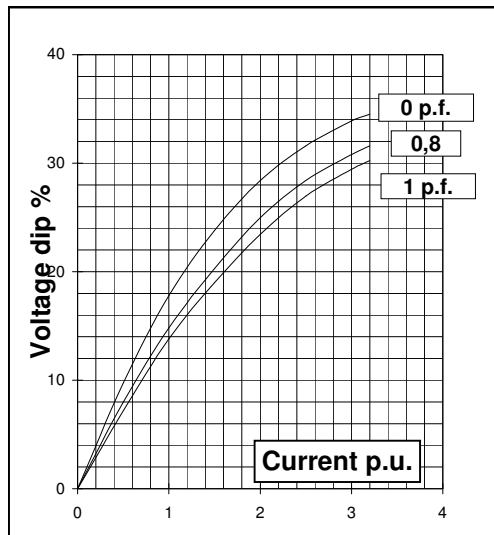
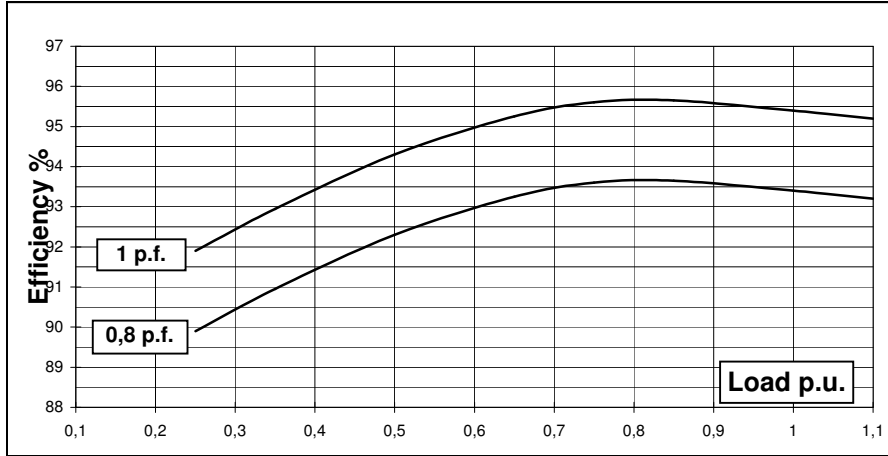
issue 000 date 21/06/2013

Electrical Characteristics			
Frequency	Hz		60
Voltage (parallel star)	V		600
Rated power class H	kVA		220
	kW		176
Rated power class F	kVA		205
	kW		164
Regulation with	DSR		±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	%	93,4
(see graph. for details)	3/4	%	93,6
	2/4	%	92,3
	1/4	%	89,9
<b>Reactances (f. l.cl. F)</b>			
	Xd	%	197
	Xd'	%	9,7
	Xd''	%	5,5
	Xq	%	96,9
	Xq'	%	96,9
	Xq''	%	19,7
	X <sub>2</sub>	%	12,8
	X <sub>0</sub>	%	2,7
Short Circuit Ratio	Kcc		0,44
<b>Time Constants</b>			
	Td'	sec.	0,073
	Td''	sec.	0,011
	Tdo'	sec.	0,70
	Tα	sec.	0,015
Short Circuit Current Capacity		%	>350
Excitation at no load	Amp.		0,65
Excitation at full load	Amp.		3
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load
Overload per 20 sec.		%	300
Stator Winding Resistance (20 °C)	Ω		0,013
Rotor Winding Resistance (20 °C)	Ω		3,905
Exciter Resistance (20 °C)	Ω		Rotor : 0,685                      Stator : 15,28
Heat dissipation at f.l.cl.H	W		12437
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 %		2,8 / 2,7
Waveform Distors.(THD) at no load	LL/LN %		3,1 / 3
<b>Mechanical characteristics</b>			
Protection			IP 21 (other protection on request)
DE bearing			6318.2RS
NDE bearing			6314.2RS
Weight of wound stator assembly	kg		168
Weight of wound rotor assembly	kg		103
Weight of complete generator	kg		510
Maximun overspeed	rpm		2250
Unbalanced magnetic pull at f.l.cl.F	kN/mm		4,4
Cooling air requirement	m³/min		39
Inertia Constant (H)	sec.		0,140
Noise level at 1m/7m	dB(A)		86 / 73

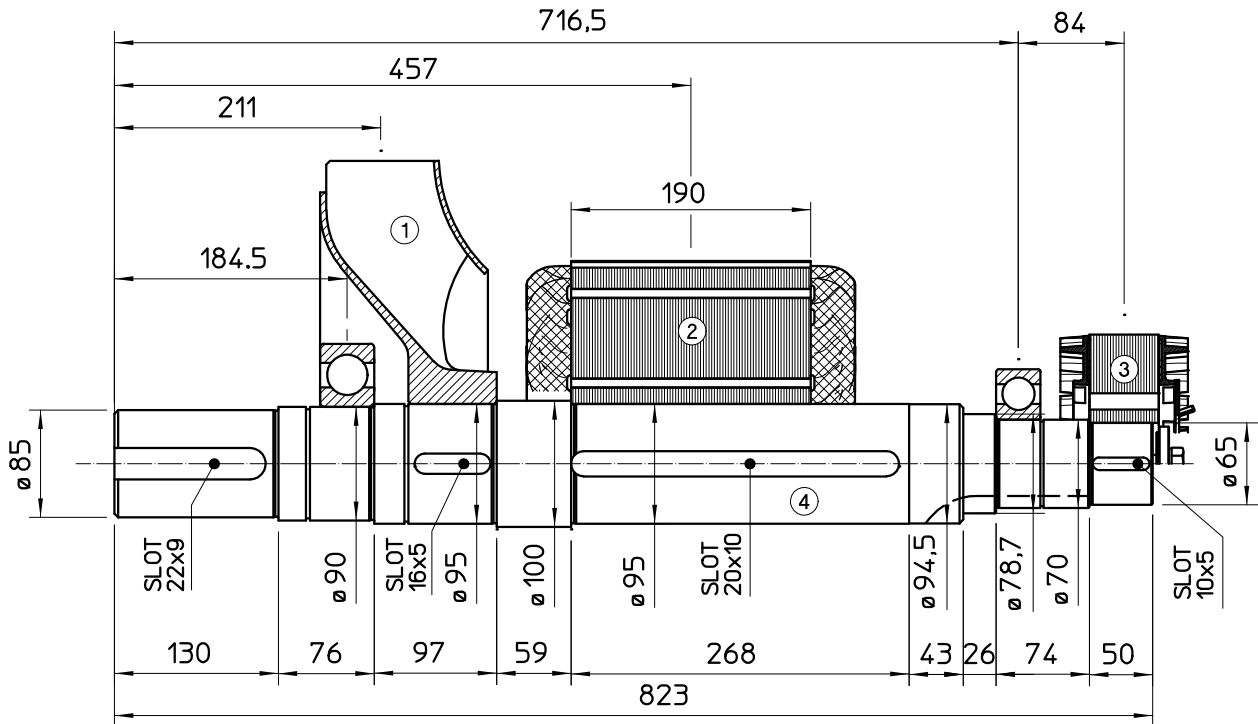
All technical data are to be considered as a reference and they can be modified without any notice.

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**600V - 60Hz**

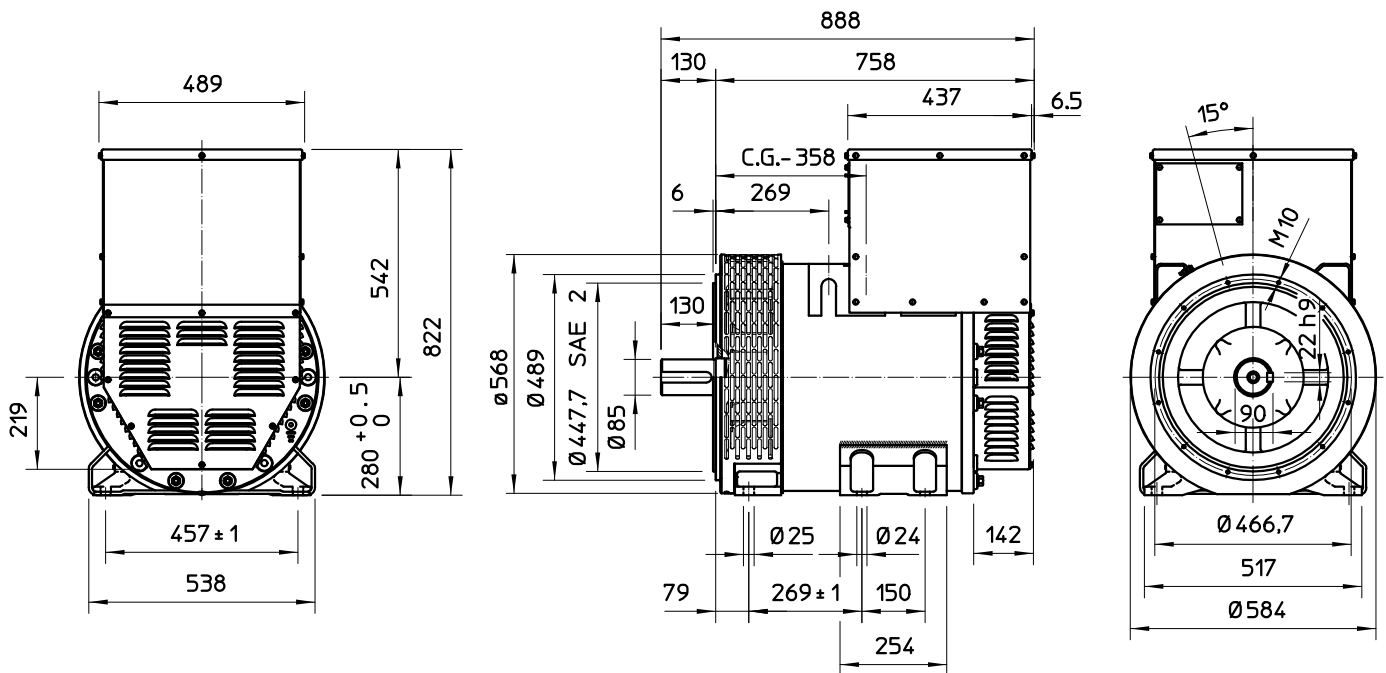


### TWO BEARING MOMENTS OF INERTIA



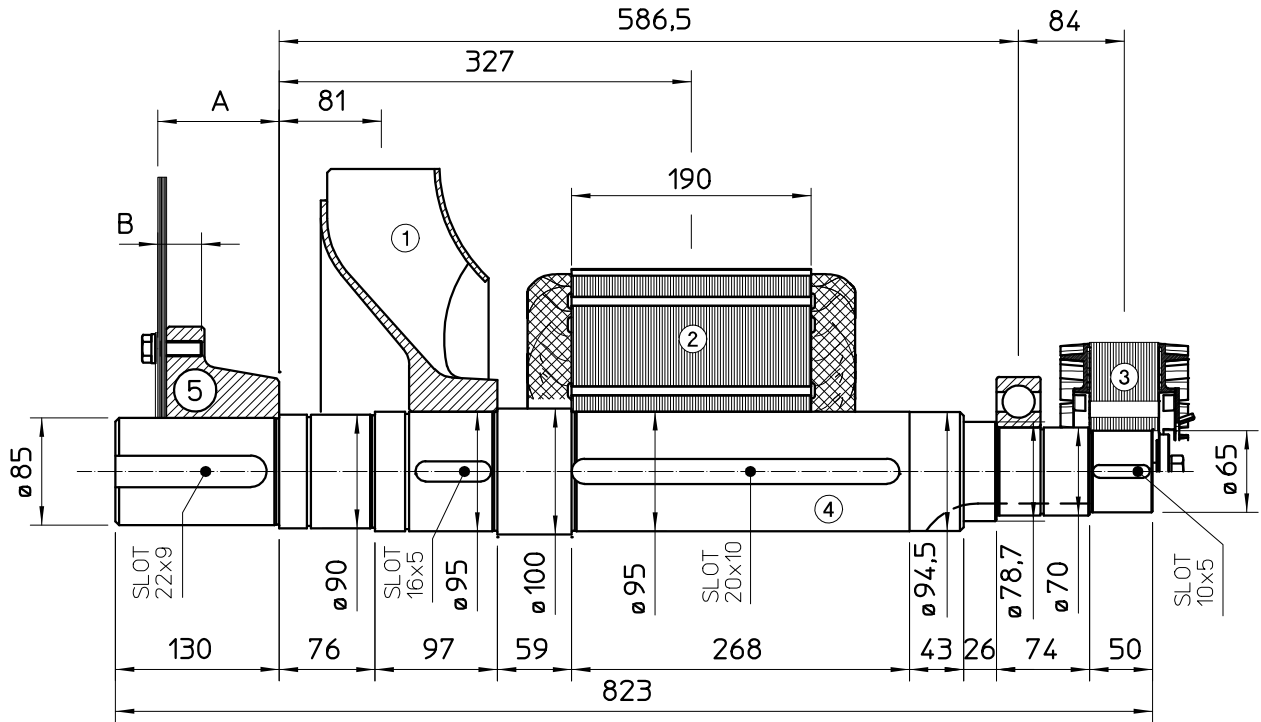
POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	6.1	0.1887
2	MAIN ROTOR	103	1.4085
3	EX. ROTOR	14.5	0.0874
4	SHAFT	38.5	0.0397
TOTAL		162.1	1.7243

### TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

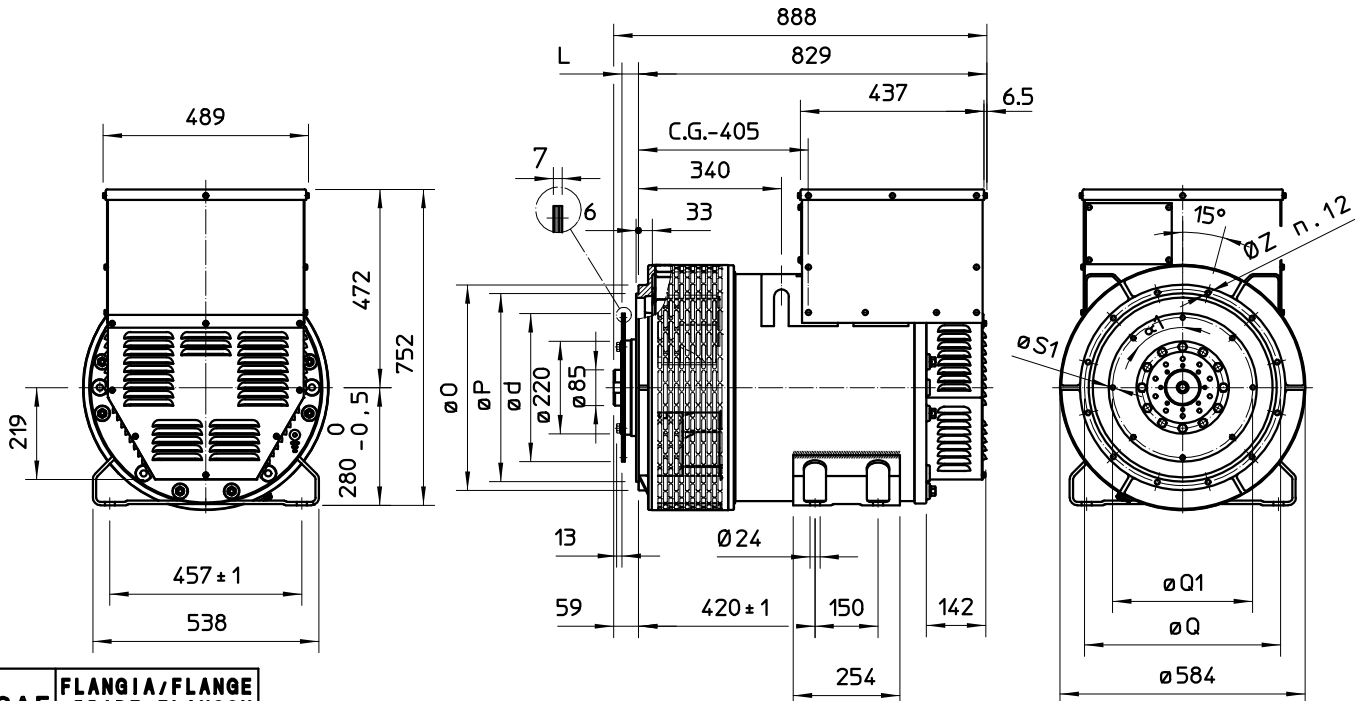
### SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm <sup>2</sup> )
1	FAN	6.1	0.1887
2	MAIN ROTOR	103	1.4085
3	EX. ROTOR	14.5	0.0874
4	SHAFT	38.5	0.0397
TOTAL		162.1	1.7243

SAE N°	SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm <sup>2</sup>
11.5	110.4	41.1	20.5	0.174
14	96.4	34.7	23.5	0.275

### SINGLE BEARING DIMENSIONS



SAE N.	FLANGIA/FLANGE BRIDE/FLANSCH		
	O	P	Q
3	451	409,6	428,6
2	489	447,7	466,7
1	552	511,2	530,2
1/2	648	584,2	619,1

SAE N.	GIUNTI A DISCHI DISC COUPLING DISQUE DE MONOPALIER SCHEIBENKUPPLUNG					
	L	d	Q1	n. fori	S1	OC1
11 1/2	39,6	352,42	333,37	8	11	45°
14	25,4	466,72	438,15	8	14	45°

C.G.= GRAVITY CENTER