



GENERATOR TYPE ECP 32-3S/2 A

Document : DS292A/1

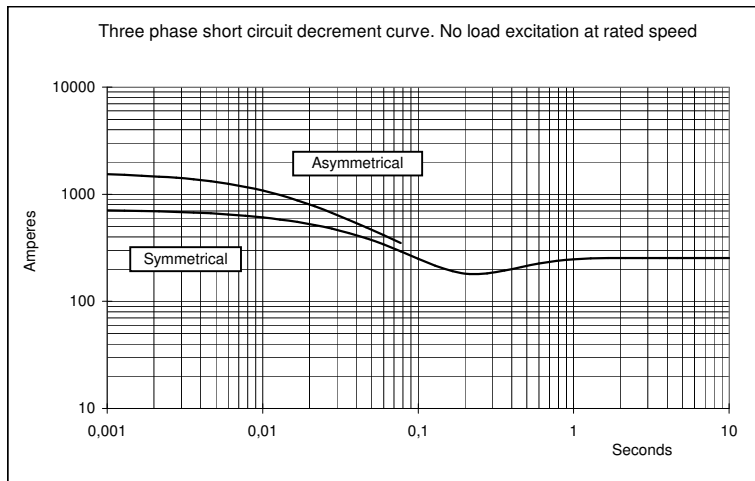
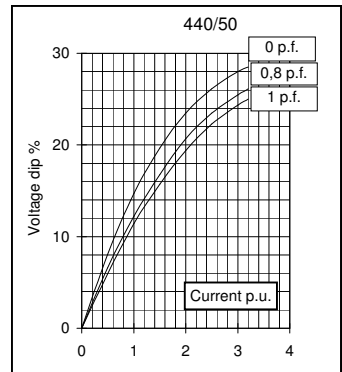
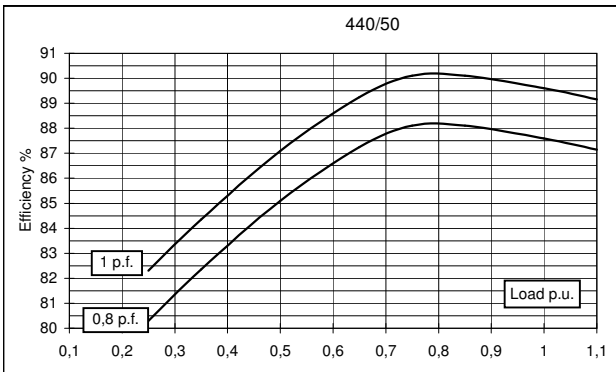
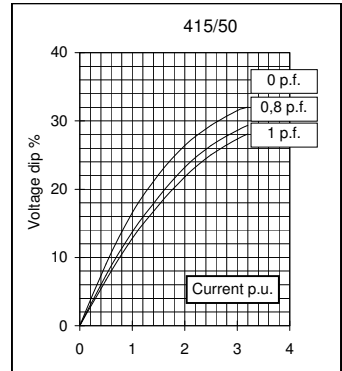
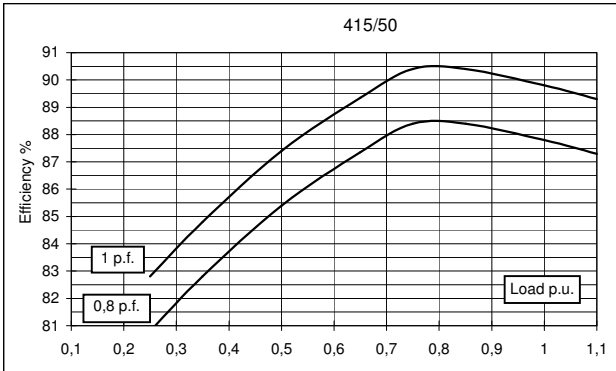
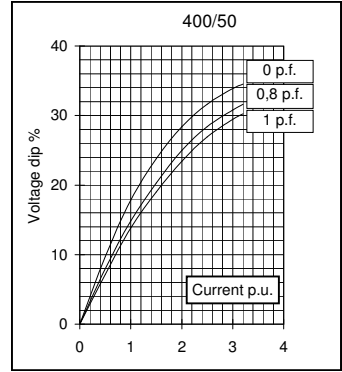
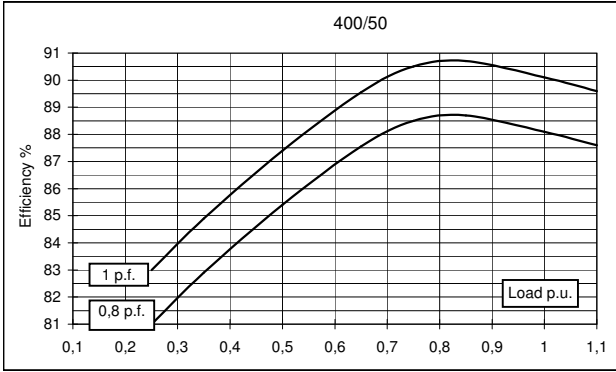
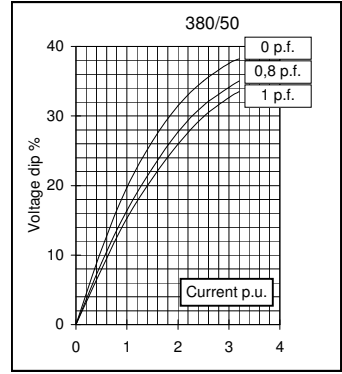
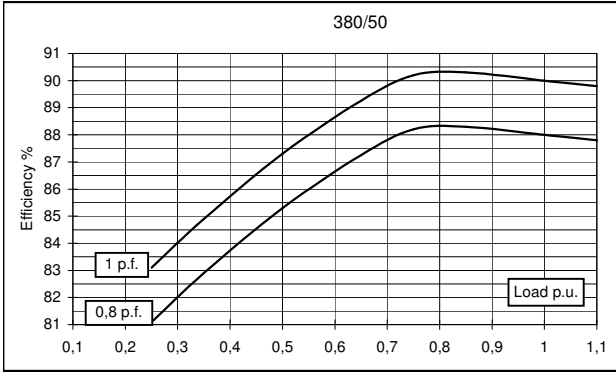
issue 000 date 30/08/2013

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	55	55	55	47	58	64	66	66	
	kW	44	44	44	37,6	46,4	51,2	52,8	52,8	
Rated power class F	kVA	50	50	50	42,5	52,5	58	60	60	
	kW	40	40	40	34	42	46,4	48	48	
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	%	88	88,1	87,8	87,6	88,8	89,3	89,4	89,5
(see graph. for details)	3/4	%	88,2	88,5	88,4	88,1	89,1	89,3	89,5	89,7
	2/4	%	85,3	85,4	85,4	85,1	86,5	86,6	86,7	86,8
	1/4	%	81,1	81	80,8	80,3	81,8	81,6	81,7	82
Reactances (f. l.cl. F)	Xd	%	487,5	440	408,8	310,7	517,3	507,8	479,1	440
	Xd'	%	13,74	12,4	11,52	8,76	14,58	14,31	13,50	12,4
	Xd''	%	6,76	6,1	5,67	4,31	7,17	7,04	6,64	6,1
	Xq	%	259,3	234	217,4	165,3	275,1	270,0	254,8	234
	Xq'	%	259,3	234	217,4	165,3	275,1	270,0	254,8	234
	Xq''	%	28,1	25,4	23,6	17,9	29,9	29,3	27,7	25,4
	X ₂	%	18,73	16,9	15,70	11,94	19,87	19,50	18,40	16,9
	X ₀	%	3,55	3,2	2,97	2,26	3,76	3,69	3,48	3,2
Short Circuit Ratio	Kcc		0,41	0,51	0,61	1,01	0,21	0,31	0,41	0,51
Time Constants	Td'	sec.	0,072							
	Td''	sec.	0,013							
	Tdo'	sec.	1,30							
	Tα	sec.	0,011							
Short Circuit Current Capacity		%	>300				>320			
Excitation at no load	Amp.		0,5	0,6	0,7	0,85	0,35	0,4	0,5	0,6
Excitation at full load	Amp.		1,8	2	2,1	2,2	1,5	1,6	1,8	1,9
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20 °C)	Ω		0,046							
Rotor Winding Resistance (20 °C)	Ω		4,071							
Exciter Resistance (20 °C)	Ω		Rotor : 0,417				Stator : 10,60			
Heat dissipation at f.l.cl.H	W		6000	5943	6114	5322	5852	6135	6260	6194
Telephone Interference			THF < 2%				TIF < 50			
Radio interference			EN61000-6-3, EN61000-6-1. For others standards apply to factory							
Waveform Distors.(THD) at f. load	LL/LN %		3,6 / 3,2							
Waveform Distors.(THD) at no load	LL/LN %		4,3 / 4							
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6312-2Z							
NDE bearing			6309-2RS							
Weight of wound stator assembly	kg		59,6							
Weight of wound rotor assembly	kg		36,3							
Weight of complete generator	kg		199							
Maximun overspeed	rpm		4320							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		3,8							
Cooling air requirement	m ³ /min		22,4				27			
Inertia Constant (H)	sec.		0,345				0,414			
Noise level at 1m/7m	dB(A)		88 / 77				93 / 80			

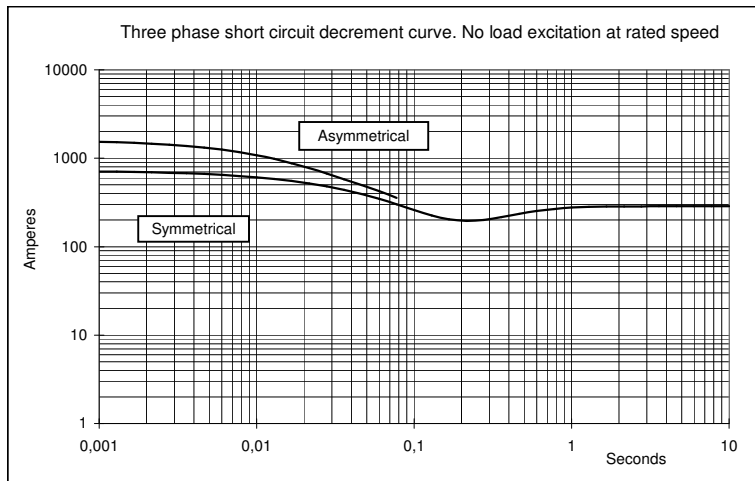
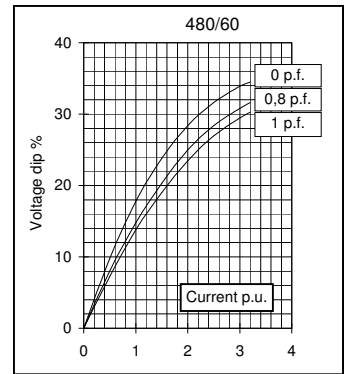
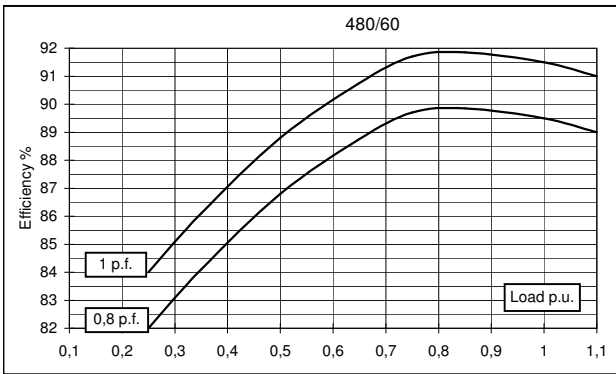
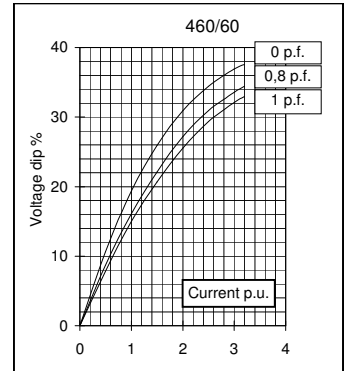
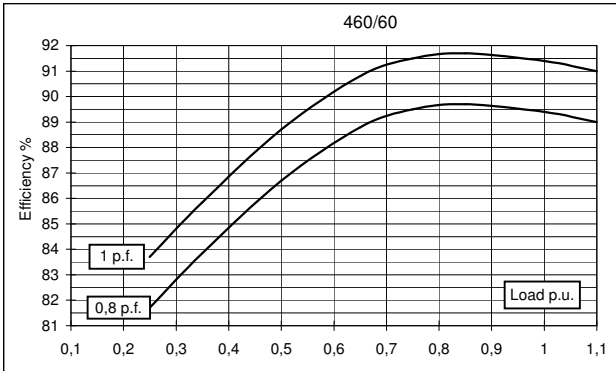
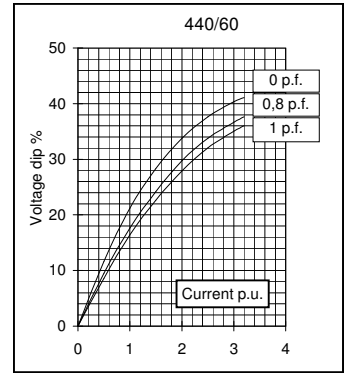
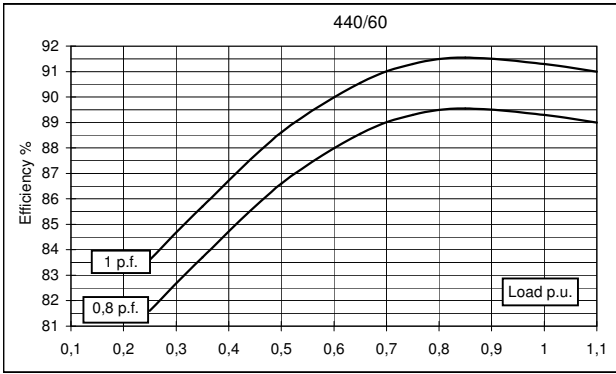
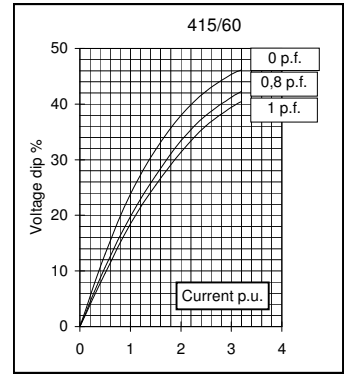
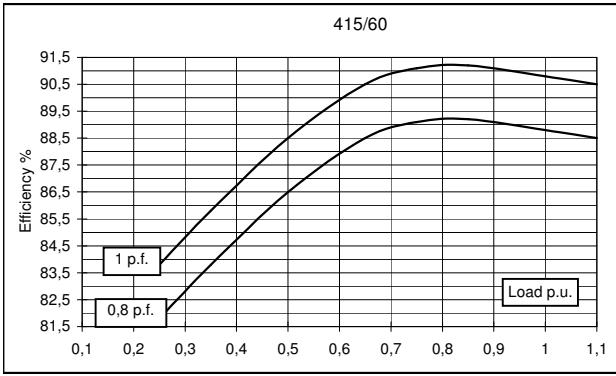
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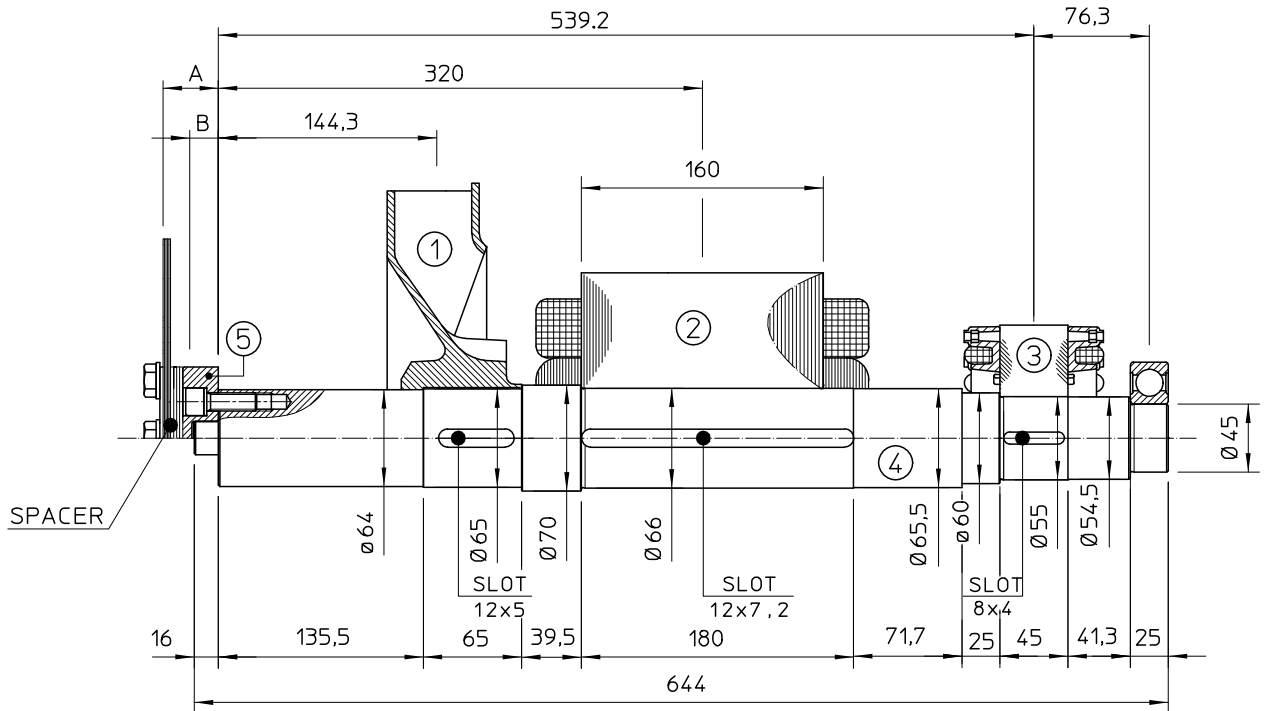
50 Hz



60 Hz



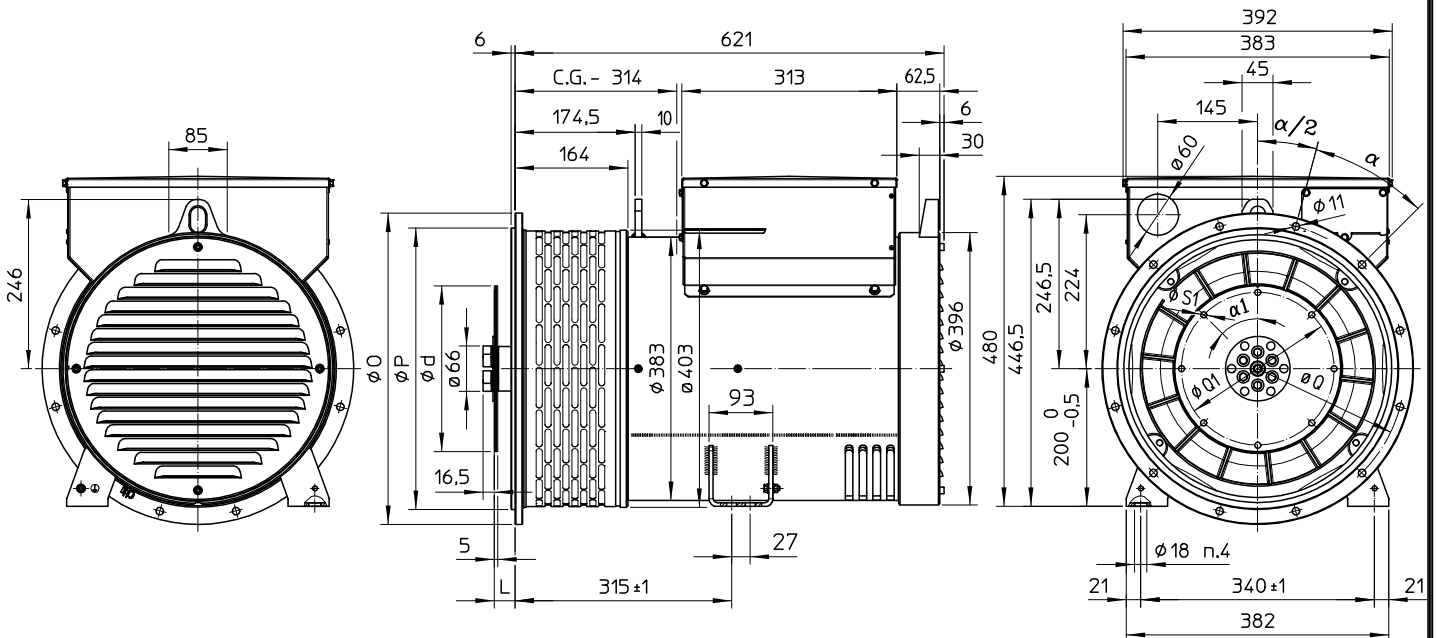
SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	2.3	0.0224
2	MAIN ROTOR	36.3	0.136
3	EX. ROTOR	5.4	0.012
4	SHAFT	15.5	0.0078
TOTAL		59.5	0.1782

SAE N°	5		SHAFTS COUPLING FLEX PLATE	
	A	B	WEIGHT kg	J kgm ²
6.5	5	2.5	1.74	0.0084
7.5	5	2.5	2.1	0.013
8	36.6	28.1	3.9	0.02
10	28.6	21.6	4.47	0.038
11.5	15	11.5	4.51	0.059

SINGLE BEARING DIMENSIONS



SAE N.	FLANGIA / FLANGE BRIDE / FLANSCH			
	O	P	Q	α
5	356	314.3	333.4	45°
4	403	362	381	30°
3	451	409.6	428.6	30°
2	490	447.7	466.7	30°
1	552	511.2	530.2	30°

SAE N.	GIUNTI A DISCHI / DISC COUPLING DISCQUE DE MONOPALIER / SCHEIBENKUPPLUNG				
	d	L	Q1	S1	α1
6 1/2	215.9	30.2	200	9	60°
7 1/2	241.3	30.2	222.25	9	45°
8	263.52	62	244.47	11	60°
10	314.32	53.8	295.27	11	45°
11 1/2	352.42	39.6	333.37	11	45°

C.G.= GRAVITY CENTER