



GENERATOR TYPE ECP 32-4L/4 A

Document : **DS310A/1**

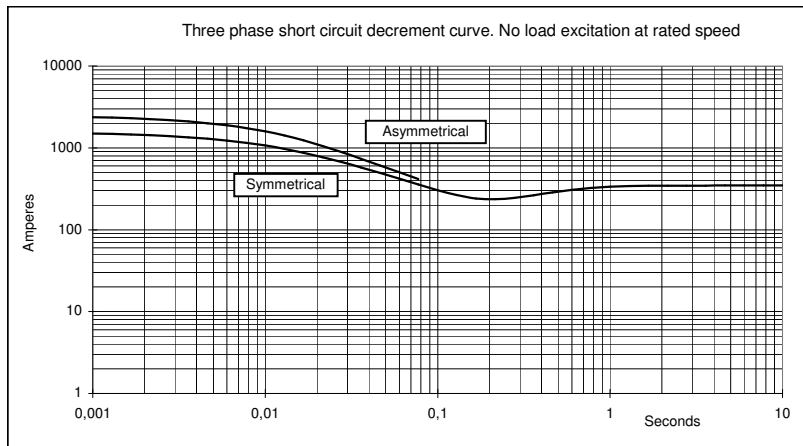
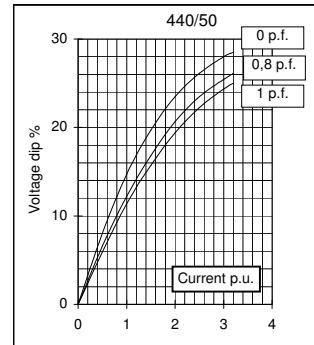
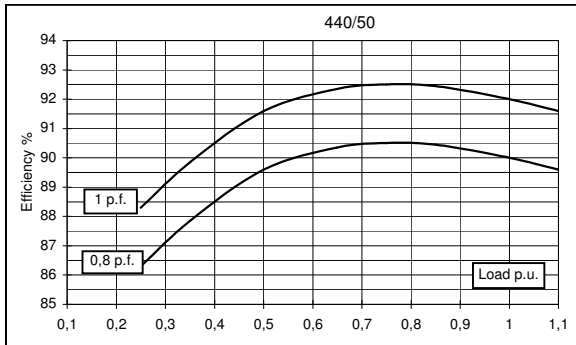
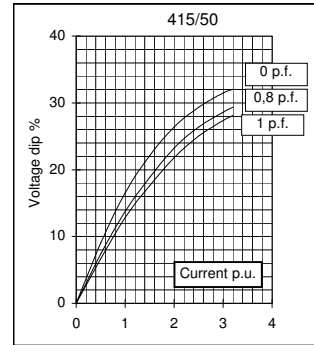
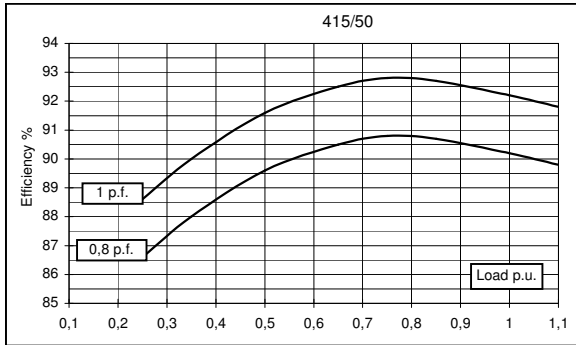
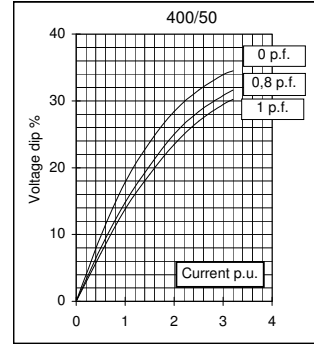
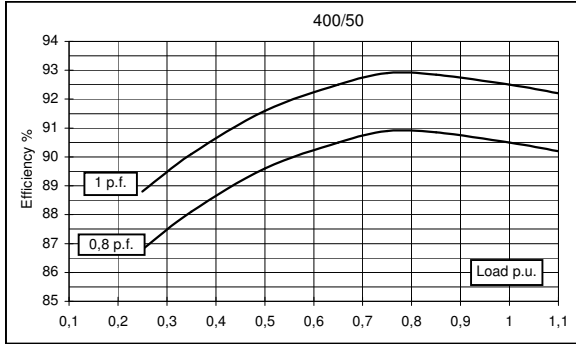
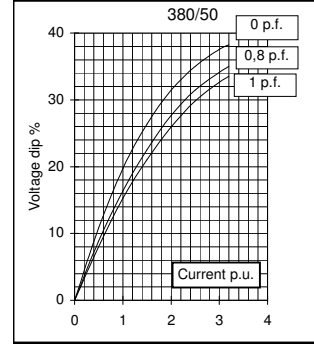
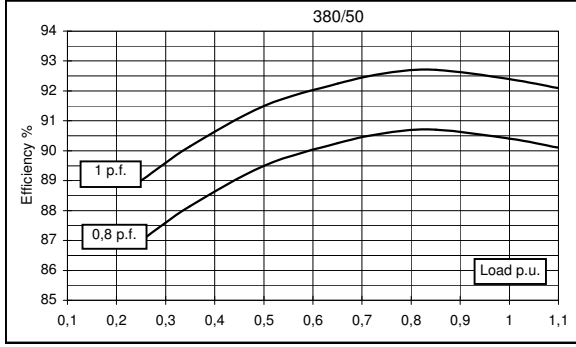
issue 001 date 05/11/2013

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (series star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	80	80	80	75	85	92	96	96	
	kW	64	64	64	60	68	74	77	77	
Rated power class F	kVA	71	71	71	66	78	85	88	88	
	kW	57	57	57	53	62	68	70	70	
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	%	90,4	90,5	90,2	90	92,3	92,8	92,9	93
(see graph. for details)	3/4	%	90,6	90,9	90,8	90,5	92,6	92,8	93	93,2
	2/4	%	89,5	89,6	89,6	89,6	90,7	90,8	90,9	91
	1/4	%	87	86,8	86,6	86,3	88	88	88	87,8
Reactances (f. l.cl. F)	Xd	%	360,9	325,7	302,6	252,4	385,8	371,5	354,7	325,7
	Xd'	%	15,83	14,3	13,27	11,07	16,92	16,29	15,55	14,3
	Xd''	%	8,23	7,4	6,90	5,76	8,80	8,47	8,09	7,4
	Xq	%	139,3	125,7	116,8	97,4	148,9	143,4	136,9	125,7
	Xq'	%	139,3	125,7	116,8	97,4	148,9	143,4	136,9	125,7
	Xq''	%	40,5	36,6	34,0	28,3	43,3	41,7	39,8	36,6
	X ₂	%	27,61	24,9	23,15	19,30	29,51	28,41	27,13	24,9
	X ₀	%	3,93	3,5	3,29	2,74	4,20	4,04	3,86	3,5
Short Circuit Ratio	Kcc		0,44	0,55	0,62	1,15	0,34	0,38	0,46	0,55
Time Constants	Td'	sec.	0,065							
	Td''	sec.	0,0135							
	Tdo'	sec.	1,30							
	Tα	sec.	0,027							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0,5	0,6	0,7	1,2	0,25	0,3	0,4	0,5
Excitation at full load	Amp.		2,2	2,4	2,5	2,9	1,9	1,8	2,1	2,3
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20°C)	Ω	0,035								
Rotor Winding Resistance (20°C)	Ω	3,171								
Exciter Resistance (20 °C)	Ω	Rotor : 0,442				Stator : 11,35				
Heat dissipation at f.l.cl.H	W	6796	6718	6953	6667	5673	5710	5870	5781	
Telephone Interference		THF < 2%				TIF < 45				
Radio interference		EN61000-6-3, EN61000-6-1. For others standards apply to factory								
Waveform Distors.(THD) at f. load	LL/LN %	3,9 / 3,7								
Waveform Distors.(THD) at no load	LL/LN %	3,3 / 3,1								
Mechanical characteristics										
Protection		IP 21 (other protection on request)								
DE bearing		6312-2RS								
NDE bearing		6309-2RS								
Weight of wound stator assembly	kg	110								
Weight of wound rotor assembly	kg	74								
Weight of complete generator	kg	294								
Maximum overspeed	rpm	2250								
Unbalanced magnetic pull at f.l.cl.F	kN/mm	5,2								
Cooling air requirement	m ³ /min	12,9				15,8				
Inertia Constant (H)	sec.	0,092				0,110				
Noise level at 1m/7m	dB(A)	76 / 61				80 / 65				

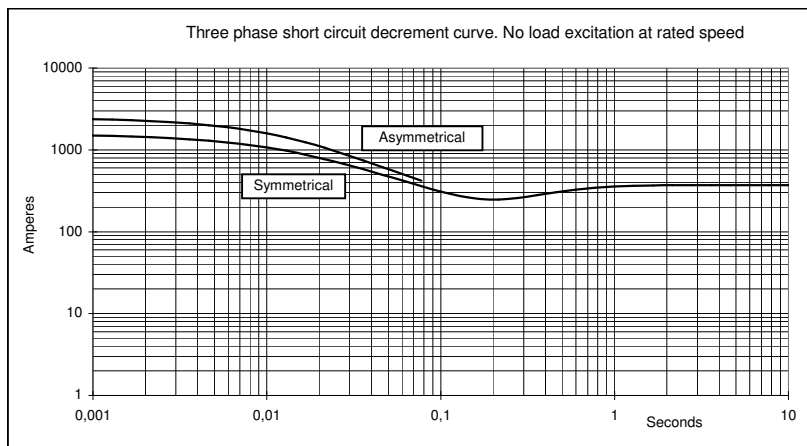
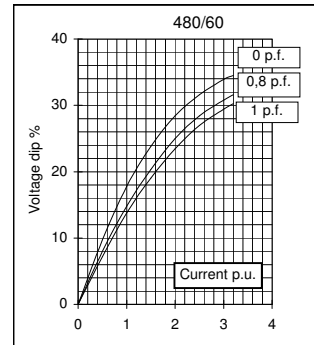
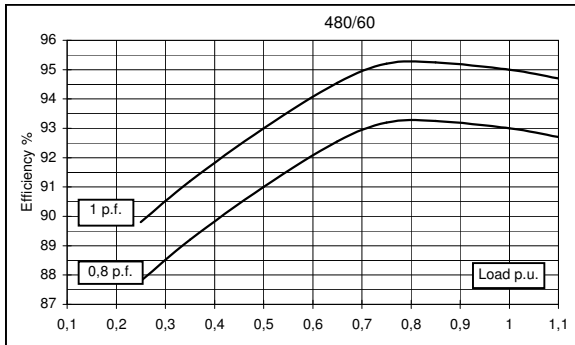
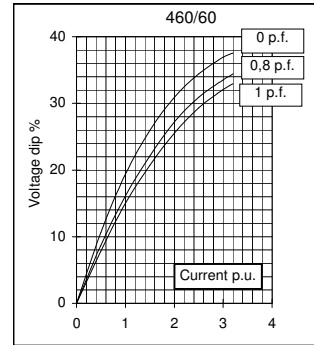
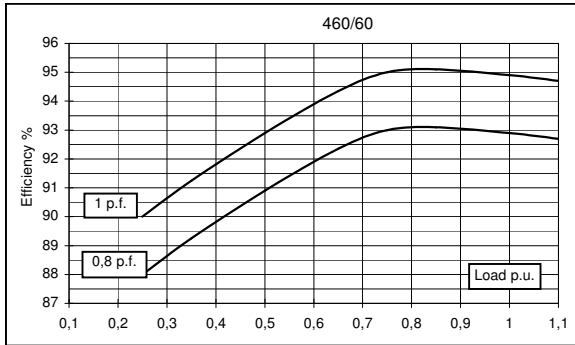
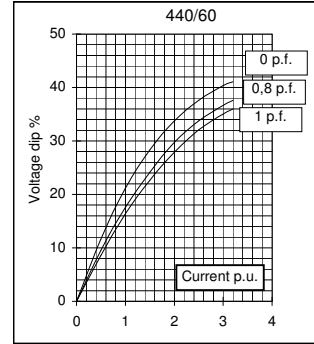
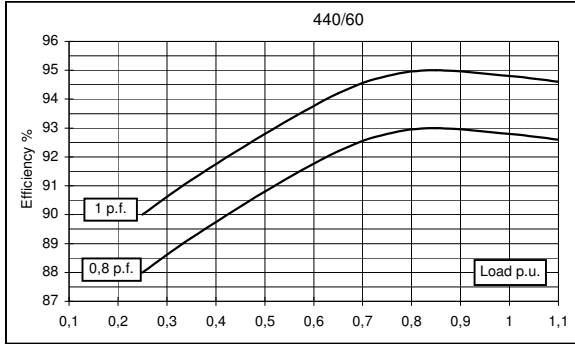
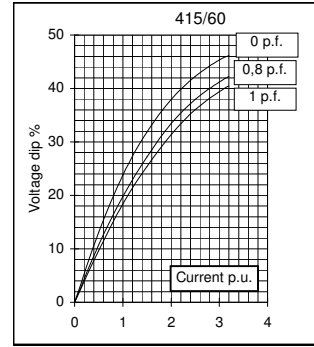
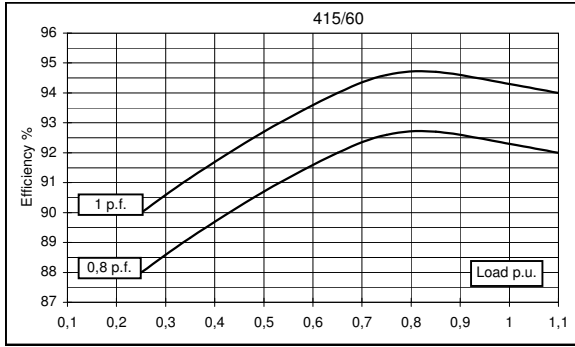
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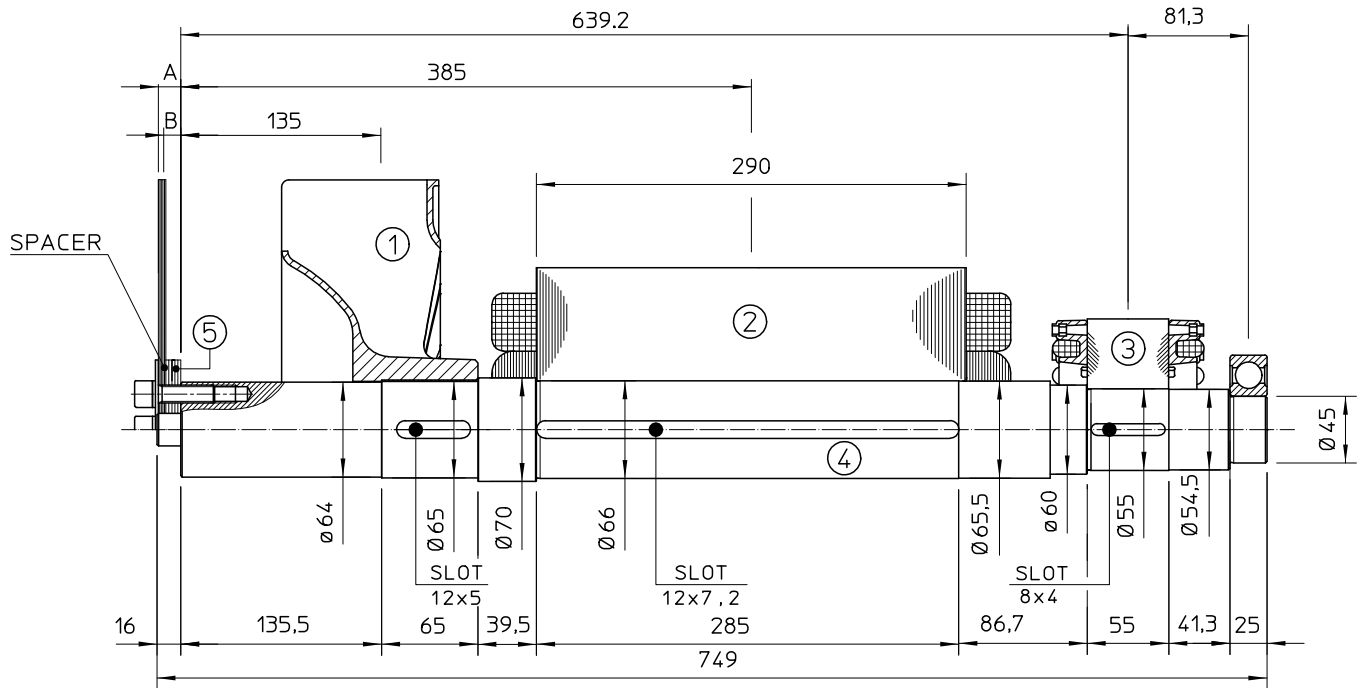
50 Hz



60 Hz



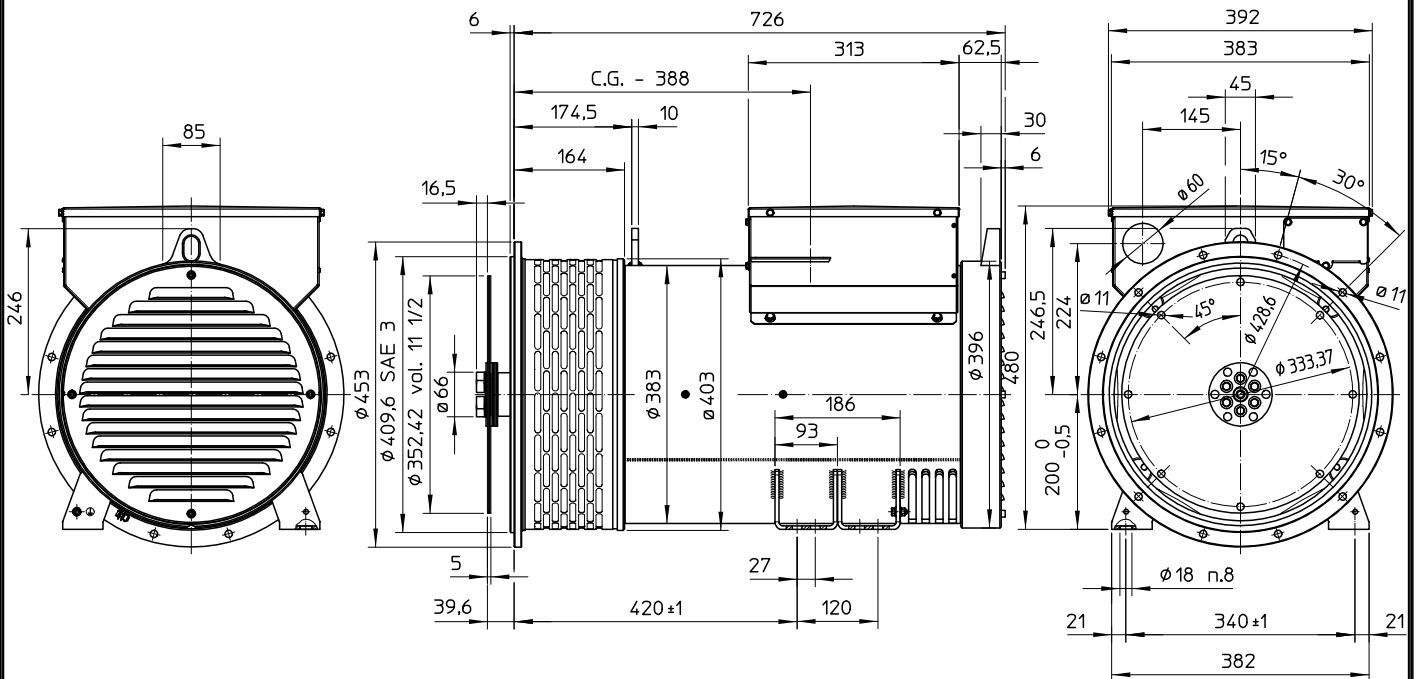
SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	3.6	0.0417
2	MAIN ROTOR	74	0.5254
3	EX. ROTOR	7	0.016
4	SHAFT	17.6	0.0090
TOTAL		102.2	0.5921

SAE N°	5 SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm ²
11.5	15	11.5	4.51	0.059

SINGLE BEARING DIMENSIONS



C.G.= GRAVITY CENTER