



GENERATOR TYPE ECP 3-3S/2

Document : DS155A/1

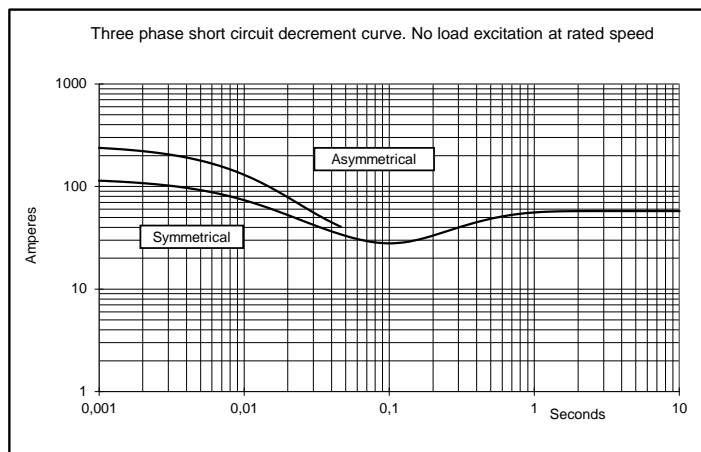
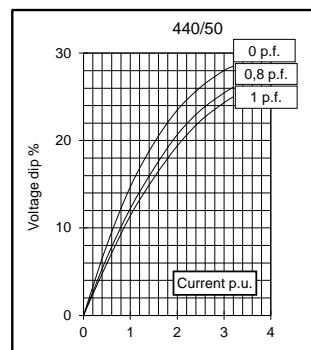
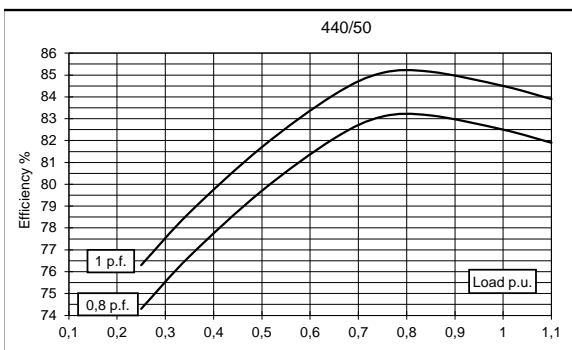
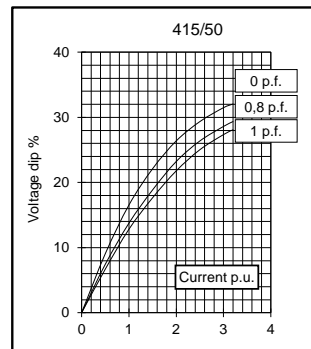
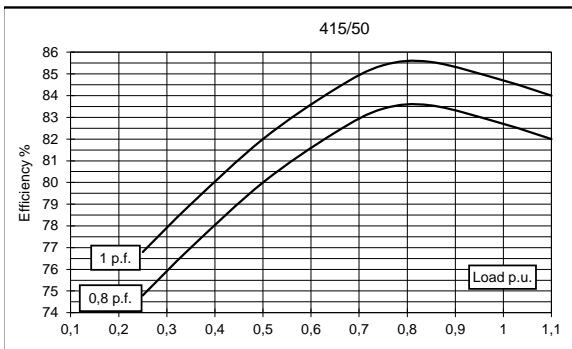
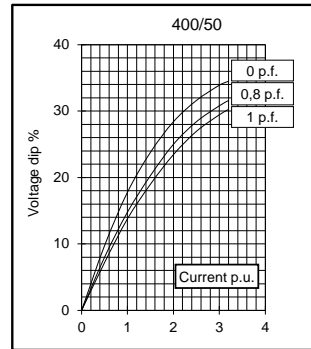
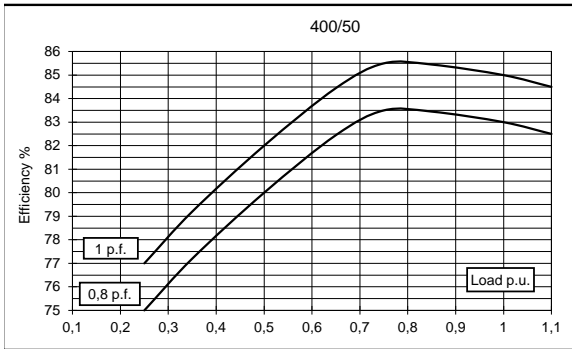
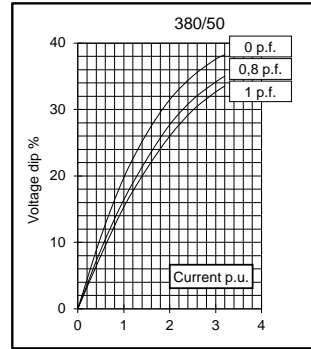
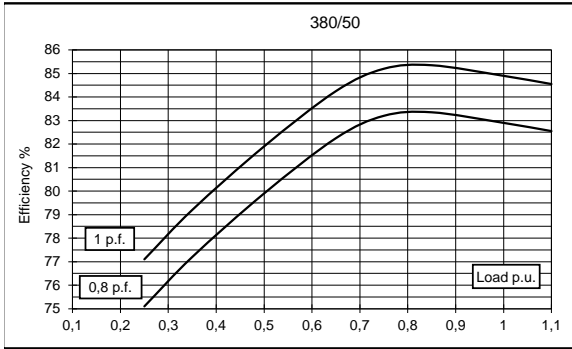
issue 002 date 05/05/2014

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (series star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	12,5	12,5	12,5	10,5	13	15	15	15	
	kW	10	10	10	8,4	10,4	12	12	12	
Rated power class F	kVA	11	11	11	9	10,5	13	13	13	
	kW	8,8	8,8	8,8	7,2	8,4	10,4	10,4	10,4	
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	%	82,9	83	82,7	82,5	83,8	84,3	84,4	84,5
(see graph. for details)	3/4	%	83,2	83,5	83,4	83,1	84,4	84,6	84,8	85
	2/4	%	79,9	80	80	79,7	81,2	81,3	81,4	81,5
	1/4	%	75,1	75	74,8	74,3	75,8	75,6	75,7	76
Reactances (f. l.cl. F)	Xd	%	243,8	220	204,4	152,7	255,1	261,8	239,5	220
	Xd'	%	33,0	29,8	27,7	20,7	34,6	35,5	32,4	29,8
	Xd''	%	16,5	14,9	13,8	10,3	17,3	17,7	16,2	14,9
	Xq	%	108,6	98	91,0	68,0	113,6	116,6	106,7	98
	Xq'	%	108,6	98	91,0	68,0	113,6	116,6	106,7	98
	Xq''	%	37,3	33,7	31,3	23,4	39,1	40,1	36,7	33,7
	X ₂	%	17,7	16	14,9	11,1	18,6	19,0	17,4	16
	X ₀	%	7,1	6,4	5,9	4,4	7,4	7,6	7,0	6,4
Short Circuit Ratio	Kcc		0,39	0,51	0,72	1,34	0,26	0,34	0,39	0,51
Time Constants	Td'	sec.	0,043							
	Td''	sec.	0,01							
	Tdo'	sec.	0,65							
	T _α	sec.	0,009							
Short Circuit Current Capacity		%	>300				>320			
Excitation at no load	Amp.		0,3	0,32	0,35	0,4	0,2	0,24	0,26	0,3
Excitation at full load	Amp.		1,2	1,22	1,3	1,4	0,9	1	1,1	1,2
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)	Ω		0,339							
Rotor Winding Resistance (20°C)	Ω		8,238							
Exciter Resistance (20 °C)	Ω		Rotor : 1,453				Stator : 15,71			
Heat dissipation at f.l.cl.H	W		2063	2048	2092	1782	2011	2235	2218	2201
Telephone Interference			THF < 2 %				TIF < 45			
Radio interference			EN61000-6-3, EN61000-6-2. For others standards apply to factory							
Waveform Distors.(THD) at f. load	LL/LN %		4,7 / 4,5							
Waveform Distors.(THD) at no load	LL/LN %		4 / 4							
Mechanical characteristics										
Protection			IP 23 (other protection on request)							
DE bearing			6308-2RS							
NDE bearing			6305-2RS							
Weight of wound stator assembly	kg		20,9							
Weight of wound rotor assembly	kg		13,2							
Weight of complete generator	kg		68							
Maximun overspeed	rpm		4500							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		2,8							
Cooling air requirement	m³/min		6,2				7,8			
Inertia Constant (H)	sec.		0,182				0,218			
Noise level at 1m/7m	dB(A)		85 / 70				89 / 73			

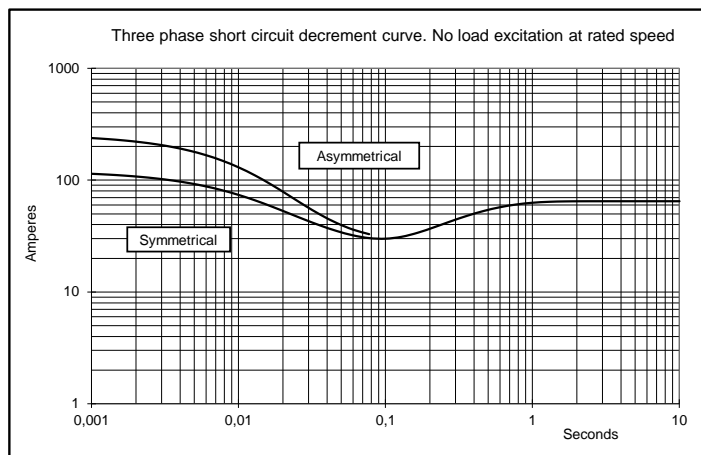
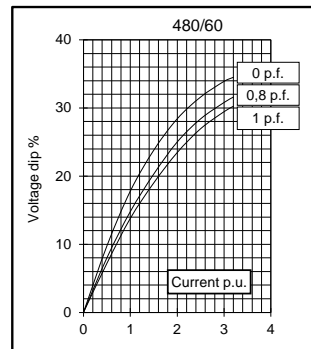
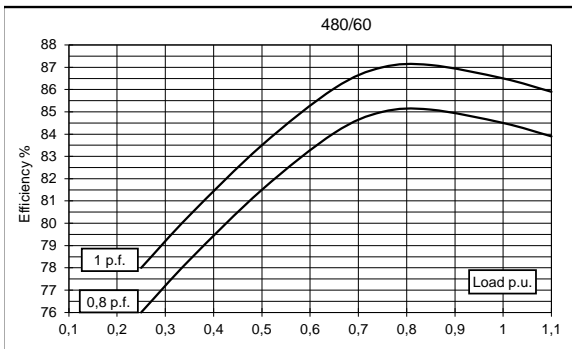
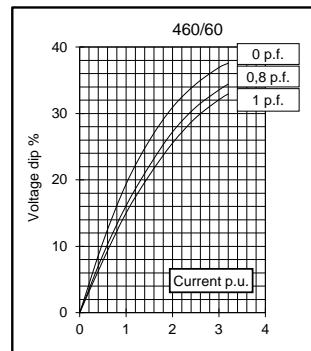
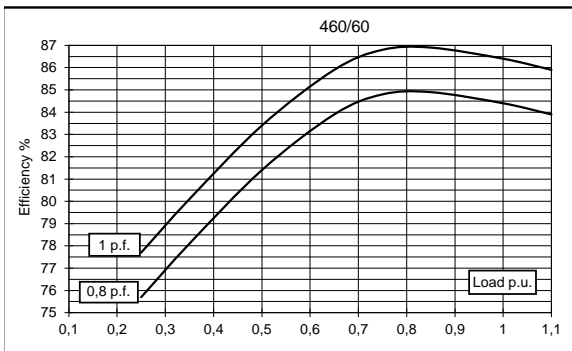
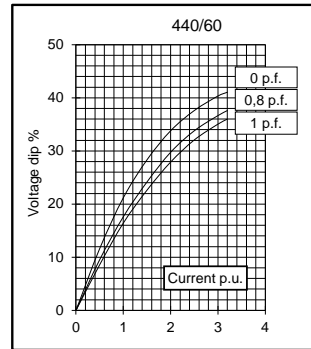
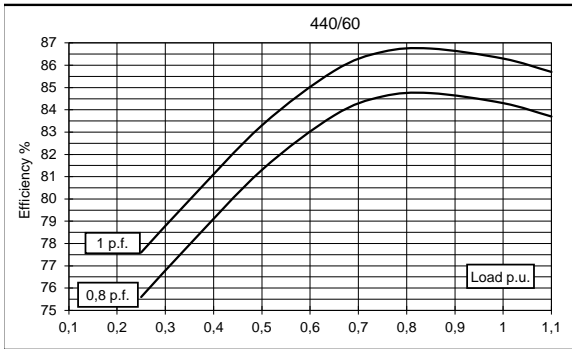
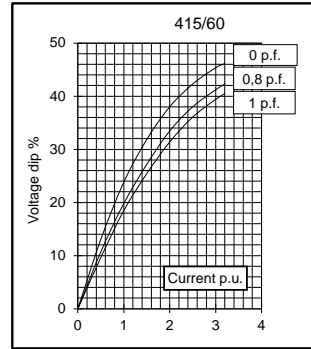
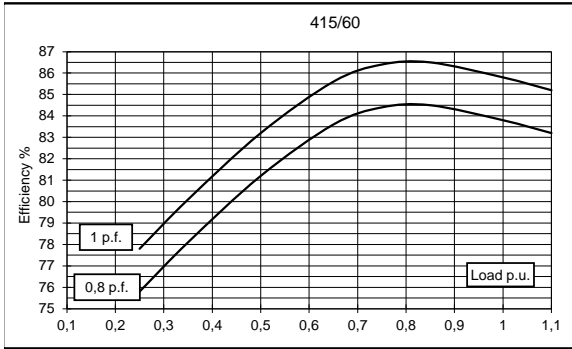
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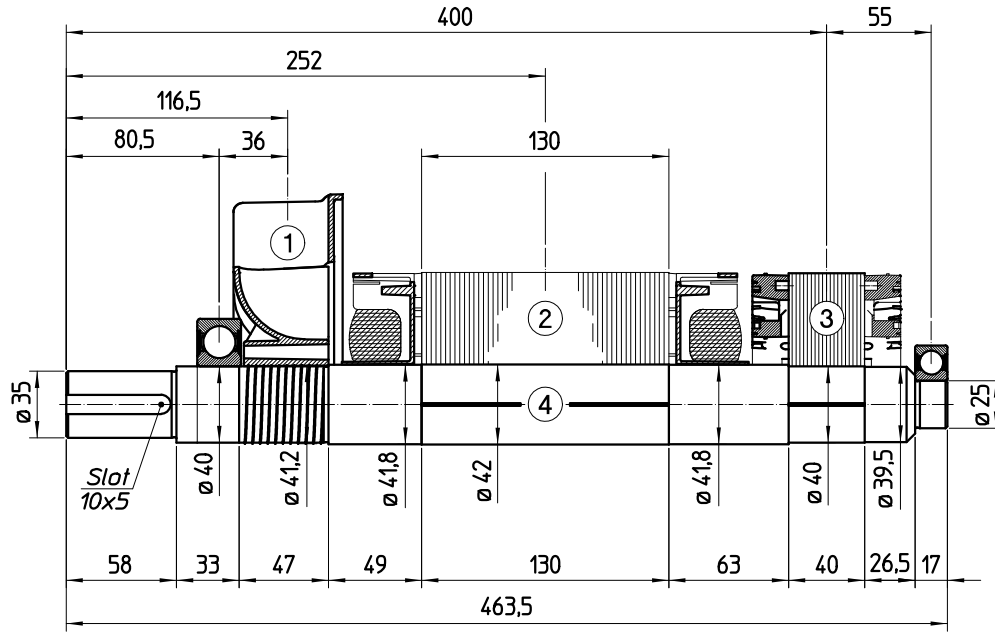
50 Hz



60 Hz



TWO BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm ²)
1	FAN	0.4	0,00206
2	MAIN ROTOR	13.2	0,03179
3	EX. ROTOR	4.2	0,01086
4	SHAFT	4.5	0,00093
TOTAL		22.3	0,04564

TWO BEARING DIMENSIONS

