GENERATOR TYPE ECP 34-1S/4

Document : **DS012A/1**
issue 002 date 01/06/2011

Electrical Characteristics									
Frequency		Hz	50				60			
Voltage (series star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	85	85	85	70	95	102	102	102
		kW	68	68	68	56	76	81,6	81,6	81,6
Rated power class F		kVA	77	77	77	63	85,5	92	92	92
		kW	61,6	61,6	61,6	50,4	68,4	73,6	73,6	73,6
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	%	91,4	91,5	91,2	91	92,7	93,2	93,3	93,4
(see graph. for details)	3/4	%	91,6	91,9	91,8	91,5	93,3	93,5	93,6	93,8
	2/4	%	89,9	90	90	89,8	91,5	91,6	91,7	91,8
	1/4	%	86,2	86	85,8	85,8	87,7	87,7	87,7	87,5
Reactances (f. l.cl. F)	Xd	%	360,1	325	301,9	221,2	404,9	386,8	353,9	325
	Xd'	%	24,7	22,3	20,7	15,2	27,8	26,5	24,3	22,3
	Xd"	%	8,2	7,4	6,9	5,0	9,2	8,8	8,1	7,4
	Xq	%	188,9	170,5	158,4	116,0	212,4	202,9	185,6	170,5
	Xq'	%	188,9	170,5	158,4	116,0	212,4	202,9	185,6	170,5
	Xq"	%	32,7	29,5	27,4	20,1	36,8	35,1	32,1	29,5
	X_2	%	21,3	19,2	17,8	13,1	23,9	22,8	20,9	19,2
	X_0	%	4,0	3,6	3,3	2,5	4,5	4,3	3,9	3,6
Short Circuit Ratio	Kcc		0,45	0,50	0,62	1,07	0,35	0,40	0,45	0,50
Time Constants	Td'	sec.	0,04192							
	Td"	sec.	0,00575							
	Tdo'	sec.	1,50							
	$T\alpha$	sec.	0,0154							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load		Amp.	0,4	0,5	0,7	1	0,2	0,3	0,4	0,7
Excitation at full load		Amp.	2,2	2,3	2,5	2,8	1,9	2	2,1	2,2
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	0,03							
Rotor Winding Resistance (20°C)		Ω	2,477							
Exciter Resistance (20 °C)		Ω	Rotor : 0,410				Stator : 15,28			
Heat dissipation at f.l.cl.H		W	6398	6317	6561	5538	5985	5954	5860	5766
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 %	1,6 / 1,8							
Waveform Distors.(THD) at no load		LL/LN %	2,9 / 3							
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6314.2RS							
NDE bearing			6311.2RS							
Weight of wound stator assembly		kg	97							
Weight of wound rotor assembly		kg	63							
Weight of complete generator		kg	341							
Maximun overspeed		rpm	2250							
Unbalanced magnetic pull at f.l.cl.F		kN/mm	4,9							
Cooling air requirement		m³/min	19,3				23			
Inertia Constant (H)		sec.	0,111				0,133			
Noise level at 1m/7m		dB(A)	79 / 65				83 / 69			

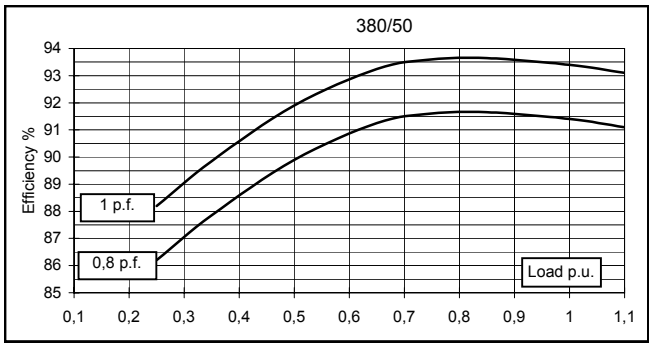
All technical data are to be considered as a reference and they can be modified without any notice.

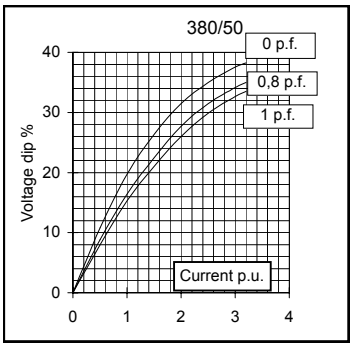
GENERATOR TYPE ECP 34-1S/4

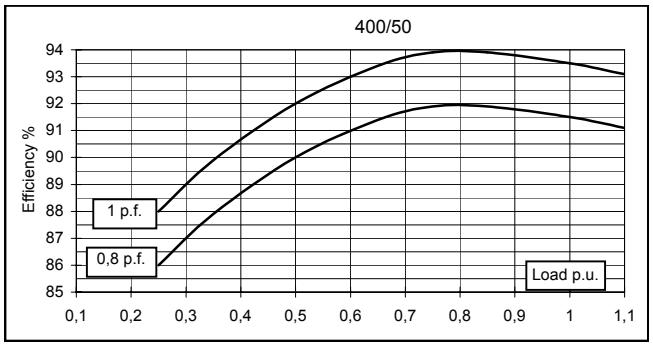
Document : **DS012A/2**

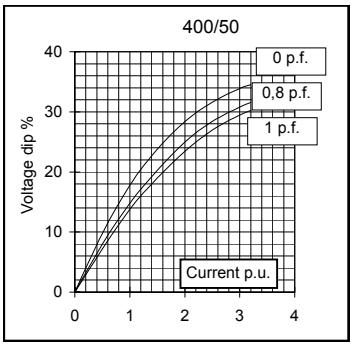
issue 001 date : 01/06/2011

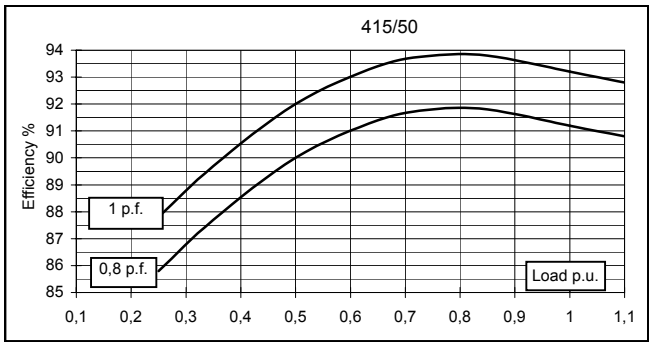
50 Hz

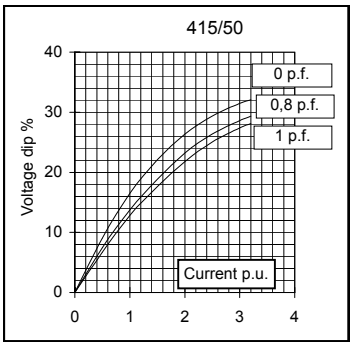


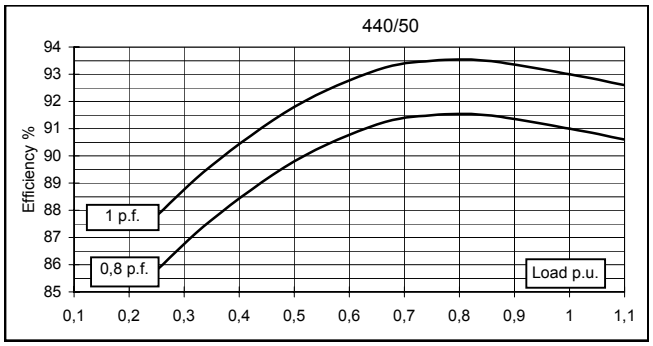


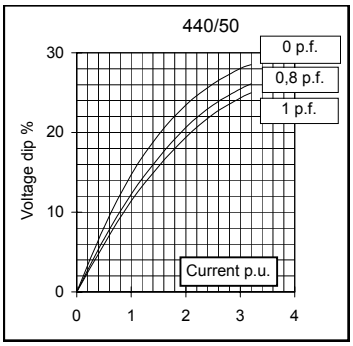


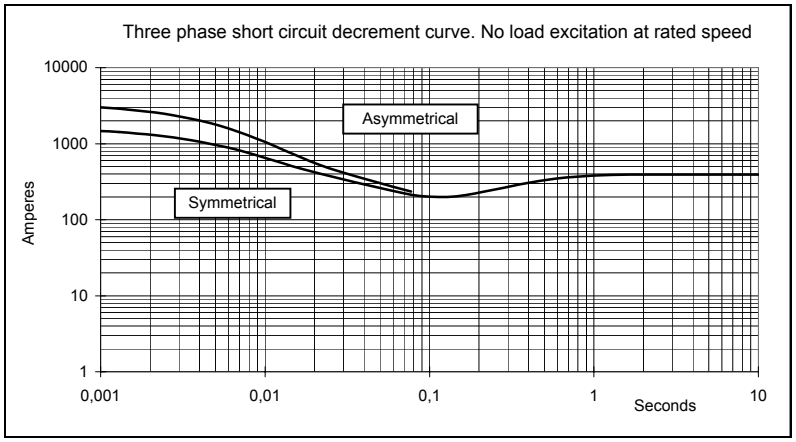








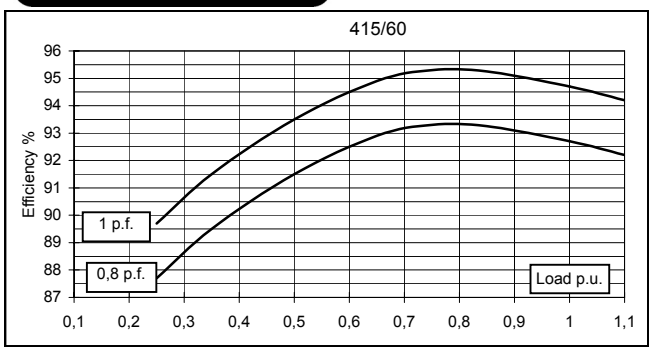


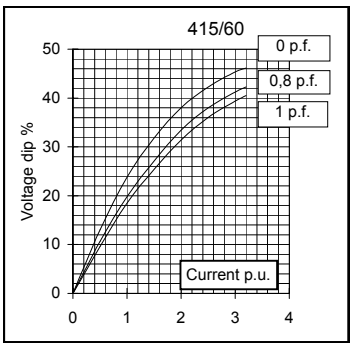


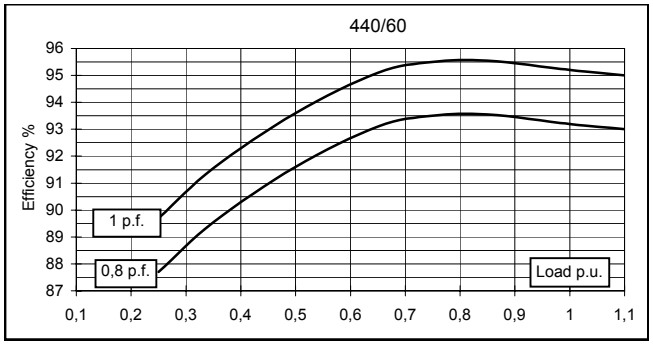
GENERATOR TYPE ECP 34-1S/4

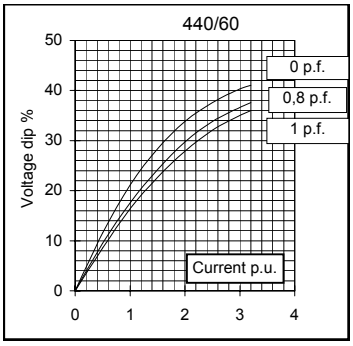
Document : **DS012A/3**
issue 001 date : 01/06/2011

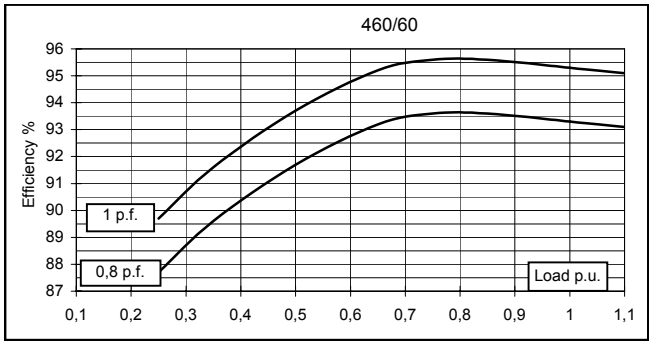
60 Hz

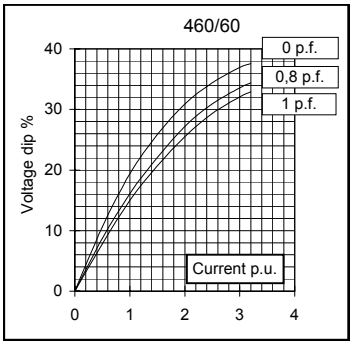


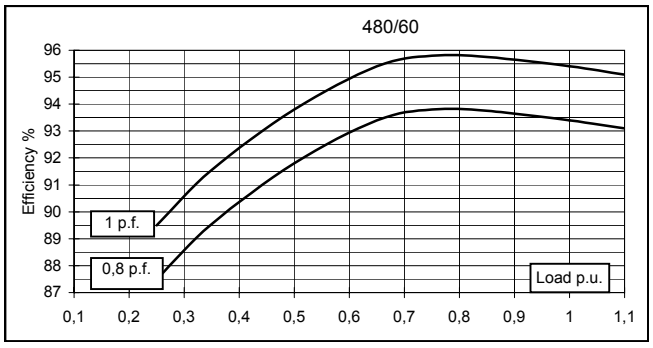


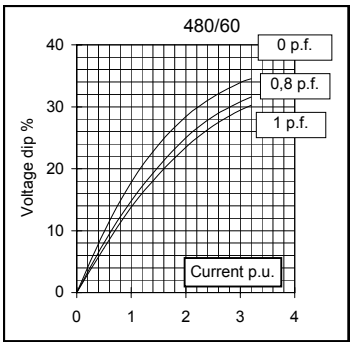


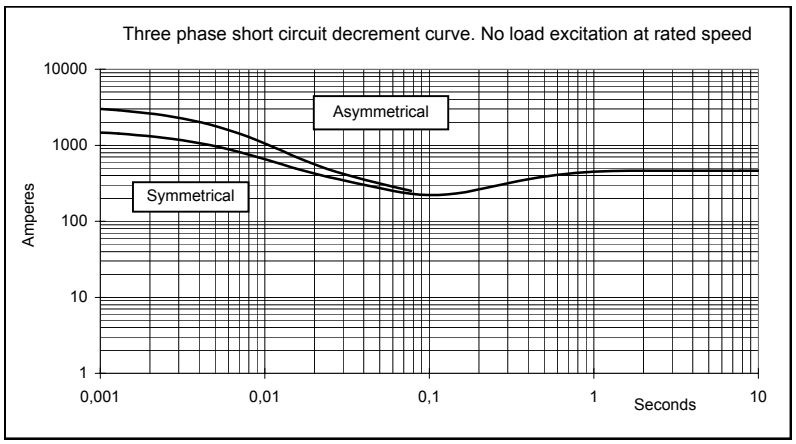




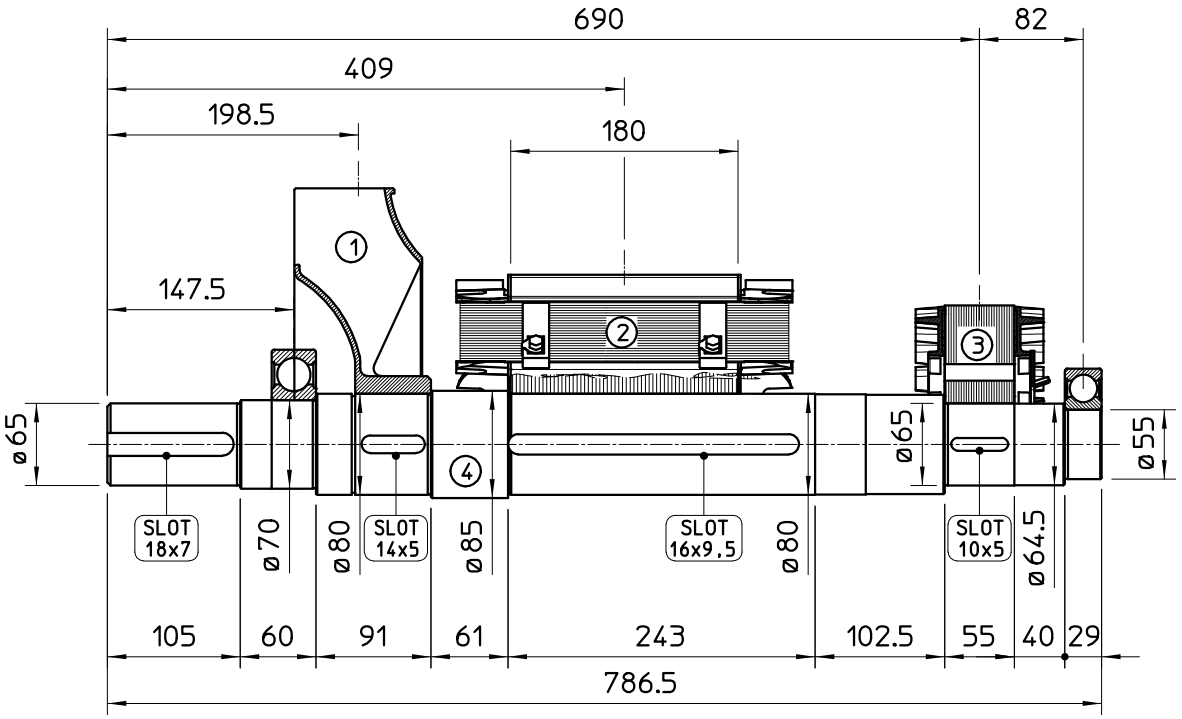






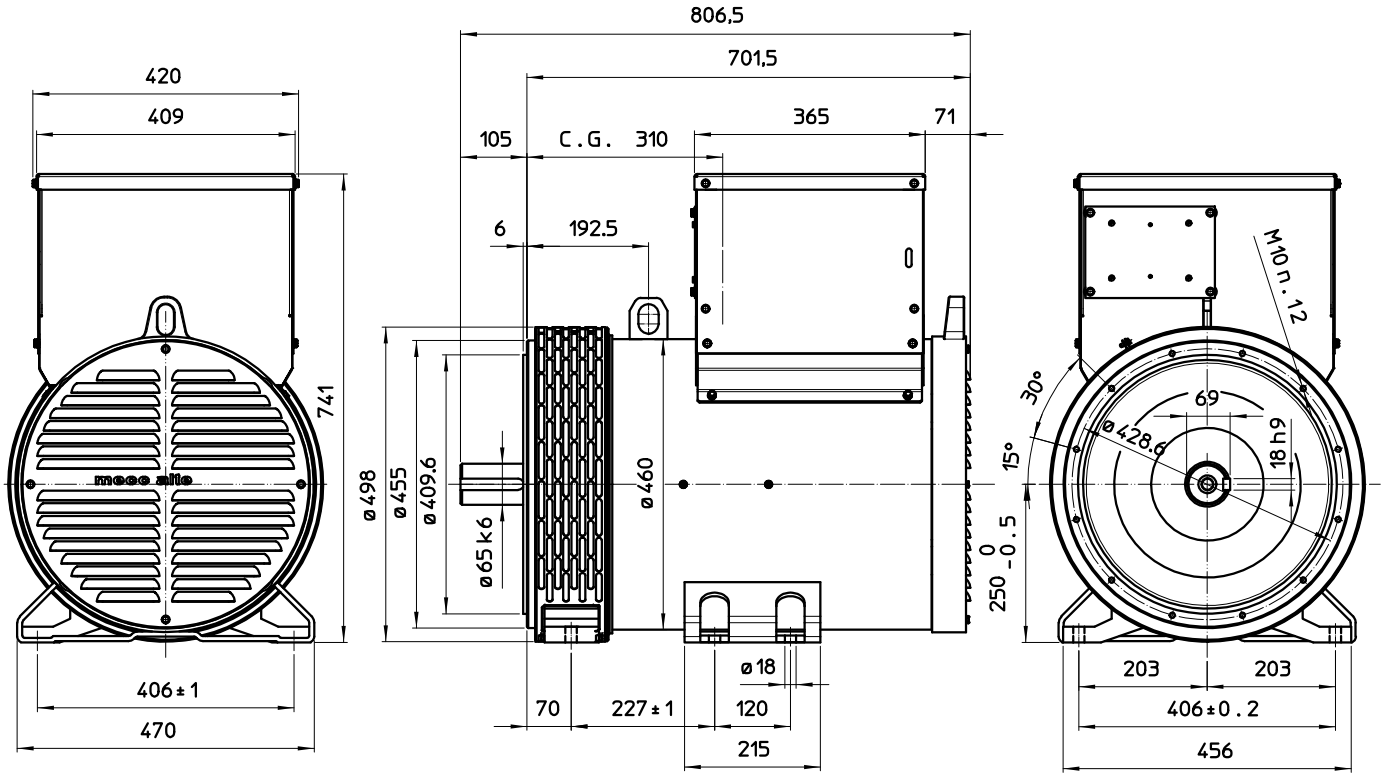


TWO BEARING MOMENTS OF INERTIA



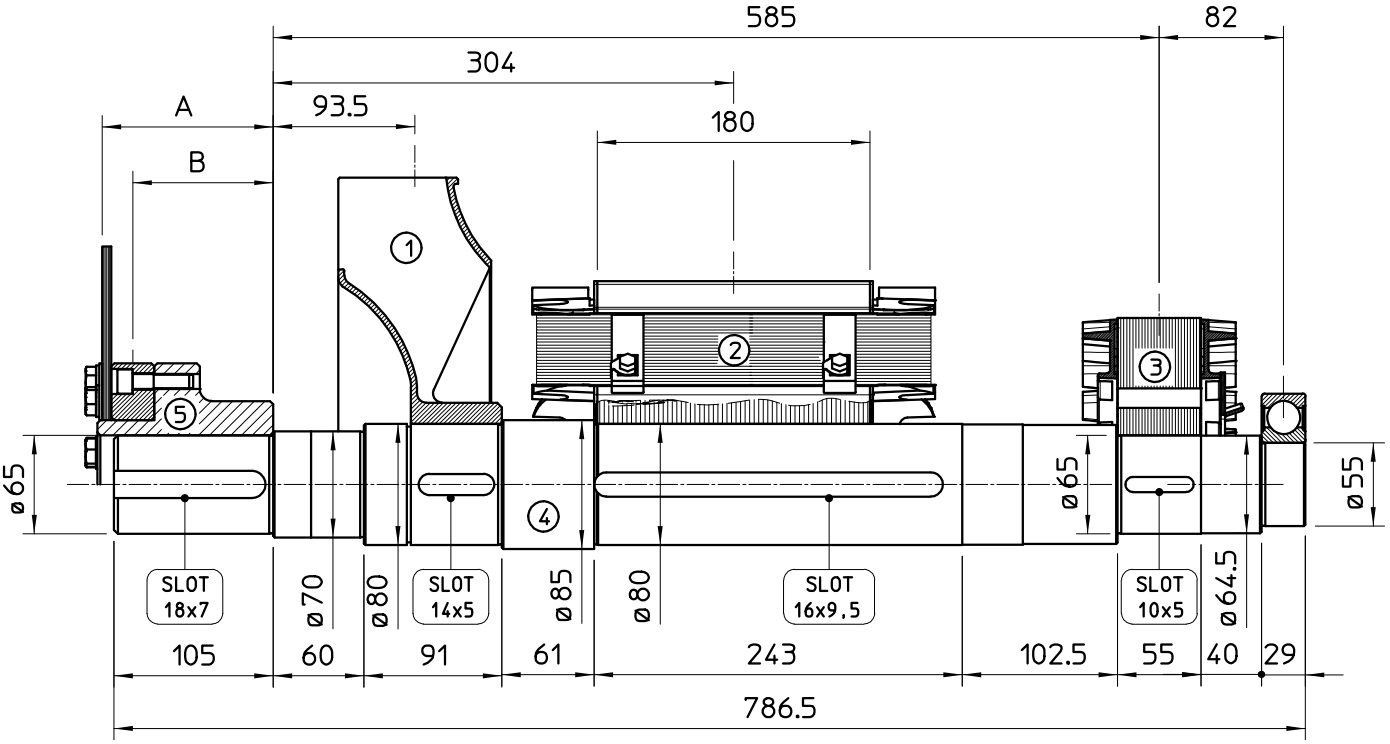
POS.	COMPONENT	WEIGHT (kg)	J (kgm^2)
1	FAN	3.3	0.0451
2	MAIN ROTOR	64.8	0.5847
3	EX. ROTOR	14.5	0.0874
4	SHAFT	26.8	0.0196
TOTAL		109.4	0.7366

TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

SINGLE BEARING MOMENTS OF INERTIA



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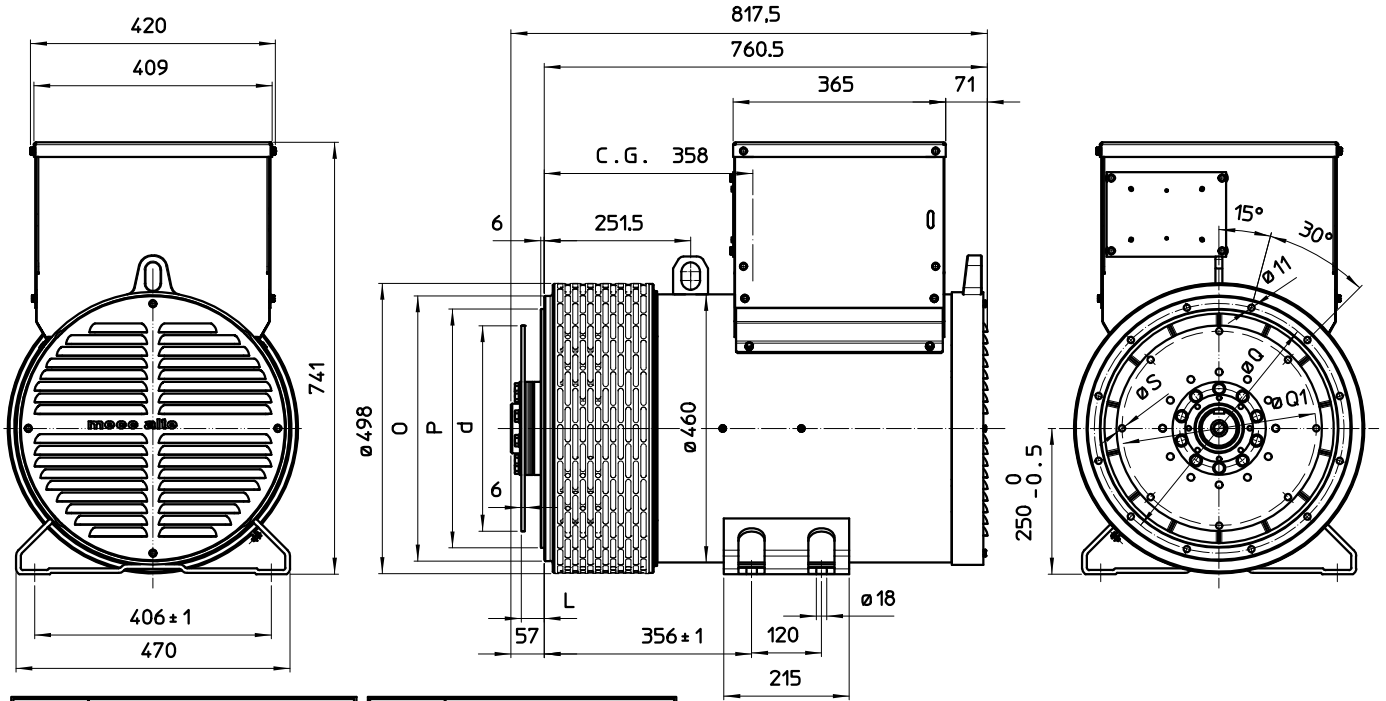
TOTAL		109.4	0.7366

SAE N°	5 SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm^2
10	112.8	35.6	13.5	0.0770
11 1/2	98.6	71.5	12.4	0.0956
14	84.4	68.6	14.8	0.2360

SINGLE BEARING DIMENSIONS



SAE N.	GIUNTI A DISCHI DISC COUPLING DISQUE DE MONOPALIER SCHEIBENKUPPLUNG				
	L	d	Q1	N. fori	S
10	53,8	314,32	295,27	8	11
11 1/2	39,6	352,42	333,37	8	11
14	25,4	466,72	438,15	8	14

SAE N.	FLANGIA/FLANGE BRIDE/FLANSCH			
	O	P	Q	N. fori
3	451	409,6	428,6	12
2	489	447,7	466,7	12
1	552	511,2	530,2	12

C.G.= GRAVITY CENTER