

Project:

Reference:

MXB 180 LB4

CLASSE DI SOVRATEMPERATURA - TEMPERATURE RISE CLASS	H		
CLASSE DI ISOLAMENTO - INSULATION CLASS	H		
PASSO DI AVVOLGIMENTO - WINDING PITCH	2/3		
FORMA COSTRUTTIVA - MOUNTING	B2		
TEMPERATURA AMBIENTE (°C) - AMBIENT TEMPERATURE (°C)	40		
ALTITUDINE (m s.l.m) - ALTITUDE (m a.s.l.)	1000		
SISTEMA DI RAFFREDDAMENTO - COOLING SYSTEM / PROTEZIONE - PROTECTION DEGREE	IC01 / IP23		
FATTORE DI POTENZA - POWER FACTOR	0.80		
NUMERO DI POLI - NUMBER OF POLES	4		
VELOCITA' NOMINALE (r.p.m.) - RATED SPEED (r.p.m.)	1500		
SOVRAVELOCITA' (r.p.m.) - OVERSPEED (r.p.m.)	2250		
NUMERO DI TERMINALI - NUMBER OF TERMINALS	12		
PESO (kg) - WEIGHT (kg)	Approx. 240		
MOMENTO D'INERZIA (J) (kg*m²) - INERTIA (J) (kg*m²)	Approx. 0.45		
TEMPERATURA ACQUA RAFFREDDAMENTO (°C) - COOLING WATER TEMPERATURE (°C)			
PORTATA D'ACQUA (m³/h) - WATER FLOW RATE (m³/h)			
CADUTA DI PRESSIONE (kPa) - PRESSURE DROP (kPa)			
AUMENTO TEMPERATURA ACQUA (°C) - WATER TEMPERATURE INCREASE (°C)			
TA DI CENTRO STELLA - NEUTRAL POINT CURRENT TRANSFORMER			
CUSCINETTI - BEARINGS			
FREQUENZA - FREQUENCY	Hz	50	
TENSIONE - VOLTAGE	V	400	
CORRENTE NOMINALE - RATED CURRENT	A	90.9	
POTENZA - RATING	kVA	63	
RENDIMENTO - EFFICIENCY - (%)	4/4	92.8	
P.F.= 1.0	3/4	93.6	
	2/4	93.9	
RENDIMENTO - EFFICIENCY - (%)	4/4	90.1	
P.F.= 0.8	3/4	91.2	
	2/4	91.6	
Rapporto di corto circuito - short circuit ratio	SCR	0.47	
reattanza - reactance (%)	sincrona diretta - synchronous direct axis	Xd uns	287
	sincrona in quadratura - synchr. quadrature axis	Xq uns	160
	transitoria diretta - transient direct axis	X'd sat	25.5
	transitoria in quadratura - transient quadrature axis	X'q uns	160
	subtransitoria diretta - subtransient direct axis	X''d sat	10.7
	subtransitoria in quad. - subtransient quadr. axis	X''q sat	13.5
	di sequenza negativa - negative sequence	X2 sat	12.1
	di sequenza zero - zero sequence	Xo sat	2.3
costanti di tempo - time constants (s)	a vuoto - open circuit	T'do	0.630
	transitoria - transient	T'd	0.060
	subtransitoria - subtransient	T''d	0.010
	unidirezionale - armature	Ta	0.009
Coppia di corto circuito bifase - Phase to Phase short circuit torque	kN*m	5.6	
Coppia di corto circuito trifase - Three phase short circuit torque	kN*m	3.7	

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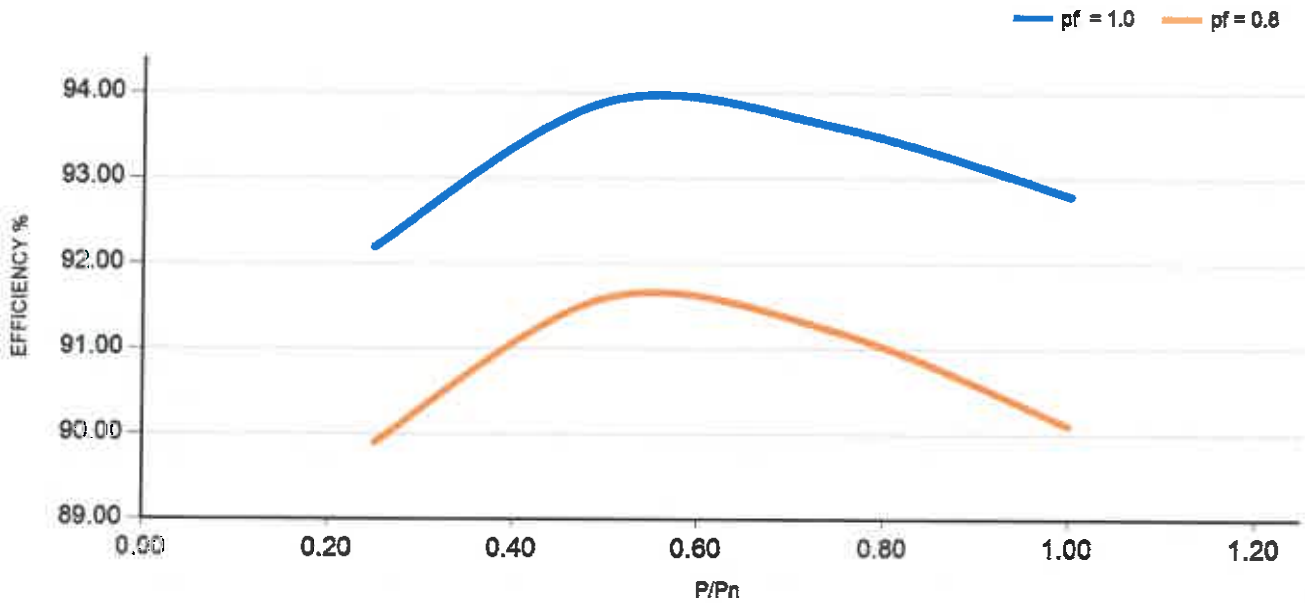
CLASSE DI SOVRATEMPERATURA - TEMPERATURE RISE CLASS		H	
CLASSE DI ISOLAMENTO - INSULATION CLASS		H	
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CORRENTE NOMINALE - RATED CURRENT		A	90.9
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Rapporto di corto circuito - short circuit ratio		SCR	0.47
reattanza - reactance (%)	sincrona diretta - synchronous direct axis	X _{d uns}	287
	sincrona in quadratura - synchr. quadrature axis	X _{q uns}	160
	transitoria diretta - transient direct axis	X' _{d sat}	25.5
	transitoria in quadratura - transient quadrature axis	X' _{q uns}	160
	subtransitoria diretta - subtransient direct axis	X'' _{d sat}	10.7
	subtransitoria in quad. - subtransient quadr. axis	X'' _{q sat}	13.5
	di sequenza negativa - negative sequence	X _{2 sat}	12.1
	di sequenza zero - zero sequence	X _{0 sat}	2.3
costanti di tempo - time constants (s)	a vuoto - open circuit	T' _{do}	0.630
	transitoria - transient	T' _d	0.060
	subtransitoria - subtransient	T'' _d	0.010
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Coppia di corto circuito bifase - Phase to Phase short circuit torque		kN*m	5.6
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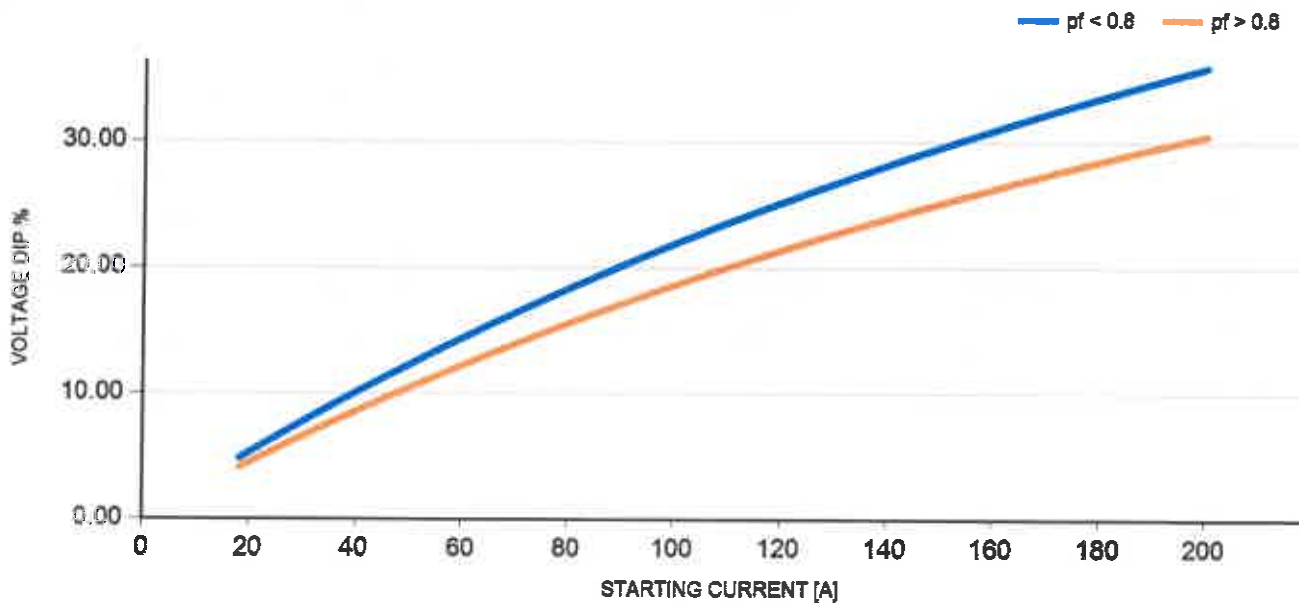
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CURVA DI RENDIMENTO - EFFICIENCY CURVE



CADUTA DI TENSIONE - VOLTAGE DIP

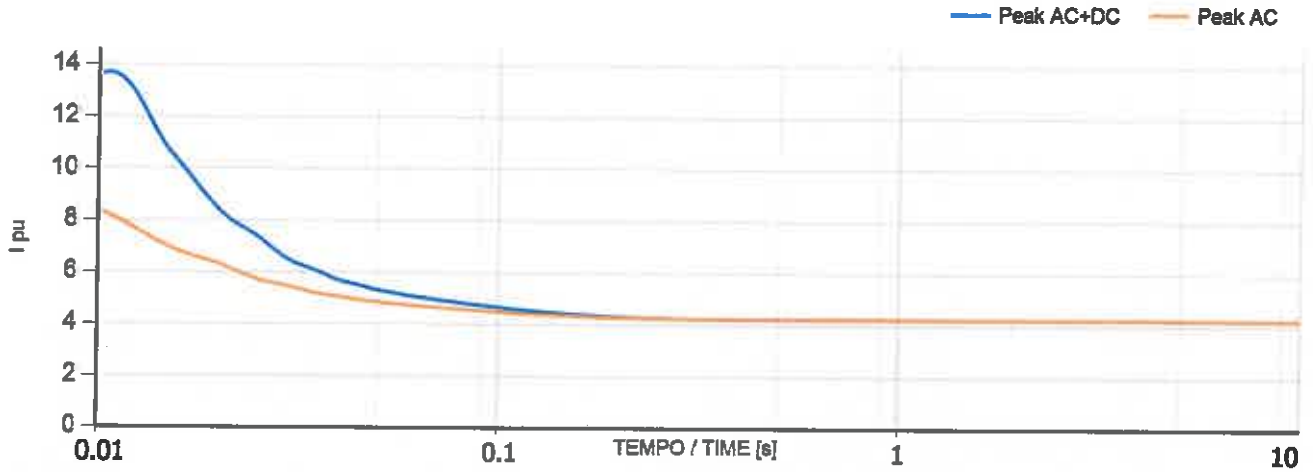


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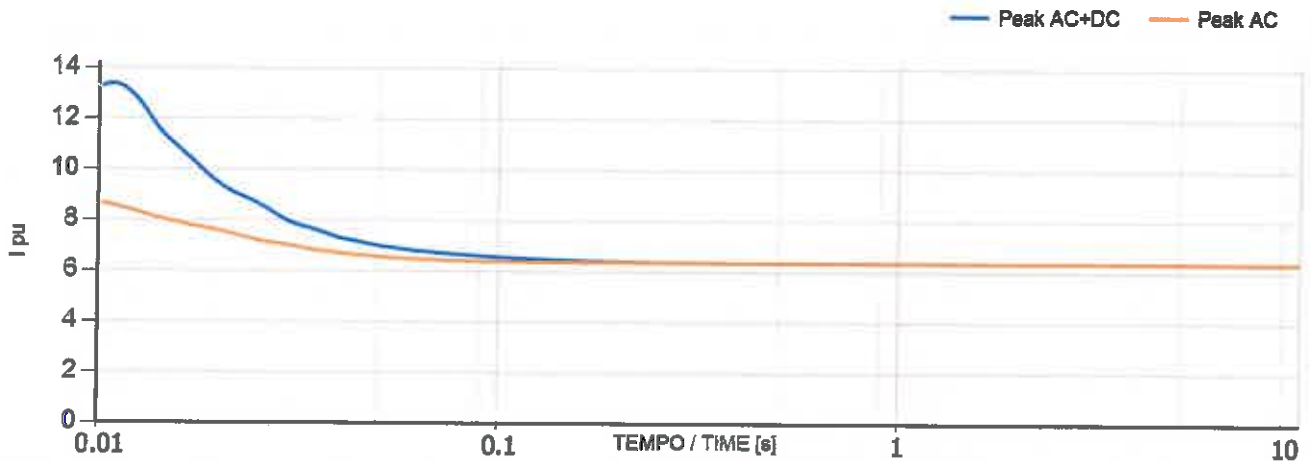
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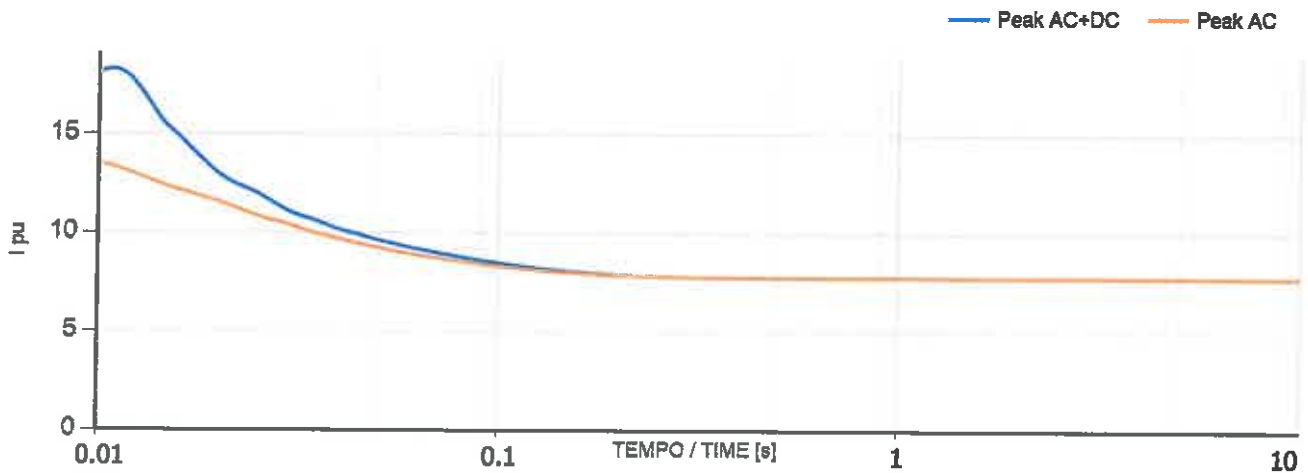
3 - PHASE SHORT CIRCUIT DECREMENT CURVE



2 - PHASE SHORT CIRCUIT DECREMENT CURVE



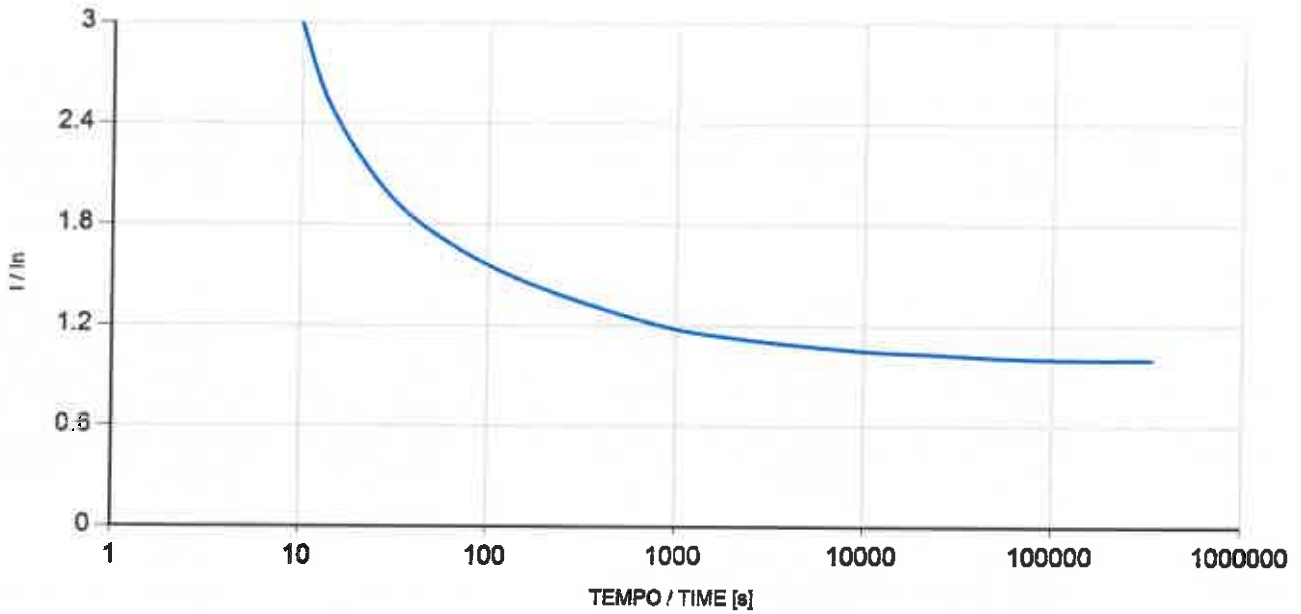
1 - PHASE SHORT CIRCUIT DECREMENT CURVE



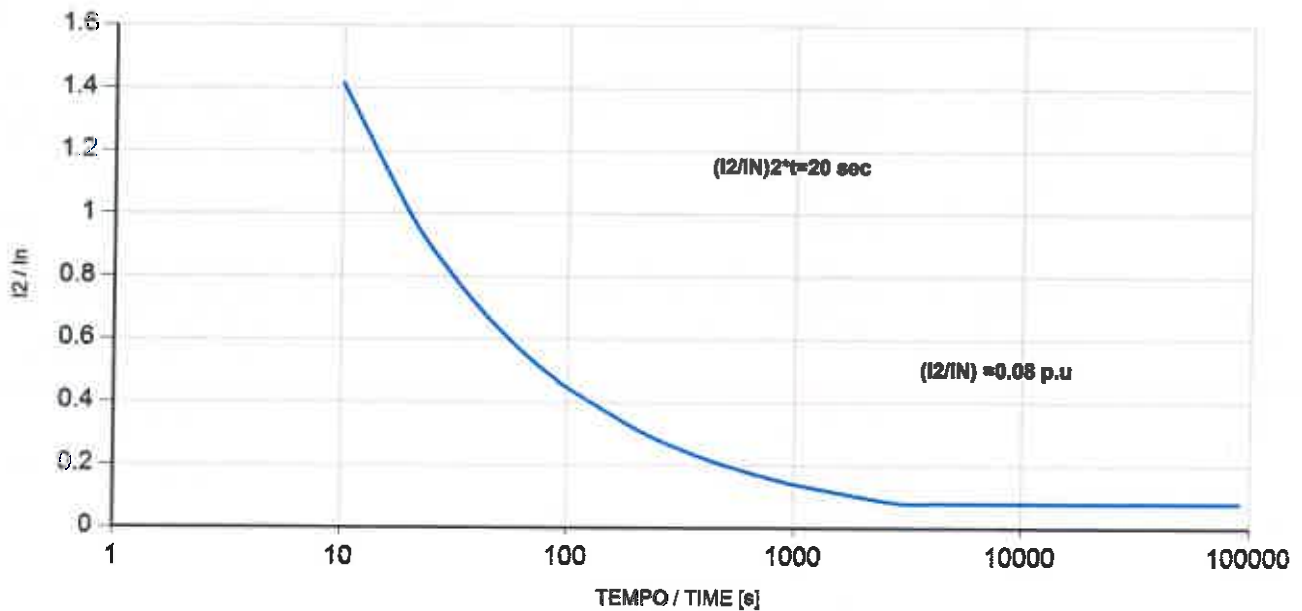
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CURVA DI LIMITE TERMICO - THERMAL DAMAGE CURVE



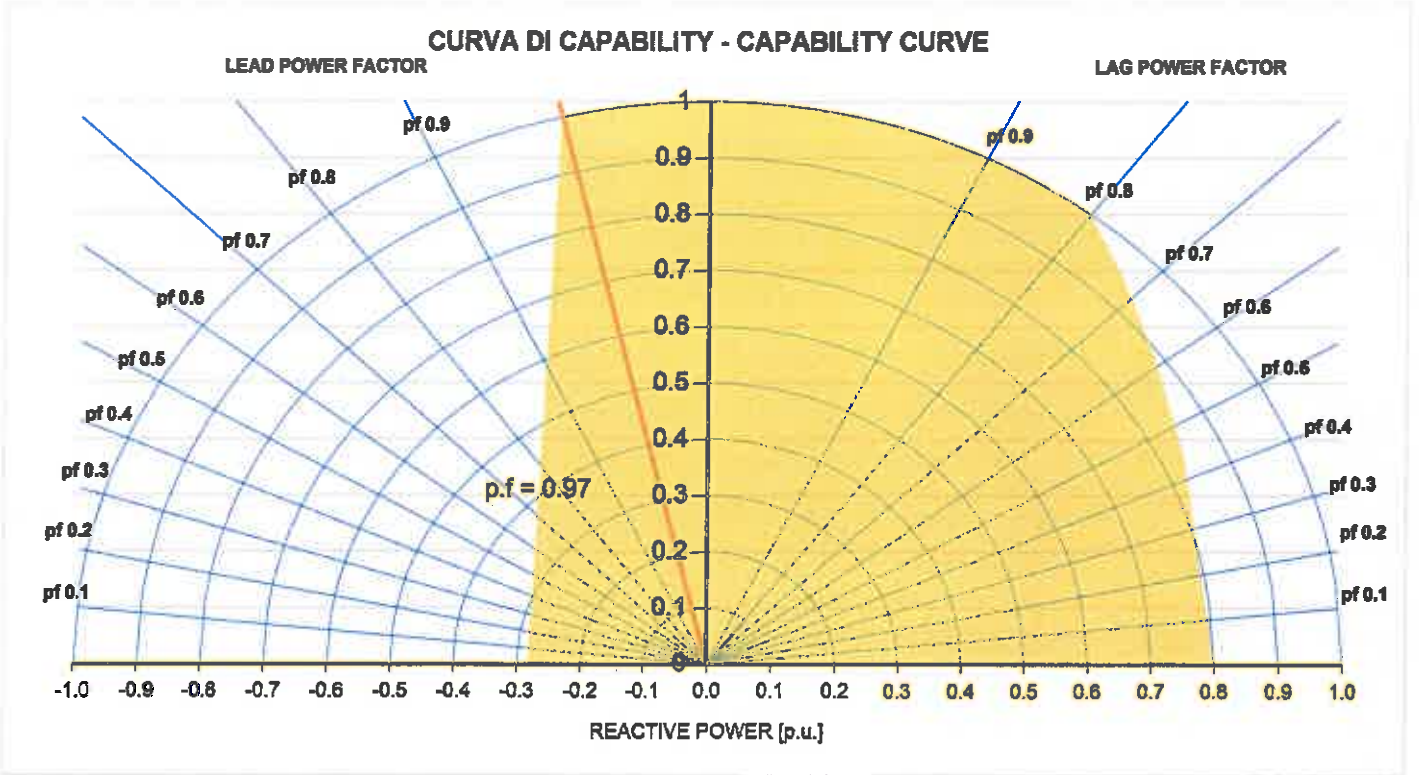
CORRENTE SEQUENZA INVERSA - NEGATIVE SEQUENCE CURRENT

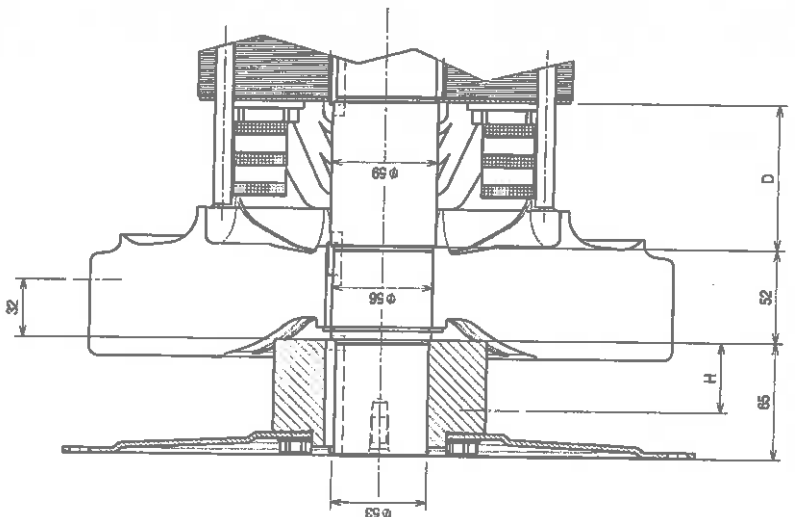
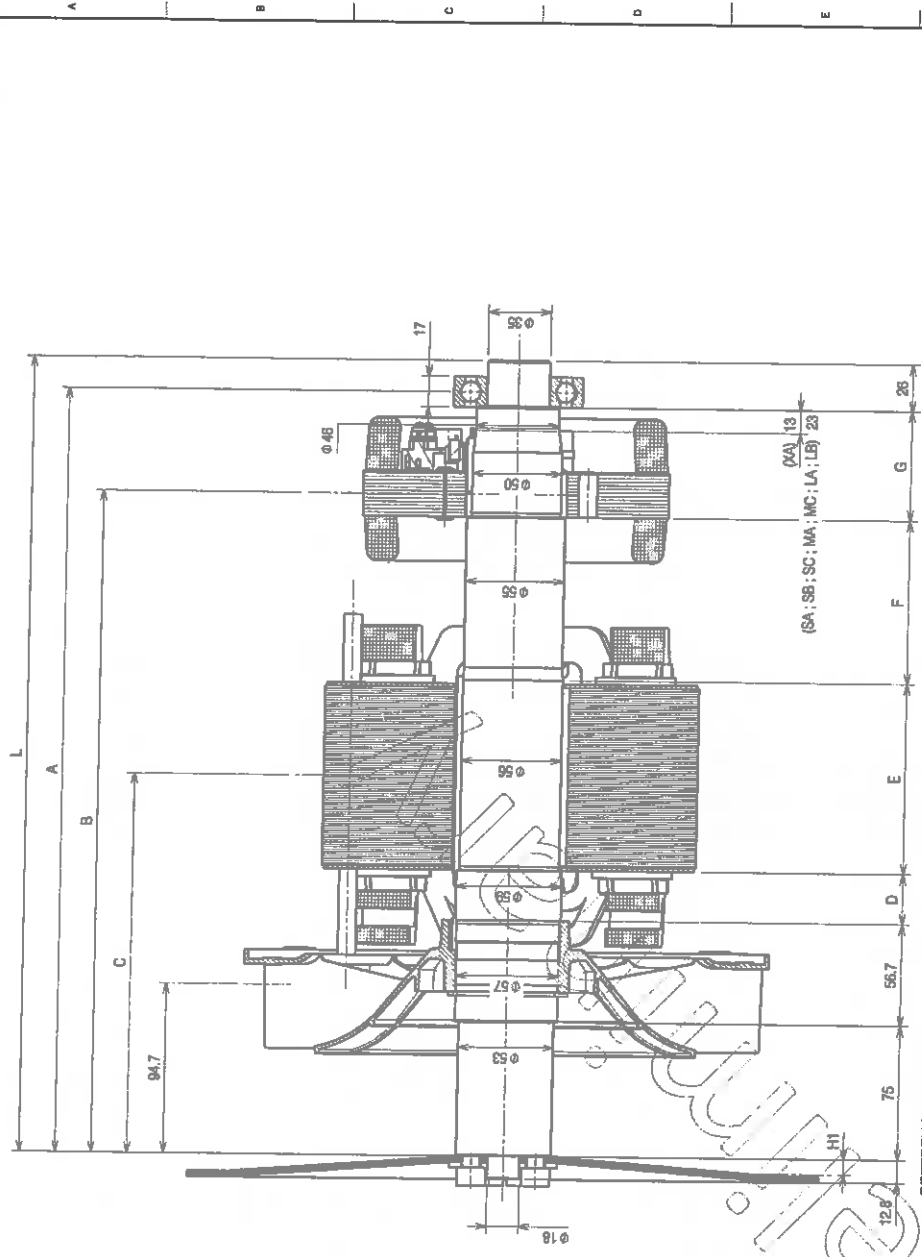


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REFERENCE FOR SIZES: XA - SA - SB - SC

COUPLING	H1	m [kg]	J [kgm ²]
SAE 6 1/2	2	0.84	0.005
SAE 7 1/2	2	1	0.008
SAE 8	19.1	1.4	0.012
SAE 10	25.6	1.8	0.022
SAE 11 1/2	7.5	2.3	0.036

REFERENCE FOR SIZES: MA - MC - LA - LB

COUPLING	H	m [kg]	J [kgm ²]
SAE 6 1/2	32.5	4.5	0.013
SAE 7 1/2	33.4	4.8	0.015
SAE 8	39.5	5.1	0.02
SAE 10	42	5.6	0.031
SAE 11 1/2	39.8	6	0.043

SIZE	DIMENSIONS mm											FAN	SHAFT	MAIN CORE	EXCITER CORE	TOTAL	
	A	B	C	D	E	F	G	L	m [kg]	J [kgm ²]	m [kg]					J [kgm ²]	m [kg]
XA	428.5	369.7	212.2	106	91	61	443.7	7.67	0.003	28.5	0.161	7.72	0.038	44.4	0.211		
SA		224.7						8.73	0.009	34.6	0.195	8.24	0.044	53.1	0.251		
SB	486.7	434.7	234.7	28	176	81	513.7	9.96	0.5	39	0.22	9.24	0.044	57.5	0.276		
SC		247.2						10.6	0.017	48.7	0.275	10.8	0.05	64.2	0.308		
MA	494.5	427.5	205	56	216		512	12		53.8	0.303			71.8	0.345		
MC		215					81	12		56	0.315			76.9	0.374		
LA	589.5	532.5	245	81	276	101	617	12.1	0.005	66.8	0.376			80.5	0.366		
LB		270												91.4	0.448		

D UPDATED DATA
 C MARKED FOR POSITION
 B MARKED SIZE (MM)
 REV

DESCRIPTION
 SOSTITUIRE L. COD. CAD A2

DATA
 04/02/2017
 07/09/2018
 15/09/2018
 06/02/2015
 04/02/2015
 04/02/2017

D. Pagnone
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 G. Sironi
 P. Riva
 D. Pagnone
 M. Crippa

TORSIONAL ANALYSIS DATA MXB 180
SYNCHRONOUS GENERATORS
M18AV001C

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