DATASHEET ALTERNATOR

Alternator ref. KH00260T
Alternator type KH00260TO4N

-GENERAL CHARACTERISTICS-

Voltage Type (V)	240 Mono	**Altitude (m)**	0-1000
Number of Phase	Single phase	**AVR Regulation**	Yes
Number of pole	4	**Indication of protection**	IP23

Capacity for maintaining short circuit at 3 In for 10 s Yes
Winding type Standard
Winding pitch 2/3

Efficiency & Power

Frequency (Hz) 50 Hz **Nominal voltage (V)** 240

	Class H				Class F	Class B
	125°C / 40°C continuous	130°C / 25°C standby	150°C / 40°C standby	163°C / 27°C standby	105°C / 40°C continuous	80°C / 40°C continuous
Nominal Rating(Kva)	5.80		6	6.40	5.70	4.60
Nominal Rating(KW)	5.80		6	6.40	5.70	4.60
Efficiency 100%	77.10		77	76.70	77.70	77.70

-ELECTRICAL CHARACTERISTICS-

Voltage regulation at established rating (+/- %)	1
Insulation class	H
T° class (H/125°), continuous 40°C	H / 125°K
T° class (H/163°C), standby 27°C	H / 163°K
Wave form : NEMA=TIF	<45
Unbalanced load acceptance ratio (%)	100
Number of wires	12
Total Harmonic Distortion in no-load DHT (%)	2,7
Wave form : CEI=FHT	<2
Total Harmonic Distortion, on linear load DHT (%)	2,8
Technology	Brushless
L-L Harmonic Maximum - Single (%)	<3
Deviation Factor (%)	6
Shaft Current	<80

Reactances

Direct axis synchro reactance unsaturated (Xd) (%)	125.80
Direct axis transcient reactance saturated (X'd) (%)	19.30
Direct axis subtranscient reactance saturated (X''d) (%)	13.90
Quadra axis synchro reactance unsaturated (Xq) (%)	41.60
Quadra axis subtranscient reactance saturated (X"q) (%)	75.60
Zero sequence reactance unsaturated (Xo) (%)	4.03
Negative sequence reactance saturated (X2) (%)	19.10

Short circuit ratio

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Short circuit ratio (Kcc)	0.94
Reactance desaturation coef	1.20
Exciter time constant (Te)	0.0050
Subtranscient time constant (T"d) (ms)	11
Short circuit transcient time constant (T'd) (ms)	17
Open circuit time constant (T'do) (ms)	730
Subtranscient time constant (T"q) (ms)	8
Leakage stator reactance (Xa)(%)	4
Stator Resistance (Ra)(%)	0.0860
Armature time constant (Ta) (ms)	12
No load excitation current (io) (A)	0.32
Full load excitation current (ic) (A)	1.30
Full load excitation voltage (uc) (V)	20.50
Heat rejection (W)	1723
No load losses (W)	308.10
Stator resistance (for 20°C ambient) (Ω)	0.6360
Rotor resistance (for 20°C ambient) (Ω)	7.1410
Exciter resistance - stator/inductor (for 20° ambient) (Ω)	15.71
Exciter resistance - rotor/armature (for 20° ambient) (Ω)	1.4530
Recovery time (Delta U = 20% transcient) (ms)	200
Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	22.10
Transcient dip (4/4 load) - PF : 0,8 AR (%)	11.60

Additional electrical characteristics-

-MECHANICAL CHARACTERISTICS-

Number of bearing	1
Overspeed (rpm)	2250
Coupling	Direct

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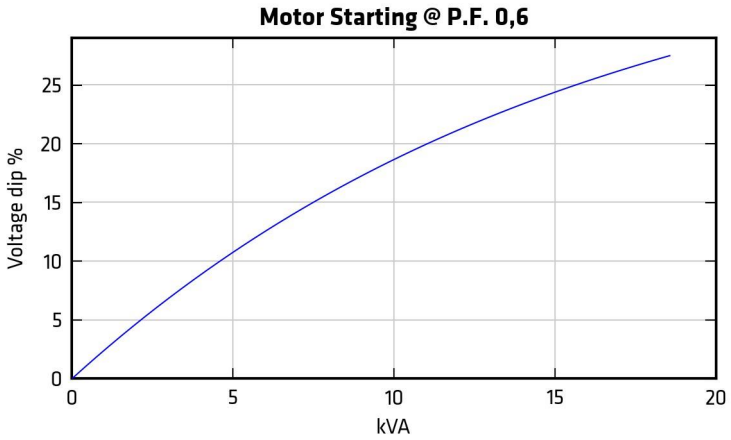
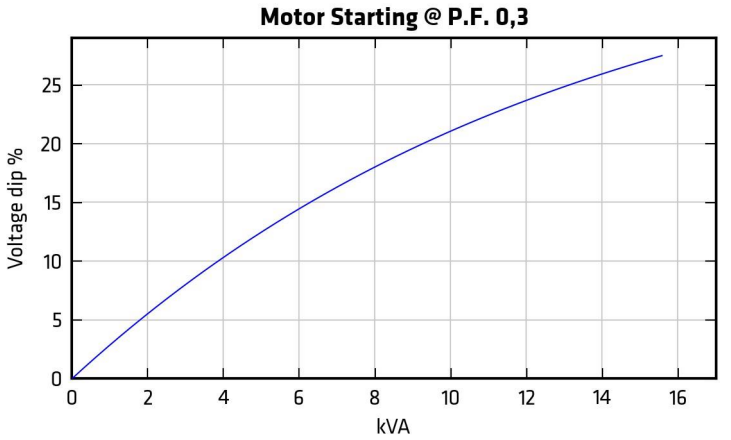
-TECHNICAL CURVES-

Motor starting curve locked rotor (0,6PF)



Motor starting curve locked rotor (0,3PF)



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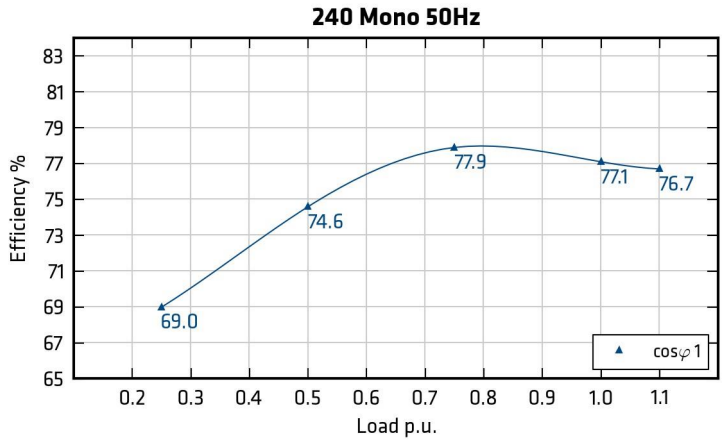
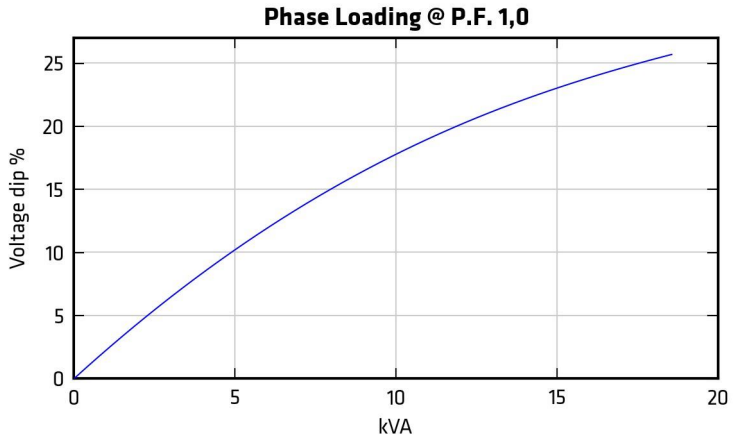
Efficiencies curve (by excitation system)



Loading curve (by excitation system)



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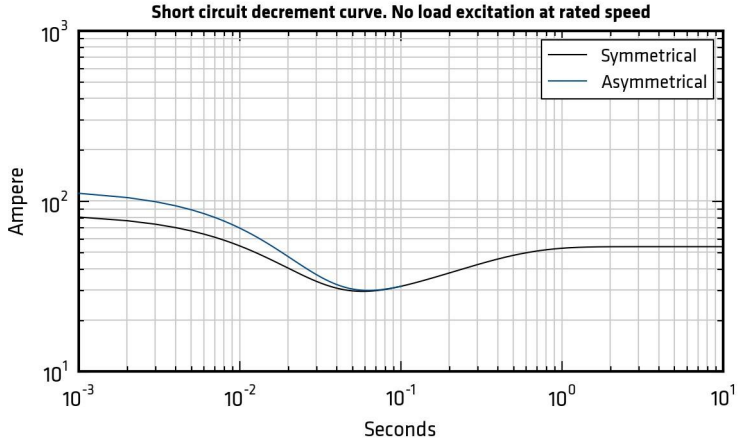
Short circuit curve at no load and rated speed



Influence due to connection

Curves shown are for star (Y) connection

For other connections, use the following multiplication factors :

- Series to Parallel star : current value x 2
- Series to Series delta : current value x 1.72
- Series star to Parallel delta : current value x 3.44

Influence due to short-circuit

The indicated coefficient have to be used to correct the three phase short circuit curves values as a function of the type of short circuit voltage.

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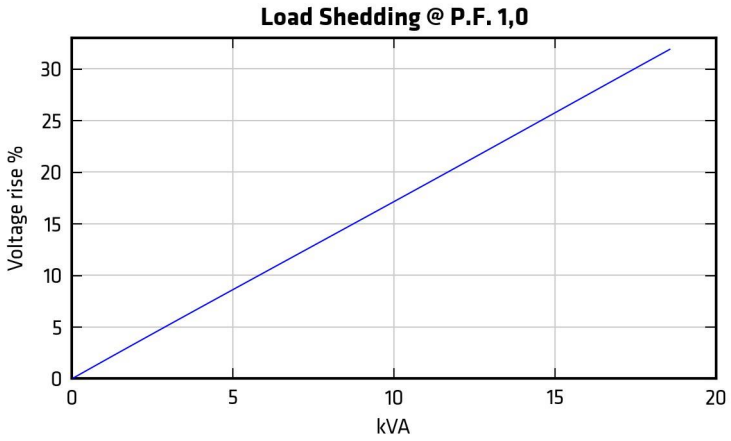
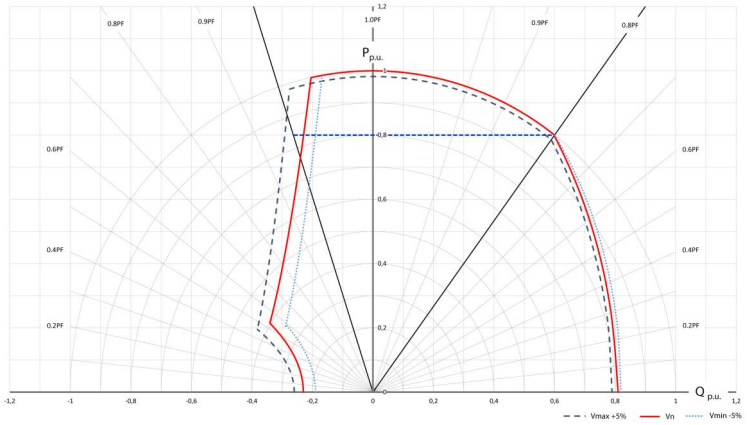
Rejection curve (by excitation system)



Capability curve (PQ diagram)



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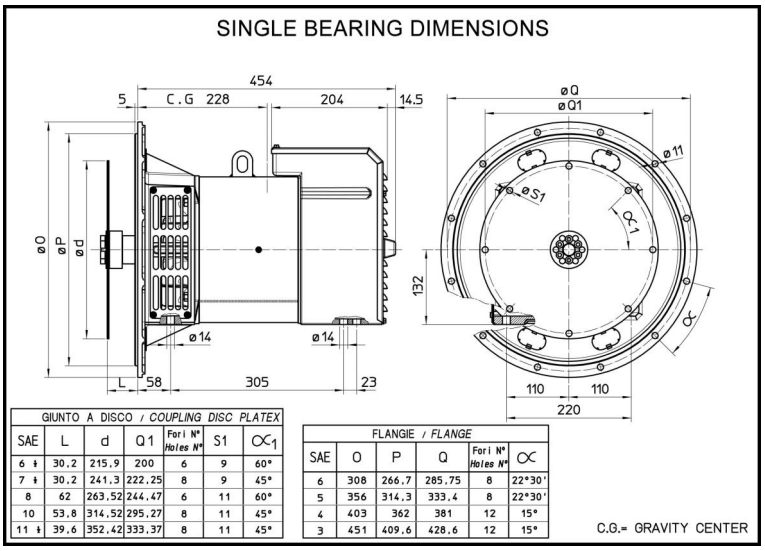
DIMENSIONS-

Overall dimension drawing (Single bearing)



GIUNTO A DISCO / *COUPLING DISC PLATEX*

SAE	L	d	Q1	Fori N° *Holes N°*	S1	α_1
6 ½	30,2	215,9	200	6	9	60°
7 ½	30,2	241,3	222,25	8	9	45°
8	62	263,52	244,47	6	11	60°
10	53,8	314,52	295,27	8	11	45°
11 ½	39,6	352,42	333,37	8	11	45°

FLANGIE / *FLANGE*

SAE	O	P	Q	Fori N° *Holes N°*	α
6	308	266,7	285,75	8	22°30'
5	356	314,3	333,4	8	22°30'
4	403	362	381	12	15°
3	451	409,6	428,6	12	15°

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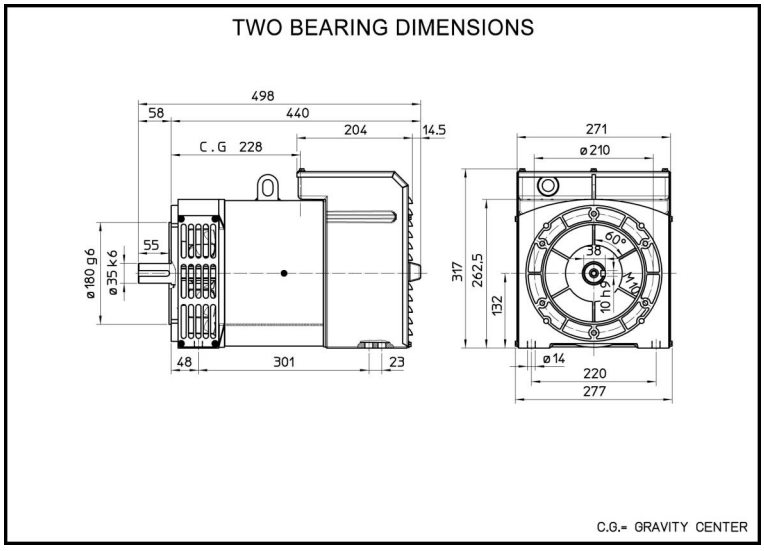
Overall dimension drawing (Two bearings)



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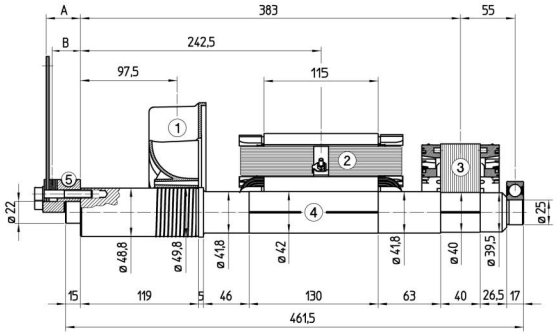
-TORSIONAL ANALYSIS DATA-

Rotation part drawing for torsional vibration calculation (Single bearing)

SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm^2)
1	FAN	0,4	0,00206
2	MAIN ROTOR	14,7	0,04548
3	EX. ROTOR	4,2	0,01086
4	SHAFT	5,1	0,00123
TOTAL		24,4	0,05963

SAE	5	SHAFTS COUPLING FLEX PLATE		
N°	A	B	WEIGHT kg	J kgm^2
6 1/2	3	1,5	1,00	0,00495
7 1/2	3	1,5	1,20	0,00769
8	34,6	29,5	1,75	0,01114
10	26,6	23,5	2,14	0,02220
11 1/2	13	11	2,60	0,03524

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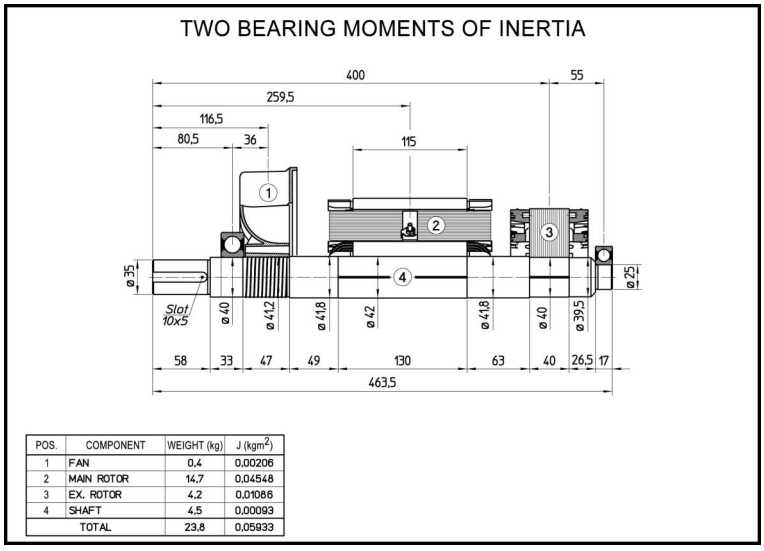
Rotation part drawing for torsional vibration calculation (Two bearings)



POS.	COMPONENT	WEIGHT (kg)	J (kgm^2)
1	FAN	0,4	0,00206
2	MAIN ROTOR	14,7	0,04548
3	EX. ROTOR	4,2	0,01086
4	SHAFT	4,5	0,00093
TOTAL		23,8	0,05933