DATASHEET ALTERNATOR

Alternator ref. KH08560T
Alternator type KH08560TO4D

-GENERAL CHARACTERISTICS-

Voltage Type (V)	400/230	**Altitude (m)**	0-1000
Number of Phase	Three 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

Efficiency & Power

Frequency (Hz) 50 Hz **Nominal voltage (V)** 400

	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)	2750	2777.5	2887.5	3025	2505.3	2117.5
Nominal Rating(KW)	2200	2222	2310	2420	2004.2	1694
Efficiency 100%	96.1	96.1	96	95.9	96.3	96.5

-ELECTRICAL CHARACTERISTICS-

Voltage regulation at established rating (+/- %)	0.5
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	<50
Unbalanced load acceptance ratio (%)	8
Number of wires	6
Total Harmonic Distortion in no-load DHT (%)	<3.5
Wave form : CEI=FHT	<2
Total Harmonic Distortion, on linear load DHT (%)	<3.5
Technology	Brushless
L-L Harmonic Maximum - Single (%)	3
Deviation Factor (%)	2
Shaft Current	
Main Stator Capacitance to ground (mdf)	0.0003

Reactances

Direct axis synchro reactance unsaturated (Xd) (%)	266.5
Direct axis transcient reactance saturated (X'd) (%)	20.8
Direct axis subtranscient reactance saturated (X''d) (%)	10.7
Quadra axis synchro reactance unsaturated (Xq) (%)	141.5
Quadra axis subtranscient reactance saturated (X"q) (%)	11.06
Zero sequence reactance unsaturated (Xo) (%)	2.6
Negative sequence reactance saturated (X2) (%)	10.88

Short circuit ratio

Short circuit ratio (Kcc)	0.506
Subtranscient time constant (T"d) (ms)	14.356

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Short circuit transcient time constant (T'd) (ms)	262.101
Open circuit time constant (T'do) (ms)	2922.31
Subtranscient time constant (T"q) (ms)	19.3
Leakage stator reactance (Xa)(%)	8.79
Stator Resistance (Ra)(%)	0.658
Armature time constant (Ta) (ms)	29.55
No load excitation current (io) (A)	1.36
Full load excitation current (ic) (A)	3.74
Full load excitation voltage (uc) (V)	37.5
Heat rejection (W)	89569.93
No load losses (W)	30628.06
Stator resistance (for 20°C ambient) (Ω)	0.00038
Rotor resistance (for 20°C ambient) (Ω)	0.55495
Exciter resistance - stator/inductor (for 20° ambient) (Ω)	8.265
Exciter resistance - rotor/armature (for 20° ambient) (Ω)	0.013
Recovery time (Delta U = 20% transcient) (ms)	500
Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	3261.75
Transcient dip (4/4 load) - PF : 0,8 AR (%)	15.73

Additional electrical characteristics-

Winding X1, X2 auxiliary resistance (for 20° ambient) (Ω)	0.102
Auxiliary winding X1, X2 excitation voltage at no load (V)	104.7
Auxiliary winding X1, X2 excitation voltage on load (V)	104.7
Winding Z1, Z2 auxiliary resistance (for 20° ambient) (Ω)	0.189
Auxiliary winding Z1, Z2 excitation voltage at no load (V)	9
Auxiliary winding Z1, Z2 excitation voltage on load (V)	46

-MECHANICAL CHARACTERISTICS-

Number of bearing	1
Overspeed (rpm)	2250
Coupling	Direct

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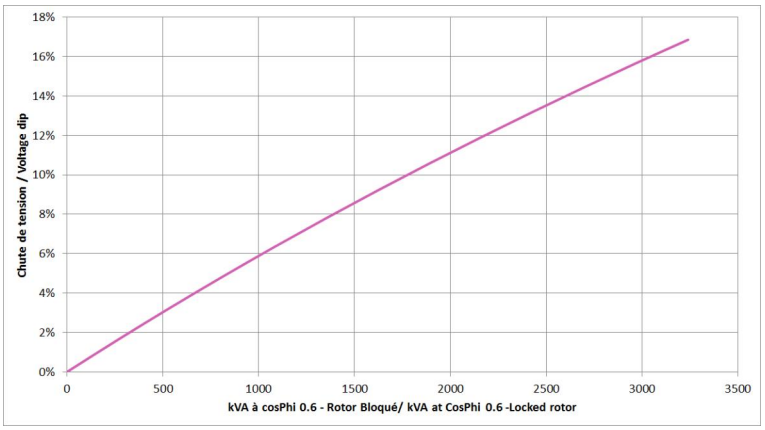
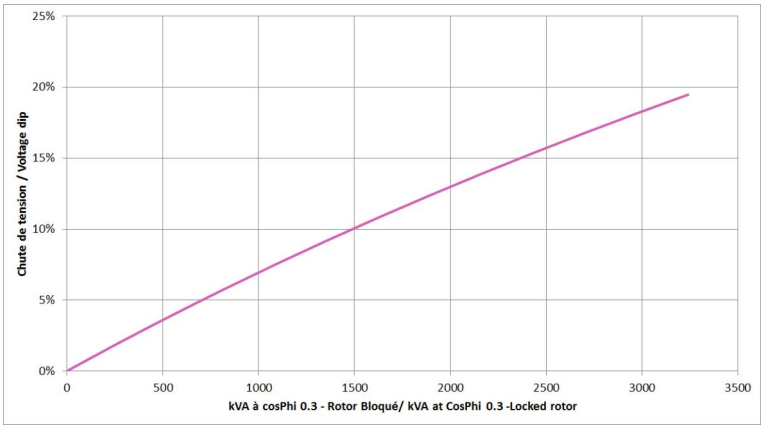
-TECHNICAL CURVES-

Motor starting curve locked rotor (0,6PF)



Motor starting curve locked rotor (0,3PF)



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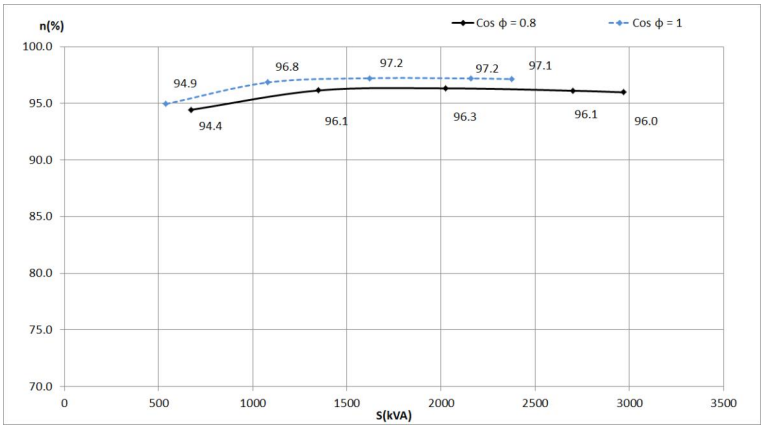
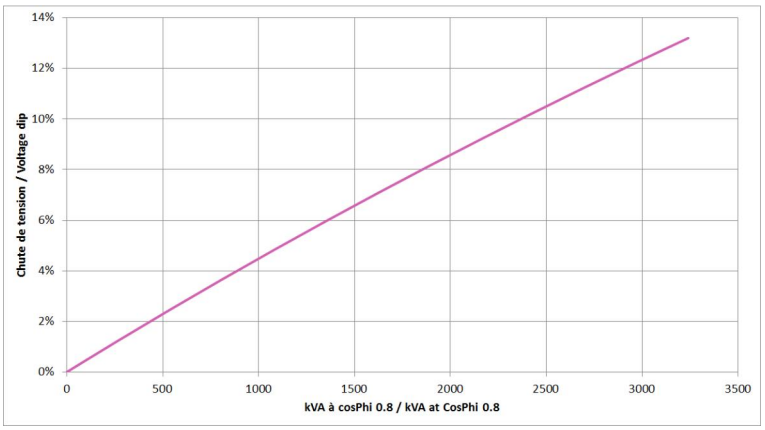
Efficiencies curve (by excitation system)



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 delta : current value x 1.732
- Parallel star : current value x 2

Influence due to short-circuit

Curves are based on a three-phase short-circuit. For the other types of short-circuit, use the following multiplication factors :

(*) Capacity for maintaining short circuit at 3 In for 10 s = YES

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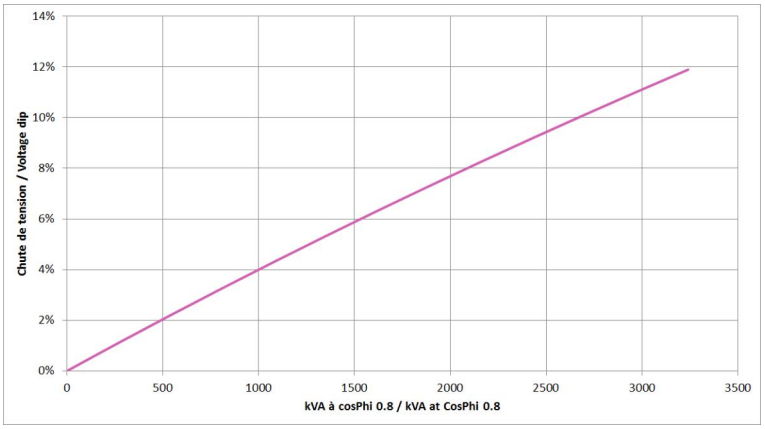
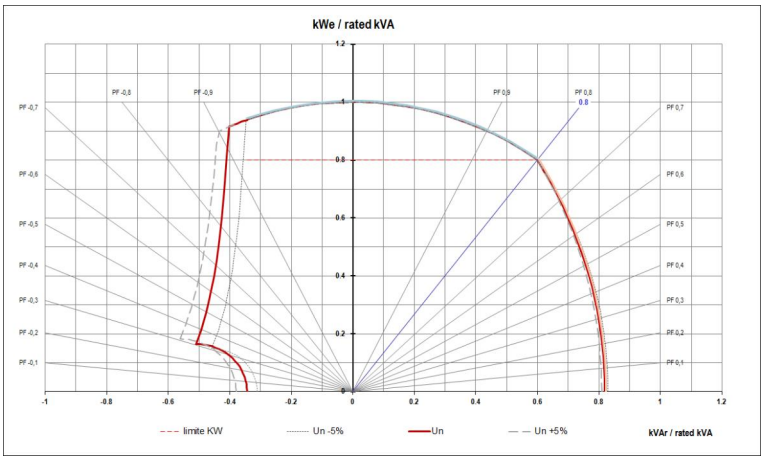
Rejection curve (by excitation system)



Capability curve (PQ diagram)



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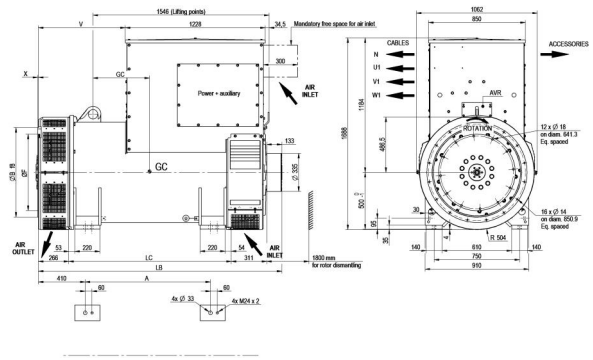
DIMENSIONS-

Overall dimension drawing (Single bearing)



Type	Flange/ Flexplates	ØB (mm)	Nd	Ød (mm)	ØP (mm)	ØF (mm)	Nf	Øf (mm)	ØS (mm)	Offset X	A (mm)	LC (mm)	LB (mm)	V (mm)	GC (mm)	Weight (kg)	T (mm)
KH08560	SAE 0/18	647.7	16	14	679.5	571.5	6	18	542.9	15.8	1100	1427	2137	763	491	5935	1600
KH08560	SAE 00/18	787.4	16	14	850.9	571.5	6	18	542.9	15.8	1100	1427	2137	763	497	5902	1600
KH08560	SAE 00/21	787.4	16	14	850.9	673.1	12	18	641.3	0	1100	1427	2137	763	497	5903	1600
KH08560	SAE 00/24	787.4	16	14	850.9	733.4	12	21	692.1	0	1100	1427	2137	763	496	5915	1600

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Overall dimension drawing (Two bearings)

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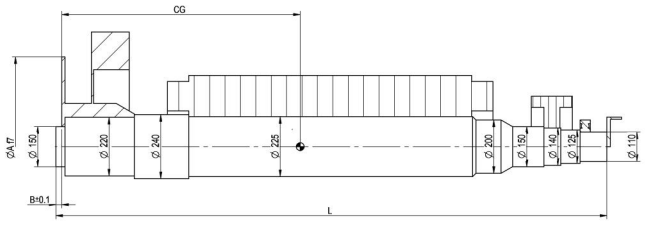
-TORSIONAL ANALYSIS DATA-

Rotation part drawing for torsional vibration calculation (Single bearing)



Type		SAE	ØA (mm)	B (mm)	L (mm)	CG (mm)	Weight (kg)	MR2 (kg.m²)
KH08561	KH08560	18	571.5	6	2065	935.1	2119	66.9
KH08561	KH08560	21	673.1	22	2065	918.4	2121	67.7

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Rotation part drawing for torsional vibration calculation (Two bearings)