Product Catalogue

A.C. Alternators

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Topland

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A.C. Alternators

Topland offers a wide range of AC alternators across 3 categories: AVR Brushless Series, Diode Brushless Series and Slipring Brush Series.
Topland AC alternators are designed with high precision manufacturing and robust construction features to provide best in class efficiency, ensuring stable voltage output, providing high performance, and high durability. Our AC alternators are suitable for use in agricultural, industrial, construction and other engine driven power back up systems. They are designed for both regular use and auxiliary power generation uses.

AVR Brushless Series
Diode Brushless Series
Slipring Brush Series

Range:
2.5 kVA - 200 kVA

Single Bearing
&
Double Bearing

Features

- Reliable long life with superior class 'H' insulation
- Life long lubricated sealed bearings
- Easy for maintenance with integrated components and outboard Exciter/ Rotating Rectifier
- Compact, light and sturdy die cast aluminum stator for frames up to 250
- High motor starting capability
- Specially designed compact slipring and brush assembly
- High thyristor load withstand capability for Cell-Phone and Telecom applications
- Short circuit maintenance capability
- Wide range of coupling discs/adaptors for single bearing construction
- Low noise level
- Flange / Foot mounting available
- Moulded case Automatic Voltage Regulation (AVR)
- Positive voltage build-up even after a long idle period

Mechanical Features

- Aluminum frame die-cast stator up to 250
- Sturdy cast iron endshields fixed on to the stator frame by 8.8 class high tensile screws
- High quality steel shafts are designed amply to take care of overload and short circuit stressed conditions
- Sturdy, dynamically balanced rotors are arduous conditions of parallel operations and non-linear (thyristor) and unbalanced loads. Designed to withstand the runaway engine speed and are with continuous damper cage for high performance under arduous conditions of parallel operations and non-linear (thyristor) and unbalanced loads
- Aluminum fan for effective cooling extends the winding life
- Screens or louvered on all openings for safety
- Easy to mount SAE Adaptors are offered with single bearing A.C. Generators to simplify coupling with all popular engines

Topland A.C. Generators are state-of-the-art, self-excited, self-regulated and dependable source of power. They are meticulously designed to ensure that the best product is offered to our customers.

Range: A.C. Alternators

AVR Brushless

- 5 to 200 kVA in 3Ø, 415v
- 5 to 40 kVA in 1Ø, 240v

Slipring Brush

- 5 to 82.5 kVA in 3Ø, 415v
- 2.5 to 30 kVA in 1Ø, 240v

Diode Brushless

- 2.5 to 20 kVA in 1Ø, 240v

For Brushless & Slipring Alternators

Our Alternators come as standard with 1500rpm, 50Hz, 4 Pole.

Double bearing alternators are available with B3 Mounting as standard.

Single bearing alternators with different SAE Housings & Coupling Disc are available. Please refer to the table FAA 1.0 below for standard SAE Housing & Coupling Disc combination.

For further options please refer to the next section.

Standards Compliance

- IEC : 60034
- BS : 5000
- EN : 50081
- IS : 4722
- IS : 13364
- NEMA : MG
- ISO : 8528
- VDE : 530

Optional For Brushless & Slipring Alternators

- Upto 600 V in 3Ø.
- Upto 300 V in 1Ø.
- 1800 RPM, 60 Hz, 4 Pole, 0.8 pf (lag).
- 3000 RPM, 50 Hz, 2 Pole, 0.8 pf (lag).
- 3600 RPM, 60 Hz, 2 Pole, 0.8 pf (lag).

Note : For above options, kindly contact us for further information.

Applications

Topland Alternators are designed to operate under various applications. We at Topland strive to provide the best product to our customers, delivering efficiency and performance at the same time.



'Topland' with modern integrated manufacturing facility for rotating machines is an ISO 9001 : 2015 certified company by TÜV SÜD South Asia. It also houses a dedicated plant for A.C. Generators deploying superior techniques and processes in each specialized field of design, material specifications, procurement, CNC machining, assembly, testing, packaging and other aspects with stringent quality standards predominating throughout.
These generators incorporate advanced European technology and are designed for optimum performance using high-end software solutions. The Mechanical Desktop for Solid Modeling with ideas, analysis techniques and reliability control for components ensures a superior product, comparable with the best in the industry. With well-qualified engineers and technocrats, backed by strong Research & Development team, Topland has fully harnessed long-term experience in design and software to offer a range of innovative, reliable and efficient A.C. Generators.

The Process That Makes Difference

CNC Machining

CNC Machining is done with low tolerances and high accuracy for uniform air-gap and rotor dynamic balancing for low vibrations to ensure smooth, efficient and silent performance.

Balancing

Our rotors designed to be dynamically balanced. We also have a in house dynamic balancing machine to ensure that our products meet the highest quality standards and efficiencies.

Winding Protection

Our alternators are shipped with a epoxy gel coating on winding to ensure the alterantors are protected against mechanical and chemical damage. It creates a tough outer shell locking loose wires in place and seals the winding against moisture and chemicals. The coat also helps in better heat dissipation.

Chormatised Coating

Applying a chromatised coating ensures our stator case is protected against oxidation of aluminum. A chromatized layer shields the casing against rust and moisture. Thus increasing the lifespan of the alternator in harsh or humid environment. This coating also enhances the visual appeal of product.

Testing

All our alternators go through a highly demanding testing procedure to maintain standards. We also have an in house laboratory to test the structural integrity of our alternators. This allows us to cater products that operate under arduous conditions. This helps in maintaining the highest quality standards.



Construction Features

Termination

- Integral terminal box is provided for higher reliability.
- Top terminal box with side cable entry ensures wiring flexibility.
- Spacious terminal box accommodates all types, including aluminum cables.
- Anti-loosening fasteners ensure stable cable terminations.
- "Standard 6 leads for rated voltage and optional reconnectable 12 leads for different voltage in three phase A.C. Generators."

Winding & Insulation System

- The armature coils of the stator main winding are made from dual coated, class 'H' copper wires. Single/Double layer concentric winding with 2/3rd pitch offers simplicity, reduced overhangs, neat look while reducing voltage distortion and superior capability to cope with non-linear loads. The auxiliary winding in stator provides power to the AVR, improving the motor starting capability of the A.C. Generator.
- The insulation system is class 'H'. All wound components are impregnated in an unsaturated polyester resin of 200 class temperature. The impregnation provides much needed rigidity and protection against the harsh environment, typical for the A.C. Generators applications. With high mechanical strength provided to the rotating components, the A.C. Generators withstand overspeed of 2250 rpm for 2 minutes.

Automatic Voltage Regulator (AVR)

Model	Frame
TOP-1	132 & 160
TOP-2	200 & 250
TOP-3	112

Automatic Voltage Regulator (AVR) Specifics

- Under speed protection with LED indicator.
- Over excitation protection with LED indicator.
- 2 Phase Sensing with senseloss LED indicator.
- Designed for thyristor load without additional filter circuits.
- Moulded construction for protection against shocks, vibrations and adverse atmospheric conditions.

Under-speed Protection (With AVR)

- Protects both the A.C. Generator and V/f sensitive loads. The AVR has provision for setting the frequency below which voltage dropping occurs linear to speed. This feature also enables the prime mover to recover the speed faster during motor starting.

Parallel Operations (With AVR)

- Parallel operation provision is available against specific requirement.

Radio Interference

- The A.C. Generators are having negligible Radio Frequency Interference and meets in general, the limits permitted by VDE 0875 (N).

Wave Form

- A.C. Generators are designed to give an excellent output wave-form. The total harmonic content of line-to-line voltage wave-form on no load is less than 5% as per the limits specified by IEC/IS standards.

Overloads

- A.C. Generators are capable of delivering an overload of 10% for one hour after every six hours of running.

Motor Starting Duty

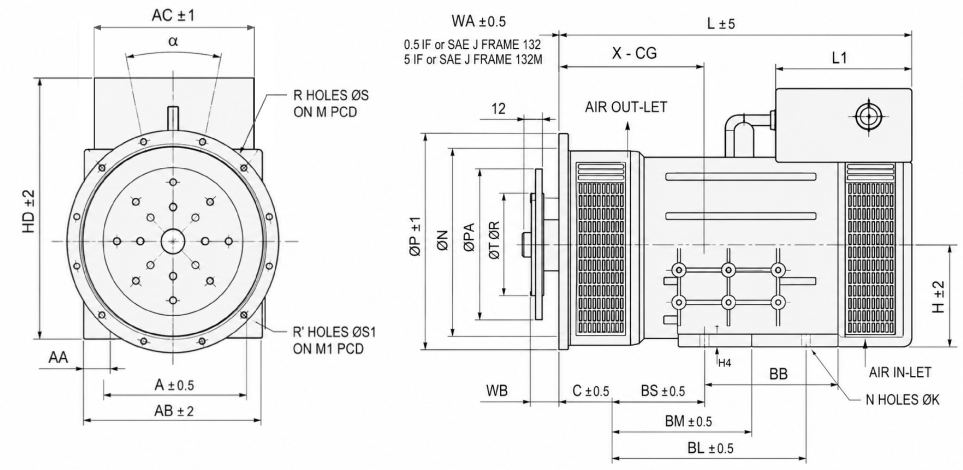
- Each kVA of A.C. Generator is capable of starting 1 HP of Induction Motor with use of auxiliary winding except for Submersible pump & Lift duty applications.

Transient Voltage Dip

- Sudden application of full load at 0.8pf (lag) results in 15-20% dip in terminal voltage.

Operating in Different Environments

- For use of A.C. Generator at altitude higher than 1000m above sea level, it is necessary to derate by a factor of 4% for every 500m above 1000m.
- If the ambient temperature exceeds 40°C, the derating factor to be incorporated is 4% for every 5°C increase.



SB GA DIMENSION

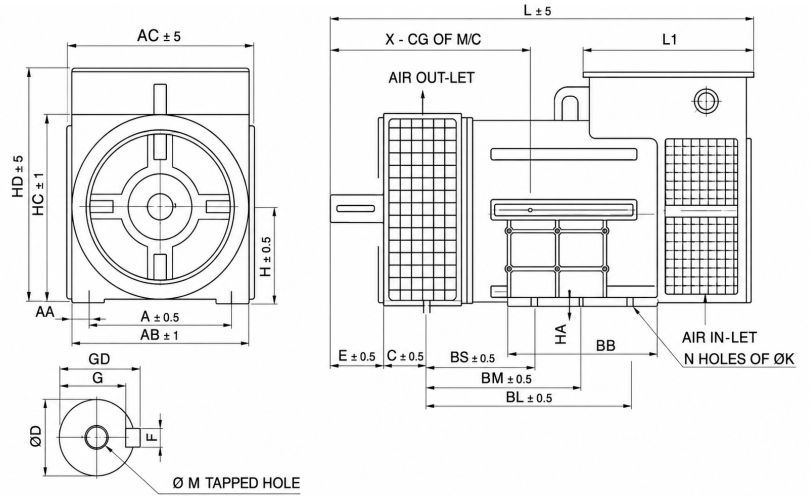
FRAME Code	Duty / Length	A	AA	AB	AC	BB	BS	BM	BL	C	H	HA	N	Ø K	L	L1	X
F112	LB	180	40	235	240	55	326	-		45	111.5 - 112	10	4	11	412	215	210
F112	MB	180	40	235	240	55	286	-		45	111.5 - 112	10	4	11	372	215	190
F112	SC	180	40	235	240	55	246	-		45	111.5 - 112	10	4	11	332	215	180
F132	LC	206	56	256	272	122	371	427	-	64	131.5 - 132	12	6	12	605-T1R	296	254
F132	MA	206	56	256	272	122	316	372	-	64	131.5 - 132	12	6	12	550-T1R - 520-T1S	296	209
F132	MC	206	56	256	272	122	316	372	-	64	131.5 - 132	12	6	12	550-T1R - 520-T1S	296	232
F132	MD	206	56	256	272	122	316	372	-	64	131.5 - 132	12	6	12	550-T1R - 520-T1S	296	249
F132	MR	206	56	256	272	122	316	372	-	64	131.5 - 132	12	6	12	550-T1R - 520-T1S	296	194
F160	MA	270	70	340	350	306	197	307	402	96	159.5 - 160	16	8	15	688	300	275
F160	MB	270	70	340	350	306	197	307	402	96	159.5 - 160	16	8	15	688	300	295
F160	MR	270	70	340	350	306	197	307	402	96	159.5 - 160	16	8	15	688	300	285
F160	S1A	254	60	340	350	335	40	70		145	159.5 - 160	16	6	15	462	262	175
F160	SA	270	70	340	350	196	197	292	-	96	159.5 - 160	16	6	15	578	300	205
F160	SB	270	70	340	350	196	197	292	-	96	159.5 - 160	16	6	15	578	300	220
F160	SC	270	70	340	350	196	197	292	-	96	159.5 - 160	16	6	15	578	300	230
F200	MD	340	75	410	424	325	270	380	500	83	199.5 - 200	20	8	19	816	350	370
F200	MDX	340	75	410	424	325	270	380	500	83	199.5 - 200	20	8	19	816	350	400
F200	SA	340	75	410	424	225	280	400	-	83	199.5 - 200	20	6	19	716	350	280
F200	SB	340	75	410	424	225	280	400	-	83	199.5 - 200	20	6	19	716	350	300
F200	SC	340	75	410	424	225	280	400	-	83	199.5 - 200	20	6	19	716	350	315
F200	SD	340	75	410	424	225	280	400	-	83	199.5 - 200	20	6	19	716	350	330
F250	SC	420	90	510	530	305	225	341	441	83	249.5 - 250	20	8	19	750	376	325
F250	SD	420	90	510	530	305	225	341	441	83	249.5 - 250	20	8	19	750	376	345

COUPLING DISC

SAE NO.	ØPA	M1	R1	S1	A1	WA	No. of Discs
6.5"	215.9	200.02	6	9	60°	30.2	2
7.5"	241.3	222.25	8	9	45°	30.2	2
8"	263.52	244.47	8	11	60°	62	2
10"	314.32	295.27	8	14	45°	53.8	2
10"	314.32	295.27	8	14	45°	53.8	3
11.5"	352.42	333.37	8	11	45°	39.6	2
14"	466.72	438.15	8	14	45°	25.4	3

FLANGE

SAE NO.	N	P	M	R	S	A	COUPLING DISC SAE
1	511.18	553	530.4	12	12.5	30°	11.5", 14"
2	447.7	490	466.7	12	11	30°	10", 11.5"
3	409.6	450	428.6	12	11	30°	8", 10", 11.5"
4	362	405	381	12	11	30°	6.5", 7.5", 8", 10"



DB GA DIMENSION

FRAME Code	Duty / Length	A	AA	AB	AC	BB	BS	BM	BL	C	Ø D	E	F	G	GD	H	HA	HC	HD	N	Ø K	L	L1	M	X
F112	LB	180	40	235	240	55	326	-		45	32.018 - 32.002	58	8	29.0 - 28.8	35.0 - 34.8	111.5 - 112	10	224	290	4	11	412	215	M12	210
F112	MB	180	40	235	240	55	286	-		45	32.018 - 32.002	58	8	29.0 - 28.8	35.0 - 34.8	111.5 - 112	10	224	290	4	11	372	215	M12	190
F112	SC	180	40	235	240	55	246	-		45	32.018 - 32.002	58	8	29.0 - 28.8	35.0 - 34.8	111.5 - 112	10	224	290	4	11	332	215	M12	180
F132	LC	206	56	256	272	122	371	427	-	64	38.018 - 38.002	80	10	33.0 - 32.8	41.0 - 40.8	131.5 - 132	12	260	365	6	12	605-T1R	296	M12	254
F132	MA	206	56	256	272	122	316	372	-	64	38.018 - 38.002	80	10	33.0 - 32.8	41.0 - 40.8	131.5 - 132	12	260	365	6	12	550-T1R - 520-T1S	296	M12	209
F132	MC	206	56	256	272	122	316	372	-	64	38.018 - 38.002	80	10	33.0 - 32.8	41.0 - 40.8	131.5 - 132	12	260	365	6	12	550-T1R - 520-T1S	296	M12	232
F132	MD	206	56	256	272	122	316	372	-	64	38.018 - 38.002	80	10	33.0 - 32.8	41.0 - 40.8	131.5 - 132	12	260	365	6	12	550-T1R - 520-T1S	296	M12	249
F132	MR	206	56	256	272	122	316	372	-	64	38.018 - 38.002	80	10	33.0 - 32.8	41.0 - 40.8	131.5 - 132	12	260	365	6	12	550-T1R - 520-T1S	296	M12	194
F160	MA	270	70	340	350	306	197	307	402	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	8	15	688	300	M16	275
F160	MB	270	70	340	350	306	197	307	402	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	8	15	688	300	M16	295
F160	MR	270	70	340	350	306	197	307	402	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	8	15	688	300	M16	285
F160	S1A	254	60	340	350	335	40	70		145	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	385	6	15	462	262	M16	175
F160	SA	270	70	340	350	196	197	292	-	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	6	15	578	300	M16	205
F160	SB	270	70	340	350	196	197	292	-	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	6	15	578	300	M16	220
F160	SC	270	70	340	350	196	197	292	-	96	48.018 - 48.002	110	14	42.5 - 42.3	51.5 - 51.3	159.5 - 160	16	323	418	6	15	578	300	M16	230
F200	MD	340	75	410	424	325	270	380	500	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	8	19	816	350	M20	370
F200	MDX	340	75	410	424	325	270	380	500	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	8	19	816	350	M20	400
F200	SA	340	75	410	424	225	280	400	-	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	6	19	716	350	M20	280
F200	SB	340	75	410	424	225	280	400	-	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	6	19	716	350	M20	300
F200	SC	340	75	410	424	225	280	400	-	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	6	19	716	350	M20	315
F200	SD	340	75	410	424	225	280	400	-	83	60.030 - 60.011	140	18	53.0 - 52.8	64.0 - 63.8	199.5 - 200	20	403	510	6	19	716	350	M20	330
F250	SC	420	90	510	530	305	225	341	441	83	70.030 - 70.011	140	20	62.5 - 62.3	74.5 - 74.3	249.5 - 250	20	510	615	8	19	750	376	M20	325
F250	SD	420	90	510	530	305	225	341	441	83	70.030 - 70.011	140	20	62.5 - 62.3	74.5 - 74.3	249.5 - 250	20	510	615	8	19	750	376	M20	345

TECHNICAL CHARACTERISTICS 1

	FAA11360 1001616	FAA11360 1001316	FAA11360 2001616	FAA11360 0501316	FAA11360 0601316	FAA11360 0751316	FAA11360 0851316	FAA1144 01001316	FAA1144 01251616	FAA1144 01501616	FAA1144 02001616	FAA1144 00251116	FAA1144 00501316	FAA1144 00601316	FAA1144 00751316	FAA1144 01001616
Type																
Class 'H' Rise (125°C) (kW)	12.5		25.0	6.3	7.5	9.4	10.6	12.5	15.6	18.8	25.0	3.1	6.3	7.5	9.4	12.5
Power Factor (LAG)	0.8															
Governing Specification	IS : 13364 (PART 1 & 2), IS : 4722, BS 5000 (PART 99), IEC 34.															
Frequency	50 Hz															
Speed (RPM)	1500															
Voltage (Ph-Ph / Ph-N)	240V															
Voltage (Ph-Ph)																
Rated Line Current (at Class 'H' Rise) Amps	41.0	82.0	20.5	24.6	30.8	34.9	41.0	51.3	61.5	82.0	10.3	20.5	24.6	30.8	41.0	
Number of Phases	1 Phase															
Excitation System																
Voltage Regulator Type																
Voltage Regulation																
10% Over Load Capacity																
Maximum permissible unbalance load																
Motor Starting capacity #																
Insulation System of All Windings	H Class															
Enclosure	IP 23															
Short Circuit Current Capacity																
Damper Winding Fitted on Poles																
Waveform Distortion (% THD) between Line-Line																
Radio Interference																
Cooling Air Requirement (m^3/min)																
Maximum Over Speed (RPM)																
DE & NDE Bearing																
Stator Winding	SINGLE															
Weight of Wound Stator Assembly (Kg)																
Weight of Wound Rotor Assembly (Kg)																
Weight of Complete Alternator (Kg)						86 KG						36 KG	62 KG	57 KG	81 KG	335 KG
% Efficiency FL	80%	81%	76%	76.60%	79%	78.30%	80%	79.50%	80%	81%	65%	76%	76.60%	77.90%	80%	
% Efficiency 3/4 FL																
% Efficiency 1/2 FL																
% Reactances (Full Load)* Xd																
% Reactances (Full Load)* X'd																
% Reactances (Full Load)* X"d																
% Reactances (Full Load)* Xq																
% Reactances (Full Load)* X2																
% Reactances (Full Load)* X0																
Time Constants (mSec) T'dO																
Time Constants (mSec) T'd																
Time Constants (mSec) T"d																
Time Constants (mSec) Ta																
Short Circuit Ratio (1/Xd)																
Excitation Amps NL																
Excitation Amps FL (0.8PF)									2.2			5.5				2.2
Stator Winding Resistance per PH (Ohm) (20°C)																
Stator Winding Resistance (Ohm) (20°C)																
Rotor Winding Resistance (Ohm) (20°C)																
Auxiliary Winding Resistance (L-L) (Ohm) (20°C)																
CE-Unit C-Wdg Resistance (Ohm) (20°C)																
CE-Unit L-Wdg Resistance (m-Ohm) (20°C)																
Exciter Stator Resistance (Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (m-Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (Ohm) (20°C)																
Transient Voltage Dip at FL 0.8PF																
Transient Voltage Rise at FL 0.8PF																
Non Linear Load Capability (6 pulse 'UPS' with Filters)																
Note																

TECHNICAL CHARACTERISTICS 2

	FAA1144 00301116	FAA1144 00851316	FAA1144 00351116	FAA1144 00501116	FAA11520 1001616	FAA11520 1501616	FAA11520 2001616	FAA11520 2502016	FAA11520 3002016	FAA11520 3502016	FAA11520 4002016	FAA11520 0501316	FAA11520 0751316	FAA11600 1501616	FAA11600 2001616	FAA11600 0501316
Type																
Class 'H' Rise (125°C) (kW)	3.8	10.6	4.4	6.3	12.5	18.8	25.0	31.3	37.5	43.8	50.0	6.3	9.4	18.8	25.0	6.3
Power Factor (LAG)	0.8															
Governing Specification	IS : 13364 (PART 1 & 2), IS : 4722, BS 5000 (PART 99), IEC 34.															
Frequency	50 Hz															
Speed (RPM)	1500															
Voltage (Ph-Ph / Ph-N)	240V															
Voltage (Ph-Ph)																
Rated Line Current (at Class 'H' Rise) Amps	12.3	34.9	14.4	20.5	41.0	61.5	82.0	102.5	123.0	143.5	164.0	20.5	30.8	61.5	82.0	20.5
Number of Phases	1 Phase															
Excitation System																
Voltage Regulator Type																
Voltage Regulation																
10% Over Load Capacity																
Maximum permissible unbalance load																
Motor Starting capacity #																
Insulation System of All Windings	H Class															
Enclosure	IP 23															
Short Circuit Current Capacity																
Damper Winding Fitted on Poles																
Waveform Distortion (% THD) between Line-Line																
Radio Interference																
Cooling Air Requirement (m^3/min)																
Maximum Over Speed (RPM)																
DE & NDE Bearing																
Stator Winding	SINGLE															
Weight of Wound Stator Assembly (Kg)																
Weight of Wound Rotor Assembly (Kg)																
Weight of Complete Alternator (Kg)	36 KG	81 KG	47 KG	57 KG	124 KG		177 KG	220 KG	239 KG	250 KG	254 KG		94 KG			62 KG
% Efficiency FL	67%	78.30%	69%	75%	80%		81%	82%	82.50%	83.50%		76%	79%	80%	81%	76%
% Efficiency 3/4 FL																
% Efficiency 1/2 FL																
% Reactances (Full Load)* Xd																
% Reactances (Full Load)* X'd																
% Reactances (Full Load)* X"d																
% Reactances (Full Load)* Xq																
% Reactances (Full Load)* X2																
% Reactances (Full Load)* X0																
Time Constants (mSec) T'dO																
Time Constants (mSec) T'd																
Time Constants (mSec) T"d																
Time Constants (mSec) Ta																
Short Circuit Ratio (1/Xd)																
Excitation Amps NL																
Excitation Amps FL (0.8PF)					1.7		2.2	1.7			2.2	1.5		1.7	2.2	1.5
Stator Winding Resistance per PH (Ohm) (20°C)																
Stator Winding Resistance (Ohm) (20°C)																
Rotor Winding Resistance (Ohm) (20°C)																
Auxiliary Winding Resistance (L-L) (Ohm) (20°C)																
CE-Unit C-Wdg Resistance (Ohm) (20°C)																
CE-Unit L-Wdg Resistance (m-Ohm) (20°C)																
Exciter Stator Resistance (Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (m-Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (Ohm) (20°C)																
Transient Voltage Dip at FL 0.8PF																
Transient Voltage Rise at FL 0.8PF																
Non Linear Load Capability (6 pulse 'UPS' with Filters)																
Note																

TECHNICAL CHARACTERISTICS 3

	FAA11600 1251616	FAA11600 1001616	FAA11600 2502016	FAA11600 3002016	FAA11600 4002016	FAA11600 0751316	FAA11760 3002016	FAA11760 1001316	FAA11760 1251616	FAA11760 1501616	FAA11760 2001616	FAA11760 2501616	FAA11760 0501316	FAA11760 0601316	FAA11760 0751316	FAA11760 2002016
Type																
Class 'H' Rise (125°C) (kW)	15.6	12.5	31.3	37.5	50.0	9.4	37.5	12.5	15.6	18.8	25.0	31.3	6.3	7.5	9.4	25.0
Power Factor (LAG)	0.8															
Governing Specification	IS : 13364 (PART 1 & 2), IS : 4722, BS 5000 (PART 99), IEC 34.															
Frequency	50 Hz															
Speed (RPM)	1500															
Voltage (Ph-Ph / Ph-N)	240V															
Voltage (Ph-Ph)																
Rated Line Current (at Class 'H' Rise) Amps	51.3	41.0	102.5	123.0	164.0	30.8	123.0	41.0	51.3	61.5	82.0	102.5	20.5	24.6	30.8	82.0
Number of Phases	1 Phase															
Excitation System																
Voltage Regulator Type																
Voltage Regulation																
10% Over Load Capacity																
Maximum permissible unbalance load																
Motor Starting capacity #																
Insulation System of All Windings	H Class															
Enclosure	IP 23															
Short Circuit Current Capacity																
Damper Winding Fitted on Poles																
Waveform Distortion (% THD) between Line-Line																
Radio Interference																
Cooling Air Requirement (m^3/min)																
Maximum Over Speed (RPM)																
DE & NDE Bearing																
Stator Winding	SINGLE															
Weight of Wound Stator Assembly (Kg)																
Weight of Wound Rotor Assembly (Kg)																
Weight of Complete Alternator (Kg)		94 KG		70 KG	251 KG	94 KG	226 KG					207 KG	62 KG		94 KG	
% Efficiency FL	79.50%	80%	82%	82.50%	83.50%	79%	82.50%	80%	79.50%	80%	81%	82%	76%	76.60%	79%	81%
% Efficiency 3/4 FL																
% Efficiency 1/2 FL																
% Reactances (Full Load)* Xd																
% Reactances (Full Load)* X'd																
% Reactances (Full Load)* X"d																
% Reactances (Full Load)* Xq																
% Reactances (Full Load)* X2																
% Reactances (Full Load)* X0																
Time Constants (mSec) T'dO																
Time Constants (mSec) T'd																
Time Constants (mSec) T"d																
Time Constants (mSec) Ta																
Short Circuit Ratio (1/Xd)																
Excitation Amps NL																
Excitation Amps FL (0.8PF)	1.7				2.2	1.5	5.6	5.5	5.0		5.3	5.6	5.5			5.3
Stator Winding Resistance per PH (Ohm) (20°C)																
Stator Winding Resistance (Ohm) (20°C)																
Rotor Winding Resistance (Ohm) (20°C)																
Auxiliary Winding Resistance (L-L) (Ohm) (20°C)																
CE-Unit C-Wdg Resistance (Ohm) (20°C)																
CE-Unit L-Wdg Resistance (m-Ohm) (20°C)																
Exciter Stator Resistance (Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (m-Ohm) (20°C)																
Exciter Rotor Resistance (L-L) (Ohm) (20°C)																
Transient Voltage Dip at FL 0.8PF																
Transient Voltage Rise at FL 0.8PF																
Non Linear Load Capability (6 pulse 'UPS' with Filters)																
Note																

TECHNICAL CHARACTERISTICS 4

	FAA11920 0301116	FAA11920 0401116	FAA11920 1001316	FAA11920 1251616	FAA11920 1501616	FAA11920 2001616	FAA11920 2501616	FAA11920 0251116	FAA11920 0351116	FAA11920 0501316	FAA11920 0501116	FAA11920 0601316	FAA11920 0751316	FAA11920 3002016
Type														
Class 'H' Rise (125°C) (kW)	3.8	5.0	12.5	15.6	18.8	25.0	31.3	3.1	4.4	6.3		7.5	9.4	37.5
Power Factor (LAG)	0.8													
Governing Specification	IS : 13364 (PART 1 & 2), IS : 4722, BS 5000 (PART 99), IEC 34.													
Frequency	50 Hz													
Speed (RPM)	1500													
Voltage (Ph-Ph / Ph-N)	240V													
Voltage (Ph-Ph)														
Rated Line Current (at Class 'H' Rise) Amps	12.3	16.4	41.0	51.3	61.5	82.0	102.5	10.3	14.4	20.5		24.6	30.8	123.0
Number of Phases	1 Phase													
Excitation System														
Voltage Regulator Type														
Voltage Regulation														
10% Over Load Capacity														
Maximum permissible unbalance load														
Motor Starting capacity #														
Insulation System of All Windings	H Class													
Enclosure	IP 23													
Short Circuit Current Capacity														
Damper Winding Fitted on Poles														
Waveform Distortion (% THD) between Line-Line														
Radio Interference														
Cooling Air Requirement (m^3/min)														
Maximum Over Speed (RPM)														
DE & NDE Bearing														
Stator Winding	SINGLE													
Weight of Wound Stator Assembly (Kg)														
Weight of Wound Rotor Assembly (Kg)														
Weight of Complete Alternator (Kg)	41 KG	48 KG	105 KG	115 KG	127 KG			41 KG	43 KG	77 KG	60 KG	86 KG	94 KG	
% Efficiency FL	67%	71%	80%	79.50%	80%	81%	82%	65%	69%	76%	72%	78%	79%	82.50%
% Efficiency 3/4 FL														
% Efficiency 1/2 FL														
% Reactances (Full Load)* Xd														
% Reactances (Full Load)* X'd														
% Reactances (Full Load)* X"d														
% Reactances (Full Load)* Xq														
% Reactances (Full Load)* X2														
% Reactances (Full Load)* X0														
Time Constants (mSec) T'dO														
Time Constants (mSec) T'd														
Time Constants (mSec) T"d														
Time Constants (mSec) Ta														
Short Circuit Ratio (1/Xd)														
Excitation Amps NL														
Excitation Amps FL (0.8PF)	4.5	4.9	5.5	5.0		5.3	5.2	4.5	4.9	5.5	4.0	5.5		5.6
Stator Winding Resistance per PH (Ohm) (20°C)														
Stator Winding Resistance (Ohm) (20°C)														
Rotor Winding Resistance (Ohm) (20°C)														
Auxiliary Winding Resistance (L-L) (Ohm) (20°C)														
CE-Unit C-Wdg Resistance (Ohm) (20°C)														
CE-Unit L-Wdg Resistance (m-Ohm) (20°C)														
Exciter Stator Resistance (Ohm) (20°C)														
Exciter Rotor Resistance (L-L) (m-Ohm) (20°C)														
Exciter Rotor Resistance (L-L) (Ohm) (20°C)														
Transient Voltage Dip at FL 0.8PF														
Transient Voltage Rise at FL 0.8PF														
Non Linear Load Capability (6 pulse 'UPS' with Filters)														
Note														

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