

Kirloskar

KIRLOSKAR ELECTRIC

Committed to Innovation and Excellence



**AC GENERATOR FOR HYDRO
TURBINE APPLICATIONS**



Product Line of Kirloskar Electric

AC & DC Motors | Generators | Transformers | Switchgear | Drives | DG Sets | Projects | Engineering

ISO 9001:2008



**BUREAU
VERITAS**

CMYK



2 MW, 750 RPM, 6.6 kV Horizontal Generator with flywheel

PRODUCT RANGE

Rating	: 500 – 10000 KVA
Speed	: 500 – 1000 RPM
Voltage (V)	: 415 – 11000 V
Frequency (Hz)	: 50/60 Hz.

SALIENT FEATURES OF HYDRO GENERATORS

- Oil pumping system with sump for maintaining required oil flow to bearing.
- Embedded temperature detectors for bearing temp measurement.
- Dial temperature detectors for bearing temp measurement.
- Jacking pump arrangement for bearing.
- Stand by auto channel for AVR.
- Stator current limiter.
- High short circuit ratio to ensure better stability.
- Damper winding on poles to ensure smooth parallel operation with machines and grid.
- Brake system for faster deceleration of rotor.
- Toothed wheel arrangement for speed measurement.
- Spherical roller bearing arrangement for thrust loads for vertical machines.
- Cylindrical roller bearing as guide bearing for vertical machines.
- Sole plate for horizontal machines to facilitate alignment.
- Liberally rated diodes are used in RRA for ensuring high reliability.
- Diodes protected by surge suppressor of high energy withstand capability to suppress transients.
- A gel coat application enhances mechanical strength of overhang and ensures protection against humid and corrosive atmosphere.
- Rotor construction is of salient or cylindrical type.
- Flywheel arrangement to enhance inertia need for hydro application.
- Embedded temperature detectors for air and winding temp measurement.

Kirloskar Electric AC generators are specially designed for micro and mini-hydel applications to take care of high thrust, high-inertia and run-away speed requirements. We have the expertise to design and manufacture AC generators for both horizontal and vertical applications.

CONSTRUCTION SPECIALITIES

- Designed to safely withstand earthquake acceleration force in vertical and horizontal direction
- Critical speed of the rotor is 30% away from runaway speed
- End windings of stator are braced to a sufficient strength to withstand short circuits
- Radial ventilation ducts will enhance heat transfer rate for better reliability
- Stator is adequately strengthened to support entire weight of the rotating system in addition to unbalanced hydraulic thrust of runner
- Special bearing assembly to facilitate sufficient movement of rotating part for adjustment of magnetic centre and removal of thrust pads
- Segmental lamination to facilitate assembly of larger diameter stator

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