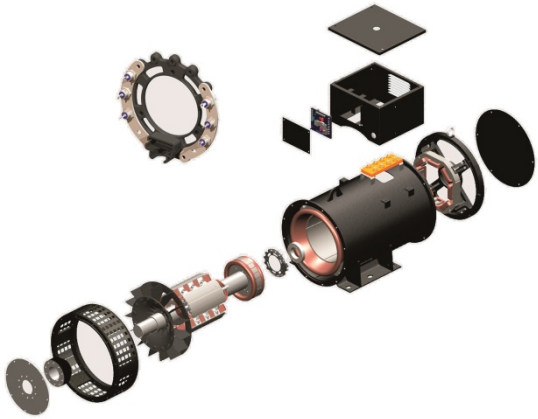
WEG GTA Plus Alternator

In today's excitation world for brushless type alternators there are basically a PMG (Permanent Magnet Alternator) and a non-PMG alternator. WEG has developed a alternator with the traditional auxiliary coil or auxiliary winding, but has gone one step further and added magnets in the main exciter stator. This excitation system has been called I-PMG (Internal PMG) due to its similar performance to a traditional PMG.

The auxiliary winding is responsible to provide independent power for the voltage regulator under all sorts of load, with no electrical link to the main winding. This way, load application, rejection or any other variation will not impact the power input for the voltage regulator. WEG's auxiliary winding ensures 300% of short circuit current up to 10 seconds. Traditional PMG's are also responsible to provide the necessary level of residual voltage that initiates the generation process. In WEG's GTA design the magnets are imbedded in the main exciter stator, and it generates around 100V guaranteed versus a no guarantee of up to 15V on a non-PMG alternator.

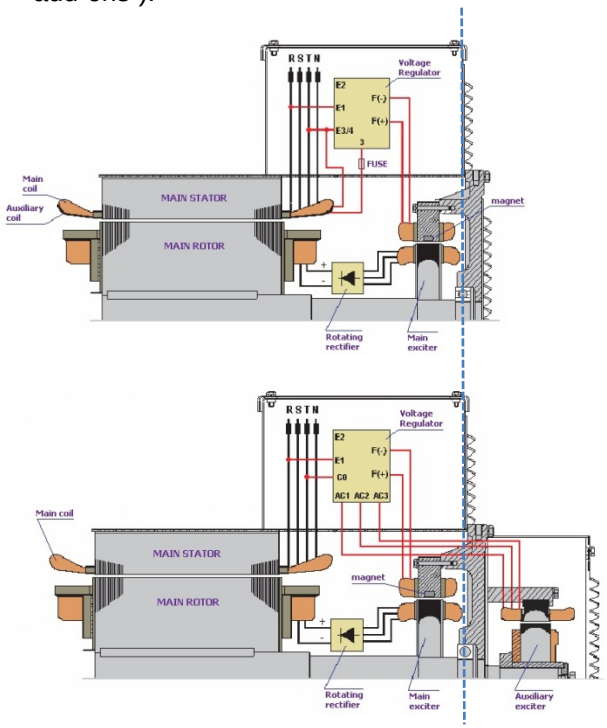


WEG's I-PMG benefits compared to non-PMG alternators are:

- better motor starting capabilities
- better performance under loads with high THD
- better performance under load variations
- short circuit capabilities
- quaranteed residual voltage (no need for flashing)
- paralleling ready (unique to WEG on standard alternators)

WEG's I-PMG benefits compared to traditional PMG alternators are:

- usually shorter envelope (see picture below)
- less components for maintenance and cost
- easier access to the diodes bridge for monitoring and maintenance (compared to “add-ons”).



- All low voltage 4-pole WEG alternators have I-PMG benefits, from 15 to 4200 kVA.
- All WEG alternators from 50 kVA and up have a voltage regulator with paralleling capabilities as standard.