

## *FIMER Introduction*

FIMER SpA was founded in 1942 and immediately identifies the technological innovations in welding equipment.

Fimer now has over 100 employees divided into 3 divisions:

- Welding Since 1942;
- Air conditioning since 2003
- Photovoltaic since 2008

FIMER manufacture a full range of single-phase On-Grid Inverters, from the Micro Inverter (model R3 of 250W) available soon, to 5.20 kWp (model **C 65**).

Regarding the **Three phases on-grid String Inverters**, beside our “R” series featuring R120 (12kwp) and R150 (14kwp) we now have the C series with different sized of 10 kW, 13 kW, 16 kW.

With regard to **central inverters** our range covers from 40kwp (**R400**) to 500kwp (**R5000TL**), all equipped with the MPS (Modular Power System), **FIMER’s power modules unique architecture**, with single or multi MPPT, with or without a transformer.

**FIMER equips all the central inverter range with the multi modular technology that provides several advantages over the traditional monolithic inverter:**

+ Choice of 1 or 3 MPPT: this allows a better sizing / configuration of the photovoltaic field in the presence of multiple layers or expositions; allowing you to maximize the production with different operating condition for each portion of the PV array while minimizing cost and size of the equipment room.

+ A multi-module inverter with a single MPPT configuration **generates more energy**: thanks to this system, the power modules of our inverters switch on in stages and are ALREADY ABLE TO PRODUCE ENERGY with few power from the photovoltaic field. Our single module of 40KWp begins to convert the energy (to produce) when he feels the presence of **only 700Wp** from the photovoltaic field (basically from the first ray of sunlight to the last one); a monolithic inverter of equal power will begin to supply power only when reaching about 6/7% of rated power (eg. 100Kwp an inverter will turn on only the achievement of 6-7KWp). Turning off the inverter in the evening, follows the same mechanism. Assuming at least (only) 10 minutes on turning on earlier and also on turning off, and not considering the production of energy in low-radiation (the FIMER inverter would produce anyway) we obtain that the inverter FIMER will generate **at least 2000 hours** more than the competitor’s central inverters (over 20 years).

+ by using a modular power system such as FIMERS’s one, in the event of a fault, **it is unlikely to experience the block of the total system**: our inverter has three completely separate conversion lines (R1200), in most situations, the block is related only to the power section of one 40KWp parallel line, while the other modules will take care of the power module failure; the power will in case be dispensed.

In addition to internal quality inverter, FIMER gives more:

- 5 year full warranty on all products (extendable up to 20 years);
- Safety DC and AC switches;
- Ethernet RJ45 with integrated data logger and Energy Meter;
- Security Interface - low frequency isolation transformer;



- Ability to have multiple MPPT for each inverter (optional);
- **Fully Italian company and products.**

Lastly, we also produce a full range of **Inverter Power Stations** from 500 kWp to 2.000kWp, even on specific customer needs for large PV Projects.

Thanks for your attention,  
Best Regards,  
Giovanni Canzano