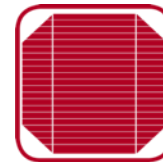




Company Profile



Index



- ▶ At a glance
- ▶ ESPE policy
- ▶ Our specialties:
 - Hydro power
 - Small Wind Turbines Generators
 - Biomass Co-generators
 - Turn-key PV systems
- ▶ ESPE Group

Our vision



“

We believe that cutting-edge technology and quality excellence are the royal road to a better world, based on sustainable and long-term systems.

Our aim is to create best machines and systems that produce energy from renewable sources such as the Wind, Water, Sun, Wood

...

”

Our areas



We, at a glance



- ▶ ESPE story started in **1974 in Padua**, as Company specialised in electrical industrial systems
- ▶ In **1982** ESPE designed and built its first hydroelectric power plant
- ▶ In the **90s** ESPE began to produce electrical components and industrial automation systems
- ▶ **1996** ESPE established a first headquarter and in **2004** acquired hydroelectric power plants in Romania
- ▶ In **2000s** ESPE established 3 Sister Companies for PV business expansion and supervisions of PV fields

In the renewables...



- ▶ In **2003** ESPE constructed its first turnkey PV system (17kWp); between **2005-2012** ESPE designed and installed PV plants for about 500MWp in Italy and Romania. In **2011** ESPE SUNPARC AMERICA was set up in North America, for Canadian and United States markets



- ▶ Since **2004** we produce hydropower turbines
- ▶ In **2011** ESPE started with design and production of innovative Wind Turbine Generator series



- ▶ In **2012** ESPE designed a new Biomass Cogenerator and started distributing it



Our product policy



- ▶ ESPE is offering solutions with **high added value**, the result of intensive Research and Development (R&D):
 - highly efficient systems
 - reduced maintenance costs
 - reduced running costs
- ➔ thus ensure a consistently **significant return on investment.**



In R&D we trust



- ▶ ESPE studies, designs and engineers different technologies with great care
- ▶ R&D is conducted in collaboration with leading Italian universities including the “Politecnico di Milano”, Aerospace Engineering from Naples and the University of Padua.



ESPE quality



► ISO 9001 Certification

ESPE Quality System has been recognised by CSQ with ISO 9001: 2008 certification.



► European Directives Conformity

ESPE's products are compliant, if applicable, to the following European Directives: 2006/95/CE (LVD), 2004/108/CE (EMC) and 2006/42/CE.

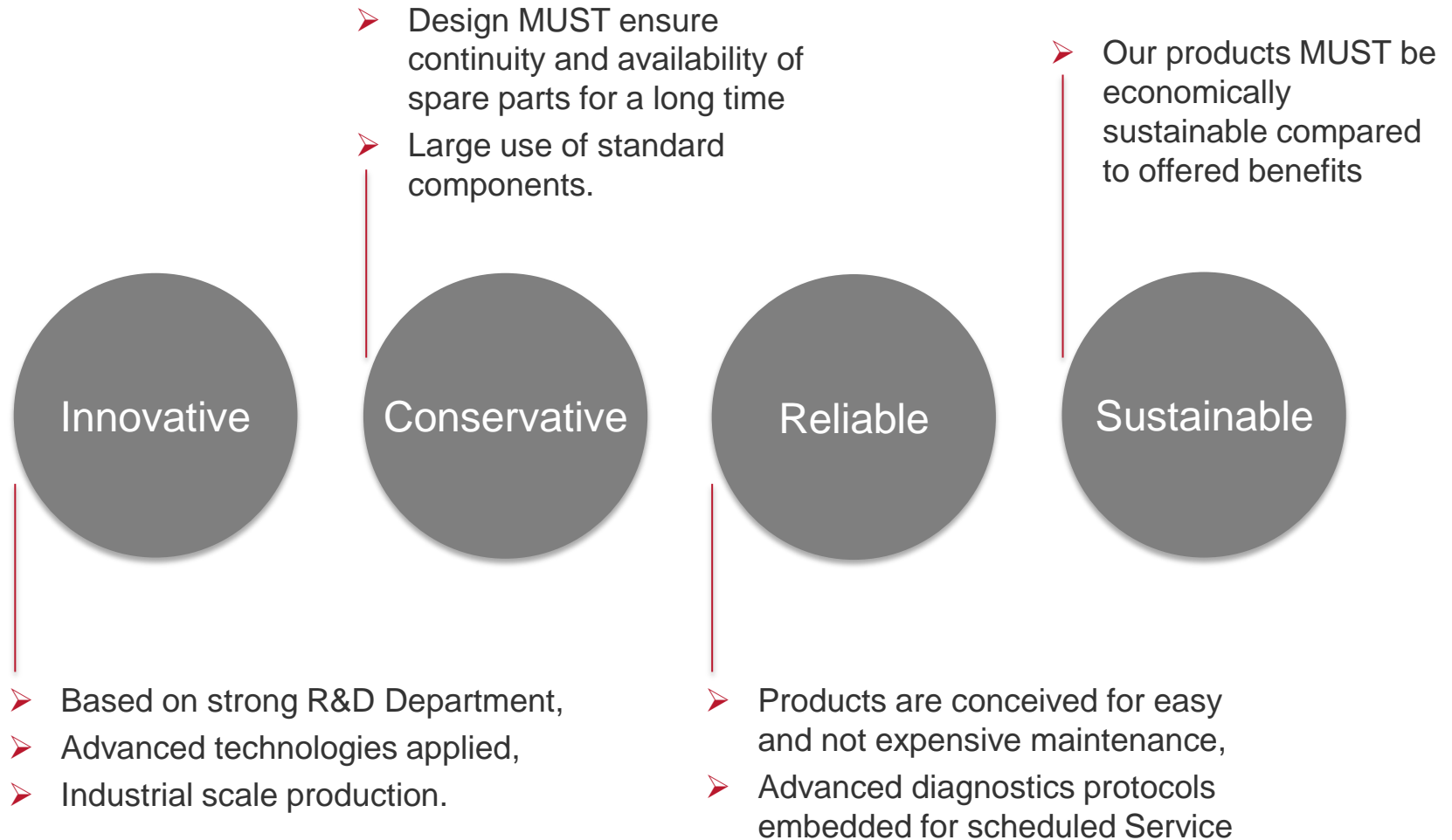


► European Standards

ESPE's products are compliant, if applicable, to the following European Standards: EN61400, EN62305, EN14122



ESPE is:



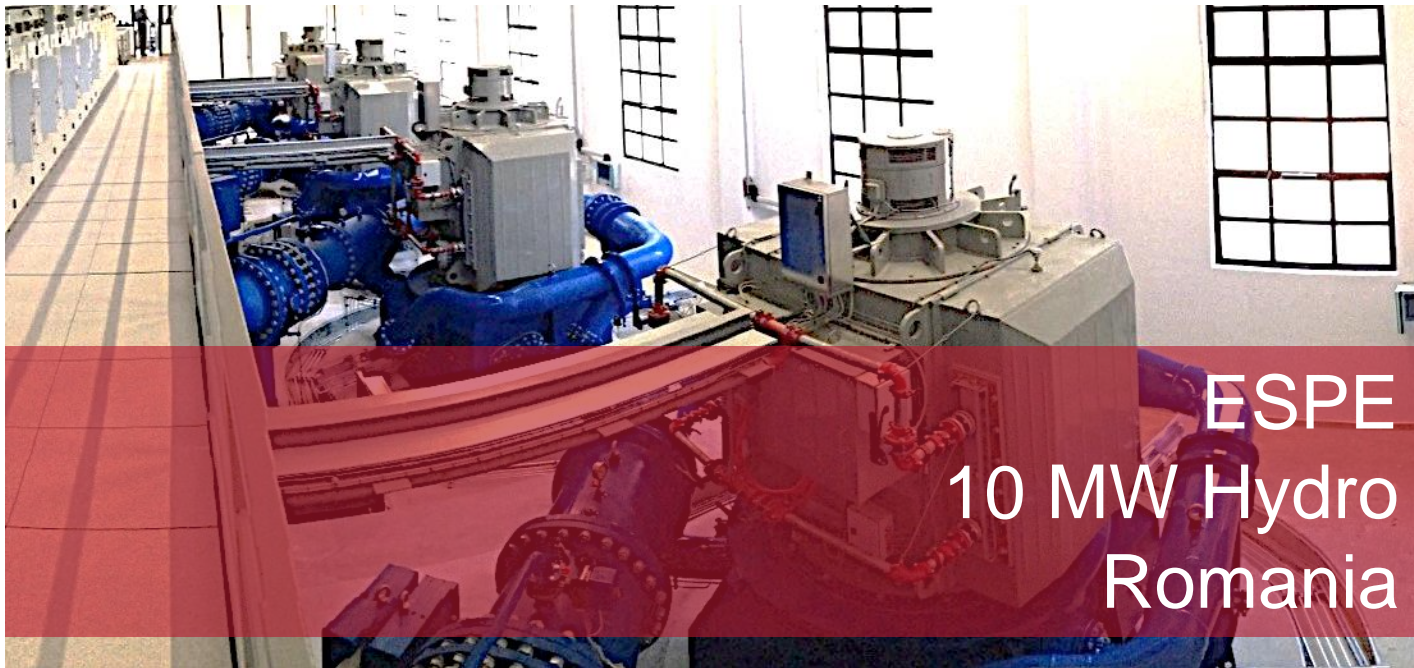


Hydro

ESPE Hydro



- ▶ We produce Pelton and Francis turbines with power range between 50 and 5.000 kW.
- ▶ Electrical and automation boards are produced internally in our facilities



ESPE Hydro



Location	Power
Montebelluna (TV), Italy	30
Cerveno (BS), Italy	56
Alleghe (BL), Italy	210
Maramures Blidari, Romania	1700
Maramures Firiza, Romania	450
Maramures Blidari, Romania	810
Maramures Blidari, Romania	1700
Cles - Santa Emerenziana, Italy	500
Maramures Blidari, Romania	210

Location	Power
Artogne (BS), Italy	50
Maramures Blidari, Romania	890
Blidari, Romania	360
Blidari, Romania	160
Blidari, Romania	160
Posina (VI), Italy	60
Sapanta, Romania	10000
Pradiran (AO), Italy	850
Rangazey (AO), Italy	460
Col di Joux (AO), Italy	610

- ▶ ESPE cumulated hydropower capacity is 20 MW

Hydro References



- ▶ **113 Milion kWh** expected energy production globally from ESPE hydro systems.





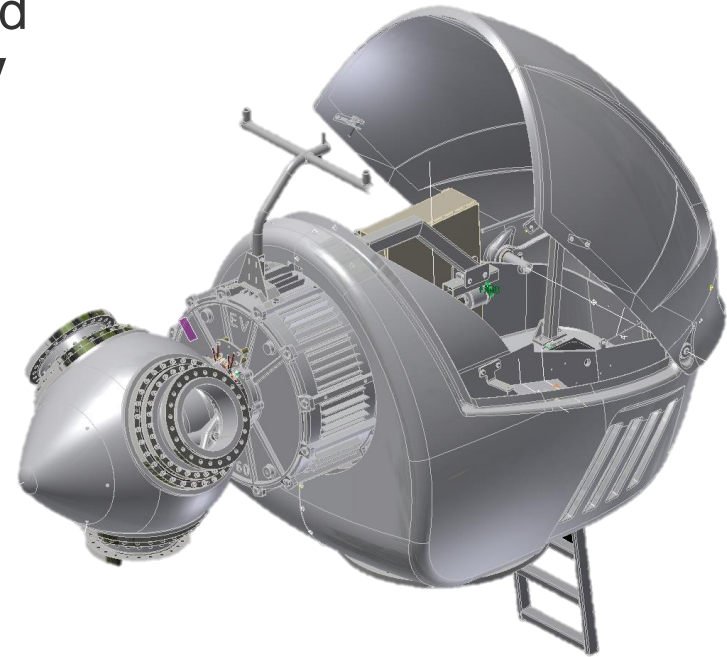
Wind Turbine Generators

Wind Turbine Generators



ESPE
Energy Professionals

- ▶ Our challenge is **to build a Wind Turbine Generator** reliable and safe **as the Large Wind**, but in the size and power of the small wind.
- ▶ We produce up to 100 kW wind turbine generators inside our manufacturing plant sized for an annual **production capacity of around 10 MW**.
- ▶ ESPE WTG (Wind Turbine Generator) is known inside the small and medium size wind industry for **its outstanding technology** thanks to many years of R&D and partnerships with many Universities



Wind Turbine Generators



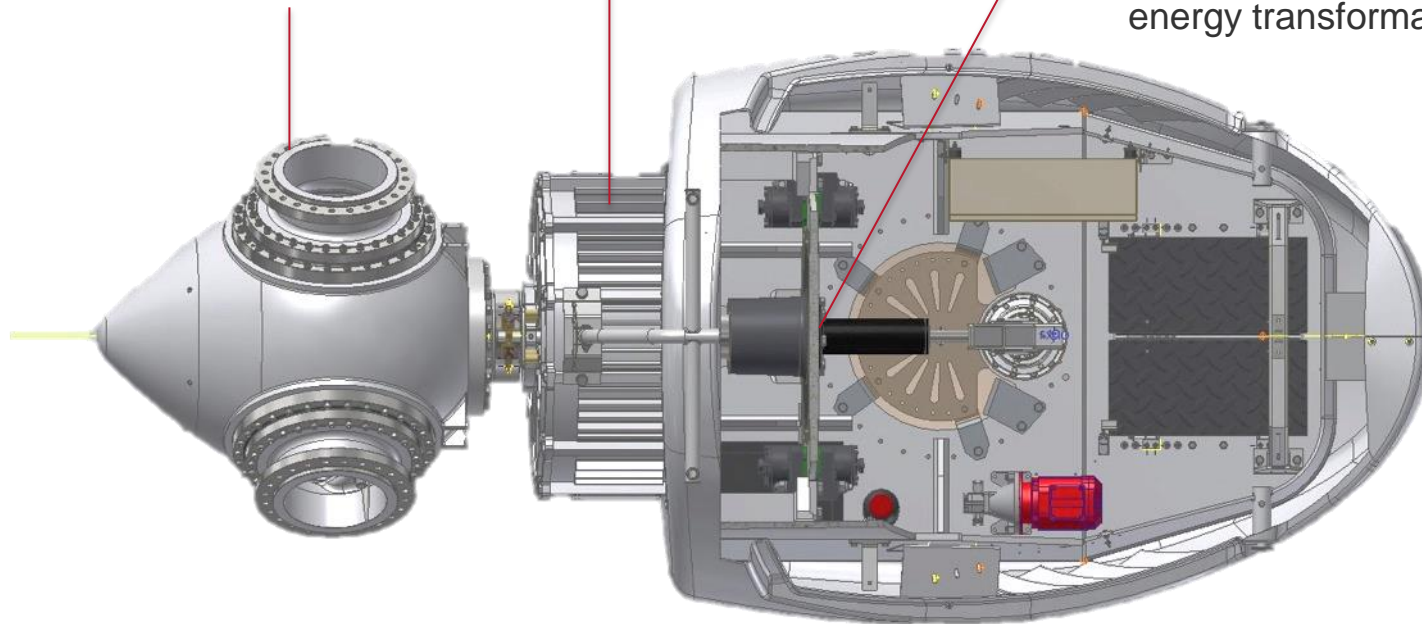
ESPE
Energy Professionals

- ▶ **No stall-regulated WTG but Pitch Controlled**

Maximised Production in the large range of wind speed

- ▶ **Direct Drive with Sync. Perm. Magnet**
Efficiency and Reliability

- ▶ **Hydraulic Pitch Control**
Reactivity for stable output, less stress and maximised energy transformation



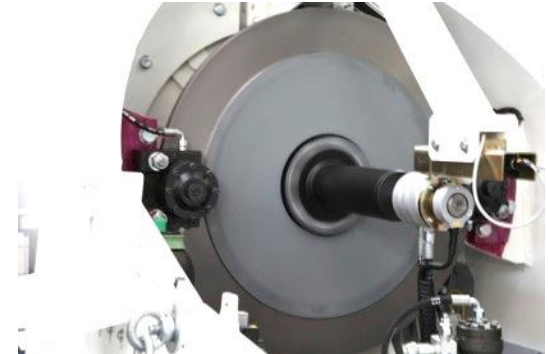
Production process



► Internal R&D department



► Industrial production



► High tech components



► Controlling



► Testing



► Delivering

WTG References

- ▶ We already installed 30 turbines and 50 more will be installed in the upcoming months
- ▶ Within end of 2014 the first of 6 turbines will be installed in UK
- ▶ We just signed a distribution agreement for Brazil and other South American countries



Installed in RED

To be installed in GREY

WTG References



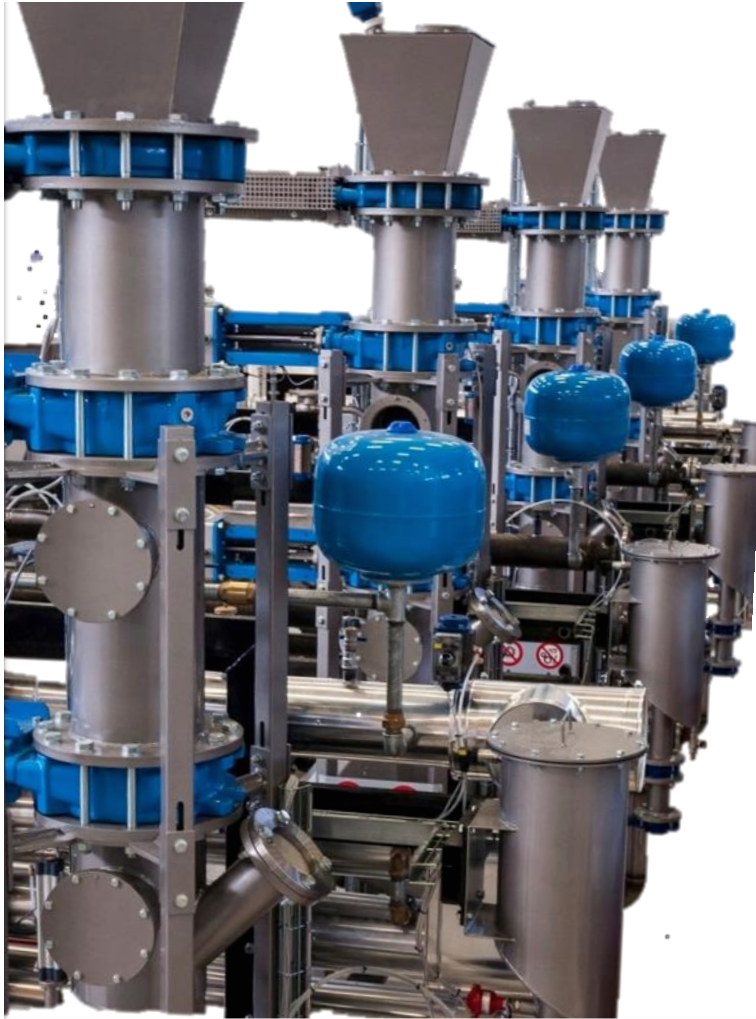
- ▶ Almost **30 turbines** already installed in Italy, **5** in UK





Biomass Cogenerators

Biomass cogenerators



- ▶ ESPE CHiP50 cogenerator uses wood chips as fuel for gasification. The “synthesis-gas fuel” (Syngas) obtained is fuel feeding the micro-cogeneration unit, which provides the combined production of electricity and thermal energy
- ▶ Industrial-scale machine, suitable for continuous cycle operation
- ▶ Use of the best available materials and components
- ▶ Total control of the system and process with industrial monitoring

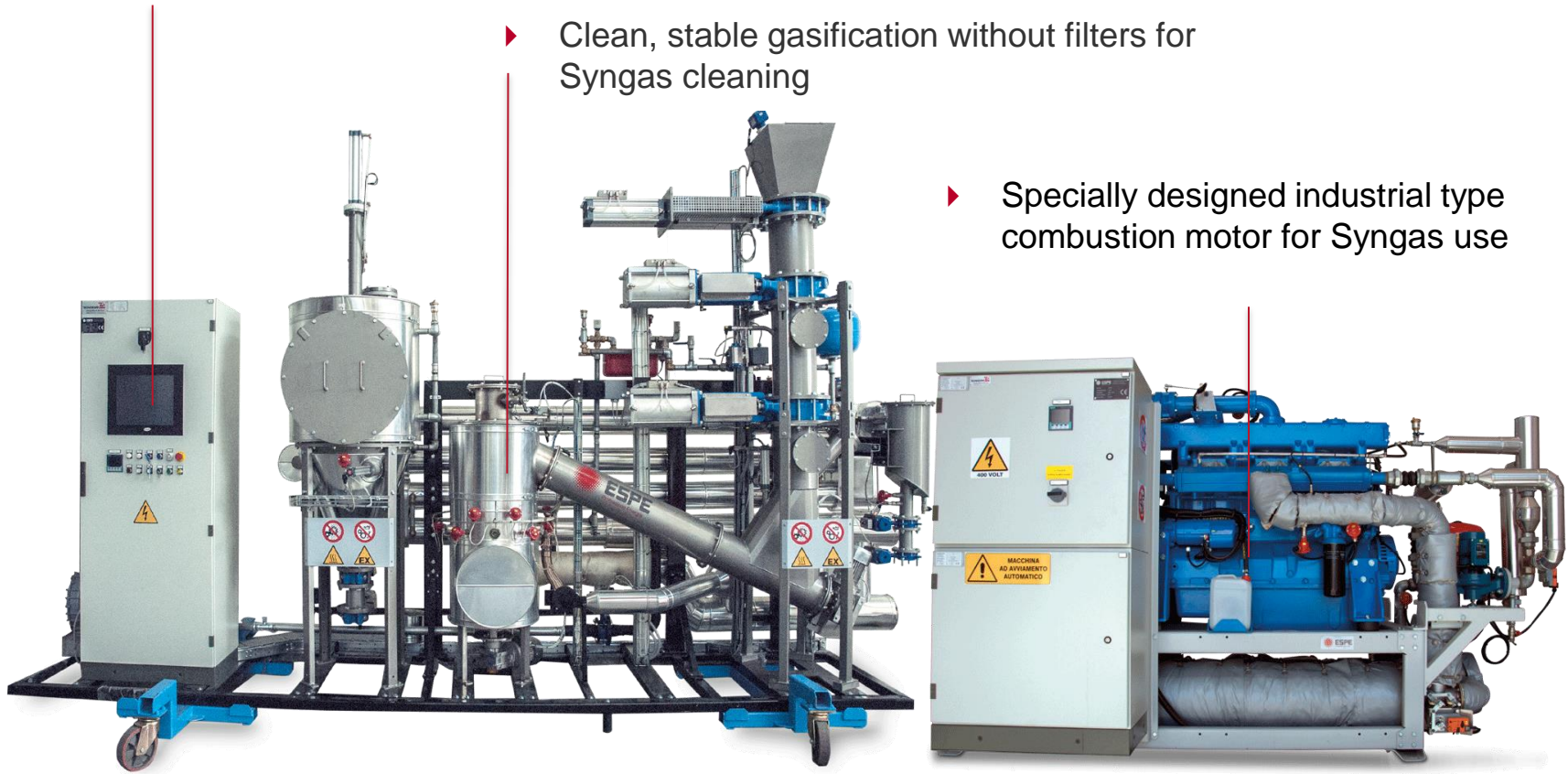
Biomass cogenerators



- ▶ Total control of the system and process with industrial monitoring

- ▶ Clean, stable gasification without filters for Syngas cleaning

- ▶ Specially designed industrial type combustion motor for Syngas use



CHiP50 references

- ▶ We already installed 30 cogenerators in Italy and 20 more will be installed in the upcoming months
- ▶ Greenhouses, fruit and vegetables farms, wellness centers, paper mills, wood chip trading companies, hotels and other manufacturing companies have the most of benefits in installing a biomass cogenerator because of their extensive use of thermal energy.



Installed

Biomass References



- ▶ Almost **30 CHiP50** already installed globally





PV

Turnkey PV systems



- ▶ ESPE is committed in supplying long lasting PV systems
- ▶ Here below some numbers:
 - **1.600.000 sqm** already installed worldwide
 - More than **600 installations**, ranging from residential rooftops to ground mounted power plants.
 - **280 MWp** of PV plants under O&M full service contracts in Italy and Eastern Europe.

Turnkey PV systems



► Residential Rooftops

More than 1.000 residential rooftops already installed in Italy



► Industrial Rooftops

To obtain the maximum from the rooftop of an industrial building, from the design of the PV system to the O&M services



► Power Plants

Maximised Production for a reliable ROI, where quality of installation is needed and O&M services are a MUST to have



PV References



- More than 600 installations worldwide, here some examples



- ▶ ESPE Group is also active in
 - Industrial automation and process control with TECNOESPE (www.tecnoespe.it)
 - Energy Service Company with ESCOESPE
 - Electrical systems and electrical components for industry
 - Biomass cogeneration plants design and engineering
 - Energy plants Operation & Maintenance and security with ESAPRO (www.esapro.it)



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