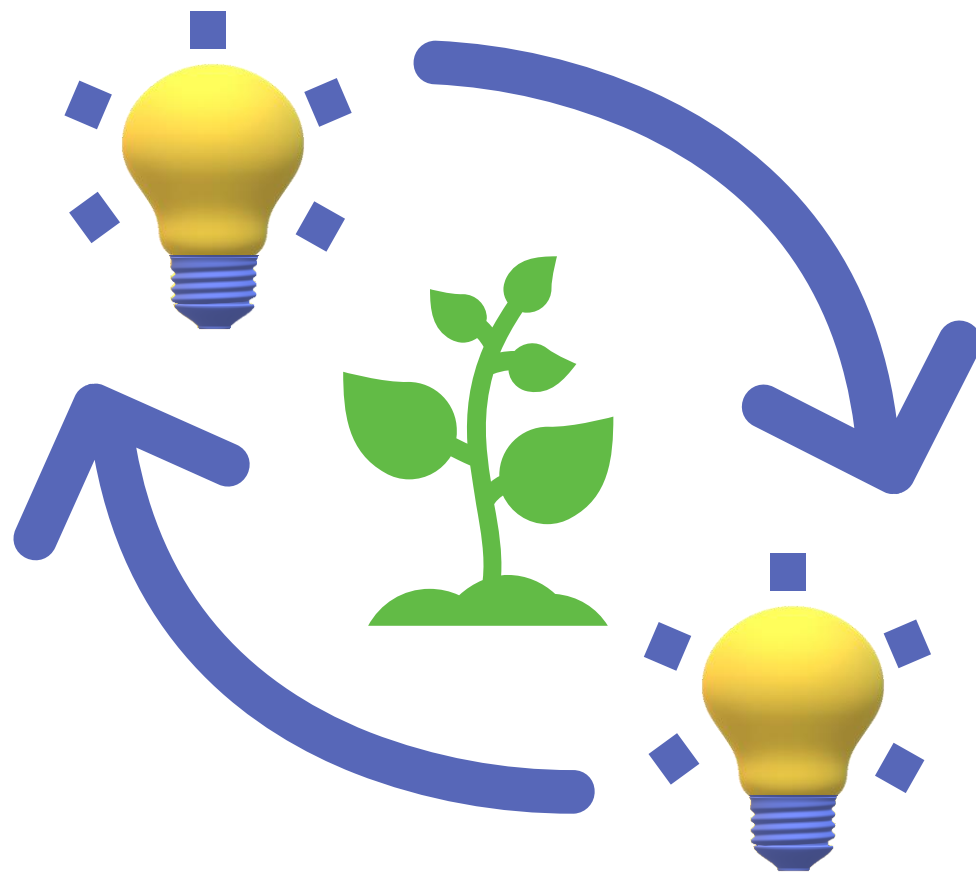


Your Reliable Partner for Today and Future Actuation Technology



INTRO



- Nowadays, sustainability has many meanings: waste reduction, low energy demand, renewable sources, recycling, and much more. It's necessary to implement specific solutions pointing in this direction to help our planet.
- Biffi is one of the leading manufacturers in the actuators production for Oil&Gas, but it is present in a lot of other applications including the sustainability production or green energy.
- The products developed for producing or refining the standard raw materials are an added value for the net zero CO₂ productions.
- Since the beginning of the new millennium, Biffi is working its way to being part of this change, providing its actuators in important projects in green energy.

Solar Projects

- Solar technology generates clean energy.
- Biffi has participated and is participating in several solar energy projects all around the world (Israel, UAE, China, Oman, Chile, California, Spain).
- The solar energy technologies of these projects were Photovoltaics (PV), Concentrating Solar-thermal Power (CSP), and Solar Thermal Panels for generating electricity and heating.



Biffi ALGA/S



Single and double-acting scotch yoke actuators, create high break-out torques, making them suitable for quarter-turn valves up to the largest sizes.

[Biffi ALGA_ALGAS product webpage](#) ▶

Biffi OLGAS



Single and double-acting SY hydraulic quarter-turn actuators for on-off and modulating control of valves in heavy duty service.

[Biffi OLGAS product webpage](#) ▶

Biffi ICON3000



Smart multi-turn actuators featuring advanced operation, control, setting and maintenance.

[Biffi ICON product webpage](#) ▶

Biffi F01



Compact electric actuators for 90° operation, complete with the intelligent control unit to fit small valves.

[Biffi F01 product webpage](#) ▶

Geothermal Projects

• Geothermal energy is the heat that comes from the sub-surface of the earth. It is contained in the rocks and fluids beneath the earth's crust and can be found as far down as the earth's hot molten rock, magma. Depending on its characteristics, geothermal energy can be used for heating and cooling purposes or be harnessed to generate clean electricity.

• Biffi collaborates with one of the industry leaders of alternative and renewable geothermal energy. This supplier has developed energy plants all around the world (Kenya, New Zealand, USA, Philippines, etc.), and Biffi provides pneumatic actuators each year since early 2000s.



Biffi OLGAS-QA



Single-acting spring return hydraulic quarter-turn actuators capable to close in less than 0,1 sec with the damper protection capability at the end of the stroke.

[Biffi OLGA_OLGAS product webpage](#)

Biffi F01



Compact electric actuators for 90° operation, complete with the intelligent control unit to fit small valves.

[Biffi F01 product webpage](#)

Biffi ALGAS



Single and double-acting scotch yoke actuators, create high break-out torques, making them suitable for quarter-turn valves up to the largest sizes.

[Biffi ALGA_ALGAS product webpage](#)

Biffi OLGAS-H



Double-acting and spring return hydraulic quarter-turn actuators for onoff and modulating control of valves in heavy duty service suitable for high pressure supply.

[Biffi OLGA-H_OLGAS-H product webpage](#)

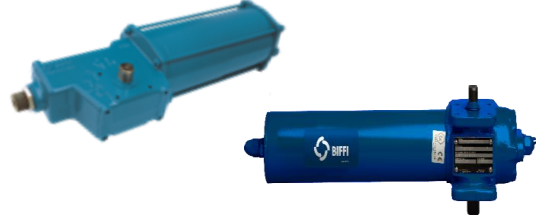
Biffi ICON3000



Smart multi-turn actuators featuring advanced operation, control, setting and maintenance.

[Biffi ICON product webpage](#)

Biffi RP and FCBx



Single and double-acting small torque actuators, providing the most economical on-off and modulating control for small to medium quarter-turn valves.

[RPD/RPS product webpage](#)

[Biffi Sales product webpage](#)



Cogeneration Projects

- Cogeneration, also called Combined Heat and Power (CHP), is a technology that generates and produces heat and electricity simultaneously.
- For these projects, Biffi collaborates with two of the largest national oil companies in the world but also with private firms in Italy, Thailand and Saudi Arabia.



Biffi PLAS



Double acting and spring return pneumatic linear valve actuators for on-off and regulating service.

[Biffi PLA PLAS product webpage](#) ▶

Biffi OLGAS-QA



Single-acting spring return hydraulic quarter-turn actuators capable to close in less than 0,1 sec with the damper protection capability at the end of the stroke.

[Biffi OLGA_OLGAS product webpage](#) ▶

Biffi ICON WGR



The ICON series are electronically-configurable quarter and multi-turn actuators with advanced operation, control, setting and maintenance characteristics.

[Biffi ICON product webpage](#) ▶

Biffi RPS and FCBx



Single and double-acting small torque actuators, providing the most economical on-off and modulating control for small to medium quarter-turn valves.

[RPD/RPS product webpage](#) ▶

[Biffi Sales product webpage](#) ▶

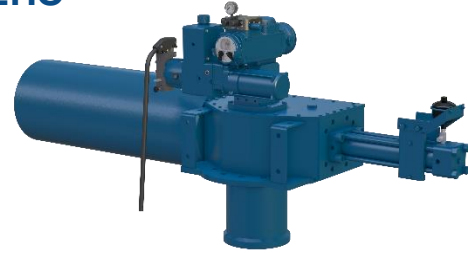


Hydrogen Projects

- Hydrogen is a clean fuel, whose energy carrier can be used to store, move, and deliver energy produced from other sources. Hydrogen fuel can be produced through several methods. The most common methods are natural gas reforming (a thermal process), and electrolysis. Other methods include solar-driven and biological processes.

- Biffi electric actuators have contributed to the expansion of the hydrogen sector in China, participating in several projects in the country. Other countries where Biffi has joined hydrogen projects are Spain and Malaya.
- Biffi Electrohydraulic complete the fail-safe product range

Biffi EHO



The EHO series is a self-contained smart electrohydraulic configurable quarter actuator solution with advanced operation, control, setting and maintenance characteristics.

[Biffi EHO product webpage](#)

Biffi ICON WGR



The ICON series are electronically-configurable quarter and multi-turn actuators with advanced operation, control, setting and maintenance characteristics.

[Biffi ICON product webpage](#)

Biffi EH solution



The configurable electrohydraulic solution is available in standard and smart version for linear and quarter actuators and give you the opportunity to fully adapt your needs around the onsite challenges and to reach 1M Nm torques.

[Biffi OLGA_OLGAS product webpage](#)

Biffi EFS



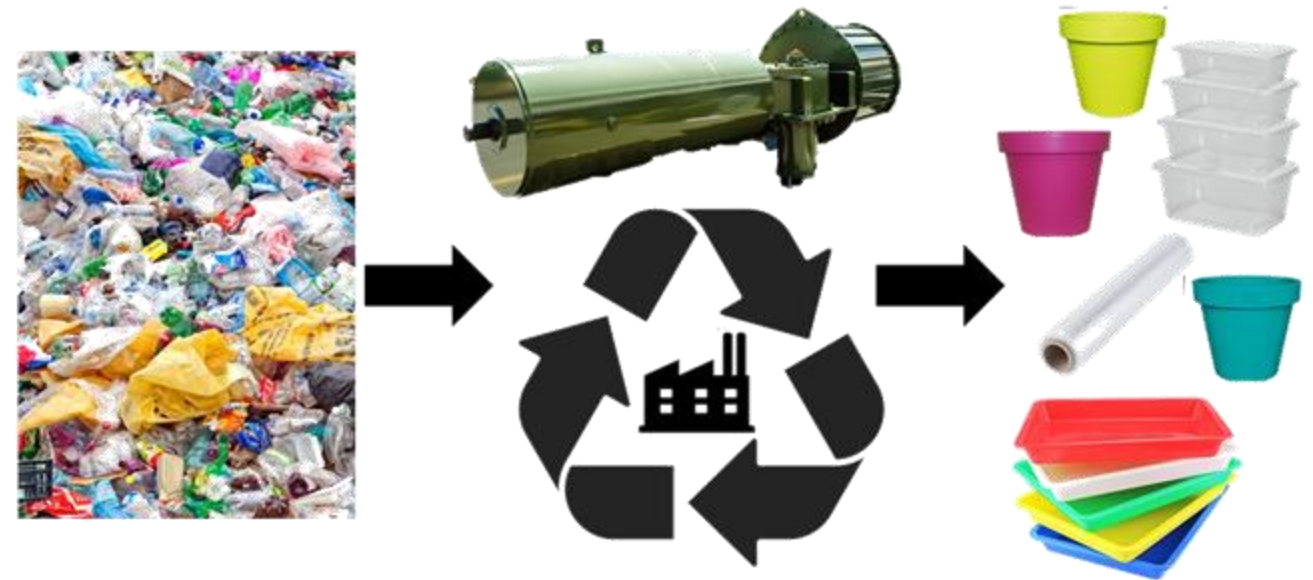
The EFS 2000 v4 series are electric quarter turn spring return actuators for closing and opening a valve in emergency conditions.

[Biffi EFS product webpage](#)



Recycling Project

- The scope of recycling is to transform end-of-life things back into their elementary form to produce new products.
- Biffi participates in a new plastics recycling plant, which uses an innovative hydrothermal platform in the UK. Biffi joins in the automation solution, providing an integrated control and safety system.
- The heart of this practice is a recycling process called Hydrothermal Plastic Recycling System (HydroPRS). Thanks to this practice, the plant uses supercritical steam (high pressure and temperature) to convert waste plastics into valuable chemicals and oils. But the real highlight of this project is that it will be able to recycle plastic, which – until now – have been considered unrecyclable.



Biffi ALGA/S



Single and double-acting scotch yoke actuators, create high break-out torques, making them suitable for quarter-turn valves up to the largest sizes.

[Biffi ALGA_ALGAS product webpage](#)

Wind Project

- Wind energy or wind power refers to the wind, used to generate mechanical-power electricity.
- Biffi takes part in an offshore wind farm in Scotland (UK). This wind farm operates with horizontal-axis wind turbines, which have three blades and operate "upwind," with the turbine pivoting at the top of the tower so the blades face into the wind.

Biffi EFS



The EFS 2000 v4 series are electric quarter turn spring return actuators for closing and opening a valve in emergency conditions.

[Biffi EFS product webpage](#) 

Biffi ICON WGR



The ICON series are electronically-configurable quarter and multi-turn actuators with advanced operation, control, setting and maintenance characteristics.

[Biffi ICON product webpage](#) 



Biogas Projects

- Biogas is one of the most widely used alternative sources for renewable energy production. Biogas is a mixture of various types of gases, mainly methane and carbon dioxide, produced by bacterial fermentation in anaerobic (absence of oxygen) plant or animal organic residues.
- Biffi F02 electric actuators are part of one of the largest biogas plants in the world, located in Brazil. The highlight of this project is that it produces electric energy using vinasse and filter cake, sugarcane by-products.

Biffi F01



Compact electric actuators for 90° operation, complete with the intelligent control unit to fit small valves.

[Biffi F01 product webpage](#) 



CCS Project

- Carbon Capture and Storage is the process of capturing carbon dioxide (CO₂) before it enters the atmosphere, transporting it, and storing it (typically in underground geologic formations). CCS is currently the only carbon capture technology that can reduce emissions from industrial plants.
- Biffi has been involved in the world's biggest CCS power plant, located in UK, using oxyfuel combustion technology.

Biffi RPS and FCBx



Single and double-acting small torque actuators, providing the most economical on-off and modulating control for small to medium quarter-turn valves.

[RPD/RPS product webpage](#) 

[Biffi Sales product webpage](#) 



Biomass Projects

- Biomass is plant-based material used as fuel to produce heat or electricity. Examples could be wood and wood residues, energy crops, agricultural residues, and waste from industry, farms and households.
- In one of the most important biomass renewable energy projects in Spain is it possible to find Biffi ICON3000 electric actuators. This plant features the latest biomass power generation technologies and complies with the most stringent European legislation.

Biffi ICON3000



Smart multi-turn actuators featuring advanced operation, control, setting and maintenance.

[Biffi ICON product webpage](#) 



Ammonia – green production

- Ammonia NH₃ is one of the most highly produced inorganic chemicals. There are numerous large-scale ammonia production plants worldwide
- 80% or more of the ammonia produced is used for fertilizing agricultural crops.
- The green production with renewables sources and green H₂ can be used in the energy production and biofuels (Jet-fuels in particular). The NH₃ use the CO₂ and the reuse of it is another future opportunity for the carbon capture technology.



Biffi OLGAS-QA



Single-acting spring return hydraulic quarter-turn actuators capable to close in less than 0,1 sec with the damper protection capability at the end of the stroke.

[Biffi OLGA_OLGAS product webpage](#)

Biffi F01



Compact electric actuators for 90° operation, complete with the intelligent control unit to fit small valves.

[Biffi F01 product webpage](#)

Biffi ALGA/S



Single and double-acting scotch yoke actuators, create high break-out torques, making them suitable for quarter-turn valves up to the largest sizes.

[Biffi ALGA_ALGAS product webpage](#)

Biffi OLGAS-H



Double-acting and spring return hydraulic quarter-turn actuators for onoff and modulating control of valves in heavy duty service suitable for high pressure supply.

[Biffi OLGA-H_OLGAS-H product webpage](#)

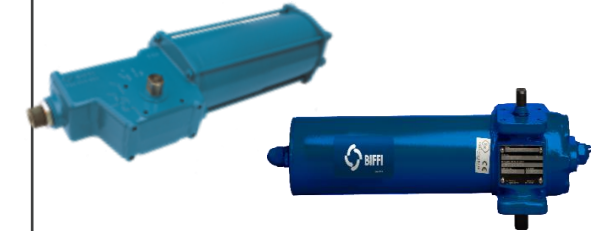
Biffi ICON3000



Smart multi-turn actuators featuring advanced operation, control, setting and maintenance.

[Biffi ICON product webpage](#)

Biffi RP and FCBx



Single and double-acting small torque actuators, providing the most economical on-off and modulating control for small to medium quarter-turn valves.

[RPD/RPS product webpage](#)

[Biffi Sales product webpage](#)

Chemical for Green applications

Oxygen Projects

- Oxygen is used in a wide range of applications, especially for environmental protection in municipal and industrial effluent treatment plants and facilities.
- Oxygen is not combustible alone. However, if there is a combustion event, high-oxygen content means that fuel materials burn much faster. Biffi can offer a complete range of solutions to match better the specific configuration capable of avoiding risks of fire injections.

Biffi ALGA/S



Single and double-acting scotch yoke actuators, create high break-out torques, making them suitable for quarter-turn valves up to the largest sizes.

[Biffi ALGA_ALGAS product webpage](#) ▶

Biffi RPD and RPS



Single and double-acting rack and pinion actuators, providing the most economical on-off and modulating control for small to medium quarter-turn valves.

[RPD/RPS product webpage](#) ▶

