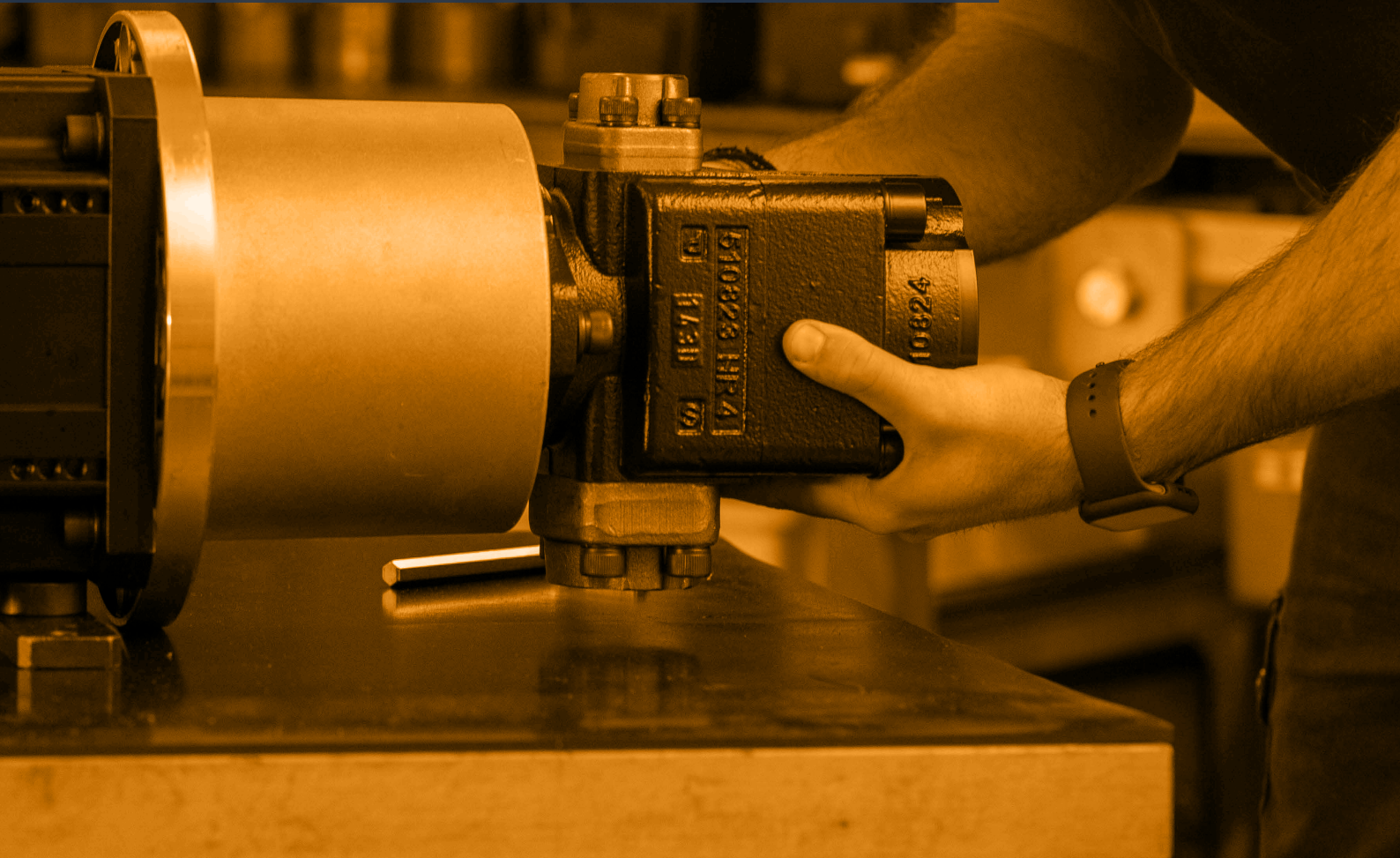




Energy saving solutions for hydraulics

Integrating low-impact environmental systems



EU Directive

The **energy efficiency directive**, approved by the European Parliament in July 2023, sets new savings targets for member states: to **reduce energy consumption by 11.7% by 2030**.

Policies aimed at enhancing energy security and combating the climate crisis provide us with the opportunity to **adopt environmentally and economically sustainable solutions**.

consumption

-11,7%

by

2030

New energy technologies

Today, there is a growing prevalence of solutions that, by intelligently utilizing machine downtime, can **save up to 80% of energy** and **reduce noise up to 20 dB** (and reset the noise level when the machine is idle).

The benefits are obvious: greater energy efficiency of the entire system and reduced wear and tear allow for a **rapid return on investment**. In recent years, we have seen many of our clients make a significant leap in quality after implementing an energy-saving system in their plants.

energy consumption

-80%

noise reduction

20 db

A close-up, slightly blurred photograph of an industrial robotic arm. The arm is white and grey, with several blue cables bundled together and running along its length. The background is a dark, industrial setting with various mechanical parts and structures.

Application fields

- Retrofitting of existing machines
- Press brakes
- Presses for wood
- Plastic injection machines
- Die casting machines
- Rubber presses
- Hydraulic presses
- Machine tools
- Waterjet
- Presses for recycling

2Q and 4Q systems

Interfluid is able to supply energy saving systems equipped with pumps that can operate at 2 or 4 quadrants. Below, we outline the primary advantages associated with each technology.

2Q 4Q

- ✓ ✓ Reduced energy consumption up to 80%

- ✓ ✓ Reduced noise up to 20 dB during the machine cycle

- ✓ ✓ Compact dimensions facilitate integration into the machine

- ✓ ✓ Maximum repeatability of flow/pressure parameter

- ✓ ✓ Less heating of the oil: reduced heat production allows to resize or even eliminate oil radiators

- ✓ ✓ The level of control provided by closed loop feedback allows for more precise movement

- ✓ No more flow direction control valves required

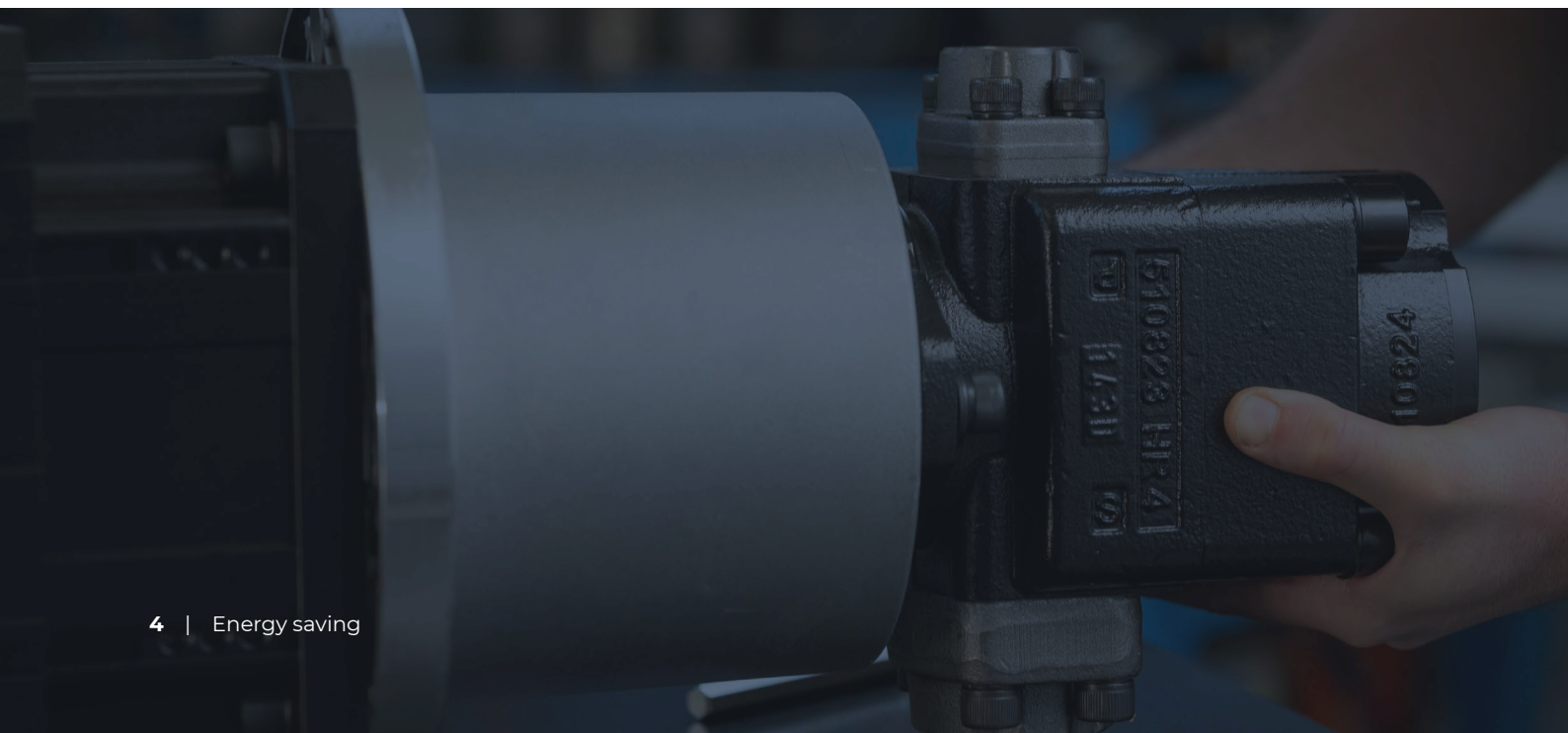
- ✓ “Conventional” oil tank is no longer needed

- ✓ Elimination of many typical elements of the hydraulic circuit subject to malfunction

- ✓ Drastic reduction of maximum system dimensions

- ✓ Further reduction of oil heating

- ✓ Option to add axis control in addition to the classic P/Q control



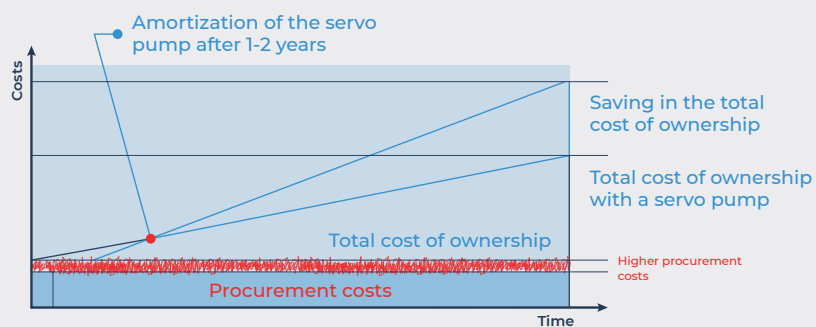
Inverter for servo pump applications

The inverter provides fully flexible integration and high performance across applications. This is enabled by its powerful, open programming platform and a dedicated PID algorithm. The latter ensures closed-loop control of flow and pressure.

Main features

- Integrated PID control software
- Control of flow and pressure limits
- Single pump control
- Multipump convergent control
- Multipump convergent/divergent control
- Various fields available

Total cost of ownership (TCO)



Our products for energy saving

PIISMA Servo pump

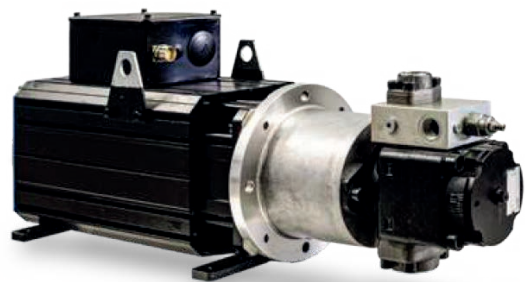


The PIISMA system consists of a variable speed servomotor controlled by inverter coupled with an internal gear fixed-displacement pump, whose power may constantly be adapted to suit effective needs. This **eliminates almost all losses when the machinery is inactive.**

When the machine is not carrying out any operation, the pump motor also comes to a standstill, unlike traditional hydraulic presses whose pump continues to make the oil circulate even when the machine is inactive.

The energy consumption of injection molding presses combined with the PIISMA system are therefore cut by more than half, to the advantage of production efficiency.

piisma
Energy on demand



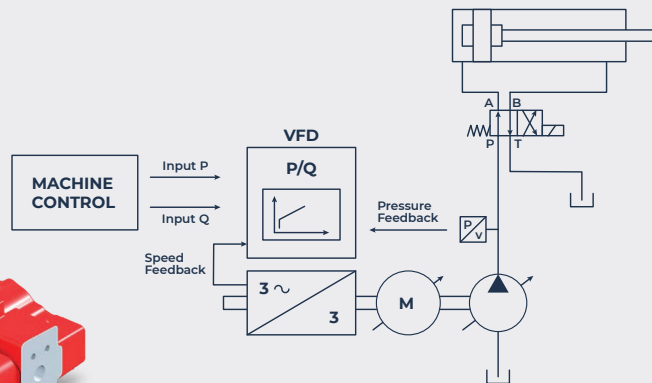
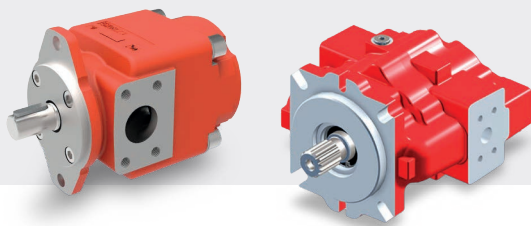
Combinable products

BUCHER
hydraulics

Servo pumps with 2Q technology

Combinable Bucher products:

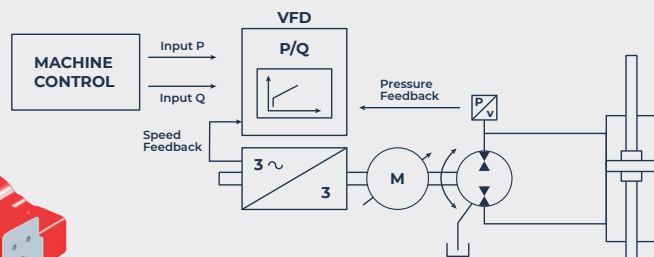
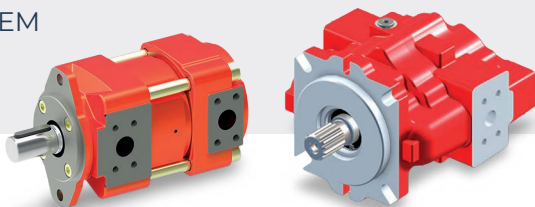
- QEXH
- QXEHX
- AX



Servo pumps with 4Q technology

Combinable Bucher products:

- AX
- QXM
- QXEM



KSPH Hydraul Servo pump



The hybrid electro-hydraulic system KSPH has been designed to meet the energy saving needs of the systems to reduce the time of implementation of the system.

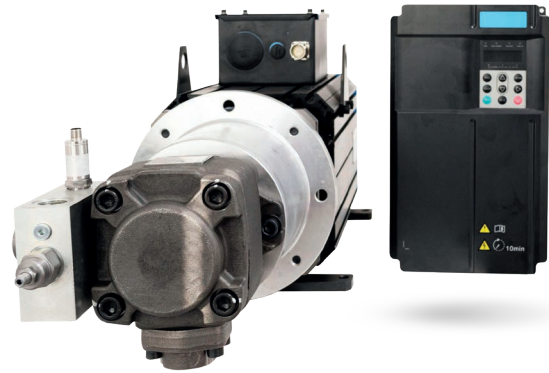
You can choose standardized packages based on the technical parameters selected by the user.

The Hydraul KSPH servo pump is configurable by **selecting standardized packages** consisting of:

1. Inverter drive
2. High power density brushless motor
3. Internal gear pump

In addition to distributing the KSPH system, **Interfluid provides the necessary technical advice to select the configuration that best suits** your production needs.

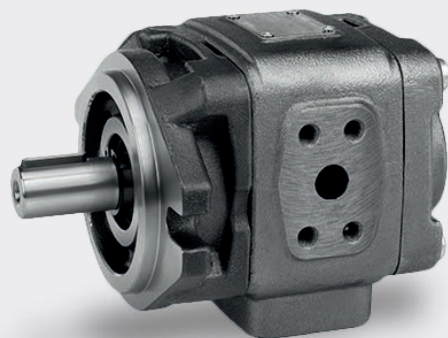
hydraul



HG pumps

The KSPH servo pump mounts Hydraul HG series internal gear pumps, with these features:

- Maximum pressure: 315 bar
- Maximum speed: 3000 rpm
- Utilized fluids HLP, HFC, HEES and HFD-U
- Available in single and double version
- Low noise level
- High volumetric efficiency
- Low pressure pulsation



Dedicated services

Project study

We identify the most suitable product for each application and, if necessary, the best alternatives with immediate availability.

Turnkey solutions

Our technicians take care of all the phases: dimensioning, cyclogram analysis, technology supply and on-site assistance at the first start-up.

Efficiency optimisation

We provide the skills to make the most of the potential of the new technology and calculate the benefits obtained already after a few months of use.

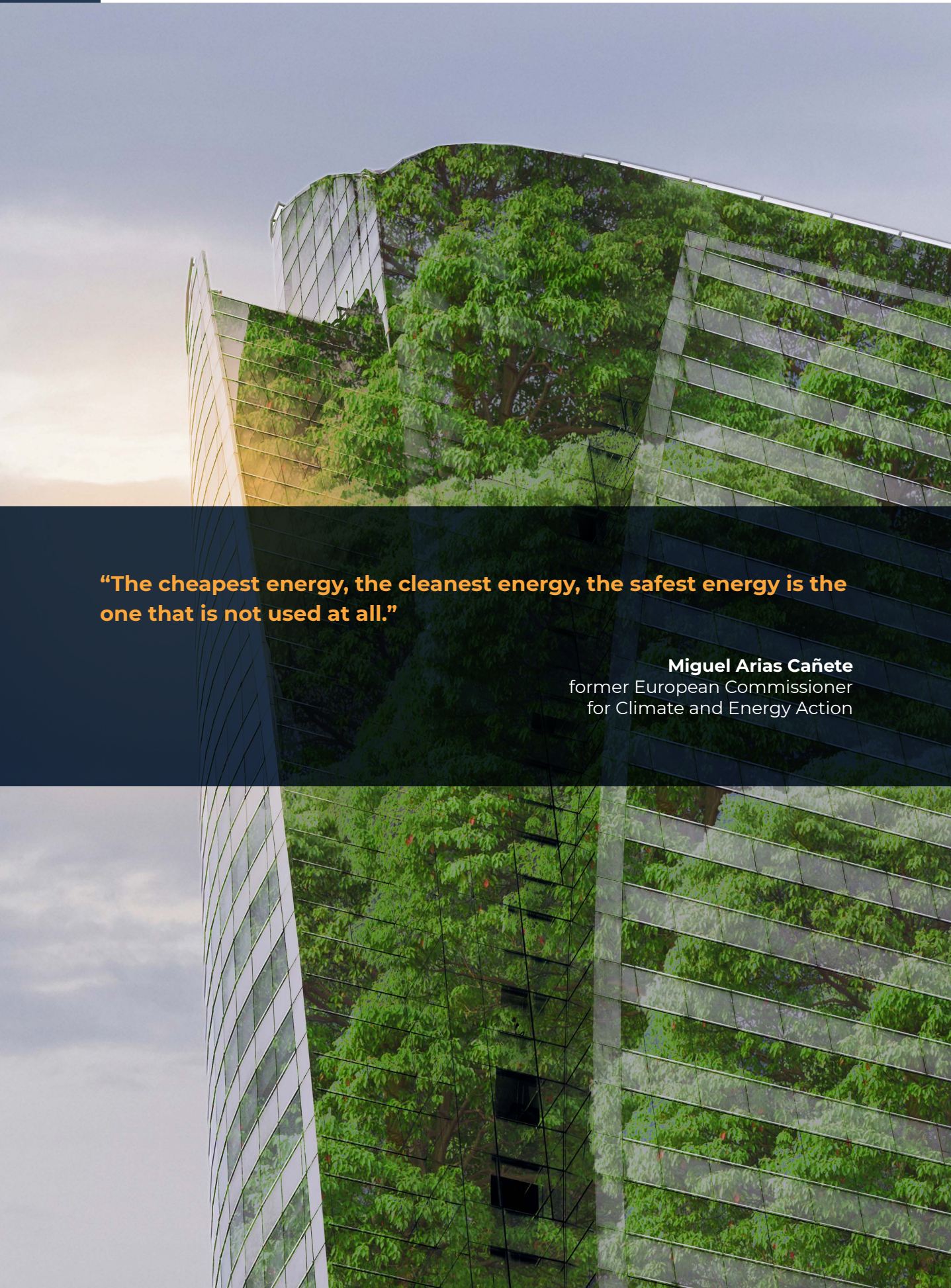
Technical analysis

We advise on the technical specifications of the products, the accessories to adapt them to your plant and industry and the technologies involved.

Our contribution to sustainable production

With the innovative technologies of the best international brands we work every day to develop more effective and sustainable projects:

- Energy saving technologies
- Technologies to reduce noise
- Improving operator safety
- Innovations towards cleaner energy, even with internal investment



“The cheapest energy, the cleanest energy, the safest energy is the one that is not used at all.”

Miguel Arias Cañete
former European Commissioner
for Climate and Energy Action

Do you want to implement an energy saving system in your plant?

Ask us for free consultation

✉ info@interfluid.net

☎ +39 0331 772410 / +39 0331 797955

🌐 www.interfluid.net

Interfluid srl

Via Lazzaretto, 10/F
21013 – Gallarate (VA), Italy