Energy consultancy
Your way to an energy-efficient production
Enter new ways for saving reserves!

Our many years of experience in the beverage industry have taught us one thing: In almost every company, there are hidden saving potentials which are just waiting for to be found. The KRONES energy consultancy makes exactly these reserves usable for you in a systematic and effective way.

At a glance
- Analysis of energy and media consumption
- Identification of savings potentials
- Sustainable reduction of the demand and therefore also the costs
- Objective recommendations for machines, lines, supply equipment and factories
In five steps to the goal

How does the KRONES energy consultancy work? In order to satisfy you and your company to one hundred percent, we will individually design the scope and the process for every project. Usually, a project comprises the following five phases:

1. Defining the goal in the kick-off workshop
2. Determining the energy and media consumption
3. Showing the options for energy and media recovery
4. Individual layout of the supply equipment
5. Elaborating different alternatives for the energy supply
One company – endless options

Which adjustments are worthy to be made? Many! Because, those, who consider the entire value will discover approaches for optimisation. Depending on the location and the savings target, these approaches can comprise very different measures such as:

- Integration of water recycling systems
- Synergetic combination of heat sources and heat sinks like, for example, heat pump technology or free cooling
- Variety of cooling and heating technologies that are individually tuned to the processes
- Use of a power-heat-coupling such as a combined heat and power plant
- Inclusion of regenerative energies like photovoltaics or solar heat depending on the local climatic conditions
- Dimensioning of the energy and media supply as needed
Efficiency measures
Heat pump

Background:
Many process steps in the beverage productions generate surplus heat.

The effect:
− Recycling of waste heat
− Use of gained energy for cooling and heating

Benefits to you
Double use
Heat pump that is well integrated in the processes can fully replace the cooling device. It is not only used for cooling, but also or heating, which makes it twice as efficient in comparison to traditional cooling units.

Reduced energy costs
The heat pump obtains parts of its required heating energy from the waste heat. This permanently reduces the demand on primary energy.
Efficiency measures
EquiTherm Freeze

Background:
− Blow moulders use CO₂ for mould cooling.
− Energy is released during the evaporation of CO₂.

The effect:
− Energy is buffered in the ice storage tank.
− The buffer guarantees consistent temperatures for direct cooling of the moulds.

Benefits to you
Reduced energy costs
EquiTherm Freeze reduces the energy demand during blow moulding and therefore the arising costs.

More efficiency for existing lines
The recycling system can be integrated as an upgrade in existing blow moulders.

![Diagram of EquiTherm Freeze system]
Efficiency measures
Groundwater cooling

**Background:**
- Usually, ground or well water has a consistently low temperature.
- Therefore, it is a natural energy source.

**The effect:**
- The system can be used for process cooling and also for re-cooling.

**Benefits to you**
**Sustainability and efficiency**
This method uses water that is already provided without using it up or impacting its quality: After having been used as a cooling medium, the groundwater can be returned via an absorption well. If needed, well water can be used further directly in the manufacturing process.

**Double use**
During the cooling process, the water temperature rises slightly. This increases its operational readiness in the syrup room and in the water treatment system.
Efficiency measures
Free cooling with cooling tower

Background:
- Depending on the air temperature, the efficiency of a cooling tower is up to ten more times higher than a cooling device.
- The free capacities of one can be used for pre-cooling the other.

The effect:
- Electrical energy consumption is reduced.

Benefits to you
Free energy
An especially economic synergy effect arises from using capacities which already exist.

High reliability
The separate installation guarantees absolute reliability for the production process.
We do more.