



WATER MANAGEMENT

The background of the lower half of the page features a stylized illustration. At the top, there are dark blue mountain peaks. Below them is a layer of water represented by numerous small, light blue circles of varying sizes, suggesting bubbles or droplets. At the bottom, there are white, snow-capped mountain peaks.

Because every drop counts™

SERVICES CATALOGUE

For the total beverage industry

Mineral water | Carbonated soft drinks | Fruit juices | Milk | Beer

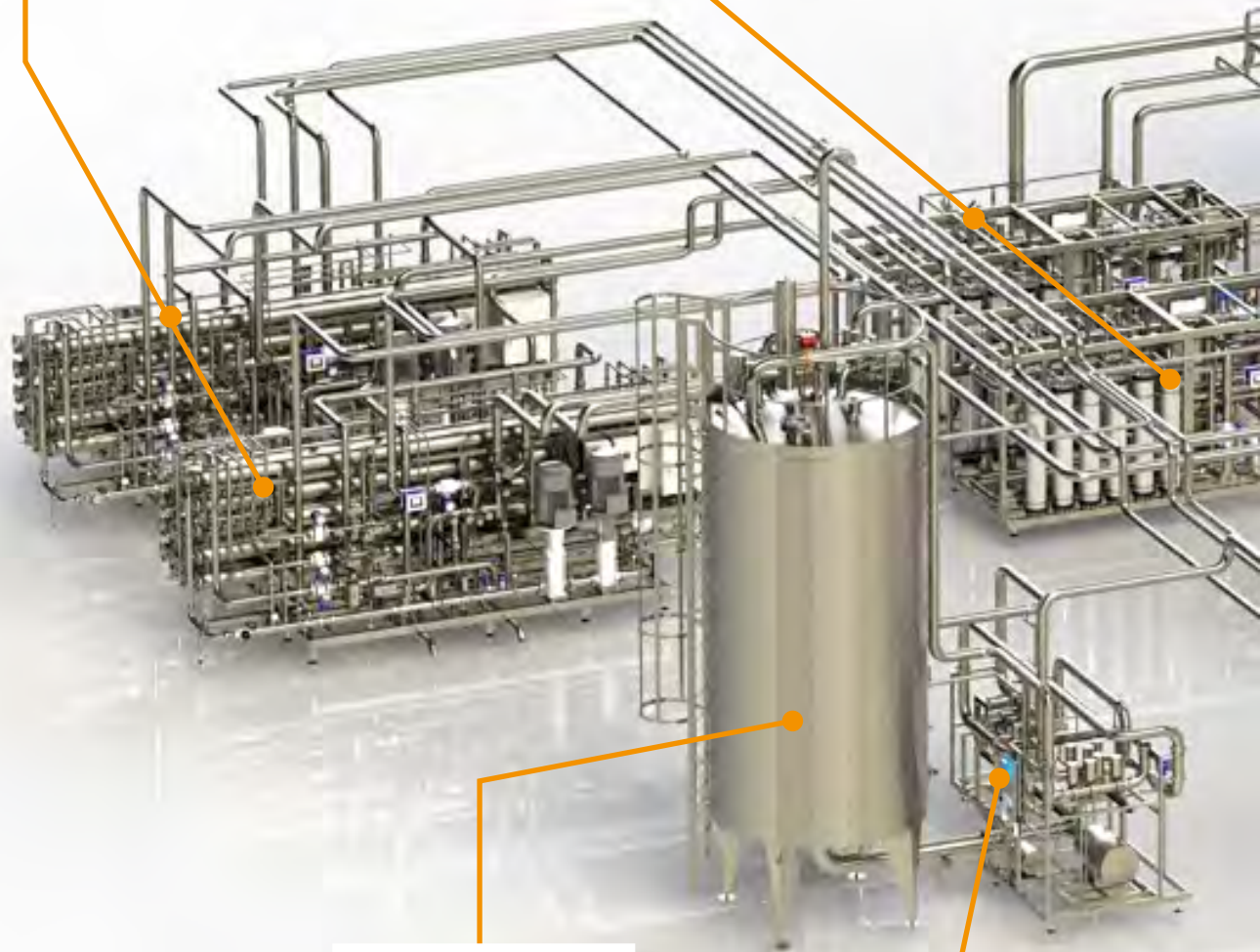
www.ice-water-treatment.com

REVERSE OSMOSIS

ULTRAFILTRATION

TREATED WATER
TANK 20m³

OZONATION
PUMPING SKID &
GENERATOR



RAW WATER TANK
50m³

PERMEATE
WATER TANK 50m³

UF WATER TANK
20m³

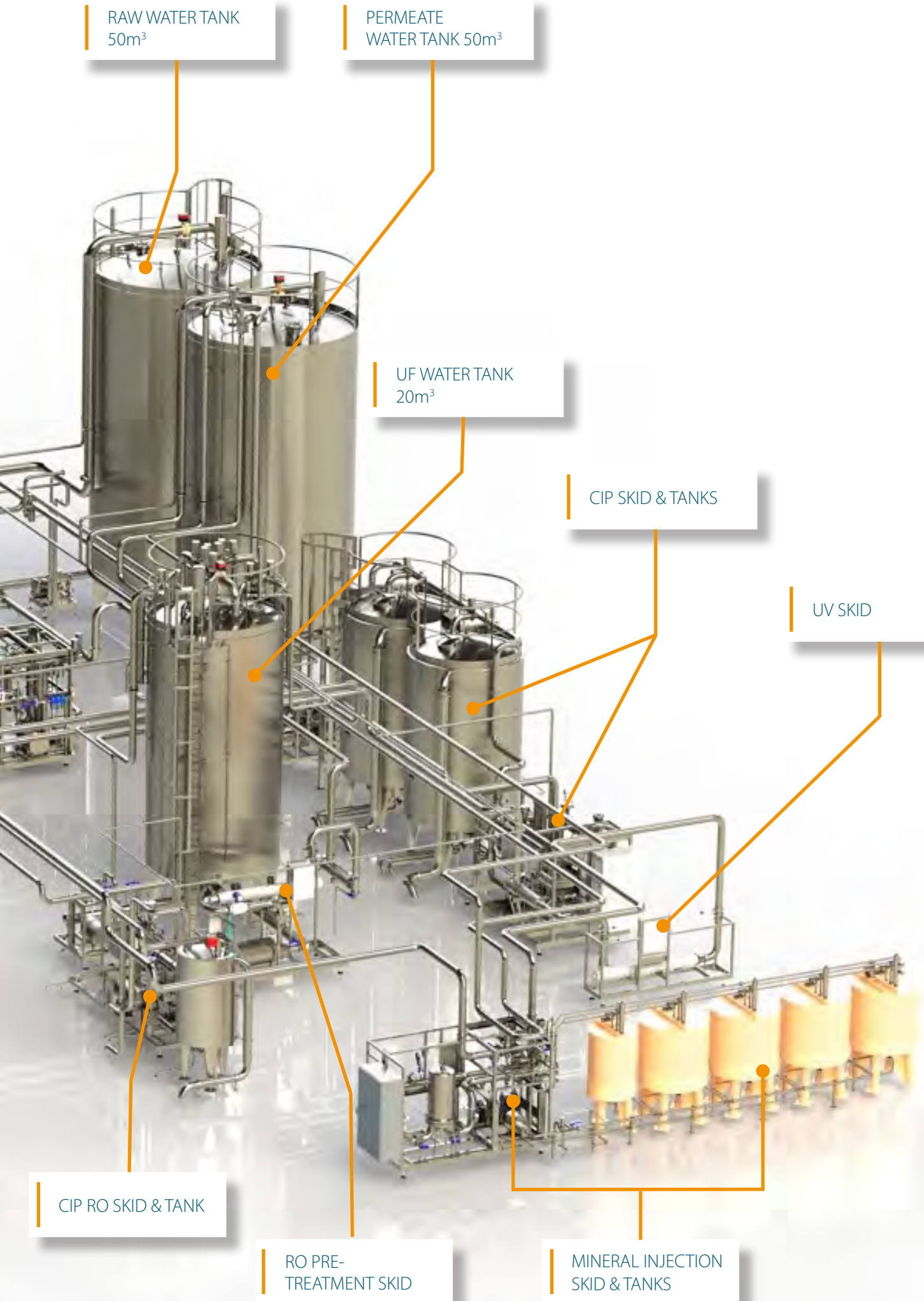
CIP SKID & TANKS

UV SKID

CIP RO SKID & TANK

RO PRE-
TREATMENT SKID

MINERAL INJECTION
SKID & TANKS







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37 YEARS

of experience dedicated to the beverage industry

ICE WATER MANAGEMENT BEVERAGE INDUSTRY

ICE
WATER MANAGEMENT

for water management

PERFORMANCE MANAGEMENT

- Water and energy savings expertise to preserve resources, increase capacity and reduce operation cost.
- Engineering to care about lifetime, integrity and productivity of the water treatment line.
- Process improvement and maintenance (OPEX optimisation, operational support, predictive maintenance).
- Water quality consulting and audits to propose cost-effective solutions, improve quality control schedule, and train QC.
- Web tool to help customers operate and improve the performance of bottling facilities.



Design
& Build



Quality
& Advanced



Decision
Support Tool

Well
Equipment



Water
Treatment Unit



Water Quality
Consulting



Process
(Water)

COVER THE WHOLE BEVERAGE INDUSTRY

- Sparkling beverages, juices, bottled water, mineral water, flavoured water, beer, milk.



470 AUDITS

and consulting missions performed



ENT, YOUR STRATEGIC JSTRY PARTNER

nt and sustainability.



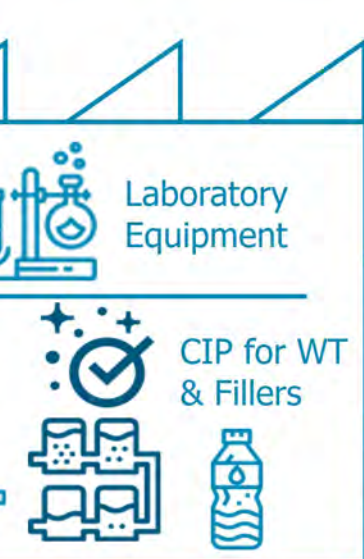
350 FACTORIES

equipped around the world

& Process
ed Training



DrinksLab
New water concept



Laboratory
Equipment



Service contract
(Process audit &
preventive maintenance)



Spare Parts &
Consumables

CIP for WT
& Fillers



Waste Water
Treatment

ess Improvement
(Water & Energy Savings)



Sustainability

END TO END WATER QUALITY

- Reliable solutions based on the latest available technologies, to guarantee quality and safety.
- Fully hygienic process to deliver the best quality product.

BRAND PROTECTION AND INNOVATION

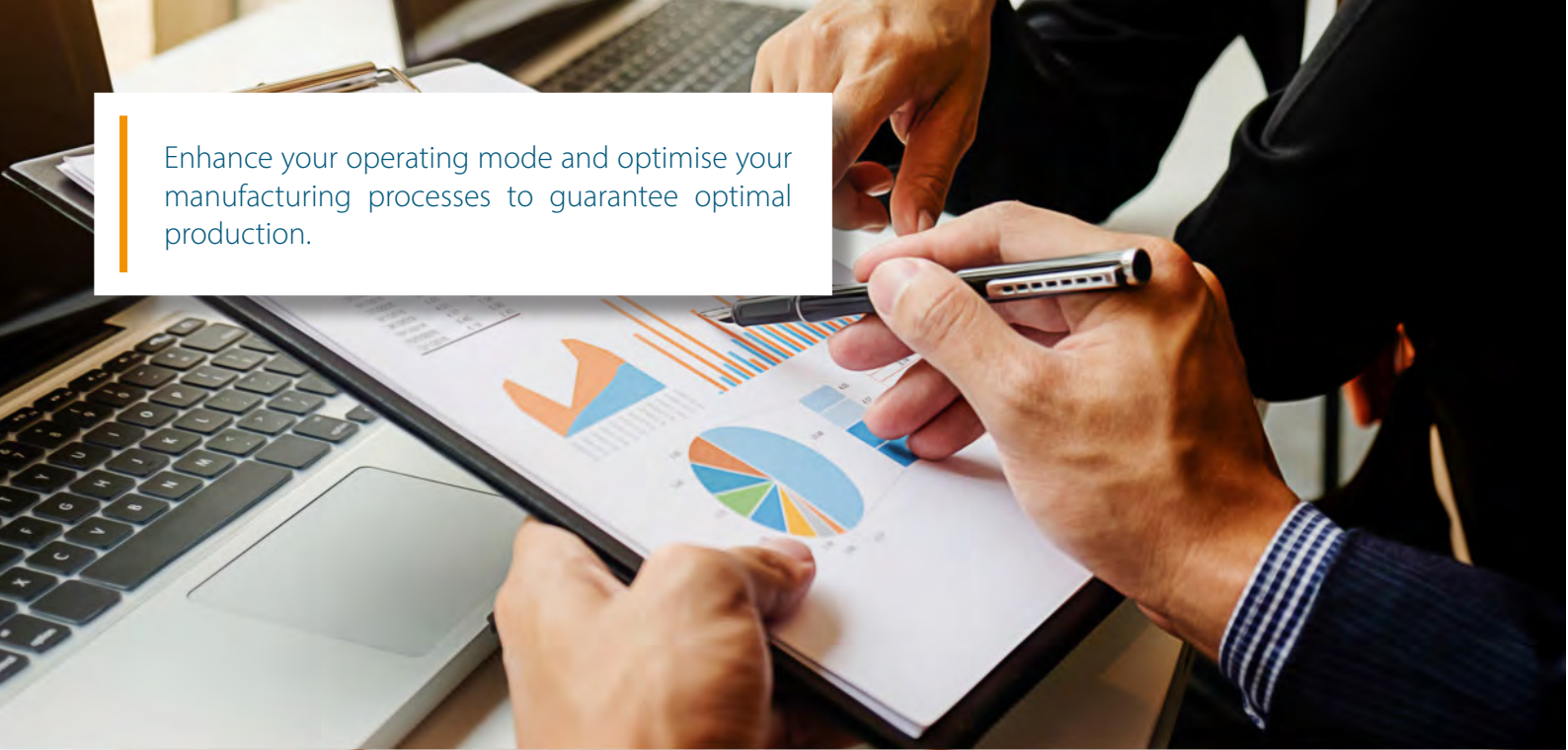
- Water treatment designed in accordance with the food-grade design principles.
- Innovating processes and decision support tools based on new concepts to reengineer water and respond to the market trend.



260 CUSTOMERS

around the world





Enhance your operating mode and optimise your manufacturing processes to guarantee optimal production.



**ASSESS PROCESS, IMPLEMENT BEST SOLUTIONS,
AND IMPART KNOWLEDGE**

We place our skills at the service of our customers, by proposing them missions of audit/consultancy, expertise/ diagnostic, and training. Thanks to audits we identify potential problems on processes or facilities. After a complete and accurate diagnostic, our expertise allows us to implement the best solutions.

AUDIT & CONSULTANCY

- Assistance for strategic development of water treatment unit in connection with business plan,
- Set up a quality control service and give the tools & knowledge to develop high level competence and organisation in a short period of time,
- Support in complying with applicable regulation or with production standards of an international group,
- Qualify a water resource and prevent it from overexploitation leading to contamination, drying up, quality decay.

EXPERTISE & DIAGNOSTIC

- Solve a specific issue (contamination, raw water quality evolution, bromate level, performance decay on equipment),
- Identify improvements to be made and relevant investments to be planned,
- Define and optimise cleaning procedures in function of quality and production targets (planning, recipes...),
- Perform pilot testing to assess performance and optimise the design before an industrial implementation,
- Define suitable process for raw water quality and target water quality in accordance with current regulations.

ENGINEERING OR AUTOMATION SERVICE

ICE's expertise and experience in water treatment process is also proposed through engineering design department services, engineering or automation according to your needs:

- PID elaboration
- Elaboration of specific or 3D plans
- Drafting of specifications and procedures
- Functional analysis and automation.

ON-SITE TRAINING

Performance of the equipment is highly dependent on the qualification of operators. Thanks to customised training program defined with customer, all operators are certified.

Allowing team to master:

- Water treatment process procedures
- Dedicated CIP procedures
- Troubleshooting procedures
- Theoretical aspects
- Clogging root causes
- Developing personalised calculation tools (chemical concentration calculation)
- Background about the water treatment set up (recovery, trans-membrane pressure limit, salt rejection, salt passage, chemical product input).

BY CHOOSING ICE AUDIT AND EXPERTISE SERVICES YOU WILL

- Benefit from a full assessment of the plant (process, automation, control and monitoring) thanks to the complete expertise and knowledge of a senior engineer on-site.
- Benefit from an identification of potential problems and a proposition of improvement and optimisation.
- Benefit from a follow-up of operating procedures and education level of the operators.

After-sales services to ensure each client to get the most out of their system with an efficient spare parts management.



OPTIMAL SPARE PARTS MANAGEMENT
RIGHT PARTS, RIGHT QUANTITY, RIGHT TIME

AFTER-SALES SERVICES

avoid downtime and extend the plants lifetime

Whether it's for a manufacturing line installed by ICE Water Management or for process improvements on a customer's existing line, our spare parts respond to quality standard and run through strict quality controls. ICE guarantees its customers the availability of spare parts and consumables to maintain the continuity of their beverage production.

SPARE PARTS

To guarantee maximal lifespan of your water treatment line and so as not to be confronted with breakdowns that lead to downtime, we have spare parts in stock for the entire lifecycle of your water treatment unit.

Our teams keep full traceability of the modifications and part numbers. We have the technical information of all the plants worldwide installed and are able to supply the appropriate spare parts rapidly.

- Valves, pneumatic or electrical actuators, manometers
- Instrumentation, sensors
- Ozone generator
- O-rings, gaskets, couplings, fittings, nipples
- Manifolds, pipes, flexible hoses
- Pumps, pumps accessories
- RO Membranes
- UV lamps and accessories
- etc...

CRITICAL SPARE PARTS

Those parts are an essential part of the water treatment lines implemented by ICE. They are very specific to our processes, with often long delivery times, and are essential for the proper functioning of the line. These are parts that would lead to a factory stoppage or alteration of the finished product if broken. During the commissioning of your line, we establish a list of critical parts that we recommend you to have in safety stock at your premises and to be used during «heavy» maintenance procedures. This stock will be checked at each of our interventions.

- Instrumentation, pressure sensor, flowmeter
- Pump, dosing pump
- Automation components
- etc...

CONSUMABLE PARTS

Those parts have a faster change turnover. We propose at each visit on site to make a precise inventory with a personalised schedule of replacement adapting to your production rates and your specific environment

- Chemicals, antiscalant
- Filtration: filter housings, cartridges
- Media: active carbon, sand, green sand
- Membranes: UF, RO
- Oil
- etc...

BY CHOOSING ICE AFTER-SALES SERVICES, YOU WILL

- Extend the lifespan of your equipment.
- Benefit from an optimal spare parts management.
- Benefit from maintaining optimal system performance.



ICE provides on-site support throughout a customised programme focused on your facilities.

**ANTICIPATE AND PLAN
TO IMPROVE PERFORMANCES**

A strict and regular maintenance of facilities prevents water quality issues, helps to improve the return on investment, and to lower your maintenance and operational costs. Our long-term yearly maintenance contracts are a guarantee for an efficient operating of your installation and for the life span of your equipment.

FOR PREVENTIVE MAINTENANCE

As part of a regular service contract, ICE engineers will:

- Control the system efficiency and running parameters
- Identify potential risks and diagnose system deviations
- Recommend a schedule to establish the needed corrective actions about system deviation and to eliminate or mitigate an identified risk
- Control the log-books, CIP procedures, equipment calibrations
- Advise on sanitation procedures, follow-up record and develop personalised follow-up document
- Follow up of parts and consumable stock
 - Establish a customised spare parts and consumables replacement schedule according to specific environment
 - Update the critical spare parts and consumables stock
 - Recommend the critical spare parts.

FOR PRODUCT CHECK-UP

On demand, ICE can provide *punctual* water treatment follow up and maintenance, and also assess operator's maintenance interventions:

- Assessment of the facilities, and plant's performance
- Diagnostic, recommendation for corrective actions
- Checking of the log-books, CIP procedures, equipment calibrations
- Recommendation of spare parts and consumables lists
- Material improvement proposal.

ADDITIONAL SERVICES

- 96-hour on-site emergency assistance: invoiced in addition, pending location
- Hot line from Monday to Friday, from 8.00 AM to 6.00 PM, included in the contract for preventive maintenance (up to 20 hours per year)
- Discount on spare-parts orders as part of a contract for preventive maintenance.

ADDITIONAL TRAINING

As part of a maintenance mission allowing team to master:

- Different procedures,
- Basic background,
- Theoretical aspects.

BY SUBSCRIBING ICE SERVICE CONTRACT, YOU WILL

- Anticipate and plan your water treatment follow-up.
- Ensure optimal operating functions of your facilities.
- Improve the reliability, the equipment life span and the final product quality.
- Benefit from the complete expertise and knowledge of senior engineer, on-site.



PERACETIC WASA™ for PET bottles



RO WASA™ for Reverse Osmosis



H₂O₂ WASA™ for beverage carton



BOTTLEWASHER WASA™ for glass bottles

**METHODOLOGY FOR
A SUSTAINABLE DEVELOPMENT APPROACH**



ICE has been developing a whole range of services and processes to save water in plants, reduce water consumption and optimise costs. This is a sustainable development approach. Reduce, reuse, recycle.

METHODOLOGY FOR A SUSTAINABLE DEVELOPMENT APPROACH

- Audit and expertise
- Water losses optimisation
- Equipment improvement

ICE'S AUDIT AND EXPERTISE

- Investigation of the factory, collecting data and study
- Seeking losses with a factory water flux map: a reliable tool to describe how water is used in a factory in quantity and quality
- Assessment of concerns, constraints
- Mapping the water losses by type, nature
- Issuing a comprehensive report with solutions and priorities.

WATER LOSSES OPTIMISATION

To optimise the recycling, ICE Water Management offers a global water management with the following objectives:

- optimising water treatment processes to reduce discharges,
- reuse water in the water treatment process
- recycle water in the process
- recycle water for utilities.

EQUIPMENT IMPROVEMENT AND UPGRADING

See the relevant data sheets in our technical catalogue for:

- PERACETIC WASA™ for PET bottles
- H₂O₂ WASA™ for beverage carton
- BOTTLE WASHER WASA™ for glass bottles
- RO WASA™ for Reverse Osmosis

BENEFITS

- **Decrease production costs:**
 - control your benefits
- **Increase productivity:**
 - improve your capacity
- **Resource preservation:**
 - branding, image vector
- **Combination for sustainability:**
 - social, environmental, economic.

BY CHOOSING ICE WATER SAVING SOLUTION, YOU WILL

- Benefit from a solution to optimise water production and reduce water consumption.
- Target a zero liquid discharge objective.
- Target the ideal bottled water ratio.
- Benefit from a sustainable development approach.
- Improve the green image of your company.



Unleash your imagination and get expertise and support for unlimited flavour possibilities.

REENGINEERING WATER

DrinksLab is the first step before defining your water process. Make the difference on the beverages market by offering healthy, innovative, flavoured drinks, while ensuring quality and safety of the product.

DRINKSLAB: A NEW WATER CONCEPT

• To respond to the market trends with innovative drinks

- Healthy and natural beverages
- Drinks with organic ingredients
- Drinks with less sugar
- Detox drinks
- Natural sources
- Original drinks
- Drinks with no artificial flavours or colours
- Probiotic drinks
- Tasty drinks

• For reengineering water

- Protein water
- Vitamin water
- Alkaline water (with high pH)
- Low or zero sodium water
- Caffeinated water
- Flavoured water
- Electrolytes enhanced water

• Option:

Audit for remineralisation

Our Quality expert will prepare, in his laboratory, 3 samples of water according to the indications given by our customer's marketing department.

The samples will be shipped to the customer by express mail. Low sodium, high pH, baby water, oligo elements, ..., the spectrum of possibilities is as wide as imagination can be.

BENEFITS

ICE's expertise and support

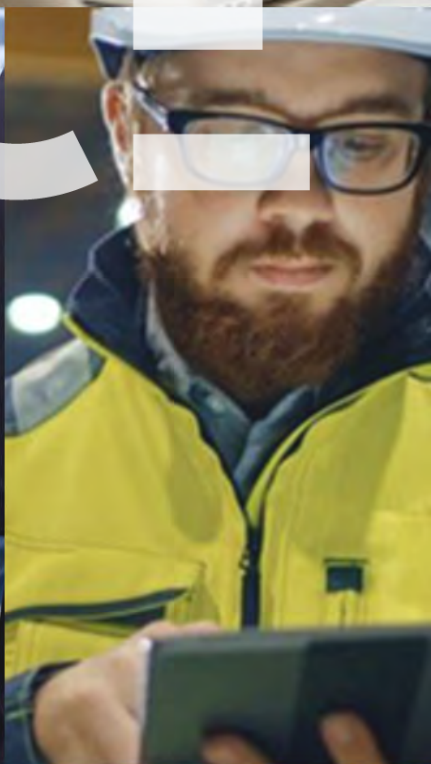
- **Collaborative project:**
 - analysing customer expectation
- **Recipes creation:**
 - whole range of flavours
- **Water processing design**
- **Quality control:**
 - water management
- **Prototyping:**
 - samples.

BY CHOOSING ICE DRINKSLAB SOLUTION, YOU WILL

- Enhance your brand by offering new, healthy and tailored alternatives and stay ahead of market demands.
- Benefit from a support to the development of innovative beverages to meet the expectations of your consumers.

With remote services, you can prevent wear and tear on your system and extend its life span.

DROP by ICE



**AWAY FROM YOU WE STAY CLOSE,
WITH A CONTINUED SUPPORT**

ICE Water Management offers a wide range of remote services for maximum performance. There can be applied either in case of routine or emergency assistance monitoring, or within a contract service⁽¹⁾.

HOT-LINE,

From our premises in Chavanod, our engineers are at your disposal with the required competence, to answer your questions and find solutions with your teams. They can take action by phone or by remote connection to carry out a diagnosis or a full monitoring service.

- From Monday to Friday, from 8 am to 6 pm (Paris time)
- By remote connection on PLC (to study parameters, alarms and provide reports when problem is observed)
- By full remote service DROP by DROP.

DECISION SUPPORT TOOL: DROP BY DROP

DROP by DROP is a web-based tool developed to monitor, manage and optimise performances of your bottling facilities. DROP by DROP acts as a continuous improvement and prediction tool that gives you a real-time and remote overview of your production.

It helps to make decisions thanks to our expertise combined with artificial intelligence

MULTI-LEVEL SUPPORTS

- **Production manager** (production monitoring, KPI indicators)
- **Technician** (prevention of unplanned production failures)
- **Operator** (remote monitoring of alerts, in real-time, Interactive messaging tool)
- **Quality manager** (control of cleaning operations).

PERFORMANCE OPTIMISATION

- Collecting data from the well to the filling line
- Analyzing sorting, combining data
- Predictive alerts and maintenance
- Productivity and traceability
- Prescribing corrective decisions
- Online assistance (with ICE/DROP by DROP experts)
- Overall supervision (automatic reports KPI).

⁽¹⁾ Within a contract service: see the relevant chapter «SERVICE CONTRACT»

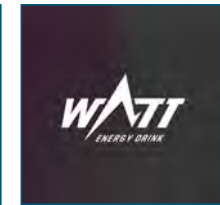


BENEFITS

- **Assets optimisation**
 - CIP procedure, maintenance and operating costs optimised
 - Water and energy savings
 - Product losses reduction and productivity increase
- **24/7 Supervision**
 - Interaction ICE experts
 - Quality optimisation and continuous improvement
 - Complete traceability
- **Quick ROI**
 - Reduction of non-quality costs and operating costs
 - Return on investment in 1 to 6 months

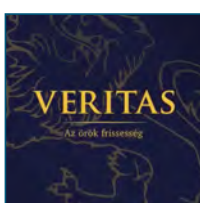
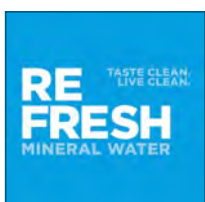
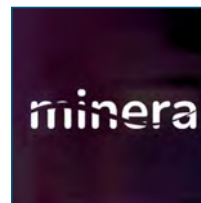
BY CHOOSING ICE REMOTE SUPPORT, YOU WILL

- Benefit from system monitoring and reduce risk of breakdowns and malfunctions.
- Benefit from optimising the efficiency and reliability of your installation.
- Benefit from maintaining optimal system performance.
- Benefit from optimal security at all levels, such as data confidentiality, security of data storage.



REFERENCES

for 37 years



OUR SOLUTIONS

ICE Water Management offers solutions to enhance water quality while ensuring savings at every step of the water treatment process.

Our mission is to deliver the best quality product to your brand with consistency and proven efficiency.



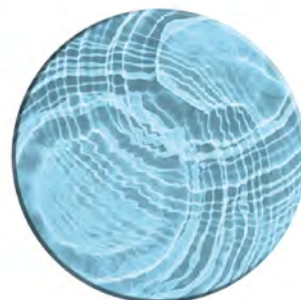
Securing access
to water resource

Starting a new
water treatment project



Increasing
water treatment capacity

Guarantee
water quality



Protecting
your brand

New
to the bottling industry



Improving performance,
productivity & hygiene

Implementing
best practices



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