



RAISE YOUR PETS TO THE NEW STANDARD!

DRY PREFORM DECONTAMINATION
IS THE SENSIBLE CHOICE FOR SENSITIVE PRODUCTS

www.sidel.com

 **Sidel**
A BETTER MATCH

SAY GOODBYE TO CHEMICALS SAY HELLO TO SAVINGS

It's time to say goodbye to the old ways and hello to dry preform decontamination with Combi Predis™. Today, too much water, chemicals, energy and costs are wasted due to a production system that is not optimized. At Sidel, we can change that. We need to. As experts, we listen to your needs and bring you all the benefits of dry preform decontamination, a unique solution that's a better

match for sensitive products. A better match of sustainability and cost-efficiency as well as production flexibility and product integrity. It's time to raise your PETs to the new standard!

Dry preform decontamination is the sensible choice for sensitive products. And we have already proven it.

RAISE YOUR PETS
TO THE NEW STANDARD!



BRING YOUR WATER CONSUMPTION DOWN TO ZERO

Water is a resource of increasing demand and decreasing supply. And saving it is going to make all the difference. That's why Predis™ uses no water. Contrary to traditional aseptic systems that consume 250 cubic meters of water a day, dry preform decontamination ensures 100% sterilization of your sensitive products' packaging without having to rinse, and without chemical effluents. So far with this technology we, together with our customers, have saved a volume of water equivalent to more than 220 Olympic swimming pools, and it only goes up from there.

NO COMPROMISE ON FOOD SAFETY

At Sidel we understand that while food safety is your top concern, you also need to make sure your end products taste great—and to do it all while decreasing the use of chemicals. Instead of 200 cubic meters of chemicals a day used with traditional aseptic systems, Predis™ decontaminates directly at the preform phase, using a very minimal amount of hydrogen peroxide. This approach significantly reduces the amount of chemicals wasted, eliminates residuals and protects the safety and quality of your products.

PROVEN BENEFITS

Global savings with Predis™

- 600 million liters of water
- 1 million liters of chemical agents

Go to www.sidel.com to calculate how much you can save

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PROVEN BENEFITS

"The added value of zero preservatives is something that customers will be attracted to"

Hana Water, Saudi Arabia

MEETING CONSUMER DEMANDS

In the beverage industry, consumers' growing preferences and government food regulations have been heading in the same direction: towards healthier, more natural food products that use less or no preservatives. To meet these demands, sensitive products that were traditionally packaged with preservatives or treated in some way, can now be reformulated naturally with Combi Predis™. And ultimately, zero preservatives will help you keep taste natural and pure, and will help preserve the integrity of your sensitive drink products.

LONG-LASTING QUALITY TASTE

All liquid producers want to maintain the shelf life of their products for as long as possible to minimize wasted products and costs. Quality and longevity are key demands. But without preservatives, ensuring long-lasting quality taste for juices, carbonated soft drinks or other sensitive products was never possible with simple solutions. Until now. Using dry preform decontamination technology, Combi Predis™ protects liquid packaging from microorganisms and proves to maintain beverage safety and quality. It is the perfect solution for handling products for ambient distribution and it may even extend your products' shelf life when distributed in the cold chain.

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PROVEN BENEFITS

"Provides a lot of potential
for creative bottle designs."

Mlekara Subotica, Serbia

PRODUCE PRACTICALLY ANY SHAPE OR SIZE

The flexibility of Combi Predis™ allows you to dream up practically any bottle design to fit your company's image, the needs of your products or the preferences of your customers. Whether they are round or square, small or big, you can produce all kinds of intricate shapes in many different sizes thanks to continuous by-the-neck transfers and the absence of any thermal stress on the empty bottle. Combi Predis™ also combines quick and easy product changeovers and a very competitive 120 hours of non-stop production.

LIGHTER BOTTLES MEAN LIGHTER COSTS

At our Packaging & Tooling centers around the world, we have many expert designers who can reduce your PET consumption by up to 30% per bottle without compromising quality. Using lightweighting to reduce the thickness of the bottle wall or by slightly shortening the bottle neck, we can assure the same bottle shape your customers know and love, while reducing your material costs significantly. This is an increasingly popular option for companies that want to save costs or contribute to their sustainability agenda.

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TOTAL PRODUCTION SIMPLICITY

While advanced technology is often very complex, Combi Predis™ offers an exceptional simplicity. With fewer manual tasks and pieces of equipment to run, Combi Predis™ requires just one operator. And to ensure a smooth transition to dry preform decontamination, Sidel provides on-site training and has several support services to help your business reap the benefits of Predis™ quickly and successfully.

AN IMPRESSIVE RETURN ON INVESTMENT

Your total cost of ownership is always top of mind when designing solutions here at Sidel. With Predis™, all the key benefits combine to make your investment in dry preform technology both worthwhile and financially rewarding. Producing up to 48,000 bottles an hour, Combi Predis™ simultaneously saves water, chemical, energy, material and labor costs. Compared to dry bottle decontamination, your total operating costs are reduced by up to 30% in all. And with fast changeovers and minimal maintenance and cleaning required, you will appreciate the benefits of maximum uptime and minimum downtime.

PROVEN BENEFITS

"Compactness and lower investment, operating and maintenance costs."

Refresco, France

PROVEN BENEFITS

JUICES AND TEAS

"Very simple and much easier to use than traditional aseptic solutions."

Hauser Weinimport, Germany

PROVEN BENEFITS

JUICES AND TEAS

"An aseptic technology with no water consumption and only tiny amounts of chemicals."

Sokpol, Poland

PROVEN BENEFITS

WATER

"Beverages in a pristine environment."

RTD Beverages, US

PROVEN BENEFITS

CSD WITHOUT PRESERVATIVES

"Reduces the use of preservatives."

Dana, Slovenia

PROVEN BENEFITS

ESL DAIRY PRODUCTS

"A revolution for our industrial model."

Danone, Russia

PROVEN BENEFITS

ESL DAIRY PRODUCTS

"Total food safety ensured."

Dukat, Croatia

PROVEN BENEFITS

JUICES AND TEAS

"The right technology with the right partner."

Aujan, Saudi Arabia

PROVEN BENEFITS

CSD WITHOUT PRESERVATIVES

"Apple juice without aseptic filling or preservatives."

Alwa Fontanis, Germany

PROVEN BENEFITS

JUICES AND TEAS

"Outstanding in terms of the environment, cost reductions and no water use."

Otsuka, Japan

PROVEN BENEFITS

JUICES AND TEAS

"An aseptic technology that enables highly innovative bottle designs."

Hana Water, Saudi Arabia

PROVEN BENEFITS

ESL DAIRY PRODUCTS

"Efficiency, sustainability, and competitive cost structure."

Byrne Dairy, USA

PROVEN BENEFITS

UHT MILK

"Helps reduce waste by eliminating the aluminium seal."

Laiterie St-Denis-De-L'Hôtel, France

PREDIST™ OFFERS YOUR BUSINESS PROVEN BENEFITS

Predis™ is a proven dry preform decontamination solution built on a solid experience with aseptic packaging solutions and innovative technology that is unmatched in the liquid packaging industry. It is the best solution for meeting today's growing demand for teas, juices, nectars, isotonic, liquid dairy products and other sensitive products that are increasingly filled in aseptic containers.

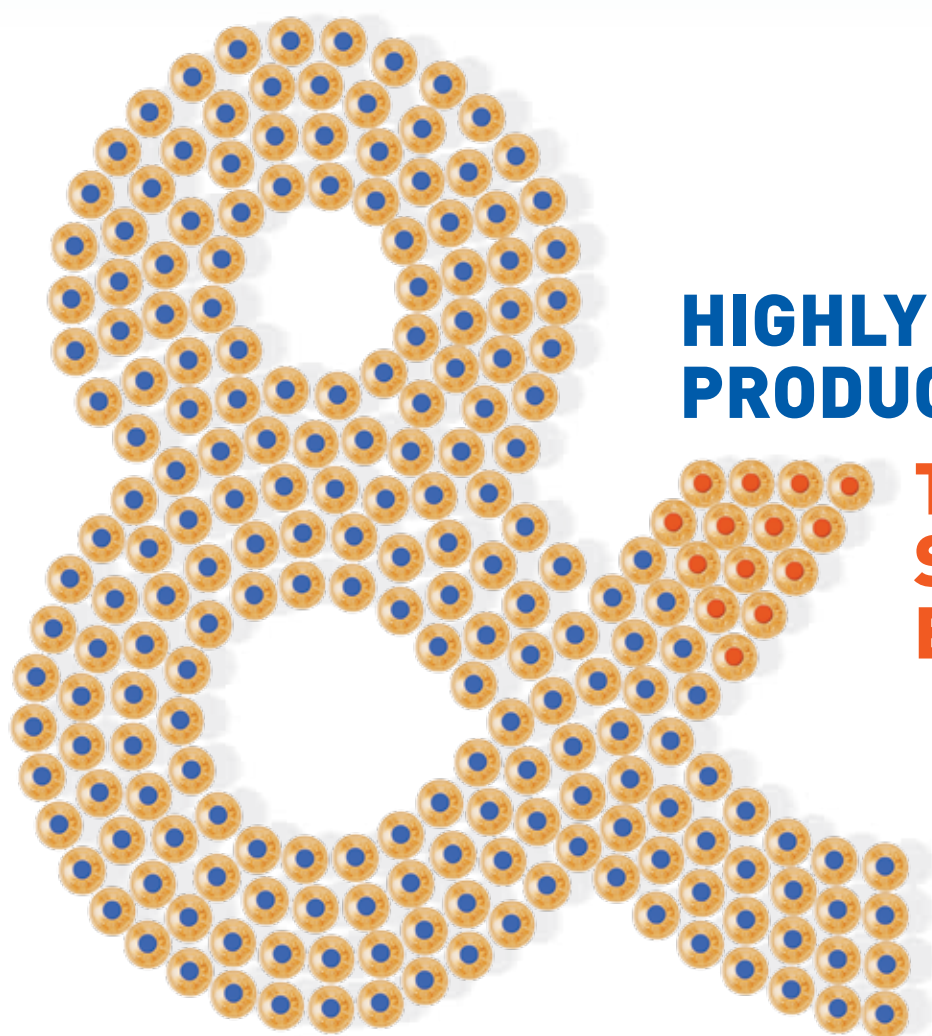
WORLDWIDE SUCCESS

Since its existence on the market, Predis™ has already experienced worldwide success. Over 5 billion bottles have been produced all over the world with the 70 dry preform decontamination systems sold thus far, generating immense cost savings and sustainability contributions. The system has been deployed for all

kinds of products sold in cold chain or at ambient temperatures – from CSD without preservatives, teas, juices and isotonic, to liquid dairy products and UHT milk. This unique technology is also available for cap sterilization with Capdis™ in a Combi configuration.

FASTER THAN EVER

Following the same economic and environmental model, Sidel has a new high-speed version of the aseptic Combi Predis™ FMa that can handle up to 48,000 bottles per hour for small containers of up to 700ml, used mainly for on-the-go consumption. This means that you can easily produce more in less time while meeting or surpassing your business objectives. Combi Predis™ FMa at high speed will also be available for larger bottle sizes in the near future.



**HIGHLY SENSITIVE
PRODUCTS**

**TOTAL FOOD
SAFETY
ENSURED**

FOOD SAFETY IS THE HIGHEST PRIORITY

The end product is a key consideration in everything we do at Sidel. And food safety is a non-negotiable, critical objective for which we accept no compromise. Our long history of providing packaging production lines, understanding end-product needs and defining equipment configurations allows us to constantly achieve and ensure food safety – and even extend your products’ shelf life.

SENSITIVE PRODUCTS REQUIRE SENSITIVE CARE

Sensitive products are defined as preservative-free microbe-sensitive beverages that require extra special care in order to achieve their expected shelf-life duration while protecting their quality, taste and vitamins. These products include juices, nectars, soft drinks, isotonic and teas (JNSDIT) as well as liquid dairy products (LDP) like fresh milks, flavored milks, drinking yoghurts or soy milks. All beverages are sensitive in some way, but these product types can more easily suffer microbiological decomposition, changes due to light, oxygen or temperature. They are therefore deemed sensitive products.



LDP

LIQUID DAIRY PRODUCTS



JNSDIT

JUICES, NECTARS, SOFT DRINKS, ISOTONICS AND TEAS



KEY CONSIDERATIONS IN BOTTLING SENSITIVE PRODUCTS

YOUR PRODUCT IS UNIQUE

There are some key intrinsic and extrinsic elements to consider when determining the best bottling solution for your sensitive products. The products' characteristics, their packages, the environments they are distributed in and your business requirements all need to be carefully evaluated and considered. Then, the optimum process and filling technology can be determined, food safety can be ensured and a positive outcome for your business can finally be attained.

PRODUCT CHARACTERISTICS & FOOD SAFETY

Defining the type of product (whether transparent, viscous or with particles) as well as the elements that require protection, such as taste, vitamins and color, is critical. A product's relative acidity (pH), nutrients, oxygen level, Brix degree (the amount of sucrose in the product), preservatives, artificial coloring and stabilizers all influence the bacteriological considerations and food safety of the products being packaged.

SHELF LIFE & DISTRIBUTION

It's important to maximize the shelf life of your products and respect their sensitivity to external elements like light or oxygen. Factors like storage time and conditions, and the shipment and distribution chain environment (whether at room temperature or refrigerated) all influence the packaging.

PACKAGING & FILLING TECHNOLOGIES

The package or cap materials used and the product production method can also affect the liquid products. Sidel has a wide range of filling technologies available to ensure the utmost protection of your products.



WHAT IS THE RIGHT SOLUTION FOR YOUR BUSINESS?

UNIQUE SOLUTIONS FOR UNIQUE PRODUCTS

The features of your sensitive products – their composition, texture, appearance, taste and flavor – are what make them unique. In order to uphold the integrity of each and every one of your products, we have a wide range of solutions in both stand-alone or Combi configurations based on the following filling methods and technologies:

Regular filling, ultra clean, ultra clean using dry preform decontamination, hot fill, and aseptic in both dry preform decontamination and wet bottle decontamination.

We also use special product treatments such as heating and advanced filling methods to protect the products when they are being filled into the bottles. And for milk and other products that are sensitive to light or oxygen, we can help you to select specific packaging barrier materials for extra protection.

For more information about which solution is right for you, please contact your local Sidel office or visit www.sidel.com.

VELOCE

Mechanical or equipped with flow meter, the Veloce is a rotary filler dedicated to filling sensitive still drinks at high temperatures. The package is sterilized by the heat of the product. The standard Veloce is a mechanical gravity level filler typically used for glass applications. It may also be equipped for PET with magnetic flow meters (Veloce FM) to ensure the highest filling precision. Available in stand alone or in Combi configuration, it can also handle beverages with particles in its configuration Veloce ISD.

SENSOFILL™ FMa

The state-of-the-art Sensofill™ FMa is an aseptic rotary filler dedicated to sensitive still products distributed at ambient temperature. The machine is characterized by its hygienic design and flexibility. It is equipped with magnetic flow meters and pneumatically operated filling valves, suitable to fill different viscosities and pulp sizes. The Sensofill™ FMa filler is available in wet and dry configuration. The Combi Predis™ FMa is the most efficient and ecological solution available on the market.

SENSOFILL™ FMm

The Sensofill FMm is a rotary filler dedicated to sensitive still drinks and liquid dairy products. Characterized by its hygienic design, it is available in configurations for LSL (fresh) and ESL (extended shelf life) products. The filling system operates by gravity, using flow meters for accurate product dosing. It is volumetric, and the dual speed filling can handle high- and low-viscosity products. Combined with the Combi Predis™, the products filled on the Sensofill™ FMm can reach a shelf life of up to 90 days, if stored in the cold chain.

HELPING YOU CREATE VALUE IS A CONTINUOUS CYCLE

OUR VALUE CREATION MAP IS DESIGNED TO SUPPORT YOU AS YOUR NEEDS CHANGE OVER TIME

At Sidel, we take a holistic approach to your bottling operations. We have technical solutions and expert know-how that cover every phase of the packaging production lifecycle, from better mold and production line designs, to more energy efficient plants and

smarter logistics solutions. Step by step, we partner with you to help you produce glass, can and PET products that are worth more in 100 ways – while keeping costs down for your business.

6 IMPROVEMENT

Based on data collected in our audits, we suggest improvement and upgrade services in the areas of:

- Packaging and tooling
- Lightweighting
- Product quality improvement
- Production hygiene improvement
- Efficiency Improvement Tool™ (EIT)
- Options and upgrades
- Advanced training and productivity coaching

5 AUDIT

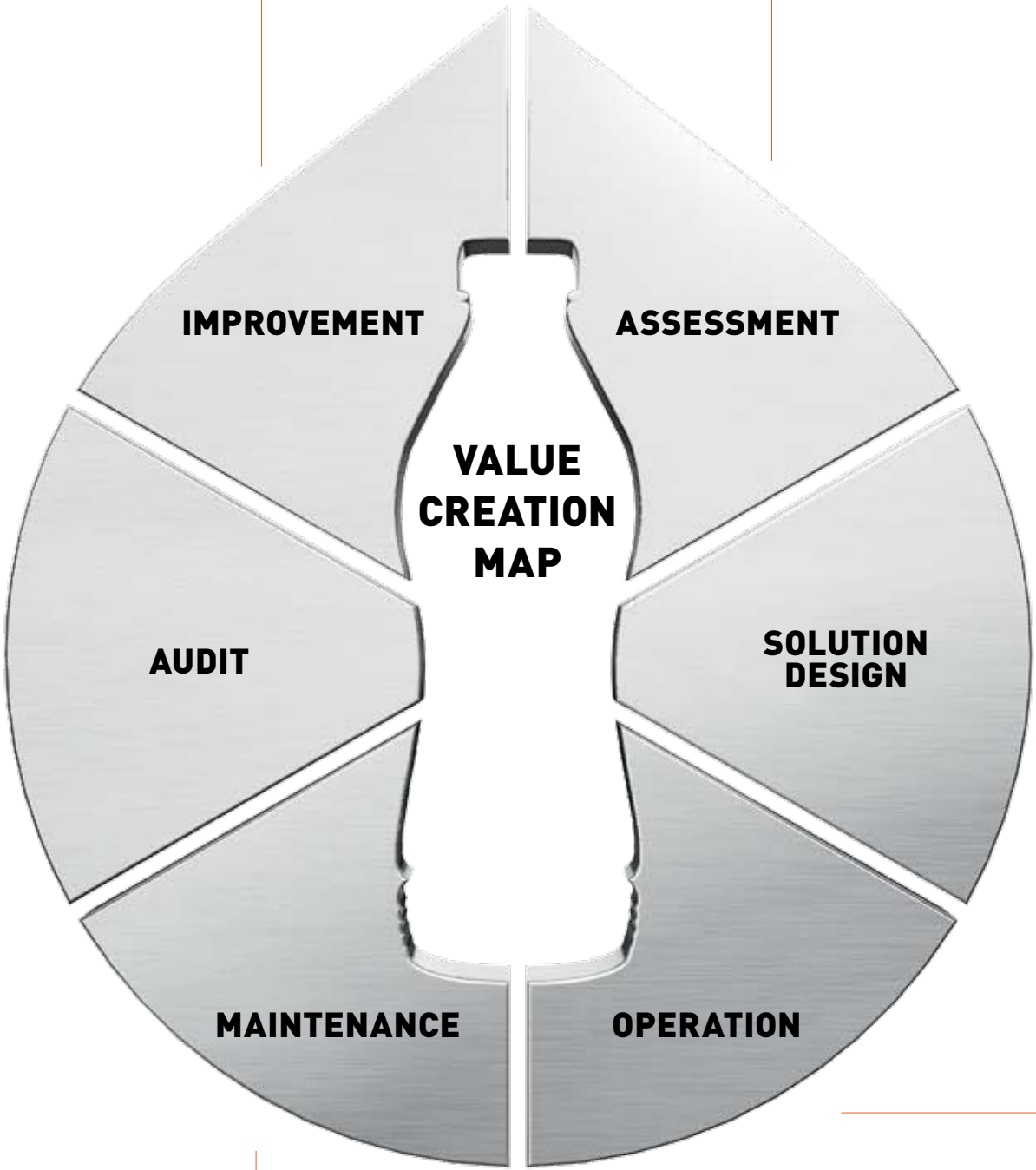
We perform regular audits to find ways of boosting your productivity and savings while minimizing the impact on the environment, providing:

- Line productivity audits
- Eco services
- Competence audits
- Sensitive production audits

4 MAINTENANCE

To ensure that your machinery continues to perform optimally and efficiently, we provide customized and proactive maintenance services:

- Diagnostic visits
- Preventative spare parts
- Overhaul
- Maintenance contracts
- Predictive maintenance
- Asset management
- Online documentation



1 ASSESSMENT

Before we start thinking about solutions, we make sure that we understand your exact needs assessing your requirements for:

- Product
- Design
- Output
- Cost
- Sustainability
- Safety

2 SOLUTION DESIGN

Then, we go to work designing a custom solution that meets your needs in terms of:

- Processing
- Bottle design and molding
- Blowing
- Filling and rinsing
- Washing and pasteurizing
- Labeling
- Conveying and wrapping
- Palletizing
- Logistics
- Line engineering

3 OPERATION

From installation and user training to technical support, we offer a full range of services to optimize your line, including:

- Installation and commissioning
- Genuine spare parts
- Field service and technical support
- Training
- Remote monitoring
- Online ordering



A GLOBAL LEADER IN A SENSITIVE WORLD

WE'RE RIGHT NEARBY ALL OVER THE WORLD

With more than 5,000 employees all over the world, Sidel has the global presence it takes to meet your local needs as they change over time. Our global sensitive products team includes world-class experts in fields such as microbiology, hygiene, product-and-packaging interaction, equipment design, packaging materials, bottle design, line engineering and project management. We have three large manufacturing sites in Europe and China, six packaging and tooling centers across five continents, and localized account and project management representatives to assist you worldwide.

We have a long history and great expertise in working with sensitive products, and this is reflected in our installed base of over 700 fillers across the globe. Our comprehensive portfolio of services and solutions allows us to consistently ensure the food safety and quality of your end products. We are always striving to be A Better Match for your sensitive products.