

ITALIAN **FOOD** processing & packaging TECHNOLOGY



*CSF Inox
Power of nature*

*High Efficiency CSF Pumps, Lower Energy Costs
and More Environmentally Friendly*



Forty years of continuous evolution



CSF INOX SPA - Strada per Bibbiano, 7 - 42027 Montecchio Emilia - RE - Italy - UE

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3 models with capacity up to 36 m³/h and pressures up to 15 bar are available; new models with higher capacity will be introduced soon.

ASH series

ASH self-priming centrifugal pumps are approved according to the 3-A sanitary standards. They are equipped with internal mechanical seal and the internal finishes of the parts contacting the pumped product are equal to Ra 0.5 µm standard.

Designed for several uses, they represent a top product, thanks to the project characteristics, materials

and technologies used. They can run with liquids and air/gas or suction pipe only partially filled. They are mainly used during the washing recovery phases and tank discharge.

CSA series

CSA Centrifugal pumps have been designed, tested and approved according to the EHEDG guidelines and 3-A sanitary standards to meet the highest hygiene requirements. The CSA versions derive from the well-known CS series, which they share the hydraulic and structural design and bearing support.

Open propeller with great

performance and low NPSH values, high-efficient volute body made by using the microfusion technique are the main characteristics of the range. The surface finish of the parts contacting the pumped product meets the requisites of the pharmaceutical 3-A standards and is equal to 0.5 µm.

Recently, the test series for the EHEDG certification have been completed even in the internal seal version. (CSF Inox - Strada per Bibbiano 7 - 42027 Montecchio Emilia - RE - Italy - Tel. +39 0522 869911 - Fax +39 0522 865454 - email: csfitalia@csf.it)



ASH pump (CSF Inox)



CSA 3A-EHEDG pump (CSF Inox).

Water-bath chiller for bags

To increase the shelf life of cooked foods beyond the five days of an ordinary refrigerated product, by preventing the proliferation of bacteria which takes place between 65° and 8°C after cooking, it is essential to quickly reduce the temperature of foods to below 8°C. This is not enough for soups, sauces, ragouts, mashed potato, béchamel sauce, and stews.

Nilma develops an innovative water-bath bag chiller, the Fastercold, which represents the essential technology in a modern, innovative Cook & Chill system.

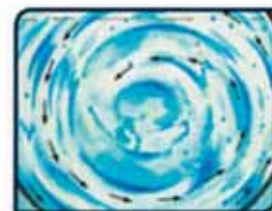
After cooking in the Mix Matic or Salsamat universal cookers, a connected

pumping system transfers the product to the bag filling machine at over 90°C. The airtight bags, produced in different weights as required, are then soaked in the Fastercold chiller. The

bag chilling time varies depending on their weight and the type of product. The Fastercold is automatically filled with refrigerated water at 2°C from a remote water cooler connected to



The Fastercold water-bath bag chiller (Nilma).



The water vortex

it. Once the chilling time has been programmed, the bags are placed in the drum. The water vortex with adjustable intensity allows the product to cool quickly and evenly. The action of the water whirlpool facilitates heat exchange between the cold water and the bags. It also moves the food around within the bag, thus enabling it gradually to reduce its heat. This provides a much higher rate of heat exchange than with the ordinary blast chiller techniques. The foods processed by the Nilma Cook & Chill method and stored at 0°C maintain their organoleptic characteristics virtually unchanged for more than

20 days. This provides a large number of practical benefits, including, production can be scheduled throughout the day and on more than one shift, stocks of food can be kept ready for use, the product characteristics can be preserved for a long time without the need of freezing, and the product can be conveniently transported to multiple distribution points.

Product, energy, time, space and labour savings are added to the advantages of shelf life of over 20 days.

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3-view X-ray inspection system

The X-ray inspection system Rayon X3 represents the latest development of the ScanVision technology. It uses a unique 3-beam X-ray technique that allows contaminant detection in the most difficult container sizes and shapes, as well as in the presence of product density variations.

The combination of 1 to 3 beams is based on the ScanVision point of view (central beam) in line with the container fill level. It is automatically adjustable to the size of the container

without operator assistance for the best possible detection accuracy.

Up to 2 additional side beams are fixed and in line with the conveyor level. At speeds of up to 60 m/min, the Rayon X3 can inspect any size of glass jars, bottles and cans, and up to 4,250 ml jars and 5 kg cans. The system has been developed in order to increase detection performances of foreign bodies that are large but also thinner than 3 mm, regardless of their orientation, even

in very big containers and in cases of strongly dishomogeneous contents. Detection accuracy is also improved for contaminants that are hidden by the side-wall areas of square and multi-edge containers.

Interferences in the processed image, caused by thickness and shape variations of the glass containers, as well as by product density variations like air bubbles, will be minimized thanks to the possibility of processing the information from 3 different images, therefore significantly reducing the number of false rejects.

The Rayon X3 can guarantee detection of foreign bodies such as glass shards, stones, metal (including iron, stainless steel, and copper), and bones, as well as high density plastics and ceramics. It is also suitable for checking the fill level with a very high accuracy.

The standard system

consists of 1 to 3 X-ray heads, in-feed, inspection and out-feed conveyors, pneumatic reject unit, and closed circuit water-cooling.

Latest software developments provide new tools for an easier operator use and product set-up (windows type GUI), including remote access for on-line technical support, data exchange with the local network, storage and management of production statistics and of machine events (type of inspected product, production date and time, counters of inspected/rejected products, images of rejects, list of commands activated by the operator).

Rayon X3 enhances quality, safety and productivity of the production lines.

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The enhanced inspection system (right) of the Rayon X3 allows to detect thin contaminants (Rayonics).