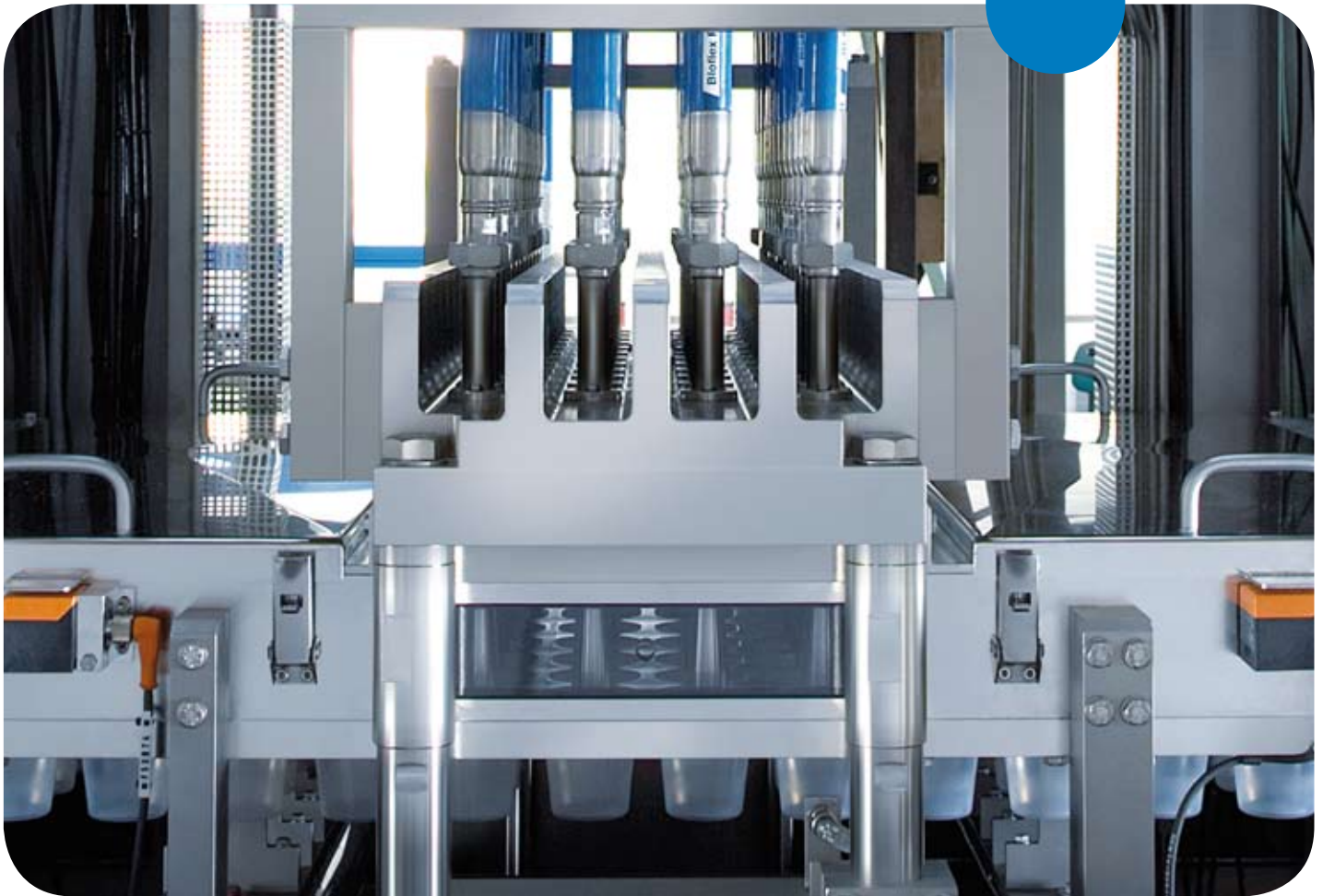


**CUP FORM FILL
AND SEAL MACHINES**
THM series



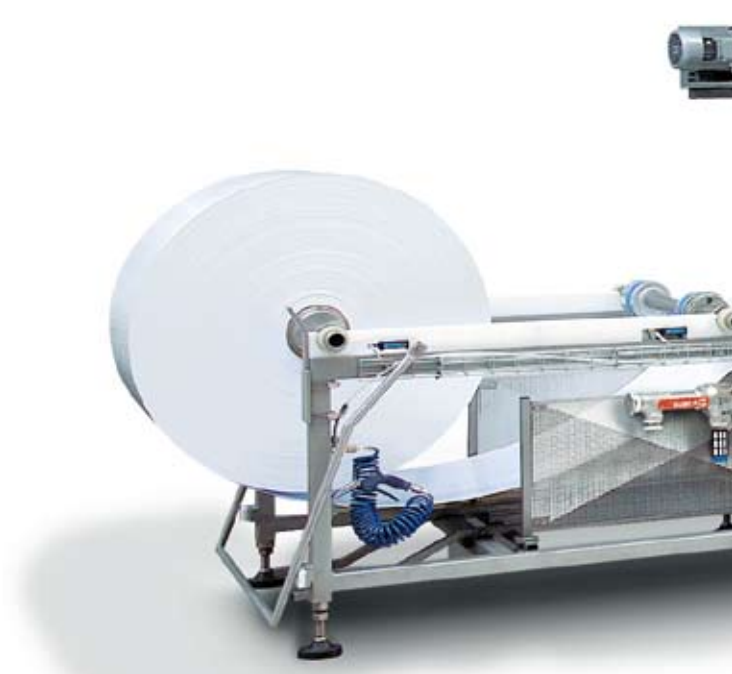
- THM 8/48
- THM 16/48
- THM 32/48
- THM 16/80
- THM 32/80

CUP FORM FILL AND SEAL MACHINES THM SERIES – EFFICIENCY, HIGH PERFORMANCE, FLEXIBILITY

Flexibility, user friendliness, reliability and economic efficiency are decisive criteria for investing in an OYSTAR Hassia cup form, fill and seal machine. Our extensive experience enables us to comply with these requirements every time, as our customers wish, in line with the product to be filled.

We combine creativity with standard solutions. This means that we adapt our technology to current market demands and special requirements, focusing on individual, future-oriented solutions with the highest economic efficiency and high product quality.

Our success in global markets is the proof of how state-of-the-art OYSTAR Hassia technology ensures you a head start over your competitors. More and more renowned companies have seen sufficient reasons to choose a cup form, fill and seal machine „made by OYSTAR Hassia“.



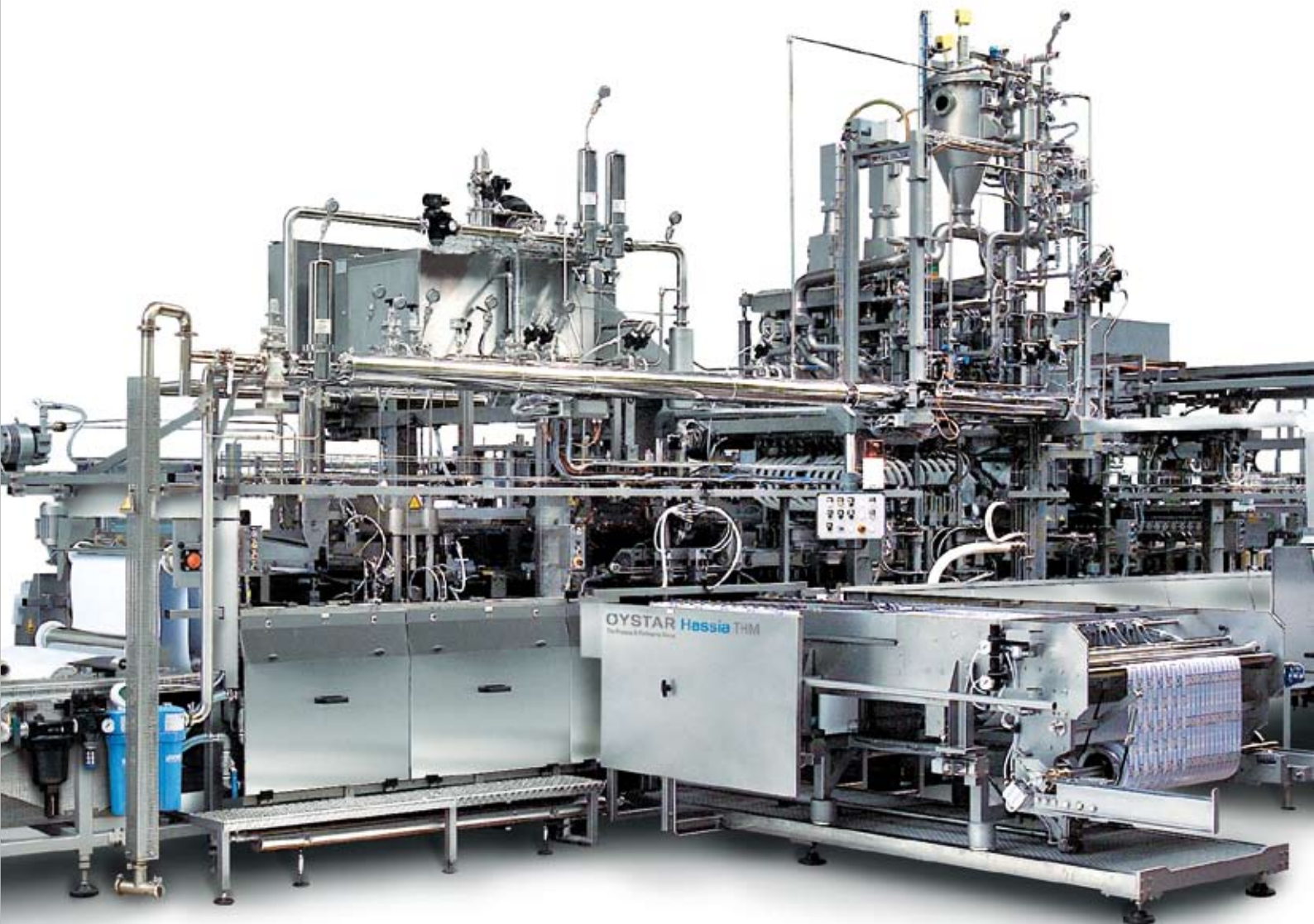
OYSTAR Hassia THM machines stand out as a result of their efficient, clever technology. An optimum working width in line with the required production capacity, short draw-off length and high speed: these are the facts underlying economic, safe and stable production.

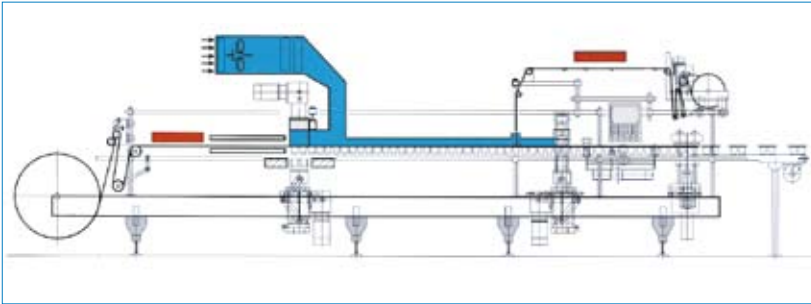
The compact construction specifically meets customers' requirements for a small footprint. The costs of investment, maintenance and spare parts are clearly reduced. In addition, the short draw-off units enable low-noise machine operation. The smaller forming surface is compensated by the high speed – up to 40 cycles a minute – so that the capacity of THM machines exceeds that of conventional systems.

Fully developed forming and punching technology, in combination with optimized labeling systems enable cup shapes and configurations to be produced which are not only attractive and appealing to consumers, but which also impress by their perfect handling and pricing.

The fact that materials suitable for recycling can be processed, the highly effective dual cavity cups and décor system with single and double-sided labeling and the wrap-around labels are just a few examples of the many benefits of our comprehensive offering.

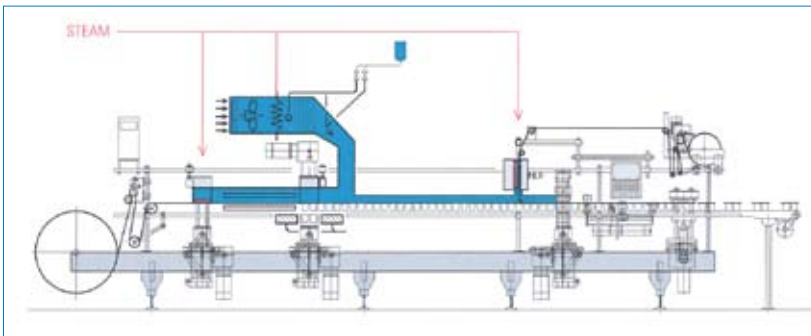
OYSTAR Hassia offers complete system concepts comprising the entire line as well as the upstream and downstream systems. This also includes product preparation and mixing units, as well as further packaging systems, such as cartoning machines and palletizers.





HYGIENIC: Tunnel cover with sterile air supply

For filling fresh products which are distributed and sold refrigerated, for example yogurt (ph < 4.5).

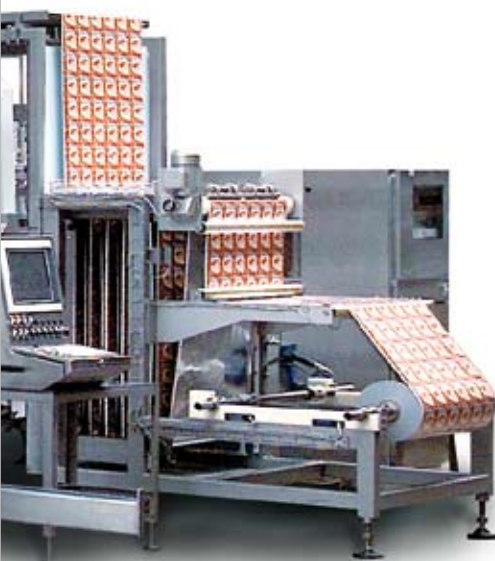


HYGIENIC ACTIVE: additional steam sterilization of the cup and lid material

For filling products with an extended shelf life which are stored under refrigerated conditions.

The advantages at a glance

- Different cup forms and configurations (e.g. dual cavity cups)
- The ability to process packaging materials which can be recycled
- Fully developed forming, sealing and punching technology
- Perfectly constructed servo technology
- Labeling systems to decorate cups on all sides
- Optimum dosing accuracy and quality
- Safe packaging to ensure that the product quality is maintained
- Extended shelf life
- Compact construction combined with exclusive, reliable construction elements
- Output performance up to 40 cycles a minute
- Complete system concept, from product mixing to end-of-line packaging systems



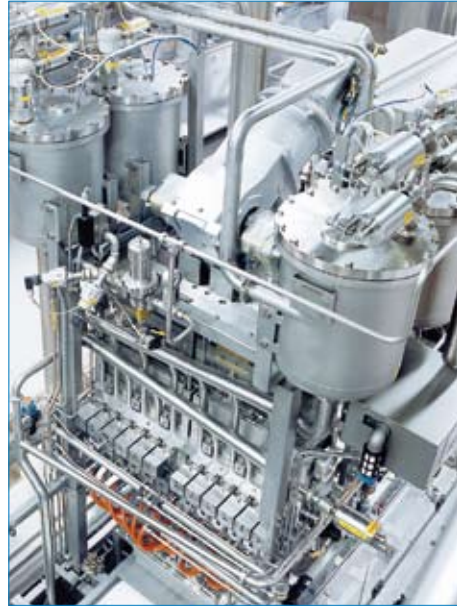
The **main specifications for the THM series** explained. The example used concerns cups of stirred yogurt – filling volume 125 g:

THM 8/48	THM 16/48	THM 32/48	THM 16/80	THM 32/80
6-up	16-up	24-up	24-up	48-up
40 cycles	40 cycles	35 cycles	35 cycles	30 cycles
approx. 19,200 cups/hour	approx. 38,400 cups/hour	approx. 50,400 cups/hour	approx. 50,400 cups/hour	approx. 86,400 cups/hour

Size indications	THM 8/48	THM 16/48	THM 32/48	THM 16/80	THM 32/80
Draw-off length, nominal	80 mm	160 mm	320 mm	160 mm	320 mm
Working width, nominal	480 mm	480 mm	480 mm	800 mm	800 mm
Max. forming depth	90 mm	90 mm	90 mm	90 mm	90 mm
Nominal output					
Cups/hour	14.400	28.800	46.100	50.400	92.200
Drive technology	Servo-Systems				

DOSING UNITS

Several supply systems and dosing units can be installed to enable alternated dosing of different products, layered products, swirled product dosing or filling dual cavity cups with two or more components.



We design our bespoke dosing units with optimum filling accuracy, exact product tear-off and careful product handling, adjusted to the composition of the actual product and its requirements. Of course, the dosing units can be cleaned (CIP) without dismantling and sterilized (SIP) if required.

An important point of attention for the Hassia engineers during the design process is that the packaging must be safe to ensure that the quality of highly sensitive products is maintained. OYSTAR Hassia dosing units comply with the most stringent requirements as regards hygiene, flexibility and capacity. The filling systems used enable an optimum accuracy and an exact product tear-off, in line with the product in question.

In addition to dosing units for liquid to highly viscous products, we also offer feeding devices for cereals or we integrate pick-and-place systems for your coarse products.

Swirl filler

Controlled filling of 2 products
(twisted stripe design = swirl).

This dosing unit is designed for a special prepared configuration where two products are filled into a cup by means of swirl dosing nozzles. The thermoformed web passes through the machine and the filling nozzles have to make the right rotary movement, in line with their immersion movement. Synchronization by means of a virtual axis (reference axis) and fine-tuning of several servo axes result in all elements and

functions working together perfectly. To be able to fill also two products into the cups „side by side“, the rotary movement of the swirl nozzle is switched off. Dosing pistons are responsible for the suction and ejection movements. They are driven by a crank and a servomotor. The dosing volume is controlled by the piston stroke.

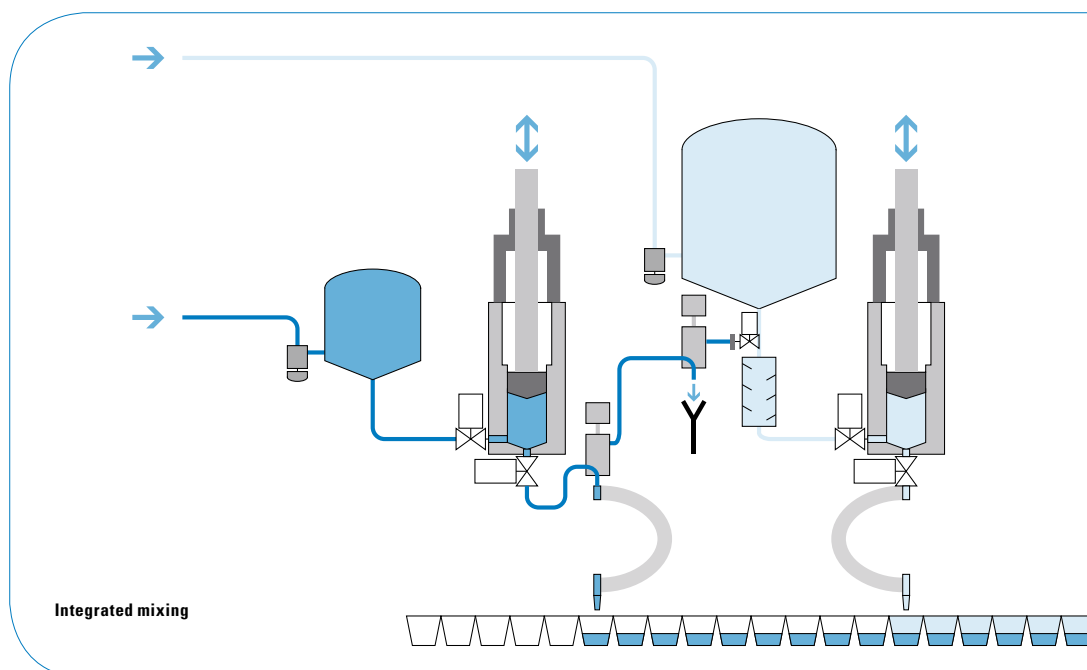


Swirl filler drive

PRODUCT PREPARATION

High-quality, complex process and filling systems are necessary to be able to comply with consumers' continuously increasing demands for innovative products. The design, construction and successful commissioning of such complex production systems require a high degree of coordination and a clear definition of the interfaces. In this respect, the OYSTAR portfolio which includes process systems offers:

- Plant engineering to ensure that the necessary utilities are supplied to the filling machine such as steam, cooling water, sterile water, compressed air and other gases.
 - Systems to clean and sterilize a filling machine and the peripheral process technology, from cleaning pumps to complete CIP stations
 - Process systems for foodstuffs processing, e.g.:
 - dosing and mixing stations to add fruit preparations
 - yogurt thermizer
 - UHT systems including a sterile tank and valve cluster for an aseptic product transfer
 - peripheral units such as climate control units for dosing cereals or yogurt incubators and cooling tunnel.
- In addition, the range of services includes validation of OYSTAR Hassia machines with aseptic tests as well as production process support and coordination.



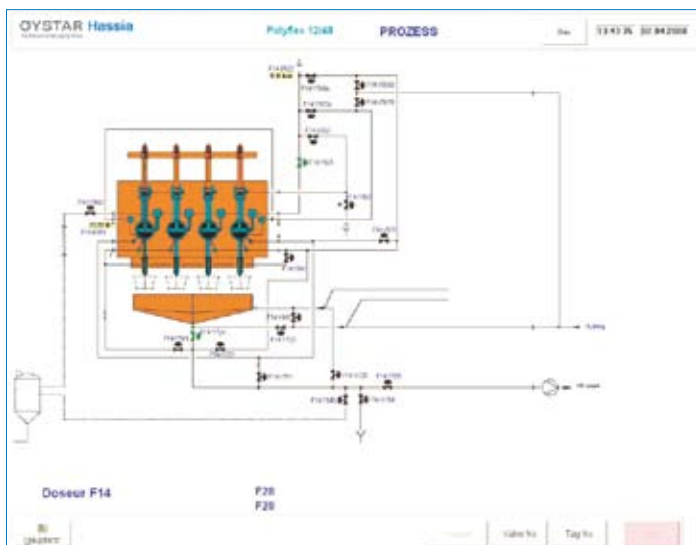
Service. Any place, any time.

- Our responsibility does not end when we have finished the development, production and delivery of your tailor-made form, fill and seal machine.
- Intensive training of your staff and detailed documentation ensure trouble-free production.
- In addition, our service engineers are available 24/7. But you can also use our remote diagnostics.

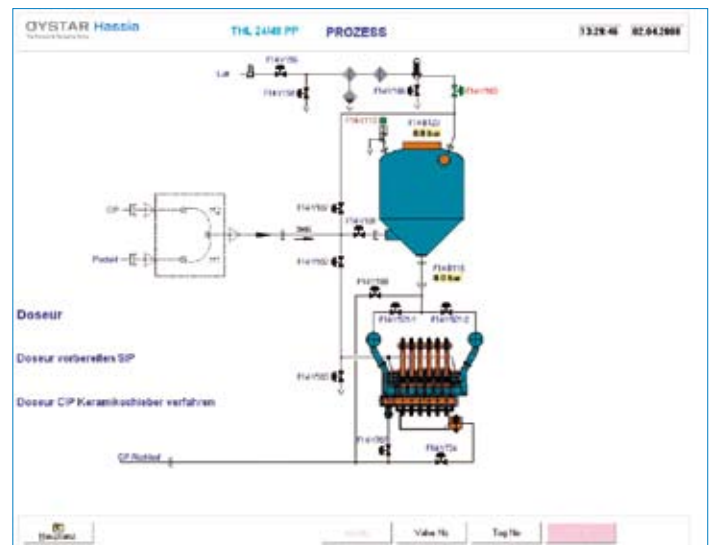
CONTROL

Key characteristics of OYSTAR Hassia control systems which are of course also featured in the THM series:

- standard use of Siemens, Elau and Rockwell Automation Systems and the OYSTAR Hassia control
- highest flexibility even with special solutions such as flow measurement, ultrasound analysis, camera systems etc.
- the possibility to use several field bus systems
- universal implementation of HMI/PLC/Motion Control concepts offered by system suppliers
- intuitive, PC-based operator concept
- integrated OYSTAR Hassia Help Desk information and help system
- graphic presentation of current machine status and expanded operator assistance
- Ethernet interfaces, Microsoft-compatible data exchange or customer-specific reports
- flexible connections to external systems
- remote diagnostics via Internet/VPN/modem with standardized remote control tools
- integrated PDA/ODA system with its own analysis functions and connection to superimposed data structures
- on-screen operation and maintenance instructions
- animated, graphic view of processes
- expanded recipe management and registration with safe user management
- EAN code analysis
- fully developed inspection and diagnostic facilities

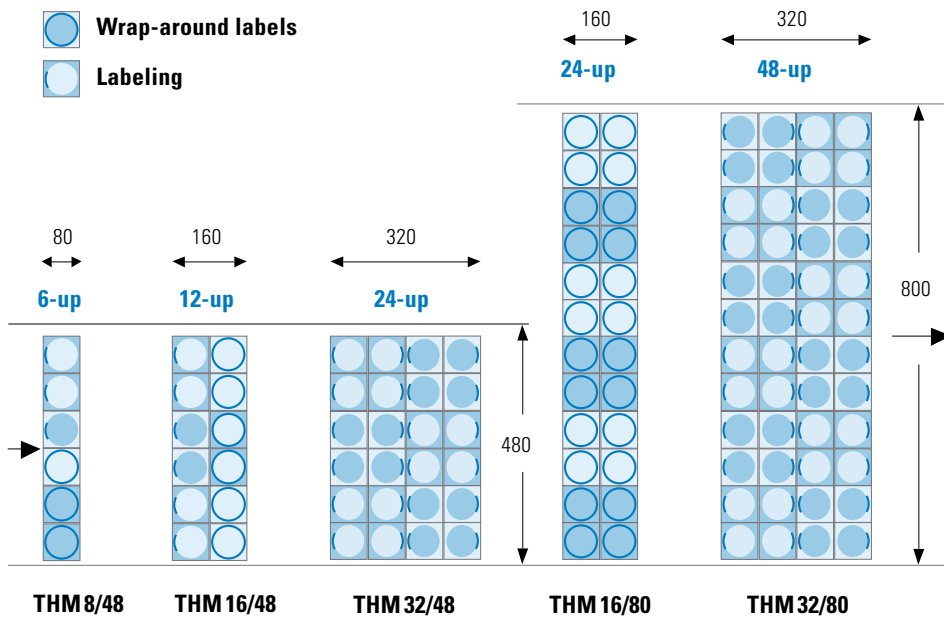


Rotary valve filler including C.I.P. mold, system prepared for rapid product change



Product hopper, valves and rotary valve filler with complete process link-up

DECOR SYSTEMS



Labeling



Wrap-around labels



1-sided labeling



Wrap-around labels



Wrap-around labels

Case Packing Systems



SPH cup transfer



The THM machine series are designed for an orderly transfer and discharge of cups into trays, display and shipping cartons and transport containers.

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