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Nassauische Sparkasse Wiesbaden  
Kto.-Nr.: 159 003 052 BLZ: 510 500 15  
Swift (BIC) NASSDE55XXX  
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Sparkasse Unstrut-Hainich  
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Thamsbrück, 29 June 2020

## **USED Suppository filling-, cooling- and sealing production line:**

**FKS-10 CP** for filling, cooling and sealing preformed plastic suppository casings.



This production line consists of:

**Filling machine type SFD-10 CP**

for filling preformed plastic suppository casings

**Product supply container**

**Cooling tunnel type KTE-10 CP**

for continuous cooling of the filled suppository casings and ovula

**Sealing machine type BST-10 CP**

for sealing the filling nozzle of preformed plastic suppository casing.

If you have any further questions, please do not hesitate to contact us.

**Filling machine type SFD-10 CP**  
for filling preformed plastic suppository casings



Production rate:	Stepless adjustment up to 10.500 suppositories per hour, depending on casing shape and viscosity of product.
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Filling stations:	2 filling stations with 17,35 mm distance.
Filling nozzle:	The filling nozzles have to be adjusted to product and production rate. Both interchangeable nozzles are firmly mounted and do not immerse into the casings.
Dosing range:	Per filling station 0,5 - 3,5 ml
Dosing range adjustment:	Stepless adjustment with machine at rest. The setting is controlled by a spindle, the numbers on the scale are only general displays.
Electrical Connections	230 Volt, 50 Hz.
Drive:	D.C. motor, 0,25 KW
Filling interval:	Stepless adjustment via drive.
Construction of dosing unit:	Dosing pistons with slide valve.

Parts with product contact:	Pump cylinder: Stainless Steel V4A 1.4404 housing: Stainless Steel V4A 1.4404 Slide valve: Hardened Stainless Steel 1.4112 Pistons and seals: Viton/Teflon
Filling temperature:	The dosing unit is designed for a filling temperature of approx. 50 degree C. The dosing unit can be exchanged for higher filling temperatures.
Housing dosing unit:	Heated by cartridge heater (2x150 Watt), adjustable with a compact control from 0 - 100 degree C. with digital display of actual- and desired temperature.
Transport system:	Designed for suppository casings with 17,35 mm distance.
Guide tracks:	Stainless Steel V2A and aluminium.
Feed table for empty plastic casings:	Situated on right side of machine with a pick-up pin for empty suppository casings, with perspex cover on the machine frame.
Working direction:	From right to left.
Working height:	865 - 900 mm, adjustable feet.
General machine construction:	Exceptionally compact and stable design for demanding and continuous operation. Easy access to all exchangeable parts for cleaning. Drive and mechanical parts in protected situation within the machine frame. Machine base plate made of aluminium with V2A steel cover. Frame cover is Stainless Steel V2A, 1.4301. The total transport area is protected by a detachable perspex cover.
Controls:	If no casings are at the pick-up point a photo cell switches the dosing unit to STOP.
Installation:	For set-up the filling machine can be operated with the separate manual controls SFD/BST.

## Product supply

Connection Dosing unit:	Heated interim container of Stainless Steel V4A 1.4404 according to drawing SFD with approx. 130 Litre contents Heated with 1 heating cartridges. Temperature can be adjusted by compact controls from 0 - 100 degree C., with digital display of actual- and desired temperature.
Electrical Connections:	230/400 Volt, 50 Hz. (Product supply container)
Electrical installation:	Completely wired according to VDE-Regulations, incl. connecting cable with CEE-plug.
Stirring unit:	A flange mixer with direct drive, type 804-008/4 attached to side mountings, positioned at an angle.
Drive for stirring unit:	D.C. Motor, 1,1 KW, 600 U/ min Stirring speed adjustable by man. Potentiometer.
Stirring tools:	Propeller stirrer with leading ring.
Material:	Shaft and stirring tools: V4A, 1.4571
Electrical Housing Unit:	The stainless steel electrical housing unit is attached to the manoeuvrable product supply container and contains:

- Main switch
- ON switch container heating
- OFF switch container heating
- ON switch stirring unit
- OFF switch stirring unit
- Controls for container heating with digital display of actual - and desired temperature and digital display of product temperature.
- Emergency OFF switch.



## Cooling tunnel type KTE-10 CP

for continuous cooling of the filled suppository casings and ovula



Output:	Stepless adjustment up to approx. 10.500 suppositories per hour, depending on container shape, filling- and cooling temperature.
Electrical Connection:	230 Volt, 50 Hz
Drive transport system:	D.C. motor, 0.25kW, stepless speed adjustment via potentiometer.
Design of cooling unit:	Air cooled condenser, completely equipped with High Pressure Switch, TÜV tested and filled with refrigerant.
Layout of cooling unit:	According to client specifications (see technical drawing) either left or right, mounted directly on the cooling tunnel or outside the room. Connecting lines have to be installed by cooling technology specialist. Please specify layout in your order.
Cooling length:	Approx. 25 Metres, which means approx. 1.450 suppositories in the cooling tunnel.
Cooling system:	Cool air circulating system. Air flow opposite

	the feed direction of the suppositories. Evaporator with ventilator.	
Transport in cooling tunnel:	5 driven transport wheels feed the filled suppositories through the cooling tunnel by the filling funnels. This system guarantees damage free handling of the suppositories.	
Transport system:	Continuous over a puffer zone at in- and outlet.	
Details of transport system:	Transport wheels and outer guides are plastic, the container tracks between the transport wheels are stainless steel and aluminium.	
Form parts for transport system:	The basic design for the transport system is for suppositories with a distance of 17,35 mm between each casing and a reel height of 45 - 51 mm	
Layout of cooling tunnel:	To filling and sealing machine in L-shape, U-shape or in a line.	
Dimensions:	Length:	approx. 2.000 mm
	Width:	approx. 1.300 mm
	Total height:	approx. 1.820 mm
Working height:	865 - 900 mm, adjustable feet.	
Working direction:	From right to left.	
Dimension cooling unit:	Length:	approx. 520 mm
	Width:	approx. 430 mm
Electrical Control:	By initiators: <ul style="list-style-type: none"> <li>• enough suppositories at inlet – transport system switches „ON“</li> <li>• puffer zone at inlet empty – transport system switches „OFF“</li> <li>• enough suppositories at outlet – sealing machine switches „ON“</li> <li>• puffer zone at outlet empty – sealing machine switches „OFF“</li> </ul>	
Construction:	Exceptionally compact and stable construction for demanding continuous use. Drive and mechanical parts protected situation inside insulated cooling tunnel. Cooling tunnel frame and housing are Stainless steel V2A, 1.4301.	

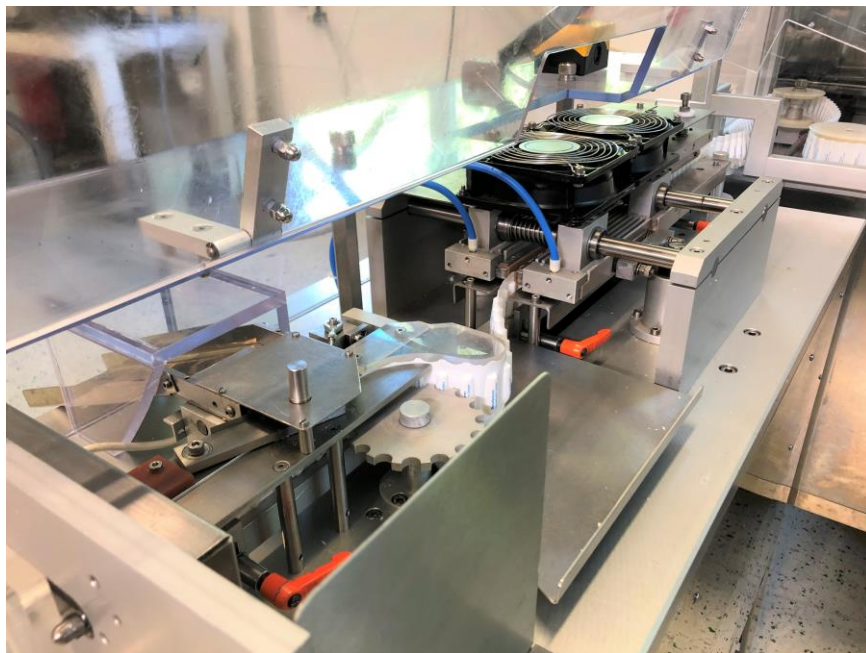
Base plates for the transport system are aluminium. The whole length of the cooling tunnel can be reached through two overhead perspex covers.



### Sealing machine type **BST-10 CP**

for sealing the filling funnel of preformed plastic suppository casings with following working stations:

- station for sealing the openings
- station for cutting/trimming the sealed openings
- printing station for coding the suppositories with batch number and 'best before date', choice of blind copy or coloured background
- cutting station for required package quantity (strip units)



Production rate:	Up to approx. 10.5000 suppositories per hour, stepless adjustment, depending on shape and foil quality.
Drive:	D.C. motor 0,30 KW
Working interval:	Stepless adjustment by potentiometer.
Electrical Connection:	230 Volt, 50 Hz
Pro-Heating:	The sealing area of the opening is pre-heated before the actual sealing station.
Design of Pre-Heating:	U-shaped channel in special design of aluminium with teflon cover.
Pre-Heating temperature:	Stepless adjustment at compact control and regulated by Pt-100 gauge. Digital display of desired- and actual temperature.

Sealing station:	Individual sealing heating adjustment by potentiometer for the front and back sealing station.
Display of pre-set sealing temperature:	Measuring instrument with scale.
Sealing bands:	Special steel with teflon coating.
Heating jaws:	Aluminium.
Cooling heating jaws:	With 2 axial ventilators, output approx. 2 x 20 Watt.
Transport system:	Design for suppository- and ovula-casings with a distance of 17,35 mm between each casing.
Pre-heating and sealing station:	At every 4th round 13 suppositories are transported in and out of the sealing station and then individually transported through a puffer zone into the trimming- and coding station.
Trimming station:	The sealed openings are trimmed across the top edge.
Required packaging quantity:	Adjustable from 1 - 999 units.
Coding station: strip units	The strip units are printed with all legal and/or client specific information.
Printing procedure / relief print:	Here, metal starch are constructed with the aid of a printing appliance with required information and then stamped via the sealing jaw heating.

## Working method of total plant

The packed suppository casings are manually placed on the working table, the protective packaging removed, and the empty casings fed into the guide track and pushed up to both filling stations.

The empty casings are intermittently moved along the transport system under the filling station and filled with the predetermined quantity.

After filling the casings are automatically transported into the cooling tunnel. They are continuously cooled while running through the cooling system.

At the end of the cooling tunnel the suppositories (the suppository mass must have set) are picked up by the transport system for the sealing machine.

At every working interval 13 suppositories are transported through the pre-heating in and out of the sealing station and the filling funnels are sealed.

After the sealing station a single transport track picks up the casings and transports them to the trimming-, printing- and cutting-station.

In the cutting station at the end of the sealing machine the casings are cut to strips with the desired packaging quantity.

## Plant layout:

See technical drawing

- L-shaped layout
- U-shaped layout

Please specify layout in your order.

Casing material:	PVC/PE, PVC/PVDC/PE and foil with condensation barrier
Dimensions casings:	Designed for suppository casings with a distance of 17,35 mm between each casing and a reel height of 45 - 51 mm.
Casings:	On reels, printed or unprinted. Reel diameter approx. 500 mm
Casing supplier:	CP-Citopac GmbH Am Schloßberg 1 D-99947 Thamsbrück (see enclosed company brochure) <b>You can find also a supplier in Cairo</b>
Before delivery the plant is tun-run using suppository, casings supplied by CP-Citopac GmbH	
Required samples / test material	If the plant is not to be run using CP-Citopac suppository casings we require 3 reels of each suppository size. These samples are to be delivered to us free of charge and within 6 weeks of placing the order.
Comment	The plant is delivered and test run with casing specifications as agreed. CP-Citopac GmbH will complete a final report upon installation.
Test run	The complete plant can be test run under working conditions at CP-Citopac GmbH.
Installation and set-up at plant	If required, installation and set-up of the plant and instruction of operating personnel can be supplied by our fitters.
Documentation	Instruction manual Conformation calibration Material-certificate Spare part list

Technical details subject to alterations.