

KRONES Viscofill

The piston-type filler for food products  
with exacting demands

**MW**  
MACHINERY WORLD

 KRONES

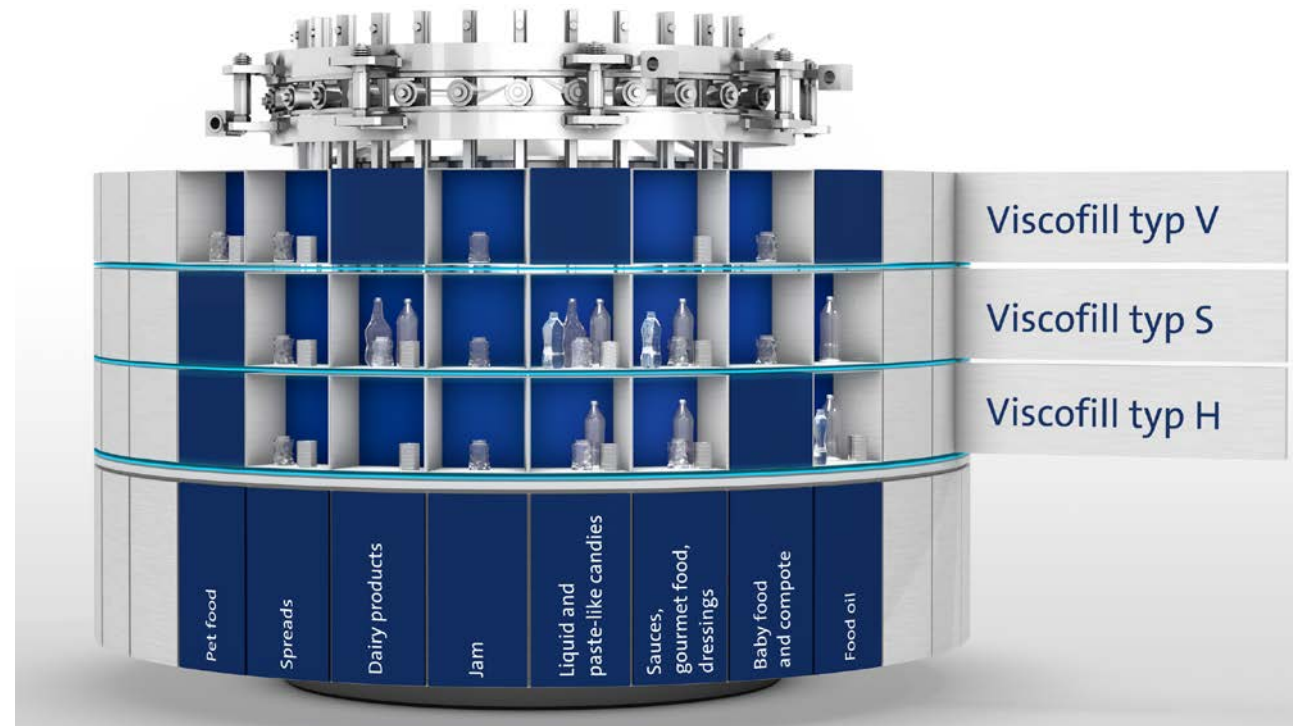
# KRONES Viscofill

## As individual as your product

Food products impose a wide range of demands on the filling process: Some want to be handled very gently, others want to be accurately measured. Some feel at ease only in an immaculate environment. Others are untidy by nature, forming threads or stubborn droplets whenever they get the chance.

For all these products – and their manufacturers – there is good news from KRONES: The Viscofill series offers a perfectly matching answer to each of these challenges.

How it does it? With a unique combination of tried-and-tested technology and innovative ideas. Namely: Viscofill machines combine the classical principle of piston-based filling with state-of-the-art filling, automation and cleaning systems – ensuring that you and your product will never need to make any more compromises.



*For every product there is a system to match:  
The Viscofill series offers perfectly matching  
answers for a very wide range of food products  
and containers.*

# One family, many talents

## The Viscofill series ...



- **handles your product gently:** Filling functions and transport routes are designed to ensure that the product is not damaged by the machine on its way through the machine – not even products containing whole fruits or large chunks.

- **sparkles with its hygienic design:** The drive and filling areas are hermetically separated from each other. A bevelled tray made of stainless steel catches all the product and media residues and discharges them without trace via a central drain. This keeps the machine and hall floor hygienically clean.

- **ensures exactly filled quantities:** The fill quantity is precisely defined via the piston travel. Thanks to the Viscofill V, compromises on precision are no longer needed even for products containing large chunks. The specialist for tough jobs works with a 180° rotary valve which lets particles of up to 40 mm pass unharmed.

- **takes up little working time:** An easy operating concept and tool-free change-over of handling parts save valuable working time in the daily production routine. Depending on the requirements and machine type, the piston-type fillers clean themselves fully automatically, without manual intervention or dismantling work.

- **works cleanly and without dripping:** Product residues on the valve or splashes on the neck finish? Not with machines from the Viscofill series: To prevent soiling and losses, high-viscosity and thread-forming products are severed from the discharge with a sharp cut.

- **cope masterfully with numerous tasks:** The machines can be equipped with various filling and cleaning systems and are available in several degrees of automation. This makes them suitable for completely different sectors, products and containers.

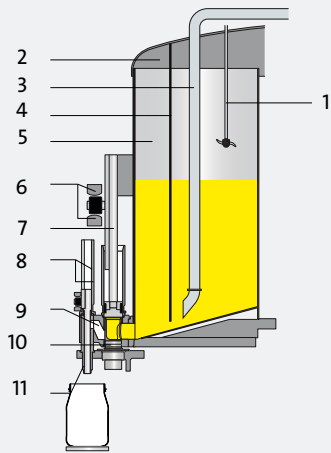
- **adapts flexibly:** The machines can be integrated seamlessly into different line layouts and block concepts. They are compact in design and permit the direction of rotation and machine discharge to be individually configured .

- **draws on the huge pool of KRONES know-how:** KRONES has been developing and building innovative solutions for the bottling industry for decades – ranging from stand-alone machines to lines and complete production facilities. The Viscofill series now makes this wealth of experience available without restriction to the food industry as well.



# Viscofill V

## Gets even large chunks into the glass safe and sound



- 1 Rotary spraying device
- 2 Hopper cover
- 3 Product feed
- 4 Level probe
- 5 Hopper
- 6 Piston control cam
- 7 Piston
- 8 Product plunger
- 9 Siphon
- 10 Vertical rotary valve
- 11 Discharge

### Method of operation:

To measure the fill quantity, the vertical rotary valve opens the route from the product hopper to the filling cylinder and the required amount of product is drawn into the cylinder by the piston stroke. As soon as the piston arrives at its top dead centre, the valve reverses: With a 180° rotation it blocks the route to the hopper and simultaneously clears the way for the filling. The piston moves back down and conveys the product out of the cylinder and via a siphon to the outlet channel. From here the entire product is pushed out by a plunger into the container.

### The rotary valve ...

- is controlled pneumatically.
- lets chunks of up to 40 mm pass unharmed.
- is low-wearing and insensitive to damage by foreign bodies.

### The siphon ...

- directs the product gently from the filling piston to the outlet.
- prevents uncontrolled emptying during machine stoppages.

### The outlet channel ...

- fills hygienically by the free jet principle.

### The product plunger ...

- actively empties the content of the outlet channel into the container.
- cuts off the product flow with near-zero dripping.

### The central product hopper ...

- has a slanted bottom to counteract any sticking of product residues.
- uses an agitator to ensure the homogeneity of the product.
- can be emptied completely via a draining device.

### The cleaning system ...

- works fully automatically.
- requires no removal of the valves.
- automatically uncovers all the parts which come into contact with the product.
- is equipped with matching cleaning nozzles according to requirements.



# Viscofill V

## Benefits to you

### No mess

The Viscofill V takes special care during filling in order to prevent product losses. By actively emptying each outlet with a separate plunger it ensures two things: that no product residues remain in the channel and that each filling operation comes cleanly to an end.

### A small detour on a relaxing journey

So that the product looks just as appetising after filling as before, it passes through a siphon after it leaves the filling cylinder. This prevents pieces of fruit and other sensitive particles becoming damaged on their way into the narrow outlet channel.

### Cutting instead of squashing

Both the vertical rotary valve and the plunger in the outlet channel cut off the product strand exactly. Particles and large chunks are not squashed but precisely severed.

### When is the Viscofill V the right choice?

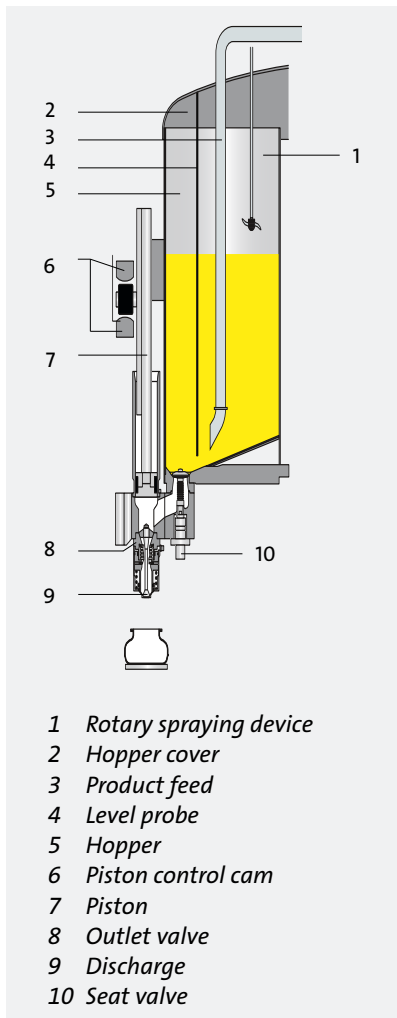
When you are looking for a filling system which ...

- treats sensitive particles gently.
- gets chunks of up to 40 mm into the glass safe and sound.
- is easy to operate and can be cleaned automatically.
- offers a maximum of hygiene and reliability.
- ensures exact fill quantities.



# Viscofill S

## The flexible all-rounder



### Method of operation

The product is drawn in and pushed out by a separate, pneumatically controlled valve in each case: To measure the fill quantity, the intake seat valve opens the route from the central hopper to the filling cylinder and the product is drawn into the cylinder by the piston stroke. As soon as the piston arrives at its top dead centre, the intake valve closes and the outlet valve opens. The piston moves down and conveys the product into the container placed centrally underneath. When the filling cylinder is empty, the outlet valve closes and the filled product leaves the machine.

### The valves ...

- are controlled pneumatically.
- permit exact product amounts.
- are rugged and low-wearing.

### The outlet ...

- fills hygienically by the free jet principle.
- cuts off the product flow with near-zero dripping.

### The central product hopper ...

- has a slanted bottom to counteract any sticking of product residues.
- uses an agitator to ensure the homogeneity of the product.
- can be emptied completely via a draining device.

### The cleaning system ...

- works fully automatically.
- requires no removal of the valves.
- is equipped with matching cleaning nozzles as required.



# Viscofill S

## Benefits to you

### Hygienic and no touching

The Viscofill S fills by the free jet principle – all contact between the outlet and the container is ruled out. The product and the container are reliably protected therefore from hygiene risks and damage.

### Nothing is lost

Small details with a great impact: The bottom of the central hopper slants downwards. As the result there is little chance of the product sticking and not being caught up in the filling operation.

If required – for example after cleaning – a draining device can be used to empty out the complete hopper contents.

### One for all

Versatility is the strong point of the Viscofill S. As a flexible all-rounder it copes masterfully with a wide range of products. But what happens if something out of the ordinary is added to the work schedule? Then it simply adapts to the new situation whatever it is – with quick-change filling attachments that are fitted with a twist of the wrist.

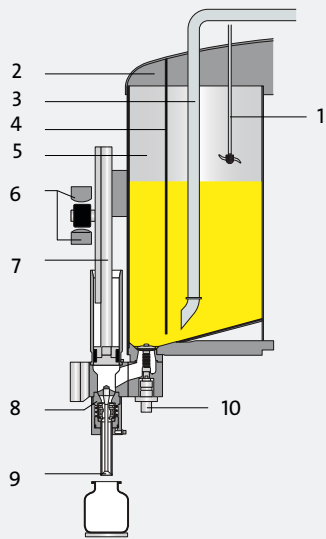
### When is the Viscofill S the right choice?

When you are looking for a filling system which ...

- reliably processes a wide range of products.
- enables minimum change-over times.
- cleanly fills thread-forming products.
- is easy to operate and can be cleaned automatically.
- offers a maximum of hygiene and reliability.
- ensures exact fill quantities.

# Viscofill SL

## Unimpressed by flow limits



- 1 Rotary spraying device
- 2 Hopper cover
- 3 Product feed
- 4 Level probe
- 5 Hopper
- 6 Piston control cam
- 7 Piston
- 8 Outlet valve
- 9 Discharge
- 10 Seat valve

### Method of operation:

The container is lifted to the point where the outlet pipe dips into it. The product is drawn in and pushed out by a separate, pneumatically controlled valve in each case: To measure the fill quantity, the intake seat valve opens the route from the central hopper to the filling cylinder and the product is drawn into the cylinder by the piston stroke. As soon as the piston arrives at its top dead centre, the intake valve closes and the outlet valve opens. The piston moves down and conveys the product into the container. So that the outlet does not come into contact with the already filled product, the container is lowered during the filling. When the filling cylinder is empty, the outlet valve closes and the filled product leaves the machine.

### The valves ...

- are controlled pneumatically.
- permit exact product amounts.
- are rugged and low-wearing.

### The outlet ...

- cuts off the product flow with near-zero dripping.
- dips into the container without touching the filled product.
- prevents air inclusions in products with a rheological flow limit.

### The central product hopper ...

- has a slanted bottom to counteract any sticking of product residues.
- uses an agitator to ensure the homogeneity of the product.
- can be emptied completely via a draining device.

### The cleaning system ...

- works fully automatically.
- requires no removal of the valves.
- is equipped with matching cleaning nozzles as required.





# Viscofill SL

## Benefits to you

### Dipping without air bubbles

On the Viscofill SL, the outlets dip into the containers and fill them from the bottom up. Products with a flow limit are thus protected against air inclusions. But don't worry: No contact occurs between the filling unit and the container. During the filling operation, the containers are lowered and kept at a safe distance.

### As though nothing happened

Thread-forming and viscous products are inclined to stick to the valves or form droplets. The Viscofill SL knows how to prevent both. It simply severs the product flow at the outlet with a single sharp cut. As the result the product leaves practically no trace even at high speeds – neither on the machine nor at the neck finish.

### Nothing is lost

Small details with a great impact: The bottom of the central hopper slants downwards. As the result there is little chance of the product sticking and not being caught up in the filling operation. If required – for example after cleaning – a draining device can be used to empty out the complete hopper contents.

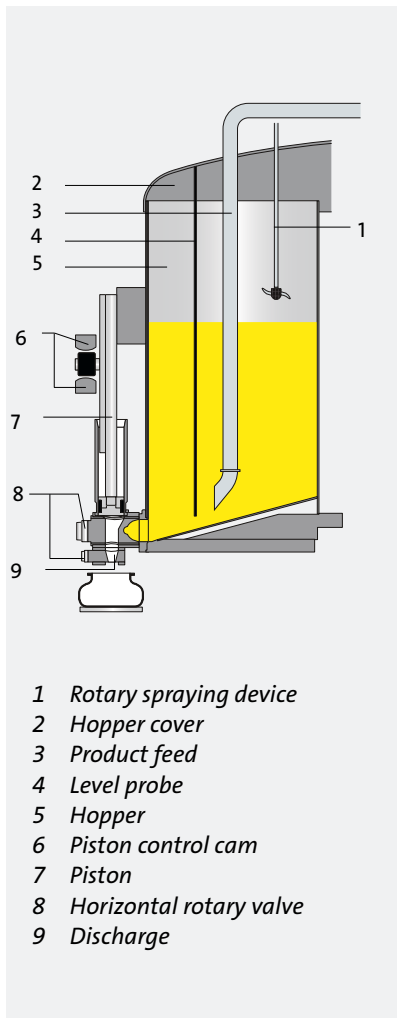
### When is the Viscofill SL the right choice?

When you are looking for a filling system which ...

- fills products with a flow limit without creating bubbles.
- cleanly processes thread-forming products.
- is easy to operate and can be cleaned automatically.
- offers a maximum of hygiene and reliability.
- ensures exact fill quantities.

# Viscofill H

## The cost-efficient multi-tasker



### Method of operation:

To measure the fill quantity, the horizontal rotary valve opens the route from the product hopper to the filling cylinder and the product is drawn into the cylinder by the piston stroke. As soon as the piston arrives at its top dead centre, the valve reverses: With a 90° rotation it blocks the route to the hopper and simultaneously clears the way for the filling. The piston moves down and conveys the product into the container placed centrally underneath. When the filling cylinder is empty, the outlet valve closes and the filled product leaves the machine.

### The valves ...

- are controlled mechanically.
- permit exact product amounts.
- are rugged and low-wearing.
- permit automatic correction of the filling volume during production.

### The outlet ...

- fills with zero contact by the free jet principle.
- cuts off the product flow precisely.
- adapts flexibly with its quick-change attachments to a very wide range of products

### The central product hopper ...

- can be emptied without loss via an outlet in the bottom.
- ensures with an agitator the homogeneity of the product.

### The cleaning system ...

- works semi-automatically.
- requires only a minimum of manual intervention.
- is equipped with matching cleaning nozzles as required.





# Viscofill H

## Benefits to you

### Equipped for every task

The filling unit of the Viscofill H can be equipped with various attachments – quickly and tool-free. With just a few adjustments the filler can be adapted to different products and their properties – regardless of whether they form foam or threads or contain particles.

### When is the Viscofill H the right choice?

When you are looking for a filling system which ...

- reliably processes a wide range of products.
- is particularly cost-efficient to operate.
- ensures exact fill quantities.
- works safely and in accordance with established methods.



# We do more.



## IT solutions

The SitePilot modular system contains IT solutions which we developed especially for the beverage and food industry. Whether you wish to increase the utilisation of your line capacity, monitor your product quality, or make spare parts handling more efficient: With SitePilot, you will always get the best result.

## enviro

High-performance technology with low consumption of resources and safety for humans and the environment – this is all guaranteed by the enviro sign. TÜV SÜD (technical control board), as an impartial appraiser, has confirmed: the enviro procedure leads to energy-efficient, media-efficient and environmentally compatible machines and lines.

## Lifecycle Service

Your company is unique – so why be satisfied with conventional solutions? KRONES Lifecycle Service will support you and your production even after the purchase of new machines. These are services which are individually tailor-made to suit your products and location.

## KRONES Academy

Turn your colleagues into high performers: The training courses provided by the KRONES Academy give you first-hand, practice-proven trade information. You will find the tailored know-how package for practically any field and hierarchy level, ranging from technical courses to management training.

## KRONES Service Line

Do you need help with a technical problem? Or do you have an urgent question about your line? No problem: We are just a call away. Just dial +49 9401 708090 for quick and straightforward assistance – in several languages, around the clock!

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