Food & drinks

The right pump for every application.

FLUX pump solutions for all applications in the food and drinks industry and the corresponding cleaning:

- Flavouring
- Ethanol
- Liquid egg
- Fruit juice and concentrated fruit juice
- Fruit purée, pulp and concentrate
- Glucose syrup and invert sugar syrup
- Honey
- Cocoa butter and chocolate
- Caramel sauce
- Food acids (e.g. lactic acid, acetic acid, citric acid)
- Marinades
- Jam
- Milk and dairy products (yoghurt, cream cheese, quark)
- Nut spreads and nut butters
- Plant-based oils
- Spirits
- Soups and sauces
- Tomato pulp and passata
- Coolant (e.g. glycol)
- Cleaning agents (e.g. caustic soda, nitric acid, hydrochloric acid)

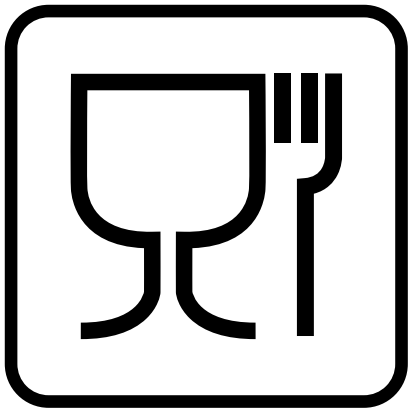
FLUX FOOD

The range of pumps displaying the glass and fork symbol

As varied as the requirements it has to meet – pump technology from FLUX

No matter whether you are decanting, filling or pumping, FLUX has solutions for all applications involving food, drinks and the corresponding raw materials, additives and processing aids. From mobile use in drums, canisters and IBCs to permanent integration in process lines. FLUX's wide range of pump technology covers applications across all viscosity classes from low-viscosity oils to high-viscosity concentrates. Highly resistant materials and components are used for safely working with aggressive cleaning agents.

The pumps of the FLUX FOOD range meet the very latest European safety standards for contact with foodstuffs. They comply with Regulation (EC) No. 1935/2004 as well as the 10/2011 (EU) “Plastic” Regulation and are permitted to display the glass and fork symbol.



The FLUX FOOD range of pumps displays the familiar glass and fork symbol.

What does the glass and fork symbol represent?

Since May 2011, (EU) Regulation 10/2011 has applied to plastics coming into contact with food. This is a specific measure of (EC) Regulation 1935/2004. For the first time ever, this puts into concrete terms the requirements of materials and objects made of plastic that are intended to come into contact with food uniformly within the European Union. It also defines the methods used for certification. Only appropriately certified products may display the glass and fork symbol.

Different assessment of risk in the EU and USA (FDA)

When we look at evaluation of the risk of approved materials in the EU, we see deviations from the requirements of the Food and Drug Administration (FDA) in the USA. The pumps of the FLUX FOOD range satisfy both the requirements of EU Regulation 10/2011 and those of the FDA and so offer major benefits for companies operating around the globe.

The FLUX FOOD range

The FLUX FOOD range includes the FP 427 FOOD and FP 430 FOOD drum and container pumps, the VISCOPOWER F 570 / F 580 FOOD progressive cavity pumps as well as certain compressed air diaphragm pump versions. All FOOD pumps are made of stainless steel. They cover a wide range of applications from pumping low-viscosity to high-viscosity fluids and can be quickly dismantled and cleaned.
The FP 430 Ex S drum pumps have explosion protection. One typical application, for example, is pumping alcohol with the FP 430 Ex S. Depending on the version used, the VISCOPOWER progressive cavity pumps and the compressed air diaphragm pumps can also be used in areas with explosion protection.

FLUX FOOD – for use in the food sector.

Advantages

- **Certified for contact with food in line with the most recent EU regulations**
- **Also certified in line with FDA requirements (for the US market)**
- **Available as versions with protection against explosion too**
- **Easy to dismantle and clean**

3A pumps for the US market

Unlike the EU Regulation and the FDA requirements, the certification required in the USA in accordance with the 3A Sanitary Standards also features specific requirements of the design properties of the pumps. Since 1995, FLUX has provided progressive cavity pumps as well as drum and container pumps, which satisfy the FDA requirements and are also 3A-certified.

FLUX solutions for the food & drinks industry

For viscous media

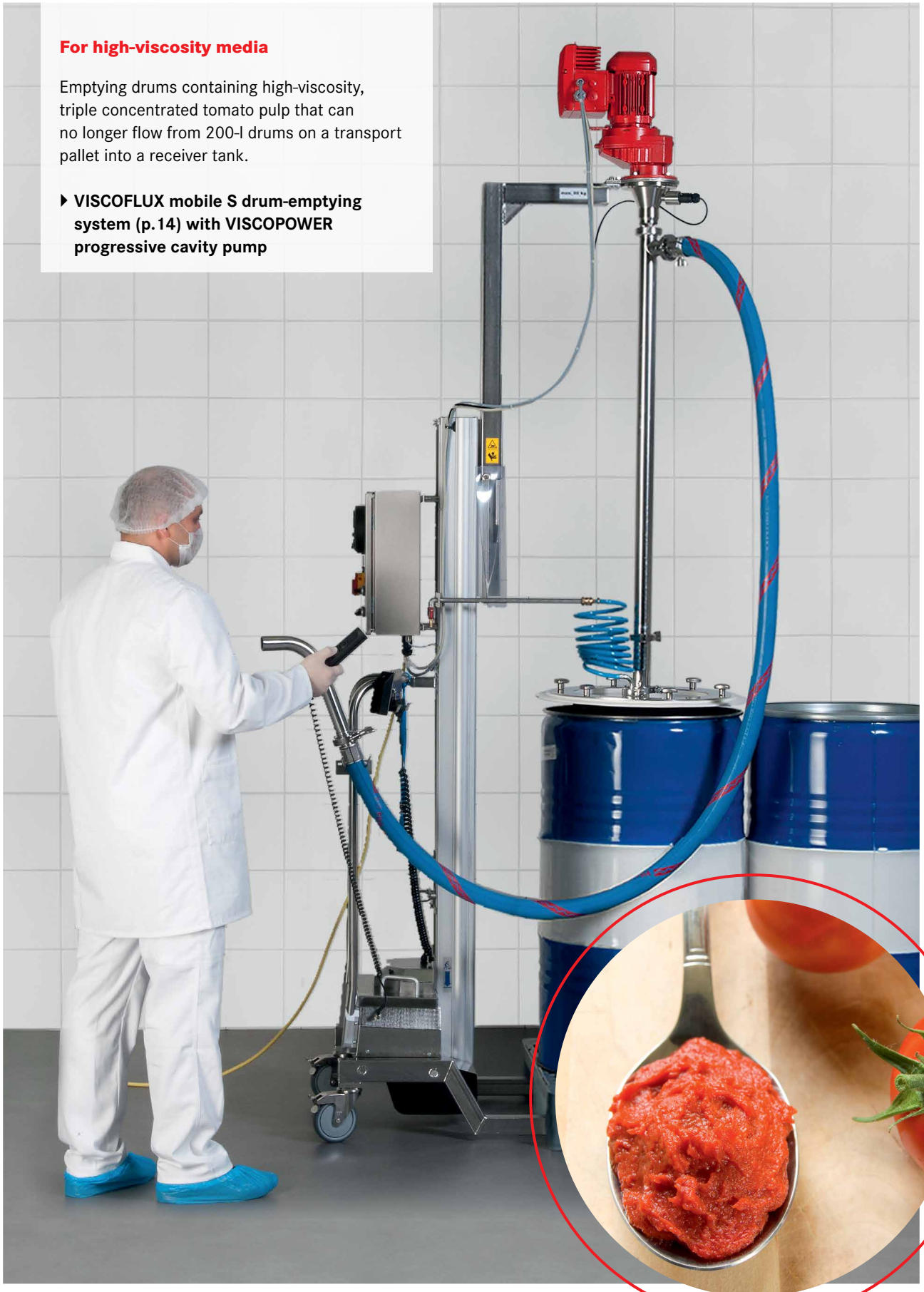
Filling viscous concentrated fruit juices and agave syrup from IBCs into stainless steel containers for further processing into alcoholic and non-alcoholic beverages.

- **VISCOPOWER F 570 progressive cavity pump (p. 12)**
- **F 457 commutator motor (p. 16)**

For high-viscosity media

Emptying drums containing high-viscosity, triple concentrated tomato pulp that can no longer flow from 200-l drums on a transport pallet into a receiver tank.

▸ **VISCOFLUX mobile S drum-emptying system (p.14) with VISCOPOWER progressive cavity pump**



FLUX solutions for the food & drinks industry

For media in an area with explosion protection

Pumping highly flammable aromatic oil from a 200-l drum into a mixing container. The quantity being pumped is registered by a flowmeter.

- **FP 430 Ex S drum pump (p. 10)**
- **F 460 Ex commutator motor (p. 16)**
- **FMO flowmeter (p. 17)**

For aggressive media for cleaning

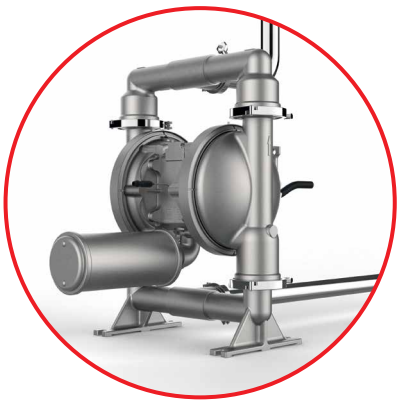
Filling 30% caustic soda from a 1000-l IBC into canisters for further use in cleaning a brewery.

- **F 430 PP drum pump (p. 11)**
- **FEM 4070 commutator motor (p. 16)**

For pumping within the process

Pumping various fruit juices containing pulp from a storage tank into a buffer tank.

- **SD compressed air diaphragm pump (p. 19)**



FLUX solutions for the food & drinks industry

For low-viscosity media

Pumping cocoa butter at approx. 40-45 °C and approx. 35–60 mPas from a stainless steel drum into a mixing vessel for further processing.

- **F/FP 427 drum pump made of stainless steel (p. 10)**
- **F 458 commutator motor (p. 16)**

For low-viscosity media

Pumping various oils out of a 1000-l IBC into a mixing vessel to produce separating agents for surface treatment in the confectionery industry

- **MINIFLUX Sanitary container pump (p. 11)**
- **F 416 Ex compressed air motor (p. 16)**

For media that is sensitive to shearing

Gentle transfer of a particularly airy dough from a charging tank into a buffer tank in order to continuously feed a baking machine. The sensitive structure of the dough is reliably retained thanks to the low-shear transfer.

- **VISCOPOWER F 580 progressive cavity pump (p. 12)**
- **Three-phase motor (p. 16)**

For media containing solids

Decanting the sour cream used for Tarte Flambée along with small pieces of bacon and onion from a mixing vessel into a receiver tank

- **VISCOPOWER F 570 progressive cavity pump (p. 12)**
- **F 458-1 commutator motor (p. 16)**

For liquid media

Decanting salad dressing (made from rapeseed oil and vinegar) from an open mixing container into a receiver vessel. The dressing is then filled into the retail pack using the pack filling machine.

- **F /FP 427 drum pump made of stainless steel (p. 10)**
- **F 457 commutator motor (p. 16)**

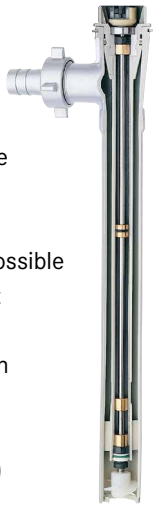
Drum pumps of the F / FP 400 series

For mobile pumping and emptying

FLUX drum and container pumps are suited to pumping various low-viscosity fluids, including those which are particularly aggressive and highly combustible. Constructed on the basis of a modular design, various pumps can be operated with the same motor. Their light weight means that the pumps can be simply carried from container to container. The motor and pump are easy to operate, ensuring short changeover times. Operators can choose from various pumps with and without a mechanical seal as well as versions for larger delivery heads and mixing pumps. A version with explosion protection is also available. Depending on the medium, the materials for the pump tube, seals, hoses, pump nozzles and appropriate drive motor are selected specifically to ensure optimum chemical resistance, temperature resistance and pump capacity.

F 430 / FP 430

With mechanical seal



Advantages/features:

- Medium is not dispersed – one pump can be used for different media
- Easy to dismantle for rapid cleaning
- Immersion lengths of up to 3000 mm are possible
- Stainless steel can be used in areas subject to explosion hazards
- Available as a variant for dry well installation

Media examples:

- Ethanol, flavours (with explosion protection)
- Spirits
- Oils and low-viscosity greases
- Lactic acid, acetic acid, citric acid

F 427 / FP 427

Can be fully dismantled

Advantages/features:

- Without mechanical seal
- Can be fully dismantled into individual parts for cleaning quickly and easily without the need for tools
- Has minimal dead space
- Medium is not contaminated by the dispersal of grease

Media examples:

- Milk
- Fruit juices (including those containing fruit pulp)
- Marinades and soups (including those containing small pieces of solid matter)

Technical data

	400 series
Container sizes	Canisters, ~ 200-l drums, IBCs, tanks > 1000 l
Flow rate max.	240 l/min*
Delivery head max.	30 MWC*
Viscosity max.	1200 mPas*
Motor drive	Electric/pneumatic
Material of pump outer tube	Stainless steel

F 427: Can be fully dismantled for cleaning and sterilisation.

* The maximum flow rate is a test bench value, measured with water at 20 °C at the pressure connector of the pump, without attachments (hose, pump nozzle, flowmeter)

MINIFLUX Sanitary
& drum pumps of the F 300 series

MINIFLUX Sanitary

The dry-installed, compact MINIFLUX Sanitary IBC container pump from the F 400 series is the ideal alternative to vertical drum pumps, especially if there is no access to the IBC from above or such access is restricted. All parts that come into contact with the product are made from materials conforming to FDA and EC 1935/2004 and are designed especially for media with challenging hygiene requirements.

- No greased seals and therefore no risk of greases getting into the medium
- Efficient residual emptying down to less than 1 % (depending on angle of inclination) of IBCs and containers with outlet at bottom
- Particularly light and compact (1.8 kg)

- **The MINIFLUX Sanitary is designed with minimal dead space and can be dismantled for cleaning purposes in 20 seconds without the need for tools**

Solutions for pumping cleaning agents

FLUX supplies not just the 400 series but also the more compact 300 series for pumping cleaning agents in the production of food and drink. This is ideally suited to smaller quantities and mobile use. As an option, also available as COMBIFLUX with a battery-powered motor for wireless tasks wherever you wish to undertake cleaning.

Technical data

	300 series	400 series
For containers	Canisters, ~200-l drums, IBCs	Canisters, ~200-l drums, IBCs Tanks > 1000 l
Flow rate max.	60 l/min*	240 l/min*
Delivery head max.	8.5 MWC*	30 MWC*
Viscosity max.	250 mPas*	1200 mPas*
Motor drive	Electric	Electric/ pneumatic
Material of pump outer tube	Polypropylene (PP), polyvinylidene fluoride (PVDF)	

300 series

400 series

Media examples:

- Caustic soda
- Hydrochloric acid
- Peracetic acid
- Hydrogen peroxide
- Phosphoric acid
- Nitric acid

- **Exclusively from FLUX:** Steel core in the inner tube (with PP and PVDF versions of the 400 series) ensures maximum stability and prevents changes in length in the event of temperature fluctuations.

VISCOPOWER progressive cavity pumps

For pumping low to high-viscosity media

FLUX VISCOPOWER progressive cavity pumps are especially suited to pumping low-viscosity to high-viscosity fluids. The positive displacement pumps work with low turbulence, under constant pressure and ensure gentle, pulsation-free pumping. All VISCOPOWER progressive cavity pumps can be used for both mobile and stationary applications, consist of very few components and are easy to dismantle.

The VISCOPOWER makes light work of the stringent requirements applicable in the hygiene sector thanks to its design with minimal dead space, the use of a closed mechanical seal and electropolished surfaces. It satisfies the EU regulation (EC) 1935/2004 and (EU) 10/2011, FDA and 3A standards as well as the ATEX directives. Either a bearing flange or gearbox can be selected as the motor connection. The VISCOPOWER can therefore be operated with all kinds of motors – be it commutator motors, three-phase motors, compressed air motors or brushless motors.

Technical data

Motor connection	F 570 gearbox version	F 580 motor flange version
Container/use	~ 200-l drums, 1000-l IBCs, tanks > 1000 l	
Flow rate max.	80 l/min*	
Delivery head max.	150 MWC*	
Viscosity max.	80 000 mPas*	100 000 mPas*
Types of motor drive	Electric, pneumatic	
Material of pump outer tube	Stainless steel (1.4404)	
Material of stator	PTFE, EPDM, NBR	

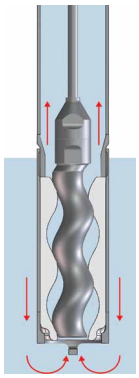
Advantages/features:

- High pumping pressure of up to 15 bar thanks to displacement device principle
- High pump capacity of up to 80 l/min
- Very quick and easy to clean
- Large range of viscosity can be covered
- Design with minimal dead space makes the pump ideal for the food sector
- Can be used vertically and horizontally
- Also available with 3A certificate
- Also available as pumps with protection against explosion

VISCOPOWER F 570 for pumping viscous concentrated fruit juice.

Pumping viscous golden syrup with the VISCOPOWER F 580 progressive cavity pump in a biscuit factory.

* The maximum flow rate is a test bench value, measured with water at 20 °C at the pressure connector of the pump, without attachments (hose, flowmeter)



Operational principle

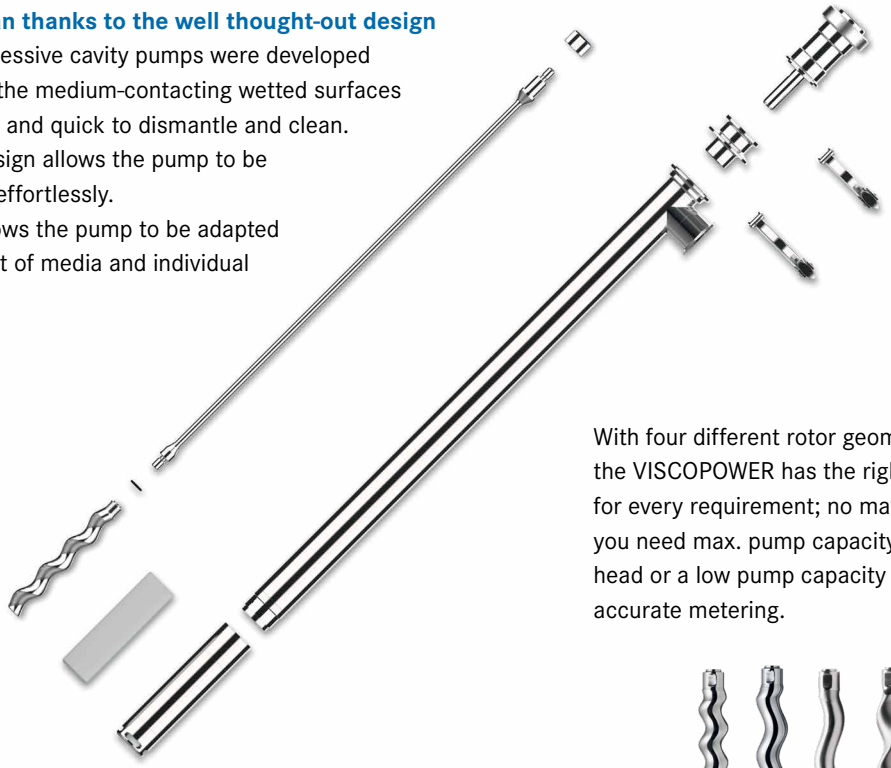
The medium to be pumped is first fed into a pumping chamber from where it is then displaced upwards. More specifically, it works using a rotating shaft in the pump tube of the progressive cavity pump. This shaft with a rotor at its lower end rotates against a fixed stator.
The worm-shaped geometry of the rotor and stator produces cavities in which the medium in question is then pumped from the suction connector at the lower end of the tube upwards to the pressure connector.

Media examples:

- Fruit purée, juice and concentrate
- Glucose syrup
- Honey (heated)
- Ketchup
- Jam
- Mayonnaise
- Dairy products (e.g. cream cheese)
- Mustard
- Viscous oils

Incredibly easy to clean thanks to the well thought-out design

The VISCOPOWER progressive cavity pumps were developed with a focus on making the medium-contacting wetted surfaces especially easy, intuitive and quick to dismantle and clean.
The well thought-out design allows the pump to be dismantled quickly and effortlessly.
The modular system allows the pump to be adapted precisely to a whole host of media and individual pumping tasks.



With four different rotor geometries, the VISCOPOWER has the right solution for every requirement; no matter whether you need max. pump capacity, the delivery head or a low pump capacity for more accurate metering.

Optional inliner suction protection

Dismantled in 30 seconds for cleaning

Open clamp on pump tube

Remove pump tube

Unscrew stator housing

Remove stator

VISCOFLUX mobile S

The autonomous solution for pumping high-viscosity media

The VISCOFLUX drum-emptying systems were specially developed for emptying lidded drums with high-viscosity contents. The VISCOFLUX mobile S system can also be used to efficiently pump high-viscosity media that can no longer flow of their own accord using reliable processes – with process times greatly reduced compared with emptying the drums by hand.
The drum-emptying system was developed for use in the FOOD industry and is also ideally suited to pumping out of conical drums with aseptic bags. There is usually no need to heat the media, which again simplifies the process.
The medium is extracted continuously and very gently by the FLUX VISCOPOWER progressive cavity pumps. The follower plate with moulded seal hermetically and hygienically seals the content and permits emptying without additional pressure. The systems make particularly efficient use of the medium, achieving almost complete drum emptying with a residual volume of < 1 % (less than 2 % for drums with inliners). This also results in reduced disposal efforts and costs as there is virtually no loss of product.

Advantages/features:

- Autonomous, mobile system thanks to movable process device
- Easy to clean
- Also for conical drums, carton and sea container drums
- Various control options are also available
- FLUX FOOD version – suited to contact with food in accordance with EC 1935/2004 and FDA CFR 21

Media examples:

- Tomato pulp (up to triple concentrated)
- Concentrated fruit juice
- Fruit purée (e.g. plums)
- Cocoa paste
- Caramel sauce
- Nut syrup and butters

The height of the process device can be reduced, making it suited to transport in an elevator too.

VISCOFLUX mobile S offers diverse control options, e.g. for batch operations.

Operational principle

VISCOFLUX mobile S is a stand-alone system that contains a process device and a pump unit consisting of a motor, progressive cavity pump and a follower plate with a process seal. The pump unit will be customised for the specific application. Steerable rear wheels make it easy to move the system to the drum.

1. Before starting, the pump unit is lowered using the lift arm until the follower plate rests on the medium.

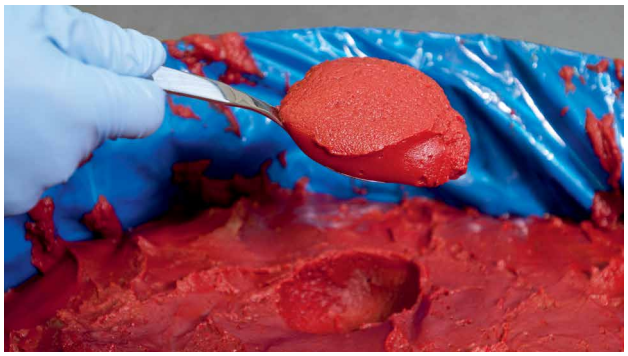
2. The pump motor is started and the lift arm and drive decouple automatically.

3. The self-priming progressive cavity pump produces a vacuum, the follower plate lowers and the medium is pumped very gently. The process seal hermetically seals the medium and ensures hygienic, continuous pumping – even when using corrugated vessels and conical drums.

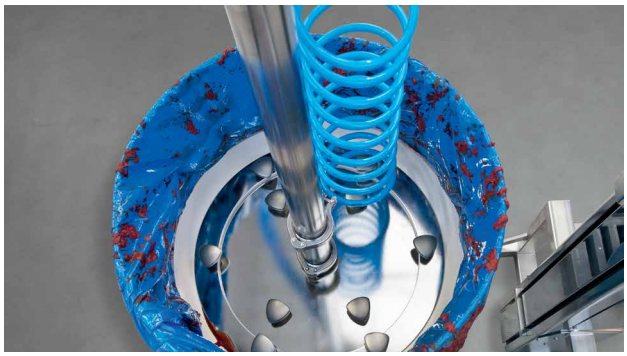
4. After pumping, the follower plate is released from the bottom of the drum by compressed air and the device moves up. Even drums with aseptic bags can be reliably emptied.

Scan the QR code to access a video showing the VISCOFLUX mobile S in action.

The VISCOFLUX mobile S features IP 66 protection and can be cleaned with a water jet.

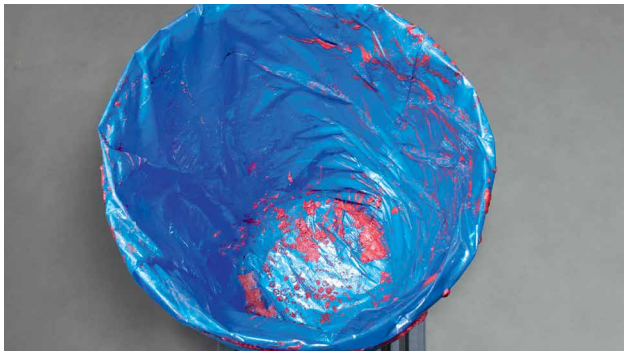


VISCOFLUX mobile S – for pumping high-viscosity, paste-like media such as concentrated tomato pulp.



Hermetic sealing of the media – processing in a closed process.

Basic food such as vegetable and fruit concentrates can be gently transferred with low-shear.



VISCOFLUX mobile S achieves residual quantities of down to less than 1 %, even for drums with aseptic bags.

Motors for the F 300, F 400, F 500 series & hoses

All the motors at a glance

A huge choice of motors is available for the food and drinks sector. These motors can be ideally combined with the various pump series depending on application.

F 458 / F 458-1

Thanks to its closed design, the **F 458 commutator motor** prevents particles and germs from being discharged – ideal for hygiene zones.
It is suited to the F 400 drum pump series for liquid media as well as the VISCOPOWER F 570 progressive cavity pumps for more viscous media.

Stainless steel motor

The **stainless steel three-phase motor** is suited to the VISCOPOWER F 580 for more viscous media that is still able to flow of its own accord.

The unpainted stainless steel housing ensures good resistance and hygiene. Thanks to IP 66, it also offers reliable protection from dust and spray.

Commutator motors / brushless motor
The commutator motors cover a huge range of different variants from the compact FEM 4070 and powerful F 457 to models with explosion protection, such as the F 460 Ex. The FBM 4000 Ex is a brushless, low-maintenance alternative to the commutator motors.

FEM 4070

F 457

F 460 Ex
F 460-1 Ex

FBM 4000 Ex

Compressed air motors
Combined with the compressed air motors, the FLUX drum pumps are not just very light and manageable, but also extremely powerful. The compressed air motors can also be used in areas subject to explosion hazards.

F 416-2 Ex

FPM 4 Ex

Three-phase motors
The FLUX three-phase motors incur very little wear and impress customers with their constant speed and high output. They are suited to the VISCOPOWER F 580 and VISCOFLUX mobile S.

Three-phase motor

Spur gear motor

Battery-powered motor
The brushless battery-powered motor for the F 300 series is not dependent on a mains supply and features an interchangeable battery, making it highly flexible. The encapsulated design prevents the emission of particles and is ideally suited to the hygiene sector. What's more, the motor requires little maintenance.

FBM-B 3100

Hoses

High-quality, food grade hoses are essential for safely pumping food and drink products. They come in various materials, lengths and diameters and can be matched perfectly to the medium and application.
With the right connections and hygienic integration, the hoses meet the most stringent of requirements.

Flowmeter & semi-automatic filling

FLUX flowmeters, constructed on the basis of the nutating disc principle (FMC), oval gear principle (FMO) or rotor turbine principle (FMT), provide the right solution for any application. Depending on model and size, they can be used on say FLUX drum pumps or for stationary applications, e.g. in pipework systems.
In combination with FLUXTRONIC® evaluation electronics for FMC and FMO, filling and metering processes for virtually all fluids can be performed with maximum precision and the greatest possible safety.
In automatic mode, signals can also be issued for control purposes. A whole host of processes can therefore be managed. In the food industry, FLUX FMO flowmeters allow delivery quantities to be registered reliably, for example, when adding plant-based oils to a mixing container.
The flowmeters are available in both stainless steel and versions made from PP or PVDF, which are resistant to chemicals, and are therefore also ideal for metering cleaning agents.

Technical data*

	FMC/FMO/FMT
Flow rate max.	380 l/min
Viscosity max.	500 000 mPas
Operating pressure max.	200 bar
Use	Stationary or mobile with drum or progressive cavity pumps

FMO 110 FOOD flowmeter with FLUXTRONIC® evaluation electronics.

FLUXTRONIC®

Thanks to the FLUXTRONIC® evaluation electronics fitted in the FMC and FMO flowmeters, there are two operating modes. While only the volumes throughput are displayed in “normal mode”, in automatic mode you can fill pre-programmed volumes of liquid semi-automatically – at the touch of a button. As soon as the desired quantity is filled, you have the option of issuing two signals. For example, a valve or drive motor can be controlled or the signal can be forwarded to a PLC.

* depending on version, material, size and medium

Accessories
For perfectly hygienic pumping and filling processes

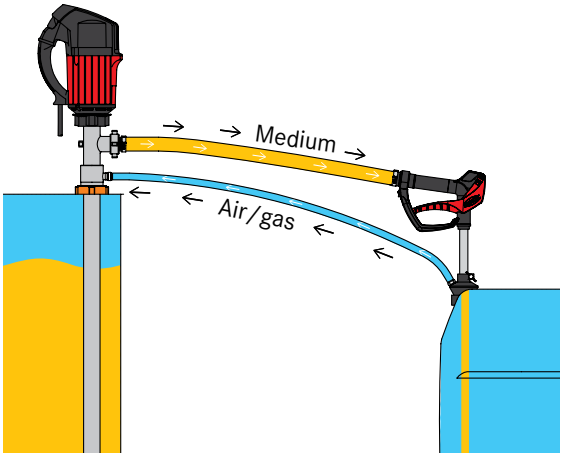
To supplement the huge range of pumps, FLUX also supplies an extensive range of accessories.
No matter whether intended for mobile or stationary use – FLUX accessories turn a FLUX pump into a tailored delivery system for any area of application and purpose. This ensures smooth and safe operation as well as simplifying the task in hand. For example, a retaining bracket and spring balancer can be used to effortlessly lift a FLUX pump out of the drum and then store it in a space-saving manner with the aid of a fixture. What's more, the accessories provide practical solutions for greater safety and efficiency. Check valves reliably protect against the medium flowing backwards, flap valves allow the flow rate to be blocked with ease, suction strainers prevent solids from being drawn in and ground cables ensure reliable earthing for conductive media.

Fume glands

For media involving vapours or odours, e.g. acetic acid, ethanol

Advantages/features:

- Hermetically seals container
- The pressure between the container being emptied and that being filled is balanced by venting valves
- The operator and environment receive optimum protection
- Motor is protected from corrosive vapours if need be
- Designed for FLUX drum pumps of the F 300, F 400 and F 500 series



Pump nozzles & discharge spout

For simple filling

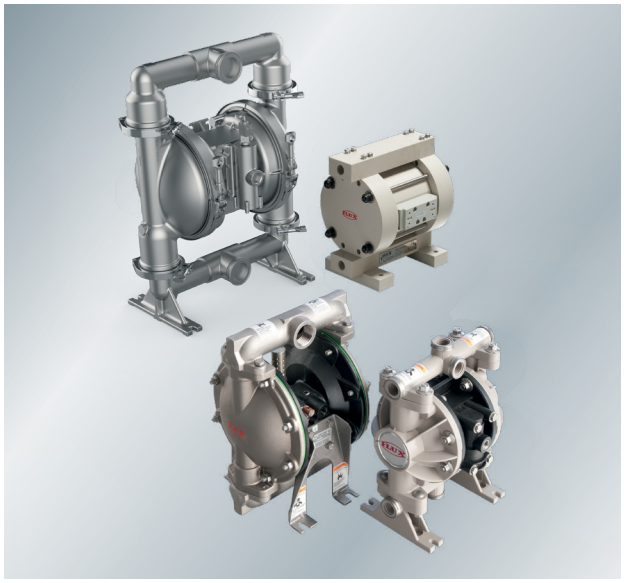
Advantages/features of pump nozzles:

- Ergonomically shaped hand lever
- Easy to operate
- Scope for fine metering
- Ball-mounted rotary joint
- Little pressure loss
- High throughput
- Can be combined with overrun stop, emission-protection cones and various outlet spouts

- With robust stainless steel fall arrest, which protects the pump nozzle in the event of falls, available as option

FLUX pump nozzles for the F 300 and F 400 series as well as a discharge spout for the VISCOPOWER progressive cavity pumps.

Compressed air diaphragm pumps



FLUX compressed air diaphragm pumps are self-priming and safe in dry operation. They are characterised by their versatility and are available in a solid design or cast/injection moulded version for a huge range of different applications.

They are designed for high pumping pressure levels of up to 8 bar and impress users with their ease of handling and other plus points. The 100% start-up safety in all shutdown positions guarantees reliability and safe operation. The flow rate can be controlled continuously by means of the amount of air used. The delivery quantity is also easy to calculate. The integrated silencer makes the compressed diaphragm pumps very quiet. What's more, the pumps require little maintenance, especially when working with pure media.

FLUX compressed air diaphragm pumps can be configured with a number of housing and diaphragm materials and are therefore suited to both food applications and pumping aggressive cleaning agents.

Media examples:

- Marinades / sauces containing solids
- Fruit juices containing solids
- Chocolate
- Aromatic oils

- Glycerine
- Cleaning agents

Technical data

	FDM/RFM/PM/SD
Flow rate max.	1040 l/min*
Delivery head max.	200 MWC*
Operating pressure max.	8.6 bar
Suction lift	When filled with product max. 9.5 m* When dry max. 4.5 m*
Viscosity max.	15 000 mPas
Size of solids max.	9.5 mm
Material of housing	Stainless steel, PP, acetal conductive, PVDF, PTFE, aluminium, cast iron
Material of diaphragm	EPDM, FKM, NBR, PTFE, Santoprene
Connections	Clamp, female thread, flange

FLUX SD20 compressed air diaphragm pump in the Hygiene Design

The SD compressed air diaphragm pump meets the most stringent of hygiene standards

- It can be dismantled without the need for tools thanks to the quick-release fastener – ideal for high-speed, thorough cleaning
- Hygienic clamp connections
- Made from electropolished 316L stainless steel (Ra ≤ 3.2 µm)
- With explosion protection, for temperatures of up to 100 °C

* The maximum flow rate is a test bench value, measured with water at 20 °C at the pressure connector of the pump, without attachments (hose, pump nozzle, flowmeter)

MAGSON magnetic centrifugal pump & SAFETEC pump set

MAGSON magnetic centrifugal pump

Regardless of whether you are working with acids or alkalis, magnetically coupled MAGSON pumps are ideally suited to pumping highly aggressive media – in the food and drinks industry, mainly in the form of cleaning and disinfection media, such as caustic soda or sulphuric acid. Safely operating standard centrifugal pumps with shaft seals, which are prone to wear, requires a lot of high tech and high financial outlays, especially if working with media which are highly aggressive or prone to crystallisation. System availability is also reduced by the fact that maintenance work has to be carried out regularly.
The benefit of sealless, magnetically-coupled centrifugal pumps (MAS), which can also be self-priming on request: hermetically sealed and require no maintenance. Thanks to the special construction, there is no need for a continuous shaft and, as a consequence, no wearing shaft seal.
The pump and drive are hermetically separated from one another by a rear casing. There is no scope for leaks.

SAFETEC pump set

Regulations relating to environmental protection, sustainability and health and safety in the handling of dangerous chemicals are becoming more and more stringent all the time. Maximum levels of safety with aggressive media: With the SAFETEC pump set, chemicals are safely and reliably removed straight from sealed IBCs or drums – without the container having to be opened at all. Thanks to an immersion tube permanently installed in the suction process, the container remains fully encapsulated and no medium can escape.
This effectively protects users because there is no longer any possibility of direct contact with dangerous or highly aggressive media, such as sulphuric acid or caustic soda. At the same time, the environment is reliably protected from leaks by the closed system. The system can also be used to measure quantities and fill containers or for batch metering.

FLUX SAFETEC with magnetic centrifugal pump in a compact panel. Also available on a cart as a mobile option

Technical data

	MA	MAS	SAFETEC pump set
Flow rate max.	950 l/min*	470 l/min*	40 l/min[2)]
Delivery head max.	42 MWC	27 MWC	13 MWC
Viscosity max.	150 mPas		
Operating pressure max.	6 bar	5.2 bar	2.5 bar
Temperature max.	80 °C	70 °C	60 °C
Suction capacity max.	–	5 MWC	5 MWC
pH value	0 – 14		
Main materials	PP / ETFE		

Media examples:

- Caustic soda
- Butyric acid
- Acetic acid
- Propionic acid
- Hydrochloric acid
- Nitric acid
- Sulphuric acid
- Hydrogen peroxide

* The maximum flow rate is a test bench value, measured with water at 20 °C at the pressure connector of the pump, without attachments (hose, pump nozzle, flowmeter)

[2)] With a 2 m DN 19 suction hose and CDS coupling as well as a 3 m DN 19 pressure hose with pump nozzle.

FLUX-FHP peristaltic pump

The ideal solution for abrasive media and media containing solids

The FLUX-FHP peristaltic pump is a powerful self-priming positive displacement pump, which impresses customers with its extreme robustness and ease of maintenance.
Its mode of operation permits gentle pumping of abrasive media and is ideally designed to efficiently pump media with a viscosity of up to 20 000 mPas, 25 % dry matter content, as well as particles with a size of up to 40 % of the hose diameter.
Given its design, the FLUX-FHP is safe to run dry and saves large amounts of energy thanks to its efficient roller principle.

In the food and drink sector, the FLUX-FHP is, for example, ideally suited to reliably transporting abrasive mash in the production of beverages as well as being a low-maintenance option for disposing of wastewater and food waste.

Media examples:

- Diatomaceous earth (for filtration processes)
- Mash in the production of beverages
- Food waste, e.g. containing fruit and vegetable peelings
- Wastewater containing solids
- Abattoir waste

Pumping wastewater containing solids: the FLUX-FHP achieves displacement volumes of up to 300 m^3/h.

Technical data

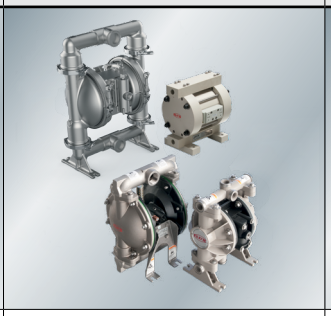
	FHP peristaltic pump
Rated volumetric flow max.	300 m^3/h
Operating pressure max.	5 bar 10 bar (as of FHP-100)
Inner hose diameter max.	200 mm
Hose material	NRH, EPDM, EPDM (FDA), NBR, NBR (FDA)
Material of housing	Polyurethane / stainless steel / steel (powder coated or galvanised)
Connection material	Stainless steel/ PP
Connections	Male thread, flange, clamp

The FLUX-FHP peristaltic pump
incurs less wear and is easier, faster and cheaper to maintain (since its hoses can be replaced) when compared with rotary piston pumps or progressive cavity pumps.
Its user-friendly design allows the hose to be easily replaced in a matter of minutes without you requiring special tools or specialist staff, keeping your systems ready for use at all times.

FLUX solutions for the food & drink industry

	Mobile pumps			
Series of FLUX pumps	**Drum pumps, 300 series JUNIORFLUX/COMBIFLUX**	**Drum and container pumps, 400 series**	**VISCOPOWER progressive cavity pumps**	
				
Typical applications in food & drink industry	Mobile filling of liquid media in smaller quantities	Mobile filling of liquid media (predefined quantities too) and/or mixing	Mobile and stationary filling of low to high-viscosity media, including those sensitive to shearing (predefined quantities too)	
Container/use	Canisters, ~ 200-l drums ~ 1000-l IBCs	~ 200-l drums ~ 1000-l IBCs Tanks > 1000 l	~ 200-l drums ~ 1000-l IBCs Tanks > 1000 l	
Flow rate max.*	60 l/min	240 l/min	80 l/min	
Delivery head max.*	8.5 MWC	30 MWC	150 MWC	
Viscosity max.*	250 mPas	1200 mPas	100 000 mPas	
Special features	▸ Brushless battery-powered motor	▸ Mixing pump ▸ 99.98 % drum emptying ▸ Pump which is easy to dismantle ▸ Also as pump sets for particular applications	▸ Pump which is very quick to dismantle ▸ Quantities can be measured without any contact ▸ Also as pump sets for particular applications	
Drive	Electric, either mains-operated or battery-operated	Electric or pneumatic	Electric or pneumatic	

* The maximum flow rate is a test bench value, measured with water at 20 °C at the pressure connector of the pump, without attachments (hose, pump nozzle, flowmeter)

	Systems	Process pumps		
	VISCOFLUX mobile S drum-emptying systems	**FDM/RFM/PM/SD compressed air diaphragm pumps**	**MAGSON magnetic centrifugal pumps**	**FLUX-FHP peristaltic pumps**
				
	Mobile and stationary filling of high-viscosity media, media that can just flow and media that is no longer able to flow (predefined quantities too)	Process pumps for liquid (including abrasive) to high-viscosity media – for small to large delivery quantities and high levels of pressure buildup	Solid plastic process pumps for particularly aggressive media	Abrasive and viscous media containing solids
	~ 200-l drum Diameter 560 mm, 571 mm conical drums	~ 1000-l IBCs Tanks > 1000 l as process pump	as process pump	~ 200-l drums 1000-l IBCs Tanks > 1000 l
	Max. 50 l/min depending on viscosity and flow properties	1000 l/min	2000 l/min	300 m³/h (or 5000 l/min)
	150 MWC	200 MWC	44 MWC	100 MWC
	Pasty	15 000 mPas	250 mPas	approx. 20 000 mPas
	▸ Also for conical drums ▸ And for sea container drums ▸ If required, quantities can be measured using bearing flange with pulse transmitter ▸ Can be integrated into processes via control unit	▸ Stroke counter can be integrated ▸ Filter presses-high-pressure pump ▸ Cycle control can be integrated ▸ Version with flap valve for semi-solid substances up to max. 50 mm	▸ Modular system ▸ Sturdy housing ▸ Different types of connection ▸ Magnetic coupling, therefore hermetically sealed ▸ Process pumps	▸ Abrasive media containing solids can be pumped ▸ Hose rupture sensor can be integrated ▸ The hose is the only wearing part in contact with the media ▸ Can be regulated using optional FC ▸ Self-priming ▸ Safe to run dry
	Electric or pneumatic	Pneumatic	Electric	Electric

The FLUX product portfolio

Drum and container pumps

Progressive cavity pumps

Drum-emptying systems

Flowmeters

Compressed air diaphragm pumps

Magnetic centrifugal pumps and filters

Filling and dosing solutions

Mixers

Peristaltic pumps

Find the right pump for your requirements quickly and easily.

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