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FLUX

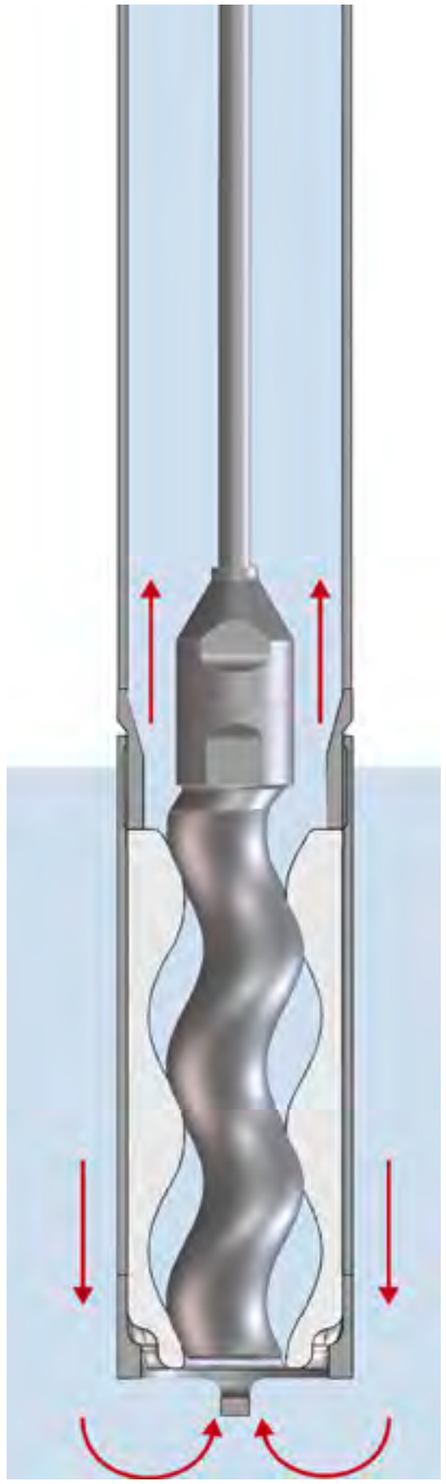
More than just pumps



VISCOPOWER

Progressive cavity pumps

F570 / F580 series



VISCOPOWER

The FLUX VISCOPOWER progressive cavity pump pumps low-viscosity to high viscosity media at up to 100,000 cPs.

The VISCOPOWER progressive cavity pump works on the principle of positive displacement pumping technology. Progressive cavity pumps can be used in almost all sectors of industry. They are distinguished by the fact that they pump constantly, gently and with low pulsation. Depending on the medium and application, flow rates of up to 13.7 GPM (52 l/min) and discharge pressures up to 217 PSIG (15 bar) are achieved.

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 sideat the lower end of the tube upwards to the discharge port.

The advantages at a glance:

- High pumping pressure up to 217 PSIG (15 bar)
- High pump capacity of up to 13.7 GPM (52 l/min)
- Gentle , low shear pumping action
- Very quick and easy to clean
- Minimal dead space makes the pump ideal for food and pharmaceutical use
- Can be used vertically and horizontally
- Can pump soft solids without damaging them

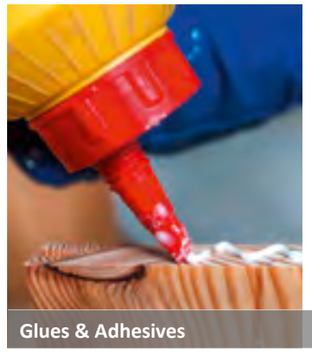
MADE IN GERMANY

FLUX products are developed and certified for use around the globe. They meet the most stringent of requirements and safety standards. Whether food, pharmaceuticals or industry - or for hygienic or hazardous areas: there are pump versions suited to every use.

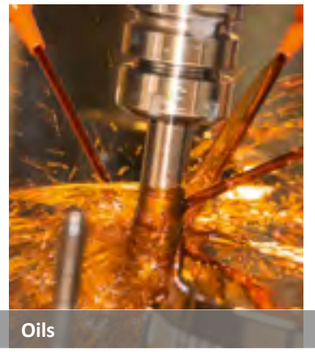
Examples of media

Virtually all media, from low-viscosity to high-viscosity and pasty, media that is sensitive to shearing and even those containing solids can be pumped with the VISCOPOWER. The pump can be used in all sectors such as industry, chemicals, hygienic, pharmaceuticals and cosmetics. Even media that is not capable of flowing can be pumped with ease when the VISCOPOWER is combined with the VISCOFLUX lite and VISCOFLUX mobile S drum emptying systems.

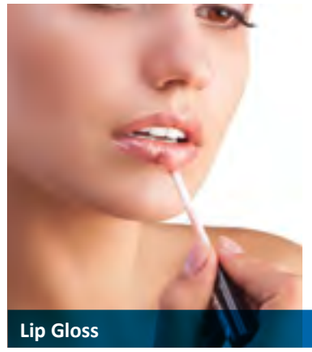
Industry


Glues & Adhesives

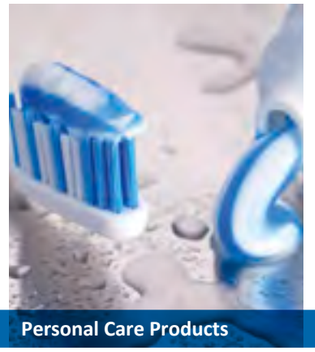

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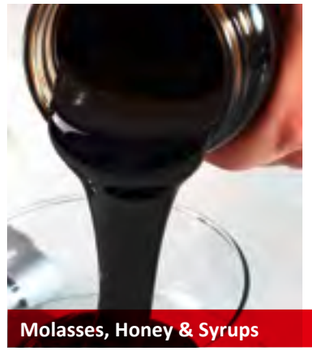
Pharmaceuticals & cosmetics


Lip Gloss


Ointments, Creams & Lotions


Personal Care Products

Food


Molasses, Honey & Syrups


Tomato Sauce, Purée & Paste


Fruit & Juice concentrates

Properties and design

The VISCOPOWER progressive cavity pumps were developed with a focus on making the components especially easy, intuitive and quick to dismantle and clean. The well thought-out design allows the pump to be dismantled quickly and effortlessly without the use of any special tools. Seals and contours are designed to minimize dead space making the pump highly suitable for use in the food, beverage, cosmetic and pharmaceutical industry just to name a few.

Huge range of applications

A large variety of pump configurations are available for the most common applications and areas of use. Above and beyond this, the modular design allows each pump to be individually configured for its own particular application.

Modular construction for flexibility in your facility

Could your requirements, areas of use or liquids to transfer change in the future? That's not an issue for the VISCOPOWER series! Standardized interfaces and a modular system allow components such as rotors, stators, motors and seals to be replaced to make the pump suitable for use in an application different from what it was originally intended.

Up to
80 %
faster to assemble/ disassemble than the competition



1 Robust outer tube in electropolished steel

Five different standard lengths available: 16", 27", 39", 47" & 60" (400, 700, 1000, 1200 & 1500 mm)

2 Torsion shaft

Reinforced shaft for higher transfer of torque

3 Mechanical seal

Closed version (shown) for hygienic applications or open version for industrial applications

4 O-ring – seal between rotor and drive shaft

Gap between rotor and drive shaft is sealed using an o-ring, allowing the pump to be hygienically cleaned with ease. One-piece shaft/rotor for 3-A.

5 Rotor

Different rotor & stator geometries provide the right solution for any application

6 Stator

Available in PTFE, NBR and FKM to suit every liquid

7 Stator housing

With integrated suction protection with extra reinforcement is also available in a version for drums with aseptic liner

8 Motor connection

Can be easily converted for motor flange or gearbox so it can be used for all motor types

9 Clamp connection

For quick dismantling and cleaning

10 Motor flange or gearbox

Features a motor flange (shown) to accommodate three-phase motors or a gearbox to accommodate FLUX 4 series motors and brushless motors

Disassemble in just 30 seconds



Remove clamp on pump tube



Remove pump tube



Unscrew stator housing



Remove stator

Power lies in the detail

Every last detail of the VISCOPOWER has been thought through. It delivers up to 87 % more pumping pressure and thanks to four different rotor geometries, up to 60 % more pump capacity. But not only has the range of options grown, many details of the FLUX VISCOPOWER make work easier and safer. Everything from the bayonet fitting for the motor flange version to suction protection for aseptic liners.

VISCOPOWER comes in two versions



F 570: gearbox version

Two-stage gearbox i = 16
- For use with compressed air or commutator motors as well as brushless motors
- For media up to max 50,000 cPs
- Lightweight - best for portable use

Single-stage gearbox i = 7
- For high-speed F 403 asynchronous motors
- For media up to 80,000 cPs



F 580: Motor flange version

- For use with asynchronous motors / gear motors / compressed air motors
- For media up to 100,000 cPs
- Freewheel bearing prevents the pump from running in the wrong direction
- Can be fitted with speed sensor for contact-free metering & batching applications

One pump tube – four different options

With four different rotor geometries, the VISCOPOWER has the right solution for every requirement. No matter whether you need maximum pumping capacity, high discharge pressure or a low pump capacity for more accurate metering, one of the four geometries is sure to provide the ideal solution while keeping everything but the stator the same.



Rotor R17
Attains a high pumping pressure at lower pump capacities

Geometry: 1/2-helix
Max. pump capacity: 4.5 GPM (17 l/min)*



Rotor R52
Standard rotor for a good balance between pumping pressure and pump capacity

Geometry: 1/2-helix
Max. pump capacity: 13.7 GPM (52 l/min)*



Rotor R33
Theoretically similar pumping pressure to R52 and R83 with greater pump capacity

Geometry: 1/2-helix
Max. pump capacity: 8.7 GPM (33 l/min)*



Rotor R83
Attains maximum pressure for thin liquids (up to 800 cPs)

Geometry: 3/2-helix
Max. pump capacity: 21.9 GPM (83 l/min)*

*Measured with water and a free outlet at 1,000 rpm

Motors at a glance

VISCOPOWER F 570 and F 580 can be run with many drive motors; be it commutator motors, three-phase motors, compressed air motors or brushless motors.

F 570 with two-stage gearbox i = 16
Commutator, compressed air or brushless motors
- For media up to 50,000 cPs



F 570 with single-stage gearbox i = 7
For high-speed asynchronous motors
- For media up to 80,000 cPs



F 580 with motor flange
For asynchronous motors / gear motors / compressed air
- For media up to 100,000 cPs



Bayonet fitting for a simple motor connection

Thanks to the bayonet fitting on the motor flange version, the pump can be easily hung on the motor and the screws can then be tightened without the pump having to be supported on its own.



Prepared for any connection

With the standardized clamp connection on the discharge, a wide variety of process connections can be supplied such as hose barbs, NPT threads, bypass valves etc. can be easily connected using adapters.



Suction protection for containers with and without aseptic liners

Depending on whether you want to use the VISCOPOWER to empty containers with or without aseptic liners, the pump can be fitted with suction protection for each scenario. And the containers in both scenarios are protected from external forces by a heavy-duty wall. There is also a stator housing with clamp connection for pumps connected to tanks and IBCs.



Use in an industrial application

Low-viscosity, high-viscosity, pasty, viscous or highly flammable – the requirements faced in industrial applications vary greatly. Thanks to its modular design, the VISCOPOWER can be perfectly matched to even the most demanding pumping job. Common industrial applications for the VISCOPOWER include filling and decanting oils, lubricants, paints, resins, hardeners, glues and much more.

Production of fertiliser



Requirement:
Decanting liquid plant fertiliser from IBCs into various containers for further processing. Desired pump capacity > 5.2 GPM (20 l/min)

Solution:
VISCOPOWER F 570 with two-stage gearbox, 47" (1, 200 mm) long, R32 stator geometry
FLUX F458 motor w/700W
Chemical hose, 5' (1.5 m) long Achieved pump capacity 8 GPM (30 l/min)









“The high pump capacity and ease of pump handling during operation impressed both me and my staff. The pump can also be cleaned in no time at all. My next pump is sure to be a VISCOPOWER too.”

Employee working in production at a chemicals company

Use in a hygienic application

The VISCOPOWER makes light work of the stringent requirements applicable in the sanitary & hygienic markets thanks to its design with minimal dead space, the use of a closed mechanical seal and electro polished surfaces. It satisfies the EU standard (EC) 1935/2004 and (EU) 10/2011, FDA and 3-A standards as well as the ATEX directives. Typical areas of use in the hygienic market includes petrolatum, creams, tomato purée, juice concentrates, fruit purées, honey and much more.

Requirement:
Filling agave syrup & juice concentrates from IBCs into stainless steel canisters for further processing into alcoholic and non-alcoholic beverages. It is important that the liquids are pumped gently to prevent aerating and with good metering accuracy.

Solution:
VISCOPOWER F 570 with two-stage gearbox, 47" (1200 mm) long, R17 rotor geometry w/PTFE stator, Closed mechanical seal
FLUX F457 motor w/800 W
Food grade hose 9' (3m) with discharge spout

Gin production – HEIMAT DISTILLERS









"I was particularly impressed with how easy it is to very quickly dismantle and clean the pump with virtually no tools. This is very important for us because we tend to produce small batches but with ever-changing media. So it saves me and my staff a lot of time on a daily basis."



Rouven Richter, co-founder
of HEIMAT DISTILLERS

“Every single motor armature is individually crafted. I am very fussy but believe that the more accurately I work, the better the product and the longer the customer will get to enjoy it.”

Jannis Kauselmann, cutting machine operator

Made in Maulbronn

MADE IN GERMANY

For more than 70 years, FLUX has been producing pumps, motors and accessories only in Germany. With its own production facilities, welding shop, motor winding room, plastic injection moulding unit and assembly workshop in Maulbronn, southern Germany, FLUX can rightly claim **100 % MADE IN GERMANY**. The recipe for the success of FLUX’s exemplary product quality is a low staff turnover, a family-like sense of belonging, staff with decades of experience as well as continually training the next generation of workers.



“Here in assembly, everything comes together. We have to handle every single part. If a component isn't right, we notice straight away. Every fully assembled pump is tested to check it is working properly and not leaking. Nothing can go wrong after that.”

Marie-Louise Hefter, pump assembly



“The exciting thing about my work is that it’s very varied. Sometimes I’m working on an automatic arc welding system, which performs several welding processes at once and which I program myself. Other times, it’s very hands-on because every now and then I have to weld special parts by hand.”

Benni Binder, machine operator / welding



“The unique thing about FLUX is that our plastic pumps have an inner tube with a metal core, which makes them highly robust. I encase this metal core with plastic on my injection moulding machine so that acids and alkalis cannot come into contact with the metal.”

Robin Haller, process technician for plastic and rubber technology



“We have set ourselves the goal of improving all the time. In the motor winding room in particular, this means that we work to tighter tolerances than is normally the case in motor production. But that is the secret to the longevity of our motors.”

Rüdiger Werknies, head of the motor winding room

“Right from the start of assembly to testing and packaging, I have control over the quality of every single motor. I have to really concentrate because we also work with motors for use in hazardous areas, which have to be really safe. Every single employee at FLUX is valued and we are one big family. You can’t take that for granted.”

Barbara Geromüller, motor assembly & shop chair



Accessories and special equipment

Single vendor solution: to supplement our huge range of pumps, FLUX also supplies an extensive range of accessories. This ensures smooth and safe operation as well as simplifying the task in hand. Whether your application is intended for mobile or stationary use – FLUX accessories turn a FLUX pump into a tailored delivery system for any application and purpose.



1 Motors

Commutator motors, brushless motors, three-phase motors and compressed air motors

2 Flange adapter

For using standard motors in IEC 90 and IEC 100 versions

3 Mounting/retaining bracket

Allows the pump to be lifted with a hoist, thereby simplifying handling for the operator

4 Flow meter

To handle meter & batching with ease. Also available in a contact-free version

5 Adapter and hose connections

For simple connection to your process

6 Discharge spout

For simple handling while pumping

Find even more accessories in our brochure or online at: **www.fluxpumpsusa.com**

VISCOFLUX drum emptying system

FLUX has developed the VISCOFLUX family for pasty liquids, media that does not flow and where the VISCOPOWER alone comes up against the limits of its capabilities.
The VISCOFLUX drum emptying systems were specially developed for emptying open-top drums with high viscosity contents. The medium is extracted continuously and very gently. All systems almost fully empty the drums, leaving a residual volume of less than 1%.



VISCOFLUX mobile S

The VISCOFLUX mobile S drum emptying system is a mobile unit and therefore highly flexible variant of the tried and tested VISCOFLUX drum-emptying sys-tem. VISCOFLUX mobile S is ideally suited to gently, efficiently and safely pumping high-viscosity, pasty media and media that is no longer capable of flowing. It can even pump from conical drums with aseptic liner bags. The drum emptying system was developed for use in pharmaceutical, food and cos-metics industries where wash down requirements are needed.

VISCOFLUX lite

The VISCOFLUX lite drum emptying sys-tem is used to pump high viscosity media barely capable of flowing from open-top drums. In the Ex version, it is also suited for use hazardous areas and for pumping a wide variety of flam-mable media (ATEX Zone 0/1). The emptying process is gentle and continuous. Same as with the VISCOFLUX mobile S, a residual volume of < 1% remains in the drum.







Today the FLUX name is recognized around the globe as the trademark for top standards in pump technology. Everything started with the invention of the electric drum pump in 1950. Nowadays, FLUX has an extensive range of products each of which can be customized. FLUX pumps are used in the chemical and pharmaceutical industries; in machinery and plant engineering as well as companies in electroplating, effluent treatment and the foodstuffs sector.

Whether a single product or complete engineered solution – FLUX quality is synonymous with a long service life, excellent economy and maximum safety.

In addition to the excellent product quality, FLUX customers appreciate the superb level of expertise our staff has to offer as well as their genuine customer focus.

These days FLUX-GERÄTE GMBH supplies pumps to almost 100 countries around the globe.

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