

# VISCOFLUX mobile S Drum Emptying System



More than just pumps



# VISCOFLUX mobile S

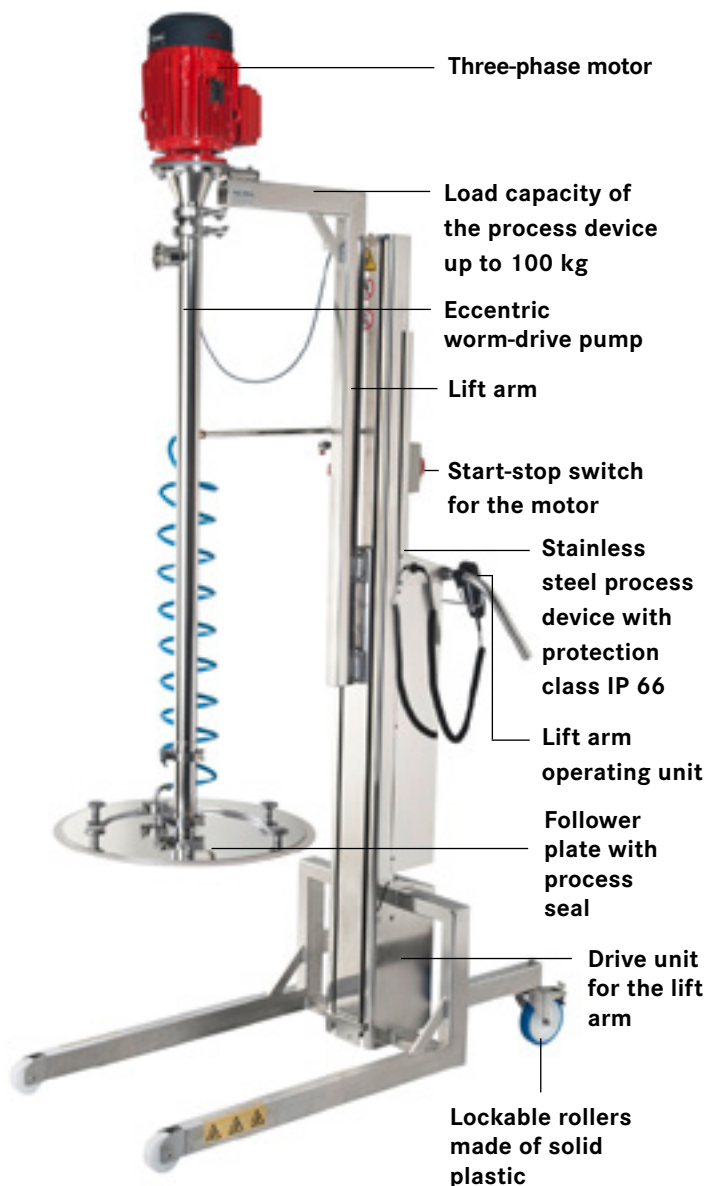
The mobile solution for pumping high-viscosity media

The VISCOFLUX mobile S drum emptying system was specifically designed for use in pharmaceutical, food and cosmetics industries. It is perfectly suited for ensuring efficiency and process safety while pumping high-viscosity, paste-like, non-self-flowing media out of diverse drums – either with or without aseptic bags. Media can be transferred low-shear and continuously. The residual amount remaining in the drum is up to less than 1 %. The mobile drum emptying system offers a high degree of flexibility and can also be operated in wet or damp production environments. The systems stainless steel process device bears the protection class IP 66.

## Functional description

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

Prior to transferring the material, the pump unit is lowered using a rechargeable battery powered lifting arm until the follower plate rests on the material. The pump motor is then activated. The automatic freewheel now assumes the decoupling of the lifting arm and power unit. The self-priming eccentric worm-drive pump creates a vacuum below the follower plate, causing it to lower. This guarantees especially gentle transport of the media. Moreover, the process seal hermetically seals the media and ensures a high degree of process safety even if the transfer process is interrupted. The flexible process seal also adapts to beads and conical constrictions when transferring so that almost no residue is left on the wall of the drum. Drums with common transport dents can also be emptied without difficulty. After the transfer of the media, the follower plate is released from the bottom of the drum by means of compressed-air. The entire pump unit is raised once again. When emptying drums with aseptic bags, the inliner automatically remains on the drum wall. At first it is pressed against the wall by the media. Once the follower plate is moving upwards, the inliner is pressed to the wall by compressed-air. A minimal amount of residue amounting to less than 1 % remains in the drum. The stainless steel process device bears the protective class IP 66 and can be cleaned using a water jet if required.



The chassis is free of dead space and is manufactured as a single-piece welded construction.

## Typical areas of application



Food



Pharma



Cosmetics



Industry

## General product features

- ▶ Mobile, compact drum emptying system
- ▶ Pumps high-viscosity, paste-like and non-self-flowing media
- ▶ For use with diverse standard drums, conical drums, carton and sea container drums (also with aseptic bags), drums with common transport dents
- ▶ Motor, pump, follower plate and process seal are customised to media and process conditions
- ▶ Eccentric worm-drive pumps and process seal available in FOOD versions
- ▶ Processing of the media carried out in a closed process
- ▶ Eccentric worm-drive pumps provide for low-shear and low pulsation media transfer
- ▶ Residual amount in drums up to less than 1 %
- ▶ Additional blind covers for interruptions in the pumping procedure
- ▶ Motor can stay attached to process device while cleaning the pump
- ▶ Eccentric worm-drive pumps, follower plate with process seal can be disassembled quickly
- ▶ Pumps with impulse sensor available for contact-free flow measurement
- ▶ Available with customisable control unit
- ▶ Can be used with three-phase motors or compressed-air motors
- ▶ Eccentric worm-drive pump with clamp on the bearing flange available for transferring extremely viscous media

## Process device features

- ▶ Designed for use in hygienic areas
- ▶ Mobile and compact
- ▶ With an integrated, automatic freewheel
- ▶ Stainless steel construction, electronics and battery encapsulated to protect against moisture
- ▶ Designed with minimal dead space and protection class IP 66
- ▶ Narrow chassis for emptying drums on euro pallets
- ▶ Wide chassis for emptying drums standing on the floor and for approaching pallets with four drums
- ▶ Chassis can subsequently be exchanged
- ▶ Sinking depth of follower plate can be limited

## Media-examples food

- ▶ Tomato puree
- ▶ Caramel
- ▶ Fruit and vegetable concentrates
- ▶ Peanut butter
- ▶ Mayonnaise
- ▶ Nut nougat paste
- ▶ Chocolate (heated)
- ▶ Concentrates for making sauces

## Media-examples pharma and cosmetics

- ▶ Vaseline
- ▶ Ointments
- ▶ Hair and body care products
- ▶ Wax, semi-solid
- ▶ Glycerine
- ▶ Lip gloss
- ▶ Mascara
- ▶ Facial masks

## Media-examples industry

- ▶ Grease up to (NLGI) grease class 3
- ▶ Coating and casting compounds
- ▶ PVC printing ink and insulating paint
- ▶ Lanolin (wool wax)
- ▶ UV curing, water-based and wood fillers
- ▶ Paints

## Technical data

- ▶ Process device: battery operated, made of stainless steel with rollers made of solid plastic, IP 66, carrying load up to 100 kg, chassis available in two standard sizes: 470 mm for euro pallets, 890 mm additionally for free-standing drums, drum dollies and universal pallets with 4 drums
- ▶ **Process device for compressed-air motors, see page 8**
- ▶ For drum diameters: 560 mm or 571 mm, for conical drums (550 mm on top, 515 mm at the bottom), for drums with small openings Ø 540 mm on top, Ø 571 mm at the bottom
- ▶ Pumps: Ø 54 mm, length 1,000 mm and 1,200 mm F 560 and F 560 TR FOOD with clamp on the bearing flange also for left/right operation, also in FOOD version conform EC 1935/2004 and FDA CFR 21 (F 550 and F 550 TR with clamp on the bearing flange for industrial use)
- ▶ Motors: Three-phase motors from 0.75 kW, spur gear drive motors, compressed-air motors
- ▶ Process seal: NBR material conform EC 1935/2004, or FDA or FKM
- ▶ Power supply for motor and switching cabinet
- ▶ Ball valves for pressurised air provision, aeration and venting

# VISCOFLUX mobile S

The drum emptying system with many advantages

## Advantages

### For pumping demanding, high-viscosity media out of drums

- ▶ For high-viscosity, paste-like and non-self-flowing media

### Highly efficient drum emptying

- ▶ Significantly reduced processing times compared to a manual drum emptying
- ▶ Usually no heating of the media necessary
- ▶ Cost reduction due to efficient use of media (residual amounts in drum up to less than 1 %)
- ▶ Reduced disposal efforts and costs

### High process safety

- ▶ Impurities are prevented from entering while pumping
- ▶ High process reliability even if the transfer process is interrupted

### Mobile use

- ▶ Can be moved to desired operation site, without the need for a crane or forklift
- ▶ Potential replacement of multiple stationary devices

### Low space requirement

- ▶ Designed to be transported with freight lifts
- ▶ Operation even possible in areas with low ceiling

### Designed for use in hygienic areas

- ▶ Stainless steel process device with protection class IP 66
- ▶ Safe operations, even in wet or humid production environments
- ▶ FOOD version according to EC 1935/2004 and FDA CFR 21



### Easy cleaning

- ▶ Quick disassembly of motor, pump, follower plate and process seal
- ▶ Process device can be cleaned with a water jet

### Gentle pumping of the media

- ▶ Low-shear transfer of the media
- ▶ Continuous, transfer with low pulsation

### For various types of drums and bundles

- ▶ Diverse standard drums, conical drums, sea container drums, carton drums (with and without aseptic bags)
- ▶ For drums with the common transport dents
- ▶ Suitable for approaching pallets with four drums

### Easy to operate

- ▶ Easy and safe to operate
- ▶ Optimal layout of all components

### Diverse control options

- ▶ From easy emptying to batch operations
- ▶ Equipment available for contact-free flow measurements



For example: efficiently pumping caramel out of drums.



Designed for use in pharmaceutical, food and cosmetics industries.

# VISCOFLUX mobile S

Mobile and flexible



In comparison to stationary devices the VISCOFLUX mobile S can quickly and easily be moved to wherever it is needed without the need of a crane or a forklift. A wide variety of drum types can be emptied – depending on the type of chassis, whether or not they are on pallets. Cables, manual operation unit and discharge spout can easily be stowed onto the multifunctional bracket.



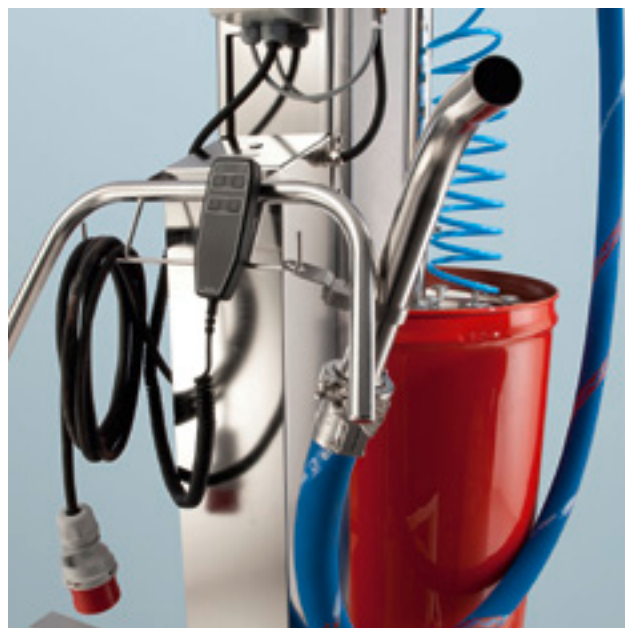
Fits into a freight elevator.



Also suited for emptying bundles with four drums per pallet.



A single system for the most diverse drum types.



The multifunctional bracket keeps everything neatly organised.

# Pharmaceutical and cosmetics application area

Application example: Vaseline

The VISCOFLUX mobile S allows for high-viscosity and non-self-flowing media, such as Vaseline, to be continuously transferred with low pulsation. Compared to manual drum emptying, users benefit from significantly reduced processing times. Usually no heating of the media is necessary. The system's high degree of process safety is also maintained during process interruptions. The VISCOFLUX mobile S achieves residual amounts of up to less than 1 %.



VISCOFLUX mobile S – for pumping high-viscosity, non-self-flowing media such as Vaseline.



High degree of process safety even if the transfer process is interrupted.



Gentle, continuous pumping based on the example of Vaseline.



VISCOFLUX mobile S achieves minimal residual quantities, even for drums with standard transport dents.

# Food application area

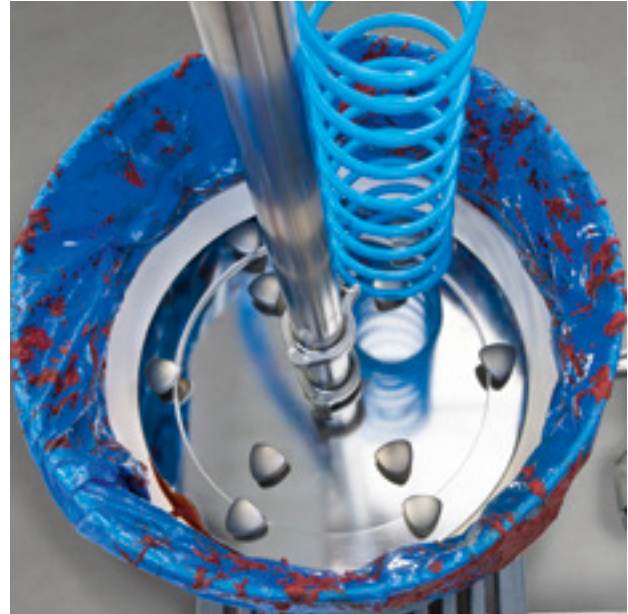
Application example: tomato puree



VISCOFLUX mobile S is designed to achieve gentle, low-shear pumping of high-viscosity media, such as tomato puree. Users benefit from increased process safety due to the hermetic sealing of the media during processing: Impurities are unable to enter during the pumping process. With the help of a special inliner suction protection, the system achieves residual amounts of up to less than 1 % in the drum, even in drums with aseptic bags. The process device version with the wider chassis allows to approach and to empty bundles with four drums per pallet.



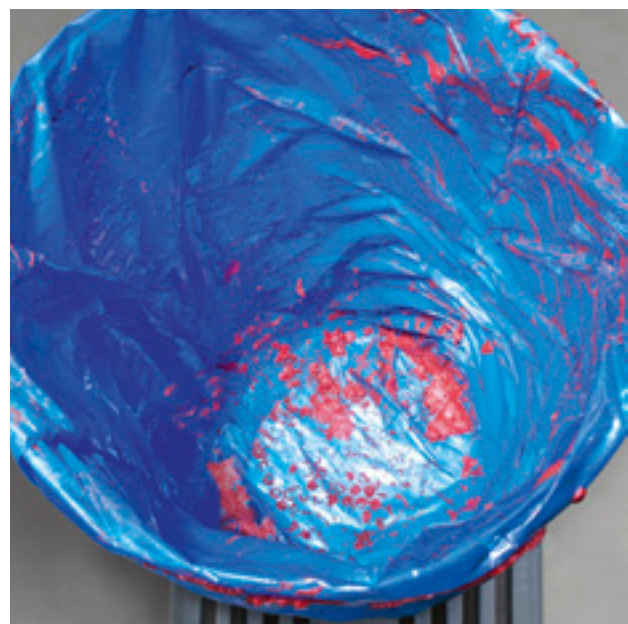
VISCOFLUX mobile S – for pumping high-viscosity, paste-like media such as tomato puree.



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.

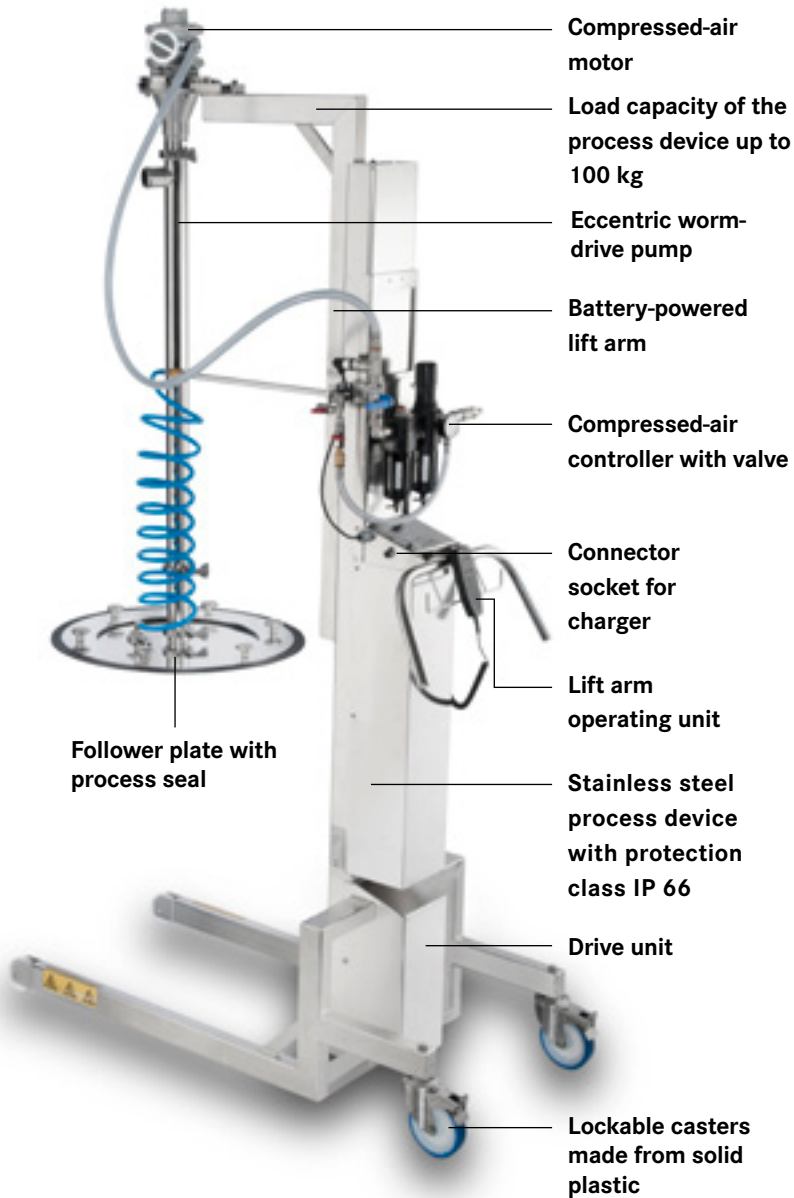


VISCOFLUX mobile S achieves residual quantities of up to less than 1 %, even for drums with aseptic bags.

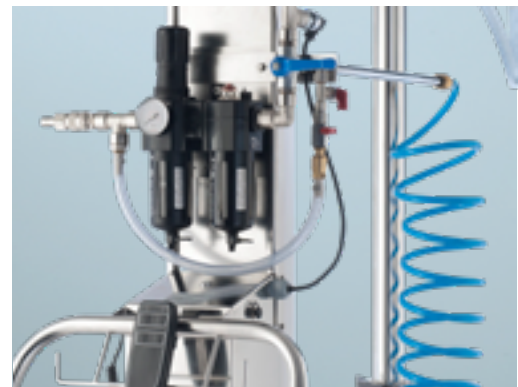
# VISCOFLUX mobile S

For the use with compressed-air motors

For users who prefer to operate their machines with compressed-air, the new VISCOFLUX mobile S process device now allows operation with compressed-air motors – in contrast to the standard process device (see page 2). The motor can be started and the speed of the pump can be very easily regulated by using the compressed-air controller on the process device. The maintenance unit integrated into the controller always ensures sufficient lubrication of the compressed-air motor. The battery integrated into the process device for operating the lift arm can be charged via an external charger if needed. Only compressed-air is necessary for the actual pumping process.



Viscoflux mobile S in the compressed-air motor version.



The motor is started and regulated via the valve on the compressed-air controller.



The integrated battery can be charged by an external charger if needed.



# Special equipment and accessories

For the most diverse applications



VISCOFLUX mobile S offers numerous control options for the most diverse applications.

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

External signals from a scale or a fill level measurement sensor can be processed for use in batch operations. For example, when a certain filling weight has been reached, the pump can be switched off and the solenoid valve can be closed at the same time. The control unit with integrated FLUXTRONIC® provides even more possibilities for batch processing. It processes the incoming impulse signals from a flow meter or a speed sensor on the pump and controls the switch-off of the pump and solenoid valve upon reaching the desired filling quantity.

## Pump with impulse sensor for contact-free flow measurements.

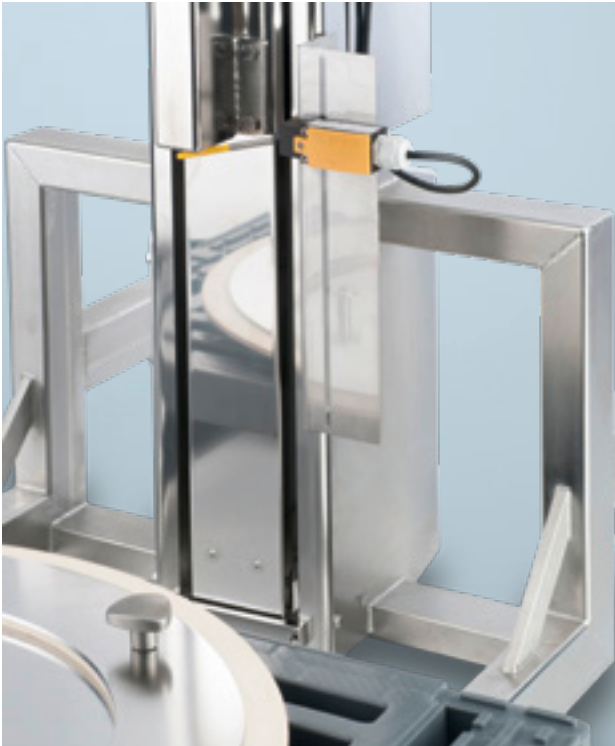
The FLUX eccentric worm-drive pumps are also available with a bearing flange along with an integrated impulse generator for contact-free flow measurements. This allows users to indirectly measure flow rates. The pump shaft rotations are counted to acquire a measurement. The information is then communicated for evaluation via an impulse transfer so that a measurement can be taken while avoiding any direct contact with the media. Finally, data analysing and programming can, at the user's discretion, be carried out either via the electronic system FLUXTRONIC®, a control cabinet or a stored program control system (PLC). This means that the bearing flange with impulse sensor can also be utilised for batch filling.



A pump with a impulse sensor is available for contact-free flow measurements.

# Special equipment and accessories

For the most diverse applications



Process device with final position switch.

## Final position switch

A final position switch, which can also be integrated into the VISCOFLUX mobile S in combination with the control unit, switches off the drive motor when a predefined media level in the drum is reached. The transferring process can be continued as desired by pushing the illuminated pushbutton on the control unit.



## Supplimental accessories

### Inliner suction protection

For optimally emptying drums with aseptic bags, FLUX offers a special inliner suction protection.

### Holder for the spout

Using the optional holder for the discharge spout allows for easy storage onto the multifunctional bracket before and after the pumping process.



Useful – the optional holder for the discharge spout.



Follower plate with blind cover.

### Blind cover for the follower plate

If the transferring process is interrupted, the follower plate can remain in the drum and be closed with the blind cover. In this way the drum can be stored in a cold storage, for example, until it is again required.

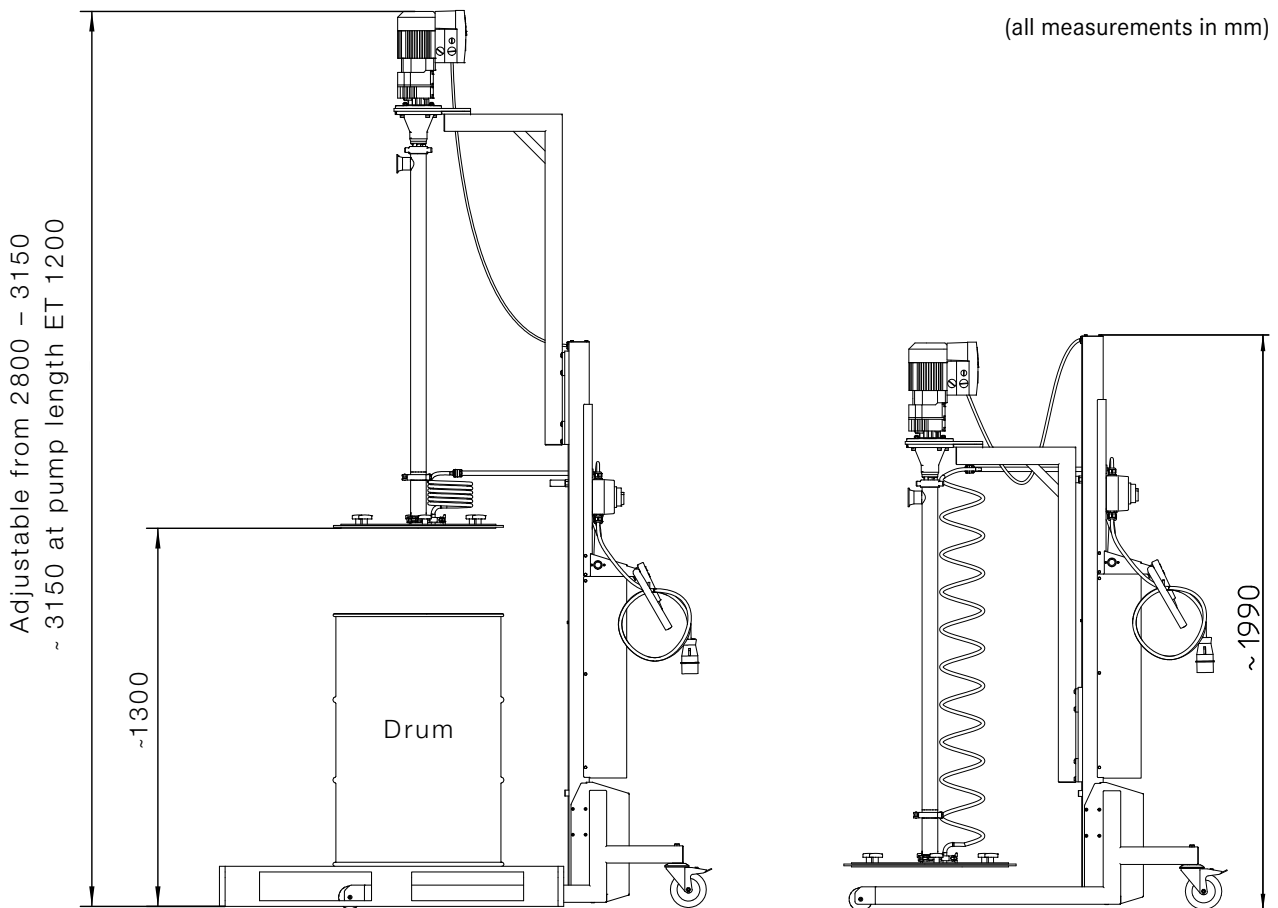


# VISCOFLUX mobile S

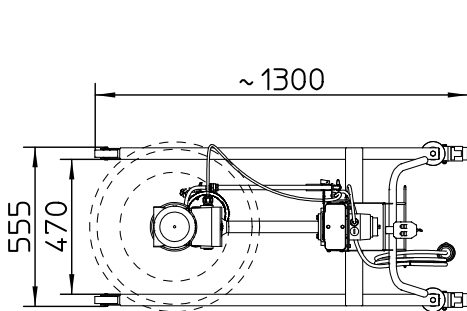
Compact in design – mobile in use



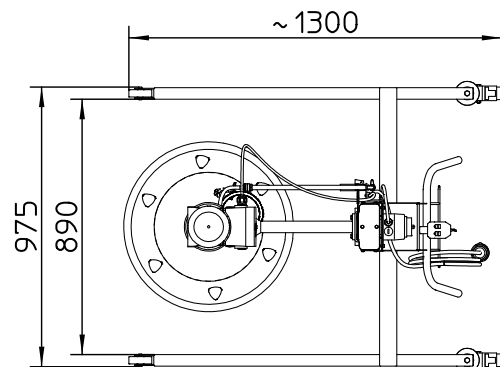
Thanks to its mobile process device, the VISCOFLUX mobile S can quickly and easily be transported to the application site or to the cleaning area – even across numerous floors. Due to its extremely compact design, the system can also be transported in a freight lift. After use, the pump unit, consisting of motor, pump and follower plate, can be quickly dismantled for cleaning.



VISCOFLUX mobile S – its compactness is an advantage over other systems.



VISCOFLUX mobile S with a narrow standard chassis – for euro pallets.



VISCOFLUX mobile S with a wide chassis – also for free-standing drums, drum dollies and universal pallets for 4 drums.



More than just pumps

Today the FLUX name is recognised 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 for example in the chemical and pharmaceutical industries; in machinery and plant engineering as well as companies in electroplating, wastewater treatment and the food sector.

Whether single-product or system 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.