
en Translation of the
original operating instructions
**HYDRAULIC DRUM EMPTYING
SYSTEM WITH FOLLOWER PLATE AND
MOUNTED ECCENTRIC SCREW PUMP**



Read this operating instructions before start up!

To be retained for future reference.

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1. Description of the device

Mobile stainless steel chassis with four castors (two fixed castors, two swivel castors with brake).

- 1 hydraulic cylinder including hydraulic power unit with overpressure protection and anti-rotation system.
- 2 hydraulic drum retaining clamps, controlled by hydraulic power unit.
- 1 pump mounted on cantilever hydraulic arm. The exact pump type is specified according to customer specifications.
- 1 integrated control panel to control the system.
- 1 16A mains plug for 400V socket for power supply of the complete system.

2. Field of application

The mobile follower plate system is used to empty viscous products from drums or similar containers that are no longer self-flowable.

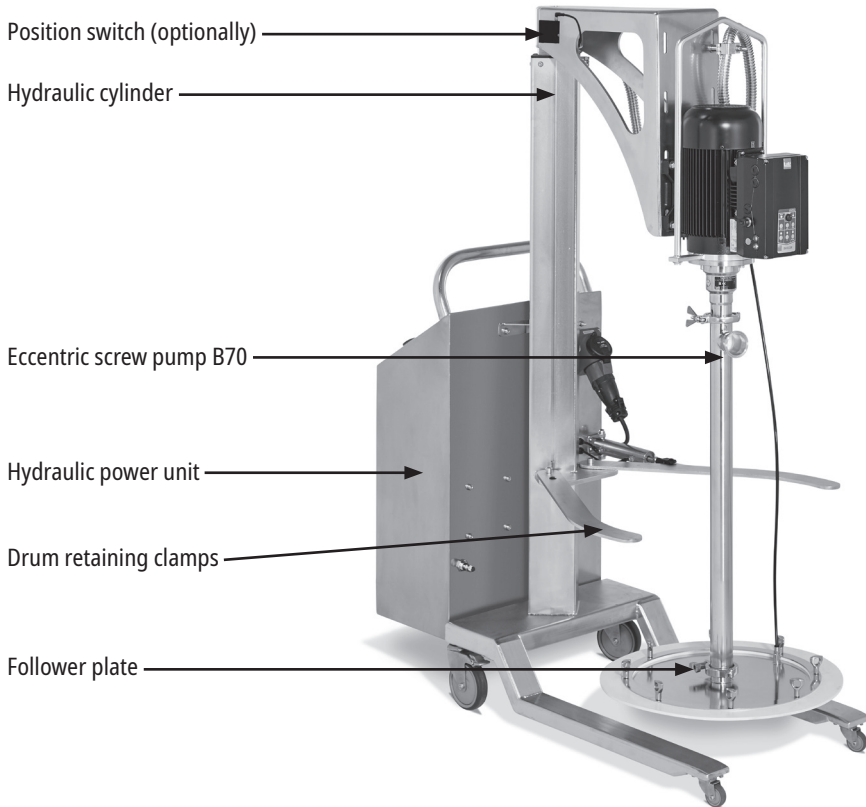
3. Before commissioning

Place the system on a level surface.

It must be ensured that there is a sufficient ceiling height to ensure the complete extension of the cylinder.

Only work in places without obstacles that could restrict the movement of the system and/or the trolley. The product shown in the picture may differ from the original.

Picture description



Control panel



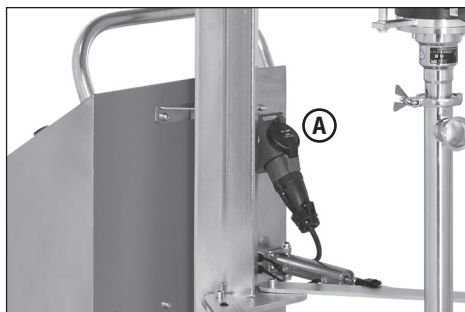
- ① Joystick for selecting the hydraulic control circuits (Lifting cylinder and drum retaining clamps) (Selection)
- ② Hydraulic switch (Main cylinder down)
- ③ Joystick for selecting "opening and closing" the drum retaining clamps (Closing/opening clamps)
- ④ Button extend hydraulic cylinder (Main cylinder up)
- ⑤ Emergency switch "OFF"
- ⑥ Switch pump on / off (Pump)
- ⑦ Button for actuating the hydraulic drum retaining clamps (in combination with ③)
- ⑧ Potentiometer for adjusting the pump speed (Pump speed)
- ⑨ LED "Power ON/OFF"

4. Commissioning

All switches must be set to „OFF“.

Connect the mains plug to the socket. **(A)**.

Make sure that the drum retaining clamps are open before extending the hydraulic cylinder.



Procedure for opening the drum holding clamps

Set the switch to "OFF" **(2)**.

Move the joystick **(1)** to the lower position.

Hold the joystick **(3)** in the "Open" position.

Hold the button **(7)** until the drum retaining clamps are fully open.

Release the joystick **(3)** when the drum retaining clamps are open.

The hydraulic system with the follower plate must not be extended when the drum retaining clamps are closed!



Extend hydraulic system



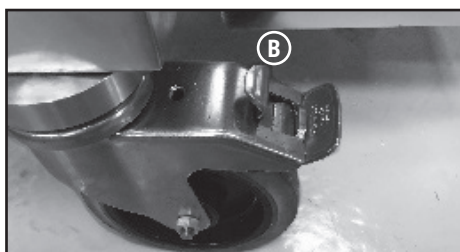
Move the joystick ① to the upper position.

Press and hold the push button ④ until the cylinder is fully extended. Minor vibrations may occur.

If the cylinder is in the extended position, you can push the system under the pallet on which the container, that should be emptied, is located. Make sure that the follower plate is positioned centrally above the container.



Actuate the brakes of the two swivel castors to fix the system ②.



Lower the follower plate onto the medium

Move the joystick ① in the upper position and set the hydraulic control switch to the "ON" position ②, while the system is in the upper position above the container which should be emptied.

The cylinder retracts and lowers the follower plate to the liquid level in the container.

Make sure to centre the follower plate above the container that should be emptied.

Ensure that the lowering process is not affected by external influences. (e.g. unit load cover etc.).

Depending on the viscosity, parts of the product may pass through the sealing lip of the follower plate.

Do not put your hands between the follower plate and the drum!



Emptying the container

Install the hose at the outlet of the pump with the appropriate connections (→ operating instructions of the pump).

Make sure that the "EMERGENCY OFF" switch ⑤ is not activated.

Set the switch "Switch pump on / off" ⑥ to "ON".

The pumping process gets started and the hydraulic cylinder, pump and follower plate sinks linearly with the medium level in the container.



By actuating the "EMERGENCY OFF" switch ⑤, both the pumping process and the lowering of the hydraulic cylinder can be interrupted.

To prevent the pump from dry running, the pump is getting stopped by a position switch at the bottom of the container.

Manual stopping of the emptying process

If the container is empty, press the "EMERGENCY OFF" switch ⑤ and set the "pump on / off switch" ⑥ to "OFF".

In order to avoid damage to the mechanical seal of the pump, dry running must be excluded!

Automatic stopping of the emptying process by integrated position switch

In this case the pump stops automatically when the container is emptied.

Then press the switch "EMERGENCY OFF" ⑤ and set the switch "Switch pump on / off" ⑥ to "OFF".



Close the drum retaining clamps

Set the hydraulic switch ② to the "OFF" position.

Move the joystick ① to the lower position.

Press and hold the joystick ③ in the "CLOSED" position.

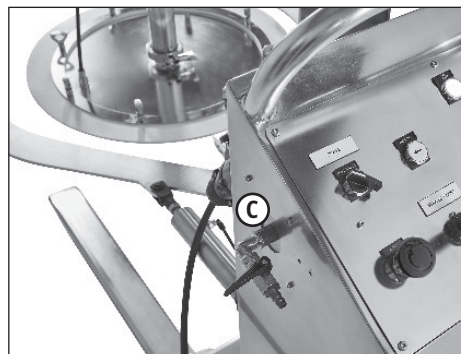
Press the button to operate the hydraulic drum retaining clamps (in combination with ③) until the drum retaining clamps are completely closed (during this operation the hydraulic cylinder may tend to lift slightly).

Then release the joystick ③.



Connect the compressed air line to the coupling provided ④ (maximum pressure 3 bar).

Make sure that the ball valve on the coupling side is closed.



Lifting the follower plate

Move the joystick ① to the upper position.

When the drum retaining clamps are closed and by opening the compressed air ball valve, slowly apply compressed air to the container to compensate the vacuum behind the follower plate.

Hold the push button ④ until the hydraulic cylinder reaches the upper end position.

Close the compressed air ball valve as soon as the follower plate left the container.

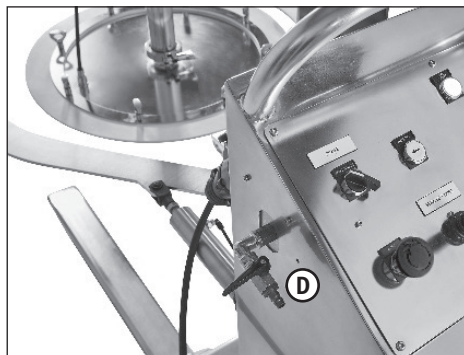


Removing the system from the container

Move the joystick ① downwards.

Open the drum retaining clamps by moving the joystick ③ to the "OPEN" position. When the drum retaining clamps are open, release the brakes on the two rear castors and remove the system from the pallet.

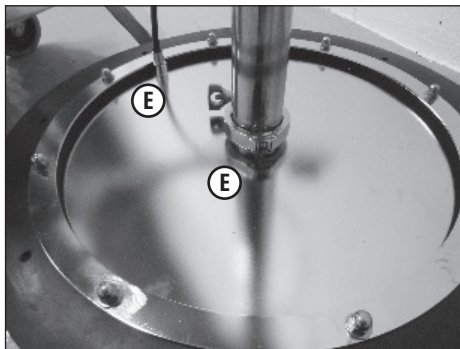
Then lower the cylinder again.



Disassembly of the electric motor

Disconnect the system from the mains and actuate the brakes on the rear castors.

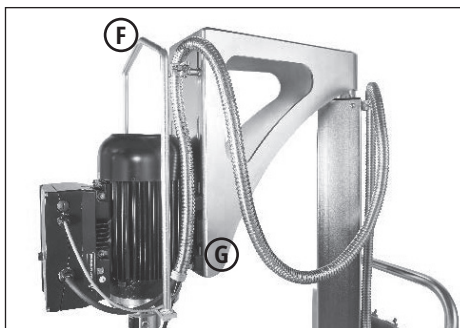
Then disconnect the compressed air hose from the follower plate and then the follower plate from the pump tube (E).



Retain the motor by means of the mounting strap with a suitable gadget (F).

Open the terminal box of the drive motor or the frequency inverter to disassemble the cables.

Then loosen the screws on the foot flange between the motor and the system by using a suitable wrench (G).



Work on electrical devices may only be carried out by qualified personnel!

5. Trouble shooting

Leak of hydraulic fluid

Check the tightness of the automatic couplings and replace them if there is a defect.

Then check the oil level on the hydraulic unit and refill hydraulic fluid if necessary (FDA-approved water/propylene glycol dissolution).

The hydraulic cylinder does not move upwards

Make sure that the joystick ① is in the upper position

Check whether the hydraulic switch ② is turned off

Check the power supply

Check the oil level of the hydraulic unit

Check the hydraulic connections

The follower plate does not detach from the container and cannot be moved upwards out of the container

Check the power supply

Check the oil level of the hydraulic unit

Check the hydraulic connections

Check whether the hydraulic switch ② is turned off

Check for compressed air

Check whether the compressed air ball valve is open

The cylinder does not go down

Check the power supply

Make sure that the movable cylinder is not blocked

Check whether the ② hydraulic switch is turned on

Make sure that the hydraulic control valve is not closed

Drum retaining clamps do not open or close

Check the power supply

Check whether the ② hydraulic switch is turned off.

6. Recommendations

If the system is not equipped with a position switch in the lower position, the pump must not be used without an operator.

Dry running leads to defect of the pump!

Never leave the system unattended during operation!

For each operation and maintenance of the system, the protective equipment recommended for the chemicals used, must be worn!

The generally applicable safety regulations must be observed!

All work on the hydraulic and electrical circuits may only be carried out by authorised and qualified personnel.

Use only original LUTZ parts for all repairs.

The system may only be moved in the retracted, lower position. Unless the system is located above a container and is in any case fixed in a pallet with the two foot brackets. If this is not observed, the system may tip over!

For safety reasons it is forbidden to empty containers which are not stored on pallets. The system is secured against tipping by driving under the pallet.

7. Technical features

Weight of system without pump:	120 kg
Maximum weight of the pump motor B70 1,5 kW (with integrated frequency converter):	40 kg
Maximum sinking speed of the cylinder:	0.05 m/s
Minimum lowering time:	21 Sekunden
Maximum total height (extended position):	2.80 m
Height (retracted position):	1.81 m
Length:	1.14 m
Width:	0.55 m
Hydraulic group 230 / 400V three-phase current 50 Hz 0,25 kW Maximum pressure 8 bar, limited by a pressure relief valve calibrated to 8 bar 10L oil tank FDA-approved water + propylene glycol dissolution	
Power requirement: 400V 50Hz three-phase current + N + PE 16A Use only oil-free compressed air	



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