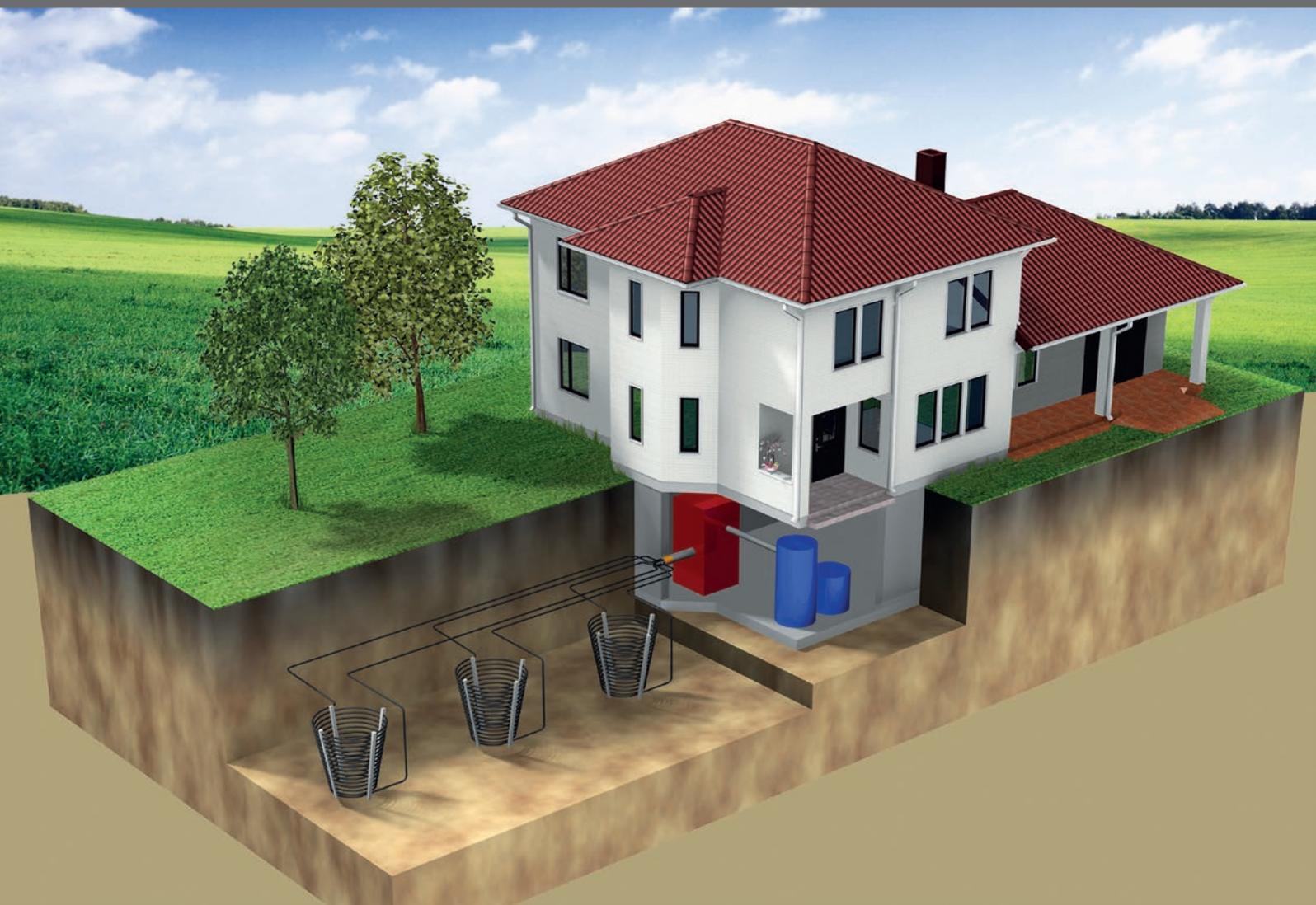


# Fill- and Flushing Station for heat pump systems



Filling ground collectors and ground probes free of air pockets



# FLUSH PRO

## the versatile flushing station

### Filling, flushing and venting of ground collectors and ground probes

The FLUSH PRO is equipped with a powerful pump to convey large amounts of heat transfer fluid in short time.

#### Function and Work flow

##### 1 + 2 Mixing heat transfer fluid

Mixing heat transfer fluid from concentrate and water. Prime and pump back concentrate and water from / to external tanks in a closed circuit

##### 1 + 3 + 4 Filling and flushing the system

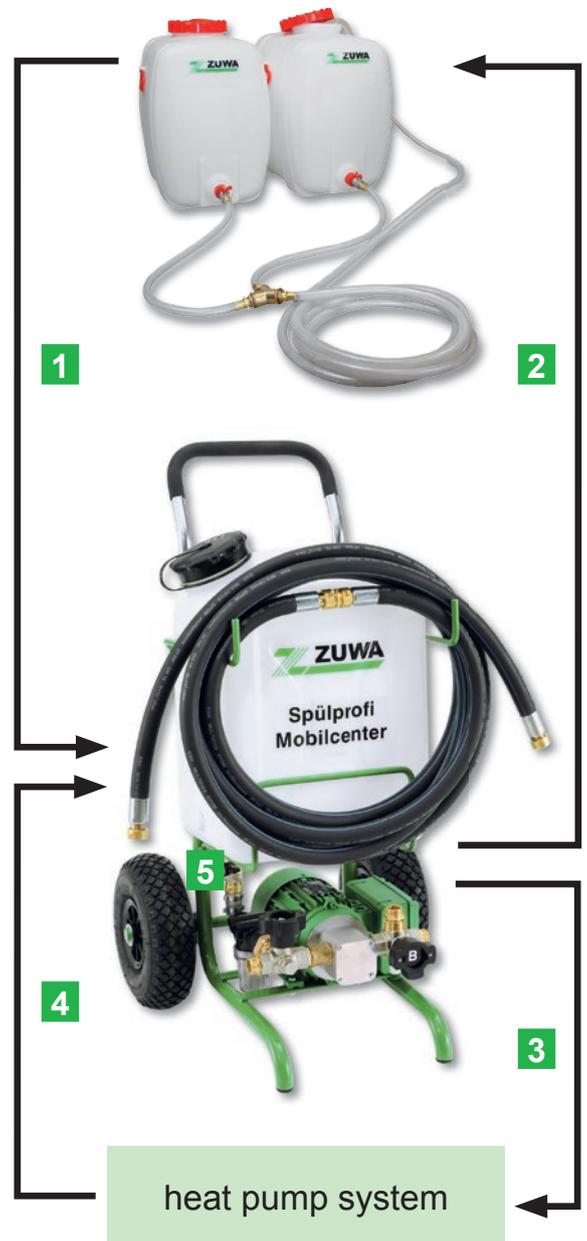
Pumping heat transfer fluid from external tanks directly into the system (very convenient for large quantities of fluid)  
Reflux from thermal collector to internal tank

##### 3 + 4 + 5 Flushing and venting the system

After filling process switch to internal circuit between tank on device and collector to remove air enclosures

Changing of hoses is not needed!

Two multifunctional valves allow for connection to external tanks (IBC etc.) as well as the execution of various successive process steps without changing hoses or hose connections



quick, simple and clean!

### ZUWA guarantees quality

With the flushing station you get a German quality product that enables filling, flushing and venting by using only one system. The FLUSH PRO can also be used for other application areas. Please do not hesitate to contact us if you need additional accessories or any further assistance/information.

MADE IN GERMANY



## Features and technical details

### Main Features

- ▶ dry self-priming impeller pump
- ▶ sturdy cart with pneumatic tyres
- ▶ 2 m cable with plug
- ▶ tank with wide charging mouth and capacity indicator
- ▶ 2 x 3 m supply and return hose
- ▶ 2 multifunctional valves



**DO YOU NEED A BIGGER TANK?**  
 you find additional equipment for the FLUSH PRO on Page 4 of this brochure

### Technical details

FLUSH PRO	MC 60/30	MC 90/55	MC 90/120
Flow rate max.	60 l/min	90 l/min	90 l/min
Working pressure max.	5 bar	5 bar	5 bar
Motor	230 V, 50 Hz with thermal motor protection		
Medium-Temperature max.	90°C	60°C	60°C
Hoses	¾" EPDM-hose for temperatures up to 100°C (for a short time even to 120°C)*		1" PVC-tissue-hose for temperatures up to 60°C*
Tank with stop valve at the outlet	✓	✓	✗
Tank content	30 l	55 l	120 l
Dimensions L x W x H	760-1000-1100 x 490 x 510 mm	1050 x 490 x 640 mm	830 x 700 x 1400 mm
Empty weight	25 kg	39 kg	47 kg
telescopic handle and carry handle with soft grip	✓	✗	✗
Protective filter	✓	optional	optional
Drain valve on pressure side	✓	✓	✓
Art. No.	134058V11	1340581	1340582

\* with crimped hose fitting

# Accessories

## Mixing vessels for brine

Mixing heat transfer fluid of concentrate and water - even in larger quantities right on construction site. Art.No.: 105012

### Features

- ▶ 2 containers, 150 litres each, with stop valve
- ▶ hose fork
- ▶ 6 m suction hose 3/4"

Mixing brine conveniently on site



### Function

Tanks are connected to both multifunctional valves. The pump takes care for the mixing of the heat transfer medium and transports the fluid from the tanks directly into the collector system. Using external tanks rather than the tank on the device speeds up the filling of large systems drastically.

## Filter bags for heavily soiled systems

The new disposable filter bags are used in cases of heavily silted heating water or polluted heat transfer medium. They supplement the filter on the suction side of the pump on the ZUWA filling stations and prevent this filter from clogging. Just hinge filter bag into the mouth piece of the tank and fix with the specific tank lid.

Filter bags for FLUSH PRO MC 60/30:

10 pieces (5 a 40 µm and 5 a 70 µm. Art. Nr.: 132003

Filter bags for FLUSH PRO MC 90/55 and MC 90/120:

10 pieces 70 µm. Art. Nr.: 132005



## User report BetaTherm

### Mixing brine, filling and venting ground collectors in one process!

A number of HVAC professionals are using the FLUSH PRO to fill solar or ground collectors with brine. The idea to add two separate 150 litre tanks with cut off cock was the result of a collaboration between BetaTherm and ZUWA. ZUWA's FLUSH PRO is absolutely tight. The pump provides sufficient pressure and flow rate to prevent air pockets influencing the heat transmission. The problem was the size of the internal tank.

In collaboration a solution was developed. Mr. Graf, Managing Director of BetaTherm, was impressed - „without hesitating Mr. Wimmer transformed our proposals“. With the extra equipment the installer is now in a position to mix the brine (see page 2) and without changing the hoses the fluid is pumped straight into the collector.

It was important for Mr. Graf that the hoses connecting the tanks are equipped with a stop cock to stop the flow before the tanks get empty and air is sucked in. When the system is full the turn of one handle is sufficient to change the flow direction of the pump: a three way valve at the pump inlet closes the hose to the mixing containers and opens the connection to the tank of the station.

Now the brine circulates between collector and station, the air still enclosed escapes through the open lid of the station's tank.

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