

# Mikrofill 3 Pro + HWB-INT-500LV Pressurisation Kit

Sealed-system pressurisation for heat pumps up to 9,660 litres · Data sheet, page 1 of 2

**Mikrofill 3 PRO** pressurisation unit + **GWS HeatWave HWB-INT-500LV** expansion vessel + 1½" service valve, for heat pump systems up to 9,660 litres.

A complete set for keeping a sealed heating system at pressure. The 3 PRO is a pumpless, direct-type unit. It connects straight to the mains, fills the system from empty and tops it up automatically, with WRAS-approved Category 4 backflow protection built in. The HWB-INT-500LV absorbs the expansion as the water heats, and the lockable service valve lets the vessel be isolated and drained for checks.

**9,660 L**

System size up to

**8.7 bar**

Max cold fill

**500 L**

Expansion vessel



## What's in the kit

### MIKROFILL · MADE IN BRITAIN 3 PRO pressurisation unit (72846)

Pumpless, direct-type unit with 3.95" colour display. Fills to 8.7 bar. Two braided hoses with integrated isolation valves and a wall backplate supplied. 2-year warranty.

### GLOBAL WATER SOLUTIONS (GWS) HeatWave HWB-INT-500LV expansion vessel

500 L vertical heating vessel on legs, exchangeable butyl membrane. 1½" BSPT, 10 bar, factory pre-charged to 1.5 bar.

### INCLUDED

#### 1½" lockable service valve

Isolates and drains the vessel so the pre-charge can be checked. Locked open in normal use.

## Features

- No pump and no break tank — uses the pressure in the mains or boosted supply
- WRAS Category 4 backflow prevention (2307805), Kiwa Regulation 4; no separate RPZ needed
- Fills from empty at up to 12 l/min, live flow readings to ±3% and logged fill volume
- Leak detection, smart fault logic, flood protection by run-time limiter
- MODBUS RTU and 4 customisable BMS outputs; 100-event time-stamped log
- IP55, compact wall mounting

## Applications

- Sealed heat pump systems up to 9,660 L (60 °C flow)
- Sealed boiler systems up to 5,390 L (82 °C flow)
- Chilled water and closed-loop HVAC; propylene glycol up to 50%

## Not suitable for

- Potable or open-loop systems
- Ethylene glycol mixtures
- System water above 85 °C
- Fill pressures above the incoming supply pressure

# Mikrofill 3 Pro + HWB-INT-500LV

## Pressurisation Kit

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### Specifications

| Mikrofill 3 PRO (72846)        |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Type                           | Pumpless, direct type                                                     |
| Max inlet pressure             | 9 bar                                                                     |
| Max cold fill pressure         | 8.7 bar                                                                   |
| Max operating pressure         | 9 bar                                                                     |
| Max flow rate                  | 12 l/min                                                                  |
| Low inlet pressure cut-out     | 0.3 bar                                                                   |
| Backflow protection            | WRAS Category 4 (2307805), Kiwa Reg. 4                                    |
| Display                        | 3.95" backlit colour LCD                                                  |
| Pressure setting resolution    | ±0.1 bar                                                                  |
| Communication                  | MODBUS RTU, 4 BMS outputs (5 A max)                                       |
| Connections                    | Inlet 15 mm; system 15 mm; drain 22 mm (all compression)                  |
| Supplied with                  | 2 × braided hoses with isolation valves; backplate (fixings not included) |
| Electrical                     | 230 V / 1 ph / 50 Hz, 3 A fuse                                            |
| IP rating                      | IP55                                                                      |
| Ambient / inlet / system water | 5–45 °C / 5–23 °C / 5–85 °C                                               |
| Max relative humidity          | 70% non-condensing                                                        |
| Dimensions (W × D × H)         | 250 × 155 × 290 mm (386 mm to tundish)                                    |
| Clearances                     | Left 100, right 170, top 100, front 750 mm                                |
| Weight                         | 5.3 kg (without hoses)                                                    |
| Warranty                       | 2 years                                                                   |

| Kit                          |                                                        |
|------------------------------|--------------------------------------------------------|
| Part number                  | WBPK3P500                                              |
| Application                  | Sealed heating and chilled water systems (closed loop) |
| System volume — heat pump    | Up to 9,660 L (60 °C flow)                             |
| System volume — boiler       | Up to 5,390 L (82 °C flow)                             |
| Sizing basis                 | 3 bar safety valve, 1.5 bar vessel pre-charge          |
| Max working pressure         | 9 bar (set by the unit)                                |
| Max system water temperature | 85 °C (set by the unit)                                |
| Service valve                | 1¼", lockable, with drain                              |

| GWS HeatWave HWB-INT-500LV |                                         |
|----------------------------|-----------------------------------------|
| Nominal volume             | 500 L                                   |
| Type                       | Vertical on legs, exchangeable membrane |
| Connection                 | 1¼" BSPT                                |
| Max operating pressure     | 10 bar                                  |
| Operating temperature      | –10 to 99 °C                            |
| Factory pre-charge         | 1.5 bar                                 |
| Membrane                   | Exchangeable, high-grade butyl          |
| Dimensions (H × Ø)         | 1,561 × 756 mm                          |
| Weight                     | 98.0 kg                                 |

**Sizing.** System volumes assume a 3 bar safety valve and the vessel's 1.5 bar factory pre-charge, at 60 °C flow for heat pumps and 82 °C for boilers. For larger systems see the Mikrofill 3 Pro + 2 × HWB-INT-300LV kit.

**Fill pressure.** The 3 PRO has no pump, so it can never fill above the incoming supply pressure. It cuts out if the inlet drops below 0.3 bar. Mikrofill show a pressure reducing valve on the incoming supply.

**Closed loop only.** Not for potable or open-loop systems. Propylene glycol up to 50%; do not use ethylene glycol. The service valve must be locked open in normal use.