



Quick Start Guide for Negative Pressure Units

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1. Foreword

This quick start guide must be read in conjunction with NPU - UG - UK - v4 which is available at www.smhproducts.com. Please note that any non-observance of this user guide may invalidate any warranty associated with the product. We recommend all users complete equipment competency training provided by SMH.

1.1 The unit

The unit as hired consists of: the unit and all fixtures and fittings; and this quick start guide.

1.2 Intended use

SMH Negative Pressure Units or NPUs are portable/transportable air movers designed for use in the asbestos removal industry. They include HEPA (High Efficiency Particulate Air) filters covered by BS EN 1822 for use in the controlled removal of asbestos-containing materials (ACMs). They are designed to create negative pressure within a portable decontamination unit facility or working enclosure. They meet the requirements for asbestos negative pressure units as detailed in BS 8520-2:2009.

2. Standard operating procedures

The purpose of the SMH NPU standard operating procedures is to provide guidance for the correct and safe method of use of the units.



All engaged in decontamination must follow the health and safety protocols described in the current legislation and guidance.

2.1 Transport of the unit

Care should be taken when transporting an NPU. NPUs should be assessed before attempting to lifting them from a van or working area. Secure lifting handles are ergonomically positioned to assist when lifting NPUs:

- Ensure the NPU is securely located before transporting
- The NPU must only be transported in a decontaminated state
- Ensure that the transit cover plate is fitted securely to protect and seal the pre-filter during transit.
- Handle the NPU with care and attention, avoid manhandling while in operation.

2.2 Set-up of the unit


- The unit must be placed on hardened, vibration-free floor
- The unit should be used indoors and kept dry and within a temperature range of +5°C - +40°C.

2.2.1 Running of the unit

 The NPU must not be left running when unattended

- The NPU will require a 110v or 230v power supply rated to at least 16A.
- Extend the NPU supply cable and plug it into the mains outlet.
- With the cover plate attached, turn on the NPU using the rocker switch located on the NPU body. Remove the cover plate when the unit is running to prevent possible fibre release.
- Remove the cover plate by unclipping the NPU over centre clips. If necessary, switch off the NPU to reduce the suction on the pressure plate. Remove the plate and turn the NPU back on.
- Ensure that a clean pre-filter is fitted to the NPU and that it has been taped into place.
- Check that the manometer reading on the unit is within its safe operating pressure. The manometer is colour coded to indicate its safe working pressure.
- The NPU can now be attached to an enclosure wall and fitted with ducting to extract to atmosphere where necessary. There is also the option of using a spigot plate and roving filter box for remote extraction..
- When the NPU has been installed, ensure that the brakes are applied on the castors of the NPU to prevent any movement.
- The use of ancillary items such as roving heads or exhaust ducts can significantly reduce the airflow through an NPU, which in turn will reduce the negative pressure within the enclosure. RR988 HSL research project estimates a 1% drop in volume airflow rate for each metre of 355mm ducting used. Attach the flexible ducting using a suitable clip or tape to secure it to the spigot plate.
- To attach ducting to the NPU, attach the NPU spigot plate to the NPU using its original strikes and over centre clips or by using PCL tape. The pre-filter should be installed into the roving head filter housing – it is not advisable to use 2 pre-filters.
- Pre-filters should be changed regularly and only under controlled conditions. When the NPU is taped to an enclosure, cut the pre-filter out of the NPU. Fit a new pre-filter and seal it with PCL tape. Dispose of the dirty pre-filter as asbestos waste.
- Before an NPU is removed from the enclosure, ensure that a clean pre-filter has been fitted.
- Seal the NPU transit cover plate to prevent fibre release during transport.
- Hired NPUs must be returned clean and free from any dust or debris.
- NPUs used in the control of asbestos-containing materials must be serviced at least once every six months by a competent person to ensure it is working to its design specification.

2.3 Shut down of the unit

 Individual units may have power supply procedures that differ from the below. Please ensure you have read any annexes to the User Guide and if you have any questions, please check with SMH before using the unit.

- Ensure that a clean pre-filter is fitted to the NPU and that it has been taped into place.
- Seal the NPU using the transit cover plate to prevent fibre release during transport.
- Turn off and unplug the unit.

2.3.1 Storage of the unit

- Avoidance of extremes of temperature, damp conditions and/or dusty conditions..
- The unit must only be stored in a decontaminated state.

2.3.2 Return of the unit after rental

- NPUs must be returned clean and free from any dust or debris, inside and out, in a decontaminated state and without any damage.

2.4 Maintenance of the unit

⚠ The following maintenance procedures and advice for the procedures must be adhered to.

⚠ Do not attempt to open the unit – risk of exposure to hazardous substances and electrical risks.

2.4.1 Pre-use checks

- Visual checks of electrical equipment for obvious defects should be carried out before each use.

2.4.2 Daily checks

- Inspection and testing of electrical equipment should be carried out
- Inspection and maintenance of casings/fittings

2.4.3 Weekly checks

- Every week, users should conduct a thorough visual check and inspection of all electrical equipment for damage/wear.

2.4.4 Preventative maintenance

- Changing the pre-filter – see above instructions in 2.2.1. They should be changed regularly and only under controlled conditions.

2.4.5 Servicing regime

⚠ The NPU should be examined or, where deemed necessary by the manufacturer, serviced at least once every six months by a competent person

- We recommend that all NPUs are returned to your local branch for servicing.
- NPUs used in the control of asbestos-containing materials must be serviced at least once every six months by a competent and qualified person to ensure they are working to their design specification. NPUs sold outside of the UK must be examined and serviced at least once every 12 months and in accordance with local regulations and approved codes of practice.