



OPERATING AND MAINTENANCE INSTRUCTIONS

At Source Extraction Unit

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INTRODUCTION

This instruction document describes how to operate and maintain the Smartair Industrial System at source extraction system. It is intended as a guide to ensure that the equipment is operated and maintained safely and efficiently by the end user, as intended by the manufacturer. Only a qualified competent person should operate or maintain this equipment.

Smartair recommends that only weekly and the operators responsible for the equipment perform monthly maintenance items. Qualified and experienced technicians should be used to carry out all service and repair work.

Please read this document carefully before operating the equipment. Do not operate the system until you have read and understood the details contained herein. The specification document provides more description and should be referred to for additional information. Retain these instructions with the equipment for future reference.

Ensure that all required safety precautions are followed.

Local regulations have jurisdiction over any statement detailed herein and must be applied by the Operator / Service Technician. Code of compliance is the sole responsibility of the Operator / Service Technician.



Failure to follow these instructions carefully may result in a fire hazard or explosion risk, causing property damage, personal injury or death.

Working on the equipment for service or maintenance when operational.

Ensure that all isolation devices are clearly marked with a suitable notice, warning other personnel, so that the equipment is not started.

European Standards that apply to Smartair referred to in this document include:

- HSE guidance note HS (G) 67 Motor Vehicle Repair
- HSG37- Local Exhaust Ventilation
- EH9 – Spraying Flammable Products
- Noise at Work Regulations 1989
- Sale of Machinery Directive
- CE Directive
- Environmental Protection Act 1990 PGN 6/34(04)
- HSG178- Spraying of Flammable Liquids
- ATEX - 94/9/EC – European directive for hazardous area equipment.

- COSHH Regulations 1988 – Control of substances hazardous to health.

Description

Smartair is an at source extraction system which allows the paint finishing process to be carried out in workshops, production areas and other suitable areas without the need for a conventional spray booth. This can dramatically increase productivity whilst ensuring that Body shops operate safely and legally. The unique hood and masking design captures and disperses paint overspray and fumes, protecting the working environment.

Smartair is designed to be used on the following;

Medium size priming areas

Medium size topcoat areas

Smart repairs

Explosion Hazard

During the spraying operation the interior of the spray hood is a Class 1 Division 1 zone. The equipment has been designed to exclude all ignition sources.

Do not place in the hood any item that may generate an ignition source during the spraying or flash off process.

DO NOT SMOKE AROUND THE SPRAY HOOD AREA

Operating conditions

The equipment is designed to operate in an ambient air temperature of 5 to 40 deg C (41 to 104 deg. F).

Do not store flammable materials in or around the extraction unit.

Electrical components should be kept dry and not subject to moisture.

Operation

The stop/start push buttons are fitted to the side of the tower. The operator must be familiar with the points of electrical isolation in case of emergency. Familiarize yourself with the position of the isolator, as sited by the electrician on wiring the unit, before operating the equipment.

Spraying

Safety

This instruction manual does not detail the safe working practice of the spraying operation. It is intended that only fully skilled suitably experienced operators will use this equipment. The user has the sole responsibility for the safe spraying process and use of personal protective equipment.

Always use the compressed air filter regulator supplied with the equipment for the spraying process. This regulator has a maximum outlet pressure of 1.5 bar, which is the safe operating pressure for the hood design. Using a different compressed air source with a higher air pressure could cause the hood to leak.

Any fume or particulate leaking from the hood is a potential hazard to health and may also be an explosion risk. The hood is designed to work with small quantities of paint materials being applied.

Before spraying ensure that the extraction system is working and that the hoses are connected securely. Check that the masking is secure between the painted area and the hood so no leakage can occur. It is important that all the extracted air is drawn over the face of the hood.

Operating Instructions - Set up

The Smartair System recommends using “Wondermask”. Wondermask HT is ideal for standard paint materials. Use only Wondermask Twin Color for UV application. This is available exclusively from your Smartair, Distributor, in roll form with perforations to provide 2m x 1.5m sheets, the ideal size to work with the hood extraction system. Mask the repair area as required ensuring that the cut out is approximately in the centre of the masking sheet.



Position the hood over the centre of the area to be painted. The back edge of the hood (with rubber protection) should be positioned to within 50mm (2”) of the panel to be painted. Use the horizontal and vertical adjustment handles to loosen and fix the hood position.

For awkward areas on the vehicle, the Smart hood can be swiveled to the opposite side of the base to enable all areas of the vehicle to be easily reached for the painting process. (See below) This procedure would have to be assessed before masking takes place.



Ensure there is enough space around the stand to allow easy movement. Stand on base and lift mast and hood assembly approx 25mm upwards and slightly turn to mast.



Walk around the base, hood and mast assembly until it locates in its new position.



As an alternative the Smartair hood position relative to the base plate.

Take care not to over stress the hood when lifting or lowering. Lift or lower using the aluminum support bar.

Use the horizontal and vertical adjustment handles to loosen and fix the hood position



Feed the edge of the masking sheet between the hood and the masking band all the way round the hood to create a good seal between the panel and the hood.



Connect the hood hose to the extraction tower hose using the quick release connections. Check the condition of the hood filter and that it is secured in the correct position.



The extraction confirmation gauge can be seen in the lower right of the Smartair hood (see picture right). The gauge confirms to the user that the extraction is connected and functional.

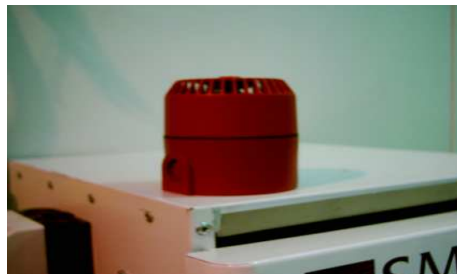
It is important that no spraying is undertaken without the gauge confirming the extraction is on (green zone on dial)



Extraction Tower

Switching on the power switch mounted on the side of the extraction tower turns on the extraction system.

Note: this switch also protects the system from current overload. If the unit fails to start when switched on, leave isolated and contact an electrician to inspect and repair as required.



There is a low airflow device fitted to the extraction system. This measures the amount of air leaving the extraction tower through the ductwork. In the event of a blockage or filters being overloaded, the low airflow sounder will activate. When the blockage is removed the system will revert to normal operating condition. If power is removed from the extraction tower the low airflow device will not operate. Always check that there is air movement at the hood before spraying. A small scrap of plastic masking sheet will adequately demonstrate that the hood is under a vacuum condition.

A visual inspection of the hood extracting the overspray should be maintained. If the overspray appears to leave the front of the hood at any time, check that the extraction system is functioning correctly. Do not continue to use the equipment if there is visible particulate leakage from the hood, hose, extraction tower or ductwork system.

Operator Maintenance Daily Maintenance

- Check the condition of hood filter. Replace as necessary. Life will depend on the number of and size of paint jobs done.
“Never let the hood filters become blocked as this will cause the hood to lose extraction and could result in a risk to health.” Heavy (high spray volume) users will need to change the hood filter daily.
Never operate the system without this filter in place; the particulate contamination will damage the equipment.



- Check the condition of the extraction hose. There should be no perforations, which will allow air to enter the hose other than through the hood connection. Report any damage immediately.
Change the hose if damage is found. Take care to store the hose correctly.

Weekly Maintenance

- Check stock of hood filters and masking material. Order as required.
- Check the condition of the bag filter located in the extraction tower. Replace as necessary. Life will depend on the number of and size of paint jobs done. Never let the filter become blocked as this will cause the hood to lose extraction and could result in a risk to health. Heavy users will need to change the bag filter weekly.
- Never operate the system without the filter in place; the particulate contamination will damage the equipment.
- Check the drain function of the filter regulator.



Specialist Service / Maintenance

To meet COSHH requirements a detailed LEV test should be carried out on this equipment at least every 14 months.

It's recommend that the equipment is serviced and an LEV test carried out at no more than 12 month intervals. A detailed COSHH and service report should be provided at the end of each service by the technician responsible.

A competent and suitably qualified technician as detailed previously in this document should only carry out all repair work.

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