

Xgard Air Sampling Unit (ASU)

Installation, Operating and Maintenance Instructions

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Introduction

The Air Sampling Unit (ASU) is designed to be used with Crowcon's Xgard range of detectors for monitoring potentially hazardous gases within ventilation ducts. The ASU operates using the Venturi principle, for which the air flow rate within the duct must be between 5 metres per second and 20 metres per second.

Installation

The Xgard gas detector must be fitted to the ASU prior to assembly onto the duct. A full assembly drawing is shown on the next page. The ASU is not compatible with the Xgard Type 4 high temperature gas detector.

1. To avoid the adverse effects of turbulence, the ASU should be installed in the centre of a straight section of duct which has a length of at least six times its width.
2. Check the air flow direction in the air duct system.
3. Apply the drilling template onto the centre line of the air duct parallel to the air flow. Check that the directional arrow on the drilling template is the same as the direction of the air flow in the duct.
4. Using a centre punch, punch the two centres indicated for the drilling template.
5. Drill out to 25mm (1") diameter. Remove burrs and sharp edges around the two holes.
6. Remove the ASU cover.
7. Fit the sample tube elbows with rubber washers on the inside and outside of the sampling chamber. Fit the securing nuts and tighten. Ensure that the black sample tube holes face 180° away from the sample chamber, and the white sample tube chamfer faces away from the sample chamber as shown on the diagram on the next page.
8. Check the thickness of the air duct metalwork and fit the black rubber grommets into the two duct holes drilled for point 5 of these instructions.
9. Fit the ASU probes through the two grommets checking that the inlet and outlet probes are correctly installed and push until the unit has sealed.
10. Mark the six ASU plate fixing holes and drill 5mm (1/4") holes for securing the plate. Secure the plate to the duct using suitable bolts.
11. Connect the detector cable as instructed in the Xgard manual.
12. **Check that there is no air leakage into the sampling chamber from outside the duct through the probe joints, grommets or sampling unit cover gasket.**

Testing and Commissioning

Calibrate the detector according to its instructions. Testing the operation of the ASU can be performed by introducing gas into the duct system.

Warning: it is essential to ensure that procedures are in place to prevent people and/or equipment being affected by any test gas introduced into the ventilation system.

Operation and maintenance

The ASU needs no specific maintenance, however the Xgard gas detector must be maintained in accordance with its instructions.

Specifications

Xgard ASU Part Number:	S011843
Suitable Duct Widths:	300mm (12") to 1500mm (60")
Suitable Air Speeds:	5 metres (3'3") per seconds to 20 metres (13') per second
Operating Temperature Range:	0°C (32°F) to +60°C (140°F)

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