

AIR SAMPLING UNIT

Part Nos: 53546-014 (Series 60)
53546-016 (XP95)

The Apollo air sampling unit is designed for use with Apollo Series 60 conventional smoke detectors (part no. 53546-014) and for XP95 smoke monitors (part no. 53546-016). The unit enables smoke detectors to be sited within ventilation extract ducts in order to assist in the prevention of the spread of smoke by the ventilation system (as required by building regulations) and in addition to form part of the fire alarm system. When designing fire detection systems incorporating smoke detectors in air sampling units reference must be made to Standards such as BS 5839: Pt1 : 1988 or locally acceptable Codes of Practice.

Under no circumstances should a duct smoke detection system be used as the sole method of detecting fire. Open area detectors must also be used.

The air sampling unit enables smoke detectors to monitor ventilation ducts without subjecting the detectors to high air velocities which could alter their sensitivity.



FEATURES

- Fully specified performance between 1m/s and 25m/s ducted air flow
- removable transparent viewing window to save on remote indicators and simplifying commissioning and servicing
- sampling probes suitable for ducts from 300mm to 1500mm wide
- probe sealing grommets supplied in two sizes
- strong, lightweight and small size design
- fitted with standard Apollo mounting base
- installation aid for accurate and easy fitting
- colour coded inlet and exhaust probes
- minimum effect on ventilation system functioning.



OPERATION

The Apollo air sampling unit works by taking a sample of air from the duct through a black perforated inlet probe into its sampling chamber, which should contain an Apollo Series 60 ionisation smoke detector, a Series 60 optical smoke detector or an Apollo XP95 ionisation or optical monitor. This air is removed through a white exhaust probe. The design of the probes and sampling chamber is arranged so that air passes through the sampling chamber at approximately 25% of the air speed in the duct.

CONSTRUCTION

The sampling chamber of the Apollo air sampling unit consists of a grey polycarbonate box fitted with a transparent polycarbonate cover. An Apollo mounting base is supplied ready fitted in this chamber. The perforated inlet probe is black PVC and is sealed at its end. The exhaust probe is distinguished by being white PVC and has a chamfer at its end. Sealing grommets in two sizes are supplied for each probe. The probes are connected by compression joints onto the sampling chamber which also has provision for fixing to the duct and removable plugs on one side for cable entry. The probes project approximately 161mm into the duct.

The transparent window which has a built-in sealing gasket can be removed by undoing four screws to provide access during installation or maintenance. During normal use the smoke detector and its LED indicator are visible through this window. During commissioning and use, smoke sampled from the duct may be visible and any accumulations of dust can be seen and removed during routine servicing.

A drilling template is provided to assist in the location of the probe entry holes into the duct. The template is in the form of a label which acts as a reminder to help ensure that each probe is fitted correctly in relation to the air flow in the duct.

The complete unit is packed with probes disassembled in a robust cardboard carton.

SPECIFICATION

Part No. 53546-014 (for Series 60 ionisation or optical detectors).

53546-016 (for XP95 ionisation or optical monitors).

Duct widths: 300mm to 1500mm

Air speeds: 1m/s to 25m/s

Operating Temperature Range: 0°C to 60°C

TESTING

Apollo Fire Detectors Limited have conducted a full testing programme for the air sampling unit using wind tunnel test facilities in Apollo's Development Department and at Fareham Technical College.

These tests included measuring the proportion of air-flow sampled by the air sampling unit.

