

3M™ Aircare™ Filtration Unit ACU-03/ACU-04

Technical datasheet

Product description

The 3M™ Aircare™ Filtration Unit provides high quality air from an external source of compressed air by removing water and oil droplets, solid particles and odours. The unit removes condensation and contamination from within the air system before it is delivered to the user.

- ▶ Three-stage filtration system removes particulates, water and oil droplets and hydrocarbon vapours
- ▶ One-handed operation to easily remove filter bowls. No tools required
- ▶ Simple, screw-fit filter elements for simple and secure maintenance.
- ▶ Secure attachment of filter stages for added confidence
- ▶ Semi-automatic drains empty the first and second stage bowls when the system is depressurised
- ▶ Solid, aluminium bowl construction for increased robustness
- ▶ Differential pressure indicator indicates when second stage filter needs changing/inspecting
- ▶ Provides Airflow in excess of 1200 litres per minute
- ▶ Multiple users/tools – 2-way and 3-way manifolds available
- ▶ Optional anti-tamper lockout kit provides added security

Approvals

This product is approved by 3M United Kingdom Plc for use with 3M air fed devices where the supply pressure and flow rates are met by the filtration unit.

The European Regulation (EU) 2016/425 does not apply to this type of device, therefore this device is not CE marked.

Standards

The Aircare™ Unit is tested to ISO 8573-1:2010 Class 2-1. This defines filter performance for:

Particulates – Water vapour – Oil

Class 2 (particulates) defines a maximum mass concentration of 400,000 particles/m³ for 0.1-0.5 micron particles, 6000 particles/m³ for 0.5-1 micron particles and 100 particles/m³ for 1-5 micron particles

Class ‘-‘ (water vapour) refers to the water vapour class not being defined as this is dependent on the dew point of the system.

Class 1 (oil) refers to the maximum concentration of oil of 0.01 mg/m³.

Applications

The Aircare unit provides a continuous flow of high quality compressed air.

Applications include:

- ▶ Pharmaceuticals
- ▶ Chemical mixing/handling
- ▶ Laboratories
- ▶ Paint Spraying
- ▶ Fibreglass handling
- ▶ Chemical and Agrochemical spraying
- ▶ Welding
- ▶ Foundries
- ▶ Grinding

Use Limitations

The 3M™ Aircare™ Filtration Unit must be used with industrial compressed air systems only.

- ▶ Air into the compressor should be of breathable quality in accordance with EN12021:2014.
- ▶ Gases such as carbon dioxide, carbon monoxide and other toxic dusts and gases should be prevented from entering the compressed air supply.
- ▶ The unit will not reduce concentrations of oxygen, carbon monoxide or carbon dioxide in the air.
- ▶ Do not use with asphyxiates
- ▶ Do not use outside the ambient temperature range of -10°C to +50°C.
- ▶ If used at higher temperatures (+50°C to +80°C) see maintenance section of the user instructions.
- ▶ Do not exceed the maximum working pressure of 10 Bar.
- ▶ Do not use in environments that are immediately dangerous to life and health (IDLH).
- ▶ Do not use in oxygen deficient environments.
- ▶ In case of intended use in potentially explosive atmospheres please contact 3M.

Spare Parts and Accessories

| Part Number | Description |
|-------------|--|
| ACU-20 | Replacement Filter Kit |
| ACU-14 | Pressure Gauge |
| ACU-22 | T-Bracket Connector |
| ACU-23 | Differential Pressure Indicator Kit |
| ACU-24 | Metal Bowl with semi-auto drain (Stage 1,2) |
| ACU-25 | Metal Bowl with manual drain (Stage 3) |
| ACU-21 | Anti-tamper lockout kit |

Technical Data Specifications

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|--|---|
| Compressed air for general use. Contaminants and purity classes. ISO 8573-1:2010 Class 2-1 | |
| Inlet Pressure | Maximum Pressure: 10 bar |
| Outlet Flow Characteristics | Maximum Flow 1200 litres per minute |
| Operating Conditions | -10°C to +50°C |
| Weight | Wall mounted unit 2.6kg Floor mounted unit 3.8kg |
| Inlet port | ½" BSP |
| Outlet Port | ¾" BSP |
| Pressure Gauge Port | ¼" BSP |

Important notice

The use of the 3M product described within this document assumes that the user has previous experience of this type of product and that it will be used by a competent professional. Before any use of this product it is recommended to complete some trials to validate the performance of the product within its expected application. All information and specification details contained within this document are inherent to this specific 3M product and would not be applied to other products or environment. Any action or usage of this product made in violation of this document is at the risk of the user. Compliance to the information and specification relative to the 3M product contained within this document does not exempt the user from compliance with additional guidelines (safety rules, procedures). Compliance to operational requirements especially in respect to the environment and usage of tools with this product must be observed. The 3M group (which cannot verify or control those elements) would not be held responsible for the consequences of any violation of these rules which remain external to its decision and control. Warranty conditions for 3M products are determined with the sales contract documents and with the mandatory and applicable clause, excluding any other warranty or compensation. Respiratory Protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to respiratory contaminants. 3M offers advice on the selection of products, and training in the correct fitting and usage. For more information on 3M products and services please contact 3M.