

Martindale Airforce Compressed Air Systems

These instructions must be read in full before operating the equipment. Failure to follow these instructions completely may result in a decrease in protection or no protection at all.

The Airforce System is a compressed air fed respirator system which, when supplied with breathable quality compressed air via a 10m hose, passes via a belt-mounted regulator to one of a range of headpieces.

Airforce Airfed Visor System

The Airforce Airfed Visor kit consists of a fixed regulator passing air to a clear flip up visor via a lightweight hose. In addition the regulator is fitted with a connection to allow the attachment of compressed air operated accessories, such as a spray gun, etc.

Airforce ConnectAir System,

The Airforce Connect Air system is an adaptor that can be fitted to the airforce regulator and supplies air to any of the Magnum hoods/helmets/visors. The regulator has an integral alarm indicator fitted which warns if the air supply pressure drops below the required minimum. The connect air adaptor includes an integral, non-replaceable odour filter element for removal of low level (below the OEL) non toxic oxours.

COMPONENT PARTS

Airforce Airfed Visor System (LDH3)

The kit consists of the following items :

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| Airfed Visor Assembly: | M25/1002N |
| Preset regulator and belt assembly: | M25R |
| Visor cover: | M23VC50N |
| The system shall be used with a 5/16" supply hose (10 Metre): | M25/10M |

Airforce Connectair System

The ConnectAir Systems consist of:

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| ConnectAir Adaptor | M25CAA |
| Preset regulator and belt assembly (with integral warning alarm) : | M25R |
| The system shall be used with a 5/16" supply hose (10 Metre): | M25/10M |

This may be used with any of the the following head pieces:

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| M23RVSN Rigid Visor with saronex hood(LDH2) | M23FSWVN Fixed shade welding visor (LDH2) |
| M23FUVN Flip Up Polycarbonate Visor (LDH2) | M23LHF P3 Tyvek-F Hood (LDH3) |
| M23HFUV Helmet with Flip Up Polycarbonate Visor (LDH2) | M23HS/8 P3 Half Suit (LDH3) |
| M23HFUVHTT High Temp. Helmet, Clear Triacetate Flip Up Visor (LDH2) | M23FH/8 P3 Full Hood (LDH3) |
| M23AWSN Auto change welding visor (LDH2) | |

All systems conform to EN 1835:1999 'Specification for light duty Compressed air breathing apparatus incorporating helmets or hoods'

SELECTION

The appropriate respiratory protection should be selected for the application in hand. Reference should be made to BS 4275:1997 Health and Safety Executive "Respiratory Protective Equipment a Guide to users" or "European Guidelines for Selection and Use of Respiratory Protective Devices".

APPLICATION

The airforce system will provide protection against airborne dusts, mists, fumes, gases and vapours.

The airforce visor system offers respiratory protection to class3 (LDH3)

The airforce connectair system offers respiratory protection to either class 2 (LDH2) or class 3 (LDH3) depending on headpiece used. Refer to table above for class corresponding to appropriate head piece.

Class 2 (LDH2) devices offer a nominal protection factor of up to 50 and an assigned protection factor according to BS 4275:1997 of 20.

Class 3 (LDH3) devices offer a nominal protection factor of up to 200 and an assigned protection factor according to BS 4275:1997 of 40.

- The system should not be used where the level of contaminant exceeds the Protection Factor x the O.E.L. or where the contaminant or its level is unknown
- The system should not be used in oxygen deficient atmospheres
- The system should not be used below 0°C
- The system should only be used in work situations were the risk of damage to the compressed air supply tube is low and where the movements of the wearer are limited

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USE

Air supply specification

Airforce Airfed Visor System (Fig 1)

Input pressure: 4.7 bar (65 P.S.I.) at input to supply hose.

System consumption: 200 litres/minute minimum. 250 litres/minute maximum.

Minimum Design Flowrate: 200 litres/min

Airforce ConnectAir System (Fig 2)

Input pressure: 4.5 - 6 bar at input to supply hose. This system should not be operated below 4.5 Bar

System consumption: 120 litres/minute minimum. 250 litres/minute maximum.

Minimum Design Flowrate: Class 2 head pieces (LDH2) - 140 litres/min

Class 3 head pieces (LDH3) - 120 litres/min

Integral Alarm

The integral audible alarm within the regulator is designed to activate when the air supply pressure reduces to a level which may result in the airflow dropping below the minimum design flowrate (as above).

Note :

The integral carbon filter within the M25CAA is intended for the removal of nuisance level odour only. The air supply must be of breathable quality as defined in EN 132:1998, BS 4275:1997. The air supply system should be equipped with a pressure relief safety valve. The integral filter is not removable and the M25CAA must be replaced when the filter has been saturated or has expired.

Regular checks for purity of breathing air supplied by a compressor should be carried out in accordance with BS 4275:1997

Frame mounted (M25/180F) filtration system and Wall Mounted (M25/180W) filtration system are available and should be used for the removal of Oil mist and Water Vapour. Refer to separate instructions supplied with the filtration system.

Air supply hose specification (M25/10M)

Maximum working pressure: 10 bar, Maximum hose length: 10 m

Note: This hose is NOT specified heat resistant or antistatic.

Regulator specification

This regulator is **NON-adjustable**. Do not attempt to adjust the regulator. The regulator has no user serviceable parts. To fit a device take off unscrew the take off point using an allen key and screw in an appropriate (1/4" BSP threaded) female shut off adaptor. Ensure that you use sealant tape or liquid on the thread to ensure that there is no leak of air.

Before use

The following should be performed in an uncontaminated area.

- Check that the air supply pressure and flow available are in accordance with the above mentioned AIR SUPPLY SPECIFICATION
- Inspect the equipment before use for any signs of damage or deterioration. Do not use the equipment if it appears damaged
- Fit the belt with the regulator attached around the operator's waist with the regulator on the side of the body and the Air inlet connector which extends from the regulator pointing forward. Lock the buckle and adjust the belt to a comfortable tightness
- Connect the male end of the main air supply hose to the main air supply. Connect the female end of the main air supply hose to the male inlet of the regulator which points downwards from the regulator housing. (See Figure 1)
- When using M25CAA - Attach the ConnectAir adaptor to the outlet of the regulator ensuring that it is locked in place. Connect the hose from the headpiece to the ConnectAir adaptor by inserting the bayonet in the top and twisting
- Check the air quality from the headpiece. If an odour is detectable and a connect air adaptor is being used then it should be replaced. If an odour is still detected then the system should not be used. The cause should then be investigated since further prefiltering will probably be required

Fitting the Headpiece

Airforce Airfed Visor System

The M25/1002N Visor is supplied with a foam face seal as standard.

- Open out the head harness by rotating the knob on the back of the harness
- To fit the head harness, adjust the crown strap and the knob at the back of the head harness until the face seal fits around the face when the visor is flipped down
- The light duty breathing hose should run down the back of the user

Airforce ConnectAir System

- To fit the headpiece refer to the fitting instructions supplied with the appropriate head piece

In use

- If an odour develops during use the connect air adaptor (if used) needs replacing (see CARE AND MAINTENANCE below). The quality of the supply air and any upstream in-line filtration should be checked to ensure that the air being fed to the breathing equipment is free from oil mist

Warnings

- If the face seal does not fit closely to the face then the stated levels of protection may not be achieved
- The airfed visor should not be used with spectacles with side arms that interfere with the face seal fit
- This system should not be used below 0°C
- This system should not be used with oxygen or oxygen enriched air
- At very high work rates the pressure in the visor may become negative at peak inhalation flow. Since it is not possible for the user to adjust the airflow other forms of respiratory protective devices should be considered for this task
- The protection factor may not be achieved with persons with excessive facial hair or glasses where this interferes with the face seal
- The user must ensure the purity and identity of the breathing air supply at all times
- Adequate protection may not be provided by the apparatus in certain highly toxic atmospheres
- This apparatus should not be used in areas where inhalation of the atmosphere, whilst escaping in the event of failure of the air supply, would cause serious harm to health
- The air supply system should be equipped with an appropriately rated and adjusted pressure relief safety valve
- If accessories (e.g. spray gun) are driven from the same compressed air tube the user shall ensure that at least the minimum flow conditions are present in the equipment when the accessory is consuming its maximum air flow requirements

CARE AND MAINTENANCE

All maintenance should be performed in an uncontaminated area.

- For the air fed visor only: Visor covers (M23VC50N) should be replaced when contamination starts to obscure vision by pulling off and pushing a new visor cover over the two metal studs
- It is recommended that the complete kit of equipment is inspected on a monthly basis (or before use for occasional users) and any worn or damaged components are replaced. Particular attention should be paid to head piece and face seal.

Spare parts

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| Airfed Visor: | M25/1002N |
| Replacement visor for M25/1002N (includes air tube + diffuser): | M25V |
| Replacement foam face seal for M25/1002N: | M25/FMFS |
| Fixed Regulator and Belt: | M25R |
| 10 m 5/16" bore supply hose: | M25/10M |
| Visor covers (for M25/1002N only): | M23VC50N |
| Comfort Pad | M23CP/L |

For spares for Magnum Headpieces please refer to the instructions supplied with the headpiece.

Cleaning

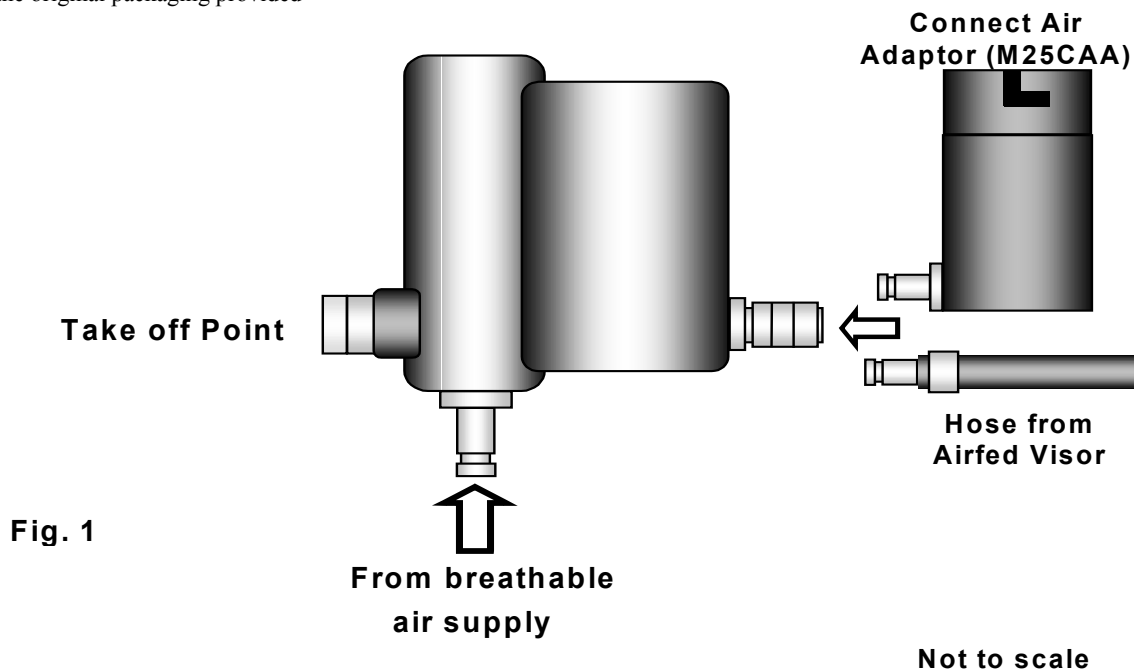
- The external surfaces of all components may be cleaned using a sponge and warm soapy water and afterwards rinsed and allowed to dry naturally
- Do not immerse any part of the system in water, particularly the regulator system as this may damage it

Storage

- The equipment should be stored in the packaging provided in an uncontaminated environment away from direct sunlight
- Recommended limits of storage are 5 to +30°C with RH < 60% : Absolute limits are : -5 to +55°C with RH <95%
- The Equipment (with the exception of the connect air adaptor) has a life of 5 years from date of manufacturer providing it is stored and maintained in accordance with the manufacturers instructions. The date of manufacture is marked on the product
- The M25CAA adaptor has a life of 3 years from date of manufacture and is marked with the use by date. Do not use past this date

Transport

- Transport in the original packaging provided



All Airforce Systems are guaranteed free from any faults in materials or workmanship. Should any such faults develop within 12 months of purchase then Centurion Safety Products Ltd will, at their discretion, repair or replace the unit without charge.

EC Type-examination by : BSI Product Services, Maylands Avenue, Hemel Hempstead, Herts, HP2 4SQ (Notified Body No 0086)