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3M™ Versaflo™ TR-300+ Powered Air Turbo

Technical datasheet



Description

The 3M™ Versaflo™ TR-300+ Powered Air Turbo is a belt-mounted air purifying device. When combined with one of the 3M approved headtops, it forms a power-assisted system for respiratory protection against particles (and nuisance odour where applicable). The TR-300+ Powered Air Turbo can be used with the 3M™ Versaflo™ S-Series Hoods and Headcovers, 3M™ Versaflo™ M-Series Faceshields and Helmets.

- Two user selectable flow rates
- Controlled airflow delivers steady flow as battery discharges or filters loads with particulates
- Display shows battery charge status, selected airflow and particulate filter loading status during use
- Audible and LED alarm signals low battery charge or low airflow
- Three filter options available:
  - Particulate only
  - Particulate plus nuisance level organic gas and vapours* below the Workplace Exposure Limit (WEL)
  - Particulate plus nuisance level acid gas* below the WEL andoffers protection against hydrogen fluoride up to 10 x WEL
- Lithium ion battery with LED to indicate charge status
- Three belt options (standard, easy-clean and leather) for a range of applications
- Suitable for use in decontamination shower (IP 53)

*Nuisance level refers to concentrations below the Workplace Exposure Limit

Standards and approvals

The TR-300+ Powered Air Turbo, in combination with 3M approved headtops, has been tested and approved to EN 12941:1998+A2:2008. The TR-300+ Powered Air Turbo also meets the dust protection and spraying water requirements (IP 53) of EN 60529.

- Dust protection and protection against spraying water to EN 60529 IP 53.

The Certificate and Declaration of Conformity are available at the following website www.3M.com/Respiratory/certs

Note: This product also complies with the European EMC Directive 2014/30/EU.



Applications

The TR-300+ Powered Air Turbo, when used as part of an approved system with appropriate filters, provides protection against:

- Particles e.g. fine dusts, mists and metal fume.
- Nuisance odour levels (below the Workplace Exposure Limit) of organic gas and vapours
- Nuisance odour levels (below the Workplace Exposure Limit) of acid gases and up to 10 x Workplace Exposure Limit of hydrogen fluoride.

The TR-300+, when used with an appropriate 3M headtop and filters, may be used in various applications including:

- Agriculture
- Chemical industry
- Construction and building renovation
- Demolition
- Food and beverage
- Medical and healthcare
- Metalworking
- Pharmaceutical manufacturing
- Pulp and paper processing
- Smelting and foundries
- Surface preparation
- Woodworking

Materials

Component	Material
Turbo body	Acrylonitrile butadiene styrene (ABS)
Filter cover	Acrylonitrile butadiene styrene (ABS)
Battery casing	Acrylonitrile butadiene styrene (ABS)
Belts	- Standard polyester web belt - Polyurethane coated polyester easy-clean belt - Leather belt

Limitations

The TR-300+ Powered Air Turbo should not be used in the following conditions:

- Asbestos removal
- In atmospheres containing less than 19.5% oxygen
- Confined spaces (lack of ventilation)
- When the risk is considered to be immediately dangerous for life or health (IDLH)
- Where the contaminant concentration is above the Workplace Exposure Limit defined for the headtop used (see relevant User Instructions for the headtop)

Product range

TR-300+ Powered Air Turbo is available to buy as:

- TR-302E+ Turbo Unit (includes filter cover, airflow indicator and spark arrestors)
- TR-315UK+ Starter Kit (includes TR-302E+ turbo unit, particulate filter, standard belt, high capacity battery pack, battery charger kit, self-adjusting breathing tube, airflow indicator and spark arrestors)

Technical specifications

Assigned Protection Factor (APF):
Depends on 3M headtop used.

Protection class TH2

- APF = 20

Protection class TH3

- APF = 40

Note: APF = Assigned Protection Factor (For furtherinformation on APFs see HSE document HSG53). Please contact 3M for further information.

Outlet flow characteristics

- Stated manufacturer's minimum design flow (MMDF) 170 l/min
- Standard Flow 185 l/min +/- 10 l/min
- High Flow 205 l/min +/- 10 l/min

Battery duration (with new filter and new battery)

- Standard battery: Standard Flow 4.5–6 hours
High Flow 4.5–5 hours
- High-capacity battery: Standard Flow 9–12 hours
High Flow 9–10 hours

Battery charge time

- Standard battery back = less than 3 hours
- High capacity battery pack = less than 3.5 hours

Storage conditions
-30°C to +50°C < 90 %RH
Refer to filter user instructions for filter storage conditions

Operating temperature
-10°C to +55°C

Shelf life*
5 years from date of manufacture

Weight (including high capacity battery, belt and filter)
Approx. 1135 g

Spare parts and accessories

Part number	Description
TR-325	Standard belt
TR-326	Leather belt
TR-327	Easy-clean belt
TR-329	Braces
BPK-01	Backpack
TR-330	Standard battery pack
TR-332	High capacity battery pack
TR-340	Battery charger cradle
TR-341E/UK	Battery charger kit (European/UK)
TR-344E/UK	4-Station battery charger kit (European/UK)
TR-362	Spark Arrestor
TR-371+	Filter cover
TR-971	Airflow indicator
TR-3600	Pre-filter
TR-3712E	Particulate filter
TR-3802E	P + Nuisance Level** Organic Vapour
TR-3822E	P + Nuisance Level** Acid Gas Filter and Hydrogen Fluoride up to 10 x Workplace Exposure Limit
BT-20S/L	Lightweight breathing tube (Small/ Medium or Medium/Long)
BT-30	Self-adjusting breathing tube
BT-40	Heavy duty breathing tube
BT-922	Disposable breathing tube cover
BT-926	Flame resistant breathing tube cover
BT-957	Storage plugs (for all 3M™ BT-Series Breathing Tubes)

*The shelf life as defined above remains an indicative and maximum data is subject to many external and non controllable factors. It may never be interpreted as a warranty.

**Nuisance level refers to concentrations below the Workplace Exposure Limit

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.

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