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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 vapours*
 - ▶ Particulate plus nuisance acid gas* and offers protection against hydrogen fluoride up to 10 x Occupational Exposure Limit
- ▶ 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 Occupational 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 60529:1992 + A2:2013.

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 Occupational Exposure Limit) of organic vapours
- ▶ Nuisance odour levels (below the Occupational Exposure Limit) of acid gases and up to 10 x Occupational 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



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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 Occupational 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+/TR-315E+ 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)
- ▶ TR-300-HIK Ready-Pak includes the M-307 Helmet, TR-302E+ Turbo Unit, TR-332 High Capacity Battery, TR-341E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter, TR-362 Spark Arrestor, TR-326 Leather Belt, BT-30 Length Adjusting Breathing Tube and BT-926 Flame Resistant Breathing Tube Cover
- ▶ TR-300-HKL Ready-Pak includes the S-133L Headcover, TR-302E+ Turbo Unit, TR-332 High Capacity Battery, TR-341E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter, TR-327 Easy Clean Belt, BT-30 Length Adjusting Breathing Tube and BT-922 Disposable Breathing Tube
- ▶ TR-300-ECK Ready-Pak includes the S-433L Headcover, TR-302E+ Turbo Unit, TR-332 High Capacity Battery, TR-341E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter, TR-327 Easy Clean Belt, BT-30 Length Adjusting Breathing Tube and BT-922 Disposable Breathing Tube

Technical specifications

Nominal Protection Factor (NPF):
Depends on 3M headtop used.

Protection class TH2

- ▶ NPF = 50

Protection class TH3

- ▶ NPF = 500

Note: The Nominal Protection Factor is a number derived from the maximum percentage of total inward leakage permitted in relevant European Standards for a given class of respiratory protective device. This may not be the level of respiratory protection that can be realistically expected in the workplace by wearers. Many countries apply Assigned Protection Factors (APFs) for example UK and Germany. Employers may apply a value lower than the NPF/APF if deemed applicable. Please refer to EN 529:2005 and National workplace protection guidance for application of these numbers in the workplace. Please contact 3M for further information.

Outlet flow characteristics

- ▶ Stated manufacturer's minimum design flow (MMDF) 170l/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)

- ▶ High-capacity battery: Standard Flow 8–12 hours
High Flow 8–10 hours

Battery charge time

- ▶ 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



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

The 3M™ Versaflo™ Powered Respirator System TR-300+ combines performance, protection and functionality with modern, stylish design and comfort. It is the key to easy-to-use, versatile, respiratory protection systems for particulate environments.

Features and Benefits:

Comfortable Airflow

- Two user selectable flow rates to maximise comfort: 185l/m and 205l/m Controlled airflow delivers steady flow as battery discharges or filter loads with particulates



Ease of Use

- Electronic audible and visual alarm in case of low battery and/or low air flow
- TR-300+ display shows battery charge status, particulate filter loading status during use as well as selected airflow
- Charge status is indicated by a useful LED display
- No user calibration of turbo required



Comfort

- Light and small - extremely slim, lightweight, balanced design for comfort

Multiple Applications

- High efficiency filter captures hazardous dust, mist and fume plus options for nuisance level gases and vapours
- IP53 rating. Suitable for use in decontamination shower



Safety

- Approved to EN 12941, TH2 or TH3 depending on headtop



Filter

TR-3712E	P3 Particulate filter
TR-3802E	P3 Particulate filter and +Nuisance Level* Organic Vapour
TR-3822E	P3 Particulate filter and +Nuisance Level* Acid Gas Filter (Hydrogen Fluoride up to 10 x Occupational Exposure Limit)

* Nuisance level refers to concentrations below the occupational exposure limit (OEL).

Batteries

TR-332	Battery charger
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Belts

TR-325	Standard Belt
TR-327	Easy-Clean Belt
TR-326	Leather Belt

Spares & Accessories

TR-3600	Pre-filter
TR-971	Air Flow Indicator
TR-371+	Filter Cover
BPK-01	Backpack
TR-362E	Spark Arrestor
022-25-10P4	Braces
TR-380	Filter Surround Gasket

Chargers

TR-341A	Single Station Battery Charger Kit
TR-344A	4-Station Battery Charger Kit

Typical Applications

- Pharmaceutical manufacturing
- Food & beverage
- Woodworking
- Metal working
- Surface preparation
- Smelting

3M™ Versaflo™ Powered Air Turbo TR-302E+

This unit comes with an airflow indicator and spark arrestors (x2). To adapt to your type of environment see options below.

3M™ Versaflo™ Starter Kit TR-315A+

This Versaflo Starter Kit includes the TR-302E+ Turbo, particulate filter, pre-filter, spark arrestors (x2), standard belt, high capacity battery pack, battery charger kit (not shown on the picture below), self-adjusting breathing tube and airflow indicator.



Note: 3M does not accept responsibility or liability, direct or consequential, arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence or fraudulent misrepresentation.



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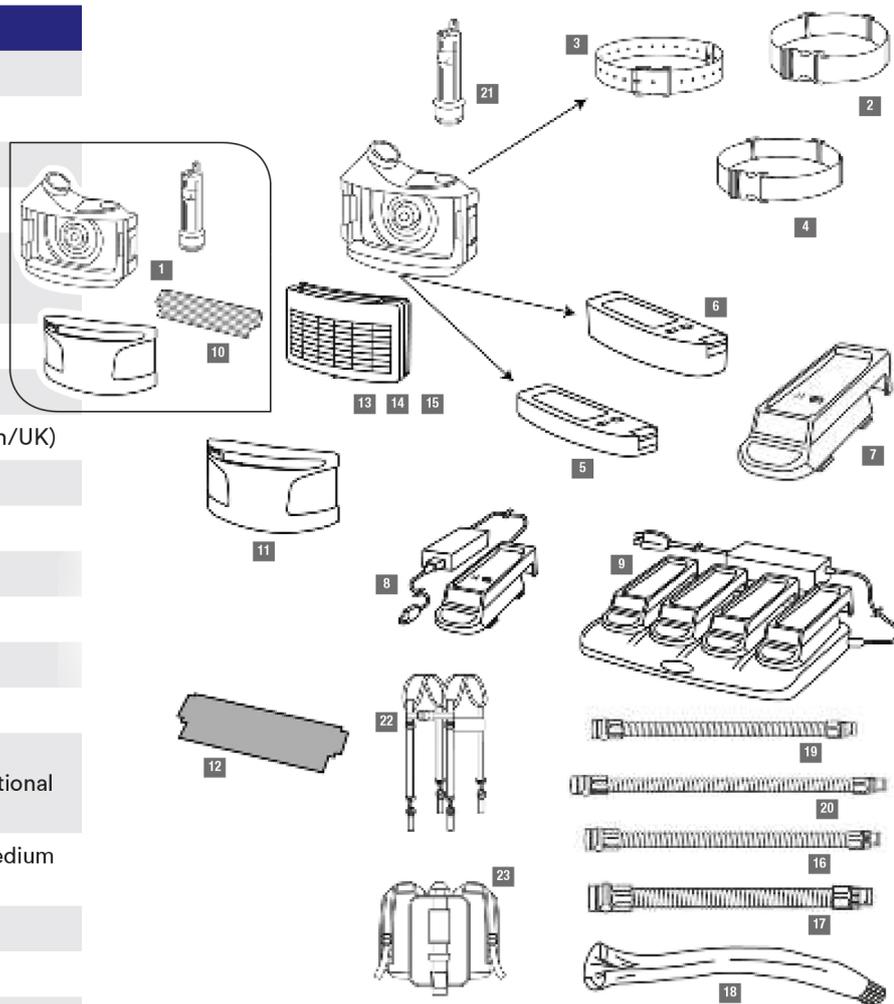
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Spare parts and accessories

Part number	Description
TR-325	Standard belt
TR-326	Leather belt
TR-327	Easy-clean belt
TR-329	Braces
BPK-01	Backpack
TR-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 (Hydrogen Fluoride up to 10 x Occupational 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, subject to many external and non controllable factors. It may never be interpreted as a warranty.

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.