

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



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 10x 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. The TR-300+ Powered Air Turbo also meets the dust protection and spraying water requirements (IP 53) of IEC 60529:1989+A1:1999+A2:2013.

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

IMPORTANT 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 10x 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

Materials

Table 1: TR-300+ Powered Air Turbo 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 and health (IDLH)
- Where the contaminant concentration requires a greater protection factor than that provided by the system (see relevant User Instructions for the headtop)

Product Range

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

- TR-302E+ Turbo Unit (includes TR-371+ Filter Cover, TR-971 Airflow Indicator and TR-362 Spark Arrestor)
- TR-315UK+/TR-315E+ Starter Kit (includes TR-302E+ Turbo Unit, TR-3712E (P) Filter, TR-3600 Pre-Filter (x10), TR-325 Standard Belt, TR-332 High Capacity Battery, TR-342E Single Station Battery Charger Kit, BT-30 Length Adjusting Breathing Tube, TR-971 Airflow Indicator and TR-362 Spark Arrestor)
- TR-300-HIK Ready-Pak includes the M-307 Helmet, TR-302E+ Turbo Unit, TR-332 High Capacity Battery, TR-342E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter (x10), 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-342E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter (x10), 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-342E Single Station Battery Charger Kit, TR-971 Airflow Indicator, TR-3712E (P) Filter, TR-3600 Pre-Filter (x10), TR-327 Easy Clean Belt, BT-30 Length Adjusting Breathing Tube and BT-922 Disposable Breathing Tube

Technical Properties

System Classification and Some Example Protection Factors

NOTE

Protection factors correct at time of printing. Refer to local regulation for current protection factors.

	EN 12941
Classification	TH3
NPF	500
APF* (UK)	40
VGW** (Germany)	100
FPO*** (Italy)	200

*APF (UK) = Assigned Protection Factor (For information on APFs, see HSE document HSG53)

**VGW (Germany) = Protection level according to DGUV-R 112-190

***FPO (Italy) = Protection level according to UNI 11719

IMPORTANT NOTE

The Nominal Protection Factor (NPF) is a number determined by the 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. Respiratory protection is only effective if it is correctly selected, fitted (if using a tight-fitting respirator) and worn throughout the time when the wearer is exposed to hazards. Many countries apply their own Protection Factors. Please refer to EN 529 and National workplace protection guidance for application of these numbers in your workplace. Employers may apply a value lower than the country's Protection Factor if deemed applicable. 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

Personal Safety Division

Storage conditions: -30°C to +50°C < 90 %RH

Operating temperature: -10°C to +55°C

Shelf life*:

- 3M™ Versaflo™ Powered Air Turbo TR-300+ and Filters = 5 years
- Battery = 12 months (if unused beyond this period, batteries may not provide approximately 500 charge/discharge cycle equivalents during the first year of use while maintaining 80% of their original capacity)

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

*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.

Spare Parts and Accessories

Part Number	Description
TR-325	Standard Belt
TR-326	Leather Belt
TR-327	Easy-Clean Belt
TR-927	Easy-Clean Backpack
BPK-HD	Heavy Duty Backpack
TR-332	High Capacity Battery Pack
TR-342E	Single Station Battery Charger Kit
TR-342-3	3-Station Battery Charger Pack
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 (Short/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
TR-381	PAPR Cover
BT-957	Storage Plugs (for all 3M™ BT-Series Breathing Tubes)

*Nuisance level refers to concentrations below the Occupational 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.

