

# 3M™ Versaflo™ Powered Air Turbo TR-600

## Technical Data Sheet



Thanks to comprehensive research and an in-depth understanding of your needs, we created the most advanced, versatile solution yet. Simply put: It's designed to help make breathing and working easier.

### Description

The 3M™ Versaflo™ Powered Air Turbo TR-600 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, nuisance odours\* (where applicable) and gases and vapours. The TR-600 Powered Air Turbo can be used with the following 3M headtops: S-Series, M-Series, and certain Speedglas welding shields and selected headtops.

### Key Features

- Three user selectable flow rates for improved comfort
- Controlled airflow delivers steady flow as battery discharges or filter loads with particulates
- Display shows battery charge status and particulate loading status during use
- No user calibration of the turbo is required
- Electronic audible, visual and vibratory alarm in case of low battery and/or low air flow
- Simple, intuitive, easy to use two-button operation
- Four filter options available:
  - PAPR-P3
  - PAPR-P3 plus nuisance level organic vapours and acid gas which also offers protection against hydrogen fluoride up to 10 x the Exposure Standard
  - PAPR-A1P3
  - PAPR-A1B1E1HgP3
- Lightweight lithium ion battery with LED to indicate charge status
- Two belt options:
  - Easy-clean belt with smooth surfaces allows easy, thorough cleaning
  - High durability belt for hot work or rugged environments provides greater durability and spark/flame resistance
- Suitable for shower decontamination (IP54) when using filter cover and temporary submersion (IP67) when fitted with cleaning plugs



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## Applications

The TR-600 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 Exposure Standard) of organic vapours
- Nuisance odour levels\* (below the Exposure Standard) of acid gases and up to 10 x the Exposure Standard for Hydrogen Fluoride
- Organic gases and vapours (with boiling point > 65°C)
- Inorganic gases
- Acid gases
- Mercury vapour

The TR-600, when used with an appropriate 3M headtop and filters, can 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, Paint Spraying and Coating
- Woodworking

## Limitations

The TR-600 Powered Air Turbo should not be used in the following conditions:

- Asbestos removal with inappropriate headtop
- 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 protection level assigned to this respirator and associated headtop (ref AS/NZS 1715:2009)

## Product Range

The TR-600 Powered Air Turbo is available to buy as:

- TR-602E Turbo Unit includes Airflow Indicator & Spark Arrestor (x2)
- TR-619A Starter Kit includes the TR-602E Turbo Unit, Easy Clean Belt, High Capacity Battery, Single Station Battery Charger Kit, BT-30 Length Adjusting Breathing Tube, Airflow Indicator and Spark Arrestor (x2).



TR-602E



TR-619A

\* Nuisance odour level refers to concentrations below the Exposure Standard

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## Technical Specifications

All 3M loose fitting hoods and headtops for use on the TR-600 Powered Air Turbo are given a protection factor of 50 for particulates and 10 for gas/vapours.

Full facemasks used on the TR-600 Powered Air Turbo are given a protection factor of 100 for particulates and 10 for gas/vapours. (ref. AS/NZS1715:2009).

## Outlet Flow Characteristics

Manufacturer's Minimum Design Flow (MMDF)	170 l/min
Nominal Standard Flow	185 l/min
Nominal Mid Flow	205 l/min
Nominal High Flow	225 l/min

## Weight

Turbo	670 g
Standard Battery	450 g
High Capacity Battery	620 g
Easy Clean Belt	270 g
High Durability Belt	425 g

## Materials

Turbo body	Polycarbonate / Acrylonitrile Butadiene Styrene blend
Filter cover	Polyamide
Battery casing	Polycarbonate / Acrylonitrile Butadiene Styrene blend
Easy Clean Belt	Ethylene Vinyl Acetate foam, polyamide webbing
High Durability Belt	Ethylene Vinyl Acetate foam, leather belt

## Battery Charge Time

Standard Battery	Less than 3.5 hours
High Capacity Battery	Less than 4.5 hours

## Battery Duration (with new battery and clean filter at 20°C)

	Standard Flow		Medium Flow		High Flow	
	All Filters	P Filter	All Filters	P Filter	All Filters	P Filter
Standard economy battery (hours)	6-12	10-12	5.5-11.5	9.5-11.5	4.5-9.5	8.5-9.5
High capacity battery (hours)	9.5-19	15-19	8.5-15	14.5-15	7-14.5	13.5-14.5

## Standards

The TR-600 Powered Air Turbo, in combination with 3M headtops, has been tested and is compliant with AS/NZS 1716:2012.

The TR-600 also meets the following requirements:

- Dust protection and protection against spraying water from all directions to EN60529 IP 54
- Dust tight and temporary submersion to 1 m to EN60529 IP 67 **when sealing caps fitted**

## Storage Conditions

-30°C to +50°C < 90%RH

## Operating Temperature

-10°C to +55°C

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## Spare Parts & Accessories

Part No.	Description
TR-630	Standard Battery
TR-632	High Capacity Battery
TR-640	Battery Charger Cradle
TR-641E	Single Station Battery Charger Kit
TR-644E	4-Station Battery Charger Kit
TR-6710ANZ	PAPR-P3 Particulate Filter
TR-6820ANZ	PAPR-P3 Particulate Filter plus nuisance level organic vapours below Exposure Standard (ES) , nuisance level acid gases below ES and Hydrogen Fluoride gas up to 10 x ES
TR-6310ANZ	PAPR-A1P3 - Organic gases & vapours (bp > 65°C) and particulates
TR-6580ANZ	PAPR-A1B1E1HgP3 - Organic gases & vapours (bp > 65°C), inorganic, acid gases, mercury vapour and particulates
TR-6300FC	Filter Cover for TR-6300 Series Filters
TR-6500FC	Filter Cover for TR-6500 Series Filters
TR-6700FC	Filter Cover for TR-6700 Series Filters
TR-6800FC	Filter Cover for TR-6800 Series Filters
TR-971	Air Flow Indicator
TR-6600	Pre-Filter
TR-662	Spark Arrestor
TR-651	Filter Latch Assembly
TR-653	Cleaning and Storage Kit
TR-626	High Durability Belt
TR-627	Easy Clean Belt
TR-329	Braces

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