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# Technical Specifications



## 3M™ Versaflo™ TR-300 Powered Air Purifying Respirator (PAPR) Assemblies

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*Replaces all previously published technical specifications until superseded.*

Attribute	Technical Specification
<b>Airflow</b>	Greater than 6 CFM (170 Lpm) (Nominal 6.7 CFM, 190 Lpm)
<b>Alarms – Motor/Blower</b>	
<ul style="list-style-type: none"> <li>▪ Low airflow (fan icon)</li> </ul>	Audible and Visual. <ul style="list-style-type: none"> <li>• Activates when airflow falls below 6 CFM (170 Lpm) for greater than approximately 30 seconds.</li> <li>• If alarm condition continues for approximately 15 minutes, the TR-300 system will automatically shut down.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Low battery voltage (battery icon)</li> </ul>	Audible and Visual. <ul style="list-style-type: none"> <li>▪ Activates when approximately 10 - 15 minutes of power left.</li> <li>▪ Activates when internal battery pack temperature reaches 130° F (55° C).</li> <li>▪ Activates when battery is not recognized by the turbo.</li> </ul>
<ul style="list-style-type: none"> <li>▪ System alarm (all icons)</li> </ul>	Audible and Visual. <ul style="list-style-type: none"> <li>▪ Activates when system software malfunctions.</li> <li>▪ Activates when motor/fan is not turning.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Alarm decibel level</li> </ul>	85 dBA at 4 inches (10 cm)
<b>Operating Altitude Range</b>	Approximately sea level to 2600 feet (800 meters). For use in elevations above 2600 feet contact 3M Technical Service.
<b>Assigned Protection Factors (APF)</b>	Depends on headgear selected. Consult selected headgear <i>User Instructions</i> or contact 3M Technical Service.
<b>Belts</b>	<ul style="list-style-type: none"> <li>▪ TR-325 – Standard – Polyester ~62 in (157 cm).</li> <li>▪ TR-326 – High Durability – Leather ~52 in (132 cm).</li> <li>▪ TR-327 - Easy Clean – Polyurethane Coated Polyethylene Webbing ~62 in (157 cm).</li> </ul>

Attribute	Technical Specification
<b>Belts, Continued</b>	<ul style="list-style-type: none"> <li>▪ All belts can be interconnected for expanded size range.</li> <li>▪ Belt extender (15-0099-06 Leather belt extender ~36 in (91 cm)) available for the TR-326 belt.</li> </ul>
<b>Breathing Tubes – Length</b> <ul style="list-style-type: none"> <li>▪ BT-20S</li> <li>▪ BT-20L</li> <li>▪ BT-30</li> <li>▪ BT-40</li> </ul>	<ul style="list-style-type: none"> <li>▪ ~28 in (71 cm)</li> <li>▪ ~38 in (96 cm)</li> <li>▪ ~26 in (66 cm) “relaxed length”; ~33.5 in (85 cm) “fully extended”</li> <li>▪ ~33 in (84 cm)</li> </ul>
<b>Decontamination</b>	<ul style="list-style-type: none"> <li>▪ Do not submerge motor/blower or battery pack.</li> <li>▪ Ingress Protection (IP) rating of IP-53 (EN 60529). Suitable for use in a decontamination shower with a spray angle of up to 60 degrees from vertical.</li> </ul>
<b>Dimensions – Motor/blower</b>	<ul style="list-style-type: none"> <li>▪ ~7 7/8 X 8 1/4 X 3 3/8 in (197 X 210 X 185 mm)</li> </ul>
<b>Weight</b> (includes TR301N blower unit, TR-370 cover, TR-3710N filter, TR-325 belt, and specified battery)	<ul style="list-style-type: none"> <li>▪ ~2.0 lbs (918 g) with TR-330 economy battery</li> <li>▪ ~2.4 lbs (1077 g) with TR-332 high capacity battery</li> </ul>
<b>Filter Options</b>	<ul style="list-style-type: none"> <li>▪ High Efficiency (HE) filter</li> <li>▪ Prefilter<sup>2</sup></li> <li>▪ Prefilter/Spark Arrestor<sup>2</sup></li> </ul>
<b>Intrinsic Safety</b>	TR-300 Assemblies and chargers are not intrinsically safe
<b>Latex</b>	TR-300 Assemblies do not contain latex
<b>Materials</b> <ul style="list-style-type: none"> <li>▪ PAPR main body</li> <li>▪ Filter cover</li> </ul>	<ul style="list-style-type: none"> <li>▪ ABS plastic</li> <li>▪ ABS plastic; thermal plastic (window)</li> </ul>
<b>Noise Levels</b>	Less than 80 dBA excluding external noise
<b>Temperature Limits – TR-300 Assembly</b> <ul style="list-style-type: none"> <li>▪ Operating</li> <li>▪ Storage</li> </ul>	<ul style="list-style-type: none"> <li>▪ 23° F to 129° F (-5° to 54° C)</li> <li>▪ -22° F to 122° F (-30° to 50° C); Optimal 40° to 95° (4° C to 35° C)</li> </ul>
<b>Service Life – Motor/blower</b>	Approximately 5000 hours (estimated depending on use conditions). If motor blower will not be used on a regular basis, the motor must be run for 5 minutes annually to ensure proper lubrication and operation.
<b>Shelf Life – Stored in original 3M packaging</b> <ul style="list-style-type: none"> <li>▪ Motor/blower</li> <li>▪ Battery packs</li> <li>▪ High Efficiency (HE) filters</li> </ul>	From date of manufacturer: approximately <ul style="list-style-type: none"> <li>▪ 5 years</li> <li>▪ 9 months</li> <li>▪ 5 years</li> </ul>
<b>Battery Pack</b> <ul style="list-style-type: none"> <li>▪ Chemistry</li> <li>▪ Service life</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lithium ion</li> <li>▪ 250 charge cycles. Consider replacing battery pack when capacity diminishes to 80% or less.</li> </ul>

Attribute	Technical Specification
<p><b>Battery Pack, Continued</b></p> <ul style="list-style-type: none"> <li>▪ Storage temperature</li> <li>▪ Continuous time on charger</li>   <li>▪ Weight – TR-330 Economy</li> <li>▪ Weight – TR-332 High Capacity</li>   <li>▪ Run time – TR-330 Economy</li> <li>▪ Run time – TR-332 High Capacity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Optimal 59° F (15° C).</li> <li>▪ Battery pack may be stored on the charger between uses. For storage longer than 1 month, to maximize battery pack life, 3M recommends storing the battery pack off the charger at approximately 40% charge.</li>   <li>▪ 0.5 lbs. (220 grams)</li> <li>▪ 0.84 lbs. (380 grams)</li>   <li>▪ Approximately 4-6 hours*</li> <li>▪ Approximately 8-12 hours*</li> </ul> <p>* Estimated system run time based on testing with a new battery and filter at 68° F (20° C). Actual system run time may be extended or shortened depending on system configuration and environment</p> <p><b>Consult with a transportation specialist regarding transport of lithium ion battery packs</b></p>
<p><b>Chargers</b></p> <p>TR-340 Cradle</p> <ul style="list-style-type: none"> <li>▪ Input</li> <li>▪ Output</li> </ul> <p>TR-944N</p> <ul style="list-style-type: none"> <li>▪ Input</li> <li>▪ Output</li> <li>▪ Fuse rating</li> </ul> <p>Time to battery pack 100% capacity</p>	<ul style="list-style-type: none"> <li>▪ 100-240 VAC; 50-60 Hz; 1.5A</li> <li>▪ 19 VDC; 2.37A</li>   <li>▪ 100-240 VAC; 50-60 Hz; 2A</li> <li>▪ 19 VDC; 7.89A</li> <li>▪ 250 V; 15 A</li> </ul> <p>TR-330 &lt; 3 hours; TR-332 &lt; 3.5 hours</p>

**Footnotes**

1. Nuisance Level - nuisance level organic vapor refers to concentrations not exceeding OSHA PEL or applicable government occupational exposure limits, whichever is lower.
2. Check NIOSH approval label to determine if the prefilter or spark arrestor is approved for use with your particular system or contact 3M Technical Service at 800-243-4630 (USA) or 800-267-4414 (Canada) for assistance.



These respirators help reduce exposure to certain airborne contaminants. Use of 3M™ Powered and Supplied Air Respirators by untrained or unqualified persons, or use not in accordance with the instructions, **may adversely affect product performance and result in sickness or death.** Powered and supplied air respirators are to be used only by qualified persons who are properly trained in their use and maintenance and only in accordance with their operating and maintenance manuals. Each person using these products must first read and understand the operator's manual. See supervisor for assistance or call 3M OH&ESD Technical Service in U.S.A. at 1-800-243-4630. In Canada call 1-800-267-4414.

**For More Information:**

In US:

Website: [www.3M.com/occsafety](http://www.3M.com/occsafety)

Technical Service: 1-800-243-4630

In Canada:

Website: [www.3M.com/CA/occsafety](http://www.3M.com/CA/occsafety)

Technical Service: 1-800-267-4414

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