

# Pneumotrac with RMS

An enhanced diagnostics solution that combines highly accurate **Respiratory Muscle Strength** and **Spirometry** testing in one robust, portable device.



A Global Leader in **Respiratory Diagnostics**

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# The importance of Respiratory Muscle Strength testing

Assessing respiratory mechanics and muscle function is critical in both clinical practice and research. It is particularly useful in patients with neuromuscular diseases to contribute to diagnosis and to assess treatment efficacy.<sup>1</sup> The American Thoracic Society (ATS) suggest routine evaluation of FVC, MIP, MEP, and PCF for patients with Duchenne muscular dystrophy (DMD)<sup>2</sup>. Early studies suggest systematic respiratory muscle testing is strongly advocated in the diagnostic examination of patients with Long COVID.<sup>3</sup>

*MIP is used for the early evaluation of respiratory muscle strength, especially of the diaphragm in patients with neuromuscular disease. (Schoer et al., 2017)<sup>4</sup>*

## PNEUMOTRAC with RMS

**Multiple respiratory diagnostics.  
One portable device.**

The Pneumotrac™ with RMS (Respiratory Muscle Strength) is a PC-based system that combines respiratory muscle strength measurements and spirometry – offering multiple testing possibilities on a single device, as portable as your laptop.

It can be used in various settings such as in-clinic on a desk, or it can be placed on a trolley with a laptop for use at bedside.



## Provides the full range of respiratory diagnostic tests

The Pneumotrac™ with RMS is a powerful and flexible respiratory diagnostic device. Alongside detailed spirometry testing, it provides a simple approach to mouth and nasal pressure measurements in both adults and paediatrics. It can be used to:

- **assess** diaphragmatic weakness in patients with neuromuscular disease (NMD)
- **assess** respiratory muscle strength in patients undergoing pulmonary rehabilitation e.g., COPD patients
- **monitor** the response of respiratory muscle training

Diagnostics	Pneumotrac with RMS	Standard Pneumotrac
Maximum Inspiratory Pressure (MIP)	✓	
Maximum Expiratory Pressure (MEP)	✓	
Sniff Nasal Inspiratory Pressure (SNIP)	✓	
Upright and Supine Spirometry (VC and Post VC)	✓	✓
Peak Cough Flow (PCF)	✓	✓
Forced Vital Capacity (FVC) and Post Bronchodilator	✓	✓



# All the benefits of the market-leading Pneumotrac Spirometer with the addition of respiratory muscle strength measurements

## Easily Interpreted Results

- Overlay of successive curves for consistent results.
- Multiple options for displaying of graphs.
- Fast evaluation of results with %Predicted comparison.
- Customisable pdf reports.

## Onscreen Testing Guidance

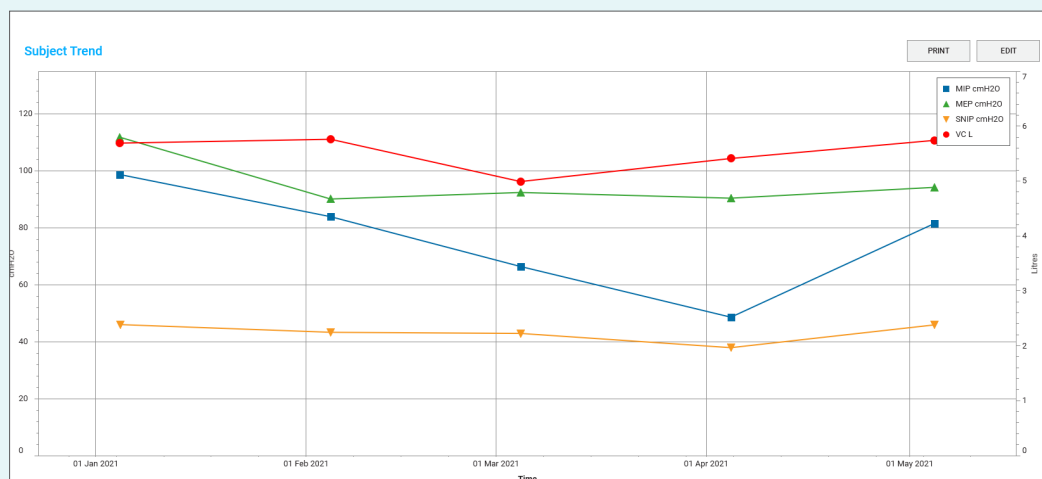
- Instant test quality feedback as per ATS/ERS guidelines ensuring maximum pressure sustained for 1 second can be recorded.
- Repeatability feedback for rapid and easy testing.
- Real-time display of pressure/time curve on Spirotrac® 6 software.

## Exceptional Test Accuracy

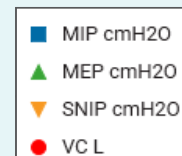
- Superior resolution of 0.1 cmH<sub>2</sub>O for MIP, MEP, and SNIP testing.

## Hygienically Efficient

- Low running costs and environmentally friendly: no costly disposable sensors, turbines, or flow tubes.
- Single-use Vitalograph Bacterial Viral Filters (BVF™) with validated cross-contamination efficiency >99.999% protect device, patient and operator.



Monitor historical changes in lung function by comparing results and view trends over time. Trend MIP, MEP, SNIP, and VC on the one chart for a complete history.



1. Laveneziana P, Albuquerque A, Aliverti A, et al. ERS statement on respiratory muscle testing at rest and during exercise. Eur Respir J 2019; 53: 1801214
2. American Thoracic Society. Respiratory care of the patient with Duchenne muscular dystrophy. ATS consensus statement. Am J Respir Crit Care Med 2004;170:456–465.
3. Hennigs, J. K., Huwe, M., Hennigs, A., Oqueka, T., Simon, M., Harbaum, L., Körbelin, J., Schmiedel, S., Schulze Zur Wiesch, J., Addo, M. M., Kluge, S., & Klose, H. (2022). Respiratory muscle dysfunction in long-COVID patients. Infection, 1–7. Advance online publication. <https://doi.org/10.1007/s15010-022-01840-9>
4. Schoser, B., Fong, E., Geberhiwot, T., Hughes, D., Kissel, J. T., Madathil, S. C., Orlikowski, D., Polkey, M. I., Roberts, M., Tiddens, H. A., & Young, P. (2017). Maximum inspiratory pressure as a clinically meaningful trial endpoint for neuromuscular diseases: a comprehensive review of the literature. Orphanet journal of rare diseases, 12(1), 52. <https://doi.org/10.1186/s13023-017-0598-0>

# Technical Specifications

**Product:** Vitalograph Pneumotrac with RMS

**Model:** 6800

**MIP MEP SNIP measurement range:** +/- 300cmH<sub>2</sub>O

**Pressure accuracy:** Within +/- 3%

**Resolution:** 0.1cmH<sub>2</sub>O

**RMS test types:** MIP, MEP, SNIP

**MIP parameters:** MIP, PIP (Maximum inspiratory mouth pressure)

**MEP parameters:** MEP, PEP (Maximum expiratory mouth pressure)

**SNIP parameters:** SNIP

**RMS predicted sets:** Wilson, Stefanutti/Uldry/Fitting

**Spirometry test types:** VC, FVC, PCF, Post-Bronchodilator

**Volume accuracy:** Within +/- 2.5%

**Flow measurement range:**

Max. flow rate ±960 L/min (±16 L/s)

Min. flow rate ±1.2 L/min (±0.02 L/s)

**PEF accuracy:** Within ±10%

**Spirometry back pressure:**

Less than 0.1kPa/L/second @ 14L/s

**Performance standards & guidelines:**

ATS/ERS 2019, ISO 23747:2015 & ISO 26782:2009

**Power supply:** 5V DC via USB

## Ordering Information

Product Model Number	Customer Order Number	Product Description
6800	77972	Vitalograph Pneumotrac with RMS <sup>1</sup>

\*1 Includes Spirotrac 6 PC software



Free 5-Year warranty included with product registration.

## Optional Extras / Consumables

Product Model Number	Customer Order Number	Product Description	Product Box Size
2820	28551	Eco BVF + Silicone Bite-On Mouthpiece + Disposable Nose Clip	60
	28553	Eco BVF with Plastic Bite Lip + Disposable Nose Clip	75
	28554	Eco BVF with Plastic Bite Lip	75
	28572	Eco BVF for Office Spirometers + Disposable Nose Clip	80
	28501	Eco BVF for Office Spirometers	100
3290	32956	SNIP Nasal probes consisting of 10 x Small, 10 x Medium, and 10 x Large	30
	32981	SNIP Nasal probes consisting of 30 x Small	30
	32982	SNIP Nasal probes consisting of 30 x Medium	30
	32983	SNIP Nasal probes consisting of 10 x Large	30

## Contact us

Our trained customer service team are available for telephone support on sales, technical queries or information requests.

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