

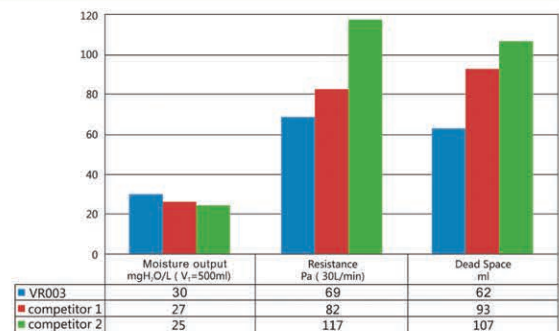
Heat and Moisture Exchanger & Filter



The VR HME(F) testing is done in accordance with ISO 9360 standard. The products are 100% inspected and tested to assure the user of reliable performance.

- Streamline shell design: Low resistance, No dead angle, Small dead space Gas sampling port: Luer port design
- Superior filtration technology: High efficiency filtration media, Bacterial filtration performance >99.999*, Virus filtration performance >99.99 (tested and verified by the USA Nelson Laboratory)
- Unique shell welding technology: 100% tested, preventing air leakage or bypass
- Medical grade K resin shell: Greater strength, clear appearance, smoother surface
- Polyester foam moisture exchanger element with proprietary pretreatment: Large, high efficiency exchanger surface, providing excellent humidification efficiency
- Gas sampling port: Luer port design

Comparison of product performance index



[1] Data from <Wilkes Report: an assessment of 104 breathing system filters> Mar 2004.





















[2] The BFE of the competitive HMEFs listed here are all greater than 99.99%

[3] Tidal Volume Range of VR003 is 250-1500ml; Tidal Volume Range of Competitor 1 is 300-1200 ml; no data for competitor 2.



Heat and Moisture Exchanger & Filter

HME/ HMEF/ Filter Technical Parameters

Target Group	Product Type	Product Photo	Product Code	Subhead (if applicable)	Tidal Volume (ml)	Filtration Efficiency (%)	Moisture Output (mgH ₂ O/L)	Pressure Drop Resistance (cmH ₂ O)	Dead Space (ml)	Connectors (mm)
Pediatric	HMEF		VR008	with gas sampling port	70-600	Bacterial: > 99.999% Viral : > 99.99%	250ml, mg/L: 33.3 500ml, mg/L: 27.8 1000ml, mg/L: /	15l/min: 0.8 30l/min: 1.6 60l/min: /	19	Patient Side : 22M/15F Machine Side: 15M
	HME		VR007	with gas sampling port	70-600	N.A	250ml, mg/L: 34.5 500ml, mg/L: 32.5 1000ml, mg/L: /	15l/min: / 30l/min: 0.8 60l/min: 2.1	21	Patient Side : 22M/15F Machine Side: 15M
			VR009			5-50	N.A	250ml, mg/L: 29.4	15l/min: 0.4 30l/min: 2.0 60l/min: /	2.2
Adult	HMEF		VR005	(HMEF)with gas sampling port	250-1500	Bacterial: > 99.9999% Viral : >99.999%	250ml, mg/L: 37.3 500ml, mg/L: 36.0 1000ml, mg/L: 32.3	15l/min: / 30l/min: 1.5 60l/min: 2.8	85	Patient Side : 22M/15F Machine Side: 15M
			VR003	with gas sampling port	250-1500	Bacterial: > 99.999% Viral : > 99.99%	250ml, mg/L: 35.3 500ml, mg/L: 31.3 1000ml, mg/L: 30.4	15l/min: / 30l/min: 0.8 60l/min: 1.8	60	Patient Side : 22M/15F Machine Side: 22F/15M
			VR004	with gas sampling port	250-1500	Bacterial: > 99.999% Viral : >99.99%	250ml, mg/L: 37.3 500ml, mg/L: 33.3 1000ml, mg/L: 31.3	15l/min: / 30l/min: 0.9 60l/min: 2.0	89(60)	Patient Side : 15F Machine Side: 22F/15M
			VR089	with gas sampling port	150-1000	Bacterial: > 99.999% Viral : >99.99%	250ml, mg/L: 35.0 500ml, mg/L: 33.0 1000ml, mg/L: 31.0	15l/min: / 30l/min: 0.8 60l/min: 1.9	43	Patient Side : 22M/15F Machine Side: 22F/15M
			VR023	with gas sampling port	250-1500	Bacterial: > 99.999% Viral : >99.99%	250ml, mg/L: 36.0 500ml, mg/L: 34.0 1000ml, mg/L: 33.0	15l/min: / 30l/min: 0.8 60l/min: 1.9	70	Patient Side : 22M/15F Machine Side: 22F/15M
	HME		VR001	with gas sampling port	150-1500	N.A	250ml, mg/L: 37.7 500ml, mg/L: 35.5 1000ml, mg/L: 33.5	15l/min: / 30l/min: 1.0 60l/min: 2.6	34	Patient Side : 22M/15F Machine Side: 15M
			VR002	with gas sampling port	150-1500	N.A	250ml, mg/L: 37.7 500ml, mg/L: 35.7 1000ml, mg/L: 33.5	15l/min: / 30l/min: 1.1 60l/min: 3.0	62(34)	Patient Side : 15F Machine Side: 15M
			VR026		250-1500	N.A	250ml, mg/L: / 500ml, mg/L: / 1000ml, mg/L: 30.0	15l/min: / 30l/min: 1.0 60l/min: 2.5	38	Patient Side : 22M/15F Machine Side: 15M
			VR024		250-1500	N.A	250ml, mg/L: / 500ml, mg/L: / 1000ml, mg/L: 30.0	15l/min: / 30l/min: 0.5 60l/min: 1.4	90	Patient Side : 15F Machine Side: 22F
			VR080	Integrated Oxygen Port	150-1250	N.A	250ml, mg/L: / 500ml, mg/L: 30.3 1000ml, mg/L: /	15l/min: / 30l/min: / 60l/min: 0.2	16	Patient Side : 15F Machine Side: /
			VR011	with suction port front Oxygen port	150-1250	N.A	250ml, mg/L: 36.3 500ml, mg/L: 30.0 1000ml, mg/L: /	15l/min: / 30l/min: 0.2 60l/min: /	15	Patient Side : 15F Machine Side: /
			VR022	with suction port front Oxygen port	150-1250	N.A	250ml, mg/L: 36.6 500ml, mg/L: 33.4 1000ml, mg/L: /	15l/min: / 30l/min: 0.2 60l/min: /	17	Patient Side : 15F Machine Side: /
	Filter		VR012	with gas sampling port	250-1500	Bacterial: > 99.9999% Viral : >99.999%	250ml, mg/L: / 500ml, mg/L: / 1000ml, mg/L: /	15l/min: / 30l/min: 1.2 60l/min: 2.6	68	Patient Side : 22M/15F Machine Side: 22F/15M
			VR010		150-1500	Bacterial: > 99.999% Viral : >99.99%	250ml, mg/L: / 500ml, mg/L: / 1000ml, mg/L: /	15l/min: / 30l/min: 0.8 60l/min: 1.6	35	Patient Side : 22M/15F Machine Side: 22F/15M
	Connector		VR017		/	N.A	N.A	N.A	8	Patient Side : 22M/15F Machine Side: 15M
			VR018		/	N.A	N.A	N.A	8	Patient Side : 15F Machine Side: 15M
	Tube		VR039		/	N.A	N.A	N.A	40	Patient Side : 15F Machine Side: 22F

