








TECHNOLOGY MATRIX CAPNOGRAPHY

	MASIMO CORP			MEDTRONIC		NONIN MEDICAL INC	
							
	Radius PCG™	Rad-97 with NomoLine Capnography	NomoLine® ISA CO2™	Capnostream™ 35 Portable Respiratory Monitor	Capnostream™ 20 Bedside Patient Monitor	LifeSense® II	RespSense® II
	www.masimo.com	www.masimo.com	www.masimo.com	www.medtronic.com	www.medtronic.com	www.nonin.com/products/lifesense2	www.nonin.com/products/respsense2
Warranty	2 years	12 months	12 months	5 years	5 years	3 years for monitor	3 years for monitor
Type	Portable capnograph	Capnograph with Pulse Oximetry	Portable Capnography Module	Portable capnograph with pulse oximetry	Bedside capnography monitor with pulse oximetry	Capnograph with pulse oximetry	Portable Capnograph
Mainstream and/or Sidestream	Mainstream	Sidestream	Sidestream	Sidestream	Sidestream	Sidestream	Sidestream
Patient population	Adult, pediatric, neonatal	Adult, pediatric, neonatal	Adult, pediatric, neonatal	Adult, pediatric, neonatal	Adult, pediatric, neonatal	Adult, pediatric, infant	Adult, pediatric, infant
Dimensions	2.1 in x 1.8 in x 1.6 in	9 in x 4 in x 6.5 in	3.6 in x 2.4 in x 1.4 in	8.38 x 5.39 x 2.16	6.6 x 8.7 x 7.6	5.3 in x 7.9 in x 2 in	5.3 in x 7.9 in x 2 in
Weight	2.1 oz	2.18 lbs (0.99 kg)	Approx 0.22 lbs (98 g)	2 lb 2 oz	4 lb 8 oz	1.9 lbs	1.9 lbs
Power Options	2 AAA batteries (alkaline or lithium)	AC power source (100 to 240 VAC, 47 to 63 Hz)	AC power source Powered through connected host monitor	<ul style="list-style-type: none"> Input power 100-240 VAC, ±10% 50-60 Hz Lithium ion battery 7.2V; 18.72 Wh 	<ul style="list-style-type: none"> Input power 90VA, input voltage 100-240 VAC, 50-60 Hz Lithium ion battery 14.8V; 4Ah 	Lithium ion rechargeable battery, power supply: 100-240 VAC	Lithium ion rechargeable battery, power supply: 100-240 VAC
Battery Life	Alkaline: Approx 6 hrs; Lithium: Approx 8 hrs	4hrs (when fully charged and not plugged into AC power source)	N/A	3 hrs for removable battery pack; 20 min for internal battery pack	2.5 hrs without thermal recorder	Approx 5 hrs	Approx 5 hrs
Sample Flow Rate	N/A (mainstream)	50 mL/min	50 mL/min	50 mL/min sampling flow rate	50 mL/min sampling flow rate	75 mL/min (minimum 60 mL/min)	75 mL/min (minimum 60 mL/min)
Display Parameters	EtCO ₂ , RR, FiCO ₂ , EtCO ₂ waveform	EtCO ₂ , RR, FiCO ₂ , SpO ₂ , PR	EtCO ₂ , RR, FiCO ₂ , EtCO ₂ waveform	EtCO ₂ , SpO ₂ , PR, RR, CO ₂ waveform, IPI, apneas/hour, ODI	EtCO ₂ , SpO ₂ , PR, RR, CO ₂ waveform, IPI, apneas/hour, ODI, SatSeconds	SpO ₂ , EtCO ₂ , PR, RR	EtCO ₂ , RR
Audible Alarms	Yes. Alarms include: No adapter, clogged adapter, no breath detected, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Yes. Capnography alarms include: No breath detected, no sampling line, replace sampling line, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Yes. Capnography alarms include: No breath detected, no sampling line, replace sampling line, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Alarms include: no breath detected; etCO ₂ -high and low; SpO ₂ -high and low; RR-high and low; PR-high and low; no detectible pulse; IPI-low; SatSeconds exceeded, plus technical and equipment alarms.	Alarms include: no breath detected; etCO ₂ -high and low; SpO ₂ -high and low; RR-high and low; PR-high and low; no detectible pulse; IPI-low; SatSeconds exceeded, plus technical and equipment alarms.	Yes	Yes
Visual Alarms	Yes. Alarms include: No adapter, clogged adapter, no breath detected, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Yes. Capnography alarms include: No breath detected, no sampling line, replace sampling line, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Yes. Capnography alarms include: No breath detected, no sampling line, replace sampling line, high/low EtCO ₂ , high/low RR, high/low FiCO ₂	Same as above, plus Advisories.	Same as above, plus Advisories.	Yes	Yes
Calibration/Zero	No routine calibration required. Gas span check recommended once a year.	No routine calibration required. Gas span check recommended once a year.	No routine calibration required. Gas span check recommended once a year.	Recommended 2 times yearly; none required for SpO ₂	No zero calibration between patients. It is recommended that the monitor be calibrated within two weeks of the Calibration Required message appearing on the monitor. Initially calibrate after 1,200 operating hours, then once a year or after 4,000 hours, whichever comes first.	Recommended 2 times yearly; none required for SpO ₂	Recommended 2 times yearly for EtCO ₂
Internal/External Sensor	Internal	Internal	Internal	External sensor is the sidestream Microstream™ capnography sampling lines	External sensor is the sidestream Microstream™ capnography sampling lines	Internal	Internal
Sensor Technology	Patented sensor technology	Patented sensor technology	Patented sensor technology	Microstream™ capnography sampling lines and Nellcor™ pulse oximetry sensors	Microstream™ capnography sampling lines and Nellcor™ pulse oximetry sensors	Nonin EtCO ₂ sensor technology Nonin PureSAT® SpO ₂ technology	Nonin EtCO ₂ sensor technology Nonin PureSAT® SpO ₂ technology
Oximetry options/compatibility	N/A	Masimo SET with optional upgrade to Masimo rainbow SET	N/A	Nellcor™ pulse oximetry; Nellcor™ SatSeconds alarm management	Nellcor™ pulse oximetry	Compatible with Nonin's SpO ₂ sensors	N/A
Interface options/compatibility	Bluetooth LE	Bluetooth and Wi-Fi	Masimo Open Connect (MOC-9) RS-232, DB-9, LEMO, etc	<ul style="list-style-type: none"> Vital Sync™ remote monitoring platform Cerner system 	Vital Sync™ remote monitoring platform, Profox™ respiratory oximetry software, Nurse call, Nuvo VEGA system, iSirona system, Capsule system, Cerner system, Epic system	Compatibility with PSG systems	Compatibility with PSG systems
Additional Features	Compact, handheld capnography with quick warm up time of less than 15 seconds. Simple, easy-to-use interface allows for quick set-up and one-touch programming.	Portable monitor with option to upgrade to Masimo rainbow SET with measurements like non-invasive hemoglobin (SpHb), Acoustic respiration rate (RRA), etc.	Small, compact, lightweight module with a quick start up time of less than 10 sec. Light Emitting Gas Inlet illuminates in different colors to provide visual indicators of module status.	Includes SARA alarm management and Integrated Pulmonary Index™ algorithm, which incorporates four parameters into a number from 1-10, for an overall indicator of respiratory status.	Includes SARA alarm management and Integrated Pulmonary Index™ algorithm, which incorporates four parameters into a number from 1-10, for an overall indicator of respiratory status.	Easy to use, accurate, and cost-effective, LifeSense II is suitable for SpO ₂ and EtCO ₂ monitoring of patients in hospitals, sleep labs, and homecare.	Portable, accurate, and cost-effective, RespSense II is suitable for use with patients in hospitals, sleep labs, and homecare.