

Comparison of Specifications for High Precision Ozone Monitors

	2B Tech Model 106-L	2B Tech Model 202	2B Tech Model 205	Teledyne-API Model 400E	Ecotech EC9810	Thermo Model 49i
Optical Bench	Single Beam	Single Beam	Dual Beam	Single Beam	Single Beam	Dual Beam
Linear Range	0-100 ppm	0-250 ppm	0-250 ppm	0-10 ppm	0-20 ppm	0-200 ppm
Resolution	0.1 ppb	0.1 ppb	0.1 ppb	0.1 ppb	0.1 ppb	0.1 ppb
Pneumatics	Internal diaphragm pump, ~800 cc/min	Internal diaphragm pump, ~800 cc/min	Internal diaphragm pump, ~1600 cc/min	Internal diaphragm pump, ~800 cc/min	Internal rotary vane pump, ~500 cc/min	Internal diaphragm pump, 1000-3000 cc/min
Filter	Optional external PTFE particle filter	Optional external PTFE particle filter	Optional external PTFE particle filter	Internal PTFE particle filter	Optional external PTFE particle filter	Optional PTFE particle filter
Dimensions	3.8 x 7.5 x 8.5 in 10 x 19 x 22 cm	3.5 x 8.5 x 11 in 9 x 21 x 29 cm	3.5 x 8.5 x 11 in 9 x 21 x 29 cm	7 x 17 x 23.5 in 18 x 43 x 60 cm	7 x 17 x 26 in 18 x 43 x 65 cm	8.6 x 16.8 x 23 in 22 x 43 x 58 cm
Volume	240 cubic inches	330 cubic inches	330 cubic inches	2,800 cubic inches	3,100 cubic inches	3,300 cubic inches
Weight	4.3 lb, 2.0 kg	4.7 lb, 2.1 kg	4.7 lb, 2.1 kg	28 lb, 13 kg	46 lb, 21 kg	55 lb, 25 kg
Power	4 Watt 100-240 V AC, 50/60 Hz or 12 V DC	4 Watt 100-240 V AC, 50/60 Hz or 12 V DC	5 Watt 100-240 V AC, 50/60 Hz or 12 V DC	250 Watt 100-240 V AC, 50/60 Hz	110 Watt 100-260 V AC, 50/60 Hz or 12 V DC	150 Watt 100-240 V AC, 50/60 Hz
Reporting Units	ppb, pphm, ppm, mg/m ³ , µg/m ³	ppb, pphm, ppm, mg/m ³ , µg/m ³	ppb, pphm, ppm, mg/m ³ , µg/m ³	ppb, ppm, mg/m ³ , µg/m ³	ppt, ppb, ppm, mg/m ³ , µg/m ³	ppb, ppm, mg/m ³ , µg/m ³
Humidity Control	Nafion tube	Nafion tube	Nafion tube	None	None	None
Zero Noise	≤ 2 ppb (rms)	≤ 1.5 ppb (rms)	≤ 1.0 ppb (rms)	< 0.3 ppb (rms)	< 0.25 ppb (rms)	0.25 ppb (rms)
Lower Detectable Limit (LDL)	≤ 4 ppb for 10-s avg. ≤ 0.9 ppb for 1-min avg.	≤ 3 ppb for 10-s avg. ≤ 1.3 ppb for 1-min avg.	≤ 2 ppb for 10-s avg. ≤ 0.9 ppb for 1-min avg.	< 0.6 ppb	< 0.5 ppb	1.0 ppb
Precision	Greater of 2.0 ppb or 2% of reading	Greater of 1.5 ppb or 2% of reading	Greater of 1.0 ppb or 2% of reading	Greater of 0.3 ppb or 2% of reading	Greater of 1 ppb or 0.5% of reading	1.0 ppb
Zero Drift	≤ 1 ppb per hour ≤ 2 ppb per 7 days	≤ 1 ppb per hour ≤ 2 ppb per 7 days	≤ 1 ppb per day ≤ 1 ppb per 7 days	< 1 ppb per hour < 1 ppb per 7 days	< 1 ppb per 24 hours < 1 ppb per 30 days	< 1 ppb per 24 hours < 2 ppb per 7 days
Span Drift	≤ 1% per 7 days	≤ 1% per 7 days	≤ 1% per 7 days	< 1% per 7 days	< 0.5% per 30 days	< 1% per 30 days
Rise and Fall Time	20 s	20 s	4 s	< 20 s to 95%	30 s to 95%	20 s
Lag Time	10 s	10 s	2 s	10 s		10 s
Linearity	1% of full scale	1% of full scale	1% of full scale	1% of full scale	< 1% of full scale	1% of full scale
Operating Temp.	0-60 °C	0-60 °C	0-60 °C	5-40 °C	5-40 °C	20-30 °C
Outputs	0-2.5 V and 4-20 mA for user enterable range, RS232 serial, USB	0-2.5 V for user enterable range, RS232 serial, USB adapter	0-2.5 V for user enterable range, RS232 serial, USB adapter	4 Analog voltage ranges, RS232 serial	3 Analog current ranges, 4 Analog voltage ranges, USB, RS232 serial	4 Analog voltage ranges, RS232/RS485 serial, TCP/IP
Data Logger	32,736 lines 5 min avg = 3.7 mo.	14,336 lines 5 min avg = 1.4 mo.	14,336 lines 5 min avg = 1.4 mo.	No	5 min avg. = 5.8 mo.	No
Options	Battery, Particle Filter	Battery, Flash Memory, GPS, Particle Filter, 4-20 mA Output, Custom	Battery, Flash Memory, GPS, Particle Filter, 4-20 mA Output, Custom	Various communication, calibration and mounting brackets	Various communication, calibration and mounting brackets	Various communication, calibration and mounting brackets