

# LiQuilaz<sup>®</sup> II E Series

Particle Counting Spectrometer for Liquids



The LiQuilaz<sup>®</sup> II E series optical particle counters are volumetric particle counters with sizing sensitivities from 1.5 – 125  $\mu\text{m}$ .

LiQuilaz II sensors provide the same levels of accuracy, reliability and repeatability that customers have trusted for many years. LiQuilaz II sensors feature both RS-485 and Ethernet network communications. The new Ethernet capability increases product flexibility and makes installation significantly easier.

Volumetric particle counters offer the highest precision possible by measuring 100% sample volumes so that short sampling intervals can be utilized without sacrificing statistical significance.

## BENEFITS

### Yield Improvement

- Real-time characterization and analysis of particle concentration for immediate response to contamination
- Optional software makes process control easy by providing alarm settings, status conditions, sampler setup, and online help
- Volumetric measurements provide greater accuracy for tighter process control

### Versatile

- Supports a wide range of applications and fluids
- E15P and E20 are available for online use
- E15P and E20P are available for use with syringe samplers
- Online and batch sampling capabilities
- RS-485 and Ethernet networking compatibility
- Ethernet TCP/IP communication
- Supports 21 CFR Part 11 in combination with SamplerSight Pharma software

### Easy to Use

- Small footprint for easy placement anywhere in the process
- Flexible software provides numerous viewing options for real-time or retrieved data

## FEATURES

- Sizing sensitivities from 1.5 – 125  $\mu\text{m}$
- 15 user-adjustable sizing channels
- Volumetric: 100% view volume
- Facility Net, SamplerSight, Pharmaceutical Net, or SamplerSight Pharma
- Compact system
- Compatible with 3rd party systems using RS 485 Modbus protocol

## APPLICATIONS

- Pharmaceutical WFI, PW performance verification
- Medical device cleanliness testing
- Parenteral sampling
- Detect abrasive particles
- Continual process improvements
- USP 788-1788 compliance with the SLS sampler family

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Specifications

	LiQuilaz II E20P	LiQuilaz II E20	LiQuilaz II E15P
Size range	2 – 125 µm	2 – 125 µm	1.5 – 125 µm
Flow rate	20 ± 10% ml/min	70 ± 10% ml/min	20 ± 10% ml/min
Sample volume	Volumetric 20 ml/min (100%)	Volumetric 70 ml/min (100%)	Volumetric 20 ml/min (100%)
Size channels	User adjustable from 1 to 15		
Resolution	Less than 10% at 10 µm		
Maximum concentration*	10,000 particles/ml		
Sample temperature	50 – 122 °F (0 – 50 °C)		
Zero count	< 50 counts/liter		
Pressure range	0 - 100 psi		
Laser source	Laser diode		
Wetted surface materials	Fused silica, black quartz, Kalrez <sup>®</sup> and Kel-F <sup>®</sup>		
Liquid connections	3 mm flare or 1/4-inch Flaretek <sup>®</sup>		
Dimensions (l, w, h)	12.75 x 4.25 x 4.5 in (32.4 x 10.8 x 11 .4 cm)		
Weight	6.1 lb (2.8 kg)		
Electrical rating	100 - 240 V, 50/60 Hz, 0.75 A		
Communication modes	5-wire, RS-485, DE9 connectors, PMS serial communications protocol, 10/100BaseT Ethernet, PMS Ethernet Protocol, Modbus TCP		
Calibration fluid	DI water		
Calibration	Materials used are traceable to U.S. National Institute of Standards and Technology (NIST) and/or Japanese Institute of Standards (JIS)		
Environment	Temperature: 50 – 95 °F (10 – 35 °C); Humidity: non-condensing		

\*Greater than 90% accuracy (less than 10% coincidence loss) at maximum recommended concentration.

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Teflon<sup>®</sup> is a registered trademark of The Chemours Company, FC, LLC.

Kalrez<sup>®</sup> is a registered trademark of DuPont.

Kel-F<sup>®</sup> is a registered trademark of 3M.

All other trademarks are the property of their respective owners.

Particle Measuring Systems, Inc. reserves the right to change specifications without notice.

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## HEADQUARTERS

5475 Airport Blvd  
Boulder, Colorado 80301 USA  
T: +1 303 443 7100, +1 800 238 1801

Instrument Service & Support  
T: +1 800 557 6363

Customer Response Center  
T: +1 877 475 3317  
E: info@pmeasuring.com



## UNITED KINGDOM

EMS Particle Solutions Ltd  
T: +44 (0) 1223 257 704  
M: +44 (0) 7825 884292  
E: info@emsparticlesolutions.co.uk

## IRELAND

EMS (Ire) Ltd  
T: +353 (0)1 295 7373  
M: +353 (87) 254 5491  
E: info@ems.ie