

## Enhance Process Understanding With Online HPLC Analysis



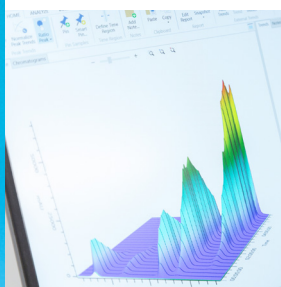
### HPLC for Reaction Analysis

With DirectInject-LC, HPLC can now be used for near real-time reaction and crystallization understanding. Fully automated rapid reaction sampling and injection transforms HPLC into a powerful new technology for online reaction monitoring.



### Effortless In-Situ Sampling

Hands-free and reproducible reaction sampling, preparation, and injection. Continuously collect representative samples, quenched at reaction conditions, with proven EasySampler™ technology that enables analysis of complex, multiphase, and challenging chemistry.



### Fewer Trials, More Discoveries

Collect HPLC data that is representative of the reaction at the time of sampling. Analysis of the data with world-leading iC Software, specifically designed for reaction analysis and modeling, enables deeper reaction insight and accelerated development.



### PAT is Our DNA

Thousands of PAT installations around the world and four decades of experience are built into DirectInject-LC with iC LC™. iC Software seamlessly incorporates multiple orthogonal data streams that drive comprehensive reaction understanding.



### DirectInject-LC™

Transform HPLC into an online technology for reaction analysis and gain the data required to understand complex processes in near real-time.

DirectInject-LC bridges the gap between offline methods and real-time, in-situ process analytical technologies (PAT), such as ReactIR™, ReactRaman™, and EasyViewer™, by effortlessly sampling a wide range of chemical reactions, with automated sample quench, dilution, and delivery to a chromatography instrument. Combine DirectInject-LC with world-leading reaction analysis and modeling software to gain near real-time insight into quantitative reaction concentrations and kinetics, crystallization processes, and impurity profiles.

## Enhance Process Understanding With Online HPLC Analysis

Developed in collaboration with:

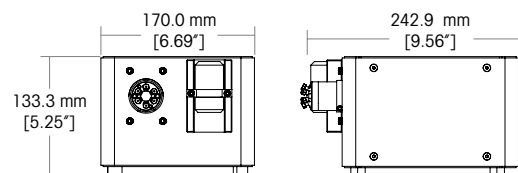


### Technical Data: DirectInject-LC

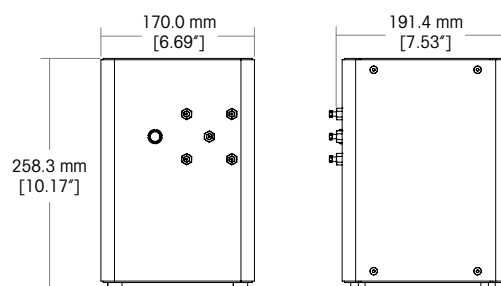
<b>Power</b>	85 VAC to 264 VAC, 47 Hz to 63 Hz
<b>Operating Temperature Range</b>	4 °C to 55 °C
<b>Weight</b>	S-100: 1.0 kg [2.2 lb] D-100: 3.2 kg [7.1 lb] I-100: 2.8 kg [6.2 lb]
<b>Wetted Materials</b>	I-100: 316 SS, ETFE, PEEK, PAEK, PTFE D-100: 316 SS, ETFE, PTFE, Sapphire, PAEK, PEEK, Viton
<b>Certification</b>	CE, NRTL-C
<b>Instrument PC Specifications*</b>	Microsoft® Windows® 10/11 Intel® Core® i5 3 GHz 16 GB or more RAM
<b>Software Required</b>	iC LC Instrument CDS Connection Application Microsoft Edge® / Google® Chrome®
<b>Supported CDS</b>	Agilent OpenLab® ChemStation® Agilent OpenLab® WorkStation Waters® Empower® 3 Shimadzu® LabSolutions™ Thermo Scientific™ Chromeleon™

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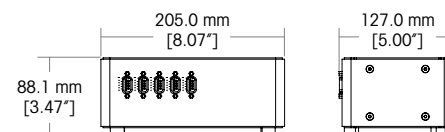
#### DirectInject-LC Instrument Module I-100



#### DirectInject-LC Delivery Module D-100



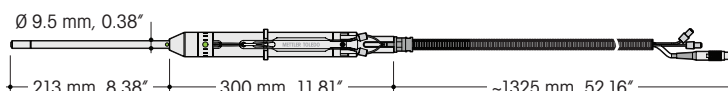
#### DirectInject-LC Server Module S-100



### Technical Data: Sampling Technology

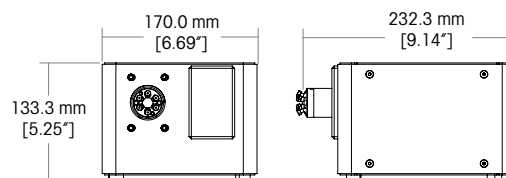
	<b>EasySampler Probe 210</b>	<b>Flow Sampler Module</b>
<b>Weight</b>	0.8 kg [1.76 lb]	2.4 kg [5.3 lb]
<b>Wetted Materials</b>	Alloy C-22, PTFE	Nitronic 60, Valcon H
<b>Reaction Temperature Range</b>	-20 °C to 140 °C (at 1 bar) 20 °C to 100 °C (at 10 bar)	20 °C to 75 °C
<b>Reaction Sampling Volume</b>	20 µL ± 10%	Any loop volume
<b>Reaction Pressure Range</b>	1 bar to 10 bar	1 bar to 340 bar

**EasySampler Probe 210\*\*** – for EasyMax 102 and 402 using reactors from 10 mL up to 400 mL



\*\*Additional EasySampler Probe lengths and accessories are available. SMART tool is not included. Please refer to the EasySampler datasheet for detailed information.

#### DirectInject-LC Flow Sampler Module F-100



[www.mt.com/DirectInject-LC](http://www.mt.com/DirectInject-LC)

For more information

#### METTLER TOLEDO Group

Automated Reactors and In-Situ Analysis  
Local contact: [www.mt.com/contacts](http://www.mt.com/contacts)

Subject to technical changes  
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