

# Unlimited Flexibility with Only One System

## Accessories for multi EA 5100

Accessories multi EA 5100



# Explore the Possibilities

Combine various detection and sample supply systems that fits perfectly your specific application and throughput needs. Tailor your own personal system for elemental analysis.

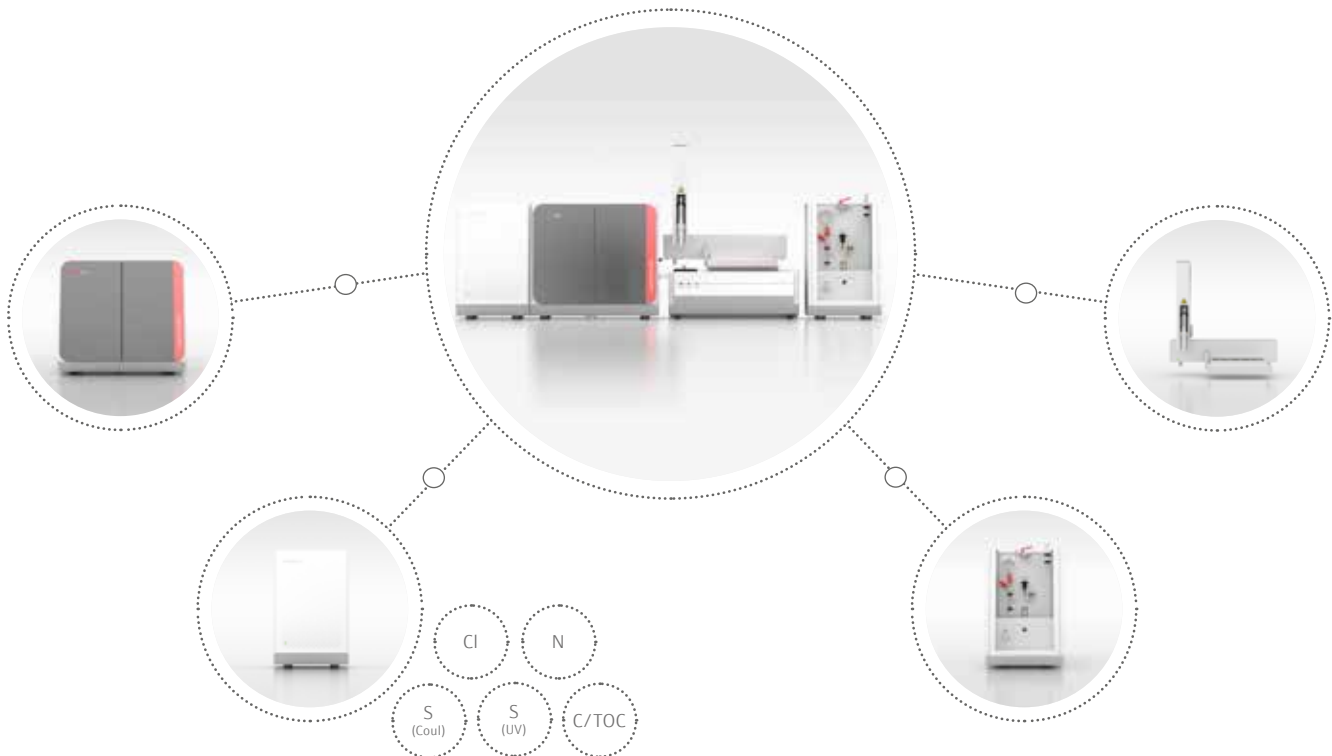
multi EA 5100's unparalleled accessory versatility opens up a broad application range for your lab.

We offer:

- Sample supply systems for gases – unpressurized, pressurized or liquefied
- Sample supply systems for liquids – from very light volatile up to highly viscose materials, including EOX and TOC wastewater samples
- Sample supply systems for solids – including AOX samples according to batch and column method
- Detection units for a wide concentration range of the most important non-metal elements

## Your benefits

- Configure the system you really need
- Stay flexible, independent whatever the future may bring
- Easy extension for wider application spectra
- Boost your sample throughput



# Sample Supply for Gaseous Samples

## LPG 2.0 Module

For direct dosing of liquefied pressurized gases (LPG) with pressures up to 35 bar



Sample volumes	Multiple injection, free selectable sample volumes up to 50 $\mu$ L
Features	Automatic flow control, particle filter, cooled sampling valve, heated evaporation chamber, system purge (prevention of memory effects, easy maintenance), SilcoNert™ coating (prevention of adsorption loss)
Dimensions (W × H × D)	300 × 800 × 550 mm

## GSS/LPG Combi Module

2-in-1 combination of LPG and pressurized gas sampling system. Suitable for liquefied pressurized gases (LPG, LNG, CNG) with pressures up to 18 bar (LPG branch) and pressurized gases up to 200 bar (GSS branch).



Sample volumes	Multiple injection, free selectable sample volumes up to 50 $\mu$ L (LPG), up to 20 mL (gas)
Features	Two separate sample branches for LPG and GSS to prevent cross contamination, automatic flow control, particle filters, cooled sampling valve, heated evaporation chamber, system purge (prevention of memory effects, easy maintenance), SilcoNert™ coating (prevention of adsorption loss)
Dimensions (W × H × D)	300 × 800 × 550 mm

## GSS Module

Suitable for non-pressurized gases (ambient pressure) and with GSS adapter box for pressurized gases (up to 200 bar)



Sample volumes	Multiple injection, free selectable sample volumes up to 100 mL
Features	Maintenance-free, automatic system rinse (prevention of memory effects), SilcoNert™ coating (prevention of adsorption loss), sample supply via gas sample bags or gas bladders, GSS adapter box for direct connection of pressurized gas cylinders
Dimensions (W × H × D)	300 × 800 × 550 mm

# Sample Supply for Liquid Samples

## Autoinjector AI

Safe, semi-automatic injection of liquids – ideal for small sample series



Sample volumes	Up to 100 µL
Features	One-step filling with special syringes for 10 µL, 20 µL, 40 µL and 100 µL; Precision like an autosampler, automatic recognition of injection volume for easy operation
Dimensions	Negligible, since the autoinjector is installed on top of the basic unit

## Autoinjector AI-EA

Safe, semi-automatic injection of liquids – ideal for small sample series



Sample volumes	Flexible up to 100 µL
Features	Flexible filling volume, controlled automated injection
Dimensions	Negligible, since the autoinjector is installed on top of the basic unit

# Systems for Multi Matrix Sample Supply

## Automatic Boat Drive (ABD)

Automatic introduction of liquid and solid samples in quartz boats



Sample quantities	Boats suited for up to 100 µL liquid or up to 110 mg solid sample resp. AOX samples acc. batch and column method
Features	Flame sensor for automatic process optimization (easy operation, maximum throughput), soot-prevention (minimum maintenance), high-performance boat cooling (fastest horizontal analysis, high-throughput speed)
Dimensions (W × H × D)	520 × 210 × 500 mm (installed at the right side of the basic unit)

## MMS – Multi Matrix Sampler

Suited for vertical and horizontal operation; automated introduction of up to 112 liquid or 35 solid samples



Samples	Liquids up to 500 µL (direct injection by µL-syringe), solids up to 110 mg resp. AOX samples acc. batch and column method (boat dosing by gripper)
Features	Flexible system configuration, accessory kits for automated dosing of solids/AOX (35 pos.), liquids/EOX (112 pos.), TOC (60 pos.), liquids with heating/cooling (112 pos.); automatic recognition of present accessory kit; direct injection with µL-syringe or boat introduction with gripper; combined heating (direct injection of highly viscose liquids without dilution) and cooling (safe dosing of very light volatile liquids) option for tray and syringe
Dimensions (W × H × D)	510 × 500 × 400 mm (depending on operation mode the MMS is either installed on the top of the basic unit (vertical) or on the top of the ABD (horizontal))

# Detection Modules

## Sulfur detection

<b>S module<sup>1</sup></b>	Technique	UV fluorescence
	Measurement range	0 - 10,000 mg/L S
	Detection limit	5 µg/L S
	Features	HiPerSens detection, wide linear operation range, direct analysis of trace and high element contents (no pretreatment), Micro plasma optimization (MPO, against N-interferences), high-performance drier
<b>S module coulometric<sup>2</sup></b>	Technique	Coulometric titration
	Measurement range	0 - 40,000 mg/L S
	Detection limit	600 µg/L S
	Features	Integrated stirrer, absorber modules (against N and X-interferences), high-performance drier

## Nitrogen detection

<b>N module<sup>1</sup></b>	Technique	Chemiluminescence
	Measurement range	0 - 10,000 mg/L N
	Detection limit	10 µg/L N
	Features	HiPerSens detection, wide linear operation range, direct analysis of trace and high element contents (no pretreatment), integrated high-performance vacuum pump and converter unit, 2-stage ozone destroyer, high-performance drier

## Carbon detection

<b>C module<sup>2</sup></b>	Technique	Non-dispersive infrared spectrometry (NDIR)
	Measurement range	0 - 100 % C
	Detection limit	100 µg/L C
	Features	HiPerSens detection, wide linear operation range, maintenance-free, direct analysis of trace and high element contents (no pretreatment), high-performance drier
<b>TOC module<sup>2</sup></b>	Technique	Non-dispersive infrared spectrometry (NDIR)
	Measurement range	0 - 10,000 mg/L C
	Detection limit	200 µg/L
	Features	HiPerSens detection, wide linear operation range, catalytic high temperature combustion, integrated TIC module, Peltier-cooled high-performance drier, also suitable for determination of TC in organic samples

## Chlorine detection

<b>Cl module<sup>2</sup></b>	Technique	Coulometric titration
	Measurement range	0 - 100,000 mg/L Cl
	Detection limit	50 µg/L resp. 10 ng Cl abs.
	Features	Flexible configuration by three Cl extension kits to perfectly fit specific application tasks; HiPerSens detection, integrated cooling/stirrer unit, high-capacity drier, heated transfer line (prevention of condensation), auto-protection system, pause titration, automatic drift control and correction, efficient exhaust management (for electrolyte vapors)

<sup>1</sup> Dimensions (W × H × D): 300 × 500 × 550 mm

<sup>2</sup> Dimensions (W × H × D): 300 × 470 × 530 mm

#### Headquarters

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