IC-D3160 Ion Chromatograph

IC-D3160 ion chromatograph is a new modular design of the high stability of ion chromatograph, combining Analytical Technologies Limited independent research and development core technology products and foreign excellent machining process equal to one, not only can be configured conductance detector, combined with powerful chromatography workstation and precision circuit control system, the IC-D3160 ion chromatograph can also configure the UV-Vis detector implementating related to environment, food, chemical, geological, and many other areas of conventional anion and cation, sugar, amino acids, other small molecule organic acids, cyanide, etc.

Pump

Technical Specifications

Wetted Materials:	Stainless Steel / PEEK*, Teflon AF® PVDF, Ceramics, Sapphire, Ruby Programmable
Flow rate:	Micro: 0.001 - 4.000 ml/min Analytical: 0.001 - 10.000 ml/min Semi-Preparative: 0.1 - 40.000 ml/min
Flow Accuracy:	± 0.08% 1.000 ml / min
Flow Precision:	± 0.1 % RSD 1.000 ml/min
Pressure Range:	0 – 7500 psi Semi-Preparative: 20 MPa (up to 20.000 ml/min); 10 MPa (up to 40.000 ml/min)
Pressure: Pulsation:	typical < 0.1 MPa or < 1.0 %
Compressibility: Compensation:	user-adjustable for different solvents
Dimensions: (W x H x D)	396 x 250 x 478 mm
Power Supply:	100 - 250 ~V (47 - 63 Hz)
Pressure Ripple:	<1% without dampner

* depending on configuration

3113i Quatenary Gradient Pump

Vacuum Degassing:	optional: < 20% dissolved gases remaining in water @ 1.000 ml/min
Gradient Range:	0.0 – 100.0 %, 4 channels
Gradiant Accuracy:	< 0.50 %
Gradiant Mixing:	Active
Mixing Volume:	adjustable: 10 – 500 µl
Composition Precision:	≤ 0.15% RSD

3113i Binary Gradient Pump

Vacuum Degassing:	optional: < 20% dissolved gases remaining in water @ 1.000 ml/min
Gradient Range:	0.0 – 100.0 %, 4 channels
Gradient Accuracy:	< 0.50 %
Gradiant Mixing:	Active
Mixing Volume:	adjustable: 10 – 500 µl

3530i Sample Injector System

The Analytical 3530i Sample Injector System is a very flexible and powerful HPLC autosampler with excellent reproducibility and linearity properties. Variable vial racks and adaptors for microliter plates as well as a multitude of firmware options make this system highly adaptable and suitable for any analytical application.

Wetted Materials:	Stainless Steel / PEEK*, PPS, PVDF
Sample tray(Thermostatting):	4ºC to 5ºC Ambient Temperature
Sample Capacity:	50 x 0.5ml or more
Injection Volume:	Programmable 0.1 - 999.9 µl
Injection Volume Accuracy:	0.1-100µl
Column Length:	upto 250 mm along with guard column
Column ID:	4 mm
Replicate Injection:	1-50 Per vial
Sample Heating/Cooling:	optional: +4 – +60 °C
Injection Precision:	< 0.5 % Variable Volume Injection (10 µl; typically ~0.25 %)
Linearity:	Correlation Factor > 0.999 (10 µl injection volume, 500 µl Syringe)
Cross contamination:	<0.1% Wash with & without automated needle Wash
Dispensing Precision	<0.2%RST
Temperature Accuracy:	±0.5°C
Carry Over:	< 0.01 % with 500 µl flush volume
Dimensions: (W x H x D)	396 x 275 x 478 mm
Power Supply:	100 - 250 ~V (47 - 63 Hz)

EC Detector

Technical Specification

Principle : Amperometric detector with electrode technique.

Working Potential	± 2.00 V	Storage capacity for	
Measurement Range	50pC- 200uC(Int. Amp), 5PA-74uA(dc Amp)	measurement program	0 - 99
Auto Zero Range	max ±50uA	Storage capacity for cell-cleaning	
Manual offset Range	max ±50uA	program	0 - 99
LCD - Display	display of setting and measurement data	Analogram Output	+ 1V per measurement
Filter	5Hz - 0.02 Hz (0.2 - 50 sec)		range
Counter Electrode	Titanium/SST	Working Electrode	Gold/platinum/Silver electrode with gasket
Reference Electrode	Ag / AgCl		and Polishing kit
Detector noise level	<0.3 pA	Auto-Zero interface	active low
Cleaing Potential	± 2.00 V in 0.001V increment	Input	115-320 , 50-60Hz
Detay time cleaning	10 - 1500sec	Output	12 V DC, 205 A
Cleaning Cycle	every 1st to 10th cycle	Dimensions	260 x 251 x 160 mm
Cell Volume	<0.5uL	Weight	7.6 kg

Digital Temperature-Control Detection System

Double Conductivity Meter:

Structure	Five polar ring passively and 316 SS conductance detector.
Detection Mode	Double Conductivity detection
Conductance cell size	< 0.8 uL
Output Voltage	500- 5000 mV (to regulate)
Measure range	0-30000uS/cm (10 level to choose)
Resolution	≤ 0.025ns
Conductance temperature	5-50 degree C (to regulate)
Constant Temperature accuracy	±0.01 degree C
Baseline Noise	≤ 0.6 % FS
Electronic Noise	< 10 pA, IPAD: <50 pC
Baseline Drift	≤ 2.0% FS

Analytic Capability

High Capacity Anion Column	pH 0-14 & Reverse phase compatible organic solvent,etc can be analyzed at the same time with one injection
High Capacity Cation Column	Lysine, chlorine chloride can be separated and analyzed
Analyze repeatability	≤ 1.0% (see SO_4^{2-})
Linear range	≥10^3
Minimum concentration of detection	≤ 0.0001ug/g (see Cl^-)
	≤ 0.005ug/g (see BrO^{3-})
	≤ 0.01ug/g(see Ca^{2+})
	≤ 0.001ug/g (see Cu^{2+})
	≤ 0.001ug/g (see CrO_4^{2-})
Anion exchange capacity	100ueq.
Operating Pressure (Max.)	15 MPa

3411i Column Oven

The Analytical 3411i Column Oven is a contact heat transfer oven for high temperature stability and accuracy. The columns are mounted inside the column oven in optimized column holder which enclose the complete column to get the best temperature transfer between the heater and the column. Up to two columns (max. length 250 mm) can be mounted at the same time (max. O.D. 8 mm).

Heating

The Analytical 3411i Column Oven standard version features a high temperature controller for stable column temperatures of +30°C up to +100°C. The temperature accuracy is within 0.1 °C.

Heating/Cooling

The Analytical 3411i Column Oven is also available with active Heating/Cooling with Peltier technique. The temperature range is +5°C up to +100°C. The Heating/Cooling unit uses the same efficient controller as the basic version with temperature accuracy better than 0.1 °C.

Leakage Sensor

The 3441i Column Oven offers a high sensitive Leakage Sensor which detects the vapors of organic solvents.

OEM Options

The Analytical 3441i Column Oven itself is available as a complete OEM instrument. Please contact us for any further information on OEM modules.

Temperature Time Program

The Heating/Cooling variant offers an optional Temperature Time Program for stand-alone operation.

Integrated Valve

The Analytical 3411i Column Oven offers the option to include an automatic switching valve of the Analytical 3600, for example the 3607 Column Selection Valve, but all 3600 can be integrated.

Temperature Fuse

Besides a Leakage Sensor the 3441i offers a temperature fuse which shuts down the unit when the temperature becomes too high, because of an electronic defect.

Technical Specifications

Wetted Materials:	Stainless Steel / PEEK[1], PPS[1]
Temperature Range:	+30°C – +100°C (min.: ambient +5 °C)
	optional : +5°C – +100 °C (Peltier)[2]
Temperature Accuracy:	< 0.1 °C
Switching Valve:	optional : any Valve
Temperature Program:	optional with Heating/Cooling (Peltier)
Safety Features:	Temperature Fuse; Leakage Sensor
Dimensions: (W x H x D)	396 x 165 x 478 mm
Power Supply:	100 - 250 ~V (47 - 63 Hz)

[1] Switching Valve: depending on configuration
[2] Temperature range at 20°C ambient

3412i Column Oven

The Analytical 3412i Column Oven is a contact heat transfer oven for high temperature stability and accuracy. The columns are mounted inside the column oven in optimized column holder.

complete column to get the best temperature transfer between the heater and the column. Up to three 350mm columns can be mounted at the same time.

Heating

The Analytical 3412i Column Oven standard version features a high temperature controller for stable column temperatures of +30°C up to +150°C. The temperature accuracy is within 0.1 °C.

Heating/Cooling

The Analytical 3412i Column Oven is also available with active Heating/Cooling with Peltier technique. The temperature range is +5°C up to +100°C. The Heating/Cooling unit uses the same efficient controller as the basic version with temperature accuracy better than 0.1 °C.

Temperature Time Program

The Heating/Cooling variant offers an optional Temperature Time Program for stand-alone operation.

Integrated Velve

The Analytical 3412i Column Oven offers the option to include an automatic switching valve of the Analytical 3412i, for example the 3600 Column Selection Valve, but all 3600 Valves can be integrated.

Leakage Sensor

The 3412i Column Oven offers a high sensitive Leakage Sensor which detects the vapors of organic solvents.

Temperature Fuse

Besides a Leakage Sensor the 3412i offers a temperature fuse which shuts down the unit when the temperature becomes too high, because of an electronic defect.

OEM Options

The Analytical 3412i Column Oven itself is available as a complete OEM instrument. Please contact us for any further information on OEM modules.

Technical Specifications

Temperature Range:	Stainless Steel / PEEK1, PPS1 +30°C – +150°C (min.: ambient +5 °C) optional: +5°C – +100 °C (Peltier)[2]
Temperature Accuracy:	< 0.1 °C
Temperature stability:	±0.1 °C to set temperature
Switching Valve:	optional: any Valve
Temperature Program:	optional with Heating/Cooling (Peltier)
Safety Features:	Temperature Fuse; Leakage Sensor
Dimensions: (W x H x D)	183 x 566 x 270 mm
Power Supply:	100 - 250 ~V (47 - 63 Hz)

[1] Switching Valve: depending on configuration
[2] Temperature range at 20°C ambient

FDA | ISO 13485 CERTIFIED | GLP | NSIC | GMP | MSME | FDA | CE CERTIFIED | JAS-ANZ

▶▶▶ **Corporate Social Responsibility**

Analytical Foundation is a nonprofit organizat (NGO) found for the purpose of:

1. Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technoligy and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds, souls and boby by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Comps etc.

TM

Analytical
Foundation

▶▶▶ **Reach us @**

Note : Company reserves rights to add/delete/modify the contents / technical specificationsof the catalogue without prior notice.

☀ **Analytical** ®
Technologies Limited