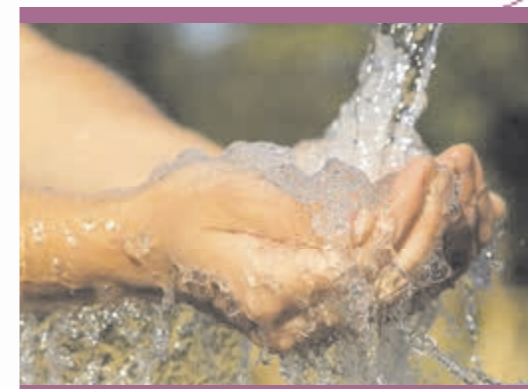


TECHNICAL SPECIFICATIONS

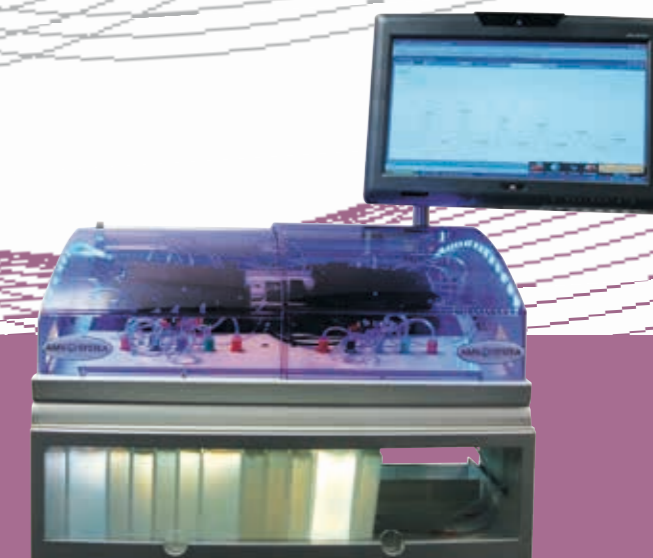
PRINCIPLE	Wet chemistry automation using continuous flow	
OPERATION	By multi parametric batches in parallel	
SAMPLES	Analytical rate	From 15 to 120 samples an hour
	Special analytical rates	Please inquire specifically
	Samples loading capacity	Depends on selected autosampler (range of 30 to 360 samples)
	Dual probe	Optional
	Sample volumes	From 0.5 ml to 100 ml
	Identification	Alphanumerical identification/Bar Code (optional)
REAGENT DRAWER	Removable drawer with control window	
	Loading capacity	Up to 21 different reagents
	Containers	From 200 ml to 1000 ml
	Leak retention volume	Made of chemically inert plastic material
PUMP	Number of pump tubes	40
	Automatic valve	Optional
	Air Injection valve	Optional, Controlled by electronic
	Leak detector	Optional, Automatic alarm and control.
	Automatic shut down	Yes
	Automatic start up	Yes
	Variable speed	Yes, by Software or Manual control
	Flow rates	From 50 to 3000 µl/minute
	MEASUREMENT	
ANALYTICAL MANIFOLD	Injection, Dilution, Mixing, Incubation, Distillation, Dialysis, UV Digestion, Extraction liquid/liquid	
COLORIMETER	Standard spectral range	340 - 1100 nm
	Type	Monochromatic or dichromatic
	Analog/Digital Converter Resolution	24 bits (16.8 million points)
	Optical path	From 5 to 50 mm
	Flow cell volume	From 1 to 150 µl
	Linearity	From 0 to 2.5 absorbance units
	Debubbling	Via mechanical or software control; hardware bubble detection
OTHER DETECTORS	UV/Vis, Flame photometer, Fluorometer, electrodes, and more... let us help develop a method that is specifically designed to meet your analytical needs	
DIMENSIONS	50 x 65 x 65 cm (L x W x H including Computer)	
WEIGHT	50 kg including computer	

NEW:
 You can order consumables and accessories
 on our new webshop: www.webshop.amsalliance.com



FUTURA DUO

THE COMPACT & OPTIMIZED
 CFA ANALYZER



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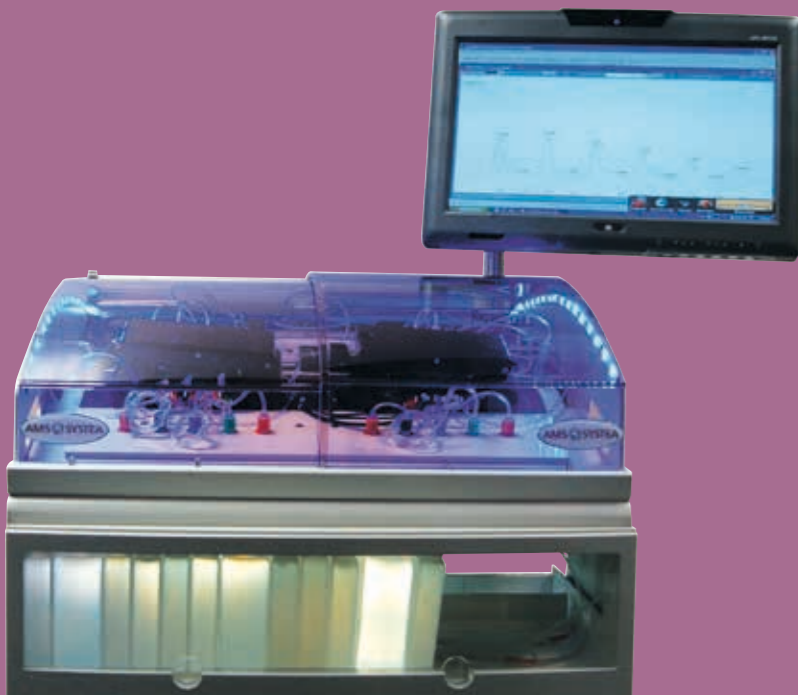
Hyxo Oy
 P.O. Box 16 (Palokorvenkatu 2)
 FI-04261 Kerava, Finland
 Tel. +358 10 417 4500
hyxo@hyxo.fi • www.hyxo.com

AMS France
 10 avenue Charles de Gaulle
 95740 Frépillon
 FRANCE

Tél.: (+33) 01 34 18 71 10
 Fax: (+33) 01 39 60 72 39

FUTURA

THE BEST CONTINUOUS FLOW ANALYSIS TECHNOLOGIES AVAILABLE ON A SINGLE PLATFORM



Taking advantage of solid experience of Futura, the new Futura Duo is designed to give you the best of CFA technology. Combining high performance and reliability, the new Futura Duo offers you all features you are expecting in a single, compact and modern system dedicated to run your preferred chemistries. The integration of the new XL pump, manifolds, and detectors will allow you to run 2 or 3 parameters simultaneously. Advanced features like automatic manifold washout and shut down enable fully controlled overnights runs and automatic start early morning prior to sample arrival so that when you arrive, your CFA is up and running and you just have to place your sample on the tray. With its adjustable speed, the peristaltic pump will allow you to fasten the cleaning time, especially for complex chemistries.

UNIQUE FEATURES IN A SINGLE INSTRUMENT

- **MultiSpeed Peristaltic Pump**
- **Compact & Integrated Analyzer: reagent drawer, XL pump, manifolds, heater, detectors and built in computer,**
- **Micro Flow, or Macro Flow, Select the one that meet your expectations,**
- **Multiple probe option,**
- **Mechanical, Electronic or software debubbling ,**
- **Multiple path length flow cells (5 to 5000 mm) for a wide variety of analytical ranges,**
- **Wide range of detector options.**



Simple or double in-line distillation for measurement of Phenol Index and Cyanides in water.

ADVANCED AUTOMATION: IMPROVING EFFICIENCY AND PRODUCTIVITY

- Automation of complex, time consuming manual methods
- Inline Distillations
 - Ammonia, phenolics, cyanides
 - Volatile Acidity (VA), Free and Total SO₂
- Inline Digestions
 - TP via acid persulfate
 - TP via inline autoclave
- Inline extractions
 - MBAS Surfactants
- Automated programmable startup
- Automated preparation of calibration standard solutions
- Automated pre-and post run dilutions of off-scale samples
- Programmable post-run manifold washout and shut-down

LOGICAL SIMPLICITY: EASY TO USE AND MAINTAIN

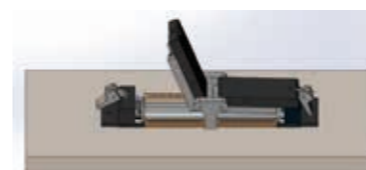
- User friendly software.
- Easy analytical manifold change over.
- Very low consumption of reagents (minimum analytical cost).
- Fewer moving parts means simplified maintenance and less downtime.
- Integrated reagent drawer enables visual management of the reagents.
- Designed to accommodate the necessary containers for two or three chemistries, the drawer allows the user to store and continuously view the levels of all the reagents.
- Easy to remove from the console, the entire drawer can be taken out and stored in a refrigerator.
- Chemically inert, no corrosion, always clean, that's simplicity!



New Built in Complete touchscreen Computer

NEW HP3 XL: THE HEART OF THE SYSTEM

Each **Futura Duo** analyzer is designed and configured for the best possible performance with your application. Each system consist of a multi stream peristaltic pump, detectors, heaters, manifolds and reagent drawers. The New High Precision Peristaltic Pump (**HP3 XL**) produces a highly stable flow for up to 40 pump tubes ensuring optimum chemistry runs for any methodology. The pump motor can operate at different speeds enabling the Futura Duo to be the only continuous flow analyzer on the market which can combine micro flow and/or macro flow methods in the same instrument. The pump module can also be programmed to automatically engage or release the pump tube platen, (APS Automatic Pressure System).

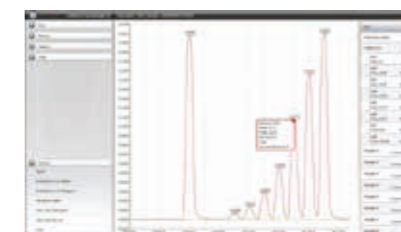


New XL HP3 pump with 40 pump tubes

DEDICATED ANALYTICAL SOFTWARE

The Futura Duo software is designed to simplify your day to day operation.

Deigned to work with the built-in TouchScreen computer, it combines all latest software updates. With bi-directional LIMS capabilities, it becomes an integral piece to improving workflow in your laboratory. The software provides a simple, elegant environment for the user to process samples. With a few mouse clicks, start a multiple parameter run that prepares calibration standards, runs samples and QC's, dilutes any off-scale samples, prints reports and QC charts, exports data to LIMS, washes out the manifold and shuts down for the evening. That's automation. Automated self-monitoring helps the user stay productive even in troubleshooting and provides the peace of mind to walk away from the analyzer.



COMPLIANCE WITH REFERENCE METHODS

- Compliant to ISO, EPA, AFNOR, COFRAC...
- Fully compatible with the former Technicon® systems
- ISO 9001:2000
- GLP compliant and compatible with your LIMS

NEW: FULL AUTO MODULE

Automatic handling of external modules and accessories for automation of complex chemistries.

2 modules:

- Full Auto
- Full Auto detergents

AVAILABLE ACCESSORIES AND MODULES TO IMPROVE PRODUCTIVITY

- Autosampler 30
Maximum capacity 30 samples.
- Autosampler CS9000 XYZ
Maximum capacity 100 samples.
- Autosampler 104
Maximum capacity 104 samples.
- Autosampler XYZ
Maximum capacity 360 samples.
- Dilutor
Automatic preparation of standard solutions and automatic dilution of off scale samples.



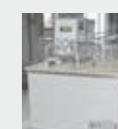
- UV digestion
In-line digestion.



- Distillation module
Simple or double in-line distillation.



- Autoclave
In-line digestion.



- Flame photometer
With interface single or dual channel.



- Fluorometer

- Reagents
A full range of ready-to-use reagents, for Environment (Selection Aqua) and Wine/Alcohols (Selection Oeno).

