

# SMARTPREP

## Solutions for Sample Preparation

**SMARTDIST™**  
*Universal Distillation  
System*



**SMARTDIGEST™**  
*The Smart Block  
Digester*



*Setting the Standard for the Future*

  
**Analytical Solutions**



# SMARTDIGEST™

The Smart Block Digestor



## The SMARTDIGEST™

The SMARTDIGEST™ is available as a 40 or 20 place system and consists of 3 components:

- Heater Block
- Glassware with accessories
- Solid-state controller

### Heater Block

- 40 or 20 positions
- Continuous heater elements for improved temperature uniformity
- Corrosion resistant design

### Glassware with Accessories

- 75 ml tubes for 40-position digester
- 100 ml tubes for 40-position digester
- 250 ml tubes for 20-position digester
- Stand
- Retainer plate
- Side Plates

### Solid State Controller

- Multi-Stage digestion
- Visual display of digestion status
- Automatic safety shutoff

## SMARTDIST™ JR

The SMARTDIST™ can be used for reduced volume distillations for:

- Cyanide
- Ammonia
- Phenol
- Fluoride
- Acid-soluble sulfide



# SMARTDIST™

## Universal Distillation System

**PATENTED**  
U.S. PATENT  
No. 07/947,429

- Innovative Design
- Time – Space – Cost Savings
- Multi-Distillation System
- Improve Productivity while Reducing Costs

### Advantages:

- Superior temperature control
- Less than 26" of hood space
- Complete 2 year warranty – excluding glassware
- Solid-state controller with digital display
- 300° C range allows rapid distillation
- Fast, easy assembly – saves labor and reduces cost
- 90% reduction in reagent, sample and generated waste
- Largest batch processing capacity available – 20 stations
- Multiple distillation applications – NOT LIMITED TO CYANIDE
- Comprehensive reference manual – INCLUDES ALL DISTILLATION METHODS
- 20 piece glassware package – DUPLICATES ANY LARGE SCALE DISTILLATION
- Performs scaled down versions of all USEPA-approved distillations

### Features:

- Flow adjusting valves
- Automatic safety shut-off
- 20 stations – more samples per batch
- Boiling tube common to all procedures
- **SMARTDIST™** makes any distillation routine
- Automatic start-up with time-delay feature
- Simple glassware change-over from test-to-test
- 20 port gas manifold for easy distribution of inert gases/vacuum
- All glass-to-glass connections in "full" compliance with regulatory methods

### EPA Compliant Methods for:

- Ammonia
- Total Kjeldahl Nitrogen
- Cyanide (total, weak acid, amenable)
- Phenol
- Sulfide
- Fluoride





## SMARTDIST™ Specifications

### Operation - Temperature

Control Range and Resolution:  
Ambient to 300°C in 1°C increments  
Accuracy: +/- 2°C in control range  
Amplitude (at setpoint): less than +/- 1°C  
Maximum Rise rate: 15°C/min

### Programmable Ranges

Parameter	Increment	Minimum	Maximum
Delay/Start	1 minute	1 minute	24 hours
Rate	Low/High		
Time	0.1 hour	0 hour	9.9 hours per stage X max of 8 stages
Temperature	1°C	Ambient	300°C

### Physical

Actual Weight: 55 lbs  
Shipping Weight: 73 lbs  
Dimensions  
Heating Unit: 11"H x 26"W x 20"D  
Unit Assembled: 32"H x 31"W x 20"D

### Electrical

Operating Voltage: 208-240 VAC, 60 Hz  
Current: 12 Amps @ 220 VAC  
(2) 15 amp, 250 V fuses  
(1) 2 amp, 250 V fuse



## SMARTDIGEST™ Specifications

### Operation - Temperature

Control Range and Resolution:  
Ambient to 400°C in 1°C increments  
Accuracy: +/- 2°C in control range  
Amplitude (at setpoint): less than +/- 1°C  
Ramp Rate: 4°C - 7°C/min

### Electrical

Operating Voltage: 208-240 VAC, 50/60 Hz  
Current: 12 Amps @ 220 VAC  
(2) 15 amp, 250 V fuses  
(1) 2 amp, 250 V fuse

### Physical

Weight  
Heating Unit: 66 lbs.  
Control Unit: 5 lbs.  
Tubes: 6.5 lbs./set  
Stand: 4 lbs.

### Dimensions

Heating Unit: 8 1/2"H x 13 1/2"W x 20"D  
Control Unit: 6 3/4"L x 7"W x 10"D  
Stand w/ Handles: 6"H x 12"W x 11"D  
Tubes: AD 20: 11 13/16"L x 1.65 O.D. (250 ml.)  
AD 40: 10"L x 1.03 O.D. (75 ml.)  
AD 40: 12 1/4"L x 1.03 O.D. (100 ml.)



AUTHORIZED DEALER



Analytical Solutions

370 Angus Crescent • Northlands Business Park •  
29 Newmarket Road • Northriding • Randburg 2169

Phone +27 (0)87 610 0900

Fax +27 (0)86 244 9524

Email [info@analyticalsolutions.co.za](mailto:info@analyticalsolutions.co.za)

[www.analyticalsolutions.co.za](http://www.analyticalsolutions.co.za)