

Vulcan

Automated Digestion and Work-Up System



Ultra-Pure, Consistent,
Automated Sample Preparation
Enhancing Safety & Efficiency
in Laboratories



V84S



V84P

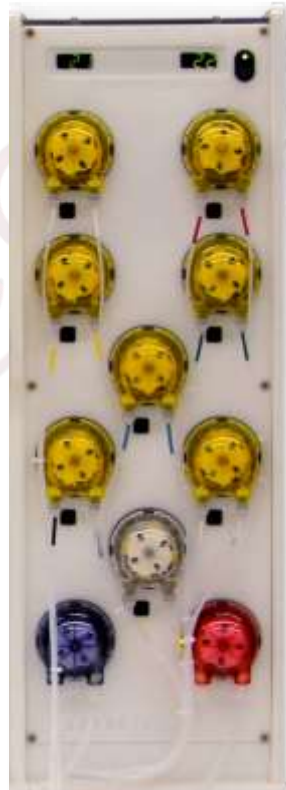
All-Plastic, Adaptable
Workstation

Increasing High-Throughput
in Corrosive Environments

Glass & Teflon Syringes



Peristaltic Pumps



- Option of Syringe or Peristaltic pump based reagent delivery system
- Syringes and Pumps available for all liquids including HF, HClO₄, H₂O₂, KMNO₄ and H₂SO₄
- Automated Reagent Management
- Flow rate up to 2.5 ml/sec

Independent reagent lines reduce priming operations, increase dispensing speed and minimize contamination



Option of PTFE syringes for ultra-pure dispensing



PTFE Coated Graphite Digestion Blocks



- Choice of digestion block, standard size (50 ml, 42 samples) and large size (50 ml, 72 samples)
- Digest samples up to 230 °C
- Temperature homogeneity of $\pm 1\%$
- Anodised Aluminum blocks available for higher temperatures
- Easy to add alternate blocks for other sample volumes

Pneumatically driven tray lift moves samples in and out of the digestion block. This provides precise, automated heating and cooling of the samples.



Digestion blocks accommodate 15, 25, 50 and 100 ml vials





Dilute Up To Mark

Ultrasonic, non-contact sensor reads the initial sample volume and dilutes the sample to the users specified volume.



Stirring Samples

Samples are homogenized by a stream of bubbles which force the sample to mix with the lighter diluent. The probe also moves laterally to help speed up this process.

Aliquot Transfer



After the digestion is complete, the system is capable of transferring an aliquot of the digestate to an autosampler rack.



Cleaning Probes

The sample probes are washed in a dual chamber wash station to eliminate sample-to-sample cross contamination. The diluent flows within the well to clean the sample from the sample loop.



The Vulcan software provides complete control and flexibility over the automation. The ease of method development allows users with unique samples and processes to customize the system for their applications.

ULPA Filter Arrangement



- Built-in fume hood saves valuable space in the laboratory
- ULPA/HEPA filter options maintain a clean work area
- Compatible for use with Perchloric acid
- Excellent fume extraction arrangement
- Option of built-in industrial computer
- Accessories include: acid resistant exhaust blower, fume scrubber and reagent storage cabinet
- Customization for unique vials and reagent dispensing is available

	QBlock Capacity	Syringe Pump	Peristaltic Pump
V84S	2	6	1
V84P	2	-	8
V42S	1	6	1
V42P	1	-	8

Sample Transfer & Dilution feature is not available with large size QBlock



V42S



V42P

Computer : Windows® 10 to XP™ operating system
1 USB port

Utilities : 208 VAC, 60 Hz, 15 Amps or
220 VAC, 50 Hz, 15 Amps

Exhaust Flow : 150 CFM

Operating ambient temperature : 5° C - 40° C

Operating ambient Humidity : 10% - 80%

Dispensing Accuracy : Syringe : ± 0.05 ml
Peristaltic pump : $\pm 0.1 - 0.15$ ml

Dispensing Flow : Syringe : ± 0.5 ml/sec
Peristaltic pump : $\pm 0.5 - 2.0$ ml/sec

Make Up Volume Accuracy : ± 0.15 ml in 50 ml vial

Temperature Accuracy : $\pm 1^\circ$ C

	Vulcan 84	Vulcan 42
Dimensions (W x D x H)	117 X 64 X 77 cm (46 X 25 X 30 in.)	89 X 64 X 77 cm (35 X 25 X 30 in.)
Weight	80 kg (178 lb)	60 kg (133 lb)
Shipping Dimensions	130 X 87X 102 cm (51 X 34 X 40 in.)	97 X 87X 102 cm (38 X 34 X 40 in.)
Shipping Weight	138 kg (305 lb)	104 kg (230 lb)



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