omniPAGE Denaturing Gradient

The VS20WAVE-DGGE is a complete system for DNA mutation analysis. Using the innovative vertical screw-clamp technology of the VS20-WAVE system, the VS20WAVE-DGGE is fully equipped – with temperature control unit, stirrer, gradient mixer and casting accessories – to perform specific mutation analysis applications.

The powerful microprocessor-controlled PID temperature control unit enables various mutation detection techniques to be undertaken between ambient temperature and 70°C, while the simple four-screw design of the WAVE insert accelerates set up of denaturing PAGE gels.

The VS20-DGGE can be used to screen single-base pair changes in the following applications:

- Parallel Denaturing Gradient Gel Electrophoresis (DGGE)
- Constant Denaturing Gradient Gel Electrophoresis (CDGE)

A maximum 96-sample throughput allows detection of as many mutations within a couple hours, alleviating many of the bottlenecks associated with screening for DNA mutations.
The GM100 gradient mixer is supplied as standard to ensure efficient gradient formation by mixing and delivering high- and low-density denaturant solutions. The PP1 peristaltic pump is also recommended for delivery of linear and reproducible gradient gels.

KEY FEATURES

- Maximum 96-sample throughput
- Four-screw vertical clamping technology accelerates set up
- Large format - 20x20cm glass plates for improved resolution
- 100ml gradient mixer, with valve-controlled 50ml reservoir and mixing chambers, makes two 1mm parallel denaturing gradient gels
- Microprocessor-controlled temperature control unit accurate to ±0.02°C

Casting process for DGGE gels

Innovative Casting and Set-up Mechanism

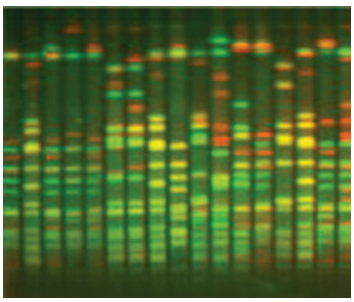
The VS20WAVE-DGGE utilises novel vertical screw clamp technology to assemble two vertical gels. This reduces the number of screws required for set up making casting assembly faster, while a built-in inner buffer chamber within the PAGE insert allows set-up to be completed without the inclusion of heavy top tanks or buffer chambers. A dual purpose PAGE insert eliminates the need for plate transfer, and is used with a cam casting base to guarantee efficient leak free casting.

Precise thermal control

The redesigned VS20DGGE-TC temperature control unit combines buffer recirculation with a heat sensor and 1.4kW heating element to facilitate precise temperature control to within ±0.02°C, allowing the gel temperature to be set to the melting temperature (Tm) of the amplified DNA polymorphism or mutation of interest. Other benefits include: a conspicuous 4-digit 16mm LED panel to aid set-up; precise tuning to within 0.1°C resolution; an operating set point, plus three adjustable pre-set temperature values; and stirred buffer circulation for temperature stability and uniformity.

Programmable power supply option

At 500V, 800mA and 300W outputs, the optional powerPRO500 power supply provides full flexibility for different mutation detection techniques.



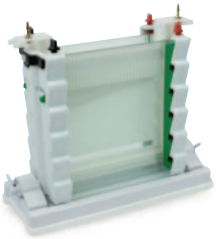
TotalLab 1D / CLIQS – Multiplex Analysis

CLIQS 1D Pro is more advanced analysis software used primarily for band-pattern matching within individual DGGE, SSCP and RFLP gels that are important for cultivar experiments, evolutionary biology and population genetics. CLIQS 1D Pro has a powerful band matching feature, which is flexible and easy to use, while visual tools show the results of matching and identify similarities within an individual gel, including lane clustering via dendrograms. More info on our software range can be found on our website.

powerPRO500 power supply

CSL-DSTIR Magnetic Stirrer

PP1 Peristaltic Pump



WAVE electrophoresis insert and cam casting base

Technical Specifications

WAVE electrophoresis insert and tank

Max. Number of Gels	2 per run
Plate Dimensions (W x H)	20x20cm
Active Gel Dimensions (W x H)	16 x 17.5cm
Spacer Thicknesses Buffer	0.75, 1, 1.5 and 2mm
Max. Sample Capacity	96 samples; 48 per gel
Standard Combs	2x 1mm 24-sample
Available Combs	1, 5, 10, 18MC, 24, 36MC, 48; as per VS20WAVE and MAXI units
Max. Buffer Volume	8.5L
Unit Dimensions (W x D x H)	40.5 x 17 x 44cm
Weight	8kg

Temperature Control Unit

Temperature Control	PID
Operating Temperature Range	ambient – 100°C
Working Temperature Range (DGGE)	45-70°C
Buffer Recirculation Mechanism	stirring
Temperature Uniformity/Stability at 37°C	±0.05/0.02°C
Setting/Display Resolution	0.1°C
Safety	fluid-level float switch; isolated; IEC 1010 /CE4
Stored Temperature Values	3
Heater Power at 230V/110VAC	1.5/1.4kW
Electrical Power at 230V/100VAC	

Recommended Power Supply

Voltage	500V Total
Current	800mA
Power	300W

Gradient Mixer

Total Volume 100ml	100ml
Volume of Reservoir & Mixing Chambers	50ml
Internal Diameter of Outlet Port	2mm

Ordering Information

VS20WAVE-DGGE*	**Complete Denaturing Gradient Gel Electrophoresis System**, 20x20cm; includes: temperature control unit, cam casting base, glass plates with 1mm bonded spacers, 2x 24-sample combs and gradient mixer – 240 VAC version
VS20WAVE-DGGETC*	Temperature Control Unit
CSL-GM100	Gradient Mixer, 100ml
VS20WAVE-DGGEKIT*	**VS20-WAVE Package**; includes VS20WAVE-DGGE, CSL-DSTIR, PP1, powerPRO500
CSL-DSTIR*	**Magnetic Stirrer**, 19 x 19cm
PP1	**Single Channel Peristaltic Pump** (with silicon tubing)
MU-S13	Silicon tube I.D. 1/32", 25 ft
MU-S14	Silicon tube I.D. 1/16", 25 ft (for peristaltic pump)
powerPRO500	**powerPRO 500 Power Supply**, 500V, 800mA, 300W
CLIQS	**1D image analysis** with band pattern matching
CLIQS 1D Pro	**1D image analysis** with band pattern matching between different gels

* For 110V units add $ to the order code

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.