ELECTROPHORESIS **Vertical gel systems**  31





- 3 tank sizes with a wide range of sample combs and precast gel compatibility
- Durable Injection moulded construction for leak-proof environment
- Designed & manufactured in United Kingdom

COOLLP

# Vertical Gel Systems SELECTION GUIDE

Active Gel

Sample Ca

Tank Buffe

Compatibl

Precast

Compatibl Transfer S modular

Standalon Semi-dry

Electropho • Standar • Precast • Tapecas • Handcas

> (with extra run 2 gels in 2 simultane

$\leq$		
	<ul> <li>OMNIPAGE MINI SYSTEM</li> <li>Run 1-4 handcast gels, and up to 2 precast gels in mini format</li> <li>Sliding clamp assembly ensures fast set up times and leak-free operation</li> <li>Insert for both gel casting and running eliminating time-consuming transfer of fragile gels</li> <li>Modular design for rapid turnaround of data, allowing PAGE, 2-D and blotting to be completed within a working day</li> </ul>	<ul> <li>OMNIPAGE MINI WIDE SYSTEM</li> <li>Mini wide format effectively allows 2 mini gels to be compared within a single gel for gel-to-gel reproducibility</li> <li>Run 1-2 handcast gels; perfect for users with &gt;20 samples to compare and resolve</li> <li>Even pressure screw system prevents gel leakage</li> <li>Combine pl (isoelectric point) separation with speed by resolving 2x 7cm IPG strips or 2x 8cm capillary tube gels per gel using special 2-D gel combs and plates</li> <li>Ability to perform three techniques in a day: IEF, PAGE and blotting</li> </ul>
ensions (w x l x h)	19 x 13 x 15cm	26 x 16 x 16cm
el Dimensions (w x I)	8 x 8.5cm	18 x 8cm
capacity	PAGE: 80 samples, 20/gel Blot: 4 blots 2D: 10 tubes	PAGE: 192 samples, 48/gel Blot: 4 blots 2D: 10 tubes
fer Volume	Min 250ml; Max 1200ml	Min 600ml; Max 2800ml
ole Gel Formats		
t	Commercial 10x10cm and 10x8cm (W x H) precast gels: e.g. IDGel™, SERVA, Thermo and Invitrogen, etc.	
ist	OmniPAGE VS10 glass plates with or without bonded spacers for handcast gels	VS10W plain and notched glass plates with or without bonded spacers for handcast gels
ble Electroblotting Systems Integrated	OmniPAGE Mini CVS10CBS, CVS10CBS-HI and CVS10CES	OmniPAGE Mini Wide VS10WCBS and VS10WCES
ne Wet/tank transfer	SB10 and EBM10, 4- and 5-blot transfer systems	SB10W and EBM20, 4- and 5-blot transfer systems
	SD10 10x10cm and SD20 20x20cm for 1x and 4x blots	SD20 20x20cm for 2x blots
oresis System		
rd	2-gel systems (can run 4 gels)	2-gel system (can run 4 gels)
t (tank, lid and running insert only)	CVS10PRE	
st (includes glass plates)	CVS10D	VS10WD
<b>ast</b> s plates and caster)	CVS10DSYS	VS10WDSYS
a casting stand and plates to in tank, while casting ieously)	CVS10DSYS-CU	VS10WDSYS-CU





VS20WAVE MAXI SYSTEM	VS30 MAXI-PLUS SYSTEM
<ul> <li>Runs 1-4 large format gels at maximum resolution</li> <li>Fewer screws compared to traditional formats resulting in rapid set up times</li> <li>Optional blotting insert</li> <li>Detachable cooling core for fast, smile-free electrophoresis</li> <li>Seamless injection moulded construction free of potential leakage-prone glue joins</li> <li>Capacity to run 1-4 18cm capillary tube gels or IPG strips in second dimension; optional 2-D module</li> </ul>	<ul> <li>Ideal for second-dimension electrophoresis</li> <li>Accepts IPG strips 24cm in length, the longest available commercially</li> <li>Rapid set-up cool packs enhance resolution, particularly during extended runs</li> </ul>
30 x 18 x 27cm	36 x 33 x 18cm
16 x 17.5cm	28 x 20cm
PAGE: 192 samples, 48/gel Blot: 4x WAVE gels 2D: 10 tubes	PAGE: 300 samples, 75/gel Blot: 4 x Maxi Plus gels
Min 1200ml; Max 5300ml	Min 1800ml: Max 8400ml
VS20 plain and notched glass plates with or without bonded spacers for handcast gels	VS30 plain and notched glass plates with or without bonded spacers for handcast gels
Maxi WAVE VS20CBS, VVS20CBS-HI and VS20WAVECES	Maxi Plus VS30CBS
SB20 and EBM20, 4- and 5-blot transfer systems	SD33 33x45cm, and SD50 20x50cm *
SD20 20x20cm	
2-gel system (can run 4 gels)	2-gel system (can run 4 gels)
VS20WAVED	VS30D
VS20WAVESYS	VS30DSYS
VS20WAVESYS-CU	

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# O M N I PAGE Mini

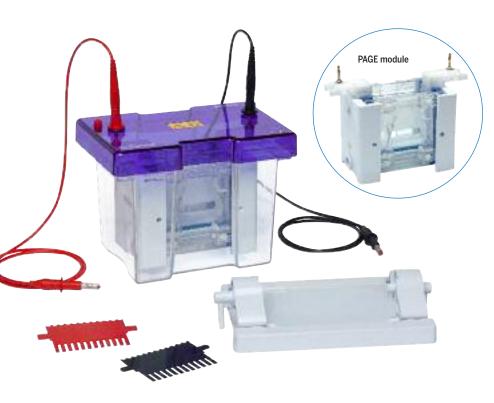
The perfect unit for routine vertical electrophoresis using pre-cast or hand-cast gels. The omniPAGE MINI features injection moulded construction for leak proof running, and a simple clamp system to ensure a tight seal between buffer chambers to prevent current leakage.

Gel casting and running is done using the same internal module, no transfer of glass plates during gel casting is necessary. The module features unique sliding gates, to allow very rapid set up of both hand cast and precast gels. Ultra soft silicone seals and pressure bars which surround the glass plates guarantee leak proof gel casting. 2mm thick glass plates minimise breakage and have bonded spacers for convenience.

### **MINI TETRAD**

**ORDERING INFORMATION** 

A 4-gel TETRAD system is created by simply introducing additional plates with spacers and appropriate combs. TETRAD is supplied with a casting base and external casting upstand to allow gels to be prepared in advance, ready for the next run.





#### interchangeable modules

**Electroblotting Module** –Complete with Platinum wire electrodes, 4 blotting cassettes and fibre pads to aid compression, this insert fits neatly into the omniPAGE Mini tank for Western Blotting.

#### High Intensity Electroblotting Module – with 2 blotting cassettes and

Platinum plate electrodes, the high intensity blotting module allows fast transfer of proteins to membranes with excellent time savings.

**Capillary IEF Module** - the Tube Gel Module includes a rapid release gasket for easy tube extraction. Focusing can be accomplished in as little as three hours.

## KEY FEATURES

Mini SDS PAGE, Native PAGE, Gradient, Second dimension and Nucleic acid separations

- Injection moulded construction
- Compatible with all 8 x 10 and 10 x 10cm precast gels
- Rapid gel casting and loading
- Low buffer volumes
- Rapid set up cooling
- Run up to four gels in tetrad model



For vertical package deals

CVS10D omniPAGE Mini, 10 x 10cm includes Glass Plates with bonded 1mm thick spacers, 2x 12 sample combs, cooling pack, blanking plate CVS10DSYS omniPAGE Mini, 10 x 10cm includes Glass Plates with bonded 1mm thick spacers, 2x 12 sample combs, cooling pack, blanking plate and casting base CVS10DSYS-CU omniPAGE Mini, 10 x 10cm incl. Glass Plates with bonded 1mm thick spacers, 2x 12 sample combs, cooling pack, blanking plate, casting base and casting upstand CVS10TETRAD omniPAGE Mini, 10 x 10cm incl. Glass Plates with bonded 1mm thick spacers, 2x 12 sample combs, cooling pack, blanking plate, casting base and casting upstand PLUS 2x additional 1mm 12-sample combs, 1x pk/2 plain glass plates with 1mm spacers, 1x pk/2 notched glass plates and 2x pk/2 notched glass plates with 1mm spacers CVS10PRE omniPAGE Mini, 10 x 10cm includes blanking plate, cooling pack VS10NGS1.5 VS10DCAST 10 x 10cm Casting Base 10 x 10cm Notched Glass Plates with 1.5mm Bonded Spacers (pk/2) VS10DCASTM Replacement Silicone Mat for 10 x 10cm Casting Base VS10PGS1.5 10 x 10cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2) 10 x 10cm Notched Glass Plates with 2mm Bonded Spacers (pk/2) CVS10DIRM Inner Running Module, with Sliding Clamps or Screw Clamps VS10NGS2 VS10ICB Mini Cooling Pack VS10PGS2 10 x 10cm Plain Glass Plates with 2mm Bonded Spacers (pk/2) VS10NG 10 x 10cm Notched Glass Plates 2mm thick (pk/2) VS10DP Blanking Plate, 10 x 10cm VS10PG 10 x 10cm Plain Glass Plates 2mm thick (pk/2) VS10S0.75 10cm Spacers - 0.75mm (pk/2) VS10NGS0.75 10 x 10cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2) 10cm Spacers - 1mm thick (pk/2) VS10S1 VS10PGS0.75 10 x 10cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2) VS10S1.5 10cm Spacers - 1.5mm thick (pk/2) VS10NGS1 10 x 10cm Notched Glass Plates with 1mm Bonded Spacers (pk/2) VS10S2 10cm Spacers - 2mm thick (pk/2) VS10PGS1 10 x 10cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)

# simple, rapid, leak-proof gel casting....

Dual purpose PAGE module eliminates time-consuming transfer of glass plates between separate casting and running

Ground glass plates with bonded injection moulded spacers consistent with comb thickness ensure 'clean' well formation, as well as the correct alignment for leak-free casting; also eliminate the need for easily mislaid and awkward to use spacer aligners

Very forgiving, ultra-soft silicone mat within cam-caster compensates for glass plate misalignment to ensure leak-free casting









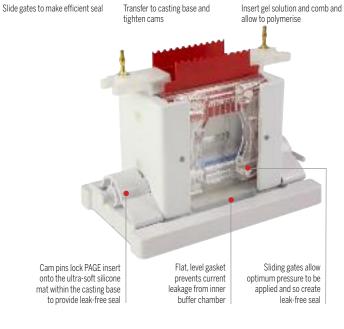
Insert glass plates between pressure frame and gasket

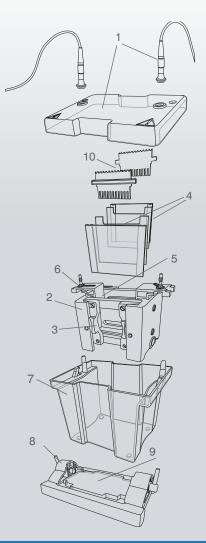


Transfer to tank and fill with buffer



Load samples using Loading Guides and run





### Mini component parts

- 1. Lid and power cables
- 2. PAGE insert
- 3. Sliding clamps

4.

- 7. R
- s ciamps
- Glass plates
- 5. Inner buffer chamber
- Outer tank
   Cam-pin caster
- 9. Ultra-soft casting mat
- 10. Combs

6. Gasket

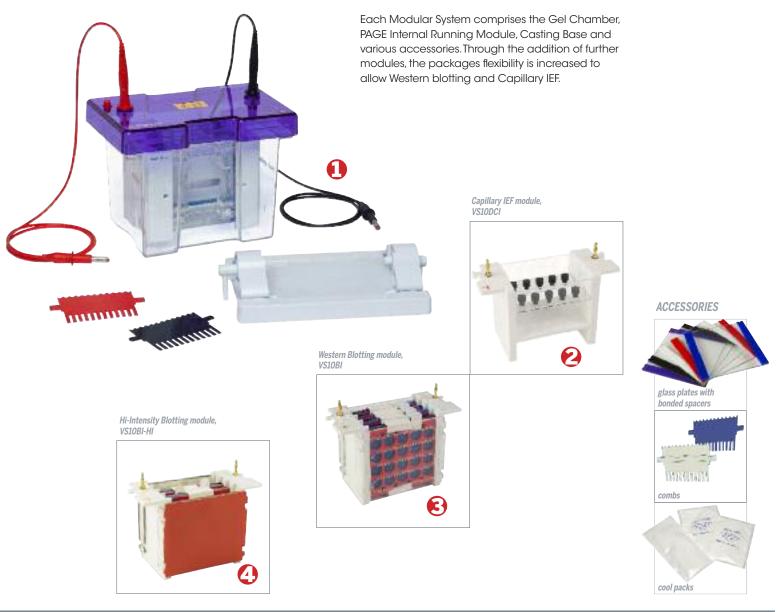
Colour	DESCRIPTION	SAMPLE VOLUME PER WELL	Colour Code	DESCRIPTION	Sample Volume per well
VS10-1-0.75	Comb 1 Prep, 1 Marker, 0.75mm thick	500µl	VS10-1-1.5	Comb 1 Prep, 1 Marker, 1.5mm thick	1000µІ
VS10-5-0.75	Comb 5 sample, 0.75mm thick	70µl	VS10-5-1.5	Comb 5 sample, 1.5mm thick	140µl
VS10-8MC-0.75	Comb 8 sample MC, 0.75mm thick	40µl	VS10-8MC-1.5	Comb 8 sample MC, 1.5mm thick	80µl
VS10-9-0.75	Comb 9 sample, 0.75mm thick	35µI	VS10-9-1.5	Comb 9 sample, 1.5mm thick	70µI
VS10-10-0.75	Comb 10 sample, 0.75mm thick	30µI	VS10-10-1.5	Comb 10 sample, 1.5mm thick	30µI
VS10-12-0.75	Comb 12 sample, 0.75mm thick	25µI	VS10-12-1.5	Comb 12 sample, 1.5mm thick	50µl
VS10-16MC-0.75	Comb 16 sample MC, 0.75mm thick	20µI	VS10-16MC-1.5	Comb 16 sample MC, 1.5mm thick	40µl
VS10-20-0.75	Comb 20 sample, 0.75mm thick	15µl	VS10-20-1.5	Comb 20 sample, 1.5mm thick	30µI
VS10-1-1	Comb 1 Prep, 1 Marker, 1mm thick	650µl	VS10-1-2	Comb 1 Prep, 1 Marker, 2mm thick	1300µІ
VS10-5-1	Comb 5 sample, 1mm thick	100µl	VS10-5-2	Comb 5 sample, 2mm thick	200µl
VS10-8MC-1	Comb 8 sample MC, 1mm thick	60µl	VS10-8MC-2	Comb 8 sample MC, 2mm thick	120µl
VS10-9-1	Comb 9 sample, 1mm thick	50µl	VS10-9-2	Comb 9 sample, 2mm thick	100µl
VS10-10-1	Comb 10 sample, 1mm thick	40µI	VS10-10-2	Comb 10 sample, 2mm thick	80µl
VS10-12-1	Comb 12 sample, 1mm thick	35µl	VS10-12-2	Comb 12 sample, 2mm thick	70µI
VS10-16MC-1	Comb 16 sample MC, 1mm thick	25µl	VS10-16MC-2	Comb 16 sample MC, 2mm thick	50µl
VS10-20-1	Comb 20 sample, 1mm thick	20µI	VS10-20-2	Comb 20 sample, 2mm thick	40µI

### www.cleaverscientific.com

MC = multichannel pipette compatible T\_+44 (0)1788 565 300 E\_info@cleaverscientific.com

# OMNIPAGE Mini Modular Systems

The omniPAGE range of Modular Vertical Gel Systems allow multiple electrophoresis techniques to be performed in the same unit. Using the same main tank and lid, three different modules are interchangeable for PAGE, tube gel and electroblotting techniques.

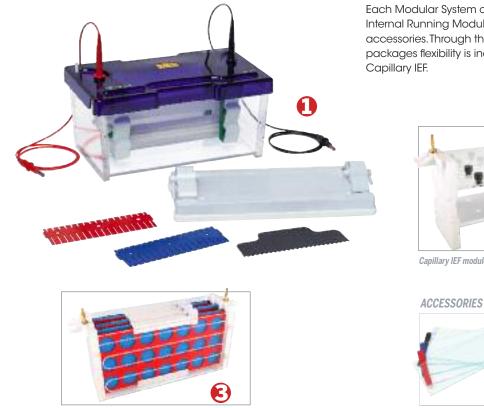


### Ordering Information

CVS10CES	Complete Mini (10x10cm) Vertical Electrophoresis Modular System, comprising:				
	1x Mini Vertical Unit, CVS10DSYS (1) which includes: PAGE Module, 2x2mm	thick notched gla	ass plates, 2x2mm thick plain glass plates with 1mm thick bonded		
	spacers, 1x blanking plate, 2x combs (1mm thick, 12 samples), 1x casting b	ase, silicone mat	, cooling pack plus: 1x Capillary Electrophoresis Module, VS10DCI (2)		
	and 1x Electroblotting Module, VS10BI (3) comprising: internal electroblott	ing module, 4x co	ompression cassettes for gel sizes up to 10x10cm and 8x fibre pads		
CVS10C2DS	Complete Mini (10 x 10cm) Vertical Electrophoresis & 2-D System, comprisin	ıg:			
	1x Mini Vertical Unit, CVS10DSYS (1) which includes: PAGE Module, 2x2mm	thick notched gla	ass plates, 2x2mm thick plain glass plates with 1mm thick bonded		
	spacers, 1x blanking plate, 2x combs (1mm thick, 12 samples), 1x casting b	ase, silicone mat	, cooling pack plus: 1x Capillary Electrophoresis Module, VS10DCI (2)		
CVS10CBS	Complete Mini (10 x 10cm) Vertical Electrophoresis & Blotting System, comp	orising:			
	1x Mini Vertical Unit, CVS10DSYS (1) which includes: PAGE Module, 2x2mm	thick notched gla	ass plates, 2x2mm thick plain glass plates with 1mm thick bonded		
	spacers, 1x blanking plate, 2x combs (1mm thick, 12 samples), 1x casting b	ase, silicone mat	, cooling pack plus 1x Standard Electroblotting Module, VS10BI (3)		
CVS10CBS-HI	Complete Mini (10 x 10cm) Vertical Electrophoresis & High Intensity Blotting	System, compris	ing:		
	1x Mini Vertical Unit, CVS10DSYS (1) which includes: PAGE Module, 2x2mm th	nick notched glass	s plates, 2x2mm thick plain glass plates with 1mm thick bonded spacers,		
	1x blanking plate, 2x combs (1mm thick, 12 samples), 1x casting base, silico	one mat, cooling	pack plus: 1x High Intensity Electroblotting Module, VS10BI-HI (4)		
VS10DCI	omniPAGE Mini Tube Unit (2)	VS10BI-HI	High Intensity omniPAGE Blot Mini insert - includes 2 casettes and 8 fibre pads (4)		
VS10BI	OmniBlot Mini Insert - including 4 cassettes, 16 foam pads (3)	SB10	omniBlot Mini 10 x 10cm Blotting System		

# PAGE Mini Modular Systems

Mini wide vertical gel unit, with a gel width of 20cm, effectively allows double the number of samples to be resolved as the mini unit. This allows consistency of sample comparison on a single gel and is designed for those with greater than 20 samples to compare and resolve. Simple set up using ultra soft silicone seals guarantees trouble free glass plate loading and gel casting.



Western Blotting module, VS10WBI

Each Modular System comprises the Gel Chamber, PAGE Internal Running Module, Casting Base and various accessories. Through the addition of further modules, the packages flexibility is increased to allow Western blotting and



Capillary IEF module, VS10WDCI



bonded spacers

cool packs

Ordering Information						
VS10WD	Mini Wide, 20 x 10cm Dual, 2 sets of Glass Plates with 1mm thick bonded Spacers, 2 x 24 sample, 1mm thick combs, cooling pack					
VS10WDSYS	Mini Wide, 20 x 10cm Dual, 2 sets of Glass Plates with 1mm thick bonded Spacers, 2 x 24 sample, 1mm thick combs, cooling pack including caster					
VS20CAST	20 x 10cm Casting Base	VS10WNGS1	20 x 10cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)			
VS20DCASTM	Replacement Silicone Mat for 20 x 10cm Casting Base	VS10WPGS1	20 x 10cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)			
VS10WDIRM	Inner Running Module	VS10WPGS1.5	20 x 10cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)			
VS20-x -LG	Loading guides for RigRunner V-MINI combs, x = comb well number	VS10WPGS2	20 x 10cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)			
VS10WNG	20 x 10cm Notched Glass Plates 4mm thick (pk/2)	VS10WDP	Blanking Plate, 20 x 10cm			
VS10WPG	20 x 10cm Plain Glass Plates 4mm thick (pk/2)	RPW-0.2100	Replacement Platinum Wire - 0.2mm, 50cm			
	20 x 10cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2)	VS20ICB	Cooling Pack			
VS10WPGS0.75	20 x 10cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)					
SB10W	Mini Wide Blot Unit, 20 x 10cm System including tank and lid,	VS10WDC	Mini Wide Tube Gel Unit, 20x10cm with tank and lid,			
	4 cassettes, 8 fibre pads, cooling pack		glass capillary tubes, blanking ports and cooling pack			
VS10WBI	Mini Wide Blot Module - includes 4 cassettes and 8 fibre pads	VS10WDCI	Mini Wide Tube Gel Module - includes glass tubes and blanking ports			
SB10WC	Mini Wide Blot Cassette	MCT10	Mini Capillary Tubes, pk/100			
SB10WF	Fibre pads - pk/8	MCT101.5	Mini Capillary Tubes, 1.5mm, pk/100			
VS10WCES	Complete Mini Wide (20x10cm) Vertical Electrophoresis Modular System,	comprising:				
	1x Mini Wide Vertical Unit, VS10WDSYS (1) which includes: PAGE Module,	2x4mm thick no	tched glass plates, 2x4mm thick plain glass plates with 1mm thick			
	bonded spacers, 1x blanking plate, 2x combs (1mm thick, 24 samples), 1	x casting base, si	licone mat, cooling pack			
	plus: 1x Wide Electroblotting Module, VS10WBI (3) 1x Wide Capillary Electroblotting	ctrophoresis Mod	ule, VS10WDCI (2)			
VS10WCBS	Complete Mini Wide (20 x 10cm) Vertical Electrophoresis & Blotting System	<b>m</b> , comprising:				
	1x Mini Wide Vertical Unit, VS10WDSYS (1) which includes: 2x4mm thick r	notched glass pla	tes, 2x4mm thick plain glass plates with 1mm thick bonded spacers,			
	1x blanking plate, 2x combs (1mm thick, 24 samples), 1x casting base, silicone mat, cooling pack plus: 1x Wide Electroblotting Module, VS10WBI (3)					
VS10WC2DS	Complete Mini Wide (20x10cm) 2-D System, comprising:					
	1x Mini Wide Vertical Unit, VS10WDSYS (1) which includes: 2x4mm thick r	notched glass pla	tes, 2x4mm thick plain glass plates with 1mm thick bonded spacers,			
	1x blanking plate, 2x combs (1mm thick, 24 samples), 1x casting base, si	licone mat, coolir	ng pack plus: 1x Wide Capillary Electrophoresis Module, VS10WDCI (3)			

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# omnipage Maxi Wave

The Maxi 'WAVE' System is designed to perform a variety of separations, including first- and second-dimension SDS-PAGE, native, preparative, gradient and high-resolution nucleic acid electrophoresis, plus capillary tube gel IEF and electroblotting, the Maxi WAVE is one of the most versatile maxi vertical systems available.

The innovative, vertical screw-clamp system within the PAGE insert requires only four screws to secure up to four 20x20cm gels. This gives the Maxi WAVE the advantage of a much faster set up time compared to products whose traditional clamping configurations require as many as 24 screws to secure just two glass plates. In addition, the WAVE's innovative vertical screw-clamp configuration distributes pressure evenly along the height of the gel rather than in the centre to eliminate plate bowing and gel compression. This still maintains a leak-proof seal during casting; while the ergonomic wave-like design of the PAGE insert aids both handling and set up.

A detachable inner cooling coil connects to the laboratory water supply or a recirculating chiller to provide uniform, smile-free electrophoresis, while allowing runs to be performed at higher voltage.

#### MAXI WAVE TETRAD

A 4-gel TETRAD system is created by simply introducing additional plates with spacers and appropriate combs.TETRAD is supplied with a casting base and external casting upstand to allow gels to be prepared in advance, ready for the next run.



External Casting Upstand is basically a standard internal module but without Platinum wire

#### Ordering Information

 VS20WAVESYS
 Maxi WAVE, 20 x 20cm Dual with Glass Plates with bonded 1mm thick spacers, 2x 24 sample combs, cooling pack, dummy plate and casting base

 VS20WAVESYS-CU
 Maxi WAVE, 20 x 20cm Dual with Glass Plates with bonded 1mm thick spacers, 2x 24 sample combs, cooling pack, dummy plate, casting base

 and external casting upstand

 VS20WAVETETRADI

 Maxi WAVE, 20 x 20cm Dual with Glass Plates with bonded 1mm thick spacers, 2x 24 sample combs, cooling pack, dummy plate, casting base

	and external casting upstand, PLUS 2x pks/2 notched glass plates with 1mm bonded spacers and 2x 1mm 24-sample combs				
VS20WAVE-EC	VS20 WAVE External Casting Stand - No Casting Base	VS20PGS1	20 x 20cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)		
VS20WAVEDIRM	VS20WAVE Page insert	VS20PGS1.5	20 x 20cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)		
VS20WAVE-CC	Detachable Cooling Coil	VS20PGS2	20 x 20cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)		
VS20DCAST	V-Maxi WAVE, 20 x 20cm Dual Caster	VS20DP	Dummy Plate, 20 x 20cm		
VS20DCASTM	Replacement Rubber mats for 20 x 20cm caster	VS20S0.75	20cm Spacers - 0.75mm (pk/2)		
VS20ICB	Maxi Cooling Pack	VS20S1	20cm Spacers - 1mm thick (pk/2)		
VS20-x -LG	Loading guides for V-Maxi WAVE maxi combs, x = comb well number	VS20S1.5	20cm Spacers - 1.5mm thick (pk/2)		
VS20NG	20 x 20cm Notched Glass Plates 4mm thick (pk/2)	VS20S2	20cm Spacers - 2mm thick (pk/2)		
VS20PG	20 x 20cm Plain Glass Plates 4mm thick (pk/2)	VS20WAVE-IEFKIT	IEF Conversion for 18cm IPG strips and tube gels, includes: 1 set of		
VS20NGS0.75	20 x 20cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2)		plain glass plates with bonded spacers, 0.6x20cm (WxH); and 2x 2-D		
VS20PGS0.75	20 x 20cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)		combs with one 3.5mm marker lane and one 18cm preparatory well		
VS20NGS1	20 x 20cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)				

## **KEY FEATURES**

- Run up to FOUR gels simultaneously [TETRAD systems]
- Only four screws required to secure glass plates significantly reduces set up time
- Vertical screw-clamps distribute pressure evenly along the height of the gel to prevent plate bowing and gel compression
- Detachable inner cooling coil facilitates rapid and uniform, smile-free electrophoresis, even at higher voltages
- Injection moulded construction guarantees long life with reliable and consistent performance

NAVE

## **Gel Casting**

Dual purpose PAGE insert eliminates time-consuming transfer of glass plates between separate casting and running modules

Ground glass plates with bonded injection moulded spacers consistent with comb thickness ensure 'clean' well formation, as well as the correct alignment for leak-free casting; also eliminate the need for easily mislaid and awkward to use spacer aligners

Very forgiving, ultra-soft silicone mat within cam-caster compensates for glass plate misalignment to ensure leak-free casting





Assemble each gel cassette on a flat level surface, by placing the plain glass plate down with the spacers facing upwards followed by the notched glass plate.

Check the bottom of the glass plates to ensure that they are flush together, and place the PAGE insert on the casting base; make sure that the cams are facing downwards.

e

f



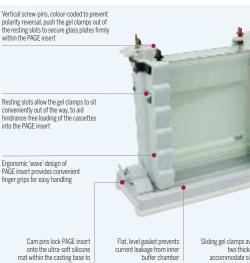
mechanism, allowing the gel clamps to sit in the resting slots.





d

Continue to tighten the screw-pins until the gel clamps glide out of the resting slots and fix firmly against the glass plates pushing them upright.



onto the ultra-soft silicone mat within the casting base to provide leak-free seal Sliding gel clamps available in two thicknesses to accommodate single- and double-gel cassettes



Insert cams and turn until tight, drawing the PAGE insert onto the

casting to form a leak-proof seal.

Pour in the gel solution, insert the combs and allow the wells to polymerise.



Transfer the PAGE insert to gel the tank. Fill the inner and outer buffel chambers before loading samples



Replace the lid, connect to the power supply and run.



#### Maxi WAVE component parts

1 Lid and power cables 2. PAGE insert

4. Clamping bars

- 3. Vertical screw-pin
- 8. Detachable cooling coil 9. Outer tank
  - 10. Cam-pin caster

7. Gasket

- 11. Ultra-soft casting mat
- 5. Glass plates 6. Inner buffer chamber
- 12. Combs

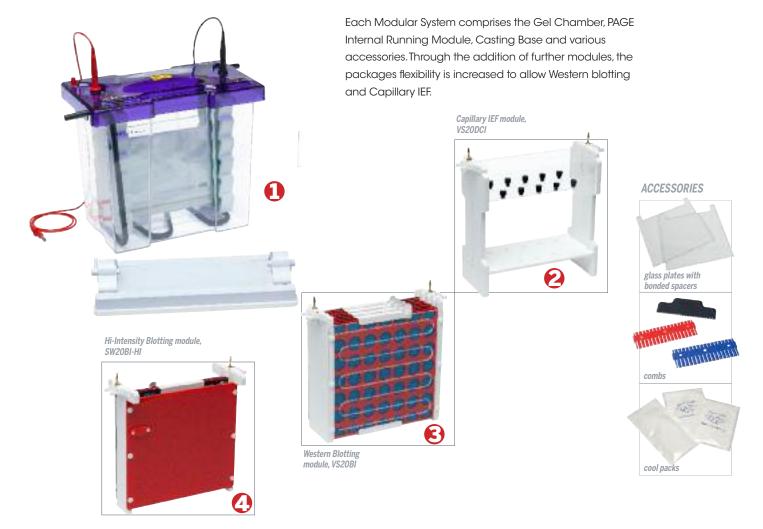
Colour	Code	DESCRIPTION	SAMPLE VOLUME PER WELL	Colour	CODE	DESCRIPTION	SAMPLE VOLUME PER WELL
	VS20-1-0.75	Comb 1 Prep, 1 Marker, 0.75mm thick	1100µl		VS20-1-1.5	Comb 1 Prep, 1 Marker, 1.5mm thick	2200µl
	VS20-5-0.75	Comb 5 sample, 0.75mm thick	160µI		VS20-5-1.5	Comb 5 sample, 1.5mm thick	320µl
	VS20-10-0.75	Comb 10 sample, 0.75mm thick	80µl		VS20-10-1.5	Comb 10 sample, 1.5mm thick	160µl
	VS20-18MC-0.75	Comb 18 sample MC, 0.75mm thick	40µl		VS20-18MC-1.5	Comb 18 sample MC, 1.5mm thick	80µI
	VS20-24-0.75	Comb 24 sample, 0.75mm thick	30µI		VS20-24-1.5	Comb 24 sample, 1.5mm thick	60µl
	VS20-30-0.75	Comb 30 sample, 0.75mm thick	25µl		VS20-30-1.5	Comb 30 sample, 1.5mm thick	50µl
	VS20-36MC-0.75	Comb 36 sample MC, 0.75mm thick	20µl		VS20-36MC-1.5	Comb 36 sample MC, 1.5mm thick	40µl
	VS20-48-0.75	Comb 48 sample, 0.75mm thick	15µI		VS20-48-1.5	Comb 48 sample, 1.5mm thick	30µI
	VS20-1-1	Comb 1 Prep, 1 Marker, 1mm thick	1500µl		VS20-1-2	Comb 1 Prep, 1 Marker, 2mm thick	3000µl
	VS20-5-1	Comb 5 sample, 1mm thick	200µl		VS20-5-2	Comb 5 sample, 2mm thick	400µI
	VS20-10-1	Comb 10 sample, 1mm thick	100µl		VS20-10-2	Comb 10 sample, 2mm thick	200µl
	VS20-18MC-1	Comb 18 sample MC, 1mm thick	50µI		VS20-18MC-2	Comb 18 sample MC, 2mm thick	100µl
	VS20-24-1	Comb 24 sample, 1mm thick	40µl		VS20-24-2	Comb 24 sample, 2mm thick	80µl
	VS20-30-1	Comb 30 sample, 1mm thick	35µI		VS20-30-2	Comb 30 sample, 2mm thick	70µI
	VS20-36MC-1	Comb 36 sample MC, 1mm thick	25µI		VS20-36MC-2	Comb 36 sample MC, 2mm thick	50µl
	VS20-48-1	Comb 48 sample, 1mm thick	20µI		VS20-48-2	Comb 48 sample, 2mm thick	40µI

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The omniPAGE range of Modular Vertical Gel Systems allow multiple electrophoresis techniques to be performed in the same unit. Using the same main tank and lid, three different inserts are interchangeable for PAGE, tube gel and electroblotting techniques.



### **Ordering Information**

ORDERING INI	ORMATION
VS20WAVECES	Complete Maxi WAVE (20x20cm) Vertical Electrophoresis Modular System, comprising:
	1x Maxi WAVE Vertical Unit, VS20WAVESYS (1) which includes: 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers,
	1x blanking plate, 2x combs (1mm thick, 24 samples), 1x casting base, silicone mat, cooling pack
	plus: 1x Electroblotting Module, VS20BI (3) comprising: internal electroblotting module, 4x compression cassettes for gel sizes up to 20x20cm and 18x fibre pads
	plus: 1x Capillary Electrophoresis Module, VS20DCI (2) which includes: internal running module for tube gels, capillary tubes, blanking plugs and 1x VS20WAVE IEF-KIT:
	1 set of plain glass plates with bonded spacers, 0.6x20cm (WxH); and 2x 2-D combs with one 3.5mm marker lane and one 18cm preparatory well
VS20WAVEC2DS	S Complete Maxi WAVE 2-D System, comprising:
	1x Maxi WAVE Vertical Unit, VS20WAVESYS (1) which includes: 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers,
	1x blanking plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack
	plus: 1x Capillary Electrophoresis Module, VS20DCI (2) which includes: internal running module for tube gels, capillary tubes, blanking plugs and 1x VS20WAVE-IEF-KIT:
	1 set of plain glass plates with bonded spacers, 0.6x20cm (WxH); and 2x 2-D combs with one 3.5mm marker lane and one 18cm preparatory well
VS20CBS	Complete Maxi WAVE (20 x 20cm) Vertical Electrophoresis & Blotting System, comprising:
	1x Maxi WAVE Vertical Unit, VS20WAVESYS (1) which includes: 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers,
	1x blanking plate, 2x combs (1mm thick, 24 samples), 1x casting base, silicone mat, cooling pack
	plus: 1x Electroblotting Module, VS20BI (3) comprising: internal electroblotting module, 4x compression cassettes for gel sizes up to 20x20cm and 6x fibre pads
VS20CBS-HI	Complete Maxi WAVE (20 x 20cm) Vertical Electrophoresis & High Intensity Blotting System, comprising:
	1x Maxi WAVE Vertical Unit, VS20WAVESYS (1) which includes: 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers,
	1x blanking plate, 2x combs (1mm thick, 24 samples), 1x casting base, silicone mat, cooling pack, plus: 1x High Intensity Electroblotting Module, SB20BI-HI (4) which
	includes: internal electroblotting module, 2x compression cassettes for gel sizes up to 20x20cm and 6x fibre pads
SB20	omniBlot Maxi 20 x 20cm Blotting System VS20-BI omniBlot Maxi Insert, including 4x cassettes, 18x foam pads
VS20BI-HI	omniBlot Maxi High Intensity Insert, includes 1x casette, 6x fibre pads

# O M N I PAGE Comb options

omniPAGE Vertical Gel Chambers can accommodate a wide variety of casting combs. Standard options are shown below, while custom combs can be manufactured on request. To select a comb, just add the desired thickness to the end of the comb code to get the complete ordering code, for example, VS10-4-1 is a 1 mm thick comb and VS20-24-1.5 is a 1.5 mm comb. Well volume shown below is for 1mm thick combs, except for Sharks Tooth combs which are 0.25mm. For volume of other thicknesses, please refer to the Cleaver Scientific website.

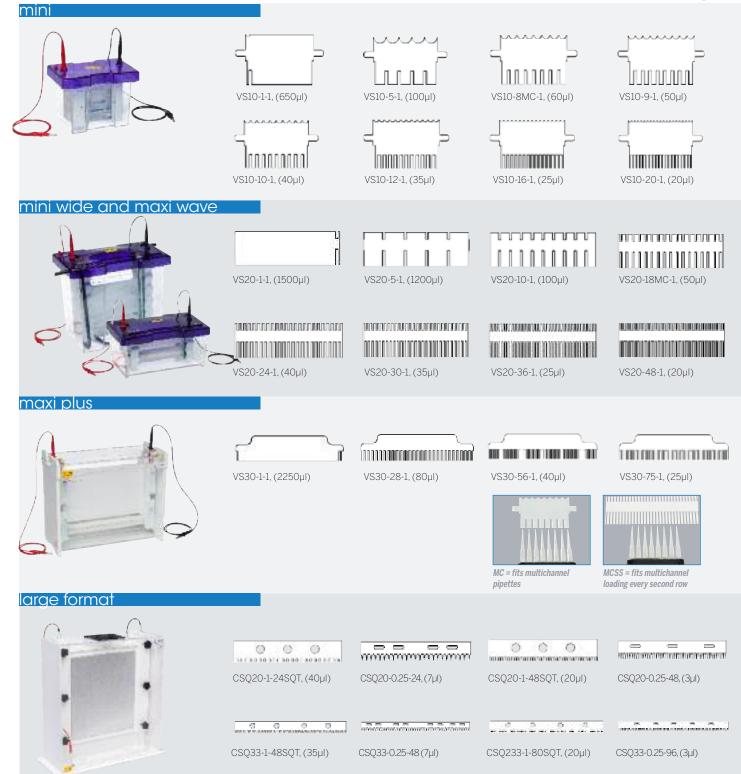
Colour-coded combs for the multiSUB are available in 4 thicknesses,

Black – 0.75mm for tightly resolved bands White – 1mm supplied as standard

Red – 1.5mm to maximise sample volume Blue – 2mm to maximise sample volume

Black and white combs recommended for high resolution gels and publication quality data; red and blue to scale-up nucleic acid volumes for preparatory techniques.

NOTE: volume refers to maximum well volume of the longer tooth



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# **PAGE** Gradient Mixers

Ideal for Caesium, Sucrose and Gel gradients the Gradient Mixer series comprises two chambers - a reservoir and a mixing chamber with an interconnecting valve. A second valve regulates the output flow from the mixing chamber. All mixers have a flat base which allows them to be placed on a magnetic stirrer. A magnetic stirring bar can be placed directly in the mixing chamber to ensure a constant gradient. The support rod allows the mixer to be fixed to a retort stand for extra stability.



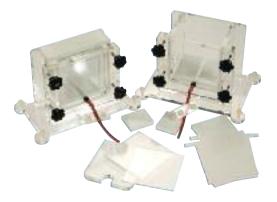
## **KEY FEATURES**

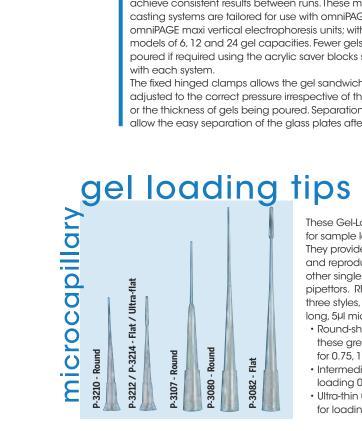
- Leak proof seals
- Easy to use
- Compatible with vertical gel chambers

# **Multiple Gel Casters**

Advance casting of multiple mini and maxi gels can help to achieve consistent results between runs. These multiple gel casting systems are tailored for use with omniPAGE mini and omniPAGE maxi vertical electrophoresis units; with three models of 6, 12 and 24 gel capacities. Fewer gels can be poured if required using the acrylic saver blocks supplied

The fixed hinged clamps allows the gel sandwich to be adjusted to the correct pressure irrespective of the number or the thickness of gels being poured. Separation sheets allow the easy separation of the glass plates after pouring.





#### These Gel-Loading Pipette Tips are designed for sample loading of electrophoresis gels. They provide positive-displacement accuracy and reproducibility using Pipetman and most other single channel air-displacement pipettors. RNase/DNase-free Tips comprise three styles, each featuring a flexible, 33mm long, 5µl microcapillary tube sections:

- Round-shaft Tip, with 0.57mm OD tube end these greatly improve loading techniques for 0.75, 1.0 and 1.5mm PAGE gels.
- Intermediate 0.37mm OD flat Tip is ideal for loading 0.4mm sequencing gels.
- Ultra-thin 0.17mm OD ultra-flat Tip is perfect for loading 0.2mm wedge-spacer gels.

## **KEY FEATURES**

- Two styles Round or Flat (Duckbill)
- 'Unifit' design provides tight seal
- Complete visibility of sub-microlitre volumes - 200ul models (83mm) at 5µl; 2µl/10µl models at 2µl
- For use with 2, 10, 20, 100 and 200 ul pipettes
- Metal and RNase free



INFORMATION

ORDERING					
GRADIENT MIX	(ERS				
CSL-GM15	15ml Gradient Mixer		CSL-GM100	100ml Gradient Mixer	
CSL-GM25	25ml Gradient Mixer		CSL-GM500	500ml Gradient Mixer	
CSL-GM50	50ml Gradient Mixer				
MULTI VERTIC	AL GEL CASTERS				
CSL-6CAST	6 gel caster for 8 x 10cm or 10 x 10cm mini gels		CSL-12CAST	12 gel caster for 8 x 10cm or 10 x 10cm mini gels	
GEL LOADING	rips	Packaging			Packaging
P3210	Round Orifice, 0.2-10µl, 0. 5mm diam.	Case = 4x rack/200	P3107	Round Orifice, 20-200µl, 1.1mm diam.	Case = 5x rack/200
P3212	Flat Orifice, 0.2-10µl, 0. 33mm diam.	Case = 4x rack/200	P3080	Round Orifice, 20-200µl, 0. 5mm diam.	Case = 4x rack/200
P3214	UftraFlat Orifice, 0.2-10µl, 0.17mm diam.	Case = 4x rack/200	P3082	Flat Orifice, 20-200µl, 0. 33mm diam.	Case = 4x rack/200

# PAGE Maxi Plus

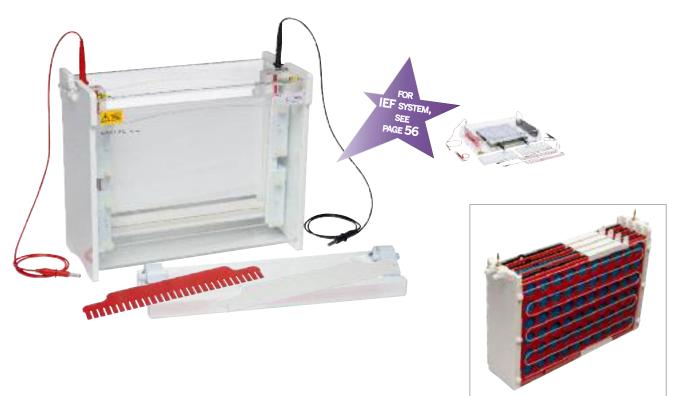
### The Maxi Plus unit provides a convenient solution for the second stage of 2-D electrophoresis.

The 26cm active gel width provides a large gel area to resolve large IEF strips. In combination with the IEF system, this offers a complete package for 2-D electrophoresis. The unit utilises the omniPAGE advanced design features to provide convenient ease of use with high resolution separations.

Rapid set up cooling retains resolution in extended separations and also saves on buffer volume without affecting run quality. Four gels can be resolved per run. A wide range of accessories is available to allow easy transition between 2-D and standard vertical electrophoresis techniques. In particular different types of 2-D comb allow a wide degree of versatility in sample selection and gel set-up.

## **KEY FEATURES**

- Ideal for second dimension electrophoresis
- Accepts strips up to 26cm in length
- Rapid set up coolpacks for enhanced resolution



Western Blotting Module, VS30BI

Ordering In	Ordering Information					
VS30D	omniPAGE MAXIPLUS, 30 x 22cm Dual w	vith Glass Plates with bonded 1	.5mm spacers, 2 x 28	sample combs, 2 x 2-D combs, cooling pack, I	planking plate	
VS30DSYS	omniPAGE MAXIPLUS, as above with Cast	ing Base	VS30PGS0.75	30 x 22cm Plain Glass Plates with 0.75mm	Bonded Spacers (pk/2)	
VS30BI	omniPAGE MAXI Blot Plus Module - includes	4 cassettes and 8 fibre pads	VS30NGS1	30 x 22cm Notched Glass Plates with 1mm	Bonded Spacers (pk/2)	
VS30DCAST	30 x 22cm Dual Casting Base		VS30PGS1	30 x 22cm Plain Glass Plates with 1mm Bo	nded Spacers (pk/2)	
VS30DCASTM	Replacement Silicone Mat for 30 x 22cm C	asting Base	VS30PGS1.5	30 x 22cm Plain Glass Plates with 1.5mm E	Sonded Spacers (pk/2)	
VS30DIRM	Inner Running Module		VS30PGS2	30 x 22cm Plain Glass Plates with 2mm Bo	nded Spacers (pk/2)	
VS30ICB	Maxi Cooling Pack		VS30DP	Blanking Plate, 30 x 22cm		
VS30-x-LG	Loading guides for omniPAGE MAXI combs, x = comb well number		VS30S0.75	22cm Spacers - 0.75mm (pk/2)		
VS30NG	30 x 22cm Notched Glass Plates 4mm thic	k (pk/2)	VS30S1	22cm Spacers - 1mm thick (pk/2)		
VS30PG	30 x 22cm Plain Glass Plates 4mm thick (pk/2)		VS30S1.5	22cm Spacers - 1.5mm thick (pk/2)		
VS30NGS0.75	30 x 22cm Notched Glass Plates with 0.75r	mm Bonded Spacers (pk/2)	VS30S2	22cm Spacers - 2mm thick (pk/2)		
Color Code	DESCRIPTION	Sample Volume per well	Colour Code	DESCRIPTION	SAMPLE VOLUME PER WELL	
VS30-1-1	Comb 1 Prep, 1 Marker, 1mm thick	2250µl	VS30-1-1.5	Comb 1 Prep, 1 Marker, 1.5mm thick	3375µl	
VS30-28MC-1	Comb 28 sample, 1mm thick MC compatible	80µl	VS30-28MC-1.5	Comb 28 sample, 1.5mm thick MC compatible	120µl	
VS30-56MC-1	Comb 56 sample, 1mm thick MC compatible	40µI	VS30-56MC-1.5	Comb 56 sample, 1.5mm thick MC compatible	60µl	
VS30-75MC-1	Comb 75 sample, 1mm thick MC compatible	25µl	VS30-75MC-1.5	Comb 75 sample, 1.5mm thick MC compatible	37µl	

#### COMBS ALSO AVAILABLE IN OTHER THICKNESSES AND SAMPLE NUMBER, PLEASE INQUIRE www.cleaverscientific.com

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37µI MC = multichannel pipette compatible

# Omnipage Blot Transfer Systems

Electroblotting is a technique to immobilise proteins or nucleic acid separation on a solid membrane support. Samples are then detected using specific antibodies, ligands or nucleic acid probes that bind to individual proteins or nucleic acid sequences. This allows identification, quantification or interaction's study of proteins and nucleic acid from various samples, and makes it a powerful technique in proteomics and genomics.

Cleaver Scientific offers four types of system: **MODULAR ELECTROBLOTTERS** – combine PAGE and transfer techniques within the same tank. These options are shown in the PAGE vertical sections

TANK TRANSFER SYSTEMS – available with either plate or wire electrodes, support efficient, quantitative transfers over a wide molecular weight range. Plate electrode systems are faster through greater field strength; wire electrodes are more economical, consuming less current and generating less heat. SEMI-DRY TRANSFER SYSTEMS – perfect for rapid, high-intensity transfers of mid-range proteins, 10-100kD in size. MICROFILTRATION (DOT AND SLOT BLOTTING) – does not require electrophoresis and is used to determine the working conditions for a new blotting assay, antibody titres and antibody-antigen specificity. Also suitable for nucleic acids

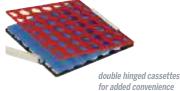
# TankBlot Electroblotters

Designed primarily for wet electroblotting of proteins, these Electroblotters offer a combination of increased capacity with economy saving features. Both units, Mini 10 x 10cm and Maxi 20 x 20cm, have increased capacity over standard systems with up to five gel blot cassettes utilised at any one time. This is especially useful in

high throughput laboratories. A uniform electric field is provided by a high intensity coiled electrode and ensures uniform transfer across the blot surface. The cassette's open architecture ensures the maximum blot area allows direct transfer of current. Its rigid construction ensures contact between the gel and membrane is retained throughout the blot and an even pressure is



maintained. These units are compatible with magnetic stirrers to aid heat dispersal and prevent pH drifts in the buffer due to incomplete buffer mixing. Each system includes a cooling pack to further enhance transfer efficiency by removing excess heat. This also saves on buffer for added economy.



## KEY FEATURES

- Ideal for wet electroblotting of proteins -Western blotting
- Up to five gel blot cassettes utilised at any one time
- Hinged cassettes for added convenience
- Accommodates gel thicknesses from 0.25 up to 3mm

TECHNICAL SPE		TIONS
Unit dimensions (W x D x H)	Mini Maxi	19 x 13 x 19cm 24 x 16 x 26cm
Max. sample capacity	Mini Maxi	5 Blots, 10 x 10cm 5 Blots, 20 x 20cm 20 Blots, 10 x 10cm
Buffer volume	Mini Maxi	Min 1000ml; Max 1500ml Min 4300ml; Max 6000ml

Ordering Information						
EBM10	TankBlot Mini ElectroBlotter, 10 x 10cm System for five cassettes,	SB10C	TankBlot Mini Cassette			
	with tank and lid, 5x cassettes, 12x fibre pads and cooling pack	SB10F	Fibre pads - pk/8			
EBM20	TankBlot Maxi ElectroBlotter, 20 x 20cm System for five cassettes,	SB20C	TankBlot Maxi Cassette			
	with tank and lid, 5x cassettes, 12x fibre pads and cooling pack	SB20F	Fibre pads - pk/6			

# Semi Dry Blotters

These Semi Dry Blotters offer rapid transfer times for DNA, RNA and protein blotting - typically 15 to 30 minutes.

All units can be used for all types of blotting: western, southern and northern via uncomplicated buffer and set up procedures and are compatible with gel thicknesses from 0.25 up to 10mm without the need for additional equipment. Semi Dry Blotting has the added benefit of economic transfers due to very low buffer volumes – typically only a few millilitres of buffer are required per transfer. The electrodes, comprising platinum coated anode and stainless steel cathode, will exhibit practically no



corrosion and so provide many years of trouble free use. Uniform heat dispersion across the blot sandwich ensures stable transfer times and no heat induced sample loss or transfer distortions.

# Dot and Slot

Dot Blot and Slot Blot microfiltration manifolds are designed for DNA and RNA filter blot hybridisations and immunological (Ag/Ab) screening applications.

Machined from high density acrylic, their precision lapped mating surfaces and leak proof gasket ensures uniform filter contact, preventing lateral transfer of samples- smudging – by ensuring that a complete vacuum is formed. A permanent filter template is provided with each manifold to simplify the cutting of filters to the exact size. A vacuum of approximately 600mm Hg (0.8 Bar) is required during sample application. Four configurations are available for 24 & 48 for slots and 48 & 96 wells for dots in the configuration of standard microplates. Each well is alpha-numerically grid referenced for easy identification.



## KEY FEATURES

- Rapid transfer times
- Western, Southern and Northern Blots
- Economic Transfers due to very low buffer volumes
- Screw down lid accommodates gels from 0.25 up to 10mm
- Uniform heat dispersion

## KEY FEATURES

- Low cost
- Easy assembly
- Alpha-numeric sample identification
- Four sample configurations





D48	D96	S24	S48	
3 x 16	8 x 12	2 x 12	3 x 16	
6mm diameter 12mm deep	6mm diameter 12mm deep	6 x 0.5mm 12mm deep	6 x 0.5mm	
Vacuum required 600mg Hg 0.8 BAR with cold trap				
6x9.5x10cm	6x10.5x14cm	6x7.4x8.3cm	6x9.5x10cm	
12.1 x 4.4cm	11 x 7.4cm	12.1 x 4.4cm	12.1 x 4.4cm	
	3 x 16 6mm diameter 12mm deep 6x9.5x10cm	3 x 16         8 x 12           6mm diameter 12mm deep         6mm diameter 12mm deep           600mg Hg 0.8 B           6x9.5x10cm         6x10.5x14cm	3 x 16     8 x 12     2 x 12       6mm diameter 12mm deep     6mm diameter 12mm deep     6 x 0.5mm 12mm deep       600mg Hg 0.8 BAR with cold tra       6x9.5x10cm     6x10.5x14cm     6x7.4x8.3cm	

Ordering Information					
SEMI DRY BLOTTERS					
SD10	Semi Dry Mini, 10 x 10cm System	SD20	Semi Dry Midi, 20 x 20cm System		
DOT & SLOT BLOTTERS					
CSL-D48	48-well Dot Blot Manifold, 3 x 16 array	CSL-S24	24-well Slot Blot Manifold, 2 x 12 array		
CSL-D96	96-well Dot Blot Manifold, 8 x 12 array	CSL-S48	48-well Slot Blot Manifold, 3 x 16 array		

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