

VERTICAL GEL SYSTEMS

THE OMNIPAGE RANGE AND WAVE MAXI – KEY FEATURES

The omniPAGE mini, mini wide and new V520WAVE systems have been designed by scientists with the laboratory scientist in mind. Each system comprises a modular tank design with optional dedicated inserts available for PAGE, blotting and capillary gel isoelectric focusing (IEF), potentially allowing the user to perform up to three techniques in a day.

TANK AND LID DESIGN	A photograph of the omniPAGE mini tank and lid. The tank is purple with red electrodes and a black lid. The lid has a handle and a small circular window.	High quality injection moulded construction and durable leak-proof design for complete safety and longevity. Corrosion-resistant, 99.99% pure platinum electrodes.
COMBS AND SPACERS	A photograph of several combs and spacers of different colors (white, black, red, blue) and sizes.	Electrical safety – lid removal immediately disconnects power to the running insert and lower buffer chamber to allow entirely safe access to the gel.
CASTING AND RUNNING	A photograph of the omniPAGE MINI system during casting and running.	Combs and spacers are injection moulded for consistency and colour-coded: <ul style="list-style-type: none">• White - 1mm supplied as standard• Black - 0.75mm for tightly resolved bands• Red 1.5mm to maximise sample volume• Blue - 2mm to maximise sample volume Black and white combs recommended for high resolution publication quality data; red and blue to scale-up volumes for preparatory techniques.
OMNIPAGE MINI	A photograph of the omniPAGE MINI system.	Dual purpose PAGE inserts eliminate time-consuming transfer of glass plates between separate casting and running modules.
WAVE	A photograph of the WAVE system.	Resting slots allow gel clamps to sit conveniently out of the way for hindrance-free loading of gel cassettes. Sliding gel-clamps available in two thicknesses to accommodate single- and double-gel cassettes.
2-D AND BLOTTING OPTIONS	A photograph of various 2-D and blotting components.	(Available as standalone add-ons or as part of fully integrated electrophoresis systems for multiple electrophoresis techniques – e.g. CV510/BS1 PAGE & blotting, CV510/2DS IEF & PAGE, CV510/CE PAGE, blotting))
ACCESSORIES	A photograph of various accessories including a power supply, cooling pack, and glass plates.	Modular blotting inserts for omniPAGE MINI, MINI WIDE and WAVE systems use the tank and lid of the corresponding PAGE system to perform fast, high-quality blotting of a maximum 4 gels high-intensity plate electrode option available for the omniPAGE MINI and WAVE. Capillary tube gel liners utilise the same tank and lid of corresponding PAGE system for reproducible 2-D electrophoresis isoelectric focusing (IEF) of up to 10 capillary tube gels may be completed in as little as 3.5 hours. Optional IFC converter kits modify PAGE gels to accommodate commercial IFC strips.
POWER SUPPLIES	A photograph of a power supply unit.	Robust scientific grade glass plates; 2mm thick omniPAGE MINI; 4mm thick omniPAGE MINI WIDE and WAVE.
BUFFERS AND MARKERS	A photograph of a buffer and marker unit.	Notched glass plates with bonded spacer option may be used with standard plain glass plate with 1mm bonded spacer and notched glass plates to double gel capacity of the PAGE insert, allowing a maximum of 4 gels to be run (supplied as standard with CV510/IEF-RAD systems).
THERMAL CYCLERS	A photograph of a thermal cycler unit.	Cool packs – simple to use cooling pack systems ensure enhanced resolution without costly and time-consuming additional equipment. Simply pre-chill in a freezer and place within the gel tank; cool packs also reduce buffer volume.
DOCUMENTATION	A photograph of a documentation unit.	Power cables with 4mm connectors compatible with most modern low-to-medium voltage power supplies; CE compliant. High voltage cables with 2mm connectors and adaptors available for complete power supply compatibility.
PAGES 90-109	A photograph of a document page.	Gradient mixers and multicasters available to cast multiple mini vertical gradient gels.

Vertical electrophoresis utilises potent protein and nucleic acid analytical tools for applications within all aspects of life science research, ranging from purity determination to analysis of complex protein lysates. Accordingly, Cleaver Scientific's remit is simple: to provide a comprehensive range of vertical electrophoresis systems – complete with tanks, inserts and reagents – to fulfil a variety of applications and techniques in different gel sizes and throughputs.

SELECTION GUIDE 48-49
OMNIPAGE MINI 50-51

OCTI- PAGE 52
OMNIPAGE MINI WIDE 54-55
V520WAVE MAXI VERTICAL 56-57

COMPLETE MODULAR SYSTEMS 58-59
2-D SYSTEMS 60-61

ISOELECTRIC FOCUSING AND SECOND STAGE 2-D ELECTROPHORESIS 62-64
VERTICAL ELECTROPHORESIS PACKAGES 66-67

LARGE FORMAT VERTICAL 68-69
DENATURING GRADIENT GEL ELECTROPHORESIS 70-71

RELATED PRODUCTS

POWER SUPPLIES PAGES 82-89
GEL DOCUMENTATION PAGES 90-109
THERMAL CYCLERS PAGE 123
BUFFERS AND MARKERS PAGE 142



Selection Guide



OMNIPAGE MINI SYSTEM		OCTI PAGE MINI SYSTEM
Advantages	Run 1-4 handcast gels and up to 2 precast gels in mini format Sliding clamp assembly ensures fast set up times and leak-free operation Insert for both gel casting and running eliminating time-consuming transfer of fragile gels Small compact unit offering ultimate economy in buffer and reagent consumption Modular design for rapid turnaround of data, allowing PAGE, 2-D and blotting to be completed within a working day Ideal for discovery projects and evaluation of sample preparation conditions	Run 1-8 handcast gels and up to 4 precast gels Sliding clamp assembly ensures fast set up times and leak-free operation Insert for both gel casting and running eliminating time-consuming transfer of fragile gels Small compact unit offering ultimate economy in buffer and reagent consumption Modular design for rapid turnaround of data, allowing PAGE, 2-D and blotting to be completed within a working day Ideal for discovery projects and evaluation of sample preparation conditions
Compatible Gel Formats	Precast e.g. IDGel™, SERVA, Thermo and Invitrogen	Commercial 10x10cm and 10x8cm (W x H) precast gels: e.g. IDGel™, SERVA, Thermo and Invitrogen
Electrophoresis Systems	Handcast OmniPAGE VS10 glass plates with or without bonded spacers for handcast gels	Handcast OmniPAGE VS10 glass plates with or without bonded spacers for handcast gels
Tetrad Packages	Standard Precast tank, lid and running insert only Tapecast (includes glass plates) CVS10D (Pg 50)	2-gel systems CVS10CPRE (Pg 52)
Combination Package	Precast CVS10PRE-CSV300 (Pg 66) CVS10DSYS-CSV300 (Pg 66) CVS10CBS-CSV300 (Pg 66)	Vertical system and optional power supply combination CVS10CTPAGE-PRENANO500 CVS10CTPAGE-CS300 CVS10CTPAGE-CS300
Active Gel Dimensions (w x h)	8 x 8.5cm	4-gel CVS10TETRAD1 (Pg 66) CVS10TETRAD1CBS (Pg 66) CVS10TETRAD1-CSV300 (Pg 66) CVS10TETRAD1-C3AMP (Pg 66) CVS10TETRAD1CBS-C3AMP (Pg 66)
Available Gel Thicknesses	0.5, 0.75, 1, 1.5 & 2mm	Vertical system and optional power supply combination CVS10CTPAGE1 CVS10CTPAGE1CBS CVS10CTPAGE1-CS300 CVS10CTPAGE1-NANO500 CVS10CTPAGE1CBS-CS3AMP



OMNI PAGE MINI WIDE SYSTEM		NEW VS20WAVE MAXI SYSTEM
Advantages	Mini wide format effectively allows 2 mm gels to be compared within a single gel for gel-to-gel reproducibility Run 1-2 handcast gels; perfect for users with >2 samples to compare and resolve Screw assembly and moveable gel stops prevent gel leakage Even pressure screw system Combine pi (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 Ability to perform three techniques in a day: IEF, PAGE and blotting	Runs 1-4 large format gels at maximum resolution resulting in a rapid set up times Innovative vertical screw-clamp technology exerts uniform pressure along the height of the glass plates, facilitating a leak-free seal, without gel compression and bowing, ensuring even sample migration Optional blotting insert supplied with additional tank and lid for a dedicated 4-gel blotting system; rapid transfer plate electrodes available Detachable cooling core for fast, smile-free electrophoresis Seamless injection moulded construction free of potential leakage-prone glue joints Capacity to run 1-4 18cm capillary tube gels or IPG strips in second dimension; optional 2-D module
Compatible Gel Formats	Handcast	V510W plain and notched glass plates with or without bonded spacers for handcast gels
Electrophoresis Systems	Standard Tapecast (includes glass plates) Handcast (with glass plates and caster) (with extra casting stand and plates to run 2 gels in tank, while casting 2 simultaneously)	V510WD (Pg 55) V510WDSY (Pg 55) V510WDSYS-CU (Pg 55) V510WDSYS (Pg 55) V510WDSYS-CU (Pg 55)
Combination Package	Precast Handcast Handcast with blotting insert	V510WDSYS-CS300 (Pg 67) V510WCBS-CS300 (Pg 67)
Tetrad Packages	Handcast (with blotting option) (with power supply) (with power supply and blotting option) (with high current power supply and blotting option)	4-gel vertical system and optional power supply combination V510TETRAD1 (with blotting option) (with power supply) (with power supply and blotting option) (with high current power supply and blotting option)
Active Gel Dimensions (w x h)	18 x 8cm	18 x 8cm
Available Gel Thicknesses	0.5, 0.75, 1, 1.5 & 2mm	0.5, 0.75, 1, 1.5 & 2mm
Compatible Electroblothing Transfer Systems	OmnipAGE Mini CVS10CBS (PAGE & Blotting, Pg 74); and CVS10CES (PAGE, Blotting & 2-D, Pg 58)	VS20CPDS (PAGE & Blotting, Pg 75)
Integrated modular	SBD10 and EBM10 4- and 5-blot transfer systems (Pg 78)	OmnipAGE Mini Wide VS10WVCS (PAGE & Blotting, Pg 25) and VS10WVCS (PAGE, Blotting & 2-D, Pg 38)
Standalone	SD10 10x10cm and SD20 20x20cm for 1x and 4x blots (Pg 80)	SB20 and EBM20 3- and 5-blot transfer systems (Pg 8)
Wet/Tank Transfer	SD20 20x20cm for 2x blots (Pg 80)	SB10W and EBM10 20x20cm for 1-3 blots (Pg 78)
Semi-dry	SD20 20x20cm for 2x blots (Pg 80)	SD20 20x20cm, SD33 33x45cm, and SD50 20x50cm for 1-3 blots (Pg 80)

ORDERING INFORMATION



OMNIPAGE MINI VERTICAL COMPONENT PARTS

	Code	Description	Sample Volume per well
1. Lid	4.	Plain glass plates with bonded spacers	7. Gel release tool
2. Tank	5.	PAGE insert	8. Mini cool pack
3. Combs	6.	Caster	9. Notched glass plates
V510EXCASTERSYS		External Casting System - Upstand + Base	For further details see the OmniPAGE™ Key Features Section on page 46.
V510EXCAST	10x10cm Casting Base	10 x 10cm Casting Base	
V510PC	10x10cm Plain Glass Plates, 2mm thick (pk/2)	10 x 10cm Plain Glass Plates, 2mm thick (pk/2)	
V510GCS0.75	10x10cm Bonded Spacers (pk/2)	10 x 10cm Bonded Spacers (pk/2)	
V510GCS0.75	10x10cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)	10 x 10cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)	
V510NGS1	10x10cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)	10 x 10cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)	
V510PGS1	10x10cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)	10 x 10cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)	
V510NGS1.5	10x10cm Notched Glass Plates with 1.5mm Bonded Spacers (pk/2)	10 x 10cm Notched Glass Plates with 1.5mm Bonded Spacers (pk/2)	
V510PGS1.5	10x10cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)	10 x 10cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)	
V510NGS2	10x10cm Notched Glass Plates with 2mm Bonded Spacers (pk/2)	10 x 10cm Notched Glass Plates with 2mm Bonded Spacers (pk/2)	
V510PGS2	10x10cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)	10 x 10cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)	
V510DP	Dummy Plate, 10 x 10cm	Dummy Plate, 10 x 10cm	
V510S0.75	10cm Spacers - 0.75mm thick (pk/2)	10cm Spacers - 0.75mm thick (pk/2)	
V510S1	10cm Spacers - 1mm thick (pk/2)	10cm Spacers - 1mm thick (pk/2)	
V510S1.5	10cm Spacers - 1.5mm thick (pk/2)	10cm Spacers - 1.5mm thick (pk/2)	
V510S2	10cm Spacers - 2mm thick (pk/2)	10cm Spacers - 2mm thick (pk/2)	
RPW-0.2	Replacement Platinum Wire - 0.2mm, 50cm	Replacement Platinum Wire - 0.2mm, 50cm	

FEATURES:

High Throughput Capability

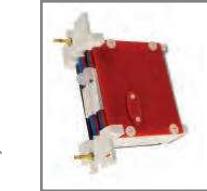
- Double gel capacity and run a maximum of 4 gels within an hour, using a combination of plain and notched glass plates with bonded spacers in between that correspond to your chosen gel thickness

Rapid Casting

- PAGE insert, used for both gel casting and running, eliminates time-consuming transfer of potentially fragile glass plates between separate casting and running modules

Innovative Loading

- Reversible combs also serving as loading indicators aid pipette-well alignment to prevent sample loading errors
- Dedicated Modules for Different Applications**
 - Interchangeable modular inserts for slab gels, 2-D electrophoresis and electroblotting allow the user to switch quickly and easily between electrophoresis techniques, using the same, single universal buffer tank and lid.



The OmniPAGE Mini capillary tube gel insert may be used for IEF or up to 10 capillary tube gels in as little as 3.5 hours (Pg 60)

Check out video at www.cleaverscientific.com for more details..

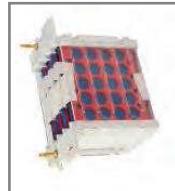
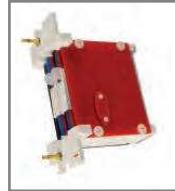
Check out video at www.cleaverscientific.com to see our technical video

OmniPAGE Mini

Cast and run in 4 easy steps
Check out video at www.cleaverscientific.com for more details..

individual research needs, while unique sliding clamp technology within the PAGE insert facilitates fast, intuitive leak-free casting.

Clever Scientific Mini Vertical systems are used primarily for protein but also nucleic acid electrophoresis techniques. By combining both functionality and ease of use, the OmniPAGE CV510 systems set the bench mark for simple, versatile mini gel electrophoresis. Each OmniPAGE electrophoresis system can accommodate up to 4 handcast gels and 2 commercial precast gels to provide complete flexibility for



The OmniPAGE Mini blotting insert is available in traditional wire electrode format or with rapid high-intensity plate electrodes (Pg 79) to transfer up to 4 and 2 gels respectively (Pg 58)

Check out video at www.cleaverscientific.com for more details..

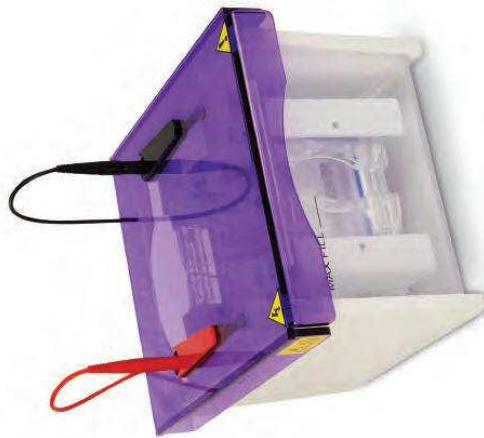
Check out video at www.cleaverscientific.com to see our technical video

TYPICAL APPLICATIONS

Ideal for the separation of proteins in poly acrylamide gels.

• Ideal for discovery projects and evaluation of sample preparation conditions.

• PAGE, 2-D electrophoresis and blotting



FEATURES:

- Compared data from up to eight independent gels run within two PAGE inserts
- Unique sliding clamp technology facilitates rapid interchange between casting and running inserts
- Run eight gels in the tank whilst casting another eight gels simultaneously, to keep the tank in permanent use and maximise throughput
- Run eight Blot eight! - optional blotting insert has double the transfer capacity of the market leader, eliminating bottlenecks between PAGE and blotting
- Suitable for precast gels, and available in a selection of customised packages with optional blotting insert and specialist power supply

Octi-Page

Octi-Page is Cleaver Scientific's solution for high throughput electrophoresis of 10x10cm mini-gels. Based on the 4-gel capacity of the CV510TETRAD system, the Octi-Page takes electrophoresis one step further by allowing eight single gels to be run within two individual CV510DIRM running inserts. By using the standard CV510 mini-vertical plain glass plate with bonded spacer (VS10PG51) and notched glass plate (VS10NG) configuration, the researcher not only benefits from being able to compare data between single gels run within the same tank but is also free of the complications that sometimes occur when opening and processing double-gel cassettes or triple-plate sandwiches.

Two casting bases are supplied to cast up to 8 gels within two CV510DIRM running inserts which are then transferred to the tank for electrophoresis. While electrophoresis is underway, time may be then spent casting another 8 gels using the two casting upstands (CV510EXCAST) in tandem with the casting bases. Once the first electrophoresis run is completed, the CV510 mini-vertical's unique sliding clamp technology allows the newly cast gels to be switched quickly and easily from the casting upstands to the running inserts, keeping the tank permanently in use for maximum throughput.

TYPICAL APPLICATIONS

Polyacrylamide gel electrophoresis (PAGE or SDS-PAGE) and electroblotting; 2-D gel electrophoresis (requires VS10DCI tube gel insert). Rapid screening of new samples, and evaluation of sample preparation conditions



Multiple Minigel Casting

ORDERING INFORMATION

CV510OCTI-PAGE-PRE	Otti-Page Mini-Protein Electrophoresis Package for commercial precast gels, includes 2x CV510DIRM, 1x VS10DP, tank, lid and power cables
CV510OCTI-PAGE-PRE-NANO500	Otti-Page Mini-Protein Electrophoresis Package for commercial precast gels, includes 2x CV510OCTI-PAGE-PRE and nanoPAC-500 power supply
CV510OCTI-PAGE1	Otti-Page Mini-Protein Electrophoresis Package for 1mm self-cast gels, includes: 2x CV510DIRM, 1x VS10DP, 4x VS10-2x1, 4x VS10NG, 4x VS10NG51, 2x CV510DECASTER and 2x VS10DECAST
CV510OCTI-PAGE1 CBS	Otti-Page Mini-Protein Electrophoresis Package for 1mm self-cast gels with interchangeable 1-blot insert, includes: CV510OCTI-PAGE1 plus VS10IBI blotting insert
CV510OCTI-PAGE1 NANOG500	Otti-Page Mini-Protein Electrophoresis Package for 1mm self-cast gels with Mini power supply, includes: CV510OCTI-PAGE1 plus nanoPAC-500 power supply
CV510OCTI-PAGE1-CS300	Otti-Page with standard Midi power supply option, includes: CV510OCTI-PAGE1 plus CS-300V power supply
CV510OCTI-PAGE1 CBS-CS300	Otti-Page with Midi power supply and interchangeable 4-blot module, includes: CV510OCTI-PAGE1 CBS and CS-300V
CV510OCTI-PAGE1-CS3AMP	Otti-Page with programmable high current Maxi power supply option, includes CV510OCTI-PAGE1 and CS3AMP
CV510OCPAGE-1CBS-CS3AMP	Otti-Page with programmable high current Maxi power supply and interchangeable 1-blot module, includes: CV510OCTI-PAGE1 CBS and CS-3AMP

Change 1 for your required spacer and comb thickness i.e. 1.5mm

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

ORDERING INFORMATION	
VS10WD	omniPAGE 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	omniPAGE 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
VS10WDSYS-CU	omniPAGE Mini Wide, 20 x 10cm Dual, 2 sets of Glass Plates, 1mm thick bonded Spacers, 2 x 24 sample, 1mm thick combs including caster, External casting Upstand
VS10WEXCASTER	VS10W External Casting Upstand - No Casting Base
VS20DCAST	20 x 10cm Casting Base
VS20DCASTM	Replacement Silicone Mat for 20 x 10cm Casting Base
V510WDIRM	Inner Running Module
V520-x-LG	Loading guides for omniPAGE mini combs, x = comb well number
V510WNG	20 x 10cm Notched Glass Plates 4mm thick (pk/2)
V510WPG	20 x 10cm Plain Glass Plates 4mm thick (pk/2)
VS10VNGS075	20 x 10cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2)
VS10WPGS075	20 x 10cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)
VS10WNGS1	20 x 10cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)
VS10WPGS1	20 x 10cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)
VS10WPGS1.5	20 x 10cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)
VS10WPGS2	20 x 10cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)
VS10WDP	Dummy Plate, 20 x 10cm
RPW-0.2	Replacement Platinum Wire - 0.2mm, 50cm
VS20ICB	Maxi Cooling Pack VS10WEXCASTER



NEW
IMPROVED
WAVE DESIGN
RUNNING
MODULE!

OmniPage mini wide

leak proof gel running. Rapid set up cooling retains resolution in extended separations and also saves on buffer volume without affecting run quality. 4mm thick glass plates reduce breakage and have bonded spacers for added convenience. A wide range of accessories is available allowing many techniques to be performed using the same unit. Prep combs can be used to maximise sample loading and recovery. Accessory electroblotting and tube gel modules are available which use the same outer tank and lid.

FEATURES:

- Offers the capacity of two mini gels on a single gel
- Rapid gel casting and loading
- Optional low or high buffer volumes
- Rapid set up cooling



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

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK OR CALL +44 (0) 1788 565300 FOR MORE INFORMATION

ORDERING INFORMATION		COMB SPECIFICATIONS	
	Description	Code	Sample Volume per well
V\$20WAVE\$YS	V\$20WAVE Maxi 20x20cm Dual with Glass Plates with bonded 1mm thick spacers, 2x 24 sample combs, cooling coil, dummy plate and Casting Base	V\$20-1-0.75	Comb 1 Prep, 1 Marker, 0.75mm thick
V\$20WAVE\$YS-CU	V\$20WAVE Maxi 20x20cm Dual, 2 sets of Glass Plates, 1mm thick bonded Spacers, 2x 24 sample combs, cooling coil, dummy plate, includes castor and External casting upstand	V\$20-5-0.75	Comb 5 Sample, 0.75mm thick
V\$20WAVE-EC	V\$20WAVE External Casting Stand - No Casting Base	V\$20-10-0.75	Comb 10 Sample, 0.75mm thick
V\$20CAST	20 x 20cm Dual Casting Base	V\$20-18MC-0.75	Comb 18 Sample MC, 0.75mm thick
V\$20DCASTM	Replacement Silicone Mat for 20 x 20cm Casting Base	V\$20-24-0.75	Comb 24 Sample, 0.75mm thick
V\$20WAVEDURM	PAGE insert	V\$20-30-0.75	Comb 30 Sample, 0.75mm thick
V\$20WAVE-CC	Detachable Cooling Coil	V\$20-36MC-0.75	Comb 36 Sample MC, 0.75mm thick
V\$20-x-LG	Loading guides for omniPAGE maxi combs, x = comb well number	V\$20-48-0.75	Comb 48 Sample, 0.75mm thick
V\$20NG	20 x 20cm Notched Glass Plates 4mm thick (pk/2)	V\$20-1-1	Comb 1 Prep, 1 Marker, 1mm thick
V\$20PG	20 x 20cm Plain Glass Plates 4mm thick (pk/2)	V\$20-5-1	Comb 5 Sample, 1mm thick
V\$20NGS0-75	20 x 20cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2)	V\$20-10-1	Comb 10 Sample, 1mm thick
V\$20PGS0-75	20 x 20cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)	V\$20-18MC-1	Comb 18 Sample MC, 1mm thick
V\$20NGS1	20 x 20cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)	V\$20-24-1	Comb 24 Sample, 1mm thick
V\$20PGS1	20 x 20cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)	V\$20-30-1	Comb 30 Sample, 1mm thick
V\$20PGS1.5	20 x 20cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)	V\$20-36MC-1	Comb 36 Sample MC, 1mm thick
V\$20PGS2	20 x 20cm Plain Glass Plates with 2mm Bonded Spacers (pk/2)	V\$20-48-1	Comb 48 Sample, 1mm thick
V\$20DP	Dummy Plate, 20 x 20cm	V\$20-1-1.5	Comb 1 Prep, 1 Marker, 1.5mm thick
V\$20S0-75	20cm Spacers - 0.75mm (pk/2)	V\$20-5-1.5	Comb 5 Sample, 1.5mm thick
V\$20S1	20cm Spacers - 1mm thick (pk/2)	V\$20-10-1.5	Comb 10 Sample, 1.5mm thick
V\$20S1.5	20cm Spacers - 1.5mm thick (pk/2)	V\$20-18MC-1.5	Comb 18 Sample MC, 1.5mm thick
V\$20S2	20cm Spacers - 2mm thick (pk/2)	V\$20-24-1.5	Comb 24 Sample, 1.5mm thick
V\$20WAVE-IEFKIT	IEF Conversion for 18cm IEF strips and tube gels, includes 1 set of plain glass plates with bonded spacers, 0.6x20cm (WxH), and 2x-D combs with one 1.5mm marker lane and one 18cm preparatory well	V\$20-30-1.5	Comb 30 Sample, 1.5mm thick
RPW-02100	Replacement Platinum Wire - 20mm, 100cm	V\$20-36MC-1.5	Comb 36 Sample MC, 1.5mm thick
MC=multichannel pipette compatible		V\$20-48-1.5	Comb 48 Sample, 1.5mm thick
SPECIFICATIONS		V\$20-1-2	Comb 1 Prep, 1 Marker, 2mm thick
Number of gels	Total Volume inner Buffer Chamber	V\$20-5-2	Comb 5 Sample, 2mm thick
Handcast gels	Total buffer Volume	V\$20-10-2	Comb 10 Sample, 2mm thick
Total buffer volume for 4 gels		V\$20-18MC-2	Comb 18 Sample MC, 2mm thick
Plate dimensions (w x h x t)	Standard	V\$20-24-2	Comb 24 Sample, 2mm thick
Dimensions (w x h x t)	2x20cm	V\$20-30-2	Comb 30 Sample, 2mm thick
Dimensions (w x h x t)	Using V\$20 glass plates and combs	V\$20-36MC-2	Comb 36 Sample MC, 2mm thick
Dimensions (w x h x t)	5.3L	V\$20-48-2	Comb 48 Sample, 2mm thick
Plate dimensions (w x h x t)	20x20x0.4cm	Standard run time for SDS-PAGE Without Cooling	4.5 hours
Dimensions (w x h x t)		With Cooling	3.4 hours
Dimensions (w x h x t)	Standard	Recommended power supplies	EV233 for IEF (Pkg 89); C5-500V for PAGE (Pkg 88); C5-3AMP for blotting (Pkg 88)
Dimensions (w x h x t)	0.6x20cm	Unit Dimensions (w x d x h)	30x18x27cm 2.5kg
Dimensions (w x h x t)		Weight	

COMB SPECIFICATIONS

FASTER SET UP:

- Fewer Screws – novel vertical screw-clamp technology reduces the number of screws required for set up compared to traditional large-format systems, dramatically reducing assembly time
- No Top Tank Assembly - A built-in inner buffer chamber within the PAGE insert allows set up to be completed without inclusion of a top tank or upper buffer chamber



The VS20WAVE Maxi Vertical Electrophoresis System

design of the PAGE insert aids both handling and set up.

Whatever your requirements are the PAGE can be made to meet them.

Regardless of whether it is running 2 or 4 gels, electroblotting, and IEF using capillary tube gels or IPG strips, all of these techniques may be performed using the same omni-purpose unit while retaining the benefits of large format electrophoresis, such as extended separation distances, greater sample throughput and superior resolution.

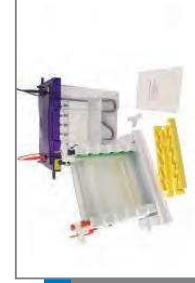
By introducing innovative, new vertical screw-clamp technology within the

Number of gels	Total Volume inner Buffer Chamber	Standard run time for SDS-PAGE Without Cooling	With Cooling
Handcast gels	640ml	4.5 hours	3.4 hours

Plate dimensions (w x h x t)	Standard	Dimensions (w x h x t)	Dimensions (w x h x t)
2x20cm	2x20cm	Using V\$20 glass plates and combs	5.3L
Dimensions (w x h x t)	0.6x20cm	5.3L	5.3L

TYPICAL APPLICATIONS

Large format separations of proteins and nucleic acids





Modular Systems

Mini, Mini Wide and VS20WAVE Complete Modular Systems

The central component is the omniPAGE Mini Vertical unit, Mini Wide Vertical Unit or omniPAGE Maxi Vertical unit. These include a rapid and intuitive casting system, enhanced and easy to set up cooling system and have increased capacity – can run up to four gels per run. In addition, the omniPAGE Tube gel module is capable of resolving up to 10 first dimension gels and the Electroblothing module has a four blot capacity for the Mini system, and a three blot capacity for the Mini Wide and Maxi. The package includes all the necessary accessories for Slab Gel, First Dimension and Electroblothing.

Each of these techniques benefits from rapid set up cooling packs which provide enhanced resolution even during high intensity 2-D electrophoresis and Electroblothing. The omniPAGE range of Modular Vertical Gel Systems allow multiple electrophoresis techniques to be performed in the same unit. These systems include all modules and accessories required for Slab Gel Electrophoresis, 2-D Electrophoresis and Electroblothing.

The Mini system, and a three blot capacity for the

Mini Wide and Maxi. The package includes all the necessary

accessories for Slab Gel, First Dimension and Electroblothing.

Each of these techniques benefits from rapid set up cooling

packs which provide enhanced resolution even during high

intensity 2-D electrophoresis and Electroblothing.

ORDERING INFORMATION



FEATURES:

- Economy of bench space and cost
- Enhanced reproducibility
- Simple to use casting
- Rapid set up cooling

ORDERING INFORMATION

CVS10CES Complete System for Mini Vertical Electrophoresis comprising:

1x omniPAGE Mini Vertical Unit which includes: 2x4mm thick notched glass plates, 2x2mm thick plain glass plates, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack plus: 1x Capillary Electrophoresis Module which includes: internal running module for tube gels, capillary tubes, blanking plugs, 2-D combs and spacers
plus: 1x Electroblothing Module comprising: internal electroblothing module, 4x compression cassettes for gel sizes up to 10x10cm and 6x fibre pads.
Complete Mini Wide (20x10cm) Vertical Electrophoresis Modular System, comprising:
1x omniPAGE Mini Wide Vertical Unit which includes: 2x4mm thick notched glass plates, 2x2mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack plus: 1x Capillary Electrophoresis Module which includes: internal running module for tube gels, capillary tubes, blanking plugs, 2-D combs and spacers
plus: 1x Electroblothing Module comprising: internal electroblothing module, 4x compression cassettes for gel sizes up to 20x10cm and 12x fibre pads.

TECHNICAL SPECIFICATION

IEF tube gel capacity	1-10
PAGE gel capacity	2 as standard; up to 4 maximum
Blotting Capacity	1-4
Buffer Volume 2-D Insert	640mL
Outer Tank Buffer Volume	5.3L
Tube Gel Dimensions	18x0.1cm (length x diameter)
Plate Dimensions (w x h x t)	20x20x0.4cm
2-D Gel Dimensions (w x h)	18.8x17.75cm
Blotting cassette dimensions	20x20cm
Recommended power supply	EV215 (Pg 89)

TYPICAL APPLICATIONS

Mini SDS PAGE protein separations, western blotting and 2-D tube gel electrophoresis.

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK

OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

ORDERING INFORMATION



FEATURES:

- Complete WAVE Maxi System for 2-D electrophoresis and blotting, comprising:



VS20WAVECES

Complete WAVE Maxi Vertical Unit which includes: PAGE insert, 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling coil; plus: 1x WAVE Standard Electroblothing Insert, 4x compression cassettes and 18x fibre pads; and: 1x WAVEDCI Capillary Electrophoresis Module which includes: WAVE Maxi Tube Gel Insert, 100x capillary tubes, 10x blanking ports, and 1x WAVE IEF-KIT; 1 set of plain glass plates with bonded spacers, 0.6x20cm (w x h), and 2x 2-D combs with one 2.5mm marker lane and one 18cm preparatory well.
Complete WAVE Maxi System 2-D electrophoresis and high intensity blotting, comprising:

The VS20WAVE complete electrophoresis system provides a fully integrated solution using one universal gel tank and lid for vertical PAGE, tube gel IEF and electroblotting.

- Interchangeable modular inserts allow users to combine vertical PAGE, tube gel IEF and electroblotting, high-resolution system
- Cooling supplied for temperature-sensitive separations and samples
- High-intensity blotting system available for rapid transfers

TECHNICAL SPECIFICATION

Unit dimensions (w x d x h)	Mini 19 x 13 x 15cm Mini Wide 26 x 16 x 16cm Max 26 x 16 x 28cm
Max. sample, Mini Capacity	Slab 80 samples, 20 samples / gel Tube - 10 tubes; Blot - 4 blots
Max. sample, Mini Wide Capacity	Slab 192 samples, 48 samples / gel Tube - 10 tubes; Blot - 4 blots
Max. sample, Maxi Capacity	Slab 192 samples, 48 samples / gel Tube - 10 tubes; Blot - 4 blots
Buffer volume	Mini: Min 250ml; Max 1200ml; Max 2800ml Maxi: Min 1200ml; Max 5600ml

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK

OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION



ORDERING INFORMATION

CVS10C2DS Complete Mini 2-D System comprising:

1x omniPAGE Mini Vertical Unit which includes: 2x2mm thick notched glass plates, 2x2mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 12 samples), 1x casting base, silicone mat, cooling pack.
1x Capillary Electrophoresis module which includes: internal running module for tube gels, capillary tubes, blanking plugs, 2x-D combs and spacers.

ORDERING INFORMATION

Tube Gel Units, Inserts and Accessories

V510DC omniPAGE Mini Tube Gel Unit, 10x10cm with tank and lid, glass capillary tubes, blanking ports & cooling pack
V510DCI omniPAGE Mini Tube Gel Insert - includes glass tubes and blanking ports
V510VDC omniPAGE Mini Wide Tube Gel Unit, 20x10cm with tank and lid, glass capillary tubes, blanking ports & cooling pack
V510VDCI omniPAGE Mini Wide Tube Gel Insert - includes glass tubes and blanking ports
MCT10 Mini Capillary Tubes, pk/100
V520DCI omniPAGE Maxi Tube Gel Insert - includes glass tubes and blanking ports
MCT20 Maxi Capillary Tubes, pk/100
MCPB Mini and Maxi Capillary Blanking ports
MCT101.5 Mini Capillary Tubes, 1.5mm, pk/100
MCT201.5 Maxi Capillary Tubes, 1.5mm, pk/100

The VS20WAVE 2D Tube Gel System

ORDERING INFORMATION

VS20WAVE2DS Complete VS20WAVE 2-D System comprising:

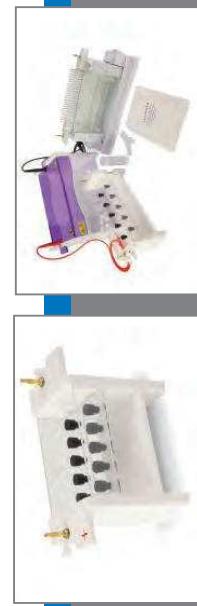
1x WAVE Maxi Vertical Unit which includes: PAGE insert, 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack; plus, 1x WAVE/CL Capillary Electrophoresis Module which includes: WAVE Maxi tube Gel Insert, 100x capillary tubes, 10x blanking ports, and 1x WAVE IEF-KIT; 1 set of plain glass plates with bonded shapers, 0.6x20cm (w x h); and 2x 2-D combs with one 3.5mm marker lane and one 18cm preparatory well
VS20WAVE/DCI WAVE Maxi Tube Gel Insert - includes glass tubes and blanking ports, plus WAVEIEF-KIT
VS20WAVE-IEFKIT IEF Conversion Kit for 18cm IPG strips and tube gels.
includes: 1 set of plain glass plates with bonded spacers, 0.6x20cm (w x h); and 2x 2-D combs with one 3.5mm marker lane and one 18cm preparatory well

TECHNICAL SPECIFICATIONS

IEF tube gel capacity Number of second-dimension PAGE gels	1-10 2 as standard; up to 4 maximum
Tube Gel Dimensions	18x0.1cm (length x diameter)
Plate Dimensions (w x h x t)	20x20x0.4cm
2-D Gel Dimensions (w x h)	18.8x17.5cm
Running conditions for IEF with cooling Recommended power supply for IEF	Up to 20 hours, 800V maximum EV215 (Pg 89)

TYPICAL APPLICATIONS

Full evaluation of protein samples.



omniPAGE 2D Systems

Mini, Mini Wide and Wave Complete 2-D Systems

The omniPAGE 2-D Systems include both modules required for Slab Gel and First Dimension Electrophoresis and accessories, to provide a complete Mini, Mini Wide or Wave 2-D system. The Tube Gel Module includes a rapid release gasket for easy tube extraction. Focusing can be accomplished in as little as three hours in the Mini Unit. Disposable capillary tubes are included for added convenience, plus 2-D combs and spacers which are colour coded according to thickness for easy identification.

FEATURES:

- Rapid set-up electrofocusing
- 10 tube capacity
- Extended accessory range
- Enhanced cooling features
- Rapid set-up electrofocusing
- 10 tube capacity
- Extended accessory range
- Enhanced cooling features
- Rapid set-up electrofocusing
- 10 tube capacity
- Extended accessory range
- Enhanced cooling features

ORDERING INFORMATION		TYPICAL RUNNING CONDITIONS	
CSL-IEF	Flatbed IEF system for IPG strips and gels, with focusing and rehydration trays	7cm IPG Strip	
CSL-CHILLER	Chiller for electrophoresis systems	IEF Step	1 2 3 4 5 6
CSL-IEF-KIT	1-D Combination Package, includes CSL-IEF, CSL-CHILLER and EV233	Voltage (V)	150 300 600 1500 3000 300
CSL-IEFDOS	Replacement positive electrode	Time (h)	0.5 0.5 0.5 2.5 <20
CSL-IEFNEG	Replacement negative electrode	Volt-hours	75 150 300 750 7500 -
CSL-IEFPLT	Replacement glass platform	18cm IPG Strip	
EV233	Consort 3000V, 300mA, 300W power supply	IEF Step	1 2 3 4 5
CSL-IEFFRME	Replacement electrode frame	Voltage (V)	300 600 1500 3000 300
CSL-RHDTRAY	Rehydration Tray and lid	Time (h)	0.5 1 1 12 <20
CSL-FOCUSTRAY	Focusing Tray	Volt-hours	150 600 1500 36000 -
CSL-FTELEPOS	Focusing Tray Adjustable Electrode Positive	Focusing Tray Adjustable Electrode Negative	
CSL-FTELECNEG	Focusing Tray	Focusing Tray Adjustable Electrode Negative	



Isoelectric Focusing

- facilitates effective heat dissipation and homogenous thermal control, particularly during high voltage IEF techniques
- An optional, but recommended, Cleaver Scientific recirculating chiller (Pg 130) connects quickly and easily to the cooling plate via snap-lock connectors to maintain optimal operating temperatures for IPG strips (20°C) and precast gels (4°C)
- Rehydration tray allows convenient transfer of IPG strips to the focusing tray without time-consuming removal of residual rehydration buffer also enables focusing tray to remain permanently in use for IEF to maximise throughput, and provides useful storage at 20°C for focused strips before second-dimension runs
- Electrode frame clips directly on to the cooling plate and includes adjustable electrodes to run horizontal precast IEF and PAGE gels

FEATURES:

- For IPG strips and IEF gels
- Large cooling platform area
- 'Pick-and-Place' adjustable electrodes
- Focusing tray for a maximum twelve IPG strips



TRAY SPECIFICATIONS

CSL-IEF TECHNICAL SPECIFICATIONS			
Max. commercial strip length accommodated	25.3cm	25.3cm	25.3cm
Electrode Distance	6.5cm	10.2cm	17.1cm
Maximum Strip Length Accommodated	25.3cm	25.3cm	25.3cm
Cleaver Scientific IPG Strip Length	7cm	n/a*	18cm
REHYDRATION TRAY			
Maximum Strip Length Accommodated	24cm	24cm	24cm
Operating Volume for Strip Rehydration	3.5ml	6ml	8.0ml
Regulatory certification	CE, EN61010		

*11cm strips available from other suppliers



TYPICAL APPLICATIONS

1st dimension of 2-D electrophoresis separation of proteins according to their PI



Second stage 2-D

The omniPAGE V330 maxi-plus large format vertical has been designed as a convenient unit for second-dimension PAGE following first-dimension isoelectric focusing using the CSL-IEF.

An active gel width of 26cm easily accommodates IPG strips up to 24cm in length, the longest available commercially, while an extended gel height of 22cm maximises separation distance and resolution of proteins similar in size or isoelectric point (pI). In combination with the CSL-IEF, the V330DSYS provides a complete 2-D electrophoresis system which utilises the advanced features of the omniPAGE range to produce a unit that is both easy to use and consistent in generating reproducible results.

Rapid set-up cooling retains resolution in extended separations and also conserves buffer volume without affecting run quality. A maximum of four 1-mm-thick gels may be resolved per run, using notched glass plates with 1mm bonded spacers; and a comprehensive range of accessories facilitate easy interchange between 2-D and standard vertical electrophoresis techniques. Different types of 2-D comb offer a wide degree of versatility in sample selection and gel set-up.

FEATURES:

- Ideal for second-dimension electrophoresis
- Accepts IPG strips 24cm in length, the longest available commercially
- Rapid set-up cool packs enhance resolution, particularly during extended runs

TECHNICAL SPECIFICATIONS

Unit dimensions (w x h x d)	36x33x18cm
Plate dimensions (w x h)	30x22cm
Gel dimensions (w x h)	28x20cm
Max. sample capacity	300 samples per run; 75 per gel
Buffer volume	1800-3400ml
Comb options	1, 2, 4, 28MC, 56MC, 75
No. of teeth	0, 25, 0, 35, 0, 5, 1, 1, 5, 2
Thicknesses	37µl



ORDERING INFORMATION

VS30D omniPAGE Maxi Plus	30 x 22cm Dual with Glass Plates with bonded 1.5mm spacers, 2 x 28 sample combs, 2 x 2-D combs, cooling pack, dummy plate
VS30DSYS	VS30D with Casting Base omniPAGE VS30 Blot Maxi Insert - includes 3 cassettes and 6 fibre pads.
VS30B1	30 x 22cm Dual Casting Base
VS30CAST	Replacement Silicone Mat for 30 x 22cm Casting Base
VS30DIW	Inner Running Module
VS30IDW	Maxi Cooling Pack
VS30LG	Loading guides for omniPAGE maxi combs, x = comb well number
VS30NC	30 x 22cm Notched Glass Plates 4mm thick (pk/2)
VS30PG	30 x 22cm Plain Glass Plates 4mm thick (pk/2)
VS30NGS0.75	30 x 22cm Notched Glass Plates with 0.75mm Bonded Spacers (pk/2)
VS30PGS0.75	30 x 22cm Plain Glass Plates with 0.75mm Bonded Spacers (pk/2)
VS30NGS1	30 x 22cm Notched Glass Plates with 1mm Bonded Spacers (pk/2)
VS30PGS1	30 x 22cm Plain Glass Plates with 1mm Bonded Spacers (pk/2)
VS30GS1.5	30 x 22cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)
VS30PGS1.5	30 x 22cm Plain Glass Plates with 1.5mm Bonded Spacers (pk/2)
VS30P	Dummy Plate, 30 x 22cm
VS30S0.75	22cm Spacers - 0.75mm (pk/2)
VS30S1	22cm Spacers - 1mm thick (pk/2)
VS30S1.5	22cm Spacers - 1.5mm thick (pk/2)
VS30S2	22cm Spacers - 2mm thick (pk/2)
RPW-0.2100	Replacement Platinum Wire - 0.2mm, 100cm



Gradient Mixers

Ideal for Caeutium, Sucrose and Gel gradients these Gradient Mixers comprise 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.

ORDERING INFORMATION

Code	Description	Sample Volume per well
VS30-1-1	Comb 1 Prep. 1 Marker, 1mm thick	2250µl
VS30-2-1	Comb 2 Sample, 1mm thick	1125µl
VS30-4-1	Comb 4 Sample, 1mm thick MC compatible	550µl
VS30-28MC-1	Comb 28 Sample, 1mm thick MC compatible	80µl
VS30-56MC-1	Comb 56 Sample, 1mm thick MC compatible	40µl
VS30-75-1	Comb 75 Sample, 1mm thick MC compatible	25µl
VS30-1-1.5	Comb 1 Prep. 1 Marker, 1.5mm thick	3375µl
VS30-2-1.5	Comb 2 Sample, 1.5mm thick	1680µl
VS30-4-1.5	Comb 4 Sample, 1.5mm thick	825µl
VS30-28MC-1.5	Comb 28 Sample, 1.5mm thick MC compatible	120µl
VS30-56MC-1.5	Comb 56 Sample, 1.5mm thick MC compatible	60µl
VS30-75-1.5	Comb 75 Sample, 1.5mm thick MC compatible	37µl

TYPICAL APPLICATIONS
Larger gel size. Running IPG strips

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

Vertical Electrophoresis Packages

Whether you require a package to match the market leader or one to address any budget or vertical electrophoresis technique, Cleaver Scientific now offers the ultimate range of Combination Packages that will meet your needs.

ORDERING INFORMATION

	CVS10TETRAD1CBS With interchangeable 4-blot module	CVS10TETRAD1-CS300 With standard midi power supply option
	OmniPAGE TETRAD with interchangeable 4-blot module, includes:	OmniPAGE TETRAD with standard Midi power supply option, includes:
CVS10DSYS-CU	10x10cm mini-vertical unit with casting base and external casting stand, plus 2x 1mm 12-sample combs, 2x plain glass plates with firm spacers and 2x notched plates (Pg 51)	CVS10TETRAD1 OmniPAGE TETRAD Mini-Protein Electrophoresis Package for 1mm self-cast gels
V510-12-1	1 pack of 2x plain sample combs, 1 pack of 2x 12-sample combs and 1 firm spacer	CVS10TETRAD1 4-blot insert with 4 blotting cassettes and 8 fibre pads (Pg 74)
V510NS1	2 packs of 2x notched glass plates	CS-300V 300V/ 700mA, 150W midi power supply (Pg 87)
	For 0.75, 1.5 and 2mm versions use CVS10TETRAD0.75-CS300, CVS10TETRAD1.5-CS300 and CVS10TETRAD2.0-CS300 respectively	For 0.75, 1.5 and 2mm versions use CVS10TETRAD0.75-CS300, CVS10TETRAD1.5-CS300 and CVS10TETRAD2.0-CS300 respectively

	CVS10PRE-CS300 Pre-cast gel mini-vertical package	CVS10DSYS-CS300 Self cast and pre cast mini vertical package	WAVETETRAD1 Standard 4-gel maxi vertical package	WAVETETRAD1-CS500 Single Workstation 4-gel Maxi Vertical package, complete with general purpose or specialist power
CVS10TETRAD1CBS with standard midi power supply option and interchangeable 4-blot module	Pre-cast and hand cast gel mini-vertical electrophoresis package includes:	4-gel electrophoresis package, run 4 gels in the tank and cast another 4 externally includes:	With interchangeable 4-blot running module includes:	4-gel electrophoresis package with general purpose Maxi programmable power supply includes:
CVS10TETRAD-1CBS	OmniPAGE TETRAD Mini-Protein Electrophoresis Package for 1mm self-cast gels with blotting module	VS20N(CS1) 2 sets of plain glass plates with 1mm thick bonded spacers; 2 set of 1mm thick glass plates x 2x 24 sample dummy plates; includes casting coil, dummy plate, includes casting coil and external casting upgrade	VS20N(AVE) Maxi 20 x 20cm Dual	4-gel electrophoresis package
CS-300V	300V/ 700mA, 150W midi power supply (Pg 87)	VS20N(CS1) 24 additional 1mm 24-sample combs	VS20N(CS1) 2x 24 sample combs with 1mm bonded spacers	VS20N(AVE) Standard Electroblothing Module for 4 cassettes (Pg 78)

For 0.75, 1.5 and 2mm versions use CVS10TETRAD0.75-CS300 and CVS10TETRAD1.5-CS300 respectively

ORDERING INFORMATION

	CVS10CBS-CS300 Mini vertical, power supply and blotting package	VS10WDSYS-CS300 Wide mini vertical self cast and blotting package	VS10WCBS Wide mini vertical power supply and blotting package
CVS10CBS	OmniPAGE Mini-Protein system with casting base and blotting insert (Pg 4)	VS10WDSYS omniPAGE Mini Wide Protein system with casting base (Pg 55)	VS10WCBS omniPAGE Mini Wide Protein system with casting base and blotting insert
CS-300V	300V/ 700mA, 150W midi power supply (Pg 87)	CS-300V 300V/ 700mA, 150W midi power supply (Pg 87)	CS-300V 300V/ 700mA, 150W midi power supply (Pg 87)
	For packages with high current power supply, use codes CVS10PRE-CSAMP, CVS10DSYS-CSAMP, CVS10CBS-CSAMP, combs and glass plates with bonded spacers may be changed at order	For 0.75, 1.5 and 2mm versions use CVS10TETRAD0.75-CS300 and CVS10TETRAD1.5-CS300 respectively	For packages with high current power supply, use codes CVS10PRE-CSAMP, CVS10DSYS-CSAMP, CVS10CBS-CSAMP, combs and glass plates with bonded spacers may be changed at order

VISIT WWW.CLEAVERSIENTIFIC.CO.UK OR CALL +44 (0) 1788 565300 FOR MORE INFORMATION

VISIT WWW.CLEAVERSIENTIFIC.CO.UK OR CALL +44 (0) 1788 565300 FOR MORE INFORMATION

ORDERING INFORMATION			COMB SPECIFICATIONS		
	Code	Description	Code	Description	Sample Volume per well
CSQ20		Large Format Vertical, 20cm wide, glass plates, 0.35mm spacers, 48 sample comb	CSQ20-0.25-24	Comb 24 sample, 0.25mm thick, Sharks tooth	7µl
CSQ20-NG		Glass plates, pk/2 Notched	CSQ20-0.25-48	Comb 48 sample, 0.25mm thick, Sharks tooth	3µl
CSQ20-PG		Glass plates, pk/2 Plain	CSQ33-0.25-48	Comb 48 sample, 0.25mm thick, Sharks tooth	7µl
CSQ20-SO-25		Spacer set 0.25mm	CSQ33-0.25-96	Comb 96 sample, 0.25mm thick, Sharks tooth	3µl
CSQ33		Large Format Vertical, 33cm wide, glass plates, 0.35mm spacers, 48 sample comb	CSQ20-0.35-24	Comb 24 sample, 0.35mm thick, Sharks tooth	9µl
CSQ33-NG		Glass plates, pk/2 Notched	CSQ20-0.35-48	Comb 48 sample, 0.35mm thick, Sharks tooth	5µl
CSQ33-PG		Glass plates, pk/2 Plain	CSQ33-0.35-48	Comb 48 sample, 0.35mm thick, Sharks tooth	9µl
CSQ33-SO-25		Spacer set 0.25mm	CSQ20-1-24	Comb 24 sample, 1mm thick, Square tooth	40µl
CSI-FHS*		Fan heater sensor kit for large format vertical units CSQ20 and CSQ33 220V	CSQ33-0.35-96	Comb 96 sample, 0.35mm thick, Sharks tooth	5µl
CSQ20-SO-35		Spacer set 0.35mm	CSQ20-1-48	Comb 48 sample, 1mm thick, Square tooth	20µl
CSQ20-S1		Spacer set 1mm	CSQ33-1-48	Comb 48 sample, 1mm thick, Square tooth	35µl
CSQ20-S1.5		Spacer set 1.5mm	CSQ33-1-80	Comb 80 sample, 1mm thick, Square tooth	20µl
CSQ33-SO-35		Spacer set 0.35mm	CSQ20-1.5-24	Comb 24 sample, 1.5mm thick, Square tooth	60µl
CSQ33-S1		Spacer set 1mm	CSQ20-1.5-48	Comb 48 sample, 1.5mm thick, Square tooth	30µl
CSQ33-S1.5		Spacer set 1.5mm	CSQ33-1.5-48	Comb 48 sample, 1.5mm thick, Square tooth	50µl
CSQ-FC		Flexi Caster for csq20 & csq33	CSQ33-1.5-80	Comb 80 sample, 1.5mm thick, Square tooth	30µl
CSL-MGR		Mini Glass Plate Rack for 20x 2mm Plates			
CSL-LGR		Large Glass Plate Rack for 10x 5mm Plates			

*100 add \$ to stock code when ordering

TECHNICAL SPECIFICATIONS

Plate dimensions (w x l)	CSQ20 20 x 50cm CSQ33 33 x 45cm
Max sample capacity	CSQ20 48 samples CSQ33 96 samples
Buffer Volume	CSQ20 Min 500ml, Max 1000ml CSQ33 Min 800ml, Max 2000ml
Combs available:	No. of teeth Thicknesses 24, 48, 80, 96 0.25, 0.35, 1, 1.5mm

Plate Racks

These sturdy racks are designed for safe drying and storage of glass plates. The small rack can hold up to 20x 2mm thick plates while the larger rack can accommodate up to 10x 5mm thick glass plates.

A wide range of interchangeable comb and spacer options allows a large number of techniques to be easily accomplished including: DNA Sequencing, 2-D analysis, Micro-satellite analysis, DNA fingerprinting, Gel shift assays, Single-Strand Conformation Polymorphism (SSCP), Heteroduplex and Oligonucleotide analysis.

Special buffer chambers allow either low buffer volumes to be used for economy or high buffer volumes to be used for extended runs.

Resolution is enhanced by using an aluminum heat sink plate, essential for even sample migration. Added convenience is provided by a removable lower buffer tank and upper buffer drainage tap.

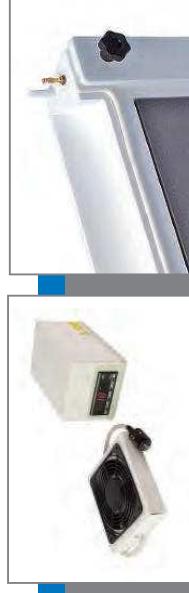
Large Format Vertical



Ideal for a variety of large format vertical gel applications, these units offer advanced features for enhancing gel resolution and ease of use, essential when handling gels of this size. Each unit contains ultra soft silicone seals for easy plate sealing and trouble free runs, even over extended run times.



A wide range of interchangeable comb and spacer options allows a large number of techniques to be easily accomplished including: DNA Sequencing, 2-D analysis, Micro-satellite analysis, DNA fingerprinting, Gel shift assays, Single-Strand Conformation Polymorphism (SSCP), Heteroduplex and Oligonucleotide analysis.



TYPICAL APPLICATIONS

DNA Sequencing, 2-D analysis, Micro-satellite analysis, DNA fingerprinting, Gel shift assays, Single-Strand Conformation Polymorphism (SSCP), Heteroduplex and Oligonucleotide analysis

VS20WAVE-DGGE - APPLICATIONS

DGGE

Description	Benefits
i. Determines the denaturing conditions required to identify unknown mutations	i. GM100 gradient mixer and optional MU-D01 peristaltic pump simplify casting of denaturing gradient gels
ii. Works on the principle that increasing denaturing concentrations melt DNA in a domain-specific manner, and the mutation or polymorphism of interest is in the DNA domain with the lowest Tm	ii. New VS20WAVE electrophoresis insert and cam caster for leak-free casting
iii. Requires parallel DGGE – a technique where DNA samples are resolved at uniform temperature in gels containing a formamide and urea denaturant gradient parallel to the direction of electrophoresis	iii. Temperature control unit provides consistent run temperatures between 45–70°C
iv. Results in partial melting of DNA to produce a branched molecule identified by its reduced mobility within the gel	iv. High resolution 20x20cm format

DGGE

Description	Benefits
i. Rapid screening method for multiple samples containing an identified mutation	i. Uses constant denaturant gels cast with new VS20WAVE electrophoresis insert and cam caster for leak-free casting
ii. Requires DGGE beforehand to establish optimal denaturing conditions to identify a specific mutation	ii. Temperature control unit provides constant run temperature during electrophoresis
iii. No denaturant gradient required as multiple samples are screened in a constant denaturation gel	iii. Maximum 96-sample throughput (48 samples per gel)
iv. Increases throughput and alleviates bottleneck	

HA

Description	Benefits
i. Used when it is difficult to detect a homoduplex mutation by DGGE	i. New VS20WAVE electrophoresis insert and cam caster for leak free casting
ii. Requires denaturation and re-annealing of wild-type and mutant DNA mixed together, usually within a PCR reaction	ii. Gradient mixer simplifies DGGE option
iii. Resultant heteroduplexes are less stable and melt at a lower denaturant concentration than wild-type and mutant homoduplex molecules, allowing them to be identified by reduced mobility within the gel	iii. Optional temperature control for reproducibility
iv. Requires parallel DGGE, or may be performed overnight in a TBE gel made from special high-resolution acrylamide	iv. High resolution 20x20cm format

ORDERING INFORMATION

VS20WAVE-DGGE	Complete Denaturing Gradient Gel Electrophoresis System, 20x20cm, includes temperature control unit, cam casting comb, and gradient mixer – 240V AC version
VS20WAVE-DGGE\$	VS20WAVE-DGGE Temperature Control Unit – 240VAC version
VS20WAVE-DGGETC	VS20WAVE-DGGETC – 110VAC version
VS20WAVE-DGGETCS	Gradient Mixer, 100ml (Pg. 29)
GM100	Gradient Mixer, 100ml (Pg. 29)

RECOMMENDED ACCESSORIES

CSL-STIR	CSL Magnetic Stirrer, 19x19cm (Pg. 76)
MU-D01	Single Peristaltic Pump (Pg. 76)
MU-S16	Silicon tube, 1D, 1/8", 25 ft (for peristaltic pump, Pg. 76)
CS-500V	omnipAC Power Supply, 500W, 800ml, 300W (Pg. 61)

VISIT WWW.CLEAVERSIENTIFIC.CO.UK OR CALL +44 (0) 1788 565300 FOR MORE INFORMATION

TYPICAL APPLICATIONS

Detecting mutations in genetics and cancer studies.



Denaturing Gradient Gel Electrophoresis

FEATURES:

- Maximum 96-sample throughput compatible with microplates and thermal cycler blocks
- 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

The VS20WAVEDIIR PAGE Insert and Casting Base

- Thermal cycler blocks after PCR® amplification.
- The VS20WAVE-DGGETC Temperature Controller
 - Combines buffer recirculation with a heat sensor and 1.4kW heating element to facilitate precise temperature control to within ±0.02°C.
- The VS20WAVE-DGGETC are:
 - A built-in inner buffer chamber eliminates the need for heavy top tanks or buffer chambers.
 - Employs innovative vertical screw clamp technology to assemble two vertical gels.
 - Four-screw set up makes casting assembly faster.
- Denaturing Gradient Gel Electrophoresis (DGGE) is an important technique used in the search for mutations and DNA polymorphisms critical in genetic disorders and cancers, and to understand genetic diversity among species.
- Supplied with the VS20WAVE-DGGE are:
 - The GM100 Gradient Mixer
 - Forms efficient gradients by mixing and delivering high- and low-density denaturant solutions.
 - The flat-base design and support handle of the GM100 allows it to be secured to a retort stand and mounted on a magnetic stirring plate (e.g. CSL-STIR, Pg. 124).
 - The mixing chamber accommodates a magnetic stirrer to form a linear gradient.
 - Optional GM100 peristaltic pump recommended.



BLOTTING SYSTEM SELECTION GUIDE

Use the selection guide below to identify the Cleaver Scientific blotting system best suited to your electrophoresis application.

BLOT TRANSFER SYSTEMS OVERVIEW:

Cleaver Scientific offers
four types of system:

- **MODULAR ELECTROBLOTTERS –** combine PAGE and transfer techniques within the same tank (see Pg. 74-75).
- **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 (see Pg. 77).
- **SEMI-DRY TRANSFER SYSTEMS** – perfect for rapid, high-intensity transfers of mid-range proteins, 10-100kD in size (see Pg. 80).
- **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 (see Pg. 81).

		Transfer Parameters			Gel Capacity		
					omniPAGE Gels (WxH) / blotting cassette		
CV510CBS		10x1cm 4 with wire / 2 with plate electrodes	1.2L 8cm wire / 2cm plate	1-2h / <1h Cool pack	CV510 Mini 8x8.5cm	V520 Wave 16x17.5cm	V520 Maxi Plus 26x20cm w = northern n = southern s = southern
VS10WCBS		20x10cm 3	2.8L	6cm 1-2h	2	1	– – w
VS20CBS		20x20cm 4 with wire / 1 with plate electrodes	6.4L 8cm wire / 4cm plate	5-20h / 1-5h Coil	–	–	w
SB10		10x10cm 4 with wire / 2 with plate electrodes	1.2L 8cm	1-2h / <1h Cool pack	1	– – w	w
SB10W		20x10cm 3	2.8L	6cm 1-2h	2	1	– – w
SB20		20x20cm 4 with wire / 1 with plate electrodes	6.4L 8cm wire / 4cm plate	5-20h / 1-5h Coil	4	2	1 – w
EBM10		10x10cm 5	1.5L	12cm 1-2h Cool pack	1	– – w	w
EBM20		20x20cm 5	1.6L	15cm 5-20h As per sandwich thickness	4	2	1 – w
SD10		10x10cm –	5ml	15-30 min –	1	– – w.s.n	w.s.n
SD20		20x10cm –	20ml	15-30 min –	4	2	1 – w.s.n
SD33		33x45cm –	75ml	15-30 min –	20	10	5 2 w.s.n
SD50		20x50cm –	50ml	15-30 min –	13	6	2 1 w.s.n

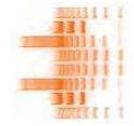
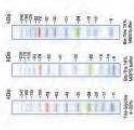
MICROFILTRATION (DOT AND SLOT BLOTTING) SELECTION GUIDE

Cleaver Scientific Microfiltration Manifolds do not require the resolving power of electrophoresis before transfer, with nucleic acid, protein and antibody samples being simply drawn onto a membrane under the power of vacuum.

Blot Parameters	Microfiltration Compatibility / Capacity
Membrane Size Required	Type of Blotting w = western n = northern s = southern
Configuration	96-well
Size of Well in Loading Template	24-well
Vacuum Required	Yes / 2x plates Yes / 1x plate
6mm diameter, 12mm deep	600mg Hg 0.8 BAR with cold trap
Dot Array	–
3x16-well Dot Array	–
CSL-D48	
CSL-D96	
CSL-S24	
CSL-S48	

SELECTION GUIDE	72
OMNIPAGE ELECTROBLOTTING	74-76
TANK SUB ELECTROBLOTTERS	77
OMNIPAGE SUB BLOT HIGH INTENSITY SYSTEMS AND ELECTROBLOTTERS	78-79

RELATED PRODUCTS	
POWER SUPPLIES PAGES 82-89	VACUUMBAND GEL PUMP PAGE 131
PROTEIN MARKERS PAGE 142	BLOTTING MEMBRANES PAGE 144
DOT AND SLOT BLOTTERS	81





omniPAGE Mini Complete Electrophoresis System

ORDERING INFORMATION

CVS10CBS Complete Mini System for electrophoresis and blotting, comprising:

1x Mini Vertical Unit which includes: PAGE insert, 2x2mm thick notched glass plates, 2x2mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 12 samples), 1x casting base, silicone mat, cooling pack; plus 1x Mini Standard Electrophoresis Module which includes: Mini Platinum Wire Blotting Insert, 4x 10x10cm compression cassettes and 16x fibre pads

CVS10CBS-HI Complete Mini System for electrophoresis and high intensity blotting, comprising:

1x Mini Vertical Unit which includes: PAGE insert, 2x2mm thick notched glass plates, 2x2mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 12 samples), 1x casting base, silicone mat, cooling pack; plus 1x Mini Standard Electrophoresis Module which includes: Mini Plate-electrode Blotting Insert, 2x 10x10cm compression cassettes and 8x fibre pads

V510BI 1x Mini Blotting Insert, 4x compression cassettes and 16x fibre pads

V510BL-HI 1x Mini High Intensity Blotting Insert, 2x compression cassettes and 8x fibre pads

TECHNICAL SPECIFICATIONS

Mini

Maximum Gel Size	8x8.5cm (active gel dimensions)
Gel Capacity	4x CVS10 Mini Gels; 2 with plate-electrode insert
Buffer volume	1.2L Max.
Running conditions	35V overnight to 100V high-intensity, <1-2 hours
Recommended power supply	CS-3AMP; CS-300V & CS-500V (Pg. 87-88)



omniPage Mini Wide Complete Electrophoresis and Blotting System

ORDERING INFORMATION

V510WCBS Complete Mini Wide System for electrophoresis and blotting, comprising:

1x Mini Wide Vertical Unit which includes: PAGE insert, 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack; plus 1x Mini Standard Electrophoresis Module which includes: Mini Platinum Wire Blotting Insert, 4x 20x10cm compression cassettes and 16x fibre pads

TECHNICAL SPECIFICATIONS

Mini Wide

Maximum Gel Size	17.5x8.5cm (active)
Gel Capacity	6x Mini, 4x Mini Wide
Buffer Volume	2.8L Max.
Running conditions	35V overnight to 100V high-intensity 1-2 hours
Recommended power supply	CS-3AMP; CS-300V & CS-500V (Pg. 87-88)

VISIT WWW.CLEAVERSIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Cast, Run and Blot up to 4 gels in the one system.

VISIT WWW.CLEAVERSIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

ORDERING INFORMATION	
VS20CBS	Complete WAVE Maxi System for electrophoresis and blotting, comprising: 1x WAVE Maxi Vertical Unit which includes: PAGE Insert, 2x4mm thick notched glass plates, 2x4mm thick plain glass plates with 1mm thick bonded spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack; plus: 1x WAVE Standard Electrophoresis Module which includes: WAVE Maxi Platinum Wire Blotting Insert, 4x compression cassettes and 18x fibre pads
VS20CBS+HI	Complete WAVE Maxi System for high intensity electrophoresis and blotting, comprising: 1x WAVE Maxi Vertical Unit which includes: PAGE Insert, 2x4mm thick notched glass plates, 2x4mm spacers, 1x dummy plate, 2x combs (1mm thick 24 samples), 1x casting base, silicone mat, cooling pack; plus: 1x WAVE High Intensity Electrophoresis Module which includes: WAVE Maxi Plate Electrode Blotting Insert, 1x compression cassettes and 6x fibre pads
VS20BI	WAVE Maxi Platinum Wire Blotting Insert, 4x compression cassettes and 8x fibre pads - standard
VS20BI+HI	WAVE Maxi Plate Electrode Blotting Insert, 1x compression cassette and 6x fibre pads - high-intensity

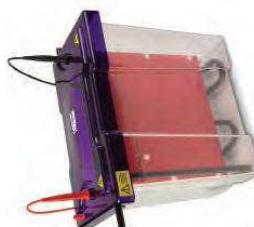


The VS20WAVE Electrophoresis and Blotting System

The VS20WAVE complete electrophoresis system provides all necessary components for performing transfers from vertical slab gels.

- Interchangeable modular inserts combine vertical PAGE with electro-transfer using the same universal tank and lid
- Multi-transfer capability for up to 4 WAVE Maxi gels, 8 omniPAGE Mini Wide and 16 omniPAGE Mini gels
- Complete flexibility with power settings as experimental needs dictate: perform overnight transfer at voltages as low as 35V, and rapid, high-intensity transfers at 200V in 1-2 hours
- Standard insert with platinum wire electrodes 8cm apart for increased capacity, and a high-intensity insert with plate electrodes 4cm apart for transfer rapidity
- Detachable cooling coil, which connects to the laboratory water supply or a recirculating chiller, prevents buffer depletion to allow overnight transfers and fast high-intensity blots, and maintains the low temperatures important for protein stability during native transfers
- Open design, rigid cassettes maximise current transfer and eliminate 'shadow band' formation
- Colour-coded cassettes prevent polarity reversal

TECHNICAL SPECIFICATIONS	
Maximum Gel Size	17.5x18cm (active gel dimensions)
Gel Capacity	Standard Blotting Insert 4x WAVE Maxi Gels High-intensity Blotting Insert 1x WAVE Maxi Gels
Electrode types	Standard Blotting Insert Platinum wire High-intensity Blotting Insert Platinum-coated titanium & stainless steel
Outer Tank Buffer Volume	5.3L working volume to 6.4L max.
Running Conditions	35V overnight to 200V high-intensity 1-2 hours
Recommended power supply	CS-3AMP (300 Volts, 3,000 mAh, 300 Watts) (Pg 58)



Tank Sub Electroblotters

Designed primarily for wet electroblotting of proteins, TankSub 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.

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

ORDERING INFORMATION

Unit dimensions (w x h x d)	Mini	19 x 13 x 19cm
Maxi	24 x 16 x 26cm	
Max. sample, capacity	Mini	5 Blots, 10 x 10cm
Buffer volume	Mini	Min 1000ml, Max 1500ml
	Maxi	Min 4300ml, Max 6000ml

TECHNICAL SPECIFICATIONS

EBM10	Electro Blot Mini, 10 x 10cm System for five cassettes, with tank and lid, 5x cassettes, 2x fibre pads and cooling pack
SB10C	Tank Blot Mini Cassette SB10F Fibre pads - pk/8
EBM20	Electro Blot Maxi, 20 x 20cm System for five cassettes, with tank and lid, 5x cassettes, 2x fibre pads and cooling pack
SB20C	Tank Blot Maxi Cassette SB20F Fibre pads - pk/6

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Combine PAGE and transfer Techniques within the same tank.

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION



omniPAGE Sub Blot System

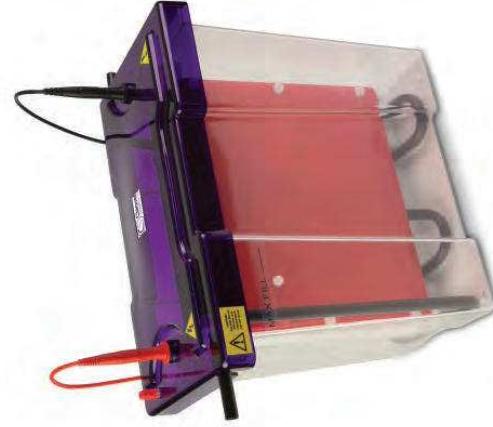
Available in Mini, Mini Wide and Maxi formats, omniPAGE Sub Blot systems are complete stand-alone units for western blotting. Each unit comprises an omniPAGE tank and lid, electrophoresis insert, cassettes and fibre pads. The versatile design of the omniPAGE tank and lid allows the unit to be easily adapted for vertical PAGE or IEF with capillary tube gels, using the relevant optional insert.

FEATURES:

- Multi-transfer capability for up to 4 Maxi gels, 8 Mini Wide and 16 Mini gels in the Maxi System; 4 Mini Wide and 8 Mini gels in the Mini Wide system; and 4 Mini gels in the Mini system
- Complete run-time flexibility from overnight to as short as a couple of hours
- Cool pack for environmentally friendly low-cost cooling during high-intensity transfers
- Open design, rigid cassettes maximise current transfer and eliminate 'shadow band' formation
- Cassettes colour-coded prevent polarity reversal to ensure transfer in the correct orientation

TECHNICAL SPECIFICATIONS

	SB10 Mini	SB10W Mini Wide	SB20 Maxi/WAVE
Max. Gel Size	8x8.5cm	10x8.5cm (active)	16x17.5cm (active)
Max. Blot Size	10x10cm	20x10cm	20x20cm
Gel Capacity	4x Mini	6x Mini, 3x Mini Wide, 12x Mini	16x Mini, 8x Mini Wide & 4x Maxi
Buffer Volume	1.2L Max.	2.6L Max.	6.4L Max.
Running conditions	100V 1-2h	100V 5-20h	100-200V 1-2h
Recommended power supply	CS-3AMP & CS-300V	CS-3AMP & CS-300V & CS-500V	CS-3AMP



Sub Blot Mini and WAVE High Intensity Transfer Systems

The Sub Blot Mini and WAVE high intensity transfer systems combine the cooling capacity of wet submarine blotting units with the speed of semi-dry transfer systems. Both systems utilise plate electrodes to create a higher strength electric field and greater current density than conventional wire-electrode systems. This allows transfer of broad range molecular weight proteins to be achieved typically within an hour in the Sub Blot Mini, and in 1-2 hours using the WAVE Sub Blot System. Features offered by the Sub Blot Mini and WAVE are as follows:

- Plate-electrodes 2cm apart in the Sub Blot Mini facilitate fast transfer of two stacked 8x8.5cm mini gels; and 4cm apart in WAVE Sub Blot system for transfer of one Maxi gel
- Multi-transfer capability in the WAVE also allows transfer arranged side-by-side
- Two cooling options: a cool pack supplied with the Sub Blot Mini for environmentally friendly low-cost cooling; and active cooling in the Sub Blot WAVE by a detachable cooling coil connected to a recirculating chiller (Pg 130)
- Magnetic stirring bars fit conveniently beneath the cooling coil within the WAVE tank to maximise buffer circulation and heat dissipation, while preventing ion gradient formation; both tanks sit comfortably on most stirring plates
- Open design, rigid cassettes maximise gel-to-membrane compression for efficient current transfer; colour-coded to prevent polarity reversal

ORDERING INFORMATION

	SB10 HI	omniPAGE Blot Mini, 10 x 10cm, High Intensity System including tank and lid, 2 cassettes, 8 fibre pads, cooling pack
	VS10BI-HI	omniPAGE Blot Mini Insert - includes 2 cassettes and 8 fibre pads
	SB10C	omniPAGE Blot Mini Cassette
	SB10F	Fibre Pads - pk/8
	SB20-HI	WAVE Sub Blot, 20 x 20cm, High Intensity System including tank and lid, 1 cassettes, 6 fibre pads, cooling coil
	VS20BI	omniPAGE Blot Maxi WAVE Insert - includes 4 cassettes and 16 fibre pads
	SB20C	omniPAGE Blot Maxi Cassette
	SB20F	Fibre Pads - pk/8

TECHNICAL SPECIFICATIONS

	SB10 HI	SB20-HI
Max. Gel Size	10x10cm	20x20cm
Gel Capacity	2x Mini	4x Mini, 2x Mini Wide & 1x Maxi
Buffer Volume	1.3L Max.	7L
Running conditions	100-200V / 1-2h	100-200V / 2-2h
Cooling	Cool Pack	Cooling Coil
Recommended power supply	CS-3AMP	CS-3AMP

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Wet Western Electroblotting

TYPICAL APPLICATIONS
High Speed Wet Western Electroblotting

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION



FEATURES:

- Rapid transfer times
- Western, Southern and Northern Blots
- Economic Transfers due to very low buffer volumes
- Screw down lid – gels from 0.25 up to 10mm thick can be blotted
- Uniform heat dispersion
- Long life electrodes

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. Each unit is compatible with their respective omniPAGE vertical gel system.

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. These Semi-Dry Blotters utilise a screw down lid, which secures the blot sandwich and allows complete control of pressure ensuring even 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. Being translucent, it allows viewing of the blot sandwich to ensure correct positioning and transfer is occurring correctly. Electrode plates are fully separated to prevent arcing or damage.



FEATURES:

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

Dot and Slot Blotters

Four different sample number size and style of Hybridisation Manifold are offered:- two types of dot blotter and two types of slot blotter.

Typical applications include clone screening with DNA / RNA probes in Southern/northern blots and immunological screening with antibodies in western blots.

The units incorporate precision lapped surfaces to ensure uniform blotting membrane contact and a leak proof gasket. These prevent lateral transfer of samples – smudging

- by ensuring that a complete vacuum is formed. Six thumbscrews ensure even and tight sealing for fast sample suck down. Dot blotters are available in 48 and 96 well versions and slot blotters in 24 and 48 well.

ORDERING INFORMATION	
SD10	Semi Dry Mini, 10 x 10cm System
SD20	Semi Dry Maxi, 20 x 20cm System
SD33	Semi Dry Maxi Plus, 33 x 45cm System
SD50	Semi Dry Maxi Long, 20 x 50cm System
SD10-CS3AMP	D10 and CS-3Amp power supply
SD20-CS3AMP	SD20 and CS-3Amp power supply

ORDERING INFORMATION

MODEL	CSL-D48	CSL-D96	CSL-S24	CSL-S48
Configuration	48-well Dot Blot Manifold, 3 x 16 array	96-well Dot Blot Manifold, 8 x 12 array	24-well Slot Blot Manifold, 2 x 12 array	48-well Slot Blot Manifold, 3 x 16 array
Size of well	16 x 16 x 7cm	26 x 26 x 7cm	8 x 16	6mm diameter
	26 x 26 x 7cm	33 x 35 x 7cm	12mm deep	12mm deep
	26 x 36 x 7cm	36 x 36 x 7cm	12mm deep	12mm deep
Max. sample capacity	Mini 1 Blot, 8 x 8.5cm	4 Blots, 8 x 8.5cm, 2 Blots, 16 x 8.5cm
Maxi	1 Blot, 16 x 17.5cm	20 Blots, 8 x 8.5cm, 2 Blots, 26 x 20cm	600mg Hg 0.8 BAR with cold trap	600mg Hg 0.8 BAR with cold trap
Maxi Plus	10 Blots, 16 x 17.5cm, 1 Blot, 33 x 45cm	10 Blots, 16 x 17.5cm	60 x 74 x 140cm	60 x 74 x 140cm
Maxi Plus	5 Blots, 16 x 17.5cm	13 Blots, 8 x 8.5cm, 2 Blots, 26 x 20cm	83cm	83cm
Maxi Long	6 Blots, 16 x 8.5cm, 1 Blot, 20 x 50cm	2 Blots, 16 x 17.5cm	11 x 7.4cm	12.1 x 4.4cm
Buffer volume	Mini 5ml	Unit 100cm	60 x 105 x 100cm	60 x 95 x 100cm
Maxi	20ml	Membranes 12.1 x 4.4cm	11 x 7.4cm	12.1 x 4.4cm
Maxi Plus	75ml			
Maxi Long	50ml			

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Rapid transfer of DNA, RNA or proteins from gels onto membranes. Termid Southern, Northern and Western blotting.

VISIT WWW.CLEAVERSCIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Direct transfer of Nucleic acid or protein samples onto membranes for hybridisation or antibody screenings

OMNIPAC POWER SUPPLY SPECIFICATIONS

	MINI	MIDI CS-300V	MAXI CS-500V	MAXI CS-3AMP
	nanoPAC-300	nanoPAC-500		
Output range	10-300V Volts Power Resolution	10-500V 10-400mA 60W max. 1V / 1mA	2-300V 1-700mA 150W 1V / 1mA	5-500V 1-800mA 300W 1V / 1mA / 1W
Type of output	Constant voltage or constant current		Constant voltage or constant current or constant power	
Automatic crossover	-		✓	✓
Timer	1.999 min. with alarm; Continuous		1.999 min. with alarm; Continuous	Constant mode: 1.9999 min. with alarm; continuous/programmable mode: 1.999 min. with alarm; continuous
Pause/resume function	-		✓	✓
Display	3-digit LED		3-digit LED	2.6" LCD, 2-line
Programmable Methods	-			Up to 30 programmable files, each with 6 steps
Automatic recovery after power failure	-	✓	✓	✓
Safety features	No-load detection; over-voltage, current & temperature protection; maximum power output detection; shrouded plugs and sockets		No-load detection; sudden load change detection; overload detection; ground-leak detection; over-voltage current & temperature protection; maximum power output detection; shrouded plugs and sockets	
Operating conditions	Ambient-40°C; ≤95% humidity		Ambient-40°C; ≤95% humidity	Ambient-40°C; ≤95% humidity
Stackable	-		✓	✓
Number of output jacks	2 sets in parallel		4 sets in parallel	4 sets in parallel
Regulatory conformity	EN-61010-1; CE		EN-61010-1; CE	EN-61010-1; CE
Dual voltage	100-240 VAC		100-240 VAC	100-240 VAC
Construction	Polycarbonate housing with aluminium base		Flame retardant ABS-plate design with aluminium base	
Dimensions (WxDxH)	140x191x84mm		190x305x95mm	190x305x95mm
Weight	1Kg	1Kg	2.5Kg	2.5Kg

POWER SUPPLIES

Whether you require a power supply for routine horizontal DNA agarose gel electrophoresis or techniques as technically demanding as SSCP analysis within a large format vertical, or first dimension IEF using IPG strips, Cleaver Scientific can meet your requirements with its comprehensive range of power supplies. Each power supply benefits from a small footprint area and compact design, while explanatory self-prompting menus facilitate easy set-up. Furthermore, these power supplies adhere to IEC 61010 – one of the world's most stringent electrical safety standards.

[SELECTION GUIDE](#) 84-85

[NANOPAC POWER SUPPLIES](#) 86

[OMNIPAC POWER SUPPLIES](#) 87-88

[CONSORT POWER SUPPLIES](#) 89

RELATED PRODUCTS

[2-D ELECTROPHORESIS](#)
PAGES 63-64



[BLOTTING SYSTEMS](#)
PAGES 72-81



[VERTICAL GEL TANKS](#)
PAGES 48-71



[HORIZONTAL GEL TANKS](#)
PAGES 4-45



Power Supply Selection Guide

ELECTROPHORESIS POWER SUPPLIES

Please use the selection menu below to choose the power supply most suitable for your electrophoresis application. The typical running conditions shown serve as guidelines only.

Technique & Apparatus Format	Typical Running Conditions†					Run Time
	At start		End			
Cell or Quantity (Width x Length x Thickness)	Power (W)	Voltage (V)	Current (mA)	Power (W)	Voltage (V)	Current (mA)
SDS-PAGE, second-dimension 2-D						
V530DSYS	280 x 200 X 1mm, 2 gels	—	100	35 (Constant)	—	350
V520WAVE	160 x 175 X 1mm, 2 gels	—	100	35 (Constant)	—	350
V510MDSYS	160 x 85 X 1mm, 2 gels	—	200	—	200 (Constant)	80
CVS10DSYS, CVS10TETRAD, CVS10TETPRO	80 X 85 X mm, 2-4 gels	—	200	120-240	—	200 (Constant)
IEF, first-dimension 2-D						
Flat-bed e.g. CS1-IEF	3 x 240 x 1mm, max. 12 strips	—	300 (Constant)	3	—	300 (Constant)
Maxi Tube Gel e.g. V5200C, V510C2DS	180 x 1/1.5mm tubes, 10 max. tubes	—	800 (Constant)	4	—	800 (Constant)
Mini Wide TubeGel e.g. V510MDC, V510WCDS	80 X 1/1.5mm tubes	—	700-800 (Constant)	1	—	700-800 (Constant)
DNA Restriction Analysis (Horizontal)						
MSMINIDUO	70 x 100 x 5mm, max.	—	80 (Constant)	40	—	80 (Constant)
MSMIDDUO	100 x 100 x 5mm, max.	—	90 (Constant)	50	—	95 (Constant)
FMM510	100 x 80 x 5mm	—	50 (Constant)	25	—	50 (Constant)
MSCHOICE-TRIO	150 x 150 x 5mm, max.	—	90-150 (Constant)	50-80	—	90-150 (Constant)
MSMAXIDUO	200 x 200 x 5mm, max.	—	100-150 (Constant)	50-80	—	100-150 (Constant)
High Throughput DNA Electrophoresis (Horizontal)						
MSMIDP6	100 x 120 x 5mm	—	—	70 (Constant)	40	—
MSMIDB6ST	100 x 240 x 5mm	—	—	90 (Constant)	50	—
MULTSUB4	80 x 240 x 5mm, max.	—	—	90 (Constant)	50	—
MSCHOICEST	150 x 250 x 5mm, max.	—	—	90-150 (Constant)	50-80	—
MSSCREEN-TRIO	260 x 320 x 5mm, max.	—	—	100-150 (Constant)	50-80	—
Comet Assay, SCCE (Horizontal)						
CSL-COM10	25 x 75mm, 10, 20, 40 & 50 slides respectively	—	—	25V (Constant)	300 max.	—
CSL-COM20	—	—	—	21V (Constant)	450 max.	—
COMPAC-80™	—	—	—	200V (Constant)	7.5	—
Clinical Electrophoresis (Horizontal)						
CSL-CELLAS	25 x 140mm-70 x 170mm Cellgel strips max 250µm thickness or Cellsefka membranes (all types)	—	—	45-55 (Constant)	1500 max.	—
DNA Sequencing, SSCP Analysis & Microsatellite Mapping (Large Format, Vertical)						
CSQ20	160 x 500 x 0.35mm	—	—	45-55 (Constant)	1500	20-30
CSQ33	290 x 410 x 0.35mm	—	—	45-55 (Constant)	1500	20-30
Mutation Detection						
V520-DGGE	160 x 175 x 1mm, 2 gels	—	—	120-150 (Constant)	—	—
Western Blotting						
omniBLT Mini e.g. S810	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250	—
Modular System e.g. CV510CDS	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250/550 Wire/Plate Electrodes	—
Standalone – e.g. EBM10	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250	—
omniBLT Mini Wide e.g. S810W	160 x 85 x 1mm, 3 gels	—	—	100 (Constant)	250	—
Modular System e.g. V510WCBS	160 x 85 x 1mm, 3 gels	—	—	100 (Constant)	250	—
Wave Maxi e.g. V520CBS	160 x 175 x 1mm, 4 gels	—	—	50/100 Wire/Plate Electrodes (Constant)	1600	—
omniBLT Maxi e.g. S820	160 x 175 x 1mm, 3 gels	—	—	50 (Constant)	250	—
Semi-Dry Blotting (Protein / Nucleic Acids)						
SD20 Mini	100 x 100 x 2.5mm, 1 gel;	—	—	75 (Constant)	550	—
SD20 Maxi	200 x 200 x 2.5mm, 1 gel;	—	—	75 (Constant)	1200	—
SD33 Maxi-Plus	330 x 450 x 2.5mm, 1 gel;	—	—	75 (Constant)	2000	—
SD50 Maxi-Long	200 x 500 x 2.5mm, 1 gel; 10x Mini Gels; 2x Maxi Gels	—	—	75 (Constant)	2000	—

* Sizes shown are those most commonly used in the corresponding apparatus. See product manuals for running conditions for additional sizes.
† Constant) the parameter set as a constant value on the power supply. Typical conditions are to serve as guidelines only, and will vary according to the buffer and overall quality of the sample and reagents. Use zXTAE.

Technique & Apparatus Format	Typical Running Conditions†					Run Time
	At start		End			
Gel or Tube Size*, Quantity (Width x Length x Thickness)	Power (W)	Voltage (V)	Current (mA)	Power (W)	Voltage (V)	Current (mA)
High Throughput DNA Electrophoresis (Horizontal)						
MSMIDP6	100 x 120 x 5mm	—	—	70 (Constant)	40	—
MSMIDB6ST	100 x 240 x 5mm	—	—	90 (Constant)	50	—
MULTSUB4	80 x 240 x 5mm, max.	—	—	90 (Constant)	50	—
MSCHOICEST	150 x 250 x 5mm, max.	—	—	90-150 (Constant)	50-80	—
MSSCREEN-TRIO	260 x 320 x 5mm, max.	—	—	100-150 (Constant)	50-80	—
Comet Assay, SCCE (Horizontal)						
CSL-COM10	25 x 75mm, 10, 20, 40 & 50 slides respectively	—	—	25V (Constant)	300 max.	—
CSL-COM20	—	—	—	21V (Constant)	450 max.	—
COMPAC-80™	—	—	—	200V (Constant)	7.5	—
Clinical Electrophoresis (Horizontal)						
CSL-CELLAS	25 x 140mm-70 x 170mm Cellgel strips max 250µm thickness or Cellsefka membranes (all types)	—	—	45-55 (Constant)	1500 max.	—
DNA Sequencing, SSCP Analysis & Microsatellite Mapping (Large Format, Vertical)						
CSQ20	160 x 500 x 0.35mm	—	—	45-55 (Constant)	1500	20-30
CSQ33	290 x 410 x 0.35mm	—	—	45-55 (Constant)	1500	20-30
Mutation Detection						
V520-DGGE	160 x 175 x 1mm, 2 gels	—	—	120-150 (Constant)	—	—
Western Blotting						
omniBLT Mini e.g. S810	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250	—
Modular System e.g. CV510CDS	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250/550 Wire/Plate Electrodes	—
Standalone – e.g. EBM10	80 x 85 x 1mm, 4 gels	—	—	100 (Constant)	250	—
omniBLT Mini Wide e.g. S810W	160 x 85 x 1mm, 3 gels	—	—	100 (Constant)	250	—
Modular System e.g. V510WCBS	160 x 85 x 1mm, 3 gels	—	—	100 (Constant)	250	—
Wave Maxi e.g. V520CBS	160 x 175 x 1mm, 4 gels	—	—	50/100 Wire/Plate Electrodes (Constant)	1600	—
omniBLT Maxi e.g. S820	160 x 175 x 1mm, 3 gels	—	—	50 (Constant)	250	—
Semi-Dry Blotting (Protein / Nucleic Acids)						
SD20 Mini	100 x 100 x 2.5mm, 1 gel;	—	—	75 (Constant)	550	—
SD20 Maxi	200 x 200 x 2.5mm, 1 gel;	—	—	75 (Constant)	1200	—
SD33 Maxi-Plus	330 x 450 x 2.5mm, 1 gel;	—	—	75 (Constant)	2000	—
SD50 Maxi-Long	200 x 500 x 2.5mm, 1 gel; 10x Mini Gels; 2x Maxi Gels	—	—	75 (Constant)	2000	—



nanopAC-300 & 500 Power Supplies

The nanopAC Mini Power supplies are an ultra compact and economic unit ideal for use with DNA (Horizontal) and Protein (Vertical) electrophoresis systems.

With enhanced features, such as a maximum constant voltage up to 300 or 500V and maximum constant current output of 400mA the nanopAC's are capable of running all Cleaver Scientific horizontal multISUB™ systems and vertical omnIPAGE™ mini. The nanopAC-500 is also capable of running the VS10W & VS20WAVE vertical units, as well as horizontal and vertical gel tanks from other manufacturers, These can be set on a continuous run or timed setting up to 999 minutes. The nanopAC's user-friendly interface is easily adjustable in 1V and 1mA increments, making it perfect for separations where precise settings are required. Its ultra compact size and two pairs of parallel power terminals, which can run two electrophoresis units simultaneously, save time and bench space.



FEATURES:

- Highly visible LED display
- 300Volts, 400mAmps, 60 Watts For DNA & Protein
- 500Volts, 400mAmps, 120 Watts For DNA & Protein
- Electrophoresis Enhanced in-built safety features Alarm function
- Easy maintenance and cleaning

OUTPUT SPECIFICATIONS

Order No.	nanopAC-300	nanopAC-500
Output Voltage / Inc.	0-300V / 1V	10 - 500V / 1V
Output Current / Inc.	10 - 400mA / 1mA	
Output Power	60W	120W
Output Type	Constant voltage or constant current	
Control	Microprocessor controller	
Terminal Pairs	2 Pairs	
Timer	1-999 minutes with alarm or continuous	
Safety Device	No load detection; shrouded plugs and sockets	
Unit Dimension (W x L x H)	140 x 191 x 84mm	
Weight	Approx. 1 kg	
Rated Voltage	Universal, 100 - 240V	

ORDERING INFORMATION

nanopAC-300	Mini Power supply, 300V, 400mA, 60W - 100-240VAC
nanopAC-500	Mini Power supply, 500V, 400mA, 120W - 100-240VAC

TYPICAL APPLICATIONS

NanoPAC-300 - Suitable for running all Cleaver Horizontal Gel tanks and the CV510 Mini Vertical NanoPAC-500 - as above but also larger vertical systems such as VS20WAVE.

VISIT WWW.CLEAVERSIENTIFIC.CO.UK

OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION



omniPAC Midi CS-300V

With nearly twice the current and power of the market leader's equivalent unit, at 700mA and 150W, the CS-300V offers a specification comparable to any midi power supply presently available on the market. The CS-300V is perfectly suited to use with all Cleaver Scientific horizontal multISUB™ systems and omnIPAGE™ mini vertical gel units, and may also be adapted for specialist techniques including the Comet Assay, and clinical and high throughput horizontal electrophoresis. Microprocessor control with four sets of power terminals allow simultaneous operation of as many electrophoresis units either at a constant voltage or current setting, while the timer function may be set continuously or up to a maximum 999 minutes when an alarm sounds to signify termination of the run. A user-friendly interface houses a conspicuous 3-digit LED to aid set up, as well as a convenient 'pause/resume' key, a particularly useful feature during extended runs when it is necessary to access the gel tank to monitor buffer levels and sample migration. Given its high specification and remarkable versatility the CS-300V is relatively inexpensive, and benefits from additional features such as:

ORDERING INFORMATION

CS-300V	omniPAC MIDI Power Supply, 300V, 700mA, 150W - 100-240VAC
---------	---

OUTPUT SPECIFICATIONS

Voltage	2-300V
Current	1-700mA
Power	150W max.

- a stackable design;
- rigorous in-built safety mechanisms;
- automatic crossover;
- dual voltage compatibility.

VISIT WWW.CLEAVERSIENTIFIC.CO.UK

OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
General Laboratory power supply ideal for DNA gels and mini protein electrophoresis and blotting.

Consort Power Supplies



All Consort Maxi Series (EV200) power supplies have four output terminals for up to four simultaneous runs. Powerful microprocessor control allows complex programming, while manual mode permits the setting of voltage, current, power and time for routine electrophoretic runs. The parameters may also be changed temporarily without interrupting the run.

Programming – up to 9 different programs, each with 9 steps, can be stored in the non-volatile memory for future recall.

Timer – can be set to automatically terminate the run and sound an alarm when the allocated time or volt hours has elapsed.

Automatic cross-over – each model has constant voltage, constant current and constant power capabilities with automatic cross-over while showing which parameter is kept constant.

Automatic recovery after mains failure – after restoration of power, the instrument will automatically continue the run for the remaining time.

Data Transfer – optional data acquisition/control software for PC is available to visualise and examine the stored run details, store and program the methods, add notes to the run, identify the unit, copy or delete programs in the unit's memory.

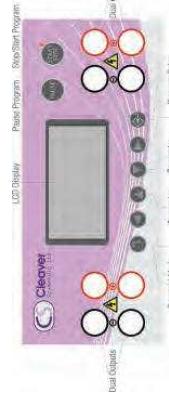
Safety precautions – the AC line is automatically disconnected from the high voltage transformer when a ground leakage path is detected protecting the user from potential shock. Other safety features include protection against any overload including accidental short circuit of the output and voltage increases smoothly.

omniPAC Maxi CS-500V

At 500V, 3000mA, 300W, the omniPAC MAXI CS-3AMP is designed for virtually all high current electrophoresis applications. The CS-3AMP's higher current output capability is perfect for electroblotting units with high-intensity plate electrodes, particularly Cleaver Scientific's omnIBLOT maxi, VS20 WAVE and semi dry blotting systems. Electrotransfers may be performed as timed runs in constant or programmable mode to prevent overheating and buffer depletion, although a run time extendable to a maximum 9999 minutes in constant mode also favours overnight transfers undertaken at constant low current in wire electrode systems. The twinline 2.6" LCD screen allows the experimental parameters, program file and step to be viewed within a single screen during each run, while the CS-3AMP's four power terminals and robust current and power outputs make it suitable for high throughput SDS-PAGE using multiple vertical systems. The CS-3AMP shares the same standard features as the omniPAGE MAXI CS-500V.

ORDERING INFORMATION	
CS-500V	omniPAC MAXI Power Supply, 500V, 800mA, 300W - 100-240VAC
CS-3AMP	omniPAC MAXI Power Supply, 300V, 300mA, 300W - 100-240VAC

OUTPUT SPECIFICATIONS	
CS-500V	CS-3AMP
Voltage	5-500V
Current	5-3000mA
Power	1-800mA 300W max.



VISIT WWW.CLEAVERSIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
More advanced programmable power supplies with increased voltage, power and current

Consort Mini EV245



The Consort Mini EV245 power supply is ideally suited for use with small electrophoresis systems. It occupies little space within the laboratory, is portable and has several other features:-

- Manual Set-up** – voltage, current and power settings can be adjusted during the run.
- Voltage ramp** – this allows a linear voltage gradient for any step to be programmed at any step.
- Automatic recovery after power failure.**
- 3 output terminals.**

The EV245 also benefits from 9 different programs, each with 9 steps; data-logging and data transfer to a PC, and PC remote control.

ORDERING INFORMATION	
EV245	Consort Power Supply, 400 V 300 mA 50 watts
EV231	Consort Power Supply, 300 V 1000 mA 300 watts
EV202	Consort Power Supply, 300 V 2000 mA 300 watts
EV265	Consort Power Supply, 600 V 500 mA 150 watts
EV261	Consort Power Supply, 600 V 1000 mA 300 watts
EV215	Consort Power Supply, 1200 V 500 mA 300 watts
EV233	Consort Power Supply, 3000 V 300 mA 300 watts
EV262	Consort Power Supply, 6000 V 150 mA 300 watts
	For 110V add \$ to stock code.

VISIT WWW.CLEAVERSIENTIFIC.CO.UK
OR CALL +44 (0) 1788 565300
FOR MORE INFORMATION

TYPICAL APPLICATIONS
Suitable for powering different gel tanks depending on size