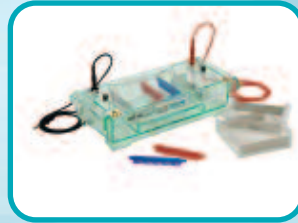


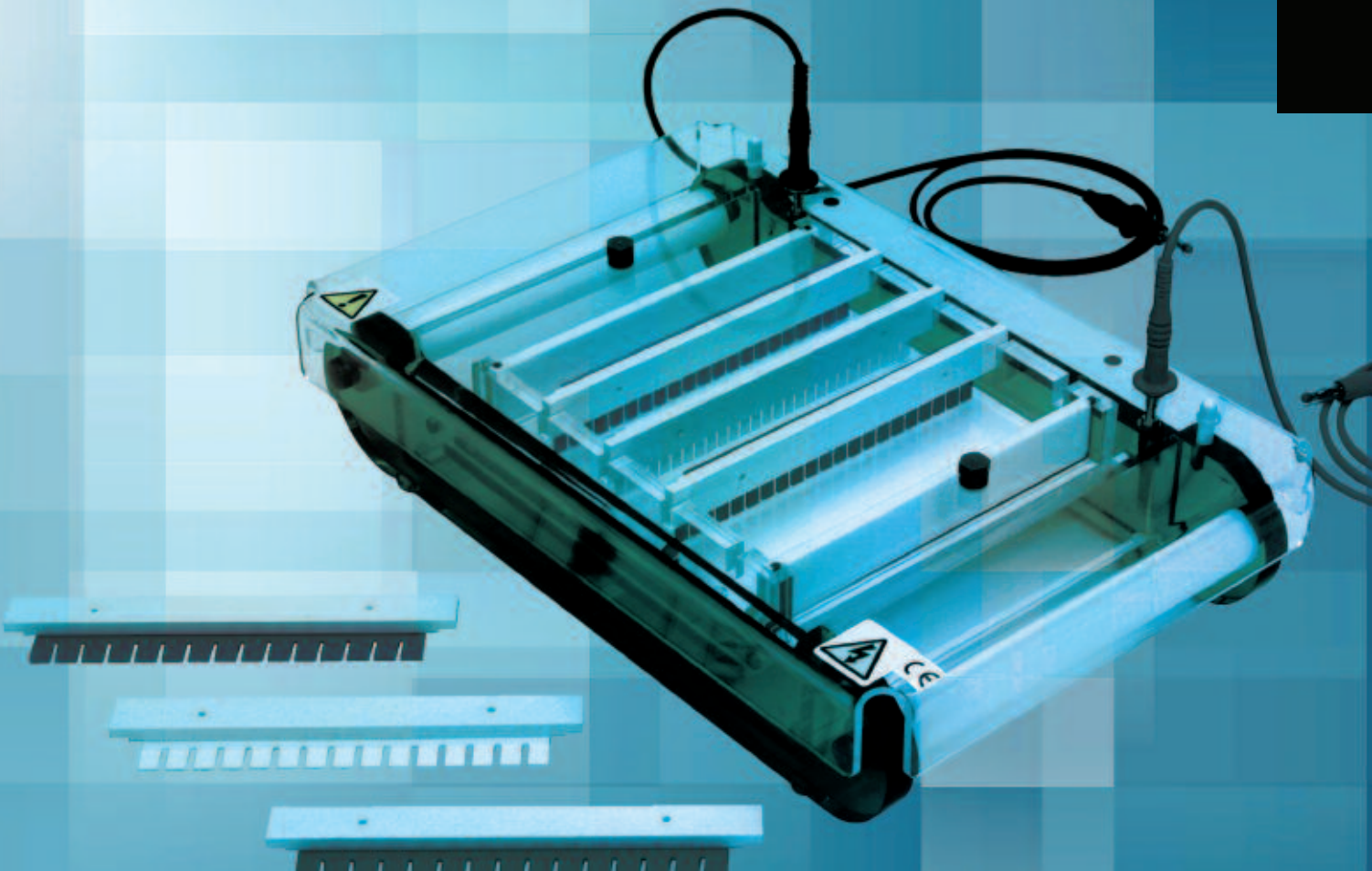
**Severn  
Biotech Ltd.**



# Electrophoresis Equipment Catalogue

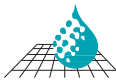
2010/11

[www.severnbiotech.com](http://www.severnbiotech.com)






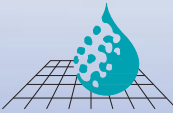
**Other Product Catalogues  
available from  
Severn Biotech**



**Severn  
Biotech Ltd.**



**HEALTH & SAFETY BROCHURE**




## Severn Biotech Ltd.



**BIOMOLECULAR  
SYNTHESIS**

See our new Peptide Catalogue  
on [www.severnbiotech.com](http://www.severnbiotech.com)



## Severn Biotech Ltd.



**Molecular Biology /  
Laboratory Reagents  
Catalogue**

2008/09



[www.severnbiotech.com](http://www.severnbiotech.com)

## Introduction

Severn Biotech Ltd is an independent manufacturer of Bioscience consumable products. The company was founded in October 1989 by Andrew Smart , to manufacture a wealth of Reagent Products and provide Bespoke Services.

As part of our commitment to Electrophoresis, we supply a number of fabricated acrylic Gel Electrophoresis tanks and associated equipment.

## Manufacturing

This catalogue features a number of horizontal and vertical Gel Electrophoresis systems to include accessories, electro-blotter and various fabricated laboratory storage items such as cabinets.

The Electrophoresis equipment is made to exacting standards prerequisite to any research laboratory. All casting units have flexible leak free seals and are made from light weight acrylics which give good visual clarity, high strength and long life to the systems. All products carry the CE mark conforming to the latest European safety regulations. Electrophoresis units are also extensively tested as part of QC procedures.

## Quality Assurance

Severn Biotech is ISO. 9001:2000 registered and QMS externally audited for quality purposes. We employ highly skilled staff to approve all products and services.



### Research and Development

Severn has been fortunate to benefit from Research and Development assistance from the DTi. in the form of a SMART award in 2001 and EU FP6 award in 2007/2008 to investigate the COMET assay.

## Delivery

All goods are delivered by courier for next day delivery unless long distance within the UK does not permit. In such cases two day carriage applies. Large items and orders will be delivered by pallet on a two day service by freight forwarders.

Export items are delivered by road or airfreight depending on location cost and expediency of delivery.

# Ordering Information

## Ordering Information for the United Kingdom

### Telephone Orders and Inquiries

To telephone an order within the UK please call : 01562-825286  
International +44 (0)1562-825286

### Fax

UK : 01562-825284  
International +44 (0)1562-825284

**E-mail:** [info@severnbiotech.com](mailto:info@severnbiotech.com)

### Mail

Severn Biotech Ltd, Unit 2 Park Lane Industrial Estate, Park Lane, Kidderminster, Worcestershire. DY116TJ

### Required Information:

**Please include the following details when placing an order:**

Contact Name  
Delivery Address  
Purchase Order Number  
Telephone Number  
Catalogue Number of each Product  
VAT Status and exemption certificate  
Account Number (if possible)

### Terms of sale

Payment terms are net 30 days  
Pro-forma invoices with first order for new accounts  
New accounts will need to prove trading history prior to opening a credit account.  
Prices are subject to change without notice and exclusive of VAT  
Credit cards Access Visa Amex, Debit, and switch are also accepted transaction fee 2.5%.

### Bulk Pricing

If you would like to enquire about larger quantities, special packaging or custom sizes of any product please contact sales on [info@severnbiotech.com](mailto:info@severnbiotech.com)

### Conditions

Please see our Terms and Conditions of Sale

### Shipping

Please contact customer services for lead times and shipping charges.

### Returns

All returns are at the discretion of Severn Biotech Ltd the "vendor" and require an authorisation letter/communication. There is a 20% restocking fee on all goods returned due to customer ordering errors.

### Warranty

Each product is shipped with a CE Mark stating the conditions and results of product performance tests. Severn Biotech warrants that the product will meet but not exceed these specifications, under normal conditions in a laboratory. Any product not conforming to specification must be notified to Severn Biotech within 48 hours receiving the goods. Our obligation is limited to remedy non conforming product by replacement in the event that the product is deemed to be defective. No other warranties are expressed or implied. Severn Biotech Ltd is not liable for consequential damages.

## Contents

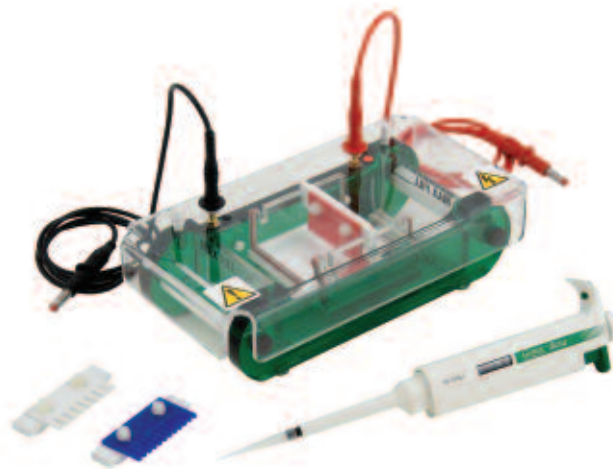
Product	Page
Horizontal Gel Units Complete Systems, Combs, Replacement Parts & Accessories	1-8
Gel Scoops	9
Vertical Gel Units Complete Systems, Combs, Replacement Parts & Accessories	10-13
Gradient Gel Electrophoresis	14
Gradient Mixers	15
Electro Blotters Complete Systems, Replacement Parts & Accessories	16-18
Power Supplies	19
PCR UV Sterilisation Cabinet	20
Safety Trays, Liners & Dispensers	21
General Information	22

# Electrophoresis Equipment

## Horizontal Gel Units

### HU6 Mini Horizontal

The HU6 mini horizontal gel electrophoresis unit is ideal for routine preparatory and analytical electrophoresis techniques.



#### Benefits Include

- **Four casting options** - provide total flexibility in gel casting, either directly within the tank or externally when the tank is in use
- **Combs** - colour-coded and height adjustable - offer complete control over loading volume and well depth to a maximum 32-sample throughput
- **Coloured loading strips** - for easy well detection when loading
- **Short 6cm gel length** - ideal for rapid separations
- **Compact tank** - reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Side handles** - for safe and easy transportation around the laboratory

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
HU6-C1-8	1	8	4.5	2	20
*HU6-C1-12MC	1	12	2.5	2	11
HU6-C1-16	1	16	2.2	1	10
HU6-C1.5-8	1.5	8	4.5	2	30
*HU6-C1.5-12MC	1.5	12	2.5	2	17
HU6-C1.5-16	1.5	16	2.2	1	15
HU6-C2-8	2	8	4.5	2	40
*HU6-C2-12MC	2	12	2.5	2	22
HU6-C2-16	2	16	2.2	1	20

\* Multi-channel pipette compatible

#### Technical Specification

Unit Dimensions (W x L x H)	13 x 24 x 6.5cm
Gel Dimensions (W x L)	6 x 7.5cm
Buffer Volume	325ml
Maximum Sample Capacity	32
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	8 to 16 samples
Comb Slots	2
Migration Distance Between Comb Slots	3.5cm
Recommended Running Voltage	70 to 90V
Power Output	Shrouded, 4mm
Connectors (diameter)	
Recommended Power Supplies	Consort EV222

#### Complete System

Mini horizontal gel unit with removable casting tray and 2 x 1mm thick, 8-sample combs and coloured loading strips

#### Product

HU6

#### Replacement Parts & Accessories

	Product
1 x gel casting tray 6 x 7.5cm	HU6-UT
2 x silicone casting gates	HU6-SCG
1 x silicone gasket, 1 metre	HU-SG
2 x Super-Seals	HU6-SS
6 x coloured loading strips	HU6-CS
1 x external casting unit for 3 gel casting trays	HU6-CU
1 x gel scoop	HU6-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 metre power leads with shrouded 4mm power output connectors	CABLE-4

# Electrophoresis Equipment



## Horizontal Gel Units

### HU13 Midi Horizontal

The HU13 midi horizontal gel electrophoresis unit is ideal for analytical and preparative studies of nucleic acids.

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
HU13-C1-10	1	10	9.5	2.5	40
HU13-C1-12MC	1	12	8	2	35
HU13-C1-16	1	16	5.5	2	25
HU13-C1-20	1	20	4	2	17
HU13-C1-24	1	24	3	2	13
*HU13-C1-28MC	1	28	3	1.5	13
HU13-C1.5-10	1.5	10	9.5	2.5	60
HU13-C1.5-12MC	1.5	12	8	2	50
HU13-C1.5-16	1.5	16	5.5	2	35
HU13-C1.5-20	1.5	20	4	2	25
HU13-C1.5-24	1.5	24	3	2	20
*HU13-C1.5-28MC	1.5	28	3	1.5	20
HU13-C2-10	2	10	9.5	2.5	85
HU13-C2-12MC	2	12	8	2	70
HU13-C2-16	2	16	5.5	2	50
HU13-C2-20	2	20	4	2	35
HU13-C2-24	2	24	3	2	25
*HU13-C2-28MC	2	28	3	1.5	25

\* Multi-channel pipette compatible

#### Benefits Include

- **Four casting options** - provide total flexibility in gel casting, either directly within the tank or externally when the tank is in use
- **Combs** - colour-coded and height-adjustable - offer complete control over loading volume and well depth to a maximum 112-sample throughput
- **Four comb positions** - at 3.5cm intervals along the tray for faster separation of multiple samples
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **Compact tank** - reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Side handles** - for safe and easy transportation around the laboratory

#### Complete System

Midi horizontal gel unit with removable casting tray and 2 x 1mm thick, 16-sample combs, coloured loading strips and buffer recirculation ports  
HU13

#### Replacement Parts & Accessories

1 x Gel casting tray 12.8 x 15cm	HU13-UT
2 x Buffer recirculation ports	HU-BRP
2 x Silicone casting gates	HU13-SCG
1 x Silicone gasket, 1 metre	HU-SG
2 x Super-Seals	HU13-SS
12 x Coloured loading strips	HU13-CS
1 x External casting unit for 3 gel casting trays	HU13-CU
1 x Gel scoop	HU13-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1metre power leads with shrouded 4mm power output connectors	CABLE-4

#### Technical Specification

Unit Dimensions (W x L x H)	20 x 32 x 7cm
Gel Dimensions (W x L)	12.8 x 15cm
Buffer Volume	900ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	112
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	10 to 28 samples
Comb Slots	4
Migration Distance Between Comb Slots	3.5cm
Recommended Running Voltage	100 to 125V
Power Output Connectors (diameter)	Shrouded, 4mm
Recommended Power Supplies	Consort EV243

# Electrophoresis Equipment

## Horizontal Gel Units

### HU15 Standard Horizontal

The HU15 standard horizontal gel electrophoresis unit provides the comb throughput and tray-size options most popular in today's market, but with additional casting options.



Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
HU15-C1-10	1	10	12.8	2	64
HU15-C1-15	1	15	7	2	35
*HU15-C1-16MC	1	16	6.4	2	32
HU15-C1-20	1	20	5.9	2	29
HU15-C1-25	1	25	3.5	2	17
*HU15-C1-30MC	1	30	2.5	2	12
HU15-C1.5-10	1.5	10	12.8	2	96
HU15-C1.5-15	1.5	15	7	2	52
*HU15-C1.5-16MC	1.5	16	6.4	2	48
HU15-C1.5-20	1.5	20	5.9	2	43
HU15-C1.5-25	1.5	25	3.5	2	25
*HU15-C1.5-30MC	1.5	30	2.5	2	18
HU15-C2-10	2	10	12.8	2	128
*HU15-C2-15	2	15	7	2	70
HU15-C2-16MC	2	16	6.4	2	64
HU15-C2-20	2	20	5.9	2	58
HU15-C2-25	2	25	3.5	2	34
*HU15-C2-30MC	2	30	2.5	2	24

\* Multi-channel pipette compatible

#### Benefits Include

- **The market standard** - a 15 x 15cm gel tray, with comb options ranging from 1 to 30 samples, is currently the most popular format in today's market
- **Four comb slots** - at 3.5cm intervals along the tray for faster separation of a maximum 120 samples
- **Multi-channel pipette compatible combs** - with a maximum 30- sample throughput reduce gel-loading time, while preparatory combs enable nucleic acids to be scaled-up for cloning
- **Combs** - colour-coded and height-adjustable - offer complete control over loading volume and well depth
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Side handles** - for safe and easy transportation around the laboratory

#### Complete System

Standard horizontal gel unit with removable casting tray, including casting gates with integral silicone seals, 2 x 1mm thick, 16-sample combs, coloured loading strips and buffer recirculation ports  
HU15

#### Replacement Parts & Accessories

1 x Gel casting tray, 15 x 15cm, including casting gates with integral silicone seals	HU15-UT
2 x Buffer recirculation ports	HU-BRP
2 x Casting gates with integral silicone seals	HU15-CG
1 x Silicone gasket, 1 metre	HU-SG
2 x Super-Seals	HU15-SS
12 x Coloured loading strips	HU15-CS
1 x Gel scoop	HU15-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 metre power leads with shrouded 4mm power output connectors	CABLE-4

#### Technical Specification

Unit Dimensions (W x L x H)	21.5 x 33.5 x 7cm
Gel Size (W x L)	15 x 15cm
Buffer Volume	1200ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	120
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	10 to 30 samples
Comb Slots	4
Migration Distance	3.5cm
Between Comb Slots	
Recommended Running Voltage	100 to 125V
Power Output	Shrouded, 4mm
Connectors (diameter)	
Recommended	Consort EV222
Power Supplies	EV243



# Electrophoresis Equipment

## Horizontal Gel Units

### HU25 Maxi-Plus Standard Horizontal

The HU25 maxi-plus standard horizontal gel electrophoresis unit is ideal for high throughput analysis of nucleic acids.



#### Benefits Include

- **Large format** - 25 x 30cm gel tray is ideal for high-throughput techniques, such as HLA typing and screening PCR® products
- **Twelve comb slots** - at 2cm intervals along the tray for rapid, high throughput separation of a maximum 624 samples
- **Multi-channel pipette compatible combs** - with a maximum 52-sample throughput - allow samples to be loaded quickly and easily from 96 and 384 - well thermal cyclers
- **Combs** - colour-coded and height-adjustable - offer complete control over loading volume and well depth
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Side handles** - for safe and easy transportation around the laboratory
- **Cooled version available**

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
*HU25-C1-26MC	1	26	7	2	30
*HU25-C1-52MC	1	52	3	1.5	13
*HU25-C1.5-26MC	1.5	26	7	2	45
*HU25-C1.5-52MC	1.5	52	3	1.5	20
*HU25-C2-26MC	2	26	7	2	60
*HU25-C2-52MC	2	52	3	1.5	25

\* Multi-channel pipette compatible

#### Complete System

Maxi-plus standard horizontal gel unit with removable casting tray, including casting gates with integral silicone seals, 6 x 1mm thick, 26-sample combs, coloured loading strips and buffer recirculation ports  
HU25

#### Replacement Parts & Accessories

1 x gel casting tray, 25 x 30cm, including casting gates with integral silicone seals	HU25-UT
2 x buffer recirculation ports	HU-BRP
2 x casting gates with integral silicone seals	HU25-CG
1 x silicone gasket, 1 metre	HU-SG
2 x Super-Seals	HU25-SS
36 x coloured loading strips	HU25-CS
1 x gel scoop	HU25-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 metre power leads with shrouded 4mm power output connectors	CABLE-4

#### Technical Specification

Unit Dimensions (W x L x H)	33 x 56 x 9cm
Gel Size (W x L)	25 x 30cm
Buffer Volume	3000ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	624
Combs	6
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	26 to 52 samples
Comb Slots	12
Migration Distance Between Comb Slots	2cm
Recommended Running Voltage	150 to 200V
Power Output Connectors	Shrouded, 4mm (diameter)
Recommended Power Supplies	Consort EV243

# Electrophoresis Equipment

## Horizontal Gel Units

### SVG-SYS Vari-gel MINI System

The SVG-SYS Vari-gel mini system is ideal for standard preparatory and analytical electrophoresis techniques.



Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
SVG-C1-8	1	8	5.5	2	27
SVG-C1-12	1	12	3	2	15
SVG-C1-15	1	15	2	2	10
*SVG-C1-16MC	1	16	1.75	2	8
SVG-C1.5-8	1.5	8	5.5	2	40
SVG-C1.5-12	1.5	12	3	2	22
SVG-C1.5-15	1.5	15	2	2	15
*SVG-C1.5-16MC	1.5	16	1.75	2	12
SVG-C2-8	2	8	5.5	2	54
SVG-C2-12	2	12	3	2	30
SVG-C2-15	2	15	2	2	20
*SVG-C2-16MC	2	16	1.75	2	16

\* Multi-channel pipette compatible

#### Benefits Include

- **Two gel trays** - in 7 x 7 and 7 x 10cm (W x L) sizes, each with aluminium casting gates
- **Multiple comb slots** - regularly positioned along the gel tray and corresponding to each comb thickness - allow the user to adjust the sample migration distance according to their own personal preference
- **Colour-coded combs** - 1, 1.5 and 2mm thick - offer complete control over loading volume and well depth
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **Compact tank** - reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Severn Biotech Super-Seals** - available as an accessory for flexible casting

#### Complete System

A complete 7cm wide Vari-gel system with 2 removable gel trays, 7 x 7 and 7 x 10cm (W x L); 2 x 1mm, 15-sample combs; aluminium casting gates and coloured loading strips

SVG-SYS

#### Replacement Parts & Accessories

1 x Gel casting tray, 7 x 7cm, including aluminium casting gates	SVG-GT-7
1 x Gel casting tray, 7 x 10cm, including aluminium casting gates	SVG-GT-10
2 x Buffer recirculation ports	HU-BRP
2 x Aluminium casting gates	SVG-GT-ALCG
2 x Super-Seals	SVG-SS
6 x Coloured loading strips	SVG-CS
1 x Gel scoop	SVG-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 metre power leads with shrouded 4mm power output connectors	CABLE-4

#### Technical Specification

Unit Dimensions (W x L x H)	25 x 11 x 7cm
Gel Size (W x L)	see Trays
Buffer Volume	350ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	48
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	8 to 20 samples
Recommended Running Voltage	75 to 100V
Power Output Connectors (diameter)	Shrouded, 4mm
Recommended Power Supplies	Consort EV222

# Electrophoresis Equipment

## Horizontal Gel Units

### TVG-SYS Vari-gel MIDI System

The TVG-SYS Vari-gel midi system is ideal for standard preparatory and analytical electrophoresis techniques.



#### Benefits Include

- **Three gel trays** - in 10 x 7, 10 x 10 and 10 x 15cm (W x L) sizes, each with aluminium casting gates
- **Multiple comb slots** - regularly positioned along the gel tray and corresponding to each comb thickness - allow the user to adjust the sample migration distance according to their own personal preference
- **Colour-coded combs** - 1, 1.5 and 2mm thick - offer complete control over loading volume and well depth
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **Compact tank** - reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Severn Biotech Super-Seals** - available as an accessory for flexible casting

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	Sample Volume in a 5mm Deep Well (µl)
TVG-C1-8	1	8	9.25	2	45
TVG-C1-12	1	12	5.5	2	25
TVG-C1-15	1	15	4	2	20
*TVG-C1-16MC	1	16	3.62	2	15
TVG-C1-20	1	20	2.5	2	10
TVG-C1.5-8	1.5	8	9.25	2	65
TVG-C1.5-12	1.5	12	5.5	2	35
TVG-C1.5-15	1.5	15	4	2	30
*TVG-C1.5-16MC	1.5	16	3.62	2	20
TVG-C1.5-20	1.5	20	2.5	2	15
TVG-C2-8	2	8	9.25	2	90
TVG-C2-12	2	12	5.5	2	50
TVG-C2-15	2	15	4	2	40
*TVG-C2-16MC	2	16	3.62	2	30
TVG-C2-20	2	20	2.5	2	20

\* Multi-channel pipette compatible

#### Technical Specification

Unit Dimensions (W x L x H)	31.5 x 14.5 x 7cm
Gel Size (W x L)	see Trays
Buffer Volume	650ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	80
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	8 to 20 samples
Recommended Running Voltage	75 to 125V
Power Output Connectors (diameter)	Shrouded, 4mm
Recommended Power Supplies	Consort EV222

#### Complete System

A complete 10cm wide Vari-gel system with 3 removable gel trays, 10 x 7, 10 x 10 and 10 x 15cm (W x L); 2 x 1mm, 15-sample combs; aluminium casting gates and coloured loading strips TVG-SYS

#### Replacement Parts & Accessories

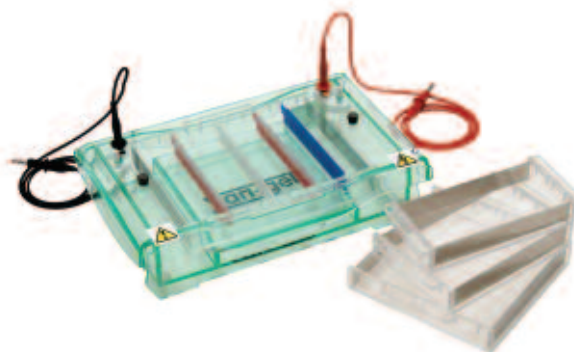
1 x Gel casting tray, 10 x 7cm, including aluminium casting gates	TVG-GT-7
1 x Gel casting tray, 10 x 10cm, including aluminium casting gates	TVG-GT-10
1 x Gel casting tray, 10 x 15cm, including aluminium casting gates	TVG-GT-15
2 x Buffer recirculation ports	HU-BRP
2 x Aluminium casting gates	TVG-GT-ALCG
2 x Super-Seals	TVG-SS
10 x Coloured loading strips	TVG-CS
1 x Gel scoop	TVG-GS
2 x 0.2mm Thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded 4mm power output connectors	CABLE-4

# Electrophoresis Equipment

## Horizontal Gel Units

### VG-SYS Vari-gel MAXI System

The VG-SYS Vari-gel maxi system is ideal for standard preparatory and analytical electrophoresis techniques.



Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Max. Spacing (mm)	
VG-C1-10	1	10	12.8	2	64
VG-C1-15	1	15	7	2	35
*VG-C1-16MC	1	16	6.4	2	32
VG-C1-20	1	20	5.9	2	29
VG-C1-25	1	25	3.5	2	17
*VG-C1-30MC	1	30	2.5	2	12
VG-C1.5-10	1.5	10	12.8	2	96
*VG-C1.5-16MC	1.5	16	6.4	2	48
VG-C1.5-20	1.5	20	5.9	2	43
VG-C1.5-25	1.5	25	3.5	2	25
*VG-C1.5-30MC	1.5	30	2.5	2	18
VG-C2-10	2	10	12.8	2	128
VG-C2-16MC	2	16	6.4	2	64
VG-C2-20	2	20	5.9	2	58
VG-C2-25	2	25	3.5	2	34
*VG-C2-30MC	2	30	2.5	2	24

\* Multi-channel pipette compatible

#### Benefits Include

- **Four gel trays** - in 15 x 7, 15 x 10, 15 x 15 and 15 x 20cm (W x L) sizes, each with aluminium casting gates
- **Multiple comb slots** - regularly positioned along the gel tray and corresponding to each comb thickness - allow the user to adjust the sample migration distance according to their own personal preference
- **Colour-coded combs** - 1, 1.5 and 2mm thick - offer complete control over loading volume and well depth
- **Buffer recirculation ports** - may be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- **Coloured loading strips** - for easy well detection when loading
- **Compact unit** - reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time
- **UV-transparent acrylic casting tray** - allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- **Severn Biotech Super-Seals** - available as an accessory for flexible casting

#### Complete System

A complete 15cm wide Vari-gel system with 4 removable gel trays, 15 x 7, 15 x 10, 15 x 15 and 15 x 20cm (W x L); 2 x 1mm, 15-sample combs; aluminium casting gates and coloured loading strips VG-SYS

#### Replacement Parts & Accessories

1 x Gel casting tray, 15 x 7cm, including aluminium casting gates	VG-GT-7
1 x Gel casting tray, 15 x 10cm, including aluminium casting gates	VG-GT-10
1 x Gel casting tray, 15 x 15cm, including aluminium casting gates	VG-GT-15
1 x Gel casting tray, 15 x 20cm, including aluminium casting gates	VG-GT-20
2 x Buffer recirculation ports	HU-BRP
2 x Aluminium casting gates	VG-GT-ALCG
2 x Super-Seals	VG-SS
12 x Coloured loading strips	VG-CS
1 x Gel scoop	VG-GS
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded	
4mm power output connectors	CABLE-4

#### Technical Specification

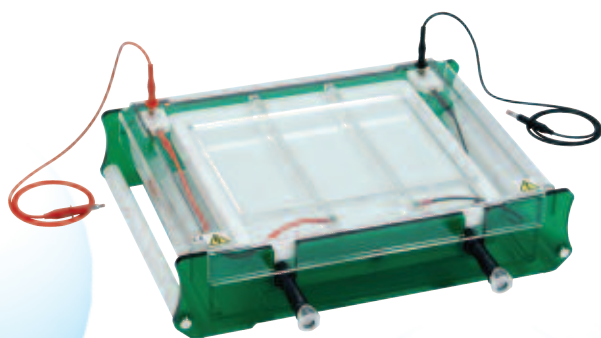
Unit Dimensions (W x L x H)	31.5 x 19 x 7cm
Gel Size (W x L)	see Trays
Buffer Volume	950ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	180
Combs	2
Comb Thickness	1, 1.5 or 2mm
Comb Throughput	10 to 30 samples
Recommended Running Voltage	75 to 150V
Power Output Connectors (diameter)	Shrouded, 4mm
Recommended Power Supplies	Consort EV243

# Electrophoresis Equipment

## Horizontal Gel Units

### The IEF-SYS Dedicated Isoelectric Focusing Unit

The recently redesigned Severn Biotech IEF-SYS unit has been optimised for isoelectric focusing applications using SERVA IPG BlueStrips and SERVALYT™ PRECOTES™ and PreNet™ IEF gels, also available through Severn Biotech.



#### Technical Specification

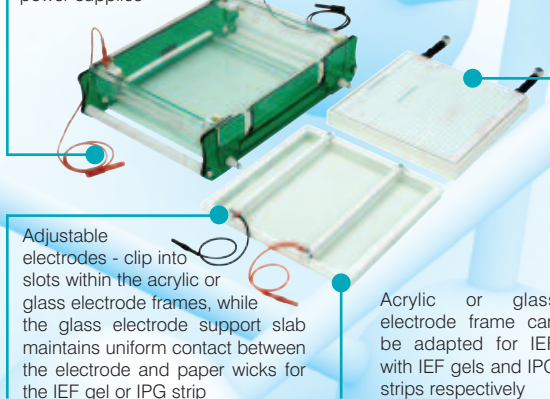
IEF-SYS Unit	
Maximum Sample Capacity	30 x SERVA IPG strips (dimensions ranging from 70 x 3 x 1mm to 240 x 3 x 1mm [L x W x T]) 1 x 245 x 125mm or 2 x 125 x 125mm (W x L) IEF gels
Unit dimensions (W x D x H) inc. cooling coil	46 x 41 x 11.5cm
Inner Tank Dimensions (W x D x H)	37 x 31 x 8.5cm
Glass plate active dimensions (W x L x D)	27 x 27 x 0.5cm
Electrode frame active dimensions (W x L x H)	27 x 27 x 1cm
Cooling plate dimensions (W x L x D)	27 x 27 x 3cm
Glass electrode weight active dimensions (W x L x H)	20 x 26.5 x 1cm
Adjustable electrodes active dimensions (W x L x H)	10 x 265 x 13mm
Recommended temperature for cooling plate during IEF with IPG strips	20°C
Recommended temperature for cooling plate during IEF with IEF gels	4°C
Power Output Connectors (diameter)	Shrouded, 2mm
Recommended Running Conditions for Voltage Step	1 2 3 4 5 6 end of run
IEF with 125mm long IEF gels	Voltage (V) 300 600 1000 1200 1500 2000 Time (min) 20 20 30 30 30 60 Volt-hours 100 200 500 600 750 2000
Recommended Running Conditions for Voltage Step	1 2 3 4 5 6 end of run
IEF of 7cm SERVA IPG strips	Voltage (V) 150 300 600 1500 3000 330 Time (h) 0.5 0.5 0.5 0.5 2.5 <20 Volt-hours 75 150 300 750 7500 -
Recommended Running Conditions for Voltage Step	1 2 3 4 5 end of run
IEF of 18cm SERVA IPG strips	Voltage (V) 300 600 1500 3000 330 Time (h) 1 1 1 12.5 <20 Volt-hours 300 600 1500 37500 -
Snap-lock Connectors for Cooling Coil	Inner Diameter 10mm Outer Diameter 12mm
Quick-fit Tubing	Inner Diameter 10mm Outer Diameter 12mm

#### Benefits Include

- **Ceramic cooling plate** - 27 x 27cm (W x L) - can support either...
- Ceramic cooling plate can also be connected to the chiller to maintain IEF at 4°C
- **Acrylic electrode frame** - sits directly on the ceramic cooling plate for IEF
- **Glass electrode frame** - sits flush with the ceramic cooling plate for optimal cooling efficiency and minimises mess caused by oil application during IEF with IPG strips
- **Positive and negative electrodes** - made from clear acrylic clip neatly within the acrylic or glass electrode frame, allowing the voltage gradient to be fine-tuned along the entire length of each IPG strip
- **Glass electrode weight** - ensures that the electrodes remain in complete contact with the positive and negative ends of each IPG strip or IEF gel during IEF
- **2mm shrouded power output connectors** - compatible with high voltage power supplies
- **IEF unit or cooling plate** - can also be used for wick-based horizontal gel electrophoresis

Shrouded 2mm power output connectors compatible with all modern commercially available high voltage power supplies

Ceramic cooling plate is connected to the JULABO chiller to maintain IEF at 4 or 20°C for IEF gels or IPG strips



Adjustable electrodes - clip into slots within the acrylic or glass electrode frames, while the glass electrode support slab maintains uniform contact between the electrode and paper wicks for the IEF gel or IPG strip

Acrylic or glass electrode frame can be adapted for IEF with IEF gels and IPG strips respectively

#### Complete System

Flat-bed isoelectric focusing unit includes running tank, lid, 1 x Ceramic cooling plate, 1 x glass plate, 1 x electrode frame, 1 x Anode electrode, 1 x cathode electrode, 1 x Glass electrode weight, 2 x Quick-fit tubes and 2 x 2mm power cables IEF-SYS

#### Replacement Parts & Accessories

1 x Ceramic cooling plate for	SYS IEF-CP
1 x Glass plate for	SYS IEF-GF
1 x Electrode frame for	SYS IEF-EF
1 x Cathode electrode for	SYS IEF-CE
1 x Anode electrode for	SYS IEF-AE
1 x Glass electrode weight for	SYS IEF-GS
2 x Quick-fit tubes for cooling plate for	SYS TCS-CC
2 x 1 Metre power leads with shrouded 2mm power output connectors	CABLE-2

# Electrophoresis Equipment

## Horizontal Accessories

### Coloured Strips

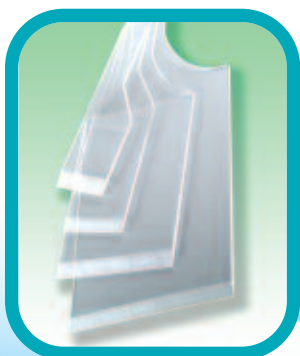
Aid sample visualisation during gel loading.

Product	Product Code	Pack Size
<b>Green Range</b>		
Coloured loading strips for HU6	HU6-CS	x12
Coloured loading strips for HU13	HU13-CS	x12
Coloured loading strips for HU15	HU15-CS	x12
Coloured loading strips for HU20 and CHU20	HU20-CS	x12
Coloured loading strips for HU25 and CHU25	HU25-CS	x36
<b>Vari-gel Range</b>		
Coloured loading strips for SVG-SYS	SVG-CS	x6
Coloured loading strips for TVG-SYS	TVG-CS	x10
Coloured loading strips for VG-SYS	VG-CS	x12



### Gel Scoops

Ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

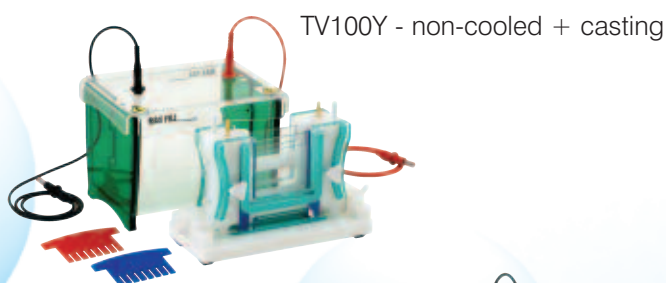


Product	Product Code	Pack Size
<b>Green Range</b>		
Gel scoop for HU6	HU6-GS	6 x 8.5cm
Gel scoop for HU13	HU13-GS	13 x 15cm
Gel scoop for HU15	HU15-GS	15 x 15cm
Gel scoop for HU20 and CHU20	HU20-GS	20 x 25cm
Gel scoop for HU25 and CHU25	HU25-GS	25 x 32.5cm
<b>Vari-gel Range</b>		
Gel scoop for SVG-SYS	SVG-GS	7 x 10cm
Gel scoop for TVG-SYS	TVG-GS	10 x 15cm
Gel scoop for TVG-SYS	TVG-GS	10 x 15cm

## Vertical Gel Units

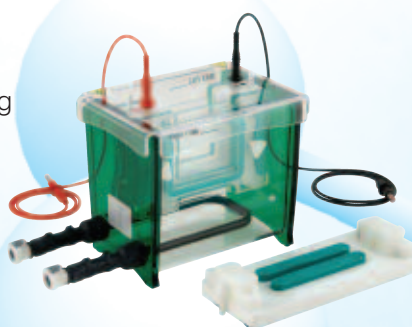
### TV100Y Standard & TV100YK Cooled Twin-Plate Mini-Gel Electrophoresis Units

The TV100Y and TV100YK twin-plate 10 x 10cm (W x H) mini-gel units are ideal for standard PAGE applications requiring self-cast gels. Soft silicone gaskets in a precision engineered casting base, included as standard with each unit, act in tandem with our newly modified GRM to provide simple, leak-free gel casting and assembly.



TV100Y - non-cooled + casting

TV100YK - cooled + casting



#### Benefits Include

- **Twin-plate 10 x 10cm mini-gel unit** - designed specifically for PAGE techniques requiring self-cast gels, although precast gels may also be used
- **Casting base** - included as standard with both units
- **Two versions available** - Standard TV100Y - non-cooled + casting Cooled TV100YK - cooled + casting
- **Glass plate stops** - within the newly modified GRM - lock the glass plates firmly into position onto soft silicone gaskets in the casting base to ensure leak-free gelcasting
- **Enhanced cooling** - in the TV100YK - snaplock connectors allow the cooling coil to be connected to the JULABO chiller unit for faster, higher voltage separations
- **Compatible** - with commercially available 10x10cm precast gels, with SERVA precast gels available through Severn Biotech for the TV100-GRM
- **Additional gel casting** - with the optional TV100-MC2 and TV100-MC10 2 and 10 gel multicasters
- **Float glass plates** - 2mm thick - guarantee uniform gel thickness and even sample migration, and with ground edges to inhibit sample leakage during casting
- **Single screws** - at either side each gelclamping plate - act in conjunction with a counterbalanced, dovetailed silicone gasket to disperse pressure evenly along the height and breadth of the gel as the screws are tightened
- **Low buffer volumes** - within the inner chamber of the GRM and gel tank economises buffer consumption
- **Colour-coded combs and spacers** - available in 0.75, 1, 1.5 and 2mm thicknesses
- **Smaller footprint area** - occupies minimal bench space

#### Technical Specification

	TV100Y	TV100YK
Unit Dimensions (W x D x H)	20 x 15 x 14cm	28 x 15 x 18cm
Inner Tank Dimensions (W x D x H)	16.5 x 11 x 11.5cm	16.5 x 11 x 15cm
Plate Dimensions (W x H x T)	10 x 10 x 0.2cm	10 x 10 x 0.2cm
Standard Spacer Dimensions (W x H x T)	1 x 10 x 0.1cm	1 x 10 x 0.1cm
Active Gel Dimensions (W x H)	8 x 8.5cm	8 x 8.5cm
Maximum Sample Capacity	2 x 16	2 x 20
Recommended Buffer Volume	Inner Buffer Chamber 90ml Gel Tank 1200ml	Inner Buffer Chamber 90ml Gel Tank 1600ml
Recommended Running Conditions for Denaturing/Native PAGE Gel	Voltage 50 - 100V (5 - 10V/cm) Current 5 - 10mA Time 1.5 - 2.5h	Voltage 100 - 150V (10 - 15V/cm) Current 10 - 15mA Time 1 - 1.75h
Snap-lock Connectors for Cooling Coil	Inner Diameter n/a Outer Diameter n/a	Inner Diameter 10mm Outer Diameter 12mm
Quick-fit Tubing	Inner Diameter n/a	Inner Diameter 10mm
Outer Diameter n/a Outer Diameter 12mm		
Casting Base Silicone Seal Dimensions (W x L x H)	1.5 x 11 x 0.8cm	1.5 x 11 x 0.8cm
Power Output Connectors (diameter)	Shrouded, 4mm	Shrouded, 4mm
Recommended Power Supplies	Consort EV243	Consort EV243

# Electrophoresis Equipment

## Complete System

Twin-plate mini-gel unit with GRM and gel tank, lid, 2 x (10 x 10cm; W x H) plain glass plates, 4 x 1mm spacers, 2 x spacer aligners, 2 x (10 x 10cm) notched glass plates, 1 x dummy plate and 2 x 1mm thick 12-sample combs plus casting base and 2 x silicone seals **TV100Y**

Twin-plate mini-gel unit with GRM and cooled gel tank, with built-in cooling coil and quick-fit tubing, plus lid, 2 x (10 x 10cm;W x H) plain glass plates, 4 x 1mm spacers, 2 x spacer aligners, 2 x (10 x 10cm) notched glass plates, 1 x dummy plate, 2 x 1mm thick 12-sample combs, casting base and 2 x silicone seals **TV100YK**



## Replacement Parts & Accessories

1 x TV100 Gel-running module	TV100-GRM
2 x Quick-fit tubes for cooling coil	TCS-CC
2 x (10 x 10cm) Plain glass plates with 0.75mm bonded spacers for TV100	TV100-PGS0.75
2 x (10 x 10cm) Plain glass plates with 1mm bonded spacers for TV100	TV100-PGS1
2 x (10 x 10cm) Plain glass plates with 1.5mm bonded spacers for TV100	TV100-PGS1.5
2 x (10 x 10cm) Plain glass plates with 2mm bonded spacers for TV100	TV100-PGS2
2 x (10 x 10cm) Plain glass plates for TV100	TV100-PG
2 x (10 x 10cm) Notched glass plates for TV100	TV100-NG
1 x (10 x 10 cm) Dummy plate	TV100-DP
2 x 0.75mm Thick spacers for TV100	TV100-S0.75
2 x 1mm Thick spacers for TV100	TV100-S1
2 x 1.5mm Thick spacers for TV100	TV100-S1.5
2 x 2mm Thick spacers for TV100	TV100-S2
2 x Spacer aligners for TV100	TV100-SA
1 x Cam-pin casting base with 2 silicone seals	TV100-CB
2 x Silicone seals for cam-pin casting base	TV100-CB-SEALS
1 x Caster system for 2 x (10 x 10cm) gradient mini-gels	TV100-MC2
1 x Caster system for 10 x (10 x 10cm) gradient mini-gels	TV100-MC10
2 x Silicone gaskets for "non-eared" glass plates	TV100-SGB
2 x 0.2mm Thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded 4mm power output connectors	CABLE-4

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Tooth Height (mm)	Max. Spacing (mm)	Sample Volume/ Well (µl)
*TV100-C0.75-8MC	0.75	8	6	15	3	67
TV100-C0.75-10	0.75	10	4	15	3	45
TV100-C0.75-12	0.75	12	3.75	15	2.25	42
*TV100-C0.75-16MC	0.75	16	2.5	15	2	28
*TV100-C1-8MC	1	8	6	15	3	90
TV100-C1-10	1	10	4	15	3	60
TV100-C1-12	1	12	3.75	15	2.25	56
*TV100-C1-16MC	1	16	2.5	15	2	37
*TV100-C1.5-8MC	1.5	8	6	15	3	120
TV100-C1.5-10	1.5	10	4	15	3	90
TV100-C1.5-12	1.5	12	3.75	15	2.25	84
*TV100-C1.5-16MC	1.5	16	2.5	15	2	55
*TV100-C2-8MC	2	8	6	15	3	180
TV100-C2-10	2	10	4	15	3	120
TV100-C2-12	2	12	3.75	15	2.25	112
*TV100-C2-16MC	2	16	2.5	15	2	75

\*Multi-channel compatible

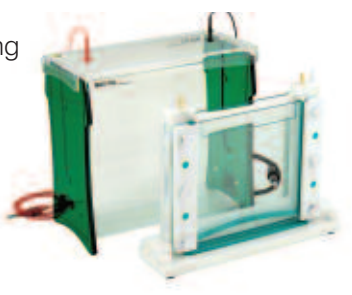
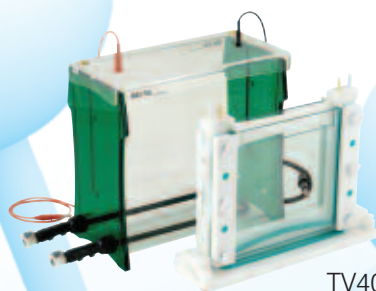


## Vertical Gel Units

### TV400Y Standard & TV400YK Cooled Twin-Plate Maxi-Gel Electrophoresis Units

The TV400Y and TV400YK twin-plate 20.5 x 20cm (W x H) maxi-gel units offers all the benefits of the TV100 units, but in a much larger gel size and with increased sample throughput. Both units include, as standard, a precision engineered casting base, which acts in tandem with our recently modified TV400-GRM to provide simple, leak-free casting.

TV400Y - non-cooled + casting



TV400YK - cooled + casting

#### Benefits Include

- **Twin-plate 20.5 x 20cm maxi-gel unit** - designed specifically for higher resolution PAGE techniques requiring self-cast gels
- **Large format** - 20.5 x 20cm glass plate dimensions are ideal for running higher percentage polyacrylamide gels to resolve smaller proteins of similar molecular weight
- **Casting base** - included as standard with both units
- **Two versions available:** -  
Standard TV400Y - non-cooled + casting  
Cooled TV400YK - cooled + casting
- **Glass plate stops** - within the newly modified GRM - lock the glass plates firmly into position onto soft silicone gaskets in the casting base to ensure leak-free gelcasting
- **Enhanced cooling** - in the TV400YK - snaplock connectors allow the cooling coil within TV400YK to be connected to the JULABO chiller unit for faster, higher voltage separations
- **Additional gel casting** - with the optional TV400-MC2 and TV400-MC10 2 and 10 gel multicasters
- **Float glass plates** - 4mm thick - guarantee uniform gel thickness and even sample migration, and with ground edges to inhibit sample leakage during casting
- **Triple screws** - on each gel-clamp - act in conjunction with a counterbalanced, dovetailed silicone gasket to disperse pressure evenly along the height and breadth of the gel as the screws are tightened
- **Colour-coded combs and spacers** - available in 0.75, 1, 1.5 and 2mm thicknesses

#### Technical Specification

	TV400Y	TV400YK
Unit Dimensions (W x D x H)	28.5 x 15 x 27.5cm	38 x 15 x 27.5cm
Inner Tank Dimensions (W x D x H)	27 x 12.5 x 25cm	27 x 12.5 x 25cm
Plate Dimensions (W x H x T)	20.5 x 20 x 0.4cm	20.5 x 20 x 0.4cm
Standard Spacer Dimensions (W x H x T)	2 x 20 x 0.1cm	2 x 20 x 0.1cm
Active Gel Dimensions (W x H)	16.5 x 17.5cm	16.5 x 17.5cm
Maximum Sample Capacity	2 x 48	2 x 48
Recommended Buffer Volume	Inner Buffer 700ml Chamber	Inner Buffer 700ml Chamber
	Gel Tank 4200ml	Gel Tank 4200ml
Recommended Running Conditions for Denaturing/Native PAGE Gel	Voltage 175 - 225V (8.75 - 11.25V/cm) Current 20 - 30mA Time 2.5 - 3.5h	Voltage 200 - 300V (10 - 15V/cm) Current 30 - 40mA Time 2 - 2.5h
Snap-lock Connectors for Cooling Coil	Inner Diameter n/a Outer Diameter n/a	Inner Diameter 10mm Outer Diameter 12mm
Quick-fit Tubing	Inner Diameter n/a Outer Diameter n/a	Inner Diameter 10mm Outer Diameter 12mm
Casting Base Silicone Seal Dimensions (W x L x H)	1.7 x 22.5 x 0.8cm	1.7 x 22.5 x 0.8cm
Power Output Connectors (diameter)	Shrouded, 4mm	Shrouded, 4mm
Recommended Power Supplies	Consort EV243	Consort EV243

# Electrophoresis Equipment

## Complete System

Twin-plate wide format mini-gel unit with GRM and gel tank, lid,  
2 x (20.5 x 20cm; W x H) plain glass plates, 4 x 1mm spacers,  
2 x spacer aligners, 2 x (20.5 x 20cm) notched glass plates, 1 x dummy plate,  
2 x 1mm thick 24-sample combs, casting base and 2 x silicone seals

**TV400Y**

Twin-plate wide format mini-gel unit with GRM and cooled gel tank, with  
built-in cooling coil and quick-fit tubing, plus lid, 2 x (20.5 x 20cm; W x H)  
plain glass plates, 4 x 1mm spacers, 2 x spacer aligners, 2 x (20.5 x 20cm)  
notched glass plates, 1 x dummy plate, 2 x 1mm thick 24-sample combs,  
casting base and 2 x silicone seals

**TV400YK**



## Replacement Parts & Accessories

1 x TV400 Gel-running module	TV400-GRM
2 x Quick-fit tubes for cooling coil	TCS-CC
2 x (20.5 x 20cm) Plain glass plates with 0.75mm bonded spacers for TV400	TV400-PGS0.75
2 x (20.5 x 20cm) Plain glass plates with 1mm bonded spacers for TV400	TV400-PGS1
2 x (20.5 x 20cm) Plain glass plates with 1.5mm bonded spacers for TV400	TV400-PGS1.5
2 x (20.5 x 20cm) Plain glass plates with 2mm bonded spacers for TV400	TV400-PGS2
2 x (20.5 x 20cm) Plain glass plates for TV400	TV400-PG
2 x (20.5 x 20cm) Notched glass plates for TV400	TV400-NG
1 x (20.5 x 20cm) Dummy plate	TV400-DP
2 x 0.75mm Thick spacers for TV400	TV400-S0.75
2 x 1mm Thick spacers for TV400	TV400-S1
2 x 1.5mm Thick spacers for TV400	TV400-S1.5
2 x 2mm Thick spacers for TV400	TV400-S2
2 x Spacer aligners for TV400	TV400-SA
1 x Cam-pin casting base with 2 silicone seals	TV400-CB
2 x Silicone seals for cam-pin casting base	TV400-CB-SEALS
1 x Caster system for 2 x (20.5 x 20cm) gradient wide format mini-gels	TV400-MC2
2 x 0.2mm Thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded 4mm power output connectors	CABLE-4

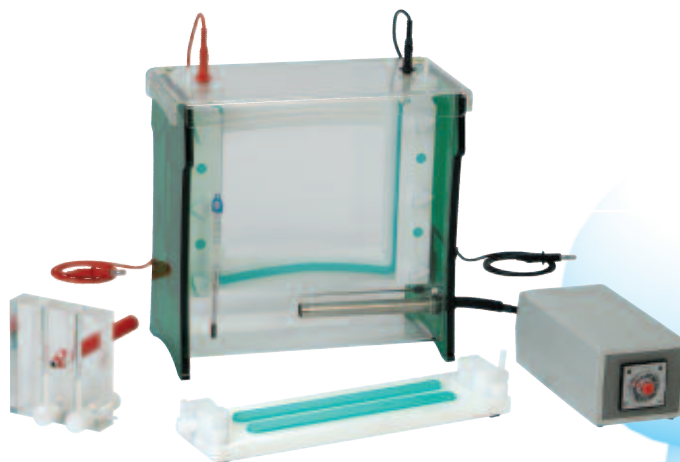
Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Tooth Height (mm)	Max. Spacing (mm)	Sample Volume/ Well (µl)
TV400-C0.35-24	0.35	24	4.75	5	2	8
*TV400-C0.35-36MC	0.35	36	2.5	5	2	4
*TV400-C0.75-18MC	0.75	18	6	20	3	90
TV400-C0.75-24	0.75	24	4.75	20	2	71
*TV400-C0.75-36MC	0.75	36	2.5	20	2	37
TV400-C0.75-48	0.75	48	2.35	20	1	35
*TV400-C1-18MC	1	18	6	20	3	120
TV400-C1-24	1	24	4.75	20	2	95
*TV400-C1-36MC	1	36	2.5	20	2	50
TV400-C1-48	1	48	2.35	20	1	47
*TV400-C1.5-18MC	1.5	18	6	20	3	180
TV400-C1.5-24	1.5	24	4.75	20	2	142
*TV400-C1.5-36MC	1.5	36	2.5	20	2	75
TV400-C1.5-48	1.5	48	2.35	20	1	70

\*Multi-channel compatible

## Gradient Gel Electrophoresis

### The TV400-DGGE Denaturing Gradient Gel Electrophoresis System

The TV400-DGGE denaturing gradient gel electrophoresis system is a cost-effective solution for researchers studying mutations and DNA polymorphisms critical in disease aetiology and genetic diversity. Designed primarily for parallel denaturing gradient gel electrophoresis (DGGE), where electrophoresis and the denaturing gradient run in the same direction, the TV400-DGGE has a maximum 96-sample throughput compatible with standard microplates and thermal cycler blocks. A 100ml gradient mixer is also included to pour gradient gels using our newly designed gel-running module and cam-caster, while a 400W heater, regulated by an external temperature control unit connected to a heat sensor within the gel tank, allows the gel temperature to be set to the predetermined melting temperature ( $T_M$ ) of the PCR® - amplified DNA polymorphism or mutation of interest.



#### Technical Specification

TV400 GRM + Heated Tank	
Unit Dimensions (W x D x H)	28.5 x 15 x 29cm
Inner Tank Dimensions (W x D x H)	27 x 12.5 x 26cm
Plate Dimensions (W x H x T)	20.5 x 20 x 0.4cm
Standard Spacer Dimensions (W x H x T)	2 x 20 x 0.1cm
Active Gel Dimensions (W x H)	2 x 24
Recommended Buffer Volume	Inner Buffer Chamber 700ml Gel Tank 4200ml
Recommended Running Conditions for Denaturing/Native PAGE Gel	Voltage 175 - 225V (8.75 - 11.25v/cm)
	Current 20 - 30mA
	Time 2.5-3.5h
Temperature Range Thermometer	0 - 100°C
Power Output of Heating Element	400W
Heating Element Dimensions (L x D)	14 x 1.5cm
Operating Range of PT100 Temperature Sensor	-50 to +200°C
PT100 Temperature Sensor Dimensions (L x D)	14 x 0.3cm
Casting Base Silicone Seal Dimensions (W x L x H)	1.7 x 22.5 x 0.8cm
Power Output Connectors (diameter)	Shrouded, 4mm
Recommended Power Supplies	Consort EV243
HS-UNIT	
Unit Dimensions (W x D x H)	9.6 x 14 x 8cm
Recommended Temperature Control Range	50 to 70°C
Temperature Control Accuracy	+/-1°C
GM100	
Unit Dimensions (W x D x H)	11 x 3 x 13.5cm
Internal Dimensions of Mixing and Reservoir Chambers (Diameter x Height)	2.5 x 12.5cm
Volume of Each Chamber	50ml
Internal Diameter of Outlet Port	2mm

#### Complete System

Twin-plate maxi-gel unit with GRM, heated gel tank with PT100 temperature sensor and thermometer, lid, 2 x (20.5 x 20cm; W X H) plain glass plates, 2 x (20.5 x 20cm) notched glass plates, 4 x 1mm spacers, 2 x spacer aligners and 2 x 1mm thick 24-sample combs, casting base, 2 x silicone seals and 1 z dummy plate; plus GM100 gradient mixer and heat sensor control unit

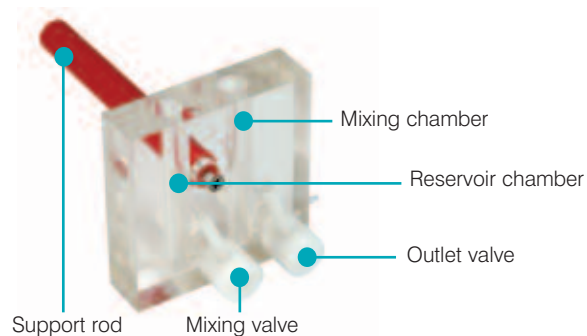
**TV400-DGGE**

#### Replacement Parts & Accessories

1 x TV400 Gel-running module	TV400-GRM
2 x (20.5 x 20cm) Plain glass plates for TV400	TV400-PG
2 x (20.5 x 20cm) Notched glass plates for TV400	TV400-NG
1 x Dummy plate	TV400-DP
2 x 1mm Thick spacers for TV400	TV400-S1
2 x Spacer aligners for TV400	TV400-SA
1 x Cam-pin casting base with 2 silicone seals	TV400-CB
2 x Silicone seals for cam-pin casting base	TV400-CB-SEALS
1 x 100ml Gradient mixer	GM100
1 x Caster system for 2 x (20.5 x 20cm) gradient maxi-gels	TV400-MC2
1 x Caster system for 10 x (20.5cm) gradient maxi-gels	TV400-MC10
2 x 0.2mm Thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded 4mm power output connectors	CABLE-4

Product	Thickness (mm)	Sample Throughput	Tooth Width (mm)	Tooth Height (mm)	Max. Spacing (mm)	Sample Volume/Well (µl)
TV400-DGGE						
TV400-C1-24 (standard)	1	24	4.75	20	2	95
TV400-C1-48 (optional)	1	48	2.35	20	1	47

# Electrophoresis Equipment



## Gradient Mixers

### Gradient Mixers

Available in 15, 25, 50, 100 and 500ml volumes, Severn Biotech's gradient mixers are ideal for pouring polyacrylamide gradient gels and centrifugation gradients using sucrose or caesium chloride solutions. Each gradient mixer is precision engineered from high quality acrylic plastic and comprises leak-free valves that control mixing between the reservoir and mixing chambers and the resultant output flow.

#### Complete System

1 x 15ml Gradient mixer	GM15
1 x 25ml Gradient mixer	GM25
1 x 50ml Gradient mixer	GM50
1 x 100ml Gradient mixer	GM100
1 x 500ml Gradient mixer	GM500

#### Technical Specification

	GM15	GM25	GM50	GM100	GM500
Unit Dimensions (WxDxH)	9x2.4x9cm	10x2.4x11.5cm	10x2.4x11.5cm	11x3x13.5cm	13x6x14cm
Internal Dimensions of Mixing and Reservoir Chambers (Diameter x Height)	1.3x8cm	1.4x10cm	1.9x10cm	2.5x12.5cm	5.4x13cm
Volume of Each Chamber	7.5ml	12.5ml	25ml	50ml	250ml
Internal Diameter of Outlet Port	2mm	2mm	2mm	2mm	5mm

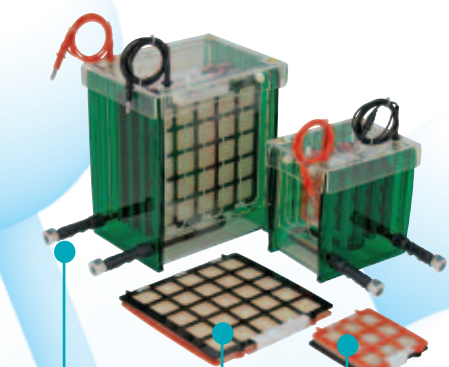
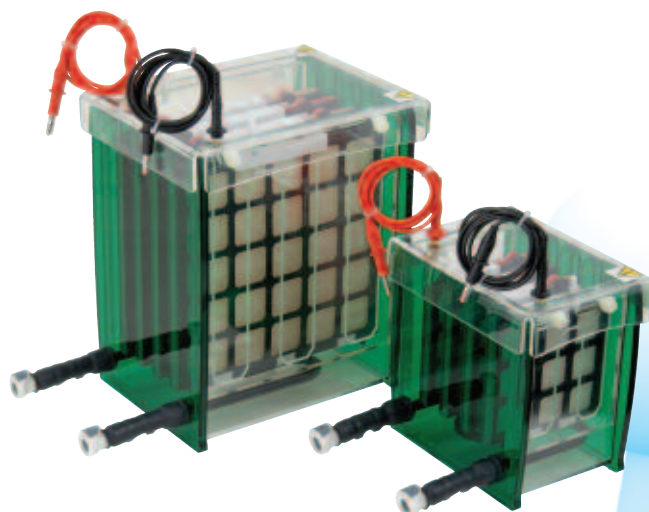
#### Benefits Include

- **Available in 5 different sizes - for different applications**
- **GM15 and GM25** - 15 and 25ml volumes for sucrose and caesium chloride gradients; the GM25 can also make two 1mm thick, 10 x 10cm gradient gels in the TV100-MC2 2-gel multicaster
- **GM50** - 50ml volume sufficient to pour up to five 1mm thick, 10 x 10cm gradient gels or one standard 1mm thick, 20.5 x 20cm gel using the TV400 casting base
- **GM100** - 100ml volume for pouring up to ten 1mm thick, 10 x 10cm gels in the TV100-MC10 10-gel multicaster or two 1mm thick, 20.5 x 20cm gels using the TV400-MC2 2-gel multicaster
- **GM500** - 500ml volume suitable for up to ten 1mm thick, 20.5 x 20cm gels in the TV400-MC10 10-gel multicaster
- **Reservoir chamber** - designed to contain higher percentage acrylamide solution when making gradient gels with the TV100 and TV400 multicasters
- **Mixing chamber** - each is of sufficient diameter to accommodate a magnetic stirrer to mix lower percentage acrylamide with higher percentage acrylamide from the reservoir chamber
- **Mixing chamber** - each is of sufficient diameter to accommodate a magnetic stirrer to mix lower percentage acrylamide with higher percentage acrylamide from the reservoir chamber
- **Valves** - control output flow from both the reservoir and mixing chambers
- **Flat base** - allows each gradient mixer to be placed onto a magnetic stirring plate
- **Support rod** - secures each gradient mixer to a retort stand

## Electro Blotters

### The TV100-EBK Mini and TV400-EBK Maxi Electroblotters

Recently redesigned to accommodate up to 4 electroblotting cassettes, the Severn Biotech TV100-EBK and TV400-EBK electroblotters provide a cost-effective and safe and easy to use system for the transfer of proteins and nucleic acids from 10 x 10cm mini and 20.5 x 20cm maxi gels. Both units are supplied with asymmetric colour-coded cassettes as a unique design feature to prevent them from being inserted into the tank in the wrong orientation, against the direction of transfer.



Snap-lock connectors for enhanced cooling

Asymmetric colour-coded cassettes

Fibre pads maintain uniform contact between the gel and the membrane

#### Technical Specification

	TV100-EBK	TV400-EBK
Unit Dimensions (W x D x H)	20 x 22.5 x 18.5cm	19.5 x 32.5 x 28.5cm
Inner Tank Dimensions (W x D x H)	12.8 x 11 x 17cm	12.8 x 21 x 26cm
Maximum Sample Capacity	4 cassettes	4 cassettes
Recommended Buffer Volume	2000ml	6300ml
Recommended Running Conditions for Electroblotting	Voltage 50 - 100V Current 75mA (0.6-0.8mA/cm <sup>2</sup> ) Time 2-4h	Voltage 200V Current 150mA (0.8-1.0mA/cm <sup>2</sup> ) Time 6h to overnight
Distance Between Plate Electrodes in EBGRM	12.8cm	12.8cm
Electroblotting Cassette Dimensions (W x L)	11.5 x 10.5cm	20.5 x 20cm
Active Transfer Area	71cm <sup>2</sup>	289cm <sup>2</sup>
Snap-lock Connectors for Cooling Coil	Inner Diameter 10mm Outer Diameter 12mm	Inner Diameter 10mm Outer Diameter 12mm
Quick-fit Tubing	Inner Diameter 10mm Outer Diameter 12mm	Inner Diameter 10mm Outer Diameter 12mm
Power Output Connectors (diameter)	Shrouded, 4mm	Shrouded, 4mm
Recommended Power Supplies	Consort EV243	Consort EV243

#### Benefits Include

Available in 2 different formats: -

- **TV100-EBK** - accommodates a maximum of four 10 x 10cm electroblotting cassettes
- **TV400-EBK** - accommodates a maximum of four 20.5 x 20cm electroblotting cassettes
- **Asymmetric, colour-coded cassettes** - hinged, with red and black covers corresponding to the anode and the cathode, to ensure correct transfer
- **Fibre pads** - compress the gel against the nitrocellulose membrane for uniform transfer
- **Plate-electrodes** - 12.8cm apart - maximise the intensity of the electric field, allowing rapid transfer within 4 to 6 hours
- **Enhanced cooling** - included as standard - snap-lock connectors allow the cooling coil within each unit to be connected to the JULABO chiller units for faster, high-intensity transfers, or extended overnight runs without buffer depletion
- **Flat bottom** - allows each electroblotter to be placed directly onto a magnetic stirring plate

#### Complete System

Complete electroblotting system for four 10 x 10cm mini-gels, including 4 x electroblotting cassettes, 4 x fibre pads, cooled tank, lid and quick-fit tubing

**TV100-EBK**

Complete electroblotting system for four 20.5 x 20cm mini-gels, including 4 x electroblotting cassettes, 4 x fibre pads, cooled tank, lid and quick-fit tubing

**TV400-EBK**

#### Replacement Parts & Accessories

1 x (10 x 10cm) Hinged, colour-coded cassette with fibre pads	TV100-EBK
4 x (10 x 10cm) Fibre pads	EB-FPS
1 x (20.5 x 20cm) Hinged, colour-coded cassette with fibre pads	TV400-EBK
4 x (20.5 x 20cm) Fibre pads	EB-FPL
2 x Quick-fit tubes for cooling coil	TCS-CC
2 x 0.2mm thick, platinum electrode wire	PT-0.2
2 x 1 Metre power leads with shrouded 4mm power output connectors	CABLE-4



## Electro Blotters

### The V10-SDB and V20-SDB Semi-Dry Blotters

The V10-SDB 10 x 10cm and V20-SDB 20 x 20cm semi-dry blotters are ideal for fast transfer of proteins and nucleic acids without the need for costly accessories such as gel cassettes and tanks. Corrosion-free platinum-coated titanium and stainless steel plate electrodes, corresponding to the anode and cathode, maximise the active area of transfer so that full electrical contact is made between the gel and the membrane, allowing transfer to be completed within an hour with the minimum of heat dissipation, buffer consumption and mess in the laboratory, normally associated with wet blotting techniques.

#### Complete System

10 x 10cm semi-dry blotter	<b>V10-SDB</b>
20 x 20cm semi-dry blotter	<b>V20-SDB</b>

#### Technical Specification

	V10-SDB	V20-SDB
Unit Dimensions (W x D x H)	17 x 7.5 x 17cm	27 x 7.5 x 27cm
Active Transfer Area (W x L)	10 x 10cm	20 x 20cm
Sample Throughput	One 10 x 10cm mini-gel	Four 10 x 10cm mini-gels; One 20 x 20cm maxi-gel
Recommended Current Setting	80mA / 0.8mAcm <sup>-2</sup>	320mA / 0.8mAcm <sup>-2</sup>
Power Output Connectors (diameter)	4mm	4mm
Recommended Power Supplies EV243		EV265, 261 & 215

#### Benefits Include

- **2 sizes available:** -
- **V10-SDB** – 10 x 10cm format - accommodates one 10 x 10cm mini-gel
- **V20-SDB** – 20 x 20cm format - accommodates up to four 10 x 10cm mini-gels or one 20 x 20cm maxi-gel
- **Gels can be stacked** – for higher throughput blotting
- **Rapid transfer assured within 1 hour** – for lower molecular weight proteins and nucleic acids; larger molecules transferred in 2 hours
- **Semi-dry format** – minimises buffer consumption, with no need for mess and additional accessories
- **Colour-coded, corrosion-free plate electrodes** – platinum-coated titanium anode and stainless steel cathode maximise the transfer area, so that full electrical contact is made between the gel and the membrane, while corrosion-resistant metal prolongs lifespan and durability

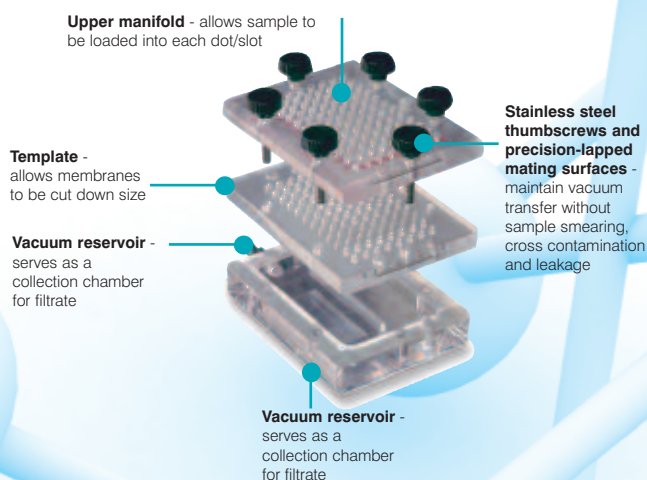
#### Semi-dry blotting with Severn Biotech V10-SDB and V20-SDB units

Three sheets of blotting paper, saturated with transfer buffer, are first superimposed over the anode plate, followed by the membrane, the gel and a further 3 sheets of blotting paper. The cathode plate is then placed over the blotting sandwich and the current applied at 0.8mAcm<sup>-2</sup> for 1 to 2 hours.



## Dot & Slot Blotters

Dot & slot microfiltration manifolds available in alphanumeric 96 sample throughputs, Severn Biotech's dot and slot blot microfiltration manifolds provide an easy and reproducible means to hybridise proteins and nucleic acids in solution onto membranes. These manifolds, which are machined from high-density acrylic, have precision-lapped mating surfaces that ensure uniform filter/membrane contact without gaskets and 'O' rings. Manifold assembly is simple, being achieved by the alignment and tightening of stainless steel thumbscrews and mating screws, while filters can be cut down to the exact size of the template.



### Technical Specification

	DHM-96
Unit Dimensions (W x D x H)	17 x 10.5 x 7cm
Maximum Sample Capacity	96
Dot Diameter	3mm
Slot Dimensions (W x L)	-
Sample Volume / Dot	100µl
Sample Volume / Slot	-
Minimum Membrane Size (W x L)	7.5 x 11.3cm
Vacuum Port External Diameter	7mm
Vacuum Port Internal Diameter	6mm
Maximum Operating Temperature	65°C
Working Pressure of Pump or Water Aspirator	600mm Hg (0.8 Bar)

### Complete System

96-well Dot Blot Hybridisation Manifold in 8 x 12 array, comprising paired upper dot-forming modules for dots 3mm in diameter, and lower vacuum chamber module. **DHM-96**

### Benefits Include

- **Rapid transfer assured within minutes** - dot/slot microfiltration manifold allows unfractionated samples to be immobilised onto a membrane for immediate screening with nucleic acid probes or antibodies
- **DHM-96** - for 7.5 x 11.3cm membranes - 96-sample throughput

# Electrophoresis Equipment

## Power Supplies

### Consort EV243 Power Supply Units

The voltage and current can be adjusted at any time during a run, and are displayed on the unit in bright, easy-to-read digits. Nine different program settings, each with 9 different parameters, allow more complex, multi-step techniques to be programmed and stored. The EV243 power supplies include voltage ramping, automatic crossover and recovery after power failure as standard, in addition to full protection against overload and accidental short circuit.



#### Technical Specification

	<b>EV243</b>
Voltage	0...400V
Current	0...300mA
Power	0...50W
Parameter Range	1...100% of full scale
Timer	0...99:59h
Volt-hours	0...99.99kVh
Display	LCD, 2x16 characters
Resolution	1V, 1mA, 1W
Programs	9x9 set of parameters
Outputs	3 in parallel, 4mm sockets
Minimum load resistance	30Ω
Buffer depletion detection	on/off, programmable
No load detection	on/off, programmable
Ground leakage detection	✓
Overload detection	✓
Computer control	✓
Data/Logging	3600 values
RS232	9600b/s
Ambient temperature	0...40°C
Relative humidity	0...95%, non condensing
Power requirements	210...250VAC, 50/60Hz, 75W
Dimensions (WxDxH)	24x20x13cm
Weight	3kg

#### Complete System

400 Volt, 300 Milliamp, 50 Watt power supply for 230Vac mains supply **EV243**

#### Benefits Include

- Compact, portable and safe
- Manual and method programming
- Constant voltage, current or power settings
- Automatic crossover
- Overloaded protection
- Short circuit protection
- Three-year warranty



# Electrophoresis Equipment

## PCR Products

### The GLE-UVSC UV Sterilisation Cabinet

The Severn Biotech GLE-UVSC UV sterilisation cabinet provides effective decontamination of reagents and equipment before carrying out sensitive PCR<sup>®</sup> reactions, particularly when amplifying DNA sequences which either in limited supply or of low copy number. Four timer-controlled 15-Watt UV-C bulbs enable the user to control the exposure time and dose of high energy UV-C irradiation required to denature nucleic acids that cause unwanted background contamination, while a timer override switch allows the UV source to remain on indefinitely if preferred. Safety interlocks switch-off the UV-C bulbs automatically when the cabinet side doors are opened, preventing accidental exposure to the UV source. The cabinet's construction from UV-C-impermeable 10mm acrylic also serves as an effective barrier against radioactive isotopes, allowing the users to work in complete safety with high energy B-emitters such as <sup>32</sup>P. A single white light bulb illuminates the work area when the cabinet is in use.



are opened, preventing accidental exposure to the UV source. The cabinet's construction from UV-C-impermeable 10mm acrylic also serves as an effective barrier against radioactive isotopes, allowing the users to work in complete safety with high energy B-emitters such as <sup>32</sup>P. A single white light bulb illuminates the work area when the cabinet is in use.

#### Technical Specification

External Dimensions (W x D x H)	56x42x77cm
Internal Dimensions (W x D x H)	54x40x75cm
Thickness of Acrylic	10mm; confers protection against the UV-C wavelength and high energy B-emitters
UV-C Bulbs	4x 15W; 254nm wavelength
White Light Bulb	1 x 15W; visible wavelength
Timer Control	0-120 minutes
Weight	19Kg

#### Complete System

UV sterilisation cabinet for 230Vac mains power supply Universal Power Supply	<b>GLE-UVSC</b>
--	-----------------

#### Replacement Parts & Accessories

1 X UV germicidal bulb, 15W, 254nm	<b>34-0008-01</b>
1 X PVC radiation safety tray, 68 x 54cm (WxL)	<b>RPP-TY6854</b>
25 x APET liners, 68 x 54cm (WxL)	<b>RPP-TL6854</b>

#### Benefits Include

- **Four 15-Watt UV-C bulbs** - generate sufficient high energy UV-C irradiation to denature nucleic acids in as little as 30 minutes, minimising unwanted background contamination in PCR reactions
- **Optimal reflectors** - provide uniform irradiation of the whole work surface area within the cabinet
- **Timer-control** - affords the user total control over exposure time and UV-dosage
- **Timer override switch** - for constant UV-C irradiation
- **Safety interlocks** - immediately cut out the UV source when the side doors are opened, preventing accidental UV exposure
- **10mm optical acrylic** - acts as a safety barrier to UV-C and B radiation, allowing the cabinet to be used as a radiation work station if preferred
- **White light** - illuminates the work area when the cabinet is in use

# Electrophoresis Equipment

## Safety Trays and Liners

Severn Biotech is now supplying Plastic spillage trays for Laboratory use.

The rigid PVC base spillage trays feature specially designed stabilising edges and rounded corners for easy cleaning. Additionally, the liner's non-porous surface allows valuable samples to be retrieved - something which is clearly not possible with absorbent paper protectors.






Unlike disposable paper bench protectors, Safety Tray Liners are re-usable. This helps reduce lab running costs and drastically reduces contaminated waste volumes where possible.

Trays are available in two colours coded for use in different laboratory applications with the corresponding liner for the size of tray.

### Benefits Include

- ▲ Saves on running cost
- ▲ Contains liquid spillages
- ▲ Provides clearly defined work area
- ▲ Easily cleaned
- ▲ APET - environmentally friendly when incinerated
- ▲ Suitable for most hazardous spillages
- ▲ Anti-static and non-porous

Colour	Ext Dimensions	Int Dimensions	Base only	Liners
<b>White General Purpose</b> 	46 x 26cm	40.5 x 20cm	SBL-TW4626	SBL-TL4626
	54 x 34cm	46 x 26cm	SBL-TW5434	SBL-TL5434
	57 x 54cm	45.5 x 43cm	SBL-TW5754	SBL-TL5754
	68 x 54cm	56.5 x 42.5cm	SBL-TW6854	SBL-TL6854
	70 x 46cm	57 x 35cm	SBL-TW7046	SBL-TL7046
	113 x 54cm	100 x 42cm	SBL-TW11354	SBL-TL11354
<b>Yellow Radiation Hazard</b> 	46 x 26cm	40.5 x 20cm	SBL-TY4626	SBL-TL4626
	54 x 34cm	46 x 26cm	SBL-TY5434	SBL-TL5434
	57 x 54cm	45.5 x 43cm	SBL-TY5754	SBL-TL5754
	68 x 54cm	56.5 x 42.5cm	SBL-TY6854	SBL-TL6854
	70 x 46cm	57 x 35cm	SBL-TY7046	SBL-TL7046
	113 x 54cm	100 x 42cm	SBL-TY11354	SBL-TL11354
<b>White Biohazard</b> 	46 x 26cm	40.5 x 20cm	SBL-TO4626	SBL-TL4626
	54 x 34cm	46 x 26cm	SBL-TO5434	SBL-TL5434
	57 x 54cm	45.5 x 43cm	SBL-TO5754	SBL-TL5754
	68 x 54cm	56.5 x 42.5cm	SBL-TO6854	SBL-TL6854
	70 x 46cm	57 x 35cm	SBL-TO7046	SBL-TL7046
	113 x 54cm	100 x 42cm	SBL-TO11354	SBL-TL11354

## Serological Pipette Rack

These racks are for bench top storage of manual glass or plastic serological pipettes of 0.1ml to 25ml capacity. They have four angled compartments measuring 8 x 8 x 30cm being fabricated from 5mm clear acrylic, stock levels of pre-packed pipettes can be constantly monitored. Additionally, each compartment can accept standard pipette cans and allow one-handed retrieval of pipettes when working in a biological hood.



## General Information

### Research & Development

Severn Biotech's R&D, is currently funded by the EU FP6 initiative and is developing new products for the "COMET" assay, an electrophoresis technique used for assessing cell nuclear damage brought about toxic chemical products.

The technique is a powerful method and used as part of toxicology testing.

This research work has led to a number of new Electrophoresis equipment designs being tested, specific to the assay. As such a number of new products which are presently being tested in our research will be released onto the market in the not too distant future.

### Further Catalogues

#### Reagent Products

Severn Biotech produces and manufactures Reagent products for Molecular Biology and General Laboratory purposes. Towards the end of 2008 we launched our new reagent catalogue which includes over 400 reagents and a new section on forensic science consumables.

#### Bio-molecular Synthesis

Further to this Severn Biotech synthesizes bespoke Oligo-nucleotide and peptide molecules for research and development work. The Peptides products can be labelled with various reporter molecules or conjugated to carrier proteins for use in anti-sera production and purification.

#### Polyclonal Anti-sera

Severn Biotech provides custom peptides for use with and in the production of polyclonal anti-sera. Protocols vary, but are generally over 77days and take into account ELISA testing on pre-immune, test and final sera production.

The Peptide molecules can also be used to make affinity purification columns specific to peptide antibodies and this is provided using a number of different ligand binding techniques.

For further information and a written quotation, please contact Severn Biotech's sales office.

### Terms and conditions of Sale

Please see Severn Biotech Ltd's terms and conditions of sale not outlined here, which are available on request.

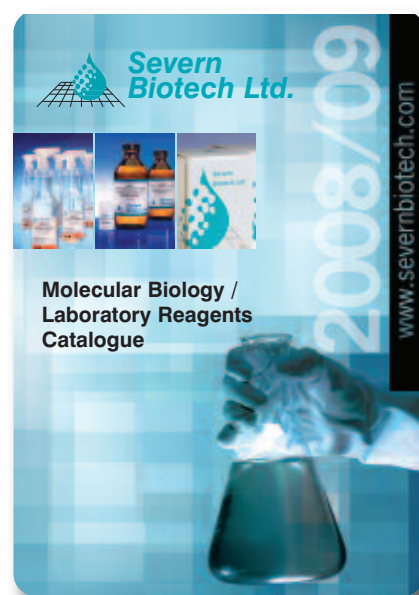
## Other Product Catalogues available from Severn Biotech



**Biomolecular Synthesis**



**Health & Safety**



**Molecular Biology /  
Laboratory Reagents Catalogue**



**INDEPENDENT UK MANUFACTURERS**

Unit 2, Park Lane, Kidderminster, Worcs., DY11 6TJ.

Tel: +44 (0)1562 825286 Fax: +44 (0)1562 825284

E-mail: [info@severnbiotech.com](mailto:info@severnbiotech.com) Website: [www.severnbiotech.com](http://www.severnbiotech.com)