

What is Your Choice in Vertical Electrophoresis Units?



Electrophoresis:

Whether you perform electrophoresis on a regular basis or just once in awhile, the unit you choose will influence your work. Hoefer™ vertical electrophoresis units have been distinguished for over 30 years for the craftsmanship and detailing that make them durable, flexible, and reliable. Each system has been engineered to provide fast and convenient separation while ensuring reproducibility of results. So when you are looking for your next vertical electrophoresis unit, choose Hoefer and receive maximum quality and performance for your investment.

Hoefer miniVE

The Hoefer miniVE Vertical Electrophoresis System offers you both electrophoresis and electrotransfer in one compact instrument, with only four major parts: a gel module, a blot module, a common lower buffer chamber, and a safety lid. You can use two gel modules or two blot modules at one time.

Cast and run gels in one module

The unique gel module is simultaneously a casting stand and an upper buffer chamber with integrated clamps—there are no small parts that might get lost. Assemble a gel sandwich with plates and spacers, clamp it onto the upper buffer chamber, then pivot the bottom sealing gasket into place. Cast your gel. After it is polymerized, take out the comb, release the bottom seal and drop the assembly into the tank for running. There are no extra parts to add or remove, and you never unclamp or reposition the gel sandwich until the run is finished.

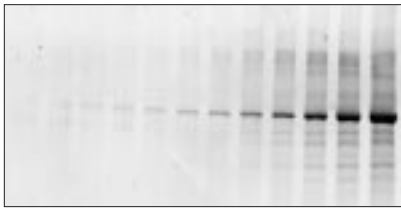


Fig 1. BSA (two-fold dilutions) resolved in 12% polyacrylamide Tris-glycine gels run in miniVE. Stained with 1:5000 dilution of SYPRO™ Red in 7.5% acetic acid, imaged on the Typhoon™ 8600 system.

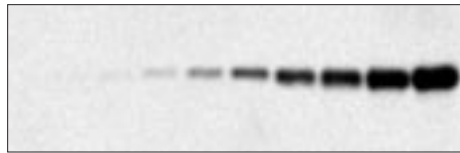


Fig 2. Fluorescent western blot using the miniVE Gel System. Two-fold dilutions of rat brain homogenate were resolved in a 12% Tris-glycine SDS gel. Proteins were transferred to Hybond™-P membrane. Direct immunodetection was done with antimouse IgG-Cy5 conjugated secondary antibody (1:500 dilution) Cy5 western blot imaged directly on the Storm™ system using red fluorescence mode.

Load



Clamp



Seal & Cast



“Semi-wet” blotting module

Electrophoretic blotting from gel to membrane is quick and reproducible. The blot module requires only 300 ml of buffer and 45 min for excellent, tank-style transfers. Two modules fit in the lower buffer chamber and each module can accept two gel/membrane stacks simultaneously.

Compatible

True to its heritage, the miniVE uses the same glass plates, combs, and spacers as the original Hoefer Mighty Small™ units. The miniVE gel modules hold gel cassettes any size from 10 × 8 cm up to 10 × 10.5 cm (w × h).

If you appreciate the convenience of precast gels, you'll appreciate not being restricted to a single gel supplier by your electrophoresis unit. The miniVE accepts precast mini gels from the major gel suppliers.



Fig 3. miniVE system with two gel modules and optional blot module.

Hoefer SE 600

The Hoefer SE 600 is versatile—run denaturing or native polyacrylamide gels; 2-D or isoelectric focusing.

High-quality construction for excellent results

We use the best materials and techniques for a durable, functional instrument. The polysulfone upper buffer chamber has high tensile strength, chemical and impact resistance, and temperature stability. The acrylic of the

tank is carefully annealed to yield stress-free parts that will last for years. Fire-polished edges and strategically placed bevels resist chipping and make the instrument convenient and comfortable to handle. The lid design encourages safe use by disconnecting both high-voltage leads simultaneously.

The thoughtful design and high-quality construction of the SE 600 lead to reproducible results. Lanes are straight and unsmiling, without the distortions that complicate lane-to-lane comparisons.

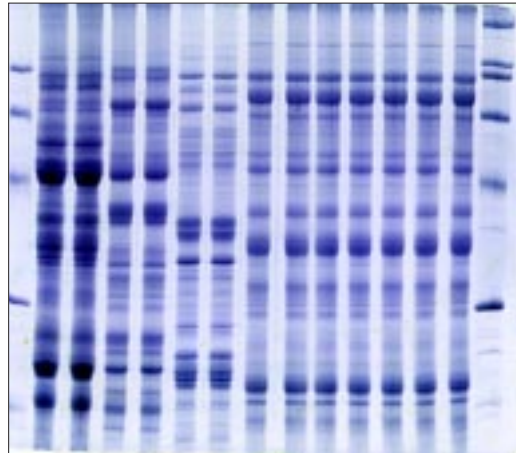


Fig 4. Separation of various legume seed proteins. 12.5% SDS PAGE SE 600 gel. Lane 1, low molecular weight markers, 2-3, *Lens culinaris*, 4-5, *Pisum sativum*, 6-7, *Cicer arietinum*, 8-14, *Glycine max*, 15, High molecular weight markers.

Temperature control is the key

Gels unequally cooled on opposite faces produce slanted bands which look broad or doubled after staining. To avoid this artifact, the SE 600 gel sandwiches and the vertical serpentine heat exchanger are completely immersed in the lower buffer, so heat is drawn quickly and evenly from both faces of the gels and transferred to the heat exchanger. Add a stir-bar and set the unit on a magnetic stirrer—temperatures are uniform, front to back and side to side. Consequently, no smiling bands, and more accurate comparisons to size standards.

Speed, resolution, or more gels?

The SE 600 offers choices beyond the standard 16-cm-long gel. To configure the system you need for speed, order the accessories for an 8-cm gel. For resolution, order 24-cm-gel accessories for your SE 660. If you need to run more gels at once, divider plates can convert single gel sandwiches into “club sandwiches” of two separate gels—up to four identical gels in one SE 600.



Fig 5. The SE 600 Vertical Slab Gel Series: The SE 600 16-cm slab unit, and the SE 660 24-cm slab unit.



Fig 6. 2-D separation of an *E. coli* lysate. A 20-mg sample of *E. coli* lysate was separated on a 130 mm Immobiline DryStrip 3–10 L gel for the first dimension and a Hoefer SE 600 for the second dimension. First dimension separation was run for a total of 2 h 18 min (30 min at 500 V, 30 min at 1 000 V and 78 min at 8 000 V).

Hoefer SE 400

The Hoefer SE 400, The Sturdier™ is a safe, sturdy, and low priced vertical unit. Injection molded of tough, impact-resistant plastics, it will withstand the rigors of daily lab use and teaching labs for years. The perfect replacement for leaking, unsafe homemade units.

The Sturdier is ideal for labs that need multiple units

The Sturdier vertical units run one 16-cm gel (model SE 400) or 24-cm gel (model SE 410) or two gels with an accessory divider plate. The extra length is ideal for complex protein mixtures such as crude cell extracts, or for nucleic acid separations that do not need the full capacity of a large sequencing unit.



Fig 7. SE 400 (left) and SE 410 (right) for standard 16- and 24-cm long slab gels.

Its low cost makes The Sturdier appropriate for labs requiring multiple units as well as for running several gels under differing conditions when temperature control is not crucial. The specially designed safety lid prevents accidental contact with buffer. The unit base forms a convenient built-in casting stand for single gels. To cast multiple gels for one or more units, use the SE 615 or SE 675 Multiple gel casters.

Plates, clamps, spacers, and combs are interchangeable with the SE 600.

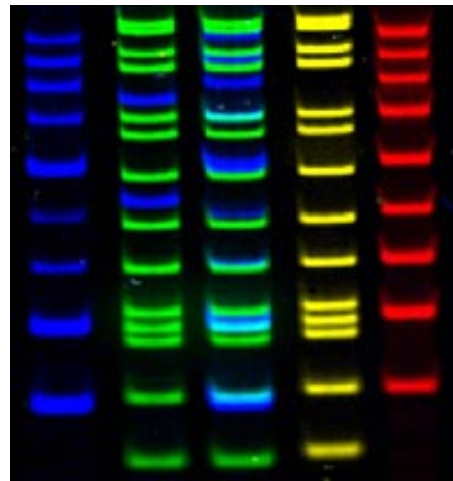


Fig 8. 4-color DNA gel (8% acrylamide native gel) separated on SE 400 and imaged on Typhoon 8600. Labels: fluorescein (blue), TAMRA (green), ROX (yellow) and Cy5 (red). 2 to 10 fmol/band.

Specifications

miniVE

Gel plate size	10.1 × 10.6 cm
Maximum gel size	8.3 × 9.7 cm
Maximum wattage:	Gel module (ea.) 25 W, Blot module (ea.) 15 W
Maximum voltage	500 VDC
Maximum amperage	500 mA
Maximum temperature range	5–75 °C
Minimum upper buffer volume	100 ml
Minimum lower buffer volume	700 ml
Minimum blot module volume	300 ml
Dimensions: (w × h × d)	20.3 × 18.7 × 17.0 cm (8.0 × 7.4 × 6.7 in.)
Weight	1.15 Kg (2.53 Lb.)
Product certifications	EN61010-1, UL3101-1, CSA C22.2 1010.1, CE

SE 600/SE 660

Gel plate size:	SE 600: 18 × 16 cm, SE 660: 18 × 24 cm
Maximum gel size:	SE 600: 14 × 16 cm, SE 660: 14 × 24 cm
Maximum wattage	50 W
Maximum voltage	1 000 VDC
Maximum amperage	500 mA
Maximum temperature range	0–45 °C
Minimum upper buffer volume	SE 600/660: 500 ml
Minimum lower buffer volume	SE 600: 1 000 ml, SE 660: 3 000 ml
Maximum lower buffer volume	SE 600: 4 500 ml, SE 660: 7 500 ml
Dimensions: (w × h × d)	SE 600: 32 × 29 × 14 cm (12.5 × 11.5 × 6 in.) SE 660: 32 × 37 × 14 cm (12.5 × 14.5 × 6 in.)
Weight:	SE 600: 8.6 Kg (19 Lb.), SE 660: 11 Kg (24 Lb.)
Product certifications	EN61010-1, UL3101-1, CSA C22.2 1010.1, CE

SE 400/SE 410

Gel plate size:	SE 400: 18 × 16 cm, SE 410: 18 × 24 cm
Maximum gel size:	SE 400: 14 × 16 cm, SE 410: 14 × 24 cm
Maximum wattage	20 W
Maximum voltage	500 VDC
Maximum amperage	30 mA/gel, total 60 mA
Maximum temperature range	0–45 °C
Minimum upper buffer volume	SE 400/410: 350 ml
Minimum lower buffer volume	SE 400/410: 150 ml
Maximum lower buffer volume	SE 400/610: 350 ml
Dimensions: (w × h × d)	SE 400: 24 × 28 × 15 cm (9.5 × 11 × 6 in.) SE 410: 24 × 36 × 15 cm (9.5 × 14.2 × 6 in.)
Weight:	SE 400: 3.2 Kg (7 Lb.), SE 410: 4.0 Kg (9 Lb.)
Product certifications	EN61010-1, UL3101-1, CSA C22.2 1010.1, CE

Recommended Power Supplies

EPS 301 and EPS 601 Power Supplies

The power behind the gel. Our EPS power supplies are the flexible and economical choice for your electrophoresis application. The EPS power supply has an easy-to-read digital display and can be set for timed or continuous runs.

The EPS 301, an excellent choice for your miniVE, can run two electrophoresis units at up to 300 V or 400 mA with 80 W power. The EPS 601 operates in constant modes up to 600 V, 400 mA, or 100 W and works well with your SE 600.



EPS 301 Power Supply.



EPS 601 Power Supply.

Ordering Information

Mini Vertical Electrophoresis Unit	Code No.
Hoefler miniVE Basic: Includes 2 gel modules, lid and lower buffer chamber.	80-6418-58
Hoefler miniVE complete: Includes 3 rectangular glass plates, 3 notched plates, 2 gel modules, lid, lower buffer chamber, 2 each 1.0-mm-thick 10-well combs and 1.0-mm-thick spacer sets.	80-6418-77
Blot Module: Includes 3 Dacron sponges (1/4" thick), 25 sheets of blotter paper.	80-6418-96
Hoefler SE 235 Mighty Small 4-Gel Caster complete (Order combs and spacers separately)	80-6146-12
Glass plates, 5/pk, 10 × 10.5 cm	80-6150-87
Notched glass plates, 5/pk, 10 × 10.5 cm	80-6150-49
Spacers, T-shaped, 0.75 mm thick, pair	80-6149-92
Spacers, T-shaped, 1.0 mm thick, pair	80-6150-11
Spacers, T-shaped, 1.5 mm thick, pair	80-6150-30
Comb; 5 well, 0.75 mm thick	80-6140-23
Comb; 5 well, 1.0 mm thick	80-6140-42
Comb; 5 well, 1.5 mm thick	80-6140-61
Comb; 9 well, 1.0 mm thick (microtiter)	80-6140-80
Comb; 10 well, 0.75 mm thick	80-6138-71
Comb; 10 well, 1.0 mm thick	80-6138-90
Comb; 10 well, 1.5 mm thick	80-6139-09
Comb; 15 well, 0.75 mm thick	80-6139-47
Comb; 15 well, 1.0 mm thick	80-6139-66
Comb; 15 well, 1.5 mm thick	80-6139-85
Comb; 18 well, 1.0 mm thick (microtiter)	80-6140-04
Comb; prep/ref, 0.75 mm thick	80-6141-56
Comb; prep/ref, 1.0 mm thick	80-6141-75
Comb; prep/ref, 1.5 mm thick	80-6141-94

Economic Vertical Units

For 18 × 16 cm gels:	
SE 400 The Sturdier Vertical unit, basic includes: 1 set of glass plates 18 × 16 cm, 2 clamp assemblies and 2 cams. (Order comb and set of spacers separately)	80-6154-86
SE 400 The Sturdier Vertical unit, complete includes: Basic unit plus 15-well comb and 2 spacers 1.5 mm thick.	80-6155-24
For 18 × 24 cm gels:	
SE 410 The Sturdier Vertical unit basic includes: 1 set of glass plates 18 × 24 cm, two 16 cm and 8 cm clamp assemblies and 2 cams. (Order comb and set of spacers separately)	80-6156-00

Electrophoresis Power Supplies

EPS 301 Power Supply	18-1130-01
EPS 601 Power Supply	18-1130-02

Protein Molecular Weight Markers

LMW Marker Kit	17-0446-01
HMW-SDS Marker Kit	17-0615-01
HMW Marker Kit	17-0445-01

PlusOne™ Chemicals

Acrylamide PAGE, 250 g	17-1302-01
N,N'-methylenebisacrylamide, 100 g	17-1304-02
Ammonium persulphate, 25 g	17-1311-01
SDS, 100 g	17-1313-01
TEMED, 25 ml	17-1312-01
Tris, 500 g	17-1321-01
Glycine, 500 g	17-1323-01
Urea, 500 g	17-1319-01
Silver Staining Kit, Protein	17-1150-01
Silver Staining Kit, DNA	17-6000-30
PhastGel Blue R Coomassie Blue R tablets (40 tablets)	17-0518-01

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Dual Vertical Gel Units with Cooling Qty. Code No.

For 18 × 16 cm gels:

SE 600 Standard Dual Cooled Vertical unit, basic includes: 3 sets of glass plates, four 16-cm clamp assemblies, 6 cams, dual gel casting stand with leveling base and level, buffer dam, Spacer-Mate alignment template, and WonderWedge plate separation tool. (Order 2 combs and 2 sets of 16-cm-long spacers separately)	1	80-6171-58
SE 600 Standard Dual Cooled Vertical unit, complete includes: basic unit, two 15-well combs and two sets of 1.5-mm-thick spacers.	1	80-6171-96

For 18 × 24 cm gels:

SE 660 Dual Cooled Vertical unit, basic includes: 3 sets of glass plates, four 16-cm and four 8-cm clamp assemblies, 6 cams, dual gel casting stand with leveling base and level, buffer dam, Spacer-Mate alignment template, and WonderWedge plate separation tool. (Order 2 combs and 2 sets of 24-cm-long spacers separately)	1	80-6189-82
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Glass Plates

18 × 8 cm:		
Glass plates	2	80-6186-59
Glass plate, club sandwich divider, notched	1	80-6186-78
18 × 16 cm:		
Glass plates	2	80-6178-99
Glass plate, club sandwich divider, notched	1	80-6179-18
18 × 24 cm:		
Glass plates	2	80-6190-01
Glass plate, club sandwich divider, notched	1	80-6190-20
Buffer Saver:		
Buffer Saver, displacement insert for SE 600	1	80-6183-17

Amersham Life Science Products

Rainbow™-coloured molecular weight markers (low molecular weight)	RPN755
Rainbow-coloured molecular weight markers (high molecular weight)	RPN756
Rainbow-coloured molecular weight markers (full range)	RPN800
ECL Plus™ Western blotting system	RPN2132
Hybond ECL™ nitrocellulose membrane, 1 roll, 30 cm × 3 m	RPN303D
Hybond-P, PVDF membrane, 1 roll, 30 cm × 3 m	RPN303F
Hyperfilm™ ECL, 25 sheets/pack, 12.7 × 17.8 cm	RPN1674K
Hyperfilm ECL, 25 sheets/pack, 20.3 × 25.4 cm	RPN3114K

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