About Vertical Electrophoresis

Preventing leaking gels
The two most important things to be aware of when casting gels using the caster systems are:
- that the glass plates have been inserted into the casting or gel running module on a flat surface.
- that the spacers are flush with the bottom edges of the glass plates.

Perfect alignment of spacers can be guaranteed using the new glass plates with bonded spacers.

Overcome polymerisation problems
If you are experiencing problems obtaining good polymerisation adjacent to spacers and combs then this can be overcome by pre-soaking the combs and spacers in distilled water or a 10% solution of ammonium persulphate.

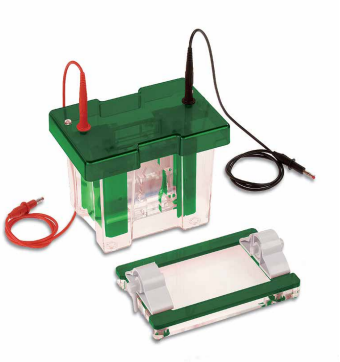
Avoiding over-tightening
Over-tightening the cam pins on the casting systems is a common cause of problems when using these units. Cams should only be tightened just until appreciable pressure is felt.

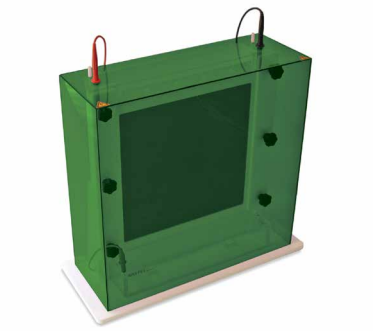
Extracting the tube gel
Tube gel electrophoresis can be difficult because of problems with extracting the tube gel from the capillary tube. The tube gel is best extracted by gently pipetting liquid behind the tube gel and then catching it in the Gel extraction platform.

Enhance transfer
If the gel blot sandwich is too thick, this may bow the cassette causing loss of contact between gel and membrane resulting in poor transfer. The thickness of the blot can be lessened by removing the fibre pad on the non-membrane side of the blot.

EVS1000 series

Vertical units





Overview

Low cost

Injection moulded construction
Durable, leak-proof environment for complete safety and long life.

Easy to use
Leak proof “Plug and Go” casting dams allow gels to be rapidly cast externally while the tank remains in use for electrophoresis.

EVS1100

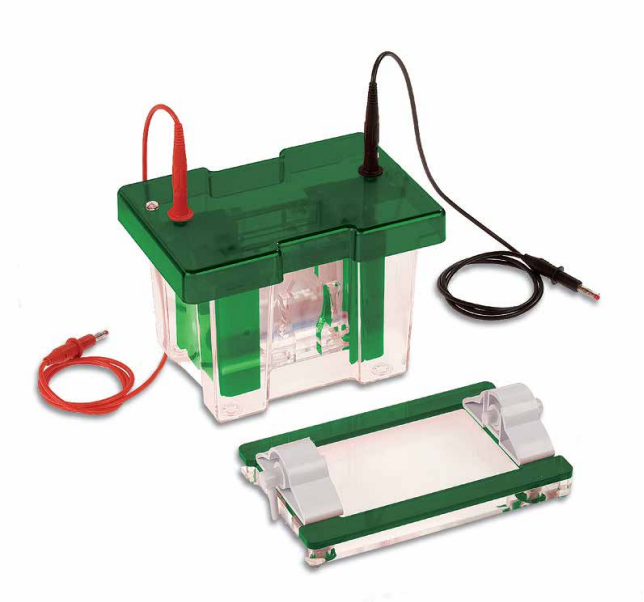
Mini vertical unit

Plate dimensions	10x10 cm
Gel dimensions	7.5x8 cm
Number of gels	1 to 4
Buffer volume	250 ml to 1200 ml
Sample Capacity	80 (20 per gel)
Unit Dimensions	19x13x15 cm
Warranty	12 months

Recommended power supply
EV1450
EV2310

EVS1100 is constructed using the latest injection moulding manufacturing techniques. This gives a high quality, low cost product with unsurpassed finish, durability and strength.

The unit incorporates a sealing system which is compatible with all major types of 8x10 cm and 10x10 cm pre-cast gel. Runs up to four 1 mm thick gels. Gel casting and running utilise the same insert, no transfer of glass plates during gel casting is necessary. The insert allowing very rapid set up of both hand cast and pre-cast gels. Reversible gasket for use with Bio-Rad 'non-eared' or short glass plates. Accessory electro-blotting and tube gel modules are available which use the same outer tank and lid.



Ordering codes

Code	Description
EVS1100-SYS	Mini vertical unit, 2 sets of glass plates with bonded 1 mm thick spacers cooling pack, dummy plate, casting base 2 combs: 12 sample, 1 mm thick, 12 samples

Combs

Code	Description	Sample volume
EVS1100-C5-0.8	0.75 mm thick, 5 sample	70 µl
EVS1100-C9-0.8	0.75 mm thick, 9 sample	35 µl
EVS1100-C10-0.8	0.75 mm thick, 10 sample	30 µl
EVS1100-C12-0.8	0.75 mm thick, 12 sample	25 µl
EVS1100-C20-0.8	0.75 mm thick, 20 sample	15 µl
EVS1100-C5-1.0	1 mm thick, 5 sample	100 µl
EVS1100-C9-1.0	1 mm thick, 9 sample	50 µl
EVS1100-C10-1.0	1 mm thick, 10 sample	40 µl
EVS1100-C12-1.0	1 mm thick, 12 sample	35 µl
EVS1100-C20-1.0	1 mm thick, 20 sample	20 µl
EVS1100-C5-1.5	1.5 mm thick, 5 sample	140 µl
EVS1100-C9-1.5	1.5 mm thick, 9 sample	70 µl
EVS1100-C10-1.5	1.5 mm thick, 10 sample	60 µl
EVS1100-C12-1.5	1.5 mm thick, 12 sample	50 µl
EVS1100-C20-1.5	1.5 mm thick, 20 sample	30 µl
EVS1100-C5-2.0	2 mm thick, 5 sample	200 µl
EVS1100-C9-2.0	2 mm thick, 9 sample	100 µl
EVS1100-C10-2.0	2 mm thick, 10 sample	80 µl
EVS1100-C12-2.0	2 mm thick, 12 sample	70 µl
EVS1100-C20-2.0	2 mm thick, 20 sample	40 µl

Preparative Combs

Code	Description	Sample volume
EVS1100-P1-0.8	0.75 mm thick, prep 1, marker 1	500 µl
EVS1100-P1-1.0	1 mm thick, prep 1, marker 1	650 µl
EVS1100-P1-1.5	1.5 mm thick, prep 1, marker 1	1000 µl
EVS1100-P1-2.0	2 mm thick, prep 1, marker 1	1300 µl

Microtiter Combs

Code	Description	Sample volume
EVS1100-CMT8-0.8	0.75 mm thick, 8 sample MC	40 µl
EVS1100-CMT16-0.8	0.75 mm thick, 16 sample MC	20 µl
EVS1100-CMT8-1.0	1 mm thick, 8 sample MC	60 µl
EVS1100-CMT16-1.0	1 mm thick, 16 sample MC	25 µl
EVS1100-CMT8-1.5	1.5 mm thick, 8 sample MC	80 µl
EVS1100-CMT16-1.5	1.5 mm thick, 16 sample MC	40 µl
EVS1100-CMT8-2.0	2 mm thick, 8 sample MC	120 µl
EVS1100-CMT16-2.0	2 mm thick, 16 sample MC	50 µl

Replacement parts & Accessories

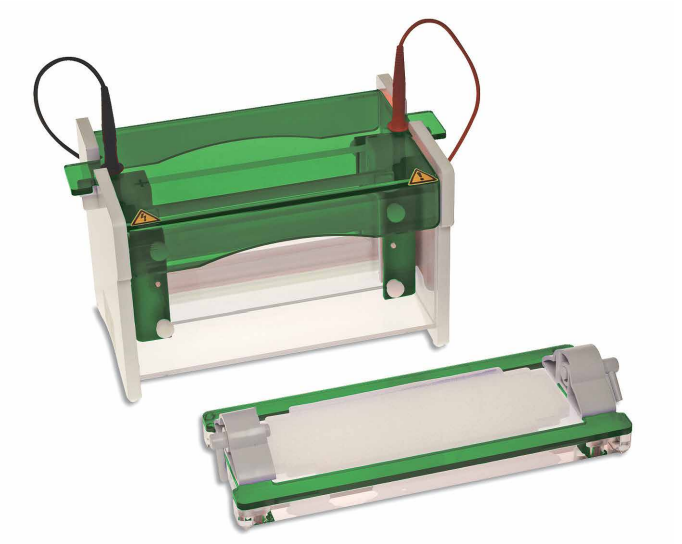
Code	Description
EVS1100-BASE	Gel casting base, 10 cm
EVS1100-SILMAT	Replacement silicone mat for gel casting base, 10 cm
EVS1100-GELINSERT	Inner running module
EVS1100-COOL	Mini cooling pack
EVS1100-NGLASS	Notched glass plates, 10x10 cm, 2 mm thick, pk/2
EVS1100-GLASS	Glass plates, 10x10 cm, 2 mm thick, pk/2
EVS1100-GLASS-SP-0.8	Glass plates, 10x10 cm, + 0.75 mm bonded spacers, pk/2
EVS1100-GLASS-SP-1	Glass plates, 10x10 cm, + 1 mm bonded spacers, pk/2
EVS1100-GLASS-SP-1.5	Glass plates, 10x10 cm, + 1.5 mm bonded spacers, pk/2
EVS1100-GLASS-SP-2	Glass plates, 10x10 cm, + 2 mm bonded spacers, pk/2
EVS1100-DUMMY	Dummy plate, 10x10 cm
EVS1100-SP-0.8	Spacers, 0.75 mm thick, 10 cm, pk/2
EVS1100-SP-1.0	Spacers, 1 mm thick, 10 cm, pk/2
EVS1100-SP-1.5	Spacers, 1.5 mm thick, 10 cm, pk/2
EVS1100-SP-2.0	Spacers, 2 mm thick, 10 cm, pk/2
E1091	Replacement platinum wire, 0.2 mm thick, 50 cm

EVS1200

Mini-wide vertical unit

Plate dimensions	20x10 cm
Gel dimensions	18x8 cm
Number of gels	1 to 4
Buffer volume	600 ml to 2800 ml
Sample Capacity	192 (48 per gel)
Unit Dimensions	26x16x16 cm
Warranty	12 months

Recommended power supply
EV2310
EV2650



EVS1200 allows double the number of samples to be resolved as the mini unit. This allows consistency of sample comparison on a single gel and is designed for those with greater than 20 samples to compare and resolve. Simple set up using ultra soft silicone seals guarantees trouble free glass plate loading and gel casting. Dual gaskets on the gel running insert along with notched and plain glass plates ensure leak proof gel running. Rapid set up cooling retains resolution in extended separations and also saves on buffer volume. 4 mm thick glass plates prevent breakage and have bonded spacers for convenience.

Ordering codes

Code	Description
EVS1200-SYS	Mini-wide vertical unit, 2 sets of glass plates with bonded 1 mm thick spacers cooling pack, dummy plate, casting base 2 combs: 12 sample, 1 mm thick, 24 samples

Combs

Code	Description	Sample volume
EVS1200-C5-0.8	0.75 mm thick, 5 sample	160 µl
EVS1200-C10-0.8	0.75 mm thick, 10 sample	80 µl
EVS1200-C24-0.8	0.75 mm thick, 24 sample	30 µl
EVS1200-C30-0.8	0.75 mm thick, 30 sample	25 µl
EVS1200-C48-0.8	0.75 mm thick, 48 sample	15 µl
EVS1200-C5-1.0	1 mm thick, 5 sample	200 µl
EVS1200-C10-1.0	1 mm thick, 10 sample	100 µl
EVS1200-C24-1.0	1 mm thick, 24 sample	40 µl
EVS1200-C30-1.0	1 mm thick, 30 sample	35 µl
EVS1200-C48-1.0	1 mm thick, 48 sample	20 µl
EVS1200-C5-1.5	1.5 mm thick, 5 sample	320 µl
EVS1200-C10-1.5	1.5 mm thick, 10 sample	160 µl
EVS1200-C24-1.5	1.5 mm thick, 24 sample	60 µl
EVS1200-C30-1.5	1.5 mm thick, 30 sample	50 µl
EVS1200-C48-1.5	1.5 mm thick, 48 sample	30 µl
EVS1200-C5-2.0	2 mm thick, 5 sample	400 µl
EVS1200-C10-2.0	2 mm thick, 10 sample	200 µl
EVS1200-C24-2.0	2 mm thick, 24 sample	80 µl
EVS1200-C30-2.0	2 mm thick, 30 sample	70 µl
EVS1200-C48-2.0	2 mm thick, 48 sample	40 µl

Preparative Combs

Code	Description	Sample volume
EVS1200-P1-0.8	0.75 mm thick, prep 1, marker 1	1100 µl
EVS1200-P1-1.0	1 mm thick, prep 1, marker 1	1500 µl
EVS1200-P1-1.5	1.5 mm thick, prep 1, marker 1	2200 µl
EVS1200-P1-2.0	2 mm thick, prep 1, marker 1	3000 µl

Microtiter Combs

Code	Description	Sample volume
EVS1200-CMT18-0.8	0.75 mm thick, 18 sample MC	40 µl
EVS1200-CMT36-0.8	0.75 mm thick, 36 sample MC	20 µl
EVS1200-CMT18-1.0	1 mm thick, 18 sample MC	50 µl
EVS1200-CMT36-1.0	1 mm thick, 36 sample MC	25 µl
EVS1200-CMT18-1.5	1.5 mm thick, 18 sample MC	80 µl
EVS1200-CMT36-1.5	1.5 mm thick, 36 sample MC	40 µl
EVS1200-CMT18-2.0	2 mm thick, 18 sample MC	100 µl
EVS1200-CMT36-2.0	2 mm thick, 36 sample MC	50 µl

Replacement parts & Accessories

Code	Description
EVS1200-BASE	Gel casting base, 20 cm
EVS1200-SILMAT	Replacement silicone mat for gel casting base, 20 cm
EVS1200-GELINSERT	Inner running module
EVS1200-COOL	Maxi cooling pack
EVS1200-NGLASS	Notched glass plates, 20x10 cm, 4 mm thick, pk/2
EVS1200-GLASS	Glass plates, 20x10 cm, 4 mm thick, pk/2
EVS1200-GLASS-SP-0.8	Glass plates, 20x10 cm, + 0.75 mm bonded spacers, pk/2
EVS1200-GLASS-SP-1.0	Glass plates, 20x10 cm, + 1 mm bonded spacers, pk/2
EVS1200-GLASS-SP-1.5	Glass plates, 20x10 cm, + 1.5 mm bonded spacers, pk/2
EVS1200-GLASS-SP-2.0	Glass plates, 20x10 cm, + 2 mm bonded spacers, pk/2
EVS1200-DUMMY	Dummy plate, 20x10 cm
EVS1200-SP-0.8	Spacers, 0.75 mm thick, 10 cm, pk/2
EVS1200-SP-1.0	Spacers, 1 mm thick, 10 cm, pk/2
EVS1200-SP-1.5	Spacers, 1.5 mm thick, 10 cm, pk/2
EVS1200-SP-2.0	Spacers, 2 mm thick, 10 cm, pk/2
E1091	Replacement platinum wire, 0.2 mm thick, 50 cm

EVS1300

Maxi vertical unit

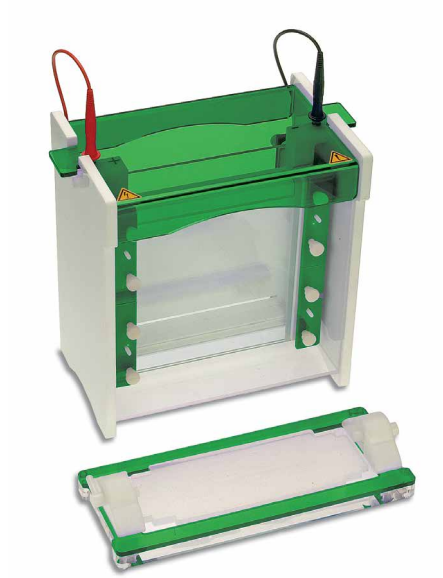
Plate dimensions	20x20 cm
Gel dimensions	16x17.5 cm
Number of gels	1 to 4
Buffer volume	1200 ml to 5600 ml
Sample Capacity	192 (48 per gel)
Unit Dimensions	30x18x27 cm
Warranty	12 months

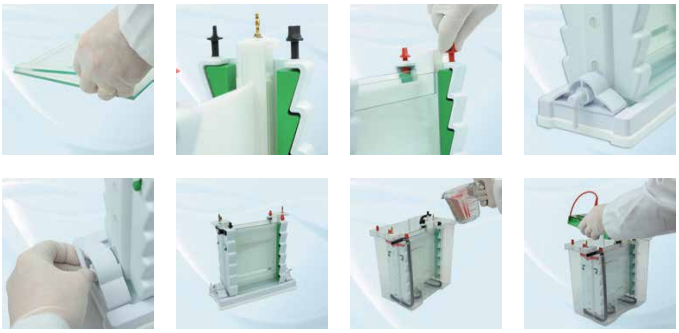
Recommended power supply
EV2650
EV3150
EV3020

EVS1300 is designed to perform a variety of separations, including first- and second-dimension SDS-PAGE, native, preparative, gradient and high-resolution nucleic acid electrophoresis, plus capillary tube gel IEF and electro-blotting.

By introducing innovative, new vertical leak-free casting with vertical screw-pin technology only four screws are now necessary to secure as many 20x20 cm gels. Glass plates compress gently against a flat, level gasket to prevent current leakage from the inner buffer chamber during electrophoresis.

Detachable inner cooling coil connects to the laboratory water supply or a recirculating chiller to provide uniform, smile-free electrophoresis, while allowing runs to be performed at higher voltage. 4 mm thick glass plates reduce breakage and have bonded spacers for added convenience. Prep combs can be used to maximize sample loading and recovery. Accessory electro-blotting and tube gel modules are available which use the same outer tank and lid.





Ordering codes

Code	Description
EVS1300-SYS	Maxi vertical unit, 2 sets of glass plates with bonded 1 mm thick spacers cooling coil, dummy plate, casting base, 2 combs: 24 sample, 1 mm thick

Combs

Code	Description	Sample volume
EVS1300-C5-0.8	0.75 mm thick, 5 sample	160 µl
EVS1300-C10-0.8	0.75 mm thick, 10 sample	80 µl
EVS1300-C24-0.8	0.75 mm thick, 24 sample	30 µl
EVS1300-C30-0.8	0.75 mm thick, 30 sample	25 µl
EVS1300-C48-0.8	0.75 mm thick, 48 sample	15 µl
EVS1300-C5-1.0	1 mm thick, 5 sample	200 µl
EVS1300-C10-1.0	1 mm thick, 10 sample	100 µl
EVS1300-C24-1.0	1 mm thick, 24 sample	40 µl
EVS1300-C30-1.0	1 mm thick, 30 sample	35 µl
EVS1300-C48-1.0	1 mm thick, 48 sample	20 µl
EVS1300-C5-1.5	1.5 mm thick, 5 sample	320 µl
EVS1300-C10-1.5	1.5 mm thick, 10 sample	160 µl
EVS1300-C24-1.5	1.5 mm thick, 24 sample	60 µl
EVS1300-C30-1.5	1.5 mm thick, 30 sample	50 µl
EVS1300-C48-1.5	1.5 mm thick, 48 sample	30 µl
EVS1300-C5-2.0	2 mm thick, 5 sample	400 µl
EVS1300-C10-2.0	2 mm thick, 10 sample	200 µl
EVS1300-C24-2.0	2 mm thick, 24 sample	80 µl
EVS1300-C30-2.0	2 mm thick, 30 sample	70 µl
EVS1300-C48-2.0	2 mm thick, 48 sample	40 µl

Preparative Combs

Code	Description	Sample volume
EVS1300-P1-0.8	0.75 mm thick, prep 1, marker 1	1100 µl
EVS1300-P1-1.0	1 mm thick, prep 1, marker 1	1500 µl
EVS1300-P1-1.5	1.5 mm thick, prep 1, marker 1	2200 µl
EVS1300-P1-2.0	2 mm thick, prep 1, marker 1	3000 µl

Microtiter Combs

Code	Description	Sample volume
EVS1300-CMT18-0.8	0.75 mm thick, 18 sample MC	40 µl
EVS1300-CMT36-0.8	0.75 mm thick, 36 sample MC	20 µl
EVS1300-CMT18-1.0	1 mm thick, 18 sample MC	50 µl
EVS1300-CMT36-1.0	1 mm thick, 36 sample MC	25 µl
EVS1300-CMT18-1.5	1.5 mm thick, 18 sample MC	80 µl
EVS1300-CMT36-1.5	1.5 mm thick, 36 sample MC	40 µl
EVS1300-CMT18-2.0	2 mm thick, 18 sample MC	100 µl
EVS1300-CMT36-2.0	2 mm thick, 36 sample MC	50 µl

Replacement parts & Accessories

Code	Description
EVS1300-BASE	Gel casting base, 20 cm
EVS1300-SILMAT	Replacement silicone mat for gel casting base, 20 cm
EVS1300-GELINSERT	Inner running module
EVS1300-COOL	Maxi cooling pack
EVS1300-NGLASS	Notched glass plates, 20x20 cm, 4 mm thick, pk/2
EVS1300-GLASS	Glass plates, 20x20 cm, 4 mm thick, pk/2
EVS1300-GLASS-SP-0.8	Glass plates, 20x20 cm, + 0.75 mm bonded spacers, pk/2
EVS1300-GLASS-SP-1.0	Glass plates, 20x20 cm, + 1 mm bonded spacers, pk/2
EVS1300-GLASS-SP-1.5	Glass plates, 20x20 cm, + 1.5 mm bonded spacers, pk/2
EVS1300-GLASS-SP-2.0	Glass plates, 20x20 cm, + 2 mm bonded spacers, pk/2
EVS1300-DUMMY	Dummy plate, 20x20 cm
EVS1300-SP-0.8	Spacers, 0.75 mm thick, 20 cm, pk/2
EVS1300-SP-1.0	Spacers, 1 mm thick, 20 cm, pk/2
EVS1300-SP-1.5	Spacers, 1.5 mm thick, 20 cm, pk/2
EVS1300-SP-2.0	Spacers, 2 mm thick, 20 cm, pk/2
E1091	Replacement platinum wire, 0.2 mm thick, 50 cm

EVS1xOO-MULTI

Mini, Mini-wide and Maxi complete modular systems

These systems include all modules and accessories required for slab gel electrophoresis, 2-D electrophoresis and electro-blotting.

The central component is the mini vertical unit, mini-wide vertical unit or 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 tube gel module is capable of resolving up to 10 first dimension gels and the electro-blotting module has a four blot (mini) or three blot (mini-wide and maxi) capacity.

Each of these techniques benefits from rapid set up cooling packs which provide enhanced resolution even during high intensity 2-D electrophoresis and electro-blotting.

All replacement parts and accessories of the corresponding vertical units can also be used for these systems.

Recommended power supply: EV3020

Ordering codes

Code	Description
EVS1100-MULTI	Modular system: EVS1100-SYS + capillary module + electro-blotting module + 2 sets of glass plates with bonded 1 mm thick spacers + 2 combs, 1 mm thick, 12 samples + cooling pack + dummy plate + casting base + 100 capillary tubes (1 mm int. diameter) + blanking plugs + 4 compression cassettes 10x10 cm + 8 fibre pads
EVS1200-MULTI	Modular system: EVS1200-SYS + capillary module + electro-blotting module + 2 sets of glass plates with bonded 1 mm thick spacers + 2 combs, 1 mm thick, 24 samples + cooling pack + dummy plate + casting base + 100 capillary tubes (1 mm int. diameter) + blanking plugs + 3 compression cassettes 20x10 cm + 6 fibre pads
EVS1300-MULTI	Modular system: EVS1300-SYS + capillary module + electro-blotting module + 2 sets of glass plates with bonded 1 mm thick spacers + 2 combs, 1 mm thick, 24 samples + cooling coil + dummy plate + casting base + 100 capillary tubes (1 mm int. diameter) + blanking plugs + 3 compression cassettes 20x20 cm + 6 fibre pads

Replacement parts & Accessories

Code	Description
EVS1100-TUBE-1.0	Mini capillary tubes, 1 mm internal diameter, 8 mm, pk/100
EVS1100-TUBE-1.5	Mini capillary tubes, 1.5 mm internal diameter, 8 mm, pk/100
EVS1100-TUBEPORT	Capillary blanking ports pk/10
EVS1300-TUBE-1.0	Maxi capillary tubes, 1 mm internal diameter, 17 mm, pk/100
EVS1100-BLOTINSERT	Mini blot insert + 4 cassettes 10x10 cm + 8 fibre pads
EVS1100-CASSETTE	Mini blot cassette, 10x10 cm
EVS1100-FIBREPAD	Mini fibre pads, 10x10 cm, pk/6
EVS1100-TUBEINSERT	Mini tube gel insert + 100 capillary tubes (1 mm int. diameter)
EVS1200-BLOTINSERT	Mini-wide blot insert + 3 cassettes 20x10 cm + 6 fibre pads
EVS1200-CASSETTE	Mini-wide blot cassette, 20x10 cm
EVS1200-FIBREPAD	Mini-wide fibre pads, 20x10 cm, pk/6
EVS1200-TUBEINSERT	Mini-wide tube gel insert + 100 capillary tubes
EVS1200-BLOTINSERT	Maxi blot insert + 3 cassettes 20x20 cm + 6 fibre pads
EVS1300-CASSETTE	Maxi blot cassette, 20x20 cm
EVS1300-FIBREPAD	Maxi fibre pads, 20x20 cm, pk/6
EVS1300-TUBEINSERT	Maxi tube gel insert + 100 capillary tubes (1 mm int. diameter)