

# Electrophoresis Systems & Laboratory Equipment

**SERVA**  
Electrophoresis

## Instruments for Life Sciences Research

---

Vertical Electrophoresis

---

Horizontal Electrophoresis

---

Power Supplies

---

Spot Picker

---

Blotting Apparatus

---

Gel Documentation and Analysis

---

Centrifuges

---

Thermoshakers

---

3D Shaker

---

Aspiration Systems

---

## SERVA Serving Scientists

Offering a portfolio of more than 2,500 products, SERVA Electrophoresis is a global leader in providing innovative solutions and technical support to life scientists in academic research and commercial organizations. Our products help to proceed in the laboratory and to simplify the day-to-day work flow for researchers – a comprehensive assortment covering cellular and protein analysis, biochemistry, enzymology, microbiology, microscopy, bioseparation and more.

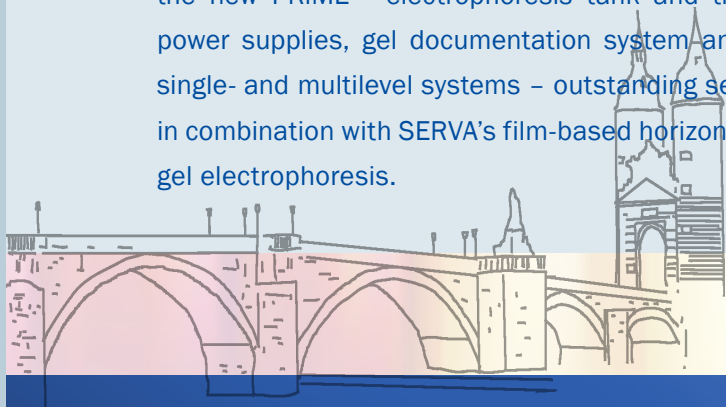
SERVA Serving Scientists – technical competence and total quality management are our basis for continuous improvement and service. Our policy is to pursue the highest standards in product quality, workplace safety and responsibility for the environment we live in. We dedicate expertise and integrity to guarantee consistent product performance and continuity of supply. SERVA is ISO 9001:2008 certified.



## Electrophoresis Made by SERVA

SERVA holds significant intellectual property – electrophoresis specialities are developed and produced at site in Heidelberg, Germany, we are well known for our ampholytes (SERVALYT™) and the wide range of precast gels for vertical and horizontal operation. Proprietary production processes and chemistries continue to be designed and implemented, fueled by many years of expertise to provide unique quality products.

Complimentary to the reagent line SERVA offers the unique range of BlueLine instrumentation – equipment of high-end quality to deliver best performance: the new PRiME™ electrophoresis tank and the submarine units, blotters, power supplies, gel documentation system and our unique HPE™ flat bed single- and multilevel systems – outstanding separation results are achieved in combination with SERVA's film-based horizontal precast gels for 1D and 2D gel electrophoresis.



**Trust in SERVA as a competent partner with many years of experience in development of solutions for your laboratory.**

# Content

## Vertical Electrophoresis

BlueVertical™ PRiME™ vertical electrophoresis mini tank system to run precast SERVAGel™ PRiME™ for premium resolution in minigel electrophoresis. . . . . 4–5

## Horizontal Electrophoresis

HPE™ Tower System for High Performance 2D Electrophoresis . . . . . 6–7

HPE™ BlueHorizon™ Flatbed System to run horizontal gels in IEF (FocusGel, SERVALYT™ PRECOTES™/PreNets™) or 1D PAGE of proteins and DNA/RNA (CleanGel) as well as 2D HPE™ large format gels . . . . . 8–9

BlueMarine™ Submarine Chambers to run DNA or RNA agarose gels . . . . . 10–11

## Power Supplies

BluePower™ Power Supplies to cover most techniques applied in electrophoresis, including BluePower™ Control Kit (read-in, read-out) . . . . . 12–13

## Spot Picker

SERVA HPE™ ScreenPicker, for semi-automated, monitor-supported spot picking from 2D gels . . . . . 14

## Blotting

BlueFlash™ Semi-Dry Blotter for gentle and efficient transfer of proteins from gel to membrane . . . . . 15

## Gel Documentation and Analysis

Digital Imaging and Analysis System III for digital SLR camera based documentation of gels and blots including GelScan 6.0 1D analysis software . . . . . 16

LabImage 1D Gel Analysis Software . . . . . 17

## Centrifuges

SERVA BlueSpin Mini for fast and efficient spin-down at very low noise level . . . . . 18

SERVA BlueSpin Cryo to spin down biological samples under accurate temperature control down to - 20 °C at very low noise level . . . . . 19

## Heating and Cooling Thermoshakers

SERVA BlueThermo H/HC shakers with heat (H) or heat and cool (HC) function, including a broad range of exchangeable thermoblocks . . . . . 20

## 3D Shaker

SERVA 3D Shaker for gel staining and more . . . . . 21

## Aspiration Systems

SERVA BlueCell aspiration system with internal pump (250 mbar, 25 L / min) . . . . . 22

SERVA BlueCell Vario aspiration system with internal pump (100 mbar, 17 L / min) . . . . . 22

SERVA BlueCell Basic aspiration system with external pump (700 mbar, 8 L / min) . . . . . 23

## BlueVertical™ PRiME™

- high quality mini gel tank system

The new BlueVertical™ PRiME™ electrophoresis chamber is a perfect instrument for vertical mini gel electrophoresis of proteins and nucleic acids. When applied in combination with SERVAGel™ precast gels „Premium Resolution in Minigel Electrophoresis (=PRiME™)“ will be guaranteed.

The BlueVertical™ PRiME™ electrophoresis mini tank system has been developed to run precast gels in SDS PAGE, native PAGE, IEF or nucleic acid PAGE applications. The unique innovative clamp system keeps the gel cassettes in their correct position at the inner core running module, leak-free and ready to start within seconds. Built-in convenient operation features result in improved daily work.



- Superb results
- Top resolution
- Easy and safe to handle
- Unique, leak-free clamp system
- Smart design – made in Germany
- For SERVAGel™ precast gels

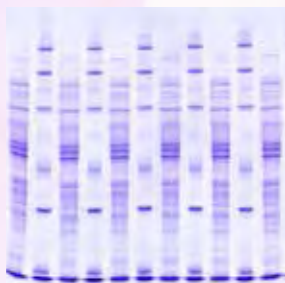


### Convenient and easy to operate

It is fast and simple to run two slab gels in parallel using the BlueVertical™ PRiME™. Unpack the SERVAGel™ PRiME™ precast gel, put it into the inner core unit and simply close the clamps. You will hear a soft „click“ – the gel is firmly positioned, leak-free. The locating pegs of the inner core unit will ensure that the unit is placed correctly into the buffer tank. Load your samples, close the safety lid. It will fit in one orientation only – this ensures right and safe connection to the power supply.

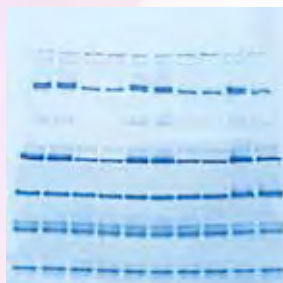
**BlueVertical™ PRiME™ – the perfect vertical electrophoresis system  
for premium resolution in mini gel electrophoresis**

BlueVertical™ PRiME™ is a highly developed instrument for versatile applications in vertical electrophoresis of proteins and nucleic acids:



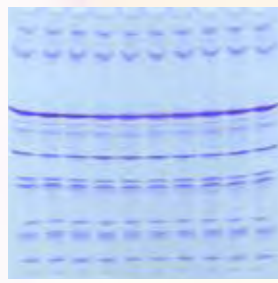
#### SDS PAGE

Separation of *E. coli* extract (lane 1, 3, 5, 7, 9, 11) and SERVA Protein Standard III (cat. no. 39215, lane 2, 4, 6, 8, 10) on SERVAGE™ TG PRiME™ 12 %.



#### Native PAGE

Separation of SERVA Native Marker Liquid Mix for BN/CN PAGE (cat. no. 39219, lane 1 to 10) by Clear Native PAGE on SERVAGE™TN 4–16 % (cat. no. 43252).



#### Isoelectric Focusing

Separation of marker proteins (cat. no. 39212, lane 1 to 10) by vertical IEF on SERVAGE™ IEF 3–10



#### DNA/RNA PAGE

Separation of SERVA FastLoad DNA standards (lane 2 + 6: 50 bp DNA ladder cat. no. 39315.01; lane 3 + 8: 100 bp DNA ladder cat. No. 39316.01; lane 4 + 10 1 kb DNA ladder cat. No. 39317.01; lanes 1, 5, 7, 9, 11 are empty) on SERVAGE™ TG PRiME™ 8 % (cat. no. 39260.01) in 1 x TBE running buffer.

### Running conditions using BlueVertical™PRiME™ in electrophoresis applications

Type of electrophoresis	Type of SERVAGE™ Precast Gel	Running conditions
SDS PAGE	SERVAGE™ TG PRiME™	Volt <sub>const.</sub> : 300 V Time: 35 min
SDS PAGE	SERVAGE™ HSE	Volt <sub>const.</sub> : 400 V Time: 20 min
Native PAGE	SERVAGE™ N	Volt <sub>const.</sub> : 200 V Time: 120 min
Isoelectric Focusing	SERVAGE™ IEF	Volt <sub>const.</sub> : 100 V for 60 min Volt <sub>const.</sub> : 200 V for 60 min Volt <sub>const.</sub> : 500 V for 30 min Time: 150 min.
DNA/RNA PAGE	SERVAGE™ TG PRiME™	mA <sub>const.</sub> : 35 mA Time: 40 min

### Specifications

Inner buffer volume	200 ml
Outer buffer volume	450 ml
Voltage (max)	500 Volt
Current (max)	250 mA
Operating temperature	4 °C – 65 °C
Electrodes	Platinum wire (0.2 mm, 99.99 %)
Dimensions (WxHxD)	160 x 156 x 95 mm
Weight	1.2 kg



### Ordering information

Product	Qty	Cat. no.
BlueVertical™ PRiME™	1 Unit	BV 104
Dummy Plate	1 Piece	BV 104-7
BluePower™ 500 Power Supply	1 Unit	BP 500x4

## HPE™ Tower System

- enabling high performance electrophoresis

The SERVA HPE™ Tower System is a multilevel flatbed electrophoresis device providing unmatched resolution, reproducibility and sensitivity – the first true „High Performance Electrophoresis (HPE™)“ system.

Up to four polyacrylamide gels can be operated simultaneously to conduct either 1- and 2-dimensional separations. Appropriate gels were developed especially for use with the HPE™ tower – a fine-tuned technology which features superb resolution and allows the researcher to achieve outstanding results. HPE™ outperforms any conventional 2D PAGE system.

The HPE™ Tower System is delivered with the following system components: HPE™ Tower, power supply with monitoring software to log the electrical parameters during gel electrophoresis, external cooling unit.

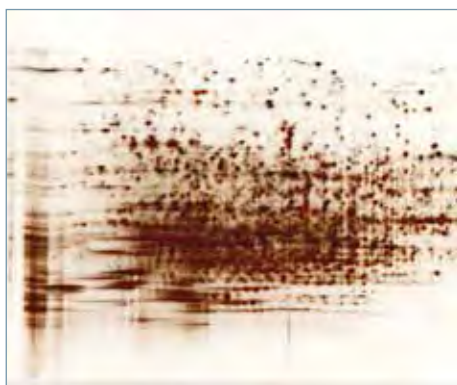


- Unmatched resolution and reproducibility
- Precast HPE™ 2D gels developed especially for use with the HPE™ tower (see below)
- Up to 25 % more spots compared to traditional vertical 2D PAGE (Moche et al., Electrophoresis 2013, 34, 1510–1516)
- Up to 4 gels per run
- Easy and safe to handle
- Smart design – made in Germany

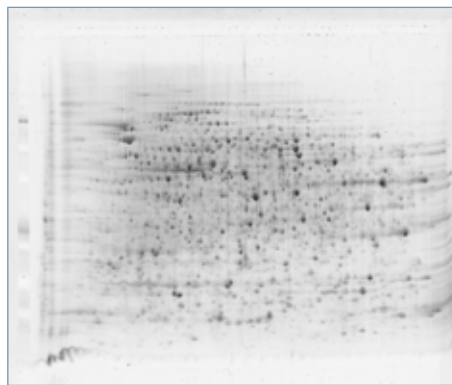
The HPE™ Tower system is compatible to all kinds of flatbed gels both self-cast and precast. SERVA offers the following precast flatbed gel types:

- | HPE™ 2D gels for 2<sup>nd</sup> dimension in 2D PAGE
- | SERVA IPG *BlueStrips* for 1<sup>st</sup> dimension in 2D PAGE
- | SERVALYT™ PRECOTES™/PreNets™ for IEF
- | FocusGels for IEF
- | CleanGels for 1D PAGE

**HPE™ Tower System – superior performance in large format 2D gel electrophoresis**



**2D HPE™ Large Gel**  
2D PAGE of *E. coli* extract: 1<sup>st</sup> dimension on SERVA IPG BlueStrip (24 cm/3–10), 2<sup>nd</sup> dimension on SERVA HPE™ Large Format Gel 12.5 % NF, silver stained



**2D HPE™ Large Gel**  
2D PAGE of *E. coli* extract: 1<sup>st</sup> dimension on SERVA IPG BlueStrip (24 cm/3–10), 2<sup>nd</sup> dimension on SERVA HPE™ Large Format Gel 12.5 % NF, stained with SERVA Purple

## 2D HPE™ Gels

- Film-backed, 0.65 mm thin gels
- Available in three formats:
  - 2D HPE™ Large Gels (255 x 200 mm) to run 1 x 24 cm IPG strip (plus 1 marker lane)
  - 2D HPE™ Double Gels (250 x 110 mm) to run 2 x 11 cm IPG strips (plus 1 marker lane)
  - 2D HPE™ Triple Gels ( 250 x 110 mm) to run 3 x 7 cm IPG strips (plus 2 marker lanes)
- All kits include running and equilibration buffers, wicks and cooling contact fluid

### Specifications

Voltage (max.)	1500 V
Current (max.)	40 mA
Electrophoresis platforms	4
Maximum gel size per drawer	260 x 205 mm
Electrode distance	270 mm
Temperature operating range	4 °C to 30 °C
Dimensions (WxHxD)	450 x 500 x 550 mm
Weight	35 kg

### Ordering information

Product	Description	Qty	Cat. no.
HPE™ Tower System	HPE™ Tower, Power Supply Package, Cooling Unit	1 System	HPE-TS2
HPE™ Tower	HPE™ Tower	1 Piece	HPE-T02
HPE™ Power Supply	1500 V, 400 mA, 300 W	1 Piece	HPE-PS1
BluePower™ Control Kit	Software, USB adaptor	1 Kit	BP-PCSV01
HPE™ Power Supply Package	Power Supply, Control Kit	1 System	HPE-PSP
HPE™ Cooling Unit	Chiller	1 Piece	HPE-CU1
Paper Pool	For soaking electrode wicks	1 Piece	HPE-A02

## HPE™ BlueHorizon™

- optimized performance in cooled flatbed gel electrophoresis

The HPE™ BlueHorizon™ is a flatbed system for horizontal electrophoresis using pre-cast gels, self-cast gels and gel strips. Main applications are isoelectric focusing (IEF) including the run of IPG strips (like SERVA IPG *BlueStrips*) in 2D PAGE and SDS PAGE, but also the separation of nucleic acids in polyacrylamide gels.

The unit consists of a stable metal housing and an integrated drawer. The drawer holds the cooling plate with connectors for the external refrigeration system (e.g. the circulatory refrigerator bath HPE™ Cooling Unit, cat. no. HPE-CU1). The cooling plate is made from special ceramic material (maximum gel size 260 x 205 mm) for efficient cooling. It provides even heat dissipation, allowing to run gels at a temperature as low as 4 °C. This is particularly important when applying high voltage to thin isoelectric focusing (IEF) gels.

The electrode lid comes with one pair of platinum electrodes. Three fixed electrode positions allow the usage of a wide range of different sized gels. Optional, an electrode lid with a triple electrode arrangement for bi-directional gel run is available. The easy-to-clean housing allows placing the power supply on top of the unit saving valuable space on your bench.

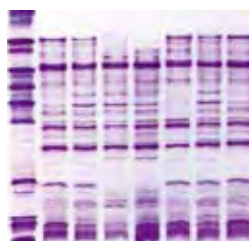


- High capacity cooling plate suitable for high voltage applications like IEF etc.
- Fixed platinum electrode distances of 270 mm, 195 mm and 115 mm
- For all kinds of film-backed flatbed gels, self-cast or precast (see p. 9)
- Samples are easy to load
- Economical reagent usage (minimizing running buffer volume)
- Smart design - made in Germany

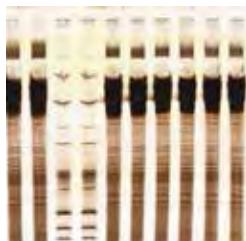
**HPE™ BlueHorizon™ – a highly sophisticated instrument to run horizontal gels under reliable temperature control**



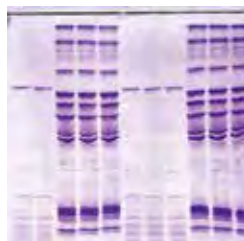
HPE™ BlueHorizon™ is a highly developed instrument for versatile applications in horizontal electrophoresis of proteins and nucleic acids:



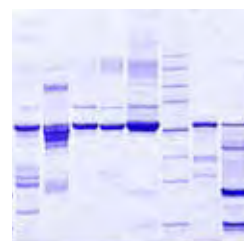
**Native IEF on PRECOTES**  
IEF of proteins isolated from different potato cultivars separated on SERVALYT™ PRECOTES™



**Native IEF on FocusGel**  
Isoelectric Focusing of proteins on FocusGel 3-10



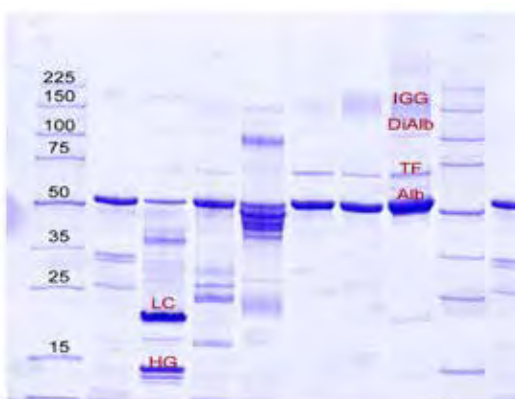
**Denaturing IEF on Blank PRECOTES**  
Separation of proteins on SERVA Blank PRECOTES™ equilibrated with SERVALYT™ pH 3-10 in the presence of 8 M urea



**SDS PAGE on CleanGel**  
Separation of urinary proteins by horizontal 1D SDS PAGE on CleanGel (see also below for more details)



**Serum/CSF analysis**  
Comparison of CSF lanes (numbers) and serum lanes (S), separated on FocusGel 6-11, silver stained.



**Urinary protein analysis**  
Urinary proteins separated on an SDS Urine Gel (M = Marker, S = Serum, 1,3 = Tubular proteins, 2 = Bence-Jones proteins, 4 = Non-selective glomerular and tubular proteins, 5,6 = Glomerular proteins; PAG 10 % , 25 slots; cat. no. 43391.01; Samples courtesy of: Dr. Christian Weber, Krankenhaus Reinkenheide, Bremerhaven, Germany)

### Specifications

Voltage (max.)	3000 V
Current (max.)	25 mA
Maximum gel size	260 x 205 mm
Electrode distances at	270 mm, 195 mm and 115 mm
Temperature operating range	4 °C to 30 °C
Dimensions (WxHxD)	450 x 500 x 120 mm
Weight	6 kg

### Ordering information

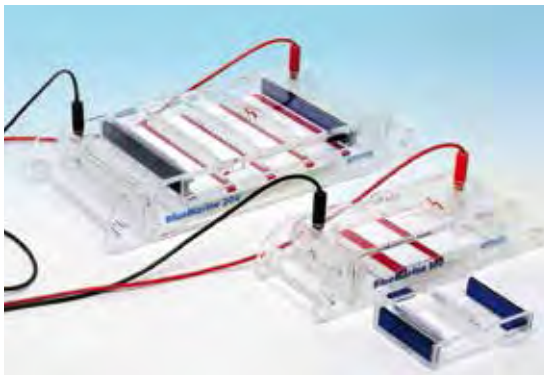
Product	Qty	Cat. no.
HPE™ BlueHorizon™	1 Unit	HPE-BH
BluePower™ 3000x4 Power Supply	1 Piece	BP-3000x4
HPE™ Cooling Unit (Chiller)	1 Unit	HPE-CU1

## BlueMarine™

- robust submarine chamber for agarose gel electrophoresis

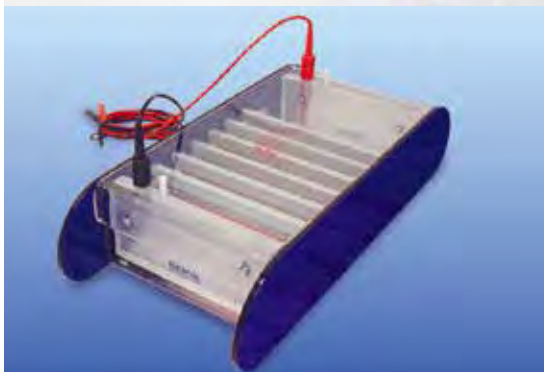
The BlueMarine™ electrophoresis units are applied to separation of nucleic acids in agarose gels. Most common applications are rapid screening of PCR fragments, analysis of restriction digests and plasmid preparations, checking *in vitro* transcripts etc.

BlueMarine™ units are designed for safe and easy handling and feature a rugged, most durable acrylic construction, ensuring a long-lasting lifetime. Double insulated cables are rated safe up to 3000 volts. Gold plated electrical connectors are corrosion-free. The recessed power connectors are integrated into the safety lid. The new designed platinum electrodes can be easily replaced by the user.



### BlueMarine™ 100/200

- Robust acrylic construction
- UV transparent gel trays
- Casting gates for leak-free gel pouring
- Red contrasting strips for easy sample loading
- Broad range of accessories available
- Smart design – made in Germany



### BlueMarine™ HTS

- Innovative system for high-throughput analysis
- Includes 6 aluminium combs with 17 sample wells each
- Includes 2 gel casting gates for leak-free gel casting
- For 102 samples, separation distance max. 6 cm
- For long runs of 17 single samples, distance max. 18 cm

### BlueMarine™: Accessories

Combs	Gel Trays	Casting Gates	Electrodes
<ul style="list-style-type: none"> <li>■ Variety of combs for all purposes</li> <li>■ For single- and multi-channel pipette</li> <li>■ For analytical and pre-parative applications</li> </ul>	<ul style="list-style-type: none"> <li>■ UV transparent</li> <li>■ With lifting aids to avoid contact with buffer</li> <li>■ Gels can be casted and run in the same tray</li> </ul>	<ul style="list-style-type: none"> <li>■ Leak-free system</li> <li>■ Insert the gasket into the tray and pour the gel</li> <li>■ No extra sealing or taping step required</li> </ul>	<ul style="list-style-type: none"> <li>■ Easy to clean</li> <li>■ Fast replacement if necessary</li> </ul>

**Submarine Agarose Gel Electrophoresis – SERVA offers a complete solution: instruments, agarose gel media, buffers, stains and standards.**

## Accessories - Ordering information

Product	Number of wells	Thickness of comb (mm)	Width of well (mm)	Application	Cat. No.
Comb for BM 100 Depth of well: 10 mm each	14	1.5	3.0	single pipette, analytical	BM 100-14-1.5
	14	2.0	3.0		BM 100-14-2.0
	12	1.0	3.7		BM 100-12-1.0
	12	1.5	3.7		BM 100-12-1.5
	8	1.0	6.0		BM 100-8-1.0
	8	1.5	6.0		BM 100-8-1.5
	1	2.0		preparative	BM 100-P1-2.0
Comb for BM 200 Depth of well: 10 mm each	10	1.0	12	single pipette, analytical	BM 200-10-1.0
	10	1.5	12		BM 200-10-1.5
	10	2.0	12		BM 200-10-2.0
	16	1.0	7		BM 200-16-1.0
	16	1.5	7		BM 200-16-1.5
	16	2.0	7		BM 200-16-2.0
	20	1.0	5		BM 200-20-1.0
	20	1.5	5		BM 200-20-1.5
	20	2.0	5		BM 200-20-2.0
	31	1.0		multi-channel pipette, analytical	BM 200-M31-1.0
	26	1.0			BM 200-M26-1.0
	26	1.5			BM 200-M26-1.5
	26	2.0			BM 200-M26-2.0
	1+2	1.0	125		preparative
1+2	2.0	125	BM 200-P2-1.0		
Gel tray				7 x 10 cm	BM 100-21
				15 x 15 cm	BM 200-15-2
				15 x 20 cm	BM 200-20-2
Casting Gates				for BM 100	BM 100-3
				for BM 200	BM 200-3
Replacement electrode				for BM 100	BM 100-RE
				for BM 200	BM 200-RE

## Specifications

	BlueMarine™ 100	BlueMarine™ 200	BlueMarine™ HTS
Voltage (max)	300 V	500 V	500 V
Current (max)	200 mA	300 mA	300 mA
Gel format	7 x 10 cm	15 x 15 cm; 15 x 20 cm	17.5 x 19.2 cm
Approx. gel volume (5 mm)	35 ml	115 ml; 150 ml	160 ml
Comb positions	2	4	6
Maximum sample number	28	124	102
Electrode distance	180 mm	285 mm	285 mm
Volts per cm	14 - 140 V	20 - 200 V	20 - 200 V
Dimensions (WxHxD)	95 x 80 x 290 mm	175 x 95 x 390 mm	195 x 380 x 800 mm
Weight	0,8 kg	1,6 kg	3,5 kg

## Ordering information

Product	Qty	Cat. no.
BlueMarine™ 100	1 Piece	BM 100
BlueMarine™ 200	1 Piece	BM 200
BlueMarine™ HTS	1 Piece	BM HTS

## BluePower™ Power Supplies

- the force that drives your gel

Different power supplies are needed to cover the large variety of electrophoretic separations such as SDS and native PAGE electrophoresis of proteins, DNA electrophoresis in agarose and PAGE gels, isoelectric focusing, 2D electrophoresis and electrotransfer of proteins in Western-Blotting.

The BluePower™ Control Kit provides the communication between a SERVA power supply and a Windows® personal computer via a USB—Serial converter and a documentation software. It has basically two functions:

- | Monitoring and documenting the voltage, voltage-hour integral, current and power during the time course of an electrophoresis run.
- | Programming, loading, storage and documentation of multistep power supply settings



- | Easy to operate
- | Fully programmable
- | Settings:  $V_{max}$ ,  $mA_{max}$  and  $W_{max}$ , timer, Vh
- | Change of parameters w/o interrupting the run
- | BluePower™ Control Kit for
  - | monitoring of V, mA, W over time
  - | loading, storage and documentation
- | Stable metal housing, large LCD display
- | Smart design - made in Germany

### Specifications

	BluePower™ 200	BluePower™ 500	BluePower™ 1500	BluePower™ 3000
Voltage (max)	200 V	500 V	1500 V	3000 V
Current (max)	2000 mA	1000 mA	400 mA	200 mA
Watt (max.)	200 W	200 W	600 W	300 W
Outlets	4 x 2			
Programmable	Yes (9 programs, 9 steps each)			
Timer	Yes			
Regulation	const. voltage / const. current / const. output / programming			
Compatible with BluePower™ Control Kit	Yes			
Security measures	recognition of load / earthing output jackets / power error test			
Dimensions (WxHxD)	300 x 108x 330 mm			
Weight	5,5 kg			

**Power Supplies for versatile applications in electrophoresis – highest standards in technology and work place safety.**

## Power Supply Selection Guide

SERVA Electrophoresis System	Applied Technique	Gel type	Typical P.S. Settings (max)			Recommended Power Supply	
			Volt	mA	Watt	Product name	Order no.
<b>Nucleic Acid Electrophoresis</b>							
Blue Marine™ HTS	Submarine electrophoresis	self-cast agarose gels	500	300	-	BluePower™ 500x4 Power Supply 500 V, 1000 mA, 200 W	BP-500X4
Blue Marine™ 200	Submarine electrophoresis	self-cast agarose gels	500	300	-	BluePower™ 500x4 Power Supply 500 V, 1000 mA, 200 W	BP-500X4
Blue Marine™ 100	Submarine electrophoresis	self-cast agarose gels	300	200	-	BluePower™ 500x4 Power Supply 500 V, 1000 mA, 200 W	BP-500X4
<b>Vertical Protein Electrophoresis</b>							
BlueVertical™ PRiME™	SDS and Native PAGE	SERVAge™ TG PRiME™ and all other mini Vertical SERVAgels	300	100	30	BluePower™ 500x4 Power Supply 500 V, 1000 mA, 200 W	BP-500X4
	IEF	SERVAge™ IEF	500	10	10	BluePower™ 500x4 Power Supply 500 V, 1000 mA, 200 W	BP-500X4
<b>Horizontal Protein Electrophoresis</b>							
Blue Horizon™	IEF	FocusGel, PRECOTES™				BluePower™ 3000x4 Power Supply 3000 V, 200 mA, 300 W	BP-3000X4
	SDS & Native PAGE	1D SDS Urea Gel	1000	50	60	BluePower™ 1500x4 Power Supply 1500 V, 400 mA, 300 W	BP-1500X4
HPE™ Tower	2D Electrophoresis	2D HPE™	1500	200	200	BluePower™ 1500x4 Power Supply 1500 V, 400 mA, 300 W	BP-1500X4
	SDS PAGE	1D SDS, CleanGel	1500	200	200	BluePower™ 1500x4 Power Supply 1500 V, 400 mA, 300 W	BP-1500X4
	IEF	FocusGel, PRECOTES™				BluePower™ 3000x4 Power Supply 3000 V, 200 mA, 300 W	BP-3000X4
<b>Protein Blotting</b>							
	Tank Blotting		200	2000	100	BluePower™ 200x4 Power Supply 200 V, 2 A, 200 W	BP-200X4
	Semi-Dry Blotting		30	500	30	BluePower™ 200x4 Power Supply 200 V, 2 A, 200 W	BP-200X4

## Ordering information

Product	Qty	Cat. no.
BluePower™ 200x4	1 Piece	BP-200x4
BluePower™ 500x4	1 Piece	BP-500x4
BluePower™ 1500x4	1 Piece	BP-1500x4
BluePower™ 3000x4	1 Piece	BP-3000x4
BluePower™ Control Kit	1 Kit	BP-PCSV01

## SERVA HPE™ ScreenPicker

- semi-manual spot picking from fluorescent gels

Without automated picker, error-free manual spot picking from complex fluorescent stained 2D gels is a challenge. To visualize the spots, it usually requires post-staining (silver, Coomassie etc.) of the gel. But these staining methods are less sensitive than fluorescence detection and, in addition, post-stained protein spots may cause problems by interfering with subsequent analysis method (e. g. mass spectrometry).

The SERVA HPE™ ScreenPicker allows semi-manual spot picking from fluorescent gels without the need of visual post staining, sophisticated robotic equipment and software. The gel is placed on a horizontal flat screen which displays the fluorescence scanned 2D image 1:1. Spots to pick are visualized one at a time by crosshair on the image. The plugs are disposed error-free into 96 well plates by using the picking list and the integrated plate identifier control. The SERVA HPE™ ScreenPicker comes complete with PC, software and picker head.



- Semi-manual guided picking – spot by spot
- 2D image displayed 1:1 below the gel on a flat screen
- VIS light for safe usage
- Error-free plug disposal
- Low cost, affordable by any lab

### Advantages of SERVA HPE™ ScreenPicker:

- | Reads any image or pick list format
- | Designed for HPE™ gels on non-fluorescent plastic backing and gels on glass plates
- | Precise XY-carriage and robust picker head
- | Maintenance-free

### Specifications

Dimensions (WxHxD)	550 x 360 x 80 mm
Weight	7 kg

### Ordering information

Product	Qty	Cat. no.
SERVA HPE™ ScreenPicker	1 Unit	HPE-SP1
OneTouch 2D gel spotpicker head, 1.5 mm	1 Piece	P2-D15
OneTouch 2D gel spotpicker head, 3.0 mm	1 Piece	P2-D30
Protection Shield (500 x 200 x 400 mm)	1 Piece	PS-50
Fluorescent stickers (5 mm in diameter)	450 Pieces	HPE-FS05

# BlueFlash™ Semi-Dry Blotter

- homogeneous protein transfer from gel to membrane

In tank blotting a large volume of buffer is required. To achieve a high electric field strength for rapid blotting, very high current volumes are needed. Consequently, this leads to high heat development. In semi-dry blotting, the closely spaced electrodes separated by filter papers permit electrotransfer of proteins without high current settings. Semi-dry blotting is faster, generates less heat and requires less materials than tank blotting.

Both discontinuous and continuous buffer systems can be applied. Discontinuous buffer systems are particularly recommended because transfer is very homogeneous for a wide range of molecular weights. Even larger proteins up to 200 kDa can be transferred with an efficiency of > 80 %.



- Easy to operate
- Efficient transfer of large proteins
- Five different sizes for different gel formats from 100 x 100 mm up to 385 x 385 mm
- Corrosion resistant carbon electrodes
- Buffer systems applicable:
  - | continuous for proteins with similar MW
  - | discontinuous for proteins with wide range MW contribution
- Stable acrylic housing
- Smart design - made in Germany

## Specifications

	BlueFlash™ Small	BlueFlash™ Medium	BlueFlash™ Large	BlueFlash™ X-Large	BlueFlash™ XX-Large
Blotting Area	100 x 100 mm	150 x 150 mm	260 x 280 mm	385 x 235 mm	385 x 385 mm
Operating range	0.8 - 3.5 mA / cm <sup>2</sup>				
Requirements	200 V, 500 mA	200 V, 500 mA	200 V, 2000 mA	200 V, 2000 mA	200 V, 2000 mA
Buffer volume	0.2 ml / cm <sup>2</sup> x number of sheets + 1.0 ml / cm <sup>2</sup> of membrane + 1.5 ml / cm <sup>2</sup> of gel				
Dimensions	23 x 15 x 8.5 cm	28 x 20 x 8.5 cm	45 x 33 x 8.5 cm	43 x 37 x 8.5 cm	51 x 43 x 8.5 cm
Weight	1,5 kg	2,5 kg	5 kg	6,5 kg	6,5 kg

## Ordering information

Product	Qty	Cat. no.
BlueFlash™ Small	1 Piece	BF-S
BlueFlash™ Medium	1 Piece	BF-M
BlueFlash™ Large	1 Piece	BF-L
BlueFlash™ X-Large	1 Piece	BF-XL
BlueFlash™ XX-Large	1 Kit	BF-XXL

**BlueFlash™ Semi-Dry Blotter – for fast and gentle electrotransfer of proteins**

## Digital Imaging and Analysis System III

- fast and convenient gel documentation

The Digital Imaging and Analysis System III from SERVA is the ideal solution to master the daily tasks of documentation and 1D gel analysis in the routine laboratory work. Solid hardware including a digital SLR camera and easy-to-grasp 1D analysis software GelScan 6.0 are combined to provide an excellent tool to meet your needs. UV-, blue- and white-light trans-illuminator or epi-UV- or white-light are optional.

Capture a quick image of your protein or DNA gel for your records in the lab book and perform an advanced analysis conforming to GLP standards by applying GelScan 6.0. Export pre-formatted data sets into MS Word™, MS Excel™ or MS PowerPoint™ for further analysis or publication. Advanced versions of GelScan (RFLP-, cluster-analysis or HTS) are available on request.

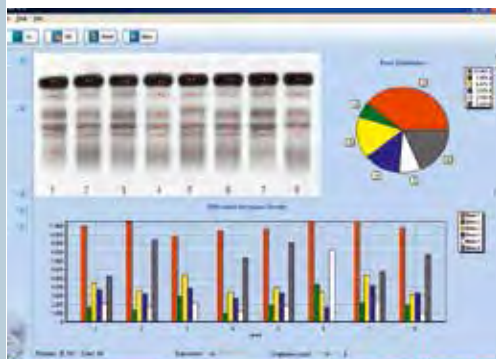


### The Hardware

- For UV-, blue- and white-light applications EtBr, SERVA DNA Stain Clear G, Silver, Coomassie® etc.
- UV filter/holder included
- Stable metal housing
- Large door for easy gel handling
- Digital SLR camera system

### Specifications

Dimensions (WxHxD)	420 x 520 x 550 mm
Weight	12 kg



### The Software GelScan 6.0

- Highly sophisticated 1D analysis
- Determination of molecular weight
- Determination of isoelectric point
- Quantification of bands
- Analysis of expression patterns
- Database for pictures, project, results
- Includes GelScript for easy image annotation

### Ordering information

Product	Qty	Cat. no.
Digital Imaging and Analysis System III	1 piece	DIAS-III
GelScan 6.0 1 D Analysis Software	1 Software	GS-V60



# LabImage 1D Gel Analysis Software

- your tool in 1D gel analysis

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.

LabImage 1D L-320 is the basic version for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.

The L-340 version includes grimage correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance.

Moreover, the L-360 version could detect multiple regions of interest (ROIs) and is fully automatable (create and edit macros for automation, apply macros to single image or image stack).



- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- Compliant with FDA21 CFR part 11 (module required)
- As single and network license available

## Ordering information

Product*	Qty	Cat. no.
LabImage 1D L-320 Gel Analysis	1 License	L-320
LabImage 1D L-340 Gel Analysis	1 License	L-340
LabImage 1D L-360 Gel Analysis for academic	1 License	L-360-A
LabImage 1D L-360 Gel Analysis for corporate	1 License	L-360-C

\* Network licenses (a minimum of 3 licenses is required) are available on request. For network data base, macro+modul as well as L-340 21 CFR Part 11 and L-360 21 CFR Part 11 please inquire.

## SERVA BlueSpin Mini Microcentrifuge

- now you can spin!

The SERVA BlueSpin Mini is a small benchtop microcentrifuge for all kinds of sample preparations and molecular biology experiments such as spin-down of pro- and eucaryotic cells, phenol extraction etc.

The SERVA BlueSpin Mini is a compact and quiet instrument. The centrifuge is operated easily and the digital LED display shows time and speed (RPM, RCF). The SERVA BlueSpin Mini speed can be adjusted up to 13,500 rpm or 12,300 g. The unit has a small footprint and a secure stand. It comes with a fixed angle microtube rotor with plastic lid for 12 microtubes and 12 adaptors for 0.5 ml tubes and 0.2 ml tubes, respectively. A fixed angle cryotube rotor with plastic lid for 8 cryotubes (capacity: 8 x 1.8 ml) as well as a PCR rotor for 4 x 8-tube PCR strips can be ordered separately.



- Max. 13,500 rpm with 12-hole microrotor
- Max. 12 microtubes or 32 PCR tubes
- Automatic RPM / RCF conversion
- „PULSE“ key for quick runs
- Blue LCD display
- Very low noise level

### Specifications (with 12 hole rotor / PCR tube rotor)

Max. RPM	13,500 rpm / 6,000 rpm
Max. RCF	12,300 xg / 1,850 xg
RPM / RCF conversion	Yes
Max. capacity	12 x 2.0 ml tubes / 8 x 1.8 ml cryotubes / 4 x 8-tube PCR strips
Time control	Pulse or timed ≤ 30 min
Noise level	≤ 56 dB
Acc / Dec	≤ 12 / < 16 s
Automatic door release	Yes
Dimensions (WxHxD)	208 x 145 x 245 mm
Weight	4.4 kg

### Ordering information

Product	Qty	Cat. no.
SERVA BlueSpin Mini	1 Piece	BS-Mini
12 Tube Microtube Rotor	1 Piece	BS-MRM
8 Tube Cryotube Rotor	1 Piece	BS-MCR
4 x 8 Tube PCR Strip Rotor	1 Piece	BS-MRP

# SERVA BlueSpin Cryo Microcentrifuge

- refrigerated centrifuge with small footprint!

The SERVA BlueSpin Cryo is a refrigerated compact benchtop microcentrifuge for all kinds of molecular and cell biology experiments such as ethanol precipitation, phenol extraction, nucleic acid preparation, cell-down and spin-down of other temperature sensitive reaction mixtures.

The SERVA BlueSpin Cryo is a solid and quiet instrument. The centrifuge with automatic rotor identification is operated easily and the digital LED display shows time, speed (RPM, RCF) and temperature. The temperature can be set from -20 °C to +40 °C. The centrifuge is delivered without rotor. A selection of four rotor types as well as microtube rotor adaptors for 0.2 and 0.5 ml tubes are available.



- Max. 17,000 rpm / 27,237 g with 24-hole microrotor
- Max. 30 microtubes, 64 PCR tubes (8 x 8-tube strip)
- Temperature range from -20 °C to +40 °C
- FAST COOL button
- „PULSE“ key for quick runs
- Blue LCD display
- Automatic rotor identification
- Programmable (100 programs)
- Very low noise level

## Specifications

Max. RPM	17,000 rpm (rotor dependent)
Max. RCF	27,237 xg (rotor dependent)
RPM / RCF conversion	Yes
Max. capacity	30 x 2.0 ml tubes / 8 x 8-tube PCR strips
Time control	Pulse, timed < 100 min or continuous
Noise level	≤ 56 dB
Acc / Dec	9 / 10 steps
Safety lid lock	Yes
FAST COOL button	Yes
Program memory	100
Temperature range	-20 °C to +40 °C
Imbalance cutout	Yes
Dimensions (WxHxD)	310 x 265 x 620 mm
Weight	43 kg

## Ordering information

Product	Qty	Cat. no.
SERVA BlueSpin Cryo	1 Piece	BS-CRYO
24 Tube Microtube Rotor	1 Piece	BS-MRR24
30 Tube Microtube Rotor	1 Piece	BS-MRR30
18 Microfildertube Rotor	1 Piece	BS-MTR18
8 x 8 Tube PCR Strip Rotor	1 Piece	BS-MRP64
0.2 ml Adaptor	12 Pieces	BS-A02
0.5 ml Adaptor	12 Pieces	BS-A05

## SERVA BlueThermo H/HC

- temperature control on your bench!

The SERVA BlueThermo H and HC shaker are precise heating (H) and heating & cooling (HC) thermoshakers. The instruments deliver highest temperature accuracy due to a 10-point-calibration ( $\pm 0.1^\circ\text{C}$ ), fastest temperature control and even temperature distribution.

The stable construction as well as the latest technology guarantees reliability. The smart touch control panel for different operation modes is perfectly adapted to laboratory setups. Use up to 9 programs with 30 program steps in total. Adjustable functions are timer, interval shaking, short mix and shaking frequencies. Surfaces of housing and touch panel are easy to clean. Units will be delivered without thermoblock. Blocks have to be ordered separately. More than 30 exchangeable blocks are available. Please inquire for a 2-block Thermoshaker or a suitable block for your application.



- Stable metal housing for high reliability
- Precise temperature control by 10-point-calibration ( $\pm 0.1^\circ\text{C}$ ) with large temperature range
- 9 programs
- Flexible with over 30 exchangeable blocks
- Unique touch control panel
- Large temperature range
- Smart design - made in Germany

### Specifications

	BlueThermo H	BlueThermo HC
Temperature operation range	Amb. $+3^\circ\text{C}$ ... $+130^\circ\text{C}$	Amb. $-16^\circ\text{C}$ ... $+100^\circ\text{C}$
Temperature adjustable range	$0^\circ\text{C}$ ... $+135^\circ\text{C}$	$-10^\circ\text{C}$ ... $+105^\circ\text{C}$
Average heating time	$11.5^\circ\text{C} / \text{min}$	$6^\circ\text{C} / \text{min}$
Maximum cooling time	n.a.	$12^\circ\text{C} / \text{min}$
Shaking frequency / orbit	200 - 1500 rpm / 3mm	200 - 1500 rpm / 3 mm
Dimensions (WxDxH)	220 x 330 x 109 mm	220 x 330 x 109 mm
Weight:	6.5 kg	9 kg

### Ordering information

Product	Qty	Cat. no.
SERVA BlueThermo H	1 Piece	BT-H
SERVA BlueThermo HC	1 Piece	BT-HC
Exchangeable Thermoblocks for SERVA BlueThermo	Qty	Cat. no.
Block 96 x 0.2 ml tubes	1 Piece	BT-B96-0.2
Block 38 x 0.5 ml tubes	1 Piece	BT-B38-0.5
Block 24 x 1.5 ml tubes	1 Piece	BT-B24-1.5
Block 24 x 2.0 ml tubes	1 Piece	BT-B24-2.0
Block 24 x 0.5 ml und 1.5 ml tubes	1 Piece	BT-B24-MIX
Block 24 x 1.5 - 2.0 ml cryo tubes	1 Piece	BT-B24-CRYO
Block for 96 well PCR plates	1 Piece	BT-BPCR-96
Block for 96 well microtiter plates	1 Piece	BT-BMTP-96
Block for microtiter plates, flat bottom	1 Piece	BT-BMTP-FLAT

## SERVA BlueShake 3D

- smooth motion on your bench!

The SERVA BlueShake 3D works with a rotational 3D motion and is flexible applicable in various incubation and preparation techniques (e. g. staining/destaining procedures). Due to the large incubation platform of 350 x 350 mm and the smooth 3D motion (including start and stop) even large sized gels can be stained/destained without breaking the gel.

The 3D Shaker is equipped with a digital LED display which shows rotational speed and timer function. Via the user-friendly control panel the rotational speed and time can be manually set. Due to its very low noise level the device is suited for continuous operation.



- Highest flexibility: large platform for individual customer needs
- Quiet operation, suitable for long term work
- Excellent price / performance ratio
- Via touch panel programmable interface
- Rock solid metal housing
- Smart design - made in Germany

### Specifications

	BlueShake 3D
Temperature operation range	+5 °C ...+ 65 °C
Shaking frequency	5 - 50 rpm
Angle of platform	4°
Timer	0 - 120 min
Maximum load	5 kg
Dimension platform (WxDxH)	350 x 350 mm
Dimensions outside (WxDxH)	340 x 400 x 140 mm
Weight:	7.7 kg

### Ordering information

Product	Qty	Cat. no.
SERVA BlueShake 3D	1 Piece	BS-3D

## SERVA BlueCell Aspiration System

- aspiration system for cell biology applications

The SERVA BlueCell aspiration system is a cell culture aspiration device with autoclavable 4 l bottle. The housing is made of easy-care, wear-resistant and specially hard anodised aluminium with a powerful integrated membrane vacuum pump, vacuum controller and mounted safety bottle holder as a compact and space saving unit.

The membrane vacuum pump is noise reduced and perfectly adapted to cell culture lab requirements. It is integrated in the housing and gently aspirates 25 l liquid per minute. By default, a pasteur pipette can be slipped on, but a variety of suction adaptors can be ordered. The fast-lock clutches, integrated to the 4 l polypropylene bottle, ensures an easy removal for cleaning. The safety filter prevents leaking of liquids. A recommended option is the footoperated switch (cat. no. BC-SFO).



- Stable aluminium housing
- Integrated, noise-reduced vacuum pump
- Quickly aspiration of liquids
- Autoclavable 4 l bottle with fast-lock clutches and integrated safety filters
- Includes handle for flow control

Additional features for SERVA BlueCell Vario:

- Multi-user system
- Handle-regulated automatic start / stop function

## SERVA BlueCell Vario Aspiration Systems

- multi-user automatic aspiration systems

Additionally for SERVA BlueCell Vario, suction start / stop is regulated by turning the swivel of the handle. By turning the swivel, the suction rate is continuously adjustable. If the system is closed, the pump shuts down at reaching the max. vacuum. If the vacuum is reduced during the aspiration, the pump turns on to reach the max. vacuum again.

The SERVA BlueCell Vario acts as multi-user system and is extendable by connecting more bottles, handles or complete collection units. The maximum per single pump is 4 bottles with single handle or 2 bottles with double handles.

# SERVA BlueCell Basic Aspiration Systems

- easy handling in aspiration!

The BlueCell Basic is a simple but complete aspiration system with autoclavable 4 l bottle. It is ready to use immediately. The small and low-noise membrane vacuum pump aspirates 8 l liquid per minute.

A handle with flow control (cat. no. BC-HFC) can be attached and connected with different suction system devices. The fast-lock clutches, integrated to the 4 l polypropylene bottle, ensures an easy removal for cleaning. The safety filter prevents leaking of liquids.



- Basic aspiration system
- External, noise-reduced vacuum pump
- Quick aspiration of liquids
- Autoclavable 4 l bottle with fast-lock clutches
- Integrated safety filters
- Handle for flow control can be attached

## Specifications

	BlueCell Basic	BlueCell	BlueCell Vario
Final vacuum	700 mbar abs.	250 mbar abs.	100 mbar abs.
Suction capacity	8 l / min (air)	25 l / min (air)	17 l / min (air)
Bottle volume	4 l	4 l	4 l
Integrated safety filter	yes	yes	yes
Multi user system	no	no	4 x 1 bottle with single handle or 2 x 1 bottle with double handle
Dimensions (WxH xD)	75 x 100 x 60 mm	170 x 220 x 155 mm	170 x 220 x 155 mm
Weight	0,8 kg	5,5 kg	5,5 kg

## Ordering information

Product	Qty	Cat. no.
SERVA BlueCell Basic	1 Piece	BLUECELL-B
SERVA BlueCell Standard	1 Piece	BLUECELL
SERVA BlueCell Vario	1 Piece	BLUECELL-V
Accessories for SERVA BlueCell	Qty	Cat. no.
Bottle Holder	1 Piece	BC-BH4
Safety Filter	1 Piece	BC-SF
Handle with flow control	1 Piece	BC-HFC
Yellow pipette tip aspiration adaptor	1 Piece	BC-SAPT
8-channel aspiration rake adaptor	1 Piece	BC-SAR8
Switch, footoperated	1 Piece	BC-SFO

# SERVA

Electrophoresis

SERVA WORLDWIDE  
[www.serva.de](http://www.serva.de)

SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7 · 69115 Heidelberg  
Germany · Fon: +49 6221 13840-0  
Fax: +49 6221 13840-10  
E-mail: [info@serva.de](mailto:info@serva.de) · [www.serva.de](http://www.serva.de)

[www.serva.de](http://www.serva.de)

