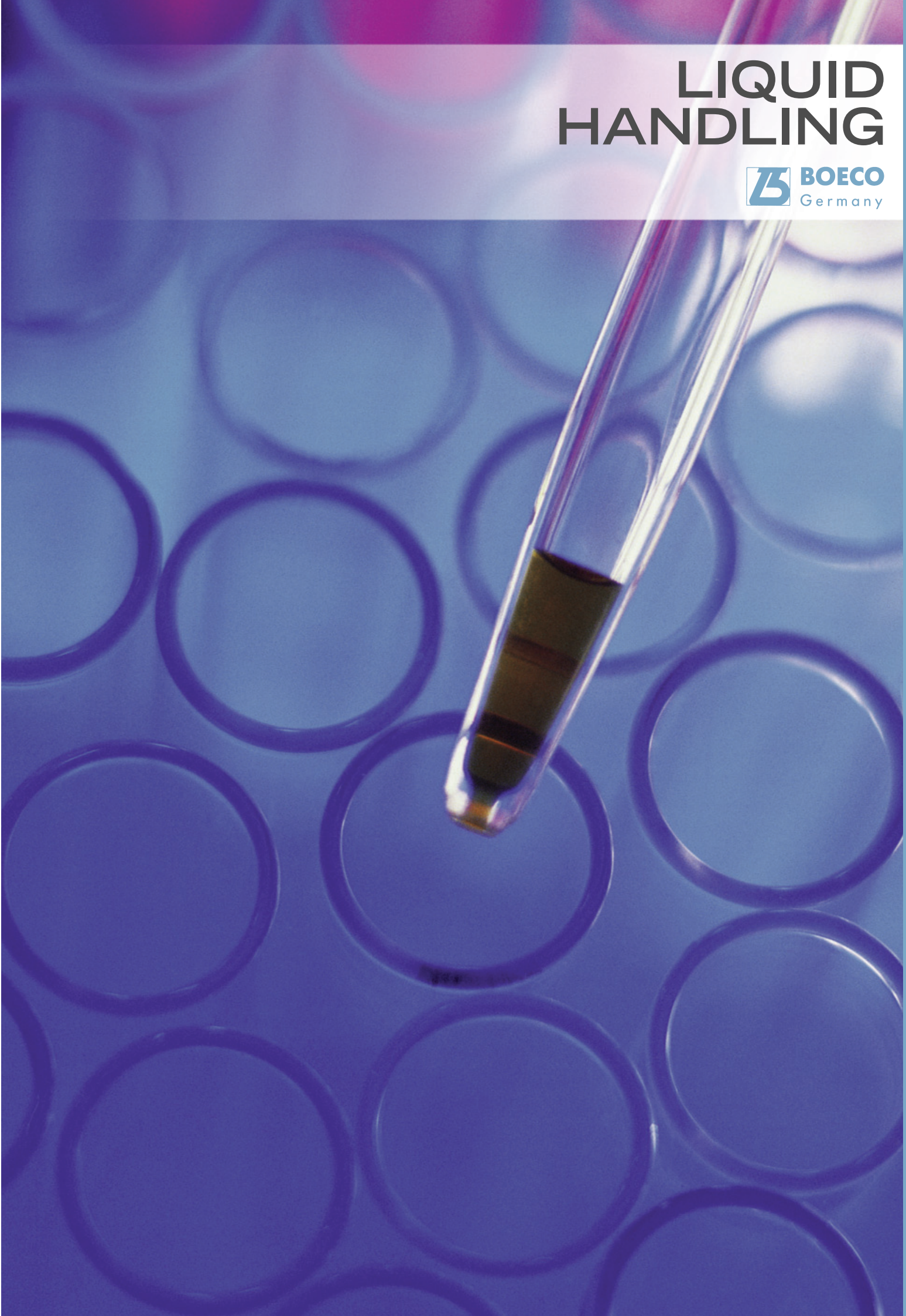
LIQUID HANDLING

BOECO
Germany



MICROPIPETTES

Our premium BOECO GP Series single- and multichannel air-interface adjustable Micropipettes include all features requested by the user:
Robustness, simple operation, complete autoclavability and ergonomic design, as well as highest accuracy and easy calibration for long lasting reliability.

- Completely autoclavable at 121°C (2 bar) as by DIN EN 285
- Ergonomic design
- Simple volume adjustment for left- and right-handers
- Integrated calibration function for easy calibration without the need for tools
- Good chemical & UV-light resistance
- conformity certified to DIN 12600 and CE/IVD compliant

Every package includes:
BOECO GP Pipettor, manual, QC-certificate.

Manufactured in Germany in accordance with ISO 9001:9008 / 14001:2009 quality and environmental standards.

All pipettors are tested acc. to DIN ISO 8655-2.

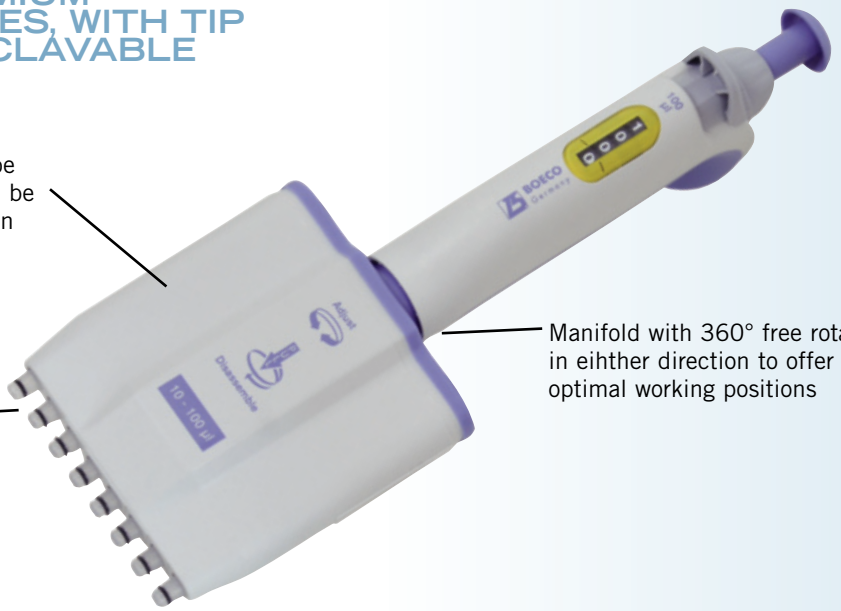
BOECO GP SERIES PREMIUM ADJUSTABLE VOLUME PIPETTE, WITH TIP EJECTOR, FULLY AUTOCLAVABLE

Cat.No	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9910010	0,5 - 10 µl	0,01 µl	10 µl	±1,00%	±0,60%	A,B,C
			5 µl	±1,60%	±1,00%	
			1 µl	±7,00%	±4,00%	
BOE 9910020	2 - 20 µl	0,02 µl	20 µl	±0,80%	±0,40%	D,E,F
			10 µl	±1,20%	±0,70%	
			2 µl	±5,00%	±2,00%	
BOE 9910100	10 - 100 µl	0,1 µl	100 µl	±0,60%	±0,20%	D,E,F
			50 µl	±0,80%	±0,40%	
			10 µl	±3,00%	±1,00%	
BOE 9910220	20 - 200 µl	0,2 µl	200 µl	±0,60%	±0,20%	D,E,F
			100 µl	±0,80%	±0,30%	
			20 µl	±3,00%	±0,60%	
BOE 9911100	100 - 1000 µl	1 µl	1000 µl	±0,60%	±0,20%	G,H,I
			500 µl	±0,80%	±0,30%	
			100 µl	±3,00%	±0,60%	
BOE 9915000	500 - 5000 µl	5 µl	5000 µl	±0,60%	±0,20%	K
			2500 µl	±0,80%	±0,30%	
			500 µl	±3,00%	±0,60%	
BOE 9911111	1000 - 10000 µl	10 µl	10000 µl	±0,60%	±0,20%	M
			5000 µl	±0,80%	±0,30%	
			1000 µl	±3,00%	±0,60%	

BOECO GP SERIES PREMIUM MULTICHANNEL PIPETTES, WITH TIP EJECTOR, FULLY AUTOCLAVABLE

121°C

Especially service-friendly: Single shafts and seals can be easily removed, and thus can be directly cleaned or replaced in the laboratory



Manifold with 360° free rotation in eihther direction to offer optimal working positions

The combination of the stepped design of the ejector and spring made of FKM reduces the effort needed for ejecting the tips

Cat.No	Channels	Volume range	Increment	Test volumen	Inaccuracy	Imprecision	Tip Type
BOE 9908050	8-ch	0,5 - 50 µl	0,1 µl	50 µl	±0,80%	±0,40%	D,E,F
				25 µl	±1,40%	±0,80%	
				5 µl	±6,00%	±3,00%	
BOE 9908100	8-ch	10 - 100 µl	0,2 µl	100 µl	±0,80%	±0,30%	D,E,F
				50 µl	±1,40%	±0,60%	
				10 µl	±4,00%	±2,00%	
BOE 9908300	8-ch	30 - 300 µl	0,2 µl	300 µl	±0,60%	±0,30%	F
				150 µl	±1,20%	±0,60%	
				30 µl	±3,00%	±1,50%	
BOE 9912050	12-ch	0,5 - 50 µl	0,1 µl	50 µl	±0,80%	±0,40%	D,E,F
				25 µl	±1,40%	±0,80%	
				5 µl	±6,00%	±3,00%	
BOE 9912100	12-ch	10 - 100 µl	0,2 µl	100 µl	±0,80%	±0,30%	D,E,F
				50 µl	±1,40%	±0,60%	
				10 µl	±4,00%	±2,00%	
BOE 9912300	12-ch	30 - 300 µl	0,2 µl	300 µl	±0,60%	±0,30%	F
				150 µl	±1,20%	±0,60%	
				30 µl	±3,00%	±1,50%	

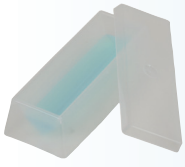
ACCESSORIES

Cat. No.	Description
BOE 1672010	Filter for GP Pipette 5 ml, Pack of 25 pcs.
BOE 1672012	Filter for GP Pipette 10 ml, Pack of 25 pcs.
BOE 1672110	Shelf/rack mount for GP-Series Micropipettes
BOE 1672112	Rotary Bench top stand for 6 GP-Series Micropipettes
BOE 9600006	Linear acrylic stand for up to 6 BOECO SA/GP Series Micropipettes, grey.
BOE 3190990	Autoclavable and transparent reagent reservoir with lid Optimally suited for working with multichannel pipettes. Capacity 60 ml, Pack of 10 units

RACK MOUNT

ROTARY CAROUSEL STAND

LINEAR STAND



REAGENT RESERVOIR

Volume adjustment is easily achieved by turning the thumb activated plunger mechanism.

Clear Digital 4 digit Display. The selected volume is shown on a clear digital display window on the hand grip.

The durable Tip Cone offers highest resistance to shocks and chemical corrosion

Our BOECO SA Series single- and multichannel Micropipettes, are our standard fully autoclavable Pipettes, which due to their high accuracy and precsion, robustness quality and fantastic ergonomic design make them a excelent price value pipette for all laboratory needs in all over the world

- Completely autoclavable at 121°C
- Ergonomic design
- Tip Ejector, for smooth ejection of the tip*
- Precise Setting of the selected volume ensures accurate aspiration & dispensing of the liquid
- Grip made out of TPE (Thermo Plasto Elastomer) prevents transfer of heat to internal components ensuring accurate pipette operation even on continuos use.
- Good chemical & UV-light resistance

Every package includes:
BOECO SA Pipettor, manual, QC-certificate, Service tool, Grease

All pipettors are tested acc. to ISO 8655 / DIN 12650 are been calibrated in a ISO/IEC 17025 accredited laboratory.

Manufactured in accordance with ISO 9001:2008 and ISO 13485:2003 quality standards

*The 10.000 µl (10 ml) models BOE 9621111 and BOE 9611111 do have a blocked tip ejector. The 10 ml tips have to be removed by hand

BOECO SA SERIES, FIXED VOLUME PIPETTE, WITH TIP EJECTOR

Color-coded button for easy tip selection

Cat.No.	Volume	Inaccuracy	Imprecision	Tip Type
BOE 9620005	5 µl	± 1,30 %	± 1,20 %	D,E,F
BOE 9620010	10 µl	± 0,80 %	± 0,80 %	D,E,F
BOE 9620020	20 µl	± 0,60 %	± 0,50 %	D,E,F
BOE 9620025	25 µl	± 0,50 %	± 0,30 %	D,E,F
BOE 9620050	50 µl	± 0,50 %	± 0,30 %	D,E,F
BOE 9620100	100 µl	± 0,50 %	± 0,30 %	D,E,F
BOE 9620200	200 µl	± 0,40 %	± 0,20 %	D,E,F
BOE 9620250	250 µl	± 0,40 %	± 0,20 %	G,H,I
BOE 9620500	500 µl	± 0,30 %	± 0,20 %	G,H,I
BOE 9621000	1000 µl	± 0,30 %	± 0,20 %	G,H,I
BOE 9622000	2000 µl	± 0,30 %	± 0,15 %	J
BOE 9625000	5000 µl	± 0,30 %	± 0,15 %	J
BOE 9621111	10000 µl	± 0,60 %	± 0,20 %	L

LINEAR BENCH STAND FOR SA/GP SERIES MICROPIPETTES

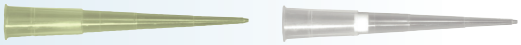
Cat. No.	Description
BOE 9600006	Linear acrylic stand for up to 6 BOECO SA/GP Series Micropipettes, grey.

BOECO SA SERIES ADJUSTABLE VOLUME PIPETTES, WITH TIP EJECTOR

Cat.No	Channel	Volume	Increment	Testvolume	Inaccuracy	Imprecision	Tip Type
BOE 9610002	1-ch	0,1 - 2,5 µl	0,01 µl	2,5 µl	±2,50%	±1,60%	A,B,C
				1,25 µl	±3,00%	±3,00%	
				0,25 µl	±12,00%	±6,00%	
BOE 9610010	1-ch	0,5 - 10 µl	0,1 µl	10 µl	±1,00%	±0,80%	A,B,C
				5 µl	±2,00%	±1,00%	
				1 µl	±2,50%	±1,50%	
BOE 9610020	1-ch	2 - 20 µl	0,1 µl	20 µl	±0,90%	±0,40%	B,C
				10 µl	±1,50%	±1,00%	
				2 µl	±3,00%	±2,00%	
BOE 9610050	1-ch	5 - 50 µl	0,5 µl	50 µl	±0,60%	±0,30%	D,E,F
				25 µl	±0,80%	±0,40%	
				5 µl	±2,00%	±2,00%	
BOE 9610100	1-ch	10 - 100 µl	0,5 µl	100 µl	±0,80%	±0,15%	D,E,F
				50 µl	±1,00%	±0,50%	
				10 µl	±3,00%	±1,50%	
BOE 9610220	1-ch	20 - 200 µl	1 µl	200 µl	±0,60%	±0,15%	D,E,F
				100 µl	±0,70%	±0,30%	
				20 µl	±2,00%	±0,80%	
BOE 9611100	1-ch	100 - 1000 µl	5 µl	1000 µl	±0,60%	±0,20%	G,H,I
				500 µl	±1,00%	±0,40%	
				100 µl	±2,00%	±0,70%	
BOE 9615000	1-ch	500 - 5000 µl	50 µl	5000 µl	±0,50%	±0,15%	J
				2500 µl	±0,60%	±0,30%	
				500 µl	±2,00%	±0,60%	
BOE 9611111	1-ch	1000 - 10000 µl	100 µl	10000 µl	±0,60%	±0,20%	L
				5000 µl	±1,20%	±0,30%	
				1000 µl	±3,00%	±0,60%	

Cat.No	Channel	Volume	Increment	Testvolume	Inaccuracy	Imprecision	Tip Type
BOE 9608010	8-ch	0,5 - 10 µl	0,1 µl	10 µl	±2,00%	±1,00%	A,B,C
				5 µl	±4,00%	±2,00%	
				1 µl	±8,00%	±1,00%	
BOE 9608050	8-ch	5 - 50 µl	0,5 µl	50 µl	±1,00%	±0,70%	D,E,F
				25 µl	±1,50%	±1,00%	
				5 µl	±3,00%	±2,00%	
BOE 9608100	8-ch	10 - 100 µl	1 µl	100 µl	±0,80%	±0,30%	D,E,F
				50 µl	±1,00%	±0,80%	
				10 µl	±3,00%	±2,00%	
BOE 9608300	8-ch	30 - 300 µl	1 µl	300 µl	±0,60%	±0,30%	F
				150 µl	±1,00%	±0,50%	
				300 µl	±3,00%	±1,00%	
BOE 9612010	12-ch	0,5 - 10 µl	0,1 µl	10 µl	±2,00%	±1,00%	A,B,C
				5 µl	±4,00%	±2,00%	
				1 µl	±8,00%	±1,00%	
BOE 9612050	12-ch	5 - 50 µl	0,5 µl	50 µl	±1,00%	±0,70%	D,E,F
				25 µl	±1,50%	±1,00%	
				5 µl	±3,00%	±2,00%	
BOE 9612100	12-ch	10 - 100 µl	1 µl	100 µl	±0,80%	±0,30%	D,E,F
				50 µl	±1,00%	±0,80%	
				10 µl	±3,00%	±2,00%	
BOE 9612300	12-ch	30 - 300 µl	1 µl	300 µl	±0,60%	±0,30%	F
				150 µl	±1,00%	±0,50%	
				300 µl	±3,00%	±1,00%	

PIPETTE TIPS

Cat.No.	Volumen	Length	Type	Description	Packaging
BOE 1-000-81-0	0,1-10 µl	34,1mm	A	Top Line Natural Tip	bag /1000 pcs. /carton 20.000 pcs.
BOE 1-000-96-0	0,1-10 µl		A	Top Line Natural Tip	96-tip Rackbox /pack 10 racks
BOE 1-001-96-0	0,1-10 µl		A	Top Line Natural Tip, sterile	96-tip Rackbox /pack 10 racks
BOE 2-001-96-0	0,1-10 µl		A	Top Line Filter Tip, sterile	96-tip Rackbox /pack 10 racks
BOE 03.033.0100	0,1-20 µl	40,5 mm	B	Standard Tip, Natural, long type	bag /1000 pcs. /carton 10.000 pcs.
BOE 1-050-81-0	0,5-20 µl	45,7 mm	C	Top Line Natural Tip, long type	bag /1000 pcs. /carton 20.000 pcs.
BOE 1-050-96-0	0,5-20 µl		C	Top Line Natural Tip, long type	96-tip Rackbox /pack 10 racks
BOE 1-051-96-0	0,5-20 µl		C	Top Line Natural Tip, long type, sterile	96-tip Rackbox /pack 10 racks
BOE 03.013.0103	2- 200 µl	52,6 mm	D	Standard Tip, yellow	bag /1000 pcs. /carton 25.000 pcs.
					
BOE 1-110-81-1	1-200 µl	50,8 mm	E	Top Line Yellow Tip, bevelled, graduated	bag /1000 pcs. /carton 20.000 pcs.
BOE 1-110-96-1	1-200 µl		E	Top Line Natural Tip, bevelled graduated, nonsterile	96-tip Rackbox /pack 10 racks
BOE 1-111-96-0	1-200 µl		E	Top Line Natural Tip, bevelled graduated, sterile	96-tip Rackbox /pack 10 racks
BOE 2-114-96-0	20 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 2-116-96-0	30 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 2-111-96-0	50 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 2-112-96-0	100 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 2-113-96-0	200 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 2-115-96-0	230 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox /pack 10 racks
BOE 702572	5-300 µl	52 mm	F	Natural Tip	box /1000 pcs. /carton 10.000 pcs.
BOE 03.023.0101	50-1000 µl	70,5 mm	G	Standard Tip, blue	bag /1000 pcs. /carton 10.000 pcs.
BOE 1-209-06-2	100-1000 µl	70,1 mm	H	Top Line Tip, clear blue,	60-tip Rackbox /pack 10 racks
BOE 1-207-06-2	100-1000 µl		H	Top Line Tip, clear blue, sterile	60-tip Rackbox /pack 10 racks
BOE 2-209-06-0	1000 µl		H	Filter Tip, natural, sterile	60-tip Rackbox /pack 10 racks
BOE 1-200-80-2	100-1000 µl	86,0 mm	I	Top Line Tip, blue, bevelled, graduated	bag /1000 pcs. /carton 10.000 pcs.
BOE 1-200-96-2	100-1000 µl		I	Top Line Tip, blue, bevelled graduated	96-tip Rackbox /pack 10 racks
BOE 1-201-96-2	100-1000 µl		I	Top Line Tip, blue, bevelled graduated, sterile	96-tip Rackbox /pack 10 racks
BOE 2-201-96-0	1000 µl		I	Top Line Filter Tip, sterile	96-tip Rackbox /pack 10 racks

BOECO Top Line Tips are certified to be free of any detectable human DNA, DNase, RNase and PCR-inhibitors.

Cat.No.	Volumen	Length	Type	Description	Packaging
BOE 9600650	1 - 5 ml	133 mm	J	Natural Tip, for SA Series	carton /300 pcs.
This Tip is also suitable for our previois Standard and SP pipettes with 2000 µl and 5000 µl as well as BIOHIT® pipettes					
BOE 702601	0,5 - 5 ml	160 mm	K	Natural Tip, for GP Series	bag / 200 pcs. /carton 1000 pcs.
This Tip is also suitable for Thermo Fisher Scientific Finnpipette® F1 and F2 of 5 ml					
BOE 9600640	2 - 10 ml	150 mm	L	Natural Tip, for SA Series	bag / 100 pcs.
This Tip is also suitable for Thermo Fisher Scientific Finnpipette® F1 and F2 of 10 ml					
BOE 702604	1 - 10 ml	156,5 mm	M	Natural Tip, for GP Series	bag / 100 pcs. /carton 1000 pcs.
This Tip is also suitable for the old SP Pipettes with 10 ml volume, as well as for Eppendorf® and Gilson® Pipettes of 10 ml					

BOECO Rackboxes

PIPETTE AIDS

BOECO PIPETTE FILLER BALLS

BOECO PIPETTE FILLER BALLS

natural rubber, red, with 3 valves

Cat. No.	Description
BOE 100	Model STANDARD, short cone for pipettes up to 20 ml
BOE 101	Model UNIVERSAL, long cone for all pipettes

BOECO PIPETTE PUMPS, PP

BOECO PIPETTE PUMPS, PP

can be operated with one hand. Glass and plastic pipettes fit easily. Precise filling or emptying is done by rotating their actuator-wheels forward or backward. For rapid emptying simply depress plunger.

Cat. No.	Description
BOE 120	0 - 2 ml, blue
BOE 121	0 - 10 ml, green
BOE 122	0 - 25 ml, red

BOECO PIPETTE CONTROLLER

BOECO PIPETTE CONTROLLER

offers safer, more convenient filling and dispensing, with glass and plastic pipettes. With one sensitive lever filling and delivery are easily controlled. Pipetting with ease and comfort.

- Easy and tireless handling for left and right-handed people
- An especially designed intake cone allows the use of pipettes from 0.1 ml to 100 ml
- The perfectly harmonized valve unit ensures effortless liquid intake
- Precise and high sensitive set of the meniscus
- A easy replaceable hydrophobic membrane filter protects the interior from penetrating liquids
- Completely autoclavable at 121° C (2 bar)

Cat. No.	Description
BOE 160	BOECO Manual Pipette controller, complete
BOE 1670650	Membrane filter, 3 µm, sterile, hydrophobic, PTFE, pack of 10
BOE 1670211	Suction bellows / Intake element
BOE 1670202	Intake cone, solicone
BOE 1655590	Valve unit

BOECO ELECTRONIC PIPETTE CONTOLLER

BOECO ELECTRONIC PIPETTE CONTROLLER

for all pipettes from 0,1 to 100 ml

With the BOECO electronic pipette controller, pipette handling is simple and comfortable. The ergonomic handle - very light weight at about 190 grams - and excellent balance all contribute to ease of operation. The speed can be adjusted easily, continuously and exactly with one hand using two buttons. A 50 ml pipette can be filled comfortably in less than 10 seconds. The liquid release can be done eighter by gravity delivery when calibrated 'ex' (to deliver), or in blow out mode using the battery-operated motor. Pipettes are held securely and tightly in the exchangeable adapter.

Liquid vapours are purged directly to protect the instrument.

The charge level of the recyclable battery is shown in the LED display.

Cat. No.	Description
BOE 9900000	BOECO Electronic Pipette Controller with battery, battery charger 100-230V, EURO plug, and 2 x 0,2 µm replacement membrane filters
BOE 9900001	Idem, with battery charger, U.S. Plug
BOE 9900002	Idem, with battery charger, U.K. Plug

SERIES PIPETTOR

BOECO SERIES PIPETTOR PRO

The BOECO handheld Series Pipettor PRO is an extremly easy-to-handle piston pipette which allows rapid repeat dispensing of pre-set volumes with 12 tip sizes, 10 volume adjustments and 120 programm steps

- **Clear**: Volume adustments and dosing volumes for different tips are shown in a vision panel

- **Handy**: A perfect ergonomic design makes an easy and comfortable use possible. With the easy-moving dosing button in combination with the low weight, long dosing series can be dispensed conveniently

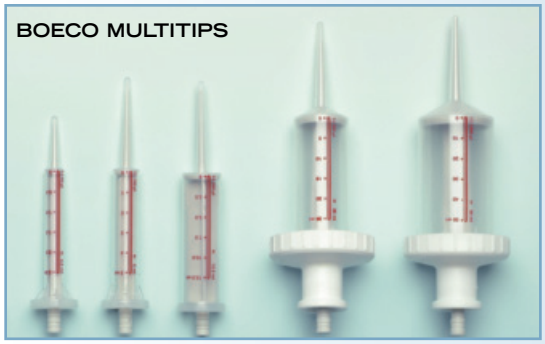
- **Compatible**: The BOECO Series Pipettor PRO apart from the BOECO Multitips is also compatible with PD-tips from Brand and as well with Combitips and Combitips plus from Eppendorf.

- **Independent**: In addition to the handy design the BOECO Series Pipettor PRO has been constructed consistent mechanical. The BOECO Series Pipettor PRO is **maintenance-free** and does not need any additional resources such as power supply or batteries.

- **Dosing table**: The below dosing table shows all dosing possibilities at a glance for chosing the most-suitable tip for your application.

BOECO SERIES PIPETOR PRO

	Program number									
Tip Size	1	2	3	4	5	6	7	8	9	10
0,05 ml	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5
0,10 ml	2	3	4	5	6	7	8	9	10	11
0,20 ml	4	6	8	10	12	14	16	18	20	22
0,50 ml	10	15	20	25	30	35	40	45	50	55
1,00 ml	20	30	40	50	60	70	80	90	100	110
1,25 ml	25	37,5	50	62,5	75	87,5	100	112,5	125	137,5
2,50 ml	50	75	100	125	150	175	200	225	250	275
5,00 ml	100	150	200	250	300	350	400	450	500	550
10,00 ml	200	300	400	500	600	700	800	900	1000	1100
12.50 ml	250	375	500	625	750	875	1000	1125	1250	1375
25.00 ml	500	750	1000	1250	1500	1750	2000	2250	2500	2750
50.00 ml	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500
	48	35	23	19	15	13	11	9	8	7
	Steps									



Cat. No	Description
BOE 9542023	BOECO Series Pipettor PRO incl. 1 adapter for 25 ml and 50 ml tips

		Cat. No.	Cat. No	Packing unit	
multitips		**standard**	**sterile**	**standard**	**sterile**
multitips	0,05 ml	BOE 980 222	-	100 pcs	100 pcs
multitips / PRO	0,10 ml	BOE 980 243	BOE 980 261	100 pcs	100 pcs
multitips / PRO	0,20 ml	BOE 980 244	BOE 980 262	100 pcs	100 pcs
multitips	0,50 ml	BOE 980 223	BOE 980 252	100 pcs	100 pcs
multitips / PRO	1,00 ml	BOE 980 245	BOE 980 264	100 pcs	100 pcs
multitips	1,25 ml	BOE 980 224	BOE 980 253	100 pcs	100 pcs
multitips	2,50 ml	BOE 980 225	BOE 980 254	100 pcs	100 pcs
multitips	5,00 ml	BOE 980 226	BOE 980 255	100 pcs	100 pcs
multitips / PRO	10,00 ml	BOE 980 246	BOE 980 267	100 pcs	100 pcs
multitips	12,50 ml	BOE 980 227	BOE 980 256	100 pcs	100 pcs
multitips	25,00 ml	BOE 980 228	BOE 980 257	25 pcs	25 pcs
multitips	50,00 ml	BOE 980 229	BOE 980 258	25 pcs	25 pcs
multitips adapter		BOE 980 234	-	1 pcs	-

DISPENSER

BOECO BOTTLE-TOP DISPENSER

- Exact reproducibility of delivered quantities, due to rapid and precise volume adjustment by serrated setting device.
- Piston with pressure-dependent active sealing, will resist even aggressive media.
- Service friendly and easy to clean, because of a removable piston and suction valve.
- Can be calibrated by service personal with an analytical balance.
- Manufactured with high quality and durable materials.
  The parts of the BOECO dispenser which come into contact with the liquid are:
  - Piston out of PTFE
  - TPX safety sheeted borosilicate glass cylinder
  - Platinum-iridium Spring
  - Valve out of ETFE

  Any liquid which does not attack these materials can be dispensed.
- Manufactured under ISO 9001 norms.
- Dispensing with all known original reagent bottles owing to the offer of different adapters.
- Completely autoclavable at 121°C

BOECO Bottle-Top Dispenser, complete with 3 adapters, intake tube FEP, Discharge-tube (with safety thread) FEP, closure cap, without reservoir bottle.

Code	Volume	Thread at the dispenser	Adapters	Increment	Inaccuracy	Imprecision
BOE 9700525	0,5 - 2,5 ml	32	28/40/45	0,05 ml	± 0,6 %	0,1 %
BOE 9701050	1,0 - 5,0 ml	32	28/40/45	0,10 ml	± 0,5 %	0,1 %
BOE 9702100	2,0 - 10,0 ml	32	28/40/45	0,20 ml	± 0,5 %	0,1 %
BOE 9705250	5,0 - 25,0 ml	45	40/38/32	0,50 ml	± 0,5 %	0,1 %
BOE 9710500	10,0 - 50,0 ml	45	40/38/32	1,00 ml	± 0,5 %	0,1 %
BOE 9725100	20,0 - 100,0 ml	45	40/38/32	2,00 ml	± 0,5 %	0,1 %

ACCESSORIES AND SPARE PARTS

Intake and Discharge tube

Code	Description
BOE 1650020	Intake tube 220 mm, FEP, for volume 2,5,10 ml
BOE 1650030	Intake tube 250 mm, FEP, for volume 25, 50,100 ml
BOE 1671085	Telescopic intake tube 250 till 350 mm, FEP, all ranges
BOE 1650400	Discharge tube, FEP, for volume 2,5,10 ml
BOE 1650401	Discharge tube, FEP, for volume 25,50,100 ml
BOE 1650090	Flexible discharge tube, PTFE, 80 cm, for volume 2,5,10 ml
BOE 1650095	Flexible discharge tube, PTFE, 80 cm, for volume 25, 50,100 ml

Adapters

Code	Bottle neck / Dispenser
BOE 1670150	25/32
BOE 1670155	28/32
BOE 1670165	38/32
BOE 1670170	40/32
BOE 1670175	45/32
BOE 1670085	32/38
BOE 1670110	38/45
BOE 1670120	40/45

Dispenser-thread bottles,with screw cap, amber glass, with synthetic coating

Code	Volume	Outer diam. (mm)
BOE 9772010	100 ml	28
BOE 9772020	250 ml	32
BOE 9772030	500 ml	32
BOE 9772040	1000 ml	45
BOE 9772050	2500 ml	45

BOTTLE TOP BURETTE

BOECO DIGITAL CONTINUOUS BOTTLE-TOP BURETTES

- The digital BOECO Continuous Bottle-top Burette makes manual titration safer, easier, with more reliable results.
- The DCB burettes can be used for titration agents up to a concentration of 2 Mol/l. During the titration process, the burette fills automatically, eliminating time-consuming refills.
- Continuous pulse-free operation for faster titratons up to 5 ml per second.
- Titrant delivery is controlled by turning the wheels, and the amount dispensed is immediately shown on the display - from 10 µl to 999.9 ml, with a velocity of 2,5 ml/turn using model DCB 2500 or 5,0 ml/turn with model DCB 5000.
- The DCB models eliminate the errors of reading the meniscus and volume graduations of conventional hanging glass burettes.
- There is no exposed glassware to break, and direct connection to the reagent bottle avoids pouring dangerous chemicals.
- Safety recirculating valve allows for recirculation within the closed system to avoid reagent waste.
- Angled digital display for easier reading from different heights by different users.
- Unique telescopic intake tube with length from 210 till 310 mm can be readjusted without cutting for different bottle sizes.
- Dosing spectrum from 10 µl to 999,9 ml
- Battery-operated, easily replaceable micro-batteries 1,5 V (LR 03/AAA). One charge lasts a minimum of 500 hours (dispensing 4500 l of reagent).
- Burette can be rotated 360° on the bottle
- Titrating Tube removable and adjustable: horizontal 142-220 mm, vertical 10-200 mm
- Service friendly modular assembly.
- Electronic can be completely removed.
- Low battery indicator.
- User-serviceable and calibratable to meet ISO and GLP requirements.
- Optional drying tube protects reagents from moisture or CO2.
- Manufactured under ISO 9001 norms.
- Adapters are available to fit most bottle neck sizes.

BOECO Digital Continuous Bottle-Top Burettes, complete with 3 PP adapters 45/38, 38/32, 40/45 (45 thread at the burette), 1 telescopic intake tube (FEP), 1 telescopic titration tube, 2 micro-batteries 1,5 V (LR 03/AAA), without reservoir bottle.

Code	Model		Accuracy	Coefficient of variation
BOE 9882500	DCB 2500	(2.5 ml/turn)	± 0,2 %	0,1 %
BOE 9885000	DCB 5000	(5,0 ml/turn)	± 0,2 %	0,1 %

Accessories

Code	Description
BOE 1650135	Discharge Tube complete
BOE 1671095	Drying tube
BOE 9772050	Amber Glass bottle, 2500 ml
BOE 1671085	Telescopic Intake Tube, 200-350 mm

CHEMICAL-RESISTANT DIAPHRAGM DOSING PUMPS KNF SIMDOS®

the chemically-resistant, microprocessor-controlled SIMDOS diaphragm metering pumps meter the smalles volumes continuously and evenly. Thanks to a special drive technology, these pumps feature a remarkably wide metering range. A knob makes it easy to vary the pumping function.

- Intuitive operation
- Adaptable to fluid characteristics
- Analog and impulse control
  - Analog control: 0-10 V, 0-20 MA, 4-20 mA from 0 to 100 %
  - Start/Stop through logic control (TTL)
  - Reset/prime through logic control (TTL)
  - Output signal (i.e. the end of cycle)
- Pause function without data loss
- Chemically-resistant versions
- Self priming
- Dry running
- Low maintenance
- Small footprint
- Supplied with software and PC cable

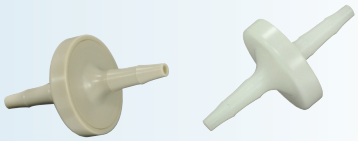
Specification Simdos10:

Flow rate:	1-100 ml/min
Pressure head:	60 mWg (6 bar)
Suction head:	3 mWg
Time metering:	1s - 99h 59 min (manual)
Mains:	100-240 V 50/60 Hz
Permissible liquid temp:	+5...+80°C
Permissible ambient temp:	+5...+40°C
Max. viscosity allowed:	up to 150 cSt (reduced performance up to 500 cSt)
Accuracy:	± 2%
Repeatablity:	± 1%
Motor protection:	IP 65 (splash proof)
Weight:	0,9 kgs
Dimensions LxWxH:	134x93x145 mm

Code	Description
KNF 159995/160157	KNF SIMDOS®10 Diaphragm Dosing Pump FEM 1.10 KT.18RC, Pump head: **PP** suitable for aqueos solutions and beases
KNF 159997/160157	KNF SIMDOS®10 Diaphragm Dosing Pump FEM 1.10 TT.18RC, Pump head: **PVDF** suitable for medium acid concentrations
KNF 159998/160157	KNF SIMDOS®10 Diaphragm Dosing Pump FEM 1.10 FT.18RC, Pump head: **PTFE** suitable for high acid concentrations and solvents

Accessories:

Code	Description
KNF 155872	Footswitch Impuls
KNF 160473	Wall fixture
KNF 160474	Column fixture



The below KNF filters protect both pumps and other upstream instrumentation and hydraulic circuits against particulate, crystals and fibres which can impede optimum operation.
The use of PVDF and PEEK provides compatibility with a wide range of neutral, agressive and corrosive liquids, particularly those used in laboratories such as acids, bases, solvents, alcohols and oils.

Code	Description
KNF 165211	In-Line Filter FS 25 TZ, Material PVDF Mesh 70 µm, Max flow rate 250 ml/min
KNF 165213	In-Line Filter FS 25 XZ, Material PEEK Mesh 35 µm, Max flow rate 250 ml/min