

YOUR WORLDWIDE PARTNER IN THE LABORATORY

CATALOGUE 2024 – 2026

BOECO Germany



BOECO
Germany

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BOECO

The family-owned company
Boeckel + Co. (GmbH + Co.) KG was founded in 1929 and now exists in the fourth generation.

To our customers on all 5 continents we are pleased to introduce our fifth general BOECO catalog with our extended and updated complete line of laboratory equipment and consumables.

We offer high quality at competitive prices by a convenient and cost-effective one-stop supply.

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BANK

EURO €

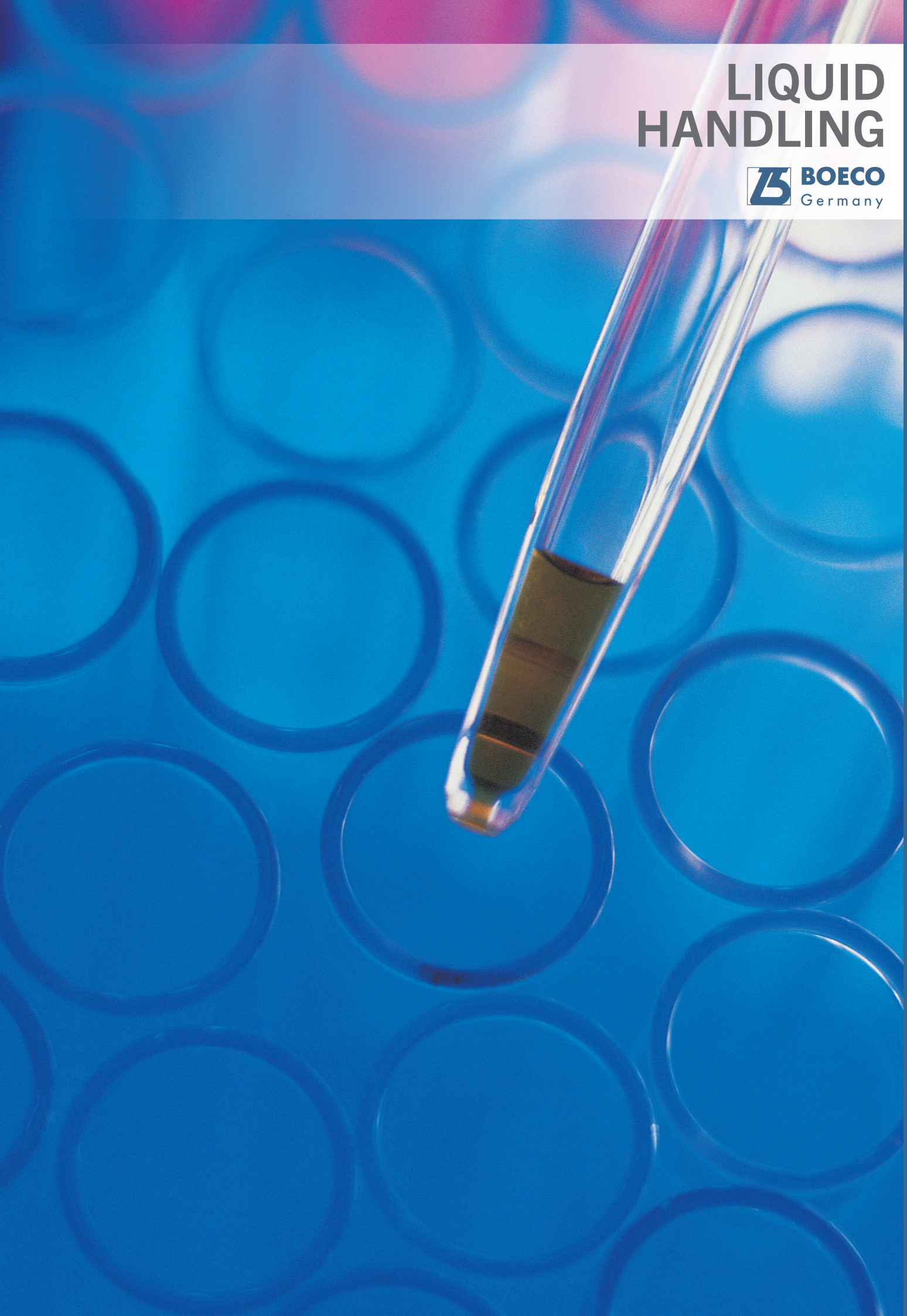
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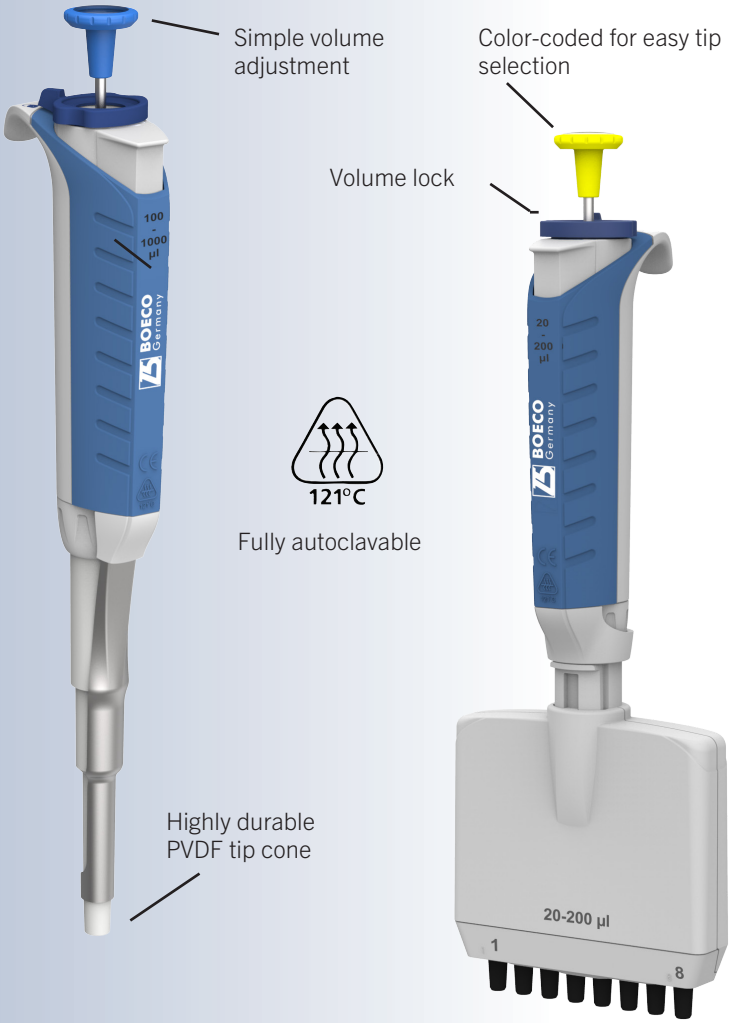
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LIQUID HANDLING

BOECO
Germany



MICROPIPETTES



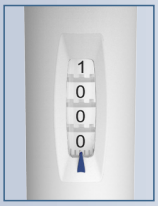
Our new premium BOECO IP Series single- and multichannel air-displacement Micropipettes with magnetic assisted piston and low plunging force, include all most advanced features requested by the researchers.

- Fully autoclavable at 121°C (2 bar)
- Ergonomic design
- Experience truly effortless pipetting with one of the lowest plunge force requirement, due to its innovative spring and seal design
- Magnet assisted piston for unparalleled consistency in results
- Fatigue free experience empowered by an ergonomic design approach, unique shock-absorbing tip ejector and convenient finger rest
- Easy in house calibration & tool free cleaning
- Built using high-durability material for enhanced durability and prevention against chemical as well as physical corrosion
- Volume lock to prevent unintended volume adjustments

Every package includes:
BOECO IP Pipette, manual, quality-certificate, calibration tool, warranty card, shelf-mounting stand, grease, sample pack of tips

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

Manufactured in accordance with ISO 9001:2015 and ISO 13485:2016 quality standards



Large & clear, 4-digit display


Volume lock to prevent unintended volume adjustments


Spring loaded tip cone for lesser strain & proper tip fitment (Multichannels only)


Magnet assisted piston for precise results


Corrosion resistant tip ejector mechanism with shock-absorbing design

BOECO IP SERIES PREMIUM FIXED VOLUME PIPETTE, WITH TIP EJECTOR, FULLY AUTOCLAVABLE

Cat. No.	Volume	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9320002	2,5 µl	2,5 µl	± 2,00 %	± 1,60 %	D,E,F
BOE 9320005	5 µl	5 µl	± 1,30 %	± 1,20 %	D,E,F
BOE 9320010	10 µl	10 µl	± 1,20 %	± 0,60 %	D,E,F
BOE 9320020	20 µl	20 µl	± 1,00 %	± 0,30 %	D,E,F
BOE 9320025	25 µl	25 µl	± 1,00 %	± 0,30 %	D,E,F
BOE 9320050	50 µl	50 µl	± 0,70 %	± 0,30 %	D,E,F
BOE 9320100	100 µl	100 µl	± 0,60 %	± 0,20 %	D,E,F
BOE 9320200	200 µl	200 µl	± 0,60 %	± 0,20 %	D,E,F
BOE 9320250	250 µl	250 µl	± 0,60 %	± 0,30 %	G,H,I
BOE 9320500	500 µl	500 µl	± 0,60 %	± 0,20 %	G,H,I
BOE 9321000	1000 µl	1000 µl	± 0,60 %	± 0,20 %	G,H,I
BOE 9322000	2000 µl	2000 µl	± 0,30 %	± 0,15 %	N
BOE 9325000	5000 µl	5000 µl	± 0,30 %	± 0,15 %	N
BOE 9321111	10000 µl	10000 µl	± 0,60 %	± 0,20 %	O

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

Cat. No	Channel	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9310002	1-ch	0,1 - 2,5 µl	0,002 µl	0,25 µl	±12,0 %	±6,00 %	A,B,C
				1,25 µl	±2,50 %	±1,50 %	
				2,5 µl	±2,50 %	±0,70 %	
BOE 9310010	1-ch	0,5 - 10 µl	0,02 µl	1 µl	±2,50 %	±1,50 %	A,B,C
				5 µl	±1,50 %	±0,80 %	
				10 µl	±1,00 %	±0,40 %	
BOE 9310020	1-ch	2 - 20 µl	0,02 µl	2 µl	±3,00 %	±1,50 %	D,E,F
				10 µl	±1,20 %	±0,60 %	
				20 µl	±0,90 %	±0,30 %	
BOE 9310050	1-ch	5 - 50 µl	0,1 µl	5 µl	±2,00 %	±2,00 %	D,E,F
				25 µl	±0,80 %	±0,40 %	
				50 µl	±0,60 %	±0,30 %	
BOE 9310100	1-ch	10 - 100 µl	0,1 µl	10 µl	±3,00 %	±1,00 %	D,E,F
				50 µl	±1,00 %	±0,30 %	
				100 µl	±0,80 %	±0,20 %	
BOE 9310220	1-ch	20 - 200 µl	0,2 µl	20 µl	±2,50 %	±0,70 %	D,E,F
				100 µl	±0,70 %	±0,30 %	
				200 µl	±0,60 %	±0,20 %	
BOE 9311100	1-ch	100 - 1000 µl	1 µl	100 µl	±3,00 %	±0,60 %	G,H,I
				500 µl	±1,00 %	±0,20 %	
				1000 µl	±0,60 %	±0,20 %	
BOE 9315000	1-ch	500 - 5000 µl	10 µl	500 µl	±2,40 %	±0,60 %	N
			2500 µl	±1,20 %	±0,25 %		
				5000 µl	±0,60 %	±0,20 %	
BOE 9311111	1-ch	1000 - 10000 µl	20 µl	1000 µl	±3,00 %	±0,60 %	O
				5000 µl	±0,80 %	±0,20 %	
				10000 µl	±0,60 %	±0,15 %	

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

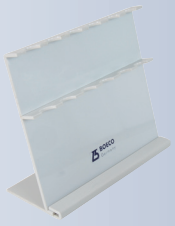
Cat. No	Channels	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9308010	8-ch	0,5 - 10 µl	0,02 µl	1 µl	±8,00 %	±5,00 %	D,E,F
BOE 9312010	12-ch			5 µl	±4,00 %	±2,00 %	
				10 µl	±2,00 %	±1,00 %	
BOE 9308050	8-ch	5 - 50 µl	0,1 µl	5 µl	±3,00 %	±2,00 %	D,E,F
BOE 9312050	12-ch			25 µl	±1,50 %	±1,00 %	
				50 µl	±1,00 %	±0,70 %	
BOE 9308100	8-ch	10 - 100 µl	0,1 µl	10 µl	±3,00 %	±2,00 %	D,E,F
BOE 9312100	12-ch			50 µl	±1,00 %	±0,80 %	
				100 µl	±0,80 %	±0,30 %	
BOE 9308300	8-ch	30 - 300 µl	0,2 µl	30 µl	±3,00 %	±1,00 %	F
BOE 9312300	12-ch			150 µl	±1,00 %	±0,50 %	
				300 µl	±0,60 %	±0,30 %	

ACCESSORIES

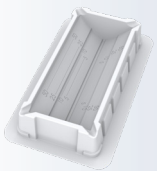
Cat. No.	Description
BOE 9300006	Rotary Carousel stand for 6 IP-Series Micropipettes
BOE 9600006	Linear acrylic stand for up to 6 BOECO SA/GP/IP Series Micropipettes, grey
BOE 9600050	Disposable reagent reservoir, capacity 50 ml graduated wall, made out of polystyrene Optimally suited for working with multichannel pipettes. Pack of 100 units



ROTARY CAROUSEL STAND



LINEAR STAND



REAGENT RESERVOIR



Our BOECO SA Series single- and multichannel Micropipettes are our standard fully autoclavable Pipettes, which due to their high accuracy and precision, robustness quality and fantastic ergonomic design make them an excellent price value pipette for all laboratory needs 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 continuous use
- » Good chemical & UV-light resistance

Every package includes:
BOECO SA Pipettor, manual, quality-certificate, service tool, grease

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

Manufactured in accordance with ISO 9001:2015 and ISO 13485:2016 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



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

BENCH STAND FOR BOECO SA SERIES MICROPIPETTES

Cat. No.	Description
BOE 9600006	Linear acrylic stand for up to 6 BOECO SA/IP/GP Series Micropipettes, grey
BOE 9600016	Rotary Carousel stand for 6 SA-Series Micropipettes

BOECO SA SERIES ADJUSTABLE VOLUME PIPETTES, WITH TIP EJECTOR

Cat. No	Channel	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9610002	1-ch	0,1 - 2,5 µl	0,01 µl	0,25 µl	±12,00 %	±6,00 %	A,B,C
				1,25 µl	±3,00 %	±3,00 %	
				2,50 µl	±2,50 %	±1,60 %	
BOE 9610010	1-ch	0,5 - 10 µl	0,1 µl	1 µl	±2,50 %	±1,50 %	A,B,C
				5 µl	±2,00 %	±1,00 %	
				10 µl	±1,00 %	±0,80 %	
BOE 9610020	1-ch	2 - 20 µl	0,1 µl	2 µl	±3,00 %	±2,00 %	B,C
				10 µl	±1,50 %	±1,00 %	
				20 µl	±0,90 %	±0,40 %	
BOE 9610050	1-ch	5 - 50 µl	0,5 µl	5 µl	±2,00 %	±2,00 %	D,E,F
				25 µl	±0,80 %	±0,40 %	
				50 µl	±0,60 %	±0,30 %	
BOE 9610100	1-ch	10 - 100 µl	0,5 µl	10 µl	±3,00 %	±1,50 %	D,E,F
				50 µl	±1,00 %	±0,50 %	
				100 µl	±0,80 %	±0,15 %	
BOE 9610220	1-ch	20 - 200 µl	1 µl	20 µl	±2,00 %	±0,80 %	D,E,F
				100 µl	±0,70 %	±0,30 %	
				200 µl	±0,60 %	±0,15 %	
BOE 9611100	1-ch	100 - 1000 µl	5 µl	100 µl	±2,00 %	±0,70 %	G,H,I
				500 µl	±1,00 %	±0,40 %	
				1000 µl	±0,60 %	±0,20 %	
BOE 9615000	1-ch	500 - 5000 µl	50 µl	500 µl	±2,00 %	±0,60 %	J
				2500 µl	±0,60 %	±0,30 %	
				5000 µl	±0,50 %	±0,15 %	
BOE 9611111	1-ch	1000 - 10000 µl	100 µl	1000 µl	±3,00 %	±0,60 %	L
				5000 µl	±1,20 %	±0,30 %	
				10000 µl	±0.60 %	±0,20 %	



Cat. No	Channel	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9608010	8-ch	0,5 - 10 µl	0,1 µl	1 µl	±4,00 %	±4,00 %	A,B,C
				5 µl	±2,50 %	±2,50 %	
				10 µl	±1,50 %	±1,50 %	
BOE 9608050	8-ch	5 - 50 µl	0,5 µl	5 µl	±3,00 %	±2,00 %	D,E,F
				25 µl	±1,50 %	±1,00 %	
				50 µl	±1,00 %	±0,70 %	
BOE 9608100	8-ch	10 - 100 µl	1 µl	10 µl	±1,50 %	±0,75 %	D,E,F
				50 µl	±1,00 %	±0,50 %	
				100 µl	±1,00 %	±0,50 %	
BOE 9608300	8-ch	30 - 300 µl	1 µl	30 µl	±1,50 %	±0,75 %	F
				150 µl	±1,00 %	±0,50 %	
				300 µl	±0,80 %	±0,25 %	
BOE 9612010	12-ch	0,5 - 10 µl	0,1 µl	1 µl	±4,00 %	±4,00 %	A,B,C
				5 µl	±2,50 %	±2,50 %	
				10 µl	±1,50 %	±1,50 %	
BOE 9612050	12-ch	5 - 50 µl	0,5 µl	5 µl	±3,00 %	±2,00 %	D,E,F
				25 µl	±1,50 %	±1,00 %	
				50 µl	±1,00 %	±0,70 %	
BOE 9612100	12-ch	10 - 100 µl	1 µl	10 µl	±1,50 %	±0,75 %	D,E,F
				50 µl	±1,00 %	±0,50 %	
				100 µl	±1,00 %	±0,50 %	
BOE 9612300	12-ch	30 - 300 µl	1 µl	30 µl	±1,50 %	±0,75 %	F
				150 µl	±1,00 %	±0,50 %	
				300 µl	±0,80 %	±0,25 %	





CHARGING STAND
BOE 9650002



ACRYLIC PIPETTE STAND
BOE 9650001

BOECO ELECTRONIC PIPETTES

- Light weight and ergonomic design with comfortable operations help to avoid Repetitive Strain Injuries (RSI)
- Color coded tip ejector for easy identification
- Hi-resolution color graphic interface with real time display of pipetting operation
- User friendly intuitive interface. Easy selection of all modes.
- Most reliable 3-point calibration method ensuring accuracy and consistency in pipetting results for longer time
- Secured calibration with password protection
- Saves power by switching to Standby Mode if the pipette is not in use for long time
- Favourite program can store frequently used sequence steps for smoother handling and complex process
- Bottom assembly autoclavable
- Fast battery charging via charger with USB cable

Modes

- Favourites
- Pipetting
- Reverse Pipetting
- Multi Dispensing
  Sub Mode: Repeat Dispense, Auto Dispensing, Sequence Dispensing
- Diluting
  Sub Mode: Diluting + Mixing
- Mixing
  Sub Mode: Mixing, Pipetting + Mixing, Diluting + Mixing
- Settings
- Calibration

Technical Information:

Power:	4,2 V / 1150 mAh Li-ion battery
Battery usage duration:	6 hours of continuos usage
Battery charging duration:	2 hours for full charge

Every package includes:
BOECO Electronic Pipette, Multiplug Battery Charger (EU, UK, US), Li-ion battery, spanner tool, manual, quality-certificate

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

Cat. No	Channel	Volume	Increment	Test Volume	Inaccuracy	Imprecision	Tip Type
BOE 9650010	1-ch	0,5 - 10 µl	0,01 µl	10 µl	±1,00 %	±0,60 %	A,B,C
				5 µl	±2,00 %	±1,00 %	
				1 µl	±2,50 %	±1,80 %	
BOE 9650100	1-ch	5 - 100 µl	0,1 µl	100 µl	±0,80 %	±0,20 %	D,E,F
				50 µl	±1,00 %	±0,50 %	
				10 µl	±3,00 %	±1,00 %	
BOE 9650220	1-ch	10 - 200 µl	0,1 µl	200 µl	±0,60 %	±0,20 %	D,E,F
				100 µl	±0,70 %	±0,30 %	
				20 µl	±2,50 %	±0,70 %	
BOE 9651100	1-ch	50 - 1000 µl	1 µl	1000 µl	±0,60 %	±0,20 %	G,H,I
				500 µl	±1,00 %	±0,40 %	
				100 µl	±3,00 %	±0,60 %	
BOE 9655000	1-ch	250 - 5000 µl	5 µl	5000 µl	±0,60 %	±0,15 %	N
				2500 µl	±1,20 %	±0,25 %	
				500 µl	±2,40 %	±0,60 %	

ACCESSORIES

BOE 9650001	Acrylic single pipette stand for BOECO Electronic Pipettes
BOE 9650002	Charging stand for BOECO Electronic Pipettes, 110 V - 220 V

SERIES PIPETTOR

BOECO SERIES PIPETTOR PRO

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

» **Clear**: Volume adjustments 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 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 PIPETTOR 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					

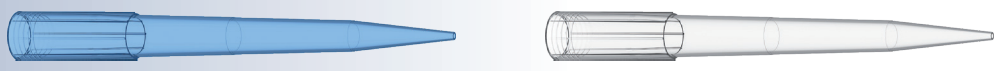
BOECO MULITITIPS



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 pc	-

PIPETTE TIPS

Cat. No.	Volume	Length	Type	Description	Packaging
					
BOE 1-300-81-0	0,1-10 µl	31,2 mm	A	Top Line Natural Tip	bag / 1000 pcs. / carton 20.000 pcs.
BOE 1-300-96-0	0,1-10 µl		A	Top Line Natural Tip	96-tip Rackbox / pack 5x10 racks
BOE 1-301-96-0	0,1-10 µl		A	Top Line Natural Tip, sterile	96-tip Rackbox / pack 5x10 racks
BOE 2-301-96-0	0,1-10 µl		A	Top Line Filter Tip, sterile	96-tip Rackbox / pack 5x10 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 1-350-81-0	0,5-10/20 µl	45,7 mm	C	Top Line Natural Tip, long type	bag / 1000 pcs. / carton / 20.000 pcs.
BOE 1-350-96-0	0,5-10/20 µl		C	Top Line Natural Tip, long type	96-tip Rackbox / pack 5x10 racks
BOE 1-351-96-0	0,5-10/20 µl		C	Top Line Natural Tip, long type, sterile	96-tip Rackbox / pack 5x10 racks
					
BOE 03.013.0103	2- 200 µl	52,6 mm	D	Standard Tip, yellow	bag / 1000 pcs. / carton / 25.000 pcs.
					
BOE 1-410-81-1	1-200 µl	53,4 mm	E	Top Line Yellow Tip, bevelled, graduated	bag / 1000 pcs. / carton / 30.000 pcs.
BOE 1-410-96-1	1-200 µl		E	Top Line Yellow Tip, bevelled graduated, nonsterile	96-tip Rackbox / pack 5x10 racks
BOE 1-411-96-0	1-200 µl		E	Top Line Natural Tip, bevelled graduated, sterile	96-tip Rackbox / pack 5x10 racks
BOE 2-416-96-0	1-20/30 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox / pack 5x10 racks
BOE 2-412-96-0	1-100 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox / pack 5x10 racks
BOE 2-413-96-0	1-200 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox / pack 5x10 racks
BOE 2-415-96-0	5-300 µl		E	Top Line Filter Tip, natural, sterile	96-tip Rackbox / pack 5x10 racks
					
BOE 732031	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 1-600-80-2	100-1000 µl	84,3 mm	I	Top Line Tip, blue, bevelled, graduated	bag / 500 pcs. / carton / 10.000 pcs.
BOE 1-601-96-2	100-1000 µl		I	Top Line Tip, blue, bevelled graduated	96-tip Rackbox / pack 4 x 8 racks
BOE 1-601-96-0	100-1000 µl		I	Top Line Tip, clear, bevelled graduated, sterile	96-tip Rackbox / pack 4 x 8 racks
BOE 2-601-96-0	100-1000 µl		I	Top Line Filter Tip, sterile	96-tip Rackbox / pack 4 x 8 racks

.

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

Cat.No.	Volume	Length	Type	Description	Packaging
					
BOE 9600650	1 - 5 ml	126 mm	J	Natural Tip, for SA/IP Series	carton / 300 pcs.

This Tip is also suitable for our previous 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 1.000 pcs.

This Tip is also suitable for Thermo Fisher Scientific Finnpipette® F1 and F2 of 5 ml

					
BOE 1218610	1 - 5 ml	124 mm	N	Natural Tip, for IP Series	bag / 250 pcs. / carton 2.500 pcs.

.
This Tip is also suitable for Gilson® and HTL® pipettes of 5 ml

					
BOE 9600640	2 - 10 ml	150 mm	L	Natural Tip, for SA/IP 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 1.000 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

					
BOE 1220500	1 - 10 ml	181 mm	O	Natural Tip, for IP Series	bag / 200 pcs. / carton 1.000 pcs.

This Tip is also suitable for Gilson® and Eppendorf® 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



PIPETTE PUMPS, PP

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
- An 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 pcs.
BOE 1670211	Suction bellows / Intake element
BOE 1670202	Intake cone, silicone
BOE 1655590	Valve unit

BOECO ELECTRONIC PIPETTE CONTROLLER, GP SERIES

for all pipettes from 0,1 to 200 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 either 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.
One full charge of the nickel-metal hydride battery allows 8 hours of non-stop pipetting.
The charge level of the recyclable battery is shown by the LED indicator. Defective batteries are easily replaced. To avoid surprises, the LED indicator changes from green to red two hours before the battery must be recharged. The BOECO GP Series Pipette Controller can still be operated while the battery is being recharged.

Manufactured in Germany in accordance with ISO 9001:2008 / ISO 14001:2009 quality and environmental standards.

Cat. No.	Description
BOE 9900000	BOECO Electronic Pipette Controller, GP Series with battery, battery charger 100-230V, with multiplug charger (EU, UK, US/J, AUS) and 2 x 0,2 µm replacement membrane filters



BOECO ELECTRONIC PIPETTE CONTROLLER GP SERIES

BOECO ELECTRONIC PIPETTE CONTROLLER, SA SERIES

is an engine powered pipetting aid designed for cordless work with glass or plastic pipettes in 0.1 - 200 ml range. Ergonomically shaped and carefully modeled light weight handle, together with its smooth push buttons and conveniently located slide switch it ensures effortless pipetting even during extensive use.

- » Powerful yet quite pump can fill a 25 ml pipette under 4 seconds
- » Autoclavable pipette cone
- » Double Safety valve and hydrophobic filters provide double protection against fluid penetration
- » Two different speed modes – High, Low along with Gravity drain.
- » Cadmium Free environment friendly NiMH batteries
- » Batteries can be changed very easily by the end user
- » The intelligent charger prevents over charging / heating of batteries
- » Low battery indicator
- » The specially designed desktop stand enables the Pipette Controller to be charged while resting on it
- » The Pipette Controller can hold serological pipette while resting on the desk top stand



BOECO ELECTRONIC PIPETTE CONTROLLER SA SERIES

Technical Information:

Power	2x1.2 V/1000 mAh rechargeable NiMH batteries.
Battery usage duration:	Eight hours continuous use
Battery charging duration	2 – 3 hours to charge fully
Volumetric Range	Plastic or Glass pipette from 0.1 ml up to 200 ml
Safety System	Replaceable hydrophobic 0.45 µm and 0.2 µm PTFE filter, Safety check valve

Cat. No.	Description
BOE 9600010	BOECO Electronic Pipette Controller, SA series with battery, battery charger 100-230V, and 1 x 0.2 µm Hydrophobic PTFE membrane filter 1 x 0.45 µm Hydrophobic PTFE membrane filter Wall mounting stand with screw, Desktop stand



DISPENSER



BOECO GP SERIES BOTTLE-TOP DISPENSER

Drawing quantities of liquids from large supply bottles is a daily routine in the lab. This manual task must be carried out quickly, accurately, reproducibly, simply and safely.

BOECO GP Series bottle-top dispensers are instruments with proven precision that offer many advantages in routine liquid-handling operations. The positive displacement piston in this instrument is equipped with a fluoroplastic (PFA) sealing lip on the cylinder wall. This acts like a windscreen wiper to prevent crystal build-up on the cylinder wall from readily crystallisable media. The glass cylinder is also coated with a plastic material that reduces the risk of splashes should breakage occur. The telescopic filling tube can be adjusted smoothly to the height of the bottle.
Since the materials in contact with the media (Borosilicate glass, Al2O3-ceramic, ETFE, FEP, PFA, PTFE, platinum- iridium, PP (closure cap) are resistant to most acids, bases, and solvents, BOECO GP Series bottle-top dispensers can be used in practically any operation with salt solutions, acids, bases and many organic solvents.

BOECO GP Series bottle-top Dispensers are completely autoclavable at 121°C (2 bar) according to DIN EN 285

Also available with DAkkS calibration certificate or individual quality certificate.

Manufactured in Germany in accordance with ISO 9001:2008 / ISO 14001:2009 quality and environmental standards

Limits and operating exclusions

Use Temperature from +15 °C to +40 °C of instrument and reagent
Steam pressure: max. 600 mbar; Kinematic Viscosity up to: max. 500 mm2/s
Density: max. 2.2 g/cm3
Liquids attacking Al2O3-ceramic, ETFE, FEP, PFA and PTFE (e.g. dissolved sodium azide)
Liquids attacking borosilicate glass (e.g. hydrofluoric acid)
Nitric acid > 60 %, Tetrahydrofuran, Trifluoroacetic acid.
Explosive liquids (e.g., carbon disulfide)
Suspensions (e.g. of charcoal) as solid particles may clog or damage the instrument. Liquids attacking PP (Closure cap)

BOECO GP Series Bottle-Top Dispenser, complete with 3 or 5 adapters (PP), telescopic filling tube, mounting tool, instruction manual, quality certificate, without reservoir bottle.

Code	Volume	Thread at the dispenser	»dapters	Filling Tube	Increment	Inaccuracy	Imprecision
BOE 9900225	0,2 - 2,0 ml	45	GL25/28/32/38/S40	125-240 mm	0,05 ml	± 0,5 %	0,1 %
BOE 9900550	0,5 - 5,0 ml	45	GL25/28/32/38/S40	125-240 mm	0,10 ml	± 0,5 %	0,1 %
BOE 9900110	1,0 - 10,0 ml	45	GL25/28/32/38/S40	125-240 mm	0,20 ml	± 0,5 %	0,1 %
BOE 9902525	2,5 - 25,0 ml	45	GL32/38/S40	170-330 mm	0,50 ml	± 0,5 %	0,1 %
BOE 9905050	5,0 - 50,0 ml	45	GL32/38/S40	170-330 mm	1,00 ml	± 0,5 %	0,1 %
BOE 9901100	10,0 - 100,0 ml	45	GL32/38/S40	170-330 mm	1,00 ml	± 0,5 %	0,1 %

Accessories and Spare Partes for BOECO GP Dispensers

Code	Description
BOE 1678210	Telescopic filling tube 70-140 mm for volume 2/5/10 ml
BOE 1678212	Telescopic filling tube 125-240 mm for volume 2/5/10 ml
BOE 1678214	Telescopic filling tube 195-350 mm for volume 2/5/10 ml
BOE 1678216	Telescopic filling tube 250-480 mm for volume 2/5/10 ml
BOE 1678218	Telescopic filling tube 170-330 mm for volume 25/50/100 ml
BOE 1678220	Telescopic filling tube 250-480 mm for volume 25/50/100 ml
BOE 1678132	Flexible discharge tube, PTFE, 80 cm, for volume 2/5/10 ml
BOE 1678134	Flexible discharge tube, PTFE, 80 cm, for volume 25/50/100 ml
BOE 1671090	Drying tube
BOE 1671683	Sealing ring for valve block (PTFE) for dosing highly volatil media
BOE 1671682	Ventilation plug for micro filter (PP) with Luer-cone and sealing ring

Adapters

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

BOECO SA-SERIES BOTTLE-TOP DISPENSER

designed to handle dispensing of liquid from wide range of bottle and flasks. The BOECO SA Series dispensers are intended for the safe and reproducible liquid distribution



Innovative

» Unique piston mechanism allows cleaning of the piston and cylinder without disturbing the calibration
» Spring-less valve design leads to smooth functioning and high chemical resistance

Perfect Handling

» Discharge tube with 360° rotating makes the bottle label visible all the time
» Ease of volume setting with locking mechanism
» Telescoping filling tube compatible with different sizes of reagent bottles
» Comes with 4 additional adapters for common bottle sizes
» Easy dispensing and fast priming

Key features

» Excellent chemical resisitance
» Permanent fluid path visible
» Robustness with long lasting performance
» Hassle free maintenance and cleaning
» Easy to calibrate and adjust in order to comply with ISO 8655-5 standards
» Can be autoclaved for sterile application 121°C

Safety

» Replaceable filling and discharge valve with safety ball
» The glass barrel is protected by a transparent plastic sleeve, which prevents the user from cuts and splashes if the glass breaks
» Drip-free discharge tube holder to restrict tubing movement

Application

The BOECO SA dispenser supports a very wide range of applications for the dispensing of aggressive reagents - directly from the supply bottle: Such as concentrated bases and acids like H3PO4, H2SO4 (with certain exceptions such as HCL, HNO3, HF, etc.), saline solutions, and a variety of organic solvents
Specially for use in trace analysis for dispensing high-purity and highly concentrated acids and salt solutions, acids, alkalies and many organic solvents as well as hydrogen peroxide, bromine

Material in contact with media

Borosilicate glass, Al2O3-ceramic PFA, FEP, PTFE, ETFE and PP (Bottle screw cap)

Limits and operating exclusions

Temperature: +15 °C to +40 °C
Steam pressure: max. 500 mbar
Viscosity: max. 500 mm2/s
Density: max. 2.2 g/cm3
Liquids attacking ETFE, FEP, PFA and PTFE (e.g. dissolved sodium azide)
Liquids attacking borosilicate glass (e.g. hydrofluoric acid)
Hydrochloric acid > 20 % and nitric acid > 30 %
Tetrahydrofuran, Trifluoroacetic acid
Explosive liquids (e.g. carbon disulfide)
Suspensions (e.g. of charcoal) as solid particles may clog or damage the instrument.
Liquids attacking PP (Bottle screw cap)

BOECO SA Series Bottle-Top Dispenser, complete with 4 adapters (PP), telescopic filling tube, spanner, instruction manual, quality certificate and calibration report, without reservoir bottle

Code	Volume	Thread at the dispenser	Adapters	Increment	Inaccuracy	Imprecision
BOE 9680002	0,25 - 2,5 ml	32	28/38/40/45	0,05 ml	± 0,6 %	± 0,2 %
BOE 9680005	0,50 - 5,0 ml	32	28/38/40/45	0,10 ml	± 0,5 %	± 0,2 %
BOE 9680010	1,0 - 10,0 ml	32	28/38/40/45	0,20 ml	± 0,5 %	± 0,2 %
BOE 9680025	2,5 - 25,0 ml	32	28/38/40/45	0,50 ml	± 0,5 %	± 0,2 %
BOE 9680050	5,0 - 50,0 ml	32	28/38/40/45	1,00 ml	± 0,5 %	± 0,2 %
BOE 9680100	10,0 - 100,0 ml	32	28/38/40/45	2,00 ml	± 0,5 %	± 0,2 %

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 1 Mol/l. During the titration process, the burette fills automatically, eliminating time-consuming refills.
- Continuous pulse-free operation for faster titrations 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 re-adjusted 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 1671095	Drying Tube
BOE 9772050	Amber Glass bottle, 2500 ml
BOE 1671085	Telescopic Intake Tube, 200-350 mm

Dispenser-thread bottles, with screw cap, amber glass

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

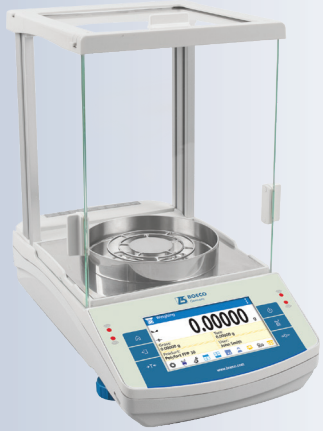


LABORATORY EQUIPMENT

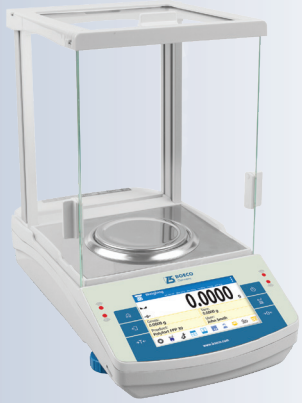
BOECO
Germany



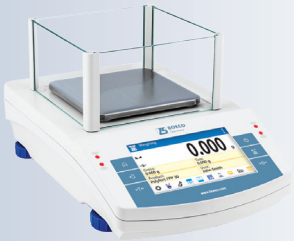
BALANCES



Model	Readability	Capacity
BXX 22	0,00001 g	82 g
(dual range)	0,0001 g	220 g



Model	Readability	Capacity
BXX 30	0,0001 g	310 g
BXX 31	0,0001 g	220 g



Model	Readability	Capacity
BXX 40	0,001 g	750 g



Model	Readability	Capacity
BXX 51	0,01 g	4500 g
Monoblock		

BOECO BXX MODELS

Our advanced level for Semi-Micro and Analytical balances with touch-screen and internal automatic calibration.

» 5“ colour capacitive touch-screen / maximum comfort of operation
» Personal display design allows using a wide selection of widgets
» Menu navigation selectable in many languages, interactive menu
» Built-in IR sensors allow numerous operations (touch-free operations)
» Conformity with GLP and GMP regulations
» Dynamically controlled sample weight (bar graph)
» Statistics, formulations, reports and printouts
» Alibi memory with record of measurements
» Complex databases
» Kensington lock

» Functions: autotest, dosing, percent weighing, parts counting, peak hold, formulation, newton unit measurement, statistics, checkweighing, infrared sensors, under hook weighing, GLP procedures, animal weighing, air density correction, density determination, ambient conditions, replaceable unit, alibi memory, mass for titrator

Specifiaction	BXX 22	BXX 30	BXX 31
Max. capacity	82 /220 g	310 g	220 g
Minimal load	0,001 g	0,01 g	0,01 g
Readability	0,00001/0,0001 g	0,0001 g	0,0001 g
Tare range	- 220 g	- 310 g	- 220 g
Repeatability	0,000015/0,0001 g	0,0001 g	0,0001 g
Linearity	± 0,0000/0,0002 g	± 0,0002 g	± 0,0002 g
Pan size	Open work pan ø 90 mm	ø 100 mm	ø 100 mm
Stabilization time	2 sec.	2,5 sec.	2 sec.
Calibration	Internal (automatic)		
Interface	2 x RS232, 2 x USB (A+B), WIFI, Ethernet		
Display	5“ colour capacitive touch-screen		
Working temperature	+10°C - +40°C		
Power Supply	110-230 V AC, 50/60 Hz		
Netweight / Grossweight	7,3 kg / 8,8 kg		
Size / Packing size	333x206x355 / 495x400x515 mm		



Our advanced level touch-screen Precision balances with internal calibration.

Specifiaction	BXX 40	BXX 51
Max. capacity	750 g	4500 g
Minimal load	0,02 g	0,5 g
Readability	0,001 g	0,01 g
Tare range	- 750 g	- 4500 g
Repeatability	0,015 g	0,01 g
Linearity	± 0,003 g	± 0,02 g
Pan size	128 x 128 mm	195 x 195 mm
Stabilization time	2 sec.	1,5 sec.
Calibration	Internal (automatic)	
Interface	2 x RS232, 2 x USB (A+B), WIFI	
Display	5“ colour capacitive touch-screen	
Working temperature	+10°C - +40°C	
Power Supply	110-230 V AC, 50/60 Hz	
Netweight / Grossweight	3,9 / 7,2 kg	4,5 / 7,2 kg
Size / Packing size	333x206x100/170 / 530x440x410 mm	

BOECO BAS PLUS MODELS

Our Standard Analytical balance with automatic internal calibration

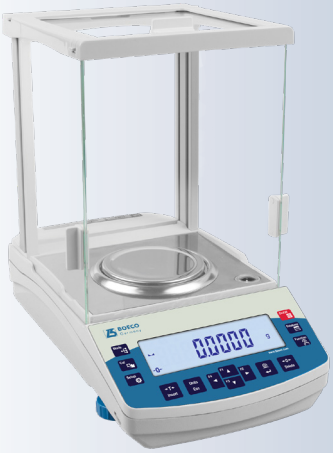
Display with enlarged characters, keypad with quick access buttons, communication interfaces 2 x USB (1 x to work with printers with PCL protocol) and optional WIFI
Kensington Lock, which allows to secure the device against theft.

» Functions: autotest, dosing, percent weighing, totalizing, parts counting, peak hold, Newton unit measurement, statistics, checkweighing, under hook weighing, GLP procedures, animal weighing, pipettes calibration, density determination.

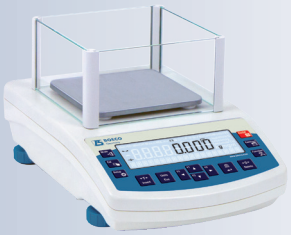
Menu navigation selectable in many languages

Specifiaction	BAS 31 plus
Max. capacity	220 g
Minimal load	0,01g
Readability (permissible)	0,0001 g
Tare range	- 220 g
Repeatability	0,0001 g
Linearity	± 0,0002 g
Pan size	ø 100 mm
Stabilization time	2 sec.
Calibration	Internal (automatic)
Interface	2xRS232, 2xUSB(A+B), WIFI (optional)
Display	large LCD with backlight
Working temperature	+10°C - +40°C
Power Supply	110-230 V AC, 50/60 Hz
Netweight / Grossweight	7,3 kg / 10,7 kg
Size / Packing size	333 x 206 x 355 / 495 x 400 x 515 mm

The BAS 31 plus balance is available in an optional WIFI interface version



Model	Readability	Capacity
BAS 31 plus	0,0001 g	220 g



Model	Readability	Capacity
BPS 40 plus	0,001 g	750 g
BPS 41 plus	0,001 g	360 g



Model	Readability	Capacity
BPS 51 plus	0,01 g	4500 g
BPS 52 plus	0,01 g	2100 g

BOECO BPS PLUS MODELS

Our Standard Precision balances with automatic internal calibration

Display with enlarged characters, keypad with quick access buttons, communication interfaces 2 x USB (1 x to work with printers with PCL protocol) and optional WIFI.

» Functions: autotest, dosing, percent weighing, totalizing, parts counting, peak hold, Newton unit measurement, statistics, checkweighing, under hook weighing, GLP procedures, animal weighing, density determination

Menu navigation selectable in many languages

Specifiaction	BPS 40 plus	BPS 41 plus	BPS 51 plus	BPS 52 plus
Max. capacity	750 g	360 g	4500 g	2100 g
Minimal load	0,02 g	0,02 g	0,5 g	0,5 g
Readability	0,001 g	0,001 g	0,01 g	0,01 g
Tare range	- 750 g	- 360 g	- 4500 g	- 2100 g
Repeatability	0,0015 g	0,001 g	0,01 g	0,01 g
Linearity	± 0,003 g	± 0,002 g	± 0,02 g	± 0,02 g
Pan size	128 x 128 mm		195 x 195 mm	
Stabilization time	2 sec.		1,5 sec.	
Calibration	Internal (automatic)			
Interface	2xRS232, 2xUSB (A+B), WIFI (optional)			
Display	large LCD with backlight			
Working temperature	+10°C - +40°C			
Power Supply	110-230 V AC, 50/60 Hz			
Netweight / Grossweight	3,9/7,1 kg	3,7/7,1 kg	4,5/7,1 kg	4,3/7,1 kg
Size / Packing size	333 x 206 x 100/170 / 530 x 440 x 420 mm			

All 4 BPSplus balances are available in an optional WIFI interface version



Model	Readability	Capacity
BWL 51	0,01 g	2000 g
BWL 61	0,1 g	6000 g
BWL 60	0,1 g	10 kg

BOECO BWL MODELS

Our Basic Precision balances with external calibration and internal rechargeable accu with power charger. This makes them independent from a mains supply and therefore portable.

» Functions:
Parts counting, weighing in percent, totalising, checking, under hook weighing, animal weighing, GLP procedures, measurement in Newton.

Specifiaction	BWL 51	BWL 61	BWL 60
Max. capacity	2000 g	6000 g	10 kg
Readability	0,01 g	0,1 g	0,1 g
Tare range	- 2000 g	- 6000 g	- 10 kg
Repeatability	0,03 g	0,3 g	0,1 g
Linearity	± 0,03 g	± 0,3 g	± 0,1 g
Pan size	195 x 195 mm		
Stabilization time	3 sec.		
Calibration	external		
Interface	RS 232		
Display	LCD with backlight		
Working temperature	+15°C - +30°C		
IP rating	IP 43		
Power Supply	110-230 V AC, 50/60 Hz		
Operation time on batteries	45 hours (average time)		
Netweight / Grossweight	2,9 kg / 4,2 kg		
Size / Packing size	335x210x88 / 470x380x336 mm		



CALIBRATION WEIGHTS

cylindrical shape, nickel-plated and polished brass, packed in a lined plastic container, with DAkkS certificate

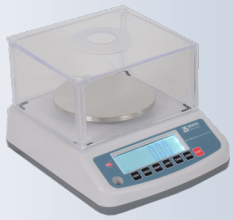
Code	Description
BOE F1-2000	Calibration weight, 2 kg, F1
BOE F1-5000	Calibration weight, 5 kg, F1
BOE F1-10000	Calibration weight, 10 kg, F1

BOECO BLC 600

Our low-cost balance. It is accurate, fast and versatile general purpose balance with weighing, counting, % weighing functions, weighing units conversion.
22 mm LCD with white LED back light display
All the keypads are light touch switches

The BLC 600 is supplied with a plastic windshield and a multiplug (EU/UK/US/AU) AC adaptor

Specifiaction	BLC 600	BLC 6000
Max. capacity	600 g	6000 g
Readability	0,01/0,05 ct	0,1/0,5 ct
Linearity	± 0,02 g	± 0,2 g
Units	g/ct/lb/oz	g/ct/lb/oz
Calibration	Recomended adjustment weight 500 g	Recomended adjustment weight 5000 g
Tare range	Full capacity tare	Full capacity tare
Auto off	30 minutes off	30 minutes off
Operation	+10°C to +35°C / 50°F-95°F	+10°C to +35°C / 50°F-95°F
Power Source	5V/1A	5V/1A
Display	LCD 6 digits x 22 mm	LCD 6 digits x 22 mm
Dimension (LxWxH)	228 x 190 x 150 mm	228 x 190 x 80 mm
Pan size	Ø 120 mm	138 x 160 mm
Netweight	1020 g	1000 g





Model	Readability	Capacity
BLC 600	0,01 g	600 g
BLC 6000	0,1 g	6000 g



BOECO MOISTURE ANALYZER BMA H50, BMA I50

» Functions: drying modes, samples drying, water vapor permeability, halogen, humidity analysis, dry mass determination, elevated temperature level, GLP/GMP procedures.

Specification	BMA H50	BMA I50
Heating Module	**Halogen emitter**	**Infrared emitter**
Range of Drying temp	**250°C**	**160°C**
Max. capacity	50 g	
Readability	0,001 g	
Tare range	- 50 g	
Max mass sampling	50 g	
Accuracy of moisture reading	0,001 %	
Repeatability	±0,05 % (sample < 2 g) ±0,01 % (sample >10 g)	
Max. height of tested sample	h = 20 mm	
Pan size	ø 90 mm, h = 8 mm	
Drying modes	4 drying modes (standard, quick, step, mild)	
Auto switch off options	4 options (manual, automatic, time defined, user-defined)	
Aditional functions	sample identification	
Power of heating device	400 W	
Interface	1xRS232, 2xUSB (A+B), WIFI (optional)	
Display	LCD with backlight	
Working temperature	+10°C - +40°C	
Power Supply	110-240 V AC, 50/60 Hz	
Netweight / Grossweight	4,8 kg / 6,2 kg	
Size / Packing size	333x206x190 / 470x380x336 mm	



BOECO MOISTURE ANALYZER BMX H50, BMX I50

as the above models BMA H50 and BMA I50 but with
» LCD 5“ capacitive colour touch-screen
» The drying chamber can be opened and closed automatically using button or proximity sensors.
» SMART DRY - prognosis of the Drying Process Result. It is an option dedicated for users who require fast and multiple estimation of the materials moisture content. SMART DRY method is a prognosis of the end result carried out before the drying process is completed.

Specification	BMX H50	BMX I50
Heating Module	**Halogen emitter**	**Infrared emitter**
Range of Drying temp	**250°C**	**160°C**
Max. capacity	50 g	
Readability	0,001 g	
Tare range	- 50 g	
Max mass sampling	50 g	
Accuracy of moisture reading	0,001 %	
Repeatability	±0,05 % (sample 2 g) ±0,01 % (sample 10 g)	
Max. height of tested sample	h = 20 mm	
Pan size	ø 90 mm, h = 8 mm	
Drying modes	4 drying modes (standard, quick, step, mild)	
Auto switch off options	4 options (manual, automatic, time defined, and user-defined)	
Aditional functions	sample identification	
Power of heating device	400 W	
Interface	1xRS232, 2xUSB (A+B), WIFI	
Proximity sensors	2	
Display	LCD 5“ capacitive colour touch-screen	
Working temperature	+10°C - +40°C	
Power Supply	110-240 V AC, 50/60 Hz	
Netweight / Grossweight	5,2 kgs / 6,7 kgs	
Size / Packing size	333x206x190 / 595x395x420 mm	

ACCESSORIES FOR BMA/BMX MOISTURE ANALYZERS

Code	Description
BOE PAN90	Aluminium sample pans, round, ø = 90 mm (box of 50)
BOE 440017	Glass fiber filters MG 161, 90 mm ø , with binder, anorganic, 75 g/m^2 (box of 50)
BOE F1-50	Calibration weight, 50 g, F1, cylindrical shape nickel-plated and polished brass, packed in a lined plastic container, with DAkkS certificate

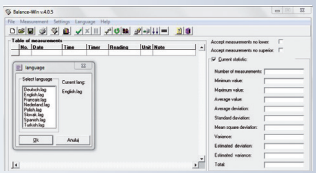


ACCESSORIES

Code	Description
BOE KIT 85	Density determination KIT for solids and liquids, for balances featuring weighing pan ø 85, 90 and 100 mm
BOE KIT 128	Density determination KIT for balances with weighing pan 128 x 128 mm
BOE KIT 195	Density determination KIT for balances with weighing pan 195 x 195 mm



BOE P0108	RS 232 cable (balance-computer)
BOE USBAB	USB cable Typ A to B (balance-computer)
BOE DC-1	Dust cover for BAS / BXX Plus analytical balances
BOE DC-2	Dust cover for BPS 51 PLUS / BPS 52 PLUS, BXX 51 and BWL 51 / BWL 60 / BWL 61 balances

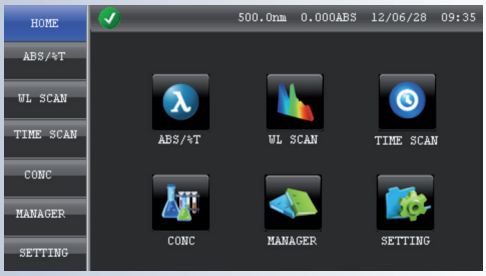




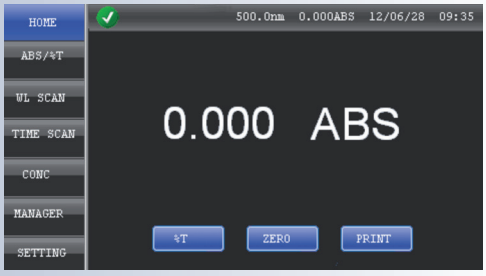
SPECTROPHOTOMETERS



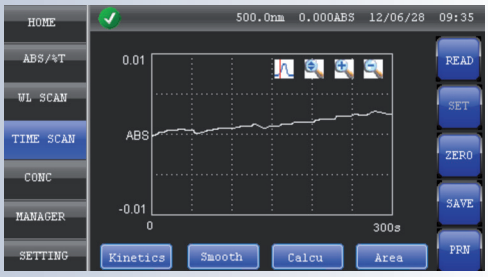
S-200
S-220



MAIN MENUE



LARGE DISPLAY MEASURE



TIME SCAN RESULTS AND DATA PROCESSING

BOECO SPECTROPHOTOMETER MODELS S-200 VIS & S-220 UV/VIS

The BOECO S-220 (UV/VIS) and S-200 (VIS) are high quality, compact, low cost measurement systems for daily analysis in education, QC and basic research.

» Compact single beam optics with full range scanning

The single beam optics are compact and bench space saving.
The long life Hamamatsu Xenon lamp optics in the S-220 ensure quick and reliable performance and the Tungsten Halogen lamp used in S-200 also provide a reliable measurement.

» Color touch screen operation

The intuitive color touch screen operation provides simple access to an extensive range of functions. The touch screen is sensitive to stylus and laboratory gloves. Icon driven on-board software improves accessibility and the graphical display allows spectrum or standard curve to be shown on the screen. The forward and back quick key allows the user to proceed or swiftly return to the process. An enlarged data display for photometry measurement makes result reading easier.

» Various measurement modes

Operation modes include photometric, multiple wavelength analysis, spectrum scanning, time scan and kinetics; direct concentration results are included.

» Optional accessories

A variety of accessories are included such as test tube holder, flow cell with sipper, temperature control holder, long path length cuvette holder & multiple cell holder are available to enhance different application needs.

» Storage and data output

External storage with SD card and free downloadable PC Software MasterReport (www.boeco.com) allows data export to PC in compatible text or spreadsheet format for further data processing in the PC.
Method and result storage is almost unlimited by exchanging SD card when needed. Printer options are available for direct result printing with graphics.

» Validation function

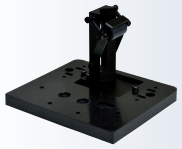
To ensure optimum instrument performance, self diagnosis functions are equipped in GLP/GMP feature for performance validation and auditing.

Code	Description
BOE 8620000	Model S-200 Vis Spectrophotometer, single beam with full range scanning and color touch screen operation. Supplied with 10 x 10 mm cuvette holder
BOE 8622000	Model S-220 UV/Vis Spectrophotometer, single beam with full range scanning and color touch screen operation. Supplied with 10 x 10 mm cuvette holder

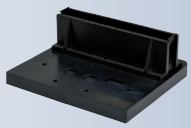
Specification	S-200 Vis	S-220 UV/Vis
Wavelength Range:	320 to 1100nm	190 to 1000nm
Spectral Bandwidth:	6nm	5nm
Transmittance accuracy:	±0,5% T (NIST 930 Filter)	±1% T (NIST 930 Filter)
Transmittance repeatability:	0.2% T	0.5% T
Baseline flatness:	± 0.002 Abs (330-1090nm)	± 0.005 Abs (200-990nm)
Noise level:	≤ 0.001 Abs (500nm)	≤ 0.005 Abs (250 nm)
Baseline stability:	≤ 0.001 Abs/h (500nm) (after 2 hours warm up)	≤ 0.005 Abs/h (250nm) (after 2 hours warm up)
Stray light:	≤ 0.5% T	≤ 0.5% T
Wavelength controlled variable:	0.2nm	0,2nm
Wavelength accuracy:	± 1nm	± 2nm
Wavelength repeatability:	≤ 0,5nm	≤ 1nm
Wavelength scan speed:	2400nm/min (0,2 sampling interval without filter)	300nm/min (0,2 sampling interval without filter)
Wavelength move speed:	to any specified position within 1sec.	to any specified position within 1sec.
Absorbance:	-0.3 to 1.999	-0.3 to 1.999
Transmittance:	0 to 199.9%	0 to 199.9%
Spectrum Scanning:	Yes	Yes
Concentration:	-300 to 1999	-300 to 1999
Selectable Resolution:	1, 0.1, 0.01 or 0.001	1, 0.1, 0.01 or 0.001
Light source:	Tungsten Halogen lamp	pulsed-Xenon lamp
Detector:	Silicon photodiode	
Display screen:	4,3 inches colorful touch LCD screen	
Printer:	specified 80-column thermal printer (series port)	
Metering mode:	Single beam	
Memory:	SD card storage	
Time Scan:	Graphical and calculated concentration value	
Analysis:	Absorbance and wavelength of peaks and valleys	
GLP:	Real time clock and calendar, Self Diagnosis	
Size:	400 (W) x 280 (D) x 160 (H) mm	
Power requirement:	AC, 100-240V, 50/60Hz	
Power consumption:	100VA	
Communication ports:	Serial printer port connects thermal printer USB port connects PC SD card port saves data and measurement methods Accessories port connects and controls serval options	
Weight:	4,7 kg	

Accessories

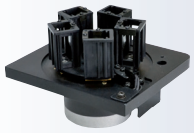
Code	Description
BOE 8620005	Test tube holder (only for S-200)
BOE 8622004	Rectangular long-path cuvette holder for cuvettes with 10, 20, 30, 50 and 100 mm path-length
BOE 8620003	Micro-cuvette holder, for cuvettes with centre height of 15 mm
BOE 8620020	Flow cuvette holder, incl. quartz glass flow cuvette of 150 µl
BOE 8620030	Set of Auto sample sipper and Flow cuvette holder with quartz glass flow cuvette of 150 µl
BOE 8622040	Electronic thermostat (Peltier element) TC cuvette holder (only for S-220, S-300)
BOE 8620050	Automatic 5 position cuvette holder
BOE 8620060	Thermo printer with 100V-240V AC power supply
BOE 8620001	Tungsten halogen lamp (S-200)
BOE 8622001	Xenon Lamp module (S-220, S-300)
BOE 8622070	UV DETECTIVE software to control and operate the spectrophotometer on a PC. The versatile software can control all spectrophotometer operations such as photometry, wavelength scans, time scans and more. Further functions include storage of methods programs, saving of numerical and graphical data, downstream data processing, data transfer to commercial spreadsheets such as Excel® and report generation.



TEST TUBE HOLDER



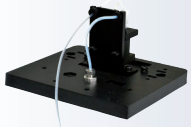
LONG PATH CUVETTE HOLDER



5-PLACE AUTO SAMPLE HOLDER



ELECTRONIC THERMOSTAT HOLDER



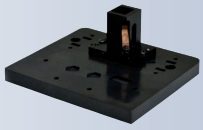
FLOW CUVETTE HOLDER



SAMPLE SIPPER



THERMO PRINTER



MICRO CUVETTE HOLDER



S-300

BOECO LIFE SCIENCE SPECTROPHOTOMETER MODEL S-300

The BOECO S-300 life science spectrophotometer allows measurement of nucleic acid concentrations and purity (using ratio function) including protein concentrations. As a high quality spectrophotometer, the S-300 features touch screen operation packaged as a lightweight system with a compact footprint for life science and education related applications.

» Life Science Programs

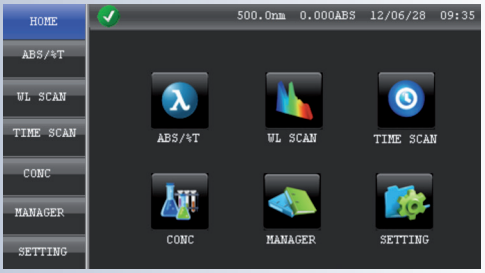
The S-300 contains onboard functions for the quantification of nucleic acid, including dsDNA, ssDNA, RNA and Oligonucleotides. The purity of the nucleic acid can also be determined with the ratio A260/A280 calculation. Protein concentrations can be measured from a range of colourimetric assays such as Bradford, Lowry, Biuret and BCA. Standard calibration data and curves can also be displayed. Furthermore, proteins can be quantified at 280nm. Bacterial cell density at 600nm can also be measured under the OD600 cell culture optical density function. It can define a bacterial culture in exponential growth phase and at the most appropriate time for harvest or induction.

» Compact Optics with Full Range Scanning

The single beam optics are compact resulting in significant bench space saving. The long life Hamamatsu Xenon lamp optics system in the S-300 ensures quick and reliable performance.

» Color Touch Screen Operation

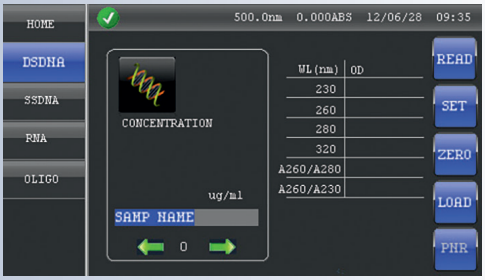
The intuitive color touch screen provides simple access to an extensive range of function. The touch screen is sensitive to stylus or hands (with and without gloves). Icon driven on board software improves accessibility and the quick action keys are another convenience feature.



MAIN MENUE

» Various measurement modes

In addition to the Lifescience program, the S-300 also features conventional spectrophotometer functions such as single/ multiple wavelength analysis, spectrum scanning, kinetics and concentration measurement.

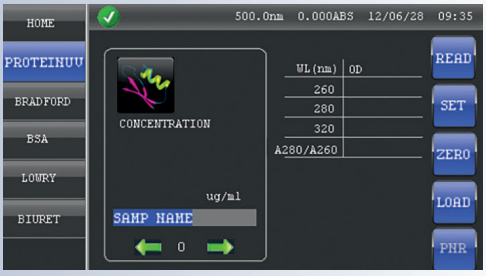


» Optional accessories

A various selection of optional accessories is available such as flow cell with sipper, temperature control holder, long path length cuvette holder & multiple cell holder to enhance different application needs.

» Storage and data output

External storage with SD card allows data export to PC in compatible text or spreadsheet format. Free downloadable PC Software MasterReport (www.boeco.com) allows data export to PC in compatible text or spreadsheet format for further data processing in the PC.
Method and result storage is almost unlimited by exchanging SD card when needed. Printer options are available for direct result printing with graphics.



» Validation function

To ensure optimum instrument performance, self diagnosis functions are equipped in GLP/GMP feature for performance validation and auditing.

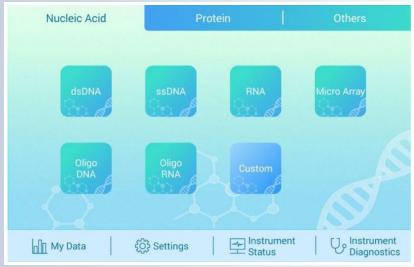
Code	Description
BOE 8630000	Model S-300 UV/Vis Life Science Spectrophotometer, single beam with full range scanning and color touch screen operation. Supplied with installed micro cuvette holder (centre height 15 mm) and with optional 10 x 10 mm cuvette holder and sample pack of 8 pcs. disposable UV Micro Cuvettes

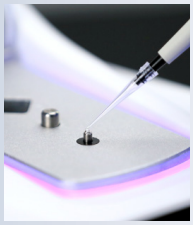
Specification	**S-300 UV/Vis**
Wavelength Range:	190 to 1000nm
Wavelength Resolution	0.2nm
Spectral Bandwidth:	5nm
Transmittance accuracy:	±1% T (NIST 930 Filter)
Transmittance repeatability:	0.50% T
Detection limit Concentration:	dsDNA 1.5 - 100µh/ml (for 100µl cell)
Noise level:	0.005 Abs (at 250 nm)
Stray light:	≤ 0.5% T at 220, 340 nm
Wavelength accuracy:	± 2nm
Wavelength repeatability:	≤ 1nm
Absorbance:	-0.3 to 1.999
Transmittance:	0 to 199.9%
Spectrum Scanning:	Yes
Concentration:	0 to 1999
Light source:	pulsed-Xenon lamp
Detector:	Silicon photodiode
Display screen:	4,3 inches colorful touch LCD screen
Printer:	specified 80-column thermal printer (series port)
Metering mode:	Single beam
Memory:	SD card storage
Time Scan:	Graphical and calculated reaction activity
Wavelegth Scan Analysis:	Absorbance and wavelength of peaks and valleys
GLP:	Real time clock and calendar, Self Diagnosis
Size:	400 (W) x 280 (D) x160 (H) mm
Power requirement:	AC, 100-240V, 50/60Hz
Power consumption:	100VA
Communication ports:	Serial printer port connects thermal printer USB port connects PC SD card port saves data and measurement methods Accessories port connects and controls serval options
Weight:	4,7 kg

BOECO MICRO UV-VIS SPECTROPHOTOMETER MODELS N-1 TOUCH & N-1C TOUCH

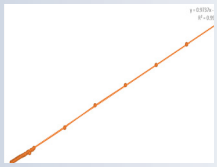


The BOECO N-1 / N-1C Touch Micro volume (UV-Vis) spectrophotometers with built-in 7-inch color touch screen, can complete all detection functions without connecting a computer, display test results in real time, store historical data, and export to a computer. The Android operating system, optimized for the touch operation habits, improves the operating feelings. The integrated design and compact size are ideal to save the space in the crowded laboratories, or as the in-vehicle mobile inspection device.
It can be applied to the concentration detection of nucleic acids, proteins, bacterial cell cultures, etc., as well as the absorbance measurement of unknown samples.
The variable path length of the N-1C Touch Micro US-Vis Spectrophotometer realizes both the minimum sample volume pedestal detection as low as 0.5μL,
suitable for precious samples, and the detection to the high concentration samples without dilution at all. Including the liquid drop, it builds in the standard cuvette detection module for more use.











Features

Large size colour touch screen
Built-in-7-inch high resolution color touch screen for more detection information, all operations can be done on the screen.

Two models in one (N-1C Touch)
Pedestral Micro volume or cuvette mode, to meet the flexible detection need. The cuvette module has a heating stirrer.

Wide detection range
The 0.03 minimum detection path length, combined with a new generation spectrophotometer, increases the maximum detection concentration to 27,500 ng/μl and the lowest detection concentration as low as 0,2 ng/μl

Stability for long life
Long-life xenon flash lamp of Hamamastu ensures stability of detection and the long life of the instrument.
The lifting detection base with sliding bearing structure has high precision, not easy to damage.

Ultra-wide wavelength range
With continuous wavelength range as 185-910nm, the instrument can detect various samples through selecting any band. It adapts to a variety of detection requirements with wide range of near infrared wavelength.

Accurate path length
The stepper motor combined unique double track technology (DPTL), allows the precision of optical path length as 0.001mm, thus to achieve highly repeatability of absorbance detection.

Cuvette detection mode (N-1C Touch)
The cuvette detection mode comes with magnetic stirring function. User can set the heating function and stirring speed for dynamic analysis detection.
And the user can define different path length, such as 1mm, 2mm, 5mm,10mm.

Android operating system
The spectrophotometer has a built-in operating system and detection software, without need of a computer. Graphical touch operation is in line with user friendly design and improves work effiicency.

Light status
The lighting strip around the test stand flashes with different states to show the detection process straightforwardly

Multi-functions

Nucleic acid detection
Built-in common calculation formula of dsDNA, ssDNA, RNA, Oligo-DNA, Oligo-RNA, can get the concentration and purity of samples automatically.

UV visible custom scanning
In the full wavelength range, set the detected wavelength through increasing or decreasing wavelength with 1 nm as expected.

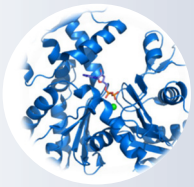
Nucleic acid fluorescence marker detection
Preinstall extinction factor of commonly used fluorescent dyes of dsDNA, ssDNA, RNA, Oligo-DNA, Oligo-RNA.

Protein detection
Can detect the concentration of protein solution, or detect protein concentration of dye marker. Built-in common detection methods of BCA, Bradford, Lowry, Pierce 660nm.

Cell detection
Can detect absorbance value at 600nm automatically. Meanwhile, it can detect absorbance value at any band under set wavelength range.



NUCLEIC ACID DETECTION



PROTEIN DETECTION



CELL DETECTION

Code	Description
BOE 8638000	Model N-1 Touch micro UV/Vis Spectrophotometer, with pedestal microvolume mode
BOE 8638100	Model N-1C Touch micro UV/Vis Spectrophotometer, with pedestal microvolume and cuvette mode

Research use only

Specification		**N-1C touch**	**N-1 touch**
Parameters			
Detector		2048-element liner CCD array	
Light Source		Xenon flash lamp	
Mini.Sample Amount (µl)		0.5	
Pathlength (mm)		0.03, 005, 0,1, 0,2, 1,0 auto ranging	
Wavelength Range (nm)		185-910	
Wavelength Accuracy (nm)		±1	
Spectral Resolution (nm)		≤1.8(FWHMat Hg 253.7nm)	
Photometric Accuracy		0-550 (10 mm equivalent)	
Measurement Repeatability		0.002 (1mm optical length)	
Limit of Detection		Pedestal: 2ng/µl ds DNA, 0,006 mg/ml BSA, 0,03 ng/ml IgG	
Maximum Concentration		Pedestal: 27.500 ng/µl ds DNA, 820ml/ml BSA, 400 mg/ml Lg	
Limit of Detection		2ng/µl dsDNA	
Measurement Time		5 Sec.	
Cuvette Mode	Heating Temp.(°C)	37±0.5	NA
	Cuvette Stirring Speed (RPM)	150-900 / 10 Speeds	NA
	Cuvette photometric	0-1,5A (10 mm)	NA
	Cuvette Limit of Detection	0.2ng/µl dsDNA, 0,006mg/ml BSA, 0,003 mg//ml LgG	NA
Display		7 inch, 1280 x 800 high definition LCD	
Internal storage		32GB flash memory	
PC software requirements		Windows 7:32/64 bit, Windows 8/10 64 bit	
Data transfer & PC connecting		USB, Wifi	
Power		AC 110 V - 220 V, 50/60 Hz (Power adapter)	
Net Weight		2,3 kg	



MACRO



SEMI-MICRO



MICRO



BOE 104010



HEL 6030-OG



HEL 6030-UV



HEL 6040-OG



HEL 6040-UV



HEL 100-OS/10



HEL 100-OS/100



HEL 105.202-QS

CUVETTES

Disposable Cuvettes:

Code	Description
BRA 759007	Disposable Macro Cuvettes, PS, Window: 10 x 35 mm; 10 mm light path Filling volume: min 2,5 / max 4,5 ml grouped by mold cavity number, neutral packing Wavelength: From 340 to 900 nm Packing: 100 pcs./box, 1000 pcs./carton
BRA 759017	Disposable Semi-Micro Cuvettes, PS, Window: 4,5 x 23 mm; 10 mm light path Filling volume: min 1,5 / max 3,0 ml grouped by mold cavity number, neutral packing Wavelength: From 340 to 900 nm Packing: 100 pcs./box, 1000 pcs./carton
BRA 759170	BRAND Disposable UV Macro Cuvettes, Filling volume: min 2,5 / max 4,5 ml grouped by mold cavity number, Wavelength: From 220 to 900 nm, 10 mm light path, pack of 100 pcs.
BRA 759150	BRAND Disposable UV Semi-Micro Cuvettes, Filling volume: min 1,5 / max 3,0 ml grouped by mold cavity number, Wavelength: From 220 to 900 nm, 10 mm light path, pack of 100 pcs.
BRA 759220	BRAND Disposable UV Micro Cuvettes, Center height 15 mm, Vol. 70 µl up to 550 µl, Wavelength: From 220 to 900 nm, 10 mm light path, pack of 100 pcs.

Optical and quartz glass Cuvettes:

Code	Description
BOE 104010	BOECO economic Macro cell, Optical glass, 340-2500 nm 10 mm ligth path, PTFE lid, Volume 3,5 ml 2 pcs. / pack
BOE 204010	BOECO economic Macro cell, Quartz glass, 190-2500 nm 10 mm ligth path, PTFE lid, Volume 3,5 ml 2 pcs. / pack
HEL 6030-10-10	HELLMA Macro Cuvette 6030-OG without lid, Optical glass, 360-2500 nm. 10 mm light path
HEL 6030-UV-10-531	HELLMA Macro Cuvette 6030-UV without lid, Quartz glass, 260-2500 nm, 10 mm light path
HEL 6040-10-10	HELLMA Semi-Micro Cuvette 6040-OG without lid, Optical glass, 360-2500 nm, 10 mm light path
HEL 6040-UV-10-531	HELLMA Semi-Micro Cuvette 6040-UV without lid, Quartz glass, 260-2500 nm, 10 mm light path
HEL 100-10-20	HELLMA Macro Cuvette 100-OS with PTFE lid, Optical glass, 320-2500 nm, 10 mm light path
HEL 100-20-20	100-OS with 20 mm light path
HEL 100-50-20	100-OS with 50 mm light path
HEL 100-100-20	100-OS with 100 mm light path
HEL 100-10-40	HELLMA Macro Cuvette 100-QS with PTFE lid, Quartz glass, 200-2500 nm, 10 mm light path Volume 3,5 ml
HEL 100-20-40	100-QS with 20 mm light path
HEL 100-50-40	100-QS with 50 mm light path
HEL 100-100-40	100-QS with 100 mm light path
HEL 105-202-15-40	HELLMA Ultra-Micro Cuvette 105.202-QS with PE stopper, Quartz glass, 200-2500 nm 10 mm light path, Centre height 15 mm Chamber volume 50 µl, Filling volume 70 µl

BOECO CLINICAL PHOTOMETER MODEL PM-51

- » Semi-automated photometric system
- » Effective temperature regulation system
- » Flexible cuvette concept, interchangeable flow-through or standard cuvette
- » Reagent-open system with high capacity for programmable methods
- » Teach-in capability for reagent application via touchscreen
- » Minimum sipping volume 250 µl
- » Double-secured liquid control with infrared bubble detector
- » Future-proof operation, can easily be upgraded



Specification:

Type:	Semi-automatic, single-beam filter photometer
Light Source:	Halogen lamp - 12 V, 20 W with protection for lifetime
Wavelength:	340 nm - 800 nm
Wavelength Selection:	Automatic via 9-position filter wheel: 6 standard interference filters: 340 nm, 405 nm, 492 nm, 546 nm, 578 nm, 623 nm, 3 positions for optional filter of choice
Photometric Range:	0 - 2.5 Bel
Cuvette System:	Microflow cell: 32 µl, 10 mm light path interchangeable with normal standard cuvettes (macro or semi-micro, disposable or special optical glass) Temperature Control Internal Peltier element, temperature variable, pre-adjusted to 25 °C, 30 °C and 37 °C Equilibration time for aspirated reaction mixture to reach 37 °C from ambient temperature: 15 sec
Aspiration System:	Built-in peristaltic pump driven by stepper motor programmable aspiration volume controlled by infrared light barrier
Sipping Volume:	Minimum 250 µl, typically 500 µl up to 2000 µl Separate setting of aspirate volume and wash volume
Operator interface:	Touchscreen, for direct functions and alphanumeric inputs
Data Presentation:	Graphic display, White characters or symbols, blue background, lighted, resolution 240 x 126 dots.
Integrated Printer:	Thermal printer, 24 characters per line
Languages:	English, German, Spanish, French, Russian and Indonesian
Memory:	General operating software can be updated by PC Reagent open system with capacity for up to 231 programmable methods Import of data by touchscreen or PC Up to 50 non-linear calibration curves with max. 20 sets of points can be stored
Data Logging:	Up to 1000 results can be saved in memory automatically
Signal Port:	1 serial port for connection to an external printer or PC (bidirectional interface)
Measurement Procedures:	» Absorbance » Endpoint with standard, factor or multiple standards, with or without reagent blank and/or sample blank » Bichromatic end point » Kinetics with standard, factor or multiple standards, with or without blank » Fixed time with standard, factor or multiple standards, with or without reagent blank » Turbidimetry with optional timer function » Single, double and triple determinations » Curve fitting for non-linear standard curves » Free hemoglobin in combination with optional interference filters
Measuring Time:	» Kinetic: variable from 3 - 19 deltas, time per delta 4 - 255 sec. » Fixed time: variable from 0 - 65535 sec.
Delay Time:	Programmable from 0 - 65535 sec.
Mains Supply:	Range 100 VAC up to 240 VAC at 50/60 Hz
Dimensions:	Length 33 cm x Width 34 cm x Height 18 cm
Weight:	5,3 kg

Code	Description
BOE PM-51	BOECO photometer PM-51, with integrated printer, flow-through cell, standard cuvette adapter and filter wheel (340-405-492-546-578-623 nm), 90-264 V, 50/60 Hz



BOECO BMR-100 MICROPLATE READER

Our BMR-100 Microplate Reader is a reliable and robust instrument for a wide variety of research and clinical applications. It reads various kinds of 96-well plates and is equipped with shaking function. It can be used as a stand alone instrument or under PC control with a regular or APP software

- » Easy to use with a 7 inch touch screen together with 3 external keys
- » A broad wavelength range of 340-750nm
- » Able to use as a stand alone or with PC control software to export the results
- » Absorbance range: 0.0~4.000Abs
- » 8 position optical filter wheel equipped with 4 standard optical filters
- » Fast and accurate measurement of 96-well plates within 6 seconds

Safety

The drawer is controlled by a motor, if there is anything blocked when it is closing, the motor would draw back to protect the user. The light source and optical filters can be exchangead without opening the cover

Software

BMR-100 keeps with high visual and logical user interface of software.
It offers a comprehensive inbuilt calculation, such as blank subtraction, quantitative curve fit, qualitative classification and kinetic calculations, as well as the versatile reporting tool and further provides data reduction

Specification

Display:	7 inch touch screen (800x480 dots)
Light source:	Quartz-halogen lamp 6V/10W
Wavelength:	340-750 nm
Optical filter:	Standard filters 405, 450, 492, 630 nm
Half-bandwidth of filters:	3~9 nm
Read-out range:	0~4.000 Abs
Linearity (405 nm):	0~2.000 Abs ≤ ±1%, 2~4.000 Abs ≤ ±2%
Resolution:	0.001 Abs 1
Accuracy (405 nm):	±1%(0-3Abs), ±2%(3-4Abs)
Precision (405 nm) :	CV≤0.2%(0-3Abs), CV≤1.0%(3-4 Abs)
Test speed	<6s for 96 well plate
Incubator:	No
Shaking:	3 modes of shaking: slow, medium and fast
User interface:	Integrated software or PC control software
Operation:	Touch screen, 3 pcs external keys
Storage:	200 programs and 100.000 test records
Ports:	3 USB ports, for PC, printer and USB-disk
Dimensions (W x D x H)	440 x 295 x 225 mm
Weight:	10 kg

Code	Description
BOE 8160500	BMR-100 Microplate Reader with standard filters 405, 450, 492, 630 nm, 100-240 V, 50/60 Hz

Optional Filters

BOE 8160511	Optical filter 340 nm
BOE 8160512	Optical filter 380 nm
BOE 8160513	Optical filter 415 nm
BOE 8160516	Optical filter 540 nm
BOE 8160518	Optical filter 570 nm
BOE 8160519	Optical filter 578 nm
BOE 8160521	Optical filter 595 nm
BOE 8160523	Optical filter 650 nm
BOE 8160514	Optical filter 690 nm

BOECO IW-8 INTELISPEED MICROPLATE WASHER

The Intelispeed Washer IW-8 is designed for washing of standard flat-bottom 96 well plates and microstrips. The unit is fully programmable ensuring multi-step solution ripening, aspiration (aspiration, combination of aspiration/liquid dispensing and soaking, as well as soaking cycle during a particular period of time).

The unit has 100 user-defined programs. Standard version is supplied with 8-channel washing head for dispensing/aspiration, 3 bottles for washing and rinsing solutions, a waste bottle and bottle with filter. Optional 4-channel washing solution weight logger 4 CHW Logger is available.

The unit is designed for washing standard 96-well plates during analyses.

The unit provides:
- » Washing mode
- » Rinsing mode
- » Mixing mode
- » Double aspiration
- » Possibility of additional solution mixing during time gap between two work cycles
- » Possibility to use microtest plates by different manufacturers, ensured by automated plate set up (adjusting to different depths of plate wells)
- » Plate and strip washing mode
- » User-defined programs with adjustable parameters
- » Saving work programs

The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80% at +25°C decreasing linearly to 50% relative humidity at 35°C

4-channel washing solution weight logger 4 CHW Logger provides automatic control of rinsing solution and waste volumes. The washer shows remaining volume for each bottle as percentage and gives a warning message in case of low solution volume or full waste bottle when 4 CHW Logger is connected.



Specification

Detection mode:	Absorbance
Minimum dispense volume:	25 µl
Maximum dispense volume:	1600 µl
Dispense increment:	25 µl
Dispensing accuracy:	±2.5%
Allowed residual liquid volume in plate well:	not more than 2 µl
Number of wells washed simultaneously:	8
Number of washing cycles for each channel:	1–15
Aspiration time:	0.2–3 s
Aspiration/dispensing speed:	3 levels
Max. number of channels in a program:	2
Soaking time:	0–300 s (increment 10 s)
Shaking time:	0–150 s (increment 5 s)
Number of washed rows:	1 – 12
Time of plate single wash (350 µl), no more:	45 s
Number of programs:	100
Plate platform and washing head movement:	automated
Indication of operation modes:	8-line LCD
Dimensions:	375 x 345 x 180 mm
Weight with accessories:	9,6 kg
External power supply:	DC 12 V, 5 A
Consumed power, not more:	60 W

4 CHW Logger Specifications

Max. loading per scale cup:	2 kg
Overall dimensions:	267 × 252 × 97 mm
Weight:	3 kg

Code	Description
BOE 8078000	IW-8 Intelispeed Microplate Washer, 100-240 V, 50/60 Hz incl. bottles & external power supply unit
BOE 8078010	4 CHW logger

MILK ANALYZER



BOECO LAC-SP
BOECO LAC-SPA



BACKPANEL

BOECO MILK ANALYZER LAC-SP, LAC-SPA

The function of the BOECO Ultrasonic Milk Analyzer is to make quick analyses of milk samples directly after milking, at collecting and during processing.

The BOECO Milk analyzer makes quick analyses of milk and liquid dairy products as: Cow milk, UHT milk, Sheep milk, Goat milk, Buffalo milk, Camel milk, Whey, Cream (up to 45%), Skimmed milk (0,01% FAT, Ice-cream mixtures, Concentrated milk (up to 1160 kg/m^3), Yogurt, Flavoured milk, Recovered milk.

Each unit will be delivered with 3 calibrations (standard are sheep, cow and UHT milk)

The model LAC-SP has one peristaltic pump for the sample aspiration.
The model LAC-SPA has two pumps. The second one for automatic cleaning

The key features are:

- User-friendly: simple in operation, maintenance, calibration and installation
- Portable and compact design
- Very small quantity of milk required (25 ml per one measurement)
- Low power consumption
- No use of hazardous chemicals
- Measuring accuracy adjustment can be done by the user RS 232 interface
- ESC POS Printer Support
- Two samples self-calibration
- Dimensions 175x175x150 mm (WxDxH)
- Weight: < 1,5 kg
- Power: Input 100-240V ~1,6 A max, 50/60 Hz, Output +12V 4.17 A min

The following Parameters can be measured from the Ultrasonic system:
Fat, Solid-non-fat (SNF), Density, Protein, Lactose,
Milk sample temperature, Added water, Salts, Freezing point.

The following Parameters can be measured from integrated systems:
pH (together with an electrode), Conductivity, Inhibitors

Parameter	Measuring range	Accuracy
Fat	from 0,01% to 25% (option 45%)	± 0.1%
SNF (Solids-non-fat)	from 3% to 15%	± 0.15%
Density	from 1015 to 1140 kg/m^3 (option 1160 kg/m^3)	± 0.3 kg/m^3
Protein	from 2% to 7%	± 0,15%
Lactose	from 0.01% to 6%	± 0.15
Added Water content	from 0% to 70%	± 3.0%
Temperature of milk	from 1°C to 40°C	± 1°C
Freezing point	from -0,4 to -0,7°C	± 0.001°C
Salts	from 0,4 to 1,5%	± 0.05%
pH	from 0 to 12	± 0,05%
Total solids	from 0 to 50 %	± 0,17%
Option Conductivity	from 3 to 14 (mS/cm)	± 0,05%

Code	Description
BOE 5290800	BOECO LAC-SP-50 Milk Analyzer, Standard Plastic Model, 50 sec. measuring time, with pH measuring system, USB/RS 232 dataport
BOE 5291860	BOECO LAC-SPA-50 Milk Analyzer, Standard Automat Model 50 sec. measuring time, with pH measuring system and integrated Conductivity measurement, real time clock, USB/RS 232 dataport
Option:	
BOE 5451160	High-fat (45%) / Density 1160 kg/m^3 measuring function

BOECO MILK ANALYZER LAC-S, LAC-SA

The function of the BOECO Ultrasonic Milk Analyzer is to make quick analyses of milk samples directly after milking, at collecting and during processing.

The BOECO Milk analyzer makes quick analyses of milk and liquid dairy products as: Cow milk, UHT milk, Sheep milk, Goat milk, Buffalo milk, Camel milk, Whey, Cream (up to 45%), Skimmed milk (0,01% FAT, Ice-cream mixtures, Concentrated milk (up to 1160 kg/m^3), Yogurt, Flavoured milk, Recovered milk.

Each unit will be delivered with 3 calibrations (standard are sheep, cow and UHT milk)

The standard model LAC-S has one peristaltic pump for the sample. The LAC-SA models have two pumps. The second one for automatic cleaning.

- Direct measurement of cold milk samples, starting at 5°C
- No need of periodical calibration
- The measurement accuracy is not dependant on milk's acidity
- High-end ultrasonic technology for analyzing any kind of milk
- Dimensions 100x223x216 mm (WxLxH)
- Weight: < 3 kg
- Power: Input 100-240V ~1,6 A max, 50/60 Hz, Output +12V 4.17 A min

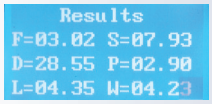
The following Parameters can be measured from the Ultrasonic system:
Fat, Solid-non-fat (SNF), Density, Protein, Lactose,
Milk sample temperature, Added water, Salts, Freezing point

The following Parameters can be measured from integrated systems:
pH (together with an electrode), Conductivity, Inhibitors

USB FLASH DRIVE



BOECO LAC SA 50



Measurement results

Parameter	Measuring range	Accuracy
Fat	from 0,01% to 25% (option 45 %)	± 0.1%
SNF (Solids-non-fat)	from 3% to 15%	± 0.15%
Density	from 1015 to 1140 kg/m^3 (option 1160 kg/m^3)	± 0.3 kg/m^3
Protein	from 2% to 7%	± 0,15%
Lactose	from 0.01% to 6%	± 0.15
Added Water content	from 0% to 70%	± 3.0%
Temperature of milk	from 1°C to 40°C	± 1°C
Freezing point	from -0,4 to -0,7°C	± 0.001°C
Salts	from 0,4 to 1,5%	± 0.05%
pH	from 0 to 12	± 0,05%
Total solids	from 0 to 50 %	± 0,17%
Option Conductivity	from 3 to 14 (mS/cm)	± 0,05%

The optional built-in conductivity sensor gives high performance freezing point analysis - avoid poor quality milk due to added water, detects mastitis and falsification with added salt

Code	Description
BOE 5290090	BOECO LAC-S-50 Milk Analyzer, Standard Model, 50 sec. measuring time, with pH measuring system USB/RS 232 data port, USB flash drive

Option:

BOE 5451160	High-fat (45%) / Density 1160 kg/m^3 measuring function

Accessories

Code	Description
BOE 5290020	Thermal Printer
BOE 5095626	Basic pH combination electrode BA 17, liquid electrolyte, 0...14 pH, 0...100°C, with BNC plug, 1m cable. With leak proof refill opening, platinum diaphragm





SHAKER AND STIRRER



V1 PLUS

BOECO VORTEX MIXER V1 PLUS

Vortex mixer V1 plus with variable speed control. Continuous operation as well as with automatic starter, triggered by pressing the attachment. Incl. standard attachment for test tubes up to 20 mm ø.

Specification:

Kind of motion:	orbital, 4 mm
Speed range:	750 - 3000 rpm.
Time of acceleration:	3 sec.
Tube's capacity:	1,5-50ml
Speed display:	scale (min/max)
Switch:	touch / continuous mode
Overall size:	90 x 150 x 80 mm
Weight:	0,8 kg
Power:	12 V. DC 2,0A (External power adapter)

Code	Description
BOE 8055000	Vortex mixer V1plus, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)



V2H



BOECO VORTEX MIXER V2H

Heavy Vortex high speed mixer with brushless motor, digital display and optional attachments.

Specification:

Motor:	brushless DC motor
Kind of motion:	orbital, 4 mm
Speed range:	300 - 4200 rpm. / speed accuracy: ± 10 rpm
Max. loading capacity:	500 g
Display:	digital speed / time setting
Switch:	ON / OFF / Touch
Pulse mode (default):	vibration for 5 secs. than pause for 5 secs.
Pulse mode (programm)	vibration time & pause time can be defined by user between 1 to 99 secs.
Timer	1 to 999 mins. & continuous mode
Overall size:	205 x 136 x 138,5 mm
Weight:	2,8 kg
Power:	external power adapter, 1.6A

Code	Description
BOE 8062000	Vortex mixer V2H, with standard Vortex cup AC adapter 100-240 V, 50/60 Hz
BOE 8062001	Microplate/Microtube (20x1,5/2,0ml) attachment
BOE 8062003	Erlenmeyer flask attachment

BOECO COMBI-SPIN, FVL-2400N PLUS

this combination of a centrifuge and a vortex mixer for Micro test tubes is specially designed for the genetic engineering researches (especially for PCR-diagnostics experiments). It can be used also in biochemical clinical laboratories as well as microbiological and industrial biotechnology laboratories. Combi-Spin ensures the possibility for the simultaneous mixing and separation of the samples, using centrifuge and mixing modules

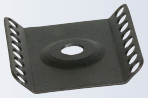


COMBISPIN
FVL-2400N PLUS

Specification:

Rotation speed (constant):	2800 rpm (50 Hz), 3500 rpm (60 Hz)
Max RCF:	450 x g (50 Hz), 700 x g (60 Hz)
Continuous operation time:	< 60 min
Accessories included:	1 rotor for 12 x 1,5 ml 1 rotor for 12 x 0,5 and 0,2 ml
Overall size:	190 x 235 x 125 mm
Weight:	1,7 kg

Code	Description
BOE 8071000	Combi-Spin, FVL-2400N plus, 220 V, 50/60 Hz
BOE 8071100	Combi-Spin, FVL-2400N plus, 110 V, 60 Hz
BOE 8071001	SR-16, rotor for 2 x 8-well 0,2 ml microtest strips
BOE 8071002	SR-32, rotor for 4 x 8-well 0,2 ml microtest strips



SR-16

BOECO ROTATOR BIO RS-24

Mini-rotator with vertical rotation of the platform for soft mixing of test tubes, microtubes and vacutainers.
Incl. Standard platform PRS-22 for 22 tubes up to 15 mm diam.



RS-24

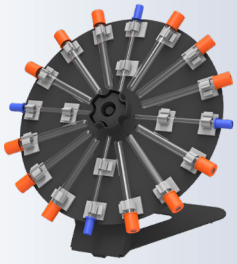
Specification:

Speed range:	5 - 30 1/min
Dgital Timer:	from 1 min to 23 h 59 min / non-stop
Overall size:	325 x 180 x 155 mm
Weight:	1,4 kg
Power:	12 V. DC 2,0A (External power adapter)

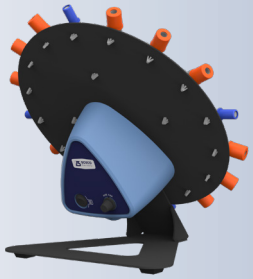
Code	Description
BOE 8024000	Rotator Bio RS-24, with platform PRS-22, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)
BOE 8073001	Platform PRS-4/12 (4x30 mm diam. and 12x15 mm)

BOECO BLOOD TUBE ROTATOR BTR 16

our compact designed BTR 16 with its circular rotating action gives gentle but effective mixing. It can accomodate up to 16 tubes (4 ESR tubes & 12 blood collection tubes) The tubes are easy to fix and remove.
The BTR 16 has a robust construction with a strong metal frame design



BTR-16



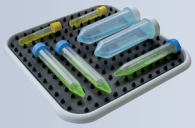
Specification:

Capacity:	16 Tubes (12 Blood collection Tubes + 4 ESR Tubes)
Motor:	AC Synchronous motor for noiseless operation
Speed:	Fixed Speed of 30 rpm with an accuracy of ±2
Run Time:	Continous / Infinite
Angle of Disc Plate:	Fixed angle of 38°
Maximum operational weight capaciyt:	1,5 kg
Protection class:	IP 21
Dimension (W x D x H):	278 x 252 x 183 mm
Weight:	1,4 kg

Code	Description
BOE 8026000	Blood Tube Rotator BTR 16, 220 V, 50/60 Hz
BOE 8026100	Blood Tube Rotator BTR 16, 110 V, 60 Hz



3D



DIMPLED MAT

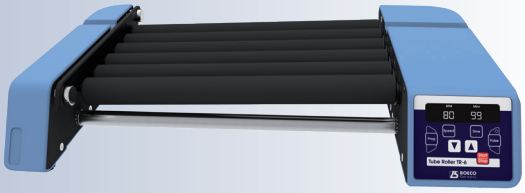
BOECO SUNFLOWER MINI-SHAKER 3D

Mini-Shaker 3D with adjustable speed and constant angle of mixing. Very small and ideal for private diagnostics. Incl. black non-slip silicone mat.

Specification:

Kind of motion:	three-dimensional orbital movement
Angle:	7°
Speed range:	50 - 60 rpm
Speed display:	scale (min/max)
Platform size:	215 x 215 mm
Overall size:	235 x 235 x 140 mm
Max Loading:	1 kg
Weight:	1,3 kg
Power:	12 V. DC 2,0A (External power adapter)

Code	Description
BOE 8058000	Sunflower Mini Shaker 3D, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)
BOE 8050200	Dimpled mat



TR-6

BOECO TUBE ROLLER TR-6

the microprocesor controlled BOECO TR-6 provides gentle rocking and rolling motion. The user can define programs (speed & time) and its Pulse mode provides a momentary pause for through mixing (Pulse can be set for a range of 30 sec. to 90 sec. time) The rollers are fully autoclavable and easy to remove which could allow to use bigger tubes.

Specification:

Housing:	Plastic (ABS)
Motion:	Rolling & Rocking
Tilt angle	± 3°
Motor:	Brushless DC motor
Speed range:	10 - 80 rpm / 1 rpm
Speed display:	LED
Timer:	1 minute to 99 min. / non-stop
Roller:	6 Rolls / 5 positions (Nylon - autoclavable)
Roller Length:	327 mm
Max Loading capacity	2 kg
Protection class	IP 21
Permissible ambient temp.	4°C to 50°C
Permissible rel. humidity	<80°C
Input voltage	100-240 VAC, 50/60 Hz
Output voltagw	24VDC
Overall size:	505x293x90 (WxDxH)
Weight:	approx. 4,2 kg

Code	Description
BOE 8025000	Tube roller TR-6, AC adapter 100-240 V, 50/60Hz

BOECO MAGNETIC STIRRER MMS 3000

Motor drive magnetic stirrer, with stainless steel plate and speed regulation up to 3000 rpm. An optional to be ordered detachable support rod allows to fix different sensors (temperature, pH etc.) inside the Liquid.

Specification:

Speed range:	0 - 3000 1/min
Max. stirring volume:	up to 20,0 l
Platform size:	160 mm diam.
Platform material:	stainless steel
Support rod height:	320 mm
Overall size:	185 x 230 x 75 mm
Weight:	1,5 kg
Power:	12 V. DC 2,0A (External power adapter)

Code	Description
BOE 8056500	Magnetic stirrer MMS-3000, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)
BOE 8056501	Detachable support rod



MMS 3000



BOECO MAGNETIC STIRRER WITH CERAMIC HOTPLATE HSC-400

Our analog hot plate stirrer with a square ceramic heating plate. Resistant, safe and reliable. The ideal solution for basic heating and stirring application You can rely on the BOECO HSC-400 for everyday laboratory applications, as it stirs volumes up to 15 liters (H2O).
The BOECO HSC-400 is equipped with a cutting-edge Heating Plate technology that ensures temperature homogeneity, thermal efficiency and durable heating performance over time.
The BOECO HSC-400 stirs aqueous solutions from 50 up to 1300 rpm being a suitable solution for general laboratory applications performed in chemistry and biology in academia and laboratories.
The BOECO HSC-400 provides LED Indicators for Heating and Stirring.

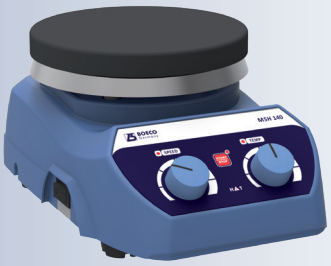


HSC 400

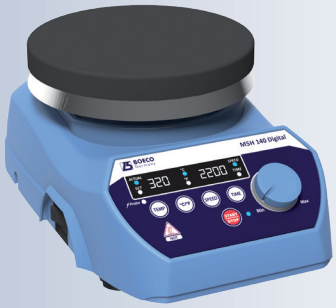
Specification:

Housing material:	Technopolymer
Hot platform size:	180x180 mm (7x7 in)
Hot platform material:	Ceramic
Stirring speed range:	50 - 1300 rpm
Speed control:	Analog
Stirring volume (H20):	15 L
Motor:	Monophase PCM
Temperature range:	Room temperature to 400°C
Heating control:	Analog
Power input:	800 W
Permissible ambient temp.:	40°C
Dimensions (WxHxD):	203 x 94 x 233 mm
Weight:	3,4 kg

Code	Description
BOE F20500552BO	Magnetic stirrer with hotplate HSC-400, 220 V
BOE F20510552BO	Magnetic stirrer with hotplate HSC-400, 110 V

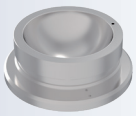


MSH 140



MSH 140 DIGITAL





500 ML REACTION BLOCK

BOECO MAGNETIC STIRRER WITH HOTPLATE MSH 140, MSH 140 DIGITAL

Motor drive Magnetic stirrer with ceramic coated stainless steel hot plate for simultaneously stirring and heating of chemical reagents. „Hot-Surface“ alert indicator light when the plate temperature exceeds 50°C

Specification:	**MSH140 digital**	**MSH140**
Over all dimensions (LxBxH) (mm)	156x248x104	156x248x104
Set-up plate dimensions (mm)	140	140
Stirring quantity in Ltr (max)	10	10
Number of stirrer positions	1	1
Setup plate feature (Coating)	ceramic coated stainless steel plate	
IP Rating	IP 21	IP 21
Product weight (kg)	2,3	2,3
Safety temp circuit	Yes	no
Safe temp. (°C)	345	no
Power supply	110/240VAC	110/240VAC
Maximum bar size (mm)	25 - 60	25 - 60
Speed range (rpm)	200 - 2200	200 - 2200
Heating temp. range (°C)	320	320
Hot surface alert (°C)	50	50
Control		
Time range	1 to 999 minutes & continuous	no
Motor type	DC	DC
Motor rating input & Output (W)	5-7	5-7
Accuracy in RPM (+/- RPM)	+/-80	-
speed step	10	-
Heat Output (W)	600	300
Power output (W)	610	310
Temp Accuracy [+/-K]	1	-
Temp increment	1	-
Temp indication	yes	no
Permissible ambient temp (°C)	5-40	5-40
Error code Display	yes	no
Housing Material	ABS	ABS
Display	Yes	no

Code	Description
BOE 8014000	Magnetic stirrer with hotplate MSH 140, 240V
BOE 8014001	Magnetic stirrer with hotplate MSH 140, 110V
BOE 8014110	Magnetic stirrer with hotplate MSH 140 digital, 240V
BOE 8014111	Magnetic stirrer with hotplate MSH 140 digital, 110V

Accessories for MSH 140 digital

Code	Description
BOE 8014120	Support stand with boss head clamp for PT 1000 sensor probe
BOE 8014121	PT 1000 sensor
BOE 8014122	Reaction block, 500 ml

BOECO OVERHEAD STIRRERS OST-25 / OST-40

» With digital display
» Compact size
» Brushless DC maintenance free long life motor
» The speed will remain constant even with changing viscosities
» Suitable for viscosities 10.000 and 30.000 mPas and volumes (25/40l)

Technical details	**OST-25**	**OST-40**
Stirring quantity (H_2O):	25 l	40 l
Max. viscosity:	10.000 mPas	30.000 mPas
Motor rating input/ouput:	59 W / 45 W	
Output at stirring shaft:	42 W	
Max. ON-time	100%	
Max. torque at chuck (100rpm)	20 Ncm	40 Ncm
Speed range	50 - 2.000 rpm	50 - 1.000 rpm
Speed display:	digital (LED)	
Speed control:	stepless	
Setting accuracy speed:	± 1 rpm	
Reversible direction of rotation:	yes	
Power intermittent operation	yes, (resumes from last run)	
Chuck range:	0,7 - 10 mm	
Extension arm diameter:	13 mm	
Length of extension arm:	160 mm	
Timer (LED):	Yes	
Timer setting range:	1 min - 99 hr 59 min & continuous.	
Protection class:	IP 54 (acc. to DIN EN 60529)	
Protection:	Overload, overcurrent, overtemperature	
Voltage:	100-240 V	
Frequency	50/60 Hz	
DC voltage:	24 V	
Housing material	Thermoplastic polymer	
Dimensions in (WxHxD):	79 x 173 x 176 mm	
Net weight:	approx. 1,4 kg	

Code	Description
BOE 8901170	BOECO overhead stirrer OST-25, 100-240V, 50/60 Hz, **package**, incl. plate stand (220x320mm/ shaft length 550mm/ diameter 10mm), boss head clamp and 4-bladed propeller stirrer
BOE 8901180	BOECO overhead stirrer OST-40, 100-240V, 50/60 Hz, **package**, incl. plate stand (220x320mm/ shaft length 550mm/ diameter 10mm), boss head clamp and 4-bladed propeller stirrer







**PACKAGE WITH PLATE STAND,
BOSS HEAD CLAMP AND 4-BLADED PROPELLER
STIRRER INCLUDED**



MR-1

BOECO MINI-ROCKER SHAKER MR-1

provides gentle rocking motion. It is perfect for soft mixing of biological components. Incl. black non-slip silicone mat

Specification:

Kind of motion:	rocking with fixed 7° angle
Speed range:	5 - 30 rpm
Speed display:	scale (min/max)
Timer:	digital, 1 min - 23h 59min / non-stop
Platform size:	215 x 215 mm
Overall size:	220 x 205 x 120 mm
Max Loading:	1 kg
Weight:	2,1 kg
Power:	12 V. DC 2,0A (External power adapter)

Code	Description
BOE 8058500	MR-1, Mini-rocker Shaker, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)



ROTATOR
MULTI BIO RS-24

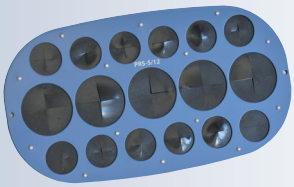
BOECO ROTATOR MULTI BIO RS-24

is an intelligent rotator for soft mixing microtubes and vacutainers
The BioRotator RS-Multi provides 3 types of motion, which can be used separately (except for vortex mode, which works in conjunction with reciprocal motion mode) and consecutively in a cycle:

1. Orbital motion
simple even circular motion - common type of motion used in Rotators. Adjustable speed from 1 to 100 rpm.

2. Reciprocal motion
vertical rotation with changing direction of rotation.
Adjustable turning angle (from 1° to 90°, increment 1°) sets the limits for this type of motion. The speed is the same as set for rotational motion (from 1 to 100 rpm). In this type of motion there is a pause function (from 0 to 5 sec., increment 1 sec.) settable in the Vortex/pause mode.

3. Vortex motion
intensive mixing of samples at high speed with small amplitude - Vortex motion. The vortex mode is necessary for intensive mixing in and it is provided to decrease adhesion of solutions with tube surface, which is especially important for conducting microquantity research when the sample weight may be equal to the adhesion force. The vortex, mode has an adjustable turning angle of 0° to 5° (increment 1°) and the timer has a pause function from 0 to 5 sec., increment 1 sec.)



PRS-5/12



PRSC-10



PRSC-22

Specification:

Standard platform capacity:	PRS-26 for 26 (Microtubes and vacutainers)
Power:	12 V. DC 2,0A (External power adapter)
Size:	365 mm x 195 mm x 155 mm
Weight:	1,8 kg

Code	Description
BOE 8073000	Rotator Multi Bio RS-24, with platform PRS-26 AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)
BOE 8073002	Platform PRS-5/12 for tubes (5 x 30 mm diam. and 12 x 15 mm diam.)
BOE 8073003	Platform PRSC-10 for tubes 10 x 50 ml (Tube Diam 20-30 mm)
BOE 8073004	Platform PRSC-22 for tubes 22 x 15 ml (Tube Diam 10-16 mm)

BOECO MICROPLATE SHAKER PSU-2T

Specially designed for medical diagnostic. Orbital shaking platform IPP-2 with a holding mechanism for 2 standard microtiter plates.
The use of direct drive and brushless motor allows continuous mixing up to 7 days and ensures reliable, trouble-free operation.
The variable speed control provides an optimally adapted speed range from 150 to 1200 rpm with an orbit of 2 mm.

Specification:

Orbit size:	2 mm
Speed range:	150 - 1200 1/min
Speed display:	scale (min/max)
Timer:	digital, 1 min - 23h 59min / non-stop
Overall size:	220 x 205 x 90 mm
Weight:	2 kg
Power:	12 V. DC 2,0A (External power adapter)

Code	Description
BOE 8052000	Microtiter Plate Shaker PSU-2T, incl. platform IPP-2 AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)
BOE 8052002	Platform IPP-4 for 4 Microtiter Plates



PSU-2T



PLATFORM IPP-4

BOECO MICROPLATE INCUBATOR SHAKER PST-60 HL

The PST-60 HL shakers provide orbital shaking of the samples and have a heating platform for 2 x 96 or 4 x 96 wells microplates and an upper heating lid. The display indicates simultaneous set and actual time, temperature and shaking speed. The PST-60 HL are ideal for a variety of cytochemistry, immunochemistry, biochemistry and research applications.

Specification:	**PST-60 HL**	**PST-60 HL 4**
Temperature regulation range:	25°C ….. 60°C	
Temperature setting resolution:	0,1°C	
Temp. Stability:	± 0,1 °C	
Temp. Uniformity over the platform:	± 0,25 °C	
Time of thermoblock heating from RT till 37°C:	12 min.	
Orbit :	2 mm	
Max. height of micotest plate:	18 mm	
Speed regulation:	250 –1200 rpm / increment 10 rpm	
Timer with sound signal:	1 min - 96 hrs, increment 1 min	
Power (external) :	DC 12 V. 5 A	
Platform dimensions:	250 x 150 mm	210 x 290 mm
Number of microplates:	2	4
Size :	270x260x125 mm	380x390x140 mm
Weight incl. power supply :	6,1 kg	9,1 kg

Code	Description
BOE 8072000	Microplate Incubator Shaker PST-60 HL, for 2 plates, AC 100-240 V, 50/60 Hz
BOE 8072040	Microplate Incubator Shaker PST-60 HL 4, for 4 plates, AC 100V-240 V, 50/60 Hz



PST-60 HL



PST-60 HL 4

BOECO UNIVERSAL ORBITAL SHAKER OS-20

Compact, low-profile, orbital laboratory shaker for versatile applications in the fields of biotechnology, microbiology and medical diagnostics. The OS-20 provides gentle rotational mixing and precise circulation at each point of the platform. Variable digital displayed speed control from 50-250 rpm. Digital timer for setting a time interval and continuous operation.



OS-20 ILLUSTRATED WITH PP-4 PLATFORM

Specification:

Kind of motion:	orbital
Orbit size:	20 mm
Speed regulation:	50 - 250 rpm
Speed display:	digital (LED)
Timer:	from 1 min to 999 min / continuous
Time display:	digital (LED)
Max. load:	2,5 kg excl. attachment
Power:	12 V. DC 2,0A (External power adapter)
Overall size :	265 x 270 x 70 mm (w/o attachment)
Weight:	3,3 kg

Code	Description
BOE 8059000	Universal Orbital Shaker OS-20, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)

BOECO UNIVERSAL ORBITAL SHAKER PSU-10i

Equipped with the direct drive system and brushless motor, our compact, powerful and quiet microprocessor controlled orbital laboratory shaker for many general purpose shaking applications. Speed and time setting are easy and during operation the LCD status display clearly indicates both set and actual speed, plus set and elapsed time.



PSU-10i ILLUSTRATED WITH UP-12 PLATFORM

Specification:

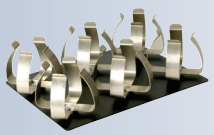
Kind of motion:	orbital
Orbit size:	10 mm
Speed regulation:	50 - 450 rpm
Speed display:	digital (LCD)
Timer:	from 1 min to 96 hours / continuous
Time display:	digital (LCD)
Max. load:	3 kg excl. attachment
Power:	12 V. DC 2,0A (External power adapter)
Overall size:	220 x 205 x 90 mm (w/o attachment)
Weight:	3,2 kg

Code	Description
BOE 8069200	Universal Orbital Shaker PSU-10i, AC Adapter 100-240 V with Multi plug (EU, US, UK, AU)

ACCESSORIES FOR OS-20 AND PSU-10i

PLATFORM PP-4

PLATFORM UP-12



PLATFORM P-6/250



PLATFORM P-12/100

Code	Description
BOE 8059001	Dish platform PP-4 with silicone mat for Petri dishes, culture flasks etc. 235 x 235 mm
BOE 8059002	Universal platform UP-12 for all kind of flasks 285 x 215 mm, stainless steel with variable clamping rolls and silicone mat. Numbers of flasks at the platform 100- 150 ml flasks max 12-9 pieces 200- 250 ml flasks max 6-4 pieces 500-1000 ml flasks max 4-2 pieces
BOE 8059003	Platform P-6/250 with fixed clamps for 6 flasks 250/300 ml, 250 x 190 mm
BOE 8059004	Platform P-12/100 with fixed clamps for 12 flasks 100/150 ml, 250 x 190 mm

BOECO PROGRAMMABLE ORBITAL SHAKER PSU-15i

The PSU-15i belongs to a generation of multifunctional mixing devices: The design, direct drive system, brushless motor (service life up to 35000 hours) and automatic loading balancing system make the PSU-15i even more reliable especially for the long non-stop operation. The PSU-15i has a microprocessor control which allows real-time program correction, indication of set and actual speed, angle and time, operation timer in the display.

1. Orbital motion
simple even circular motion - common type of motion used in shakers. Adjustable speed from 20 to 250 rpm.

2. Reciprocal motion
vertical rotation with changing direction of rotation. Adjustable turning angle (from 0° to 360°, increment 30°) sets the limits for this type of motion. The speed is the same as set for rotational motion (from 20 to 250 rpm).

3. Vortex motion of the platform (vibration)
intensive mixing of samples at high speed with small amplitude - Vortex motion. Adjustable turning angle of 0° to 5° (increment 1°)

Specification:

Kind of motion:	orbital
Orbit size:	20 mm
Speed regulation:	20 - 250 rpm
Speed display:	digital (LCD)
Timer:	from 1 min to 96 hours / continuous
Time display:	digital (LCD)
Max. load:	8 kg
Continuous operation time:	max 168 hrs.
Power (external):	DC 12 V. 3,2 A
Overall size (w/o platform):	410 x 410 x 130 mm
weight:	11,6 kg

Code	Description
BOE 8079000	Orbital Shaker PSU-15i, 100-240 VAC/12DC 4,16A without platform

Accessories

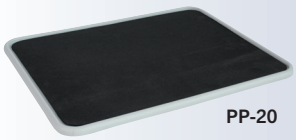
Code	Description	
BOE 8079010	Universal platform UP-330 for all kind of flasks 430 x 330 mm, stainless steel with 4 variable clamping rolls and rubber mat	
BOE 8080011	Flat platform PP-20, 480 x 380 mm	
BOE 8080012	4 level platform PP-20-4, 480 x 380 x 170 mm Distance between platforms: 170 mm Total height: 510 mm	
BOE 8080005	Universal tray platform, 360 x 360 mm with holes to accommodate clamps for Erlenmeyer flasks, separating funnels and test tube racks Clamps have to be ordered separately	
BOE 8081001	Spring clamp, 25 ml max.:	36 pcs.
BOE 8081002	Spring clamp, 50 ml max.:	36 pcs.
BOE 8081003	Spring clamp, 100 ml max.:	25 pcs.
BOE 8081004	Spring clamp, 250 ml max.:	16 pcs.
BOE 8081005	Spring clamp, 500 ml max.:	9 pcs.
BOE 8081006	Spring clamp, 1000 ml max.:	9 pcs.
BOE 8081007	Spring clamp, 2000 ml max.:	4 pcs.
BOE 8081009	Holding device for Separating funnels 250-1000 ml	



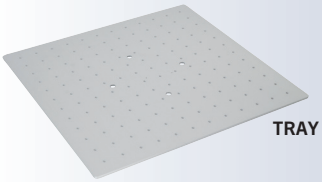
PSU-15i WITH PLATFORM UP-330

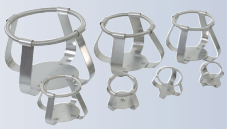


PSU-15i WITH TRAY PLATFORM


PP-20


PP-20-4


TRAY PLATFORM


SPRING CLAMPS


HOLDING DEVICE FOR SEPARATING FUNNELS



BOECO ORBITAL SHAKER INCUBATOR ES-20/80

Our BOECO ES-20/80 shaker-incubator for biotechnological and pharmaceutical laboratories is a professional category equipment.
The typical applications include microbiological and cell culture cultivation, protein expression, solubility studies, general mixing, as well as other various applications in the fields of biology and chemistry. The unit is equipped with a newly developed triple eccentric mechanism for platform motion that provides supreme balancing characteristics, superior reliability and quiet operation. The achieved stability of the unit during vigorous mixing allows for stacking installation of up to 3 units which enables to save space. The new display and easy to use user interface provide a clear and intuitive control of parameters and also allow data logging, storage and display over time. Additional features like out of balance sensor and automatic thermostat failure detection make this shaker-incubator an advanced and safe product. Bluetooth connectivity to PC allows for data management, data logging, parameter control and profiling in a dedicated software that can be requested separately.
A built-in heat-resistant brushless fan provides precise temperature distribution inside the chamber (from 10°C above ambient up to +80°C). Additionally, excellent sample temperature uniformity of ±0.3 °C at 37 °C is achieved. The inner chamber is made of stainless steel. State-of-the-art motor, thermal insulation materials and parameter PID-control decrease the energy consumption and make the shaker-incubator highly energy efficient despite its relatively large size.

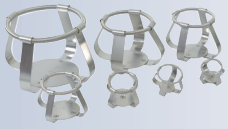
Specification:

Speed control range	50–400 rpm (increment 10 rpm)
Digital time setting	1 min–96 hrs / non–stop (1 min increment)
Maximum continuous operation time	30 days
Maximum load	10,6 kg
Orbit	20 mm
Stacking	up to 3
Display	TFT
Data transfer	Bluetooth
Temperature setting range	+25°C... +80°C (increment 0,1°C)
Temperature control range	10°C above ambient... +80°C
Sample temperature uniformity	±0,3°C at 37°C
Temperature precision	±0,1°C at 37°C
Temperature accuracy	±0,1°C at 37°C
Sample temperature stability	±0,1°C at 37°C
Heat up time to max. temperature	75 min
Overall dimensions (W×D×H)	620 × 530 × 510 mm
Dimensions of the inner chamber	460 × 350 × 400 mm
Weight	48 kg
Nominal operating voltage	230 V, 50/60 Hz or 120 V, 50/60 Hz
Power consumption	230 V / 450 W (2 A) 120 V / 450 W (4.5 A)

Code	Description
BOE 8086000	Orbital Shaker Incubator ES 20/80 230V, 50/60Hz, without platform
BOE 8086100	Orbital Shaker Incubator ES 20/80 120V, 50/60Hz, without platform

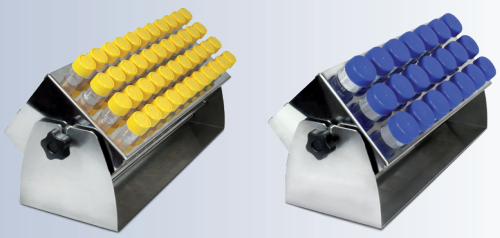






Accessories

Code	Description
BOE 8086400	Platform PP-400 360 x 400 mm with silicone mat
BOE 8080005	Universal tray platform 360 x 360 mm clamps have to be ordered separately
BOE 8082003	Tight fit clamp, 100 ml max.: 25 pcs.
BOE 8082004	Tight fit clamp, 250 ml max.: 16 pcs.
BOE 8082005	Tight fit clamp, 500 ml max.: 9 pcs.
BOE 8082006	Tight fit clamp, 1000 ml max.: 9 pcs.
BOE 8086015	Test tube rack TR-44/15 for 44 x 15 ml tubes
BOE 8086050	Test tube rack TR-21/50 for 21 x 50 ml tubes



BOECO DESKTOP INCUBATOR I-18
BOECO UNIVERSAL DESKTOP OVEN U-18

The I-18/U-18 are featured with unique design, modern appearance, and advanced manufacturing techniques. they have an accurately temperature control system, daily maintains and operates easily. Those Incubator/Oven are widely used in bacteria & microbial scientific research, medical science, pharmacy, biological and biochemical industries etc



Features:

- Vertical design, box body made by high quality cold-rolled steel, the surface is treated by electrostatic spraying process, stable and beautiful appearance.
- LCD fuzzy-PID control temperature contoller with overtemperature protection
- Stainless Steel inner chamber, Circular arc transition corners, adjustable shelf, and easy cleaning.
- The external chamber is processed by cold rolling steel plate after anti-corrosive coating.
- Door with double toughened glass window enables large angle observation. Elastic adjustable lock type handle. High temperature silica gel sealing strip, to ensure good sealing and prevent heating loss.

Specification I-18:

Volume:	18 l
Heating power:	200W
Operating Temp. Range:	Room Temperature + 5°C... + 65°C
Temp. Uniformity:	± 0,5
Temp. Fluctuation:	± 0,5
Temperature Setting:	0,1°C
Time range:	1 -9999min, continuous.
Max. Number of shelfs:	2
Shelf Load:	15 kg
Internal Dimension:	260 x 260 x 260 mm (L x W x H)
External Dimension:	460 x 510 x 695 mm (L x W x H)
Weight net:	16,3 kg

Code	Description
BOE 8042000	BOECO Desktop Incubator I-18, 220 V, 50/60 Hz incl. 2 stainless steel shelfs
BOE 8042100	BOECO Desktop Incubator I-18, 115 V, 60 Hz incl. 2 stainless steel shelfs

Specification U-18:

Volume:	18 l
Heating power:	600W
Operating Temp. Range:	Room Temperature + 10°C... + 300°C
Temp. Uniformity:	± 0,5
Temp. Fluctuation:	± 0,5
Temperature Setting:	0,1°C
Time range:	1 -9999 min, continuous.
Max. Number of shelfs:	2
Shelf Load:	15 kg
Internal Dimension:	260 x 260 x 260 mm (L x W x H)
External Dimension:	460 x 510 x 695 mm (L x W x H)
Weight net:	16,4 kg

Code	Description
BOE 8043000	BOECO Universal Desktop oven U-18, 220 V, 50/60 Hz incl. 2 stainless steel shelfs
BOE 8043100	BOECO Universal Desktop oven U-18, 115 V, 60 Hz incl. 2 stainless steel shelfs



BOECO COMPACT CO2 INCUBATOR S-BT

S-Bt Smart Biotherm is designed for work in the areas of cell biology (operations with animal cell cultures and tissues), molecular biology (DNA/RNA reaction analysis, hybridization reactions), biotechnology (synthesis of target proteins and other molecules), immunology (synthesis of antibodies and other proteins of immune system).

Features:

» Six-sided heating: The heating elements are located on the walls and on the door, thus providing excellent uniform temperature distribution, regardless of external factors, such as ambient temperature and positioning of the device.

» Built-in infrared CO2–sensor allows an accurate control of the CO2 level. The sensor makes measurement non-sensitive to changes in temperature and humidity inside the incubator.

» The chamber is made of stainless steel with smoothed seams to minimize contamination and to facilitate cleaning.

» The BOECO S-Bt is equipped with a UV air recirculation system - one UV lamp and a fan are mounted behind the rear wall, providing decontamination of the working volume.

» A convenient access port is built in the wall of the incubator for easy output of wire sensors or devices' installed inside. The access port is heated independently to prevent formation of condensate.

» An error tracing and alarm system lowers significantly potential risks during operation.

» The unit is equipped with a "black box" system that records temperature, humidity and CO2 levels, as well as statuses for door opening, UV lamp, fan and errors, to the inner memory.

» Bluetooth connection to PC is available as an opition.

Technical details:

Working chamber material	Stainless Steel (1 mm)
Temperature setting range	+25°C ... +60°C
Temperature stability	±0.1°C
Temperature uniformity at +37°C	±0.3°C
Working volume	46 litres
Number of shelves	3 (max. 6)
Inner glass door	yes
Relative humidity	>90% @ 37°C
Humidity delivery	Water Pan
CO2 control range	0 – 20%
CO2 sensor	Infrared CO2 sensor
Temperature and CO2 level input	Digital
UV lamp	1 × 6 W, TUV G6T5
Data output	Wireless
Access port	1 (ø 26 mm)
Dimensions	400 × 410 × 580 mm
Weight	37,7 kg
Nominal operating voltage	230 V, 50/60 Hz 115 V, 60 Hz

Code	Description
BOE 8087000	BOECO compact CO2 incubator, 230 V, 50/60 HZ
BOE 8087100	BOECO compact CO2 incubator, 115 V, 60 Hz

Accessories

Code	Description
BOE 8087001	Additional shelf
BOE 8087002	PC Software and Bluetooth adapter
BOE 8087003	Incubator stacking device

BOECO AUTOCLAVE BTE-23D

Features:

» Three times fractionated pre-vacuum
» Stainless steel chamber
» LCD display
» Equipped with high quality and high performance pump
» 1 tray holder, 1 tray handle and 3 trays included
» High quality water pump and valves
» Independent steam generator
» Two samples self-calibration
» Overhead type water storage tank, easy to clean
» Drying procedure: Dry by vacuum
» Sterilization temperature: 121°C and 134°C
» Test programs: Helix test, B&D test and Vacuum test
» Sterilization cycles: 9 cycles are available and 3 test programmes.

Program	Temperature	Pressure	Sterilization time	Total time
SOLID 134	134°C	2.1 bar	4 min	25-45 min
SOLID 121	121°C	1.1 bar	20 min	35-60 min
LIQUID 134	134°C	2.1 bar	10 min	35-60 min
LIQUID 121	121°C	1.1 bar	30 min	35-65 min
WRAPPED 134	134°C	2.1 bar	4 min	35-60 min
WRAPPED 121	121°C	1.1 bar	20 min	35-65 min
TEXTILE 134 (or wrapped)	134°C	2.1 bar	6 min	45-65 min
TEXTILE 121 (or wrapped)	121°C	1.1 bar	20 min	50-70 min
PRION	134°C	2.1 bar	18 min	45-70 min
B&D TEST	134°C	2.1 bar	3.5 min	22-35 min
Helix TEST	134°C	2.1 bar	3.5 min	22-35 min
Vacuum TEST	-	-	-	15-20 min

» It only have several buttons, very easy to use, any people can run it easily.
» All cycles are fully automatic; there is no need for human intervention in cycle management.
» Pressure protection locking system that ensures the door will not be opened once there is any pressure in chamber.
» Sterilization documentation: Integrated Micro Printer and USB port to store the information of the programme cycle in flash memory.
» The sterilization time and dry time can be adjusted by manual, ensure user to obtain best sterilization effects according to private requirements.
» Malfunction detection system, corresponding error code will be showed on the display once there is something going wrong.

Safety:

» Warning system prevents starting a cycle if door is not properly locked.
» Triple threat protection for overheating and overpressure.
– The pressure protection system will automatically cut off the electricity supply once the temperature of chamber inside is abnormally. Motorola pressure sensor is used to accurately sense the state of pressure inside chamber.
Temperature control system is using high quality PT1000 temperature sensor, it is high precision, reliable service and prompt measurement, ensure accurate and timely transmission of temperature fluctuation.
The safety valve will release steam in case the pressure inside chamber exceeds normal levels.

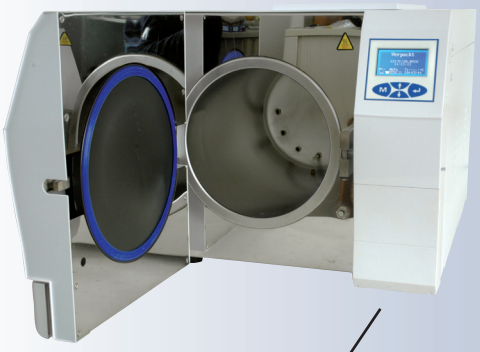
Technical Information:

» Conform to CE and EN13060
» Manufactured under ISO 13485 norms
» Chamber Size: ø 247 x 450 mm (23 l)
» External dimension: 490 x 480 x 680 mm, Net weight 50 kg
» Packing box 750 x 560 x 460 mm, Gross weight 67,5 kg
» Power: 220 V, 50/60 Hz or 110 V, 60 Hz

Code	Description
BOE 8902300	BOECO BTE-23D Bench Top Autoclave, Vol. 23 l. incl 1 tray holder, 1 tray handle and 3 trays, micro printer and USB port, 220 V, 50/60 Hz
BOE 8902310	BOECO BTE-23D as above but for 110 V, 60 Hz



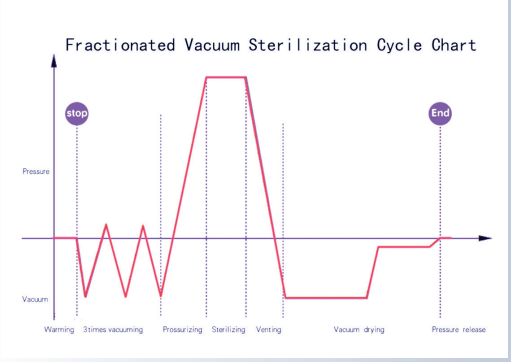
BOECO BTE-23D



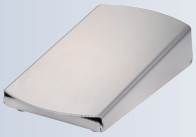


MICRO PRINTER AND USB PORT

This BTE-23D adopts 3 times pre-fractionated vacuum system, the following chart simply describes the status of its process







FOOT PEDAL

BOECO FUEGO SCS BASIC
SAFETY LABORATORY GAS BURNER

is a new standard among laboratory gas burners. With its innovative design this laboratory gas burner is suitable for all flame related applications in the laboratory.

Specification:

Technology:	Microprocessor
Programs	
Foot pedal:	Standard (flame during pressed foot pedal) Start-Stop with timer, 60 min
Button:	Start-Stop with timer, 60 min
Safety features	
Safety Control System (SCS) with gas safety cut off:	ignition and flame control temperature monitor burner head clogging and assembly monitor (BHC) automatic unit switch off, 4 h residual heat display
Gas supply and consumption	
Gas connection:	1/4" left with gas filter
Gas types:	natural gas E/LL, 18 - 25 mbar liquid gas II2ELL3B/P, 20 - 50 mbar
Connected load:	70 g/h liquid gas
Continuous cartridge operation:	CV 360 - 40 min, Express 444 - 50 min CG 1750 - 150 min, C 206 - 170 min CP 250 - 210 min, CV 470 - 370 min
Temperatures	
Flame temperature:	1350 °C on liquid gas 1300 °C on natural gas (E)
Electrical	
Power consumption:	2VA
Power connection:	100 - 240 V / 50/60 Hz / max. 0,3 A 9 V DC / 1A
Mechanical	
Casing and operation controls:	stainless steel / glass, UV and solvent resistant
Cover of burner shaft:	ø 23 mm, with drains
Size (w x h x d):	103 x 49 x 130 mm
Weight:	1,4 kg
Licenses	
DIN-DVGW Reg.-No:	NG-2211AS0167
CE:	EN 61326-1, EN 61010-1
EEC guidelines:	2004 / 108 / EC, 73/23/EEC

Code	Description
BOE 8201000	BOECO Fuego SCS basic, Safety Laboratory gas burner with button function and foot pedal, 3 standard-programs for button (function knob) and foot pedal SCS (Safety Control System) with BHC (Burner Head Control), Removable and decomposable burner head Tild mechanism, right / left, Holding device for 3 inoculation loop holders. Nozzles for natural gas, propane / butane gas, Turbo flame Wrench 17 mm for gas connection, Screwdriver for burner head and cover of burner shaft. Tubing connector with swivel nut, Switching power supply

Accessories



Code	Description
USB 5431	Inoculation Loop / needle holder, 230 mm,
USB 5460	Inoculation Loop, st.steel wire ø 0,6mm, ø loop 1,5mm
USB 5461	Inoculation Loop, st.steel wire ø 0,6mm, ø loop 2,5mm
USB 5462	Inoculation Loop, st.steel wire ø 0,6mm, ø loop 4,0mm

BOECO WATER BATH PWB-4 AND PWB-8

The personal advanced PID microprocessor controlled waterbath PWB-4 and PWB-8 with their specification, easy operation and small foot print are designed for chemical, pharmaceutical, medical and biological routine laboratory use and as well as for research purpose.

» Control Panel:
Easy setting and operating, adjustable temperature, alarm signal display Single Line 4 digitals LED

» Overheat Protection:
The power will automatically be turned off when the internal temperature is over 110 °C

Specification	PWB-4	PWB-8
Capacity:	4 l	8 l
Temperature Range:	Room Temperature +5°C.. +99,9°C	
Temperature Setting:	0,1°C	
Uniformity:	± 0,2 (37°C)	
Fluctuation of Temp.:	± 0,5°C (RT + 5 - 80°C), ± 0,8 (80 - 99,9°C)	
Heating Time:	≤ 100 min (from 30°C to 95°C at RT 25°C)	
Input Power:	400 W	600 W
Water outlet:	No	Yes
Bath Inner Dimensions: (LxWxH mm)	238x135x146	325x265x150
Outside Dimensions: (LxWxH mm)	380x212x250	445x285x316
Weight (net):	6,5 kg	8 kg



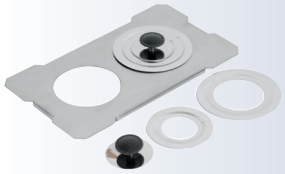
PWB-8 PWB-4

PWB-4

Code	Description
BOE 8036000	Waterbath PWB-4, without lid, 220 V, 50/60 Hz
BOE 8036100	Waterbath PWB-4, without lid, 115 V, 60 Hz

Accessories for PWB-4

Code	Description
BOE 8036001	Gabled plastic lid
BOE 8036002	Flat stainless steel lid with 2 concentric rings
BOE 8036018	Test tube rack st.steel with 41 x 18 mm ø holes
BOE 8036015	Test tube rack st.steel with 41 x 15 mm ø holes
BOE 8036003	Flask tray, stainless steel



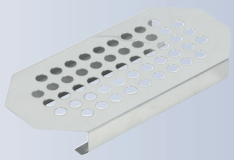
FLAT LID FOR PWB-4



GABLED PLASTIC LID FOR PWB-4



TEST TUBE RACK FOR PWB-4



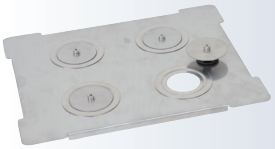
FLASK TRAY FOR PWB-4

PWB-8

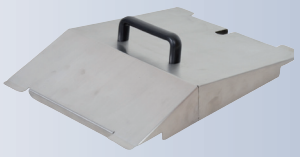
Code	Description
BOE 8037000	Waterbath PWB-8, without lid, 220V, 50/60 Hz
BOE 8037100	Waterbath PWB-8, without lid, 115V, 60 Hz

Accessories for PWB-8

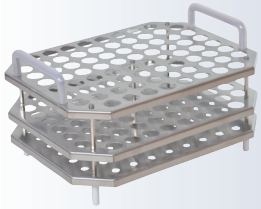
Code	Description
BOE 8037001	Gabled stainless steel lid
BOE 8037002	Flat stainless steel lid with 4 concentric rings
BOE 8037018	Test tube rack st.steel with 76 x 18 mm ø holes
BOE 8037015	Test tube rack st.steel with 76 x 15 mm ø holes
BOE 8037003	Flask tray, stainless steel



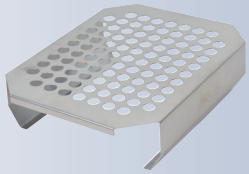
FLAT LID FOR PWB-8



GABLED LID FOR PWB-8



TEST TUBE RACK FOR PWB-8



FLASK TRAY FOR PWB-8

BOECO MUFFLE FURNACE MF 8/1100

our new muffle furnace, designed for materials testing, heat treatment, ceramic and stoneware samples firing. The furnace can be used in laboratories, educational institutions, ceramic studios and industrial laboratories.



MF 8/1100

Standard design of furnace

- Maximum temperature 1100°C
- Capacity 8.2 L
- High thermal efficiency
- Vacuumed ceramic fiber chamber
- Heating elements are embedded in fiber
- High quality thermoinsulation materials
- Door safety interlock switch
- Ceramic bottom plate
- Fast heating time
- Low power consumption
- Good stability and uniformity

Control

- Microprocessor temperature controller (Omron E5CC)
- Temperature measurement by thermocouple type "K"
- PID electronic regulator, double digital display reference temperature and measured temperature



Technical details:

	MF 8/1100
Useful volume	8,2 L
Rated power not more then	1.8 kW
Rated supply voltage	230 V
Rated frequency	50/60 Hz
Number of phases	1
Continuous operating Temperature	1100°C
Maximum temperature	1100°C
Working chamber material	Fibre muffle
Maximum heating- up time (without charge)	50 min
Temperature stability in working chamber at rated temperature in thermal steady state without charge not more than	±2°C
Temperature uniformity in working space at rated temperature in thermal steady state without charge not more than	±10°C
Furnace working chamber dimensions	
width	200 mm
depth	300 mm
height	133 mm
Furnace dimensions:	
width	440 mm
depth	620 mm
height	510 mm
Weight (Net)	28 kg

Code	Description
BOE 8641100	BOECO Muffle Furnace, MF 8/1100, 230 V, 50/60 Hz



MF 8/1100
WITH CHIMNEY

Code	Description
BOE 8641100/ LHM21	BOECO Muffle Ashing Furnace, MF 8/1100, with Fan-assisted chimney for smoke and humidity extraction, 230 V, 50/60 Hz

BOECO PCR WORKSTATION WITH UV AIR RECIRCULATOR, TYPE UVC/T-AR

For the preparation of PCR reactions and many other methods in molecular biology, a contamination-free working environment is required. The UVC/T-AR PCR Workstation is designed for DNA/RNA decontamination in the laboratory working place.

The UVC/T-AR is a bench top model, constructed from metallic skeleton and plexiglas and has a painted metal working place and a digital timer control of UV exposure. One open 25 W UV-lamp substantially decreases contamination level during UV-exposure (15-30 min).

White 15 W lamp provides local illumination of the working place and ensures good conditions for visual control of operation.

The model UVC/T-AR includes not only traditional UV source for direct lighting the surface of the inner working place of the PCR-box, but also additional UV air flow cleaner (UV - recirculator) for biosafety DNA decontamination to protect the user from direct UV-light during operation.

UV-recirculator consists of a UV lamp, fan and dust filters organized in a special box for maximum increasing (1000 x fold) density of UV-light leading sufficiently to effectivity of DNA inactivation. UV-recirculator generates 100 volumes of the PCR per 1 hour air flow exchange giving maximum aseptic conditions inside the box.



UVC/T-AR

Advantages

No HEPA filters, Ozone free high density UV decontamination
Long living UV lamps (8000 hrs)-No noise, low energy consumption-
Compact bench top for personal labs.

The PCR workstation UVC/T-AR is recommended for labs working in the fields of DNA analysis, genetic engineering, molecular biology.

Specification

Direct UV-lamp light:	TUV 25W G13 UV-C Special Philips
Radiation type:	Ultraviolet (254 nm), ozone free
UV-lamp life time:	9000 hrs
UV-recirculator:	TUV 25W G13 UV-C Special Philips
Digital time setting of direct UV-exposure	1 min - 24 hrs
Luminiescent (visible light lamp)	15W/830 G13 Philips
Plexiglass type:	Polymethylmethacrylate
Optical transmission:	92 %
UV-protection:	99,9%
Thickness of plexiglass sides:	4 mm
Thickness of upper front side:	8 mm
Thickness of protective front screen:	8 mm
Working place:	650x475 mm
Overall size:	690x535x555 mm
Power:	100-240 V, 50/60 Hz, 67 W
Weight:	21,2 kg

Code	Description
BOE 8040000	PCR Workstation UVC/T-AR, 100-240 VAC, 50/60 Hz



DBI-100



DBI-200



DB-01



DB-02



DB-03



DB-4



DB-5



DB-06



DB-07



DB-08



DB-09



DB-10



DB-11



DB-15



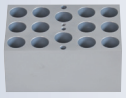
DB-16



DB-17



DB-18



DB-20

BOECO DRY BATH BLOCK INCUBATOR DBI-100, DBI-200

are ideal for incubation and activation of cultures, enzyme reactions, blood urea nitrogen determinations, immunoassays, melting/boiling points and a wide variety of laboratory procedures.
A supplied special block extraction tool allows to remove blocks easily.

Specification:

Model:	**DBI-100**	**DBI-200**
Temperature control range:	RT +5°C - 105°C	
Display Accuracy :	± 0,1°C	
Temperature Stability @100°C	0,4°C	
Uniformity[1] within the block @37°C	≤ 0,5°C	
Heating Time (20 to 105°C)	less than 15 min	
Timer:	1 min - 99 h 59 min	
Block Quantity:	1	2
Power, max:	120 W	240 W
Size mm :	250x190x130	365x210x150
Weight:	1,8 kg	2,9 kg

Code	Description
BOE 8018000	Dry Block Thermostat DBI-100, 200/240 V 50/60 Hz
BOE 8018100	Dry Block Thermostat DBI-100, 110/120 V 50/60 Hz
BOE 8019000	Dry Block Thermostat DBI-200, 200/240 V 50/60 Hz
BOE 8019100	Dry Block Thermostat DBI-200, 110/120 V 50/60 Hz

Aluminium blocks with conical bottom for microtubes:

Code	Description
BOE 8018001	Block DB 01 for 96 x 0,2 ml PCR tubes
BOE 8018002	Block DB 02 for 45 x 0,5 ml tubes
BOE 8018003	Block DB 03 for 35 x 1,5 ml tubes
BOE 8018004	Block DB 04 for 35 x 2,0 ml tubes
BOE 8018005	Block DB 05 for 15 x 0,5 ml + 20 x 1,5 ml tubes
BOE 8018006	Block DB 06 for 20 x 1,5 ml + 15 x 2,0 ml tubes
BOE 8018007	Block DB 07 for 32 x 0,2 ml + 25 x 0,5 ml + 9 x 1,5 ml tubes

Aluminium blocks with flat bottom:

Code	Description
BOE 8018008	Block DB 08 for 20 x 5 ml tubes Bore size: 14 mm ø, Depth 40 mm
BOE 8018009	Block DB 09 for 20 x 10 ml tubes Bore size: 16 mm ø, Depth 47 mm
BOE 8018010	Block DB 10[2] for 12 x 15 ml tubes Bore size: 16,9 mm ø, Depth 58,5 mm
BOE 8018011	Block DB 11[2] for 6 x 50 ml tubes Bore size: 29 mm ø, Depth 58,5 mm

Aluminium blocks with round bottom:

Code	Description
BOE 8018015	Block DB 15[2] for 40 x 6 mm ø tubes Bore size: 6,5 mm ø, Depth: 33 mm
BOE 8018016	Block DB 16[2] for 28 x 10 mm ø tubes Bore size: 10,5 mm ø, Depth: 47 mm
BOE 8018017	Block DB 17[2] for 24 x 12 mm Ø tubes Bore size: 12,5 mm ø, Depth: 47 mm
BOE 8018018	Block DB 18[2] for 24 x 13 mm ø tubes Bore size: 13,5 mm ø, Depth: 47 mm
BOE 8018020	Block DB 20[2] for 14 x 16 mm ø tubes Bore size: 16,5 mm ø, Depth: 47 mm
BOE 8018027	External Sensor, PT 1000

[1] uniformity is measured with a sample height within the block

[2] for blocks DB 10, 11 the lid cannot be closed, for blocks DB 15-19 the lid could only be closed if the tube height is less than 80 mm

BOECO THERMO-SHAKER FOR MICROTUBES TS-100

is a compact and cost-efficient solution for shaking and temperature control of small samples in 0,5 ml, 1,5 ml and 2,0 ml microtubes. The TS-100 is microprocessor controlled and has a display which indicates simultaneous set and actual time, temperature and shaking speed.

Specification:

Orbit size:	2 mm
Temperature range:	25°C - 100°C
Speed range:	250 - 1400 1/min, increment 10 rpm
Acceleration time:	3 sec
Timer with sound signal:	digital, 1 min - 96 h increment 1 min
Power (external):	DC 12 V. 5 A
Overall size:	205 x 230 x 130 mm
Weight:	4,0 kg

Code	Description
BOE 8064000	Thermo-Shaker for microtubes TS-100, without block, AC 100-240V 50/60 Hz
BOE 8064001	Interchangeable block, SC-18 for 20x0,5 ml and 12 x 1,5 ml microtubes
BOE 8064004	Interchangeable block, SC-18/02 for 20x0,2 and 12 x 1,5 ml microtubes
BOE 8064005	Interchangeable block, SC-24N for 24x1,5 ml microtubes
BOE 8064007	Interchangeable block, SC-24 for 24x2,0 ml microtubes
BOE 8064006	Interchangeable block, SC-96A for 96-well PCR microplate



TS-100 with block SC-24N

BOECO THERMO-SHAKER FOR MICROTUBES TS-100C

is a heating and cooling thermomixer. Active cooling using Peltier technology offers a temperature regulation range from +4°C to + 100°C. Temperature control and mixing modes can be used simultaneously and independently. The TS-100C is microprocessor controlled and has a display which indicates simultaneous set and actual time, temperature and shaking speed. The low voltage power supply enables safe cold room or incubator operation. The TS-100C is applicable for DNA analysis, extraction of proteins, polysaccharids, lipids and other cell components

Specification:

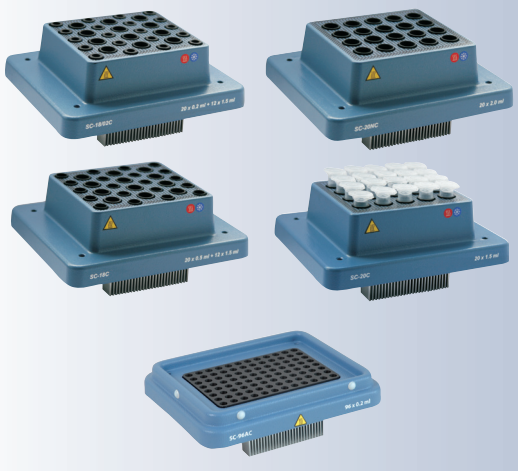
Speed range:	250 - 1400 1/min, increment 10 rpm
Acceleration time:	3 sec
Orbit size:	2 mm
Temperature control range:	15°C below room temp. to +100°C
Temperature setting range:	+4°C to 100°C
Average heating rate:	5°C / min (from +25 to +100°C in 15 min)
Average cooling speed:	From +100°C to + 25°C: 5°C / min From +25°C to + 4°C: 1,8°C / min
Timer with sound signal:	digital, 1 min - 96 h, increment 1 min
Power (external):	DC 12 V. 5 A
Overall size:	205 x 230 x 130 mm (w x d x h)
Weight:	4,2 kg

Code	Description
BOE 8064050	Thermo-Shaker for microtubes TS-100C, without block, AC 100-240 V 50/60 Hz
BOE 8064051	Interchangeable block, SC-18C for 20x0,5 ml and 12 x 1,5 ml microtubes
BOE 8064054	Interchangeable block, SC-18/02C for 20x0,2 ml and 12 x 1,5 ml microtubes
BOE 8064057	Interchangeable block, SC-24NC for 24x1,5 ml microtubes
BOE 8064055	Interchangeable block, SC-24C for 24x2,0 ml microtubes
BOE 8064056	Interchangeable block, SC-96AC for 96-well PCR microplate



with Cooling

TS-100C with block





THERMAL CYCLER TC-SQ

BOECO THERMAL CYCLER TC-SQ

is a personal Thermal Cycler with compact structure and small footprint and a friendly user interface with big LCD display which gives reliable results for teaching and research laboratories.
The TC-SQ provides superior performance especially in the cooling and heating speed, temperature control accuracy and uniformity of the block.

Specification:

Sample capacity:	24 x 0,2 ml, 8-strip, 24 x 0,2 ml plate
Temperature control range:	+ 4 ~ +99 °C
Heating rate (max.):	≥ 5,0°C /sec
Cooling rate (max.):	≥ 4,0°C /sec
Block temp. uniformity:	≤ ± 0,5°C
Block temp. accuracy:	≤ ± 0,3°C
Temp. of hot lid:	30°C - 110°C
Adjustability of hot lid press:	Yes
Temp. control mode:	Block or Tube
Display:	320 x 240 LCD
Program storage:	100 files
Max. segments	5 segments
Max. program steps:	16 steps
Max. cycles:	99 cycles
Size:	297 (L) x 212 (W) x 200 (H) mm
Weight:	3,2 kg
Interface:	RS 232

Code	Description
BOE 8085240	Thermal cycler TC-SQ, 220-240 V, 50/60 Hz with sample block for 24 x 0,2 ml
BOE 8085241	Thermal cycler TC-SQ, 100-120 V, 50/60 Hz with sample block for 24 x 0,2 ml

Optional Block:

Code	Description
BOE 8085185	Sample Block for 18 x 0,5 ml

BOECO THERMAL CYCLER TC-TE

is a personal Thermal Cycler with compact structure and small footprint and a friendly user interface with colored 5,7' touch screen and a fixed gradient block for 96 x 0,2 ml which gives reliable results for teaching and research laboratories.

Specification:

Sample capacity:	96 x 0,2 ml, 8-strip, 24 x 0,2 ml plate
Cooling technology:	Peltier
Temperature control range:	+ 4 ~ +99°C
Heating speed of ramping:	up to 4,0°C /sec
Cooling speed of ramping :	up to 4,0°C /sec
Block temp. uniformity:	≤ ± 0,3°C
Block temp. accuracy:	≤ ± 0,1°C (55°C) ≤± 0,2°C (≥90°C)
Display resolution:	0,1°C
Temp. control mode:	Block or Tube
Ramping rate adjustable:	0,1°C - 4°C
Memories:	250 typical programs (unlimited by USB)
Max. cycles:	99 cycles for Nested PCR
Time up/down:	0-9 min59s, suit for LongPCR
Temperature up/down:	0,1 - 9,9°C suit for TouchdownPCR
Soak function:	Yes
Gradient range:	30°C ~ 99°C
Temp. differential range:	1°C ~ 30°C
Temp. of hot lid:	30°C -110 °C (Temp. / pressure adjusted)
Size:	335 (W) x 260 (D) x 270 (H) mm
Weight:	8 kg
Interface:	1 x USB
Power Suppply:	100 - 240V, 50-60 Hz <= 600W

Code	Description
BOE 8089602	Thermal cycler TC-TE, 100-240 V, 50/60 Hz with gradient sample block for 96 x 0,2 ml



THERMAL CYCLER TC-TE

HEATING MANTLES

- » for operating temperatures up to 450°C
- » for glass flasks, round bottom up to 20 l.
- » flexible glass yarn heating element
- » plastic coated metal housing
- » thermally insulated and grounded
- » predrilled threaded hole on rear allows connection of the clamp KM-SK (accessory)



KM-M

BOECO LabHEAT® KM-M SERIES

1,5 m power supply (earthed) cable with heating-zone switch

Volume ml/l	Flask ø mm	Power W	Heating zones	Order No. 220 V AC	Order No. 110 V AC
50	51	55	1	BOE 91000050	BOE 91500050
100	64	100	1	BOE 91000100	BOE 91500100
250	85	150	2	BOE 91000250	BOE 91500250
500	105	200	2	BOE 91000500	BOE 91500500
1	131	300	2	BOE 91001000	BOE 91501000
2	166	500	2	BOE 91002000	BOE 91502000
3	185	600	2	BOE 91003000	BOE 91503000
4	207	750	2	BOE 91004000	BOE 91504000
5	223	860	2	BOE 91005000	BOE 91505000
6	236	1000	2	BOE 91006000	BOE 91506000
10	279	1400	2	BOE 91010000	BOE 91510000
20	345	2000	2	BOE 91020000	BOE 91520000



KM-ME

BOECO LabHEAT® KM-ME SERIES

designed identical to series KM-M, but in addition equipped with a built-in heating-zone switch and a power controller which allows a continuous adjustment of the heater power.

Volume ml/l	Flask ø mm	Power W	Heating zones	Order No. 220 V AC	Order No. 110 V AC
50	51	55	1	BOE 92000050	BOE 92500050
100	64	100	1	BOE 92000100	BOE 92500100
250	85	150	2	BOE 92000250	BOE 92500250
500	105	200	2	BOE 92000500	BOE 92500500
1	131	300	2	BOE 92001000	BOE 92501000
2	166	500	2	BOE 92002000	BOE 92502000
3	185	600	2	BOE 92003000	BOE 92503000
4	207	750	2	BOE 92004000	BOE 92504000
5	223	860	2	BOE 92005000	BOE 92505000
6	236	1000	2	BOE 92006000	BOE 92506000
10	279	1400	2	BOE 92010000	BOE 92510000
20	345	2000	2	BOE 92020000	BOE 92520000



KM-MER

BOECO LabHEAT® KM-MER SERIES

designed identical to series KM-ME, but in addition equipped with a built-in separate switched magnetic stirrer with an infinitely variable speed range - up to 1600 rpm.

Volume ml/l	Flask ø mm	Power W	Heating zones	Order No. 220 V AC
100	64	100	1	BOE 94000100
250	85	150	2	BOE 94000250
500	105	200	2	BOE 94000500
1	131	300	2	BOE 94001000



Code	Description
BOE 970000001	Support clamp KM-SK for the attachment of the metal-cased heating mantles to support rod or within support wall.

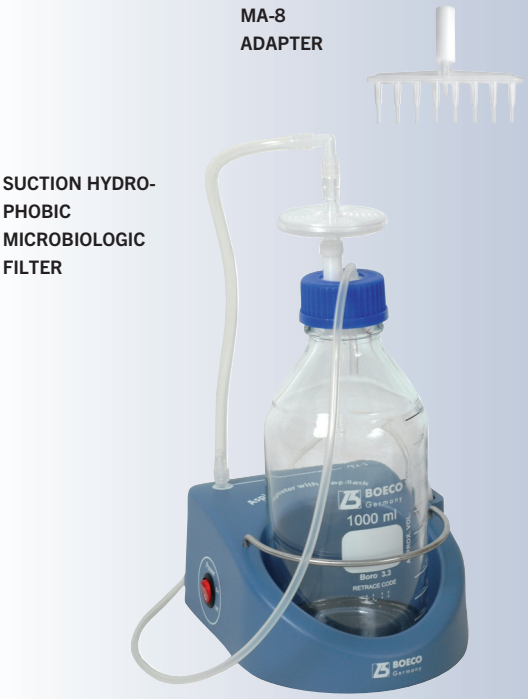
BOECO ASPIRATOR WITH TRAP FLASK MODEL FTA-1

is designed for aspiration/removal of alcohol/buffer remaining quantities from microtest tube walls during DNA/RNA purification and other macromolecule reprecipitation techniques.
The FTA-1 can also be used for routine operations of cell washing from culture medium and resuspension in buffer.
A suction microbiological filter eliminates the risk of contamination from the trap flask with bacteria, viruses and infected particles.

Specification:

Operating Principle:	Creating negative pressure in trapping flask using built-in microprocessor
Vacuum	-500mbar
Trap Flask vol.:	1000 ml
Dimension:	160 x 210 x 340 mm (with trap flask)
Power:	External power supply DC 12 V, 125 A
Net Weight:	1,9 kg

Code	Description
BOE 8039000	Aspirator with trap flask, model FTA-1
BOE 8039001	Optional 8-channel adapter manifold MA-8



ROTARY EVAPORATOR



RVO 400 SD VERTICAL CONDENSER



RVO 400 SD DIAGONAL CONDENSER



SAFETY
BATH COVER



COR 400

BOECO ROTARY EVAPORATOR RVO 400 SD

- With digital display and control
- Water or oil bath
- Motorized lift
- Built in vacuum controller
- function of pressure and temperature gradient
- Variable inclination angle of evaporating flask
- With vertical or diagonal condenser
- fitted and designed for control and communication by PC

Technical details:

Receiving flasks:	100 - 2000 ml
Evaporating flasks:	20 - 4000 ml
Rotation speed:	0 - 280 rpm
Bath temperature:	max. 100°C for water filling max. 180°C for oil filling
Regulation accuracy:	± 1°C up to 100°C ± 3°C up to 180°C
Pressure measurement:	absolute
Pressure difference:	adjustable 1-500 mbar.
Digital settings:	Temperature, rotations, vacuum
Gradient settings:	Temperature, pressure
Temperature unit selection:	°C, °K
Pressure units selections:	hPa, Torr
Cooler condensation size:	1200 sq cm (double sprial)
Switched vacccum pump:	output max 650 VA, input max. 2000 VA
Power supply:	230 V ±10%, 50/60 Hz
Power input:	max. 2000 W (excluding vacuum pump)
Dimensions in mm (WxHxD):	650 x 900 x 360 (incl. glass)
Net weight:	approx 20 kg

The RVO 400 SD conforms to the CE mark and all relevant EC standards and DIN norms and has been manufactured under ISO 9001:2000

Code	Description
BOE 8090020	BOECO Rotary Evaporator RVO 400 SD, with heating bath, motorized lift, built-in vacuum contoller, digital measuring and control system with vertical condenser, 230 V
BOE 8090021	Idem for 110 V
BOE 8090030	BOECO Rotary Evaporator RVO 400 SD, with heating bath, motorized lift, built-in vacuum contoller, digital measuring and control system with diagonal condenser, 230 V
BOE 8090031	Idem for 110 V

Accessories:

BOE 8090005	Safety bath cover, Plexiglass
BOE 8090006	Wireless remote controller
BOE 8090007	PC-based evaporation control software

BOECO CIRCULATION CHILLER COR 400

Performance:	1/4 HP
Performance 22°C =>7°C:	80 l/hour
Minimum temperature:	1°C for water
Minimum temperature:	-20°C for antifreezing mix
Regulation accuracy:	±1°C
Volume of cooling tank:	20 l
Displacement pump:	7 m
Pump flow:	120 l/hour
Cooling gas:	R – 134a
Power supply:	230V, 50/60Hz
Power:	max. 391 VA
Weight:	29 kg
Dimensions (w x d x h):	530 x 330 x 474 mm

Code	Description
BOE 8090010	BOECO Circulation Chiller, COR 400, 230 V, 50/60 Hz

CHEMICAL RESISTANT VACUUM PUMP

» 100 % oil-free transfer
» Pure transfer, evacuation and compression
» TFM™ PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely agressive/corrosive gases and vapors.
» ATEX-compliant in accordance with ATEX II 2G IIB+H2 T3X internal atmosphere only
» Maintenance-free
» Gas tight, leake rate approx. 6 x 10^{-3} mbar x l/s



Specification:

Delivery:	20 l/min
Vacuum:	8 mbar abs.
Operating pressure:	0,1 bar
Connectors for tube:	ID 10 mm
Permissible media and ambient temp:	+5...+40°C
Weight / Dimensions WxHxD:	9,3 kg / 154 x 207 x 312 mm

Code	Description
KNF 309577/026366	KNF LABOPORT® Diaphragm Vacuum Pump N 820.3FT.18, 220 V, 50 Hz Pump head: TFM™ PTFE, Diaphragm: PTFE-coated, Valves: FFPM
KNF 309577/029163	Idem, 220 V, 60 Hz
KNF 309577/027170	Idem, 115 V, 60 Hz

The above pumps are suitable for our Rotary Evaporator RVO 400 SD

BOECO VACUUM PUMPS R-300, R-400

are piston-powered, oil-free vacuum pumps, adaptable to many laboratory requirements.

» quiet and low vibration
» Compact and light weight
» Oil free and Maintenance-free



R-300

Specification:	**R-300**		**R-400**	
Max. vacuum:	670 mm Hg		670 mm Hg	
	50 Hz	60 Hz	50 Hz	60 Hz
Max flow rate:	17 l/min	20 l/min	34 l/min	37 l/min
Horse power:	1/8 HP		1/6 HP	
Pole:	4 P			
Net weight:	3,5 kg		4,8 kg	
Port thread:	5/16 inch (8 mm)			
Noise level:	50 db			



R-400

Code	Description
BOE 8830000	BOECO R-300 vacuum pump 220-240 V, 50/60 Hz
BOE 8830100	BOECO R-300 vacuum pump 110-120 V, 60 Hz
BOE 8840000	BOECO R-400 vacuum pump 220-240 V, 50/60 Hz
BOE 8840100	BOECO R-400 vacuum pump 110-120 V, 60 Hz

BOECO VACUUM / PRESSURE PUMP R-430



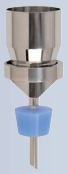
R-430

Specification:	**R-430**	
Max. vacuum:	630 mm Hg	
Max. pressure:	80 psi	
	50 Hz	60 Hz
Max flow rate:	28 l/min	34 l/min
Motor rotation:	1450 rpm	1700 rpm
Horse power:	1/6 HP	
Pole:	4 P	
Net weight:	5,8 kg	
Port thread:	5/16 inch (8 mm)	
Noise level:	52,0 db	

Code	Description
BOE 8843000	BOECO R-430 vacuum pump 220-240 V, 50/60 Hz
BOE 8843100	BOECO R-430 vacuum pump 110-120 V, 60 Hz



FILTRATION UNIT
BOE 8833001



ST. STEEL
FUNNEL
BOE 16710310



MF 3



MF 3A

MV 3



MV 6





ADAPTER BOE 19010071
to enable the use of the Magnetic filter holders MF3 instead of the st.steel funnels at the above manifolds.

Filtration Accessories

Code	Description
BOE 88330001	Filtration unit for 47-50 mm membrane filter with vacuum-resistant flask, capacity 1 litre
BOE 88300002	Glass filtration set for 47 mm membrane filter with 1 litre lab storage bottle
BOE 16710310	Stainless Steel funnel, 100 ml, 47 mm Diam.

MAGNETIC FILTER HOLDERS

our MF series magnetic filter holders are designed with double-layer magnets to ensure a tight seal between the funnel and support base. The innovative design of a hose fitting detachable to the support base can allow a direct connection to the vacuum source and a flexible use with various kinds of vacuum flasks and bottles.
Constructed of Polyether sulfone (PES) material, the MF series filter holders are resistant to a wide range of chemicals and high temperature. They are sturdy and autoclavable.

Specification:	**MF 3**	**MF 3a**
Funnel Capacity:	300 ml	
Effective filtration area:	13,1 cm^3	
Effective Diameter:	41 cm	
Filter size:	47 cm	
Fitting Size (tubing):	Ø 4-8 mm	
Graduation increment:	50 ml	
Dimensions: (Ø x H)	9 x17 cm	9 x 10,4 cm
Net Weight:	0,3 kg	0,3 kg
Material		
Polyether sulfone (PES)	Funnel body, Funnel base, Hose fitting, Support screen	
Silicone rubber:	Sealing gasket, Sealing plug	
Lid kit:	PP (Polypropylene construction with PTFE syringe filter)	

Code	Description
BOE 20300010	Magnetic Filter Holder 300ml MF3 with lid, long stem and silicone stopper
BOE 20310010	Magnetic Filter Holder 300ml MF3a with lid, short stem for direct application on general flask or lab bottles)

STAINLESS STEEL MANIFOLDS

Applicable for microbiology test filtration in food, pharmaceutical, beverage industries. Medium purification in life science labs. General filtration for aqueous samples. Suspended solid test filtration for municipal surface ground and drinking water

Specification:	**MV 3**	**MV 6**
Number of branches:	3	6
Effective filtration area:	47 mm / 50 mm	
Port thread:	8 mm (5/16 inch)	
Dimensions: (h x w x d)	48x13x16cm	85x13x16cm
Material		
Stainless steel (SS316)	Pipe - Control valve - Vent valve Hose barb	
Aluminium:	Handles - Knob of control valve	
FKM:	Seals of control valve - Vent valve - Hose barb	

Code	Description
BOE 18030061	3-branch stainless steel (SS316) manifold MV 3 with 3 x stainless steel funnels 100 ml
BOE 18060061	6-branch stainless steel (SS316) manifold MV 6 with 6 x stainless steel funnels 100 ml
Optional	
BOE 16710311	Stainless steel cover for 100 ml stainless steel funnel
BOE 19010071	Adapter for silicone stoppers No.8, for use with MF3

MINI DIAPHRAGM VACUUM PUMP N96

the N 96 combines a high flow rate with a compact design, saving valuable space in the laboratory. Thanks to the manual rotational speed control, the N 96 is quiet, very energy efficient, and can be optimally adjusted in accordance with the application.
Potential applications include filtration, SPE, and liquid aspiration using a vacuum.

- » 100 % oil-free transfer - thereby pure transferring evacuation and compression of gases
- » Extremely low footprint
- » Maintenance-free
- » Environmentally friendly
- » PTFE-coated diaphragm for use with aggressive/corrosive gases and vapors



N 96

Specification N 96

Flow rate:	7 l/min
Vacuum:	130 mbar abs.
Pressure:	2,5 bar
Connectors for tube:	ID 4 mm
Permissible gas and ambient temp:	+5...+40°C
Motor protection:	IP 40
Weight:	1,3 kg
Dimensions WxHxD:	156 x 119 x 75 mm

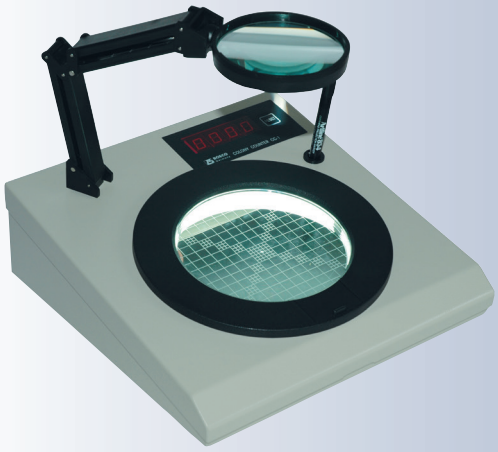
Code	Description
KNF 322806/00000	KNF LABOPORT® Diaphragm Vacuum Pump N 96, 100-240 V, 50/60 Hz, Pump head: PPS, Diaphragm: PTFE-coated, Valves: FKM

Options:

KNF 132254/000000	Fine control valve (vaccum side)
KNF 058970	Fine control valve (pressure side)

BOECO COLONY COUNTER CC-1

is suitable for counting bacteria growing on agar contained Petri dishes.
Built-in electronic register, operated by any pen. Every time a count is registered the beeper gives an audible signal to verify entry.
The pressure sensor system provides uniform sensitivity over the whole of working field.
A reset button provides immediate zeroing of the 4-digit counter
Flexible adjuster accepts 10 cm to 15 cm petri dishes
The adjustable focusing arm allows the 1,5x magnifying glass to be placed at various angles of working position.
The background plate can be changed to white or black for easy counting.
Ring-shaped lamp provides uniform working field illumination.
The number of counts is capable of being registered to maximum of 4-digits i.e. 9999 and displayed on bright red LED.



CC-1

Specification:

Working Principle:	Pressure sensor system provides uniform sensitivity over the whole working field
Readout:	4-digit bright red, 0,6“ LED display
Modes of Counting:	Marking pen counting (any pen)
Dimension:	30 x 33 x 10 cm (W x D x H)
Power:	115 / 230 VAC, 50/60 Hz
Net Weight:	5,2 kg

Code	Description
BOE 5157000	Colony Counter CC-1, with 1,5x standard lens, adjustable focusing arm, power cord

WATER PURIFICATION



BOECOpure PLUS

LABORATORY WATER PURIFICATION SYSTEM BOECOpure PLUS

The all-rounder for H_2O pure type ASTM I + ASTM II

If both, pure and ultra pure water in small quantities is required, BOECOpure PLUS is the perfect system.
The ability to provide both types from a single system results from the combination of ultramodern purification technologies. These also make it possible to connect the system directly to a drinking water tap.

A press on the dispenser button activates dispensing of ultrapure water type ASTM I via the digital dispenser control. The recirculation of the pure water held in the installed 10 litre tank keeps it permanently at type ASTM II quality.

Features:
- OptiFill dispenser is standard
- TapWater set for direct connection to a drinking water tap
- 10-litre pure water tank has a pressure outlet
- Tank volume display in percent
- Simple and economical filter replacement
- Leakage sensor is standard
- Type ASTM I dispensing performance is 1,6 / 2 l/min.
- Type ASTM II draw-off is up to 6 l/h / 12 l/h
- Ready-to use, including filter cartridges (Pre-treatment cartridge with RO membrane and ultrapure water cartridge)

The BOECOpure PLUS UV is supplemented with UV-oxidation, 185/254 nm.
The BOECOpure PLUS UV/UF is supplemented with an ultrafilter and UV-oxidation, 185/254 nm.



OPTIFILL DISPENSER

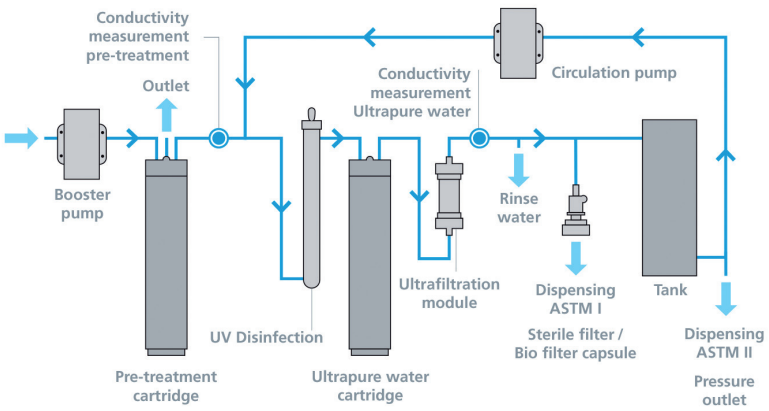
ASTM Type I Ultrapure water applicable for

Molecular biology, microbiology, PCR, inorganic and organic trace analysis
HPLC, ICP, TOC-analysis

ASTM Type II pure water applicable for

Rinsing laboratory glassware, preparing and diluting buffers, reagents, tissue culture media and dyes.
Sample preparation for analytical methods such as flame AAS

BOECOpure PLUS UV/UF Flow chart



Specification BOECOpue PLUS:	Standard	UV	UV/UF
ASTM II			
Pure water performance at 15°C:	6 l/h	6 or 12 l/h	6 l/h
Conductivity:		0.067-0.1µS/cm	
Resistance:		15-10 MΩ x cm	
Pure water tank pressurized outlet		yes	
ASTM I			
Conductivity:		0.055 µS/cm	
Resistance:		18.2 MΩ x cm	
TOC Value*:	5-10 ppb	1-5 ppb	1-5 ppb
Dispensing performance:	up to 2 l/min	up to 2 l/min	up to 1.6 l/min
Bacterial ** content:		< 1 CFU/ml	
Particles ** content:		< 1ml	
Endotoxines*			0.001 EU/ml
Feedwater requirements			
Drinking water acc. to DIN 2000			
Feedwater temperature:		+ 2°C up to + 35°C	
Manganese and iron content:		< 0,05 mg/l	
Free chlorine content:		< 1 mg/l	
Silt density index (SDI):		max. 3	
Technical data			
Operating pressure in bar, min./max.		0,5-6 bar	
Supply voltage:		100-240 V / 50-60 Hz	
Connected load:		0.1 kW	
Connector size:		8 mm hose	
Ambient temperature:		+ 2°C up to + 35°C	
Dimensions ***, W x D x H:		390 x 725 x 615 mm	
Weight:		20/21 kg	

*in dependence on the feedwater quality **with sterilizing filter 0,2 µm ***with OptiFill Dispenser

Code	Description
BOE 8210051	BOECOpure PLUS Standard, 6 l/h Typical application: AAS, IC, ICP, buffers and media preparation
BOE 8210052	BOECOpure PLUS UV, 6 l/h
BOE 8210102	BOECOpure PLUS UV, 12 l/h Typical application: Ultra-trace analysis, ICP-MS, HPLC, TOC
BOE 8210053	BOECOpure PLUS UV/UF, 6 l/h Typical application: Life science and microbiology, cell culture media

Accessories / Consumables

Code	Description
BOE 8210005	Pre-treatment cartridge with RO-membrane, 6 l/h
BOE 8210010	Pre-treatment cartridge with RO-membrane, 12 l/h
BOE 8010003	Ultrapure water cartridge
BOE 19111300	Sterile filter capsule 0,2 µm
BOE 8510400	Sterile tank ventilation filter
BOE 8110200	Replacement UV-lamp
BOE 8010051	Replacement Ultrafilter
BOE 8210300	Wall-mount
BOE 16500030	Storage tank, 30 liter, with sterile overflow, sterile vent filter and pressure pump

Optional

The Pre-treatment pack for BOECOpure PLUS protects the reverse osmosis module against particulates, dirt, and colloids. For the complete pack the filter housing and prefilter have to be ordered.

Code	Description
BOE 16531110	Filter housing 10“ without Pre-filter
BOE 16511100	Pre-filter insert 1 µm, 10“





LABORATORY WATER PURIFICATION SYSTEM
BOECOpure PLUS standard xs basic
BOECOpure PLUS UV xs basic

The simple solution for H_2O pure type ASTM I + ASTM II

The BOECOpure PLUS standard xs is an extremly compact system and the best choice when small volumes of both pure water and ultrapure water are required. It offers great flexibility and can be directly connected to the drinking water supply.

The standard OptiFill dispenser is a flexible extraction solution for a kind of laboratory vessels. The ergonomic shape of it enables onehanded use of it for both system operation and the monitoring of all quality parameters.

The dispensing of pure water and ultrapure water from a single system is made possibe by the need-filling combination of ultra-modern purification technologies.

Features:
- Reliable ASTM I + II water quality supply
- Tap water set for direct drinking water connection
- Optifill dispenser as standard:
  - enables one handed dispenser operation
  - is detachable and ergonomically shaped
  - can be turned by 170 degrees/80 cm in diameter and is height adjustable
- Simple and economical filter replacement
- Clear view of controls with graphics display
- Leak detector is included as a standard
- Supply including all mandatory filters and consumables for start-up and operation)



OPTIFILL DISPENSER

The BOECOpure PLUS UV is supplemented with UV-oxidation, 185/254 nm.

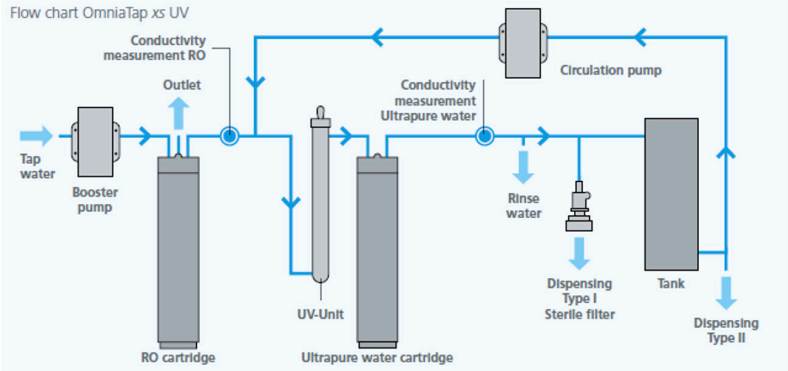
ASTM Type I Ultrapure water applicable for

Molecular biology, microbiology, PCR, inorganic and organic trace analysis HPLC, ICP, TOC-analysis

ASTM Type II pure water applicable for

Rinsing laboratory glassware, preparing and diluting buffers, reagents, tissue culture media and dyes.
Sample preparation for analytical methods such as flame AAS

BOECOpure PLUS UV/UF Flow chart



Specification BOECOpue PLUS:	Standard xs^{basic}	UV xs^{basic}	xs^{touch} UV-TOC/UF
ASTM II			
Pure water performance at 15°C (l/h):	5	5	8
Conductivity at 25°C (µS/cm):	0.067-0.1	0.067-0.1	0.067-0.1
Resistance at 25°C (MΩ x cm):	15 up to 10	15 up to 10	15 up to 10
ASTM I			
Conductivity at 25°C (µS/cm):	0.055	0.055	0.055
Resistance at 25°C (MΩ x cm):	18.2	18.2	18.2
TOC Value* (ppb):	< 10	< 5	< 5
Dispensing performance (l/min.):	up to 2	up to 2	up to 2
Bacterial ** content (KBE/ml):	< 0,01	< 0,01	< 0,01
Particles ** content < 0.2 µ (1/ml):	< 1ml	< 1	< 1
Pyrogens (Endtoxins) *** (EU/ml):	-	-	< 0.001
RNase *** (pg/ml)	-	-	< 1
DNase *** (pg/m)	-	-	< 5
Proteases *** (µg/m)	-	-	< 0.15

*in dependence on the feedwater quality and regular disinfection
**with sterilizing filter 0,2 µm (Capsule BOE 19100300 or Bio filter capsule BOE 19102100)
*** With ultrafilter/bio filter capsule

Feedwater requirements

Drinking water acc. to DIN 2000			
Feedwater temperature (°C):	+ 2 up to + 35	+ 2 up to + 35	+ 2 up to + 35
Feedwater pressure (bar):	0,5 up to 6	< 0,5 up to 6	0,5 up to 6 bar
Conductivity at 25°C (µS/cm):	< 2000	< 2000	< 2000
Colloid index SDI:	< 10	< 10	< 10
Free chlorine (ppm):	< 3	< 3	< 3
TOC-Value (ppm):	< 1	< 1	< 1
Hardeness [as CaCo3]*:	< 300	< 300	< 300
pH range:	4 up to 10	4 up to 10	4 up to 10

* For higher values, pre-treatment must be carried out upstream

Technical data

Electrical connection (Volt/Hz):	90-240 / 50-60	90-240 / 50-60	90-240 / 50-60
Total connected load (W):	120	120	120 W
Port size - tap water:	R ¾ - female	R ¾ - female	R ¾ - female
Ambient temperature (°C):	+ 2 up to + 35	+ 2 up to + 35	+ 2 up to + 35
Dimensions, (W x D x H mm):	253 x 530 x 520	253 x 530 x 520	253 x 530 x 520*
Weight dry (kg):	19	19	19

*with OptillFill^{touch} dispenser

Code	Description
BOE 8210051	BOECOpure PLUS Standard xs basic Typical application: AAS, IC, ICP, buffers and media preparation
BOE 8210052	BOECOpure PLUS UV xs basic Typical application: Ultra-trace analysis, ICP-MS, HPLC, TOC

Accessories / Consumables

Code	Description
BOE 19200007	RO cartridge xs 5 l/h
BOE 19200103	Ultrapure water cartridge xs 055
BOE 19100300	Sterile filter capsule 0,2 µm
BOE 19111300	Sterile filter capsule 0,2 µm
BOE 19102100	Bio filter capsule
BOE 19200305	Wall mounting BOECOpure PLUS xs
BOE 19200091	Disinfection unit BOECOpure PLUS xs
BOE 19200057	Disinfectant BOECOpure PLUS

Optional

The Pre-treatment pack for BOECOpure PLUS protects the reverse osmosis module against particulates, dirt, and colloids. For the complete pack the filter housing and prefilter have to be ordered.

Code	Description
BOE 16531110	Filter housing 10“ without Pre-filter
BOE 16511100	Pre-filter insert 1 µm, 10“









OPTIFILL^{touch}
DISPENSER

LABORATORY WATER PURIFICATION SYSTEM BOECOpure PLUS xs^{touch} UV-TOC/UF

The all-rounder for H_2O pure type ASTM I + ASTM II

The BOECOpure PLUS xs^{touch} is an extremly compact system to produce ultrapure water fulfilling highest demands of analytical and life sciences laboratories and can be directly connected to the drinking water supply.

Scroll and swipe to the next function with the intuiitive Optifill^{touch} display and integrated monitoring unit. Adjustable limit values for conductivity and TOC, as well as data output via USB increase process reliability under consideration of highest sustainability.

Save valuable space in your lab. Configure and place the production unit under the bench and position your Optifill^{touch} dispenser and monitoring unit practical on a bench or space-saving on a wall.

Retractable and pivotable with a flexible connection for the most comfortable supply of ultrapure water to any vessel.

Features:

- Reliable ASTM I + II water quality supply
- Optifill^{touch} dispenser as standard:
  - enables one handed dispenser operation
  - Colour-touch-display with intuitive menu navigation
  - is detachable and ergonomically shaped
  - can be turned by 170 degrees/80 cm in diameter and is height adjustable
- Simple and economical filter replacement
- Real time TOC monitoring
- Residual cartridge volume display
- USB-Port for data in- and output
- Leak detector is included as a standard
- Supply including all mandatory filters and consumables for start-up and operation

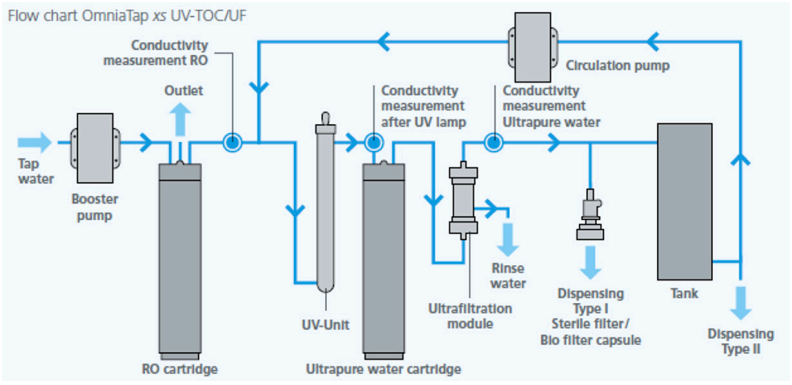
The BOECOpure PLUS XS^{touch} UV-TOC/UF is supplemented with UV-oxidation, 185/254 nm.

ASTM Type I Ultrapure water applicable for
Life science and microbiology and cell culture media

ASTM Type II pure water applicable for

Rinsing laboratory glassware, preparing and diluting buffers, reagents, tissue culture media and dyes.
Sample preparation for analytical methods such as flame AAS

BOECOpure PLUS UV/UF Flow chart



Specification BOECOpue PLUS:	xs^{touch} UV-TOC/UF

ASTM II

Pure water performance at 15°C (l/h):	8
Conductivity at 25°C (µS/cm):	0.067-0.1
Resistance at 25°C (MΩ x cm)::	15 up to 10

ASTM I

Conductivity at 25°C (µS/cm):	0.055
Resistance at 25°C (MΩ x cm):	18.2
TOC Value* (ppb):	< 5
Dispensing performance (l/min):	up to 2
Bacterial ** content (KBE/ml):	< 0,01
Particles ** content < 0.2 µ (1/ml):	< 1
Pyrogens (Endtoxins) *** (EU/ml):	< 0.001
RNase *** (pg/ml)	< 1
DNase *** (pg/ml)	< 5
Proteases *** (µg/ml)	< 0.15

*in dependence on the feedwater quality and regular disinfection
**with sterilizing filter 0,2 µm (Capsule BOE 19100300 or Bio filter capsule BOE 19102100)
***with ultrafilter/bio filter capsule

Feedwater requirements

Drinking water acc. to DIN 2000

Feedwater temperature (°C):	+ 2 up to + 35
Feedwater pressure (bar):	0.5 up to 6
Conductivity at 25°C (µS/cm):	< 2000
Colloid index SDI:	< 10
Free chlorine (ppm):	< 3
TOC-Value (ppm):	< 1
Hardeness [as CaCo3]*:	< 300
pH range:	4 up to 10

* For higher values, pre-treatment must be carried out upstream

Technical data

Electrical connection (Volt/Hz):	90-240 / 50-60
Total connected load (W):	120
Port size - tap water:	R ¾ - female
Ambient temperature (°C):	+ 2 up to + 35
Dimensions* (W x D x H mm):	253 x 530 x 520
Weight dry (kg):	19

*with OptillFill^{touch} dispenser

Code	Description
BOE 8211085	BOECOpure PLUS xs^{touch} UV-TOC/UF Typical application: Life science and microbiology, cell culture media

Accessories / Consumables

Code	Description
BOE 19200008	RO cartridge BOECOpure Plus^{XS}
BOE 19200103	Ultrapure water cartridge BOECOpure Plus^{xs} 055
BOE 19100300	Sterile filter capsule 0,2 µm
BOE 19102100	Bio filter capsule
BOE 19200305	Wall mounting BOECOpure PLUS^{XS}
BOE 19200091	Disinfection unit BOECOpure PLUS^{XS}
BOE 19200057	Disinfectant BOECOpure PLUS

Optional

The Pre-treatment pack for BOECOpure PLUS protects the reverse osmosis module against particulates, dirt, and colloids. For the complete pack the filter housing and prefilter have to be ordered.

Code	Description
BOE 16531110	Filter housing 10“ without Pre-filter
BOE 16511100	Pre-filter insert 1 µm, 10“



WATER STILLS



DEST 4

DEST-4

standard water stiller with integrated low-water cut-off, continuous production of high pure water, free of dissolved metals and pyrogens

Specification:

Distillate flow rate	approx. 4 l/h
Conductivity of distilled water (20°C)	1 µS/cm
Wattage:	2.800 W
Heater element:	Silica heater
Material of glass parts:	Borosilicate glass 3.3
Water consumption:	approx. 60 l/h
Size:	550 x 150 x 500 mm
Weight:	6,2 kg

Code	Description
BOE 8704000	DEST-4, 230 V



DEST 4L

BOECO DEST 4L

vertical water still with stainless steel boiler and borosilicate condenser. Integrated low-water cut-off, water inlet & flow regulator, continuous production of high purity distilled water, free of metal ions, salts, dissolved gases and pyrogenic substances.
With flow regulator to avoid excessive water consumption.

Specification:

Distillate flow rate:	approx 4 l/h
Conductivity of distilled water (20°C)	1,5 µS/cm
Heater:	2.800 W
Heater element:	Stainless steel (AISI 304)
Material of glass parts:	Borosilicate glass 3.3
Safety:	Low water cut-off & level switch
Water consumption:	approx. 55 l/h
Size:	690 x 280 x 280 mm
Weight:	13,7 kg

Code	Description
BOE 8704200	DEST 4L, 230 V



DEST 10L

BOECO DEST 10L

Vertical water still with 3 metalic heaters and a large surface condenser made of borosilicate glass 3.3. Designed for fully automatic operation, with an output of 10 liters per hour, includes safety features in case of lack of electricity supply or flow water supply. Automatic operation because of an included reservoir level control. If the destilled water is supplied to an external reservoir or flask the level control will unplug the water still DEST 10L if the reservoir is full and start again if the water level has been reduced in the reservoir.

Specification:

Distillate flow rate:	approx. 10 l/h
Conductivity of distilled water (20°C):	1,5 µS/cm
Heater:	3 x 2.200 W
Heater element:	Stainless steel (AISI 304)
Material of glass parts:	Borosilicate glass 3.3
Safety:	Low water cut-off & level switch
Water consumption:	approx. 1,5 l/min
Size:	360 x 400 x 960 mm
Weight:	approx. 16 kg

Code	Description
BOE 8711811	DEST 10L, 230 V, single phase
BOE 8711812	DEST 10L, 380 V, 3-phase

BOECO WS 4000 / WS 8000

Stainless steel water still with thermostatic low water cut-off and level switch which activates the heater if there is enough level of water in the boiler.

Specification:	**WS 4000**	**WS 8000**
Distillate flow rate:	approx. 4 l/h	approx. 7,5-8 l/h
Cond. of dist water (20°C):	approx. 1,5 µS/cm	
Heater:	3 KW	6 KW
Cooling water:	approx. 60 l/h	approx. 84 l/h
Material: Inner part:	Stainless steel	
Outer part:	Stainless steel & powder coating	
Size: (h x w x d)	435x370x220mm	635x370x260 mm
Switch:	Main power with pilot lamp	
Sealing:	Silicone gasket	
Safety:	Low water level & over heating cut-off	
Weight:	8,6 kg	12,2 kg

Code	Description
BOE 8703600	WS 4000, 230 V
BOE 8703601	WS 4000, 110 V
BOE 8707500	WS 8000, 230 V



BOECO WS 4000 / WS 8000

BOECO DEST TANK 4000 / 8000

Stainless steel water still for automatic and continuous operation with built-in 8/16 l storage tank. For bench and wall mounting. Supplied with wall mounting bracket. Excellent quality of distillation. An electronic level switch switches the still off when the storage tank is full and restarts it automatically when destilled water is withdrawn. Dispenser Tap of distilled water.
With flow regulator to avoid excessive water consumption.

Specification:	**DEST TANK 4000**	**DEST TANK 8000**
Distillate flow rate:	approx. 4 l/h	approx. 8 l/h
Water tank capacity:	8 l	16 l
Cond. of dist water (20°C):	approx 1,5 µS/cm	
Power:	3.000 W	6.000 W
Cooling water:	approx. 55 l/h	approx. 80 l/h
Material: Inner part:	Stainless steel	
Outer part:	Galvanized steel & powder coating	
Switch:	Main power with pilot lamp	
Safety:	Low water level & over heating cut-off	
Size (wxdxh):	620x330x460 mm	720x350x700 mm
Weight:	24,6 kg	36,0 kg

Code	Description
BOE 8704500	DEST TANK 4000, 230 V
BOE 8704501	DEST TANK 4000, 115 V
BOE 8708000	DEST TANK 8000, 230 V



BOECO DEST TANK 4000 / 8000

PRESSURELESS DEIONIZER DS 450, DS 750

pressureless Ion exchanger in disposable cartridges of synthetic material. Excellently suited for medical practices and small laboratories requiring up to 10 litres a day. Supplied with conductivity meter, wall mount and a set of hoses.



DS 450

Specification:	**DS 450**	**DS 750**
Flow rate:	50 l/h	100 l/h
Capacity at 10° GSG:	425 l	750 l
Quality:	0,1 - 20 µS/cm	0,1 - 20 µS/cm
Temperature max:	30°C	30°C
Material	Polyethylene	Polyethylene
Size (h x diam.):	600 x 100 mm	470 x 125 mm
Weight:	3,1 kg	6 kg

Code	Description
BOE 11042506	Deionizer DS 450, 230 V, 50/60 Hz
BOE 11042507	Deionizer DS 450, 110 V, 60 Hz
BOE 11042706	Set of two replacement cartridges

Code	Description
BOE 11170506	Deionizer DS 750, 230 V, 50/60 Hz
BOE 11170600	Deionizer DS 750, 110 V, 60 Hz
BOE 11175010	Replacement cartridge for DS 750
BOE 20100501	2 x 5 liter resin for DS 750

BOECO BIDEST 4

is our Bidistiller designed to work automatically with a production of 4 liters per hour, includes several safety systems to work continuously.



BIDEST 4

- » Produces distilled water for the most common applications in the laboratory.
- » Boiler and Condenser are made of borosilicate glass 3.3. The heaters are sheated with quartz glass. This is ideal for producing high quality water, free of metal ions and pyrogens, with a conductivity 1-2 µS / cm.
- » Incorporates several security systems for automatic operation: presostat, electrovalve and level sensor.
- » Cooling water outlet by rubber tube. The condensed water not flowing through the cooling water outlet.
- » Energy saving through distillation of preheated cooling water.
- » Distillation process visible through the front screen.
- » The main switch and monitor drivers are on the front of the unit.
- » Control of water level automatic cut-off power in case of lack of water.
- » Output of the distillate on the side of the unit.
- » Output of carbon dioxide through hole of the top of condensers
- » Suitable for wall mounting.

Code	Description
BOE 8700410	BIDEST 4, 230 V, 50/60 Hz, single phase

Safety systems

Preostat
Safety thermostat protects still in the event of water supply failure.
Electrovalve
It cuts water and electrical supply to avoid useless expenses of water and electricity.
It returns to open water inlet if the electrical supply is enough to let the water still to work properly.
Level device
Device to fill a container without worrying when it finished. It cuts water and electrical supply to avoid useless expenses of water and electricity.

Specification:

Output:	approx. 4 l/h
Conductivity of distilled water (20°C):	1-2 µS/cm
pH:	Depends on tap water inlet 5,5-7
Heater:	2 x 3.000 W
Heater element:	Quartz sheated heater
Material of glass parts:	Borosilicate glass 3.3
Water consumption:	approx. 2 l/min
Size:	700 x 360 x 470 mm
Weight:	31,8 kg

Note on the water output:
Depends directly on the quality of water supply and other environmental factors, maybe type III (according to ASTM). As distillates are open to the atmosphere before measurements can be made, the value of conductivity is really much less (down to 10 times) than it is really measured. Any ultra pure water in contact with the atmosphere has a conductivity of 1-2 µS/cm and a pH of 5, due to the small amount of CO2 (0.05 ppm) from the atmosphere.

ELECTROCHEMISTRY

BOECO PORTABLE PH/ORP/TEMP METER MODEL PT-380

» Simultaneous displays pH or mV and temperature.
» Convenient calibration with automatic buffer recognition of European and US buffer sets. Calibration data is stored in memory and is ready for use on power up.
» Automatic or manual temperature compensation
» Automatic lock mode and end point sensing are available to lock in stable readings.
» 50 data set reviewable memory.
» Automatic shut off function (30 minutes of non-use)
» Battery life 1000 hours
» Low battery indicator
» IP65 waterproof case

The PT-380 will be delivered incl. the following standard accessories:
1 x ATC probe 6000AST, each 1 x 100 ml BOECO Buffer solution pH 4,01, pH 7,00, 1 x 9 V battery, 1 x operating manual, 1 x carrying case

Specification:

pH

Range	Resolution	Accuracy
-2 to 16,00 pH	0,01 pH	± 0,01 ± 1 digit

mV

Range	Resolution	Accuracy
-1999 to 1999 mV	1 mV	± 0,1 %

Temperature

Range	Resolution	Accuracy
-10,0 to 120,0 °C	0,1 °C	±0,5 %

pH buffer recognition:	US (4,01, 7,00, 10,01) NIST (4,00, 6,86, 9.18) user selectable
pH electrode offset Recognition:	±90mV at pH 7,00 or 6.86
pH electrode slope Recognition:	±30% at pH 4,00, 4,01, 9,18 or 10,01
pH temp. compensation:	Auto / manual -10,0 to 120 °C
Input Impedance:	10^{12} ohms
Temperature sensor:	Thermistor, 10K ohms at 25°C
RS 232 interface:	no
Power requirement:	9 Volt battery
Dimensions (LxWxH):	198 x 70 x 37 mm
Weight:	0,26 kg (1 x 9V Battery included)

Code	Description
BOE 5190380	Portable pH/ORP/Temperature meter, model PT-380 in carrying case with standard accessories without electrode



BOECO PORTABLE PH/ORP/ TEMP METER MODEL PT-380



BOECO ELECTRODES

The electrodes are not included with the pH meters and have to be ordered separately:

Code	Description
BOE 5190600	Basic pH combination electrode, BA ECO plastic PC shaft, gel electrolyte, 0...14 pH, 0...80°C, with BNC plug, 1m cable, glass sensor
BOE 5095695	Basic pH combination electrode BA 25, Noryl plastic shaft, gel electrolyte, 0...14 pH, -5...80°C, with BNC plug, 1m cable, fibre diaphragm
BOE 5095626	Basic pH combination electrode BA 17, glass shaft, liquid electrolyte, 0...14 pH, 0...100°C, with BNC plug, 1m cable. With leak proof refill opening, platinum diaphragm



BOECO ELECTRODES



BT-700

BOECO PH/ORP/TEMP BENCH TOP METER MODEL BT-700

- LCD display with backlight showing pH / ORP and temperature readings
- Up to 5 point calibration for pH and one point calibration for and ORP
- Automatic buffer recognition (NIST and USA)
- Automatic or manual temperature compensation
- Bluetooth function to connect to tablets
  App name **BOECO E-Chem BT-700 (App Store / Googleplay)**
- When the unit is connected to a bluetooth device, the user can store data into the device that meets GLP requirements
- AC adaptor or battery power (low battery indicator)

The BT-700 will be delivered incl. the following standard accessories:
1 x ATC probe, each 1 x 500 ml Buffer solution pH 4,01, pH 7,00
1 x AC adaptor, 1 x operating Manual, 1 x flexible electrode holder.
6 x 1,5 V AAA batteries

Specification:

pH

Range	**Resolution**	**Accuracy**
-2 to 16,00 pH	0.01 pH	± 0,01

mV

Range	**Resolution**	**Accuracy**
-1999,9 to 1999,9 mV	0,1 mV	A 0,05 % full scale

Temperature

Range	**Resolution**	**Accuracy**
-10 to 120,0°C	0,1°C	±0,2°C

pH buffer recognition:	US (1,68, 4,01, 7,00, 10,01, 12,46) or NIST (1,68, 4,00, 6,86, 9,18, 12,46) user selectable
Buffer temp. range	0 - 60,0 °C
pH calibration	Up to 5 points
ORP calibration:	1 point Offset ±150mV
ATC :	Auto / manual -10,0 to 120°C
Input impedance:	>1x10^{12} ohms
Connectivity:	Bluetooth
Memory:	When the unit is connected to a bluetooth device, the user can store data into the device that meets GLP requirements
Temperature sensor:	Thermistor, 10K ohms at 25°C
Power requirement:	6 x 1,5 Volt AAA Alkaline batteries or AC adaptor
Case:	IP54 waterproof
Dimensions (LxWxH):	210 x 150 x 45 mm
Weight:	0,43 kg

Code	**Description**
BOE 5196700	Bench Top pH/mV/Temp Meter, Model BT-700, AC adaptor with attachable EURO/US plug with standard accessories, without electrode

BOECO MULTIPARAMETER PH/ORP/CONDUCTIVITY/TDS/ SALINITY/RESISTIVITY/TEMPERATURE BENCH TOP METER MODEL MBT-700





- LCD display with backlight showing pH / ORP or Conductivity / TDS / Salinity and temperature readings
- Two channel measurement allows measuring ph/ORP and Conductivity/TDS/ Salinity simultaneously
- Up to 5 point calibration for pH and one point calibration for conductivity and ORP
- Automatic or manual temperature compensation
- Automatic buffer recognition (NIST and USA)
- Bluetooth function to connect to tablets.
  App name: BOECO E-Chem MBT-700
- When the unit is connected to a bluetooth device, the user can store data into the device that meets GLP requirements.

The MBT-700 will be delivered incl. the following standard accessories:
1 x ATC probe, each 1 x 500 ml Buffer solution pH 4,01, pH 7,00
1 x AC adaptor, 1 x operating manual, 1 x flexible electrode holder, 1 x 4 wire Conductivity cell 101C

Specification:

Conductivity K = 0,475

Range	**Resolution**	**Accuracy**
0,0 to 474,9µS/cm	0,1µS/cm	±0,5% Full Scale
475 to 4749µS/cm	1µS/cm	±0,5% Full Scale
4,75 to 47,49mS/cm	0,01mS/cm	±0,5% Full Scale
47,5 to 200,0mS/cm	0,1mS/cm	±0,5% Full Scale

Conductivity K = 0,1

Range	**Resolution**	**Accuracy**
0.00 to 99,99µS/cm	0,01µS/cm	±0,5% Full Scale
100 to 200µS/mS	0,1µS/cm	±0,5% Full Scale

TDS

Range	**Resolution**	**Accuracy**
0,00mg/l to 200,0g/l	0,01/0,1//1mg/l 0.01/0,1 g/l	±0,5% Full Scale

Salinity

Range	**Resolution**	**Accuracy**
0,0 to 80,0 ppt	0,1 ppt	±0,5 % Full Scale

pH

Range	**Resolution**	**Accuracy**
-2,00 to 16,00 pH	0,01 pH	±0,01pH

mV

Range	**Resolution**	**Accuracy**
-1999,9 to 1999,9 mV	0,1 mV	±0,05% Full Scale

Temperature

Range	**Resolution**	**Accuracy**
-10,0 to 120,0°C	0,1°C	±0,2°C

pH buffer recognition:	US (1,68 4,01, 7,00, 10,01, 12,46 or NIST (1,68, 4,00, 6,86, 9,18, 12,46)
mV Offset	±150 mV
pH calibration: Up to 5 points	
Conductivity Calibration:	1 point in each range
ATC :	Auto / manual -10,0 to 120°C
Input impedance:	>1x10^{12} ohms
Temperature sensor:	Thermistor, 10K ohms at 25°C
Memory:	When the unit is connected to a bluetooth device, the user can store data into the device that meets GLP requirements
pH electrode connection:	BNC
Conductivity cell connection:	8 PIN connector
Connectivity:	Bluetooth
Power requirement:	6 x 1,5 Volt AAA Alkaline batteries or AC adaptor
Case:	IP54 waterproof
Dimensions (LxWxH):	210 x 150 x 45 mm
Weight (net):	approx. 0,43 kg

Code	**Description**
BOE 5197700	Bench Top pH/mV/Ion/Temp Meter, Model MBT-700, AC adaptor, with standard accessories as above mentioned, without electrode



PH/TEMP. TESTER PT-70 WITH REPLACEABLE ELECTRODE



ELECTRODE MODULE

PHBOECO /TEMP. POCKET TESTER PT-70

with replaceable electrode

- » Large display screen - displays pH and temperature at the same time
- » 1, 2 or 3 point calibration, with automatic buffer recognition of US and NIST buffer sets
- » Readings are automatically compensated for temperature (ATC)
- » Electrode efficiency display
- » Replaceable electrode module ensures extended usefulness
- » IP67 water-tight housing
- » Auto power off after 10 minutes of inactivity
- » Battery life over 200 hours

Specification:

Modes:		pH, °C
Ranges:	pH	0 to 14 pH
	Temp.	-9,9...99,9 °C
Resolution:	pH	0,01 pH
	Temp.	0,1 °C
Accuracy:	pH	± 0,02 pH ± 1 digit
	Temp.	± 0,3 °C ± 1 digit
Temperature compensation:		Auto from -9,9 to 99,9°C
pH buffer recognition:		US (pH 4.01, 7.00, 10.01)
		NIST (pH 4.00, 6.86, 9.18)
Buffer temp range:		0,0 - 60 °C
Input impedance:		> 10^{12} ohms
pH calibration:		
1, 2 or 3 point calibration		
pH electrode offset recognition:		±90mV at pH 7,00
		±98,3mV to -81,7mV at pH 6,86
pH electrode slope recognition:		±30% at pH 4,00; 4,01;
		9,18 and 10,01
Power:		4 x LR44 botton cell batteries
Dimensions :		193 x 44 x 25 mm
Weight :		0,105 kg (incl. batteries)

Code	Description
BOE 5190070	PH/Temp. Tester PT-70
BOE 5190071	Spare pH electrode module PT-70-1 for PT-70



TECHNICAL BUFFER SOLUTIONS

In square plastic bottles, PE, 500 ml, labeled with an individual batch no. on the bottles, traceable to SRM of NIST

Code	Description
BOE 104000	pH 4,00 (20°C), 500 ml
BOE 107000	pH 7,00 (20°C), 500 ml
BOE 610000	pH 10,00 (20°C), 500 ml
BOE 104004	pH 4,00 (20°C), 500 ml, red colour coded
BOE 107006	pH 7,00 (20°C), 500 ml, green colour coded
BOE 610008	pH 10,00 (20°C), 500 ml, blue colour coded



CONDUCTIVITY CALIBRATION SOLUTIONS

In square plastic bottles, PE, 250 ml, labeled with an individual batch no. on the bottles, traceable to PTB and NIST

Code	Description
BOE 300141	1,413 mS/cm KCL 0,01 mol/l (25°C), 250 ml
BOE 301288	12,88 mS/cm KCL 0,1 mol/l (25°C), 250 ml
BOE 311180	111,8 mS/cm KCL 1 mol/l (25°C), 250 ml

ELECTROLYTE SOLUTION

In square plastic bottles, PE, 500 ml, labeled with an individual batch no. on the bottles

Code	Description
BOE 400300	Potassium chloride 3 mol/l, 500 ml

PH INDICATORS

pH-Fix is the most popular indicator stick for all purposes. The indicator dyes are chemically bound to the cellulose fibres, avoiding bleeding even in strong alkaline samples. Presentation: Box of 100 sticks 6 x 85 mm

Code	Description
M-N 92110	pH-Fix 0-14, pH Graduation 1,0

The budget priced universal indicator papers can be used for most standard applications. For each pH-value these papers show a single colour which can be matched with the colour scale at an interval of 1 pH-unit. Presentation: Reel of 5 m length and 7 mm width

Code	Description
M-N 90204	pH-Universal Indicator Paper, pH 1-14, pH Graduation 1,0/2,0





PH INDICATORS

BOECO PORTABLE DO/TEMP. METER MODEL DO-580

- » Simultaneous display of dissolved oxygen and temperature measurements
- » Automatic temperature compensated (ATC) dissolved oxygen readings
- » User selectable salinity and pressure compensated dissolved oxygen readings
- » Works with accurate and reliable galvanic dissolved oxygen probes
- » 50 data set reviewable memory
- » Automatic shut off function (30 minutes of non-use)
- » Battery life approx. 200-500 hours
- » Low battery indicator
- » IP65 waterproof case

Specification:

Dissolved Oxygen (ppm)	
Ranges	0,00 to 20,00 ppm (mg/L)
Resolution	0,01 ppm (mg/L)
Accuracy	±2 % of the reading or ±0,2 ppm
Dissolved Oxygen (%)	
Ranges	0,0 to 200,0 %
Resolution	0,1 %
Accuracy	±2 % of the reading or ±0,2 air saturation
Temperature	
Ranges	-6 to 46,0 °C
Resolution	0,1°C
Accuracy	±0,3 °C ±1 digit
Pressure compenssation:	600 to 1100 mBar (450 to 825 mmHg)
Salinity compensation:	From 0,0 to 40,0 ppt
Electrode type:	Galvanic
Temperature sensor:	Thermistor, 10K ohms, at 25 °C
Calibration backup:	Yes
Automatic temp. comp:	Yes
Power	9 Volt battery
Size (LxWxD)	198 x 70 x 37 mm
Weight:	1,26 kg (1 x 9V Battery included)

The DO-580 will be delivered incl. the following standard accessories:
1 x Watertight dissolved oxygen probe LD-900-11, 1 x 30 ml Galvanic O2 Fill Solution, 1 x 9 V battery, 1 x Operating manual, 1 x carrying case

Code	Description
BOE 5190580	Portable DO/Temperature Meter, Model DO-580 in carrying case wih dissolved oxygen probe LD-900-11



BOECO PORTABLE DO/TEMP METER MODEL DO-580





BOECO PORTABLE CONDUCTIVITY/ TDS/SALINITY/TEMP METER MODEL CT-480



BOECO PORTABLE CONDUCTIVITY/TDS SALINITY/TEMP. METER MODEL CT-480

- Simultaneous displays of conductivity, salinity or TDS with temperature measurements.
- Convenient one point calibration. Calibration data is stored in memory and is ready for use on power up.
- Adjustable TDS coefficient, reference temperature and temperature coefficient
- Uses one conductivity cell for conductivity, salinity and TDS measurement
- Accepts 4-wire conductivity cells with k=0,475 cell constant and 2-wire K=0,1 cell constant for improved flexibility and accuracy
- 50 data set reviewable memory
- Automatic shut off function (30 minutes of non-use)
- Battery life approx. 200-500 hours
- Low battery indicator
- IP65 waterproof case

Specification:

Conductivity K = 0,475

Range	Resolution	Accuracy
0,0 to 475µS/cm	0,1µS/cm	±1% of reading +2µS/cm
475 to 4750µS/cm	1µS/cm	±1% of reading +5µS/cm
4,75 to 47,50mS/cm	0,01mS/cm	±1% of reading +0,05mS/cm
47,5 to 200,0mS/cm	0,1mS/cm	±2,5% of reading +0,5mS/cm

Conductivity K = 0,1

Range	Resolution	Accuracy
0,00 to 99,99µS/cm	0,01µS/cm	±1% of reading
100 to 200µS/cm	0,1µS/cm	±1% of reading

Salinity

Range	Resolution	Accuracy
0,0 to 70,0 ppt	0,1 ppt	± 0,2 % Full Scale

Temperature

Range	Resolution	Accuracy
-10,0 to 90,0 °C	0,1 °C	±0,2 % or ±4% Full Scale whichever is greater

Reference Temp.:	From 15,0 to 25,0°C, default is 25,0°C
Temperature Coefficient:	From 0,00 to 4,00 °C, default is 1,91°C
TDS Constant:	From 0,30 to 1,00, default is 0,65
Cell Constant:	4 wire conductivity cell: K = 0,475
ATC:	Thermistor, 10K ohms, at 25°C
Power :	9 Volt battery
Size (LxWxD) :	196 x 70 x 37 mm
Weight :	1,36 kg (1 x 9V Battery included)

The CT-480 will be delivered incl. the following standard accessories:
1 x 4-wire conductivity cell 3020P with k=0,475
1 x 9 V battery, 1 x operating manual, 1 x carrying case

Code	Description
BOE 5190480	Portable Conductivity/Salinity/TDS/Temperature Meter, Model CT-480 in carrying case with 4-wire Conductivity Cell 3020P with 6 PIN connector, K=0,475 (50µS - 200mS/cm)

Optional Conductivity Cell:

BOE 5190109	2-wire Conductivity Cell 109P with 6 PIN connector, K=0,1 (0,0 - 200,0µS/cm)

BOECO BENCH TOP CONDUCTIVITY/ TDS/SALINITY/TEMP. METER MODEL CT-676

- » Simultaneous displays of conductivity, salinity or TDS with temperature measurements.
- » Convenient one point calibration. Calibration data is stored in memory and is ready for use on power up.
- » Adjustable TDS coefficient, reference temperature and temperature coefficient
- » Uses one conductivity cell for conductivity, salinity and TDS measurement
- » Accepts 4-wire conductivity cells with k=0,475 cell constant and 2-wire K=0,1 cell constant for improved flexibility and accuracy
- » Low battery indicator
- » IP54 waterproof case



CT-676

Specification:

Conductivity K = 0,475

Range	Resolution	Accuracy
0,0 to 475µS/cm	0,1µS/cm	±1% of reading +2µS/cm
475 to 4750µS/cm	1µS/cm	±1% of reading +5µS/cm
4,75 to 47,50mS/cm	0,01mS/cm	±1% of reading +0,05mS/cm
47,5 to 200,0mS/cm	0,1mS/cm	±2,5% of reading +0,5mS/cm

Conductivity K = 0,1

Range	Resolution	Accuracy
0,00 to 99,99µS/cm	0,01µS/cm	±1% of reading
100 to 200µS/cm	0,1µS/cm	±1% of reading

Salinity

Range	Resolution	Accuracy
0,0 to 70,0 ppt	0,1 ppt	± 0,2 % Full Scale

Temperature

Range	Resolution	Accuracy
-10,0 to 90,0 °C	0,1 °C	±0,2 % or ±4% Full Scale whichever is greater

Reference Temp.:	From 15,0 to 25,0°C, default is 25,0°C
Temperature Coefficient:	From 0,00 to 4,00 °C, default is 1,91°C
TDS Constant:	From 0,30 to 1,00, default is 0,65
Cell Constant	4 wire conductivity cell: K = 0,475
ATC	Thermistor, 10K ohms, at 25°C
Power Requirement:	6 x 1,5 Volt AAA batteries or AC adaptor
Dimensions (LxWxH):	150 x 203 x 72 mm
Weight:	2,3 kg (6 x 1,5 V AAA Batteries included)

The CT-676 will be delivered incl. the following standard accessories:
1 x 4-wire conductivity cell 3020P with k=0,475, 6 x 1,5V AAA batteries, 1 x operating manual, 1 x flexible electrode holder

Code	Description
BOE 5196760	Bench Top Coductivity/Salinity/TDS/Temperature Meter, Model CT-676 with 4-wire Conductivity Cell 3020P with 6 PIN connector, K=0,475 (50µS - 200mS/cm), with EURO plug
BOE 5196761	Idem, with US plug AC adaptor

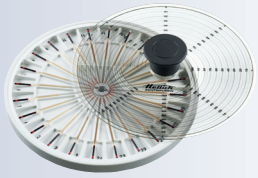
Optional Conductivity Cell:

BOE 5190109	2-wire Conductivity Cell 109P with 6 PIN connector, K=0,1 (0,0 - 200,0µS/cm)

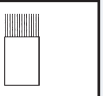
CENTRIFUGES



BOECO HAEMATOCRIT CENTRIFUGE HC-240



Haematocrit rotor with lid as evaluation disc included.

capacity	75 µl
Capillaries	1,5 x 75 mm
 Rotor and Lid as evaluation disc incl.	
Cat.-No.	–
capillaries per rotor	24
RCF	16,060
radius in mm	85
run-up in sec	9
run-down in sec[2)]	16

BOECO HAEMATOCRIT CENTRIFUGE HC-240

High-speed bench-top centrifuge for haematocrit determinations with brushless frequency drive. At 16.060 g sedimentation is completed in just a little over 6 minutes.

The HC-240 centrifuge includes a segmented haematocrit rotor for 24 capillaries. With the segmented haematocrit rotor every capillary has its own chamber. If a capillary breaks, the fragments stay in this chamber or segment without affecting other capillaries.

The lid of the rotor is evaluation disc and cover in one.
The haematocrit value can be read off the lid/evaluation disc right after centrifugation.

Controls and displays

» During centrifugation the actual values of the parameters are indicated
» The centrifuge's speed and running time can be variably adjusted for different applications
» Speed display in RPM or RCF
RPM input from 200 to 10.000 in steps of 10, starting from 10.000 to the maximum speed in steps of 100
RCF input from 200 to 10.000 in steps of 1, starting from 10.000 to the maximum speed in steps of 10
» Time t/min: 1 - 99 min. in steps of 1 min.,
Time t/sec: 1 - 59 sec. in steps of 1 sec.,
Continuous operation
» Brake stage, selectable between fast and slow
» Pulse key: For short centrifugation operations
» Open lid key

Safety

» Lid locking and holding device
» Emergency lid lock release
» Lid closure of metal
» Imbalance switch-off
» Flexible motor bearings
» Deep metal rotor chamber (die-cast-aluminium) to securely accomodate the rotor

Design

» Smooth plastic housing, easy to clean
» Metal lid
» Deep metal rotor chamber

Technical details

Max. RPM (speed) / RCF:	13,000 rpm / 16,060 RCF
Noise level:	≤ 57 dB(A)
Dimensions in mm (HxWxD):	228 x 262 x 352
Net weight:	10 kg
Emission / Immunity :	EN / IEC 61326-1, class B / FCC class B

The HC-240 conforms to safety regulations such as IEC 61010, or the EC mark and all relevant EU standards and DIN norms and has been manufactured under ISO 9001:2015

Code	Description
BOE 01801-13	BOECO centrifuge HC-240, 208-240 V, 50/60 Hz, with haematocrit rotor and lid as evaluation disc
BOE 01801-12	BOECO centrifuge HC-240, 100-127 V, 50/60 Hz, with haematocrit rotor and lid as evaluation disc

BOECO CENTRIFUGE SC-8

Practical and handy the SC-8 is the ideal centrifuge for small sample volumens. It is supplied with a 8-place angle steel rotor, which accomodates various tube systems as well as 15 ml glass tubes without adapters. The centrifuge is microprocessor controlled.



BOECO CENTRIFUGE SC-8

Controls and displays

- During centrifugation the actual values of the parameters are indicated
- The centrifuge's speed and running time can be variably adjusted for different applications:
- Speed display in RPM or RCF
  RPM input from 200 to the maximum speed in steps of 10
  RCF input from 200 to the maximum speed in steps of 1
- Time t/min: 1 - 99 min. in steps of 1 min.,
  Time t/sec: 1 - 59 sec. in steps of 1 sec.,
  Continuous operation
- Brake stage, selectable between fast and slow
- Pulse key: For short centrifugation operations
- Open lid key

Safety

- Lid locking and holding device
- Emergency lid lock release
- Lid closure of metal
- Imbalance switch-off
- Flexible motor bearings
- Deep metal rotor chamber (die-cast-aluminium) to securely accomodate the rotor

Design

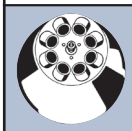
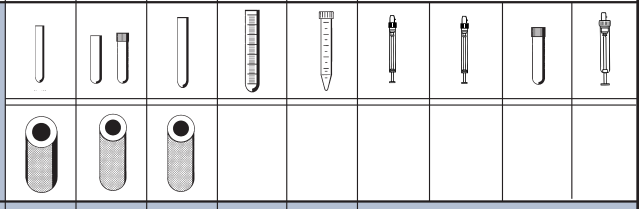
- Smooth plastic housing, easy to clean
- Metal lid
- Deep metal rotor chamber

The SC-8 conforms to safety regulations such as IEC 61010, or the EC mark and all relevant EU standards and DIN norms and has been manufactured under ISO 9001:2015

Technical details

Max RPM (speed) / RCF:	6,000 rpm / 3,461 RCF
Noise level:	≤ 50 dB(A)
Dimensions in mm (HxWxD):	228 x 262 x 352
Net weight:	8,9 kg
Emission / Immunity:	EN / IEC 61326-1, class B / FCC class B

Code	Description
BOE 01800-13	BOECO centrifuge SC-8, 208-240 V, 50/60 Hz, complete with 8-place angle rotor
BOE 01800-12	BOECO centrifuge SC-8, 100-127 V, 50/60 Hz, complete with 8-place angle rotor

capacity in ml	4	5	7	15	15	blood collection / urine tubes			
dimensions Ø x L mm	10 x 88	12/13 x 75	13 x 100	17 x 100	17 x 120	max 17 x 100			
 n=6,000 min^{-1} Rotor included									
Cat.-No.	06305	01054-A	01058	-	-	–			
tubes per rotor	8	8	8	8	4	8			
RCF	2,817	2,697	3,461	3,461	3,461	3,461			
radius in mm	70	67	86	86	86	99			
run-up in sec	17								
run-down in sec[2)]	37								



BOECO CENTRIFUGE SC-6



BOECO CENTRIFUGE SC-6

The BOECO SC-6 is a small centrifuge with a swing-out rotor especially designed for use in clinical laboratories and medical practices.
It accepts common blood or urine tubes up to a volume of 15 ml and accelerates them to a maximum speed of 4,000 rpm^{-1}

The BOECO SC-6 delivers optimal separation results and a horizontal layer of the separating gel that is identical to that achieved with a large centrifuge. Samples are therefore optimally prepared for analysis.

Controls and displays
- » During centrifugation the actual values of the parameters are indicated
- » The centrifuge's speed and running time can be variably adjusted for different applications.
- » Speed display in RPM x 100, input in steps of 100
- » Time t/min: 1 - 99 min, continuous operation
- » Pulse key: For short centrifugation operations
- » Open lid key

Safety
- » Lid locking and holding device
- » Centrifuge chamber of stainless steel
- » Emergency lid lock release
- » Lid closure of metal
- » Imbalance switch-off
- » Flexible motor bearings

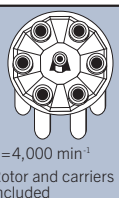
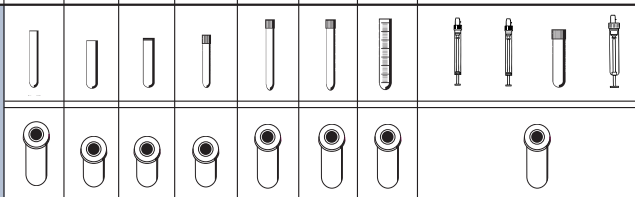
Design
- » Smooth plastic housing, easy to clean
- » Metal lid
- » Stainless steel centrifugation chamber, deep-drawn and seamless

The SC-6 conforms to safety regulations such as IEC 61010, or the EC mark and all relevant EU standards and DIN norms and has been manufactured under ISO 9001:2015

Technical details

Max RPM (speed) / RCF:	4,000 rpm / 2,254 RCF
Noise level:	≤ 50 dB(A)
Dimensions in mm (HxWxD):	239 x 326 x 389
Net weight:	13,5 kg
Emission / Immunity:	EN / IEC 61326-1, class B / FCC class B

Code	Description
BOE 02300-13	BOECO centrifuge SC-6, 200-240 V, 50/60 Hz, complete with 6-place swing-out rotor and carrieres 02331 and 02333 (6 of each)

capacity in ml	4	5	6	1,6-7	4-7	8,5-10	15	blood collection / urine tubes
dimensions Ø x L mm	10 x 88	12x75	12x82	13/16x75	13x100	16x100	17x100	max 17 x 100
 n=4,000 min^{-1} Rotor and carriers included								
Cat.-No.	02331	02333	02333	02333	02331	02331	02331	02331
tubes per rotor	6	6	6	6	6	6	6	6
RCF	2,254	1,807	1,807	1,807	2,254	2,254	2,254	2,254
radius in mm	126	101	101	101	126	126	126	126
run-up in sec	10							
run-down in sec[2)]	22							

BOECO CENTRIFUGE C-28A

The non-refrigerated microprocessor-controlled C-28A is the ideal bench-top centrifuge for performing daily routine tasks in doctors' laboratories and small hospitals. But because of the wide range of accessories the C-28A can also be used for sample preparation in research and industrial laboratories.
The centrifuge has a brushless frequency drive (no carbon brushes).
A special locking device allows effortless opening and closing of the lid with just one hand.



BOECO CENTRIFUGE C-28A

Controls and displays

- During centrifugation the actual values of the parameters are indicated
- Entry of the running parameters via foil keypad
- Speed display in RPM x 100, input in steps of 100
- Time t/min: 1 - 99 min, continuous operation
- Impulse key: For short centrifugation operations

Safety

- Housing and lid of metal finished in a scratch and impact resistant coating
- Centrifuge chamber of stainless steel
- Lid locking and holding device
- See-through glass in the lid
- Emergency lid lock release
- Imbalance switch-off
- Easily exchangeable rotors
- Automatic rotor recognition

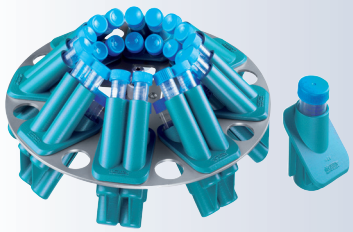
The C-28A conforms to safety regulations such as IEC 61010 or the EC mark and all relevant EU standards and DIN norms and has been manufactured under ISO 9001:2015

Technical details

Max. RPM (speed) / RCF:	6,000 rpm / 4,226 RCF
Noise level:	< 58 dB(A) (dependent on rotor)
Dimensions in mm: (HxWxD)	257 x 366 x 430
Net weight:	approx. 23 kg
Emission / Immunity:	EN / IEC 61326-1 class B, FCC class B

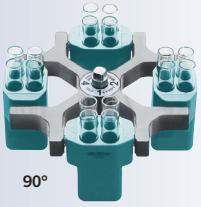
Code	Description
BOE 01206-13	BOECO centrifuge C-28A, 208-240 V, 50/60 Hz, without rotor
BOE 01206-12	BOECO centrifuge C-28A, 100-127 V, 50/60 Hz, without rotor

capacity in ml	5	4-7	15	15	50	12	50	50
dimensions Ø x L mm	12 x 75	13 x 100	17 x 100	17 x 120	29 x 115	17 x 100	29 x 115	29 x 107
n=4,000 min^{-1} Cat.-No. 01418	+ 01054A		+ 00716	+ E2109	+ E2110	+ 00716		
Cat.-No.	01467	01467	01467	01467	01468	01467	01468	
tubes per rotor	32	32	32	32	8	32	8	
RCF	2,182	2,612	2,540	2,594	2,486	2,540	2,486	
radius in mm	122	146	142	145	139	142	139	
run-up in sec	36							
run-down in sec.[2]	43							



ROTOR 01418 WITH 01467

Swing-out rotor 01624, 4-place, illustrated with carriers 01369
n= 4,000 min-1,
max RCF 2,665,
max. cap. 4 x 100 ml.



capacity in ml	5	4-7	9	9	15	15	1,6 - 7	20	25	45	50
dimensions Ø x L mm	12/13x75	13x100	14x100	14x100	17x100	17x100	12/13x75 16 x 75	21x100	24x100	31x100	34x100
n=4,000 min-1 rotor Cat.-No. 01624				use with insert 00701			use with insert 00716				
Cat.-No.	01372	01739	01370	01741	01369	01742	01742	01346	01745	01345	01746
tubes per rotor	68	28	20	40	16	28	28	8	8	4	4
RCF	2,164	2,451	2,308	2,415	2,308	2,415	2,325	2,361	2,451	2,361	2,451
radius in mm	121	137	129	135	129	137	130	132	137	132	137
run-up in sec	22										
run-down in sec.[2]	25										



Swing-out rotor, 4-place, 01624 illustrated with carriers 01481 and lids 01492 with bio-containment

Please take care not to exceed the tubes' max. permissible RCF!

2) braked run-down

capacity in ml	1	3	5/6/7	4-10	9/15	25	30	50	50	85	100	15	50	1.6 - 7	4 - 10
dimensions Ø x L mm	6x45 rhesus	10 x 60	12 x 75-100	16x75/100	14/17 x 100	24 x 100	26 x 95	29 x 107	34 x 100	38 x 106	44 x 100	17 x 120	29 x 115	13x75/100	16x75/100
lid with bio-containment 01492 Carrier Cat.-No. 01481											rubber insert				
Cat.-No.	01339	01343	01383	01348	01329	01330	04417	04416	01331	01396	00761	01347	01384	01383	01348
tubes per rotor	108	36	20	16	16	4	4	4	4	4	4	4	4	20	16
RCF	2,594	2,630	2,558	2,522	2,540	2,433	2,451	2,630	2,415	2,612	2,558	2,665		2,558	2,522
radius in mm	145	147	143	141	142	136	137	147	135	146	143	149		143	141
run-up in sec	22														
run-down in sec.[2]	25														



Swing-out rotor, 4-place 01324, illustrated with carrier 01398 and adapter 01483A
n= 4,000 min-1, max RCF 2,522

capacity ml	5-7	9	15	2,6-3,4	4-5,5	9-10	10	4-7	15	50	12	50
dimensions Ø x L mm	12x75/82/100	14x100	17x100	13x65	15x75	16x92	15x102	16 x 75	17x120	29x115	17x100	29x115
n=4,000 min-1 rotor Cat.-No. 01324 Carrier Cat.-No 01398					+2x00716			+ 00716				
Cat.-No.	01486	01482A	01486	01482A	01482A		01482A	01483A	01484	01482A	01484	
tubes per rotor	20	16	20	16	16		16	16	4	16	4	
RCF	2,486	2,522	2,486	2,272	2,522		2,397	2,612	2,576	2,522	2,576	
radius in mm	139	141	139	127	141		134	146	144	141	144	
run-up in sec	27											
run-down in sec.[2]	30											



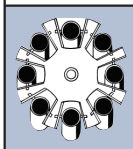
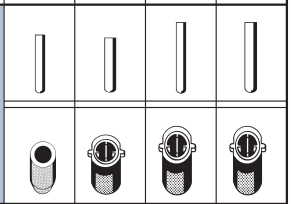
Swing-out rotor, 4-place 01324, illustrated with carrier 01490 and lids 01492
n= 4,000 min-1, max RCF 2,630
for max. 4 x 100 ml

capacity ml	1.5/2.0	1	3/4	5	6/7	9/15	25	50	100	10	30	50	85	15		50	12	25	30	50
dimensions Ø x L mm	11 x 38	6 x 45 Rhesus	10x60/88	12x75	12x82/100	14/17x100	24 x 100	34 x 100	44 x 100	16x80/100	26x95	29x107	38x106	17x120		29x115	17x100	25 x90	25x110	29x115
lid No. 01492 biocontainment [5] Carrier Cat.-No 01490									rubber insert											
Cat.-No.	01351	01339	01343	01383	01383	01329	01330	01331	00761	01348	04417	04416	01396	01356	01347	01384	06311	01363	01365	06318
tubes per rotor	20	108	36	20	20	16	4	4	4	16	4	4	4	12	4					
RCF	2,415	2,558	2,594	2,522	2,522	2,504	2,397	2,379	2,522	2,486	2,415	2,594	2,576	2,630				2,308	2,630	
radius in mm	135	143	145	141	141	140	134	133	141	139	135	145	144	147				129	147	
run-up in sec	27																			
run-down in sec.[2]	30																			

90°

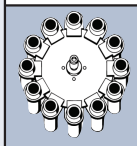
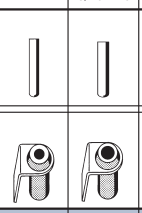


Swing-out rotor, 8-place,
for 8 x 15 ml,
n= 4,000 min^{-1}, RCF 2,415
Stainless steel, with
suspensions No. 01644, PA, fib-
reglass reinforced.

capacity in ml	5	4-7	10	15
dimensions Ø x L mm	12/13x75	17 x 70	13 x 100	17 x 100
 n=4,000 min^{-1} Cat.-No. 01611				
Cat.-No.	01131-A	01132-A	01643	01644
tubes per rotor	8	8	8	8
RCF	1,914		2,415	
radius in mm	107		135	
run-up in sec	22			
run-down in sec.[2)]	25			



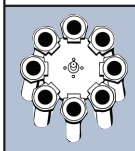
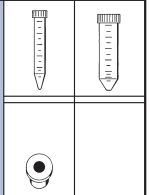
Swing-out rotor, 12-place,
for 12 x 15 ml
n= 4,000 min^{-1}, RCF 2,683,
Stainless steel, with suspensions
No. 01621, PA, fibreglass rein-
forced.

capacity in ml	5	4-7	15
dimensions Ø x L mm	12/13 x 75	15/16 x 75	17 x 100
 n=4,000 min^{-1} Cat.-No. 01628			
Cat.-No.	01127-A	01122	01621
tubes per rotor	12	12	12
RCF	2,236	2,254	2,683
radius in mm	125	126	150
run-up in sec	22		
run-down in sec.[2)]	25		

45°



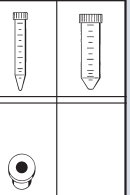
Swing-out rotor, 8-place,
for 8 x 50/15 ml Falcon tubes
n= 4,000 min^{-1}, RCF 2,469
stainless steel, with
suspensions, aluminium.

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
 n=4,000 min^{-1} Cat.-No. 01617		
Cat.-No.	01462A	–
tubes per rotor	8	
RCF	2,469	
radius in mm	138	
run-up in sec	22	
run-down in sec.[2)]	25	

90°



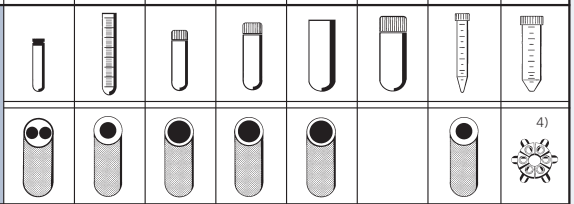
Swing-out rotor, 6-place,
for 6 x 50/15 ml Falcon tubes
n= 4,000 min^{-1}, RCF 2,701,
Stainless steel, with suspensions,
PA, fiberglass reinforced.

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
 n=4,000 min^{-1} Cat.-No. 01619		
Cat.-No.	01462-A	–
tubes per rotor	6	
RCF	2,701	
radius in mm	151	
run-up in sec	22	
run-down in sec.[2)]	25	

35°



Angle rotor, 6-place,
Cat. No. 01620»
n= 6,000 min^{-1},
max. RCF 4,226
illustrated with adapter set 01646

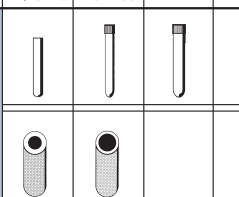
capacity in ml	10	15	30	50	50	85	15	50
dimensions Ø x L mm	16 x 80	17 x 100	26 x 95	29 x 107	34 x 100	38 x 106	17 x 120	29 x 115
 n=6,000 min^{-1} Cat.-No. 01620A								4)
Cat.-No.	01448	01451	01447	01446	01463	–	01466	01646
tubes per rotor	12	6	6	6	6	6	6	6
RCF	3,904	3,904	3,824	4,025	4,146	4,226	3,985	
radius in mm	97	97	95	100	103	105	99	
run-up in sec	19							
run-down in sec.[2)]	22							

4) Adapter set, 6-place, for conical 50 ml tubes with screw cap

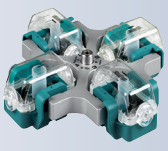
35°



Angle rotor, 12-place,
Cat. No. 01613
n= 6,000 min^{-1},
max. RCF 4,146

capacity in ml	1,6-5	4-7	8,5-10	15	15
dimensions Ø x L mm	12/13 x 75	13 x 100	16 x 100	17 x 100	17 x 120
 n=6,000 min^{-1} Cat.-No. 01613					
Cat.-No.	01054-A	01058	–	–	–
tubes per rotor	12	12	12	12	6
RCF	3,300	4,146			
radius in mm	86	103			
run-up in sec	13				
run-down in sec.[2)]	15				





Cyto rotors, 4-place and 6-place suitable for C-28A more information is available in a detailed cyto brochure.

2) Braked run down in sec.

Please make sure not to exceed the tubes max. permissible RCF. For glass tubes the max. RCF is 4,000



BOECO MINI CENTRIFUGE M-6

BOECO MINI CENTRIFUGE M-6

This Mini-centrifuge is ideal for quick spin downs for Micro and PCR tubes and PCR strip. The M-6 is supplied with a 6 x 1,5/2,0ml angle rotor, a 2 x 8 x 0,2ml strip rotor and a slide rotor.
Operation of the centrifuge begins when the lid is closed. When opening the lid the rotor automatically decelerates and comes to a stop.
A rubber footplate keeps the unit stable and avoids vibration.
The M-6 is CE marked and has been manufactured under ISO 9001

Technical details

Max. RPM (speed) / RCF:	6,000 rpm / 2,000 x g
Noise level:	50 dB(A)
Power:	120 V to 240 V, 50/60 Hz
Dimensions in mm:(D/W/H)	175 x 148 x 118 mm
Net weight:	1,2 kg

Code	Description
BOE 8074000	BOECO Mini Centrifuge M-6, EU Plug
BOE 8074100	BOECO Mini Centrifuge M-6, US Plug
BOE 8074200	BOECO Mini Centrifuge M-6, UK Plug

BOECO CENTRIFUGE MICROSPIN 12

is a compact bench-top microliter centrifuge for medical and biological research, molecular diagnostics, biochemistry, immunology and cell technologies. It can be used for extracting RNA/DNA samples, separation of cell suspensions and other micro quantitative analysis.

The microprocessor control provides precise control of the set parameters and a user-friendly interface allows a easy entry of parameters.

The brushless motor provides quite, vibration free performance, even at high speeds and a long product service life.

The angle rotor is made out of aluminium.

Due to the low voltage external power supply, the Microspin 12 can be used in cold rooms.



BOECO CENTRIFUGE MICROSPIN 12

Controls and displays

» During centrifugation the actual values of the parameters are indicated
» Entry of the running parameters via foil keypad
» Speed display in RPM x 100, increment 100 rpm
» Time t/min: 1 - 30 min, increment 1 min
» Open lid key

Safety

» Lid locking and holding device
» Emergency lid lock release
» Metal protective inserts and enclosures inside the body
» See-through glass in the lid
» Imbalance switch-off

The Microspin 12 conforms to safety regulations such as EN 61326, EN 61010 or the EU mark and all relevant EC standards and DIN norms and has been manufactured under ISO 9001:2015

Technical details

Max. RPM (speed) / RCF:	14,500 rpm / 12,400 x g
Noise level:	≤ 62 dB(A)
Power (external):	AC 100-240 V, 60 W/DC24 V, 2.5 A
Dimensions in mm: (D/W/H)	200 x 240 x 125 mm
Net weight:	3,4 kg

Code	Description
BOE 8075000	BOECO Micro centrifuge Microspin 12, 100-240 V, 50/60 Hz, with angle rotor for 12 x 1,5 / 2,0 ml microtubes and spin columns. And each 12 adapters for 0,2 and 0,5 ml microtubes

BOECO CENTRIFUGE MC-24

Powerful, space-saving, low-noise, reliable and microprocessor-controlled microlitre centrifuge with brushless frequency drive.



BOECO CENTRIFUGE MC-24

Controls and displays

- During centrifugation the actual values of the parameters are indicated
- Entry of the running parameters via foil keypad
- Speed display in RPM or RCF
  RPM input from 200 to 10.000 in steps of 10, starting from 10.000 to the maximum speed in steps of 100
  RCF input from 200 to 10.000 in steps of 1, starting from 10.000 to the maximum speed in steps of 10
- Time t/min: 1 - 99 min. in steps of 1min.,
  Time t/sec: 1-59 sec. in steps of 1 sec.,
  Continuous operation
- Brake stage, selectable between fast and slow
- Pulse key: For short centrifugation operations
- Open lid key

Safety

- Lid locking and holding device
- Emergency lid lock release
- Motor overheating protection
- Imbalance switch-off
- Deep metal rotor chamber (die-cast-zinc) to securely accomodate the rotor

The MC-24 conforms to safety regulations such as IEC 61010 or the EU mark and all relevant EC standards and DIN norms and has been manufactured under ISO 9001:2015

Technical details

Max. RPM (speed) / RCF:	14,000 rpm / 18,845 RCF
Noise level:	59 dB(A)
Emission / Immunity:	EN / IEC 61326-1 class B / FCC class B
Dimensions in mm: (H/W/D)	228 x 262 x 352
Net weight:	11 kg

Code	Description
BOE 01203-13	BOECO centrifuge MC-24, 200-240 V, 50/60 Hz, without rotor

45°



Angle rotor, 12-place Cat. No. 01252-A 12-place, n= 14,000 min⁻¹, max RCF 15,558

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
n=14,000 min⁻¹ Cat.-No. 01252-A	with high speeds we recom-mend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	12			
RCF	15,558			
radius in mm	71			
run-up in sec.	15			
run-down in sec.[2]	15			

45°



Angle rotor, 18-place, Cat. No. 01258-A n= 14,000 min⁻¹, max RCF 16,654

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
n=14,000 min⁻¹ Cat.-No. 01258-A	with high speeds we recom-mend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	18			
RCF	16,654			
radius in mm	76			
run-up in sec.	15			
run-down in sec.[2]	15			

45°



Angle rotor, 24-place, Cat. No. 01226-A n= 14,000 min⁻¹, max RCF 18,845

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
n=14,000 min⁻¹ Cat.-No. 01226-A	with high speeds we recom-mend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	24			
RCF	18,845			
radius in mm	86			
run-up in sec.	15			
run-down in sec.[2]	15			



Angle rotor, 18-place, Cat. No. 01213-A n= 14,000 min⁻¹, max RCF 16,654

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0	1,5	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38	mico spin columns 11x38	
n=14,000 min⁻¹ Cat.-No. 01213-A	with high speeds we recom-mend to use adapter No. 02031				with high speeds we recom-mend to use adapter No. 02031	
Cat.-No.	–	02023	02024	–	–	–
tubes per rotor	18					
RCF	16,654					
radius in mm	76					
run-up in sec.	16					
run-down in sec.[2]	15					

The special raised rim of the rotor 01213-A enables centrifugation with open tube lids.



BOECO CENTRIFUGE M-240



BOECO CENTRIFUGE M-240R

BOECO CENTRIFUGES M-240 / M-240R

The M-240 and M-240R rank among the fastest centrifuges in their class – With a maximum speed of 15,000 rpm and an RCF of 21,382 they are not only fast, the M-240R also refrigerates quickly: to +4°C with the Fast Cool function in 10 to 15 minutes..
Even thermosensitive samples can be gently centrifuged thanks to highly reliable refrigeration. Best separation results are guaranteed with the smooth-running, high-performance motor featuring a maintenance-free frequency drive. With the optional autoclavable and aerosol-tight accessories, even infectious materials can be processed safely for both the user and the environment.

User-Friendliness

» Automatic lid locking
» Quick-entry foil keypad
» Easy-to-read, digital display
» Display of current parameter values
» Select key for parameter selection
» Impulse key for short centrifuging
» Open lid key
» RCF key
» Twist knob to enter values
» RPM in increments of 10
» Running time in minutes, max. 99 min
» Temperature in increments of 1°C (M-240R)
» 4 programmable memories

Refrigeration (M-240R)

» Infinitely variable setting from –10 °C to +40 °C
» Fast Cool function in 10 - 15 min to +4 °C
» Stand-by mode maintains the set temperature
» Automatic refrigeration switch-off when the lid is opened

Safety

» Lid dropping protection
» Lid locking and holding
» Emergency lid lock release
» Motor overheating protection
» Chamber overheating protection
» Imbalance switch-off
» Standstill indication
with the refrigerated model M-240R the LED in the Open key lights up
with the M-240 the lid opens automatically after the rotor has come to a standstill

The M-240 / M-240R conform to safety regulations such as IEC 61010, all relevant EU standards and DIN norms and have been manufactured under ISO 9001:2015

Technical details

	M-240	M-240R
Max. RPM (speed) / RCF:	15,000 RPM / 21,382 RCF	
Noise level: (dependent on rotor)	≤ 58 dB (A	≤ 54 dB(A)
Dimensions in mm (HxWxD):	260 x 275 x 344	260 x 281 x 533
Net weight:	11,5 kg	28 kg
Emission / Immunity:	EN / IEC 61326-1 / class B / FCC class B	

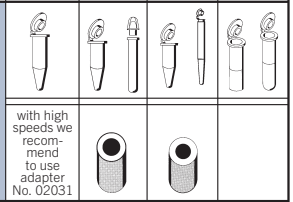
Code	Description
BOE 02400-13	BOECO centrifuge M-240, 200-240 V, 50/60 Hz, without rotor
BOE 02405-13	BOECO refrigerated centrifuge M-240R, 200-240 V, 50 Hz, without rotor

Rotors for M-240 and M-240 R

45°



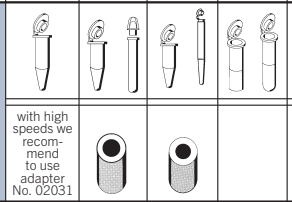
Angle rotor, 24-place
Cat. No. 02434
n= 15,000 min^{-1},
max RCF 21.382
incl. biocontainment lid

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
n=15,000 min^{-1} Cat.-No. 02434	 with high speeds we recom-mend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	24			
RCF	21,382			
radius in mm	85			
run-up in sec.	20			
run-down in sec.[2)]	29			
temperature °C [1)]	+4			

45°



Angle rotor, 24-place
Cat. No. 02428
n= 15,000 min^{-1},
max RCF 21,382
incl. bioseakl lid

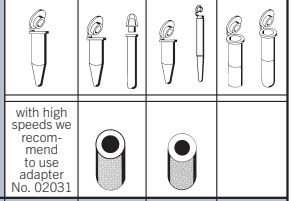
capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0	1,5	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38	mico spin columns 11x38	
n=15,000 min^{-1} Cat.-No. 02428	 with high speeds we recom-mend to use adapter No. 02031				 with high speeds we recom-mend to use adapter No. 02031	
Cat.-No.	–	02023	02024	–	–	–
tubes per rotor	24					
RCF	21,382					
radius in mm	85					
run-up in sec.	20					
run-down in sec.[2)]	28					
temperature °C [1)]	+4					

The special raised rim of the rotor 02428 enables centrifugation of tubes with open lids. The rim supports the lids so they will not rip off during centrifugation.
Centrifugation with open tube lids is performed for example when spinning tubes with filter elements, so called „spin columns“

40° inside /
52,5° outside



Angle rotor, 30-place,
Cat. No. 02437
n= 15,000 min^{-1},
max RCF 21,328
incl. bioseal lid.

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
n=15,000 min^{-1} Cat.-No. 02437	 with high speeds we recom-mend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	30			
RCF	21,328			
radius in mm	85			
run-up in sec.	22			
run-down in sec.[2]	30			
temperature °C [1)]	+4			



Optional for rotor 02437 and 02434

Lid (Cat. No. 02435)
with bio-containment
autoclavable,
phenol-resistant



BOECO CENTRIFUGE U-320



BOECO CENTRIFUGE U-320R

BOECO CENTRIFUGES U-320 / U-320R

Because of their comprehensive range of accessories, the U-320 and U-320R centrifuges are the perfect universal centrifuges for routines in basic research and R&D laboratories of the pharmaceutical and biotechnical industry. The microprocessor controlled centrifuges have a brushless frequency drive (no carbon brushes) and a motorized lid locking.

Performance
- » High RCF
- » Extremely short run-up and run-down times

Design
- » Metal housing, metal lid
- » Stainless steel centrifugation chamber
- » Viewing port in the lid

Refrigeration (U-320R)
- » Infinitely variable setting from –20 °C to +40 °C
- » Fast cool function

User-Friendliness
- » Automatic lid locking
- » Easily exchangeable rotors
- » 10 programmable memories
- » 9 acceleration and braking ramps, or unbreaked run down time

Safety
- » Lid locking and holding during rotor run
- » Emergency lid lock release
- » Motor overheating protection
- » Chamber overheating protection (with U-320R)
- » Imbalance switch-off
- » Automatic rotor recognition
- » Lid dropping protection

Controls and displays
- » During centrifugation the actual values of the parameters are indicated
- » Change-over RPM/RCF: by entering the rotor radius r/mm the Centrifuge will calculate/indicate speed or RCF.
- » Time preselection in steps of minutes and seconds / continuous operation
- » Temperature T/°C**:** Input in increments of 1°C
- » Impulse key: For short centrifugation operations

The U-320 / U-320R conform to safety regulations such as IEC 61010 or the EC mark and all relevant EU standards and DIN norms and have been manufactured under ISO 9001:2015

Technical details

	U-320	U-320 R
Max. Capacity:	4 x 200 ml, 6 x 94 ml	
Max. RPM (speed) / RCF:	15,000 RPM / 21,382 RCF	
Noise level: (dependent on rotor)	≤ 68 dB (A	≤ 58 dB(A)
Dimensions in mm (HxWxD):	346 x 395 x 520	346 x 401 x 695
Net weight:	31 kg	52 kg
Emission / Immunity:	EN IEC 61326-1, class B / FCC CLass B	

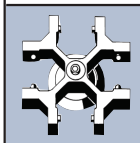
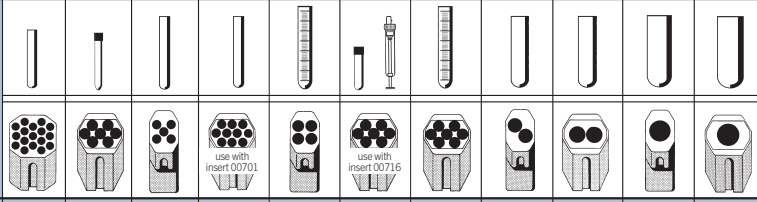
Code	Description
BOE 01401-13	BOECO centrifuge U-320, 200-240 V, 50/60 Hz, without rotor
BOE 01406-13	BOECO refrigerated centrifuge U-320R, 200-240 V, 50 Hz 240 V, 60 Hz, without rotor

Swing-out rotor 01624, 4-place, illustrated with carriers 01369
n= 4,000 min-1,
max. RCF 2,665
max. cap. 4 x 100 ml.





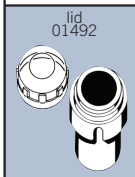
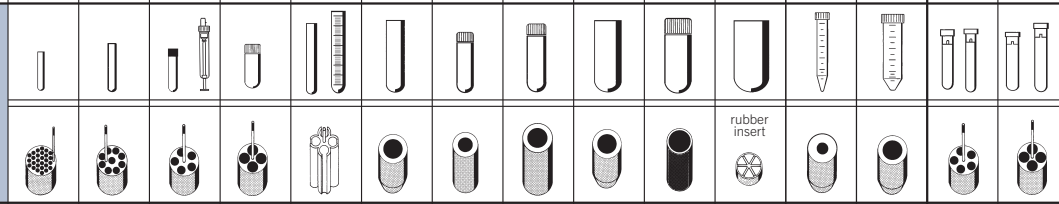
Swing-out rotor, No. 01624, 4-place, n= 4,000 min-1, max. RCF 2,665 for max. 4 x 100 ml

capacity in ml	5	4-7	9	9	15	1,6 - 7	15	20	25	45	50
dimensions Ø x L mm	12/13x75	13 x 100	14 x 100	14 x 100	17 x 100	12/13x75 16 x 75	17 x 100	21 x 100	24 x 100	31 x 100	34 x 100
 n=4,000 min-1 Cat.-No. 01624											
Cat.-No.	01372	01739	01370	01741	01369	01742	01742	01346	01745	01345	01746
tubes per rotor	68	28	20	40	16	28	28	8	8	4	4
RCF	2,164	2,451	2,308	2,415	2,308	2,325	2,415	2,361	2,451	2,361	2,451
radius in mm	121	137	129	135	129	130	137	132	137	132	137
run-up in sec	20	22	20			22	20				
run-down in sec.[2]	25										
temperature °C [1]	- 17			- 15	- 17	- 15	- 15	- 15	- 15	- 17	- 15

1) Lowest attainable temperature in the U-320 R at max. speed.

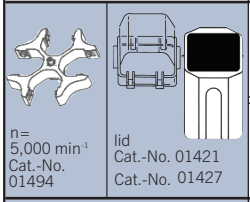
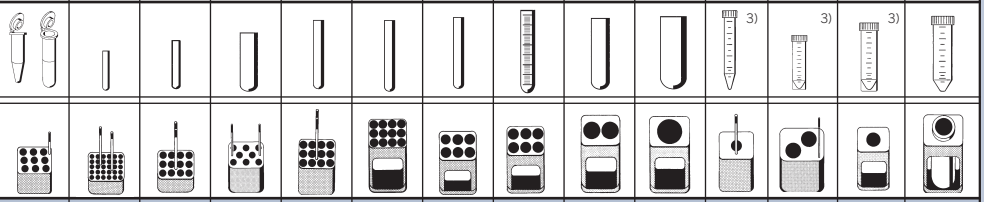
2) braked run-down

Please take care not to exceed the tubes' max. permissible RCF!

capacity in ml	1	3	1,6-7	4-10	9/15	25	30	50	50	85	100	15	50	1.6 - 7	4 - 10
dimensions Ø x L mm	6x45 Rhesus	10 x 60	13 x 75/100	16x75/100	14/17 x 100	24 x 100	26 x 95	29 x 107	34 x 100	38 x 106	44 x 100	17 x 120	29 x 115	13x75/100	16x75/100
 lid 01492 Cat.-No. 01481	 rubber insert														
Cat.-No.	01339	01343	01383	01348	01329	01330	04417	04416	01331	01396	00761	01347	01384	01383	01348
tubes per rotor	108	36	20	16	16	4	4	4	4	4	4	4	4	20	16
RCF	2,594	2,630	2,558	2,522	2,540	2,433	2,451	2,630	2,415	2,612	2,558	2,665		2,558	2,522
radius in mm	145	147	143	141	142	136	137	147	135	146	143	149		143	141
run-up in sec	20														
run-down in sec.[2]	25														
temperature °C [1]	- 15														



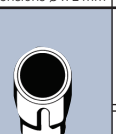
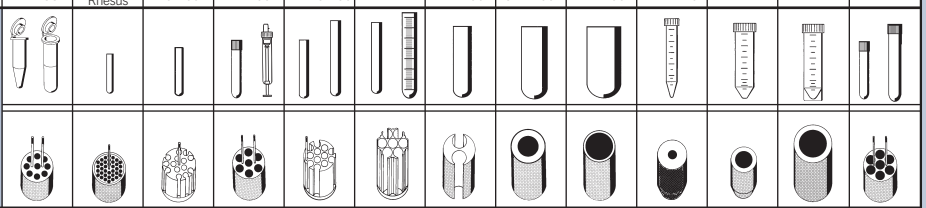
Swing-out rotor, No. 01494 4-place, n= 5,000 min-1, max. RCF 4,193 illustrated with buckets 01427

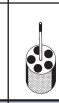
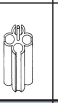
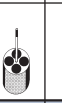
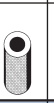
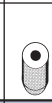
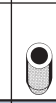
capacity ml	1.5/2.0	1	3	5	6	7	9	15	25	50	15	25	30	50
dimensions Ø x L mm	11 x 38	6 x45 Rhesus	10 x 60	13 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	17 x 120	25 x 90	25 x 110	29 x 115
 n= 5,000 min-1 Cat.-No. 01494 lid Cat.-No. 01421 Cat.-No. 01427	 3) 3) 3)													
Cat.-No.	05277	01357	01327	01732	05229	05230	05237	05231	05232	05233	05275	01731	05272	05276
tubes per rotor	36	120	48	32	48	48	24	24	8	4	4	8	4	4
RCF	4,109	4,081	4,053	4,025	4,053	3,941					4,165	3,969	4,025	4,053
radius in mm	147	146	145	144	145	141					149	142	144	145
run-up in sec	30													
run-down in sec.[2]	32													
temperature °C [1]	– 7													

3) When using these tubes, bucket 01427 cannot be closed with lid 01421



Swing-out rotor, No. 01494 4-place, n= 5,000 min-1, max. RCF 4,193 illustrated with buckets 01425

capacity ml	1.5/2.0	1	3	2,6-7	5/6/7	9/15	25	50	100	15	50	50	4 - 10
dimensions Ø x L mm	11 x 38	6 x 45 Rhesus	10 x 60	11x100	12x75-100	14/17x100	24 x 100	34 x 100	44 x 100	17 x 120	29 x 115	29 x 115	16 x 75/100
 Cat.-No 01425													
Cat.-No.	01444	01432	01433	01438	01434	01431	01435	01436	01437	01442	01443	01737	01441
tubes per rotor	36	144	56	28	48	28	8	4	4	4			28
RCF		3,969	3,913						3,801	4,081			3,913
radius in mm	139	142	140						136	146			140
run-up in sec	30												
run-down in sec.[2]	32												
temperature °C [1]	– 10												

capacity ml	1.5/2.0	1	3	5	6/7	9/15	25	50	100	10	30	50	85	15	50	12	25	30	50
dimensions Ø x L mm	11 x 38	6 x 45 Rhesus	10x60	13x75	13x82/100	14/17x100	24 x 100	34 x 100	44 x 100	16x80/100	26x95	29x107	38x106	17x120	29x115	17x100	25 x90	25x110	29x115
lid No. 01492 biocontainment [5]																			
Carrier Cat.-No 01495									 rubber insert										
Cat.-No.	01351	01339	01343	01383	01383	01329	01330	01331	00761	01348	04417	04416	01396	01347	01384	06311	01363	01365	06318
tubes per rotor	20	108	36	20	20	16	4	4	4	16	4	4	4	4					
RCF	3,857	4,081	4,137	4,025	4,025	3,997	3,829	3,801	4,025	4,025	3,857	4,137	4,109	4,193			3,689	4,193	
radius in mm	138	146	148	144	144	143	137	136	144	144	138	148	147	150			132	150	
run-up in sec	30																		
run-down in sec. [2]	32																		
temperature °C [1]	– 10																		

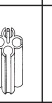
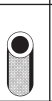
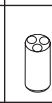


Swing-out rotor 01324, 4-place, illustrated with suspension 01398 and adapter 01483 n= 4,500 min^{-1}, max. RCF 3,260



Swing-out rotor 01324, 4-place, illustrated with carrier 01490 and lids 01492 n= 4,500 min^{-1}, max. RCF 3,328 for max. 4 x 100 ml

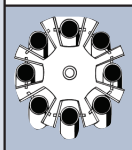
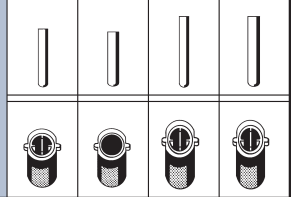
capacity ml	9	15	2,6-3,4	4-5,5	9-10	10	4-7	15	50	12	50
dimensions Ø x L mm	14x100	17x100	13x65	15x75	16x92	15x102	16 x 75	17x120	29x115	17x100	29x115
Carrier Cat.-No 01398											
			 +2x00716		 + 00716						
Cat.-No.	01482-A	01486	01482-A	01482-A	01482-A	01483-A	01484	01482-A	01484		
tubes per rotor	16	20	16	16	16	16	4	16	4		
RCF	3,192	3,147	2,875	3,192	3,034	3,305	3,260	3,192	3,260		
radius in mm	141	139	127	141	134	146	144	141	144		
run-up in sec	27										
run-down in sec. [2]	30										
temperature °C [1]	– 6										

capacity ml	1.5/2.0	1	3/4	5	6/7	9/15	25	50	100	4-10	30	50	85	15	50	12	25	30	50
dimensions Ø x L mm	11 x 38	6 x 45 Rhesus	10x60/88	12/13x75	13x82/100	14/17x100	24 x 100	34 x 100	44 x 100	16x75/100	26x95	29x107	38x106	17x120		29x115	17x100	25 x90	25x110	29x115
lid No. 01492 biocontainment [5]																			
Carrier Cat.-No 01490									 rubber insert										
Cat.-No.	01351	01339	01343	01383	01383	01329	01330	01331	00761	01348	04417	04416	01396	01356	01347	01384	06311	01363	01365	06318
tubes per rotor	20	108	36	20	20	16	4	4	4	16	4	4	4	12	4					
RCF	3,056	3,237	3,283	3,192	3,192	3,170	3,034	3,011	3,192	3,147	3,056	3,283	3,260	3,328				2,920	3,328	
radius in mm	135	143	145	141	141	140	134	133	141	139	135	145	144	147				129	147	
run-up in sec	27																			
run-down in sec. [2]	30																			
temperature °C [1]	– 6																			

90°



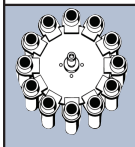
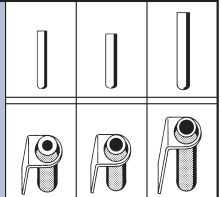
Swing-out rotor, 8-place, n= 4,000 min^{-1}, max. RCF 2,415, for 8 x 15 ml, stainless steel, with suspensions No. 01644, PA, fibreglass reinforced.

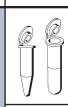
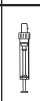
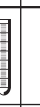
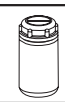
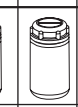
capacity in ml	5	10	10	15
dimensions Ø x L mm	12/13x75	17 x 70	13 x 100	17 x 100
n=4,000 min^{-1} Cat.-No. 01611				
Cat.-No.	01131-A	01132-A	01643	01644
tubes per rotor	8	8	8	8
RCF	1,914		2,415	
radius in mm	107		135	
run-up in sec	20			
run-down in sec. [2]	20			
temperature °C [1]	-16			

75°



Swing-out rotor, 12-place, n= 5,000 min^{-1}, max. RCF 4,193, for 12 x 15 ml, stainless steel, with suspensions No. 01621, PA, fibreglass reinforced.

capacity in ml	5	10	15
dimensions Ø x L mm	12/13 x 75	17 x 70	17 x 100
n=5,000 min^{-1} Cat.-No. 01628			
Cat.-No.	01127-A	01122	01621
tubes per rotor	12	12	12
RCF	3,494	3,522	4,193
radius in mm	125	126	150
run-up in sec	16		
run-down in sec. [2]	16		
temperature °C [1]	-15		-10

capacity ml	1.5/2.0	5	5-7	1,6-7	9/15	25	50	85	100	125/150	200	30	50	15		50	12	25/30	50
dimensions Ø x L mm	11 x 38	17x59	12x75/100	13x75/100	14/17x100	24 x 100	34 x 100	38x101/6	44 x 100	51x100/116	56 x 112	26 x 95	29 x 107	17 x 120		29 x 115	17 x 100	25x90/110	29x115
lid No. 01561 biocontainment [5]																			
Carrier Cat.-No 01560																			
Cat.-No.	01571	01593	01589	01589	01588	01573	01574	01575	01576	01594	-	01585	01586	01577	01595	01579	01582	01582	01583
tubes per rotor	56	16	28	28	20	4	4	4	4	4	4	4	4	8	12	4	16	4	
max. RCF	3,328/2,332	3,328	3,215	3,215	3,215	3,056	3,147	3,260	3,147	3,328	3,328	3,260	3,260	3,328			3,260	3,328	
radius in mm	147/103	147	142	142	142	135	139	144	139	147	147	144	144	147			144	147	
run-up in sec	28																		
run-down in sec.[2]	31																		
temperature °C [1]	– 8																		

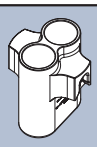
90°



Swing-out rotor, 01554, 4-place, illustrated with carrier 01560 and lids 01561 n= 4,500 min^{-1}, max. RCF 3,328 for max. 4 x 200 ml



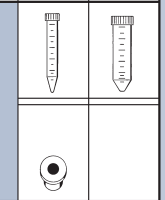
Swing-out rotor 01554, 4-place, illustrated with carrier 01563

capacity in ml	12	15	50	50
dimensions Ø x L mm	17 x 100	17 x 120	29 x 115	29 x115
Carrier Cat.-No. 01563				
		+ E2109	+ E2110-A	
Cat.-No.	01592	01592	-	-
tubes per rotor	8			
RCF	3,260			
radius in mm	144			
run-up in sec	28			
run-down in sec.[2]	31			
temperature °C [1]	-8			

90°



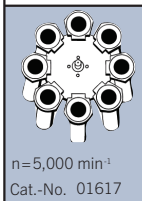
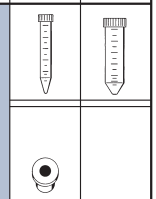
Swing-out rotor, 6-place, n= 4,000 min^{-1}, RCF 2,701, for 6 x 50/15ml Falcon tubes, stainless steel, with suspensions, PA, fiberglass reinforced.

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
n=4,000 min^{-1} Cat.-No 01619		
Cat.-No.	01462-A	–
tubes per rotor	6	
RCF	2,701	
radius in mm	151	
run-up in sec	20	
run-down in sec[2]	22	
temperature °C [1]	- 15	

45°



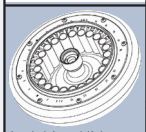
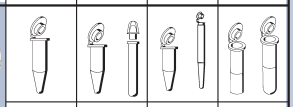
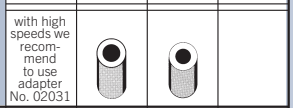
Swing-out rotor, 8-place, n= 5,000 min^{-1}, RCF 3,857, for 8 x 50/15 ml, stainless steel, with suspensions, aluminium.

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
n=5,000 min^{-1} Cat.-No. 01617		
Cat.-No.	01462-A	–
tubes per rotor	8	
RCF	3,857	
radius in mm	138	
run-up in sec	20	
run-down in sec.[2]	19	
temperature °C [1]	- 10	

45°



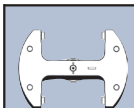
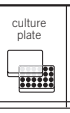
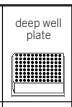
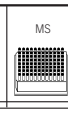
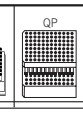
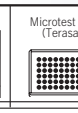
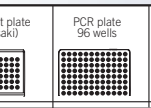
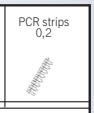
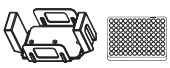
Swing-out rotor, 24-place, with bioseal, phenol-resistant lid n= 13,000 min^{-1}, RCF 18,127

capacity in ml	1.5	0.5/0.8	0.2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
incl. biosal lid n=13,000 min^{-1} Cat.-No. 01555		 with high speeds we recommend to use adapter No. 02031		
Cat.-No.	–	02023	02024	–
tubes per rotor	24			
RCF	18,327			
radius in mm	97			
run-up in sec	36			
run-down in sec.[2]	31			
temperature °C [1]	3			

90°



Swing-out rotor, 2-place, n=4,000 min^{-1}, RCF 2,218 for microtitre plates, aluminium, coated, with suspensions No. 01453-A, stainless steel.

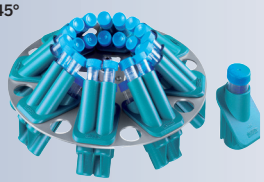
	microtitre plate	culture plate	deep well plate	MS	QP	Microtest plate (Terasaki)	PCR plate 96 wells	PCR strips 0,2
n=4,000 min^{-1} Rotor Cat.-No. 01460								
								
Cat.-No.	01453-A						01453-A + 01485	
plates per rotor	10	8	6	2	2	2	4	2	24 x 8
RCF	2,218								
radius in mm	124								
run-up in sec	40								
run-down in sec.[2]	45								
temperature °C [1]	-6								

1) Lowest attainable temp. in precooled refrigerated centrifuges at max. speed.

2) Rund down in sec. braked

Please make sure not to exceed the tubes max. permissible RCF. For glass tubes the max. RCF is 4,000

45°



Angle rotor,
Cat. No. 01418
8-place
N = 4.500 min^{-1}
max. RCF 3,305
illustrated with adapters 01467

capacity in ml	4-7	15	15	50	12	50	50
dimensions Ø x L mm	13 x 100	17 x 100	17 x 120	29 x 115	17 x 100	29 x115	29 x 107
n=4,500 min^{-1} Cat.-No. 01418		+ 00716	+ E2109	+ E2110	+ 00716		
Cat.-No.	01467	01467	01467	01468	01467	01468	
tubes per rotor	32	32	32	8	32	8	
RCF	3,305	3,215	3,283	3,147	3,215	3,147	
radius in mm	146	142	145	139	142	139	
run-up in sec	30						
run-down in sec.[2]	31						
temperature °C [1]	-11						

45°



Angle rotor,
Cat. No. 01627
18-place, with bioseal, phenol-resistant lid
n= 14,150 min^{-1},
RCF 22.161,
for 5 ml microtest tubes

capacity in ml	5,0 ml
dimensions Ø x L mm	17 x 59
n=14,500 min^{-1} Cat.-No. 01627	
Cat.-No.	
tubes per rotor	18
RCF	22,161
radius in mm	
run-up in sec	35
run-down in sec.[2]	32
temperature °C [1]	2

35°



Angle rotor,
Cat. No. 01556
6-place,
n= 9,000 min^{-1},
max. RCF 10,595

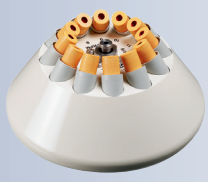
capacity in ml	10	10-15	30	50	50/75	85	15	50
dimensions Ø x L mm	16 x 80	17 x 100	26 x 95	29 x 107	34 x 100 35 x 105	38 x 106	17 x 120	29 x 115
n=9,000 min^{-1} Cat.-No. 01556								
Cat.-No.	01477	01478	01447	01446	01463	–	01466	01454
tubes per rotor	12	6	6	6	6	6	6	6
RCF	10.414	10.052	9-690	10,142	10,414	10.595	10.052	
radius in mm	115	111	107	112	115	117	111	
run-up in sec	30							
run-down in sec.[2]	30							
temperature °C [1]	- 11							

1) Lowest attainable temp. in precooled refrigerated centrifuges at max. speed

2) Rund down in sec. braked

Please make sure not to exceed the tubes max. permissible RCF. for glass tubes the max. RCF is 4,000

35°



Angle rotor,
Cat. No. 01613
12-place,
n= 6,000 min^{-1},
max. RCF 4,146

capacity in ml	5	15	15
dimensions Ø x L mm	12/13 x 75	17 x 100	17 x 120
n=6,000 min^{-1} Cat.-No. 01613			
Cat.-No.	01054A	–	–
tubes per rotor	12	12	6
RCF	3,300	4,146	
radius in mm	82	103	
run-up in sec	15		
run-down in sec.[2]	15		
temperature °C [1]	- 16		

35°



Angle rotor,
Cat. No. 01615
12-place,
n= 12,000 min^{-1}, max. RCF 16,582

capacity in ml	5	15	15
dimensions Ø x L mm	12/13x75	17 x 100	17 x 120
n=12.000 min^{-1} Cat.-No. 01615			5)
Cat.-No.	01054A	–	01647
tubes per rotor	12	12	6
RCF	13,201	16,582	15,455
radius in mm	82	103	93
run-up in sec	40		
run-down in sec.[2]	40		
temperature °C [1]	-2		

50°



Angle rotor,
Cat. No. 01552
24-place,
incl. bioseal lid,
phenol resistant
n= 16,000 min^{-1}, max.
RCF 24,900

capacity in ml	1.5	0.5/0.8	0.2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
incl. biosal lid n=16,000 min^{-1} Cat.-No. 01552	with high speeds we recommend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	24			
RCF	24,900			
radius in mm	87			
run-up in sec	30			
run-down in sec.[2]	29			
temperature °C [1]	2			

45°

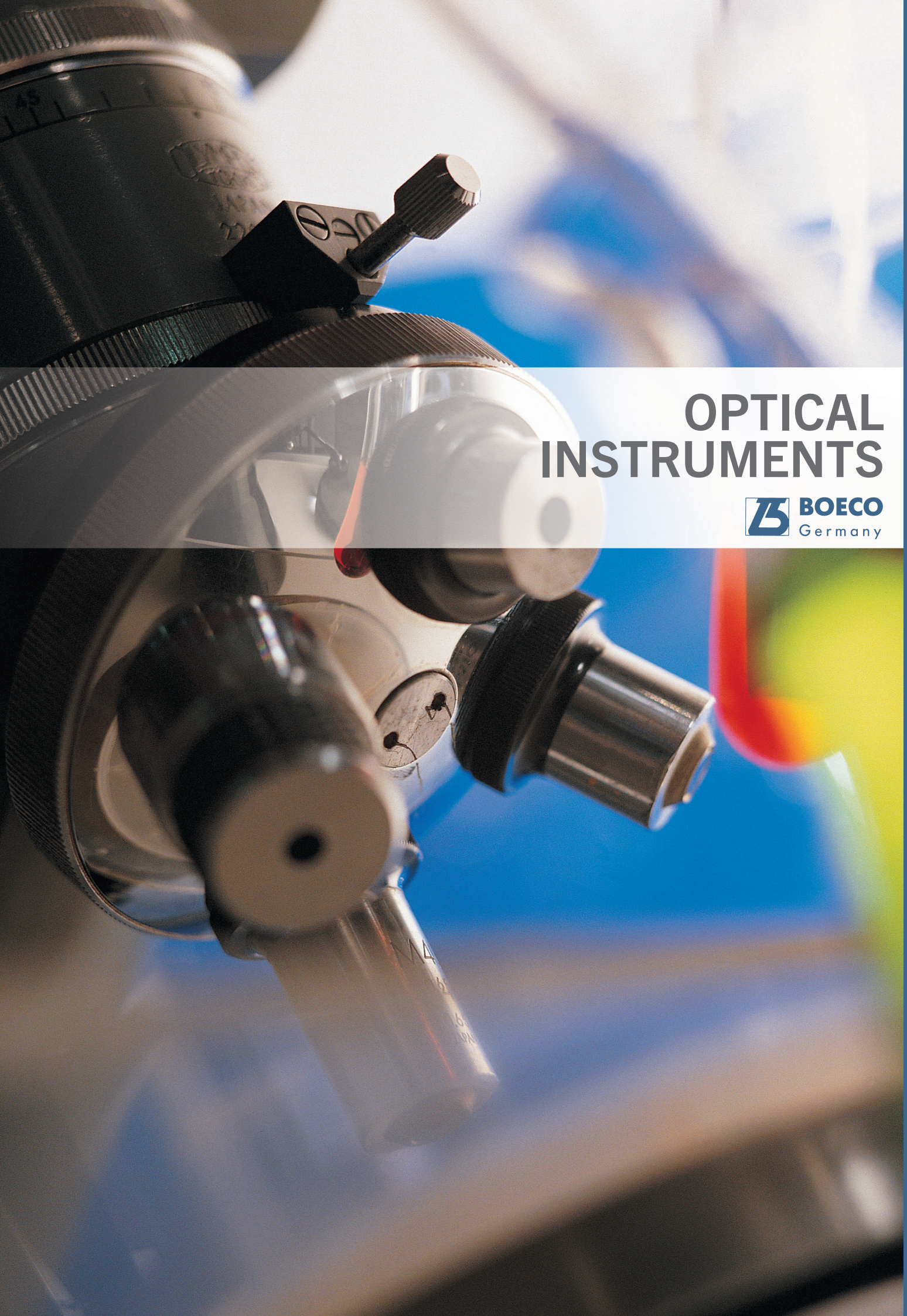


Angle rotor,
Cat. No. 01553
30-place,
incl. bioseal lid, phenol resistant
n= 14,150 min^{-1}
max RCF 21,713

capacity in ml	1.5	0.5/0.8	0,2 /0.4	2.0
dimensions Ø x L mm	11x38	8x30/45	6x18/45	11x38
incl. bioseal lid n=14,150 min^{-1} Cat.-No. 01553	with high speeds we recommend to use adapter No. 02031			
Cat.-No.	–	02023	02024	–
tubes per rotor	30			
RCF	21,713			
radius in mm	97			
run-up in sec	35			
run-down in sec.[2]	32			
temperature °C [1]	-1			

Cyto rotors, suitable for U-320 and U-320R are availble.
More informations are available in a detailed cyto brochure.





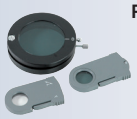
OPTICAL INSTRUMENTS

BOECO Germany

BIOLOGICAL MICROSCOPES



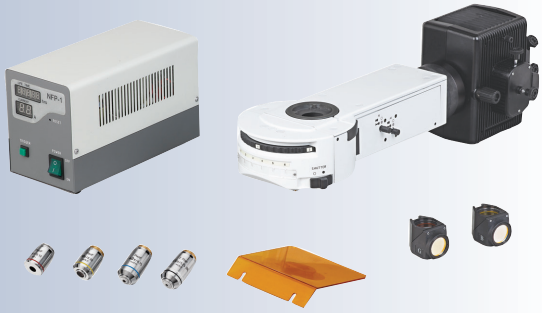




POLARISATION SET



PHASE CONTRAST KIT



EPI-FLUORESCENT ATTACHMENT

BOECO LABORATORY BINOCULAR MICROSCOPE MODEL BM-800

Specification BM-800:

Optical System:	Infinite corrected system, field diameter 22 mm
Viewing Head:	Bin- or Trinocular compensation free head, 30° inclined, 360° rotatable, Interpupillary distance 48 - 75 mm
Nosepiece:	Backward quintuple revolving nosepiece
Eyepiece:	Larger viewing area with extra wide field eyepiece EW 10X /22 mm
Objectives:	BOECO Infinite corrected Plan Achromat Objectives 4x/0.10, 10x/0.25, 40x/0.65 (S), 100x/1.25 (S) (Oil)
Stage:	Large sized double layer mechanical specimen stage 185 x 142 mm, Moving range 75 x 55 mm
Focusing:	Coaxial coarse and calibrated fine focus control, fine division 0,001 mm, Coarse stroke 37,7mm/rotation fine stroke 0,1mm/rotation, mowing Range 24 mm safety autofocus stop unit.
Condenser:	Swing condenser, N.A. 0,9/0,25
Field diaphragm:	With aspherical condenser and Köhler illumination
Illumination:	5W LED illumination, brightness adjustable
Body / power:	Modern and ergonomic body made from die-cast aluminium with inbuilt power supply 110-240 V, 50/60 Hz
Supplied with:	Dust cover, immersion oil, green filter and instruction manual
Dimensions:	280 x 358 x 304/416 mm, net weight 9,3 / 9,9 kg

Code	Description	Head	Plug
BOE 8000.550	BM-800/I/PL	Binocular	Euro
BOE 8000.551	BM-800/I/PL	Binocular	US
BOE 8000.560	BM-800/T/I/PL	Trinocular	Euro
BOE 8000.561	BM-800/T/I/PL	Trinocular	US

Accessories

Code	Description
BOE 8000.301	EW eyepiece 10x/22mm
BOE 8000.302	EW eyepiece 10x/22mm with pointer
BOE 8000.303	EW eyepiece 10x/22mm with micrometer
BOE 8000.552	BOECO Infinite E Plan Achrom. Objective 4x
BOE 8000.553	BOECO Infinite E Plan Achrom. Objective 10x
BOE 8000.559	BOECO Infinite E Plan Achrom. Objective 20x
BOE 8000.554	BOECO Infinite E Plan Achrom. Objective 40x (S)
BOE 8000.555	BOECO Infinite E Plan Achrom. Objective 100x (S) (Oil)
BOE 8000.305	Dark Field Condenser (Dry) NA 0,7-0,9
BOE 8000.306	Dark Field Condenser (Oil) NA 1,25-1,36
BOE 1800.419	Objective 100x plan-achrom. for Dark field cond. (Oil)
BOE 8000.325	Simple Polarization set
BOE 8000.802	1x Video Attachment with C mount
BOE 8000.903	Turret Annular Phase Contrast Kit, consisting of: Phase Contrast Infinity Plan-achromatic Objectives 10x,20x(S), 40x(S), 100x(S)(Oil), Turret Annular Phase, Contrast Condenser, Centering Telescope, Green Filter
BOE 8000.906	Epi-Fluorescent Attachment B (Blue) BP460-495, G (Green) BP 510-550 Excitation Light Filter system, O Ordinary Light System, 100WHBO Ultra Hi-voltage Spherical Mercury Lamp, Barrier to resist the Ultraviolet light, Power Supply with Digital Display, AC Input 100-240 V
BOE 8000.923	Infinite Plan Fluorescence Free Obj. 4x
BOE 8000.924	Infinite Plan Fluorescence Free Obj. 10x
BOE 8000.925	Infinite Plan Fluorescence Free Obj. 20x
BOE 8000.926	Infinite Plan Fluorescence Free Obj. 40x
BOE 8000.927	Infinite Plan Fluorescence Free Obj. 100x
BOE 8000.908	U (ultraviolet) BP330-385 Excitation light filter system
BOE 8000.909	V (violet) BP400-410 Excitation light filter system

BOECO INVERTED BIOLOGICAL MICROSCOPE MODEL BIB-100



Specification BIB-100:

Optical System:	Infinite corrected system, field diameter 22 mm
Viewing Head:	Bin- or Trinocular Head, 30° inclined, 360° rotatable, Interpupillary Distance 48 - 75 mm
Nosepiece:	Quintuple revolving nosepiece
Eyepiece:	High-point, Extra Wide Field Eyepiece EW 10x /22 mm
Objectives:	LWD Infinite corrected Plan Achromat Objective 4x/0,1 WD 28 mm LWD Infinite corrected Plan Achromat Objective 40x/0,6 WD 2.1 mm Infinite corrected Plan Achromat Phase Objective 10x/0,25 WD 10 mm Infinite corrected Plan Achromat Phase Objective 20x/0,4 WD 5.1 mm
Condenser:	ELWD condenser N.A. 0,3. LWD 72 mm (without condenser 150 mm)
Centering	Centering Telescope 30 mm diam. Telescope Phase Annulus 10x - 20x Phase Annulus Plate
Stage:	Plain Stage 160 x 250 mm, Glass Insert Auxiliary Stage 70 x 180 mm Attachable Mechanical Ruler
Focusing:	Coaxial coarse and fine adjustment. Vertical objective movement, Coarse stroke 37.7 mm per rotation, Fine Stroke: 0,2 mm per rotation
Filter:	Diameter 45 mm, blue, green and ground glass
Illumination:	3W LED lamp, brightness adjustable
Body:	Innovative stand structure
Power:	Inbuilt power supply 100-240 V, 50/60 Hz
Weight:	Net weight 10,0 / 10,5 kg

Supplied with: Dust cover, immersion oil and instruction manual

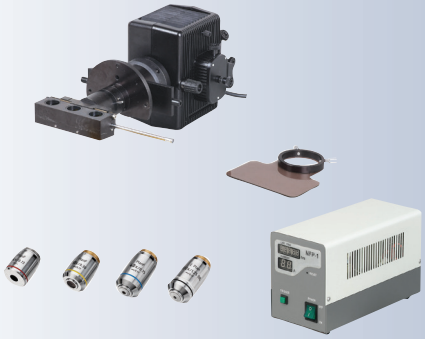
Code	Description	Head	Plug
BOE 5000.900	BIB-100	Binocular	Euro
BOE 5000.901	BIB-100	Binocular	US
BOE 5000.930	BIB-100/T	Trinocular	Euro
BOE 5000.931	BIB-100/T	Trinocular	US

HOLDERS



Optional Accessories

Code	Description
BOE 5000.220	Terasaki Holder
BOE 5000.221	35 mm diam. Petri dish holder
BOE 5000.222	54 mm diam. Slide glass holder
BOE 5000.906	Inverted Fluorescent Attachment for BIB-100, without objectives







BOECO BINOCULAR MICROSCOPE MODEL BM-700

Our advanced biological Microscope for educational, teaching, life science and clinical applications. The Anti-Fungus treatment protects the optical system, objectives and eyepieces in high-humidity environments. The new designed F=200 mm Infinite Plan achromatic objectives provide a fully corrected image for clear visual and digital results.

Specification BM-700:

Optical system:	Siedentopf Binocular Head, 30° inclined, 360° rotatable, with high quality infinite optical system
Nosepiece:	Backward quadruple revolving nosepiece
Eyepiece:	Pair Eyepiece WF 10X /20 mm, diopter adjustable, with anti fungus treatment, Interpupillary Distance 50-75 mm
Objectives:	BOECO Anti Fungus Infinite Plan Achromat Objectives 4x, 10x, 40x, 100x (S, Oil)
Stage:	Double layer mechanical specimen stage 216 x 150 mm moving range 78 x 54 mm, Right hand stage handle
Focusing:	Low position, coaxial coarse and calibrated fine focus control, with graduation reading 2 microns per division. Total focusing range 24 mm, Safety stop unit
Condenser:	Sliding-in centerable Abbe Bright field condenser, N.A. 1,25, Integrated Iris diaphragm and filter tray
Illumination:	3W LED lamp, Koehler illumination, brightness adjustable
Body /power:	Sturdy body with supportive rubber and inbuilt power supply 100 - 240 V, 50/60 Hz
Supplied with:	Dust cover, green filter, immersion oil and instruction manual
Dimensions:	204 x 376 x 406 mm
Weight:	Net weight 6,4 / 7,2 kg
Packing:	Styrofoam shelve in a cardboard box



BACK HANDLE / POWER CORD WRAP



ANTI FUNGUS TREATED OBJECTIVES



KOEHLER ILLUMINATION / SLIDING-IN ABBE BRIGHT FIELD CONDENSER



BIG RACKLESS MECHANICAL STAGE WITH ANTI SCRATCH GRAPHITE TREATMENT

Code	Description	Head	Plug
BOE 7000.570	BM-700/I/PL	Binocular	Euro
BOE 7000.571	BM-700/I/PL	Binocular	US
BOE 7000.580	BM-700/T/I/PL	Trinocular	Euro
BOE 7000.581	BM-700/T/I/PL	Trinocular	US



Objectives for BM-700

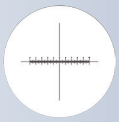
Code	Description
BOE 7000.552	BOECO Infinite Plan Achromatic AF Obj. 4x
BOE 7000.553	BOECO Infinite Plan Achromatic AF Obj. 10x
BOE 7000.559	BOECO Infinite Plan Achromatic AF Obj. 20x
BOE 7000.554	BOECO Infinite Plan Achromatic AF Obj. 40x (S)
BOE 7000.555	BOECO Infinite Plan Achromatic AF Obj. 100x (S) (Oil)

Accessories for BM-700

Code	Description
BOE 7000.303	WF eyepiece 10x/20mm with Micrometer
BOE 7000.302	WF eyepiece 10x/20mm with Pointer
BOE 7000.307	WF eyepiece 10x/22mm
BOE 7000.304	Eyepiece 15x/16mm
BOE 7000.305	Dark Field Condenser (Dry) NA 0,7-0,9
BOE 7000.306	Dark Field Condenser (Oil) NA 1,36-1,25
BOE 7000.325	Polarisation attachment
BOE 7000.903	Phase Contrast kit, dial type. Consisting of Phase Contrast Infinite Plan-achromatic Objectives 10x, 40x, 100x(S)(Oil), Turret Annular Phase Contrast Condenser, Green Filter
BOE 7000.906	Epi-Fluorescent attachment, power supply, mercury lamp, blue and green filter
BOE 7000.907	Epi-Fluorescent attachment FL-LED, with B excitation filter (465-475 nm blue) and LED lamp



EYEPIECE WITH POINTER



EYEPIECE WITH MICROMETER





DARK FIELD CONDENSER DRY AND OIL TYPE



POLARIZATION ATTACHMENT



PHASE CONTRAST CONDENSER (DIAL)



BM-700 WITH FL-LED

BOECO BINOCULAR MICROSCOPE MODEL BM-250/I/SP

Specification BM-250/I/SP:

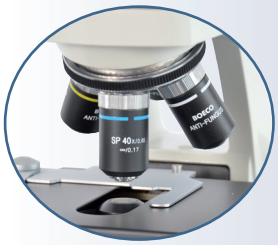
Optical System:	Siedentopf Viewing Head, 30° inclined, 360° rotatable, with Infinite corrected optical system. Interpupillary Distance 47 - 78 mm, diopter adjustable (left side)
Nosepiece:	Backward quadruple revolving nosepiece
Eyepiece:	Pair Eyepiece WF 10x /20 mm Wide field
Objectives:	BOECO Anti Fungus Infinite Semi-plan Achromat Objectives F=180 mm: 4x, 10x, 40x (S), 100x (S) (Oil)
Stage:	Rackless Double layer mechanical specimen stage 150 x 139 mm, moving range 75 x 52 mm, Right hand stage handle
Focusing:	Low position, coaxial coarse and calibrated fine focus control, with graduation reading 2 microns per division. Total focusing range 25 mm, Safety stop unit.
Condenser:	Abbe Bright field condenser, N.A. 1,25, Integrated Iris diaphragm and filter tray with rack & pinion height adjustment
Illumination:	S-LED, brightness adjustable
Body / power:	Sturdy body with supportive rubber and inbuilt power supply, 100-240 V, 50/60 Hz
Supplied with:	Dust cover, green filter, immersion oil, instruction manual
Dimensions:	208(W) x 266(D) x 370(H) mm
Weight:	Net weight 6,9 / 7,3 kg
Packing:	Styrofoam shelve in a cardboard box

Code	Description	Head	Plug
BOE 2500.200	Model BM-250/I/SP	Binocular	Euro
BOE 2500.201	Model BM-250/I/SP	Binocular	US
BOE 2500.230	Model BM-250/T/I/SP	Trinocular	Euro
BOE 2500.231	Model BM-250/T/I/SP	Trinocular	US
BOE 3000.512	BOECO Infinite Semi-Plan Achromatic AF Obj. 4x		
BOE 3000.514	BOECO Infinite Semi-Plan Achromatic AF Obj. 10x		
BOE 3000.516	BOECO Infinite Semi-Plan Achromatic AF Obj. 40x(S)		
BOE 3000.517	BOECO Infinite Semi-Plan Achromatic AF Obj. 100x (S) (Oil)		



EW 10X/20MM EYEPIECES





ANTI FUNGUS TREATED OBJECTIVES



RACKLESS MECHANICAL STAGE



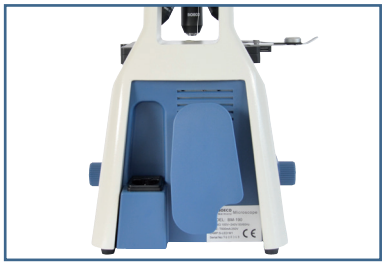
BOECO BINOCULAR MICROSCOPE MODEL BM-190 SP

Specification BM-190/SP:

Magnification:	40X- 100x
Optical system:	Siedentopf Viewing Head, 30° inclined, 360° rotatable, Interpupillary Distance 47 - 78 mm, diopter adjustable (left)
Nosepiece:	Backward quadruple revolving nosepiece
Eyepiece:	Pair Eyepiece WF 10x /18 mm Widefield
Objectives:	BOECO Semi-plan Achromat DIN Objectives 4x/0.10, 10x/0.25, 40x/0.65 (S), 100x/1.25 (S) (Oil)
Stage:	Double layer mechanical specimen stage. 140 x 140 mm moving range 75 x 50 mm, Right hand stage handle
Focusing:	Low position, coaxial coarse and calibrated fine focus control, with graduation reading 2 microns per division. Total focusing range 25 mm, Safety stop unit.
Condenser:	Abbè Brightfield condenser, N.A. 1,25, Integrated Iris diaphragm and filter tray. With rack & pinion height adjustment
Illumination:	S-LED, brightness adjustable.
Body / power:	Sturdy body with supportive rubber and inbuilt power supply 100-240 V, 50/60 Hz
Supplied with:	Dust cover, green filter, immersion oil, instruction manual
Dimensions:	208(W) x 266(D) x 370(H) mm
Weight:	Net weight 6,9 / 7,2 kg
Packing:	Styrofoam shelve in a cardboard box



TRINOCULAR MODEL BM-190/T/SP



POWER CORD WRAP IN THE BACK

Code	Description	Head	Plug
BOE 1900.200	BM-190/SP	Binocular	Euro
BOE 1900.201	BM-190/SP	Binocular	US
BOE 1900.230	BM-190/T/SP	Trinocular	Euro
BOE 1900.231	BM-190/T/SP	Trinocular	US

Objectives for BM-190/SP, BM-180/SP



Code	Description
BOE 1800.413	BOECO Black Semi-Plan Achromat DIN Obj. 4x
BOE 1800.414	BOECO Black Semi-Plan Achromat DIN Obj. 10x
BOE 1800.418	BOECO Black Semi-Plan Achromat DIN Obj. 20x
BOE 1800.415	BOECO Black Semi-Plan Achromat DIN Obj. 40x (S)
BOE 1800.416	BOECO Black Semi-Plan Achromat DIN Obj. 100x (S)(Oil)

Eyepieces for BM-190, BM-180, BM-120, BM-117, N-10

Code	Description
BOE 1800.301	Wide Field Eyepiece WF 10x, pc.
BOE 1800.302	Wide Field Eyepiece WF 10x with Pointer, pc.
BOE 1800.303	Wide Field Eyepiece WF 10x with 0,1 Micrometer, pc.
BOE 1800.304	Eyepiece P 16x, pc.

Dark Field Condensers for BM-180/SP, BM-190/SP

Code	Description
BOE 1800.305	Dark Field Condenser (Dry) NA 0-7-0,9
BOE 1800.306	Dark Field Condenser (Oil) NA 1,25-1,36
BOE 1800.412	Achromatic Objective 100x for Dark Field (Oil) with cone diaphragm
BOE 1800.417	Plan-Achromatic Objective 100x for Dark Field (Oil) with Iris Diaphragm



BOE 1800.305



BOE 1800.306

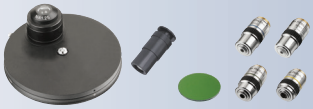
Phase Contrast Kits for BM-180/SP, BM-190/SP

Code	Description
BOE 1800.902	Annular Phase Contrast Kit, consisting of: Simple Phase Contrast Achromatic Objectives & Diaphragms PH10x, PH40x & PH100x, Centering Telescope
BOE 1800.903	Turret Annular Phase Contrast Kit, consisting of: Phase Contrast Plan-achromatic Objectives 10X, 20x(S), 40x(S), 100x(S)(Oil), Turret Annular Phase Contrast Condenser, Centering Telescope, Green Filter
BOE 1800.904	Sliding Phase Contrast Kit, consisting of: Sliding Phase Contrast Condenser, Green Filter Plan achromatic Phase Contrast Objectives PH10x, PH40x, Centering Telescope



BOE 1800.902

BOE 1800.903





BOE 1800.904

Epi-Fluorescent Attachments for BM-180/SP, BM-190/SP

Code	Description
BOE 1800.906	Epi-Fluorescent attachment complete set B (Blue), G (Green) Excitation Light Filter system, O Ordinary Light System, 100WHBO Ultra Hi-voltage Spherical Mercury Lamp, Barrier to resist the Ultraviolet light, Power Supply with Digital Display, AC Input 100-240 V, Fluorescenct Free Objective 4x, 10x, 40x (S), 100x (S)(Oil), Fluorescent Free Oil
BOE 1800.908	U (ultraviolet) Excitation light filter system
BOE 1800.909	V (violet) Excitation light filter system



BOECO ROUTINE BINOCULAR MICROSCOPE MODEL BM-120

Magnification:	40x- 100x
Optical System:	Compensation Free Binocular Head, 30° inclined, 360° rotatable, Interpupillary Distance 55 - 75 mm
Nosepiece:	Quadruple revolving nosepiece
Eyepiece:	Pair Eyepiece WF 10x /18 mm Wide field
Objectives:	BOECO Achromat DIN Objectives 4x/0.10, 10x/0.25, 40x/0.65 (S), 100x/1.25 (S) (Oil)
Stage:	Double layer mechanical specimen stage 140 x 140 mm moving rane 75 x 50 mm,
Focusing:	Coaxial coarse and Fine Focus Adjustment, Range 20 mm fine Division 2 microns, safety stop unit
Condenser:	Abbe Brightfield condenser, N.A. 1,25, Integrated iris diaphragm and filter tray with rack & pinion height adjustment
Illumination:	S-LED, brightness adjustable
Body /power:	Sturdy body with supportive rubber and inbuilt power supply 100-240 V, 50/60 Hz
Supplied with:	Dust cover, green filter, immersion oil and instruction manual
Dimensions:	196 x 344 x 349 mm, net weight 5,6 kg

Code	Description	Head	Plug
BOE 1200.100	Model BM-120	Binocular	Euro
BOE 1200.101	Model BM-120	Binocular	US
BOE 1200.005	Mirror attachment for BM-120		





OPTIONAL MIRROR-ATTACHMENT

STUDENT MICROSCOPES





BOECO STUDENT MICROSCOPES MODEL BM-117

Optical System:	Binocular or Monocular Head, 30° inclined, 360° rotatable, interpupillary distance 48 - 75 mm
Nosepiece:	Backward quadruple revolving nosepiece
Eyepiece:	Wide field Eyepiece WF 10x /18 mm
Objectives:	Achromatic DIN Objectives 4x/0.10, 10x/0.25, 40x/0.65 (S), 100x/1.25, (Oil)(S)
Stage:	Double Layers mechanical stage 132 x 142 mm moving range 75 x 40 mm
Focusing:	Coaxial Coarse & Fine Adjustment System Range 24 mm, Fine Division 0,004 mm
Condenser:	Abbe Condenser, N.A. 1,2, with iris diaphragm and filter
Illumination:	S-LED, light brightness adjustable
Body / power:	Sturdy body with supportive rubber and inbuilt power supply 110-240 V, 50/60 Hz
Supplied with:	Dust cover, green filter, spare fuses, Immersion oil
Dimensions:	170 x 310 x 355 mm, netweight 4,4 kg
Packing:	Styrofoam shelve in a cardboard box

Code	Description	Head	Plug
BOE 1170.100	BM-117	Binocular	Euro
BOE 1170.101	BM-117	Binocular	US
BOE 1170.110	BM-117	Monocular	Euro
BOE 1170.111	BM-117	Monocular	US



BOECO STUDENT MONOCULAR MICROSCOPE MODEL BM-1

Specification:

Optical system:	Monocular Head, 30° inclined,
Nosepiece:	Triple revolving nosepiece
Eyepiece:	Pair Eyepiece WF 10x /15 mm, WF 25x/9 mm
Objectives:	Achromatic Objectives 4x/0.10, 10x/0.25, 40x/0.65
Stage:	Plain stage with Slide Clips 95 x 95 mm
Focusing:	Coaxial coarse and Fine Adjustment
Condenser:	N.A. 0.65 with Disc Diaphragm
Illumination:	0,1W LED, Brightness adjustable, + upper USB LED Lamp
Supplied with:	Dust cover, spare fuse, manual
Power:	AC/DC adapter 100-240 V, 50/60 Hz, Output 5 V, 500 mA
Dimensions:	126x186x305 mm, net weight 1,9 kg
Packing:	Styrofoam shelve in a cardboard box

Code	Description	Head	Plug
BOE 1111.010	BM-1	Monocular	EU and US plug

optional

Code	Description
BOE 1111.100	Achromatic Objective 100x



Objectives for BM-120 and BM-117, BM-1

Code	Description
BOE 1800.403	BOECO DIN Achromatic Objective 4x
BOE 1800.402	BOECO DIN Achromatic Objective 10x
BOE 1800.409	BOECO DIN Achromatic Objective 20x
BOE 1800.404	BOECO DIN Achromatic Objective 40x (S)
BOE 1800.406	BOECO DIN Achromatic Objective 100x (S) (Oil)

STEREO MICROSCOPES

BOECO ZOOM STEREO MICROSCOPE MODEL BSZ-405



BSZ-405 TRINOCULAR WITH DIGITAL MICROSCOPE CAMERA B-CAM10

Specification BSZ-405:

Optical system:	Binocular head inclined at 45° Interpupillary Distance 55 - 75 mm Eyepiece dioptric adjustment range ± 5D
Working distance:	97 mm
Field of View:	20,0 to 4.4 mm diam.
Eyepiece:	EWF 10x/20 mm eyepieces
Zoom Optics:	1X to 4,5x , Zoom ratio 1:4,5
Illumination:	2-way illumination LED 1,2W Reflected (upper) illumination LED 0,7W Transmitted (lower) illumination
Stage Plate:	Frosted glass stage plate 90 mm and black/white reversible stage plate
Base:	Stable 262 x 185 mm base, fitted with anti-skid rubber feet. Main Body 360° rotatable
Power:	100-240 V, 50/60 Hz
Dimensions:	185 (W) x 262 (L) x 315 (H) mm, Net weight 4,3 / 4,4 kg

Code	Description	Head	Plug
BOE 4050.000	BSZ-405	Binocular	Euro
BOE 4050.001	BSZ-405	Binocular	US
BOE 4050.300	BSZ-405/T	Trinocular	Euro
BOE 4050.301	BSZ-405/T	Trinocular	US

optional

Code	Description
BOE 3460.020	Wide Field Eyepiece WF 20x/12 with diopter adjustment
BOE 4050.002	Auxiliary Objective 2x, for BSZ-405 and BS-80
BOE 4050.007	Auxiliary Objective 0,75x, for BSZ-405 and BS-80



BOECO ZOOM STEREO MICROSCOPE MODEL BST-606



Specification BST-606:

Optical system:	Binocular head inclined at 45° Interpupillary distance 55 - 75 mm Eyepiece dioptric adjustment range ± 5D
Working distance:	115 mm
Field of View:	28,0 to 4,5 mm diam.
Eyepiece:	EWF 10x/22 mm eyepieces with eyeshadow
Zoom Optics:	0,8x to 5x, Zoom ratio 6,3:1
Illumination:	2-way illumination switch allows upper and lower illumination Transmitted (lower) LED light source Incident (upper) LED light source
Stage Plate:	100 mm ø frosted glass stage plate and black/white reversible stage plate
Base:	Stable 300x225 mm base, fitted with anti-skid rubber feet. Main Body 360° rotatable
Power:	100-240 V, 50/60 Hz
Dimensions:	300 (W) x 225 (L) x 300 (H) mm, Net weight 5,4 kg

Code	Description	Head	Plug
BOE 6060.000	BST-606	Binocular	EURO
BOE 6060.001	BST-606	Binocular	US
BOE 6060.300	BST-606/T	Trinocular	Euro
BOE 6060.301	BST-606/T	Trinocular	US

optional

BOE 3460.020	Wide Field Eyepiece WF 20x/12 w/ diopter adjustment
BOE 6060.002	Auxiliary Objective 2x, for BST-606
BOE 6060.005	Auxiliary Objective 0,5x, for BST-606









Specifications:

Model:	**B-CAM16**	**B-CAM10**	**B-CAM2**	**B-CAM1080PHB**
Code	BOE 1900.16000	BOE 1900.10000	BOE 1900.02000	BOE 1900.05000
Camera	Color CMOS 16 MP	Color CMOS 10 MP	Color CMOS 2 MP	Color CMOS 5 MP
Application software	B-View on disk (12 cm)	B-View on disk (12 cm)	B-View on disk (8 cm)	B-View on disk (12 cm)
Lens adapter	0.50x manual focusable	0.50x manual focusable	N/A	0.50x manual focusable
Eye tube adapter ring	23.2 mm to 30.0mm	23.2 mm to 30.0mm	23.2 mm to 30.0mm	23.2 mm to 30.0mm
Calibration slide 0,01mm	1mm/100 Div.x 0,01mm	1mm/100 Div.x 0,01mm	N/A	1mm/100 Div.x
Spectral Range (IR filter)	380-650nm	380-650nm	380-650nm	380-650nm
Sensor Size (mm)	1/2.33“(6.18x4.67)	1/2.3“(5,98x4.58)	1/3.2“ (4.48x3.36)	1/1.8“ (6.22x3.36)
Pixel Size (µm)	1.335x1.335	1.67x1.67	2.8x2.8	2.4x2.4
FPS/Resolution	16@4632x3488 30@2320x1740 27@1536x1160	7.2@3584x2746 24.5@1792x1372	5@1600x1200 7.5@1280x1024 20@800x600 22@640x480	30@1920x1080 (HDMI) 25@1920x1080 (WIFI)
USB Interface	USB 3.0 (USB 2.0)	USB 3.0 (USB 2.0)	USB 2.0 (USB 3.0)	USB 2.0 (USB 3.0)
Binning	1x1, 2x2, 3x3	1x1, 2x2, 4x4	1x1, 2x2, 3x3	N/A
Exposure Mode	ROI Auto & Manual input	ROI Auto & Manual input	ROI Auto & Manual input	Auto & Manual
Exposure Time	0.2~2000ms	0.1~2000ms	0.244~2000ms	0.122~250ms
White Balance	ROI White Balance/ Manual Temp Tint Adjustment			N/A
Color Rendering Tech:	Ultra FineTM Color Engine			N/A
Recording System	Still Picture and Movie			
Capture/Control API	Native C/C++, C#, DirectShow, Twain and Labview			
PC Requirements:	CPU equal to Intel Core2 2.8GHz or higher, 2GB Ram Memory or more. USB 3.0 High speed port, 17“ Display or larger			

B-View is a professional application software integrated with camera control, image capture & process, image browse, image measurement and analysis

REFRACTOMETER

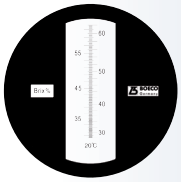
BOECO HAND REFRACTOMETER

Code	Description
BOE 30103	Saccharic Concentration 0-32 % Resolution: 0,2 %



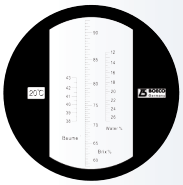


Code	Description
BOE 30104	Saccharic Concentration 28-62 % Resolution: 0,2 %



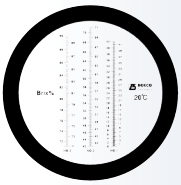


Code	Description
BOE 30106	Saccharic Concentration 58-90% 58-90% Brix, 38°-43°Be', 17-27% water Resolution: 0,5 % Brix, 0,5° Be', 1% water (Sugar content, Baume and Water content)





Code	Description
BOE 30107	Saccharic Concentration 0-90 % (3 ranges) 0-42%, 42-71%, 71-90% Resolution: 0,2 %





Code	Description
BOE 30202	Salinity 0-28 % Resolution: 0,2 %





Code	Description
BOE 30301	Protein in Serum 0-12g/dl / 0,2 g/dl Urine Gravity 1.000-1.040 sg / 0,002 sg





DIGITAL HAND REFRACTOMETER

with Automatic Temperature Compensation (ATC), large backlit color tdt display, multi-scale, dual temperature conversion
Dimensions: 145x67x38 mm, batteries included (AAA, 2 pcs.)

Code	Description
BOE 32345	Range: 0-45 % Brix Resolution: 0,1% Accuracy: ± 0,2 % Refractiv Index: 1.3330 - 1.4098 Resolution: 0,0001 Accuracy: ± 0,0003
BOE 32395	Range: 0-95 % Brix Resolution: 0,1% Accuracy: ± 0,5 % Refractiv Index: 1.3330 - 1.5400 Resolution: 0,0001 Accuracy: ± 0,0005







BOECO ABBE REFRACTOMETER

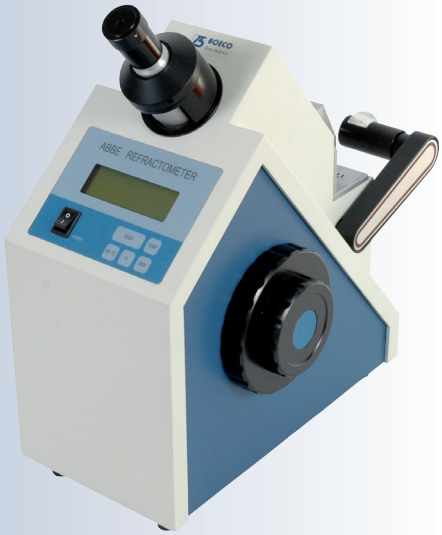
complete with: 1 x set special thermometer (with protective shield) 1 pc. Standard Specimen, 1 x screw driver, 1 x instruction manual., 1 x button cell

Specification:

Measuring range of ND:	1.3000-1.7000
Measuring accuracy of ND (room temperature):	± 0.0002
Minimum scale value for ND:	0.0005
Minimum scale value for the concentration: of sugar content (%)	0.25
Measuring range of the concentration: of sugar content (%)	0-95
Magnification of telescopic system:	2x
Magnification of reading system:	30x
Weight of the instrument (kg):	2,6
Dimensions (mm):	100 x 200 x 240

Code	Description
BOE 32200	ABBE Refractometer, with aluminium carrying case





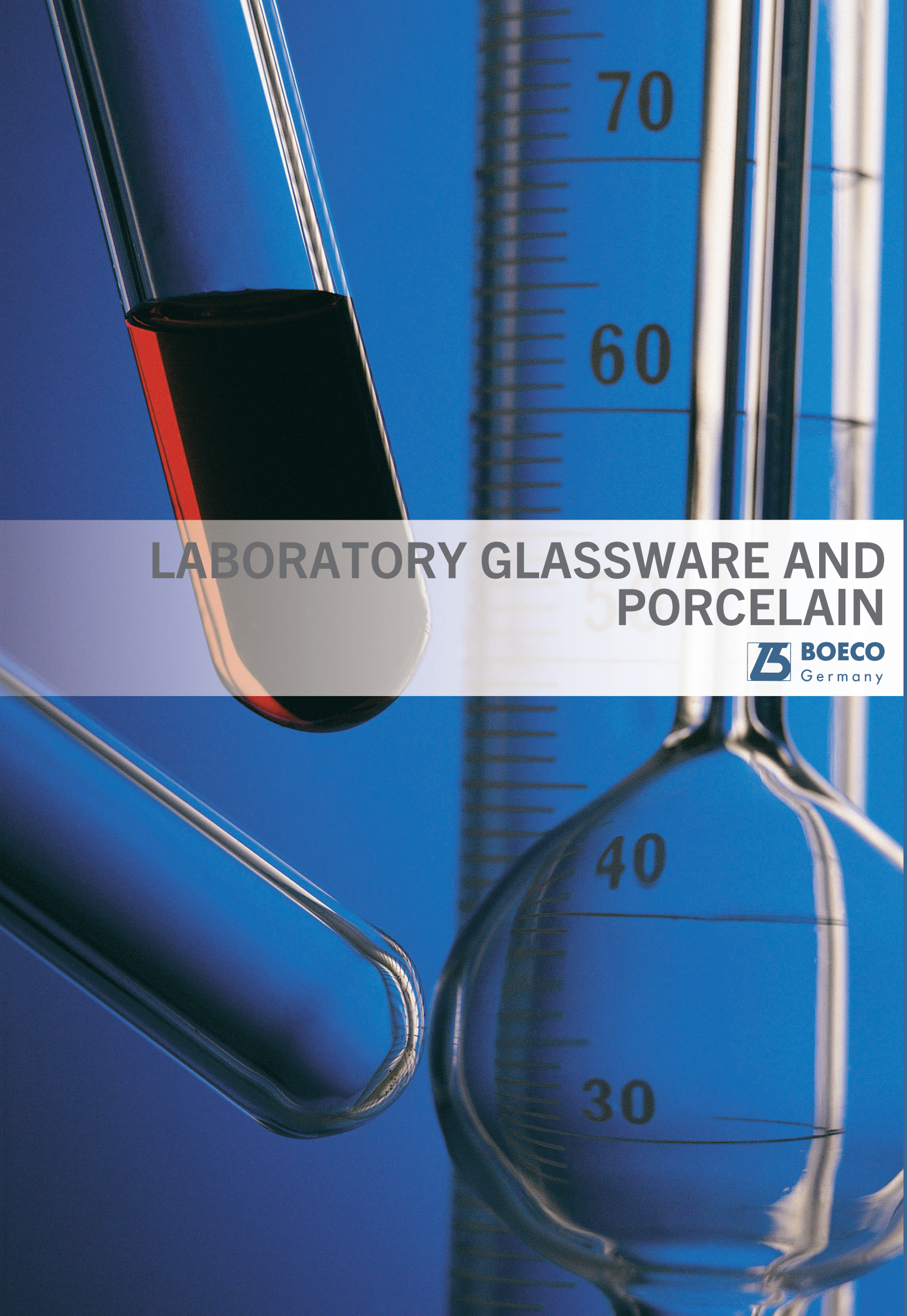
BOECO DIGITAL ABBE REFRACTOMETER

This instrument can widely be used in petroleum, chemical, pharmaceutical, sugar refining and food industries, as well as in related colleges, universities and scientific research institutions for measuring the refractive index ND of transparent or subtransparent liquid or solid substance. This instrument can also be used to measure Brix (BX) of the sugar solution and to correct the affect of temperature on the Brix automatically.
In addition the instrument can display the temperature of the sample.
Complete with: 1 x standard sample (standard block), 1 x inner - hexagon spanner, 3 x Illuminating Bulb, 1 x Plastic Cover Hood, 3 x fuses, 1 x instruction manual

Specification:

Measuring range	
Refractive index ND:	1.3000-1.7000
Brix BX - TC:	0-95 %
Brix BX:	0-95 %
Measuring accuracy	
Refractive index ND:	± 0.0002
Brix BX - TC:	± 0.1 %
Brix BX:	± 0.1 %
Temperature	
Temperature displaying range:	0-50°C
Correcting range of BX versus temperature:	15-45°C
Weight (kg):	12,0
Dimensions (mm):	330 x 180 x 380

Code	Description
BOE 32400	Digital ABBE Refractometer, 220 V with aluminium carrying case
BOE 32401	Digital ABBE Refractometer, 110 V with aluminium carrying case



LABORATORY GLASSWARE AND PORCELAIN

BOECO
Germany

BOECO GLASSWARE



LABORATORY BOTTLES

"BOECO GERMANY" boro 3.3., graduated. Acc. to ISO 4796-1,
Complete with **blue** screw cap and pouring ring of PP
Resistant to steam sterilization up to 140 °C, Retrace code

Capacity	GL	Code	Pack of
50 ml	32	BOE 5080175	10
100 ml	45	BOE 5080245	10
250 ml	45	BOE 5080365	10
500 ml	45	BOE 5080445	10
1000 ml	45	BOE 5080545	10
2000 ml	45	BOE 5080635	10
5000 ml	45	BOE 5080735	6
10000 ml	45	BOE 5080865	1
20000 ml	45	BOE 5080915	1



LABORATORY BOTTLES

"BOECO GERMANY" boro 3.3., graduated. Acc. to ISO 4796-1,
Complete with **red** screw cap (PBTB), PTFE protected seal and pouring ring of ETFE. Resistant to steam sterilization up to 200 °C, Retrace code

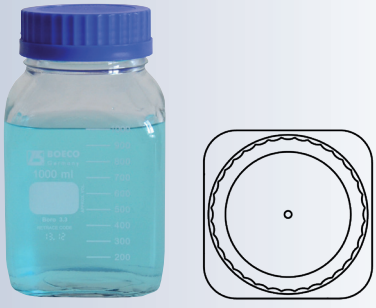
Capacity	GL	Code	Pack of
100 ml	45	BOE 5080241	10
250 ml	45	BOE 5080361	10
500 ml	45	BOE 5080441	10
1000 ml	45	BOE 5080541	10
2000 ml	45	BOE 5080631	10
5000 ml	45	BOE 5080731	6
10000 ml	45	BOE 5080861	1
20000 ml	45	BOE 5080911	1



LABORATORY BOTTLES

"BOECO GERMANY" boro 3.3., amber, graduated. Acc. to ISO 4796-1,
Complete with **blue** screw cap and pouring ring of PP.
Resistant to steam sterilization up to 140 °C, Retrace code

Capacity	GL	Code	Pack of
50 ml	32	BOE 5086175	10
100 ml	45	BOE 5086245	10
250 ml	45	BOE 5086365	10
500 ml	45	BOE 5086445	10
1000 ml	45	BOE 5086545	10
2000 ml	45	BOE 5086635	10
5000 ml	45	BOE 5086735	6
10000 ml	45	BOE 5086865	1
20000 ml	45	BOE 5086915	1



LABORATORY BOTTLES, WIDE NECK

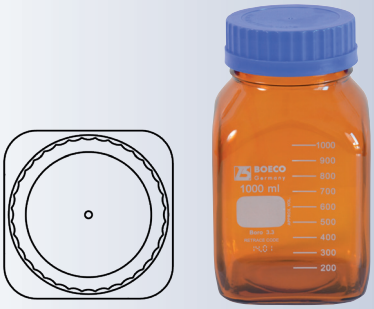
"BOECO GERMANY" boro 3.3., graduated, square.
Complete with **blue** GL 80 screw cap and pouring ring of PP.
Resistant to steam sterilization up to 140 °C, Retrace code

Capacity	GL	Code	Pack of
500 ml	80	BOE 5098445	10
1000 ml	80	BOE 5098545	10
2000 ml	80	BOE 5098635	10
5000 ml	80	BOE 5098735	6

LABORATORY BOTTLES, WIDE NECK

"BOECO GERMANY" boro 3.3., amber, graduated, square, Retrace code
Complete with **blue** GL 80 screw cap and pouring ring of PP.
Resistant to steam sterilization up to 140 °C

Capacity	GL	Code	Pack of
500 ml	80	BOE 5096445	10
1000 ml	80	BOE 5096545	10
2000 ml	80	BOE 5096635	10
5000 ml	80	BOE 5096735	6



SCREW CAPS

GL	Color, material	Heat resistant	Code	Pack of
32	Blue, PP	up to 140°C	BOE 5923919	10
45	Blue, PP	up to 140°C	BOE 5923928	10
45	Red, PBTB	up to 200°C	BOE 5924028	10
80	Blue, PP	up to 140°C	BOE 5923916	10



POURING/OUTLET RINGS,

GL	Color, material	Heat resistant	Code	Pack of
32	Blue, PP	up to 140°C	BOE 5924219	10
45	Blue, PP	up to 140°C	BOE 5924228	10
45	Red, ETFE	up to 200°C	BOE 5924428	10
80	Blue, PP	up to 140°C	BOE 5924207	10



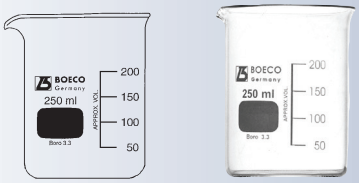
PTFE COATED SILICON GASKET,

Diameter	Heat resistant	Code	Pack of
43 mm	up to 200°C	BOE 9180001239	10

BEAKERS

low form, with lip and graduation, "BOECO Germany", boro 3.3., ISO 3819

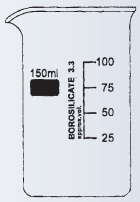
Capacity	Code	Pack of
25 ml	BOE 5010614	10
50 ml	BOE 5010617	10
100 ml	BOE 5010624	10
150 ml	BOE 5010629	10
250 ml	BOE 5010636	10
400 ml	BOE 5010641	10
600 ml	BOE 5010648	10
800 ml	BOE 5010653	10
1000 ml	BOE 5010654	10
2000 ml	BOE 5010663	4
3000 ml	BOE 5010668	4
5000 ml	BOE 5010673	2



BEAKERS

tall form, with lip and graduation, SIMAX, borosilicate glass 3.3., ISO 3819

Capacity	Code	Pack of
50 ml	BOE 5011617	10
100 ml	BOE 5011624	10
150 ml	BOE 5011629	10
250 ml	BOE 5011636	10
400 ml	BOE 5011641	10
600 ml	BOE 5011648	10
800 ml	BOE 5011653	10
1000 ml	BOE 5011654	10
2000 ml	BOE 5011663	6
3000 ml	BOE 5011668	6

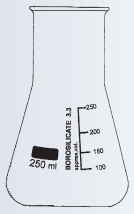




ERLENMEYER FLASKS

narrow neck, flange-edged, graduated, “BOECO Germany” boro 3.3.

Capacity	Code	Pack of
25 ml	BOE 5021614	10
50 ml	BOE 5021617	10
100 ml	BOE 5021624	10
250 ml	BOE 5021636	10
500 ml	BOE 5021644	10
1000 ml	BOE 5021654	10
2000 ml	BOE 5021663	6
3000 ml	BOE 5021668	6
5000 ml	BOE 5021673	2



ERLENMEYER FLASKS

wide neck, flange-edged, graduated, SIMAX borosilicate glass 3.3.
ISO 24450

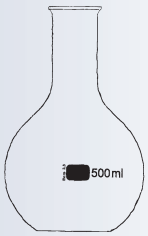
Capacity	Code	Pack of
25 ml	BOE 5022614	10
50 ml	BOE 5022617	10
100 ml	BOE 5022624	10
250 ml	BOE 5022636	10
500 ml	BOE 5022644	10
1000 ml	BOE 5022654	10
2000 ml	BOE 5022663	6



ROUND BOTTOM FLASKS

(Boiling Flasks), “BOECO Germany” borosilicate glass 3.3.

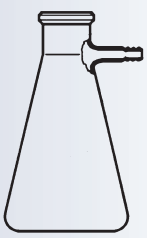
Capacity	Code	Pack of
250 ml	BOE 5072136	10
500 ml	BOE 5072144	10



FLAT BOTTOM FLASKS

narrow neck, with beaded rim, SIMAX borosilicate glass 3.3.

Capacity	Code	Pack of
250 ml	BOE 5071136	10
500 ml	BOE 5071144	10



FILTERING FLASKS

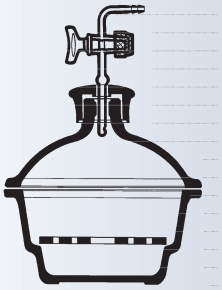
Erlenmeyer shape, SIMAX borosilicate glass 3.3.
with glass hose connection, for vacuum use

Capacity	Code	Pack of
100 ml	BOE 5120124	10
250 ml	BOE 5120136	10
500 ml	BOE 5120144	8
1000 ml	BOE 5120154	8
2000 ml	BOE 5120163	6

DESICCATORS

with plastic knob and stopcock, borosilicate glass 3.3.
without porcelain plate

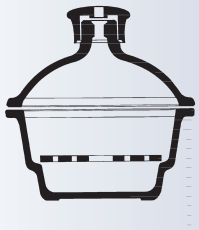
Nom. size	Code	Pack of
100 mm	GLA 415262112	1
150 mm	GLA 415262162	1
200 mm	GLA 415262212	1
250 mm	GLA 415262262	1
300 mm	GLA 415262303	1



DESICCATORS

with plastic knob, borosilicate glass 3.3., without porcelain plate

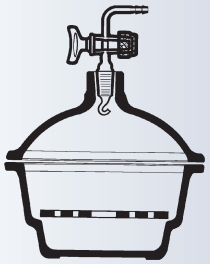
Nom. size	Code	Pack of
100 mm	GLA 415262111	1
150 mm	GLA 415262161	1
200 mm	GLA 415262211	1
250 mm	GLA 415262261	1
300 mm	GLA 415262302	1



DESICCATORS

with outlet tube and stopcock NS 24/29,
borosilicate glass 3.3., without porcelain plate

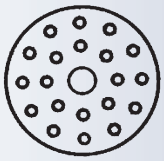
Nom. size	Code	Pack of
100 mm	GLA 415262120	1
150 mm	GLA 415262170	1
200 mm	GLA 415262220	1
250 mm	GLA 415262270	1
300 mm	GLA 415262330	1



DESICCATOR PLATES

porcelain, glazed

Ø	Code	Pack of
90 mm	GLA 9180000358	1
140 mm	GLA 9180000354	1
190 mm	GLA 9180003405	1
240 mm	GLA 9180003398	1
280 mm	GLA 9180003410	1



FUNNELS

60°, short stem, borosilicate glass 3.3.

Ø	Code	Pack of
30 mm	LMS 11241020	10
35 mm	LMS 11241030	10
40 mm	LMS 11241040	10
45 mm	LMS 11241050	10
50 mm	LMS 11241060	10
55 mm	LMS 11241070	10
60 mm	LMS 11241080	10
70 mm	LMS 11241110	10
80 mm	LMS 11241160	10
100 mm	LMS 11241190	10
120 mm	LMS 11241230	10
150 mm	LMS 11241310	10
200 mm	LMS 11241380	5





REAGENT BOTTLES

narrow mouth, round shoulder, with ground-in NS Stopper, sodaglass

Capacity	clear glass	brown glass	Pack of
50 ml	GLA 414102050	GLA 414202050	48
100 ml	GLA 414102100	GLA 414202100	10
250 ml	GLA 414102250	GLA 414202250	10
500 ml	GLA 414102500	GLA 414202500	10
1000 ml	GLA 414102940	GLA 414202940	10
2000 ml	GLA 414102950	GLA 414202950	6



REAGENT BOTTLES

wide mouth, round shoulder, with ground-in NS Stopper, sodaglass

Capacity	clear glass	brown glass	Pack of
50 ml	GLA 414104050	GLA 414204050	40
100 ml	GLA 414104100	GLA 414204100	10
250 ml	GLA 414104250	GLA 414204250	10
500 ml	GLA 414104500	GLA 414204500	10
1000 ml	GLA 414104940	GLA 414204940	10
2000 ml	GLA 414104950	GLA 414204950	6



DROPPING BOTTLES

wide mouth, round shoulder, with ground-in NS Stopper, sodaglass

Capacity	clear glass	brown glass	Pack of
50 ml	GLA 414109050	GLA 414209050	96
100 ml	GLA 414109100	GLA 414209100	10



BOECO PETRI DISHES

Ø x height	Code	pcs./carton
60 x 15 mm	BOE 4006015	144
70 x 15 mm	BOE 4007015	144
80 x 15 mm	BOE 4008015	144
90 x 15 mm	BOE 4009015	72
100 x 10 mm	BOE 4010010	72
100 x 15 mm	BOE 4010015	72
100 x 20 mm	BOE 4010020	72
120 x 20 mm	BOE 4012020	72
150 x 25 mm	BOE 4015025	72
180 x 30 mm	BOE 4018030	6
200 x 30 mm	BOE 4020030	6
200 x 50 mm	BOE 4020050	6



WATCH GLASSES

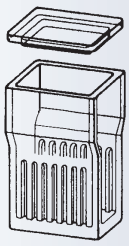
fused edges, acc. to DIN 12341

Ø	Code	pcs./carton
50 mm	BOE 3106050	100
60 mm	BOE 3008060	100
70 mm	BOE 3010070	100
80 mm	BOE 3012080	100
90 mm	BOE 3011090	80
100 mm	BOE 3013100	80
120 mm	BOE 3015120	60
125 mm	BOE 3016125	60
150 mm	BOE 3019150	60
200 mm	BOE 3027200	30

STAINING DISHES

acc. to Hellendahl, with wider upper section,
with cover, for 16 slides 76 x 26 mm, sodaglass

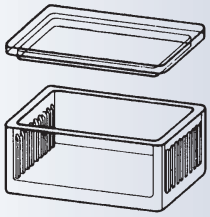
l x w x h	Code	Pack of
60 x 60 x 100 mm	HAV 23253111	10



STAINING DISHES

acc. to Schieferdecker,
with cover, for 10 slides 76 x 26 mm, sodaglass

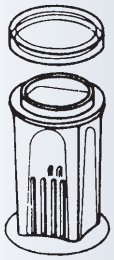
l x w x h	Code	Pack of
90 x 70 x 40 mm	HAV 23253201	10



STAINING JAR

acc. to Coplin, with cover, for 10 slides 76 x 26 mm, sodaglass

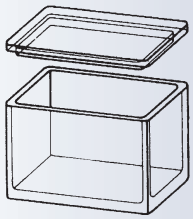
w x h	Code	Pack of
40 / 100 mm	HAV 23253401	10



STAINING GLASS BOX

for staining tray, with cover, sodaglass

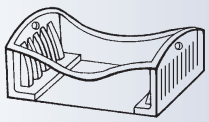
l x w x h	Code	Pack of
108 x 90 x 70 mm	HAV 23253423	10



STAINING TRAY

for 10 slides 76 x 26 mm, sodaglass

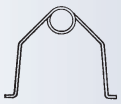
l x w x h	Code	Pack of
88 x 40 x 70 mm	HAV 23253422	10

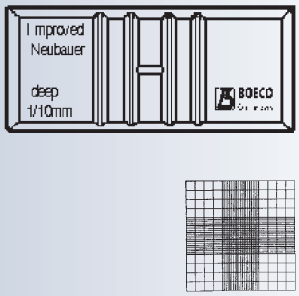


STAINLESS STEEL HANDLE

for staining trays

Code	Pack of
HAV 23253427	10

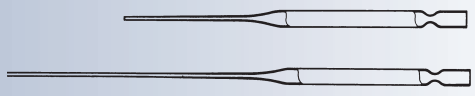




BOECO BLOOD COUNTING CHAMBERS

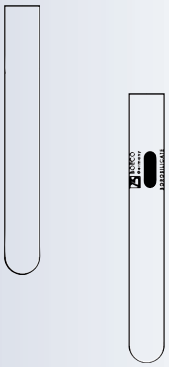
Description	Code	Pack of
Neubauer improved, double ruling without coverglasses	BOE 01	1
Neubauer improved, double ruling with 2 coverglasses	BOE 13	1
Neubauer improved, bright-line double ruling, without coverglasses	BOE 02	1
Neubauer improved, bright-line, double ruling, with 2 coverglasses	BOE 14	1
Neubauer improved, bright-line, double ruling, with **V-slash** with 2 coverglasses	BOE 14V	1

We can also deliver all other types like: Neubauer, Thoma, Thoma new, Bürker, Türk, Nageotte, Fuchs-Rosenthal, Malassez.
As well as complete HAEMACYTOMETER SETS



PASTEUR PIPETTES, SODAGLASS

Description	Code	Pack of
150 mm long	BOE 5010601	4 x 250 pcs.
230 mm long	BOE 5010602	4 x 250 pcs.



TEST TUBES

Round bottom, without rim, borosilicate glass 5.1.

Ø x L mm	Wall thickness	Code	Pack of
12 x 75	0,6 mm	BOE 03.3411.1118	250
13 x 100	0,5-0,6 mm	BOE 03.3411.1019	250
16 x 160	0,6 mm	BOE 03.3411.3020	250

Round bottom, without rim, heavy wall, with printed logo "BOECO GERMANY" and matt label, borosilicate glass 5.1.

Ø x L mm	Wall thickness	Code	Pack of
12 x 75	1,0 mm	BOE 03.3421.1126	250
13 x 100	1,0 mm	BOE 03.3421.1128	250
16 x 160	1,0±0,15 mm	BOE 03.3421.2038	250

TEST TUBES WITH THREAD

without cap, borosilicate glass 5.1.

Ø x L mm	Code	Pack of
13 x 100	BOE 155030	1000
16 x 100	BOE 155060	1000
16 x 125	BOE 155061	1000
16 x 150	BOE 155062	1000
20 x 125	BOE 155000	500
20 x 150	BOE 155001	500



SCREW CAPS, PP, BLACK, FOR TEST TUBES WITH THREAD

for tubes with ø	Code	Pack of
13 mm	BOE 155403	1000
16 mm	BOE 155406	1000
20 mm	BOE 155409	500

VIALS, FLAT BOTTOM, WITH THREAD

without cap, borosilicate glass 5.1.

Ø x L mm	ml	clear glass	amber glass	Pack of
20 x 36	5 ml	BOE 152035	BOE 152035B	225
23 x 38	7,5 ml	BOE 152338	BOE 152338B	180
23 x 48	12 ml	BOE 152348	BOE 152348B	180
23 x 72	20 ml	BOE 152372	BOE 152372B	171



SCREW CAPS, PP, GL 18, BLUE WITH POLYETHYLENE SEALING

for tubes with ø	Code	Pack of
GL 18	BOE 150018	100

GRADUATED PIPETTES

"BOECO GERMANY", total delivery, zero at top, from 5 ml with filter bed, amber graduation, sodaglass, Cl. AS / ISO 835

Capacity	Subdivision	Code	Pack of
0,5 ml	0,01	BOE 5116312	50
1 ml	0,01	BOE 5116314	50
2 ml	0,02	BOE 5116516	50
5 ml	0,05	BOE 5116618	50
5 ml	0,1	BOE 5116718	50
10 ml	0,1	BOE 5116719	50
20 ml	0,1	BOE 5116722	25
25 ml	0,1	BOE 5116723	25
50 ml	0,2	BOE 5116825	5
100 ml	0,2	BOE 5116831	5



VOLUMETRIC PIPETTES

"BOECO GERMANY", with one mark, amber stain graduation, sodaglass, Cl. AS / ISO 648

Capacity	Tolerance +/-ml	Code	Pack of
1 ml	0,008	BOE 5111014	50
2 ml	0,010	BOE 5111016	50
3 ml	0,010	BOE 5111017	50
4 ml	0,015	BOE 5111117	25
5 ml	0,015	BOE 5111018	25
10 ml	0,020	BOE 5111019	25
15 ml	0,030	BOE 5111021	25
20 ml	0,030	BOE 5111022	10
25 ml	0,030	BOE 5111023	10
50 ml	0,050	BOE 5111025	1
100 ml	0,080	BOE 5111030	1
200 ml	0,100	BOE 5111037	1





BURETTES

"BOECO GERMANY" acc. to Mohr, with straight interchangeable glass stopcock borosilicate glass, CL. AS, ISO 385

Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5156619	1
10 ml	0,1	BOE 5156719	1
25 ml	0,05	BOE 5156623	1
25 ml	0,1	BOE 5156723	1
50 ml	0,1	BOE 5156725	1
100 ml	0,2	BOE 5156831	1

SCHELLBACH BURETTES

"BOECO GERMANY" acc. to Mohr, with straight interchangeable glass stopcock borosilicate glass, CL. AS, ISO 385

Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5176619	1
10 ml	0,1	BOE 5176719	1
25 ml	0,05	BOE 5176623	1
25 ml	0,1	BOE 5176723	1
50 ml	0,1	BOE 5176725	1
100 ml	0,2	BOE 5176831	1



BURETTES

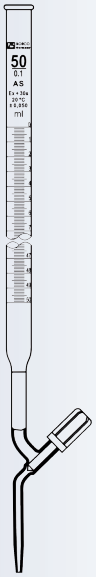
"BOECO GERMANY" acc. to Mohr, with straight PTFE stopcock borosilicate glass, CL. AS, ISO 385

Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5256619	1
10 ml	0,1	BOE 5256719	1
25 ml	0,05	BOE 5256623	1
25 ml	0,1	BOE 5256723	1
50 ml	0,1	BOE 5256725	1
100 ml	0,2	BOE 5256831	1

SCHELLBACH BURETTES

"BOECO GERMANY" acc. to Mohr, with straight PTFE stopcock borosilicate glass, CL. AS, ISO 385

Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5276619	1
10 ml	0,1	BOE 5276719	1
25 ml	0,05	BOE 5276623	1
25 ml	0,1	BOE 5276723	1
50 ml	0,1	BOE 5276725	1
100 ml	0,2	BOE 5276831	1



BURETTES

"BOECO GERMANY" acc. to Mohr, with straight PTFE spindle stopcock borosilicate glass, CL. AS, ISO 385

Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5458619	1
10 ml	0,1	BOE 5458719	1
25 ml	0,05	BOE 5458623	1
25 ml	0,1	BOE 5458723	1
50 ml	0,1	BOE 5458725	1
100 ml	0,2	BOE 5458831	1

SCHELLBACH BURETTES

"BOECO GERMANY" acc. to Mohr, with straight PTFE spindle stopcock stopcock borosilicate glass, CL. AS, ISO 385

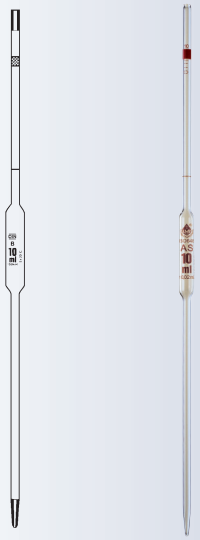
Capacity	Subdiv. ml	Code	Pack of
10 ml	0,05	BOE 5478619	1
10 ml	0,1	BOE 5478719	1
25 ml	0,05	BOE 5478623	1
25 ml	0,1	BOE 5478723	1
50 ml	0,1	BOE 5478725	1
100 ml	0,2	BOE 5478831	1

GRADUATED GLASSWARE

VOLUMETRIC PIPETTES

with one mark, amber stain graduation,
sodaglass, DIN EN ISO 648

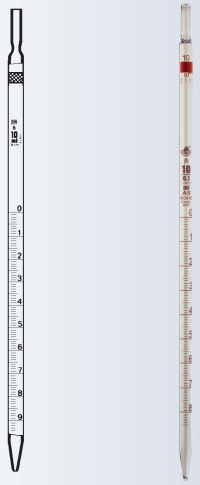
Capacity	Tolerance +/-ml	Cl. B	Cl. AS	Pack of
0,5 ml	0,010/0,005	LMS 63331401	LMS 63331421	50
1 ml	0,015/0,007	LMS 63331402	LMS 63331422	50
2 ml	0,020/0,010	LMS 63331403	LMS 63331423	30
3 ml	0,020/0,015	LMS 63331404	LMS 63331424	30
4 ml	0,030/0,015	LMS 63331405	LMS 63331425	15
5 ml	0,030/0,015	LMS 63331406	LMS 63331426	10
6 ml	0,030/0,020	LMS 63331407	LMS 63331427	10
10 ml	0,040/0,025	LMS 63331408	LMS 63331428	10
15 ml	0,060/0,030	LMS 63331409	LMS 63331429	20
20 ml	0,060/0,030	LMS 63331410	LMS 63331430	20
25 ml	0,060/0,030	LMS 63331411	LMS 63331431	10
30 ml	0,100/0,050	LMS 63331412	LMS 63331432	10
40 ml	0,100/0,050	LMS 63331413	LMS 63331433	10
50 ml	0,100/0,050	LMS 63331414	LMS 63331434	10
100 ml	0,150/0,080	LMS 63331415	LMS 63331435	6



GRADUATED PIPETTES

total delivery, zero at top, from 5 ml with filter bed, amber graduation,
sodaglass, DIN EN ISO 835

Capacity	Subdivision	Cl. B	Cl. AS	Pack of
0,1 ml	0,01	LMS 63336151	LMS 63336161	100
0,2 ml	0,02	LMS 63336152	LMS 63336162	100
0,5 ml	0,01	LMS 63336153	LMS 63336163	100
1 ml	0,01	LMS 63336154	LMS 63336164	100
2 ml	0,02	LMS 63336155	LMS 63336165	100
5 ml	0,05	LMS 63336156	LMS 63336166	100
5 ml	0,1	LMS 63336157	LMS 63336167	100
10 ml	0,1	LMS 63336158	LMS 63336168	100
20 ml	0,1	LMS 63336159	LMS 63336169	100
25 ml	0,1	LMS 63336160	LMS 63336170	100
50 ml	0,2	LMS 63336181	LMS 63336182	100



PYCNOMETER ACC. TO GAY LUSSAC

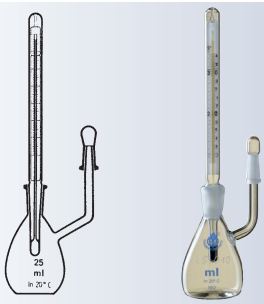
Capacity	uncalibrated	calibrated to Contain (In)	Pack of
1 ml	LMS 61372100	LMS 61372110	2
2 ml	LMS 61372101	LMS 61372111	2
5 ml	LMS 61372102	LMS 61372112	2
10 ml	LMS 61372103	LMS 61372113	2
25 ml	LMS 61372104	LMS 61372114	2
50 ml	LMS 61372105	LMS 61372115	2
100 ml	LMS 61372106	LMS 61372116	2

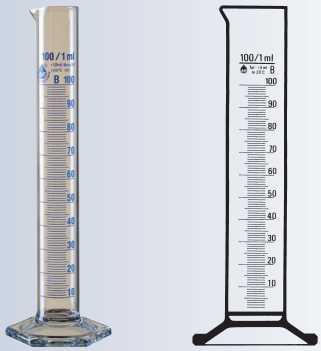


PYCNOMETER

acc. to Gay Lussac with lateral capillary tube and thermometer, calibrated to contain (In)

Capacity	Code	Pack of
10 ml	LMS 61372313	2
25 ml	LMS 61372314	2
50 ml	LMS 61372315	2
100 ml	LMS 61372316	2

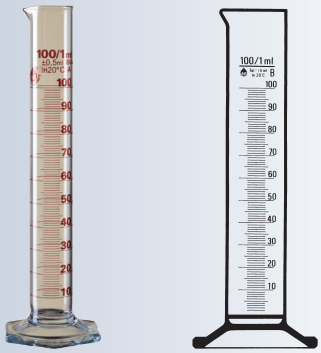




MEASURING CYLINDER

tall form, hexagonal glass base, Cl. B,
borosilicate glass, acc. to DIN EN ISO 4788

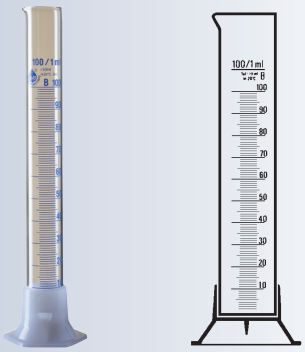
Capacity	Subdiv. ml	blue graduation	amber stain graduation	Pack of
5 ml	0,1	LMS 61321201	LMS 61321231	10
10 ml	0,2	LMS 61321202	LMS 61321232	10
25 ml	0,5	LMS 61321203	LMS 61321233	10
50 ml	1	LMS 61321204	LMS 61321234	10
100 ml	1	LMS 61321205	LMS 61321235	10
250 ml	2	LMS 61321206	LMS 61321236	10
500 ml	5	LMS 61321207	LMS 61321237	10
1000 ml	10	LMS 61321208	LMS 61321238	10
2000 ml	20	LMS 61321209	LMS 61321239	10



MEASURING CYLINDER

tall form, hexagonal glass base, Cl. A,
borosilicate glass, acc. to DIN EN ISO 4788

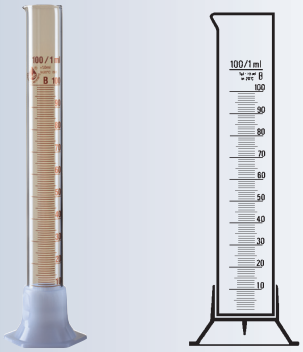
Capacity	Subdiv. ml	blue graduation	amber stain graduation	Pack of
5 ml	0,1	LMS 61321021	LMS 61321031	10
10 ml	0,2	LMS 61321022	LMS 61321032	10
25 ml	0,5	LMS 61321023	LMS 61321033	10
50 ml	1	LMS 61321024	LMS 61321034	10
100 ml	1	LMS 61321025	LMS 61321035	10
250 ml	2	LMS 61321026	LMS 61321036	10
500 ml	5	LMS 61321027	LMS 61321037	10
1000 ml	10	LMS 61321028	LMS 61321038	10
2000 ml	20	LMS 61321029	LMS 61321039	10



MEASURING CYLINDER

tall form, hexagonal plastic base, Cl. B,
sodaglass, acc. to DIN EN ISO 4788

Capacity	Subdiv. ml	blue graduation	amber stain graduation	Pack of
10 ml	0,2	LMS 63321302	LMS 63321332	10
25 ml	0,5	LMS 63321303	LMS 63321333	10
50 ml	1	LMS 63321304	LMS 63321334	10
100 ml	1	LMS 63321305	LMS 63321335	10
250 ml	2	LMS 63321306	LMS 63321336	10
500 ml	5	LMS 63321307	LMS 63321337	10
1000 ml	10	LMS 63321308	LMS 63321338	10
2000 ml	20	LMS 63321309	LMS 63321339	10



MEASURING CYLINDER

tall form, hexagonal plastic base, Cl. A,
sodaglass, acc. to DIN EN ISO 4788

Capacity	Subdiv. ml	blue graduation	amber stain graduation	Pack of
10 ml	0,2	LMS 63321312	LMS 63321322	10
25 ml	0,5	LMS 63321313	LMS 63321323	10
50 ml	1	LMS 63321314	LMS 63321324	10
100 ml	1	LMS 63321315	LMS 63321325	10
250 ml	2	LMS 63321316	LMS 63321326	10
500 ml	5	LMS 63321317	LMS 63321327	10
1000 ml	10	LMS 63321318	LMS 63321328	10
2000 ml	20	LMS 63321319	LMS 63321329	10

MIXING CYLINDER

hexagonal glass base, plastic stopper,
blue graduation, borosilicate glass, acc. to DIN EN ISO 4788

Capacity	Neck size	Cl. B	Cl. A	Pack of
10 ml	NS 10/19	LMS 61322832	LMS 61322822	10
25 ml	NS 14/23	LMS 61322833	LMS 61322823	10
50 ml	NS 19/16	LMS 61322834	LMS 61322824	10
100 ml	NS 24/29	LMS 61322835	LMS 61322825	10
250 ml	NS 29/32	LMS 61322836	LMS 61322826	10
500 ml	NS 34/35	LMS 61322838	LMS 61322828	10
1000 ml	NS 45/40	LMS 61322839	LMS 61322829	10
2000 ml	NS 45/40	LMS 61322840	LMS 61322830	10

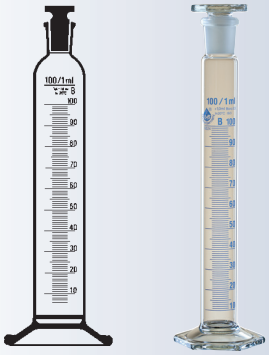


IMAGE WITH AMBER GRADUATION

MIXING CYLINDER

hexagonal glass base, glass stopper,
blue graduation, borosilicate glass, acc. to DIN EN ISO 4788

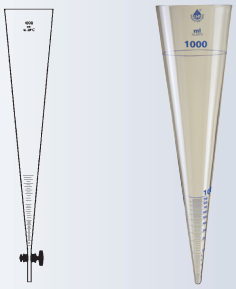
Capacity	Neck size	Cl. B	Cl. A	Pack of
10 ml	NS 10/19	LMS 61322812	LMS 61322852	10
25 ml	NS 14/23	LMS 61322813	LMS 61322853	10
50 ml	NS 19/16	LMS 61322814	LMS 61322854	10
100 ml	NS 24/29	LMS 61322815	LMS 61322855	10
250 ml	NS 29/32	LMS 61322816	LMS 61322856	10
500 ml	NS 34/35	LMS 61322818	LMS 61322858	10
1000 ml	NS 45/40	LMS 61322819	LMS 61322859	10
2000 ml	NS 45/40	LMS 61322820	LMS 61322860	10



SEDIMENTATION CONES

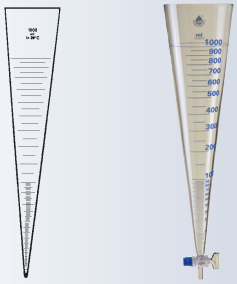
acc. to Imhoff graduation till 100 ml, ringmarks at 1000 ml
borosilicate glass, acc. to DIN 12672

Capacity	without stopcock	with stopcock	Pack of
1000 ml	LMS 61329102	LMS 61329107	2



graduation till 1000 ml

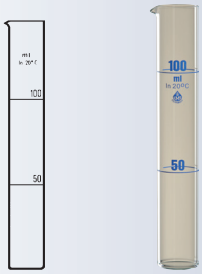
Capacity	without stopcock	with stopcock	Pack of
1000 ml	LMS 61329114	LMS 61329118	2



COLOUR COMPARISON TUBES

acc. to Nessler, sodaglass, 2 ring marks at 50 and 100 ml

Capacity	type	Code	Pack of
100 ml	low form	LMS 63324203	10
100 ml	tall form	LMS 63324103	10





STANDARD STOPPER



OCTAGONAL STOPPER





VOLUMETRIC FLASKS

Cl. A with plastic stopper, borosilicate glass, acc. to DIN EN ISO 1042

Capacity	Neck size	standard stopper	octagonal stopper	Pack of
5 ml	NS 7/16	LMS 61319620	LMS 61319520DP	10
10 ml	NS 7/16	LMS 61319621	LMS 61319521DP	10
25 ml	NS 10/19	LMS 61319622	LMS 61319522DP	10
50 ml	NS 12/21	LMS 61319623	LMS 61319523DP	10
100 ml	NS 12/21	LMS 61319624	LMS 61319524DP	10
200 ml	NS 14/23	LMS 61319625	LMS 61319525DP	10
250 ml	NS 14/23	LMS 61319626	LMS 61319526DP	10
500 ml	NS 19/26	LMS 61319627	LMS 61319527DP	10
1000 ml	NS 24/29	LMS 61319628	LMS 61319528DP	10
2000 ml	NS 29/32	LMS 61319629	LMS 61319529DP	5
5000 ml	NS 34/35	LMS 61319630	LMS 61319530DP	1





VOLUMETRIC FLASKS

Cl. A, with glass stopper, borosilicate glass, acc. to DIN EN ISO 1042

Capacity	Neck size	glass stopper	Pack of
5 ml	NS 7/16	LMS 61319520	10
10 ml	NS 7/16	LMS 61319521	10
25 ml	NS 10/19	LMS 61319522	10
50 ml	NS 12/21	LMS 61319523	10
100 ml	NS 12/21	LMS 61319524	10
200 ml	NS 14/23	LMS 61319525	10
250 ml	NS 14/23	LMS 61319526	10
500 ml	NS 19/26	LMS 61319527	10
1000 ml	NS 24/29	LMS 61319528	10
2000 ml	NS 29/32	LMS 61319529	5
5000 ml	NS 29/32	LMS 61319530	1





VOLUMETRIC FLASKS

Cl. A, with plastic stopper, amber
borosilicate glass white graduation, acc. to DIN EN ISO 1042

Capacity	Neck size	standard stopper	octagonal stopper	Pack of
5 ml	NS 7/16	LMS 61319960	LMS 61319960DP	10
10 ml	NS 7/16	LMS 61319961	LMS 61319961DP	10
25 ml	NS 10/19	LMS 61319962	LMS 61319962DP	10
50 ml	NS 12/21	LMS 61319963	LMS 61319963DP	10
100 ml	NS 12/21	LMS 61319964	LMS 61319964DP	10
200 ml	NS 14/23	LMS 61319965	LMS 61319965DP	10
250 ml	NS 14/23	LMS 61319966	LMS 61319966DP	10
500 ml	NS 19/26	LMS 61319967	LMS 61319967DP	10
1000 ml	NS 24/29	LMS 61319968	LMS 61319968DP	10
2000 ml	NS 29/32	LMS 61319969	LMS 61319969DP	5





VOLUMETRIC FLASKS

Cl. A, with glass stopper, amber
borosilicate glass white graduation, acc. to DIN EN ISO 1042

Capacity	Neck size	glass stopper	Pack of
5 ml	NS 7/16	LMS 61319820	10
10 ml	NS 7/16	LMS 61319821	10
25 ml	NS 10/19	LMS 61319822	10
50 ml	NS 12/21	LMS 61319823	10
100 ml	NS 12/21	LMS 61319824	10
200 ml	NS 14/23	LMS 61319825	10
250 ml	NS 14/23	LMS 61319826	10
500 ml	NS 19/26	LMS 61319827	10
1000 ml	NS 24/29	LMS 61319828	10
2000 ml	NS 29/32	LMS 61319829	5

VOLUMETRIC FLASKS

for sugar testing, with 2 marks and rim
borosilicate glass, calibrated “to contain“ and marked at 20°C

Capacity	Cl. A	Pack of
50/55 ml	LMS 61319121	10
100/110 ml	LMS 61319122	10
200/220 ml	LMS 61319123	10



VOLUMETRIC FLASKS

for sugar testing acc. to Kohlrausch with rim
borosilicate glass, calibrated “to contain“ and marked at 20°C

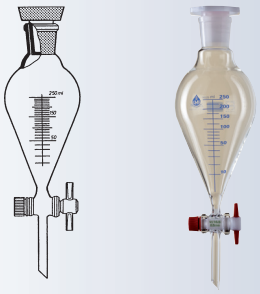
Capacity	Cl. A	Pack of
100 ml	LMS 61313125	10
200 ml	LMS 61313126	10



SEPARATING FUNNELS

conical form (pear type) acc. to DIN ISO 4800, with plastic stopper, graduation, borosilicate glass

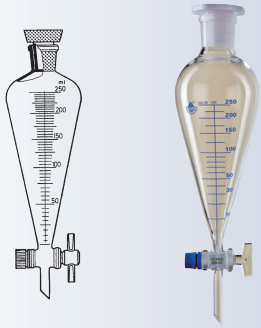
Capacity	Neck size	PTFE stopcock key	glass stopcock key	Pack of
50 ml	NS 19/26	LMS 61165601	LMS 61165611	10
100 ml	NS 19/26	LMS 61165602	LMS 61165612	10
250 ml	NS 29/32	LMS 61165603	LMS 61165613	10
500 ml	NS 29/32	LMS 61165604	LMS 61165614	10
1000 ml	NS 29/32	LMS 61165605	LMS 61165615	2
2000 ml	NS 29/32	LMS 61165606	LMS 61165616	2



SEPARATING FUNNELS

acc. to Squibb acc. to DIN ISO 4800, with plastic stopper, graduation, borosilicate glass

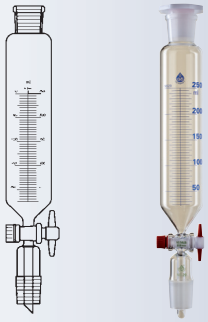
Capacity	Neck size	PTFE stopcock key	glass stopcock key	Pack of
50 ml	NS 19/26	LMS 61165620	LMS 61165101	10
100 ml	NS 19/26	LMS 61165621	LMS 61165102	10
250 ml	NS 29/32	LMS 61165622	LMS 61165103	10
500 ml	NS 29/32	LMS 61165623	LMS 61165104	10
1000 ml	NS 29/32	LMS 61165624	LMS 61165105	2
2000 ml	NS 29/32	LMS 61165625	LMS 61165106	2

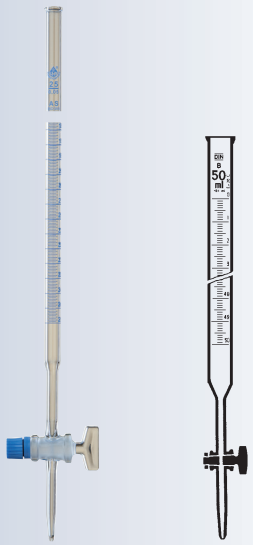


DROPPING FUNNELS

cylindrical form, acc. to DIN ISO 4800, with conical ground socket and cone, plastic stopper, graduation, borosilicate glass

Capacity	NS size	PTFE stopcock key	glass stopcock key	Pack of
50 ml	NS 14/23	LMS 61164551	LMS 61164531	1
100 ml	NS 14/23	LMS 61164552	LMS 61164532	10
250 ml	NS 29/32	LMS 61164553	LMS 61164534	10
500 ml	NS 29/32	LMS 61164554	LMS 61164535	10
1000 ml	NS 29/32	LMS 61164555	LMS 61164536	10
2000 ml	NS 29/32	LMS 61164556	LMS 61164537	2





BURETTES

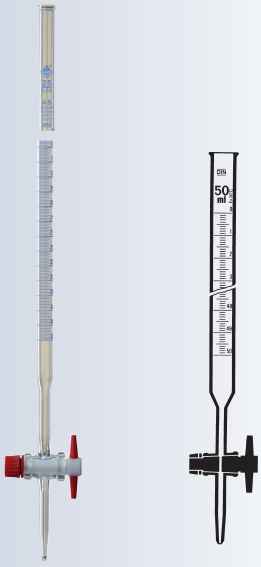
acc. to Mohr, with straight interchangeable glass stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346401	LMS 61346411	2
10 ml	0,05	LMS 61346402	LMS 61346412	2
25 ml	0,05	LMS 61346403	LMS 61346413	2
25 ml	0,1	LMS 61346404	LMS 61346414	2
50 ml	0,1	LMS 61346405	LMS 61346415	2
100 ml	0,2	LMS 61346406	LMS 61346416	2

SCHELLBACH BURETTES

acc. to Mohr, with straight interchangeable glass stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346431	LMS 61346441	2
10 ml	0,05	LMS 61346432	LMS 61346442	2
25 ml	0,05	LMS 61346433	LMS 61346443	2
25 ml	0,1	LMS 61346434	LMS 61346444	2
50 ml	0,1	LMS 61346435	LMS 61346445	2
100 ml	0,2	LMS 61346436	LMS 61346446	2



BURETTES

acc. to Mohr, DIN ISO 385, with straight PTFE stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346501	LMS 61346511	2
10 ml	0,05	LMS 61346502	LMS 61346512	2
25 ml	0,05	LMS 61346503	LMS 61346513	2
25 ml	0,1	LMS 61346504	LMS 61346514	2
50 ml	0,1	LMS 61346505	LMS 61346515	2
100 ml	0,2	LMS 61346506	LMS 61346516	2

SCHELLBACH BURETTES

acc. to Mohr, DIN ISO 385, with straight PTFE stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346531	LMS 61346541	2
10 ml	0,05	LMS 61346532	LMS 61346542	2
25 ml	0,05	LMS 61346533	LMS 61346543	2
25 ml	0,1	LMS 61346534	LMS 61346544	2
50 ml	0,1	LMS 61346535	LMS 61346545	2
100 ml	0,2	LMS 61346536	LMS 61346546	2



BURETTES

acc. to Mohr, DIN ISO 385 with straight PTFE spindle stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346601	LMS 61346611	2
10 ml	0,05	LMS 61346602	LMS 61346612	2
25 ml	0,05	LMS 61346603	LMS 61346613	2
25 ml	0,1	LMS 61346604	LMS 61346614	2
50 ml	0,1	LMS 61346605	LMS 61346615	2
100 ml	0,2	LMS 61346606	LMS 61346616	2

SCHELLBACH BURETTES

acc. to Mohr, DIN ISO 385, with straight PTFE spindle stopcock, boro 3.3.

Capacity	Subdiv.ml	Cl. B	CL. AS	Pack of
10 ml	0,02	LMS 61346631	LMS 61346641	2
10 ml	0,05	LMS 61346632	LMS 61346642	2
25 ml	0,05	LMS 61346633	LMS 61346643	2
25 ml	0,1	LMS 61346634	LMS 61346644	2
50 ml	0,1	LMS 61346635	LMS 61346645	2
100 ml	0,2	LMS 61346636	LMS 61346646	2

BURETTES

acc. to Daffert, Cl. AS, Schellbach, blue graduation, stopcock with two oblique bores, borosilicate glass

Capacity	Subdiv. ml	interchangeable glass key	PTFE key	Pack of
25	0,05 ml	LMS 61447401	LMS 61447400	4
25	0,1 ml	LMS 61447403	LMS 61447402	4
50	0,1 ml	LMS 61447405	LMS 61447404	4
100	0,2 ml	LMS 61447407	LMS 61447406	4



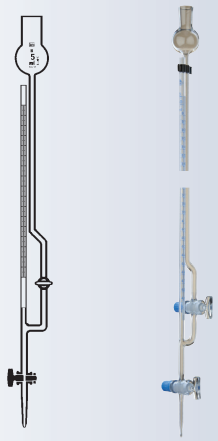
MICROBURETTES

acc. to Bang, with straight glass stopcock Cl. B, with glass key, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
1 ml	0,01	LMS 61342211	LMS 61342261	4
2 ml	0,01	LMS 61342212	LMS 61342262	4
5 ml	0,01	LMS 61342214	LMS 61342264	4
5 ml	0,02	LMS 61342215	LMS 61342265	4

acc. to Bang, with straight glass stopcock Cl. AS, with glass key, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
1 ml	0,01	LMS 61342231	LMS 61342281	4
2 ml	0,01	LMS 61342232	LMS 61342282	4
5 ml	0,01	LMS 61342234	LMS 61342284	4
5 ml	0,02	LMS 61342235	LMS 61342285	4



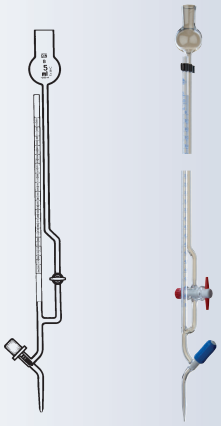
MICROBURETTES

acc. to Bang, with straight PTFE spindle stopcock, Cl. B, with PTFE intermedium stopcock, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
1 ml	0,01	LMS 61342611	LMS 61342661	4
2 ml	0,01	LMS 61342612	LMS 61342662	4
5 ml	0,01	LMS 61342614	LMS 61342664	4
5 ml	0,02	LMS 61342615	LMS 61342665	4

acc. to Bang, with straight PTFE spindle stopcock Cl. AS, with PTFE intermedium stopcock, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
1 ml	0,01	LMS 61342631	LMS 61342481	4
2 ml	0,01	LMS 61342632	LMS 61342482	4
5 ml	0,01	LMS 61342634	LMS 61342484	4
5 ml	0,02	LMS 61342635	LMS 61342485	4



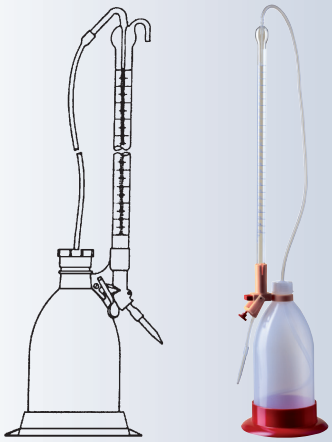
AUTOMATIC BURETTES

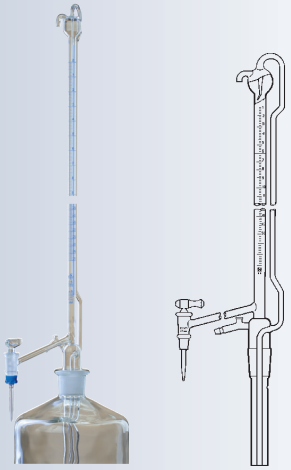
acc. to Dr. Schilling, Cl. B, Schellbach with automatic zero adjustment, for rapid titration with pinchcock for delivery drop by drop, blue graduation, consisting of: burette, plastic bottle and plastic base

Capacity	code	Pack of
5 ml	LMS 61046401	10
10 ml	LMS 61046402	10
25 ml	LMS 61046403	10
50 ml	LMS 61046404	10

Spare burettes

Capacity	code	Pack of
5 ml	LMS 61046411	10
10 ml	LMS 61046412	10
25 ml	LMS 61046413	10
50 ml	LMS 61046414	10





AUTOMATIC BURETTES

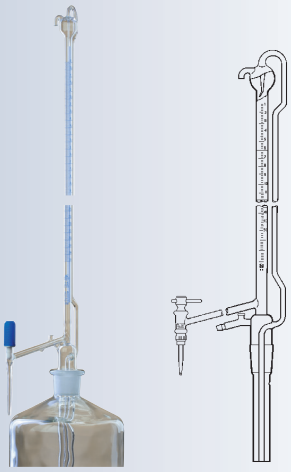
acc. to Pellet, without intermediate stopcock, Cl. B, with glass key, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347401	LMS 61347431	2
10 ml	0,05	LMS 61347402	LMS 61347432	2
25 ml	0,05	LMS 61347403	LMS 61347433	2
25 ml	0,1	LMS 61347404	LMS 61347434	2
50 ml	0,1	LMS 61347405	LMS 61347435	2

AUTOMATIC BURETTES

acc. to Pellet, without intermediate stopcock, Cl. AS, with glass key, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347411	LMS 61347441	2
10 ml	0,05	LMS 61347412	LMS 61347442	2
25 ml	0,05	LMS 61347413	LMS 61347443	2
25 ml	0,1	LMS 61347414	LMS 61347444	2
50 ml	0,1	LMS 61347415	LMS 61347445	2



AUTOMATIC BURETTES

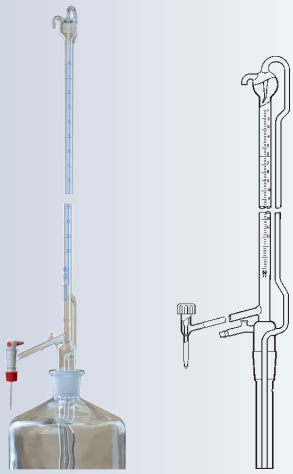
acc. to Pellet, without intermediate stopcock, Cl. B, with PTFE spindle stopcock, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347601	LMS 61347631	2
10 ml	0,05	LMS 61347602	LMS 61347632	2
25 ml	0,05	LMS 61347603	LMS 61347633	2
25 ml	0,1	LMS 61347604	LMS 61347634	2
50 ml	0,1	LMS 61347605	LMS 61347635	2

AUTOMATIC BURETTES

acc. to Pellet, without intermediate stopcock, Cl. AS, with PTFE spindle stopcock, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347611	LMS 61347641	2
10 ml	0,05	LMS 61347612	LMS 61347642	2
25 ml	0,05	LMS 61347613	LMS 61347643	2
25 ml	0,1	LMS 61347614	LMS 61347644	2
50 ml	0,1	LMS 61347615	LMS 61347645	2



AUTOMATIC BURETTES

acc. to Pellet, without intermediate stopcock, Cl. B, with PTFE key, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347501	LMS 61347531	2
10 ml	0,05	LMS 61347502	LMS 61347532	2
25 ml	0,05	LMS 61347503	LMS 61347533	2
25 ml	0,1	LMS 61347504	LMS 61347534	2
50 ml	0,1	LMS 61347505	LMS 61347535	2

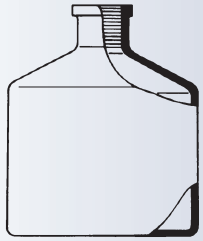
AUTOMATIC BURETTES

acc. to Pellet, without intermediate stopcock, Cl. AS, with PTFE key, without bottle, borosilicate glass

Capacity	Subdiv. ml	clear glass	Schellbach	Pack of
10 ml	0,02	LMS 61347511	LMS 61347541	2
10 ml	0,05	LMS 61347512	LMS 61347542	2
25 ml	0,05	LMS 61347513	LMS 61347543	2
25 ml	0,1	LMS 61347514	LMS 61347544	2
50 ml	0,1	LMS 61347515	LMS 61347545	2

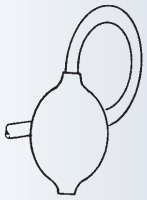
RESERVOIR BOTTLES
for Automatic Burettes, NS 29/32

Capacity	clear glass	amber glass	Pack of
2000 ml	LMS 63231953	LMS 63231952	4



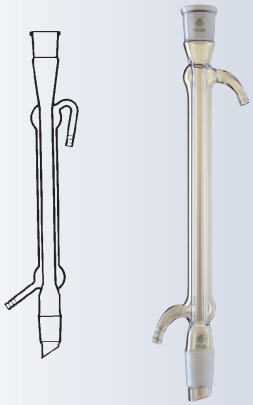
RED RUBBER BULBS
for Automatic Burettes

Type	Code	Pack of
Single bulb	BOE 110	1



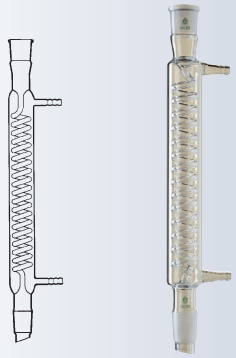
LIEBIG CONDENSERS
borosilicate glass, olive diam. 11 mm

Jacket length	Cone/socket size	Code	Pack of
100 mm	NS 14/23	LMS 61451118	4
160 mm	NS 14/23	LMS 61451119	4
160 mm	NS 19/26	LMS 61451120	4
200 mm	NS 14/23	LMS 61451121	4
200 mm	NS 29/32	LMS 61451122	4
250 mm	NS 19/26	LMS 61451123	2
250 mm	NS 24/29	LMS 61451124-40	2
250 mm	NS 24/40	LMS 61451224	2
250 mm	NS 29/32	LMS 61451125	2
400 mm	NS 24/29	LMS 61451202	1
400 mm	NS 24/40	LMS 61451202-40	1
400 mm	NS 29/32	LMS 61451203	1



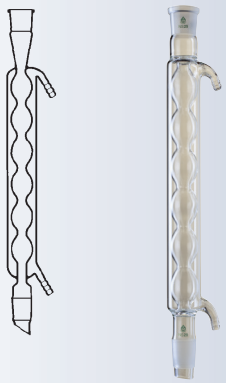
COILED CONDENSERS
borosilicate glass

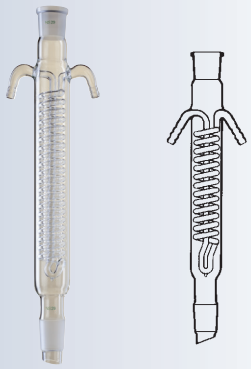
Jacket length	Cone/socket size	Code	Pack of
200 mm	NS 14/23	LMS 61455121	4
200 mm	NS 29/32	LMS 61455122	4
300 mm	NS 29/32	LMS 61455132	2
400 mm	NS 24/40	LMS 61455930	1
400 mm	NS 29/32	LMS 61455142	1



ALLIHIN CONDENSERS
borosilicate glass, olive diam. 11 mm

Jacket length	Cone/socket size	Code	Pack of
160 mm	NS 14/23	LMS 61452129	4
160 mm	NS 19/26	LMS 61452130	4
250 mm	NS 19/26	LMS 61452131	2
250 mm	NS 24/29	LMS 61452132	2
250 mm	NS 24/40	LMS 61452225	2
250 mm	NS 29/32	LMS 61452133	2
300 mm	NS 29/32	LMS 61452134	1
400 mm	NS 24/40	LMS 61452134-40	1
400 mm	NS 29/32	LMS 61452135	1

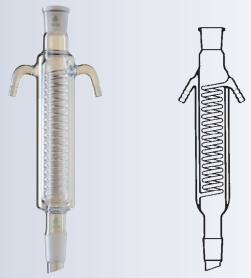




DIMROTH CONDENSERS

borosilicate glass, olive diam. 11 mm

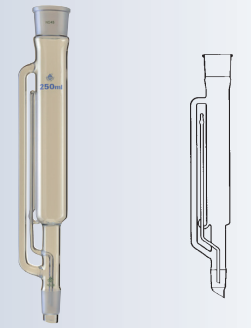
Jacket length	Cone/socket size	Code	Pack of
160 mm	NS 14/23	LMS 61453120	4
160 mm	NS 19/26	LMS 61453121	4
250 mm	NS 19/26	LMS 61453122	2
250 mm	NS 24/29	LMS 61453123	2
250 mm	NS 29/32	LMS 61453124	2
400 mm	NS 24/29	LMS 61453125	1
400 mm	NS 29/32	LMS 61453126	1



JACKET COILED CONDENSERS

borosilicate glass

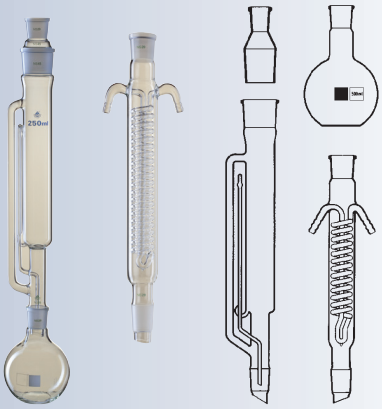
Jacket length	Cone/socket size	Code	Pack of
200 mm	NS 29/32	LMS 61454119	2
250 mm	NS 29/32	LMS 61454120	2
300 mm	NS 29/32	LMS 61454121	2
400 mm	NS 29/32	LMS 61454122	2



SOXHLET EXTRACTORS

cones NS 29/32, (NS 24/40 for L version) borosilicate glass

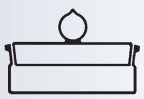
Vol. extractor	socket size	Code	Pack of
30 ml	NS 29/32	LMS 61435100	10
50 ml	NS 29/32	LMS 61435101	10
100 ml	NS 45/40	LMS 61435102	10
100 ml	NS 24/40	LMS 61435102L	10
150 ml	NS 45/40	LMS 61435103	10
250 ml	NS 45/40	LMS 61435104	10
250 ml	NS 24/40	LMS 61435104L	10
500 ml	NS 60/46	LMS 61435105	10



SOXHLET EXTRACTION APPARATUS

complete with: Soxhlet extractor, flat bottom flask NS 29/32, Dimroth condenser NS 29/32, reduction adapter

Vol. extractor	flat bottom flask	Code	Pack of
30 ml	100 ml	LMS 61612102	1
50 ml	250 ml	LMS 61612103	1
100 ml	250 ml	LMS 61612104	1
150 ml	500 ml	LMS 61612105	1
250 ml	500 ml	LMS 61612106	1
500 ml	1000 ml	LMS 61612107	1
500 ml	2000 ml	LMS 616121072	1



WEIGHING BOTTLES

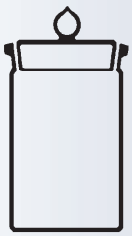
with interchangeable knob lid, matt label, low form

Ø x Height	Code	Pack of
25 x 25 mm	LMS 61135102	10
35 x 30 mm	LMS 61135106	10
45 x 30 mm	LMS 61135109	10
50 x 30 mm	LMS 61135111	10
60 x 30 mm	LMS 61135113	10
80 x 30 mm	LMS 61135116	10

WEIGHING BOTTLES

with interchangeable knob lid, matt label, tall form

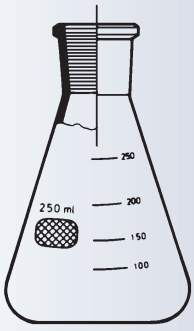
Ø x Height	Code	Pack of
25 x 40 mm	LMS 61135104	10
30 x 50 mm	LMS 61135107	10
40 x 50 mm	LMS 61135140	10
35 x 70 mm	LMS 61135137	10
50 x 80 mm	LMS 61135158	10
60 x 80 mm	LMS 61135168	10



ERLENMEYER FLASKS

with conical ground socket, borosilicate glass 3.3., with approximated volume scale, acc. to DIN 4797

Capacity	Socket size	Code	Pack of
25 ml	NS 14 / 23	LMS 61217601	10
25 ml	NS 19 / 26	LMS 61217604	10
50 ml	NS 14 / 23	LMS 61217602	10
50 ml	NS 19 / 26	LMS 61217605	10
50 ml	NS 24 / 29	LMS 61217611	10
50 ml	NS 29 / 32	LMS 61217621	10
100 ml	NS 14 / 23	LMS 61217603	10
100 ml	NS 19 / 26	LMS 61217606	10
100 ml	NS 24 / 29	LMS 61217612	10
100 ml	NS 29 / 32	LMS 61217622	10
200 ml	NS 19 / 26	LMS 61217607	10
200 ml	NS 24 / 29	LMS 61217613	10
200 ml	NS 29 / 32	LMS 61217623	10
200 ml	NS 45 / 40	LMS 61217629	10
250 ml	NS 19 / 26	LMS 61217608	10
250 ml	NS 24 / 29	LMS 61217614	10
250 ml	NS 29 / 32	LMS 61217624	10
250 ml	NS 45 / 40	LMS 61217630	10
300 ml	NS 19 / 26	LMS 61217609	10
300 ml	NS 24 / 29	LMS 61217615	10
300 ml	NS 29 / 32	LMS 61217625	10
300 ml	NS 45 / 40	LMS 61217631	10
500 ml	NS 24 / 29	LMS 61217616	10
500 ml	NS 29 / 32	LMS 61217626	10
500 ml	NS 45 / 40	LMS 61217632	10
1000 ml	NS 24 / 29	LMS 61217617	10
1000 ml	NS 29 / 32	LMS 61217627	10
1000 ml	NS 45 / 40	LMS 61217633	10
2000 ml	NS 24 / 29	LMS 61217618	10
2000 ml	NS 29 / 32	LMS 61217628	10
2000 ml	NS 45 / 40	LMS 61217634	10



STOPPERS

with flat and pointed bottom, borosilicate glass

Size	Code	Pack of
NS 5 / 13	LMS 61424401	25
NS 7 / 16	LMS 61424402	25
NS 10 / 19	LMS 61424403	25
NS 12 / 21	LMS 61424404	25
NS 14 / 23	LMS 61424405	25
NS 19 / 26	LMS 61424406	25
NS 24 / 29	LMS 61424407	10
NS 29 / 32	LMS 61424408	10



FLAT BOTTOM FLASKS

with conical ground socket, borosilicate glass 3.3.



Capacity	Socket size	Code	Pack of
25 ml	NS 14 / 23	LMS 61212201	10
50 ml	NS 14 / 23	LMS 61212202	10
50 ml	NS 19 / 26	LMS 61212204	10
50 ml	NS 24 / 29	LMS 61212207	10
50 ml	NS 29 / 32	LMS 61212215	10
100 ml	NS 14 / 23	LMS 61212203	10
100 ml	NS 19 / 26	LMS 61212205	10
100 ml	NS 24 / 29	LMS 61212208	10
100 ml	NS 29 / 32	LMS 61212216	10
250 ml	NS 19 / 26	LMS 61212206	10
250 ml	NS 24 / 29	LMS 61212209	10
250 ml	NS 24 / 40	LMS 61212212-40	10
250 ml	NS 29 / 32	LMS 61212217	10
500 ml	NS 24 / 29	LMS 61212210	10
500 ml	NS 24 / 40	LMS 61212213-40	10
500 ml	NS 29 / 32	LMS 61212218	10
1000 ml	NS 24 / 29	LMS 61212211	10
1000 ml	NS 24 / 40	LMS 61212214-40	10
1000 ml	NS 29 / 32	LMS 61212219	10
1000 ml	NS 45 / 40	LMS 61212221	10
2000 ml	NS 45 / 40	LMS 61212222	10

ROUND BOTTOM FLASKS

with conical ground socket, borosilicate glass 3.3.



Capacity	Socket size	Code	Pack of
10 ml	NS 14 / 23	LMS 61211200	10
25 ml	NS 14 / 23	LMS 61211201	10
25 ml	NS 19 / 26	LMS 61211205	10
50 ml	NS 14 / 23	LMS 61211202	10
50 ml	NS 19 / 26	LMS 61211206	10
50 ml	NS 24 / 29	LMS 61211210	10
50 ml	NS 29 / 32	LMS 61211216	10
100 ml	NS 14 / 23	LMS 61211203	10
100 ml	NS 19 / 26	LMS 61211207	10
100 ml	NS 24 / 29	LMS 61211211	10
100 ml	NS 29 / 32	LMS 61211217	10
250 ml	NS 14 / 23	LMS 61211204	10
250 ml	NS 19 / 26	LMS 61211208	10
250 ml	NS 24 / 29	LMS 61211212	10
250 m	NS 24 / 40	LMS 61211212-40	10
250 ml	NS 29 / 32	LMS 61211218	10
250 ml	NS 34 / 35	LMS 61211228	10
250 ml	NS 45 / 40	LMS 61211236	10
500 ml	NS 19 / 26	LMS 61211209	10
500 ml	NS 24 / 29	LMS 61211213	10
500 ml	NS 24 / 40	LMS 61211213-40	10
500 ml	NS 29 / 32	LMS 61211219	10
500 ml	NS 34 / 35	LMS 61211229	10
500 ml	NS 45 / 40	LMS 61211237	10
1000 ml	NS 24 / 29	LMS 61211214	10
1000 ml	NS 24 / 40	LMS 61211214-40	10
1000 ml	NS 29 / 32	LMS 61211220	10
1000 ml	NS 34 / 35	LMS 61211230	10
1000 ml	NS 45 / 40	LMS 61211238	10
2000 ml	NS 24 / 29	LMS 61211215	10
2000 ml	NS 29 / 32	LMS 61211221	10
2000 ml	NS 34 / 35	LMS 61211231	10
2000 ml	NS 45 / 40	LMS 61211239	10

JIPO PORCELAIN

CRUCIBLES, LOW FORM

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
30	19	5	JIP 100301	5
35	22	10	JIP 100351	5
40	25	17	JIP 100401	5
45	28	21	JIP 100451	5
50	32	34	JIP 100501	5
60	38	62	JIP 100601	5
70	44	91	JIP 100701	5



CRUCIBLES, MIDDLE FORM

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
30	25	10	JIP 200301	5
35	28	12	JIP 200351	5
40	32	20	JIP 200401	5
45	36	30	JIP 200451	5
50	40	45	JIP 200501	5
60	48	80	JIP 200601	5
70	56	120	JIP 200701	5
80	82	200	JIP 200801	5



CRUCIBLES, HIGH FORM

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
30	38	15	JIP 300301	5
35	44	26	JIP 300351	5
40	50	35	JIP 300401	5
45	56	50	JIP 300451	5
50	62	72	JIP 300501	5
60	75	120	JIP 300601	5



LIDS FOR CRUCIBLES

Ø (mm) crucible	Ø (mm) lid	Code	Pack of
30	34	JIP 000301	5
35	39	JIP 000351	5
40	44	JIP 000401	5
45	49	JIP 000451	5
50	54	JIP 000501	5
60	64	JIP 000601	5
70	74	JIP 000701	5
80	84	JIP 000801	5



GOOCH CRUCIBLES

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
30	36	17	JIP 234101	5
35	43	25	JIP 234301	5
39	49	35	JIP 234401	5
60	71	120	JIP 234501	5





FILTER CRUCIBLES

with porous base

H (mm)	Vol (ml)	Porosity	Code	Pack of
28	8	P1 = 6µ	JIP 400256	2
28	8	P2 = 7µ	JIP 400257	2
28	8	P3 = 8µ	JIP 400258	2
35	15	P1 = 6µ	JIP 400306	2
35	15	P2 = 7µ	JIP 400307	2
35	15	P3 = 8µ	JIP 400308	2
40	25	P1 = 6µ	JIP 400356	2
40	25	P2 = 7µ	JIP 400357	2
40	25	P3 = 8µ	JIP 400358	2
43	35	P1 = 6µ	JIP 400406	2
43	35	P2 = 7µ	JIP 400407	2
43	35	P3 = 8µ	JIP 400408	2
50	50	P1 = 6µ	JIP 400456	2
50	50	P2 = 7µ	JIP 400457	2
50	50	P3 = 8µ	JIP 400458	2



BUECHNER FUNNELS

Nom. size	Stem length	Hole Ø	Code	Pack of
45	43	1	JIP 237101	1
55	64	1	JIP 237201	1
70	64	1	JIP 237301	1
90	71	2	JIP 237401	1
110	83	2	JIP 237501	1
125	85	2	JIP 237601	1
150	96	2	JIP 237701	1
185	117	2	JIP 237801	1
240	117	2	JIP 237901	1
270	130	2	JIP 237921	1
320	133	2	JIP 237991	1



DESICCATOR PLATES, ACC. TO CSN

Ø (mm)	for Desic.	Code	Pack of
90	100	JIP 238101	1
140	150	JIP 238331	1
189	200	JIP 238521	1
241	250	JIP 238821	1
290	300	JIP 238991	1



DESICCATOR PLATES, ACC. TO DIN

Ø (mm)	for Desic.	Code	Pack of
90	100	JIP 138101	1
140	150	JIP 138201	1
190	200	JIP 138301	1
235	250	JIP 138401	1
280	300	JIP 138501	1

EVAPORATION DISH, ROUND BOTTOM

deep form, with lip

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
40	16	10	JIP 206001	5
50	20	20	JIP 206101	5
63	25	30	JIP 206121	5
80	32	60	JIP 206201	5
81	38	107	JIP 206221	5
94	42	140	JIP 206301	5
100	40	150	JIP 206321	5
112	47	232	JIP 206401	5
125	50	285	JIP 206411	5
132	55	300	JIP 206421	5
138	61	400	JIP 206501	5
160	64	580	JIP 206611	5
170	74	700	JIP 206621	1
200	80	1000	JIP 206721	1
202	86	1300	JIP 206801	1
320	140	6000	JIP 206991	1



EVAPORATION DISH, ROUND BOTTOM

semideep form, with lip

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
72	26	41	JIP 207101	5
83	27	62	JIP 207201	5
96	30	110	JIP 207301	5
110	37	160	JIP 207401	5
117	41	215	JIP 207421	5
127	42	240	JIP 207501	5
142	46	325	JIP 207521	5
154	50	420	JIP 207601	5
170	55	558	JIP 207701	5



EVAPORATION DISH, FLAT BOTTOM

with lip

Ø (mm)	H (mm)	Vol (ml)	Code	Pack of
54	22	22	JIP 274101	5
70	30	62	JIP 274121	5
86	33	93	JIP 274201	5
98	40	154	JIP 274301	5
112	50	265	JIP 274401	5
126	53	330	JIP 274501	5
145	55	450	JIP 274601	5
151	63	620	JIP 274701	5
169	68	800	JIP 274801	1
195	74	1000	JIP 274901	1
254	105	2500	JIP 274991	1



MORTARS WITH LIP, GLAZED



IØ (mm)	H (mm)	Vol (ml)	Code	Pack of
51	32	25	JIP 211001	5
56	36	30	JIP 211101	2
63	41	70	JIP 211111	2
76	45	75	JIP 211121	2
83	50	110	JIP 211201	2
90	56	160	JIP 211221	1
105	64	220	JIP 211301	1
125	71	400	JIP 211321	1
139	82	500	JIP 211401	1
150	90	650	JIP 211501	1
180	104	1000	JIP 211601	1
224	127	2250	JIP 211701	1
268	150	4300	JIP 211801	1

PESTLES, GLAZED



Ø (mm)	length (mm)	Code	Pack of
14	54	JIP 213001	5
24	115	JIP 213101	2
30	135	JIP 213201	2
36	150	JIP 213301	2
42	175	JIP 213401	1
55	210	JIP 213501	1
74	250	JIP 213601	1
85	280	JIP 213701	1
101	370	JIP 213801	1

MORTARS WITH LIP, ROUGH



IØ (mm)	H (mm)	Vol (ml)	Code	Pack of
51	32	25	JIP 211000	5
56	36	30	JIP 211100	2
63	41	70	JIP 211110	2
76	45	75	JIP 211120	2
83	50	110	JIP 211200	2
90	56	160	JIP 211220	1
105	64	220	JIP 211300	1
125	71	400	JIP 211320	1
139	82	500	JIP 211400	1
150	90	650	JIP 211500	1
180	104	1000	JIP 211600	1
224	127	2250	JIP 211700	1
268	160	4300	JIP 211800	1

PESTLES, ROUGH



Ø (mm)	length (mm)	Code	Pack of
14	54	JIP 213000	5
24	115	JIP 213100	2
30	135	JIP 213200	2
36	150	JIP 213300	2
42	175	JIP 213400	1
55	210	JIP 213500	1
74	250	JIP 213600	1
85	280	JIP 213700	1
101	370	JIP 213800	1



LABORATORY PLASTICWARE

BOECO
Germany

REUSABLE PLASTICWARE



GRADUATED CYLINDERS PP

tall, class B per DIN 12681/ISO 6706, highly transparent, with raised scale and ring marks at the primary scale points, hexagonal base

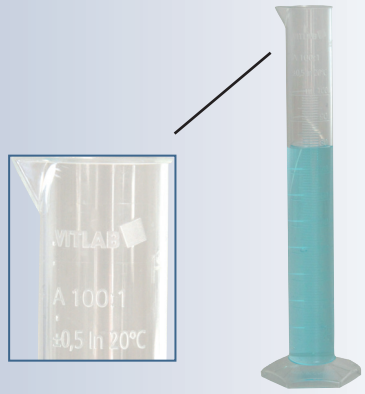
Volume	Code	Tolerance	Height	Pack
10 ml	VIT 646-941	± 0,2 ml	145 mm	12
25 ml	VIT 647-941	± 0,5 ml	170 mm	12
50 ml	VIT 648-941	± 1,00 ml	200 mm	12
100 ml	VIT 649-941	± 1,00 ml	250 mm	12
250 ml	VIT 650-941	± 2,00 ml	315 mm	6
500 ml	VIT 651-941	± 5,00 ml	360 mm	6
1000 ml	VIT 652-941	± 10,00 ml	440 mm	6
2000 ml	VIT 653-941	± 20,00 ml	482 mm	3



GRADUATED CYLINDERS PP

tall, class B per DIN 12681/ISO 6706, highly transparent, with raised blue scale and ring marks at the primary scale points, hexagonal base

Volume	Code	Tolerance	Height	Pack
10 ml	VIT 646-081	± 0,2 ml	145 mm	12
25 ml	VIT 647-081	± 0,5 ml	170 mm	12
50 ml	VIT 648-081	± 1,00 ml	200 mm	12
100 ml	VIT 649-081	± 1,00 ml	250 mm	12
250 ml	VIT 650-081	± 2,00 ml	315 mm	6
500 ml	VIT 651-081	± 5,00 ml	360 mm	6
1000 ml	VIT 652-081	± 10,00 ml	440 mm	6
2000 ml	VIT 653-081	± 20,00 ml	482 mm	3



GRADUATED CYLINDERS, PMP

Class A per DIN 12681/ISO 6706, crystal clear. Certified compliant
With a raised scale and ring marks at the primary scale points, calibrated 'in', hexagonal base. **With laser engraved batch number and the year of manufacture**. The lot certificate supplied bears the batch number and the actual nominal value ascertained under the test conditions.
Thermal stess up to 121°C (autoclaving) does not cause tolerance limits to be permanently exceeded

Volume	Code	Tolerance	Graduation	Height	Pack
10 ml	VIT 646-04	± 0,10 ml	0,2 ml	145 mm	2
25 ml	VIT 647-04	± 0,25 ml	0,5 ml	170 mm	2
50 ml	VIT 648-04	± 0,50 ml	1,00 ml	200 mm	2
100 ml	VIT 649-04	± 0,50 ml	1,00 ml	250 mm	2
250 ml	VIT 650-04	± 1,00 ml	2,00 ml	315 mm	2
500 ml	VIT 651-04	± 2,50 ml	5,00 ml	360 mm	1
1000 ml	VIT 652-04	± 5,00 ml	10,00 ml	440 mm	1
2000 ml	VIT 653-04	± 10,00 ml	20,00 ml	482 mm	1

Sample of the lot certificate supplied which bears the batch number and the actual nominal value ascertained under the test condition:

VITLAB
Competence in Labware

QUALITÄTSZERTIFIKAT
CERTIFICATE OF PERFORMANCE

Artikel-Nr. / Article No:	64904	
Lot-Nrl. / Batch No:	13.02	
Produkt / Product:	Messzylinder / Graduated Cylinder	
Material / Material:	PMP (Polymethylpenten) / PMP (Polymethylpentene)	
Klasse / Class:	A KB	
Toleranz / Tolerance:	± 0,500	ml, DIN 12681 / ISO 6706
Nennvolumen / Nominal volume:	100	ml
Mittelwert / Mean value:	99,929	ml
Standardabweichung/ Standard deviation:	± 0,101	ml

Prüfmittel / Testing devices:

Waage / Balance:	1, (3200 g/0,001 g) kalibriert bis, calibrated till 10/2013
Thermometer / Thermometer:	16, (0-50°C) kalibriert bis, calibrated till 09/2013
Dest. Wasser / Dist. Water:	20°C, < 3µS

Die Endprüfwerte sind bezogen auf 20 °C, die Prüfung erfolgte gemäß ISO 4787. Die verwendeten Normale sind an die Normale der PTB angeschlossen.

These final test values refer to 20 °C, the test was effected acc. to ISO 4787. The used standards are connected with the standards of the PTB (German Federal Institue of Physics and Metrology).

Datum / Date: 10.04.2013

Prüfer/Operator:

VITLAB GmbH . Postfach 1272 . 63757 Grossostheim . Germany
Tel.: +49 (0) 6026 9 77 99 - 0 . Fax: +49 (0) 6026 9 77 99 - 30 . e-mail: info@vitlab.com . www.vitlab.com

VOLUMETRIC FLASKS (PP)

translucent, individually ring-marked. The tolerances are approx. 20% better than class B according to DIN EN ISO 1042.
To preserve markings, cleaning at no higher temperature than 60°C is recommended.



with screw-caps (PP)

Volume	Code	Height	Thread	Pack
10 ml	VIT 677-891	90 mm	GL 18	6
25 ml	VIT 671-891	115 mm	GL 18	6
50 ml	VIT 672-891	150 mm	GL 18	6
100 ml	VIT 673-891	180 mm	GL 18	6
250 ml	VIT 674-891	235 mm	GL 25	5
500 ml	VIT 675-891	270 mm	GL 25	4
1000 ml	VIT 676-891	310 mm	GL 32	3



with NS stoppers (PP)

Volume	Code	Height	Stopper	Pack
10 ml	VIT 677-941	90 mm	NS 10/19	6
25 ml	VIT 671-941	115 mm	NS 10/19	6
50 ml	VIT 672-941	150 mm	NS 12/21	6
100 ml	VIT 673-941	180 mm	NS 14/23	6
250 ml	VIT 674-941	235 mm	NS 19/26	5
500 ml	VIT 675-941	270 mm	NS 19/26	4
1000 ml	VIT 676-941	310 mm	NS 24/29	3

VOLUMETRIC FLASKS (PMP), CLASS A

With NS stoppers (PP), crystal clear. With ring mark individually calibrated to 'In', Class A tolerances according to DIN EN ISO 1042, **with imprinted lot number and batch certificate**. Thermal stess up to 121°C (autoclaving) does not permanently exceed the tolerance limit. To preserve markings, cleaning at no higher temperature than 60°C is recommended.



Volume	Code	Height	Stopper	Pack
10 ml	VIT 677-04	90 mm	NS 10/19	6
25 ml	VIT 671-04	115 mm	NS 10/19	6
50 ml	VIT 672-04	150 mm	NS 12/21	6
100 ml	VIT 673-04	180 mm	NS 14/23	6
250 ml	VIT 674-04	235 mm	NS 19/26	5
500 ml	VIT 675-04	270 mm	NS 19/26	4
1000 ml	VIT 676-04	310 mm	NS 24/29	3

VOLUMETRIC FLASKS (PMP), OPAQUE

Class A tolerances according to DIN EN ISO 1042, **with imprinted lot number and batch certificate**. UV-absorbent, highly transparent.
For storage of light-sensitive substances.



with NS stoppers (PP)

Volume	Code	Height	Stopper	Pack
10 ml	VIT 670-950	90 mm	NS 10/19	2
25 ml	VIT 671-950	115 mm	NS 10/19	2
50 ml	VIT 672-950	150 mm	NS 12/21	2
100 ml	VIT 673-950	180 mm	NS 14/23	2
250 ml	VIT 674-950	235 mm	NS 19/26	2
500 ml	VIT 675-950	270 mm	NS 19/26	2
1000 ml	VIT 676-950	310 mm	NS 24/29	1



with coloured screw caps (PP)

Volume	Code	Height	Thread	Pack
10 ml	VIT 670-040	90 mm	GL 18	2
25 ml	VIT 671-040	115 mm	GL 18	2
50 ml	VIT 672-040	150 mm	GL 18	2
100 ml	VIT 673-040	180 mm	GL 18	2
250 ml	VIT 674-040	235 mm	GL 25	2
500 ml	VIT 675-040	270 mm	GL 25	2
1000 ml	VIT 676-040	310 mm	GL 32	1



ERLENMEYER FLASKS (PP)

wide neck, blue scale, highly transparent, supplied complete with PP screw-caps. NS-stoppers can also be used (not included)

Volume	Code	Grad	Thread GL NS-Stopper	Pack
50 ml	VIT 666-941	10 ml	40 - NS 34/35	6
100 ml	VIT 667-941	20 ml	40 - NS 34/35	6
250 ml	VIT 668-941	50 ml	52 - NS 45/40	6
500 ml	VIT 669-941	100 ml	52 - NS 45/40	6
1000 ml	VIT 670-941	200 ml	52 - NS 45/40	4



BEAKER (PP)

highly transparent, raised graduation.
Autoclavable at 121°C (2bar) acc. to DIN EN 285

Volume	Code	Grad	Height	Pack
25 ml	VIT 606-941	5 ml	50 mm	12
50 ml	VIT 607-941	10 ml	60 mm	12
100 ml	VIT 608-941	10 ml	70 mm	12
150 ml	VIT 609-941	20 ml	80 mm	12
250 ml	VIT 610-941	25 ml	95 mm	6
400 ml	VIT 611-941	50 ml	112 mm	6
500 ml	VIT 618-941	50 ml	118 mm	6
600 ml	VIT 612-941	50 ml	127 mm	6
1000 ml	VIT 614-941	100 ml	147 mm	6
2000 ml	VIT 615-941	200 ml	187 mm	6
3000 ml	VIT 616-941	250 ml	212 mm	4
5000 ml	VIT 617-941	500 ml	247 mm	4



BEAKER (PP)

highly transparent, with easily readable, raised blue scale.
To preserve markings, cleaning at no higher than 60°C is recommended

Volume	Code	Grad	Height	Pack
10 ml*	VIT 605-081	2 ml	35 mm	12
25 ml*	VIT 606-081	5 ml	47 mm	12
50 ml*	VIT 607-081	10 ml	60 mm	12
100 ml	VIT 608-081	20 ml	70 mm	12
150 ml	VIT 609-081	20 ml	80 mm	12
250 ml	VIT 610-081	50 ml	94 mm	6
400 ml	VIT 611-081	50 ml	109 mm	6
500 ml	VIT 618-081	100 ml	122 mm	6
600 ml	VIT 612-081	100 ml	125 mm	6
1000 ml	VIT 614-081	100 ml	149 mm	6
2000 ml	VIT 615-081	200 ml	183 mm	6
3000 ml	VIT 616-081	200 ml	214 mm	4
5000 ml	VIT 617-081	500 ml	248 mm	4

* the 10 ml, 25 ml and 50 ml versions do have a printed blue scale

= **Food safe products acc. to EU Regulation No. 10/2011**

GRADUATED PITCHERS (PP)

raised scale, highly transparent, Autoclavable at 121°C (2 bar)

Volume	Code	Grad	Height	Pack
50 ml	VIT 446-941	2 mm	70 mm	24
100 ml	VIT 447-941	2 mm	80 mm	24
250 ml	VIT 440-941	5 mm	120 mm	12
500 ml	VIT 441-941	10 mm	133 mm	12
1000 ml	VIT 442-941	10 mm	170 mm	6
2000 ml	VIT 443-941	20 mm	215 mm	6
3000 ml	VIT 444-941	50 mm	242 mm	6
5000 ml	VIT 445-941	100 mm	270 mm	6



GRADUATED PITCHERS (PP)

raised blue scale, highly transparent

Volume	Code	Grad	Height	Pack
50 ml	VIT 446-081	2 mm	70 mm	24
100 ml	VIT 447-081	2 mm	80 mm	24
250 ml	VIT 440-081	5 mm	120 mm	12
500 ml	VIT 441-081	10 mm	133 mm	12
1000 ml	VIT 442-081	10 mm	170 mm	6
2000 ml	VIT 443-081	20 mm	215 mm	6
3000 ml	VIT 444-081	50 mm	242 mm	6
5000 ml	VIT 445-081	100 mm	270 mm	6



SEDIMENTATION CONE

Imhoff-type (SAN), moulded graduations, screw-cap at tip for easy cleaning

Volume	Code	Grad	Division	Pack
1000 ml	VIT 759-91	0 - 2 ml	0,1 ml	3
		2 - 10 ml	0,5 ml	
		10 - 40 ml	1,0 m	
		40 - 100 ml	2,0 ml	
		100 - 1000 ml	50 ml	



FUNNELS (PP)

transparent

Diameter	Code	Height	Stem Diam.	Pack
30 mm	VIT 408-94	50 mm	1,5 mm	24
30 mm	VIT 410-94	47 mm	4 mm	24
40 mm	VIT 411-94	65 mm	4 mm	24
50 mm	VIT 412-94	85 mm	7 mm	24
75 mm	VIT 413-94	110 mm	6 mm	12
100 mm	VIT 414-94	155 mm	8 mm	12
120 mm	VIT 415-94	180 mm	11 mm	12
150 mm	VIT 416-94	220 mm	15 mm	12





NARROW NECK BOTTLE
WITH SPRAYING TUBE

NARROW-NECK / WASH BOTTLES

Narrow neck bottles in polyethylene soft (LD-PE), graduated, natural

Volume	Code	Dimensions D-d-H (mm)	Pack
50 ml	KJS E50	37 - 11 - 87	100
100 ml	KJS E100	47 - 11 - 105	550
250 ml	KJS E250	63 - 18 - 119	252
500 ml	KJS E500	78 - 18 - 152	123
1000 ml	KJS E1000	96 - 20 - 206	61
2000 ml	KJS E2000	120 - 20 - 264	36

Screw caps for wash bottles, with spraying tube (swan-neck)

Diam.	Code	fit to narrow neck bottles:	Pack
18 mm	KJS SR18	E50, E100	25
25 mm	KJS SR25	E250, E500	25
28 mm	KJS SR28	E1000, E2000	25



WIDE-NECK BOTTLES

round, in polyethylene soft (LD-PE), natural

Volume	Code	Dimensions D-d-H (mm)	Pack
50 ml	KJS W50	39 - 24 - 77	100
100 ml	KJS W100	47 - 24 - 94	624
250 ml	KJS W250	63 - 31 - 119	279
500 ml	KJS W500	78 - 39 - 152	141
1000 ml	KJS W1000	96 - 50 - 206	64
1500 ml	KJS W1500	109 - 50 - 226	45
2000 ml	KJS W2000	120 - 50 - 247	33

Screw caps with threads for narrow- and wide-neck bottles (LD-PE)

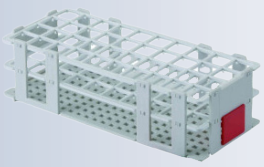
Diam.	Code	fit to bottles:	Pack
18 mm	KJS V18	E50, E100	200
25 mm	KJS V25	E250, E500	200
28 mm	KJS V28	E1000, E2000	200
32 mm	KJS V32	W50, W100	200
40 mm	KJS V40	W250	100
50 mm	KJS V50	W500	100
65 mm	KJS V65	W1000, W1500, W2000	100



SQUARE BOTTLES, WIDE NECK

made in HD-PE, natural, with black tamper evident cap packed aside

Volume	Code	Dimensions (mm)	Pack
100 ml	KJS 141-0100	52 x 52 mm, height 82 mm	440
250 ml	KJS 141-0250	67 x 67 mm, height 107 mm	215
500 ml	KJS 141-0250	85 x 85 mm, height 129 mm	123
1000 ml	KJS 141-01000	85 x 85 mm. height 210 mm	77



TEST TUBE RACKS

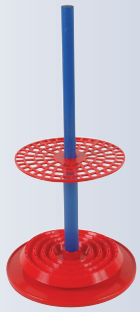
for general purpose, square holes, easy to assemble,
white, autoclavable at temperatures up to 121°C.
Dimension: 246 x 104 x 64 mm

Tube Ø	Code	Capacity
13	BOE 290131	90
16	BOE 260161	60
20	BOE 240201	40
25	BOE 224251	24
30	BOE 221301	21

PIPETTE RACK, PP

Rotary model for 94 pipettes of different sizes, autoclavable at temperatures up to 121°C.

Code
BOE 194



MAGNETIC PTFE ENCAPSULATED STIRRING BARS

cylindrical, smooth round profile, universal application

ØxLmm	Code
4,5 x 12	BOE 114512
6 x 10	BOE 110610
6 x 13	BOE 110613
6 x 20	BOE 110620
6 x 25	BOE 110625
7 x 20	BOE 110720
7 x 30	BOE 110730
7 x 40	BOE 110740
8 x 50	BOE 110850
10 x 60	BOE 111060
10 x 70	BOE 111070
10 x 80	BOE 111080



MAGNETIC PTFE ENCAPSULATED STIRRING BARS

with pivot ring

ØxLmm	Code
6 x 25	BOE 130625
8 x 40	BOE 130840
8 x 50	BOE 130850
10 x 25	BOE 131025
10 x 60	BOE 131060



MAGNETIC STIRRING BAR RETRIEVER, PTFE

Lenght mm	Code
350	BOE 114350

DISPOSABLE PLASTICWARE



BOECO TOP-LINE HIGH QUALITY THIN WALLED PCR-TUBES

PP, Certified to be free of any detectable human DNA, DNase, RNase and PCR-inhibitors.

Capacity	Colour	Code	pcs./bag	pcs./case
flat cap				
0,2 ml	natural	BOE 3-010-80-0	1.000	10.000



BOECO TOP-LINE HIGH QUALITY MICRO TUBES

PP, Certified to be free of any detectable human DNA, DNase, RNase and PCR-inhibitors.

Capacity	Colour	Code	pcs./bagp	pcs./case
0,5 ml	natural	BOE 3-115-80-0	1.000	10.000
1,5 ml	natural	BOE 3-205-85-0	1.000	8.000
2,0 ml	natural	BOE 3-204-85-0	1.000	8.000



MICROTEST TUBES,

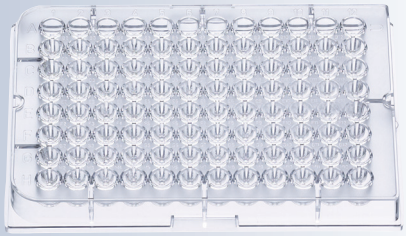
PP, graduated, with cap

SafeFit cap

Capacity	Colour	Code	pcs./bag	pcs./case
0,5 ml	natural	BOE 02.053.0100	1.000	10.000
1,5 ml	natural	BOE 02.063.0100	1.000	8.000
2,0 ml	natural	BOE 02.043.0100	1.000	8.000

EasyFit cap

Capacity	Colour	Code	pcs./bag	pcs./case
1,5 ml	natural	BOE 02.023.0100	1.000	8.000
1,5 ml	blue	BOE 02.023.0101	1.000	8.000
1,5 ml	red	BOE 02.023.0102	1.000	8.000
1,5 ml	yellow	BOE 02.023.0103	1.000	8.000
1,5 ml	green	BOE 02.023.0104	1.000	8.000



MICROTEST PLATES

96-well, crystal clear, PS, machinesterile

Type	Code	pcs./bag	pcs./case
U-shape	BOE 05.011.0100	5	100
V-shape	BOE 05.021.0100	5	100
F-shape	BOE 05.031.0100	5	100
Lid	BOE 05.041.0100	5	100



PETRI DISHES

for bacteriology, 94 x 16 mm, crystal clear, PS, machinesterile

Type	Code	pcs./bag	pcs./case
with vents	BOE 04.031.2100	20	480
without vents	BOE 04.041.2100	20	480

CENTRIFUGE TUBES
16x100 mm, round bottom

Capacity	Material	Code	pcs./bag	pcs./case
12 ml	PS	BOE 01.011.0100	1.000	2.000
12 ml	PP	BOE 01.013.0100	1.000	2.000



SEDIMENTATION TUBES
16x105 mm, conical pointed, clear PS

Capacity	Material	Code	pcs./bag	pcs./case
12 ml	PS	BOE 01.021.0100	1.000	2.000



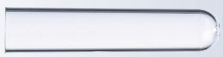
SPECIAL RIBBED STOPPERS
LD-PE, for test tubes with 16 mm diam.

Colour	Material	Code	pcs./bag	pcs./case
natural	LD-PE	BOE 01.604.0100	1000	10.000
blue	LD-PE	BOE 01.604.0101	1000	10.000
red	LD-PE	BOE 01.604.0102	1000	10.000
yellow	LD-PE	BOE 01.604.0103	1000	10.000
green	LD-PE	BOE 01.604.0104	1000	10.000



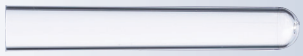
COAGULOMETER TUBES
12x55 mm, round bottom, clear PS

Capacity	Material	Code	pcs./bag	pcs./case
3,5 / 4 ml	PS	BOE 01.031.0100	1000	5.000



TEST TUBES
12x75 mm, round bottom

Capacity	Material	Code	pcs./bag	pcs./case
4,5 ml	PS	BOE 01.051.0100	1000	4.000



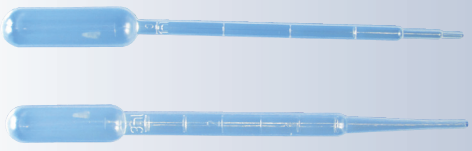
SPECIAL RIBBED STOPPERS
LD-PE, for test tubes with 12 mm diam.

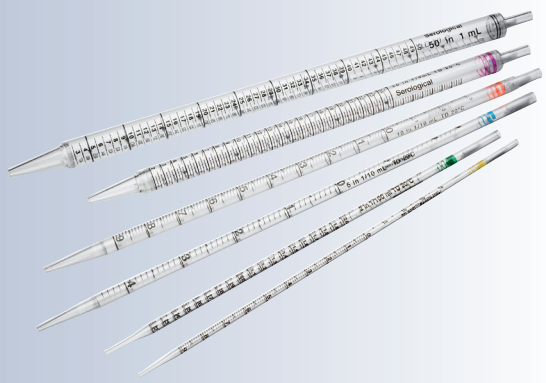
Colour	Material	Code	pcs./bag	pcs./case
natural	LD-PE	BOE 01.624.0100	1000	20.000
blue	LD-PE	BOE 01.624.0101	1000	20.000
red	LD-PE	BOE 01.624.0102	1000	20.000
yellow	LD-PE	BOE 01.624.0103	1000	20.000
green	LD-PE	BOE 01.624.0104	1000	20.000



DISPOSABLE PASTEUR PIPETTES
LD-PE

Cat. No.	Type	pcs./box	pcs./case
BOE 9640001	1,0 ml, graduated, 150 mm, non-sterile	500	5.000
BOE 9640003	3,0 ml, Macro graduated, 150 mm, non-sterile	500	5.000





STERILE DISPOSABLE SEROLOGICAL PIPETTES

With hydrophobic polyester stopper.
Volumetric Accuracy ±2% (±3% for 1 & 2ml) as by ASTM E394/ISO 12771
Non pyrogenic, non cytotoxic,
DNase/RNase free, BSE/TSE free
Individually wrapped in paper/plastic peel pack.
Gammasterile as by requirements of ANSI/AAMI/ISO 11137

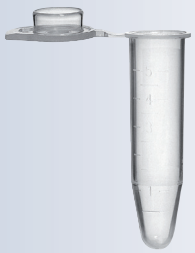
Vol.	Increm.	Color Code	Code	pcs. /bag	pcs. /case
1 ml	1/0,01 ml	yellow	BOE 357770	100	1000
2 ml	1/0,01 ml	green	BOE 357771	100	1000
5 ml	1/0,10 ml	blue	BOE 357772	50	200
10 ml	1/0,10 ml	red	BOE 357773	50	200
25 ml	1/0,25 ml	magenta	BOE 357774	50	200
50 ml	1/1,00 ml	black	BOE 357775	25	100



CONICAL CENTRIFUGE TUBES, PP

„BOECO Germany“ with blue screw cap, printed graduation and writing surface, free of RNA, DNA, RNase, DNase, Pyrogen, Endotoxin.
Gammasterile.
Max centrifugation: 15 ml tubes up to 17,000 RCF
50 ml tubes up to 20,000 RCF

Vol.	Size	Code	pcs./bag	pcs./case
15 ml	17x120	BOE 9640015	25	500
50 ml	30x115	BOE 9640050	25	500



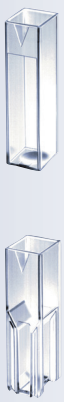
MICRO CENTRIFUGE TUBES

PP, attached cap, natural, graduated, with writing area,
max. RCF 25,000 g, autoclavable at 121°C
Free of any detectable human DNA, DNase, RNase and PCR-inhibitors.

Capacity	Sterility	Code	pcs./bag	pcs./case
5,0 ml	nonsterile	BOE 04-252-1000	200	4.000
5,0 ml	sterile R	BOE 04-252-9000	200	4.000

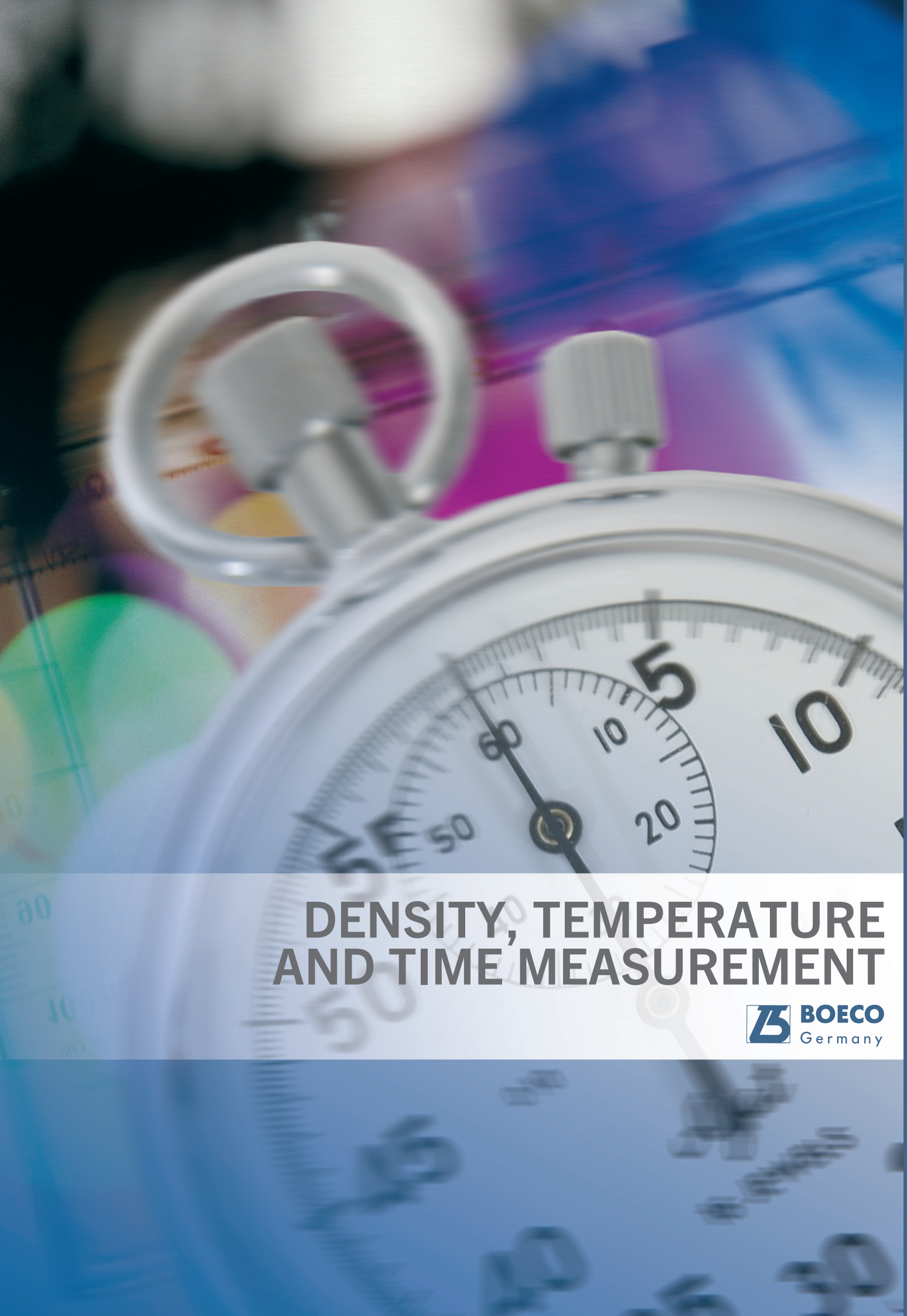
MACRO

SEMI-MICRO



DISPOSABLE CUVETTES

Code	Description
BRA 759007	Disposable Macro Cuvettes, PS, Window: 10 x 35 mm, 10 mm light path Filling volume: min 2,5 / max 4,5 ml grouped by mold cavity number, neutral packing Wavelength: from 340 to 900 nm Packing: 100 pcs./box, 1000 pcs./carton
BRA 759017	Disposable Semi-Micro Cuvettes, PS, Window: 4,5 x 23 mm, 10 mm light path Filling volume: min 1,5 / max 3,0 ml grouped by mold cavity number, neutral packing Wavelength: from 340 to 900 nm Packing: 100 pcs./box, 1000 pcs./carton



DENSITY, TEMPERATURE AND TIME MEASUREMENT

BOECO
Germany

BOECO HYDROMETERS



BOE 6707

DENSITY HYDROMETERS

without thermometer, reference temperature 20°C (27,5°C upon request)
Nominal range 0.100 g/cm³ devided in 0,001

Range g/cm³	mm	Code
0.600-0.700	300	BOE 6700
0.700-0.800	300	BOE 6701
0.800-0.900	300	BOE 6702
0.900-1.000	300	BOE 6703
1.000-1.100	300	BOE 6704
1.100-1.200	300	BOE 6705
1.200-1.300	300	BOE 6706
1.300-1.400	300	BOE 6707
1.400-1.500	300	BOE 6708
1.500-1.600	300	BOE 6709
1.600-1.700	300	BOE 6710
1.700-1.800	300	BOE 6711
1.800-1.900	300	BOE 6712
1.900-2.000	300	BOE 6713
2.000-2.100	300	BOE 6714



BOE 6960

DENSITY HYDROMETERS

without thermometer, reference temperature 20°C (27,5°C upon request)
Nominal range 0.200 g/cm³ devided in 0,002

Range g/cm³	mm	Code
0.600-0.800	320	BOE 6960
0.800-1.000	280	BOE 6961
1.000-1.200	280	BOE 6962
1.200-1.400	280	BOE 6963
1.400-1.600	280	BOE 6964
1.600-1.800	280	BOE 6965
1.800-2.000	280	BOE 6966

DENSITY HYDROMETERS

without thermometer, reference temperature 20°C (27,5°C upon request)
Nominal range 0.300/0.400/0.500 g/cm³ devided in 0,005

Range g/cm³	mm	Code
0.700-1.000	320	BOE 7000
1.000-1.300	280	BOE 7001
1.300-1.600	280	BOE 7002
1.000-1.500	280	BOE 7004
1.500-2.000	280	BOE 7005
2.000-2.500	280	BOE 7040
2.500-3.000	280	BOE 7041
3.000-3.500	280	BOE 7042
3.500-4.000	280	BOE 7043

UNIVERSAL-DENSITY HYDROMETERS

without thermometer, reference temperature 20°C (27,5°C upon request)

Range g/cm³	mm	Code
0.700-2.000	330	BOE 7020
1.000-2.000	280	BOE 7021

UNIVERSAL-HYDROMETERS AND BAUMÉ-SCALE

without thermometer, reference temperature 20°C (27,5°C upon request)

Range g/cm³	mm	Code
0.700-2.000	330	BOE 7019
1.000-2.000	280	BOE 7022

ASTM E100 HYDROMETERS

Specific gravity 82H-90H
Nominal range 0.50/0.0005
Temp. 60/60 °F

Range		mm	Code
0.650-0.700	82H	330	BOE 6150
0.700-0.750	83H	330	BOE 6151
0.750-0.800	84H	330	BOE 6152
0.800-0.850	85H	330	BOE 6153
0.850-0.900	86H	330	BOE 6154
0.900-0.950	87H	330	BOE 6155
0.950-1.000	88H	330	BOE 6156
1.000-1.050	89H	330	BOE 6157
1.050-1.100	90H	330	BOE 6158



BOE 6055

ASTM E100 SOIL-HYDROMETERS

for the determination of particle size distribution in soil
Standard temp. 68/68 °F

Range		mm	Code
0.995-1.038/0,001	151 H	280	BOE 6050
-5 - +60/1	152 H	280	BOE 6055

BRIX-HYDROMETERS

without thermometer, reference temperature 20°C (27,5°C upon request)
Nominal range 10/0,1 Brix

Range °Brix	mm	Code
0-10	260	BOE 1330
10-20	260	BOE 1331
20-30	260	BOE 1332
30-40	260	BOE 1333
40-50	260	BOE 1334
50-60	260	BOE 1335
60-70	260	BOE 1336
70-80	260	BOE 1337
80-90	260	BOE 1338



BOE 4085



BOE 4054

LACTOMETERS

plain form, type Quevenne “Original”
Range 15-40/1,0, reference temperature 20°C (15°C upon request)

Range	mm	Code
15-40	210	BOE 4080

LACTOMETERS

plain form, type Gerber “Original”
Range 1.020-1.040/0.0005
reference temperature 20°C (15°C, 27,5°C upon request)

Range g/ml	mm	Code
1.020-1.040	230	BOE 4054



BOE 2944

ALCOHOLOMETERS

Commercial grade, reference temperature 20°C
Range 0 - 100/1,0

%vol	mm	Code
0-100	265	BOE 2910

ALCOHOLOMETERS

Type Gay-Lussac, 0-35/1,0°C
standard temperature 15°C

Range %vol GI	mm	Code
0-100	265	BOE 2944

ALCOHOLOMETERS

Type Richter + Tralles
standard temperature 20°C

%vol %mas	mm	Code
0-100	265	BOE 2940



BOE 2940

ALCOHOLOMETERS EC CLASS II

standard temperature 20°C
Nominal range 10% / 0,1% vol.

Range %vol	mm	Code
00-10	360	BOE 2610
10-20	360	BOE 2611
20-30	360	BOE 2612
30-40	360	BOE 2613
35-45	260	BOE 2620
40-50	360	BOE 2614
50-60	360	BOE 2615
60-70	360	BOE 2616
70-80	360	BOE 2617
80-90	360	BOE 2618
90-100	360	BOE 2619

BAUMÉ-HYDROMETERS

plain form, without thermometer, nominal range 10/1,0
reference temperature 20°C (15°C, 27,5°C upon request)

Range °Be	mm	Code
00-10	220	BOE 1810
10-20	220	BOE 1811
20-30	220	BOE 1812
30-40	220	BOE 1813
40-50	220	BOE 1814
50-60	220	BOE 1815
60-70	220	BOE 1816

BAUMÉ-HYDROMETERS

plain form, without thermometer, nominal range 10/0,1
reference temperature 20°C (15°C, 27,5°C upon request)

Range °Be	mm	Code
00-10	280	BOE 1830
10-20	280	BOE 1831
20-30	280	BOE 1832
30-40	280	BOE 1833
40-50	280	BOE 1834
50-60	280	BOE 1835
60-70	280	BOE 1836



BOE 1831

BAUMÉ-HYDROMETERS

plain form, without thermometer, Nominal range 20/1,0
reference temperature 20°C (15°C, 27,5°C upon request)

Range °Be	mm	Code
00-20	240	BOE 1980
20-40	240	BOE 1981
40-60	240	BOE 1982
10-30	240	BOE 1985
30-50	240	BOE 1986
50-70	240	BOE 1987

BAUMÉ-HYDROMETERS

plain form, without thermometer, nominal range 20/0,1
reference temperature 20°C (15°C, 27,5°C upon request)

Range °Be	mm	Code
00-20	330	BOE 2030
20-40	330	BOE 2031
40-60	330	BOE 2032
10-30	330	BOE 2035
30-50	330	BOE 2036
50-70	330	BOE 2037

BAUMÉ-HYDROMETERS

plain form, without thermometer, range finder,
reference temperature 20°C (15°C, 27,5°C upon request)
Nominal range / 1,0

Range °Be	mm	Code
00-50	250	BOE 2115
00-70	250	BOE 2126

LABORATORY TIMER



MECHANICAL TIMER

0-60 min, sec. alarm, housing colour white/blue

Code

BOE 124



BOECO DIGITAL STOPWATCH

waterproof,
Stopwatch precision 1/100 seconds first 30 min, 1 sec. up to max 24 h,
2 splits memory
Chronograph up to 23 hours, 59 minutes, 59,99 seconds
Calendar shows day, week, month and year
Daily alarm, hourly chime and snooze function
Time shows second, minute, hour, AM/PM & 12/24 switch
With batteries (button cells, 2pcs)

Code

BOE 260



DIGITAL TIMER

Count down 99 min., 59 sec., alarm when countdown reaches
“zero”, magnet, silver, with battery (1 pc. button cell SR 44 1,5 V)

Code

BOE 200



BOECO DIGITAL TIMER

Count down/up timer, 99 min. 59 sec. alarm when countdown reaches
“zero”, magnet, blue, with battery (AAA, 1 pc.)

Code

BOE 210

BOECO DIGITAL TIMER, JUMBO DISPLAY



82 x 68 x 20,5 mm
count up/ count down timer 23 hours, 59 min., 59 sec.
Clock (12h format)
Reminder: sound and flashing light
Casing material: ABS plastic
Fixed Support: Magnet + stand + hanging role
Battery: 2 pcs. AAA

Code
BOE 270

BOECO 2-LINE DIGITAL TIMER, JUMBO DISPLAY



92 x 79 x 21 mm
Display size: 60 x 40 mm
count up/ count down timer 99 hours, 59 min., 59 sec.
2 channels timer, stopwatch function with flashing light
Casing material: ABS plastic
Fixed support: magnet + stand + hanging hole
Battery: 2 pcs. AAA

Code
BOE 280

BOECO 3-LINE DIGITAL TIMER, JUMBO DISPLAY



3 channels digital timer
88,7 x 68 x 16,2 mm
Alarm and flashing when countdown reaches „zero“
Clock (12h format)
Clip for hanging and standing,
magnet with battery (2 x AAA, 1,5 V)

Code
BOE 290

THERMOMETERS



DIAL BIMETAL POCKET THERMOMETER

Measuring range: - 10°C to + 100°C / 1°C
Measuring probe st.steel, 125 mm and protective plastic sleeve

Code
BOE 316



DIGITAL POCKET THERMOMETER

Measuring range: - 50°C to + 300°C / 0,1°C
Measuring probe st.steel, 120 mm and protective plastic sleeve
Min/Max memory, Measuring time 1 or 10 sec.
Selectable °C/°F, with battery (button cell, 1 pc.)

Code
BOE 310



DIGITAL WATERPROOF THERMOMETER

Pocket size, with easy to read Jumbo Display
Measuring range: - 50°C to + 300°C
Accuracy: ± 1°C in the range of -30° till +150°, otherwise ± 2°C
Visible 115 mm stainless steel piercing sensor probe
IP67 waterproof.
Alarm at high-/low temperature
Max/Min (°C) Memory recalling. One hour auto shut-off
With battery (button cell, 1 pc.)

Code
BOE 311



DIGITAL WATERPROOF THERMOMETER

Measuring range: - 50°C to + 300°C
Resolution: ± 0,1°C for 19,9° till +199,9°, otherwise 1°C
Accuracy: ± 1°C in the range of 151°C till + 250°C, otherwise ± 2°C.
130 mm stainless steel temperature sensor probe, with 1 metre wire, alarm at high-/low temperature
Selectable °C/°F, Max/Min (°F/°C) memory recalling without auto shutt-off
suitable for overnight Max/Min measurements IPX5 waterproof
With battery (button cell, 1 pc.)

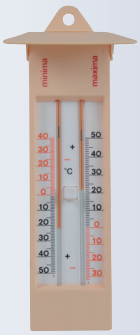
Code
BOE 305

MAX/MIN THERMOMETER

MAXIMA/MINIMA THERMOMETER

mercury free
Measuring range: -30ºC to + 50ºC
with push button for automatic resetting
Ivory coloured plastic housing with removable top shield and eyelet for wall mounting
Size: 230 x 55 mm

Code
BOE 23940



DIGITAL MAX/MIN THERMOMETER

Display with current temperature, minimum temperature and maximum temperature
Indoor/outdoor minimum and maximum temperature measurement
Temperature measuring range:
Indoor: -5ºC to + 50ºC (+23ºF to +122ºF)
Outdoor: -50ºC to + 70ºC (-58ºF to +158ºF)
With sensor probe for outdoor minimum and maximum temperature measurement
Supplied with wire holder for fixing sensor probe on wall
Table standing and hanging features
Size: 66 x 68 x 21 mm (L x W x H)
Battery: 1 x button cell

Code
BOE 325



DIGITAL JUMBO MAX/MIN THERMOMETER

°F/°C, Max/Min (°F/°C) memory
Instant reading of Max/Min temperature record or High/low alarm setting
Alerting alarm beeps and flashing symbol displays when temperature reaches/beyond the pre-set limit
Jumbo LCD Display with digit height 35 mm
Flip out stand and hanging hole at the back oft the unit

Measuring range:	-50°C to +70°C or -58°F to +158°F
Accuracy:	1°C or ±1,8°F in the range of 0°C to +50°C or 32°F to +122 °F otherwise more than ±1°C or ±1,8°F
Resolution:	0,1° for the whole range
Ambient temp. for the plastic case:	0°C till +50°C or 32°F till +122°F
External sensor:	3m sensor wire with probe (22,5 x ø 5,5 mm) for outdoor temperature measurement
Size:	120 x 110 x 25 mm
Battery:	1 x AAA (1,5 VDC) battery incl.

Code
BOE 328



THERMO-HYGROMETERS



BOECO DIGITAL MAX/MIN THERMO HYGROMETER

Current Indoor and Outdoor temperature
and indoor humidity in the display
Indoor/Outdor min. / max. measurement by pressing the MAX./MIN key

Measuring range:
IN: 0°C to + 50°C / 1°C (+32°F to 122°F)
OUT: - 50°C to + 70°C / 1°C (-58°F to +158°F)
Indoor hygro range: 20 to 98 RH / ± 5%
Supplied with 1,5 m cable sensor probe for outdoor min.
and max temp. measurement
Size: 123 x 70 x 20 mm
Battery: 1 x AAA (1,5 VDC) battery included

Code
BOE 326



DIGITAL THERMO- / HYGROMETER

Dual LCD display with indoor temp. and relative
indoor humidity at the same time.
Measuring range:
Indoor temp.: 0°C to + 50°C /1°C
Rel. humidity indoor: 25% to 95%/1%
with battery (AAA, 1pc.)

Code
BOE 330



BOECO DIGITAL THERMO-HYGROMETER & CLOCK

Display Indoor Temperature and Humidity, Outdoor temperature
record the maximum and minimum temperature and humidity
°C and °F switch
Freeze alert from -1°C to +4°C

Temperature measuring range:
Indoor: -10 to + 50°C (+14 to +122 °F)
Outdoor: -5 to + 70°C (-58 to + 158°F)

Humidity measuring range:
20 – 99 %RH

Accurarcy:
± 1°C,
± 10% RH

1 x battery (AAA) incl.

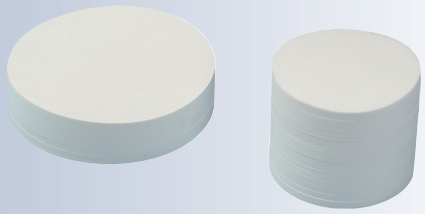
Code
BOE 327



LABORATORY FILTER PAPER

BOECO Germany

BOECO FILTER PAPER



QUANTITATIVE FILTERS

quantitative ashless filter papers are recommended for quantitative analysis. As quantitative analysis requires a high purity, these filters are being washed out with acid

388 - black spot - fast filtering, wide pores, ashless hardened

For coarse and voluminous precipitates such as iron-aluminium and chromium hydroxide, Si-determination in steel and pig iron analysis

Basis weight:	84 g/m^2
Filtration velocity:	10 ml / 10 seconds
Typical pore size:	12 - 15 µm
Similar to:	S&S 589/1, M-N 640w

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.101.055	388 / Filter discs. Black dot	100
70 mm	FTR 3.101.070	388 / Filter discs. Black dot	100
90 mm	FTR 3.101.090	388 / Filter discs. Black dot	100
110 mm	FTR 3.101.110	388 / Filter discs. Black dot	100
125 mm	FTR 3.101.125	388 / Filter discs. Black dot	100
150 mm	FTR 3.101.150	388 / Filter discs. Black dot	100
185 mm	FTR 3.101.185	388 / Filter discs. Black dot	100
240 mm	FTR 3.101.240	388 / Filter discs. Black dot	100



389 - white spot - medium fast filtering, medium wide pores, ashless hardened

Typical grade for quantitative tasks, coarser precipitates, such as lead-, iron and silver sulphide alcali carbonates, food stuff and soil analysis

Basis weight:	84 g/m^2
Filtration velocity:	10 ml / 20 seconds
Typical pore size:	8 - 12 µm
Similar to:	Whatman 41, S&S 589/2, M-N 640m

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.102.055	389 / Filter discs. White dot	100
70 mm	FTR 3.102.070	389 / Filter discs. White dot	100
90 mm	FTR 3.102.090	389 / Filter discs. White dot	100
110 mm	FTR 3.102.110	389 / Filter discs. White dot	100
125 mm	FTR 3.102.125	389 / Filter discs. White dot	100
150 mm	FTR 3.102.150	389 / Filter discs. White dot	100
185 mm	FTR 3.102.185	389 / Filter discs. White dot	100
240 mm	FTR 3.102.240	389 / Filter discs. White dot	100

392 - red spot - medium to slowly filtering, medium tight, ashless hardened

Fast filtration of fine precipitates such as calcium oxalate, magnesium ammonium phosphate, coarser forms of barium sulphate

Basis weight	84 g/m^2
Filtration velocity:	10 ml / 50 seconds
Typical pore size:	5 - 8 µm
Similar to	Whatman 43, S&S 589/5, M-N 640md

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.105.055	392 / Filter discs. Red dot	100
70 mm	FTR 3.105.070	392 / Filter discs. Red dot	100
90 mm	FTR 3.105.090	392 / Filter discs. Red dot	100
110 mm	FTR 3.105.110	392 / Filter discs. Red dot	100
125 mm	FTR 3.105.125	392 / Filter discs. Red dot	100
150 mm	FTR 3.105.150	392 / Filter discs. Red dot	100
185 mm	FTR 3.105.185	392 / Filter discs. Red dot	100
240 mm	FTR 3.105.240	392 / Filter discs. Red dot	100

390 - green spot - slowly filtering, narrow pores, ashless hardened

Filtration of fine precipitates such as lead dioxide, calcium fluoride nickel sulphide, zinc sulphide

Basis weight: 84 g/m²
Filtration velocity: 10 ml / 100 seconds
Typical pore size: 3 - 5 µm
Similar to: Whatman 40, S&S 589/6, M-N 640d



Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.103.055	390 / Filter discs. Green dot	100
70 mm	FTR 3.103.070	390 / Filter discs. Green dot	100
90 mm	FTR 3.103.090	390 / Filter discs. Green dot	100
110 mm	FTR 3.103.110	390 / Filter discs. Green dot	100
125 mm	FTR 3.103.125	390 / Filter discs. Green dot	100
150 mm	FTR 3.103.150	390 / Filter discs. Green dot	100
185 mm	FTR 3.103.185	390 / Filter discs. Green dot	100
240 mm	FTR 3.103.240	390 / Filter discs. Green dot	100

391 - blue spot - very slowly filtering, fine pores, ashless hardened

Fine-grained precipitates such as barium sulphate, metannic acid, cupros oxide

Basis weight: 84 g/m²
Filtration velocity: 10 ml / 180 seconds
Typical pore size: 2 - 3 µm
Similar to: Whatman 44, S&S 589/3, M-N 640de



Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.104.055	391 / Filter discs. Blue dot	100
70 mm	FTR 3.104.070	391 / Filter discs. Blue dot	100
90 mm	FTR 3.104.090	391 / Filter discs. Blue dot	100
110 mm	FTR 3.104.110	391 / Filter discs. Blue dot	100
125 mm	FTR 3.104.125	391 / Filter discs. Blue dot	100
150 mm	FTR 3.104.150	391 / Filter discs. Blue dot	100
185 mm	FTR 3.104.185	391 / Filter discs. Blue dot	100
240 mm	FTR 3.104.240	391 / Filter discs. Blue dot	100

393 - purple spot - particularly slow filtering, especially fine pores, ashless hardened

For extremely difficult filtration conditions and particularly fine precipitates

Basis weight: 100 g/m²
Filtration velocity: 10 ml / 250 seconds
Typical pore size: 1 - 2 µm
Similar to: Whatman 42

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.127.055	393 / Filter discs. Purple dot	100
70 mm	FTR 3.127.070	393 / Filter discs. Purple dot	100
90 mm	FTR 3.127.090	393 / Filter discs. Purple dot	100
110 mm	FTR 3.127.110	393 / Filter discs. Purple dot	100
125 mm	FTR 3.127.125	393 / Filter discs. Purple dot	100
150 mm	FTR 3.127.150	393 / Filter discs. Purple dot	100
185 mm	FTR 3.127.185	393 / Filter discs. Purple dot	100
240 mm	FTR 3.127.240	393 / Filter discs. Purple dot	100

QUALITATIVE FILTERS

Grade 1288 - wide-pored, spongy structure, soft, very high rate of filtration

coarse-flocculent and bulky precipitates, in particular hydroxides of iron, aluminium and chromium, sulphides of copper, bismuth, cobalt and iron, various organic metal precipitates,
determination of silicon in the analysis of steel and pig iron, etc.

Basis weight	84 g/m^2
Filtration velocity:	10 ml / 10 seconds
Typical pore size:	12 - 15 µm
Similar to:	Whatman 4, S&S 604, M-N 617

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.206.055	1288 / Filter discs.	100
70 mm	FTR 3.206.070	1288 / Filter discs.	100
90 mm	FTR 3.206.090	1288 / Filter discs.	100
110 mm	FTR 3.206.110	1288 / Filter discs.	100
125 mm	FTR 3.206.125	1288 / Filter discs.	100
150 mm	FTR 3.206.150	1288 / Filter discs.	100
185 mm	FTR 3.206.185	1288 / Filter discs.	100
240 mm	FTR 3.206.240	1288 / Filter discs.	100

Grade 1289 - plain, medium wide pores, medium fast

commonly used grade for analytical work, coarser precipitates like sulphides of silver, arsenic, antimony, cadmium, lead, iron and magnes, lead chromate, ammonium molybdate, alkaline earth carbonates etc.

Basis weight	84 g/m^2
Filtration velocity:	10 ml / 20 seconds
Typical pore size:	8 - 12 µm
Similar to:	S&S 597, M-N 616

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.207.055	1289 / Filter discs.	100
70 mm	FTR 3.207.070	1289 / Filter discs.	100
90 mm	FTR 3.207.090	1289 / Filter discs.	100
110 mm	FTR 3.207.110	1289 / Filter discs.	100
125 mm	FTR 3.207.125	1289 / Filter discs.	100
150 mm	FTR 3.207.150	1289 / Filter discs.	100
185 mm	FTR 3.207.185	1289 / Filter discs.	100
240 mm	FTR 3.207.240	1289 / Filter discs.	100

Grade 1291 - fine pored, very dense, very low rate of filtration

fine-grained precipitates cold-precipitated barium sulphate, meta-stannic acid

Basis weight	84 g/m^2
Filtration velocity:	10 ml / 180 seconds
Typical pore size:	2 - 3 µm
Similar to:	S&S 602 h, M-N 619 de

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.209.055	1291 / Filter discs.	100
70 mm	FTR 3.209.070	1291 / Filter discs.	100
90 mm	FTR 3.209.090	1291 / Filter discs.	100
110 mm	FTR 3.209.110	1291 / Filter discs.	100
125 mm	FTR 3.209.125	1291 / Filter discs.	100
150 mm	FTR 3.209.150	1291 / Filter discs.	100
185 mm	FTR 3.209.185	1291 / Filter discs.	100
240 mm	FTR 3.209.240	1291 / Filter discs.	100

Grade 292 - medium to slowly filtering, medium tight

fast filtration of fine precipitates such as calcium oxalate, magnesium ammonium phosphate, coarser forms of barium sulphate

Basis weight 87 g/m^2
Filtration velocity: 10 ml / 45 seconds
Typical pore size: 5 - 8 µm
Similar to: Whatman 1, S&S 593, M-N 616 md



Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.205.055	292 / Filter discs.	100
70 mm	FTR 3.205.070	292 / Filter discs.	100
90 mm	FTR 3.205.090	292 / Filter discs.	100
110 mm	FTR 3.205.110	292 / Filter discs.	100
125 mm	FTR 3.205.125	292 / Filter discs.	100
150 mm	FTR 3.205.150	292 / Filter discs.	100
185 mm	FTR 3.205.185	292 / Filter discs.	100
240 mm	FTR 3.205.240	292 / Filter discs.	100

Grade 292a - slowly filtering, narrow pores

filtration of fine precipitates such as lead dioxide, calcium fluoride, nickel sulphide, zinc sulphide

Basis weight 97 g/m^2
Filtration velocity: 10 ml / 60 seconds
Typical pore size: 5 - 8 µm
Similar to: Whatman 2, S&S 2095

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.215.055	292a / Filter discs.	100
70 mm	FTR 3.215.070	292a / Filter discs.	100
90 mm	FTR 3.215.090	292a / Filter discs.	100
110 mm	FTR 3.215.110	292a / Filter discs.	100
125 mm	FTR 3.215.125	292a / Filter discs.	100
150 mm	FTR 3.215.150	292a / Filter discs.	100
185 mm	FTR 3.215.185	292a / Filter discs.	100
240 mm	FTR 3.215.240	292a / Filter discs.	100

GENERAL PURPOSE, QUALITATIVE-TECHNICAL FILTERS

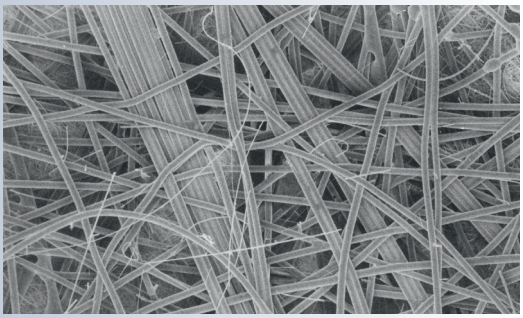
Grade 3 hw - medium rate of filtration, increased wet strength, plain

This paper grade is generally used for analytical and technical purposes, as clarification, analytical sample preparation, particle analysis

Basis weight 65 g/m^2
Filtration velocity: 10 ml / 20 seconds
Typical pore size: 8 - 12 µm
Similar to: Whatman Student Grade, S&S 595, 3002 M-N 615

Diam.	Code	Grade/Description	Pack of
55 mm	FTR 3.303.055	3 hw / Filter discs.	100
70 mm	FTR 3.303.070	3 hw / Filter discs.	100
90 mm	FTR 3.303.090	3 hw / Filter discs.	100
110 mm	FTR 3.303.110	3 hw / Filter discs.	100
125 mm	FTR 3.303.125	3 hw / Filter discs.	100
150 mm	FTR 3.303.150	3 hw / Filter discs.	100
185 mm	FTR 3.303.185	3 hw / Filter discs.	100
240 mm	FTR 3.303.240	3 hw / Filter discs.	100

GLASS MICROFIBRE FILTERS



MICRO-GLASS FIBRE FILTERS BINDER FREE UNDER A RASTER ELECTRON MICROSCOPE

Grade MGA

Highly efficient for general laboratory filtration, clarification of buffer and reagent solutions corresponds to many international standards for air and water pollution monitoring

Basis weight	52 g/m^2
Thickness	0,25 mm
Particle retention in liquids:	1,6 µm
Pressure drop:	33 mbar (a=10 m2, flow velocity 40 cm/sec.)
Finish:	binder-free
Similar to:	Whatman GF/A, S&S GF 50, M-N GF 1

Diam.	Code	Grade/Description	Pack of
25 mm	FTR 3.1101.025	MGA / Glass Microfibre discs.	100
47 mm	FTR 3.1101.047	MGA / Glass Microfibre discs.	100
50 mm	FTR 3.1101.050	MGA / Glass Microfibre discs.	100
55 mm	FTR 3.1101.055	MGA / Glass Microfibre discs.	100
70 mm	FTR 3.1101.070	MGA / Glass Microfibre discs.	100
90 mm	FTR 3.1101.090	MGA / Glass Microfibre discs.	100
100 mm	FTR 3.1101.100	MGA / Glass Microfibre discs.	100
110 mm	FTR 3.1101.110	MGA / Glass Microfibre discs.	100
125 mm	FTR 3.1101.125	MGA / Glass Microfibre discs.	100
150 mm	FTR 3.1101.150	MGA / Glass Microfibre discs.	100
180 mm	FTR 3.1101.180	MGA / Glass Microfibre discs.	100



Grade MGC

Standard filter for the clarification and monitoring of waste water and water, scintillation counting on the filter, cell harvesting, hydrocarbon analysis where cellulose fibres a nuisance as by DIN EN 872

Basis weight	52 g/m^2
Thickness	0,26 mm
Particle retention in liquids:	1,2 µm
Pressure drop:	54 mbar (a=10 m2, flow velocity 40 cm/sec.)
Finish:	binder-free
Similar to:	Whatman GF/C, S&S GF 52, M-N GF 3

Diam.	Code	Grade/Description	Pack of
25 mm	FTR 3.1103.025	MGC / Glass Microfibre discs.	100
47 mm	FTR 3.1103.047	MGC / Glass Microfibre discs.	100
50 mm	FTR 3.1103.050	MGC / Glass Microfibre discs.	100
55 mm	FTR 3.1103.055	MGC / Glass Microfibre discs.	100
70 mm	FTR 3.1103.070	MGC / Glass Microfibre discs.	100
90 mm	FTR 3.1103.090	MGC / Glass Microfibre discs.	100
100 mm	FTR 3.1103.100	MGC / Glass Microfibre discs.	100
110 mm	FTR 3.1103.110	MGC / Glass Microfibre discs.	100
125 mm	FTR 3.1103.125	MGC / Glass Microfibre discs.	100
150 mm	FTR 3.1103.150	MGC / Glass Microfibre discs.	100
180 mm	FTR 3.1103.180	MGC / Glass Microfibre discs.	100

CELLULOSE EXTRACTION THIMBLES

for Soxhlet extraction

Grade 30

extraction thimbles made of cellulose, are perfect sample reservoirs for Soxhlet extraction in quality control, research and/or analysis. Solvent extraction from solids and semi-solids can be carried out easily and reliably. The thimbles fit Soxhlet extractors and automatic extractors.



Material	Cellulose
Shape	hollow cylinders with round bottom
Max. temp. res.:	120 °C

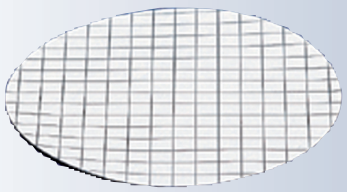
ID x H	Code	Grade/Description	Pack of
22 x 80 mm[1.]	FTR 1201.022080	30/extraction thimbles	25
25 x 80 mm	FTR 1201.025080	30/extraction thimbles	25
25 x 100 mm[1.]	FTR 1201.025100	30/extraction thimbles	25
26 x 60 mm[3.]	FTR 1201.026060	30/extraction thimbles	25
28 x 22 mm[4.]	FTR 1201.028022	30/extraction thimbles	25
30 x 80 mm	FTR 1201.030080	30/extraction thimbles	25
33 x 80 mm[2.,3.,5.]	FTR 1201.033080	30/extraction thimbles	25
33 x 94 mm[1.]	FTR 1201.033094	30/extraction thimbles	25
33 x 118 mm	FTR 1201.033118	30/extraction thimbles	25
43 x 123 mm[1.]	FTR 1201.043123	30/extraction thimbles	25

1. fits Büchi B-811
2. fits Gerhardt Soxterm Automatic
3. fits Foss Tecator System
4. fits Foss Soxtec 2050
5. fits Velp Extractors SER 148

GRIDDED MEMBRANE FILTERS

Sartorius® brand

Sterile, individually packed membrane filters have long become standard for routine microbiological quality control because of the user benefits they offer. They are ready-to-use and save preparatory time, they avoid the possibility of contamination of remaining filters in opened packs and are GLP conform, having filter identification and lot number printed on each individual envelope.



Material:	Cellulose nitrate, white with black grid
Reaction to water:	Hydrophilic
Grid size:	3,1 x 3,1 mm
Pore size:	**0,45 micron**
Diameter:	47 mm
Presentation:	Sterile, individually packed

Diam.	Code	Pack of
47 mm	SAR 11406-47ACR	1000 (10 x 100)

Material:	Cellulose nitrate, white with black grid
Reaction to water:	Hydrophilic
Grid size:	3,1 x 3.1 mm
Pore size:	**0,2 micron**
Diameter:	47 mm
Presentation:	Sterile, individually packed

Diam.	Code	Pack of
47 mm	SAR 11407-47ACR	1000 (10 x 100)





SYRINGE FILTERS

Sartorius® brand

Cellulose acetate syringe filters are used for the filtration of volumes up to 100 ml. The syringe filters units are ideal for applications requiring maximum sample recovery such as: Tissue culture preparation, sterile filtration and clarification of biological fluids, specimen solutions, protein and enzyme filtration, hybridization buffers and other aqueous solutions.

Specification:

Pore size	0,20 µm	0,45 µm
Color code	blue	yellow
Membrane	Cellulose Acetate	
Housing	Cyrolite	
Diameter	28 mm	
Filter aerea	6,2 cm^2	
Idle Volume	0,1 ml	
Bubble Point	3,2 bar	1,6 bar
Max. Pressure	4,5 bar	
Burst Strength	6 bar	
Max. temperature	50 °C	
Flow Rate (water)	60 ml/min	180 ml/min
Hydrophilic	yes	
Inlet	Luer lock	
Outlet	Luer lock	
Presentation	sterile, individually packed	

Pore size	Code	Color Code	Pack of
0,20 µm	SAR 16534-K	blue	50
0,45 µm	SAR 16555-K	yellow	50

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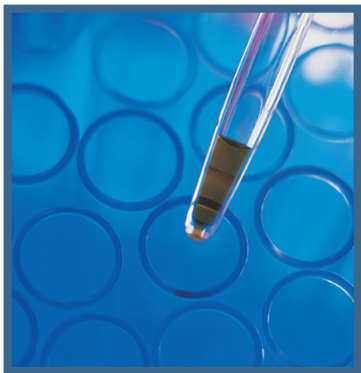
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Germany







LIQUID HANDLING

LABORATORY EQUIPMENT

OPTICAL INSTRUMENTS

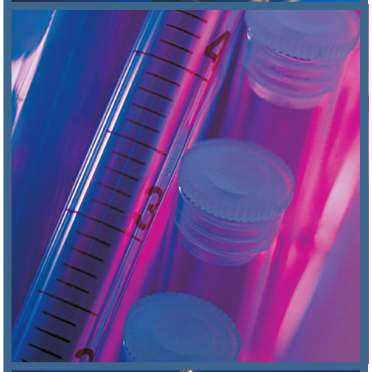
LABORATORY GLASSWARE

LABORATORY PLASTICWARE

DENSITY, TEMPERATURE AND TIME MEASUREMENT

LABORATORY FILTER PAPER







YOUR WORLDWIDE PARTNER IN THE LABORATORY

CATALOGUE 2024 – 2026

We reserve the right to make changes in technical specification.

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