Inspired Solutions
for your Laboratory

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medline scientific

Inspired Solutions for your Laboratory

Welcome to the latest Medline Scientific core product catalogue.

Medline Scientific has been supplying specialist laboratory and scientific equipment to medical, clinical, college/university, pharmaceutical, food & drink research and industrial laboratories since 1992.

Based in Oxfordshire, our mission is to support scientific innovation by providing a wide range of high-quality equipment, consumables and services to laboratories across the country. Our comprehensive portfolio includes our own brand products offering our customers unrivalled price and performance. We also work with market-leading brands and manufacturers to provide our customers with the latest equipment and consumables.

Our products are chosen based on their known quality, reliability and value. All instruments are CE and ISO accredited, produced and tested

to the most stringent regulations. Medline Scientific is an ISO accredited company, which ensures our business processes and standards are maintained to the highest levels.

Quality System approved to ISO9001:2015 Environmental System Approved to ISO14001:2015

With over 20 years' experience as a laboratory equipment supplier, we take great pride in offering our customers the best advice in our industry – so whether you are looking for a competitively priced brand leading product or quality alternatives, we are confident that we will be able to provide you with the right solutions for your laboratory.

ISO 9001 CERTIFIED ORGANISATION

URS

UKAS QUALITY MANAGEMENT 043-A

United Registrar of Systems Certificate No. 1930

ORDERING INFORMATION

Please contact our Head Office to request a quote, place an order, or discuss your requirements.

Telephone
+44 (0) 1865 400321

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+44 (0) 1865 400736

Email
sales@medlinescientific.com

For all technical / service enquiries, please contact our Servicing Department on **servicing@medlinescientific.com**

Our office hours are
9am – 5.30pm (Monday – Thursday)
9am – 4.30pm (Friday)

Alternatively, please visit our website:
www.medlinescientific.com

To keep up to date with all of our latest news follow and find us on:

Contents

This publication showcases products from our exclusive distribution partners as well as a selection from some of the best known manufacturers in the industry. Due to space constraints, we are unable to list every product from every supplier in this printed catalogue, so this "wall" of logos serves to highlight the many brands we can offer.

Please visit www.medlinescientific.com for more details.

Consumables

Medline offers a comprehensive range of disposable and reusable plastic products. The following section details some of the most common products which are available from our central UK stocks.

The complete product range is covered by our separate 300 page catalogue (available upon request). This range is targeted at all laboratory disciplines, from microbiology to research applications.

Material Key

F	Foam	**N**	Nitrile	**PET**	Polyethylene Terephthalate	**SS**	Stainless Steel
G	Glass	**P**	Paper	**PMMA**	Polymethyl Methacrylate (Acrylic)	**V**	Vinyl
HDPE	High Density Polyethylene	**PA**	Polyacetyle	**PP**	Polypropylene	**VI**	Viscose
L	Latex	**PE**	Polyethylene	**PS**	Polystyrene	**W**	Wood

Autoanalyser Cups / Cuvettes		Material	Sterility	Qty
302000	4.5ml Macro cuvette, 1cm square	PS	NS	500
302100	1.5ml Semi-micro cuvette, square	PS	NS	500
303100	4.5ml UV Macro cuvette, 1cm square	PMMA	NS	500
303101	2.5ml UV Semi-micro cuvette, 1cm square	PMMA	NS	500
900023	0.25ml Centrifichem sample cup	PS	NS	1000
900024	0.5ml AA cup	PS	NS	1000
900022	1.5ml AA cup	PS	NS	1000
910022	2.0ml Centrifichem sample cup	PS	NS	1000
910023	4.0ml AA cup	PS	NS	1000
900020	2.5ml Hitachi sample cup	PS	NS	1000

Autoclave Bags & Paper Products		Material	Sterility	Qty
200310R	Autoclave bag - 310mm x 660mm, high temp.	PA	NS	200
200311R	Autoclave bag - 415mm x 600mm, high temp.	PA	NS	200
200312R	Autoclave bag - 610mm x 810mm, high temp.	PA	NS	200
MD66201	Specimen bag with document pouch - 140mm x 152mm x 216mm	PE	NS	1000
MD66200	Specimen bag with document pouch, printed biohazard - 140mm x 152mm x 216mm	PE	NS	1000
233039	Yellow clinical waste bag - 762mm x 991mm	PP	NS	100
191050	Ethylene oxide gas indicator tape - 19mm x 50m	P	NS	1
191051	Dry heat (Poupinel) indicator tape - 19mm x 50m	P	NS	1
191052	Autoclave tape - 19mm x 50m	P	NS	1
120001	Post lip paper / slide blotting paper - 89mm x 140mm	P	NS	100
120002	Absorbent bench paper sheets - 500mm x 500mm	P	NS	100
120003	Absorbent bench coat - 500mm x 50m	P	NS	1
120010	Filter paper - 500mm x 500mm	P	NS	100

Consumables

Centrifuge Tubes		Material	Sterility	Qty
409920	15ml Graduated with screw cap (50/bag)	PP/PE	S	500
409920R	15ml Graduated with screw cap (racked)	PP/PE	S	500
429910	15ml Graduated with screw cap (bulk)	PP/PE	S	500
429920	15ml Graduated with screw cap (ind. wrapped)	PP/PE	S	500
409922	50ml Graduated with screw cap (25/bag)	PP/PE	S	500
409922R	50ml Graduated with screw cap (racked)	PP/PE	S	500
429901	50ml Graduated with screw cap (self standing)	PP/PE	S	500

Clinical Waste & Sharps Bins		Material	Sterility	Qty
233039	Yellow clinical waste bag - 762mm x 229mm	PE	NS	100
232025	25L Sharpsafe® container	PP	NS	10
232802	7L Sharpsafe® container	PP	NS	50
244000	4L Sharps container, round	PP	NS	45
240007	7L Sharps container, round	PP	NS	30
240028	25L Sharps container, round	PP	NS	10
240035	30L Waste container, rectangular	PP	NS	1
240065	60L Waste container, rectangular	PP	NS	1

Containers - Specimen Containers		Material	Sterility	Qty
129202	7ml Bijou container, no label	PS	S	700
129205	7ml Bijou container, plain label	PS	S	700
129208	7ml Bijou container with boric acid, printed label	PS	S	700
129209	7ml Bijou container, no label	PP	S	700
309205FL	30ml Universal container with flow seal, printed label	PS	S	400
309202.4F	30ml Universal container, plain label	PS	S	400
309602.E	30ml Universal container with spoon, printed label	PS	S	400
409202	30ml Universal container, no label	PP	S	400
409205FL	30ml Universal container with flow seal, printed label	PP	S	400
409202B	30ml Universal container with boric acid, printed label	PS	S	400
409202BP	30ml Universal container with boric acid, printed label	PP	S	400
409502	60ml Clear container, plastic cap, no label	PP	S	600
409501	60ml Clear container, plastic cap, printed label	PP	S	600
409511	60ml Clear container, plastic cap, dark blue, plain label	PP	S	600

Containers - Specimen Containers		Material	Sterility	Qty
309502	60ml Plastic cap container, no label	PS	S	600
309501	60ml Plastic cap container, printed label	PS	S	600
309502.6	60ml Plastic cap container, plain label	PS	S	600
309501M	60ml Metal cap container, printed label, tray wrapped	PS	S	300
309502M	60ml Metal cap container, no label, tray wrapped	PS	S	300
309601M	100ml Metal cap container, printed label, tray wrapped	PS	S	200
309602M	100ml Metal cap container, no label, tray wrapped	PS	S	200
409711	125ml Clear container, plastic cap, dark blue, plain label	PP	S	450
409702	125ml Clear container, screw cap, plain label	PP	S	450
409752	125ml Clear container screw cap with spoon, plain label	PP	S	450
309702M	150ml Metal cap container, no label, tray wrapped	PS	S	120
309701M	150ml Metal cap container, printed label, tray wrapped	PS	S	120
309752	160ml Container with spoon	PS	S	360
409905	200ml Clear container, plastic cap, light blue, plain label	PP	S	275
409902	200ml Clear container, screw cap, no label	PP	S	275
309801M	250ml Metal cap container, printed label, tray wrapped	PS	S	50
309802M	250ml Metal cap container, no label, tray wrapped	PS	S	50
309803M	250ml Metal cap container, plain label, tray wrapped	PS	S	50
309903	200ml Container, screw cap, no label	PS	NS	300
IMP-200-SD	200ml Container, snap top lid, no label	PP	NS	300

Containers - Graduated, 24 Hour Urine & Sweetie Jars		Material	Sterility	Qty
407000	2.5L 24 Hour urine collection (label optional)	PE	NS	50
407001	2L Graduated container	PE	NS	44
407003	2L Brown graduated container	PE	NS	44
407004	5L 24 Hour urine container (label optional)	PE	NS	25
407005	2.7L Graduated container (label optional)	PE	NS	34
407006	2.7L Brown graduated container	PE	NS	34
870004	1.5L Sweetie jar with cap, small	PET	NS	30
87004H	1.5L Sweetie jar with cap & label, small	PET	NS	30
870036	3.6L Sweetie jar with cap, large	PET	NS	16
870036H	3.6L Sweetie jar with cap & label, large	PET	NS	16

Consumables

Containers - Histology		Material	Sterility	Qty
241010	250ml Snap top bucket, white with lid	PP	NS	1
241011	500ml Snap top bucket, white with lid	PP	NS	1
241013	1000ml Snap top bucket, white with lid	PP	NS	1
222802	2500ml Snap top bucket, white with lid	PP	NS	1
222804	5000ml Snap top bucket, white with lid	PP	NS	1
222805	10,000ml Snap top bucket, white with lid	PP	NS	1
222806	20,000ml Snap top bucket, white with lid	PP	NS	1
202840	20ml Clear container, yellow security cap	PP/PE	NS	1000
202841	40ml Clear container, yellow security cap	PP/PE	NS	600
202842	60ml Clear container, yellow security cap	PP/PE	NS	500
202843	90ml Clear container, yellow security cap	PP/PE	NS	400
202848	90ml Clear container, yellow security cap	PP/PE	NS	300
202844	120ml Clear container, yellow security cap	PP/PE	NS	300
202845	250ml Clear container, yellow security cap	PP/PE	NS	100
202846	500ml Clear container, yellow security cap	PP/PE	NS	200
202847	1000ml Clear container, yellow security cap	PP/PE	NS	100

Dippers		Material	Sterility	Qty
309277	30ml Clear dipper sampler with handle	PS	S	50
309278	30ml Blue dipper sampler with handle	PS	S	50
409277	30ml Clear dipper sampler with handle	PP	S	50
409278	30ml Blue dipper sampler with handle	PP	S	50
309666	100ml Clear dipper sampler with handle	PS	S	50
309688	100ml Blue dipper sampler with handle	PP	S	50
309866	250ml Clear dipper sampler with handle	PP	S	50
309888	250ml Blue dipper sampler with handle	PP	S	50

General Labware - Scoops & Weigh Boats		Material	Sterility	Qty
1911103	5ml White diamond weigh boat	PS	NS	1000
1911104	30ml White diamond weigh boat	PS	NS	500
1911105	100ml White diamond weigh boat	PS	NS	250
1911103SQ	7ml White square weigh boat	PS	NS	1000
1911104SQ	100ml White square weigh boat	PS	NS	1000
1911105SQ	250ml White square weigh boat	PS	NS	1000
191057	10ml Measuring scoop	PE	NS	12
191058	25ml Measuring scoop	PE	NS	12
191060	100ml Measuring scoop	PE	NS	12

General Labware - Special Bottles		Material	Sterility	Qty
202811	30ml Wide mouth screw cap container	PE	NS	100
202810	60ml Wide mouth screw cap container	PE	NS	200
202808	90ml Wide mouth screw cap container	PE	NS	150
202807	200ml Wide mouth screw cap container	PE	NS	150
202803	500ml Wide mouth screw cap container	PE	NS	125
202818	1000ml Wide mouth screw cap container	PE	NS	50
202820	2000ml Wide mouth screw cap container	PE	NS	35

Other sizes are available - please enquire for details

General Labware - Cylinders & Beakers		Material	Sterility	Qty
408025	25ml Graduated cylinder	PP	NS	1
408050	50ml Graduated cylinder	PP	NS	1
408100	100ml Graduated cylinder	PP	NS	1
408250	250ml Graduated cylinder	PP	NS	1
408500	500ml Graduated cylinder	PP	NS	1
481000	1000ml Graduated cylinder	PP	NS	1
482000	2000ml Graduated cylinder	PP	NS	1
409050	50ml Graduated beaker	PP	NS	1
409100	100ml Graduated beaker	PP	NS	1
409250	250ml Graduated beaker	PP	NS	1
409500	500ml Graduated beaker	PP	NS	1
491000	1000ml Graduated beaker	PP	NS	1
492000	2000ml Graduated beaker	PP	NS	1
191637	250ml Wash bottle	PE	NS	1
191638	500ml Wash bottle	PE	NS	1

Gloves		Material	Sterility	Qty
102LP	Powder free gloves, small (6-7)	L	NS	100
102LM	Powder free gloves, medium (7-8)	L	NS	100
102LG	Powder free gloves, large (8-9)	L	NS	100
200VP	Lightly powdered gloves, small (6-7)	V	NS	100
200VM	Lightly powdered gloves, medium (7-8)	V	NS	100
200VG	Lightly powdered gloves, large (8-9)	V	NS	100
402NP	Powder free gloves, small (6-7)	N	NS	100
402NM	Powder free gloves, medium (7-8)	N	NS	100
402NG	Powder free gloves, large (8-9)	N	NS	100

Consumables

Microtubes & Cryovials		Material	Sterility	Qty
409115/4	0.5ml Skirted microtube with cap, RNAse & DNAse free	PP	S	2500
409115/2	1.5ml Non skirted microtube with cap, RNAse & DNAse free	PP	S	2500
409115/6	2ml Skirted microtube with cap, RNAse & DNAse free	PP	S	2500
409115/3	2ml Non skirted microtube with cap, RNAse & DNAse free	PP	S	2500
409220	2ml Skirted microtube without cap	PP	NS	500
409601	Screw cap with O ring, natural	PP	NS	500
409612	Screw cap with O ring, white	PP	NS	500
409603	Screw cap with O ring, orange	PP	NS	500
409604	Screw cap with O ring, red	PP	NS	500
409605	Screw cap with O ring, blue	PP	NS	500
409606	Screw cap with O ring, green	PP	NS	500
409607	Screw cap with O ring, yellow	PP	NS	500
409608	Screw cap with O ring, black	PP	NS	500
409105.1	1.2ml Cryovial, storage to -190°C	PP	S	1000
409106.1	2.0ml Cryovial, storage to -190°C	PP	S	1000
409109	5.0ml Cryovial, storage to -190°C	PP	S	1000

Microcentrifuge Tubes		Material	Sterility	Qty
900117	0.5ml Microcentrifuge tube, clear	PP	NS	1000
4092.1N	0.5ml Microcentrifuge tube, clear RNAse & DNAse free	PP	NS	1000
408002	1.2ml Microcentrifuge tube, clear (strips of 8)	PP	NS	120
4092.2N	1.5ml Microcentrifuge tube, clear	PP	NS	500
200400P	1.5ml Microcentrifuge tube, clear, 'flat top'	PP	NS	500
4092.5N	1.5ml Microcentrifuge tube, clear, 'twist lock'	PP	NS	5000
200401	1.5ml Microcentrifuge tube, yellow	PP	NS	5000
200407	1.5ml Microcentrifuge tube, green	PP	NS	5000
4092.6N	2.0ml Microcentrifuge tube, clear	PP	NS	5000
4092.7N	2.0ml Microcentrifuge tube, clear 'flat-cap'	PP	NS	500

Microscope Slides & Cover Slips - Standard Models		Material	Sterility	Qty
D102222	Rectangular cover slip - 22mm x 22mm	G	NS	10 x 200
D102424	Rectangular cover slip - 24mm x 24mm	G	NS	10 x 200
D102432	Rectangular cover slip - 24mm x 32mm	G	NS	10 x 100
D100001	Plain slide, cut edge	G	NS	50
D100002	Plain slide, ground edge	G	NS	50
D100003	Twin frosted slide, cut edge	G	NS	50
D100004	Twin frosted slide, ground edge	G	NS	50

When it comes to creating tissue slides, laboratory personnel will find the perfect combination of exceptional surface quality and optical clarity in our innovative and specialised slides. The advanced surface technology on our speciality slides, provides an optimal environment needed for tissue adhesion – and ultimately, successful diagnostic capability for a wide range of pathologies. Our dedication to quality and technology helps to provide reliable results within laboratories as they process and deliver multiple slides.

Quality - Superior and robust
- High quality extra plane float glass
- Pre-cleaned slides with superior flatness and no artefacts
- Automated production for increased reproducibility and reliability
- High precision manufacturing under a Quality Management System certified to ISO 9001 and ISO 13485

Reliability - Exceptional performance
- Uniform coating with strong staining results
- Minimal failure rates with best in class performance
- Validated on multiple tissue sample types
- Special packaging to minimise exposure to moisture and dust

Flexibility - Multiple applications
- Core histology, special and advanced staining applications in pathology
- Cytology and haematology based processes
- Trusted performance across all uses

Compatibility - Automation amenable
- Compatible with all major histology equipment including slide printers, cover slippers and stainers
- Integrate well within existing histology workflow and processes
- Provide better process control

Improved patient care - Better diagnosis
- Superior optical clarity for accurate diagnosis
- Increased process reproducibility for consistent result interpretation
- Preserve integrity of all stains and can be archived long-term

Series 1 Advanced Adhesive Slides	
TJ471042241	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, white
TJ471042241C	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, clipped corners, thermal white
TJ471042241T	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, thermal white
TJ471042242	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, yellow
TJ471042243	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, pink
TJ471042244	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, blue
TJ471042245	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, green
TJ471042249	Trajan microscope slides, Series 1 Advanced Adhesive, ground edge 90°, orange
Series 2 Adhesive Slides	
TJ472042491	Trajan microscope slides, (P7611) Series 2 Adhesive, 76 x 26mm, white, frosted
TJ472042492	Trajan microscope slides, (P7612) Series 2 Adhesive, 76 x 26mm, yellow, frosted
TJ472042493	Trajan microscope slides, (P7613) Series 2 Adhesive, 76 x 26mm pink, frosted
TJ472042494	Trajan microscope slides, (P7614) Series 2 Adhesive, 76 x 26mm, blue, frosted
TJ472042495	Trajan microscope slides, (P7615) Series 2 Adhesive, 76 x 26mm, green, frosted
Series 3 Adhesive Slides	
TJ473042491	Trajan microscope slides, (T7611) Series 3 Adhesive, 76 x 26mm, white frosted
TJ473042492	Trajan microscope slides, (T7612) Series 3 Adhesive, 76 x 26mm, yellow, frosted
TJ473042493	Trajan microscope slides, (T7613) Series 3 Adhesive, 76 x 26mm pink, frosted
TJ473042494	Trajan microscope slides, (T7614) Series 3 Adhesive, 76 x 26mm, blue, frosted
TJ473042495	Trajan microscope slides, (T7615) Series 3 Adhesive, 76 x 26mm, green, frosted

Consumables

Microscope Slides & Cover Slips - Cover Slips		Material	Sterility	Qty
TJ471110600	Circular cover slips - Ø6mm	G	NS	1000
TJ471110800	Circular cover slips - Ø8mm	G	NS	1000
TJ471111000	Circular cover slips - Ø10mm	G	NS	1000
TJ471112000	Circular cover slips - Ø20mm	G	NS	1000
TJ471111400	Circular cover slips - Ø14mm	G	NS	1000
TJ471113000	Circular cover slips - Ø30mm	G	NS	1000
TJ471114000	Circular cover slips - Ø40mm	G	NS	1000
TJ471115000	Circular cover slips - Ø50mm	G	NS	1000
TJ471112440M	Auto - specialised non-stick 24mm x 40mm	G	NS	1000
TJ471112450M	Auto - specialised non-stick 24mm x 50mm	G	NS	1000

Other sizes are available - please enquire for details

| Histology Wax	
TJ4810023	Trajan Histology Wax Micro - polymer free paraffin wax supplemented with microcrystalline additive (8 x 1Kg bags)
TJ4810025	Trajan Histology Wax Plus - paraffin wax supplemented with plasticising polymers (8 x 1Kg bags)
TJ4810027	Trajan Histology Wax Plus D - paraffin wax supplemented with plasticising polymers and DMSO (8 x 1Kg bags)
TJ4810031	Trajan Histology Wax Plus - paraffin wax supplemented with plasticising polymers (2 x 5Kg bags)

Davidson Marking System Set	
YBP-2401-P	Davidson Marking System 5-Color Set - 2oz (57ml) bottles with plastic tray Includes 5 x 2oz (57ml) bottles of marking dye (1 ea. of green, yellow, black, red and blue) in a plastic holding tray with 50 applicator sticks and instructions

Individual Dyes	
YBP-3408-1	Davidson Marking System tissue marking dye, 8oz (237ml), green
YBP-3408-2	Davidson Marking System tissue marking dye, 8oz (237ml), yellow
YBP-3408-3	Davidson Marking System tissue marking dye, 8oz (237ml), black
YBP-3408-4	Davidson Marking System tissue marking dye, 8oz (237ml), red
YBP-3408-5	Davidson Marking System tissue marking dye, 8oz (237ml), blue
YBP-3408-6	Davidson Marking System tissue marking dye, 8oz (237ml), orange
YBP-3408-7	Davidson Marking System tissue marking dye, 8oz (237ml), violet
YBP-3408-8	Davidson Marking System tissue marking dye, 8oz (237ml), lime

Slide Printer	
YFT-ESPO01-W	ESPO Path Slide Printer
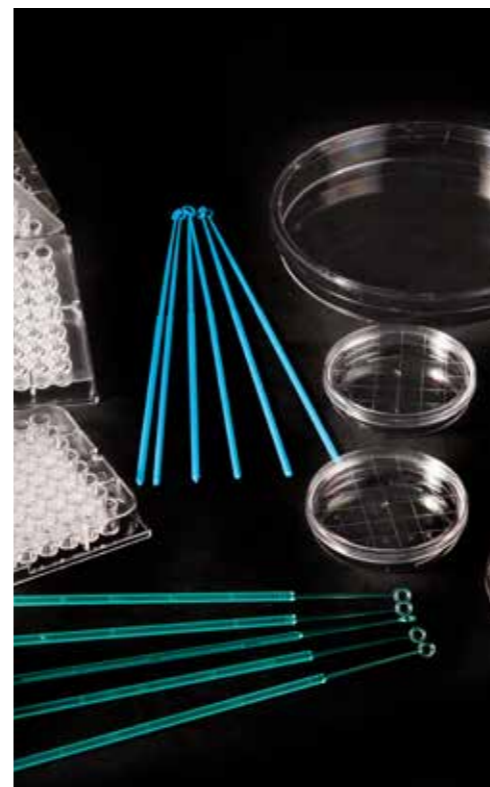
Petri Dishes, Loops & Spreaders		Material	Sterility	Qty
200201.5	55mm Triple vent Petri dish	PS	S	1400
200200.5	90mm Triple vent Petri dish	PS	S	500
200214	140mm Triple vent Petri dish	PS	S	120
200204	120mm x 120mm Square, vented Petri dish	PS	S	240
302713	1µl Smart loop, packs of 20	PS	S	1000
302715	5µl Smart loop, packs of 20	PS	S	1000
302710	10µl Smart loop, packs of 20	PS	S	1000
302723R	1µl Loop, packs of 20	PS	S	1000
302724R	10µl Loop, packs of 20	PS	S	1000
200500	L Shaped spreaders, packs of 5	PS	S	500
MLSP25	Blue spreaders, packs of 25	PP	S	500
900010SP	96-Well microtitre plate, 'U' well (U bottom)	PS	NS	100
900011SP	96-Well microtitre plate, 'F' well (flat bottom)	PS	NS	100
900012SP	96-Well microtitre plate, 'V' well (V bottom)	PS	NS	100
900015SP	Lid for microtitre plates	PS	NS	100

Pipettes - Plastic Pasteur Pipettes		Material	Sterility	Qty
200000	4.5ml Pasteur pipette	PE	NS	400
200003	1ml Pasteur pipette, graduated	PE	NS	500
200004	1ml Pasteur pipette, individually wrapped, peel-pack	PE	S	500
200006	3ml Pasteur pipette, graduated	PE	NS	500
200007	3ml Pasteur pipette, individually wrapped, peel-pack	PE	S	500
200032R	1ml Pasteur pipette, graduated - packs of 20	PE	S	500
200034	1ml Pasteur pipette, graduated, individually wrapped	PE	S	500
200037	3ml Pasteur pipette, graduated, individually wrapped	PE	S	500
200050	5ml Pasteur pipette, graduated	PE	NS	250
200060	7ml Pasteur pipette, jumbo	PE	NS	100
200062R	3ml Pasteur pipette, graduated - packs of 20	PE	S	500
210002	3ml Pasteur pipette, fine tip	PE	NS	500
210003	1ml Pasteur pipette, micro fine tip	PE	NS	400
210004	3ml Pasteur pipette, micro tip	PE	NS	250
210006	2ml Pasteur pipette	PE	NS	400
210022	3ml Pasteur pipette, fine tip, individually wrapped	PE	S	500
210023	1ml Pasteur pipette, micro tip	PE	NS	500
210024	3ml Pasteur pipette, peel-pack	PE	S	500

Consumables

Pipettes - Serological Pipettes		Material	Sterility	Qty
900030RU	1ml Pipette, tapered end, individually wrapped	PS	S	300
900031RU	1ml Pipette, tapered end, bulk wrapped in 25s	PS	S	1000
900032RU	2ml Pipette, tapered end, individually wrapped	PS	S	300
900033RU	2ml Pipette, tapered end, bulk wrapped in 25s	PS	S	800
900034RU	5ml Pipette, tapered end, individually wrapped	PS	S	200
900038RU	5ml Pipette, tapered end, bulk wrapped in 25s	PS	S	500
900036RU	10ml Pipette, tapered end, individually wrapped	PS	S	200
900037RU	10ml Pipette, tapered end, bulk wrapped in 25s	PS	S	400
900041RU	25ml Pipette, tapered end, individually wrapped	PS	S	100
900042RU	25ml Pipette, tapered end, bulk wrapped in 25s	PS	S	350
900051RU	50ml Pipette, tapered end, individually wrapped	PS	S	75
900052RU	50ml Pipette, tapered end, bulk wrapped in 25s	PS	S	250

Pipette Tips		Material	Sterility	Qty
200024	0.1 - 10µl White micro crystal tip - Gilson type	PP	NS	1000
301-11	0.5 - 10µl White micro crystal tip - Eppendorf type	PP	NS	1000
BT10	10µl S3 Filter tip, low retention, racked	PP	S	10 x 96
BT10XL	10µl S3 Extended length filter tip, low retention, racked	PP	S	10 x 96
BT20	20µl S3 Filter tip, low retention, racked	PP	S	10 x 96
327-36	2 - 30µl Natural universal tip - bevelled Gilson type	PP	NS	1000
200009	5 - 200µl Yellow pipette tip - Eppendorf type	PP	NS	1000
200016	5 - 200µl Yellow pipette tip - Gilson type	PP	NS	1000
200026	1 - 200ul Extended length tip – universal type	PP	NS	1000
200019	5 - 200µl White slim pipette tip - Oxford type	PP	NS	1000
BT200	200µl S3 Filter tip, racked	PP	S	10 x 96
200020	200 -1000µl Blue slim-line tip - Oxford type	PP	NS	1000
200012	100 -1000µl Blue pipette tip - universal type	PP	NS	1000
200029	100 - 1000µl Natural universal tip - Eppendorf type	PP	NS	1000
BT1000.96	1000µl S3 Filter tip, racked	PP	S	8 x 96
BT1250	1000 - 1250µl S3 Filter tip, racked	PP	S	8 x 96
200075	1000 - 5000µl Natural pipette tip - Eppendorf type	PP	NS	250
200028	1000 - 5000µl Natural pipette tip - Finnpipette type	PP	NS	250
200015	2 - 10ml Macrotip – Gilson type	PP	NS	100

Other sizes are available - please enquire for details

Pipetting Reservoir		Material	Sterility	Qty
MD98010	10ml Pipetting reservoir, bulk packed	PS	NS	300
MD98010-1S	10ml Pipetting reservoir, individually packed	PS	S	100
MD98025	25ml Pipetting reservoir, bulk packed	PS	NS	100
MD98025-1S	25ml Pipetting reservoir, individually packed	PS	S	100
MD98050	50ml Pipetting reservoir, bulk packed	PS	NS	100
MD98050-1S	50ml Pipetting reservoir, individually packed	PS	S	100
MD98051	65ml Pipetting reservoir, bulk packed	PS	NS	100
MD98051-1S	65ml Pipetting reservoir, individually packed	PS	S	100
MD98100	100ml Pipetting reservoir, bulk packed	PS	NS	100
MD98100-1S	100ml Pipetting reservoir, individually packed	PS	S	100
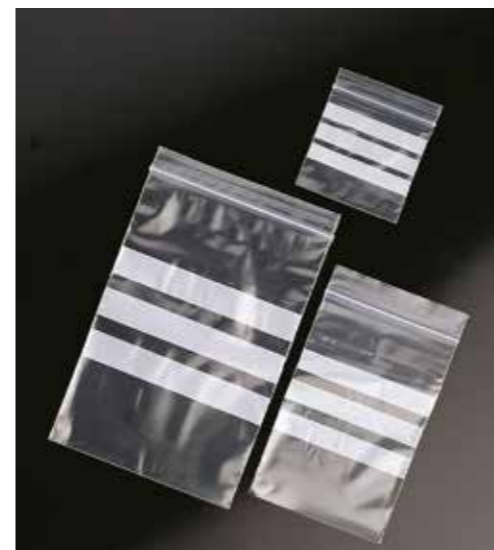
Plastic Bags / Zip-lock Bags		Material	Sterility	Qty
M5555	55mm x 55mm	PE	NS	2000
M6080	60mm x 80mm	PE	NS	2000
M70100	70mm x 100mm	PE	NS	2000
M80120	80mm x 120mm	PE	NS	2000
M100150	100mm x 150mm	PE	NS	2000
M110110	110mm x 110mm	PE	NS	2000
M120180	120mm x 180mm	PE	NS	2000
M150220	150mm x 220mm	PE	NS	2000
M200300	200mm x 300mm	PE	NS	2000
M250330	250mm x 330mm	PE	NS	2000
M300400	300mm x 400mm	PE	NS	2000

Racks & Storage Boxes		Material	Sterility	Qty
901410	Single use rack for 100 x 13mm tubes	PS	NS	25
901407	Single use rack for 120 x 16mm tubes	PS	NS	25
19564	Universal test tube rack for 90 x 12mm test tubes	PP	NS	5
19567	Universal test tube rack for 40 x 25mm tubes	PP	NS	5
19568	Universal test tube rack for 24 x 30mm tubes	PP	NS	5
W-011	Squared holed test tube rack with grip for 90 x 13mm tubes	PP	NS	1
W-012	Squared holed test tube rack with grip for 60 x 16mm tubes	PP	NS	1
W-013	Squared holed test tube rack with grip for 40 x 20mm tubes	PP	NS	1
G-050	Cryo-storage box for 50 x 1.5ml microtubes	PS	NS	1
G-100	Cryo-storage box for 100 x 1.5ml microtubes	PS	NS	1
M-600	Cardboard cryobox for 100 x 12mm tubes	C	NS	1
M-500	Cryobox, 50 wells	PP	NS	1
M-510	Cryobox, 100 wells	PP	NS	1
M-450	Microtube rack for 50 x 0.5ml tubes	PP	NS	5
M-410	Microtube rack for 50 x 1.5ml / 2.0ml tubes	PP	NS	5
19973	Pipette rack for 50 serological pipettes	PP	NS	1
F-210	Stainless steel rack for 50 x 12mm tubes	SS	NS	1
B-210	Stainless steel rack for 50 x 14mm tubes	SS	NS	1
A-210	Stainless steel rack for 50 x 18mm tubes	SS	NS	1
D-230	Stainless steel rack for 48 x 23mm tubes / containers	SS	NS	1
C-211	Stainless steel rack for 50 x 28mm containers	SS	NS	1
L-240	Stainless steel rack for 24 x 38mm containers	SS	NS	1
I-240	Stainless steel rack for 24 x 47mm containers	SS	NS	1
N-240	Stainless steel rack for 24 x 58mm containers	SS	NS	1
M-300	Plastic tray for blood collection tubes (including racks)	PP	NS	1

Consumables

Swab Information

Looking at the new demands of the market and endeavouring to make microbiology departments and analysis laboratories' jobs easier, Deltalab has developed a new range of swabs for collecting and transporting microbiological samples in liquid medium as well as a new line of enrichment media.

Advantages:

- Compatible with the new inoculation automation and sample streaking equipment
- Compatible with molecular diagnostic techniques
- Facilitates the collection, transport and subsequent treatment of microbiological samples
- Greater reliability for sample recovery; high capacity for the absorption and elution of the sample
- Greater feasibility of the sample as it is totally suspended in the medium
- Allows different homogeneous innocula to be obtained from the same sample
- It adapts to any working protocol
- Minimises any possible cross-contamination: less handling and maximum watertightness
- More comfort for the user; conical base which facilitates stirring and greater stability of the tube with skirt base
- More comfort for the patient, due to the softer swab covering
- Standardises the receipt of samples at microbiology labs
- Facilitates manual streaking
- Allows direct extension on the glass slide as the medium does not contain agar
- Ensures proper sample transport and storage both at room temperatures (+20ºC to +25ºC) and at refrigeration temperatures (+4ºC to +8ºC)

The different M40 studies performed confirms the efficacy of Amies charcoal swabs in the recovery of the following microorganisms:

- ✓ **Pseudomonas aeruginosa**
- ✓ **Staphylococcus aureus (MRSA)**
- ✓ **Clostridium sporogenes**
- ✓ **Propionibacterium acnes**
- ✓ **Prevotella melaninogenica**
- ✓ **Peptostreptococcus anaerobius**
- ✓ **Fusobacterium nucleatum**
- ✓ **Bacteroides fragilis**
- ✓ **Streptococcus pyogenes**
- ✓ **Streptococcus pneumoniae**
- ✓ **Haemophilus influenzae**
- ✓ **Neisseria gonohrroeae**

Swabs - Media		Sterility	Qty
300287	M40 Amies transport swab, plain media, polystyrene shaft, viscose tip	S	100
300285	M40 Amies transport swab, charcoal media, polystyrene shaft, viscose tip	S	100
300281/1	Amies transport swab, charcoal media, aluminium shaft, viscose tip	S	100
300297	Viral transport swab, polystyrene shaft, polyester tip	S	100
300299	Chlamydia swab, polystyrene shaft, polyester tip	S	100
300284	Liquid Amies transport swab, plain media, polystyrene shaft, viscose tip	S	600
300295	Stuart transport swab, plain media, polystyrene shaft, viscose tip	S	600
300280.2	Cary Blair transport swab, plain media, polystyrene shaft, viscose tip	S	600

Swabs - Plain		Sterility	Qty
300205	Wooden applicator sticks, non-sterile, 147mm	NS	1000
300230	Plain swab, non-sterile,, wooden shaft, cotton tip, 150mm	NS	10,000
300232	Plain swab, non-sterile,, extra large wooden shaft (200mm), cotton tip	NS	8000
300200	Plain swab, sterile, wooden shaft, cotton tip - ind. wrapped, peel pack	S	1000
310200	Plain swab, sterile, wooden shaft, cotton tip - ind. wrapped, flow pack	S	1000
300201	Plain swab, sterile, polystyrene shaft, cotton tip - ind. wrapped	S	1000
300202	Plain swab, sterile, polystyrene shaft, viscose tip - ind. wrapped, peel pack	S	1000
310202	Plain swab, sterile, polystyrene shaft, viscose tip - ind. wrapped, flow pack	S	1000
300230S	Plain swab, sterile, wooden shaft, cotton tip	S	1000
300210	Plain swab, sterile, wooden shaft, cotton tip (2 units per pack)	S	1000
300250	Plain swab, sterile in round tube, wooden shaft, cotton tip	S	500
300261	Plain swab, sterile in round tube, polystyrene shaft, cotton tip	S	500
300252	Plain swab, sterile in round tube, polystyrene shaft, viscose tip	S	500
300263	Plain swab, sterile in round tube, polystyrene shaft, polyester tip	S	500
300254	Plain swab, sterile in round tube, twisted aluminium shaft, viscose tip	S	500
300265	Plain swab, sterile in round tube, polystyrene shaft, flocked polyester tip	S	500

Swabs - Environmental		Sterility	Qty
88010-PF	Enviromax foam tip sampling swab	S	25
25-88010PFB	Enviromax foam tip sampling swab	S	25
25-88050PF	Enviromax pre-moistened sampling swab	S	25
200399	5ml Neutralising buffer swab	S	600
25-83010	ESK 10ml Neutralising buffer swab	S	300

Environmental swabs

Puritan's single-use products for controlled and critical environments are manufactured in our ISO:2008 certified and CE-compliant facility, providing reliable, consistent performance to ensure the quality of your end product.

Swabs are designed for use in specific environments such as precision manufacturing, fibre optics, electronics, semiconductors, and biotechnology. For even tighter control, we offer critical environment swabs for the cleanroom.

Our lines include: foam, cotton, knitted polyester, ESD (electrostatic discharge), anti-static and chemical-resistant swabs.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	803-PC	Standard tip, polystyrene handle	17.45 x 5.16	77.78	100
	803-WC	Standard tip, wood handle	15.88 x 4.78	77.01	100
	8230-WC	Tapered mini tip, lint-sensitive, wood handle	12.70 x 3.05	75.41	100
	869-WCS	Mini tip, wood handle	12.7 x 3.18	149.23	100
	867-WCNOGLUE	Regular cotton tipped applicator with no glue and wood handle	15.88 x 4.78	152.40	100

Puritan Cotton-tipped Applicators
Ideal for general purposes when you are less concerned about static or particulate release.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	803-PC	Standard tip, polystyrene handle	17.45 x 5.16	77.78	100
	803-WC	Standard tip, wood handle	15.88 x 4.78	77.01	100
	8230-WC	Tapered mini tip, lint-sensitive, wood handle	12.70 x 3.05	75.41	100
	869-WCS	Mini tip, wood handle	12.7 x 3.18	149.23	100
	867-WCNOGLUE	Regular cotton tipped applicator with no glue and wood handle	15.88 x 4.78	152.40	100

purswab® Lint-Sensitive Cotton-tipped Applicators
An excellent choice when you are looking for a swab for cleaning sensitive components. These swabs are both low lint and residue-free.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	870-PC DBL	Double sharp pointed tip, fine paper handle	8.51 x 2.21	76.00	100
	872-PC DBL	Double cone-shaped tip, fine paper handle	10.99 x 4.70	81.00	50

purswab® Specialty & Chemical Resistant Foam-tipped Applicators
This line of specialty swabs includes super-absorbent and chemical-resistant foam-tipped applicators. Chemical resistant foam is made of a different polymer and will stand up to most solvents.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	1803-WFB CR POINTED	Mini chemical resistant foam tip, pointed wood handle	11.91 x 3.96	76.2	500
	1806-PCF CR	Standard chemical resistant foam-over-cotton tip, polypropylene handle	20.62 x 6.35	154.79	50
	1806-WCF CR	Standard chemical resistant foam-over-cotton tip, wood handle	20.62 x 9.525	153.98	50
	1806-WF CR	Standard chemical resistant foam tip, wood handle	17.45 x 4.775	149.23	50
	1876-PF CR	Flexible chemical resistant paddle foam tip, polypropylene handle	15.09 x 4.775	153.98	50
	1905-PF RECT	Rectangular foam tip, polypropylene handle	22.61 x 17.45	131.40	50
	1906-PFB	Standard foam tip, polypropylene handle	15.88 x 4.78	151.61	250

Forensic swabs
In the search for verifiable identity, DNA is key. Puritan has the tools of choice used in forensics, rapid diagnostics, pharmacogenetics, veterinary, ancestry, and research. All products collect and release efficiently and reliably, manufactured with controls to protect against contamination.

DNA/RNAse free
All of our DNA-free products are certified to be DNA-free, DNAse-free, and RNAse-free. Designed specifically for DNA testing, buccal swabbing, these multipurpose swabs are a go-to in the crime scene investigation industry.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	25-806 1WC FDNA	Standard cotton tip, wood handle	15.88 x 4.78	150.80	100
	25-806 2WC TT FDNA	Standard cotton tips, wood handles, dry transport tube	15.88 x 4.78	150.80	50
	25-1805 1PF RND FDNA	Large foam paddle tip, polypropylene handle	28.58 x 23.01	120.18	50
	25-3306-U TT FDNA	Standard PurFlock Ultra® tip, polystyrene handle with 80mm breakpoint, dry transport tube	17.53 x 5.08	153.42	50

DNA-Controlled swabs
All DNA-controlled swabs are manufactured in a DNA-controlled environment. Filtered air breathable (FAB) transport systems have a patented tube design for product breathability.

	Item No.	Product Description	Tip length (mm) x Ø (mm)	Total length (mm)	Pack Size
	25-3606-U BT FABUSA	Elongated PurFlock Ultra® tip, polystyrene handle with 30mm molded breakpoint, patented tube design for product breathability	17.40 x 5.563	153.42	50

Syringes		Material	Sterility	Qty
BS-01T	1ml Terumo Luer slip tip syringe	PP	S	100
BS-02S	2.5ml Terumo Luer slip tip syringe	PP	S	100
BS-05S	5ml Terumo Luer slip tip syringe	PP	S	100
BS-10ES	10ml Terumo Luer slip tip syringe	PP	S	100
BS-20ES	20ml Terumo Luer slip tip syringe	PP	S	50
BS-50ES	50ml Terumo Luer slip tip syringe	PP	S	25

Budget Syringes		Material	Sterility	Qty
JS1	1ml Luer slip tip syringe	PP	S	100
JS2	2ml Luer slip tip syringe	PP	S	100
JS3	5ml Luer slip tip syringe	PP	S	100
JS4	10ml Luer Slip eccentric syringe	PP	S	100
JS5	20ml Luer slip tip eccentric syringe	PP	S	50

Test Tubes & Caps		Material	Sterility	Qty
300500	11mm x 55mm - Round bottom	PS	NS	4000
300300	11mm x 70mm - Round bottom	PS	NS	3000
300800	12mm x 75mm - Round bottom, graduated	PS	NS	4000
300800.1	12mm x 75mm - Round bottom	PS	NS	4000
300700	13mm x 75mm - Round bottom	PS	NS	4000
301700	13mm x 100mm - Round bottom	PS	NS	3000
300705	16mm x 100mm - Round bottom	PS	NS	2500
300100	16mm x 150mm - Round bottom	PS	NS	1000
400500	11mm x 55mm - Round bottom	PP	NS	4000
400800	12mm x 75mm - Round bottom, graduated	PP	NS	4000
400400	12mm x 88mm - Round bottom, graduated	PP	NS	4000
401700	13mm x 100mm - Round bottom	PP	NS	3000
400900	16mm x 95mm - Round bottom, graduated	PP	NS	2500
400705	16mm x 100mm - Round bottom	PP	NS	2500
401100	15mm x 50mm - Flat bottom, graduated	PP	NS	5000
301200	12ml Conical base, graduated	PS	NS	2500
301201	12ml Conical base	PS	NS	2500
401200	12ml Conical base, graduated	PP	NS	2500
401201	12ml Conical base	PP	NS	2500
901075	10mm x 75mm - Round bottom	G	NS	1000
901275	12mm x 75mm - Round bottom	G	NS	1000
916100	16mm x 100mm - Round bottom	G	NS	1000
916150	16mm x 150mm - Round bottom	G	NS	1000
918150	18mm x 150mm - Round bottom	G	NS	500

Test Tubes - Caps		Material	Sterility	Qty
305302	Cap to fit 11mm diameter tube	PP	NS	2000
305802	Cap to fit 12mm diameter tube	PE	NS	2000
307102	Cap to fit 13mm diameter tube, flange plug	PE	NS	2000
307202	Cap to fit 16mm diameter tube, flange plug	PE	NS	2500
305002	Cap to fit 16mm diameter tube, internal chamber	PE	NS	2500
308102	Cap to fit 16mm diameter tube, ribbed	PE	NS	2500
307006	Cap to fit 17ml (16mm x 150mm) tube, ribbed	PE	NS	1000
305502	Cap to fit 16mm conical tubes, flange plug	PE	NS	2500
308202	Cap to fit 16mm conical tubes, ribbed	PE	NS	2500
6010	Easy topper to fit 12mm diameter tube, clear	PE	NS	1000
6565	Easy topper to fit 12mm diameter tube, green	PE	NS	1000
6560	Easy topper to fit 12mm diameter tube, purple	PE	NS	1000
6010R	Re-cap to fit 13mm tube	PE	NS	1000
MED131INS	13mm Hanging Vacutainer insert flat bottom	PE	NS	1000
308502	Re-cap to fit 12-13mm diameter tube, clear	PE	NS	1000
308506	Re-cap to fit 12-13mm diameter tube, red	PE	NS	1000
308602	Re-cap to fit 15.2-16mm diameter tube, clear	PE	NS	1000
308606	Re-cap to fit 15.2-16mm diameter tube, red	PE	NS	1000
617402	Culture tube cap to fit 16mm diameter glass tubes	PP	NS	1000

Water Sampling Bottles		Material	Sterility	Qty
282320	500ml Sodium thiosulphate sample bottle	PE	S	24
282323	500ml Sodium thiosulphate sample bottle	PE	S	111
282323.BU	500ml Sodium thiosulphate sample bottle - individually wrapped	PE	S	111
282321	1000ml Sodium thiosulphate sample bottle	PE	S	20
282324	1000ml Sodium thiosulphate sample bottle	PE	S	68
282324.BU	1000ml Sodium thiosulphate sample bottle - individually wrapped	PE	S	68
282330	500ml Sample bottle	PE	S	24
282331	1000ml Sample bottle	PE	S	20
282333	500ml Sample bottle	PE	S	111
282334	1000ml Sample bottle	PE	S	68
282340	500ml Sodium thiosulphate sample bottle, wide mouth	PET	S	44
282341	1000ml Sodium thiosulphate sample bottle, wide mouth	PET	S	48
282350	500ml Wide mouth container	PET	S	44
282351	1000ml Wide mouth container	PET	S	48

Cleaning

Cleaning & Decontamination Reagents

Hygienic Hand Wash & Disinfectants

Cleaning and Decontamination Reagents

The RBS range provides a wide selection of cleaning and disinfecting agents for glassware and equipment covering every application within the laboratory, industrial and medical fields.

Efficiency at low concentration

RBS detergents present favourable benefits/costs ratio due to the low working concentration that allows the generation of high volume of cleaning solution.

Compatible with most materials

At the recommended use concentrations, RBS detergents show excellent compatibility with most materials including stainless steel, chromed steel, plastic, rubber, porcelain and ceramic.

Developed with biodegradable ingredients

RBS products have been designed taking into account recent environmental directives and regulations, thanks notably to the use of biodegradable surfactants. Customers who opt or support the use of phosphate-free products will find in our range the suitable products that meet their needs.

Free rinse

RBS products rinse away easily and completely without leaving any traces or films that may interfere with further analysis.

Easy and safe to use

Thanks to their high emulsifying, wetting and detergency power, RBS detergents allow the removal of hard to clean residues. They constitute excellent alternative to hazardous acid mixtures and solvents and allow safe working conditions for both user and cleaned items.

- Manual soaking
- Ultrasonic cleaning
- Labware washers
- Surface cleaning
- Glassware efficiency at low concentration

RBS Uklean
Multi-purpose concentrated alkaline liquid cleaning agent

For manual cleaning, soaking and ultrasonic cleaning systems.

Uses	RBS Uklean is convenient for cleaning and degreasing of parts and equipment made of stainless steel, glass and plastic in mechanical industry, pharmaceutical. It efficiently removes organic residues, oils, ointment and fatty deposits.
Description	Dilute 20ml of RBS Uklean per litre of water at 40-70°C. Soak the parts and equipment to be cleaned. Let act, rinse profusely with water and dry. In case of stubborn residues, increase the concentration or the temperature of the cleaning solution. The mechanical action of manual brushing or the use of an ultrasonic bath improves the efficiency of the product and reduces the cleaning time.
Usage Concentration	(Normal cleaning): 1% v/v (manual cleaning) • 0.3 to 0.5% v/v (ultrasonic bath)
Supply Options	Product code: RBSUKLEAN	5L Bottle
	Product code: RBSUKLEAN-DRUM	20L Drum

RBS 50
Non foaming liquid alkaline detergent

Used in laboratories for cleaning glassware and laboratory equipment made of stainless steel, plastic, porcelain, quartz and ceramic.

Uses	Multi-purpose non foaming alkaline cleaning agent. For manual use, soaking, ultrasonic baths and washing machines.
Description	RBS 50 is used in laboratories for removing organic and mineral residues, proteins, chemical solutions, distillation residues, fats, oils, cell cultures. It allows efficient cleaning of glassware and equipment made of plastic, porcelain, ceramic, rubber, quartz, stainless steel. In industry, it is used as a technical product for high performance cleaning of metal parts, optical lenses, glass, electronic components, RBS 50 complies with EN 1040, EN 1276, EN 1275 and NF T 72-190 (spectrum 4) standards under certain conditions and concentrations.
Usage Concentration	(Normal cleaning): 1% v/v (manual cleaning) • 0.3 to 0.5% v/v (ultrasonic bath)
Supply Options	Product code: RBS50	5L Bottle
	Product code: RBS50-DRUM	20L Drum

RBS FOGLYAM MD
Solution for cleaning and disinfecting non-invasive medical devices before sterilisation

Cleaning and disinfecting solution for floors, surfaces and medical devices.

Uses	Concentrated, lightly foaming and perfumed disinfectant – cleaning agent for non-invasive medical devices (equipment, bedframes, trolleys for instruments). Manual use.
Description	Its specific formulation combining aldehydes and quaternary ammonium compounds provides a wide bactericidal spectrum. This high antibacterial activity prevents spreading of germs and assures safety in high risk areas. RBS FOGLYAM MD efficiently removes blood and its residues, proteins and cell deposits, fats and oils. It is recommended for the daily cleaning and disinfecting of non-invasive medical devices (equipment, bedframes, trolley for instruments) made of stainless steel, glass, plastic, porcelain. Likely to constitute sources of nosocomial infections. The perfume of RBS FOGLYAM MD leaves a pleasant fresh smell after treatment. Without rinsing, the product remains active for several days. RBS FOGLYAM MD meets the requirements of the European directive regarding medical devices and is CE 1639 certified.
Usage Concentration	1% v/v
Supply Options	Product code: RBSSR80NP	5L Bottle
	Product code: RBSSR80NP-DRUM	20L Drum

RBS T 230
Liquid neutral detergent

Neutral foaming detergent for soft cleaning by immersion or ultrasonic baths for glassware and sensitive laboratory equipment.

Uses	Multi-purpose neutral cleaning agent for sensitive materials, for soaking and ultrasonic baths.
Description	Thanks to its high content in active ingredients and its neutral pH, RBS T 230 is the ideal product for cleaning sensitive glassware and materials to bases or acids. It presents excellent compatibility with the most of materials. At the recommended working concentration, RBS T 230 is neither corrosive, irritating, nor toxic for both the cleaned items and the user.
Usage Concentration	4 to 6% v/v in water
Supply Options	Product code: RBST230	5L Bottle
	Product code: RBST230-DRUM	20L Drum

RBS T 305
Descaler and oxides remover

Strong acidic detergent for manual cleaning, degreasing and de-scaling of surfaces and laboratory equipment.

Uses	Cleaning, de-scaling and metal oxides removal, manual use.
Description	Thanks to the combination of acid elements and powerful surfactants, RBS T 305 offers a strong degreasing and de-scaling power that makes it particularly efficient for the removal of insoluble inorganic residues, metal oxides and calcareous deposits on glassware, equipment and surfaces made of stainless steel, plastic and ceramic. RBS T 305 is also recommended for cleaning of animal cages and rooms in laboratories and veterinary institutions.
Usage Concentration	20 to 50ml of RBS T 305 per litre of water
Supply Options	Product code: RBST305	5L Bottle
	Product code: RBST305-DRUM	20L Drum

Cleaning Reagents

RBS 25
Multi-purpose concentrated foaming alkaline liquid cleaning agent

For manual cleaning, soaking and ultrasonic cleaning in laboratories and industry.

Uses	Thanks to its high emulsifying and wetting power, RBS 25 ensures excellent penetration activity in the cleaning of baths. In laboratories, it is used for cleaning glassware and equipment made of stainless steel, plastic, porcelain, quartz, and ceramic.
Description	RBS 25 can be used for manual cleaning, in ultrasonic baths and soaking. In order to avoid calcareous precipitation, the soaking process should not exceed 3 hours. If a contact time of more than 3 hours is required, it is advised to work with demineralised water. Dilute 20ml of RBS 25 per litre of water (preferably at 50°C). In case of soaking, immerse completely the soiled items to ensure an optimal contact with the cleaning solution. Rinse immediately with tap water, or better, with demineralised water. RBS 25 is easily and totally eliminated without leaving any traces or invisible film. Note: the use of an ultrasonic bath and/or an increase of the temperature of the cleaning solution may be of help in case of stubborn soils.
Usage Concentration	20 to 50ml of RBS 25 per litre of water
Supply Options	Product code: RBS25	5L Bottle
	Product code: RBS25-DRUM	20L Drum

RBS A 375
Neutraliser and acid rinse for use in automatic washing machines

Suitable for prewash and rinsing cycles.

Uses	For use in pre-wash and rinsing cycles in automatic washing machines.
Description	RBS A 375 is used in the first rinsing cycle after the alkaline washing with either RBS A 155 (liquid), RBS 50 pF (liquid) or RBS SOLID pF (powder). RBS A 375 allows the neutralisation and the removal of residual traces of carbonates, hydroxides and calcareous elements on the cleaned items and on the internal components of the washing machine. RBS A 375 can also be used during the pre-wash cycle when glassware and material to be cleaned are soiled with mineral residues. It does not contain surfactants or phosphorus that may interfere with certain types of analysis (e.g. water and phosphates) or pollute the environment.
Usage Concentration	0.2 to 0.5% v/v depending on the type of machine and the soils to be removed.
Supply Options	Product code: RBSA375	5L Bottle
	Product code: RBSA375-DRUM	20L Drum

RBS A 155
Non foaming alkaline cleaning agent

Power general purpose cleaner - phosphate free

Uses	Non-foaming cleaning and decontaminating agent for glassware and laboratory equipment. For use in washing machines.
Description	Thanks to its high content in active alkaline elements and its non-foaming property, RBS A 155 perfectly suits the efficient cleaning of laboratory glassware and equipment. It can be used for surfaces made of stainless steel, glass, plastic and allows total removal of soils such as fats, oils, chemical solutions, blood and distillation residues. RBS A 155 is chlorine and phosphate free.
Usage Concentration	0.3 to 2% v/v (normal cleaning)
Supply Options	Product code: RBSA155	5L Bottle
	Product code: RBSA155-DRUM	20L Drum

RBS A 285 SOLID pF
Alkaline powder detergent

Non foaming Alkaline powdered detergent for cleaning and degreasing in labware washers to clean glassware and equipment made of stainless steel, plastic, porcelain etc.

Uses	RBS A 285 SOLID pF has been especially developed for the mechanical cleaning and degreasing of glassware and laboratory equipment. Its composition makes it particularly efficient in difficult conditions even at low concentrations. It perfectly removes organic and mineral residues, greases, oils, chemical solutions, distillation residues.
Description	Efficient from 1g per litre of water according to the type of machine, the selected program and the tenacity of the soils. For optimal results, proceed with an acid pre-wash with RBS A 375 to eliminate alkaline residues and other mineral salts. Also use this product in the rinsing cycle to remove residual traces of the alkaline washing cycle. RBS A 285 SOLID pF does not contain phosphates that would interfere with certain types of analysis (e.g. water and phosphates) or that would pollute the environment.
Usage Concentration	1 to 3g per litre of water according to the type of machine and the tenacity of the soils to be removed.
Supply Options	Product code: RBSSOLID	5Kg Bucket

RBS B 200 A MD
Alkaline powder detergent and cleaning agent with controlled foam for laboratories and industry

Ready-to-use cleaning and disinfecting solution in spray form for surfaces, floors, benches and furniture. It ensures the removal of blood residues, chemical solutions and fatty deposits.

Uses	Ready-to-use lightly foaming and perfumed disinfectant – cleaning solution for non-invasive medical devices (equipment, bedframes, trolleys for instruments). Manual use (spray).
Description	RBS B 200 A MD is easy and practical to use due to its spray. Its specific formulation combining aldehydes and quaternary ammonium compounds provides a wide bactericidal spectrum. This high antibacterial activity prevents spreading of germs and assures safety in high risk areas. RBS B 200 A MD efficiently removes blood and its residues, proteins and cells deposits, fats and oils. It is recommended for the daily cleaning and disinfecting of non-invasive medical devices made of stainless steel, glass, plastic or porcelain that are likely to constitute sources of nosocomial infections. The perfume of RBS B 200 A MD leaves a pleasant fresh smell after treatment. Without rinsing, the product remains active for several days. RBS B 200 A MD meets the requirements of the European directive regarding medical devices and is CE 1639 certified.
Usage Concentration	Ready-to-use solution
Supply Options	Product code: RBS200	1L Spray Bottle

Accessory available

Dispenser for 5L container - Product code: RBS-DISP5LT

Cleaning Reagents

Hygienic Hand Wash & Disinfectants

RBS HDS 15
Bactericidal liquid hand soap with perfume

Recommended for mild hygienic hand washing and decontamination

Uses	Bactericidal liquid soap for hygienic hand washing	
Description	Guarantees perfect daily hand hygiene by means of cleansing and decontamination. Helps to prevent propagation of contagious germs. Light Green Tea scent. Bactericidal activity according to EN 1040 and EN 1499. Authorised as biocidal product. Authorisation number : NOTIF 444.	
Usage Concentration	Ready-to-use solution	
Supply Options	Product code: RBSHDS15-750ML	750ml Bottle + Dispenser
	Product code: RBSHDS15-5LIT	5L Bottle

RBS HDS GEL
Hydro-alcoholic gel

Helps to prevent propagation of contagious germs.

Uses	Suitable for hand disinfection in laboratories, hospitals and collectivises.	
Description	Provides perfect hygiene for hands and allows for frequent use. Fast decontaminating action which helps to prevent the propagation of contagious germs. Ideal for application after a hand washing. RBS HDS GEL - hydro-alcoholic disinfecting gel is: Bactericidal according to the European standards EN 1040 (Pseudomonas aeruginosa, Staphylococcus aureus, Salmonella enterica, Listeria monocytogenes, Escherichia coli) and EN 1500. Fungicidal according to the European EN 1275 (Candida albicans). Virucidal, active against Influenza A H1N1 virus according to EN 14476. Authorised as biocidal product. Authorisation number : NOTIF 75.	
Usage Concentration	Ready-to-use solution	
Supply Options	Product code: RBSHDSGEL	750ml Bottle + Dispenser

RBS HDS LOTION
Hydro-alcoholic lotion for hygienic hand disinfection

Decontaminating lotion based on alcohol for hand disinfection.

Uses	Provides perfect hand hygiene with a fast decontaminating action, and helps to prevent the propagation of contagious germs.	
Description	Provides perfect hygiene for hands and allows frequent use. Fast decontaminating action. Helps to prevent the propagation of contagious germs. Ideal for application after a hand washing. Perfume free hypo-allergenic formula. RBS HDS LOTION - hydro-alcoholic disinfecting lotion is: Bactericidal according to the European standards EN 1040 (Pseudomonas aeruginosa, Staphylococcus aureus, Salmonella enterica, Listeria monocytogenes, Escherichia coli) and EN 1500. Fungicidal according to the European EN 1275 (Candida albicans). Authorised as biocidal product. Authorisation number : NOTIF 74	
Usage Concentration	Ready-to-use solution	
Supply Options	Product code: RBSHDSLOTION	750ml Bottle + Dispenser

Accessory available
Wall bracket for 750ml bottle - Product code: RBSHDSE154

Lab Equipment

Autoclaves

Aspirators

Balances

Baths & Circulators

Centrifuges

Desiccators

Fume Hoods

Heating Apparatus

Incubators

Incubator Shakers

Melting Point Apparatus

Microtube Homogenisers

Ovens

Polarimeters

Refractometers

Refrigerators & Freezers

Rotators

Shakers

Spectrophotometers

Stirrers & Hotplates

Vortex Mixers

Laboratory Equipment

Autoclaves

Standard Bench Top Autoclaves

Bench top autoclaves for the modern laboratory, the pharmaceutical and food industry as well as for special applications. Innovations are included that ensure safe, accurate and reproducible results that can be validated for sterilisation in laboratories within research and industry, including dental, medical, veterinary, cosmetics and pharmaceuticals. Our autoclaves are produced under the most rigorous system of quality control certifications in accordance to ISO13485 and TUV CE0197.

All models are fully automatic with LCD display, independent steam generator, temperature and pressure monitoring systems. Every unit comes equipped with a unique high precision control system and automatic alarm for water level, door locking and cycle errors, plus a built in printer.

Product code	MDB8C	MDB18C	MDB23C
Volume (L)	8	18	23
Chamber size; diam x D (mm)	170 x 320	247 x 350	247 x 450
Power (W)	1500	2200	
Printer	Optional		
Security door lock	Yes		
No. of trays (max)	2	4	
Dimensions; W x D x H (mm)	414 x 365 x 570	480 x 455 x 600	480 x 455 x 700
Weight (Kg)	34.50	51	58

Advanced Steam Sterilisers

These small, B-Class steam sterilisers are ideal for use in clinics, small operating rooms, veterinary practices and dental laboratories. They are capable of sterilising and drying medical devices which prove difficult by normal means, including hollow loads such as tubes or endoscopes, and porous loads such as sponges or textiles. These sterilisers satisfy the sterility assurance level (SAL=10-6, EN 556) demanded from the international standards, and this sterilising power has been fully verified by passing the Hollow Load A test (Helix test) specified in European Standards (EN 13060, EN867-5) within 3.5min at 134°C.

The sterilising chamber is equipped with a jacket surrounding the circular chamber wall for generating saturated steam, and has the following advantages:

- The jacket helps to maintain the structure of the chamber
- Chamber temperature deviation is minimised which aids accurate and reproducible sterilisation runs
- Sterilising time is dramatically reduced

Product code	HS-2321BL	HS-3041BL
Volume (L)	21.5	40.5
Chamber size; diam x D (mm)	225 x 425 x 225	300 x 450 x 300
Pressure	Max. working pressure 2.40bar, min. working pressure -1.00bar	
Reservoir (L)	6	72
Operating temperature (°C)	121 to 135	
Sterilising agent	Saturated vapour	
Air removal	Vacuum / gravity	
Vacuum system	Vacuum pump	
Display	Digital LED	
Printer (optional)	Direct thermal printing, printing paper roll W58 x Ø40 mm	
No. of trays (max)	2	
Dimensions; W x D x H (mm)	515 x 754 x 405	614 x 804 x 489
Weight (Kg)	53	78

Aspirators

Water Jet Aspirator Pump

Portable dual-channel, jet aspirator pump. By creating a vacuum by means of the 'Venturi' effect, the VE-11 aspirator pump is suitable for rotary vacuum evaporation, decompression distillation, vacuum drying and vacuum filtering. A built in circulating pump and water tank make the unit portable.

The circulating pump pumps water silently across a set of aspirators and is therefore clean and efficient. The built-in check valve prevents backflow of water into the aspirator pump.

Model		VE-11
Product code		71015
Bath volume (L)		9.5
Maximum vacuum (mbar)		998
Flow rate (m³/hr)		1.08 (each channel)
Construction	Bath	Polypropylene
	Aspirator	Nickel-coated brass
Dimensions	Internal; W x D x H (mm)	298 x 210 x 227
	External; W x D x H (mm)	330 x 265 x 390
Weight (Kg)		5.7

Rotary Vane Vacuum Pumps

Rotary vacuum pump equipped with direct connect oil seal prevents air reflux, essentially used with vacuum ovens to achieve a higher level of vacuum pressure filter

- Oil mist filter prevents fumes entering the lab (optional on W2V10)

Model	W2V10	CCMD4
Product code	BEH73205K	MED-141C
Flow rate (m³/hr)	6	8.4
Ultimate vacuum (mbar)	5×10^{-3}	
Oil capacity (ml)	500	450
Inlet / Outlet port (DN)	25KF	8mm hose tail
Oil mist filter	Optional	Included
Dimensions; W x D x H (mm)	150 x 392 x 250	178 x 375 x 330
Weight (Kg)	23	12

Balances

Our range of affordable top pan balances cover many of the requirements of the modern laboratory. A range of features that often cost extra are included as standard which makes our precision balances suitable for use in QC laboratories, research departments, universities and schools.

Precision Balance - JTB Series

- High precision load cell
- Aluminium alloy die cast base
- Stainless steel pan
- Super bright LCD with backlight
- AC/DC power supply
- Full capacity subtraction
- Overload protection
- Glass shield supplied as standard
- RS-232C Interface
- Below balance hanger supplied as standard
- Check weighing
- Stabilisation time 1.5 seconds, typically

Product code	MD8103	MD8104
Capacity (g)	0 to 100	0 to 200
Readability (g)	0.001	
Repeatability (g)	±0.001	
Linearity (g)	±0.001	
Corner load error (g)	±0.001	
Pan size (mm)	Ø125	
Weighing units	g, ct, oz, lb, ozt	
Dimensions; W x D x H (mm)	190 x 287 x 267	
Weight (Kg)	4	

Precision Balances - TDM Series

- Internal calibration weight, auto calibration
- Check weighing & parts countingHigh precision load cell
- Full plastic housing, stainless steel pan
- Super bright LCD
- Full capacity subtraction, overload protection
- Below balance hanger hanger supplied as standard
- Stabilisation time 1.5 seconds, typically
- Power supply, 9V DC/Dry battery

Product code	TD3002M	TD6002M	TD10002M	TD20002M	TD30002M
Capacity (g)	0 to 310	0 to 610	0 to 1000	0 to 2000	0 to 3000
Readability (g)	0.01				
Pan size (mm)	Ø133				
Weighing units	g, ct, oz				
Dimensions; W x D x H (mm)	265 x 200 x 80				
Weight (Kg)	1.3				

Product code	TD10001M	TD12001M	TD20001M	TD30001M	TD50001M
Capacity (g)	0 to 1000	0 to 1200	0 to 2100	0 to 3100	0 to 5100
Readability (g)	0.1				
Pan size (mm)	Ø133		155 x 143		
Weighing units	g, ct, oz				
Dimensions; W x D x H (mm)	265 x 200 x 80				
Weight (Kg)	1.3				

Precision Balances - TDB-M Series

- High precision load cell
- Aluminium alloy die cast base
- Stainless steel pan
- Super bright LCD
- RS-232C interface
- Below balance hanger supplied as standard
- Full capacity subtraction, overload protection
- Check weighing and parts counting
- Stabilisation time 1.5 seconds typically

Product code	TDB10002M	TDB20002M	TDB30002M	TDB50002M
Capacity (g)	0 to 1000	0 to 2100	0 to 3100	0 to 5100
Readability (g)	0.1			
Pan size (mm)	Ø133		155 x 143	
Weighing units	g, ct, oz			
Dimensions; W x D x H (mm)	265 x 200 x 80			
Weight (Kg)	2.9			

Balances

A&D HR-A/HR-AZ Analytical Balances

The HR-A and HR-AZ Series are entry-level Compact Analytical Balances with a shatterproof, anti-static draft shield.

The rotary doors also give HR-A/Z balances the smallest footprint ever in an A&D analytical (0.1mg) balance. They feature fast response times of just 2 seconds, auto on/off, RS-232C interface (USB/LAN are optional) and a useful shock absorber function.

Code	Description
HR-100A	Analytical Balance, 102g x 0.1mg, external calibration
HR-150A	Analytical Balance, 152g x 0.1mg, external calibration
HR-251A	Analytical Balance, 62g / 252g x 0.1mg / 1mg, external calibration
HR-250A	Analytical Balance, 252g x 0.1mg, external calibration
HR-100AZ	Analytical Balance, 102g x 0.1mg, internal calibration
HR-150AZ	Analytical Balance, 152g x 0.1mg, internal calibration
HR-251AZ	Analytical Balance, 62g / 252g x 0.1mg / 1mg, internal calibration
HR-250AZ	Analytical Balance, 252g x 0.1mg, internal calibration

A&D FX-i/FX-i-WP Precision Top Pan Balances

The FX-i and FX-i-WP Precision top pan balances provide a host of features in a compact, light-weight, space saving package. All of the traditional A&D functions are present plus a host of innovative features

The WP models add the additional feature of being IP65 dustproof and waterproof making them ideal for hostile environments. They feature easy to read VFD display, response times of just 1 second, RS-232C interface (USB/LAN are optional) and a small draft shield is included on 1mg models.

Code	Description
FX-120i	Precision Balance, 122g x 1mg
FX-200i	Precision Balance, 220g x 1mg
FX-300i	Precision Balance, 320g x 1mg
FX-500i	Precision Balance, 520g x 1mg
FX-1200i	Precision Balance, 1220g x 0.01g
FX-2000i	Precision Balance, 2200g x 0.01g
FX-3000i	Precision Balance, 3200g x 0.01g
FX-5000i	Precision Balance, 5200g x 0.01g
FX-120i-WP	Precision Balance, 122g x 1mg, dustproof, waterproof
FX-200i-WP	Precision Balance, 220g x 1mg, dustproof, waterproof
FX-300i-WP	Precision Balance, 320g x 1mg, dustproof, waterproof
FX-1200i-WP	Precision Balance, 1220g x 0.01g, dustproof, waterproof
FX-2000i-WP	Precision Balance, 2200g x 0.01g, dustproof, waterproof
FX-3000i-WP	Precision Balance, 3200g x 0.01g, dustproof, waterproof

Baths & Circulators

A range of water baths and circulators with outstanding temperature control and advanced features

Safety

- Automatic power cut off in the event of overheating, with audible and visual alarms. Two separate fuses are included
- Manual or automatic run functions with timer for delayed start and off, plus automated Run and Off (except BW-B and BW-H models)
- Protection against low fluid level and dry running (except for BW-B and BW-H models)

User-friendly Controls

- Microprocessor PID temperature control with easy-to-use calibration and auto tuning features (except BW-B models)
- Selectable units - ºC or ºF
- Intuitive control display based on HMI (Human Machine Interface) design concept (except for BW-B and BW-H models)
- Splash-proof keypad which is easy-to-clean, bright LED display, button lock and 3 user-defined presets

Construction

- Baths are made of high quality, corrosion resistant 304 grade stainless steel with seamless, rounded corners for easy cleaning

Lab Tracer PC Software

- Available to control models with an RS-232 interface and allow recording of temperature profiles. Contact us for further details

Water Baths - BW-H Series

An economic range of water baths covering most applications, with a temperature range from ambient +5°C to 100°C.

- PID temperature controller
- Over temperature limiter with alarm indication
- Digital LED temperature display

(Analogue controlled units also available - please contact us for details)

Model		BW-05H	BW-10H	BW-20H
Product code		AAH45115K	AAH45125K	AAH45135K
Bath volume (L)		3.5	11.5	20
Temperature (ºC)	Range	Amb. +5 to 100		
	Accuracy	±0.1		
Bath opening; W x D x H (mm)		240 x 136 x 150	300 x 240 x 200	498 x 300 x 200
Dimensions; W x D x H (mm)		307 x 216 x 266	364 x 316 x 318	564 x 372 x 318
Weight (Kg)		6.5	10	15.5

Water Baths - BW-H Dual Series

A range of dual tank water baths with specifications as per BW-H single chamber baths.

- 2 separate individually controlled baths
- PID temperature controller
- Over temperature limiter with alarm indication
- Digital LED temperature display

Model	BW-0505H	BW-0510H	BW-1010H	BW-1020H
Product code	AAH47115K	AAH47125K	AAH47135K	AAH47145K
Bath volume (L)	3.5 & 3.5	3.5 & 11.5	11.5 & 11.5	11.5 & 20
Temperature (°C) Range	Amb. +5 to 100			
Temperature (°C) Accuracy	±0.1			
Bath opening; W x D x H (mm)	240 x 136 x 150	240 x 136 x 150 300 x 240 x 200	300 x 240 x 200	300 x 240 x 200 498 x 300 x 200
Dimensions; W x D x H (mm)	590 x 200 x 265	544 x 300 x 318	706 x 300 x 318	844 x 356 x 318
Weight (Kg)	9.7	12.4	14	17.6

Water Baths, Shaking - BS Series

The BS series reciprocal shaking & heating baths provide precise and constant temperature control which ensures ideal sample incubation conditions for DNA, tissue culture or cell culture applications.

The BS series shaking baths have a temperature range from ambient +5°C to 100°C, and are supplied with a stainless steel, hinged gabled cover.

- Microprocessor PID controller / auto timing / auto calibration
- Digital timer (1min - 99hr 59min)
- Splash proof keypad

Model	BS-06	BS-11	BS-21	BS-31
Product code	44062	44112	44212	44312
Bath volume (L)	17	25	37	55
Temperature (°C) Range	Amb. +5 to 100			
Temperature (°C) Accuracy	±0.2			
Shaking system Motion / Speed range (rpm)	Reciprocating / 20 to 180			
Shaking system Stroke length (mm)	25, 30, 35 (preset at 30)			
Bath opening; W x D x H (mm)	109 x 243 x 235	229 x 243 x 235	389 x 243 x 235	670 x 350 x 235
Dimensions; W x D x H (mm)	430 x 440 x 355	550 x 440 x 355	710 x 440 x 355	860 x 490 x 355
Weight (Kg)	26	30	35	42

Ultrasonic Cleaners

Our dedicated series use ultrasound to remove problematic contamination from all types of hard surfaces such as metals, plastics and ceramics. The power of our equipment can be used to clean items of all shapes, sizes and technical complexity, penetrating holes and cavities that are impossible to reach using ordinary cleaning methods

- Durable / flame resistance ABS material used and cover with 304 stainless steel tanks
- Over-temperature protection with alarm (except for UCP-02)
- Digital LED display using splash-proof keypads: timer (1 to 99min, Max 4 hour operating), temperature monitor (except for UCP-02)
- High-frequency 40kHz sound waves provide greater cleaning power and increased reliability
- Multiple output mode (Normal/Pulse/Sweep) with power selection (Low/Middle/ High) (except for UCP-02)
- Before cleaning, dissolved gas removed by degas function (except for UCP-02)
- Drain valve, basket, cover as standard offer (except for UCP-02)

Model	UCP-02	UCP-10	UCP-20
Product code	BDH532011K	BDH532012K	BDH532013K
Bath volume (L)	2	10	20
Temperature range (°C)	Amb. to 70		
Ultrasonic power (W)	100	300	500
Dimensions Bath interior; W x L x H (mm)	142 x 132 x 104	295 x 240 x 160	500 x 290 x 160
Dimensions Exterior; W x L x H (mm)	290 x 210 x 200	490 x 368 x 297	721 x 451 x 2977
Net weight (Kg)	2	11	17

Accessories

Gable Lid
- Prevents condensed water from falling onto specimen with gable roof shape
- Transparency makes for convenient internal observation

Flat Lid
- Made from stainless steel with high corrosion resistance even with long-term use
- Convenient handle

Open Ring Lid
- Select the ring size according to flask size
- Multiple rings in one hole allow for adjustment

Spring Wire Rack
- It has a lattice-shaped double spring structure, which makes it easy to fix various kinds of experiment containers and the height can also be easily adjusted
- Excellent corrosion resistance as made from stainless steel
- Convenient for handling with handles on either side

Half Shelf Adjuster
- Easy-to-use pedestal structure when using low-height experiment container
- Convenient height adjustment
- Convenient for handling with handles on either side

Test Tube Rack
- Fix test tubes of various sizes
- Excellent durability as made from stainless steel
- Structure allowing tilt adjustment

Model			BW-05H	BW-10H	BW-20H	BW-05B	BW-10B	BW-20B
Cover	Gable lid		AAA45531	AAA45532	AAA45533	AAA45531	AAA45532	AAA45533
	Flat lid		AAA45541	AAA45542	AAA45543	AAA45541	AAA45542	AAA45543
	Open ring lid (mm)	Ø80 x 2	AAA45521	-	-	AAA45521	-	-
		Ø80 x 4	-	AAA45522	-	-	AAA45522	-
		Ø80 x 8	-	-	AAA45523	-	-	AAA45523
		Ø110 x 1	AAA45524	-	-	AAA45524	-	-
		Ø110 x 2	-	AAA45525	-	-	AAA45525	-
		Ø110 x 6	-	-	AAA45527	-	-	AAA45527
		Ø185 x 1	-	AAA45526	-	-	AAA45526	-
		Ø185 x 2	-	-	AAA45528	-	-	AAA45528
Rack	Spring wire rack		-	AAA45502	AAA45503	-	AAA45502	AAA45503
	Half shelf adjuster		AAA45511	AAA45512	AAA45513	AAA45511	AAA45512	AAA45513
	Test tube rack (mm)	Ø8 x 50 tubes	AAA41531	-	-	AAA41531	-	-
		Ø10 x 50 tubes	AAA41532	-	-	AAA41532	-	-
		Ø12 x 33 tubes	AAA41533	-	-	AAA41533	-	-
		Ø16 x 16 tubes	AAA41535	-	-	AAA41535	-	-
		Ø25 x 10 tubes	AAA41539	-	-	AAA41539	-	-
		Ø8 x 176 tubes	-	AAA45551	AAA45551	-	AAA45551	AAA45551
		Ø10 x 176 tubes	-	AAA45552	AAA45552	-	AAA45552	AAA45552
		Ø12 x 84 tubes	-	AAA45554	AAA45554	-	AAA45554	AAA45554
		Ø16 x 68 tubes	-	AAA45556	AAA45556	-	AAA45556	AAA45556
		Ø25 x 33 tubes	-	AAA45561	AAA45561	-	AAA45561	AAA45561
		Maximum capacity	1	1	2	1	1	2

Flask Clamps
- Clamp able to hold an Erlenmeyer flask
- Excellent durability as made of stainless steel
- Equipped with flask clamps of the desired size/quantity on the universal platform and used inside the bath

Product code	Flask clamp	Max. number of clamps per bath			
		BS-06	BS-11	BS-21	BS-31
AAA23550	50ml	9	12	20	32
AAA23551	100ml	3	9	15	24
AAA23552	250ml	2	4	8	12
AAA23556	300ml	2	4	8	12
AAA23553	500ml	2	4	6	12
AAA23554	1L	1	2	4	6
AAA23555	2L[1]	-	1	2	3
AAA23557	2.8L[1]	-	1	1	2

1) 2L and 2.8L flasks can only be used with the bath cover removed.

Universal Platforms
- Accessories for mounting flask clamp, test tube rack, etc. inside bath
- Spring wire rack can be used attached and used instead of clamps

Product code	Model
AAA44521	BS-06
AAA44522	BS-11
AAA44523	BS-21
AAA44524	BS-31

Dedicated Platforms
- Set of 250ml/500ml flask clamps mounted on Universal Platform
- Spring wire rack can be used attached and used instead of clamps

Product code	Flask Clamps	Model
AAA44531	250ml x 2	BS-06
AAA44532	500ml x 2	
AAA44541	250ml x 4	BS-11
AAA44542	500ml x 4	
AAA44551	250ml x 8	BS-21
AAA44552	500ml x 6	
AAA44561	250ml x 12	BS-31
AAA44562	50ml x 12	

Test Tube Racks
- Fix test tubes of various sizes
- Excellent durability as made of stainless steel
- Structure allows tilt adjustment

Product code	Description (mm)	Max. Quantity of Racks
AAA44581	Ø8 x 86 tubes	BS-06 : 1x BS-11 : 2x BS-21: 3x BS-31 : 4x
AAA44582	Ø10 x 86 tubes	
AAA44583	Ø12 x 58 tubes	
AAA44585	Ø16 x 32 tubes	
AAA44586	Ø25 x 19 tubes	

Heating Bath Circulators - CW3 Series

The CW3 circulators feature a highly intuitive interface. One touch operating button and easy-to-navigate icon-driven menus mean that operation is simple, whether you are setting up a program or just pressing "start".

Performance
- Microprocessor PID control
- Three point temperature calibration / automatic tuning / automatic run
- Accurate, stable and efficient temperature management by using a powerful, variable speed (5 steps) circulating pump. Consistent and powerful pump pressure and flow rate across the whole temperature range

Convenience
- Bright VFD display with a simple dial knob (0.1°C resolution)
- Dual wait on/off timer modes. (1min to 99hr 59min)
- Convenient memory function of up to three frequently set temperature
- High quality, corrosion resistant, 304 grade stainless steel bath with rounded corners which is easy to clean, with front access drain valve
- RS-232 interface for external control and data collection
- Side handles enable convenient handling and transport

Safety
- Isolated design of agitator, heater and sensor by a baffle plate, minimising the turbulence in the bath fluid and also protecting users and samples against direct contact
- Complete safety protection system with warning alarms; low fluid level and dry-running, over-temperature, over-current
- Keypad lock function prevents accidental changes during operation

Pump Capacities
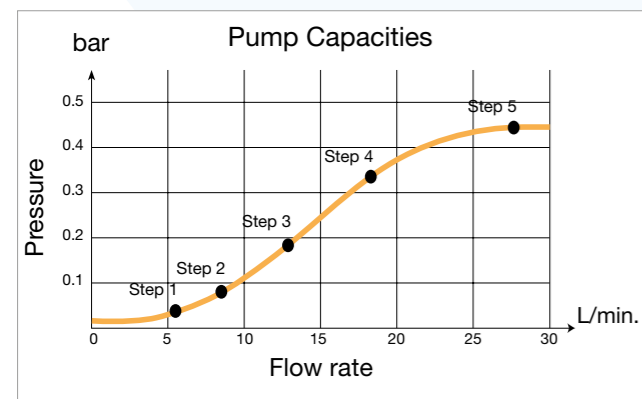
Model	CW3-05	CW3-10	CW3-20	CW3-30
Product code	AAH52341K	AAH52351K	AAH52361K	AAH52371K
Bath volume (L)	5	10	20	30
Temperature ($^\circ$C) Range	Amb. +5 to 150			
Temperature ($^\circ$C) Accuracy	±0.05		±0.08	
Pump Pressure (PSI)	5.9			
Pump Flow rate (l/min)	28			
Dimensions; W x D x H (mm)	228 x 395 x 424	289 x 450 x 444	368 x 510 x 464	378 x 560 x 494
Weight (Kg)	12.5	15	17.5	19.5

Refrigerating & Heating Bath Circulators - RW3 Series

Performance
- Microprocessor PID control
- Three point temperature calibration / automatic tuning / automatic run
- Suitable for both internal and external bath environments due to reduced turbulence by using five-speed adjustable pump and built-in cooling coil

Convenience
- Intuitive touch screen LCD controller with easy icons and logical menus
- Dual wait On / Off timer modes (1min to 99hr 59min)
- Digital input and output control function for interlocking external devices
- RS-232 interface for external control and data collection
- High quality, corrosion resistant, 304 grade stainless steel bath with rounded corners which is easy to clean, with front access drain valve
- Quick release front grill and detachable condenser air-filter for easy maintenance
- Use of CFC-free refrigerant (R-507, R-404A) and a double service valve for leak prevention
- Built-in casters and side handles for easy transport and installation

Safety
- Isolated design of agitator, heater and sensor by a baffle plate, minimising the turbulence in the bath fluid and also protecting users and samples against direct contact
- Complete safety protection system with warning alarms; low fluid level and dry-running, over-temperature, over-current
- Splash-proof keypad and keypad lock function prevents accidental changes during operation

Pump Capacities
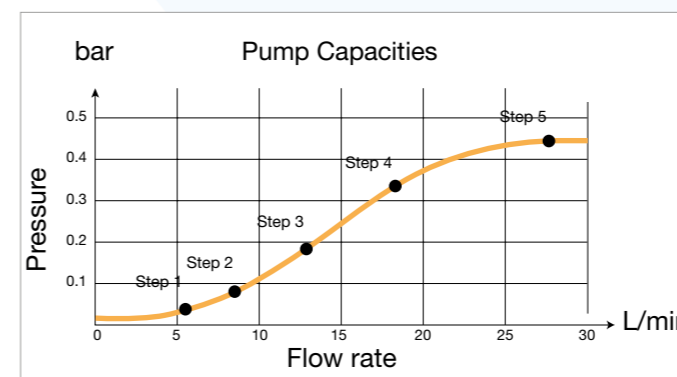
Model	RW3-0525P	RW3-1025P	RW3-2025P	RW3-3025P
Product code	AAH57642K	AAH57652K	AAH57662K	AAH57672K
Bath volume (L)	5	10	20	30
Temperature ($^\circ$C) Range	-25 to 150			
Temperature ($^\circ$C) Accuracy	±0.05			
Cooling capacity (W) at -20°C	30	50	260	390
Cooling capacity (W) at 0°C	230	250	410	570
Cooling capacity (W) at +20°C	320	380	560	680
Pump Pressure (PSI)	5.9			
Pump Flow rate (l/min)	28			
Dimensions; W x D x H (mm)	302 x 438 x 690	360 x 490 x 780	380 x 560 x 825	440 x 620 x 895
Weight (Kg)	37	44	60	70

Laboratory Equipment

Accessories

Stainless Steel Covers
- Sturdy, corrosion-resistant, stainless steel

Product code	Model
AAA51531	RW3-0525(P), RW3-0535(P), CW3-05(P)
AAA51532	RW3-1025(P), RW3-1035(P), CW3-10(P)
AAA51533	RW3-2025(P), RW3-2035(P), CW3-20(P)
AAA51534	RW3-3025(P), RW3-3035(P), CW3-30(P)
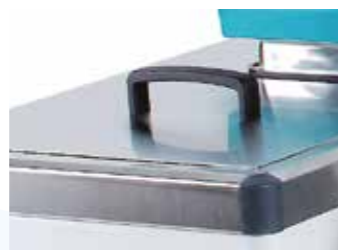
Spring Wire Racks
- It has a lattice-shaped double spring structure, which makes it easy to fix various kinds of experiment containers and the height can also be easily adjusted

Product code	Model
AAA51522	RW3-2025(P), 2035(P)
AAA51523	RW3-3025(P), 3035(P)
AAA51522	CW3-20(P)
AAA51523	CW3-30(P)

Test Tube Racks
- Test tubes can be easily fixed in the bath and various models are available according to test tube size
- Structure allows for easy adjustment of the degree of tilt and lock

Product code	Description (mm)	Max. quantity of racks
AAA44581	Ø8 x 86 tubes	CW3-20(P): 2
AAA44582	Ø10 x 86 tubes	CW3-30(P): 2
AAA44583	Ø12 x 58 tubes	RW3-2025(P): 2
AAA44585	Ø16 x 32 tubes	RW3-2035(P): 2
AAA44586	Ø25 x 19 tubes	RW3-3025(P): 2
AAA41531	Ø8 x 50 tubes	RW3-3035(P): 2
AAA41532	Ø10 x 50 tubes	
AAA41533	Ø12 x 33 tubes	CW3-10(P): 1
AAA41535	Ø16 x 16 tubes	RW3-1025(P): 1
AAA41539	Ø25 x 10 tubes	RW3-1035(P): 1

LC GreenBox
- Real-time monitoring and control of device operation via mobile app. Up to 4 devices can be connected at once

Product code	Dimensions; W x D x H (mm)
AAAQ1011	156 x 94 x 34

Tube Clamp

Product code	Description (mm)
HXE1099	1.9
HXE1100	1.6

Tubing Insulation
- EPDM material insulation prevents heat loss when using external circulation

Product code	Length (m)
FEA1453	1

Silicone Tubing
- The operating temperature range is -50 ~ 250°C
- Inner diameter of 10mm, outside diameter of 16mm

Product code	Length (m)
FAA1110	1

Centrifuges

The Medline range of centrifuges brings a new level of performance and reliability to the laboratory. The range is suitable for all applications including tissue/cell culture, molecular biology and clinical applications as well as proteomics and genomics.

Ultra Micro Centrifuges
- Ideal for microfiltration and quick spin-downs
- Easy-to-use with dual start/stop function
- Fixed speed operation
- Quiet running
- Rotor change without tools
- Accelerates and brakes in seconds
- cTÜVus FCC MCA certified
- Includes rotors

Model	MD1008	MD1008E
Max. speed (rpm)	7000	5000
Max. RCF (x g)	2680	1360
Rotor capacity	8 x 0.2/0.5/1.5/2.0ml 16 x 0.2ml PCR strips or 2x 8x0.2ml strips	
Run time	Continuous operation	
Driving motor	Brushless DC motor	
Noise level (dB)	≤45	
Dimensions; W x D x H (mm)	160 x 170 x 122	
Weight (Kg)	0.5	

High Speed Micro Centrifuges - MD Series

High speed micro-centrifuges are widely used in physical and chemistry analysis, biochemistry, cellular and molecular biology, clinical labs and blood donation centres and are ideal for high-end research applications.

- Timer starts when target speed is reached, to achieve the accuracy of separation time
- User-friendly large LCD display shows real-time information
- Both RPM and RCF can be set and displayed
- The parameters can be modified after the set speed is reached
- Automatic lid-lock release
- Concise display and sound-alert
- High strength metal casing ensures security of centrifugal process
- Dual door interlock design for safety
- Gentle braking to ensure efficient separation
- Rotors are fully autoclavable and include bio-safe lids

Rotor Features

Rotors are manufactured from military, industrial-grade aluminum alloy with high mechanical strength for precise running and safety (excludes MD2012 plus rotor)

Fully autoclavable
High strength aluminum alloy rotors are fully autoclavable, withstanding steam sterilising at 121°C for 20 minutes.

Bio-safe
Aspired to be the top-of-the-line model, MD3024 & MD3024R rotors are designed to prevent sample leakage. Each and every rotor is hermetically sealed by three rubber seals.

Explosion-proof
Centrifuges are checked under MCA conditions according to IEC / EN61010-2-20, causing disruption by partially cutting and overloading rotor assembly, and guarantees that no other part shall be detached to cause danger to person or the environment.

Model	MD3024	MD3024R
Max. speed (rpm)	200-15,000	
Max. RCF (x g)	21,380	
Speed accuracy (rpm)	±20	
Temperature range (°C)	-	-20 to +40
Rotor capacity	18 x 0.5ml, 24 x 1.5/2.0ml, 36 x 0.5ml, 4 x PCR strips (8 x 0.2ml)	
Run time	30sec - 99min / Continuous	
Motor	Brushless DC motor	
Safety devices	Dual door interlock, Over-speed detection, Over-temperature detection, Automatic internal diagnosis	
Acceleration/Braking time (sec)	25	
Dimensions; W x D x H (mm)	280 x 364 x 266	338 x 580 x 324
Weight (Kg)	12	30

Laboratory Equipment

Microcentifuges

MyFuge™ 5

The MyFuge™ 5 microcentifuge includes a four position rotor for compatibilty with a variety of 5ml test tubes, including 5ml snap cap centrifuge tubes. In addition, this combination rotor has four additional slots for centrifuging standard microtubes (1.5/2.0ml). Simply close the lid and the centrifuge quickly accelerates to the fixed speed of 5000rpm. Open the lid, and the rotor decelerates to a stop for removing samples.

The 5ml rotor positions accept 5ml centrifuge tubes directly, while 5ml blood and culture tubes (12x75mm) are accepted with the included adapters. The microtube positions are designed to accept 0.5 and 0.2ml tubes with the use of optional adapters.

- For quick spin downs of 5ml centrifuge tubes
- Includes adapters for 5ml blood tubes
- Starts and stops with closing/opening of the lid
- Optional adapters for centrifuging cryovials

Model	MyFuge™ 5
Product code	C1005
Speed	5000rpm / 2000 x g
Capacity	4 x 5ml tubes & 4 x 1.5/2.0ml
Dimensions; W x D x H (mm)	140 x 200 x 140
Weight (Kg)	1
Electrical	100-240V, 50-60 Hz, 50W

MyFuge™ 12

Unlike traditional mini centrifuges, the new MyFuge™ 12 eliminates the need to change rotors when switching between microtubes and PCR strips. The included, unique COMBI-Rotor™ is all that is required for running 12 microtubes and/or 4 (eight position) PCR strips.

With a fixed speed that produces 2000 x g, this centrifuge is perfect for quick spin downs. Simply close the lid and the unit accelerates to 5500rpm. Open the lid, and the rotor quickly decelerates for removal of samples.

At just 140mm wide and less than 114mm tall, the MyFuge™ 12 is a personal centrifuge with unmatched capacity and flexibiilty.

- COMBI-Rotor™ for tubes and strips
- Twice the capacity of most mini centrifuges
- Near silent operation
- Starts & stops with closing/opening of the lid

Model	MyFuge™ 12
Product code	C1012
Speed	5500rpm / 2000 x g
Capacity	12 x 1.5/2.0ml tubes 32 x 0.2ml PCR tubes 4 x PCR strips (8 x 0.2ml)
Dimensions; W x D x H (mm)	140 x 200 x 112
Weight	1
Electrical	100-240V, 50-60 Hz, 50W

Bench Top Centrifuges - MC Series

The MC range of bench-top centrifuges is our most common and versatile type of centrifuge. They have a variety of uses, from routine specimen preparation to research, and have an extensive range of rotors and adapters. The low profile compact design means they are easy to reach into the centrifuge whilst still taking up minimal bench space.

Product code	MC-4000	MC-5000	MC-7000
Max. speed (rpm)	4000	5000	6000
Max. RCF (x g)	2690	4745	5080
Max. capacity	4 x 50ml	4 x 250ml	4 x 500ml
Timer (min)	0 - 99		
Motor	Brushless		
Noise (dB)	≤55		
Dimensions; W x D x H (mm)	480 x 400 x 300	440 x 550 x 330	440 x 550 x 330
Weight (Kg)	22	35	45

Rotors & Adapters

Product code	Suitable for	Item	Included adapters	Max. Speed (rpm)	Max. RCF (x g)
MC16RT-A	MC-4000	Angle rotor	12 x 10ml	4000	2095
MCRT-12		Swing bucket rotor	12 x 10ml		2600
MCRT-15			8 x 15ml		2690
MCRT-13			4 x 50ml		2420
MCRT-1	MC-5000	Swing bucket rotor	4 x 100ml	5000	4605
MCRT-2			4 x 50ml		4745
MCRT-3			8 x 50ml		3040
MCRT-4			32 x 15ml	4000	3000
MCRT-5			32 x 10ml		2910
MCRT-6			32 x 5ml		2810
MCRT-7			32 x 2ml		2810
MCRT-8			48 x 5ml		2910
MCRT-9			72 x 5ml		2810
MCRT-10			72 x 2ml		2810
MCRT-11			4 x 250ml		2990
MCRT-19A	MC-7000	Angle rotor	12 x 15ml	6000	5080
MCRT-18A			24 x 10ml		3670
MCRT-17		Swing bucket rotor	96 x 5ml	4000	3405
MCRT-16			96 x 2ml		3405
MCRT-18			4x 12 x 10ml		3100
MCRT-19			24 x 15ml		3000
MCRT-20			4x 2 x 50ml		3040
MCRT-21			4x 2 x 100ml		2950
MCRT-22			4 x 500ml		3520

Additional tube adapters / reducers available for above rotors, please contact us for further details

Laboratory Equipment

Product code	MC-16000	MC-16000R	MC-20000
Type	High Speed	Refrigerated	High Speed
Max. speed (rpm)	16,000		20,000
Max. RCF (x g)	17,800		27,800
Max. capacity	12 x 10ml	4 x 100ml	
Timer (min)	0 - 99		
Motor	Brushless DC motor		
Noise (dB)	≤55		
Temperature (°C) — Range	-	-20 to +40	-
Temperature (°C) — Accuracy	-	±2	-
Dimensions; W x D x H (mm)	330 x 390 x 320	620 x 500 x 350	330 x 390 x 320
Weight (Kg)	26	70	26

Rotors & Adapters

Product code	Suitable For	Item	Description	Max. Speed (rpm)	Max. RCF (x g)
MC16RT-1C	MC-16000	Capilliary rotor	24 Capilliaries	12,000	14,800
MC16RT-1		Angle rotor	12 x 0.5ml	16,000	17,800
MC16RT-2			12 x 1.5ml	16,000	17,800
MC16RT-2A			24 x 1.5ml	13,000	15,710
MC16RT-3			10 x 5ml	16,000	17,800
MC16RT-4			12 x 10ml	12,000	12,740
MCRR-10	MC-16000R	Angle rotor	48 x 0.5ml	13,000	13,910
MCRR-1			12 x 1.5ml	16,000	17,800
MCRR-5			24 x 1.5ml	13,000	15,710
MCRR-2			10 x 5ml	14,000	13,200
MCRR-3			12 x 10ml	13,000	12,740
MCRR-6			4 x 50ml	12,000	13,900
MCRR-4			6 x 50ml	12,000	13,280
MCRR-7			4 x 100ml	10,000	10,975
MCRR-8		Swing bucket rotor	4 x 10ml	6000	4495
MCRR-9			2x 2 x 48 (microplate)	4000	1505
MCRR-11	MC-20000	Swing bucket rotor	48 x 0.5ml	16,000	21,900
MCRR-12			24 x 1.5ml	16,000	20,380
MCRR-13			24 x 2.2ml	16,000	23,800
MCRR-14			10 x 5ml	16,000	17,780
MCRR-15			12 x 10ml	15,000	19,910
MCRR-16			6 x 50ml	13,000	18,550
MCRR-17			4 x 100ml	10,000	13,280

Additional tube adapters / reducers available for above rotors, please contact us for further details
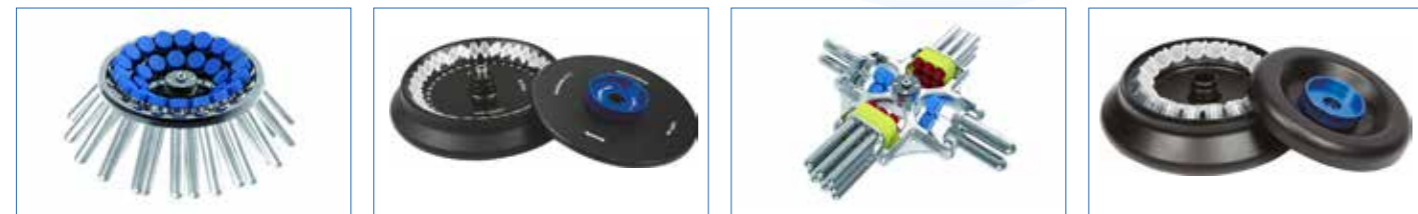
Desiccators - SDC Cubic Series (without vacuum)

Integrally moulded cubic box design ensures maximum storage space in a minimum of laboratory bench space.

Features

- High quality silicone gasket ensures greaseless, airtight seal
- Highly transparent, shatterproof, non-corrosive and easy to clean polycarbonate construction
- Up to 5 shelves and/or drawers maximises internal space
- Stackable, space-saving design allowing efficient use of cramped lab space
- Hygrometer dial in door
- "U" models minimise photo degradation of light sensitive product

Model		SDC-30 / 30U*	SDC-45 / 45U*
Product code	Without UV Block Effect	AAAD5011	AAAD5021
	With UV Block Effect (U)	AAAD5111	AAAD5121
Internal volume (L)		35	50
Max. Load per shelf or drawer (Kg)		5	
Number of shelves (included / max.)		1 / 3	2 / 5
Number of drawers (included / max.)		1 / 3	1 / 5
Construction	Body	Polycarbonate	
	Perforated sample tray		
	Perforated sample drawer		
	Drying agent tray / locker	Polypropylene / stainless steel	
	Seal	Silicone rubber	
Dimensions; W x D x H (mm)	Internal	322 x 367 x 302	322 x 367 x 422
	External	360 × 410 × 326	360 × 410 × 447
Weight (Kg)		4.9	6.2

* U models are translucent (amber coloured) vacuum dessicators with ultraviolet block effect

Desiccators - VDC Cubic Series (with vacuum)

Integrally moulded cubic box design enabling outstanding vacuum capability with virtually no leakage and exceptional durability.

Features

- Maximum vacuum of 1 Torr (1.33mbar) for 72 hours
- Greaseless, airtight vacuum seal using high-quality silicone gasket
- Highly transparent, shatter-proof, non-corrosive and easy-to-clean polycarbonate construction
- Convenient three-way stopcock providing consistent and uniform vacuum draw, vacuum release or shut-off
- Maximised utilisation of internal space using a maximum six shelves depending on model
- Stackable design allowing efficient usage of cramped lab space
- Easy vacuum level checking, using the vacuum gauge attached to the front door
- Minimised damage or discolouration of light-sensitive samples when using UV-blocking models
- Four built-in ports allowing easy attachment of various accessories

Model		VDC-11 / 11U*	VDC-21 / 21U *	VDC-31 / 31U *	VDC-41 / 41U *
Product code	Without UV Block Effect	AAAD4001	AAAD4021	AAAD4011	AAAD4031
	With UV Block Effect (U)	AAAD4101	AAAD4121	AAAD4111	AAAD4131
Internal volume (L)		11	23	35	45
Nozzle (Ø, mm)		9.5			
Max. permissible vacuum (mbar)		1.33			
Max. load per shelf (Kg)		3	5		
Number of shelves (included / max.)		2 / 4		3 / 5	3 / 6
Construction	Body	Polycarbonate			
	Perforated sample tray				
	Drying agent tray / locker	Polypropylene			
	Vacuum seal	Silicone rubber			
Dimensions; W x D x H (mm)	Internal	248 x 254 x 238	346 x 365 x 246	355 x 375 x 345	355 x 374 x 445
	External	322 x 285 x 271	420 x 392 x 281	420 x 397 x 381	420 x 397 x 491
Weight (Kg)		4.2	8.2	10.8	12.2

* U models are translucent (amber coloured) vacuum dessicators with ultraviolet block effect

Desiccators - VDR Round & VDP Cylindrical Series (with vacuum)

Our round design offers light weight yet high tensile strength. A high-quality silicone O-ring and a specially designed locking clip provide outstanding vacuum capability with virtually no leakage.

Features

- Maximum vacuum of 1 Torr (1.33mbar) for 72 hours
- Greaseless, airtight vacuum seal using high-quality silicone gasket
- Highly transparent, shatterproof, non-corrosive and easy to clean polycarbonate construction
- Convenient three-way stopcock providing consistent and uniform vacuum draw, vacuum release or shut-off
- A flange lock holds the top and the bottom together during non-vacuum conditions
- A vacuum gauge is attachable at the centre of the lid for easy vacuum level checking (G models only)
- VDR and VDP components are compatible with each other
- UV blocking models are available on request

Model		VDR-20 / 20G*	VDR-25 / 25G*	VDR-30 / 30G*	VDP-25 / 25G*	VDP-30 / 30G*
Product code	Clear body	AAAD2011	AAAD2111	AAAD2211	AAAD3011	AAAD3021
	Clear body with vacuum gauge (G)	AAAD2021	AAAD2121	AAAD2221	AAAD3111	AAAD3121
Internal volume (L)		6	10	20	16	25
Nozzle diameter (mm)		9.5				
Max. permissible vacuum (mbar)		1.33				
Construction	Lid / Bottom	Polycarbonate				
	Body / Base for VDP					
	Perforated sample tray	Polypropylene				
	Drying agent tray / Locker					
	Vacuum seal	Silicone rubber				
Dimensions; Ø x H (mm)		242 x 279	308 x 325	385 x 399	308 x 374	385 x 384
Weight (Kg)		1.5	2.5	4.2	2.7	4.0

* G models are supplied with a vacuum gauge as standard

Laboratory Equipment

Desiccators - Accessories & Options

Drying agent tray
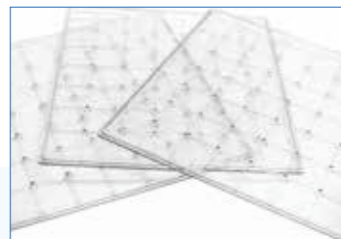
Perforated sample tray

Drying agent tray

Perforated sample tray

For Cubic Vacuum Desiccators

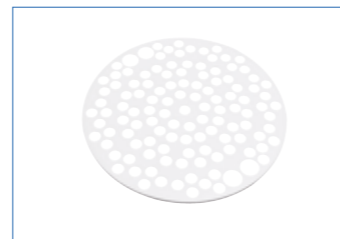| Product code	Accessories	VDC-11 / 11U	VDC-21 / 21U	VDC-31 / 31U	VC-41 / 41U
VDC0035	Perforated sample tray	●	-	-	-
VDC0003		-	●	●	●
VDC0037	Drying agent tray	●	-	-	-
VDC0005		-	●	●	●
VDC0032	Vacuum seal	●	-	-	-
VDC0033		-	●	-	-
VDC0015		-	-	●	-
VDC0034		-	-	-	●
AAAD4501	Stopcock	●	●	●	●
EDA4301	Vacuum gauge	●	●	●	●

For Round & Cylindrical Vacuum Desiccators

Product code	Accessories	VDR-20 / 20G VDR-20U / 20UG	VDR-25 / 25G VDR-25U / 25UG	VDR-30 / 30G VDR-30U / 30UG	VDP-25 / 25G VDP-25U / 25UG	VDP-30 / 30G VDP-30U / 30UG
AAAD1501	Drying agent tray	●	-	-	-	-
AAAD1502		-	●	-	●	-
AAAD1503		-	-	●	-	●
AAAD1511	Perforated sample tray	●	-	-	-	-
AAAD1512		-	●	-	-	-
AAAD1513		-	-	●	-	-
AAAD3511		-	-	-	●	-
AAAD3512		-	-	-	-	●
VDR0001	Vacuum seal	●	-	-	-	-
VDR0002		-	●	-	●	-
VDR0003		-	-	●	-	●
VDR0015	Flange lock	●	-	-	-	-
VDR0016		-	●	-	●	-
VDR0017		-	-	●	-	●
AAAD1521	Stopcock	●	●	●	-	-
AAAD3501		-	-	-	●	●
EDA4302	Vacuum gauge	●	●	●	●	●

Fume Hoods / Laminar Flow Cabinets

Vertical Laminar Flow Cabinets
Asbestos handling, electronics inspection/repair, general forensics, non-toxic solution preparation, plant tissue culture, QA/QC testing, sterile media preparation, syringe filling, tissue fixation/staining preparation, etc.

Fume Hoods
Chemical sampling, chemical preparation, cosmetic production, numerous vapour-generating laboratory processes, powder extraction, slide preparation, touch up painting, weighing toxic powders, welding fumes, etc.

PCR Workstations
A PCR workstation, also called a PCR hood, is a work space, enclosed on three sides and with a sloping front panel, that provides a sterile space for performing amplification of DNA and/or RNA. PCR hoods are used in biology and genetic labs to prevent cross contamination between samples.

Vertical Laminar Flow Cabinets
Features
- 2 independent over-current fuses for user safety
- UV lamp switches off whenever window is opened
- Tempered glass sliding sash window
- Optimum PWM (pulse width modulation) control performance
- Dirt-repellent surfaces
- Light and fan switches are within easy reach of the user
- Excellent chemically resistant work surface
- User-friendly controls

Ductless Fume Hoods
Features
- Transparent acrylic front window
- Stand with casters for easy maneuverability (optional)
- Control panel for, Fan Start/Stop, Blower speed controller, alarm etc
- Over-current circuit protector for user safety
- A built in anemometer provides input air velocity data in real time

PCR Workstations
Features
- Choice of "static" (UV sterilisation) and "active" (HEPA filtration and UV sterilisation) models
- Built-in over-current circuit protector for user safety
- Intelligent multifunctional digital controller
- A fitted prefilter extends the life of the filters
- Powerful, uniformly distributed UV-C lamp
- Excellent chemically resistant work surface
- Auto UV lamp switch off

Clean Benches - Analogue Control

Vertical type laminar flow clean bench

ISO 14644-1 Class 4 air (formerly Class 10 per Federal Standard 209E). High efficiency HEPA filter, for particles from 0.3 microns. Nominal downflow velocity of 0.3m/s. (60fpm). Ergonomic 5 degree slope at front for maximum user comfort.

Model		BC-01B	BC-11B	BC-21B
Product code		AAHA6012K	AAHA6022K	AAHA6032K
Air flow type		Vertical		
Air volume (Minimum / Maximum)		274 to 914cmh / 119 to 399cfm		
Laminar airflow velocity (m/s)		0.3		
Air cleanliness within working area		ISO 14644-1 Class 4, US Federal Standard 209E Class 10		
Filters	HEPA filter	Typical efficiency of 99.99% at 0.3µm US MIL - STD -282; Micro glass fibre media, particle board, AL separator, Neoprene gaskets		
	Pre filter	Polyester fibres with an efficiency of 85% (A-F-I TEST); AL frame, Polyester fibre media		
Noise level (dB)		<67 (at initial blower speed)		
Contruction	Main body	Stainless steel (grade 304) & steel powder coating		
	Work surface	Stainless steel (grade 304)		
	Windows front / side	Colourless and transparent UV absorbing 5mm tempered glass		
Illumination	Intensity (lux)	>1000		
	FL lamp	2x 30W electronically ballasted FL Lamp		
	UV lamp	30W electronically ballasted UV Lamp		
Dimensions; W x D x H (mm)	Internal	970 x 540 x 570	1270 x 540 x 570	1870 x 540 x 570
	External	1040 x 630 x 1060	1340 x 630 x 1060	1940 x 630 x 1060
Weight (Kg)		110	127	163

Pictured with stand (optional)

Clean Benches - Digital Control

Model		BC-01H	BC-11H	BC-21H
Product code		AAHA5012K	AAHA5022K	AAHA5032K
Air flow type		Vertical		
Air volume (Minimum / Maximum)		274 to 914cmh / 119 to 399cfm		
Laminar airflow velocity (m/s)		0.3		
Air cleanliness within working area		ISO 14644-1 Class 4, US Federal Standard 209E Class 10		
Filters	HEPA filter	Typical efficiency of 99.99% at 0.3µm US MIL - STD -282; Micro glass fibre media, particle board, AL separator, Neoprene gaskets		
	Pre filter	Polyester fibres with an efficiency of 85% (A-F-I TEST); AL frame, Polyester fibre media		
Noise level (dB)		<67 (at initial blower speed)		
Contruction	Main body	Stainless steel (grade 304) & Steel powder coating		
	Work surface	Stainless steel (grade 304)		
	Windows front / side	Colourless and transparent UV absorbing 5mm tempered glass		
Illumination	Intensity (lux)	>1000		
	FL lamp	2x 30W electronically ballasted FL Lamp		
	UV lamp	30W electronically ballasted UV Lamp		
Dimensions; W x D x H (mm)	Internal	970 x 540 x 570	1270 x 540 x 570	1870 x 540 x 570
	External	1040 x 630 x 1060	1340 x 630 x 1060	1940 x 630 x 1060
Weight (Kg)		110	127	163

Pictured with stand (optional)

Clean Benches - Accessories & Options

Product code	Description	BC-01H/B	BC-11H/B	BC-21H/B
AAAB1601	HEPA filter	●	-	-
AAAB1602		-	●	-
AAAB1603		-	-	●
AAAB1611	Pre filter	●	-	-
AAAB1612		-	●	-
AAAB1613		-	-	●
AAAB1621	Stand with casters	●	-	-
AAAB1622		-	●	-
AAAB1623		-	-	●
AAAB1631	UV lamp	●	-	-
AAAB1633		-	●	-
AAAB1635		-	-	●
AAAB1561	Gas cock	●	●	●
AAAB1571	Differential pressure gauge	●	●	●

Bench Top Fume Hood

Ideal for use where laboratory space is limited.

- Compact design for easy transportation and space saving
- Transparent polycarbonate front door for observation
- The door opens to five positions for comfort and convenience
- One-piece moulded design for leak tightness and exceptional durability
- Chemical resistant polyethylene construction
- Rounded inner corners for non-interrupted air flow and easy cleaning

Model		PMH-720
Product code		AAAB5011
Permissable air velocity (m/s)		0.3 to 1
Construction	Main body	Polyethylene
	Window	Polycarbonate
Dimensions (mm)	External (W x D x H)	720 x 450 x 560
	Entrance (W x D)	560 x 300
	Exhaust duct (O.D.)	150
Weight (Kg)		7

Note: The PMH-720 does not include a fan so an external exhaust fan, connected to a 150mm diameter flexible hose, is required

Laboratory Equipment

Ductless Fume Hoods and Accessories

Providing safe and energy saving workspaces, free from toxic vapours and fumes without the need for costly ducting.

Pictured with stand (optional)

Model		DLH-01G	DLH-11G
Product code		AAHB2002K	AAHB2012K
Fume hood type		Ductless	
Permissible environmental condition (°C)		Temperature 5° to 40° Maximum relative humidity 80% Altitude up to 2000m	
Controller		Microprocessor control	
Face velocity		Initial set point: 0.4m/s	
Air flow meter		Swing vane type	
Main filter		Chemical filter (optional 6 different filters)	
Pre filter		Washable high efficiency nylon filter	
Construction	Main body	2mm steel (epoxy powder-coated)	
	Work surface	Optional 6 different work surfaces	
	Window front / side	Acrylic 8mm / Acrylic 6mm	
Fluorescent light intensity (lux)		>600	
Sound emission (dB)		55 (during normal operation)	
Dimensions; W x D x H (mm)	Internal	880 x 640 x 800	1180 x 640 x 800
	External	900 x 660 x 1250	1200 x 660 x 1250
Weight (Kg)		100	118

Filters

Cat. No.	Description	Application	DLH-01G	DLH-11G
AAAB2543	Complex carbon filter	Filters a wide range of chemicals, including acid, ammonia, and aldehyde.	•	-
AAAB2544			-	•
AAAB2545	Acid filter	Filters acid gases such as HCl, HF, H2S, and CH3COOH	•	-
AAAB2546			-	•
AAAB2547	Formaldehyde filter	Filters formaldehyde, acete aldehyde, etc.	•	-
AAAB2548			-	•
AAAB2549	Ammonia / Amines filter	Filters basic gases such as NH3, (CH3)3N, ETC.	•	-
AAAB2550			-	•
EDA9193	HEPA filter	Filters 99.99% of toxic dust and other 0.3µm particles	•	-
EDA9194			-	•
EDA9196	Pre filter	Primarily filters particles to extend the life of other filters.	•	-
EDA9198			-	•

Filters need to be purchased separately

Work Surfaces & Stands

Cat. No.	Description	DLH-01G	DLH-11G
AAAB2501	Work surface (SUS #304)	•	-
AAAB2502		-	•
AAAB2503	Work surface (SUS #316)	•	-
AAAB2504		-	•
AAAB2505	Work surface (Ceramite)	•	-
AAAB2506		-	•
AAAB2507	Work surface (polypropylene)	•	-
AAAB2508		-	•
AAAB2509	Work surface (Bakelite)	•	-
AAAB2510		-	•
AAAB2511	Work surface (PVC)	•	-
AAAB2512		-	•
AAAB2521	Stand with casters	•	-
AAAB2522		-	•

Work surfaces need to be purchased separately

PCR Workstations with UV Sterilisation

A high quality UV lamp with a timer control feature is ideal for sterilising the working environment and instruments before and after carrying out PCR experiments.

Model			UVC-01	UVC-11	UVC-21
Product code			AAHB4002K	AAHB4012K	AAHB4022K
Illumination	Intensity	FL lamp (lux)	>800	>900	>1000
		UV density (µW/cm²)	150	385	450
	Capacity	FL lamp	8W x1	15W x1	20W x1
		UV lamp	8W x1	15W x1	20W x1
Construction		Work surface	Stainless steel (grade 304)		
		Windows	Acrylic 5mm (clear)		
Dimensions; W x D x H (mm)		Internal	433 x 500 x 468	583 x 500 x 468	880 x 500 x 468
		External	450 x 509 x 610	600 x 509 x 610	900 x 509 x 610
Weight (Kg)			15	18	20

PCR Workstations with HEPA Filtration and UV Sterilisation

Specially designed to minimise sample contamination during PCR applications by combining an ISO Class 4 clean air environment with UV sterilisation.
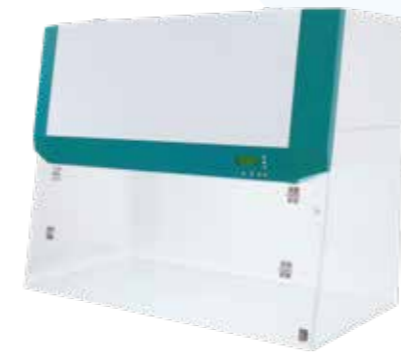
Model			PW-01	PW-11	PW-21
Air flow type			Vertical		
Laminar airflow velocity (m/s)			0.3		
Filters		Air cleanliness	ISO 14644-1 Class 4		
		HEPA filter	Typical efficiency of 99.99% at 0.3µm		
		Pre filter	Polyester fibres with an efficiency of 85%		
Noise level (dB)			<60 (at initial blower speed)		
Construction		Work surface	Clear acrylic 10mm		
		Windows	Acrylic 8mm / 10mm (clear)		
Illumination	Intensity	FL lamp (lux)	>1000		
		165 UV Density (µW/cm²)	165	185	330
	Capacity	FL lamp (W)	15	20	30
		UV lamp (W)	15	20	30
Dimensions; W x D x H (mm)		Internal	700 x 585 x 602	880 x 585 x 602	1180 x 585 x 602
		External	720 x 605 x 964	900 x 605 x 964	1200 x 605 x 964
Weight (Kg)			57	65	78

Laboratory Equipment

Horizontal Laminar Flow

FlowFAST H

FlowFAST H Cabinets are "ISO Class 3" horizontal laminar flow (HLF) cabinets which represent far more economical and valid alternatives to clean-rooms, as they are capable of providing uncontaminated, particle-free and sterile workspace conditions via a G3 pre-filter and a HEPA main filter.

The FlowFAST H HLF cabinets are constructed of epoxy powder coated steel structures and feature a 304L stainless steel work surface as standard (a laminated work surface is available as an option as is a UV

sterilising lamp, complete with a flexible front shutter in order to protect the working area from dust and contamination).

Note: Each FASTER cabinet is coated with Dupont™ ALESTA®, an anti-bacterial that is capable of preventing microbial contamination of surfaces thereby inhibiting long term surface growth.

A wipe-clean membrane keyboard is situated on the front panel with touch sensitive buttons for all the cabinet controls and a display to show air velocity and any alarms.

Model	H 09	H 12	H 15	H 18
Product code	F00000190000	F00000200000	F00000210000	F00000220000
External dimensions; W x D x H (mm)	945 x 1190 x 925	1250 x 1190 x 925	1555 x 1190 x 925	1860 x 1190 x 925
Internal dimensions; W x D x H (mm)	885 x 734 x 600	1190 x 734 x 600	1495 x 734 x 600	1800 x 734 x 600
Working aperture (mm)	735			
Weight (Kg)	104	122	171	194
Noise level (dB)	<60			

FlowFAST V

FlowFAST V cabinets are "ISO Class 3" vertical laminar flow (VLF) cabinets which represent far more economical and valid alternatives to clean-rooms, as they are capable of providing uncontaminated, particle-free and sterile workspace conditions. Air is drawn through the top of the cabinet via a pre-filter and then directed downwards and filtered through an H14 HEPA filter into the working area in a vertical laminar air flow pattern. Approximately half of the air volume is exhausted outside into the environment and the remaining air is recirculated by means of slots positioned at the base of the rear panel.

FlowFAST V VLF cabinets are constructed of epoxy powder coated steel and feature a 304L stainless steel work surface as

standard. If required, the cabinets can be entirely constructed of 304L stainless steel. Useful snap hinges maintain the tempered glass front panel in an open position, increasing the height of the opening to allow for the positioning of equipment, such as a microscope or shaker, within the cabinet.

Note: Each FASTER cabinet is coated with Dupont™ ALESTA®, an anti-bacterial that is capable of preventing microbial contamination of surfaces thereby inhibiting long term surface growth.

A wipe-clean membrane keyboard is situated on the front panel with touch sensitive buttons for all the cabinet controls and a display to show air velocity and any alarms. Depending on the size, one or two electrical sockets are included in each cabinet.

Model	V 12	V 15	V 18
Product code	F00001120000	F00001150000	F00001180000
External dimensions; W x D x H (mm)	1350 x 1500 x 760	655 x 1500 x 760	1960 x 1500 x 760
Internal dimensions; W x D x H (mm)	1198 x 755 x 609	1503 x 755 x 609	1808 x 755 x 609
Working aperture (mm)	250		
Weight (Kg)	192	274	325
Noise level (dB)	<60		

SafeFAST Biological Safety Cabinets, Class II

SafeFAST Classic, Elite and Premium Class II Microbiological Safety Cabinets belong to the latest generation of laminar airflow systems manufactured by Faster, in which the choice of materials of construction of the highest quality guarantees conformity to the strictest safety standards.

The electrically operated, angled sloping (7°) safety-glass sash provides optimum visibility of all objects within workspace, and provides an ergonomic working position for the user. The standard sash-height opening is set to 200mm, factory adjustable on request. The whole front of the cabinets can be hinged open in order to allow easy access for complete and effective cleaning and decontamination.

The new ECS® microprocessor self-regulates all the main filtration and ventilation components - compensating for declining pressure drops and restoring power balance if necessary. In addition, it optimises power consumption, reducing CO_2 emissions into the environment.

The SafeFAST Premium offers outstanding energy efficiency performance with a power consumption value rated to 84.4 Watt in operational mode in conformity to EN 12469:2000. This performance is achieved combining innovative solutions such as DC fans and low power consumption LED lighting. In addition, the SafeFAST Premium features an impressive working sound level of just 42.5 decibels.

The SafeFAST Elite features a user-friendly practical keyboard and the rear-lit LCD will continuously display all required data keeping the user constantly informed of the cabinet conditions in operation, including:

- Display of laminar airflow velocity and frontal air barrier velocity
- Display of inside and outside temperature
- Display of residual lifetime of HEPA/ULPA filters, UV lamp and total operational hours

Audio-visual alarms provide for all operation malfunctions as well as clogging of filters.

For further details on the SafeFAST range of Class II cabinets please contact our technical department.

Model	SafeFAST Elite			
Product code	BIO2090000	BIO2120000	BIO2150000	BIO2180000
External dimensions; W x D x H (mm)	1045 x 1545 x 855	1350 x 1545 x 855	1655 x 1545 x 855	1960 x 1545 x 855
Internal dimensions; W x D x H (mm)	887 x 740 x 580	1192 x 740 x 580	1497 x 740 x 580	1802 x 740 x 580
Working aperture (mm)	200			
Maximum front aperture (mm)	440			
Weight (Kg)	170	195	225	260
Exhaust flow rate (m³/h)	290	390	485	585
Noise level (dB)	<53	<54	<55	<56
Lighting level (lux)	<1100	<1200	<1300	<1300

Model	SafeFAST Premium			
Product code	BIO24900000	BIO25200000	BIO25500000	BIO25800000
External dimensions; W x D x H (mm)	1045 x 1545 x 855	1350 x 1545 x 855	1655 x 1545 x 855	1960 x 1545 x 855
Internal dimensions; W x D x H (mm)	887 x 740 x 580	1192 x 740 x 580	1497 x 740 x 580	1802 x 740 x 580
Working aperture (mm)	200			
Maximum front aperture (mm)	440			
Weight (Kg)	170	195	225	260
Exhaust flow rate (m³/h)	290	390	485	585
Noise level (dB)	<53	<54	<55	<56
Lighting level (lux)	<1100	<1200	<1300	<1300

Dry Block Heaters

Dry block heating systems combine superb temperature control and uniformity with high quality design and great versatility.

- Accurate, reproducible, rapid and safe dry block heating of your samples - courtesy of advanced temperature control combined with high quality, precision-engineered aluminium which maintain excellent thermal contact

- Choice of models with interchangeable blocks or with fixed microtube blocks
- Versatile range of interchangeable heating blocks to fit any sample tube or plate from our standard range of blocks, or custom-made to suit your application

Pictured without lid

Mini Dry Block Heaters

Product code	MD 110401005	MD 110401006
Temperature range (°C)	Amb. +5 to 100	
Timer range	0 ~ 99min 59sec	
Temperature control accuracy (°C)	±0.1	
Display	LED	
Display accuracy	±0.5	
Heating time (40°C to 100°C)	≤15min	
Heated lid	No	Yes
Dimensions; W x D x H (mm)	164 x 116 x 98	
Weight (Kg)	0.8	0.9

Jeio Tech Dry Block Heaters

The PID controller has a built-in temperature limit setting feature and precise settings for complete accuracy. There is an automatic power cutoff. These heating blocks offer two alternative timer modes:

- Timer 1: Timer activation starts only after reaching the set temperature
- Timer 2: Timer activation starts immediately the timer has been set

The bodies are manufactured from highly chemically resistant polypropylene making them very easy to clean and maintain. Optimal heat transfer is enabled via the tight coupling design of the main body and the corrosion resistant aluminium blocks. A transparent lid allows for sample monitoring coupled with even heat distribution.

Model		CCB-350	CHB-350S	CHB-350T
Product code		AAHJ5015K	AAHJ1015K	AAHJ1115K
Control system		Feedback control PID		
Display		VFD (0.1°C resolution)		
Temperature (°C)	Range	Amb. -20 to 95	Amb. +5 to 130	
	Fluctuation	±0.06 (at 37°C)	±0.1 (at 80°C)	
	Variation	±0.15 (at 37°C)	±0.2 (at 80°C)	
Dimensions; W x D x H (mm)	Internal	99 x 77.5 x 36	154 x 99 x 37	
	External	249 × 325 × 168	276 x 334 x 120	276 x 334 x 250
Weight (Kg)		5.0	5.1	5.5

Heating Blocks for Dry Block Heaters

Microplate blocks

Microtube blocks

Centrifuge tube blocks

Tube blocks

Product code	Description	Maximum block capacity			
		CHB-350S	CHB-350T	CCB-350	MD Series
CHB0030	48 x 96-well microplate block	1	1	-	-
CHB0029	48 x 0.5ml Microtube block	2	2	1	-
CHB0028	48 x 1.5/2.0ml Microtube block	1	1	-	-
CHB0031	15ml Round bottom tube block	2	2	1	-
CHB0032	6 x 50ml Round bottom tube block	2	2	1	-
CHB0033		2	2	1	-
CHB0034	35 x Ø10mm Tube block	2	2	1	-
CHB0035	24 x Ø12mm Tube block	2	2	1	-
CHB0036	24 x Ø13mm Tube block	2	2	1	-
CHB0037	20 x Ø15mm Tube block	2	2	1	-
CHB0038	16 x Ø16mm Tube block	2	2	1	-
CHB0039	12 x Ø18mm Tube block	2	2	1	-
CHB0040	12 x Ø20mm Tube block	2	2	1	-
MD1102A	40 x 0.2ml Tube block	-	-	-	1
MD1102B	24 x 0.5ml Tube block	-	-	-	1
MD1102C	15 x 1.5ml Tube block	-	-	-	1
MD1102D	15 x 0.5ml and 20 x 1.5ml Tube block	-	-	-	1
MD1102E	12 x 12mm Cuvette block	-	-	-	1
MD1102G	6x 15ml Conical tube block	-	-	-	1
MD1102H	2 x 50ml Conical tube block	-	-	-	1
MD1102I	Water bath block	-	-	-	1
MD1102J	96-well Microplate tray	-	-	-	1

Laboratory Equipment

Heating/Stirring Mantles

Controlled Mantles

The E series mantles are energy-regulated, all purpose heating mantles. The time proportional double pole system allows stable control of the heating element, reducing the risk of overheating liquids. The dial controller allows accurate temperature settings. Retort rod holder integrated into base of unit to accommodate a range of accessories. Variable temperature range of ambient up to 450°C.

Product code	E-1005N	E-101N	E-102N	E-103N	E-104N
Volume (ml)	50	100	250	500	1000
Product code	E-105N	E-106N	E-107N	E-108N	E-109N
Volume (ml)	2000	3000	5000	10,000	20,000

Mantles - ES Series

The ES series rota-mantles feature an integral magnetic stirrer, which is independently controlled. The stirrer speed may be varied from 100 to 1000rpm and the temperature is regulated by an infinity bimetallic thermostat. Retort rod holder integrated into base of unit to accommodate a range of accessories.

Product code	ES-3005N	ES-301N	ES-302N	ES-303N	ES-304N
Volume (ml)	50	100	250	500	1000
Product code	ES-305N	ES-306N	ES-307N	ES-308N	ES-309N
Volume (ml)	2000	3000	5000	10,000	20,000

Mantles - DM Series

The DM series mantles features an integral digital temperature controller linked to a sensor probe, which is inserted directly into the flask. The temperature is shown clearly on an LED display and the desired temperature is controlled by a simple push button potentiometer. Retort rod holder integrated into base of unit to accommodate a range of accessories.

Product code	DM-6005	DM-601	DM-602	DM-603	DM-604
Volume (ml)	50	100	250	500	1000
Product code	DM-605	DM-606	DM-607	DM-608	DM-609
Volume (ml)	2000	3000	5000	10,000	20,000

Extraction Mantles - EAM Series

Designed for use in distillation or extraction. Each of the three and six place mantles has individual temperature regulation. The support rods and scaffolding are included. The body is made of steel with a chemically resistant coating and the cover of high grade stainless steel.

Product code	EAM-9201-03	EAM-9202-03	EAM-9203-03	EAM-9204-03	EAM-9205-03
Volume (ml)	100	250	500	1000	2000
Positions			3		

Product code	EAM-9201-06	EAM-9202-06	EAM-9203-06	EAM-9204-06	EAM-9205-06
Volume (ml)	100	250	500	1000	2000
Positions			6		

Electric Burners

Becelec 2

The Becelec 2 Electric Burner offers a unique, safe replacement option to conventional gas Bunsen burners. The high power heater, combined with a reflective internal stainless steel bowl, produces a concentrated stream of heat comparable with that of existing gas-powered Bunsen burners. Supplied with reflective internal stainless steel bowl, wire safety guard, retort stand and clamps.

Product code	Becelec 2 UK	Becelec 2 EU
Temp range (°C)	37 to 720	
Heating area (mm)	Ø130	
Power (W)	500	
Safety indicator	LED	
Plug type	3 pin UK	2 pin EU
Dimensions; W x D x H (mm)	31 x 20 x 11	
Weight (Kg)	1.7	

Becelec Burner - optional and included accessories

Flame gel (option) / SS plate (inc.)   Retort rod and clamp holder (inc.)   Wire safety guard (inc.)

Medline Sirius Microincinerator

New safety regulations have meant that microincinerators are increasingly replacing the traditional Bunsen burners that have long been fundamental to microbiology laboratories. Accordingly, CDC and WHO, recommend these in laboratories instead of Bunsen burners. When using in biosafety cabinets, contrary to Bunsen burners, the filter system is not damaged and the cabinet air flow is not affected. During operation the exterior surface temperature of the device does not exceed 30°C, allowing handling without heat protective gloves.

- Suitable for slide fixation, sterilisation of loops and culture tubes
- Energy- and environmentally-friendly design ensures minimum power consumption
- Operational angle adjustment of chamber: 270°

Product code	Sirius
Energy consumption (kW/h)	0.150kw/h
Quartz glass tube dimensions (mm)	Ø18, length: 100
Sterilisation temperature (°C)	850 to 1100
Time to reach sterilisation temperature (min)	7-9
Sterilisation duration (sec)	2-4
Dimensions; W x D x H (mm)	200 x 300 x 265
Weight (Kg)	4.2

Chamber Furnaces

Furnaces can be used in quality control tests, ashing, heat treatment, preheating, melting, metallurgical research and sample production.
Our products have been produced for heavy duty conditions.

Features:
- Chamber walls made up of insulating fire bricks with protection against mechanical abrasion and thermal aging and deformation
- Half buried heaters in two sides and on top (housed in quartz tubes)
- Tight door closing mechanism
- Homogeneous temperature gradient in the chamber thanks to similar heat loss in every direction
- Optimal insulation thickness to reduce the temperature of the outer surface
- No contact between outer shell and chamber for low surface temperature
- Standard chimney with fan
- Lift-up door and side-hinged door options for different spatial use of applications

Product code	MD1305	MD1310	MD1320	MD1340	MD1360
Volume (L)	5	10	20	40	60
Continuous working temperature (°C)			1250		
Max. temperature (°C)			1300		
Chamber dimensions; W x D x H (mm)	150 x 150 x 230	200 x 180 x 300	250 x 200 x 400	300 x 300 x 450	400 x 300 x 500
Power (W)	2250	3600	4500	9000	13,500
Dimensions; W x D x H (mm)	400 x 590 x 550	500 x 620 x 550	500 x 640 x 720	550 x 740 x 770	650 x 740 x 820
Weight (Kg)	42	54	80	100	120

* Above models listed with side-hinged door

Model	MDU1005	MDU1100	MDU1200	MDU1400	MDU1600
Volume (L)	5	10	20	40	60
Continuous working temperature (°C)			1075		
Max. temperature (°C)			1100		
Chamber dimensions; W x D x H (mm)	150 x 150 x 230	200 x 180 x 300	250 x 200 x 400	300 x 300 x 450	400 x 300 x 500
Power (W)	2000	2800	4000	9000	13,500
Dimensions; W x D x H (mm)	400 x 590 x 550	500 x 620 x 550	500 x 640 x 720	550 x 740 x 770	650 x 740 x 820
Weight (Kg)	42	54	80	100	120

* Above models listed with lift-up door

Incubators

Safety Features
- Open door alert
- Audible and visible alarms
- Automatic power cut off from the heater and the fan
- Protection against overheating by automatic power cut off from the heater controller before shutting down the unit
- Two separate fuses to protect against over current

Optimum Control Features
- Microprocessor PID control
- Simple calibration and auto-tuning functions
- Built-in digital timer with Delayed ON/OFF function
- Timer range: 1min - 99hr 59min
- Operation mode selection after power interruption, either Automatic Run or Manual Run
- Convenient preset function for 3 the most commonly used temperature settings
- Easy conversion between Celsius and Fahrenheit
- Self-diagnostic function identifying errors
- Intuitive control panel design based on HMI (Human Machine Interface) system
- Bright LED display as well as splashproof and easy-to-clean keypads
- Quick-lock button prevents accidental parameter changes (for IB, IL, and ILP models only)

Constructional Features
- High-quality 304 grade stainless steel internal chamber and dirt-repellent external surface with powder coating
- Perfectly sealed door gasket minimising heat loss and fully insulated chambers

Economy Models

Affordable yet exceptionally reliable incubators featuring film type heaters. Thanks to the film type heaters attached to the inner chamber's external walls, IB-E series incubators are free from noise, vibration, and mechanical troubles.

- Microprocessor PID controller
- Digital timer (1min - 99hr 59min)
- Intuitive control panel with LED display

Model		IB-01E	IB-11E	IB-21E
Product code		26015	26025	26035
Chamber volume (L)		65	150	205
Temperature (°C)	Range		Amb. +3 to 60	
	Fluctuation at 37°C	±0.2	±0.3	±0.1
	Variation at 37°C	±0.6	±0.8	±1.1
Dimensions; W x D x H (mm)	Internal	423 x 355 x 445	500 x 515 x 585	623 x 515 x 630
	External	533 x 475 x 725	595 x 630 x 865	740 x 630 x 910
Weight (Kg)		33	47	57

Forced Convection Incubators - General Models

Specially designed for uniform temperature distribution and minimal sample contamination caused by external air intrusion.

- USB/RS-232 connection interface and Lab Tracer software

Model		IB3-05	IB3-10	IB3-15
Product code		AAH26315K	AAH26325K	AAH26335K
Chamber volume (L)		50	100	155
Temperature (°C)	Range	Amb. +5 to 80		
	Fluctuation at 37°C	±0.5		
	Variation at 37°C	±0.25	±0.4	±0.38
Dimensions; W x D x H (mm)	Internal	367 x 371 x 367	463 x 467 x 463	550 x 455 x 600
	External	545 x 705 x 560	641 x 802 x 655	728 x 815 x 794
Weight (Kg)		53	63	72.5

Low Temperature Incubators - Air Jacketed Models

Specially designed for optimal temperature control as well as minimal sample contamination caused by external air intrusion

- USB/RS-232 connection and Lab Tracer software

Model		IL3-15A	IL3-25A
Product code		AAH220612K	AAH220712K
Chamber volume (L)		156	254
Temperature (°C)	Range	+4 to 70	
	Fluctuation at 25°C	±0.2	
	Variation at 25°C	±0.7	±1.0
Dimensions; W x D x H (mm)	Internal	600 x 520 x 500	500 x 540 x 940
	External	770 x 790 x 1115	670 x 805 x 1668
Weight (Kg)		108	145

Low Temperature Incubators - Compact Models

Compact, stackable, energy-efficient and exceptionally reliable low temperature incubators using Peltier technology.

Model		ILP-02	ILP-12
Product code		24032	24042
Chamber volume (L)		14	48
Temperature (°C)	Range	10 to 40	
	Fluctuation at 25°C	±0.1	
	Variation at 25°C	±0.5	±0.4
Dimensions; W x D x H (mm)	Internal	315 x 200 x 230	334 x 334 x 430
	External	430 x 495 x 400	430 x 665 x 620
Weight (Kg)		27.5	49

Low Temperature Incubators - Forced Convection Models

Superb low temperature incubation performance using a noiseless HBP compressor cooling system which reduces water evaporation within the chambers.

- USB/RS-232 connection and Lab Tracer software

| Model		IL3-15	IL3-25
Product code		AAH220412K	AAH220512K
Chamber volume (L)		150	242
Temperature (°C)	Range	0 to 80	
	Fluctuation at 37°C	±0.1	
	Variation at 37°C	±0.6	±0.1
Dimensions; W x D x H (mm)	Internal	600 x 500 x 500	500 x 520 x 940
	External	720 x 760 x 1070	620 x 770 x 1680
Weight (Kg)		100	135

General Incubators - Air Jacketed Models

Compact, stackable, energy-efficient and exceptionally reliable.

- USB/RS-232 connection interface and Lab Tracer software

Model		IB3-03A	IB3-05A	IB3-10A	IB3-15A
Product code		AAH21355K	AAH21365K	AAH21375K	AAH21385K
Chamber volume (L)		30	50	100	120
Temperature (°C)	Range	Amb. +5 to 80	Amb. +5 to 80	Amb. +5 to 80	Amb. +5 to 80
	Fluctuation at 37°C	0.05	0.1	0.1	0.15
	Variation at 37°C	0.43	0.25	0.5	0.52
	Heating time to 37°C (min)	29	39	42	45
	Recovery time at 37°C (min)	6	6	6	9
Dimensions	Interior; W x D x H (mm)	310 x 313 x 310	367 x 372 x 367	463 x 467 x 463	550 x 455 x 600
	Exterior; W x D x H (mm)	488 x 649 x 503	545 x 705 x 560	641 x 802 x 655	728 x 815 x 794
Weight (Kg)		43	53	63	72.5

Laboratory Equipment

Incubators - Accessories & Options
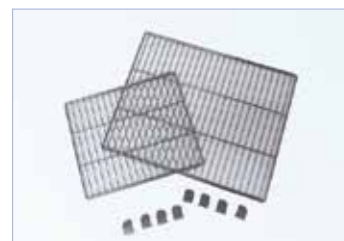
Wire Shelf
- Excellent corrosion resistance as made of stainless steel
- Excellent air permeability and uniform temperature distribution

Perforated Shelf
- Porous structure made of stainless steel
- Solid structure makes it suitable for high load samples

Recorder (dot matrix)
- 6-channel type temperature recorder
- Adjustable recording range, speed etc.

CO_2 Sensor
- Dedicated sensor for CO_2 measurement
- Formation of optimal photosynthetic conditions

Model	Wire Shelves		Perforated Shelves		Recorder	CO_2 Sensor
	Product Code	Quantity of shelves (standard/max.)	Product Code	Quantity of shelves (max.)	Product Code	Product Code
IB3-03A	FDA9542	2 / 2	AAA125330	2	-	-
IB3-05A	FDA9543	2 / 4	AAA125331	4	-	-
IB3-10A	FDA9544	2 / 5	AAA125332	5	-	-
IB3-15A	FDA9545	2 / 6	AAA125333	6	-	-
IB3-05	FDA9543	2 / 4	AAA125331	4	-	-
IB3-10	FDA9544	2 / 5	AAA125332	5	-	-
IB3-15	FDA9545	2 / 6	AAA125333	6	-	-
IM-10	EDA8244	2 / 4	AAA24511	4	-	-
IB-01E	EDA8136	2 / 5	AAA12531	5	-	-
IB-11E	EDA8220	2 / 7	AAA22522	7	-	-
IB-21E	EDA8219	2 / 7	AAA22521	7	-	-
IB-02G-2C/4C [1]	EDA8136	2 / 4	AAA12531	4	-	-
ILP-02	EDA8223	1 / 6	AAA24501	6	-	-
ILP-12	EDA8221	2 / 13	AAA24502	13	-	-
IL3-11/11A	EDA8219	2 / 6	AAA22521	6	-	-
IL3-21/21A	EDA8220	3 / 13	AAA22522	13	-	-
IL-11-2C/4C [1]	EDA8219	2 / 12	AAA12532	12	-	-
GC-300TL	EDA8220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-300TLH	EDA8220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-1000TL	EDA8222	6 / 29	AAAA1512	29	AAAA1502	AAAA1521
GC-1000TLH	EDA8222	6 / 29	AAAA1512	29	AAAA1502	AAAA1521

1) Standard for each chamber

Stacking bracket
- Oven / incubator bracket for double stacked units

Model	Product Code
OF3/ON3-03, 05	AAA125421
OF3/ON3-10, 15	AAA125422

Model	Product Code
IB3/IB3-A-03, 05	AAA125431
IB3/IB3-A-10, 15	AAA125432

LC GreenBox
- Monitor and control the operation status of the product in real time via mobile app with an internet connection

Model	Description	Dimension (mm)	Product Code
IB3 / IL3 / ILP	Mobile Monitoring System	156 x 94 x 34	AAAQ1011

Digital Incubators

MyTemp™ Mini

With digital temperature control, the MyTemp™ Mini incubators provide convenient "set and walk away" operation, eliminating the need for external thermometers and repetitive "fine tuning" of an analog control knob. Simply choose the desired temperature and the incubators quickly begin to heat (or cool in the -HC model only). Throughout the incubation, the chamber temperature is constantly monitored and displayed in real time on the large LED control panel.

Despite a modest footprint of 335 x 370mm, the MyTemp™ Mini incubators feature large internal chambers, capable of accepting flasks and bottles up to 2L. The chamber temperature is accurately maintained with a unique airflow design that urilises multiple internal fans, resulting in a high level of uniformity.

The incubators include two adjustable/removable shelves for increased capacity. A mini nutating rocker (supplied with both flat and dimpled mats) is also available for agitation of samples during incubation and can plug directly into an included internal power outlet.

- Digital temperature control
- Personal sized, 335 x 370mm footprint
- Two models
  - Heat only
  - Heat & cool

Model	myTemp Mini	
Product code	H2200-H	H2200-HC
Capacity (L)	20	
Temperature (°C)	Accuracy at 37°C	±0.5
	Increments	1°C
	Uniformity at 37°C	±1.5
Dimensions; W x D x H (mm)	Internal	260 x 235 x 330
	External	335 x 370 x 480
Weight (Kg)	6.8	

CO_2 Incubators

LEEC Culture Safe TOUCH CO_2 Incubators have a fully-sealed, electro-polished, one-piece, deep drawn chamber which is manufactured from the highest grade 316L stainless steel. The purpose of the design of this laboratory incubator range is to lower the risk of contamination inside the chamber.

Model	LEEC Culture Safe TOUCH		
Product code	LEECT50	LEECT190	LEECT190S
Capacity (L)	50	90	190
Temperature (°C)	Range	Amb. +5 to 60	
	Control	0.1	
	Stability at 37°C	±0.1	
	Uniformity at 37°C	±0.25	
CO_2	Range	0% to 20%	
	Control	±0.1%	
	Stability	±0.2%	
	Uniformity	±0.2%	
	CO_2 Sensor	Infra-Red min. 5 psi and max. 10 psi	
	CO_2 Inlet Pressure	Min. 0.3 bar and max. 0.7 bar	
RH at 37°C + 5%		Up to 95%	Up to 90%
Dimensions; W x D x H (mm)	Internal	432 x 402 x 300	632 x 686 x 440
	External	534 x 717 x 460	765 x 862 x 734
Weight (Kg)	38	94.5	104

Incubator Shakers - Bench Top

Performance
- Microprocessor PID control
- Three point temperature calibration / automatic tuning
- Wide speed range even with heavy workload
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform and powerful shaking motion
- Automatic shaking speed adjustment in case of excessive workload such as unbalanced load placement, unusual vibrations caused from unstable work surface or external shocks
- Smooth acceleration and deceleration controls, prevents liquid spills from vessels
- High-velocity fan ensures uniform temperature distribution and rapid thermal recovery after door open
- Air-tight silicone door seal ensures excellent temperature uniformity

Convenience
- Intuitive touch screen LCD controller with easy icons and logical menus
- Easy-set digital timer for shaking operation (1min to 999hr 59min)
- Wide sample monitoring and convenient sample loading
- Convenient sample monitoring without affecting internal environment thanks to the transparent acryl lid with bright LED illumination
- Gas sprung lid supports providing smooth motion with soft opening and closing
- Repetitive tasks can be easily performed as the platform stops in the same position as it starts, making it beneficial for automated dosing or sampling processes
- Corrosion resistant stainless steel interior
- Built-in RS-232 and USB port for external control and data logging

Safety
- Automatic run after power interruption
- Temperature and shaking speed deviation alarm
- Over-current protection, stalled platform check
- Mechanical over-temperature protection device.
- Environment-friendly CFC-free refrigerant (for IST-3075R / 4075R)

Model	IST-3075	IST-3075R	IST-4075	IST-4075R
Product code	AAH23422K	AAH23522K	AAH23622K	AAH23722K
Volume (L)	53		83	
Temperature (°C) — Range	Amb. +5 to 80	+15 to 80	Amb. +5 to 80	+15 to 80
Temperature (°C) — Fluctuation at 37°C	±0.1			
Temperature (°C) — Variation at 37°C	±0.5			
Shaking system — Motion type	Orbital			
Shaking system — Amplitude size (Ø, mm)	19.1			
Shaking system — Speed range (rpm)	20 to 500			
Shaking system — Accuracy	±1% of set speed (≥100rpm) / ±1 (≤100rpm)			
Shaking system — Timer	1min to 999hr 59min			
Shaking system — Max. load (Kg)	10 at 500rpm 15 at 400rpm		14 at 500rpm 21 at 400rpm	
Dimensions; W x D x H (mm) — Platform (W x D)	350 × 350		450 × 450	
Dimensions; W x D x H (mm) — Internal	410 × 410 × 320		510 × 510 × 320	
Dimensions; W x D x H (mm) — External	440 x 785 x 510		540 x 890 x 510	
Weight (Kg)	65	73	81	90

Platforms and accessories must be purchased separately

Incubator Shakers - Floor Standing

Performance
- Orbital shaking motion with choice of amplitude
- Microprocessor PID control
- Three point temperature calibration / automatic tuning
- Equipped with DD (Direct Drive) brushless motor and triple cam system which is quiet, maintenance free operation and deliver high torque at high speeds and smooth rotation
- Wide speed range even with heavy workloads
- Automatic shaking speed adjustment in case of excessive workload such as unbalanced load placement, unusual vibrations caused from unstable floor or external shocks
- Smooth acceleration and deceleration controls, prevents chemical spills from vessels
- High-velocity fan ensures uniform temperature distribution and rapid thermal recovery after door open
- Air-tight silicone door seal with lockable door for safe storage of samples

Convenience
- Intuitive touch screen LCD controller with easy icons and logical menus
- Easy-set digital timer for shaking operation (1min to 999hr 59min)
- Easy sample monitoring and convenient sample loading
- Clear observation of samples without affecting inner chamber's environment thanks to the transparent top viewing window with bright LED illumination
- Repetitive tasks can be easily performed as the platform stops in the same position as it starts, making it beneficial for automated dosing or sampling processes
- Corrosion resistant stainless steel interior
- Easy-access drain system with a quick disconnect valve
- Built-in RS-232 and USB ports for external control and data collection
- Retractable, lockable caster plate
- Sturdy, lockable casters beneficial for easy mobility during installation or relocation

Safety
- Automatic run after power interruption
- Temperature and shaking speed deviation alarm
- Over-current protection
- Triple independent temperature monitor system
- - Temperature deviation alarm (High/Low)
- - Electronic temperature limiter (High/Low)
- - Mechanical over-temperature limiter (High)
- Environment-friendly CFC-free refrigerant (for ISF-7100R / 7200R)

Model		ISF-7100	ISF-7100R	ISF-7200	ISF-7200R
Product code		AAH23342K	AAH23542K	AAH23442K	AAH23642K
Volume (L)		270			
Temperature (°C)	Range	Amb. +5 to 80	+4 to 80	Amb. +5 to 80	+4 to 80
Temperature (°C)	Fluctuation at 37°C	±0.1			
Temperature (°C)	Variation at 37°C	±0.5			
Shaking system	Motion type	Orbital			
Shaking system	Amplitude size (Ø, mm)	25.4		50.8	
Shaking system	Speed range (rpm)	30 to 500		30 to 300	
Shaking system	Accuracy	±1% of set speed (≥100rpm) / ±1 (≤100rpm)			
Shaking system	Timer	1mins to 999hr 59min			
Shaking system	Max. load (Kg)	15 at 500rpm 25 at 400rpm 35 at 300rpm		20 at 300rpm 35 at 200rpm	
Dimensions; W x D x H (mm)	Platform (W x D)	755 × 520			
Dimensions; W x D x H (mm)	Internal	894 × 634 × 480			
Dimensions; W x D x H (mm)	External	1128 × 854 × 1035			
Weight (Kg)		277	287	277	287

Platforms and accessories must be purchased separately

Incubator Shakers - Front Opening

Performance

- Microprocessor PID control
- Three point temperature calibration / automatic tuning
- Wide speed range even with heavy workload
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform and powerful shaking motion
- Automatic shaking speed adjustment in case of excessive workload such as unbalanced load placement, unusual vibrations caused from unstable work surface or external shocks
- Smooth acceleration and deceleration controls, prevents liquid spills from vessels
- High-velocity fan ensures uniform temperature distribution and rapid thermal recovery after door open
- Air-tight silicone door seal ensures excellent temperature uniformity

Convenience

- Intuitive touch screen LCD controller with easy icons and logical menus
- Easy-set digital timer for shaking operation (1min to 999hr 59min)
- Wide sample monitoring
  - Clear observation of samples without affecting inner chamber's environment thanks to the transparent viewing window with bright LED illumination
- Repetitive tasks can be easily performed as the platform stops in the same position as it starts, making it beneficial for automated dosing or sampling processes
- Two adjustable-height shelves provided allow static incubation or refrigeration, which increases storage capacity

- Built-in electrical outlet with a safety cover inside the chamber
- Corrosion resistance stainless steel Internal
- Easy-access drain system with a quick disconnect valve
- Built-in RS-232 and USB pors
- Retractable, lockable caster plate, beneficial for easy mobility during installation or relocation
- Chambers are stackable

Safety

- Automatic run after power interruption
- Temperature and shaking speed deviation alarm
- Over-current protection, stalled platform check
- Triple independent temperature monitor system
  - Temperature deviation alarm (High/Low)
  - Electronic temperature limiter (High/Low)
  - Mechanical over-temperature limiter (High)
- Environment-friendly CFC-free refrigerant (for ISS-3075R / 4075R)

Model		ISS-3075	ISS-3075R	ISS-4075	ISS-4075R
Product code		AAH23432K	AAH23532K	AAH23632K	AAH23732K
Volume (L)		80		150	
Temperature (°C)	Range	Amb. +5 to 80	+4 to 80	Amb. +5 to 80	+4 to 80
	Fluctuation at 37°C	±0.1			
	Variation at 37°C	±0.5			
Shaking system	Motion type	Orbital			
	Amplitude size (Ø, mm)	19.1			
	Speed range (rpm)	20 to 500 (stacked; 20 to 250)			
	Accuracy	±1% of set speed (≥100rpm) / ≤1 (<100rpm)			
	Timer	1min to 999hr 59min			
	Max. load (Kg)	10 at 500rpm 15 at 400rpm 15 at 250rpm (stacked)		10 at 500rpm 21 at 400rpm 21 at 250rpm (stacked)	
Dimensions; W x D x H (mm)	Platform (W x D)	350 × 350		450 × 450	
	Internal	440 × 440 × 418		540 × 540 × 518	
	External	578 × 815 × 854		678 × 895 × 934	
Shelves supplied / max.		2 / 8		2 / 11	
Weight (Kg)		153	160	183	190

Platforms and accessories must be purchased separately

Maximal space-saving multi-stackable model

Structural Functional Features

- Large-capacity triple stackable incubated shaker
- Up to 80°C, 400rpm enables experimental conditions for various applications
- Three operating modes: Temperature & Shaking, Temperature, or Shaking
- Shaking structure with minimised vibration
- Easy to move/fix the product
- Convenient to change samples with glide-up door
- Stable shaking of high-load samples (patent registered: 10-1678160)

Use Convenience Features

- Accurate rpm and temperature control through temperature auto-tuning / microprocessor PID and calibration
- Monitor via mobile app anytime, anywhere with LC Connected (mobile monitoring system) (when purchased LC GreenBox)
- Countdown timer (999 hours 59 minutes) of shaking operation
- Intuitive operation with color touch display

- High brightness / low-power LED illumination makes it easy to observe inside
- Spill drain port for internal cleanliness and easy maintenance

Outstanding Safety

- Electronic over temperature protection system (A-OT, advanced over temperature limiter) Independent precision temperature sensor and controller provides more secure and reliable over-temperature protection
- Conventional over-temperature protection system. (B-OT, backup over temperature limiter) A backup device against electronic system failure, mechanically preventing over temperature even when there are electronic errors
- Soft start and stop shaking function.
- Malfunction prevented by controller lock function
- Displays all information such as device operation and error occurrence
- Overcurrent protection device that restricts operation when objects are caught inside the system and shaking is not possible

Model		SS-7100	ISS-7100R	ISS-7200	ISS-7200R
Product code		AAH238132K	AAH238232K	AAH239132K	AAH239232K
Temperature (°C)	Range	Amb. +10 to 80	Amb. -20 (Min. 4) to 80	Amb. +10 to 80	Amb. -20 (Min. 4) to 80
	Fluctuation at 37°C in flask	±1			
	Variation at 37°C in flask	±0.6	±0.5	±0.6	±0.5
	Refrigerator (Hp)	-	1/6Hp	-	1/6Hp
Shaking system	Motion type	Orbital	Orbital	Orbital	Orbital
	Speed range (rpm)	30 to 400 (stacked: 30 to 250)	30 to 400 (stacked: 30 to 250)	30 to 300 (stacked:30 to 200)	30 to 300 (stacked: 30 to 200)
	Max. speed per permissible load (rpm)	1 unit only 400 (max. 20Kg) Stacked units 250 (max. 15Kg) 200 (max. 20Kg)	1 unit only 400 (max. 20Kg) Stacked units 250 (max. 15Kg) 200 (max. 20Kg)	1 unit only 300 (max. 20Kg) Stacked units 200 (max. 15Kg) 150 (max. 20Kg)	1 unit only 300 (max. 20Kg) Stacked units 200 (max. 15Kg) 150 (max. 20Kg)
	Amplitude size (diameter, mm)	25.4	25.4	50.8	50.8
	Speed stability (rpm, %)	1	1	1	1
	Timer (count-down)	999hr 59min	999hr 59min	999hr 59min	999hr 59min
Dimensions (1 unit); W x D x H (mm)	Chamber volume (L)	198	198	198	198
	Platform (W x D)	755 x 520	755 x 520	755 x 520	755 x 520
	Interior	809 x 624 x 393	809 x 624 x 393	809 x 624 x 393	809 x 624 x 393
	Exterior	2 units + Stand 2 stacked; 1307 x 996 x 1655 3 units stacked; 1307 x 996 x 1955		1 unit; 1307 x 996 x 755 1 unit + Stand 1 or 2 units stacked; 1307 x 996 x 1355	
Weight (Kg)		300	320	300	320

Platforms and accessories must be purchased separately

Laboratory Equipment

Universal Platform

Universal Platform
Enables the mounting of clamps for Erlenmeyer flasks, test tubes, separating funnels, etc.

Accessories for Universal Platform

Flask Clamp stainless steel
Erlenmeyer flask mounting (50 ml - 6L). High-strength spring maintains excellent clamping

Flask Clamp plastic
Erlenmeyer flask mounting (50ml - 2L). Reduced noise with plastic body and rubber on the bottom

Funnel Clamp
Separating funnel mounting (250ml - 2L). Easy detachment/attachment and stable clamping

Test Tube Rack
Test tube mounting (Ø8 mm - Ø35 mm). Easily adjustable angle

Microplate Holder
Various options for microplates: Single, Tower, Flat A (Large), Flat B (Small)

Lab Sticker
Excellent adhesion as size is 200 x 200mm, allowing for application to Petri dishes, culture bottles, etc.

LC GreenBox
Monitor the operation status of the device in real time via the mobile app with a simple internet connection

Set Accessories

Spring Wire Rack
Fixed with 2-stage grid springs to accommodate various sample container shapes and sizes

Dedicated Platform
Accessories (250ml and 500ml) installed on platform with maximum quantity of flask clamps

Rubber Mat
Convenient for use with culture flasks and Petri dishes to prevent slipping

Universal Attachment
Rubber mat on the bottom and adjustable clamping rods make it a convenient structure for a wide range of applications

Wire Shelf
Shelf and its bracket enabling sample loading (ISS-3075/4075 series)

Retractable Foot Castor
Device that makes it easy to move/fix (ISS-3075/4075 series)

Stand 1 & 2
When using 1 unit of the ISS-7000 series or when using more than 2 stacked units, different height of stands provide convenient access to a platform

Stacking Kit
Fixing tool for stacked units (ISS series)

Model	IST-3075	IST-4075	ISS-3075	ISS-4075	ISF-7000	ISS-7000
Dedicated platform; 250ml	AAA23611-V1	AAA23623-V1	AAA23611-V1	AAA23621-V1	AAA23634	AAA23637
Dedicated platform; 500ml	AAA23612-V1	AAA23622-V1	AAA23612-V1	AAA23622-V1	AAA23635	AAA23636
Rubber mat	AAA23531	AAA23532	AAA23531-V1	AAA23532-V1	AAA23534	A A A 2 3 5 3 7
Universal attachment	AAA23511-V1	AAA23512-V1	AAA23511-V1	AAA23512-V1	AAA23505	AAA23517
Lab Sticker	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551
Wire shelf	-	EDA8235	EDA8233	-	-	
Stand 1 with stacking kits (600mm height for stacking 1 unit)	-	-	-	-	-	AAA23571
Stand 2 with stacking kits (300mm height for stacking 2 unit)	-	-	-	-	-	AAA23572
Retractable foot castor	-	-	AAA23801	AAA23802	-	-
Stacking kit	-	-	AAA23811	AAA23812	-	AAA23573

LC GreenBox

Model	Dimensions; W x D x H (mm)	IST-3075	IST-4075	ISS-3075	ISS-4075	ISF-7000	ISS-7000
LC GreenBox	156 x 94 x 34			AAAQ1011			

Incubator Shakers - Accessories & Options

Universal Platforms

Description	Model	IST-3075	IST-4075	ISS-3075	ISS-4075	ISF-7000	ISS-7000
Platform size (mm)		350 x 350	450 x 450	350 x 350	450 x 450	755 x 520	755 x 520
Universal Platform	Product Code	AAA23501-V3	AAA23502-V3	AAA23501-V3	AAA31502-V3	AAA23503-V3	AAA23507
Flask clamp for Erlenmeyer flasks (stainless steel)	50ml — AAA23550	36	49	36	49	88	88
	100ml — AAA23551	24	39	24	39	68	68
	250ml — AAA23552	14	20	14	24	39	39
	300ml — AAA23556	14	20	14	24	39	39
	500ml — AAA23553	9	16	9	16	28	28
	1L — AAA23554	6	9	6	9	18	18
	2L — AAA23555	4	5	4	6	11	11
	2.8L — AAA23557	2	4	2	5	8	8
	4L — AAA23558	-	-	-	4	6	6
	6L — AAA23559	-	-	-	2	5	-
Flask clamp for Erlenmeyer flasks (plastic) [1]	50ml — AAA30570	36	49	36	49	88	88
	100-125ml — AAA30571	19	29	19	29	48	48
	200ml — AAA30572	13	21	13	21	35	33
	250ml — AAA30573	13	19	13	19	35	33
	300ml — AAA30574	12	19	12	19	35	33
	500ml — AAA30575	9	12	9	12	24	24
	1L — AAA30576	4	9	5	9	12	12
	2L — AAA30577	2	4	4	5	8	8
Funnel clamp	250ml — AAA23562	4	6	4	6	15	15
	500ml — AAA23563	2	4	3	4	10	10
	1L — AAA23564	-	3	-	3	7	7
	2L — AAA23565	-	-	-	-	5	5
Test tube rack [2]	86 x Ø8mm — AAA23581	2	4	2	4	7	7
	86 x Ø10mm — AAA23582	2	4	2	4	7	7
	58 x Ø12mm — AAA23583	2	4	2	4	7	7
	58 x Ø14mm — AAA23584	2	4	2	4	7	7
	32 x Ø17mm — AAA23585	2	4	2	4	7	7
	19 x Ø25mm — AAA23586	2	4	2	4	7	7
	10 x Ø35mm — AAA23594	2	4	2	4	7	7
Microplate holder	Single — AAA23654	8	15	8	15	25	25
	Tower — AAA23651	5	8	6	10	21	21
	Flat A (Large) — AAA23652	-	2	-	2	4	4
	Flat B (Small) — AAA23653	2	2	2	3	6	6

1) In the case of plastic flask clamps, deformation may occur at temperatures over 40°C. Stainless steel flask clamps are recommended when maintaining a high temperature environment.
2) Maximum quantity on each platform. (For test tube racks, it is the maximum quantity when the rack is not to be tilted).

Spring Wire Rack

Description		IST-3075	IST-4075	ISS-3075	ISS-4075	ISF-7000	ISS-7000
Product Code		AAA23501-V3	AAA23502-V3	AAA23501-V3	AAA31502-V3	AAA23503-V3	AAA23507
Quantity of Erlenmeyer flasks	50ml	16	25	16	25	45	45
	100ml	9	16	9	16	28	28
	250ml	4	9	4	9	18	18
	300ml	4	9	4	9	18	18
	500ml	4	5	4	5	15	15
	1L	2	4	2	4	10	10
	2L	1	2	1	2	6	6
	2.8L	1	2	1	2	4	4

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Incu-Shaker™ Mini Shaking Incubator

The Incu-Shaker™ Mini is the most compact shaking incubator in its class. While this shaking incubator has a remarkably small footprint, the interior is spacious enough to accept a 235 x 290mm platform as well as clamps for a variety of flasks, tubes and other common vessels. The standard platform (included) features a non-slip, rubber coated surface, ideal for tissue culture flasks, Petri dishes and staining trays.

The convenient MAGic Clamp™ platform is also available for use with Erlenmeyer flasks and test tube racks. This unique, magnetic attachment method is the easiest way to instantly change between flask clamps of different sizes.

- Domed lid accepts flasks up to 1L
- Touch screen control panel
- Extremely compact: just 280mm wide
- Exchange flask clamps in one second with MAGic Clamp™ magnetic system

Model	H1001
Temperature (°C)	Ambient +5 to 70
Temperature increments at 37°C	0.1
Temperature uniformity at 37°C	±0.25
Temperature accuracy at 37°C	±0.1
Shaking speed range (rpm)	30 to 300
Speed increments (rpm)	1
Shaking orbit (mm)	19
Platform dimensions; W x D x H (mm)	235 x 290
Exterior dimensions; W x D x H (mm)	280 x 410 x 330
Height with lid open (mm)	630
Timer	1min to 48hr / continuous
Weight (Kg)	11.5

Incu-Shaker™ Mini CO_2 Shaking Incubator

- Integral orbital shaker, ideal for suspension cell culture
- Six side direct heating, provides uniform temperature
- Stainless steel chamber (SS316), with round corners for easy cleaning
- Dual beam IR sensor, fast response time for precise control over CO_2%

Model	H3501		
Temperature (°C)	Ambient +5 to 60 (increments: 0.1)		
Temperature accuracy / uniformity / stabiilty	±0.5 / ±0.5 / 0.1 (at 37)		
Speed range	30 to 300 (increments: 1rpm)		
Mixing orbit (mm)	19		
CO_2 range	0 to 20 (increments: 0.1%)		
CO_2 accuracy	±0.1		
Time range	1min to 48hr (or continuous)		
Dimensions; W x D x H (mm)	Platform	235 x 290	
	Chamber	335 x 260 x 392 (46L)	
	Exterior	420 x 465 x 553	
Weight (Kg)	40.1		

For ordering information on the various MAGic Clamp™ systems available, please contact us for details

Melting Point Apparatus

These instruments are designed for fast and accurate measurement of melting points. A membrane keypad allows easy setting of the desired start temperature and heating ramp rates. The user friendly LCD display shows both the temperature and the specific stage of operation.

When measurements are being made, the temperatures may be stored in the instrument's memory by simply pressing the storage buttons. Once the heating cycle is completed, an integral air pump quickly cools the heating block so that the next series of tests can be commenced promptly.

Model	MD 400C
Measurement range (°C)	Ambient to +400
Minimum digital display (°C)	0.1
Size of the capillary (mm)	Ø1.4 (outside) Ø1.0 (inside), length: 80
Loading height of the sample (mm)	3
Linear heating-up rate (ºC/min)	0.1 to 20
Accuracy (°C)	<200 ±0.5 >200 ±0.8
Dimensions; W x D x H (mm)	440 x 490 x 320
Weight (Kg)	11.5

Microtube Homogenisers - BeadBugs™

The BeadBugs™ are high energy bench top homogenisers that set the performance standard for personal sized cell disruption and lysis instruments. Simultaneous homogenisation of up to 6 samples takes place (often within 45 seconds) inside the disposable 2ml screw cap microtubes. The optimised mixing motion causes rapid cell disruption through constant high velocity impact from the hardened micro-beads* chosen specifically for your sample type.

- Extremely powerful mixing action for lysis, grinding or homogenising
- Eliminates the cross contamination associated with hand-held homogenisers
- Faster & more effective than tissue grinders
- Process multiple tubes simultaneously

Model	D1030	D1036
Speed range (rpm)	2800 to 4000	2500 to 4350
Max. capacity	3 x 2.0ml non-skirted	6 x 2.0ml (skirted or non) or 2 x 5ml
Timer	3sec to 3min	1sec to 90sec with up to 10 cycles
Operating temp. range (°C)	+4 to +45 (ambient temp.)	
Dimensions; W x D x H (mm)	170 x 210 135	220 x 355 x 205
Weight (Kg)	2.2	9.0

* Please contact us or look online for details of the beads available

Advanced Series

The MD 400C uses PID & PWM to control the temperature

- Automatically records the melting curve
- Touch screen
- USB and RS-232 interface
- 3 samples can be measured at the same time and calculate the average value of initial and final melting points automatically

Developed for samples too tough to be homogenised in a common lab vortexer, the BeadBugs™ provides a convenient and economical alternative to larger and more expensive homogenisers on the market today. With compact footrpints (as small as 170 x 210mm, in the 3 position model), the BeadBugs™ are the the ideal homogenising instruments for low to medium throughput laboratories.

Laboratory Equipment

Ovens

Natural Convection Ovens

Annealing, drying of plant tissue, drug metabolism, fine chemical precipitation, general heating/ drying, serum protein analysis and sterilisation.

Forced Convection Ovens

General aging and curing, agricultural genetic, digestion of proteins and starches, general heating/drying, stability and QC/batch testing and sterilisation.

Vacuum Ovens

Agricultural genetic, annealing, desiccating, out-gassing solids and liquids, vacuum embedding, volatile resins and polymers testing.

Safety Features
- Self-protecting cut-off function and visual signals
- Over-temperature safety function; shuts off the power that is being supplied to the heater and then the controller sequentially
- 2 separate over-current fuses
- Timer mode useful for delaying the start of a test or for stopping a test that has been running for a certain time
- Integrated time setting: Delay ON/OFF. (1min to 99hr 59min)
- Power interruption setting: After a power interruption select automatic run or manual run
- Door-open warning alarm (excludes OV models)
- Intermittent audible tone and visual LED warning alarms
- After 5 minutes of the door being open the heater and fan will stop

Optimum Control Features
- Professional electronic and program control
- Microprocessor PID temperature control with simple calibration and autotuning feature

- Conveniently preset settings for the 3 most commonly used temperatures
- Switch from Celsius to Fahrenheit (C°or °F)
- HMI (Human Machine Interface) control display network system
- User-friendly controls, splash-proof, easy-to-clean keypad and clear LED display
- Keypad lock key prevents accidental resetting of testing parameters

Constructional Features
- High quality 304 grade stainless steel inner chamber and dirt repellent, powder coated exterior surface (except for OV models)
- Gasket minimises heat loss and tightly seals the chamber door
- Fully insulated oven chamber prevents heat from escaping to the exterior surface
- Adjustable electropolished stainless steel shelving provides uniform air flow around samples

Natural Convection Oven - Economy Models

Stackable, multi-function ovens with gentle air-flow circulation.
- USB/RS-232 connection interface and Lab Tracer software

Model		Solid door (without window)	ON3-03	ON3-05	ON3-10	ON3-15
		Window door	ON3-03W	ON3-05W	ON3-10W	ON3-15W
Product code	Solid door (without window)		AAH11165K	AAH11175K	AAH11185K	AAH11195K
	Window door		AAH11265K	AAH11275K	AAH11285K	AAH11295K
Chamber volume (L)			30	50	100	163
Temperature (°C)	Range		Amb. +15 to 250			
	Fluctuation at 100°C		±0.3			±0.5
	Variation at 100°C		±2.7	±3.7	±7.5	±4.1
Shelves	No. of wire shelves (supplied / max.)		2 / 2	2 / 4	2 / 5	2 / 4
Dimensions; W x D x H (mm)	Internal		310 x 380 x 252	367 x 437 x 309	463 x 533 x 405	550 x 546 x 542
	External		488 x 643 x 503	545 x 699 x 560	641 x 796 x 655	728 x 815 x 793
Weight (Kg)			43	53	63	73

Forced Convection Ovens - Economy Models

Fast drying ovens with vertical air-flow circulation.

Model		OF-01E	OF-11E	OF-21E
Product code		14012	14022	14032
Chamber volume (L)		52	100	150
Temperature (°C)	Range	Amb. +10 to 220		
	Fluctuation at 100°C	±0.4		
	Variation at 100°C	±3.3		±2.3
Shelves	No. of wire shelves (supplied / max.)	2 / 9	2 / 13	2 / 14
Dimensions; W x D x H (mm)	Internal	375 x 370 x 370	455 x 430 x 510	585 x 460 x 555
	External	530 x 535 x 737	610 x 595 x 877	740 x 625 x 922
Weight (Kg)		36	47	59

Forced Convection Oven - General Models

Specially designed for large volume and fast drying application. Offering rapid heating performance as well as uniform temperature distribution, these heavy-duty ovens are ideal for obtaining quick test results.
- USB/RS-232 connection interface and Lab Tracer software

| Model		OF3-30H	OF3-45H	OF3-75H
Product code		AAH192114K	AAH192214K	AAH192314K
Chamber volume (L)		314	450	760
Temperature (°C)	Range	Amb. +10 to 300		
	Fluctuation at 100°C	±0.2		
	Variation at 100°C	±3.5		±4.5
Shelves	No. of wire shelves (supplied / max.)	2 / 5	3 / 8	3 / 11
Dimensions; W x D x H (mm)	Internal	645 x 750 x 650	645 x 750 x 930	745 x 850 x 1200
	External	850 x 1100 x 1235	850 x 1100 x 1525	950 x 1200 x 1785
Weight (Kg)		200	240	300

Vacuum Ovens - OV Series

With a wide temperature range for various test applications for separating solvents from solutions or drying solvents with high boiling points.
- USB/RS-232 connection interface and Lab Tracer software

Model		OV3-30	OV3-65
Product code		AAH13215K	AAH13225K
Chamber volume (L)		28	65
Vacuum range (MPa)		0 to 0.1	
Temperature (°C)	Range	Amb. +10 to 250	
	Fluctuation at 100°C	±0.1	±0.3
	Variation at 100°C	±1.5	
Shelves	No. of shelves (supplied / max.)	2 / 2	3 / 3
Dimensions; W x D x H (mm)	Internal	302 x 305 x 302	402 x 405 x 402
	External	537 x 522 x 655	636 x 622 x 755
Weight (Kg)		63	110

Laboratory Equipment

Ovens - Accessories & Options
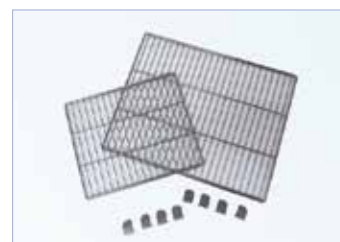
Wire Shelf
- Excellent corrosion resistance as made of stainless steel
- Excellent air permeability and uniform temperature distribution

Perforated Shelf
- Porous structure made of stainless steel
- Solid structure makes it suitable for high load samples

Recorder (dot matrix)
- 6-channel type temperature recorder
- Adjustable recording range, speed, etc.

LC GreenBox
- One LC GreenBox can connect up to 4 devices

Model	Wire Shelves		Perforated Shelves	
	Product Code	Quantity of shelves (standard/max.)	Product Code	Quantity of shelves (max.)
OF3-05/05W	FDA9543	2 / 4	AAA125331	4
OF3-10/10W	FDA9544	2 / 6	AAA125332	6
OF3-15/15W	FDA9545	2 / 7	AAA125333	7
OF-02P/PW	EDA8136	2 / 5	AAA12531	4
OF-12P/PW	EDA8135	2 / 7	AAA12532	6
OF-22P/PW	EDA8137	2 / 7	AAA12535	7
OF-01E	EDA8136	2 / 5	AAA14501	5
OF-11E	EDA8135	2 / 7	AAA14502	7
OF-21E	EDA8137	2 / 7	AAA14503	7
OF3-30 / 30W / 30P / 30PW	RTD1196	2 / 5	AAA18501	5
OF3-45 / 45W / 45P / 45PW	RTD1196	3 / 8	AAA18501	8
OF3-75 / 75W / 75P / 75PW	RTD1197	3 / 11	AAA18502	11
OF3-30H / 30HW / 30HP / 30HPW	RTD1196	2 / 5	AAA18501	5
OF3-45H / 45HW / 45HP / 45HPW	RTD1196	3 / 8	AAA18501	8
OF3-75H / 75HW / 75HP / 75HPW	RTD1197	3 / 11	AAA18502	11
OF-02G-2C	EDA8136	4 / 8	AAA12531	8
OF-02G-4C	EDA8136	8 / 16	AAA12531	16
ON3-03/03W	FDA9542	2 / 3	AAA125330	3
ON3-05/05W	FDA9543	2 / 4	AAA125331	4
ON3-10/10W	FDA9544	2 / 6	AAA125332	6
ON3-15/15W	FDA9545	2 / 7	AAA125333	7
ON-01E	EDA8136	2 / 5	AAA12531	5
ON-11E	EDA8135	2 / 7	AAA12532	7
ON-21E	EDA8137	2 / 7	AAA12535	7

LC GreenBox
- Monitor and control the operation status of the product in real time via mobile app with an internet connection

Model	Description	Dimension (mm)	Product Code
OF-P, OF3, ON3, OV3	Mobile Monitoring System	156 x 94 x 34	AAAQ1011

Recorder (dot matrix)
- 6-channel graph-type temperature recorder
- Adjustable recording range, speed, etc.

Model	Description	Product Code
OF3-30/45/75/30H/45H/75H Series	Recorder (dot matrix)	AAA8T500
	Recorder (thermal)	AAAE1503

Recorder (thermal)
- Graph/Digital mode
- Thermal-type temperature recorder

Stacking bracket
- Oven / incubator bracket for double stacking

Model	Product Code
OF3/ON3-03, 05	AAA125421
OF3/ON3-10, 15	AAA125422
IB3/IB3-A-03, 05	AAA125431
IB3/IB3-A-10, 15	AAA125432

Polarimeters
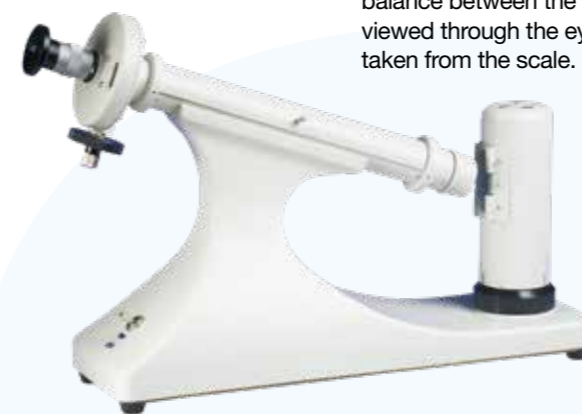
Polaris - Digital and Auto

The Polaris A is a high quality, low cost instrument capable of measuring the rotation of optically active samples and matches the performance of many digital instruments in the market today. The variable half waveplate effect is used to obtain a balance between the two halves of a circle when viewed through the eyepiece. The reading is then taken from the scale.

The Polaris A accepts sample tubes of lengths up to 220mm and is used for measuring concentrations and optical rotations in the food, sugar, flavouring, fragrance, pharmaceutical and chemical industries.

Model	Polaris A
Product code	9100.0000
Measuring range	360° with 180°left/right rotation
Light source	Monochromatic light source of 589nm
Accuracy	Double vernier scale, accuracy 0.05°
Light source	LED
Dimensions; W x D x H (mm)	600 x 200 x 400
Weight (Kg)	8

Polaris - Digital & Auto

The Polaris Digital and Auto polarimeters include a self test for rotating the angle and sugar degree as one complete operation based upon the mean average. All results are clearly displayed on the LCD display.

Automatic models have a Peltier controlled chamber to control the temperature of the sample and can measure dark coloured samples. Supplied with USB and RS232 interfaces.

Model	Polaris D	Polaris Auto 6000	Polaris Auto 7000
Product code	9100.5000	9100.6000	9100.7000
Type	Digital	Automatic	
Measuring range	-45° to +45° -120° to +120°	-45° to +45° -120° to +120°	-89° to +89°
Measuring time	1°/s		
Minimum reading	0.001°		
Accuracy	±0.01°		
Repeatability	≤0.002° / ≤0.02°	>1% ≤0.002°	1%° 0.002°
Resolution	0.005° / 0.001°		
Minimum sample transmittance	1%		
Light source	Sodium lamp, 589nm	LED	
Dimensions; W x D x H (mm)	600 x 320 x 220	850 x 470 x 380	
Weight (Kg)	30	32	37

Laboratory Equipment

Refractometers

Ceti refractometers offer precision, versatility and excellent value. Our range begins with the analogue pocket models, expanding to digital and bench top systems, incorporating fully automated measuring and processing models.

Hand Held - Analogue Digit Series

The Digit series comprises 25 lightweight hand-held refractometers for measuring the Brix or refractive index value of specific products. 8145 models feature automatic temperature compensation (ATC). Suitable for general applications to industry specific; examples include the control of sugar or alcohol levels in food and beverages and spot testing of petrochemicals.

Model	DIGIT-012 Clinical		DIGIT-050 Battery			DIGIT-090 Sugar	
Scale	Refractive Index 1.3330 to 1.3600	0.0005	Ethylene glycol from -50°C to 0°C	5°C		0-42% Brix	0.2%
	Protein 0 to 12g/dl	0.2	Specific gravity 1.15 to 1.30sg	0.01		42-71% Brix	0.2%
	Specific gravity 1.000 to 1.050	0.002	Battery fluid from -50°C to 0°C	5°C		71-90% Brix	0.2%

Model	DIGIT-5890 Honey		DIGIT-5890 ATC Honey		DIGIT-015 Sugar/oil	
Scale	58-90% Brix	0.5%	58-90% Brix	0.5%	0-15% Brix	0.2%
	12-27% Water	1%	12-27% Water	1%	Refractive index 1.3330 to 1.3560	0.0005 nD
	38-43% Baumé	0.5%	38-43% Baumé	0.5%		

Model	DIGIT-30~140 Oechsle scale		DIGIT-100 ATC Salinity		DIGIT-025 ATC Alcohol	
Scale	0-32% Brix	0.20%	0-100% Salinity	1%	0-25% Alcohol/ Volume	0.2%
	30-140 Oechsle	0.10%	Gravity 1.000 to 1.070sg	0.001		

Model	DIGIT-025 Alcohol		DIGIT-032 Sugar		DIGIT-080 Sugar	
Scale	0-25% Alcohol (by volume)	0.2%	0-32% Brix	0.2%	0-80% Brix	0.5%

Model	DIGIT-2862 Sugar		DIGIT-010 ATC Sugar		DIGIT-032 ATC Sugar	
Scale	28-62% Brix	0.2%	0-10% Brix	0.1%	0-32% Brix	0.2%

Hand Held - Digital

The SR-95 digital refractometer has a triple range scale coupled with an RS232 interface. Other additions include automatic temperature compensation, Centigrade and Fahrenheit measurements, a stainless steel sample plate and instantaneous digital results.

Model	SR-95				
Description	Type	Range	Resolution	Accuracy	
Scale	Brix	0-95%	0.1%	±0.1%	
	Refractive Index	1.3330-1.5318	0.0001	±0.00015	
	Salinity	0-30%	0.1%	±0.1%	
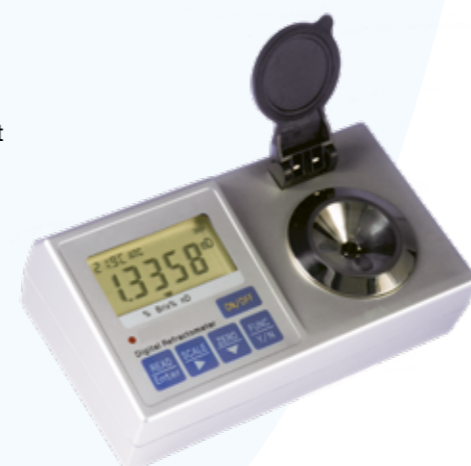
The new MW-802 is a unique hand-held, portable refractometer that is both waterproof and shock proof, making it the perfect choice for field based applications in conjunction with ultra-low power consumption*

Model	MW-802				
Description	Type	Range	Resolution	Accuracy	
Scale	Brix	0.0-90.0%	0.001	±0.2%	
	Refractive index	1.3330-1.5177nD	0.0001nD	±0.0003nD	

* (Each single battery can produce upto 15,000 measurements)

Bench Top - Convex & Prisma Analogue

The Convex is highly versatile, allowing measurements of a wide range of substances to be taken. Both upper and lower prisms have their own light entry ports, which can be closed, thereby making it possible to take readings from both reflected and transmitted light.

Model	Convex
Product code	8200.0000M
Scale	Refractive Index nD: 1.3000-1.7200 Sugar 0-95% Brix
Precision	0.0005nD 0.25% Brix
Eyepiece	30x telescope, focusable
Temperature range (°C)	0-200 (digital thermometer)
Dimensions; W x D x H (mm)	280 x 190 x 380
Weight (Kg)	4.5

The Prisma refractometer is equipped with an integral LED illuminator for its external scale unit, allowing readings to be easily taken whilst taking notes. A user friendly colour compensation knob eliminates any colour shift. In addition to transparent solutions, the Prisma is equipped to measure the RI of solids, powders, pastes and plastic films. Both the upper and lower prisms are of the highest quality and include connecting nozzles for a thermostatic water bath.

Model	Prisma
Product code	8300.0000M
Scale	Refractive Index nD: 1.3000-1.7200 Sugar 0-95% Brix
Precision	0.0005 nD 0.25% Brix
Eyepiece	22x telescope, focusable
Temperature range (°C)	0-200 (digital thermometer)
Dimensions; W x D x H (mm)	360 x 240 x 400
Weight (Kg)	7

Bench Top - Abbe Quartz & Difrax Digital

The Quartz is a semi-automated Abbe refractometer. Its fast, digital read-out offers a speedier throughput, which is particularly useful in manufacturing centres and on production lines. Presentation of a sample produces an almost instantaneous, accurate readout of the RI, %Brix value and temperature on the LCD display. An RS-232C PC/Printer interface is included.

Model	Quartz
Product code	8400.0000M
Scale	Refractive Index nD: 1.3000 - 1.7000: 0 to 95% Brix (Bx) 0 to 90% Brix temp. compensated (BxTC)
Precision	0.0001nD / 0.00020nD 0.1% Brix/0.1% Brix
Eyepiece	Focusable
Temperature range (°C)	15 to 50
Dimensions; W x D x H (mm)	470 x 370 x 240
Weight (Kg)	12

The Difrax is a fully automated digital Abbe refractometer. The touch sensitive screen has functions of temperature display, automatic correction and saving of data. A USB interface is supplied as standard.

Model	Difrax
Product code	8500.0000M
Scale	Refractive Index nD: 1.3000-1.7000 Brix(BX-TC): 0-100% Brix(Bx): 0-95%
Measuring accuracy	Refractive Index / nD: ±0.0002 Dissolved solids / Brix: ±0.1%
Measuring resolution	Refractive Index / nD: 0.00001 Dissolved solids / Brix: 0.01%
Temperature range (°C)	0 to 50
Dimensions; W x D x H (mm)	329 x 214 x 150
Weight (Kg)	3.7

Laboratory Equipment

Refrigerators and Freezers

Performance

- Reliable cooling storage of laboratory and medical samples.
  - Designed and tested in accordance with the international standard DIN 58345 / DIN 58375
  - Complies with the strict requirements of the international medical standards (ISO13485 / DIN 58371)
- Optimised temperature control system for high temperature stability
  - Automatic defrost and intelligent dual refrigeration system minimises temperature change
- Shock absorbing door construction
- Fully insulated chamber ensures minimal chamber temperature fluctuation

Convenience

- Intuitive and easy operation by means of the VFD display with touch-sensitive buttons
- Choice of solid or glass doors
- Precise and easy output of storage documentation

Safety

- High and low temperature alarms
- Automatic power cut-off system against overheating
- Built-in door lock for safe sample storage
- Keypad lock button prevents inadvertent parameter changes
- Advanced safety system to meet strict requirements of the medical cooling devices
- Safe door open system to minimise heat loss and protect stored samples
- Eco-friendly refrigerant protects the global environment

Laboratory Refrigerators - General Purpose

With advanced safety features, the cold storage system provides a stable refrigerated environment for life science, pharmaceutical, biotechnology, clinical and industrial laboratories.

Model		CLG-150	CLG-300	CLG-650	CLG-850	CLG-1400
Product code	Solid door	AAHE1002K	AAHE1012K	AAHE1022K	AAHE1032K	AAHE1042K
	Glass door	AAHE1102K	AAHE1112K	AAHE1122K	AAHE1132K	AAHE1142K
Chamber volume (L)		156	319	603	805	1327
Display		VFD and touch-screen				
Temperature range (°C)		+2 to 10				
Door type		Heated glass or Solid				
Lighting		-	18W Fluorescent lamp	32W Fluorescent lamp		
Insulation material		60mm Polyurethane foam				
Dimensions; W x D x H (mm)	Internal	550 x 580 x 490	550 x 580 x 1000	650 x 675 x 1450	750 x 775 x 1450	1425 x 675 x 1450
	External	683 x 791 x 870	670 x 719 x 1515	770 x 815 x 1965	870 x 915 x 1965	1545 x 815 x 1965
Weight (Kg)		100	130	210	260	350

LEC British Manufactured Laboratory Fridges

Lec is a well-known household name and their Laboratory and Medical refrigeration products are just as popular. We have put together a selection of products at competitive prices.

The LR111 Basic Laboratory Refrigerator that will conveniently slide under a standard laboratory bench. Security is essential so the LR111 fridge comes complete with door lock and two keys, ensuring that only authorised individuals are able to access it. The LR111 is finished in white, is spark free for peace of mind and has adjustable temperature control and auto defrost. It features three glass shelves and a useful drawer.

If you wish, the LR111 can be situated on the bench top if no suitable under bench space is available. It has a nominal internal capacity of 130 litres.

If you require more capacity, the LSFSR288UK (illustrated) Laboratory Refrigerator features 288 litres of usable space. The interior is spark free and it comes complete with a lockable door and automatic defrost. An integral temperature display and high and low temperature alarms help to give peace of mind, as does the anti- microbial coating on the handle.

Model	LR111	LSFSR288UK
Product code	444441207	444410661
Dimensions; W x D x H (mm)	545 x 554 x 845	595 x 634 x 1570
Net capacity (L)	130	288
Door lock	Yes	Yes
Temperature range (°C)	2 to 10	2 to 10
Temperature display	No	Yes
Shelves/drawers	1 / 3	5 / 1
Defrost cCapability	Auto defrost	Auto defrost
Spark free	Yes	Yes

Refrigerator/Freezer - MDRF300

Refrigerators and freezers for the research and laboratory sectors, with precise electronic controls and degree-accurate temperature settings, offering outstanding temperature stability.

The comprehensive functions and features ensure that sensitive substances, chemicals and other research materials can be optimally stored. Designed for a long service life and energy efficiency. Both chambers have their own independent cooling system, controller and power.

Performance
- Microprocessor Comfort controller with digital display, 1-point calibration to accurately control the internal temperature and volt-free contact
- Integrated alarm datalogger
- Self-closing doors prevent cold loss

Convenience
- Intuitive and easy operation by means of the VFD display with touch-sensitive controller
- Sturdy, plastic-coated adjustable shelves have a loading capacity of up to 45Kg
- 10mm access port for integration of an optional / independent temperature sensor
- The drawers can easily be removed by the handles and have a transparent front providing a clear view of the products stored inside

Safety
- Audible and visual alarms for high/low temperature
- Built-in door lock for safe sample storage
- Fitted with an additional safety thermostat to prevent temperatures below +2°C and to protect sensitive products in the event of a fault
- Keypad lock button prevents accidental parameter changes
- 100% HCFC/CFC free refrigerant

Product code	MDRF300	
Chamber volume (L)	254 (fridge) / 107 (freezer)	
Display	Digital	
Temperature (°C)	Range Upper	+3 to +16
	Range Lower	-9 to -30
	Accuracy	±0.1
	Stability	±2
Chart recorder	Optional	
Insulation material	70mm foamed polyurethane	
No. of shelves / drawers	5 (fridge) / 2 (freezer)	
Dimensions; W x D x H (mm)	Internal	440 x 435 x 1105 (fridge) / 431 x 435 x 597 (freezer)
	External	600 x 615 x 2000
Weight (Kg)	85	

Laboratory Freezers - General Purpose

Protect laboratory materials and choose from three different freezer lines that fit your experimental needs. Equipped with a manual defrost function for storage of sensitive samples and specimens.

Performance
- Excellent freezing control and minimal temperature fluctuation
- Dual defrost systems

Convenience
- Intuitive and easy-to-operate touch sensitive control panel
- Air-tight door seal and lockable door latch
- High-quality 304 grade stainless steel interior
- Height adjustable wire shelves
- Dedicated stand with casters and stacking kits available

Safety
- High/low temperature and over-current protection
- Open door alarm and automatic fan stop interlocked with door opening for minimisation of heat loss
- Keypad lock function
- Built in door lock with key

Model		FHG-150	FHG-300	FHG-650
Product code		AAHE2102K	AAHE2112K	AAHE2122K
Chamber volume (L)		154	303	647
Display		VFD and touch screen		
Temperature range (°C)		0 to -15		
Door type		Solid		
Insulation material		70mm Polyurethane foam		
Shelves	No. of shelves (supplied / max.)	2 / 6	3 / 11	3 / 17
Dimensions; W x D x H (mm)	Internal	550 x 570 x 490	550 x 550 x 1000	700 x 675 x 1370
	External	763 x 815 x 1055	765 x 760 x 1650	915 x 885 x 2020
Weight (Kg)		120	150	230

Model		FCG-150	FCG-300	FCG-650
Product code		AAHE2302K	AAHE2312K	AAHE2322K
Chamber volume (L)		154	303	647
Display		VFD and touch screen		
Temperature range (°C)		-25 to -35		
Door type		Solid		
Insulation material		70mm Polyurethane foam		
Shelves	No. of shelves (supplied / max.)	2 / 6	3 / 11	3 / 17
Dimensions; W x D x H (mm)	Internal	550 x 570 x 490	550 x 550 x 1000	700 x 675 x 1370
	External	763 x 815 x 1055	765 x 760 x 1650	915 x 885 x 2020
Weight (Kg)		123	155	238

LEC British Manufactured Laboratory Freezers

The LEC ISU111 Basic Laboratory Freezer is also under bench, is the identical size to the LR111 fridge but, instead of a combination of shelves and drawers it comes with four drawers. Unlike the LR111 there is no auto defrost feature.

If required, the ISU111 can be situated on the bench top if no suitable under bench space is available. It has a nominal internal capacity of 85 litres.

Similar to the LSFSR288UK fridge, is the LSFSR288UK (illustrated) Laboratory Freezer. Six shelves with separate internal, drop down doors ensure samples are kept conveniently organised and safe at the same time. The same safety and convenience features of the LSFSR288UK are to be found on the LSFSF232UK.

If you require a smaller freezer then you may wish to consider the counter top LSFSF39UK Laboratory Freezer. With a capacity of just 50 litres it still has all the features of the larger units featured above - spark free, temperature display, audible and visual alarms and door lock. Defrost on the LSFSF39UK is manual.

Medline -86°C Ultra Low Temperature Freezers

Manufactured by Meiling, Medline -86°C Ultra Low Temperature Freezers are designed for sample protection and convenient access when carrying out various laboratory applications. Suitable for laboratories in a large number of sectors (e.g. healthcare, colleges/universities, electrical), these upright freezers feature an accessible control and monitoring system.

Features

- Large touch screen controller with display of internal temperature, ambient temperature, running conditions and any alarm signals
- Temperature graph display and data logging with download to PC via USB stick
- Stainless steel interior with adjustable stainless steel shelves and powder coated exterior
- Insulated inner doors with vacuum release port
- Quiet operation with low energy usage
- CFC/HFC free refrigerants
- 5 year parts and labour warranty

Model	ISU111	LSFSF232UK	LSFSF39UK
Product code	44441208	444410672	444410574
Dimensions W x D x H (mm)	545 x 554 x 845	595 x 634 x 1570	480 x 505 x 565
Net capacity (L)	85	232	39
Door lock	Yes	Yes	Yes
Temperature range (°C)	-18 to -25	-18 to -25	-18 to -25
Temperature display	No	Yes	Yes
Shelves/drawers	0/4	0/4	1/0
Defrost capability	Manual defrost	Manual defrost	Manual defrost
Spark free	Yes	Yes	Yes

Model		MDDW-HW50	MDDW-HL100S	MDDW-HL400S	MDDWHL-528S
Capacity (L)		50	100	400	528
Dimensions W x D x H (mm)	Internal	550 x 650 x 425	450 x 439 x 514	440 x 696 x 1266	585 x 696 x 1266
	External	590 x 650 x 425	1066 x 742 x 820	785 x 1041 x 1947	930 x 1041 x 1947
Weight (Kg)		65	120	252	283
Max.1.5ml vials		5832	-	24,300	32,400
Power consumption (kWh/24hr)		8	9.82	8.18	12.25

Model		675-HL675S	MDDW-HL775S	MDDW-HL850S	MDDW-HL1000S
Capacity (L)		50	775	850	1000
Dimensions W x D x H (mm)	Internal	750 x 696 x 1268	865 x 696 x 1268	877 x 696 x 1378	1022 x 696 x 1378
	External	1090 x 998 x 1955	1205 x 998 x 1955	1218 x 997 x 1998	1363 x 997 x 1998
Weight (Kg)		380	390	440	480
Max.1.5ml vials		50,000	60,000	69,000	80,500
Power consumption (kWh/24hr)		14.41	14.5	20.26	19.15

Arctiko -90°C Integra Ultra Low Temperature Freezers

Arctiko's -90°C Integra Ultra Low Temperature Freezers each have a dual cooling system, which consist of two individual systems that present excellent security. If one of the cooling systems fails, the other system will still control the temperature at -80°C. Therefore, your samples are unlikely to be affected by a rise in temperature. This feature, provided for by Arctiko's original and highly reliable single compressor technology, could be the difference between losing or saving a freezer full of priceless samples.

Features

- Dual, independent cooling system for double security
- Maximum cooling of compressors with airflow control and filter-less technology
- VIP panels and insulated inner doors to ensure lowest energy consumption and ECO mode to further reduce energy consumption
- Reduced noise level down to 49dB.
- Microprocessor control with clear display and self-diagnostic functions
- Adjustable shelves and easily removable inner doors
- 100% HCFC/CFC free

Arctiko ULTF -86°C Ultra Low Temperature Chest Freezers

Arctiko's ULTF -86°C Ultra Low Temperature Chest Freezers show that high performance freezing with focus on low energy consumption is the future. Each ULTF freezer features Arctiko's advanced microprocessor controller, which ensures that all control, alarm and data logging features are included as standard. In addition, all ULTF freezers are equipped with Arctiko's original single compressor technology.

Features

- Low energy consumption with insulated inner doors
- Heated door frame for frost-free gasket and easy door opening
- 100% HCFC/CFC free refrigerants and low noise level
- Microprocessor controller with digital display of temperature, battery level, ambient temperature and temperature graph
- Battery backup (approx. 72 hours) for alarms, data, logging and temperature display in case of power outage

Model		ULUF P390	ULUF P500	ULUF P610	ULUF P820
Dimensions W x D x H (mm)	Internal	466 x 600 x 1320	606 x 600 x 1320	746 x 600 x 1320	996 x 600 x 1320
	External	705 x 860 x 1999	895 x 860 x 1999	1035 x 860 x 1999	1285 x 860 x 1999
Capacity (L)		381	496	610	815
Noise level (dB)		<49			
Temperature range (°C)		-90/-40			
Max. ambient temperature (°C)		25			
Power supply (V)		230			
Frequency (Hz)		50/60			
Power consumption (kWh/24hr)		14.91	15.4	17.1	18.7

Model		ULTF 80	ULTF 220	ULTF 320	ULTF 420
Dimensions W x D x H (mm)	Internal	390 x 390 x 450mm	760 x 440 x 630mm	1100 x 440 x 630mm	1400 x 440 x 630mm
	External	552 x 648 x 850mm	920 x 695 x 885mm	1262 x 698 x 885mm	1562 x 698 x 885mm
Capacity (L)		71	189	283	368
Noise level (dB)		<50			
Temperature range (°C)		-86/-40			
Max. ambient temperature (°C)		20			
Power supply (V)		230			
Frequency (Hz)		50/60			
Power consumption (kWh/24hr)		4.6	5.8	7.8	6.2

Rotators

Effective mixing of biological samples in a variety of tubes. Ideal for immune precipitations, prevention of blood coagulation, latex diagnostics etc.

Performance
- Microprocessor PID control
- Adjustable speed range from 2 to 70rpm
- Fully adjustable tilt angle up to 90°
  - Horizontal for minimal mixing and vertical for full end-over-end mixing
- Digital speed control providing gentle rotating even at low speed
- Low-profile design with rubber feet for minimal vibration and noise

Convenience
- Simple fixture of accessories for quick installation and removal
- Various selection of optional tube and flask clamp holder disks to accommodate most applications
- Optional dual holder accessory to increase tube capacity
- Vivid and colourful vacuum fluorescent display (VFD) with touch sensitive keypad
- One-touch timer range: 1min to 99hr 59min
- Compact and lightweight design allows for use in cold rooms or incubators

Safety
- Stepping motor with self-protection function for advanced durability
- Self-diagnostic function identifying errors
- Polypropylene construction is highly chemically resistant and easy-to clean
- Over-current protection

Model		CRT-350
Product code		AAH3E115K
Shaking system	Motion type	Orbital
	Speed range (rpm)	2 to 70
	Tilt angle	0 to 90°
	Max. load (Kg)	4
Construction	Disk (optional)	Aluminium
	Body	Polypropylene
Dimensions; W x D x H (mm)	Exterior with disk (optional)	320 x 325 x 463
Weight with disk (optional) (Kg)		7.5

Rotator - Accessories & Options

Erlenmeyer flask clamp holders

Description	Max. mountable flasks		Product code
Disk for flask clamp	N/A		AAA3E511
Flask clamp (stainless steel)	50ml	13	23550
	100ml	8	23551
	300ml	6	23556
Flask clamp (plastic)	50ml	13	AAA30570
	100ml to 125ml	8	AAA30571
	300ml	6	AAA30574

Tube holder connector for double stacking

Description	Product code
Post	AAA3E521

Tube holder set with disk

Description	Max. mountable flasks	Product code
1.5ml (Ø, 10mm)	60	AAA3E501
5ml (Ø, 12mm)	18	AAA3E502
15ml (Ø, 16.5mm)	18	AAA3E503
50ml (Ø, 29mm)	12	AAA3E504

Shakers

Performance
- Orbital, reciprocal or dual orbital/reciprocal action depending on the model
- Microprocessor PID control with shaking speed calibration.
- Choice of shaking amplitude
- Wide speed range even with heavy workload.
  - Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform and powerful shaking motion
- Intelligent feedback mechanism maintains constant speed whilst under load
- Low-profile design minimises vibration or Intelligent feedback mechanism maintains constant speed whilst under load

Convenience
- User friendly control panel
  - Unique VFD-bright, clear, easy to read
  - Durable membrane touch switch and control knob
- Easy-set digital timer (1min to 999hr 59min)
- Repetitive tasks can be easily performed as the platform stops in the same position as it starts, making it beneficial for automated dosing or sampling processes
- Speed is set and displayed in increments of 1rpm
- Speed increment interval can be set from 1, 5, or 10rpm
- RS-232 and USB ports for external control and data collection
- Compact design with interchangeable platforms to accommodate various sizes of vessels (flasks up to 6L)

Safety
- Automatic run after power interruption
- Shaking speed deviation alarm
- Over-current protection
- Stalled platform check
- Slow start and gentle stop to protect delicate cells and to help prevent spillages
- Suitable for use in cold rooms and non-CO_2 incubators

Dual Action Shakers

Two types of shaking motions (orbital or reciprocating), with numerous amplitude settings. The compact and interchangeable platform design accommodates various types and sizes of vessels (flasks up to 6L) and is suitable for use in incubators.

Model		OS-2000	OS-3000
Product code		AAH3D1115K	AAH3D1215K
Shaking system	Motion type	Orbital or Reciprocating	
	Amplitude size (mm)	12.7 / 19.1 (standard)	19.1 (standard) / 25.4
	Speed range (rpm)	20 to 500	
	Accuracy	±1% of set speed	
	Timer	1min to 999hr 59min	
Max. load (Kg)		10 at 500rpm (orbital motion) 8.5 at 500rpm (reciprocating motion)	
Dimensions (mm)	Platform (W x D)	320 x 260	350 x 350
	External (W x D x H)	354 x 388 x 146	409 x 508 x 141
Weight (Kg)		22	28

Platforms and accessories must be purchased separately

Laboratory Equipment

Orbital Shakers

Powerful driving system with a durable body structure increases shaking capacity. Suitable for larger or heavier workloads requiring accurate and reproducible results.

Advanced Orbital Shakers - SKC Series

Innovative triple-cam shaking mechanism with offering reliable performance across a wide speed range. Specially designed to carry out heavy-duty and trouble-free operations continuously.

Model		OS-4000		OS-7100	OS-7200
Product code		AAH3D1315K	AAH3D1316K	AAH3D1415K	AAH3D1515K
Shaking system	Motion type	Orbital			
	Amplitude size (mm)	19.1 (standard)	25.4 (adjustable)	25.4	50.8
	Speed range (rpm)	20 to 500	20 to 450	30 to 500	30 to 300
	Accuracy	±1% of set speed			
	Timer	1min to 999hr 59min			
Max. load (Kg)		14 at 500rpm 21 at 400rpm	10 at 450rpm 21 at 300rpm	10 at 500rpm 25 at 400rpm	23 at 300rpm 35 at 200rpm
Dimensions (mm)	Platform (W x D)	450 x 450		755 x 520	
	External (W x D x H)	510 x 632 x 156		755 x 627 x 151	
Weight (Kg)		43		117	

Platforms and accessories must be purchased separately

Model			SKC-6075	SKC-6200	SKC-7075	SKC-7200
Product code			AAH30105K	AAH30125K	AAH30205K	AAH30225K
Shaking system	Motion type		Orbital			
	Amplitude size (mm)		19	50	19	50
	Speed range (rpm)		30 to 500			
	Accuracy		±1			
	Timer		1min to 999hr 59min			
Max. load (Kg)			28 at 310rpm	28 at 200rpm	28 at 310rpm	28 at 200rpm
Dimensions (mm)	Platform (W x D)	Small	580 x 520		755 x 520	
		Large	660 x 520		885 x 520	
	External (W x D x H)		583 x 618 x 122		755 x 662 x 122	
Weight (Kg)			65		75	

Platforms and accessories must be purchased separately

Laboratory Equipment

Mini Shaker - CMS-350

Compact and lightweight design for easy mobility and for use in areas with limited space. Suitable for low rpm sensitive applications, including, hybridisation, immunocytochemistry, gel staining/destaining and other bioscience applications.

Performance
- Microprocessor PID control
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform and powerful shaking motion

Convenience
- Vivid and colourful vacuum fluorescent display (VFD) with touch sensitive keypad
- One-touch timer for time-dependent shaking operation (1min to 999hr 59min)
- Compact and lightweight design allow allows for use in cold rooms and non-CO_2 incubators
- Variety of accessories are available to meet application demands

Safety
- Self-diagnostic function for identifying errors
- Polypropylene main body is highly chemically resistant and easy to clean
- Over-current protection

Model		CMS-350
Product code		AAH3B1115K
Shaking system	Motion type	Orbital
	Speed range (rpm)	50 to 300
	Accuracy at 100rpm (rpm)	±5
	Timer	1min to 999hr 59min
	Max. load (Kg)	5.2
Dimensions (mm)	Platform (W x D)	250 x 250
	External (W x D x H)	249 x 325 x 109
Weight (Kg)		8

Microplate Shaker - CPS-350

Suitable for 4 microplates with a wider speed range to accommodate various sample testing. Optimally designed to shake four microplates simultaneously, this microplate shaker is ideal for applications that demand precise and repeatable mixing such as immunoassays.

Model		CPS-350
Product code		AAH3C1115K
Shaking system	Motion type	Orbital
	Speed range (rpm)	150 to 1200
	Accuracy at 500rpm (rpm)	±15
	Timer	1min to 999hr 59min
	Max. load (Kg)	4
Dimensions (mm)	Tray (W x D)	269 x 185
	External (W x D x H)	269 x 325 x 128
Weight (Kg)		7.7

Platforms and accessories must be purchased separately

Rocking Shaker - CRS-350

Adjustable tilt angle and precise digital speed control providing desired rocking motion. Ideal for ELISA, enzyme immunoassays, protein synthesis, hybridisation staining or destaining gels, pharmaceutical profiling and many other laboratory applications.

Performance
- Microprocessor PID control
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform and powerful shaking motion

Convenience
- Vivid and colourful vacuum fluorescent display (VFD) with touch sensitive keypad
- One-touch timer for time-dependent shaking operation. (1min to 999hr 59min)
- Compact and lightweight design allow allows for use in cold rooms and non-CO_2 incubators
- Variety of accessories are available to meet application demands

Safety
- Self-diagnostic function for identifying errors
- Polypropylene main body is highly chemically resistant and easy to clean
- Over-current protection

Model		CRS-350
Product code		AAH391115K
Shaking system	Motion type	Rocking
	Speed range (rpm)	5 to 100
	Accuracy at 100rpm (rpm)	±5
	Tilt angle	7 to 13°
	Max. load (Kg)	5
Dimensions (mm)	Tray (W x D)	276 x 276
	External (W x D x H)	249 x 325 x 138
Weight (Kg)		3.7

3D Shaker - CWS-350

Enhanced features such as tilt adjustment, removable tray and digital control. Ideal for ELISA, enzyme immunoassays, protein synthesis, hybridisation staining or destaining gels, pharmaceutical profiling and many other laboratory applications.

Model		CWS-350
Product code		AAH381115K
Shaking system	Motion type	Waving
	Speed range (rpm)	8 to 100
	Accuracy at 100rpm (rpm)	±5
	Tilt angle	0 to 13°
	Max. load (Kg)	5
Dimensions (mm)	Tray (W x D)	276 x 276
	External (W x D x H)	249 x 325 x 138
Weight (Kg)		3.7

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Laboratory Equipment

Heated Tube Shaker - CBS-350

Useful for a variety of molecular biology applications. Interval mix function in program mode can be properly set according to user's experimental conditions.

Performance
- Microprocessor PID control ensuring consistent shaking motion and precision accuracy
- Wide speed range from 150 to 1500rpm (block dependent)
- Automatic temperature calibration

Convenience
- Bright VFD display with responsive touch buttons
- Memory function of programs allowing relevant parameters of each program step to be stored
  - Up to 10 programs allowed for memory storage
  - Up to 10 steps allowed for each program
  - Interval mix function (continuous switching between shaking and phasing)
- Advanced dual wait on/off timer modes
- Optimal heat transfer is achieved by the tight coupling design of the main body and the corrosion-resistant anodised aluminium blocks

Safety
- Self-diagnostic function for identifying errors
- Polypropylene contruction is highly chemically resistant and easy to clean
- Low-profile design with rubber feet for minimal vibration and noise
- Over-current protection

Model		CBS-350
Product code		AAHJ4015K
Control		PID feedback control
Display		VFD (0.1° resolution)
Motion type		Orbital
Temperature (°C)	Range	Amb. +5 to 100
	Fluctuation at 80°C	±0.5
	Variation at 80°C	±0.15
Heating power (W)		360
Safety	Over temp.	Heating plate
		PCB
	Over current	Current limit protection
Shaking	Speed range (rpm)	96-well tube block; 150 to 1500
		0.5ml tube block; 150 to 1000
		1.5ml tube block; 150 to 1000
		15ml tube block; 150 to 900
		Ø12 tube block; 150 to 850
		Ø13 tube block; 150 to 850
		50ml tube block; 150 to 800
Orbit size (mm)		2
Dimensions; W x D x H (mm)		249 x 325 x 120
Weight (Kg)		8.3

Platform Shakers - Accessories & Options

Universal Platform

Universal Platform
Enables the mounting of clamps for Erlenmeyer flasks, test tubes, separating funnels, etc.

Dual Level Platform
Doubles the capacity of the shaker

Accessories for Universal Platform

Flask Clamp stainless steel
Erlenmeyer flask mounting (50 ml - 6L). High-strength spring maintains excellent clamping

Flask Clamp (Plastic)
Erlenmeyer flask mounting (50ml - 2L). Reduced noise with plastic body and rubber on the bottom

Funnel Clamp
Separating funnel mounting (250ml - 2L). Easy detachment/attachment and stable clamping

Test Tube Rack
Test tube mounting (Ø8 mm - Ø35 mm). Easily adjustable angle

Microplate Holder
Various options for microplates: Single, Tower, Flat A (Large), Flat B (Small)
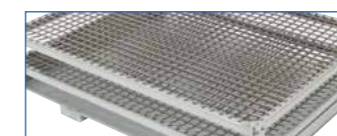
Lab Sticker
Excellent adhesion as size is 200 x 200mm, allowing for application to Petri dishes, culture bottles, etc.

LC GreenBox
Monitor the operation status of the device in real time via the mobile app with a simple internet connection

Set Accessories

Spring Wire Rack
Fixed with 2-stage grid springs to accommodate various sample container shapes and sizes

Half Spring Wire Rack
Platform that can be used both universal platform and spring wire rack at the same time.

Dedicated Platform
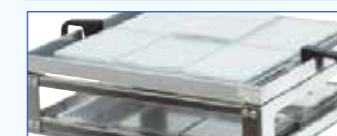Accessories (250ml and 500ml) installed on platform with maximum quantity of flask clamps

Rubber Mat
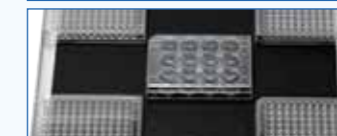Convenient for use with culture flasks and Petri dishes to prevent slipping

Universal Attachment
Rubber mat on the bottom and adjustable clamping rods make it a convenient structure for a wide range of applications

Microplate Tray
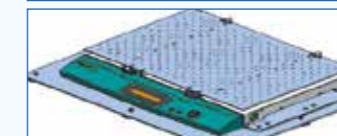(Dual Stacking Tray) Dual stacking structure for microplate allows for excellent space utilisation.

Microplate Tray
(Large Tray) The tray for microplates with anti-slip rubber plate on the bottom.

Stage Rack
The rack maximises space efficiency by stacking up to four shakers.

Weight Increaser
Accessories allowing for use of SKC series shaker up to 500rpm.

Description		OS-2000	OS-3000	OS-4000	OS-7000	SKC-6000		SKC-7000		CMS-350
Spring wire rack (half)		-	-	-	-	-	-	AAA30525 [1]	AAA30526 [2]	-
Dedicated platforms; 250ml		-	AAA23611-V1	AAA23621-V1	AAA23634	-	-	-	-	-
Dedicated platforms; 500ml		-	AAA23613-V1	AAA23622-V1	AAA23635	-	-	-	-	-
Rubber mat		AAA3A531-V1	AAA23531-V1	AAA23532-V1	AAA23534	AAA30531	AAA30532	AAA30533 [1]	AAA30534 [2]	AAA38501
Universal attachment		AAA3A511-V1	AAA23511-V1	AAA23512-V1	AAA23505	AAA30511	AAA30512	AAA30513 [1]	AAA30514 [2]	AAA3B521
Lab Sticker		AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551
Microplate tray	Dual stacking	AAA3A541	-	-	-	-	-	-	-	AAA3B531
	Large tray	AAA3A542	-	-	-	-	-	-	-	AAA3B532
Stage rack	4 Stages	-	AAA31541-V1	AAA31542-V1	AAA31702-V1	-	-	-	-	-
	3 Stages	-	-	-	AAA31703-V1	-	-	-	-	-
Weight increaser		-	-	-	-	AAA30562	AAA30562	AAA30561	AAA30561	-

1) Small size   2) Large size

Laboratory Equipment

Platform Shakers - Accessories & Options (cont'd)

Description	Model	OS-2000	OS-3000	OS-4000	OS-7000	SKC-6000		SKC-7000		CMS-350
Platform Size (mm)		320 x 260	350 x 350	450 x 450	755 x 520	580 x 520	660 x 520	755 x 520	885 x 520	276 x 276
Universal Platform	Cat. No.	AAA3A501-V2	AAA23501-V3	AAA23502-V3	AAA23503-V3	AAA30501	AAA30503	AAA30502 [1] / AAA30541 [2]	AAA30504 [1] / AAA30542 [2]	AAA3B501
Flask clamp for Erlenmeyer flasks (stainless steel) [4]	50ml — AAA23550	20	36	49	88	84	96	108 (216) [3]	126 (252) [3]	16
	100ml — AAA23551	16	28	39	68	54	66	72 (144) [3]	84 (168) [3]	9
	250ml — AAA23552	8	14	24	39	33	39	42 (84) [3]	51 (102) [3]	9
	300ml — AAA23556	8	14	24	39	28	32	36	40	9
	500ml — AAA23553	6	10	16	28	20	24	27	30	5
	1L — AAA23554	3	6	9	18	14	16	18	20	4
	2L — AAA23555	-	4	6	11	8	11	12	13	1
	2.8L — AAA23557	-	3	5	8	6	7	9	11	-
	4L — AAA23558	-	1	4	6	4	6	8	9	-
	6L — AAA23559	-	1	3	5	3	4	6	7	-
Flask clamp for Erlenmeyer flasks (plastic) [4]	50ml — AAA30570	20	36	49	88	56	64	72	80	16 [5]
	100-125ml — AAA30571	12	19	29	48	42	48	54	60	9 [5]
	200ml — AAA30572	8	13	21	35	25	39	30	32	9 [5]
	250ml — AAA30573	8	13	19	35	25	30	30	32	9 [5]
	300ml — AAA30574	6	12	19	35	25	30	30	32	9 [5]
	500ml — AAA30575	6	9	12	24	20	20	24	28	5 [5]
	1L — AAA30576	3	5	9	12	10	12	12	15	4 [5]
	2L — AAA30577	-	4	5	8	6	6	6	9	1 [5]
Funnel clamp [4]	250ml — AAA23562	4	4	6	15	14	16	18	20	3
	500ml — AAA23563	3	3	4	10	9	10	11	14	2
	1L — AAA23564	3	3	3	7	7	8	9	12	2
	2L — AAA23565	-	2	2	5	5	6	7	8	-
Test tube rack [4]	86 x Ø8mm — AAA23581	2	2	4	7	8	9	9	12	2
	86 x Ø10mm — AAA23582	2	2	4	7	8	9	9	12	2
	58 x Ø12mm — AAA23583	2	2	4	7	8	9	9	12	2
	58 x Ø14mm — AAA23584	2	2	4	7	8	9	9	12	2
	32 x Ø17mm — AAA23585	2	2	4	7	8	9	9	12	2
	19 x Ø25mm — AAA23586	2	2	4	7	8	9	9	12	2
	10 x Ø35mm — AAA23594	2	2	4	7	8	9	9	12	2
Microplate holder [4]	Single — AAA23654	6	8	15	25	20	23	25	28	6
	Tower — AAA23651	4	6	10	21	16	19	22	25	6
	Flat A (Large) — AAA23652	-	-	2	4	3	4	4	5	-
	Flat B (Small) — AAA23653	1	2	3	6	4	5	6	7	-

1) Single platform installed in SKC-7000
2) Dual platform installed in SKC-7000, only flasks less than 250ml can be installed on the lower platform. (Height of lower platform is about 175mm.)
3) The numbers in parentheses indicate the maximum number of 250ml flasks that can be installed when Dual Platform is mounted.
4) Maximum quantity that can be mounted on each platform (for test tube racks, it is the maximum quantity when the rack is not to be tilted)
5) In the case of plastic flask clamps, deformation may occur at temperatures over 40°C. Stainless steel flask clamps are recommended when maintaining a high temperature environment.

Spring Wire Rack	OS-2000	OS-3000	OS-4000	OS-7000	SKC-6000		KC-7000		CMS-350
					Small	Large	Small	Large	
Spring Wire Rack (Cat. No.)	AAA3A521	AAA31521-V1	AAA31522-V1	AAA23514	AAA30521	AAA30522	AAA30523	AAA30524	AAA3B511
Quantity of Erlenmeyer flasks — 50ml	15	16	25	45	30	35	45	50	15
100ml	9	9	16	28	20	24	28	32	9
250ml	4	4	9	18	12	15	18	21	4
300ml	4	4	9	18	12	15	18	21	4
500ml	4	4	5	15	9	12	15	18	4
1L	2	2	4	10	6	8	10	12	2
2L	-	1	2	6	4	5	6	7	-
2.8L	-	1	2	4	3	3	4	5	-

LC GreenBox

Description	OS-2000	OS-3000	OS-4000	OS-7000	SKC-6000	KC-7000	CMS-350
LC GreenBox	AAAQ1011	AAAQ1011	AAAQ1011	AAAQ1011	-	-	-

All Environment Shakers

The new Orbi-Shaker™ CO_2 series is designed for shaking, mixing & aeration applications in extreme environments, including CO_2 incubators. It can withstand temperatures from 0 to 65°C and humidity levels up to 100%.

To avoid contamination, unintentional release of gas or deviations from protocol, all settings are adjusted via the included remote control module. This module can be stored outside of the chamber and connects to the shaker via a flat (1mm thick) cable, that easily passes through a port or underneath an incubator door without compromising the seal. This allows for user adjustment of run time or mixing speed without opening the chamber door(s).

The instrument is supplied with a non-slip rubber mat platform. In addition, convenient MAGic Clamp™ platforms (of multiple sizes) are also available for use with Erlenmeyer flasks and test tube racks. The unique magnetic attachment method has been widely recognised as the easiest way to instantly change between flask clamps of different sizes.

- Designed to fit and maximise capacity in most CO_2 incubators and chambers
- Remote controlled, adjust settings without disturbing the CO_2 environment
- Instantly exchange flask clamps with MAGic Clamp™ accessories

Model	BT4001	BT4011
Speed range (rpm)	30 to 300	
Speed increment (rpm)	1	
Motion	Orbital / 19mm	
Max. capacity	1 x 2L or 5 x 1L	5 x 2L or 9 x 1L
Timer	1min to 99hr and continuous	
Platform dimensions (mm)	330 x 300	400 x 425
Operating temp. (°C)	0 to +65	
Dimensions; W x D x H (mm)	300 x 340 x 90	430 x 457.5 x 12.7
Weight (Kg)	11.5	23
Cord length (mm)	1540	

Orbital Shaker

- Horizontally circular 19mm orbit for aeration and mixing
- Extremely compact, perfect for low to medium capacity applications
- Instantly exchange flask clamps with MAGic Clamp™ accessories

Model	BT302	
Speed range (rpm)	Variable, 50 to 300	
Speed increment (rpm)	10	
Motion	Orbital / 19mm	
Max. capacity	4 x 1L	
Timer	1min to 99hr 59min / continuous	
Platform dimensions; (mm)	Standard (included)	240 x 200
	MAGic Clamp™ (optional)	290 x 240
Operating temp. (°C)	+4 to 65	
Dimensions; W x D x H (mm)	333 x 298 x 120	
Weight (Kg)	5.5	

For ordering information on the various MAGic Clamp™ systems available please contact us for details

Spectrophotometers

All units come complete with microprocessor control offering fully automated functions including auto self test. RS232C analogue output and optional software is available. The instruments feature a large sample compartment that will accept 5mm to 100mm pathlength rectangular cuvettes.

These units are ideal for the many tests performed in environmental protection, water, biochemistry, clinical, food, beverage and industrial laboratories. All units have modes for absorbance, %T and concentration measurements. Calibration is performed against a 'blank' (Abs and %T) and a standard or factor for concentration. Wavelength selection is made electronically via a finely geared stepper motor.

High performance scanning

- Single and multi-wavelength operation
- Kinetics, transmittance, concentration and absorbance analysis
- Clear easy to read display
- Advanced optical system ensures very low stray light
- Superior quality optical components ensure accurate and reliable analytical data
- Deuterium and tungsten lamps are used as the light sources

Model	MD-1105	MD-2100	MD-2000UV	MD-2100UV
Range	Visible		UV/Visible	
Optical performance	Single beam			
Spectral bandwidth (nm)	6	4	5	4
Wavelength range (nm)	340-1000	320-1000	200-1000	190-1000
Accuracy (nm)	±2	±1	±2	±1
Repeatability (nm)	≤1	≤0.5	≤1	≤0.5
Modes	Transmittance, absorbance, concentration			
Display	3.5" LCD	2 line, 20 character LCD		
Sample compartment; L x W (mm)	100 x 50			
Dimensions; W x D x H (mm)	415 x 315 x 155		475 x 420 x 180	
Weight (Kg)	7	10	11	12

Libra S21 Visible and Libra S22 UV/Visible

Libra S21 and S22 are simple-to-use instruments with advanced performance, incorporating xenon lamp technology for longer source lifetime and lower maintenance costs. A further benefit of this design is optical noise compensation to improve signal to background measurements. Instrument Performance Validation (IPV) is included as standard, and will benefit any laboratory that needs to prove the quality of their results; the GLP results can be viewed on the display or printed out.

In addition to measuring absorbance, transmittance and concentration, they provide a standard curve routine for analyte determination. Wavelength scan (with zoom), absorbance changes with time, reaction rate determinations and standard curves can be displayed as graphics and printed out. User defined equations can be entered using multi-wavelength mode and up to 18 methods can be saved in separate operator folders. The instrument can be upgraded for more sophisticated applications, as well as data manipulation, with Acquire Software and a PC.

With its large sample compartment and wide range of accessories, Libra S21 and S22 are versatile and reliable instruments for use in any laboratory performing general-purpose measurements.

- Press To Read (PTR) xenon lamp technology
- Reference Beam Compensation (RBC)
- Instrument Performance Validation (IPV) facility
- 8-position sample changer as standard
- Rapid System Operation (RSO)

Model	Product Code	Lamps	Optics	Wavelength range (nm)	Absorbance range (A)	Bandwidth (nm)
Libra S21	80-2115-25	Xenon Press to Read (PTR)	Reference Beam Compensation (RBC)	325 - 1100	-3.000 to +3.000	<3
Libra S22	80-2115-20	Xenon Press to Read (PTR)	Reference Beam Compensation (RBC)	190 - 1100	-3.000 to +3.000	<3

Magnetic Stirrers & Hotplates

Analogue Models

The Medline MS series of hotplates, stirrers and hotplate stirrers offer a large heating area of 180 x 180mm with safe controlled heating up to 400°C.

Product code	MS-100	MS-200	MS-300
Description	Hotplate	Stirrer	Hotplate stirrer
Case construction	Ceramic coated steel (chemically resistant)		
Plate area (mm)	180 x 180		
Temperature range (°C)	Amb. to 400	–	Amb. to 400
Speed range (rpm)	–	100 to 1500	
Retort rod (Ø12.5mm)	400mm / 760mm (optional)		
Dimensions; W x D x H (mm)	410 x 210 x 150		
Weight (Kg)	4	5	

Hotplates

Superior temperature control with various safety functions and a ceramic coated aluminium top plate.

Performance & Convenience
- Microprocessor PID temperature control
- Auto-tuning and temperature calibration functions
- Multi-functional temperature control modes
- Integrated design of the heater and the top plate provides exceptional heat transfer rate and quick heat up capability
- Precise temperature is set by digital LED display
- Advanced dual wait on/off timer modes
- Separate operation RUN/STOP button

Safety
- Built-in thermal shut off and current limit protection
- High and low temperature limiter
- Hot top warning indicator
- Keypad lock function
- Transparent safety shield (optional)

Model		T-14SG	T-14R	T-17SG	T-17R	T-18QG
Product code		AAH35045K	AAH35115K	AAH35075K	AAH35125K	AAH35085K
Heating	Temperature range (°C)	350				
Safety	Hot top indicator (°C)	Warning lamp @ +50 and above				
Timer		1min to 99hr 59min				
Max load (Kg)		25				
Top plate	Shape	Round	Round	Round	Round	Square
	Dimensions; Ø or W x D x H (mm)	140	161	170		180 x 180
Dimensions; W x D x H (mm)		161 x 290 x 100	161 x 290 x 100	191 x 330 x 101	191 x 330 x 101	209 x 326 x 102
Weight (Kg)		2.2	2.4	2.9	2.9	3.8

Laboratory Equipment

Magnetic Hotplate Stirrers - Basic

Easy to control with simple dial knobs for general laboratory heating and stirring applications.

Performance & Convenience

- Microprocessor PID temperature control
- Ceramic coated aluminium top plate
- Feedback control allows constant stirring speed
- Automatic tuning and temperature calibration with multi-function temperature controls
- Integrated design of the heater and the top plate provides exceptional heat transfer rate and quick heat up capability

- Precise stirring and heating control for reproducible results, even with viscous liquids
- Advanced dual wait on/off timer modes
- Included temperature probe measures the actual temperature of media in real time

Safety

- Hot top warning indicator, built in thermal shut off, current limit protection
- High and low temperature limit setting

Model		TS-14SG	TS-17SG	TS-18QG
Product code		AAH34445K	AAH34475K	AAH34485K
Heating	Temperature range (°C)	Amb. to 350		
	Control	PID Feedback (optimal, fast, slow)		
Stirring	Speed range (rpm)	30 to 2000		
	Capacity, H_2O (L)	20		
	Magnetic bar, max. (ØxL, mm)	8 x 40		
Max. load (Kg)		25		
Top plate	Shape	Round		Square
	Dimensions; Ø or W x D (mm)	140	170	180 x 180
Dimensions; W x D x H (mm)		161 x 290 x 100	191 x 330 x 101	209 x 326 x 102
Weight (Kg)		2.8	3.5	3.8

Hotplate Stirrers - Multi Position

Performance & Convenience

- Ideal for multiple sample testing under the same conditions
- User-friendly operation and time setting modes single point, multiple point, whole row, whole column, etc.
- Fast and precise stirring operations are enabled by BLDC motorand strong magnetic coupling
- Smooth-start mechanism provides virtually no decoupling of stir bars even with viscous media

- Instant halt of the stirring operation
- Easy-to-read VFD and intuitive control panel

Safety

- Unit is designed to protect internal components from accidental spills
- Non-slip silicone plate mat is attached to the top plate to prevent unintended slips
- Built in thermal shut off and current limit protection

Model		MS-33MH	MS-53MH
Product code		AAHK34015K	AAHK34025K
Heating	Temperature range (°C)	Amb. to 120	
	Control	Scale	
	Heating power (W)	600	1000
Stirring	Speed range (rpm)	30 to 2000	
	Stirring positions	9	15
	Stirring point distance; W x D (mm)	117 x 90	
	Timer	1min to 99hr 59min	
	Magnetic bar, max. (ØxL, mm)	8 x 30	
Max. load (Kg)		30	
Top plate	Dimensions; W x D (mm)	385 x 328	385 x 493
Body	Dimensions; W x D x H (mm)	395 x 450 x 104	395 x 614 x 104
Weight (Kg)		10	15

Mini-Stirrers

The low-profile and smooth design of the Medline Ultra-Flat Magnetic Stirrer allows it to be used in compact spaces such as fume hoods or cabinets. It is ideal in teaching laboratories as it can be stacked in cupboards when not in use to save space. The top-plate is virtually indestructible, waterproof and very easy to clean. The Ultra-Flat Magnetic Stirrer can be used in cold rooms and incubators (non CO_2).

Model	Ultra-Flat Magnetic Stirrer
Product code	FE102001D
Working plate material	Tempered glass
Speed range (rpm)	150 to 1500
Mixing action	Selectable auto-reverse
Speed display	None
Max. stirring volume, H_2O (ml)	1000
Max. stir bar length (mm)	25
Stirring surface (mm)	Ø100
Input power	6W
Dimensions; W x D x H (mm)	117 x 12 x 180
Weight (Kg)	0.3
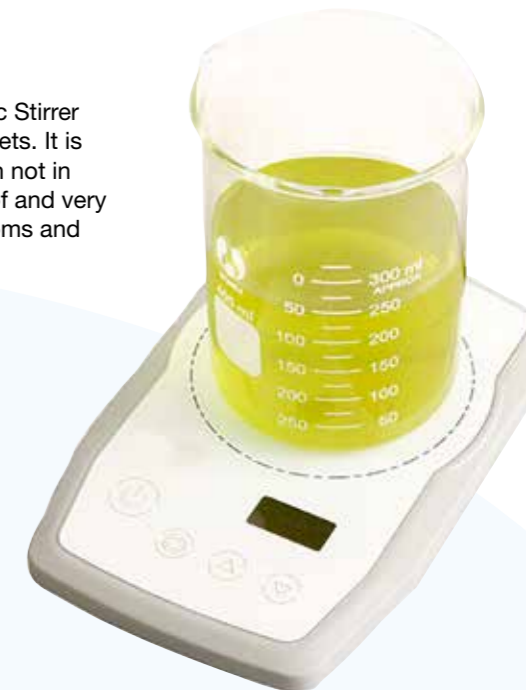
Magnetic Stirrers - Analogue

Performance & Convenience

- Ergonomic design, lightweight, easy to operate and low profile
- Spark-less, silent and durable BLDC motor
- Wide stirring plate
- Two non-slip silicone plate covers (white & black)
- Non-slip rubber feet
- Strong magnetic coupling to ensure constant stirring

Safety

- Designed to protect internal components from accidental spills
- Built-in thermal shut down and current limit protection
- Protection class IP42 (DIN EN 60529)

Model	MS-12B	MS-17B	MS-22B
Product code	AAH330115BK	AAH330215BK	AAH330315BK
Speed control	Electronic		
Max. stirring capacity, H_2O (L)	2	4	5
Speed range (rpm)	150 to 2500		
Speed display	None		
Magnetic bar, max. (ØxL) (mm)	8 × 30	8 × 40	10 × 50
Load, max. (Kg)	15	20	25
Top plate (Ø, mm)	120	170	220
Body shape	Round		
Dimensions; W x D x H (mm)	130 × 133 × 65	180 × 186 × 65	230 × 235 × 65
Weight (Kg)	0.6	0.9	1.1

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Heating blocks for round flask and vials

A safe solution for replacing oil baths and heating mantles when heating contents above 100°C

Round Flask Heating Block				Vial Heating Block			
Plate		Insert		Plate		Insert	
Model	Volume	Model	Volume	Model	Volume	Model	Volume
RBP-100	100ml	RBI-25	25ml	VBP	190 x 190 x 20 mm (max. four mounted)	VBI-1D	4 ml (1 dram) (Ø15 x 17mm), 16 holes
RBP-50	50ml	RBI-50	50ml			VBI-2D	8 ml (2 dram) (Ø 17 x 23mm), 16 holes
RBP-500	500ml	RBI-100	100ml			VBI-4D	15 ml (4 dram) (Ø21 x 30mm), 16 holes
		RBI-250	250ml			VBI-20S	20ml (Ø28 x 22mm), 4 holes
RBP-1000	1000ml	RBI-500	500ml			VBI-30S	30ml (Ø28 x 32mm), 4 holes
RBP-2000	2000ml	RBI-1000	1000ml			VBI-40S	40ml (Ø28 x 42mm), 4 holes

Accessories

Temperature Probe, B Class
With external temperature sensor, it is possible to check and control the temperature of the sample when it's connected to the equipment. (TS model)

3 Prong Clamps / Clamp Holders & Rods
Various types of instruments can be fixed. Allowing for various types of instruments / accessories to be attached to the unit in conjunction with specimen holders.

Heating Bath
Top plate combines concave and convex structure, resulting in no slippage.

Transparent Shield
Safely observe experiments.

Magnetic Bars & Retrievers
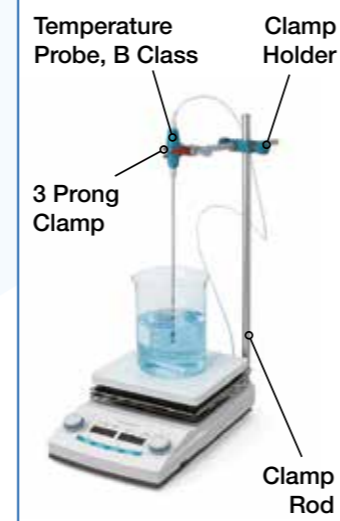
Cat. No.	Description
AAA34501	Temperature probe, B Class (max. 250)
AAA34502	Temperature probe, A Class (max. 400)
HPS0012	Heating bath (TS-14SG, TM-14SG, T-14SG)
HPS0015	Heating bath (TS-17SG, TM-17SG, T-17SG)
MTT0132	Clamp rod (Ø12, 400mm)
BEA1000011	3 Prong clamp (80mm grip)
BEA1000012	3 Prong clamp (60mm grip)
BEA1000013	3 Prong clamp (20mm grip)
AAA37511	Clamp holder (max. Ø27, C-20)
AAA37512	Clamp holder (max. Ø17, C-10)
AAA37513	Clamp holder (max. Ø12, C-7)
AAA37514	Clamp holder (max. Ø12, C-5)
HPS0059	Transparent shield (TS-14SG, TM-14SG, T-14SG)
HPS0039	Transparent shield (TS-17SG, TM-17SG, T-17SG)
19400	12 Piece Octagonal Stirrer Set
BCW4150	Ø10mm x 150mm PTFE, Alnico V Magnetic stirrer bar retriever
BCW4250	Ø10mm x 250mm PTFE, Alnico V Magnetic stirrer bar retriever
BCW4350	Ø10mm x 350mm PTFE, Alnico V Magnetic stirrer bar retriever
BCW4450	Ø10mm x 450mm PTFE, Alnico V Magnetic stirrer bar retriever

Temperature Probe, B Class — Clamp Holder — 3 Prong Clamp — Clamp Rod

Magnetic Stirrers - Digital

Performance & Convenience
- Ergonomic design, lightweight, easy to operate and low profile
- Spark-less, silent and durable BLDC motor
- Wide top plate
- Two non-slip silicone plate covers (white & black)
- Non-slip rubber feet
- Strong magnetic coupling to ensure constant stirring
- Digital PID feedback control for reproducible stirring results
- Convenient program control
- Gradual start-up to protect users against splashing of samples
- Bright and vivid VFD and responsive touch buttons
- Easy-settable digital timer (1min to 99hr 59min)
- M10 threaded hole to hold a support rod
- Standard colour - blue

Safety
- Designed to protect internal components from accidental spills
- Built-in thermal shut down and current limit protection
- Protection class IP42 (DIN EN 60529)

Model	MS-17G	MS-22G
Product code	AAH331215BK	AAH331315BK
Speed control	Feedback control with PID	
Max. stirring capacity, H_2O (L)	4	5
Speed range (rpm)	30 to 2000	
Speed display	VFD	
Magnetic bar, max. (Ø×L) (mm)	8 × 40	10 × 50
Max. load (Kg)	20	25
Top plate (Ø, mm)	170	220
Dimensions; W x D x H (mm)	210 × 280 × 72	260 × 355 × 72
Weight (Kg)	1.35	1.75

Magnetic Stirrers - Multi Position

Performance & Convenience
- Ergonomic design, lightweight, easy to operate and low profile
- Spark-free, silent and durable BLDC motor
- Two non-slip silicone plate covers (white & black)
- Non-slip rubber feet
- Strong magnetic coupling to ensure constant stirring
- Digital PID feedback control for every single point, separately
- User-friendly operation and time setting modes single point, multiple point, whole row, whole column, etc.
- Easy-to-read VFD and intuitive control panel
- Non-slip see-through silicone plate mat (optional)
- Chemically resistant grade stainless steel top plate

Safety
- Designed to protect internal components from accidental spills
- Built-in thermal shut down and current limit protection
- Protection class IP21 (DIN EN 60529)

Model		MS-23M	MS-32M	MS-33M	MS-51M	MS-52M	MS-53M
Product code		AAH332115K	AAH332215K	AAH332315K	AAH332415K	AAH332515K	AAH332615K
Speed control		Feedback control with PID					
Stirring	Positions	6	9		5	10	15
	Speed range (rpm)	30 to 2000					
Stirring point distance; W x D (mm)		117 × 170	117 × 90		90	117 × 90	
Timer		1min to 99hr 59min					
Speed display		VFD					
Max. load (Kg)		30					
Dimensions; W x D x H (mm)		377 × 434 × 81	254 × 434 × 81	377 × 434 × 81	130 × 591 × 75	251 × 591 × 75	378 × 591 × 75
Weight (Kg)		6	5	7	4	8	11

Laboratory Equipment

Overhead Stirrers - Analogue / Digital

Performance & Convenience

- Equipped with a maintenance-free BLDC motor to generate smooth, quiet and powerful stirring
- Powerful torque capable of handling high viscosity tasks
- Powerful torque capable of handling high viscosity tasks, maintenance of constant motor speed by PID feedback control system even under conditions of changing viscosity and intelligent speed control if speed set is out of range (MSD-0420 only)Illuminated digital display panel with sensitive touch buttons
  - Set/present rpm, power ratio (%) and run time are visible together on one screen
- Stirring directions are selectable depending on each impeller's shape (MSD-0420 only)
- Built-in USB port for external PC control and data collection (MSD-0420 only)
  - Software and USB cable are provided as standard

Safety

- Sturdy aluminium main body efficiently absorbs and dissipates the heat generated by the motor
- Safety features against overload and overheating for continuous operation
- Keypad lock function prevents accidental changes (digital)
- Protection class IP30 (MSD-0420 only)

Model	MSA-0420
Product code	AAH373325K
Speed control / type	PID feedback control / analogue
Speed range (rpm)	80 to 2000
Chuck range (Ø, mm)	3 to 10
Max. stirring capacity, H_2O (L)	20
Stirring direction	Clockwise
Max. viscosity (cP)	5000 (~2000rpm) / 10,000 (~1200rpm) / 30,000 (~300rpm) / 50,000 (~200rpm)
Max. torque (N·cm)	19
Motor rating input / output (W)	70 / 40
Construction — Body / Cover / Motor	Powder coated aluminium / Polypropylene / BLDC
Dimensions; W x D x H (mm)	75 x 215 x 150
Weight (Kg)	2.8

Model	MSD-0420
Product code	AAH373225K
Speed control / type	PID feedback control / digital
Speed range (rpm)	80 to 2000
Chuck range (Ø, mm)	3 to 10
Stirring capacity, max. H_2O (L)	20
Stirring direction	Clockwise / Counter-clockwise
Max. viscosity (cP)	5000 (~2000rpm) / 10,000 (~1200rpm) / 30,000 (~300rpm) / 50,000 (~200rpm)
Max. torque (Nm)	0.19
Motor rating input / output (W)	70 / 40
Construction — Body / Cover / Motor	Powder coated aluminium / Polypropylene / BLDC
Dimensions; W x D x H (mm)	75 x 215 x 150
Weight (Kg)	2.8

Overhead Stirrers - Advanced

Ideal for performing professional stirring tasks requiring high functionality, safety and longevity.

Touch screen LCD controller and external controller (optional) add to its flexibility.

Performance

- Years of vibration-free and silent operation
  - Equipped with a maintenance-free BLDC motor to generate smooth, quiet and powerful stirring
- Powerful torque capable of handling high viscosity tasks, maintenance of constant motor speed by PID feedback control system even under conditions of changing viscosity and intelligent speed control if speed set is out of range

Convenience

- Touch screen LCD controller
  - Essential information is displayed and intuitively controlled
  - Set/present rpm and run time view, motor temperature, timer (99hr 59min)
  - Varying motor torque is indicated on display in real time
  - Stirring directions are selectable depending on each impeller's shape
- Built-in USB port for external PC control and data collection
  - Software and USB cable are provided as standard
- Practical external controller
  - Allows remote control (e.g. for stirring in a fume hood)

Safety

- Sturdy aluminium main body efficiently absorbs and dissipates the heat generated by the motor
- Safety features against overloading and overheating for continuous operation
- Separated adapter from the main body minimises the risks of electrical hazards to the users
- Screen/keypad lock function prevents accidental changes during operation
- Protection class IP30 (DIN EN 60529)

Model	MSH-0512	MSH-0520
Product code	AAH371415K	AAH371515K
Speed control / type	PID feedback control / digital	
Speed range (rpm)	50 to 1200	50 to 2000
Chuck range (Ø, mm)	3 to 10	
Max. stirring capacity, H_2O (L)	100	60
Stirring direction	Clockwise / Counter-clockwise	
Max. viscosity (cP)	5000 (~1200rpm) 10,000 (~1200rpm) 30,000 (~1200rpm) 50,000 (~700rpm)	5000 (~2000rpm) 10,000 (~1600rpm) 30,000 (~600rpm) 50,000 (~300rpm)
Max. torque (Nm)	0.46	0.21
Motor rating input / output (W)	71	
Construction — Body / Cover / Motor	Powder coated aluminium / polypropylene / BLDC	
Dimensions; W x D x H (mm)	80 x 185 x 235	
Weight (Kg)	3.1	

Overhead Stirrers - Accessories & Options

Stands / support rods

Stainless steel impellers

External controller

PTFE impellers

Stands / Support rods

Product code	Description
AAA37501	Dial stand (W x D x H, 400 × 400 × 700mm)
AAA37502	Basic stand 1 (W x D x H, 400 × 400 × 700mm)
AAA37503	Basic stand 2 (W x D x H, 300 × 400 × 700mm)
AAA37504	Basic stand 3 (W x D x H, 250 × 350 × 700mm)
MSS0051	Support rod, M14 (Ø15 x 500mm)
MSS0052	Support rod, M14 (Ø18 x 500mm)
MSS0053	Support rod, M14 (Ø20 x 500mm)

External controller for MSH series

Product code	Description
AAA37591	External controller (3m cable) (W x D x H, 60 x 16 x 120mm)

Impellers

Propeller impellers

Standard grade stainless steel with Teflon shaft produces an axial flow stir between the bottom and top levels of a sample with local shearing force. Used at medium or high speeds for mixing normal range level viscosity samples.

Turbine impellers

A radial flowing stir from the top and bottom levels of a sample with a powerful, high shearing turbulent force. Used ideally for the gassing of liquids and mixing medium to high range level viscosity samples.

Half-moon impellers / Centrifugal impellers

Tiltable moon-shaped and blade shaft produces a normal axial flow percentage mixing of samples. Used with round bottom shaped containers, medium mixing speed, and samples ranging from low to medium visco-sity levels.

Anchor impellers / Paddle impellers

An anchored shaft that produces a strong tangential flow with a high shearing percentage force on samples with medium to high viscosity level with speed setting in the low to medium range.

Stainless steel impellers

Product code	Blade (Ø, mm)	Shaft (Ø, mm)	Length (mm)
3-bladed propeller			
AAA37521	50		
AAA37522	70	8	400
AAA37523	100		
4-bladed propeller			
AAA37531	50		
AAA37532	70	8	400
AAA37533	100		
Turbine			
AAA37561	40	8	500
AAA37562	70		
Dissolver			
BEA0570031	55	8	350
BEA0570032	75		

Product code	Blade (W x H, mm)	Shaft (Ø, mm)	Length (mm)
Half-moon			
AAA37541	65 x 20	8	300
AAA37542	90 x 25		500
Centrifugal			
AAA37551	50 x 15	8	500
AAA37552	80 x 15		
Anchor			
AAA37571	45 x 45	8	300
AAA37572	60 x 60		500
Paddle A			
AAA37581	70 x 70	8	500

PTFE coated impellers

Product code	Blade (Ø, mm)	Shaft (Ø, mm)	Length (mm)
4-bladed propeller			
BEA0570081	50	8	500
BEA0570082	70		
Turbine			
BEA0570131	70	8	500

Product code	Blade (W x H, mm)	Shaft (Ø, mm)	Length (mm)
Half-moon			
BEA0570091	60 x 18	8	500
Centrifugal			
BEA0570101	76 x 17	8	500
Anchor			
BEA0570111	80 x 50	8	500
BEA0570121	80 x 40		500
Paddle			
BEA0570141	70	8	500
Paddle A			
BEA0570151	78 x 80	8	500

Vortex Mixers

Mini

The small but effective Mini Vortex Mixer is a robust unit, specially designed for mixing tubes. Its compact design makes it easy to store and use the mixer in small spaces (e.g. fume hoods). Ideal for personal use and for use in teaching laboratories. It can be used in cold rooms and warm rooms.
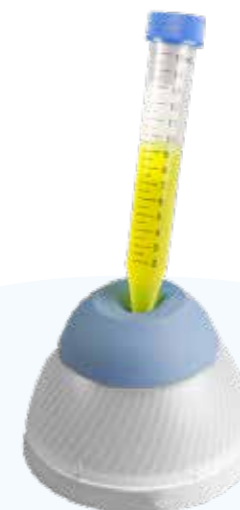
Product code	FE101001
Shaking motion	Orbital
Orbital diameter (mm)	5.5
Speed range (rpm)	3000 (fixed)
Operating mode	Tube pressure
Dimensions; Ø x H (mm)	100 x 78
Weight (Kg)	0.55

VX-3000MD

Ideally sized for personal use, the Medline VX-3000MD vortex mixer is compact, with a low profile and small footprint, to sit in almost any location, yet there is no compromise on performance. The strong, reliable and silent motor produces regulated and reproducible agitation throughout the speed range utilising either touch activation or continuous modes. LED display for optimum control and reading of time and speed. Rubber feet on the base minimise any vibration and movement.

Product code	VX-3000MD
Shaking motion	Orbital
Orbital diameter (mm)	6
Speed range (rpm)	0 to 3000
Operating mode	Touch, continuous
Dimensions; W x D x H (mm)	107 x 146 x 166
Weight (Kg)	3

A range of accessories & options are also available - please contact us for details

VM-Series

Low profile design and highly touch sensitive sensor reduce wrist stresses.

Features

- Well-balanced design and optimised safety features
- Low-profile with small footprint ideal for use on lab benches and within fume hoods or clean benches
- Unique "any-point" top plate enables one touch operation, real-time and dynamic mixing modes even with gentle pressure
- Selective mixing modes with variable speed control knob
- Built-in LED lamps (VM96A only) for easy recognition of the mixing mode selected
- Spark free BLDC motor adopted for safety, quick acceleration, and low maintenance
- Built-in safety features against overload and over current
- Chemically resistant polypropylene moulded exterior

Model	VM-96A	VM-96T
Product code	AAH360215K	AAH361215BK
Shaking motion	Orbital	
Orbit diameter (mm)	4	
Speed range (rpm)	0 to 3000	
Operating mode	Touch / continuous / high-continuous	Touch / continuous
Max. load (Kg)	0.5	
Dimensions; W x D x H (mm)	154 × 210 × 84	148 x 159 x 77
Weight (Kg)	3	2.6

Microscopes

Upright Microscopes

Laboratory Microscopes

Stereo Microscopes

Inverted Microscopes

Industrial Microscopes

Image Capture & Analysis Solutions

The Ceti microscope range offers an extensive choice of affordable microscopes to suit all budgets. From basic educational needs to the more specialised requirements of the research and clinical scientist, we have the perfect solution.

Our range includes monocular, binocular or trinocular configurations to suit most typical applications and requirements. These use brightfield, phase contrast, darkfield, polarisation, DIC or fluorescent light techniques and are supplied with optics ranging from achromatic to infinity corrected planachromatic objectives, depending on the model.

All Ceti microscopes are manufactured to the highest specification demanded by the relevant application.

Each microscope has its own unique product code, with 10x eyepieces, objectives, a dust cover and power lead as standard and an extensive range of accessories available to complement each model. This ensures that the ordering process is simplified and a complete working unit is delivered, easily unpacked and rapidly set up for operation upon arrival. The units are shipped in robust Styrofoam packaging in a sturdy cardboard outer case.

All the units are supplied with DIN* (*Deutsche Industrie Normen – an internationally recognised industry standard for microscope objectives) antifungal optics. They are manufactured to ISO 9002 standards and are fully CE compliant.

Upright Microscopes

Focus II

A modern school and college student microscope with a built-in carrying handle.

Product code	1100.4000M	1100.4400M	1100.4440M
Optical head	Monocular, inclined at 45°		
Nosepiece	Triple		Quadruple
Eyepiece	10x / 18mm widefield with pointer		
Objectives		4x, 10x, 40x Achromatic	4x, 10x, 40x, 100x (oil) Achromatic
Condenser	Brightfield Abbe – NA 1.25		
Stage	120 x 120mm with built-in mechanical stage and slide holder		
Focusing	Coaxial coarse and fine		
Illumination	20W halogen	2W LED	20W halogen

Akropol

The Akropol is designed to introduce polarisation techniques, whilst allowing for the measurement of the degree of rotation that the sample induces.

Product code	1111.2441	1111.2442	1111.2443	1111.2444	1111.2445
Optical head	Monocular, inclined at 30°		Binocular, inclined at 30°		Trinocular, inclined at 30°
Eyepieces	10x / 16mm widefield				
Objectives	4x, 10x, 40x, 60x Achromatic	4x, 10x, 40x, 100x Achromatic		4x, 10x, 40x, 60x Achromatic	4x, 10x, 40x, 100x Achromatic
Condenser	Brightfield Abbe – NA 1.25				
Stage	Round, centrable and rotating stage 360°				
Focusing	Coaxial coarse and fine				
Illumination	20W halogen				

Ceti Max III

The Max III series microscopes are Ceti's best value-for-money upright biological microscopes and bridge the gap between low cost student models and the more expensive research microscopes. They are ideal for teaching in colleges and universities, although they do not have to be used exclusively in teaching laboratories! However, the newly designed cord storage facility and carrying handle make the Max III absolutely perfect for use in these labs.

They are very popular in industry, veterinary laboratories and effluent treatment plants as well as education, giving outstanding image quality. The Max III is supplied with high clarity, infinity corrected plan achromatic objectives.

Selection of the best model for your requirements is easy as there are just three models to choose from, all featuring a powerful 3W LED illumination system (although they all are alternatively available with halogen illumination) and Infinity Corrected Plan Achromatic objectives (except Max III - Mono which features achromatic objectives). A mirror attachment is available for ultimate portability where power is not available.

Features:
- Widefield 10X, FN18 eyepieces with dioptre adjustment on binocular models
- Quadruple, reversed nosepiece with Infinity Corrected Plan Achromatic objectives*
- Mechanical stage, coaxial coarse/fine focus, Abbe condenser
- White LED illumination with intensity control (halogen available as option)
- Range of accessories including eyepiece camera adapters, cameras and storage case

* Achromatic on Max III-Mono

Model	Max III-Mono	Max III-Bino	Max III-Trino
Product code	1203.1003	1203.2006	1203.3006
Optical head	Monocular, inclined at 45°	Binocular, inclined at 45°	Trinocular with photo port, inclined at 30°
	Interpupillary distance adjustment (Siedentopf type): 47 to 78mm		
	-	Dioptre adjustment on one eyepiece	
Eyepieces	10x / 18mm widefield	10x / 18mm widefield (pointer in one eyepiece)	
Nosepiece	Quadruple reversed, revolving with click stop		
Objectives	4x, 10x, 40x Achromatic	4x, 10x, 40x, 100x (oil) Infinity Corrected Plan Achromatic	
Condenser	Brightfield Abbe NA 1.25 – precentred, focusable		
	Iris diaphragm and filter holder		
Stage	160 x 140mm with built-in mechanical stage and slide holder		
	75 x 50mm movement, Vernier scale		
Focusing knobs	Coaxial coarse and fine with stop		
Mains power	220 – 240V/50 – 60Hz		
Illumination	3W LED (halogen also available)		
Supplied with	Immersion oil (5ml), blue filter, dust cover, power cord with unique 'self-store' system and instruction manual		

Digi Max

A dedicated digital-camera microscope using a digital USB camera and advanced software to allow for image capture and analysis.

Model	1203.8000M	1202.9000M
Product code	1203.8000M	1202.9000M
Optical head	Trinocular, inclined at 30°	Binocular, inclined at 30°
Eyepieces	10x / 18mm widefield	
Objectives	4x, 10x, 40x, 100x (oil) Achromatic	
Condenser	Brightfield Abbe – NA 1.25 - pre-centred	
Stage	160 x 140mm with built-in mechanical stage and slide holder	
Focusing	Coaxial coarse and fine	
Illumination	3W LED	
Camera	6.3Mpx digital USB camera	Integral 3Mpx with 8" LCD screen

Ceti Magnum Upright Microscopes

The Magnum series of microscopes are Ceti's most popular, biological upright microscopes providing excellent quality images via the widefield FN20mm eyepieces.

Featuring a robust, T-shaped base, designed to offer maximum stability. Modern, ergonomic features, such as a 30° inclined eyepiece tube, ensure a comfortable viewing position.

Three brightfield models are available, one of which is rechargeable for use in the field or in areas liable to power interruptions. There are also three additional models set up for different contrasting techniques.

Features:
- Sturdy base for comfortable viewing over long periods
- Widefield 10X, FN20 eyepieces with dioptre adjustment
- Quintuple, reversed nosepiece with four Infinity Corrected Plan Achromatic objectives
- Wide range of accessories
- Bright, white LED illumination with intensity control
- Full Köhler illumination

Note that alternative models are available with halogen illumination and binocular eyepiece tubes if required.

Model	Magnum-B	Magnum-T	Magnum-TR
Product code	2629.0000M	2729.0000M	2721.7000M
Optical head	Binocular, inclined at 30°	Trinocular with photo port, inclined at 30°	
	Interpupillary distance adjustment (Siedentopf type): 55 to 75mm		
	Dioptre adjustment on one eyepiece		
Eyepieces	10x / 20mm widefield		
Objectives	4x, 10x, 40x, 100x (oil) Infinity Corrected Plan Achromatic		
Condenser	Pre-condenser with field diaphragm		
	Brightfield Abbe - NA 1.25 with iris diaphragm		
Stage	210 x 140mm with built-in mechanical stage and slide holder		
	90 x 60mm movement, Vernier scale		
Focusing knobs	Coaxial coarse and fine with stop		
	Tension adjustment ring		
Mains power	220 – 240V/50 – 60Hz		
Illumination	3W LED		Rechargeable 3W LED

Model	Magnum-POL	Magnum-PH	Magnum-FL
Product code	2753.0000M	2738.0000M	2777.0000M
Optical head	Trinocular with photo port, inclined at 30°		
	Interpupillary distance adjustment (Siedentopf type): 55 to 75mm		
	Dioptre adjustment on one eyepiece		
	Analyser	-	
Fluorescent filters	-	-	Blue / Green / Ultraviolet / Violet excitation
Eyepieces	10x / 20mm widefield		
Objectives	4x, 10x, 40x, 60x Infinity Corrected Plan Achromatic	10x, 20x, 40x, 100x (oil) Phase Contrast Infinity Corrected Plan Achromatic	4x, 10x, 40x, 100x (oil) Infinity Corrected Plan Achromatic
Condenser	Pre-condenser with field diaphragm and polariser	Pre-condenser with field diaphragm	
	-	Phase contrast turret – NA 1.25	Brightfield Abbe – NA 1.25
	Focusable and centrable, iris diaphragm		
Stage	Round, centerable with scale and two stage clips	210 x 140mm with built-in mechanical stage and slide holder	
Focusing knobs	Coaxial coarse and fine with stop tension adjustment ring		
Mains power	220 – 240V/50 – 60Hz		
Illumination, transmitted	3W LED		
Illumination, reflected	-		3.6W LED

Ceti Triton II Compound Microscopes

The Triton II series represents the pinnacle of compound microscopy in the CETI range and is ideal for clinical applications with its variety of lighting options. The Triton II series of microscopes are Ceti's most advanced, biological upright microscopes providing excellent quality images via the widefield FN22mm eyepieces.

Featuring a robust, T-shaped base, designed to offer maximum stability. Modern, ergonomic features, such as a 30° inclined eyepiece tube, or 0-45° adjustable eyepiece tube suitable for prolonged periods of use.

Features:

- Sturdy base for comfortable viewing over long periods
- Widefield 10X, FN22 eyepieces with dioptre adjustment
- Sextuple, reversed nosepiece with four Infinity Corrected Plan Achromatic objectives
- Wide range of accessories
- Bright, white LED illumination with intensity control
- Full Köhler illumination

Note that alternative models are available with halogen illumination and binocular eyepiece tubes if required.

Triton II

Product code	3100.5000M	3100.5050M	3100.5150M
Optical head	Trinocular, fixed at 30°	Trinocular, adjustable 0-45°	
Eyepieces	10x / 22mm widefield		
Objectives	4x, 10x, 40x, 100x (oil) E-plan Planachromatic Infinity Corrected		
Condenser	Swing-out condensing lens – Brightfield NA 1.25		
Stage	Size 185 x 142mm with built-in mechanical stage and slide clip		
Focusing	Coaxial coarse and fine		
Illumination	5W LED		100W halogen

Triton II Fluorescence

A dedicated fluorescence module enables identification of both brightfield and fluorescence applications. The camera port is now mounted on the left hand side to accommodate the HBO or LED refelected light source.

Product code	3100.7000M	3100.8000M
Optical head	Trinocular, variable 0-45°	
Eyepieces	10x / 22mm widefield	
Objectives	20x, 40x, 100x (oil) E-plan Planachromatic Infinity Corrected	
Condenser	Swing-out condensing lens – Brightfield NA 1.25	
Stage	Size 185 x 142mm with built-in mechanical stage and slide clip	
Focusing	Coaxial coarse and fine	
Illumination — Transmitted	100W halogen	
Illumination — Reflected	100W halogen	5W LED
Fluorescent filters	Blue and green excitation	

Triton II Multi-Observation

The master head is ergonomic and includes a laser pointer, allowing for the selection of designated samples for viewing within the teaching heads.

Product code	3100.9050M	3100.9100M	3100.9200M	3100.9500M
Optical head	Trinocular Ergonomic 0-45°			
Additional number of optical heads*	1	2	3	4
Eyepieces	10x / 22mm widefield			
Objectives	4x, 10x, 40x, 100x (oil) E-plan Planachromatic Infinity Corrected			
Condenser	Swing-out condensing lens – Brightfield NA 1.25			
Stage	Size 185 x 142mm with built-in mechanical stage and slide clip			
Focusing	Coaxial coarse and fine			
Illumination	100W halogen			

* Fixed at 30°

Ceti Vulcan

After years of research and development the Vulcan motorised biological microscope is designed to allow users to enjoy safe, comfortable and superb quality observations of their specimens.

The intensity of illumination for each objective can be adjusted and the intelligent AIS (Automatic Illumination System) automatically recalls that intensity with the relevant objective. This averts the possibility of uncomfortable over-bright illumination. With the handy ECO function the transmitted light turns off automatically after 30 minutes of non-use. This not only saves energy, but also prolongs the life of the long-life LED even further.

The motorised nosepiece adds to the ergonomics of the microscope as objectives can be selected via buttons on the front of the stand, removing the necessity to manually rotate the nosepiece - with the Remote Control Pad objectives can be switched by simply pressing the buttons. Users can also self-define two of the most commonly used objectives and swap between these two objectives by pressing the green button.

The motorised swing-out condenser automatically swings the top lens element in or out according to the objective lens that is selected via the intelligent linking system.

The optional epi-fluorescence system features high quality filter blocks and filter lenses. 6 filter blocks can be fitted into the epi-fluorescence attachment, allowing the operator to view different fluorophores without the necessity to change filter blocks.

Features:

- Mechanical stage with low X/Y controls and Gorilla Glass insert for smooth operation
- Super widefield 10X, FN22 eyepieces for maximum field of view
- Quintuple, reversed nosepiece with five Infinity Corrected N-Plan Achromatic objectives
- Ergonomic, tilting trinocular eyepiece tube for comfortable viewing over long periods
- Automatic Illumination System with auto intensity control on each objective
- Full Köhler illumination and a wide range of accessories

Model	Vulcan 9300
Product code	3200.9300LED
Optical head	Ergonomic tilting trinocular with photo port, adjustable from 0° to 35°
	3-Position beam splitter; 0:100, 100:0, 80:20
	Interpupillary distance adjustment 47 to 78mm
	Dioptre adjustment on both eyepieces
Eyepieces	10x / 22mm super widefield
Nosepiece	Motorised with remote switching pad on base
	Nosepiece rotating buttons behind focus knobs
Objectives	4x, 10x, 20x, 40x, 100x oil Infinity Corrected N-Plan Achromatic
Condenser	Pre-condenser with field diaphragm
	Motorised Abbe - NA 1.25 with automatic swing-out when 4x objective is selected
	Focusable and centrable, iris diaphragm
Stage	Double layer mechanical stage, 190 x 152mm with Gorilla Glass insert and slide holder
	78 x 32mm movement, Vernier scale
Focusing knobs	Low position coaxial coarse and fine with stop
	Fine focus knobs can be swapped
	Tension control
Mains power	220 – 240V/50 – 60Hz
Illumination	3W S-LED with Fly-lens, intensity control and Automatic Illumination System (AIS)
	ECO function switches illumination off after 30 minutes non-use

Microscopes

Stereo Microscopes

Star

The Star is a stereo microscope with dual magnification which is designed for both educational and professional use. It is particularly well suited to viewing specimens at low magnifications.

Product code	1800.1000M
Optical head	Binocular, inclined at 45°
Eyepieces	10x / 22mm widefield
Magnification	20x and 40x
Focusing	Rack and pinion system with safety stop
Stage	Frosted and black / white contrast plates. 2 stage clips
Illumination	Episcopic: 3W LED Diascopic: 3W LED

Steddy

The Steddy stereoscopic zoom microscope features dual LED illumination and a sturdy column focusing unit. The diamond shaped base allows the hands to be rested on the base of the unit providing the necessary support for delicate operation or manipulation of the sample during examination. The broad base model is ideal for larger samples.

Product code	7500.0000M	7600.000M	7500.9000M
Optical head	Trinocular, inclined at 45° with photo port		Binocular, with integrated 3Mpx digital USB camera
Eyepieces	10x / 22mm super widefield		
Magnification	6.5x to 45x		
Focusing	Zoom system. Rack and pinion system with safety stop		
Stage	Diamond shaped	Broad base design	Diamond shaped
	Supplied with frosted and black/white contrast plates, 2 stage clips		
Illumination	Episcopic: 2W LED with directional condensing lens Diascopic: 5W LED		

Varizoom

The Varizoom is a stereoscopic microscope with parallel infinity optics and an optical zoom system. Three zoom ranges are available with binocular eyepiece tubes inclined at an ergonomic 20o. In addition there is a version with an integrated digital camera and screen.

Product code	7700.0006	7700.0008	7700.0000M	7700.1008
Optical head	Binocular, inclined at 20°			Trinocular, inclined at 20° with integrated 2Mpx digital camera and 8.4" TFT touch screen monitor.
Eyepieces	10x / 22mm super widefield			
Magnification	8x to 48x	8x to 64x	8x to 80x	8x to 64x
Focusing	Zoom system. Rack and pinion system with safety stop			
Stage	Broad base design, supplied with frosted and black/white contrast plates, 2 stage clips			
Illumination	Episcopic: 5W LED with directional condensing lens Diascopic: 5W LED			

Varizoom LED Fluorescence

Fluorescent stereo microscope achieves fluorescence observation of living cells and is widely used in biology, industrial inspection, forensics, etc. It is also an essential tool for fluorescence inspection of security printing and an ideal instrument for mineral research.

Product code	7700.8000M
Optical head	Binocular head 20° inclined
Eyepieces	10x / 22mm super widefield
Magnification	8x to 64x
Focusing	Zoom system. Rack and pinion system with safety stop
Stage	Broad base design, supplied with frosted and black/white contrast plates, 2 stage clips
Illumination	Episcopic: 5W LED with directional condensing lens. Diascopic: 5W LED
Fluorescence	100W Ultra high voltage spherical mercury lamp
Fluorescence filters	GFP and GFP-L

Inverted Microscopes

Inverso TC-100

The Inverso TC-100 is ideal for the typical working laboratory and is built to a high quality specification. It is robust enough to withstand the rigours of constant daily use and is ideal for multiple usage as there is no manual adjustment required. With a quintuple position nosepiece fitted as standard it is ideally suited for multiple observation techniques and / or magnifications.

Product code	3660.5000LED
Optical head	Trinocular, inclined at 45° (Siedentopf)
Eyepieces	10x / 22mm widefield
Objectives	4x, 40x Planachromatic LWD / 10x, 20x, 40x Phase contrast
Condenser	NA 0.3 (removable) - working distance: 72mm
Stage	Size 160 x 250mm with additional mechanical stage (2 interchangeable stage plates), stage extending board
Focusing	Coaxial coarse and fine
Illumination	3W LED

Inverso TC-100 Fluorescence

With an additional external fluorescent light source and power supply 100W HBO. This microscope is supplied complete with two sliding filter holders, one containing the blue and green filter blocks.

Product code	3660.8000M	
Optical head	Trinocular, inclined at 45° (Siedentopf)	
Eyepieces	10x / 22mm widefield	
Objectives	4x, 40x Planachromatic LWD / 10x, 20x, 40x Phase contrast	
Condenser	NA 0.3 (removable) - working distance: 72mm	
Stage	160 x 250mm with additional mechanical stage (2 interchangeable stage plates). Stage extending board	
Focusing	Coaxial coarse and fine	
Illumination	Transmitted	3W LED
	Reflected	100W HBO
Fluorescent filters	Blue and green excitation	

Versus II TC-100

The Versus II is a multifunctional inverted microscope. It has been specially developed to produce exceptionally high quality, high contrast phase contrast and brightfield images of your specimens. The controls are ergonomically positioned and the large stage, with its range of standard accessories, allows you to observe almost all classes of specimens on the microscope. This microscope is suitable for the observation of cells, tissues, clear liquid tissue.

Product code	3660.4000M
Optical head	Trinocular, inclined at 45° (Siedentopf)
Eyepieces	10x / 22mm widefield, centering telescope
Objectives	10x Planachromatic LWD / 10x, 20x, 40x Phase contrast
Condenser	NA 0.3 (removable) - working distance: 70mm
Stage	300 x 170mm with additional mechanical stage (2 interchangeable stage plates and culture dish holder)
Focusing	Coaxial coarse and fine
Illumination	LED (halogen optional)

Industrial Microscopes

Magtex

Using both transmitted and reflected light illumination enables the examination of both translucent and opaque materials. It is ideally suited for biological, geological and engineering applications.

Product code	2763.0000M	2783.0000M
Optical head	Trinocular, inclined at 30° (Siedentopf)	
Eyepieces	10x / 18mm widefield.	
Objectives	5x, 10x, 20x, 50x Planachromatic (CCS Optics)	4x, 10x 40x, 60x Planachromatic tension free and parcentered
Condenser	Brightfield Abbe - NA 1.25	
Stage	Size 210 x 140mm with built-in mechanical stage	180mm round polarisation stage. Centrable and rotating 360°
Focusing	Coaxial coarse and fine	
Illumination — Transmitted / Reflected	30W halogen	

Tritex

The Tritex II is fully equipped to allow for the evaluation of samples in materials science. The microscope is supplied with both transmitted and reflected light sources and has in addition darkfield objectives which allow for the examination of highly reflective samples.

Product code	3100.6000M	3100.9000M
Optical head	Trinocular, inclined at 30° (Siedentopf)	
Eyepieces	10x / 22mm widefield	
Objectives	5x, 40x, 50x, 100x (oil) Infinity Corrected 10x, 20x, Infinite Planachromatic (BF/DF)	40x, 100x (oil) Infinity Corrected 5x, 10x, 20x, 50x, 100x (oil) Planachromatic (BF/DF) 20x, 100x (oil) DIC
Condenser	Aspherical (incident light)	
	Swing-out condensing lens – NA 0.90 / NA 1.25 with aspherical condenser	
Stage	186 x 138mm with built-in graduated, non-porous double layer mechanical stage	
Focusing	Coaxial coarse and fine	
Illumination — Transmitted / Reflected	100W halogen	

Metex

High performance infinity corrected optical system with exceptional stability and intense illumination, this inverted microscope with DIC observation ensures full detailed examinations.

Product code	3660.6000M
Optical head	Binocular, inclined at 30° (Siedentopf)
Eyepieces	10x / 22mm widefield and 10x / 20mm (with cross hair scale)
Objectives	5x, 10x, 20x, 50x, 100x (oil) Planachromatic LWD (BF / DF)
Condenser	NA 0.3 (removable) - working distance: 70mm
Stage	226 x 178mm double layer mechanical stage (3 interchangeable stage plates)
Focusing	Coaxial course and fine
Illumination	50W halogen

CX43 Biological Upright Microscope

The Olympus CX43 microscope enables users to remain comfortable during long periods of routine microscopy observations. The microscope frame conforms to the user's hands and the location of the control knobs maximise ergonomics to improve work efficiency.

Users can quickly set a specimen with one hand, while adjusting the focus and operating the stage with the other hand with minimal movement. The microscope also features an optional camera port for digital imaging.

The CX43 is equipped to handle a range of techniques, including phase contrast, darkfield and simple epi-fluorescence.

Model	CX43
Product Code	3200.9300LED
Optical head	Trinocular, angled at 30°
	Interpupillary distance adjustment 48 to 75mm
	Dioptre adjustment on both eyepieces
Eyepieces	10x/20mm, widefield
Nosepiece	Quintuple nosepiece, reversed
Objectives	4x, 10x, 20x, 40x, 100x (oil) phase contrast
Condenser	Pre-condenser without field diaphragm
	Abbe Condenser, NA 1.25
	7-Position turret condenser
	Focusable and centrable, iris diaphragm
Stage	Wire movement mechanical stage, 211 x 154mm with slide holder
	76 x 52mm movement, Vernier scale
Focusing knobs	Coaxial coarse and fine with stop
	Tension control on coarse focus
Mains power	100 – 240V/50 – 60Hz
Illumination	2.4W LED
Supplied with	Power cord, microscope oil and cover

CKX53 Inverted Microscope

Inverted microscopes from Olympus represent the perfect solution for cell culture in which a variety of cells are grown under controlled conditions thanks to its easy and quick operation combined with excellent optical performance, optimal working distances and various contrast methods. With a slim and compact design, centring free phase contrast and optional fluorescence capability, all kinds of live cells checks can be easily and quickly performed.

The CKX53 has been designed from the ground up to be the best microscope available for routine inverted microscopic analysis. The combination of excellent optical performance and mechanical quality results in a microscope system of outstanding value and comfort for regular use. Features such as the pre-centred phase contrast and inversion contrast (IVC) enable users to design their own system, to match their application, with ease.

Model	CKX53
Optical head	Trinocular with photo port, angled at 45°, 100:0, 0:100 split
	Interpupillary distance adjustment 48 to 75mm
	Dioptre adjustment on both eyepieces
Eyepieces	10x / 22mm super widefield
Nosepiece	Quintuple nosepiece with click stop
Objectives	4x, 10x, 20x and 40x LWD phase contrast
Condenser	Abbe, NA 1.25
	Phase contrast and inversion contrast
	Pre-centred phase slider with single phase ring for 4x, 10x, 20x, and 40x plus two BF positions
	Iris diaphragm
Stage	Plain stage, 252 x 200mm, with exchangeable transparent plate
	Mechanical stage, 180 x 70mm with microplate holder
	110 x 74mm movement, Vernier scale
Focusing knobs	Coaxial coarse and fine with stop
	Tension control on coarse focus
Mains power	100 – 240V/50 – 60Hz
Illumination	4W LED
Supplied with	Power cord and cover

Microscopes

Medline Imaging Systems

There are a wide range of camera systems available which complement our extensive microscope range. Images can either be simply captured or additional detailed analysis can be performed, depending on the operation required.

MiPlatform

MiPlatform is a smartphone adapter which combines the comfort of microscope navigation and smartphone camera lens, thereby, enabling scientists and clinicians to study quality images quickly and ergonomically. It maintains microscope-like navigation to fully utilise the advantages of microscopic slides in both clinical and training settings.

QUALITY - Image Quality
- Maintains quality* image acquisition of photomicrographs
- Images comparable with standard captured images
- Maintains microscope-like navigation to fully utilise the advantages of microscopic slides
- Seamless integration of any smartphone within the existing laboratory workflow

USER-FRIENDLY - Ease of use
- No requirement for optical alignment
- Straight-forward installation
- Requires limited adjustment each time the phone is attached and/or removed
- Stable imagery with the platform securely mounted on the eyepiece

FLEXIBILITY - Wide Compatibility
- Compatible with any Smartphone
- Smartphone can be used with a protective case
- Acquired image is the same as seen through the ocular lens
- Images can be postprocessed on mobile or desktop applications
- Valid in both clinical and training settings

ERGONOMICAL - Improved Posture
- No awkward work posture
- Reduced eye strain and physical stress
- Improve work efficiency

EDUCATION - Acquire & Share
- Share information from the microscopic slide for consultation, training and documentation
- Novel solution for capturing digital images for educational purposes

*Image quality depends on microscope and smartphone camera

The components are robust and easy to assemble for use.

- Mounting collar
- Platform
- Thumbscrews
- Adjustable grips

Product code: 9554.0007

High Performance CMOS Cameras

Digital Clarity™ sensor technology ensures delivery of high quality, crystal clear images at all times.

This breakthrough in CMOS imaging technology can achieve CCD performance based on signal to noise ratio and low light sensitivity. This has major advantages when scanning slides under a compound microscope, as it allows the user to view the image more clearly whilst moving the slide, thus reducing errors and improving productivity.

- Complete with USB cable and image analysis software
- Tripod fixing 'C' mount thread
- Optical black level calibration
- Progressive scan

Ceti D6.3 Digital Microscope Camera

This 6.3 megapixel, C-Mount microscope camera is a USB 3.0 device that utilises an ultra-high performance SONY Exmor CMOS sensor as the image capture device.

The included 12-bit software has processing controls for demosaic adjustments, automatic exposure, gain adjustment, one click white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment and contrast adjustment.

The camera is designed for high quality image and video capture in brightfield microscopy applications. It will also cope well with medium to high signal fluorescence applications.

Product Code	Description
9558.0063	Ceti D6.3 6.3Mpx Digital Microscope Camera with capture software

Ceti D18 Digital Microscope Camera

This 18 megapixel, C-Mount microscope camera is a USB 3.0 device that utilises an ultra-high performance Aptina CMOS sensor as the image capture device.

It comes with advanced video and image processing software, allowing capture and output on Windows, Linux and Mac OSX platforms. Video can be captured at 1080P resolution at up to 30fps.

The included 12-bit software has processing controls for demosaic adjustments, automatic exposure, gain adjustment, one click white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment and contrast adjustment.

The camera is designed for use with brightfield applications and is ideal if high resolution, large-scale prints (such as presentation posters) are required.

Product Code	Description
9558.0018	Ceti D18 18Mpx Digital Microscope Camera with capture software

Microscopes

Ceti WFHD5C Multi Functional Microscope Camera

All-in-one (HDMI+Wi-Fi+SD card) C-mount camera with high sensitivity CMOS sensor, simultaneous HDMI & WiFi output, built-in mouse control and built-in image capture and video recording to SD card. When using the optional 11.6" monitor there is a built-in toolbar including zoom, mirror, comparison and freeze functions. For use with a device other than the monitor, PC, Linux and Mac IOS software is included.

This multiple interface microscope camera utilises an ultra-high performance Sony CMOS sensor as the image capture device. HDMI and WiFi are used as the data transfer interface to an HDMI display or computer/laptop, with USB connection also available to a PC.

If an HDMI connection is used, the included USB mouse can be used to control the camera, browse and compare the captured image, play video and playback images.

For WiFi output, unplug the mouse and plug in the USB WiFi adapter and connect your device's WiFi to the camera. Then the image stream can be transferred to the device via the advanced software (included). With this software, you can control the camera and process the image as required.

The camera body, made from tough, aluminium alloy, ensures a heavy duty, workhorse solution. The camera is equipped with a high quality IR-CUT filter to protect the camera sensor.

Product Code | Description
9558.0005 | Ceti WFHD5C Microscope Camera with SD card

Ceti WFHD5M High Resolution Monitor

HD monitor features a Panasonic IPS LCD (Super TFT) to guarantee a wide viewing angle and high resolution. The LCD panel has true 1080P resolution, a high contrast ratio (up to 1000:1), LED backlight with 50,000 hours long life time and an 11.6" active area.

Product Code | Description
9556.5800M | Ceti 11.6" HD Monitor for WFHD5C Camera

Tablet Cameras - Android

Digi-Pad Microscope Tablet Camera

The Digi-Pad combines a 5Mpx digital microscope camera with a 9.7 inch LCD touch screen tablet

The Medline Scientific Digi-Pad 5Mpx digital microscope camera tablet, with 1024 x 768Mpx resolution, developed specifically for Microscopy applications. Equipped with special software that supports preview, image capture, video measurement capabilities, annotations and saving. It has a C-mount adapter which can be connected to any microscope with an adaptor.

- 9.7 inch colour LCD high definition screen with true colour reproduction
- Built in special microscopy software, the machine runs. smoothly to give a perfect user experience
- Operating software Android 4.2 RAM 2GB Display
- Crystal display, RK3066 dual-core 1.5Hz CPU
- Touch screen operation, can be used as a small computer
- Keyboard and mouse can also be used to operate
- Includes Wi-Fi and Bluetooth wireless networking for easy file exchange

Product code	9556.5600M
CPU	RK3066 Dual-core 1.5Hz
Display	9.7 inch (1024x768) Colour LCD touch
Storage	External SD Memory Card - up to 32GB
	ROM 2GB
	RAM 1GB DDR3
Camera	15fps at 1024x768
	1 / 2.5 (4:3) 5 megapixel CMOS
Network	Wi-Fi
	Bluetooth
Input / output	HDMI Output
	On/Off button
	DC5V Power
	SD Memory card slot
	USB/Mini-USB (OTG) supports USB keyboard and mouse
Battery	6000MAH
Operating system	Android 4.2
Software	Built in microscopy software

Environmental Chambers

Bench Top Temperature Chambers

Bench Top Temperature & Humidity Chambers

Floor Standing Temperature & Humidity Chambers

Pharmaceutical Stability Test Chambers

Plant Growth Chambers

Product Code	Description
9557.8888	Medline Precipoint M8 Digital Microscope and Scanner

The M8 is an all-in-one device, serving as both a microscope and a digital scanner, thus offering completely new possibilities for your workflow. Using the M8 you can digitise your workflow, scanning a 15x15mm area, for instance, within seconds at the highest resolution and image quality. Scan and save your images for future examination and consultation. Alternatively, working in LiveView enables instant visualisation of the sample.

Live remote control is possible - control the M8 from anywhere at any time and simultaneously work with colleagues, across the world if necessary, for second opinions. The M8 is the perfect working tool for various applications, from frozen sections to stained slides.

Empower your work with cloud solutions, virtual classrooms and powerful image analysis tools.

PreciPoint products are designed, engineered and manufactured in Germany – high quality products since 1982.

- Annotations, measurements, multiple fields of view and other software based applications empower you and your work
- Use your resources efficiently: screen shots as well as partial and full slide scanning in dif-ferent qualities enable digitisation and processing of your work in less than 60 seconds. Save time - stay focused
- Access and operate remotely and in real-time (telepathology) and connect, share and discuss your findings with your colleagues and specialists from all over the world

Product Code:	9557.0008
Description:	Medline Precipoint O8 Digital (Oil) Microscope and Scanner

An all-in-one device that offers completely new possibilities for your workflow. The O8 is equipped with three different modes - Live, Instant Scan, and Slide Scan. With these three modes combined, the O8 serves both as a microscope and a scanner. It allows you to directly work on your sample, perform various analyses, and to scan your slides for documentation and future viewing.

With its live remote control capability, the O8 can also be controlled from all over the world. Thanks to its entirely automated hardware, you can work on a sample from anywhere, just as if you were right next to the device. The availability of digital whole slide images helps users to simplify and standardise their work, thereby increasing efficiency and quality.

Microscope and Scanner
- 3 operating modes tailored to diverse workfl ows:
- Live, Instant Scan and Slide Scan
- Transmitted light
- Overview picture
- Seamless zoom action
- Live stitching makes changing of objectives redundant
- Supported objectives: 10x, 20x, 40x 60x, 100x air (M8) 20x, 40x, 60x, 100x air and oil (O8)
- Easy, intuitive and ergonomic handling via touch screen
- Annotations, measurements
- Automated x/y stage
- 25 x 75mm (2 slides) or 50 x 75mm (1 slide)
- Motorised Z-axis; Z-stacking

Digitisation
- Whole slide imaging or partial digitisation
- Different scanning algorithms tailored to different slide qualities
- Slide Scan Mode: 15 x 15mm area in 2min with 20x /40x objective
- Instant Scan Mode: large field of view within seconds at high resolution (M8)
- Slide Scan Mode: 15 x 15mm area in 1h with 100x oil objective
- Instant Scan Mode: large field of view within seconds at high resolution (O8)
- Scanning resolution: 20x, objective, NA 0.75, 0.55μm / px (M8) 40x, objective, NA 0.95, 0.28μm / px (M8)
- Scanning resolution: 100x, oil objective, NA 1.4, 0.11μm / px (O8)
- Live remote control

Cloud, Image Analysis and Computer
- Operating software "MicroPoint" included
- Viewer software "ViewPoint" included*
- Cloud and image analysis
- Connection from computer to M8: min. USB 3.0
- Various output formats: PNG, JPEG, TIFF, VMIC, XLS, and many more

Environmental Chambers

Bench Top Temperature Chambers

Safety Features
- Self-protecting cut-off function
- Over temperature, electrical leakage or over voltage automatically cuts the power from the unit, in an orderly fashion, starting with the heating element then the controller unit
- Controller allows time setting with auto Run/Off, timed auto start and auto end for up to 1 month and data logging
- Door-open warning alarm
- Heating element, fan, and platform automatically stops when the door is opened to minimise heat loss and to ensure user safety
- Built-in door lock with key

Optimum Control Features
- Microprocessor PID control with touch screen display, auto tuning and auto calibration / Auto-tuning / Calibration
- CPU logic control system for optimum control of temperature and reduced energy consumption
- Air-tight door closure
- Tempered glass window with wire heater and lighting
- Temperature / timer settings, and operation condition

Performance
- Use of HFC refrigerant prevents damage to the ozone layer
- Complies with the Montreal protocol on substances that deplete the Ozone layer control measures

Model	TC3-ME-025	TC3-ME-065	TC3-ME-100
Product code	AAH860132K	AAH860232K	AAH860332K
Chamber volume (L)	25	65	100
Temperature (°C) Range	-20 to 150		
Temperature (°C) Fluctuation at 100°C	±0.3		
Temperature (°C) Variation at 100°C	±0.5		
Time min Heating	50 (-20°C to 100°C)		
Time min Cooling	55 (20°C to -20°C)		
No. of wire shelves (supplied / max.)	2 / 7	2 / 10	
Max. load per shelf (Kg)	25		
Access port (supplied / max.)	1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm) Internal	350 x 220 x 350	400 x 330 x 495	500 x 380 x 530
Dimensions; W x D x H (mm) External	500 x 380 x 530	500 x 380 x 530	700 x 1110 x 1100
Weight (Kg)	80	110	130

Model	TC3-KE-025	TC3-KE-065	TC3-KE-100
Product code	AAH861132K	AAH861232K	AAH861332K
Chamber volume (L)	25	65	100
Temperature (°C) Range	-40 to 150		
Temperature (°C) Fluctuation at 100°C	±0.3		
Temperature (°C) Variation at 100°C	±0.5		
Time min Heating	60 (-40°C to 100°C)		
Time min Cooling	70 (20°C to -40°C)		
No. of wire shelves (supplied / max.)	2 / 7	2 / 10	
Max. load per shelf (Kg)	25		
Access port (supplied / max.)	1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm) Internal	350 x 220 x 350	400 x 330 x 495	500 x 380 x 530
Dimensions; W x D x H (mm) External	550 x 680 x 915	600 x 1050 x 1060	700 x 1110 x 1100
Weight (Kg)	110	140	150

Recorders   Perforated shelves   Stands   Cable ports

Bench Top Chambers - Accessories & Options

● Optional

Product code	Description	TC3-KE			TC3-ME		
		25L	65L	100L	25L	65L	100L
AAA8T504	Portable recorder (6 points)	●	●	●	●	●	●
AAA8T5056	Portable recorder (digital, 6 channels)	●	●	●	●	●	●
AAA80550	Warning signal lamp	●	●	●	●	●	●
RTD0679	Wire shelf (195mm × 310mm)	●	-	-	●	-	-
RTD0680	Wire shelf (280mm × 360mm)	-	●	-	-	●	-
RTD0681	Wire shelf (330mm × 460mm)	-	-	●	-	-	●
AAA80602-6	Perforated shelf (195mm × 310mm)	●	-	-	●	-	-
AAA80602-7	Perforated shelf (280mm × 360mm)	-	●	-	-	●	-
AAA80602-8	Perforated shelf (330mm × 460mm)	-	-	●	-	-	●
AAA8T612	Access port (Ø 50mm)	-	-	-	●	●	●
AAA8T613	Access port (Ø 80mm)	-	-	-	●	●	●
AAA8T610	Access port (Ø 50mm)	●	●	●	-	-	-
AAA8T611	Access port (Ø 80mm)	-	●	●	-	-	-
AAA80631	Stand for TC3-KE/ME-025	●	-	-	●	-	-
AAA80632	Stand for TC3-KE/ME-065	-	●	-	-	●	-
AAA80633	Stand for TC3-KE/ME-100	-	-	●	-	-	●
AAA80634	Two step stand for TC3-KE/ME-025	●	-	-	●	-	-
AAA80635	Two step stand for TC3-KE/ME-065	-	●	-	-	●	-
CFA1910	Temperature sensor (RTD type)	●	●	●	●	●	●

Environmental Chambers

Bench Top Temperature & Humidity Chambers

Safety Features
- Self-protecting cut-off function
- Over temperature, electrical leakage or over voltage automatically cuts the power from the unit, in an orderly fashion, starting with the heating element then the controller unit
- Controller allows time setting with auto Run/Off, timed auto start and auto end for up to 1 month and data logging
- Door-open warning alarm
- Heating element, fan, and platform automatically stops when the door is opened to minimise heat loss and to ensure user safety
- Built-in door lock with key

Optimum Control Features
- Microprocessor PID control with touch screen display, auto tuning and auto calibration / Auto-tuning / Calibration
- CPU logic control system for optimum control of temperature and reduced energy consumption
- Air-tight door closure
- Tempered glass window with wire heater and lighting
- Temperature / timer settings, and operation condition
- Direct fill water system

Performance
- Use of HFC refrigerant prevents damage to the ozone layer
- Complies with the Montreal protocol on substances that deplete the Ozone layer control measures

Model		TH3-PE-025	TH3-PE-065	TH3-PE-100
Product code		AAH822132K	AAH822232K	AAH822332K
Chamber volume (L)		25	65	100
Temperature (°C)	Range	0 to 120 (without humidity) 30 to 95 (with humidity)		
	Fluctuation at 25°C / 60%RH	±0.3		
	Variation at 25°C / 60%RH	±0.5		
Time (min)	Heating without humidity	40 (0°C to 90°C)		
	Cooling without humidity	35 (90°C to 0°C)		
Humidity (%RH)	Range	30 to 95		
	Fluctuation at 60%RH / 55°C	±1.0		
	Variation at 60%RH / 55°C	±3.0		
Water tank	Capacity (L)	8		12
	Water quality	pH 6.2 to 7.2		
No. of wire shelves (supplied / max.)		2 / 7	2 / 10	
Max. load per shelf (Kg)		25		
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm)	Internal	350 x 220 x 350	400 x 330 x 495	500 x 380 x 530
	External	600 x 1050 x 1060		700 x 1110 x 1100
Weight (Kg)		80	110	130

LCD controller

Viewing window

Model		TH3-ME-025	TH3-ME-065	TH3-ME-100
Product code		AAH821132K	AAH821232K	AAH821332K
Chamber volume (L)		25	65	100
Temperature (°C)	Range	-20 to 150 (without humidity) 20 to 95 (with humidity)		
	Fluctuation at 25°C / 60%RH	±0.3		
	Variation at 25°C / 60%RH	±0.5		
Time (min)	Heating without humidity	50 (0°C to 90°C)		
	Cooling without humidity	55 (90°C to 0°C)		
Humidity (%RH)	Range	20 to 95		
	Fluctuation at 25°C / 60%RH	±0.3	±1.0	
	Variation at 25°C / 60%RH	±3.0		
Water tank	Capacity (L)	8		12
	Water quality	pH 6.2 to 7.2		
No. of wire shelves (supplied / max.)		2 / 7	2 / 10	
Max. load per shelf (Kg)		25		
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm)	Internal	350 x 220 x 350	400 x 330 x 495	500 x 380 x 530
	External	550 x 680 x 915	600 x 1050 x 1060	700 x 1110 x 1100
Weight (Kg)		80	110	130

Model		TH3-KE-025	TH3-KE-065	TH3-KE-100
Product code		AAH824132K	AAH824232K	AAH824332K
Chamber volume (L)		25	65	100
Temperature (°C)	Range	-40 to 150 (without humidity) 20 to 95 (with humidity)		
	Fluctuation at 50°C / 60%RH	±0.3		
	Variation at 50°C / 60%RH	±0.5	±0.5	
Time (min)	Heating without humidity	60 (0°C to 90°C)		
	Cooling without humidity	70 (90°C to 0°C)		
Humidity (%RH)	Range (%RH)	20 to 95		
	Fluctuation at 60%RH / 50°C	±1.0		
	Variation at 60%RH / 50°C	±3.0		
Water tank	Capacity (L)	7.5	10	14.5
	Water quality	pH 6.2 to 7.2		
No. of wire shelves (supplied / max.)		2 / 7	2 / 10	
Max. load per shelf (Kg)		25		
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm)	Internal	350 x 220 x 350	400 x 330 x 495	500 x 380 x 530
	External	550 x 680 x 915	600 x 1050 x 1060	700 x 1110 x 1100
Weight (Kg)		110	140	150

Floor Standing Temperature & Humidity Chambers

Economy Type

Applied the new developed controller specialised for temperature and Humid chambers Differentiated Systems

- Convenient operation with 5.6 inch color touch display controller
- Possible to check the operation status with graphs
- Minimise the occurrence of faults by simplifying water direct line and electric circuit
- Water level check function enables water replenishment at the right time

Structural Functional Features

- Excellent thermal insulation and sealing to ensure stable temperature and humidity reproducibility even for repeated test use
- The door part is a double-sealed structure that provides enhanced airtightness
- Maintains stable temperature and humidity by circulating air in the chamber at the optimum speed
- Energy-saving system that can perform optimum temperature and humidity tests efficiently, reducing power consumption during operation

Outstanding Safety

- Electronic over temperature shutdown system (advanced over temperature (A-OT) limiter). Independent precision temperature sensor and controller for safer and more accurate over temperature shutdown
- General-type over power shutdown system (B-OT, backup over temperature limiter)
- A backup device for electronic system failure, mechanically preventing over temperature even when it occurs electronic errors
- Ensures that the surface temperature is kept below 60°C
- Low and empty water level alarm and automatic shut off
- Door open warning and automatic shut off
- Overcurrent and short circuit protection of device
- Fuse installed for each heater for safety
- Auto stop when operating current of compressor is overloaded
- Auto stop when compressor is overheating
- Auto shut off in case refrigerant pressure (high/low pressure) is abnormal

Model	TH3-E-200	TH3-E-400
Product code	AAH841102K	AAH841112K
Chamber volume (L)	201	398
Quantity of shelves (standard/max.)	2 / 9	2 / 10
Distance of between shelves (mm)	40	
Max. load per shelf (kgs)	20	25
Permitted total load (kg)	50	60
Cable port (Ø, mm)	50	50
Water tank capacity (L)	20	20
Temperature (°C) — Range without humidity	0 to 90	
Temperature (°C) — Fluctuation at 40°C / 75%RH	±0.3	
Temperature (°C) — Variation at 40°C / 75%RH	±0.5	
Temperature (°C) — Heating time (-5°C to 100°C) (min)	80	
Temperature (°C) — Cooling time (100°C to -5°C) (min)	90	
Humidity (%RH) — Range	35 to 85	
Humidity (%RH) — Fluctuation at 40°C / 75%RH	0.8	
Humidity (%RH) — Variation at 40°C / 75%RH	3	
Dimensions; W x D x H (mm)	500 x 670 x 600	600 x 830 x 800
Weight (kg)	200	270

General Type

Safety Features

- Self-protecting cut-off function
- Over temperature, electrical leakage or over voltage automatically cuts the power from the unit, in an orderly fashion, starting with the heating element then the controller unit
- Controller allows time setting with auto Run/Off, timed auto start and auto end for up to 1 month and data logging
- Door-open warning alarm
- Heating element, fan, and platform automatically stops when the door is opened to minimise heat loss and to ensure user safety
- Built-in door lock with key

Optimum Control Features

- Microprocessor PID control with touch screen display, auto tuning and auto calibration / Auto-tuning / Calibration
- CPU logic control system for optimum control of temperature and reduced energy consumption
- Air-tight door closure
- Tempered glass window with wire heater and lighting
- Temperature / timer settings, and operation condition
- Direct fill water system
- 140mm colour LCD display with interactive input system

Performance

- Use of HFC refrigerant prevents damage to the ozone layer
- Complies with the Montreal protocol on substances that deplete the ozone layer control measures

Model		TH-TG-180	TH-TG-300	TH-TG-408	TH-TG-800	TH-TG-1000	TH-TG-1500
Product code		AAHC2002K	AAHC2012K	AAHC2022K	AAHC2032K	AAHC2042K	AAHC2052K
Chamber volume (L)		180	314	419	770	997	1540
Temperature (°C)	Range without humidity	-5 to 100					
	Range with humidity	10 to 95			25 to 95		
	Fluctuation at 40°C / 60%RH	±0.3					
	Variation at 40°C / 60%RH	±0.5					
Time (min)	Heating without humidity	50 (-5°C to 100°C)			55 (-5°C to 100°C)		
	Cooling without humidity	120 (100°C to -5°C)			145 (100°C to -5°C)		
Humidity (%RH)	Range	10 to 95			20 to 95		
	Fluctuation at 60%RH / 40°C	±2.0					
	Variation at 60%RH / 40°C	±3.0					
Water tank	Capacity (L)	15					30
	Water quality	pH 6.2 to 7.2					
No. of wire shelves (supplied / max.)		2 / 7	2 / 8		2 /17		
Max. load per shelf (Kg)		20	25		40		
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)					
Dimensions; W x D x H (mm)	Internal	500 x 600 x 600	748 x 600 x 700	748 x 800 x 700	748 x 920 x 1120	748 x 1190 x 1120	1100 x 1000 x 1400
	External	950 x 907 x 1484	1200 x 863 x 1524	1200 x 1063 x 1524	1200 x 1230 x 1973	1200 x 1500 x 1973	1554 x 1876 x 1935
Weight (Kg)		230	250	290	370	420	490

Features

- Corrosion resistance stainless steel chamber and electric polished humidification tank
- Front loading portable water tank
- Direct fill water system provides user great convenience when performing long-term tests (optional)
- Clear observation of samples
- Tempered glass door with built in heating wire
- Energy efficient, long life LED lighting
- Wider view, inner glass door is available for monitoring of samples (optional)
- Access port for introduction of external probes or cables. 50mm diameter port comes as standard on the left side of the unit
- Casters for easy mobility during installation or relocation
- 140mm colour interactive touch screen LCD controller
- Set and actual values are clearly visible together on display
- Operating progress visible in graph mode allow for direct data interpretation
- Built-in SD card drive
- RS-485 communication port enables connection of up to a maximum 9 units. Simultaneous monitoring and operating of multiple units is an option
- Setting and storage of program information, backup of value settings, recovery, temperature and humidity is easy to program
- Includes RS-232 communication port

Portable water container

Colour LCD controller

Model		TH-G-180	TH-G-300	TH-G-408	TH-G-800	TH-G-1000	TH-G-1500
Product code		AAH80013K	AAH80023K	AAH80033K	AAH80048K	AAH80058K	AAH80078K
Chamber volume (L)		189	302	408	800	1000	1450
Temperature (°C)	Range without humidity	-40 to 150					
	Range with humidity	15 to 90					
	Fluctuation at 40°C / 75%RH	±0.3					
	Variation at 40°C / 75%RH	±0.5					
Time (min)	Heating without humidity	70 (-40°C to 120°C)					90 (-40°C to 120°C)
	Cooling without humidity	75 (20°C to -40°C)			85 (20°C to -40°C)		90 (20°C to -40°C)
Humidity (%RH)	Range	25 to 95					
	Fluctuation at 75%RH / 40°C	±0.4			±1.0		±2.0
	Variation at 75%RH / 40°C	±3.0					
Water tank	Capacity (L)	15					
	Water quality	pH 6.2 to 7.2					
No. of wire shelves (supplied / max.)		2 / 9		2 / 10		3 / 18	
Max. load per shelf (Kg)		20		25		40	
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)					
Dimensions; W x D x H (mm)	Internal	500 x 630 x 600	600 x 630 x 800	600 x 850 x 800	1000 x 800 x 1000	1000 x 1000 x 1000	1100 x 1000 x 1400
	External	1003 x 1139 x 1468	1103 x 1139 x 1668	1103 x 1359 x 1668	1503 x 1319 x 1968	1503 x 1519 x 1968	1603 x 1960 x 1950
Weight (Kg)		320	385	410	620	680	860

Intelligent Type

Model		TH-I-180	TH-I-300	TH-I-408
Product code		AAH80113K	AAH80123K	AAH80133K
Chamber volume (L)		189	302	408
Temperature	Range without humidity (°C)	-40 to 150		
	Range with humidity (°C)	15 to 95		
	Fluctuation at 40°C / 75%RH	±0.3		
	Variation at 40°C / 75%RH	±0.5		
Time (min)	Heating without humidity	60 (-40°C to 120°C)		
	Cooling without humidity	60 (20°C to -40°C)		
Humidity (%RH)	Range	20 to 95		
	Fluctuation at 75%RH / 40°C	±0.4		
	Variation at 75%RH / 40°C	±3.0		
Water tank	Capacity (L)	15		
	Water quality	pH 6.2 to 7.2		
No. of wire shelves (supplied / max.)		2 / 9	2 / 10	
Max. load per shelf (Kg)		20	25	
Access port (supplied / max.)		1 (Ø 50mm) / 2 (Ø 50mm or Ø 80mm)		
Dimensions; W x D x H (mm)	Internal	500 x 630 x 600	600 x 630 x 800	600 x 850 x 800
	External	1003 x 1139 x 1468	1103 x 1139 x 1668	1103 x 1359 x 1668
Weight (Kg)		320	385	410

Optimised For Long-term Testing

- Independent control of the temperature and humidity with dual chambers divided into upper and lower
- Suitable for use when various test are required
- Superior defrosting control technology ensures stable temperature and humidity control for long-term tests
- Recommended in case no low temperature testing
- Provide 3 kinds of model depending on capacity
- Satisfies ICH Guideline Q1A (R2) Stability Test
- Recorder for maintaining test records (option)

Structural Functional Features

- Optimum temperature and humidity test can be carried out even with minimum refrigeration performance, efficiently reducing energy usage
- Excellent thermal insulation and sealing to ensure stable temperature and humidity reproducibility even for repeated test use
- Proven reproducibility and reliability with structural design optimised for each capacity
- The door part is a double-sealed structure that provides enhanced airtightness

Dual-chamber Type

Model		TH-DG-150	TH-DG-300	TH-DG-400
Product code		AAHC6002K	AAHC6012K	AAHC6022K
Chamber volume (L)		150 x 2	288 x 2	384 x 2
Quantity of shelves (standard/max.)		2 / 7	2 / 8	2 / 8
Distance of between shelves (mm)		60	60	60
Max. load per shelf (Kg)		25	25	25
Permitted total load (Kg)		75	75	75
Cable port (Ø, mm)		50	50	50
Water tank capacity (L)		20	24	24
Temperature data	Range without humidity (°C)	-5 to 100	-5 to 100	-5 to 100
	Fluctuation (°C)	0.3 / 0.54	0.3 / 0.54	0.3 / 0.54
	Variation (°C)	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9
	Heating time (-5°C) to 100°C) (min)	85	85	85
	Cooling time (100°C to -5°C) (min)	100	100	100
Humidity data	Range (%RH)	15 to 90	15 to 90	15 to 90
	Fluctuation (±%RH)	0.8	0.8	0.8
	Variation (±%RH)	3	3	3
Interior dimensions; W x D x H (mm)		600 x 500 x 500	800 x 600 x 600	800 x 800 x 600
Weight (Kg)		420	516	560

Environmental Chambers

Pharmaceutical Stability Test Chambers

Features
- In the event of a validation the apparatus correctly controls each light and then transfers accurate data and is equipped with light sensors
- Samples that have to be exposed to the light in which it is completely near the UV energy of less than 200W-hr/m^2 is provided to compare directly with the results from overall intensity of less than 1.20 million lux-hr, drug substances and reagents
- Total fluorescent lamp and UV lamp indicator and operating time indicator

Safety
- Leakage breaker for power supply
- Over-current protection
- Overheat protection
- Switch-off after alarm for overheating
- Door open alarm
- Water empty
- Vice type door locking mechanism (optional)
- Alarm for completed photostability test

Model	TH-ICH-300	TH-ICH-800
Product code	AAHC1002K	AAHC1012K
Chamber volume (L)	300	760
Controller	PID Control (LCD Type)	
Temperature (°C) — Range without humidity	-5 to 85 (without light) / 0 to 85 (with light)	
Temperature (°C) — Range with humidity	+15 to 85 (with light)	
Temperature (°C) — Fluctuation at 40°C / 60%RH	±0.3	
Temperature (°C) — Variation at 40°C / 60%RH	±0.5	±0.7
Time — Heating	25 (20°C to 85°C)	30 (20°C to 85°C)
Time — Cooling	35 (20°C to -5°C)	40 (20°C to -5°C)
Humidity (%RH) — Range	20 to 85	
Humidity (%RH) — Fluctuation at 60%RH / 40°C	±3.0	
Humidity (%RH) — Variation at 60%RH / 40°C	±5.0	
Light source — Cool white (lux)	6000	6500
Light source — Ultraviolet-A (W/m^2)	4.5	5
Water tank — Capacity (L)	15	
Water tank — Water quality	pH 6.2 to 7.2	
No. of wire shelves (supplied / max.)	2 / 8	2 / 17
Max. load per shelf (Kg)	25	40
Access port (supplied / max.)	1 (Ø50mm) / 2 (Ø50mm or Ø80mm)	
Dimensions; W x D x H (mm) — Internal	750 x 650 x 650	750 x 880 x 1160
Dimensions; W x D x H (mm) — External	1130 x 985 x 1520	1220 x 1215 x 1965
Weight (Kg)	290	410

Digital recorders

Access ports

Portable recorders

Perforated shelves

Bench Top Chambers - Accessories & Options

■ Standard   ● Optional

Description	TH3-KE	TH3-ME	TH3-PE
Portable recorder (6 points)	●	●	●
Portable recorder (digital, 6 channels)	●	●	●
Interface converter (RS-485C to RS-232C) including a cable (5m)	●	●	●
Interface cable (5m)	●	●	●
Warning signal lamp	●	●	●
Viewing window	■	■	■
Wire shelf	■	■	■
Perforated shelf	●	●	●
Access port (Ø 50mm)	■	■	■
Access port (Ø 80mm)*	●	●	●
Stand	●	●	●
Two step stand	●	●	●
Temperature sensor (RTD type)	■	■	■
Humidity sensor	■	■	■
Water purifier	●	●	●
Direct fill water system	●	●	●

* 80mm cable access hole is NOT available for 25L chambers

Floor Standing Chambers - Accessories & Options

■ Standard   ● Optional

Description	TH-G	TH-I	TH-KH	TH-TG	TH-ICH	TH-CR
Recorder (6 points)	●	●	●	●	●	●
Recorder (digital, 6 channels)	●	●	●	●	●	●
Interface converter RS-485C - 232C included a cable (5m)	●	●	●	●	●	●
Interface cable (5m)	●	●	●	●	●	●
Warning signal lamp	●	●	●	●	●	●
Inner glass door	●	●	●	●	●	-
Viewing window	■	■	■	■	-	■
Wire shelf	■	■	■	■	■	■
Perforated shelf	●	●	●	●	●	●
Access port (Ø50mm)	■	■	■	■	■	■
Access port (Ø80mm)	●	●	●	●	●	●
Temperature sensor (RTD type)	■	■	■	■	■	■
Humidity sensor	■	■	■	■	■	■
Fluorescent lamp (cool white)	-	-	-	-	■	-
UVA lamp	-	-	-	-	■	-
UV sensor	-	-	-	-	■	-
Illumination sensor	-	-	-	-	■	-
HEPA filter	-	-	-	-	-	■
Water cartridge tank (water container)	■	■	■	■	-	■
Water purifier	●	●	●	●	●	●
Direct fill water system	●	●	●	●	●	●

Plant Growth Chambers

Operating Features
- Microprocessor PID controller with automatic tuning and calibration
- Digital timer: 1min to 99hr 59min
- 10 step programmable temperature, humidity and illumination 300 to 5000ppm CO_2 control system (optional)

Safety Features
- Leakage breaker for power supply
- Over-current protection
- Overheat protection with alarm
- Door opening alarm
- Low and empty water level alarm (TLH models only)

Construction Features
- High quality 304 grade stainless steel interior and dirt repellent powder coated exterior surface
- Wide inner tempered glass door provides a full view of the samples
- High frequency electronic ballast lamps
- Easy cleaning of condenser air filter
- Casters for easy mobility when installing or moving
- Electronic humidity sensor is fast acting and easy to calibrate
- Adjustable water tank positions for GC-300TLH
- Removable shelving and rounded inner chamber corners for easy cleaning

Model		GC-300TL	GC-300TLH	GC-1000TLH
Product code		AAHA1012K	AAHA1022K	AAHA1032K
Chamber volume (L)		300		1000
Temperature (°C)	Range	5 to 50 lamp off		
		10 to 50 lamp on		
		20 to 50 with humidity		
	Fluctuation at 25°C	±0.4 without humidity		
	Variation at 25°C	±1.0 without humidity		
Illumination	Range (lux)	0 to 20,000		0 to 35,000
	Control (steps)	10		11
Humidity (RH%)	Range	-	40 to 80 at 20 to 35°C 70 to 90 at 36 to 50°C	50 to 90 at 20 to 35°C 60 to 90 at 36 to 50°C
	Fluctuation at 60%RH	-	±3	
CO_2 (optional)	Range (ppm)	300 to 5000		
	Sensor	Infra red (NDIR)		
Dimensions; W x D x H (mm)	Internal	510 x 540 x 1100		1200 x 800 x 1080
	External	700 x 805 x 1900		1410 x 1070 x 2150
Weight (Kg)		250		550

Plant Growth Chambers - Accessories & Options

Model	Wire shelves			Perforated shelves			Recorder	CO_2 sensor
	Product code	Dimensions (W x L, mm)	No. of shelves (supplied/max.)	Product code	Dimensions (W x L, mm)	No. of shelves (max.)	Product code	Product code
GC-300TL	EDA8220	466 × 490	3 / 14	AAA22522	466 × 490	14	AAAA1501	AAAA1521
GC-300TLH	EDA8220		3 / 14	AAA22522		14	AAAA1501	AAAA1521
GC-1000TLH	EDA8222	580 × 770	6 / 29	AAAA1512	580 × 770	29	AAAA1502	AAAA1521

Tubing & Medical Gas Hose

Rubber Tubing

Reinforced Bunsen Tubing

Silicone Tubing

Medical PU Gas Hose - Purehose

Medical PVC Gas Hose - Primehose

Rubber Tubing

Manufactured from 45° natural rubber, high strength, good resistance to tear, fatigue and abrasion. Has excellent electrical properties but poor resistance to ozone and mineral and petroleum based oils. All tubing sizes are detailed as inner diameter (ØI.D.) multiplied by wall thickness.

- Temperature: -65°C to +70°C
- Applications: Transferring gases, liquids and diluted acids

Product code	Description	Coil Length (m)
211484	Rubber drain tubing, 1.25mm x 0.6mm	
211485	Rubber drain tubing, 1.6mm x 0.7mm	
211486	Rubber drain tubing, 1.6mm x 1.2mm	
211487	Rubber drain tubing, 2.5mm x 1.0mm	
211488	Rubber drain tubing, 3.2mm x 1.0mm	
211489	Rubber drain tubing, 4.0mm x 1.2mm	
211491	Rubber drain tubing, 5.0mm x 1.4mm	
211492	Rubber drain tubing, 6.3mm x 1.7mm	20
211493	Rubber drain tubing, 6.3mm x 2.5mm	
211494	Rubber drain tubing, 8.0mm x 2.0mm	
211495	Rubber drain tubing, 8.0mm x 2.8mm	
211496	Rubber drain tubing, 9.0mm x 2.3mm	
211497	Rubber drain tubing, 10.0mm x 2.5mm	
211498	Rubber drain tubing, 11.2mm x 2.8mm	
211499	Rubber drain tubing 12.5mm x 3.2mm	
212502	Neoprene tube, 5.0mm x 1.5mm	
212503	Neoprene tube, 6.5mm x 1.5mm	10
212504	Neoprene tube, 8.0mm x 2.0mm	

Reinforced Bunsen Tubing

Product code	Description	Coil Length (m)
215450	Bunsen tubing, 450mm	0.45
215600	Bunsen tubing, 600mm	0.60
215900	Bunsen tubing, 900mm	0.90

Silicone Tubing

Silicone rubber tubing offer platinum cured silicone rubber tubing as standard which has increased tear strength, less bacterial build up and a higher clarity over peroxide silicone rubber tubing. It also has no smell or taste taint or reaction with chlorine and is also less likely to have surface extrusion lines, sometimes visible on peroxide silicone tubing.

Key Features: Excellent resistance to temperature, ozone and weathering. It also has good electrical properties but poor resistance to petroleum based fluids. Manufactured from FDA approved materials. All tubing sizes are detailed as inner diameter (ØI.D.) multiplied by wall thickness.

- Temperature: -40°C to +200°C (+250°C short term)
- Applications: Food, medical and pharmaceutical. Peristaltic pump use

Product code	Description	Coil length (m)
21300215	Silicone tubing 1.0mm x 1.0mm	
21300315	Silicone tubing 2.0mm x 0.5mm	
21300415	Silicone tubing 3.00mm x 0.75mm	
21300515	Silicone tubing 3.0mm x 1.0mm	
21300815	Silicone tubing 4.0mm x 1.0mm	
21300915	Silicone tubing 5.0mm x 1.0mm	
21301015	Silicone tubing 5.0mm x 1.5mm	15
21301215	Silicone tubing 6.0mm x 2.0mm	
21301715	Silicone tubing 8.0mm x 2.0mm	
21303415	Silicone tubing 8.0mm x 2.5mm	
21301815	Silicone tubing 9.0mm x 2.5mm	
21302115	Silicone tubing 10.0mm x 2.5mm	

Medical Gas Hose

Purehose pf®
Phthalate-free PU ESD medical gas hose

Modern anaesthetic gasses are now virtually inert therefore the risk of explosion has been considerably reduced. This, coupled with a growing concern over the potential vaporisation and subsequent inhalation of phthalates, has resulted in the development of this new phthalate & PVC-free, PureHose pf® that is fully compliant with all the most recent specifications and conforms to BS EN ISO 5359:2008 (2014) + A1:2011. All the materials used are USP VI compliant.

PureHose pf® hose does not contain plasticizer of any form, it does not work harden and will not expose patients to any potentially harmful phthalate vapours. The material is designed to be used in areas that require static dissipation. As such, all the mating surfaces are made from ESD material with a surface resistivity of 1.1E11 Ω/Sq when tested to ASTMD 257. This level is more than sufficient to prevent any risk of promoting static build up.

Product code	Description	Colour	Coil Length (m)
108601PF	High pressure ESD PU (Oxygen) Ø6.7mm	White	
108602PF	High pressure ESD PU (Air) Ø6.7mm	Black	
108603PF	High pressure ESD PU (Vacuum) Ø6.7mm	Yellow	
108604PF	High pressure ESD PU (N$_2$O) Ø6.7mm	Blue	
108605PF	High pressure ESD PU (O$_2$/N$_2$O) Ø6.7mm	Blue/White stripe	
108606PF	High pressure ESD PU (CO$_2$) Ø6.7mm	Grey	30
108612PF	High pressure ESD PU (Air) Ø6.7mm	Black/White	
108607PF	High pressure ESD PU (He/O$_2$) Ø6.7mm	Brown/White	
108632PF	High pressure ESD PU (Air) Ø8.0mm	Black	
108631PF	High pressure ESD PU (Air) Ø8.0mm	Black/White	
108633PF	High pressure ESD PU (Vacuum) Ø8.0mm	Yellow	
108643PF	High pressure ESD PU (AGSS) Ø12.7mm	Yellow	

Purehose pf®
Phthalate-free PVC ESD medical gas hose - Antimicrobial

Primehose is the latest addition to the Medline range of medical gas hose and has been engineered to provide the market with up to date and technically advanced products for the delivery of medical gases within the demanding, twenty first century hospital environment. A detailed evaluation and a careful selection of materials have enabled us to entirely dispense with standard ortho phthalate plasticisers, increasingly a cause for concern in medical circles, and offer a strong but flexible phthalate-free PVC alternative hose and peace of mind for the user.

Our PVC grade is based upon a low migration plasticiser and is expected to comply with British Standard 2463 (Freedom from toxicity), which has been extended to measure zinc content and UV absorption, and also the US Pharmacopoeia biological tests for plastics. Antimicrobial, providing resistance to bacteria such as MRSA and Klebsiella Pneumoniae in accordance with BS ISO 22196.
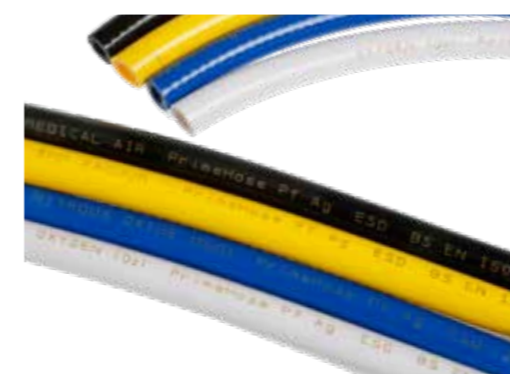
Product code	Description	Colour	Length (m)
208601PF	High pressure ESD PVC (Oxygen) Ø6.7mm	White	
208602PF	High pressure ESD PVC (Air) Ø6.7mm	Black	
208603PF	High pressure ESD PVC (Vacuum) Ø Ø 6.7mm	Yellow	
208604PF	High pressure ESD PVC (N$_2$O Nitrous) Ø6.7mm	Blue	30
208605PF	High pressure ESD PVC (O$_2$/N$_2$O) Ø6.7mm	Blue/White	
208633PF	High pressure ESD PVC (Vacuum) Ø8.0mm	Yellow	

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