Cooling 754

Temperature regulators 796

Heating 829

Warning

Do not use CryoTubes in the liquid phase of liquid nitrogen unless correctly sealed. Improper use may cause liquified nitrogen to be trapped inside the vial and lead to pressure build-up, resulting in possible explosion or biohazard release.

Products for nitrogen storage - please see page 768.

1

1 LLG-Cryotubes, PP, sterile

A
121 °C

With star-shape in the screw cap, for automated capper/decapper. Temperature resistant down to -196°C.
Not appropriate for operations in liquid nitrogen. With marking area, fill line and graduations printed on the vial.
Safe and precise handling of biotechnology materials. Bar-code printed on each tube.
DNase/RNase free. Vials and caps are autoclavable at 121 °C.

Homogeneous conception:
- all made from polypropylene
- single-body, single-turn screw cap

Printed graduations for accurate measurements. Large white area for writing specimen identification. Sterile.

Packed in 2 bags of 50 tubes.

Description	Capacity ml	Ext. diam. mm	Height mm	Thread	PK	Cat. No.
self-standing	1.2	12.6	40.2	external	100	**9.401 160**
self-standing	1.2	12.6	40.2	internal	100	**9.401 161**
self-standing	2.0	12.6	45.6	external	100	**9.401 162**
self-standing	2.0	12.6	48.2	internal	100	**9.401 163**
without ring	2.0	12.6	44.5	external	100	**9.401 164**
without ring	2.0	12.6	47.0	internal	100	**9.401 165**
self-standing	5.0	12.6	87.6	external	100	**9.401 166**
without ring	5.0	12.6	89.2	internal	100	**9.401 167**
self-standing	5.0	12.6	90.3	internal	100	**9.401 168**

Fits in 10 x 10 Cryobox System 100™ 5026, Order No: 9.400 927

2

2 Insert cap disks for LLG cryotubes, PP

Cap-disk with star-shaped insert. For colour-coding of cryotubes and quick identification of the samples.

Colour	PK	Cat. No.
blue	1000	**9.401 170**
white	1000	**9.401 171**
yellow	1000	**9.401 172**
pink	1000	**9.401 173**
red	1000	**9.401 174**
green	1000	**9.401 175**

1 2 Cryogenic tubes, PP

BRAND

Designed for storage of biological material, such as microorganisms, human and animal cells, etc. in the gas phase of liquid nitrogen.
Graduated, 12.5 mm o.d. Large frosted marking area and coloured cap inserts for easy sample identification.
Temperature stability to -196 °C. gamma-ray sterile (SAL 10^{-6}) and autoclavable at 121 °C (2 bar), according to DIN EN 285. Cryogenic vials are sterile, RNase-, DNase-, DNA- and endotoxin-free.

Description	Capacity ml	Grad. up to ml	Height mm	Thread	PK	Cat. No.
self-standing	1.2	1.0	41	external	1000	**6.801 655**
round-bottom	2.0	1.8	47	external	1000	**6.206 393**
self-standing	2.0	1.8	49	external	1000	**7.079 366**
self-standing	3.0	3.0	70	external	1000	**6.802 266**
self-standing	4.0	3.6	76	external	1000	**7.059 827**
self-standing	5.0	4.5	90	external	1000	**7.300 349**
self-standing	1.2	1.0	41	internal	1000	**7.300 557**
self-standing	2.0	1.8	49	internal	1000	**7.053 349**
round-bottom	2.0	1.8	48	internal	1000	**7.604 109**
round-bottom	4.0	3.6	70	internal	1000	**9.401 223**
self-standing	4.0	3.6	71	internal	1000	**9.401 224**
round-bottom	5.0	4.6	90	internal	1000	**7.610 567**

3 Cap coders, PP for Brand® cryogenic tubes

For colour coding. Fit for all sizes.

BRAND

Colour	PK	Cat. No.
white	500	**7.200 575**
blue	500	**7.077 849**
red	500	**7.053 350**
green	500	**7.079 679**
yellow	500	**7.600 162**

4 Cryovials with external screw thread, PP

With screw cap, self-standing. Increase storage capacity in mechanical and gaseous phase liquid nitrogen freezers. With writing area and graduation.
Gamma radiation sterilized. One-handed operation possible. DNAse/RNAse free.
Pyrogen-free and non-cytotoxic.
SYSTEM 100: Cryovials for space-saving storage (10 x 10 per box).

Thermo Scientific

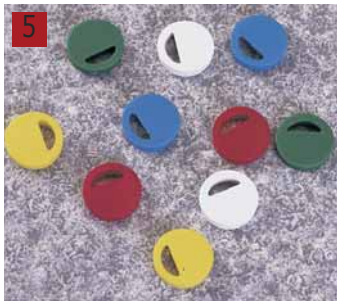
Type	Cover type	Description	Sterile	Capacity ml	Ext. diam. mm	Height mm	PK	Cat. No.
5000	PP	silicone gasket, SYSTEM 100	+	1.0	12.0	38	500	**4.675 510**
5000	PP	silicone gasket, SYSTEM 100	+	1.5	12.0	48	500	**4.675 511**
5000	HDPE	sealing ring	+	1.2	13.5	38	500	**4.675 512**
5000	HDPE	sealing ring	+	2.0	13.5	48	500	**4.675 513**
5000	HDPE	sealing ring	+	5.0	13.5	92	250	**4.675 514**
5005* **	HDPE	without inlay	+	15.0	33.0	47	75	**9.400 950**

*not DNase-/RNase-free
**Flat bottom
Also available in a larger pack size (1000 pc.).

5 Colour Coders for Cryotubes Nalgene™, PS

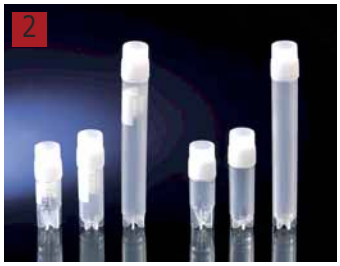
Coloured PS cap inserts.

Thermo Scientific



Colour	PK	Cat. No.
white	100	**9.400 967**
yellow	100	**9.400 968**
blue	100	**9.400 969**
green	100	**9.400 970**
red	100	**9.400 971**

Cryo labels - please see page 764.



1 2 Cryotubes Nunc with External Thread, PP/PE

Thermo Scientific

Intended for cryogenic transportation and storage of biological material.
Available in three different tube types: Round or conical bottom shape with starfoot or round without foot (= non free standing). Conform to the IATA requirements for the transport of diagnostic specimens and to the US pharmacopoeia USP Class VI. Packed in resealable zip lock bags with printed catalog no. and lot. no. Pyrogen-free. Non-toxic. Sterile (SAL 10^{-6}).
Certified RNase- and DNase-free.

Material tubes: PP
Material screw caps: PE

Warning:
Do not use CryoTubes in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ Tubing (Cat. No. 4.009 142). Improper use may cause liquified nitrogen to be trapped inside the vial and lead to pressure build-up, resulting in possible explosion or biohazard release.

Description	Capacity ml	Ext. diam. mm	Height mm	PK	Cat. No.
Conical, starfoot and writing area	1.0	12.5	41	2000	**4.675 472**
Round, starfoot and writing area	1.8	12.5	48	1800	**4.675 471**
Round, starfoot and writing area	4.5	12.5	91	1200	**4.675 474**
Conical, starfoot	1.0	12.5	41	2000	**4.009 087**
Round, starfoot	1.8	12.5	48	1800	**4.675 478**
Round, starfoot	4.5	12.5	91	1200	**4.008 952**
Round, writing area*	1.0	12.4	30	500	**6.800 399**

* Closure design does not permit the use of Cryo Color Coders.

3 4 Cryotubes Nunc with Internal Thread, PP, sterile

Thermo Scientific

Intended for cryogenic transportation and storage of biological material.
Internal thread with a silicone gasket provides the best possible seal.
Available in four different bottom shapes: Round with or without free standing and round or conical with starfoot.
Conform to the IATA requirements for the transport of diagnostic specimens and to the US pharmacopoeia USP Class VI. Packed in resealable zip lock bags with printed catalog no. and lot. no. Pyrogen-free. Non-toxic. Sterile (SAL 10^{-6}). Certified RNase- and DNase-free.
Material tube and screw cap: PP

Warning:
Do not use CryoTubes in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ Tubing (Cat. No. 4.009 142). Improper use may cause liquified nitrogen to be trapped inside the vial and lead to pressure build-up, resulting in possible explosion or biohazard release.

Description	Capacity ml	Ext. diam. mm	Height mm	PK	Cat. No.
Round and writing area	1.8	12.5	48.0	2000	**4.675 469**
Round and writing area	3.6	12.5	70.0	1600	**4.675 480**
Round and writing area	4.5	12.5	92.0	1200	**4.675 481**
Round, starfoot and writing area	1.8	12.5	49.0	1800	**4.675 476**
Round, starfoot and writing area	3.6	12.5	72.0	1600	**4.675 473**
Round, starfoot and writing area	4.5	12.5	92.0	1200	**4.675 475**
Round, free standing and writing area	1.8	12.5	49.0	1800	**4.675 477**
Round, starfoot	0.5	8.8	35.0	960	**4.008 814**
Round, starfoot	1.0	8.8	48.5	960	**4.008 821**
Conical, starfoot and writing area	1.0	12.5	42.0	2000	**4.675 470**
Conical, free standing and writing area	1.0	12.5	42.0	2000	**4.675 479**

5

5 Colour Coders for Cryotubes Nunc™, PC

Thermo Scientific

Use Nunc Cryo Colour Coders as part of a versatile and comprehensive filing system.
Fit all CryoTubes™ and are available in 10 different colours.

Colour	PK	Cat. No.
Red	500	**7.079 568**
Orange	2000	**9.401 272**
Brown	500	**7.630 646**
White	2000	**9.401 274**
Blue	2000	**9.401 275**
Green	2000	**9.401 276**
Magenta	500	**6.204 811**
Yellow	2000	**9.401 278**
Purple	500	**6.901 208**
Grey	500	**6.901 244**
Assorted colours	500	**7.200 519**

1 Cryogenic vial racks, PC

Blue. Safe storage and transport of cryogenic vials. *Heathrow Scientific*

- Drainage holes in each well
- Alphanumeric identification
- Temperature resistant up to -196 °C
- Autoclavable

Volume litres	Array	For tubes diam. mm	PK	Cat. No.
2 - 5	50	12.9	4	**6.238 908**

1

2 LLG-Cryogenic storage boxes, plastic coated, 136 x 136

Freezer and cryogenic storage boxes (CryoBoxes). Dimensions: 136 x 136mm square. For the storage of samples. Made of cardboard, **plastic coated** without divider. With lid. Further colours available on request.

Colour	Int. height mm	PK	Cat. No.
white	32	1	**4.653 682**
blue	32	1	**6.269 788**
red	32	1	**6.269 789**
green	32	1	**6.269 790**
white	50	1	**6.080 130**
yellow	50	1	**6.077 876**
blue	50	1	**6.077 875**
green	50	1	**6.081 021**
red	50	1	**6.081 022**
white	75	1	**6.802 726**
blue	75	1	**6.260 006**
red	75	1	**6.260 007**
green	75	1	**6.260 008**
yellow	75	1	**6.260 009**
white	100	1	**6.237 840**
blue	100	1	**6.260 010**
red	100	1	**6.260 011**
yellow	100	1	**4.654 547**
white	130	1	**6.083 519**

2

3 LLG-Partition inserts for Cryoboxes, 136 x 136

For cryoboxes 136 x 136 mm. With compartment heights and formats as indicated. Other sizes available on request.

Height mm	Array	For tubes diam. mm	PK	Cat. No.
22	7 x 7	17.9	1	**4.654 558**
22	8 x 8	15.7	1	**4.654 557**
22	9 x 9	13.9	1	**4.654 556**
22	10 x 10	12.5	1	**4.654 555**
40	9 x 9	13.9	1	**9.405 872**
22	12 x 12	10.2	1	**4.654 554**
22	13 x 13	9.4	1	**4.654 553**
22	14 x 14	8.7	1	**4.654 552**
22	16 x 16	7.5	1	**6.257 202**
30	4 x 4	32.0	1	**6.305 840**
30	5 x 5	25.5	1	**9.401 055**
30	6 x 6	21.0	1	**6.090 419**
30	7 x 7	17.9	1	**7.617 877**
30	8 x 8	15.7	1	**6.243 752**
30	9 x 9	13.9	1	**9.405 871**
30	10 x 10	12.5	1	**9.405 875**
30	12 x 12	10.2	1	**9.401 050**
30	13 x 13	9.4	1	**6.228 893**
30	14 x 14	8.7	1	**6.260 016**
30	16 x 16	7.5	1	**9.405 883**
40	4 x 4	32.0	1	**6.401 505**
40	5 x 5	25.5	1	**6.260 020**
40	6 x 6	21.0	1	**6.202 839**
40	7 x 7	17.9	1	**6.802 215**
40	8 x 8	15.7	1	**6.900 361**
40	10 x 10	12.5	1	**9.405 876**
40	12 x 12	10.2	1	**9.405 880**
65	6 x 6	21.0	1	**6.201 071**
65	8 x 8	15.7	1	**6.801 789**
65	9 x 9	13.9	1	**9.405 873**
65	10 x 10	12.5	1	**9.405 877**
65	4 x 4	32.0	1	**9.405 870**
65	5 x 5	25.5	1	**6.079 677**

3

1

1 LLG-Cryogenic storage boxes, plastic coated, 133 x 133

Dimensions: 133 x 133mm square. For the storage of samples. Made of cardboard, **plastic coated**.
Without divider. With lid. Further sizes and colours available on request.

Colour	Int. height mm	PK	Cat. No.
white	32	1	**6.260 029**
red	32	1	**6.234 735**
green	32	1	**4.654 505**
yellow	32	1	**4.654 506**
blue	32	1	**6.802 431**
white	50	1	**6.082 701**
red	50	1	**6.081 654**
green	50	1	**6.084 538**
yellow	50	1	**6.260 091**
blue	50	1	**6.700 568**
white	75	1	**6.801 707**
green	75	1	**6.803 056**
yellow	75	1	**6.260 031**
blue	75	1	**9.698 776**
white	100	1	**6.260 032**
red	100	1	**9.698 787**
green	100	1	**9.698 788**
yellow	100	1	**9.698 789**
blue	100	1	**9.698 786**
white	130	1	**6.260 033**

2

2 LLG Partition inserts for Cryoboxes, 133 x 133

For cryoboxes 133 x 133 mm. With compartment heights and formats as indicated.
Other sizes available on request.

Height mm	Array	For tubes diam. mm	PK	Cat. No.
22	8 x 8	15.0	1	**4.654 512**
22	9 x 9	13.0	1	**6.265 799**
22	10 x 10	12.0	1	**6.265 800**
22	12 x 12	9.8	1	**4.653 626**
30	4 x 4	30.8	1	**6.260 038**
30	5 x 5	24.5	1	**7.606 811**
30	6 x 6	20.3	1	**6.265 798**
30	7 x 7	17.3	1	**9.698 773**
30	8 x 8	15.0	1	**9.698 772**
30	9 x 9	13.0	1	**6.081 879**
30	10 x 10	12.0	1	**6.075 820**
30	12 x 12	9.8	1	**6.260 035**
40	4 x 4	30.8	1	**4.654 519**
40	5 x 5	24.5	1	**6.260 044**
40	6 x 6	20.3	1	**6.260 043**
40	7 x 7	17.3	1	**9.698 783**
40	8 x 8	15.0	1	**9.698 782**
40	9 x 9	13.0	1	**9.698 781**
40	10 x 10	12.0	1	**9.698 780**
65	3 x 3	41.2	1	**4.654 521**
65	4 x 4	30.8	1	**6.079 079**
65	5 x 5	24.5	1	**6.260 046**
65	6 x 6	20.3	1	**6.206 129**
65	7 x 7	17.3	1	**9.698 793**
65	8 x 8	15.0	1	**9.698 792**
65	9 x 9	13.0	1	**9.698 791**
65	10 x 10	12.0	1	**9.698 790**
30	14 x 14	8.3	1	**4.654 514**

3

3 Cryogenic Cardboard Boxes, 145 x 145 and Partitions

For storage of large samples and 15 and 50 ml tubes. One size box safely stores 15 and 50 ml tubes in LN_2 or mechanical freezers. Choose from two partitions for your tube size.
Colour white.

Heathrow Scientific

Description	Int. height mm	PK	Cat. No.
Box for 15 or 50 ml tubes, with lid	122	1	**6.254 570**
Partition for 16 x 50 ml tubes	122	1	**6.254 571**
Partition for 36 x 15 ml tubes	122	1	**6.254 572**

1 LLG-Cryogenic storage boxes, PP, autoclavable

With 81 places, 9 x 9 grid and numerical coded. Robust hinge with safe snap-on lid, stackable for safe transport. Minimised liquid retention. Guaranteed metal free. Temperature resistant from -90 °C - +121 °C, autoclavable at 121 °C, opened, 20 minutes. Dimensions: 133 x 133 x 52 mm

1

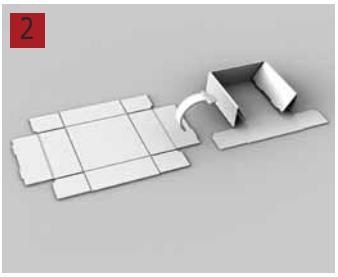
Colour	Array	PK	Cat. No.
Magenta/clear	9 x 9	1	**9.405 800**

Cryogenic Boxes true north® Flatpack

Heathrow Scientific

Reusable, economical and moisture resistant plastic. Made from polypropylene material.
Easy self-assemble boxes shipped flat-packed saving space in the laboratory.
More durable than card boxes as they are not susceptible to moisture.
Significantly reduces the chance of mould. Suitable for repeated freezing and defreezing.
Dividers included with the boxes.

2



2 Cryogenic Boxes true north® Flatpack, PP

Store down to temperatures of -80 °C.

Heathrow Scientific

3

6.281 160

For tubes ml	Colour	Dimensions (W x D x H) mm	Array	PK	Cat. No.
0.2	white	133 x 130 x 30	144	10	**6.281 163**
0.5	white	133 x 130 x 42	81	10	**6.281 166**
0.5	blue	133 x 130 x 42	81	10	**6.281 167**
1.5/2.0	white	133 x 130 x 51	81	10	**6.281 158**
1.5/2.0	blue	133 x 130 x 51	81	10	**6.281 161**
5.0	white	133 x 130 x 75	25	10	**6.281 169**
5.0	blue	133 x 130 x 75	25	10	**6.281 170**
15	white	145 x 147 x 120	36	10	**6.281 172**
15	blue	145 x 147 x 120	36	10	**6.281 173**
50	white	145 x 147 x 120	16	10	**6.281 159**
50	blue	145 x 147 x 120	16	10	**6.281 160**

4 Cryogenic storage boxes Arctic Square®, PC, autoclavable

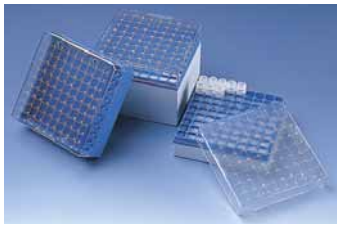
Heathrow Scientific

Safely store vials from -196 to +121 °C for repeated use in mechanical freezers as well as liquid nitrogen.
Boxes are designed with unique features to help the user orient, identify, and access vials with ease.
The forward-sloped base and high-contrast, imprinted indexing on the transparent lid ensure quick visual orientation. Hinged lid allows easy one-handed access to samples. A built-in stop prevents the lid from swinging too far when the box is picked up by the lid, helping to prevent accidental spills.
The 5 x 5 array box does not have hinged lid. All boxes include vent and drainage holes.
Stackable. Autoclavable.

4

For tubes	Colour	Dimensions (W x D x H) mm	Array	PK	Cat. No.
up to 2.0 ml	red	76 x 76 x 53	5 x 5	1	**9.405 911**
up to 2.0 ml	red, blue , green, purple	133 x 133 x 53	9 x 9	4	**9.405 913**
up to 2.0 ml	blue	133 x 133 x 53	10 x 10	1	**9.405 910**

1



1 Storage boxes, PC for cryogenic tubes

BRAND

Operating range: -196 °C to +121 °C (in gas phase of liquid nitrogen).
Autoclavable at 121 °C (2 bar), according to DIN EN 285.

For tubes ml	For thread type	Width mm	Depth mm	Height mm	Aperture array qty.	PK	Cat. No.
1.2 and 2	internal / external	132	132	52	81	1	**7.400 583**
3, 4 and 5	external	132	132	95	81	1	**7.071 111**
1.2 and 2	internal	132	132	52	100	1	**7.300 574**

2

2 Cryogenic boxes, PP, 133 x 133

Ratiolab

For cryogenic storage of cryotubes.

- 9 x 9 grid
- Grid numerically coded
- Removable grid inserts
- Hinge with safe snap-on lid
- Stackable
- Drain bores at the bottom for dew liquid
- Temperature resistant from -90 to 121 °C
- Autoclavable

Colour	Height mm	For tubes ml	PK	Cat. No.
natural	52	1.2 ... 2	1	**9.405 890**
yellow	52	1.2 ... 2	1	**9.405 892**
red	52	1.2 ... 2	1	**9.405 894**
green	52	1.2 ... 2	1	**9.405 896**
blue	52	1.2 ... 2	1	**9.405 898**
black	52	1.2 ... 2	1	**9.405 900**
natural	75	3 ... 4	1	**9.405 891**
yellow	75	3 ... 4	1	**9.405 893**
red	75	3 ... 4	1	**9.405 895**
green	75	3 ... 4	1	**9.405 897**
blue	75	3 ... 4	1	**9.405 899**
black	75	3 ... 4	1	**9.405 901**

3

4

3 4 Cryogenic boxes, slip lid with adaptable height, PP, 133 x 133

Ratiolab

- Made from polypropylene
- Height adaptable from 50 mm to 75 mm, by turning the lid 90°
- 9 x 9 array, 10 x 10 array
- Numerical coded places (except black box)
- Drain bores at the bottom for dew liquids
- Autoclavable, temperature resistant from -90 °C to +121 °C

Colour	For tubes diam. mm	Array	PK	Cat. No.
natural	13	9 x 9	5	**9.405 840**
yellow	13	9 x 9	5	**9.405 843**
red	13	9 x 9	5	**9.405 845**
green	13	9 x 9	5	**9.405 844**
blue	13	9 x 9	5	**9.405 842**
black	13	9 x 9	5	**9.405 846**
natural, yellow, red, green, blue	13	9 x 9	5	**9.405 841**
natural	11.5	10 x 10	5	**9.405 847**
yellow	11.5	10 x 10	5	**9.405 848**
red	11.5	10 x 10	5	**9.405 849**
green	11.5	10 x 10	5	**9.405 850**
blue	11.5	10 x 10	5	**9.405 851**
black	11.5	10 x 10	5	**9.405 852**
natural, yellow, red, green, blue	11.5	10 x 10	5	**9.405 855**

1 Cryogenic Boxes, CryoBoxes™, PC

Thermo Scientific

Robust design, autoclavable. With printed grid on lid for cryovials and similar tubes up to 13.5 mm diameter (except type 5026: up to Ø 12.5 mm). Temperature resistant from -196 to 121 °C.
With grid numbers for reliable identification of individual samples.

Type 5050 is a plain box with transparent PC lid, without grid, used for storing tubes of various sizes.

Type	For tubes ml	Dimensions (l x w x h) mm	Array	PK	Cat. No.
5026	1/1.5	133 x 133 x 52	10 x 10	1	**9.400 927**
5025	1.2/2.0	76 x 76 x 52	5 x 5	1	**9.400 946**
5026	1.2/2.0	133 x 133 x 52	9 x 9	1	**9.400 947**
5027	5.0	133 x 133 x 95	9 x 9	1	**9.400 948**
5050		133 x 133 x 52	1	1	**9.400 949**

2 Cryogenic boxes, 81 well, PP, autoclavable

The boxes are made of polypropylene and can be used in temperatures as low as -90 °C.
The boxes are autoclavable at +121 °C for 20 minutes. The boxes have a fixed grid divider with 9x9 cells and are suited for 1.0 ml and 2 ml cryogenic vials. Cellcodes are printed on the lid for easy identification.

Type	Dimensions (W x D x H) mm	PK	Cat. No.
blue	130 x 130 x 50	1	**9.698 708**
green	130 x 130 x 50	1	**9.698 709**
natural	130 x 130 x 50	1	**9.698 710**
red	130 x 130 x 50	1	**9.698 711**
yellow	130 x 130 x 50	1	**9.698 712**

3 Cryogenic boxes, PP, 81 well, autoclavable

Heathrow Scientific

Polypropylene box fits in standard freezer racks. Locate tubes is easily with moulded grid lines and a moulded reference point on the lid.
Stores 1.5 ml to 2.0 ml microtubes under easy-open, friction-fit lid.
Dimensions: 130 mm x 130 mm x 47 mm. Autoclavable.

Colour	PK	Cat. No.
natural	1	**9.193 983**
blue	1	**7.078 821**
green	1	**7.058 103**
pink	1	**7.058 102**
yellow	1	**7.078 822**
orange	1	**7.083 522**
black	1	**6.282 195**
blue, green, pink, yellow, orange	5	**9.193 984**

1

1 Microtube Storage Boxes, PP, 50-/100-Well

Heathrow Scientific

A 121 °C

Autoclavable. Compact storage box has angled front slot for easy access to tubes. Rugged, polypropylene box has durable three-point hinges, snapping clasp for secure closure, moulded grid lines on lid, imprinted coordinates on bottom of base and imprinted and raised coordinates on tube wells. Ideal for sample or case study storage. Holds 1.5 ml to 2.0 ml microtubes. Resist storage temperatures from -80 to +121 °C.

Colour	Dimensions (l x w x h) mm	Array	PK	Cat. No.
blue, green, purple, yellow, orange	141 x 92 x 56	50	5	**9.193 985**
natural	141 x 92 x 56	50	1	**6.243 162**
blue, green, purple, yellow, orange	141 x 151 x 57	100	5	**9.193 981**
natural	141 x 151 x 57	100	1	**6.206 710**
black	141 x 151 x 57	100	1	**6.253 894**

2 Microtube Storage Boxes, PC

ISOLAB

Manufactured from polycarbonate with high mechanical strength and high temperature resistance between -196 to +121 °C. Uniquely designed to carry 81 cryo tubes in 9 x 9 array "Hedgehog" designed tube compartments holds the tube in their position firmly. Unique design with vent and drainage holes guarantees best, efficient air circulation. Forward slope base ensures quick visual orientation. Easily stackable for reducing storage space. Hinged lid with built-in stop allows easy one-handed access to tubes. Clear box lid enables easy identification of box content and protects the tubes from dust, moisture and other environmental effects. Alphanumerical index both on tube rows and the lid enables easy identification of tube positions. Box is supplied together with a disposable forceps, made from ABS, with fine end for easy handling and fast removal of tubes.

Volume ml	Colour	Dimensions (W x D x H) mm	PK	Cat. No.
2.0	green	133 x 133 x 53	1	**4.664 457**
5.0	blue	133 x 133 x 96	1	**6.286 848**

2

3

3 50-/100-Well cryogenic boxes, EPS

Heathrow Scientific

Inexpensive freezer storage. Lightweight 1.5ml to 2.0ml microtube racks are ideal for long-term studies or tube storage. Two-piece racks are constructed of expanded polystyrene (EPS) foam. Extra spacing between wells allows easy gripping with fingertips. Racks stack securely with nesting features on lid and base. Resist storage temperatures from -80 °C up to +70 °C. Not autoclavable.

Dimensions (l x w x h) mm	No. of wells	PK	Cat. No.
210 x 100 x 71	50	1	**9.193 987**
336 x 95 x 73	100	1	**9.193 986**

4

4 Cryoware marker set Nalgene™, Type 6313

Thermo Scientific

For durable labelling of cardboard, plastic and cloth material for use at ultra-low temperatures. Non-smudge and non-running. Removable with alcohol. Extra fine point. Two packs available: 1 pack contains one each red, green, black and blue marker while the other pack contains black markers only.

Type	Description	PK	Cat. No.
6313	Assorted	4	**9.400 978**
6313	Black	4	**9.400 979**

1 Chest Freezers Racks, vertical

Stainless steel racks, suitable for all brands of chest freezer.
For boxes up to 136 x 136 mm.

Type	Width	Depth	Height	Height Box	PK	Cat. No.
	mm	mm	mm	mm		
7 x 1	140	141	390	approx. 53	1	**9.698 962**
10 x 1	140	141	557	approx. 53	1	**9.698 746**
11 x 1	140	141	613	approx. 53	1	**9.698 963**
12 x 1	140	140	665	approx. 53	1	**9.698 964**
13 x 1	140	141	724	approx. 53	1	**9.698 965**
5 x 1	140	141	406	approx. 78	1	**9.698 967**
8 x 1	140	141	649	approx. 78	1	**9.698 966**
9 x 1	140	141	730	approx. 78	1	**9.698 968**

1

2 Upright Freezer Racks

Stainless steel racks, suitable for all brands of upright freezers.
For boxes up to 136 mm x 136 mm.

Type	Width	Depth	Height	Height Box	PK	Cat. No.
	mm	mm	mm	mm		
2 x 3	140	423	164	approx. 75	1	**9.698 954**
4 x 3	140	419	221	approx. 50	1	**9.698 950**
6 x 4	140	562	331	approx. 50	1	**9.698 959**
4 x 4	556	140	326	approx. 78	1	**9.698 960**
5 x 4	556	140	407	approx. 78	1	**9.698 961**
4 x 4	558	139	221	approx. 53	1	**9.698 969**
3 x 4	558	139	168	approx. 53	1	**9.698 970**
5 x 4	558	139	276	approx. 53	1	**9.698 971**
7 x 4	556	140	392	approx. 53	1	**9.698 972**
4 x 5	688	139	221	approx. 53	1	**9.698 973**
5 x 3	419	139	276	approx. 53	1	**9.698 974**
3 x 4	556	139	240	approx. 78	1	**9.698 975**
3 x 3	419	139	240	approx. 78	1	**9.698 976**

2

3 Racks for cryoboxes Arctic Squares®

Heathrow Scientific

Stainless steel. Fits most standard upright freezers.
Overall rack size (H x W x D): 238 x 139 x 571 mm.
With four drawers to hold 16 boxes of 133 x 133 x 53 mm.
Drawers feature a unique stop that when fully extended pivot down allowing for easy box access.
Freezer rack also includes a pull-out wire handle for easy removal off the shelf. Polycarbonate drawer handles provide a user-friendly grip. Includes a slot and label for drawer/sample identification.

Type	PK	Cat. No.
Arctic Squares®	1	**9.193 980**

3

4 Deep freeze labels TOUGH-SPOTS®

Heathrow Scientific

Pre-cut Peel-off round lables for 0.5 and 1.5/2.0 ml microcentrifuge tube tops.
Temperature resistant from -196 °C to 80 °C.
Easy to write on: PVC labels accept writing from most lab markers.
Convenient: Dispensing box assists in labeling individual tubes used in small experiments.

Colour	Diam.	For vessels	PK	Cat. No.
	mm			
White	9.5	0.5 ml Tubes	1000	**9.040 711**
Blue	9.5	0.5 ml Tubes	1000	**9.040 712**
Green	9.5	0.5 ml Tubes	1000	**9.040 713**
Red	9.5	0.5 ml Tubes	1000	**9.040 714**
Yellow	9.5	0.5 ml Tubes	1000	**9.040 715**
Pink	9.5	0.5 ml Tubes	1000	**6.267 506**
Coffee	9.5	0.5 ml Tubes	1000	**6.267 517**
Orange	9.5	0.5 ml Tubes	1000	**6.267 518**
White	13.0	1.5/2.0 ml Tubes	1000	**9.040 716**
Blue	13.0	1.5/2.0 ml Tubes	1000	**9.040 717**
Green	13.0	1.5/2.0 ml Tubes	1000	**9.040 718**
Red	13.0	1.5/2.0 ml Tubes	1000	**9.040 719**
Yellow	13.0	1.5/2.0 ml Tubes	1000	**9.040 720**
Lavendel	13.0	1.5/2.0 ml Tubes	1000	**6.287 530**

4

1

1 Deep freeze labels Cryo-Babies®/Cryo-Tags®

Heathrow Scientific

Temperature resistant from -196 °C to +150 °C. All labels withstand freezer temperatures down to -196 °C (liquid and vapour phase nitrogen), boiling water baths, autoclaving and moderate ovens (150 °C). Chemically inert labels resist most organic solvents and caustic agents. They adhere to most plastics, glass and metals without cracking, peeling or degrading. Made with a flexible, polyolefin label material and acrylic adhesive. This unique combination expands and contracts together with temperature fluctuations resulting in a strong adhesive bond. Convenient dispensing box assists in labeling individual tubes used in small experiments. Easy to write on.
PVC labels accept writing from most lab markers including solvent resistant pens.

Type	Colour	Dimensions (W x D) mm	For vessels	PK	Cat. No.
Cryo-Babies®	White	24 x 13	0.5 ml tubes	1000	**9.100 030**
Cryo-Babies®	White	33 x 13	1.5/2.0 ml tubes	1000	**9.100 031**
Cryo-Tags®	White	38 x 13	General application	1000	**9.100 032**

2

2 Deep freeze labels

ISOLAB

Manufactured from polyfiber grade flexible paper with acrylic resin adhesive back.
This unique combination expands and retracts together with temperature fluctuations and always guarantees a strong adhesive bond. Chemically inert, resists to water, moisture and most organic solvents and caustic agents. Can be used between -196 to +80 °C temperature range.
Sticks to any clean surface including PTFE coated surfaces without cracking, peeling and degrading.
Peels off without leaving any sticky residue. Recommended to be used on tube caps with different diameters.
Supplied as white color or pack of 6 different colors matching the universal hazard color codes (yellow for chemical reactivity, blue for health hazards, green for safety, red for flammability, orange tape for biohazard and white for general use).

Diam. mm	Colour	For vessels	PK	Cat. No.
9.5	white	0.5 ml Tubes	1000	**6.286 763**
9.5	yellow, blue, green, red, orange, white	0.5 ml Tubes	6000	**6.286 764**
13.0	white	1.5/2.0 ml Tubes	1000	**6.286 765**
13.0	yellow, blue, green, red, orange, white	1.5/2.0 ml Tubes	6000	**6.286 766**
19.0	white	15 ml Tubes	500	**6.286 767**
25.0	white	50 ml Tubes	500	**6.286 768**

3

3 Label Dispenser for Deep freeze labels

ISOLAB

Perfect organizer for fast and efficient use of labels. Manufactured from clear acrylic and holds 6 label box. Drop the label box in the label dispenser and feed the paper through the slot. The writing surface enables easy and clean writing on the label. The sharp cutting edge helps to tear off the labels. A weighted base with nonskid pads prevents sliding or lifting. The article is delivered without pen.

Type	PK	Cat. No.
Label Dispenser for Deep freeze labels	1	**6.286 769**

4

9.409 015

LLG-Temperature block *exact*, aluminium

Suitable for both cooling and heating, universally usable, uniform temperature distribution within the block, ideal for all temperature-sensitive applications.

Aluminum blocks with conical compartments and closed bottom for easy and precise tempering of reaction tubes and PCR tubes. The precisely adapted shape of the borings and the closed bottom offer advantages compared with cylindrical drilled blocks with open bottom, such as much better heat transfer and temperature accuracy.
Made of a special aluminum alloy with high thermal conductivity. Identical temperature conditions for all samples.
Compact size, requiring little space. Suitable for 96-well plates, 8 or 12 strips and single tubes.
Ideal for working with 8- or 12-channel pipettes. Blocks for different tube sizes and combinations of tube sizes as indicated, all working steps in one block, holes closed at the bottom and tapered to fit perfectly the respective tube sizes and offer an optimum heat exchange.

5

9.409 017

Array	Dimensions (W x D x H) mm	PK	Cat. No.
96 x 0.2 ml PCR tubes + 6 x 1.5 ml tubes	118 x 89 x 24	1	**9.409 015** 4
36 x 0.5 ml tubes + 11 x 1.5 ml tubes	180 x 79 x 24	1	**9.409 016**
24 x 1.5 ml tubes	115 x 89 x 34	1	**9.409 017** 5
24 x 2.0 ml tubes	115 x 89 x 34	1	**9.409 018**
25 x 2.0 ml Cryogenic tubes with round bottom	197 x 99 x 32	1	**9.409 006**
12 x 15.0 ml Centrifuge tubes	75 x 89 x 38	1	**9.409 008**

Cryogenic items - please see our chapter 7.

Cryovial racks Nalgene™, PC

Thermo Scientific

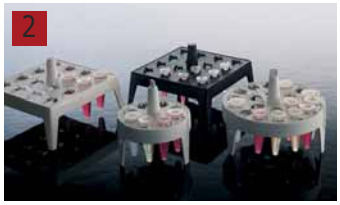
9.400 958

Autoclavable. Space-saving. Choice of sizes to hold 25 or 50 cryovials of 1.2, 2.0 or 5 ml capacities.
With moulded identification numbers and letters. One-handed operation possible.

Width	Length	Height	Aperture array	Colour	PK	Cat. No.
mm	mm	mm	qty.			
102	197	28	5 x 10	white	1	**9.400 944**
102	197	22	5 x 5, staggered	blue	1	**9.400 958** 1

2 Floating cryovial racks Nalgene™, Type 5974, PP

Thermo Scientific



For 0.5 to 2.0 ml test tubes and cryovials. Racks will float with a full load of filled tubes.
With moulded identification numbers and letters.

Type	For tubes	Description	Colour	Dimensions (W x D x H)	Array	PK	Cat. No.
	ml			mm			
5974	1.0/1.2/1.5/2.0	Square	white	103 x 103 x 65	4 x 4	1	**9.400 982**
5974	1.0/1.2/1.5/2.0	Circular	white	66 dia.	8	4	**9.400 983**
5974	1.0/1.2/1.5/2.0	Circular	white	96 dia.	20	4	**9.400 984**

3 Floating Tube Racks, PE

Heathrow Scientific

Polyethylene foam. Resist water absorption so racks can be washed and reused.
Ideal for floating tubes in water baths, tubs, or beakers.
Racks include detachable carrying handles, to lift samples out of baths easily.

Type	For tubes	Colour	Array	PK	Cat. No.
	ml				
Diamond	50	green	4	5	**6.238 546**
Parallelogram	15	blue	8	5	**6.238 547**
Rectangle	1.5 to 2.0	yellow	24	5	**6.238 545**
Round	0.2/0.5/1.5 to 2	blue	18	5	**6.240 378**

4 Cryogenic storage boxes Transformer™ Cube, PP

Heathrow Scientific

For storage of large samples or 15 and 50 ml tubes. Robust, rugged polypropylene construction complete with two Snap-In grids for 16 x 15 ml and 9 x 50 ml tubes. Holds tubes securely upright in deep grid wells.
Locate tubes easily with numbering of inserts on lid, imprinted grid and first tube orientation.
Use without grids for larger sized product storage. Fill with ice and use as a temporary low temperature workstation.
Autoclavable. Dimensions: 125 x 125 x 129 mm. For temperatures from -80 to 121 °C. Purple box with clear lid.

Type	PK	Cat. No.
Box with 2 inserts	1	**6.243 251**

Further Racks - please see page 33.

1

4.658 426

Storage tubes Matrix™ with 2D barcode and screw cap, sterile

For storage in the gas phase of liquid nitrogen. Screw cap tubes Matrix™ with 2D code for sample storage up to gas phase of liquid nitrogen. SBS format with 8x12 grid allows both manual and automated storage. The 2D screw cap tubes can be picked and sorted by a robot. *Thermo Scientific*

Capacity ml	Description	Package contents	PK	Cat. No.
0.2	in barcoded rack	5 racks of 96	480	**4.658 426** 1
0.5	in barcoded rack	5 racks of 96	480	**4.658 412**
0.5	in barcoded rack, with white patch	5 racks of 96	480	**4.658 413**
0.5	2D and linear barcode, in barcoded rack	5 racks of 96	480	**4.658 414**
0.5	in barcoded rack, brown, with red cap	5 racks of 96	480	**4.658 415**
1.0	in barcoded rack	5 racks of 96	480	**4.658 398**
1.0	in barcoded rack, with white patch	5 racks of 96	480	**4.658 399**
1.0	2D and linear barcode, in barcoded rack	5 racks of 96	480	**4.658 400**
1.0	in barcoded rack, brown, with red cap	5 racks of 96	480	**4.658 401**

2

4.658 418

3

4.658 407

Storage tubes Matrix™ with 2D barcode and coloured screw cap, sterile

For storage in the gas phase of liquid nitrogen. *Thermo Scientific*

Capacity ml	Colour Cover	Description	Package contents	PK	Cat. No.
0.5	blue	in barcoded rack	5 racks of 96	480	**4.658 416**
0.5	grey	in barcoded rack	5 racks of 96	480	**4.658 417**
0.5	purple	in barcoded rack	5 racks of 96	480	**4.658 418** 2
0.5	red	in barcoded rack	5 racks of 96	480	**4.658 419**
0.5	white	in barcoded rack	5 racks of 96	480	**4.658 420**
0.5	yellow	in barcoded rack	5 racks of 96	480	**4.658 425**
1.0	blue	in barcoded rack	5 racks of 96	480	**4.658 402**
1.0	grey	in barcoded rack	5 racks of 96	480	**4.658 403**
1.0	purple	in barcoded rack	5 racks of 96	480	**4.658 404**
1.0	red	in barcoded rack	5 racks of 96	480	**4.658 405**
1.0	white	in barcoded rack	5 racks of 96	480	**4.658 406**
1.0	yellow	in barcoded rack	5 racks of 96	480	**4.658 407** 3

Empty racks for storage tubes can be found in our webshop.

4

4 8-channel Decapper for screw cap tubes

Process a full rack of Thermo Scientific™ Matrix™ or Thermo Scientific™ Nunc™ tubes in less than one minute with this ergonomic, manual capper/decapper. The Thermo Scientific™ 8-Channel Screw Cap Capper/Decapper is designed to cap tubes to the optimal torque to maintain sample integrity and prevent sample loss during storage. The 8-channel Capper/Decapper is a practical addition to benchtop processing of screw top storage tubes. *Thermo Scientific*

- Improves processing throughput of manual procedures with automated column-wise decapping and capping in just four seconds
- Ensures reproducibility by capping all tubes to the optimal torque level specified for the tube
- Allows anyone in the lab to cap or decap tubes with a light weight, easy-to-use and ergonomic design
- Stand allows easy storage of removed caps during sample processing steps
- Virtually always available for use with long battery life and quick recharge time

For tubes	PK	Cat. No.
Matrix™ ScrewTop (0.5 ml, 1.0 ml)	1	**7.659 021**
Matrix™ ScrewTop (0.2 ml), Nunc Cryobank (0.5 ml, 1.0 ml, 1.8 ml, 2.0 ml, 5.0 ml)	1	**4.658 357**

1 Capping Systems Matrix™ SepraSeal

1

Thermo Scientific

For open tubes without screw cap.
Thermo Scientific™ Matrix™ SepraSeal tube sealing solutions complement the innovative line of Thermo Scientific Matrix 2D and non-2D coded storage tubes. Available in a range of formats, colors and sterility, there is a sealing option to meet a range of application and storage requirements.

Enhanced Materials
- Made of an advanced thermoplastic elastomer that offers excellent chemical resistance and low vapor transmission rates
- Elastomer ensures sealing performance will not degrade, even after multiple cap piercings

Sample Access Options
- Designed for storage down to -20 °C, Matrix SepraSeal mats are available in sterile, nonsterile, solid, or pre-split, in a range of colors for quick visual sample identification
- Solid seals can be removed for sample access with the Matrix SepraSeal cap removal tool
- For applications involving repetitive sample access, a pre-split Matrix SepraSeal can be pierced by automated liquid handling equipment, requiring very little pressure, while maintaining seal integrity with self sealing closure

Application Flexibility
- Individual tube capping or apply 96 caps at once
- Supplied in mats of 96 caps each, sealing is secure and consistent every time when applied with the Thermo Scientific SuperSealer

Cover type	Description	Package contents	PK	Cat. No.
Natural	non-sterile	10 mats of 96	960	**6.251 983**
Blue	non-sterile	10 mats of 96	960	**4.658 359**
Green	non-sterile	10 mats of 96	960	**4.658 360**
Grey	non-sterile	10 mats of 96	960	**4.658 361**
Purple	non-sterile	10 mats of 96	960	**4.658 362**
Red	non-sterile	10 mats of 96	960	**4.658 363**
Yellow	non-sterile	10 mats of 96	960	**4.658 364**
Natural	sterile	10 mats of 96	960	**4.658 300**
Blue	sterile	10 mats of 96	960	**4.658 365**
Green	sterile	10 mats of 96	960	**4.658 366**
Grey	sterile	10 mats of 96	960	**4.658 367**
Purple	sterile	10 mats of 96	960	**4.658 368**
Red	sterile	10 mats of 96	960	**4.658 369**
Yellow	sterile	10 mats of 96	960	**4.658 370**
Natural	non-sterile, pre-slit	10 mats of 96	960	**6.253 949**
Blue	non-sterile, pre-slit	10 mats of 96	960	**6.253 981**
Green	non-sterile, pre-slit	10 mats of 96	960	**6.253 980**
Grey	non-sterile, pre-slit	10 mats of 96	960	**4.658 371**
Purple	non-sterile, pre-slit	10 mats of 96	960	**4.658 374**
Red	non-sterile, pre-slit	10 mats of 96	960	**6.253 979**
Yellow	non-sterile, pre-slit	10 mats of 96	960	**6.253 982**
Natural	sterile, pre-slit	10 mats of 96	960	**6.254 687**
Blue	sterile, pre-slit	10 mats of 96	960	**4.658 375**
Green	sterile, pre-slit	10 mats of 96	960	**4.658 376**
Grey	sterile, pre-slit	10 mats of 96	960	**4.658 377**
Purple	sterile, pre-slit	10 mats of 96	960	**4.658 378**
Red	sterile, pre-slit	10 mats of 96	960	**4.658 379**
Yellow	sterile, pre-slit	10 mats of 96	960	**4.658 380**
Natural	sterile, pre-slit	1 bag of 500	500	**4.658 312**
	Cap Removal Tool		1	**6.254 390**

2 2D Barcode Reader VisionMate™ ST for single tubes

2

Thermo Scientific

The Thermo Scientific™ VisionMate™ ST Barcode Reader is a compact single tube reader used for instant scanning of individual 2D barcoded tubes into any file or database application. Simple plug-and-play installation via automatically installed USB port allows simple and easy set up. USB working temperature: 4 to 30 °C.

- Instant read time
- Simple to install and use
- For individual sample retrieval
- Export via comma-separated variable file, Microsoft® Excel™, XML, COM port, ODBC or TCP socket
- Supported Barcode Type: any Thermo Scientific 2D Barcoded Storage Tube as well as virtually any other tube with high contrast 2D codes

Type	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
VisionMate™ ST	111 x 87 x 70	0.8	1	**6.268 861**

1

1 Liquid nitrogen container BIO GT, aluminium

NEW

For storage and transport of biological materials. *KGW*

- Super-insulation foil in the vacuum space
- Low evaporation rate
- Transport handle
- With vacuum valve
- Loose lied-on plug
- Canister made of stainless steel

Type	Capacity L	External dimensions (Ø x H) mm	No. of vials 2ml	No. of straws 0.25 ml	No. of canisters	Static holding time Days	PK	Cat. No.
GT 2K *	2.0	174 x 392		330	3	25	1	**4.672 667**
GT 3	3.7	250 x 405		1560	6	33	1	**9.524 383**
GT 11	12.2	308 x 630	180	3120	6	130	1	**9.524 386**
GT 21	21.0	388 x 660	180	3120	6	225	1	**7.982 553**
GT 26	26.7	468 x 460		7380	9	90	1	**9.524 392**
GT 38	37.0	468 x 715	612	9840	6	245	1	**9.524 393**
GT 40	40.0	468 x 710	1200	16400	10	140	1	**9.524 394**

* Canister made of plastic

2

2 Liquid nitrogen container, aluminium

NEW

For storage and transport of liquid nitrogen. *KGW*

- Super-insolation foil in the vacuum space
- Low evaporation rate
- Vacuum valve
- Small-flange KF NW 50
- Loosely resting plug

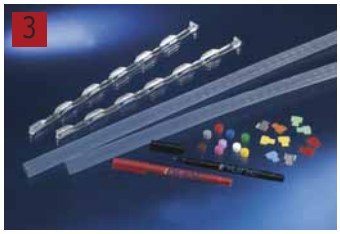
Type	Capacity L	External dimensions (Ø x H) mm	Evaporation rate L/ day	Weight empty/full kg	Static holding time Days	PK	Cat. No.
ALU 10	12.0	305 x 550	0.2	6 / 14	67	1	**6.256 041**
ALU 26	26.0	388 x 670	0.2	14 / 35	130	1	**6.257 855**
ALU 35	34.0	468 x 655	0.24	16 / 43	140	1	**6.238 955**
ALU 60	60.0	468 x 870	0.4	21.5 / 70	150	1	**6.235 695**

Accessories for liquid nitrogen container made of aluminium

KGW

Description	PK	Cat. No.
Transfer siphon EKI incl. safety valve, manometer, pressure reduction valve made of stainless steel, fluid valve made of stainless steel, clamp and O-ring	1	**6.234 251**
Transfer tube made of stainless steel, 1.5 m	1	**7.621 719**
Transfer tube with phase separator	1	**6.234 252**
Screw coupling for pipes (OD 8 mm)	1	**6.226 301**
Screw adapter	1	**6.226 302**
Clamp for KF NW 50	1	**6.234 253**
O-ring KF NW 50 with centering	1	**6.234 254**

3



3 CryoStor Storage Cane 6-fold Aluminium

- For frozen storage of cryovials. *Thermo Scientific*
- Also suitable for tubes protected with Thermo Scientific™ CryoFlex™ tubing
- Compatible with colour coders that attach to the end of the cane and can be written on

Length mm	PK	Cat. No.
290	50	**6.084 320**

4

4 Aluminium holder Nalgene™ CryoCane™, Type 5015

For frozen storage of cryovials 1.2, 1.5 or 2.0 ml. *Thermo Scientific*

For	Type	Length mm	PK	Cat. No.
5 cryovials	5015	290	1	**9.400 956**
6 cryovials	5015	300	12	**9.400 935**

1 Sleeve Nalgene™ CryoSleeve™, Type 5016

Made of transparent PVC. For KryoCane™ aluminium vial holder. *Thermo Scientific*

Type	Length mm	PK	Cat. No.
5016	273	100	**9.400 957**

2 Dewar flasks Nalgene™, Type 4150, HDPE

With vented, insulating HDPE lid. PE covered handle. Unbreakable and completely safe for short term storage of ice water, dry ice solvents and liquid nitrogen.
Also suitable for use as warming baths. Chemical-resistant, reinforced walls, filled with urethane foam, are temperature resistant from -196 to +100 °C.
1, 2 and 4 litre flasks have a carrying handle. *Thermo Scientific*

Type	Capacity Litres	Top diam. mm	Int. height mm	PK	Cat. No.
4150	1	96	195	1	**9.031 961**
4150	2	122	231	1	**9.031 962**
4150	4	158	259	1	**9.031 964**
4150	10	198	396	1	**9.031 970**

3 Dewar flasks, shallow form, for CO_2 and LN_2

DURAN®. DIN 12492. Dish-shaped. Generally for thermostatting round bottom flasks to a constant temperature as hot or cold baths. With structured aluminium casing and edge protection. Suitable for use with magnetic stirrers. *KGW*

Capacity ml	Int. diam. mm	Height mm	PK	Cat. No.
120	77	50	1	**9.032 422**
260	100	65	1	**9.032 423**
400	110	70	1	**9.032 425**
680	138	80	1	**9.032 426**
1600	170	110	1	**9.032 427**
3000	200	125	1	**6.075 807**

Dewar carrying flasks, cylindrical, for CO_2 and LN_2

DURAN®. DIN EN ISO 16496. Cylindrical design with insulated lid, held by two spring clips and aluminium carrying handle. For cooling, storage and transport of small samples of temperature-sensitive goods e.g. with liquid nitrogen (LN_2) or dry ice (CO_2).
When storing liquid nitrogen (LN_2) or CO_2 a hole (diam. approx. 2 mm) in centre of the lid is necessary that no overpressure can arise in the vessel. *KGW*

Type B: blue-coated metal cover
Type BE: stainless steel cover

Type	Capacity Litres	Int. diam. mm	Int. height mm	PK	Cat. No.
26 B	1	100	150	1	**9.032 726** 4
27 B	2	138	170	1	**9.032 727**
28 B	3	138	230	1	**9.032 728**
29 B	4	138	310	1	**9.032 729**
26 BE	1	100	150	1	**9.032 736**
27 BE	2	138	170	1	**9.032 737**
28 BE	3	138	230	1	**9.032 738**
29 BE	4	138	310	1	**9.032 739**

1 2 3 4 Dewar vessels, cylindrical, for CO_2 and LN_2

DURAN®. DIN 12492. Cylindrical. Borosilicate glass 3.3. With blue coated protective casing out of metal or structured aluminium casing. Large opening. With insulated lid. Carrying handles as indicated. For cooling and storage of temperature-sensitive goods e.g. with dry ice (CO_2). When storing liquid nitrogen (LN_2) a hole (diam. approx. 2 mm) in centre of the lid is necessary. *KGW*

Capacity l	Int. diam. mm	Int. height mm	Figure	With	PK	Cat. No.
10	200	350	a	Handle	1	**9.032 131**
10	200	350	d	Handle	1	**9.032 742**
14	200	500	a	Handle	1	**9.032 132**
14	200	500	d	Handle	1	**6.070 411**
21	250	480	c	Side grips	1	**9.032 133**
21	250	480	b	Side grips	1	**9.032 743**
28*	250	620	c	Side grips	1	**9.032 134**
28	250	620	b	Side grips	1	**6.300 165**

*Linen bag included.

1

a

2

b

3

c

4

d

5

5 Dewar flasks, cylindrical, for CO_2 and LN_2

DURAN®. DIN EN ISO 16496. Cylindrical. With blue coated protective casing made of metal. All vessels can also be supplied without casing, unsilvered or silvered with opposite viewing strips. Stoppers - please order separately. *KGW*

Type	Capacity ml	Int. diam. mm	Int. height mm	PK	Cat. No.
00 C	100	40	90	1	**9.032 011**
0 C	200	40	170	1	**9.032 012**
1 C	300	47	190	1	**9.032 013**
2 C	450	47	270	1	**9.032 014**
3 C	500	57	210	1	**9.032 015**
4 C	750	57	310	1	**9.032 016**
5 C	1250	57	500	1	**9.032 017**
6 C	800	67	240	1	**9.032 018**
7 C	1200	67	350	1	**9.032 019**
9 C	1000	77	235	1	**9.032 021**
10 C	1500	77	345	1	**9.032 022**
11 C	2100	77	500	1	**9.032 023**
12 C	1500	90	245	1	**9.032 024**
13 C	2000	90	340	1	**9.032 025**
14 C	3200	90	600	1	**9.032 026**
15 C	1500	100	240	1	**9.032 027**
16 C	2000	100	290	1	**9.032 028**
17 C	4000	100	600	1	**9.032 029**
18 C	2500	110	290	1	**9.032 030**
19 C	5000	110	600	1	**9.032 031**
20 C	3000	138	230	1	**9.032 032**
S 21 C	4000	138	310	1	**9.032 033**
S 22 C	8000	138	600	1	**9.032 034**

1 Dewar flasks, cylindrical, with side grip

DURAN®. DIN EN ISO 16496. *KGW*
With blue coated protective casing out of metal and side grip.

Type	Capacity ml	Int. diam. mm	Ext. diam. mm	Int. height mm	PK	Cat. No.
G0C	200	40	56	170	1	**7.200 338**
G1C	300	47	60	190	1	**6.803 703**
G3C	500	57	70	210	1	**6.800 771**
G6C	800	67	80	240	1	**6.083 078**
G9C	1000	77	95	235	1	**6.053 660**
G7C	1200	67	80	350	1	**6.078 740**
G10C	1500	77	95	345	1	**6.059 732**
G12C	1500	90	115	245	1	**6.076 560**
G13C	2000	90	115	340	1	**6.076 997**
G15C	1500	100	120	240	1	**6.070 692**
G16C	2000	100	120	290	1	**6.801 610**
G18C	2500	110	130	290	1	**6.070 548**
GS21C	4000	138	160	310	1	**6.090 309**

1

2 Chrome steel Dewar flasks

Nickel chromium steel, unbreakable, open top. With high-vacuum, permanent insulation.
Temperature range -269 to +300 °C. 5 year insulation guarantee.

Capacity L	Tubing i.d. mm	Int. height mm	PK	Cat. No.
0.5	180	79	1	**9.031 981**
1.0	88	207	1	**9.031 982**
1.0	103	158	1	**9.031 983**
2.0	103	286	1	**9.031 984**
3.0	159	189	1	**9.031 985**
6.0	269	189	1	**9.031 986**

2

3 Lid in cork for chrome steel Dewar flasks

Cork.

For	PK	Cat. No.
0,9 l (9.031 981)	1	**9.031 971**
1,0 l (9.031 982)	1	**9.031 972**
1,0-2,0 l (9.031 983 + 9.031 984)	1	**9.031 973**
3,0-6,0 l (9.031 985 + 9.031 986)	1	**9.031 975**

3

4 Dewar flasks, spherical, for LN_2

DURAN®. DIN 16496. Spherical. Brushed aluminium casing with insulating lid and carrying handle. *KGW*

Capacity Litres	Neck diam. mm	Ext. diam. mm	PK	Cat. No.
1	30	175	1	**9.032 740**
3	60	225	1	**9.032 741**
5	60	260	1	**9.032 115**
10	65	330	1	**9.032 127**

4

1

9.699 310

Ultra low temperature freezer, ULUF, up to -90 °C

Arctiko

- Low energy consumption
- Low noise level, low heat dissipation
- Insulated inner doors
- Castors
- Lock on door
- Ergonomic loading
- Heated door frame, heated vacuum valve
- 100 % HCFC/CFC free
- Premade porthole for external temperature probes (diam. 11 mm)
- Single-compressor (ULUF 15, 65, 125, 450, 550) or two compressor systems (ULUF 750) as security in case of failure of a compressor.

Controller features
- Temperature graph
- Micro processor controller with digital display
- Approx. 72 hours battery back up for alarms, loggings and temperature display in case of power cut
- Visual and acoustic alarm, adjustable high/low temperature alarm, power failure alarm, probe failure alarm, instrument failure alarm, open door alarm, contact for remote alarm, prepared for GSM alarm
- Prepared for connection of 2 additional probes
- Integrated data logger (software included)
- RS485/232 Interface
- Computer USB data read out
- Direct download/upload on/from USB memory stick
- Auto cycle if probe failure
- Ambient temperature display
- Shows all alarms as text (no codes)
- 3-level password protected
- Battery level indication
- Integrated memory
- Display text available in different languages

Accessories (optional on request): Racks and boxes, CO_2 backup system, GSM alarm module, cryo gloves, water cooled condensers.

5 year warranty on the compressor.

2

9.699 311

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Weight kg	PK	Cat. No.
ULUF 15	7	400 x 630 x 665	150 x 143 x 310	-90 ... -40	55	1	**6.264 066**
ULUF 65	55	600 x 700 x 810	360 x 468 x 320	-86 ... -40	80	1	**9.699 310** 1
ULUF 125	115	950 x 725 x 810	360 x 493 x 530	-86 ... -40	100	1	**9.699 311** 2
ULUF 450-2M	393	720 x 885 x 1990	480 x 608 x 1345	-86 ... -40	175	1	**6.266 243**
ULUF 550-2M	556	920 x 885 x 1990	680 x 608 x 1345	-86 ... -40	203	1	**7.983 050**
ULUF 750-2M*	646	1030 x 885 x 1989	790 x 680 x 1345	-86 ... -40	254	1	**6.290 902**

*Dual Cooling System: Increased safety due to 2 separate cooling systems.

3

3 Ultra-low temperature freezer, UFV series up to -90 °C

NEW

BINDER

The ultra-low freezers are suitable for the stable long-term storage of sensitive samples and guarantee a constant low temperature. The ultra-low freezers are designed for -90 °C, but can be used in a temperature range from -40 °C to -90 °C.

- Climate-neutral refrigerants R-290 and R-170
- Interior completely made of stainless steel
- Powerful cascade compression refrigeration machine
- Efficient thermal insulation through vacuum insulation panels
- Removable interior doors made of stainless steel
- 3 flexibly positionable shelves made of stainless steel
- Water cooling (depending on variant)
- Optical and acoustic alarms

Specifications

Temperaturrange:	-90 ... -40 °C
Port hole:	2 x Ø 28 mm, rear
Interface:	Ethernet
Power supply:	230 V/50 Hz
Warranty:	5 years

Type	Description	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
UFV500	Standard	477	826 x 938 x 1966	606 x 605 x 1300	1	**4.668 590**
UFV700	Standard	700	1110 x 938 x 1966	890 x 605 x 1300	1	**4.664 563**
UFV500	With water cooling	477	826 x 938 x 1966	606 x 605 x 1300	1	**4.668 591**
UFV700	With water cooling	700	1110 x 938 x 1966	890 x 605 x 1300	1	**6.275 022**

Ultra low temperature Upright Freezers, ULT Series, up to -86 °C

NEW

1

Nordiclab ApS

Supreme stability, reliability, user-friendliness and small dimensions make these freezers the perfect choice for use inside the lab. For temporary to long term storage.
Low power consumption, natural refrigerant, cyclopentane insulation combined with recyclable materials, makes these freezers very environmental friendly. The unit is easy to install. Due to the small footprint, transport through all standard sized doors is possible. In combination with a low weight, it is also easy to move around. The material is galvanized and pre-coated steel on the outside and stainless steel on the inside.

- Temperature logger with USB port
- Data logging 35.000 Entries
- Battery Backup for min. 48 h
- Digital controller with display
- High/low temperature alarm
- Door alarm
- Contact for remote alarm
- Porthole for external probe & CO_2 backup Ø12 mm
- Eco-friendly, HCFC-free Nature R refrigerant

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

Racks must be ordered separately.

4.672 429

Specifications

Adjustable shelves, stainless steel:	2 (5 for U250)
Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	57 dB (64 dB for U250)
Power consumption 24/h:	6.2 kWh (12.8 kWh for U250)
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
ULT U100, under bench	91	430 x 425 x 625	595 x 630 x 830	60	-86 ... -60	1	**4.672 428**
ULT U250	221	435 x 370 x 1420	600 x 630 x 2055	122	-86 ... -60	1	**4.672 429** 1

Ultra low temperature Chest Freezers, ULT Series, up to -86 °C

NEW

2

Nordiclab ApS

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. Low power consumption, natural refrigerant, cyclopentane insulation combined with recyclable materials, makes these freezers very environmental friendly. The unit is easy to install. Due to the small footprint, transport through all standard sized doors is possible. The freezer also has four castors, which makes it very mobile.
The material is galvanized and pre-coated steel on the outside and precoated white steel on the inside.

- Digital controller with display
- Audible and visual alarm
- High/low temperature alarm
- Contact for remote alarm
- Battery Backup 48 h
- Porthole for external probe & CO_2 backup Ø12 mm
- Eco-friendly, HCFC-free Nature R refrigerant

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives new unit.

Racks must be ordered separately.

4.672 427

Specifications

Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	55 dB
Power consumption 24/h (kWh):	5.1 (C75), 5.3 (C200), 8.1 (C300), 9.1 (C400)
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
ULT C75	71	390 x 390 x 465	555 x 580 x 930	45	-86 ... -60	1	**4.672 424**
ULT C200	189	550 x 440 x 635	920 x 630 x 890	65	-86 ... -60	1	**4.672 425**
ULT C300	284	890 x 440 x 635	1265 x 630 x 890	71	-86 ... -60	1	**4.672 426**
ULT C400	368	1190 x 440 x 635	1560 x 630 x 890	80	-86 ... -60	1	**4.672 427** 2

Accessories please see page 780.

Ultra low temperature freezer, ULTF series, up to -86 °C

Arctiko

The ULTF range shows that high performance freezing with focus on low energy consumption is the future.
The range has been updated with our advanced Arctiko controller which ensures that all alarm and data logging features are included as standard. The ULTF range is produced with the true and original single compressor technology which ensures the lowest noise level available.

- Single compressor
- Low energy consumption
- Low noise level
- Low heat dissipation
- 100% HCFC/CFC free
- Sub lids
- Castors and key lock
- Prepared porthole for external temperature probes

Controller features
- Temperature graph
- Micro processor controller with digital display
- Approx. 72 hours battery back up for alarms, loggings and temperature display in case of power cut
- Visual and acoustic alarm
- Adjustable high/low temperature alarm
- Power, probe and instrument failure alarm,
- Open door alarm
- Contact for remote alarm
- Prepared for GSM Alarm
- Prepared for connection of 2 additional probes
- Integrated data logger
- RS485/232 Interface
- Direct upload of new software via USB memory stick
- Direct download of logged data on USB memory stick
- Auto cycle in case of probe failure
- Ambient temperature display
- Shows all alarms (displayed as text, no codes)
- 3-level password protected
- Battery level indication
- Integrated memory for 30 years
- Display text available in different languages

5 year warranty on the compressor.

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Weight kg	PK	Cat. No.	
ULTF 80	71	552 x 648 x 850	390 x 390 x 450	-86 ... -40	53	1	**9.699 320**	1
ULTF 220	189	920 x 695 x 885	760 x 440 x 635	-86 ... -40	64	1	**9.699 321**	
ULTF 320	284	1262 x 698 x 885	1100 x 440 x 630	-86 ... -40	76	1	**9.699 322**	
ULTF 420	368	1562 x 698 x 885	1400 x 440 x 630	-86 ... -40	88	1	**9.699 323**	2

1

9.699 320

2

9.699 323

Freezer boxes B35-50/B35-85, up to -85 °C

Fryka-Kältetechnik

The cold boxes are small benchtop units for cooling and freezing in all laboratories. Due in particular to its compact space-saving design and the low-noise cooling unit, the cold box is suitable for direct use in the workplace.

- Vacuum-Insulation: large interior space with small external dimensions and low power consumption
- Extremely low noise refrigeration unit
- Models with temperature range -85 °C with two-stage cascade refrigeration system
- with natural refrigerants (R-290, R-170)
- Interior made of high quality stainless steel
- Interior without fittings allows easy cleaning and disinfection
- Side air vent, so suitable for installation directly on walls
- Bushing (diameter 10 mm), e.g. for temperature monitoring with external sensors
- Maximum safety, due to mains-independent alarm, battery lasting approx. 72 hours
- Visual and audible signal
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- Potential-free contact for connection to an external alarm system
- RS485 interface
- 100 mV/K-output for connection to a temperature recording system
- Lockable insulating door with door frame heating and double magnetic seal with additional sealing surface
- Stackable unit, max. 2 units

Cold boxes B35 //logg:
- Touchscreen control with color display and integrated data logger for full traceability
- User-friendly menu structure, remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

Stainless steel shelf B 35-RS: 5 drawers, each for 6 standard cryoboxes (135 x 135 x 52 mm).
Extra gaps for optimal, uniform and rapid cooling of the entire frozen product (please order separately).

Specifications

Control accuracy:	±1 K
Ambient temperature:	+12 to +30 °C
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
B 35-50	35	425 x 300 x 280	580 x 765 x 540	65	-50 ... -10	1	**6.284 402**
B 35-50 //logg	35	425 x 300 x 280	580 x 765 x 580	65	-50 ... -10	1	**6.284 403**
B 35-85	35	425 x 300 x 280	580 x 765 x 540	81	-85 ... -50	1	**7.982 609** 1
B 35-85 //logg	35	425 x 300 x 280	580 x 765 x 580	81	-85 ... -50	1	**6.284 404** 2
Shelf B 35-RS						1	**6.284 406** 3

1

7.982 609

2

6.284 406

3

6.284 406

FRYKA

COOLING AND FREEZING UP TO -85°C

Expertise in cooling and freezing
FOR OVER 40 YEARS
FRYKA Kältetechnik

MADE IN GERMANY

Cooling and freezing of gases, liquids and solids

Robust and durable technology, sophisticated functions as well as a particularly simple handling: All that makes FRYKA recirculating chillers and freezers the first choice in many segments of modern research and industry.

www.fryka.de

Underbench freezers TUS 50-100/TUS 80-100, up to -80 °C

Fryka-Kältetechnik

The freezers have a usable space of 100 litres and can be used for cooling and freezing in industrial and scientific laboratories. Particularly due its compact, space-saving design with low-noise cooling unit, the underbench freezer is suitable for use directly under or even on the desk at work.

- Vacuum-Insulation: large interior space with small external dimensions and low power consumption
- Extremely low noise refrigeration unit
- Models with temperature range -80 °C: with two-stage cascade refrigeration system
- With natural refrigerants (R-290, R-170)
- Interior made of high quality stainless steel
- Bushing (diameter 19 mm), e.g. for temperature monitoring with external sensors
- Maximum safety, due to mains-independent alarm, battery lasting approx. 72 hours
- Visual and audible signal
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- Potential-free contact for connection to an external alarm system
- RS485 interface
- 100 mV/K-output for connection to a temperature recording system
- Lockable insulating door with door frame heating and double magnetic seal with additional sealing surface
- One Inlaid grille included
- Optionally available: Four fixed rollers, two with a brake, H: 805 mm.
  Stainless steel shelf TS 100-RS (alternative to Inlaid grille): For 81 standard cryoboxes.
  Nine drawers, each for nine standard cryoboxes. Extra gaps for optimum, uniform and rapid cooling of all the refrigerated items.

Underbench freezers TUS 50-100/TUS 80-100 //logg:
- Touchscreen control with color display and integrated data logger for full traceability
- User-friendly menu structure, remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

Specifications

Control accuracy:	±1 K
Ambient temperature:	+12 to +30 °C
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.	
TUS 50-100	100	450 x 450 x 500	950 x 730 x 750	120	-50 ... -10	1	**6.284 408**	
TUS 50-100 //logg	100	450 x 450 x 500	950 x 730 x 750	120	-50 ... -10	1	**6.284 409**	
TUS 80-100	100	450 x 450 x 500	950 x 730 x 750	120	-80 ... -50	1	**6.284 410**	1
TUS 80-100 //logg	100	450 x 450 x 500	950 x 730 x 750	120	-80 ... -50	1	**6.284 411**	2
Shelf TS 100-RS						1	**6.284 416**	3
Inlaid grille (additional)						1	**6.284 419**	

1

6.284 410

2

6.284 411

3

6.284 416

Chest freezers TT 50-90/TT 85-90, up to -85 °C

NEW

Fryka-Kältetechnik

The chest freezers are used successfully in the laboratory as well as in industry due to their compact design, their technical properties and their reliability.The use of vacuum insulation panels (VIP), enables a extensive interior space with compact external dimensions. The interior is made of high-grade stainless steel.
Models with temperature range -85 °C have a two-stage cascade refrigeration system for high performance and high safety.
A bushing (diameter 19 mm) enables temperature monitoring with external sensors.

- Extremely quiet cooling unit, with natural refrigerants (R-290, R-170)
- Visual and acoustic alarm signal
- Lockable cover latch with lever action
- Microprocessor-controlled adjustment with membrane keyboard and LED display
- Independant alarm system, with battery capacity for approx. 72 hours
- Interface (RS485)

TT 50-90 logg/TT 85-90 logg:
- Touchscreen control with color display and integrated data logger
- Remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

Specifications

Ambient temperature:	12 ... 30 °C
Control accuracy:	±0.5 K
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
TT 50-90	90	590 x 430 x 370	760 x 710 x 880	92	-50 ... -10	1	**6.284 420**
TT 50-90 logg	90	590 x 430 x 370	760 x 710 x 880	92	-50 ... -10	1	**6.284 421**
TT 85-90	90	590 x 430 x 370	760 x 710 x 880	110	-85 ... -50	1	**6.284 422**
TT 85-90 logg	90	590 x 430 x 370	760 x 710 x 880	110	-85 ... -50	1	**6.284 423** 1

2 TT 90-RC stainless steel shelf for TT 50-90/TT 85-90

NEW

Fryka-Kältetechnik

Extra gaps ensure optimal, uniform and rapid cooling of all the refrigerated items.

- For storage of 6 standard cryoboxes (135 x 135 x 52 mm) per shelf
- 12 shelves possible per chest

Type	PK	Cat. No.
Stainless steel shelf TT 90-RC	1	**6.284 424**

1

6.284 423

2

Ultra low temperature freezers HDE/TDE series, to -86 °C

NEW

Thermo Scientific

Environmentally friendly, energy-saving freezers with a temperature range from -50 to -86 °C.

- Maximum 24 minutes temperature recovery time after door opening
- Ergonomic design
- Very quiet operation below 53 dB (A)
- Compatible with most racking systems
- Natural refrigerants based on hydrocarbons
- Water-blown foam insulation: avoids harmful emissions and reduces long-term propellant outgassing
- Capacity for 300-600 boxes depending on model
- Intuitive touch-screen operation with display of all relevant data
- Data logger function with secure cloud storage option and smartphone connection

Herafreeze™ HDE models with 5 interior doors and 5 compartments for inserts < 24 cm height
TDE models with 4 interior doors and 4 compartments for units < 30 cm height

1

6.311 315

2

4.668 940

Type	For	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
HDE 30086 FV	300 x 5 cm boxes	422	452 x 719 x 1301	584 x 977 x 1981	1	**6.311 317**
HDE 40086 FV	400 x 5 cm boxes	549	588 x 719 x 1301	719 x 977 x 1981	1	**4.668 935**
HDE 50086 FV	500 x 5 cm boxes	682	730 x 719 x 1301	864 x 977 x 1981	1	**6.311 315** 1
HDE 60086 FV	600 x 5 cm boxes	816	873 x 719 x 1301	1006 x 977 x 1981	1	**4.668 936**
TDE 30086 FV	300 x 5 cm boxes	422	452 x 719 x 1301	584 x 977 x 1981	1	**4.668 937**
TDE 40086 FV	400 x 5 cm boxes	549	588 x 719 x 1301	719 x 977 x 1981	1	**4.668 938**
TDE 50086 FV	500 x 5 cm boxes	682	730 x 719 x 1301	864 x 977 x 1981	1	**4.668 939**
TDE 60086 FV	600 x 5 cm boxes	816	873 x 719 x 1301	1006 x 977 x 1981	1	**4.668 940** 2

Upright Freezers LT/XLT Series, up to -65 °C

NEW

Nordiclab ApS

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. The unit is easy to install.
Due to the small footprint, transport through all standard sized doors is possible.
The freezer also has four castors with brakes, which makes it very mobile.
The material is galvanized and pre-coated steel on the outside, stainless steel on the inside and cyclopentane for efficient insulation.

- Temperature logger with USB port
- Data logging 35.000 Entries
- Battery Backup 48 h
- Digital controller with display
- High/low temperature alarm
- Door alarm
- Contact for remote alarm
- Porthole for external probe & CO_2 backup Ø12 mm
- Integrated lock
- Eco-friendly, HCFC-free Nature R refrigerant (MLT U250 with HCFC-free R290 refrigerant)
- ISO 9001, 14001 & 18001 OHSAS Certified

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

Racks must be ordered separately.

Specifications

Adjustable shelves, stainless steel:	5
Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	60 dB (57 dB for MLT U250)
Power consumption 24/h:	6.25 kWh (5.3kWh for LT U250)
Power supply:	230 V/50 Hz

3

4.672 436

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
MLT U250	236	440 x 430 x 1439	600 x 690 x 2055	115	-30 ... -15	1	**4.672 443**
LT U250	236	420 x 370 x 1420	600 x 690 x 2055	115	-45 ... -10	1	**4.672 442**
XLT U250	221	420 x 370 x 1420	600 x 690 x 2055	120	-65 ... -30	1	**4.672 436** 3

1

4.672 437

Chest Freezers LT/XLT Series, up to -65 °C

NEW

Nordiclab ApS

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. The unit is easy to install.
Due to the small footprint, transport through all standard sized doors is possible. T
he freezer also has four castors (XLT C75 without castors, with legs), which makes it very mobile.
The material is galvanized and pre-coated steel on the outside, precoated white steel on the inside and cyclopentane for efficient insulation.

- Digital controller with display
- Audible and visual alarm
- High/low temperature alarm
- Porthole for external probe & CO_2 backup Ø12 mm
- Integrated lock
- Eco-friendly, HCFC-free Nature R refrigerant at -65 °C and HCFC-free R290 refrigerant at -45 °C
- ISO 9001, 14001 & 18001 OHSAS Certified

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

Racks must be ordered separately.

Specifications

Baskets:	1 (3 for LT C500 and XLT C300/C500/4 for XLT C400)
Internal humidity:	<5 %
Temperature probes:	1/PTC at -45 °C/1/PT 1000 at -65 °C
Noise level:	55 dB
Power supply:	230 V/50 Hz

Type	Capacity Litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
LT C150	133	350 x 440 x 635	720 x 630 x 890	51	-45 ... -10	1	**4.672 437** 1
LT C200	189	550 x 440 x 635	920 x 630 x 890	65	-45 ... -10	1	**4.672 438**
LT C300	284	890 x 440 x 635	1260 x 630 x 890	71	-45 ... -10	1	**4.672 439**
LT C400	368	1190 x 440 x 635	1560 x 630 x 890	80	-45 ... -10	1	**4.672 440**
LT C500	476	1290 x 500 x 640	1660 x 690 x 890	108	-45 ... -10	1	**4.672 441**
XLT C75	71	390 x 390 x 465	555 x 580 x 900	48	-65 ... -30	1	**4.672 430**
XLT C150	133	350 x 440 x 635	720 x 630 x 890	56	-65 ... -30	1	**4.672 431**
XLT C200	189	550 x 440 x 635	920 x 630 x 890	65	-65 ... -30	1	**4.672 432**
XLT C300	284	890 x 440 x 635	1260 x 630 x 890	71	-65 ... -30	1	**4.672 433**
XLT C400	268	1190 x 440 x 635	1560 x 630 x 890	80	-65 ... -30	1	**4.672 434**
XLT C500	476	1290 x 500 x 640	1660 x 690 x 890	108	-65 ... -30	1	**4.672 435**

Racks for Upright and Chest Freezers and Ultra low temperature Freezers, LT/XLT/ULT Series

NEW

Nordiclab ApS

Type	Dimensions (W x D x H) mm	No. of racks	Boxes/ Racks	Height Box mm	PK	Cat. No.
XLT C75, ULT C75	140 x 140 x 445	5	8	50	1	**4.672 445**
XLT C75, ULT C75	140 x 140 x 406	5	5	75	1	**4.672 448**
XLT C75, ULT C75	140 x 140 x 425	5	4	100	1	**4.672 451**
ULT U100	420 x 416 x 590	1	74	50	1	**4.672 458**
ULT U100	420 x 416 x 590	1	45	75	1	**4.672 461**
ULT U100	420 x 416 x 590	1	33	100	1	**4.672 463**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 335	3	6	50	1	**4.672 444**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 610	6	11	50	1	**4.672 446**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 326	3	4	75	1	**4.672 447**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 629	6	8	75	1	**4.672 449**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 320	3	3	100	1	**4.672 450**
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 530	6	5	100	1	**4.672 452**
LT U250, XLT U250, ULT U250	135 x 280 x 225	3	8	50	1	**4.672 453**
LT U250, XLT U250, ULT U250	135 x 280 x 275	12	10	50	1	**4.672 457**
LT U250, XLT U250, ULT U250	135 x 280 x 160	3	4	75	1	**4.672 459**
LT U250, XLT U250, ULT U250	135 x 280 x 240	12	6	75	1	**4.672 460**
LT U250, XLT U250, ULT U250	135 x 280 x 210	15	4	100	1	**4.672 462**

1 Mini-Freezer KBT 08-51, up to -50 °C

1

Fryka-Kältetechnik

The mini-freezers are the ideal solution for chilling material samples directly at the workplace.

- Electronic temperature control with LED display, 2 controls available
- Refrigeration unit: low noise, air-cooled, low maintenance
- with natural refrigerant R-1270
- Housing parts made of high quality stainless steel
- Insulated stainless steel hinges and hinged lid with magnetic seal
- Ram protection ring going over and under

ST71 control
- Electronic temperature control with LED display
- Optical and acoustic alarm

ST100 control
- Microprocessor-controlled, with membrane keyboard and easy-to-read LED display
- Protection against unintentional activation
- Alarm system that is separate from the mains, with battery capacity for approx. 72 hours
- Display of the maximum temperature reached in the interior area during the fault
- RS485 interface, potential-free contact for connection to an external alarm system and 100 mV/K output
- Optical and acoustic alarm

Specifications

Temperature range:	-50 ... -30 °C
Control accuracy:	±1 K
Capacity:	8 l
Ambient temperature:	12 ... 30 °C
Dimensions, internal (W x D x H):	150 x 300 x 200 mm
Dimensions, external (W x D x H):	360 x 490 x 570 mm
Weight:	36 kg
Power supply:	230 V/50 Hz

Type	PK	Cat. No.
Mini-Freezer KBT 08-51 with ST71 control	1	**6.284 427**
Mini-Freezer KBT 08-51 with ST100 control	1	**4.671 415**
Mini-Freezer KBT 08-51 with ST100 control and convection	1	**4.671 416**

2 Laboratory refrigerators and freezers LKPv/LGPv with professional electronic controller, up to -2 °C/-35 °C

2

Liebherr

The laboratory appliances incorporating Profi electronic controllers offer many advantages. High-grade materials, high-performance components and accurate workmanship right down to the last detail ensure the high quality of the Liebherr appliances. Wherever huge storing capacity is required the large-scale laboratory appliances with Profi electronic controller are the ideal solution.

- Dynamic cooling system
- Profi electronic controller with integrated real-time clock
- Castors, thereof two with brake
- Integrated, ergonomic handle
- Plastic-coated grid shelves and CNS inner liner
- Glass door (..23) with ceiling light (seperately switchable)
- Hot-gas defrost system for very short defrost cycles

Security package:
- Integrated data memory (Alarm events and temperature profile)
- Visual and audible temperature and door alarm
- Mains-independent power supply of the electronic controller
- Infrared and RS 485 interface enabling external documentation
- Volt-free contact for alarm forwarding to an external remote warning system
- Maximum temperature stability and consistency according to IEC 60068-3
- 3-point calibration
- Access port for an external temperature sensor
- Lock

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	PK	Cat. No.
LKPv 6523	597	700 x 830 x 2160	533 x 650 x 1500	1.564	0 ... 16	1	**9.698 395**
LKPv 1423	1361	1430 x 830 x 2160	1236 x 650 x 1500	2.246	0 ... 16	1	**6.264 055**
LKPv 6520	597	700 x 830 x 2160	533 x 650 x 1550	1.361	-2 ... 16	1	**9.698 686**
LKPv 8420	856	790 x 980 x 2160	620 x 850 x 1550	1.652	-2 ... 16	1	**9.698 697**
LKPv 1420	1361	1430 x 830 x 2160	1236 x 650 x 1550	1.956	-2 ... 16	1	**9.698 688**
LGPv 1420	1361	1430 x 830 x 2160	1236 x 650 x 1550	7.271	-26 ... -9	1	**9.698 693**
LGPv 6520	697	700 x 830 x 2160	533 x 650 x 1550	3.745	-35 ... -9	1	**9.698 692**
LGPv 8420	856	790 x 980 x 2160	620 x 850 x 1550	4.761	-35 ... -9	1	**9.698 698**

1

1 Laboratory refrigerators and freezers ES series, up to +1 °C/-30 °C

Thermo Scientific

Designed for routine sample protection where laboratory space is limited.
Our new ES Series lab refrigerators, freezers and combination refrigerator/freezer are the ideal choice when there is limited space in the laboratory.
All ES Series models deliver the sample protection, performance, security and quality you have come to depend on from us:

- with EU plug and UK adapter
- Integrated controller
- Digital temperature display
- High and low temperature alarms
- Standard door locks, lockable
- Low energy consumption
- Access ports
- Defrost type automatic for temperature range +1 to +10 °C and manual for temperature range -19 to -21 °C

Equipment

98F-AEV-TS:	3 drawers
232F-AEV-TS:	2 shelves, 3 baskets
288R-AEV-TS:	5 shelves, 1 basket
263C-AEV-TS/263C-AXV-TS:	3 shelves, 2 half baskets (R) / 1 shelf 2 baskets (F)

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range °C	PK	Cat. No.
98F-AEV-TS	98	599 x 658 x 850	420 x 440 x 650	0.4	-18 ... -25	1	**6.315 197**
232F-AEV-TS	232	595 x 640 x 1570	440 x 430 x 1300	1.0	-18 ... -25	1	**9.536 239**
288R-AEV-TS	288	595 x 634 x 1570	480 x 445 x 1382	0.5	1 ... 11	1	**9.536 213**
263C-AEV-TS	159 (R) / 109 (F)	545 x 600 x 1680	457 x 450 x 725 (R) / 408 x 415 x 670 (F)	0.9	1 ... 11 / -10 ... -30	1	**9.536 219**
263C-AXV-TS	159 (R) / 109 (F)	545 x 600 x 1680	457 x 450 x 725 (R) / 408 x 415 x 670 (F)	0.9	1 ... 11 / -12 ... -20	1	**6.265 834**

(R) refrigerated area, (F) freeze area

2

Biomedical freezers FLEXA LFE, up to -25 °C

NEW

Arctiko

Freezers with flexible interior, adjustable shelves and high temperature stability.
Ideal for storing biological and medical samples.

- With natural refrigerant R-290
- Static cooling
- Digital controller
- LED display with touch operation
- Visual/acoustic alarm when door is open
- Alarm at over/under temperature and temperature sensor failure
- Lockable door
- Selectable door stop

Scope of supply LFE 110: Freezer, 3 adjustable shelves (2 x regular size, 1 x small), 1 basket
Scope of supply LFE 360: Freezer, 5 adjustable shelves (regular size), 1 basket

Specifications

Temperature range:	-15 ... -25 °C
Power supply:	230 V, 50/60 Hz

Type	Capacity l	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Energy consumption kWh (24 h)	PK	Cat. No.
LFE 110®	107	460 x 410/230*x 680	600 x 600 x 835	45	1.1	1	**4.667 926**
LFE 360®	356	440 x 500/311* x 1690	600 x 700 x 1865	97	3.2	1	**4.667 927**

* Depth at bottom of device

Accessories - please see page 785.

1 Cold box B 30-20, up to -20 °C

Fryka-Kältetechnik

Compact desktop cold box for cooling and freezing for all laboratories. Due to the low-noise cooling unit, the cold box can be used directly in the workplace. The space-saving box has an insulating glass pane in the door, so that the cooling material can be observed during freezing.

- Extremely low noise refrigeration unit
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- with natural refrigerant R-1270
- Interior made of high quality stainless steel
- Interior without fittings allows easy cleaning and disinfection
- Bushing (diameter 10 mm), e.g. for temperature monitoring with external sensors
- Lockable door with insulating glass, door frame heating and double magnetic seal with additional lip
- Stackable unit, max. 3 boxes

Stainless steel shelf B 30-RS: 4 drawers, each for 4 standard cryoboxes.
Drawer size (W x D x H): 300 x 280 x 52 mm. Extra gaps for optimal, uniform and rapid cooling of the entire frozen product (please order separately).

Specifications

Temperature range:	-20 to +10 °C
Control accuracy:	±1 K
Capacity:	30 l
Ambient temperature:	+12 to +30 °C
Dimensions, internal (W x D x H):	360 x 350 x 230 mm
Dimensions, external (W x D x H):	530 x 700 x 460 mm
Weight:	42 kg
Power supply:	230 V/50 Hz

Description	PK	Cat. No.
Cold box B 30-20	1	**6.284 401**
Shelf B 30-RS	1	**6.284 405**

1

High-Performance refrigerators and freezers TSX series

Thermo Scientific

The TSX Series high performance refrigerators and freezers are designed for the storage of media, reagents and other laboratory products.
V-drive increases compressor speed to quickly restore temperature after door openings.

- Whisper quiet with a sound level of 52 dBA
- Natural refrigerants (R290)
- Compatible with wireless monitoring systems and remote alarm contacts
- Audible and optical alarm
- GMP Clean Room Class A/ISO 6 (ISO EN 14644-1) compatible with appropriate pre-install preparation
- Four 2" casters, the front two are lockable
- Self-closing door with 90° stop
- Optional chart recorders available

High performance freezers TSX Series, up to -35 °C

NEW

Thermo Scientific

- TSX 5030 FV is equipped with 2 doors
- With auto defrost

Specifications

Temperature range:	-35 ... -15 °C
Power supply:	230 V, 50 Hz

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	No. of shelves	PK	Cat. No.
TSX 1230 FV	326	619 x 790 x 1854	508 x 554 x 1331	4	1	**4.671 810**
TSX 2330 FV	650	711 x 962 x 1994	610 x 723 x 1473	4	1	**4.672 628**
TSX 3030 FV	827	864 x 962 x 1994	762 x 723 x 1473	4	1	**6.312 076**
TSX 5030 FV	1447	1435 x 962 x 1994	1334 x 723 x 1473	8	1	**4.672 629** 2

2

4.672 629

1

4.672 644

High-Performance plasma freezers TSX series, up to -35 °C

NEW

Thermo Scientific

- With auto defrost
- Meets AABB and FDA requirements for the storage of plasma
- Fully extendable stainless steel drawers
- Standard factory-installed chart recorder

Specifications

Temperaturrange: -35 ... -15 °C
Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
TSX 1230 LV	1 door and 7 drawers	326	619 x 790 x 1854	508 x 554 x 1331	1	**4.672 643**
TSX 2330 LV	1 door and 7 drawers	650	711 x 962 x 1994	610 x 723 x 1473	1	**4.672 644** 1
TSX 3030 LV	1 door and 7 drawers	827	864 x 962 x 1994	762 x 723 x 1473	1	**4.672 645**
TSX 5030 LV	2 doors and 14 drawers	1447	1435 x 962 x 1994	1334 x 724 x 1473	1	**4.672 646**

2

4.672 647

High-Performance enzyme freezers TSX series, up to -25 °C

NEW

Thermo Scientific

- Without auto defrost
- Cold wall convection cooling
- With enzyme bins

Specifications

Temperaturrange: -25 ... -15 °C
Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
TSX 2320 EV	9 shelves, 45 bins	650	711 x 990 x 1994	610 x 723 x 1473	1	**4.672 647** 2
TSX 3020 EV	9 shelves, 54 bins	827	864 x 990 x 1994	762 x 723 x 1473	1	**4.672 648**

3

4.672 631

High-Performance lab refrigerators TSX Series, up to +2 °C

NEW

With glass door or solid door.

Thermo Scientific

- Bright, LED interior lighting
- Heat-free defrost for maximum temperature uniformity

Specifications

Temperaturrange: 2 ... 8 °C
Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	No. of shelves	PK	Cat. No.
TSX 1205 GV	With glass door	326	619 x 775 x 1854	508 x 554 x 1331	4	1	**4.672 630**
TSX 2305 GV	With glass door	650	711 x 962 x 1994	610 x 723 x 1473	4	1	**4.672 631** 3
TSX 3005 GV	With glass door	827	864 x 947 x 1994	762 x 723 x 1473	4	1	**4.672 632**
TSX 4505 GV	With double sliding glass door	1297	1435 x 931 x 1994	1334 x 724 x 1473	8	1	**4.672 633**
TSX 5005 GV	With 2 glass doors	1447	1435 x 962 x 1994	1334 x 724 x 1473	8	1	**4.672 634**
TSX 1205 SV	With solid door	326	619 x 790 x 1854	508 x 554 x 1331	4	1	**4.672 635**
TSX 2305 SV	With solid door	650	711 x 962 x 1994	610 x 723 x 1473	4	1	**4.672 636**
TSX 3005 SV	With solid door	827	864 x 962 x 1994	762 x 723 x 1473	4	1	**4.672 637**
TSX 5005 SV	With 2 solid doors	1447	1435 x 962 x 1994	1334 x 724 x 1473	8	1	**4.672 638**

1 Laboratory refrigerators GPS series up to +1 °C

1

Medium and large capacities designed for routine sample protection. With capacities ranging from space-saving 400 L to spacious 1400 L, our new GPS Series lab refrigerators meet the demands of today's laboratory requirements. All models contain sample protection features designed for the rigorous demands of the laboratory environment.

Thermo Scientific

- With EU plug and UK adapter
- Integrated controller
- Digital temperature display
- High and low temperature alarms
- Standard door locks, lockable
- Standard casters
- Choice of glass or solid door
- Automatic defrost
- Access ports

Equipment

R400/R700: 3 shelves
R14X: 6 shelves

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	doors	PK	Cat. No.
R400-SAEV-TS	400	600 x 600 x 1900	480 x 500 x 1150	3.1	1 ... 11	solid	1	**9.536 221**
R400-GAEV-TS	400	600 x 600 x 1900	480 x 500 x 1150	3.6	1 ... 11	glass	1	**9.536 223**
R700-SAEV-TS	700	790 x 860 x 1980	600 x 660 x 1300	3.4	1 ... 11	solid	1	**9.536 225**
R700-GAEV-TS	700	790 x 860 x 1980	600 x 660 x 1300	5.3	1 ... 11	glass	1	**9.536 227**
R14X-SAEV-TS	1400	1400 x 800 x 1980	1300 x 660 x 1300	2.6	1 ... 11	solid	1	**9.536 229**
R14X-GAEV-TS	1400	1400 x 800 x 1980	1300 x 660 x 1300	7.7	1 ... 11	glass	1	**9.536 231**

Biomedical refrigerators FLEXA LRE/PRE, up to 2 °C

2

Refrigerators with flexible interior, adjustable shelves and high temperature stability. Ideal for storing biological and medical samples.

Arctiko

- Environmentally friendly refrigerant
- Convection cooling
- Digital controller
- LED display with touch operation
- Visual/acoustic alarm when door is open
- Alarm at over/under temperature and temperature sensor failure
- Lockable door
- Selectable door stop

LRE models: With LED interior lighting
PRE models: With LED interior lighting and glass doors

Scope of supply LRE/PRE 120: Refrigerator, 3 adjustable shelves (2 x regular size, 1 x small), 1 basket
Scope of supply LRE/PRE 440: Refrigerator, 5 adjustable shelves (regular size), 1 basket

Specifications

Temperature range: 2 ... 8 °C
Power supply: 230 V, 50/60 Hz

Type	Capacity l	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Energy consumption kWh (24 h)	PK	Cat. No.
LRE 120®	117	480 x 410/240* x 690	600 x 600 x 835	51	0.9	1	**4.667 920**
LRE 440®	437	475 x 500/341* x 1723	600 x 700 x 1865	93	1.9	1	**4.667 921**
PRE 120®	117	480 x 410/240* x 690	600 x 600 x 835	51	1.2	1	**4.667 924**
PRE 440®	437	475 x 500/365* x 1723	600 x 700 x 1865	105	2.3	1	**4.667 925**

* Depth at bottom of device

Accessories for laboratory refrigerators and freezers LR/LF series

Arctiko

Type	PK	Cat. No.
Stainless steel grid for LF 660-2/700/1400, incl. carrier	1	**6.270 299**
Plastic grid for LR/LF/LFF/PR/PF 660/700/1400 incl. carrier	1	**7.971 172**
Plastic grid for LF 300, incl. carrier	1	**7.971 324**

Laboratory refrigerators LKv/LKUv and laboratory fridge-freezer LCv, up to 3 °C/-30 °C

Liebherr

Wherever floor space is limited or under-worktop installation is planned, the laboratory refrigerators with Comfort electronic controllers are the ideal solution. The range comprises two freestanding (LKv) and two underworktop (LKUv) laboratory refrigerators, in each case with glass door and solid door versions. The temperature can be set from +3 °C to +8 °C. The forced-air cooling system in conjunction with the precision electronic controller ensures temperature consistency and uniform temperature distribution in the interior.
The LCv 4010 laboratory fridge-freezer, which has two separately cooling circuits, further extends the range of compact laboratory appliances.

- Dynamic cooling system
- Precision electronic controller with digital temperature display
- Glass door (..13) with ceiling light (separately switchable)
- Convenient, clear view drawers (LCv 4010)
- Self-closing door with integrated lock

Security package:
- Visual and audible temperature and door alarm
- Visual power failure alarm when mains power returns
- Integrated data memory with min/max temperatures
- Volt-free contact for alarm forwarding to an external remote warning system
- RS 485 interface enabling external documentation
- Access port for an external temperature sensor
- Maximum temperature stability and consistency according to IEC 60068-3

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	PK	Cat. No.	
LKv 3913*	386	601 x 618 x 1840	440 x 435 x 1635	1.315	3 ... 16	1	**7.940 344**	1
LKv 3910	361	601 x 618 x 1840	440 x 435 x 1635	0.846	3 ... 16	1	**6.313 863**	
LKUv 1613*	152	601 x 618 x 820	440 x 435 x 670	1.010	3 ... 16	1	**9.698 699**	2
LKUv 1610	142	601 x 618 x 820	440 x 435 x 670	0.747	3 ... 16	1	**9.698 680**	3
LCv 4010	254/107	601 x 618 x 2000	440 x 441 x 1105 / 433 x 435 x 597	1.8	3 ... 16 / -30 ... -9	1	**7.627 795**	4

*Glass door

1

7.940 344

2

9.698 699

3

9.698 680

4

7.627 795

5

5 Refrigerator drawers AluCool® including dividers

H+H System

High quality aluminium drawers including frame on smooth-running wheels with pull-out stop. Includes flexible dividing system with card pockets. Depending on the specific need, the dividing system allows the storage of drugs, blood and plasma with a space saving of up to 30%. With a few simple steps, the flexible dividers are taken out and the drawer can be cleaned easily and hygienically.

Typ A:
FKS 1800/1802/2600 /2602/3600/3602; FKU 1800/1805; UKS 1800/1801/2600/2602/3600/3602/3650; FKEx 1800/2600/3600

Typ B:
FKUv 1610/1612/1660/1662; LKexv 3910; LKv 3910/3912; LKUexv 1610; LKUv 1610/1612

The AluCool® drawers can be retrofitted at any refrigerator - to save and optimise valuable space.
Tool-free assembly without damaging the refrigerator interior.

Division: 3 channels with 12 universal dividers. Width of the channels can be changed in 1 cm steps.

Type	Refrigerator internal dimensions (W x D) mm	PK	Cat. No.
A	441 x 513	1	**9.698 980**
B	435 x 440	1	**9.698 981**

Pharmacy refrigerators MK, up to +2 °C

Liebherr

Liebherr pharmaceutical refrigerators compliant with DIN 58345 safely store high-quality preparations and sensitive medications at all times. This is achieved by a combination of precise electronic controls, highly effective insulation, an optimised forced-air cooling system, and premium-quality workmanship.

- Maintenance of an operating temperature from +2 °C to +8 °C, visual and audible warning installation for high and low temperature
- Can be used in ambient temperatures from +10 °C to +35 °C
- Noise emission less than 48 dB(A)
- Visual and audible power failure alarm for at least 12 h
- Safety thermostat to avoid temperatures below +2 °C
- Mechanical resistance of internal fittings at least 100 kg/m²
- Lockable door optionally made of steel or insulating glass

1

6.283 866

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range °C	Weight kg	PK	Cat. No.
MKUv 1610-21	109/142	601 x 618 x 820	440 x 435 x 670	0.747	5	39	1	**6.283 386**
MKUv 1613-20*	109/152	601 x 618 x 820	440 x 435 x 670	1.010	5	45	1	**6.283 865**
MKv 3910-21	280/361	601 x 618 x 1840	440 x 435 x 1635	0.846	5	68	1	**6.283 694**
MKv 3913-20*	278/386	601 x 618 x 1840	440 x 435 x 1635	1.315	5	85	1	**6.283 866**

*with insulating glass door with switchable LED illumination

2 LLG-Laboratory Power Failure Detector

2

- Immediate visual and acoustic alarm
- Alarm can sound for short power outages, or for larger periods of at least 12 hours (can be switched off manually).
- Plug safety cover offers protection against accidental disconnection of plug
- Maximum total power of connected devices. 3500W power supply 230V 50Hz
- Suitable for European plugs
- Max. Rating 16 A
- With built-in battery

Scope of supply:
1 x power failure detector
2 x plug safety caps
2 x screws

Type	PK	Cat. No.
LLG-Laboratory Power Failure Detector	1	**6.255 819**

3 4 Spark-free laboratory refrigerators, up to +1 °C

Lovibond®

The German guidelines "Working Safely in Laboratories BG-I 850-0" stipulates that interior space must be xplosion-protected where hazardous, explosive atmospheres can develop (for example, due to the presence of flammabel liquids). Such explosive atmospheres can be created by stored flammable liquids, for example. The laboratory refrigerators by Lovibond® meet these requirements. The interiors are free from sparking sources and are therefore explosion-proof. With glass shelves. Variable temperature control from +1 °C to 15 °C. Temperature is continuously controlled by thermostat. The digital temperature display enables the interior temperature to be easily read.

3

- Spark-free according to BG-I 850-0
- Dynamic cooling system
- 1 °C to 15 °C, continuously adjustable
- Digital temperature display
- High energy efficiency
- Robust materials
- Lockable

4

Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Weight kg	PK	Cat. No.
160	600 x 600 x 860	513 x 441 x 702	+1 ... +15	41	1	**9.699 005**
220	600 x 610 x 1250	470 x 440 x 1062*	+1 ... +15	53	1	**9.699 006**
300	600 x 610 x 1640	470 x 440 x 1452*	+1 ... +15	64	1	**9.699 007**
490	750 x 730 x 1640	600 x 460 1452*	+1 ... +15	84	1	**9.699 008**

* with "fan stop" function, which switches the fan off when the door is opened.

1 Spark-free laboratory refrigerators LKexv, up to +1 °C

Liebherr

Laboratory refrigerators with dynamic cooling and spark-free interior. Designed especially for storing explosive and highly flammable substances. The interiors of the LKexv models meet all the safety requirements of the EU Directive 94/9EC (ATEX 95). The appliances excel with a large capacity and rugged design. The cooling temperature is continuously adjustable from +1 °C to +15 °C with the aid of the thermostat integrated in the control panel. Certified according to ATEX 95.

Features: Flexible, hygienic interior, Glass shelves, Water tray, Lock, Reversible door hinges.

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	PK	Cat. No.
LKexv 2600	240	600 x 610 x 1250	470 x 440 x 1062	0.786	1	**6.264 468**
LKexv 3600	333	600 x 610 x 1641	470 x 440 x 1452	0.947	1	**7.671 880**
LKexv 5400	554	750 x 729 x 1640	600 x 560 x 1452	0.983	1	**6.262 810**

2 Spark-free laboratory refrigerators and freezers MediLine with comfort electronic controller, up to 3 °C/-30 °C

Liebherr

Refrigerators and freezers specially designed for the storage of explosive and highly flammable substances. With comfort electronics and spark-free interior. The interiors of the units meet the safety requirements of the EU Directive 94/9/EC (ATEX 95) and are tested by the ATEX conformity assessment body electro-suisse (SEV).

- Precision electronic controller with digital temperature display
- Self-closing door with integrated lock
- Visual and audible temperature and door alarm
- Visual power failure alarm as well as sensor defect alarm
- Integrated data memory with min/max temperatures
- Alarm forwarding to an external remote warning system
- RS 485 Interface for external documentation
- 1-point calibration
- Maximum temperature stability and consistency according to IEC 60068-3
- Access port for an external temperature sensor

Cooling units LKexv/LKUexv
- With dynamic cooling system
- Flexible, height-adjustable glass shelves

Freezers LGex/LGUex/LCexv
- With static cooling system
- Convenient and comfortable drawers
- Model LCexv 4010 equipped with 2 doors

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Plug type	PK	Cat. No.
LKexv 3910	601 x 618 x 1840	440 x 435 x 1635	3 ... 16	EU	1	**9.698 685** 2
LKUexv 1610	601 x 618 x 820	440 x 435 x 670	3 ... 16	EU	1	**9.698 682**
LGex 3410	601 x 618 x 1840	420 x 400 x 1587	-30 ... -9	EU	1	**9.698 691**
LGUex 1500	601 x 618 x 820	454 x 450 x 663	-26 ... -9	EU	1	**9.698 690**
LCexv 4010	601 x 618 x 2003	440 x 441 x 1105 / 433 x 433 x 597	3 ... 16 / -30 ... -9	EU	1	**9.698 677**

1

2

9.698 685

1 Flake ice maker with reservoir, UFP series, air cooled

NEW

MANITOWOC®

For fast, HACCP-compliant production of various quantities of compact, granular ice flakes for laboratories, the chemical industry and food production. The ice is produced by a vertical stainless steel evaporator and transported by a worm gear to the head of the cylinder, pressed and broken into the desired size. For the production of up to 153 kg of ice per day.
The new refrigerant R290 meets the requirements of the latest EU regulations, reduces energy consumption by up to 30 %, has no ozone depletion potential and only a very low global warming potential.

- Robust stainless steel evaporator
- Easy ice removal
- Suitable for demineralised water
- Closed system for optimum hygiene
- Environmentally friendly refrigerant
- Air-cooled
- Depending on model, has storage capacities from 20 to 55 kg
- Stainless steel housing
- Easy to clean
- Height-adjustable feet from 110 to 150 mm
- Comfortable and safe operation
- Low energy consumption

Scope of supply: Flake ice maker with height-adjustable stainless steel feet, ice shovel, water inlet and outlet set

Specifications

Refrigerant:	R290
Permissible ambient temperature:	10 ... 43 °C
Power supply:	230 V, 50 Hz

Type	Output kg/24 hrs. up to kg	Rating W	Capacity kg	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
UFP 0244 A	113	470	20	500 x 660 x 843	67	1	**4.667 960**
UFP 0200 A	113	470	30	500 x 660 x 843	76	1	**4.667 961**
UFP 0388 A	153	700	40	738 x 690 x 1070	102	1	**4.667 962**
UFP 0399 A	153	700	55	738 x 690 x 1173	105	1	**4.667 963**

1

Flake ice makers with/without reservoir, air-cooled

Scotsman / HIBU

Manufactured according to DIN ISO 9001. For preparing solid and saturated ice flakes of hygienic, 0.5 °C cold ice. With eletronic control of the ice temperature. The units have a stainless steel housing and an antimicrobial coated interior. Air-cooled versions, with cleaning indication.

- MF models without reservoir (please order separately).
- AF models without drain pump
- EF models standard with drain pump. The drain pump allows an installation or set-up without any drainage height or distance problems. Place your ice maker just where it is needed even lower than the actual drain outlet (can be up to 1.70 m higher). Distance to drain outlet up to 15 meters. Drain can be placed up to 1.70 higher.
- 2 year warranty.

Scope of supply: Flake ice maker, 1 x scoop

Also available with water-cooled compressor. Alternative models availlable on request.
A specially built model for laboratory-grade water is available on request.

2 3

9.580 006

9.580 045

Type	Capacity kg	Depth mm	Width mm	Height mm	Output kg/24 hrs. up to kg	Rating W	PK	Cat. No.
Ice flake maker AF 80	25	620	535	890	73	340	1	**9.580 006** 2
Ice flake maker AF 103	30	622	592	1078	120	550	1	**9.580 040**
Ice flake maker AF 124	40	605	950	872	122	510	1	**9.580 041**
Ice flake maker AF156	60	605	950	1083	160	590	1	**9.580 042**
Ice flake maker AF 206	60	605	950	1083	200	950	1	**9.580 043**
Ice flake maker EF 103	30	622	592	1078	120	550	1	**9.580 045** 3
Ice flake maker EF 124	40	605	950	872	122	510	1	**9.580 046**
Ice flake maker EF 156	60	605	950	1083	160	590	1	**9.580 047**
Ice flake maker EF 206	60	605	950	1083	200	950	1	**9.580 048**
Ice flake maker MF 26*		536	564	531	140	500	1	**9.580 009**
Ice flake maker MF 36*		536	564	531	200	900	1	**9.580 016**
Reservoir SB 193 for MF 26/MF 36	129	845	569	1048			1	**9.580 010**
Reservoir SB 393 for MF 26/MF 36 incl. cover adapter	181	850	769	1048			1	**9.580 049**

* without reservoir

Scoops please see page 138.

1

1 Dry Ice Machines SnowPack®

Bürkle

The dry ice machine SnowPack® produces dry ice tablets of -79 °C with 50 or 250 g weight within a short time. Suitable for all European siphon carbon dioxide cylinders with valve (W 21.80 x 1¼" acc. to DIN 477-1, no. 6) without pressure regulator.

- Produces dry ice tablets at -79 °C with 50 or 250 g
- Operates without electricity
- Taint and odour free

Applications: Hospitals, universities, schools, laboratories, chemical industry, materials testing.
Examples of use: Lowering the temperature in cooling baths or cold traps, pre-cooling tissue samples, ensuring safe transport or embedding biological substances, freezing blood and tissue samples, studies in chemistry, physics and materials technology, etc.

Gassing period (per tablet):	approx. 1 min
Tablets per 22 kg bottle (dependent on ambient temperature and pressure):	either 90 or 16 pieces approx.

Type	Diam. mm	Height mm	Tablet weight g	PK	Cat. No.
SnowPack® 50	50	30	50	1	**9.253 006**
SnowPack® 250	80	60	250	1	**9.253 008**

2

2 Cooling Boxes, Isotherm Extreme

Campingaz

- Strong, high quality PU insulation
- Compact and robust cool boxes
- Cover can be locked with carrier bracket
- Rubber seal for airtight seal

Type	Capacity l	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight g	PK	Cat. No.
Isotherm Extreme	10	265 x 165 x 250	350 x 225 x 310	1400	1	**9.031 821**

3

3 Cooling Boxes, Icetime® Plus

Campingaz

- Strong, high quality PU insulation,
- Lockable lid, which clicks audibly when closing
- Handle for easy transport

Type	Capacity l	External dimensions (W x D x H) mm	Weight g	PK	Cat. No.
Icetime® Plus	26	407 x 313 x 424	2400	1	**6.284 954**
Icetime® Plus	30	410 x 310 x 460	2600	1	**6.284 527**

4

4 Cooling bag Fold'N Cool™

Campingaz

The cooler Fold'N Cool™ 30 L has a wide range of uses and can be laid flat after use. 1 large front pocket with zip, 2 carrying handles and hanging loop.

- 100 % polyester with PU coating on the back
- Easy-to-clean inner material, food-free PEVA
- Isolation: high-performance EPE foam
- Dark blue/grey

Type	Capacity l	External dimensions (W x D x H) mm	Weight g	PK	Cat. No.
Fold'N Cool™	30	390 x 250 x 380	760	1	**6.266 054**

1 Cool packs Freez'Pack®

Campingaz

- Composition: water, carboxymethyl cellulose, acticides and blue dye
- Suitable for food contact (non-toxic coolant)
- Dishwasher safe

Type	Weight g	Dimensions (W x D x H) mm	PK	Cat. No.
Freez'Pack® 2 x M5	200	150 x 80 x 25	2	**6.236 733**
Freez'Pack® M10	370	180 x 95 x 30	1	**6.262 337**
Freez'Pack® M20	741	200 x 172 x 30	1	**6.803 624**
Freez'Pack® M30	1100	255 x 210 x 30	1	**6.802 089**

Cool packs Icecatch®

Icecatch

Icecatch® cool packs for temperature sensitive products used in the pharmaceutical, biotech, medical and food industries. Icecatch® cool packs distinguish themselves through the following specific features:
- Reliable cold storage through the use of immobilised coolant
- For repeat usage due to the use of robust PA/PE film
- Disposal with the domestic trash due to the use of non-poisonous ingredients
- Unobjectionable use in the pharmaceutical and food industries
- Phase transition 0 °C

Icecatch®-Gel
- Spreading of heat absorption around the 0 °C range through the use of immobilised cooling gel
- Optimal price/heat absorption capacity relationship
- Filled with cooling gel

Icecatch®-Solid
- Maximum dimensional stability during the freezing process through the use of hard foam
- Filled with hard foam

Icecatch®-Solid Insulated 2 - 8 °C
- A perfect cool pack in combination with our System packaging for the +2 °C up to +8 °C transport
- Maximum dimensional stability during the freezing process through the use of hard foam, coolant and integrated isolation layer
- Filled with hard foam and isolation layer

Attention

H phrases: H302

9.695 000

9.695 007

Type	Description	Dimensions (W x D x H) mm	Weight g	PK	Cat. No.
Icecatch®-Gel	with cooling gel	90 x 110 x 20	90	120	**9.695 000** 2
Icecatch®-Gel	with cooling gel	90 x 150 x 20	170	80	**9.695 001**
Icecatch®-Gel	with cooling gel	90 x 180 x 20	230	60	**9.695 002**
Icecatch®-Gel	with cooling gel	140 x 190 x 30	460	32	**9.695 003**
Icecatch®-Gel	with cooling gel	140 x 240 x 40	690	24	**9.695 004**
Icecatch®-Solid	with hard foam/cool medium	195 x 130 x 20	500	27	**6.262 659**
Icecatch®-Solid	with hard foam/cool medium	105 x 180 x 40	630	12	**6.262 660**
Icecatch®-Solid	with hard foam/cool medium	280 x 190 x 25	1100	12	**9.695 006**
Icecatch®-Solid Insulated	with hard foam/cool medium and isolation layer	195 x 130 x 23	500	24	**9.695 008**
Icecatch®-Solid Insulated	with hard foam/cool medium and isolation layer	280 x 190 x 30	1100	12	**9.695 007** 3
Icecatch®-Solid Insulated	with hard foam/cool medium and isolation layer	280 x 190 x 45	1700	8	**9.695 009**

1

1 Isolation Box Icecatch®, EPS

Icecatch

The standard thermo boxes made of EPS (Styrofoam®) for temperature sensitive products used in the Pharmaceutical and food industries which have to be stored and transported within a specific temperature spectrum. In combination with the Icecatch cooling elements the perfect solution for the transport of temperature sensitive products.

Specifications:

Colour: White
Foam weight: 20 g/l

Capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Wall thickness mm	PK	Cat. No.
3.1	200 x 115 x 135	260 x 170 x 190	30	1	**9.695 030**
3.1	200 x 115 x 135	260 x 170 x 190	30	5	**6.290 853**
9.1	275 x 195 x 170	335 x 255 x 230	30	1	**9.695 031**
9.1	275 x 195 x 170	335 x 255 x 230	30	5	**6.290 854**
12.8	305 x 210 x 200	365 x 270 x 250	30	1	**9.695 032**
18.8	300 x 250 x 250	400 x 350 x 350	50	1	**9.695 033**
26.3	420 x 305 x 205	480 x 365 x 255	30	1	**9.695 034**

2

2 Isolating box with lid, Neopor®

Storopack Deutschland

Neopor® is characterised by its outstanding hot and cold thermal insulation properties (a further 20 % over Styropor), its high compressive strength, shock absorbing properties, low weight and insensitivity to moisture. It also contains infrared absorbers and reflectors. Compared to conventional insulating materials, they diminish heat conductivity and lend the material its characteristic silver-grey color.

Description	Capacity L	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
Isolating box with lid	3.5	165 x 165 x 130	225 x 225 x 195	1	**6.267 991**
Isolating baffle ring	6.2	350 x 350 x 100	250 x 250 x 100	1	**7.656 681**
Isolating box with lid	12.5	350 x 350 x 300	250 x 250 x 200	1	**7.656 680**
Isolating box with lid	101.5	690 x 565 x 470	590 x 465 x 370	1	**7.661 033**

3 Euronormboxes, PP, stackable

Solid transparent plastic containers, odorless, cold- and heat-resistant, stable against the most acids and alkalis.
Dishwasher safe, food safe. Two sizes (40 x 30 cm and 60 x 40 cm) available.

- **Corresponding lids please order separately**
- Suitable Trolley (Cat. No.: 9.301 502)

Type	Capacity l	External dimensions (W x D x H) mm	Colour	PK	Cat. No.
Euronormbox	20	400 x 300 x 220	transparent	1	**9.301 503**
Lid	-	400 x 300 x 10	transparent	1	**9.301 506**
Euronormbox	46	600 x 400 x 220	transparent	1	**9.301 504**
Euronormbox	66	600 x 400 x 320	transparent	1	**9.301 505**
Lid	-	600 x 400 x 10	transparent	1	**9.301 507**
Euronormbox	20	400 x 300 x 220	grey	1	**6.283 913**
Lid	-	400 x 300 x 10	grey	1	**6.283 914**

Suitable accessories can be found in our online shop.

3

1 Ice buckets and pans PolarSafe™, PS

Argos Technologies

These polystyrene buckets and pans are produced with thick walls to provide rigidity and strength, and yet are very lightweight. Perfectly suited for use with ice, dry ice and slurry ice. Even liquid nitrogen can be stored in these containers. All products provide excellent insulating properties to help keep temperature sensitive samples safely chilled. PolarSafe™ buckets come with snug fitting lids to minimize evaporation loss and to maximize cooling. They feature easy-grab knobs on each lid and prominent recessed handles to facilitate transport. The pans, without a lid feature unique gripping ridges and pour spouts to facilitate the disposal of cooling agents.

1

Description	Colour	Capacity L	Dimensions (l x w x h) mm	PK	Cat. No.
Ice Bucket*	black	2.5	276 x 308 x 114	1	**6.281 562**
Ice Bucket*	blue	5.0	276 x 308 x 173	1	**6.281 563**
Ice Pan	blue	4.0	305 x 229 x 127	1	**6.281 565**

* with lid

2 Cool Containers True North®, PU

Heathrow Scientific

Rigid polyurethane container provides durability for chilling your temperature sensitive samples. Excellent insulation properties for ultra cold. Use with ice, dry ice and ice-salt slurries, etc. For low temperature use down to -196°C. Minimize evaporation loss with close fit lid. Easily remove with comfortable recessed knobs. Keyed lid and base fit together to conveniently store lid under base. With spout and ergonomic handles for safe handling. Stackable.

2

Colour	Capacity l	Dimensions (l x w x h) mm	PK	Cat. No.
black	4	234 x 181*	1	**9.010 691**
green	1	267 x 195.5 x 114	1	**9.010 692**
blue	4	381 x 254 x 182	1	**9.010 693**
red	9	521 x 292 x 163	1	**9.010 694**

*(diam. x H)

3 4 Insulated container Magic Touch 2™

Bel-Art Products

Superior insulating properties combined with high chemical resistance make Magic Touch 2™ laboratory ice buckets and pans compatible not only with wet ice, but also with ultra-low temperature materials including dry ice, ice-salt mixtures, dry ice solvent mixtures, or liquid nitrogen. Their lightly textured non-slip finish and raised edge provides secure transport and a stylish look.

Expanded urethane icewares are
- lightweight
- durable
- non-sweating
- impervious to moisture and odors
- able to withstand a wide temperature range: -196 °C to 100 °C
- provided with a convenient pour spout, drip-proof rims and fill line
- furnished with perfect fitting lid
- easy and secure to stack because of a keyed lid and base

3

4

Type	Colour	Capacity L	Dimensions (l x w x h) mm	PK	Cat. No.
Mini Ice Pan	blue	1.0	183 x 183 x 116	1	**9.010 632**
Mini Ice Pan	red	1.0	183 x 183 x 116	1	**9.010 633**
Midi Ice Pan	blue	4.0	304 x 229 x 200	1	**9.010 638**
Midi Ice Pan	red	4.0	304 x 229 x 200	1	**9.010 639**
Maxi Ice Pan*	blue	9.0	420 x 303 x 200	1	**9.010 640**
Maxi Ice Pan*	red	9.0	420 x 303 x 200	1	**9.010 641**
Handy Ice Bucket	blue	2.5	(diam. x H) 268 x 164	1	**9.010 634**
Handy Ice Bucket	red	2.5	(diam. x H) 268 x 164	1	**9.010 635**
N'Icer Ice Bucket	blue	4.0	(diam. x H) 268 x 212	1	**9.010 636**
N'Icer Ice Bucket	red	4.0	(diam. x H) 268 x 212	1	**9.010 637**

* without lid

1

9.401 090

Cryo-Safe™ Coolers

Bel-Art Products

Use to protect samples on the bench, during transport, or in freezers with defrost cycle and fluctuating temperatures
Polycarbonate. A non-toxic freezing gel is isolated within the walls of the cooler, guaranteeing that labels or marks on the vials or tube are not damaged.

- The indexed and transparent (9.401 090, 9.401 091, 9.401 092) or gel-filled (9.401 093, 9.401 094) polycarbonate lid shows tube location and matches locations printed on the cooler
- Side handles (9.401 090, 9.401 091) or a wire handle for easy carrying
- Coolers can be stacked to save space and maximize freezer volume
- Rubber feet to prevent slipping
- All polycarbonate cooler body easy to clean

Store at -20 °C for 24 hours prior to use — for -15 °C-Cryo-Safe-Boxes
Store at -20 °C for a few hours until the temperature of the cooler falls below 0 °C — for -0 °C-Cryo-Safe-Boxes

2

9.401 094

For tubes ml	Dimensions (l x w x h) mm	Array	Temperature-maintained	PK	Cat. No.
0.5 ml, 1.5 ml	145 x 100 x 95	12	≤ 0 °C for 2.5 h	1	**9.401 090** 1
0.5 ml, 1.5 ml, 2.0 ml	145 x 100 x 95	12	≤ -15 °C for 1 h	1	**9.401 091**
15 ml	197 x 140 x 190	12	≤ 0 °C for 3 h	1	**9.401 092**
0.5 ml, 1.5 ml	243 x 157 x 146	32	≤ 0 °C for 3 h	1	**9.401 093**
0.5 ml, 1.5 ml, 2.0 ml	243 x 157 x 146	32	≤ -15 °C for 1.5 h	1	**9.401 094** 2

3

3 Labtop Cooler Nalgene™, Type 5115, 5116, DS5116

Thermo Scientific

The economical alternative for keeping samples and biochemical reagents cool at the workbench or for protecting against temperature fluctuations and power failure in refrigeration apparatus. With write-on, gridded lid. Lids fit one way to maintain the correct grid orientation. Robust, space-saving and stackable. With non-slip rubber feet. Can be used down to -135 °C. Adapters are also supplied for 0.5 ml microtubes.

Type	Description	Aperture array qty.	Temperature-maintained on lab bench	PK	Cat. No.
5115	Clear lid, without gel, for 1.5 - 2.0 ml tubes	12	≤-15 °C up to 1 hr.	1	**9.400 929**
DS5116	Clear lid, without gel, for 1.5 - 2.0 ml tubes	12	≤ 1 °C up to 3.5 hrs.	1	**9.400 930**
5115	White lid, with gel, for 1.5 - 2.0 ml tubes	32	≤-15 °C up to 2 hrs.	1	**9.400 932**
DS5116	White lid, with gel, for 1.5 - 2.0 ml tubes	32	≤ 1 °C up to 5 hrs.	1	**9.400 933**

4

4 Mini coolers, PC

BRAND

Mini coolers are designed to protect a wide range of solutions (enzymes, DNA, RNA, cell suspensions) by helping to maintain freezer temperatures on the lab bench.
Durable polycarbonate filled with non-toxic gel.
Mini coolers hold twelve 0.5 ml to 2.0 ml tubes.

Colour	Temperature-maintained on lab bench	PK	Cat. No.
red	0 °C, up to 60 min	1	**6.802 253**
yellow	-20 °C up to 60 min	1	**7.300 442**
white	-70 °C up to 45 min	1	**7.090 437**

1 Cooling Block Systems, FreezeBox™

Blue. FreezeBox™ is a new, energy-saving, environmentally friendly and safe cooling equipment, without additives. It does not require electricity (except for pre-cooling the cores in the freezer) and no ice for low-temperature cooling of biological samples. The system can be used ice-free, is lightweight, easy to transport and ideal for the collection and storage of biological samples. It can be combined with interchangeable cores and different tube modules.
Cooling cores can be tempered in a refrigerator or freezer and inserted into the FreezeBox™.
For operation with dry ice, leave out the cooling core and fill with 200 g dry ice instead.

- For use with cooling core, ice or dry ice
- Easy to clean and disinfect
- Durable, suitable for frequent use
- Easy to mount

1

Type	Description	Dimensions (W x D x H) mm	PK	Cat. No.
FreezeBox™	with cooling core, -0.5 °C ... 4 °C and CM-01-module	152 x 170 x 123	1	**4.665 848**
FreezeBox™	with cooling core, -0.5 °C ... 4 °C and CM-02-module	152 x 170 x 123	1	**4.665 856**
FreezeBox™	with cooling core, -0.5 °C ... 4 °C and CM-03-module	152 x 170 x 123	1	**4.665 857**
FreezeBox™	with cooling core, -0.5 °C ... 4 °C and CM-04-module	152 x 170 x 123	1	**4.665 858**
FreezeBox™	with freeze core, -18 °C ... -4 °C and CM-01-module	152 x 170 x 123	1	**4.665 859**
FreezeBox™	with freeze core, -18 °C ... -4 °C and CM-02-module	152 x 170 x 123	1	**4.665 860**
FreezeBox™	with freeze core, -18 °C ... -4 °C and CM-03-module	152 x 170 x 123	1	**4.665 861**
FreezeBox™	with freeze core, -18 °C ... -4 °C and CM-04-module	152 x 170 x 123	1	**4.665 862**
FreezeBox™	Empty FreezeBox™	152 x 170 x 123	1	**4.665 849**
Cooling core	for -0.5 °C ... 4 °C	105 x 100 x 26	1	**4.665 850**
Freeze core	for -18 °C ... -4 °C	105 x 100 x 26	1	**4.665 851**
CM-01-module	for 30 x 2 ml tubes, Ø 12,6	119 x 101 x 38	1	**4.665 852**
CM-02-module	for 48 x 1.5 ml tubes, Ø 11	119 x 101 x 38	1	**4.665 853**
CM-03-module	for 30 x 5 ml tubes, Ø 13,5	119 x 101 x 38	1	**4.665 854**
CM-04-module	for 96 PCR-tubes, Ø 7	119 x 101 x 38	1	**4.665 855**

Freezing Aid for Cell Cultures, FreezerCell™

FreezerCell™ can be used for a variety of cell types, including stem cells, primary cells, cell lines and yeasts. The FreezerCell™ does not require any additives and only needs to be placed in an ultra deep freezer and the cooling runs at -1°C per minute.
Fill the freezing aid with the cryotubes and freeze for approx. 3 hours at -80 °C.
Then the samples are readyto transfer to a nitrogen tank.
This gentle method ensures a high survival rate of the cells during the freezing process.

- No pre-cooling necessary
- Consistent temperature distribution, even with partial loading
- Lid can be opened easily

2

4.665 863

3

4.665 865

Type	Dimensions (W x D x H) mm	PK	Cat. No.
Hexagon shape for 12 tubes	108 x 108 x 100	1	**4.665 863** 2
Square shape for 12 tubes	117 x 117 x 100	1	**4.665 865** 3

4 Nalgene Freezing container Mr. Frosty, PC

Thermo Scientific

With 120mm diameter screw cap in blue HDPE, vial holder made of white HDPE.
Suitable for 18 x 1.2/2.0 ml cryovials. Foam interior. Cooling rate 1 °C/min.
Tubes can be easily removed. Each aperture has a moulded number for identification.
Stackable.

4

For tubes ml	Diam. mm	Height mm	No. of tubes	PK	Cat. No.
1.0-2.0	117	86	18	1	**9.400 945**
3.6	117	151	12	1	**9.400 990**
4.5-5.0	117	151	12	1	**9.400 991**

1

1 Immersion circulator

Immersion circulator for all kinds of water baths. It clamps securely to both straight and curved tank walls. The patented, closed housing protects the user and the heating element. *PolyScience*

- Temperature stability ±0.07 °C
- Minimum working depth 7.5 inch/19 cm
- Large LCD-display
- Display resolution 0.1 °C
- Displays actual and set point temperature simultaneously
- Integrated pump and heater protection
- Integrated over-temperature protection
- Low liquid level protection
- Included clamp for straight and curved tank walls
- Maximum pressure 0.12 bar/1.8 psi with a maximum pressure flow rate of 11.9 l/min

Type	Dimensions (W x D x H) mm	Pump max. l/min / bar	Temp. range max. °C	PK	Cat. No.
MX	109 x 97 x 358	11.9 / 0.12	135	1	**6.281 081**

2

2 Open Tanks

For use with Immersion circulator LX and MX. *PolyScience*

Filling volume L	Dimensions (W x D x H) mm	Bath opening mm	Bath tank depth mm	Temp. range max. °C	Material	PK	Cat. No.
8	302 x 174 x 232	284 x 156	203	85	Polycarbonate	1	**6.281 082**
11	406 x 174 x 232	389 x 156	203	85	Polycarbonate	1	**4.658 653**
14	513 x 174 x 232	493 x 156	203	85	Polycarbonate	1	**4.658 654**
17	351 x 324 x 232	312 x 305	203	85	Polycarbonate	1	**4.658 655**
23	455 x 324 x 232	417 x 305	203	85	Polycarbonate	1	**4.658 656**
28	561 x 324 x 232	523 x 305	203	85	Polycarbonate	1	**4.658 657**

3

3 Open Bath Systems, Stainless Steel

An economical alternative to integrated heating baths for liquid temperatures up to 150 °C. Controller bridge rests securely on the bath, yet is easily removed for tank cleaning. Generous bath opening provides ready access to samples and the included bath cover improves stability. *PolyScience*

- Working temperatures from ambient +10° up to 150 °C
- Advanced Programmable, Advanced Digital or MX Temperature Controller
- 6, 10, 20 or 28 liter reservoir
- DuraTop™ Chemical Resistant Bridge, Swivel 180™ Rotating Controller (on Advanced Programmable and Advanced Digital models)
- Lidded opening for optional cooling coil (10, 20 and 28 liter models)
- External circulation capability
- Complies with DIN 12876-1 Class I safety requirements for use with non-flammable liquids
- Incl. bath cover

Working temperature range:	+10° … +150 °C (+135 °C, MX type)
Temperature stability:	±0.01 °C (±0.07 °C, MX type)
Heating capacity:	2.2 kW (1.1 kW, MX type)
Pump capacity:	16.7 l/min/0.25 bar (AP, AD type)
	11.9 l/min/0.12 bar (MX type)

Type	Filling volume L	Dimensions (W x D x H) mm	Bath opening mm	Bath tank depth mm	PK	Cat. No.
MX	6	340 x 206 x 406	100 x 110	152	1	**4.658 641**
MX	10	353 x 342 x 406	99 x 255	152	1	**4.658 644**
MX	20	531 x 342 x 406	264 x 228	152	1	**4.658 647**
MX	28	531 x 342 x 457	257 x 214	203	1	**4.658 650**
AD	6	340 x 206 x 378	100 x 110	152	1	**4.658 640**
AD	10	353 x 342 x 378	99 x 255	152	1	**4.658 643**
AD	20	531 x 342 x 378	264 x 228	152	1	**4.658 646**
AD	28	531 x 342 x 427	257 x 214	203	1	**4.658 649**
AP	6	340 x 206 x 378	100 x 110	152	1	**4.658 639**
AP	10	353 x 342 x 378	99 x 255	152	1	**4.658 642**
AP	20	531 x 342 x 378	264 x 228	152	1	**4.658 645**
AP	28	531 x 342 x 427	257 x 214	203	1	**4.658 648**

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1

1 Refrigerated/heated circulators

PolyScience

The circulators are available in 4 bath sizes combined with 4 different temperature controllers. A large, 180° freely rotatable display allows good visibility and control of the values set from different angles.

- Temperature range -40 to 200 °C
- Reservoir sizes ranging from 7 liters to 45 liters
- Working temperature from ambient +10 °C to 200 °C
- Pressure and suction pump (selected models)
- Incl. lid and LidDock™ lid holder
- DuraTop™, precision-molded phenolic bath top resists laboratory chemicals
- Large bath opening and drain
- Swivel 180™, display with a 180° viewing radius
- Easy hook-up of fluid connections
- Intuitive setup and operation, featuring multi-language help and screen prompts
- Simplified setup and maintenance
- Class III safety, according to DIN 12876-1 Class III standards for use with flammable liquids (selected models)

2

2 Heated Circulating Baths with MX Temperature Controller

PolyScience

- Working Temperature: Ambient +10° to +135 °C
- Temperature Stability: ±0.07 °C
- Pump: 1-speed
- Pump Pressure (max.): 1.8 psi (0.12 bar)
- External Circulation: Closed loop

Bath capacity L	External dimensions (W x D x H) mm	Pressure pump max. L/min bar	Heating capacity kW	Bath opening mm	Bath tank depth mm	PK	Cat. No.
7	499 x 221 x 437	11.9/0.12	1.1	157 x 142	127	1	**6.281 071**
15	569 x 368 x 452	11.9/0.12	1.1	212 x 276	140	1	**7.920 413**
20	610 x 419 x 452	11.9/0.12	1.1	250 x 316	140	1	**4.658 635**

3

3 Thermostatic controllers Optima™ T100/TC120

Grant

Combine with a plastic or stainless steel tank or with an accessory T-clamp for independent use. The two general purpose heating circulators offer excellent temperature stability and uniformity with a cooling/heating range of 0 °C to +100 °C* (T100) and -15 °C to +120 °C* (TC120).
***For using at or below room temperature you need additional flow coolers C1G (9.920 765) or C2G (9.920 766).**

Features:
T100: visual alarm, 2 point recalibration, fixed over temperature cut-out
TC120: visual and audible alarm, timer, 2 point recalibration, adjustable over temperature cut-out, pump for external circulation

T Clamp: For attaching the thermostats to any vertical sided tank with a maximum wall thickness of 35 mm for rectangular tanks, 30 mm for circular tanks (300 mm diameter), and a capacity of up to 50 L.

Models with clamps available on request.

Specifications

Temperature range with stainless steel tank	
T100:	0 °C to +100 °C*
TC120:	-15 °C to +120 °C*
Stability/Uniformity (DIN 12876) at 70 °C:	±0.05 °C/±0.1 °C
Setting resolution:	0.1 °C
Display:	4 digit LED
No. of pre-set temperatures:	3
Recalibration points:	2
Heating power (230 V):	1.3 kW
Power supply (230 V/50-60 Hz):	1.4 kW
TC120 only:	
Timer:	1 to 6000 mins
Pump max. pressure:	210 mbar
Flow rate max.:	16 l/min

Type	Description	PK	Cat. No.
T100	without pump	1	**9.699 630**
TC120	with pump	1	**9.699 631**
T clamp	-	1	**9.699 634**

1 Thermostatic controllers Optima™ TX150/TXF200

1

Grant

Combine with a plastic or stainless steel tank or with an accessory T-clamp for independent use. The two advanced heating circulators feature a modern, icon driven programming interface and full colour display. Cooling/heating range: -15 °C to +150 °C* (TX150) and -15 °C to +200 °C* (TXF200).
***For using at or below room temperature you need additional flow coolers C1G (9.920 765) or C2G (9.920 766).**

Features:
Visual and audible alarm, timer, 5 point recalibration, adjustable over temperature cut-out, pump, external probe, progammable, relay, menu system, program storage, USB port.

T Clamp: For attaching the thermostats to any vertical sided tank with a maximum wall thickness of 35 mm for rectangular tanks, 30 mm for circular tanks (300 mm diameter), and a capacity of up to 50 L.

Models with clamps available on request.

Specifications

Temperature range with stainless steel tank	
TX150:	-15 °C to 150 °C*
TXF200:	-15 °C to 200 °C*
Stability/Uniformity (DIN 12876) at 70 °C:	±0.01 °C / ±0.05 °C
Setting resolution:	0.1 °C (0.01 °C with Labwise)
Display:	QVGA TFT
Timer:	1 min to 99 hrs 59 mins
No. of pre-set temperatures:	3
Recalibration points:	5
Heating power (230 V):	1.9 kW
Power supply (230 V/50-60 Hz):	2.0 kW
Interface:	USB and RS232
Pump max. pressure	
TX150:	310 mbar
TXF200:	530 mbar
Flow rate max.	
TX150:	18 l/min
TXF200:	22 l/min (adjustable)

Type	Programmable	PK	Cat. No.
TX150	remote via PC/labtop, 1 program / 30 segments	1	**9.699 632**
TXF200	direct via user interface or remote via PC/labtop, 10 programs / 100 segments	1	**9.699 633**
T clamp	-	1	**9.699 634**

Accessories for water baths Optima™ series

2

6.239 419

Grant

Drain syphon SY1: For the rapid draining of baths.

Heat exchange coil CW5: For use with precision and general purpose stirred baths.
Temperature range 2 °C above coolant temperature.
Coil diameter/l mm 77/55, pipe bore inlet/outlet 7 mm.

PP spheres PS20: Between operating temperatures 60 °C and 100 °C and below room temperature a lid or layers of polypropylene spheres can be used. Above 100 °C a lid must be used.

C1G refrigerated cooler:
For use with all stainless steel Optima™ baths ranging from 0 °C to +40 °C.
For 220 - 240 V 50 Hz single phase supplies.

C2G refrigerated cooler:
For use with all stainless steel Optima™ baths ranging from -15 °C to +40 °C.
A bath lid must be used at temperatures below 0°C, in order to achieve optimum performance.
For 220 - 240 V 50 Hz single phase supplies.

Type	PK	Cat. No.
Drain syphon SY1	1	**9.699 096**
Heat exchange coil CW5	1	**9.920 764**
PP spheres PS20	300	**6.239 419** 2
Refrigerated cooler C1G	1	**9.920 765**
Refrigerated cooler C2G	1	**9.920 766**

1

1 Stirred thermostatic baths Optima™ series

Grant

Complete units including plastic or stainless steel bath, bridge mounting plate and thermostatic controller. For 220-240V, 50/60Hz.

- The two general purpose heating circulators offer excellent temperature stability and uniformity with a cooling/heating range of 0 to 100 °C (T100) and -15 °C to +120 °C (TC120).
- The two advanced heating circulators feature a modern, icon driven programming interface and full color display. Cooling/heating range: -15 °C to +150 °C (TX150) and -15 °C to +200 °C (TXF200).
- Grant stirred baths and circulators provide a source of precision heating and cooling. Complete range of 32 models covers basic to more sophisticated needs, each model representing excellent value for money and featuring intuitive programming and accurate, safe temperature control.
- An accessory gabled hinged lid is available to reduce evaporation, avoid heat loss and avoid sample contamination.
- High efficiency stainless steel (ST) tanks (range -15 °C to +200 °C)
- A drain trap is included on the ST12, ST18, ST26 and ST38

Accessory polypropylene spheres or a lid must be used at temperatures between 60 °C and 100 °C. Above 100 °C only a lid must be used.
For using at or below room temperature you need additional flow coolers C1G (9.920 765) or C2G (9.920 766).

Please see article table for usable working space. External dimensions incl. controller.

Please order spheres and lids separately.

Type	Capacity	External dimensions (W x D x H)	Working space W x D x H	Temp. range	Material	PK	Cat. No.
	l	mm	mm	max. °C			
T100-P5	5	235 x 325 x 380	150 x 120 x 155	amb. +15 ... +99	plastic	1	**9.699 640**
T100-P12	12	350 x 415 x 380	280 x 210 x 155	amb. +5 ... +99	plastic	1	**9.699 641**
T100-P18	18	350 x 600 x 380	375 x 280 x 155	amb. +5 ... +99	plastic	1	**9.699 642**
T100-ST5	5	180 x 330 x 395	150 x 150 x 150	amb. +15 ... +100	stainless steel	1	**9.699 643**
T100-ST12	12	330 x 360 x 415	300 x 205 x 150	amb. +5 ... +100 *	stainless steel	1	**9.699 644**
T100-ST18	18	330 x 540 x 415	300 x 385 x 150	amb. +5 ... +100 *	stainless steel	1	**9.699 645**
T100-ST26	26	330 x 540 x 465	300 x 385 x 200	amb. +5 ... +100 *	stainless steel	1	**9.699 646**
T100-ST38	38	330 x 730 x 460	300 x 575 x 200	amb. +5 ... +100 *	stainless steel	1	**9.699 647**
TC120-P5	5	235 x 325 x 380	150 x 120 x 155	amb. +15 ... +99	plastic	1	**9.699 648**
TC120-P12	12	350 x 415 x 380	280 x 210 x 155	amb. +5 ... +99	plastic	1	**9.699 649**
TC120-P18	18	350 x 600 x 380	375 x 280 x 155	amb. +5 ... +99	plastic	1	**9.699 650**
TC120-ST5	5	180 x 330 x 395	150 x 150 x 150	amb. +15 ... +120 *	stainless steel	1	**9.699 651**
TC120-ST12	12	330 x 360 x 415	300 x 205 x 150	amb. +5 ... +120 *	stainless steel	1	**9.699 652**
TC120-ST18	18	330 x 540 x 415	300 x 385 x 150	amb. +5 ... +120 *	stainless steel	1	**9.699 653**
TC120-ST26	26	330 x 540 x 465	300 x 385 x 200	amb. +5 ... +120 * **	stainless steel	1	**9.699 654**
TC120-ST38	38	330 x 730 x 460	300 x 575 x 200	amb. +5 ... +120 * **	stainless steel	1	**9.699 655**
TX150-P5	5	235 x 325 x 380	150 x 120 x 155	amb. +15 ... +99	plastic	1	**9.699 656**
TX150-P12	12	350 x 415 x 380	280 x 210 x 155	amb. +5 ... +99	plastic	1	**9.699 657**
TX150-P18	18	350 x 600 x 380	375 x 280 x 155	amb. +5 ... +99	plastic	1	**9.699 658**
TX150-ST5	5	180 x 330 x 395	150 x 150 x 150	amb. +15 ... +150 *	stainless steel	1	**9.699 659**
TX150-ST12	12	330 x 360 x 415	300 x 205 x 150	amb. +5 ... +150 *	stainless steel	1	**9.699 660**
TX150-ST18	18	330 x 540 x 415	300 x 385 x 150	amb. +5 ... +150 *	stainless steel	1	**9.699 661**
TX150-ST26	26	330 x 540 x 465	300 x 385 x 200	amb. +5 ... +150 * **	stainless steel	1	**9.699 662**
TX150-ST38	38	330 x 730 x 460	300 x 575 x 200	amb. +5 ... +150 * **	stainless steel	1	**9.699 663**
TXF200-P5	5	235 x 325 x 380	150 x 120 x 155	amb. +15 ... +99	plastic	1	**9.699 664**
TXF200-P12	12	350 x 415 x 380	280 x 210 x 155	amb. +5 ... +99	plastic	1	**9.699 665**
TXF200-P18	18	350 x 600 x 380	375 x 280 x 155	amb. +5 ... +99	plastic	1	**9.699 666**
TXF200-ST5	5	180 x 330 x 395	150 x 150 x 150	amb. +15 ... +200 *	stainless steel	1	**9.699 667**
TXF200-ST12	12	330 x 360 x 415	300 x 205 x 150	amb. +5 ... +200 *	stainless steel	1	**9.699 668**
TXF200-ST18	18	330 x 540 x 415	300 x 385 x 150	amb. +5 ... +200 *	stainless steel	1	**9.699 669**
TXF200-ST26	26	330 x 540 x 465	300 x 385 x 200	amb. +5 ... +200 * **	stainless steel	1	**9.699 670**
TXF200-ST38	38	330 x 730 x 460	300 x 575 x 200	amb. +5 ... +200	stainless steel	1	**9.699 671**

* Temperature range can be extended to 0 °C with accessory cooling of flow cooler 9.920 765.
**Temperature range can be extended to -15 °C with accessory cooling of flow cooler 9.920 766.

2

9.699 086

Lids for water baths Optima™ series

Grant

3

9.905 724

Type	For	Description	Material	PK	Cat. No.
PL 5	bath P 5	Flat	Stainless steel	1	**9.699 085**
PL 12	bath P 12	Flat	Plastic	1	**9.699 086** 2
PL 18	bath P 18	Flat	Plastic	1	**9.699 087**
STL5	bath ST5	Flat	Stainless steel	1	**9.905 723**
STL12	bath ST12	Gabled with hinge	Stainless steel	1	**9.905 724** 3
STL26	bath ST26 and ST18	Gabled with hinge	Stainless steel	1	**9.905 725**
STL38	bath ST38	Gabled with hinge	Stainless steel	1	**9.905 726**

1 Baths and Circulators

1

Huber

The Huber circulators are split into two product lines, the Compatible Control models and the simpler KISS models. Both model lines represent classically constructed laboratory circulators with open baths. Baths and circulators for heating applications up to +300 °C are available, as well as models for heating and cooling applications from -90 °C to +200 °C. Immersion or bridge circulators are suitable for thermal control of existing baths. The Ministat, the smallest cooling and heating circulator in the world, is the first choice for operation in fume-hoods or integrating into systems.

Circulators with Pilot ONE Controller
Models with Pilot ONE Controller convincing in practice with their highly precise temperature control and a professional range of functions even in the basic version. The electronic upgrade function "E-grade" allows a simple and low cost expansion of functions at any time. Operation is simple using large colour displays, an easily understandable menu and an individually customisable display. Models with the Pilot ONE have powerful pressure and suction pumps with continuously variable speed control for adjusting circulation to the bath in use. Further connections are available via the optional Com.G@te, e.g. RS232 and RS485, analogue interface 4 to 20 mA or 0 to 10 V, standby signal and programmable alarm.

Circulators using the KISS Controller
The functions of models with the low price KISS controller concentrate on the essentials. KISS models are suitable for numerous typical laboratory applications, such as temperature control of samples, analysis, materials testing, as well as the external temperature control of test equipment or experimental constructions. The machine achieves a temperature stability of ±0.05 °C and are fitted with an over temperature and low fluid level protection. The safety systems are according to class III/FL (DIN 12876) for use with flammable fluids.

Advantages and Functions (model dependent):
- Working Temperatures from -90 °C to +300 °C
- Models for internal and external temperature control
- High heating and cooling powers up to 7kW
- Powerful controllable circulation pumps
- Function expansion with the E-grade system is available at any time
- High precision cascade temperature control
- Large and full colour 5.7" TFT touchscreen
- Programmer with calendar/clock function
- Extended range of languages including a selection of European and Asian
- Comprehensive warning and safety functions
- Large, bright OLED display
- Simple operation via a plain text menu
- RS232 and USB Interfaces
- Safety class 3 (FL) to DIN 12876
- Internal and external temperature control

2 Immersion circulators KISS E and CC-E

2

Huber

Immersion circulators are the basis of many combinations of polycarbonate and stainless steel baths. Together with a cooling bath it is possible to get exact and reproducable temperatures down to -30 °C. All models are equipped with a powerful suction pressure pump and comply with safety class III (FL) for use with flammable liquids. Pump adapters for external tempering and cooling coils for cooling water connection are available as accessories.

Temp. control range °C:	(-30) 25 to 200 °C
Safety class:	FL, III
Heating capacity kW:	2 kW
suction max. (CC-E):	22 l/min/0.4 bar
suction max. (CC-E xd):	17 l/min/0.25 bar
suction max. (KISS E):	10.5 l/min/0.17 bar
Immersion depth	
(CC-E, KISS E):	150 mm
(CC-E xd):	195 mm

Type	Pump max. l/min / bar	Dimensions (W x D x H) mm	Temp. Stability K	PK	Cat. No.
CC-E	27 / 0.7	132 x 159 x 315	0,01*	1	**9.859 201**
CC-E xd	22 / 0.4	132 x 159 x 360	0,01	1	**6.313 816**
KISS E	14 / 0.25	132 x 163 x 312	0,05*	1	**6.272 332**

*according to DIN 12876, measured in 12-litre stainless steel bath.

1

1 Thermostatic baths with polycarbonate tanks

Huber

The transparent polycarbonate baths are suitable for use up to 100 °C.
An immersion thermostat is mounted on the bath bridge for all models.
With a pump adapter, this combination can also be used with external, closed applications.
Models with the Pilot ONE controller have a variable speed pressure/suction pump and are therefore also suitable for external open applications.

Temperature max.:	100 °C
Temp. Stability at 70 °C to DIN12876	
KISS E:	0.05 K
CC-E:	0.02 K
Safety class:	FL, III
Bath depth:	150 mm

Type	Bath capacity	Pressure pump max.	Dimensions (W x D x H)	Bath opening	PK	Cat. No.
	L	L/min bar	mm	mm		
CC-106A	6	27 / 0,7	147 x 307 x 330	130 x 110	1	**9.859 203**
KISS-106A	6	14 / 0,25	147 x 307 x 330	130 x 110	1	**6.272 334**
CC-108A	8	27 / 0,7	147 x 407 x 330	130 x 210	1	**9.859 204**
KISS-108A	8	14 / 0,25	147 x 407 x 330	130 x 210	1	**6.272 335**
CC-110A	10	27 / 0,7	147 x 507 x 330	130 x 310	1	**9.859 205**
KISS-110A	10	14 / 0,25	147 x 507 x 330	130 x 310	1	**6.272 336**
CC-112A	12	27 / 0,7	333 x 360 x 335	275 x 161	1	**9.859 206**
KISS-112A	12	14 / 0,25	333 x 360 x 335	275 x 161	1	**6.272 337**
CC-118A	18	27 / 0,7	333 x 520 x 335	275 x 321	1	**9.859 207**
KISS-118A	18	14 / 0,25	333 x 520 x 335	275 x 321	1	**6.272 338**

2

2 Heating circulators with stainless steel baths

Huber

The insulated stainless steel baths are suitable for use up to 200°C. All models have a bridge-mounted immersion circulator. With a pump adapter, this combination can also be used with externally closed and externally open (with option level control) applications.
Models with the Pilot ONE controller have a variable speed pressure/suction pump and are therefore also suitable for external open applications.

Stability to DIN 12876:	
CC models:	0.02 K
KISS models:	0.05 K
Max. temp.:	200 °C
Safety class:	FL, III

Type	Bath capacity	Pressure pump max.	Dimensions (W x D x H)	Bath tank depth	Bath opening	PK	Cat. No.
	L	L/min bar	mm	mm	mm		
CC-208B	8.5	27 / 0.7	290 x 350 x 375	150	230 x 127	1	**9.859 212**
KISS-208B	8.5	14 / 0.25	290 x 350 x 375	150	230 x 127	1	**6.272 343**
CC-212B	12	27 / 0.7	350 x 375 x 375	150	290 x 152	1	**9.859 208**
KISS-212B	12	14 / 0.25	350 x 375 x 375	150	290 x 152	1	**6.272 342**
CC-215B	15	27 / 0.7	350 x 375 x 425	200	290 x 152	1	**9.859 209**
KISS-215B	15	14 / 0.25	350 x 375 x 425	200	290 x 152	1	**6.272 341**
CC-220B	20	27 / 0.7	350 x 555 x 375	150	290 x 329	1	**9.859 210**
KISS-220B	20	14 / 0.25	350 x 555 x 375	150	290 x 329	1	**6.272 340**
CC-225B	25	27 / 0.7	350 x 555 x 425	200	290 x 329	1	**9.859 211**
KISS-225B	25	14 / 0.25	350 x 555 x 425	200	290 x 329	1	**6.272 339**

OUR POWER DWARFS FOR YOUR LABORATORY

Our smallest – Stars in every laboratory

Inspired by **temperature**

Our smallest ones are convincing as an inexpensive and environmentally friendly solution for numerous laboratory applications. The units require little space on the laboratory bench and are therefore ideally suited for high-precision temperature control of research reactors, reactor blocks, vapour barriers, vacuum pumps, rotary evaporators or heat exchangers.

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1

1 Heating circulators

Huber

Good things come in small packages! Thanks to their low bath volumes the models CC-104A und KISS-104A (with polycarbonate bath) as well as the CC-202C and KISS-202C (with stainless steel bath) are especially suitable for controlling the temperature of small external applications. All models are fitted with rear mounted M16x1 pump connections as standard.
Models with the Pilot ONE have a speed regulated pressure/suction pump. The temperature constancy, in accordance with DIN12876, is 0.02 K with the Compatible Control models and 0.05 K for the KISS models.
Models CC-202C and KISS-202C are fitted with an integrated cooling coil as standard.
With the models CC-104A and KISS-104A the cooling coil is an optional extra.

Temperature range	
CC-104A/KISS-104A:	(15) 25 to 100 °C
CC-202C/KISS-202C:	(-30) 45 to 200 °C
Temp. Stability to DIN 12876	
CC models:	0.02 K
KISS models:	0.05 K
Safety class:	FL, III
Bath depth:	150 mm
Heating capacity:	2kW

Type	Suction pump cap.	Pressure pump max.	Dimensions (W x D x H)	Bath opening	PK	Cat. No.
	L/min bar	L/min bar	mm	mm		
CC-104A	22/0.4	27/0.7	147 x 235 x 330	Ø 25	1	**9.859 213**
CC-202C	22/0.4	27/0.7	178 x 260 x 355	Ø 25	1	**9.859 220**
KISS-202C	10.5/0.17	14/0.25	178 x 260 x 355	Ø 25	1	**6.272 344**

2 Heating bath circulators

Huber

Heating bath circulators are suitable for temperatures up to 200 °C or 300 °C depending on model.
The Compatible Control models have a continuously variable pressure and suction pump. The pump pressure can be controlled with an optional pressure sensor, and so can protect your valuable glass-ware from breakage. The machines are preferred and used for temperature control of externally connected applications. Additionally there is the ability to control the temperature of objects placed directly in the open bath.

Temperature control range	
CC-205B/KISS-205B:	(20) 45 ... 200 °C
CC-304B/CC-308B/CC-315B:	28 ... 300 °C
Safety class:	FL, III
Stability to DIN 12876	
CC-205B/CC-304B/CC-308B/CC-315B:	0.02 K
KISS-205B:	0.05 K

Type	Bath capacity	Suction pump cap.	Pressure pump max.	Dimensions (W x D x H)	Heating capacity	PK	Cat. No.
	L	L/min bar	L/min bar	mm	kW		
CC-205B	5.0	22 / 0.4	27 / 0.7	178 x 337 x 355	2.0	1	**9.859 221**
KISS-205B	5.0	10.5 / 0.17	14 / 0.25	178 x 337 x 355	2.0	1	**6.272 345**
CC-304B	5.0	18.5 / 0.4	25 / 0.7	210 x 335 x 392	3.0	1	**9.859 222**
CC-308B	8.5 / 5.2*	18.5 / 0.4	25 / 0.7	242 x 404 x 392	3.0	1	**9.859 223**
CC-315B	15 / 8.5*	18.5 / 0.4	25 / 0.7	335 x 382 x 433	3.0 / 4.0	1	**9.859 224**

*using displacement insert

2

1 Thermoregulators CORIO™

1

JULABO

The CORIO™ C Immersion Circulator is the basic model of the CORIO™ circulator portfolio. The bath attachment clamp is included in delivery and facilitates mounting of the circulator on any bath tank up to 30 liters. With a few simple steps you can install a pump set onto the CORIO™ CD Immersion Circulator. In no time at all, your circulator is ready for temperature control of an external application.

- Precise temperature control
- For internal standard applications
- Immersion depth: 7.5 to 16.5 cm
- Bright, white, easy to read display
- Whisper quiet
- Easy operation

CORIO™ C
- For bath tank up to 30 liters
- Class I (NFL) according to DIN 12876-1
- Circulation capacity 6 l/min at 0.1 bar

CORIO™ CD
- For bath tank up to 50 liters
- Pump change-over between internal and external circulation
- USB interface
- Class III (FL) according to DIN 12876-1
- Circulation capacity 15 l/min at 0.35 bar

Delivery without bath please order separately.
To adapt the CORIO™ Immersion Circulator to your individual application we offer a comprehensive range of accessories (racks, bath lids, and more).

Type	Heating capacity kW	Working Temp. range °C	Temp. stability ± °C	PK	Cat. No.
CORIO™ C	2	+20 … +100	0.03	1	**7.673 349**
CORIO™ CD	2	+20 … +150	0.03	1	**4.658 066**

Pump set for CORIO™ CD with connectors M16x1, Art. No. 4.658 027

2 Thermoregulators CORIO™ CP

NEW

2

JULABO

CORIO CP thermoregulators are capable to control the temperature of external applications in combination with an optional pump set.
Suitable for bath vessels with a volume of up to 50 l.

- For internal and external applications (accessories required)
- Bright, white, easily visible display, even from a distance
- Very quiet
- Easy operation
- Low-level warning system
- Pump switch for internal and external circulation
- Powerful, continously variable pump
- USB connection
- RS232 interface
- Class III (FL) according to DIN 12876-1

Scope of supply: Thermoregulator, mains power cable, bath attachment clamp

Specifications

Setting accuracy:	0.01 °C
Pump output:	8 ... 27 l/min
Pump pressure:	0.1 ... 0.7 bar
Immersion depth:	75 ... 165 mm
Max. viscosity:	50 cSt
Timer:	0 ... 999 min
Permissible ambient temperature:	5 ... 40 °C
Dimensions (W x D x H):	132 x 160 x 362 mm
Weight:	2.5 kg
Power supply:	230 V/50 Hz

Type	Working Temp. range °C	Temp. stability ± °C	Heating capacity kW	PK	Cat. No.
CP	20 ... 200	0.02	2	1	**4.669 404**

1

1 Thermoregulators DYNEO™ DD

JULABO

For internal and external applications. The thermoregulators with maximum flexibility can be mounted with the sturdy bath clamp to any bath up to 50 liters. Equipped with USB interface, also available with optional analogue (extra code A) or RS232 (extra code D) interface.

- Easy switching between internal and external circulation (optional pump set, Cat. No. 4.658 027)
- Large colour TFT Display
- Easy to operate via central controller
- Integrated programmer for 8 x 60 program steps
- Class III (FL) acc. to DIN 12876-1
- Continuously adjustable, powerful pressure pump
- External Pt100 sensor connection
- Installation cooling coil for counter-cooling, Cat No. 4.658 026, available separately

Bath clamp included.

Specifications

Operating temperature range:	20...200 °C
Temperature stability:	0.01 °C
Heating capacity:	2 kW
Flow rate:	8 ... 27 l/min
Pump capacity:	0.1 ... 0.7 bar
Dimensions (W x D x H):	130 x 160 x 360 mm
Weight:	2.5 kg
Power supply:	200-230 V, 50/60 Hz

Type	PK	Cat. No.
DD	1	**4.663 220**
DD.A	1	**4.663 233**
DD.D	1	**4.663 246**

2

2 Bridge circulators MAGIO MS and MX

NEW

JULABO

Thanks to the adjustable stainless steel bridge the thermostats can be used with bath tanks up to a filling volume of 100 litres and bath widths from 33 to 68 cm.

- Simple control of complex applications
- Infinitely adjustable, extremely powerful pressure and suction pump
- Large, high-resolution TFT touch display with multilingual user interface
- Medium-contacting parts made of stainless steel
- Integrated programmer
- External Pt100 connection
- USB interface
- RS232 interface
- Ethernet interface
- Analogue interfaces (optionally)
- Classification III according to DIN 12876-1

Specifications:	**MS-Z // MX-Z**
Temperature stability:	±0.01 °C
Flow rate:	16 ... 31 l/min
Pump pressure:	0.24 ... 0.92 bar
Suction pressure:	0.03 ... 0.4 bar
Immersion depth:	150 mm // 200 mm
Heating capacity:	2000 W // 3000 W
Permissible ambient temperature:	5 ... 40 °C
Power supply:	230 V/50 ... 60 Hz

Type	Dimensions (W x D x H) mm	Temp. range °C	Heating power W	PK	Cat. No.
MS-Z	340 x 190 x 360	20 ... 300	2000	1	**4.678 302**
MX-Z	340 x 190 x 410	20 ... 300	3000	1	**4.678 309**

1 Heating circulators MAGIO MS and MX

NEW

1

For precise temperature control of internal and external applications from 3 to 26 litres. *JULABO*

- Simple control of complex applications
- Infinitely adjustable, extremely powerful pressure and suction pump
- Large, high-resolution TFT touch display with multilingual user interface
- Medium-contacting parts made of stainless steel
- Integrated programmer
- External Pt100 connection
- USB interface
- RS232 interface
- Ethernet interface
- Analogue interfaces (optionally)
- Classification III according to DIN 12876-1
- High quality thermal insulation of the bath tanks
- Integrated drain cock for easy and safe emptying

Specifications:	**MS-BC // MX-BC**
Temperature stability:	±0.01 °C
Flow rate:	16 ... 31 l/min
Pump pressure:	0.24 ... 0.92 bar
Suction pressure:	0.03 ... 0.4 bar
Heating capacity:	2000 W // 3000 W
Permissible ambient temperature:	5 ... 40 °C
Power supply:	230 V/50 ... 60 Hz

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	Temp. range	Heating power	PK	Cat. No.
	L	mm	mm	mm	°C	W		
MS-BC4	3 ... 4.5	230 x 410 x 420	130 x 150	150	20 ... 300	2000	1	**4.678 303**
MX-BC6	4.5 ... 6	240 x 440 x 470	130 x 150	200	20 ... 300	3000	1	**4.678 310**
MX-BC12	8.5 ... 12	330 x 490 x 470	220 x 150	200	20 ... 300	3000	1	**4.678 311**
MX-BC26	19 ... 26	390 x 620 x 480	260 x 350	200	20 ... 300	3000	1	**4.678 312**

2 3 Accessories for heating thermostats CORIO™

Transparent bath tanks and stainless steel bath tank for CORIO™ *JULABO*

For Type	Description	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
C,CD	Transparent bath tank BT5, up to +100 °C	150 x 300 x 150	220 x 370 x 160	1	**4.658 013**
C,CD	Transparent bath tank BT9, up to +100 °C	240 x 300 x 150	310 x 370 x 160	1	**4.658 014**
C,CD	Transparent bath tank BT19, up to +100 °C	300 x 500 x 150	370 x 580 x 160	1	**4.658 015**
C,CD	Transparent bath tank BT27, up to +100 °C	300 x 500 x 200	370 x 580 x 210	1	**4.658 016**
C,CD	Stainless steel bath tank B5, up to +150 °C	150 x 300 x 150	220 x 370 x 200	1	**4.658 017**
C,CD	Stainless steel bath tank B13, up to +150 °C	300 x 320 x 150	370 x 400 x 200	1	**4.658 018**
C,CD	Stainless steel bath tank B17, up to +150 °C	300 x 320 x 200	370 x 400 x 250	1	**4.658 019**
C,CD	Stainless steel bath tank B19, up to +150 °C	300 x 500 x 150	370 x 580 x 200	1	**4.658 020**
C,CD	Stainless steel bath tank B27, up to +150 °C	300 x 500 x 200	370 x 580 x 250	1	**4.658 021**
C,CD	Stainless steel bath tank B33, up to +150 °C	830 x 300 x 150	900 x 360 x 200	1	**4.658 022**
C,CD	Stainless steel bath tank B39, up to +150 °C	300 x 500 x 300	340 x 580 x 350	1	**4.658 023**

2

3

1

1 Circulator Baths, CORIO™ C with transparent bath tanks

JULABO

CORIO™ C Open Heating Bath Circulators for internal temperature applications with transparent bath tanks for working temperatures from 20 °C to 100 °C.

- For internal applications
- Bright, white, easy to read display
- Whisper quiet

Working temperature range: 20 … 100 °C
Temperature stability: ±0.03 °C
Heating capacity: 2 kW
Pump capacity: 6 l/min/0.1 bar

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ C-BT5	3.5 - 5	230 x 380 x 380	150 x 150	150	1	**4.657 985**
CORIO™ C-BT9	6 - 9	320 x 380 x 380	230 x 150	150	1	**4.657 986**
CORIO™ C-BT19	14 - 19	380 x 580 x 380	300 x 350	150	1	**4.657 987**
CORIO™ C-BT27	20 - 27	380 x 580 x 430	300 x 350	200	1	**4.657 988**

2

2 Circulator Baths, CORIO™ C with stainless steel bath tanks

JULABO

CORIO™ C Open Heating Bath Circulators for internal temperature applications with stainless steel bath tanks for working temperatures from +20 °C to +100 °C, complete set with bath tanks.

- For internal applications
- Bright, white, easy to read display
- Whisper quiet
- Integrated drain screw (except for B5)

Working temperature range: 20 … 100 °C
Temperature stability: ±0.03 °C
Heating capacity: 2 kW
Flow rate: 6 l/min
Pressure: 0.1 bar

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ C-B5	3.5 - 5	230 x 380 x 410	150 x 150	150	1	**4.657 989**
CORIO™ C-B13	9 - 13	380 x 400 x 420	300 x 180	150	1	**4.657 990**
CORIO™ C-B17	13 - 17	380 x 400 x 470	300 x 180	200	1	**4.657 991**
CORIO™ C-B19	14 - 19	380 x 580 x 420	300 x 350	150	1	**4.657 992**
CORIO™ C-B27	17 - 27	380 x 580 x 470	300 x 350	200	1	**4.657 993**

3

3 Circulator baths, CORIO™ CD with transparent bath tanks

JULABO

CORIO™ CD Open Heating Bath Circulators for internal and external temperature applications with transparent bath tanks for working temperatures from +20 °C to +100 °C. The Open Heating Bath Circulator of the new CORIO™ series feature durable, high-quality transparent bath tanks and pump connections.

- For internal and external applications
- Bright, white, easy to read display
- Very quiet
- Pump change-over between internal and external circulation
- USB connection
- Class III (FL) according to DIN 12876-1

Working temperature range: 20 … 100 °C
Temperature stability ±0.03 °C
Heating capacity: 2 kW
Flow rate: 15 l/min
Pressure: 0.35 bar

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ CD-BT5	3.5 - 5	230 x 380 x 380	150 x 150	150	1	**4.657 994**
CORIO™ CD-BT19	14 - 19	380 x 580 x 380	300 x 350	150	1	**4.657 995**
CORIO™ CD-BT27	20 - 27	380 x 580 x 430	300 x 350	200	1	**4.657 996**

1 Circulator baths, CORIO™ CD with stainless steel bath tanks

JULABO

CORIO™ CD Open Heating Bath Circulators for internal and external temperature applications with stainless steel bath tanks for working temperatures from +20 °C to +150 °C.
The Open Heating Bath Circulators of the new CORIO™ series feature high-quality bath tanks made of stainless steel and with pump connections.

- For internal and external applications
- Bright, white, easy to read display
- Very quiet
- Pump change-over between internal and external circulation
- USB connection
- Integrated drain screw (except for B5)

Working temperature range:	20 … 150 °C
Temperature stability:	±0.03 °C
Heating capacity:	2 kW
Flow rate:	15 l/min
Pressure:	0.35

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ CD-B5	3.5 - 5	230 x 380 x 410	150 x 150	150	1	**4.657 997**
CORIO™ CD-B13	9 - 13	380 x 400 x 420	300 x 180	150	1	**4.657 998**
CORIO™ CD-B17	13 - 17	380 x 400 x 470	300 x 180	200	1	**4.657 999**
CORIO™ CD-B19	14 - 19	380 x 580 x 420	300 x 350	150	1	**4.658 000**
CORIO™ CD-B27	17 - 27	380 x 580 x 470	300 x 350	200	1	**4.658 001**
CORIO™ CD-B33	26 - 39	910 x 360 x 430	660 x 320	150	1	**4.658 002**
CORIO™ CD-B39	35 - 41	540 x 340 x 570	330 x 300	300	1	**4.658 003**

1

Bath covers

JULABO

Flat bath cover or lift-up gable bath cover made of stainless steel.

For Type	Description	Material	PK	Cat. No.
B5, BT5	Flat bath cover	stainless steel	1	**4.658 040**
B13, B17	Flat bath cover	stainless steel	1	**4.658 036** 2
B19, B27, BT19, BT27	Flat bath cover	stainless steel	1	**4.658 037**
B33	Flat bath cover	stainless steel	1	**4.658 038**
B39	Flat bath cover	stainless steel	1	**4.658 039**
B13, B17	Lift-up gable bath cover	stainless steel	1	**4.658 033** 3
B19, B27, BT19, BT27	Lift-up gable bath cover	stainless steel	1	**4.658 034**
B33	Lift-up gable bath cover	stainless steel	1	**4.658 035**

2

4.658 036

3

4.658 033

4 Circulator Baths, CORIO™ CD

JULABO

CORIO™ CD Heating Circulators for internal and external temperature applications with stainless steel baths for working temperatures from +20 °C to +150 °C. CORIO™ Heating Circulators feature professional technology for demanding applications. These units facilitate internal temperature control in the bath tank or control of externally connected applications.

- For internal and external applications
- Bright, white, easy to read display
- Very quiet
- Pump change-over between internal and external circulation
- USB connection
- High-quality bath tanks made of stainless steel with bath lid and drain tap
- Integrated cooling coil for counter-cooling

Working temperature range:	+20 … +150 °C
Temperature stability:	±0.03 °C
Heating capacity:	2 kW
Flow rate:	15 l/min
Pressure:	0.35 bar

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ CD-BC4	3 - 4,5	230 x 410 x 420	130 x 150	150	1	**4.658 004**
CORIO™ CD-BC6	4,5 - 6	240 x 440 x 470	130 x 150	200	1	**4.658 005**
CORIO™ CD-BC12	8,5 - 12	330 x 490 x 470	220 x 150	200	1	**4.658 006**
CORIO™ CD-BC26	19 - 26	390 x 620 x 480	260 x 350	200	1	**4.658 007**

4

1

1 Circulator Baths, CORIO™ CP

NEW

JULABO

With insulated stainless steel bath tanks, flexible performance and an operating temperature range of up to 200 °C. Temperature control is possible either in the internal bath or in a connected external application.

- Suitable for internal and external applications
- High-quality stainless steel bath vessels with bath lid and drain
- Integrated pump connections M16x1
- Integrated cooling coil for counter-cooling
- Bright, white, easily visible display, even from a distance
- Low-level warning system
- Easy switching between internal and external circulation
- Powerful, continuously variable pump
- Pump capacity adjustable from 8 to 27 l/min
- Very quiet
- Rubber feet for secure standing
- USB connection
- RS232 interface
- 3-point calibration
- Class III (FL) according to DIN 12876-1

Scope of supply: Circulator bath, mains power cable, connection box, bath, bath cover, hose connectors 8 and 12 mm

Specifications

Temperature range:	20 ... 200 °C
Setting accuracy:	0.01 °C
Temperature uniformity:	±0.02 °C
Pump output:	8 ... 27 l/min
Pump pressure:	0.1 ... 0.7 bar
Heat output:	2 kW
Timer:	0 ... 999 min
Hose connector inner width:	8/12 mm
Permissible ambient temperature:	5 ... 40 °C
Power supply:	230 V/50 Hz

Type	Capacity of the bath	Bath opening	Bath tank depth	Weight	External dimensions (W x D x H)	PK	Cat. No.
	litres	mm	mm	kg	mm		
CP-BC4	4.5	130 x 150	150	8.5	230 x 410 x 420	1	**4.669 405**
CP-BC6	6.0	130 x 150	200	10.0	240 x 440 x 470	1	**4.670 677**
CP-BC12	12.0	220 x 150	200	12.0	330 x 490 x 470	1	**4.670 678**
CP-BC26	26.0	260 x 350	200	19.0	390 x 620 x 480	1	**4.670 679**

2

2 Reaction vessels, cylindrical, with thermostatic jacket

Lenz

- With graduation
- Laboratory flange LF
- Groove
- Flat bottom
- Two connectors with threads GL 14 or GL 18
- Made of DURAN® tubing

Other sizes on request.

Nominal capacity	Flange (LF)	Outer/ inner diam.	Height	Int. height	Connection	PK	Cat. No.
ml		mm	mm	mm			
100	60	90/60	135	115	GL 14	1	**9.142 726**
250	60	90/60	190	170	GL 14	1	**9.142 727**
500	60	90/60	275	255	GL 14	1	**9.142 728**
1000	60	90/60	245	220	GL 18	1	**6.243 104**
250	100	130/93	160	140	GL 18	1	**6.243 105**
500	100	130/93	180	155	GL 18	1	**9.142 741**
1000	100	130/93	245	220	GL 18	1	**9.142 742**
2000	100	130/93	375	350	GL 18	1	**9.142 744**
3000	100	190/150	325	285	GL 18	1	**6.243 106**
4000	100	190/150	380	340	GL 18	1	**9.142 747**
2000	150	190/150	265	225	GL 18	1	**9.142 754**
3000	150	190/150	320	280	GL 18	1	**6.089 893**
4000	150	190/150	375	335	GL 18	1	**9.142 757**
5000	150	190/150	430	390	GL 18	1	**6.243 107**
6000	150	190/150	485	445	GL 18	1	**9.142 759**

1 Heating circulator baths DYNEO™ DD

1

For internal and external applications. With powerful components and a large, easy-to-read colored TFT display. Operation is simple and intuitive via the central controller on the front of the device. Equipped with USB interface and with additional analogue (extra code A) or RS232 (extra code D) interface.

JULABO

- Easy switching between internal and external circulation
- Integrated cooling coil for counter-cooling
- Built-in drain tap
- Integrated programmer for 8 x 60 program steps
- Class III (FL) acc. to DIN 12876-1
- Continuously adjustable, powerful pressure pump
- Pump connections M16x1 (outer thread)
- External Pt100 sensor connection

2 hose connectors for 8 and 12 mm I.W. and bath lid included.

Specifications

Operating temperature range:	20...200 °C
Temperature stability:	0.01 °C
Heating capacity:	2 kW
Flow rate:	8 ... 27 l/min
Pump capacity:	0.1 ... 0.7 bar
Power supply:	200-230 V, 50/60 Hz

Type	Filling volume L	Bath opening mm	Bath tank depth mm	Weight kg	PK	Cat. No.
DD-BC4	3.0 - 4.5	130 x 150	150	8.5	1	**4.663 221**
DD-BC6	4.5 - 6.0	130 x 150	200	9.7	1	**4.663 222**
DD-BC12	8.5 - 12.0	220 x 150	200	11.9	1	**4.663 223**
DD-BC26	19.0 - 26.0	260 x 350	200	18.7	1	**4.663 224**
DD-BC4.A	3.0 - 4.5	130 x 150	150	8.5	1	**4.663 234**
DD-BC6.A	4.5 - 6.0	130 x 150	200	9.7	1	**4.663 235**
DD-BC12.A	8.5 - 12.0	220 x 150	200	11.9	1	**4.663 236**
DD-BC26.A	19.0 - 26.0	260 x 350	200	18.7	1	**4.663 237**
DD-BC4.D	3.0 - 4.5	130 x 150	150	8.5	1	**4.663 247**
DD-BC6.D	4.5 - 6.0	130 x 150	200	9.7	1	**4.663 248**
DD-BC12.D	8.5 - 12.0	220 x 150	200	11.9	1	**4.663 249**
DD-BC26.D	19.0 - 26.0	260 x 350	200	18.7	1	**4.663 250**

2 Stabilizing/Weighting rings, lead

2

LAB-Rings to stabilise glassware and plasticware on shakers or to immerse in water baths. Vinyl-coated lead rings will not mark or scratch benchtops and labware.

Heathrow Scientific

Type	For flasks ml	Int. diam. mm	PK	Cat. No.
O-Shape	5 ... 10	18	1	**7.072 085**
O-Shape	125 ... 500	48	1	**6.243 010**
O-Shape	250 ... 1000	51	1	**6.242 742**
O-Shape	500 ... 2000	57	1	**6.243 011**
O-Shape	1000 ... 4000	70	1	**7.054 161**
C-Shape	125 ... 500	42	1	**9.149 902**
C-Shape	250 ... 1000	51	1	**9.149 905**
C-Shape	500 ... 2000	54	1	**9.149 906**
C-Shape	1000 ... 4000	66	1	**9.149 907**

Water baths please see page 829.

1

1 Refrigerated/heated circulators

PolyScience

The circulators are available in 4 bath sizes combined with 4 different temperature controllers. A large, 180° freely rotatable display allows good visibility and control of the values set from different angles.

- Temperature range -40 to 200 °C
- Reservoir sizes ranging from 7 liters to 45 liters
- Working temperature from ambient +10 °C to 200 °C
- Pressure and suction pump (selected models)
- Incl. lid and LidDock™ lid holder
- DuraTop™, precision-molded phenolic bath top resists laboratory chemicals
- Large bath opening and drain
- Swivel 180™, display with a 180° viewing radius
- Easy hook-up of fluid connections
- Intuitive setup and operation, featuring multi-language help and screen prompts
- Simplified setup and maintenance
- Class III safety, according to DIN 12876-1 Class III standards for use with flammable liquids (selected models)

2

2 Refrigerated Circulators with MX Temperature Controller

PolyScience

- Working Temperature: From -30° up to +135 °C
- Temperature Stability: ±0.07 °C
- Pressure Pump with one pump speed
- Maximum Pressure: 1.8 psi (0.12 bar)
- External circulation: closed loop

Capacity	Dimensions (W x D x H)	Heating capacity	Cooling capacity kW at 20 °C	Temp. range	Bath opening	Bath tank depth	PK	Cat. No.
l	mm	kW		max. °C	mm	mm		
7	157 x 142 x 127	1.1	0.2	-20 … +135	157 x 142	127	1	**4.658 606**
15	212 x 276 x 140	1.1	0.9	-30 … +135	212 x 276	140	1	**4.658 616**
20	250 x 316 x 140	1.1	0.9	-30 … +135	250 x 316	140	1	**6.283 678**

3

3 Refrigerated Circulators with Standard Digital (SD) Temperature Controller

PolyScience

- Working Temperature: From -30° up to +170 °C
- Temperature Stability: ±0.04 °C
- Large, universal icon and English display
- Swivel 180™ Rotating Controller
- Pressure Pump with two speeds
- Pump pressure max. 2.9 psi (0.20 bar)
- On-board connectivity: RS-232 serial output
- Adjustable over- or under-temperature
- Automatic performance optimization
- Single-point calibration capability

Capacity	Dimensions (W x D x H)	Heating capacity	Cooling capacity kW at 20 °C	Temp. range	Bath opening	Bath tank depth	PK	Cat. No.
l	mm	kW		max. °C	mm	mm		
7	157 x 142 x 127	2.2	0.2	-20 … +170	157 x 142	127	1	**6.280 874**
15	212 x 276 x 140	2.2	0.9	-30 … +170	212 x 276	127	1	**4.658 615**
20	250 x 316 x 140	2.2	0.9	-30 … +170	250 x 316	140	1	**4.658 620**
28	314 x 359 x 140	2.2	0.9	-30 … +170	314 x 359	140	1	**4.658 623**

1 Refrigerated Circulators with Advanced Digital (AD) Temperature Controller

PolyScience

- Working Temperature: From -40° up to +200 °C
- Temperature Stability: ±0.01 °C
- Intuitive 3.75" (9.5 cm) display with touch-pad control
- 4 languages: French, German, Spanish, English
- Swivel 180™ Rotating Controller
- Pump speed variable external temperature control capability
- Pump pressure max. 4.3 psi (0.3 bar)
- On-board connectivity: USB-A & B, Ethernet, RS-232/RS-485, and external temperature probe
- Adjustable over- or under-temperature
- On-screen prompts
- Single-point calibration capability

1

Capacity	Dimensions (W x D x H)	Heating capacity	Cooling capacity kW at 20 °C	Temp. range	Bath opening	Bath tank depth	PK	Cat. No.
l	mm	kW		max. °C	mm	mm		
7	157 x 142 x 127	2.2	0.20	-20 … +200	157 x 142	127	1	**6.281 080**
7	157 x 142 x 127	2.2	0.36	-40 … +200	157 x 142	127	1	**4.658 612**
15	212 x 276 x 140	2.2	0.90	-30 … +200	212 x 276	140	1	**4.658 614**
15	212 x 276 x 140	2.2	1.00	-40 … +200	212 x 276	140	1	**4.658 618**
20	250 x 316 x 140	2.2	0.90	-30 … +200	250 x 316	140	1	**6.281 652**
28	314 x 359 x 140	2.2	0.90	-30 … +200	314 x 359	140	1	**4.658 622**
45	549 x 398 x 140	2.2	1.40	-25 … +135	549 x 398	140	1	**4.658 625**

2 Refrigerated Circulators with Advanced Programmable (AP) Temperature Controller

PolyScience

- Working Temperature: From -40° up to +200 °C
- Temperature Stability: ±0.005 °C
- Time/temperature programming (ten 100-step programs)
- Intuitive 4.3" (10.9 cm) SmartTouch display
- 11 languages: French, German, Spanish, Chinese, Arabic, English, Portuguese, Russian, Hindi, Italian, Korean
- Variable speed pump with open- and closed-loop external circulation capability
- Swivel 180™ Rotating Controller
- On-board connectivity: USB-A & B, Ethernet, RS-232/RS-485, remote on/off and external temperature probe
- Event scheduling (time & date) with real-time clock
- Review temperature trends for up to 10 days
- Multiple selectable "home" screens
- On-screen help
- Automatic and/or user-adjustable performance optimization
- 10-point calibration capability

2

Capacity	Dimensions (W x D x H)	Heating capacity	Cooling capacity kW at 20 °C	Temp. range	Bath opening	Bath tank depth	PK	Cat. No.
l	mm	kW		max. °C	mm	mm		
7	157 x 142 x 127	2.2	0.20	-20 … 200	157 x 142	127	1	**4.658 605**
7	157 x 142 x 127	2.2	0.36	-40 … 200	157 x 142	127	1	**4.658 611**
15	212 x 276 x 140	2.2	0.92	-30 … 200	212 x 276	140	1	**4.658 613**
15	212 x 276 x 140	2.2	1.00	-40 … 200	212 x 276	140	1	**4.658 617**
20	250 x 316 x 140	2.2	0.92	-30 … 200	250 x 316	140	1	**4.658 619**
28	314 x 359 x 140	2.2	0.92	-30 … 200	314 x 359	140	1	**4.658 621**
45	549 x 398 x 140	2.2	1.40	-25 … 135	549 x 398	140	1	**4.658 624**

3 Refrigerated/heated circulating baths LT ecocool

Grant

Consisting of two models, all products in the LT ecocool range are supplied assembled as ready to use kits, complete with accessory hosing, clips and connectors as standard.

- Choice of two models, temperature range -25 °C to 150 °C (model dependent)
- Industry leading 4 year warranty with Grant renowned service and support, no registration required
- Active cooling through the whole temperature range
- True energy saving of up to 80% against standard compressor units
- Thermostat and chiller work in harmony, neither will operate alone, eliminating any danger of overheating or freezing
- Single front switch for user convenience
- Modern, sleek, attractive design

3

Type	Capacity	Dimensions (W x D x H)	Heating power	Cooling capacity kW at 20/0/-20°C	Temp. range	PK	Cat. No.
	l	mm	W		max. °C		
LT ecocool 100	5	245 x 430 x 640	2160	210/184/21	-20 to 100	1	**6.282 852**
LT ecocool 150	6	245 x 430 x 640	2280	378/189/53	-25 to 150	1	**6.286 686**

1

1 Refrigerated circulators LTC 4

Versatile system for the laboratory, with a comprehensive specification to suit most low temperature applications. *Grant*

- Optima™ digital thermostat for precise temperature control: assembled with TX 150
- Cooling/heating range -30 to 100 °C
- Stability ±0.1 °C
- Powerful integral pump; allows temperature-controlled fluid to be circulated to external devices (18 L/min, 310 mbar)
- Easy to use rotary dial and two function keys
- Clear 4 digit display - easy to read from a distance for instant reassurance
- Visual alarm and countdown timer; alerts you when your attention is required
- User calibration facility for optimum accuracy at the required operating temperature
- Operating setpoint plus 3 adjustable preset temperatures for convenience
- Liquid protection and over-temperature cut-out
- Easy access to coolant reservoir for local cooling of tubes, bottles etc.
- Powerful efficient cooling, ozone-friendly refrigerant
- Dual-position bridge plate, ensures visibility/accessibility of the thermostat whilst optimising bench space
- Robust construction, corrosion resistant materials, stainless steel tank; durable in demanding environments
- 5 °C thermostat on/off switch; stops tank freezing when operating with water

Type	Capacity	Dimensions (W x D x H)	Heating power	Cooling capacity kW at 20/0/-20 °C	Temp. range	PK	Cat. No.
	l	mm	W		max. °C		
LTC 4	20	390 x 490 x 730	1900	0.90/0.50/0.18	-30 to +100	1	**9.721 067**

2 Cooling circulators

Combinations of immersion circulators and insulated refrigeration baths are low-cost solutions for direct thermoregulation within the temperature range -20/-30 °C to +200 °C. The refrigeration baths operate with natural refrigerants. A pump adapter (optional) can be fitted for thermoregulation of externally closed applications. Models with the Pilot ONE controller have a variable speed pressure/suction pump and are therefore suitable for external open thermoregulation applications. The temperature stability is 0.02 K for the Compatible Control models and 0.05 K for the KISS models. *Huber*

Type	Bath capacity	Pump max.	Dimensions (W x D x H)	Bath opening	Cooling capacity kW at 0/-10/-20 °C	Working Temp. range	PK	Cat. No.
	L	l/min / bar	mm	mm		°C		
CC-K12	12	27 / 0.7	350 x 560 x 430	290 x 152	0.2/0.12/0.05	-20 ... +200	1	**9.859 227**
KISS-K12	12	14 / 0.25	350 x 560 x 430	290 x 152	0.2/0.12/0.05	-20 ... +200	1	**6.287 658**
CC-K15	15	27 / 0.7	350 x 560 x 430	290 x 152	0.2/0.12/0.05	-20 ... +200	1	**9.859 228**
KISS-K15	15	14 / 0.25	350 x 560 x 430	290 x 152	0.2/0.12/0.05	-20 ... +200	1	**6.272 329**
CC-K20	20	27 / 0.7	350 x 555 x 615	290 x 329	0.35/0.27/0.16	-30 ... +200	1	**9.859 229**
KISS-K20	20	14 / 0.25	350 x 555 x 615	290 x 329	0.35/0.27/0.16	-30 ... +200	1	**6.272 330**
CC-K25	25	27 / 0.7	350 x 555 x 615	290 x 329	0.35/0.27/0.16	-30 ... +200	1	**9.859 230**
KISS-K25	25	14 / 0.25	350 x 555 x 615	290 x 329	0.35/0.27/0.16	-30 ... +200	1	**6.272 331**

2

1 Compatible Control Refrigeration Circulators K6

1

Huber

The K6 models are compact refrigeration bath circulators for temperatures from -25 to 200 °C. These units are a combination of a refrigerated bath and immersion circulator, in combination with an integrated pump they are suitable for external open (with level control) and closed applications. The CC-E immersion circulator with its suction/pressure pump is suitable to externally open and closed applications. The temperature stability is 0.02 K for the Compatible Control models and 0.05 K for the KISS models.

Safety class:	FL, III
Heating capacity:	2 kW
Pressure pump	
CC-K6/CC-K6s:	27 L/min/0.7 bar
KISS-K6/KISS-K6s:	14 L/min/0.25 bar

Type	Bath capacity	Dimensions (W x D x H)	Bath opening	Cooling capacity kW at 0/-10/-20 °C	Temp. range	PK	Cat. No.
	L	mm	mm		max. °C		
CC-K6	4.5	210 x 400 x 546	140 x 120	0.15/0.1/0.05	-25 ... +200	1	**9.859 226**
KISS-K6	4.5	210 x 400 x 546	140 x 120	0.15/0.1/0.05	-25 ... +200	1	**6.272 327**
CC-K6s	4.5	210 x 400 x 546	140 x 120	0.21/0.15/0.05	-25 ... +200	1	**9.859 225**
KISS-K6s	4.5	210 x 400 x 546	140 x 120	0.21/0.15/0.05	-25 ... +200	1	**6.272 328**

All units use natural refrigerant as standard.

2 Compact refrigerated circulators - Ministat®

2

Huber

Exceptionally compact and powerful, Ministats have been the smallest cooling circulators in the world since 1976. Their compact form allows them to be placed in small spaces, e.g. in a laboratory extraction hood. Compliance with DIN 12876, class 3 allows them to be used unsupervised in continual operation. The maximum ambient temperature is 40 °C. The powerful variable speed pressure/suction pump can thermoregulate objects in the bath or external applications. The maximum pressure can be controlled using an optional pressure sensor - VPC (Variable Pressure Control) - which protects delicate glassware. The small volume and high power of the Ministats means exceptionally rapid heating and cooling rates are achieved. Optional displacement inserts reduce the bath volume by approximately 50 % amplifying this effect and reducing moisture absorption in the thermal fluid. All models have Active Cooling Control for cooling power control at the maximum working temperature and an automatic cooling power regulation for energy saving operation and reduced heat dissipation into the lab.The bath opening is large enough to allow small objects to be thermoregulated within. All parts in contact with the thermal fluid are made of stainless steel or Polycarbonate.
Ministats have the Pilot ONE with Plug & Play technology (proven since 1980).
In the event of service the controller can be simply swapped. Using a data cable the Ministat can be remotely controlled. The Pilot ONE has a state of the art microprocessor controller and a high precision temperature measurement system for exact and reproducible temperature control. The functionality and TFT-display are supported by Easy Control. Typical applications for the smallest cooling circulator in the world are external closed systems e.g. photometer, refractometer and viscosimeter.

Pump pressure max.:	27 L/min / 0.7 bar
Max. suction:	20 L/min / 0.4 bar
Temperature Stability to DIN 12876:	0.02 K

Type	Bath capacity	Dimensions (W x D x H)	Bath tank depth	Heating power	Cooling capacity kW at 0/-20/-30° C	Working Temp. range	PK	Cat. No.
	L	mm	mm	W		max. °C		
Ministat® 125	2.75/1.3*	225 x 370 x 429	120	1000	0.21/0.05/--	-25 ... +150	1	**6.257 173**
Ministat® 125w	2.75/1.3*	225 x 370 x 429	120	1000	0.20/0.10/--	-25 ... +150	1	**9.859 232**
Ministat® 230	3.2/1.7*	255 x 450 x 476	135	2000	0.38/0.25/0.14	-40 ... +200	1	**9.859 233**
Ministat® 230w	3.2/1.7*	255 x 450 x 476	135	2000	0.38/0.25/0.14	-40 ... +200	1	**9.859 234**
Ministat® 240	4.9/2.8*	300 x 465 x 516	157	2000	0.55/0.35/0.125	-45 ... +200	1	**9.859 235**
Ministat® 240w	4.9/2.8*	300 x 465 x 516	157	2000	0.55/0.35/0.125	-45 ... +200	1	**9.859 236**

All units use natural refrigerant as standard.
*with displacement insert

1

1 Refrigeration Bath Circulators to -45 °C

Huber

HUBER refrigerated bath circulators perform safe and repeatable heating and cooling tasks in the lab. The models are covering the range to -45 °C with a selection of heating and cooling powers are available with air or water cooling (w). Natural refrigerants for environmentally friendly operation are available on request. A powerful variable speed pressure/suction pump allows the thermoregulation of objects directly in the bath or can be used to control external applications. The pump speed is stepless and when used in combination with an optional pressure sensor the maximum pressure can be controlled. VPC (Variable Pressure Control) ensures the best circulation and protects delicate glass apparatus from breakage caused by overpressure.
Small volume and high heating and cooling powers result in the shortest heating and cooling rates. Optional displacement inserts reduce the bath volume by half increasing this effect. Additionally the bath surface area is reduced, lowering moisture absorption. The optional calibration insert allows all HUBER refrigeration circulators to be used as calibration baths. The calibration insert ensures an even temperature distribution with a temperature stability of ±0.01K. All models have Active Cooling Control for cooling power control at the maximum working temperature and an automatic cooling power regulation for energy saving operation and reduced heat dissipation into the lab. Depending on the model carry handles or castors are fitted for easy transportation. The drain is located on the front of the unit to enable simple drainage of the bath. The cover plate is thermoregulated to avoid condensation. All models have the Pilot ONE with Plug & Play technology which can be simply swapped in the event of a service. The Pilot ONE can be used as a remote control (with data cable). The Pilot ONE is a high tech microprocessor based controller with a high precision measurement system for exact and reproducible results. The wide ranging functionality is supported by a large TFT display and simple operation. HUBER refrigeration circulators can be equipped with a Com.G@te to the NAMUR standard to enable integration in a process control system. Depending on the bath dimensions objects can be thermoregulated within the bath. Typical applications for these classics are the thermoregulation of externally closed systems, e.g. photometer, refractometer, viscosimeter, double-jacketed reactors and autoclaves. They are used in miniplants, kilo labs, for stock point measurement, for low temperature calibration, for petroleum tests and many more applications.

Option: Natural refrigerant available on request

Pump data

Max. pressure:	25 L/min/0.7 bar
Max. suction:	18.5 L/min/0.4 bar
Temp. stability acc. to DIN 12876:	0.02 K

Type	Bath capacity L	Bath tank depth mm	Heating power W	Cooling capacity KW at 100/20/0/-20/-30/-40°C	Working Temp. range °C	PK	Cat. No.
CC-405	5	150	1500	0.7 / 0.7 / 0.7 / 0.45 / 0.18 / 0.03	-40 ... +200	1	**9.859 237**
CC-405w	5	150	1500	0.7 / 0.7 / 0.7 / 0.45 / 0.18 / 0.03	-40 ... +200	1	**9.859 238**
CC-410	22 /8.5*	200	3000	0.8 / 0.8 / 0.8 / 0.5 / 0.15 / 0.1	-45 ... +200	1	**9.857 403**
CC-410wl	22 /8.5*	200	3000	0.8 / 0.8 / 0.8 / 0.5 / 0.15 / 0.1	-45 ... +200	1	**9.859 243**
CC-415	5	150	1500	1.2 / 1.2 / 1.0 / 0.6 / 0.2 / 0.05	-40 ... +200	1	**9.859 239**
CC-415wl	5	150	1500	1.2 / 1.2 / 1.0 / 0.6 / 0.2 / 0.05	-40 ... +200	1	**9.859 240**

*with displacement insert

2

2 Double-walled wide-mouth bottles GLS 80®, DURAN®

DWK Life Sciences

The DURAN® double-walled wide-mouth bottles GLS 80® incorporate an integral jacket that isolates the contents from the external environment. Heated or cooled liquids can be circulated through the jacket to control the temperature within the screw topped DURAN® bottle.

Applications
- Simple, low cost, jacketed chemostat or bioreactor for cell culture.
- Vessel for temperature-controlled reactions such as enzyme digestions.
- Simple continuous flow stirred reactor system with the optional GLS 80® cap components.
- Thermostatic vessel to maintain fluids, or high viscosity liquids at a constant temperature, useful when working with endo- or exothermic reactions.
- Large cold trap or condenser when used with dry ice in the inner container.

Features
- Usable temperature range of - 40 to + 120 °C.
- Manufactured from DURAN® borosilicate 3.3 glass.
- All components are fully autoclavable.
- Available in two sizes: 500 and 1000 ml.
- Compatible with full range of wide mouth GLS 80® connection cap systems for liquid addition or removal during processing.

Capacity ml	Diam. mm	Height without closure mm	PK	Cat. No.
500	110	170	1	**6.266 805**
1000	110	270	1	**6.266 806**

1 Refrigeration Bath circulators to -55°C

Compact design and high cooling capacity at low temperatures.
Option: Natural refrigerant available on request

Huber

Heating capacity	
CC-505/CC-505wl:	1.5 kW
CC-508 to CC-525w:	3.0 kW
Pump data CC-505 to CC-525w	
Max. pressure:	25 L/min / 0.7 bar
Max. suction:	18.5 L/min / 0.4 bar
Supply requirement	
CC-505 to CC-508w:	230 V / 50 Hz
CC-510 to CC-525w:	400 V / 50 Hz
Temp. stability acc. to DIN 12876:	±0.02 K

Type	Bath capacity L	Bath tank depth mm	Cooling capacity KW at 100/20/0/-20/-40°C	Working Temp. range °C	PK	Cat. No.
CC-505	5	150	1.2 / 1.2/ 1.0 / 0.6 / 0.15	-50 ... +200	1	**9.859 241**
CC-505wl	5	150	1.2 / 1.2/ 1.0 / 0.6 / 0.15	-50 ... +200	1	**9.859 242**
CC-508w	5	160	1.5 / 1.5 / 1.5 / 1.0 / 0.3	-55 ... +200	1	**9.857 401**
CC-510	26/15*	200	2.1 / 2.1 / 2.1 / 1.0 / 0.4	-50 ... +200	1	**9.859 256**
CC-510w	18/11*	200	2.4 / 2.4 / 2.4 / 1.0 / 0.4	-50 ... +200	1	**9.859 245**
CC-515	26/15*	200	3.3 / 3.3 / 3.3 / 1.6 / 0.6	-55 ... +200	1	**9.859 247**
CC-515w	18/11*	200	3.3 / 3.3 / 3.3 / 1.6 / 0.6	-55 ... +200	1	**9.859 246**
CC-520w	17/10*	200	5.0 / 5.0 / 5.0 / 3.0 / 1.5	-55 ... +200	1	**9.859 248**
CC-525w	17/10*	200	7.0 / 7.0 / 5.0 / 3.0 / 1.5	-55 ... +100	1	**9.859 249**

*with displacement insert
Function version available by E-grade.

2 Refrigerated circulator baths, CORIO™ CD

CORIO™ CD Heating Circulators for internal and external temperature applications with stainless steel baths for working temperatures from -40 °C to +150 °C.
CORIO™ Heating Circulators feature professional technology for demanding applications.
These units facilitate internal temperature control in the bath tank or control of externally connected applications.

JULABO

- For internal and external applications
- Bright, white, easy to read display
- Very quiet
- Pump change-over between internal and external circulation
- External pump connections (M16x1)
- USB connection
- High-quality bath tanks made of stainless steel with bath lid and drain tap
- Integrated cooling coil for counter-cooling
- Removable ventilation grille
- Refrigeration machines without lateral ventilation openings
- Class III (FL) according to DIN 12876-1

Specifications

Temperature stability:	±0.03 °C
Heating capacity:	2 kW
Flow rate:	15 l/min
Pressure:	0.35 bar

Type	Filling volume L	Dimensions (W x D x H) mm	Bath opening mm	Bath tank depth mm	Working Temp. range °C	Cooling capacity kW at 20/0/-20°C	PK	Cat. No.
CORIO™ CD-200F	3 - 4	230 x 390 x 650	130 x 150	150	-20 - 150	0.22 / 0.17 / 0.06	1	**4.658 008**
CORIO™ CD-201F	3 - 4	440 x 410 x 440	130 x 150	150	-20 - 150	0.22 / 0.17 / 0.06	1	**4.658 009**
CORIO™ CD-300F	3 - 4	240 x 420 x 660	130 x 150	150	-25 - 150	0.31 / 0.28 / 0.11	1	**4.658 010**
CORIO™ CD-600F	5 - 7,5	330 x 470 x 690	220 x 150	150	-35 - 150	0.6 / 0.46 / 0.18	1	**4.658 011**
CORIO™ CD-601F	8 - 10	360 x 460 x 740	220 x 150	200	-40 - 150	0.6 / 0.46 / 0.18	1	**6.283 539**
CORIO™ CD-900F	21 - 30	390 x 620 x 750	260 x 350	200	-40 - 150	0.9 / 0.8 / 0.35	1	**6.283 540**
CORIO™ CD-1000F	5 - 7,5	420 x 490 x 700	220 x 150	150	-40 - 150	1.0 / 0.98 / 0.53	1	**6.283 541**
CORIO™ CD-1001F	42 - 56	450 x 640 x 950	350 x 410	300	-38 - 100	1.0 / 0.9 / 0.35	1	**6.283 542**

1

1 Refrigerated circulators CORIO™ CP

NEW

JULABO

With insulated stainless steel bath tanks, flexible performance and an operating temperature range of up to 200 °C. Temperature control is possible either in the internal bath or in a connected external application.

- Suitable for internal and external applications
- High-quality stainless steel bath vessels including bath lid and drain
- Refrigerating units without side ventilation openings
- More space in the bath due to space-saving evaporator coils
- External pump connections M16x1
- Bright, white, easily visible display, even from a distance
- Low-level warning system
- Simple switchng between internal and external circulation
- Powerful, continuously variable pump
- Pump capacity adjustable from 8 to 27 l/min
- Very quiet
- Rubber feet for secure standing
- Removable air vent
- USB connection
- RS232 interface
- Class III (FL) according to DIN 12876-1

Scope of supply: refrigerated circulator, mains power cable, connection box, bath cover, connecting cable, refrigerator, hose connectors 8 and 12 mm

Specifications

Setting accuracy:	0.01 °C
Temperature uniformity:	±0.03 °C
Pump output:	8 ... 27 l/min
Pump pressure:	0.1 ... 0.7 bar
Heat output:	2 kW
Timer:	0 ... 999 min
Hose connector inner width:	8/12 mm
Permissible ambient temperature:	5 ... 40 °C
Power supply:	230 V/50 Hz

Type	Capacity of the bath	Bath opening	Bath tank depth	Temp. range	External dimensions (W x D x H)	Cooling capacity kW at 20/0/-20°C	PK	Cat. No.
	litres	mm	mm	°C	mm			
CP-200F	4.0	130 x 150	150	-20 ... 200	230 x 390 x 650	0.22 / 0.17 / 0.02	1	**4.670 680**
CP-201F	4.0	130 x 150	150	-20 ... 200	440 x 410 x 440	0.22 / 0.17 / 0.02	1	**4.670 681**
CP-300F	4.0	130 x 150	150	-30 ... 200	240 x 420 x 660	0.31 / 0.28 / 0.08	1	**4.670 683**
CP-600F	7.5	220 x 150	150	-35 ... 200	330 x 470 x 690	0.6 / 0.44 / 0.16	1	**4.670 684**
CP-601F	10.0	220 x 150	200	-35 ... 200	360 x 460 x 740	0.6 / 0.44 / 0.16	1	**4.670 685**
CP-900F	30.0	260 x 350	200	-38 ... 200	390 x 620 x 750	0.9 / 0.8 / 0.31	1	**4.670 686**
CP-1000F	7.5	220 x 150	150	-50 ... 200	420 x 490 x 700	1.0 / 0.96 / 0.51	1	**4.670 687**
CP-1001F	56.0	350 x 410	300	-38 ... 100	450 x 640 x 950	1.0 / 0.85 / 0.32	1	**4.670 688**

1 Refrigerated/heated circulators MAGIO MS

NEW

JULABO

For precise, reliable temperature control of demanding external applications, e.g. in basic research, in material testing and in technical installations.

- Simple control of complex applications
- Infinitely adjustable, extremely powerful pressure and suction pump
- Large, high-resolution TFT touch display with multilingual user interface
- Medium-contacting parts made of stainless steel
- Integrated programmer
- External Pt100 connection
- USB interface
- RS232 interface
- Ethernet interface
- Analogue interfaces (optionally)
- Classification III according to DIN 12876-1

1

Specifications:

Temperature stability:	±0.01 °C
Flow rate:	16 ... 31 l/min
Pump pressure:	0.24 ... 0.92 bar
Suction pressure:	0.03 ... 0.4 bar
Heating capacity:	2000 W
Permissible ambient temperature:	5 ... 40 °C
Power supply:	230 V/50 ... 60 Hz

Type	Filling volume	Dimensions (W x D x H)	Bath opening	Bath tank depth	Temp. range	Cooling capacity kW at 20/0/-20°C	PK	Cat. No.
	L	mm	mm	mm	°C			
MS-300F	3 ... 4	240 x 420 x 660	130 x 150	150	-25 ... 200	0.3/0.24/0.06	1	**4.678 304**
MS-600F	5 ... 7.5	330 x 470 x 690	220 x 150	150	-35 ... 200	0.6/0.44/0.16	1	**4.678 305**
MS-601F	8 ... 10	330 x 470 x 740	220 x 150	200	-35 ... 200	0.6/0.52/0.16	1	**4.678 306**
MS-900F	21 ... 30	390 x 620 x 750	260 x 350	200	-38 ... 200	0.9/0.8/0.31	1	**4.678 307**
MS-1000F	21 ... 30	420 x 490 x 700	180 x 130	150	-50 ... 200	1.0/0.96/0.51	1	**4.678 308**

2 Water bath preservative liquid Aqua Stabil

JULABO

- Prevents build-up of algae and bacteria in bath tanks providing hygienic operation
- No contamination of the tank or immersion thermostat components
- Economical - only 2 ml of Aqua Stabil is required for every 1 litres of water
- Remains effective for weeks, as shown by colour indicator.

2

This product is a disinfectant containing biocides. Please inquire its availability and legal information.

H phrases: H412

Volume ml	PK	Cat. No.
100	1	**9.858 040**

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1 Refrigerated circulator baths DYNEO™ DD

JULABO

Ideal for internal and external applications. With powerful components and a large, easy to read colored TFT display. Operation is simple and intuitive via the central controller on the front of the device. Equipped with USB interface, also available with optional analogue (extra code A) or RS232 (extra code D) interface.

- Easy switching between internal and external circulation
- Built-in drain tap
- Integrated programmer for 8 x 60 program steps
- Class III (FL) acc. to DIN 12876-1
- Continuously adjustable, powerful pressure pump
- Pump connectors M16x1
- External Pt100 sensor connection

2 hose connectors for 8 and 12 mm I.W. and bath lid included.

Specifications

Temperature stability:	0.01 °C
Heating capacity:	2 kW
Flow rate:	8 ... 27 l/min
Pump capacity:	0.1 ... 0.7 bar
Power supply:	230 V, 50/60Hz

Type	Working Temp. range °C	Filling volume L	Bath opening mm	Bath tank depth mm	Cooling capacity kW at 20/0/-20°C	PK	Cat. No.
DD-200F	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 225**
DD-201F	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 226**
DD-300F	-30...200	3.0 - 4.0	130 x 150	150	0.31 / 0.28 / 0.08	1	**4.663 227**
DD-600F	-35...200	5.0 - 7.5	220 x 150	150	0.6 / 0.44 / 0.16	1	**4.663 228**
DD-601F	-35...200	5.0 - 7.5	220 x 150	20	0.6 / 0.44 / 0.16	1	**4.663 229**
DD-900F	-38...200	21.0 - 30.0	260 x 350	20	0.9 / 0.8 / 0.31	1	**4.663 230**
DD-1000F	-50...200	5.0 - 7.5	180 x 130	15	1.0 / 0.96 / 0.51	1	**4.663 231**
DD-1001F	-38...100	42.0 - 56.0	350 x 410	30	1.0 / 0.85 / 0.32	1	**4.663 232**
DD-200F.A	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 238**
DD-201F.A	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 239**
DD-300F.A	-30...200	3.0 - 4.0	130 x 150	150	0.31 / 0.28 / 0.08	1	**4.663 240**
DD-600F.A	-35...200	5.0 - 7.5	220 x 150	150	0.6 / 0.44 / 0.16	1	**4.663 241**
DD-601F.A	-35...200	5.0 - 7.5	220 x 150	20	0.6 / 0.44 / 0.16	1	**4.663 242**
DD-900F.A	-38...200	21.0 - 30.0	260 x 350	20	0.9 / 0.8 / 0.31	1	**4.663 243**
DD-1000F.A	-50...200	5.0 - 7.5	180 x 130	15	1.0 / 0.96 / 0.51	1	**4.663 244**
DD-1001F.A	-38...100	42.0 - 56.0	350 x 410	30	1.0 / 0.85 / 0.32	1	**4.663 245**
DD-200F.D	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 251**
DD-201F.D	-20...200	3.0 - 4.0	130 x 150	150	0.22 / 0.17 / 0.02	1	**4.663 252**
DD-300F.D	-30...200	3.0 - 4.0	130 x 150	150	0.31 / 0.28 / 0.08	1	**4.663 253**
DD-600F.D	-35...200	5.0 - 7.5	220 x 150	150	0.6 / 0.44 / 0.16	1	**4.663 254**
DD-601F.D	-35...200	5.0 - 7.5	220 x 150	20	0.6 / 0.44 / 0.16	1	**4.663 255**
DD-900F.D	-38...200	21.0 - 30.0	260 x 350	20	0.9 / 0.8 / 0.31	1	**4.663 256**
DD-1000F.D	-50...200	5.0 - 7.5	180 x 130	15	1.0 / 0.96 / 0.51	1	**4.663 257**
DD-1001F.D	-38...100	42.0 - 56.0	350 x 410	30	1.0 / 0.85 / 0.32	1	**4.663 258**

Pump set for Circulator baths CORIO CD™, CORIO CP™, DYNEO™ DD

JULABO

Type	For Type	PK	Cat. No.
Pump set with pump connectors M16x1	CD	1	**4.658 027**
Pump set with pump connectors M16x1	CP, DD	1	**4.663 259**

Further JULABO Refrigerated circulator baths for lower temperature ranges available on request.

1 Chiller DuraChill®

NEW

1

PolyScience

Stable and reliable cooling for many common heat removal applications, including laser etching, AA furnaces, ICP, rotary evaporators, vacuum systems, reaction vessels, plasma etching, and condenser cooling.
The chillers are available with turbine or positive displacement pump.

- A bright, full-color touchscreen display
- Cooling at ambient temperatures up to 30 °C
- DynamicFilter™ self-cleaning filter system
- Liquid level sensor
- UV light system to prevent growth inhibitors
- User-adjustable temperature, pressure, and flow rate alarms
- External temperature tracking and communications capability (optionally)
- Cool Command™
- WhisperCool® noise reduction system
- Self-diagnostics service and functionality system
- Front fill reservoir
- 4 Casters, 2 of them locking

Specifications:

Working temperature:	-10 ... 70 °C
Temperatur stability:	±0.1 °C
Cooling capacity:	850 ... 2900 W
Connectivity:	RS232, status relay, dry contact
Power supply:	240 V, 50 Hz

Type	Description	Pressure bar	Flow rate (50/60Hz) L / min.	Cooling capacity kW at 20 °C	PK	Cat. No.
CA 02	With positive displacement pump	1.4 ... 5.7	7.6	0.7	1	**4.675 228**
CA 02	With turbine pump	1.4 ... 5.2	8.3	0.7	1	**4.675 229**
CA 03	With positive displacement pump	1.4 ... 5.7	7.6	1.28	1	**4.675 230**
CA 03	With turbine pump	1.4 ... 5.2	8.3	1.28	1	**4.675 231**
CA 05	With positive displacement pump	1.4 ... 5.7	7.6	1.84	1	**4.675 232**
CA 05	With turbine pump	1.4 ... 5.2	8.3	1.84	1	**4.675 233**
CA 10	With positive displacement pump	1.4 ... 5.7	11.0	2.65	1	**4.675 234**
CA 10	With turbine pump	1.4 ... 5.2	11.0	2.65	1	**7.984 151**

2 Benchtop Chillers

2

PolyScience

These powerful, low-temperature chillers are well matched for use with rotary evaporators, vacuum systems, spectrometers, and other analytical equipment.
They also are available with a mobile cart accessory for convenient placement under a bench.

- Large, easy to read LED display
- Space-saving design
- Cooling at ambient temperatures as high as 35 °C
- Temperature Stability ±0.1 °C
- Low flow shut-off and alarm, high and low temperature alarms
- Front mounted fluid level gauge
- Simple setup, operation, and maintenance
- Choice of pumps

LS

Type	With	Working Temp. range °C	Pressure bar	Flow rate (50/60 Hz) L / min.	Cooling capacity kW at 20/0/-10 °C	PK	Cat. No.
LS	Centrifugal Pump	-20 ... +40	0.4	12.9	1.16 / 0.69 / 0.435	1	**4.658 658**
LS	Centrifugal Pump	-20 ... +40	0.7	11.7	1.19 / 0.7 / 0.46	1	**4.658 659**
LS	Turbine Pump	-20 ... +40	2.2	8.3	0.8 / 0.5 / 0.3	1	**4.658 660**
LM	Centrifugal Pump	-10 ... +30	0.3	6.8	0.52 / 0.25 / 0.14	1	**4.658 661**
LM	Centrifugal Pump	-10 ... +30	0.9	11.4	0.39 / 0.17 / 0.11	1	**4.658 662**
MM	Centrifugal Pump	-5 ... +50	0.9	11.4	0.39 / 0.175 / -	1	**4.658 663**
MM	Centrifugal Pump	-5 ... +50	0.3	6.8	0.4 / 0.19 / -	1	**6.280 728**

1

1 Unichiller® in alternative bench-top or tower housing formats

Huber

Unichillers are intelligent chillers which are used mainly as an environmentally friendly and economic alternative to tap water for process cooling. Low temperatures increase efficiency and recovery rates in condensation processes. In contrast to tap water a set-point can be selected between -10/-20°C to 40°C and controlled with a temperature stability of ±0.5°C. The product range includes air cooled and water cooled models, with cooling powers from 0.3kW to 50kW. Most models can be factory fitted with a heater if required. Housings are made of stainless steel to ensure long life. Compact, value-for-money units are available in classic look with cooling powers up to 2.5kW for cooling applications in the lab. Models from Minichiller to Unichiller 025w are suitable for on or under the lab bench. The proven Huber tower housing models offer power with small footprints. These models are fitted with the exchangeable Pilot ONE controller and are used in both research and production. The range of cooling powers available is from 0.3kW to 50kW. Unichillers with an optional heating become powerful process ciculators (additional charge on request).
The desktop models are equipped with the Pilot ONE- and OLÉ-controller.

2

2 Chillers, Minichiller®

Huber

Small, robust and cost effective with its stainless steel casing. The Minichiller is the smallest Unichiller in the world. Minichillers are available with air or water-cooled refrigeration systems, illuminated level indicator, overflow and drain on the front. The filling port is on the top of the unit. All models use natural refrigerants as standard. Minichillers have suction and pressure pumps and therefore have the advantage of have a high flow at low pressure. This is particularly interesting for all pressure sensitive applications (e.g. glass condensors).

Supply req.: 230V 50/60Hz

Type	Cooling capacity kW at 15/0/-10°C	Working Temp. range °C	Dimensions (W x D x H) mm	PK	Cat. No.
Minichiller® 280 OLÉ	0.28/0.2/-	-5 … 40	225 x 360 x 380	1	**6.272 350**
Minichiller® 300 OLÉ	0.3/0.2/0.14	-20 … 40 (80)*	225 x 360 x 380	1	**6.272 346**
Minichiller® 300w OLÉ	0.3/0.2/0.14	-20 … 40 (80)*	225 x 360 x 380	1	**6.272 347**
Minichiller® 600 OLÉ	0.6/0.5/0.35	-20 … 40	280 x 490 x 424	1	**6.272 348**
Minichiller® 600w OLÉ	0.6/0.5/0.35	-20 … 40	280 x 490 x 424	1	**4.675 313**
Minichiller® 900w OLÉ	0.9/0.7/0.4	-25 ... 40	280 x 490 x 424	1	**4.664 642**

* Permissible temperature in return line 80 °C

1 Unichiller® with Pilot ONE controller

NEW

Huber

High performance Unichiller with Pilot ONE controller for standard applications.
The Unichiller offers cooling powers up to 2.5 kW. The chiller is ideal for standard cooling applications in the laboratory or in industry. The energy efficient function of the chiller reduces the water consumption for many applications, helping to protect the environment and reducing operating costs. The models are fitted with the Pilot ONE controller including 5.7" colour touch screen and 2 x USB, Ethernet and RS232 connections. P-models include circulating pumps with a high discharge pressure for applications with high pressure drops.

- Cooling power up to 2.5 kW
- Air- and watercooled models
- Compact, robust stainless steel housings
- Fitted with wheels for easy handling
- Optional heating up to +100 °C

Power supply: 230 V, 50/60 Hz

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Type	Working Temp. range °C	Cooling capacity kW at 15/0/-10 °C	Flow rate L / min.	Pressure max. bar	PK	Cat. No.
Unichiller® 007	-20 ... 40	0.7/0.55/0.4	29	1.0	1	**4.675 316**
Unichiller® 007w	-20 ... 40	0.7/0.55/0.4	29	1.0	1	**4.675 317**
Unichiller® P007	-20 ... 40	0.7/0.55/0.4	25	2.5	1	**4.675 327**
Unichiller® P007w	-20 ... 40	0.7/0.55/0.4	25	2.5	1	**4.675 328**
Unichiller® 010	-20 ... 40	1.0/0.8/0.5	29	1.0	1	**4.675 318**
Unichiller® 010w	-20 ... 40	1.0/0.8/0.5	29	1.0	1	**4.675 319**
Unichiller® P010	-20 ... 40	1.0/0.8/0.5	25	2.5	1	**6.273 296**
Unichiller® P010w	-20 ... 40	1.0/0.8/0.5	25	2.5	1	**4.675 329**
Unichiller® 012	-20 ... 40	1.2/1.0/0.7	29	1.0	1	**4.675 320**
Unichiller® 012w	-20 ... 40	1.2/1.0/0.7	29	1.0	1	**4.675 321**
Unichiller® P012	-20 ... 40	1.2/1.0/0.7	25	2.5	1	**4.675 330**
Unichiller® P012w	-20 ... 40	1.2/1.0/0.7	25	2.5	1	**6.288 870**
Unichiller® 015	-20 ... 40	1.5/1.0/0.7	29	1.0	1	**4.675 322**
Unichiller® 015w	-20 ... 40	1.5/1.0/0.7	29	1.0	1	**4.675 323**
Unichiller® P015	-20 ... 40	1.5/1.0/0.7	25	2.5	1	**4.675 331**
Unichiller® P015w	-20 ... 40	1.5/1.0/0.7	25	2.5	1	**4.675 332**
Unichiller® 022	-10 ... 40	2.2/1.6/1.0	29	1.0	1	**4.675 324**
Unichiller® 022w	-10 ... 40	2.2/1.6/1.0	29	1.0	1	**4.675 325**
Unichiller® P022	-10 ... 40	2.2/1.6/1.0	25	2.5	1	**4.675 333**
Unichiller® P022w	-10 ... 40	2.2/1.6/1.0	25	2.5	1	**4.675 334**
Unichiller® 025	-10 ... 40	2.5/2.0/1.2	29	1.0	1	**7.971 768**
Unichiller® 025w	-10 ... 40	2.5/2.0/1.2	29	1.0	1	**4.675 326**
Unichiller® P025	-10 ... 40	2.5/2.0/1.2	25	2.5	1	**4.675 335**
Unichiller® P025w	-10 ... 40	2.5/2.0/1.2	25	2.5	1	**4.675 336**

2 Hoses

Huber

2

Type	Temp.-working range °C	Length cm	Material	PK	Cat. No.
NW 12 M16 x 1	-50 ... 200	100	Metal	1	**9.857 214**
NW 12 M16 x 1	-50 ... 200	150	Metal	1	**9.857 215**
NW 12 M16 x 1	-50 ... 200	200	Metal	1	**9.857 216**
NW 12 M16 x 1	-50 ... 200	300	Metal	1	**9.857 217**
NW 12 M16 x 1	-100 ... 350	100	Metal	1	**9.857 121**
NW 12 M16 x 1	-100 ... 350	150	Metal	1	**9.857 122**
NW 12 M16 x 1	-100 ... 350	200	Metal	1	**9.857 045**
NW 12 M16 x 1	-100 ... 350	300	Metal	1	**9.857 124**
NW 12 M24 x 1,5	-60 ... 260	100	Plastic	1	**7.900 874**
NW 12 M24 x 1,5	-60 ... 260	150	Plastic	1	**6.254 865**
NW 12 M24 x 1,5	-100 ... 350	100	Metal	1	**9.857 218**
NW 12 M24 x 1,5	-100 ... 350	150	Metal	1	**6.229 781**
NW 12 M24 x 1,5	-100 ... 350	200	Metal	1	**9.857 219**
NW 12 M24 x 1,5	-100 ... 350	300	Metal	1	**9.857 220**
NW 12 M24 x 1,5	-120 ... 400	100	Metal	1	**9.857 046**
NW 12 M24 x 1,5	-120 ... 400	150	Metal	1	**9.857 047**
NW 12 M24 x 1,5	-120 ... 400	200	Metal	1	**9.857 048**
NW 12 M24 x 1,5	-120 ... 400	300	Metal	1	**9.857 049**
NW 20 M30 x 1,5	-60 ... 260	100	Plastic	1	**6.261 514**
NW 20 M30 x 1,5	-60 ... 260	150	Plastic	1	**6.258 999**
NW 20 M30 x 1,5	-60 ... 260	200	Plastic	1	**7.671 774**
NW 20 M30 x 1,5	-60 ... 260	300	Plastic	1	**6.254 719**
NW 20 M30 x 1,5	-100 ... 350	100	Metal	1	**9.857 125**
NW 20 M30 x 1,5	-100 ... 350	150	Metal	1	**9.857 126**
NW 20 M30 x 1,5	-100 ... 350	200	Metal	1	**9.857 127**
NW 20 M30 x 1,5	-100 ... 350	300	Metal	1	**9.857 128**
NW 25 M38 x 1,5	-60 ... 260	100	Plastic	1	**4.675 343**
NW 25 M38 x 1,5	-60 ... 260	150	Plastic	1	**4.675 344**
NW 25 M38 x 1,5	-60 ... 260	200	Plastic	1	**6.269 871**
NW 25 M38 x 1,5	-60 ... 260	300	Plastic	1	**4.675 345**
NW 25 M38 x 1,5	-100 ... 350	100	Metal	1	**9.857 129**
NW 25 M38 x 1,5	-100 ... 350	150	Metal	1	**9.857 130**
NW 25 M38 x 1,5	-100 ... 350	200	Metal	1	**9.857 131**
NW 25 M38 x 1,5	-100 ... 350	300	Metal	1	**9.857 132**

1

1 Unichiller® with OLÉ controller

Huber

High performance Unichiller with OLÉ controller for standard applications.
The Unichiller with the OLÉ controller offers cooling powers up to 2.5 kW.
The chiller is ideal for standard cooling applications in the laboratory or in industry. The energy efficient function of the chiller reduces the water consumption for many applications, helping to protect the environment and reducing operating costs. All models are fitted with the OLÉ controller with its modern OLED display as well as for RS232, USB interfaces and PT100 measurement sensor connection.

P-models include circulating pumps with a high discharge pressure for applications with high pressure drops.

- Cooling power up to 2.5 kW
- Air- and watercooled models
- Compact, robust stainless steel housings
- Fitted with wheels for easy handling
- Optional heating up to +100°C

Power supply: 230 V, 50/60 Hz

Type	Working Temp. range °C	Cooling capacity kW at 15/0/-10°C	Flow rate L / min.	Pressure max. bar	PK	Cat. No.
Unichiller® 007 OLÉ	-20 ... 40	0.7.0,55/0.4	29	1,0	1	**6.272 357**
Unichiller® 007w OLÉ	-20 ... 40	0.7/0.55/0.4	29	1,0	1	**4.675 314**
Unichiller® P007 OLÉ	-20 ... 40	0.7/0.55/0.4	25	2,5	1	**6.288 861**
Unichiller® 010 OLÉ	-20 ... 40	1.0/0.8/0.5	29	1,0	1	**6.272 358**
Unichiller® 010w OLÉ	-20 ... 40	1.0/0.8/0.5	29	1,0	1	**4.667 602**
Unichiller® P010 OLÉ	-20 ... 40	1.0/0.8/0.5	25	2,5	1	**6.288 863**
Unichiller® 012 OLÉ	-20 ... 40	1.2/1.0/0.7	29	1,0	1	**6.272 351**
Unichiller® 012w OLÉ	-20 ... 40	1.2/1.0/0.7	29	1,0	1	**4.675 315**
Unichiller® P012 OLÉ	-20 ... 40	1.2/1.0/0.7	25	2,5	1	**6.288 852**
Unichiller® P012w OLÉ	-20 ... 40	1.2/1.0/0.7	25	2,5	1	**6.288 864**
Unichiller® 015 OLÉ	-20 ... 40	1.5/1.0/0.7	29	1,0	1	**6.272 352**
Unichiller® 015w OLÉ	-20 ... 40	1.5/1.0/0.7	29	1,0	1	**6.272 359**
Unichiller® P015 OLÉ	-20 ... 40	1.5/10/0.7	25	2,5	1	**6.288 853**
Unichiller® P015w OLÉ	-20 ... 40	1.5/1.0/0.7	25	2,5	1	**6.288 865**
Unichiller® 022 OLÉ	-10 ... 40	2.2/1.6/1.0	29	1,0	1	**6.272 355**
Unichiller® 022w OLÉ	-10 ... 40	2.2/1.6/1.0	29	1,0	1	**6.272 353**
Unichiller® P022 OLÉ	-10 ... 40	2.2/1.6/1.0	25	2,5	1	**6.288 857**
Unichiller® P022w OLÉ	-10 ... 40	2.2/1.6/1.0	25	2,5	1	**6.288 854**
Unichiller® 025 OLÉ	-10 ... 40	2.5/2.0/1.2	29	1,0	1	**6.272 356**
Unichiller® 025w OLÉ	-10 ... 40	2.5/2.0/1.2	29	1,0	1	**6.272 354**
Unichiller® P025 OLÉ	-10 ... 40	2.5/2.0/1.2	25	2,5	1	**6.288 859**
Unichiller® P025w OLÉ	-10 ... 40	2.5/2.0/1.2	25	2,5	1	**6.288 856**

2

2 Compact Recirculating Cooler, F-Series

JULABO

- Environmentally friendly operation with low energy consumption
- No side vents, instruments can be placed right next to other equipment
- All wetted parts made of stainless steel or high grade plastic
- Large, bright LED display
- Compact design and small foot print
- Splash-proof keypad
- Drain tap
- Easy filling

Type	Flow rate L / min.	Cooling capacity kW at 20/0/-10°C	Working Temp. range °C	Temp. stability ± °C	Pressure bar	PK	Cat. No.
F250	15	0.25/0.18/0.09	-10 to +40	0.5	0.35	1	**9.698 525**
F500	24	0.5/0.25	0 to +40	0.5	0.5	1	**9.698 528**
F1000	23	1.0/0.35	0 to +40	0.5	1.0	1	**9.698 526**

1 Flow coolers, FL series

1

JULABO

- Working temperature range covers -20 °C to +40 °C, the temperature stability of the PID control is ±0.5 °C
- splash-proof keypad with integral mains switch
- large, bright LED display
- reliable Microprocessor PID temperature control
- filling level indicator
- powerful immersion pumps, suitable for continuous operation
- permissible temperature within return line: +80 °C max.
- easy filling from the top with hinged protective lid
- low liquid level protection with visual and audible alarm signal
- stainless steel bath tanks
- removable venting grille for cleaning of the condenser
- front drain
- no side vents
- RS232 interface for PC connection
- Ingress protection class acc. to IEC 529: IP 21
- pressure indicator
- adjustable bypass for pump pressure

Type	Flow rate L / min.	Cooling capacity kW at 20/0/-10°C	Working Temp. range °C	Temp. stability ± °C	Pressure bar	PK	Cat. No.
FL300	15	0.3/0.2/0.15	-20 to 40	0.5	0.35	1	**9.698 530**
FL601	23	0.6/0.4/0.33	-20 to 40	0.5	1.0	1	**9.698 531**
FL1201	23	1.2/0.9/0.6	-20 to 40	0.5	1.0	1	**9.698 532**
FL1203	40	1.2/0.8/0.5	-20 to 40	0.5	0.5-3.0	1	**9.698 533**
FL1701	23	1.7/1.1/0.85	-20 to 40	0.5	1.0	1	**9.698 534**
FL1703	40	1.7/1.0/0.75	-20 to 40	0.5	0.5-3.0	1	**9.698 535**
FL2503	40	2.5/1.5/1.2	-20 to 40	0.5	0.5-3.0	1	**9.698 536**
FL2506	60	2.5/1.0/0.3	-15 to 40	0.5	0.5-6.0	1	**9.698 537**
FL4003	40	4.0/2.4/1.5	-20 to 40	0.5	0.5-3.0	1	**9.698 538**
FL4006	60	4.0/1.9/0.9	-20 to 40	0.5	0.5-6.0	1	**9.698 539**
FL7006	60	7.0/5.1/3.0	-20 to 40	0.5	0.5-6.0	1	**9.698 540**
FL11006	60	11.0/7.5/5.0	-20 to 40	0.5	0.5-6.0	1	**9.698 541**
FL20006	80	20.0/10/6	-20 to 40	0.5	0.8-6.0	1	**9.698 550**

2 Recirculating chillers ULK

NEW

2

Fryka-Kältetechnik

For cooling applications and processes in laboratory and industry.
Thanks to the space-saving design and the particularly quiet cooling unit, the Chiller is ideally suited for installation directly at the workplace.

- Higher energy efficiency through fan with EC technology
- Pleasantly quiet and space saving
- Refrigeration unit: fully hermetically sealed, air-cooled, low maintenance
- Integrated funnel
- Self-sealing hose connector with quick coupling
- Touchscreen controller with high-grade glass screen and integrated flow and digital fill level indicators
- Freeze-up and thermal overload protection
- Flow control with dry running protection
- Optical and acoustical alarm
- MOD bus interface optionally available

Type	Working Temp. range °C	Pressure bar	Flow rate L / min.	Cooling capacity kW at 20 °C	PK	Cat. No.
ULK 602	-10 ... 40	0.6	10	650	1	**6.284 440**
ULK 1002	-10 ... 40	2.9	12	1200	1	**6.284 441**
ULK 2002	-10 ... 40	2.9	12	2300	1	**6.284 442**

1

9.857 916

Highly Dynamic Temperature Control Systems Presto™

JULABO

The models of JULABO's new Presto generation set new standards for highly dynamic temperature control systems. They represent the optimal solution for highly precise external temperature control applications. Temperature control of jacketed reactor vessels, reactor systems, autoclaves, distillations, pilot plants, semiconductor industries.

The advantages of PRESTO models:
- Extremely short heat-up and cool-down times
- Powerful circulating pump with adjustable pump pressure
- Wide working temperature ranges without change of thermal fluid
- Large TFT touch screen for interactive operation
- Digital and analog interfaces
- Handles and castors allow for easy set-up
- Low filling volume
- Small dimensions

2

9.857 917

Specifications

Temperature stability:	±0.01 … 0.05 °C
Pump capacity	
Flow rate:	
A30	25 l/min
A40/W40/A80/W80	16 ... 40 l/min
A45/A45t/W50/W50t	35 ... 76 l/min
A85/A85t	35 ... 80 l/min
Pressure:	
A30	0.5 bar
A40/W40/A80/W80	0.3 ... 1.7 bar
A45/A45t/W50/W50t/A85/A85t	0.48 ... 3.2 bar

Type	Dimensions (W x D x H) mm	Heating capacity kW	Cooling capacity kW at 20 °C	Working Temp. range °C	Cooling capacity kW at 20/0/-20°C	PK	Cat. No.
A 30	242 x 583 x 612	2.7	0.5	-30 ... 250	0.5 / 0.4 / 0.17	1	**9.857 915**
A 40	323 x 583 x 662	2.7	1.2	-40 ... 250	1.2 / 0.9 / 0.6	1	**9.857 916** 1
W 40	323 x 583 x 662	2.7	1.2	-40 ... 250	1.2 / 1.0 / 0.55	1	**9.857 917** 2
A 45	530 x 665 x 1260	6.0	3.5	-45 ... 250	3.5 / 3.3 / 1.8	1	**4.672 122**
A 45t	530 x 665 x 1260	6.0	3.5	-45 ... 250	3.5 / 3.3 / 1.8	1	**4.672 123**
W 50	530 x 665 x 1260	6.0	7.5	-50 ... 250	7.5 / 6.5 / 3.0	1	**4.658 069**
W 50t	530 x 665 x 1260	6.0	7.5	-50 ... 250	7.5 / 6.5 / 3.0	1	**4.658 070**
A 80	430 x 650 x 1258	1.8	1.2	-80 ... 250	1.2 / 1.2 / 1.1	1	**9.857 918**
W 80	430 x 650 x 1258	1.8	1.2	-80 ... 250	1.2 / 1.2 / 1.1	1	**9.857 919**
A 80t	430 x 650 x 1260	3.4	1.2	-80 ... 250	1.2 / 1.2 / 1.1	1	**9.857 920**
W 80t	430 x 650 x 1260	3.4	1.2	-80 ... 250	1.2 / 1.2 / 1.1	1	**9.857 921**

3

3 Reaction vessels, cylindrical, with thermostatic jacket and withdrawal valve

NEW

Lenz

- With graduation
- Laboratory flange LF
- With groove
- Two connectors with threads GL 14 or GL 18
- Made of DURAN® tubing

Other sizes on request.

Nominal capacity ml	Flange (LF)	Outer/ inner diam. mm	Height mm	Int. height mm	Connection	Bore mm	PK	Cat. No.
100	60	90/60	245	115	GL 14	10	1	**9.142 766**
250	60	90/60	300	170	GL 14	10	1	**9.142 767**
500	60	90/60	385	255	GL 14	10	1	**9.142 768**
1000	60	90/60	360	220	GL 14	10	1	**6.233 770**
250	100	130/99	275	140	GL 18	10	1	**6.230 277**
500	100	130/99	295	155	GL 18	10	1	**9.142 781**
1000	100	130/99	360	220	GL 18	10	1	**9.142 782**
2000	100	130/99	490	350	GL 18	10	1	**9.142 784**
3000	100	190/150	440	285	GL 18	10	1	**6.243 114**
4000	100	190/150	495	340	GL 18	10	1	**9.142 787**
2000	150	190/150	375	225	GL 18	10	1	**6.233 793**
3000	150	190/150	430	280	GL 18	10	1	**6.243 115**
4000	150	190/150	485	335	GL 18	10	1	**7.635 340**
5000	150	190/150	540	390	GL 18	10	1	**6.224 194**
6000	150	190/150	595	445	GL 18	10	1	**6.243 116**
10000	150	315/240	640	480	GL 18	20	1	**6.240 516**

1 2 Function upgrade for Huber circulators

E-grade - innovative activation keys for the functionality to suit your budget and process requirements *Huber*

Every application requires particular functions. If the circulator is to be used in a range of applications it will generally require greater functionality. The required functionality grows with the complexity of the application.
The innovative "E-grade" has the answer. Models with the Pilot ONE Controller have a comprehensive range of functions suited to the classical temperature control applications. The E-grade allows the functionality to be extended at any time to suit new process requirements and budget. E-grade stands for electronic upgrade and it is simple to do:
To extend the functionality a unit specific code is entered via the controller. This code is specific to the serial number of the unit and is either already entered at the factory for new units or it can be activated at a later date.
The code is sent by email. There is no requirement for a hardware or software update.

The E-grade "Explore" for Unistats is more than just another functions package. It makes important information available to users of Unistat temperature control systems. Temperature values and temperature differentials as well as for the actual heating power, cooling power and pump power within the system are displayed on the touch-panel.
E-grade "Explore" is an evolution of the existing Unistat technology. Existing sensors are utilised to make important process temperature and power data visible. In addition to making the data visible on the display of the device, it can also be accessed via the digital interfaces for further processing.

Application examples for E-grade® "Explore":
- Process and product development and optimisation
- Use-Tests of raw materials, quality control
- Enhanced data collection for scale-up trials

1

2

Type	PK	Cat. No.
E-grade® "Exclusive"	1	**9.699 100**
E-grade® "Professional"	1	**9.699 101**

1

1 Thermal fluids

Huber

Huber thermal fluids are recommended because they have the best possible thermodynamic and environmental characteristics. Safe reliable operation relies on compliance with safety standards to ensure optimal results.

Danger

H phrases: H304

Type	Description	Capacity l	Temp. range °C	PK	Cat. No.
P20.190.40	Thermal fluid MinOil	5	+20 ... +190	1	**6.201 643**
P20.190.40	Thermal fluid MinOil	20	+20 ... +190	1	**6.239 618**
P20.275.50	Thermal fluid SilOil	5	+20 ... +275	1	**6.201 670**
P20.275.50	Thermal fluid SilOil	10	+20 ... +275	1	**6.203 535**
M20.195/235.20	Thermal fluid SilOil	5	-20 ... + 195/235	1	**6.306 078**
M20.195/235.20	Thermal fluid SilOil	10	-20 ... +195/235	1	**6.250 420**
M40.165.10/220.10	Thermal fluid SilOil	5	-40 ... +165/220	1	**6.250 278**
M40.165.10/220.10	Thermal fluid SilOil	10	-40 ... +165/220	1	**6.304 378**
M60.115/200.05	Thermal fluid SilOil	5	-60 ... +115/200	1	**6.201 255**
M60.115/200.05	Thermal fluid SilOil	10	-60 ... +115/200	1	**6.225 263**
M90.055/170.03	Thermal fluid SilOil	5	-90 ... +55/170	1	**7.615 661**
M90.055/170.03	Thermal fluid SilOil	10	-90 ... +55/170	1	**6.202 172**

Further thermal fluids available on request

2

2 Tempering Liquids

JULABO

Long-term tested for safe and reliable operation. Suitable for temperature control in refrigerated circulators.
- Low toxicity
- Low viscosity
- High stability
- Almost odor-free
- Good thermal conductivity
- Low corrosion susceptibility
- Wide temperature ranges

H phrases: H302|H373

Type	Temp. range °C	Capacity Litres	Description	PK	Cat. No.
Thermal M	+70...+170	10	Heating Thermostats	1	**6.100 525**
Thermal M	+70...+170	5	Heating Thermostats	1	**6.051 961**
Thermal HS	+50...+250	10	Heating Thermostats	1	**6.100 527**
Thermal HS	+50...+250	5	Heating Thermostats	1	**6.100 528**
Thermal HY	-80...+55	10	Heating-, Cooling Thermostats	1	**6.100 529**
Thermal HY	-80...+55	5	Heating-, Cooling Thermostats	1	**6.100 530**
Thermal H20S	0...+220	10	Heating-, Cooling Thermostats	1	**6.100 533**
Thermal H20S	0...+220	5	Heating-, Cooling Thermostats	1	**6.100 534**
Thermal H5	-50...+105	10	Flow Coolers, Cooling Thermostats	1	**6.100 531**
Thermal H5	-50...+105	5	Flow Coolers, Cooling Thermostats	1	**6.100 532**
Thermal G	-30...+80	10	Flow Coolers, Cooling Thermostats	1	**6.206 171**
Thermal G	-30...+80	5	Flow Coolers, Cooling Thermostats	1	**6.229 933**
Thermal H10	(-40)-20...+180	10	Flow Coolers, Cooling Thermostats	1	**6.222 284**
Thermal H10	(-40)-20...+180	5	Flow Coolers, Cooling Thermostats	1	**6.207 217**
Thermal H250S	+20...+250	5	High Temperature Thermostats (Forte HT)	1	**6.264 316**
Thermal HL30	-30...+90	5	Dynamic Temperature Control Systems	1	**6.287 812**
Thermal HL60	-60...+250	10	Dynamic Temperature Control Systems	1	**6.281 890**
Thermal HL60	-60...+250	5	Dynamic Temperature Control Systems	1	**7.647 214**
Thermal HL 90	-90 ... +200	5	Dynamic Temperature Control Systems	1	**4.672 125**
Thermal HL 90	-90 ... +200	10	Dynamic Temperature Control Systems	1	**4.672 124**

1 Water baths Precision incl. Thermal Beads

Thermo Scientific

The general purpose water baths, Precision, are rugged, high performance baths for temperatures up to 100°C (TSGP02 up to 90 °C). Over-temperature safety circuit is designed to prevent thermal runaway. Benefit from outstanding chemical and corrosion resistance with epoxy powder-coated exterior, and easily clean the chamber with its seamless stainless-steel interior. With timer.

- Advanced microprocessor controller is designed for extended functionality
- Protect your work with audible alarms
- Conveniently save commonly used settings with four temperature presets
- Clear polycarbonate gable cover

Scope of supply: Bath incl. gable cover, diffuser tray, TSGP02 and TSGP05 with hand pump, all other models with drain hose.

1

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	With	PK	Cat. No.
TSGP02PMO5	2	138 x 155 x 150	230 x 199 x 233	0.2	4 l Thermal Beads	1	**6.290 947**
TSGP05PMO5	5	154 x 300 x 150	246 x 355 x 232	0.3	4 l Thermal Beads	1	**6.273 859**
TSGP10PMO5	10	301 x 330 x 150	393 x 383 x 233	0.8	8 l Thermal Beads	1	**6.273 860**
TSGP20PMO5	20	297 x 500 x 150	392 x 555 x 233	1.2	16 l Thermal Beads	1	**6.273 861**
TSGP28PMO5	28	297 x 500 x 200	392 x 555 x 282	1.2	24 l Thermal Beads	1	**6.273 862**
TSGP15PMO5	5 + 10	154 x 300 x 150 + 301 x 330 x 150	246 x 355 x 232 + 393 x 383 x 233	1.1	12 l Thermal Beads	1	**6.273 863**

2 Thermal beads for Water baths Precision

Thermo Scientific

Thermal beads replace water in laboratory baths or ice in ice buckets to prevent contamination. A bath filled with Thermal Beads can be left unattended and is always available at the set temperature without danger of water evaporating to dryness.

- Small, non-uniform metal beads composed of a dry metallic thermal alloy
- Cleaning with biodegradable disinfectant every 2 - 4 weeks only
- Good temperature stability and uniformity
- Energy-efficient
- Minimizes maintenance such as emptying, cleaning, monitoring, and refilling the bath
- Holds common lab vessels in place without accessories such as racks, floats, and weights

2

Description	PK	Cat. No.
Thermal beads, 4 l	1	**6.290 968**

1

1 Digital water baths

PolyScience

The unstirred, general purpose water baths are available in 5 sizes: 2, 5, 10, 20 and 28 liters.

- Color TFT display with control panel
- Calibration offset feature
- Low liquid alarm
- Over temperature alarm
- 5 user programmable pre-sets (temperature and duration)
- 5 languages (English, German, French, Spanish and Chinese)
- Integrated independent timer
- Eco-mode
- Safety thermostat
- High-gabled, clear lids accommodate taller media bottles
- Rear-mounted drain (10, 20 and 28 liters)
- Recessed Handles

Scope of supply: Digital water bath, incl. lid

Specifications:

Temperature range:	Ambient +5 °C ... 100 °C
Temperature uniformity:	±0.2 °C
Temperature stability:	±0.1 °C
Power supply:	240 V, 50 Hz

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
WBE02A12E	2	109 x 99 x 152	305 x 229 x 267	0.12	1	**6.274 985**
WBE05A12E	5	274 x 127 x 152	305 x 368 x 267	0.36	1	**6.274 986**
WBE10A12E	10	295 x 269 x 152	432 x 393 x 305	1.00	1	**6.274 987**
WBE20A12E	20	432 x 241 x 152	445 x 572 x 305	1.40	1	**6.274 988**
WBE28A12E	28	432 x 241 x 203	445 x 572 x 356	1.40	1	**6.274 989**

2

2 Basic digital water baths JB Academy

Grant

An ideal choice for schools and colleges requiring a basic simple-to-use quality water bath. Base tray included as standard. A great value range consisting of three models.

- Ambient + 5 °C to 95 °C
- Unique Set and Forget™ technology, fast heat-up, reliable temperature control
- Stability ±0.5 °C
- Simple, intuitive controls, quick and easy to set temperature
- Practical front panel lock, disables front panel controls preventing unintentional temperature changes
- 3 year warranty

Accessory polypropylene spheres or a lid must be used at temperatures between +60 °C and +99 °C.
Please order lid and PP spheres separately.

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
JBA5	5	281 x 131 x 132	335 x 215 x 200	0.35	1	**9.905 875**
JBA12	12	306 x 281 x 132	360 x 365 x 225	0.80	1	**9.905 876**
JBA18	18	281 x 485 x 132	335 x 570 x 275	1.40	1	**9.905 877**

3

3 Water bath preservative liquid Aqua Stabil

JULABO

- Prevents build-up of algae and bacteria in bath tanks providing hygienic operation
- No contamination of the tank or immersion thermostat components
- Economical - only 2 ml of Aqua Stabil is required for every 1 litres of water
- Remains effective for weeks, as shown by colour indicator.

This product is a disinfectant containing biocides. Please inquire its availability and legal information.

H phrases: H412

Volume ml	PK	Cat. No.
100	1	**9.858 040**

1 Digital water baths JB Nova

1

Grant

General purpose water baths with stable temperature control, simple controls and fast heat up. A choice of four models with a base tray and lid included as standard.

- Ambient +5 °C to 95 °C
- Unique Set and Forget™ technology, fast reliable temperature control
- Stability ±0.5 °C
- Simple, intuitive controls, quick and easy to set temperature
- Drain tap on 12 L, 18 L and 26 L baths
- Practical front panel lock - disables front panel controls preventing unintentional temperature changes
- 3-year warranty

Accessory polypropylene spheres or a lid must be used at temperatures between +60 °C and +99 °C.
Please order PP spheres separately.

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
JBN5	5	281 x 131 x 132	335 x 215 x 200	0.35	1	**9.905 870**
JBN12	12	308 x 281 x 132	360 x 380 x 225	0.80	1	**9.905 871**
JBN18	18	281 x 485 x 132	335 x 590 x 275	1.40	1	**9.905 872**
JBN26	26	278 x 481 x 182	335 x 590 x 275	1.40	1	**9.905 873**

2 Unstirred water baths SUB Aqua Pro series, digital

2

Grant

High quality and excellent temperature stability, in a value-for-money package designed to meet the needs of the world`s researchers. The SUB Aqua Pro range is composed of eight models, including shallow and dual baths.

- Three programmable temperature presets
- Drain tap on SUB Aqua Pro 12, 18, 26 and 34
- Front panel lock-out
- Countdown timer with audible buzzer
- Ambient +5 °C to 99 °C operation
- Stability ±0.2 °C
- Digital PID control for quick heat-up and precision control throughout the temperature range
- User-settable sample protection and fixed thermal cut-out
- High grade stainless steel tanks
- Non drip polycarbonate lid and base tray included as standard

Available as 120V or 230V.

Accessory polypropylene spheres or a lid must be used at temperatures between +60 °C and +99 °C.
Please order PP spheres separately.

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
SUB Aqua Pro 2	2	131 x 117 x 132	185 x 200 x 200	0.25	1	**9.905 860**
SUB Aqua Pro 2s	2	289 x 139 x 47	335 x 215 x 150	0.35	1	**9.905 861**
SUB Aqua Pro 5	5	281 x 131 x 132	335 x 215 x 200	0.35	1	**9.905 862**
SUB Aqua Pro 12	12	306 x 281 x 132	360 x 380 x 225	0.80	1	**9.905 863**
SUB Aqua Pro 18	18	281 x 485 x 132	335 x 590 x 275	1.05	1	**9.905 864**
SUB Aqua Pro 26	26	278 x 481 x 182	335 x 590 x 275	1.05	1	**9.905 865**
SUB Aqua Pro 34	34	281 x 635 x 180	335 x 770 x 275	1.30	1	**9.905 866**
SUB Aqua Pro Dual	5 + 12	281 x 131 x 132 & 306 x 281 x 132	545 x 380 x 225	1.15	1	**9.905 867**

3 LLG- Floating pellets, PP

3

Pellets with 20 mm diameter. Can cover 0.1 m². Protect against evaporation and rapid temperature loss. Decreases hazardous vapors. Resistant against most acids, bases, solvents and mineral oils. Temperature stable up to +100 °C.

Description	PK	Cat. No.
Floating pellets	250	**6.266 611**

Water baths PURA™

JULABO

Flexible in use for all purposes in research and quality control. All PURA™ water baths (except PURA™ 4) have an integrated drain screw. The bright, easy-to-read white LED display is clearly visible, even from a distance.
With integrated side recessed grips for easy transport and non-slip rubber feet for safe standing.
The complete interior surface of the water baths can be used, as there are no installation elements in the interior.

- Including platform
- Integrated timer
- Working temperature range from 18 to 99.9 °C (with counter-cooling/bath cover)
- Models with filling volumes from 0.8 to 36 liters available
- High temperature accuracy of 0.15 °C
- Bright display with membrane keypad
- Splash-proof
- Built-in dry-running protection

Please order bath cover separately

1

1 Water bath PURA™ 4

For 1 test tube rack. *JULABO*

Specifications

Bath volume:	0.8 ... 4.5 l
Bath opening (W x D x H):	120 x 270 x 140 mm
Heating capacity:	0.5 kW
Weight:	4.9 kg
Overall dimensions (W x D x H):	210 x 350 x 220 mm
Power supply:	230 V, 50-60 Hz

Type	PK	Cat. No.
PURA™ 4	1	**4.667 880**

2

2 Water bath PURA™ 10

For 2 test tube racks. *JULABO*

Specifications

Bath volume:	1.4 ... 9.5 l
Bath opening (W x D x H):	220 x 270 x 140 mm
Heating capacity:	1.2 kW
Weight:	7 kg
Overall dimensions (W x D x H):	310 x 350 x 220 mm
Power supply:	230 V, 50-60 Hz

Type	PK	Cat. No.
PURA™ 10	1	**4.667 881**

3

3 Water bath PURA™ 14

For 3 test tube racks. *JULABO*

Specifications

Bath volume:	2 ... 14 l
Bath opening (W x D x H):	330 x 270 x 140 mm
Heating capacity:	1.8 kW
Weight:	8.5 kg
Overall dimensions (W x D x H):	420 x 350 x 220 mm
Power supply:	230 V, 50-60 Hz

Type	PK	Cat. No.
PURA™ 14	1	**4.667 882**

4

4 Water bath PURA™ 22

For 5 test tube racks. *JULABO*

Specifications

Bath volume:	3.4 ... 25.5 l
Bath opening (W x D x H):	550 x 270 x 180 mm
Heating capacity:	2.0 kW
Weight:	11.5 kg
Overall dimensions (W x D x H):	640 x 350 x 260 mm
Power supply:	230 V, 50-60 Hz

Type	PK	Cat. No.
PURA™ 22	1	**4.667 883**

1 Water bath PURA™ 30

1

For 7 test tube racks. *JULABO*

Specifications

Bath volume:	4.8 ... 36.0 l
Bath opening (W x D x H):	770 x 270 x 180 mm
Heating capacity:	2.0 kW
Weight:	14.5 kg
Overall dimensions (W x D x H):	860 x 350 x 260 mm
Power supply:	230 V, 50-60 Hz

Type	PK	Cat. No.
PURA™ 30	1	**4.667 884**

Lids for Water baths, PURA™

2

JULABO

For model	Description	PK	Cat. No.
PURA™ 4	Hinged bath cover	1	**9.857 931**
PURA™ 10	Hinged bath cover	1	**9.857 932** 2
PURA™ 14	Hinged bath cover	1	**9.857 933**
PURA™ 22	Hinged bath cover	1	**9.857 934**
PURA™ 30	Hinged bath cover	1	**9.857 935**
PURA™ 10	Flat bath cover, with 4 openings Ø 92 mm	1	**9.857 922**
PURA™ 10	Flat bath cover, with 1 openings Ø 190 mm	1	**9.857 923**
PURA™ 14	Flat bath cover, with 6 openings Ø 92 mm	1	**9.857 924**
PURA™ 22	Flat bath cover, with 8 openings Ø 92 mm	1	**9.857 925**
PURA™ 22	Flat bath cover, with 6 openings Ø 115 mm	1	**9.857 926**
PURA™ 22	Flat bath cover, with 2 openings Ø 190 mm	1	**9.857 927**
PURA™ 30	Flat bath cover, with 10 openings Ø 115 mm	1	**9.857 928**
PURA™ 30	Flat bath cover, with 3 openings Ø 190 mm	1	**9.857 929**

9.857 932

3 Test tube trays for PURA™

3

JULABO

For Type	Description	PK	Cat. No.
PURA™	Test tube rack for 60 tubes 100 x 16/17 mm diam.	1	**4.658 041**
PURA™	Test tube rack for 90 tubes 75 x 12/13 mm diam.	1	**4.658 042**
PURA™	Test tube rack for 21 tubes 30 mm diam.	1	**4.658 043**

4 Water baths Hydro

NEW

4

LAUDA

The Hydro water baths are optimally equipped for every application in the laboratory. With their precise temperature distribution, they are designed for the needs of biological, medical or biochemical laboratories. The H 8 A and H 16 A models are also equipped with a circulation system for optional mixing.

- Interior made of high quality stainless steel
- Applications in the boiling range possible (temperature range: 25 to 100 °C)
- TFT color display for intuitive operation, temperature display in °C and °F
- Programmable timer
- Optical and acoustic alarm in the event of an error

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
H 4	4	245 x 100 x 165	340 x 290 x 275	0.5	1	**4.672 291**
H 8	8	245 x 200 x 165	340 x 395 x 275	1.0	1	**4.672 292**
H 8 A	8	245 x 200 x 165	340 x 395 x 275	1.0	1	**4.672 297**
H 16	16	400 x 245 x 165	500 x 440 x 275	1.5	1	**4.672 293**
H 16 A	16	400 x 245 x 165	500 x 440 x 275	1.5	1	**4.672 298**
H 22	22	400 x 245 x 225	500 x 440 x 345	1.5	1	**4.672 294**
H 24	24	600 x 245 x 165	700 x 440 x 275	1.5	1	**4.672 295**
H 41	41	410 x 296 x 335	510 x 490 x 476	1.5	1	**4.672 296**

Water baths WNB/WNE

The Memmert waterbath is available in six model sizes and two performance classes. In addition to the Basic class for standard temperature control tasks, the Excellent version provides precise test procedures with a maximum of safety. The 3-sided heating ensures excellent temperature homogeneity.

WNB = water bath, natural circulation, temperature controller BASIC with 2-fold overtemperature protection
WNE = water bath, natural circulation, temperature controller EXCELLENT with 3-fold overtemperature protection, filling level control and calibration option

Specifications

Working-temperature range:	at least 5 °C above ambient to +95 °C and additional boiling stage
Setting temperature-range:	+10 °C to +95 °C and boiling stage
Temperature variation:	±0.1 K
Temperature distribution:	±0.25 K (sizes 7 - 29), ±0.3 K (size 45)
Power supply:	230 V, 50/60 Hz; 115 V, 50/60 Hz no extra charge

1 Water baths WNB

Water bath with natural circulation and temperature controller BASIC with 2-fold overtemperature protection

Memmert

Without covers - please order separately!

Type	Capacity of the bath	Internal dimensions (W x D x H)	External dimensions (W x D x H)	Rated capacity	Net weight	PK	Cat. No.
	litres	mm	mm	kW	kg		
WNB7	7	240 x 210 x 140	468 x 356 x 238 *	1.2	11	1	**9.906 581**
WNB10	10	350 x 210 x 140	578 x 356 x 238 *	1.2	13	1	**9.906 582**
WNB14	14	350 x 290 x 140	578 x 436 x 238 *	1.8	15	1	**9.906 583**
WNB22	22	350 x 290 x 220	578 x 436 x 296 *	2.0	17	1	**9.906 584**
WNB29	29	590 x 350 x 140	818 x 516 x 238 *	2.4	24	1	**9.906 585**
WNB45	45	590 x 350 x 220	818 x 516 x 296 *	2.8	26	1	**9.906 586**

* Weight and height with flat cover.

1

Water baths WNB with gabled cover

Memmert

Type	Capacity of the bath	Internal dimensions (W x D x H)	External dimensions (W x D x H)	Rated capacity	Net weight	PK	Cat. No.
	litres	mm	mm	kW	kg		
WNB7	7	240 x 210 x 140	468 x 356 x 337	1.2	11	1	**6.290 896**
WNB10	10	350 x 210 x 140	578 x 356 x 337	1.2	13	1	**6.290 897**
WNB14	14	350 x 290 x 140	578 x 436 x 347	1.8	15	1	**6.290 898**
WNB22	22	350 x 290 x 220	578 x 436 x 405	2.0	17	1	**6.290 899**
WNB29	29	590 x 350 x 140	818 x 516 x 343	2.4	24	1	**6.290 900**
WNB45	45	590 x 350 x 220	818 x 516 x 401	2.8	26	1	**6.290 901**

1 Water baths WNE

Water bath with natural ciculation and temperature controller EXCELLENT with 3-fold overtemperature protection, filling level control and calibration option. *Memmert*

Without covers - please order separately!

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
WNE7	7	240 x 210 x 140	468 x 356 x 238*	1.2	11	1	**9.906 591**
WNE10	10	350 x 210 x 140	578 x 356 x 238*	1.2	13	1	**9.906 592**
WNE14	14	350 x 290 x 140	578 x 436 x 238*	1.8	15	1	**9.906 593**
WNE22	22	350 x 290 x 220	578 x 436 x 296*	2.0	17	1	**9.906 594**
WNE29	29	590 x 350 x 140	818 x 516 x 238*	2.4	24	1	**9.906 595**
WNE45	45	590 x 350 x 220	818 x 516 x 296*	2.8	26	1	**9.906 596**

*Weight and hight with flat cover.

1

Options and accessories for water baths

Flat cover: Flat stainless steel cover with openings and concentric ring sets *Memmert*
Gable cover: Stainless steel gable cover, also suitable for shaking device and Peltier cooling device
Shaking device: Shaking device including support frame (for racks or support basket with perforated mounting shelf) for use in water baths, shaking speed 35-160 strokes per minute (horizontal back/forth movement), requires gable cover
Peltier-cooling device CDP115: For precise operation with temperatures starting from +10 °C. The temperature is controlled via the electronic controller of the waterbath with a precision of ±0.1 K. Easy fitting to bath by snap-on-technology, suitable for all tank sizes. Power supply: 230 V, 50/60 Hz or 115 V, 60 Hz (please state in case of order).
Effective cooling capacity: 115 W. Pumping capacity of circulation pump for coolant: 600 ml/min
Bottom grid: reversible for 2 heights (30 mm and 60 mm)

Type	For Volume l	Diam. mm	Openings	PK	Cat. No.
Flat cover	7	147	1	1	**9.906 530**
Flat cover	10	107	3	1	**9.906 531**
Flat cover	14	87	6	1	**9.906 532**
Flat cover	22	87	6	1	**9.906 533**
Flat cover	29	107	8	1	**9.906 534**
Flat cover	45	107	8	1	**9.906 537**
Flat cover	29/45	147	4	1	**6.073 294**
Gable cover	7			1	**9.906 561**
Gable cover	10			1	**9.906 562**
Gable cover	14/22			1	**6.306 619**
Gable cover	29/45			1	**6.228 924**
CDP115 Peltier Cooling Device	all			1	**9.906 651**
Water level control	all			1	**9.906 650**
Installation and connection set for Peltier cooling device CDP115	all			1	**7.900 153**
Bottom grid	7			1	**6.302 001**
Bottom grid	10			1	**7.076 000**
Bottom grid	14			1	**6.200 774**
Bottom grid	22			1	**7.076 101**
Bottom grid	29			1	**7.083 478**
Bottom grid	45			1	**6.801 467**
Shaking device	14/22			1	**7.075 941**
Shaking device	29/45			1	**6.228 923**

Further accessories can be found in our online shop.

1

1 Shaking water baths LSB Aqua Pro

Grant

- Reliable linear shaking mechanism for consistent results
- Excellent temperature stability and uniformity of ±0.1 °C
- Simple controls, clear, bright display
- Set and Forget™ technology, fast heat-up accurate temperature control
- Extensive choice of trays for a wide variety of vessels. Trays sold separately
- Discreet magnetically coupled shaking mechanism maximises working area
- Advanced dry start/run dry protection, prevents costly service repairs
- Universal frame and polycarbonate lid included

Accessory polypropylene spheres or a lid must be used at temperatures between +60 °C and +99 °C.
Accessory cooling is required for temperatures below ambient.
Please order PP spheres separately.

Minimum working depth:	60mm
Temperature range:	ambient +5 to 99 °C
Display:	LED
Linear shaking speed:	20 to 200 rpm (depending on load)
Shaking speed display resolution:	1 rpm
Linear shaking stroke length:	20 mm
Timer:	1 to 999 min
Drain tap:	yes
Supply voltage:	220-230 V

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Dimensions Shaking trays (D x W) mm	PK	Cat. No.
LSB12	12	323 x 298 x 118	360 x 380 x 275	240 x 235	1	**6.264 684**
LSB18	18	298 x 500 x 118	335 x 565 x 275	420 x 235	1	**6.264 685**

2

2 Shaking water bath OLS 26 Aqua Pro

Grant

A combined orbital/linear shaking bath for ultimate flexibility and usability.
Combined orbital/linear motion in one bath, simply rotate tray carrier 180°.

- Excellent temperature stability and uniformity of ±0.1 °C
- Adjustable shaking speed/intensity for application optimisation
- Set and Forget™ technology - fast heat-up accurate temperature control
- Extensive choice of trays for a wide variety of vessels. Trays sold separately
- Includes adjustable high temp cut-off/alarm, countdown timer, presets, calibration facility and dry start/run dry protection
- Discreet magnetically coupled shaking mechanism maximises working area
- Universal frame and polycarbonate lid included

Accessory polypropylene spheres or a lid must be used at temperatures between +60 °C and +99 °C.
Accessory cooling is required for temperatures below ambient.
Please order PP spheres separately.

Tank size:	26 l
Minimum working depth:	70 mm
Temperature range:	ambient +5 to 99 °C (0 to 99 °C with accessory cooling)
Uniformity:	±0.1 °C
Stability:	±0.1 °C
Display:	2 x LED (individual displays & controls for temperature and shaking speed)
Orbital and Linear shaking speed:	20 to 200 rpm (depending on load)
Orbital shaking radius:	9 mm
Shaking speed display resolution:	1 rpm
Linear shaking stroke length:	18, 28, 36 mm
Shaking tray area:	380 x 235 mm
Timer:	1 to 999 min
Drain Tap:	yes
Supply voltage:	220-230 V

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
OLS 26	26	298 x 500 x 159	335 x 565 x 325	1	**6.264 683**

Accessories for shaking water baths

Grant

Type	For	PK	Cat. No.
Refrigerated immersion cooler CC26	OLS26	1	**6.264 808**
Cooling coil CW26	OLS26	1	**6.264 809**
Spring clamp SC-25	25 ml flask	1	**6.264 810**
Spring clamp SC-50	50 ml flask	1	**6.264 811**
Spring clamp SC-100	100 ml flask	1	**6.264 812**
Spring clamp SC-250	250 ml flask	1	**6.264 813**
Spring clamp SC-500	500 ml flask	1	**6.264 814**
Spring clamp SC-1000	1000 ml flask	1	**6.264 815**

1 2 Trays for shaking water baths OLS/LSB series

Versatile stainless steel trays. Designed to accommodate a variety of vessels.
Adjustable spring configuration for maximum flask capacity.

Grant

1

Type	For	PK	Cat. No.
Universal tray TU12	LSB12	1	**6.264 687**
Universal tray TU18	LSB18	1	**6.264 688**
Universal tray TU26	OLS26	1	**6.264 686**
Test tube tray TS26	OLS26	1	**6.264 689**
Test tube tray TS12	LSB12	1	**6.264 690**
Test tube tray TS18	LSB18	1	**6.264 691**
Flask tray TF26	OLS26	1	**6.264 695**
Flask tray TF12	LSB12	1	**6.264 696**
Flask tray TF18	LSB18	1	**6.264 697**
Base tray SBT12	LSB12	1	**6.264 698**
Base tray SBT26	OLS26/LSB18	1	**6.264 699**

2

3 Shaking water baths Hydro

NEW

3

With their excellent temperature homogeneity, the universal Hydro shaking water baths are designed for the needs of biological, medical or biochemical laboratories.
The models H 20 S and H 20 SW shaking water baths have a linear, oscillating shaking movement, while model H 20 SOW moves the sample in an orbital motion.

LAUDA

- For boiling range applications
- TFT display
- Speed controller for load-independent, continuously adjustable shaking movement
- Soft, controlled start of the shaking movement
- Dry run protection (safety class I, NFL)
- Maintenance free and reliable
- H 20 SW and H 20 SOW with integrated cooling coil

Specifications	**H 20 S (SW) // H 20 SOW**
Type of movement:	linear // orbital
Speed Range:	10 … 250 rpm
Shaking diameter:	22 mm // 14 mm
Temperature stability:	±0.1 K
Heating power:	1.5 kW
Power supply:	230 V, 50/60 Hz

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Temp. range °C	PK	Cat. No.
H 20 S	20	450 x 300 x 160	715 x 520 x 330	25 ... 99.9	1	**4.672 299**
H 20 SW	20	450 x 300 x 160	715 x 520 x 330	10 ... 99.9	1	**4.672 300**
H 20 SOW	20	450 x 300 x 155	632 x 500 x 390	10 ... 80	1	**4.672 301**

1 Shaking water baths, SW series

JULABO

For simultaneous heating and shaking of samples, e.g. incubations, hybridizations etc.
Reciprocal motion.
- microprocessor technology with PID temperature control
- bright Multi-Display (LED) indicates five different temperature values and shaking speed
- splash-proof mains switch, built into plastic membrane keypad
- easy-to-use controls
- timer for selecting desired operating period
- RS232 interface provided
- shaking frequency 20 to 200 strokes/min., with 15 mm stroke
- removable shaking carriage
- model SW23 has an internal circulation pump giving enhanced temperature stability

Bath lid not included.

Type	Capacity of the bath litres	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
SW22	20	500 x 300 x 180	700 x 350 x 260	1	**9.906 383**
SW23	20	500 x 300 x 180	700 x 350 x 260	1	**9.906 384**

1

2

2 Shaking water baths, SW 22, SW 23, accessories

JULABO

Type	PK	Cat. No.
Hinged Makrolon® lid	1	**9.906 401**
Constant level device/cooling set	1	**9.906 402**

3

3 Test tube trays

JULABO

For	PK	Cat. No.
240 test tubes, 16/17 mm Ø	1	**9.906 420**
360 test tubes, 12/13 mm Ø	1	**9.906 421**
360 microlitre vessels, 30 x 11/12 mm Ø	1	**9.906 422**
84 test tubes, 30 mm Ø	1	**9.906 423**

Water bath protection agent please see page 830.

1 Sand Baths with Performance Control and Thermostatic Controller

Gestigkeit

For continuous operation. Electrical sand baths with thermostatic temperature control and separate power controller for performance adjustment to the heating requirements.
Anodised aluminium alloy hotplate. Excellent uniform temperature distribution over the entire heating surface. Asbestos free. The sand bath frame is tightly screwed onto the hotplate so that the sand is in direct contact with the hotplate. Useful depth 50 mm. Stainless steel controller housing, with painted central section.
Height-adjustable feet. Connection cable approximately 1.7 m.
With earthed plug for 230 V supplies up to 3300 W. A 400 V 3-phase model is also available.

Type	Min. operating temperature RT + °C	Max. operating temperature °C	Hot-plate mm	Dimensions (W x D x H) mm	Net weight kg	PK	Cat. No.
ST 72	50	300	360 x 360	358 x 358 x 220	14	1	**9.645 814**
ST 82	50	300	360 x 510	364 x 514 x 220	21	1	**9.645 815**
ST 92-2	50	300	440 x 590	442 x 592 x 220	28	1	**9.645 816**
ST 93-230	100	370	440 x 590	442 x 592 x 220	28	1	**9.645 819**
ST 92-3	50	300	440 x 590	442 x 592 x 220	28	1	**9.645 820**

* special production

2 Heating Bath HB eco

NEW

IKA

Compact and ergonomic heating safety bath.

- Ergonomic handles
- Clear, black-and-white display
- Alternating set-point/actual temperature display
- USB interface

Specifications

Heating output:	1400 W
Temperature range:	ambient ... 99 °C
Setting accuracy:	±1 K
Offset:	±2 K
Material:	Stainless steel 1.4404
Useful volume:	4 l
Dimensions, internal (diam. x H):	225 x 130 mm
Dimensions, external (W x D x H):	330 x 325 x 190 mm
Weight:	3.9 kg
Power supply:	200 ...240/100 ... 120 V, 50/60 Hz
IP code acc. to DIN EN 60529:	IP 21

Type	PK	Cat. No.
HB eco	1	**6.311 083**

3 Heating Bath HB Digital

IKA

Compact and ergonomic heating safety bath for all tempering media.
- Ergonomic handles
- Key button to lock heating bath temperature
- Clear, black-and-white display
- Permanent set-point/actual temperature display
- 3 different safety operating modes
- USB interface

Specifications

Heating output:	1350 W
Temperature range:	ambient ... 180 °C
Setting accuracy:	±1 K
Offset:	±1 K
Material:	Stainless steel 1.4404
Useful volume:	4 l
Dimensions, internal (diam. x H):	225 x 130 mm
Dimensions, external (W x D x H):	330 x 325 x 190 mm
Weight:	3.9 kg
Power supply:	200 ...240/100 ... 120 V, 50/60 Hz
IP code acc. to DIN EN 60529:	IP 21

Type	PK	Cat. No.
HB digital	1	**9.729 918**

1

1 Heating bath HBR 4 control

IKA

The heating bath is noted for:
- Cylindrical bath shape
- Heating elements integrated into the bath base
- Heat transfer media can be low-viscous oil (50 mPas) or water
- Two carry handles
- Infinitely variable safety temperature limiter according to DIN 12877
- Double-jacketed mantle protection against burns
- Digital display for target, actual and safety temperatures as well as speed
- Integrated magnetic stirrer drive to circulate the tempering fluid, allowing for better heat distribution in the bath
- RS 232 interface

Specifications

Heating output:	1000 W
Temperature range:	ambient up to 200 °C
Setting accuracy:	±1 K
Offset:	±1 K
Material:	stainless steel 1.4301
Useful volume:	max. 4 l
Ext./int. height:	250/160 mm
Dimensions (W x D x H):	340 x 250 x 340 mm
Weight:	4.4 kg
Protection class DIN EN 60529:	IP 20
Tested to DIN 12877 II.	

Type	PK	Cat. No.
HBR 4 control	1	**6.282 329**

2

2 Heating bath liquid, BUDDE

Buddeberg

Use:
BUDDE heating bath liquid can be used continuously as a heating medium up to approx. 170 °C. Higher temperatures (below flash point) are possible, but will result in rapid darkening. The low pour point allows the bath liquid also to be used as a cooling medium. Mixtures with 10 % to 30 % water achieve best results.

The crucial advantages of BUDDE heating bath liquid compared to the oils or other organic liquid mainly used are:
- accidental spillage of water into the bath does not lead to dangerous spitting at temperatures over 100 °C, as the water dissolves in the heating bath liquid and subsequently evaporates safely
- BUDDE heating bath liquid can easily be rinsed away with water which eases cleaning of laboratory equipment, e.g. distillation flasks, and also bench or floor if the bath liquid is accidentally spilled.
- BUDDE heating bath liquid does not foam when mixed with water.

Viscosity on addition of water:
BUDDE heating bath liquid is quite viscous at ambient or low temperatures, and therefore sometimes difficult to dispense. The addition of 10-20 % water reduces the viscosity and enables easier handling. If the mixture is then heated to 100 °C, the water evaporates without boiling. Further heating is only shortly delayed by this. Before next heating, water can be added again.

Water solubility: BUDDE heating bath liquid can be mixed with water in any ratio. The hardness of the water has no effect on the bath liquid.

Chemical character:	Modified polyglycolether
Appearance:	Clear, colourless or lightly yellowish liquid
Storage time:	When stored for long periods (over 2 years) the product may become darker. This does not affect the performance of the product.
Water solubility:	Heating bath liquid BUDDE can be mixed with water in any ratio.
pH value (DIN ISO 976):	6-8 (100 g/l, 20 °C)
Solidification temperature (DIN ISO 3016):	approx. -39 °C
Boiling point:	200 °C
Density (DIN 51757, 23 °C):	approx. 1.13 g/cm³ to 1.17 g/cm³
Flashpoint (DIN EN ISO 2592):	> 290 °C
Ignition temperature (DIN 51794):	approx. 390 °C

Container	PK	Cat. No.
5 litres	1	**9.906 200**

Hotplate Ceran®

1

Housing made of stainless steel, brushed and polished, in a unique Softline Design, Schott Ceran® cooking surface. Adjustable power control with power-saving or power control in 9 steps (TC = *Touch Control*). Two-circle HiLight technique, thus extra large heating zone (dia. 210 mm) can be activated. Thermal shutdown and automatic cooking system. Residual heat indicator and warning light. Temperature range (empty): 0 to approx. 460 °C. Power supply 230 V.

9.645 510

Type	Dimensions (W x D x H) mm	Hot-plate mm	Heating capacity W	PK	Cat. No.
CT 2200/E	305 x 410 x 75	Ø 140/210	1000/2200	1	**9.645 510** 1
CT 2203/TC	305 x 410 x 75	Ø 140/210	1000/2200	1	**9.645 511**
CT 3400/E	550 x 310 x 65	Ø 140/210, Ø 145	1000/2200, 1200	1	**6.261 651**
CT 3010	300 x 600 x 80	Ø 145, Ø 180	1200, 1800	1	**7.940 294**

2 Hotplate induction Ceran®

2

- casing made of brushed stainless steel in softline design
- Schott Ceran® cooking surface, superior and easy to clean
- with superior induction technology, pot recognition
- safe, user-friendly and extremely energy-saving
- temperature selection in 21 levels in steps of 10 °C from 60 °C (keeping warm) up to 260 °C
- power selection in 9 levels, powerboost (2200 W) for additional performance
- timer up to 99 minutes, automatic switch-off and signal tone
- electronic regulation via touch control sensors
- integrated safety functions, overheating protection
- indicators for residual heat, standby and power-on

Specifications

Heating zone:	80 - 200 mm Ø
Weight:	3.5 kg
Power supply:	230 V ~ 2200 W

Type	Dimensions (W x D x H) mm	PK	Cat. No.
Hotplate induction Ceran®	305 x 410 x 75	1	**7.672 290**

3 Hotplates, analogue, CB300 and CB500

3

Stuart

Energy regulator control with glass ceramic top plate and 'hot' warning lamp which illuminates when the plate temperature exceeds 50 °C. For 230 V 50/60 Hz single phase supplies. With BioCote, silver-based, antimicrobial protection.
Maximum temperature as indicated.

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Max. temp. °C	Weight kg	PK	Cat. No.
CB300	320 x 370 x 120	300 x 300	1200	450	6	1	**9.645 338**
CB500	520 x 360 x 130	500 x 300	2250	375	12	1	**9.645 316**

4 Hotplate CP 300, analogue

NEW

4

Stuart

A heated glass ceramic plate mounted in a block of pure PTFE creates a powerful hotplate which is chemically resistant, even to concentrated acids. The separate temperature controller is connected to the hotplate via a 2 metre PTFE coated lead, which allows the hotplate to be located in fume hoods.

- Ideal for acid digestions or trace metal analysis
- PTFE construction with glass ceramic plate for exceptional resistance to chemical attack
- Can be cleaned with concentrated nitric acid
- Controller is fitted with a hot warning light for temperatures above 50 °C

Specifications

Max. temperature:	400 °C
Heater power:	900 W
Heated area:	200 x 200 mm
Dimensions Hotplate (W x D x H):	320 x 360 x 60 mm
Dimensions Controller (W x D x H):	150 x 160 x 65 mm
Net weight:	11 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
CP 300	1	**6.230 893**

Boiling chips - please see page 638.

Hotplates SS/CS/SD/CD/SP150

Stuart

Hotplates with accurate temperature control.
- Spill-resistant front control panel with chemically toughened glass for extra resilience
- Hot surface warning light flashes when plate temperature is above 50 °C
- Durable chip-resistant aluminum top plate offers excellent heat transmission, rapid heating, and oven temperature distribution
- Ceramic top plate is chemical resistant and easy to clean, plus the white surface ensures good visibility of colour changes
- With an integral fixing point for a retort rod
- With BioCote, silver-based, antimicrobial protection

SP150 additionally with:
- Full-colour 10-cm TFT screen which simultaneously displays target settings and the actual temperature
- Individual profiles can be created and saved
- User calibration for adjusting the temperature output (±5% at 50 and 450 °C)
- Incl. Pt100 Temperature sensor

Specifications

Max. load:	15 l
Display resolution:	1 °C
Accuracy:	±1 °C
Dimensions Hotplate (W x D x H):	150 x 150 mm
Dimensions (W x D x H):	180 x 300 x 93 mm
Net weight:	2.5 kg
Power supply:	230 V, 50/60 Hz
Warranty:	3 years

1

4.672 501

Hotplate SS150/CS150, analogue

NEW

Stuart

With basic interface and an LED array indicating the temperature, offering the same quality as the two higher end models. With connection for contact thermometer SCT-1.

Specifications	**SS150 // CS150**
Max. temperature:	325 °C // 450 °C
Heater power:	700 W // 500 W
Heated area:	150 x 150 mm // 120 x 120 mm

2

4.672 502

Type	Material stirring surface	Colour	PK	Cat. No.
SS150B	Aluminium, ceramic coated	Blue	1	**4.672 499**
SS150K	Aluminium, ceramic coated	Black	1	**4.672 500**
SS150W	Aluminium, ceramic coated	White	1	**4.672 501** 1
CS150B	Glass ceramic	Blue	1	**4.672 502** 2
CS150K	Glass ceramic	Black	1	**4.672 503**
CS150W	Glass ceramic	White	1	**4.672 504**

3

4.672 514

Hotplate SD150/CD150/SP150, digital

NEW

With digital interface for a digital temperature setting. With connection for contact thermometer SCT-1.

Specifications	**SD150/SP150 // CD150**
Max. temperature:	325 °C // 450 °C
Heater power:	700 W // 500 W
Heated area:	150 x 150 mm // 120 x 120 mm

4

4.672 576

Type	Material stirring surface	Colour	PK	Cat. No.
SD150B	Aluminium, ceramic coated	Blue	1	**4.672 511**
SD150K	Aluminium, ceramic coated	Black	1	**4.672 512**
SD150W	Aluminium, ceramic coated	White	1	**4.672 513**
CD150B	Glass ceramic	Blue	1	**4.672 514** 3
CD150K	Glass ceramic	Black	1	**4.672 515**
CD150W	Glass ceramic	White	1	**4.672 516**
SP150B	Aluminium, ceramic coated	Blue	1	**4.672 575**
SP150W	Aluminium, ceramic coated	White	1	**4.672 576** 4
SP150K	Aluminium, ceramic coated	Black	1	**4.672 577**
SP150P	Aluminium, ceramic coated	Pink	1	**4.672 578**

1 Hotplates, analogue, SB 300 and SB 500

Maximum temperature 300 °C. Energy regulator control with cast aluminium/silicon alloy top plate and 'hot' warning lamp which illuminates when the plate temperature exceeds 50 °C. The 300 mm x 300 mm top plate model has a retort rod mounting at the rear of the housing. With BioCote, silver-based, antimicrobial protection.

Stuart

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Max. temp. °C	Weight kg	PK	Cat. No.
SB300	320 x 370 x 120	300 x 300	600	300	6	1	**9.645 331**
SB500	520 x 360 x 130	500 x 300	1500	300	12	1	**9.645 317**

1

2 Hotplates digital, SD 300 and SD 500

Maximum temperature 300 °C. Digital setting and control of plate temperature with 1 °C resolution and cast aluminium/silicon alloy top plate.
The 300 x 300 mm top plate model has a retort rod mounting at the rear of the housing.
With BioCote, silver-based, antimicrobial protection.
For 230V 50/60 Hz single phase supplies.

Stuart

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Max. temp. °C	Weight kg	PK	Cat. No.
SD300	320 x 370 x 105	300 x 300	600	300	6	1	**9.645 320**
SD500	520 x 360 x 130	300 x 500	1500	300	12	1	**9.645 321**

2

Hotplates C-MAG HP 4/C-MAG HP 7/C-MAG HP 10

Made of glass ceramic which offers excellent chemical resistance.
- fixed safety circuit of 550 °C

- Hot Top indicator: Hot surface warning to prevent burns
- exact temperature setting via digital display (LED)
- digital error code display
- raised control panel for protection against spilt liquids

C-MAG HP 7, C-MAG HP 10 additionally:
adapter according to DIN 12878 for connecting a contact thermometer, e.g. ETS-D5, enables precise temperature control

IKA

3

9.720 496

Specifications

Heating function	
Temperature display:	digital
Heat output	
C-MAG HP 4:	250 W
C-MAG HP 7:	1000 W
C-MAG HP 10:	1500 W
Heating rate (1 litre H_2O)	
C-MAG HP 4:	2.5 K/min
C-MAG HP 7/HP 10:	5 K/min
Temperature range:	50 to 500 °C
Setting accuracy:	±10 K
Safety circuit fixed:	550 °C
Control accuracy with sensor	
C-MAG HP 4:	-
C-MAG HP 7/HP 10:	ETS-D5/±0.5 K
Heating plate	
Material:	glass ceramic
Dimensions	
C-MAG HP 4:	100 x 100 mm
C-MAG HP 7:	180 x 180 mm
C-MAG HP 10:	260 x 260 mm
Tested to DIN EN IEC 61010-1.	

4

9.720 497

5

9.720 498

Type	Dimensions (W x D x H) mm	Weight kg	Plug type	PK	Cat. No.
C-MAG HP 4	150 x 260 x 105	3	EU	1	**9.720 496** 3
C-MAG HP 7	220 x 330 x 105	5	EU	1	**9.720 497** 4
C-MAG HP 10	300 x 415 x 105	6	EU	1	**9.720 498** 5

Optional accessories: HP 7 and HP 10 additionally: Electronical thermometer ETS-D5

1

1 High-performance hotplates

With thermostatic temperature control. CERAN® glass ceramic material is highly resistant to breakage and changes in temperature, free from distortion, permeable to infrared light and highly acid-resistant. Bench-top instrument with built-in controller. SR model - with separate controller for wall mounting.

Gestigkeit

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
4 A	440 x 300 x 100	430 x 140	1500	50 - 500	230	5.0	1	**7.603 031**
11 A	290 x 410 x 100	280 x 280	2000	50 - 500	230	5.5	1	**9.645 711**
22 A	290 x 560 x 100	280 x 430	3000	50 - 500	230	6.5	1	**9.645 712**
33 A	440 x 560 x 100	430 x 430	4400	50 - 500	3x400	9.0	1	**9.645 714**
44 A	590 x 560 x 100	580 x 430	5700	50 - 500	3x400	11.5	1	**9.645 715**
4 SR	440 x 180 x 100	430 x 140	1500	50 - 500	230	5.0	1	**6.803 027**
11 SR	290 x 290 x 100	280 x 280	2000	50 - 500	230	5.5	1	**9.645 721**
22 SR	290 x 440 x 100	280 x 430	3000	50 - 500	230	6.5	1	**9.645 722**
33 SR	440 x 440 x 100	430 x 430	4400	50 - 500	3x400	9.0	1	**9.645 724**
44 SR	590 x 440 x 100	580 x 430	5700	50 - 500	3x400	11.5	1	**9.645 725**
33 EB	440 x 440 x 100	430 x 430	4400	50 - 500	3x400	9.0	1	**9.645 734**

2

2 High-performance hotplate CERAN®

High-performance CERAN® glass ceramic hotplate with circular heating area 145 mm diameter and square placement surface made of glass ceramic (175 x 175), stainless steel housing, power controller (adjustable 10 % to 100 %) and integral temperature monitor.

Gestigkeit

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
CT 10	200 x 290 x 85	Ø 145	1200	500	230	2.6	1	**9.645 740**

3

3 Precision hotplate, PZ 44

Automatic, precise regulation of temperatures between 20 and 450 °C. Digital presetting and temperature display. Three power levels (825 W, 1650 W and 3300 W) can be set and an additional electronic power controller (adjustable 10 % to 100 %) is provided. At 825 W and 3300 W settings the entire plate surface is heated. At 1650 W setting only the right hand side of the plate is heated. As a result of heat conduction, the temperature from the right hand side to the left edge of the plate varies by approx. 40 %. Built-in relay allows direct connection of electronic contact thermometers. With solid, flat, low-distortion, cast GG15 alloy. Switching differential ±1 K.

Gestigkeit

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
PZ 44	320 x 470 x 190	290 x 440	3300	20 to 450	230*	23	1	**9.645 744**

* 400 V, 3-ph. versions are also available on request

1 Precision hotplates, PZ-series

Gestigkeit

For continuous operation. Provide extremely accurate, uniform temperatures, even in plate corners and on edges. Polished anodised aluminium heating surface. Microprocessor-controlled temperature controller with temperature setting up to 99.9 in 0.1 °C steps, over 99.9 in 1 °C steps. Actual temperature displayed continuously. With separate power controller for performance adjustment to the heating requirements from 10 to 100 %. Built-in relay allows direct connection of electronic contact thermometers. Adjustable temperature monitor from 50 to 300 °C (with PZ 28-1, 30 to 110 °C) to prevent excess temperatures.

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
PZ 28-1	210 x 300 x 135	200 x 280	500	20 to 110	230	7	1	**9.645 827**
PZ 28-2	210 x 300 x 135	200 x 280	1100	20 to 300	230	7	1	**9.645 828**
PZ 35	365 x 365 x 155	350 x 350	2200	20 to 300	230	14	1	**9.645 824**
PZ 60	620 x 200 x 155	610 x 160	2000	20 to 300	230	12	1	**9.645 829**

2 Hotplates with Performance Control and Thermostatic Controller

Gestigkeit

For continuous operation. Electric hotplates with thermostatic temperature control and separate power controller for performance adjustment to the heating requirements. Anodised aluminium alloy hotplate. Excellent uniform temperature distribution over entire heating surface. Asbestos free. Stainless steel housing, with painted central section. Height-adjustable feet. Mains cable approximately 1.7 m. With earthed plug for 230 V supplies up to 3300 W. A 400V 3-phase model is also available.

Type	Dimensions (W x D x H) mm	Hot-plate mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
HT 02	312 x 312 x 170	300 x 300	1800	50 - 300	230	11	1	**9.645 781**
HT 12	358 x 358 x 170	350 x 350	2200	50 - 300	230	13	1	**9.645 782**
TH 11	308 x 458 x 170	290 x 440	1650	30 - 110	230	14	1	**9.645 773**
TH 13	308 x 458 x 170	290 x 440	2400	100 - 370	230	14	1	**9.645 793**
HT 22	514 x 364 x 170	350 x 500	2850	50 - 300	230	19	1	**9.645 785**
HT 31	592 x 442 x 170	430 x 580	2000	30 - 110	230	26	1	**9.645 776**
HT 32-230	592 x 442 x 170	430 x 580	4000	50 - 300	230	26	1	**9.645 786**
HT 32-400	592 x 442 x 170	430 x 580	4000	50 - 300	3x400	26	1	**9.645 787**
HT 33-230	592 x 442 x 170	430 x 580	4000	100 - 370	230	26	1	**9.645 796**

3 Multiple hotplate systems behrotest®

behr

Multiple hotplate systems, 360 W, with individually adjustable heating controls and indidicator lights. Maximum surface temperature 400 °C.

HB4 + HBS4

Type	Description	Dimensions (W x D x H) mm	PK	Cat. No.
HB 4	4 hotplates with metal protective grills, 94 mm diam.	530 x 320 x 150/760*	1	**9.645 590**
HB 6	6 hotplates with metal protective grills, 94 mm diam.	760 x 320 x 150/760*	1	**9.645 591**
HB 8	8 hotplates with metal protective grills, 94 mm diam.	900 x 320 x 150/760*	1	**9.645 594**
HBS 4	Holder for HB 4 incl. 4 support rods		1	**9.645 592**
HBS 6	Holder for HB 6 incl. 6 support rods		1	**9.645 593**
HBS 8	Holder for HB 8 incl. 8 support rods		1	**9.645 595**

*with support rod

1

1 Standard heating mantles series KM-G

SAF Wärmetechnik

LabHEAT®-Heating mantles for flasks, round bottom. Flexible glass yarn heating element, outer jacket in glass silk, with diam. 60 mm bottom out-let from 500 ml, max. heating element temperature 450 °C, 1.5 m power supply (earthed) cable with heating-zone switch and RCD (residual current detection), nominal voltage 230 V AC.

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
25	41	65	1	1	**9.642 401**
50	51	75	1	1	**9.642 402**
100	64	120	1	1	**9.642 403**
250	85	180	2	1	**9.642 404**
500	105	250	2	1	**9.642 405**
1000	131	450	2	1	**9.642 406**
2000	166	600	2	1	**9.642 407**
3000	185	800	2	1	**9.642 408**
4000	207	900	2*	1	**9.642 409**
5000	223	1200	2*	1	**9.642 410**
6000	236	1400	2*	1	**9.642 411**
10000	279	2000	2*	1	**9.642 412**
20000	345	2200	2*	1	**9.642 413**

Heating mantles with other specifications available on request.
*with 4 heating zones available on request

2

2 Standard heating mantles series KM-GH

SAF Wärmetechnik

LabHEAT®-Heating mantles for flasks, round bottom. Designed identical to series KM-G, but the heating element is made of heat-resistant quartz yarn and permits a maximum temperature up to 900 °C; 1.5 m power supply (earthed) cable with heating-zone switch and RCD (residual current detection); nominal voltage 230 V AC.

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
100	64	200	1	1	**9.642 440**
250	85	300	2	1	**9.642 441**
500	105	500	2	1	**9.642 442**
1000	131	750	2	1	**9.642 443**
2000	166	1200	2	1	**9.642 444**
4000	207	1800	2	1	**9.642 445**
6000	236	2500	2	1	**9.642 446**

Heating mantles with other specifications available on request.

3

4

3 4 Accessories for Standard heating mantles

SAF Wärmetechnik

LabHEAT® - Accessories made of stainless steel (1.4301) for higher stability or to integrate within support wall. The heating mantles are able to be suspended on its four clips.

For mantle ml	Description	PK	Cat. No.
100	Tripod	1	**9.642 600**
250	Tripod	1	**9.642 601**
500	Tripod	1	**9.642 602**
1000	Tripod	1	**9.642 603**
2000	Tripod	1	**9.642 604**
3000	Tripod	1	**9.642 605**
4000	Tripod	1	**9.642 606**
5000	Tripod	1	**9.642 607**
6000	Tripod	1	**9.642 608**
10000	Tripod	1	**9.642 609**
20000	Tripod	1	**9.642 610**
25	Support ring	1	**9.642 620**
50	Support ring	1	**9.642 621**
100	Support ring	1	**9.642 622**
250	Support ring	1	**9.642 623**
500	Support ring	1	**9.642 624**
1000	Support ring	1	**9.642 625**
2000	Support ring	1	**9.642 626**
3000	Support ring	1	**9.642 627**
4000	Support ring	1	**9.642 628**

1 Metal-cased heating mantles series KM-M, without controller

1

LabHEAT® - Heating mantles for flasks, round bottom. Flexible glass yarn heating element in plastic coated, chemical-resistant metal housing with built-in power-on and heating zone switch; max. heating element temperature 450 °C; 1.5 m power supply (earthed) cable and RCD (residual current detection); nominal voltage 230 V AC. *SAF Wärmetechnik*

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
50	51	55	1	1	**9.642 500**
100	64	100	1	1	**9.642 501**
250	85	150	2	1	**9.642 502**
500	105	200	2	1	**9.642 503**
1000	131	300	2	1	**9.642 504**
2000	166	500	2	1	**9.642 505**
3000	185	600	2	1	**9.642 506**
4000	207	750	2	1	**9.642 507**
5000	223	860	2	1	**9.642 508**
6000	236	1000	2	1	**9.642 509**
10000	279	1400	2	1	**9.642 510**
20000	345	2000	2	1	**9.642 511**

Serial heating units and Heating mantles with other specifications available on request.

2 Metal-cased heating mantles series KM-ME, with controller

2

LabHEAT® - Heating mantles for flasks, round bottom. Flexible glass yarn heating element in plastic coated, chemical-resistant metal housing with built-in power-on and heating zone switch, **in addition equipped with a controller** which allows a continuous adjustment of the heater power; max. heating element temperature 450 °C; 1.5 m power supply (earthed) cable and RCD (residual current detection); nominal voltage 230 V AC. *SAF Wärmetechnik*

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
50	51	55	1	1	**9.642 520**
100	64	100	1	1	**9.642 521**
250	85	150	2	1	**9.642 522**
500	105	200	2	1	**9.642 523**
1000	131	300	2	1	**9.642 524**
2000	166	500	2	1	**9.642 525**
3000	185	600	2	1	**9.642 526**
4000	207	750	2	1	**9.642 527**
5000	223	860	2	1	**9.642 528**
6000	236	1000	2	1	**9.642 529**
10000	279	1400	2	1	**9.642 530**
20000	345	2000	2	1	**9.642 531**

Heating mantles with other specifications available on request.

3 Electronic heating mantles, EM series

3

Polypropylene outer case is resilient and chemically resistant. Highly efficient in heating up to a maximum element temperature of 450 °C. The flexible heating element is suspended in a thermal insulating cartridge to provide maximum heat transfer with minimum risk of flask breakage. Even at full power output, the exterior remains "cool-to-touch" due to good heating element insulation. All heating mantles have support clamp for rods of up to 12 mm diameter, and are double fused, with earth (ground) screen to protect the user from electric shocks. Available as 220-240 V 50/60 Hz models; spare heater cartridges are available on request. *Electrothermal*

For flasks ml	Width mm	Depth mm	Height mm	Power W	PK	Cat. No.
100	175	260	127	60	1	**9.643 033**
250	175	260	127	150	1	**9.643 034**
500	238	310	145	200	1	**9.643 035**
1000	238	310	145	300	1	**9.643 036**
2000	350	400	190	500	1	**9.643 037**
3000	350	400	190	500	1	**9.643 038**
5000	350	400	190	800	1	**9.643 039**

1

1 Multi-size Heating Mantles, series KM-MPE for different sized round bottom flasks

SAF Wärmetechnik

LabHEAT®-Heating mantles for flasks, round bottom. Designed and technically identical to series KM-ME, but can be used **for round flasks of three different sizes,** max. heating element temperature 450 °C; 1.5 m power supply (earthed) cable and RCD (residual current detection); nominal voltage 230V AC also equipped with a controller which allows a continuous adjustment of power.

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
50 to 250	51 to 85	160	3	1	**9.642 540**
250 to 1000	85 to 131	350	3	1	**9.642 541**
1000 to 3000	131 to 185	700	3	1	**9.642 542**

Serial Heating Units and Heating Mantles with other specifications available on request.

2

2 Metal-cased heating mantles, series KM-MEB

SAF Wärmetechnik

With corrosion-resistant stainless steel heating bowl to protect against leaking liquid resulting of a broken flask.

- increased working safety in the lab
- plastic-coated, chemically resistant metal housing
- predrilled threaded hole on rear allows to fix the stativ clamp
- 2 heating zones
- with built-in controller allows a continuous adjustment of power outlet
- thermally insulated and earthed
- with built-in heating zone switch and residual current detection (RCD)

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
250	85	150	2	1	**6.310 317**
500	105	200	2	1	**6.310 318**
1000	131	300	2	1	**6.310 319**
2000	166	500	2	1	**6.310 320**

3

3 Electronic multi-size heating mantles, spill-proof, EMX series

Electrothermal

Solid stainless steel liner, which protects against fluid spills and is easy to clean, with central aperture to accommodate round-bottom and pear-shaped flask and 60° funnels. Polypropylene outer case is resilient and chemically- resistant. Highly efficient in heating up to an element temperature of 450 °C. Even at full power output, the exterior remains "cool-to-touch" due to good heating element insulation. All heating mantles have support clamp for rods of up to 12 mm diameter, and are double fused, with earth (ground) screen to protect the user from electric shocks. Available as 220-240 V 50/60 Hz models; spare heater cartridges are available on request.

For round bottom flasks, pear-shaped flasks and 60° funnels (Mantle is open at the bottom).

For flasks ml	Width mm	Depth mm	Height mm	Power W	PK	Cat. No.
500 - 1000	238	310	145	240	1	**9.643 081**
2000 - 5000	350	400	190	600	1	**9.643 083**

4

4 Electronic multi-size heating mantles, V-shaped, EMV series

Electrothermal

Solid, with mesh stainless steel liner, which protects against fluid spills, with central aperture to accommodate round-bottom and pear-shaped flask and 60° funnels. Polypropylene outer case is resilient and chemically- resistant. Highly efficient in heating up to a maximum element temperature of 450°C. Even at full power output, the exterior remains "cool-to-touch" due to good heating element insulation. All heating mantles have support clamp for rods of up to 12 mm diameter, and are double fused, with earth (ground) screen to protect the user from electric shocks. Available as 220-240 V 50/60 Hz models; spare heater cartridges are available on request.

For round bottom flasks, pear-shaped flasks and 60° funnels (Mantle is open at the bottom).

For flasks ml	For funnel diam. mm	Dimensions (W x D x H) mm	Power W	PK	Cat. No.
10 to 50	50 to 100	175 x 260 x 127	60	1	**9.643 072**
100 to 250	75 to 100	175 x 260 x 127	150	1	**9.643 073**
500 to 1000	100 to 200	238 x 310 x 145	300	1	**9.643 074**
2000 to 5000 *	200 to 300	350 x 400 x 190	800	1	**9.643 075**

* With 2 circuits, 1 x 300, 1 x 500 W.

1 Heating mantles Electrothermal® CMUV

NEW

Electrothermal

Heating mantle has a "V"-shaped design for large, pear-shaped and round-bottom flasks.
The bottom opening allows 60° funnels of various diameters to be accommodated.
Coiled heating element provides optimal heat transfer. Control heat throughout the mantle using three separate electrical circuits (top, middle, and bottom), each controlled with its own dial switch.

- Cool-to-the-touch design with powder-coated aluminium casing
- Indicator lamps for "power on" and "heat on" operation

Scope of supply: Heating mantle, three sets of integrated support rod clamps, power cords with UK and EU plugs

Specifications

Max. working temperature:	450 °C
Dimensions (W x D x H):	485 x 485 x 300 mm
Power supply:	230 V, 50/60 Hz

Type	For flasks ml	PK	Cat. No.
CMUV10/CL	10000	1	**6.282 660**
CMUV20/CL	20000	1	**4.672 211**
CMUV22/CL	22000	1	**4.011 144**

1

2 Stirring heating mantles LabHEAT® KM-MER series

SAF Wärmetechnik

LabHEAT® - Heating mantles for flasks, round bottom. Designed and technical identical to series KM-ME, but **in addition equipped with a magnetic stirrer**;
rotational frequency up to 1600 rpm max. heating element temperature 450 °C,
1.5 m power supply (earthed) cable and RCD (residual current detection);
nominal voltage 230 V AC.

Capacity ml	Flask diam. mm	Rating W	Heating zones	PK	Cat. No.
100	64	100	1	1	**9.642 545**
250	85	150	2	1	**9.642 546**
500	105	200	2	1	**9.642 547**
1000	131	300	2	1	**9.642 548**

Serial heating units and Heating mantles with other specifications available on request.

2

3 Electronic stirrer mantles, EMA series

Electrothermal

Built-in adjustable heater control up to an element temperature of 450 °C and magnetic stirring control up to approx. 520 rpm with auto-reverse facility and automatic stirrer bar trap; the stirrer unit has an independent power supply. Polypropylene outer case is resilient and chemically-resistant. Even at full power output, the exterior remains "cool-to-touch" due to good heating element insulation. All heating mantles have support clamp for rods of up to 12 mm diameter, and are double fused, with earth (ground) screen to protect the user from electric shocks.
Available as 220-240 V 50/60 Hz models; spare heater cartridges are available on request.

For flasks ml	Width mm	Depth mm	Height mm	Power W	PK	Cat. No.
50	175	260	133	80	1	**9.643 122**
100	175	260	133	80	1	**9.643 123**
250	175	260	133	170	1	**9.643 124**
500	238	310	157	220	1	**9.643 125**
1000	238	310	157	320	1	**9.643 126**
2000	350	400	197	520	1	**9.643 127**

3

4 Support clamp KM-SK

SAF Wärmetechnik

LabHEAT®-Accessories for metal-cased heating mantles and serial heating unit to fix support rods up to diameter 12 mm or to integrate the metal-cased heating mantles within support wall.

Type	PK	Cat. No.
KM-SK	1	**9.642 630**

4

1

1 Glass fibre-insulated heating tapes series KM-HT-BS30

LabHEAT®-Heating tapes. No protection against ingress of water; *SAF Wärmetechnik*
with inner metal protective braiding and glass fibre insulation;
product dimensions 30 x 5 mm; min. bending radius > 15 mm; max. heating element temperature 450 °C;
preterminated with 1.0 m cold end; nominal voltage 230V AC.

Length cm	Heating power W	PK	Cat. No.
50	125	1	**9.642 720**
100	250	1	**9.642 721**
150	375	1	**9.642 722**
200	500	1	**9.642 723**
250	625	1	**9.642 724**
300	750	1	**9.642 725**
400	1000	1	**9.642 726**
500	1250	1	**9.642 727**
700	1500	1	**9.642 728**
1000	2000	1	**9.642 729**

Other lenghts and other specifications available on request.

2

2 Glass fibre-insulated heating cables series KM-HC-G

LabHEAT®-Heating cables. No protection against ingress of water; *SAF Wärmetechnik*
glass fibre insulation without protective braiding; outer diameters dia. 3.5 to 4.5 mm;
min. bending radius > 5 mm; max. heating element temperature 450 °C; preterminated with 2 x 1.5 m cold end;
nominal voltage 230 V AC.

Length cm	Heating power W	PK	Cat. No.
50	75	1	**9.642 750**
100	150	1	**9.642 751**
150	225	1	**9.642 752**
200	300	1	**9.642 753**
250	375	1	**9.642 754**
300	450	1	**9.642 755**
400	600	1	**9.642 756**
500	750	1	**9.642 757**
600	900	1	**9.642 758**

Other lenghts and other specifications available on request.

3

3 Power controller KM-L116 for heating mantles

LabHEAT®-regulator for heating mantles. *SAF Wärmetechnik*
Electromechanical; infinitely variable control over power outlet;
plastic housing (H x W x D) 55 x 65 x 120 mm; switching power max.
2990 W (13 A); 1.5 m power supply (earthed) cable with plug.

Type	PK	Cat. No.
KM-L116	1	**9.642 660**

4

4 Laboratory regulator series KM-RX1000

LabHEAT®-regulator. Freely configurable electronical temperature regulator with *SAF Wärmetechnik*
two displays indicating the desired and actual values. PID self-optimisation,
with ramp function, USB port, for external configuration. Pt-100 or thermocouples for temperatures up to 1200 °C,
metal housing (H x W x D) 75 x 205 x 140 mm with fixed support clamp, switching power max. 2300 W (10A),
1.5 m power supply (earthed) cable with plug. Nominal voltage 230 V AC.

Type	Description	Sensor / Alarm connetion	PK	Cat. No.
KM-RX 1001	Laboratory regulator	Socket / Socket	1	**7.619 815**
KM-RX 1004	Laboratory regulator	Clamps / Clamps	1	**9.642 654**

1 Temperature sensors for Laboratory regulator series KM-RX

LabHEAT®-sensors. Suitable for temperature control and KM-KM-RX1001 RX1004 with permanently attached cable, with or without diode plug. *SAF Wärmetechnik*

KM-TP2: Pt100, up to 400 °C, sheated element V2A, dia. 4 x 50 mm,
KM-TPG: Pt100, up to 250 °C, glass tube, dia. 6 x 40 0mm,
KM-TNS: NiCr-Ni, up to 1200 °C, rod sensor in Inconell, dia. 1.5 x 300 mm
KM-TNF: NiCr-Ni, up to 400 °C, flat sensor, 0.4 x 15 x 400 mm

1

Type	For	Length m	Description	PK	Cat. No.
KM-TP2	KM-RX1001	2.0	with diode plug	1	**7.619 816**
KM-TPG	KM-RX1001	1.5	with diode plug	1	**9.642 674**
KM-TNS	KM-RX1001	2.0	with diode plug	1	**6.237 998**
KM-TNF	KM-RX1001	1.5	with diode plug	1	**6.236 355**
KM-TP2	KM-RX1004	2.0	without diode plug	1	**9.642 672**
KM-TPG	KM-RX1004	1.5	without diode plug	1	**9.642 673**
KM-TNS	KM-RX1004	2.0	without diode plug	1	**9.642 671**
KM-TNF	KM-RX1004	1.5	without diode plug	1	**9.642 670**

Further models available on request.

2 Power controller, Voltron 20

Alternating current resistance controller with interference suppressor for variable, no-power-loss control of hotplates, heating tapes, soldering irons, light bulbs, infrared radiators etc., control range 25 V to 225V. With single throw on/off potentiometer and shielded fuse holder for safe fuse replacement away from the internal circuit. Fitted with interference suppressor in accordance with EN standard.

2

Type	Power W	PK	Cat. No.
Voltron 20	2000	1	**9.725 094**

3 Temperature controllers, TEMPAT®-D

For controlling temperature of heating coils, hotplates, ovens, infrared radiators and water baths. TEMPAT®-D has a 10 mm high, LED display which can even be seen in dark rooms and allows monitoring of actual temperature at any time. Set point can be entered via a 3 or 4 figure coding switch with 1 °C resolution. Built-in sensor breakdown fuse, switching interval display and Xp trimmer to adjust variable gain amplification between 0 and 10 K. Sensor connection is via a plug-in socket.

3

Appropriate temperature sensor please order separately.
If no temperature sensor is ordered, a loose plug is supplied.

Specifications

Input:	230 V, 50/60 Hz
Switching capacity:	2300 W, 10A
Connection, appliance:	1.20M long connection cable with impact resistant plug
Consumer load:	earthed schuko socket, other plug-in connections in accordance with Swiss or French/Belgian standards, for example can be supplied at additional cost.
Housing:	Polycarbonate plastic, gray
Dimensions:	188 mm x 110 mm x 70 mm
On/off switch:	via dipole luminous rocker switch
Probe connection:	via socket
Contact assignment Pt100:	1 and 2
Contact load:	1 + 3
Accuracy:	±1 % from measuring range value

For	Temp. range °C	PK	Cat. No.
Probe Pt100	0 ... 400	1	**9.725 381**
Probe Fe-CuNi	0 ... 600	1	**9.725 382**
Probe NiCr-Ni	0 ... 1200	1	**9.725 383**

4 Probe for temperature controllers, TEMPAT®

All probes with 2m connecting cable and plug.

4

Type	Diam. mm	Length mm	PK	Cat. No.
Probe Pt100	1.6*	250	1	**9.725 320**
Probe Pt100	2.0*	250	1	**9.725 321**
Probe Pt100	3.0*	250	1	**7.601 585**
Glass-probe Pt100	2.5	250	1	**9.725 322**
Glass-probe Pt100	3.0	250	1	**9.725 323**
Probe Fe-CuNi	1.5**	250	1	**9.725 394**
Probe NiCr-Ni	1.5**	250	1	**9.725 395**

* probe tube stainless steel 4301.
**mantle of austenitic stainless steel.

1

1 Power controller, VOLTRON-PLUS F

Alternating current controller for variable and no-loss control of resistive and inductive power devices with the following additional features:
- On/off luminous rocker switch, dipole switching, 10 A (4)
- IC controlled, hysteresis free
- Quiet running
- Anti-interference grade N
- Fast-blow fuse
- Protected fuse holder
- Power-on indicator lamp

Specifications

Voltage:	220-235 V, 50/60 Hz
Switching capacity:	Max. 2000 VA
Switching current:	Max. 10A
Electronics:	Phase controls
Regulating range:	0 to 235 V a.c.
Dimensions:	150 x 80 x 55 mm
Weight:	0.7 kg

Type	PK	Cat. No.
VOLTRON-PLUS F	1	**9.725 363**

2

2 Microwave SEVERIN MW 7875, silver/black

- wattage: approx.700 W
- interior capacity: approx. 20 l
- power continuously variable, (by time or weight)
- 30 minute timer with acoustic signal
- turntable dia. approx. 24.5 cm
- heat resistant housing
- Dimensions (W x D x H) : 452 x 352 x 262 mm

Rating W	Colour	PK	Cat. No.
700	silver/black	1	**4.658 443**

3

3 Microwave Severin MW 7873

- wattage: approx. 900 W
- interior capacity: approx. 30 l
- interior height: approx. 210 mm, suitable for 800 ml Erlenmeyer flask
- turntable dia. approx. 315 mm
- Dimensions (W x D x H) : 510 x 430 x 305 mm
- 5 steps selectable
- power continuously variable, (by time or weight)
- 35 minute timer with acoustic signal

Type	PK	Cat. No.
Severin MW 7873	1	**7.672 991**

Universal drying oven LLG-uni*OVEN* 42 and LLG-uni*OVEN* 110

1

Microprocessor controlled universal drying oven with **forced convection** including two shelves.
Each shelf of the uni*OVEN* 42 and uni*OVEN* 110 has a load capacity of 20 kg, the total load capacity of each unit is 50 kg. The maximum number of shelves is 7 for uni*OVEN* 42 and 10 for uni*OVEN* 110 with a distance of 40 mm between shelves.

- Quick and intuitive operation
- Microprocessor control with integrated auto-diagnostic system
- Forced convection with fan
- Digital display for time and temperature
- **Timer**: 1 minute to 99.9 h and continuous
- Delayed start timer: 1 minute to 99.9 h
- Outlet for vapour exhaustion
- Acoustical and visible information for end of program
- Acoustical and optical alarm at temperature differences
- Interior made of stainless steel
- Adjustable over temperature protection at 300 °C

6.263 670

2

6.263 675

Scope of supply: LLG-uni*OVEN* incl. 2 shelves

Specifications	LLG-uni*OVEN* 42 // LLG-uni*OVEN* 110
Internal volume:	42 l // 110 l
Temperature range:	50 ... 250 °C
Temperature accuracy:	±1 °C (at 70 °C)
Temperature uniformity:	±2 °C (at 70 °C)
Permissible ambient temperature:	5 ... 40 °C
Permissible relative moisture:	80 %, not condensing
Dimensions (W x D x H):	420 x 280 x 360 // 500 x 445 x 500 mm
Weight:	39 kg // 66 kg
Power supply:	230 V, 50/60 Hz
Warranty:	3 years

Type	Nom. capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Plug type	PK	Cat. No.
LLG-uni*OVEN* 42	42	420 x 280 x 360	705 x 505 x 540	0.85	EU	1	**6.263 670** 1
LLG-uni*OVEN* 42	42	420 x 280 x 360	705 x 505 x 540	0.85	UK	1	**6.263 673**
LLG-uni*OVEN* 110	110	500 x 445 x 500	790 x 665 x 680	1.55	EU	1	**6.263 675** 2
LLG-uni*OVEN* 110	110	500 x 445 x 500	790 x 665 x 680	1.55	UK	1	**6.263 678**

Accessories for Universal drying ovens LLG-uni*OVEN* 42/110

Description	PK	Cat. No.
Shelf for LLG-uni*OVEN* 42	1	**6.263 671**
Shelf carrier for LLG-uni*OVEN* 42	2	**6.263 672**
Shelf for LLG-uni*OVEN* 110	1	**6.263 676**
Shelf carrier for LLG-uni*OVEN* 110	2	**6.263 677**

3 Drying oven E28 series

3

Robust, space-saving, low-profile ovens with mechanical and adjustable chamber ventilation. *BINDER*

- Temperature range: 60 to 230 °C
- Hydraulic thermostat temperature control
- Adjustable exhaust air flap
- Timer 0 to 120 min
- Available with, or without, TB (Class 1)
- Power supply 230 V, 50/60 Hz

The number of shelves included in the scope of delivery is listed in the table.

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
E 28	28	4	2	400 x 250 x 280	580 x 425 x 405	0.8	1	**9.883 543**
E 28*	28	4	2	400 x 250 x 280	580 x 425 x 405	0.8	1	**9.883 544**

* with TB (Class 1)

1 Universal Ovens UN/UF and UNplus/UFplus

The all-round genius among heating ovens covers a multitude of applications, ideally at temperatures above +50 °C. *Memmert*
The fresh air is preheated in the pre-heating chamber to avoid temperature fluctuations.

Specifications

Type designation:	N = Natural convection F = Forced air circulation plus = TwinDISPLAY
Working temperature range:	at least 5 °C (UN/UNplus) or 10 °C (UF/UFplus) above ambient to +300 °C
Setting temperature range:	+20 to +300 °C
Setting accuracy:	up to 99.9 °C: 0.1 °C/from 100 °C: 0.5 °C
Power supply:	230 V, 50/60 Hz (sizes 30 - 260) 400 V (sizes 450 - 1060)

Universal Ovens UN and UF

SingleDISPLAY: ControlCOCKPIT with one colour display *Memmert*
You can find a detailed description of the "SingleDISPLAY" model at www.memmert.com

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
UN30	32	3	1	400 x 250* x 320	585 x 434** x 704	1.6	45	1	**9.869 681**
UN55	53	4	1	400 x 330* x 400	585 x 514** x 784	2.0	57	1	**9.869 682**
UN75	74	6	2	400 x 330* x 560	585 x 514** x 944	2.5	66	1	**9.869 683**
UN110	108	5	2	560 x 400* x 480	745 x 584** x 864	2.8	74	1	**9.869 684**
UN160	161	8	2	560 x 400* x 720	745 x 584** x 1104	3.2	96	1	**9.869 685**
UN260	256	9	2	640 x 500* x 800	824 x 684** x 1183	3.4	110	1	**9.869 686**
UN450	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	5.8	161	1	**9.869 687**
UN750	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	7.0	217	1	**9.869 688**
UF30	32	3	1	400 x 250* x 320	585 x 434** x 704	1.6	45	1	**9.869 697** 2
UF55	53	4	1	400 x 330* x 400	585 x 514** x 784	2.0	57	1	**9.869 698**
UF75	74	6	2	400 x 330* x 560	585 x 514** x 944	2.5	66	1	**9.869 699**
UF110	108	5	2	560 x 400* x 480	745 x 584** x 864	2.8	74	1	**9.869 700**
UF160	161	8	2	560 x 400* x 720	745 x 584** x 1104	3.2	96	1	**9.869 701**
UF260	256	9	2	640 x 500* x 800	824 x 684** x 1183	3.4	110	1	**9.869 702**
UF450	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	5.8	161	1	**9.869 703**
UF750	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	7.0	217	1	**9.869 704**
UF1060	1060	14	1	1040 x 850* x 1200	1224 x 1035** x 1720	7.0	252	1	**6.266 314**

* Less 39 mm for fan
**Depth without door handle, please add 56 mm

1

9.869 695

2

9.869 697

Universal Ovens UNplus and UFplus

TwinDISPLAY: ControlCOCKPIT with two colour displays *Memmert*
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
UN30plus	32	3	1	400 x 250* x 320	585 x 434** x 704	1.6	45	1	**9.869 689**
UN55plus	53	4	1	400 x 330* x 400	585 x 514** x 784	2.0	57	1	**9.869 690**
UN75plus	74	6	2	400 x 330* x 560	585 x 514** x 944	2.5	66	1	**9.869 691**
UN110plus	108	5	2	560 x 400* x 480	745 x 584** x 864	2.8	74	1	**9.869 692**
UN160plus	161	8	2	560 x 400* x 720	745 x 584** x 1104	3.2	96	1	**9.869 693**
UN260plus	256	9	2	640 x 500* x 800	824 x 684** x 1183	3.4	110	1	**9.869 694**
UN450plus	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	5.8	161	1	**9.869 695**
UN750plus	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	7.0	217	1	**9.869 696**
UF30plus	32	3	1	400 x 250* x 320	585 x 434** x 704	1.6	45	1	**9.869 705**
UF55plus	53	4	1	400 x 330* x 400	585 x 514** x 784	2.0	57	1	**9.869 706**
UF75plus	74	6	2	400 x 330* x 560	585 x 514** x 944	2.5	66	1	**9.869 707**
UF110plus	108	5	2	560 x 400* x 480	745 x 584** x 864	2.8	74	1	**9.869 708** 1
UF160plus	161	8	2	560 x 400* x 720	745 x 584** x 1104	3.2	96	1	**9.869 709**
UF260plus	256	9	2	640 x 500* x 800	824 x 684** x 1183	3.4	110	1	**9.869 710**
UF450plus	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	5.8	161	1	**9.869 711**
UF750plus	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	7.0	217	1	**9.869 712**
UF1060plus	1060	14	1	1040 x 850* x 1200	1224 x 1035** x 1720	7.0	252	1	**9.869 713**

* Less 39 mm for fan
**Depth without door handle, please add 56 mm

Suitable accessories can be found in our online shop.

1

9.869 708

2 3 Heating ovens, ED, FD, FED series - Classic.Line

BINDER

Diversity for all types of thermal, whether efficient drying, long-term controlled elevated temperatures or sterilization tasks for homogeneous temperature distribution: a BINDER oven and heating chamber is up to any tasks thanks to its wide temperature range.

ED Series: Drying ovens with gravity convection.
FD Series: Drying ovens with forced convection.
FED Series: Heating chambers with forced convection and enhanced timer functions.

Euqipment:
- Temperature range from 5°C above ambient temperature to 300 °C
- Independent adjustable temperature safety device class 2 (DIN 12880), with visual temperature alarm
- Optional RS 422 Interface for APT-COM™ Data Control System communication software

The number of shelves included in the scope of delivery is listed in the table.

2

3

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Type of auxiliary energy	PK	Cat. No.
ED 23	20	4	2	222 x 300 x 330	435 x 520 x 495	0.8	230 V, 50/60 Hz	1	**9.883 529**
ED 23	20	4	2	222 x 300 x 330	435 x 520 x 495	8.0	230 V, 50/60 Hz	1	**9.883 530**
ED 400	400	10	2	1000 x 520 x 800	1235 x 765 x 1025	3.4	400 V, 50/60 Hz	1	**9.883 551**
FD 23	20	4	2	222 x 300 x 330	435 x 520 x 495	0.8	230 V, 50/60 Hz	1	**9.883 808**
FED 400	400	10	2	1000 x 510 x 800	1235 x 765 x 1025	3.4	400 V, 50/60 Hz	1	**9.883 803**

* with RS 422

1

1 Heating ovens ED-S/FD-S Solid.Line

For drying and heating in research and quality control. *BINDER*
With ramp function, optical temperature alert and delayed power-off.

- APT.line™ preheating chamber technology
- Natural convection with homogenous temperature distribution
- Adjustable exhaust air flap
- Digital controller with timer
- Easy and ergonomical door opening
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

Scope of delivery: Heating oven, 1 chrome plated rack incl. shelf supports

Heating oven ED-S 56 Solid.Line with natural convection

With natural convection for homogenous temperature distribution. *BINDER*

Specifications

Temperature range:	RT + 10 °C ... 250 °C
Temperature variation at 150 °C:	±2.8 °C
Heating-up time to 150 °C:	60 min
Permitted load:	30 kg
Weight:	38 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
ED-S 56	1	**4.665 042**

Heating oven ED-S 115 Solid.Line with natural convection

NEW

With natural convection for homogenous temperature distribution. *BINDER*

Specifications

Temperature range:	RT + 7 °C ... 250 °C
Temperature variation at 150 °C:	±2.8 °C
Heating-up time to 150 °C:	55 min
Interior volume:	118 l
Internal dimensions:	550 x 390 x 550 mm
External dimensions:	745 x 565 x 735 mm
Permitted load:	75 kg
Max. shelves:	5
Weight:	54 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
ED-S 115	1	**4.667 816**

Heating oven FD-S 56 Solid.Line with forced convection

With forced convection for homogenous temperature distribution. *BINDER*

Specifications

Temperature range:	RT + 10 °C ... 250 °C
Temperature variation at 150 °C:	±2.6 °C
Heating-up time to 150 °C:	20 min
Permitted load:	30 kg
Weight:	38 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
FD-S 56	1	**4.665 196**

Heating oven FD-S 115 Solid.Line with forced convection

NEW

With forced convection for homogenous temperature distribution. *BINDER*

Specifications

Temperature range:	RT + 10 °C ... 250 °C
Temperature variation at 150 °C:	±2.4 °C
Heating-up time to 150 °C:	22 min
Interior volume:	106 l
Internal dimensions:	550 x 350 x 550 mm
External dimensions:	745 x 565 x 735 mm
Permitted load:	75 kg
Max. shelves:	5
Weight:	54 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
FD-S 115	1	**4.665 522**

1 Heating ovens, ED, FD, FED series - Avantgarde.Line

BINDER

The drying chambers with natural convection (Type designation ED) or forced convection (Type designation FD, FED) are renowned due to their new design, convenient operation, and efficiency. The latest APT.line™ technology offers outstanding temperature accuracy.

Equipment:
- Temperature range series ED: room temperature plus 5-6 °C to 300 °C
- Temperature range series FD, FED: room temperature plus 10 °C to 300 °C
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Class 2 independent temperature safety device (DIN 12880) with visual temperature alarm
- USB port for recording data

The number of shelves included in the scope of delivery is listed in the table.

1

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Type of auxiliary energy	PK	Cat. No.
ED 56	57	4	2	360 x 380 x 420	560 x 565 x 625	1.05	230 V, 50/60 Hz	1	**4.658 061**
ED 115	114	5	2	510 x 425 x 530	710 x 605 x 735	1.25	230 V, 50/60 Hz	1	**4.658 059**
ED 260	260	8	2	610 x 550 x 760	810 x 760 x 965	2.25	230 V, 50/60 Hz	1	**6.280 292**
FD 56	60	4	2	400 x 345 x 440	560 x 565 x 625	1.10	230 V, 50/60 Hz	1	**6.280 069**
FD 115	116	5	2	550 x 385 x 550	710 x 605 x 735	1.30	230 V, 50/60 Hz	1	**4.658 060**
FD 260	260	8	2	650 x 515 x 780	810 x 760 x 965	2.30	230 V, 50/60 Hz	1	**6.280 362**
FD 720	741	16	2	1000 x 570 x 1300	1165 x 870 x 1590	4.50	400 V, 50/60 Hz	1	**6.291 250**
FED 56	60	4	2	400 x 345 x 440	560 x 565 x 625	1.10	230 V, 50/60 Hz	1	**6.280 295**
FED 115	116	5	2	550 x 385 x 550	710 x 605 x 735	1.30	230 V, 50/60 Hz	1	**6.280 284**
FED 260	260	8	2	650 x 515 x 780	810 x 760 x 965	2.30	230 V, 50/60 Hz	1	**6.280 296**
FED 720	741	16	2	1000 x 570 x 1300	1165 x 870 x 1590	4.50	400 V, 50/60 Hz	1	**4.668 970**

2 3 Accessories for incubators, drying and heat chambers

Insert grids and shelves, chrome-plated or stainless steel.

BINDER

Type	For	PK	Cat. No.
Shelves, perforated	BF 56, FD 56, MKF 56, MK 56, FED 56	1	**6.272 895**
Shelves, perforated, stainless steel	BD 56, ED 56	1	**6.290 544**
Shelves, perforated, stainless steel	FD 115, FED 115, BF 115	1	**6.313 969**
Shelves, perforated, stainless steel	KBF-S 240, KBF P 240, KBF LQC 240, KBWF 240, KB 400, KB 240, KBF 240, KMF 240, KBW 400, KBW 240	1	**6.233 078**
Shelves, perforated, stainless steel	FP 720, M 720	1	**6.242 769**
Shelves, perforated, stainless steel	KMF 720, KB 720, KBF P 720, KBF LQC 720, KBF-S 720, KBF 720, KBWF 720, KBW 720	1	**6.237 182**
Shelves, perforated, stainless steel	KBF 1020, KBF-S 1020	1	**6.312 312**
Insert grids, chrome-plated	BF 56, FD 56, FED 56	1	**6.280 337**
Insert grids, chrome-plated	BD 115, ED 115	1	**6.283 062**
Insert grids, chrome-plated	FD 115, FED 115, BF 115	1	**6.287 278**
Insert grids, chrome-plated	FP 115, M 115, FDL 115	1	**6.901 132**
Insert grids, chrome-plated	ED 260, BD 260	1	**4.664 397**
Insert grids, chrome-plated	FED 260, BF 260, FD 260	1	**6.270 116**
Insert grids, chrome-plated	BF 400, BD 400, FP 400, ED 400, FED 400, M 400	1	**6.223 529**
Insert grids, chrome-plated	BF 720, FD 720, FED 720	1	**6.291 569**
Insert grids, chrome-plated	FP 720, M 720	1	**6.510 242**
Insert grids, stainless steel	MKT 115, KB 115, FP 115, MK 115, MKF 115, M 115, MKFT 115, FDL 115	1	**6.059 089**
Insert grids, stainless steel	M 240, FP240	1	**6.058 638**
Insert grids, stainless steel	KBF-S 240, KBF P 240, KBF LQC 240, KBWF 240, KB 400, KB 240, KBF 240, KBW 400, KBW 240, KMF 240	1	**6.206 325**
Insert grids, stainless steel	FED 260, BF 260, FD 260	1	**6.314 255**
Insert grids, reinforced, stainless steel	FP 720, M 720	1	**6.240 557**
Insert grids, stainless steel	BF 720, FD 720, FED 720	1	**6.275 805**
Insert grids, stainless steel	ED 720, BD 720	1	**6.313 789**

2

3

DryingOven 125 basic dry/control dry

IKA

Powerful drying cabinets with rapid heating and exact temperature regulation guarantees reproducible results.
Thanks to its high quality insulation, the device has a very large interior of 125L in relation to its total volume.
This structure also reduces odour emissions, operating costs, and ensures excellent temperature uniformity.

- Oven basic dry with natural convection up to 250 °C
- Oven control dry with recirculating air up to 300 °C
- Electronically adjustable ventilation
- Clear LED display and control menu
- Key lock function
- Timer from 1 minute up to 100 days
- Adjustable temperature limit
- USB Interface
- For up to 6 shelves
- Interior made of stainless steel
- Also available with glass door
- Door opening possible up to max. 180°

Additional features Oven 125 control dry:
- Recirculating air drying cabinet with automatic fan switch-off
- Recirculating air adjustable in 10 steps
- Real-time clock
- Temperature selection limited TWB (DIN 12880)
- Illuminated interior
- Cable bushing at the rear for measurings inside the oven
- RS 232 Interface
- Direct saving of data on USB stick
- Interface for additional temperature sensor (display and control possible)
- 2 large TFT Displays

Scope of supply: Oven with 2 shelves and calibration certificate at 160 °C.

Specifications	**basic dry // control dry**
Internal volume:	125 l
Ambient temperature:	5 ... 40 °C
Working temperature:	RT+ 5 ... 250 °C // RT+ 5 ... 300 °C
Adjustment and display resolution:	0.1 K
Temperature stability (150 °C):	±0.3 K
Ambient humidity:	80 %
Heating power:	2400 W
Outer Dimensions (W x D x H):	700 x 650 x 825 mm
Inner Dimensions (W x D x H):	550 x 525 x 450 mm
Weigth:	55 kg // 82 kg
Power supply:	230 V, 50/60 Hz
Protection class:	IP 20

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.	
Oven basic dry	125	6	2	550 x 525 x 450	700 x 650 x 825	2.45	1	**6.289 337**	
Oven basic dry - glass	125	6	2	550 x 525 x 450	700 x 650 x 825	2.45	1	**6.289 338**	1
Oven control dry	125	6	2	550 x 525 x 450	700 x 650 x 825	2.45	1	**4.663 261**	2
Oven control dry - glass	125	6	2	550 x 525 x 450	700 x 650 x 825	2.45	1	**4.663 262**	

1

6.289 338

2

4.663 261

1 Ovens Heratherm™

1

Thermo Scientific

The series provide bench-top models with 60, 100 or 180 l as well as floor models with 400 or 750 l chamber volume and 3 different fittings, each optionally with gravity or mechanical convection.

- Very high energy efficiency, environmentally friendly materials (reduced use of formaldehyde), reduced heat emission
- Programmable timer
- Small footprint
- Flexible shelf system doubles the number of shelves and therefore the footprint
- Very good spatial and temporal temperature stability
- Automatic visual and acoustic over-temperature alarm
- Very low temperatures at outer wall
- Easy to read vacuum fluorescent display
- Intuitive user interface for setting temperature
- Easy cleaning due to edgeless fabrication

Heratherm™ General Protocol:
Perfect for routine daily work from 10 to 250 °C. Chambers made from corrosion-resistant st. steel with rounded corners. Timer, mechanical exhaust vent as well as 2 shelves are incl. as standard.
Heratherm™ Advanced Protocol:
For a greater flexibility and accuracy of temperature values. With V2A st. steel interior, works up to 330 °C at highly stable temperatures. Digital timer for daily or weekly On/OFF cycles. Up to 10 cycles can be stored and combined as ramps. Fan speed and air valve can be integrated into ramp programming.
Selectable quick start function allows for extremely fast heating.

Specifications
Power supply: 230 V, 60 Hz
Temperature range: 10 to 250 °C (General Protocol/Advanced Protocol floor models)
10 to 330 °C (Advanced Protocol benchtop models/Advanced Protocol Security)

2 Heratherm™ General Protocol Ovens

2

Thermo Scientific

Thermo Scientific™ Heratherm™ General Protocol ovens are perfect for routine daily work, providing the ideal heating and drying solution for your applications.

- Low energy consumption
- Built in timer
- Excellent footprint/volume ratio
- Tabletop models in 3 sizes (60 L, 100 L, 180 L), floor models in 2 sizes (400 L, 750 L)
- Inner chambers made from corrosion-resistant stainless steel with rounded corners for easy cleaning
- Large, easy to view vacuum fluorescent display
- Simple, microprocessor-based touch button controls
- Doors can be opened over 180° making these units easy to access
- Automatic overtemperature alarm system to protect samples
- Gravity convection units (Type designation OGS) are designed to protect delicate samples while offering temperature uniformity of ±4 °C with temperature stability of ±0.4 °C at 150 °C
- Mechanical convection models (Type designation OM) provide a temperature uniformity of ±3.3 °C with temperature stability of ±0.3 °C at 150 °C
- The exhaust vent can be used as an access port for an external temperature sensor
- Lockable casters for easy mobility and stability (floor models only)
- All Heratherm™ ovens come standard with a RS232 data interface

The number of shelves included in the scope of delivery is listed in the table.

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
OGS60	65	13	2	328 x 415 x 480	530 x 565 x 720	1.80	1	**4.009 206**
OGS100	105	16	2	438 x 414 x 580	640 x 565 x 820	3.10	1	**4.009 207**
OGS180	176	19	2	438 x 589 x 680	640 x 738 x 920	3.10	1	**4.009 208**
OGS400	419	39	2	544 x 590 x 1307	778 x 770 x 1545	2.40	1	**9.534 156**
OGS750	774	39	2	1004 x 590 x 1307	1261 x 770 x 1545	3.00	1	**9.534 159**
OGS750-3/N/PE	774	39	2	1004 x 590 x 1307	1261 x 770 x 1545	6.35	1	**9.534 161**
OMS60	66	13	2	354 x 368 x 508	530 x 565 x 720	1.40	1	**4.009 209**
OMS100	104	16	2	464 x 368 x 608	640 x 565 x 820	3.06	1	**4.009 210**
OMS180	179	19	2	464 x 543 x 708	640 x 738 x 920	3.06	1	**4.009 211**

1 2 Heratherm™ Advanced Protocol Ovens

Thermo Scientific

As well as incorporating all the benefits of Thermo Scientific™ Heratherm™ General Protocol ovens, the Heratherm™ Advanced Protocol range boasts additional features providing even more flexibility, accuracy and dependability.

- Sophisticated timer extends the automation options available to the user: turn on or off after a pre-set time, choose between a recurring weekly timer or run oven based on the 24 hour clock
- Highest level of temperature uniformity
- Exceptionally low energy consumption - 60 litre models just need 170W (gravity convection) and 275W (mechanical convection) per hour to maintain 150°C
- Adjustable fan speed for application related airflow
- Programmable controller for temperature ramps and dwells (store up to 10 programs with 10 discrete steps, features electronically controlled fan speed and damper position)
- Access port allows the introduction of sensors for independent data monitoring
- A simple calibration routine ensures temperature accuracy over time
- Boost function enables rapid heating up - no need to run the oven 24/7 (tabletop models only)
- Optional stainless steel exterior

The number of shelves included in the scope of delivery is listed in the table.

Specifications

Type designation:	OGH = Natural convection OMH = Forced air circulation
Temperature range:	10 to 330 °C
Power supply:	230 V/50 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
OGH60	61	13	2	328 x 389 x 480	530 x 565 x 720	1.80	1	**4.009 212**
OGH60 SS*	61	13	2	328 x 389 x 480	530 x 565 x 720	1.80	1	**4.009 215**
OGH100	99	16	2	438 x 389 x 580	640 x 565 x 820	3.10	1	**4.009 213**
OGH100 SS*	99	16	2	438 x 389 x 580	640 x 565 x 820	3.10	1	**4.009 216**
OGH180	168	19	2	438 x 564 x 680	640 x 738 x 920	3.10	1	**4.009 214**
OGH180 SS*	168	19	2	438 x 564 x 680	640 x 738 x 920	3.10	1	**4.009 217**
OMH60	62	13	2	354 x 343 x 508	530 x 565 x 720	1.40	1	**4.009 218**
OMH60 SS*	62	13	2	354 x 343 x 508	530 x 565 x 720	1.40	1	**4.009 221**
OMH100	97	16	2	464 x 343 x 608	640 x 565 x 820	3.06	1	**4.009 219**
OMH100 SS*	97	16	2	464 x 343 x 608	640 x 565 x 820	3.06	1	**4.009 222**
OMH180	170	19	2	464 x 518 x 708	640 x 738 x 920	3.06	1	**4.009 220**
OMH180 SS*	170	19	2	464 x 518 x 708	640 x 738 x 920	3.06	1	**4.009 223**
OMH400	396	39	2	544 x 545 x 1335	778 x 770 x 1545	3.00	1	**9.534 157**
OMH400 SS	396	39	2	544 x 545 x 1335	778 x 770 x 1545	3.00	1	**9.534 158**
OMH750	731	39	2	1004 x 545 x 1335	1261 x 770 x 1545	3.00	1	**9.534 162**
OMH750 SS	731	39	2	1004 x 545 x 1335	1261 x 770 x 1545	3.00	1	**9.534 163**
OMH750-3P	731	39	2	1004 x 545 x 1335	1261 x 770 x 1545	5.75	1	**9.534 165**

*Stainless steel housing.

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2

1 Heratherm™ Advanced Protocol Security Ovens

Thermo Scientific

The Thermo Scientific™ Heratherm™ Advanced Protocol Security portfolio combines the benefits of the Advanced Protocol line with an extra layer of security for applications where process reliability and sample protection are paramount.

Additional security features provide peace of mind for precious samples:
- Auto-dry function deactivates oven when the samples are dry, saving energy (optional sample temperature sensor is required to utilize this feature)
- Standard overtemperature alarm and an additional undertemperature alarm
- Door lock prevents disruption, tampering or accidental opening
- Door alarm notifies the operator when door is left open accidentally
- Socket for independent sample sensor (option): When connected, exact sample temperature is shown on display for additional peace of mind

The number of shelves included in the scope of delivery is listed in the table.

Specifications

Type designation: OGH = Natural convection, OGH = Forced air circulation
Temperature range: 10 to 330 °C
Power supply: 230 V/50 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
OGH60-S	61	13	2	328 x 389 x 480	530 x 565 x 720	1.81	1	**4.009 224**
OGH60-S SS*	61	13	2	328 x 389 x 480	530 x 565 x 720	1.81	1	**4.009 227**
OGH100-S	99	16	2	438 x 389 x 580	640 x 565 x 820	3.10	1	**4.009 225**
OGH100-S SS*	99	16	2	438 x 389 x 580	640 x 565 x 820	3.10	1	**4.009 228**
OGH180-S	168	19	2	438 x 564 x 680	640 x 738 x 920	3.10	1	**4.009 226**
OGH180-S SS*	168	19	2	438 x 564 x 680	640 x 738 x 920	3.10	1	**4.009 229**
OMH60-S	62	13	2	328 x 343 x 508	530 x 565 x 720	1.40	1	**4.009 230**
OMH60-S SS*	62	13	2	328 x 343 x 508	530 x 565 x 720	1.40	1	**4.009 233**
OMH100-S	97	16	2	438 x 343 x 608	640 x 565 x 820	3.06	1	**4.009 231**
OMH100-S SS*	97	16	2	438 x 343 x 608	640 x 565 x 820	3.06	1	**4.009 234**
OMH180-S	170	19	2	464 x 518 x 708	640 x 738 x 920	3.06	1	**4.009 232**
OMH180-S SS*	170	19	2	464 x 518 x 708	640 x 738 x 920	3.06	1	**4.009 235**

*Stainless steel housing.

Accessories for Heratherm™ Ovens

Thermo Scientific

For	Description	PK	Cat. No.
OGS60, OGH60, OGH60 SS, OGH60-S, OGH60-S SS	Shelf incl. 2 shelf supports	1	**4.009 236**
OGS100, OGH100, OGH100 SS, OGH100-S, OGH100-S SS	Shelf incl. 2 shelf supports	1	**4.009 237**
OGS180, OGH180, OGH180 SS, OGH180-S, OGH180-S SS	Shelf incl. 2 shelf supports	1	**4.009 238**
OMS60, OMH60, OMH60 SS, OMH60-S, OMH60-S SS	Shelf incl. 2 shelf supports	1	**4.009 239**
OMS100, OMH100, OMH100 SS, OMH100-S, OMH100-S SS	Shelf incl. 2 shelf supports	1	**4.009 240**
OMS180, OMH180, OMH180 SS, OMH180-S, OMH180-S SS	Shelf incl. 2 shelf supports	1	**4.009 241**
OGS60, OGH60, OGH60 SS, OGH60-S, OGH60-S SS, OMS60, OMH60, OMH60 SS, OMH60-S, OMH60-S SS	Kit for stacking 60 L units	1	**4.009 246**
OGS100, OGH100, OGH100 SS, OGH100-S, OGH100-S SS, OMS100, OMH100, OMH100 SS, OMH100-S, OMH100-S SS	Kit for stacking 100 L units	1	**4.009 247**
OGS180, OGH180, OGH180 SS, OGH180-S, OGH180-S SS, OMS180, OMH180, OMH180 SS, OMH180-S, OMH180-S SS	Kit for stacking 180 L units	1	**4.009 248**
OGS60, OGH60, OGH60 SS, OGH60-S, OGH60-S SS, OMS60, OMH60, OMH60 SS, OMH60-S,OMH60-S SS	Support stand with castors	1	**4.009 249**
OGS100, OGH100, OGH100 SS, OGH100-S, OGH100-S SS, OMS100, OMH100, OMH100 SS, OMH100-S, OMH100-S SS	Support stand with castors	1	**4.009 250**
OGS180, OGH180, OGH180 SS, OGH180-S, OGH180-S SS, OMS180, OMH180, OMH180 SS, OMH180-S, OMH180-S SS	Support stand with castors	1	**4.009 251**
OGS750 / OMH750	Wire mesh shelf	1	**9.534 167**
OMH750 3PH / IMH750-S	Wire mesh shelf	1	**9.534 168**
400 L Modelle	Silicone-free Viton sealing	1	**9.534 171**
750 L Modelle	Silicone-free Viton sealing	1	**9.534 172**

1

1 Vacuum drying ovens VD/VDL series

NEW

BINDER

For gentle, fast drying without residues, incrustations or oxidation.

- Direct heat transfer through large thermal conducting plates
- Program-controlled drying monitoring with automatic ventilation at end of process
- Internal data logger, measured values can be read out in open format via USB
- Inert gas connection
- Shatterproof, spring-mounted safety glass panel
- Large viewing window
- Aluminum expansion racks, can be custom-positioned
- Ethernet interface

Vacuum drying ovens VD:
- Temperature range: RT +10 °C to 220 °C
- For non-flammable solvents
- Controller with digital display of pressure and temperature
- 2 relay outputs, 24 V DC (max. 0.4 A)

Vacuum drying ovens VDL:
- Temperature range: RT +10 °C to 110 °C
- For flammable solvents
- ATEX conformity for units: EX II 2/3/- G IIB T3 Gb/Gc/- X
- Intuitive touchscreen controller with graphical pressure and temperature display
- Pressure control device for heating activated from < 100 mbar

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Type of auxiliary energy	PK	Cat. No.
VD 23	24	4	1	285 x 295 x 285	523 x 413 x 698	0.9	200 ... 230 V, 50/60 Hz	1	**4.678 317**
VD 56	55	5	1	400 x 343 x 400	638 x 461 x 815	1.4	200 ... 230 V, 50/60 Hz	1	**4.678 318**
VD 115	119	6	1	506 x 460 x 506	743 x 581 x 942	1.6	200 ... 230 V, 50/60 Hz	1	**4.678 319**
VDL 23	24	4	2	285 x 295 x 285	523 x 413 x 698	0.9	200 ... 230 V, 50/60 Hz	1	**4.678 320**
VDL 56	55	5	2	400 x 343 x 400	638 x 461 x 815	1.4	200 ... 230 V, 50/60 Hz	1	**4.678 321**
VDL 115	119	6	2	506 x 460 x 506	743 x 581 x 942	1.6	200 ... 230 V, 50/60 Hz	1	**4.678 322**

2

2 LLG-Porcelain evaporating dishes with spout, flat bottom, medium form

Glazed.

Capacity ml	Ext. diam. mm	Height mm	PK	Cat. No.
22	54	22	1	**7.970 673**
62	70	30	1	**6.268 802**
93	86	33	1	**6.251 474**
154	98	40	1	**6.253 566**
265	112	50	1	**6.262 379**
330	126	53	1	**6.257 949**
450	145	55	1	**6.269 244**
620	151	63	1	**6.257 950**
800	169	68	1	**6.269 245**
1200	195	74	1	**6.241 820**
3000	254	105	1	**7.971 013**

Vacuum Ovens VO

1

Reliable, comfortable and energy-efficient - that's how vacuum drying works today. Separately adjustable and directly heated thermoshelves ensure precise temperature control and, thanks to the digital pressure control, the chamber load is not only dried at high speed but also extremely gently in our powerful and robust vacuum drying oven.

- Safety glass door with armoured glass on the inside and splinter shield on the outside
- Digital pressure control
- Directly heated and individually controllable thermoshelves
- With 2 thermoshelf connections
- Optional: Pump base cabinet and energy-efficient vacuum pump

Model variant TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Scope of supply: Vacuum drying oven, 1 aluminium thermoshelf, calibration certificate (for 160 °C at 20 mbar), software AtmoCONTROL

Memmert

4.663 352

Specifications

Working temperature range:	at least 5 above ambient to +200 °C
Setting temperature range:	20 °C to +200 °C
Setting accuracy:	up to 99.9: 0.1 °C/ from 100: 0.5 °C
Vacuum:	5 to 1100 mbar
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. shelves	Included shelves	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
VO29	29	1	1	385 x 250 x 305	550 x 400 x 607	0.82	55	1	**4.663 352**
VO49	49	2	1	385 x 330 x 385	550 x 480 x 687	2.02	83	1	**4.663 353**
VO101	101	2	1	545 x 400 x 465	710 x 550 x 767	2.42	110	1	**4.663 354**

Accessories for vacuum ovens VO

Memmert

Premium module: The premium module comprises the inert gas inlet (only sizes 49/101), extra connectors for thermoshelves, one for VO29, two for VO49/VO101, an additional thermoshelf for model size 49/101.

Vacuum pump module: Without pump with antivibration metal plate at the bottom to accommodate the vacuum pump, including full-sight glass door, socket, signal cable and connecting hose to the vacuum oven.

Chemical-resistant vacuum pump: With 4x diaphragm, pump capacity: approx. 50 Nl/min = 3.0 m/h³, automatic purge control, with signal cable (3 m) to control the rotation speed and vacuum connecting hose (3 m).

Description	For Volume l	PK	Cat. No.
Thermoshelf, aluminium, eloxadised material 3.3547	29	1	**9.537 938**
Thermoshelf, aluminium, eloxadised material 3.3547	49	1	**9.537 939**
Thermoshelf, aluminium, eloxadised material 3.3547	101	1	**9.537 940**
Thermoshelf stainless steel, material 1.4404	29	1	**6.071 767**
Thermoshelf stainless steel, material 1.4404	49	1	**9.537 941**
Thermoshelf stainless steel, material 1.4404	101	1	**6.225 112**
Chemical-resistant vacuum pump	all	1	**4.663 358**
Vacuum pump module	29	1	**4.663 355**
Vacuum pump module	49	1	**4.663 356**
Vacuum pump module	101	1	**4.663 357**
Premium module	29	1	**9.537 944**
Premium module	49	1	**9.537 945**
Premium module	101	1	**9.537 946**
Subframe, tubular steel, black enamelled	29	1	**6.225 455**
Subframe, tubular steel, black enamelled	49	1	**4.664 347**
Subframe, tubular steel, black enamelled	101	1	**6.260 454**

Further accessories can be found in our online shop.

1

1 Mini-Incubator CULTURA® M inclusive Multirack

The CULTURA® M Mini-Incubator has specifically been designed for the incubation of contact slides and dipslides, as well as common Petri dishes for detecting bacteria, fungi and yeast. With its extremely small footprint, it can easily be transported wherever you need to use it. The Cultura® M incubator has an internal capacity of approximately 4 L. It is used in the areas of medical diagnostics and water analytics. The transparent door allows you to check inside the incubator without opening the door. Supplied with one Multirack for the incubation of up to 18 dipslides and one thermometer.

Specifications

Temperature range:	25 to 45 °C
Temperature uniformity:	±1.0 °C
Capacity:	4 l
External dimensions (W x D x H):	310 x 168 x 155 mm
Internal dimensions (W x D x H):	220 x 150 x 120 mm
Weight:	1.1 kg
Power supply:	230 V, 50 Hz
Warranty:	2 Years

Type	PK	Cat. No.
Mini-Incubator CULTURA® M incl. Multirack for 18 tests	1	**6.280 441**

2

2 Incubator Lovibond® DI 10

Designed for the reliable incubation of dipslides in laboratories and field work. *Lovibond®*

- Low voltage, in-car operation possible
- Holds up to 12 dipslides or 10 quanti-discs
- Excellent temperature stability
- Programmable incubation period setting
- LCD Temperature display with up/down push button control
- Rapid heating times for fast testing
- External status LEDs

Scope of supply: Incubator incl. external 12 V universal power supply, set of leads (UK, EU, US), 12 V in-car power adapter

Temperature range:	ambient +5 ... +40 °C (±0.5 °C)
Dimensions (W x D x H):	246 x 215 x 162 mm
Weight:	1.7 kg
Power supply:	110/220-240 V or 12 V

Type	PK	Cat. No.
Lovibond® DI 10	1	**6.291 192**
Dipslide-Holder	1	**6.274 399**

3

3 Microbiological rapid tests Lovibond® Dipslides

The Lovibond® Dipslides are designed to test liquids as well as surfaces. *Lovibond®*
These dual-sided Dipslides are available in a wide range of different media types.
They are ideal for use in many applications including evaporative cooling towers, closed water circuits, cutting fluids, food testing, and many more.

Description	PK	Cat. No.
TTC/TTC for total viable count (TVC)	10	**6.282 520**
TTC/MALT for Yeast, Moulds, Fungi, TVC	10	**6.282 521**
TTC/ROSE for Yeast, Moulds, Fungi, TVC	10	**6.282 522**
TTC/MAC for coliforms, TVC	10	**6.282 523**
TTC/E.COLI for E. coli/coliforms, TVC	10	**6.282 524**
PDM/MAC for Pseudomonas species, coliforms	10	**6.282 525**
TTC/PDM for Pseudomonas species, TVC	10	**6.282 526**
SRB for Sulphate reducing bacteria	10	**6.282 527**
NRB for Nitrite reducing bacteria	10	**6.282 528**
R2A/R2A - TTC for testing of potable water	10	**6.282 529**

1 2 Mini-Incubator LLG-uni*INCU* 20

The **portable** LLG-uni*INCU* 20 **digital** incubator is ideally suited for haematology and microbiology applications, such as the cultivation of contact plates for microbiological hygiene analysis. Due to its small footprint and economical price, it is also the perfect incubator for educational institutions and small laboratories.
The LLG-uni*INCU* 20 incubator features a large internal chamber with a capacity of 20 liter, capable of storing flasks and bottles up to 2 liter. In addition, the incubator includes two adjustable/removable shelves for increased capacity, as well as an electrical socket. The digital temperature control eliminates the need for external thermometers and repetitive "fine tuning" of an analog control knob. Optimum temperature distribution throughout the cabinet interior by fan circulation. The LLG-mini tumbling shaker uni*SHAKER* 2 which can be positioned inside the incubator (please order separatly).

Scope of supply: incubator, mains adapter, mains cable for integrated socket, 12 V cigarette lighter cable, 2 grid shelves, 1 drip tray

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Specifications LLG-uni*INCU* 20

Temperature range:	Ambient + 5 °C to 60 °C
Accuracy:	±0.5 °C
Temperature uniformity:	±1.5 °C
Capacity:	20 l
External dimensions (W x D x H):	335 x 370 x 475 mm
Internal dimensions (W x D x H):	260 x 235 x 325 mm
Weight:	6.5 kg
Power supply:	100 - 240 V, 50/60 Hz
Warranty:	3 years

Type	Max. grids	Included grids	Plug type	PK	Cat. No.
LLG-uni*INCU* 20	4	2	EU	1	**6.263 570**
LLG-uni*INCU* 20	4	2	UK	1	**6.263 571**
Set LLG-uni*INCU* 20 incl. LLG-uni*SHAKER* 2	4	2	EU	1	**6.280 597**

3 Mini-Incubator Heratherm™ Compact

3

Thermo Scientific

The most compact unit of the Heratherm™ microbiological incubator family has an 18 L capacity, ideal for personalized workspace.

- Minimal footprint for space restricted lab areas
- Temperatures at or below ambient
- High temperature accuracy
- Internal light facilitates sample observartion

Specifications

Temperature range:	17 to 50 °C
Convection technology:	Mechanical convection
Temperature deviation at 37 °C (spatial):	±1.2 °C
Temperature deviation at 37 °C (over time):	±0.2 °C
Footprint:	0.12 m²
Chamber volume:	approx. 18 l
Dimensions chamber (W x H x D):	180 x 310 x 290 mm
Dimensions, external (W x H x D):	260 x 415 x 470 mm
Number of shelves:	2 (incl. in delivery)/max. 3
Max. shelf load:	2 kg
Power supply/max. current:	45 W/0.45 - 0.85 A
Weight:	7.2 kg

Type	PK	Cat. No.
Compact Incubator Heratherm™	1	**4.009 190**
Compact Incubator Heratherm™ *	1	**4.672 604**

* without window

Incubators IN/IF and INplus/IFplus

Incubators for research, medicine, pharmaceuticals and food technology. Organic chamber loads require gentle heating. F
or this reason, the heating and control system are especially optimised for low temperatures of up to +80 °C.
To prevent temperature overshoots, temperature is increased within a very narrow control range and kept exactly at the setpoint value.

- with all-round surface heating
- fresh air is pre-heated
- with inner glass door

Specifications

Type designation:	N = Natural convection, F = Forced air circulation plus = TwinDISPLAY
Working temperature range:	at least 5°C (IN/INplus), at least 10°C (IF/IFplus) above ambient to +80 °C
Setting temperature range:	+20 °C to +80 °C
Setting accuracy:	0.1 °C
Power supply:	230 V, 50/60 Hz

Incubators IN and IF

SingleDISPLAY: ControlCOCKPIT with one colour display *Memmert*
You can find a detailed description of the "SingleDISPLAY" model at www.memmert.com

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
IN30	32	3	1	400 x 250* x 320	585 x 434** x 704	1.60	48	1	**9.537 961** 1
IN55	53	4	1	400 x 330* x 400	585 x 514** x 784	1.00	57	1	**9.537 962**
IN75	74	6	2	400 x 330* x 560	585 x 514** x 944	1.25	66	1	**9.537 963**
IN110	108	5	2	560 x 400* x 480	745 x 584** x 864	1.40	76	1	**9.537 964**
IN160	161	8	2	560 x 400* x 720	745 x 584** x 1104	1.60	96	1	**9.537 965**
IN260	256	9	2	640 x 500* x 800	824 x 684** x 1183	1.70	110	1	**9.537 966**
IN450	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	1.80	161	1	**9.537 967**
IN750	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	2.00	217	1	**9.537 968**
IF30	32	3	1	400 x 250* x 320	585 x 434** x 704	1.60	48	1	**9.537 977**
IF55	53	4	1	400 x 330* x 400	585 x 514** x 784	1.00	57	1	**9.537 978**
IF75	74	6	2	400 x 330* x 560	585 x 514** x 944	1.25	66	1	**9.537 979**
IF110	108	5	2	560 x 400* x 480	745 x 584** x 864	1.40	76	1	**9.537 980**
IF160	161	8	2	560 x 400* x 720	745 x 584** x 1104	1.60	96	1	**9.537 981**
IF260	256	9	2	640 x 500* x 800	824 x 684** x 1183	1.70	110	1	**9.537 982**
IF450	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	1.80	161	1	**9.537 983**
IF750	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	2.00	217	1	**9.537 984**

* Less 39 mm for fan
**Depth without door handle, please add 56 mm

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9.537 961

Incubators INplus and IFplus

1

TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Memmert

9.537 990

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
IN30plus	32	3	1	400 x 250* x 320	585 x 434** x 704	1.60	48	1	**9.537 969**
IN55plus	53	4	1	400 x 330* x 400	585 x 514** x 784	1.00	57	1	**9.537 970**
IN75plus	74	6	2	400 x 330* x 560	585 x 514** x 944	1.25	66	1	**9.537 971**
IN110plus	108	5	2	560 x 400* x 480	745 x 584** x 864	1.40	76	1	**9.537 972**
IN160plus	161	8	2	560 x 400* x 720	745 x 584** x 1104	1.60	96	1	**9.537 973**
IN260plus	256	9	2	640 x 500* x 800	824 x 684** x 1183	1.70	110	1	**9.537 974**
IN450plus	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	1.80	161	1	**9.537 975**
IN750plus	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	2.00	217	1	**9.537 976**
IF30plus	32	3	1	400 x 250* x 320	585 x 434** x 704	1.60	48	1	**9.537 985**
IF55plus	53	4	1	400 x 330* x 400	585 x 514** x 784	1.00	57	1	**9.537 986**
IF75plus	74	6	2	400 x 330* x 560	585 x 514** x 944	1.25	66	1	**9.537 987**
IF110plus	108	5	2	560 x 400* x 480	745 x 584** x 864	1.40	76	1	**9.537 988**
IF160plus	161	8	2	560 x 400* x 720	745 x 584** x 1104	1.60	96	1	**9.537 989**
IF260plus	256	9	2	640 x 500* x 800	824 x 684** x 1183	1.70	110	1	**9.537 990** 1
IF450plus	449	8	2	1040 x 600* x 720	1224 x 784** x 1247	1.80	161	1	**9.537 991**
IF750plus	749	14	2	1040 x 600* x 1200	1224 x 784** x 1720	2.00	217	1	**9.537 992**

* Less 39 mm for fan
**Depth without door handle, please add 56 mm

Accessories for Universal Ovens and Incubators

Additional stainless steel grids and drip trays are available on request.

Memmert

Type	For Volume l	Load max. kg	PK	Cat. No.
Stainless steel grid	30	20	1	**9.537 203**
Stainless steel grid	55/75	20	1	**6.231 512**
Stainless steel grid	110/160	20	1	**6.232 433**
Stainless steel grid	260	20	1	**9.537 204**
Stainless steel grid	450/750	30	1	**6.222 688**
Stainless steel grid	1060	60	1	**6.266 337**

Further accessories can be found in our online shop.

2 Incubators, BD, BF series - Classic.Line

2

BINDER incubators stand for optimal incubation and for results that are reproducible in every routine test, even under high batch throughputs in long-term operation.

BINDER

Serie BD: Incubators with gravity convection.
Serie BF: Incubators with forced convection.

Equipment:
- Temperature range: from 5°C above room temperature to 100 °C
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- RS 422 interface for use with APT-COM™ DataControlSystem communication software
- Inner door made of tempered safety glass
- Power supply 230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
BD 23	20	4	2	222 x 277 x 330	435 x 520 x 495	0.20	1	**9.883 599**
BD 400	400	9	2	1000 x 500 x 800	1235 x 765 x 1025	0.85	1	**9.883 603**
BF 400	400	9	2	1000 x 500 x 800	1235 x 765 x 1025	0.85	1	**6.203 549**

1

1 Incubators BD-S Solid.Line with natural convection

Standard incubators for research and quality control. *BINDER*

- APT.line™ preheating chamber technology for exact temperature control
- Natural convection with homogenous temperature distribution
- Adjustable exhaust air flap
- Digital controller with timer
- Inner door made from safety glass
- Class 3.1 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

Specifications	BD-S 56 // BD-S 115
Temperature range:	RT +5 °C ... 70 °C
Temperature variation at 37 °C:	0.7 °C // 0.5 °C
Recovery time after 30 sec. door open at 37 °C:	15 min.
Interior volume:	62 l // 118 l
Internal dimensions:	400 x 350 x 440 mm // 550 x 390 x 550 mm
External dimensions:	595 x 525 x 625 mm // 745 x 565 x 735 mm
Permitted load:	30 kg // 75 kg
Max. shelves:	3 // 5
Weight:	38 kg // 54 kg
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
BD-S 56	62	3	1	400 x 350 x 440	595 x 525 x 625	1	**4.667 815**
BD-S 115	118	5	1	550 x 390 x 550	745 x 565 x 735	1	**4.667 817**

2

2 Incubators, BD, BF series - Avantgarde.Line

The new Avantgarde.Line incubators, with their exceptional efficiency and perfect temperature accuracy thanks to the very latest APT.line™ technology has the real appeal. *BINDER*

Series BD: Incubator with natural convection
Series BF: Incubator with forced convection

Equipment:
- Up to 30% lower energy consumption compared to the previous model
- APT.Line™ technology for homogenous temperature distribution and accuracy
- Electromechanical control of the exhaust air flap
- Controller with LCD display
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Stackable up to 115 l
- Temperature range Series BD: ambient temperature plus 5 °C to 100 °C
- Temperature range Series BF: ambient temperature plus 7-8 °C to 100 °C
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- USB port for recording data
- Power supply 230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
BF 56	59	4	2	400 x 340 x 440	560 x 565 x 625	0.40	1	**4.658 058**
BF 115	115	5	2	550 x 380 x 550	710 x 605 x 735	0.40	1	**6.280 293**
BF 260	260	8	2	610 x 545 x 760	810 x 760 x 965	0.90	1	**6.270 115**
BF 720	734	16	2	1000 x 565 x 1300	1165 x 870 x 1590	1.75	1	**4.664 254**
BD 56	57	4	2	360 x 380 x 420	560 x 565 x 625	0.30	1	**6.280 269**
BD 115	115	5	2	510 x 420 x 530	710 x 605 x 735	0.35	1	**6.280 290**
BD 260	260	8	2	610 x 545 x 760	813,5 x 813 x 962	0.85	1	**6.280 291**
BD 720	737	16	2	960 x 600 x 1280	1165 x 870 x 1590	1.65	1	**6.274 532**

1 Microbiological Incubators Heratherm™

1

Thermo Scientific Heratherm™ microbiological incubators are available in four different models, providing three different incubator airflow technologies in a choice of six sizes.

Safe
- Safe view of samples through internal glass door, without impact on temperature
- Safe conditions with superior temperature uniformity
- Safe containment with automatic alarm for temperature deviations

Easy
- Easy temperature setting with intuitive user interface
- Easy to remove shelf system
- Easy to clean interior with rounded corners
- Easy to read large display

Efficient
- Efficient small footprint to optimize benchtop space
- Conveniently stackable without the need for tools or stacking kits
- Efficient utilization of interior with flexible shelf system

2 3 Heratherm General Protocol Microbiological Incubators

2

Thermo Scientific Heratherm General Protocol incubators have been designed for your routine applications in pharmaceutical, medical, food and research laboratories.

Thermo Scientific

- Gravity convection provides gentle air flow and minimal drying out
- Corrosion resistant stainless steel chamber (AISI 430)
- Intuitive user interface for easy temperature setting
- Large vacuum fluorescent display for easy reading
- Safe view of samples through internal glass door, without impact on temperature
- Automatic overtemperature alarm
- Easy to remove "One Click" - shelf system
- Easy to clean interior with rounded corners
- Efficient small footprint to optimize benchtop space
- Efficient utilization of interior with flexible shelf system
- Tabletop models conveniently stackable without the need for tools or stacking kits
- Lockable casters for easy mobility and stability (floor models only)

3

Specifications

Temperature range: ambient +5 °C to 75 °C
Power supply: 230 V/50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
IGS60	75	13	2	354 x 414 x 508	530 x 565 x 720	0.30	1	**4.009 191**
IGS100	117	16	2	464 x 414 x 608	640 x 565 x 820	0.54	1	**4.009 192**
IGS180	194	19	2	464 x 589 x 708	640 x 738 x 920	0.71	1	**4.009 193**
IGS400	405	39	2	544 x 569 x 1307	778 x 770 x 1545	1.20	1	**9.534 150**
IGS750	747	39	2	1004 x 569 x 1307	1261 x 770 x 1545	1.50	1	**9.534 153**

Accessories for Heratherm Microbiological Incubators

Thermo Scientific

Description	PK	Cat. No.
Wire mesh shelf for 60 L Incubators including 2 shelf supports, 338 mm x 336 mm	1	**4.009 239**
Wire mesh shelf for 100 L Incubators including 2 shelf supports, 448 mm x 336 mm	1	**4.009 240**
Wire mesh shelf for 180 L Incubators including 2 shelf supports, 448 mm x 511 mm	1	**4.009 241**
Kit for stacking 60 L units	1	**4.009 246**
Kit for stacking 100 L units	1	**4.009 247**
Kit for stacking 180 L units	1	**4.009 248**
Perforated stainless steel insert for all 400 litre Incubators	1	**9.534 169**
Perforated stainless steel insert for all 750 litre Incubators	1	**9.534 170**
Silicone free viton door sealing for all 400 litre Incubators	1	**9.534 171**
Silicone free viton door sealing for all 750 litre Incubators	1	**9.534 172**

1

2

1 2 Cooling incubator LLG-uni*INCU* 28 Cool

The LLG-uni*INCU* 28 Cool is a small cooling incubator with 28 litres and a temperature range of 3 °C - 45 °C. Natural convection prevents the samples from drying and enables cultivation and storage of long-term samples. The device is suitable for food controls, research, various cultivation processes and protein crystallization.

- Control panel for temperature setting
- Good temperature distribution due to 5 cooling and heating surfaces
- Peltier cooling and heating system
- Lockable
- Max. 6 shelves possible

Scope of supply: Cooling incubator LLG-uni*INCU* 28 Cool with power plug, 2 shelves, key, instruction manual

Specifications

Temperature range:	3 °C ... 45 °C
Accuracy/Temperature uniformity:	±0.5 °C
Capacity:	28 l
External dimensions (W x D x H):	420 x 413 x 485 mm
Internal dimensions (W x D x H):	329 x 219 x 369 mm
Weight:	13.5 kg
Power supply:	100 ... 240 V, 50/60 Hz
Warranty:	3 years

Type	Max. grids	Included grids	Rated capacity kW	Plug type	PK	Cat. No.
LLG-uni*INCU* 28 Cool	6	2	0.075	EU	1	**6.263 575**
LLG-uni*INCU* 28 Cool	6	2	0.075	UK	1	**6.263 418**

3

4.666 794

Cooled incubators FOC series

Versatile cooled incubators with class A+ energy efficiency. The auto-tuning temperature control system ensures excellent temperature stability and temperature distribution. *Velp Scientifica*

- High efficiency, low operating costs
- 2 internal sockets for further devices
- Optionally available software TEMPSoft™ for setting times, temperatures, ramps and alarm thresholds
- Wireless data transmission
- Forced ventilation for uniform temperature distribution
- 3-digit display for indoor temperature
- The FOC 200I model has an internal glass door
- The FOC 200IL model has an internal glass door and illuminated shelves

Scope of supply: Cooled incubator, shelves

Specifications

	FOC 120 // FOC 200
Temperature range:	3 ... 50 °C
Temperature accuracy:	±0.5 °C
Volume:	120 l // 200 l
Outer dimensions:	540 x 550 x 905 mm // 540 x 600 x 1263 mm
Power rating:	120 W // 400 W
Weight:	36 kg // 46.3 kg
Power supply:	230 V, 50/60 Hz

4

4.666 795

Type	Nom. capacity L	Max. grids	Included grids	Rated capacity kW	PK	Cat. No.
FOC 120E	120	2	2	0.12	1	**4.666 793**
FOC 120I	120	2	2	0.12	1	**4.666 796**
FOC 200E	200	6	4	0.40	1	**4.666 794** 3
FOC 200I	200	6	4	0.40	1	**4.666 797**
FOC 200IL	200	6	4	0.40	1	**4.666 795** 4

Cooling incubators, KB, KT series

1

BINDER

Series KB: Cooling incubators with compressor technology, for safe, reproducible incubation, even at high ambient temperatures.
Temperature range: -10 °C to 100 °C (KB 23: 0 °C to 100 °C).
Series KT: Cooling incubators with thermoelectric cooling, combines exceptional performance with low energy consumption. Temperature range: 4 °C to 100 °C.

- Adjustable fan speed Controller with time-segment and real-time programming
- Inner door made of tempered safety glass
- 2 stainless steel racks
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet or RS 422
- Data recording and USB interface (Series KT)

6.269 765

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Type of auxiliary energy	PK	Cat. No.
KT 53	52	5	2	400 x 334 x 400	660 x 630 x 635	0.4	200 ... 240 V, 50/60 Hz	1	**6.280 289**
KT 115	102	6	2	600 x 355 x 455	860 x 655 x 715	0.7	200 ... 240 V, 50/60 Hz	1	**6.280 268**
KT 170	163	10	2	600 x 355 x 765	860 x 655 x 1025	0.8	200 ... 240 V, 50/60 Hz	1	**6.269 765** 1
KB 23	20	3	2	222 x 277 x 330	435 x 600 x 620	0.3	230 V, 50/60 Hz	1	**9.883 528**
KB 53	53	4	2	400 x 330 x 400	635 x 665 x 840	0.6	230 V, 50 Hz	1	**9.883 568**
KB 115	115	5	2	600 x 400 x 480	835 x 730 x 1025	0.7	230 V, 50 Hz	1	**9.883 569**
KB 240	240	9	2	650 x 485 x 785	930 x 880 x 1460	1.2	200 ... 240 V, 50 Hz	1	**9.883 570**
KB 400	400	15	2	650 x 485 x 1270	930 x 880 x 1945	1.4	200 ... 240 V, 50/60 Hz	1	**9.883 571**
KB 720	720	15	2	970 x 576 x 1250	1255 x 970 x 1925	2.3	200 ... 240 V, 50/60 Hz	1	**9.883 572**

2 Thermostatic cabinets

2

Lovibond®

The incubators from Lovibond® are designed for continuous tempering for different applications, mainly for the determination of BOD, the storage of wastewater samples, and the determination of enzymatic activity. The temperature range is +2 °C up to +40 °C and can be regulated in steps of 0.1°C. Temperature tolerance is defined with ±1 °C respectively ±0.5 °C (at 20 °C).
Low engergy consumption due to reinforced isolation. The interior of the cabinets is equipped with sockets for connecting stirrers. There are 3 models available with standard doors from 135 to 445 litres net capacity, and 2 models with glass doors with 140 and 255 litres net capacity.
Illuminated LED display with actual/setpoint display.

- Temperature range 2 °C to 40 °C, continuously adjustable in steps of 0.1 °C
- Low power consumption
- Illuminated LED display of preset and current temperatures
- Ideal for BOD determination at 20 °C
- Power sockets inside the incubator
- 5 models in 3 sizes
- Standard door or glass door

Specifications

Coolant:	R134a
Fan:	Axial, delivery rate 320 m³/h
Power supply:	220-230 V/50 Hz

Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
135	600 x 600 x 850	513 x 441 x 704	39.0	+2 ... +40	1	**9.699 142**
255	600 x 610 x 1640	470 x 440 x 1452	61.0	+2 ... +40	1	**9.699 144**
445	750 x 730 x 1640	600 x 560 x 1452	78.5	+2 ... +40	1	**9.699 145**
140	600 x 600 x 850*	513 x 441 x 702	48.0	+2 ... +40	1	**9.699 146**
256	600 x 610 x 1640*	470 x 440 x 1452	77.0	+2 ... +40	1	**9.699 147**

* With glass door

1

9.538 012

Cooled Storage Incubators, IPS

Memmert

Sample storage, incubating and cooling in the food industry, medicine, the cosmetics industry or pharmaceuticals. The storage cooled incubators with Peltier elements, heat and cool seamlessly with one system.

- double doors as standard: prevents contamination and drops in temperature, and at the same time an optimal view of the load through fully glazed interior doors
- fans integrated in the Peltier elements ensure rapid energy transport and optimal temperature distribution

Model variant SingleDISPLAY: ControlCOCKPIT with one colour display
You can find a detailed description of the "SingleDISPLAY" model at www.memmert.com

Specifications

Working temperature range:	+14 °C to +45 °C
Setting temperature range:	+14 °C to +45 °C
Setting accuracy:	0.1 °C
Power supply:	230/115V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
IPS260	256	9	2	640 x 500** x 800	824 x 754* x 1183	0.55	113	1	**9.538 011**
IPS750	749	14	2	1040 x 600** x 1200	1224 x 856* x 1720	0.55	230	1	**9.538 012**

* Depth without door handle, please add 56 mm
**Less 10 mm for fan - Peltier

Suitable accessories can be found in our online shop.

2

2 Refrigerated incubator RI-150/RI-250

NEW

Thermo Scientific

For incubation and test applications below ambient temperature as well as standard incubation applications at 37 °C in warm environments.

- Available in 2 sizes as tabletop or standalone unit
- Standalone unit has lockable casters for easy mobility
- Door with viewing window
- Microprocessor control for precise temperature adjustment
- Timer function
- Temperature alarm, overtemperature shutdown
- Port hole on the right side of the device for inserting monitoring probes or cables
- RS232 data interface for temperature monitoring (software not included in delivery)
- IQ and OQ documentation and qualification service available
- Automatic defrosting
- Overheating protection in fan motor

Specifications

Temperature range:	4 ... 60 °C
Power supply:	230 V, 50 Hz
Warranty:	1 year

Type	Nom. capacity L	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
RI-150, tabletop	150	2	550 x 450 x 615	652 x 605 x 1050	1	**4.672 602**
RI-250, standalone unit	250	3	550 x 450 x 1015	652 x 605 x 1450	1	**4.672 603**

Peltier-cooled incubators IPP and IPPplus

Heating and cooling seamlessly with one system thanks to Peltier technology. In this respect, cooled incubators IPP not only contribute to climate protection, but it also achieves an additional decrease in operating costs of up to 90 % compared to compressor technology.

- Extremely quiet, vibration-free and space saving as no compressor is required
- No condensation in the interior chamber: due to the closed Peltier cooling system no outside air is exchanged
- LED light module for sizes 110 to 750 (as an option): dimmable LED light in three alternative colour temperatures (cold white light, warm white light or cold white and warm white light, dimmable in steps of 1 %)

Specifications

Type designation:	plus = TwinDISPLAY
Working temperature range without light:	0 (at least 20 below ambient) to +70 °C
Working temperature range with light:	+10 to +40 °C
Setting temperature range:	0 to +70 °C
Setting accuracy:	0.1 °C
Power supply:	230 V, 50/60 Hz

Peltier-cooled incubators IPP

SingleDISPLAY: ControlCOCKPIT with one colour display *Memmert*

You can find a detailed description of the "SingleDISPLAY" model at www.memmert.com

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
IPP30	32	3	1	400 x 250* x 320	585 x 506** x 704	0.140	40	1	**9.538 001**
IPP55	53	4	1	400 x 330* x 400	585 x 586** x 784	0.275	52	1	**9.538 002** 1
IPP110	108	5	2	560 x 400* x 480	745 x 656** x 864	0.550	78	1	**9.538 003**
IPP260	256	9	2	640 x 500* x 800	824 x 756** x 1183	0.820	114	1	**9.538 004**
IPP410	384	14	2	640 x 500* x 1200	824 x 756** x 1720	1.030	157	1	**6.312 192**
IPP750	749	14	2	1040 x 600* x 1200	1224 x 856** x 1720	1.300	230	1	**9.538 005**

* Less 10 mm for fan - Peltier
**Depth without door handle, please add 56 mm

Peltier-cooled incubators IPPplus

TwinDISPLAY: ControlCOCKPIT with two colour displays *Memmert*

You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
IPP30plus	32	3	1	400 x 250* x 320	585 x 506** x 704	0.140	40	1	**9.538 006**
IPP55plus	53	4	1	400 x 330* x 400	585 x 586** x 784	0.275	52	1	**9.538 007**
IPP110plus	108	5	2	560 x 400* x 480	745 x 656** x 864	0.550	78	1	**9.538 008** 2
IPP260plus	256	9	2	640 x 500* x 800	824 x 756** x 1183	0.820	114	1	**9.538 009**
IPP410plus	384	14	2	640 x 500* x 1200	824 x 756** x 1720	1.030	157	1	**6.312 193**
IPP750plus	749	14	2	1040 x 600* x 1200	1224 x 856** x 1720	1.300	230	1	**9.538 010**

* Less 10 mm for fan - Peltier
**Depth without door handle, please add 56 mm

Suitable accessories can be found in our online shop.

1

9.538 002

2

9.538 008

1

9.538 021

Cooled incubators with compressor cooling ICPeco

NEW

Memmert

This environmentally-friendly incubator is cooled with climate-friendly CO_2.
Thanks to the excellent thermodynamic properties of the refrigerant CO_2 (R744) and the finely adjusted control technology, the ICPeco cooled incubator is both powerful and high-precision. Without critical temperature overshoots, it keeps the temperatures exactly at the setpoint.

- double doors standard for all models: Prevention of contamination and drops in temperature, and at the same time an optimum view of the sensitive load through wide-area interior glass doors
- very good air circulation in the working chamber through sophisticated ventilation technology
- intelligent defrosting function

Model variant TwinDISPLAY: ControlCOCKPIT with two TFT colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Specifications

Working temperature range:	-12 to +60 °C
(not suitable for long-term storing at sub-zero temperatures, during permanent operation, the inner glass door may ice over)	
Setting temperature range:	-12 to +60 °C
Setting accuracy:	0.1 °C
Power supply:	230 V, 50/60 Hz

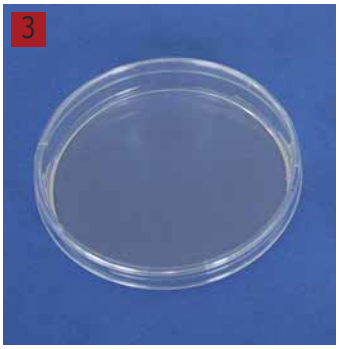
2

9.538 023

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
ICP110eco	108	5	2	560 x 400* x 480	745 x 584** x 1233	1.2	118	1	**6.314 845**
ICP260eco	256	9	2	640 x 500* x 800	824 x 684** x 1552	1.2	162	1	**9.538 021** 1
ICP450eco	449	8	2	1040 x 600* x 720	1224 x 784** x 1467	1.2	222	1	**9.538 022**
ICP750eco	749	14	2	1040 x 600* x 1200	1224 x 784** x 1950	1.2	254	1	**9.538 023** 2

* Less 33 mm for fan
**Depth without door handle, please add 56 mm

3



3 LLG-Petridishes, PS

Made of high quality optical clear polystyrene. Produced under aseptic conditions in an ISO 6 cleanroom.
Contact plate with counting grid.
- With a smooth surface for an optimal distribution of the transport medium
- Stable thickness to prevent any deformations while using
- Stackable
- With or without vents
- Aseptic (90 mm diam.) or beta irradiated sterile versions (all sizes)
- Packed in sleeves á 10 dishes or 20 dishes (90 mm diam. dishes)

Ext. diam. mm	Description	Height approx. mm	PK	Cat. No.
90	with triple vents, aseptic	16	480	**6.285 823**
90	without vents, aseptic	16	480	**6.285 824**
90	with triple vents, sterile	16	480	**6.285 816**
90	without vents, sterile	16	480	**6.285 817**
60	with triple vents, sterile	14	1080	**4.678 371**
60	without vents, sterile	14	1080	**4.678 372**
55	contact plate, sterile	17	1000	**6.285 821**
150	with triple vents, sterile	19	180	**6.285 822**

1 CO_2 Incubators CellCulture®

1

The CellCulture® CO_2 incubators from Esco are widely used in scientific research to grow and maintain cell cultures. Typical fields of application include tissue engineering, neuroscience, cancer research and other mammalian cell research applications.

ESCO

- Fast and uniform temperature, CO_2 and O_2 control (O_2 suppressed models)
- HEPA filtration system with internal blower (some models)
- Capacitive humidity sensor
- IR CO_2-sensor with automatic auto zero
- Quick recovery time for temperature, CO_2 and humidity after door opening
- Stainless steel 1.4301 (AISI 304) or copper interior
- 90 °C moist heat decon system (models with air jacket)
- Easy to clean due to removable lids and inner door
- Serial RS485 communication port
- Low maintenance
- Stackable

Options on request:
Additional shelves, stacking kits, rollerbase, chart recorder

CO_2 Incubators CelCulture® with High Heat Sterilization

NEW

ESCO

Incubator with 180 °C high heat sterilization cycle, for efficient contamination protection. Conforms to the international standards for dry heat sterilization.
- Stainless steel chamber
- Heat-resistant sensors
- IR CO_2 sensor
- O_2 Sensor (for suppressed O_2 model)
- 2 MB built-in flash memory for data and event logging

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
With ULPA Filter	170	7	4	505 x 535 x 633	660 x 660 x 905	1	**4.678 084**
With ULPA Filter	240	7	4	595 x 640 x 633	750 x 770 x 905	1	**4.678 085**
With ULPA Filter, O_2 suppressed	170	7	4	505 x 535 x 633	660 x 660 x 905	1	**4.678 086**
With ULPA Filter, O_2 suppressed	240	7	4	595 x 640 x 633	750 x 770 x 905	1	**4.678 087**
Without ULPA Filter	170	7	4	505 x 535 x 633	660 x 660 x 905	1	**4.678 088**
Without ULPA Filter	240	7	4	595 x 640 x 633	750 x 770 x 905	1	**4.678 089**
Without ULPA Filter, O_2 suppressed	170	7	4	505 x 535 x 633	660 x 660 x 905	1	**4.678 090**
Without ULPA Filter, O_2 suppressed	240	7	4	595 x 640 x 633	750 x 770 x 905	1	**4.678 091**

2 3 CO_2 incubator Heracell™ VIOS™ 160i with Cell Locker™ system

NEW

2

Thermo Scientific

The CO_2 incubator with the Cell Locker™ system is designed for improved culturing efficiency and security for sensitive cultures. Six individual, autoclavable polycarbonate chambers divide the incubator chamber. Each Cell Locker™ chamber has dual 0.2 µm membrane filters, that permit air circulation but exclude microbial contaminants. When the Cell Locker™ chamber is opened, the temperature, CO_2 concentration and humidity in the unopened Cell Locker™ chambers remain stable.

- Provides security from cross contamination due to culture isolation in separate chambers
- Interior made of electropolished stainless steel or pure copper
- ISO class 5 HEPA filtered air
- Steri-Run overnight 180 °C sterilisation cycle achieves total sterilization (12 log SAL)
- iCAN Touchscreen with LED display
- Temperature resistant IR CO_2 sensor
- THRIVE technology for optimal air circulation

Specifications

Volume:	165 l
Dimensions, external (W x H x D):	637 x 880 x 900 mm
Dimensions, internal (W x H x D):	470 x 576 x 607 mm
Weight:	83 kg
Power supply:	230 V, 50/60 Hz

3

Type	PK	Cat. No.
Copper interior	1	**6.312 578**
Stainless steel interior	1	**6.312 579**

1

1 Cell Locker™ chambers for CO_2 inkubator Heracell™ VIOS™ 160i

NEW

Thermo Scientific

Transparent. Each Cell Locker™ holds 9 each T-75 cell culture flasks, 20 each 6-well plates, or 24 each 96-well plates. The Cell Locker™ can be manually disinfected or can be autoclaved a maximum of 12 times.

- Tapered box for easy installation into incubator
- Easy and secure one handed latch and pull
- Non-slick sliding tray with tip protection
- Removable cover for protected transport
- Membrane filter (0.2 µm)

Description	PK	Cat. No.
Package of 6 Cell Locker™ with copper sliding tray	6	**6.312 571**
Package of 6 Cell Locker™ with stainless steel sliding tray	6	**6.312 573**

2

2 CO_2 Incubators ICOmed

Memmert

The CO_2 incubator ICOmed is the perfect solution: Thanks to the battery-buffered ControlCOCKPIT, the operating display, logging and CO_2 control remain fully functional even when there is a power failure. All parameters are logged in accordance with the FDA and, when individually adjusted ranges for CO_2, O_2, temperature and humidity are exceeded, notifications can be sent to a mobile phone in addition to an alarm. With its rounded corners, the interior is easy to clean and can be sterilised for 60 minutes at 180 °C (including all sensors). The active humidity control offers optimal protection for cell and tissue cultures. It minimizes evaporation in the interior and ensures short recovery times. Every Memmert CO_2 incubator ICOmed is a medical device of class IIa according to MDD 93/42/EEC until 26 May 2024 according to the transitional provisions by the (EU) 2017/745 article 120 (2).
- fully insulated stainless steel door and heated inner glass door

Model variant TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Specifications

Working temperature range:	at least 5 above ambient up to +50 °C (standard sterilisation programme: 60 minutes at 180 °C)
Setting temperature range:	+18 °C up to +50 °C
Setting accuracy temperature:	0.1 °C
Humidity limitation thanks to a Peltier element:	when water dish is full and inserted, the Peltier element limits the value of relative humidity in the interior to 93 % rh ±2.5 %
Setting range active humidity control:	40 to 97 % rh and rh-Off
Setting accuracy humidity:	0.5 % rh
CO_2-concentration:	0 to 20 %
O_2-concentration:	1 to 20 %
Setting accuracy CO_2:	0.1 %
Setting accuracy O_2:	0.1 %
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. shelves	Included shelves	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
ICO50med	56	5	1	400 x 330* x 425	559 x 521** x 795	1.10	55	1	**6.283 118**
ICO105med	107	6	2	560 x 400* x 480	719 x 591** x 850	1.30	75	1	**6.283 119**
ICO150med	156	10	2	560 x 400* x 700	719 x 591** x 1070	1.50	90	1	**6.283 120**
ICO240med	241	12	2	600 x 500* x 810	759 x 691** x 1180	1.65	110	1	**6.283 121**

* Less 35 mm for fan
**Depth without door handle, depth of door handle 56 mm

Suitable accessories can be found in our online shop.

3

3 Cell Culture Flasks EasyFlask™/TripleFlask™, non-treated, PS/HDPE, pyrogen-free

Thermo Scientific

Non-treated, sterile flasks for suspension cell cultures.
White caps for easy identification. Pyrogen-free.
Material flasks: Polystyrene
Material caps: HDPE

Type	Working volume ml	Culture surface cm²	Neck	PK	Cat. No.
EasyFlask™	7	25	curved	200	**6.702 724**
EasyFlask™	30	75	curved	100	**6.222 672**
EasyFlask™	55	175	curved	30	**7.900 288**
TripleFlask™	200	500	straight	32	**7.900 289**

For our Cell Culture range - please see page 1331.

1 CO_2 incubators, CB series with sterilizable sensor

1

BINDER

Suitable for all incubation tasks, even for complex experiments under hypoxic conditions. Models with additional O_2 control, **active humidification** and split interior doors are available. With intuitive touchscreen controller, DuoDoor™ system for simultaneous opening of outer and inner door as well as lockable door handle. CO_2 autodiagnostic system to protect cell cultures.

- Unit and CO_2 sensor can be sterilized with hot air at 180 °C
- Double-pan humidification system with condensation protection
- Seamless inner compartment made of stainless steel
- Measured values can be read out via USB and Ethernet interface
- Sealing inner door made of safety glass
- Stackable with adapter
- Fault diagnosis system with optical and acoustic alarm
- Internal data recording, can be read out via USB
- Ethernet interface

Type G: with divided inner door
Type F (CB170): with active humidification
Type O: with O_2 control

Specifications

Working temperature range:	RT + 7 °C ... 60 °C
CO_2 range:	0 ... 20 %
Humidity range:	90 ... 95 %
Power supply:	200 ... 240 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	PK	Cat. No.
CB060-230V	53	3	2	400 x 330 x 400	580 x 545 x 720	1.0	1	**9.883 726**
CB060-230V-O	53	3	2	400 x 330 x 400	580 x 545 x 720	1.0	1	**9.883 738**
CB060-230V-G*	53	2	2	400 x 330 x 400	580 x 550 x 720	1.0	1	**9.883 732**
CB060-230V-GO*	53	2	2	400 x 330 x 400	580 x 550 x 720	1.0	1	**9.883 744**
CB170-230V	170	6	3	560 x 505 x 600	680 x 715 x 870	1.4	1	**6.274 262**
CB170-230V-O	170	6	3	560 x 505 x 600	680 x 715 x 870	1.4	1	**4.663 953**
CB170-230V-F	170	6	3	560 x 505 x 600	680 x 715 x 870	1.4	1	**6.312 166**
CB170-230V-OF	170	6	3	560 x 505 x 600	680 x 715 x 870	1.4	1	**6.312 167**
CB260-230V	267	8	3	620 x 575 x 750	740 x 785 x 1020	1.5	1	**4.678 809**
CB260-230V-O	267	8	3	620 x 575 x 750	740 x 785 x 1020	1.5	1	**4.678 810**
CB260-230V-F	267	8	3	620 x 575 x 750	740 x 785 x 1020	1.5	1	**4.678 811**
CB260-230V-OF	267	8	3	620 x 575 x 750	740 x 785 x 1020	1.5	1	**4.678 812**

*with four-part inner door

Further models can be found in our online shop.

2 Cell and Tissue Culture Dishes, treated, PS, sterile

NEW

2

Dishes with treated surface, suitable for adhesion cells.
- Easy and secure stacking
- Sterilized by gamma irradiation
- Pyrogen-free

Diam. mm	Height mm	Culture surface cm^2	PK	Cat. No.
18	12	12.0	300	**4.672 542**
33	13	8.5	960	**4.672 543**
52	18	21.2	600	**4.672 544**
55	14	3.3	600	**4.672 545**
68	15	36.3	600	**4.672 546**
85	17	55.0	500	**4.672 547**
88	22	60.8	300	**4.672 548**
136	22	143.0	120	**4.672 549**
136	22	143.0	100	**4.672 550**

1

1 Incubator 1000, Suitable for Heidolph Shakers

Heidolph

Modular system for shaking, mixing and heating with visual reaction control.
Compatible shakers are Duomax 1030, Polymax 1040, Titramax 1000, Unimax 1010 and Promax 1020.

- Heating module with a heating capacity of 300 W allows for quick and gentle temperature adjustments up to 65 °C
- Digital temperature setting of target temperature of 65 °C and separate display for actual temperature (accuracy of ±2°C up to 50°C and ±4°C over 50°C)
- Low noise blower allows for quick and even temperature distribution throughout the entire enclosure
- One incubation system can be used for several shakers, fast conversion possible
- To protect samples from thermal damages this unit features a safety circuit to prevent overheating
- Unlimited visual reaction control due to transparent and non-fogging PETG hoods
- 3 hoods options available: A flat hood for small vessels and mictrotiter plates, a high hood for all common medium sized vessels and a high hood XL for larger Erlenmeyer flasks up to 2000 ml
- The incubator hoods open instantly and interlock in any position

Please order hoods separately.

Type	PK	Cat. No.
Incubator 1000, heating module	1	**9.839 875**

2

2 Hoods for Inkubator 1000

Heidolph

Description	PK	Cat. No.
Incubation hood, low	1	**9.839 876**
Incubation hood, high	1	**9.839 877**
Incubation hood XL	1	**9.839 878**

3

6.251 451

Shaking Incubators ES-20/ES-80

Grant

Stable and reliable orbital shaker-incubator for vigorous or even mixing and incubation of samples in a variety of flasks and vessels.
For Life Sciences, suitable for growing cell cultures in flasks, extracting tissue samples at physiological, temperatures, and sample preparation processes, mixing of biological liquids as well as the incubation and cultivation of biological liquids, growing e-coli, bioluminescence preparation.

- Variable speed: 50 to 250 rpm
- Digital control of time, temperature and shaking speed for accuracy and repeatability
- Display 2-line 16 character LCD
- Interchangeable platforms for shaking/incubating different vessels (please order separately)

Specifications

Speed range:	50 to 250 rpm
Temperature range ES-20:	+25 to 42 °C
Temperature range ES-80:	+25 to 80 °C
Temperature setting resolution:	0.1 °C
Stability:	±0.5 °C
Shaking movement:	orbital
Orbit ES-20:	10 mm
Orbit ES-80:	20 mm
Continuous operation ES-20:	720 hrs
Continuous operation ES-80:	168 hrs
Timer:	1 min to 96 hrs
Load capacity ES-20:	2.5 kg
Load capacity ES-80:	8 kg
Power supply:	230 V 50/60 Hz

4

9.721 056

Type	Load capacity kg	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
ES-20	2.5	305 x 260 x 250	340 x 340 x 435	1	**6.251 451** 3
ES-80	8.0	390 x 450 x 300	590 x 525 x 510	1	**9.721 056** 4

Accessories for Shaking Incubators ES-20/ES-80

Grant

Type	Description	For Type	PK	Cat. No.
P12-100	Platform with clamps for 12 x 100 ml flasks / 150 ml beakers	ES-20	1	**9.721 023** 1
PP-4	Flat platform with non slip rubber mat	ES-20	1	**9.721 022**
P6-250	Platform with clamps for 6 x 250 ml flasks / 300 ml beakers	ES-20	1	**9.721 024**
PUP-12	Universal platform	ES-20	1	**9.721 021** 2
P16-88	Platform with spring holders for 88 tubes up to 30 mm	ES-20	1	**9.721 049** 3
PP-400	Flat platform with non slip rubber mat	ES-80	1	**9.721 060**
P30-100	Platform with clamps for 30 x 100 ml flasks	ES-80	1	**9.721 061**
P16-250	Platform with clamps for 16 x 250 ml flasks	ES-80	1	**9.721 062**
P9-500	Platform with clamps for 9 x 500 ml flasks	ES-80	1	**9.721 063**
P6-1000	Platform with clamps for 6 x 1000 ml flasks	ES-80	1	**9.721 064**

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9.721 023

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9.721 021

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9.721 049

4 Shaking Incubator 211DS

NEW

Labnet

Due to a small footprint, compact, stackable design and expanded temperature range, this shaking incubator is ideal for molecular biology and general use. With integral orbital shaker. Two full and one half shelves are supplied with each incubator.

- Temperature control system SmartChek™
- Internal electrical outlet
- Flask capacity: 4 x 1 l, 5 x 500 ml, 9 x 250 ml or 16 x 125 ml
- Gasket door with large viewing area

4

Specifications

Temperature range:	Ambient +5 °C ... 80 °C
Precision:	±0.5 °C
Temperature setting resolution:	0.1 °C
Shaker orbit:	19 mm
Shaker speed:	20 ... 300 rpm
Timer:	0 ... 99 min. or continuous
Chamber volume:	49 l
Chamber Dimensions (W x D x H):	343 x 375 x 381 mm
Total Dimensions (W x D x H):	425 x 550 x 580 mm
Weight:	37.7 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
211DS	1	**6.265 178**

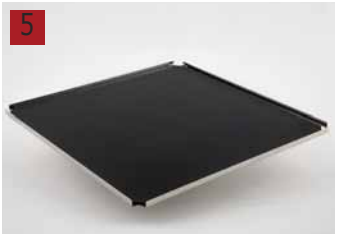
Accessories for Shaking Incubator 211DS

NEW

Labnet

Description	PK	Cat. No.
Clamp for 125 ml flask	1	**6.265 183**
Clamp for 250 ml flask	1	**6.261 512**
Clamp for 500 ml flask	1	**6.261 520**
Clamp for 1000 ml flask	1	**6.265 184**
Flat platform with non-slip rubber mat	1	**6.265 181** 5
Flask clamp platform, predrilled	1	**6.265 179**
Universal spring loaded platform	1	**6.265 180**
Stacking adapter	1	**4.676 172**

5



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1

1 Benchtop Shaking Incubator 222DS

Labnet

The Benchtop Shaking Incubator is a combination of a shaker and a temperature chamber, designed for shaking and heat treatment of sensitive samples. It replaces two devices, reduces time and space needed. It is very suitable for biochemistry, microbiology and medicine laboratories in which thermal and shaking treatment of samples is a daily used routine.

- High temperature working range
- Can be used in cold rooms too
- Digital readout of all parameters - read temporary or preset RPM, temperature, time, acceleration
- Parameter changes while the device is running (except timer)
- Last parameter values reside in the memory even if the device was switched off
- Precisely adjusted and maintained temperature regulation within 0.5 °C of absolute deviation from the set temperature
- HOLD and STEP time function with 1 minute resolution
- Easy interchangeable platforms
- Lid sensor

Univeral attachement and non-slip mat please order separately.

Specifications

Temperature range:	Ambient +5 °C ... 70 °C
Precision:	±0.5 °C
Speed range:	20 ... 300 rpm
Timer:	1 min - 99 hours or continuous
Platform size:	300 x 300 mm
Supply requirements:	230 V, 50 Hz

Type	PK	Cat. No.
222DS	1	**6.259 079**

2

6.259 082

Accessories for Benchtop Shaking Incubator 222DS

NEW

Labnet

Description	PK	Cat. No.
Universal platform 30 x 30 cm	1	**6.259 080**
Non-slip mat	2	**6.259 082**

3

3 Shaking Incubator 311DS

NEW

Labnet

Incubator with built-in orbital shaker. Stable temperature conditions and a broad temperature range enables the use of this incubator for cell cultures, washing blots, bacterial cultures, yeast cultures, entomology studies, egg hatching, hybridization washes, mixing and re-suspensions. Opening the door stops operation of the shaker. The incubator is supplied with one shelf.

- Temperature control system SmartChek™
- Broad temperature range
- High uniformity and accuracy
- Gasket door with large viewing area
- Adjustable shelves

Flat platform with non-slip rubber mat, flask platforms, additional shelves please order separately.

Specifications

Temperature range:	Ambient +5 °C ... 80 °C
Precision:	±0.5 °C
Temperature setting resolution:	0.1 °C
Shaker orbit:	19 mm
Shaker speed:	20 ... 300 rpm
Timer:	0 ... 99 min or continuous
Chamber volume:	71 l
Chamber Dimensions (W x D x H):	442 x 396 x 406 mm
Total Dimensions (W x D x H):	574 x 544 x 635 mm
Weight:	63.6 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
311DS	1	**6.261 509**

Accessories for Shaking Incubator 311DS

NEW

Labnet

Description	PK	Cat. No.
Platform with 6 x 1000 ml flask clamps	1	**4.676 163**
Platform with 20 x 125 ml flask clamps	1	**4.676 164**
Platform with 4 x 2000 ml flask clamps	1	**4.676 165** 1
Platform with 12 x 250 ml flask clamps	1	**4.676 166**
Platform with 30 x 50 ml flask clamps	1	**4.676 167**
Platform with 8 x 500 ml flask clamps	1	**4.676 168**
Rack holder, fits I-5330, holds 1 x K566 for 15 ml tubes	1	**4.676 169**
Rack holder, fits I-5330, holds 1 x K568 for 50 ml tubes	1	**4.676 170**
Flat shaker platform with non-slip rubber mat	1	**4.676 171**
Additional full size shelf	1	**6.261 510**
Shaker platform pre-drilled for flask clamps (clamps sold separatly)	1	**6.261 511**

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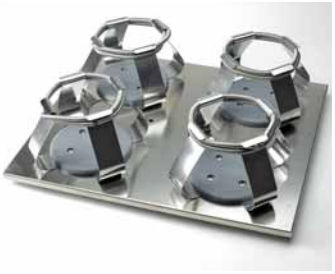

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Benchtop shaking incubators Genie Temp-Shaker 100/300

Scientific Industries

For shaking and incubation of samples. The incubation chamber can be opened from 3 sides and tilted to the side to load the platform or take samples.

- Removable incubation chamber
- Very good temperature distribution
- Minimum temperature loss when opening the chamber
- The maximum working temperature of 75 °C is reached in 20 minutes
- Transparent incubation chamber

Genie Temp-Shaker 100
For shaking speeds up to 100 min^{-1}. Available with adhering mat.

Genie Temp-Shaker 300
For shaking speeds up to 300 min^{-1}. Available with adhering mat, ratcheting clamps or flask clamps.

Specifications	**Temp-Shaker 100 // Temp-Shaker 300**
Shaking movement:	orbital
Orbit:	19 mm
Max. shaker weight:	3 kg
Speed range:	20 ... 100 min^{-1} // 35 ... 300 min^{-1}
Temperature range:	28 ... 75 °C
Platform dimensions (W x D):	305 x 305 mm
Chamber volume:	40 l
Overall dimensions (W x D x H):	450 x 480 x 305 mm
Weight:	9 kg
Ambient temperature range:	0 ... 38 °C

Type	Plug type	PK	Cat. No.
Genie Temp-Shaker 100	EU	1	**4.668 295** 2
Genie Temp-Shaker 100	UK	1	**4.668 296**
Genie Temp-Shaker 100	CH	1	**4.668 297**
Genie Temp-Shaker 300, with ratcheting clamps	without	1	**4.668 298**
Genie Temp-Shaker 300, with flask clamps	without	1	**4.668 299**
Genie Temp-Shaker 300, with adhering mat	without	1	**4.668 300**
Genie Temp-Shaker 300, with ratcheting clamps	EU	1	**4.668 301**
Genie Temp-Shaker 300, with flask clamps	EU	1	**4.668 302** 3
Genie Temp-Shaker 300, with adhering mat	EU	1	**4.668 303**
Genie Temp-Shaker 300, with ratcheting clamps	UK	1	**4.668 304**
Genie Temp-Shaker 300, with flask clamps	UK	1	**4.668 305**
Genie Temp-Shaker 300, with adhering mat	UK	1	**4.668 306**
Genie Temp-Shaker 300, with ratcheting clamps	CH	1	**4.668 307**
Genie Temp-Shaker 300, with flask clamps	CH	1	**4.668 308**
Genie Temp-Shaker 300, with adhering mat	CH	1	**4.668 309**

2

4.668 295

3

4.668 302

1

1 Shaking incubator with cooling ISICMBCDG

OHAUS

The Incubating/Cooling Orbital Shaker is microplate ready without the need for any additional accessories. Optional modular blocks can accommodate micro-tubes, centrifuge tubes, vials, or culture tubes. Unit holds microplates or modular blocks with a 127 mm tall interior capacity. Ideal for analyses that require a stable, controlled temperature.

- Heats to 65 °C and cools to 10 °C below ambient
- LED displays for temperature, speed and time
- Temperature Calibration Mode
- Triple Eccentric Drive
- Overload Protection
- Speed Ramping Feature
- Audible Alarm
- Caution Hot Indicator
- Polycarbonate Lid

Scope of supply: Thermo Shaker incl. adapter bracket for blocks

Without blocks. Please order separately.

Specifications

Temperature range:	10 °C below ambient to +65 °C
Temperature uniformity:	±0.5 °C at +37 °C
Speed with microplates:	100 to 1200 rpm
Speed with blocks:	100 to 600 rpm
Accuracy:	±2 %
Timer:	1 s to 160 h
Orbit:	3 mm
Max. load:	2 microplates or 2 blocks
Permissible ambient conditions:	5 to 40 °C
Dimensions (L x W x H):	455 x 279 x 267 mm
Weight:	15.4 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
ISICMBCDG	1	**4.659 474**

2

4.659 479

Shaking Incubator with rocking or tumbling motion

OHAUS

The Incubating Rocking and Tumbling Shakers combine smooth rocking or tumbling motion and general purpose incubation in one compact bench top unit.

- Electronic tilt adjustment while unit is operating
- LED displays for temperature, speed and tilt angle, and time
- Timer with audible alarm
- Overload Protection
- Speed Ramping Feature
- Caution Hot Indicator
- Polycarbonate Lid

Scope of supply: Shaking Incubator incl. built-in tray and lid

Specifications

Temperature range:	ambient +5 °C to 65 °C
Temperature uniformity:	±0.5 °C at 37 °C
Tilt angle Rocking shaker/Tumbling shaker:	0 to 15°/0 to 20°
Timer:	1 s to 160 h
Max. loading:	4.5 kg
Permissible ambient conditions:	5 to 40 °C
Overall Dimensions (L x B x H):	432 x 279 x 267 mm
Interior Dimensions (L x B x H):	273 x 197 x 97 mm
Interior Dimensions Tumbling shaker (L x B x H):	273 x 197 x 86 mm
Weight:	10 kg
Power supply:	230 V, 50/60 Hz

3

4.659 480

Type	PK	Cat. No.
Rocking shaker ISRK04HDG	1	**4.659 479** 2
Tumbling shaker ISWV02HDG	1	**4.659 480** 3

Shaking Incubators ISLD

OHAUS

The Incubating Light Duty Orbital Shakers are designed to heat and shake a variety of samples. The Microplate Shakers are optimized for shaking microplates, deep-well plates, or micro-tubes. Available with opaque lid for light sensitive samples.

- LED displays for temperature, speed and time
- Timer with audible alarm
- Calibration mode for temperature
- Microprocessor Control
- PID Temperature Controller
- Triple Eccentric Drive
- LED Display
- Temperature Calibration Mode
- Overload Protection
- Speed Ramping Feature
- Audible Alarm
- Spill-Resistant Design
- Polycarbonate Lid

Scope of supply:
04HDG: Shaking Incubator incl. built-in tray and lid
MPHDG: Shaking Incubators incl. built in tray for microplates, deep-well plates, or micro-tubes and lid
MPHDGL: as MPHDG, but with opaque lid

Specifications

Temperature range:	ambient +5 °C to 65 °C
Temperature uniformity:	±0.5 °C at 37 °C
Speed/Accuracy:	100 to 1200 rpm/±2 %
Timer:	1 s to 160 h
Orbit:	3 mm
Max. Load	
Orbital shaker	3.6 kg
Microplate shaker	4 microplates or 2 racks for microtubes
Permissible ambient conditions:	5 to 40 °C
Weight:	13.6 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.	
04HDG	1	**4.659 471**	1
MPHDG	1	**4.659 473**	2
MPHDGL	1	**4.659 472**	3

1

4.659 471

2

4.659 473

3

4.659 472

Blocks for Benchtop Shaking Incubators

For	No. of wells	Plate format mm	Depth mm	PK	Cat. No.	
Microplates*		107 x 71 x 2.5	23.0	1	**4.659 810**	
384 Well Plates*	384	Ø 4.0	8.1	1	**4.659 811**	4
0.2 ml PCR Plates*	384	Ø 6.4	12.7	1	**4.659 812**	
0.5 ml Microplates**	30	Ø 7.9	24.6	1	**4.659 813**	
1.5 ml Microplates**	24	Ø 11.1	35.3	1	**4.659 814**	
2.0 ml Microplates**	24	Ø 11.5	35.3	1	**4.659 815**	
5-7 ml Tubes	24	Ø 12.0	36.1	1	**4.659 816**	
2.0 ml Cryogenic Tubes	24	Ø 12.6	36.0	1	**4.659 817**	5
5 ml Eppendorf™ Tubes	9	Ø 16.8	49.0	1	**4.659 818**	
15 ml conical Tubes	9	Ø 17.3	104.4	1	**4.659 819**	
50 ml conical Tubes	4	Ø 30.0	100.9	1	**4.659 820**	

*with lid
**with empty rack and cover

4

4.659 811

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4.659 817

1

1 Shaking incubators SI500/SI600/SI600C

Stuart

These combined shakers and incubators are ideal for scientists doing cell culturing procedures, especially suspension culture applications. All units are compact enough to be positioned on the laboratory bench.
When SI600C is combined with the SRC4 recirculating cooler, or equivalent, the SI600C can operate at temperatures down to 15 °C below ambient (min. 5 °C). On the SI600C all viewing windows are also double glazed to prevent condensation. The Incubators have a versatile clamping system which secures most sizes and mixtures of flask up to 1 litre on the SI500 and 2 litres on the SI600 and SI600C. Typically, the SI500 platform will accommodate the following Erlenmeyer flasks: 12 x 250 ml, or 9 x 500 ml or 4 x 1000 ml while the SI600 and SI600C can accommodate the following: 6 x 2000ml, 9 x 1000ml or 15 x 500ml.

- Microprocessor controlled
- 51 or 115 Litre capacity available
- Digital display for temperature and speed
- Timer from 1 second to 9 days
- USB connection
- Unique retractable platform for easy loading and unloading
- With alarm function

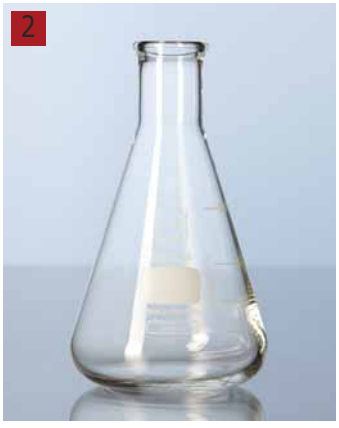
Specifications

Temperature range	
SI500 + SI600:	Amb.+5 °C to + 60 °C
SI600C:	Amb. -15 °C (min. 5 °C) to 60 °C*
Display resolution:	0.1 °C
Precision:	±0.5 °C at 37 °C
Fluctuation:	±0.5 °C at 37 °C
Variation:	< 0.5 °C at 37 °C
Speed range:	30 to 300 rpm
Platform size	
SI500 // SI600 + SI600C:	335 x 335 mm // 526 x 390 mm
Max. vessel height	
SI500 // SI600 + SI600C:	250 mm // 300 mm
Volume	
SI500 // SI600 + SI600C:	51 l // 115 l
Max. load	
SI500 + SI600C // SI600:	10 kg // 15 kg
Heater power	
SI500 // SI600 + SI600C:	250 W // 400 W
Supply requirements:	230 V, 50 Hz

Type	Nom. capacity L	Load capacity kg	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
SI500	51	10	422 x 408 x 297	450 x 474 x 522	1	**9.951 612**
SI600	115	15	660 x 470 x 395	675 x 542 x 640	1	**9.645 351**
SI600C	115	10	625 x 455 x 380	675 x 562(592**) x 640	1	**6.287 436**

* Requires separate recirculating cooler (6.287 437)
** 592 mm with cooling connectors attached

2



2 Erlenmeyer flasks, DURAN® Super Duty, narrow neck

DWK Life Sciences

With approximate graduations. Reinforced sturdy rim, and increased mechanical strength for heavy duty. Glass type I/neutral glass as per USP, EP and JP.
With Retrace Code (Batch Identification) certificate available via the Internet.
Autoclavable.

Capacity ml	Neck diam. mm	Bottom diam. mm	Height mm	PK	Cat. No.
25	22	42	75	1	**9.141 270**
50	22	51	90	1	**9.141 271**
100	22	64	105	1	**9.141 272**
250	34	85	145	1	**9.141 273**
500	34	105	180	1	**9.141 274**
1000	42	131	220	1	**9.141 275**
2000	50	166	280	1	**9.141 276**
5000	52	220	365	1	**9.141 277**

KS 3000 i control/KS 3000 ic control

1

IKA

Innovatively designed, compact incubator shaker to safely allow unattended operation in a temperature-controlled environment. The unit has a large LED display for speed, temperature and timer. An integrated PID temperature control allows the use of PT 1000 temperature sensors to assure highly accurate temperature control. The electronically controlled incubator comes equipped with RS 232 and USB ports for PC interface. All functions can be controlled and documented using labworldsoft® (software sold separately).

- Controls with antimicrobial coating for reduction of bacteria
- Junction box in the workspace for connection of an additional temperature sensor, e.g. PT 1000 (included with delivery)
- Wide range of attachments allows for using almost all shapes and sizes of vessels
- Unit stops automatically when hood is lifted
- Collecting tray with drain hose on rear of the unit
- Electronic timer
- Error code display

9.837 882

KS 3000 ic control additionally with built-in cooler for connection to an external cooling unit.

Specifications

Shaking movement:	orbital
Orbit:	20 mm
Max. shaker weight (with attachment):	7.5 kg
Motor rating input/output:	45/10 W
Power consumption:	1.120 W
Speed:	10 to 500 rpm
Timer:	1 s to 999 h
Speed display:	LED
Heater power:	1000 W
Temperature range KS 3000 i:	RT +5 °C to +80 °C
Temperature range KS 3000 ic:	RT -10 °C to +80 °C
Temperature stability (200 ml H_2O at target T=37 °C, RT 25 °C):	±0.1 K
Temperature range (inlet T>3 °C) for KS 3000 ic:	+12 to +80 °C
Dimensions (W x D x H):	465 x 695 x 430 mm
Protection class acc. to DIN EN 60529:	IP 30
Interface:	RS 232, USB
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Plug type	PK	Cat. No.
KS 3000 i control	50	EU	1	**9.837 881**
KS 3000 i control	50	UK	1	**9.837 883**
KS 3000 i control	50	CH	1	**9.837 884**
KS 3000 ic control	50	EU	1	**9.837 882** 1
KS 3000 ic control	50	UK	1	**9.837 885**
KS 3000 ic control	50	CH	1	**9.837 886**

2 Erlenmeyer flasks DURAN® Super Duty, wide neck

2

DWK Life Sciences

With approximate graduations. Reinforced, sturdy rim and increased mechanical strength for heavy duty. Glass Type I/neutral glass as per USP, EP and JP.
With retrace code (Batch Identification). Certificate available via the Internet.
Autoclavable.

Capacity ml	Neck diam. mm	Bottom diam. mm	Height mm	PK	Cat. No.
100	34	64	105	1	**9.141 280**
250	50	85	140	1	**9.141 281**
500	50	105	175	1	**9.141 282**
1000	50	131	220	1	**9.141 283**

1

1 Incubator Shaker KS4000i control

IKA

Innovative incubator shaker design allowing unattended operation in a temperature-controlled environment.

- large LED display for speed and time settings
- controls with antimicrobial coating for reduction of bacteria
- integrated PID temperature control (two Pt1000 temperature sensors can be used)
- socket in the work area for connection of an additional temperature sensor e.g. PT1000.60 (included in delivery)
- electronic temperature and speed control
- electronic timer switch: 0 to 999h (set by the minute or by the hour)
- KS 4000 ic with built-in cooler for connection to an external cooling unit e.g. RC 2 basic
- unit switches off automatically if disturbed
- unit stops automatically when hood is lifted
- collecting tray for spillages with draining tube at rear of unit
- all functions can be controlled and documented using labworldsoft® software
- attachments not included - Please order accessories as required

Specifications

Shaking movement:	orbital
Orbit:	20 mm
Max. shaker weight (with attachment):	20 kg
Motor rating input/output:	82/24 W
Power consumption:	1120 W (at 230 V)
Operating time:	continuous
Speed range:	10 to 500 rpm
Timer switch (select minutes/hours):	0 to 999 h/continuous
Heater power:	1000 W
Temperature range:	RT +5 °C to 80 °C
Temperature stability (200 ml H_2O at target T = 37 °C, RT 25 °C):	0.1 K
Recirculating cooler:	additional cooling function for KS 4000 ic
Dimensions (W x D x H):	580 x 750 x 525 mm
Space required (W x D):	600 x 600 mm
Weight:	55 kg
Permissible ambient temperature:	15 to 32 °C
Protection class acc. to DIN EN 60529:	IP 30
Interface:	RS232
Supply requirements:	230 V 50/60 Hz

Tested to DIN EN IEC 61010-1.

Type	Nom. capacity L	Plug type	PK	Cat. No.
KS 4000 i control	90	EU	1	**9.837 890**
KS 4000 i control	90	UK	1	**4.008 075**
KS 4000 ic control	90	EU	1	**9.837 891**
KS 4000 ic control	90	UK	1	**4.008 077**

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9.837 894

Accessories for Incubator Shaker KS4000i control

IKA

AS 4000.1 Universal attachment
For various types of vessels. Infinitely variable clamping rolls allow universal adaptation to various vessels.
Included with delivery: 1 x AS 1.400 Basic holder, 6 x AS 1.401 Clamping roll, 12 x AS 1.402 Fastening screw

AS 4000.2 Fixing clip attachment
For shaking flasks, Erlenmeyer flasks and bottles with a round crosssection (without fixing clips).
Number of fixing clips (volume): 50 x AS 2.1(25ml), 48 x AS 2.2 (50ml), 25 x AS 2.3 (100ml), 16 x AS 2.4 (250ml), 12 x AS 2.5 (500ml), 7 x AS 2.6 (1000 ml)

AS 4000.3 Dish attachment
For smooth shaking operations in the low viscosity range, e.g. for cell cultures, nutrient media in Petri dishes, culture bottles and vessels with a low centre of gravity. With integrated slip-resistant foil (PP).

3

9.837 893

Type	Description	Dimensions Set-up plate (W x D) mm	Weight g	PK	Cat. No.
AS 4000.1	Universal attachment	360 x 410	3200	1	**9.837 894** 2
AS 1.402	Fastening screw*			1	**9.837 897**
AS 4000.2	Fixing clip attachment	430 x 430	2650	1	**9.837 893** 3
AS 4000.3	Dish attachment	430 x 430	800	1	**9.837 892**
STICKMAX	Adhesive mat	200 x 200		1	**6.236 293**

*Spare parts for universal attachment.

1 MaxQ 4450 Compact Benchtop Incubated Shakers, orbital

Thermo Scientific

- Holds up to 4 x 1L flasks.
- Requires minimal bench space.
- Choose between two temperature ranges, 5 °C above ambient to 80 °C or 5 °C below ambient to 80 °C.
- Clear lid lets you view samples without disturbing internal temperature
- Triple eccentric drive handles heavy loads, provides uniform agitation and c ontinuous 24-hour operation, even at high speeds.
- Monitor and control chamber temperature range with ±0.1 °C accuracy and ±0.5 °C uniformity at 37 °C.
- View speed, operating time and temperature simultaneously on three individual LED displays.
- Visual/audible alarms alert you to temperature deviations. Heat turns off if temperature deviates ±1°C of set point.
- Soft start feature eliminates sudden starts and stops, splashing of vessel contents or wetting of flask closure.
- Retains parameters during power failure and restarts unit automatically after power is restored.
- Over-temperature safety feature with independent thermostat provides additional backup by controlling heat if main temperature controller fails.
- Safety interlock stops platform motion when lid is opened.
- 5 year warranty and 10 year on drive mechanism.

Specifications

Speed range, rpm:	15 to 500 ±1 rpm digital 40 to 400 ±1 rpm analog
Temperature range:	±0.1 °C accuracy at 37°
Operating time:	0.1 hour to 999 hours or 0.1 minute to 999 minutes
Dimensions (L x W x H):	691 x 358 x 401 mm
Supply requirements:	240 V, 50/60 Hz

Type	PK	Cat. No.
MaxQ 4450, Benchtop Incubated Shaker, digital	1	**4.011 063**
MaxQ 4450, Benchtop Incubated Shaker with Cooling Coil, digital	1	**4.011 064**

2 Universal Platform for MaxQ Shaker

Thermo Scientific

For	Dimensions (W x D) mm	PK	Cat. No.
MaxQ 4450	280 x 330	1	**4.009 327**
MaxQ 6000	460 x 460	1	**4.009 330**

3 Clamps for MaxQ Shaker (except MaxQ 8000)

Thermo Scientific

Description	PK	Cat. No.
Clamps for Microplate/Deep-well plate	1	**4.009 340**
Clamps for Erlenmeyer Flask 10 ml	1	**4.010 229**
Clamps for Erlenmeyer Flask 25 ml	1	**4.009 332**
Clamps for Erlenmeyer Flask 50 ml	1	**4.010 230**
Clamps for Erlenmeyer Flask 125 ml	1	**4.009 333**
Clamps for Erlenmeyer Flask 250 ml	1	**4.010 231**
Clamps for Erlenmeyer Flask 300 ml	1	**4.009 334**
Clamps for Erlenmeyer Flask 500 ml	1	**4.010 232**
Clamps for Erlenmeyer Flask 1000 ml	1	**4.010 233**
Clamps for Erlenmeyer Flask 2000 ml	1	**4.009 335**
Clamps for Erlenmeyer Flask 4000 ml	1	**4.009 336**
Clamps for Erlenmeyer Flask 6000 ml	1	**4.009 337**
Clamps for Low Form Culture Flask 2500 ml	1	**4.009 338**
Clamps for Fernbach Flask 2800 ml	1	**4.009 339**

1

1 MaxQ 6000 Incubated and Refrigerated Stackable Shakers, orbital

Thermo Scientific

- Available in incubated or refrigerated models.
- Units can be stacked two high on the floor with the stacking kit accessory.
- Two adjustable-height shelves provide added storage.
- Large viewing window and internal light offer sample visibility.
- View temperature, speed and time simultaneously on three individual displays.
- Door can be hinged from the right or left by the user for convenient placement in lab.
- Triple eccentric drive handles heavy loads, provides uniform agitation and continuous 24-hour operation, even at high speeds.
- Visual/audible alarms alert you to temperature deviations. Heat turns off if temperature deviates ±1 °C of set point.
- Shaker shut down and visual/audible alarms signal if unit operates ±10 % of set speed, preventing shaker from moving.
- Unbalanced load sensor stops platform motion when excess vibration is detected visual/audio alarms signal until condition is corrected.
- Soft start feature eliminates sudden starts and stops, splashing of vessel contents or wetting of flask closure.
- Retains parameters during power failure and restarts unit automatically after power is restored.
- Over-temperature safety feature with independent thermostat provides additional backup by controlling heat if main temperature controller fails.
- Safety interlock stops shaking motion when the door is open.
- 5 year warranty and 10 year on drive mechanism.

Specifications

Speed range:	15 rpm to 300 rpm ±1 rpm (stacked) 15 rpm to 500 rpm ±1 rpm (unstacked)
Temperature	
Floor Shaker:	10 °C above ambient to 80 °C
Refrigerated Floor Shaker:	15 °C below ambient to 80 °C
Timer:	0.1 hr. up to 999 hr. or 0.1 to 999 min.
Power supply	
Floor Shaker:	240 V 50/60 Hz, 4.5A, 1100 W
Refrigerated Floor Shaker:	240 V 50/60 Hz, 7A, 1500 W
Dimensions (L x W x H):	838 x 699 x 1029 mm

Type	Load capacity kg	PK	Cat. No.
MaxQ 6000, Stackable Incubated Floor Shaker, digital	15.9	1	**4.011 067**
MaxQ 6000S, Stackable Incubated and Refrigerated Floor Shaker	15.9	1	**4.011 068**

2

2 Adhesive Flask Mat for MaxQ Shakers

Thermo Scientific

Our Adhesive Flask Mat is an alternative to flask clamps for securing odd shaped objects such as bottles, volumetric flasks and test tube racks to a shaker platform. Simply place the 21 cm x 21 cm Adhesive Flask Mat on an anodised aluminum or stainless steel shaker platform and secure the vessel to it. It will hold Erlenmeyer flasks as large as 4 L that contain 2 L of media at speeds up to 250 rpm. The mat is not suitable for use in water baths.

- Easy-to-view samples. The white background makes it easy to determine when to harvest your samples
- Simple to clean. Can be restored to like new condition by wiping with alcohol
- Long lasting. Months of use without losing adhesive properties

Description	PK	Cat. No.
Flask Mat	1	**4.009 506**

1 Digital dry bath LLG-uni*BLOCKTHERM*

Suitable for use in microbiological, histological, clinical, industrial and environmental laboratories.
Various types of optional heating blocks are available as accessories for the LLG-uni*BLOCKTHERM*.

- Digital control with LED display
- Can be used up to 120 °C
- For timer and continuous operation
- Can be used with different heating blocks
- 1 x block unit
- With overheating protection

Scope of supply: LLG-uni*BLOCKTHERM*, removal tool, lid

Please order heating blocks separately.

Specifications

Temperature range:	RT ... 120 °C
Temperature uniformity:	±0.5 °C
Temperature accuracy:	±0.5 °C
Timer:	0 ... 99:59:00 min
Block material:	Aluminium
Dimensions (W x D x H):	175 x 290 x 85 mm
Weight:	3 kg
Power supply:	220 ... 240 V, 50/60 Hz
Warranty:	3 years

Type	Plug type	PK	Cat. No.
LLG-uni*BLOCKTHERM*	EU	1	**6.263 460**
LLG-uni*BLOCKTHERM*	UK	1	**6.263 461**

1

Accessories for LLG-uni*BLOCKTHERM*

Description	No. of wells	Diam. mm	Depth mm	PK	Cat. No.
Heating block 54 x 0.2 ml	54	6.4	15	1	**6.263 462**
Heating block 40 x 0.5 ml	40	8.2	26.4	1	**6.263 463**
Heating block 40 x 1.5 ml	40	11	34.7	1	**6.263 464** 2
Heating block 40 x 2.0 ml	40	11	34.7	1	**6.263 465**
Heating block 28 x 5/15 ml	28	17	48	1	**6.263 466**
Heating block 8 x 50 ml	8	29.8	48	1	**6.263 467**
Heating block for 96/384 Microplate	-	-	-	1	**6.263 468**
Heating block for each 18 x 0.2 ml, 0.5 ml and 1.5/2.0 ml	-	-	-	1	**6.263 469** 3

2

6.263 464

3

6.263 469

1

1 Digital Dry Bath AccuBlock™ Mini

Labnet

AccuBlock™ Mini combines digital control, a fast heating microtube block and a convenient AccuRack™ transfer system, all in an ultra compact footprint.
With a temperature range to 100 °C which can be set in increments of 0.1 °C, AccuBlock™ Mini is suitable for a range of uses in life science, molecular biology, environmental and industrial laboratories and a variety of applications including incubation, enzyme reactions, immunoassays.

- Accepts up to 12 x 1.5 ml tapered microcentrifuge tubes
- With thermometer well for temperature confirmation and calibration
- Microprocessor controlled heating element
- Easy to read 4 digit LCD display
- Built in calibration mode allows end users to calibrate the bath as needed

The included AccuRack™ allows quick loading or unloading of all sample tubes simultaneously.
It is self standing and can be used to hold samples while they are prepared for loading.
Samples can also be loaded directly into the AccuBlock™ Mini without the AccuRack™.

Specifications:

Temperature range:	Ambient +5 °C ... 100 °C, resolution 0.1 °C
Temperature uniformity:	±0.2 ºC
Temperature accuracy:	±0.2 ºC
Timer:	0 ... 19 h 59 min or continuous
Block material:	Anodized aluminum
Block capacity:	12 x 1.5 ml tubes
Dimensions (W x D x H):	140 x 120 x 60 mm
Weight:	1.3 kg
Supply requirements:	230 V 50/60 Hz

Type	PK	Cat. No.
AccuBlock™ Mini	1	**9.945 780**

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6.272 368

3

6.272 369

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6.272 370

Dry Baths, AccuBlock™

Labnet

The device is available in single, dual, and four block configurations and provide a broad temperature range up to 150 °C, which makes them useful for a variety of applications in molecular biology, histology, clinical, environmental, and industrial laboratories.

- Single, dual and four block capacity
- Dual display
- USB connectivity enables traceability of data
- Molded block chamber

Please order blocks separately.

Specifications

Temperature range:	Ambient +5 to +150 °C, adjustable in 0.1 °C steps
Temperature uniformity:	±0.2 °C
Temperature resolution:	±0.1 °C
Temperature accuracy:	±0.3 °C
Temperature control:	Microprocessor
Timer:	1 ... 99 h 59 min or continuous
Block material:	Aluminium
Dimensions (W x D x H)	
Single/Dual Block:	210 x 290 x 120 mm
4 Block:	210 x 390 x 120 mm
Weight	
Single/Dual Block:	3.2 kg
4 Block:	4.4 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
Single Block	1	**6.272 368** 2
Dual Block	1	**6.272 369** 3
Four Block	1	**6.272 370** 4

Accessories for Dry Baths, AccuBlock™

Labnet

Type	For	PK	Cat. No.
Block	24 x 1.5 ml tubes	1	**6.224 191**
Block	20 x 2.0 ml tubes	1	**6.233 664**
Block	24 x 0.5 ml tubes	1	**6.235 417**
Block	48 x 0.2 ml PCR tubes or 6 x 0.2 ml strips	1	**9.945 763**
Block	12 x 15 ml centrifuge tubes	1	**9.945 764**
Block	5 x 50 ml centrifuge tubes	1	**9.945 765**

Dry Block Heaters, digital

OHAUS

Designed for applications that require repeatable results and superior temperature stability.
These multi-purpose units are ideal for incubation and activation of cultures, enzyme reactions, immunoassays, melting/boiling points, and a wide variety of other laboratory procedures.
Integral support rod holder with locking knob accepts optional External Temperature Probe Kit.
Optional External Temperature Probe Kit monitors actual block or sample temperature.
Each of the models accept separate interchangeable modular blocks, accommodating various tube sizes from 0.2 ml microtubes to 50 ml centrifuge tubes. Each block has a thermometer well for measuring block temperature. Efficient heating due to close tube-and-block contact for maximum heat retention.

- Microprocessor Control
- LED Display
- Temperature Calibration Mode
- Caution Hot Indicator
- Audible Alarm

Without blocks. Please order separately.

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4.659 491

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4.659 495

Specifications

Temperature range:	ambient +5 to 120 °C
Temperature stability at 37 °C:	±0.2 °C
Uniformity within block at 37 °C:	±0.2 °C
Uniformity across blocks at 37 °C/Heat up time to 100 °C	
1 block:	-/45 min
2 blocks:	±0.1 °C/50 min
4 blocks:	±0.2 °C/60 min
6 blocks:	±0.3 °C/65 min
Permissible ambient conditions:	18 to 33 °C
Power supply:	230 V, 50/60 Hz

Capacity	Length mm	Width mm	Height mm	PK	Cat. No.
1 block	315	203	89	1	**4.659 491** 1
2 blocks	391	203	89	1	**4.659 494**
4 blocks	429	203	89	1	**4.659 495** 2
6 blocks	531	203	89	1	**4.659 496**

Blocks for Microcentrifuge and Centrifuge tubes for Dry Block Heaters

OHAUS

3

4.659 852

For	No. of wells	Diam. mm	Depth mm	PK	Cat. No.
0.5 ml Tubes	30	7.9	27.6	1	**4.659 841**
1.5 ml Tubes	20	11.1	39.1	1	**4.659 843**
1.5 ml Eppendorf™ Tubes	20	11.5	39.9	1	**4.659 846**
2 ml Eppendorf™ Tubes	20	11.5	38.1	1	**4.659 875**
2 ml Corning™ Tubes	20	10.9	38.1	1	**4.659 876**
50 ml Conical Tubes	5	29.0	47.6	1	**4.659 852** 3
15 ml Conical Tubes	12	17.1	44.5	1	**4.659 856** 4

4

4.659 856

Blocks and Combination Blocks for Standard Test Tubes for Dry Block Heaters

OHAUS

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4.659 842

For tubes	No. of wells	Diam. mm	Depth mm	PK	Cat. No.
6 mm	30	8.3	48.4	1	**4.659 842** 5
10 mm	24	10.7	48.4	1	**4.659 835**
12/13 mm	20	13.9	48.4	1	**4.659 836**
12/13 mm	16	13.9	48.4	1	**4.659 849**
15/16 mm	12	17.5	48.4	1	**4.659 837**
17/18 mm	12	19.1	48.4	1	**4.659 879**
20 mm	8	21.0	48.4	1	**4.659 838**
25 mm	6	26.2	48.4	1	**4.659 839**
35 mm	4	35.0	47.6	1	**4.659 851**
2.5 ml	30	6.35	27	1	**4.659 847**
6 mm / 12/13 mm / 25 mm	6 / 5 / 3	8.3 / 13.8 / 26.2	48.4 / 48.4 / 48.4	1	**4.659 840** 6
1.5 ml / 15 ml / 50 ml	4 / 3 / 2	11.1 / 17.1 / 29.0	39.1 / 44.5 / 47.6	1	**4.659 877**
0.5 ml / 1.5 ml / 2 ml	6 / 10 / 5	7.9 / 11.1 / 11.5	27.6 / 39.1 / 38.1	1	**4.659 878**

6

4.659 840

1

1 Block thermostats PCH-1/PCH-2/PCH-3

Grant

Personal benchtop cooling/heating dry block for microcentrifuge tubes.
The ingenious block construction, combined with the powerful Peltier module, produces very rapid cooling and heating.

Temperature range:	-10 to +100 °C
Heat up, amb. to 100 °C:	15 min
Cool down, 100 °C to amb.:	15 min
Cool down, amb. to -10 °C:	21 min

Type	Description	PK	Cat. No.
PCH-1	20 x 0.5 ml and 12 x 1.5 ml microtubes	1	**9.721 009**
PCH-2	20 x 1.5 ml microtubes	1	**9.721 010**
PCH-3	20 x 2.0 ml microtubes	1	**9.721 066**

2

2 Block thermostat CH3-150 Combitherm-2

NEW

Grant

Block thermostat with cooling and heating function and with 2 independent modules for interchangeable blocks, combined in a single unit. Control panel is divided in two parts for separate control of cooling and heating blocks.

- Digital temperature control for optimum precision
- Digital timer with sound alarm
- User adjustable programs for temperature and time: 16 heating programs and 16 cooling programs
- Temperature Calibration Function
- With protective lid

Specifications

Temperature range heating/cooling:	25 ... 150 °C/-3 ... 20 °C
Temperature control range heating/cooling:	ambient +5 ... 150 °C/ambient -23 ... ambient +5 °C
Temperature uniformity:	±0.1 °C
Temperature accuracy:	0.1 °C
Timer:	1 min ... 99 h 59 min
Dimensions (W x D x H):	295 x 285 x 220 mm
Weight:	5.6 kg
Power supply:	230 V, 50/60 Hz

Type	PK	Cat. No.
CH3-150 Combitherm-2	1	**7.983 641**

3

3 Changeable blocks for CH3-150 Combitherm-2

NEW

Grant

For tubes	No. of wells	Depth mm	Description	PK	Cat. No.
12 mm	18	58	round bottom	1	**4.671 969**
13 mm	10	30	flat bottom	1	**4.671 968**
16 mm	10	56	flat bottom	1	**7.983 642**
25 mm	6	40	flat bottom	1	**7.983 643**
29 mm	5	40	flat bottom	1	**4.671 972**
48 mm	2	58	flat bottom	1	**4.671 970**
1.5 ml	23		conical bottom	1	**4.671 971**

1 Microtube block thermostat BTD

Grantás block heating system BTD with fixed block is designed for rapid and precise heating of microtubes up to 100 ºC. *Grant*

- Digital temperature control for optimum precision
- Heating block holds combinations of four microtube sizes simultaneously
  - up to a total of 49 tubes: 24 x 1.5/2.0 ml, 15 x 0.5 ml, 10 x 0.2 ml
- Flexible tube sizes and rapid heat-up time enables swift change of application
- Convenient integral timer for time-sensitive incubations
- Sturdy, durable, easy-to-clean plastic construction; compact design with small footprint
- 2-line display for simple and precise setting of temperature/time and for monitoring current status during operation

1

Specifications

Temperature range:	ambient +5 to 100 °C
Stability at 37 °C:	±0.1 °C
Uniformity:	±0.1 °C
Heat-up times:	25 ºC to 100 ºC in 15 min 25 ºC to 37 ºC in 4 min
Timer:	1 min to 96 h
Power supply:	230 V, 50/60 Hz

Type	Dimensions (W x D x H) mm	Power W	PK	Cat. No.
BTD	210 x 230 x 110	200	1	**6.223 310**

2 3 Block thermostats,QBD and QBH series

For controlled dry heating of test tubes, microplates and Eppendorf tubes in interchangeable aluminium blocks. The following models are available: *Grant*

- Choose from 3 digital systems with 1, 2 or 4 interchangeable blocks (QBD models) and 1 digital high-temperature system (QBH2) with 2 blocks
- Fast heat-up time and in-block temperature sensing capability using external sensor probe. Please order Cat. No. 6.228 714 separately.
- Built-in timer, programmable delayed start and RS232 output for data monitoring
- Includes block removal tool

Requires but does not include interchangeable QB-series blocks

2

Specifications

Temperature range:	ambient 5 to 130 °C, QBH2: ambient 5 to 200 °C
Stability at 37 °C:	±0.1 °C
Uniformity	
within the block at 37 °C:	±0.1 °C
across similar blocks at 37 °C:	±0.2 °C
Supply requirements:	230 V, 50/60 Hz, single phase

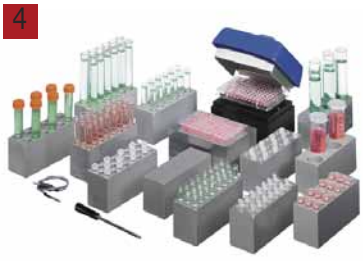
3

Type	Width mm	Length mm	Height mm	Power W	Blocks accepted	PK	Cat. No.
QBD1	200	230	100	150	1	1	**9.852 307**
QBD2	200	280	100	300	2	1	**9.852 308**
QBD4	200	380	100	600	4	1	**9.852 309**
QBH2	200	280	100	300	2	1	**9.852 310**

4 Digital block thermostats QB, for QBD, QBH series

Accessory blocks for QB series only. Interchangeable. Machined aluminium, (L x W x H) 140 x 50 x 63 mm. Holes drilled as indicated. *Grant*

4



Type	For tubes diam. mm	No.of holes	PK	Cat. No.
QB-10	10 mm	24	1	**9.951 661**
QB-12	12 mm	24	1	**9.951 662**
QB-16	16 mm	12	1	**9.951 663**
QB-18	18 mm	12	1	**9.951 664**
QB-24	24 mm	5	1	**9.951 665**
QB-50	50 ml	4	1	**6.075 814**
QB-H	0.2 ml	56	1	**9.951 666**
QB-E0	0.5 ml	24	1	**9.951 667**
QB-E1	1.5 ml	24	1	**9.951 668**
QB-E2	2.0 ml	24	1	**9.951 669**
QB-E5	5.0 ml	12	1	**6.266 809**

Further blocks available on request.

1

9.852 300

Block Heaters, analogue and digital, SBH series

Stuart

- choice of either analogue or digital models
- digital models available with either 130 or 200 °C maximum temperature
- three block model for extra capacity
- dual control models have two blocks with independent temperature control
- uniform and stable block temperatures

Designed for the precise heating of test-tubes, microcentrifuge tubes, cuvettes and microplates.
Range compromises an economical analogue model with easy to use, dial setting and advanced digital models with bright, easy to read, LED display which facilitates setting of the required temperature and also accurate monitoring of the actual temperature.
Excellent temperature stability and uniformity is maintained via sensitive, microprocessor control.
Heats to 100°C in <12 mins.
Supplied complete with block extraction tool but without aluminium blocks which must be ordered separately.
With BioCote, silver-based, antimicrobial protection.

2

9.852 303

3

6.207 050

Specifications

Temperature stability at 37 °C:	±0.1 °C
Uniformity within block at 37 °C:	±0.1 °C
Uniformity within block at 130 °C:	±1 °C
Electrical supply:	230 V 50 Hz
	SBH130 // SBH130D // SBH200D
Number of blocks:	2
Temperature range:	Amb.+8 °C to +130 °C // Amb.+8 °C to +130 °C // Amb.+8 °C to +200 °C
Display type:	Calibrated knob // LED // LED
Display resolution:	10 °C // 0.1 °C // 0.1 °C
Dimensions (W x D x H) mm:	235 x 280 x 115 mm
Net weight:	2.1 kg // 2.3 kg // 2.3 kg
Heater power:	300W
	SBH130D/3 // SBH200D/3
Number of blocks:	3
Temperature range:	Amb.+8 °C to +130 °C // Amb.+8 °C to +200 °C
Display type:	LED
Display resolution:	0.1 °C
Dimensions (W x D x H) mm:	310 x 280 x 115 mm
Net weight:	3.2 kg
Heater power:	450 W
	SBH130DC // SBH200DC
Number of blocks:	2 (independent control)
Temperature range:	Amb.+8 °C to +130 °C // +50 °C to +200 °C
Display type:	LED
Display resolution:	0.1 °C
Dimensions (W x D x H) mm:	310 x 280 x 115 mm
Net weight:	2.9 kg
Heater power:	300 W

Type	Description	PK	Cat. No.	
SBH130	Block heater, 2 block, analogue, 130 °C	1	**9.852 300**	1
SBH130D	Block heater, 2 block, digital, 130 °C	1	**9.852 301**	
SBH200D	Block heater, 2 block, digital, 200 °C	1	**9.852 302**	
SBH130D/3	Block heater, 3 block, digital, 130 °C	1	**7.624 685**	
SBH200D/3	Block heater, 3 block, digital, 200 °C	1	**9.852 303**	2
SBH130DC	Block heater, 2 block, digital, dual control, 130 °C	1	**6.207 050**	3
SBH200DC	Block heater, 2 block, digital, dual control, 200 °C	1	**9.852 315**	

4

4 Aluminium blocks SHT for block heaters Stuart SBH series

Stuart

For	PK	Cat. No.
20 x 10.5 mm Ø tubes	1	**9.951 617**
20 x 12.5 mm Ø tubes	1	**9.951 618**
12 x 16.5 mm Ø tubes	1	**9.951 619**
8 x 19.5 mm Ø tubes	1	**9.951 620**
Solid, for user to drill as required	1	**9.951 621**
48 x 0.2 ml centrifuge tubes	1	**9.951 622**
20 x 1.5 ml Eppendorf Tubes®	1	**9.951 623**
20 x 2.0 ml Eppendorf Tubes®	1	**9.951 624**
15 x 10 mm cuvettes*	1	**9.951 625**

*Separations can be removed to take larger cells

Dry Block Heater

IKA

Digital block heaters for 1, 2, 3 or 4 aluminium blocks provides precise temperature control in small vessels. Included PT 1000 temperature sensor allows temperature control directly in the sample vessel. It is used with PCR tubes, PCR strips, Greiner tubes, microplates and cuvettes. The block heater is ideal for melting and boiling point determination, enzyme reactions, incubation and activation of cultures, immunoassays, DNA denaturation, culture media tests, coagulation tests, blood-urea-nitrogen determinations and in situ hybridizations.

- Stepless adjustable temperature up to 120 °C
- Timer: Countdown, adjustable from 1 min to 99 h 59min
- Counter: Display of heating time
- Highly versatile with a large number of blocks
- Error code display
- Fixed safety circuit
- Acoustic signal at end of test

Without blocks. Please order separately.

1

9.816 801

2

9.816 807

Specifications

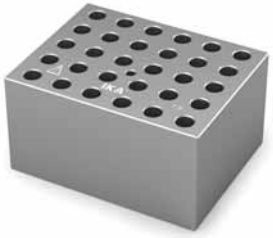
Temperature range	RT to +120 °C
Display:	LED
Heat control accuracy:	±1 K
Connection for ext. temperature sensor:	DIN 12878
Control accuracy with sensor:	±1 K
Temperature constancy in medium:	±1 K
Temperature stability within the blocks at 37 °C:	±0.2 °C
Temperature stability within the blocks at 60 °C	±0.4 °C
Fixed safety circuit:	+150 °C
Protection class acc. to DIN EN 60529:	IP 21
Power supply:	220-240 V, 50/60 Hz

Type	Dimensions (W x D x H) mm	Dimensions Set-up plate (W x D) mm	Heating power W	Plug type	PK	Cat. No.
Dry Block Heater 1	151 x 228 x 73	95 x 76	165	EU	1	**9.816 801** 1
Dry Block Heater 1	151 x 228 x 73	95 x 76	165	UK	1	**9.816 802**
Dry Block Heater 1	151 x 228 x 73	95 x 76	165	CH	1	**9.816 803**
Dry Block Heater 2	151 x 304 x 73	95 x 152	250	EU	1	**9.816 804**
Dry Block Heater 2	151 x 304 x 73	95 x 152	250	UK	1	**9.816 805**
Dry Block Heater 2	151 x 304 x 73	95 x 152	250	CH	1	**9.816 806**
Dry Block Heater 3	151 x 380 x 73	95 x 228	330	EU	1	**9.816 807** 2
Dry Block Heater 3	151 x 380 x 73	95 x 228	330	UK	1	**9.816 808**
Dry Block Heater 3	151 x 380 x 73	95 x 228	330	CH	1	**9.816 809**
Dry Block Heater 4	151 x 456 x 73	95 x 304	412	EU	1	**9.816 810**
Dry Block Heater 4	151 x 456 x 73	95 x 304	412	UK	1	**9.816 811**
Dry Block Heater 4	151 x 456 x 73	95 x 304	412	CH	1	**9.816 812**

Aluminium blocks for Dry Block Heater

IKA

3



9.816 813

Type	Description	PK	Cat. No.
DB 1.1	Single block for PCR tubes (0.5 ml), holes (diam. x D): 7.9 x 27.6 mm	1	**9.816 813** 3
DB 1.2	Single block for Eppendorf® microtubes (1.5 ml), holes (diam. x D): 11.5 x 36.9 mm	1	**9.816 814**
DB 3.1	Single block for centrifuge tube combination 0.5 ml, 15 ml, 50 ml	1	**9.816 815**
DB 3.2	Single block for microtube combination 1.5 ml, 15 ml, 50 ml	1	**9.816 816**
DB 6.3	Double block for 1 x 96 well plates (0.2 ml), holes (diam. x D): 6.4 x 15.5 mm	1	**9.816 817**
DB 7.1	Double block for 96 or 384 wellplates, depth: 13.5 mm	1	**9.816 818**

Further blocks available on request.

1

1 Dry Block Heater Matrix Δ+

NEW

IKA

Powerful Dry Block Heater for samples with very small volumes, e.g. blood samples, pharmaceutical agents, DNA/RNA samples, DNA/RNA samples or Elisa assays.
Wide range of exchangeable attachments for various applications available.
- Without cross-contamination
- Large and clear display with a convenient menu structure allows for intuitive operation
- Robust aluminum die cast housing

Please order attachments separately.

Specifications

Temperature range:	ambient -30 ... 100 °C
Temperature control:	±1 K
Heating/cooling rate:	±5 K/min
Uniformity:	0.5 °C
Display:	TFT
Programs:	2
Timer:	1 s ... 6000 min
Capacity:	0.3 kg
Dimensions (W x D x H):	220 x 350 x 125 mm
Weight:	8.8 kg
Power consumption:	100 W
Power supply:	100 ... 240 V, 50/60 Hz
IP code:	IP 21

Type	PK	Cat. No.
Matrix Δ+	1	**4.664 745**

2

2 Cooling/Heating block Eppendorf ThermoStat C

Eppendorf AG

The ideal device to accurately set and maintain temperatures.
Precise temperature control is achieved using optimally balanced heating and cooling elements (peltier technology). The cooling and heating temperature keys provide quick access to five important experimental temperatures (4 °C, 16 °C, 37 °C, 56 °C and 95 °C).
You can also individually store 15 programs.

- Excellent temperature accuracy
- Precise temperature control from -10 to +110 °C
  (+110 °C can be set when using 12 mm and cryo SmartBlocks™)
- Prevent condensation and improve temperature homogeneity with the new ThermoTop
- Comprehensive range of program functions

Specifications

Temperature operation range:	min: +30 °C below RT, max: +110 °C
Temperature adjustable range:	-10 to +110 °C (+110 °C can be set when using 12 mm and cryo SmartBlocks™)
Accuracy/ resolution:	±0.5 °C at +20 to +45 °C
Max. heating time:	5.5 °C/min
Max. cooling time:	5 °C/min between +110 °C and RT
Dimensions (W x D x H):	206 x 304 x 131 mm
Capacity:	dependent on Eppendorf SmartBlock™
Weight:	4.3 kg
Power consumption:	200 W (max.)
Power supply:	220 - 240 V ±10 %, 50/60 Hz

Type	Description	PK	Cat. No.
Eppendorf ThermoStat C	Basic device without Eppendorf SmartBlock™	1	**9.776 903**

1 Exchangeable blocks Eppendorf SmartBlocks™ and accessories for Eppendorf ThermoMixer™ C and ThermoStat C

Eppendorf AG

Exchangeable blocks:
Flexibility has never been this easy.
Eppendorf offers a variety of SmartBlocks™ for tubes from 0.5 ml to 50 ml.
- Fast and simple block exchange due to Eppendorf Quick Release
- Optimized block design guarantees maximum temperature transfer to the sample

Transfer Racks:
- Autoclavable transport aid for tubes from 0.5 to 2.0 ml
- For transferring up to 24 tubes in/from the heating block at the same time
- Offers protection against burns when transferring hot samples

SmartExtender:
A heatable frame/attachment for mixer, with separate temperature control (3 °C above RT to 110 °C), for simultaneous operation at two different temperatures.
- Enables 2 incubations at the same time

Type	Description	PK	Cat. No.
Eppendorf SmartBlock™ 0.5 mL	24 tubes, 0.5 ml	1	**9.776 906**
Eppendorf SmartBlock™ 1.5 mL	24 tubes, 1.5 ml	1	**9.776 907**
Eppendorf SmartBlock™ 2.0 mL	24 tubes, 2.0 ml	1	**9.776 908**
Eppendorf SmartBlock™ 5.0 mL	8 Eppendorf Tubes®, 5.0 ml	1	**9.776 909**
Eppendorf SmartBlock™ 15 mL	8 conical tubes, 15 ml	1	**9.776 910**
Eppendorf SmartBlock™ 50 mL	4 conical tubes, 50 ml	1	**9.776 911**
Eppendorf SmartBlock™ 12 mm	24 tubes, diam. 11 to 11.9 mm	1	**9.776 912**
Eppendorf SmartBlock™ cryo	24 cryogenic tubes, 1.5 to 2.0 ml, all bottom forms	1	**9.776 913**
Eppendorf SmartBlock™ plates	For micro plates and Deepwell plates, incl. lid	1	**9.776 914**
Eppendorf SmartBlock™ PCR 96	PCR plates 96, incl. lid	1	**9.776 915**
Eppendorf SmartBlock™ PCR 384	PCR plates 384, incl. lid	1	**9.776 916**
Eppendorf SmartExtender™	12 tubes 1.5 - 2.0 ml	1	**4.664 579**
Transfer Rack	For 24 tubes, 0.5 ml	1	**6.280 936**
Transfer Rack	For 24 tubes, 1.5 to 2.0 ml	1	**6.280 935**

1

1

Constant Climate Chambers HPP

9.868 022

Memmert

They are simply unbeatable in energy efficiency.
Furthermore, as constant climate chambers HPP have a very long maintenance free service life, they are perfectly suited for stability tests, storage in controlled environments and conditioning. The high precision temperature control as well as the active humidification and dehumidification were particularly adapted to the ICH guidelines, option Q1A, for stability tests.

- LED light module for sizes 110 to 750 (as an option): dimmable LED light in three alternative colour temperatures (cold white light, warm white light or cold white and warm white light, dimmable in steps of 1 %)
- Heating and cooling seamlessly with one system thanks to Peltier technology

Almost vibration-free and extremely quiet

Model variant TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Specifications

Working temperature range sizes 110 - 1060:	
without light, without humidity:	0 (at least 20 °C below ambient) to +70 °C
without light, with humidity:	+5 °C (at least 20 °C below ambient) to +70 °C
Working temperature range sizes 110 - 750:	
with light, without/with humidity:	+15 to +40 °C
Setting temperature range sizes1400 - 2200:	
without light, without/with humidity:	+15 °C (at least 10 °C below ambient) to +60 °C
Setting accurate temperature:	0.1 °C
Setting ranges humidty:	
Sizes 110 - 1060: without light	10 to 90 % rh
Size 1400 - 2200: without light	10 to 80 % rh
Sizes 110 - 750: with light	10 to 85 % rh
Setting accurate humidity:	0.5 % rh
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
HPP110	108	5	2	560 x 400* x 480	745 x 656** x 864	0.65	77	1	**9.868 021**
HPP260	256	9	2	640 x 500* x 800	824 x 756** x 1183	0.92	122	1	**9.868 022** 1
HPP410	384	14	2	640 x 500* x 1200	824 x 756** x 1720	1.30	160	1	**6.312 191**
HPP750	749	14	2	1040 x 600* x 1200	1224 x 856** x 1720	1.50	208	1	**9.868 023**
HPP1060	1060	14	2	1040 x 850* x 1200	1224 x 1107** x 1720	1.60	260	1	**6.272 235**
HPP1400	1360	28	4	1250 x 750* x 1450	1435 x 1007** x 1913	3.10	450	1	**6.286 315**
HPP2200	2140	42	6	1972 x 750* x 1450	2157 x 1007** x 1913	3.50	493	1	**6.312 160**

* Less 10 mm for fan-Peltier
**Depth without door handle, please add 56mm

2

2 Options and accessories for constant climate chamber HPP

Memmert

Light module cold white 6.500 K:
LED strips arranged on the side walls of the interior, 10 for model 110;
14 for models 260, 410 and 750; programme controlled dimming from 0 to 100 % (in 1 % steps);
ramp programming in combination with temperature and humidity

Light module cold white 6.500 K + warm white 2.700 K:
LED light strips - 10 strips for model 110; 14 strips for model 260, 410 and 750
(5 resp. 7 alternating cold white light strips and 5 resp. 7 warm white light strips);
on the side walls of the interior, programme controlled dimming from 0 to 100 % (in 1 % steps);
ramp programming in combination with temperature and humidity

Type	Description	For Volume l	PK	Cat. No.
T7	Light module cold white 6,500 kelvin	110	1	**9.868 024**
T7	Light module cold white 6,500 kelvin	260	1	**9.868 025**
T7	Light module cold white 6,500 kelvin	410/750	1	**9.868 026**
T8	Light module cold white 6,500 kelvin + warm white 2,700 kelvin	110	1	**9.868 027**
T8	Light module cold white 6,500 kelvin + warm white 2,700 kelvin	260	1	**9.868 028**
T8	Light module cold white 6,500 kelvin + warm white 2,700 kelvin	410/750	1	**9.868 029**
E20165	Stainless steel grid	110	1	**6.232 433**
E28891	Stainless steel grid	260/410	1	**9.537 204**
E20182	Stainless steel grid	750	1	**6.222 688**
B41251	Stainless steel grid	1060	1	**6.312 988**
B38955	Stainless steel grid	1400/2200	1	**4.663 195**
B00325	Perforated stainless steel shelf	110	1	**9.867 707**
B29725	Perforated stainless steel shelf	260/410	1	**6.262 685**
B00328	Perforated stainless steel shelf	750	1	**6.266 306**
B32549	Perforated stainless steel shelf	1060	1	**6.310 098**

Further accessories can be found in our online shop.

Climate Chambers ICHeco

NEW

1

Memmert

Climate-friendly and powerful: the ICHeco climate chamber for the stability testing of pharmaceuticals, cosmetics or food works with environmentally-friendly CO_2 (R744) as refrigerant. No icing, no drying out of samples, no dehumidification of the working chamber. Compared to appliances with refrigerant R134a, it scores with faster cooling-down times.
In the ICHeco L climate chamber, stability tests in accordance with ICH guidelines Q1B, option 2, can be performed, thanks to an illumination unit. Fluorescent lights with cold white light (daylight: light colour 865, 6.500 K) and UV radiation in the spectral range of 320 - 400 nm. Daylight and UV light comply with standard illuminant D65.

Model variant TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

Different variants of ICHeco:
ICHeco with humidity control
ICHeco L with humidity control and light

9.538 024

Specifications

Working temperature range with humidity and/or light (ICHeco/ICHeco L):	+10 °C to +60 °C
Working temperature range without humidity (ICHeco):	-10°C to +60°C
Working temperature range without humidity (ICHeco L):	0 °C to +60 °C
Setting temperature range ICHeco:	-10 to +60 °C
Setting temperature range ICHeco L:	0°C to +60°C
Setting accuracy temperature:	0.1 °C
Setting range humidity:	10 to 80 % rh
Setting accuracy humidity:	0.5 % rh
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included grids	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
ICH110eco	108	5	2	560 x 400* x 480	745 x 585** x 1233	1.35	114	1	**6.314 847**
ICH260eco	256	9	2	640 x 500* x 800	824 x 685** x 1552	1.35	165	1	**9.538 024** 1
ICH750eco	749	14	2	1040 x 600* x 1200	1224 x 785** x 1950	1.35	254	1	**9.538 025**
ICH110Leco	108	5	2	560 x 400* x 480	745 x 585** x 1233	1.45	114	1	**6.314 850**
ICH260Leco	256	9	2	640 x 500* x 800	824 x 685** x 1552	1.45	165	1	**9.538 026**
ICH750Leco	749	14	2	1040 x 600* x 1200	1224 x 785** x 1950	1.55	254	1	**9.538 027**

* Less 33 mm for fan
**Depth without door handle, please add 56 mm

Further products can be found in our online shop.

Humidity Chambers HCP

2

Memmert

The Memmert humidity chamber HCP - This climate chamber offers a full range of comfort, reliability and safety. This humidity chamber is ideally suited for environmental testing, environmental simulation, accelerated service life tests and 85/85 tests according to IEC 60068-2-67 and IEC 60068-2-78.
The active humidity control is the guarantee for ideal homogeneity of temperature and humidity as well as for short recovery times after opening the door. In combination with heating on all six sides, including heated inner glass door, it also minimises vaporisation in the interior and thus the risk of condensed water dripping onto the test object. An aluminium thermal conductive layer supports optimum temperature distribution and serves as a heat accumulator in case of a temporary power failure.

Model variant TwinDISPLAY: ControlCOCKPIT with two colour displays
You can find a detailed description of the "TwinDISPLAY" model at www.memmert.com

4.662 063

Specifications

Setting range active humidity control:	20 to 95 % rh
Setting accurate humidity:	0.5 % rh
Working temperature range:	at least 7 °C above ambient up to +90 °C
Setting temperature range:	+18 °C to +90 °C
Setting accurate temperature:	0.1 °C
Power supply:	230 V, 50/60 Hz

Type	Nom. capacity L	Max. grids	Included shelves	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Rated capacity kW	Net weight kg	PK	Cat. No.
HCP50	56	5	1	400 x 330* x 425	559 x 521** x 795	1.52	55	1	**4.662 063** 2
HCP105	107	6	2	560 x 400* x 480	719 x 591** x 850	1.72	75	1	**4.662 064**
HCP150	156	10	2	560 x 400* x 700	719 x 591** x 1070	1.80	90	1	**4.662 065**
HCP240	241	12	2	600 x 500* x 810	759 x 691** x 1180	1.84	110	1	**4.662 066**

* Less 35 mm for fan
**Depth without door handle, depth of door handle 56 mm

Suitable accessories can be found in our online shop.

1

1 Constant climate chambers, KBF/KMF series

BINDER

For long-term stable temperature/humidity simulations in one chamber.
The constant climate chambers are ideal for norm-compliant work according to ICH guidelines and work independently of the water supply.

KBF Series: Constant climate chambers with large temperature range:
0 °C to 70 °C and humidity range: 10 % RH to 80 % RH.
KMF Series: Ideal for demanding stress tests, e.g. at 85 °C and 85 % RH.
Temperature range: -10 °C to 100 °C and humidity range 10 % RH to 98 % RH.

Equipment:
- Electronically controlled APT.line™ preheating chamber with cooling system
- Inner chamber made of stainless steel
- Intuitive touchscreen controller with time-segment and real-time programming with internal data recording
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Inner glass door with seal
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- Avoidance of glass corrosion by special TIMELESS coating
- Access port with silicone plug diam. 30 mm, left side
- Door heating
- Ethernet interface for communication software APT-COM™ DataControlSystem
- Internal data logger, measured values can be read out in open format via USB
- Power supply 200 ... 230 V, 50/60 Hz

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
KBF 115	102	880 x 650 x 1050	600 x 351 x 483	1	**6.270 830**
KBF 240	247	925 x 800 x 1460	650 x 485 x 785	1	**4.661 323**
KBF 720	700	1250 x 890 x 1925	973 x 576 x 1250	1	**6.291 134**
KBF 1020	1020	1250 x 1145 x 1925	976 x 836 x 1250	1	**4.661 324**
KMF 115	102	880 x 650 x 1050	600 x 351 x 483	1	**6.287 692**
KMF 240	247	930 x 800 x 1465	650 x 485 x 785	1	**4.661 325**
KMF 720	700	1250 x 890 x 1925	973 x 576 x 1250	1	**4.661 326**

2

2 Constant climate chambers, KBF P/KBF LQC

NEW

BINDER

For long-term stable temperature/humidity simulations in one chamber.
The constant climate chambers are ideal for norm-compliant work according to ICH guidelines and work independently of the water supply.

KBF P Series: Constant climate chambers with ICH-compliant lighting and variably positionable light cassettes.
KBF LQC Series: Constant climate chambers with ICH-compliant light source and patented light dose control for UV-A and VIS**.** Temperature range: 0 °C to 70 °C and humidity range: 10 % RH to 80 % RH.

Equipment:
- Electronically controlled APT.line™ preheating chamber with cooling system
- Inner chamber made of stainless steel
- Intuitive touchscreen controller with time-segment and real-time programming with internal data recording
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Inner glass door with seal
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- Avoidance of glass corrosion by special TIMELESS coating
- Access port with silicone plug diam. 30 mm, left side
- Door heating
- Ethernet interface for communication software APT-COM™ DataControlSystem
- Internal data logger, measured values can be read out in open format via USB
- Power supply 200 ... 230 V, 50/60 Hz

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
KBF P 240	247	925 x 800 x 1460	650 x 485 x 785	1	**9.883 583**
KBF P 720	700	1250 x 890 x 1925	973 x 1250 x 576	1	**9.883 584**
KBF LQC 240	247	925 x 800 x 1460	650 x 485 x 785	1	**6.236 223**
KBF LQC 720	700	1250 x 890 x 1925	973 x 576 x 1250	1	**6.236 224**

1 Constant climate chambers series KBF-S Solid.Line

BINDER

Constant climate chambers for long-term tests and accelerated stability tests of pharmaceutical products according to the ICH guideline Q1A. With corrosion and condensate-free stainless steel interior for homogeneous temperature and humidity conditions.

- Electronically controlled APT.line™ preheating chamber with cooling system
- Inner chamber made completely of stainless steel
- 2 stainless steel racks incl. shelf support
- Intuitive touchscreen controller with time segment and real-time programming with internal measured value recording
- Humidity control with capacitive humidity sensor and vapor humidification
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible alarm
- Access port with silicone plug diam. 30mm, left side
- LCD display for indication of temperature, humidity, alarms and additional information
- Internal data logger with USB interface
- Independent water supply via canisters
- Models from 240 l capacity with double swivel castors and brake

1

Specifications

Humidity range:	20 ... 80 % r.F.
Humidity accuracy:	2.0 %
Temperature range:	0 ... 70 °C
Temperature accuracy:	±0.1 °C
Computer interface:	Ethernet
Power supply:	200 ... 230 V, 50/60 Hz

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Plug type	PK	Cat. No.
KBF-S 115	102	880 x 650 x 1050	600 x 351 x 483	EU	1	**6.275 186**
KBF-S 240	247	925 x 800 x 1460	650 x 485 x 785	EU	1	**4.665 284**
KBF-S 270	700	1250 x 890 x 1925	973 x 576 x 1250	EU	1	**4.665 286**
KBF-S 1020	1020	1250 x 1145 x 1925	976 x 1250 x 836	EU	1	**6.275 188**

Material test chambers, FP and M series

BINDER

The material test chambers from BINDER are highly precise and have a wide temperature range, as well as comprehensive programming options, with which you can customise ramps, profiles and processes.

FP Series: Material test chamber with forced convection.
M Series: Material test chambers with individual programming.

- Electronically controlled APT.line™ preheating chamber assuring temperature accuracy and reproducible results
- Adjustable fan speed
- 2 chrome-plated racks
- Temperature range from 5°C above ambient temperature to 300 °C
- Independent adjustable temperature safety device class 2 (DIN 12880), with visual temperature alarm
- RS 422 interface for use with APT-COM™ DataControlSystem communication software

2

9.883 710

3

9.883 565

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Type of auxiliary energy	PK	Cat. No.
FP 53	53	635 x 575 x 620	400 x 340 x 400	230 V, 50/60 Hz	1	**9.883 710** 2
FP 115	115	835 x 645 x 705	600 x 410 x 480	230 V, 50/60 Hz	1	**9.883 711**
FP 240	240	1035 x 745 x 825	800 x 510 x 600	230 V, 50/60 Hz	1	**9.883 712**
FP 400	400	1235 x 765 x 1025	1000 x 510 x 800	400 V, 50/60 Hz	1	**9.883 713**
FP 720	720	1235 x 865 x 1530	1000 x 610 x 1200	400 V, 50/60 Hz	1	**9.883 714**
M 53	53	635 x 575 x 780	400 x 340 x 400	230 V, 50/60 Hz	1	**9.883 563**
M 115	115	835 x 645 x 865	600 x 410 x 480	230 V, 50/60 Hz	1	**9.883 564**
M 240	240	1035 x 745 x 985	800 x 510 x 600	230 V, 50/60 Hz	1	**9.883 565** 3
M 400	400	1235 x 765 x 1185	1000 x 510 x 800	400 V, 50/60 Hz	1	**9.883 566**
M 720	720	1235 x 865 x 1695	1000 x 610 x 1200	400 V, 50/60 Hz	1	**9.883 567**

Growth chambers, KBW, KBWF series

Homogeneous lighting conditions with constant temperature and humidity conditions, the BINDER growth chambers. *BINDER*
The responsive humidification system, the high-performance cooling and uniform light distribution ensure optimal growth conditions.

KBW Series: Growth chambers with light.
KBWF Series: Growths chambers with light and humidity.

Equipment:
- Electronically controlled APT.line™ preheating chamber
- Temperature range 0 °C to 70 °C (without humidity and illumination)
- Humidity range 10 % to 80 % RH (KBWF)
- 2 variable position illumination cassettes each with 5 daylight fluorescent illumination tubes
- Controller with time-segment and real-time programming
- Humidity regulation with capacitative humidity sensor and vapor humidification (KBWF)
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- Ethernet or RS 422 interface for communication software APT-COM™ DataControlSystem

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Type of auxiliary energy	PK	Cat. No.	
KBW 240	247	925 x 800 x 1460	650 x 485 x 785	200 ... 240 V, 50 Hz	1	**9.883 573**	
KBW 400	400	925 x 800 x 1945	650 x 485 x 1270	200 ... 240 V, 50/60 Hz	1	**9.883 535**	1
KBW 720	698	1255 x 887 x 1925	970 x 576 x 1270	200 ... 240 V, 50/60 Hz	1	**9.883 574**	
KBWF 240	247	930 x 800 x 1460	650 x 485 x 785	200 ... 240 V, 50 Hz	1	**9.883 575**	
KBWF 720	720	1255 x 890 x 1925	973 x 576 x 1250	200 ... 240 V, 50 Hz	1	**9.883 576**	2

1

9.883 535

2

9.883 576

3

3 Rapid incinerator

For individual and series incineration of solids and liquids. Upper platform with 8 openings of 34 mm diameter, for porcelain crucibles up to 50 mm diameter. Upper platform and housing made of stainless steel. With 120 minute timer with audible signal after timed period and separate continuous operation switch. A safety switch switches the mains supply off/on automatically on opening/closing the incinerator chamber. With 1.5 metre cable and earthed plug. *Gestigkeit*

Type SVR/E
With electronic temeprature control which allows stepless heating adjustment from 10 to 100 %. Complete for use.

Type SVD 95
With digital temperature adjustment and display. Complete for use.

Type	Dimensions (W x D x H) mm	Rating W	Temp. range max. °C	Supply requirements V	Weight kg	PK	Cat. No.
SVR/E	450 x 310 x 180	2500	950	230	7	1	**9.884 140**
SVD 95	450 x 310 x 180	2500	950	220	7	1	**9.884 141**
Heating element EH 400 for SVR/E (spare part)						1	**9.884 142**
Heating element EH 95 for SVD 95 (spare part)						1	**9.884 143**

Muffle furnaces up to 1300 °C

NEW

1

SNOL

High temperature furnaces with glass fibre insulated chamber.
Suitable for applications in industry, science and medicine.

- Ceramic bottom plate
- Side-opening, down-opening or top-opening door, depending on model
- Controls easily accessible in the socket
- Fast heating times
- Furnace housing made of powder-coated metal
- Good temperature stability
- Energy saving
- Models with Omron E5CC controller: time and temperature can be set
- Models with Omron E5CC-T controller: 8 storable programs

Model numbers with "1100" up to 1100 °C
Model numbers with "1300" up to 1300 °C

4.669 221

Type	Nom. capacity L	Description	Internal dimensions (W x D x H) mm	Type of auxiliary energy	PK	Cat. No.
SNOL 3/1100 LHM01*	3	Top-opening	120 x 200 x 105	230 V, 50 Hz	1	**4.669 202**
SNOL 8.2/1100 LHM01*	8	Top-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 203**
SNOL 8.2/1100 LSM01*	8	Side-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 204**
SNOL 8.2/1100 LZM01*	8	Down-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 205**
SNOL 13/1100 LHM01*	13	Top-opening	220 x 335 x 170	230 V, 50 Hz	1	**4.669 206**
SNOL 22/1100 LHM01*	22	Top-opening	280 x 500 x 160	230 V, 50 Hz	1	**4.669 207**
SNOL 39/1100 LHM01*	39	Top-opening	320 x 495 x 230	400 V, 50 Hz	1	**4.669 208**
SNOL 6.7/1300 LSM01*	7	Side-opening	145 x 310 x 135	230 V, 50 Hz	1	**4.669 209**
SNOL 10/1300 LHM01*	10	Top-opening	190 x 335 x 170	230 V, 50 Hz	1	**4.669 210**
SNOL 3/1100 LHM01**	3	Top-opening	120 x 200 x 105	230 V, 50 Hz	1	**4.669 220**
SNOL 8.2/1100 LHM01**	8	Top-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 221**
SNOL 8.2/1100 LSM01**	8	Side-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 222**
SNOL 8.2/1100 LZM01**	8	Down-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 223**
SNOL 13/1100 LHM01**	13	Top-opening	220 x 335 x 170	230 V, 50 Hz	1	**4.669 224**
SNOL 22/1100 LHM01**	22	Top-opening	280 x 500 x 160	230 V, 50 Hz	1	**4.669 225**
SNOL 39/1100 LHM01**	39	Top-opening	320 x 495 x 230	400 V, 50 Hz	1	**4.669 226**
SNOL 6.7/1300 LSM01**	7	Side-opening	145 x 310 x 135	230 V, 50 Hz	1	**4.669 227**
SNOL 10/1300 LHM01**	10	Top-opening	190 x 335 x 170	230 V, 50 Hz	1	**4.669 228**

* with Omron E5CC controller
**with Omron E5CC-T controller

2 Muffle Furnaces Series LE 1/11 - LE 14/11 up to 1100 °C

2

Nabertherm

Compact muffle furnaces with dual shell furnace housing of rust-free stainless steel and heating elements encased in quartz glass tubes.
- Tmax 1100 °C, working temperature 1050 °C
- Heating from two sides from heating elements in quartz glass tubes
- Maintenance-friendly replacement of heating elements and insulation
- Insulation only made of materials that are classified as not carcinogenic acc. to TRGS 905, class 1 or 2
- Housing made of sheets of textured stainless steel
- Dual shell housing for low external temperatures and high stability
- Flap door which can also be used as a work platform
- Exhaust air outlet in rear wall
- Compact dimensions and light weight
- Controller mounted under the door to save space
- Equipped with the basic controller R 7 with one free storeable temperature, which is dwelled until the controller is switch off
- Standard power supply 230 V, 1/N/PE, 50/60 Hz

Type/Controller	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Rating kW	Weight kg	PK	Cat. No.
LE 1/11/R7	1	290 x 280 x 406	90 x 115 x 110	1.5	10	1	**9.764 543**
LE 2/11/R7	2	330 x 385 x 406	110 x 180 x 110	1.8	10	1	**9.764 537**
LE 6/11/R7	6	390 x 434 x 466	170 x 200 x 170	1.8	18	1	**9.764 539**
LE 14/11/R7	14	440 x 534 x 516	220 x 300 x 220	2.9	25	1	**9.764 541**

External dimensions vary for versions with additional equipment. Dimensions on request.

Safety gloves, heat protection - please see page 239.

Muffle furnaces series L/LT 1100 °C to 1400 °C

For daily laboratory use. Models with flap door or lift door available, for temperatures from 1100 °C to 1400 °C. *Nabertherm*

- Dual shell housing made of textured stainless steel sheets for low external temperatures and high stability
- Adjustable air inlet integrated in door
- Exhaust air outlet in rear wall of furnace
- Solid state relays provide low-noise operation
- Optionally available with flap door (L models) that can be used as work platform or with lift door (LT models) with hot surface facing away from the operator
- Available with the programmable controllers B 410 and C 450 with adjustable ramps and hold times (L 1/12 with R7 or 3216)
- All insulation materials used are classified as non-carcinogenic according to TRGS 905, Class 1 or 2
- Standard connection 220-240 V 1/N/PE 50/60 Hz

1100 °C and 1200 °C models
- Ceramic heating plates with integrated heating wire, splash and exhaust protected, easy to replace
- heating from two sides (heating from three sides for muffle furnaces with interior volumes of 24 litres and 40 litres)

1300 °C and 1400 °C models
- Heating elements on support tubes for free heat radiation, short heating times and long service life
- Heating from two sides

Optional
- Chimney, chimney with fan or catalytic converter
- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Protective gas connection to purge with non-flammable protective or reaction gases (not available in combination with chimney, chimney with fan or catalytic converter)
- Manual or automatic gas supply system
- Process control and documentation via VCD software package for monitoring, documentation and control

1

1 Muffle furnaces series LT 3/11 - LT 40/11, max. 1100 °C, with lift door

Max. temperature 1100 °C. Lift door with hot surface facing away from the operator. *Nabertherm*

Type	Nom. capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Power consumption W	PK	Cat. No.
LT 3/11/B410	3	160 x 140 x 100	385 x 330 x 405	1200	1	**6.241 787**
LT 5/11/B410	5	200 x 170 x 130	385 x 390 x 460	2400	1	**6.260 949**
LT 9/11/B410	9	230 x 240 x 170	415 x 455 x 515	3000	1	**6.241 499**
LT 15/11/B410	15	230 x 340 x 170	415 x 555 x 515	3500	1	**6.237 183**
LT 24/11 *	24	280 x 340 x 250	490 x 555 x 580	4500	1	**6.274 993**
LT 40/11/B410*	40	320 x 490 x 250	530 x 705 x 580	6000	1	**6.239 613**

*400 V 3/N/PE 50/60 Hz connector as standard
External dimensions vary for versions with additional equipment. Dimensions on request.

2

2 Muffle furnaces series L 3/11 - L 40/11, max. 1100 °C, with flap door

Max. temperature 1100 °C. Flap door can be used as work platform. *Nabertherm*

Type	Nom. capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Power consumption W	PK	Cat. No.
L 3/11/B410	3	160 x 140 x 100	385 x 330 x 405	1200	1	**6.059 769**
L 5/11/B410	5	200 x 170 x 130	385 x 390 x 460	2400	1	**6.092 769**
L 9/11/B410	9	230 x 240 x 170	415 x 455 x 515	3000	1	**6.302 391**
L 15/11/B410	15	230 x 340 x 170	415 x 555 x 515	3500	1	**6.056 446**
L 24/11/B410*	24	280 x 340 x 250	490 x 555 x 580	4500	1	**6.206 861**
L 40/11/B410*	40	320 x 490 x 250	530 x 705 x 580	6000	1	**7.660 691**

* 400 V 3/N/PE 50/60 Hz connector as standard
External dimensions vary for versions with additional equipment. Dimensions on request.

1 Muffle furnaces series LT 3/12 - LT 40/12, max. 1200 °C, with lift door

Max. temperature 1200 °C. Lift door with hot surface facing away from the operator. *Nabertherm*

Type	Nom. capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Power consumption W	PK	Cat. No.
LT 3/12/B410	3	160x 140 x 100	385 x 330 x 405	1200	1	**6.256 646**
LT 5/12/B410	5	200 x 170 x 130	385 x 390 x 460	2400	1	**6.284 369**
LT 9/12/B410	9	230 x 240 x 170	415 x 455 x 515	3000	1	**6.244 089**
LT 15/12/B410	15	230 x 340 x 170	415 x 555 x 515	3500	1	**6.240 063**
LT 24/12/B410*	24	280 x 340 x 250	490 x 555 x 580	4500	1	**6.287 691**
LT 40/12/B410*	40	320 x 490 x 250	530 x 705 x 580	6000	1	**4.660 518**

* 400 V 3/N/PE 50/60 Hz connector as standard
External dimensions vary for versions with additional equipment. Dimensions on request.

1

2 Muffle furnaces series L 1/12 - L 40/12, max. 1200 °C, with flap door

Max. temperature 1200 °C. Flap door can be used as work platform. *Nabertherm*

Type	Nom. capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Power consumption W	PK	Cat. No.
L 1/12	1	90 x 115 x 110	290 x 280 x 430	1500	1	**4.675 300**
L 3/12/B410	3	160 x 140 x 100	385 x 330 x 405	1200	1	**6.201 618**
L 5/12/B410	5	200 x 170 x 130	385 x 390 x 460	2400	1	**6.223 409**
L 9/12/B410	9	230 x 240 x 170	415 x 455 x 515	3000	1	**6.226 450**
L 15/12/B410	15	230 x 340 x 170	415 x 555 x 515	3500	1	**6.233 463**
L 24/12/B410*	24	280 x 340 x 250	490 x 555 x 580	4500	1	**6.265 211**
L 40/12/B410*	40	320 x 490 x 250	530 x 705 x 580	6000	1	**6.234 225**

* 400 V 3/N/PE 50/60 Hz connector as standard
External dimensions vary for versions with additional equipment. Dimensions on request.

2

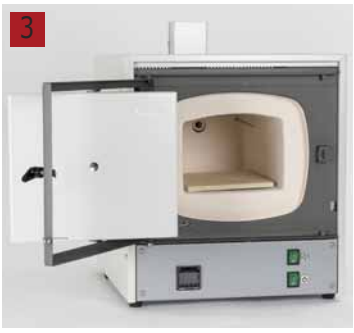
Ashing furnaces up to 1300 °C

NEW

Ashing furnaces with glass fibre insulated chamber. Suitable for applications in industry, science and medicine. *SNOL*

- Fan-assisted chimney for air extraction
- Side- opening, down-opening or top-opening door, depending on model
- Continuous air change in the chamber
- Controls easily accessible in the socket
- Fast heating times
- Furnace housing made of powder-coated metal
- Good temperature stability
- Energy saving
- Models with Omron E5CC controller: time and temperature can be set
- Models with Omron E5CC-T controller: 8 storable programs

3



4.669 231

Model numbers with "1100" up to 1100 °C
Model numbers with "1300" up to 1300 °C

Type	Nom. capacity L	Description	Internal dimensions (W x D x H) mm	Type of auxiliary energy	PK	Cat. No.
SNOL 3/1100 LHM21*	3	Top-opening	120 x 200 x 105	230 V, 50 Hz	1	**4.669 211**
SNOL 8,2/1100 LHM21*	8	Top-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 212**
SNOL 8,2/1100 LSM21*	8	Side-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 213**
SNOL 8.2/1100 LZM21*	8	Down-opening	200 x 300 x 133	230 V, 50 Hz	1	**4.669 214**
SNOL 13/1100 LHM21*	13	Top-opening	220 x 335 x 170	230 V, 50 Hz	1	**4.669 215**
SNOL 22/1100 LHM21*	22	Top-opening	280 x 500 x 160	230 V, 50 Hz	1	**4.669 216**
SNOL 39/1100 LHM21*	39	Top-opening	320 x 495 x 230	400 V, 50 Hz	1	**4.669 217**
SNOL 6.7/1300 LSM21*	7	Side-opening	145 x 310 x 135	230 V, 50 Hz	1	**4.669 218**
SNOL 10/1300 LHM21*	10	Top-opening	190 x 335 x 170	230 V, 50 Hz	1	**4.669 219**
SNOL 3/1100 LHM21**	3	Top-opening	120 x 200 x 105	230 V, 50 Hz	1	**4.669 229**
SNOL 8,2/1100 LHM21**	8	Top-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 230**
SNOL 8,2/1100 LSM21**	8	Side-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 231**
SNOL 8.2/1100 LZM21**	8	Down-opening	195 x 310 x 135	230 V, 50 Hz	1	**4.669 232**
SNOL 13/1100 LHM21**	13	Top-opening	220 x 335 x 170	230 V, 50 Hz	1	**4.669 233**
SNOL 22/1100 LHM21**	22	Top-opening	280 x 500 x 160	230 V, 50 Hz	1	**4.669 234**
SNOL 39/1100 LHM21**	39	Top-opening	320 x 495 x 230	400 V, 50 Hz	1	**4.669 235**
SNOL 6.7/1300 LSM21**	7	Side-opening	145 x 310 x 135	230 V, 50 Hz	1	**4.669 236**
SNOL 10/1300 LHM21**	10	Top-opening	190 x 335 x 170	230 V, 50 Hz	1	**4.669 237**

* with Omron E5CC controller
**with Omron E5CC-T controller

1

6.310 023

2

6.310 029

High-temperature chamber furnaces with air circulation NA/N

Nabertherm

These chamber furnaces with air circulation are characterized by their extremely high temperature uniformity. Hence, they are especially suitable for processes such as cooling, crystalizing, preheating, curing, but also for numerous processes in tool making. Due to the modular concept, the forced convection furnaces can be adjusted to the process requirements by adding suitable equipment.

- Tmax 450 °C, 650 °C, or 850 °C
- Horizontal air circulation
- Swing door hinged on the right
- Temperature uniformity up to ±4 °C according to DIN 17052-1 (model NA 15/65 up to ±5 °C)
- Optimum air flow and temperature uniformity through high circulation rates
- One frame sheet and rails for two additional trays included in the scope of delivery (NA 15/65 without frame sheet)
- Stainless steel air-baffles in the furnace for optimum air circulation
- Base frame included in the delivery, NA 15/65 designed as table-top model
- Air inlet and exhaust air flaps as additional equipment for using as drying oven
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Available with the programmable controllers B 400 and C 440 with adjustable ramps and hold times (NA 15/65 with B 410 or C 450)
- Standard power supply 400 V 3/N/PE 50/60 Hz (NA 15/65: 220 - 240 V, 1/N/PE)

Type/Controller	Temp. max. °C	Capacity L	Rating kW	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.	
NA 30/45/B400	450	30	3.6	290 x 420 x 260	1040 x 1290 x 1385	1	**6.310 019**	
NA 60/45/B400	450	60	6.6	350 x 500 x 350	1100 x 1370 x 1475	1	**6.310 021**	
NA 120/45/B400	450	120	9.8	450 x 600 x 450	1250 x 1550 x 1550	1	**6.310 023**	1
NA 250/45/B400	450	250	12.8	600 x 750 x 600	1350 x 1650 x 1725	1	**6.310 025**	
NA 500/45/B400	450	500	18.8	750 x 1000 x 750	1550 x 1900 x 1820	1	**6.310 027**	
NA 15/65 HA/B410*	650	15	2.8	295 x 340 x 170	470 x 790 x 460	1	**6.310 029**	2
NA 30/65/B400	650	30	7.0	290 x 420 x 260	870 x 1290 x 1385	1	**6.310 031**	
NA 60/65/B400	650	60	10.0	350 x 500 x 350	910 x 1390 x 1475	1	**6.310 033**	
NA 120/65/B400	650	120	13.0	450 x 600 x 450	990 x 1470 x 1550	1	**6.310 035**	
NA 250/65/B400	650	250	21.0	600 x 750 x 600	1170 x 1650 x 1680	1	**6.310 037**	

*Standard power supply 220-240 V 1/N/PE 50/60 Hz
External dimensions vary for versions with additional equipment. Dimensions on request.

3

6.226 571

4

6.285 618

Chamber furnaces

NEW

Nabertherm

The chamber furnaces are suitable for Annealing, Hardening and Brazing. The furnaces can be extended with a variety of accessories, like annealing boxes for operation under protective gas, roller guides, or a cooling station with a quench tank. Even high-performance applications like the annealing of titanium can be implemented without the use of expensive and complicated annealing systems.

- Robust insulation with light refractory bricks
- Deep furnace chamber with three-sides heating: from both side walls and bottom
- Low energy consumption due to multi-layer insulation
- Base frame included
- N 7/H - N 17/HR designed as table-top model
- Parallel guided downward swinging door (user protected from heat radiation)
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Available with the programmable controllers B 400 and C 440 with adjustable ramps and hold times

Type	Temp. max. °C	Capacity L	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Type of auxiliary energy	PK	Cat. No.	
N 7/H	1280	9	250 x 250 x 140	800 x 650 x 600	230 V, 1/N/PE, 50 Hz	1	**6.226 571**	3
N 11/H	1280	11	250 x 350 x 140	800 x 750 x 600	230 V, 1/N/PE, 50 Hz	1	**6.227 200**	
N 11/HR	1280	11	250 x 350 x 140	800 x 750 x 600	400 V, 3/N/PE, 50 Hz	1	**6.226 570**	
N 31/H	1280	30	350 x 350 x 250	1040 x 1100 x 1340	400 V, 3/N/PE, 50 Hz	1	**4.675 220**	
N 41/H	1280	40	350 x 500 x 250	1040 x 1250 x 1340	400 V, 3/N/PE, 50 Hz	1	**6.241 122**	
N 61/H	1280	60	350 x 750 x 250	1040 x 1500 x 1340	400 V, 3/N/PE, 50 Hz	1	**6.285 618**	4
N 87/H	1280	87	350 x 1000 x 250	1040 x 1750 x 1340	400 V, 3/N/PE, 50 Hz	1	**4.675 221**	

1 Tube Furnaces

1

Nabertherm

These compact tube furnaces with integrated control systems can be used universally for many processes. Equipped with a standard working tube of C 530 ceramic and two fiber plugs, these tube furnaces have an unbeatable price/performance ratio.
- Tmax 1200 °C or 1300 °C
- Single-zoned design as standard
- Dual shell housing made of sheets of textured stainless steel
- Outer tube diameter of 50 to 170 mm, heated length from 250 to 1000 mm
- Working tube of C 530 ceramic including two fiber plugs as standard equipment
- Solid state relays provide for lownoise operation
- Available with the programmable controllers B 410, C 450 and P 480 (for three-zoned design) with adjustable ramps and hold times
- Standard power supply 400 V 3/N/PE 50/60 Hz (R 50/250 und R 50/500: 220 V, 1/N/PE, 50/60 Hz)

Option:
- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Charge control with temperature measurement in the working tube and in the furnace chamber outside the tube
- Three-zoned design (heated length from 500 mm)
- Working tubes
- Gas supply systems for protective gas or vacuum operation
- Process control and documentation with VCD software package

Type/Controller	Tube diam. mm	Tube length mm	Max. temp. °C	Dimensions (W x D x H) mm	Power W	PK	Cat. No.
R 50/250/12/B410	40	450	1200	434 x 340 x 508	1.6	1	**9.764 651**
R 50/500/12/B410	40	700	1200	670 x 340 x 508	2.3	1	**9.764 653**
R 170/750/12/B410	150	1100	1200	920 x 460 x 628	11.5	1	**9.764 659**
R 170/1000/12/B410	150	1350	1200	1170 x 460 x 628	11.5	1	**9.764 661**
R 50/250/13/B410	40	450	1300	434 x 340 x 508	1.6	1	**9.764 663**
R 50/500/13/B410	40	700	1300	670 x 340 x 508	2.3	1	**9.764 665**
R 120/500/13/B410	100	850	1300	670 x 410 x 578	6.5	1	**9.764 667**
R 170/750/13/B410	150	1100	1300	920 x 460 x 628	11.5	1	**9.764 671**
R 170/1000/13/B410	150	1350	1300	1170 x 460 x 628	11.5	1	**9.764 673**
R 120/500/12/B410	100	850	1200	670 x 410 x 578	6.5	1	**9.764 655**

2 3 Tube Furnaces with Stand

NEW

2

Nabertherm

These compact tube furnaces are used when laboratory experiments must be performed horizontally, vertically, or at specific angles. The ability to configure the angle of tilt and the working height, and their compact design, also make these tube furnaces suitable for integration into existing process systems.

- Vertical or horizontal operation freely adjustable
- Working height freely adjustable
- Working tube made of C 530 ceramic
- Control system integrated in furnace base
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Available with the programmable controllers B 410 and C 450 with adjustable ramps and hold times

Specifications

Power input: 1800 W
Power supply: 230 V, 1/N/PE, 50/60 Hz

3

Type	Tube diam. mm	Tube length mm	Temp. max. °C	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
RT 50-250/11	50	360	1100	350 x 380 x 740	25	1	**6.242 203**
RT 50-250/13	50	360	1300	350 x 380 x 740	25	1	**6.240 831**
RT 30-200/15	30	360	1500	445 x 475 x 740	45	1	**4.675 222**

4 Glass drying pistol

4

LABC-Labortechnik

Ideally suited for drying of small sample volumes. This sample dryer, for analysing substances and synthetic products, uses heat, desiccant and vacuum at the same time for optimum results. Its temperature range can be adjusted between +30 °C to +160 °C, with a temperature stability of ±1°C.

The two-part drying vessel is approximately two parts of DURAN® glass:
1) Drying tube with an outer diameter of 44 mm, length inside 200 mm, joint NS45.
2) Ground flask with stopcock for connection to a vacuum pump.
The glass drying oven needs to be fixed with screw stand rod at the laboratory stand to be secured. Dimensions (without mounting for tripod and Flask): H 120 mm x B 195 mm x T 185 mm. Weight: 2 kg

Supplied with: Glass drying oven consisting of heating element with support rod and glassware with ground drying tube and ground flask with stopcock.

Type	PK	Cat. No.
Glass drying oven	1	**6.269 737**
Glassware for Glass drying oven	1	**6.269 738**

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