Аксессуары

Описание

Starter package

Accessories for our smallest unit, Alpha 1–2 LDplus, for drying in round-bottom flasks, wide-neck bottles or ampoules or on unheated shelves.

Starter product package with Alpha 1–2 LDplus   Starter

3 shelves dia. 200 mm = 920 cm², distance between shelves 85 mm, additional ports for 8 flasks, round-bottom flasks and wide-neck bottles or distributor			
System	Alpha 1-2 LDplus (item no. 101521)		
Description	Item number	Quantity	Page
1 Vacuum sensor	125478	1	88
2 Vacuum hose	125702	1	86
3 Base plate	120890	1	36
4 Three unheated shelves	120893	1	27
5 Acrylic drying chamber with 8 ports	121455	1	20
6 Rubber valves	121860	8	60
7 Vacuum pump RZ-2,5 (2.25 m³/h)	125302	1	85
8 Exhaust filter	125501	1	87

Routine package

Accessories for the Beta series for drying in round-bottom flasks, wide-neck bottles or vials
or on unheated shelves with relatively high specimen volume.

Routine product package with Beta 2–8 LSCbasic   Routine

Drying chamber with 24 ports for bottles, round-bottom flasks and wide-neck bottles or distributor for ampoules			
System	Beta 2–8 LSCbasic		
Description	Item number	Quantity	Page
1 Vacuum sensor	125478	1	88
2 Vacuum pump RZ-6	125307	1	85
3 Exhaust filter	125501	1	87
4 Vacuum hose	125702	1	86
5 Acrylic drying chamber	121550	1	22
6 Extra acrylic drying chamber	121850	1	22
7 Rubber valve for connecting vessels	121860	24	60
8 Drip tray for acrylic drying chamber	121360	1	37

Pharmacy product package

Accessories for the Alpha LSCplus series for carrying out the complete freeze drying
process, including connection of crimp-seal vials under vacuum or inert gas.

Pharmacy 1 product package with Alpha 2-4 LSCplus   Pharmacy 1

Freezing and drying ice condenser chamber (method A) cooled shelves with sealing device (dia. 200 mm, total area 0.031 m²)			
System	Alpha 2-4 LSCplus (item no. 102142)		
Description	Item number	Quantity	Page
1 Extension unit HED-16 LSCplus	125041	1	
2 Vacuum pump RZ-2,5 (2.25 m³/h)	125302	1	85
3 Exhaust filter	125501	1	87
4 Vacuum hose with standard flange couplings	125702	1	86
5 Electromagnetic pressure control and stop valve	125910	1	87
6 Sealing device integrated in acrylic lid	120861	1	30

Dish Drying 1 product package

Accessories for laboratory systems with LSCplus controller for drying relatively large specimen volumes in dishes or vessels (or in aluminium blocks if necessary).

Dish Drying 1 product package with Alpha 1-4 LSCplus

Dish Drying 1

10 heated shelves (dia. 200 mm; total area 0.31 m², distance between shelves 25 mm – can be adjusted by removing shelves)			
System	Alpha 1-4 LSCplus (item no. 102141)		
Description	Item number	Quantity	Page
1 Extension unit HED-16 LSCplus	125041	1	
2 Vacuum pump RZ-6	125307	1	85
3 Exhaust filter	125501	1	87
4 Vacuum hose with standard flange couplings	125702	1	86
5 Electromagnetic pressure control and stop valve	125910	1	87
6 Base plate	120880	1	34
7 Frame for 10 shelves	121160	1	35
8 Shelves with rim, dia. 200 mm, with LyoBus-Modul	122576	10	34
9 Acrylic drying chamber	121558	1	21

Pharmacy 2 product package

Accessories for laboratory systems with LSCplus controller for drying relatively large product volumes
in crimp-seal vials, including connection under vacuum or inert gas.

Pharmacy 2 product package with Alpha 2-4 LSCplus

Pharmacy 2

4 heated shelves with sealing device (dia. 250 mm, total area 0.18 m², distance between shelves 50 mm –
can be adjusted by removing shelves)

System	Alpha 2–4 LSCplus (item no. 102142)		
Description	Item number	Quantity	Page
1 Extension unit HED-16 LSCplus	125041	1	
2 Vacuum pump RZ-6	125307	1	85
3 Exhaust filter	125501	1	87
4 Vacuum hose with standard flange couplings	125702	1	86
5 Electromagnetic pressure control and stop valve	125910	1	87
6 Base plate	120880	1	34
7 Sealing device with 1 shelf	120841	1	31
8 Shelf with rim	120830	3	31
9 Acrylic drying chamber	121505	1	21

Flask Drying product package

Accessories for the Gamma and Delta LSCplus series for drying in round-bottom flasks,
wide-neck bottles or ampoules.

Flask Drying product package with Gamma 2–16 LSCplus   Flask Drying

Drying manifold for 24 round-bottom flasks / wide-neck bottles or distributor for ampoules			
System	Gamma 2–16 LSCplus (item no. 102211)		
Description	Item number	Quantity	Page
1 Vacuum pump RC-6	125295	1	84
2 Vacuum hose with standard flange couplings	125702	1	86
3 Electromagnetic pressure control and stop valve	125911	1	
4 Solvent-resistant manifold with 24 rubber valves	112237	1	39
5 Drip tray	121360	1	39

Dish Drying 2 product package

Accessories for the Delta (and Gamma) LSCplus series for drying very large specimen volumes in dishes.

Dish Drying 2 product package with Delta 2-24 LSCplus

Dish Drying 2

8 heatable shelves (dia. 375 mm, total area 0.88 m², distance between shelves 48 mm)			
System	Delta 2–24 LSCplus (item no. 102301)		
Description	Item number	Quantity	Page
1 Vacuum pump 20 m³/h	125263	1	84
2 Exhaust filter	125502	1	88
3 Electromagnetic pressure control and stop valve	125911	1	
4 Plate frame with 8 electrically heatable shelves	122826	1	36
5 Acrylic drying chamber	121529	1	25
6 Lifting hoist for acrylic drying chamber, electronic control	121914	1	

3.1 Drying Chambers

Drying chambers Ø 240 mm (for Alpha 1–2 LDplus)

The drying chamber can be placed directly on top of any laboratory system. A base plate is additionally necessary when shelves and racks are used.

Acrylic drying chamber
Order number **121450**

Diameter	240 mm
Clear height	285 mm
Weight approx.	3.6 kg
Features	With NS 45/40 ground joint stoppers
Remark	Alpha 1-2 LDplus

Acrylic drying chamber
Order number **121454**

Diameter	240 mm
Clear height	285 mm
Weight approx.	3.6 kg
Features	With 6 ports for individually closable rubber valves
Remark	Alpha 1-2 LDplus

Acrylic drying chamber
Order number **121455**

Diameter	240 mm
Clear height	285 mm
Weight approx.	3.6 kg
Features	With 8 ports for individually closable rubber valves, including NS 45/40 ground joint stoppers
Remark	Alpha 1-2 LDplus

Overview   Ø 240 mm only for Alpha 1–2 LDplus

Item number	Height [mm]	Connections	Weight [kg]
121450	285		3.6
121454	285	6	3.6
121455	285	8	3.6

Stainless steel drying chamber
Order number **121536**

Diameter	240 mm
Clear height	295 mm
Weight	8 kg
Features	With adapter ring, only usable in combination with glass lid 121398
Remark	Alpha 1-2 LDplus

Connection ring, stainless steel		Order number	121534
Diameter	240 mm		
Clear height	55 mm		
Weight	2.7 kg		
Features	With 8 ports for rubber valves including adapter ring; can only be used in combination with glass lid 121398 and stainless steel drying chamber 121536		
Connection	For connecting vessels with DIN female ground joint NS29/32: 8x 100 ml, 8x 250 ml, 8x 500 ml, 8x 1000 ml, 8x 2000 ml round-bottom flasks 8x 75 ml, 8x 150 ml, 8x 300 ml, 8x 600 ml, 8x 1200 ml wide-neck filter bottles		
Remark	Alpha 1-2 LDplus		

Drying chambers Ø 300 mm (not for Alpha 1–2 LDplus)

Acrylic drying chamber		Order number	121500
Diameter	300 mm		
Clear height	295 mm		
Weight approx.	4.5 kg		
Features	With stoppers		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Acrylic drying chamber		Order number	121505
Diameter	300 mm		
Clear height	460 mm		
Weight approx.	6 kg		
Features	With stoppers		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Acrylic drying chamber		Order number	121558
Diameter	300 mm		
Clear height	515 mm		
Weight approx.	6.4 kg		
Features	Suitable for hoist		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Acrylic drying chamber		Order number	121550
Diameter	300 mm		
Clear height	295 mm		
Weight approx.	5.1 kg		
Connection	With 12 ports for individually closable rubber valves		
Features	With stoppers		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Additional acrylic chamber		Order number	121850
Diameter	300 mm		
Clear height	295 mm		
Weight approx.	4.8 kg		
Connection	With 12 ports for individually closable rubber valves		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Acrylic drying chamber		Order number	121555
Diameter	300 mm		
Clear height	460 mm		
Weight approx.	6 kg		
Connection	With 12 ports for individually closable rubber valves		
Features	With stoppers		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Acrylic drying chamber		Order number	121557
Diameter	300 mm		
Clear height	515 mm		
Weight approx.	6.6 kg		
Connection	With 12 ports for individually closable rubber valves		
Features	Suitable for hoist		
Remark	For all laboratory units except of Alpha 1-2 LDplus		

Overview	Ø 300 mm for Alpha to Delta			
	Item number	Height [mm]	Connections	Weight [kg]
	121500	295		4.5
	121550	295	12	5.1
	121850	295	12	4.8
	121505	460		6
	121555	460	12	5.1
	121558	515		6.4
	121557	515	12	6.6

Stainless steel drying chamber   Order number   121537

Diameter	300 mm
Clear height	295 mm
Weight approx.	5.4 kg
Related items	Only suitable for use with glass lid 121411
Features	With adapter ring
Remark	For all laboratory units except of Alpha 1-2 LDplus

Stainless steel drying chamber   Order number   121538

Diameter	300 mm
Clear height	460 mm
Weight approx.	8.6 kg
Related items	Only suitable for use with glass lid 121411
Features	With adapter ring
Remark	For all laboratory units except of Alpha 1-2 LDplus

Conection ring, stainless steel   Order number   121535

Diameter	300 mm
Height	55 mm
Weight	2 kg
Connection	For connecting vessels with DIN female ground joint NS29/32: 12x100 ml, 12x250 ml, 12x500 ml, 12x1000 ml, 12x2000 ml round-bottom flasks · 12x75 ml, 12x150 ml, 12x300 ml, 12x600 ml, 12x1200 ml wide-neck filter bottles
Related items	Only usable for use with glass lid 121411 and stainless steel drying chamber 121537 or 121538
Features	With adapter ring
Remark	For all laboratory units except of Alpha 1-2 LDplus

Drying chambers Ø 457 mm (not suitable for use with Alpha 1–2 LDplus)
• Adapter flange item no. 120901 required for Alpha 1/2–4 LSCbasic and Beta 1/2–8 LSCbasic
• Adapter flange item no. 120881 required for Alpha 1/2–4 LSCplus and Beta 1/2–8 LSCplus

Acrylic drying chamber	Order number	121511
Diameter	457 mm	
Clear height	340 mm	
Weight approx.	12.7 kg	
Features	With hoisting eye including connection for lifting device	
Remark	For all laboratory units except of Alpha 1-2 LDplus	

Acrylic drying chamber	Order number	121515
Diameter	457 mm	
Clear height	340 mm	
Weight approx.	12.7 kg	
Features	With 18 individually closable rubber valves, hoisting eye including connection for lifting device	
Remark	For all laboratory units except of Alpha 1-2 LDplus	

Acrylic drying chamber	Order number	121517
Diameter	457 mm	
Clear height	460 mm	
Weight approx.	14.3 kg	
Features	With hoisting eye including connection for lifting device	
Remark	For all laboratory units except of Alpha 1-2 LDplus	

Acrylic drying chamber	Order number	121521
Diameter	457 mm	
Clear height	460 mm	
Weight approx.	14.3 kg	
Features	With 18 ports for rubber valves, hoisting eye including connection for lifting device	
Remark	For all laboratory units except of Alpha 1-2 LDplus	

Acrylic drying chamber — Order number 121523

Diameter	457 mm
Clear height	565 mm
Weight approx.	15.8 kg
Features	With hoisting eye including connection for lifting device
Remark	For all laboratory units except of Alpha 1-2 LDplus

Acrylic drying chamber — Order number 121527

Diameter	457 mm
Clear height	565 mm
Weight approx.	15.8 kg
Features	With 18 ports for rubber valves, with hoisting eye including connection for lifting device
Remark	For all laboratory units except of Alpha 1-2 LDplus

Acrylic drying chamber — Order number 121529

Diameter	457 mm
Clear height	693 mm
Weight approx.	17.6 kg
Features	With hoisting eye including connection for lifting device
Remark	For all laboratory units except of Alpha 1-2 LDplus

Acrylic drying chamber — Order number 121531

Diameter	457 mm
Clear height	693 mm
Weight approx.	17.6 kg
Features	With 18 ports for rubber valves, hoisting eye including connection for lifting device
Remark	For all laboratory units except of Alpha 1-2 LDplus

Overview

Ø 457 mm for Alpha to Delta

Item number	Height [mm]	Connections	Weight [kg]
121511	340		12.7
121515	340	18	12.7
121517	460		14.3
121521	460	18	14.3
121523	565		15.8
121527	565	18	15.8
121529	693		17.6
121531	693	18	17.6

Stoppers for acrylic chambers   Order number   121410

NS	45/40
Colour	Black
Remark	Also usable with acrylic lid (121404) and glass lid (121411)

Rubber stoppers   Order number   492299

Function	For closing ports in acrylic chambers
Colour	Grey

Silicone cap   Order number   492300

Function	For ports of acrylic chambers

3.2   Unheated shelves

Shelves

3 stainless steel shelves   Order number   120893

Diameter	200 mm
High approx.	220 mm
Heating/cooling	Unheated
Features	Spacing between shelves 85 mm
Remark	Only for Alpha 1–2 LDplus

3 stainless steel shelves   Order number   120903

Diameter	265 mm
Height approx.	220 mm
Heating/cooling	Unheated
Features	Spacing between shelves 79 mm

5 stainless steel shelves   Order number   120902

Diameter	265 mm
High approx.	390 mm
Heating/cooling	Unheated
Features	Spacing between shelves 79 mm

5 stainless steel shelves   Order number   112229

Diameter	360 mm
Heating/cooling	Unheated
Features	Spacing between shelves 70 mm
Remark	Not for Alpha 1–2 LDplus

1 aluminium shelf with rim and feet   Order number   112279

Spacing	33 mm
Diameter	265 mm
Heating/cooling	Unheated
Features	Stackable up to 10 high
Remark	Not for Alpha 1–2 LDplus

1 aluminium shelf with rim and feet   Order number   112318

Diameter	200 mm
Heating/cooling	Unheated
Remark	For use with Alpha 1–2 LDplus and other laboratory freeze dryers

Number of drying vessels per shelf, order number 120902 and 120903

Order number of drying vessels	ID code Nominal capacity (ml)	Dimensions Ø (mm)	Dimensions height (mm)	Content with 1 cm layer		Number	Min. necessary spacing
				Static (ml)	Dynamic (ml)*		
127502	2 ml	12	121	0.6	1.2 (sh. f.)	345	125
127505	5 ml	12	156	0.6	2.5 (sh. f.)	345	160
127510	10 ml	16	156	1.2	3.5 (sh. f.)	185	160
127572	2 R	16	35	1.2		185	50
127576	6 R	22	40	3.0		100	55
127580	10 R	24	45	4.5		88	60
127582	20 R	30	55	6.0		54	70
127585	50 H	42.5	73	12.0	35–40 (sp. f.)	25	88
127590	100 H	51.6	94.5	18.0	65–70 (sp. f.)	16	110
127603	300	78	140	38.0	125–135 (sp. f.)	7	162
127605	500	78	207	38.0	250–300 (sp. f.)	7	229
127000		65	20	28.0		11	25
127010		75	20	45.0		8	25
127073		200	22	300.0		1	25

*sh.f. = shell freezing; sp.f. = spin freezing (see introduction)

Rack	Order number	127202
Function	To hold 10 (11) microtiter plates (no deep-well plates)	
Clearance	20 mm	
Material	Anodised aluminium plate holders and stainless steel spacers	
Features	If the microtiter plates are placed in this rack for freezing (externally), the specially formed anodised aluminium plate holders act as cold buffers, which prevents partial or full thawing of the specimens at the start of the process	
Remark	Use base plate 120906 for Alpha to Delta	
Dimensions	Height 283.5 mm, depth 97.5 mm, width 133.5 mm	

Rack	Order number	127203
Function	To hold 1 deep-well plate or 1 microtiter plate	
Clearance	50 mm	
Material	Anodised aluminium plate holders and stainless steel spacers	
Features	If the microtiter plates are placed in this rack for freezing (externally), the specially formed anodised aluminium plate holders act as cold buffers, which prevents partial or full thawing of the specimens at the start of the process. Shelves can be stacked up to 5 high	
Remark	For Alpha to Delta	

Rack	Order number	110394
Function	To hold 6 microtiter plates or 6 deep-well plates	
Clearance	85 mm	
Material	Anodised aluminium with stainless steel spacers in three levels	
Features	Not stackable	
Remark	Also for Alpha 1–2 LDplus	

Rack	Order number	110527
Function	To hold 5 microtiter plates	
Clearance	25 mm	
Material	Stainless steel with PDVF feet	
Features	Racks can be stacked up to 3 high	
Remark	Also for Alpha 1–2 LDplus	
Dimensions	Height 137 mm, depth 130.6 mm, width 89.5 mm	

Sealing devices for LDplus / LSCbasic controller

Sealing device with 2 shelf with rim	Order number	121015
Diameter	200 mm	
Temperature control system	None	
Extension	Shelves, separation 70 mm; with just one shelf 152 mm	
Features	Only in combination with base plate 120890	
Remark	For Alpha 1–2 LDplus	
Hood	121450 or 121455 can be used	

Sealing device with 1 shelf with rim	Order number	121020
Diameter	250 mm	
Temperature control system	None	
Extension	Can be extended to 2 shelves (max.) with shelf 120959	
Remark	For Alpha 1/2–4 LSCbasic and Beta 1/2-8 LSCbasic	
Hood	121500 or 121550 can be used	

Sealing device with 1 shelf with rim	Order number	121021
Diameter	250 mm	
Temperature control system	None	
Extension	Can be extended to max. 4 shelves (120959)	
Remark	For Alpha 1/2–4 LSCbasic and Beta 1/2-8 LSCbasic	
Hood	121505 or 121555 can be used	

3.3   Heated shelves

Sealing devices for LSCplus controller (wireless)
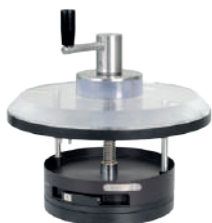
Sealing device with 1 shelf | Order number | 120860

Diameter	200 mm
Function	For sealing injection vials with serrated rubber stoppers under vacuum or inert gas
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Weight approx.	6.5 kg
Remark	Max. vessel height 70 mm; for LSCplus controller

Fan | Order number | 120862

Diameter	200 mm
Function	For circulation of cold air
Weight approx.	
Remark	For LSCplus controller; integrated into 120860, 120861 and 120761

Number of drying vessels per shelf, order number 120860 and 121009

Order number of drying vessels	ID code Nominal capacity (ml)	Dimensions Ø (mm)	Dimensions height (mm)	Content with 1 cm layer		Number
				Static (ml)	Dynamic (ml) *	
127572	2 R	16	35	1.2		116
127576	6 R	22	40	3.0		60
127580	10 R	24	45	4.5		48
127582	20 R	30	55	6.0		29
127585	50 H	42.5	73	12.0	35–40 (sp. f.)	15
127001		65	20	28.0		5
127010		75	20	45.0		4

* sh. f. = shell freezing; sp. f. = spin freezing (see introduction)

Sealing device with max. 2 shelves | Order number | 120821

Diameter	250 mm
Function	For sealing injection vials with serrated rubber stoppers under vacuum or inert gas
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Extension	Can be extended to max. 2 shelves (120830)
Weight approx.	8 kg
Remark	For LSCplus controller

Options

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm²)
1	110 to 35	450
2	2x 45 to 35	900

Sealing devices for LSCplus controller (wireless)

Sealing device with max. 4 shelves

Order number: 120841

Diameter	250 mm
Function	For sealing injection vials with serrated rubber stoppers under vacuum or inert gas
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Extension	Can be extended to max. 4 shelves (120830)
Features	Height of pressure plate is adjustable
Weight approx.	8.4 kg
Remark	For LSCplus controller

Options

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm^2)
1	290 to 35	450
2	2x 135 to 35	900
3	3x 83 to 35	1350
4	4x 50 to 35	1800

Shelf

Order number: 120830

Diameter	250 mm
Surface	Black anodised
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Use	For item 120821 and 120841

Fan

Order number: 120801

Diameter	250 mm
Function	For circulation of cold air
Weight approx.	1.1 kg
Remark	For LSCplus controller; integrated into 120821 and 120841

Number of drying vessels per shelf order number 120821, 120841 and 120830

Order number of drying vessels	ID code Nominal capacity (ml)	Dimensions Ø (mm)	Dimensions height (mm)	Content with 1 cm layer		Number	Min. necessary shelf area and spacing
				Static (ml)	Dynamic (ml) *		
127502	2 ml	12	121	0.6	1.2 (sh. f.)	280	125
127505	5 ml	12	156	0.6	2.5 (sh. f.)	280	160
127510	10 ml	16	156	1.2	3.5 (sh. f.)	154	160
127572	2 R	16	35	1.2		154	50
127576	6 R	22	40	3.0		80	55
127580	10 R	24	45	4.5		67	60
127582	20 R	30	55	6.0		45	70
127585	50 H	42.5	73	12.0	35–40 (sp. f.)	19	88
127590	100 H	51.6	94.5	18.0	65–70 (sp. f.)	14	110
127603	300	78	140	38.0	125–135 (sp. f.)	6	162
127605	500	78	207	38.0	250–300 (sp. f.)	6	229
127000		65	20	28.0		8	25
127010		75	20	45.0		6	25

* sh. f. = shell freezing; sp. f. = spin freezing (see introduction)

Shelves for single-chamber method ("inside") for LSCplus controller

Shelves with integrated acrylic lid

Order number 120861

Diameter	200 mm
Material	Aluminium, black anodised
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Weight	
Remark	Max. vessel height 70 mm; for LSCplus controller

Shelves with integrated acrylic lid

Order number 120761

Diameter	200 mm
Material	Aluminium, black anodised
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Weight	
Remark	Max. vessel height 140 mm; only usable with 120755, for LSCplus controller

Adapter / distance ring

Order number 120755

Diameter	300 mm
Material	PET

Fan

Order number 120862

Diameter	200 mm
Function	For circulation of cold air
Weight	
Remark	For LSCplus controller; integrated into 120860, 120861 and 120761

Support frame

Order number 121945

Function	To hold max. 5 shelves Ø 200 mm
Use	Inside the ice condenser chamber
Height approx.	295 mm
Weight	2 kg
Remark	Suitable for Gamma and Delta with LSCplus controller

Variations

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm²)
1	208	314
1 + 5	138 + 32	628
1 + 4	130 + 76	628
1, 3 + 5	2x 69 + 32	942
1 to 5	4x 25 + 32	1570

Shelves for single-chamber method ("inside") for LSCplus controller
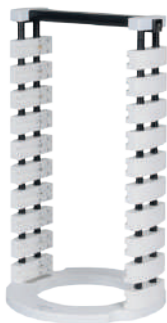
Support frame		Order number	121960
Function	To hold max. 10 shelves Ø 200 mm		
Use	Inside the ice condenser chamber		
Height approx.	514 mm		
Weight	3.3 kg		
Remark	Suitable for Delta with LSCplus controller		

Variations

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm²)
1	428	314
1 + 10	377 + 32	628
1 + 9	330 + 76	628
1 + 8	289 + 120	628
1 + 7	245 + 164	628
1 + 6	201 + 208	628
1, 5 + 9	2x 157 + 76	942
1 + 4 + 7 + 10	3x 113 + 32	1256
1 + 3 + 5 + 7 + 9	4x 69 + 76	1570
1 to 10	9x 25 + 32	3140

Shelf		Order number	122576
Diameter	200 mm		
Material	Aluminium, black anodised		
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul		
Weight approx.	2.3 kg		
Control	For LSCplus controller		

Shelves for double-chamber method ("outside") for LSCplus controller

Base plate		Order number	120880
Diameter	300 mm		
Function	The base plate is necessary when shelves are used		
Control	For LSCplus controller		

Adapter flange		Order number	120881
Diameter	457 mm		
Function	For mounting drying chamber Ø 457 mm		
Remark	Only for Alpha and Beta with LSCplus controller		

Shelves for double-chamber method ("outside") for LSCplus controller

Support frame		Order number	121145
Function	To hold max. 5 shelves Ø 200 mm		
Use	Outside of ice condenser chamber		
Height approx.	295 mm		
Weight	2 kg		
Control	For LSCplus controller		

Variations

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm²)
1	208	314
1 + 5	138 + 32	628
1 + 4	130 + 76	628
1 + 3 + 5	4x 69 + 32	942
1 to 5	4x 25 + 32	1570
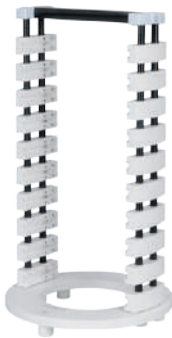
Support frame		Order number	121160
Function	To hold max. 10 shelves Ø 200 mm		
Use	Outside of ice condenser chamber		
Height approx.	514 mm		
Weight	3.3 kg		
Control	For LSCplus controller		

Variations

Shelf arrangement	Clearance between shelves (mm)	Usable shelf area (cm²)
1	428	314
1 + 10	377 + 32	628
1 + 9	330 + 76	628
1 + 8	289 + 120	628
1 + 7	245 + 164	628
1 + 6	201 + 208	628
1 + 5 + 9	2x 157 + 76	942
1 + 4 + 7 + 10	3x 113 + 32	1256
1 + 3 + 5 + 7 9	4x 69 + 76	1570
1 to 10	9x 25 + 32	3140

Shelf		Order number	122576
Diameter	200 mm		
Material	Aluminium, black anodised		
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul		
Weight approx.	2.3 kg		
Control	For LSCplus controller		

Shelves for double-chamber method ("outside") for LSCplus controller

Intermediate valve

Order number **122032**

Diameter	300 mm
Control	For LSCplus controller
Remark	Base plate 120880 is necessary

LyoCube Base frame

Order number **122557**

Dimensions	424 x 334 x 360 mm (H x W x D)
Material	Stainless steel
Weight	Approx. 3 kg
Control	For LSCplus controller

Shelf

Order number **122561**

Dimensions	256 x 300 mm
Material	Aluminium, black anodised
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Weight approx.	Approx. 2.5 kg
Control	For LSCplus controller

Plate frame with 3 shelves, 86 mm between shelves — Order number **122872**

Plate frame with 5 shelves, 67 mm between shelves — Order number **122857**

Plate frame with 8 shelves, 48 mm between shelves — Order number **122826**

Diameter	375 mm
Material	Aluminium, black anodised
Temperature control system	Electrical heating with built-in sensor PT 100 and LyoBus-Modul
Control	For LSCplus controller

Base plate

Order number **120890**

Diameter	240 mm
Features	The accessory base plate is necessary when shelves are used
Remark	Only for Alpha 1–2 LDplus

Adapter flange

Order number **120901**

Function	For mounting drying chamber Ø 457
Features	For Alpha 1/2–4 LSCbasic and Beta 1–8/2–8 LSCbasic

Drip tray for manifold		Order number	121350
Diameter	500 mm		
Function	For protection of the freeze dryer; collects the condensation water dripping from the drying vessels		
Remark	Alpha to Gamma, for manifolds 121208, 110538 and 121280		

Drip tray for drying chamber		Order number	121355
Diameter	575 mm		
Inside diameter	260 mm		
Function	For protection of the freeze dryer; collects the condensation water dripping from the drying vessels		
Remark	For Alpha 1–2 LDplus		

Drip tray		Order number	121360
Diameter	650 mm		
Function	For protection of the freeze dryer; collects the condensation water dripping from the drying vessels		
Weight approx.	2 kg		
Remark	Suitable for drying chamber Ø 300 mm		

Drip tray		Order number	121365
Function	For protection of the freeze dryer; collects the condensation water dripping from the drying vessels		
Remark	Suitable for drying chamber Ø 457 mm, outside 800 mm		

Glass lid		Order number	121398
Diameter	240 mm		
Features	With central DIN female ground joint NS 45/40 and stopper NS 45/40		
Remark	Only for Alpha 1–2 LDplus		

Acrylic lid		Order number	121404
Diameter	300 mm		
Weight approx.	3.1 kg		
Features	With central DIN female ground joint NS 45/40 and stopper NS 45/40		
Thickness	40 mm		

Safety glass lid		Order number	121411
Diameter	300 mm		
Features	Solvent resistant, with central stainless steel DIN female ground joint NS 45/40 and stopper		
Thickness	19 mm		

3.4   Drying manifolds

Drying manifolds

Vertical manifold	Order number	110538
Material	Stainless steel with DIN male ground joint NS 45/40	
Width	372 mm	
Height	1030 mm	
Function	For connection to acrylic or glass lid with female ground joint and 12 rubber valves, **for substances containing solvents**	
Connections	For connecting vessels with DIN female ground joint NS 29/32: 12x 100 ml, 12x 250 ml, 12x 1000 ml, 12x 2000 ml round-bottom flasks, 12x 75 ml, 12x 150 ml, 12x 300 ml, 12x 600 ml, 12x 1200 ml, 8x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Three levels with four connections each; Alpha 1-2 LDplus, Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24	

Vertical manifold	Order number	121224
Material	Stainless steel with DIN male ground joint NS 45/40	
Width	650 mm	
Height	1170 mm	
Weight approx.	18 kg	
Function	With flange-mounted glass lid Ø 300 mm and 24 rubber valves, for aqueous solutions	
Connections	For connecting vessels with DIN female ground joint NS29/32: 24x 100 ml, 24x 250 ml, 24x 500 ml, 24x 1000 ml, 16x 2000 ml round-bottom flasks, 24x 75 ml, 24x 150 ml, 24x 300 ml, 24x 600 ml, 24x 1200 ml, 8x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Three levels with eight connections each; Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24	

Vertical manifold	Order number	121226
Material	Stainless steel with DIN male ground joint NS 45/40	
Width	380 mm	
Height	755 mm	
Function	For connection to acrylic or glass lid with female ground joint and 8 rubber valves, **for substances containing solvents**	
Connections	For connecting vessels with DIN female ground joint NS29/32: 8x 100 ml, 8x 250 ml, 8x 500 ml, 8x 1000 ml, 4x 2000 ml round-bottom flasks, 8x 75 ml, 8x 150 ml, 8x 300 ml, 8x 600 ml, 8x 1200 ml, 4x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Two levels with four connections each; Alpha 1–2 LDplus, Alpha 1/2-4, Beta 1/2–8, Gamma 1/2–16, Delta 1/2–24 and Epsilon 2–6 D LSC/LSCplus	

Drying manifolds

Vertical manifold	Order number	112237
Material	Stainless steel with DIN male ground joint NS 45/40	
Width	650 mm	
Height	946 mm	
Function	With flange-mounted glass lid Ø 300 mm and 24 rubber valves, **for substances containing solvents**	
Features	**With DIN 10 KF connector for hot water defrosting**	
Connections	For connecting vessels with DIN female ground joint NS 29/32: 24x 100 ml, 24x 250 ml, 24x 500 ml, 24x 1000 ml, 8x 2000 ml round-bottom flasks, 24x 75 ml, 24x 150 ml, 24x 300 ml, 24x 600 ml, 16x 1200 ml, 8x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Three levels with eight connections each; Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24	

Vertical manifold	Order number	112306
Material	Stainless steel	
Width	650 mm	
Height	903 mm	
Function	With flange-mounted glass lid Ø 300 mm and 16 rubber valves, **for substances containing solvents**	
Features	**With DN 10 KF connector for hot water defrosting**	
Connections	For connecting vessels with DIN female ground joint NS 29/32: 16x 100 ml, 16x 250 ml, 16x 500 ml, 16x 1000 ml, 16x 2000 ml round-bottom flasks, 16x 75 ml, 16x 150 ml, 16x 300 ml, 16x 600 ml, 16x 1200 ml, 8x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Two levels with eight connections each; Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24	

Vertical manifold	Order number	112393
Material	Stainless steel	
Width	650 mm	
Height	1129 mm	
Function	With flange-mounted glass lid Ø 300 mm and 16 rubber valves, **for substances containing solvents**	
Features	**With DN 10 KF connector for hot water defrosting**	
Connections	For connecting vessels with DIN female ground joint NS 29/32: 16x 100 ml, 16x 250 ml, 16x 500 ml, 16x 1000 ml, 16x 2000 ml round-bottom flasks, 16x 75 ml, 16x 150 ml, 16x 300 ml, 16x 600 ml, 16x 1200 ml, 16x 2000 ml wide-neck filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Two levels with eight connections each; Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24	

Drying manifolds

Vertical manifold		Order number	121280
Material	Stainless steel with DIN male ground joint NS 45/40		
Width	108 mm		
Height	450 mm		
Weight	3 kg		
Function	For connection to acrylic or glass lid with female ground joint and 48 hoses, for aqueous solutions, for connecting vials		
Features	The connections can be shut off individually and the drying vessels can be vented individually		
Remark	Alpha 1-2 LDplus, Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24		

Vertical manifold		Order number	110280
Material	Stainless steel with DIN male ground joint NS 45/40		
Width	108 mm		
Height	545 mm		
Function	For connection to acrylic or glass lid with female ground joint and 60 hoses, for connection of ampoules		
Features	The connections can be shut off individually and the drying vessels can be vented individually		
Remark	Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24		
Note	separate connection set necessary		

Vertical manifold		Order number	112322
Material	Stainless steel with DIN KF 40 connection		
Width	520 mm		
Height	770 mm		
Weight	Approx. 10 kg		
Function	For connection to acrylic or glass lid and 96 hoses, for aqueous solutions, for connection of ampoules		
Features	The connections can be shut off individually and the drying vessels can be vented individually		
Remark	Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–2		
Note	separate connection set necessary		

Overview

Vertical manifolds

Item number	Connec-tions	Solvent	Water	Mounting	Width (mm)	Height (mm)	Weight (kg)	Connections₁	Systems
121226	8	Yes	Yes	Ground joint stubs	380	755	4	4x 2000 ml round-bottom flasks and wide-neck bottles	Alpha–Epsilon
110538	12	Yes	Yes	Ground joint stubs	372	1030		8x 2000 ml wide-neck bottles	Beta–Delta
112306	16	Yes	Yes	Glass lid Ø 300 mm	650	903		8x 2000 ml wide-neck bottles	Alpha–Delta
121224	24		Yes	Acrylic lid Ø 300 mm	650	1170	18	16x 2000 ml round-bottom flasks and 8x wide-neck bottles	Alpha–Delta
112237	24	Yes	Yes	Glass lid Ø 300 mm	650	946		8x 2000 ml round-bottom flasks and wide-neck bottles and 16 x 1200 ml wide-neck filter bottles	Alpha–Delta
121280	48		Yes	Ground joint stubs	108	540	3	Ampoules	Alpha–Delta
110280	60	Yes	Yes	Ground joint stubs	108	545		Ampoules	Alpha–Delta
112322	96		Yes	Connection over KF40	520	770	10	Ampoules	Alpha–Delta

with individually closable rubber valves for connection of round-bottom flasks and wide-neck bottles with DIN female ground joint NS 29/32
₁ The maximum number of large-volume vessels

Horizontal manifold (T shape)   Order number   110005

Material	Stainless steel
Width	1070 mm
Height	550 mm
Weight approx.	6 kg
Function	With flange-mounted acrylic glass lid Ø 300 mm and 16 rubber valves, for aqueous solutions
Connections	For connecting vessels with DIN female ground joint NS29/32: 16x 100 ml, 16x 250 ml, 16x 500 ml, 8x 1000 ml, 8x 2000 ml round-bottom flasks 16x 75 ml, 16x 150 ml, 16x 300 ml, 16x 600 ml, 16x 1200 ml, 16x 2000 ml wide-neck filter bottles
Features	The connections can be shut off individually and the drying vessels can be vented individually
Remark	Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24

Horizontal manifold (T shape)   Order number   121290

Material	Stainless steel with DIN male ground joint NS 45/40
Width	687 mm
Height	320 mm
Weight approx.	5.7 kg
Function	For connection to acrylic or glass lid with female ground joint and 20 rubber valves, for aqueous solutions
Features	The connections can be shut off individually and the drying vessels can be vented individually
Remark	Alpha 1–2 LDplus, Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24

Drying manifolds

Horizontal manifold (T shape)		Order number	110367
Material	Stainless steel with DIN male ground joint NS 45/40		
Width	301 mm		
Height	611 mm		
Function	For connection to acrylic or glass lid with female ground joint and 40 hoses, for connection of ampoules		
Features	The connections can be shut off individually and the drying vessels can be vented individually		
Remark	Alpha 1–2 LD plus, Alpha 1/2–4, Beta 1/2–8, Gamma 1/2–16 and Delta 1/2–24		

Overview

Horizontal manifolds

Item number	Connec-tions	Solvent	Water	Mounting	Width (mm)	Height (mm)	Weight (kg)	Connections	Systems
110005	16		Yes	Acrylic lid Ø 300 mm	1070	550	6	8x 1000 ml round-bottom flasks, 8x 2000 ml round-bottom flasks	Alpha–Delta
121290	20		Yes	Ground joint stubs	687	320	5.7		Alpha–Delta
110367	40	Yes	Yes	Ground joint stubs	301	611		Ampoules	Alpha–Delta

With individually closable rubber valves for connection of round-bottom flasks and wide-neck bottles with DIN female ground joint NS 29/32

₁ The maximum number of large-volume vessels

Distributor for ampoules		Order number	121870
Connections	15		

Ball tap with small flange DN 10KF and accessories		Order number	112271
Function	For hot water defrosting		

4.1 Product dishes

Product dishes

Product dish		Order number	127000
Material	Stainless steel		
Diameter	65 mm		
Rim height	20 mm		

Product dish		Order number	127010
Material	Stainless steel		
Diameter	75 mm		
Rim height	20 mm		

Product dish		Order number	127073
Material	Stainless steel		
Diameter	200 mm		
Rim height	18 mm		

Product dish		Order number	127113
Material	Stainless steel		
Diameter	360 mm		
Rim height	32 mm		

Product dish		Order number	127170
Material	Stainless steel, acrylic rim		
Diameter	340 mm		
Rim height	35 mm		
Features	With removable bottom		

Product dish, Teflon coated		Order number	127001
Material	Teflon-coated stainless steel		
Diameter	65 mm		
Rim height	20 mm		

Product dish, Teflon coated		Order number	127011
Material	Teflon-coated stainless steel		
Diameter	75 mm		
Rim height	20 mm		

Product dish, Teflon coated

		Order number	127071
Material	Teflon-coated stainless steel		
Diameter	200 mm		
Rim height	18 mm		

Product dish, Teflon coated

		Order number	127111
Material	Teflon-coated stainless steel		
Diameter	360 mm		
Rim height	32 mm		

Aluminium product dishes

Product dish

		Order number	127126
Material	Aluminium		
Diameter	63 mm		
Rim height	20 mm		

Product dish

		Order number	127127
Material	Aluminium		
Diameter	140 mm		
Rim height	18 mm		

Product dish

		Order number	127128
Material	Aluminium		
Diameter	200 mm		
Rim height	18 mm		

Product dish

		Order number	127130
Material	Aluminium		
Diameter	360 mm		
Rim height	32 mm		

Product sieves

Product sieve	Order number	127075
Diameter	200 mm	
Mesh size	0.2 mm	

Product sieve	Order number	127076
Diameter	200 mm	
Mesh size	0.25 mm	

Product sieve	Order number	127115
Diameter	360 mm	
Mesh size	0.2 mm	

Product sieve	Order number	127117
Diameter	360 mm	
Mesh size	0.25 mm	

4.3 Thermoblocks, split

Aluminium thermoblocks for sealing device, Ø 195 mm

Thermoblock	Order number	110069
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	37 mm	
Form	Two-piece	
Function	For holding a total of 100 vessels Ø 10.2–10.8 x 42–49 mm with round bottom	

Thermoblock	Order number	112288
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	33 mm	
Form	Two-piece	
Function	For holding a total of 72 vessels Ø 14–14.8 x 34–40 mm with flat bottom	

Thermoblock	Order number	112302
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	30 mm	
Form	Two-piece	
Function	For holding a total of 92 vessels Ø 12–12.8 x 33–38 mm with flat bottom	

Aluminium thermoblocks for sealing device, Ø 195 mm

Thermoblock   Order number   112339

Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	30 mm
Form	Two-piece
Function	For holding a total of 70 vessels Ø 16 x 35 mm (2R vials)
Remark	Usable in Alpha 1-2 LDplus

Thermoblock   Order number   112487

Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	41 mm
Form	Two-piece
Function	For holding a total of 34 vessels Ø 21.5–22.6 x 44–51 mm (6R/8R vials)

Thermoblock   Order number   112243

Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	45 mm
Form	Two-piece
Function	For holding a total of 14 vessels Ø 27.5 x 57 mm with flat bottom

Thermoblock for shelves inside ice condenser chamber (120761)

Thermoblock		Order number	113318
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	70 mm		
Form	Two-piece		
Function	For a total of 24 vessels Ø 27.8–29.2 x 77–90 mm (50 ml flask) Only in combination with distance ring 120755		

Thermoblock for sealing device Ø 240 mm

Thermoblock		Order number	110200
Material	Aluminium		
Surface	Black anodised		
Diameter	240 mm		
Height	20 mm		
Form	Two-piece		
Function	For holding a total of 136 vessels Ø 12 x 30 mm		

Thermoblock		Order number	110159
Material	Aluminium		
Surface	Black anodised		
Diameter	240 mm		
Height	30 mm		
Form	Two-piece		
Function	For holding a total of 94 vessels Ø 15.4–16.3 x 31–36 mm (2R vials)		

Thermoblock		Order number	110064
Material	Aluminium		
Surface	Black anodised		
Diameter	240 mm		
Height	30 mm		
Form	Two-piece		
Function	For holding a total of 48 vessels Ø 23–24.2 x 35–41 mm with flat bottom		

Thermoblock		Order number	112240
Material	Aluminium		
Surface	Black anodised		
Diameter	240 mm		
Height	36 mm		
Form	Two-piece		
Function	For holding a total of 48 vessels Ø 23–24.2 x 41–48 mm (10R vials)		

Thermoblock for sealing device Ø 240 mm

Thermoblock	Order number	112370
Material	Aluminium	
Surface	Black anodised	
Diameter	240 mm	
Height	36 mm	
Form	Two-piece	
Function	For holding a total of 198 vessels Ø 10.5–11.1 x 41–48 mm with flat bottom	

Thermoblock	Order number	112402
Material	Aluminium	
Surface	Black anodised	
Diameter	240 mm	
Height	41 mm	
Form	Two-piece	
Function	For holding a total of 56 vessels Ø 21.4–22.5 x 44–51 mm (6R/8R vials)	

Thermoblock	Order number	112449
Material	Aluminium	
Surface	Black anodised	
Diameter	240 mm	
Height	43 mm	
Form	Two-piece	
Function	For holding a total of 32 vessels Ø 28.6–30.1 x 50–59 mm (20R vials)	

Overview

Aluminium thermoblocks

Item number	Block diameter (mm)	Number of vials	Vial diameter (mm)	Comments
110069	195	100	10.2–10.8 x 42–48	with round bottom
112302	195	92	12–12.8 x 33–38	with flat bottom
112339	195	70	16 x 35	2R vials
112487	195	34	21.5–22.6 x 44–51	6R/8R vials
112243	195	14	27.5 x 57	with flat bottom
113318	195	24	27.8–29.2 x 77–90	50 ml flask
110200	240	136	12 x 30	
110159	240	94	15.4–16.3 x 31–36	2R vials
110064	240	48	23–24.2 x 35–41	with flat bottom
112240	240	48	23–24.2 x 41–48	10R vials
112370	240	198	10.5–11.1 x 41–48	with flat bottom
112402	240	56	21.4–22.5 x 44–51	6R/8R vials
112449	240	32	28.6–30.1 x 50–59	20R vials

4.4 Thermoblocks, not split

Aluminium thermoblocks Ø 195 mm

Thermoblock	Order number	110319
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	30 mm	
Function	For holding a total of 70 vessels Ø 11.1–11.8 x 30–35 mm or 27 vessels Ø 19.7–20.7 x 37–43	

Thermoblock	Order number	110007
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	30 mm	
Function	For holding a total of 79 vessels Ø 15.4–16.3 x 31–36 mm with flat bottom	

Thermoblock	Order number	110053
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	30 mm	
Function	For holding a total of 118 vessels Ø 7.9–8.3 x 33–38 mm with round bottom	

Thermoblock	Order number	110183
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	33 mm	
Function	For holding a total of 50 vessels Ø 12.1–12.8 x 33–38 mm with round or flat bottom or 50 vessels Ø 10.2–10.8 x 36–42 mm with flat or round bottom	

Thermoblock	Order number	127213
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	30 mm	
Function	For holding a total of 104 vessels Ø 12.1–12.8 x 33–38 mm with flat or round bottom	

Aluminium thermoblocks Ø 195 mm

Thermoblock		Order number	127215
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	30 mm		
Function	For holding a total of 86 vessels Ø 14–-14.8 x 33–38 mm		

Thermoblock		Order number	112218
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	30 mm		
Function	For holding a total of 44 vessels Ø 19.7–20.7 x 35–41 mm with flat bottom		

Thermoblock		Order number	112455
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	70 mm		
Function	For holding a total of 22 vessels Ø 27.8–29.2 x 36.5–43 mm (designed for flasks or Eppendorf) or 21 vessels Ø 9.9–10.5 x 48–56 mm or 22 vessels Ø 14.9–15.8 x 50.5–59 mm		

Thermoblock		Order number	112448
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	31 mm		
Function	For holding a total of 69 vessels Ø 16.5–17.5 x 36–42 mm		

Thermoblock		Order number	112225
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	32 mm		
Function	For holding a total of 50 vessels Ø 18.1–19.2 x 36–42 mm with flat bottom		

Thermoblock		Order number	112461
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	40 mm		
Function	For holding a total of 16 strips with 8 tubes per strip		

Aluminium thermoblocks Ø 195 mm

Thermoblock	Order number	112367
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	35 mm	
Function	For holding a total of 85 vessels Ø 15.1–16 x 40–47 mm with flat bottom	

Thermoblock	Order number	110006
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	50 mm	
Function	For holding a total of 43 vessels Ø 21.1–22.2 x 43–50 mm	

Thermoblock	Order number	110011
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	50 mm	
Function	For holding a total of 44 vessels Ø 14–14.8 x 41–48 mm (injection vials with crimp seal Ø 23 mm)	

Thermoblock	Order number	112354
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	38 mm	
Function	For holding a total of 140 vessels Ø 9.8–10.4 x 43–50 mm	

Thermoblock	Order number	110282
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	40 mm	
Function	For holding a total of 93 vessels Ø 13.5–14.3 x 43–50 mm with flat bottom	

Thermoblock	Order number	112223
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	45 mm	
Function	For holding a total of 37 vessels Ø 23.5–24.7 x 48–56 mm with flat bottom	

Aluminium thermoblocks Ø 195 mm

Thermoblock	Order number	112363
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	41.5 mm	
Function	For holding a total of 36 vessels Ø 24.2–25.4 x 48.5–57 mm (10H vials)	

Thermoblock	Order number	113307
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	45 mm	
Function	For holding a total of 52 vessels Ø 10.2–10.8 x 48–56 mm (Eppendorf caps)	
Remark	two pieces not usable for sealing device	

Thermoblock	Order number	113345
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	44 mm	
Function	For holding a total of 36 vessels Ø 22.8–24 x 51–60 mm (10R / 15R vials)	

Thermoblock	Order number	112364
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	46 mm	
Function	For holding a total of 23 vessels Ø 30.4–32 x 53–62 mm (20H vials)	

Thermoblock	Order number	113344
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	55 mm	
Function	For holding a total of 36 vessels Ø 28.5–30 x 63–74 mm (30R vials)	

Thermoblock	Order number	110161
Material	Aluminium	
Surface	Black anodised	
Diameter	195 mm	
Height	58 mm	
Function	For holding a total of 86 vessels Ø 14.4–15.3 x 62–73 mm with round bottom (ampoules)	

Aluminium thermoblocks Ø 195 mm

Thermoblock		Order number	110010
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	60 mm		
Function	For holding a total of 79 vessels Ø 15.4–16.3 x 63–74 mm with round bottom		

Thermoblock		Order number	110050
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	70 mm		
Function	For holding a total of 20 vessels Ø 32.1–33.7 x 65–75 mm with round bottom		

Thermoblock		Order number	110530
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	60 mm		
Function	For holding a total of 100 vessels Ø 11.1–11.8 x 63–74 mm with round bottom		

Thermoblock		Order number	112246
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	60 mm		
Function	For holding a total of 91 vessels Ø 16.8–17.8 x 63–74 mm with flat bottom		

Thermoblock		Order number	110182
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	70 mm		
Function	For holding a total of 22 vessels Ø 27.8–29.2 x 68–80 mm or 22 vessels Ø 15.8–16.8 x 70–82 mm		

Thermoblock		Order number	112365
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	61 mm		
Function	For holding a total of 13 vessels Ø 40.4–42.5 x 68–80 mm (50H vials)		

Aluminium thermoblocks Ø 195 mm

Thermoblock		Order number	112366
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	43 mm		
Function	For holding a total of 7 vessels Ø 49.6–51.6 x 77.5–91 mm (100H vials)		

Thermoblock		Order number	112317
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	85 mm		
Function	For holding a total of 124 vessels Ø 6.9–7.3 x 80–94 mm or 124 vessels Ø 6.9–7.3 x 88–103 mm		

Thermoblock		Order number	110193
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	85 mm		
Function	For holding a total of 37 vessels Ø 23–25.1 x 84–99 mm with round bottom		

Thermoblock		Order number	110023
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	80 mm		
Function	For holding a total of 190 vessels Ø 7.9–8.3 x 83–97 mm with round bottom		

Thermoblock		Order number	112224
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	85 mm		
Function	For holding a total of 37 vessels Ø 23.9–25.1 x 90–106 mm with flat bottom		

Thermoblock		Order number	110311
Material	Aluminium		
Surface	Black anodised		
Diameter	195 mm		
Height	100 mm		
Function	For holding a total of 37 vessels Ø 23.5–24.7 x 99–116 mm with flat bottom		

Thermoblock. not split Ø 195 mm, stackable

Thermoblock	Order number 127227
Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	30 mm
Function	For holding a total of 354 vessels Ø 10.2–10.8 x 33–38 mm (Eppendorf caps)
Remark	Total height of three stacked blocks = 200 mm Space between thermoblocks 55 mm

Thermoblock	Order number 112316
Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	45 mm
Function	For holding a total of 58 vessels Ø 10.2–10.8 x 33–38 mm (Eppendorf caps)
Remark	Max. stacking height 4 blocks; spacers required (item no. 112315) Space between thermoblocks 30 mm

Thermoblock	Order number 112346
Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	70 mm
Function	For holding a total of 72 vessels Ø 15.8–16.8 x 70–82 mm (15 ml Falcon tube); spacers required (item no. 113316)

Thermoblock	Order number 110281
Material	Aluminium
Surface	Black anodised
Diameter	195 mm
Height	70 mm
Function	For holding a total of 27 vessels Ø 27.8–29.2 x 77–90 mm (50 ml Falcon tube); spacers required (item no. 113316)

Thermoblock. not split Ø 360 mm

Thermoblock	Order number 110057
Material	Aluminium
Surface	Black anodised
Diameter	356 mm
Height	150 mm
Function	For holding a total of 12 vessels Ø 76.8–80 x 155–182 mm

Thermoblock			Order number	110055
Material	Aluminium			
Surface	Black anodised			
Diameter	366 mm			
Height	220 mm			
Function	For holding a total of 6 vessels Ø 104.2–108.5 x 227–267 mm			

Overview

Aluminium thermoblocks

Item number	Block diameter (mm)	Number of vials	Vial diameter (mm)	Comments
110319	195	70 / 27	11.1–11.8 x 30–35	
			19.7–20.7 x 37–43	
110007	195	79	15.4–16.3 x 31–36	with flat bottom
110053	195	118	7.9–8.3 x 33–38	with round bottom
			12.1–12.8 x 33–38	
110183	195	50	10.2–10.8 x 36–42	Eppendorf caps
127213	195	104	12.1–12.8 x 33–38	Round or flat bottom
127215	195	86	14–14.8 x 33–38	with flat bottom
112218	195	44	19.7–20.7 x 35–41	with flat bottom
112455	195	22/21	27.8–29.2 x 36.5–43	
			9.9–10.5 x 48–56	
112448	195	69	16.5–17.5 x 36–42	
112225	195	50	18.1–19.2 x 36–42	with flat bottom
112461	195	16	Tube strips	
112367	195	85	15.1–16 x 40–47	with flat bottom
110006	195	43	21.1–22.2 x 43–50	
110011	195	44	14–14.8 x 41–48	Injection vials
112354	195	140	9.8–10.4 x 43–50	with flat bottom
110282	195	93	13.5–4.3 x 43–50	with flat bottom
112223	195	37	23.5–24.7 x 48–56	with flat bottom
112363	195	36	24.2–25.4 x 48.5–57	10H vials
113307	195	52	10.2–10.8 x 48–56	Eppendorf caps/two pieces
113345	195	36	22.8–24 x 51–60	10R/15R vials
112364	195	23	30.4–32 x 53–62	20H vials
113344	195	36	28.5–30 x 63–74	30R vials
110161	195	86	14.4–15.3 x 62–73	Ampoules
110010	195	79	15.4–16.3 x 63–74	with round bottom
110050	195	20	32.1–33.7 x 65–75	with round bottom
110530	195	100	11.1–11.8 x 63–74	with round bottom
112246	195	91	16.8–17.8 x 63–74	with flat bottom
110182	195	22	27.8–29.2 x 68–80	
112365	195	13	40.4–42.5 x 68–80	50H vials
112366	195	7	49.6–51.6 x 77.5–91	100H vials
112317	195	124	6.9–7.3 x 80–94	
110193	195	37	23–25 x 84–99	with round bottom
110023	195	190	7.9–8.3 x 83–97	with round bottom
112224	195	37	23.9–25.1 x 90–106	with flat bottom
110311	195	37	23.5–24.7 x 99–116	with flat bottom

4.5 Rubber valves

Rubber valves

Rubber valve		Order number	121860
Function	For connection to drying chamber or as spare rubber valve for drying manifold		
Features	The rubber valve is equipped with a DIN male ground joint NS29/32 for connection of round-bottom flasks, etc.; 5–100 ml injection vials or wide-neck filter bottles can be connected after removing the rubber ground joint from the valve		
Sterilisation	Fully sterilisable at +121°C		

Rubber valve		Order number	121861
Features	Rubber valve with stainless steel shut-off knob, solvent resistant version		
Function	For connecting vessels with DIN female ground joint 29/32		

Replacement rubber and piece		Order number	121865
Features	For rubber valve, NS 29/32		
Sterilisation	Sterilisable at +121°C		

Screw stopper		Order number	121862
Material	Plastic		
Connection	For rubber valve		
Sterilisation	Sterilisable at +121°C		

Shut-off knob		Order number	121863
Material	Stainless steel		
Connection	For rubber valve		
Sterilisation	Sterilisable at +121°C		

Adapter		Order number	121880
Connection	For rubber valve, NS 14.5		

Adapter and filter		Order number	121890
Connection	For rubber valve NS 29/32		

4.6 Round-bottom flasks

Round-bottom flasks

Round-bottom flask		Order number	127350
Size	100 ml		

Round-bottom flask		Order number	127355
Size	250 ml		

Round-bottom flask		Order number	127360
Size	500 ml		

Round-bottom flask		Order number	127361
Size	500 ml		
Features	With glass shard protection		

Round-bottom flask		Order number	127365
Size	1000 ml		

Round-bottom flask		Order number	127370
Size	2000 ml		

4.7 Filter inserts

Filter inserts and spare parts for filter inserts

Filter insert		Order number	121891
Features	With fine filter for rubber valves		

Filter insert		Order number	121892
Material	Stainless steel		
Features	With fine filter for rubber valves (solvent resistant)		

Filter paper		Order number	127444
Diameter	18 mm		
Quantity	100		
Function	For retention filter		

4.8 Wide-neck filter bottles

Wide-neck filter bottles

Wide-neck filter bottle		Order number	127400
Size	75 ml		

Wide-neck filter bottle		Order number	127405
Size	150 ml		

Wide-neck filter bottle		Order number	127410
Size	300 ml		
	wide neck filter bottle without cap - item no. 680520		

Wide-neck filter bottle		Order number	127415
Size	600 ml		
	wide neck filter bottle without cap - item no. 680530		

Wide-neck filter bottle		Order number	127420
Size	1200 ml		
	wide neck filter bottle without cap - item no. 680540		

Wide-neck filter bottle		Order number	127425
Size	2000 ml		
	wide neck filter bottle without cap - item no. 680550		

Order number of drying vessels	Nominal capacity (ml)	Dimensions Ø outside (mm)	Dimensions height (mm)	Bottle opening Ø	Content with 1 cm layer	
					Static (ml)	Dynamic (ml)*
127400	75	60	87	49	25	45
127405	150	70	87	49	35	115
127410	300	70	151	49	35	226
127415	600	105	130	77	78	302
127420	1200	105	222	77	78	560
127425	2000	105	352	77	78	945

Spare rubber cap		Order number	127430
Size	For Ø 75 ml to Ø 300 ml		

Spare rubber cap		Order number	127431
Size	For Ø 600 ml to Ø 2000 ml		

Filter paper		Order number	127440
Size	Ø 30 mm		
Quantity	100		
Pore size	70 µm		
Use	For wide-neck filter bottles 75 ml to 300 ml		

Filter paper		Order number	127442
Size	Ø 47 mm		
Quantity	100		
Pore size	70 µm		
Use	For wide-neck filter bottles 600 ml to 2000 ml		

4.9 Protective nets

Protective nets

Protective net		Order number	127380
Vessel Ø	80–120 mm		
Function	For round-bottom flasks and wide-neck filter bottles		
Length	250 mm		

Protective net		Order number	127381
Vessel Ø	100–200 mm		
Function	For round-bottom flasks and wide-neck filter bottles		
Length	250 mm		

Protective net		Order number	127382
Vessel Ø	150–230 mm		
Function	For round-bottom flasks and wide-neck filter bottles		
Length	250 mm		

4.10 Ampoules

Ampoules

Long-neck ampoules		Order number	127502
Capacity	2 ml		
Diameter	12 mm		
Overall length	121 mm		
Neck diameter	8 mm		
Neck length	90 mm		
Quantity	100		

Long-neck ampoules		Order number	127505
Capacity	5 ml		
Diameter	12 mm		
Overall length	156 mm		
Neck diameter	8 mm		
Quantity	100		

Long-neck ampoules		Order number	127510
Capacity	10 ml		
Diameter	16 mm		
Overall length	156 mm		
Neck diameter	8 mm		
Quantity	100		

Ampoule sealing torch		Order number	127695
Remark	For connection to gas and oxygen or to gas, air and oxygen. The torch has a special flame stabilisation system, which allows it to be operated with a high air ratio to cool the flame.		

4.11 Single vial sealing device

Screw bottles

Screw bottles		Order number	112488
Remark	For screw bottles compliant with ISO 11418, with round fitting 18 x 3.0		
Function	For connection to rubber valve		

4.12 Injection vials

Injection vials (crimp seal vials), DIN/ISO compliant

Injection vials   Order number   127572

Type	2 R
Quantity	352

Injection vials   Order number   127576

Type	6 R
Quantity	192

Injection vials   Order number   127580

Type	10 R
Quantity	160

Injection vials   Order number   127582

Type	20 R
Quantity	99

Injection vials   Order number   127585

Type	50 H
Quantity	130

Injection vials   Order number   127590

Type	100 H
Quantity	88

* Qvantity can vary

Vial type	Maximum capacity (ml)	Diameter (mm)	Height (mm)	Capacity with 1 cm fill level (ml)
2 R	4	16	35	1.4
4 R	6	16	45	1.4
6 R	10	22	40	3.0
8 R	11.5	22	45	3.0
10 R	13.5	24	45	3.7
15 R	19	24	60	3.7
20 R	25	30	55	5.8
25 R	30.5	30	65	5.8
30 R	36	30	75	5.8
5 H	7	20.8	41.3	2.7
7 H	9	22.1	40.8	3.1
8 H	10	23	46.8	3.4
10 H	15	25.4	53.5	4.2
15 H	17	26.5	58.8	4.7
20 H	26	32	58	6.6
25 H	32	36	58	8.5
30 H	38	36	62.8	8.5
50 H	60	42.5	73	11.6
100 H	119	51.6	94.5	17.7

Serrated rubber stopper		Order number	127650
Diameter	13 mm		
Function	For injection vials 2 R		
Quantity	100		

Serrated rubber stopper		Order number	127651
Diameter	20 mm		
Function	For injection vials 6 R–100 H		
Quantity	100		

Crimp caps		Order number	127660
Dimensions	Ø 13 x 6.8 mm		
Function	For injection vials 2 R		
Quantity	100		

Crimp caps		Order number	127661
Dimensions	Ø 20 x 7.5 mm		
Function	For injection vials 6 R–100 H		
Quantity	100		

Hand crimper		Order number	127670
Remark	For 2 R		

Hand crimper		Order number	127671
Remark	For 6 R–100 H		

Decrimper		Order number	127680
Remark	For 2 R		

Decrimper		Order number	127681
Remark	For 6 R–100 H		

5 Epsilon Accessories

Product dishes

Product dish	Order number	127280
Material	Stainless steel	
Size (mm)	225 x 300 x 30 (W x D x HD)	
Remark	For Epsilon 2-6 D	
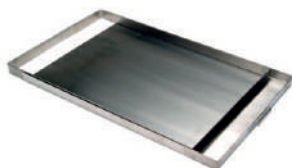
Product frame	Order number	127286
Material	Stainless steel	
Size (mm)	225 x 300 x 30 (W x D x HD)	
Remark	For Epsilon 2-6 D	

Product base sheet	Order number	127285
Material	Stainless steel	
Size (mm)	225 x 300	
Function	For product frame 127286	
Remark	For Epsilon 2-6 D	

Product sieve	Order number	127282
Size (mm)	225 x 300	
Mesh size	0.2 mm	

Product dish	Order number	127230
Material	Stainless steel	
Size (mm)	227 x 400 x 20 (W x D x HD)	
Rim height	20 mm	
Remark	For Epsilon 1-4 / 2-4	
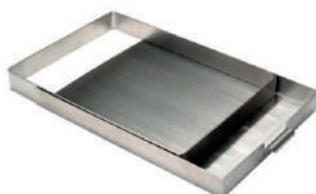
Product frame	Order number	127231
Material	Stainless steel	
Size (mm)	227 x 400 x 20 (W x D x HD)	
Remark	For Epsilon 1-4 / 2-4	

Product base sheet	Order number	127229
Material	Stainless steel	
Size (mm)	227 x 400	
Function	For product frame 127231	
Remark	For Epsilon 1-4 / 2-4	

Product dish   Order number   127230

Material	Stainless steel
Size (mm)	227 x 400 x 20 (W x D x HD)
Remark	For Epsilon 1-4 / 2-4

Product dish   Order number   127290

Material	Stainless steel
Size (mm)	350 x 450 x 30 (W x D x HD)
Weight approx.	2.3 kg
Remark	For Epsilon 2-12 D

Product dish   Order number   127190

Material	Stainless steel
Size (mm)	350 x 400 x 30 (W x D x HD)
Weight approx.	2.3 kg
Remark	For Epsilon 2-12 D

Product frame   Order number   127293

Material	Stainless steel
Size (mm)	350 x 450 x 30 (W x D x HD)
Weight approx.	1.5 kg
Remark	For Epsilon 2-12 D

Product base sheet   Order number   127295

Material	Stainless steel
Function	For product frame 127293
Weight approx.	1.8 kg
Remark	For Epsilon 2-12 D

Overview

Product dishes

Item number	Size in mm	Nominal volume Layer thickness 1 cm	Device
127230	270 x 400	1080 ml	Epsilon 1-4/2-4 and Epsilon 2-20
127280	225 x 300	675 ml	Epsilon 2-6 D
127260	300 x 400	1200 ml	Epsilon 2-16 D
127190	350 x 400	1400 ml	Epsilon 2-10 D
127290	350 x 450	1575 ml	Epsilon 2-12 D
127300	300 x 300	900 ml	Production systems
127310	300 x 450	1350 ml	Production systems
127320	300 x 600	1800 ml	Production systems

5.2 Sensor

Product sensor

Product sensor	Order number	124799
Model	PT 100	
Cable length approx.	0.8 m	

Product sensor	Order number	124801
Model	PT 100	
Cable length approx.	2 m	

Product sensor	Order number	124806
Model	2x PT 100	

Product sensor	Order number	124804
Model	PT 100 Mini-Epsilon	

5.3 Manifolder

Drying manifolder

Horizontal drying manifold	Order number	121202
Width	575 mm	
Height	753 mm	
Material	Stainless steel	
Function	With connection to rear wall of system via 2x DN 40 KF-37 and 12 rubber valves, **for substances containing solvents**	
Connection	For connecting vessels with DIN female ground joint NS29/32: 12x 100 ml, 12x 250 ml, 12x 500 ml, 12x 1000 ml, 8x 2000 ml round-bottom flasks· 12x 75 ml, 12x 150 ml, 12x 300 ml, 12x 600 ml, 12x 1200 ml, 6x 2000 ml wide-mouth filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	Epsilon 2-6 D	

Vertical manifold	Order number	121204
Width	400 mm	
Height	524 mm	
Material	Stainless steel	
Function	Flange mounted directly on drying chamber, with 4 rubber valves, **for substances containing solvents**	
Connection	For connecting vessels with DIN female ground joint NS29/32: 4x 100 ml, 4x 250 ml, 4x 500 ml, 4x 1000 ml, 4x 2000 ml round-bottom flasks 4x 75 ml, 4x 150 ml, 4x 300 ml, 4x 600 ml, 4x 1200 ml wide-mouth filter bottles	
Features	The connections can be shut off individually and the drying vessels can be vented individually	
Remark	1 level; only for Epsilon 1/2–4 LSCplus	

Drip tray	Order number	121345
Size	30 x 138 x 525 mm	
Function	For drying manifolds	
Remark	For Epsilon 2-6 D	

5.4 Thermoblocks

Thermoblocks for Epsilon

Thermoblock	Order number	112428
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.8 x 30 (L x W x H)	
Function	For holding a total of 30 vessels Ø 7.6–8 x 35–41 mm with flat bottom or holding a total of 20 vessels Ø 14.2–15.1 x 35–41 mm with flat bottom	

Thermoblock	Order number	110382
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.8 x 48 (L x W x H)	
Function	For holding a total of 40 vessels Ø 9.6–10.2 x 48.5–57 mm with flat bottom and crimp rim Ø 12.2	

Thermoblock	Order number	112290
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.7 x 31.5 (L x W x H)	
Function	For holding a total of 40 vessels Ø 10–10.6 x 36.5–43 mm with bail crimp	

Thermoblock	Order number	110534
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.8 x 43 (L x W x H)	
Function	For holding a total of 30 vessels Ø 10.4–11 x 51–60 mm (Eppendorf caps)	

Thermoblock	Order number	110535
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.8 x 23 (L x W x H)	
Function	For holding a total of 48 vessels Ø 11–11.6 x 28–33 mm	

Thermoblock	Order number	110356
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	127.8 x 85.8 x 72 (L x W x H)	
Function	For holding a total of 48 vessels Ø 11.3–12 x 79.5–93 mm with round bottom	

Thermoblocks for Epsilon

Thermoblock	Order number 113309
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.8 x 50 (L x W x H)
Function	For holding a total of 35 vessels Ø 12.1–12.8 x 55–64 mm with flat bottom

Thermoblock	Order number 110216
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.7 x 21 (L x W x H)
Function	For holding a total of 35 vessels Ø 12.6–13.3 x 27–31 mm with flat bottom

Thermoblock	Order number 110220
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.8 x 38 (L x W x H)
Function	For holding a total of 35 vessels Ø 13.8–14.6 x 44–51 mm with flat bottom

Thermoblock	Order number 110054
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 86 x 28 (L x W x H)
Function	For holding a total of 35 vessels Ø 14–14.8 x 33–38 mm with flat bottom

Thermoblock	Order number 110275
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.8 x 45 (L x W x H)
Function	For holding a total of 12 vessels Ø 14.1–15 x 43–50 mm with flat bottom

Thermoblock	Order number 110385
Material	Aluminium
Surface	Black anodised
Dimensions (mm)	198 x 99 x 35 (L x W x H)
Function	For holding a total of 50 vessels Ø 15 x 45 mm with round or flat bottom

Thermoblocks for Epsilon

Thermoblock		Order number	110355
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 72 (L x W x H)		
Function	For holding a total of 24 vessels Ø 15.1–16 x 72–84 mm with round bottom		

Thermoblock		Order number	110191
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 44 (L x W x H)		
Function	For holding a total of 24 vessels Ø 15.8–16.8 x 44–51 mm with round bottom		

Thermoblock		Order number	110374
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 35 (L x W x H)		
Function	For holding a total of 24 vessels Ø 16.1–17.1 x 41.5–48 mm		

Thermoblock		Order number	110300
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 72 (L x W x H)		
Function	For holding a total of 24 vessels Ø 16.3–17.3 x 72–84 mm with round bottom		

Thermoblock		Order number	112344
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 30 (L x W x H)		
Function	For holding a total of 24 vessels Ø 17.3–18.3 x 36–42 mm with flat bottom		

Thermoblock		Order number	110364
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 38 (L x W x H)		
Function	For holding a total of 18 vessels Ø 19.2–20.2 x 46–54 mm with flat bottom		

Thermoblocks for Epsilon

Thermoblock   Order number   110370

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.7 x 25 (L x W x H)
Function	For holding a total of 18 vessels Ø 20.2–21.2 x 33–38 mm with flat bottom

Thermoblock   Order number   110305

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.8 x 61 (L x W x H)
Function	For holding a total of 12 vessels Ø 21.9–23 x 68–80 mm with flat bottom

Thermoblock   Order number   110219

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.8 x 38 (L x W x H)
Function	For holding a total of 12 vessels Ø 23.2–24.4 x 45–53 mm with flat bottom

Thermoblock   Order number   110322

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.7 x 31.5 (L x W x H)
Function	For holding a total of 12 vessels Ø 24–25.2 x 33.5–39 mm with flat bottom

Thermoblock   Order number   110321

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	127.8 x 85.7 x 31 (L x W x H)
Function	For holding a total of 10 vessels Ø 24–25.2 x 38–44 mm with flat bottom

Thermoblock   Order number   110511

Material	Aluminium
Surface	Black anodised
Dimensions (mm)	187.5 x 134.5 x 20 (L x W x H)
Function	For holding a total of 35 vessels Ø 24 x 45 mm with flat bottom (10R vials)

Thermoblocks for Epsilon

Thermoblock		Order number	110368
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 38 (L x W x H)		
Function	For holding a total of 10 vessels Ø 26.4–27.7 x 45–53 mm with flat bottom		

Thermoblock		Order number	110304
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 61 (L x W x H)		
Function	For holding a total of 10 vessels Ø 26.6–28 x 68–80 mm with flat bottom		

Thermoblock		Order number	110301
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 93 x 65 (L x W x H)		
Function	For holding a total of 12 vessels Ø 26.2–27.5 x 70–82 mm with flat bottom		

Thermoblock		Order number	110533
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 63 (L x W x H)		
Function	For holding a total of 11 vessels Ø 27.5–28.9 x 70–82 mm with flat bottom		

Thermoblock		Order number	110376
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 38 (L x W x H)		
Function	For holding a total of 8 vessels Ø 28.7–30.2 x 45–53 mm with flat bottom		

Thermoblock		Order number	110190
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 44 (L x W x H)		
Function	For holding a total of 6 vessels Ø 30.6–32.2 x 48–56 mm with flat bottom		

Thermoblocks for Epsilon

Thermoblock		Order number	110197
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 61 (L x W x H)		
Function	For holding a total of 6 vessels Ø 32.5–34.2 x 69–81 mm with round bottom		

Thermoblock		Order number	110192
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 66.5 (L x W x H)		
Function	For holding a total of 4 vessels Ø 42.3–44.5 x 51–60 mm with flat bottom		

Thermoblock		Order number	110324
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	127.8 x 85.8 x 42 (L x W x H)		
Function	For holding a total of 2 vessels Ø 57.2–59.5 x 42–49 mm with flat bottom		

Overview

Item number	Block dimensions (mm)	Number of vials	Vial diameter (mm) Height (mm)	Number of thermoblocks per shelf			
				Epsilon 1-4 LSCplus Epsilon 2-4 LSCplus 270 x 400 mm (W x L)	Epsilon 2-6D LSCplus 225 x 300 mm (W x L)	Epsilon 2-10D LSCplus 350 x 400 mm (W x L)	Epsilon 2-12D 350 x 400 mm (W x L)
112428	127.8 x 85.8 x 30	30	7.6–8 x 35–41	9	5	12	12
110382	127.8 x 85.8 x 48	40	9.6-10.2 x 48.5-57	9	5	12	12
112290	127.8 x 85.7 x 31.5	40	10-10.6 x 36.5-43	9	5	12	12
110534	127.8 x 85.8 x 43	30	10.4-11 x 51-60	9	5	12	12
110535	127.8 x 85.8 x 23	48	11-11.6 x 28-33	9	5	12	12
110356	127.8 x 85.8 x 72	48	11.3-12 x 79-93	9	5	12	12
113309	127.8 x 85.8 x 50	35	12.1-12.8 x 55-64	9	5	12	12
110216	127.8 x 85.7 x 21	35	12.6-13.3 x 27-31	9	5	12	12
110220	127.8 x 85.8 x 38	35	13.8-14.6 x 44-51	9	5	12	12
110054	127.8 x 86 x 28	35	14-14.8 x 33-38	9	5	12	12
110275	127.8 x 85.8 x 45	12	14.1-15 x 43-50	9	5	12	12
110385	198 x 99 x 35	50	15 x 45	4	3	6	6
110355	127.8 x 85.8 x 72	24	15.1-16 x 72-84	9	5	12	12
110191	127.8 x 85.8 x 44	24	15.8-16.8 x 44-51	9	5	12	12
110374	127.8 x 85.8 x 35	24	16.1-17.1 x 41.5–48	9	5	12	12
110300	127.8 x 85.8 x 72	24	16.3-17.3 x 72-84	9	5	12	12
112344	127.8 x 85.8 x 30	24	17.3-18.3 x 36-42	9	5	12	12
110364	127.8 x 85.8 x 38	18	19.2-20.2 x 46-54	9	5	12	12
110370	127.8 x 85.7 x 25	18	20.2-21.2 x 33-38	9	5	12	12
110305	127.8 x 85.8 x 61	12	21.9-23 x 68-80	9	5	12	12
110219	127.8 x 85.8 x 38	12	23.2-24.4 x 45-53	9	5	12	12
110322	127.8 x 85.7 x 31.5	12	24-25.2 x 33.5-39	9	5	12	12
110321	127.8 x 85.7 x 31	10	24-25.2 x 38-44	9	5	12	12
110511	187.5 x 134.5 x 20	35	24 x 45	4	2	4	4
110368	127.8 x 85.8 x 38	10	26.4-27.7 x 45-53	9	5	12	12
110304	127.8 x 85.8 x 61	10	26.6-28 x 68-80	9	5	12	12
110301	127.8 x 93 x 65	12	26.2-27.5 x 70-82	8	4	8	8
110533	127.8 x 85.8 x 63	11	27.5-28.9 x 70-82	9	5	12	12
110376	127.8 x 85.8 x 38	8	28.7-30.2 x 45-53	9	5	12	12
110190	127.8 x 85.4 x 44	6	30.6-32.2 x 48-56	9	5	12	12
110197	127.8 x 85.8 x 61	6	32.5-34.2 x 69-81	9	5	12	12
110192	127.8 x 85.8 x 66.5	4	42.3-44.5 x 51-60	9	5	12	12

Thermoblocks for Epsilon 2-4 / 2-10

Thermoblock	Order number	110245
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	400 x 99 x 25 (L x W x H)	
Function	For holding a total of 150 vessels Ø 9.7–10.3 x 28–33 mm with round or flat bottom	
Remark	6-row block	

Thermoblock	Order number	112414
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	400 x 115.5 x 32 (L x W x H)	
Function	For holding a total of 100 vessels Ø 10.2–10.8 x 34–40 mm or a total of 190 vessels Ø 9.1–9.6 x 36–42 mm	
Remark	Two-sided, designed for two vessel sizes	

Thermoblock	Order number	112411
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	400 x 63 x 45 (L x W x H)	
Function	For holding a total of 50 vessels Ø 10.2–10.8 x 48–56 mm (Eppendorf caps)	

Thermoblock	Order number	112413
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	400 x 113.8 x 45 (L x W x H)	
Function	For holding a total of 100 vessels Ø 10.2–10.8 x 48–56 mm (Eppendorf caps)	
Remark	Vials placed stepwise at an angle of 60° in four rows	

Thermoblock	Order number	112220
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	296 x 219 x 5 (L x W x H)	
Function	For holding a total of 88 vessels Ø 14.5–15.4 x 13–15 mm	

Thermoblock	Order number	112434
Material	Aluminium	
Surface	Black anodised	
Dimensions (mm)	200 x 270 x 30 (L x W x H)	
Function	For holding a total of 108 vessels Ø 16 x 35 mm with flat bottom (2R vials)	

Thermoblock		Order number	112435
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	225 x 300 x 30 (L x W x H)		
Function	For holding a total of 130 vessels Ø 16 x 35 mm with flat bottom (2R vials)		

Thermoblock		Order number	112483
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	400 x 80 x 62 (L x W x H)		
Function	For holding a total of 11 vessels Ø 27.8–29.2 x 65–76 mm (50 ml flask)		
Remark	1-row block		

Overview

Item number	Block dimensions (mm)	Number of vials	Vial diameter (mm) Height (mm)	Number of thermoblocks per shelf			
				Epsilon 1-4 LSCplus Epsilon 2-4 LSCplus 270 x 400 mm (W x L)	Epsilon 2-6D LSCplus 225 x 300 mm (W x L)	Epsilon 2-10D LSCplus 350 x 400 mm (W x L)	Epsilon 2-12D 350 x 400 mm (W x L)
110245	400 x 99 x 25	150	9.7-10.3 x 28-33	2	0	3	3
112414	400 x 115.5 x 32	100	10.2–10.8 x 34-40	2	0	3	3
112411	400 x 63 x 45	50	10.2–10.8 x 48-56	4	0	6	5
112413	400 x 113.8 x 45	100	10.2–10.8 x 48-56	2	0	3	4
112220	296 x 219 x 5	88	14.5-15.4 x 13-15	1	1	1	2
112434	200 x 270 x 30	108	16 x 35	2	1	2	2
112435	225 x 300 x 30	130	16 x 35	1	1	1	2
112483	400 x 80 x 62	11	27.8-29.2 x 65-76	3	0	4	5

Thermoblocks for Epsilon 2-12D

Thermoblock		Order number	110296
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	290.5 x 89.2 x 90 (L x W x H)		
Function	For holding a total of 75 vessels Ø 14.5–15,2 x 100–115 mm		

Thermoblock		Order number	110303
Material	Aluminium		
Surface	Black anodised		
Dimensions (mm)	231.3 x 80 x 85 (L x W x H)		
Function	For holding a total of 44 vessels Ø 16 x 100 mm with round bottom		

6.1 Vacuum pumps

Vacuum pumps
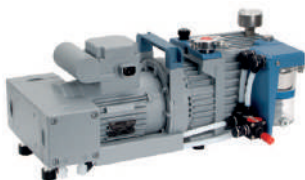
Chemical hybrid vacuum pump   Order number   125295

Model	RC6
Suction capacity	5.9 m³/h
Power	230 V, 50/60 Hz
Features	With small flange coupling DN 16
Remark	Final vacuum 2×10^{-3} mbar

Chemical hybrid vacuum pump   Order number   125296

Model	RC6
Features	Emissions condenser and trap, for substances containing solvents
Suction capacity	5.9 m³/h
Power	230 V, 50/60 Hz
Features	With small flange coupling DN 16
Remark	Final vacuum 2×10^{-3} mbar

Vacuum pump (chemical-resistant rotary-vane pump)   Order number   125261

Model	Pascal 2010 C1
Suction capacity	10 m³/h
Power	230 V, 50/60 Hz
Features	With small flange coupling DN 25
Remark	Final vacuum 2×10^{-3} mbar

Vacuum pump (chemical-resistant rotary-vane pump)   Order number   125263

Model	Pascal 2021 C1
Suction capacity	21 m³/h
Power	230 V, 50/60 Hz
Features	With small flange coupling DN 25
Remark	Final vacuum 2×10^{-3} mbar

Vacuum pump (rotary-vane pump)		Order number	125302
Model	RZ 2,5		
Suction capacity	2.3 m³/h		
Power	230 V, 50/60 Hz		
Features	With small flange coupling DN 16		
Remark	Final vacuum 2×10^{-3} mbar		

Vacuum pump (rotary-vane pump)		Order number	125307
Model	RZ 6		
Suction capacity	5.7 m³/h		
Power	230 V, 50/60 Hz		
Features	With small flange coupling DN 16		
Remark	Final vacuum 2×10^{-3} mbar		

Vacuum pump:		Order number	125317
Model	DUO 10		
Suction capacity	11.1 m³/h		
Power	230 V, 50/60 Hz		
Features	With small flange coupling DN 25/25		
Remark	Final vacuum 2×10^{-3} mbar		

Vacuum pump:		Order number	125318
Model	DUO 20		
Suction capacity	20 m³/h		
Power	230 V, 50/60 Hz		
Features	With small flange coupling DN 25/25		
Remark	Final vacuum 2×10^{-3} mbar		

Vacuum pump:		Order number	125245
Model	nXDS 10i		
Suction capacity	11.4 m³/h		
Power	200–240 V, 50/60 Hz		
Remark	Final vacuum <0,01 mbar		
Features	With small flange coupling DN 25/25		

6.2 Vacuum pump oil

Vacuum pump oil

P3 pump oil	Order number	126181
Contents	1 l bottle	
Pumps	RZ / RC / DUO	

Pump oil	Order number	126185
Contents	5 l cannister	
Pumps	RZ / RC / DUO	

Pump oil	Order number	126200
Contents	20 l cannister	
Pumps	RZ / RC / DUO	

6.3 Vacuum hoses

Vacuum hoses

Vacuum hose	Order number	125702
Length	1 m	
Features	With standard flange couplings DN 16 / DN 25	

Vacuum hose	Order number	125706
Length	1.5 m	
Features	With standard flange couplings DN 16 / DN 25	

Vacuum hose	Order number	125704
Length	1 m	
Features	With standard flange couplings DN 25 / DN 25	

Vacuum hose	Order number	125705
Length	1.5 m	
Features	With standard flange couplings DN 25 / DN 25	

6.4 Vacuum accessories

Vacuum accessories

Micro aeration valve	Order number	125931
Features	With hose fitting	

Micro vent valve	Order number	125932
Features	With hose fitting and pipe bend, DN25 / DN25	

Electromagnetic pressure control valve	Order number	125910
Function	For installation in the suction line of the vacuum pump	
Features	With DN 25 / DN25	
Remark	Usable for all laboratory freeze dryer and Epsilon 1–4/2–4 LSCplus	

Manual stop valve	Order number	125920
Function	For the vacuum hose between LDplus series freeze dryer systems and the vacuum pump (in place of the solenoid pressure control valve 125910)	
Features	With standard flange DN 25 / DN25	

Exhaust filter	Order number	125501
Remark	For vacuum pumps 125302 / 125307	

Replacement filter cartridge	Order number	125509
Remark	For 125501	

Exhaust filter		Order number	125502
Model	ONF 25 L		
Features	With automatic oil return		

Note: for Duo pump

Exhaust filter		Order number	125503
Model	ONF 25 L		
Features	Without automatic oil return		

Note: for Duo pump

Replacement filter cartridge		Order number	125510
Remark	For 125502 and 125503		

Vacuum sensor		Order number	125478
Model	VCP 63 MV		
Connection	With integrated signal processing for direct connection to the freeze drying system		
Measuring range	1000 – 0.001 mbar		
Measuring principle	Pirani		
Features	With connecting cable, clamping/centring and T fitting		
Warranty	6 months		
Note	These sensors are wear parts whose service life is largely dependent on the proper use and handling of the freeze dryer		

Note: only for Alpha 1-2 LDplus

Vacuum sensor		Order number	125488
Model	VCP 63 MV		
Connection	With integrated signal processing for direct connection to the freeze drying system		
Measuring range	1000 – 0.001 mbar		
Measuring principle	Pirani		
Features	With connecting cable, clamping/centring and T fitting		
Warranty	6 months		
Note	These sensors are wear parts whose service life is largely dependent on the proper use and handling of the freeze dryer		

Replacement sensor		Order number	125468
Model	VCP 63 MV		
Warranty	6 months		

Vacuum sensor		Order number	125491
Modell	CMR 363		
Connection	Preferably for pilot systems and for laboratory units		
Measuring range	10-0.05 hPa (mbar) or lower with reduced accuracy		
Measuring principle	Capacitive		
Warranty	6 months		
Note	These sensors are wear parts whose service life is largely dependent on the proper use and handling of the freeze dryer		

Chemical-resistant vacuum sensor
Order number   125476

Model	TPR 281
Connection	With integrated signal processing for direct connection to the freeze drying system
Measuring range	1000 – 0.001 mbar
Measuring principle	Pirani
Features	Complete with connecting cable, two centring and clamping rings and T fitting DN 25/25 ISO-KF
Warranty	6 months
Note	These sensors are wear parts whose service life is largely dependent on the proper use and handling of the freeze dryer

Replacement sensor
Order number   125466

Model	TPR 281
Connection	For connection to system controller; chemical resistant
Warranty	6 months
Note	These sensors are wear parts whose service life is largely dependent on the proper use and handling of the freeze dryer

High-vacuum grease
Order number   126210

Remark	

7.1 Software and hardware

Software and hardware

Program selection module

Order number   125099

Model	PGM-30
Function	LSCplus system controller extension module for 30 user-defined individual programs
Control	Control of temperature and pressure profiles and individual process steps (freezing, primary drying, secondary drying)
Features	Very easy to use thanks to integration into system controller and guided data entry; supports entry and deletion of individual steps

LyoControlplus

Order number   125050

Function	Determination of eutectic point
Features	Includes sensors for temperature and resistance
Note	For use in combination with LSCplus system controller and LyoLogplus documentation software

Documentation software LyoLogplus

Order number   125025

Function	Windows-based software for logging relevant process parameters: ice condenser temperature, product temperature, shelf temperature, vacuum, and/or Lyo-Rx (depending on freeze dryer configuration)
Features	Supports export in PDF and Excel file formats

USB

Order number   125037

Model	Process data logging for equipment with LSCplus system controller
Function	For graphical process display
Includes	USB stick, LyoLogplus installation CD
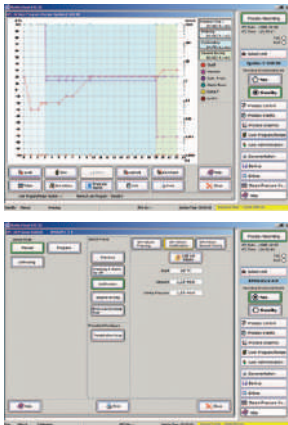
LPCplus process visualisation		Order number	125042
Model	LPCplus		
Function	Software for standard PCs for data transfer and freeze drying system monitoring in combination with LSCplus system controller		
Includes	LPC software on diskettes, 1 connecting cable, installation and operation manual, Laptop with operating system		
Note	Laptop included		

7.2 Sensors

Sensors

Product sensor		Order number	124812
Model	PT 100		
Cable length approx.	0.26 m		
Features	With precision connector for use with LSCplus controller		

Product sensor		Order number	124799
Model	PT 100		
Cable length approx.	0.8 m		
Features	With precision connector		
Remark	Epsilon		

Product sensor		Order number	124800
Model	PT 100		
Cable length approx.	1.3 m		
Features	With precision connector		
Remark	Epsilon		

Product sensor		Order number	124801
Model	PT 100		
Cable length approx.	2 m		
Features	With precision connector		
Remark	Epsilon		

Sensor for temperature and resistance		Order number	124809
Function	For LyoControlplus		
Remark	With precision connector for use with LSCplus system controller		
Cable lenght	0,26 m		

Sensor for temperature and resistance		Order number	125130
Function	For LyoControl and LyoControlplus		
Remark	Epsilon		
Cable lenght	0,8 m		

8 Cooling Baths and Freezing Equipment

Cooling Baths and Freezing Equipment

Cooling bath   Order number   101840

Model	CB 18-40
Dimensions (mm)	410 x 450 x 460
Bath depth	200 mm
Bath opening (mm)	300 x 327 (W x L)
Characteristics	Air cooled
Features	Stainless steel tank with integrated condensate drain, digital display and actual ice condenser temperature indication
Capacity	18 litres
Bath temp.	Approx. -40 °C
Power	230 V, 50 Hz
Note	For connection of 1 or 2 rotators
Features	Non-halogenated chilling media

Rotator with support rod   Order number   120720

Function	For freezing liquids in round-bottom flasks
Weight approx.	3.8 kg
Power	230 V, 50 Hz
Features	Speed continuously variable from 60 to 2000 rpm

Horizontal roller rotator   Order number   120726

Material	Stainless steel
Weight approx.	11.5 kg
Application	For 1 or 2 1200-ml wide-neck filter bottles
Power	220 V, 50 Hz
Features	Speed continuously variable from 60 to 2000 rpm

Therminol D12   Order number   130345

Quantity	5 l cannister

Therminol D12   Order number   130350

Quantity	10 l cannister

Therminol D12   Order number   130360

Quantity	20 l cannister

Rotor program

Fixed-angle rotors for RVC 2-18 CDplus

All the products included in this table are solvent-resistant (not acid-resistant). They are made of aluminium (black anodised).

Vessel			Rotor		
Nominal volume (ml)	**Dimensions** Ø x length (mm)	**Description** **Standard Features**	**Vessels per rotor** (pcs.)	**Rotors per unit** (pcs.)	**Part no.** **Configuration** **Setting angle (reference: vertical)**
0.25 0.50	5.8 x 47	Reaction vessel	40	2[1]	Solid rotor 30° **110334**
0.50 0.75	7.9 x 28	Eppendorf	30	3	**124505** Solid rotor 45°
1.5 2.2	10.8 x 38	Eppendorf	24	3	**124502** Solid rotor 45°
2.0	10.7 x 72	With round or flat bottom	12		**112250**[3] Adapter receiver 25°
2.0	11.2 x 36	With flat bottom	36	3	**110188** Solid rotor 40°
2.0	16.1 x 56	With flat bottom, micro reaction vessel	18	2[1]	**112351** Solid rotor 22°
2.5	11.7 x 32	Chromacol, with flat bottom	24	3	**110517** Solid rotor 40°

Rotor program

Vessel			Rotor		
Nominal volume	Dimensions	Description Standard Features	Vessels per rotor	Rotors per unit	Part no. Configuration Setting angle (reference: vertical)
(ml)	Ø x length (mm)		(pcs.)	(pcs.)	
2.5	12 x 36	With round or flat bottom	24	3	**110327** Solid rotor 40°
4.0 7.0	12.5 x 70 – 100	DIN 58970	18	1	**124512** Disc rotor 25°
5.0	15 x 45	With flat bottom	18	2[1]	**112328** Solid rotor 40°
5.5	15.6 x 57	With flat bottom	18	2[1]	**110514** Solid rotor 22°
10.0	16 x 150	With round bottom	8	1	**112319** Disc rotor 32°
10.0	20 x 62	With round or flat bottom, micro reaction vessel	12	1	**110265** Disc rotor 25°
10.0 15.0 alt. 15.0 18.0	16.5 x 80 – 100 alternatively 16.5 x 100 – 125	DIN 58970	12 alt. 6	1	**124516** Disc rotor 25°

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description** **Standard** **Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration** **Setting angle (reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
30.0	23.8 – 25 x 106 – 120	With round bottom	8	1	**110242** Disc rotor 18°
50.0	28 – 28.5 x 107	With round bottom	6	1	**110226** Disc rotor 20°
50.0	29.5 – 30 x 105 – 120	Falcon	6	1	**112383** Disc rotor 20°
50.0	34 x 100	DIN 58970	6	1	**110252** Disc rotor 20°
	Outside: 50 x 20		--	--	**110393** Distance ring

Fixed-angle rotors for RVC 2-18 CDplus in HCl version

All of the products included in this table are acid-resistant and, to a limited extent, also solvent-resistant. They are made of polypropylene (PP), polyvinylidene fluoride (PVDF), and nickel (Ni).

Rotor program

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration Material Setting angle (reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
0.25 0.50	5.8 x 47	Reaction vessel	40	2[5]	**112360** Solid rotor PVDF 30°
1.5 2.2	10.8 x 38	Eppendorf	24	2[5]	**112239** Solid rotor PVDF 45°
2.0	11.6 x 32	With flat bottom	24	3	**110212** Solid rotor PVDF 40°
4.0 7.0	12.5 x 70 – 100	DIN 58970 with round or flat bottom	18	1	**112261** Solid rotor PVDF 25°
5.0	15 x 45	With flat bottom	18	2	**110211** Solid rotor PP 40°
5.0	15 x 45	With flat bottom	18	2	**112298** Solid rotor PVDF 40°
9.0	13 x 100 13 x 70 – 100	Pyrex® no. 9826 with round or flat bottom	18	1	**112376[4]** Disc rotor PVDF, Ni 25°

Rotor program

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration** **Material** **Setting angle (reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
10.0 to 15.0	15.8 – 16.8 x 78 – 100 alternatively 15.8 – 16.8 x 100 – 125	DIN 58970	12 alt. 6	1	**112331** Disc rotor PVDF, Ni 25°
50.0	27.3 – 28.7 x 87 – 120	With round bottom	6	1	**112332** Disc rotor PVDF, Ni 20°
50.0	29.5 – 30 x 105 – 120	Falcon	6	1	**112382** Disc rotor PVDF, Ni 20°
	Outside: 50 x 20		--	--	**112361** Distance ring PVDF

[1] In order to use two rotors,a distance ring, part no. 110393, must be installed between the rotors.

[2] Only in conjunction with fixed-angle disc rotor, part no. 124512

[3] Only in conjunction with fixed-angle disc rotor, part no. 124516

[4] Delivery time on request, subject to technical changes.

[5] In order to use two rotors,a distance ring, part no. 112361, must be installed between the rotors.

Rotor program

Fixed angle rotors

All products consist of aluminium, black anodized.

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration Setting angle (Reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
0.2	6 x 20	Eppendorf	72	3	**110283** Solid rotor 45°
0.5 0.75	7.9 x 28	Eppendorf	54	3	**124554**[1] Solid rotor 45°
1.5 2.2	10.8 x 38	Eppendorf	36	3	**124552** Solid rotor 45°
ca. 2.0	12 x 36	with flat bottom	36	3	**110369** Solid rotor 40°
2.0 4.0	11.6x 32 12.7 x 46	with flat bottom both vessel types can be used simultaneously	36	2	**110507** Solid rotor (combination rotor) 28°
5.0	14.7 x 45	with flat bottom	30	2[4]	**110391**[4] Solid rotor 30°
5.0	16.5 x 35	with flat bottom, front-side thread Ø 18 mm x 6 mm	24	3	**110392**[1] Solid rotor 40°

Rotor program

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration** **Setting angle (Reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
5.0 7.0	12.5 x 75 - 85	with round bottom	48	1	**124562** Disc rotor 30°
8.0 10.0	12 – 13 x 100 – 120	with round bottom	36	1	**124563** Disc rotor 25°
9.0	16.5 – 17 x 60 – 120	with round or flat bottom	24	1	**124564** Disc rotor 20°
10.0	19 – 20.5 x 40 – 48		24	2	**124582** Disc rotor 23°
10.0 12.0 15.0	16 – 16.5 x 80 – 125	with round bottom, Falcon	24	1	**124566** Disc rotor (reversible rotor) 20°
15.0	18 x 100 or 18 x 125	with round bottom	36 or 27	1	**110515** Disc rotor 20°
20.0	26.6 – 28 x 55 – 71	with flat bottom	16	1	**112460** Disc rotor 25°

Vessel			Rotor		
Nominal volume **(ml)**	**Dimensions** **Ø x length (mm)**	**Description Standard Features**	**Vessels per rotor** **(pcs.)**	**Rotors per unit** **(pcs.)**	**Part no.** **Configuration Setting angle (Reference: vertical)**
30.0	24 x 105 – 120 or 25 x 105	with round bottom	12	1	**124575** Disc rotor 25°
50.0	29.5 – 30 x 115 – 120	Falcon	8	1	**124580** Disc rotor 30°
50.0	34.5 x 100 – 120		8	1	**124584** Disc rotor 28°
60.0	27.1– 28.5x 104 – 140		12	1	**124581** Disc rotor 18°
100.	45 x 100 – 120		6	1	**124595** Disc rotor 28°
--	outside: 50 x 20		--	--	**110393** Distance ring

[1] In order to use two rotors, a distance ring, part no. 110393 can be installed to ensure equal evaporation between the two rotors.

[2] Only in conjunction with fixed-angle disc rotor, part no. 124562

[3] Delivery time on request, subject to technical relations.

[4] In order to use two rotors, a distance ring, part no. 110393, must be installed between the rotors.

[5] Only in conjunction with fixed-angle disc rotor, part no. 124575

[6] Only in conjunction with fixed-angle disc rotor, part no. 110515

Rotor program

Swing-out rotors

All products included in this table consist of aluminium, black anodized.

Vessel			Remarks	Part no. **Configuration** **Setting angle (reference: vertical)**	
Quan-tity **(pcs.)**	**max. dimensions** **W x D x H (mm)**	**Description**			
2	86.5 x 128.5 x 20.3	Mikrotitre plate	Basic rotor	**124600** Swing-out rotor with 2 carriers 90° (swinging out fully)	
2	86.5 x 128.5 x 44.0	Deepwell plate	Set **Caution:** Use rotor no. 124601 only in conjunction with the rotor shaft with magnetic coupling Nr. 112280!	**124561** Swing-out rotor with 2 carriers for deepwell plates no. 124601, incl. rotor shaft with magnetic coupling no. 112280 90° (swinging out fully)	

Rotor program

Fixed-angle rotors

All products consist of aluminium (black anodised).

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** Configuration Setting angle (Reference: vertical)
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
1.5	11 – 12 x 31 – 39	round or flat bottom basic rotor for 126305	54	1 + 2	**124534** massive rotor 25°
1.5	11 – 12 x 31 – 39	round or flat bottom extension rotor for 124534	54	max. 2	**126305** massive rotor 25°
1.5 – 2.2	10.8 x 38	Eppendorf basic rotor for 126300	72	1 + 2	**124532** massive rotor 45°
1.5 – 2.2	10.8 x 38	Eppendorf extension rotor for 124532	72	max. 2	**126300** massive rotor 45°
2.5	10 x 40 – 50	basic rotor for 126307	54	1 + 2	**112378** massive rotor 25°

Rotor program

Vessel			Rotor		
Nominal volume (ml)	Dimensions Ø x length (mm)	Description Standard Features	Vessels per rotor (pcs.)	Rotors per unit (pcs.)	Part no. Configuration Setting angle (Reference: vertical)
5.0	15 x 50	flat bottom basic rotor for 126303	72	1 + 1	**124515** disc rotor 30°
5.0	15 x 50	flat bottom extension rotor for 124515	72	max. 1	**126303** disc rotor 30°
5.5	14.7 x 45	round or flat bottom	40	3	**112228**[2)] massive rotor 30°
5.0 / 9.0	12 – 13 x 100 – 120	round bottom basic rotor for 126306	72	1 + 1	**124524** disc rotor 30°
5.0 / 9.0	12 – 13 x 100 – 120	round bottom extension rotor for 124524	72	max. 1	**126306** disc rotor 30°
10.0	16 – 17 x 65 – 100	basic rotor for 126302	48	1 + 1	**124518**[3)] disc rotor 30°
10.0	16 – 17 x 65 – 100	extension rotor for 124518	48	max. 1	**126302** disc rotor 30°

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration Setting angle (Reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
10,0	26,5 – 28 x 80 – 109		32	1	**124556**[3) disc rotor 20°
10.0 12.0 15.0	16 – 16.5 x 80 – 125	round bottom, Falcon	48	1	**124536** disc rotor (turn-over rotor) 20°
13.0	15.2 x 100 (vessel) 18 x 85 (cover)		48	--	**110516**[4) adapter cover
15.0	18 x 100 or 18 x 125		48	1	**124538** disc rotor 20°
50.0	27 x 140		20	1	**124539**[3) disc rotor 22°
50.0	29.5 – 30 x 115 – 120	Falcon	18	1	**124540** disc rotor 25°
50.0	34.5 x 100 – 120		12	1	**124544** disc rotor 28°

Rotor program

Vessel			Rotor			
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration Setting angle (Reference: vertical)**	
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**		
100	45 x 100 – 120		12	1	**124547** disc rotor 23°	
150	58.6 – 61 x 110 – 120	flat bottom Falcon	6	1	**124546** disc rotor 20°	
--		--	--	--	**124533** distance ring	
--		--	--	--	**112227**[2] distance ring	

[1] Only in conjunction with fixed-angle disc rotor, part no. 124522

[2] In order to use two rotors, a distance ring, part no. 110393, must be installed between the rotors.

[3] Delivery time on request, subject to technical relations.

[4] Only in conjunction with fixed-angle disc rotor, part no. 124538

[5] Only in conjunction with fixed-angle disc rotor, part no. 124528

[6] Only in conjunction with fixed-angle disc rotors, part no. 124527 and 126311

[7] Only in conjunction with fixed-angle disc rotors, part no. 112418 and 112419

Swing-out rotors

⚠️ **WARNUNG**	The balance point of the loaded bucket must be located considerably below the pivotal point !

Plate				Rotor type and accessories
Type	**Dimensions**	**No. of plates per rotor**	**No. of plates per device**	**Part no.** **Configuration** **Setting angle (Reference: vertical)** **Material**
	B x T x H (mm)	**(piece)**	**(piece)**	
MTP or AP or DWP	max. 86.5 x 128.5 x 15.9 max. 86.5 x 128.5 x 25.9 max. 86.5 x 128.5 x 60.0	6 4 2	12 8 4	**124567** 1 set, consisting of 2 rotors, no. 124511 1 coupling piece, no. 124553, 4 carriers, no. 124708, 4 carrier plates, no. 124704 4 carrier plates, no. 124705 90° aluminium, black anodized
				124511 Swing-out rotor for microtiter plates (MTP) assay plates (AP) and deepwell plates (DWP) 90° (swinging out fully) aluminium, black anodized
---	---	---	---	**124553** Coupling piece, to connect two rotors no. 124511 aluminium, black anodized
MTP or AP or DWP	max. 86.5 x 128.5 x 15.9 max. 86.5 x 128.5 x 25.9 max. 86.5 x 128.5 x 60.0	6 4 2	12 8 4	**124708** Carrier, without bottom window, for 3 MTP or 2 AP or 1 DWP, suitable for rotor no. 124511 aluminium, black anodized
				124704 Carrier plate with distance piece, red, heigth 6 mm, suitable for carrier no. 124708 aluminium, black anodized

Rotor program

Plate		Rotor type and accessories		
Type	**Dimensions** **B x T x H (mm)**	**No. of plates per rotor** **(piece)**	**No. of plates per device** **(piece)**	**Part no.** **Configuration** **Setting angle (Reference: vertical)** **Material**
				124705 Carrier plate with distance piece, blue, height 16 mm, suitable for carrier no. 124708 aluminium, black anodized

Plate		Rotor type and accessories		
Type	**Dimensions** **B x T x H (mm)**	**No. of plates per rotor** **(piece)**	**No. of plates per device** **(piece)**	**Part no.** **Configuration** **Setting angle (Reference: vertical)** **Material**

Rotor program

Fixed-angle rotors

All products consist of aluminium (black anodised).

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration Setting angle (Reference: vertical)**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	
1.5 – 2.2	10.8 x 38	Eppendorf basic rotor for 126300	72	1 + 2	**124610** massive rotor 45°
1.5 – 2.2	10.8 x 38	Eppendorf extension rotor for 124610	72	2 max.	**126300** massive rotor 45°
2.5	11 x 31 – 39	basic rotor for 126305	54	1 + 2	**124613**[2)] massive rotor 25°
2.5	11 x 31 – 39	extension rotor for 124613	54	2 max.	**126305** massive rotor 25°
5.0	26.5 – 28 x 54.9 – 85		36	1	**124636** disc rotor 25°
5.0	15.5 – 16.7 x 47 – 59	with round or flat bottom basic rotor for 126304	36	1 + 2	**124620** massive rotor 30°

Rotor program

Vessel			Rotor		
Nominal volume **(ml)**	**Dimensions** **Ø x length (mm)**	**Description** **Standard** **Features**	**Vessels per rotor** **(pcs.)**	**Rotors per unit** **(pcs.)**	**Part no.** **Configuration** **Setting angle (Reference: vertical)**
5.0	15.5 – 16.7 x 47 – 59	with round or flat bottom extension rotor for 124620	36	2 max.	**126304** massive rotor 30°
5.0	12.5 – 13.8 x 70.4 – 86	with round bottom, e.g. Sarstedt centrifuge tubes basic rotor for 126311	72	1 + 1	**124627** disc rotor 20°
5.0 / 9.0	12 – 13 x 75– 100	with round bottom basic rotor for 126306	72	1 + 1	**124614** disc rotor 30°
5.0 / 9.0	12 – 13 x 75 – 100	with round bottom extension rotor for 124614	72	max. 1	**126306** disc rotor 30°
8.0 / 10.0	16 – 16.5 x 100 - 125	with round bottom, Falcon	48	1	**124616** disc rotor 20°
10.0	16 – 17 x 65 – 100	basic rotor for 126302	48	1 + 1	**124617** disc rotor 30°
10.0	16 – 17 x 65 – 100	extension rotor for 124617	48	max. 1	**126302** disc rotor 30°
10.0	22.5 – 24 x 41 – 45	bottle, ISO 8362-1 10R basic rotor for 126309	27	1 + 2	**124632** massive rotor 25°

Rotor program

Vessel			Rotor			
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.** **Configuration** **Setting angle (Reference: vertical)**	
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**		
10.0 12.0 15.0	16 – 16.5 x 80 – 125	with round bottom, Falcon	48	1	**124621** disc rotor 20°	
13.0	17 – 18 x 100 – 125		48	1	**124618** disc rotor 20°	
15.0	17.9 – 19 x 97 – 125	with round bottom	48	1	**124622** disc rotor 20°	
21.0	15.6 – 16.5 x 104.3 – 162.5	with round bottom	48	1	**112357** disc rotor 20°	
30.0	24 – 25 x 95 – 120		36	1	**124625** disc rotor 25°	
50.0	24 – 24.5 x 120 – 160		24	1	**124624** disc rotor 18°	
50.0	29.5 – 30 x 115 – 120		24	1	**124630** disc rotor 25°	
50.0	27.7 – 29.1 x 100 – 120	Falcon	18	1	**124629** disc rotor 23°	
50.0	32.8 – 34.5 x 100 – 120	with round bottom	16	1	**124626** disc rotor 23°	

Rotor program

Vessel			Rotor		
Nominal volume	**Dimensions**	**Description Standard Features**	**Vessels per rotor**	**Rotors per unit**	**Part no.**
(ml)	**Ø x length (mm)**		**(pcs.)**	**(pcs.)**	**Configuration Setting angle (Reference: vertical)**
55.0	24.1 – 25.3 x 105 – 166.4	with round bottom	24	1	**112358** disc rotor 18°
55.0 / 80.0	28 – 30 x 120 – 150	with round bottom	24	1	**124628** disc rotor 20°
70.0	24.1 – 25.3 x 143.9 – 203.8	with round bottom	20	1	**112359** disc rotor 18°
100	44 – 45 x 100 – 120	with round bottom	12	1	**124645** disc rotor 23°
150	58.6 – 61 x 110 – 120	with flat bottom, Falcon	8	1	**124644** disc rotor 20°
250	68.2 – 71 x 137 – 139	Wheaton Lab Media Bottle 219927	6	1	**124606** massive rotor 18°

[1] only in conjunction with disc rotors, part no. 124614 and 126306

[2] delivery time on request, subject to technical modifications

[3] only in conjunction with disc rotors, part no. 124627 and 126311

[4] only in conjunction with disc rotors, part no. 124622 and 124618

[5] only in conjunction with disc rotor, part no. 124619

[6] only in conjunction with disc rotors, part no. 112420 and 112421

[7] only in conjunction with disc rotor, part no. 124623

[8] only in conjunction with disc rotor, part no. 112441

Rotor program

Swing-out rotors and accessories

The balance point of the loaded bucket must be located considerably below the pivotal point !

All products consist of aluminium (black anodised).

Plate		Rotor type and accessories		
Type	**Dimensions** **B x T x H (mm)**	**No. of plates per rotor** **(piece)**	**No. of plates per device** **(piece)**	**Part no.** **Configuration**
				124511 **Basic rotor with triple TMM** Swing-out rotor for microtiter plates (MTP) assay plates (AP) deepwell plates (DWP) and massive bucket (MAB) with microtiter plate footprint
MTP or AP or DWP	max. 86.5 x 128.5 x 15.9 max. 86.5 x 128.5 x 25.9 max. 86.5 x 128.5 x 60.0		3 2 1	**124701** Carrier with integrated temperature sensor, without bottom window, suitable in rotor Nr. 124700 with carrier no. 124708; carrier plates no. 124704 and 124705 required
MTP or AP or DWP	max. 86.5 x 128.5 x 15.9 max. 86.5 x 128.5 x 25.9 max. 86.5 x 128.5 x 60.0		3 2 1	**124708** Carrier without temperature sensor, without bottom window, suitable in rotor Nr. 124700 with carrier no. 124701; carrier plates no. 124704 and 124705 required
			2	**124704** Carrier plate with distance pieces, red, height 6 mm, suitable for carrier no. 124701 and 124708
			2	**124705** Carrier plate with distance pieces, blue, height 16 mm, suitable for carrier no. 124701 and 124708

Rotor program

Plate		Rotor type and accessories		
Type	**Dimensions** **B x T x H (mm)**	**No. of plates per rotor** **(piece)**	**No. of plates per device** **(piece)**	**Part no.** **Configuration**
MAB	max. 86.5 x 128.5 x 60.0		1	**124703** Carrier with integrated temperature sensor, without bottom window, suitable for rotor no. 124700 with carrier no. 124706
MAB	max. 86.5 x 128.5 x 60.0		1	**124706** Carrier without temperature sensor, without bottom window, suitable for rotor no. 124700 with carrier no. 124703
		4	40	**112290** Massive bucket, with thicker rim and pedestal, for vessels $\varnothing$ 10,2 x 45,5 mm, suitable for 124703 and 124706
DWP or MAB	max. 86.5 x 128.5 x 60.0 max. 86.5 x 128.5 x 60.0		1 1	**124707** Carrier without temperature sensor, with bottom window, suitable for rotor no. 124700 with carrier no. 124711 and 124702
MAB	max. 86.5 x 128.5 x 60.0		1	**124702** Carrier with integrated temperature sensor, with bottom window, suitable for rotor no. 124700 with carrier no. 124702 The temperature sensor is positioned at the location hole of the massive bucket
		4	48	**110535** Massive bucket, for vessels $\varnothing$ 11.0-11.7 x 28.0-33.0 mm, suitable for 124702 and 124707

Rotor program

Plate		Rotor type and accessories		
Type	**Dimensions** **B x T x H (mm)**	**No. of plates per rotor** **(piece)**	**No. of plates per device** **(piece)**	**Part no.** **Configuration**
		4	35	**113309** Frame, for vessels ⌀ 12.0-12.8 x 53.2-64.2 mm, suitable for 124702 and 124707
MTP or AP or DWP	max. 86.5 x 128.5 x 15.9 max. 86.5 x 128.5 x 25.9 max. 86.5 x 128.5 x 60.0	12 8 4	3 2 1	**126350** 1 Set, consisting of 2 carriers no. 124701, 2 carriers no. 124708, 4 carrier plates no. 124704, 4 carrier plates no. 124705, 1 sample temperature sensor no. 124764
MAB	max. 86.5 x 128.5 x 60.0	4	1	**126351** 1 Set, consisting of 2 carriers no. 124703, 2 carriers no. 124706, 1 sample temperature sensor no. 124764
MAB	max. 86.5 x 128.5 x 60.0	4	1	**126352** 1 Set, consisting of 2 carriers no. 124702, 2 carriers no. 124707, 1 sample temperature sensor no. 124764

[1] special design, on request, subject to technical modifications

All products consist of aluminium (black anodised).

Vessel		Rotor and accessories		
Nominal volume **(ml)**	**Description** **Ø x length (mm)**	**Vessels per rotor** **(piece)**	**Rotors per unit** **(piece)**	**Part no.** **Configuration**
500	round bottom flask	4	1	**124660** **Basic rotor with triple-TMM** Swing-out rotor for round bottom flasks, 500 ml, for 4 carriers 112433, 112440, 124664, 124665, 124667
			1	**124667** Adapter cover Centre-cover 124664 or 124665 required
500	round bottom flask EN ISO 4797 each, with inner grinding 29/32		1	**124664** Centre cover, complete, with temperature sensor, to accomodate one round bottom flask, adapter cover 124667 required, suitable for 124665
500	round bottom flask EN ISO 4797 each, with inner grinding 29/32		1	**124665** Centre cover, complete, without temperature sensor, to accomodate one round bottom flask, adapter cover 124667 required, suitable for 124664
5 13	15.0 x 48.0 23.0 x 48.0	32 36	1	**112433** Combined bucket, with temperature sensor, to accomodate 8 vessels of 5 ml and 9 vessels of 13 ml, suitable for 112440
5 13	15.0 x 48.0 23.0 x 48.0	32 36	1	**112440** Combined bucket, with temperature sensor, to accomodate 8 vessels of 5 ml and 9 vessels of 13 ml, suitable for 112433

Rotor program

Vessel		Rotor and accessories		
Nominal volume **(ml)**	**Description** **Ø x length (mm)**	**Vessels per rotor** **(piece)**	**Rotors per unit** **(piece)**	**Part no.** **Configuration**
			1	**124670** 1 Set, consisting of 4 adapter covers no. 124667, 2 centre-covers no. 124664, 2 centre-covers no. 124665 1 sample temperature sensor no. 124764 NOTE: Use a round bottom flask with splinter protection coating (part no 127361)
			1	**124671** 1 Set, consisting of 2 combined buckets no. 112433, 2 combined buckets no. 112440, 1 sample temperature sensor no. 124764

Vessel		Rotor and accessories		
Nominal volume **(ml)**	**Description** **Ø x length (mm)**	**Vessels per rotor** **(piece)**	**Rotors per unit** **(piece)**	**Part no.** **Configuration**

All products consist of aluminium (black anodised).

Vessel		Rotor and accessories			
Nominal volume **(ml)**	**Description** **Ø x length (mm)**	**Vessels per rotor** **(piece)**	**Rotors per unit** **(piece)**	**Part no.** **Configuration**	
		4	1	**124640** **Basic rotor with Triple-TMM** Swing-out rotor, for 4 buckets 124641, 124642, 124649, 124650, 124651, 124652, 154653, 154654, 124655, 124656, 124657, 124658	
15.0	∅ 16.2 mm x 114 mm	16	1	**124641** Bucket 4 x 15 ml without temperature sensor	
15.0	∅ 16.2 mm x 114 mm	16	1	**124642** Bucket 4 x 15 ml with integrated temperature sensor	

[1] special design, on request, subject to technical modifications

Rotor program

Sample temperature sensors (temperature sensor element teflon-bonded/ -capsuled)

Description	Dimensions (length), features	Part no.
Sample temperature sensor PT100	120 mm	124750
Sample temperature sensor PT100	140 mm	124754
Sample temperature sensor PT100	150 mm	124756
Sample temperature sensor PT100	160 mm	124758
Sample temperature sensor PT100	175 mm	124761
Sample temperature sensor PT100	190 mm	124764
Sample temperature sensor PT100	220 mm	124770
Sample temperature sensor PT100	280 mm	124782
Sample temperature sensor PT100	320 mm	124837

Sample holder temperature sensors(temperature sensor element in stainless steel cover)

Description	Dimensions (length), features	Part no.
Sample holder temperature sensor PT100	150 mm, for combined bucket no.112433	124785
Sample holder temperature sensor PT100	190 mm, marked, for carrier no.124702, 124703, 124711	124787
Sample holder temperature sensor PT100	220 mm, marked, for carrier no. 124701	124790

Tools

Description	Dimensions	Part no.
Torx screw driver	TX 8	988034