

Алматы (7273)495-231
Ангарск (3955)42-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-42
Белгород (4735)40-23-142
Благовещенск (4162)35-142-07
Брянск (4232)59-03-52
Владивосток (423)249-42-31
Владикавказ (8672)42-90-42
Владимир (4935) 49-43-18
Волгоград (844)278-03-42
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-142

Ижевск (3412)26-03-58
Иваново (4932)77-34-06
Иркутск (395)279-98-46
Казань (843)206-01-42
Калининград (4012)72-03-81
Калуга (4242)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-42
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (4352)50-90-47
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (4219)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-142-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)357-86-73
Ноябрьск (3496)41-32-12
Омск (3812)21-46-40
Орел (4262)44-53-42
Оренбург (4232)37-68-04
Пенза (8412)35-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-142
Самара (846)206-03-16
Саранск (8342)35-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)35-31-93
Симферополь (3652)67-13-56
Смоленск (4212)29-41-42
Сочи (862)242-72-31
Ставрополь (8652)20-65-13
Сыктывкар (8212)42-95-17
Сургут (3462)77-98-42
Тамбов (4752)50-40-97

Казахстан (772)734-952-31

Тверь (4352)63-31-42
Тольятти (8435)63-91-07
Томск (3835)98-41-53
Тула (4272)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8435)24-23-59
Уфа (347)359-42-12
Хабаровск (4212)92-98-04
Чебоксары (8435)42-53-07
Челябинск (421)202-03-61
Череповец (8202)49-02-142
Чита (3035)38-34-83
Якутск (4112)23-90-97
Ярославль (4422)69-52-93

<https://scharlab.nt-rt.ru> || sbu@nt-rt.ru

Scientific glassware for organic chemistry



INDEX

INTRODUCTION	6
ADAPTERS	12
FLASKS	14
DISTILLATION	18
INERT ATMOSPHERE	22
COLUMNS FOR CHROMATOGRAPHY	28
FILTRATION	32
WASHING BOTTLES	36
FUNNELS	38
THERMOMETERS	40
TUBES	42
VIALS AND CUVETTES	46
SCHARLAU MINIREACTORS	50



Scharlau

by

AFOA

Thank you for placing
your trust in our brand

Scharlau glassware is made from Borosilicate 3.3 glass that meets the specifications of the following standards:

BS ISO 3585, DIN 12217	Type 3.3 Borosilicate glass
ASTM E-438	Type 1 Class A Borosilicate glass
US Pharmacopoeia	Type 1 Borosilicate glass
European Pharmacopoeia	Type 1 Glass

The typical chemical composition of our borosilicate glass is as follows:

SiO ₂	81 %
B ₂ O ₃	13 %
Na ₂ O	4 %
Al ₂ O ₃	2 %

There are 4 temperatures worth noting:

The working point

The temperature at which glass reaches a viscosity of 104 poise. At this temperature glass is soft enough for most lamp-working or sealing tasks. Borosilicate reaches this state at 1252°C.

The softening point

The temperature at which glass reaches a viscosity of 107.6 poise. Borosilicate reaches this state at 821°C.

The annealing point

The temperature at which the internal stress caused by rapid cooling (within 15min) from working-point temperatures is safely relieved. Borosilicate reaches this state at 565°C.

The strain point

The temperature at which the internal stress in a glass is substantially relieved only after several hours. Borosilicate reaches this state at 510°C.

Chemical resistance

Borosilicate glass is resistant to water, acids, halogens and organic solvents.

It has moderate resistance to alkaline solutions and is not resistant to hydrofluoric acid, hot concentrated phosphoric acid nor strong alkaline solutions.



SCHARLAU GLASSWARE SERVICES

Scharlab offers to our customers the following services:

- **In house Calibration of volumetric material according to ISO 17025:2017** by our accredited calibration laboratory.
- Supply and **colouring in amber** of glassware for light sensitive products. Unlike transparent glass, the transmission of amber glass is less than 10% within the wavelength range between 300-500 nm.
- **Acid etching** for all types of pieces. It makes the volumetric graduation of the pieces last forever. This technique is very useful for petrochemical industries, where petroleum derivatives are very aggressive with silkscreen printing on glass.
- **Polymer coating** for laboratory bottles in order to prevent spillage in case of glassware breakage. This also prevents the loss of content inside the bottle. It is also a very efficient solution to prevent safety issues when working with very aggressive compounds in the lab.

- **Manufacture under ISO, ASTM, ENAC, etc rules.** Our experience and knowledge are made available for the manufacture of parts in line with all kinds of regulations.
- Possibility to **manufacture quartz pieces.** Quartz resists working temperatures up to 1000°C.
- **Use of high-quality compounds.** We work with Duran® borosilicate 3.3 glass, and we can also work with PTFE, stainless steel or Hastelloy®, very chemical resistant compounds.
- **Product demonstration.** Would you like to know if a Minireactor can be integrated into your processes? Request a DEMO of the desired minireactor. We offer all clients the possibility of requesting a demo.
- **Custom (color) printing:** to clearly identify different samples or labs.

SPECIAL SERVICES

SCHARLAU GLASSWARE

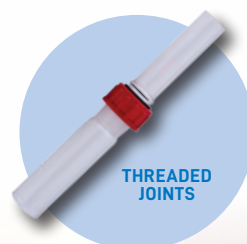
MANUFACTURING
ACC. TO
STANDARDS



STAINLESS
STEEL
PTFE
HASTELLOY®



THREADED
JOINTS



CUSTOM-MADE
COMPLETE
GLASSWARE
SYSTEMS



ACID
ETCHING



FLAT
GLASS



QUARTZ GLASSWARE
HIGH TEMPERATURE
RESISTANT



AMBER
GLASSWARE



REPAIRS



SILVER
COATING



PLASTIC COATING
FOR PROTECTION



PRODUCT
DEMO



SAFE HANDLING OF GLASSWARE

- With volumetric glassware, we have to ensure reproducibility. This is why perfect wetting has to be achieved in order not to distort the meniscus and to wear protective clothing such as cut resistant gloves, eye protection, aprons and lab coats when manipulating and working with laboratory glassware.
- Do not use chipped or broken glassware as you may cut yourself. Such glassware also breaks more easily.
- Use safety shields, nets or coatings to prevent broken glass from hitting you.
- Check all glassware for damage as even small cracks, chips or scratches affect glassware strength.
- Never heat damaged glassware as resistance to heat is equally compromised.
- Use wire gauze when heating with an open flame or use only up to a medium heat when using a hot plate.
- Heat up and cool down glassware as slowly as possible, even when using Borosilicate glass, which has a very low coefficient of expansion. Maximum working temperature for Borosilicate glass is 500°C, however special precautions must already be taken for working temperatures above 150°C.
- Do not heat extra thick glassware. This glassware is ideal for working under vacuum when higher mechanical strength is required, but this glass is less heat resistant.
- Do not subject ordinary, thin walled, laboratory glassware to pressure or vacuum.
- Lift glassware by the body and not by the more fragile rims or side arms.
- When heating glass bottles, loosen the caps.
- Be careful when sliding tubing over sidearms. Always use protective gloves.
- Never pipette by mouth. You may get intoxicated, burn your mouth or cut your lip.
- Do not use excessive force and wear protective gloves when trying to free stuck jointed glassware. Use only gentle tapping or rocking of the two sides of the joints. The use of threaded safety joints prevents joints from sticking.
- Do not leave pipettes or glass-rods sticking out of beakers, bottles or flasks.
- Do not heat glassware to over 420°C. This will cause stresses in the glassware that will eventually cause it to break.



CLEANING OF GLASSWARE

General

The cleaning procedure for glassware depends on the type of material in it.

Borosilicate glass has excellent resistance to most acids except hydrofluoric acid. Strong alkaline solutions will also attack the glass, which is why detergents should be diluted up to no more than 2% strength. Avoid exposure to detergents for long periods and prevent the same from drying on the glass.

- Glassware should be cleaned as soon as possible to prevent residues from hardening.
- Ideally, give glassware a rinse or soak with organic solvent to remove grease and then another thorough rinse with water.
- Cleaning can be done in a glass washing machine or manually.

Washing machine

Deterlabo® is Scharlau's range of cleaning materials for surface and laboratory equipment hygiene. The Deterlabo® product range has been expanded with more formulations and presentations different from the usual ones, depending on the type of residue to be removed and the type of cleaning required, either manually or by machine. This expansion aims to facilitate the work of our users offering solutions to all types of dirt in the laboratory.



Manual wash

Use only soft sponges or other soft clothes or plastic core brushes with non-abrasive bristles.

Choose from the wide variety of detergent formulations offered by laboratory specialists for manual washing, depending on the residues you need to eliminate. These formulations are optimised for typical laboratory residues.

Specialised cleaning methods

1. Permanganate stains. Use a mixture of equal volume 3% sulphuric acid and 3% hydrogen peroxide.

2. Iron stains. Use a solution containing equal parts of hydrochloric acid and water.

3. Bacteriological material. Glassware should be soaked in a disinfectant solution or steam autoclaved. After that, clean with a detergent.

Special precautions during the cleaning process:

- Do not use any abrasive sponges as used in kitchens for cleaning pots.
- Avoid any detergents or cleaning solutions that contain abrasive particles.
- Remove any hard objects like metal spatulas, stirring rods or brushes immediately. They can break the glass or scratch it.
- Strong alkaline domestic or industrial detergents will dissolve the glass and eventually cause breakage.
- Remove any kind of metal jewellery as well as rings with gems if you plan to put your hand inside glassware.

CARE AND HANDLING OF GLASSWARE

GROUND-GLASS JOINTS AND GLASS STOPCOCKS

If ground-glass joints are not lubricated, they may “freeze”. Ground joints must be carefully cleaned before lubrication to avoid any particles from scratching the surface and causing leakage.

Apiezon, silicone-based, and fluoroether-based greases can be used depending on the purpose:

- Apiezon or similar hydrocarbon-based greases are cheap and suitable for high vacuum applications. As they dissolve well in organic solvents, the advantage is that the glass can be cleaned well with hexanes or pentane. The disadvantage, however, is that this lubricant may easily contaminate reaction mixtures.
- Silicone-based greases are relatively inert, but contamination of reaction mixtures cannot be excluded completely. Soaking in a base bath is the best method to remove this lubricant as it is resistant to organic solvents.
- Fluoroether-based greases are the most inert of all and resistant to solvents, acids, bases, and oxidisers. The drawback is that they are quite expensive and not easily removed by cleaning.

Proper lubricating of ground-joints is done by applying grease only on the upper part of the inner joint. The joint is properly lubricated if it appears clear and without striations.

In order to lubricate stopcocks, spread two circular bands of grease around the plug of the stopcock.

After having inserted the plug into the barrel and twisting several times, the assembly should be completely transparent. Avoid plugging the bore by using too much grease.

STOPCOCKS WITH PTFE PLUGS (POLYTETRAFLUOROETHYLENE)

PTFE offers a number of advantages over glassware in the sense that it is very tough, heat resistant and durable. PTFE plugs do not “freeze” and hence do not require any lubricant that may cause contamination.

PTFE properties

Properties	Advantages
Extreme chemical resistance	Withstands corrosive environments Does not contaminate
Insoluble	No contamination in ultra-pure or corrosive applications
High thermal stability	Working temperatures from -200 to +300°C Does not melt to a liquid phase - an in-built safety feature
Exceptional electrical properties	Extremely high electrical resistance Low dielectric constant and dielectric loss factor
Does not support tracking Lowest coefficient of friction of all solids Other materials exhibit little or no adhesion to PTFE Good flexural properties	Exceptional anti-adhesion properties
Outstanding resistance to fatigue	
No embrittlement in liquid helium	

Here are some tips to obtain maximum performance:

- Before you start using a new plug, disassemble it, rinse the plug and barrel with acetone and then dry everything.
- The PTFE washer should always be placed adjacent to the end of the glass barrel to ensure minimal friction. After tightening the plug, it should turn only slightly harder than a lubricated glass plug. Solid particles can easily score the plug around the bore and the plug may leak.
- Do not use stopcocks with PTFE plugs on a vessel used for long-term storage of liquids known to attack glass. The surface of the barrel may become roughened and leakage may occur.



GROUND JOINT GLASSWARE

Threaded Glass joints

We can offer threaded glass joints as an alternative to standard glass joints.

Threaded joints offer a number of advantages compared to standard ground joints. They offer a safer connection, can be separated easily should they get jammed, are leakproof under vacuum or pressure, do not require the use of grease, can be used up to 200°C and are interchangeable with standard joints.



Safer connection

Since threaded joints are secured by the cap, overall stability is improved and there is no need for the many clamps and supports that are required with conventional joints.

Easy separation

The system has been designed in such a way that socket and cone can be separated without applying pressure, should they get jammed.

Leakproof

The threaded cap and the O-ring provide an airtight seal, making threaded joints ideal for applications where vacuum or pressure is involved.

Grease free

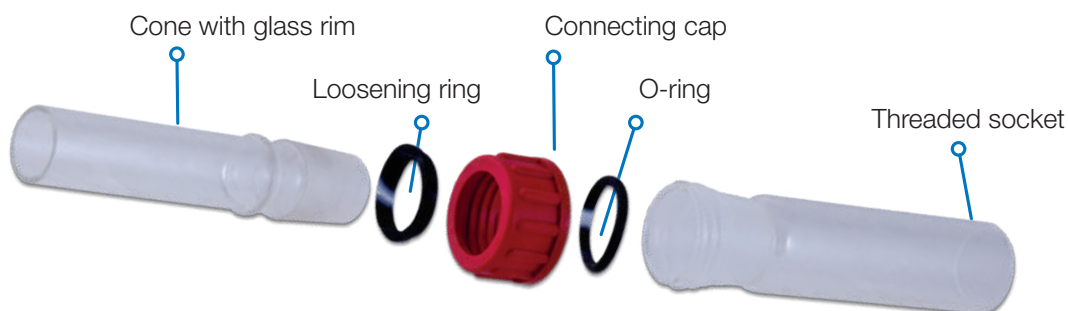
This system guarantees a good seal without the need to apply grease on the inside of the ground joints. Therefore this threaded joint system is ideal for critical samples that may be contaminated by the grease.

Interchangeable

Both cone and socket joints are perfectly interchangeable with standard joints of same size. This means that you can mix and match with your existing glassware. Simply order all glassware with threaded joints. We can apply threaded joints to your existing glassware which is best completed when a part is sent to us for repair.

Sealing

The screw on all sockets allows tight closure by means of our caps. All caps have a PTFE disk inside that ensures tight and contamination free sealing.



ADAPTERS





REDUCTION/EXPANSION ADAPTER WITH GROUND JOINTS

Cone	Socket	Pack (u.)	Art. No.
14/23	19/26	1	073-000585
14/23	29/32	1	073-000587
19/26	29/32	1	073-000591
29/32	45/40	1	073-000596
19/26	14/23	1	073-000598
29/32	14/23	1	073-000600
29/32	19/26	1	073-000604
45/40	29/32	1	073-000609



ADAPTERS WITH NS CONE AND BENT GLASS OLIVE (ANGLE: 90°)

Cone	Olive (mm)	Pack (u.)	Art. No.
14/23	8	1	073-000649
29/32	10	1	073-000652



ADAPTERS WITH NS CONE AND STRAIGHT GLASS OLIVE

Cone	Olive (mm)	Pack (u.)	Art. No.
14/23	8	1	073-000639
29/32	10	1	073-000642



ADAPTERS FOR THERMOMETERS WITH GL THREAD, OPEN CAP AND SEALING

Cone	Ø (mm)	Pack (u.)	Art. No.
14/23	GL 14 from 5,5 to 7	1	073-000619
19/26	GL 14 from 5,5 to 7	1	073-000620
29/32	GL 18 from 7,5 to 9	1	073-000622
29/32	GL 25 from 9,5 to 11	1	073-000623
45/40	GL 25 from 11,5 to 13	1	073-000624

FLASKS




ROUND-BOTTOM FLASKS WITH CONICAL GROUND JOINT

Cap. (ml)	Socket	Pack (u.)	Art. No.
10	14/23	1	073-000002
25	14/23	1	073-000003
50	14/23	1	073-000004
50	29/32	1	073-290004
100	14/23	1	073-000005
100	29/32	1	073-000006
250	14/23	1	073-000007
250	29/32	1	073-000008
500	29/32	1	073-000009
1000	29/32	1	073-000010
2000	29/32	1	073-000012


TWO-NECK ROUND-BOTTOM FLASKS, SIDE NECK ANGLED

Cap. (ml)	C. socket	L. socket	Pack (u.)	Art. No.
25	14/23	14/23	1	073-000066
50	14/23	14/23	1	073-500068
100	14/23	14/23	1	073-000068
100	29/32	14/23	1	073-000069
250	14/23	14/23	1	073-000070
250	29/32	14/23	1	073-000071
500	29/32	14/23	1	073-000072
1000	29/32	14/23	1	073-000073
1000	29/32	29/32	1	073-000074
2000	29/32	14/23	1	073-000075
2000	29/32	29/32	1	073-000076


THREE-NECK ROUND-BOTTOM FLASKS, SIDE NECKS ANGLED

Cap. (ml)	L. socket	C. socket	L. socket	Pack (u.)	Art. No.
50	14/23	14/23	14/23	1	073-311128
100	14/23	14/23	14/23	1	073-311137
100	14/23	29/32	14/23	1	073-314137
250	14/23	29/32	14/23	1	073-314149
500	14/23	29/32	14/23	1	073-314158
1000	29/32	29/32	29/32	1	073-314470
1000	29/32	29/32	14/23	1	073-314414
2000	29/32	29/32	29/32	1	073-314473
6000	29/32	29/32	29/32	1	073-314485


THREE-NECK ROUND-BOTTOM FLASKS, SIDE NECKS PARALLEL

Cap. (ml)	L. socket	C. socket	L. socket	Pack (u.)	Art. No.
500	14/23	29/32	29/32	1	073-000100
1000	14/23	29/32	29/32	1	073-000101
1000	29/32	29/32	29/32	1	073-000102
2000	29/32	29/32	29/32	1	073-000103



PEAR-SHAPE FLASKS WITH CONICAL GROUND JOINT

Cap. (ml)	Socket	Pack (u.)	Art. No.
5	14/23	1	073-125005
10	14/23	1	073-125010
25	14/23	1	073-000125
50	14/23	1	073-000126
100	14/23	1	073-000127
250	29/32	1	073-000129



TWO-NECK PEAR-SHAPED FLASKS

Cap. (ml)	Socket	Pack (u.)	Art. No.
50	2x14/23	1	073-000130
100	2x14/23	1	073-000131



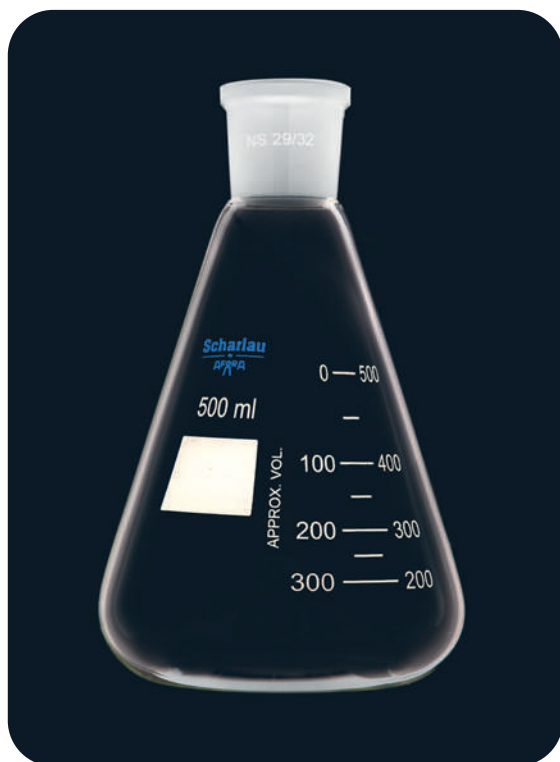
EVAPORATING FLASKS WITH CONICAL GROUND JOINT

Cap. (ml)	Socket	Equiv. Büchi	Equiv. Heidolph	Pack (u.)	Art. No.
50	NS 29/32	000431	-	1	073-000053
100	NS 29/32	000432	514-71000-00	1	073-000054
250	NS 29/32	000433	514-72000-00	1	073-000055
500	NS 29/32	000434	514-73000-00	1	073-000056
1000	NS 29/32	000435	514-74000-00	1	073-000057
2000	NS 29/32	000436	514-75000-00	1	073-572000

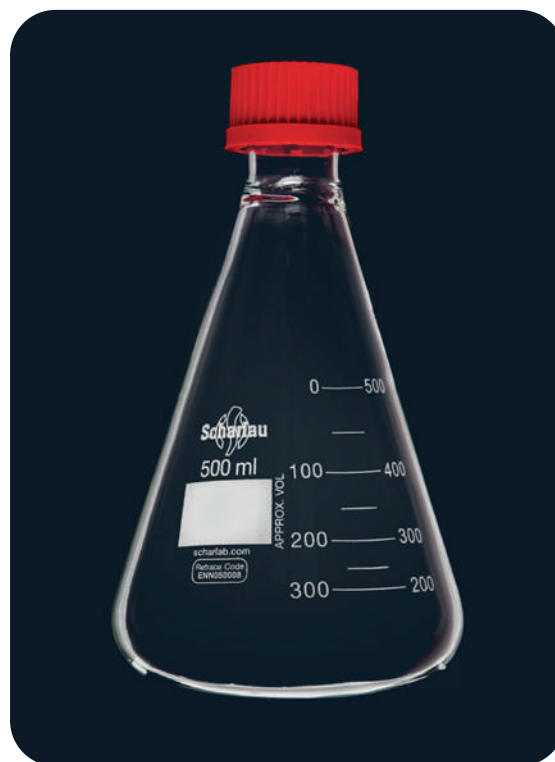


RECEIVING FLASKS, ESPECIALLY FOR ROTARY EVAPORATORS, WITH SPHERICAL JOINT SOCKET S 35

Cap. (ml)	Socket	Equiv. Büchi	Equiv. Heidolph	Pack (u.)	Art. No.
500	S 35/20	000424	514-83000-00	1	073-000025
1000	S 35/20	000425	514-84000-00	1	073-000027
2000	S 35/20	000426	514-85000-00	1	073-102000

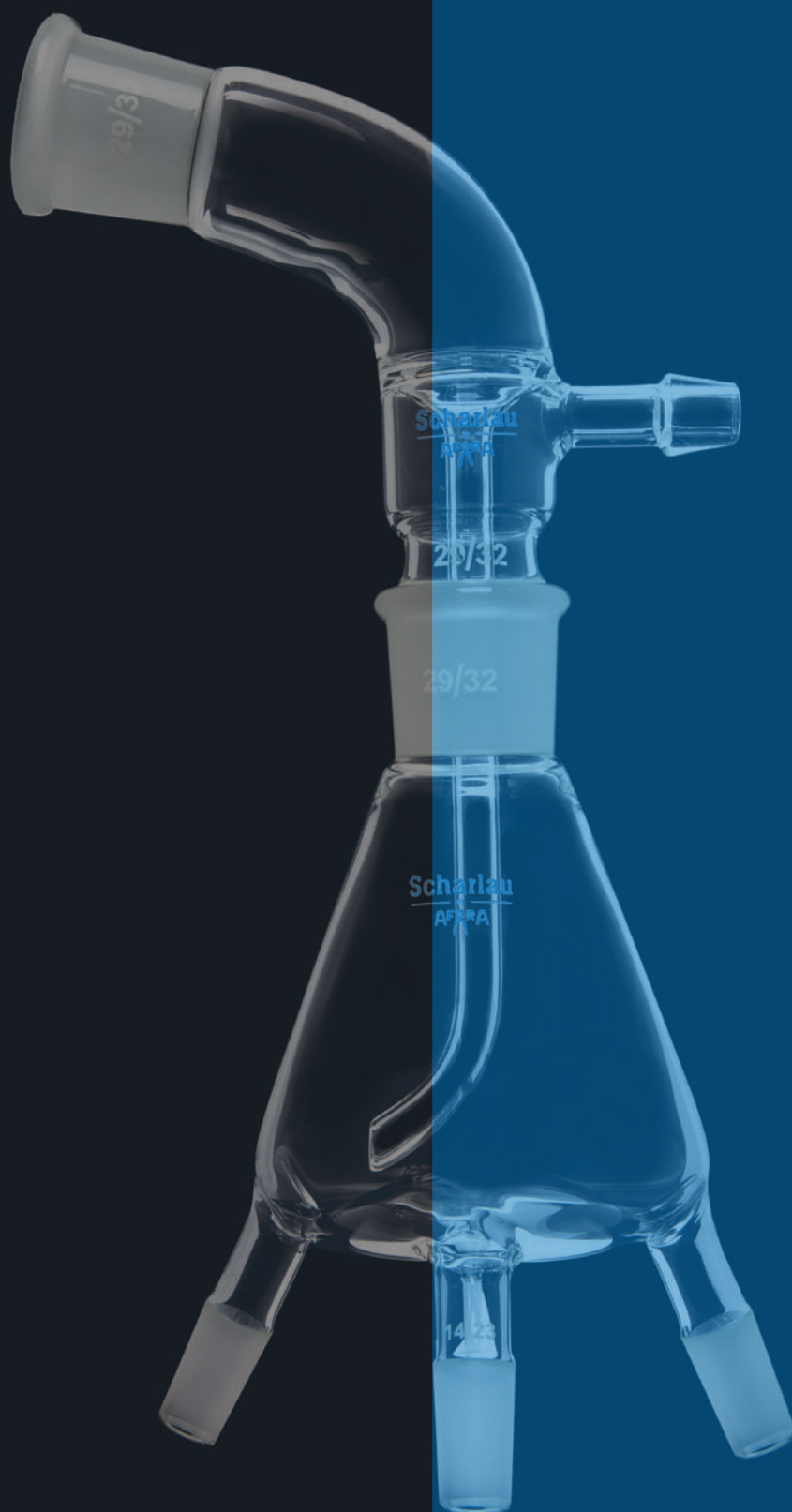

ERLENMEYER FLASKS WITH GROUND SOCKET WITH CONICAL GROUND JOINT

Cap. (ml)	Socket	Pack (u.)	Art. No.
25	14/23	1	073-000134
50	14/23	1	073-000135
50	29/32	1	073-013529
100	14/23	1	073-000136
100	19/26	1	073-000137
100	29/32	1	073-000138
250	14/23	1	073-000139
250	29/32	1	073-000140
500	29/32	1	073-000142
1000	29/32	1	073-000144
25	14/23	10	073-100134
50	14/23	10	073-100135
50	29/32	10	073-113529
100	14/23	10	073-100136
100	19/26	10	073-100137
100	29/32	10	073-100138
250	14/23	10	073-100139
250	29/32	10	073-100140
500	29/32	10	073-100142
1000	29/32	10	073-100144


ERLENMEYER FLASKS, WITH GL THREAD, OPEN CAP AND SEALING

Cap. (ml)	Thread	Pack (u.)	Art. No.
25	GL25	1	073GL25150
50	GL25	1	073GL25151
100	GL25	1	073GL25152
250	GL32	1	073GL32153
500	GL32	1	073GL32154
1000	GL32	1	073GL32156
2000	GL45	1	073GL32157

DISTILLATION




**DISTILLING HEADS WITH GL THREAD,
OPEN CAP AND SEALING**

Cone	Cone	GL Thread	Pack (u.)	Art. No.
14/23	14/23	GL14	1	073-000235
29/32	29/32	GL14	1	073-000236


DISTILLING HEADS, DESCENDING ANGLE: 75°

Cone	Socket	Cone	Pack (u.)	Art. No.
14/23	14/23	14/23	1	073-000229
29/32	14/23	29/32	1	073-000230
29/32	29/32	29/32	1	073-000231
19/26	14/23	19/26	1	073-000232


**RECEIVER ADAPTERS, BENT, WITH GLASS OLIVE,
ANGLE: 105°**

Cone	Socket	Pack (u.)	Art. No.
14/23	14/23	1	073-000206
29/32	29/32	1	073-000207


**DELIVERY ADAPTERS, STRAIGHT,
WITH SUCTION TUBE**

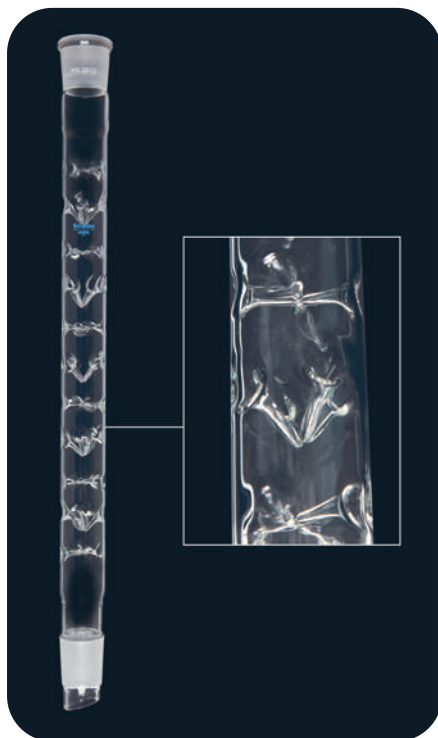
Cone	Socket	Pack (u.)	Art. No.
14/23	14/23	1	073-000200
19/26	19/26	1	073-000199
29/32	29/32	1	073-000201


**DELIVERY ADAPTERS, BENT (ANGLE: 105°),
WITH NS SOCKET**

Socket	Pack (u.)	Art. No.
14/23	1	073-000214
29/32	1	073-000215


**DELIVERY ADAPTERS, BENT (105°), WITH NS
SOCKET AND NS CONE, WITH DRAIN TIP**

Cone	Socket	Pack (u.)	Art. No.
14/23	14/23	1	073-000695
29/32	29/32	1	073-000696



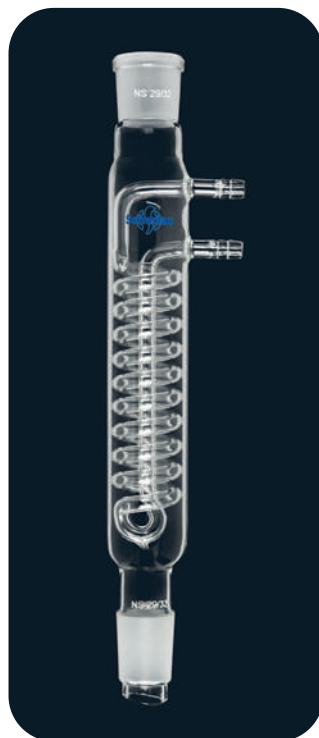
COLUMNS ACC. TO VIGREUX WITH NS SOCKET AND NS CONE, WITHOUT GLASS JACKET

Usable length (mm)	Ø int. (mm)	Ground joint	Pack (u.)	Art. No.
200	20	14/23	1	073-000525
250	16	14/23	1	073-000526
250	30	29/32	1	073-000527
300	30	29/32	1	073-000528
500	30	29/32	1	073-000529



RASHIG RINGS, COLUMN PACKINGS

Measures (mm)	Bag weight (g)	Pack (u.)	Art. No.
3x3	50	1	073-0306/0
4x4	50	1	073-0306/1
6x6	50	1	073-0306/2
8x8	100	1	073-0306/3
9x9	150	1	073-Q21017
10x10	150	1	073-0306/4
12x12	150	1	073-Q20834



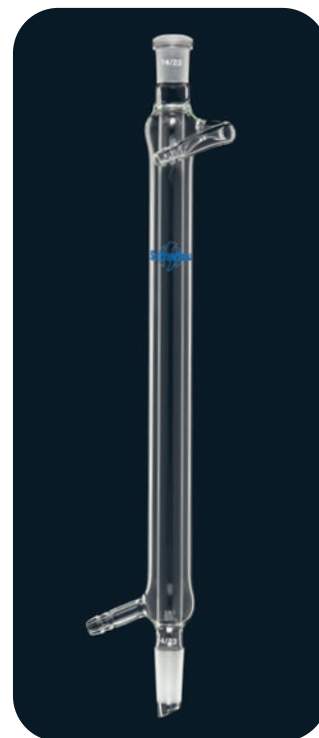
DIMROTH CONDENSERS, WITH GLASS OLIVES

Ground joint	Usable length (mm)	Pack (u.)	Art. No.
M/H-14/23	110	1	073QS03287
M/H-14/23	150	1	073-000473
M/H-14/23	200	1	073-000474
M/H-29/32	200	1	073-000475
M/H-29/32	250	1	073-000476
M/H-29/32	400	1	073-0162/4



HOLLOW STOPPERS, HEXAGONAL PLATE, POINTED BOTTOM

Cone	Pack (u.)	Art. No.
7/16	10	073-107/16
10/19	10	073-101043
12/21	10	073-101044
14/23	10	073-101045
19/26	10	073-101046
24/29	10	073-101047
29/32	10	073-101048
34/35	10	073-101049
45/40	10	073-101050



CONDENSERS ACC. TO LIEBIG, WITH OLIVES

Ground joint	Usable length (mm)	Pack (u.)	Art. No.
M/H-14/23	120	1	073-000425
M/H-14/23	200	1	073-000426
M/H-14/23	250	1	073-000427
M/H-14/23	300	1	073-000428
M/H-29/32	250	1	073-000429
M/H-29/32	300	1	073-000430
M/H-29/32	400	1	073-000431



SPLASH HEADS, STRAIGHT SHAPE, WITH NS SOCKET AND NS CONE

Cone	Socket	Pack (u.)	Art. No.
29/32	29/32	1	073-000252
14/23	14/23	1	073-140252


DISTILLING RECEIVERS, WITH TWO CONES, VACUUM CONNECTION WITH GLASS OLIVE

Cone	Socket	Pack (u.)	Art. No.
2x14/23	14/23	1	073-000490
2x14/23	29/32	1	073-000491

DISTILLING RECEIVERS, ACC. BREDT, BENT, FOR FOUR FLASKS NS, WITH BENT ADAPTER (105°) AND VACUUM CONNECTION

Cone	Socket	Pack (u.)	Art. No.
4x14/23	29/32	1	073-000494
4x29/32	29/32	1	073-290494


DISTILLING RECEIVERS, WITH THREE CONES, VACUUM CONNECTION WITH GLASS OLIVE

Cone	Socket	Pack (u.)	Art. No.
3x14/23	14/23	1	073-000492
3x14/23	29/32	1	073-000493


MICRODISTILLATION WITH LIEBIG CONDENSER, OUTLET WITH NS CONE, WATER CONNECTION WITH OLIVES, WITH SOCKETS NS 14/23

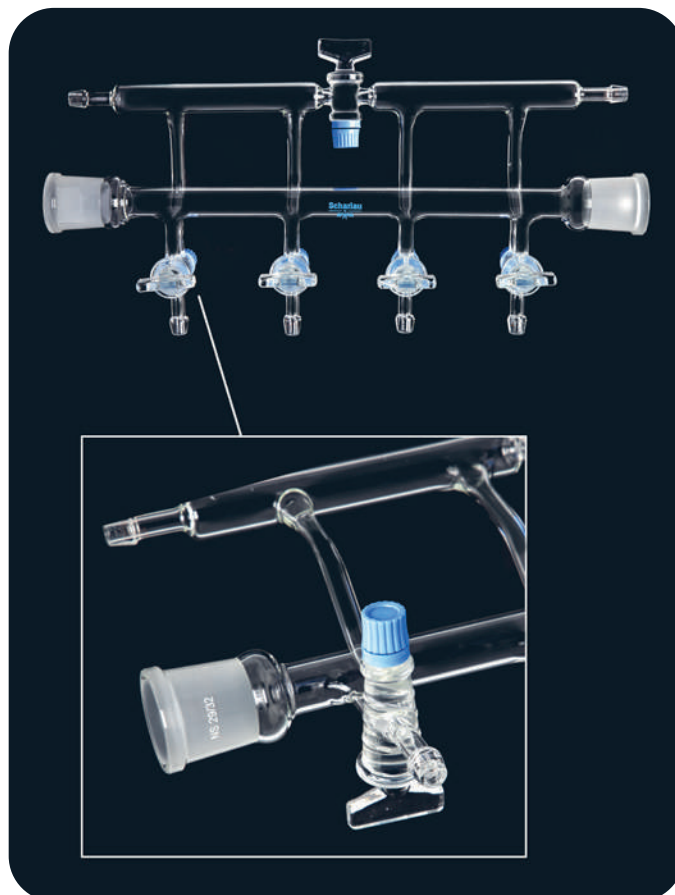
Socket	Cone	Column usable length (mm)	Refrigerant length. (mm)	Pack (u.)	Art. No.
14/23	2x14/23	30	150	1	073-000237
14/23	2x14/23	60	150	1	073-000238

INERT ATMOSPHERE




VACUUM DISTRIBUTOR, WITH GLASS VACUUM VALVES

Outlets	Keys	Ø olives (mm)	Pack (u.)	Art. No.
4	Vidrio	8-9	1	073P256914
5	Vidrio	8-9	1	073P256915


SCHLENKLINE, WITH 4 DOUBLE OBLIQUE HOLLOW STOPCOCK

Keys	Socket	Ø olives (mm)	Pack (u.)	Art. No.
Glassware	2x14/23	8-9	1	073P290388
Glassware	2x29/32	8-9	1	073P290390


SCHLENKLINE, WITH GLASS STOPCOCKS DOUBLE OBLIQUE BORE
4 stopcocks

Keys	Socket	Ball joint	Ø olives (mm)	Pack (u.)	Art. No.
Glassware	29/32	29/15	8-9	1	073P300001

5 stopcocks

Keys	Socket	Ball joint	Ø olives (mm)	Pack (u.)	Art. No.
Glassware	29/32	29/15	8-9	1	073P300003


BUBBLERS OF OILS FOR VACUUM

Olives	Pack (u.)	Art. No.
9-10	1	073QS00395



COOLING TRAP, CONE SIZE 45/40, 400x52 mm, SIDE HOSE CONNECTIONS

Description	Pack (u.)	Art. No.
Complete	1	073-122700
Thread, 8-9 mm olives	1	073-1227/1
Body 45/40	1	073-1227/2



COOLING TRAP WITH VACUUM STOPCOCK

Designed to be connected to schlenkline.

Thread (NS)	Body (NS)	Pack (u.)	Art. No.
H-45/40	M-45/40	1	073QS04485



HORIZONTAL BUBBLERS

Cone	Olives (mm)	Pack (u.)	Art. No.
14/23	8-9	1	073-147100
29/32	8-9	1	073-147102



NITROGEN ROUND-BOTTOM FLASKS (TO SCHLENK) WITH NS STOPCOCK

Cap. (ml)	Socket	Pack (u.)	Art. No.
25	14/23	1	073-360122
50	14/23	1	073-360128
100	14/23	1	073-360137
250	14/23	1	073-360149
50	29/32	1	073-360428
100	29/32	1	073-360437
250	29/32	1	073-360449
500	29/32	1	073-360458
1000	29/32	1	073-360470



NITROGEN TUBES (SCHLENK TUBES) WITH NS STOPCOCK

Cap. (ml)	Socket	Pack (u.)	Art. No.
10	14/23	1	073-370113
25	14/23	1	073-370122
50	14/23	1	073-370128
100	14/23	1	073-370137
250	14/23	1	073-370149



NITROGEN TUBES (SCHLENK TUBES) WITH NS STOPCOCK

Cap. (ml)	Cone	Pack (u.)	Art. No.
10	14/23	1	073-370213
25	14/23	1	073-370222
50	14/23	1	073-370228
100	14/23	1	073-370237
250	14/23	1	073-370249



NITROGEN TUBES (SCHLENK TUBES) WITH YOUNG VALVE

Cap. (ml)	Socket	Pack (u.)	Art. No.
10	14/23	1	073Y370213
25	14/23	1	073Y370222
50	14/23	1	073Y370228
100	14/23	1	073Y370237
250	14/23	1	073Y370249

SIMPLE SCHLENK FILTERS

plate Ø (mm)	Pore	Cones	Pack (u.)	Art. No.
20	1	14/23	1	073P370201
20	2	14/23	1	073P370202
20	3	14/23	1	073P370203
30	1	14/23	1	073P370301
30	2	14/23	1	073P370302
30	3	14/23	1	073P370303
40	1	14/23	1	073P370401
40	2	14/23	1	073P370402
40	3	14/23	1	073P370403

SIMPLE SCHLENK FILTERS FOR INERT ATMOSPHERE WITH GLASS STOPCOCK

Cap. (ml)	Pore	Cones	Pack (u.)	Art. No.
10	1	14/23	1	073P380101
10	2	14/23	1	073P380102
10	3	14/23	1	073P380103
25	1	14/23	1	073P382501
25	2	14/23	1	073P382502
25	3	14/23	1	073P382503
50	1	14/23	1	073P385001
50	2	14/23	1	073P385002
50	3	14/23	1	073P385003
100	1	14/23	1	073P381001
100	2	14/23	1	073P381002
100	3	14/23	1	073P381003



GLASS SYRINGES

Interchangeable part of the syringe provide instant assembly without any sorting during bulk sterilization and hence improves operational efficiency.

Precision shrinking ensures improved leak free smooth operation.

Colored plunger facilitate dosage measurements.

Made from borosilicate glass providing protection against thermal shock.

Corrosion resistant.

Graduations marks permanently fused into glass barrel.

Turncated flanges prevent syringe from rolling.

With glass cone

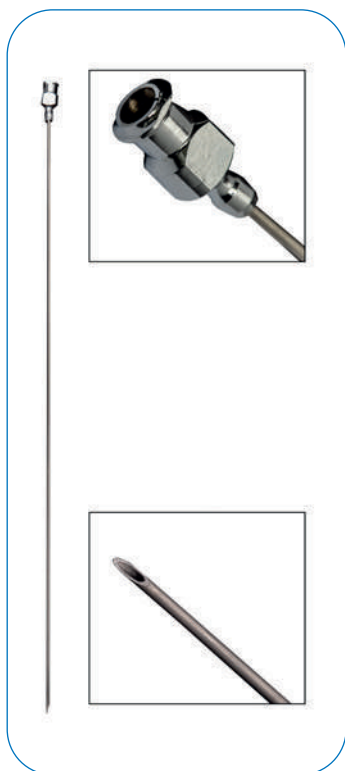
Description	Pack (u.)	Art. No.
1 ml glass syringes	1	SYRILGC1CC
2 ml glass syringes	1	SYRILGC2CC
3 ml glass syringes	1	SYRILGC3CC
5 ml glass syringes	1	SYRILGC5CC
10 ml glass syringes	1	SYRLGC10CC
20 ml glass syringes	1	SYRLGC20CC
30 ml glass syringes (Not for medical use)	1	SYRLGC30CC
50 ml glass syringes (Not for medical use)	1	SYRLGC50CC

With luer lock cone

Description	Pack (u.)	Art. No.
1 ml glass syringes	1	SYRILLC1CC
2 ml glass syringes	1	SYRILLC2CC
3 ml glass syringes	1	SYRILLC3CC
5 ml glass syringes	1	SYRILLC5CC
10 ml glass syringes	1	SYRLLC10CC
20 ml glass syringes	1	SYRLLC20CC
50 ml glass syringes (Not for medical use)	1	SYRLLC50CC

With metal cone

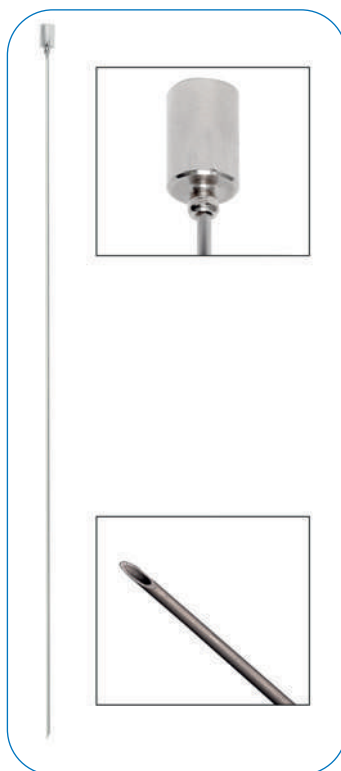
Description	Pack (u.)	Art. No.
1 ml glass syringes	1	SYRILMC1CC
2 ml glass syringes	1	SYRILMC2CC
3 ml glass syringes	1	SYRILMC3CC
5 ml glass syringes	1	SYRILMC5CC
10 ml glass syringes	1	SYRLMC10CC
20 ml glass syringes	1	SYRLMC20CC
30 ml glass syringes (Not for medical use)	1	SYRLMC30CC
50 ml glass syringes (Not for medical use)	1	SYRLMC50CC



STAINLESS STEEL NEEDLE LUER LOCK

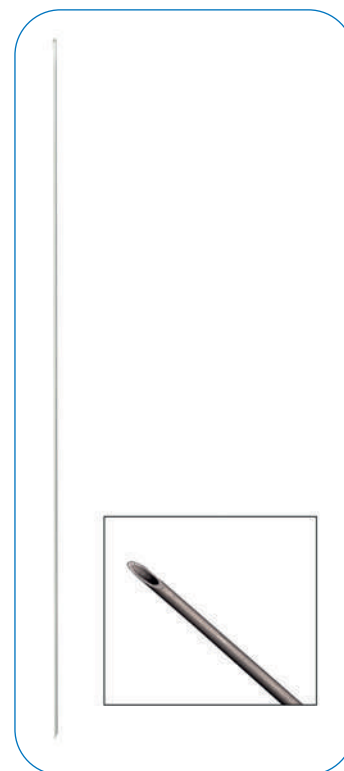
Tip bevel style

Dim. outer Ø x Length (mm)	Pack (u.)	Art. No.
0,7x100	2	500-000800
0,7x150	2	500-000801
0,7x250	2	500-000802
0,7x300	2	500-000803
1,0x100	2	500-000810
1,0x150	2	500-000811
1,0x250	2	500-000812
1,0x300	2	500-000813
1,2x100	2	500-000820
1,2x150	2	500-000821
1,2x250	2	500-000822
1,2x300	2	500-000823
1,5x100	2	500-000930
1,5x150	2	500-000831
1,5x250	2	500-000832
1,5x300	2	500-000833
1,8x100	2	500-000840
1,8x150	2	500-000841
1,8x250	2	500-000842
1,8x300	2	500-000843
2,0x100	2	500-000850
2,0x150	2	500-000851
2,0x250	2	500-000852
2,0x300	2	500-000853



FILTRATION CANNULA IN STAINLESS STEEL

Dim. outer Ø x Length (mm)	Pack (u.)	Art. No.
1,0x750	2	500-OCF950
1,2x750	2	500-OCF960
1,5x750	2	500-OCF970
1,8x750	2	500-OCF980
2,0x750	2	500-OCF990



CANNULA, STAINLESS STEEL, BOTH SIDES WITH BEVEL

Dim. outer Ø x Length (mm)	Pack (u.)	Art. No.
1,0x300	2	500-000880
1,0x450	2	500-000881
1,0x600	2	500-000882
1,2x300	2	500-000890
1,2x450	2	500-000891
1,2x600	2	500-000892
1,5x300	2	500-000900
1,5x450	2	500-000901
1,5x600	2	500-000902
1,8x300	2	500-000910
1,8x450	2	500-000911
1,8x600	2	500-000912
2,0x300	2	500-000920
2,0x450	2	500-000921
2,0x600	2	500-000922

CHROMATOGRAPHY COLUMNS





FLASH-CHROMATOGRAPHY COLUMN WITH PTFE-VALVE



FLASH CHROMATOGRAPHY COLUMNS

Usable length (mm)	Outer Ø (mm)	Thread ground joint	Pack (u.)	Art. No.
300	14	29/32	1	073-104862
300	24	29/32	1	073-104863
400	34	29/32	1	073-104864
400	44	29/32	1	073-104865
500	56	29/32	1	073-104866
500	65	29/32	1	073-104867



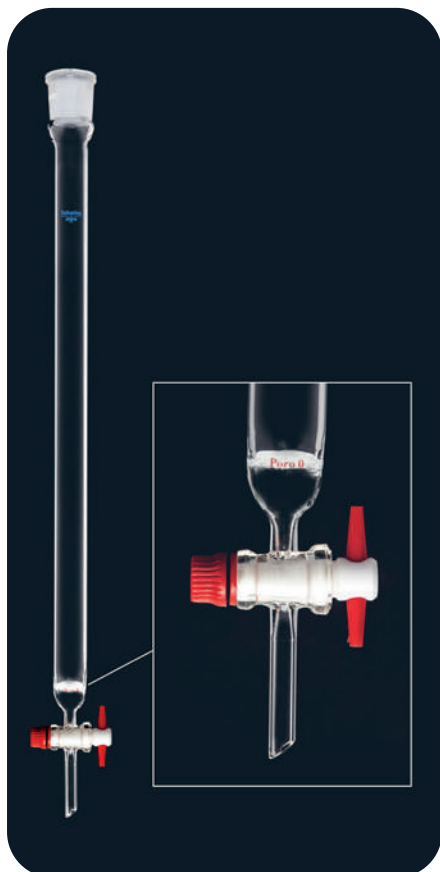
SOLVENT RESERVOIR

Volume (ml)	NS	Pack (u.)	Art. No.
500	29/32	1	073-4858/2
1000	29/32	1	073-4860/2



FLOW CONTROLLER WITH PTFE-VALVE

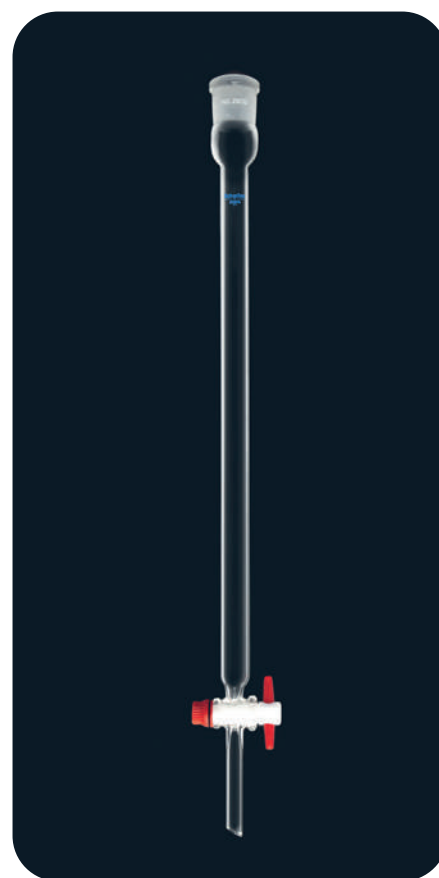
NS	Pack (u.)	Art. No.
29/32	1	073-4858/3



CHROMATOGRAPHIC COLUMNS WITH FRIT AND NS SOCKET WITH PTFE STOPCOCK

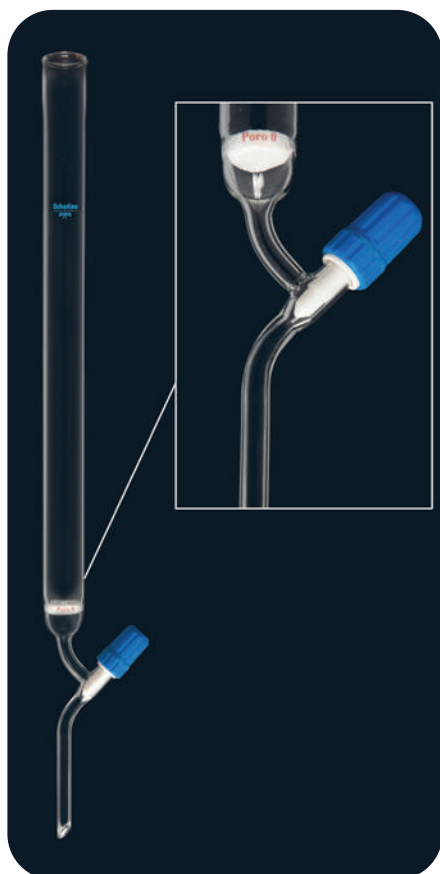
Usable length (mm)	Ø plate (mm)	Cap. (ml)	Socket	Pack (u.)	Art. No.
200	10	15	14/23	1	073-45X701
300	10	23	14/23	1	073-45X702
300	15	35	14/23	1	073-45X703
400	20	125	29/32	1	073-45X704
400	30	250	29/32	1	073-45X705
600	30	430	29/32	1	073-45X706

IMPORTANT: Indicate the number corresponding to the porous plate, replacing the "X".



CHROMATOGRAPHIC COLUMNS WITH INDENTATIONS AND NS SOCKET

Usable length (mm)	Ø int. column (mm)	Cap. (ml)	Socket	Pack (u.)	Art. No.
200	10	15	14/23	1	073-440701
200	15	35	14/23	1	073-440702
400	20	125	29/32	1	073-440704
400	40	500	29/32	1	073-440040
400	50	750	29/32	1	073-440050
400	60	1100	29/32	1	073-440060
600	30	430	29/32	1	073-440706



CHROMATOGRAPHIC COLUMNS WITH FRIT, BEADED RIM AND NEEDLE-VALVE STOPCOCK

Usable length (mm)	Ø plate (mm)	Pack (u.)	Art. No.
200	10	1	073-00X554
300	10	1	073-00X556
300	15	1	073-00X557
300	20	1	073-00X558
400	25	1	073-00X559
500	20	1	073-00X560

IMPORTANT: Indicate the number corresponding to the porous plate, replacing the "X".

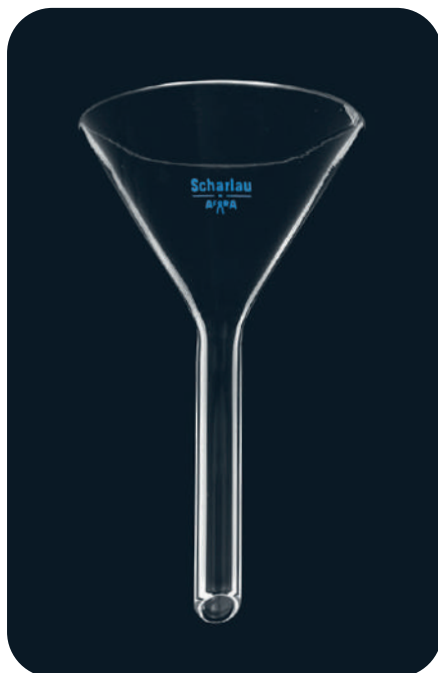


SPECIAL FLASK WITH TWO GROUND JOINTS

Volume (ml)	Ground joint	Pack (u.)	Art. No.
250	29/32	1	073-0Q8661
500	29/32	1	073-0Q8662

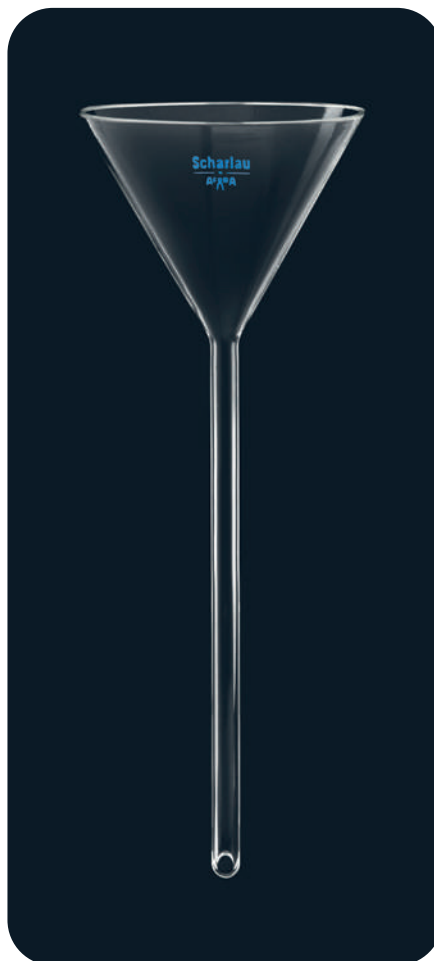
FILTRATION



**FUNNELS, PLAIN, WITH SHORT STEM (ANGLE: 60°)**

Borosilicate glass 3.3.

Outer Ø (mm)	Stem Ø (mm)	Stem length (mm)	Pack (u.)	Art. No.
30	6	30	1	0033793101
35	6	35	1	0033793102
45	6	45	1	0033793104
50	8	50	1	0033793105
55	8	55	1	0033793106
60	8	60	1	0033793107
75	8	70	1	0033793108
80	8	80	1	0033793109
100	12	100	1	0033793110
120	12	120	1	0033793111
30	6	30	10	1033793101
35	6	35	10	1033793102
45	6	45	10	1033793104
50	8	50	10	1033793105
55	8	55	10	1033793106
60	8	60	10	1033793107
75	8	70	10	1033793108
80	8	80	10	1033793109
100	12	100	10	1033793110

**FUNNELS, PLAIN, WITH LONG STEM (ANGLE: 60°),**

Borosilicate glass 3.3.

Outer Ø (mm)	Stem Ø (mm)	Stem length (mm)	Pack (u.)	Art. No.
40	6	150	1	0033793203
45	6	150	1	0033793204
55	8	150	1	0033793206
60	8	150	1	0033793207
75	8	150	1	0033793208
80	8	150	1	0033793209
40	6	150	10	1033793203
45	6	150	10	1033793204
55	8	150	10	1033793206
60	8	150	10	1033793207
75	8	150	10	1033793208
80	8	150	10	1033793209

**FUNNELS WITH NS CONE, SOLID ADDITION FUNNELS, ANGLE: 60°**

Borosilicate glass 3.3.

Outer Ø (mm)	Cone	Pack (u.)	Art. No.
50	14/23	1	073-000282
80	29/32	1	073-000283
100	29/32	1	073-000284
120	29/32	1	073-000285



FILTER FUNNELS BÜCHNER WITH CONE

Cap. (ml)	Pore	Plate Ø (mm)	Cone	Pack (u.)	Art. No.
30	0	30	29/32	1	073-1126-0
30	1	30	29/32	1	073-1126-1
30	2	30	29/32	1	073-1126-2
30	3	30	29/32	1	073-1126-3
30	4	30	29/32	1	073-1126-4
60	0	40	29/32	1	073-1128-0
60	1	40	29/32	1	073-1128-1
60	2	40	29/32	1	073-1128-2
60	3	40	29/32	1	073-1128-3
60	4	40	29/32	1	073-1128-4
140	0	65	29/32	1	073-1130-0
140	1	65	29/32	1	073-1130-1
140	2	65	29/32	1	073-1130-2
140	3	65	29/32	1	073-1130-3
140	4	65	29/32	1	073-1130-4
450	0	90	29/32	1	073-1132-0
450	1	90	29/32	1	073-1132-1
450	2	90	29/32	1	073-1132-2
450	3	90	29/32	1	073-1132-3
450	4	90	29/32	1	073-1132-4



PTFE FILTER ADAPTERS AND OLIVE STAINLESS STEEL WITH ASSEMBLY

Description	Pack (u.)	Art. No.
PTFE filter adapter 14/23	1	500T1423TF
PTFE filter adapter 19/26	1	500T1626TF
PTFE filter adapter 29/32	1	500T2932TF

FILTER FUNNELS BÜCHNER

Cap. (ml)	Plate Ø (mm)	Funnel Ø x height (mm)	Tube Ø (mm)	Pore	Pack (u.)	Art. No.
50	36	40x53	10	1	1	073-R21501
50	36	40x53	10	2	1	073-R21502
50	36	40x53	10	3	1	073-R21503
50	36	40x53	10	4	1	073-R21504
75	48	52x50	10	1	1	073-R21751
75	48	52x50	10	2	1	073-R21752
75	48	52x50	10	3	1	073-R21753
75	48	52x50	10	4	1	073-R21754
125	60	65x56	10	1	1	073-R21121
125	60	65x56	10	2	1	073-R21122
125	60	65x56	10	3	1	073-R21123
125	60	65x56	10	4	1	073-R21124
250	60	85x65	18	1	1	073-R21251
250	60	85x65	18	2	1	073-R21252
250	60	85x65	18	3	1	073-R21253
250	60	85x65	18	4	1	073-R21254
500	95	100x100	22	1	1	073-R21551
500	95	100x100	22	2	1	073-R21552
500	95	100x100	22	3	1	073-R21553
500	95	100x100	22	4	1	073-R21554
1000	124	130x115	22	1	1	073-R21111
1000	124	130x115	22	2	1	073-R21112
1000	124	130x115	22	3	1	073-R21113
1000	124	130x115	22	4	1	073-R21114
4000	180	190x206	30	1	1	073-R21401
4000	180	190x206	30	2	1	073-R21402
4000	180	190x206	30	3	1	073-R21403
4000	180	190x206	30	4	1	073-R21404
8000	205	215x280	40	1	1	073-R21801
8000	205	215x280	40	2	1	073-R21802
8000	205	215x280	40	3	1	073-R21803
8000	205	215x280	40	4	1	073-R21804


FILTRATION UNIT OF 47 mm WITH PLUG

Description	Pack (u.)	Art. No.
Complete	1	073-001119
47 mm filter support	1	073-001120
Support funnel 300 ml	1	073-001121
Metal clamp	1	073-Q279-5
1000 ml filtering flask	1	0033768104
Neoprene plug Number 8	1	073-426151


SUCTION FLASK, WITH RIM, VACUUM RESISTANT, BOROSILICATE GLASS

Cap. (ml)	Ø neck (mm)	Pack (u.)	Art. No.
100	24	1	0033768101
250	35	1	0033768102
500	35	1	0033768103
1000	40	1	0033768104
2000	60	1	038-126950
100	24	10	1033768101
250	35	10	1033768102
500	35	10	1033768103
1000	45	10	1033768104

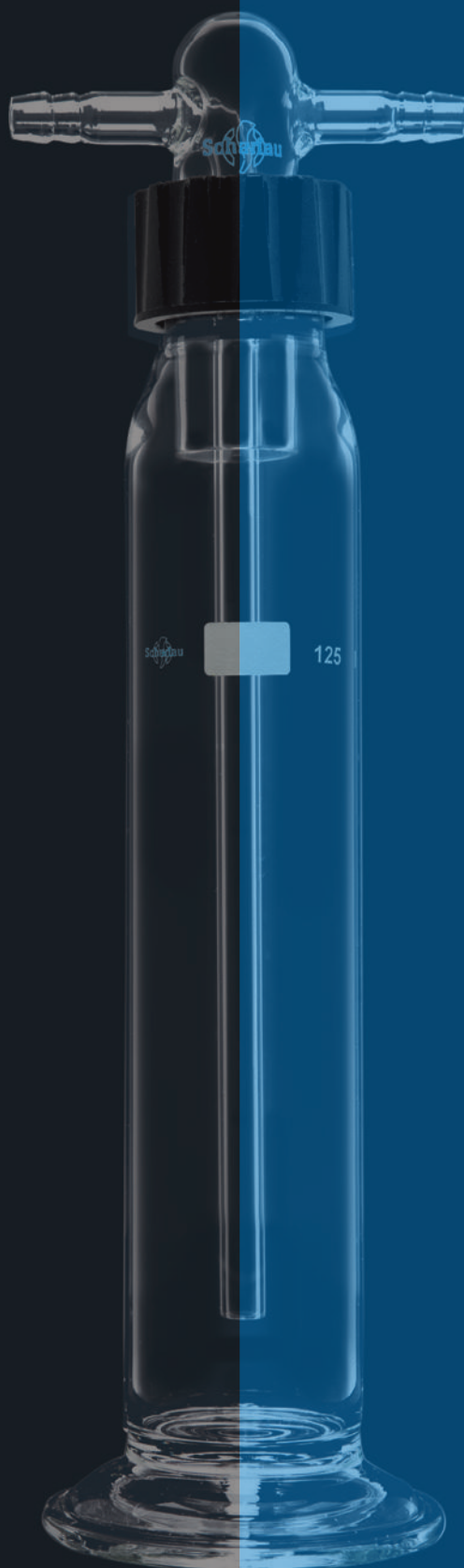

FILTRATION UNIT OF 47 mm WITH SJ

Description	Pack (u.)	Art. No.
Complete	1	073-001123
Glass base and cap 47 mm	1	073-001124
Support funnel 300 ml	1	073-001121
Metal clamp	1	073-Q279-5
Jointed flask 1000 ml	1	073-001125


SUCTION FLASK WITH GROUND JOINT, VACUUM RESISTANT, BOROSILICATE GLASS

Cap. (ml)	Socket	Pack (u.)	Art. No.
100	29/32	1	073-000161
250	29/32	1	073-000162
500	29/32	1	073-000163
1000	29/32	1	073-000164
2000	29/32	1	073-000165

WASHING BOTTLES




GAS WASHING BOTTLES OF 125 ml WITH SVL THREAD AND POROSITY NO. 1

Description	Thread	Pack (u.)	Art. No.
Complete	-	1	073-000916
125 ml flask	SVL 30	1	073-887SVL
Insert with filter disk por. 1	-	1	073-917S/1
SVL 30 screw cap	SVL 30	1	073-701-43
Sealing ring SVL 30	-	1	073-701-26


GAS WASHING BOTTLES OF 125 ml WITH SVL THREAD

Description	Thread	Pack (u.)	Art. No.
Complete	-	1	073-000904
125 ml flask	SVL 30	1	073-887SVL
Insert without filter disk	-	1	073-000905
SVL 30 screw cap	SVL 30	1	073-701-43
Sealing ring SVL 30	-	1	073-701-26


GAS WASHING BOTTLE OF 125 ml WITH GROUND JOINT CONNECTION

Description	Cone	Socket	Pack (u.)	Art. No.
Complete	-	-	1	073-000886
125 ml flask	-	29/32	1	073-000887
Insert without filter disk	29/32	-	1	073-000888

FUNNELS




**SEPARATING FUNNELS, CONICAL,
WITH GLASS PLUG**

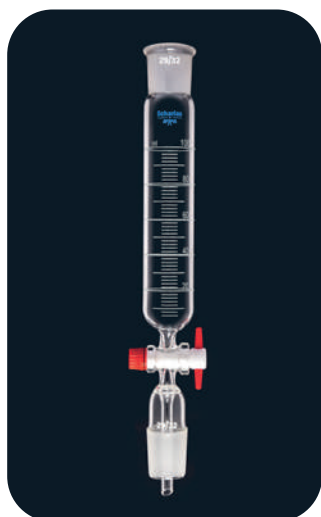
Cap. (ml)	Socket	Pack (u.)	Art. No.
100	19/26	1	073-000295
250	29/32	1	073-000297
500	29/32	1	073-000298
1000	29/32	1	073-000299


**SEPARATING FUNNELS, CONICAL,
WITH NEEDLE-VALVE PLUG**

Cap. (ml)	Socket	Pack (u.)	Art. No.
100	19/26	1	073-000308
250	29/32	1	073-000309
500	29/32	1	073-000310
1000	29/32	1	073-000311


**SEPARATING FUNNELS,
CONICAL PTFE STOPCOCK, WITH STOPPER**

Cap. (ml)	Socket	Pack (u.)	Art. No.
50	19/26	1	073-000313
100	19/26	1	073-000314
250	29/32	1	073-000315
500	29/32	1	073-000316
1.000	29/32	1	073-000317

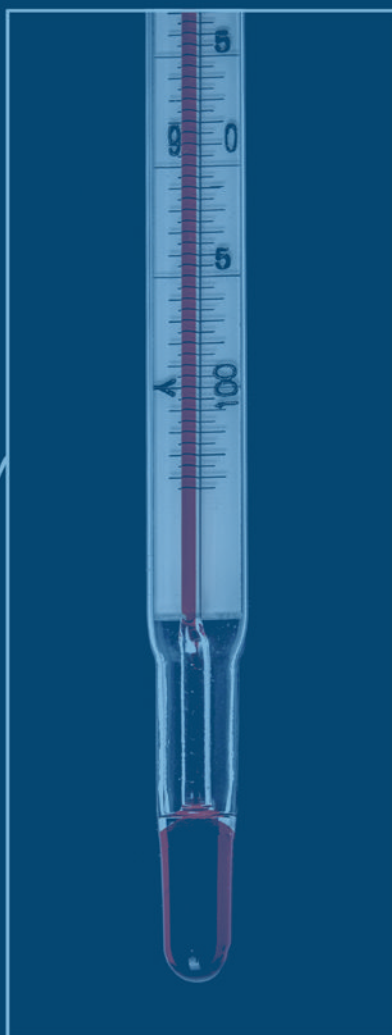

DROPPING FUNNELS, CYLINDRICAL, WITH PTFE PLUG

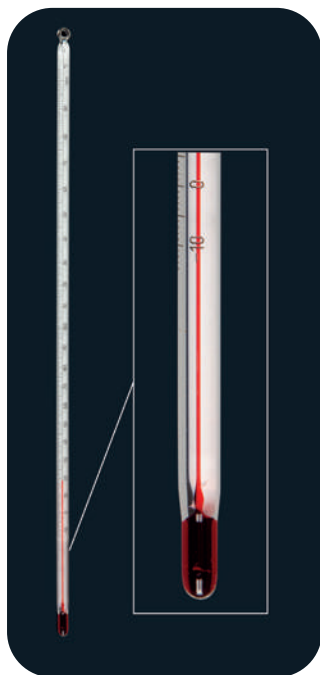
Cap. (ml)	Graduation	Division	Cone	Socket	Pack (u.)	Art. No.
20	Yes	1/2	14/23	14/23	1	073-344PTF
50	Yes	1/1	19/26	19/26	1	073-345PTF
50	No	-	14/23	14/23	1	073-337PTF
100	Yes	1/1	29/32	29/32	1	073-346PTF
100	No	1/1	29/32	29/32	1	073-339PTF
250	Yes	5/1	29/32	29/32	1	073-347PTF
250	No	5/1	29/32	29/32	1	073-340PTF
500	No	-	29/32	29/32	1	073-341PTF


**DROPPING FUNNELS, CYLINDRICAL, WITH NEEDLE-VALVE PLUG,
WITH PRESSURE EQUALIZING TUBE**

Cap. (ml)	Cone	Socket	Pack (u.)	Art. No.
50	14/23	14/23	1	073-000373
100	29/32	29/32	1	073-000374
250	29/32	29/32	1	073-000375
500	29/32	29/32	1	073-000376

THERMOMETERS

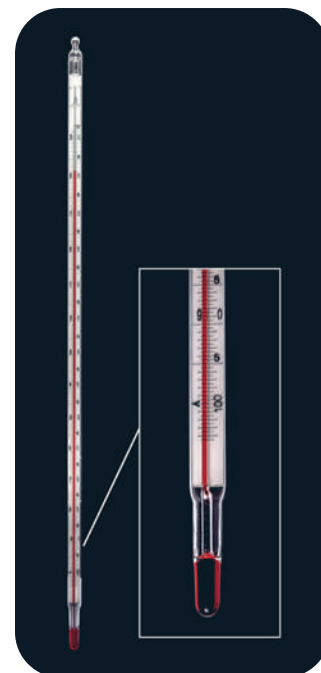



**GENERAL USE THERMOMETERS, TOTAL IMMERSION, Ø 5,5 TO 7 mm, WHITE BACKED, FILLING RED LIQUID
AMARELL**

Measuring range (°C)	Division (°C)	Length (mm)	Backed	Liquid	Thermometer with factory certificate	Pack (u.)	Art. No.
-10 to +100	1	260	White	Red	000FG11358	1	0000G11358
-10 to +150	1	260	White	Red	000FG11362	1	0000G11362
-10 to +200	1	300	White	Red	000FG11366	1	0000G11366
-10 to +250	1	300	White	Red	000FG11368	1	0000G11368

**LOW TEMPERATURE THERMOMETERS OPAL SCALE, TOTAL IMMERSION
AMARELL**

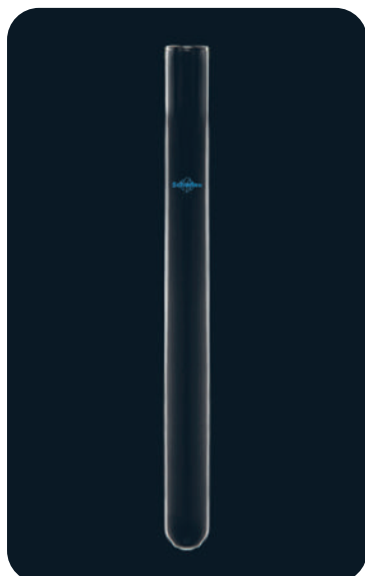
Measuring range (°C)	Division (°C)	Length (mm)	Liquid	Pack (u.)	Art. No.
-100 to +30	1	300	Toluene	1	0000L33008
-100 to +30	0,5	400	Toluene	1	0000L33040


**GROUND GLASS THERMOMETERS 14/23, OPAL SCALE, ACCORDING TO DIN 12784
AMARELL**

Measuring range (°C): Subdivision	Length/diameter (mm)	Total length lower section (mm)	Immersion (mm)	Pack (u.)	Art. No.
- 10 + 150 : 1	350 / 11	75	52	1	000D262234
- 10 + 150 : 0,5	350 / 11	75	52	1	000D262236
- 10 + 250 : 1	350 / 11	75	52	1	000D262238
- 10 + 360 : 1	350 / 11	75	52	1	000D262242
- 10 + 360 : 1	350 / 11	90	67	1	000D262338
- 10 + 150 : 1	350 / 11	100	77	1	000D262350
- 10 + 250 : 1	350 / 11	100	77	1	000D262354
- 10 + 360 : 1	350 / 11	100	77	1	000D262358
- 10 + 250 : 1	350 / 11	120	97	1	000D262374
- 10 + 360 : 1	350 / 11	120	97	1	000D262378
- 10 + 250 : 1	350 / 11	150	127	1	000D262414
- 10 + 250 : 1	350 / 11	195	172	1	000D262454
- 10 + 250 : 1	350 / 11	235	212	1	000D262494
				1	000D265808

TUBES




BOROSILICATE GLASS TEST TUBES WITHOUT RIM, ROUND BOTTOM
SCHARLAU

Cap. (ml)	Dim. Ø x length (mm)	Wall thickness (mm)	Tubes/box	Pack (u.)	Art. No.
3	10x75	0,6	100	1	124-01075P
4	10x100	0,6	100	1	124-10100P
5	12x75	0,8	250	1	124-01275P
6	12x100	0,8	100	1	124-12100P
8	12x120	0,8	250	1	124-12120P
15	15x150	1	250	1	124-15150P
15	16x100	1	250	1	124-16100B
20	16x160	1	250	1	124-16160B
30	18x180	1	100	1	124-18180P
40	20x200	1	100	1	124-20200P

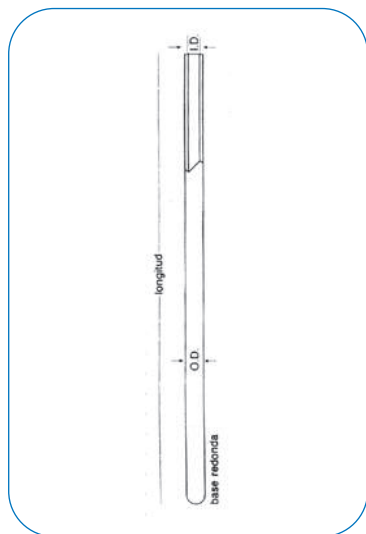

KG-33 BOROSILICATE GLASS CULTURE TUBES WITH SCREW CAP
KIMBLE®

Culture tube made from KG-33 borosilicate glass tubing with uniform wall thickness for maximum heat transfer and chemical resistance. Thread finish complies with Glass Packaging Institute (GPI) requirements. Cap has a PTFE-faced rubber liner and is not attached. Reusable. Designed from ASTM E982, Type VI, Class B requirements.

Bottom	Cap. (ml)	Dim. Ø x length (mm)	Thread	Units	Art. No.
Round	8	13x100	13-415	72	4506613100
Round	12	16x100	15-415	72	4506616100
Round	16	16x125	15-415	72	4506616125
Round	20	16x150	15-415	72	4506616150
Round	25	20x125	18-415	48	4506620125
Round	30	20x150	18-415	48	4506620150
Round	50	25x150	24-410	36	4506625150
Round	70	25x200	24-410	36	4506625200
Round	160	38x200	38-430	24	4506638200


CENTRIFUGE TUBES DIN58970

Description	Bottom	Cap. (ml)	Dim. Ø x length (mm)	Tubes/box	Pack (u.)	Art. No.
According DIN58970	Round	6	12x100	1	1	073-001242
According DIN58970	Round	12	16x100	1	1	073-001243
According DIN58970	Round	25	24x100	1	1	073-001244
According DIN58970	Round	30	24x120	1	1	073-001245
According DIN58970	Round	50	34x100	1	1	073-001246
According DIN58970	Round	80	44x100	1	1	073-001247
According DIN58970	Round	250	56x147	1	1	073-001248
Graduated, without rim	Round	10	17x105	1	1	073-001249
Without graduation, with rim	Conical	12	16x110	1	1	073-001250
Graduated, without rim	Conical	10	16x105	1	1	073-001251
Graduated, with rim	Conical	15	17x115	1	1	073-001252



NMR TUBES ARMAR

Description	Dim. (mm)	Outer Ø (mm)	Inner Ø (mm)	Averaged Camber (µm)	Pack (u.)	Art. No.
Precision <200MHz	203x5	4,97±0,019	4	76	50	RMN5T20350
Precision <300MHz	178x5	4,97±0,019	4	13	50	RMN5P17850
Precision <300MHz	203x5	4,97±0,019	4	13	50	RMN5P20350
High Precision <400MHz	178x5	4,97±0,019	4	13	5	RMN5H17805
High Precision <400MHz	203x5	4,97±0,019	4	13	5	RMN5H20305
Ultra Precision <500MHz	178x5	4,97±0,019	4	6	5	RMN5U17805
Ultra Precision <500MHz	203x5	4,97±0,019	4	6	5	RMN5U20305



CAPILLARY TUBES

Transparent glass.
Special versions are available on request.

Type	Length (mm)	Inner Ø (mm)	Outer Ø (mm)	Pack (u.)	Art. No.
Open both sides	70	0,8	1	1000	6709201070
Open both sides	75	0,8	1	1000	6709201075
Open both sides	80	0,8	1	1000	6709201080
Open both sides	100	0,8	1	1000	6709201010
Open both sides	150	0,8	1	1000	6709201015
Open both sides	60	0,95	1,35	1000	6709201360
Open both sides	70	0,95	1,35	1000	6709201370
Open both sides	75	0,95	1,35	1000	6709201375
Open both sides	100	0,95	1,35	1000	6709201310
Open both sides	150	0,95	1,35	1000	6709201315
Open both sides	70	1,15	1,55	1000	6709201570
Open both sides	75	1,15	1,55	1000	6709201575
Open both sides	80	1,15	1,55	1000	6709201580
Open both sides	100	1,15	1,55	1000	6709201510
Open both sides	150	1,15	1,55	1000	6709201515

Type	Length (mm)	Inner Ø (mm)	Outer Ø (mm)	Pack (u.)	Art. No.
One side closed	70	0,8	1	1000	6709211070
One side closed	75	0,8	1	1000	6709211075
One side closed	80	0,8	1	1000	6709211080
One side closed	100	0,8	1	1000	6709211010
One side closed	150	0,8	1	1000	6709211015
One side closed	60	0,95	1,35	1000	6709211360
One side closed	70	0,95	1,35	1000	6709211370
One side closed	75	0,95	1,35	1000	6709211375
One side closed	100	0,95	1,35	1000	6709211310
One side closed	150	0,95	1,35	1000	6709211315
One side closed	75	1,15	1,55	1000	6709211575
One side closed	80	1,15	1,55	1000	6709211580
One side closed	100	1,15	1,55	1000	6709211510
One side closed	150	1,15	1,55	1000	6709211515



You imagine it and we manufacture it

Our wide range of experience along the last 30 years in the laboratory glassware field, allows us to manufacture glass pieces with the best quality according to our customers particular requirements.

At Scharlab, we are committed to the quality of our scientific glassware. For that reason we manufacture using borosilicate 3.3 Shott Duran® glass tube.

We also offer other services, such as amber painting, plastic coating, or manufacturing glass complete reaction configurations.

In 2020 more than 300 customers trusted us to acquire their special scientific glass pieces.

**During 2020 we manufactured
more than 4,000
special glass pieces**

We have more than 50,000 custom-made glassware in our portfolio.

Compatible for a wide variety of laboratory uses:

- ✓ Research
- ✓ Complex glass systems
- ✓ Modifications of standard
- ✓ Design of glass reactors



VIALS AND CUVETTES



**VIAL WITH ROLLED RIM, AR-GLASS, WITH PE SNAP-ON LID, SEALS TIGHTLY**

PE snap-on lid, seals tightly.

Cap. (ml)	Height x outer Ø (mm)	Material	Pack (u.)	Art. No.
3	30x19	Clear glass	200	0225400211
5	40x19	Clear glass	200	0225400215
10	45x23	Clear glass	200	0225400225
25	50x30	Clear glass	200	0225400230
15	52x24	Clear glass	200	0225400235
20	55x27	Clear glass	200	0225400240
20	70x25	Clear glass	200	0225400250
30	75x28	Clear glass	200	0225400260
40	80x30	Clear glass	200	0225400270
50	100x30	Clear glass	200	0225400280
100	145x34	Clear glass	100	0225400290

**ADAPTER ROTATE-VIALS SOCKET 29/32, THREAD GL18, COMPLETE**

Description	Socket	Thread	Pack (u.)	Art. No.
Complete adapter rotate-vials	29/32	GL 18	1	0000330005
Complete adapter rotate-vials	29/32	13-415	1	073QS02779

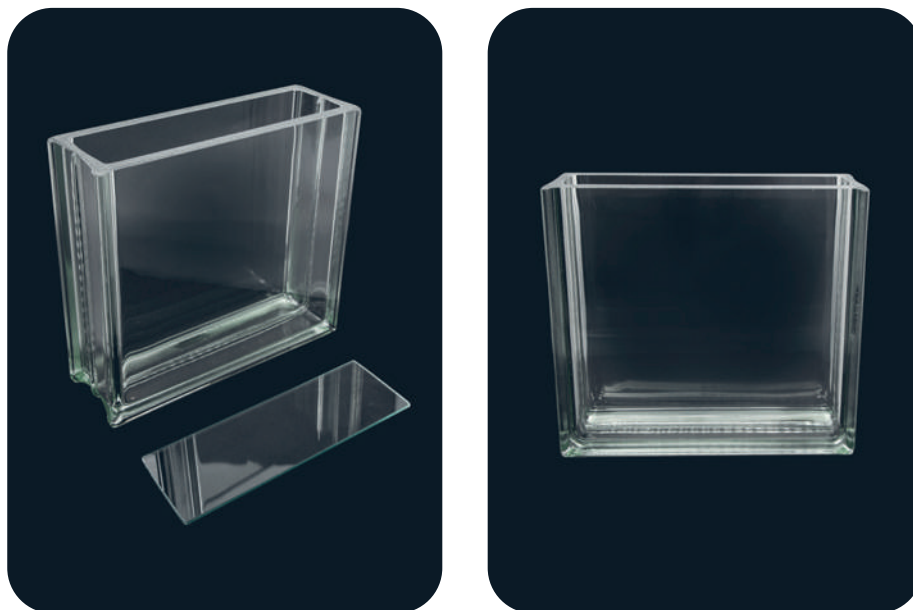
**VIAL GL18 THREAD, WITH SCREW CAP, BOROSILICATE 5.1 CLEAR GLASS**

Cap. (ml)	Height x outer Ø (mm)	Material	Pack (u.)	Art. No.
5	36x20	Clear glass	210	0000290005
7,5	38x23	Clear glass	153	0000290010
12	48x23	Clear glass	153	0000290015
24	80x23	Clear glass	180	0000290025
36	110x26	Clear glass	153	0000290030
5	36x20	Amber glass	210	0000300005
7,5	38x23	Amber glass	153	0000300010
20	72x23	Amber glass	153	0000300025
27	80x25	Amber glass	136	0000300030
36	110x26	Amber glass	153	0000300035

**VIAL SCREW CAP 13-415, CLEAR BOROSILICATE GLASS 3.1, WITHOUT CAP**

Without cap.

Description	Cap. (ml)	Height x Outer Ø (mm)	Material	Pack (u.)	Art. No.
Vial	3	16,25x40	Borosilicate clear glass	390	0120121640
Vial	5	16,25x55	Borosilicate clear glass	390	0120121655
Screw cap with disc 13-415	-	-	-	390	012011TRD01

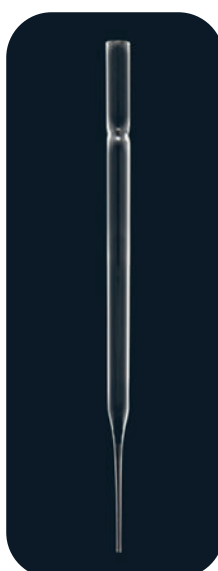


GLASS RECTANGULAR DEVELOPING CHAMBER FOR TLC PLATES

Glass rectangular TLC developing chambers provide optimum developing conditions for a variety of TLC plate sizes and shapes. Precision ground surfaces provide tight seals between tanks and glass covers and permit complete saturation of chambers with solvent vapor for uniform development of chromatograms.

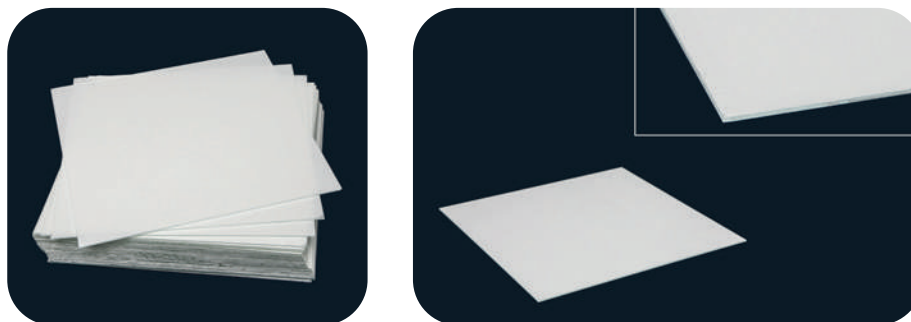
Best when used with 20x20 cm plates. Can also be used with smaller plates with consideration for the reach necessary.

Description	Pack (u.)	Art. No.
Multi-Plate chamber 200x200 mm complete	1	MULTLC2020
Chamber 200x200 mm complete	1	CUBTLC2020
Chamber 100x200 mm complete	1	CUBTLC1010



PASTEUR PIPETTES

Description	Pack (u.)	Art. No.
Length 160 mm	250	073-001734
Length 220 mm	250	073-001735



THIN LAYER PLATES

Scharlau TLC plates show a high separation power, due to the narrow distribution of silica gel particles. The hardness of the silica layer that homogeneously covers the support and a suitable layer thickness make separation highly efficient. Each batch of TLC is controlled chemically and physically by our Quality Control department to ensure reproducibility from batch to batch and from layer to layer.

Adsorbent	Support	Indicator	Thickness (mm)	Size (mm)	Pack (u.)	Art. No.
Glass	Silica gel	Yes	0,25	200x200	25	TLCGLI2020
Plastic	Silica gel	Yes	0,2	200x200	25	TLCPLI2020
Aluminium	Silica gel	Yes	0,2	200x200	25	TLCALI2020



VTRRB12X32

VARBE12X32

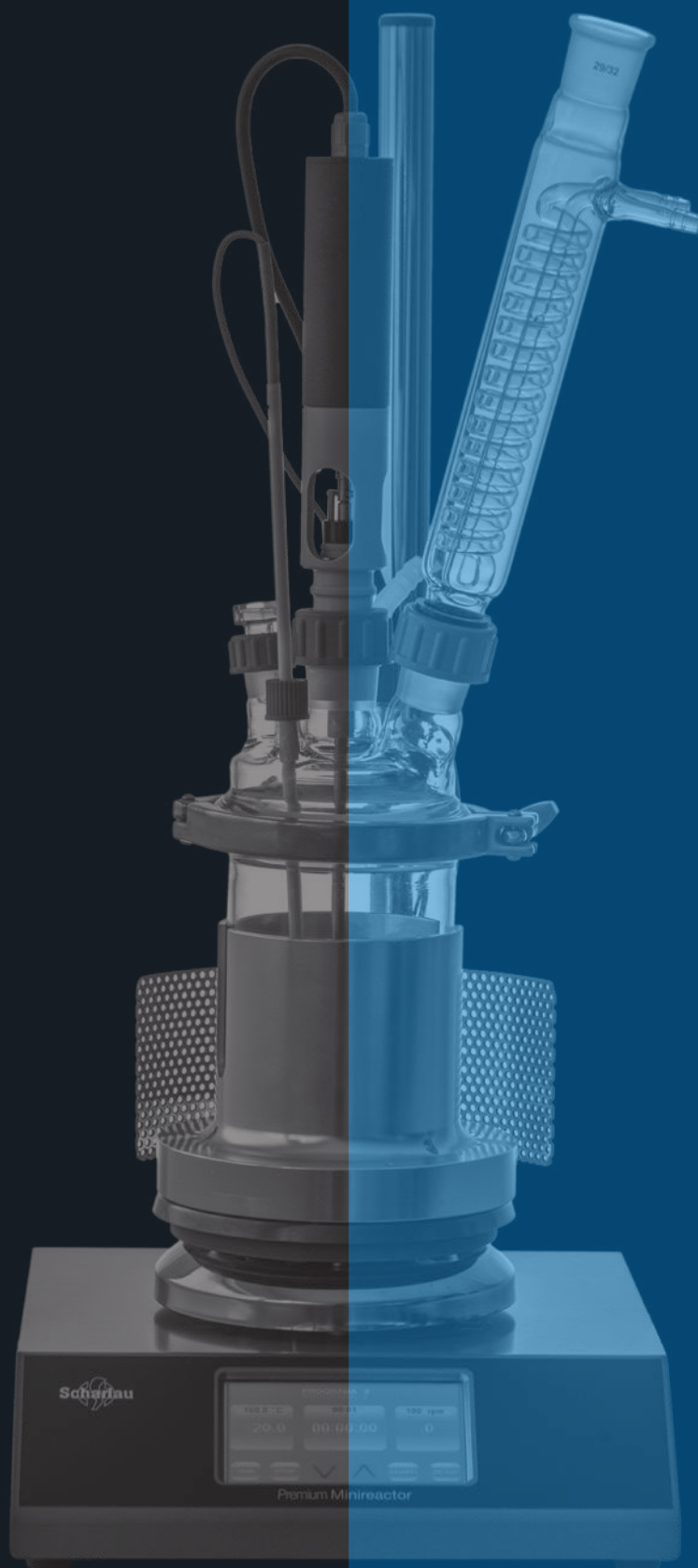
S-WIC47000

VIALS 12x32 mm 2 ml SCREW TOP 9-425, WIDE OPENING

The 9-425 2 ml screw top vial 12x32 mm is the most popular screw top vial. It has a "short" thread with a similar height to the aluminium caps, not as high as screw top vials with a narrow opening. High-quality vials, made from borosilicate clear glass Type 1, 33 expansion with great thermal resistance and inert. Uniform vial shape for maximum autosampler safety as well as in the use of inserts. Most of the existing instruments accept this vial.

Description	Material	Pack (u.)	Art. No.
Threaded vial	Transparent glass	100	VTRRB12X32
Threaded vial	Amber glass	100	VARBE12X32
Cap	With septum PTFE/silicone	100	RBBSILCAP
Cap	With septum PTFE/silicone precut	100	0WIC43945B
Vial and cap	Transparent glass/septum PTFE/silicone	1000	VTRRBCAPSM
Vial and cap	Amber glass/septum PTFE/silicone	1000	VAMRBCAPSM
Vial and cap	Transparent glass/septum PTFE/precut silicone	1000	VTRRBSLITM
Vial and cap	Amber glass/septum PTFE/precut silicone	1000	VAMRBSLITM
Insert conical bottom 300 µl	Transparent glass	100	S-WIC47000
Insert flat bottom 350 µl	Transparent glass	100	00WIC47095
50 vial rack	Polipropilene	1	00S500-142

SCHARLAU MINIREACTORS





COMPACT PREMIUM MINIREACTORS FOR SYNTHESIS IN LIQUID PHASE WITH MECHANICAL STIRRING AND ELECTRICAL HEATING

Aluminium block for fast, homogenous heating with groove for internal visibility.
 Electrical heating from +30 to 250°C with PT100 sensor.
 Reaction vessels from 50 ml to 2 litres.
 Mechanical stirring.
 Stirrer bearing with quick motor coupling.
 Maintains exact speed under changing loads or viscosity.
 Heavy-duty stainless-steel telescopic stand.
 Standard 5 neck glass lid customizable on request.
 FEP encapsulated silicone O-ring, grease free, with self-centering PTFE collar.
 Inert and chemical resistant materials in contact with the reaction product (Glass, PTFE, Hastelloy® stirring shaft).
 Easy internal access.
 Quick release tool-free vessel clamp made of stainless steel.
 USB port for datalogging.
 Colour touch screen.
 Autotuning function.

Technical specifications:

- Temperature range: ambient +15°C to 250°C (0,5 °C intervals)
- Power: 800 W (hotplate) and 50 W (stirrer)
- Stirring speed range: 100 to 700 rpm* controlled by microprocessor (25 rpm intervals)
- Up to 10 programs of 6 segments (Temperature, speed and time)
- Pressure range: from 5 mb to 0,7 bar overpressure
- Colour touch screen with real-time temperature and stirring graphics
- Overheating protection: automatic safety shutdown
- USB port for datalogging
- Dimensions: 276x315 mm
- Minimum height: 635 mm (885 mm for 5 l minireactor)

- Maximum height: 935 mm (1150 mm for 5 l minireactor)
- Power supply: 220 V, 50-60 Hz

*Available lower speed range on request (1-400 rpm)..

NOTE: The condenser is exclusively used as a photo prop and is not included in the minireactor set up.

Available other capacities.

Description	Ø joint (")	Pack (u.)	Art. No.
Premium minireactor with mechanical stirring and heating of 50 ml	2,5	1	PHMER00/50
Premium minireactor with mechanical stirring and heating of 100 ml	2,5	1	PHMER0/100
Premium minireactor with mechanical stirring and heating of 250 ml	3	1	PHMER0/250
Premium minireactor with mechanical stirring and heating of 500 ml	3	1	PHMER/5003
Premium minireactor with mechanical stirring and heating of 500 ml	4	1	PHMER/5004
Premium minireactor with mechanical stirring and heating of 1000 ml	4	1	PHMER/1000
Premium minireactor with mechanical stirring and heating of 2000 ml	4	1	PHMER/2000



PREMIUM MINIREACTOR WITH MECHANICAL STIRRING AND JACKETED REACTION VESSEL

Jacketed reaction vessels from 50 ml to 2 litres.
Temperature control through external equipment (heating or cooling).
Stirring speed and time settings.
Zero dead space drain PTFE stopcock.
Safety drip tray for accidental spills.
Mechanical stirring:
Stirrer bearing with quick motor coupling.
It maintains exact speed under changing loads or viscosity.
Heavy-duty stainless-steel telescopic stand.
Standard 5 neck glass lid customisable on request.
FEP encapsulated silicone O-ring, grease free, with self-centering PTFE collar.
Inert and chemical resistant materials in contact with the reaction product (Glass, PTFE, Hastelloy® stirring shaft).
Easy internal access.
Quick release tool-free vessel clamp made of stainless steel.
USB port for datalogging.
Colour touch screen.
Autotuning function.

Technical specifications:

- Temperature range: depending on the circulating bath to which it is connected
- Power: 50 W (stirrer)
- Stirring speed range: 100 to 700 rpm* controlled by microprocessor (25 rpm intervals)
- Up to 10 programs of 6 segments (Speed and time). Temperature: only register
- Pressure range: from 5 MB to 0,7 bar overpressure
- Colour touch screen with real-time temperature and stirring graphics
- Overheating protection: automatic safety shutdown
- USB port for datalogging
- Dimensions: 276x315 mm
- Minimum height: 635 mm (885 mm for 5 l minireactor)
- Maximum height: 935 mm (1150 mm for 5 l minireactor)

- Power supply: 220 V, 50-60 Hz

*Available lower speed range on request (1-400 rpm).

**This model does not include temperature probe.

NOTE: The condenser is exclusively used as a photo prop and is not included in the minireactor set up.

Description	Ø joint (")	Pack (u.)	Art. No.
Premium minireactor with mechanical stirring and jacketed reaction vessel of 50 ml	2,5	1	PMR0000/50
Premium minireactor with mechanical stirring and jacketed reaction vessel of 100 ml	2,5	1	PMR0000/100
Premium minireactor with mechanical stirring and jacketed reaction vessel of 250 ml	3	1	PMR0000/250
Premium minireactor with mechanical stirring and jacketed reaction vessel of 500 ml	3	1	PMR0000/5003
Premium minireactor with mechanical stirring and jacketed reaction vessel of 500 ml	4	1	PMR0000/5004
Premium minireactor with mechanical stirring and jacketed reaction vessel of 1000 ml	4	1	PMR0000/1000
Premium minireactor with mechanical stirring and jacketed reaction vessel of 2000 ml	4	1	PMR0000/2000

WE HAVE A WIDE RANGE OF OF GLASSWARE ACCESSORIES





Алматы (7273)495-231
Ангарск (3955)42-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-42
Белгород (4735)40-23-142
Благовещенск (4162)35-142-07
Брянск (4232)59-03-52
Владивосток (423)249-42-31
Владикавказ (8672)42-90-42
Владимир (4935) 49-43-18
Волгоград (844)278-03-42
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-142

Ижевск (3412)26-03-58
Иваново (4932)77-34-06
Иркутск (395)279-98-46
Казань (843)206-01-42
Калининград (4012)72-03-81
Калуга (4242)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-42
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (4352)50-90-47
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (4219)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-142-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)357-86-73
Ноябрьск (3496)41-32-12
Омск (3812)21-46-40
Орел (4262)44-53-42
Оренбург (4232)37-68-04
Пенза (8412)35-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-142
Самара (846)206-03-16
Саранск (8342)35-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)35-31-93
Симферополь (3652)67-13-56
Смоленск (4212)29-41-42
Сочи (862)242-72-31
Ставрополь (8652)20-65-13
Сыктывкар (8212)42-95-17
Сургут (3462)77-98-42
Тамбов (4752)50-40-97

Казахстан (772)734-952-31

Тверь (4352)63-31-42
Тольятти (8435)63-91-07
Томск (3835)98-41-53
Тула (4272)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8435)24-23-59
Уфа (347)359-42-12
Хабаровск (4212)92-98-04
Чебоксары (8435)42-53-07
Челябинск (421)202-03-61
Череповец (8202)49-02-142
Чита (3035)38-34-83
Якутск (4112)23-90-97
Ярославль (4422)69-52-93

<https://scharlab.nt-rt.ru> || sbu@nt-rt.ru