

Laboratory Glassware



*S*AVEEN *W*ERNER





INTERCHANGEABLE GLASSWARE

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INTERCHANGEABLE GLASSWARE



VOLUMETRIC GLASSWARE

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VOLUMETRIC GLASSWARE



FUNNELS

47

FUNNELS



CONDENSERS/EXTRACTORS/REACTION VESSELS

65

CONDENSERS/
EXTRACTORS/
REACTION VESSELS



GENERAL GLASSWARE

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GENERAL GLASSWARE



Laboratory Chemicals

INTERCHANGEABLE GLASSWARE



INTERCHANGEABLE GLASSWARE



Adapters, Reduction

Cat. no.	Socket size	Cone size
013.202.01	14/23	14/23
013.202.01A	14/23	19/26
013.202.02	14/23	24/29
013.202.03	14/23	29/32
013.202.04	19/26	24/29
013.202.05	19/26	29/32
013.202.06	19/26	34/35
013.202.07	19/26	40/38
013.202.08	19/26	45/40
013.202.09	19/26	55/44
013.202.10	24/29	29/32
013.202.11	24/29	34/35
013.202.12	24/29	40/38
013.202.13	24/29	45/40
013.202.14	24/29	50/42
013.202.15	24/29	55/44
013.202.16	29/32	34/35
013.202.17	29/32	40/38
013.202.18	29/32	45/40
013.202.19	34/35	40/38
013.202.20	34/35	45/40
013.202.21	34/35	50/42



Adapters, Expansion

Cat. no.	Socket size	Cone size
014.202.01	19/26	14/23
014.202.02	24/29	14/23
014.202.03	24/29	19/26
014.202.03A	29/32	14/23
014.202.04	29/32	19/26
014.202.05	29/32	24/29
014.202.06	34/35	19/26
014.202.07	34/35	24/29
014.202.08	34/35	29/32
014.202.09	40/38	24/29
014.202.10	45/40	29/32



Adapters, Multiple

With Two Necks parallel

Cat.No.	Socket size	Cone size
015.202.01	14/23	14/23
015.202.01A	14/23	19/26
015.202.02	19/26	19/26
015.202.03	19/26	24/29
015.202.04	24/29	24/29
015.202.05	19/26	34/35
015.202.06	29/32	29/32



Adapters, Multiple

With Two Necks, one vertical and one at 45°

Cat. no.	Socket size	Cone size
016.202.01	14/23	14/23
016.202.01A	14/23	19/26
016.202.01B	14/23	24/29
016.202.02	19/26	19/26
016.202.03	19/26	24/29
016.202.04	14/23	29/32
016.202.05	29/32	29/32



Adapters, Multiple

With Tree Necks, two parallel and one at 45°

Cat. no.	Socket size	Cone size
017.202.01	19/26	19/26
017.202.01A	19/26	24/29
017.202.02	19/26	29/32
017.202.03	24/29	24/29
017.202.04	29/32	29/32



Adapters, Receiver Delivery

Short stem 65 mm at 80°

Cat. No	Socket size
00171-05	14/23
00171-06	19/26
00171-07	24/29
00171-08	29/32



Adapters, Receiver Delivery

Long stem

Cat. no.	Socket size	Approx. length mm
019.202.05	14/23	190
019.202.06	19/26	200
019.202.07	24/29	200
019.202.08	29/32	200



Adapters, Receiver

Straight

Cat. no.	Socket size
020.202.01	14/23
020.202.02	19/26
020.202.03	24/29
020.202.04	29/32



Adapters, Receiver

Bend with vent

Cat. no.	Socket size	Cone size
021.202.01	14/23	14/23
021.202.02	19/26	19/26
021.202.03	19/26	24/29
021.202.04	24/29	24/29
021.202.05	29/32	29/32



Adapters, Receiver

Straight with vacuum connection

Cat. no.	Socket size	Cone size
022.202.01	14/23	14/23
022.202.02	14/23	19/26
022.202.02A	19/26	19/26
022.202.03	19/26	24/29
022.202.04	24/29	24/29
022.202.05	24/29	29/32
022.202.06	29/32	29/32



Adapters, Receiver

Bend with vacuum connection

Cat. no.	Socket size	Cone size
022.201.01	14/23	14/23
022.201.02	14/23	19/26
022.201.03	19/26	19/26
022.201.04	19/26	24/29
022.201.05	24/29	24/29
022.201.06	24/29	29/32
022.201.07	29/32	29/32



Adapters, Receiver

Inclined at an angle 105°

Cat. no.	Socket size	Cone size
023.202.01	14/23	14/23
023.202.02	19/26	19/26
023.202.03	19/26	24/29
023.202.04	24/29	24/29
023.202.05	29/32	29/32



Adapters, Receiver

With multiple connection

Cat. no.	Socket size	Cone size
024.202.01	14/23	14/23
024.202.02	14/23	19/26
024.202.03	19/26	19/26



Adapters, Receiver

Plain bend

Cat. no.	Socket size	Cone size
025.202.00	14/23	14/23
025.202.00A	14/23	19/26
025.202.01	19/26	19/26
025.202.02	19/26	24/29
025.202.03	24/29	24/29
025.202.04	29/32	29/32



Adapters

Recovery bend, sloping

Cat. no.	Cone size to fit flask	Cone size to fit condenser
026.202.01	14/23	14/23
026.202.02	24/29	14/23
026.202.03	19/26	19/26
026.202.04	24/29	19/26
026.202.05	29/32	19/26
026.202.06	29/32	29/32
026.202.07	24/29	24/29
026.202.08	34/35	24/29
026.202.09	29/32	24/29
026.202.10	34/35	34/35



Adapters

Socket to tube with stopcock straight

Glass stopcock

Cat. no.	Socket
00200-01	14/23
00200-02	19/26
00200-03	24/29
00200-04	29/32

Teflon stopcock

Cat. no.	Socket
00200-50	14/23
00200-51	19/26
00200-52	24/29
00200-53	29/32



Adapters

Cone to tube with stopcock straight

Glass stopcock

Cat. no.	Cone
00199-13	14/23
00199-14	19/26
00199-15	24/29
00199-16	29/32

Teflon stopcock

Cat. no.	Cone
00199-50	14/23
00199-51	19/26
00199-52	24/29
00199-53	29/32



Adapters

Cone to tube with stopcock, bend

Glass stopcock

Cat. no.	Cone
00199-17	14/23
00199-18	19/26
00199-19	24/29
00199-20	29/32

Teflon stopcock

Cat. no.	Cone
00199-54	14/23
00199-55	19/26
00199-56	24/29
00199-57	29/32



Adapters

Socket to tube with stopcock, bend

Glass stopcock

Cat. no.	Socket
00200-05	14/23
00200-06	19/26
00200-07	24/29
00200-08	29/32

Teflon stopcock

Cat. no.	Cone
00200-54	14/23
00200-55	19/26
00200-56	24/29
00200-57	29/32



Adapters Cone to Tube

Right angle

Cat. no.	Cone
036.202.01	14/23
036.202.02	19/26
036.202.03	24/29
036.202.04	29/32



Adapters Socket to Tube

Straight

Cat. no.	Socket
038.202.01	14/23
038.202.02	19/26
038.202.03	24/29
038.202.04	29/32



Adapters

Cone straight

Cat. no.	Cone
00199-05	14/23
00199-06	19/26
00199-07	24/29
00199-08	29/32



Adapters

Stopper

Cat. no.	Socket
00199-21	14/23
00199-22	19/26
00199-23	24/29
00199-24	29/32

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Adapters

Socket to tube bend

Cat. no.	Socket
00199-33	14/23
00199-34	19/26
00199-35	24/29
00199-36	29/32



Adapters

With plastic cap

Cat. no.	Thread	Cone	Hole
00166-20	GL14	14/23	5.5-6.5 mm
00166-21	GL14	19/26	5.5-6.5 mm
00166-22	GL14	24/29	5.5-6.5 mm
00166-23	GL14	29/32	5.5-6.5 mm
00166-24	GL18	14/23	7.5-9 mm
00166-25	GL18	19/26	7.5-9 mm
00166-26	GL18	24/29	7.5-9 mm
00166-27	GL18	29/32	7.5-9 mm
00166-32	GL25	14/23	9-11 mm
00166-29	GL25	19/26	9-11 mm
00166-30	GL25	24/29	9-11 mm
00166-31	GL25	29/32	9-11 mm



Plastic Cap

With hole

Cat. no.	Thread
00165-15	GL14
00165-16	GL18
00165-17	GL25
00165-18	GL32
00400-76	GL45



Plastic Cap

Teflon sealing

Cat. no.	Thread
00166-01	GL14
00166-02	GL18
00166-03	GL25
00166-04	GL32
00400-77	GL45



Gasket Set

For plastic cap with hole silicone/teflon

Cat. no.	Thread	For tube diameter mm
00166-05	GL14	5.5-6.5
00166-06	GL18	5.5-6.5
00166-07	GL18	7.5-9
00166-08	GL18	9-10
00166-09	GL25	7.5-9
00166-10	GL25	9-11
00166-11	GL25	11-13
00166-12	GL32	9-11
00166-13	GL32	11-13
00166-14	GL32	13-15
00166-15	GL32	15-17
00400-78	GL45	26
00400-79	GL45	32



Septa

Silicone rubber seals for piercing

Cat. no.	Thread	Diam. mm	Thickness mm
166-50	GL14	12	2
166-51	GL18	16	2
166-52	GL25	22	2
166-53	GL32	29	2
166-54	GL45	42	3

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Adapters

With side tube

Cat. no.	Thread	Cone	For tube O.D.
00167-01	GL14	14/23	5.5-6.6 mm
00167-02	GL18	19/26	7.5-9 mm
00167-03	GL18	24/29	7.5-9 mm
00167-04	GL18	29/32	7.5-9 mm

With teflon stopcock

Cat. no.	Thread	Cone	For tube O.D.
00167-07	GL14	14/23	5.5-6.5 mm
00167-08	GL18	19/26	7.5-9 mm
00167-09	GL18	24/29	7.5-9 mm
00167-10	GL18	29/32	7.5-9 mm



Tube for Adapters

Tube 300 mm

Cat. no.	O.D.
00167-13	6 mm
00167-14	8 mm

With teflon stopcock, tube 300 mm

Cat. no.	O.D.
00167-15	6 mm
00167-16	8 mm



Adapters

Socket to cone with tee connection

Cat. no.	Socket	Cone
039.202.01	14/23	14/23
039.202.02	14/23	19/26
039.202.03	14/23	24/29
039.202.04	14/23	29/32
039.202.05	19/26	19/26
039.202.06	19/26	24/29
039.202.07	19/26	29/32
039.202.08	24/29	24/29
039.202.09	24/29	29/32
039.202.10	29/32	29/32



Drying Tube

Cat. no.	Cone
041.202.01	14/23
041.202.02	19/26
041.202.03	24/29
041.202.04	29/32



Round Bottom Flask Support

Made of moulded rubber (E.P.D.M.). Temperature resistance up to 100°C. Specially designed with stepp surface to support different flask diameters. From 10 ml up to 10 litre capacity. Dimensions: 50 mm high x 160 mm diam.

Cat. no.
1000863



Flask Support

made of cork, high 30 mm

Cat. no.	O.D. mm	I.D. mm
136-25	80	30
136-26	100	60
136-27	140	90
136-29	210	150



Flasks Round Bottom

Single neck DIN 12348 medium

Cat. no.	Nominal capacity ml	Socket size	Approx. overall height mm.	Dia mm
057.202.02	5	14/23	65	27
057.202.04	10	14/23	65	33
057.202.05	25	14/23	85	41
057.202.06	25	19/26	85	41
057.202.07	25	24/29	85	41
057.202.08	50	14/23	105	51
057.202.09	50	19/26	105	51
057.202.10	50	24/29	105	51
057.202.10A	50	29/32	105	51
057.202.11	100	14/23	115	64
057.202.12	100	19/26	115	64
057.202.13	100	24/29	115	64
057.202.14	100	29/32	115	64
057.202.16	150	19/26	120	74
057.202.17	150	24/29	120	74
057.202.18	150	29/32	120	74
057.202.20	250	14/23	145	85
057.202.21	250	19/26	145	85
057.202.22	250	24/29	145	85
057.202.23	250	29/32	145	85
057.202.24	250	34/35	145	85
057.202.25	500	19/26	175	105
057.202.26	500	24/29	175	105
057.202.27	500	29/32	175	105
057.202.28	500	34/35	175	105
057.202.29	1000	19/26	210	131
057.202.30	1000	24/29	210	131
057.202.31	1000	29/32	210	131
057.202.32	1000	34/35	210	131
057.202.33	2000	24/29	260	166
057.202.34	2000	29/32	260	166
057.202.35	2000	34/35	260	166
057.202.36	3000	29/32	260	185
057.202.37	4000	29/32	290	207
057.202.38	5000	29/32	310	223
057.202.39	6000	29/32	355	236



Flasks Round Bottom

with conical joint, amber, DURAN®, DIN 12348, with inscription label

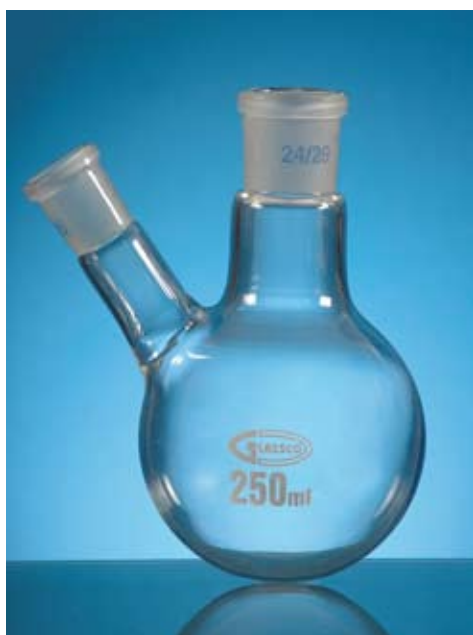
Cat. no.	Capacity ml	Socket size	Dia mm
3.0031.28	50	29/32	51
3.0031.37	100	29/32	64
3.0031.49	250	29/32	85
3.0031.58	500	29/32	105
3.0031.70	1000	29/32	131



Flasks Flat Bottom

Single neck DIN 12348 medium

Cat. no.	Nominal capacity ml	Socket size	Approx. overall height mm.	Dia mm
058.202.01	50	19/26	90	51
058.202.02	50	24/29	90	51
058.202.02A	50	29/32	90	51
058.202.03	100	19/26	110	64
058.202.04	100	24/29	110	64
058.202.05	100	29/32	110	64
058.202.07	150	19/26	115	74
058.202.08	150	24/29	115	74
058.202.09	150	29/32	115	74
058.202.11	250	19/26	140	85
058.202.12	250	24/29	140	85
058.202.13	250	29/32	140	85
058.202.14	250	34/35	140	85
058.202.15	500	19/26	170	105
058.202.16	500	24/29	170	105
058.202.17	500	29/32	170	105
058.202.18	500	34/35	170	105
058.202.19	1000	24/29	200	131
058.202.20	1000	29/32	200	131
058.202.21	1000	34/35	200	131
058.202.22	2000	24/29	250	166
058.202.23	2000	29/32	250	166
058.202.24	2000	34/35	250	166



Flasks Round Bottom

Two neck DIN 12394

Cat. no.	Nominal capacity ml	Socket size	Side socket	Approx. overall height mm.
059.202.01	50	24/29	14/23	115
059.202.02	50	29/32	14/23	115
059.202.03	100	24/29	14/23	115
059.202.04	100	24/29	19/26	115
059.202.05	100	29/32	14/23	115
059.202.06	250	24/29	14/23	145
059.202.07	250	24/29	19/26	145
059.202.08	250	29/32	14/23	145
059.202.09	500	24/29	14/23	175
059.202.10	500	24/29	19/26	175
059.202.11	500	29/32	14/23	175
059.202.12	1000	24/29	14/23	210
059.202.13	1000	24/29	19/26	210
059.202.14	1000	29/32	14/23	210
059.202.15	2000	34/35	19/26	223



Flasks Round Bottom

Three neck at angle DIN 12394

Cat. no.	Nominal capacity ml	Centre socket	Side sockets	Approx overall height mm.
060.202.21	50	14/23	14/23	95
060.202.22	50	19/26	14/23	95
060.202.23	100	14/23	14/23	115
060.202.01	100	19/26	14/23	115
060.202.02	100	24/29	14/23	115
060.202.03	100	24/29	19/26	115
060.202.03A	100	29/32	14/23	115
060.202.04	250	19/26	19/26	145
060.202.05	250	24/29	14/23	145
060.202.06	250	24/29	19/26	145
060.202.07	250	29/32	14/23	145
060.202.08	250	29/32	19/26	145
060.202.08A	250	29/32	29/32	145
060.202.09	500	24/29	14/23	175
060.202.10	500	24/29	19/26	175
060.202.11	500	29/32	14/23	175
060.202.12	500	29/32	19/26	175
060.202.12A	500	29/32	29/32	175
060.202.13	1000	24/29	14/23	210
060.202.14	1000	24/29	19/26	210
060.202.15	1000	29/32	14/23	210
060.202.16	1000	29/32	19/26	210
060.202.17	1000	29/32	29/32	210
060.202.18	2000	24/29	19/26	260
060.202.19	2000	29/32	24/29	260
060.202.20	2000	29/32	29/32	290



Flasks Round Bottom

Three neck parallel DIN 12392

Cat. no.	Nominal capacity ml	Center socket	Side sockets	Approx overall height mm.
061.202.01	250	24/29	19/26	145
061.202.02	250	29/32	14/23	145
061.202.02A	250	29/32	29/32	145
061.202.03	500	24/29	19/26	175
061.202.04	500	29/32	14/23	175
061.202.05	500	29/32	19/26	175
061.202.05A	500	29/32	29/32	175
061.202.06	1000	24/29	19/26	210
061.202.07	1000	29/32	14/23	210
061.202.08	1000	29/32	19/26	210
061.202.09	1000	29/32	24/29	210
061.202.10	1000	29/32	29/32	210
061.202.11	2000	24/29	19/26	260
061.202.12	2000	29/32	19/26	260
061.202.13	2000	29/32	29/32	260
061.202.14	2000	34/35	19/26	260
061.202.15	2000	34/35	24/29	260



Flasks Pear Shape

Cat. no.	Volym ml	NS
062.202.04	5	14/23
062.202.05	10	14/23
062.202.06	25	14/23
062.202.07	50	14/23
062.202.09	100	14/23
062.202.10	250	14/23
062.202.11	5	19/26
062.202.12	10	19/26
062.202.13	25	19/26
062.202.14	50	19/26
062.202.15	100	19/26
062.202.16	250	19/26
062.202.17	50	29/32
062.202.18	100	29/32
062.202.19	250	29/32



Flasks Pear Shape

Two neck

Cat. no.	Nominal capacity ml	Centre socket	Side socket	Approx. overall height mm.
063.202.01	50	14/23	14/23	110
063.202.02	100	14/23	14/23	125



Flasks

Evaporating

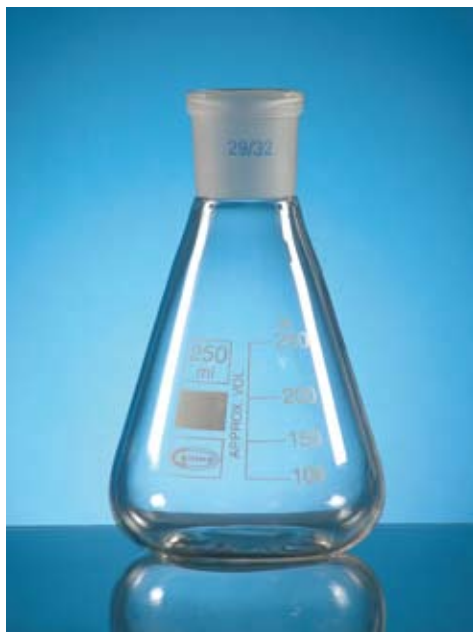
Cat. no.	Nominal capacity ml	Side socket	Approx. overall height mm.
069.202.01	50	29/32	94
069.202.03	100	29/32	110
069.202.05	250	29/32	140
069.202.07	500	29/32	170
069.202.09	1000	29/32	210
069.202.10	2000	29/32	250



Flasks

Kjeldahl

Cat. no.	Nominal capacity ml	Socket size	Approx. overall height mm.
070.202.01	50	19/26	162
070.202.02	100	19/26	165
070.202.03	100	24/29	265
070.202.04	300	24/29	295
070.202.05	500	24/29	305
070.202.06	800	24/29	325



Flasks Conical

Erlenmeyer DIN 12387

Cat. no.	Nominal capacity ml	Socket size	Approx. overall diameter mm.	Approx overall height mm.
071.202.06	25	14/23	75	42
071.202.07	25	19/26	75	42
071.202.08	50	14/23	85	51
071.202.09	50	19/26	85	51
071.202.10	50	24/29	85	51
071.202.10A	50	29/32	85	51
071.202.11	100	14/23	105	64
071.202.12	100	19/26	105	64
071.202.13	100	24/29	105	64
071.202.14	100	29/32	105	64
071.202.15	150	19/26	118	74
071.202.16	150	24/29	118	74
071.202.17	150	29/32	118	74
071.202.17A	200	29/32	131	79
071.202.18	250	19/26	140	85
071.202.19	250	24/29	140	85
071.202.20	250	29/32	140	85
071.202.21	250	34/35	140	85
071.202.21A	300	29/32	156	87
071.202.22	500	19/26	175	105
071.202.22A	500	24/29	175	105
071.202.23	500	29/32	175	105
071.202.24	500	34/35	175	105
071.202.25	1000	24/29	220	131
071.202.26	1000	29/32	220	131
071.202.27	1000	34/35	220	131
071.202.28	2000	29/32	280	166
071.202.29	2000	34/35	280	166



Stabilising Rings "Circum"

P.V.C. coated steel. The weight of the ring stabilises and prevents flasks from floating when placed in a water bath. Suitable for conical, volumetric and all types of flasks.

Cat. no.	Colour	Mode	Diam. mm	Weight g
1001169	red	open	50	207
1001170	red	open	70	340
1001171	red	open	100	470
1001734	blue	closed	48	270
1001735	blue	closed	70	360
1001736	blue	closed	90	440



Flasks

Iodine

Cat. no.	Nominal capacity ml	Joint size	Min. cup capacity ml
072.202.01	250	24/29	20
072.202.02	250	29/32	20
072.202.03	500	24/29	20
072.202.04	500	29/32	20



Flasks Conical

With teflon liner screw cap

Cat. no.	Capacity	Dia mm
075.202.01	50	51
075.202.02	100	64
075.202.03	150	74
075.202.04	250	85
075.202.05	500	105
075.202.06	1000	131



Splash Heads

Pear shape sloping

Cat. no.	Cone size to fit flask	Cone size to fit condenser
032.202.01	14/23	14/23
032.202.02	19/26	19/26
032.202.03	24/29	19/26
032.202.04	24/29	24/29
032.202.05	29/32	29/32



Splash Heads

With filter P2, small compact model, centrated socket and cone

Cat. no.	Socket	Cone
00172-05	29/32	14/23
00172-06	29/32	19/26
00172-07	29/32	24/29
00172-08	29/32	29/32



Splash Heads

Straight model, centrated

Cat. no.	Socket	Cone
030.202.01	14/23	14/23
030.202.02	24/29	19/26
030.202.03	29/32	29/32
030.202.04	29/32	14/23
030.202.05	29/32	19/26
030.202.06	29/32	24/29



Splash Heads

Tube in the bottom prevent splash from running backwards, centrated

Cat. no.	Socket	Cone
00171-21	29/32	14/23
00171-22	29/32	19/26
00171-23	29/32	24/29
00171-24	29/32	29/32



Receiver Bend

Vertical

Cat. no.	Cone size to fit flask	Cone size to fit condenser
027.202.01	14/23	14/23
027.202.02	19/26	19/26
027.202.03	24/29	19/26
027.202.04	24/29	24/29
027.202.05	29/32	29/32



Still Head Plain

With thermometer socket

Cat. no.	Socket size	Cone size to fit flask	Cone size to fit condenser
028.202.01	14/23	14/23	14/23
028.202.02	14/23	19/26	19/26
028.202.03	14/23	24/29	19/26
028.202.04	14/23	29/32	19/26
028.202.05	14/23	34/35	19/26
028.202.06	14/23	24/29	24/29
028.202.07	14/23	34/35	24/29
028.202.08	14/23	29/32	24/29
028.202.09	14/23	29/32	29/32
028.202.10	14/23	34/35	29/32



Claisen Heads

Sloping with 2xB14 socket

Cat. no.	Socket size	Cone size to fit flask	Cone size to fit condenser
029.202.01	14/23	14/23	14/23
029.202.02	14/23	19/26	19/26
029.202.03	14/23	24/29	19/26
029.202.04	14/23	24/29	24/29
029.202.05	14/23	29/32	29/32
029.202.06	14/23	34/35	24/29



Nitrogen Round-bottom Flasks (Schlenk-Flasks)

DURAN®. With conical joint and NS stopcock.

Cat. no.	Capacity ml	Socket NS	NS Stopcock Bore mm
3.3601.22	25	14/23	2,5
3.3601.28	50	14/23	2,5
3.3601.37	100	14/23	2,5
3.3601.49	250	14/23	2,5
3.3604.28	50	29/32	2,5
3.3604.37	100	29/32	2,5
3.3604.49	250	29/32	2,5



Nitrogen Tubes (Schlenk-Tubes)

DURAN®. With conical joint and NS stopcock.

Cat. no	Capacity ml	Socket NS	NS Stopcock Bore mm
3.3701.13	10	14/23	2,5
3.3701.22	25	14/23	2,5
3.3701.28	50	14/23	2,5
3.3701.37	100	14/23	2,5
3.3701.49	250	14/23	2,5



Nitrogen Tubes (Schlenk-Tubes)

DURAN®. With conical joint and NS stopcock.

Cat. no	Capacity ml	Cone NS	NS Stopcock Bore mm
3.3702.13	10	14/23	2,5
3.3702.22	25	14/23	2,5
3.3702.28	50	14/23	2,5
3.3702.37	100	14/23	2,5
3.3702.49	250	14/23	2,5



Stopper

Hollow with tip shape hexagonal

Cat. no.	Cone
011.205.01	10/19
011.205.02	12/21
011.205.03	14/23
011.205.04	19/26
011.205.05	24/29
011.205.06	29/32
011.205.07	34/35

For amber color add A after catalogue number.



Stopper Solid

Flat head

Cat. no.	Cone
012.202.01	10/19
012.202.02	14/23
012.202.03	19/26
012.202.04	24/29
012.202.05	29/32
012.202.06	34/35



Sleeves For Glass Joints

PTFE sleeves are inserted between standard ground glass joints to eliminate the use of grease and prevent sticking. Sleeves have a wall thickness of about 0.05 mm are inert, usable to ca. 280°C and will withstand low to medium vacuum.

Cat. no.	Joint
019.107	7/16
019.110	10/19
019.112	12/21
019.114	14/23
019.119	19/26
019.124	24/29
019.129	29/32
019.134	34/35
019.140	40/38
019.145	45/40
019.150	50/42
019.155	55/44
019.160	60/46
019.170	71/51
019.185	85/55



Rigid Sleeves

For grease-free, high vacuum seals using standard ground glass joints. Made from PTFE with substantial shoulder for ease of handling and of robust overall construction for repeated use. Rigid sleeves are inert, usable to ca. 280°C and will withstand high vacuum – leakage rate less than 1×10^{-4} torr, litre, sec.⁻¹.

Cat. no.	Joint
020.010	10/29
020.014	14/23
020.019	19/26
020.024	24/29
020.029	29/32
020.034	34/35
020.040	40/38
020.045	45/40
020.050	50/42
020.055	55/44
020.060	60/46
020.070	71/51
020.085	85/55



Distilling Links, Claisen

DURAN®. Distilling links with Liebig condenser and head to Claisen, sockets NS 14/23, for distillation thermometers, 55 mm fitting length. Liebig condenser with straight outlet. Water connection.

Cat. no.	Cones NS	Water conn.	Jacket length mm
5.0552.01	14/23	nozzle	160
5.0553.01	14/23	nozzle	250
5.0553.04	29/32	nozzle	250
5.0554.04	29/32	nozzle	400



Distilling Links with Liebig Condenser

DURAN®. Distilling links with Liebig condenser and socket NS 14/23 for distillation thermometers, 55 mm fitting length. With cone at the outlet, water connection with nozzle.

Cat. no.	Cones NS	Water conn.	Jacket length mm
5.0502.01	14/23	nozzle	160
5.0503.01	14/23	nozzle	250
5.0503.04	29/32	nozzle	250
5.0504.04	29/32	nozzle	400



Receiving Flasks

DURAN®. Especially for rotary evaporators. With spherical joint socket S 35.

Cat. no.	Capacity ml	Socket S	Flask O-Ø mm
3.0635.37	100	35	64
3.0635.49	250	35	85
3.0635.58	500	35	105
3.0635.70	1000	35	131
3.0635.73	2000	35	166



Conical Joint Clips Type "Keck"

POM. With not scratch glass surfaces. Excellent resilience and stability. Outstanding chemical resistance. Operating temperatur up to approx. 150°C.

Cat. no.	Size NS	Colour
28.633.610	10	green
28.633.620	12	violet
28.633.630	14	yellow
28.633.640	19	blue
28.633.650	24	green
28.633.660	29	red
28.633.670	34	orange
28.633.680	40	yellow
28.633.690	45	brown



Clips

for conical joints, Ni.

Cat. no.	Size NS
28.633.730	14
28.633.740	19
28.633.750	24
28.633.760	29



Fork Clamps For NS

Cr-Ni steel. For ground joints.

Cat. no.	For NS
1.1035.14	14/23
1.1035.19	19/26
1.1035.24	24/29
1.1035.29	29/32
1.1035.45	45/40

Set Screws For NS Fork Clamps

Fits all sizes of NS fork clamps Cat. no. 1.1035.14 ff.

Cat. no.	For NS
1.1035.99	14-45



VITLAB plastic laboratory products for volume measuring.



VITLAB plastic laboratory products for daily use.



VITLAB liquid handling instruments for the best measurement results.

VITLAB is one of the leading manufacturers of liquid handling instruments and high-quality plastic laboratory products. Our development and manufacturing goals are laboratory products that simplify your daily work and always produce perfect results. As a specialist in high-purity plastic materials, VITLAB manufactures a comprehensive selection of laboratory products made from the fluoroplastic PFA. Used in trace analysis, they guarantee a high degree of long-term stability for measuring solutions.

All Vitlab products are available from Saveen & Werner.

VITLAB 
Competence in Labware

VOLUMETRIC GLASSWARE





Burette with Straight Bore Glass Key Stopcock, Schellbach Stripe

Accuracy as per class AS DIN 12700, ISO 385 (waiting time 30 seconds) with Lot certificate.

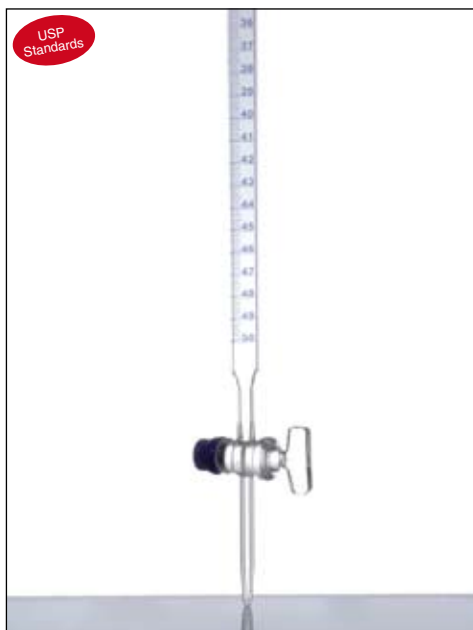
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
110.202.01A	10	0.05	0.020
110.202.02A	25	0.10	0.050
110.202.03A	50	0.10	0.050
110.202.04A	100	0.20	0.100



Burette with Straight Bore Glass Key Stopcock, Schellbach Stripe

Accuracy as per class AS DIN 12700, ISO 385 (waiting time 30 seconds) with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
110.223.01	10	0.05	0.020
110.223.02	25	0.10	0.050
110.223.03	50	0.10	0.050
110.223.04	100	0.20	0.100



Burette with Straight Bore Glass Key Stopcock, Burettes Meet ASTM E-287 Class A

Specifications & USP standard with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
111.220.01	10	0.05	0.02
111.220.02	25	0.10	0.03
111.220.03	50	0.10	0.05



Burette with Screw Type Needle Valve PTFE stopcock, Schellbach Stripe

Accuracy as per class AS DIN 12700, ISO 385 (waiting time 30 seconds) with lot certificate.

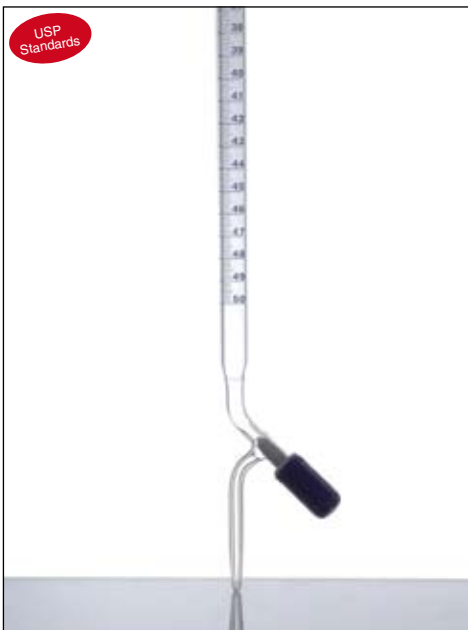
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (±ml)
112.202.01A	10	0.05	0.020
112.202.02A	25	0.10	0.050
112.202.03A	50	0.10	0.050
112.202.04A	100	0.20	0.100



Burette with Screw Type Needle Valve PTFE stopcock, Schellbach Stripe

Accuracy as per class AS DIN 12700, ISO 385 (waiting time 30 seconds) with individual work certificate, serially numbered.

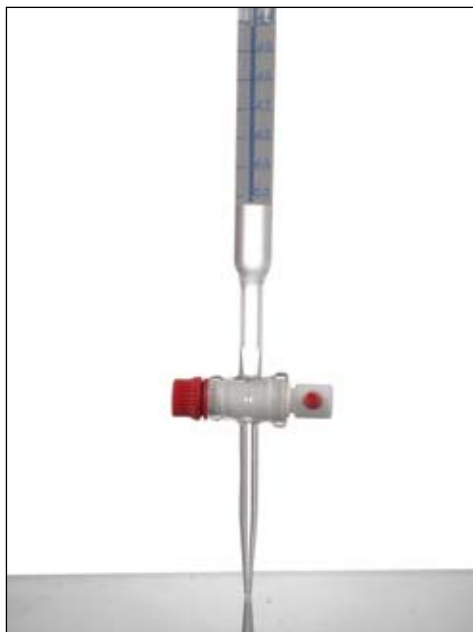
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (±ml)
112.223.01A	10	0.05	0.020
112.223.02A	25	0.10	0.050
112.223.03A	50	0.10	0.050
112.223.04A	100	0.20	0.100



Burette with Screw Type Needle Valve PTFE Stopcock

Burettes meet ASTM E-287 class A specification & USP standard with individual work certificate, serially numbered.

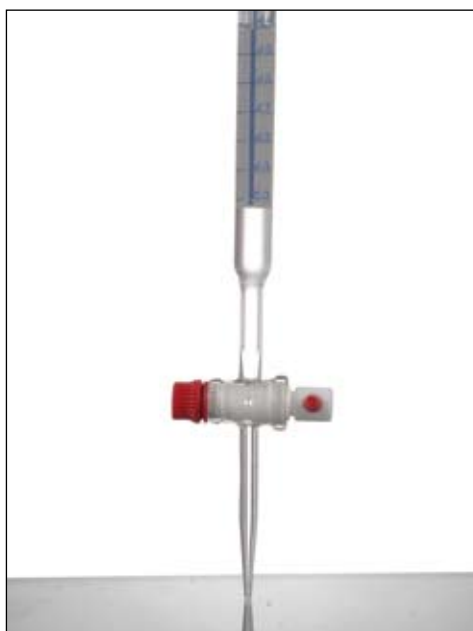
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (±ml)
113.220.01	10	0.05	0.02
113.220.02	25	0.10	0.03
113.220.03	50	0.10	0.05



Burette with Straight Bore PTFE Key Stopcock, Schellbach Stripe

Accuracy as per AS DIN 12700, ISO 385 (waiting time 30 seconds) with lot certificate.

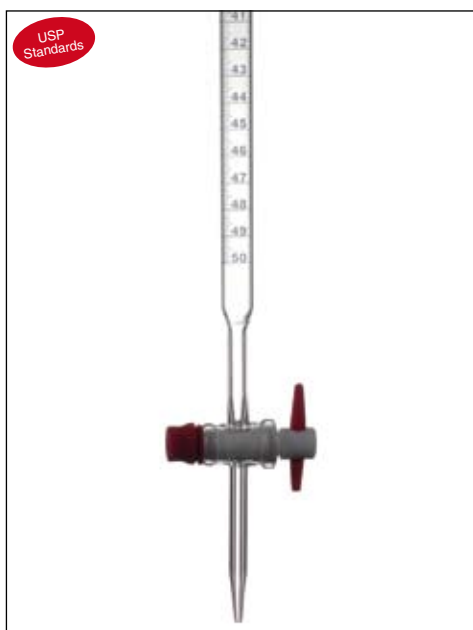
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
114.202.04A	10	0.05	0.020
114.202.05A	25	0.10	0.050
114.202.06A	50	0.10	0.050
114.202.07A	100	0.20	0.100



Burette with Straight Bore PTFE Key Stopcock, Schellbach Stripe

Accuracy as per AS DIN 12700, ISO 385 (waiting time 30 seconds) with individual work certificate, serially numbered.

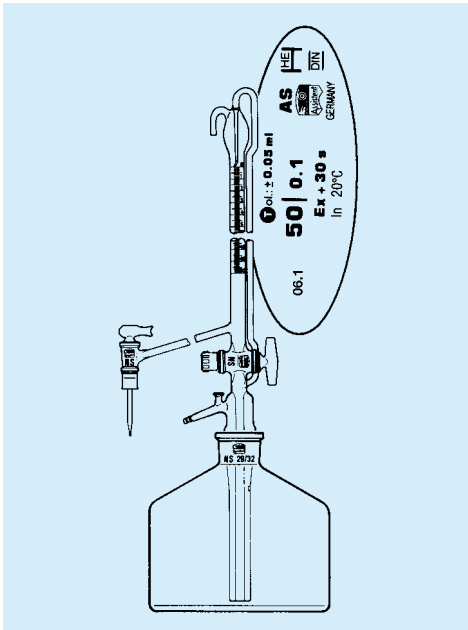
Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
114.223.04A	10	0.05	0.020
114.223.05A	25	0.10	0.050
114.223.06A	50	0.10	0.050
114.223.07A	100	0.20	0.100



Burette with Straight Bore PTFE Key Stopcock

Burettes meet ASTM E-287, class A specification & USP standard with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml	Tolerance (\pm ml)
115.220.01	10	0.05	0.02
115.220.02	25	0.10	0.03
115.220.03	50	0.10	0.05



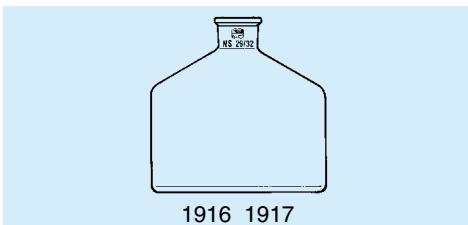
Burette, "Assistent" Automatic

Conformity Certified I^{HfI} , (class A, fast delivery)

"Assistent" Automatic burettes, DURAN®/borosilicateglass 3.3, conformity-certified I^{HfI} , tolerance indicated on each burette, with Schellbach stripe, circular graduation at main points, fused blue graduation "ASSISTENT-PERMANENT", acid and alkali resistant, stopcocks with interchangeable safety plugs, waiting time: 30 sec., complete with reservoir bottle 2 l with standard ground NS 29/32 and rubber bulb no. 850/1, available with individual test- or lot-control certificate on request at surcharge.

With intermediate stopcock and delivery stopcock, both stopcocks with NS-plug of glass.

Cat. no.	Capacity ml	Sub. div. ml	Tolerance (±ml)	Delivery times (sec)
8415H-15	10	0.02	0.02	35-45
8415H-22	25	0.09	0.03	35-45
8415H-50	50	0.10	0.05	35-45



1916 1917



850-1

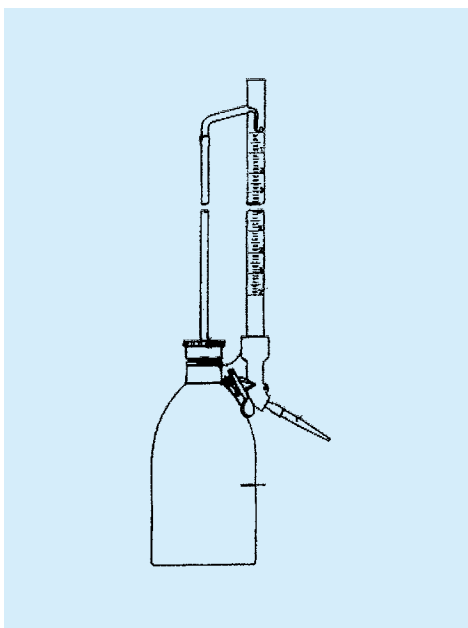


850-2

Spare Parts and Accessories

Reservoir bottles for automatic burettes, low form, with standard ground NS 29

Cat. no.		
1916-1000	clear glass	1000 ml
1917-1000	amber glass	1000 ml
1916-2000	clear glass	2000 ml
1917-2000	amber glass	2000 ml
850-1	Rubber bulbs	with valve and tubing
850-2	Rubber bulbs	with air reservoir, net and tubing



Burette, "Schilling" Automatic

Soda lime glass, class B, with resevoir and plastic feet, pack 1, Schellbach, blue graduation.

Cat. no.	Capacity ml	Sub. div. ml	Flask ml
820-5	5	0.05	500
820-10	10	0.05	500
820-25	25	0.10	1000
820-50	50	0.10	1000

Spare Burette

Cat. no.	Capacity ml	Sub. div. ml
821-5	5	0.05
821-10	10	0.05
821-25	25	0.10
821-50	50	0.10



Pipette Volumetric

With one mark, accuracy as per class AS DIN 12691 ISO 648 (waiting time 15 seconds) with lot certificate.

Cat. no.	Capacity ml	Tolerance (\pm ml)	Colour code
123.202.01	1	0.006	Blue
123.202.02	2	0.010	Orange
123.202.03	5	0.015	White
123.202.04	10	0.020	Red
123.202.05	20	0.030	Yellow
123.202.06	25	0.030	Blue
123.202.07	50	0.050	Red
123.202.08	100	0.080	Yellow

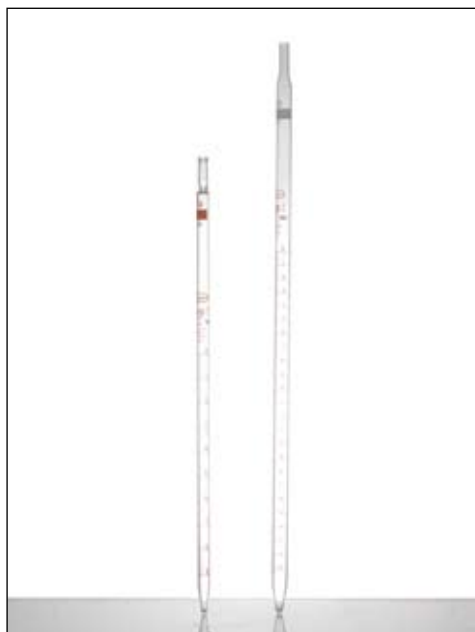
Also available in PP plastic.



Pipette Volumetric

With one mark, accuracy as per class AS DIN 12691 ISO 648 (waiting time 15 seconds) with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Tolerance (\pm ml)	Colour code
123.223.01	1	0.006	Blue
123.223.02	2	0.010	Orange
123.223.03	5	0.015	White
123.223.04	10	0.020	Red
123.223.05	20	0.030	Yellow
123.223.06	25	0.030	Blue
123.223.07	50	0.050	Red
123.223.08	100	0.080	Yellow

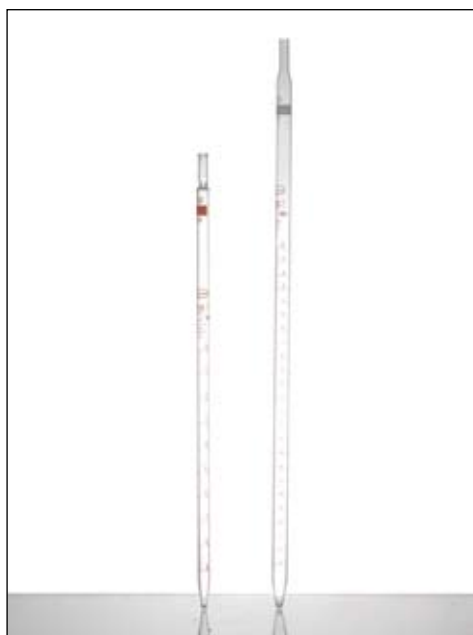


Graduated Pipettes

Class AS DIN 12697 ISO 835 (waiting time 15 seconds) with lot certificate.

Cat. no.	Capacity ml	Tolerance (\pm ml)	Subdivision (ml)	Colour code
125.202.01	1	0.006	0.01	Yellow
125.202.02	2	0.010	0.02	Black
125.202.03	5	0.030	0.05	Red
125.202.04	10.0	0.050	0.10	Orange
125.202.06	25.0	0.100	0.10	White

Also available in PP plastic.



Graduated Pipette

Class AS DIN 12697 ISO835 (waiting time 15 seconds) with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Tolerance (\pm ml)	Subdivision (ml)	Colour code
125.223.01	1.0	0.006	0.01	Yellow
125.223.02	2.0	0.010	0.02	Black
125.223.03	5.0	0.030	0.05	Red
125.223.04	10.0	0.050	0.10	Orange
125.223.06	25.0	0.100	0.10	White



Volumetric Flask

With one graduation mark and stopper made of polythelene ISO 1042, DIN 12664, class A, with lot certificate.

Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.202.01	5	0.025	10/19
130.202.02	10	0.025	10/19
130.202.02A	20	0.040	10/19
130.202.03	25	0.040	10/19
130.202.04	50	0.060	12/21
130.202.05	100	0.100	14/23
130.202.06	200	0.150	14/23
130.202.07	250	0.150	14/23
130.202.08	500	0.250	19/26
130.202.09	1000	0.400	24/29
130.202.10	2000	0.600	29/32

Also available in plastic.



Volumetric Flask

With one graduation mark and stopper made of polythelene ISO 1042, DIN 12664, class A, with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.223.01	5	0.025	10/19
130.223.02	10	0.025	10/19
130.223.02A	20	0.040	10/19
130.223.03	25	0.040	10/19
130.223.04	50	0.060	12/21
130.223.05	100	0.100	14/23
130.223.06	200	0.150	14/23
130.223.07	250	0.150	14/23
130.223.08	500	0.250	19/26
130.223.09	1000	0.400	24/29
130.223.10	2000	0.600	29/32



Volumetric Flask

With one graduation mark and stopper made of polythelene, vol. flasks meet ASTM E228 class A specifications & USP standards, flasks are serially numbered and supplied with individual work certificate.

Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.220.01	5	0.02	10/19
130.220.02	10	0.02	10/19
130.220.02A	20	0.03	10/19
130.220.03	25	0.03	10/19
130.220.04	50	0.05	12/21
130.220.05	100	0.08	14/23
130.220.06	200	0.10	14/23
130.220.07	250	0.12	14/23
130.220.08	500	0.20	19/26
130.220.09	1000	0.30	24/29
130.220.10	2000	0.50	29/32



Volumetric Flask Amber

With one graduation mark and stopper made of polythelene ISO 1042 DIN 12664, accuracy as per class A, with lot certificate.

Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.202.01A	5	0.025	10/19
130.202.02AB	10	0.025	10/19
130.202.03A	20	0.040	10/19
130.202.04A	25	0.040	10/19
130.202.05A	50	0.060	12/21
130.202.06A	100	0.100	14/23
130.202.07A	200	0.150	14/23
130.202.08A	250	0.150	14/23
130.202.09A	500	0.250	19/26
130.202.10A	1000	0.400	24/29
130.202.11A	2000	0.600	29/32

Also available in plastic.



Volumetric Flask Amber

With one graduation mark and stopper made of polythelene ISO 1042 DIN 12664, accuracy as per class A, with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.223.01A	5	0.025	10/19
130.223.02AB	10	0.025	10/19
130.223.03A	20	0.040	10/19
130.223.04A	25	0.040	10/19
130.223.05A	50	0.060	12/21
130.223.06A	100	0.100	14/23
130.223.07A	200	0.150	14/23
130.223.08A	250	0.150	14/23
130.223.09A	500	0.250	19/26
130.223.10A	1000	0.400	24/29
130.223.11A	2000	0.600	29/32



Volumetric Flask Amber

With one graduation mark and stopper made of polythelene, flasks meet ASTM E-228 class A, specifications & USP standard, serially numbered & supplied, with individual work certificate.

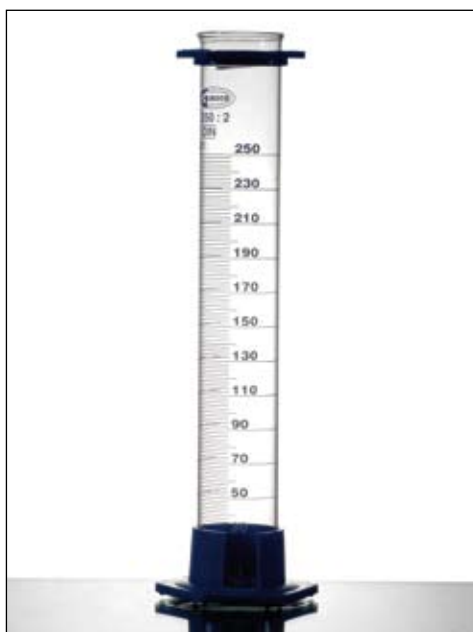
Cat. no.	Capacity ml	Tolerance (\pm ml)	N/S
130.220.01A	5	0.02	10/19
130.220.02AB	10	0.02	10/19
130.220.03A	20	0.03	10/19
130.220.04A	25	0.03	10/19
130.220.05A	50	0.05	12/21
130.220.06A	100	0.08	14/23
130.220.07A	200	0.10	14/23
130.220.08A	250	0.12	14/23
130.220.09A	500	0.20	19/26
130.220.010A	1000	0.30	24/29
130.220.011A	2000	0.50	29/32



Volumetric Flask

With rim without stopper ISO 1042, DIN 12664, class A, with lot certificate.

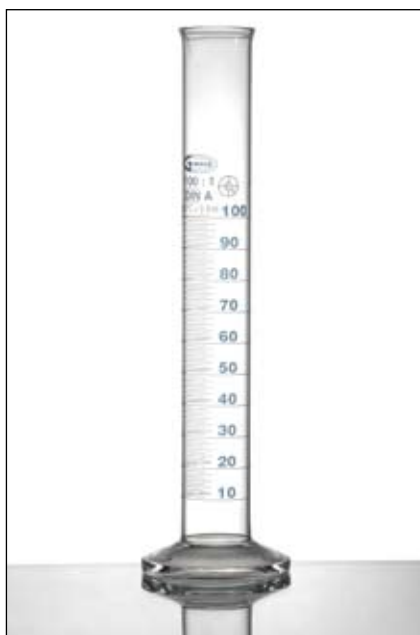
Cat. no.	Capacity ml	Tolerance (\pm ml)
132.202.01	5	0.025
132.202.02	10	0.025
132.202.03	20	0.040
132.202.04	25	0.040
132.202.05	50	0.060
132.202.06	100	0.100
132.202.07	200	0.150
132.202.08	250	0.150
132.202.09	500	0.250
132.202.10	1000	0.400
132.202.11	2000	0.600



Measuring Cylinders

With plastic bases and protection collar, class B.

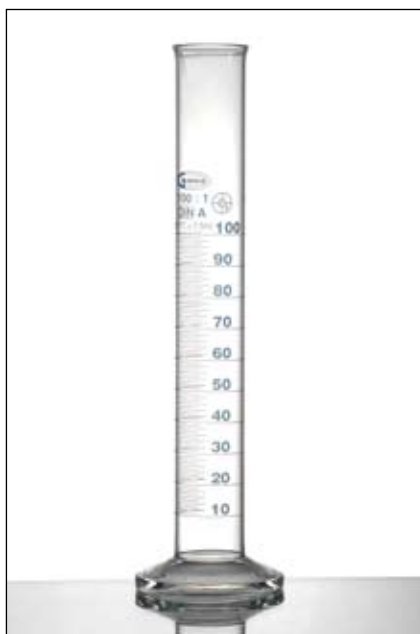
Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)
137.202.01	5	0.1	0.1
137.202.02	10	0.2	0.2
137.202.03	25	0.5	0.5
137.202.04	50	1.0	1.0
137.202.05	100	1.0	1.0
137.202.06	250	2.0	2.0



Measuring Cylinders

With spout and round base, class A, DIN 12680, with lot certificate.

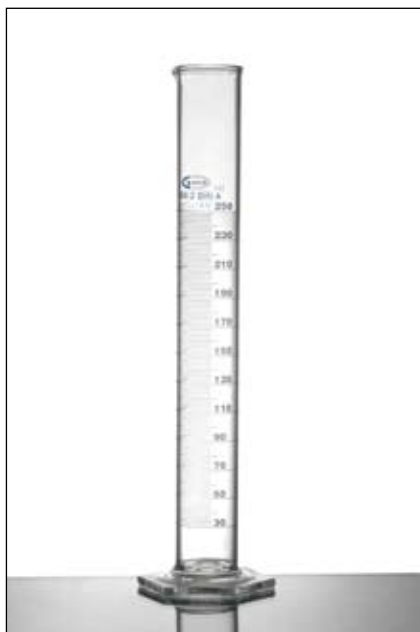
Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)
139.202.01	5	0.1	0.05
139.202.02	10	0.2	0.10
139.202.03	25	0.5	0.25
139.202.04	50	1.0	0.50
139.202.05	100	1.0	0.50
139.202.06	250	2.0	1.00
139.202.07	500	5.0	2.50
139.202.08	1000	10.0	5.00
139.202.09	2000	20.0	10.00



Measuring Cylinders

With spout and round base, class A, DIN 12680, with individual certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)
139.223.01	5	0.1	0.05
139.223.02	10	0.2	0.10
139.223.03	25	0.5	0.25
139.223.04	50	1.0	0.50
139.223.05	100	1.0	0.50
139.223.06	250	2.0	1.00
139.223.07	500	5.0	2.50
139.223.08	1000	10.0	5.00
139.223.09	2000	20.0	10.00

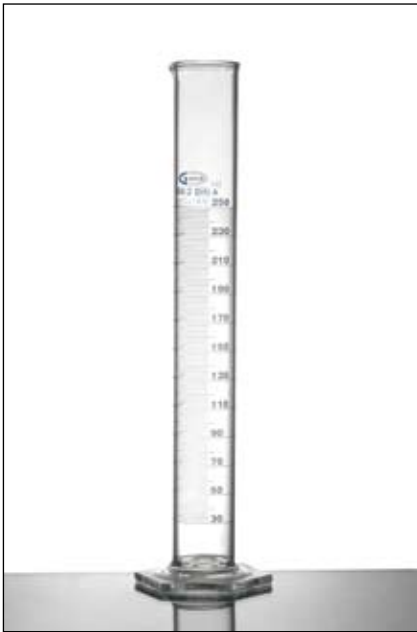


Measuring Cylinders

With spout and hexagonal base, class A, DIN 12680, with lot certificate.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)
139.202.01A	10	0.2	0.10
139.202.02A	25	0.5	0.25
139.202.03A	50	1.0	0.50
139.202.04A	100	1.0	0.50
139.202.05A	250	2.0	1.00
139.202.06A	500	5.0	2.50
139.202.07A	1000	10.0	5.00
139.202.08A	2000	20.0	10.00

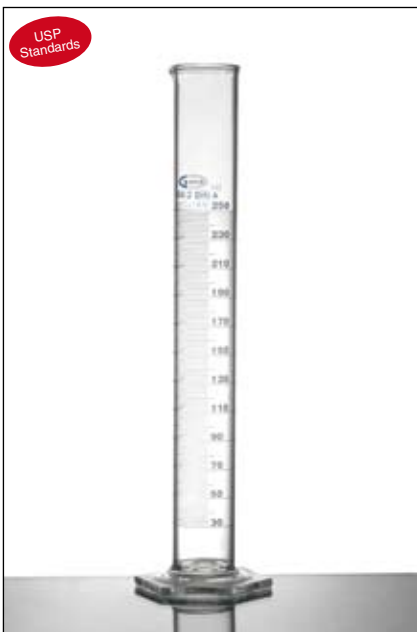
Also available in plastic.



Measuring Cylinders

With spout and hexagonal base, class A, DiN 12680, with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (±ml)
139.223.01A	10	0.2	0.10
139.223.02A	25	0.5	0.25
139.223.03A	50	1.0	0.50
139.223.04A	100	1.0	0.50
139.223.05A	250	2.0	1.00
139.223.06A	500	5.0	2.50
139.223.07A	1000	10.0	5.00
139.223.08A	2000	20.0	10.00



Measuring Cylinders

With spout and hexagonal base, serially numbered, with individual work certificate as per USP standards.

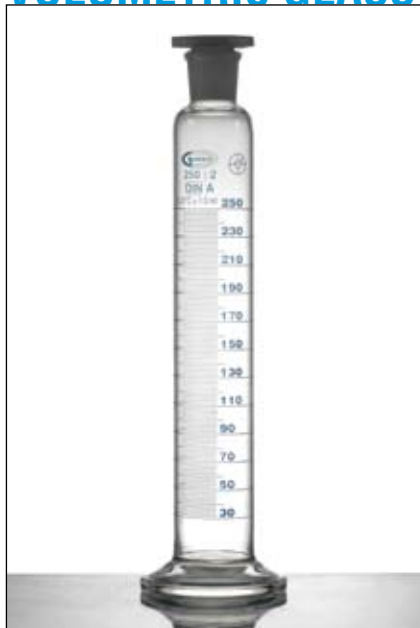
Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (±ml)
139.220.01A	10	0.2	0.10
139.220.02A	25	0.5	0.25
139.220.03A	50	1.0	0.50
139.220.04A	100	1.0	0.50
139.220.05A	250	2.0	1.00
139.220.06A	500	5.0	2.50
139.220.07A	1000	10.0	5.00
139.220.08A	2000	20.0	10.00



Measuring Cylinders

Graduated with hexagonal base and pourout, low form, brown graduation, class B

Cat. no.	Capacity ml	Accuracy limits ±ml	Graduation division ml
432350818	5	0,2	0,2
432350919	10	0,5	0,5
432351123	25	1,0	1,0
432351125	50	1,0	1,0
432351230	100	2,0	2,0
432351338	250	5,0	5,0
432351443	500	10,0	10,0
432351544	1000	20,0	20,0
432721746	2000	50,0	50,0



Mixing Cylinders

Round base with interchangeable polythelene stopper, class A, DIN 12685, ISO 4788, with lot certificate.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)	N/S
141.202.02	10	0.2	0.10	12/21
141.202.03	25	0.5	0.25	14/23
141.202.04	50	1.0	0.50	14/23
141.202.05	100	1.0	0.50	19/26
141.202.06	250	2.0	1.00	24/29
141.202.07	500	5.0	2.50	24/29
141.202.08	1000	10.0	5.00	29/32
141.202.09	2000	20.0	10.00	34/35



Mixing Cylinders

Round base with interchangeable polythelene stopper, class A, DIN 12685, ISO 4788, with individual work certificate, serially numbered.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)	N/S
141.223.02	10	0.2	0.10	12/21
141.223.03	25	0.5	0.25	14/23
141.223.04	50	1.0	0.50	14/23
141.223.05	100	1.0	0.50	19/26
141.223.06	250	2.0	1.00	24/29
141.223.07	500	5.0	2.50	24/29
141.223.08	1000	10.0	5.00	29/32
141.223.09	2000	20.0	10.00	34/35



Mixing Cylinders

Hexagonal base with polythylene stopper, class A, DIN 12685, ISO 4788, with lot certificate.

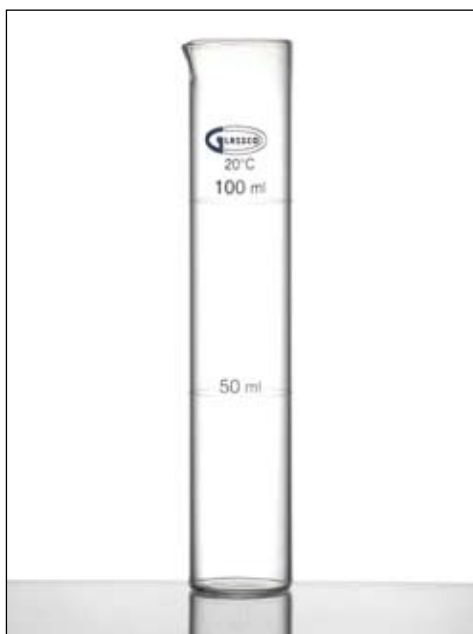
Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)	N/S
142.202.01A	10	0.2	0.10	12/21
142.202.02A	25	0.5	0.25	14/23
142.202.03A	50	1.0	0.50	14/23
142.202.04A	100	1.0	0.50	19/26
142.202.05A	250	2.0	1.00	24/29
142.202.06A	500	5.0	2.50	24/29
142.202.07A	1000	10.0	5.00	29/32
142.202.08A	2000	20.0	10.00	34/35



Mixing Cylinders

Hexagonal base with polyethylene stopper, class A, DIN 12685, ISO 4788, with individual work certificate, serially numbered.

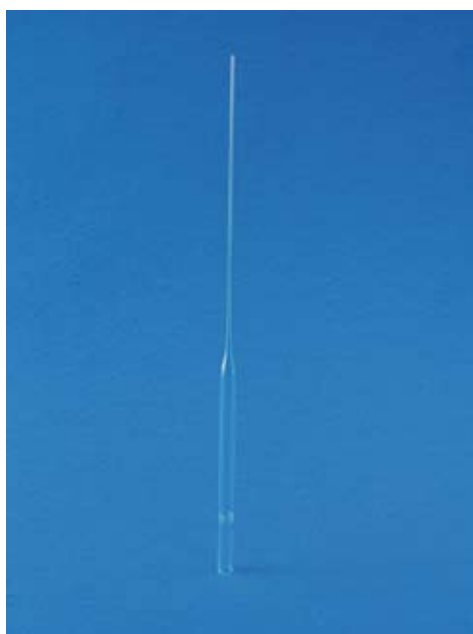
Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)	N/S
142.223.01	10	0.2	0.10	12/21
142.223.02	25	0.5	0.25	14/23
142.223.03	50	1.0	0.50	14/23
142.223.04	100	1.0	0.50	19/26
142.223.05	250	2.0	1.00	24/29
142.223.06	500	5.0	2.50	24/29
142.223.07	1000	10.0	5.00	29/32
142.223.08	2000	20.0	10.00	34/35



Nessler Cylinders

For colour comparison, class A, graduated.

Cat. no.	Capacity ml	Sub. div. ml.	Tolerance (\pm ml)
143.202.01	50	25 & 50	0.4
143.202.02	100	50 & 100	0.8



Pipettes

Pasteur type pipettes made of soda lime glass.

Cat. no.	Length mm	Tip mm
M4150NO250	150	1.0–1.2
M4230NO250	230	1.0–1.2



Safety Pipettes

Safety pipettes with interchangeable ground-in piston, standard type, precisely adjusted, fused amber graduation.

Safety measuring pipettes

Cat. no.	Capacity ml	Sub. div. ml
2548-1	1	0.01
2548-22	2	0.02
2548-55	5	0.05
2548-10	10	0.10
2548-20	20	0.10
2548-25	25	0.10



Safety volumetric pipettes

Cat. no.	Capacity ml
2555-1	1
2555-2	2
2555-5	5
2555-10	10
2555-20	20
2555-25	25



Kipp Dispenser Heads

DURAN®, cone 29/32.

Cat. no.	Capacity ml
5.4761.01	1
5.4761.04	2
5.4761.07	3
5.4761.10	5
5.4761.13	10
5.4761.19	20
5.4761.22	25
5.4761.28	50
5.4761.37	100



Bottle

Socket 29/32

Cat. no.	Capacity ml
00193-17	1000



Pipette Tips



Pipettes



Consumables



Sample Storage



Equipment



Protection

TipOne

The pipette tip system designed to fit all popular pipettes



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FUNNELS



Dropping Funnels, Pear shape

with socket and glass stopcock, with cone and with stopper

Cat. no.	Capacity	Socket	Cone
162.202.02	50	14/23	14/23
162.202.03	50	19/26	19/26
162.202.04	100	14/23	14/23
162.202.05	100	19/26	19/26
162.202.06	250	14/23	14/23
162.202.07	250	19/26	19/26
162.202.08	500	19/26	19/26
162.202.09	500	24/29	24/29
162.202.10	1000	19/26	19/26
162.202.11	1000	24/29	24/29



Dropping Funnels, Cylindrical

with socket and glass stopcock, stem with cone and with stopper

Cat. no.	Capacity	Socket	Cone
165.202.02	50	14/23	14/23
165.202.03	100	14/23	14/23
165.202.04	100	19/26	19/26
165.202.05	250	19/26	19/26
165.202.06	500	19/26	19/26
165.202.07	1000	19/26	19/26



Dropping Funnels, Pear shape

with socket and PTFE needle valve stopcock, with cone and with stopper

Cat. no.	Capacity	Socket	Cone
163.202.02	50	14/23	14/23
163.202.03	50	19/26	19/26
163.202.04	100	14/23	14/23
163.202.05	100	19/26	19/26
163.202.06	250	14/23	14/23
163.202.07	250	19/26	19/26
163.202.08	500	19/26	19/26
163.202.09	500	24/29	24/29
163.202.10	1000	19/26	19/26
163.202.11	1000	24/29	24/29



Dropping Funnels, Pear shape

with socket and PTFE key stopcock, with cone and with stopper

Cat. no.	Capacity	Socket	Cone
164.202.02	50	14/23	14/23
164.202.03	50	19/26	19/26
164.202.04	100	14/23	14/23
164.202.05	100	19/26	19/26
164.202.06	250	14/23	14/23
164.202.07	250	19/26	19/26
164.202.08	500	19/26	19/26
164.202.09	500	24/29	24/29
164.202.10	1000	19/26	19/26
164.202.11	1000	24/29	24/29



Dropping Funnels, Cylindrical

with socket and PTFE needle valve stopcock, stem with cone and with stopper

Cat. no.	Capacity	Socket	Cone
166.202.02	50	14/23	14/23
166.202.03	100	14/23	14/23
166.202.04	100	19/26	19/26
166.202.05	250	19/26	19/26
166.202.06	500	19/26	19/26
166.202.07	1000	19/26	19/26



Dropping Funnels, Cylindrical

with socket and PTFE key stopcock, stem with cone but with stopper

Cat. no.	Capacity	Socket	Cone
167.202.02	50	14/23	14/23
167.202.03	100	14/23	14/23
167.202.04	100	19/26	19/26
167.202.05	250	19/26	19/26
167.202.06	500	19/26	19/26
167.202.07	1000	19/26	19/26



Dropping Funnel, Graduated

with socket and PTFE key stopcock and with stopper

Cat. no.	Capacity	Graduation	Socket	Cone
00227-06	50	1	14/23	14/23
00227-07	50	1	29/32	29/32
00227-08	100	2	14/23	14/23
00227-10	100	2	29/32	29/32
00227-13	250	5	29/32	29/32
00227-14	500	10	29/32	29/32
00227-15	1000	20	29/32	29/32



Dropping Funnel, Pressure Equalising

with socket, glass stopcock and stem with cone

Cat. no.	Capacity	Socket	Cone
168.202.01	50	14/23	14/23
168.202.02	100	19/26	19/26
168.202.03	250	19/26	19/26
168.202.04	250	24/29	24/29
168.202.05	500	19/26	19/26
168.202.06	500	24/29	24/29



Dropping Funnel, Pressure Equalising, Pear Shape

with socket, glass stopcock and stem with cone

Cat. no.	Capacity ml	Socket	Cone
170.202.01	50	14/23	14/23
170.202.02	100	19/26	19/26
170.202.03	250	19/26	19/26
170.202.04	250	24/29	24/29
170.202.05	500	19/26	19/26
170.202.06	500	24/29	24/29



Dropping Funnel, Graduated, Pressure Equalising

with socket and PTFE key stopcock and with stopper

Cat. no.	Capacity	Graduation	Socket	Cone
4.3722.11	25	1	14/23	14/23
4.3728.11	50	1	14/23	14/23
4.3728.14	50	1	29/32	29/32
4.3737.11	100	2	14/23	14/23
4.3737.14	100	2	29/32	29/32
4.3749.14	250	5	29/32	29/32
4.3758.14	500	10	29/32	29/32
4.3770.14	1000	20	29/32	29/32



Dropping Funnel, Pressure Equalising

with socket and PTFE key stopcock and stem with cone

Cat. no.	Capacity ml	Socket	Cone
169.202.01	50	14/23	14/23
169.202.02	100	19/26	19/26
169.202.03	250	19/26	19/26
169.202.04	250	24/29	24/29
169.202.05	500	19/26	19/26
169.202.06	500	24/29	24/29



Dropping Funnel, Pressure Equalising, Pear Shape

with socket and PTFE key stopcock and stem with cone

Cat. no.	Capacity ml	Socket	Cone
171.202.01	50	14/23	14/23
171.202.02	100	19/26	19/26
171.202.03	250	19/26	19/26
171.202.04	250	24/29	24/29
171.202.05	500	19/26	19/26
171.202.06	500	24/29	24/29



Filtering Funnel

60° angle with stem

Cat. no.	Diameter (mm)
238.202.01	25
238.202.02	35
238.202.03	38
238.202.04	40
238.202.05	50
238.202.06	55
238.202.07	65
238.202.08	70
238.202.09	75
238.202.10	80
238.202.11	100
238.202.12	125
238.202.13	150



Filtering Funnel

conical

Cat. no.	Capacity	Porosity	Plate Ø	Stem Ø
22251	25	1	25	8
22252	25	2	25	8
22253	25	3	25	8
22254	25	4	25	8
22261	170	1	30	10
22262	170	2	30	10
22263	170	3	30	10
22264	170	4	30	10



Filtering Funnel

micro, conical

Cat. no.	Porosity	Plate Ø	Stem Ø
00085-30	1	5	6
00085-31	2	5	6
00085-32	3	5	6
00085-33	4	5	6
00085-40	1	10	8
00085-41	2	10	8
00085-42	3	10	8
00085-43	4	10	8

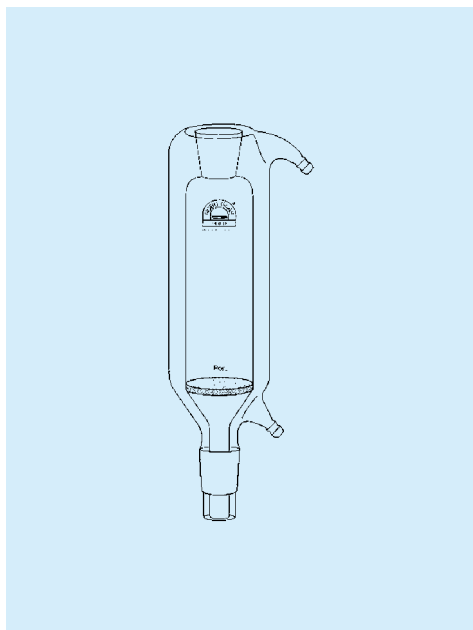


Filtering Funnel

micro, cylindrical

Cat. no.	Capacity	Porosity	Plate Ø
27081	0,8	1	10
27082	0,8	2	10
27083	0,8	3	10
27084	0,8	4	10
27201	2	1	10
27202	2	2	10
27203	2	3	10
27204	2	4	10

Porosity	Nominal pore size
0	160–250 µm
1	100–160 µm
2	40–100 µm
3	16–40 µm
4	10–16 µm
5	1,0–1,6 µm



Filtering Funnel

for hot filtration with heating mantle and standard joints

Cat. no.	Capacity	Porosity	Socket	Cone mm	B mm	D mm
49300	50	0	29/32	29/32	30	280
49301	50	1	29/32	29/32	30	280
49302	50	2	29/32	29/32	30	280
49303	50	3	29/32	29/32	30	280
49304	50	4	29/32	29/32	30	280
49500	250	0	29/32	29/32	50	330
49501	250	1	29/32	29/32	50	330
49502	250	2	29/32	29/32	50	330
49503	250	3	29/32	29/32	50	330
49504	250	4	29/32	29/32	50	330
49700	500	0	29/32	45/40	70	310
49701	500	1	29/32	45/40	70	310
49702	500	2	29/32	45/40	70	310
49703	500	3	29/32	45/40	70	310
49704	500	4	29/32	45/40	70	310
49900	1000	0	29/32	45/40	90	380
49901	1000	1	29/32	45/40	90	380
49902	1000	2	29/32	45/40	90	380
49903	1000	3	29/32	45/40	90	380
49904	1000	4	29/32	45/40	90	380



Funnel Filtration System

for 47 mm diameter membranes, funnel 300 ml, flask 1000 ml

Cat. no.
258.202.01



Filtering Funnel

cylindrical

Cat. no.	Capacity	Porosity	Plate Ø	Stem Ø
21501	50	1	35	10
21502	50	2	35	10
21503	50	3	35	10
21504	50	4	35	10
21751	75	1	45	10
21752	75	2	45	10
21753	75	3	45	10
21754	75	4	45	10
21121	125	1	60	10
21122	125	2	60	10
21123	125	3	60	10
21124	125	4	60	10
21251	250	1	80	18
21252	250	2	80	18
21253	250	3	80	18
21254	250	4	80	18
21551	500	1	90	22
21552	500	2	90	22
21553	500	3	90	22
21554	500	4	90	22
21111	1000	1	120	22
21112	1000	2	120	22
21113	1000	3	120	22
21114	1000	4	120	22
21401	4000	1	175	30
21402	4000	2	175	30
21403	4000	3	175	30
21404	4000	4	175	30
21801	8000	1	210	40
21802	8000	2	210	40
21803	8000	3	210	40
21804	8000	4	210	40



Rubber Sleeve

conical, 7 sleeves, 10–85 mm

Cat. no.

00496-58



Filtering Adapter

for rubber sleeve

Cat. no.	Cone
00085-20	14/23
00085-21	19/26
00085-22	24/29
00085-23	29/32



Filtering Adapter

with screw cap

Cat. no.	Thread	Cone	Funnel stem Ø
00085-50	GL14	14/23	5,5–6,5
00085-51	GL18	19/26	7,5–9
00085-52	GL25	29/32	9–11
00085-53	GL25	29/32	11–13
00085-54	GL45	29/32	30
00085-55	GL32	29/32	15–18



Powder Funnel

Cat. no.	N/S size	Approx. funnel diameter
238.202.01 P	14/23	45 mm
238.202.02 P	14/23	70 mm
238.202.03 P	29/32	70 mm
238.202.04 P	29/32	80 mm
238.202.05 P	14/23	100 mm
238.202.06 P	29/32	100 mm



Powder Funnel

with stem

Cat. no.	Funnel Ø	Fit N/S
00229-25	65	14/23
00229-26	75	19/26
00229-27	100	29/32
00229-28	120	29/32

Also available in PP plastic.



Separating Funnels

with glass stopcock and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
147.202.02	50	19/26
147.202.03	100	19/26
147.202.04A	250	29/32
147.202.05	500	29/32
147.202.06	1000	29/32
147.202.07	2000	29/32



Separating Funnels

with PTFE needle valve and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
148.202.02	50	19/26
148.202.03	100	19/26
148.202.04A	250	29/32
148.202.05	500	29/32
148.202.06	1000	29/32
148.202.07	2000	29/32



Separating Funnels

with glass stopcock and polythelene stopper, pear shape

Cat. no.	Capacity	N/S
150.202.02	50	19/26
150.202.03	100	19/26
150.202.04A	250	29/32
150.202.05	500	19/26
150.202.06	1000	29/32
150.202.07	2000	29/32



Separating Funnels, Cylindrical

with polythelene stopper and glass stopcock

Cat. no.	Capacity	N/S
153.202.02	50	19/26
153.202.03	100	19/26
153.202.04	250	29/32
153.202.05	500	29/32
153.202.06	1000	29/32



Separating Funnels, Cylindrical Graduated

with polythelene stopper and glass stopcock

Cat. no.	Capacity	N/S
154.202.02	50	19/26
154.202.03	100	19/26
154.202.04	250	29/32
154.202.05	500	29/32
154.202.06	1000	29/32



Separating Funnels Gilson

with glass stopcock and polythelene stopper

Cat. no.	Capacity	N/S
159.202.01	50	19/26
159.202.02	100	19/26
159.202.03	250	29/32
159.202.04	500	29/32
159.202.05	1000	29/32
159.202.06	2000	29/32



Separating Funnels

with PTFE needle valve and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
148.202.02	50	19/26
148.202.03	100	19/26
148.202.04A	250	29/32
148.202.05	500	29/32
148.202.06	1000	29/32
148.202.07	2000	29/32



Separating Funnels, Graduated

with PTFE needle valve and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
148.209.02	50	19/26
148.209.03	100	19/26
148.209.04A	250	29/32
148.209.05	500	29/32
148.209.06	1000	29/32
148.209.07	2000	29/32



Separating Funnels

with PTFE key, stopcock and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
149.202.02	50	19/26
149.202.03	100	19/26
149.202.04	250	19/26
149.202.04A	250	29/32
149.202.05	500	29/32
149.202.06	1000	29/32
149.202.07	2000	29/32



Separating Funnels, Graduated

with PTFE key, stopcock and polythelene stopper, squibb shape

Cat. no.	Capacity	N/S
149.209.02	50	19/26
149.209.03	100	19/26
149.209.04A	250	29/32
149.209.05	500	29/32
149.209.06	1000	29/32
149.209.07	2000	29/32



Separating Funnels

with PTFE needle valve stopcock and polythelene stopper, pear shape

Cat. no.	Capacity	N/S
151.202.02	50	19/26
151.202.03	100	19/26
151.202.04A	250	29/32
151.202.05	500	29/32
151.202.06	1000	29/32
151.202.07	2000	29/32



Separating Funnels

with PTFE key, stopcock and polythelene stopper, pear shape

Cat. no.	Capacity	N/S
152.202.02	50	19/26
152.202.03	100	19/26
152.202.04A	250	29/32
152.202.05	500	29/32
152.202.06	1000	29/32
152.202.07	2000	29/32



Separating Funnels, Cylindrical

with polythelene stopper and PTFE needle valve stopcock

Cat. no.	Capacity	N/S
155.202.02	50	19/26
155.202.03	100	19/26
155.202.04	250	29/32
155.202.05	500	29/32
155.202.06	1000	29/32



Separating Funnels, Cylindrical Graduated

with polythelene stopper and needle valve stopcock

Cat. no.	Capacity	N/S
156.202.01	25	14/23
156.202.02	50	19/26
156.202.03	100	19/26
156.202.04	250	29/32
156.202.05	500	29/32
156.202.06	1000	29/32



Separating Funnels, Cylindrical

with PTFE key and polythelene stopper

Cat. no.	Capacity	N/S
157.202.01	25	14/23
157.202.02	50	19/26
157.202.03	100	19/26
157.202.04	250	29/32
157.202.05	500	29/32
157.202.06	1000	29/32



Separating Funnels, Cylindrical Graduated

with PTFE key and polythelene stopper

Cat. no.	Capacity	N/S
158.202.01	25	14/23
158.202.02	50	19/26
158.202.03	100	19/26
158.202.04	250	29/32
158.202.05	500	29/32
158.202.06	1000	29/32



Separating Funnel Gilson

with PTFE key stopcock

Cat. no.	Capacity	N/S
160.202.01	50	19/26
160.202.02	100	19/26
160.202.03	250	29/32
160.202.04	500	29/32
160.202.05	1000	29/32
160.202.06	2000	29/32



Separating Funnel

round with PTFE key stopcock and polythelene stopper

Cat. no.	Capacity	N/S
00229-51	2000	29/32
00229-52	5000	34/35
00229-53	10000	45/40

Separating Funnels

round with glass stopcock and polythelene stopper

Cat. no.	Capacity	N/S
00229-01	2000	29/32
00229-02	5000	34/35
00229-03	10000	45/40



Weighing Scoops

with open tubular arm, suitable for use when small quantity of dyes or powders are to be weighed

Cat. no.	Capacity
245.202.01	3 ml
245.202.02	6 ml
245.202.03	10 ml



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CONDENSERS/EXTRACTORS/REACTION VESSELS



CONDENSERS/EXTRACTORS/REACTION VESSELS



Air Condensers

Cat. no.	Cone	Effective length (mm)
181.202.09	19/26	750
181.202.10	24/29	750
181.202.11	19/26	1000
181.202.12	24/29	1000
181.202.13	14/23	600
181.202.14	29/32	750
181.202.15	29/32	1000



Liebig/West Condensers

Cat. no.	Socket	Cone	Effective length (mm)
182.202.01	14/23	14/23	160
182.202.01A	19/26	19/26	160
182.202.02	19/26	19/26	250
182.202.03	24/29	24/29	250
182.202.04	19/26	19/26	300
182.202.05	24/29	24/29	300
182.202.06	29/32	29/32	300
182.202.10	24/29	24/29	400
182.202.11	29/32	29/32	400



Liebig/West Condensers

Cat. no.	Socket	Cone	Effective length (mm)
5.2102.G1	14/23	14/23	160
5.2103.G1	14/23	14/23	250
5.2103.G2	19/26	19/26	250
5.2103.G3	24/29	24/29	250
5.2103.G4	29/32	29/32	250
5.2104.G1	14/23	14/23	400
5.2104.G2	19/26	19/26	400
5.2104.G3	24/29	24/29	400
5.2104.G4	29/32	29/32	400
5.2105.G4	29/32	29/32	500
5.2107.G4	29/32	29/32	750



Coil Condenser

singel coil

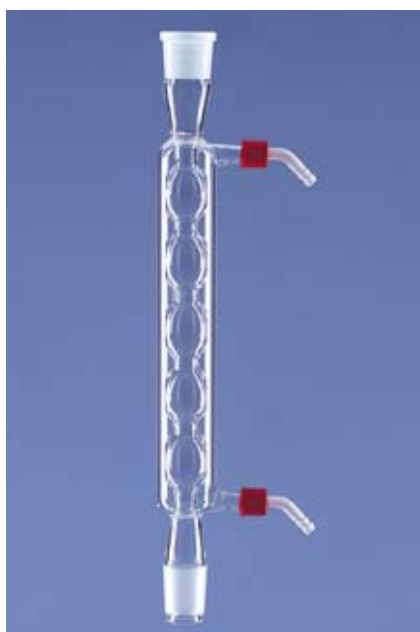
Cat. no.	Socket	Cone	Effective length (mm)
150-01	14/23	14/23	150
150-02	19/26	19/26	150
150-03	24/29	24/29	150
150-04	29/32	29/32	150
150-07	19/26	19/26	300
150-08	24/29	24/29	300
150-09	29/32	29/32	300

For GL14 connection add G after Cat. no.



Allihn Condensers (Bulb Condenser)

Cat. no.	Socket	Cone	Effective length (mm)
190.202.05	14/23	14/23	160
190.202.06	19/26	19/26	160
190.202.07	14/23	14/23	250
190.202.08	19/26	19/26	250
190.202.09	24/29	24/29	250
190.202.10	24/29	24/29	300
190.202.11	29/32	29/32	300
190.202.12	24/29	24/29	400
190.202.13	29/32	29/32	400



Allihn Condensers

Cat. no.	Socket	Cone	Effective length (mm)
5.2232.G1	14/23	14/23	160
5.2232.G2	19/26	19/26	160
5.2232.G3	14/29	14/29	160
5.2232.G4	29/32	29/32	160
5.2233.G1	14/23	14/23	250
5.2233.G2	19/26	19/26	250
5.2233.G3	24/29	24/29	250
5.2233.G4	29/32	29/32	250
5.2234.G3	24/29	24/29	400
5.2234.G4	29/32	29/32	400
5.2235.G4	29/32	29/32	500



Allihn Condenser For Soxhlet

Cat. no.	Cone	Extractor ML
191.202.01	45/40	100-250
191.202.02	60/46	500
191.202.03	71/51	1000
00149-22	19/26	6
00149-40	24/29	20



Allihn Condenser For Soxhlet

Cat. no.	Cone	Extractor ML
5.2260.G4	29/32	30
5.2260.G5	34/35	70
5.2260.G6	45/40	100-250



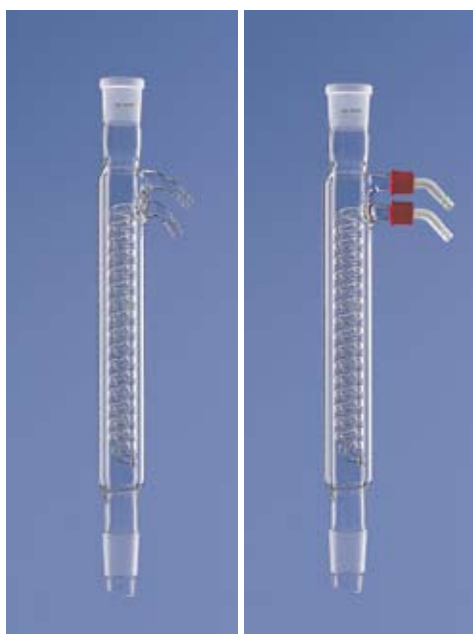
Dimroth Condenser For Soxhlet

Cat. no.	Cone	Extractor ML
192.202.01	45/40	100-250
192.202.02	60/46	500
192.202.03	71/51	1000
00151-04	29/32	30
00151-05	34/35	70



Dimroth Condenser For Soxhlet

Cat. no.	Cone	Extractor ML
5.2460.G4	29/32	30
5.2460.G5	34/35	70
5.2460.G6	45/40	100-250
5.2460.G7	60/46	300-500
5.2460.G8	71/51	1000



Coil Condenser

double walled, single coil

Cat. no.	Socket/Cone NS	Effective length (mm)	Water connection
5.2502.01	14/23	160	Nozzle
5.2502.04	29/32	160	Nozzle
5.2503.03	24/29	250	Nozzle
5.2503.04	29/32	250	Nozzle
5.2504.04	29/32	400	Nozzle
5.2505.04	29/32	500	Nozzle
5.2502.G1	14/23	160	GL 14
5.2502.G4	29/32	160	GL 14
5.2503.G3	24/29	250	GL 14
5.2503.G4	29/32	250	GL 14
5.2504.G4	29/32	400	GL 14
5.2505.G4	29/32	500	GL 14



Coil Condenser

4 coils, cooling area 3000 cm², with nozzle

Cat. no.	Socket	Cone	Effective length (mm)
5.2550.00	45/40	45/40	400



Davies Condenser

Cat. no.	Socket/Cone NS	Effective length (mm)
5.2153.03	24/29	250
5.2153.04	29/32	250
5.2154.03	24/29	400
5.2154.04	29/32	400

For GL14 connection add G after Cat. no.



Dimroth Condenser

single coil

Cat. no.	Socket/Cone NS	Effective length (mm)
5.2402.01	14/23	160
5.2402.02	19/26	160
5.2403.01	14/23	250
5.2403.02	19/26	250
5.2403.03	24/29	250
5.2403.04	29/32	250
5.2404.04	29/32	400

For GL14 connection add G after Cat. no.



Cold Finger Condenser

length under N/S 100 mm

Cat. no.	Cone
00151-25	14/23
00151-26	19/26
00151-27	29/32



Cold Finger Condenser

with vacuum connection, effective length 120 mm

Cat. no.	Cone
00151-30	14/23
00151-31	19/26



Soxhlet Extraction Apparatus

consists of flask, extractor and condenser

Cat. no.	Extractor cap. (ml)	Extractor socket	Extractor Cone	Flask cap	Condensor type
210.202.04	100	45/40	29/32	250	ALLIHIN
210.202.05	150	45/40	29/32	250	ALLIHIN
210.202.06	250	45/40	29/32	500	ALLIHIN
210.202.08	500	60/46	29/32	1000	ALLIHIN
210.202.09	1000	71/55	29/32	2000	ALLIHIN
210.202.12	100	45/40	29/32	250	DIMROTH
210.202.13	150	45/40	29/32	250	DIMROTH
210.202.14	250	45/40	29/32	500	DIMROTH
210.202.15	500	60/46	29/32	1000	DIMROTH
210.202.16	1000	71/55	29/32	2000	DIMROTH



Spare Extractor For Soxhlet Apparatus

Cat. no.	Capacity (ml)	Socket	Cone
211.202.04	100	45/40	29/32
211.202.05	150	45/40	29/32
211.202.06	250	45/40	29/32
211.202.08	500	60/46	29/32
211.202.09	1000	71/51	29/32



Soxhlet Extraction Head

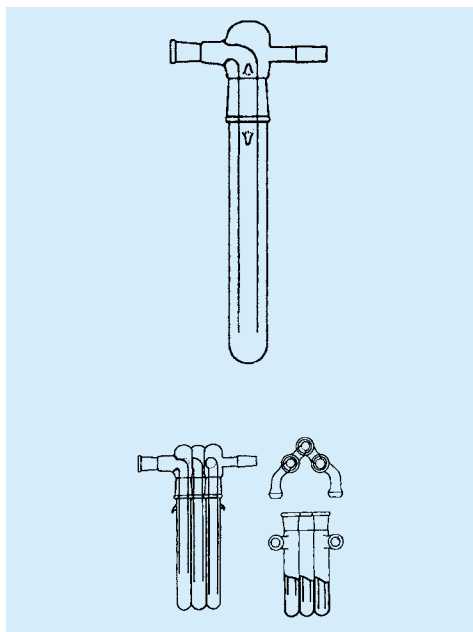
Extractor Cat. no	Extractor Cap. ml	Socket	Cone
00044-20	6	19/26	14/23
00044-21	20	24/29	19/26
5.3951.25	30	29/32	29/32
5.3951.31	70	34/35	29/32



Soxhlet Extractor Head

with glass stopcock

Cat. no.	Extractor Cap. ml	Socket	Cone
5.4001.31	70	34/35	29/32
5.4001.37	100	45/40	29/32
5.4001.43	150	45/40	29/32
5.4001.49	250	45/40	29/32
5.4001.58	500	60/46	29/32



Cold Trap

with single tube

Cat. no.	Socket	Cone	Effective length (mm)	Tube Ø
152-01	14/23	14/23	200	32 mm
152-02	29/32	29/32	200	32 mm

with 3 tubes

Cat. no.	Socket	Cone	Effective length (mm)	Tube Ø
152-05	14/23	14/23	180	18 mm

with 3 tubes, large model with ball joints

Cat. no.	Socket	Cone	Effective length (mm)	Tube Ø
152-06	S35	S35	220 mm	35 mm

Accessories

with straight nozzle

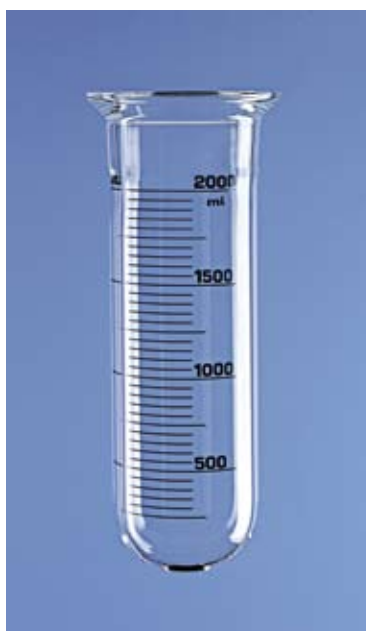
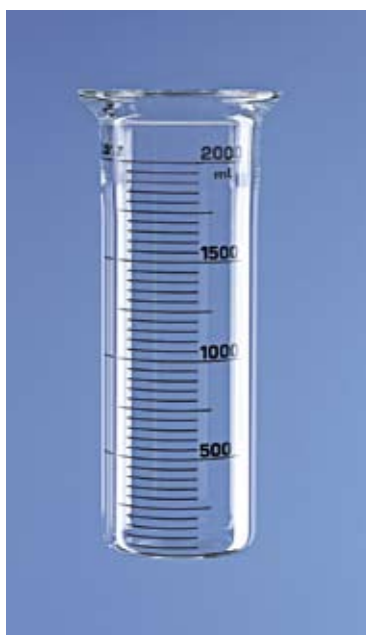
Cat. no.	Socket	Cone	For cold trapp
199-05		14/23	00152-01, 00152-05
038.202.01	14/23		00152-01, 00152-05
199-08		29/32	00152-02, 5.3555.X
038.202.04	29/32		00152-02, 5.3555.X
152-07	S35		00152-06



Cold Trap

with condensate drain

Cat. no.	Coolant cap ml
5.3555.46	200
5.3555.58	500
5.3555.70	1000



Reaction Vessels, Cylindrical

DURAN®, cylindrical shape, with graduation, with laboratory flange LF with nut, available with flat or round bottom

Cat. no.	Lab flange LF	Capacity ml	Diam. mm	Height approx mm	Bottom
6.0001.28	60	50	65	80	flat
6.0001.37	60	100	65	115	flat
6.0001.49	60	250	65	170	flat
6.0001.58	60	500	65	255	flat
6.0001.70	60	1000	105	155	flat
6.0011.28	60	50	65	95	round
6.0011.37	60	100	65	135	round
6.0011.49	60	250	65	190	round
6.0011.58	60	500	65	275	round
6.0011.70	60	1000	105	175	round
6.0002.49	100	250	105	110	flat
6.0002.58	100	500	105	155	flat
6.0002.70	100	1000	105	220	flat
6.0002.73	100	2000	105	350	flat
6.0002.76	100	3000	160	285	flat
6.0002.79	100	4000	160	340	flat
6.0012.49	100	250	105	110	round
6.0012.58	100	500	105	170	round
6.0012.70	100	1000	105	235	round
6.0012.73	100	2000	105	375	round
6.0012.76	100	3000	160	300	round
6.0012.79	100	4000	160	355	round
6.0004.73	150	2000	160	225	flat
6.0004.76	150	3000	160	280	flat
6.0004.79	150	4000	160	335	flat
6.0004.82	150	5000	160	390	flat
6.0004.85	150	6000	180	445	flat
6.0004.88	150	10000	250	410	flat
6.0004.94	150	20000	250	630	flat
6.0014.73	150	2000	160	245	round
6.0014.76	150	3000	160	300	round
6.0014.79	150	4000	160	355	round
6.0014.82	150	5000	160	410	round
6.0014.85	150	6000	160	465	round
6.0014.88	150	10000	250	430	round
6.0014.94	150	20000	250	650	round
6.0005.88	200	10000	215	450	flat
6.0005.94	200	20000	315	455	flat
6.0015.85	200	6000	215	320	round
6.0015.88	200	10000	215	460	round
6.0015.94	200	20000	315	480	round



Reaction Vessels, Cylindrical, with Withdrawal Valve

DURAN®, with graduation, round bottom and laboratory flange LF with nut

Cat. no.	Lab flange LF	Capacity ml	Diam. mm	Height approx mm	Valve mm
6.0071.28	60	50	65	180	10
6.0071.37	60	100	65	220	10
6.0071.49	60	250	65	275	10
6.0071.58	60	500	65	360	10
6.0071.70	60	1000	105	260	10
6.0072.49	100	250	105	200	10
6.0072.58	100	500	105	255	10
6.0072.70	100	1000	105	320	10
6.0072.73	100	2000	105	460	10
6.0072.76	100	3000	160	385	10
6.0072.79	100	4000	160	440	10
6.0074.73	150	2000	160	330	10
6.0074.76	150	3000	160	385	10
6.0074.79	150	4000	160	440	10
6.0074.82	150	5000	160	495	10
6.0074.85	150	6000	160	550	10
6.0074.88	150	10000	250	560	15
6.0074.94	150	20000	250	815	25
6.0075.85	200	6000	215	405	10
6.0075.88	200	10000	215	600	15
6.0075.94	200	20000	315	650	25

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CONDENSERS/EXTRACTORS/
REACTION VESSELS



Reaction Vessels, Cylindrical, with Thermostatic Jacket

DURAN® reaction Vessels with graduation and flat bottom, with laboratory flange LF with nut, available with connector GL14/ GL18 or KF15 (KF25)

Cat. no.	Lab. flange LF	Capacity ml	O.Diam./ I.Diam. mm	Height approx. mm	Connector
6.0101.37	60	100	90/ 65	110	GL14
6.0101.49	60	250	90/ 65	135	GL14
6.0101.58	60	500	90/ 65	190	GL14
6.0101.70	60	1000	105/ 80	275	GL14
6.0111.37	60	100	90/ 65	110	KF15
6.0111.49	60	250	90/ 65	135	KF15
6.0111.58	60	500	90/ 65	190	KF15
6.0111.70	60	1000	105/ 80	275	KF15
6.0102.49	100	250	130/105	110	GL18
6.0102.58	100	500	130/105	180	GL18
6.0102.70	100	1000	130/105	245	GL18
6.0102.73	100	2000	130/105	375	GL18
6.0102.76	100	3000	190/160	325	GL18
6.0102.79	100	4000	190/160	380	GL18
6.0112.49	100	250	130/105	110	KF15
6.0112.38	100	500	130/105	180	KF15
6.0112.70	100	1000	130/105	245	KF15
6.0112.73	100	2000	130/105	375	KF15
6.0112.76	100	3000	190/160	325	KF15
6.0112.79	100	4000	190/160	380	KF15
6.0104.73	150	2000	190/160	265	GL18
6.0104.76	150	3000	190/160	320	GL18
6.0104.79	150	4000	190/160	375	GL18
6.0104.82	150	5000	190/160	430	GL18
6.0104.85	150	6000	190/160	485	GL18
6.0114.73	150	2000	190/160	265	KF15
6.0114.76	150	3000	190/160	320	KF15
6.0114.79	150	4000	190/160	375	KF15
6.0114.82	150	5000	190/160	430	KF15
6.0114.85	150	6000	190/160	485	KF15
6.0114.88	150	10000	315/250	490	KF15
6.0114.94	150	20000	315/250	710	KF25
6.0115.79	200	6000	250/215	425	KF15
6.0115.88	200	10000	250/215	555	KF15
6.0115.94	200	20000	400/315	590	KF25



Reaction Vessels, Cylindrical, with Thermostatic Jacket and Withdrawal Valve

DURAN®, reaction Vessels with graduation, with laboratory flange LF with nut, available with connector GL14/GL18 or KF15 (KF25)

Cat. no.	Lab. flange LF	Capacity ml	O.Diam./ I.Diam. mm	Height approx. mm	Connector	Valve mm
6.0301.37	60	100	90/ 65	215	GL14	10
6.0301.49	60	250	90/ 65	270	GL14	10
6.0301.58	60	500	90/ 65	355	GL14	10
6.0301.70	60	1000	105/ 80	350	GL14	10
6.0311.37	60	100	90/ 65	215	KF15	10
6.0311.49	60	250	90/ 65	270	KF15	10
6.0311.58	60	500	90/ 65	355	KF15	10
6.0311.70	60	1000	105/ 80	350	KF15	10
6.0302.49	100	250	130/105	230	GL18	10
6.0302.58	100	500	130/105	275	GL18	10
6.0302.70	100	1000	130/105	340	GL18	10
6.0302.73	100	2000	130/105	470	GL18	10
6.0302.76	100	3000	190/160	420	GL18	10
6.0302.79	100	4000	190/160	475	GL18	10
6.0312.49	100	250	130/105	230	KF15	10
6.0312.58	100	500	130/105	275	KF15	10
6.0312.70	100	1000	130/105	340	KF15	10
6.0312.73	100	2000	130/105	470	KF15	10
6.0312.76	100	3000	190/160	420	KF15	10
6.0312.79	100	4000	190/160	475	KF15	10
6.0304.73	150	2000	190/160	370	GL18	10
6.0304.76	150	3000	190/160	415	GL18	10
6.0304.79	150	4000	190/160	470	GL18	10
6.0304.82	150	5000	190/160	525	GL18	10
6.0304.85	150	6000	190/160	580	GL18	10
6.0304.88	150	10000	315/250	620	GL18	15
6.0314.73	150	2000	190/160	370	KF15	10
6.0314.76	150	3000	190/160	415	KF15	10
6.0314.79	150	4000	190/160	470	KF15	10
6.0314.82	150	5000	190/160	525	KF15	10
6.0314.85	150	6000	190/160	580	KF15	10
6.0314.88	150	10000	315/250	620	KF15	15
6.0314.94	150	20000	315/250	875	KF25	25
6.0315.85	200	6000	250/215	520	KF15	10
6.0315.88	200	10000	250/215	680	KF15	15
6.0315.94	200	20000	400/250	760	KF25	25



Reaction Vessels, Spherical

DURAN®, without graduation, with laboratory flange LF with nut

Cat. no.	Lab. flange LF	Capacity ml	Diam. mm	Height approx. mm
6.0051.49	60	250	85	120
6.0051.58	60	500	105	145
6.0051.70	60	1000	131	175
6.0052.70	100	1000	131	185
6.0052.73	100	2000	165	210
6.0052.79	100	4000	206	260
6.0052.85	100	6000	236	285
6.0052.88	100	10000	280	330
6.0052.94	100	20000	350	400
6.0054.85	150	6000	236	285
6.0054.88	150	10000	280	335
6.0054.94	150	20000	350	410
6.0055.85	200	6000	236	325
6.0055.88	200	10000	280	305
6.0055.94	200	20000	350	385



Reaction Vessels, Spherical, with Withdrawal Valve

DURAN®, without graduation, with laboratory flange LF with nut

Cat. no.	Lab. flange LF	Capacity ml	Diam. mm	Height approx. mm	Valve mm
6.0081.49	60	250	85	190	10
6.0081.58	60	500	105	215	10
6.0081.70	60	1000	131	245	10
6.0082.73	100	2000	165	295	10
6.0082.79	100	4000	206	345	10
6.0082.85	100	6000	236	370	10
6.0082.88	100	10000	280	460	15
6.0082.94	100	20000	350	550	25
6.0084.85	150	6000	236	370	10
6.0084.88	150	10000	280	465	15
6.0084.94	150	20000	350	560	25
6.0085.85	200	6000	236	325	10
6.0085.88	200	10000	280	435	15
6.0085.94	200	20000	350	535	25



Reaction Vessels, Spherical, with Thermostatic Jacket

DURAN®, reaction Vessels without graduation, with laboratory flange LF with nut, available with connector GL14/GL18 or KF15 (KF25)

Cat. no.	Lab. flange LF	Capacity ml	O.Diam./ I.Diam. mm	Height approx. mm	Connector
6.0201.49	60	250	105/ 85	145	GL14
6.0201.58	60	500	131/105	175	GL14
6.0201.70	60	1000	165/131	210	GL14
6.0211.49	60	250	105/ 85	145	KF15
6.0211.58	60	500	131/105	175	KF15
6.0211.70	60	1000	165/131	210	KF15
6.0202.73	100	2000	206/165	260	GL18
6.0202.79	100	4000	236/206	285	GL18
6.0202.85	100	6000	280/236	330	GL18
6.0212.73	100	2000	206/165	260	KF15
6.0212.79	100	4000	236/206	285	KF15
6.0212.85	100	6000	280/236	330	KF15
6.0204.85	150	6000	280/236	335	GL18
6.0204.88	150	10000	350/275	410	KF15
6.0204.94	150	20000	490/345	565	KF25
6.0215.85	200	6000	280/236	320	KF15
6.0215.88	200	10000	350/275	400	KF15
6.0215.94	200	20000	490/345	550	KF25



Reaction Vessels, Spherical, with Thermostatic Jacket and Withdrawal Valve

DURAN®, reaction Vessels without graduation, with laboratory flange LF with nut, available with connector GL14/GL18 or KF15 (KF25)

Cat. no.	Lab. flange LF	Capacity ml	O.Diam./ I.Diam. mm	Height approx. mm	Connector	Valve mm
6.0401.49	60	250	105/ 85	215	GL14	10
6.0401.58	60	500	131/105	245	GL14	10
6.0401.70	60	1000	165/131	280	GL14	10
6.0411.49	60	250	105/ 85	215	KF15	10
6.0411.58	60	500	131/105	280	KF15	10
6.0411.70	60	1000	165/131	280	KF15	10
6.0402.73	100	2000	206/165	345	GL18	10
6.0402.79	100	4000	236/206	370	GL18	10
6.0402.85	100	6000	280/236	415	GL18	10
6.0412.73	100	2000	206/165	345	KF15	10
6.0412.79	100	4000	236/206	370	KF15	10
6.0412.85	100	6000	280/236	415	KF15	10
6.0404.85	150	6000	280/236	420	GL18	10
6.0414.85	150	6000	280/236	420	KF15	10
6.0414.88	150	10000	350/275	590	KF15	15
6.0414.94	150	20000	490/345	730	KF25	25
6.0415.85	200	6000	280/236	430	KF15	10
6.0415.88	200	10000	350/275	530	KF15	15
6.0415.94	200	20000	490/345	715	KF25	25

Height of flat flange lids with conical ground joints. All Measures are approximate.

Laboratory Flange LF	NS 14/23 mm	NS 19/26 mm	NS 24/29 mm	NS 29/32 mm	NS 45/40 mm
60	75	80	85	100	100
100			95	110	110
150			125	140	140
200			150	165	165



Flat Flange Lids, Center Neck

Cat. no.	Lab. flange LF	C. Neck NS
6.1001.01	60	14/23
6.1001.04	60	29/32
6.1002.01	100	14/23
6.1002.04	100	29/32
6.1002.06	100	45/40
6.1004.04	150	29/32
6.1004.06	150	45/40
6.1005.04	200	29/32
6.1005.06	200	45/40



Flat Flange Lids, Center Neck, One Oblique Side Neck

Cat. no.	Lab. flange LF	C. Neck NS	Side Neck NS
6.1021.11	60	14/23	14/23
6.1021.41	60	29/32	14/23
6.1022.14	100	29/32	14/23
6.1022.44	100	29/32	29/32
6.1022.64	100	45/40	29/32
6.1024.44	150	29/32	29/32
6.1024.64	150	45/40	29/32
6.1025.44	200	29/32	29/32
6.1025.64	200	45/40	29/32



Flat Flange Lids, Center Neck, Two Oblique Side Neck

Cat. no.	Lab. flange LF	C. Neck NS	Side Neck NS
6.1031.11	60	14/23	14/23
6.1031.41	60	29/32	14/23
6.1032.41	100	29/32	14/23
6.1032.44	100	29/32	29/32
6.1032.64	100	45/40	29/32
6.1034.44	150	29/32	29/32
6.1034.64	150	45/40	29/32
6.1035.44	200	29/32	29/32
6.1035.64	200	45/40	29/32



Flat Flange Lids, Center Neck, Two Oblique Side Neck and One Vertical Side Neck

Cat. no.	Lab. flange LF	C. Neck NS	Side Necks oblique NS	Side Neck vertical NS
6.1041.11	60	14/23	14/23	14/23
6.1041.41	60	29/32	14/23	14/23
6.1042.41	100	29/32	14/23	14/23
6.1042.44	100	29/32	29/32	14/23
6.1042.64	100	45/40	29/32	14/23
6.1044.44	150	29/32	29/32	14/23
6.1044.64	150	45/40	29/32	14/23
6.1045.44	200	29/32	29/32	14/23
6.1045.64	200	45/40	29/32	14/23



Flat Flange Lids, Center Neck, Three Oblique Side Necks and One Vertical Side Neck

Cat. no.	Lab. flange LF	C. Neck NS	Side Necks oblique NS	Side Neck vertical NS
6.1052.41	100	29/32	14/23	14/23
6.1052.44	100	29/32	29/32	14/23
6.1052.64	100	45/40	29/32	14/23
6.1054.44	150	29/32	29/32	14/23
6.1054.64	150	45/40	29/32	14/23
6.1055.44	200	29/32	29/32	14/23
6.1055.64	200	45/40	29/32	14/23



Clamps

for the fixing of heads onto reaction vessels, available for flat flanges DN 60–200

Cat. no.	Lab. flange LF
6.2460.06	60
6.2460.10	100
6.2460.15	150
6.2460.20	200



O-ring Seals

available for flat flanges DN 60–200, available of silicone or FEP coated

Cat. no.	Lab. flange LF	Description
6.2480.06	60	Silicone
6.2480.10	100	Silicone
6.2480.15	150	Silicone
6.2480.20	200	Silicone
6.2482.06	60	FEP coated
6.2482.10	100	FEP coated
6.2482.15	150	FEP coated
6.2482.20	200	FEP coated



Clamps for Stand Rods

made of polyester-glass compound with rod for mounting on stands to fix a head onto a reaction vessel

Cat. no.	Lab.flange LF
6.2465.06	60
6.2465.10	100
6.2465.15	150



Plastic Hose Connections

PP with silicone (VMQ) sealing. For screw-caps with bore and DIN-thread GL. Max temperature 140°C.

Cat. no.	Description	For GL
1.3500.00	Straight	14
1.3500.01	Straight	18
1.3600.00	Bent	14
1.3600.01	Bent	18



Screw-Caps with Aperture for Screwthread Tubes

PBT. With DIN-thread GL. With aperture. Resistant up to 180°C. Color: red

Cat. no.	Thread GL	Bore mm
1.3210.14	14	8
1.3210.18	18	11



Small Flanges, KF, with Nozzle

Cat. no.	Description	KF	Nozzle mm
5.1061.10	Small flange, socket	15	10
5.1061.16	Small flange, socket	15	16
5.1062.16	Small flange, socket	25	16



KPG Stirrer Guides (Stirrer Bearings)

DURAN®, with NS cone, bearing surface ground and polished

Cat. no.	Nom. diam. mm	Cone NS
6.3010.24	10	24/29
6.3010.29	10	29/32
6.3016.29	16	29/32
6.3016.45	16	45/40



KPG Stirrer Guides (Stirrer Bearings)

DURAN®, with NS cone and vacuum jacket, bearing surface ground and polished

Cat. no.	Nom. diam. mm	Cone NS
6.3020.29	10	29/32
6.3020.45	16	45/40



Stirrer Guides with Cooling Jacket

DURAN®, with NS cone and cooling water connection, thread GL14, bearing surface ground and polished

Cat. no.	Nom. diam. mm	Cone NS
6.3025.29	10	29/32
6.3025.45	16	45/40



Stirrer Guides with Female Thread

DURAN®, pressure screw of PTFE/fiber glass. The bearing of fluoroplastics is fixed in a glass housing and equipped with an adjustable special sealing of PTFE/FPM, all parts are easily interchangeable

Cat. no.	Nom. diam. mm	Cone NS	Total length mm
6.3050.29	10	29/32	ca 108
6.3050.45	10	45/40	ca 125



Stirrer Guides with GL Male Thread

DURAN®, with screw caps, PTFE bearing with an adjustable special sealing of PTFE/FPM, all parts are easily interchangeable

Cat. no.	Cone NS	Thread GL	for Nom. diam mm	Total length mm
6.3030.29	29/32	25	10	90
6.3030.45	45/40	25	10	110
6.3036.45	45/40	32	16	118



Spare Parts for Stirrer Guides

Cat. no.	Description	Cone NS	Thread GL	Size mm
6.3040.01	housing	29/32	25	
6.3040.03	housing	45/40	25	
6.3040.05	housing	45/40	32	
6.3041.01	PTFE bearing with sealing			10
6.3041.03	PTFE bearing with sealing			16
6.3043.01	special sealing of PTFE/FPM			10
6.3043.03	special sealing of PTFE/FPM			16
6.3044.25	screw caps PPS		25	10
6.3044.32	screw caps PPS		32	16



Stirrers with Stirrer Bearing

DURAN®, shaft with blade and security screw PTFE. Gastight closure for vacuum stirring apparatus up to 10^{-3} mbar at a continuous operation speed of max 800 rpm. For round bottom flasks 250–2000 ml.

Cat. no.	Description
6.3100.00	Stirrers with stirrer bearing, complete
6.3105.01	Shaft diam. 10 x length 400 mm
6.3105.02	Blade PTFE, 70 x 24 x 3 mm
6.3105.03	Security screw, PTFE
6.3105.04	Closure, GL25 and cone NS 29/32
6.3105.05	Sealing, PTFE/graphite, 1 set
6.3105.06	Pressure spring, stainless steel
6.3105.07	Screw cap, PP, GL25



KPG Stirrers with Lateral Blade

DURAN®, with security screw of PTFE, shaft diam. 10 or 16 mm. Length of the grounded and polished bearing surface for both shaft diam. is 160 mm

Cat. no.	for round bottom flasks ml	Joint NS	Shaft D x L mm	Blade L x H x D mm	Journal D x L mm
6.3070.01	100	29/32	10 x 310	50 x 18 x 3	8 x 40
6.3070.03	250/500	29/32	10 x 310	68 x 24 x 3	8 x 40
6.3070.05	1000	29/32	10 x 390	75 x 24 x 3	8 x 40
6.3070.07	2000/3000	29/32	10 x 390	75 x 24 x 3	14 x 50
6.3070.10	4000/5000	29/32	10 x 480	125 x 24 x 3	8 x 40
6.3070.11	4000/5000	45/40	16 x 520	125 x 35 x 3	14 x 50
6.3070.13	6000	45/40	16 x 560	125 x 35 x 3	14 x 50
6.3070.15	10000	45/40	16 x 620	125 x 35 x 3	14 x 50

Spare Parts for KPG Stirrers with Lateral Blade

shafts and blades of DURAN®, security screw of PTFE

Cat. no.	Description	Shaft diam. x length mm	Blade L x H x D mm
6.3072.01	shaft	10 x 310	
6.3072.05	shaft	10 x 390	
6.3072.10	shaft	10 x 480	
6.3072.08	shaft	16 x 460	
6.3072.11	shaft	16 x 520	
6.3072.13	shaft	16 x 560	
6.3072.15	shaft	16 x 620	
6.3073.01	blade		50 x 18 x 3
6.3073.03	blade		68 x 24 x 3
6.3073.05	blade		75 x 24 x 3
6.3073.10	blade		125 x 24 x 3
6.3073.11	blade		125 x 35 x 3
6.3074.00	security screw		



Stirrers with Paddles

shaft of DURAN®, paddles of PTFE, with rounded and polished shaft and journal

Cat. no.	Shaft diam.	for NS	Circle mm	Length mm
6.3080.01	10	29/32	50	310
6.3080.03	10	29/32	90	310
6.3080.05	10	29/32	90	400
6.3080.07	10	29/32	90	460
6.3080.09	10	29/32	90	520
6.3080.10	10	45/40	120	560
6.3080.12	10	45/40	120	620

PTFE Paddles

paddles with PTFE pin and PTFE disc

Cat. no.	Circle mm
6.3081.01	50
6.3081.03	90
6.3081.05	120

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KPG Stirrers with Teflon Blades

DURAN®, shaft diam. 10 mm, teflon blades with bores, interchangeable, with snap-fastener

Cat. no.	for flasks ml	Joint NS	Length approx. mm	Blade L x H x D mm	Bores No./Diam. mm
6.3150.01	100	29/32	270	55 x 17 x 3	2/5
6.3150.03	250	29/32	280	55 x 17 x 3	2/5
6.3150.05	500	29/32	300	80 x 20 x 3	4/5
6.3150.07	1000	45/40	370	80 x 20 x 3	6/6
6.3150.08	2000	45/40	425	98 x 20 x 3	6/7
6.3150.11	4000	45/40	480	105 x 25 x 4	6/7
6.3150.15	6000	45/40	515	115 x 25 x 4	6/7

Teflon Blades for KPG Stirrers

Bore-diam. for snap-fastener 6 mm

Cat. no.	for flasks ml	Blade L x H x D mm	Bores No./Diam. mm
6.3152.01	100/250	55 x 17 x 3	2/5
6.3152.05	500	80 x 20 x 3	4/5
6.3152.07	1000	80 x 20 x 3	6/6
6.3152.08	2000	98 x 20 x 3	6/7
6.3152.11	4000	105 x 25 x 4	6/7
6.3152.15	6000	115 x 25 x 4	6/7



Pipette Tips



Pipettes



Consumables



Sample Storage



Equipment



Protection

TipOne

The pipette tip system designed to fit all popular pipettes



Products for the Laboratory

www.starlabgroup.com

STARLAB products available via Saveen Werner












Anchor Stirrer




DURAN®, for flange vessels, with grounded and polished shaft, with journal




Cat. no.	Lab. flange LF	for capacity ml	Shaft diam. mm
6.3206.28	60	50	10
6.3206.37	60	100	10
6.3206.49	60	250	10
6.3206.58	60	500	10
6.3206.70	60	1000	10
6.3210.49	100	250	10
6.3210.58	100	500	10
6.3210.70	100	1000	10
6.3210.73	100	2000	10
6.3210.76	100	3000	10
6.3210.79	100	4000	10
6.3210.85	100	6000	10
6.3210.88	100	10000	10
6.3210.94	100	20000	10
6.3215.73	150	2000	16
6.3215.76	150	3000	16
6.3215.79	150	4000/6000	16
6.3215.88	150	5000/10000	16
6.3215.94	150	20000	16



Laboratory Chemicals

Scharlau products are available from Saveen & Werner.

GENERAL GLASSWARE





Arsenic Determination Apparatus

Cat. no.

00009-40



Beaker, Low Form

with graduation and spout DIN 12331, ISO 3819

Cat. no.	Capacity ml	D. mm	H. mm
229.202.01	5	22	30
229.202.02	10	26	35
229.202.03	25	34	50
229.202.04	50	42	60
229.202.05	100	50	70
229.202.06	150	60	80
229.202.07	250	70	95
229.202.08	400	80	110
229.202.09	600	90	125
229.202.09A	800	100	135
229.202.10	1000	105	145
229.202.11	2000	132	185
229.202.12	3000	150	210
229.202.13	5000	170	270

Beaker, Low Form

Transparent quartzglass with spout, ungraduated.

Cat. no.	Capacity ml	D. mm	H. mm
00015-51	10	26	35
00015-52	25	34	50
00015-53	50	42	60
00015-54	100	50	70
00015-56	250	70	95
00015-57	400	80	110
00015-58	600	90	125



Beaker, Tall form

with graduation and spout DIN 12331, ISO 3819

Cat. no.	Capacity ml	D. mm	H. mm
230.202.01	25	38	70
230.202.02	50	38	70
230.202.03	100	48	80
230.202.04	150	54	95
230.202.05	250	60	120
230.202.06	400	70	130
230.202.07	600	80	150
230.202.08	800	90	175
230.202.09	1000	95	180
230.202.10	2000	120	240
230.202.11	3000	135	280



Glass Tempering Beakers

Manufactured in high quality borosilicate glass, the double-walled beakers are used for tempering liquids or specimens. Any cold or hot tempering fluid can be pumped around the air space in the double walled vessel, through the inlet and outlet ports provided. A thermostat can be placed between your pump and the beaker for precise control.

Approximate volume graduations are printed on the inner vessel wall.

Three standard sizes are available, though other sizes can be made on request.

Cat. no.	Capacity cc	Inner diam. mm	Outer diam. mm	Depth mm
260120	250	55	70	110
261021	600	75	95	135
261022	2000	109	130	225



Bottles

with blue screw cap, GL45 acc. to DIN

Cat. no.	Capacity ml	Packing quantity
88-100	100	10
88-250	250	10
88-500	500	10
88-1L	1000	10
88-2L	2000	10
88-5L	5000	6
88-10L	10000	1
88-20L	20000	1



Bottles, Brown

with blue screw cap, GL45 acc. to DIN

Cat. no.	Capacity ml	Packing quantity
88B-100	100	10
88B-250	250	10
88B-500	500	10
88B-1L	1000	10
88B-2L	2000	10
88B-5L	5000	6
88B-10L	10000	1
88B-20L	20000	1



Bottles

with PBTB red screw cap, GL45 acc. to DIN, silicon gasket PTFE coated, ring ETFE

Cat. no.	Capacity ml	Packing quantity
88R-100	100	10
88R-250	250	10
88R-500	500	10
88R-1L	1000	10
88R-2L	2000	10
88R-5L	5000	6
88R-10L	10000	1
88R-20L	20000	1



Screw cap

GL45

Cat. no.	Color	Packing quantity
88-45B	blue	10
88-45R	red PTFE	10





Outlet ring

for GL45

Cat. no.	Color	Packing quantity
88-45RB	blue	10
88-45RR	red PTFE	10



Multiple Distributors for Bottles

Made of fluorplastic. With GL14 thread sockets, for bottles with GL45 thread, complet with screw cap made of PP, ideal for transferring liquids without laboratory screw joints.

Cat. no.	Sockets
D614-08	2 x GL14
D615-08	3 x GL14



Laboratory Screw Joints

The medium is exposed only to fluorplastic, screw cap made of glass-fibre reinforced ETFE (max. 150°C), GL14.

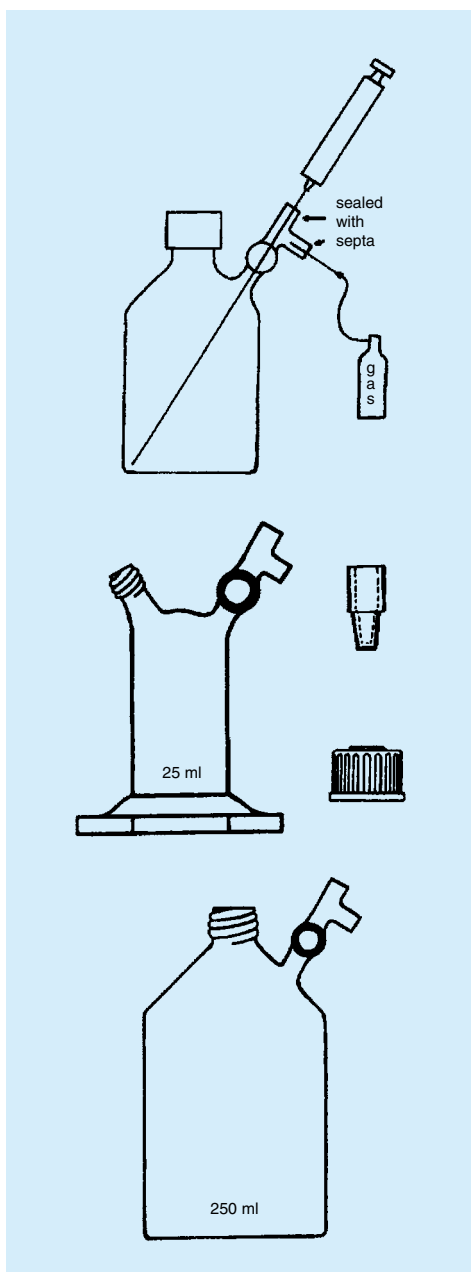
Cat. no.	For tubing O.D. mm
D593-02	0.8 (1/32")
D593-04	1.0
D593-06	1.6 (1/16")
D593-10	2.0
D593-12	2.4
D590-02	3.0
D590-08	3.2 (1/8")
D590-04	4.0
D590-06	6.0
D590-62	6.35 (1/4")



Bottle Pourer

Permits direct pouring of all liquids from reagent bottles in a safe and consistent manner. Totally inert with PTFE encapsulated viton neck seal.

Cat. no.	Fits	O Ring Ref
028.045	GL45	2000-123



Bottles

for storage of air and humidity sensitive liquids under protection of gas. Filling neck with screw cap and PTFE sealing. Withdraw through the PTFE stopcock and septa. For better sealing of the stopcock use apiezon greas.

Cat.no.	Capacity ml	Thread
00090-50	25	GL14
00090-52	100	GL14
00090-54	250	GL18
00090-56	500	GL18
00090-58	1000	GL25

Accessories

Cat.no.	
00090-60	Septa

Screwcap with PTFE sealing

Cat. no.	Thread
00166-01	GL14
00166-02	GL18
00166-03	GL25



Reagent Bottles, Narrow Mouth

boro 3.3, with hollow stopper

Cat. no.	Capacity ml	Stopper NS
272.202.01	30	14/23
272.202.02	60	14/23
272.202.03	125	19/26
272.202.04	250	19/26
272.202.05	500	24/29
272.202.06	1000	29/32
272.202.07	2000	34/35



Reagent Bottles, Amber

boro 3.3, with interchangeable hollow stopper

Cat. no.	Capacity ml	Stopper NS
273.202.01	30	14/23
273.202.02	60	14/23
273.202.03	125	19/26
273.202.04	250	19/26
273.202.05	500	24/29
273.202.06	1000	29/32
273.202.07	2000	34/35



Dropping Bottles

boro 3.3, fitted with ground in interchangeable stopper and rubber teat

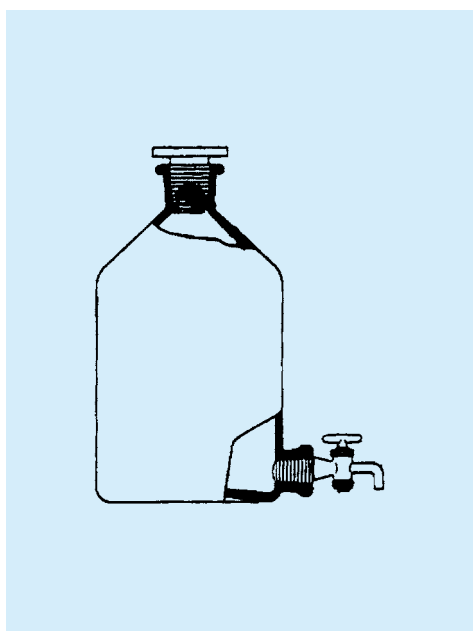
Cat. no.	Capacity ml	Stopper NS
279.202.01	30	14/23
279.202.02	60	14/23
279.202.03	120	19/26
279.202.04	250	29/26



Dropping Bottles, Amber

boro 3.3, fitted with ground in interchangeable stopper and rubber teat

Cat. no.	Capacity ml	Stopper NS
279.229.01	30	14/23
279.229.02	60	14/23
279.229.03	120	19/26
279.229.04	250	19/26



Bottles

Aspirator bottle made of soda-lime glass.

Cat. no.	Capacity ml	Stopcock NS	Stopper NS
31/5	5000	24/29	45/40
31/10	10000	29/32	29/32
31/20	20000	29/32	50/42



Bottles, Oxygen Determination

For the determination of the solved oxygen in water. The capacity is engraved at the bottle with an accuracy of ± 0.01 ml. With white inscription label. Solid, oblique grounded NS stopper, which can be fixed with a clamp. Each bottle is individually adjusted with its stopper, which is not interchangeable. An identical serial number at the bottle and the stopper prevents accidentally mistakes.

Cat. no.	Description	Capacity ml	Joint NS
5.6050.37	Oxygen det. bottle to Winkler	100-150	14/23
5.6050.49	Oxygen det. bottle to Winkler	250-300	19/26
5.6055.00	Clamp		14/23
5.6055.01	Clamp		19/26





Bottles

with white screw cap soda-lime glass.

Cat. no.	Capacity ml	Size mm
00092-30	5	41 x 20
00092-31	10	55 x 20
00092-32	15	45 x 27
00092-33	20	50 x 27
00092-34	30	75 x 27
00092-35	40	75 x 30
00092-36	50	90 x 30



Bottles

with polynap cup soda-lime glass.

Cat. no.	Capacity ml	Size mm
00092-71	5	40 x 19
00092-72	10	45 x 22
00092-73	15	52 x 24
00092-74	20	55 x 27
00092-75	25	50 x 30
00092-76	30	75 x 28
00092-77	35	65 x 30
00092-78	40	80 x 30
00092-79	50	100 x 30
00092-80	100	145 x 34



Bottles, Vials

Borosilicate glass, thread 8-425. Size 32 x 12 mm, capacity 1.2 ml.

Cat. no.	
00010-59	Vial without lid, amber glass
00010-60	Vial without lid, clear glass
00010-62	Micro inserts
00010-63	Liner butyl/PTFE
00010-64	Lid closed with liner butyl/PTFE
00010-65	Lid open without liner



Bottles, Vials

Borosilicate glass, thread 13-425. Size 45 x 15 mm, capacity 4 ml.

Cat. no.	
00010-69	Vial without lid, amber glass
00010-70	Vial without lid, clear glass
00010-72	Micro inserts
00010-73	Liner butyl/PTFE
00010-74	Lid closed with liner butyl/PTFE
00010-75	Lid open without liner



Bottles

Bubble bottle made of borosilicate glass 3.3. One inlet, one outlet tube O.D. 8 mm. Size 120 x 30 mm.

Cat. no.	
00010-50	Bubble bottle



Centrifuge Tube

Model "Farmis" made of borosilicat glass 3.3 heavy wall, socket 19/26, without stopper.

Cat. no.	Capacity ml	O.D. mm	Length mm
00016-25	50	30	130



Centrifuge Tube

Conical bottom, ungraduated without stopper, borosilicat glass 3.3.

Cat. no.	Socket	Length mm	O.D. mm
00016-20	10/19	80	12
00016-21	14/23	115	17



Centrifuge Tube, ASTM, Cylindrical

DURAN®. DIN 51793. ASTM D91 and ASTM D96. Capacity 100 ml. Can be used up to RCA 700 (relative centrifuge acceleration). With conical bottom. Length 200 mm. Diam. 37 mm.

Cat.no.	Graduation ml	Subdivision ml
5.6750.00	0-0.5	0.1
	0.5-2	0.1
	2-3	0.2
	3-5	0.5
	5-10	1.0
	10-25	5.0
	25-100	25.0



Centrifuge Tube, ASTM, Cylindrical

DURAN®. ASTM D96 and ASTM D96. Capacity 100 ml. Can be used up to RCA 700 (relative centrifuge acceleration). With conical bottom. Length 165 mm. Diam. 45 mm. With marks at 50 and 100 ml.

Cat.no.	Graduation ml	Subdivision ml
5.6750.03	0–0.5	0.1
	0.5–2	0.1
	2–3	0.2
	3–5	0.5
	5–10	1.0
	10–25	5.0
	25–100	25.0



Centrifuge Tube, ASTM, Pear-shaped

DURAN®. ASTM D96 and ASTM D96. Capacity 100 ml. Can be used up to RCA 700 (relative centrifuge acceleration). With cylindrical bottom. Length 165 mm. Diam. 57 mm. With marks at 50 and 100 ml.

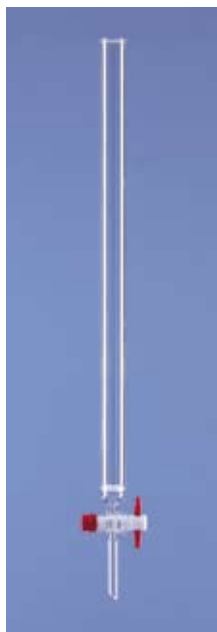
Cat.no.	Graduation ml	Subdivision ml
5.6750.05	0–1.5	0.1
	1.5–3	0.5
	3–5	0.5
	5–10	1.0
	10–25	5.0
	25–100	25.0



Chromatographic Column

with stem and filter disc Por 2.

Cat. no.	Eff. length mm	I.D. mm
00145-10	300	10
00145-11	300	20
00145-12	500	20
00145-13	300	30
00145-14	500	30
00145-15	300	40
00145-16	500	40
00145-17	500	50
00145-19	500	65
00145-21	500	90



Chromatographic Column

with PTFE stopcock, filterdisc Por 0.

Cat. no.	Eff. length mm	I.D. mm
5.4457.01	200	10
5.4457.02	200	15
5.4457.04	400	20
5.4457.06	600	30
5.4457.08	800	40



Chromatographic Column

"Flash" column with capillary PTFE stopcock, socket and filter disc Por 2.

Cat. no.	Eff. length mm	I.D. mm	NS
00148-91	300	10	29/32
00148-51	300	20	29/32
00148-53	300	30	29/32
00148-55	300	40	29/32
00148-57	300	50	29/32
00148-59	300	60	29/32
00148-61	500	20	29/32
00148-63	500	30	29/32
00148-65	500	40	29/32
00148-67	500	50	29/32
00148-69	500	60	29/32
00148-94	500	65	45/40
00148-96	500	90	45/40



Liquid Container

for "Flash" column.

Cat. no.	Capacity ml	Socket	Cone
00148-70	250	29/32	29/32
00148-72	500	29/32	29/32
00148-74	1000	29/32	29/32
00148-76	2000	29/32	29/32
00148-86	2000	29/32	29/32



Pressure Regulator

for "Flash" column with needle valve stopcock PTFE.

Cat. no.	Cone
00148-78	29/32
00148-79	45/40



Accessories

Fork clamps for NS

Cat. no.	For NS
1.1035.29	29/32
1.1035.45	45/40

Set screws for NS fork clamps

Cat. no.
1.1035.99





Combustion Tube

Determination of nitrogen "Kjeldahl method".

Cat. no.	Capacity ml	O.D. mm	Length mm
00091-30	75	26	255
00091-32	250	42	300



Combustion Vessel

Transparent quartzglass with handel.

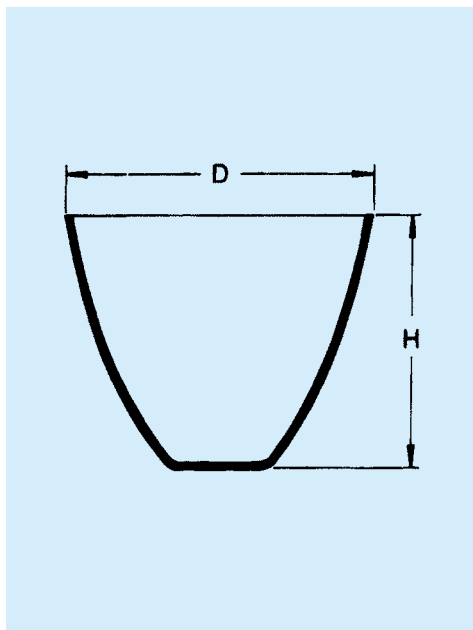
Cat. no.	Length mm	Width mm	Height mm
00108-92	30	5	5
00108-93	45	12	10
00108-94	75	12	10
00108-95	100	18	20
00108-96	150	16	12



Cover glass

Thickness 0.13–0.17 mm. Box of 100 pcs.

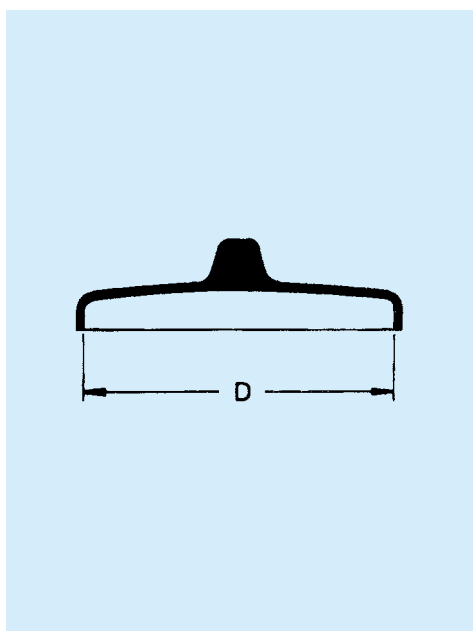
Cat. no.	Size mm
00156-18	18 x 18
00156-19	20 x 20
00156-20	21 x 26
00156-21	22 x 22
00156-22	24 x 24
00156-23	24 x 30
00156-25	24 x 40
00156-26	24 x 50
00156-27	24 x 60



Crucible

Transparent quartz glass, medium form.

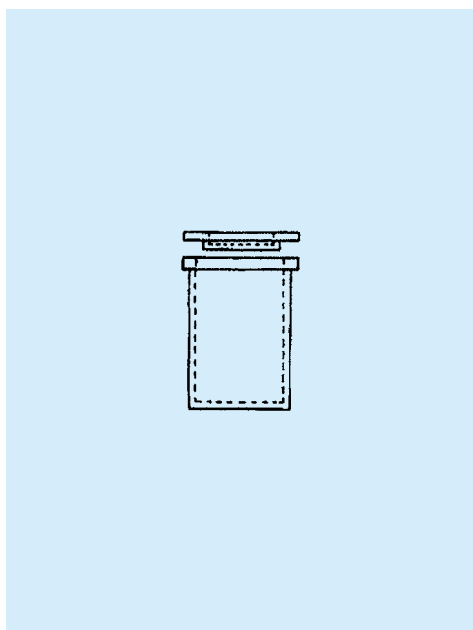
Cat. no.	Capacity ml	Height mm	Diam. mm
00022-60	15	28	35
00022-61	20	32	40
00022-62	38	36	45
00022-63	49	40	50
00022-64	90	48	60
00022-65	150	56	70



Crucible Lid

Transparent quartz glass.

Cat. no.	Diam. mm	Crucible mm
00022-81	39	35
00022-82	44	40
00022-83	49	45
00022-84	54	50
00022-85	64	60
00022-86	74	70



Incineration Crucible

Transparent quartz glass, made to ISO 51720.

Cat. no.	O.D. mm	Height mm
00021-50	25	38



Crystallizing Dishes

without spout

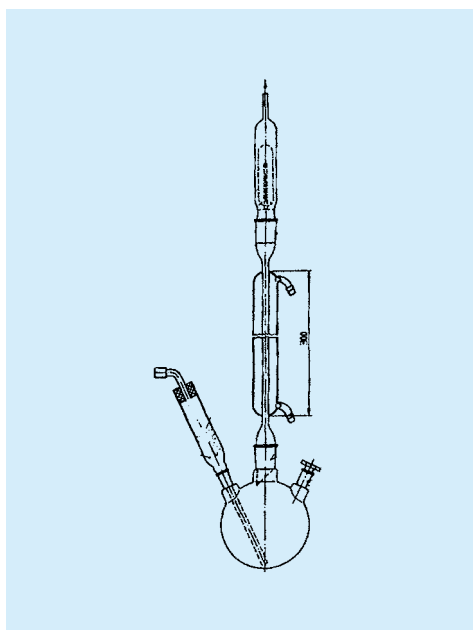
Cat. no.	O.D. x Height mm	Capacity ml
246.202.01	40 x 25	20
246.202.02	50 x 30	40
246.202.03	60 x 35	60
246.202.04	70 x 40	100
246.202.05	80 x 45	150
246.202.06	95 x 55	300
246.202.07	115 x 65	500
246.202.08	140 x 75	900
246.202.09	190 x 90	2000
246.202.10	230 x 100	3500



Crystallizing Dishes

with spout, borosilicate glass 3.3.

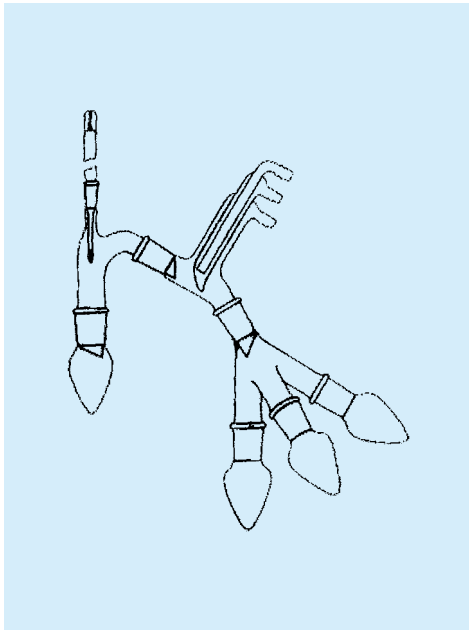
Cat. no.	O.D. x Height mm	Capacity ml
246.202.1S	40 x 25	20
246.202.2S	50 x 30	40
246.202.3S	60 x 35	60
246.202.4S	70 x 40	100
246.202.5S	80 x 45	150
246.202.6S	95 x 55	300
246.202.7S	115 x 65	500
246.202.8S	140 x 75	900
246.202.9S	190 x 90	2000
246.202.10S	230 x 100	3500



Cyanide Determination Apparatus

Made to swedish standard SS 02 81 77.

Cat. no.	
00016-30	Complete apparatus
00016-31	Round bottom flask
00149-11	Condenser
00016-33	Absorption tube
00016-34	Funnel
00199-12	Adapter with bent tube cone 29/32

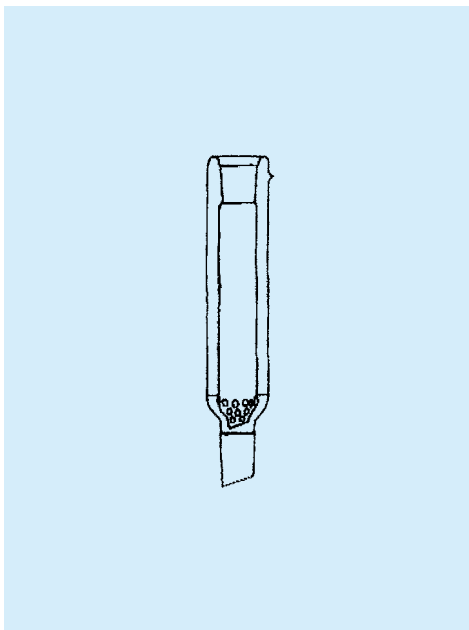


Distillation Apparatus Micro

Micro distillation apparatus "Triflex" made of borosilicat glass 3.3. The apparatus is supplied with:

- 3 Pear-shape flasks 10 ml socket 19/26
- 2 Pear-shape flasks 5 ml socket 19/26
- 1 Still head for use with or without Raschig glass rings
- 1 Condenser part with vacuum connection
- 1 Destilling reciver for 4 flasks
- 1 Thermometer 0–250°C
- Raschig glass rings 6 x 6 mm and 8 x 8 mm
- Boiling stones

Cat. no.	
00027-01	Distillation apparatus "Triflex"



Accessories

Column with vacuum jacket

Cat. no.	EH. length mm
00027-05	50
00027-06	100

Pear-shape flask, socket 19/26

Cat. no	Capacity ml
062.202.11	5
062.202.12	10
062.202.13	25
062.202.14	50



Desiccator

with plastic knob and porcelain plate

Cat. no.	Description	d ₁ mm	d ₂ mm
415270100	100	151	90
415270150	150	210	140
415270200	200	269	190
415270250	250	329	240
415270300	300	392	290



Desiccator

with plastic knob, stopcock and porcelain plate

Cat. no.	Description	d ₁ mm	d ₂ mm
415271100	100	151	90
415271150	150	210	140
415271200	200	269	190
415271250	250	329	240
415271300	300	392	290



Desiccator

with tubes (outlet) and stopcock, socket 24/29 and porcelain plate

Cat. no.	Description	d ₁ mm	d ₂ mm
415272100	100	151	90
415272150	150	210	140
415272200	200	269	190
415272250	250	329	240
415272300	300	392	290



Bottoms for Desiccators

only glass

Cat. no.	Description	d mm	h mm
415262102	100	151	85
415262152	150	210	105
415262202	200	269	145
415262252	250	329	180
415262320	300	392	200



Lids for Desiccators

only glass, bored

Cat. no.	Description	d ₁ mm	d ₂ mm	h mm
415262101	100	153	9	84
415262151	150	213	9	96
415262201	200	272	9	124
415262251	250	333	9	140
415262311	300	395	9	141



Lids for Desiccators

only glass, unbored

Cat. no.	Description	d mm	h mm
415262100	100	153	84
415262150	150	213	96
415262200	200	272	124
415262250	250	333	140
415262310	300	395	141



Lids for Desiccators

glass only, socket 24/29

Cat. no.	Description	d mm	h mm
415262121	100	153	83
415262171	150	213	95
415262221	200	272	123
415262271	250	333	139
415262331	300	395	140



Stopcocks for Dessiccators

Cat. no.	d mm	l mm
441334521	8	100



Needle-valve Stopcocks for Desiccators

DURAN®. PTFE spindle. Hose connection with outer diameter 8 mm. Needle-valve Stopcock for lid tubulation with lateral ventilation bore for reducing turbulences.

Cat. no.	for	Cone NS	Bore mm
2.8224.04	Lid tubulation	24/29	NW 2.5



Plastic Knobs

part of desiccator lid, unbored

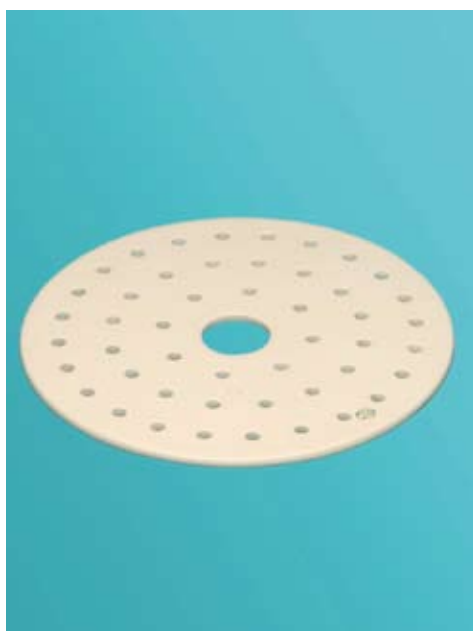
Cat. no.	d mm
9180000363	52



Plastic Knobs

part of desiccator lid, bored

Cat. no.	d ₁ mm	d ₂ mm
813754010	52	9



Porcelain Plate to Desiccators

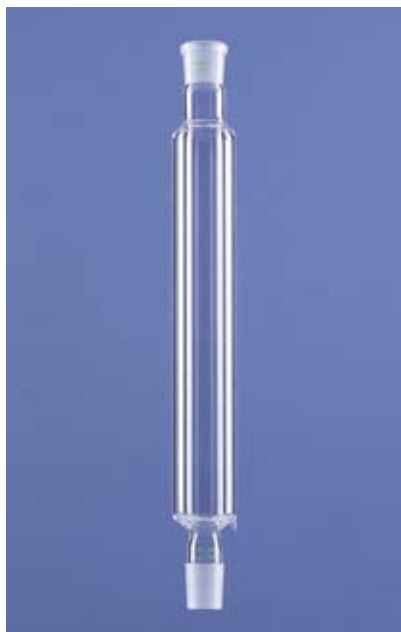
Cat. no.	d mm
9180000358	90
9180000354	140
9180000355	190
9180000356	240
9180000357	290



Distillation Column

DURAN®. For packings like glass rings, Raschig, or glass beads.

Cat. no.	Eff. L. mm	Socket/Cone NS
5.1152.01	200	14/23
5.1153.01	300	14/23
5.1153.03	300	24/29
5.1153.04	300	29/32
5.1155.03	500	24/29
5.1155.04	500	29/32
5.1158.03	800	24/29
5.1158.04	800	29/32



Distillation Column

DURAN®. With fixed vacuum jacket. For packings like glass rings, Raschig, or glass beads.

Cat. no.	Eff. L. mm	Socket/Cone NS
5.1192.01	200	14/23
5.1193.04	300	29/32
5.1195.04	500	29/32
5.1198.04	800	29/32



Distillation Column

DURAN®. With fixed vacuum jacket. Alterating horizontal and laterat pushed punts. Vigreux.

Cat. no.	Eff. L. mm	Socket/Cone NS
5.1362.01	200	14/23
5.1363.01	300	14/23
5.1363.03	300	24/29
5.1363.04	300	29/32
5.1365.03	600	24/29
5.1365.04	600	29/32



Distillation Column

DURAN®. Alterating horizontal and lateral pushed punts. Vigreux.

Cat. no.	Eff. L. mm	Socket/Cone NS
5.1302.01	200	14/23
5.1303.01	300	14/23
5.1303.03	300	24/29
5.1303.04	300	29/32
5.1305.03	600	24/29
5.1305.04	600	29/32



Glass Beads, Solid

Soda-lime glass.

Cat. no.	Diam. mm
00166-04	1
00116-05	2
00116-06	3
00116-07	4
00116-08	5



Glass Rings, Raschig

Soda-lime glass.

Cat. no.	Diam. x length mm
00116-10	2 x 2
00116-11	3 x 3
00116-12	4 x 4
00116-13	5 x 5
00116-14	6 x 6
00116-15	8 x 8



Dewar Flasks

DILVAC Glass Dewars in protective containers.

DILVAC is the leading brand in Glass Dewars. Three distinctive ranges of outer containers are offered, all utilising borosilicate glass dewars of the finest quality in capacities ranging from 200 ml to 10 litres for safe and reliable storage and transportation of all types of Liquid Gas.

Stainless steel: Strong anti-corrosive, rust free and hygienic, with vented lid, lid clamps and carrying handle, ideally suitable for safe transportation. There is also a Shallow-form range with no lid or handle, made specifically for short term bench top use with any coolant.

Blue enamelled steel: Available with or without lids in wide or narrow neck sizes, ideal for those situations where transportation of the liquid gas is not the issue.

Polypropylene: The ultimate in low cost, high efficiency Dewars. Light, strong and reliable, but only available in 1 litre capacity.



Dewar Flasks, model 990

blue polypropylene container with handle and lid

Cat. no.	Container O.D. x H. mm	Glass I.D. x inner H. mm	Capacity ml
990111	145 x 220	85 x 185	1000



Dewar Flasks, model SS

stainless steel container with clamp lid attachment, vent and handle

Cat. no.	Container O.D. x H. mm	Glass I.D. x inner H. mm	Capacity ml
SS111	116 x 228	85 x 185	1000
SS222	142 x 268	106 x 205	2000
SS333	182 x 350	150 x 280	4500
SS700	245 x 335	200 x 285	7000



Dewar Flasks, model MS

blue enameled steel container, no handle or lid

Cat. no.	Container O.D. x H. mm	Glass I.D. x inner H. mm	Capacity ml
MS40	68 x 215	40 x 170	200
MS57	81 x 350	54 x 315	550
MS67	94 x 285	65 x 240	650
MS77	106 x 275	75 x 235	1100
MS90	126 x 290	90 x 240	1500
MS100A	137 x 295	100 x 240	1500
MS100B	137 x 345	100 x 305	2000
MS135	175 x 290	135 x 230	3000



Dewar Flasks, model MS

blue enameled steel container with handle and lid

Cat. no.	Container O.D. x H. mm	Glass I.D. x inner H. mm	Capacity ml
MS111	116 x 228	85 x 185	1000
MS222	142 x 268	106 x 205	2000
MS333	182 x 350	150 x 280	4500
MS200	245 x 445	200 x 375	10000



Dewar Flasks, model SH

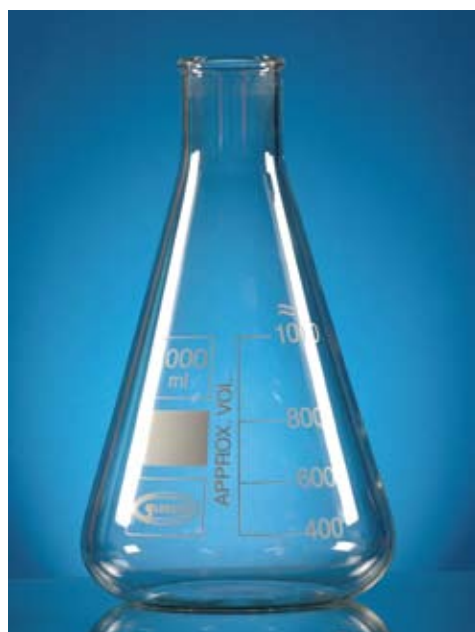
shallow form, stainless steel container, no handle or lid

Cat. no.	Container O.D. x H. mm	Glass I.D. x inner H. mm
SS77SH	105 x 75	77 x 50
SS100SH	130 x 90	100 x 65
SS115SH	150 x 95	115 x 70
SS138SH	160 x 115	130 x 90
SS150SH	186 x 138	120 x 110



Dewar Spare Glass

Cat. no.	I.D. x inner H. mm	Capacity ml	For Dewarflask
47040R	40 x 170	200	MS40
57R	54 x 315	550	MS57
67R	65 x 240	650	MS67
77R	75 x 235	1100	MS77
90R	90 x 240	1500	MS90
100AR	100 x 240	1500	MS100A
100BR	100 x 290	2000	MS100B
135R	135 x 230	3000	MS135
111	85 x 185	1000	990, MS111, SS111
222	106 x 205	2000	MS222, SS222
333	150 x 280	4500	MS333, SS333
700	200 x 280	7000	SS700
200	200 x 375	10000	MS200
77SH	77 x 50		SS77SH
100SH	100 x 65		SS100SH
115SH	115 x 70		SS150SH
138SH	138 x 80		SS138SH
150SH	155 x 120		SS150SH



Erlenmeyer Flasks

Narrow neck with graduation DIN 12380, ISO 1773

Cat. no.	Capacity ml	D. mm	Neck mm	H. mm
231.202.01	25	42	22	75
231.202.02	50	51	22	90
231.202.03	100	64	22	105
231.202.04	250	85	34	145
231.202.05	500	105	34	180
231.202.06	1000	131	42	220
231.202.07	2000	166	50	280
231.202.08	3000	187	50	310
231.202.09	5000	220	50	365



Erlenmeyer Flasks

Wide neck with graduation DIN 12385

Cat. no.	Capacity ml	D. mm	Neck mm	H. mm
232.202.01	25	42	31	70
232.202.02	50	51	34	85
232.202.03	100	64	34	105
232.202.04	150	64	34	105
232.202.05	250	85	50	140
232.202.06	300	85	50	140
232.202.07	500	105	50	175
232.202.08	1000	131	50	220
232.202.09	2000	153	72	276



Erlenmeyer Flasks

Narrow neck, with 4 baffles

Cat. no.	Capacity ml
00125-50	100
00125-52	250
00125-54	500
00125-56	1000
00125-57	2000
00125-58	5000



Stabilising Rings "Circum"

P.V.C. coated steel. The weight of the ring stabilises and prevents flasks from floating when placed in a water bath. Suitable for conical, volumetric and other types of flasks.

Cat. no.	Colour	Mode	Diam. mm	Weight g
1001169	red	open	50	207
1001170	red	open	70	340
1001171	red	open	100	470
1001734	blue	closed	48	270
1001735	blue	closed	70	360
1001736	blue	closed	90	440



Flask Round Bottom

narrow neck, with beaded rim DIN 12347, ISO 1773

Cat. no.	Capacity ml	D. mm	Neck mm	H. mm
233.202.01	50	51	26	95
233.202.02	100	64	26	110
233.202.03	250	85	34	144
233.202.04	500	105	34	175
233.202.05	1000	131	42	200
233.202.06	2000	166	42	260



Flask Round Bottom

wide neck, with beaded rim DIN 12347, ISO 1773

Cat. no.	Capacity ml	D. mm	Neck mm	H. mm
234.202.01	50	51	34	105
234.202.02	100	64	35	110
234.202.03	250	85	51	145
234.202.04	500	105	50	168
234.202.05	1000	131	50	210
234.202.07	2000	166	76	260



Round Bottom Flask Support

Made of moulded rubber (E.P.D.M.). Temperature resistance up to 100°C. Specially designed with stepp surface to support different flask diameters. From 10 ml up to 10 litre capacity. Dimensions: 50 mm height x 160 mm diam.

Cat. no.
1000863



Filter Crucibles

for dietary fibre extraction, system "Tecator" and others.
Capacity 30 ml, diam. 34 mm and height 60 mm.

Cat. no.	Porosity
20651	1
20632	2
20653	3
20654	4

Numberd

Cat. no.	Porosity
20651*	1
20652*	2
20653*	3
20654*	4



Filter Thimbles

for dietary fibre extraction with flange for system "Tecator" and others.
Diam. 34 mm. Flange diam. 38 mm.

Cat. no.	Porosity
20681	1
20682	2
20683	3
20684	4

Numberd

Cat. no.	Porosity
20681*	1
20682*	2
20683*	3
20684*	4



Filter Crucibles

Cat. no.	Porosity	Plate diam. mm	Capacity ml
20081	1	20	8
20082	2	20	8
20083	3	20	8
20084	4	20	8
20301	1	30	30
20302	2	30	30
20303	3	30	30
20304	4	30	30
20501	1	40	50
20502	2	40	50
20503	3	40	50
20504	4	40	50



Crucible adapter

Cat. no.	Crucible diam. mm
20801	20
20803	30
20804	40



Filter Tube

Gas distribution tube, cylindrical filter

Cat. no.	Porosity	Filter diam. mm	Total length mm	Tube diam. mm
18120	0	13	235	8
18121	1	13	235	8
18122	2	13	235	8
18123	3	13	235	8

Micro

Cat. no.	Porosity	Filter diam. mm	Total length mm	Tube diam. mm
18110	0	9	230	8
18111	1	9	230	8
18112	2	9	230	8
18113	3	9	230	8



Filter Tube

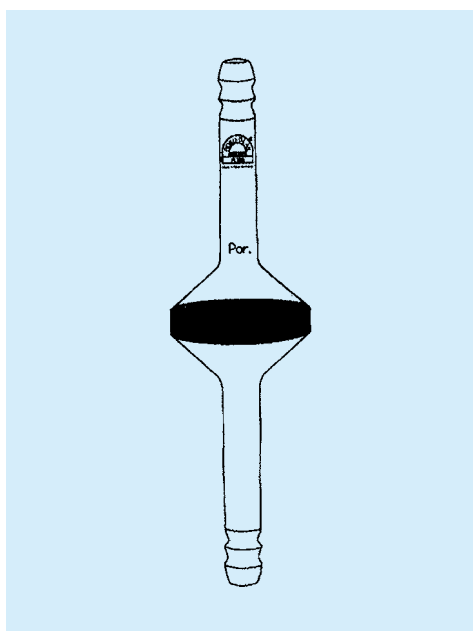
Gas distribution, tube min. socket 29/32

Cat. no.	Porosity	Filter diam. mm	Length mm	Tube mm
19250	0	22	250	8
19251	1	22	250	8
19252	2	22	250	8
19253	3	22	250	8



Filter Tube

Cat. no.	Length mm	Diam. mm
00088-15	100	12
00088-16	125	16
00088-17	150	19
00088-18	150	24
00088-19	150	34



Pipeline Filter

Cat. no.	Porosity	Filter diam. mm	Tube mm
23301	1	30	12
23302	2	30	12
23303	3	30	12
23304	4	30	12
23601	1	60	14
23602	2	60	14
23603	3	60	14
23604	4	60	14
23901	1	90	18
23902	2	90	18
23903	3	90	18
23904	4	90	18



Filter Tube

for reverse filtration

Cat. no.	Porosity	Filter diam. mm	Length mm	Tube mm
24201	1	20	150	10
24202	2	20	150	10
24203	3	20	150	10
24204	4	20	150	10
24351	1	35	210	10
24352	2	35	210	10
24353	3	35	210	10
24354	4	35	210	10



Filtering Flasks

Cat. no.	Nominal capacity ml
074.202.01	100
074.202.02	250
074.202.03	500
074.202.04	1000
074.202.05	2000



Gas Collecting Tube

DURAN®. DIN 12473-1. With 2 stopcocks, one-way, with retaining device. With capillary tube at one end (I-Ø 2.7 mm, O-Ø 8 mm) and nozzle (O-Ø 8 mm) at the other end. With inscription label. Available without or with distributor tube with thread GL 14.

Cat. no.	Capacity ml
5.6800.43	150
5.6800.52	350
5.6800.58	500
5.6800.70	1000
5.6801.43	150 with GL 14
5.6801.52	350 with GL 14
5.6801.58	500 with GL 14
5.6801.70	1000 with GL 14

Septa

for gas collecting tubes

Cat. no.	Septa
00166-50	Septa





Gas Washing Bottle

For large volume of gas flow. Joint 29/32. Supplied with adapter but without clamp.

Porosity 0

Cat. no.	Capacity ml
00097-09	100
00097-10	250
00097-11	500
00097-12	1000

Porosity 1

Cat. no.	Capacity ml
00097-14	100
00097-15	250
00097-16	500
00097-17	1000

Porosity 2

Cat. no.	Capacity ml
00097-19	100
00097-20	250
00097-21	500
00097-22	1000

Without filter disc

Cat. no.	Capacity ml
00097-49	100
00097-50	250
00097-51	500
00097-52	1000

Spare adapter socket 29/32

Cat. no.
00097-80



Fork Clamp

for 29/32

Cat. no.

1.1035.29

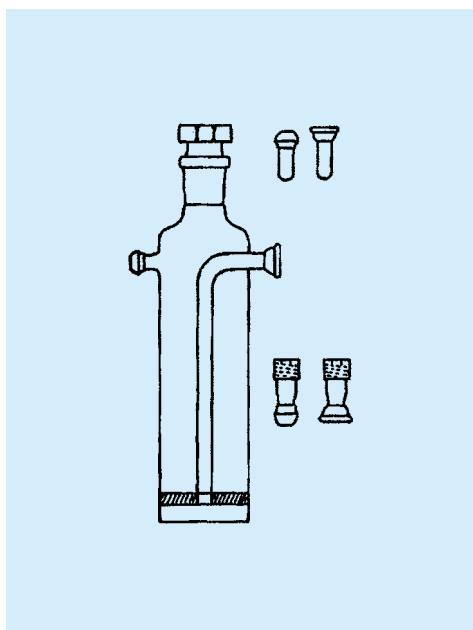


Gas Washing Bottle

Inlet and outlet on the same level for easy connecting in series with tubing. Porosity 1. Joint 19/23. Complete with stopper and clamp. Capacity 200 ml.

Cat. no.

00097-30



Gas Washing Bottle

As above but with ball joint S13 on side arms for easy connecting in series without tubing. Capacity 200 ml.

Cat. no.

00097-32

Stopper/connection to 00097-32

Cat. no.

00097-34 Stopper with ball S13

00097-36 Stopper with cup S13

00097-38 Adapter with ball S13 for 6 mm PTFE tubing

00097-40 Adapter with cup S13 for 6 mm PTFE tubing

Cat. no.

00115-31 Clamp for ball joint S13

Also available in plastic.



Gas Washbottle Heads without Filter Disc

Cone NS 29/32. For all bottle sizes to DIN 12463. Available with hose nozzle O-Ø 11 mm or thread GL 14.

Cat. no.	Description
5.5006.00	Nozzle
5.5006.G0	GL 14



Gas Washbottle Heads with Filter Disc

Cone NS 29/32. Fits all bottle sizes to DIN 12463. Available with hose nozzle O-Ø 11 mm or thread GL 14.

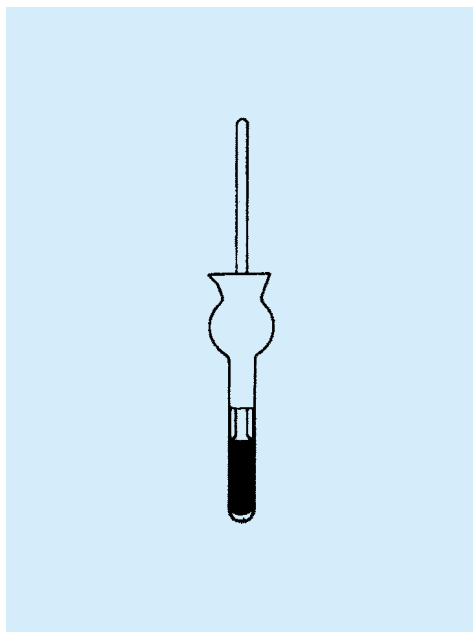
Cat. no.	Description	Porosity
5.5104.00	Nozzle	0
5.5104.01	Nozzle	1
5.5104.02	Nozzle	2
5.5104.G0	GL 14	0
5.5104.G1	GL 14	1
5.5104.G2	GL 14	2



Gas Washbottles without Head

DURAN®. NS 29/32, to DIN 12463.

Cat. no.	Capacity ml	Diam. mm	Height mm	Description
5.5150.37	100	40	200	with base
5.5150.49	250	55	200	with base
5.5150.58	500	75	200	without base
5.5150.70	1000	107	200	without base



Homogenisers

Plunger head is pure PTFE, plunger shaft stainless steel, diam 6.5 mm, tube, precision borosilicate glass, and the clearance between the plunger head and tube 0.15–0.25 mm. Volumes stated are working volumes with the plunger in place.

Glass vessel

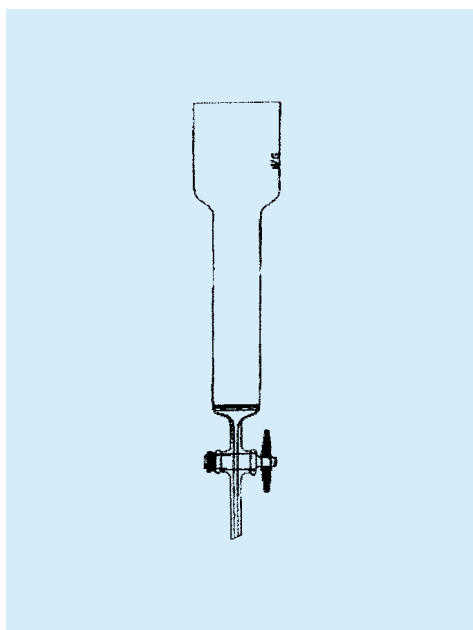
Cat. no.	Capacity ml
011.102	2
011.105	5
011.110	10
011.115	15
011.130	30
011.150	50

Plunger – plain

Cat. no.	Capacity ml
011.202	2
011.205	5
011.210	10
011.215	15
011.230	30
011.250	50

Plunger – serrated tip

Cat. no.	Capacity ml
011.302	2
011.305	5
011.310	10
011.315	15
011.330	30
011.350	50



Ion Exchange Tube

with funnel

PTFE stopcock, without filter

Cat. no.	Funnel length x O.D mm	Tube length x I.D mm
00113-40	100 x 30	150 x 10
00113-41	110 x 30	200 x 15
00113-42	100 x 40	250 x 20
00113-43	125 x 50	300 x 30

PTFE stopcock, filter porosity 2

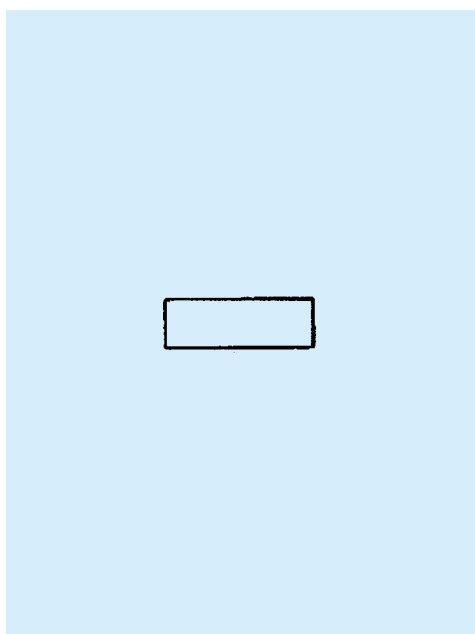
Cat. no.	Funnel length x Y.D mm	Tube length x I.D mm
00113-50	100 x 30	150 x 10
00113-51	100 x 30	200 x 15
00113-52	100 x 40	250 x 20
00113-53	125 x 50	300 x 30



Manifold

With 2 tubes and 2-way stopcocks with solid glass plug, bore 4 mm.
All joints 14/23. Supplied without adapters.

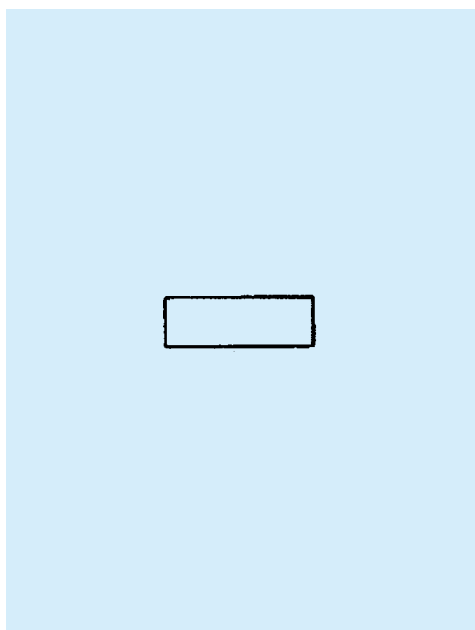
Cat. no.	
00158-39	Manifold with 3 stopcocks
00158-40	Manifold with 4 stopcocks
00158-41	Manifold with 5 stopcocks
00199-29	Adapter with socket 14/23, straight nozzle
00199-21	Adapter with socket 14/23, closed
00115-53	Plastic clip for joint 14/23



Micro Slides

Half-white, cut edges. Precleaned. 76 x 26 mm.

Cat. no.	Thickness mm
2400	1,0



Micro Slides

Half-white, ground edges, 90°. Precleaned. 76 x 26 mm.

Cat. no.	Thickness mm
2401	1,0

Micro Slides

Half-white, one end frosted. Precleaned. 76 x 26 mm.

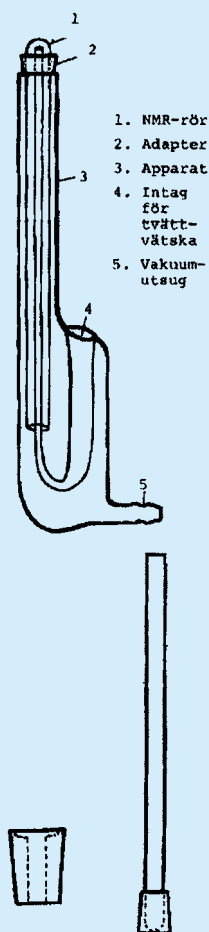
Cat. no.	Thickness mm
2407/1	1,0



NMR Tube Washer

Apparatus for washing and drying of NMR-tubes with diameter 5, 8, 10 and 12 mm. Use a water jet pump to obtain vacuum.

Put the NMR-tube (1) in the adapter (2) and place the adapter in the washer (3). Connect the nozzle (5) to the water jet pump. Pour the detergent into the funnel (4)



- 1. NMR-rör
- 2. Adapter
- 3. Apparat
- 4. Intag för tvättvätska
- 5. Vakuumsug

Cat. no.	
00231-30	NMR-tube wascher with adapter 5 mm and 10 mm
00231-32	Adapter 5 mm
00231-33	Adapter 8 mm
00231-34	Adapter 10 mm
00231-35	Adapter 12 mm



Quartz Disc

Optical polished

Thickness 1 mm

Cat. no.	Diam. mm
00187-01	10
00187-02	20
00187-03	25
00187-04	30
00187-05	40
00187-06	50
00187-07	75
00187-08	100

Thickness 2 mm

Cat. no.	Diam. mm
00187-09	10
00187-10	20
00187-11	25
00187-12	30
00187-13	40
00187-14	50
00187-15	75
00187-16	100

Thickness 3 mm

Cat. no.	Diam. mm
00187-17	10
00187-18	20
00187-19	25
00187-21	30
00187-22	40
00187-23	50
00187-24	75
00187-40	100

Thickness 5 mm

Cat. no.	Diam. mm
00187-25	10
00187-26	20
00187-27	25
00187-28	30
00187-29	40
00187-30	50
00187-31	75
00187-32	100



Quartz Plates

Optical polished, size 100 x 100 mm.

Cat. no.	Thickness mm
00187-33	1
00187-34	2
00187-35	3
00187-36	5



Quartz Plates

Optical polished

Cat. no.	Length mm	Width mm	Thickness mm
00188-01	35	25	0,5
00188-02	75	25	1,0
00188-03	16	16	0,17
00188-04	18	18	0,17
00188-05	22	22	0,17



Quartz Rod

Transparent, length 1000 mm.

Cat. no.	O.D. mm
107-20	1
107-21	2
107-22	3
107-23	4
107-24	5
107-25	6
107-26	8
107-27	10
107-28	12
107-29	15
107-30	18
107-31	20



Quartz Tubes

Transparent, length 1000 mm.

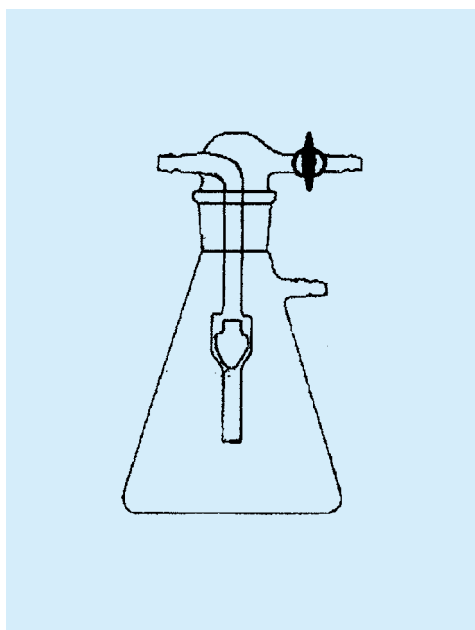
Cat. no.	O.D. mm	+ -	Wall mm
104-01	1	0,3	-0.3
104-02	2		0.3-0.7
104-03	3		0.4-0.8
104-04	4		0.8-1.2
104-05	5	0.4	
104-06	6	0.5	
104-07	7		
104-08	8		
104-09	9		
104-10	10	0.5	0.9-1.3
104-11	11		
104-12	12		1.0-1.4
104-13	13		
104-14	14		1.1-1.5
104-15	15		
104-16	16		
104-17	17		
104-18	18		1.2-1.7
104-19	19		
104-20	20	0.5	1.2-1.7
104-22	22		1.2-1.8
104-24	24		
104-26	26	1.0	1.3-1.9
104-28	28		
104-30	30		1.4-2.0
104-32	32		
104-34	34		
104-36	36		1.5-2.1
104.38	38		
104-40	40	1.0	1.5-2.1
104-42	42		
104-44	44		1.6-2.4
104-46	46		
104-48	48		
104-50	50		
104-55	55	1.7	1.7-2.4
104-60	60		
104-65	65		
104-70	70		
104-75	75		
104-80	80		
104-85	85		
104-90	90		
104-99	100		



Quartz Capillary Tubes

Transparent, length 1000 mm.

Cat. no.	O.D. mm	I.D. mm
107-01	3	0.8
107-02	4	1.0
107-03	5	1.0
107-04	6	1.5
107-05	7	1.0
107-06	7	3.5
107-08	8	1.0
107-09	8	2.5
107-10	9	3.0
107-11	10	2.5
107-50	11	3.5
107-12	12	4.0
107-51	13	4.5
107-52	14	4.5
107-13	15	5.0
107-53	16	5.5
107-54	18	6.5
107-14	20	7.0
107-15	25	10.0
107-16	30	15.0

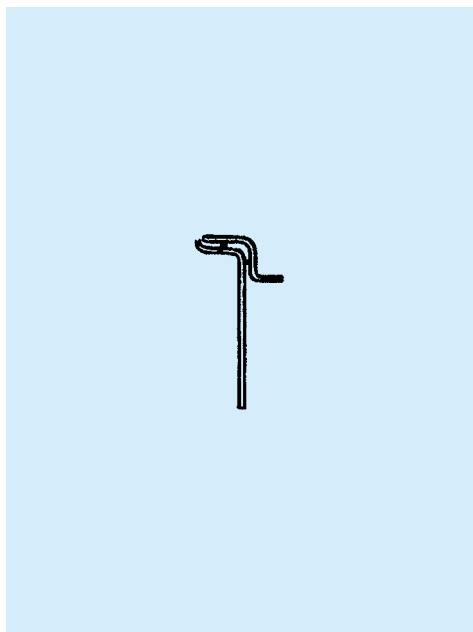


Safety Bottles

For use between a water jet pump or vacuum pump and a distillation apparatus or similar. With a no-return valve and a stopcock with solid glass plug (air inlet). Joint size 34/35.

Cat. no.

00156-10



Sprayer

For use in beakers, bottles or other open vessels.

Cat. no.	
00213-04	Sprayer



Sprayer

Erlenmyer flask 100 ml NS 19/26 with sprayer head, clamp and rubber bulb

Cat. no.	
5.4700.00	Sprayer



Sprayer

Test tube 12 ml, NS 19/26 with sprayer head, clamp and rubber bulb

Cat. no.	
5.4712.00	Sprayer



Staining Dishes

acc. to Hellendahl with extension, for 8 micro slides of approx. 76 x 26 mm (or for 16 slides back to back), with cover

Cat. no.

2460



Staining Dishes

acc. to Hellendahl without extension, for 8 micro slides of approx. 76 x 26 mm (or for 16 slides back to back), with cover

Cat. no.

2461



Stirring Rods

Made of glass rods with round edges. Diameter 6 mm.

Cat. no.	Length mm
00605-74	100
00605-76	150
00605-78	200
00605-80	250



Syringes

All glass syringes, autoclavable at 134°C. Amber graduation, conformity approved. Glass tip Luer.

Cat. no.	Capacity ml
00510-40	1
00510-41	2
00510-42	3
00510-43	5
00510-44	10
00510-45	20
00510-46	30
00510-47	50
00510-48	100



Syringes

All glass syringes, autoclavable at 134°C. Amber graduation, conformity approved. Luer lock tip.

Cat. no.	Capacity ml
00510-50	1
00510-51	2
00510-52	3
00510-53	5
00510-54	10
00510-55	20
00510-56	30
00510-57	50
00510-58	100



Stopcock Grease, Silicone

Medium viscosity, consistency is retained at temperatures of -50 $+150^{\circ}\text{C}$, tubes of 35 g.

Cat. no.
1480/35



Destillation Thermometers

Top end melted round. Frosted glass scale with black graduation. With red filling not HG. Note: fitting length = distance from the top of the joint to the bottom of reservoir. Graduation 1/1 °C.

Cat. no.	Cone	Graduation °C	Fitting length mm
00219-10	14/23	0+250	55
00219-11	14/23	0+250	70
00219-14	14/23	0+250	100
00219-17	14/23	0+250	150
00219-20	14/23	0+250	200
00220-02	10/19	0+250	55



General Purpose Thermometers

Enclosed scale, diameter 7–8 mm. Red filling. Graduation 1/1 °C. No Hg.

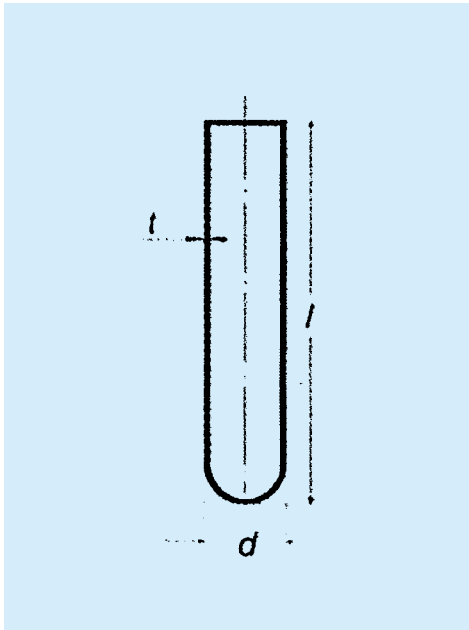
Cat. no.	Graduation °C	Length approx. mm
00217-01	–10 +50	200
00217-02	–10 +110	260
00217-03	–10 +250	300



Low Temperature Thermometers

Enclosed scale, diameter 9 mm. Graduation 1/1 °C.

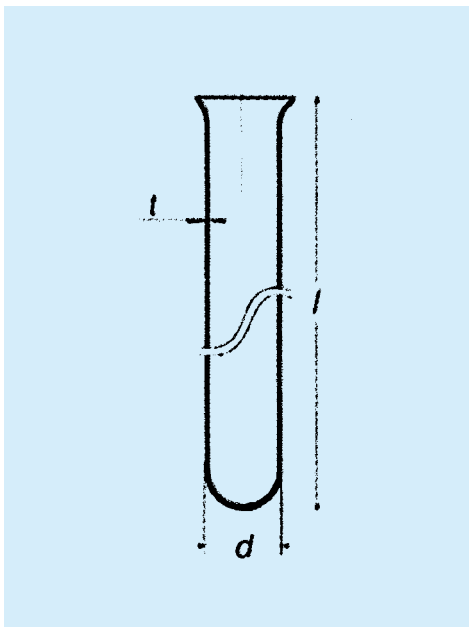
Cat. no.	Graduation °C	Filling
00218-13	–50 +50	Toluol
00218-14	–100 +30	Alcohol
00218-15	–200 +30	Pentan



Test Tubes

without rim, round bottom

Cat. no.	O.D. mm	Length mm	Wall mm
422008107	8	70	1,0
422010107	10	75	1,0
422010110	10	100	1,0
422012107	12	75	1,0
422012110	12	100	1,0
422014113	14	130	1,0
422016115	16	150	1,2
422016116	16	160	1,2
422018118	18	180	1,2
422020115	20	150	1,2
422020118	20	180	1,2
422024115	24	150	1,2
422024120	24	200	1,2
422030120	30	200	1,4



Test Tubes

with rim, round bottom

Cat. no.	O.D. mm	Length mm	Wall mm
422108107	8	70	1,0
422110107	10	75	1,0
422110110	10	100	1,0
422112107	12	75	1,0
422112110	12	100	1,0
422114113	14	130	1,0
422114114	14	140	1,0
422116115	16	150	1,2
422116116	16	160	1,2
422118115	18	150	1,2
422118118	18	180	1,2
422120115	20	150	1,2
422120118	20	180	1,2
422134115	24	150	1,2
422124120	24	200	1,2
422130120	30	200	1,4



Test Tubes

Duran® glass with screw thread and screw cap with teflon seal.

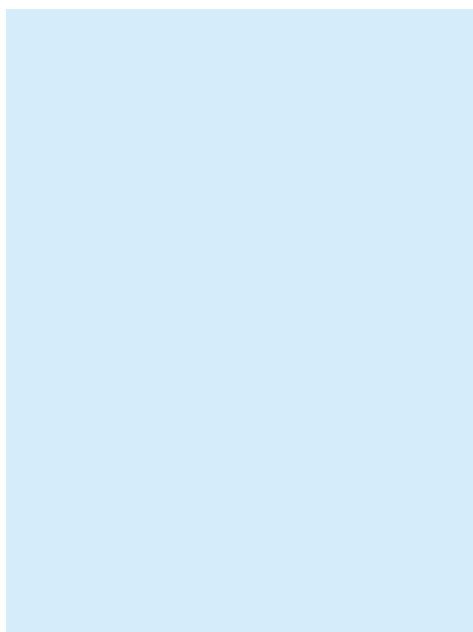
Cat. no.	Length x O.D. mm
00200-35	100 x 13
00200-36	100 x 16
00200-37	125 x 16
00200-38	150 x 16
00200-39	150 x 20
00200-40	200 x 25



Test Tubes

with interchangeable stopper, plain

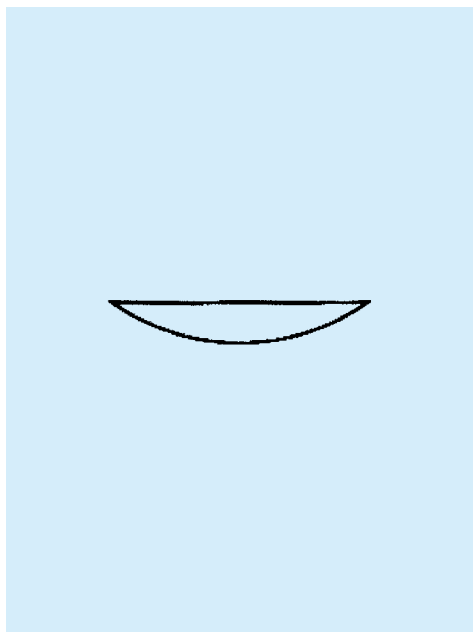
Cat. no.	Length x diam. mm	Stopper size
096.202.01	100 x 12	10/19
096.202.02	125 x 15	12/21
096.202.03	150 x 18	14/23
096.202.04	150 x 25	19/26
096.202.05	200 x 25	19/26
096.202.06	200 x 32	24/29
096.202.07	200 x 38	24/29



Test Tubes

with joint and stopper, graduated

Cat. no.	Size mm	Capacity ml	Graduation	Stopper size
095.202.01	100 x 12	5		10/19
095.202.02	125 x 16	10		12/21
095.202.03	150 x 22	25		19/26
095.202.04	200 x 25	50		19/26



Watch Glass

Soda lime glass

Cat. no.	Diam. mm
00234-16	50
00234-17	60
00234-18	70
00234-19	80
00234-20	100
00234-21	150



Water Estimators to Dean Stark

DURAN®. DIN 12420. Xylol method. With round bottom flask, 500 ml, NS 29/32 and Liebig condenser, jacket length 400 mm, cone and socket NS 29/32. Measuring tube with stopcock, capacity 10:0.1 ml.

Cat. no.	Capacity ml	Zero Point
5.6000.00	10:0.1	at the stopcock

Spare Parts for Water Estimators to Dean Stark

Measuring tube with stopcock, 10:0.1 ml, zero point at the stopcock.

Cat. no.
5.6003.01



Water Jet Pumps to Friedrichs-Antlinger

DURAN®. Friedrichs- Antlinger, with spiral ejector. High suction capacity.

Specifications at 4 bar water pressure:

- water consumption 10 l/min
- flow rate 400 ml/sec
- no return safety up to 1 kg/cm²
- ultimate, 16 mbar

Cat.no.
5.5800.03



Weighing Bottles with NS Cap

DURAN®. With interchangeable NS cap. With white inscription label. Available in low, medium or tall shape.

Cat. no.	Ø x H mm	Joint mm	Shape
5.5653.34	30 x 30	34/12	low
5.5653.40	38 x 35	40/12	low
5.5653.50	48 x 35	50/12	low
5.5653.80	75 x 35	80/12	low
5.5655.34	30 x 50	34/12	medium
5.5655.40	38 x 50	40/12	medium
5.5655.50	48 x 50	50/12	medium
5.5655.80	75 x 50	80/12	medium
5.5657.34	30 x 70	34/12	tall
5.5657.40	38 x 70	40/12	tall
5.5657.50	48 x 70	50/12	tall
5.5657.80	75 x 95	80/12	tall

Heating Mantle for Flasks "Fibroman-C"

Features

Two position isolated rocker switch heating control with power on indicator lamp.

- DUR ALLOY aluminium exterior case with epoxy coating
- Suspended mineral wool woven heating mantle
- Heating element homogeneously distributed throughout the woven mantle
- Thermally insulated case, mineral wool fibre insulation
- Nickel connectors
- Retort stand clamp at the back of the unit
- In the case of breakage or spills a drain hole is provided at the bottom of the mantle
- Safety earth connection



Models

Cat. no.	Flask capacity ml	Flask Ø approx. mm	Ø / Height (exterior) cm	Power W
3003141	100	65	16 / 11	130
3003142	250	83	16 / 11	130
3003145	500	102	17 / 12	270
3031410	1000	132	21 / 12.5	410
3031420	2000	164	24 / 15	530
3031430	3000	190	27 / 18	620
3031440	4000	203	31 / 19	700
3031450	5000	222	31 / 19	840
3031460	6000	235	31 / 19	1000
3314100	10000	290	38 / 22	1400
3314200*	20000	365	48 / 26	2300

* The mantle part no. 3314200 comes without the 2 position controller and switch.

Accessories

Cat. no.	
6000270	Support bar made of aluminium. Diam. 12 mm, length 700 mm



Heating Mantle for Flasks "Fibroman-N"

Features

AISI 304 stainless steel outer casing
 Complete with a rod support clamp at the back
 Safety earth fitted

Control Panel

Main power switch with power on indicator lamp. Heating control using a 0 to 100% energy regulator. Indicator lamp shows when the heating mantle is on. To monitor the sample temperature, a connection at the back of the unit allows for a contact or digital thermometer "Sensoterm", to be connected. Alternatively a digital "Electemp" controller can be added to set and control the temperature of the unit.

Cat. no.	Flask capacity ml	Height / Width / Depth (exterior) cm	Power W
3000996	100	11 / 14 / 18	130
3000721	250	12 / 18 / 24	130
3000722	500	12 / 18 / 24	270
3000723	1000	13 / 21 / 27	410
3000724	2000	15 / 25 / 31	530

Accessories

Cat. no.	
6000270	Support bar made of aluminium. Diam. 12 mm, length 700 mm

Custom Synthesis:

DIN EN ISO 9001 certified



The preparation of chemicals is always performed with utmost care under the guidelines of our quality control and according to DIN EN ISO 9001. The products are controlled by analytical methods like HPLC, TLC and NMR as well as by chemical analytical methods. Detailed GMP-like documentation of every manufacturing process is available upon request. This enables us to guarantee the highest purity of the products and to fulfill the specifications of our customers.



41 Mathies + Tanat - Darmstadt

GENERAL GLASSWARE



TAILOR MADE

Enkelt eller svært?

En eller tusen?

Har ni behov av glas etter egne idéer?

Skicka oss en skiss så tillverkar vi!

Enkelt eller kompliseret?

Et eller tusinde?

Har i behov for at få lavet glas ud fra jeres egne idéer?

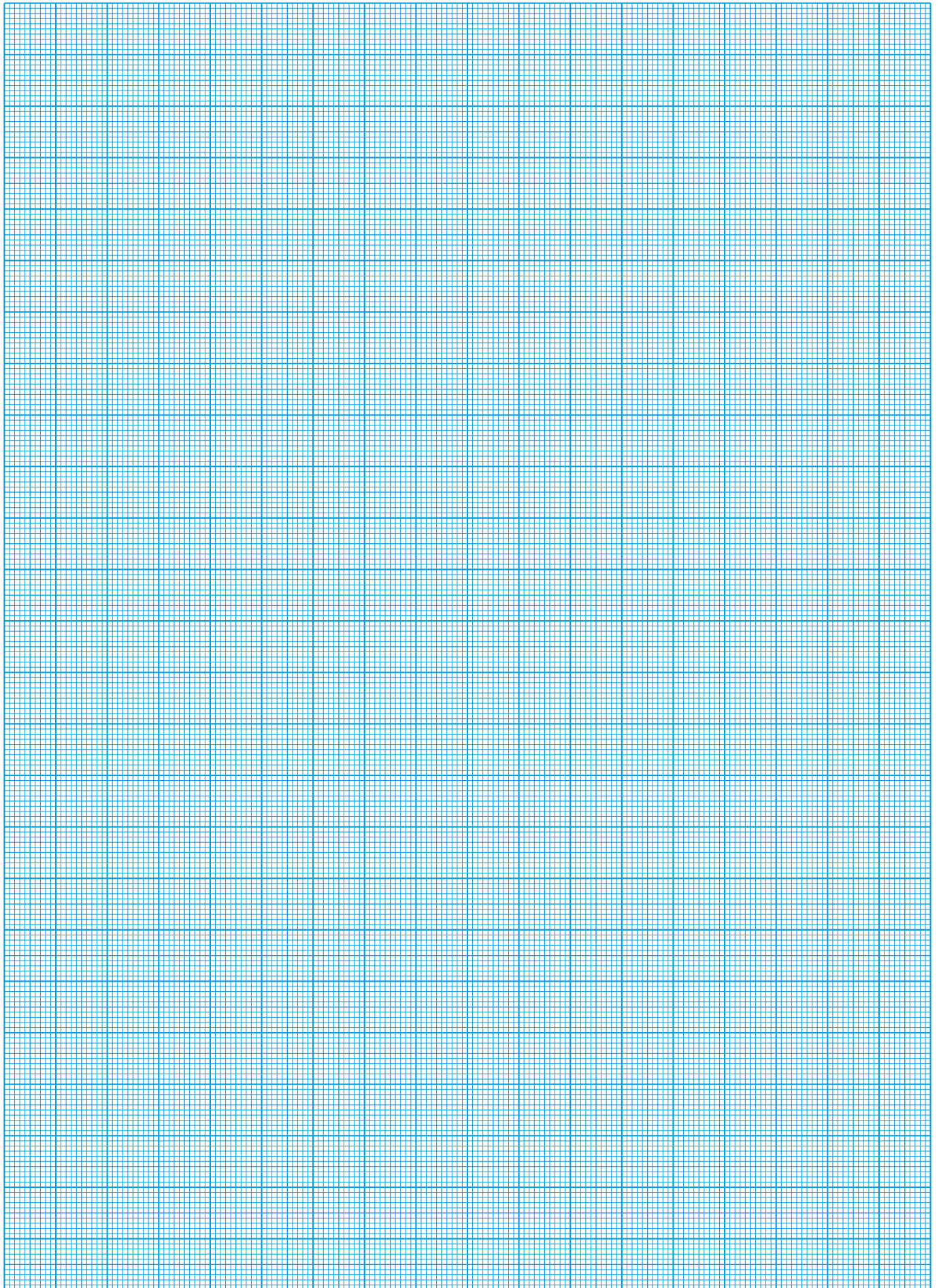
Så send os en skitse, og vi laver det!

Lett eller vanskelig?

En eller tusen?

Trenger de glass etter egne idéer?

Sned oss en skisse så lager vi det!



Borosilicate Glass 3.3

Laboratory works requires apparatus made in a glass – which can readily be moulded into any desired shape or form, which offers maximum inertness when in contact with the widest range of chemical substances, which can withstand thermal shock with fracture and high temperature work without deforming, and which will be resilient enough to survive the everyday knocks to which it will be subjected in normal laboratory handling, washing and sterilizing processes.

Chemical Composition

The following is a typical analysis of borosilicate glass 3.3:

Element	% by weight
Silica (SiO ₂)	80.60
Boric oxide (B ₂ O ₃)	12.60
Sodium oxide (Na ₂ O)	4.20
Alumina (Al ₂ O ₃)	0.04
Calcium oxide (CaO)	0.10
Magnesium oxide (MgO)	0.05
Chlorine (Cl)	0.10

There may be heavy metals in a concentration of less than 5 ppm.

Thermal Expansion

The coefficient of linear thermal expansion is one of the characteristic properties by which glass is measured and is defined as the change in unit length per degree rise in temperature. The thermal expansion is 33×10^{-7} per °C between 20°C and 300°C and is controlled to a tolerance of $\pm 0.5 \times 10^{-7}$ per °C. Due to its porous structure, sintered glass has a slightly different thermal expansion. Care should be taken when fusing it to massive borosilicate glass 3.3.

Thermal Resistance

Since borosilicate glass has a high softening point, it can be used at temperatures of the order of 515°C. Care must be exercised, however, in cooling down apparatus which has been held at high temperatures. The cooling process must be slow and uniform, particularly in the case of thick sections.

Maximum Temperatures

In general it is recommended, that the strain point (515°C) be regarded as the maximum safe operating temperature of borosilicate glassware 3.3. For some shapes and for a relatively short time this limit can be exceeded, but at 580°C there is danger of deformation and in case of sintered glassware the porous structure may be changed. At high temperatures the glass may acquire permanent stress on cooling and this may result in subsequent breakage.

If it is suspected that permanent stress has occurred, the article should be annealed. Permanent stress can greatly reduce the mechanical and thermal resistance.

Chemical Resistance

The chemical resistance of glass is better than that of all other known materials. It shows resistance to water, acids and alkalis, salt, organic substances as well as chlorine and bromine. Hydrofluoric acid, concentrated phosphoric acid and strong alkalis attack the glass surface at higher concentrations and temperatures.

The following are typical results of tests undertaken to international standards:

1. Hydrolytic resistance

Glass grains (300–500 microns)

acc. ISO 719 (98°C) Water attack: <0.01 mg Na₂O/g grains

Class ISO 719 - HGB 1

acc. ISO 720 (121°C)

Class ISO 720 - HGA 1

2. Acid Resistance

Resistance acc. DIN 12116 Acid Class 1

Resistance acc. DIN/ISO 1766 = loss in weight < 100 µg Na₂O/dm²

3. Alkali Resistance

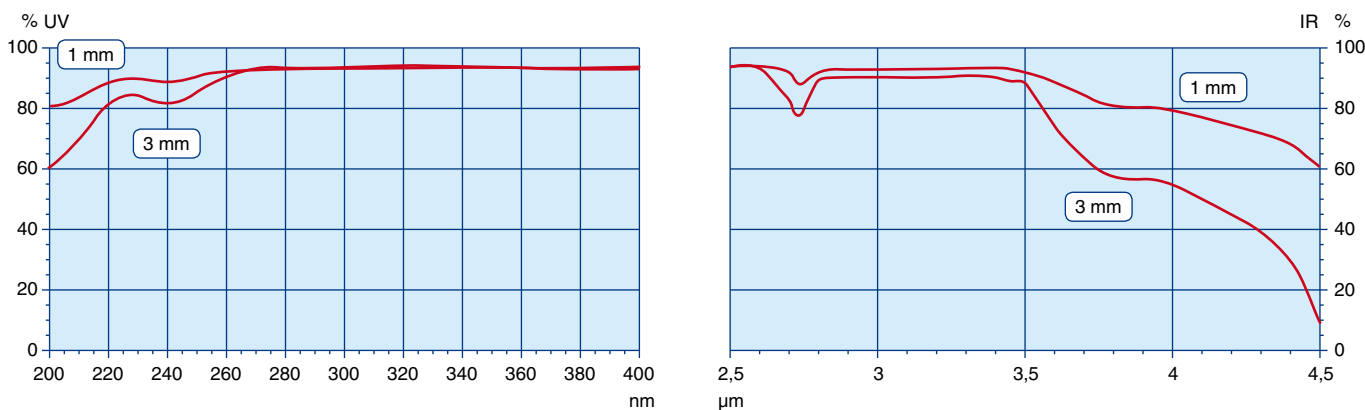
Resistance acc. DIN 52322 / ISO 695 Class A2

Optical Properties

Massive borosilicate glass 3.3 has a high ability to transmit light throughout the visible range of the spectrum. Ranging from approx. 310 to 2300 nm there is virtually no absorption through the thickness of glass generally encountered in laboratory ware (up to approx. 6 mm).

Fused Quartz Glass

Transmission



Chemical Purity

Element	Typical Trace Element Content in ppm
Al	16
Ca	0.8
Fe	0.8
K	0.9
Li	0.7
Na	0.9
Ti	1.5
Mg	0.1
Cu	<0.05
Cr	<0.05

OH-Content

The OH-content from 15–45 ppm is stable. After thermal treatment, a decrease in OH-content of 3 ppm maximum is obtainable by tempering the fused quartz material at 1000°C under vacuum for a period of 30 hours.

Properties

Density	2.20 g/cm ³
Max. Usable Temperature	
long term	1100°C
short term	1300°C
Coefficient of Thermal Expansion (20–300°C)	4.5–5.9 x 10 ⁻⁷ /°C
Hydrolytic resistance per DIN 12111	
Acid resistance per DIN 12116	
Alkaline resistance per DIN 52322	

Information About Filter Plates

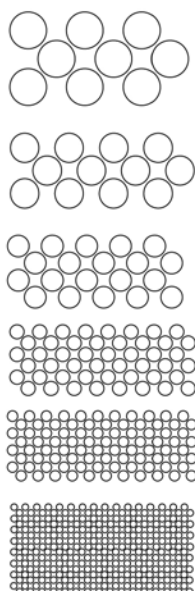
Production Process

Glass filters are made of borosilicate glass 3.3 (DURAN®), according to DIN/ISO 3585. Base material for filter discs is sintered glass grit. By a special grinding procedure, at first accurately defined grit sizes are preprocessed. In an afterwards applied high-temperature sintering-process, all surfaces of the separate glass-bodies are melted at their points of contact.

Porosity Classes

Glass filters are characterized by their pore-size in porosity classes from 0 to 5. Measurement of the porosity takes place through a bubble point process according to Bechthold. The following table provides an overview of porosity areas as well as their main fields of application. The denoted pore size refers to the respective largest pore of a disc. Pore sizes mark also the minimum diameter of particles which can just be held back during filtration.

Porosity Classes



Porosity	ISO 4793	Nominal pore size	Examples of application
0	P 250	160–250 µm	Gas distribution, filtration of coarse deposits, gas distribution in liquids.
1	P 160	100–160 µm	Filtration of coarse deposits, gas distribution in liquids, rough gas filtration, extractors for coarse materials, mats for filterlayers against gelatinous deposits.
2	P 100	40–100 µm	Preparative fine filtration, mercury filtration, preparative operations with crystalline deposits.
3	P 40	13–40 µm	Analytical filtration, preparative operations with fine deposits, filtration in cellulose chemistry, refined gas filtration, extraction instruments for fine-grained materials.
4	P 16	10–16 µm	Analytical precision filtration and operations with very fine deposits, as check and stop valve for mercury.
5	P 1.6	1.0–1.6 µm	Filtration of bacteria, sterile filtration.

Flow Rates and Pressure Drop

The flow rates of liquids and the pressure drop of gases depend on:

- filter size
- filter porosity
- relation of pressure/vacuum in the apparatus
- physical properties of the medium to be filtered.

To determine the possible applications of glass filter instruments and to choose the best apparatus for the work intended, it is necessary to know the flow rates of

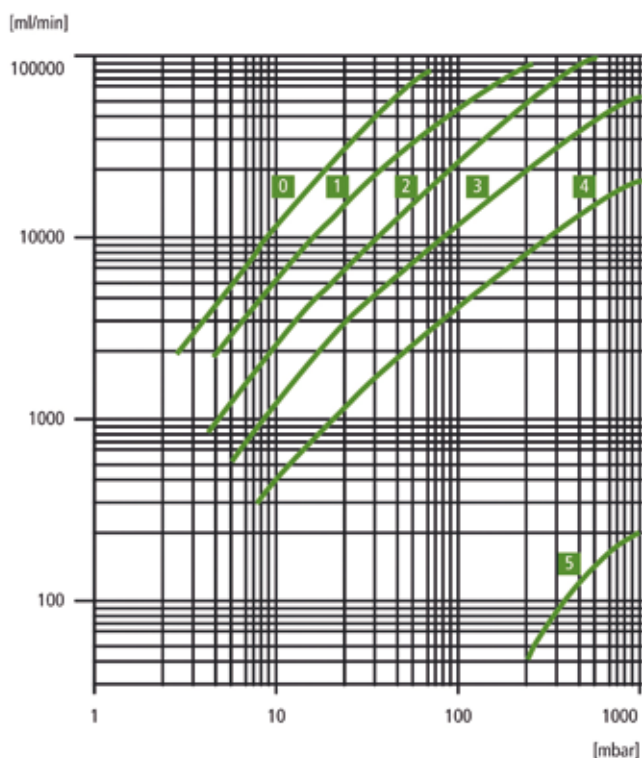
liquids and gases. Please use the diagrams on the next page which show data for water and air. The data apply to filter discs of 30 mm diameter with average properties and usually effective filter area and thickness, as well as pore sizes. The flow rates for other diameters can easily be calculated by multiplying this data by the conversion factor.

Flow Rates

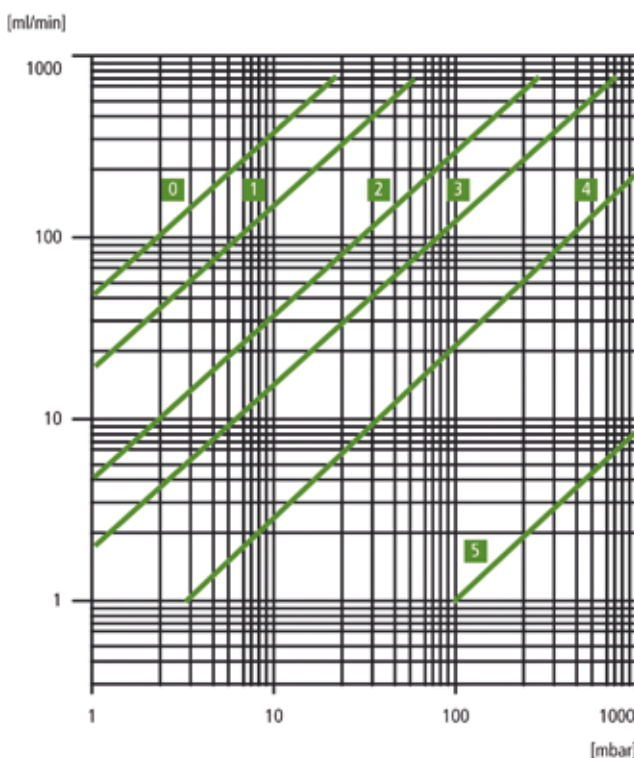
Filter disc Ø mm	Conversion factor
10	0.13
20	0.55
30	1.00
40	1.50
50	2.50
60	4.30
90	6.80
120	9.70
175	15.00

Informations for the Application of GLass Filters and Instruments

Flow rate of dry air (ml/min) through a filter plate of Ø 30 mm in relation to the pressure difference (mbar).



Flow rate of water (ml/min) through a filter plate of Ø 30 mm in relation to the pressure difference (mbar).



Prime Cleaning

Before using a glass filter apparatus for the first time, it should be cleared of all dust and dirt particles. For that you use hot hydrochloric acid, followed by several steps of distilled water sucked under good vacuum through the filter disc.

Mechanical Cleaning

Glass filter instruments have to be cleaned at once after usage, to increase their life-span. If the pores of the filter disc are clean, it is sufficient to spray the surface

with water and to clean it with a brush or rubber spatula. If the pores are contaminated, a cleaning with water or rinsing solution in reverse filtration direction is absolutely necessary. 1 bar must not be exceeded. After that a reverse sparging with pure air dries and cleans the filter disc additionally.

Chemical Cleaning

If there are still clogged pores after a mechanical cleaning, a careful chemical cleaning is advisable. Depending on the contamination different solutions may have to be used. Afterwards you should carefully rinse the filter discs with water.

Drying and Sterilization

To prevent tensions between filter and vessel, you have to avoid temperature shocks, which can lead to breakages in the filter apparatus. Heating and cooling of glass filter instruments have to be slow and even.

Pressure- and Vacuum Resistance

Pressure- and vacuum resistance cannot be guaranteed because of the material. Even smallest surface damage of the glass, like scratches, can lead to a stability loss.

Temperature Resistance

The maximum temperature is 500°C. Glass filter instruments must never be subjected to sudden temperature changes. Furthermore, it is necessary to observe the designated heating and cooling rates for borosilicate glass 3.3 to prevent permanent tension in the glass.

Special Notes

An increase in pore size is unavoidable with filtration of phosphoric acid, hydrofluoric acid and hot bases. These media corrode the surface and must not be used as cleaning solutions. Their usage decreases the lifespan of glass filter instruments immensely.

Properties of PTFE in the Laboratory Environment

Chemical Resistance

The chemical resistance of PTFE over a wide range of temperatures is unequalled and the material is used in all applications where chemical resistance and purity is important. Some limited reaction with compounds with free electrons such as sodium in liquid ammonia and some fluorine containing compounds at high temperature and pressure has been noted. Halogens will penetrate PTFE but without reaction.

Thermal Stability

The thermal stability of PTFE is outstanding. The material can be used to 300°C yet there is no embrittlement in liquid nitrogen. Thermal degradation does not commence until ca. 400°C, no liquid phase is formed.

Insolubility with High Purity

PTFE is intrinsically pure with no additives used; it is insoluble in all known solvents except under extremes of pressure and temperature and will not contaminate reaction systems or media by dissolution.

Low Friction

PTFE has the lowest coefficient of friction of all solids and other materials show little or no adhesion.

Sterilisation

PTFE can be sterilised by all usual means except gamma radiation.

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