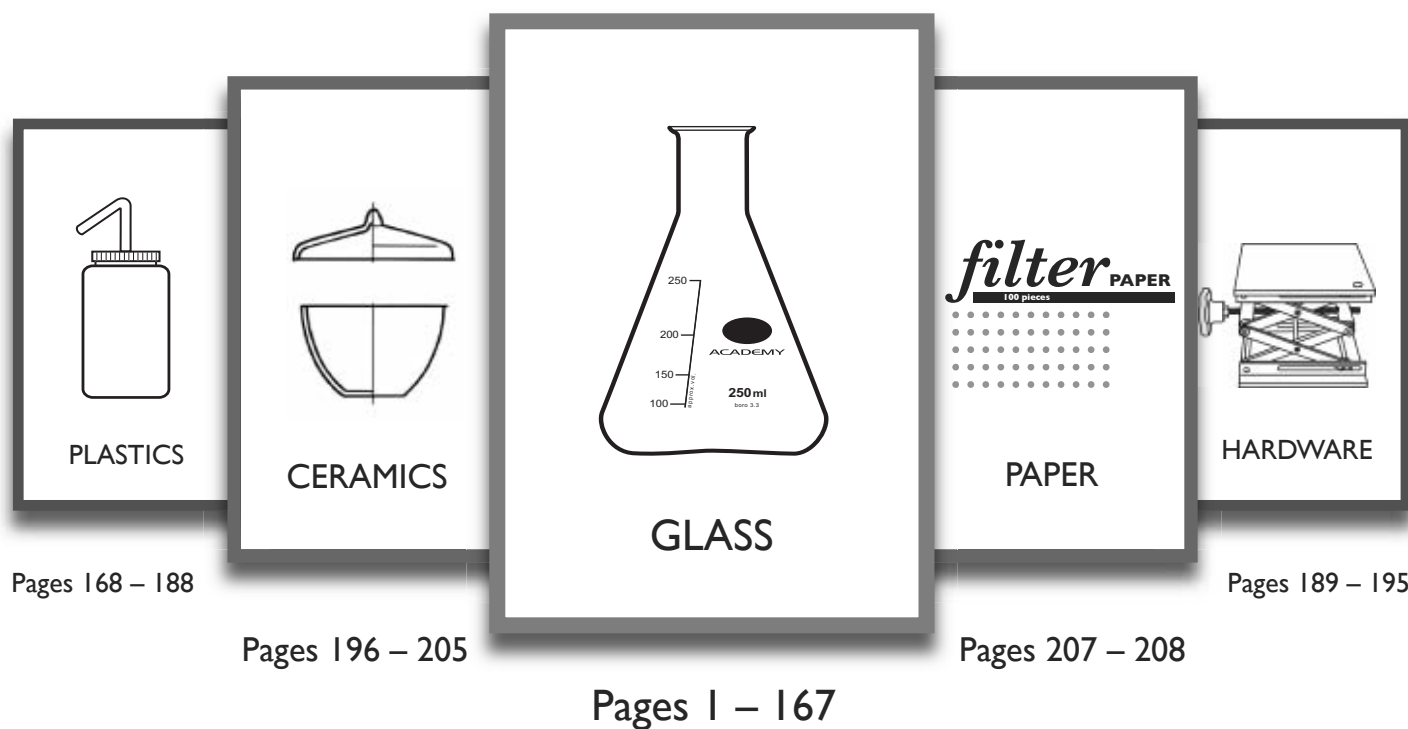




Contents

Index by name	Page II – IV
Glassware	Page 1 – 167
Plastics	Page 168 – 188
Hardware	Page 189 – 195
Ceramics	Page 196 – 205
Glass Tubing	Page 206
Paper Product	Page 207 – 208
Technical Information	Page 209 – 218
Index by catalogue number	Page 219 – 236

INDEX BY NAME

A

Absorption tubes	130
Acidity test, Dairyware	32
Adapters	
cone/screwthread	75
cone/tubing	73, 76
distillation	77, 80-81
expansion	73
multiple	73, 74
receiver/recovery	76-78
receiver, pig	77
receiver, vacuum	78
reduction	75
splash head	74
thermometer	76
Air condensers	79
Air/Steam inlet tube	89
Alcohol lamps	114
Allihn condensers	42, 80
Alpha sirop bottles	14
Alu seal, vials	165
Ampoules	1
Annealing dish	199, 201
Antibiotic flask	64
Apparatus	
arsine generator	1
distillation	38
titration	19
Arsine generator	1
Aspirator	
bottles	2, 181
stopcocks	3, 181
Autosampler vials	148

B

Babcock	
bottles	32, 33
pipettes	33
Baffled flasks	56
Balls	
glass	70
porcelain	205
Battery jars	71, 72
Beakers	
low form	3-6
plastic	169
porcelain	201
quartz	6
tall form	4, 5
Beehive shelf	204
Bell jars	72
Bell measures	99
Bench protector	208
Boiling flasks	42, 51-52
Bossheads	191
Bottles	
Alpha sirop	14
aspirator	2, 181
BOD	12
caps & rings	8, 9, 15
carboy	15, 182-183
culture	14
dairy	32-33
Dreschel	16
dropping	11, 174

gas washing	16
Handyboy	183
laboratory	6, 7, 8, 10-13, 171-174, 181-182
media	6, 7, 8, 10
powder	13
reagent	6-8, 10-13, 171-174, 181-182
reservoir	2
serum	158-159
specific gravity	18-19
universal	161
wash	174-175
weighing	17-18
wide neck	14
Winchester	13, 14
Woulff	15
Buchner	
flasks	63-64
funnels	48-49, 203-204
Bulb pipettes	111-112
Burette holders	192
Burettes	19-21, 32, 181

C

Calcium Chloride Towers	78
Caps & rings	8-10, 12, 15, 61, 139, 161-164, 179-180
Carboys	15, 182-183
Centrifuge Tubes	131-136, 176-177
Chromatography	
columns	23-28, 108
HPLC	28-30
paper	208
tanks	21
TLC spray	31
Clamps	190, 194-195
Clips	
conical joints	192, 194-195
spherical joints	195
Cold test jar	72
Columns	
chromatography	23-28, 108
fractionating	78-79
Combustion boat	205
Condensers	
air	79
Allihn	42, 80
Davies	79
Graham	80
jacketed coil	80
Liebig	79
Cones	
Imhoff	100
standard joints	90
Cone/screwthread adapters	75
Conical	
flasks	1, 53-56, 83, 109, 170
measures	99
Connectors, tubing	74, 90, 93, 186, 187
Coolers	
cryo	183
mini	184
quick freeze	184
Cover slips, microscope	102-103
Crucibles	
filter	198
Gooch	51, 198

INDEX BY NAME

lid 197
low form 197-198
medium form 197
swelling 199
tall form 197-198
tong 193-194
volatile liquid 199

Cryo
cooler 183
racks 185, 187
vials 176

Crystallising dishes 36

Culture
bottles 14
flasks 52-53, 185
plates 37-38, 176, 187
tubes 138-144

Cuvette racks 188

Cylinders
measuring 96-98, 180
mould blown 32
Nessler 137
soil testing 100

D

Dairyware
acidity test 32
bottles 32-33
burettes 32
pipettes 33
stirring rods 32
Davies condensers 79

Desiccators
non-vacuum 34, 180
plate 35, 204
stopcocks 35
vacuum 34-35, 181

Dilatometer 146

Disc, desiccators 35, 204

Dishes
annealing 199, 201
crystallising 36
Dappens 37
embryo 35
evaporating 37, 200-202
petri 37-38, 176, 187

Dissolution vessel 38

Distillation
apparatus 38, 81
flasks 62

Dreschel bottles 16

Dropping
bottles 11, 174
funnels 88

Drying tubes 89

E

Erlenmeyer flasks 1, 53-56, 83, 109, 170
Evaporating dishes 37, 200-202
Expansion adapters 73
Extraction thimble 50
Extractors, Soxhlet 41-42

F

Fat extraction flask 64
Fermentation lock 89

Filter
crucibles 198
discs 39-40
flasks 63-64, 82
funnels 50, 66-67, 81, 171, 203
paper 207-208
tubes 50

Filtration, holders 43-48, 186,

Flasks
antibiotic 64
baffled 56
boiling 42, 51-52
Buchner 55, 63-64
conical 1, 53-56, 83, 109, 170
culture 52-53, 185
distillation 62
dropping 87
Erlenmeyer 1, 53-56, 83, 109, 170
fat extraction 64
filter 63-64, 82
flat bottom 41-42, 52
Florentine 85
fractionating 63
heart shaped 84
incubation 64
Kjeldhal 83
pear shaped 38, 84
reaction 65-66, 147
round bottom 86-88
volumetric 57-62, 170

Float racks 187

Florentine flasks 85

Fractionation-apparatus 81

Fractionation-columns 78-79

Fractionation-flasks 63

Funnels
Buchner 48-49, 203-204
dropping 88
filter 50, 66-67, 81, 171
holders 192
powder 67, 82
pressure equalising 82
ribbed 67
separating 67-70, 171

G

Gas dispersion tubes 49
Gas jars 113-114
Gas syringes 123
Gas washing bottles 16
Gooch crucibles 51
Graduated pipettes 110-111, 175
Graham condensers 80

H

Hardware
bosshead 191
clamp 190, 192
jack 194
retort, base 189
retort, ring 191-192
retort, rod 189
retort, stand 189-190
test tube holders 193
tongs 193-194

INDEX BY NAME

Headspace vials 148
Homogenisers 124-130
HPLC, reservoir 28-30
Hydrolysis tube 121

I

Incubation flask 64
Irrigator 2

J

Jacketed coil condensers 80
Jars
 ball mill 205
 bell 72
 cold test 72
 gas 113-114
 lotion 2
 museum 71-72
 staining 35, 70-71
 troughs 71, 123
 wide neck 14
Jerricans 183
Joint clips
 conical 192, 194-195
 spherical 195
Joints
 cones 90
 screwthreads 92
 sockets 91
 spherical 91-92

K

KIM-KAPS 143
Kipps Apparatus 94
Kjeldahl flasks 83

L

Lab jack 194
Laboratory bottles 6, 7, 8, 10-13, 171-174, 181-182
Liebig condensers 79

M

Manifold, vacuum 146
Measures
 bell 99
 conical 99
Measuring cylinders 96-98, 180
Measuring jugs 204
Media bottles 6-8, 10-12, 171-174, 181-182
Melting point tubes 131
Micro pipettes 113
Microfiltration assembly 43-48, 186
Microscope
 cover slips 102-103
 slides 101, 104
 slides, racks 187
Mini cooler 183-184
Mixing Pots 37
Mortar & Pestles 100, 202-203
Mould blown cylinders 32
Multiple adapters 74

N

Nessler cylinders 137
NMR
 caps 107-108
 manifold 107
 pipettes 109
 rack 188
 tubes 105-107
 valve 123
 washer 109

O

Oak Ridge centrifuge tubes 176

P

Paper
 chromatography 208
 filter 207-208
Pasteur pipettes 113, 175
Pear shaped flasks 38, 84
Petri dishes 37-38, 176, 187
Pharmacy measures 99
Pipettes
 bulb 111-112, 194
 dairy 33
 graduated 110-111, 175
 micro 113
 NMR 109
 pasteur 113, 175
 pump 194
 rack 188
Plastic bottles 171-174, 181-182
Pneumatic troughs 123
Powder
 bottles 13-14
 funnels 67, 82
Pressure equalising funnels 82
Profiles, borosilicate glass 206
Pump, pipettes 194

R

Racks
 cryo 185, 187
 cuvette 188
 float 187
 NMR 188
 pipette 188
 slides 187
 test tube 187-188
 vials 185
Reaction flasks 65-66, 147
Reagent bottles 6-8, 10-13, 171-174, 181-182
Receiver adapters 76-78
Reduction adapters 75
Reservoir bottles 2
Retort
 base 189-190
 ring support 191-192
 rod 189
 stand 189-190
Ribbed funnels 67
Rod, borosilicate glass 206
Rods, stirring 114

INDEX BY NAME

Round bottom flasks 86-88
 Rubber plug seals 166

S

Schlenk tubes 147
 Scintillation vials 157-158, 178-179
 Scoops, weighing 167
 Screwthread joints 92
 Separating funnels 67-70, 171
 Septa, vials 164
 Serum bottles 158, 159
 Sets, Interchange 94-96
 Shell vials 160
 Sintered discs 39-40
 Sintered filter tubes 50
 Slides, microscope 101, 104
 Sockets, standard joint 91
 Soil testing cylinders 100
 Soxhlet extractors 41-42
 Specific gravity bottles 18-19
 Specimen
 containers 177
 tubes 178
 Spherical joints 91-92
 Splash head adapters 74
 Spotting capillaries 31
 Spotting plate 204
 SSR vials 149
 Staining jars 70-71
 Still heads 77, 80
 Stirring
 rods 32, 114
 spattle 205
 Stopcocks
 aspirator 3, 181
 burette 3
 desiccators 35
 glass 24, 32, 115-121
 PTFE 116-117
 needle valve 118-119
 vacuum 116-122
 Stoppers
 glass 62, 89
 rubber/plastic 62, 159, 165
 Syringes 123, 170

T

Tanks
 chromatography 21
 laboratory 123
 TLC 21, 31
 Test tubes 138, 144-145
 Test tube holder 193
 Test tube racks 187-188
 Thermometer
 adapters 76
 pockets 89
 Thermometers 19
 Tissue grinders 124-130
 Titration apparatus 19
 TLC capillaries 31
 TLC spray, chromatography 31
 TLC tank 21, 31
 Tongs 193-194
 Tubes
 absorption 130

air/steam inlet 89
 caps 143
 centrifuge 131-136, 176-177
 connecting 74, 90, 93, 186, 187
 culture 138-144
 drying 89
 gas dispersion 49
 hydrolysis 121
 melting point 131
 NMR 105-107
 Schlenk 147
 specimen 178
 test 138, 144-145
 viscosity 146
 Tubing connectors 74, 90, 93, 186, 187
 Tubing
 borosilicate 206
 capillary 206
 soda 206

U

Universal media vials 161

V

Vacuum manifold 146
 Vacuum stopcocks 116-122
 Vials
 racks 185
 alu seal 165
 alu seal, micro 151, 166
 autosampler 148
 cryo 176
 EPA 151
 headspace 148
 scintillation 157-158, 178-179
 screw 152-157, 159
 screw, micro 149-150
 septa 164
 shell 160
 SSR 149
 stoppers 159, 165
 tooled 161
 universal 161
 Viscometer tubes 146
 Volatile liquid crucible 199
 Volumetric flasks 57-62, 170

W

Wash bottles 174-175
 Watch glasses 167
 Weighing
 boats 205
 bottles 17-18
 scoops 167
 Winchester bottles 13
 Woulff bottles 15

Ampoules, Trimmed Stem, Score-Break, Pull seal

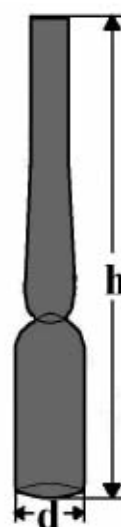
Clear N-51A (Kimble-51) Type I Borosilicate Glass

Code	Capacity ml	Pack Content	Body O.D. (mm)	Body Length (mm)	Overall Length (mm)
K12010L /1	1	1152	10.75	22	67
K12010L /2	2	1152	12.0	30	75
K12010L /5	5	864	16.75	37	88
K12010L /10	10	576	19.5	52	107
K12010L /20	20	288	23.0	75	135

**Ampoules, Amber Score-Break, Pull seal**

Amber 203 Kimble Glass U.P.S Type I Borosilicate Glass

Code	Capacity ml	Pack Content	Body O.D. (mm)	Body Length (mm)	Overall Length (mm)
K12040G /1	1	144	10.75	22	67
K12040G /2	2	144	12.0	30	75

**Arsine Generator**

Kimble KG-33 Borosilicate Glass ASTM D 2972 84

Code	Capacity ml	Pack Content	Joint	Body Joint	Overall HxW (mm)
K241100/0000	125	1	24/40	12/2	250x140

Parts Scrubber

Code	Pack Content	Type
K241101/2440	1	Scrubber 24/20 12/2
K241102/0000	1	Absorber Tube 12/2
K617000/0224	1	Erlenmeyer Flask 24/40, 125ml
K675000/0012	1	Pinch Clamp, Size 12

Accessory

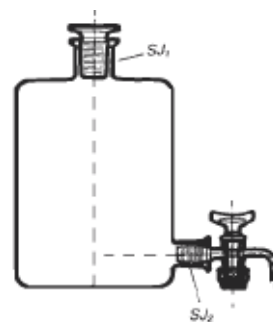
Code	Pack Content	Type
K675300/0024	1	Polyacetal Clamp, 24/40 and 24/25 Joint



Aspirators with SJ and Stopcock

Simax Borosilicate Glass, PN 70 4606

Code	Capacity ml	Pack Content	d mm	h mm	SJ1	SJ2
2038 /500	500	4	95	145	19/26	19/26
2038 /1000	1000	4	110	180	24/29	19/26
2038 /2000	2000	3	135	225	29/32	19/26
2038 /5000	5000	3	180	316	45/40	24/29
2038 /10000	10000	1	225	380	50/42	29/32
2038 /15000	15000	1	260	420	50/42	29/32
2038 /20000	20000	1	278	502	50/42	29/32

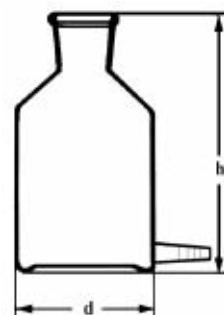


FOR OUR RANGE OF PLASTIC ASPIRATORS, PLEASE SEE PAGE 181.

Reservoir, with hose outlet

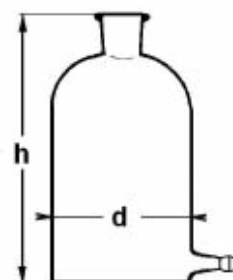
KIMAX KG-33 Borosilicate Glass, ASTM E438, Type I, Class A

Code	Capacity ml	Pack Content	d mm	h mm	Neck ID (mm)	Stopper size
K14607 /250	250	6	72	132	18	2
K14607 /500	500	6	89	165	22	4
K14607 /1000	1000	1	110	200	27	6
K14607 /2000	2000	1	136	250	27	6
K14607 /5000	5000	1	183	320	42	10
K14607 /10000	10000	1	230	400	58	11.5
K14607 /20000	20000	1	290	495	58	11.5

**Aspirator**, ribbed for plastic tube connection

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm
2040 /250	250	12	65	132
2040 /500	500	12	81	167
2040 /1000	1000	6	102	195
2040 /2000	2000	3	135	244

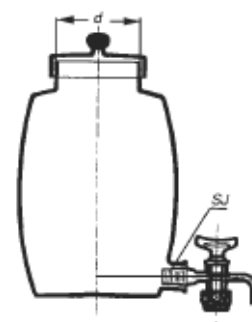


FOR OUR RANGE OF PLASTIC ASPIRATORS, PLEASE SEE PAGE 181.

Irrigator, barrel shape

Simax Borosilicate Glass

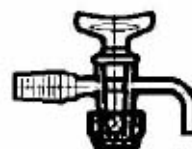
Code	Capacity ml	Pack Content	d mm	SJ
827/R/5	5000	1	100	29/32
827/R/10	10000	1	127	29/32
827/R/20	20000	1	160	29/32



Spare Parts**Aspirator Stopcock** for 2035 and 2038

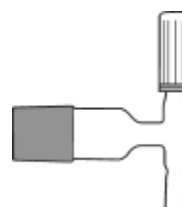
Simax Borosilicate Glass

Code	Size SJ	Pack Content
2038/SJ19/26	19/26	1
2038/SJ24/29	24/29	1
2038/SJ29/32	29/32	1

**Aspirator Stopcock**, PTFE

Borosilicate Glass

Code	Size SJ	Pack Content
2038/ST/24	24/29	1

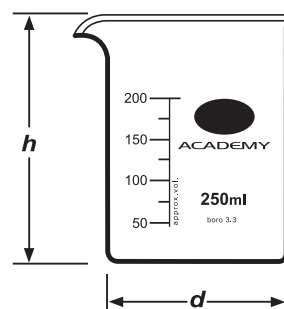


FOR MORE STOPCOCKS, PLEASE SEE PAGES 115-122.

Beaker, low form

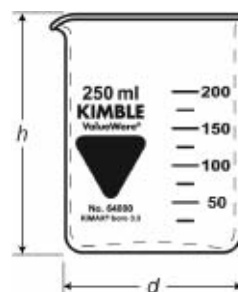
Academy Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm
A/2218/25	25	12	34	50
A/2218/50	50	12	42	60
A/2218/100	100	12	50	70
A/2218/150	150	12	60	80
A/2218/250	250	12	70	95
A/2218/400	400	12	80	110
A/2218/600	600	6	90	125
A/2218/1000	1000	6	105	145
A/2218/2000	2000	4	130	190
A/2218/3000	3000	2	150	210

**Beaker**, low form

Kimble 3.3 Borosilicate Glass, ISO 3819

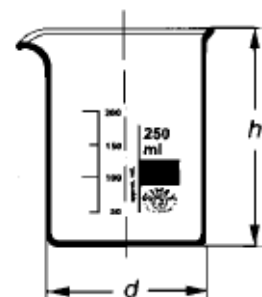
Code	Capacity ml	Pack Content	d mm	h mm
K64000/10	10	10	26	35
K64000/25	25	10	34	50
K64000/50	50	10	42	60
K64000/100	100	10	50	70
K64000/150	150	10	60	80
K64000/250	250	10	70	95
K64000/400	400	10	80	110
K64000/600	600	10	90	125
K64000/800	800	10	100	135
K64000/1000	1000	10	105	145
K64000/2000	2000	1	130	190
K64000/3000	3000	1	150	210
K64000/5000	5000	1	170	270



Beaker, low form

Simax Borosilicate Glass, ISO 3819

Code	Capacity ml	Pack Content	d mm	h mm
I55/5	5	10	22	30
I55/10	10	10	26	35
I55/25	25	10	34	50
I55/50	50	10	42	60
I55/100	100	10	50	70
I55/150	150	10	60	80
I55/250	250	10	70	95
I55/400	400	10	80	110
I55/600	600	10	90	125
I55/800	800	10	100	135
I55/1000	1000	10	105	145
I55/2000	2000	4	130	190
I55/3000	3000	4	150	210
I55/5000	5000	2	170	270
I55/10000	10000	1	217	350

**Beaker, low form, with handle**

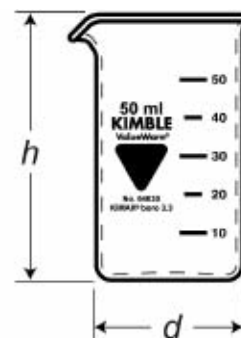
Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm
I54/250	250	6	70	95
I54/400	400	6	80	110
I54/600	600	6	90	125
I54/1000	1000	2	105	145

**Beaker, tall form**

Kimble 3.3 Borosilicate Glass, ISO 3819

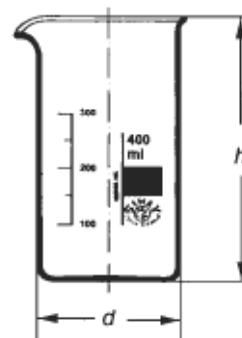
Code	Capacity ml	Pack Content	d mm	h mm
K64030/50	50	10	38	70
K64030/100	100	10	48	80
K64030/150	150	10	54	95
K64030/250	250	10	60	120
K64030/400	400	10	70	130
K64030/600	600	10	80	150
K64030/800	800	10	90	175
K64030/1000	1000	10	95	180
K64030/2000	2000	1	120	240
K64030/3000	3000	1	135	280



Beaker, tall form

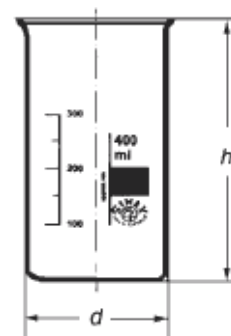
Simax Borosilicate Glass, ISO 3819

Code	Capacity ml	Pack Content	d mm	h mm
I53/50	50	10	38	70
I53/100	100	10	48	80
I53/150	150	10	54	95
I53/250	250	10	60	120
I53/400	400	10	70	130
I53/600	600	10	80	150
I53/800	800	10	90	175
I53/1000	1000	10	95	180
I53/2000	2000	6	120	240
I53/3000	3000	6	135	280

**Beaker, tall form without spout**

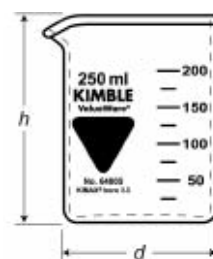
Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm
I52/50	50	10	38	70
I52/100	100	10	48	80
I52/150	150	10	54	95
I52/250	250	10	60	120
I52/400	400	10	70	130
I52/600	600	10	80	150
I52/800	800	10	90	175
I52/1000	1000	10	95	180

**Beaker, heavy wall, low form**

Kimble 3.3 Borosilicate Glass, ASTM E960 Type II

Code	Capacity ml	Pack Content	d mm	h mm
K64005/150	150	10	58	88
K64005/250	250	10	68	92
K64005/400	400	10	78	114
K64005/600	600	10	88	122
K64005/1000	1000	10	108	152
K64005/2000	2000	4	131	193
K64005/4000	4000	1	161	252



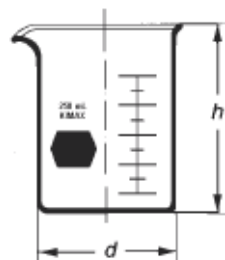
**This product is not
recommended for use
on hot plates**

FOR PLASTIC BEAKERS, PLEASE SEE PAGE 169.
FOR CERAMIC BEAKERS, PLEASE SEE PAGE 201.

Beaker, With coloured markings, low form

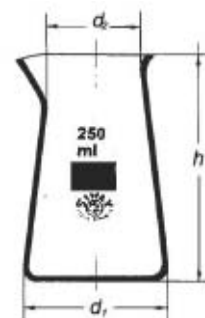
Kimble KG-33 Borosilcate Glass, ASTM E960 Type I

Code	Capacity ml	Pack Content	d mm	h mm
K14000 _ /50	50	12	58	88
K14000 _ /150	150	12	78	114
K14000 _ /250	250	12	88	122
K14000 _ /400	400	12	108	152
K14000 _ /600	600	6	131	193
K14000 _ /1000	1000	6	161	252

↑ Please add a **B** for blue, **Y** for yellow, **R** for Red and **G** for Green after the K14000**Beaker, philips, low form, with Spout**

Simax Borosilicate Glass, PN 70 0122

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
161/150	150	10	57	40	91
161 /250	250	10	68	48	110
161/500	500	10	88	61	145
161/1000	1000	10	112	70.5	184

**Beaker/ Crucible, Quartz**

Kimble Quartz Glass,

Code	Capacity ml	Pack Content	O.D. mm	h mm
K319010/0050	50	1	49	50

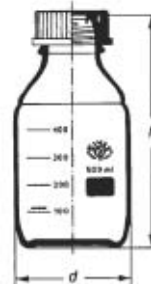
**Replacement parts**

Code	
K319011/0050	Beaker only
K319012/0050	Cover only

Laboratory Bottle, clear, graduated, complete with blue screw cap and pouring ring 140°C

Simax Borosilicate Glass, ISO 4796-I with thread ISO GL45

Code	Capacity ml	Pack Content	d mm	h mm
2070/100	100	10	56	100
2070/250	250	10	70	138
2070/500	500	10	86	176
2070/1000	1000	10	101	225
2070/2000	2000	10	136	260
2070/5000	5000	6	186	330
2070/10000	10000	1	234	410
2070/20000	20000	1	299	505

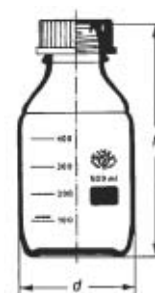
Plastic coating available on request,
please request price detail

Laboratory Bottle, Safety coated, clear, graduated, complete with blue screw cap and pouring ring

Simax Borosilicate Glass, ISO 4796-I with thread ISO GL45, autoclaving not advised

Code	Capacity ml	Pack Content	d mm	h mm
2070PC/100	100	10	56	100
2070PC/250	250	10	70	138
2070PC/500	500	10	86	176
2070PC/1000	1000	10	101	225
2070PC/2000	2000	10	136	260
2070PC/5000	5000	6	186	330

Other sizes available upon request



Laboratory Bottle, amber, graduated, complete with blue screw cap and pouring ring 140°C

Simax Borosilicate Glass, ISO 4796-I with thread ISO GL45

Code	Capacity ml	Pack Content	d mm	h mm
2070H/100	100	10	56	100
2070H/250	250	10	70	138
2070H/500	500	10	86	176
2070H/1000	1000	10	101	225
2070H/2000	2000	10	136	260
2070H/5000	5000	6	186	330
2070H/10000	10000	1	234	410
2070H/20000	20000	1	299	505

Other sizes available upon request

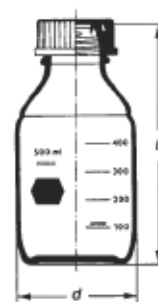


Plastic coating available on request, please request price

Laboratory Bottle, clear, graduated with blue screw cap and pouring ring

Kimble Borosilicate Glass, ISO 4796 with thread ISO GL45

Code	Capacity ml	Pack Content	GL	d mm	h mm
K14395/100	100	10	45	56	100
K14395/250	250	10	45	70	138
K14395/500	500	10	45	86	176
K14395/1000	1000	10	45	101	225
K14395/2000	2000	4	45	136	262
K14395/5000	5000	1	45	186	355
K14395/10000	10000	1	45	234	435

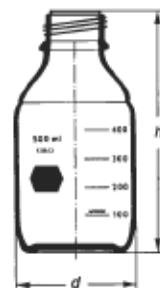


FOR PLASTIC BOTTLES, PLEASE SEE PAGES 171-175.

Laboratory Bottle, clear, graduated without cap

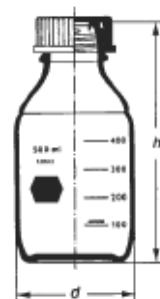
Kimble Borosilicate Glass, ISO 4796 with thread ISO GL45

Code	Capacity ml	Pack Content	GL	d mm	h mm
KI4396/100	100	10	45	56	100
KI4396/250	250	10	45	70	138
KI4396/500	500	10	45	86	176
KI4396/1000	1000	10	45	101	225
KI4396/2000	2000	4	45	136	262
KI4396/5000	5000	1	45	186	355
KI4396/10000	10000	1	45	234	435

**Laboratory Bottle**, clear, safety coated, graduated with blue cap and pouring ring

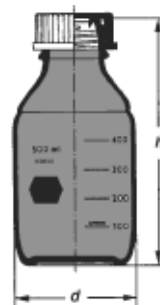
Kimble Borosilicate Glass, ISO 4796 with thread ISO GL45

Code	Capacity ml	Pack Content	GL	d mm	h mm
KKCI4395/100	100	10	45	56	100
KKCI4395/250	250	10	45	70	138
KKCI4395/500	500	10	45	86	176
KKCI4395/1000	1000	10	45	101	225
KKCI4395/2000	2000	4	45	136	262
KKCI4395/5000	5000	1	45	186	355
KKCI4395/10000	10000	1	45	234	435

**Laboratory Bottle**, graduated with blue cap RAY-SORB, Amber

Kimble Borosilicate Glass, ISO 4796 with thread ISO GL45

Code	Capacity ml	Pack Content	GL	d mm	h mm
KI4399/500	500	10	45	86	176
KI4399/1000	1000	10	45	101	225
KI4399/2000	2000	4	45	136	262
KI4399/5000	5000	1	45	186	355
KI4399/10000	10000	1	45	234	435

**Replacements Caps and Pour Rings**
Screw Thread, GL 45 Colour Caps

Solid top polypropylene GL45 caps with internal moulded seal rings.

Code	Pack Content	Colour
KI4395C/45	10	Blue
KI4395C/451	10	White
KI4395C/453	10	Orange



Caps and pouring rings are autoclavable up to 140°C steam

FOR PLASTIC BOTTLES, PLEASE SEE PAGES 171-175.

Screw Thread, GL 45

Cap has a 0.2 micron PTFE membrane as a barrier to allow pressure equilibrium during low temp (140 deg C max) autoclaving

Code	Pack Content	Type
K14395M/45	10	Membrane Cap

**Screw Thread, GL 45 Red Caps**

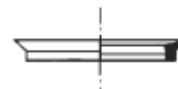
High Temperature 180°C

Code	Pack Content	Type
K14395H/452	10	Polybutylene Terephthalate

**Spare Pour Ring, GL45 Polypropylene / EFTE**

High Temperature 180°C

Code	Pack Content	Type	Max. Temp.
K14395P/45	10	Polypropylene, Clear	140°C
K14395E/452	10	EFTE, Red, High Temp	180°C

**Spare Screw Cap, GL45**

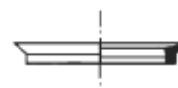
Polypropylene

Code	Pack Content	Type	Max. Temp.
2070/TOP	10	Polypropylene, Blue	140°C steam

**Spare Pour Ring, GL45**

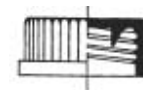
Polypropylene

Code	Pack Content	Type	Max. Temp.
2070/POUR	10	Polypropylene, Blue	140°C steam

**Spare Screw Cap, GL45**

PBT with PTFE/Silicon faced seal

Code	Pack Content	Type	Max. Temp.
2070/TOP/R	10	PBT, Red	200°C

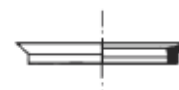


Red caps are autoclavable up to 200°C hot air sterilisation

Spare Pour Ring, GL45

PBT

Code	Pack Content	Type	Max. Temp.
2070/POUR/RED	10	PBT, Red	200°C



Red pouring rings are autoclavable up to 200°C hot air sterilisation

Bottle Storage/Media,

Kimble KG-35 Borosilicate Glass, Screw thread, with Black Polypropylene Closure with PTFE Silicone liner.

Code	Capacity ml	Pack Content	Subdivision ml	O.D. mm	Height mm	GPI Thread
K61110P/125	125	48	25	55	123	33-430
K61110P/250	250	48	25	70	150	33-430
K61110P/500	500	24	50	88	192	33-430
K61110P/1000	1000	12	50	102	226	38-430
K61111P/1000	1000	12	50	102	225	33-430



Also available with white rubber lined closure. Please ask for details

Bottle Storage/Media,

Kimble KG-35 Borosilicate Glass, Screw thread, without Closure

Code	Capacity ml	Pack Content	Subdivision ml	O.D. mm	Height mm	GPI Thread
K61110/125	125	48	25	55	119	33-430
K61110/250	250	48	25	70	147	33-430
K61110/500	500	24	50	88	188	33-430
K61110/1000	1000	12	50	102	222	38-430
K61110A/1000	1000	12	50	102	222	33-430

**Accessory Closure**

Code	Pack Content	Type
K73802/33430	144	Closure, Phenolic, with PTFE-Faced Rubber Liner, 33-430
K73802/38430	144	Closure, Phenolic, with PTFE-Faced Rubber Liner, 38-430
K73803/33430	144	Closure, Phenolic, with Rubber Liner, 33-430
K73803/38430	144	Closure, Phenolic, with Rubber Liner, 38-430



Academy Reagent Bottles, plain with ground inside narrow neck, clear with dustproof Polypropylene plastic stopper
Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2009/B/30/P	30	10	34	83	14.5/23
2009/B/50/P	50	10	43	86	14.5/23
2009/B/100/P	100	10	53	113	14.5/23
2009/B/250/P	250	10	72	140	24/29
2009/B/500/P	500	10	87	174	24/29



Academy Reagent Bottles, plain with ground inside narrow neck, clear with dustproof Polypropylene plastic stopper
Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2009/B/1000/P	1000	10	87	211	29/32
2009/B/2000/P	2000	6	87	260	29/32



Academy Reagent Bottles, plain with ground inside narrow neck,
amber with dustproof Polypropylene plastic stopper
Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2009/H/50/P	50	10	43	86	14.5/23
2009/H/100/P	100	10	53	113	14.5/23
2009/H/250/P	250	10	72	140	19/26
2009/H/500/P	500	10	87	174	24/29
2009/H/1000/P	1000	10	87	211	29/32
2009/H/2000/P	2000	6	87	260	29/32



Academy Dropping Bottle, clear
Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2009/D/30	30	10	34	124	14.5/23
2009/D/50	50	10	43	126	14.5/23
2009/D/100	100	10	53	153	14.5/23



Academy Dropping Bottle, amber
Soda Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2009/DA/50	50	10	43	126	14.5/23
2009/DA/100	100	10	53	153	14.5/23



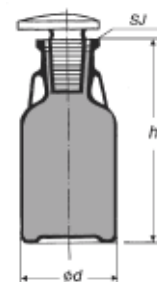
TK Dropping Bottle with flat stopper, clear
Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2020/CLEAR/50	50	96	44	92	14.5/23
2020/CLEAR/100	100	70	55	106	14.5/23



TK Dropping Bottle with flat stopper, amber
Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2021H/30	30	30	39	113	14.5/23
2020/50/AMBER	50	96	44	92	14.5/23
2020/100/AMBER	100	70	55	106	14.5/23



Bottle, Biochemical Oxygen Demand, (B.O.D) with glass stopper

Kimble KG-33 Borosilicate Glass, ASTM E438

Code	Capacity ml	Pack Content	Number Sequence	d mm	h mm	Neck I.D. mm
K15070/00	300	24	un-numbered	69	165	16.7
K15070/01	300	24	01-25	69	165	16.7
K15070/25	300	24	25-48	69	165	16.7

**Replacement parts**

Code	Capacity ml	Pack Content	Description
K15070G/00	300	24	Bottle only, un-numbered
K15070L/99	-	50	Accessory part – Snap-lids

Reagent Bottle, narrow mouth with glass stopper

Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2002/_/50	50	48	41.5	77	14.5/15
2002/_/100	100	70	51.5	103	14.5/23
2002/_/250	250	30	69	131	19/26
2002/_/500	500	15	85	163	24/29
2002/_/1000	1000	12	106.5	199	29/32
2002/_/2000	2000	6	132	245	29/32

↑ For **clear** please add a B after the 2002/ and for **amber** please add an H after the 2002/**Reagent Bottle, wide mouth with glass stopper**

Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2006/_/50	50	48	41.5	76	24/20
2006/_/100	100	70	51.5	95	29/22
2006/_/250	250	30	69	128	34.5/24
2006/_/500	500	15	85	162	45/27
2006/_/1000	1000	12	106.5	187	60/31
2006/_/2000	2000	6	132	238	60/31

↑ For **clear** please add a B after the 2006/ and for **amber** please add an H after the 2006/**Reagent Bottle, wide mouth with glass stopper**

Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Standard Joint
2006/_/5000	5000	3	181	338	85/55

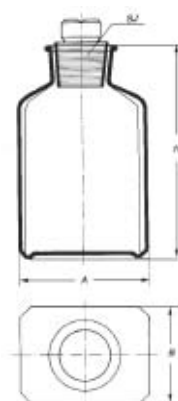
↑ For **clear** please add a B after the 2006/ and for **amber** please add an H after the 2006/

Reagent Bottle, Square type wide mouth with glass stopper

Soda-Lime Glass

Code	Capacity ml	Pack Content	A mm	B mm	h mm	Standard Joint
2043/_/100	100	48	51	51	103	29/22
2043/_/150	150	18	70.5	51.5	103	29/22
2043/_/250	250	42	70	50	143	29/22
2043/_/350	350	30	71.5	71.5	153	34.5/24
2043/_/500	500	24	92	71.5	148	34.5/24

↑ For **clear** please add a B after the 2043/ and for **amber** please add an H after the 2043/

**Academy Clear Glass Winchester**

with narrow neck, Type III Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BW500C	500	24	80.2	187.1	R6/31



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

Academy Amber Glass Winchester

with narrow neck, Type III Amber Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BW500A	500	24	80.2	187.1	R6/31
BW1000A	1000	12	96.4	241.6	R6/31
BW2500A	2500	12	132.9	297.0	R6/31

**Academy Clear Glass Powder**

with wide neck, Type III Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BP015C	15	140	33.3	53.2	R3/28
BP030C	30	132	38.9	58.7	R3/33
BP060C	60	72	45.6	77.0	R3/38
BP40ZC	131	80	55.2	96.0	R3/38
BP175C	175	53	59.1	106.6	R3/48
BP250C	250	42	64.3	119.2	R3/48
BP500C	500	33	82.6	159.8	R3/58



Academy Amber Glass Powder

with wide neck, Type III Amber Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BP030A	30	127	38.9	58.7	R3/33
BP060A	60	72	44.8	76.2	R3/38
BP40ZA	131	68	54.0	95.2	R3/38
BP250A	250	42	64.3	119.2	R3/48
BP500A	500	28	82.6	159.8	R3/58
BP1000A	1000	12	103.1	187.0	R3/63

**Academy Clear Glass Straight Sides**

with wide neck, Type III Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BJ30C	30	110	40.5	46.0	R3/38
BJ60C	60	72	51.6	52.4	R3/51
BJ120C	120	48	62.3	63.9	R3/58
BJ250C	250	48	85.5	73.0	R3/83

**Academy Clear Glass Culture**

with Narrow neck, Type III Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BSF100C	100	90	50.8	142.1	R3/24
BSF150C	150	56	58.2	159.0	R3/24
BSF300C	300	36	71.8	196.1	R3/28

**Academy Clear Glass Alpha Sirop**

with narrow neck, Type III Soda-Lime Glass

Code	Capacity ml	Pack Content	d mm	h mm	Thread Type
BA200C	200	67	57.0	133.3	R3/28



CAPS FOR ALL OF THE ABOVE BOTTLES ARE AVAILABLE SEPARATELY,
PLEASE SEE PAGE 15.

IF YOU WOULD LIKE TO PURCHASE BOTTLES COMPLETE WITH CAPS,
PLEASE CALL FOR A QUOTATION.

Caps to fit Academy bottles**Academy Caps, Aluminium**

Aluminium with EPE liner

Code	Pack Content	Thread	To Fit
BR324AE	100	R3/24	BSF100C, BSF150C
BR328AE	100	R3/28	BSF300C

**Academy Caps, Black Urea**

with PVDC faced liner

Code	Pack Content	Thread	To Fit
BR328UPB	100	R3/28	BP015C
BR333UPB	100	R3/33	BP030C, BP030A
BR338UPB	100	R3/38	BP060C, BP060A, BP4OZA, BP4OZC, BJ30C
BR348UPB	100	R3/48	BP175C, BP250C, BP250A
BR351UPB	100	R3/51	BJ60C
BR358UPB	100	R3/58	BP500C, BP500A, BJ120C
BR363UPB	100	R3/63	BP1000A
BR383UPB	100	R3/83	BJ250C

**Academy Caps, Black Urea**

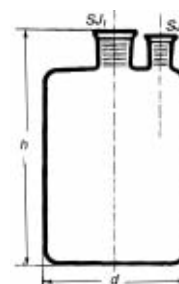
with Polycone liner

Code	Pack Content	Thread	To Fit
BR328PC	100	R3/28	BA200C
BR631PC	100	R6/31	BW500A, BW1000A, BW2500A

**Bottle, Woulff, two neck SJ**

Simax Borosilicate Glass PN70 4606

Code	Capacity ml	Pack Content	d mm	h mm	SJ1	SJ2
2032/500	500	4	95	145	19/26	19/26
2032/1000	1000	4	110	180	24/29	19/26
2032/2000	2000	3	135	225	29/32	19/26
2032/5000	5000	3	180	305	45/40	24/29
2032/10000	10000	1	225	380	50/42	29/32



3 necks also available with/without bottom outlets. Please enquire

Bottles, Solution (Carboy), Heavy-Duty with tooled neck

Kimble KG-33 Borosilicate Glass Federal Specification DD-B-597

Code	Capacity Litres	Pack Content	d mm	h mm	Capacity Gallons
K14950/25	9.5	1	222	392	2.5
K14950/35	13.2	1	257	448	3.5
K14950/500	19.0	1	294	502	5
K14950/120	45.5	1	410	584	12



Neck fit a No.12 rubber stopper

Bottles, Dreschel

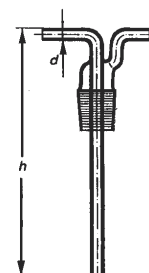
Glassco Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	SJ
8SMF/29/3/125	125	I	43	159	24/29
8SMF/29/3/250	250	I	55	191	24/29
8SMF/29/3/500	500	I	64	240	24/29

**Dreschel, bottle heads, plain**

Glassco Borosilicate Glass

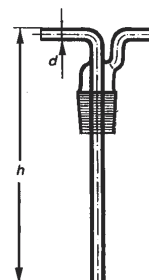
Code	To fit	Pack Content	Approx h mm	SJ
8SDHP12/3	125	I	215	24/29
8SDHP25/3	250	I	225	24/29
8SDHP50/3	500	I	309	24/29

**Dreschel, bottle heads, with sinter**

Borosilicate Glass

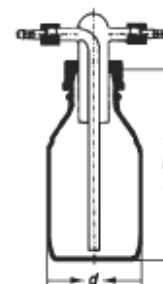
Code	To fit	Pack Content	Approx h mm	SJ	Porosity
8SDHS12/3/ _	125	I	215	24/29	1,2 or 3
8SDHS25/3/ _	250	I	225	24/29	1,2 or 3
8SDHS50/3/ _	500	I	309	24/29	1,2 or 3

↑ Please specify porosity of sinter and type when ordering.
For example for a sintered head porosity 2 to fit 125ml, 8SDHS12/3/2

**Bottles, gas washing, Dreschel**

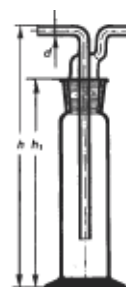
Simax Borosilicate Glass, PN 70 4057

Code	Capacity ml	Pack Content	GL	d mm	h mm
2451/500	500	I	45	86	176

**Bottles, gas washing, Dreschel**

Simax Borosilicate Glass, PN 70 4057

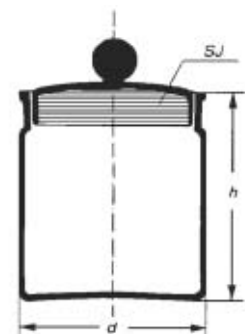
Code	Capacity ml	Pack Content	d mm	h mm	h1 mm
2450/100	100	10	8	250	200
2450/250	250	10	8	250	200
2450/500	500	10	8	250	200
2450/1000	1000	10	8	250	200



Weighing, Bottles, Tall form

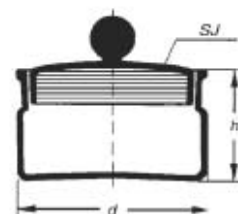
Kimble KG-33 Borosilicate Glass

Code	Approx. I.D. x H of body mm	Pack Content	Capacity mm	Assembled Height mm	SJ
K15145/1550	15x50	6	7	68	14/10
K15145/2540	25x40	6	12	62	24/12
K15145/2550	25x50	6	16	72	24/12
K15145/3060	30x60	6	30	85	29/12
K15145/4050	40x50	6	45	76	40/12
K15145/4080	40x80	6	70	106	40/12
K15145/5060	50x60	6	85	88	50/12

**Weighing, Bottles, Low form**

Kimble KG-33 Borosilicate Glass

Code	Approx. I.D. x H of body mm	Pack Content	Capacity mm	Assembled Height mm	SJ
K15165/5030	50x30	6	35	60	50/12
K15165/6030	60x30	6	50	58	60/12
K15165/7033	70x33	6	82	60	71/15

**Weighing, Bottles with joint**

Kimble KG-33 Borosilicate Glass

Code	Approx. I.D. x h of Body mm	Pack Content	Capacity mm	Assembled Height mm	SJ
K15146/2540	25x40	6	12	52	29/12
K15146/2550	25x50	6	16	62	29/12
K15146/3060	30x60	6	30	72	34/12
K15146/4050	40x50	6	45	64	45/12
K15146/4080	40x80	6	70	94	45/12
K15146/40100	40x100	6	92	114	45/12

**Replacement parts**

Code	
K15180/2912	Stopper Only, Cap Style, 33x24mm, 29/12
K15180/3412	Stopper Only, Cap Style, 39x24mm, 34/12
K15180/4512	Stopper Only, Cap Style, 50x26mm, 45/12

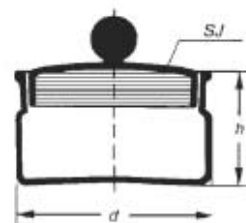
ALL ITEMS LISTED ARE ONLY PART OF THE EXTENSIVE RANGE WE CAN SUPPLY.

PLEASE LET US KNOW IF THERE ARE ANY OTHER ITEMS FOR WHICH WE CAN OFFER A QUOTATION.

Weighing Bottles, Low form

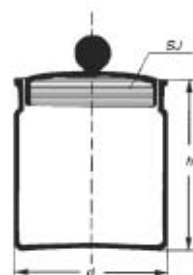
Simax Borosilicate Glass PN 70 0126

Code	dxh mm	Capacity ml	Pack Content	SJ
2602/34x30	34x30	11	10	29/12
2602/50x30	50x30	20	10	45/12
2602/50x50	50x50	54	10	45/12
2602/60x30	60x30	24	10	50/12
2602/60x40	60x40	48	10	50/12
2602/60x50	60x50	72	10	50/12
2602/80x30	80x30	46	8	71/12
2602/80x40	80x40	90	8	71/12

**Weighing Bottles, Tall form**

Simax Borosilicate Glass PN 70 0126

Code	dxh mm	Capacity ml	Pack Content	SJ
2602/25x40	25x40	8	10	19/12
2602/30x50	30x50	20	10	24/12
2602/30x60	30x60	25	10	24/12
2602/34x70	34x70	42	10	29/12
2602/40x80	40x80	65	10	34/12
2602/50x70	50x70	88	10	45/12

**Specific Gravity, Hubbard-Carmick**

KIMAX KG-33 Borosilicate Glass ASTM D70, I429, I15, I963

Code	Capacity mm	Pack Content	Dia mm	h mm	SJ
K15113/25	25	12	40	55	24/12

**Specific Gravity, Le Chatelier, Class A, Serialized**

KIMAX KG-33 Borosilicate Glass ASTM C188

Code	Capacity mm	Pack Content	Dia of bulb mm	h mm	SJ
K15115/24	24	1	90	285	13

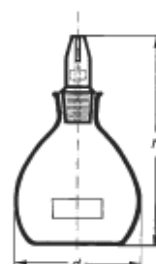
**Replacement parts**

Code	
K41900R/13	Stopper Only

Specific Gravity Bottle, Gay-Lussac

Borosilicate Glass

Code	Capacity ml	Pack Content	Dia mm	h mm
I621K/10	10	10	27	55
I621K/25	25	10	37	92
I621K/50	50	10	46	99
I621K/100	100	10	58	113



Specific Gravity, Pycnometer, Class A, Serialized

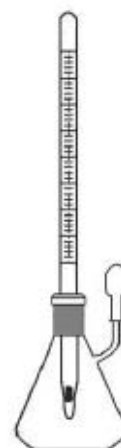
KIMAX KG-33 Borosilicate Glass ASTM D153

Code	Capacity ml	Pack Content	h mm
K15123R/10	10	1	168
K15123R/25	25	1	175
K15123R/50	50	1	186

Procedure for using 15123R bottle available on request

Spare parts

Code	
K15123T/1025	Thermometer only (14 to 38°C)

**Titration apparatus, glass stopcock and reservoir**

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	Subdivision ml	Permitted error ml
1580/BL/10	10	2	0.05	0.05
1580/BL/25	25	2	0.1	0.1
1580/BL/50	50	2	0.1	0.1

Other sizes and types available on request

**Burettes, straight bore with glass stopcock**

Glassco Borosilicate Glass DIN 12700, ISO 385

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm
1567/B/10	10	1	0.05	0.02	495
1567/B/25	25	1	0.1	0.05	530
1567/B/50	50	1	0.1	0.05	767
1567/B/100	100	1	0.2	0.10	785

Finer subdivision also available for 10 and 25ml on request

**Burettes, straight bore with PTFE stopcock**

Glassco Borosilicate Glass DIN 12700, ISO 385

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm
1567/BT/10	10	1	0.05	0.02	495
1567/BT/25	25	1	0.1	0.05	530
1567/BT/50	50	1	0.1	0.05	767
1567/BT/100	100	1	0.2	0.10	785

Finer subdivision also available for 10 and 25ml on request



Burettes, Class A, Serialized and certified, Straight Bore PTFE stopcock, with Dust Cap

KIMAX KG-33 Borosilicate Glass ASTM E287, Class A

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm	Kim-Kap mm
K17027F/10	10	1	0.05	0.02	664	13
K17027F/25	25	1	0.1	0.03	614	13
K17027F/50	50	1	0.1	0.05	745	16
K17027F/100	100	1	0.2	0.1	791	20

For spare KIM-KAPS see page G100



Burettes, Class B, Straight Bore PTFE stopcock, with Dust Cap

KIMAX KG-33 Borosilicate Glass ASTM E287, Class B

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm	Kim-Kap mm
K17026F/10	10	1	0.05	0.02	664	13
K17026F/25	25	1	0.1	0.03	614	13
K17026F/50	50	1	0.1	0.05	745	16
K17026F/100	100	1	0.2	0.1	791	20

For spare KIM-KAPS see page G100



Burettes, RAY-SORB Class B, Straight Bore PTFE stopcock, with Dust Cap

KIMAX KG-33 RAY-SORB Amber Glass

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm	Kim-Kap mm
K17033F/10	50	1	0.1	0.1	738	16



Burettes, Schell Bach Stripe, Straight bore with PTFE stopcock

Glassco Borosilicate Glass DIN 12700, ISO 385

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm
1567/BS/10	10	1	0.05	0.02	495
1567/BS/25	25	1	0.1	0.05	530
1567/BS/50	50	1	0.1	0.05	767



Burettes, Class B, Straight Bore PTFE stopcock, with Dust Cap

KIMAX KG-33 Borosilicate Glass ASTM E287, Class B

Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	o.d. mm	l mm
K17080F/250	250	1	1	2.00	36	544
K17080F/500	500	1	5	2.50	43	646
K17080F/1000	1000	1	10	5.00	52	780



Burettes, with detachable stopcock

Glassco Borosilicate Glass

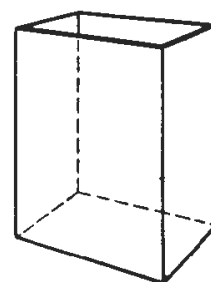
Code	Capacity ml	Pack Content	Subdivision ml	+/- Tol ml	l mm
7109/25	25	1	0.1	0.05	730
7109/50	50	1	0.1	0.05	770

**Tank** with Standard Lid

USP Type 3, Clear Soda-lime Glass

Code	Pack Content	Plate size wxh (mm)	Type
K416180/0000	1	20x20	TLC Developing Tank with Standard Lid
K416180/1020	1	10x10	TLC Developing Tank, "Shorty"

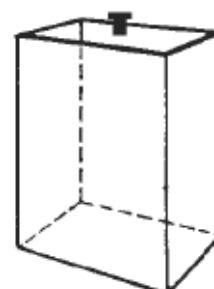
Code	Pack Content	Size l x w x h (cm)	Type
K416181/0000	1	Tank I.D. 27x7x25	TLC with Standard Lid

**Tank** with Nonslip Lid

USP Type 3, Clear Soda-lime Glass

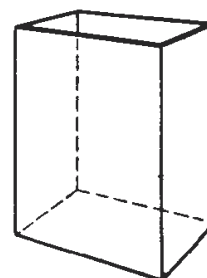
Code	Pack Content	Size lxwxh (cm)	Type
K416185/0000	1	Tank I.D. 27x7x25	TLC Developing Tank with Non Slip Lid

Code	Pack Content	Size l x w x h (cm)	Type
K416186/0000	1	Tank I.D. 27x7x25	TLC Non Slip Lid
K416182/0000	1	Tank I.D. 27x7x25	TLC Developing Tank Only

**Chromatography Tank**

Soda-Lime

Code	Pack Content	Size l x w x h (mm)	Type
1195/TANK	1	230x90x230	Chromatography Tank

**Accessories**

Soda-Lime

Code	Pack Content	Size mm	Type
1195/LID	1	230x90	Accessory, Lid only



CHROMATOGRAPHY

CHROMAFLEX Chromatography Columns have a unique design feature: PTFE shielded o-rings. Each end fitting has a thin PTFE layer that is curled over the o-ring to form a solvent resistant, leak free seal. CHROMAFLEX Columns can be used with all aqueous buffers without modification and with organic solvents when the optional PTFE bed supports are installed in the end fittings and flow adapters. CHROMAFLEX Columns are available in both standard and water jacketed versions.

Standard CHROMAFLEX Columns

Standard CHROMAFLEX Columns are available in three IDs (1.0, 2.5 and 4.8 cm) in five standard lengths (15, 30, 60, 100 and 120cm). Each column is supplied with two PTFE end fittings with 20 µm porosity polyethylene bed supports, 5 feet PTFE tubing (1/16" OD tubing with 1.0 cm, 1/8" OD tubing with 2.5 & 4.8 cm), 2 flangeless tubing nuts and 2 flangeless ferrules.

Jacketed CHROMAFLEX Columns

Jacketed CHROMAFLEX Columns are provided with an acrylic water jacket to provide thermal control of temperature sensitive chromatographic separations. The acrylic jacket also acts as a safety shield. Jacketed columns are available in all of the standard CHROMAFLEX Column sizes and supplied with the same tubing, nuts and ferrules.

Flow Adapters

CHROMAFLEX Flow Adapters allow easy adjustment of the column bed volume.

They are ideal for concentration and pH gradients, reverse flow separations, and gravity flow separations that require a high level of resolution and reproducibility. Flow adapters are available for all three standard ID columns.

Packing Reservoirs

The CHROMAFLEX Glass Reservoirs are ideal for packing gel slurries into columns and as buffer reservoirs for simple gravity flow chromatography. Each reservoir has been designed for easy mounting on all CHROMAFLEX Columns. The reservoir capacities are matched by column ID to take the amount of slurry required to pack the longest standard column. The reservoir end fitting has 1/4-28 threads for simple flangeless connection to a pump.

Flangeless 1/4-28 Fittings

All tubing connections to CHROMAFLEX Columns can be made with easy-to-use 1/4-28 flangeless fittings and either 1/16" OD, 1/8" OD or 1.8 mm OD tubing. Our complete line of fittings and adapters allow simple connection to any chromatography system.

Custom Length Columns

Certain applications may require a column length not found in our standard product offering.

Specifications

Materials

Column Barrels:	Type I, Class A Borosilicate Glass
End Fitting:	Polytetrafluoroethylene (PTFE)
Bed Support:	High Density Polyethylene (HDPE)
Water/Safety Jacket:	Acrylic (jacketed columns only)
Jacket Sealing Rings:	Polypropylene (jacketed columns only)
Bed Support Porosity:	20 micron nominal (for standard bed support)
Maximum Pressure*:	1.0 cm ID Columns - 100 psi (6.9 bar) 2.5 cm ID Columns 75 psi (5.2 bar) 4.8 cm ID Columns - 50 psi (3.4 bar)
Temperature Range:	0 to 50 °C
Tubing Connections:	1/4-28 flangeless fittings
Sterilization:	Ethylene Oxide, 2N NaOH or 100% Ethanol (autoclaving is not recommended)

CHROMATOGRAPHY**Column, Threaded, Standard, CHROMAFLEX**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Volume ml	Pressure psi/bar	ID mm	Length cm
K420830/1500	I	12	100/6.9	1.00	15
K420830/3000	I	24	100/6.9	1.00	30
K420830/6000	I	47	100/6.9	1.00	60
K420830/1000	I	79	100/6.9	1.00	100
K420830/1200	I	95	100/6.9	1.00	120
K420830/1510	I	74	75/5.2	2.50	15
K420830/3010	I	147	75/5.2	2.50	30
K420830/6010	I	295	75/5.2	2.50	60
K420830/1010	I	491	75/5.2	2.50	100
K420830/1210	I	589	75/5.2	2.50	120
K420830/1520	I	271	50/3.4	4.80	15
K420830/3020	I	543	50/3.4	4.80	30
K420830/6020	I	1086	50/3.4	4.80	60
K420830/1020	I	1810	50/3.4	4.80	100
K420830/1220	I	2172	50/3.4	4.80	120

Accessories

Code	Pack Content	Type
K420809/0510	I	Bed Support, PTFE, 1.0cm, 5µm, 1/pkg
K420809/0520	I	Bed Support, PTFE, 2.5cm, 5µm, 1/pkg
K420809/0540	I	Bed Support, PTFE, 4.8cm, 5µm, 1/pkg
K420809/1010	I	Bed Support, PTFE, 1.0cm, 10µm, 1/pkg
K420809/1020	I	Bed Support, PTFE, 2.5cm, 10µm, 1/pkg
K420809/1040	I	Bed Support, PTFE, 4.8cm, 10µm, 1/pkg
K420809/2010	I	Bed Support, PTFE, 1.0cm, 20µm, 1/pkg
K420809/2020	I	Bed Support, PTFE, 2.5cm, 20µm, 1/pkg
K420809/2040	I	Bed Support, PTFE, 4.8cm, 20µm, 1/pkg

Flow Adapter, Threaded, Standard, CHROMAFLEX

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Fits Column ID (cm)	Tubing OD Inches
K420836/0000	I	1.0	1/16
K420836/1620	I	2.5	1/16
K420836/0020	I	2.5	1/8
K420836/0040	I	4.8	1/8

Replacement Parts

Code	Pack Content	Fits Column ID (cm)	Type
K420811/2011	10	1.0	Bed Support, HDPE, 20µm porosity, pkg/10
K420811/2020	10	2.5	Bed Support, HDPE, 20µm porosity, pkg/10
K420811/2040	10	4.8	Bed Support, HDPE, 20µm porosity, pkg/10



Jacketed columns also available on request



Jacketed columns also available on request

Packing Reservoir, Threaded, Standard, CHROMAFLEX

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Fits Column ID (cm)	Volume ml
K420837/0000	I	1.0	150
K420837/0020	I	2.5	500
K420837/0040	I	4.8	2000

**CHROMATOGRAPHY****Column, with All-PTFE Stopcock Assembly**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	ID mm	Capacity ml	Length mm
K17800/11300	I	11	25	300
K17800/11500	I	11	45	500
K17800/19300	I	19	80	300
K17800/19500	I	19	135	500
K17800/22300	I	22	120	300
K17800/22500	I	22	200	500

Replacement Parts

Code	Pack Content	Type
K41006F	I	PTFE Stopcock Assembly for K17021H, K17800 and K29050H
K17802/99	6	Column Tip, Only for K17800, K17810 and K29050H 6

**Column, with Reservoir and All-PTFE Stopcock Assembly**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	ID mm	Capacity ml	Length mm
K17810/11300	I	11	250	300
K17810/19300	I	19	250	300

Replacement Parts

Code	Pack Content	Type
K41006F	I	PTFE Stopcock Assembly for K17021H, K17800 and K29050H
K17802/99	6	Column Tip, Only for K17800, K17810 and K29050H 6



Column, Plain, with PTFE Stopcock Plug

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	ID x length mm	Volume ml	Stopcock mm
K420530/0221	I	15x200	30	2
K420530/0225	I	15x500	80	2
K420530/0241	I	22x300	110	2
K420530/0242	I	22x350	130	2
K420530/0251	I	30x350	220	2
K420530/0252	I	30x400	250	2
K420530/0760	I	75x600	2579	4

Other sizes available on request



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

Column, chromatography with sintered disc Porosity 0

Simax Borosilicate Glass

Code	Pack Content	Diameter mm	Effective Length mm	SJ
8SR1/10	I	10	100	14/23
8SR1/20	I	10	200	14/23
8SR1/30	I	10	300	14/23
8SR1/40	I	10	400	14/23
8SR2/10	I	20	100	19/26
8SR2/20	I	20	200	19/26
8SR2/30	I	20	300	19/26
8SR2/40	I	20	400	19/26
8SR2/50	I	20	500	19/26
8SR3/30	I	26	300	24/29
8SR3/40	I	26	400	24/29
8SR3/50	I	26	500	24/29
8SR5/40	I	30	400	34/35
8SR5/50	I	30	500	34/35
8SR6/40	I	30	400	40/38
8SR6/50	I	30	500	40/38

Other sizes available on request



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

CHROMATOGRAPHY**Column, with Fritted Disc and PTFE Stopcock Plug**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Column ID x length (mm)	Nominal Volume (ml)	Plug Size mm
K420540/0213	I	11x300	20	2
K420540/0224	I	19x400	110	2
K420540/0233	I	22x300	110	2
K420540/0243	I	25x500	140	2
K420540/0245	I	25x500	240	2
K420540/0420	I	38x200	227	2
K420540/0430	I	38x300	340	2
K420540/0760	I	75x600	2579	4

Replacement Parts

Code	Pack Content	Type
K821001/0002	I	Stopcock plug, 2mm
K821001/0004	I	Stopcock plug, 4mm

**Column, Cadmium Reduction, BEVEL-SEAL Connections**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Reservoir mm	Height mm
K419000/8505	I	85	350

Component Parts

Code	Pack Content	Type
K419001/8505	I	Cadmium Reduction Column Only
K179740/0505	I	BEVEL-SEAL Stopcock Connector, 5 to 5 mm
K420823/0018	I	FEF Teflon® Tubing, 1/8", Pkg./10" (10" supplied)

**Column, Disposable, Polypropylene, DISPOSAFLEX**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Column ID x l ml	Column ml	Reservoir ml	Overall l mm
K420160/0000	100	8x200	8	9	265

Accessories

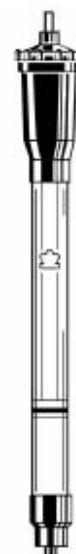
Code	Pack Content	Type
K420162/0000	100	Polyethylene Bed Support, 30-50. Microns
K420162/0020	100	Polyethylene Bed Support, 20 Microns
K420163/0000	50	1-Way On-Off Valve, Polycarbonate/Polyethylene
K420163/0001	10	1-Way Valve, Polycarbonate/Polyethylene
K420163/4503	10	3-Way Valve, Nylon/Polyethylene



CHROMATOGRAPHY**FLEX-COLUMN**, Economy Chromatography Columns

Kimble KG-33 Borosilicate Glass / PP / HDPE

Code	Pack Content	ID cm	Length cm	Max Volume	Cross sectional area cm ³
K420400/0704	10	0.7	4	2	0.39
K420401/0704	1	0.7	4	2	0.39
K420400/0710	10	0.7	10	4	0.39
K420401/0710	1	0.7	10	4	0.39
K420400/0715	10	0.7	15	6	0.39
K420401/0715	1	0.7	15	6	0.39
K420400/0720	10	0.7	20	8	0.39
K420401/0720	1	0.7	20	8	0.39
K420400/0730	10	0.7	30	12	0.39
K420401/0730	1	0.7	30	12	0.39
K420400/1005	10	1.0	5	4	0.79
K420401/1005	1	1.0	5	4	0.79
K420400/1010	10	1.0	10	8	0.79
K420401/1010	1	1.0	10	8	0.79
K420400/1015	10	1.0	15	12	0.79
K420401/1015	1	1.0	15	12	0.79
K420400/1020	10	1.0	20	16	0.79
K420401/1020	1	1.0	20	16	0.79
K420400/1030	10	1.0	30	24	0.79
K420401/1030	1	1.0	30	24	0.79
K420400/1505	5	1.5	5	9	1.77
K420401/1505	1	1.5	5	9	1.77
K420400/1510	5	1.5	10	18	1.77
K420401/1510	1	1.5	10	18	1.77
K420400/1515	5	1.5	15	27	1.77
K420401/1515	1	1.5	15	27	1.77
K420400/1520	5	1.5	20	35	1.77
K420401/1520	1	1.5	20	35	1.77
K420400/1530	5	1.5	30	53	1.77
K420401/1530	1	1.5	30	53	1.77
K420400/2510	5	2.5	10	49	4.91
K420401/2510	1	2.5	10	49	4.91
K420400/2515	5	2.5	15	74	4.91
K420401/2515	1	2.5	15	74	4.91
K420400/2520	5	2.5	20	98	4.91
K420401/2520	1	2.5	20	98	4.91
K420400/2550	3	2.5	50	246	4.91
K420401/2550	1	2.5	50	246	4.91
K420400/2511	2	2.5	100	491	4.91
K420401/2511	1	2.5	100	491	4.91



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

CHROMATOGRAPHY**Flow Adapter, Economy, FLEX-COLUMN Fitting**

Code	Pack Content	Type
K420408/0000	10	Polypropylene Barb for 1/16", tube to female luer
K420412/0000	10	Polypropylene Barb for 1/16", tube to male luer
K420163/0001	10	1-way stopcock female luer to male luer; body-nylon valve plug polyethylene
K420823/0116	10ft	FEF Teflon Tubing, 1/16" O.D. x 0.038" I.D.
K420823/0018	10ft	FEF Teflon Tubing, 1/8" O.D. x 0.038" I.D.



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

Flow Adapter, Economy, FLEX-COLUMN

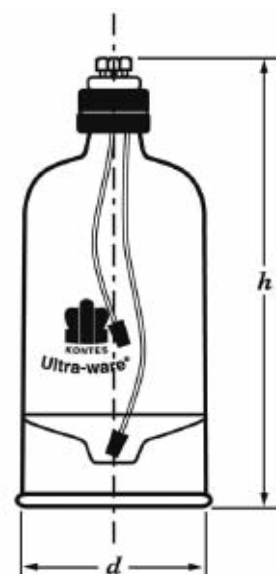
Code	Pack Content	Fits Column ID mm	Functional Length (cm)
K420415/1000	1	1	14
K420415/1500	1	1.5	14
K420415/2500	1	2.5	14

Flow adapter consist of 1/16" OD FEP Teflon® tubing, a polyacetal body, a viton® o-ring seal and a 20 µm porosity HDPE bed support

**HPLC (High Pressure Liquid Chromatography), Mobile Phase Three****Hole Cap System**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Reservoir Capacity (mm)	Height x Dia. mm
K953980-0252	1	250	245 x 85
K953980-0502	1	500	255 x 105
K953980/1002	1	1000	290 x 130
K953980/2002	1	2000	370 x 150
K953980/5002	1	5000	450 x 205
K953980/1003	1	10000	460 x 255
K953980/2003	1	20000	540 x 315



CHROMATOGRAPHY

HPLC Mobile Phase Economy Three Hole Cap System

Kimble KG-33 Borosilicate Glass

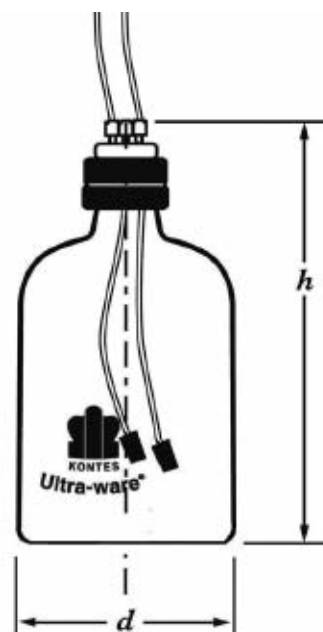
The ULTRA-WARE Flat bottom reservoirs are manufactured from Type I, Class A borosilicate glass with a plastic safety coating.

The plastic coating also blocks virtually all UV light up to 385 nm, preventing photo degradation of light sensitive mobile phases.

Code	Pack Content	Type
K953930/1002	1	Economy 3-Hole Cap system with 1 Litre Reservoir
K953930/2002	1	Economy 3-Hole Cap system with 2 Litre Reservoir
K953930/5002	1	Economy 3-Hole Cap system with 5 Litre Reservoir
K953930/1003	1	Economy 3-Hole Cap system with 10 Litre Reservoir

Parts Supplied with Three Hole Cap System

Code	Pack Content	Type
K953913/5000	1	Economy 3-Hole Cap
K953902/series	1	Ultra-Ware Flat Bottom Reservoir
K953916/3002	1	All PEEK Inlet/Spurge Filter, 2µm
K420821/0018	1	Flangeless Nut, ETFE, 1/4-28. 1/8"
K420822/0018	1	Flangeless Ferrule Nut, ETFE, 1/8"
K953913/0001	1	Nut plug, ETFE, 1/4-28
K420823/0018	1	FEF Teflon® Tubing, 1/8" O.D x 1/16" I.D. x 10ft



Safety System 3

Eliminates the safety hazards of aluminium foil-wrapped solvent containers.

This unique Solvent Bottle Adapter is made from PBT and converts ULTRA-WARE GL-45 mobile phase caps to standard 4L solvent bottles for direct connection to your HPLC pump.

Code	Pack Content	Type
K953930/0000	1	Safety System 3 with GL-45 Bottle Adapter
K953930/0001	1	Safety System 3 without GL-45 Bottle Adapter

Parts Supplied with Safety System 3

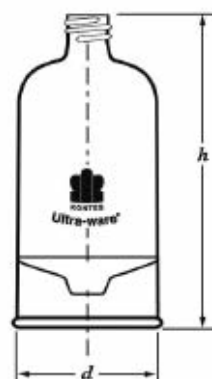
Code	Pack Content	Type
K953913/5000	1	Economy 3-Hole Cap
K953907/0000	1	Solvent Bottle Adapter, GL-45 (only for K953930/0000)
K953916/3002	1	All PEEK Inlet/Spurge Filter, 2µm, PEEK™
K420821/0018	2	Flangeless Nut, ETFE, 1/4-28. 1/8"
K420822/0018	2	Flangeless Ferrule Nut, ETFE, 1/8"
K953913/0001	1	Nut plug, ETFE, 1/4-28
K420823/0018	1	FEF Teflon® Tubing, 1/8" O.D x 1/16" I.D. x 10ft

CHROMATOGRAPHY**HPLC RESERVOIR** with conical Bottom and Plastic-coating

Kimble KG-33 Borosilicate Glass

WITHOUT GRADUATIONS

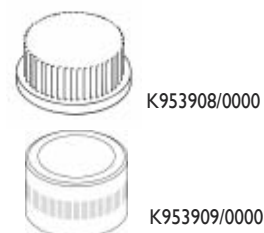
Code	Pack Content	Reservoir Capacity (mm)	Height x Dia. mm
K953901/0252	I	250	203x85
K953901/0502	I	500	230 x 105
K953901/1002	I	1000	275 x 130
K953901/2002	I	2000	319 x 150
K953901/5002	I	5000	373 x 205
K953901/1003	I	10000	433 x 255
K953901/2003	I	20000	578 x 315

**WITH GRADUATIONS**

Code	Pack Content	Reservoir Capacity (mm)	Height x Dia. mm
K953922/0252	I	250	203x85
K953922/0502	I	500	230 x 105
K953922/1002	I	1000	275 x 130
K953922/2002	I	2000	319 x 150
K953922/5002	I	5000	373 x 205
K953922/1003	I	10000	433 x 255
K953922/2003	I	20000	578 x 315

Storage Caps, GL45

Code	Pack Content	Type
K953908/0000	I	Cap, PTFE cap body, TFE/propylene o-ring, PP screw collar
K953909/0000	I	Hi-Temp (200°C) Cap, Red PBT cap body, PTFE-faced silicone rubber liner

**Chromatography HPLC Filtration Cap**

Kimble KG-33

Code	Pack Content	Filter Diameter (mm)	Cap Thread	Tubing Adapter
K953915/0047	I	47	GL45	1/4"

Glass filled PTFE body, coarse fritted glass filter PTFE/Polylene o-ring

**HPLC Solvent Pickup Adapter** with 3ft of 1/4" Teflon tubing

Kimble KG-33

Code	Pack Content	Type
K953906/0047	I	Pickup Adapter, Standard, 47mm
K953906/6347	I	Pickup Adapter, THF/Resistant, 47mm

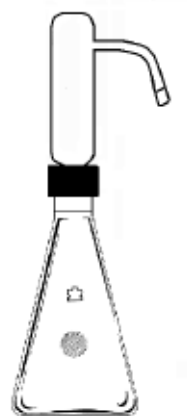


Additional components may be available on request

CHROMATOGRAPHY**TLC Reagent Sprayer, with Screw Thread Ground Joint**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Joints	Height x Dia mm
K422530/0025	I	25	19/22	147x40
K422530/0050	I	50	19/22	174x50
K422530/0125	I	125	24/40	204x65

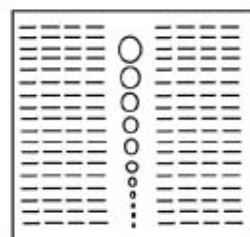
**TLC Reagent Sprayer, with Standard Ground Joint**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Joints	Height x Dia mm
K422500/0125	I	125	24/40	200 x 65
K422500/0250	I	250	24/40	225 x 85

**TLC Labeling Template**

Code	Pack Content	Length cm	Width cm	Height cm
K416450/0000	I	22	20	I

**TLC Spotting Capillary, 5 packs**

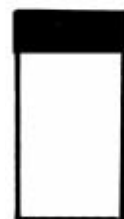
Kimble KG-33 Borosilicate Glass, Microcaps

Code	Pack Content	Type
K764520/0000	I Kit	Each kit contains 5 dispenser vial containing 100 micro pipettes each 0.5, 1, 2, 5 and 10µm plus a bulb assembly and spotting holder.

**TLC Developing Tank Cylinder**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	For Plate Size (cm)	Lid
K416170/0520	I	5x20cm	Glass
K416170/1020	I	10x20cm	Glass
K416170/1118	I	1x3 inch	Polyethylene

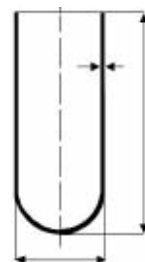


OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

Mould Blown Cylinder

Simax Borosilicate Glass

Code	Diameter mm	Pack Content	Length mm	Approx. Wal (mm)
MB/250	250	1	400	7.0
MB/215	215	1	400	6.5
MB/185	185	1	400	5.5
MB/160	160	1	400	5.5
MB/130	130	1	400	3.0
MB/105	105	1	400	3.0
MB/85	85	1	400	3.0
MB/65	65	1	400	3.0

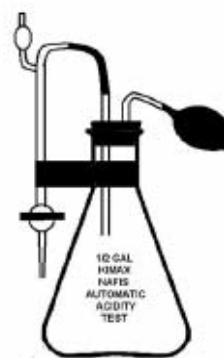
**DAIRYWARE****Acidity Test, Automatic Zero,**

KIMAX 35 Borosilicate Glass

Code	Pack Content	Capacity (%)	Stopcock Size	Tolerance & Subdivision (%)
K620F/1	1	1 (10ml)	2	0.01

Replacement Parts

Code	Pack Content	Type
KA/620F/1	1	Acid Test Buret Only
K609/99	1	Stirring Rod Only
K41500F/2	1	Stopcock only

**Bottle, Milk Dilution, Square, with Screw Cap**

KIMAX 35 Borosilicate Glass

Code	Pack Content	Capacity ml	+/- Tol ml	Height mm	L x W mm	GPI Thread
K14915/160	48	160	-	150	45x45	28-400

Graduated at 99ml

Code	Pack Content	Capacity ml	+/- Tol ml	Height mm	L x W mm	GPI Thread
K14925/160	48	160	1	150	45x45	28-400

**Milk Test, 8%, Sealed, APHA 15.8 or AOAC 989.04 test**

KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K1003S/8	12	8 (1.6ml)	0.1 (0.02ml)	0.04 (0.008ml)	18	165

**Ice Cream Test, 10%,**

KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K1025/10	12	10 (2ml)	0.1 (0.02ml)	0.1	18	165



DAIRYWARE

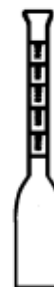
Ice Cream and Half & Half Cream Test, 20%, APHA Test,
KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K516/20	12	20 (2ml)	0.2 (0.02ml)	0.2	9	165



Cream and Cheese Test, 50%, Sealed, APHA 15.8 or AOAC 920.111 test
KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K2085S/50	12	50 (5ml)	0.5 (0.05ml)	0.25	9	165



Cheese and Sour Cream, Paley, 20%, APHA 15.8 test
KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K508/20	3	20 (2ml)	0.2 (0.02ml)	0.2	9	165



Cream, Paley, 50%,
KIMAX 35 Borosilicate Glass

Code	Pack Content	Size %	Subdivision %	+/- Tol %	Sample Size (g)	Max. overall Height (mm)
K509/50	3	50 (5ml)	0.5 (0.05ml)	0.25	9	165



Milk Test, To Contain, 17.6ml, Sealed
KIMAX 35 Borosilicate Glass, ASTM E1043 Type II A,AOAC/APHA

Code	Pack Content	Capacity ml	+/- Tol ml	Length mm
K3005S/176	12	17.6	0.05	330



Milk Test, To Deliver, 17.6ml
KIMAX 35 Borosilicate Glass, ASTM E1043 Type II B

Code	Pack Content	Capacity ml	+/- Tol ml	Length mm
K3001/176	12	17.6	0.05	330



Desiccators, knob top with perforated Ceramic disc

KIMAX KG-33 Borosilicate Glass

Code	ID of Flange mm	Pack Content	h mm	plate mm	Capacity ml
K21050/160	160	1	255	140	220
K21050/200	200	1	310	190	380
K21050/250	250	1	330	230	750

**Desiccators**, vacuum with detachable stopcock and Ceramic disc

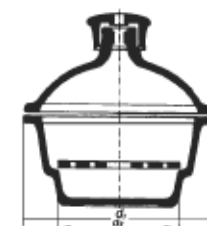
KIMAX KG-33 Borosilicate Glass

Code	ID of Flange mm	Pack Content	h mm	plate mm	Capacity ml
K21200/160	160	1	255	140	220
K21200/200	200	1	310	190	380
K21200/250	250	1	330	230	750

**Desiccators**, knob lid with perforated Ceramic disc

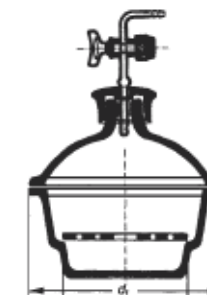
Simax Borosilicate Glass

Code	Size mm	Pack Content	d1 mm	d2 mm
262 D/100	100	1	151	90
262 D/150	150	1	210	140
262 D/200	200	1	269	190
262 D/250	250	1	329	240
262 D/300	300	1	392	290

**Desiccators**, vacuum with stopcock and perforated Ceramic disc

Simax Borosilicate Glass CSN 70 4300

Code	Size mm	Pack Content	d1 mm	d2 mm
262 D/K/100	100	1	151	90
262 D/K/150	150	1	210	140
262 D/K/200	200	1	269	190
262 D/K/250	250	1	329	240
262 D/K/300	300	1	392	290

**Desiccators Lid**, knob only

Simax Borosilicate Glass

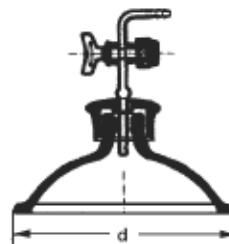
Code	To fit Desiccator	Pack Content	d mm
262 V/H/100	100	3	153
262 V/H/150	150	3	213
262 V/H/200	200	3	272
262 V/H/250	250	2	333
262 V/H/300	300	2	395



Desiccators Lid, with stopcock

Simax Borosilicate Glass

Code	To fit Desiccator	Pack Content	d mm
262K/VH/100	100	4	153
262K/VH/150	150	3	213
262K/VH/200	200	3	272
262K/VH/250	250	2	333
262K/VH/300	300	2	395

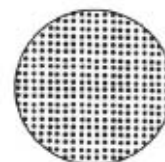
**Desiccators Stopcock Assembly**

Simax Borosilicate Glass

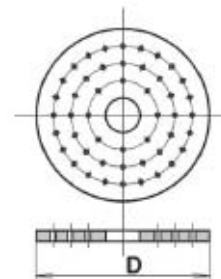
Code	Pack Content	Type
262 K/K	1	Desiccators Stopcock Assembly

**Zinc Coated, Perforated Metal Disc**

Code	Diameter mm	Pack Content	To Fit Desiccator (mm)
262 ZD/90	90	1	100
262 ZD/145	145	1	150
262 ZD/195	195	1	200
262 ZD/245	245	1	250
262 ZD/295	295	1	300

**Ceramic Disc**

Code	d mm	Pack Content	To Fit Desiccator (mm)
CR238/1	90	1	100
CR238/3B	140	1	150
CR238/5A	189	1	200
CR238/8A	241	1	250
CR238/10A	290	1	300



FOR MORE CERAMIC DISCS, PLEASE SEE PAGE 204.

Dishes, borax, embryo with lid

Soda-Lime Glass

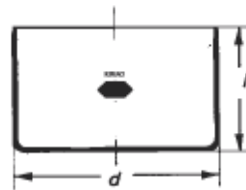
Code	Dimensions mm	Pack Content	Well dia. mm
546/40x40	40x40	50	30
546/60x60	60x60	25	45



Crystallising Dishes, Flat bottom without spout

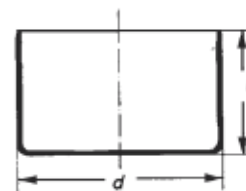
KIMAX KG-33 Borosilicate Glass

Code	d x h mm	Pack Content	Capacity ml
K23000/5035	50 x 35	6	50
K23000/6035	60 x 35	6	80
K23000/7050	70 x 50	6	160
K23000/8040	80 x 40	6	170
K23000/9050	90 x 50	6	270
K23000/10050	100 x 50	6	340
K23000/12565	125 x 65	4	700
K23000/15075	150 x 75	4	1200
K23000/17090	170 x 90	4	1800
K23000/19100	190 x 100	3	2600

**Crystallising Dishes, Flat bottom without spout**

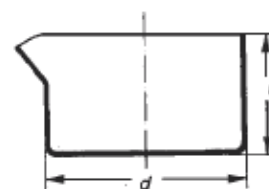
Simax Borosilicate Glass, PN 70 0121

Code	d x h mm	Pack Content	Capacity ml
174/40	40 x 25	10	20
174/50	50 x 30	10	40
174/60	60 x 35	10	60
174/70	70 x 40	10	100
174/80	80 x 45	10	150
174/95	95 x 55	10	300
174/115	115 x 65	10	500
174/140	140 x 75	10	900
174/190	190 x 90	4	2000
174/230	230 x 100	3	3500

**Crystallising Dishes, Flat bottom, with spout**

Simax Borosilicate Glass, PN 70 0121

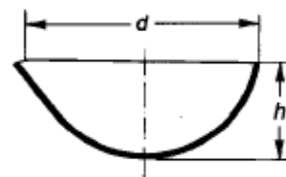
Code	d x h mm	Pack Content	Capacity ml
175/40	40 x 25	10	20
175/50	50 x 30	10	40
175/60	60 x 35	10	60
175/70	70 x 40	10	100
175/80	80 x 45	10	150
175/95	95 x 55	10	300
175/115	115 x 65	10	500
175/140	140 x 75	10	900
175/190	190 x 90	4	2000
175/230	230 x 100	3	3500



Evaporating Dishes, round bottom with spout

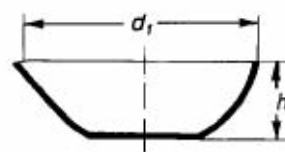
Simax Borosilicate Glass, PN 70 0120

Code	Size mm	d x h mm	Pack Content	Capacity ml
177/60	60	64 x 29	10	35
177/80	80	85 x 39	10	90
177/100	100	105 x 49	10	180
177/130	130	131 x 62	10	400
177/160	160	166 x 80	8	800
177/200	200	206 x 100	4	1700
177/230	230	235 x 115	3	2600

**Evaporating Dishes, flat bottom with spout**

Simax Borosilicate Glass, PN 70 0120

Code	d1 mm	d2 x h mm	Pack Content	Capacity ml
179/40	40	20 x 18	10	10
179/50	50	25 x 25	10	15
179/60	60	30 x 30	10	45
179/70	70	32 x 35	10	60
179/80	80	35 x 45	10	90
179/95	95	40 x 55	10	170
179/115	115	50 x 65	10	320
179/140	140	60 x 80	10	600
179/190	190	80 x 100	4	1500
179/230	230	100 x 130	3	2500



FOR CERAMIC EVAPORATING DISHES, PLEASE SEE PAGES 200-202.

Glass Dappens Dishes, capacity 5ml

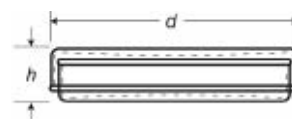
Soda-Lime Glass

Code	Pack Content	Colour
24/27/C	36	Clear (C)

**Petri Dishes**

Kimble Valueware Borosilicate Glass

Code	Pack Content	Diameter x Height (mm)
K63060/6015	36	60 x 15
K63060/10010	36	100 x 10
K63060/10020	36	100 x 15
K63060/10015	36	100 x 20
K63060/15020	36	150 x 20



Petri Dishes

Code	Pack Content	Diameter x Height (mm)
2290/50x12	18	50 x 12
2290/60x12	18	60 x 12
2290/80x15	18	80 x 15
2290/90x15	18	90 x 15
2290/100x15	18	100 x 15
2290/120x20	18	120 x 20
2290/150x25	18	150 x 25
2290/200x30	6	200 x 30



Note: Special glass which can be autoclaved up to 160°C

FOR PLASTIC PETRI DISHES, PLEASE SEE PAGE 176.

Dissolution, Test Vessel

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Height mm
K33730/1000	2	1000	108	160



Distillation, Apparatus, Cyanide.

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Flask Vol. ml	Hose Size	Overall H x W (mm)
K479100/0000	1	1000	2	500x450

Component Parts

Code	Pack Content	Type
K479101/0000	1	Inlet Tube 19/38
K479102/0000	1	Reflux Condenser 24/40 Lower 45/50 Upper 19/38 side
K479103/0000	1	Cold Finger Condenser, 45/50
K479104/0000	1	Dispersion Tube, Medium Porosity, 19/38 Side 29/42 Lower
K479105/0000	1	Receiver Tube 29/42



Flask 24/40 Center Neck, 19/38 Side Neck

Apparatus, Short Path, Compact

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Flask Vol. ml	Hose Size	Overall H x W (mm)
K284800/0000	1	10	1	190x215

Component Parts

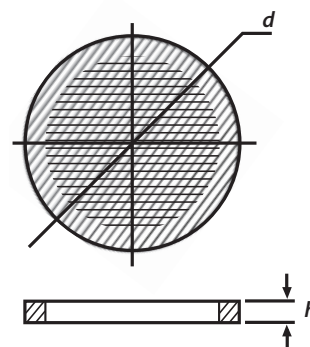
Code	Pack Content	Type
K287100/0000	1	Distilling Head 14/20
K288200/0000	1	Distilling Receiver 14/20
K294750/0010	1	Flask, Pear shaped, 10ml
K275400/0035	1	Bleed Tube, Size 35



Disc, Sintered

Simax Borosilicate Glass

Code	Grade Porosity /diameter (mm)	Pack Content	h mm
IIS0/10	0/10	10	2.5
IIS0/20	0/20	10	3.5
IIS0/30	0/30	10	3.5
IIS0/40	0/40	10	4.5
IIS0/60	0/60	10	5.0
IIS0/90	0/90	10	7.5
IIS0/120	0/120	1	9.0
IIS0/150	0/150	1	10.5
IIS0/175	0/175	1	12.0
IIS0/210	0/210	1	13.5



Code	Grade Porosity /diameter (mm)	Pack Content	h mm
IISI/10	1/10	10	2.5
IISI/20	1/20	10	3.5
IISI/30	1/30	10	3.5
IISI/40	1/40	10	4.5
IISI/60	1/60	10	5.0
IISI/90	1/90	10	7.5
IISI/120	1/120	1	9.0
IISI/150	1/150	1	10.5
IISI/175	1/175	1	12.0
IISI/210	1/210	1	13.5

Code	Grade Porosity /diameter (mm)	Pack Content	h mm
IIS2/10	2/10	10	2.5
IIS2/20	2/20	10	3.5
IIS2/30	2/30	10	3.5
IIS2/40	2/40	10	4.5
IIS2/60	2/60	10	5.0
IIS2/90	2/90	10	7.5
IIS2/120	2/120	1	9.0
IIS2/150	2/150	1	10.5
IIS2/175	2/175	1	12.0
IIS2/210	2/210	1	13.5

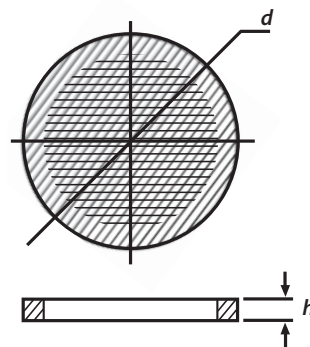
Code	Grade Porosity /diameter (mm)	Pack Content	h mm
IIS3/10	3/10	10	2.5
IIS3/20	3/20	10	3.5
IIS3/30	3/30	10	3.5
IIS3/40	3/40	10	4.5
IIS3/60	3/60	10	5.0
IIS3/90	3/90	10	7.5
IIS3/120	3/120	1	9.0
IIS3/150	3/150	1	10.5
IIS3/175	3/175	1	12.0
IIS3/210	3/210	1	13.5

Continued

Disc, Sintered Continued

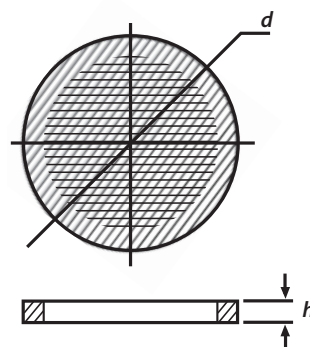
Simax Borosilicate Glass

Code	Grade Porosity /diameter (mm)	Pack Content	h mm
IIS4/10	4/10	10	2.5
IIS4/20	4/20	10	3.5
IIS4/30	4/30	10	3.5
IIS4/40	4/40	10	4.5
IIS4/60	4/60	10	5.0
IIS4/90	4/90	10	7.5
IIS4/120	4/120	1	9.0
IIS4/150	4/150	1	10.5
IIS4/175	4/175	1	12.0
IIS4/210	4/210	1	13.5

**Disc**

Individual sintered discs for the fabrication of special apparatus or as a separate filtering device. Three porosities are available: extra coarse (EC), nominal pore size 170-220 microns; coarse (C), nominal pore size 40-60 microns; and medium (M), nominal pore size 10-15 microns.

Code	Pack Content	Disc Dia. mm	Porosity	Approx Thickness mm
K952000/1044	1	10	M	2
K952000/1025	1	10	EC	3
K952000/2025	1	20	EC	2
K952000/4023	1	40	C	3.5
K952000/6044	1	60	M	4.5
K952000/6023	1	60	C	4.5
K952000/6025	1	60	EC	6
K952000/8044	1	80	M	6
K952000/0944	1	90	M	6
K952000/0923	1	90	C	6
K952000/0925	1	90	EC	6



ALL ITEMS LISTED ARE ONLY PART OF THE EXTENSIVE RANGE WE CAN SUPPLY.

PLEASE LET US KNOW IF THERE ARE ANY OTHER ITEMS FOR WHICH WE CAN OFFER A QUOTATION.

Extraction Soxhlet, Full length

Glassco Borosilicate Glass

Code	Extractor Capacity (ml)	Pack Content	Extractor Socket	Extractor Cone	Flask Capacity (ml)
8SEA/100	100	I	45/40	29/32	250
8SEA/150	150	I	45/40	29/32	250
8SEA/250	250	I	45/40	29/32	500
8SEA/500	500	I	60/46	29/32	1000
8SEA/1000	1000	I	71/55	29/32	2000

Also available with Dimroth Condenser

Components Parts

Code	Pack Content	Type
8SEC100/74	I	Extractor Body
8SEC150/74	I	Extractor Body
8SEC250/74	I	Extractor Body
8SEC500/104	I	Extractor Body
8SEC1000/114	I	Extractor Body
8SFL100/B29	6	Flat Bottom Flask
8SFL150/B29	6	Flat Bottom Flask
8SFL250/B29	6	Flat Bottom Flask
8SFL500/B29	6	Flat Bottom Flask
8SFL11/B29	6	Flat Bottom Flask
8SCAL20/B40	I	Allihn Condenser
8SCAL20/B45	I	Allihn Condenser
8SCAL20/B60	I	Allihn Condenser
8SCAL20/B71	I	Allihn Condenser

**Extraction Body, Soxhlet**

Glassco Borosilicate Glass

Code	Capacity ml	Socket Size	Cone Size
8SEC40/43	40	29/32	24/29
8SEC60/53	60	34/35	24/29
8SEC60/55	60	34/35	34/35
8SEC100/53	100	34/35	24/29
8SEC100/55	100	34/35	34/35
8SEC200/83	200	50/42	24/29

**CARE FOR YOUR GLASSWARE**

DO NOT USE ABRASIVES ON GLASSWARE, PARTICULARLY VOLUMETRIC WARE. THE SURFACE WILL BE MARRED IN TIME AND THE RESULTANT SCRATCHES MAY PREVENT PROPER DRAINAGE OR ACT AS RESTING PLACES FOR ADULTERANTS WHICH MAY BE DIFFICULT TO REMOVE.

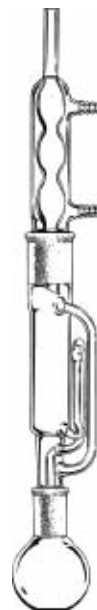
Extraction Soxhlet, Full Length

Kimble KG-33 Borosilicate Glass

Code	I.D. of Extractor Tube (mm)	Pack Content	Vol. of Flask (ml)	Overall Height (mm)	Vol. of tube of Siphon (ml)	Height of Siphon tube (mm)
K24005/30	30	I	125	565	43	73
K24005/40	40	I	250	660	76	73
K24005/50	50	I	500	720	185	113

Components Parts

Code	Pack Content	Type
K24027/30	I	Extraction Condenser Only 34/35, 30mm
K24027/40	I	Extraction Condenser Only 34/35, 40mm
K24027/50	I	Extraction Condenser Only 34/35, 50mm
K24071/30	I	Extraction Tube Only 34/35, 24/40, 30mm
K24071/40	I	Extraction Tube Only 34/35, 24/40, 40mm
K24071/50	I	Extraction Tube Only 34/35, 24/40, 50mm
K25055/125	I	Flask, 125ml, 24/40
K25055/250	I	Flask, 250ml, 24/40
K25055/500	I	Flask, 500ml, 24/40

**Extraction Soxhlet, Full Length**

Simax Borosilicate Glass

Code	Extractor Capacity (ml)	Pack Content	Extractor Socket	Extractor Cone	Flask Capacity (ml)
8730/30	30	I	29/32	29/32	100
8730/70	70	I	34/35	29/32	100
8730/100	100	I	45/40	29/32	250
8730/200	200	I	55/50	29/32	500
8730/5000	500	I	60/46	29/32	1000
8730/1000	1000	I	71/51	29/32	2000

Components Parts

Code	Pack Content	Type
8293/30	I	Extractor Body
8293/70	I	Extractor Body
8293/100	I	Extractor Body
8293/200	I	Extractor Body
8293/500	I	Extractor Body
8293/1000	I	Extractor Body
8SFL250/B29	6	Flat Bottom Flask
8SFL500/B29	6	Flat Bottom Flask
8SFL11L/B29	6	Flat Bottom Flask
8SFL2L/B29	6	Flat Bottom Flask
8281/200/B29	I	Allihn Condenser
8281/200/B34	I	Allihn Condenser
8281/300/B45	I	Allihn Condenser
8281/300/B55	I	Allihn Condenser
8281/400/B60	I	Allihn Condenser
8281/400/B71	I	Allihn Condenser



Microfiltration Assembly, 25mm

Glassco Borosilicate Glass

Code	Pack Content	
8259/25	I	

Accessories

Code	Pack Content	Type
8259/1	I	Funnel 15ml
8259/2	I	Sintered base with Stopper
8259/3	I	Clamp
8259/4	I	Filter Flask 125ml

**Microfiltration Assembly, 25mm, with Support, ULTRA-WARE**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953705/0000	I	Sintered Glass	15	25	152x25

Components Parts

Code	Pack Content	Type
K953701/0000	I	Glass Funnel, 25 mm, 15 ml capacity
K953703/0000	I	Anodized Aluminum Clamp, 25 mm
K953702/0001	I	Sintered Glass Support Base, 25 mm
K953715/0501	I	No. 5 Silicone Stopper, 3/8" (9.5 mm) Hole for use with Accessory 125ml Filtration Flask

Accessories

Code	Pack Content	Type
K953701/0125	I	Glass Funnel, 25 mm, 150 ml Capacity
K953703/0000	I	Anodized Aluminum Clamp, 25 mm
K953711/0000	I	Stainless Steel Support Screen, 25 mm
K953712/0000	25	PTFE Support Screen Gasket, Pkg./25 (1 Supplied)
K953726/0001	I	Glass Support Base, 25mm
K953715/0501	I	No. 5 Silicone Stopper, 3/8" (9.5 mm) Hole, for use with 125 ml Filtration Flask

**WITH SINTERED GLASS SUPPORT****Microfiltration Assembly, 25mm, with Support, ULTRA-WARE**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953730/0000	I	Stainless	15	25	152x25

Components Parts

Code	Pack Content	Type
K953701/0000	I	Glass Funnel, 25 mm, 15 ml capacity
K953703/0000	I	Anodized Aluminum Clamp, 25 mm
K953711/0000	I	Stainless Steel Support Screen, 25 mm
K953712/0000	25	PTFE Support Screen Gasket, Pkg./25 (1 Supplied)
K953726/0001	I	Glass Support Base, 25mm
K953715/0501	I	No. 5 Silicone Stopper, 3/8" (9.5 mm) Hole, for use with 125 ml Filtration Flask

**WITH STAINLESS STEEL SUPPORT**

Accessories continued on next page

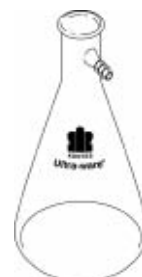
Accessories, for item Microfiltration Assembly

Code	Pack Content	Type
K953701/0125	I	Glass Funnel, 25 mm, 150 ml Capacity
K953701/0325	I	Glass Funnel, 25 mm, 300 ml Capacity
K953710/0000	I	Sintered Flask, 125 ml, No. 5 Rubber Stopper Joint No. 2 Hose Connection
K953715/0801	I	No. 8 Silicone Stopper, 3/8" (9.5 mm) Hole, for use with 1000 ml Filtration Flask
K953726/0001	I	Glass Support Base, 25mm
K953760/0000	I	Filtration Flask, 1000 ml, No. 8 Stopper Joint, 1/4" Hose Connection

Filter Flask, ULTRA-WARE

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Type
K953710/0000	I	Flask, 125ml, No. 5 Rubber Stopper Joint, 3/8" Hose Connection
K953760/0122	I	Flask, 125ml, Safety Coated, No. 5 Rubber Stopper Joint, 3/8" Hose Connection



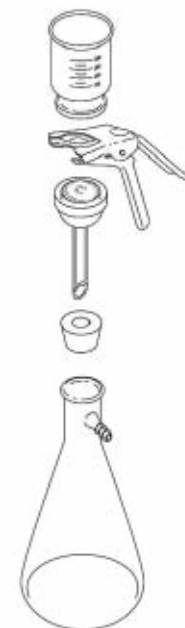
Microfiltration Assembly, 47mm

Glassco Borosilicate Glass

Code	Pack Content	Type
8260/25	I	

Accessories

Code	Pack Content	Type
8260/1	I	Funnel 300ml
8260/2	I	Sintered base with Stopper
8260/3	I	Clamp
8260/4	I	Filter Flask 1000ml



Microfiltration Assembly, 47mm, with Sintered Support, ULTRA-WARE

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953755/0000	I	Sintered Glass	300	47	229x76

Components Parts

Code	Pack Content	Type
K953751/0000	I	Glass Funnel, 47 mm, 300 ml capacity
K953753/0000	I	Anodized Aluminum Clamp, 47 mm
K953752/0001	I	Sintered Glass Support Base, 47 mm
K953763/0801	I	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories continued on next page



**WITH SINTERED
GLASS SUPPORT**

Accessories

Code	Pack Content	Type
K953761/0000	1	Glass Funnel, 47 mm, 100 ml Capacity
K953771/0000	1	Glass Funnel, 47 mm, 500 ml Capacity
K953781/0000	1	Glass Funnel, 47 mm, 1000 ml Capacity
K953760/0000	1	Filtration Flask, 1000ml, No. 8 Stopper Joint, 1/4" Hose Connection
K953760/1002	1	Filtration Flask, 1000ml, Safety Coated, No. 8 Stopper Joint, 1/4" Hose Connection

Microfiltration Assembly, 47mm, with PTFE Support, ULTRA-WARE

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953780/0000	1	PTFE Faced	300	47	229x76

Components Parts

Code	Pack Content	Type
K953776/0000	1	PTFE-Faced Glass Funnel, 47 mm, 300 ml
K953753/0000	1	Anodized Aluminum Clamp, 47 mm
K953777/0001	1	PTFE-Faced Sintered Glass Support Base, 47 mm
K953763/0801	1	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories

Code	Pack Content	Type
K953760/1000	1	Filtration Flask, 1000ml, No. 8 Stopper Joint, 1/4" Hose Connection
K953760/1002	1	Filtration Flask, 1000ml, Safety Coated, No. 8 Stopper Joint, 1/4" Hose Connection

**WITH PTFE-FACED
SINTERED GLASS SUPPORT****Microfiltration Assembly, 47mm, with Stainless Support, ULTRA-WARE**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953805/0000	1	Stainless	300	47	229x76

Components Parts

Code	Pack Content	Type
K953751/0000	1	Glass Funnel, 47 mm, 300 ml capacity
K953753/0000	1	Anodized Aluminum Clamp, 47 mm
K953810/0000	1	Stainless Steel Support Screen, 47 mm
K953811/0000	25	PTFE Support Screen Gasket, Pk 25 (1 Supplied)
K953801/0001	1	Glass Support Base, 47mm
K953763/0801	1	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories

Code	Pack Content	Type
K953761/0000	1	Glass Funnel, 47 mm, 100 ml Capacity
K953771/0000	1	Glass Funnel, 47 mm, 500 ml Capacity
K953781/0000	1	Glass Funnel, 47 mm, 1000 ml Capacity
K953760/0000	1	Filtration Flask, 1000ml, No. 8 Stopper Joint, 1/4" Hose Connection
K953760/1002	1	Filtration Flask, 1000ml, Safety Coated, No. 8 Stopper Joint, 1/4" Hose Connection

**WITH STAINLESS
STEEL SUPPORT**

Microfiltration Apparatus, 47mm All-Glass, with Fritted

Glass Support Base, ULTRA-WARE.

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Funnel ml	Flask ml	Filter Size mm	Hose Connection	Overall hxd (mm)
K953825/0000	I	300	1000	47	3/8"	430x137
K953835/0000	I	500	2000	47	3/8"	515x165
K953845/0000	I	1000	4000	47	3/8"	600x205

Components Parts

Code	Pack Content	Type
K953751/0000	I	Glass Funnel, 47 mm, 300ml
K953771/0000	I	Glass Funnel, 47mm, 500ml
K953781/0000	I	Glass Funnel, 47mm, 1000ml
K953826/0000	I	Sintered Glass Support Base, 47mm 40/35 Outer Joint
K953827/0000	I	Flask, 1000ml, 40/35
K953828/0000	I	Flask, 2000ml, 40/35
K953829/0000	I	Flask, 4000ml, 40/35

Accessories

Code	Pack Content	Type
K953761/0000	I	Glass Funnel, 47 mm, 100ml
K953830/0000	I	Flask Cap, Outer Joint, 40/35

**Microfiltration Apparatus, 47mm with Stainless Steel Support,**

ULTRA-WARE

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Funnel ml	Flask ml	Filter Size mm	Hose Connection	Overall hxd (mm)
K953855/1047	I	300	1000	47	3/8"	430x137

Components Parts

Code	Pack Content	Type
K953751/0000	I	Glass Funnel, 47 mm, 300ml
K953753/0000	I	Aluminum Clamp, 47mm
K953810/0000	I	Stainless Steel Support Screen, 47mm
K953811/0000	25	PTFE Support Screen Gasket, Pk 25, I supplied
K953852/0001	I	Glass Support Base, 47mm, 40/35 Outer Joint
K953827/0000	I	Flask, 1000ml, 40/35 Inner Joint

Accessories

Code	Pack Content	Type
K953761/0000	I	Glass Funnel, 47mm, 100ml
K953771/0000	I	Glass Funnel, 47mm, 500ml
K953781/0000	I	Glass Funnel, 47mm, 1000ml
K953828/0000	I	Flask, 2000ml, 40/35
K953829/0000	I	Flask, 4000ml, 40/35
K953830/0000	I	Flask Cap, Outer Joint, 40/35



Microfiltration Assembly, 90mm, with Sintered Support, ULTRA-WARE

Kimble Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953755/0090	I	Sintered Glass	1000	90	160x350

Components Parts

Code	Pack Content	Type
K953781/0090	I	Glass Funnel, 90 mm, 1000 ml capacity
K953753/0090	I	Anodized Aluminum Clamp, 90 mm
K953752/0090	I	Sintered Glass Support Base, 90 mm
K953763/0801	I	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories

Code	Pack Content	Type
K953760/0000	I	Filtration Flask, 1000ml, No. 8 Stopper Joint, 1/4" Hose Connection
K953760/1002	I	Filtration Flask, 1000ml, Safety Coated, No. 8 Stopper Joint, 1/4" Hose Connection

**WITH SINTERED GLASS SUPPORT****Microfiltration Assembly, 90mm, with Fritted Support, ULTRA-WARE**

Kimble Borosilicate Glass

Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953770/0090	I	Sintered Glass	1000	90	160x350

Components Parts

Code	Pack Content	Type
K953781/0090	I	Glass Funnel, 90 mm, 1000 ml capacity
K953753/0090	I	Anodized Aluminum Clamp, 90 mm
K953752/0090	I	Sintered Glass Support Base, 90 mm
K953763/0801	I	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories

Code	Pack Content	Type
K953760/1000	I	Filtration Flask, 1000ml, No. 8 Stopper Joint, 1/4" Hose Connection
K953760/1002	I	Filtration Flask, 1000ml, Safety Coated, No. 8 Stopper Joint, 1/4" Hose Connection
K953715/0501	I	Stopper No. 5, 3/8" Hole

**WITH FRITTED GLASS SUPPORT**

ALL ITEMS LISTED ARE ONLY PART OF THE EXTENSIVE RANGE WE CAN SUPPLY.

PLEASE LET US KNOW IF THERE ARE ANY OTHER ITEMS FOR WHICH WE CAN OFFER A QUOTATION.

Microfiltration Assembly, 90mm, with Stainless Support, ULTRA-WARE

Kimble Borosilicate Glass

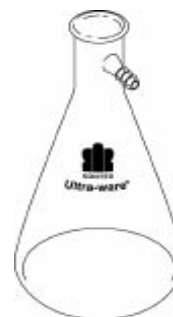
Code	Pack Content	Support Type	Grad. Funnel ml	Filter Size (mm)	Overall HxD (mm)
K953805/0090	I	Stainless	1000	90	160x350

Components Parts

Code	Pack Content	Type
K953781/0090	I	Glass Funnel, 90 mm, 1000 ml capacity
K953753/0090	I	Anodized Aluminum Clamp, 90 mm
K953810/0090	I	Stainless Steel Support Screen, 90mm
K953752/0090	I	Sintered Glass Support Base, 90 mm, Shell
K953763/0801	I	No. 8 Silicone Stopper, 9/16 (14.3mm) Hole, Fits Accessory 1L Flask

Accessories

Code	Pack Content	Type
K953760/0000	I	Filtration Flask, 1000 ml, No. 8 Stopper Joint 1/4" Hose Connection
K953760/1002	I	Filtration Flask, Safety Coated 1000 ml, No. 8 Stopper Joint 1/4" Hose Connection

**WITH STAINLESS STEEL SUPPORT****Filter, Funnel, Buchner**

Glassco Borosilicate Glass

Code	Pack Content	Size	Diameter mm	Porosity
8SFB/1/ _	I	1	30	1,2,3,4
8SFB/2/ _	I	2	40	1,2,3,4
8SFB/3/ _	I	3	60	1,2,3,4
8SFB/4/ _	I	4	90	1,2,3,4

↑ Please state porosity when ordering, for e.g. 8SFB/1/1 for porosity 1 size 1

**Filter, Funnel, Buchner**

Simax Borosilicate Glass

Code	Pack Content	Diameter mm	Height mm	Aprox. Capacity mm
34S _/30	10	30	143	35
34S _/40	10	40	165	80
34S _/60	10	60	195	180
34S _/90	I	90	245	425
34S _/120	I	120	310	1000
34S _/150	I	150	425	2000
34S _/175	I	175	490	3000

↑ Please state porosity when ordering, e.g. 34S3/30 for porosity 3, 30mm diameter



Filter, Funnel, Buchner with KINFLOW® Sintered Disc

Kimble KG-33 Borosilcate Glass

Code	Pack Content	Capacity ml/ Porosity	Dia. of Disc (mm)	Height above Disc (mm)	Stem mm	Stem O.D. (mm)	Stem I.D. (mm)
K28400/21	9	2 C	10	30	30	7	3
K28400/22	9	2 M	10	30	30	7	3
K28400/23	1	2 F	10	30	30	7	3
K28400/151	6	15 C	20	45	75	8	4
K28400/152	6	15 M	20	45	75	8	4
K28400/153	1	15 F	20	45	75	8	4
K28400/301	6	30 C	30	45	75	8	4
K28400/302	6	30 M	30	45	75	8	4
K28400/303	1	30 F	30	45	75	8	4
K28400/601	6	60 C	40	50	75	10	6
K28400/602	6	60 M	40	50	75	10	6
K28400/603	1	60 F	40	50	75	10	6
K28400/1501	4	150 C	60	50	75	15	10
K28400/1502	4	150 M	60	50	75	15	10
K28400/1503	1	150 F	60	50	75	15	10
K28400/3501	3	350 C	80	75	75	20	14
K28400/3502	3	350 M	80	75	75	20	14
K28400/3503	1	350 F	80	75	75	20	14
K28400/6001	3	600 C	90	90	100	20	14
K28400/6002	3	600 M	90	90	100	20	14
K28400/6003	1	600 F	90	90	100	20	14
K28400/20001	1	2000 C	125	160	110	26	18
K28400/20002	1	2000 M	125	160	110	26	18
K28400/30001	1	3000 C	150	170	110	26	18
K28400/30002	1	3000 M	150	170	110	26	18

FOR MORE BUCHNER FUNNELS, PLEASE SEE PAGES 81, 203-204.

**Filter, Funnel, Buchner with Joint on Stem**

Glassco Borosilicate Glass

Code	Pack Content	Disc Dia. mm	Cone SJ	Funnel Dia. mm
8SBF/2	10	60	19/26	80
8SBF/3	10	60	24/29	80
8SBF/4	10	90	24/29	105

**Filter Tube, Dispersion, Gas**

Kimble KG-33 Borosilcate Glass

Code	Pack Content	Porosity	Overall Height (mm)	Stem O.D. (mm)
K956500/0023	1	Coarse	250	8
K956500/0025	1	Ex. Coarse	250	8



Filter Tube with sintered disc

Simax Borosilicate Glass

Code	Diameter of Disc (mm)	Pack Content	Length mm
261S _ /10	10	1	150
261S _ /20	20	1	150
261S _ /30	30	1	150
261S _ /40	40	1	150

↑ Please state porosity in blank space when ordering e.g. 261S1/10 for porosity 1 10mm diameter

**Thimble** with Sintered Disc

Kimble KG-33 Borosilicate Glass

Coarse Porosity

Code	Pack Content	Body O.D. (mm)	Dia. of Disc (mm)	Height above Disc (mm)	Overall Height (mm)	Approx. Capacity (ml)
K292100/0000	1	11	9	40	55	2.5
K586500/0211	1	25	20	70	85	25
K586500/0222	1	35	30	75	90	55
K586500/0233	1	45	40	115	130	150
K586500/0244	1	57	50	135	150	275
K586500/0255	1	90	80	150	230	850
K586500/0266	1	125	112	260	300	2800

Extra Coarse Porosity

Code	Pack Content	Body O.D. (mm)	Dia. of Disc (mm)	Height above Disc (mm)	Overall Height (mm)	Approx. Capacity (ml)
K586500/0021	1	25	20	70	85	25
K586500/0022	1	35	30	75	90	55
K586500/0023	1	45	40	115	130	150
K586500/0024	1	57	50	135	150	275
K586500/0025	1	90	80	150	230	850

**Filter, Hirsch**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Top Dia. mm	Dia. of Sintered Disc (mm)	Porosity	Stem Length (mm)	Stem O.D. (mm)	Overall Height (mm)
K955250/3523	1	40	10	Coarse	145	6	180
K955250/5026	1	50	20	Fine	70	8	115
K955250/7526	1	75	30	Fine	75	8	145
K955250/5044	1	50	20	Medium	70	8	115
K955250/7544	1	75	30	Medium	75	8	145
K955250/5023	1	50	20	Coarse	70	8	115
K955250/7523	1	75	30	Coarse	75	8	145



Crucible, Gooch, Low Form, with KIMFLOW® Fritted Disc

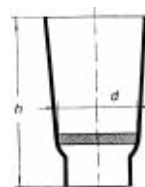
Kimble Sintered Borosilicate Glass

Code	Pack Content	Capacity ml/ Porosity	Diameter of Disc (mm)	Height mm
K28260/152	1	15 M	20	45
K28260/301	2	30 C	30	50
K28260/302	2	30 M	30	50
K28260/303	2	30 F	30	50

**Crucible, Gooch, Low Form, with sintered disc**

Simax Borosilicate Glass

Code	Pack Content	Diameter of Disc (mm)	Height mm	Approx. Capacity (mm)
31S_/20	10	20	50	15
31S_/30	10	30	60	35
31S_/40	10	40	65	55



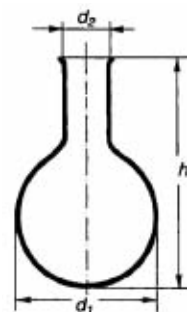
↑ Please add porosity required in blank space when ordering e.g. 31S2/30 for porosity 2 30mm diameter.

FOR CERAMIC GOOCH CRUCIBLES, PLEASE SEE PAGE 198.

Flasks, round bottom

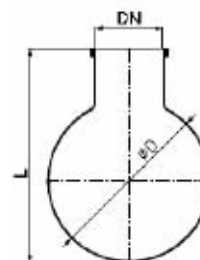
Simax Borosilicate Glass ISO 1773

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
15/50	50	10	51	22	105
15/100	100	10	64	22	115
15/250	250	10	85	34	145
15/500	500	10	105	34	175
15/1000	1000	10	131	42	210
15/2000	2000	6	166	50	260
15/3000	3000	6	188	50	265
15/4000	4000	2	207	50	315
15/5000	5000	2	222	65	330
15/6000	6000	2	236	65	355
15/10000	10000	1	279	65	420
15/20000	20000	1	345	80	500

**Flasks, heavy wall**

Simax Borosilicate Glass

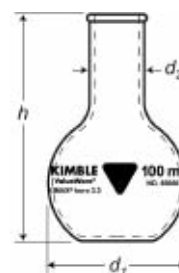
Code	Capacity ml	Pack Content	DN mm	D mm	L mm
15/5LTR/R/BB	5	1	100	220	300
15/10LTR/R/BB	10	1	100	280	390
15/20LTR/R/BB	20	1	100	350	475
15/50LTR/R/BB	50	1	200	490	640
15/100LTR/R/BB	100	1	200	610	735
15/200LTR/R/BB	200	1	300	750	890



Flasks, flat bottom, narrow neck, with Beaded Rim

Kimble 3.3 Borosilicate Glass ISO 1773

Code	Capacity ml	Pack Content	d1 mm	h mm
K65000/50	50	10	51	90
K65000/100	100	10	65	105
K65000/250	250	10	85	138
K65000/500	500	10	105	163
K65000/1000	1000	10	131	190
K65000/2000	2000	1	166	230

**Flasks,** flat bottom

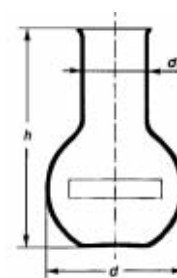
Simax Borosilicate Glass ISO 1773

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
10/50	50	10	51	22	100
10/100	100	10	64	22	110
10/250	250	10	85	34	140
10/500	500	10	105	34	170
10/1000	1000	10	131	42	200
10/2000	2000	6	166	50	250
10/4000	4000	2	207	50	300
10/6000	6000	2	236	65	340
10/10000	10000	1	279	65	400

**Flasks,** flat bottom, wide neck, with rim

Simax Borosilicate Glass ISO 24450

Code	Capacity ml	Pack Content	d mm	d1 mm	h mm
18/50	50	10	51	34	100
18/100	100	10	64	34	110
18/250	250	10	85	50	140
18/500	500	10	105	50	170
18/1000	1000	10	131	50	200
18/2000	2000	6	166	76	250

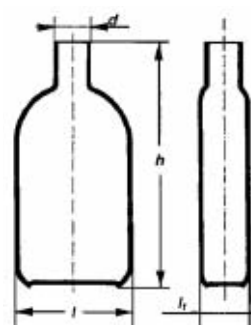


FOR MORE FLASKS, PLEASE SEE PAGES 86-88.

Culture Flasks, Roux Pattern with central neck

Simax Borosilicate Glass PN 70 6812

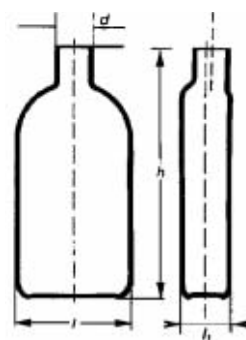
Code	Capacity ml	Pack Content	l mm	l1 mm	h mm	d mm
70/1000	1000	6	120	55	225	32



Culture Flasks, Roux Pattern with offset neck

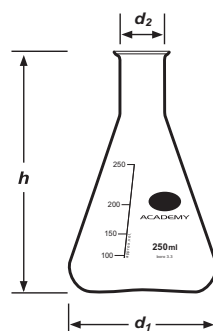
Simax Borosilicate Glass PN 70 6812

Code	Capacity ml	Pack Content	l mm	l1 mm	h mm	d mm
70A/1000	1000	6	120	55	225	32

**Academy Flask**, Erlenmeyer, narrow neck

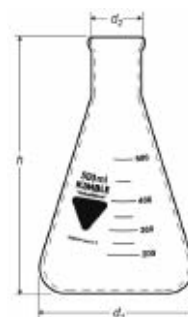
Borosilicate Glass

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
A/1136/50	50	24	54	26	80
A/1136/100	100	12	66	32	106
A/1136/250	250	6	85	34	140
A/1136/500	500	6	103	38	184
A/1136/1000	1000	6	131	45	214
A/1136/2000	2000	6	166	50	280

**Flask**, Erlenmeyer, narrow neck

Kimble 3.3 Borosilicate Glass ISO1773

Code	Capacity ml	Pack Content	Dia base mm	Height mm	Neck od mm
K66500/25	25	10	42	75	22
K66500/50	50	10	51	90	22
K66500/100	100	10	64	105	22
K66500/250	250	10	85	145	34
K66500/500	500	10	105	180	34
K66500/1000	1000	10	131	220	42
K66500/2000	2000	6	166	280	50
K66500/3000	3000	1	187	310	50
K66500/5000	5000	1	220	365	50

**Flask**, Erlenmeyer, narrow reinforced neck

Kimble 3.3 Borosilicate Glass ASTM E1404

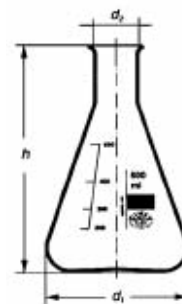
Code	Capacity ml	Pack Content	d1 mm	Height mm	Rubber stopper size
K56500/25	25	12	39	65	0
K56500/50	50	12	50	78	1
K56500/125	125	12	66	108	5
K56500/250	250	12	82	130	6
K56500/500	500	6	102	170	7
K56500/1000	1000	6	128	213	9
K56500/2000	2000	4	161	275	10



Flask, Erlenmeyer, narrow neck

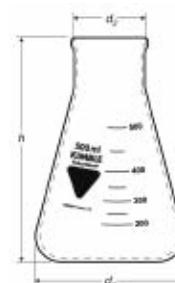
Simax Borosilicate Glass ISO 1173

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
24/25	25	10	42	22	75
24/50	50	10	51	22	90
24/100	100	10	64	22	105
24/200	200	10	79	34	135
24/250	250	10	85	34	145
24/300	300	10	87	34	160
24/500	500	10	105	34	180
24/1000	1000	10	131	42	220
24/2000	2000	6	166	50	280
24/3000	3000	6	187	50	310
24/5000	5000	2	220	50	365

**Flask, Erlenmeyer, wide neck**

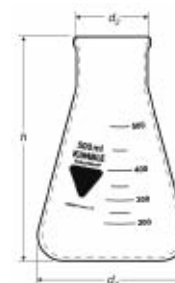
Kimble 3.3 Borosilicate Glass ISO 1773

Code	Capacity ml	Pack Content	Dia base mm	Height mm	Neck od mm
K66650/25	100	10	64	105	34
K66650/250	250	10	85	140	50
K66650/500	500	10	105	175	50
K66650/1000	1000	10	131	220	50

**Flask, Erlenmeyer, reinforced wide neck, ASTM E1404**

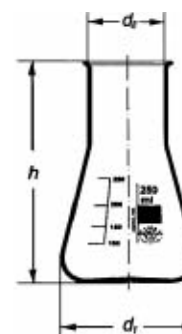
Kimble 3.3. Borosilicate Glass ISO 3585 DIN EN ISO 24450

Code	Capacity ml	Pack Content	d mm	h mm	Rubber stopper size
K56650/125	125	12	66	108	6
K56650/250	250	12	78	130	8
K56650/500	500	6	97	172	10
K56650/1000	1000	6	123	215	11

**Flask, Erlenmeyer, wide neck**

Simax Borosilicate Glass ISO 1173

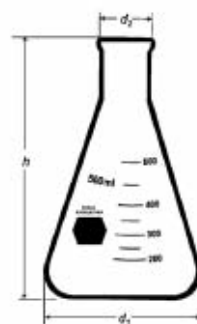
Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
25/25	25	10	42	32	70
25/50	50	10	51	34	85
25/100	100	10	64	34	105
25/200	200	10	79	50	131
25/250	250	10	85	50	140
25/300	300	10	87	50	156
25/500	500	10	105	50	175
25/1000	1000	10	131	50	220
25/2000	2000	6	153	72	280



Flask, Erlenmeyer, narrow neck, Heavy Duty, ASTM E1404

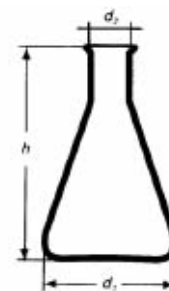
Kimble 3.3. Borosilicate Glass ISO 3585 DIN EN ISO 24450

Code	Capacity ml	Pack Content	d mm	h mm	Rubber stopper size
K27050/500	500	I	104	190	7
K27050/1000	1000	I	135	238	8
K27050/2000	2000	I	168	300	9
K27050/4000	4000	I	208	380	12

K27050 are not recommended for use on hot plates**Flask, Erlenmeyer, Heavy Duty, narrow neck**

Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm
24HW/125	125	I	70	115
24HW/250	250	I	105	140
24HW/500	500	I	105	190

**Flask, Erlenmeyer, Heavy Duty, wide neck**

Borosilicate Glass

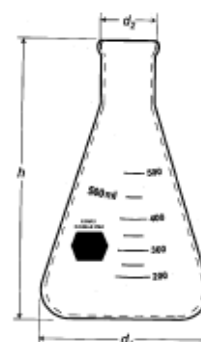
Code	Capacity ml	Pack Content	d mm	h mm
25HW/125	125	I	70	115
25HW/250	250	I	105	140
25HW/500	500	I	105	190

24 HW and 25HW are not recommended for use on hot plates**Flask, Erlenmeyer, narrow neck, Coloured markings**

Kimble KG-33 Borosilicate Glass ASTM E104 Type I Class I

Code	Capacity ml	Pack Content	d1 mm	h mm	Rubber stopper size
K26500/_ /50	50	12	50	78	1
K26500/_ /125	125	12	66	108	5
K26500/_ /250	250	12	82	130	6
K26500/_ /500	500	12	102	174	7
K26500/_ /1000	1000	6	128	213	9

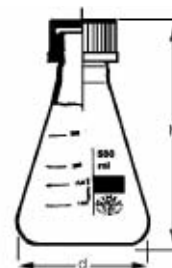
↑ Please state colour when ordering in blank space, printing available in blue (B), green (G), yellow (Y) and red (R)



Flask, Erlenmeyer with screw cap

Simax Borosilicate Glass ČSN 70 4030

Code	Capacity ml	Pack Content	GL	d mm	h size
8023/100	100	10	25	64	100
8023/250	250	10	32	85	140
8023/500	500	10	32	105	175
8023/1000	1000	10	32	131	215

**Accessory Closure**

Code	Pack Content	Type
834/GL25	10	Seal GL25
834/GL32	10	Seal GL32
948/GL25	10	Plastic cap GL25
948/GL32	10	Plastic cap GL32

Flask, Erlenmeyer with screw cap

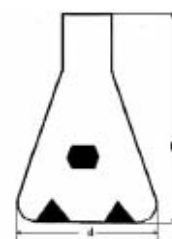
Kimble KG-33 Borosilicate Glass ASTM E1404 Type III

Code	Capacity ml	Pack Content	GPI Thread	d mm	h mm
K26505/50	50	6	24-410	50	78
K26505/125	125	6	24-410	66	115
K26505/250	250	6	28-410	82	128
K26505/500	500	6	38-430	102	175
K26505/1000	1000	6	38-430	128	215
K26505/2000	2000	2	38-430	161	273

**Replacement Cap is K45066B****Flask, Baffled shake**

Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Neck O.D. Thread	d mm	h mm
K25630/125	125	6	25	66	125
K25630/250	250	6	38	82	142
K25630/500	500	6	38	102	183
K25630/1000	1000	6	38	128	230
K25630/2000	2000	6	38	161	288

**Accessory Closure**

Code	Pack Content	Type
K73660/25	100	KIM-KAP Closure, 25mm
K73660/38	50	KIM-KAP Closure, 38mm

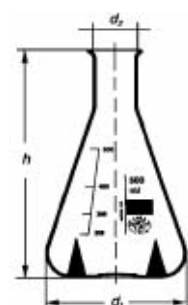
Baffles increase aeration or gas exchange**Flask, Baffled**

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
24/2000/BAF	2000	6	166	50	280

Other sizes available on request

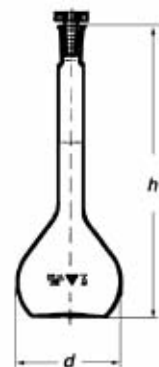
FOR PLASTIC BAFFLED FLASKS, PLEASE SEE PAGE 170.



Flask, volumetric one mark with plastic stopper, Class A

Kimble ValueWare Borosilicate Glass, ISO 1042, ISO 3585

Code	Capacity ml	Pack Content	Tolerance +/- ml	h mm	SJ
K68014W/5	5	10	0.040	70	10/19
K68014W/10	10	10	0.040	90	10/19
K68014/20	20	10	0.040	110	10/19
K68014/25	25	10	0.040	110	10/19
K68014W/25	25	10	0.060	110	12/21
K68014/50	50	10	0.060	140	12/21
K68014W/50	50	10	0.100	140	14/23
K68014/100	100	10	0.080	170	12/21
K68014N/100	100	10	0.100	170	14/23
K68014/200	200	10	0.100	210	14/23
K68014/250	250	10	0.120	220	14/23
K68014/500	500	10	0.200	260	19/26
K68014/1000	1000	10	0.300	300	24/29
K68014/2000	2000	6	0.600	370	29/31

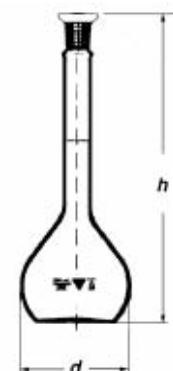


Flasks marked with a "W" are wide-neck flask are used so that pipette tip may be inserted to remove solution directly

Flask, volumetric, Snap cap, Class A Unserialized

Kimble ValueWare Borosilicate Glass ASTM E288, Class A

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height w/o stopper (mm)	Plastic Cap No.
K58008/50	50	12	0.050	130	3
K58008/100	100	12	0.080	160	4
K58008/250	250	12	0.120	225	5
K58008/500	500	12	0.200	260	5
K58008/1000	1000	6	0.300	310	6
K58008/2000	2000	4	0.500	370	8

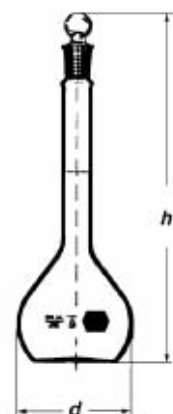


Replacement cap is K28150R

Flask, volumetric, one mark, Heavy duty, Wide mouth, Class A, with glass stopper

KIMAX KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Stopper
K92812G/5	5	6	0.080	97	13
K92812G/10	10	6	0.080	100	13
K92812G/20	20	6	0.080	130	13
K92812G/25	25	6	0.080	130	13
K92812G/50	50	6	0.080	150	13
K92812G/100	100	6	0.100	180	16
K92812G/200	200	6	0.200	223	19
K92812G/250	250	6	0.200	248	19
K92812G/500	500	6	0.200	283	19
K92812G/1000	1000	1	0.300	335	22
K92812G/2000	2000	1	0.500	395	27

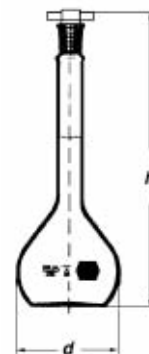


RAY-SORB Amber Flasks available on request

Flask, volumetric, one mark, Heavy duty, Wide mouth, Class A, with colour coded PTFE stopper

KIMAX KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Stopper	Stopper handle colour
K92812F/5	5	6	0.080	94	13	Orange
K92812F/10	10	6	0.080	97	13	Orange
K92812F/20	20	6	0.080	127	13	Orange
K92812F/25	25	6	0.080	127	13	Orange
K92812F/50	50	6	0.080	147	13	Orange
K92812F/100	100	6	0.100	175	16	Blue
K92812F/200	200	6	0.200	217	19	Green
K92812F/250	250	6	0.200	269	19	Green
K92812F/500	500	6	0.200	300	19	Green
K92812F/1000	1000	1	0.300	328	22	Orange
K92812F/2000	2000	1	0.500	392	27	Orange

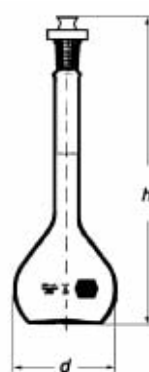


RAY-SORB Amber Flasks available on request

Flask, volumetric, one mark, Heavy duty, Wide mouth, Class A, with Polyethylene stopper

KIMAX KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Stopper
K92812P/5	5	6	0.080	97	13
K92812P/10	10	6	0.080	100	13
K92812P/20	20	6	0.080	130	13
K92812P/25	25	6	0.080	130	13
K92812P/50	50	6	0.080	150	13
K92812P/100	100	6	0.100	180	16
K92812P/200	200	6	0.200	223	19
K92812P/250	250	6	0.200	248	19
K92812P/500	500	6	0.200	283	19
K92812P/1000	1000	1	0.300	335	22
K92812P/2000	2000	1	0.500	395	27



RAY-SORB Amber Flasks available on request

Flask, volumetric, one mark, Heavy duty, Wide mouth, Class A, without stoppers

KIMAX KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height mm	Stopper
K92812N/5	5	6	0.080	77	13
K92812N/10	10	6	0.080	87	13
K92812N/20	20	6	0.080	110	13
K92812N/25	25	6	0.080	110	13
K92812N/50	50	6	0.080	130	13
K92812N/100	100	6	0.100	160	16
K92812N/200	200	6	0.200	200	19
K92812N/250	250	6	0.200	225	19
K92812N/500	500	6	0.200	260	19
K92812N/1000	1000	1	0.300	310	22
K92812N/2000	2000	1	0.500	370	27



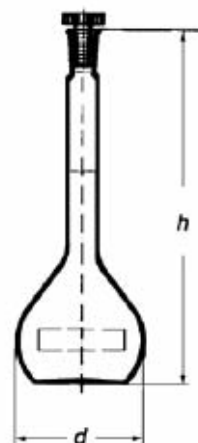
RAY-SORB Amber Flasks available on request

Flask, volumetric with plastic stoppers Class A (Amber coated available on request)

Simax Borosilicate Glass, ISO 1042

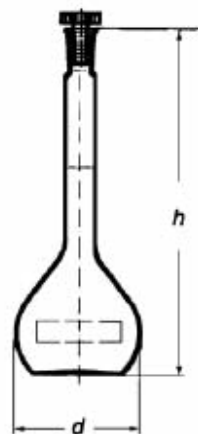
Code	Capacity ml	Pack Content	Tolerance +/- ml	d mm	h mm	SJ
I503/APN/5	5	10	0.025	22	70	7/16
I503/APN/10	10	10	0.025	27	90	7/16
I503/APN/25	25	10	0.040	40	110	10/19
I503/APN/50	50	10	0.060	50	140	12/21
I503/APN/100	100	10	0.100	60	170	12/21
I503/APN/200	200	10	0.150	75	210	14/23
I503/APN/250	250	10	0.150	80	220	14/23
I503/APN/500	500	10	0.250	100	260	19/26
I503/APN/1000	1000	10	0.400	125	300	24/29
I503/APN/2000	2000	6	0.600	160	370	29/32

Conformity certificate available on request

**Flask**, volumetric with plastic stoppers, Class B

Glassco Borosilicate Glass, ISO 1042, DIN 12664

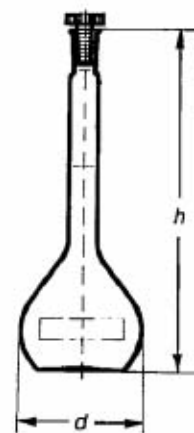
Code	Capacity ml	Pack Content	Tolerance +/- ml	d mm	h mm	SJ
I29/B/5	5	2	0.025	23	68	10/19
I29/B/10	10	2	0.025	28	92	10/19
I29/B/20	20	2	0.040	36	113	10/19
I29/B/25	25	2	0.040	36	113	10/19
I29/B/50	50	2	0.060	48	139	12/21
I29/B/100	100	2	0.100	60	172	14/23
I29/B/200	200	2	0.150	77	209	14/23
I29/B/250	250	2	0.150	81	220	14/23
I29/B/500	500	2	0.250	103	261	19/26
I29/B/1000	1000	2	0.400	127	300	24/29
I29/B/2000	2000	1	0.600	159	369	29/32

**Flask**, volumetric with plastic stoppers Class B (Amber coated available on request)

Simax Borosilicate Glass, ISO 1042

Code	Capacity ml	Pack Content	Tolerance +/- ml	d mm	h mm	SJ
I503/BPN/5	5	10	0.050	22	70	7/16
I503/BPN/10	10	10	0.050	27	90	7/16
I503/BPN/25	25	10	0.080	40	110	10/19
I503/BPN/50	50	10	0.120	50	140	12/21
I503/BPN/100	100	10	0.200	60	170	12/21
I503/BPN/200	200	10	0.300	75	210	14/23
I503/BPN/250	250	10	0.300	80	220	14/23
I503/BPN/500	500	10	0.500	100	260	19/26
I503/BPN/1000	1000	10	0.800	125	300	24/29
I503/BPN/2000	2000	6	1.200	160	370	29/32
I503/BPN/5000	5000	2	2.400	217	470	34/35

Conformity certificate available on request

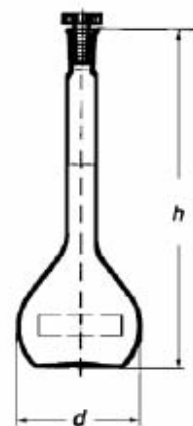


FOR PLASTIC VOLUMETRIC FLASKS, PLEASE SEE PAGE 170.

Flask, volumetric with plastic stoppers, Class A, with batch certificate

Glassco Borosilicate Glass, ISO 1042, DIN 12664, ASTM E228

Code	Capacity ml	Pack Content	Tolerance +/- ml	d mm	h mm	SJ
I30/A/5	5	2	0.025	23	68	10/19
I30/A/10	10	2	0.025	28	92	10/19
I30/A/20	20	2	0.040	36	113	10/19
I30/A/25	25	2	0.040	36	113	10/19
I30/A/50	50	2	0.060	48	139	12/21
I30/A/100	100	2	0.100	60	172	14/23
I30/A/200	200	2	0.150	77	209	14/23
I30/A/250	250	2	0.150	81	220	14/23
I30/A/500	500	2	0.250	103	261	19/26
I30/A/1000	1000	2	0.400	127	300	24/29
I30/A/2000	2000	1	0.600	159	369	29/32



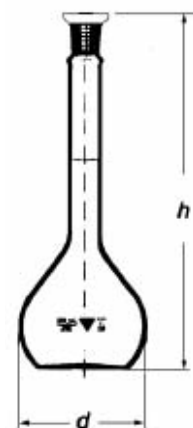
Individual certificate flasks made to ASTM E-228 Class A specifications and USP standards are available on request

Flask, volumetric, serialized and certified, Snap cap Class A

KIMAX KG-33 Borosilicate Glass ASTM E288

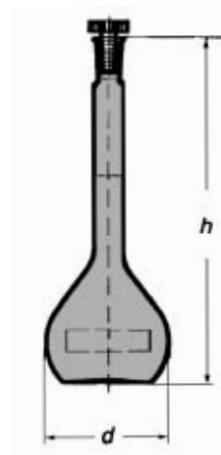
Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Plastic Cap No.
K28012/50	50	6	0.05	130	3
K28012/100	100	6	0.08	160	4
K28012/250	250	6	0.12	225	5
K28012/500	500	6	0.20	260	5
K28012/1000	1000	1	0.30	310	6

Replacement cap is K28150R

**Flask**, Amber coating volumetric with plastic stoppers, Class A, with batch certificate

Glassco Borosilicate Glass, ISO 1042, DIN 12664, ASTM E228

Code	Capacity ml	Pack Content	Tolerance +/- ml	d mm	h mm	SJ
I30/AH/5	5	2	0.025	23	68	10/19
I30/AH/10	10	2	0.025	28	92	10/19
I30/AH/20	20	2	0.040	36	113	10/19
I30/AH/25	25	2	0.040	36	113	10/19
I30/AH/50	50	2	0.060	48	139	12/21
I30/AH/100	100	2	0.100	60	172	14/23
I30/AH/200	200	2	0.150	77	209	14/23
I30/AH/250	250	2	0.150	81	220	14/23
I30/AH/500	500	2	0.250	103	261	19/26
I30/AH/1000	1000	2	0.400	127	300	24/29
I30/AH/2000	2000	1	0.600	159	369	29/32

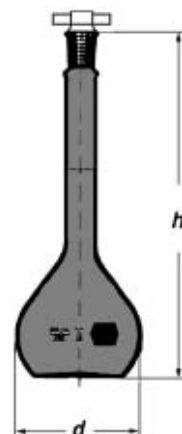


Flask, volumetric RAY-SORB (Amber) with colour coded PTFE stopper

Class A

KIMAX KG-33 RAY SORB Borosilicate Glass ASTM E288

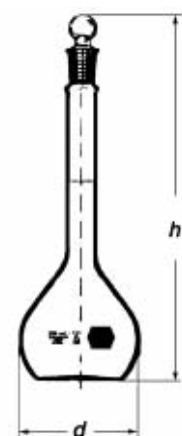
Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Stopper	Stopper handle colour
K28016/10	10	12	0.020	103	9	Black
K28016/25	25	6	0.030	118	9	Black
K28016/50	50	6	0.050	148	9	Black
K28016/100	100	6	0.080	180	13	Orange
K28016/200	200	6	0.100	225	16	Blue
K28016/250	250	6	0.120	250	16	Blue
K28016/500	500	6	0.200	287	19	Green
K28016/1000	1000	1	0.300	338	22	Yellow

**Flask, volumetric, Class A, colour coded**

Kimble KG-33 Borosilicate Glass, ASTM E288

Code	Capacity ml	Pack Content	Tolerance +/- ml	Height with stopper (mm)	Stopper
K28014/_ /25	25	6	0.030	118	9
K28014/_ /50	50	6	0.050	148	9
K28014/_ /100	100	6	0.080	180	13
K28014/_ /250	250	6	0.120	250	16
K28014/_ /500	500	6	0.200	287	19
K28014/_ /1000	1000	1	0.300	338	22

↑ Please state colour when ordering in blank space with letter; (**B**) blue, (**E**) green, (**Y**) yellow or (**R**) red

**Snap cap**

Yellow Polyethylene

Code	Cap Number	Pack Content	Fits Flask Size ml
K28150R/2	2	6	10, 25
K28150R/3	3	6	50
K28150R/4	4	6	100
K28150R/5	5	6	200, 250, 500
K28150R/6	6	6	1000

**To fit on K28012 and K58008****Stopper**

Polyethylene, Linear High-Density

Code	Cap Number	Pack Content	Fits ground neck
K28160R/9	9	6	9
K28160R/13	13	6	13
K28160R/16	16	6	16
K28160R/19	19	6	19
K28160R/22	22	6	22
K28160R/27	27	6	27

**To fit on K92812P**

Stopper Key Head

Colour-Coded PTFE

Code	Stopper Size	Pack Content	Dia. at widest point (mm)	Length of Joint (mm)	Colour Code
K41901R/9	9	6	9.4	14	Black
K41901R/13	13	6	13.4	14	Orange
K41901R/16	16	6	16.5	15	Blue
K41901R/19	19	6	19.7	17	Green
K41901R/22	22	6	22.05	20.5	Yellow
K41901R/32	32	6	32.15	21.5	Grey
K41901R/38	38	6	38	30	Black



To fit on K28016 and K92812F

Stopper Penny Head Flask Length

Kimax KG-33 Borosilicate Glass ASTM E675

Code	Stopper Size	Pack Content	Dia. at widest point (mm)	Length of Joint (mm)	Height above Joint (mm)
K41900R/13	13	6	13.4	14	21
K41900R/38	38	6	38	30	39



Flask, volumetric sugar analysis, two marks

Simax Borosilicate Glass

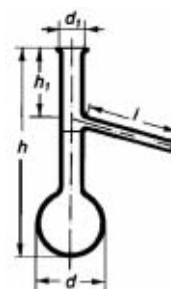
Code	Capacity ml	Pack Content	d1 mm	d2 mm	h size
I509/50-55	50/55	10	47	18	155
I509/100-110	100/110	10	58	22	180
I509/200-220	200/220	10	75	24	200



Flask, Distilling, Engler Side tube at 75 degrees

Kimax KG-33 Borosilicate Glass ASTM D86, D223, D801, D802, E133

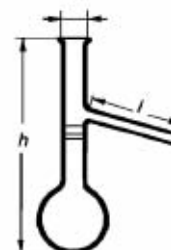
Code	Capacity ml	Pack Content	Height mm	Arm O.D. (mm)	Bottom Flask to arm (mm)
K26015/125	125	12	214	7	137



Flask, Distilling, Engler; three reference lines. Side tube at 75 degrees

Kimax KG-33 Borosilicate Glass ASTM D86

Code	Capacity ml	Pack Content	Height mm	Arm O.D. (mm)	Bottom Flask to arm (mm)
K26016/125	125	12	214	7	137



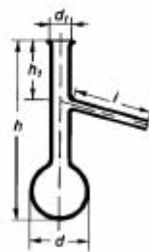
Accessories

Code	Type
K26015C/125	Centering Device, Thermometer, for Distilling Flask Teflon with Viton O ring, cap yellow polypropylene

Flask Fractionating, Engler

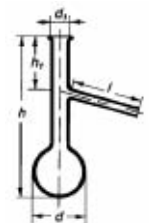
Simax Borosilicate Glass PN 70 4047

Code	Capacity ml	Pack Content	h mm	h1 mm	d1 mm	l mm	d mm
42/100	100	10	215	75	20	100	64
42/250	250	10	215	65	20	100	68

**Flask Fractionating**

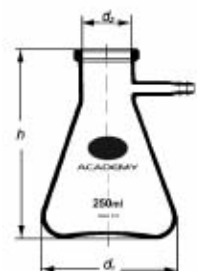
Simax Borosilicate Glass PN 70 4047

Code	Capacity ml	Pack Content	h mm	h1 mm	d1 mm	l mm	d2 mm
41/B/500	500	10	250	72	105	200	34

**Flask, filtering, with glass side hose connection**

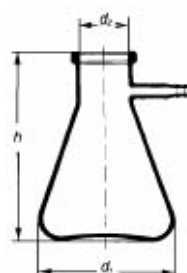
Academy 3.3 Borosilicate Glass

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
A/6060/100	100	8	65	24	115
A/6060/250	250	6	87	24	150
A/6060/500	500	6	107	24	175
A/6060/1000	1000	2	138	34	230

**Flask, filtering with glass side hose connection**

Simax Borosilicate Glass PN 70 0124

Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
2420/100	100	10	70	24	105
2420/250	250	10	85	35	145
2420/500	500	8	105	35	175
2420/1000	1000	8	135	45	230
2420/2000	2000	6	165	60	255

**Flask, filtering with glass side hose connection**

Simax Borosilicate Glass DIN 12475

Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
2420/3000	3000	6	170	70	295
2420/5000	5000	3	185	80	360
2420/10000	10000	1	240	80	420

**Flask, filtering, with removable plastic hose connection**

Kimble ValueWare Borosilicate Glass ISO 6556

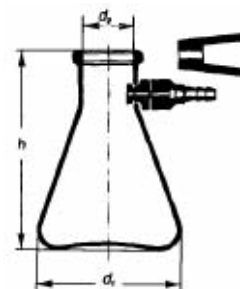
Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
K67065/100	100	10	72	24	105
K67065/250	250	10	87	35	145
K67065/500	500	6	107	35	175
K67065/1000	1000	6	138	43	230
K67065/2000	2000	6	168	43	275



Flask, filtering with plastic side hose connection

Simax Borosilicate Glass ISO 6556, DIN 12 476, PN 70 0124

Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
2419/100	100	10	70	24	105
2419/250	250	10	85	35	145
2419/500	500	8	105	35	175
2419/1000	1000	8	135	45	230
2419/2000	2000	6	165	60	255

**Flask,** filtering with plastic side hose connection

Simax Borosilicate Glass DIN 12 475

Code	Capacity ml	Pack Content	d1 Thread	d2 mm	h mm
2419/3000	3000	6	170	70	295
2419/5000	5000	3	185	80	360
2419/10000	10000	1	240	80	420

**Flask,** Antibiotic Moisture content

Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Joints
K881700/0000	2.2	1	10/10

**Flask,** Fat extraction, Mojonnier

Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Height mm	Width mm
K617600/0025	25	1	80	192

**Flask,** Incubation, Center well

Kimble KG-33 Borosilicate Glass

Order as component parts, please see catalogue numbers below.

Only sold in the pack content shown below

Code	Pack Content	Components
K882300/0010	12	Flask only, 10ml
K26500/25	48	Kimble KIMAX Flask only 25ml
K882360/0010	12	Sidearm Flask only 10ml
K882310/0000	144	Stopper only, Top
K882311/0000	144	Stopper only, Sidearm
K882320/0000	144	Center Well, Polypropylene, 10mm diameter, 70mm long

Polypropylene centre well is 70mm in length

Approx. dimensions

Capacity	h x w (mm)
10ml	50x31
25ml	60x40



Flasks, Reaction, Cylindrical

Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Flange I.D. Inches	Height mm	Use Clamp	Wall Inches
K296100/0050	50	1	2	65	K296200/0000	3/16
K296100/0100	100	1	2	95	K296200/0000	3/16
K612000/0500	500	1	4	100	K613750/0000	3/16
K612000/1000	1000	1	4	150	K613750/0000	3/16
K612000/1500	1500	1	4	205	K613750/0000	3/16
K612000/2000	2000	1	4	260	K613750/0000	3/16
K612000/3000	3000	1	4	370	K613750/0000	3/16

**Flasks, Reaction, Cylindrical, with jacket**

Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Flange I.D. Inches	Height mm	Hose Con. Size	Use Clamp	Wall Inches
K296110/0000	100	1	2	110	1	K296200/000	3/16
K612100/0500	500	1	4	140	2	K613750/0000	3/16
K612100/1000	1000	1	4	170	2	K613750/0000	3/16
K612100/2000	2000	1	4	280	3	K613750/0000	3/16
K612100/3000	3000	1	4	390	3	K613750/0000	3/16

**Flasks, Reaction, Spherical**

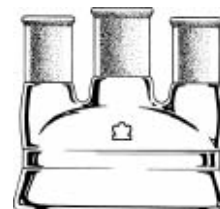
Kimble KG-33 Borosilicate Glass

Code	Capacity ml	Pack Content	Flange I.D. Inches	Diameter mm	Height mm	Use Clamp
K296150/0250	250	1	2	83	115	K296200/0000
K296150/0500	500	1	2	102	140	K296200/0000
K612250/5000	5000	1	4	221	290	K613750/0000
K612250/12000	12000	1	4	295	365	K613750/0000

**Reaction, Flask Top, Three Neck**

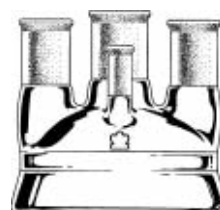
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Flange I.D. Inches	Centre Joint	Side Joint	Use Clamp
K296170/0000	1	2	19/22	14/20	K296200/0000
K612500/0021	1	4	24/40	24/40	K613750/0000
K612500/0022	1	4	29/42	24/40	K613750/0000

**Reaction, Flask Top, Four Neck**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Flange I.D. Inches	Centre Joint	Side Joint	Thermometer Joint	Use Clamp
K296190/0000	1	2	19/22	14/20	10/18	K296200/0000
K613000/0021	1	4	24/40	24/40	10/30	K613750/0000
K613000/4524	1	4	45/50	24/40	10/30	K613750/0000



Reactors, Un-Jacketed and Jacketed

12mm Low-Interference PTFE Plugs for Easy Product Removal

Flush Bottom Outlets Eliminates Dead Space

Improved Stirring with Removable Baffle Cage

Grease-Free 6" Beaded Pipe Connections

Wall approximate 5mm

Code	Pack Content	Type	Flask Capacity (ml)	Hose Connection	Centre Joints	Side Joints	Approx' Height (mm)
K614100/5005	I	Un-Jacketed	5000	-	45/50	24/40	570
K614110/5005	I	Jacketed	5000	1/2"	45/50	24/40	570

Both Styles shown with optional, removable, PTFE, baffle cage

Component Parts

Code	Pack Content	Components
K614101/4524	I	Reaction Flask Top
K614112/5005	I	Reaction Flask Jacketed 5000ml
K675800/0060	I	Coupling 6"

Optional Part

Code	Pack Content	Components
K614103/5000	I	Removable Baffle Cage PTFE

**Clamp, Reaction Flask**

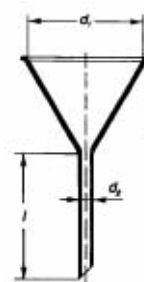
Aluminium

Code	Pack Content	To fit Ground Flange I.D.
K296200/0000	I	2

**Funnel, Short stem**

Glassco Borosilicate Glass ISO 4798

Code	I.D. Top Funnel (mm)	Pack Content	Length of Stem (mm)
238/35	35	10	35
238/45	45	10	45
238/55	55	10	55
238/75	75	10	75
238/100	100	10	100
238/150	150	10	150

**Funnel, Short stem**

Kimble 3.3 Borosilicate Glass ISO 4798

Code	I.D. Top Funnel (mm)	Pack Content	Height mm	O.D. Stem (mm)	Length Stem (mm)	Capacity ml
K68950/55	55	10	105	8	55	36
K68950/75	75	10	145	8	75	90
K68950/100	100	10	193	10	100	225



Funnel, Short stem

Simax Borosilicate Glass ISO 4798

Code	d1 mm	Pack Content	d2 mm	l mm
2350/35	35	10	6	35
2350/45	45	10	6	45
2350/55	55	10	8	55
2350/75	75	10	8	75
2350/100	100	10	10	100
2350/150	150	10	16	150
2350/200	200	6	24	150
2350/250	250	2	30	175

**Funnel, Long stem**

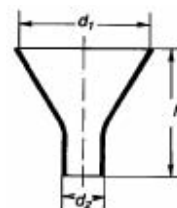
Kimble 3.3 Borosilicate Glass ISO 4798

Code	I.D. Top Funnel (mm)	Pack Content	Height mm	O.D. Stem (mm)	Length Stem (mm)	Capacity ml
K68900/55	55	10	200	8	150	36
K68900/75	75	10	220	8	150	90
K68900/100	100	10	243	9	150	225

**Funnel, Powder, Short stem**

Simax Borosilicate Glass

Code	d1 mm	Pack Content	d2 mm	l mm
2356/80	80	10	25	75
2356/100	100	10	25	95
2356/120	120	10	30	110



Other sizes from 50mm to 200mm available on request

Funnel, ribbed

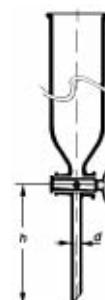
Simax Borosilicate Glass

Code	Pack Content	d1 mm	d2 mm	l mm
2360/100	12	105	18	80
2360/130	6	138	22	90
2360/160	6	170	26	120
2360/200	3	210	38	140
2360/250	2	250	40	155

**Funnel, separatory, cylinder, open, with glass stopcock**

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Key No.
2390/50	50	4	9	150	2
2390/100	100	4	9	150	2
2390/250	250	2	9	150	2
2390/500	500	2	10	150	4
2390/1000	1000	2	10	150	4



Funnel, separatory, pear shape

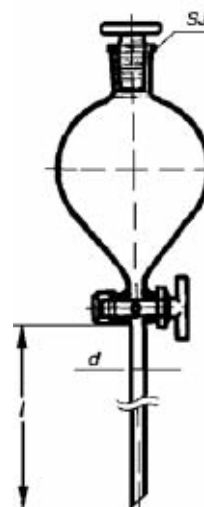
Glassco Borosilicate Glass

GLASS STOPCOCK

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
8SI50/50	50	I	19/26	10	65	2.5
8SI50/100	100	I	19/26	10	65	2.5
8SI50/250	250	I	19/26	10	65	4
8SI50/500	500	I	29/32	10	65	4
8SI50/1000	1000	I	29/32	10	65	6
8SI50/2000	2000	I	29/32	10	65	6

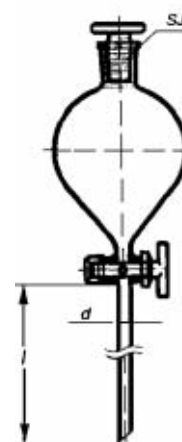
PTFE STOPCOCK

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
8SI52/50	50	I	19/26	10	65	2.5
8SI52/100	100	I	19/26	10	65	2.5
8SI52/250	250	I	19/26	10	65	4
8SI52/500	500	I	29/32	10	65	4
8SI52/1000	1000	I	29/32	10	65	6
8SI52/2000	2000	I	29/32	10	65	6

**Funnel, separatory, globe shape, with glass stopcock**

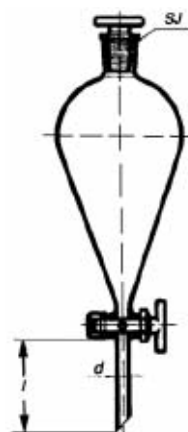
Simax Borosilicate Glass PN70 4083

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
2392/50	50	4	19/26	9	150	2
2392/100	100	4	19/26	9	150	2
2392/250	250	2	29/32	9	200	2
2392/500	500	2	29/32	10	200	4
2392/1000	1000	2	29/32	10	200	4
2392/2000	2000	I	29/32	10	200	6

**Funnel, separatory, squibb shape, with glass stopcock**

Glassco Borosilicate Glass

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
8SI47/50	50	I	19/26	10	78	2.5
8SI47/100	100	I	19/26	10	78	2.5
8SI47/250	250	I	19/26	10	78	4
8SI47/500	500	I	29/32	10	78	4
8SI47/1000	1000	I	29/32	10	78	6
8SI47/2000	2000	I	29/32	10	78	6



Funnel, separatory, Squibb, with PTFE stopcock

Glassco Borosilicate Glass

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
8SI49/50	50	1	19/26	10	78	2.5
8SI49/100	100	1	19/26	10	78	2.5
8SI49/250	250	1	19/26	10	78	4
8SI49/500	500	1	29/32	10	78	4
8SI49/1000	1000	1	29/32	10	78	6
8SI49/2000	2000	1	29/32	10	78	6

**Funnel, separatory, pear shape, PTFE stopcock**

Kimax Borosilicate Glass ASTM E1096 Type 4

Code	Capacity ml	Pack Content	Stopper Joint	d mm	h mm	Stopcock Size
K29049F/125	125	2	22	9	60	2
K29049F/250	250	2	22	9	60	2
K29049F/500	500	1	27	9	60	2
K29049F/1000	1000	1	27	10	60	4
K29049F/2000	2000	1	38	10	60	6

**Funnel, separatory, pear shape**

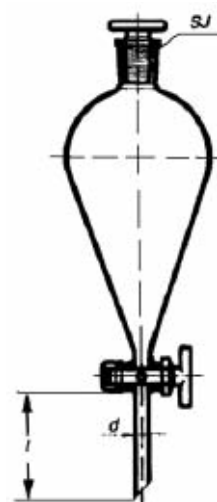
Simax Borosilicate Glass PN70 4083

GLASS STOPCOCK

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
2394/50	50	4	19/26	9	70	2
2394/100	100	4	19/26	9	70	2
2394/250	250	2	29/32	9	70	2
2394/500	500	2	29/32	10	70	4
2394/1000	1000	2	29/32	10	70	4
2394/2000	2000	4	29/32	13	70	6

PTFE STOPCOCK

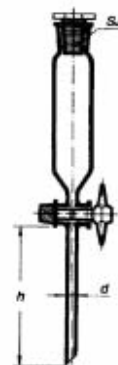
Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
2394/T/50	50	4	19/26	9	70	2
2394/T/100	100	4	19/26	9	70	2
2394/T/250	250	2	29/32	9	70	2
2394/T/500	500	2	29/32	10	70	4
2394/T/1000	1000	2	29/32	10	70	4
2394/T/2000	2000	4	29/32	13	70	6



Funnel, separatory, cylindrical, PTFE stopcock

Simax Borosilicate Glass PN70 4083

Code	Capacity ml	Pack Content	SJ	d mm	h mm	Key No.
2397/50	50	4	19/26	9	150	2
2397/100	100	4	19/26	9	150	2
2397/250	250	2	29/32	9	200	2
2397/500	500	2	29/32	10	200	4
2397/1000	1000	2	29/32	10	200	4
2397/2000	2000	1	29/32	10	200	6



FOR PLASTIC SEPARATORY FUNNELS, PLEASE SEE PAGE 171.

Glass, balls

Soda Lime Glass

Code	Diameter mm	Pack Content	Tol. +/- (mm)	Approx. beads per Kg
GS/2/0.5KG	2	500g	0.2	226354
GS/3/0.5KG	3	500g	0.2	48892
GS/4/0.5KG	4	500g	0.3	17818
GS/5/0.5KG	5	500g	0.3	6112
GS/6/0.5KG	6	500g	0.3	3537
GS/8/0.5KG	8	500g	0.4	1492

**Glass, balls**

KIMAX KG-33 Borosilicate Glass

Code	Diameter mm	Pack Content	Tol. +/- (mm)	Approx. beads per cubic inch	Approx. beads per pound
K13500/3	3	1 lb	0.3	550	12000
K13500/4	4	1 lb	0.4	250	5200
K13500/5	5	1 lb	0.5	125	3000
K13500/6	6	1 lb	0.6	75	1800

**Jars Staining, Hellendahl**

Soda-Lime Glass

Code	Pack Content	Height mm	Length mm	Width mm
2954	10	100	58.8	58.5

**Jars Staining, Schiefferdecker**

Soda-Lime Glass

Code	Pack Content	Height mm	Length mm	Width mm
2956	10	50	90	70



Jars Staining, Coplin

Soda-Lime Glass

Code	Pack Content	Height mm	Diameter mm
2959	10	115	90

**Jars Staining, Rectangular**

Soda-Lime Glass

Code	Pack Content	Height mm	Length mm	Width mm
2960	10	74	105	85

**Jars Staining, Rack**

Soda-Lime Glass

Code	Pack Content	Height mm	Length mm	Width mm
2960/RACK	10	50	87	67

**Jars Staining, Square**

Soda-Lime Glass

Code	Pack Content	Height mm	Length mm	Width mm
2960/1	10	77	115	115

**Jars, Battery, museum, cotton wool etc**

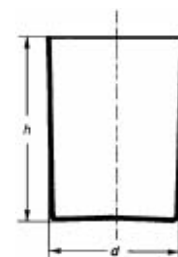
Soda-Lime Glass

Code	Pack Content	Diameter mm	Height mm
1196/100x100	1	100	100
1196/150x150	1	150	150
1196/200x250	1	200	250

**Jars, Battery, museum, cotton wool etc**

Simax Borosilicate glass

Code	Pack Content	Diameter mm	Height mm
2500/100x100	6	100	100
2500/100x150	6	100	150
2500/100x200	6	100	200
2500/150x200	6	150	200
2500/150x250	6	150	250
2500/200x200	2	200	200



Lids, to fit 2500 Series

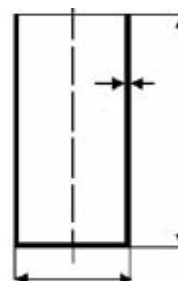
Simax Borosilicate glass

Code	Pack Content	To fit Vessel with Diameter
2500/LID/100	12	100
2500/LID/150	12	150

**Jars, Cold Test (Cloud and Pour Points)**

KIMAX KG-33 Borosilicate Glass

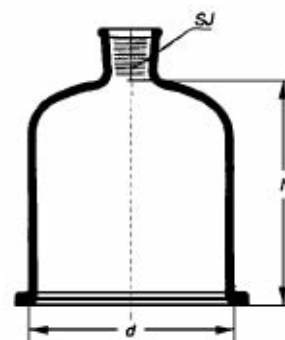
Code	Pack Content	Approx O.D. mm	Height mm
K32501/99	12	35	125

**Bell Jars, with neck SJ**

(Full height, Please note; shoulder height 50mm less than measurement shown)

Simax Borosilicate glass

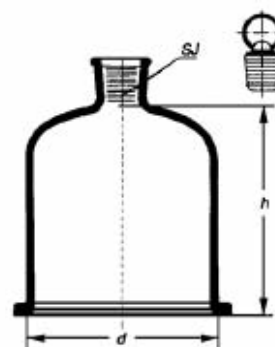
Code	Pack Content	Diameter mm	Height mm	SJ
2874/150x200	2	150	200	29/32
2874/150x250	2	150	250	29/32
2874/200x300	1	200	300	29/32
2874/200x350	1	200	350	29/32

**Bell Jars, stoppered**

(Full height, Please note; shoulder height 50mm less than measurement shown)

Simax Borosilicate glass

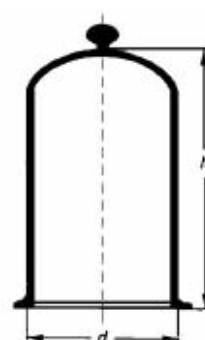
Code	Pack Content	Diameter mm	Height mm	SJ
695/150x200	2	150	200	29/32
695/150x250	2	150	250	29/32
695/200x300	1	200	300	29/32
695/200x350	1	200	350	29/32

**Bell Jars, knob type**

(Full height, Please note; shoulder height 50mm less than measurement shown)

Simax Borosilicate glass

Code	Pack Content	Diameter mm	Height mm
2873/150x250	2	150	250
2873/180x300	1	180	300
2873/200x300	1	200	300
2873/200x350	1	200	350



Adapters, cone/rubber tubing, right angled connection

Glassco Borosilicate Glass

Code	Cone size	O/D nipple mm
8SATA/0	10/19	9
8SATA/1	14/23	9
8SATA/2	19/26	9
8SATA/3	24/29	9
8SATA/4	29/32	9
8SATA/5	34/35	9



Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SATA/2SC

Adapters, cone/rubber tubing, straight connection

Glassco Borosilicate Glass

Code	Cone size	O/D nipple mm
8SATS/1	14/23	9
8SATS/2	19/26	9
8SATS/3	24/29	9
8SATS/4	29/32	9



Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SATS/2SC

Adapters, expansion

Glassco Borosilicate Glass

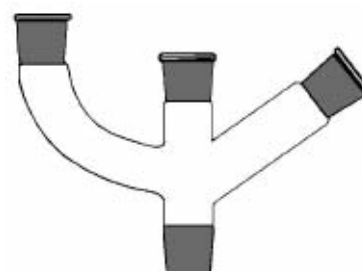
Code	Socket size	Cone size
8SXAE10	14/23	10/19
8SXAE21	19/26	14/23
8SXAE31	24/29	14/23
8SXAE32	24/29	19/26
8SXAE41	29/32	14/23
8SXAE42	29/32	19/26
8SXAE43	29/32	24/29
8SXAE52	34/35	19/26
8SXAE53	34/35	24/29
8SXAE54	34/35	29/32
8SXAE64	40/38	29/32



Adapters, multiple, three necks, two parallel and one at 45 degree neck

Glassco Borosilicate Glass

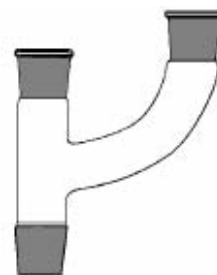
Code	Parallel neck	Angled neck	Cone size
8SMA4/23	19/26	19/26	24/29



Adapters, multiple, two necks parallel

Glassco Borosilicate Glass

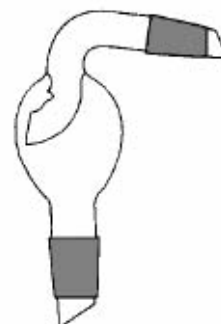
Code	Socket size	Cone size
8SMAP/00	10/19	10/19
8SMAP/11	14/23	14/23
8SMAP/22	19/26	19/26
8SMAP/32	19/26	24/29
8SMAP/44	24/29	24/29
8SMAP/55	29/32	29/32



Adapters, splash head sloping

Glassco Borosilicate Glass

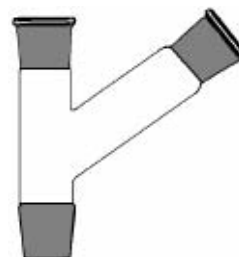
Code	Cone size to fit flask	Cone size to fit condenser
8SSH7/02	19/26	19/26
8SSH7/03	24/29	19/26
8SSH7/43	24/29	24/29
8SSH7/0/44	29/32	29/32
8SSH7/0/55	34/35	34/35



Adapters, multiple, one parallel and one 45 degree neck

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SMAA/22	19/26	19/26
8SMAA/32	19/26	24/29
8SMAA/33	24/29	24/29
8SMAA/43	24/29	29/32



Adapters, T-shaped

Glassco Borosilicate Glass

Code	Diameter mm	Pack Content
8240/7	7	1
8240/10	10	1



Adapters, Y-shaped

Glassco Borosilicate Glass

Code	Diameter mm	Pack Content
8241/7	7	1
8241/10	10	1



FOR PLASTIC 'T' AND 'Y' SHAPED ADAPTERS, PLEASE SEE PAGE 186.

Adapters, reduction

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SRA01	10/19	14/23
8SRA12	14/23	19/26
8SRA13	14/23	24/29
8SRA14	14/23	29/32
8SRA23	19/26	24/29
8SRA24	19/26	29/32
8SRA25	19/26	34/35
8SRA26	19/26	40/38
8SRA27	19/26	45/40
8SRA34	24/29	29/32
8SRA35	24/29	34/35
8SRA36	24/29	40/38
8SRA37	24/29	45/40
8SRA38	24/29	50/42
8SRA45	29/32	34/35
8SRA47	29/32	45/40
8SRA56	34/35	40/38
8SRA58	34/35	50/42



Adapters, cone/screw thread

Glassco Borosilicate Glass

Code	Cone size	Thread size	Diameter through cap (mm)
8SAST/1	14/23	14	6.0-7.0
8SAST/2	19/26	14	6.0-7.0
8SAST/3	24/29	14	6.0-7.0
8SAST/4	29/32	14	6.0-7.0
8SAST/5	34/35	14	6.0-7.0
8SAST/6	14/23	18	7.0-8.5
8SAST/7	19/26	18	7.0-8.5
8SAST/8	24/29	18	7.0-8.5
8SAST/9	29/32	18	7.0-8.5
8SAST/11	19/26	25	10.5-11.5
8SAST/12	24/29	25	10.5-11.5
8SAST/13	29/32	25	10.5-11.5
8SAST/14	34/35	25	10.5-11.5



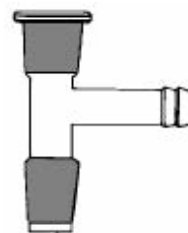
CARE FOR YOUR GLASSWARE

YOU SHOULD AVOID USING GROUND-GLASS JOINTS WHEN DRY. ALTHOUGH GROUND-GLASS SURFACES SEAL WELL WITHOUT THE USE OF LUBRICANTS, IT IS ADVISABLE TO LUBRICATE THEM TO PREVENT STICKING AND BREAKAGE. GROUND SURFACES SHOULD BE CLEANED PRIOR TO LUBRICATION- DUST, DIRT AND PARTICULATE MATTER MAY SCORE THE SURFACE AND CAUSE LEAKAGE.

Adapters, socket/cone with 'T' connection

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SATR/11	14/23	14/23
8SATR/12	14/23	19/26
8SATR/13	14/23	24/29
8SATR/22	19/26	19/26
8SATR/23	19/26	24/29
8SATR/24	19/26	29/32
8SATR/25	19/26	34/35
8SATR/33	24/29	24/29
8SATR/44	29/32	29/32



Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SATR/44SC

Adapters, socket/rubber tubing, straight connection

Glassco Borosilicate Glass

Code	Socket size	O/D nipple mm
8SATF/1	14/23	9
8SATF/2	19/26	9
8SATF/3	24/29	9
8SATF/4	29/32	9



Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SATF/3SC

Adapters, swan neck (screwthread for use with thermometer or air leak tube)

Glassco Borosilicate Glass

Code	Socket size	Cone size	Thread size (GL)
8SASN/B14	14/23	14/23	14
8SASN/B19	19/26	19/26	14
8SASN/B19/B24	19/26	24/29	14
8SASN/B24	24/29	24/29	14



Bends, plain, long

Glassco Borosilicate Glass

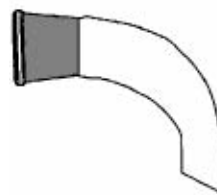
Code	Socket size	Approx length (mm)
8SRAAL0	10/19	120
8SRAAL1	14/23	190
8SRAAL2	19/26	200
8SRAAL3	24/29	200
8SRAAL4	29/32	200



Bends, plain, short

Glassco Borosilicate Glass

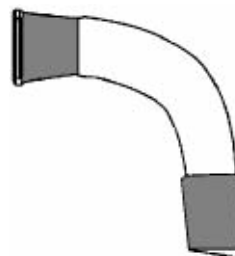
Code	Socket size	Approx length (mm)
8SRAAS1	14/23	65
8SRAAS2	19/26	65
8SRAAS3	24/29	65
8SRAAS4	29/32	65



Bends, plain, socket to cone

Glassco Borosilicate Glass

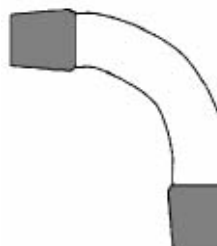
Code	Socket size	Cone size
8SRPB/11	14/23	14/23
8SRPB/22	19/26	19/26
8SRPB/23	19/26	24/29
8SRPB/33	24/29	24/29
8SRPB/44	29/32	29/32
8SRPB/55	34/35	34/35



Bends, recovery, sloping

Glassco Borosilicate Glass

Code	Socket size	Cone size to fit condenser
8SSBA/11	14/23	14/23
8SSBA/22	19/26	19/26
8SSBA/23	24/29	19/26
8SSBA/33	24/29	24/29
8SSBA/44	29/32	29/32



Bends, recovery, vertical

Glassco Borosilicate Glass

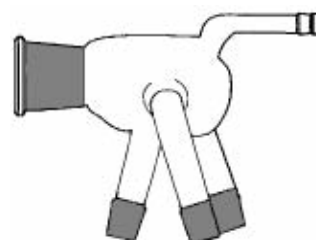
Code	Cone size to fit flask	Cone size to fit condenser
8SSBV/11	14/23	14/23
8SSBV/22	19/26	19/26
8SSBV/23	19/26	24/29
8SSBV/33	24/29	24/29
8SSBV/44	29/32	29/32



Bends, with multiple connections (pig)

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SRVP/00	10/19	10/19
8SRVP/11	14/23	14/23
8SRVP/21	19/26	14/23
8SRVP/41	29/32	14/23



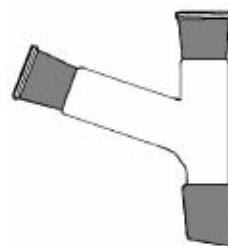
Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SRVP/41SC

Bends with socket connection

Glassco Borosilicate Glass

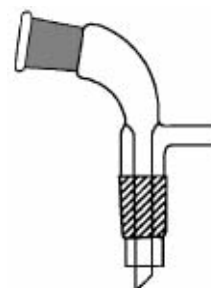
Code	Socket size	Cone size
8SRBS/11	14/23	14/23
8SRBS/22	19/26	19/26
8SRBS/23	19/26	24/29



Bends with vacuum connection

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SRAAV/11	14/23	14/23
8SRAAV/22	19/26	19/26
8SRAAV/23	19/26	24/29
8SRAAV/33	24/29	24/29
8SRAAV/44	29/32	29/32



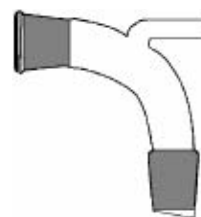
Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SRAAV/44SC

Bends, with vent

Glassco Borosilicate Glass

Code	Socket size	Cone size
8SRBV/00	10/19	10/19
8SRBV/11	14/23	14/23
8SRBV/22	19/26	19/26
8SRBV/23	19/26	24/29
8SRBV/33	24/29	24/29
8SRBV/44	29/32	29/32



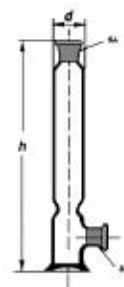
Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SRBV/44SC

Calcium Chloride Towers

Simax Borosilicate Glass

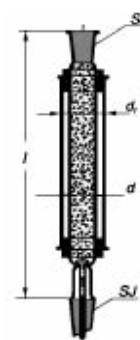
Code	Pack content	d mm	h mm	SJ1	SJ2
2720/125	8	40	240	24/29	19/26
2720/250	8	45	315	24/29	19/26



Column, distilling, Hempel, jacketed

Simax Borosilicate Glass

Code	Pack content	d mm	h mm	SJ1	SJ2
8321/300/B14	1	18	32	300	14/23
8321/300/B19	1	22	32	300	19/26
8321/500/B14	1	18	32	500	14/23
8321/500/B29	1	34	46	500	29/32
8321/750/B29	1	34	46	750	29/32
8321/1000/B29	1	34	46	1000	29/32



Columns, fractionating (Vigreux)

Glassco Borosilicate Glass

Code	Socket/Cone size	Approx. effective length (mm)
8SCFV36/B24	24/29	360
8SCFV60/B24	24/29	600



Condensers, air

Glassco Borosilicate Glass

Code	Surface area cm ²	Socket size	Cone size	Effect length (mm)	Overall length (mm)
8SCA12/11	100	14/23	14/23	200	225
8SCA12/12	100	19/26	19/26	150	170
8SCA12/23	200	24/29	24/29	300	320
8SCA12/22	240	19/26	19/26	400	430
8SCA12/43	400	24/29	24/29	550	570
8SCA12/44	500	29/32	29/32	550	570

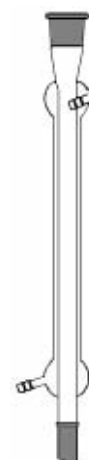


Condensers, Liebig

Glassco Borosilicate Glass

Code	Socket size	Cone size	Approx. effective length (mm)
8SCLI1/11	14/23	14/23	150
8SCLI1/22/200	19/26	19/26	200
8SCLI1/33	24/29	24/29	250
8SCL2/22	19/26	19/26	400
8SCL2/33	24/29	24/29	400

If you wish to order with screw thread connectors please add SC to end of product code e.g. 8SCLI1/11/SC



Condensers, double surface (Davies)

Glassco Borosilicate Glass

Code	Socket size	Cone size	Approx. effective length (mm)
8SC5/13	24/29	24/29	160
8SC5/23	24/29	24/29	200

Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SC5/23SC



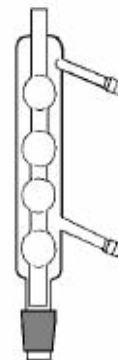
Condensers, Allihn (Bulb)

Glassco Borosilicate Glass

Code	Cone size	Approx. effective length (mm)
8SCAL20/B19	19/26	200
8SCAL20/B24	24/29	200
8SCAL20/B29	29/32	200
8SCAL20/B34	34/35	200
8SCAL20/B40	40/38	200
8SCAL20/B50	50/42	200

Thread type available.

If you wish to order thread type, please add SC to catalogue number. For e.g. 8SCAL20/B50SC



Condensers, Graham (Coil)

Glassco Borosilicate Glass

Code	Socket/Cone size	Approx. effective length (mm)
8SCC20/B19	19/26	200
8SCC25/B24	24/29	250
8SCC30/B19	19/26	300
8SCC30/B24	24/29	300

Thread type available.

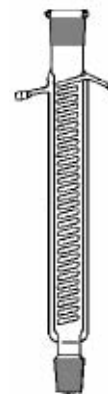
If you wish to order thread type, please add SC to catalogue number. For e.g. 8SCC30/B24SC



Condensers, Jacketed (Coil)

Glassco Borosilicate Glass

Code	Socket/Cone size	Approx. effective length (mm)
8SCCJ15/B19	19/26	150
8SCCJ15/B24	24/29	150



Distillation heads, plain with thermometer socket

Glassco Borosilicate Glass

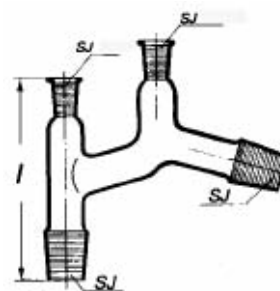
Code	Cone to fit flask	Cone to fit condenser	Socket size
8SSBS/11	14/23	14/23	14/23
8SSBS/12	19/26	19/26	14/23
8SSBS/22	19/26	19/26	19/26
8SSBS/23	24/29	19/26	14/23
8SSBS/33	24/29	24/29	14/23
8SSBS/24	29/32	19/26	14/23
8SSBS/44	29/32	29/32	14/23
8SSBS/25	34/35	19/26	14/23
8SSBS/35	34/35	24/29	14/23



Distillation, head acc. to Claisen, with SJ

Simax Borosilicate Glass

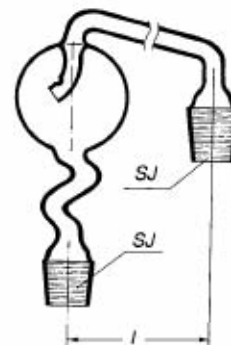
Code	Cones SJ	Pack Content	Sockets SJ	I mm
8173/14/23	14/23	I	14/23	113
8173/29/32	29/32	10	14/23	132



Adapter, distilling, drop catcher

Simax Borosilicate Glass

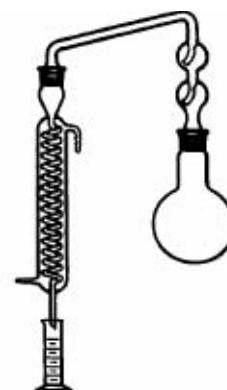
Code	SJ	Pack Content	I mm
8147/14/23	14/23	I	200
8147/29/32	29/32	10	200



Apparatus, distilling, splash head

Simax Borosilicate Glass

Code	Packing Height mm	Pack Content	SJ
8746/1000	1000	I	29/32
8746/2000	2000	I	29/32



Filters, Buchner, with fitted sintered disc

Glassco Borosilicate Glass

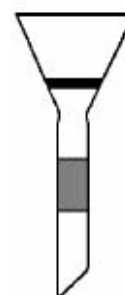
Code	Cone size	Disc diam mm	Funnel diam (mm)	Porosity
8SBF/2	19/26	60	80	3
8SBF/3	24/29	60	80	3
8SBF/4	24/29	90	105	3



Filters, conical, jointed with fitted sintered disc

Glassco Borosilicate Glass

Code	Cone size	Disc diam mm	Funnel diam (mm)	Porosity
8SCF/1	19/26	20	45	3
8SCF/2	19/26	30	80	3

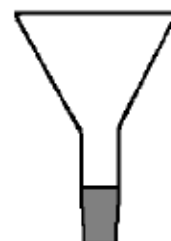


For Funnels without jointed stem see page 00

Funnels, powder

Glassco Borosilicate Glass

Code	Cone size	Diameter mm
8SPF/B14	14/23	100
8SPF/B19	19/26	100
8SPF/B24	24/29	100
8SPF/B29	29/32	100
8SPF/B34	34/35	100

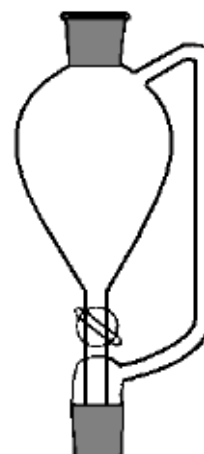


For Funnels without jointed stem see page 00

Funnels, pressure (Equalising) with Glass stopcock

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Cone size
8SFPE100/B19	100	19/26	19/26
8SFPE100/B19/B24	100	24/29	19/26
8SFPE100/B29	100	29/32	29/32
8SFPE250/B19/B24	250	24/29	19/26
8SFPE250/B29	250	29/32	29/32
8SFPE250/B34	250	34/35	34/35
8SFPE500/B19/B24	500	24/29	19/26
8SFPE500/B29	500	29/32	29/32



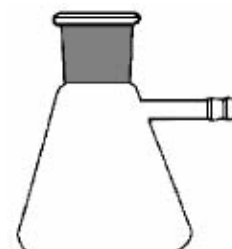
PTFE Needle valve Stopcock available.

If you wish to order Needle valve Stopcock, please add GP to catalogue number, for e.g. 8SFPE100/B19GP

Flasks, Buchner, filter, with glass side arm connection

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Height mm	Diameter mm
8SFCB100/B19	100	19/26	105	70
8SFCB100/B24	100	24/29	105	70
8SFCB250/B24	250	24/29	140	90
8SFCB250/B29	250	29/32	140	90
8SFCB500/B24	500	24/29	175	110
8SFCB500/B29	500	29/32	175	110
8SFCB1L/B24	1000	24/29	220	135
8SFCB1L/B29	1000	29/32	220	135



Available with plastic screw thread connectors, please add SC to catalogue number, e.g.

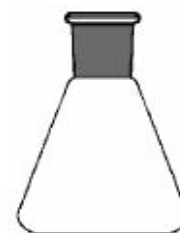
8SFCB100/B19SC

FOR MORE BUCHNER FLASKS, PLEASE SEE PAGES 63-64.

Flasks, Conical with standard joint

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Pack content
8SFE10/B14	10	14/23	6
8SFE25/B14	25	14/23	6
8SFE25/B19	25	19/26	6
8SFE25/B24	25	24/29	6
8SFE50/B14	50	14/23	6
8SFE50/B19	50	19/26	6
8SFE50/B24	50	24/29	6
8SFE50/B29	50	29/32	6
8SFE100/B19	100	19/26	6
8SFE100/B24	100	24/29	6
8SFE100/B29	100	29/32	6
8SFE150/B19	150	19/26	6
8SFE150/B24	150	24/29	6
8SFE250/B19	250	19/26	6
8SFE250/B24	250	24/29	6
8SFE250/B29	250	29/32	6
8SFE500/B19	500	19/26	6
8SFE500/B24	500	24/29	6
8SFE500/B29	500	29/32	6
8SFE500/B34	500	34/35	6
8SFE1L/B24	1000	24/29	6
8SFE1L/B29	1000	29/32	6
8SFE1L/B34	1000	34/35	6
8SFE2L/B29	2000	29/32	6
8SFE2L/B34	2000	34/35	6



FOR MORE ERLLENMEYER FLASKS, PLEASE SEE PAGES 1,53-56, 109 & 170.

Flask, Kjeldahl

Glassco Borosilicate Glass

Kjeldahl shape

Code	Capacity ml	Overall height (mm)	Socket size
8SFK100/B24	100	260	24/29
8SFK300/B24	300	290	24/29
8SFK500/B24	500	300	24/29
8SFK800/B24	800	320	24/29

Round Bottom

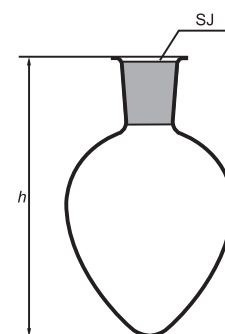
Code	Capacity ml	Overall height (mm)	Socket size
8SFMC22/50	50	160	19/26
8SFMC22/100	100	165	19/26



Flasks, heart shaped with SJ

Simax Borosilicate Glass

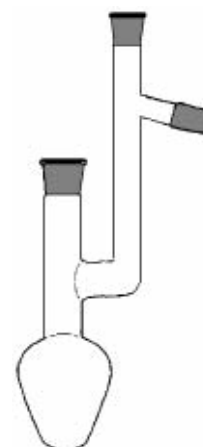
Code	Capacity ml	Pack Content	SJ	h mm
8027/10	10	10	14/23	62
8027/25	25	10	14/23	75
8027/50	50	10	14/23	88
8027/100	100	10	14/23	103
8027/250	250	10	14/23	130



Flasks, pear shape, Claisen

Glassco Borosilicate Glass

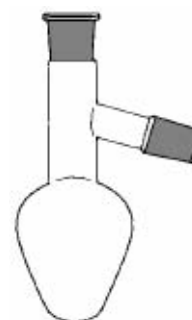
Code	Capacity ml	Socket size	Cone size
8SFPC3/10	10	14/23	14/23
8SFPC3/0/25	25	10/19	10/19
8SFPC3/25	25	14/23	14/23
8SFPC3/50	50	14/23	14/23
8SFPC3/100	100	14/23	14/23



Flasks, pear shape, distillation

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Cone size	Height mm
8SMD2/10	10	14/23	14/23	120
8SMD2/25	25	14/23	14/23	135
8SMD2/50	50	14/23	14/23	150
8SMD2/100	100	14/23	14/23	165



Flasks, pear shape, single neck

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Height mm	Diameter mm	Pack Content
8SFP5/B10	5	10/19	65	25	6
8SFP5/B14	5	14/23	70	25	6
8SFP10/B10	10	10/19	80	30	6
8SFP10/B14	10	14/23	85	30	6
8SFP25/B10	25	10/19	90	40	6
8SFP25/B14	25	14/23	100	40	6
8SFP50/B14	50	14/23	115	50	6
8SFP50/B19	50	19/26	130	50	6
8SFP100/B14	100	14/23	135	60	6
8SFP100/B19	100	19/26	140	60	6
8SFP100/B24	100	24/29	150	60	6



Flasks, pear shape, two necks, centre neck and one angled side neck

Glassco Borosilicate Glass

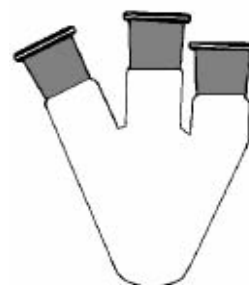
Code	Capacity ml	Centre socket	Side sockets	Height mm
8SFP50/22	50	19/26	19/26	115



Flasks, pear shape, three necks, centre neck, one angled side neck and one parallel side neck

Glassco Borosilicate Glass

Code	Capacity ml	Centre socket	Side sockets	Height mm
8SFP25/0/00	25	10/19	10/19	115



Florentine (rotary) evaporator flasks

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Pack Content
8SFF50/B24	50	24/29	6
8SFF100/B24	100	24/29	6
8SFF250/B24	250	24/29	6
8SFF500/B24	500	24/29	6
8SFF1L/B24	1000	24/29	6
8SFF50/B29	50	29/32	6
8SFF100/B29	100	29/32	6
8SFF250/B29	250	29/32	6
8SFF500/B29	500	29/32	6
8SFF1L/B29	1000	29/32	6



ALL ITEMS LISTED ARE ONLY PART OF THE EXTENSIVE
RANGE WE CAN SUPPLY.

PLEASE LET US KNOW IF THERE ARE ANY OTHER ITEMS
FOR WHICH WE CAN OFFER A QUOTATION.

Flasks, round bottom, short neck, jointed

Glassco Borosilicate Glass

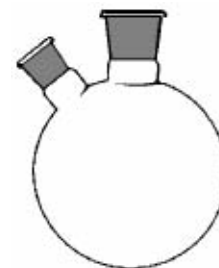
Code	Capacity ml	Socket size	Pack Content
8SFR5/B10	5	10/19	6
8SFR5/B14	5	14/23	6
8SFR10/B10	10	10/19	6
8SFR10/B14	10	14/23	6
8SFR25/B14	25	14/23	6
8SFR25/B19	25	19/26	6
8SFR25/B24	25	24/29	6
8SFR50/B14	50	14/23	6
8SFR50/B19	50	19/26	6
8SFR50/B24	50	24/29	6
8SFR50/B34	50	34/35	6
8SFR100/B14	100	14/23	6
8SFR100/B19	100	19/26	6
8SFR100/B24	100	24/29	6
8SFR100/B29	100	29/32	6
8SFR100/B34	100	34/35	6
8SFR150/B19	150	19/26	6
8SFR150/B24	150	24/29	6
8SFR250/B14	250	14/23	6
8SFR250/B19	250	19/26	6
8SFR250/B24	250	24/29	6
8SFR250/B29	250	29/32	6
8SFR250/B34	250	34/35	6
8SFR500/B19	500	19/26	6
8SFR500/B24	500	24/29	6
8SFR500/B29	500	29/32	6
8SFR500/B34	500	34/35	6
8SFR500/B45	500	45/40	6
8SFR1L/B19	1000	19/26	6
8SFR1L/B24	1000	24/29	6
8SFR1L/B29	1000	29/32	6
8SFR1L/B34	1000	34/35	6
8SFR2L/B24	2000	24/29	6
8SFR2L/B29	2000	29/32	6
8SFR2L/B34	2000	34/35	6
8SFR3L/B24	3000	24/29	1
8SFR3L/B34	3000	34/35	1
8SFR5L/B24	5000	24/32	1
8SFR5L/B29	5000	29/32	1
8SFR5L/B34	5000	34/35	1
8SFR5L/B45	5000	45/40	1



Flasks, round bottom, two necks, jointed centre neck and one angled neck

Glassco Borosilicate Glass

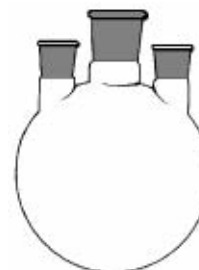
Code	Capacity ml	Centre socket	Side sockets
8SFR100/31A	100	24/29	14/23
8SFR100/32A	100	24/29	19/26
8SFR250/31A	250	24/29	14/23
8SFR250/32A	250	24/29	19/26
8SFR500/31A	500	24/29	14/23
8SFR500/32A	500	24/29	19/26
8SFR1L/31A	1000	24/29	14/23
8SFR1L/32A	1000	24/29	19/26



Flasks, round bottom, three necks, jointed, all necks parallel

Glassco Borosilicate Glass

Code	Capacity ml	Centre socket	Side sockets
8SFR250/211P	250	19/26	14/23
8SFR250/322P	250	24/29	19/26
8SFR250/411P	250	29/32	14/23
8SFR500/322P	500	24/29	19/26
8SFR500/411P	500	29/32	14/23
8SFR500/422P	500	29/32	19/26
8SFR1L/322P	1000	24/29	19/26
8SFR1L/411P	1000	29/32	14/23
8SFR1L/422P	1000	29/32	19/26
8SFR1L/522P	1000	34/35	19/26
8SFR1L/533P	1000	34/35	24/29
8SFR1L/722P	1000	45/40	19/26
8SFR2L/322P	2000	24/29	19/26
8SFR2L/422P	2000	29/32	19/26
8SFR2L/522P	2000	34/35	19/26
8SFR2L/533P	2000	34/35	24/29
8SFR3L/522P	3000	34/35	19/26
8SFR3L/533P	3000	34/35	24/29
8SFR5L/533P	5000	34/35	24/29



Flasks, dropping, jointed neck

Simax Borosilicate Glass

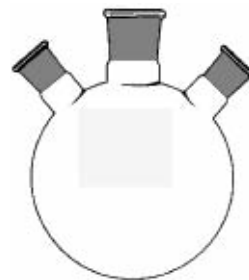
Code	Capacity ml	Pack Content	Socket size mm	d mm	h mm
8029/10	10	100	14/23	26	60
8029/25	25	100	14/23	34	80
8029/50	50	100	14/23	42	100
8029/100	100	60	14/23	52	123
8029/250	250	32	14/23	72	170



Flasks, round bottom, three necks, jointed, centre neck and two angled side necks

Glassco Borosilicate Glass

Code	Capacity ml	Centre socket	Side sockets
8SFR100/211A	100	19/26	14/23
8SFR100/311A	100	24/29	14/23
8SFR100/322A	100	24/29	19/26
8SFR250/211A	250	19/26	14/23
8SFR250/222A	250	19/26	19/26
8SFR250/311A	250	24/29	14/23
8SFR250/322A	250	24/29	19/26
8SFR500/311A	500	24/29	14/23
8SFR500/322A	500	24/29	19/26
8SFR500/411A	500	29/32	14/23
8SFR1L/311A	1000	24/29	14/23
8SFR1L/322A	1000	24/29	19/26
8SFR1L/522A	1000	34/35	19/26
8SFR2L/322A	2000	24/29	19/26
8SFR2L/522A	2000	34/35	19/26
8SFR3L/522A	3000	34/35	19/26



Funnels, cylindrical (stem with cone)

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Cone size
8SD1/01	25	14/23	14/23
8SD1/11	50	14/23	14/23
8SD1/21	100	14/23	14/23
8SD1/22	100	19/26	19/26
8SD1/32	250	19/26	19/26
8SD1/42	500	19/26	19/26
8SD1/62	1000	19/26	19/26



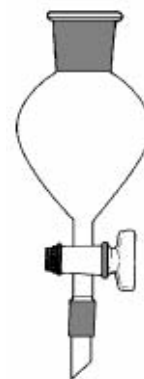
PTFE Needle valve Stopcock available.

If you wish to order Needle valve Stopcock, please add GP to catalogue number, for e.g. 8SD1/62GP

Funnels, pear shape (stem with cone)

Glassco Borosilicate Glass

Code	Capacity ml	Socket size	Cone size
8SD2/01	25	14/23	14/23
8SD2/12	50	19/26	19/26
8SD2/21	100	14/23	14/23
8SD2/22	100	19/26	19/26
8SD2/31	250	14/23	14/23
8SD2/32	250	19/26	19/26
8SD2/42	500	19/26	19/26
8SD2/62	1000	19/26	19/26



PTFE Needle valve Stopcock available.

If you wish to order Needle valve Stopcock, please add GP to catalogue number, for e.g. 8SD2/62GP

FOR MORE SEPARATING FUNNELS, PLEASE SEE PAGES 68-69, 171.

Stoppers, both ends closed

Glassco Borosilicate Glass

Code	Pack content
8SST10	10/19
8SST14	14/23
8SST19	19/26
8SST24	24/29
8SST29	29/32
8SST34	34/35



Tubes, drying, angled

Glassco Borosilicate Glass

Code	Cone size
8SDTS/0	10/19
8SDTS/1	14/23
8SDTS/2	19/26
8SDTS/3	24/29
8SDTS/4	29/32



Tubes/air inlets, straight with cone

Glassco Borosilicate Glass

Code	Stem length mm	Cone size
8SMCS0	100	10/19
8SMCS1	150	14/23
8SMCS2	150	19/26
8SMCS3	150	24/29
8SMCS4	150	29/32



Thermometer Pockets

Glassco Borosilicate Glass

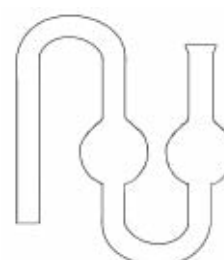
Code	Stem length mm	Cone size
8STPS1	45	14/23
8STPS2	75	19/26



Fermentation Lock

Glassco Borosilicate Glass

Code	Pack Content
8WFL	10



Thread Connecting Tube with 1-1.5mm I.D.

Kimble KG-33 Borosilicate Glass

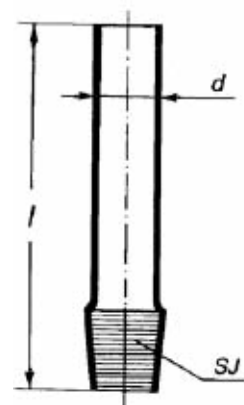
Code	Pack Content	Thread Size	Tube O.D. (mm)	Overall Length (mm)
K747630/0000	1	1/4"-28	7	150



Standard Joint Cones

Simax Borosilicate Glass

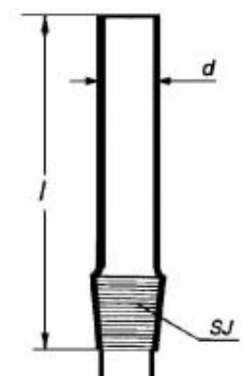
Code	SJ	Pack Content	d mm	l mm
8120/5/13	5/13	10	5	120
8120/7/16	7/16	10	7	120
8120/10/19	10/19	10	8	120
8120/12/21	12/21	10	11	120
8120/14/23	14/23	10	13	120
8120/19/26	19/26	10	17	150
8120/24/29	24/29	10	22	150
8120/29/32	29/32	10	26	150
8120/34/35	34/35	10	30	150
8120/40/38	40/38	10	36	150
8120/45/40	45/40	10	40	150
8120/50/42	50/42	10	46	150
8120/60/46	60/46	10	56	200
8120/71/51	71/51	10	65	200
8120/85/55	85/55	10	80	200



Standard Joint Cones, with single tip

Borosilicate Glass

Code	SJ	Pack Content
803/14/23	14/23	10
803/19/26	19/26	10
803/24/29	24/29	10
803/29/32	29/32	10



Ground Joints Sockets

Simax Borosilicate Glass PN 70 4008

Code	SJ	Pack Content	d mm	l mm
8124/5/13	5/13	10	8	120
8124/7/16	7/16	10	10	120
8124/10/19	10/19	10	13	120
8124/12/21	12/21	10	16	120
8124/14/23	14/23	10	18	120
8124/19/26	19/26	10	22	150
8124/24/29	24/29	10	28	150
8124/29/32	29/32	10	34	150
8124/34/35	34/35	10	40	150
8124/40/38	40/38	10	46	150
8124/45/40	45/40	10	50	150
8124/50/42	50/42	10	56	150
8124/60/46	60/46	10	70	200
8124/71/51	71/51	10	80	200
8124/85/55	85/55	10	95	200



Spherical joints, Joints, Spherical male (ball)

Glassco Borosilicate Glass

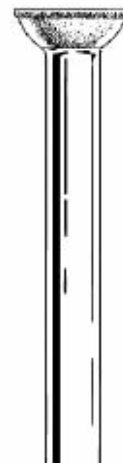
Code	Joint Size	Pack Content	Shank Length (mm)
8SMS/13C	13C	10	100
8SMS/13	13	10	100
8SMS/19	19	10	100
8SMS/29	29	10	100
8SMS/35	35	10	100
8SMS/40	40	10	100
8SMS/41	41	10	100



Joints, Spherical female (Cup)

Glassco Borosilicate Glass

Code	Joint Size	Pack Content	Shank Length (mm)
8SFS/13C	13C	10	100
8SFS/13	13	10	100
8SFS/19	19	10	100
8SFS/29	29	10	100
8SFS/35	35	10	100
8SFS/40	40	10	100
8SFS/41	41	10	100



Greaseless Spherical Joints

Borosilicate Glass

GLASS BALL ONLY

Code	Pack Content	
SJM18/9	I	
SJM35/20	I	
SJM40/25	I	

GLASS SOCKET ONLY

Code	Pack Content	
SJF18/9	I	
SJF35/20	I	
SJF40/25	I	

VITON "O" RING

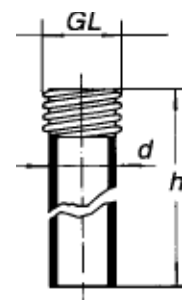
Code	Pack Content	
OV18	I	
OV35	I	
OV40	I	



Screw thread Tubes

Simax Borosilicate glass PN 70 0036

Code	GL	Pack Content	d mm	h mm
746/GL14	14	I	12	120
746/GL18	18	I	16	120
746/GL25	25	I	22	150
746/GL32	32	I	30	150
746/GL45	45	I	42	150



Other sizes available on request

Plastic Screw Cap

Polypropylene

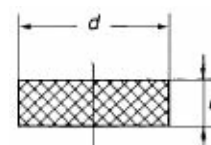
Code	GL/MM	Pack Content
948/GL14	14	10
948/GL18	18	10
948/GL25	25	10
948/GL32	32	10
948/GL45	45	10



Sealing Ring, without hole

Silicone

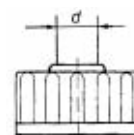
Code	To Fit Cap	Pack Content	d mm	h mm
834/GL14	GL14	10	12	5
834/GL18	GL18	10	16	5
834/GL25	GL25	10	23	5
834/GL32	GL32	10	30	6



Screw Cap, for Bolted Joint GL with hole

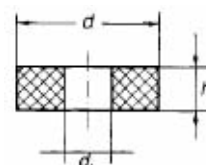
Polypropylene

Code	GL/D MM	Pack Content
754/GL14	14/7.5	10
754/GL18	18/11.5	10
754/GL25	25/16	10
754/GL32	21/32	10

**Sealing Ring**, with hole

Rubber

Code	GL/MM	Pack Content	d mm	d1 mm	h mm
833/14-5	14-5	10	12	5	5
833/14-7	14-7	10	12	7	5
833/18-7	18-7	10	16	7	5
833/18-10	18-10	10	16	10	5
833/25-10	25-10	10	23	10	5
833/25-15	25-15	10	23	15	5
833/32-15	32-15	10	30	15	6
833/32-20	32-20	10	30	20	6

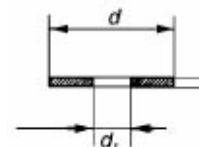


Also available in VITON

Protective foil for joints

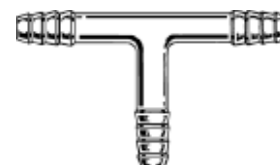
PTFE

Code	GL/MM	Pack Content	d mm	d1 mm	h mm
832/14-5	14-5	10	13	4	0.2
832/14-7	14-7	10	13	6	0.2
832/18-7	18-7	10	17	6	0.2
832/18-10	18-10	10	17	8	0.2
832/25-10	25-10	10	24	8	0.2
832/25-15	25-15	10	24	12	0.2
832/32-15	32-15	10	30	12	0.2
832/32-20	32-20	10	30	17	0.2

**Adapters, T-shaped**

Glassco Borosilicate Glass

Code	Diameter mm	Pack Content
8240/7	7	1
8240/10	10	1

**Adapters, Y-shaped**

Glassco Borosilicate Glass

Code	Diameter mm	Pack Content
8241/7	7	1
8241/10	10	1

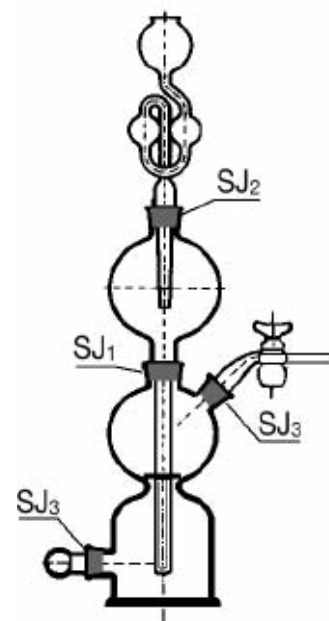


FOR PLASTIC 'T' AND 'Y' SHAPED ADAPTERS, PLEASE SEE PAGE 186.

Kipps Apparatus

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	SJ1	SJ2	SJ3
2445	1000	I	29/32	29/32	29/32

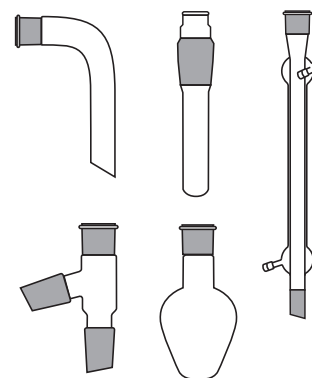


Organic Chemistry Set I, Interchangeable

Glassco Borosilicate Glass

Code	Set No.	Set Contains	Components
8SET/I	I		
		8SSBS/I I	Still head 14/23 14/23
		8SCLI/I I	Condenser 14/23 14/23
		8SRAALI	Bends Plain Long 14/23
		8STPSI	Thermometer pocket 14/23
		8SFP50/B14	Pear shape flask B14

Basic set for simple preparations

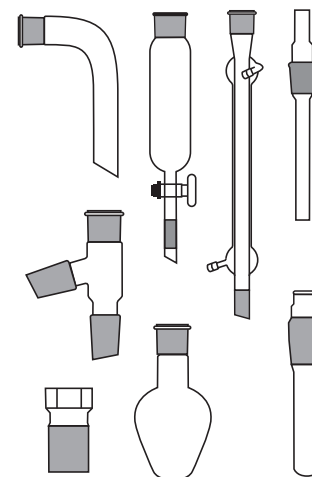


Organic Chemistry Set 2, Interchangeable

Glassco Borosilicate Glass

Code	Set No.	Set Contains	Components
8SET/2	2		
		8SSBS/I I	Still head 14/23 14/23
		8SCLI/I I	Condenser 14/23 14/23
		8SRAALI	Bends Plain Long 14/23
		8STPSI	Thermometer pocket 14/23
		8SFP50/B14	Pear shape flask B14
		8SDI/I I	Dropping Funnel 14/23
		8SST14	Stopper 14/23
		8SMCSI	Tubes/Air inlets straight with cone 14/23

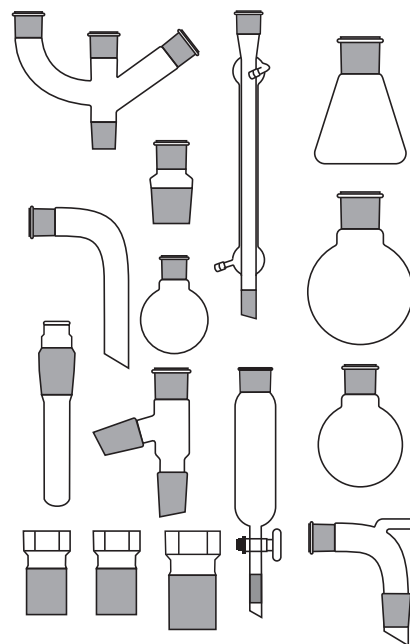
Set for simple preparations



Organic Chemistry Set 7, Interchangeable

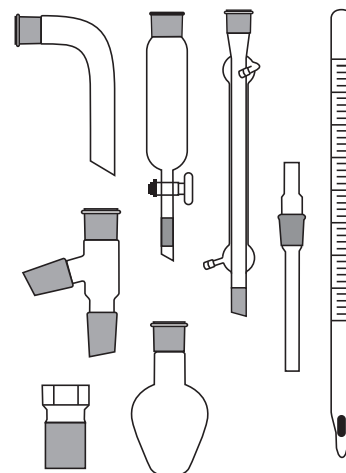
Glassco Borosilicate Glass

Code	Set No.	Set Contains	Components
8SET/7	7		
		8SCL1/22/200	Condenser 19/26 19/26
		8SD1/22	Dropping Funnel 19/26 19/26
		8SFE250/B24	Flask Conical 250ml B24
		8SFR100/B24	Flask Round Bottom 100ml B24
		8SFR250/B24	Flask Round Bottom 250ml B24
		8SFR50/B24	Flask Round Bottom 50ml B24
		8SMA4/23	Adapter Multiple 19/26 24/29
		8SMCS2	Tubes/Air inlets stra' with cone 19/26
		8SRA23	Adapter Reduction 19/26 24/29
		8SRAAL2	Bends Plain Long 19/26
		8SRBV/23	Bends with vent 19/26 24/29
		8SSBS/22	Still head 19/26 19/26
		8SST19	Stoppers Ends closed 19/26 (x2)
		8SST24	Stoppers Ends closed 24/29
		8STPS1	Thermometer pocket 14/23

**Multi-joint set for preparation of about 150g of product.****Contains all the equipment a student may need for project in organic chemistry.****Organic Chemistry Set 27, Interchangeable**

Glassco Borosilicate Glass

Code	Set No.	Set Contains	Components
8SET/27	I		
		8SSBS/11	Still head 14/23 14/23
		8SCL1/11	Condenser 14/23 14/23
		8SRAAL1	Bends Plain Long 14/23 14/23
		8STPS1	Thermometer pocket 14/23 14/23
		8SD1/11	Dropping Funnel 14/23 14/23
		8SST14	Stopper 14/23
		8SMCS1	Tubes/Air inlets straight with cone 14/23
		H/TM10T250	Thermometer -10 to 250 °C

**For the preparative chemistry up to advance level.****This set enables a number of preparations to be carried out on a 30g scale.****CARE FOR YOUR GLASSWARE**

YOU SHOULD AVOID USING GROUND-GLASS JOINTS WHEN DRY. ALTHOUGH GROUND-GLASS SURFACES SEAL WELL WITHOUT THE USE OF LUBRICANTS, IT IS ADVISABLE TO LUBRICATE THEM TO PREVENT STICKING AND BREAKAGE. GROUND SURFACES SHOULD BE CLEANED PRIOR TO LUBRICATION- DUST, DIRT AND PARTICULATE MATTER MAY SCORE THE SURFACE AND CAUSE LEAKAGE.

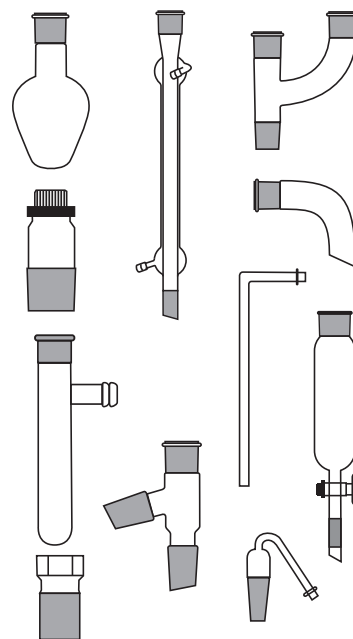
Organic Chemistry Small-Scale Apparatus

Glassco Borosilicate Glass

Code	Set No.	Set Contains	Components
8SET/SS	SS		
		7243/125/24/B14	Receiver with Side Arm 14/23
		8SAGC1	Adapter for gas collection 14/23
		8SAST/1	Adapters Cone with Screw thread 14/23 GL14
		8SCL1/11	Condenser 14/23
		8SD1/11	Dropping Funnel 14/23
		8SFP50/B14	Pear shape flask 50ml B14
		8SMAP/11	Adapter Multiple 2 neck Parallel 14/23 14/23
		8SMFL	Inlet tube L shape with hose connection
		8SRAAS1	Bends Plain short 14/23
		8SSBS/11	Still head 14/23 14/23
		8SST14	Stopper 14/23

Set for small scale preparation

FOR MORE INTERCHANGEABLE PRODUCT, PLEASE SEE PAGES 73-90.

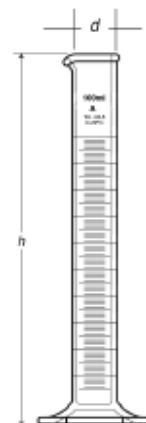


Measuring Cylinder, with hexagonal base

Class A, Blue graduation

Simax Borosilicate Glass, ISO 4788

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
1634/AM/5	5	10	0.05	0.1	12.9	115
1634/AM/10	10	10	0.1	0.2	15.5	135
1634/AM/25	25	10	0.25	0.5	21.3	160
1634/AM/50	50	10	0.5	1	26	195
1634/AM/100	100	1	0.5	1	31.3	240
1634/AM/250	250	1	1	2	41	320
1634/AM/500	500	1	2.5	5	53.2	380
1634/AM/1000	1000	1	5	10	67	465
1634/AM/2000	2000	1	10	20	83.5	565

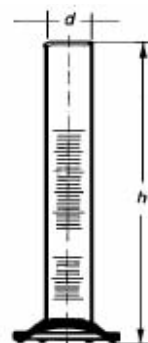


Measuring Cylinder, with hexagonal base

Class A, blue graduation

Glassco Borosilicate Glass ISO 4788, DIN 12680

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
138/A/10	10	10	0.1	0.2	15	139
138/A/25	25	10	0.25	0.5	22	164
138/A/50	50	10	0.5	1.0	27	195
138/A/100	100	10	0.5	1.0	32	240
138/A/250	250	10	1.0	2.0	42	315
138/A/500	500	10	2.5	5.0	55	365
138/A/1000	1000	10	5.0	10.0	65	470
138/A/2000	2000	10	10.0	20	84	570

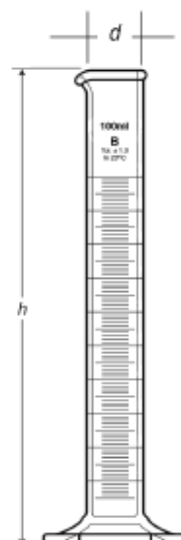


Also available with batch or individual certificate made to USP Standards on request

Measuring Cylinder, with hexagonal base**Class B**, white graduation. (bronze graduation also available)

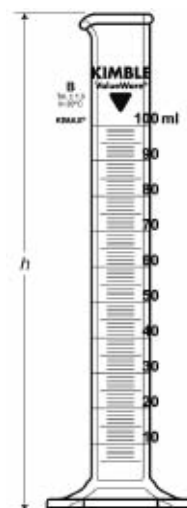
Simax Borosilicate Glass ISO 4788

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
I634/BB/5	5	10	0.1	0.1	12.9	115
I634/BB/10	10	10	0.2	0.2	15.5	135
I634/BB/25	25	10	0.5	0.5	21.3	160
I634/BB/50	50	10	1	1	26	195
I634/BB/100	100	1	1	1	31.3	240
I634/BB/250	250	1	2	2	41	320
I634/BB/500	500	1	5	5	53.2	380
I634/BB/1000	1000	1	10	10	67	465
I634/BB/2000	2000	1	20	20	83.5	565

**Measuring Cylinder, with hexagonal base****Class B** with white graduation

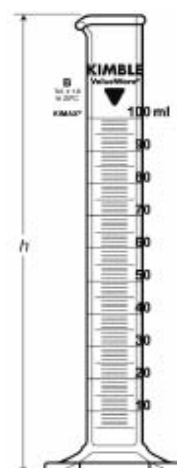
Kimble Valueware Borosilicate Glass ISO 4788

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	h mm
K60022/5	5	10	0.1	0.1	110
K60022/10	10	10	0.2	0.2	137
K60022/25	25	10	0.5	0.5	160
K60022/50	50	10	1.0	1	191
K60022/100	100	10	1.0	1	256
K60022/250	250	6	2.0	2	330
K60022/500	500	4	5.0	5	375
K60022/1000	1000	4	10.0	20	460
K60022/2000	2000	1	20.0	20	520

**Measuring Cylinder, with hexagonal base****Class B** with white graduation

Kimble Valueware Borosilicate Glass ASTM E1272, Style I

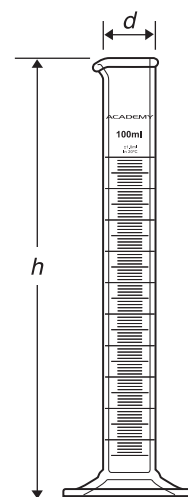
Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	h mm
K50022/10	10	12	0.1	0.2	137
K50022/25	25	12	0.3	0.5	160
K50022/50	50	12	0.4	1	191
K50022/100	100	12	0.6	1	256
K50022/250	250	6	1.4	2	330
K50022/500	500	4	2.6	5	375
K50022/1000	1000	4	5.0	10	460



Measuring Cylinder, with round base**Class B** with Amber graduations

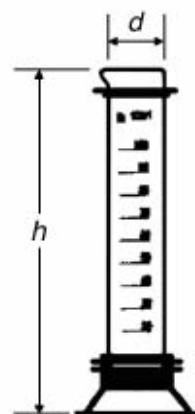
Academy Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
A/1133/10	10	10	0.2	0.2	16	137
A/1133/25	25	20	0.5	0.5	21	162
A/1133/50	50	20	0.5	1.0	26	197
A/1133/100	100	10	1.0	1.0	30	257
A/1133/250	250	4	2.0	2.0	42	310
A/1133/500	500	2	5.0	5.0	54	360
A/1133/1000	1000	2	10.0	10.0	70	440
A/1133/2000	2000	1	20.0	20.0	90	515

**Measuring Cylinder, with plastic base and bumper guard****Class B**, blue graduation

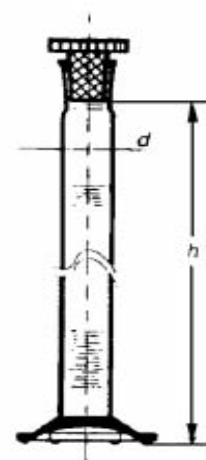
Glassco Borosilicate Glass

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
137/B/5	5	10	0.1	0.1	12	115
137/B/10	10	10	0.2	0.2	14	137
137/B/25	25	10	0.5	0.5	20	165
137/B/50	50	10	1.0	1.0	25	192
137/B/100	100	10	1.0	1.0	30	233
137/B/250	250	10	2.0	2.0	42	284

**Measuring Cylinder, with hexagonal base****Class B** with white graduation, standard joint with plastic stopper. (bronze graduation also available)

Simax Borosilicate Glass ISO 4788

Code	Capacity ml	Pack Content	Tolerance limits $\pm$ ml	Graduation divisions (ml)	d mm	h mm
1652/BBPN/5	5	10	0.1	0.1	12.9	115
1652/BBPN/10	10	10	0.2	0.2	15.5	135
1652/BBPN/25	25	10	0.5	0.5	21.3	160
1652/BBPN/50	50	10	1	1	26	195
1652/BBPN/100	100	10	1	1	31.3	240
1652/BBPN/250	250	10	2	2	41	320
1652/BBPN/500	500	10	5	5	53.2	380
1652/BBPN/1000	1000	4	10	10	67	465
1652/BBPN/2000	2000	3	20	20	83.5	565

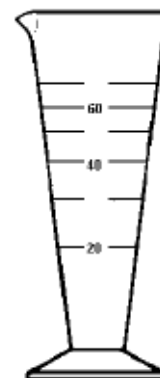


FOR PLASTIC MEASURING CYLINDERS,
PLEASE SEE PAGE P180

Measures, Pharmaceutical, Conical, Dual scale

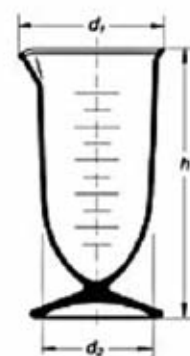
Kimble KG-33 Borosilicate Glass ASTM E1094 (25ml and above only)

Code	Pack Content	Capacity US Customary Unit Scale (minim)	Metric Scale ml	Interval Grad. (minim)	Sub divisions ml	Approx. +/- Tol (minims)
K60345/60	1	60	5	10-60	5	All points-2
K60345/120	1	120	10	10-120	10-40 in 5 40-120 in 10	Up to 30 Min-2 Above 30-3
K60345/40	12	4 fluid drams	15	0-4 fl dr	0-1 in 0.25 1-4 in 0.5	At 0.25 dr-2 Above 0.25 to 2.5-3 Above 2.5-6
K60345/80	1	8 fluid drams	25	2-8 fl dr	1 fl dr	Up to 5 fl dr-6 Above 5-10
K60345/2	12	2 fluid ounces	50	0.5-2 fl dr	0.25 fl oz	Up to 1.25 fl oz-10 Above 2-20
K60345/8	1	8 fluid ounces	250	2-8 fl oz	0.5 fl oz	Up to 4 fl oz -30
K60345/16	6	16 fluid ounces	500	4-16 fl oz	1 fl oz	Up to 4 fl oz -40 Above 4 to 8 -50 Above 8 to 13 -65 Above 13-80
K60345/32	1	32 fluid ounces	1000	8-32 fl oz	2 fl oz	Up to 10 fl oz -80 Above 10 to 16-95 Above 16 to 26-110 Above 26-100

**Measures, graduated, bell shaped**

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
1686/5	5	10	26	30	70
1686/10	10	10	30	35	75
1686/25	25	10	39	40	90
1686/50	50	10	50	50	110
1686/100	100	24	62	60	130
1686/250	250	10	84	80	160
1686/500	500	10	102	95	200
1686/1000	1000	2	126	115	240
1686/2000	2000	8	148	150	310

**Measures, graduated, conical**

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d1 mm	d2 mm	h mm
1688/25	25	10	61	45	100
1688/50	50	10	68	65	110
1688/100	100	10	85	65	140
1688/250	250	9	105	95	180
1688/500	500	6	125	95	215
1688/1000	1000	6	160	110	270
1688/2000	2000	6	192	115	330



Soil Testing, To Contain

Kimble KG-33 Borosilicate Glass ASTM D42

Code	Capacity ml	Pack Content	Lines at ml	Tolerance $\pm$ ml	Height mm
K20023/1000	1000	1	1000	5.0	457
K20023/1205	1205	1	1130, 1205	5.0	457

**Cones, Imhoff, closed tip**

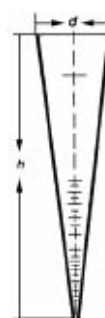
Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Sub divisions
2745/Czech	1000	10	118	470	Czech
2745/German	1000	10	118	470	German
2745/Swiss	1000	10	118	470	Swiss

**Imhoff Sediment Cone**

Kimble KG-33 Borosilicate Glass

Code	Capacity Litres	Pack Content	Sub divisions mm	Tolerance $\pm$ (ml)	Length mm	Diameter at top (mm)
K19000/1	1	1	0-2 in 0.1	0 to 0.5 - 0.10 Above 0.5 to 2 - 0.20	415 (+/- 10)	108
			2-10 in 0.5	Above 2 to 5 - 0.25 Above 5 to 10 - 0.50		
			10-40 in 1 and at 1 litre	Above 10 to 40 - 1.00 At 1 litre - 10.00		

**Cones, Imhoff with Stopcock**

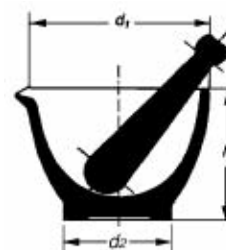
Simax Borosilicate Glass

Code	Capacity ml	Pack Content	d mm	h mm	Sub divisions
2746/Czech	1000	10	118	470	Czech
2746/German	1000	10	118	470	German
2746/Swiss	1000	10	118	470	Swiss

**Mortars and Pestles, inside glazed**

Simax Borosilicate Glass PN 70 0080

Code	Pack Content	d1 mm	d2 mm	h mm
2231/80	12	80	50	60
2231/100	12	100	60	75
2231/120	10	120	70	90
2231/150	8	150	85	110
2231/200	3	200	120	135



FOR CERAMIC MORTAR & PESTLES, PLEASE SEE PAGES 202-203.

ACADEMY

MICROSCOPE SLIDES

Academy Microscope Slides

All slides are pre-washed and have 45 degree ground edges, ISO 8037, External cellophane wrapping, Interleaved

PLAIN GLASS

Code	Pack Content	Thickness mm	Dimensions mm
N/A131	50	1.0-1.2	76x26



FROSTED ONE END, ONE SIDE

Code	Pack Content	Thickness mm	Dimensions mm
N/A132	50	1.0-1.2	76x26



Academy Microscope Slides

All slides are pre-washed and have 45 degree ground edges. Internal cellophane wrapping with easy open tear strip

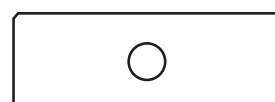
PLAIN GLASS

Code	Pack Content	Thickness mm	Dimensions mm
N/A141	50	1.0-1.2	76x26



SINGLE CAVITY

Code	Pack Content	Thickness mm	Dimensions mm
N/A144	50	1.0-1.2	76x26



DOUBLE CAVITY

Code	Pack Content	Thickness mm	Dimensions mm
N/A145	50	1.0-1.2	76x26



FROSTED ONE END, ONE SIDE

Code	Pack Content	Thickness mm	Dimensions mm
N/A142	50	1.0-1.2	76x26



FROSTED ONE END, BOTH SIDES

Code	Pack Content	Thickness mm	Dimensions mm
N/A143	50	1.0-1.2	76x26



ALL ITEMS LISTED ARE ONLY PART OF THE EXTENSIVE RANGE WE CAN SUPPLY.

PLEASE LET US KNOW IF THERE ARE ANY OTHER ITEMS FOR WHICH WE CAN OFFER A QUOTATION.

ACADEMY

MICROSCOPE SLIDES

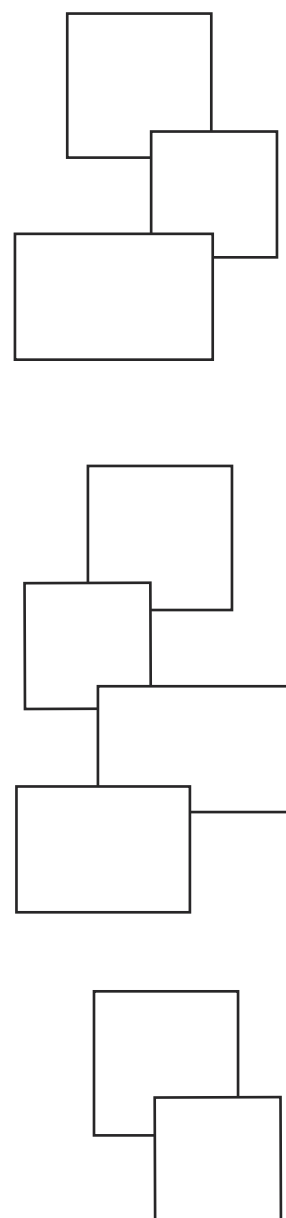
Academy Cover Slips

Code	Pack Content	Thickness mm	Dimensions mm
NPS09/1818	100	No.0, 0.09-0.13	18x18
NPS09/2020	100	No.0, 0.09-0.13	20x20
NPS09/2222	100	No.0, 0.09-0.13	22x22
NPS09/2250	100	No.0, 0.09-0.13	22x50
NPS09/2432	100	No.0, 0.09-0.13	24x32

Code	Pack Content	Thickness mm	Dimensions mm
NPS13/1818	100	No.1, 0.13-0.16	18x18
NPS13/2222	100	No.1, 0.13-0.16	22x22
NPS13/2226	100	No.1, 0.13-0.16	22x26
NPS13/2232	100	No.1, 0.13-0.16	22x32
NPS13/2240	100	No.1, 0.13-0.16	22x40
NPS13/2250	100	No.1, 0.13-0.16	22x50
NPS13/2432	100	No.1, 0.13-0.16	24x32
NPS13/2450	100	No.1, 0.13-0.16	24x50

Code	Pack Content	Thickness mm	Dimensions mm
NPS16/1818	100	No.1.5, 0.16-0.19	18x18
NPS16/2020	100	No.1.5, 0.16-0.19	20x20
NPS16/2222	100	No.1.5, 0.16-0.19	22x22
NPS16/2226	100	No.1.5, 0.16-0.19	22x26
NPS16/2232	100	No.1.5, 0.16-0.19	22x32
NPS16/2240	100	No.1.5, 0.16-0.19	22x40
NPS16/2250	100	No.1.5, 0.16-0.19	22x50
NPS16/2264	100	No.1.5, 0.16-0.19	22x64
NPS16/2424	100	No.1.5, 0.16-0.19	24x24
NPS16/2432	100	No.1.5, 0.16-0.19	24x32
NPS16/2440	100	No.1.5, 0.16-0.19	24x40
NPS16/2450	100	No.1.5, 0.16-0.19	24x50

Code	Pack Content	Thickness mm	Dimensions mm
NPS19/1818	100	No.2, 0.19-0.23	18x18
NPS19/2222	100	No.2, 0.19-0.23	22x22



For Circular Cover Slips see next page

ACADEMY

MICROSCOPE SLIDES

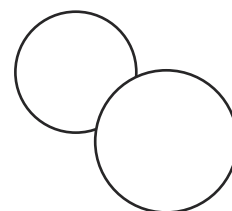
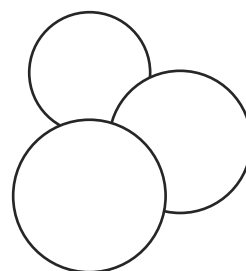
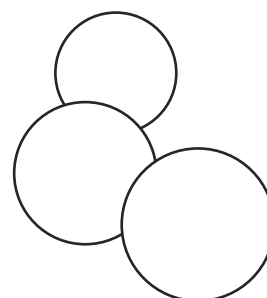
Academy Circular Cover Slips

Code	Pack Content	Thickness mm	Dimensions mm
NPC09/13	100	No. 0, 0.09-0.13	13 Diameter
NPC09/19	100	No. 0, 0.09-0.13	19 Diameter

Code	Pack Content	Thickness mm	Dimensions mm
NPC13/12	100	No. 1, 0.13-0.16	12 Diameter
NPC13/13	100	No. 1, 0.13-0.16	13 Diameter
NPC13/15	100	No. 1, 0.13-0.16	15 Diameter
NPC13/16	100	No. 1, 0.13-0.16	16 Diameter
NPC13/19	100	No. 1, 0.13-0.16	19 Diameter
NPC13/22	100	No. 1, 0.13-0.16	22 Diameter

Code	Pack Content	Thickness mm	Dimensions mm
NPC16/12	100	No. 1.5, 0.16-0.19	12 Diameter
NPC16/13	100	No. 1.5, 0.16-0.19	13 Diameter
NPC16/16	100	No. 1.5, 0.16-0.19	16 Diameter
NPC16/19	100	No. 1.5, 0.16-0.19	19 Diameter
NPC16/22	100	No. 1.5, 0.16-0.19	22 Diameter

Code	Pack Content	Thickness mm	Dimensions mm
NPC19/13	100	No. 2, 0.19-0.23	13 Diameter



GLASSWARE SAFETY – A COMMON-SENSE APPROACH

1. DON'T DROP OR KNOCK GLASSWARE – AVOID THE BRUISES THAT LEAD TO BREAKAGE.
2. DON'T USE CHIPPED, CRACKED OR BROKEN GLASSWARE, IT'S DANGEROUS AND MAY LEAD TO INJURY.
3. DON'T MOUTH PIPETTE, YOU MAY INHALE A TOXIC SUBSTANCE, BURN YOUR MOUTH OR CUT YOUR LIP.
4. DON'T LEAVE PIPETTES STICKING OUT OF BEAKERS- AN INVITATION FOR CHEMICAL SPILLAGE OR BREAKAGE
5. INSERT TUBING CAREFULLY. USE A PROTECTIVE TOWEL FOR YOUR HAND AND LUBRICATE THE TUBING.
6. DISPOSE OF BROKEN OR DAMAGED GLASSWARE IN A DESIGNATED CONTAINER; DO NOT MIX WITH GENERAL WASTE.
7. CARRY LARGE CONTAINERS CAREFULLY, USE A BOTTLE CARRIER.
8. CLEAN AND RINSE GLASSWARE VERY WELL WITH DEIONIZED WATER, LEAVE TO DRY ON A CLEAN, LINT-FREE TOWEL.



Clarity Microscope Slides

All slides are pre-washed and have 90 degree ground edges. **ISO 8037**

Internal cellophane wrapping with easy open tear strip

PLAIN GLASS

Code	Pack Content	Thickness mm	Dimensions mm
N/C361	50	0.9-1.1	76x26



PLAIN GLASS

Code	Pack Content	Thickness mm	Dimensions mm
N/C368	50	0.9-1.1	76x38



PLAIN GLASS

Code	Pack Content	Thickness mm	Dimensions mm
N/C369	50	0.9-1.1	76x52



FROSTED ONE END, ONE SIDE

Code	Pack Content	Thickness mm	Dimensions mm
N/C362	50	0.9-1.1	76x26



FROSTED ONE END, BOTH SIDES

Code	Pack Content	Thickness mm	Dimensions mm
N/C363	50	0.9-1.1	76x26



SILANE TREATED, COLOUR FROST ONE END ONE SIDE

Code	Pack Content	Thickness mm	Dimensions mm	Colour
N/C360Y	50	0.9-1.1	76x26	Yellow
N/C360W	50	0.9-1.1	76x26	White
N/C360P	50	0.9-1.1	76x26	Pink
N/C360G	50	0.9-1.1	76x26	Green
N/C360O	50	0.9-1.1	76x26	Orange
N/C360B	50	0.9-1.1	76x26	Blue



PERMANENT POSITIVE CHARGE

Code	Pack Content	Thickness mm	Dimensions mm
N/C366	72	0.9-1.1	76x26



NMR (Nuclear Magnetic Resonance)**Highest Quality 5mm Tubes, Caps Attached**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Approx. Mhz	Length Inches	Wall Thickness		Concentricity		Camber	
					Inches	mm	T.I.R. Inches	T.I.R. Microns	T.I.R. Inches	T.I.R. Microns
K897250/3000	5	542-PP-7	900	7	0.01475	0.38	0.0002	5	0.00015	3.8
K897250/3008	5	542-PP-8		8	0.01475	0.38	0.0002	5	0.00015	3.8
K897245/3000	5	541-PP-7	800	7	0.01475	0.38	0.0002	5	0.00015	3.8
K897245/3008	5	541-PP-8		8	0.01475	0.38	0.0002	5	0.00015	3.8
K897241/0000	5	535-PP-7	600-700	7	0.01475	0.38	0.0005	13	0.00025	6
K897241/0008	5	535-PP-8		8	0.01475	0.38	0.0005	13	0.00035	9
K897241/0009	5	535-PP-9		9	0.01475	0.38	0.0005	13	0.00045	11
K897240/0000	5	528-PP-7	500	7	0.01475	0.38	0.0005	13	0.00025	6
K897240/0008	5	528-PP-8		8	0.01475	0.38	0.0005	13	0.00035	9
K897240/0009	5	528-PP-9		9	0.01475	0.38	0.0005	13	0.00045	11
K897235/0000	5	527-PP-7	400	7	0.01475	0.38	0.0010	25	0.0005	13
K897235/0008	5	527-PP-8		8	0.01475	0.38	0.0010	25	0.0006	15
K897235/0009	5	527-PP-9		9	0.01475	0.38	0.0010	25	0.0007	18
K897230/0000	5	526-PP-7	300	7	0.01475	0.38	0.0015	38	0.0010	25
K897230/0008	5	526-PP-8		8	0.01475	0.38	0.0015	38	0.0011	28
K897225/0000	5	507-PP-7	200	7	0.01475	0.38	0.0020	51	0.0005	13
K897225/0008	5	507-PP-8		8	0.01475	0.38	0.0020	51	0.0006	15
K897225/0009	5	507-PP-9		9	0.01475	0.38	0.0020	51	0.0007	18
K897220/0000	5	—	150	7	0.01475	0.38	0.0020	51	0.0010	25
K897220/0008	5	—		8	0.01475	0.38	0.0020	51	0.0011	28
K897205/0000	5	506-PP-7	100	7	0.01475	0.38	0.0025	64	0.002	51
K897205/0008	5	506-PP-8		8	0.01475	0.38	0.0025	64	0.002	51
K897205/0009	5	506-PP-9		9	0.01475	0.38	0.0025	64	0.002	51
K897200/0000	5	505-PP-7	100	7	0.01475	0.38	0.0030	76	0.002	51
K897200/0008	5	505-PP-8		8	0.01475	0.38	0.0030	76	0.002	51
K897200/0009	5	505-PP-9		9	0.01475	0.38	0.0030	76	0.002	51

O.D. inches – 0.1955 (+0.0000 / -0.0005) **O.D. mm** – 4.97 (+0.000 / -0.013)**I.D. inches** – 0.1655 (+0.0005 / -0.0000) **I.D. mm** – 4.20 (+0.013 / -0.0000)**Highest Quality 3mm Tubes, Caps Attached**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Approx. Mhz	Length Inches	Wall Thickness Inches	Concentricity T.I.R.*	Camber T.I.R.*
K897840/0000	5	335-PP-7	600-800	7	0.01118	0.0005	0.00025
K897840/0008	5	335-PP-8		8	0.01118	0.0005	0.00035
K897835/0000	5	328-PP-7	500	7	0.01118	0.0010	0.0005
K897835/0008	5	328-PP-8		8	0.01118	0.0010	0.0006
K897830/0000	5	327-PP-7	400	7	0.01118	0.0015	0.0010
K897825/0000	5	-	300	7	0.01118	0.0020	0.0005
K897820/0008	5	307-PP-8		8	0.01118	0.0020	0.0011
K897805/0000	5	-	100	7	0.01118	0.0025	0.0020
K897800/0000	5	305-PS-7	80	7	0.01118	0.0030	0.0020
K897800/0008	5	305-PS-8		8	0.01118	0.0030	0.0020

O.D. inches – 0.1186" (+0.0000/-0.0005) **I.D. inches** – 0.0945" (+0.0005/-0.0000)***T.I.R.** = Total Indicator Reading in inches.

Highest Quality 10mm Tubes, Caps Attached

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Approx. Mhz	Length Inches	Wall Thickness Inches	Concentricity T.I.R.*	Camber T.I.R.*
K897335/0000	I	513-7PP-7	360	7	0.0182	0.0015	0.0005
K897335/0008	I	-	360	8	0.0182	0.0015	0.0005
K897330/0000	I	513-5PP-7	150	7	0.0182	0.0020	0.0010
K897330/0008	I	-	150	8	0.0182	0.0020	0.0010
K897325/0000	I	513-3PP-7	80	7	0.0182	0.0030	0.0015
K897320/0000	I	513-1PP-7	60	7	0.0182	0.0090	0.0020
K897320/0008	I		60	8	0.0182	0.0090	0.0020

**NMR (Nuclear Magnetic Resonance)****Thrift 5mm Tubes, Caps Attached**

KIMAX N-51A Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Approx. Mhz	Length Inches	Wall Thickness		Concentricity T.I.R.		Camber T.I.R.	
					Inches	mm	Inches	Microns	Inches	Microns
K897150/0007	5	1235-7	500	7	0.01475	0.38	0.0005	13	0.00025	6
K897150/0008	5	1235-8	500	8	0.01475	0.38	0.0005	13	0.00035	9
K897140/0007	5	1228-7	400	7	0.01475	0.38	0.0005	13	0.00025	6
K897140/0008	5	1228-8	400	8	0.01475	0.38	0.0005	13	0.00035	9
K897130/0007	5	1226-7	300	7	0.01475	0.38	0.0015	38	0.0010	25
K897130/0008	5	1226-8	300	8	0.01475	0.38	0.0015	38	0.0011	28
K897120/0007	5	1208-7	200	7	0.01475	0.38	0.0020	51	0.0005	13
K897120/0008	5	1208-8	200	8	0.01475	0.38	0.0020	51	0.0006	15
K897110/0007	5	1206-7	>200	7	0.01475	0.38	0.0020	51	0.0010	25
K897110/0008	5	1206-8	>200	8	0.01475	0.38	0.0020	51	0.0011	28

**Disposable Grade 5mm Tubes, with caps**

KIMAX N-51A Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Approx. Mhz	Length Inches	Wall Thickness Inches
K897193/0000	25	512-7	100	7	0.015
K897193/0008	25	512-8	100	8	0.015
K897193/0050	50	512-7	100	7	0.015
K897193/7100	100	512-7	100	7	0.015
K897193/8050	50	512-8	100	8	0.015
K897193/8100	100	512-8	100	8	0.015

**Valved Tubes 5mm**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Tube Dia. mm	Length Inches	Wall Thickness Inches	Concentricity T.I.R.*	Camber T.I.R.*
K897435/0000	I	528-JY-7	5	7	0.01475	0.001	0.0005
K897435/0008	I	528-JY-8	5	8	0.01475	0.001	0.0006



All sizes are precision grade and suitable for use in instruments with field strength greater than 360MHz

Valved Tubes 5mm

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Description	Tube O.D. mm	Approx. Overall Length Inches
K897635/0800	1	528-TR-7	NMR Tube, 8-425 Thread	5	7.5

All sizes are precision grade and suitable for use in instruments with field strength greater than 360MHz

**Valved Tubes 5mm**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Approx. MHz	Length Inches	Wall Thickness Inches	Wall Variation T.I.R.*	Camber
K897750/0245	5	>800	7.2	0.01475	0.0002	0.00015
K897750/0240	5	>400	7.2	0.01475	0.0005	0.00025
K897750/0235	5	>360	7.2	0.01475	0.0010	0.0005

*T.I.R. = Total Indicator Reading in inches.

**NMR Sealing Manifold**

Kimble Borosilicate Glass

Code	Pack Content	Description	O-Ring Size Shaft- Tip
K897047/0001	1	NMR Manifold Complete	110 - 011

Component Parts

Code	Pack Content	Description	O-Ring Size Shaft- Tip
K897048/0001	1	NMR Manifold Only, Single	110 - 011
K897096/0005	1	Cap, Shield No.5, Thread size 106 o-ring	

**Sample Tube Pressure Caps, for 3 and 5 mm Tubes**

PTFE

Code	Pack Content	Fits Tube Size (mm)	Colour
K897096/0003	25	3	White
K897096/0005	25	5	White



NMR (Nuclear Magnetic Resonance) – Accessories**Sample Tube Pressure Caps, Assorted Colours, for 3, 5 and 10 mm Tubes**

Polyethylene

Code	Pack Content	Wilmad Equivalent	Fits Tube Size (mm)	Colour
K897093/0001	100	-	3	Red
K897095/0001	100	521	5	Red
K897095/0021	100	521	5	Black
K897095/0061	100	521	5	White
K897095/0071	100	521	5	Green
K897095/0081	100	521	5	Yellow
K897095/1001	100	521-C	10	Red
K897095/1021	100	-	10	Black
K897095/1071	100	521-C	10	Green
K897095/1081	100	521-C	10	Yellow

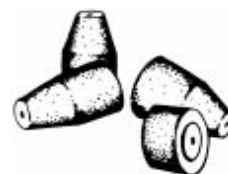


Code	Pack Content	Wilmad Equivalent	Fits Tube Size (mm)	Colour assorted
K897095/0011	100	—	5	(20 each of red, black, white, green and yellow) assorted
K897095/1011	100	—	10	(25 each of red, black, green and yellow) assorted
K897095/0012	600	—	5	(100 each of red, black, white, green, blue and yellow)

Sample Tube Septum, for 5 mm Tubes

Natural Rubber

Code	Pack Content	Wilmad Equivalent	Fits Tube Size (mm)
K897097/0001	100	521-S	5

**Funnel, Polypropylene**

Polypropylene

Code	Pack Content	Description
K420160/0000	100	Funnel set

Replacement Parts

Code	Pack Content	Description
K420164/1000	50	Reservoir
K420168/1000	50	Lower Fitting Only

Accessories

Code	Pack Content	Description
K420162/0000	100	Polyethylene Disc 30-50 Microns
K420162/0020	100	Polyethylene Disc 20 Microns



NMR (Nuclear Magnetic Resonance)

Pipette, Extended Tip

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Wilmad Equivalent	Description
K897085/0007	100	803	7" Tip
K897085/0009	100	803A	9" Tip



Utility Washer for Cuvette Cells and NMR

(Nuclear Magnetic Resonance) Tubes

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Adapter Joint	Flask Joint	Flask ml	Approx Overall Height (mm)
K459960/0000	1	24/25	24/40	250	255

Replacement Parts

Code	Pack Content	Description
K459961/0000	1	Cuvette Washer Only
K459951/0000	12	Neoprene Gasket. Pk 12
K179850/2224	1	Vacuum Adapter, Size 22, 24/25
K617000/0424	1	Erlenmeyer Flask, 24/40, 250ml



Washer for 5mm NMR (Nuclear Magnetic Resonance) Tubes

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Pack Description
K897030/0005	1	5 mm NMR Tube Washer
K953763/0000	5	No. 8 Silicone Stopper, Pkg/ 5
K953760/0000	1	1000 ml Filter Flask



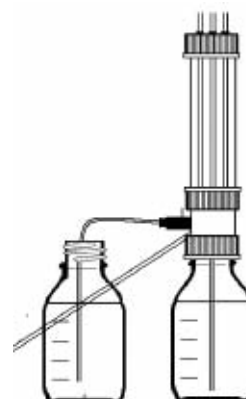
Tube Washer, 5-Place for 3 mm and 5 mm Tubes, Accommodates 7" and 8" Tubes

Kimble KG-33 Borosilicate Glass/PTFE

Code	Pack Content	Description
K897033/0003	1	3 mm NMR Tube Washer
K897033/0005	1	5 mm NMR Tube Washer

Hose Connector Size Tubing Size Chart

Hose Connection Size	Fits Flexible Tubing I.D.
1	1/4"
2	3/8"
3	1/2"
4	3/4"



Pipette, measuring, graduated, Class A

Glassco Alkaline resistant glass

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	Graduation divisions (ml)	l mm	Colour Code
I608/A/1	5	1	0.006	0.1	360	Yellow
I608/A/2	5	2	0.010	0.1	360	Black
I608/A/5	5	5	0.030	0.1	360	Red
I608/A/10	5	10	0.050	0.1	370	Orange
I608/A/25	5	25	0.100	0.2	450	White

Pipette, measuring, graduated, Class B

Glassco Alkaline resistant glass

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	Graduation divisions (ml)	l mm	Colour Code
I608/B/1	5	1	0.006	0.1	360	Yellow
I608/B/2	5	2	0.010	0.1	360	Black
I608/B/5	5	5	0.030	0.1	360	Red
I608/B/10	5	10	0.050	0.1	370	Orange
I608/B/25	5	25	0.100	0.2	450	White

**Pipette**, measuring, graduated, Class A

Soda-Lime and Simax Borosilicate Glass DIN 12697 (ISO 835)

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	Graduation divisions (ml)	l mm	Colour Code	Type of Glass
I605/A/1	1	1	0.007	0.1	360	Yellow	Soda
I605/A/2	1	2	0.010	0.1	360	Black	Soda
I605/A/5	1	5	0.030	0.1	360	Red	Soda
I605/A/10	1	10	0.05	0.1	360	Orange	Soda
I605/A/20	1	20*	0.10	0.1	360	Yellow	Soda
I605/A/25	1	25	0.10	0.1	450	White	Soda
I605/A/50	1	50*	0.20	0.1	450	Orange	Borosilicate
I605/A/100	1	100*	0.20	0.2	770	Red	Borosilicate

* Not according to DIN and ISO standards

**Pipette**, measuring, graduated, Class B

Kimble Valueware Borosilicate glass, ASTM E1293, Style I

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	Graduation divisions (ml)	l mm	Colour Code
K67020/11100	10	1	0.01	0.01	350	Yellow
K67020/2	10	2	0.02	0.1	350	Black
K67020/5	10	5	0.04	0.1	350	Red
K67020/10	10	10	0.06	0.1	350	Orange
K67020/25	10	25	0.1	0.1	400	White



Pipette, measuring, graduation, Type I, Class B
Soda-Lime and Simax Borosilicate Glass DIN 12696 (ISO 835)

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	Graduation divisions (ml)	l mm	Colour Code	Type of Glass
1605/B/1	1	1*	0.01	0.1	360	Red	Soda
1605/1B/1/0.01	1	1	0.01	0.01	360	Yellow	Soda
1605/B/2	1	2*	0.02	0.1	360	Green	Soda
1605/1B/2/0.02	1	2	0.02	0.02	360	Black	Soda
1605/B/5	1	5**	0.05	0.1	360	Blue	Soda
1605/1B/5/0.05	1	5	0.05	0.05	360	Red	Soda
1605/B/10	1	10	0.10	0.1	360	Orange	Soda
1605/B/20	1	20*	0.20	0.1	360	Yellow	Soda
1605/B/25	1	25*	0.20	0.1	450	White	Soda
1605/B/50	1	50*	0.40	0.1	450	Orange	Borosilicate
1605/B/100	1	100*	0.40	0.2	770	Red	Borosilicate

* Not according to DIN and ISO standards

** Not according to ISO standard.

Type 2 also available on request



Pipette, bulb form, one mark, Class A
Glassco Alkaline Resistant Glass

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	l mm	Colour Code
1598/A/1	5	1	0.006	250	Blue
1598/A/2	5	2	0.010	305	Orange
1598/A/5	5	5	0.015	360	White
1598/A/10	5	10	0.020	450	Red
1598/A/20	5	20	0.030	515	Yellow
1598/A/25	5	25	0.030	520	Blue
1598/A/50	5	50	0.050	550	Red
1598/A/100	5	100	0.080	580	Yellow

Pipette, bulb form, one mark, Class B
Glassco Alkaline Resistant Glass

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	l mm	Colour Code
1598/B/1	5	1	0.006	250	Blue
1598/B/2	5	2	0.010	305	Orange
1598/B/5	5	5	0.015	360	White
1598/B/10	5	10	0.020	450	Red
1598/B/20	5	20	0.030	515	Yellow
1598/B/25	5	25	0.030	520	Blue
1598/B/50	5	50	0.050	550	Red
1598/B/100	5	100	0.080	580	Yellow



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR FURTHER DETAILS

Pipette, bulb form, one mark, Class A

Kimble Valueware Borosilicate Glass ASTM E1273

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	l mm	Colour Code
K67004/1	10	1	0.006	317	Blue
K67004/2	10	2	0.006	335	Orange
K67004/5	10	5	0.01	365	White
K67004/10	10	10	0.02	400	Red
K67004/25	10	25	0.03	503	Blue
K67004/50	10	50	0.05	545	Red
K67004/100	10	100	0.08	550	Yellow

**Pipette, bulb form, one mark, Class A**

Soda-Lime Glass DIN 12696 (ISO 648)

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	l mm	Colour Code
I595/A/1	5	1	0.008	310	Blue
I595/A/2	5	2	0.010	330	Orange
I595/A/5	5	5	0.015	400	White
I595/A/10	5	10	0.02	440	Red
I595/A/20	5	20	0.03	510	Yellow
I595/A/25	5	25	0.03	520	Blue
I595/A/50	5	50	0.05	540	Red
I595/A/100	5	100	0.08	585	Yellow

**Pipette, bulb form, one mark, Class B**

Soda-Limes ISO 12690 (ISO 648)

Code	Pack Content	Capacity ml	Tolerance $\pm$ (ml)	l mm	Colour Code
I595/B/1	5	1	0.015	310	Blue
I595/B/2	5	2	0.02	330	Orange
I595/B/5	5	5	0.03	400	White
I595/B/10	5	10	0.04	440	Red
I595/B/20	5	20	0.06	515	Yellow
I595/B/25	5	25	0.06	520	Blue
I595/B/50	5	50	0.10	540	Red
I595/B/100	5	100	0.15	585	Yellow



OTHER SIZES AVAILABLE ON REQUEST, PLEASE CALL FOR
FURTHER DETAILS

Pipette, Pasteur, Disposable Pasteur-type pipettes

Borosilicate and Soda-Lime

Borosilicate

Code	Pack Content	Approx' Overall Length (mm)	Tip Length mm	Body Length (mm)	O.D. mm
K883350/0575	250	146	57	89	7
K883350/0009	250	228	5	102	7

Soda Lime

Code	Pack Content	Approx' Overall Length (mm)	Tip Length mm	Body Length (mm)	O.D. mm
KM4150/N0250SP4	1000	146	57	89	7
KM4230/N0250SP4	1000	228	5	102	7

Soda Lime, Cotton-Plugged

Code	Pack Content	Approx' Overall Length (mm)	Tip Length mm	Body Length (mm)	O.D. mm
K63A54P	1000	146	57	89	7
K63B93P	1000	228	5	102	7

Soda Lime, Blood Bank Dropper

Code	Pack Content	Approx' Overall Length (mm)	Tip Length mm	Body Length (mm)	O.D. mm
K63C50	1000	146	57	89	7

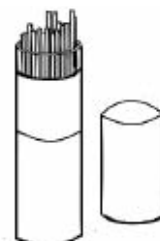
Soda Lime, Monstr-Pette

Code	Pack Content	Approx' Overall Length (mm)	Tip Length mm	Body Length (mm)	O.D. mm
K63DPI005	800	146	57	89	7

**Micro Capillary, Disposable, To Contain**

Soda-Lime ASTM E438 Type II, ASTM E672

Code	Pack Content	Microliter (Lambda)	Tolerance $\pm$ (ml)	Colour Code
K71900/5	250	5	1	White
K71900/10	250	10	0.5	Orange
K71900/20	250	20	0.5	Black
K71900/25	250	25	0.5	2 White
K71900/50	250	50	0.5	Green
K71900/100	250	100	0.5	Blue



PLEASE ALSO SEE PAGES 31 AND 131.

Specimen Jar or Gas (Without cover)

Simax Borosilicate Glass

Code	Diameter x Height mm	Pack Content
2704/50x150	50x150	10
2704/50x200	50x200	10
2704/50x250	50x250	8
2704/60x150	60x150	10
2704/60x200	60x200	10
2704/60x300	60x300	10
2704/80x300	80x300	6



Specimen Jar or Gas (Without cover)

Borosilicate Glass

Code	Diameter x Height mm	Pack Content
2705/50x150	50x150	10
2705/50x200	50x200	10

**Lids**, frosted one side for above item.

Soda-Lime Glass

Code	Diameter mm	Pack Content
2704/LID/75	75	1
2704/LID/115	115	1

**Spirit/Alcohol Lamp**, with wick

Soda-Lime Glass

Code	Capacity ml	Pack Content
2163/100	100	100
2163/WICK	Spare Wicks	10

**Stirring Rods**, paddle type

Simax Borosilicate Glass

Code	Diameter x Length mm	Pack Content
3100/6x125	6x125	10
3100/6x150	6x150	10
3100/6x200	6x200	10
3100/6x300	6x300	10

**Stirring Rods**, plain type, rounded ends

Simax Borosilicate Glass

Code	Diameter x Length mm	Pack Content
7765/6x100	6x100	10
7765/6x200	6x200	10
7765/6x250	6x250	10
7765/6x300	6x300	10
7765/6x400	6x400	10

**Stirring Rods**, plain type, rounded ends

KIMAX KG-33 Borosilicate Glass.

Designed from Federal Specification NNN-R-560, Type I requirements.

Code	Pack Content	Diameter mm	Length mm
K40500/125	100	4	125
K40500/150	100	5	150
K40500/200	100	5	200
K40500/250	100	6	250
K40500/300	50	10	300
K40500/375	50	10	375



Stopcock, straight bore, glass key, greased

Simax Borosilicate Glass PN 70 4180

Code	Bore Size mm	Pack Content	l mm	d mm
7143/2.5	2.5	1	100	9
7143/4	4	1	110	10
7143/6	6.3	1	120	13
7143/8	8	1	120	15

**Stopcock**, interchangeable glass key, greased

Simax Borosilicate Glass

Code	Bore Size mm	Pack Content	Wall mm	Side Arms O.D. (mm)	l mm
2137	2	1	1.5	8	111

**Stopcock**, Straight-Bore, Glass Plug Interchangeable

Kimble KG-33 Borosilicate Glass

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K801000/0001	1	1	8	12/30
K801000/0002	2	1	8	12/30
K801000/0004	4	1	10	17/40
K801000/0006	6	1	13	20/44

**Replacement Stopcock Plugs**

Kimble KG-33 Borosilicate Glass

Code	Bore Size mm	Pack Content		Plug Size mm
K801001/0001	1	1		12/30
K801001/0002	2	1		12/30
K801001/0004	4	1		17/40
K801001/0006	6	1		20/44

Stopcock, interchangeable glass key, capillary arms, greased

Simax Borosilicate Glass

Code	Bore Size mm	Pack Content	Side Arms Bore (mm)	Side Arms O.D. (mm)	l mm
2139	2	1	2.5	7	140



Straight-Bore, PTFE Plug

1:5 Taper

Kimble KG-33 Borosilicate

Code	Pack Content	Plug size mm	Stem O.D. mm
K821000/0002	1	11/25	8
K821000/0004	1	15.2/30	10
K821000/0006	1	16/35	13

Replacements PTFE Stopcock Plug

Code	Pack Content	Plug size mm	
K821001/0002	1	11/25	
K821001/0004	1	15.2/30	
K821001/0006	1	16/35	

**Stopcock, straight bore, PTFE key**

Glassco Borosilicate Glass

Code	Bore Size mm	Pack Content	l mm	d mm
7143/2/PTFE	2	1	120	8
7143/4/PTFE	4	1	130	10
7143/6/PTFE	6	1	142	12

**Stopcock, T-bore, glass key**

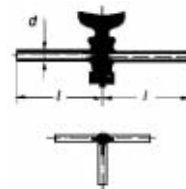
Kimble KG-33 Glass

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K802000/0002	2	1	8	17/40
K802000/0004	4	1	10	20/44

**Stopcock, T-bore, glass key**

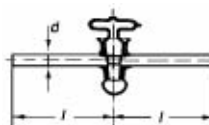
Simax Borosilicate Glass PN 70 4180

Code	Bore Size mm	Pack Content	l mm	d mm
7150/2.5	2.5	1	100	9
7150/4	4	1	110	10
7150/6	6.3	1	120	13

**Stopcock, high vacuum, straight bore, glass key**

Simax Borosilicate Glass PN 70 4180

Code	Bore Size mm	Pack Content	l mm	d mm
7160/6	6	1	100	10
7160/8	8	1	100	12
7160/10	10	1	150	15



Stopcock, Oblique-Bore, High-Vacuum, Hollow Glass Plug,
with Vacuum Chamber
Kimble KG-33 Borosilicate Glass

Code	Stopcock Bore mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K843000/0004	4	I	10	17.350/50
K843000/0006	6	I	13	20.9/54
K843000/0008	8	I	16	25/66/40
K843000/0010	10	I	19	30/75



Stopcock, Three-Way, Double-Oblique, Solid Glass Plug
Kimble KG-33 Borosilicate Glass

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K803000/0002	2	I	8	14.5/50
K803000/0004	4	I	10	16.2/56



Replacement Stopcock Plugs

Kimble KG-33 Borosilicate Glass 3.3

Code		Pack Content		Plug Size mm
K803001/0002		I		14.5/50
K803001/0004		I		16.2/56

Stopcock, Three-Way, Double-Oblique, Pressure, Solid Glass Plug with threaded pressure nut
Kimble KG-33 Borosilicate Glass 3.3

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K833000/0002	2	I	8	14.5/50
K833000/0004	4	I	10	16.2/56



Stopcock, Three Way, PTFE Plug with thread pressure nut
Kimble KG-33 Borosilicate Glass 3.3

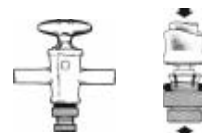
Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K823000/0002	2	I	8	12.9/44
K823000/0004	4	I	10	14.4/44



Plug Retainer

Polyacetal

Code		Pack Content		Fits Plug Size mm
K809000/0021		I		12/30, 12.6/40, 14.5/50
K809000/0023		I		20/44, 20.9/54



Stopcock, Three-Way, Double-Oblique, High-Vacuum, Solid Glass Plug,
with Vacuum Chamber
Kimble KG-33 Borosilicate Glass

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K845100/0004	4	1	10	16.2/56
K845100/0006	6	1	13	25/66



Stopcock, Straight-Bore, High Vacuum, Hollow Glass Plug
Kimble KG-33 Borosilicate Glass 3.3

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K841000/0002	2	1	8	15/35
K841000/0010	10	1	19	30/75



Stopcock, Straight-Bore, High Vacuum, Solid Glass Plug
Kimble KG-33 Borosilicate Glass 3.3

Code	Bore Size mm	Pack Content	Approx. Stem O.D. (mm)	Plug Size mm
K841100/0002	2	1	8	15/35
K841100/0004	4	1	10	17/40
K841100/0006	6	1	13	20/44



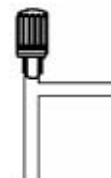
Stopcock, straight, Needle valve
Glassco Borosilicate Glass

Code	Bore Size mm	Pack Content
7299/3	0 – 3	1
7299/6	0 – 6	1



Stopcock, 90 degree, Needle valve
Glassco Borosilicate Glass

Code	Bore Size mm	Pack Content
7305/3	0 – 3	1
7305/6	0 – 6	1



Stopcock for burette, Needle valve
Glassco Borosilicate Glass

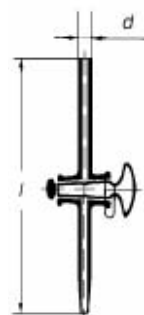
Code	Bore Size mm	Pack Content
7302/3	2.5	1



Stopcock for burette, Straight, PTFE Plug

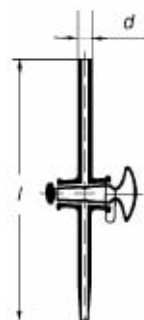
Glassco Borosilicate Glass PN 70 4180

Code	Bore Size mm	Pack Content	Size mm	l mm	d mm
7303/3	0-3	1	-	125	8

**Stopcock** for burette, Straight, Glass Plug

Simax Borosilicate Glass PN 70 4180

Code	Bore Size mm	Pack Content	Size mm	l mm	d mm
7155	2.5	1	12.5	120	8



Stopcock, Straight, with Tip O-Ring, Glass Plug, HI-VAC® Plugs are interchangeable with other Hi-Vac counterparts

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826450/0004	1	0-4	9	107	006
K826450/0008	1	0-8	13	110	108
K826450/0012	1	0-12	16	112	109



Stopcock, Straight, with Tip O-Ring, PTFE Plug, HI-VAC® High Temp. 230°C or intermittently at 275°C

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826500/0004	1	0-4	9	010	5-105
K826500/0008	1	0-8	13	110	011
K826500/0012	1	0-12	16	112	110



Stopcock, Right-Angle, with Tip O-Ring, Glass Plug, HI-VAC® Plugs are interchangeable with other Hi-Vac counterparts

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826460/0004	1	0-4	9	107	006
K826460/0008	1	0-8	13	110	108
K826460/0012	1	0-12	16	112	109



Stopcock, Right-Angle, with Tip O-Ring, PTFE Plug, HI-VAC® High Temp. 230°C
or intermittently at 275°C
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826510/0004	1	0-4	9	010	5-105
K826510/0008	1	0-8	13	110	011
K826510/0012	1	0-12	16	112	110



Stopcock, Straight, without Tip O-Ring, PTFE Plug, HI-VAC® High Temp. 230°C
or intermittently at 275°C
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826600/0004	1	0-4	9	010	-
K826600/0008	1	0-8	13	110	-
K826600/0012	1	0-12	16	112	-



Stopcock, Straight, Low Hold-Up, without Tip O-Ring, PTFE Plug, HI-VAC®
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826620/0004	1	0-4	9	010	-
K826620/0008	1	0-8	13	110	-



Stopcock, Right-Angle, without Tip O-Ring, PTFE Plug, HI-VAC® High Temp. 230°C
or intermittently at 275°C
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826610/0002	1	0-2	8	5-105	-
K826610/0004	1	0-4	9	010	-
K826610/0008	1	0-8	13	110	-
K826610/0012	1	0-12	16	112	-



Stopcock, Right-Angle, Extended-Tip, PTFE Plug, HI-VAC®
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Bore Range mm	Approx. Stem O.D. (mm)	O-Ring Size Shaft	O-Ring Size Tip
K826410/0002	1	0-2	8	5-105	-
K826410/0004	1	0-4	9	010	-



Hydrolysis, Vacuum Max.Temp 150°C

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Vacuum Valve (mm)	Tube O.D. x Height (mm)	Tube Volume ml	Plug Cat. No.	Aprx. Overall Height (mm)
K896860/2860	I	2	8 x 60	1.5	K826601/4002	108
K896860/4010	I	4	10 x 100	5	K826601/4004	158
K896860/4015	I	4	10 x 150	7.5	K826601/4004	208
K896860/8910	I	8	19 x 100	20	K826501/4008	165

**Replacement Parts**

Code	Pack Content	Description
K826601/4004	I	Valve Plug, Size 4, with PEEK Knob
K826501/4008	I	Valve Plug, Size 8, with PEEK Knob

Care and use of Kimble Hi-Vac® PTFE Valves

1. Valves are assembled with Viton O-rings, suitable for use with oxidising and NON-POLAR compounds at temperatures from -23°C to 204°C.
2. All elastomers have outgassing rates higher than glass. Long pump-down periods will typically reduce these rates by a factor of ten. Vacuum systems using PTFE valves normally operate at pressures up to 10^{-6} mm Hg. Heating of this valve during pump-down with an air heat gun will improve ultimate vacuum.
3. O-rings should be lubricated with a thin film of vacuum grease to prolong life and reduce leakage by allowing the o-ring to slip easily along the tube. Excess grease should be thoroughly wiped off.
4. Any leakage across the o-ring stem seal occurs mainly on the inward movement. Turning the stem in and out during the pump-down helps evacuate the space between the two stem o-rings. One o-ring may be removed if preferred, improving performance under some conditions.
5. O-rings may be removed from the stem by pushing the o-ring into groove with thumb and forefinger, distorting ring sufficiently to form a small loop which can be 'picked up' and the o-ring pulled off of the stem without damaging surfaces.

Greaseless Stopcocks

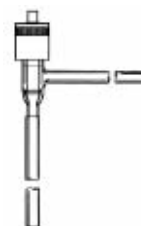
Borosilicate Glass

General Purpose "O" Ring Tap

Straight and Right Angle Pattern Available

Right angle tap

Code	Pack Content	Type
GP-RA-5	I	Greaseless, 5mm bore

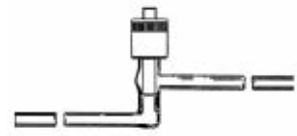


High Vacuum

STRAIGHT THROUGH TAP

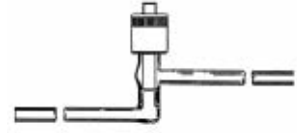
Fine Thread

Code	Pack Content	Type
ST-FI-6	I	Greaseless, 6mm bore
ST-FI-10	I	Greaseless, 10mm bore



Fast Thread

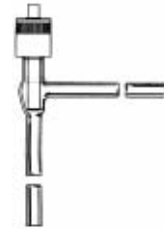
Code	Pack Content	Type
ST-FA-6	I	Greaseless, 6mm bore
ST-FA-10	I	Greaseless, 10mm bore



RIGHT ANGLE TAP

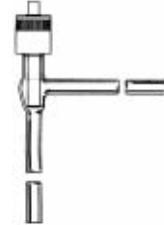
Fine Thread

Code	Pack Content	Type
RA-FI-6	I	Greaseless, 6mm bore
RA-FI-10	I	Greaseless, 10mm bore
RA-FI-15	I	Greaseless, 15mm bore



Fast Thread

Code	Pack Content	Type
RA-FA-6	I	Greaseless, 6mm bore
RA-FA-10	I	Greaseless, 10mm bore



IN LINE TAP

Fine Thread

Code	Pack Content	Type
IL-FI-6	I	Greaseless, 6mm bore
IL-FI-10	I	Greaseless, 10mm bore



Fast Thread

Code	Pack Content	Type
IL-FA-6	I	Greaseless, 6mm bore
IL-FA-10	I	Greaseless, 10mm bore



NMR PTFE Valve without tube

Code	Pack Content	Type
NMR-V5	1	Greaseless, 5mm bore

OTHER SIZES FOR ALL THE ABOVE AVAILABLE ON REQUEST. SEE PAGE G60-61 FOR SPHERICAL JOINTS

**Needle, Safety Tip, Blunt end, Syringe**

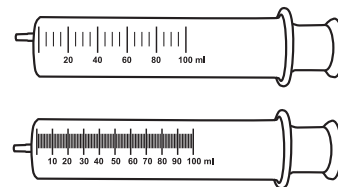
Non-sterile stainless steel needle with an inert plastic hub and a blunt end for safety

Code	Pack Content	O.D. mm	O.D. inches	Needle Length (In.)
K868280/1801	12	1.25	0.050	1.0
K868280/2001	12	0.90	0.036	1.0
K868280/2201	12	0.70	0.028	1.0

**Academy Gas Syringe, Glass with Graduations**

Available with 1ml or 5ml graduations

Code	Pack Content	Capacity ml	Graduation division (ml)
G/GS100	1	100	5
G/GS100-1	1	100	1

**Gas Syringe, Glass with Graduations**

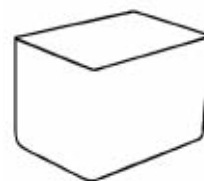
Vertical 1ml graduations. Made in the EU

Code	Pack Content	Capacity ml	Graduation division (ml)
G/GS100-1V	1	100	1

**Tanks, Laboratory one piece blown oblong, clear soda glass**

Soda-Lime Glass

Code	Pack Content	Dimensions Capacity LxWxH
1193/100x100x100	16	100 x 100 x 100 mm
1193/200x100x100	8	200 x 100 x 100 mm
1193/180x130x130	2	180 x 130 x 130 mm (2 Ltrs.)
1193/300x200x50	3	300 x 200 x 50 mm (2 Ltrs.)

**Pneumatic Troughs, one piece circular heavy wall clear soda glass**

Soda-Lime Glass

Code	Pack Content	Diameter x Height
1196/200x100	1	200 x 100 mm
1196/200x200	1	200 x 200 mm
1196/250x125	1	250 x 125 mm
1196/300x125	1	300 x 125 mm
1196/360x230	1	360 x 230 mm



Tissue Grinders

Principle of Operation

Tissue grinders produce homogenates by a combination of shearing and compression actions. The tissue sample is progressively ground (sheared) into smaller pieces at the rounded end of the pestle as the spinning pestle is lowered into the tube. As the pestle is forced lower into the tube, the sample is displaced and forced between the straight outside wall of the pestle and the inside wall of the tube, compressing the tissue cells until they rupture. When the tube is pulled away from the pestle, a slight vacuum is created that pulls the sample back past the compression area, resulting in an additional homogenization stroke. The degree of homogenization is controlled by the clearance between the pestle's and tube's cylindrical section (radial distance usually 0.002 - 0.003 inches), the rotational speed of the pestle and the number of compression strokes made.

There are three basic types of tissue grinders: Dounce, DUALL® and Potter-Elvehjem.

In choosing the correct tissue grinder for a particular application, there are two rules that apply:

1. Conically shaped pestles homogenize better than pestles with a rounded shape.
2. Ground glass to ground glass surfaces homogenize better than smooth glass to smooth glass or PTFE to smooth glass.

Using these rules, a glass DUALL tissue grinder produces the finest homogenate while a glass Dounce will produce a relatively coarse homogenate.

Stated clearances for the tubes and pestles on the Tissue Grinder pages are "total" not "annular".

All Glass parts made from Kimble KG-33 Borosilicate Glass

Dounce, All-Glass

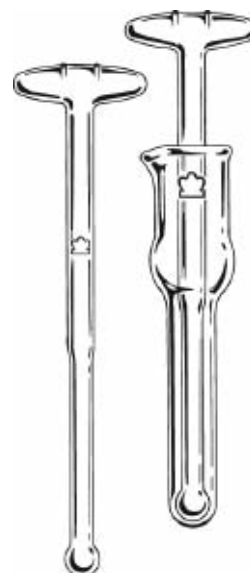
Designed primarily for cellular work where the nucleus remains intact after homogenization.

- All-glass construction.
- Two pestles are supplied with each complete unit:
- Large clearance pestle is used for the initial sample reduction.
- Small clearance pestle is used to form the final homogenate.
- Replacement components are available and completely interchangeable.

Code	Pack Content	Working Capacity (ml)	Pestle "A" Lrg. Clearance (in.)	Pestle "B" Sml. Clearance (in.)	Tube Overall mm
K885300/0000	I	0.5	.0025-.0055	.0005-.0025	37
K885300/0001	I	1	.0025-.0055	.0005-.0025	88
K885300/0002	I	2	.0030-.0050	.0005-.0025	60
K885300/0007	I	7	.0028-.0047	.0008-.0022	125
K885300/0015	I	15	.0035-.0065	.0010-.0030	157
K885300/0040	I	40	.0030-.0060	.0010-.0030	215
K885300/0100	I	100	.0020-.0100	.0005-.0055	232

Component Parts

Code	Pack Content	Description
K885301/0000	I	Large Clearance Pestle, 0.5 ml
K885301/0001	I	Large Clearance Pestle, 1 ml
K885301/0002	I	Large Clearance Pestle, 2 ml
K885301/0007	I	Large Clearance Pestle, 7 ml
K885301/0015	I	Large Clearance Pestle, 15 ml
K885301/0040	I	Large Clearance Pestle, 40 ml
K885301/0100	I	Large Clearance Pestle, 100 ml
K885302/0000	I	Small Clearance Pestle, 0.5 ml
K885302/0001	I	Small Clearance Pestle, 1 ml
K885302/0002	I	Small Clearance Pestle, 2 ml
K885302/0007	I	Small Clearance Pestle, 7 ml
K885302/0015	I	Small Clearance Pestle, 15 ml
K885302/0040	I	Small Clearance Pestle, 40 ml
K885302/0100	I	Small Clearance Pestle, 100 ml
K885303/0000	I	Tube, 0.5 ml
K885303/0001	I	Tube, 1 ml
K885303/0002	I	Tube, 2 ml
K885303/0007	I	Tube, 7 ml
K885303/0015	I	Tube, 15 ml
K885303/0040	I	Tube, 40 ml
K885303/0100	I	Tube, 100 ml



Tissue grinder

DUAL[®], All-Glass

- Combines both conical and cylindrical surfaces to effectively reduce tissue and produce a uniform homogenate.
- Grinding efficiency is greatly improved when this tube is used.
- This ground glass model is ideal for connective tissue such as muscle, heart and lung.
- Construction is strong enough to allow the pestle to be motor driven.
- Pestles are designed to be used with K788000 Stirrer Adapters.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006".

Code	Pack Content	Size	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885450/0020	I	20	I	155 x 6	80 x 13
K885450/0021	I	21	3	207 x 6	120 x 16
K885450/0022	I	22	5	220 x 8	150 x 18
K885450/0023	I	23	15	278 x 10	175 x 25
K885450/0024	I	24	30	310 x 10	215 x 32
K885450/0025	I	25	50	345 x 16	225 x 38

Component Parts

Code	Pack Content	Description
K885451/0020	I	Pestle, Size 20
K885451/0021	I	Pestle, Size 21
K885451/0022	I	Pestle, Size 22
K885451/0023	I	Pestle, Size 23
K885451/0024	I	Pestle, Size 24
K885451/0025	I	Pestle, Size 25
K885452/0020	I	Tube, Size 20
K885452/0021	I	Tube, Size 21
K885452/0022	I	Tube, Size 22
K885452/0023	I	Tube, Size 23
K885452/0024	I	Tube, Size 24
K885452/0025	I	Tube, Size 25



DUAL[®], PTFE Pestle and Glass Tube

- Combines both conical and cylindrical surfaces to effectively reduce tissue and produce a uniform homogenate.
- Grinding efficiency is greatly improved when this tube is used.
- This PTFE pestle model is ideal for soft tissue such as brain or liver.
- Construction is strong enough to allow the pestle to be motor driven.
- Pestles are designed to be used with K788000 stirrer adapters.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006"

Code	Pack Content	Size	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885480/0020	I	20	I	155 x 4.5	80 x 13
K885480/0021	I	21	3	210 x 6	120 x 16
K885480/0022	I	22	5	228 x 6	150 x 18
K885480/0023	I	23	15	268 x 6	175 x 25
K885480/0024	I	24	30	305 x 10	215 x 32
K885480/0025	I	25	50	330 x 10	225 x 38

See next page for Component Parts



Tissue Grinder**DUALL®**, PTFE Pestle and Glass Tube, continued**Component Parts**

Code	Pack Content	Description
K885481/0020	I	Pestle, Size 20
K885481/0021	I	Pestle, Size 21
K885481/0022	I	Pestle, Size 22
K885481/0023	I	Pestle, Size 23
K885481/0024	I	Pestle, Size 24
K885481/0025	I	Pestle, Size 25
K885482/0020	I	Tube, Size 20
K885482/0021	I	Tube, Size 21
K885482/0022	I	Tube, Size 22
K885482/0023	I	Tube, Size 23
K885482/0024	I	Tube, Size 24
K885482/0025	I	Tube, Size 25

Micro Duall®, All-Glass, with Screw-Cap

- Can serve as a storage vessel following homogenization.
- Centrifugation, concentrations, and lyophilization can be accomplished without a transfer.
- Flat base allows tube to stand upright without support.
- Heavy wall construction minimizes breakage.
- Capacities shown are without the pestle inserted.
- Supplied complete with a pestle, tube, phenolic cap and a PTFE liner.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006".

Code	Pack Content	Size	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885490/0017	I	17	0.3	13-425	148 x 6
K885490/0019	I	19	I	13-425	148 x 6
K885490/0020	I	20	3	20-400	165 x 9
K885490/0021	I	21	5	20-400	165 x 9

Component Parts

Code	Pack Content	Description
K885491/0017	I	Pestle, For Size 17 and 19 Tubes
K885491/0020	I	Pestle, For Size 20 and 21 Tubes
K885492/0017	I	Tube, Size 17
K885492/0019	I	Tube, Size 19
K885492/0020	I	Tube, Size 20
K885492/0021	I	Tube, Size 21

**Tissue Grinder****Micro**, All-Glass

- Designed for dispersing small quantities of tissue in buffer solution.
- Working capacity is 200 microliters.
- All-glass tube and pestle.
- PTFE bearing prevents misalignment and avoids aerosol formation.
- Packed in six matched sets per carton.

Code	Pack Content	Working Capacity (µl)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885470/000	6	200	75 x 3	33 x 8



Potter-Elvehjem, All-Glass

- All-glass construction.
- Designed for a motor drive using a K788000 Stirrer Adapter.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006".

Code	Pack Content	Size	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885500/0019	I	19	I	145 x 5	95 x 13
K885500/0021	I	21	5	205 x 6	140 x 16
K885500/0022	I	22	8	215 x 8	150 x 18
K885500/0023	I	23	17	265 x 10	175 x 25
K885500/0024	I	24	45	315 x 10	220 x 32

Component Parts

Code	Pack Content	Description
K885501/0019	I	Pestle, Size 19
K885501/0021	I	Pestle, Size 21
K885501/0022	I	Pestle, Size 22
K885501/0023	I	Pestle, Size 23
K885501/0024	I	Pestle, Size 24
K885502/0019	I	Tube, Size 19
K885502/0021	I	Tube, Size 21
K885502/0022	I	Tube, Size 22
K885502/0023	I	Tube, Size 23
K885502/0024	I	Tube, Size 24



Potter-Elvehjem, PTFE Pestle and Glass Tube

- Similar to K885500 but with a PTFE pestle and an unground tube.
- Sizes 21 to 24 have radial serrations on the lower portion of the pestle to deliver the homogenate into the cylindrical portion of the tube.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006".

Code	Pack Content	Size	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K886000/0018	I	18	0.5	130 x 3	80 x 12
K886000/0019	I	19	I	154 x 5	95 x 12
K886000/0020	I	20	3	154 x 5	115 x 12
K886000/0021	I	21	5	215 x 6	140 x 15
K886000/0022	I	22	8	212 x 6	150 x 19
K886000/0023	I	23	17	266 x 6	175 x 25
K886000/0024	I	24	45	269 x 6	220 x 32

See next page for Component Parts



Tissue Grinder

Potter-Elvehjem, Glass Tube

Component Parts

Code	Pack Content	Description
K885752/0018	I	Tube, Size 18
K885752/0019	I	Tube, Size 19
K885752/0020	I	Tube, Size 20
K885752/0021	I	Tube, Size 21
K885752/0022	I	Tube, Size 22
K885752/0023	I	Tube, Size 23
K885752/0024	I	Tube, Size 24
K886001/0018	I	Pestle, Size 18
K886001/0019	I	Pestle, Size 19
K886001/0020	I	Pestle, Size 20
K886001/0021	I	Pestle, Size 21
K886001/0022	I	Pestle, Size 22
K886001/0023	I	Pestle, Size 23
K886001/0024	I	Pestle, Size 24



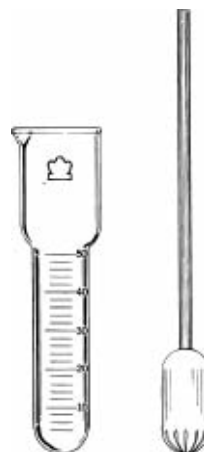
Potter-Elvehjem, PTFE Pestle and Glass Tube

- A graduated tube and a finely machined PTFE pestle comprise this popular style.
- Radial serrations on the lower portion of the pestle deliver the homogenate into the cylindrical portion of the tube.
- Graduations are fused into the glass.
- Replacement components are available and completely interchangeable.

Code	Pack Content	Size	Working Capacity (ml)	Graduations x Subdiv. (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K88510/0020	I	20	4	0.5-4 x 0.5	215 x 4	125 x 16
K88510/0021	I	21	10	1-9 x 0.5	213 x 6	128 x 22
K88510/0022	I	22	30	2-25 x 1	225 x 6	160 x 35
K88510/0023	I	23	55	6-50 x 2	231 x 6	170 x 41

Component Parts

Code	Pack Content	Description
K88511/0020	I	Pestle, Size 20 (0.003-.005" clearance)
K88511/0021	I	Pestle, Size 21 (0.004-.006" clearance)
K88511/0022	I	Pestle, Size 22 (0.005-.007" clearance)
K88511/0023	I	Pestle, Size 23 (0.006-.009" clearance)
K88512/0020	I	Tube, Size 20
K88512/0021	I	Tube, Size 21
K88512/0022	I	Tube, Size 22
K88512/0023	I	Tube, Size 23



Tissue grinder Tenbroeck, All-Glass

- All-glass construction.
- Popular style which affords the choice of hand or motor operation.
- Pestle is tooled for an appropriately sized single hole rubber stopper (not supplied).
- By inserting a short metal rod in the stopper, these grinders can be motor driven at slow speeds by inserting the metal rod into the motor chuck.
- Replacement components are available and completely interchangeable.
- Clearance between pestles and tubes is 0.004" to 0.006".

Code	Pack Content	Stopper No.	Working Capacity (ml)	Pestle Overall x Shaft O.D. (mm)	Tube Overall x Res. O.D. (mm)
K885000/0002	I	00	2	160 x 50	100 x 30
K885000/0007	I	00	7	195 x 50	125 x 30
K885000/0015	I	I	15	250 x 65	157 x 38
K885000/0040	I	3	40	315 x 90	215 x 55

Component Parts

Code	Pack Content	Description
K885001/0002	I	Pestle, 2 ml
K885001/0007	I	Pestle, 7 ml
K885001/0015	I	Pestle, 15 ml
K885001/0040	I	Pestle, 40 ml
K885002/0002	I	Tube, 2 ml
K885002/0007	I	Tube, 7 ml
K885002/0015	I	Tube, 15 ml
K885002/0040	I	Tube, 40 ml



PELLET PESTLES® Resuspend Protein and DNA Pellets or

Grind Soft Tissues in Micro Centrifuge Tubes

RNase-Free Disposable PELLET PESTLES® with Microtubes

- RNase, DNase and Pyrogen-free
- Individually wrapped to ensure purity

Code	Pack Content	Description
K749520/0090	100	RNase Free Pellet Pestle w/tube 1.5ml
K749520/0590	100	RNase Free Pellet Pestle w/tube 0.5ml
K749521/0590	100	RNase Free Pellet Pestle Only 0.5ml
K749521/1590	100	RNase Free Pellet Pestle Only 1.5ml
K749510/0590	100	RNase Free Microtube Only 0.5ml
K749510/1590	100	RNase Free Microtube Only 1.5ml



Disposable PELLET PESTLES® with Microtubes

- Autoclavable blue polypropylene
- Pestles specially designed to match microtubes

Code	Pack Content	Description	Overall Pestle Length (cm)
K749520/0500	100	0.5 ml Pellet Pestle with matching Microtubes	7
K749520/0000	100	1.5 ml Pellet Pestle with matching Microtubes	7
K749521/0500	100	0.5 ml Pellet Pestle Only	7
K749521/1500	100	1.5 ml Pellet Pestle Only	7



Reusable PELLET PESTLES®, CTFE / Stainless Steel

- Autoclavable CTFE/stainless steel
- Specially designed to match microtubes

Code	Pack Content	Size ml	Overall Pestle Length (cm)
K749516/0500	1	0.5	6
K749515/0000	1	1.5	14

Polypropylene PELLET PESTLE® Microtubes

Code	Pack Content	Size ml	Colour
K749510/1501	500	1.5	blue
K749560/0500	1000	0.5	natural

**PELLET PESTLE®** Cordless Motor

- For all Pellet Pestle mixers
- Complete with two AA batteries

Code	Pack Content	Description
K749540/0000	1	Pellet Pestle Cordless Motor

Replacement Part

Code	Pack Content	Description
K749541/0000	1	Replacement Motor Adapter



PLEASE NOTE, THIS IS ONLY PART OF THE RANGE WE CAN OFFER,
PLEASE CALL FOR FURTHER DETAILS.

Tubes, Absorption, straight form

Glassco Borosilicate Glass

Code	Length x Bore mm	Pack Content
7307/100x12	100 x 12	1

**Tubes, Absorption**, U-form

Glassco Borosilicate Glass

Code	Length x Bore mm	Pack Content
7308/100x12	100 x 12	1
7308/125x15	125 x 15	1
7308/150x18	150 x 18	1

**Tubes, Absorption**, U-form with side arms

Glassco Borosilicate Glass

Code	Length x Bore mm	Pack Content
7309/100x12	100 x 12	1
7309/125x15	125 x 15	1
7309/150x18	150 x 18	1



Melting point capillary tube

Tube, Capillary, Melting Point, Open Both Ends

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Length mm	Approx O.D. (mm)	Thickness of Wall (mm)	Tubes per Vial
K34500/99	20	100	1.5-1.8	0.2	100

Tubes, Capillary, Melting Point, U.S.P, Open Both Ends

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Length mm	Approx O.D. (mm)	Thickness of Wall (mm)	Tubes per Vial
K34502/99	20	100	0.8-1.1	0.25	100

Tubes, Capillary, Melting Point, Open One End

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Length mm	Approx O.D. (mm)	Thickness of Wall (mm)	Tubes per Vial
K34505/99	20	90	1.5-1.8	0.2	100

Tubes, Capillary, melting Point, U.S.P., Open One End

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Length mm	Approx O.D. (mm)	Thickness of Wall (mm)	Tubes per Vial
K34507/99	20	90	0.8-1.1	0.25	100

PLEASE ALSO SEE PAGES 31 AND 113



Centrifuge, Disposable

Centrifuge, Disposable, Plain, Screw Thread Finish, No caps supplied

Kimble KG-33 Borosilicate Glass ASTM E438 Type I Class A or B glass

Code	Pack Content	Nominal Capacity ml	Approx O.D. mm	Approx. Length mm	GPI Thread Finish
K73785/5	125	5	13	110	13-415
K73785/10	125	10	16	114	15-415
K73785/15	125	15	17	126	15-415
K73785/50	72	50	29	137	24-400

Accessory Closures

Code	Nominal Pack Content	Description
K73800/13415	1000	Closures, Screw Thread, Rubber Lined, 13-415
K73800/15415	1000	Closures, Screw Thread, Rubber Lined, 15-415
K73802/13415	500	Closures, Screw Thread, PTFE Lined, 13-415
K73802/15415	500	Closures, Screw Thread, PTFE Lined, 15-415
K73802/24400	144	Closures, Screw Thread, PTFE Lined, 24-400

FOR PLASTIC CENTRIFUGE TUBES, PLEASE SEE PAGES 176-177.



Centrifuge, Disposable, Plain, Snap Cap Finish, No caps supplied

Kimble KG-33 Borosilicate Glass ASTM E438 Type I Class A or B glass

Code	Pack Content	Nominal Capacity ml	Approx O.D. mm	Approx. Length mm	Snap-Cap Size
K73790/5	125	5	13	110	1
K73790/10	125	10	16	114	2
K73790/15	125	15	17	126	2
K73790/50	72	50	29	137	-

**Accessory Closures**

Code	Nominal Pack Content	Description
K73837/1	500	Snap Cap, Polyethylene, Cap size 1
K73837/2	500	Snap Cap, Polyethylene, Cap size 2

Centrifuge, Plain, Beaded Top

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. x Length mm
K45160/15	12	15	17x118

**Centrifuge, Graduated, Beaded Top, White Scale and Marking Spot**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45165/10	12	10	0.1	0 to 0.2 - ±0.05	17 x 108
K45165/15	12	15	0.1	Above 0.2 to 1 - ±0.10 Above 1 to 3 - 0.15 Above 3 - 0.20	17 x 118
K45165/50	12	50	0-10 in 0.5 10-50 in 1	0 to 1 - ±0.075 Above 1 to 2 - 0.15 Above 2 to 5 - 0.30 Above 5 to 10 - 0.50 Above 10 - 1.00	29 x 133

**Centrifuge, Graduated, Beaded Top, White Scale, with Pour Spout and Marking Spot**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45186/50	12	50	0-10 in 0.5 10-50 in 1	0 to 0.2 - ±0.2 Above 2 to 10-0.3 Above 2 to 10-0.3 Above 10 - 0.5	29 x 118

**Centrifuge, Graduated, Hopkins Vaccine, with Marking Spot**

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45225/10	12	10	0.0025	0.2	17 x 119

The stem is graduated at 0.01 ml to 0.05ml in 0.01 ml subdivisions, and the body has graduations at 1, 5 and 10 ml



Centrifuge, Graduated, with Marking Spot. All markings in black ceramic enamel

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45167/50	12	50	0-1 in 0.1 1-2 in 0.2 2-10 in 0.5 10-20 in 1 and at 50	0 to 1 - 0.075 Above 1 to 2 - 0.150 Above 2 to 5 - 0.300 Above 5 to 10 - 0.50 Above 10 - 1.0	29 x 133



FOR PLASTIC CENTRIFUGE TUBES, PLEASE SEE PAGES 176-177.

Centrifuge, Graduated, Threaded, with Screw Cap, with Marking Spot

Caps Unattached

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm	GPI Thread
K45166/15	12	15	0.1	0 to 0.2 - ±0.050 Above 0.2 to 1 - 0.100 Above 1 to 3 - 0.150 Above 3 - 0.200	17 x 130	15-415
K5166/50	12	50	0-10 in 0.5 10-50 in 1	0 to 1 - ±0.075 Above 1 to 2 - 0.150 Above 2 to 5 - 0.300 Above 5 to 10 - 0.500 Above 10 - 1.000	29 x 147	24-410



Replacement cap is K45066B

Centrifuge, Plain, Threaded, with Screw Cap

Conical tube with a PTFE/rubber lined black phenolic screw cap.

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Overall GPI Thread	Fits I.E.C. Shield No.	Height x O.D. mm
K410090/0015	12	15	15-415	302	130 x 17
K410090/0050	12	50	24-410	320	158 x 28

**Centrifuge**, Graduated, Screw Thread, 100 ml, Caps PTFE- Faced Liners and

Marking Spot (Caps 28-410 GPI Unattached)

KIMAX KG-33 Borosilicate Glass ASTM D2158

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45246/100	12	100	0-1 in 0.05 1-3 in 0.1 3-6 in 0.2 6-10 in 0.5 10-100 in 1	0-0.1 ±0.02 Above 0.1-0.30 0.03 Above 0.3-1 0.05 Above 1-3 0.10 Above 3-5 0.20 Above 5-10 0.50 Above 10 1.00	37 x 203

**Centrifuge**, Plain, Heavy-Duty, Screw Thread, Cap with cemented in rubber

liner, not attached

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. x Length mm	GPI Thread
K45212/35	12	35	29 x 100	24-410
K45212/50	12	50	29 x 123	24-410

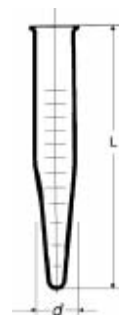


Replacement cap is K45066B

Tubes centrifuge, Graduated

Simax Borosilicate Glass

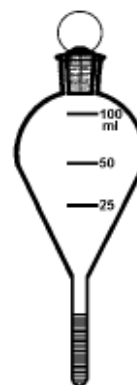
Code	Capacity ml	Pack Content	d mm	l mm
3822/10	10	50	17	120
3822/15	15	50	17	140
3822/25	25	50	24	150

**Tube, Centrifuge, Graduated, Goetz, with, SJ 16 Stopper**

Stem is graduated in 0.01 ml to 0.2 ml and the body has graduations at 25, 50, and 100 ml
KIMAX KG-33 Borosilicate Glass ASTM D2709

Code	Pack Content	Capacity ml	±Tolerance ml	O.D. x Length without Stopper (mm)
K45220/100	6	100	0 to 0.2 - ± 0.01 At 25 - 1.00 Above 25 - 2.00	58 x 160

Replacement stopper is K41900R

**Tube, Centrifuge, Oil, 1.5 ml Stem**

KIMAX KG-33 Borosilicate Glass ASTM D1966

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45244/100	12	100	0-1.5 in 0.1 1.5-5 in 0.5 5-10 in 1 10-25 in 5 and at 50, 100	0 to 1.5 - ±0.03 Above 1.5 to 3 - 0.20 Above 3 to 5 - 0.30 Above 5 to 10 - 0.50 Above 10 to 25 - 1.00 Above 25 - 2.00	58 x 158

Graduated in %. 100ml equals 200%

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45244/200	6	200%	0-3% in 0.10% 3-5 in 0.50 5-10 in 1 10-100 in 10 100-200 in 20	0 to 1.5 - ±0.03 Above 1.5 to 3 - 0.20 Above 3 to 5 - 0.30 Above 5 to 10 - 0.50 Above 10 to 25 - 1.00 Above 25 to 100 - 2.00	58 x 158

**Tube, Centrifuge, Oil, 8"**

KIMAX KG-33 Borosilicate Glass ASTM D4007, D1796, D91, D128 and MPMS 10.4 standards

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45240/100	12	100	0-0.5 in 0.05 0.5-2 in 0.1 2-3 in 0.2 3-5 in 0.5 5-10 in 1 10-25 in 5 25-100 in 25	0 to 0.1 - ± 0.02 Above 0.1 to 0.3 - 0.03 Above 0.3 to 1 - 0.05 Above 1 to 3 - 0.10 Above 3 to 5 - 0.20 Above 5 to 10 - 0.50 Above 10 - 1.00	37 x 203

Top is tooled to accept a Snap Cap K28150R/6



FOR PLASTIC CENTRIFUGE TUBES, PLEASE SEE PAGES 176-177.

Tube, Centrifuge, Oil and Weathering (End Point Index), 8"

KIMAX KG-33 Borosilicate Glass ASTM D2158

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45241/100	12	100	0-1 in 0.05 1-3 in 0.1 3-6 in 0.2 6-10 in 0.5 10-100 in 1	0 to 0.1 - ±0.02 Above 0.1 to 0.3 - 0.03 Above 0.3 to 1 - 0.05 Above 1 to 3 - 0.10 Above 3 to 5 - 0.20 Above 5 to 10 - 0.50 Above 10 - 1.00	37 x 203

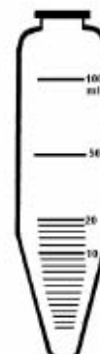


Top is tooled to accept a Snap Cap K28150R/6

Tube, Centrifuge, Oil, Short Cone, 6"

KIMAX KG-33 Borosilicate Glass ASTM D4007

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45243/100	12	100	0-0.5 in 0.05 2-3 in 0.2 3-5 in 0.5 5-10 in 1 10-25 in 5 and at 50,100	0 to 0.1 - ±0.02 Above 0.1 to 0.3 - 0.03 Above 0.3 to 1 - 0.05 Above 1 to 1.5 - 0.10 Above 1.5 to 2 - 0.20 Above 2 to 3 - 0.30 Above 3 to 5 - 0.50 Above 5 to 10 - 0.75 Above 10 to 25 - 1.00 Above 25 - 1.50	45 x 165



Top is tooled to accept a Snap Cap K28150R/6

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45243/200	6	200%	0-0.1% in 0.10% 1-4 in .20 4-6 in .40 6-10 in 1 10-20 in 2 20-50 in 10 and at 100,200	0 to 0.1 - ±0.02 Above 0.1 to 0.3 - 0.03 Above 0.3 to 0.5 - 0.05 Above 0.5 to 1 - 0.075 Above 1 to 1.5 - 0.10 Above 1.5 to 2 - 0.20 Above 2 to 3 - 0.30 Above 3 to 5 - 0.50 Above 5 to 10 - 0.75 Above 10 to 25 - 1.00 Above 25 - 1.50	45 x 165

Top is tooled to accept a Snap Cap K28150R/6

Centrifuge, Graduated, Screw Thread, Heavy-Duty, with autoclavable screw cap with rubber liner

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45200/10	12	10	0.1	0 to 0.2 - ±0.05 Above 0.2 to 1 - 0.10 Above 1 to 3 - 0.15 Above 3 - 0.20	17 x 116
K45200/40	12	40	0-10 in 0.5 10-40 in 1	0 to 1 - ±0.10 Above 1 to 2 - 0.20 Above 2 to 5 - 0.30 Above 5 to 10 - 0.50 Above 10 - 1.00	29 x 140



FOR PLASTIC CENTRIFUGE TUBES, PLEASE SEE PAGES 176-177.

Centrifuge, Graduated, To Contain, Heavy-Duty, with Colour-Coded

Flathead PTFE Stopper

KIMAX KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Subdivision ml	±Tolerance ml	O.D. x Length mm
K45176/13	6	13	0.1	0 to 0.2 - ±0.05 Above 0.2 to 1 - 0.10 Above 1 to 3 - 0.15 Above 3 - 0.20	17 x 130
K45176/50	6	50	0-10 in 0.5 10-50 in 1	0 to 1 - ± 0.10 Above 1 to 2 - 0.20 Above 2 to 5 - 0.30 Above 5 to 10 - 0.50 Above 10 - 1.00	29 x 155

**Centrifuge, Plain, High Strength**

Max. Temp. 300°C.

Kimble KG-33 Borosilicate Glass Type I, Class B

Plain Top

Code	Pack Content	Capacity ml	O.D. x Length mm	
K45500/15	6	15	18 x 102	
K45500/30	6	30	24 x 106	

**Screw Thread with PTFE-faced rubber lined cap**

Code	Pack Content	Capacity ml	O.D. x Length mm	GPI Thread
K45600/15	6	15	20-400	18 x 102
K45600/30	6	30	24-400	24 x 106

**Replacement Caps and Accessory Sleeves**

Code	Pack Content	Type
K45550/15	2	Rubber Adapter Sleeve, 15 ml
K45550/30	2	Rubber Adapter Sleeve, 30 ml
K73802/20400	144	Cap, 20-400, For use with K45600/15
K73802/24400	144	Cap, 24-400, For use with K45600/30



KIMBLE (HS) High Strength 15ml and 30ml reusable centrifuge tubes are manufactured from Type I, Class B borosilicate glass. The tubes have been chemically strengthened to achieve a greater mechanical strength than standard borosilicate centrifuge tubes. These tubes can be centrifuged up to 13,100 RCF when used with an accessory rubber adapter sleeve in a 50ml rotor cavity. They can withstand temperatures up to 300°C. Screw cap tube is supplied with 73802 cap with PTFE-faced rubber liner.

FOR PLASTIC CENTRIFUGE TUBES, PLEASE SEE PAGES 176-177.

Nessler Tubes

Nessler, Colour Comparison, Low Form, (Unmatched)

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Graduations ml	Approx. O.D. and Height (mm)	Scale Length mm
K45310/50	6	50	25 x 175	125-136
K45310/100	6	100	32 x 200	145-158
K45310/50100	6	50 & 100	32 x 200	145-158



Nessler, Colour Comparison, Low Form, (Matched Set of 6)

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Graduations ml	Approx. O.D. and Height (mm)	Scale Length mm
K45310A/50	1 Set	50	25 x 175	125-136
K45310A/100	1 Set	100	32 x 200	145-158



Nessler, Colour Comparison, APHA Standard (Unmatched)

Kimble KG-33 Borosilicate Glass APHA Standard

Code	Pack Content	Graduations ml	Approx. O.D. and Height (mm)	Scale Length mm
K45315/50	6	50	20 x 300	200-220
K45315/100	6	100	24 x 375	275-295
K45315/50100	6	50 & 100	24 x 375	275-295



Nessler, APHA Standard, with Cap Stopper (Matched Set of 6)

Kimble KG-33 Borosilicate Glass ASTM D1209

Code	Pack Content	Graduation ml	Approx. O.D. (mm)	Approx. Height Inc. Stopper (mm)	Length mm	Joint
K45325A/50	1	50	20	312	200-220	19/10

Replacement cap is K15182/1910



Nessler, APHA Standard, with Cap Stopper (Matched Set of 12)

Kimble KG-33 Borosilicate Glass ASTM D1209

Code	Pack Content	Graduation ml	Approx. O.D. (mm)	Approx. Height Inc. Stopper (mm)	Length mm	Joint
K45325B/50100	1	50 & 100	24	390	275-295	24/12

Cap for Series K45320A and K45325A & B Nessler Tubes

Code	Pack Content	Description
K15182/1910	1	Nessler Tubes, size 19/10
K15182/2412	1	Nessler Tubes, size 24/12



Test tubes with screw cap

Glassco Borosilicate Glass

Code	Pack Content	d x l mm	Wall mm	
3801/16x100	100	16 x 100	1.8	
3801/16x120	100	16 x 120	1.8	
3801/16x160	100	16 x 160	1.8	

**Test tubes** with screw cap

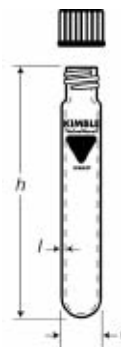
Simax Borosilicate Glass

Code	Pack Content	d x l mm	Wall mm	GL
3830/100x16	100	16 x 100	1.8	18
3830/120x16	100	16 x 120	1.8	18
3830/160x16	100	16 x 160	1.8	18

**Culture tubes**, screw cap with rubber lining and marking spot

KIMAX ValueWare Borosilicate Glass ASTM E982 Type VI, Class A

Code	Pack Content	d x l mm	Capacity ml	O.D. x Length (mm)
K65066/13100	100	13 x 100	8	13-145
K65066/16100	100	16 x 100	12	15-415
K65066/16125	100	16 x 125	16	15-415
K65066/16150	100	16 x 150	20	15-145
K65066/20125	100	20 x 125	25	18-415
K65066/20150	100	20 x 150	30	18-415
K65066/25150	100	25 x 150	50	24-410

**Culture Culture**, Screw Thread, with marking spot

KIMAX-51 Borosilicate Glass ASTM E438 Type I, Class A or B

K73800, K73802 and K73805 for caps.

Code	Approx. Pack Content	Approx. O.D. mm	Approx. Length mm	Approx. Overflow Capacity (mm)	GPI Thread Finish
K73750/13100	500	13	100	8	13-415
K73750/16100	250	16	100	12	15-415
K73750/16125	250	16	125	16	15-415
K73750/16150	250	16	150	20	15-415
K73750/20125	250	20	125	25	18-415
K73750/20150	250	20	150	30	18-415

**Tube Culture**, Screw Thread, Round Bottom,

Kimble KG-33 Borosilicate Glass

See K73800, K73802 and K73805 for caps.

Code	Approx. Pack Content	Approx. O.D. mm	Approx. Length mm	Approx. Overflow Capacity (mm)	GPI Thread Finish
K90H13100R	250	13	100	8	13-415
K90K16100R	250	16	100	12	15-415
K90P20125R	125	20	125	25	18-415



ALSO AVAILABLE WITH FLAT BOTTOM, PLEASE CALL FOR FURTHER DETAILS

Culture Tube, Screw Thread, Round Bottom

Kimble KG-33 Borosilicate Glass

See K73800, K73802 and K73805 for caps.

Code	Approx. Pack Content	Approx. O.D. mm	Approx. Length mm	Approx. Overflow Capacity (mm)	GPI Thread Finish
K73770/13100	500	13	100	8	13-415
K73770/16100	250	16	100	12	15-415
K73770/16125	250	16	125	16	15-415
K73770/16150	250	16	150	20	15-415
K73770/20125	250	20	125	25	18-415
K73770/20150	250	20	150	30	18-415

**Cap with Cemented-in rubber Liner**

Special phenolic material ASTM Specification E982

Code	Approx. Pack Content	GPI Thread Finish
K73800/13415	1000	13-415
K73800/15415	1000	15-415
K73800/18415	1000	18-415



Intended for use with K73750, K73760, K73770 and K73785

Cap, with PTFE-Faced White Rubber Liner

Special phenolic material ASTM E982

Code	Approx. Pack Content	GPI Thread Finish
K73802/13415	500	13-415
K73802/15415	500	15-415

**Cap, Linerless, Screw thread, White Polypropylene**

Polypropylene ASTM E982

Code	Approx. Pack Content	GPI Thread Finish
K73805/15415	1000	15-415

**Cap, Linerless, Screw thread, Natural Polypropylene**

Polypropylene ASTM E982

Code	Approx. Pack Content	GPI Thread Finish
K73805B/13415	1000	13-415
K73805B/15415	1000	15-415
K73805B/18415	500	18-415

**Disposable Culture Tube, Plain**

Soda-Lime Glass

Code	Pack Content	Size mm	Pallet Quantity
VS10075	767	10 x 75	156,468
VS12075	500	12 x 75	102,000
VS13100	500	13 x 100	90,000
VS16125	486	16 x 125	48,114
VS16150	500	16 x 150	40,500



Disposable Culture Tube, Rim Top

Choose borosilicate or soda-lime glass

Uniform dimensions

Soda-Lime Glass

Code	Approx. Pack Content	Size mm	Label Colour
K60AM10	1000	10 x 75	Plain
K60BM12	1000	12 x 75	Plain
K60CM13	1000	13 x 100	Plain
K60MM190	1000	16 x 75	Plain
K60EM16	1000	16 x 100	Plain
K60FM165	1000	16 x 125	Plain
K60GM166	1000	16 x 150	Plain

**N-51A Borosilicate Glass**

Code	Approx. Pack Content	Size mm	Label Colour
K73500/1075	1000	10 x 75	Plain
K73500/1275	1000	12 x 75	Plain
K73500/13100	1000	13 x 100	Plain
K73500/1585	1000	15 x 85	Plain
K73500/16100	1000	16 x 100	Plain
K73500/16125	1000	16 x 125	Plain
K73500/16150	1000	16 x 150	Plain



Other sizes available

Kimble N-51A Borosilicate Glass Tubes with 3/4" Banded Labels

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZXB	1000	10 x 75	Blue (25± 10% case min.)
K60A10BZXG	1000	10 x 75	Green (25± 10% case min.)
K60A10BZXL	1000	10 x 75	Yellow (25± 10% case min.)
K60A10BZXW	1000	10 x 75	White
K60B12BZXB	1000	12 x 75	Blue (25± 10% case min.)
K60B12BZXG	1000	12 x 75	Green (25± 10% case min.)
K60B12BZXL	1000	12 x 75	Yellow (25± 10% case min.)
K60B12BZXW	1000	12 x 75	White

**Kimble N-51A Borosilicate Glass Tubes with 1-3/8" Vertical Labels**

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZB	1000	10 x 75	Blue
K60A10BZG	1000	10 x 75	Green (25± 10% case min.)
K60A10BZL	1000	10 x 75	Yellow
K60A10BZW	1000	10 x 75	White
K60B12BZB	1000	12 x 75	Blue
K60B12BZG	1000	12 x 75	Green (25± 10% case min.)
K60B12BZL	1000	12 x 75	Yellow
K60B12BZW	1000	12 x 75	White
K60C13BZW	1000	13 x 100	White
K60E16BZW	1000	16 x 100	White



Disposable Culture Tube, continued**Soda-Lime Glass Tubes with 3/4" Banded Labels**

Code	Approx. Pack Content	Size mm	Label Colour
K60BM12MXW	1000	12 x 75	White
K60A10BZXG	1000	10 x 75	Green (25± 10% case min.)
K60A10BZXL	1000	10 x 75	Yellow (25± 10% case min.)

**Blood Typing**

- Pre-labeled with blood type
- Permanent Colour-coded label
- Convenient packing quantities
- Borosilicate Glass

Chase brand blood typing tubes feature a permanent ceramic label, fused to the glass, that is easily written on with marker or pencil. Tubes are pre-labeled with the blood type and a Colour-coded band that is placed to allow an unobstructed view of cell suspension.

AI Yellow Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ1	1000	10 x 75	yellow
K60B12BZ1	1000	12 x 75	yellow

ANTI A Blue Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ2	1000	10 x 75	blue
K60B12BZ2	1000	12 x 75	blue

ANTI B Yellow Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ4	1000	10 x 75	yellow
K60B12BZ4	1000	12 x 75	yellow

B Blue Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ3	1000	10 x 75	blue
K60B12BZ3	1000	12 x 75	blue

IIS White Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ6	1000	10 x 75	white
K60B12BZ6	1000	12 x 75	white

IS Green Colour-Coded Tubes

Code	Approx. Pack Content	Size mm	Label Colour
K60A10BZ5	1000	10 x 75	green
K60B12BZ5	1000	12 x 75	green



Culture Tube, Rim Top

KIMAX-51 Borosilicate Glass ASTM E982 Type IV

Code	Pack Content	Approx. O.D. (mm)	Approx. Length (mm)	Overflow Capacity (ml)
K45060/650	72	6	50	0.7
K45060/13100	72	13	100	10
K45060/16150	72	16	150	24
K45060/19150	72	19	150	30
K45060/25150	72	25	150	55
K45060/25200	24	25	200	75

**Culture Tube, Rim Top, with Marking Spot**

KIMAX KG-33 Borosilicate Glass ASTM E982 Type IV

Code	Pack Content	Approx. O.D. (mm)	Approx. Length (mm)	Overflow Capacity (ml)
K45048/1075	72	10	75	4
K45048/1275	72	12	75	6
K45048/13100	72	13	100	10
K45048/15125	72	15	125	16
K45048/16100	72	16	100	15
K45048/16125	72	16	125	20
K45048/16150	72	16	150	24
K45048/18150	72	18	150	28
K45048/20150	72	20	150	36
K45048/25150	72	25	150	55
K45048/25250	24	25	250	95

**Culture Tube, Rim Top, Graduated, with Marking Spot**

KIMAX KG-33 Borosilicate Glass ASTM E982 Type II

Code	Pack Content	Capacity ml	±Tolerance ml	Approx. O.D. mm	Approx. Length mm
K45071/10	12	10	0.12	16	150

**PERSONAL SAFETY**

1. USE TONGS OR SAFETY GLOVES DESIGNED FOR THE PURPOSE TO REMOVE GLASSWARE FROM HEAT SOURCE.
2. PROTECTIVE GLOVES, SAFETY SHOES, APRONS AND GOGGLES SHOULD BE WORN WHEN HANDLING ALL CHEMICALS.
3. ALWAYS FLUSH THE OUTSIDE OF AN ACID BOTTLE WITH WATER BEFORE OPENING. DO NOT PUT THE STOPPER ON THE COUNTER TOP WHERE SOMEONE ELSE MAY COME INTO CONTACT WITH ACID RESIDUE.
4. NEVER DRINK FROM A BEAKER. BEAKERS OR GLASSES FOR DRINKING SHOULD NOT BE BROUGHT INTO THE LABORATORY ENVIRONMENT.
5. DO NOT TASTE CHEMICALS FOR IDENTIFICATION. SMELL CHEMICALS ONLY WHEN NECESSARY AND BY WAFTING A SMALL AMOUNT OF VAPOUR TOWARDS THE NOSE.
6. DO NOT PIPETTE BY MOUTH, PARTICULARLY WHEN USING CONCENTRATE ACIDS, ALKALIS OR POTENTIALLY BIO-HAZARDOUS MATERIALS. USE MECHANICAL MEANS SUCH AS RUBBER BULB OR AUTOMATIC DISPENSER.
7. NEVER FILL RECEPTACLES WITH MATERIAL OTHER THAN WHAT IS ON THE LABEL. THROW AWAY CONTENTS OF ANY UNLABELLED CONTAINERS.

KIM-KAP®, Polypropylene Closures, Autoclavable, Colour Coded -
natural, red, green, yellow and blue

Code	Pack Content	Size (For tubes of O.D. mm)	Colour
K73660/13	500	13	Natural
K73660/16	500	16	Natural
K73660/18	500	18	Natural
K73660/20	250	20	Natural
K73660/25	250	25	Natural
K73660/38	125	38	Natural
K73662/13	500	13	Red
K73662/16	500	16	Red
K73662/18	500	18	Red
K73662/20	250	20	Red
K73662/25	250	25	Red
K73663/13	500	13	Green
K73663/16	500	16	Green
K73663/18	500	18	Green
K73663/20	250	20	Green
K73663/25	250	25	Green
K73664/13	500	13	Yellow
K73664/16	500	16	Yellow
K73664/18	500	18	Yellow
K73664/20	250	20	Yellow
K73664/25	250	25	Yellow
K73665/13	500	13	Blue
K73665/16	500	16	Blue
K73665/18	500	18	Blue
K73665/20	250	20	Blue
K73665/25	250	25	Blue

Also for use with burettes and some Erlenmeyer flasks



Culture Tube, Screw Thread, with Rubber Lined Cap, Unattached

KIMAX KG-33 Borosilicate Glass ASTM E982 Type IV Class A

Code	Pack Content	Approx. O.D. and Length (mm)	Capacity to Neck (ml)	GPI Thread Finish
K45066/13100	72	13 x 100	8	13-415
K45066/16100	72	16 x 100	12	15-415
K45066/16125	72	16 x 125	16	15-415
K45066/16150	72	16 x 150	20	15-415
K45066/20125	48	20 x 125	25	18-415
K45066/20150	48	20 x 150	30	18-415
K45066/25150	36	25 x 150	50	24-410
K45066/25200	36	25 x 200	70	24-410
K45066/38200	24	38 x 200	160	38-430

Replacement caps are K45066B



Culture Tube, Screw Thread, with PTFE-Faced Rubber Lined Cap, Unattached

Kimble KG-33 Borosilicate Glass ASTM E982, Type VI, Class B

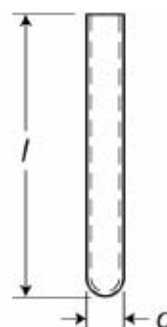
Code	Pack Content	Approx. O.D. and Length (mm)	Capacity to Neck (ml)	GPI Thread Finish
K45066A/13100	72	13 x 100	8	13-415
K45066A/16100	72	16 x 100	12	15-415
K45066A/16125	72	16 x 125	16	15-415
K45066A/16150	72	16 x 150	20	15-415
K45066A/20125	48	20 x 125	25	18-415
K45066A/20150	48	20 x 150	30	18-415
K45066A/25150	36	25 x 150	50	24-410
K45066A/25200	36	25 x 200	70	24-410

Replacement caps are K45066C

**Test tube, plain, without Rim**

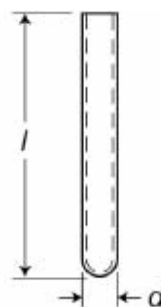
Kimble ValueWare Borosilicate Glass ISO 3585 DIN 12395

Code	O.D. x Length mm	Pack Content	Wall mm
K65048/1075	10 x 75	100	0.8 - 1.0
K65048/1275	12 x 75	100	0.8 - 1.0
K65048/10100	10 x 100	100	0.8 - 1.0
K65048/12100	12 x 100	100	0.8 - 1.0
K65048/16100	16 x 100	100	0.8 - 1.0
K65048/16125	16 x 125	100	0.8 - 1.0
K65048/16150	16 x 150	100	0.8 - 1.0
K65048/18150	18 x 150	100	0.8 - 1.0
K65048/20150	20 x 150	100	0.8 - 1.0
K65048/20180	20 x 180	100	0.8 - 1.0
K65048/24150	24 x 150	50	0.8 - 1.0
K65048/25200	25 x 200	50	0.8 - 1.0

**Test tube, plain, without Rim**

Simax Borosilicate Glass

Code	O.D. x Length mm	Pack Content	Wall mm
3840/12x75	12 x 75	100	1.00
3840/16x100	16 x 100	100	1.20
3840/16x125	16 x 125	100	1.20

**Test tube, Plain with rim**

KIMAX N-51A Borosilicate Glass

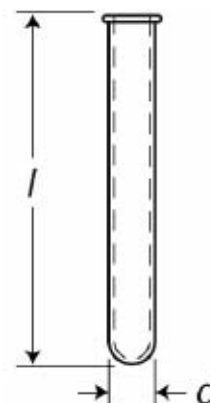
Code	O.D. x Length mm	Pack Content	Overflow Cap. ml
K45050/19150	19 x 150	72	30
K45050/25150	25 x 150	72	55
K45050/25200	25 x 200	24	75



Test tube, Plain with rim

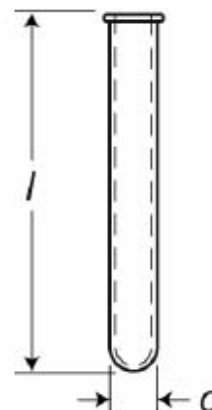
Soda-Lime Glass

Code	d x l mm	Pack Content	Glass
7801/10X100	10 x 100	100	Borosilicate
7801/12X75	12 x 75	100	Borosilicate
7801/12X100	12 x 100	100	Borosilicate
7801/16X100	16 x 100	100	Borosilicate
7801/16X125	16 x 125	100	Borosilicate
7801/18X150	18 x 150	100	Borosilicate
7801/24X150	24 x 150	100	Soda Lime

**Test tube, Plain with Rim**

Kimble ValueWare Borosilicate Glass ISO 3585 DIN 12395

Code	O.D. x Length mm	Pack Content	Wall mm
K65042/1075	10 x 75	100	0.8 - 1.0
K65042/1275	12 x 75	100	0.8 - 1.0
K65042/10100	10 x 100	100	0.8 - 1.0
K65042/12100	12 x 100	100	0.8 - 1.0
K65042/16100	16 x 100	100	0.8 - 1.0
K65042/16125	16 x 125	100	0.8 - 1.0
K65042/16150	16 x 150	100	0.8 - 1.0
K65042/18150	18 x 150	100	0.8 - 1.0
K65042/20150	20 x 150	100	0.8 - 1.0
K65042/20180	20 x 180	100	0.8 - 1.0
K65042/24150	24 x 150	50	0.8 - 1.0
K65042/25200	25 x 200	50	0.8 - 1.0

**Test tube, Glass-Stoppered, with Marking Spot**

KIMAX KG-33 Borosilicate Glass ASTM E982, Type III

Code	Pack Content	Approx. O.D. and Length (mm)	Capacity to Neck (ml)	Stopper Size
K45100/13100	6	13 x 100	7	9
K45100/16150	24	16 x 150	18	13
K45100/19150	24	19 x 150	26	13
K45100/25200	24	25 x 200	65	19

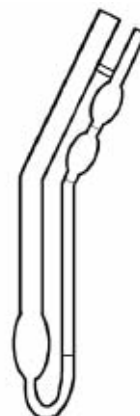
Replacement stopper is K41900R



FOR DISPOSABLE CULTURE TUBES (D.C.T), PLEASE SEE PAGES 139-141.

Viscometer Tube, Cannon-Fenske, Uncalibrated, Serialized KIMAX KG-33 tube designed from ASTM Specification D446. Permanently marked with an individual serial number. For use in obtaining kinematic viscosities of transparent liquids (ASTM Method of Test D445). Viscosity ranges shown below are for an efflux time greater than 200 seconds, except for size 25 where minimum time should be greater than 250 seconds. Lines and legend are printed black. Tubes have **not** been calibrated for constant value and must be before use. Calibration against a standard liquid of known viscosity or against a second viscometer with a known constant must be made.

Code	Pack Content	Size No.	Constant (c) Approx.	Kinematic Centistokes
K46460/50	I	50	0.004	0.8 to 4
K46460/100	I	100	0.015	3 to 15
K46460/150	I	150	0.035	7 to 35
K46460/200	I	200	0.1	20 to 100
K46460/300	I	300	0.25	50 to 250
K46460/350	I	350	0.5	100 to 500
K46460/400	I	400	1.2	240 to 1200



Viscosity, Varnish (Bubble Tube) Flat-bottomed. With lines at 27 mm, 100 mm and 108 mm from the outside bottom.

For rough control work where bubble comparison is made to limit samples of known viscosity, reference ASTM D1545. Lines are durable white ceramic enamel.

Code	Pack Content	Approx. I.D. mm	Length mm
K46463/1075	144	10.75	114



Manifold, Double, Vacuum / Gas, Glass Plugs. An all-glass manifold for connecting inert gas and vacuum sources to sidearm stopcock.

Supplied with patented 809000-0021 pressure/vacuum retainers.

Code	Pack Content	No. of Places	Hose Connections	Approx. Overall W x H x D (mm)
K216050/0000	I	3	2	230 x 87 x 90
K216050/0005	I	5	2	500 x 87 x 90



Distance between stopcocks is 65 mm for the 3 position size and 100 mm for the 5 position size

Dilatometer, Dilatometer for the determination of the solid fat index (an empirical measure of the solid fat content) of shortenings, margarine oils, and other fats with solid index of 50 or less at 10°C. Results are expressed as melting dilation in mL/kg of fat. Stem is made from precision-bore tubing and has a overall accuracy of graduations of +/-0.005ml. Supplied with calibration certificates.

Amber Scale

Kimble Borosilicate Glass 3.3

Code	Pack Content	Capacity ml	Joint	Grads subdiv (ml)	Height mm	Width mm
K329325/0000	I	1.4	14/20	0-1.4/0.005	550	35

Replacement Parts

Code	Pack Content	Description
K675300/0014	12	Polyacetal Clamp, Fits 14/20 and 14/35 Joints



Tube, Schlenk, Vacuum, AIRLESS-WARE® with valve

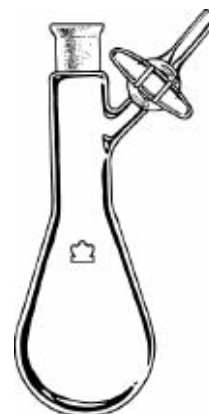
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Valve Stem O.D. mm	Body O.D. x Height (mm)	Overall Width x Height (mm)
K218710/0015	I	15	9	19 x 100	65 x 165
K218710/0025	I	25	9	25 x 100	70 x 165
K218710/0050	I	50	9	32 x 120	75 x 190
K218710/0100	I	100	13	38 x 150	80 x 235
K218710/0350	I	350	13	51 x 250	90 x 335

**Tube/Flask, Vacuum, AIRLESS-WARE®**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Joint	Overall Height (mm)
K213100/0114	I	10	14/20	105
K213100/0214	I	25	14/20	120
K213100/0514	I	50	14/20	135
K213100/1014	I	100	14/20	155
K213100/2014	I	200	14/20	190
K213100/1024	I	100	24/40	185
K213100/2024	I	200	24/40	205
K213100/5024	I	500	24/40	245

**Tube, Schlenk, Vacuum, AIRLESS-WARE® O-Ring Sidearm**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	Valve Size mm	Approx. Body O.D. x Height (mm)	Approx. Overall Width x Height (mm)
K218720/0025	I	25	25x100	80x165	0-4
K218720/0050	I	50	32x120	90x200	0-4
K218720/0100	I	100	38x150	100x235	0-8
K218720/0350	I	350	51x250	120x335	0-8



VIALS

Autosampler, Chromatography, Screw Thread, Clear and Amber, without Closures

Vials are made from clear, Type I borosilicate, 33 expansion glass or amber, Type I, borosilicate, 51 expansion glass.

Clear Vials

Code	Pack Content	Cap ml	O.D. Size (mm)	Length Size (mm)	Finish
K33I232C	100	2	12	32	Crimp
K33I232CW	100	2	12	32	Crimp with Marking Spot. Graduated
K33I232CL	100	2	12	32	Crimp Large Opening
K33I232CLW	100	2	12	32	Crimp Large Opening, with Marking Spot
K33I232S	100	2	12	32	Screw Thread, 8-425
K33I232SN	100	2	12	32	Screw Thread, 9-425
K33I232SW	100	2	12	32	Screw Thread, 9-425, with Marking Spot
K33I545S	100	4	15	45	Screw Thread, 13-425
K33I545SW	100	4	15	45	Screw Thread, 13-425, with Marking Spot



See caps / Closures to fit above

Amber Vials

Code	Pack Content	Cap ml	O.D. Size (mm)	Length Size (mm)	Finish
K51I232CA	100	2	12	32	Crimp
K51I232CAW	100	2	12	32	Crimp with Marking Spot. Graduated
K51I232CLA	100	2	12	32	Crimp Large Opening
K51I232CLAW	100	2	12	32	Crimp Large Opening, with Marking Spot
K51I232SA	100	2	12	32	Screw Thread, 8-425
K51I232SDPA	100	2	12	32	Screw Thread, 9-425
K51I232SAW	100	2	12	32	Screw Thread, 9-425, with Marking Spot
K51I545SA	100	4	15	45	Screw Thread, 13-425
K51I545SAW	100	4	15	45	Screw Thread, 13-425, with Marking Spot



See caps / Closures to fit above

Autosampler, Headspace, 20 mm, Clear glass vials with 20mm crimp seal finish are designed to fit most headspace autosamplers. Headspace vials meet or exceed OEM specifications. Flat top vials have traditional flat finish on top and bottom to maximize heating efficiency. The beveled edge finish features a sturdy rim that presses into the septum for a more effective seal. Round bottom vials distribute the internal pressure created at high temperatures across the glass surface and are more easily handled by robotic arms that lift the vial from the tray.

Code	Pack Content	Style	Size O.D. x H (mm)	Finish
K90S332375	100	Flat Top	23 X 75	20mm A/S
K90S332346B	100	Modified Top	23 X 46	20mm A/S
K90S332375B	100	Modified Top	23 X 75	20mm A/S
K90S332375BMB	100	Modified Top & Bottom	23 X 46	20mm A/S



PLEASE SEE PLASTICS ON PAGES 176-179.

Accuform® SSR™ Vials

- Smooth conical interior surfaces facilitates complete sample recovery
- Automation friendly and ideal for high-throughput Screening
- Smooth exterior bottoms are perfect for 2D barcoding

Standard Shoulder vial.

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Cap ml	Cap drams	O.D. x Ht Size (mm)	GPI Thread Finish
K60680/12	250	2	0.5	13 x 39	13-425
K60680/1	250	4	1	15 x 45	13-425
K60680/2	250	7	2	18 x 60	15-425
K60680/4	250	15	4	21 x 70	18-400



See caps / Closures to fit above

Accuform® SSR™ Vials

Shoulderless, Straight-sided Vials

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Cap ml	Cap drams	O.D. x Ht Size (mm)	GPI Thread Finish
K60690/12	250	2	0.5	13 x 39	15-425
K60690/1	250	4	1	15 x 45	18-400
K60690/2	250	7	2	18 x 60	20-400
K60690/4	250	15	4	21 x 70	24-400



See caps / Closures to fit above

Micro-Vial, Screw Thread, Graduated, with Open Top Closure and PTFE-Faced Silicone Septum, Assembled, ACCUFORM®

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60700/1	12	1	14	49	13-425
K60700/2	12	2	21	40	20-400
K60700/3	12	3	21	51	20-400
K60700/5	12	5	21	62	20-400
K60700/10	12	10	25	73	24-400

**Micro-Vial, Screw Thread, Graduated, with Open Top Closure and PTFE-Faced Silicone Septum, Assembled, ACCUFORM®**

Kimble Amber 203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60705/1	12	1	14	49	13-425
K60705/2	12	2	21	40	20-400
K60705/3	12	3	21	51	20-400
K60705/5	12	5	21	62	20-400



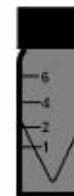
Micro-Vial, Screw Thread, Graduated, with Solid Top Closure and PTFE-Faced White Rubber Liner, Assembled, ACCUFORM
Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60702/1	12	1	14	49	13-425
K60702/2	12	2	21	40	20-400
K60702/3	12	3	21	51	20-400
K60702/5	12	5	21	62	20-400
K60702/10	12	10	25	73	24-400



Micro-Vial, Screw Thread, Graduated, with Solid Top Closure and PTFE-Faced White Rubber Liner, Assembled, ACCUFORM
Kimble Amber 203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60707/1	12	1	14	49	13-425
K60707/2	12	2	21	40	20-400
K60707/3	12	3	21	51	20-400
K60707/5	12	5	21	62	20-400



Micro-Vial, Autosampler, Screw Thread, Ungraduated, with Open Top Closure and PTFE-Faced Silicone Septum, Assembled, ACCUFORM®
12x32 mm size is designed for use with Varian and other autosamplers.

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60710/110	12	0.1	12	32	8-425
K60710/310	12	0.3	14	36	13-425
K60710/1	12	1	14	49	13-425
K60710/2	12	2	21	40	20-400
K60710/3	12	3	21	51	20-400
K60710/5	12	5	21	62	20-400
K60710/10	12	10	25	73	24-400



Kimble Amber 203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60715/110	12	0.1	12	32	8-425
K60715/310	12	0.3	14	36	13-425
K60715/1	12	1	14	49	13-425
K60715/2	12	2	21	40	20-400
K60715/3	12	3	21	51	20-400
K60715/5	12	5	21	62	20-400



Micro-Vial, Aluminum Seal, Graduated, without Closure, ACCUFORM®

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	A/S Finish Finish
K60720/1	12	1	14	49	13
K60720/2	12	2	21	40	20
K60720/3	12	3	21	51	20
K60720/5	12	5	21	62	20

**Autosampler, Aluminum Seal, Ungraduated, without Closure, ACCUFORM®**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	A/S Finish Finish
K60730/310	12	0.3	14	36	13

**Dilution-Vial, Screw Thread, with 3ml blue line mark, black Phenolic caps with white rubber lines (Attached) Autoclavable, Packed in corrugated trays**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	A/S Finish Finish
K60811D/312	144	4	15	45	13-425

**EPA Water Analysis Vials, Screw Thread without closure**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60958A/4	144	20	28	57	24-400
K60958A/6	144	30	28	70	24-400
K60958A/912	144	40	28	95	24-400
K60958A/11	144	45	28	108	24-400
K60958A/16	144	60	30	123	24-400

**EPA Water Analysis Vials, Screw Thread without closure**

Kimble 203 Amber Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60960A/4	144	20	28	57	24-400
K60960A/912	144	40	28	95	24-400

**EPA Water Analysis Vials, Screw Thread with attached open top white polypropylene closure with PTFE faced silicon rubber septa**

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60961C/4	72	20	28	60	24-400
K60961C/6	72	30	28	73	24-400
K60961C/912	72	40	28	98	24-400



Sample Vials, Screw Thread with attached lined Black phenolic closure

Kimble Clear KG-33 Borosilicate Glass

PTFE Faced / White rubber liner

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60811B/1	144	1	15	45	13-425
K60811B/12	288	3/8	12	35	8-425
K60811B/2	144	2	17	60	15-425
K60811B/3	144	3	19	65	15-425
K60811B/4	144	4	21	70	18-400
K60811B/5	72	5	28	57	24-400
K60811B/6	144	6	23	85	20-400
K60811B/612	72	6 1/4	28	70	24-400
K60811B/10	72	10	28	95	24-400

**White rubber liner**

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60811D/1	144	1	15	45	13-425
*K60811D/11	144	1	15	45	13-425
K60811D/12	288	3/8	12	35	8-425
K60811D/1528	200	1/2	15	28	13-425
K60811D/1738	200	1	17	38	15-425
K60811D/1940	200	1 1/2	19	40	15-425
K60811D/2	144	2	17	60	15-425
K60811D/3	144	3	19	65	15-425
K60811D/4	144	4	21	70	18-400
K60811D/5	72	5	28	57	24-400
K60811D/6	144	6	23	85	20-400
K60811D/612	72	6 1/4	28	70	24-400
K60811D/10	72	10	28	95	24-400



* Product has 'write-on' patch

Sample Vials, Screw Thread with attached PTFE closure

The 16 ml size complies with EPA 600 Series Methods.

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60940A/2	144	2	12	35	8-425
K60940A/4	144	4	15	47	13-425
K60940A/8	144	8	17	63	15-425
K60940A/12	144	12	19	67	15-425
K60940A/16	144	16	21	72	18-400
K60940A/24	144	24	23	87	20-400

**Sample Vials, Screw Thread with attached White Open Top Polypropylene closure with PTFE-Faced Silicone liners**

Kimble Clear KG-33 Borosilicate Glass

Code	Case Content	Caps drams	O.D. mm	Length mm	GPI Thread Finish
K60811S/5	72	5	28	57	24-400
K60811S/10	72	10	28	95	24-400



Sample Vials, Screw Thread with attached Open Top Black Polypropylene Closures with PTFE / Silicone septa
Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60942A/8	144	8	17	63	15-425
K60942A/12	144	12	19	67	15-425
K60942A/16	144	16	21	72	18-400
K60942A/24	144	24	23	87	20-400
K60942A/40	72	40	28	98	24-400



Sample Vials, Screw Thread with Unattached Black Phenolic Lined Closures
Vial closures with PTFE faced White Rubber Liners

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60812B/1	200	1	15	45	13-425
K60812B/12	200	3/8	12	35	8-425
K60812B/1232	200	1/2	12	32	8-425
K60812B/2	200	2	17	60	15-425
K60812B/3	200	3	19	65	15-425
K60812B/4	200	4	21	70	18-400
K60812B/6	200	6	23	85	20-400



Vial closures with white rubber liners

Kimble Clear KG-33 Borosilicate Glass

Code	Case Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60812D/12	200	3/8	12	35	8-425



Sample Vials, Screw Thread with attached Black Phenolic Closure with Rubber liner

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60940D/12	144	2	12	35	8-425
K60940D/1	144	4	15	45	13-425
K60940D/2	144	8	17	60	15-425
K60940D/3	144	12	19	65	15-425
K60940D/4	144	16	21	70	18-400
K60940D/6	144	24	23	85	20-400



FOR PLASTIC VIALS, PLEASE SEE PAGES 178-179.

Sample Vials, Screw Thread, without Closures

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Caps drams	O.D. mm	Length mm	GPI Thread Finish
K60812/1232	200	3/8	12	32	8-425
K60812/1235	200	1/2	12	35	8-425
K60812/1528	200	1/2	15	28	13-425
K60812/1545	200	1	15	45	13-425
K60812/1738	200	1	17	38	15-425
K60812/1940	200	1 1/2	19	40	15-425
K60812/1760	200	2	17	60	15-425
K60812/1965	200	3	19	65	15-425
K60812/2170	200	4	21	70	18-400
K60812/2857	200	5	28	57	24-400
K60812/2385	200	6	23	85	20-400
K60812/2870	200	6 1/4	28	70	24-400
K60812/2895	200	10	28	95	24-400

**Sample Vials, Screw Thread without Closures**

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60810/1760	200	8	17	60	15-425
K60810/1965	200	12	19	65	15-425
K60810/2170	200	16	21	70	18-400
K60810/2385	200	20	23	85	20-400

**Sample Vials, Screw Thread, Short Style without Closure**

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60810/1528	200	2	15	28	13-425
K60810/1940	200	6	19	40	15-425

**Sample Vials, Screw Thread with unattached Black Phenolic Closures**

Kimble Clear N-51A Borosilicate Glass

Closures with Polyvinyl-Faced pulp liners

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60957C/4	144	4	28	57	24-400
K60957C/6	144	6	28	70	24-400
K60957C/11	144	11	28	108	24-400



Closures with rubber liners

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60957D/4	144	4	28	57	24-400
K60957D/6	144	6	28	70	24-400
K60957D/11	144	11	28	108	24-400



Sample Vials, Screw Thread with Unattached Black Phenolic Closures

Kimble Clear N-51A Borosilicate Glass

Closures with Polyvinyl-Faced Pulp Liners

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60910C/12	144	0.5	12	35	8-425
K60910C/1	144	1	15	45	13-425
K60910C/112	144	1.5	16	50	13-425
K60910C/2	144	2	17	60	15-425
K60910C/3	144	3	19	65	15-425
K60910C/4	144	4	21	70	18-400
K60910C/6	144	6	23	85	20-400
K60910C/8	144	8	25	95	22-400



Closures with Rubber Liners

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60910D/1	144	1	15	45	13-425
K60910D/2	144	2	17	60	15-425
K60910D/3	144	3	19	65	15-425
K60910D/4	144	4	21	70	18-400

**Sample Vials, Screw Thread with Unattached Black Phenolic Closures with Rubber liners, Lab Pack**

Kimble Clear N-51A Borosilicate Glass

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60910L/12	72	0.5	12	35	8-425
K60910L/1	72	1	15	45	13-425
K60910L/2	72	2	17	60	15-425

**Sample Vials, Screw Thread, without Closures**

Kimble Clear N-51A Borosilicate Glass

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60910/1	144	1	15	45	13-425
K60910/2	144	2	17	60	15-425
K60910/3	144	3	19	65	15-425
K60910/4	144	4	21	70	18-400
K60910/6	144	6	23	85	20-425
K60910/8	144	8	25	95	22-400

**Sample Vials, Screw Thread without Closures, Short Style**

Kimble Clear N-51A Borosilicate Glass

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60957/1	72	4	28	57	24-400
K60957/4	72	11	28	108	24-400



Sample Vials, Screw Thread with attached Black Phenolic Closures

Kimble Amber 203 Borosilicate Glass

PTFE Faced / White rubber liner

Code	Case Content	Caps drams	O.D. mm	Length mm	GPI Thread Finish
K60911B/1	144	1	15	45	13-425
K60911B/12	288	3/8	12	35	8-425
K60911B/1528	200	1/2	15	28	13-425
K60911B/1738	200	1	17	38	15-425
K60911B/1940	200	1 1/2	19	40	15-425
K60911B/2	144	2	17	60	13-425
K60911B/5	72	5	28	57	24-400
K60911B/10	72	10	28	95	24-400

**White rubber liner**

Code	Case Content	Caps drams	O.D. mm	Length mm	GPI Thread Finish
K60911D/1	144	1	15	45	13-425
K60911D/12	288	3/8	12	35	8-425
K60911D/2	144	2	17	60	13-425
K60911D/5	72	5	28	57	24-400

Sample Vials, Screw Thread with attached Polypropylene Open Top Closures and PTFE-Faced Silicone Septa

Kimble Amber 203 Borosilicate Glass

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60911P/10	72	10	28	95	24-400

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60911S/5	72	5	28	57	24-400
K60911S/10	72	10	28	95	24-400



Code K60911P/10 Septa is PTFE-faced (0.005") silicone (0.120")

Sample Vials, Screw Thread with Unattached Black Phenolic Closures

Kimble Amber 203 Borosilicate Glass

Vials & Closures with PTFE-Faced / White Rubber Liners

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60912B/1	200	1	15	45	13-425
K60912B/12	200	3/8	12	35	8-425
K60912B/1232	200	1/2	12	32	8-425
K60912B/2	200	2	17	60	15-425

**Vials & Closures with White Rubber Liners**

Code	Case Content	Cap drams	O.D. mm	Length mm	GPI Thread Finish
K60912D/1	200	1	15	45	13-425
K60912D/12	200	3/8	12	35	8-425
K60912D/2	200	2	17	60	15-425



Sample Vials, Screw Thread with Unattached Black Phenolic Closures with Rubber Liners

Kimble Amber 203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI Thread Finish
K60920D/4	144	4	21	70	18-400
K60920D/8	144	8	25	95	22-400



Sample Vials, Screw Thread, without Closures

Kimble Amber 203 Borosilicate Glass

Code	Pack Content	Capacity drams	O.D. mm	Length mm	GPI Thread Finish
K60912/1235	200	3/8	12	35	8-425
K60912/1528	200	1/2	15	28	13-425
K60912/1545	200	1	15	45	13-425
K60912/1738	200	1	17	38	15-425
K60912/1940	200	1 1/2	19	40	15-425
K60815/1760	200	2	17	60	15-425
K60912/1760	200	2	17	60	15-425
K60815/1965	200	3	19	65	15-425
K60912/2857	200	5	28	57	24-400
K60912/2895	200	10	28	95	24-400



Scintillation Vials, 20ml with Attached Closures

Vials, with caps attached, are packaged in cellular trays having alpha numeric coordinates for fast, easy identification.

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K74500/20	500	22	Urea	Cork-backed foil
K74501/20	500	22	Urea	Polypropylene disc liner
K74504/20	500	22	Polypropylene	Pulp-backed foil
K74505/20	500	22	Polypropylene	Foamed polypropylene
K74516/20	500	22	Urea	Polyseal® cone
K74502/20	500	24	Polypropylene	Foamed polyethylene
K74509/20	500	24	Polypropylene	Metal foil liner
K74507/20	500	24	Urea	Metal foil liner
K74508/20	500	24	Urea	Polyethylene disc liner



Scintillation Vials, 20ml with Unattached Closures

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K74510/20	500	22	Urea	Cork-backed foil
K74511/20	500	22	Polyethylene	Linerless
K74512/20	500	22	Polypropylene	Pulp-backed foil
K74513/20	500	22	Polypropylene	Foamed polyethylene liner
K74515/20	500	22	Urea	Polyseal® cone
K74514/20	500	24	Polypropylene	Foamed polyethylene liner
K74517/20	500	24	Polypropylene	Metal foil liner



Scintillation Vials, 20ml, Large Opening, LOVials® with Unattached Closures

Recommended for use on Packard scintillation vial counters.

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K74503/20	500	24	Urea	Cork-backed foil

**Scintillation Vials, 20ml, Large Opening without Closures**

Recommended for use on Packard scintillation vial counters.

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Cap Size
K74506/20	500	22

**Scintillation Vials, 7ml with Unattached Closures, SOLVENT SAVER®**

Kimble Clear KG-33 Borosilicate Glass

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K74502/7	1000	15	Urea	Cork-backed foil
K74503/7	1000	15	Polypropylene	Pulp-backed foil

**Bottle, Serum with Aluminum Seal, without Closure**

Kimble KG-35 Borosilicate Glass

Code	Capacity ml	Pack Content	O.D. mm	I mm	GPI Neck Finish
K61000G/5	5	288	23	47	20A
K61000G/10	10	288	25	52	20A
K61000G/20	20	288	33	59	20A
K61000G/30	30	288	37	66	20A
K61000G/50	50	288	43	75	20A
K61000G/60	60	144	40	90	20A
K61000G/100	100	144	52	94	20A
K61000G/125	125	144	54	106	20A
K61000G/200	200	24	65	114	20A

**Bottle, Serum, Heavy-Duty**

Kimble Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity Litre	d mm	h mm
K14960/4	I	4	167	310
K14960/9	I	9	203	412

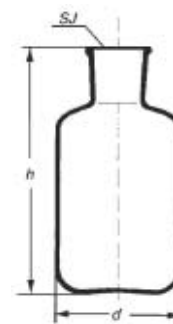
Neck fits a No. 8 rubber stopper



Bottle, reservoir, for injection serum

Simax Borosilicate Glass PN70 0422

Code	Capacity ml	Pack Content	d mm	h mm	SJ
3125/1000	1000	10	105	197	34/35
3125/2000	2000	3	125	257	34/35
3125/5000	5000	2	178	305	34/35
3125/10000	10000	1	220	385	34/35
3125/20000	20000	1	286	470	60/46

**Stopper,** Straight sided, 20mm, Grey Butyl

Polypropylene

Code	Pack Content	Fits Serum	GPI Finish
K7381I/2I	1000	20mm	–
K7381IT/2I	100	20mm	Telfon - Faced

**Vials,** Serum, Aluminium Seal, without Closures

Special Design provides extra strength for freeze-drying applications

Kimble KG-33 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI A/S Neck Finish
K62113D/2	1440	2	15	40	13
K62113D/312	1440	3.5	18	45	13
K62121D/5	864	5	23	47	20
K62121D/10	864	10	25	54	20
K62121D/20	720	20	30	57	20

**Vials,** Serum, Aluminium Seal, without Closures

Kimble Amber-203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm	GPI A/S Neck Finish
K62413D/2	1440	2	15	40	13
K62421D/5	864	5	23	47	20
K62421D/10	864	10	25	54	20
K62421D/30	576	20	30	86	20

**Shell Vials,** TITSEAL® with Unattached White Polyethylene Plug Style

Needle Closures

Kimble N-51A Borosilicate Glass

Code	Pack Content	Capacity ml	O.D. mm	Length mm
K60831D/830	200	0.75	8	30
K60831D/843	200	1	8	43
K60831D/1231	200	2	12	31
K60831D/1544	200	4	15	44



Replacement Caps K73835

Shell Vials, TITSEAL® with Unattached White Polyethylene Plug Style

Needle Closures

Kimble Amber-203 Borosilicate Glass

Code	Pack Content	Capacity ml	O.D mm	Length mm
K60835D/1544	200	4	15	44

Replacement Caps K73835



FOR PLASTIC VIALS, PLEASE SEE PAGES 178-179.

Shell Vials, Disposable, for Chloride meters, without Closures

Kimble N-51A Borosilicate Glass

Code	Pack Content	O.D mm	Length mm
K74400/2040	100	20	40

**Shell Vials, Short Style without Closures**

Kimble N-51A Borosilicate Glass

Code	Pack Content	O.D mm	Length mm
K60965/4	144	24	62

**Shell Vials, Short Style, Clear plain top without Closures, Lab pack**

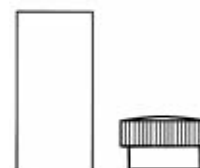
Kimble N-51A Borosilicate Glass

Code	Pack Content	Capacity drams	Length mm
K60931/14	144	0.25	30
K60931/12	144	0.5	35
K60931/1	144	1	45
K60931/2	144	2	60
K60931/4	144	4	70
K60931/6	144	6	85
K60931/8	144	7.75	95

**Shell Vials, TITSEAL®** with Unattached Open Bottom Closures

Kimble N-51A Borosilicate Glass

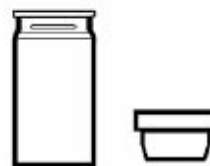
Code	Pack Content	Capacity drams	O.D mm	Length mm
K60965D/12	144	0.5	12	35
K60965D/1	144	1	15	45
K60965D/3	144	3	19	65
K60965D/7	144	7	29	65
K60965D/120	144	12	29	94



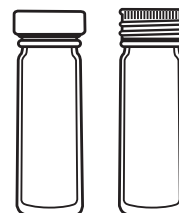
Tooled Neck Vials, OPTICLEAR®, with Unattached Polyethylene Closures

Kimble N-51A Borosilicate Glass

Code	Pack Content	Capacity drams	O.D mm	Length mm
K60975L/1	72	1	15	45
K60975L/3	72	3	21	50
K60975L/4	72	4	25	52
K60975L/5	72	5	27	55

**Moulded Universal Media Vials, Type I Neutral Vials** with screw neck and fitted cap

Code	Pack Content	Capacity ml	Diameter mm	Height mm	Cap Type
V0027	144	30	28	83	P/P
V0028	144	30	28	83	Aluminium

**Screw Thread Caps, White, Polypropylene, Linerless, Autoclavable**

Polypropylene ASTM E982

Code	Approx. Pack Content	GPI Thread Finish
K73805/15415	1000	15-415

**Screw Thread Caps, Natural, Polypropylene, Linerless, Autoclavable**

Polypropylene ASTM E982

Code	Approx. Pack Content	GPI Thread Finish
K73805B/13415	1000	13-415
K73805B/15415	1000	15-415
K73805B/18415	500	18-415

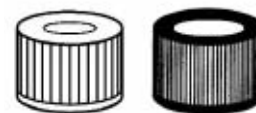
**Screw Thread Caps, Black Polypropylene with Welded PTFE/Silicone Liner, Autoclavable**

Code	Approx. Pack Content	GPI Thread Finish
K73808/13415	288	13-415
K73808/15415	288	15-415
K73808/18415	288	18-415
K73808/24400	72	24-400
K73808/24410	144	24-410
K73808/28400	48	28-400
K73808/28410	36	28-410
K73808/33430	48	33-430
K73808/38430	48	38-430



Screw Thread Caps, Polypropylene, Open Top with Red PTFE-Faced Silicone Septa

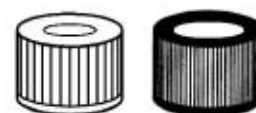
Code	Pack Content	GPI Thread Finish	Septa	Colour
K73812BK/8425	1000	8-425	Standard	Black
K73813BK/8425	1000	8-425	Pre-Slit	Black
K73812WH/8425	1000	8-425	Standard	White
K73813WH/8425	1000	8-425	Pre-Slit	White
K73812BK/9425	1000	9-425	Standard	Black
K73813BK/9425	1000	9-425	Pre-Slit	Black
K73812BL/9425	1000	9-425	Standard	Blue
K73813BL/9425	1000	9-425	Pre-Slit	Blue
K73812BK/13425	1000	13-425	Standard	Black
K73813BK/13425	1000	13-425	Pre-Slit	Black
K73812WH/13425	1000	13-425	Standard	White
K73813WH/13425	1000	13-425	Pre-Slit	White



Autoclavable and used for multiple injections

Screw Thread Vials, Polypropylene, Open Top with White Bonded PTFE Liner

Code	Pack Content	GPI Thread Finish	Colour
K73814WH/8425	1000	8-425	White
K73814BL/9425	1000	9-425	Blue
K73814BK/13425	1000	13-425	Black



Intended for single-use injections

Screw Thread Caps, Black Phenolic with White Rubber Liners, Autoclavable

Code	Pack Content	GPI Thread Finish	Approx. Cap Height (mm)
K45066B/13	300	13-415	14
K45066B/15	300	15-415	16
K45066B/18	225	18-415	18
K45066B/24	150	24-410	19
K45066B/28	150	28-410	20
K45066B/38	150	38-430	26



Screw Thread Caps, Black Phenolic with PTFE-Faced Rubber Liners, Autoclavable

Code	Pack Content	GPI Thread Finish	Approx. Cap Height (mm)
K45066C/13	300	13-415	14
K45066C/15	300	15-415	16
K45066C/18	225	18-415	18
K45066C/24	150	24-410	19
K45066C/28	150	28-410	20
K45066C/38	50	38-430	26



Screw Thread Caps, Black Phenolic with Cemented-In Rubber Liners, Autoclavable
Special phenolic material ASTM Specification E982

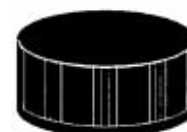
Code	Approx. Pack Content	GPI Thread Finish
K73800/13415	1000	13-415
K73800/15415	1000	15-415
K73800/18415	1000	18-415



Intended for use with K73750, K73760, K73770 and K73785

Screw Thread Caps, Black Phenolic with Cemented-In PTFE-Faced White Rubber Liners, Autoclavable

Code	Approx. Pack Content	GPI Thread Finish
K73802/8425	144	8-425
K73802/13415	500	13-415
K73802/13425	144	13-425
K73802/15415	500	15-415
K73802/15425	144	15-425
K73802/18400	144	18-400
K73802/20400	144	20-400
K73802/22400	144	22-400
K73802/24400	144	24-400
K73802/33430	144	33-430
K73802/38430	144	38-430



Screw Thread Caps, Black Phenolic with White Rubber Liners, Autoclavable

Code	Approx. Pack Content	GPI Thread Finish
K73803/33430	144	33-430
K73803/38430	144	38-430



Screw Thread Caps, Black Phenolic, Open Top without Liner, Autoclavable

Code	Approx. Pack Content	GPI Thread Finish	Hole I.D. mm
K73804/15425	144	15-425	8.7
K73804/18400	144	18-400	12
K73804/20400	144	20-400	12
K73804/24400	144	24-400	14



Screw Thread Caps, Black Phenolic with Poly-Seal® Liners, Autoclavable

Code	Approx. Pack Content	GPI Thread Finish
K73809/13425	144	13-425
K73809/15425	144	15-425
K73809/18400	144	18-400
K73809/20400	144	20-400
K73809/22400	144	22-400



Screw Thread Caps, White Urea with PTFE-Faced Foam-Backed Rubber Liner, Ideal for use with scintillation Vials

Code	Approx. Pack Content	GPI Thread Finish
K73802U/8425	144	8-425
K73802U/13425	144	13-425
K73802U/15425	144	15-425
K73802U/18400	144	18-400
K73802U/20400	144	20-400
K73802U/22400	144	22-400



Septa, Flat Disc, PTFE-Faced Silicone Rubber

Used with open tops caps for syringe access. PTFE facing maintains content integrity while silicone backing allows repeated puncturing.

Code	Pack Content	For Cap Size (mm)	Thickness, Inches PTFE	Thickness, Inches PTFE
K774161/0008	48	8	0.005	0.060
K774161/0013	48	13	0.005	0.060
K774161/0015	48	15	0.005	0.060
K774161/0018	24	18	0.005	0.060
K774161/0020	24	20	0.005	0.060
K774161/0024	24	24	0.005	0.060
K774161/0924	24	24	0.010	0.090



Septa, Flat Disc, PTFE-Faced Red Rubber

Low cost, good resealability. PTFE facing provides a barrier for product contact.

Code	Pack Content	Fits Cap Size	Thickness, Inches PTFE	Thickness, Inches Red Rubber
K73816/15	144	15	0.002	0.06
K73816/18	144	18	0.002	0.06
K73816/20	144	20	0.002	0.06
K73816/24	144	24	0.002	0.06



Septa, Flat Disc, PTFE-Faced Silicone Rubber

Resists coring and is autoclavable. Recommended for use in all autosamplers using screw thread vials. Great for sample storage.

Code	Pack Content	Fits Cap Size	Thickness, Inches PTFE	Thickness, Inches Silicone Rubber
K73818/15	144	15	0.005	0.06
K73818/18	144	18	0.005	0.06
K73818X/18	144	18	0.005	0.09
K73818/20	144	20	0.005	0.06
K73818/24	144	24	0.005	0.06
K73818X/24	144	24	0.010	0.09
K73818A/24*	144	24	0.005	0.12



* K73818A/24 is a white PTFE/Tan Silicone and is recommended for use with the 40ml EPA Vial

Stopper for Aluminium Seal Finish

Gray Butyl Rubber

Code	Pack Content	Fits GPI Aluminum Seal Finish
K73827/13	1000	13
K73827/21	1000	20

**Stopper** for Aluminium Seal Finish Vials, Lyophilization Style

Gray Butyl Rubber

Code	Pack Content	Fits GPI Aluminum Seal Finish	Number of Legs
K73828/13	1000	13	2
K73828A/21	1000	20	2

**Stopper**, for Aluminium Seal Finish, Straight Sided Serum

Gray Chlorobutyl

Code	Pack Content	Fits GPI Aluminum Seal Finish	Type
K73811/21	1000	20mm	-
K73811T/21	100	20mm	Teflon® faced

**Stopper**, for TITSEAL® Vials, White Polyethylene Plug Style, Needle Closures

Code	Pack Content	Accommodates Vials
K73835/1	500	K60831D/830, 834, K60835D/843
K73835/2	500	K60831D/1231
K73835/3	500	K60831D/1544, K60835D/1544

**Aluminum Seal**, One Piece, Unlined, Tear-Out Style

Aluminum

Code	Pack Content	Fits GPI Aluminum Seal Finish	Colour	Container Type
K73820/13	1000	13	Natural	Septa
K73820/20	1000	20 or 20A	Natural	Septa



Tear-Off Style

Code	Pack Content	Fits GPI Aluminum Seal Finish	Colour	Container Type
K73821/13	1000	13	Natural	Vial
K73821/20	1000	20 or 20A	Natural	Vial

Button Top, Unlined Flip Off, Color Coded

Aluminum

Code	Pack Content	Fits GPI Aluminum Seal Finish	Colour
K73843A/20	1000	20	White
K73843C/20	1000	20	Red



Aluminium Seal, One piece, Open top, with PTFE-faced silicon rubber septa

Aluminum

Code	Pack Content	Fits GPI Aluminium Seal Finish	Thickness PTFE inches	Thickness silicone rubber inches	Colour
KN73824/I1	100	I1	0.002	0.040	Natural
KN73824/I3	100	I3	0.002	0.060	Natural
KN73824T/20	100	20 or 20A	0.002	0.060	Natural

**Aluminium Seal, One piece, Open top, with PTFE-faced red rubber septa**

Aluminum

Code	Pack Content	Fits GPI Aluminium Seal Finish	Thickness PTFE inches	Thickness silicone rubber inches	Colour
KN73826/I1	1000	I1	0.002	0.040	Red
KN73824/I3	1000	I3	0.002	0.060	Red

**Not recommended for multiple injection or long term storage****Sleeves, Plug -Type**

Rubber

Code	Pack Content	Plug Diameter (mm)	Stopper Fits mm/SJ	Rubber Colour
K774250/0005	50	5	5-6 OD	Red
K774261/0005	50	5	5-6 OD	White
K774261/0006	50	6	6-7 OD	White
K774250/0007	50	7	7-8 OD	Red
K774261/0008	50	8	9-10 OD	White
K774261/0010	50	10	10/18	Red
K774250/0011	50	11	11-12 OD	Red
K774250/0013	50	13	13-14 OD	Red
K774250/0014	50	14	14/20	Red
K774261/0014	50	14	14/20	White
K774250/0016	50	16	16-17 OD	White
K774261/0019	50	19	19/22	White
K774261/0024	50	24	24/20	White

**Sleeves, Plug-Type, Kit**

Rubber

Kit contains

Code	Number in Kit	Stopper Fits mm/SJ
K774260/0000		
	10	24/40
	10	19/22
	10	14/20
	20	10/18
	20	9-10 OD
	20	8-9 OD
	30	7 OD

**120 pieces supplied in polyethylene storage case**

Watch Glasses

Soda Lime Glass

Code	Pack Content	Diameter mm
170/1/50	10	50
170/1/60	10	60
170/1/70	10	70
170/1/80	10	80
170/1/90	10	90
170/1/100	10	100
170/1/130	10	130
170/1/150	10	150
170/1/200	10	200
170/1/250	10	250



Weighing Scoop

Simax Borosilicate Glass

Code	Capacity ml	Pack Content	l mm	w mm
8245/3	3	10	71	22
8245/6	6	10	86	28
8245/10	10	10	111	36



FOR OUR RANGE OF WEIGHING BOTTLES, PLEASE SEE PAGES 17-18

FOR OUR RANGE OF CERAMIC BOATS, PLEASE SEE PAGES 204-205

GLASSWARE SAFETY – A COMMON-SENSE APPROACH

1. DON'T DROP OR KNOCK GLASSWARE – AVOID THE BRUISES THAT LEAD TO BREAKAGE.
2. DON'T USE CHIPPED, CRACKED OR BROKEN GLASSWARE, IT'S DANGEROUS AND MAY LEAD TO INJURY.
3. DON'T MOUTH PIPETTE, YOU MAY INHALE A TOXIC SUBSTANCE, BURN YOUR MOUTH OR CUT YOUR LIP.
4. DON'T LEAVE PIPETTES STICKING OUT OF BEAKERS – AN INVITATION FOR CHEMICAL SPILLAGE OR BREAKAGE.
5. INSERT TUBING CAREFULLY. USE A PROTECTIVE TOWEL FOR YOUR HAND AND LUBRICATE THE TUBING.
6. DISPOSE OF BROKEN OR DAMAGED GLASSWARE IN A DESIGNATED CONTAINER; DO NOT MIX WITH GENERAL WASTE.
7. CARRY LARGE CONTAINERS CAREFULLY, USE A BOTTLE CARRIER.
8. CLEAN AND RINSE GLASSWARE VERY WELL WITH DEIONIZED WATER, LEAVE TO DRY ON A CLEAN, LINT-FREE TOWEL.

Physical Properties

Resin	Max Use Temp °C	Brittleness Temp °C	Transparency	Sterilization					Specific Gravity	Flexibility	Water Absorption %
				Auto-claving	Gas	Dry Heat	Radiation	Disinfectant			
HDPE	120	-100	Translucent	No	Yes	No	Yes	Yes	0.95	Rigid	<0.01
LDPE	80	-100	Translucent	No	Yes	No	Yes	Yes	0.92	Excel	<0.01
PC	135	-135	Clear	Yes +	Yes	No	No	Yes	1.20	Rigid	0.35
PMMA	50	20	Clear	No	Yes	No	Yes	Some	1.20	Rigid	0.30
PP	135	0	Translucent	Yes	Yes	No	No	Yes	0.90	Rigid	<0.02
PS	90	20	Clear	No	Yes	No	Yes	Some	1.05	Rigid	0.05
PSF	165	-10	Clear	Yes	Yes	Yes +	Yes	Yes	1.24	Rigid	0.30
PTFE	270	-200	Opaque	Yes	Yes	Yes	No	Yes	2.17	Excel	<0.01
PVDF	110	-62	Translucent	Yes	Yes	No	No	Yes	1.75	Rigid	0.05
TPX*	175	20	Clear	Yes	Yes	Yes +	No	Yes	0.83	Rigid	<0.01

Sterilization

- Autoclaving (121°C, 15 psig for 20 minutes) Clean and rinse item with distilled water before autoclaving. Certain Chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures.
ALWAYS COMPLETELY DISENGAGE THREADS BEFORE AUTOCLAVING.
 - Gas - Ethylene oxide, formaldehyde.
 - Dry heat - 160°C for 120 minutes
 - Disinfectant - Benzalkonium chloride, Formalin, Ethanol, etc.
 - Radiation - gamma irradiated at 2.5 Mrad with unstabilized plastic.
- + Sterilizing reduces mechanical strength. Do not use PC vessels for vacuum application if they have been autoclaved.

Chemical Resistance

Classes of Substances at Room Temperature	HDPE	LDPE	PC	PMMA	PP	PS	PSF	PTFE	PVDF	TPX*
Acids, Dilute or Weak	E	E	E	G	E	E	E	E	E	E
Acids, Strong and Concentrated	E	E	N	N	E	F	G	E	E	E
Alcohols, Aliphatic	E	E	G	N	E	E	G	E	E	E
Aldehydes	G	G	F	G	G	N	F	E	E	G
Bases	E	E	N	F	E	E	E	E	E	E
Esters	G	G	N	N	G	N	N	E	G	G
Hydrocarbons, Aliphatic	G	F	F	G	G	N	G	E	E	F
Hydrocarbons, Aromatic	G	F	N	N	F	N	N	E	E	F
Hydrocarbons, Halogenated	F	N	N	N	F	N	N	E	N	N
Ketones	G	G	N	N	G	N	N	E	N	F
Oxidizing Agents, Strong	F	F	N	N	F	N	G	E	G	F

Resin Code

HDPE	High-density polyethylene
LDPE	Low-density polyethylene
PC	Polycarbonate
PMMA	Polymethyl methacrylate
PP	Polypropylene
PS	Polystyrene
PSF	Polysulfone
PTFE	Polytetrafluoroethylene
PVDF	Polyvinylidene fluoride
TPX*	Polymethylpentene

Chemical Resistance Classification

E = Excellent - 30 days of constant exposure cause no damage. Plastics may even tolerate for years.

G = Good - Little or no damage after 30 days of constant exposure to the reagent.

F = Fair - Some effect after 7 days of constant exposure to the reagent like crazing, cracking, loss of strength or discoloration.

N = Not Recommended - Not for continuous use. Immediate damage may occur.

*TPX is the registered Trade Mark of Mitsui & Co. Ltd.

Beaker, Low form

PP Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/421/010	12	50	60	47
P/421/020	12	100	71	58
P/421/040	12	250	92	76
P/421/050	6	500	128	100
P/421/060	4	1000	148	122
P/421/070	4	2000	191	151
P/421/080	2	5000	260	198
P/421/090	1	10000	325	250



Beaker, Low form

TPX Autoclavable

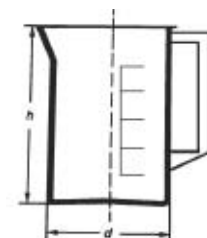
Code	Pack Content	Capacity ml	h mm	d mm
P/422/000	12	50	60	47
P/422/010	12	100	71	58
P/422/020	12	250	92	76
P/422/030	6	500	128	100
P/422/040	4	1000	148	122
P/422/050	4	2000	191	151
P/422/060	2	5000	260	198
P/422/070	1	10000	325	250



Measuring Beaker with Handle

PP Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/431/040	6	100	71	58
P/431/050	6	250	92	76
P/431/060	6	500	128	100
P/431/070	4	1000	148	122
P/431/080	4	2000	191	151
P/431/090	2	5000	260	198

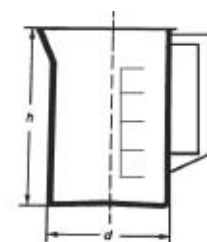


These beakers are provided with large sturdy handles for safe handling of acids, alkalies and other dangerous solutions.

Measuring Beaker with Handle

TPX Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/441/040	6	100	71	58
P/441/050	6	250	92	76
P/441/060	6	500	128	100
P/441/070	4	1000	148	122
P/441/080	4	2000	191	151
P/441/090	2	5000	260	198

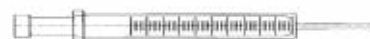


FOR GLASS BEAKERS, PLEASE SEE PAGES 3-6.

Syringe, Micro

Polyethylene

Code	Pack Content	Capacity cc	Graduation cc
K748019/0001	12	1	0.01



Flask, Baffled

PC Autoclavable

Code	Pack Content	Capacity ml	Approx. h mm	Approx. d mm
P/441/170	6	250	140	85

Baffles increase aeration or gas exchange.

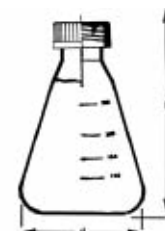


Flask, Conical with screw cap

PC Autoclavable

Code	Pack Content	Capacity ml	Approx. h mm	Approx. d mm
P/441/160	6	250	140	85

Same properties as the standard flask but with the added advantage of polypropylene screw cap. Used for preparation and storage of culture media.

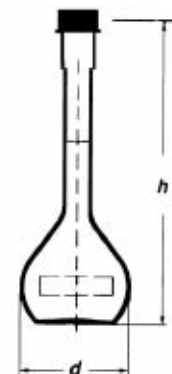


FOR GLASS FLASKS, PLEASE SEE PAGE 56.

Flask, Volumetric, Class B, Screw Cap

TPX Autoclavable

Code	Pack Content	Capacity ml	h mm
P/322/010	6	25	115
P/322/020	6	50	150
P/322/030	6	100	180
P/322/040	5	250	235
P/322/050	4	500	270
P/322/060	3	1000	310

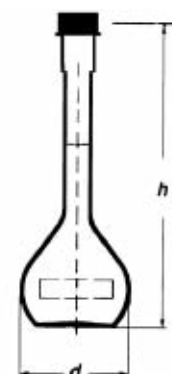


Flask, Volumetric, Class A, Stoppered

TPX/PP Autoclavable

Code	Pack Content	Capacity ml	h mm
P/324/010	1	25	115
P/324/020	1	50	150
P/324/030	1	100	180
P/324/040	1	250	235
P/324/050	1	500	270
P/324/060	1	1000	310

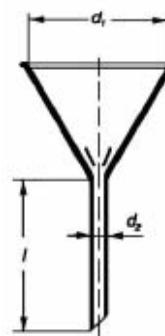
These translucent individually ring marked flask have a tolerance as per DIN EN ISO 1042, Class A, with imprinted lot No. and certificate. They have standard NS polypropylene stoppers.



Funnel, Plain

PP Autoclavable

Code	Pack Content	Diameter funnel (mm)	Filter paper Diameter (mm)	l mm
P/630/010	36	35	55	35
P/630/020	36	50	70	50
P/630/030	36	55	90	55
P/630/040	36	65	110	65
P/630/050	36	75	125	75
P/630/060	12	90	150	90
P/630/070	12	100	185	100
P/630/090	6	160	240	100



Autoclavable funnel designed for use with standard filter paper.

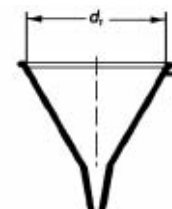
The funnel body is at 60° angle with the internal ribs at 58° for rapid filtration. External ribs prevent air locks

FOR GLASS FUNNELS, PLEASE SEE PAGES 66-67.

Funnel, Large Carboy

PP Autoclavable

Code	Pack Content	d1 mm
P/642/060	2	200
P/642/070	2	250
P/642/080	1	350

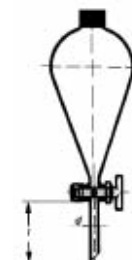


The large funnel is ideal for filling drum, barrel, tank and carboy. The two smaller sizes have handle at the rim.

Funnel, separatory Funnel

PP Autoclavable

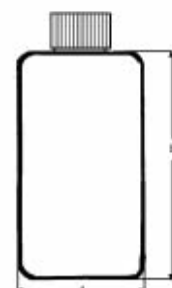
Code	Pack Content	Capacity ml	l mm	d mm
P/641/110	2	250	45	9
P/641/120	2	500	45	9



Bottle, Narrow Mouth, Screw Thread with Cap Attached

PP Autoclavable

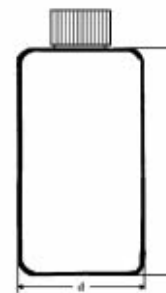
Code	Pack Content	Capacity ml	h mm	d mm
P/582/070	100	4	41	16
P/582/080	100	8	45	24
P/582/090	100	15	58	25
P/582/100	12	30	62	35
P/582/110	12	60	85	40
P/582/120	12	125	100	51
P/582/130	12	250	132	61
P/582/140	6	500	169	73
P/582/150	6	1000	217	93



Bottle, Narrow Mouth, Screw Thread with Cap Attached

LDPE

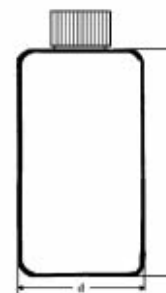
Code	Pack Content	Capacity ml	h mm	d mm
P/586/080	100	8	45	24
P/586/090	100	15	58	25
P/586/200	12	30	62	35
P/586/210	12	60	85	40
P/586/220	12	125	100	51
P/586/230	12	250	132	61
P/586/240	6	500	169	73
P/586/250	6	1000	217	93



Bottle, Narrow Mouth, Screw Thread with Cap Attached

HDPE (PP Cap)

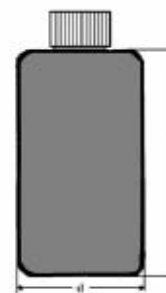
Code	Pack Content	Capacity ml	h mm	d mm
P/583/170	100	4	41	16
P/583/180	100	8	45	24
P/583/190	100	15	58	25
P/583/100	12	30	62	35
P/583/110	12	60	85	40
P/583/120	12	125	100	51
P/583/130	12	250	132	61
P/583/140	6	500	169	73
P/583/150	6	1000	217	93



Bottle, Narrow Mouth, Amber, Screw Thread with Cap Attached

HDPE

Code	Pack Content	Capacity ml	h mm	d mm
P/581/170	100	4	41	16
P/581/180	100	8	45	24
P/581/190	100	15	58	25
P/581/200	12	30	62	35
P/581/210	12	60	85	40
P/581/220	12	125	100	51
P/581/230	12	250	132	61
P/581/240	6	500	169	73
P/581/250	6	1000	217	93

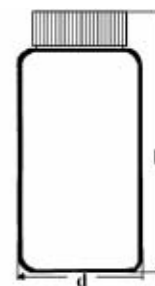


FOR OUR RANGE OF GLASS BOTTLES, PLEASE SEE PAGES 6-15

Bottle, Wide Mouth, Screw Thread with Cap Attached

PP Autoclavable

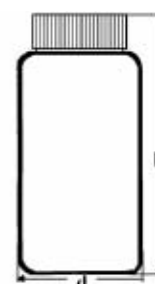
Code	Pack Content	Capacity ml	h mm	d mm
P/582/200	12	30	62	35
P/582/210	12	60	85	40
P/582/220	12	125	100	51
P/582/230	12	250	132	61
P/582/240	6	500	169	73
P/582/250	6	1000	217	93
P/582/260	6	2000	249	123



Bottle, Wide Mouth, Screw Thread with Cap Attached

LDPE

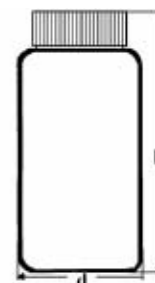
Code	Pack Content	Capacity ml	h mm	d mm
P/585/200	12	30	62	35
P/585/210	12	60	85	40
P/585/220	12	125	100	51
P/585/230	12	250	132	61
P/585/240	6	500	169	73
P/585/250	6	1000	217	93
P/585/260	6	2000	249	123



Bottle, Wide Mouth, Screw Thread with Cap Attached

HDPE

Code	Pack Content	Capacity ml	h mm	d mm
P/584/200	12	30	62	35
P/584/210	12	60	85	40
P/584/220	12	125	100	51
P/584/230	12	250	132	61
P/584/240	6	500	169	73
P/584/250	6	1000	217	93
P/584/260	6	2000	249	123



Bottle, Wide Mouth, Amber, Screw Thread with Cap Attached

HDPE

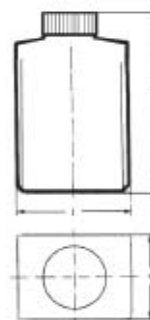
Code	Pack Content	Capacity ml	h mm	d mm
P/581/300	12	30	62	35
P/581/310	12	60	85	40
P/581/320	12	125	100	51
P/581/330	12	250	132	61
P/581/340	6	500	169	73
P/581/350	6	1000	217	93
P/581/360	6	2000	249	123



Bottle, Wide Mouth, Rectangular, Screw Thread with Cap Attached

HDPE

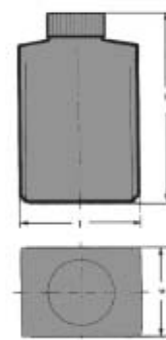
Code	Pack Content	Capacity ml	h mm	d mm	w mm
P/583/320	12	125	99	59	39.5
P/583/330	12	250	116	74.5	51.5
P/583/340	6	500	144	99.5	64
P/583/350	6	1000	180	127	67
P/583/360	6	2000	242	150	97



Bottle, Wide Mouth, Rectangular, Amber, Screw Thread with Cap Attached

HDPE

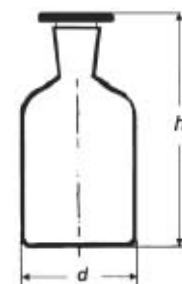
Code	Pack Content	Capacity ml	h mm	d mm	w mm
P/583/420	12	125	99	59	39.5
P/583/430	12	250	116	74.5	51.5
P/583/440	6	500	144	99.5	64
P/583/450	6	1000	180	127	67
P/583/460	6	2000	242	150	97



Bottle, Stoppered

LDPE

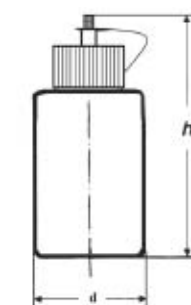
Code	Pack Content	Capacity ml	h mm	d mm
P/581/120	12	125	106	52
P/581/130	12	250	138	70
P/581/140	6	500	172	87
P/581/150	6	1000	213	108



Bottle, Dropping, Euro Design

LDPE

Code	Pack Content	Capacity ml	h mm	d mm
P/620/030	12	15	70	26
P/620/040	12	30	75.4	36.5
P/620/050	12	60	99	48.5
P/620/060	12	125	114	51.5
P/620/070	12	250	149	61.5



Wash Bottle, flexible tube

LDPE

Code	Pack Content	Capacity ml	h mm	d mm
P/109/303/01	12	125	139	48
P/109/303/02	12	250	207	64
P/109/303/03	6	500	263	79
P/109/303/04	6	1000	272	171



Wash Bottle, Narrow mouth

LDPE/PP

Code	Pack Content	Capacity ml	h mm	d mm
P/560/050	12	125	145	51.5
P/560/060	12	250	178	61.5
P/560/070	6	500	240	74.5
P/560/080	6	1000	280	93.0



Wash Bottle, Wide mouth

LDPE/PP

Code	Pack Content	Capacity ml	h mm	d mm
P/560/090	6	500	230	77

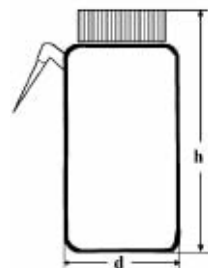


FOR OUR RANGE OF GLASS BOTTLES, PLEASE SEE PAGES 6-15

Wash Bottle, New Type

LDPE

Code	Pack Content	Capacity ml	h mm	d mm
P/561/100	12	125	122	48
P/561/110	12	250	141	62
P/561/120	6	500	173	76



Pipette, Serological, Sterile

PS

Code	Pack Content	Capacity ml
P/940/010	500	1
P/940/020	500	2
P/940/030	250	5
P/940/040	200	10
P/940/000	200	25



Pipette, Pasteur

LDPE

Code	Pack Content	Capacity ml
P/160/501	500	1
P/160/101	500 individually wrapped	1 Sterile
P/160/503	500	3
P/160/103	500 individually wrapped	3 Sterile
P/160/201	500 in packs of 20	1 Sterile
P/160/203	500 in packs of 20	3 Sterile



Petri dishes, Tissue culture, Sterile

PS

Code	Pack Content	Diameter mm	h mm
P/960/010	900	40	12
P/960/020	840	60	12
P/960/031	240	90	15
P/960/041	100	150	20



NOT AUTOCLAVABLE

Petri dishes, Tissue culture, Sterile, triple vent

PS

Code	Pack Content	Diameter mm	h mm
P/460/090	20	90	15
P/460/091	500	90	15



NOT AUTOCLAVABLE

Petri dishes, Tissue culture, Non Sterile, triple vent

PS

Code	Pack Content	Diameter mm	h mm
P/159/303/01	15	55	12

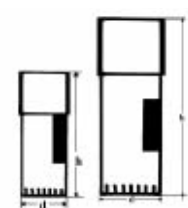


NOT AUTOCLAVABLE

Cryovial, Sterile

PP

Code	Pack Content	Capacity ml	h mm	d mm
P/523/010	1000	1	38	13.5
P/523/020	1000	1.8	48	13.5
P/523/030	500	4.5	92	13.5



Cryo Coder

PS

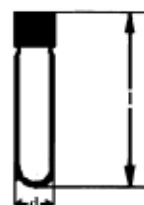
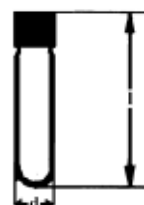
Code	Pack Content	Colour
P/523/110	100	White
P/523/120	100	Blue
P/523/130	100	Red
P/523/140	100	Yellow



Tube, Centrifuge, Oak Ridge

PP Autoclavable

Code	Pack Content	Capacity ml	d mm	d mm
P/541/020	12	10	16	81
P/541/030	12	30	26	102
P/541/040	12	50	29	107
P/541/050	12	70	35	107



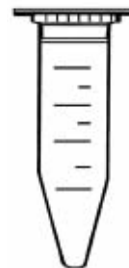
PC/PP Autoclavable

Code	Pack Content	Capacity ml	d mm	d mm
P/542/040	12	50	29	107

Tube, Centrifuge, Micro

PP

Code	Pack Content	Capacity ml
P/130/303/01	100	0.5
P/130/303/02	100	1.5



Tube, Centrifuge, Conical Bottom

PP Autoclavable

Code	Pack Content	Capacity ml	d mm	h mm
P/135/303/01	280	15	16.5	122
P/135/303/02	280	50	16.5	122
P/135/303/03	216	15 Sterile	28.5	115
P/135/303/04	216	50 Sterile	28.5	115



Tube, Centrifuge Tube, Conical Bottom

PP Autoclavable

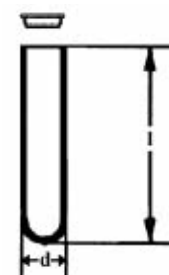
Code	Pack Content	Capacity ml	d mm	h mm
P/546/021	280	15 Sterile	16.5	122
P/546/041	216	50 Sterile	28.5	115
P/500/031	280	15	16.5	122
P/500/041	216	50	28.5	115



Tube, Centrifuge, Round Bottom

PP Autoclavable

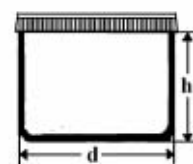
Code	Pack Content	Capacity ml	d mm	h mm
P/542/010	12	16	16	125
P/542/020	12	50	24	150



Container, Specimen

PC/PP Autoclavable

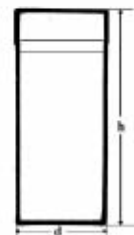
Code	Pack Content	Capacity ml	d mm	h mm
P/881/080	12	125	64	73
P/881/090	12	250	110	119
P/881/100	6	500	77.4	85
P/881/111	6	1000	138	146



Tube, Specimen

PS/PE

Code	Pack Content	d mm	h mm
P/881/110	20	25	50
P/881/120	10	25	75
P/881/130	10	25	100
P/881/140	20	31	50
P/881/150	10	31	75
P/881/160	10	31	100
P/881/170	20	37	50
P/881/180	10	37	75
P/881/190	10	37	100



Vials, Scintillation

PP/HDPE

Code	Pack Content	Capacity ml	d mm	h mm
P/522/010	100	8	16	55
P/522/020	100	20	26.5	60



Storage Vial

PP/HDPE

Code	Pack Content	Capacity ml
P/523/070	500	5
P/523/150	500	10
P/523/160	300	10 Sterile



Vials, Scintillation, 20ml, with Closures Attached

Polyethylene

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K58500/20	500	22	urea	cork-backed foil
K58504/20	500	22	polypropylene	pulp-backed foil



Vials, Scintillation, 20ml, with Closures Unattached

Polyethylene

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K58510/20	500	22	urea	cork-backed foil
K58511/20	500	22	polypropylene	foamed polyethylene
K58512/20	500	22	polypropylene	pulp-backed foil
K58515/20	500	22	urea	Polyseal® Cone



Vials, Scintillation, 20ml, with Closures Unattached, KIM-BULK® Packaging

Polyethylene

Code	Pack Content	Cap Size	Cap Material	Cap Liner
K58501/20	1000	22	polypropylene	pulp-backed foil
K58510B/20	1000	22	urea	cork-backed foil
K58511B/20	1000	22	polypropylene	foamed polyethylene

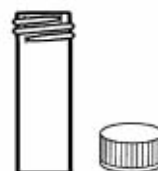


Vials, Scintillation, 7ml, with unattached Closures, SOLVENT SAVER®

Vial designed to fit 74700 carrier vial

Polyethylene

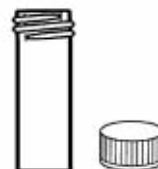
Code	Pack Content	Cap Material	d mm	h mm
K58502/7	1000	Polyethylene	17	57



Vials, Scintillation, 7ml, with unattached Closures, SOLVENT SAVER®, KIM-BULK® Packaging Vial designed to fit in 74700 carrier vial

Polyethylene

Code	Pack Content	Cap Material	d mm	h mm
K58503/7	1000	Polyethylene	17	57



Vials, Scintillation, 4ml, with Unattached Closures, SOLVENT SAVER®, KIM-BULK® Packaging

Polyethylene

Code	Pack Content	Cap Type	Cap Material	d mm	h mm
K58552/4	1000	Snap on	Polyethylene	14	56



Closure for Scintillation Vial, White Urea

Not autoclavable. Top is suitable for marking. White urea and has cork-backed aluminum foil liner

Code	Approx. Pack Content	GPI Thread Finish
K74520/15425	1000	15-425
K74520/22400	1000	22-400



Closure for Scintillation Vial, White Polypropylene

Top is suitable for marking. White polypropylene and has a pulp-backed aluminum foil liner

Code	Approx. Pack Content	GPI Thread Finish
K74521/15425	1000	15-425
K74521/22400	1000	22-400



Closure for Scintillation Vial, White Polyethylene

Top is suitable for marking. White Polyethylene and is linerless

Code	Approx. Pack Content	GPI Thread Finish
K74522/22400	1000	22-400



Closure for Scintillation Vial, White Urea

Top is suitable for marking. Closure is not autoclavable, as the liner may melt.

White urea with a polyethylene cone-shaped liner (POLY-SEAL®).

Code	Approx. Pack Content	GPI Thread Finish
K74525/22400	1000	22-400



Closure for Scintillation Vial, White Urea

Top is suitable for marking. Suitable for long term sample storage.

White urea and has a F-217-PTFE liner

Code	Approx. Pack Content	GPI Thread Finish
K74526/22400	500	22-400

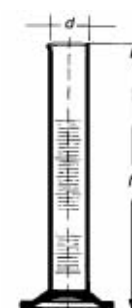


PLEASE ALSO SEE PAGES 157 AND 158.

Cylinder, Measuring, Round Base

PP, Moulded Graduations

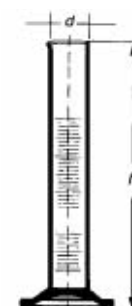
Code	Pack Content	Capacity ml	Graduation Divisions (ml)	h mm	d mm
P/175/303/01	I	10	0.2	111	15
P/175/303/02	I	25	0.5	170	17.5
P/175/303/03	I	50	1	197	25
P/175/303/04	I	100	1	208	34
P/175/303/05	I	250	2	315	46
P/175/303/06	I	500	2	360	56
P/175/303/07	I	1000	10	371	72
P/175/303/08	I	2000	20	473	90



Cylinder, Measuring, Round Base

TPX, Moulded Graduations

Code	Pack Content	Capacity ml	Graduation Divisions (ml)	h mm	d mm
P/176/303/01	I	10	0.2	111	15
P/176/303/02	I	25	0.5	170	17.5
P/176/303/03	I	50	1	197	25
P/176/303/04	I	100	1	208	34
P/176/303/05	I	250	2	315	46
P/176/303/06	I	500	2	360	56
P/176/303/07	I	2000	10	371	90

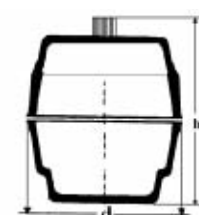


FOR GLASS CYLINDERS, PLEASE SEE PAGES 96-98.

Desiccator, Plain

PP/PC

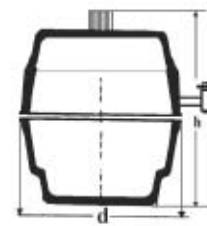
Code	Pack Content	ø mm	h mm	d mm
P/401/010	I	150	206	171
P/401/020	I	200	260	230
P/401/030	I	250	311	273
P/401/040	I	300	350	330



Desiccator, Vacuum

PP/PC

Code	Pack Content	ø mm	h mm	d mm
P/402/010	I	150	206	171
P/402/020	I	200	260	231
P/402/030	I	250	311	273
P/402/040	I	300	350	330



FOR GLASS DESICCATORS, PLEASE SEE PAGE 34.

Burette, PTFE Stopcock

PMMA/TPX

Code	Capacity ml	Pack Content	l mm
7103/25	25	I	610
7103/50	50	I	742
7103/100	100	I	790



FOR GLASS BURETTES, PLEASE SEE PAGES 19-21.

Aspirator Bottle with Stopcock

PP Autoclavable

Code	Pack Content	Capacity ml
P/583/210	I	5000
P/583/220	I	10000
P/583/230	I	20000
P/583/211	I	Spare Stopcock



Bottle, Narrow mouth

PP Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/582/180	6	2000	248	121
P/582/160	6	4000	334	154
P/582/190	6	8000	415	195



Bottle, Narrow mouth, Amber

PP Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/582/170	6	4000	334	154



Bottle, Wide mouth with handle

PP Autoclavable

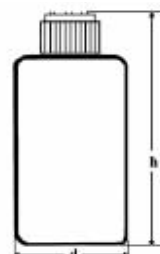
Code	Pack Content	Capacity ml	h mm	d mm
P/583/257	6	4000 Round	302	163
P/583/258	6	4000 Square	297	147x147



Bottle, Heavy Duty, Vacuum

PP Autoclavable

Code	Pack Content	Capacity ml	h mm	d mm
P/583/255	2	2000	264	118



Filling/Venting Closure for Vacuum Bottle

PP Autoclavable

Code	Pack Content	Size mm
P/583/216	1	53

Autoclavable closure for aseptic transfer of media, biological reagents, pure water and chemical to and from heavy duty vacuum bottle and carboys. Size 53mm can be used with Heavy duty vacuum bottle 2 litre



Carboy

PP Autoclavable

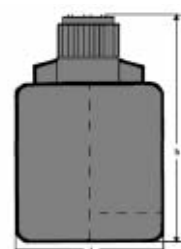
Code	Pack Content	Capacity litres	h mm	d mm	I.D. neck (mm)
P/583/250	1	10	390	249	65
P/583/260	1	20	535	285	65
P/583/270	1	50	682	376	65



Carboy, Amber

PP Autoclavable

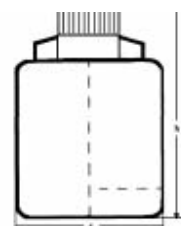
Code	Pack Content	Capacity litres	h mm	d mm	I.D. neck (mm)
P/583/252	1	10	390	249	65



Carboy, Wide Mouth

PP Autoclavable

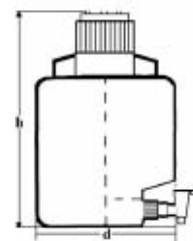
Code	Pack Content	Capacity litres	h mm	d mm	I.D. neck (mm)
P/583/351	1	10	342	249	95
P/583/361	1	20	482	285	95



Carboy, with Stopcock

PP Autoclavable

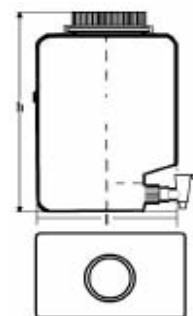
Code	Pack Content	Capacity litres	h mm	d mm
P/583/280	I	10	388	245
P/583/290	I	20	540	270
P/583/300	I	50	682	376



Carboy, with Stopcock, Rectangular

PP

Code	Pack Content	Capacity litres
P/683/240	I	10
P/683/250	I	20
P/683/260	I	50



Handyboy, with Stopcock

PP

Code	Pack Content	Capacity litres
P/683/300	I	8



Jerrican

HDPE

Code	Pack Content	Capacity litres	h mm	d mm	w mm
P/683/210	I	5	330	253	168
P/683/220	I	10	380	282	189
P/683/230	I	20	470	352	243

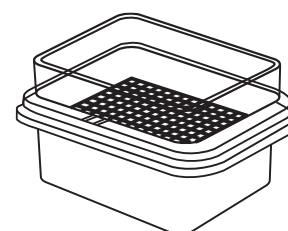


Cooler, PCR Mini -20°C

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml
P/525/110	I	96	0.2

This cooler is designed to protect enzymes and solution by maintaining them at temperatures between -20°C and -15°C for upto 2hrs during samples preparations on a bench. The aluminium block has 96 holes to hold tubes, strips or plates. Suitable for 6mm Diameter Vials

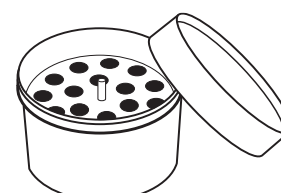


Cooler, Cryo 1°C

PC/HDPE

Code	Pack Content	Places	Capacity ml	d mm	h mm
P/525/000	I	18	1 or 1.8	86	114

Used for cell cryopreservation and recovery, this cooler gives -1°C/min cooling rate for 18 cryovials of 1 or 1.8ml. The cooler needs 100% isopropyl alcohol and mechanical freezer. Hole diameter 15mm



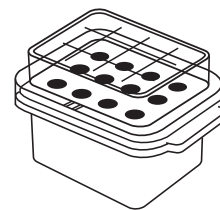
Cooler, Mini 0°C

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/020	I	12	15	150	170	140

An alternative to an ice bucket for keeping reagents and enzymes cool. Also protects critical samples from temperature fluctuations in the freezers. Freeze 0°C minicooler for 24 hours at -5°C to -10°C before use.

Hole diameter 18mm



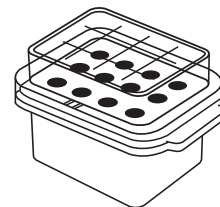
Cooler, Quick Freeze

PC/Insulating solution

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/040	I	12	1.5	98	144	104

An alternative to dry ice - solvent bath for quick chilling of specimens.

Hole diameter 12mm or 8mm with adapter



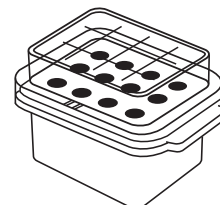
Cooler, Mini 0°C

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/010	I	12	1.5	98	144	104
P/526/010	I	32	1.5	107	210	120

An alternative to an ice bucket for keeping reagents and enzymes cool. Also protects critical samples from temperature fluctuations in the freezers. Freeze 0°C minicooler for 24 hours at -5°C to -10°C before use.

Hole diameter 12mm or 8mm with adapter



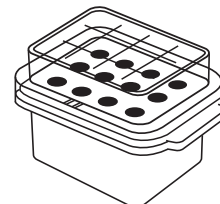
Cooler, Mini 20°C

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/030	I	12	1.5	98	144	104
P/526/030	I	32	1.5	107	210	120

An alternative to an ice bucket for keeping reagents and enzymes cool. Also protects critical samples from temperature fluctuations in the freezers. Freeze -20°C minicooler for 24 hours at -20°C to -25°C before use.

Hole diameter 12mm or 8mm with adapter

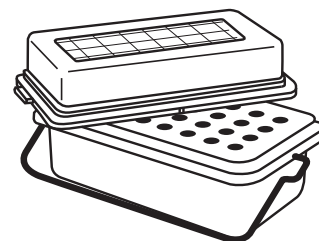


Cooler, Mini 0°C with gel filled cover

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/050	I	32	1.5	107	210	120

An alternative to an ice bucket for keeping reagents and enzymes cool. Also protects critical samples from temperature fluctuations in the freezers. Freeze 0°C minicooler for 24 hours at -5°C to -10°C before use.



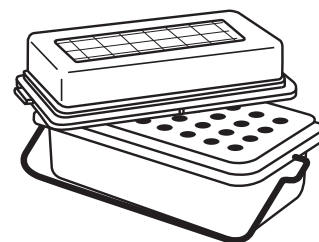
Cooler, Mini -20°C with gel filled cover

PC/Non Toxic Gel

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/525/060	I	32	1.5	107	210	120

The mini coolers are an alternative to ice bucket for keeping reagent and enzymes cool. Also protects critical samples from temperature fluctuations in a freezer.

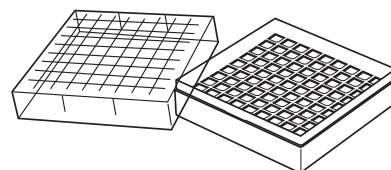
Freeze -20°C minicooler for 24 hours at -20°C to -25°C before use.



Cryo Box

PC

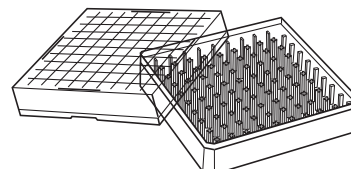
Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/524/000	8	25	1.0 & 1.8	51	76	76
P/524/010	4	81	1.0 & 1.8	51	133	133
P/524/030	4	81	4.5	95	133	133



Cryo Box -100

PC

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/524/020	4	100	1.0 or 1.8	52	133	133

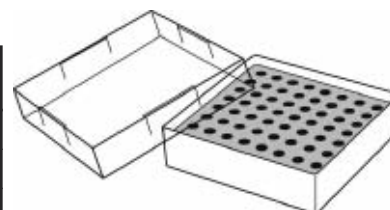


This cryobox is suitable for storage of internally threaded vial or other similar size externally threaded vials in ultra low temperatures. Transparent cover permits viewing.

Tube Box, Micro

PC/LDPE

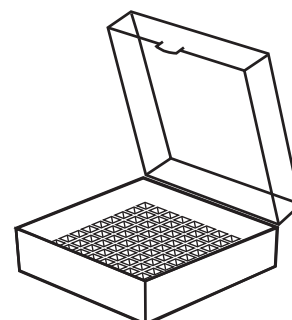
Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/524/040	4	81	0.2	51	133	133
P/524/060	4	81	0.5	51	133	133
P/524/070	4	64	1.5	51	133	133



Cryo Box, Cube

PC

Code	Pack Content	Places	Capacity ml	h mm	l mm	w mm
P/202/060	8	50	1.8	54	76	76
P/202/070	4	100	1.8	51	133	133
P/212/060	4	81	1.8	51	133	133



These stackable boxes are designed for storage of samples upto -90°C.
The lid is hinged and has a lock at the front to prevent accidental opening in the deep freezer.
These boxes accomodate 0.5, 1.5, 2.0ml micro tubes and 1.0 and 1.8ml Cryo tubes

Flask, Tissue Culture, Sterile

PS

Code	Pack Content	Growth CM3	h mm	d mm	w mm
P/950/020	100	75	150	85	35
P/950/031	40	175	205	120	45



Flask, Tissue Culture with Filter cap, Sterile

PS

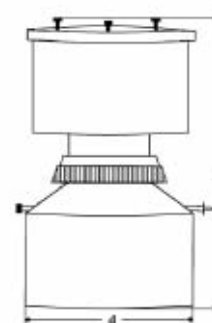
Code	Pack Content	Growth CM3	h mm	d mm	w mm
P/950/050	100	75	150	85	35
P/950/061	40	175	205	120	45



Membrane Filter Holder-47mm

PSF Autoclavable

Code	Pack Content	Capacity of upper Chamber ml	Capacity of lower Chamber ml
P/050/010	I	250	250
P/050/020	I	500	500
P/050/030	I	500	1000
P/050/011	I	Spare seal Kit for P/050/010	
P/050/021	I	Spare seal Kit for P/050/020 and /030	

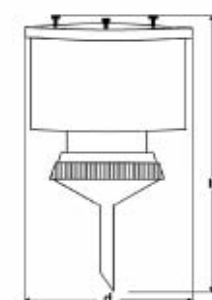


Filter Holder with Funnel

PSF Autoclavable

Code	Pack Content	Capacity mm
P/050/041	I	250

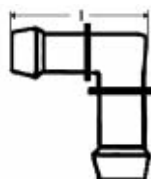
The funnel can be used with a filtering flask or manifold.



Connector, Elbow

PP Autoclavable, USP Class VI

Code	Tube O.D. mm
P/720/100	3.2
P/720/110	4
P/720/120	4.8
P/720/130	6.4
P/720/140	8
P/720/150	9.5
P/720/160	12.7



Connector, Y

PP Autoclavable, USP Class VI

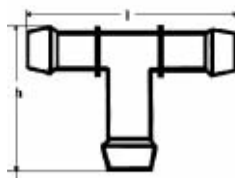
Code	Tube O.D. mm
P/720/300	3.2
P/720/310	4.8
P/720/320	6.4
P/720/330	9.5
P/720/340	12.7



Connector, Elbow

PP Autoclavable, USP Class VI

Code	Tube O.D. mm
P/720/200	3.2
P/720/210	4
P/720/220	4.8
P/720/230	6.4
P/720/240	8
P/720/250	9.5
P/720/260	12.7



Connector, Straight

PP Autoclavable, USP Class VI

Code	Tube O.D. mm
P/720/000	3.2
P/720/010	4
P/720/020	4.8
P/720/030	6.4
P/720/040	8
P/720/050	9.5
P/720/060	12.7



These autoclavable polypropylene barbed fittings are designed for quick, easy assembly to flexible tubing in low pressure application. They have an excellent chemical resistance and meet USP class VI for use as medical components.

FOR GLASS CONNECTORS, PLEASE SEE PAGES 74 AND 93.

Clamp, Snappers

Acetal

Code	Pack Content
P/720/500	1



Clamp are made of polyacetal. Snapper clamp size will vary with hose thickness and barbed fitting sizes. An assortment kit includes 24 clamps i.e. 6 of each size 1.5, 4, 6 and 8.

Clamp, Pinch

PP Autoclavable

Code	Pack Content
P/720/510	1

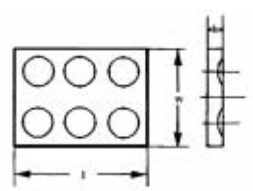


ON/OFF Ratchet Clamp fits 5mm to 9.5mm OD tubing.

Tissue Culture Plate-Sterile

PS

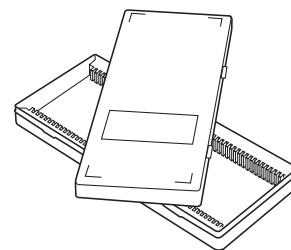
Code	Pack Content	Capacity Wells
P/980/010	50	6
P/980/020	50	12
P/980/030	50	24
P/980/040	100	96F
P/980/050	162	96U



Box, Slides

PS

Code	Pack Content	Slots	l mm	w mm	h mm
P/481/010	12	25	140	89	32
P/481/020	6	50	220	89	32
P/481/030	6	100	220	172	32



Basket, Test tubes with covers

PP Autoclavable

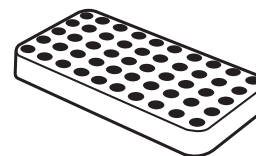
Code	Pack Content	l mm	w mm	h mm
P/180/010	6	110	120	150
P/180/020	6	180	170	160
P/180/030	4	230	230	230



Rack, cryo

PC

Code	Pack Content	Slots	w mm	h mm
P/241/050	1	50	240	120



Rack, Float

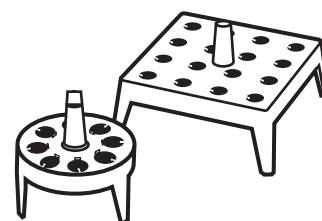
PP

Square

Code	Pack Content	Slots	l mm	w mm	h mm
P/240/000	6	16	95	95	65

Circular

Code	Pack Content	Slots	l mm	w mm	h mm
P/240/040	6	8	-	95	65



Rack, Test tube

PP

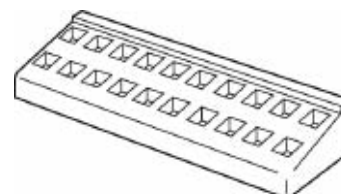
Code	Pack Content	Slots	Size mm	l mm	w mm	h mm
H/163/03	2	20	20	320	68	123
H/163/08	3	18	13	145	64	109



Rack, Cuvette

RPP

Code	Pack Content	Slots	l mm	w mm	h mm
P/260/010	6	20	210	72	36



Pipette Rack, Horizontal

PP

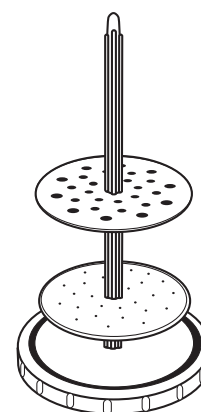
Code	Pack Content	Places
P/162/010	3	12



Pipette stand, Vertical

PP

Code	Pack Content	Slots	d mm	h mm
P/161/010	1	28	235	400
P/161/040	1	94	230	480



NMR Sample Tube Rack

Polypropylene

Code	Pack Content	Wilma Equivalent	Accommodates	l x w x h Inches
K897080/0005	1	820-A	72 - 3 or 5mm tubes	8 3/8x4 1/2x8 3/4



Retort stand base with rod, 'A' Shaped

Cast iron, Base has blue paint finish

Code	Pack Content	Sides mm	Rod mm
H/AA420/150	1	150	600 x 10
H/AA420/151	1	200	700 x 10


Retort stand base with rod, Rectangular

Cast iron, Base has blue paint finish

Code	Pack Content	l x w mm	Rod mm
H/AA330/140	1	200 x 140	600 x 10
H/AA330/180	1	300 x 180	700 x 10


Retort stand base with rod, Rectangular

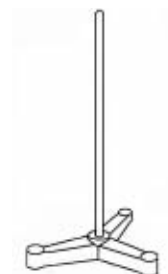
Cast iron, Base has blue paint finish

Code	Pack Content	l x w mm	Rod mm
H/39040	1	115 x 75	430 x 10
H/39050	1	160 x 100	470 x 10
H/39060	1	200 x 125	570 x 10
H/39070	1	250 x 160	670 x 10
H/39080	1	315 x 200	670 x 10


Retort stand base, without rod, Tripod

Cast iron with blue paint finish

Code	Pack Content	Size mm
H/AA320/85	1	85
H/AA320/110	1	110
H/AA320/135	1	135
H/AA320/175	1	175


Retort Base and Rod

Cast iron, Base has blue paint finish

BASE

Code	Pack Content	l x w mm
H3107/1	2	160 x 100
H3107/2	2	200 x 125
H3107/3	2	250 x 160

ROD

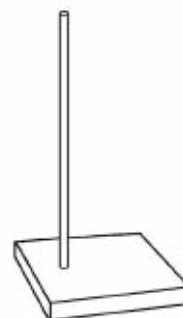
Code	Pack Content	Size mm
H3108/1	1	500
H3108/2	1	600
H3108/3	1	750



Retort stand base with rod

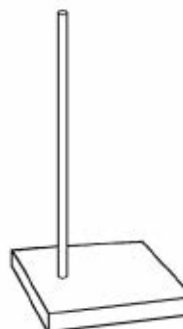
PP Base, Plastic coated rod

Code	Pack Content	Rod Position	l mm	w mm	rod (l) mm
P/141/010	1	central	220	150	750
P/141/020	1	central	300	200	750
P/142/010	1	side	220	150	750
P/142/020	1	side	300	200	750


Retort stand base with rod

PP base, SS rod

Code	Pack Content	Rod Position	l mm	w mm	rod (l) mm
P/143/010	1	central	220	150	750
P/143/020	1	central	300	200	750
P/144/010	1	side	220	150	750
P/144/020	1	side	300	200	750


Clamp, three fingers

Nickel/Chrome alloy

Code	Pack Content	Max Opening mm	Coating
H/CJ170/10	1	70	PVC (fingers only)
H/CJ170/11	1	70	PVC


Clamp, four fingers with cork lining and interlocking jaws

Nickel/Chrome alloy

Code	Pack Content	Max Opening mm	Coating
H/CJ180/10	1	70	-
H/CJ180/11	1	70	PVC


Clamp, four fingers with cork lining and interlocking jaws

Nickel/Chrome alloy

Code	Pack Content	Max Opening mm	Coating
H/CJ190/10	1	80	-
H/CJ190/11	1	80	PVC



Bosshead

Painted or Chrome plated

Code	Pack Content	To fit Rod (mm)	Coating
H/CB203/13	1	13	Black paint
H/CB203/16	1	16	Black paint
H/CB203/21	1	21	Black paint
H/CB203/25	1	25	Black paint
H/CB201/13	1	13	Chrome plated
H/CB201/16	1	16	Chrome plated
H/CB201/21	1	21	Chrome plated
H/CB201/25	1	25	Chrome plated
H/CB202/13	1	13	White paint
H/CB202/16	1	16	White paint
H/CB202/21	1	21	White paint
H/CB202/25	1	25	White paint



Bosshead, Double rotating

Chrome plated alloy

Code	Pack Content	To fit Rod (mm)
H/BB180/19	1	21
H/BB180/16	1	16



Bosshead

Chrome plated alloy

Code	Pack Content	To fit Rod (mm)
H/CB200/10	1	15



Retort Ring Support

Nickel/Chrome plated steel

Code	Pack Content	Ring Diameter (mm)
H/HO310/50	1	50
H/HO310/60	1	60
H/HO310/80	1	80
H/HO310/100	1	100
H/HO310/120	1	120
H/HO310/140	1	140



Retort Ring Support with bosshead

Nickel/Chrome plated steel

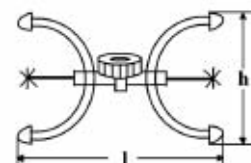
Code	Pack Content	Ring Diameter (mm)	Length mm
H/HO330/60	1	60	180
H/HO330/80	1	80	195
H/HO330/100	1	100	200
H/HO330/120	1	120	215
H/HO330/140	1	140	225



Clamp, Burette

PP

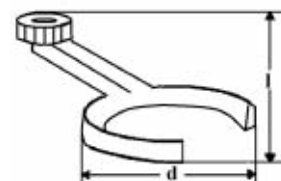
Code	Pack Content	Type	l mm	h mm
P/I21/100	6	single	115	125
P/I21/200	2	double	220	125



Holder, Separating Funnel

PP

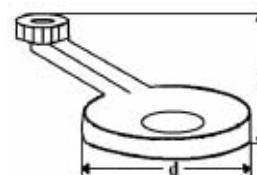
Code	Pack Content	Type	To fit Rod Diameter (mm)
P/I23/000	6	single	9.5-13.0



Holder, Funnel

PP

Code	Pack Content	Type	To fit Rod Diameter (mm)	To fit Funnel Diameter (mm)
P/I22/100	6	single	9.5-13.0	76-115
P/I22/200	2	double	9.5-13.0	76-115



Conical Joint Clips

Code	Pack Content	Colour
8SSKC10	10	Black
8SSKC12	10	Purple
8SSKC14	10	Yellow
8SSKC19	10	Blue
8SSKC24	10	Green
8SSKC29	10	Red
8SSKC34	10	Orange
8SSKC40	10	Yellow
8SSKC45	10	Brown



Test Tube holders for tubes upto 30mm diameter

Plated steel

Code	Pack Content	Type
H/TH800/10	I	Without finger grips
H/TH800/20	I	With finger grips


Test Tube holder

Wood

Code	Pack Content	Overall Length mm
H/TH810/80	I	180


Beaker tong, flat hinge

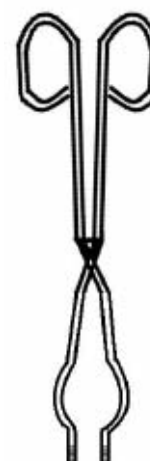
Plated steel

Code	Pack Content	Overall Length mm	Coating
H/CJ205/30	I	275	PVC
H/TB600/10	I	275	Rubber


Crucible tongs, flat hinge, bowed type

Plated steel

Code	Pack Content	Overall Length mm
H/TA500/150	I	150
H/TA500/200	I	200
H/TA500/220	I	220
H/TA500/250	I	250
H/TA500/300	I	300
H/TA500/350	I	350
H/TA500/400	I	400
H/TA500/450	I	450
H/TA500/500	I	500
H/TA500/600	I	600



Crucible tongs, flat hinge, bowed type

Stainless steel

Code	Pack Content	Overall Length mm
H/TA600/150	I	150
H/TA600/200	I	200
H/TA600/220	I	220
H/TA600/250	I	250
H/TA600/300	I	300
H/TA600/350	I	350
H/TA600/400	I	400
H/TA600/450	I	450
H/TA600/500	I	500
H/TA600/600	I	600


Pipette, Bulb

Natural Rubber

Code	Pack Content	Up to ml	d mm	h mm
P/415/303/01	I	100	52	129.5

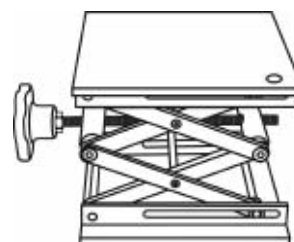

Pipette aid, Handypette

Code	Pack Content	Up to ml	l mm	Colour
P/104/303/01	I	2	150	Blue
P/104/303/02	I	10	180	Green
P/104/303/03	I	25	195	Red


Lab Jack,

Aluminium Coated Steel

Code	Pack Content	Platform Dimension (mm)	Max Height (mm)
H/104/303/02	I	150 x 150	285


Clamps, KEM-KLAMP, Standard Taper

Stainless Steel

Code	Pack Content	Fits Joint Sizes
K675500/1420	I	14/20, 14/35
K675500/1922	I	19/22, 19/38
K675500/2440	I	24/40, 24/25
K675500/2942	I	29/42, 29/26
K675500/3445	I	34/35, 34/28



Conical Joint Clips

Polyacetal

Code	Pack Content	Fits Joint Sizes	Colour Code
K675300/0010	12	10/18, 10/30	Aqua
K675300/0014	12	14/20, 14/35	Yellow
K675300/0019	12	19/22, 19/38	Blue
K675300/0024	12	24/20, 24/25	Green
K675300/0029	12	29/42, 29/26	Red
K675300/0034	12	34/45, 34/28	Orange
K675300/0040	12	40/35, 40/50	Gold
K675300/0045	12	45/50	Brown



Spherical Joint Clips for ball joints

Polyacetal

Code	Pack Content	Fits Joint Sizes	Colour Code
K675310/0013	12	12/2, 12/3 12/5	Violet
K675310/0019	12	18/7, 18/19	light Blue
K675310/0029	12	28/12, 28/15	Dark Red
K675310/0035	12	35/20, 35/25	Light Orange



Conical Joint Clips

Nickel-Plated

Code	Pack Content	Fits Joint Sizes
K675320/0014	6	14/20, 14/35
K675320/0019	6	19/22, 19/38
K675320/0024	6	24/25, 24/40



Clamp, Pinch

Aluminium

Code	Pack Content	Size	Screw Lock	Fits O-Ring Conn. Size
K675000/0012	1	12	No	5
K675000/1221	1	12A	Yes	5
K675000/0018	1	18	No	7-9
K675000/1821	1	18A	Yes	7-9
K675000/0028	1	28	Yes	12-15
K675000/0035	1	35	Yes	20-25
K675000/0050	1	50	Yes	30
K675000/0065	1	65	Yes	40
K675000/0075	1	75	Yes	50
K675000/0102	1	102	Yes	75



Clamp, Spring wire, Standard Taper

Stainless Steel

Code	Pack Content	Fits Joint Size
K675400/1420	12	14/20, 14/35
K675400/2440	12	24/40, 24/25



CERAMICS PROPERTIES

This laboratory porcelain is the result of many years research and specialised experience. It is well-known by its high chemical and thermal resistance.

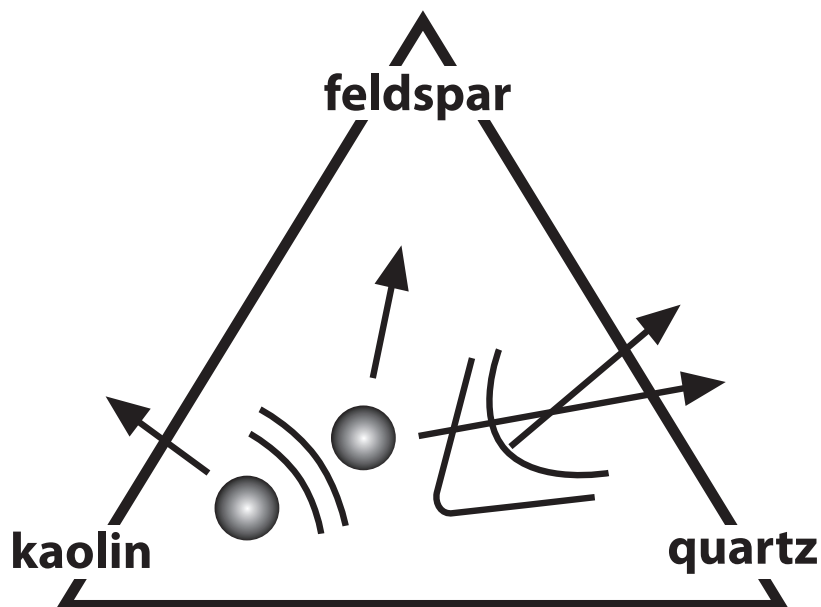
The bearers of these properties are well developed mullite crystals ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$), not only increasing the softening point, but also ensuring both high mechanical resistance and low coefficient of thermal expansion. Thus the material is capable of withstanding high thermal shocks. To assure the high quality of laboratory porcelain only high grade raw materials are used.

The content of clay expresses the difference between the laboratory porcelain and ordinary technical porcelain. The phase diagram illustrates the position of the laboratory porcelain in the range of high thermal stability and resistance.

The high softening point makes possible to use glazed articles under suitable conditions at temperature up to 1100°C , unglazed articles up to 1350°C .

This laboratory porcelain meets all current standards. The dimensions are also in accordance with latest recommendations of ISO/TC 48.

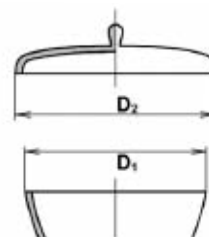
The high quality and its stability is assured by steady control of the body and the production technology.



Crucible Covers

EU Manufacturer

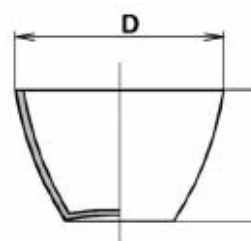
Code	To fit mm	Pack Content	d2 mm
CRD/30	30	10	34
CRD/35	35	10	39
CRD/40	40	10	44
CRD/45	45	10	49
CRD/50	50	10	54
CRD/60	60	10	64
CRD/70	70	10	74



Crucibles, low form

EU Manufacturer

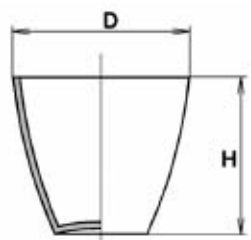
Code	D mm	Pack Content	H mm	Capacity ml
CR202/1/30	30	10	19	5
CR202/1/35	35	10	22	10
CR202/1/40	40	10	25	17
CR202/1/45	45	10	28	21
CR202/1/50	50	10	32	34
CR202/1/60	60	10	38	62
CR202/1/70	70	10	44	91



Crucibles, medium form

EU Manufacturer

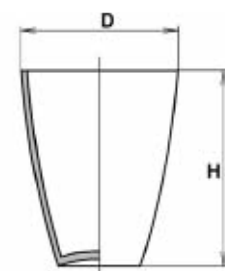
Code	D mm	Pack Content	H mm	Capacity ml
CR202/2/35	35	10	28	12
CR202/2/40	40	10	32	20
CR202/2/45	45	10	36	30
CR202/2/50	50	10	40	45
CR202/2/60	60	10	48	80
CR202/2/70	70	10	56	120



Crucibles, tall form

EU Manufacturer

Code	D mm	Pack Content	H mm	Capacity ml
CR202/3/30	30	10	38	15
CR202/3/35	35	10	44	26
CR202/3/40	40	10	50	35
CR202/3/45	45	10	56	50
CR202/3/50	50	10	62	72
CR202/3/60	60	10	75	120



Crucibles, low form with lid

Academy

Code	Pack Content	Dia. x HT. mm	Capacity ml
C9	432	32 x 19	5
C10	432	43 x 23	15
C11	216	47 x 27	25
C14	216	57 x 36	50
C25	72	60 x 55	85



Crucibles, tall form with lid

Academy

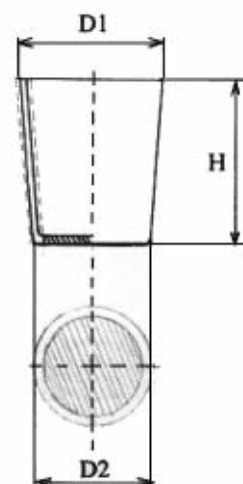
Code	Pack Content	Dia. x HT. mm	Capacity ml
C2	450	34 x 36	18
C4	432	38 x 40	25
C5	432	40 x 46	30
C7	216	43 x 58	50



Crucible, filter with porous bottom

EU Manufacturer

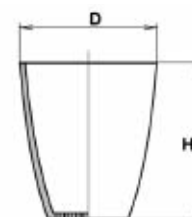
Code	Pack Content	D1 mm	D2 mm	H mm	capacity ml	pore size μ m
CR4/25/6	10	25	20	28	8	6
CR4/25/7	10	25	20	28	8	7
CR4/25/8	10	25	20	28	8	8
CR4/30/6	10	30	24	35	15	6
CR4/30/7	10	30	24	35	15	7
CR4/30/8	10	30	24	35	15	8
CR4/35/6	10	35	28	40	25	6
CR4/35/7	10	35	28	40	25	7
CR4/35/8	10	35	28	40	25	8
CR4/40/6	10	40	30	43	35	6
CR4/40/7	10	40	30	43	35	7
CR4/40/8	10	40	30	43	35	8
CR4/45/6	10	45	36	50	50	6
CR4/45/7	10	45	36	50	50	7
CR4/45/8	10	45	36	50	50	8



Crucible, Gooch

EU Manufacturer

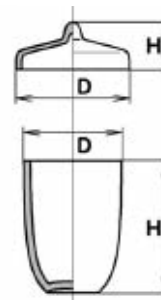
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR234/1	1	10	30	36	17
CR234/3	3	10	35	43	25
CR234/4	4	10	39	49	35
CR234/5	5	10	60	71	120



Crucible for the determination of volatile liquid, with lid

EU Manufacturer

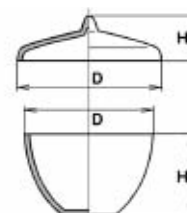
Code	Pack Content	D mm	H mm	Capacity ml
CR98	10	32	42	22
CR098V	-	36	15	-



Crucible, swelling with lid

EU Manufacturer

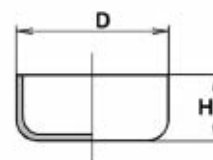
Code	Pack Content	D mm	H mm	Capacity ml
CR301	10	43	27	19
CR0301V	-	50	17	-



Dish, annealing, deep form without spout

EU Manufacturer

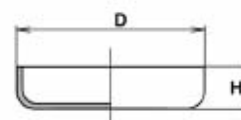
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR203/1	1	10	31	17	8
CR203/2	2	10	42	23	21
CR203/3	3	10	52	27	35
CR203/4	4	10	61	31	64
CR203/5	5	10	72	37	103



Dish, annealing, low form without spout

EU Manufacturer

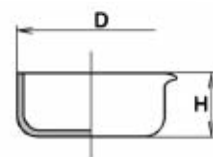
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR204/2	2	10	38	10	7
CR204/3	3	10	44	11	9
CR204/4	4	10	47	13	12
CR204/6	6	10	81	20	70
CR204/8	8	10	122	28	220



Dish, annealing, deep form with spout

EU Manufacturer

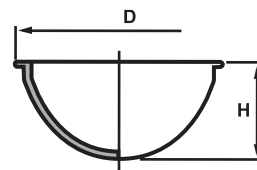
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR205/1	1	10	30	15	8
CR205/2	2	10	40	20	21
CR205/3	3	10	50	25	35
CR205/4	4	10	60	30	64
CR205/5	5	10	70	35	103



Dish, evaporating, medium, round bottom with spout

EU Manufacturer

Code	Size	Pack Content	D mm	H mm	Capacity ml
CR206/0	0	10	40	16	10
CR206/1	1	10	50	20	20
CR206/1a	1a	10	63	25	30
CR206/2	2	10	80	32	60
CR206/2a	2a	10	81	38	107
CR206/3	3	10	94	42	140
CR206/3a	3a	10	100	40	150
CR206/4	4	10	112	47	232
CR206/4a	4a	10	132	55	300
CR206/5	5	10	138	61	400
CR206/6	6	10	160	64	580
CR206/6a	6a	10	170	74	700
CR206/7	7	5	190	73	1135
CR206/8	8	5	202	86	1300
CR206/10a	10a	1	320	140	6000



Dish, evaporating, round bottom with spout

Academy

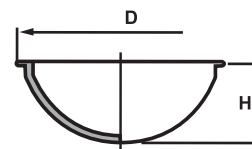
Code	Pack Content	D mm	H mm	Capacity ml
C46	360	60	25	35
C48	360	70	28	50
C50	288	82	32	75
C51	144	90	35	100
C53	96	98	38	125
C55	96	104	40	150
C57	96	110	44	200
C59	96	118	48	250
C63	96	150	58	400



Dish, evaporating, semi depth, round bottom with spout

EU Manufacturer

Code	Size	Pack Content	D mm	H mm	Capacity ml
CR207/1	1	20	72	26	41
CR207/2	2	20	83	27	62
CR207/3	3	20	96	30	110
CR207/4	4	10	110	37	160
CR207/4a	4a	10	117	41	215
CR207/5	5	10	127	42	240
CR207/5a	5a	10	142	46	325
CR207/6	6	10	154	50	420
CR207/7	7	5	170	55	558

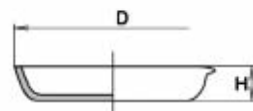


FOR GLASS EVAPORATING DISHES, PLEASE SEE PAGE 37.

Dish, annealing, low form, flat bottom with spout

EU Manufacturer

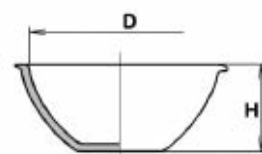
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR208/1	1	20	60	14	20
CR208/2	2	20	75	15	28
CR208/3	3	10	80	20	55
CR208/4	4	10	100	25	110
CR208/5	5	10	130	30	250
CR208/6	6	10	160	40	450



Dish, evaporating, flat bottom with spout

EU Manufacturer

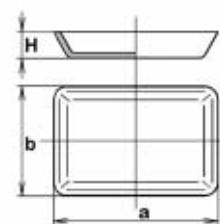
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR274/1	1	20	54	22	22
CR274/1a	1a	20	70	30	62
CR274/2	2	20	86	33	93
CR274/3	3	10	98	40	154
CR274/4	4	10	112	50	265
CR274/5	5	10	126	53	330
CR274/6	6	10	145	55	450
CR274/7	7	10	151	63	620
CR274/8	8	10	169	68	800
CR274/9	9	5	195	74	1000
CR274/10	10	5	254	105	2500



Dish, annealing, rectangular

EU Manufacturer

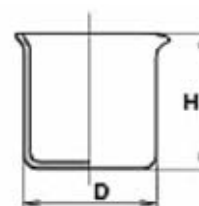
Code	Size	Pack Content	a mm	b mm	h mm	Capacity ml
CR255/1	1	10	50	35	12	6
CR255/2	2	10	62	40	12	13
CR255/2a	2a	10	74	49	14	28
CR255/3	3	10	95	65	14	40



Beaker, low form, with spout

EU Manufacturer

Code	Size	Pack Content	D mm	H mm	Capacity ml
CR227/1	1	3	70	85	275
CR227/2	2	3	80	99	400
CR227/3	3	3	90	116	620
CR227/4	4	2	100	129	860
CR227/5	5	3	123	100	950

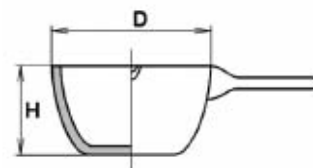


FOR GLASS BEAKERS, PLEASE SEE PAGES 4-6.
FOR PLASTIC BEAKERS, PLEASE SEE PAGE 169.

Dish, evaporating with porcelain handle

EU Manufacturer

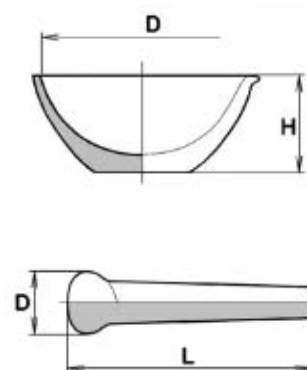
Code	Size	Pack Content	D mm	H mm	Capacity ml
CR209/1	1	10	45	26	22
CR209/2	2	10	67	39	84
CR209/3	3	10	85	49	176
CR209/4	4	10	101	51	270
CR209/5	5	10	120	64	450
CR209/6	6	10	150	86	960



Mortar & Pestles, Unglazed

EU Manufacturer

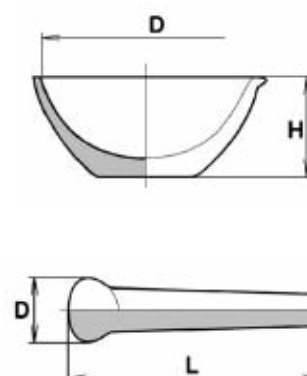
Code	Size	Pack Content	D mm	Mortar H mm	Mortar Cap. ml	Pestle D mm	Pestle L mm
CR211A/2113/0	0	1	51	32	25	14	54
CR211A/2113/1	1	1	56	36	30	24	115
CR211A/2113/1/0	1/0	1	63	41	70	24	115
CR211A/2113/1a	1a	1	76	45	75	24	115
CR211A/2113/2	2	1	83	50	110	30	135
CR211A/2113/2a	2a	1	90	56	160	30	135
CR211A/2113/3	3	1	105	64	220	36	150
CR211A/2113/3a	3a	1	125	71	400	36	150
CR211A/2113/4	4	1	139	82	500	42	175
CR211A/2113/5	5	1	150	90	650	55	210
CR211A/2113/6	6	1	180	104	1000	74	250
CR211A/2113/7	7	1	224	127	2250	85	280
CR211A/2113/8	8	1	268	160	4300	101	370



Mortar & Pestles, Glazed

EU Manufacturer

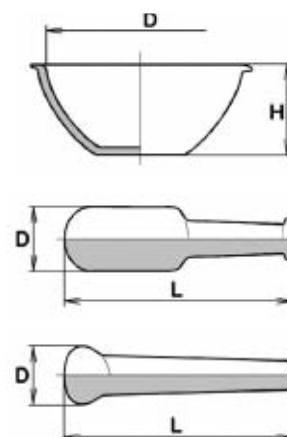
Code	Size	Pack Content	D mm	Mortar H mm	Mortar Cap. ml	Pestle D mm	Pestle L mm
CR211B/2113/0	0	1	51	32	25	14	54
CR211B/2113/1	1	1	56	36	30	24	115
CR211B/2113/1/0	1/0	1	63	41	70	24	115
CR211B/2113/1a	1a	1	76	45	75	24	115
CR211B/2113/2	2	1	83	50	110	30	135
CR211B/2113/2a	2a	1	90	56	160	30	135
CR211B/2113/3	3	1	105	64	220	36	150
CR211B/2113/3a	3a	1	125	71	400	36	150
CR211B/2113/4	4	1	139	82	500	42	175
CR211B/2113/5	5	1	150	90	650	55	210
CR211B/2113/6	6	1	180	104	1000	74	250
CR211B/2113/7	7	1	224	127	2250	85	280
CR211B/2113/8	8	1	268	160	4300	101	370



Mortar & Pestles, with wooden handles, Unglazed

EU Manufacturer

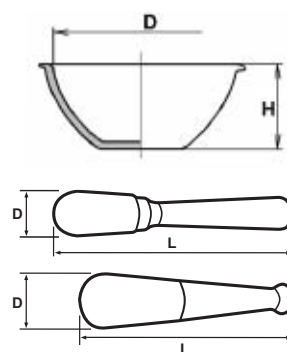
Code	Size	Pack Content	D mm	Mortar H mm	Mortar Cap. ml	Pestle D mm	Pestle L mm
CR829A/830/1	1	5	85	65	150	27	155
CR829A/830/2	2	1	103	75	300	30	180
CR829A/830/3	3	1	121	88	420	33	185
CR829A/830/4	4	1	152	95	730	37	210
CR829A/830/5	5	1	178	110	1200	45	245



Mortar & Pestles, with wooden handles, Glazed

EU Manufacturer

Code	Size	Pack Content	D mm	Mortar H mm	Mortar Cap. ml	Pestle D mm	Pestle L mm
CR829B/830/1	1	5	85	65	150	27	155
CR829B/830/2	2	1	103	75	300	30	180
CR829B/830/3	3	1	121	88	420	33	185
CR829B/830/4	4	1	152	95	730	37	210
CR829B/830/5	5	1	178	110	1200	45	245



Mortars & Pestles, Glazed

Academy

Code	Pack Content	Diameter mm
CI54	1	80
CI55	1	100
CI56	1	130
CI57	1	160

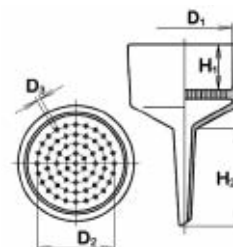


FOR GLASS MORTAR & PESTLES, PLEASE SEE PAGE 100.

Funnel, Buchner

EU Manufacturer

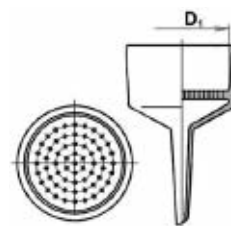
Code	Size	Pack Content	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm
CR237/1	1	10	48	38	1	24	43
CR237/2	2	10	62	45	1	30	64
CR237/3	3	8	77	58	1	35	64
CR237/4	4	6	97	70	2	40	71
CR237/5	5	1	116	95	2	49	83
CR237/6	6	1	130	110	2	52	85
CR237/7	7	1	156	130	2	59	96
CR237/8	8	1	192	160	2	74	117
CR237/9	9	1	248	220	2	90	117
CR237/9a	9a	1	296	270	2	105	130
CR237/10	10	1	334	300	2	120	133



Funnels Buchner

Academy

Code	Pack Content	D1 mm	Total Height (mm)
CI44	72	50	95
CI45	50	70	120
CI46	30	90	140
CI47	30	110	170

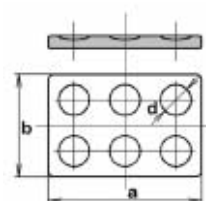


PLEASE ALSO SEE PAGES 48-49 AND 81.

Plate, spotting with cavities

EU Manufacturer

Code	Size	Pack Content	a mm	b mm	d mm	Cavities
CR263/5	5	10	112	81	25	6
CR263/6	6	10	115	91	17	12



Beehive Shelf

Academy

Code	Pack Content	Diameter mm	Normal Height (mm)	Semi-Circle
CI502	1	100	44	R13/26mm dia



Jug, measuring

EU Manufacturer

Code	Size	Pack Content	D mm	H mm	Capacity ml
CR241/1	1	10	71	72	100
CR241/2	2	4	82	96	250
CR241/3	3	3	97	131	500
CR241/4	4	1	127	160	1000

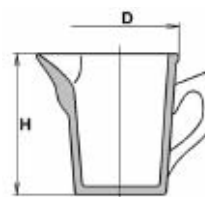
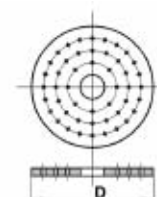


Plate for desiccator acc. DIN

EU Manufacturer

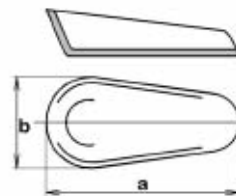
Code	Size Content	Pack mm	D mm
CR138/1	1	10	90
CR138/2	2	10	140
CR138/3	3	5	190
CR138/4	4	5	235
CR138/5	5	5	280



Boat, weighing

EU Manufacturer

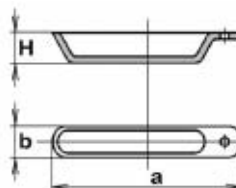
Code	Size	Pack Content	a mm	b mm
CR252/0	0	20	37	17
CR252/1	1	20	53	23
CR252/2	2	20	64	29



Boat, combustion with eyelet

EU Manufacturer

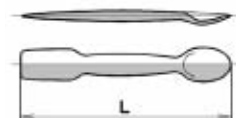
Code	Size	Pack Content	a mm	b mm	Capacity ml
CR214/2	2	50	75	13	8
CR214/3	3	50	105	14	9
CR214/4	4	50	85	13	8
CR214/8	8	50	90	13	8



Stirring spatle with scoop

EU Manufacturer

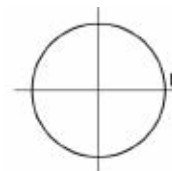
Code	Size	Pack Content	L mm
CR218/1	1	10	103
CR218/1a	1a	10	148
CR218/1b	1b	10	164
CR218/2	2	10	187
CR218/2a	2a	10	200
CR218/3	3	10	250



Ball, milling

EU Manufacturer

Code	D mm	Pack Content
CR321/40	40	1
CR321/50	50	1



Jar, milling

EU Manufacturer

Code	Size	Pack Content	D mm	H mm	Capacity ml
CR224/0	0	1	142	175	1300
CR224/1	1	1	250	210	4000
CR224/2	2	1	250	250	6000

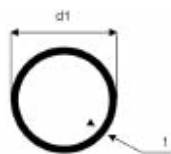


GLASS TUBING, ROD AND PROFILES

ALL TUBING AND ROD IS SUPPLIED IN STANDARD 1500MM LENGTHS, OTHER LENGTHS AVAILABLE ON REQUEST

Borosilicate Glass Tubes

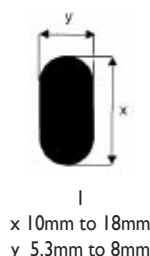
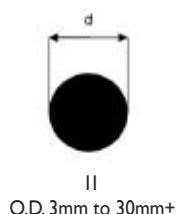
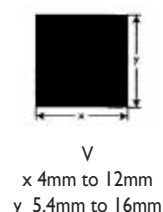
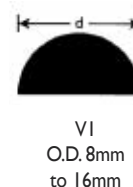
Code	Type
T/	Glass Tube



From 4mm O.D. to 180mm O.D. most sizes produced in light, medium and heavy wall.
For a full specification please contact us for your requirement.

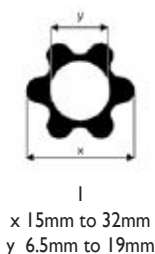
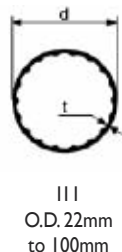
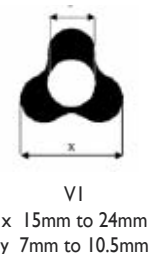
Borosilicate Glass Rods

Code	Type
R/I/	Glass Rods
R/II/	Glass Rods
R/IV/	Glass Rods
R/V/	Glass Rods
R/VI/	Glass Rods



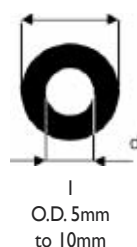
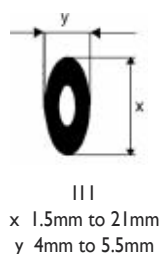
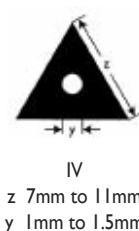
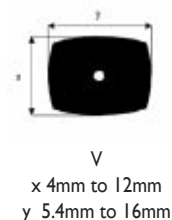
Borosilicate Glass Profiles

Code	Type
TP/I/	Glass Profiles
TP/III/	Glass Profiles
TP/VI/	Glass Profiles
TP/VIII/	Glass Profiles



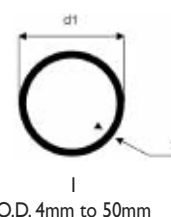
Borosilicate Glass Capillary Tubes

Code	Type
TC/I/	Capillary
TC/III/	Capillary
TC/IV/	Capillary
TC/V/	Capillary



Soda Glass Tubes

Code	Type
ST/	Soda Glass



Available in minimum quantity, please let us know your requirements

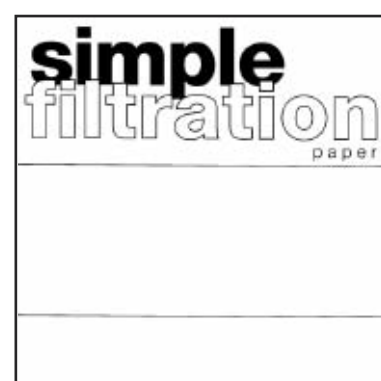
FILTER PAPER

Elementary Filters (student)

Code	Sheets Per Pack	Diameter mm
FP/55	100	55
FP/70	100	70
FP/90	100	90
FP/110	100	110
FP/125	100	125
FP/150	100	150
FP/185	100	185
FP/240	100	240
FP/270	100	270

Simple Filters (high quality student)

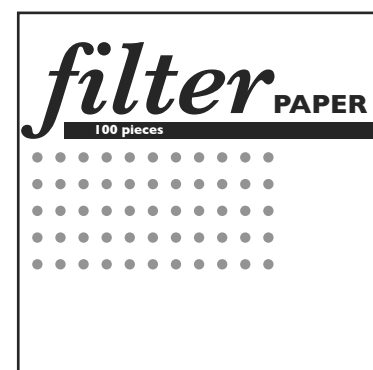
Code	Sheets Per Pack	Diameter mm
FS/90	100	90
FS/110	100	110
FS/125	100	125
FS/150	100	150



Filter Paper 1 (professional)

Suitable for routine laboratory applications.

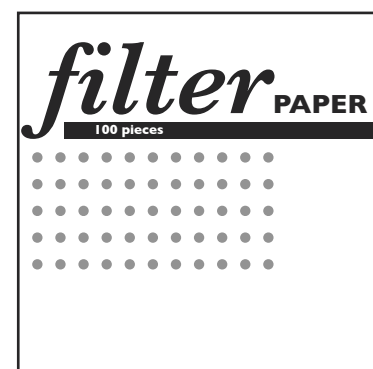
Code	Sheets Per Pack	Diameter mm
F1/KA4/55	100	55
F1/KA4/70	100	70
F1/KA4/90	100	90
F1/KA4/110	100	110
F1/KA4/125	100	125
F1/KA4/150	100	150
F1/KA4/185	100	185



Filter Paper 2 (professional)

Slightly thicker and more retentive than the above paper.

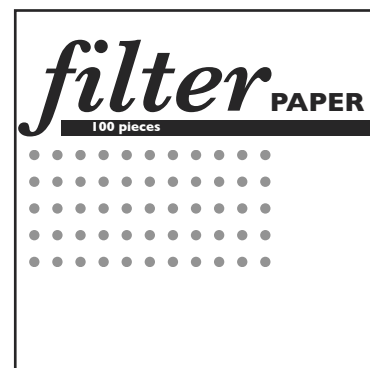
Code	Sheets Per Pack	Diameter mm
F2/KA5/55	100	55
F2/KA5/70	100	70
F2/KA5/90	100	90
F2/KA5/110	100	110
F2/KA5/125	100	125
F2/KA5/150	100	150
F2/KA5/185	100	185



Filter Paper 4 (professional)

For rapid filtration with excellent retention of larger particles.

Code	Sheets Per Pack	Diameter mm
F4/KA2/90	100	90
F4/KA2/110	100	110
F4/KA2/125	100	125
F4/KA2/150	100	150
F4/KA2/185	100	185



Laboratory Bench Protectors

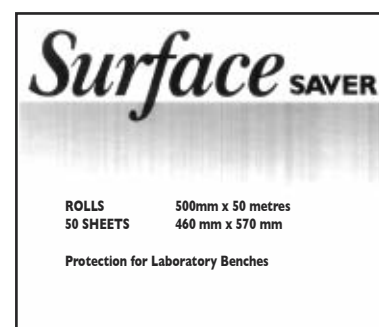
A specially designed absorbent paper – laminated on one side to a layer of polyethylene – for protecting surfaces.

Surface Saver

Laboratory bench protectors

Code	Type	Size
F/SS/S4657	Surface saver sheets	460 mm x 570mm
F/SS/R4650	Surface saver rolls	500mm x 50 metres

A practical way of saving finishes on benches, tables, shelves and cabinets. Convenient also for impact protection of vulnerable surfaces, for lining animal cages, for humidity control and many other purposes.



Chromatography Paper

Grade I

ROLLS

Code	Width mm	Length metres
F/CP/R10100	10	100
F/CP/R20100	20	100
F/CP/R30100	30	100
F/CP/R40100	40	100
F/CP/R50100	50	100
F/CP/R100100	100	100
F/CP/R150100	150	100

SHEETS (PACK 100)

Code	Width mm	Length mm
F/CP/S100300	300	100
F/CP/S200200	200	200
F/CP/S250250	250	250

SLOTTED

Code	Width mm	Length mm
F/CP/SS110213	213	110

KIMBLE CHASE

Technical information

Glass properties

IDENTIFICATION OF KIMBLE GLASSES

Information as to the type of glass from which a specific piece of apparatus is made is often required. The purpose may be to determine the glass with the best possible chemical durability, or the glassblower may wish to seal onto existing pieces of apparatus or create an entirely new piece, composed of several other parts. There are three relatively easy tests to determine glass type within your own laboratory.

Density Test

The densities of the Kimble laboratory glasses are:

KG-33 2.23 g/cm³

N-51A 2.33 g/cm³

KG-35 2.41 g/cm³

KG-35 may be differentiated from N51A by the seam line on the surface of the item, and identifying marks on the bottom from the blow moulding process. N51A will have neither of these characteristics. The other glasses are readily identified by the sink/float method. Small pieces of the glass or glasses to be checked are dropped into two liquids:

A) 2.30 specific gravity — (Mix 354 ml of triethylene glycol and 646 ml of s-tetrabromoethane.)

B) 2.44 specific gravity — (Mix 264 ml of triethylene glycol and 736 ml of s-tetrabromoethane.)

Liquid	Float	Sink
2.30	KG-33	N-51A (also KG-35)
2.44	KG-33 N-51A (also KG-35)	

Before using these liquids, their material safety data sheets should be consulted for proper handling precautions.

(The liquids should be stored in glass stoppered containers, preferably amber, at room temperature. Spillage should be avoided because the liquids damage painted surfaces.)

Differential Expansion (Dual Fiber) Test

Differences in the linear coefficients of expansion of the laboratory glasses may be used as a means of identification by lampworking; drawing a fiber with a standard known glass and observing the absence or presence of a curvature in the fiber.

PHYSICAL PROPERTIES OF GLASS

Glass is an inorganic product of fusion that has cooled to a rigid condition without crystallizing and, therefore, has no melting point as such. There are, however, four temperatures that are of interest to the glassblower. They are:

1. The Working Point — the temperature at which glass has a viscosity of 10⁴ poises. At this temperature, glass is soft enough for most lampworking or sealing operations.

2. The Softening Point — the temperature at which glass has a viscosity of 10^{7.6} poises. In this temperature range glass will deform noticeably under its own weight: ASTM C 338.

3. The Annealing Point — the temperature at which the internal stress caused by rapid cooling from lampworking or forming temperatures may be substantially removed in a matter of minutes. It is determined by measuring the elongation rate versus temperature of a fiber of glass under conditions prescribed by ASTM Designation C 336. The values given herein are typical for production glasses.

4. The Strain Point — the temperature at which the internal strain in a glass is substantially relieved only after a matter of hours and not at a commercially desirable rate. It is determined by extrapolation of annealing point data for fiber elongation: ASTM C 336.

Table 2

Physical Properties of KG-33 and N-51A Glasses

	KG-33	N-51A
Working Point	1255°C	1140°C
Strain Point	513°C	530°C
Annealing Point	565°C	570°C
Softening Point	827°C	785°C
Linear Coefficient of Expansion (from 0 to 300°C), in./in./°C	32×10 ⁻⁷	55×10 ⁻⁷
Density grams per cm ³	2.22	2.33
Refractive Index—Sodium D line (.5893 microns)	1.47	1.49
Visible Light Transmission, 2 mm thickness	92%	91%
Specific Heat (in g. cal. per g. deg.)	0.204	0.204
	(25 to 175°C)	(25 to 175°C)
Thermal Conductivity (in cal/cm/cm ² /sec/°C)	0.0027	0.0026

Care and Use

CLEANING METHODS

Care should be exercised when using most cleaning solutions as they can cause skin irritations or severe burns on contact. Dilute solutions become concentrated as the water evaporates; therefore, always flush the exposed area immediately with large quantities of water.

The list of methods given here is by no means complete, but offers a fairly wide variety and should cover all the usual contaminants, as well as the more important special cases.

Frequently it is desirable to give glassware a preliminary rinse or soak with organic solvent to remove grease, followed by a water rinse. The rinsing with water must be done thoroughly if acid will be used later to clean the glassware.

Unless autoclaving is necessary, glassware should be cleaned as soon as possible after use to avoid setting and caking of residues. Pipettes, for example, may be placed in a convenient jar containing a weak antiseptic solution, immediately after use.

Autoclaving is necessary to disinfect glassware that may have been used to contain potentially dangerous biological fluids.

There is a wide variety of cleaning agents available that will remove surface contaminants such as silicone and other organic and biological residues, blood residues and other contaminants that may interfere with trace analyses. These cleaners are available in biodegradable, phosphate-free and chromium-free formulations if desired and can be obtained from laboratory supply houses.

NOTE: If wiping or other mechanical cleaning action is necessary, it should be done gently using non-abrasive cleaners and wiping materials. The use of abrasive materials will damage the glass surface, degrading its inherent strength.

There are some specific contaminants that may require specialized cleaning methods, and some are given here:

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

2. Iron stains. Use a solution containing on part hydrochloric acid and one part water.

3. Bacteriological material. Glassware should be soaked in a suitable disinfectant solution or steam autoclaved followed by cleaning with a suitable agent.

CAUTIONS: Before using any cleaning solution, refer to its Material Safety Data Sheet for precautions to be observed during use. Some of the cleaning materials used may leave trace residue unless rinsing process is carried out thoroughly. While such traces may not be harmful if the object of cleaning is to prepare the glassware for calibration, they can give trouble in certain laboratory operations. When glassware is to be calibrated, the final rinsings must be distilled water.

If an article is to be dried after cleaning, as is necessary for all vessels marked "To Contain", ethyl alcohol or acetone (American Chemical Society Specification) may be used. Drying may be hastened by blowing clean, dry air into the vessel (or sucking the air through the vessel).

Efficient air filters must be provided to remove any particles of oil or dirt from compressed air. Drying should be done in a fume hood or cupboard.

GLASSWARE SAFETY

You play by common, ordinary, everyday rules, the kinds of things you'd do naturally if you just took time to think about them:

1. Don't get cut – it hurts you and your productivity.
2. Don't drop glassware – avoid the bruises that lead to breakage.
3. Don't use chipped or broken glassware – it's dangerous and breaks more readily.
4. Don't mouth pipette – you could inhale a toxic substance, burn your mouth, or cut your lip.
5. Don't leave pipetts sticking out of beakers or flasks – an invitation for an accident.
6. Insert tubing carefully. Use a protective towel for your hand and lubricate the tubing.
7. Dispose of broken glassware in a special receptacle.
8. Carry large containers carefully, using a bottle carrier.
9. Clean and rinse glassware very well with deionized water, then let it drain dry on a clean, lint-free towel.

To back up the rules, you need a formal laboratory safety program. It begins with a written safety policy, a safety committee, and regular safety inspections. That way, you can investigate accidents thoroughly, keep a record and analysis of them, and promote safety awareness all the time. It could lead you to the best safety record ever.

CLEANLINESS OF APPARATUS

The usual criterion of cleanliness of glass apparatus is uniform wetting of the surface by distilled water. Certain contaminants, especially grease, adhering to the walls prevent them from being uniformly wetted, and there is a tendency for water to collect into drops.

Imperfect wetting causes irregularities in capacity of volumetric glassware by distorting the meniscus, and also by affecting the volume of the residue adhering to the walls after emptying instruments calibrated to deliver the indicated volume.

Even when the surface of the vessel is uniformly wetted, variations in the apparent capacity still may occur, due to contamination of the liquid surface by minute quantities of fatty or other organic substances which produce a change in surface tension affecting the shape of the meniscus. The cleaning, rinsing and drying, therefore, must be carried out in such a way as to prevent this from happening.

The choice of the procedure to be used in cleaning glassware depends on the nature of the contaminant. In many cases special reagents or methods must be used to remove a particular substance. Before listing the more important methods, it is desirable to make a few general statements.

Glass

Glasses used in chemical apparatus have excellent resistance to acids, except hydrofluoric. Strong alkaline solutions, such as hot caustic solutions, will attack any glass if contact is prolonged. This is true even though a particular glass may not exhibit any visible effect, due to the solubility of the reaction products. Dilute detergent solutions, up to about 2% strength, will have no serious effect on the glass, unless the glass is exposed for unnecessarily long periods or the detergent is allowed to dry on the glass.

Coloured Graduations

The scales and inscriptions of many items of Kimble glassware are coloured by staining a thin layer of the glass. Since the coloured portion is of the same composition as the glass object, the resistance to chemical attack is the same as that of the rest of the glass. Here, the colour can be removed only by dissolving a layer of glass from the surface.

Some Kimble volumetric glassware has fused on, ceramic enamel printed lines and inscriptions. These fused-on enamels are quite resistant to acids and alkalis. In most cases they should last as long as the piece of apparatus if cared for properly. However, by their nature, they cannot be as resistant as the ware to which they adhere.

Consequently, the graduated lines should not be subjected to prolonged immersion in acids or alkalis. Whenever the lines are wetted by reagents, they should be rinsed as soon as conveniently possible.

Safety Precautions

With many pieces of glassware, it is necessary or desirable to fill by suction when cleaning. Do not suck up acid or other cleaners by mouth. In fact, do not pipette by mouth at all. Use hand held, manual or electronic pipetting aids.

Abrasives

Do not use abrasives on glassware, particularly volumetric ware. The surface will be marred in time, and the resultant scratches may prevent proper drainage or act as resting places for adulterants which will be difficult to remove.

Water for Rinsing

When preparing a piece of glassware for calibration, rinsing with tap water should be followed by a thorough rinsing with distilled water. Sufficient material may be deposited on the surface by tap water to cause erratic results, particularly with small items, even though water wets the surface uniformly. Even in ordinary cleaning processes, the use of deionized water is recommended.

Adherent Organic Residues

Never attempt to remove such residues by the application of direct heat. Permanent strains may be introduced and, what is more important, the calibration of volumetric apparatus may be changed.

GROUND-GLASS SURFACES

Ground-glass joints and stopcocks should never be used when dry. Although groundglass surfaces seal well without the use of lubricants, it is advisable to lubricate them to prevent sticking and breakage. Ground surfaces must be cleaned prior to lubrication—dust, dirt and particulate matter may score the surface and cause leakage.

Different lubricants are used for these operating conditions:

- Silicone grease—for high temperature and high vacuum
- Glycerin—for long term reflux or extraction
- Hydrocarbon grease—for general laboratory use

Lubricating Ground-Glass Joints

1. Lubricate joints that must be airtight and when glassware contains strong alkaline solutions.
2. Lubricate only the upper part of the inner joint. A properly lubricated joint appears clear, without striations.
3. Do not allow grease to come in contact with vapor or liquid and cause contamination.

Lubricating Stopcocks

Spread two circular bands of grease around the stopcock plug. Insert the plug into the barrel and twist several times until the assembly is completely transparent. Be careful not to use too much lubricant or the bore will become plugged.

HI-VAC™ PTFE VALVES

1. Valves are assembled with Viton® O-rings, suitable for use with oxidizing and NONPOLAR compounds at temperatures from -23°C to 204°C.
2. All elastomers have outgassing rates higher than glass. Long pump-down periods will typically reduce these rates by a factor of ten. Vacuum systems using PTFE valves normally operate at pressures up to 10⁻⁶ mm Hg. Heating of this valve during pumpdown with an air heat gun will improve ultimate vacuum.
3. O-rings should be lubricated with a thin film of vacuum grease to prolong life and reduce leakage by allowing the o-ring to slip easily along the tube. Excess grease should be thoroughly wiped off.
4. Any leakage across the o-ring stem seal occurs mainly on the inward movement. Turning the stem in and out during pump-down helps evacuate the space between the two stem o-rings. One o-ring may be removed if preferred, improving performance under some conditions.
5. O-rings may be removed from the stem by pushing the o-ring into the groove with thumb and forefinger, distorting ring sufficiently to form a small loop which can be "picked up" and the o-ring pulled off of the stem without damaging surfaces.

©Reg. T.M. E.I. DuPont Co.

STOPCOCKS WITH PLUGS MADE OF POLYTETRAFLUOROETHYLENE (PTFE)

Kimble stopcock plugs of PTFE are made of the most chemically inert material in laboratory use today. Only a few chemicals have any effect on PTFE and these only at elevated temperatures and pressures. The material is

extremely tough, durable and heat resistant, with practically zero moisture absorption. It remains non-brittle even at sub-zero temperatures.

To obtain maximum performance from your stopcock plugs of PTFE observe the following hints:

1. To clean new plugs, carefully disassemble, lift plug free of glass barrel, and rinse all parts of plug and barrel in acetone. After drying, reassemble and the stopcock is ready for use. (Do not use abrasive materials to clean either plug or barrel at any time.)
2. The washer of PTFE must always be placed adjacent to the end of the glass barrel, to secure minimal friction when turning. When properly tightened, the plug will be slightly more resistant to turning than a lubricated glass plug.
3. Plugs of PTFE can be easily scored around the bore if rotated when solid particles are lodged between plug and barrel, or project beyond mating edges of glass parts. Once scored, the plug may leak.
4. Do not use a stopcock plug of PTFE on a vessel used for long time storage of liquids known to attack glass, since the surface of the barrel may become roughened, and leakage may occur between the plug and barrel causing a potential safety hazard.
5. If plugs of PTFE are used with liquids corrosive to glass, such as alkalis, rinse the stopcock thoroughly with water after use. Do not allow the liquid to evaporate. The concentrated solution remaining will attack the glass surface: and the eventual solids may also mar the surface of PTFE if the plug is then rotated.
6. When not in use, store in a dust-free area with plug loosened within the glass barrel. Although tough and unbreakable, PTFE is softer than glass and has a tendency to conform to the glass surface, including eventual expansion into the hollow parts of the barrel.

RECOMMENDATIONS

A. TO AVOID SERIOUS AND PERSONAL INJURY, AVOID ABRASIONS -

An abrasion reduces the strength of glass, making it more susceptible to breakage under impact and/or thermal shock. Thermal shock may result from sudden changes in temperature or use on either a burner or hot plate.

Serious injuries could result if breakage occurs while glass holds heated and/or corrosive liquid.

B. RECOMMENDED GLASSWARE CLEANING AND HANDLING PROCEDURES PROPER CLEANING PROCEDURE

1. Washing machines may be used. Support racks on the washer must be well maintained. The support pins should be coated with a nonabrasive material to prevent metal to glass contact and scratching.
2. For manual washing, use only plastic core brushes that have soft non-abrasive bristles. Soft, clean sponges or other wiping materials may be used. **DO NOT USE THESE BRUSHES OR WIPING MATERIALS WITH ABRASIVE CLEANERS.**
Keep them clean. Scotch Brite and similar scouring pads will scratch glass and should not be used.
3. Inspect the glassware before each use and discard if scratched on inner surfaces, chipped, cracked or damaged in any way.
4. Many commercial glass cleaners are available. Follow the manufacturer's directions for the use of these products since some are corrosive and can damage the glass.
5. Organic solvents are acceptable cleaning agents when conditions warrant their use.

IMPROPER CLEANING PROCEDURE:

1. Do not place metal or other hard objects, such as spatulas, glass stirring rods, or brushes with metal parts, inside the glassware. This will scratch the glass and cause eventual breakage and injury.
2. Do not use strong alkaline products and hydrofluoric acid as cleaning agents, they are glass dissolvers and can damage the glassware and eventually cause breakage which can result in injury.
3. Do not use any abrasive cleansers, including soft cleansers (i.e. Ajax, Comet, Old Dutch, Soft Scrub, etc.), as these will scratch the glass and cause eventual breakage and injury.
4. Do not place hands inside glassware while wearing any jewellery, particularly diamond rings, as these will score the inside of the

glassware and eventually cause breakage and injury.

5. Do not heat glassware to temperatures (>800°F) needed to burn out carbon residues. This will result in the introduction of permanent stresses in the glass that will eventually cause the glassware to break resulting in possible injury.
- C. **AVOID IMPACT** - Glass will break as a result of impact. Use care when handling to avoid impacting hard objects, such as spigots, other glassware, counter tops, etc.
- D. **HEATING GLASSWARE**
 1. Use wire gauze when heating over open flame.
 2. Use either low or medium heat settings when using a hot plate. High hot plate settings will cause excessive localized heating of the glassware and will eventually cause breakage and possible injury.
3. Do not heat glassware designated as heavy duty unless recommended by manufacturer. Even though these items have added mechanical strength, they are more susceptible to breakage from thermal shock when heated.
4. Do not allow the contents of the container to boil dry as this may induce permanent stresses that will eventually cause breakage. Discard containers that have been boiled dry. **DO NOT** evacuate or pressurize unless recommended in the current Kimble Chase Laboratory catalogue.
- E. **CENTRIFUGE TUBES** – RCF values can be significantly reduced if the glass tubes have been scratched or otherwise physically abused resulting in surface damage and lowered glass strength. Refer to the current Kimble Chase Laboratory catalogue.

TYPE III SODA GLASS

Chemical composition by %

SiO ₂	72.3
Na ₂ O	13.4
B ₂ O ₃	0.3
Al ₂ O ₃	2.7
CaO	10.3
K ₂ O	0.5
BaO	0.2
Fe ₂ O ₃	0.04
MgO	0.3
Straining Point	507°C
Annealing Point	546°C
Softening Point	727°C
Linear Coefficient of Expansion	88x10 ⁻⁷

Type III soda-lime glass is acceptable for storage of some dry powders and liquid formulations that prove to be insensitive to alkali.

The glass should not be autoclaved but can be used in dry heat sterilization

KIMBLE TRADE MARKS AND GLASS TYPES

KIMAX

KIMAX is a trademark identifying all ware including tubing rod, made of Kimble borosilicate glass, produced and sold by Kimble Glass, Inc. When used alone KIMAX signifies that the glass is KG-33; when the KIMAX is followed by a suffix the glass used is one of the other Kimble borosilicate glasses, e.g. KIMBLE-51 means that the glass is N-51A or KIMAX-35 means that the glass is KG-35. Physical properties are referenced in this catalogue on page 127. KIMAX (Class A) graduated apparatus is precision grade, include the apparatus described in ANSI/ASTM E694, Standard Specification for volumetric Ware and many other pieces of apparatus made if similar rigid requirements for accuracy and design. KIMAX graduated glassware is intended for general use wherever highly accurate laboratory work is carried out. Tolerances are generally twice those of Class A ware.

KIMBLE

KIMBLE is the trademark identifying scientific glassware. The trademark KIMBLE is also used for scientific laboratory ware manufactured from

plastic such as polystyrene and polypropylene. Kimble Borosilicate Glass is KG-33

KIM-BULK

KIM-BULK is the trademark identifying the bulk packaging for glass and plastic vials.

KIMFLOW

KIMFLOW is the trademark identifying Kimble sintered discs etc and glassware with sintered shapes an integral part of the piece of apparatus.

N-51A

N-51A is the trademark identifying glass that belongs to the family of Kimble borosilicate glasses. It possesses the best all-around chemical durability of available commercial glasses. Due to a comparative low coefficient of expansion, N-51A also possesses good resistance to heat shock. N-51A meets the requirements for Type I Class B glass of ASTM E438.

RAY-SORB

RAY-SORB is the trademark identifying red-coloured KIMAX glassware for use when contents must be protected from light of wavelength below the 500mu (millimicron) range. KG-33 glass. Transmission characteristics: 0 percent at 300 mu, 1 percent at 400 mu and 4 percent at 500 mu.

KONTES

Kontes products are made from KG-33 Borosilicate Glass unless otherwise stated.

Kontes Trademarks

AIRLESS-WARE	products for the manipulation of air sensitive and moisture sensitive compounds
BEVEL-SEAL	a vacuum tight o-ring seal against the bevelled edge of threaded glass
CHROMAFLEX	chromatographic equipment
DISPOSAFLEX	disposable column and rack system
DUAL	tissue grinder with both conical and cylindrical surfaces
FLEX-COLUMN	economy chromatography column
HI-VAC	high vacuum valves and vacuum products
KEM-KIT	a selection of basic small scale glassware in a reusable storage case
KOOL-GRIP	heat insulating cork jackets that are permanently bonded to borosilicate glassware
MICROFLEX	microscale kits and components, vials and accessories
PELLET PESTLE	disposable mixer for microtubes
ULTRA-WARE	Filtration products for microbiology and HPLC solvent clean-up and handling

SIMAX GLASS

Technical information

CHEMICAL COMPOSITION

Main weights in percentage by weight

SiO ₂	B ₂ O ₃	Na ₂ O + K ₂ O	Al ₂ O ₃
80.6	13	4	2.4
Resistance			
Water at 98°C	(pursuant to ISO 719)		HGB I
Water at 121°C	(pursuant to ISO 720)		HGB I
Acids	(pursuant to ISO 1776)		I
Effect of water solution of alkali mixture	(pursuant to ISO 695)		A2 or better

The SIMAX® borosilicate glass 3.3 is highly resistant to effects of water, neutral and acid solutions, strong acids and their mixtures, chlorine, bromine, iodine, and organic compounds. Even in long-term effects and at temperatures above 100 °C, this glass outstrips, with its chemical durability, most metals and other raw materials.

Due to effects of water and acids, the glass releases only small amounts of mostly univalent ions. At the same time, a very thin permeable siliceous gel layer is formed on the glass surface, which ensures resistance to further effects. Hydrogen fluoride, hot phosphoric acid, and alkaline solutions attack the glass surface, depending on concentration and temperature.

The SIMAX®: Physical properties

Physical Data

Mean linear and thermal coefficient of expansion	
α (20 °C; 300 °C) according to ISO 7991	3.3 × 10 ⁻⁶ K ⁻¹
Transformation temperature T _g	525 °C
Glass temperature at 10 ¹³ (upper chilling temperature)	560 °C
Viscosity η in dPa . s:	
10 ^{7.6} (softening temperature)	825 °C
10 ⁴ (working range)	1 260 °C
Highest short-term admissible working range	500 °C
Density ρ at 20 °C	2.23 g . cm ⁻³
Modulus of elasticity E (Young modulus)	64 × 10 ³ MPa
Poisson ratio μ	0.20
Thermal conductivity λ (20 to 100 °C)	1.2 W.m ⁻¹ K ⁻¹
Temperature for specific electric resistance 108 Ω.cm (DIN 52326) τ _{k100}	250 °C
Logarithm of electric bulk resistivity (Ω . cm) at 250 degrees Centigrade	8
Logarithm of electric bulk resistivity (Ω . cm) at 350 degrees Centigrade	6.5
Dielectric properties (1 MHz, 25 degrees Centigrade)	
Permittivity ε	4.6
Loss factor tan δ	37.10 ⁻⁴

MECHANICAL STABILITY OF SIMAX GLASS

Mechanical properties and service life of products made of the SIMAX glass are largely done by the stage of their finish, especially in their entirety, i.e. depth failure on surface in manipulation and secondary thermal treatment.

Glass mass scratch hardness of 6° of Mohs scale

Admissible tensile stress	3.5 MPa
Admissible bending stress	7.0 Mpa
Admissible compressive stress	100.0Mpa

THERMAL PROPERTIES OF SIMAX GLASS

High resistance of product made of the SIMAX glass to sudden change in temperature – heat stability – is done by low coefficient of linear thermal expansion, relatively low modulus of tensile elasticity, as well as relatively high thermal conductivity resulting in a lower thermal gradient in the product wall.

On cooling and heating the glass product, an undesirable internal stress arises. Breakage of the glass product due to temperature change is caused by tensile stress on the product surface arising due to action of linear dilatability of the glass on quick cooling from the product surface. With a mechanical failure in the product surface, the heat stability can be significantly reduced.

Wall thickness (in mm)	Resistance to heat shock (0 °C)
1	303
3	175
5	136
6	124
7	115
10	96

The manufacturer may perform an exact calculation, where necessary.

COOLING OF SIMAX GLASS

Cooling represents a thermal process the purpose of which is keeping from formation of undesirable and inadmissibly high thermal stress in the glass which would reduce the product resistance, and/or removing of stress already arisen.

Cooling cycle comprises three stages:

- **Temperature increase** (product heating) with heating rate from the inlet temperature to the upper cooling value.
- **Dwell** (pause, tempering, stabilization) of products at upper cooling temperature for certain time when the temperature differences in the product must be equalized, including stress reduction to an admissible limit.
- **Temperature decrease** (cooling and additional cooling) of the product with cooling rate from the upper to the lower cooling value (this stage is important as the permanent stress can arise), and from the lower cooling temperature to the final value or ambient temperature (important for subsequent practical manipulation with the product).

Concrete cooling cycle is specified in the table.

TEMPERATURE RANGE

Maximum wall thickness	Rise	Dwell	Temperature Drop °C		
	20-550°C	560°C	560-490	490-440	440-40
3mm	140°C/min	5°C/min	14°C/min	28°C/min	140°C/min
6mm	30°C/min	10°C/min	3°C/min	6°C/min	30°C/min
9mm	15°C/min	18°C/min	1.5°C/min	3°C/min	15°C/min
12mm	8°C/min	30°C/min	0.6°C/min	1.6°C/min	8°C/min

OPTICAL PROPERTIES OF SIMAX GLASS

The Glass SIMAX is transparent and clear; it does not show substantial absorption in visible spectrum.

Permeability of ultra-violet rays enables the products made of the SIMAX glass to be used for photochemical reactions.

Refractive index (λ = 587.6 nm) n _d	1.473
Photoelastic constant (DIN 52314) K	4.0.10 ⁻⁶ mm ² .N ⁻¹

ELECTRICAL PROPERTIES OF SIMAX GLASS

At usual temperatures, the SIMAX glass is a non-conducting material – it is an insulant.

- Specific resistance in damp-proof medium (20°C) higher than 10¹³-10¹⁵ Ω.cm
- Permittivity ε (20°C, 1 MHz) 4.6
- Loss angle tg δ (20°C, 1 MHz) 4.9x10⁻³

Dielectric losses increase sharply with rising temperature and they change with frequency.

PLASTIC USED WITH LABORATORY GLASS

Materials for laboratory glassware complements

Type	Name	Temperature resistance (°C)
PE	Polyethylene	-40 to +80
PP	Polypropylene	-40 to +140
PBT	Poly(butylene terephthalate)	-45 to +180
PTFE	Polytetrafluoroethylene	-200 to +260
ETFE	Ethylene-tetrafluoroethylene	-100 to +180
VMQ	Silicone Rubber	-50 to +230
NR	Food rubber	-40 to +70
FKM	Fluorinated rubber-Viton	-20 to +200
N.K.	Natural cork	-20 to +200

Chemical resistance of materials

Substance groups + 20°C	PE	PP	PBT	PTFE	ETFE	VMQ	NR	FKM	N.K.
Alcohols	++	++	++	++	++	+	+	-	+
Aldehydes	+	+	++	++	++	+	+	-	+
Alkaline	++	++	+/-	++	++	-	+	-	+
Esters	+	+	+	++	++	-	+	-	-
Ethers	-	-	+	++	++	-	-	-	+
Aliphatic hydrocarbons	-	++	++/+	++	++	-	-	++	-
Aromatic hydrocarbons	-	+	++/+	++	++	-	-	++	-
Halogenated hydrocarbons	-	+	+	++	++	-	-	++	-
Ketones	+	+	+/-	++	++	-	-	++	-
Diluted or weak acid	++	++	++	++	++	-	+	++	+
Strong acid	++	++	+	++	++	-	-	++	-
Oxidizing acids	-	+	-	++	++	-	-	+	-

++ = Very good resistance

+

- = Low resistance

PRINCIPLES OF USING SIMAX LABORATORY GLASSWARE

The laboratory glassware can be cleaned either manually or in a laboratory dish washer using the usual cleaning and disinfecting agents. It is recommended to wash the glass before the first use.

Laboratory glassware which came into contact with infectious substances should be cleaned and sterilized with hot air or steam. In this way, burning-on of impurities and damaging of glass by possibly adhered chemicals is prevented.

A) Manual cleaning:

- Laboratory glassware should be wiped and washed with a cloth or a sponge using a cleaning solution.
- Do not use abrasive washing agents as they can scratch the glass.
- Avoid extended exposition to alkaline media at temperatures above 70 °C as printing can be destroyed.

B) Washing in dishwashers:

Washing of laboratory glassware in dishwashers is more considerate than manual cleaning. The glass gets into contact with a cleaning solution for a relatively short time only during the phase of rinsing when the solution is sprayed on the glass surface.

- When inserting the glassware into a dish washer care should be taken to prevent mutual.

SAFETY INSTRUCTIONS FOR USER

- Never expose the laboratory glassware to sudden changes in temperature. Prevent taking hot glassware out of a drier and putting it on a cold or wet laboratory table. The warning is particularly applicable to a thick-walled glassware, such as suction flasks or desiccators.
- Before each evacuation or pressure stress of glass flasks, make visual inspection of a faultless state (for heavy scratches, impacts, etc.). Damaged glass flasks must not be used for works under pressure or vacuum.
- The laboratory glassware under pressure or vacuum should be handled with care (e.g. with suction flasks, desiccators).
- Do not expose the glassware to sudden changes in pressure.

- To prevent developing stress in the glass do not heat up glass flasks under vacuum or pressure from one side or with an open flame.
- The laboratory glassware with flat bottom (e.g. Erlenmeyer flasks, flasks with flat bottom) should not be exposed to pressure stress.

LABORATORY BOTTLES SIMAX

Laboratory bottles are made of the borosilicate glass 3.3. featuring excellent chemical properties and a high thermal resistance. They are chemically resistant and stable. After completion with a plastic pouring ring, they enable liquids to be easily poured out. All bottles of the volume 100 ml and higher have the same thread size, the screw caps can be mutually interchanged. The bottle, pouring ring, and screw caps can be sterilized.

Handling instructions:

- Freezing of substances
 - Freeze the bottle in a skew position (about 45 °) and filled up to max. 3/4 (volume expansion).
 - Temperature limit: -40 °C as plastic lids and pouring rings do not resist to lower temperatures.
- Thawing of substances
 - Thawing of a frozen material can be carried out by submerging the bottle into a liquid bath (temperature difference should not exceed 100 °C). The frozen material will thus be heated up uniformly from all sides and the bottle will not be damaged. Thawing can also be accomplished slowly from the top so that the surface is first liquefied and the material can expand.
- Sterilization
 - During sterilization, the screw cap can only lightly be fitted on the bottle (screwed with max. one rotation). Pressures are not equalized when the bottle is closed. The pressure difference created in this way can result in the bottle breakage.
- Pressure resistance
 - The laboratory bottles are not suitable for works under pressure or vacuum.

SIMAX® TUBES AND CAPILLARIES PRESSURE RESISTANCE

Pressure resistance (p) calculation with a know wall thickness (Wt) and a given outside diameter (OD):

$$p = \frac{Wt \cdot 20 \cdot K/S}{OD - Wt}$$

Wall thickness (Wt) calculation with a given pressure resistance (p) and outside diameter (OD):

$$Wt = \frac{OD \cdot p}{20 \cdot K/S + p}$$

OD=outside diameter in mm

P=pressure resistance in bar

Wt=wall thickness in mm

K/S=admissible in N. mm⁻²

SIMAX® borosilicate glass 3.3 admissible stress: K/S = 7N. mm⁻² according to CSN EN 1595 Standard:

Pressure Vessels Made of Borosilicate Glass 3.3; General Principles for Construction, Manufacturing and testing.

Pressure resistance (p) affects, among others, the following:

- Thermal difference between the inside and outside walls
- Surface quality
- Working the ends
- Compliance with assembling conditions in accordance with pressure vessels regulations
- Tube length

The manufacturer may perform an exact calculation, where necessary.

In addition, the following should be taken into consideration:

- CSN EN 1595:1998 Pressure Vessel Made of Borosilicate Glass 3.3 General Principles for Construction, Manufacturing and Testing.
- CSN EN 12585:199 Glass Equipment, pipes and Pipe Fitting. Piping and

Pipe Fitting with a Nominal Diameter of DN 15 to 1000. Compatibility and Interchangeability.

RESISTANCE TO TEMPERATURE VARIATION

Resistance to temperature variations corresponds according to ISO 718 to the thermal difference between the hot test piece and the cold water bath (room temperature), where the first cracks appear on 50 per cent of samples, when these will have been quickly dipped into the water bath. Resistance to temperature variations of tubes, capillaries and bars depends on the wall thickness, shape and size of the chilled surface, surface condition, tension and final working. Uneven, flash heating or fast chilling may easily lead to cracking due to the resulting tension. It is recommendable not to exceed the thermal difference of 120 degrees Centigrade. At thicker walls, this thermal difference is limited to lower values. As for examples of resistance to temperature variations of tubes and bars made of SIMAX® borosilicate glass 3.3 some values measured have been specified hereinafter. These values may be considered indicators, because considerable differences may exist among parts of the same size.

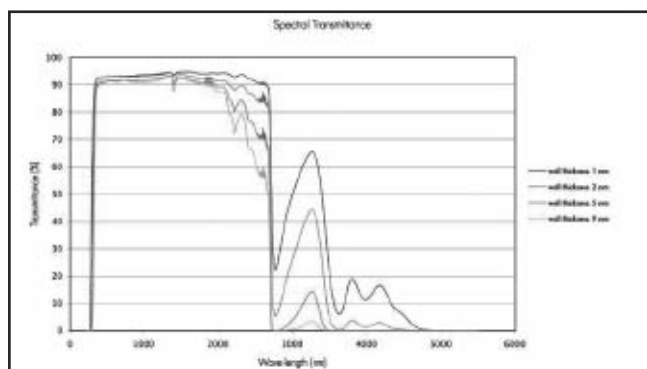
Chemical Durability

Class of Resistance to Water Effects (ISO 719)	HGB I
Class of Resistance to Acid Effects (ISO 1776 a DIN 12116)	Class S1
Class of Resistance to Various Kinds of Lye (ISO 695)	Class A2

SIMAX® borosilicate glass 3.3 is highly resistant to water effects, neutral and acid solutions, heavy acids and their mixtures, to chlorine, bromine, iodine and organic compounds. Even in long-term effects and at temperatures above 100 degrees Centigrade, this glass outstrips with its chemical durability most metals and other raw materials.

Due to water and acid effects the glass releases small amounts only, mostly those of monovalent ions. At the same time, on the glass surface, there is formed a very thin, permeable siliceous gel layer, which ensures resistance to further effects. Hydrogen fluoride, hot phosphoric acid and alkaline solutions have an effect on the glass surface, depending on concentration and temperature.

Light Transmittance



Instructions for Processing

SIMAX® tubes, capillaries and bars material properties guarantee a very good workability in glass forming and dividing, which is usual with technical glass. To remove temporary stress, which originates in processing, it is appropriate to warm the glass through, to a temperature of 550 degrees Centigrade, and, to leave it at this temperature over a period of time of at maximum 30 minutes; as a rule, in thin-walled products a fraction of this time would suffice. With regard to glass chemical durability

Kavalier SIMAX®: Technical Conditions

LENGTH

Standard lengths:

Tubing	1500 +/- 10mm -0mm
Capillary	1500 +/- 10mm
Rod:	diameter 3 to 6mm 1500 +/- 20mm

diameter 7 to 16mm	1500 +/- 10mm
diameter 18 to 30mm	1500 +/- 30mm
Non-circular assortment	1500 +/- 20mm

Non standard Lengths:

Both shorter and longer lengths can be produced to suit special requirements. For example; depending on outside diameter and wall thickness, we can supply up to 12 metres in length.

OUT-OF-ROUNDNESS

Tubing Ø < 180mm	Smax	0.7% of the outside diameter
Capillary Ø < 10mm	Smax	1.0% of the outside diameter
Rod Ø < 20mm	Smax	1.0% of the outside diameter
20mm □ Ø □ 30	Smax	1.5% of the outside diameter

WALL THICKNESS VARIANCE

The difference between the maximum and minimum wall thickness at arbitrary point of a tube may not exceed 12% of the wall nominal thickness.

DEFLECTION

Tubes deflection according to ISO 1101 may be as follows:

Outside diameter 4--<6mm	maximum 4.0 mm/1500mm
Outside diameter □ 6-<30mm	maximum 1.5 mm/1000mm
Outside diameter □ 30-<100mm	maximum 2.0 mm/1400mm
Outside diameter □ 100-□ 180mm	maximum 2.5 mm/1400mm

Rods and capillaries are supplied with deflection of maximum 4mm over 1500mm of the product length.

Non-circular assortment is supplied as follows:

- tubes with deflection of maximum 0.4% of nominal length
- capillaries and rods with deflection of maximum 0.6% of nominal length.

STRESS

Tubes

Outside diameter In mm	Ø < 40	40 □ Ø □ 60	Ø > 60
Internal stress over the tube length	3.0 MPa 102.9nm/cm	3.5 MPa 120.05 nm/cm	2.5 MPa 85.75 nm/cm
Internal stress at the tube edge	4.0 Mpa 137.2nm/cm	3.5 MPa 120.05 nm/cm	2.5 MPa 85.75 nm/cm

Rods are not normally annealed, however; rods 18 to 30mm diameter can be annealed, if requested by the customer.

Profile and capillary tubing are not annealed.

STONES AND TAILS

Stones	Stones/ 1 kg of glass
Size < 0.3mm	permitted
Size □ 0.3-<1.0mm	max. 2
Size □ 1.0-□ 2.0mm	max. 1
Size > 2.0mm	prohibited

Tails	Tails/ 1 kg of glass
Size < 0.3mm	permitted
Size □ 0.3-<1.0mm	max. 4
Size > 1.0-□ 3.0mm	max. 2
Size > 3.0mm	prohibited

The grain size is considered as corresponding to stone or tail size.

BUBBLES

Length

Bubbles length corresponds to the length of all bubbles ≤ 20 mm.

Permitted length of bubbles is 0.8 m/10 m of a tube.

Bubbles < 20 mm: 20 pcs/1 kg of glass

Width

Bubbles wider than 1 mm are prohibited in tubes with a diameter of

$\varnothing \leq 100$ mm

Bubbles wider than 2 mm are prohibited in tubes with a diameter of

$\varnothing > 100$ mm

Note: capillary bubble is a bubble drawn in the direction of the length of a product in the form of a capillary with a length greater than 2mm.

END FINISH AND FRONT SURFACE PERPENDICULARITY DEVIATION

Tubing

Tubes	Tube Ends	Front surface perpendicularity
4<0<5	not flame polished	-
5<0<100	flame polished	2.5
100<0<180	flame polished	4.0

In flame polishing the ends, wall thickness may get enlarged by 0.1 mm

Capillaries and rods are not flame polished.

Profiles are not flame polished at the ends, with the exception of tubes fluted inside, which are flame polished at the ends.

PACKING

Product are supplied in conveniently sized cartons, with sufficient protection against damage in transport and storage.

GLASSCO GLASS

Technical information

GLASSCO LOW EXPANSION BOROSILICATE GLASS

From the 16th Century to today, chemical research teams have used glass containers for a very basic reason, the glass container is transparent, almost invisible and so the contents and the reaction are clearly visible. As chemists must heat, cool and mix chemical substances, ordinary glass is not always adequate for laboratory work. Laboratory work requires apparatus made in a glass which can readily be moulded into any desired shape or form, offering maximum inertness when in contact with the widest range of chemical substances. It should be able to withstand thermal shock without fracture and high temperature work without deforming. It should also be resilient enough to survive the everyday knocks to which it will be subjected to in normal laboratory handling, washing and sterilizing processes.

Chemical Composition

Glassco Glassware is a low alkali borosilicate composition. Its typical chemical composition is given below. It is virtually free of magnesia-lime-Zinc group and contains only traces of heavy metals.

Percentage by weigh

SiO ₂	81
B ₂ O ₃	13
Na ₂ O	4

THERMAL PROPERTIES

As the coefficient of thermal expansion of Borosilicate glass is low, the thermal stresses under a given temperature gradient are consequently low therefore the glass can withstand higher temperature gradients and also sudden temperature changes/thermal shocks.

Minute scratching of glass surface can however reduce its' thermal resistance.

Coefficient of linear expansion	32.5 x 10 ⁻⁷ K ⁻¹
Strain point	515°C
Annealing point	565°C
Softening Point	820°C
Specific Heat	0.2
Thermal Conductivity (Cal/cm ³ /°C/Sec)	0.0027

In general the 'Strain point' should be regarded as the maximum safe operating temperature of Glassco glassware. When heated above 500° C the glass may acquire permanent stresses on cooling. All Glassco labware is annealed in modern ovens under strictly controlled conditions to ensure minimal residual stress in the products.

CHEMICAL DURABILITY

Glassco Glassware is highly resistant to water, neutral and acid solutions, concentrated acids and their mixtures as well as to chloride, bromine, iodine, and organic matters. Even during extended period of reaction and at temperatures above 100° C, its chemical resistance exceeds that of most metals and other materials. It can withstand repeated dry and wet sterilisation without surface deterioration and subsequent contamination. Resistance to attack of various chemicals is shown below. Only hydrofluoric acid, very hot phosphoric acid and alkaline solutions increasingly attack the glass surface with rising concentration and temperature.

Contact Chemical	Duration in hours	Loss in Wt.mg/m ²
Water distilled at 100°C	6	10
Water Vapour Steam at 121°C	1	75
Acid HCl	6	100
80% H ₂ SO ₄ at 130°C	12	140
Alkali – 1N soln. of Na ₂ CO ₃ boiling	6	4000
Infusion Fluids Isotonic		
NaCl (0.85%) 121°C	2.5	70
Glucose (5%) 121°C	2.5	50

FABRICATION WITH BOROSILICATE GLASS

Due to the low expansion of glass and easy workability, this glass can be shaped, formed and joined into complicated apparatus

OPTICAL PROPERTIES

Laboratory glassware made from Borosilicate Glass shows no noticeable absorption in the visible region of the spectrum. Consequently, it appears clear and colourless.

HEATING AND COOLING

Glass may suffer damage in three ways:

- It may break under thermal stress in the steady state, which is when there is established thermal gradient through the glass.
- It may break under the transient stress of a "thermal shock", that is a sudden heating or cooling.
- It may, if heating beyond certain temperature, acquire a permanent stress on cooling which could cause subsequent failure.

The following precautionary measures will assist in avoiding failures during heating and cooling procedures.

1. Never leave vessels unattended when evaporation work is being carried out. The vessel may crack or explode as dry conditions are approached if the heat source is not adjusted correctly. Lower the temperature gradually as the liquid level drops.
2. Always use caution when removing glassware from a heat source and avoid placing on a cold or damp surface. Although the glassware can withstand extreme temperatures, sudden temperature changes may cause the vessel to break.
3. Always cool vessel slowly to prevent thermal breakage.
4. Never apply heat to a badly scratched or etched vessel as the thermal strength will have been greatly reduced.
5. Never apply point source heating to a vessel as this will greatly increase the chance of breakage.
6. Always diffuse the heating source by using metal or air/water bath. Alternatively ensure even heating of the vessel by slow movement of the vessel in relation to the heat source.
7. Adjust Bunsen burner to get a large soft flame. It will heat slowly but also more uniformly. Uniform heat is a critical factor for some chemical reaction.
8. Ensure that the flame contacts the vessel below the liquid level. Heating above that level will invite breakage of the vessels.
9. Always use anti-bumping devices in the vessel, such as powered pumice or glass wool when rapid heating of the vessel is required.
10. Never use materials with sharp edges such as broken porcelain as an anti-bumping device. This will cause internal abrasions and reduce the mechanical and thermal strength of the vessel.
11. Heavy walled glass should not be subjected to direct flame or other localized heat source. Vessels of this type are best heated with the use of an electric immersion heater.
12. Avoid heating glassware over an electric heater with open elements. Uneven heat of this type can produce localized stress and increase the chance of breakage.
13. Remember that the hot plate will retain heat long after the appliance has been switched off.
14. Always ensure that the surface of the hot plate is larger in area than the base of the vessel being heated. An under-sized plate for the job in hand will invite uneven heating and promote breakage of glassware.
15. Always ensure that the manufacturer's instructions are followed when using an electrical heat source.

MIXING AND STIRRING

1. Always use a policeman's or similar device on stirring rods to prevent scratching the inside of the vessel.
2. When using a glass vessel with a magnetic stirrer always use a covered follower to prevent abrading the inside of the vessel.
3. When using glass or metal mechanical stirrer in a glass vessel,

always predetermine the height of the stirrer before use to ensure there is no contact between the stirrer blade and the bottom of the vessel.

4. Never mix sulphuric acid and water inside a glass measuring cylinder.
The heat of the reaction can break the base of the cylinder.

VACUUM AND PRESSURE

1. Never use glassware beyond the recommended safety limits.
2. Always use a safety screen when working with glassware subjected to pressure or a vacuum.
3. Never subject glassware to sudden pressure changes. Always apply and release positive and negative pressure gradually.

JOINING AND SEPARATING GLASS APPARATUS

1. When storing glass stopcocks and jointed ware, insert a thin strip of paper between joint surfaces to prevent sticking.
2. Never store stopcocks for long periods with lubricant still on the round surface.
3. Glass stopcocks on burettes and separating funnels should be lubricated frequently to prevent sticking.
4. If a ground joint sticks, separation can be achieved by carefully rocking the cone in the socket, by gently tapping the socket flange on a wooden surface, or by heating the socket and not the cone in a localized flame. The use of penetrating oil will often prove useful in aiding separation.
5. In using lubrication it is advisable to apply a light coat of grease around the upper part of the joint. Use only a small amount and avoid greasing the part of the joint which is in contact with the inner part of the apparatus.
6. Three types of lubrication are commonly used on standard taper joints:
(A) Hydrocarbon grease is the most widely used. It can be easily removed by most laboratory solvents, including acetone.
(B) As hydrocarbon grease is so easily removed, silicon grease is often preferred for higher temperature or high vacuum applications. It can be removed readily with chloroform.
(C) For long term reflux or extraction reactions, water soluble, organic and insoluble grease, such as glycerin, is suitable. Water will clean glycerin.
There are other types of greases which can be used specifically when certain reagents are used in a burette or separating funnel.
7. The use of water, oil or glycerol is recommended on both tubing and rubber bungs when inserting glass tubing into the bung or tubing. Always wear protective gloves or similar protection when carrying out this operation.
8. Always fire polish rough ends of glass tubing before attempting to insert into flexible tubing. The lubricants recommended above may also prove useful.

PERSONAL SAFETY

1. Use tongs or asbestos gloves to remove all glassware from heat. Hot glass can cause severe burns.
2. Protective gloves, safety shoes, aprons and goggles should be worn when handling chemicals.
3. Always flush the outside of an acid bottle with water before opening.
Do not put the stopper on the counter top where someone else may come into contact with acid residue.
4. Special care is needed when dealing with mercury. Even a small amount of mercury in the bottom of a drawer can poison the room atmosphere. Mercury toxicity is cumulative and the element's ability to amalgamate with a number of metals is well known. After an accident involving mercury, the area should be cleaned carefully until there are no globules remaining.
5. Never drink from a beaker. A beaker left specifically for drinking is a menace to the laboratory. Do not taste chemicals for identification. Smell chemicals only when necessary and by wafting a small amount of vapor towards the nose.
6. Do not pipette by mouth, particularly when using concentrated

acids, alkalis or potentially biohazardous materials. Use mechanical means such as rubber bulb or automatic dispenser.

7. Never fill receptacles with material other than what is on the label. Throw away contents of any unlabelled containers.
8. To avoid breakage when clamping glassware, do not permit 'glass to Metal' contact and do not use excessive force to tighten the clamp.
9. Do not look down a test tube being heated or containing chemicals and do not point its open end at another person as a reaction might cause the content to be ejected resulting in injury.
10. Spattering from acid, caustic materials and strong oxidizing solutions on skin or clothing should be washed off immediately with large quantities of water.
11. When working with chlorine, hydrogen sulphide, carbon monoxide, hydrogen cyanide and other very toxic substances, always use a protective mask or perform these experiments under a fume hood/cupboard or in a well-ventilated area.
12. In working with volatile materials, remember that heat causes expansion and confinement of expansion results in explosion. Remember also that danger exists even though external heat is not applied.
13. Perchloric acid is especially dangerous because it explodes on contact with organic materials. Do not use perchloric acid around wooden benches or tables. While handling perchloric acid, wear protective clothing.
14. When using hot plates and other electrical equipment, ensure the wires and plugs are in good condition. Never handle electrical connection with damp hands.

CLEANING

Successful experiment results can only be achieved by using clean apparatus. In all instances, laboratory glassware must be physically clean, in nearly all cases it must be chemically clean and in specific cases it must be bacteriologically clean or sterile. There must be no trace of grease and the safest criteria of cleanliness is the uniform wetting of the glass surface by distilled water - this being of the utmost importance for glassware used for volumetric methods. Any prevention of uniform wetting of the surface will introduce errors such as distortion of the meniscus and accuracy of volume.

GENERAL CLEANING

1. Cleaning of glassware which has contained hazardous materials must be solely undertaken by experienced personnel.
2. Most new glassware is slightly alkaline in reaction. For precision chemical tests, new glassware should be soaked for several hours in acid water (1% solution of hydrochloric acid or nitric acid) before washing.
3. Glassware which is contaminated with blood clots, culture media etc, must be sterilized before cleaning.
4. If glassware becomes unduly cloudy, dirty or contains coagulated organic matter, it must be cleaned with chromic acid cleaning solution. Dichromate should be handled with extreme care because it is a powerful corrosive agent.
5. Wash glassware as quickly as possible after use but if delays are unavoidable, the articles should be allowed to soak in water.
6. Grease is removed by weak sodium carbonate solution, acetone or fat solvent. Never use strong alkalis.
7. Hot water with recommended detergents should be used and if glass is exceptionally dirty, a cleaning powder with a mild abrasive action can be applied, provided the surface is not scratched.
8. During washing, all parts of the article should be thoroughly scrubbed with a brush selected for the shape and size of the glassware. Brushes should always be in a good condition to avoid any abrasion of the glassware.
9. When chrome acid solution is used, the item may be rinsed with the cleaning solution or it may be filled and allowed to stand. The amount of time should depend on amount of contamination on the glassware.
10. Special type of precipitate material may require removal with nitric acid, aqua regia or fuming sulphuric acid. These are very corrosive substances and should be used only when required.
11. It is imperative that all soap detergents and other cleaning fluids be removed from glassware before use. This is especially important with detergents, slight traces of which will interfere with serologic

and culture reactions. After cleaning thoroughly rinse with tap water ensuring that containers are partly filled with water, shaken and emptied several times. Finally rinse with deionized or distilled water.

12. Drying can be undertaken either in baskets or on pegs in air or at a temperature not exceeding 120°C.
13. Always protect clean glassware from dust by using temporary closures or by placing in a dust free cabinet. For cleaning specific types of glassware, please refer to the following text.

CLEANING SPECIFIC TYPES OF GLASSWARE

Pipettes

1. Place pipette tips down, in a cylinder or tall jar of water immediately after use. Do not drop them into the jar as this may break or chip the tips and render the pipettes useless for accurate measurement. A pad of cotton wool or glass wool at the bottom of the jar will help to prevent breaking of the top. Be certain that the water level is high enough to immerse the greater portion or all of each pipette. At a convenient time, the pipettes may then be drained and placed in a cylinder or jar of dissolved detergent or, if exceptionally dirty, in a jar of chrome acid cleaning solution. After soaking for several hours, drain the pipette and run tap water over and through them until all traces of dirt are removed. Soak the pipette in distilled water for at least one hour. Remove from the distilled water, dry the outside with a cloth, shake out the water and dry.

Burettes (with glass stopcocks)

1. Remove the stopcock key and wash the burette with detergent and water.
2. Rinse with tap water until the dirt is removed. Then rinse with distilled water and dry.
3. Wash the stopcock key separately before the stopcock key is replaced in the burette. Some stopcock keys are not interchangeable.
4. Always cover burette when not in use.

Culture tubes

1. Culture tubes which have been used previously must be sterilized before cleaning. The best general method for sterilizing culture tubes is by autoclaving for 30 minutes at 121°C (15 Psi). Media which solidifies on cooling should be poured out while the tubes are emptied, brushed with detergent and water, rinsed thoroughly with tap water and/or distilled water and placed in a basket to dry.
2. If tubes are to be filled with a medium which is sterilized by autoclaving, do not plug until the medium is added. Both medium and tubes are thus sterilized with one autoclave.
3. If the tubes are to be filled with a sterile medium or if they are to be sterilized by the fractional method then sterilize the tubes in the autoclave or dry air sterilizer before adding the medium.

Serological tubes

1. Serological tubes should be chemically clean but cannot be sterile. However, specimens of blood which are to be kept for some time at room temperature should be collected in a sterile container. It may be expedient to sterilize all tubes as routine.
2. To clean and sterilize tubes containing blood, discard the clots in a waste container and place the tube in a large basket. Put the basket with others in a large bucket or boiler. Cover with water, add a quantity of soap or detergent and boil for 30 minutes. Rinse the tubes and clean with brushes then rinse and dry with the usual precautions.
3. It is imperative when washing serological glassware that all acid, alkali and detergent is completely removed. Both acid and alkali in small amounts destroy, complement and in large amounts, produce haemolysis. Detergents interfere with serologic reactions.
4. Serological tubes and glassware should be kept separate from all other glassware and used for nothing except serologic procedures.

INDEX BY CATALOGUE NUMBER

I		11S3/30	39	15/1000	51	154/400	4
		11S3/40	39	15/10000	51	154/600	4
10/50	52	11S3/60	39	15/100LTR/R/BB	51	155/10	4
10/2000	52	11S3/90	39	15/10LTR/R/BB	51	155/100	4
10/4000	52	11S4/10	39	15/2000	51	155/1000	4
10/6000	52	11S4/120	39	15/20000	51	155/10000	4
10/100	52	11S4/150	39	15/200LTR/R/BB	51	155/150	4
10/1000	52	11S4/175	39	15/20LTR/R/BB	51	155/2000	4
10/10000	52	11S4/20	39	15/250	51	155/25	4
10/250	52	11S4/210	39	15/3000	51	155/250	4
10/500	52	11S4/30	39	15/4000	51	155/3000	4
1193/100X100X100	123	11S4/40	39	15/50	51	155/400	4
1193/180X130X130	123	11S4/60	39	15/500	51	155/5	4
1193/200X100X100	123	11S4/90	39	15/5000	51	155/50	4
1193/300X200X50	123	129/B/10	59	15/50LTR/R/BB	51	155/5000	4
1195/LID	21	129/B/100	59	15/5LTR/R/BB	51	155/600	4
1195/TANK	21	129/B/1000	59	15/6000	51	155/800	4
1196/100X100	71	129/B/20	59	1503/APN/10	59	1567/B/10	19
1196/150X150	71	129/B/200	59	1503/APN/100	59	1567/B/100	19
1196/200X100	123	129/B/2000	59	1503/APN/1000	59	1567/B/25	19
1196/200X200	123	129/B/25	59	1503/APN/200	59	1567/B/50	19
1196/200X250	71	129/B/250	59	1503/APN/2000	59	1567/BS/10	20
1196/250X125	123	129/B/5	59	1503/APN/25	59	1567/BS/25	20
1196/300X125	123	129/B/50	59	1503/APN/250	59	1567/BS/50	20
1196/360X230	123	129/B/500	59	1503/APN/5	59	1567/BT/10	19
11S0/10	39	130/A/10	60	1503/APN/50	59	1567/BT/100	19
11S0/120	39	130/A/100	60	1503/APN/500	59	1567/BT/25	19
11S0/150	39	130/A/1000	60	1503/BPN/10	59	1567/BT/50	19
11S0/175	39	130/A/20	60	1503/BPN/100	59	1580/BL/10	19
11S0/20	39	130/A/200	60	1503/BPN/1000	59	1580/BL/25	19
11S0/210	39	130/A/2000	60	1503/BPN/200	59	1580/BL/50	19
11S0/30	39	130/A/25	60	1503/BPN/2000	59	1595/A/1	112
11S0/40	39	130/A/250	60	1503/BPN/25	59	1595/A/10	112
11S0/60	39	130/A/5	60	1503/BPN/250	59	1595/A/100	112
11S0/90	39	130/A/50	60	1503/BPN/5	59	1595/A/15	112
11S1/10	39	130/A/500	60	1503/BPN/50	59	1595/A/2	112
11S1/120	39	130/AH/10	60	1503/BPN/500	59	1595/A/20	112
11S1/150	39	130/AH/100	60	1503/BPN/5000	59	1595/A/25	112
11S1/175	39	130/AH/1000	60	1509/100-110	62	1595/A/5	112
11S1/20	39	130/AH/20	60	1509/200-220	62	1595/A/50	112
11S1/210	39	130/AH/200	60	1509/50-55	62	1595/B/1	112
11S1/30	39	130/AH/25	60	152/100	5	1595/B/10	112
11S1/40	39	130/AH/250	60	152/1000	5	1595/B/100	112
11S1/60	39	130/AH/5	60	152/150	5	1595/B/15	112
11S1/90	39	130/AH/50	60	152/250	5	1595/B/2	112
11S2/10	39	130/AH/500	60	152/400	5	1595/B/20	112
11S2/120	39	137/B/10	98	152/50	5	1595/B/25	112
11S2/150	39	137/B/100	98	152/600	5	1595/B/5	112
11S2/175	39	137/B/25	98	152/800	5	1595/B/50	112
11S2/20	39	137/B/250	98	153/100	5	1598/A/1	111
11S2/210	39	137/B/5	98	153/1000	5	1598/A/10	111
11S2/30	39	137/B/50	98	153/150	5	1598/A/100	111
11S2/40	39	138/A/10	96	153/2000	5	1598/A/2	111
11S2/60	39	138/A/100	96	153/250	5	1598/A/20	111
11S2/90	39	138/A/1000	96	153/3000	5	1598/A/25	111
11S3/10	39	138/A/2000	96	153/400	5	1598/A/5	111
11S3/120	39	138/A/25	96	153/50	5	1598/A/50	111
11S3/150	39	138/A/250	96	153/600	5	1598/B/1	111
11S3/175	39	138/A/50	96	153/800	5	1598/B/10	111
11S3/20	39	138/A/500	96	154/1000	4	1598/B/100	111
11S3/210	39	15/100	51	154/250	4	1598/B/2	111

INDEX BY CATALOGUE NUMBER

I598/B/20	111	I652/BBPN/1000	98	I79/115	37	2009/H/50/P	11
I598/B/25	111	I652/BBPN/2000	98	I79/140	37	2009/H/500/P	11
I598/B/5	111	I652/BBPN/25	98	I79/190	37	2020/100/AMBER	11
I598/B/50	111	I652/BBPN/250	98	I79/230	37	2020/100/CLEAR	11
I605/1B/1/0.01	111	I652/BBPN/5	98	I79/40	37	2020/50/AMBER	11
I605/1B/2/0.02	111	I652/BBPN/50	98	I79/50	37	2020/50/CLEAR	11
I605/1B/5/0.05	111	I652/BBPN/500	98	I79/60	37	2021H/30	11
I605/A/1	110	I686/10	99	I79/70	37	2032/1000	15
I605/A/10	110	I686/100	99	I79/80	37	2032/10000	15
I605/A/100	110	I686/1000	99	I79/95	37	2032/2000	15
I605/A/2	110	I686/2000	99	I8/100	52	2032/500	15
I605/A/20	110	I686/25	99	I8/1000	52	2032/5000	15
I605/A/25	110	I686/250	99	I8/2000	52	2038/1000	2
I605/A/5	110	I686/5	99	I8/250	52	2038/10000	2
I605/A/50	110	I686/50	99	I8/50	52	2038/2000	2
I605/B/1	111	I686/500	99	I8/500	52	2038/20000	2
I605/B/10	111	I688/100	99			2038/500	2
I605/B/100	111	I688/1000	99	2		2038/5000	2
I605/B/2	111	I688/2000	99			2038/SJ19/26	3
I605/B/20	111	I688/25	99	2002/B/100	12	2038/SJ24/29	3
I605/B/25	111	I688/250	99	2002/B/1000	12	2038/SJ29/32	3
I605/B/5	111	I688/50	99	2002/B/2000	12	2038/ST/B24	3
I605/B/50	111	I688/500	99	2002/B/250	12	2040/1000	2
I608/A/1	110	I70/1/100	167	2002/B/50	12	2040/2000	2
I608/A/10	110	I70/1/130	167	2002/B/500	12	2040/250	2
I608/A/2	110	I70/1/150	167	2002/H/100	12	2040/500	2
I608/A/25	110	I70/1/200	167	2002/H/1000	12	2043/B/100	13
I608/A/5	110	I70/1/250	167	2002/H/2000	12	2043/B/150	13
I608/B/1	110	I70/1/50	167	2002/H/250	12	2043/B/250	13
I608/B/10	110	I70/1/60	167	2002/H/50	12	2043/B/350	13
I608/B/2	110	I70/1/70	167	2002/H/500	12	2043/B/500	13
I608/B/25	110	I70/1/80	167	2006/B/100	12	2043/B/750	13
I608/B/5	110	I70/1/90	167	2006/B/1000	12	2043/H/100	13
I61/1000	6	I74/115	36	2006/B/2000	12	2043/H/150	13
I61/150	6	I74/140	36	2006/B/250	12	2043/H/250	13
I61/250	6	I74/190	36	2006/B/50	12	2043/H/350	13
I61/500	6	I74/230	36	2006/B/500	12	2043/H/500	13
I621K/10	18	I74/40	36	2006/B/5000	12	2070/100	6
I621K/100	18	I74/50	36	2006/H/100	12	2070/1000	6
I621K/25	18	I74/60	36	2006/H/1000	12	2070/10000	6
I621K/50	18	I74/70	36	2006/H/2000	12	2070/2000	6
I634/AM/10	96	I74/80	36	2006/H/250	12	2070/20000	6
I634/AM/100	96	I74/95	36	2006/H/50	12	2070/250	6
I634/AM/1000	96	I75/115	36	2006/H/500	12	2070/500	6
I634/AM/2000	96	I75/130	36	2009/B/100/P	10	2070/5000	6
I634/AM/25	96	I75/140	36	2009/B/1000/P	10	2070/H/100	7
I634/AM/250	96	I75/190	36	2009/B/2000/P	10	2070/H/1000	7
I634/AM/5	96	I75/230	36	2009/B/250/P	10	2070/H/10000	7
I634/AM/50	96	I75/40	36	2009/B/30/P	10	2070/H/2000	7
I634/AM/500	96	I75/50	36	2009/B/50/P	10	2070/H/20000	7
I634/BB/10	97	I75/60	36	2009/B/500/P	10	2070/H/250	7
I634/BB/100	97	I75/70	36	2009/D/100	11	2070/H/500	7
I634/BB/1000	97	I75/80	36	2009/D/30	11	2070/H/5000	7
I634/BB/2000	97	I75/95	36	2009/D/50	11	2070/POUR	9
I634/BB/25	97	I77/100	37	2009/DA/100	11	2070/POUR/RED	9
I634/BB/250	97	I77/130	37	2009/DA/50	11	2070/TOP	9
I634/BB/5	97	I77/160	37	2009/H/100/P	11	2070/TOP/R	9
I634/BB/50	97	I77/200	37	2009/H/1000/P	11	2070PC/100	7
I634/BB/500	97	I77/230	37	2009/H/2000/P	11	2070PC/2000	7
I652/BBPN/10	98	I77/60	37	2009/H/250/P	11	2070PC/250	7
I652/BBPN/100	98	I77/80	37			2070PC/5000	7

INDEX BY CATALOGUE NUMBER

2070PC1000	7	2394/T/250	69	2500/200X200	71	262V/H/250	34
2070PC500	7	2394/T/50	69	2500/LID/100	72	262V/H/300	34
2137	115	2394/T/500	69	2500/LID/150	72	2704/50X150	113
2139	115	2397/100	70	25HW/125	55	2704/50X200	113
2163/100	114	2397/1000	70	25HW/250	55	2704/50X250	113
2163/WICK	114	2397/2000	70	25HW/500	55	2704/60X150	113
2231/100	100	2397/250	70	2602/25/50	18	2704/60X200	113
2231/120	100	2397/50	70	2602/25X40	18	2704/60X300	113
2231/150	100	2397/500	70	2602/30X50	18	2704/80X300	113
2231/200	100	24/100	54	2602/30X60	18	2704/LID/115	114
2231/80	100	24/1LTR	54	2602/34X30	18	2704/LID/75	114
2290/100X15	38	24/200	54	2602/34X70	18	2705/50X150	114
2290/120X20	38	24/2000	54	2602/40X80	18	2705/50X200	114
2290/150X25	38	24/2000/BAF	54	2602/50X30	18	2720/125	78
2290/200X30	38	24/25	54	2602/50X30	18	2720/250	78
2290/50X12	38	24/250	54	2602/50X50	18	2745/Czech	100
2290/60X12	38	24/27/C	37	2602/50X70	18	2745/German	100
2290/80X15	38	24/300	54	2602/60X30	18	2745/Swiss	100
2290/90X15	38	24/3000	54	2602/60X40	18	2746/Czech	100
2350/100	67	24/50	54	2602/60X50	18	2746/German	100
2350/150	67	24/500	54	2602/80X30	18	2746/Swiss	100
2350/200	67	24/5000	54	2602/80X40	18	2873/150X250	72
2350/250	67	2419/100	64	261S1/10	50	2873/180X300	72
2350/35	67	2419/1000	64	261S1/20	50	2873/200X300	72
2350/45	67	2419/10000	64	261S1/30	50	2873/200X350	72
2350/55	67	2419/2000	64	261S1/40	50	2874/150X200	72
2350/75	67	2419/250	64	261S2/10	50	2874/150X250	72
2356/100	67	2419/3000	64	261S2/20	50	2874/200X300	72
2356/120	67	2419/500	64	261S2/30	50	2874/200X350	72
2356/80	67	2419/5000	64	261S2/40	50	2954	70
2360/100	67	2420/100	63	261S3/10	50	2956	70
2360/130	67	2420/1000	63	261S3/20	50	2959	71
2360/160	67	2420/10000	63	261S3/30	50	2960	71
2360/200	67	2420/2000	63	261S3/40	50	2960/I	71
2360/250	67	2420/250	63	261S4/10	50	2960/RACK	
238/100	66	2420/3000	63	261S4/20	50		71
238/150	66	2420/500	63	261S4/30	50	3	
238/35	66	2420/5000	63	261S4/40	50		
238/45	66	2445/1000	94	262/ZD/145	35	3100/6X125	114
238/55	66	2450/100	16	262/ZD/195	35	3100/6X150	114
238/75	66	2450/1000	16	262/ZD/245	35	3100/6X200	114
2390/100	67	2450/250	16	262/ZD/295	35	3100/6X300	114
2390/1000	67	2450/500	16	262/ZD/90	35	3125/1000	159
2390/250	67	2451/500	16	262D/100	34	3125/10000	159
2390/50	67	24HW/125	55	262D/150	34	3125/2000	159
2390/500	67	24HW/250	55	262D/200	34	3125/20000	159
2392/100	68	24HW/500	55	262D/250	34	3125/5000	159
2392/1000	68	25/100	54	262D/300	34	31S1/20	51
2392/2000	68	25/1000	54	262D/K/100	34	31S1/30	51
2392/250	68	25/200	54	262D/K/150	34	31S1/40	51
2392/50	68	25/2000	54	262D/K/200	34	31S2/20	51
2392/500	68	25/25	54	262D/K/250	34	31S2/30	51
2394/100	69	25/250	54	262D/K/300	34	31S2/40	51
2394/1000	69	25/300	54	262K/K	35	31S3/20	51
2394/2000	69	25/50	54	262K/VH/150	35	31S3/30	51
2394/250	69	25/500	54	262K/VH/200	35	31S3/40	51
2394/50	69	2500/100X100	71	262K/VH/250	35	31S4/20	51
2394/500	69	2500/100X150	71	262K/VH/300	35	31S4/30	51
2394/T/100	69	2500/100X200	71	262V/H/100	34	31S4/40	51
2394/T/1000	69	2500/150X200	71	262V/H/150	34	34S1/120	48
2394/T/2000	69	2500/150X250	71	262V/H/200	34	34S1/150	48

34S1/175	48	70A/1000	53	8023/500	56	8260/1	44
34S1/30	48	7103/100	181	8027/10	84	8260/2	44
34S1/40	48	7103/25	181	8027/100	84	8260/25	44
34S1/60	48	7103/50	181	8027/25	84	8260/3	44
34S1/90	48	7109/25	21	8027/250	84	8260/4	44
34S2/120	48	7109/50	21	8027/50	84	827/R/10	2
34S2/150	48	7143/2.5	115	8029/10	87	827/R/20	2
34S2/175	48	7143/2/PTFE	116	8029/100	87	827/R/5	2
34S2/30	48	7143/4	115	8029/25	87	8281/200/B29	42
34S2/40	48	7143/4/PTFE	116	8029/250	87	8281/200/B34	42
34S2/60	48	7143/6	115	8029/50	87	8281/300/B45	44
34S2/90	48	7143/6/PTFE	116	803/14/23	90	8281/300/B55	42
34S3/120	48	7143/8	115	803/19/26	90	8281/400/B60	42
34S3/150	48	7150/2.5	116	803/24/29	90	8281/400/B71	42
34S3/175	48	7150/4	116	803/29/32	90	8293/100	42
34S3/30	48	7150/6	116	8120/5/13	90	8293/1000	42
34S3/40	48	7155	119	8120/7/16	90	8293/200	42
34S3/60	48	7160/10	116	8120/10/19	90	8293/30	42
34S3/90	48	7160/6	116	8120/12/21	90	8293/500	42
34S4/120	48	7160/8	116	8120/14/23	90	8293/70	42
34S4/150	48	7299/3	118	8120/19/26	90	832/14-5	93
34S4/175	48	7299/6	118	8120/24/29	90	832/14-7	93
34S4/30	48	7302/3	118	8120/29/32	90	832/18-10	93
34S4/40	48	7303/3	119	8120/34/35	90	832/18-7	93
34S4/60	48	7305/3	118	8120/40/38	90	832/25-10	93
34S4/90	48	7305/6	118	8120/45/40	90	832/25-15	93
3801/16x100	138	7307/100x12	130	8120/50/42	90	832/32-15	93
3801/16x120	138	7308/100X12	130	8120/60/46	90	832/32-20	93
3801/16x160	138	7308/125X15	130	8120/71/50	90	8321/1000/B29	78
3822/10	134	7308/150X18	130	8120/85/55	90	8321/300/B14	78
3822/15	134	7309/100X12	130	8124/5/13	91	8321/300/B19	78
3822/25	134	7309/125X15	130	8124/7/16	91	8321/500/B14	78
3830/100X16	138	7309/150X18	130	8124/10/19	91	8321/500/B29	78
3830/120X16	138	746/GL14	92	8124/12/21	91	8321/750/B29	78
3830/160X16	138	746/GL18	92	8124/14/23	91	833/14-5	93
3840/12X75	144	746/GL25	92	8124/19/26	91	833/14-7	93
3840/16X100	144	746/GL32	92	8124/24/29	91	833/18-10	93
3840/16X125	144	746/GL45	92	8124/29/32	91	833/18-7	93
4		754/GL14	93	8124/34/35	91	833/25-10	93
		754/GL18	93	8124/40/38	91	833/25-15	93
		754/GL25	93	8124/45/40	91	833/32-15	93
		754/GL32	93	8124/50/42	91	833/32-20	93
41/B/500	63	7765/6x100	114	8124/60/46	91	834/GL14	92
42/100	63	7765/6x200	114	8124/71/50	91	834/GL18	92
42/250	63	7765/6x250	114	8124/85/55	91	834/GL25	92
5		7765/6x300	114	8147/14/23	81	834/GL32	92
		7765/6x400	114	8147/29/32	81	8730/100	42
546/40X40	35	7801/10X100	145	8173/14/23</			

INDEX BY CATALOGUE NUMBER

8SI49/1000	69	8SATR/22SC	76	8SCL1/11/SC	79	8SEC250/74	41
8SI49/2000	69	8SATR/23	76	8SCL1/22/200	79	8SEC40/43	41
8SI49/250	69	8SATR/23SC	76	8SCL1/22/200/SC	79	8SEC500/104	41
8SI49/50	69	8SATR/24	76	8SCL1/33	79	8SEC60/53	41
8SI49/500	69	8SATR/24SC	76	8SCL1/33/SC	79	8SEC60/55	41
8SI50/100	68	8SATR/25	76	8SCL2/22	79	8SET/1	94
8SI50/1000	68	8SATR/25SC	76	8SCL2/22/SC	79	8SET/2	94
8SI50/2000	68	8SATR/33	76	8SCL2/33	79	8SET/27	95
8SI50/250	68	8SATR/33SC	76	8SCL2/33/SC	79	8SET/7	95
8SI50/50	68	8SATR/44	76	8SD1/01	88	8SET/SS	96
8SI50/500	68	8SATR/44SC	76	8SD1/01/GP	88	8SFB/1/1	48
8SI52/100	68	8SATS/1	73	8SD1/11	88	8SFB/1/2	48
8SI52/1000	68	8SATS/1SC	73	8SD1/11GP	88	8SFB/1/4	48
8SI52/2000	68	8SATS/2	73	8SD1/21	88	8SFB/2/1	48
8SI52/250	68	8SATS/2SC	73	8SD1/21GP	88	8SFB/2/2	48
8SI52/50	68	8SATS/3	73	8SD1/22	88	8SFB/2/3	48
8SI52/500	68	8SATS/3SC	73	8SD1/22GP	88	8SFB/2/4	48
8SASN/B14	76	8SATS/4	73	8SD1/32	88	8SFB/3/1	48
8SASN/B19	76	8SATS/4SC	73	8SD1/32GP	88	8SFB/3/2	48
8SASN/B19/B24	76	8SBF/2	49	8SD1/42	88	8SFB/3/3	48
8SASN/B24	76	8SBF/3	49	8SD1/42GP	88	8SFB/3/4	48
8SAST/1	75	8SBF/4	49	8SD1/62	88	8SFB/4/1	48
8SAST/11	75	8SC5/13	79	8SD1/62GP	88	8SFB/4/2	48
8SAST/12	75	8SC5/13SC	79	8SD2/01	88	8SFB/4/3	48
8SAST/13	75	8SC5/23	79	8SD2/01GP	88	8SFB/4/4	48
8SAST/14	75	8SC5/23/SC	79	8SD2/12	88	8SFCB100/B19	82
8SAST/2	75	8SCA12/11	79	8SD2/12GP	88	8SFCB100/B24	82
8SAST/3	75	8SCA12/12	79	8SD2/21	88	8SFCB1L/B24	82
8SAST/4	75	8SCA12/22	79	8SD2/21GP	88	8SFCB1L/B29	82
8SAST/5	75	8SCA12/23	79	8SD2/22	88	8SFCB250/B24	82
8SAST/6	75	8SCA12/43	79	8SD2/22GP	88	8SFCB250/B29	82
8SAST/7	75	8SCA12/44	79	8SD2/31	88	8SFCB500/B24	82
8SAST/8	75	8SCAL20/B19	80	8SD2/31GP	88	8SFCB500/B29	82
8SAST/9	75	8SCAL20/B19SC	80	8SD2/32	88	8SFE10/B14	83
8SATA/0	73	8SCAL20/B24	80	8SD2/32GP	88	8SFE100/B19	83
8SATA/0SC	73	8SCAL20/B24SC	80	8SD2/42	88	8SFE100/B24	83
8SATA/1	73	8SCAL20/B29	80	8SD2/42GP	88	8SFE100/B29	83
8SATA/1SC	73	8SCAL20/B29SC	80	8SD2/62	88	8SFE150/B19	83
8SATA/2	73	8SCAL20/B34	80	8SD2/62GP	88	8SFE150/B24	83
8SATA/2SC	73	8SCAL20/B34/SC	80	8SDHP12/3	16	8SFE1L/B24	83
8SATA/3	73	8SCAL20/B40	80	8SDHP25/3	16	8SFE1L/B29	83
8SATA/3SC	73	8SCAL20/B40SC	80	8SDHP50/3	16	8SFE1L/B34	83
8SATA/4	73	8SCAL20/B45	80	8SDHS12/3/_	16	8SFE25/B14	83
8SATA/4SC	73	8SCAL20/B50	80	8SDHS25/3/_	16	8SFE25/B19	83
8SATA/5	73	8SCAL20/B50SC	80	8SDHS50/3/_	16	8SFE25/B24	83
8SATA/5SC	73	8SCAL20/B60	41	8SDTS/0	89	8SFE250/B19	83
8SATF/1	76	8SCAL20/B71	41	8SDTS/1	89	8SFE250/B24	83
8SATF/1SC	76	8SCC20/B19	80	8SDTS/2	89	8SFE250/B29	83
8SATF/2	76	8SCC20/B19SC	80	8SDTS/3	89	8SFE2L/B29	83
8SATF/2SC	76	8SCC25/B24	80	8SDTS/4	89	8SFE2L/B34	83
8SATF/3	76	8SCC30/B19	80	8SEA/100	41	8SFE50/B14	83
8SATF/3SC	76	8SCC30/B19/SC	80	8SEA/1000	41	8SFE50/B19	83
8SATF/4	76	8SCC30/B24	80	8SEA/150	41	8SFE50/B24	83
8SATF/4SC	76	8SCC30/B24/SC	80	8SEA/250	41	8SFE50/B29	83
8SATR/11	76	8SCCJ15/B19	80	8SEA/500	41	8SFE500/B19	83
8SATR/11SC	76	8SCCJ15/B24	80	8SEC100/53	41	8SFE500/B24	83
8SATR/12	76	8SCF/1	81	8SEC100/55	41	8SFE500/B29	83
8SATR/12SC	76	8SCF/2	81	8SEC100/74	41	8SFE500/B34	83
8SATR/13	76	8SCFV36/B24	79	8SEC1000/114	41	8SFF100/B24	85
8SATR/13SC	76	8SCFV60/B24	79	8SEC150/74	41	8SFF100/B29	85
8SATR/22	76	8SCL1/11	79	8SEC200/83	41	8SFF1L/B24	85

INDEX BY CATALOGUE NUMBER

8SFF1L/B29	85	8SFR100/B14	86	8SFR500/31A	87	8SR1/30	25
8SFF250/B24	85	8SFR100/B19	86	8SFR500/322A	88	8SR1/40	25
8SFF250/B29	85	8SFR100/B24	86	8SFR500/322P	87	8SR2/10	25
8SFF50/B24	85	8SFR100/B29	86	8SFR500/32A	87	8SR2/20	25
8SFF50/B29	85	8SFR100/B34	86	8SFR500/411A	88	8SR2/30	25
8SFF500/B24	85	8SFR150/B19	86	8SFR500/411P	87	8SR2/40	25
8SFF500/B29	85	8SFR150/B24	86	8SFR500/422P	87	8SR2/50	25
8SFK100/B24	83	8SFR1L/311A	88	8SFR500/B19	86	8SR3/30	25
8SFK300/B24	83	8SFR1L/31A	87	8SFR500/B24	86	8SR3/40	25
8SFK500/B24	83	8SFR1L/322A	88	8SFR500/B29	86	8SR3/50	25
8SFK800/B24	83	8SFR1L/322P	87	8SFR500/B34	86	8SR5/40	25
8SFL100/B29	41	8SFR1L/32A	87	8SFR500/B45	86	8SR5/50	25
8SFL150/B29	41	8SFR1L/411P	87	8SFR5L/533P	87	8SR6/40	25
8SFL1L/B29	41	8SFR1L/422P	87	8SFR5L/B24	86	8SR6/50	25
8SFL250/B29	41, 42	8SFR1L/522A	88	8SFR5L/B29	86	8SRA01	75
8SFL2L/B29	42	8SFR1L/522P	87	8SFR5L/B34	86	8SRA12	75
8SFL500/B29	41, 42	8SFR1L/533P	87	8SFR5L/B45	86	8SRA13	75
8SFM C22/100	83	8SFR1L/722P	87	8SFS13	91	8SRA14	75
8SFM C22/50	83	8SFR1L/B19	86	8SFS13C	91	8SRA23	75
8SFP10/B10	84	8SFR1L/B24	86	8SFS19	91	8SRA24	75
8SFP10/B14	84	8SFR1L/B29	86	8SFS29	91	8SRA25	75
8SFP100/B14	84	8SFR1L/B34	86	8SFS35	91	8SRA26	75
8SFP100/B19	84	8SFR25/B14	86	8SFS40	91	8SRA27	75
8SFP100/B24	84	8SFR25/B19	86	8SFS41	91	8SRA34	75
8SFP25/0/00	84	8SFR25/B24	86	8SMA4/23	73	8SRA35	75
8SFP25/B10	84	8SFR250/211A	88	8SMAA/22	74	8SRA36	75
8SFP25/B14	84	8SFR250/211P	87	8SMAA/32	74	8SRA37	75
8SFP5/B10	84	8SFR250/222A	88	8SMAA/33	74	8SRA38	75
8SFP5/B14	84	8SFR250/311A	88	8SMAA/43	74	8SRA45	75
8SFP50/11	84	8SFR250/31A	87	8SMAP/00	74	8SRA47	75
8SFP50/22	84	8SFR250/322A	88	8SMAP/11	74	8SRA56	75
8SFP50/B14	84	8SFR250/322P	87	8SMAP/22	74	8SRA57	75
8SFP50/B19	84	8SFR250/32A	87	8SMAP/32	74	8SRA58	75
8SFPC3/0/25	84	8SFR250/411P	87	8SMAP/44	74	8SRAAL0	76
8SFPC3/10	84	8SFR250/B14	86	8SMAP/55	74	8SRAALI	76
8SFPC3/100	84	8SFR250/B19	86	8SMCS0	89	8SRAAL2	76
8SFPC3/25	84	8SFR250/B24	86	8SMCS1	89	8SRAAL3	76
8SFPC3/50	84	8SFR250/B29	86	8SMCS2	89	8SRAAL4	76
8SFPE100/B19	82	8SFR250/B34	86	8SMCS3	89	8SRAASI	77
8SFPE100/B19/B24	82	8SFR2L/322A	88	8SMCS4	89	8SRAAS2	77
8SFPE100/B19/B24GP	82	8SFR2L/322P	87	8SMD2/10	84	8SRAAS3	77
8SFPE100/B19GP	82	8SFR2L/422P	87	8SMD2/100	84	8SRAAS4	77
8SFPE100/B29	82	8SFR2L/522A	88	8SMD2/25	84	8SRAAV/11	78
8SFPE100/B29GP	82	8SFR2L/522P	87	8SMD2/50	84	8SRAAV/22	78
8SFPE250/B19/B24	82	8SFR2L/533P	87	8SMF/29/3/125	16	8SRAAV/22SC	78
8SFPE250/B19/B24GP	82	8SFR2L/B24	86	8SMF/29/3/250	16	8SRAAV/23	78
8SFPE250/B29	82	8SFR2L/B29	86	8SMF/29/3/500	16	8SRAAV/23SC	78
8SFPE250/B29GP	82	8SFR2L/B34	86	8SMS13	91	8SRAAV/33	78
8SFPE250/B34	82	8SFR3L/522A	88	8SMS13C	91	8SRAAV/33SC	78
8SFPE250/B34GP	82	8SFR3L/522P	87	8SMS19	91	8SRAAV/44	78
8SFPE500/B19/B24	82	8SFR3L/533P	87	8SMS29	91	8SRAAV/44SC	78
8SFPE500/B19/B24GP	82	8SFR3L/B24	86	8SMS35	91	8SRBS/11	78
8SFPE500/B29	82	8SFR3L/B29	86	8SMS40	91	8SRBS/22	78
8SFPE500/B29GP	82	8SFR3L/B34	86	8SMS41	91	8SRBS/23	78
8SFR10/B10	86	8SFR5/B10	86	8SPF/B14	82	8SRBV/00	78
8SFR10/B14	86	8SFR5/B14	86	8SPF/B19	82	8SRBV/11	78
8SFR100/211A	88	8SFR50/B14	86	8SPF/B24	82	8SRBV/22	78
8SFR100/311A	88	8SFR50/B19	86	8SPF/B29	82	8SRBV/23	78
8SFR100/31A	87	8SFR50/B24	86	8SPF/B34	82	8SRBV/33	78
8SFR100/322A	88	8SFR50/B34	86	8SR1/10	25	8SRBV/44	78
8SFR100/32A	87	8SFR500/311A	88	8SR1/20	25	8SRPB/11	77

INDEX BY CATALOGUE NUMBER

8SRPB/22	77	8WFL	89	BR328PC	15	CR202/2/45	197
8SRPB/23	77			BR328UPB	15	CR202/2/50	197
8SRPB/33	77	9		BR333UPB	15	CR202/2/60	197
8SRPB/44	77			BR338UPB	15	CR202/2/70	197
8SRPB/55	77	948/GL14	92	BR348UPB	15	CR202/3/30	197
8SRVP/00	77	948/GL18	92	BR351UPB	15	CR202/3/35	197
8SRVP/11	77	948/GL25	92	BR358UPB	15	CR202/3/40	197
8SRVP/21	77	948/GL32	92	BR363UPB	15	CR202/3/45	197
8SRVP/41	77			BR383UPB	15	CR202/3/50	197
8SSBA/11	77	A		BR631PC	15	CR202/3/60	197
8SSBA/22	77			BSF100C	14	CR203/1	199
8SSBA/23	77	A/1133/10	98	BSF150C	14	CR203/2	199
8SSBA/33	77	A/1133/100	98	BSF300C	14	CR203/3	199
8SSBA/44	77	A/1133/1000	98	BW1000A	13	CR203/4	199
8SSBS/11	80	A/1133/2000	98	BW2500A	13	CR203/5	199
8SSBS/12	80	A/1133/25	98	BW500A	13	CR204/2	199
8SSBS/22	80	A/1133/250	98			CR204/3	199
8SSBS/23	80	A/1133/50	98	C		CR204/4	199
8SSBS/24	80	A/1133/500	98			CR204/6	199
8SSBS/25	80	A/1136/100	53	C10	198	CR204/8	199
8SSBS/33	80	A/1136/1000	53	C11	198	CR205/1	199
8SSBS/35	80	A/1136/2000	53	C14	198	CR205/2	199
8SSBS/44	80	A/1136/250	53	C144	204	CR205/3	199
8SSBV/11	77	A/1136/50	53	C145	204	CR205/4	199
8SSBV/22	77	A/1136/500	53	C146	204	CR205/5	199
8SSBV/23	77	A/2218/100	3	C147	204	CR206/0	200
8SSBV/33	77	A/2218/1000	3	C1502	204	CR206/1	200
8SSBV/44	77	A/2218/2000	3	C154	203	CR206/10A	200
8SSH7/0/44	74	A/2218/250	3	C155	203	CR206/1A	200
8SSH7/0/55	74	A/2218/3000	3	C156	203	CR206/2	200
8SSH7/02	74	A/2218/400	3	C157	203	CR206/2A	200
8SSH7/03	74	A/2218/50	3	C2	198	CR206/3	200
8SSH7/43	74	A/2218/600	3	C25	198	CR206/3A	200
8SSKC10	192	A/6060/100	63	C4	198	CR206/4	200
8SSKC12	192	A/6060/1000	63	C46	200	CR206/4A	200
8SSKC14	192	A/6060/250	63	C48	200	CR206/5	200
8SSKC19	192	A/6060/500	63	C5	198	CR206/6	200
8SSKC24	192			C50	200	CR206/6A	200
8SSKC29	192	B		C51	200	CR206/7	200
8SSKC34	192			C53	200	CR206/8	200
8SSKC40	192	BA200C	14	C55	200	CR207/1	200
8SSKC45	192	BJ120C	14	C57	200	CR207/2	200
8SST10	89	BJ250C	14	C59	200	CR207/3	200
8SST14	89	BJ30C	14	C63	200	CR207/4	200
8SST19	89	BJ60C	14	C7	198	CR207/4A	200
8SST24	89	BP015C	13	C9	198	CR207/5	200
8SST29	89	BP030A	14	CR138/1	204	CR207/5A	200
8SST34	89	BP030C	13	CR138/2	204	CR207/6	200
8STPS1	89	BP060A	14	CR138/3	204	CR207/7	200
8STPS2	89	BP060C	13	CR138/4	204	CR208/1	201
8SXAE10	73	BP1000A	14	CR138/5	204	CR208/2	201
8SXAE21	73	BP175C	13	CR202/1/30	197	CR208/3	201
8SXAE31	73	BP250A	14	CR202/1/35	197	CR208/4	201
8SXAE32	73	BP250C	13	CR202/1/40	197	CR208/5	201
8SXAE41	73	BP4OZA	14	CR202/1/45	197	CR208/6	201
8SXAE42	73	BP4OZC	13	CR202/1/50	197	CR209/1	202
8SXAE43	73	BP500A	14	CR202/1/60	197	CR209/2	202
8SXAE52	73	BP500C	13	CR202/1/70	197	CR209/3	202
8SXAE53	73	BR324AE	15	CR202/2/35	197	CR209/4	202
8SXAE54	73	BR328AE	15	CR202/2/40	197	CR209/5	202
8SXAE64	73					CR209/6	202

INDEX BY CATALOGUE NUMBER

CR211A/2113/0	202	CR238/3B	35	CRD/60	197	GS/5/0.5KG	70
CR211A/2113/1	202	CR238/5A	35	CRD/70	197	GS/6/0.5KG	70
CR211A/2113/1/0	202	CR238/8A	35			GS/8/0.5KG	70
CR211A/2113/1A	202	CR241/1	204	F		H	
CR211A/2113/2	202	CR241/2	204				
CR211A/2113/2A	202	CR241/3	204	F/CP/R100100	208	H/104/303/02	194
CR211A/2113/3	202	CR241/4	204	F/CP/R10100	208	H/163/03	188
CR211A/2113/3A	202	CR252/0	205	F/CP/R150100	208	H/163/08	188
CR211A/2113/4	202	CR252/1	205	F/CP/R20100	208	H/39040	189
CR211A/2113/5	202	CR252/2	205	F/CP/R30100	208	H/39050	189
CR211A/2113/6	202	CR255/1	201	F/CP/R40100	208	H/39060	189
CR211A/2113/7	202	CR255/2	201	F/CP/R50100	208	H/39070	189
CR211A/2113/8	202	CR255/2A	201	F/CP/S100300	208	H/39080	189
CR211B/2113/0	202	CR255/3	201	F/CP/S200200	208	H/AA/320/110	189
CR211B/2113/1	202	CR263/5	204	F/CP/S250250	208	H/AA/320/135	189
CR211B/2113/1/0	202	CR263/6	204	F/CP/SS110213	208	H/AA320/175	189
CR211B/2113/1A	202	CR274/1	201	F/SS/R4650	208	H/AA320/85	189
CR211B/2113/2	202	CR274/10	201	F/SS/S4657	208	H/AA330/140	189
CR211B/2113/2A	202	CR274/1A	201	F1/KA4/055	207	H/AA330/180	189
CR211B/2113/3	202	CR274/2	201	F1/KA4/070	207	H/AA420/150	189
CR211B/2113/3A	202	CR274/3	201	F1/KA4/090	207	H/AA420/151	189
CR211B/2113/4	202	CR274/4	201	F1/KA4/110	207	H/BB180/16	191
CR211B/2113/5	202	CR274/5	201	F1/KA4/125	207	H/BB180/19	191
CR211B/2113/6	202	CR274/6	201	F1/KA4/150	207	H/CB200/10	191
CR211B/2113/7	202	CR274/7	201	F1/KA4/185	207	H/CB201/13	191
CR211B/2113/8	202	CR274/8	201	F2/KA5/055	207	H/CB201/16	191
CR214/2	205	CR274/9	201	F2/KA5/070	207	H/CB201/21	191
CR214/3	205	CR301	199	F2/KA5/090	207	H/CB201/25	191
CR214/4	205	CR321/40	205	F2/KA5/110	207	H/CB202/13	191
CR214/8	205	CR321/50	205	F2/KA5/125	207	H/CB202/16	191
CR218/1	205	CR4/25/6	198	F2/KA5/150	207	H/CB202/21	191
CR218/1A	205	CR4/25/7	198	F2/KA5/185	207	H/CB202/25	191
CR218/1B	205	CR4/25/8	198	F4/KA2/090	208	H/CB203/13	191
CR218/2	205	CR4/30/6	198	F4/KA2/110	208	H/CB203/16	191
CR218/2A	205	CR4/30/7	198	F4/KA2/125	208	H/CB203/21	191
CR218/3	205	CR4/30/8	198	F4/KA2/150	208	H/CB203/25	191
CR224/0	205	CR4/35/6	198	F4/KA2/185	208	H/CJ170/10	190
CR224/1	205	CR4/35/7	198	FP/055	207	H/CJ170/11	190
CR224/2	205	CR4/35/8	198	FP/070	207	H/CJ180/10	190
CR227/1	201	CR4/40/6	198	FP/090	207	H/CJ180/11	190
CR227/2	201	CR4/40/7	198	FP/110	207	H/CJ190/10	190
CR227/3	201	CR4/40/8	198	FP/125	207	H/CJ190/11	190
CR227/4	201	CR4/45/6	198	FP/150	207	H/CJ205/30	193
CR227/5	201	CR4/45/7	198	FP/185	207	H/H0310/100	191
CR234/1	198	CR4/45/8	198	FP/240	207	H/H0310/120	191
CR234/3	198	CR829A/830/1	203	FP/270	207	H/H0310/140	191
CR234/4	198	CR829A/830/2	203	FS/090	207	H/H0310/50	191
CR234/5	198	CR829A/830/3	203	FS/110	207	H/H0310/60	191
CR237/1	203	CR829A/830/4	203	FS/125	207	H/H0310/80	191
CR237/10	203	CR829A/830/5	203	FS/150	207	H/H0330/100	192
CR237/2	203	CR829B/830/1	203			H/H0330/120	192
CR237/3	203	CR829B/830/2	203	G		H/H0330/140	192
CR237/4	203	CR829B/830/3	203			H/H0330/60	192
CR237/5	203	CR829B/830/4	203	GP-RA-5	121	H/H0330/80	192
CR237/6	203	CR829B/830/5	203	G/GS100	123	H/TA500/150	193
CR237/7	203	CR98	199	G/GS100-I	123	H/TA500/200	193
CR237/8	203	CRD/30	197	G/GS100-IV	123	H/TA500/220	193
CR237/9	203	CRD/35	197	GS/2/0.5KG	70	H/TA500/250	193
CR237/9A	203	CRD/40	197	GS/3/0.5KG	70	H/TA500/300	193
CR238/1	35	CRD/45	197	GS/4/0.5KG	70	H/TA500/350	193
CR238/10A	35	CRD/50	197			H/TA500/400	193

INDEX BY CATALOGUE NUMBER

H/TA500/450	193	KI4000R/150	6	KI5123R/25	19	K213100/1024	147
H/TA500/500	193	KI4000R/250	6	KI5123R/50	19	K213100/2014	147
H/TA500/600	193	KI4000R/400	6	KI5123T/1025	19	K213100/2024	147
H/TA600/150	194	KI4000R/50	6	KI5145/1550	17	K213100/5024	147
H/TA600/200	194	KI4000R/600	6	KI5145/2540	17	K216050/0000	146
H/TA600/220	194	KI4000Y/100	6	KI5145/2550	17	K216050/0005	146
H/TA600/250	194	KI4000Y/1000	6	KI5145/3060	17	K218710/0015	147
H/TA600/300	194	KI4000Y/150	6	KI5145/4050	17	K218710/0025	147
H/TA600/350	194	KI4000Y/250	6	KI5145/4080	17	K218710/0050	147
H/TA600/400	194	KI4000Y/400	6	KI5145/5060	17	K218710/0100	147
H/TA600/450	194	KI4000Y/50	6	KI5146/2540	17	K218710/0350	147
H/TA600/500	194	KI4000Y/600	6	KI5146/2550	17	K218720/0025	147
H/TA600/600	194	KI4395/100	7	KI5146/3060	17	K218720/0050	147
H/TB600/10	193	KI4395/1000	7	KI5146/40100	17	K218720/0100	147
H/TH800/10	193	KI4395/10000	7	KI5146/4050	17	K218720/0350	147
H/TH800/20	193	KI4395/2000	7	KI5146/4080	17	K23000/10050	36
H/TH810/80	193	KI4395/250	7	KI5165/5030	17	K23000/12565	36
H3107/1	189	KI4395/500	7	KI5165/6030	17	K23000/15075	36
H3107/3	189	KI4395/5000	7	KI5165/7033	17	K23000/17090	36
H3108/1	189	KI4395C/45	8	KI5180/2912	17	K23000/19100	36
H3108/2	189	KI4395C/451	8	KI5180/3412	17	K23000/5035	36
H3108/3	189	KI4395C/453	8	KI5180/4512	17	K23000/6035	36
		KI4395E/452	9	KI5182/1910	137	K23000/7050	36
		KI4395H/452	9	KI5182/2412	137	K23000/8040	36
		KI4395M/45	9	KI7026F/10	20	K23000/9050	36
IL-FA-10	122	KI4395P/45	9	KI7026F/100	20	K24005/30	42
IL-FA-6	122	KI4396/100	8	KI7026F/25	20	K24005/40	42
IL-FI-10	122	KI4396/1000	8	KI7026F/50	20	K24005/50	42
IL-FI-6	122	KI4396/10000	8	KI7027F/10	20	K24027/30	42
		KI4396/2000	8	KI7027F/100	20	K24027/40	42
		KI4396/250	8	KI7027F/25	20	K24027/50	42
		KI4396/500	8	KI7027F/50	20	K24071/30	42
		KI4396/5000	8	KI7033F/50	20	K24071/40	42
KI003S/8	32	KI4399/1000	8	KI7080F/1000	20	K24071/50	42
KI025/10	32	KI4399/10000	8	KI7080F/250	20	K241100/0000	1
KI2010L/1	1	KI4399/2000	8	KI7080F/500	20	K241101/2440	1
KI2010L/10	1	KI4399/500	8	KI7800/11300	24	K241102/0000	1
KI2010L/2	1	KI4399/5000	8	KI7800/11500	24	K25055/125	42
KI2010L/20	1	KI4607/1000	2	KI7800/19300	24	K25055/250	42
KI2010L/5	1	KI4607/10000	2	KI7800/19500	24	K25055/500	42
KI2040G/1	1	KI4607/2000	2	KI7800/22300	24	K25630/1000	56
KI2040G/2	1	KI4607/20000	2	KI7800/22500	24	K25630/125	56
KI3500/3	70	KI4607/250	2	KI7802/99	24	K25630/2000	56
KI3500/4	70	KI4607/500	2	KI7810/11300	24	K25630/250	56
KI3500/5	70	KI4607/5000	2	KI7810/19300	24	K25630/500	56
KI3500/6	70	KI4915/160	32	KI79740/0505	26	K26015/125	62
KI4000B/1000	6	KI4925/160	32	KI79850/2224	109	K26015C/125	62
KI4000B/150	6	KI4950/120	15	KI9000/1	100	K26016/125	62
KI4000B/250	6	KI4950/25	15	K20023/1000	100	K26500/25	55
KI4000B/400	6	KI4950/35	15	K20023/1205	100	K26500B/1000	55
KI4000B/50	6	KI4950/500	15	K2085S/50	33	K26500B/125	55
KI4000B/600	6	KI4960/4	158	K21050/160	34	K26500B/250	55
KI4000G/100	6	KI4960/9	158	K21050/200	34	K26500B/50	55
KI4000G/1000	6	KI5070/00	12	K21050/250	34	K26500B/500	55
KI4000G/150	6	KI5070/01	12	K21200/160	34	K26500G/1000	55
KI4000G/250	6	KI5070/25	12	K21200/200	34	K26500G/125	55
KI4000G/400	6	KI5070G/00	12	K21200/250	34	K26500G/250	55
KI4000G/50	6	KI5070L/99	12	K213100/0114	147	K26500G/50	55
KI4000G/600	6	KI5113/25	18	K213100/0214	147	K26500G/500	55
KI4000R/100	6	KI5115/24	18	K213100/0514	147	K26500R/1000	55
KI4000R/1000	6	KI5123R/10	19	K213100/1014	147	K26500R/125	55

INDEX BY CATALOGUE NUMBER

K26500R/250	55	K28160R/13	61	K331232CL	148	K420400/1030	27
K26500R/50	55	K28160R/16	61	K331232CLW	148	K420400/1505	27
K26500R/500	55	K28160R/19	61	K331232CW	148	K420400/1510	27
K26500Y/1000	55	K28160R/22	61	K331232S	148	K420400/1515	27
K26500Y/125	55	K28160R/27	61	K331232SN	148	K420400/1520	27
K26500Y/250	55	K28160R/9	61	K331232SW	148	K420400/1530	27
K26500Y/50	55	K28260/152	51	K331545S	148	K420400/2510	27
K26500Y/500	55	K28260/301	51	K331545SW	148	K420400/2511	27
K26505/1000	56	K28260/302	51	K33730/1000	38	K420400/2515	27
K26505/125	56	K28260/303	51	K34500/99	131	K420400/2520	27
K26505/2000	56	K28400/1501	49	K34502/99	131	K420400/2550	27
K26505/250	56	K28400/1502	49	K34505/99	131	K420401/0704	27
K26505/50	56	K28400/1503	49	K34507/99	131	K420401/0710	27
K26505/500	56	K28400/151	49	K40500/125	114	K420401/0715	27
K27050/1000	55	K28400/152	49	K40500/150	114	K420401/0720	27
K27050/2000	55	K28400/153	49	K40500/200	114	K420401/0730	27
K27050/4000	55	K28400/20001	49	K40500/250	114	K420401/1005	27
K27050/500	55	K28400/20002	49	K40500/300	114	K420401/1010	27
K275400/0035	38	K28400/21	49	K40500/375	114	K420401/1015	27
K28012/100	60	K28400/22	49	K41006F/2	24	K420401/1020	27
K28012/1000	60	K28400/23	49	K410090/0015	133	K420401/1030	27
K28012/250	60	K28400/30001	49	K410090/0050	133	K420401/1505	27
K28012/50	60	K28400/30002	49	K41500F/2	32	K420401/1510	27
K28012/500	60	K28400/301	49	K416170/0520	31	K420401/1515	27
K28014/B/100	61	K28400/302	49	K416170/1020	31	K420401/1520	27
K28014/B/1000	61	K28400/303	49	K416170/1118	31	K420401/1530	27
K28014/B/25	61	K28400/3501	49	K416180/0000	21	K420401/2510	27
K28014/B/250	61	K28400/3502	49	K416180/1020	21	K420401/2511	27
K28014/B/50	61	K28400/3503	49	K416181/0000	21	K420401/2515	27
K28014/B/500	61	K28400/6001	49	K416182/0000	21	K420401/2520	27
K28014/E/100	61	K28400/6002	49	K416185/0000	21	K420401/2550	27
K28014/E/1000	61	K28400/6003	49	K416186/0000	21	K420408/0000	28
K28014/E/25	61	K28400/601	49	K416450/0000	31	K420412/0000	28
K28014/E/250	61	K28400/602	49	K419000/8505	26	K420415/1000	28
K28014/E/50	61	K28400/603	49	K419001/8505	26	K420415/1500	28
K28014/E/500	61	K284800/0000	38	K41900R/13	62	K420415/2500	28
K28014/R/100	61	K287100/0000	38	K41900R/38	62	K420530/0221	25
K28014/R/1000	61	K288200/0000	38	K41901R/13	62	K420530/0225	25
K28014/R/25	61	K29049F/1000	69	K41901R/16	62	K420530/0241	25
K28014/R/250	61	K29049F/125	69	K41901R/19	62	K420530/0242	25
K28014/R/50	61	K29049F/2000	69	K41901R/22	62	K420530/0251	25
K28014/R/500	61	K29049F/250	69	K41901R/32	62	K420530/0252	25
K28014/Y/100	61	K29049F/500	69	K41901R/38	62	K420530/0760	25
K28014/Y/1000	61	K292100/0000	50	K41901R/9	62	K420540/0213	26
K28014/Y/25	61	K294750/0010	38	K420160/0000	26	K420540/0224	26
K28014/Y/250	61	K296100/0050	65	K420162/0000	26	K420540/0233	26
K28014/Y/50	61	K296100/0100	65	K420162/0020	26	K420540/0243	26
K28014/Y/500	61	K296110/0000	65	K420163/0000	26	K420540/0245	26
K28016/10	61	K296150/0250	65	K420163/0001	26	K420540/0420	26
K28016/100	61	K296150/0500	65	K420163/4503	26	K420540/0430	26
K28016/1000	61	K296170/0000	65	K420164/1000	108	K420540/0760	26
K28016/200	61	K296190/0000	65	K420168/1000	108	K420809/0510	23
K28016/25	61	K296200/0000	65, 66	K420400/0704	27	K420809/0520	23
K28016/250	61	K3001/176	33	K420400/0710	27	K420809/0540	23
K28016/50	61	K3005S/176	33	K420400/0715	27	K420809/1010	23
K28016/500	61	K319010/0050	6	K420400/0720	27	K420809/1020	23
K28150R/2	61	K319011/0050	6	K420400/0730	27	K420809/1040	23
K28150R/3	61	K319012/0050	6	K420400/1005	27	K420809/2010	23
K28150R/4	61	K32501/99	72	K420400/1010	27	K420809/2020	23
K28150R/5	61	K329325/0000	146	K420400/1015	27	K420809/2040	23
K28150R/6	61	K331232C	148	K420400/1020	27	K420811/2011	23

INDEX BY CATALOGUE NUMBER

K420811/2020	23	K45066/38200	143	K45550/15	136	K58504/20	178
K420811/2040	23	K45066A/13100	144	K45550/30	136	K58510/20	178
K420821/0018	29	K45066A/16100	144	K45600/15	136	K58510B/20	179
K420822/0018	29	K45066A/16125	144	K45600/30	136	K58511/20	178
K420823/0018	29	K45066A/16150	144	K459951/0000	109	K58511B/20	179
K420823/0116	28	K45066A/20125	144	K459960/0000	109	K58512/20	178
K420830/1000	23	K45066A/20150	144	K459961/0000	109	K58515/20	178
K420830/1010	23	K45066A/25150	144	K46460/100	146	K58552/4	179
K420830/1020	23	K45066A/25200	144	K46460/150	146	K586500/0211	50
K420830/1200	23	K45066B/13	162	K46460/200	146	K586500/0222	50
K420830/1210	23	K45066B/15	162	K46460/300	146	K586500/0233	50
K420830/1220	23	K45066B/18	162	K46460/350	146	K586500/0244	50
K420830/1500	23	K45066B/24	162	K46460/400	146	K586500/0255	50
K420830/1510	23	K45066B/28	162	K46460/50	146	K586500/0266	50
K420830/1520	23	K45066B/38	162	K46463/1075	146	K60022/10	97
K420830/3000	23	K45066C/13	162	K479100/0000	38	K60022/100	97
K420830/3010	23	K45066C/15	162	K479101/0000	38	K60022/1000	97
K420830/3020	23	K45066C/18	162	K479102/0000	38	K60022/2000	97
K420830/6000	23	K45066C/24	162	K479103/0000	38	K60022/25	97
K420830/6010	23	K45066C/28	162	K479104/0000	38	K60022/250	97
K420830/6020	23	K45066C/38	162	K479105/0000	38	K60022/5	97
K420836/0000	23	K45071/10	142	K50022/10	97	K60022/50	97
K420836/0020	23	K45100/13100	145	K50022/100	97	K60022/500	97
K420836/0040	23	K45100/16150	145	K50022/1000	97	K60345/120	99
K420836/1620	23	K45100/19150	145	K50022/25	97	K60345/16	99
K420837/0000	24	K45100/25200	145	K50022/250	97	K60345/2	99
K420837/0020	24	K45160/15	132	K50022/50	97	K60345/32	99
K420837/0040	24	K45165/10	132	K50022/500	97	K60345/4	99
K422500/0125	31	K45165/15	132	K508/20	33	K60345/40	99
K422500/0250	31	K45165/50	132	K509/50	33	K60345/60	99
K422530/0025	31	K45166/15	133	K511232CA	148	K60345/8	99
K422530/0050	31	K45166/50	133	K511232CAW	148	K60345/80	99
K422530/0125	31	K45167/50	133	K511232CLA	148	K60680/1	149
K45048/1075	142	K45176/13	136	K511232CLAW	148	K60680/12	149
K45048/1275	142	K45176/50	136	K511232DPA	148	K60680/2	149
K45048/13100	142	K45186/50	132	K511232SA	148	K60680/4	149
K45048/15125	142	K45200/10	135	K511232SAW	148	K60690/1	149
K45048/16100	142	K45200/40	135	K511545SA	148	K60690/12	149
K45048/16125	142	K45212/35	133	K511545SAW	148	K60690/2	149
K45048/16150	142	K45212/50	133	K516/20	33	K60690/4	149
K45048/18150	142	K45220/100	134	K56500/1000	53	K60700/1	149
K45048/20150	142	K45225/10	132	K56500/125	53	K60700/10	149
K45048/25150	142	K45240/100	134	K56500/2000	53	K60700/2	149
K45048/25250	142	K45241/100	135	K56500/25	53	K60700/3	149
K45050/19150	144	K45243/100	135	K56500/250	53	K60700/5	149
K45050/25150	144	K45243/200	135	K56500/50	53	K60702/1	150
K45050/25200	144	K45244/100	134	K56500/500	53	K60702/10	150
K45060/13100	142	K45244/200	134	K56650/1000	54	K60702/2	150
K45060/16150	142	K45246/100	133	K56650/125	54	K60702/3	150
K45060/19150	142	K45310/100	137	K56650/250	54	K60702/5	150
K45060/25150	142	K45310/50	137	K56650/500	54	K60705/1	149
K45060/25200	142	K45310/50100	137	K58008/100	57	K60705/2	149
K45060/650	142	K45310A/100	137	K58008/1000	57	K60705/3	149
K45066/13100	143	K45310A/50	137	K58008/2000	57	K60705/5	149
K45066/16100	143	K45315/100	137	K58008/250	57	K60707/1	150
K45066/16125	143	K45315/50	137	K58008/50	57	K60707/2	150
K45066/16150	143	K45315/50100	137	K58008/500	57	K60707/3	150
K45066/20125	143	K45325A/50	137	K58500/20	178	K60707/5	150
K45066/20150	143	K45325B/50100	137	K58501/20	179	K60710/1	150
K45066/25150	143	K45500/15	136	K58502/7	179	K60710/10	150
K45066/25200	143	K45500/30	136	K58503/7	179	K60710/110	150

INDEX BY CATALOGUE NUMBER

K60710/2	150	K60812B/1232	153	K60912B/2	156	K60A10BZ4	141
K60710/3	150	K60812B/2	153	K60912D/1	156	K60A10BZ5	141
K60710/310	150	K60812B/3	153	K60912D/12	156	K60A10BZ6	141
K60710/5	150	K60812B/4	153	K60912D/2	156	K60A10BZB	140
K60715/1	150	K60812B/6	153	K60920D/4	157	K60A10BZG	140
K60715/110	150	K60812D/12	153	K60920D/8	157	K60A10BZL	140
K60715/2	150	K60815/1760	157	K60931/1	160	K60A10BZW	140
K60715/3	150	K60815/1965	157	K60931/12	160	K60A10BZXB	140
K60715/310	150	K60831D/1231	159	K60931/14	160	K60A10BZXG	140
K60715/5	150	K60831D/1544	159	K60931/2	160	K60A10BZXL	140
K60720/1	151	K60831D/830	159	K60931/4	160	K60A10BZXW	140
K60720/2	151	K60831D/843	159	K60931/6	160	K60AM10	140
K60720/3	151	K60835D/1544	160	K60931/8	160	K60B12BZ1	141
K60720/5	151	K609/99	32	K60940A/12	152	K60B12BZ2	141
K60730/310	151	K60910/1	155	K60940A/16	152	K60B12BZ3	141
K60810/1528	154	K60910/2	155	K60940A/2	152	K60B12BZ4	141
K60810/1760	154	K60910/3	155	K60940A/24	152	K60B12BZ5	141
K60810/1940	154	K60910/4	155	K60940A/4	152	K60B12BZ6	141
K60810/1965	154	K60910/6	155	K60940A/8	152	K60B12BZB	140
K60810/2170	154	K60910/8	155	K60940D/1	153	K60B12BZG	140
K60810/2385	154	K60910C/1	155	K60940D/12	153	K60B12BZL	140
K60811B/1	152	K60910C/112	155	K60940D/2	153	K60B12BZW	140
K60811B/10	152	K60910C/12	155	K60940D/3	153	K60B12BZXB	140
K60811B/12	152	K60910C/2	155	K60940D/4	153	K60B12BZXG	140
K60811B/2	152	K60910C/3	155	K60940D/6	153	K60B12BZXL	140
K60811B/3	152	K60910C/4	155	K60942A/12	153	K60B12BZXW	140
K60811B/4	152	K60910C/6	155	K60942A/16	153	K60BM12	140
K60811B/5	152	K60910C/8	155	K60942A/24	153	K60BM12MXW	141
K60811B/6	152	K60910D/1	155	K60942A/40	153	K60C13BZW	140
K60811B/612	152	K60910D/2	155	K60942A/8	153	K60CM13	140
K60811D/1	152	K60910D/3	155	K60957/1	155	K60E16BZW	140
K60811D/10	152	K60910D/4	155	K60957/4	155	K60EM16	140
K60811D/11	152	K60910L/1	155	K60957C/11	154	K60FM165	140
K60811D/12	152	K60910L/12	155	K60957C/4	154	K60GM166	140
K60811D/1528	152	K60910L/2	155	K60957C/6	154	K60MM190	140
K60811D/1738	152	K60911B/1	156	K60957D/11	154	K61000G/10	158
K60811D/1940	152	K60911B/10	156	K60957D/4	154	K61000G/100	158
K60811D/2	152	K60911B/12	156	K60957D/6	154	K61000G/125	158
K60811D/3	152	K60911B/1528	156	K60958A/11	151	K61000G/20	158
K60811D/312	152	K60911B/1738	156	K60958A/16	151	K61000G/200	158
K60811D/4	152	K60911B/1940	156	K60958A/4	151	K61000G/30	158
K60811D/5	152	K60911B/2	156	K60958A/6	151	K61000G/5	158
K60811D/6	152	K60911B/5	156	K60958A/912	151	K61000G/50	158
K60811D/612	152	K60911D/1	156	K60960A/4	151	K61000G/60	158
K60811S/10	152	K60911D/12	156	K60960A/912	151	K61110/1000	10
K60811S/5	152	K60911D/2	156	K60961C/4	151	K61110/125	10
K60812/1232	154	K60911D/5	156	K60961C/6	151	K61110/250	10
K60812/1235	154	K60911P/10	156	K60961C/912	151	K61110/500	10
K60812/1528	154	K60911S/10	156	K60965/4	160	K61110A/1000	10
K60812/1545	154	K60911S/5	156	K60965D/1	160	K61110P/1000	10
K60812/1738	154	K60912/1235	157	K60965D/12	160	K61110P/125	10
K60812/1760	154	K60912/1528	157	K60965D/120	160	K61110P/250	10
K60812/1940	154	K60912/1545	157	K60965D/3	160	K61110P/500	10
K60812/1965	154	K60912/1738	157	K60965D/7	160	K61111P/1000	10
K60812/2170	154	K60912/1760	157	K60975L/1	161	K612000/0500	65
K60812/2385	154	K60912/1940	157	K60975L/3	161	K612000/1000	65
K60812/2857	154	K60912/2857	157	K60975L/4	161	K612000/1500	65
K60812/2870	154	K60912/2895	157	K60975L/5	161	K612000/2000	65
K60812/2895	154	K60912B/1	156	K60A10BZ1	141	K612000/3000	65
K60812B/1	153	K60912B/12	156	K60A10BZ2	141	K612100/0500	65
K60812B/12	153	K60912B/1232	156	K60A10BZ3	141	K612100/1000	65

INDEX BY CATALOGUE NUMBER

K612100/2000	65	K64030/400	4	K67020/10	110	K68950/75	66
K612100/3000	65	K64030/50	4	K67020/11100	110	K71900/10	113
K612250/1200	65	K64030/600	4	K67020/2	110	K71900/100	113
K612250/5000	65	K64030/800	4	K67020/25	110	K71900/20	113
K612500/0021	65	K65000/100	52	K67020/5	110	K71900/25	113
K612500/0022	65	K65000/1000	52	K67065/100	63	K71900/5	113
K613000/0021	65	K65000/2000	52	K67065/1000	63	K71900/50	113
K613000/4524	65	K65000/250	52	K67065/2000	63	K73500/1075	140
K614100/5005	66	K65000/50	52	K67065/250	63	K73500/1275	140
K614101/4524	66	K65000/500	52	K67065/500	63	K73500/13100	140
K614103/5000	66	K65042/10100	145	K675000/0012	195	K73500/1585	140
K614110/5005	66	K65042/1075	145	K675000/0018	195	K73500/16100	140
K614112/5005	66	K65042/12100	145	K675000/0028	195	K73500/16125	140
K617000/0224	1	K65042/1275	145	K675000/0035	195	K73500/16150	140
K617000/0424	109	K65042/16100	145	K675000/0050	195	K73500/18150	140
K617600/0025	64	K65042/16125	145	K675000/0065	195	K73500/20150	140
K620F/1	32	K65042/16150	145	K675000/0075	195	K73500/25150	140
K62113D/2	159	K65042/18150	145	K675000/0102	195	K73500/650	140
K62113D/312	159	K65042/20150	145	K675000/1221	195	K73660/13	143
K62121D/10	159	K65042/20180	145	K675000/1821	195	K73660/16	143
K62121D/20	159	K65042/24150	145	K675300/0010	195	K73660/18	143
K62121D/5	159	K65042/25200	145	K675300/0014	195	K73660/20	143
K62413D/2	159	K65048/10100	144	K675300/0019	195	K73660/25	143
K62421D/10	159	K65048/1075	144	K675300/0024	195	K73660/38	143
K62421D/30	159	K65048/12100	144	K675300/0029	195	K73662/13	143
K62421D/5	159	K65048/1275	144	K675300/0034	195	K73662/16	143
K63060/10010	37	K65048/16100	144	K675300/0040	195	K73662/18	143
K63060/10015	37	K65048/16125	144	K675300/0045	195	K73662/20	143
K63060/10020	37	K65048/16150	144	K675310/0013	195	K73662/25	143
K63060/15020	37	K65048/18150	144	K675310/0019	195	K73663/13	143
K63060/6015	37	K65048/20150	144	K675310/0029	195	K73663/16	143
K63A54P	113	K65048/20180	144	K675310/0035	195	K73663/18	143
K63B93P	113	K65048/24150	144	K675320/0014	195	K73663/20	143
K63C50	113	K65048/25200	144	K675320/0019	195	K73663/25	143
K63DPI005	113	K65066/13100	138	K675320/0024	195	K73664/13	143
K64000/10	3	K65066/16100	138	K675400/1420	195	K73664/16	143
K64000/100	3	K65066/16125	138	K675400/2440	195	K73664/18	143
K64000/1000	3	K65066/16150	138	K675500/1420	194	K73664/20	143
K64000/150	3	K65066/20125	138	K675500/1922	194	K73664/25	143
K64000/2000	3	K65066/20150	138	K675500/2440	194	K73665/13	143
K64000/25	3	K65066/25150	138	K675500/2942	194	K73665/16	143
K64000/250	3	K66500/100	53	K675500/3445	194	K73665/18	143
K64000/3000	3	K66500/1000	53	K68014/100	57	K73665/20	143
K64000/400	3	K66500/2000	53	K68014/1000	57	K73665/25	143
K64000/50	3	K66500/25	53	K68014/20	57	K73750/13100	138
K64000/5000	3	K66500/250	53	K68014/200	57	K73750/16100	138
K64000/600	3	K66500/3000	53	K68014/2000	57	K73750/16125	138
K64000/800	3	K66500/50	53	K68014/25	57	K73750/16150	138
K64005/1000	5	K66500/500	53	K68014/250	57	K73750/20125	138
K64005/150	5	K66500/5000	53	K68014/50	57	K73750/20150	138
K64005/2000	5	K66650/100	54	K68014/500	57	K73770/13100	139
K64005/250	5	K66650/1000	54	K68014N/100	57	K73770/16100	139
K64005/400	5	K66650/250	54	K68014V/10	57	K73770/16125	139
K64005/4000	5	K66650/500	54	K68014V/25	57	K73770/16150	139
K64005/600	5	K67004/1	112	K68014V/5	57	K73770/20125	139
K64030/100	4	K67004/10	112	K68014V/50	57	K73770/20150	139
K64030/1000	4	K67004/100	112	K68900/100	67	K73785/10	131
K64030/150	4	K67004/2	112	K68900/55	67	K73785/15	131
K64030/2000	4	K67004/25	112	K68900/75	67	K73785/5	131
K64030/250	4	K67004/5	112	K68950/100	66	K73785/50	131
K64030/3000	4	K67004/50	112	K68950/55	66	K73790/10	132

INDEX BY CATALOGUE NUMBER

K73790/15	132	K73814BK/13425	162	K749510/1590	129	K826450/0008	119
K73790/5	132	K73814BL/9425	162	K749516/0500	130	K826450/0012	119
K73790/50	132	K73814WH/8425	162	K749520/0000	129	K826460/0004	119
K73800/13415	163	K73816/15	164	K749520/0090	129	K826460/0008	119
K73800/15415	163	K73816/18	164	K749520/0500	129	K826460/0012	119
K73800/18415	163	K73816/20	164	K749520/0590	129	K826500/0004	119
K73802/13415	163	K73816/24	164	K749521/0500	129	K826500/0008	119
K73802/13425	163	K73818/15	164	K749521/0590	129	K826500/0012	119
K73802/15415	163	K73818/18	164	K749521/1500	129	K826501/4008	121
K73802/15425	163	K73818/20	164	K749540/0000	130	K826510/0004	120
K73802/18400	163	K73818/24	164	K749541/0000	130	K826510/0008	120
K73802/20400	163	K73818A/24	164	K749560/0500	130	K826510/0012	120
K73802/22400	163	K73818X/18	164	K764520/0000	31	K826600/0004	120
K73802/24400	163	K73818X/24	164	K774161/0008	164	K826600/0008	120
K73802/33430	163	K73820/13	165	K774161/0013	164	K826600/0012	120
K73802/38430	163	K73820/20	165	K774161/0015	164	K826601/4004	121
K73802/8425	163	K73821/13	165	K774161/0018	164	K826610/0002	120
K73802U/13425	164	K73821/20	165	K774161/0020	164	K826610/0004	120
K73802U/15425	164	K73827/13	165	K774161/0024	164	K826610/0008	120
K73802U/18400	164	K73827/21	165	K774161/0924	164	K826610/0012	120
K73802U/20400	164	K73828/13	165	K774250/0005	166	K826620/0004	120
K73802U/24400	164	K73828A/21	165	K774250/0007	166	K826620/0008	120
K73802U/8425	164	K73835/1	165	K774250/0011	166	K833000/0002	117
K73803/33430	163	K73835/2	165	K774250/0013	166	K833000/0004	117
K73803/38430	163	K73835/3	165	K774250/0014	166	K841000/0002	118
K73804/15425	163	K73837/1	132	K774250/0016	166	K841000/0010	118
K73804/18400	163	K73837/2	132	K774260/0000	166	K841100/0002	118
K73804/20400	163	K73843A/20	165	K774261/0005	166	K841100/0004	118
K73804/24400	163	K73843C/20	165	K774261/0006	166	K841100/0006	118
K73805/15415	139	K74400/2040	160	K774261/0008	166	K843000/0004	117
K73805B/13415	139	K74500/20	157	K774261/0010	166	K843000/0006	117
K73805B/15415	139	K74501/20	157	K774261/0014	166	K843000/0008	117
K73805B/18415	139	K74502/20	157	K774261/0019	166	K843000/0010	117
K73808/13415	161	K74502/7	158	K774261/0024	166	K845100/0004	118
K73808/15415	161	K74503/20	158	K801000/0001	115	K845100/0006	118
K73808/18415	161	K74503/7	158	K801000/0002	115	K868280/1801	123
K73808/24400	161	K74504/20	157	K801000/0004	115	K868280/2001	123
K73808/24410	161	K74505/20	157	K801000/0006	115	K868280/2201	123
K73808/28400	161	K74506/20	158	K801001/0001	115	K881700/0000	64
K73808/28410	161	K74507/20	157	K801001/0002	115	K882300/0010	64
K73808/33430	161	K74508/20	157	K801001/0004	115	K882310/0000	64
K73808/38430	161	K74509/20	157	K801001/0006	115	K882311/0000	64
K73809/13425	163	K74510/20	157	K802000/0002	116	K882320/0000	64
K73809/15425	163	K74511/20	157	K802000/0004	116	K882360/0010	64
K73809/18400	163	K74512/20	157	K803000/0002	117	K883350/0009	113
K73809/20400	163	K74513/20	157	K803000/0004	117	K883350/0575	113
K73809/22400	163	K74514/20	157	K803001/0002	117	K885000/0002	129
K73811/21	159	K74515/20	157	K803001/0004	117	K885000/0007	129
K73811T/21	159	K74516/20	157	K809000/0021	117	K885000/0015	129
K73812BK/13425	162	K74517/20	157	K809000/0023	117	K885000/0040	129
K73812BK/8425	162	K74520/15425	179	K821000/0002	116	K885001/0002	129
K73812BK/9425	162	K74520/22400	179	K821000/0004	116	K885001/0007	129
K73812BL/9425	162	K74521/15425	179	K821000/0006	116	K885001/0015	129
K73812WH/13425	162	K74521/22400	179	K821001/0002	116	K885001/0040	129
K73812WH/8425	162	K74522/22400	179	K821001/0004	116	K885002/0002	129
K73813BK/13425	162	K74525/22400	180	K821001/0006	116	K885002/0007	129
K73813BK/8425	162	K74526/22400	180	K823000/0002	117	K885002/0015	129
K73813BK/9425	162	K747630/0000	90	K823000/0004	117	K885002/0040	129
K73813BL/9425	162	K748019/0001	170	K826410/0002	120	K885300/0000	124
K73813WH/13425	162	K749510/0590	129	K826410/0004	120	K885300/0001	124
K73813WH/8425	162	K749510/1501	130	K826450/0004	119	K885300/0002	124

INDEX BY CATALOGUE NUMBER

K885300/0007	124	K885482/0025	126	K897080/0005	188	K897320/0000	106
K885300/0015	124	K885490/0017	126	K897085/0007	109	K897320/0008	106
K885300/0040	124	K885490/0019	126	K897085/0009	109	K897325/0000	106
K885300/0100	124	K885490/0020	126	K897093/0001	108	K897330/0000	106
K885301/0000	124	K885490/0021	126	K897095/0001	108	K897330/0008	106
K885301/0001	124	K885491/0017	126	K897095/0011	108	K897335/0000	106
K885301/0002	124	K885491/0020	126	K897095/0012	108	K897335/0008	106
K885301/0007	124	K885492/0017	126	K897095/0021	108	K897435/0000	106
K885301/0015	124	K885492/0019	126	K897095/0061	108	K897435/0008	106
K885301/0040	124	K885492/0020	126	K897095/0071	108	K897635/0800	107
K885301/0100	124	K885492/0021	126	K897095/0081	108	K897750/0235	107
K885302/0000	124	K885500/0019	127	K897095/1001	108	K897750/0240	107
K885302/0001	124	K885500/0021	127	K897095/1011	108	K897750/0245	107
K885302/0002	124	K885500/0022	127	K897095/1021	108	K897800/0000	105
K885302/0007	124	K885500/0023	127	K897095/1071	108	K897800/0008	105
K885302/0015	124	K885500/0024	127	K897095/1081	108	K897805/0000	105
K885302/0040	124	K885501/0019	127	K897096/0003	107	K897820/0008	105
K885302/0100	124	K885501/0021	127	K897096/0005	107	K897825/0000	105
K885303/0000	124	K885501/0022	127	K897097/0001	108	K897830/0000	105
K885303/0001	124	K885501/0023	127	K897110/0007	106	K897835/0000	105
K885303/0002	124	K885501/0024	127	K897110/0008	106	K897835/0008	105
K885303/0007	124	K885502/0019	127	K897120/0007	106	K897840/0000	105
K885303/0015	124	K885502/0021	127	K897120/0008	106	K897840/0008	105
K885303/0040	124	K885502/0022	127	K897130/0007	106	K90H13100F	138
K885303/0100	124	K885502/0023	127	K897130/0008	106	K90K16100F	138
K885450/0020	125	K885502/0024	127	K897140/0007	106	K90K16125F	138
K885450/0021	125	K885510/0020	128	K897140/0008	106	K90P20113F	138
K885450/0022	125	K885510/0021	128	K897150/0007	106	K90P20125F	138
K885450/0023	125	K885510/0022	128	K897150/0008	106	K90S332346B	148
K885450/0024	125	K885510/0023	128	K897193/0000	106	K90S332375	148
K885450/0025	125	K885511/0020	128	K897193/0008	106	K90S332375B	148
K885451/0020	125	K885511/0021	128	K897193/0050	106	K90S332375BMB	148
K885451/0021	125	K885511/0022	128	K897193/7100	106	K92812F/10	58
K885451/0022	125	K885511/0023	128	K897193/8050	106	K92812F/100	58
K885451/0023	125	K885512/0020	128	K897193/8100	106	K92812F/1000	58
K885451/0024	125	K885512/0021	128	K897200/0000	105	K92812F/20	58
K885451/0025	125	K885512/0022	128	K897200/0008	105	K92812F/200	58
K885452/0020	125	K885512/0023	128	K897200/0009	105	K92812F/2000	58
K885452/0021	125	K885752/0018	128	K897205/0000	105	K92812F/25	58
K885452/0022	125	K885752/0019	128	K897205/0008	105	K92812F/250	58
K885452/0023	125	K885752/0020	128	K897205/0009	105	K92812F/5	58
K885452/0024	125	K885752/0021	128	K897220/0000	105	K92812F/50	58
K885452/0025	125	K885752/0022	128	K897220/0008	105	K92812F/500	58
K885470/0000	126	K885752/0023	128	K897225/0000	105	K92812G/10	57
K885480/0020	125	K885752/0024	128	K897225/0008	105	K92812G/100	57
K885480/0021	125	K886000/0018	127	K897225/0009	105	K92812G/1000	57
K885480/0022	125	K886000/0019	127	K897230/0000	105	K92812G/20	57
K885480/0023	125	K886000/0020	127	K897230/0008	105	K92812G/200	57
K885480/0024	125	K886000/0021	127	K897235/0000	105	K92812G/2000	57
K885480/0025	125	K886000/0022	127	K897235/0008	105	K92812G/25	57
K885481/0020	126	K886000/0023	127	K897235/0009	105	K92812G/250	57
K885481/0021	126	K886000/0024	127	K897240/0000	105	K92812G/5	57
K885481/0022	126	K896860/2860	121	K897240/0008	105	K92812G/50	57
K885481/0023	126	K896860/4010	121	K897240/0009	105	K92812G/500	57
K885481/0024	126	K896860/4015	121	K897241/0000	105	K92812N/10	58
K885481/0025	126	K896860/8910	121	K897241/0008	105	K92812N/100	58
K885482/0020	126	K897030/0005	109	K897241/0009	105	K92812N/1000	58
K885482/0021	126	K897033/0003	109	K897245/3000	105	K92812N/20	58
K885482/0022	126	K897033/0005	109	K897245/3008	105	K92812N/200	58
K885482/0023	126	K897047/0001	107	K897250/3000	105	K92812N/2000	58
K885482/0024	126	K897048/0001	107	K897250/3008	105	K92812N/25	58

INDEX BY CATALOGUE NUMBER

K92812N/250	58	K953805/0090	48	M		NPS16/1818	102
K92812N/5	58	K953810/0000	45, 46			NPS16/2020	102
K92812N/50	58	K953811/0000	45, 46	MB/105	32	NPS16/2222	102
K92812N/500	58	K953901/0252	30	MB/130	32	NPS16/2226	102
K92812P/10	58	K953901/0502	30	MB/160	32	NPS16/2232	102
K92812P/100	58	K953901/1002	30	MB/185	32	NPS16/2240	102
K92812P/1000	58	K953901/1003	30	MB/215	32	NPS16/2250	102
K92812P/20	58	K953901/2002	30	MB/250	32	NPS16/2264	102
K92812P/200	58	K953901/2003	30	MB/65	32	NPS16/2424	102
K92812P/2000	58	K953901/5002	30	MB/85	32	NPS16/2432	102
K92812P/25	58	K953906/0047	30			NPS16/2440	102
K92812P/250	58	K953906/6347	30	N		NPS16/2450	102
K92812P/5	58	K953907/0000	29			NPS19/1818	102
K92812P/50	58	K953908/0000	30	N/A131	101	NPS19/2222	102
K92812P/500	58	K953909/0000	30	N/A132	101		
K952000/0923	40	K953913/0001	29	N/A141	101	O	
K952000/0925	40	K953913/5000	29	N/A142	101		
K952000/0944	40	K953915/0047	30	N/A143	101	OV18	92
K952000/1025	40	K953916/3002	29	N/A144	101	OV35	92
K952000/1044	40	K953922/0252	30	N/A145	101	OV40	92
K952000/2025	40	K953922/0502	30	N/C360B	104		
K952000/4023	40	K953922/1002	30	N/C360G	104	P	
K952000/6023	40	K953922/1003	30	N/C360O	104		
K952000/6025	40	K953922/2002	30	N/C360P	104	P/050/010	186
K952000/6044	40	K953922/2003	30	N/C360W	104	P/050/011	186
K952000/8044	40	K953922/5002	30	N/C360Y	104	P/050/020	186
K953701/0000	43	K953930/0000	29	N/C361	104	P/050/021	186
K953701/0125	43, 44	K953930/0001	29	N/C362	104	P/050/030	186
K953701/0325	44	K953930/1002	29	N/C363	104	P/050/041	186
K953702/0001	43	K953930/1003	29	N/C366	104	P/104/303/02	194
K953703/0000	43	K953930/2002	29	N/C368	104	P/104/303/03	194
K953705/0000	43	K953930/5002	29	N/C369	104	P/109/303/01	174
K953710/0000	44	K953980/0502	28	NMR-V5	123	P/109/303/02	174
K953711/0000	43	K953980/2002	28	NPC09/13	103	P/109/303/03	174
K953712/0000	43	K955250/3523	50	NPC09/19	103	P/109/303/04	174
K953715/0501	43, 47	K955250/5023	50	NPC13/12	103	P/121/100	192
K953715/0801	44	K955250/5026	50	NPC13/13	103	P/121/200	192
K953726/0001	43, 44	K955250/5044	50	NPC13/15	103	P/122/100	192
K953730/0000	43	K955250/7523	50	NPC13/16	103	P/122/200	192
K953751/0000	44, 45, 46	K955250/7526	50	NPC13/19	103	P/123/000	192
K953752/0001	44	K955250/7544	50	NPC13/22	103	P/130/303/01	177
K953752/0090	47, 48	K956500/0023	49	NPC16/12	103	P/130/303/02	177
K953753/0000	44, 45, 46	K956500/0025	49	NPC16/13	103	P/135/303/01	177
K953753/0090	47, 48	KA/620F/1	32	NPC16/16	103	P/135/303/02	177
K953755/0000	44	KKC14395/100	8	NPC16/19	103	P/135/303/03	177
K953755/0090	47	KKC14395/1000	8	NPC16/22	103	P/135/303/04	177
K953760/0000	44, 45, 47, 48, 109	KKC14395/10000	8	NPC19/13	103	P/141/010	190
K953760/0122	44	KKC14395/2000	8	NPS09/1818	102	P/141/020	190
K953760/1002	45, 47, 48	KKC14395/250	8	NPS09/2020	102	P/142/010	190
K953761/0000	45, 46	KKC14395/500	8	NPS09/2222	102	P/142/020	190
K953763/0000	109	KKC14395/5000	8	NPS09/2250	102	P/143/010	190
K953763/0801	44, 45, 47, 48	KM4150/N0250SP4	113	NPS09/2432	102	P/143/020	190
K953770/0090	47	KM4230/N0250SP4	113	NPS13/1818	102	P/144/010	190
K953771/0000	45, 46	KN73824/11	166	NPS13/2222	102	P/144/020	190
K953776/0000	45	KN73824/13	166	NPS13/2226	102	P/159/303/01	176
K953777/0001	45	KN73824T/20	166	NPS13/2232	102	P/160/101	175
K953780/0000	45	KN73826/11	166	NPS13/2240	102	P/160/103	175
K953781/0000	45, 46	KN73826/13	166	NPS13/2250	102	P/160/501	175
K953781/0090	47, 48			NPS13/2432	102	P/160/503	175
K953801/0001	45			NPS13/2450	102	P/161/010	188
K953805/0000	45						

INDEX BY CATALOGUE NUMBER

P/161/040	188	P/422/050	169	P/546/041	177	P/583/220	181
P/162/010	188	P/422/060	169	P/560/050	175	P/583/230	181
P/175/303/01	180	P/422/070	169	P/560/060	175	P/583/250	182
P/175/303/02	180	P/431/040	169	P/560/070	175	P/583/252	182
P/175/303/03	180	P/431/050	169	P/560/080	175	P/583/255	182
P/175/303/04	180	P/431/060	169	P/560/090	175	P/583/257	182
P/175/303/05	180	P/431/070	169	P/561/100	175	P/583/258	182
P/175/303/06	180	P/431/080	169	P/561/110	175	P/583/260	182
P/175/303/07	180	P/431/090	169	P/561/120	175	P/583/270	182
P/175/303/08	180	P/441/040	169	P/581/120	174	P/583/280	183
P/176/303/01	180	P/441/050	169	P/581/130	174	P/583/290	183
P/176/303/02	180	P/441/060	169	P/581/140	174	P/583/300	183
P/176/303/03	180	P/441/070	169	P/581/150	174	P/583/320	174
P/176/303/04	180	P/441/080	169	P/581/170	172	P/583/330	174
P/176/303/05	180	P/441/090	169	P/581/180	172	P/583/340	174
P/176/303/06	180	P/441/160	170	P/581/190	172	P/583/350	174
P/176/303/07	180	P/441/170	170	P/581/200	172	P/583/351	182
P/180/010	187	P/460/090	176	P/581/210	172	P/583/360	174
P/180/020	187	P/460/091	176	P/581/220	172	P/583/361	182
P/180/030	187	P/481/010	187	P/581/230	172	P/583/420	174
P/202/060	185	P/481/020	187	P/581/240	172	P/583/430	174
P/202/070	185	P/481/030	187	P/581/250	172	P/583/440	174
P/212/060	185	P/500/031	177	P/581/300	173	P/583/450	174
P/240/000	187	P/500/041	177	P/581/310	173	P/583/460	174
P/240/040	187	P/522/010	178	P/581/320	173	P/584/200	173
P/241/050	187	P/522/020	178	P/581/330	173	P/584/210	173
P/260/010	188	P/523/010	176	P/581/340	173	P/584/220	173
P/322/010	170	P/523/020	176	P/581/350	173	P/584/230	173
P/322/020	170	P/523/030	176	P/581/360	173	P/584/240	173
P/322/030	170	P/523/070	176	P/582/070	171	P/584/250	173
P/322/040	170	P/523/110	176	P/582/080	171	P/584/260	173
P/322/050	170	P/523/120	176	P/582/090	171	P/585/200	173
P/322/060	170	P/523/130	176	P/582/100	171	P/585/210	173
P/324/010	170	P/523/140	176	P/582/110	171	P/585/220	173
P/324/020	170	P/523/150	176	P/582/120	171	P/585/230	173
P/324/030	170	P/523/160	176	P/582/130	171	P/585/240	173
P/324/040	170	P/524/000	185	P/582/140	171	P/585/250	173
P/324/050	170	P/524/010	185	P/582/150	171	P/585/260	173
P/324/060	170	P/524/020	185	P/582/160	181	P/586/080	172
P/401/010	180	P/524/030	185	P/582/170	181	P/586/090	172
P/401/020	180	P/524/040	185	P/582/180	181	P/586/200	172
P/401/030	180	P/524/060	185	P/582/190	181	P/586/210	172
P/401/040	180	P/524/070	185	P/582/200	173	P/586/220	172
P/402/010	181	P/525/000	183	P/582/210	173	P/586/230	172
P/402/020	181	P/525/010	184	P/582/220	173	P/586/240	172
P/402/030	181	P/525/020	184	P/582/230	173	P/586/250	172
P/402/040	181	P/525/030	184	P/582/240	173	P/620/030	174
P/415/303/01	194	P/525/040	184	P/582/250	173	P/620/040	174
P/421/010	169	P/525/050	184	P/582/260	173	P/620/050	174
P/421/020	169	P/525/060	184	P/583/100	172	P/620/060	174
P/421/040	169	P/525/110	183	P/583/110	172	P/620/070	174
P/421/050	169	P/526/010	184	P/583/120	172	P/630/010	171
P/421/060	169	P/526/030	184	P/583/130	172	P/630/020	171
P/421/070	169	P/541/020	176	P/583/140	172	P/630/030	171
P/421/080	169	P/541/030	176	P/583/150	172	P/630/040	171
P/421/090	169	P/541/040	176	P/583/170	172	P/630/050	171
P/422/000	169	P/541/050	176	P/583/180	172	P/630/060	171
P/422/010	169	P/542/010	177	P/583/190	172	P/630/070	171
P/422/020	169	P/542/020	177	P/583/210	181	P/630/090	171
P/422/030	169	P/542/040	176	P/583/211	181	P/641/110	171
P/422/040	169	P/546/021	177	P/583/216	182	P/641/120	171

INDEX BY CATALOGUE NUMBER

P/642/060	171	P/960/020	176
P/642/070	171	P/960/030	176
P/642/080	171	P/960/040	176
P/683/210	183	P/980/010	187
P/683/220	183	P/980/020	187
P/683/230	183	P/980/030	187
P/683/240	183	P/980/040	187
P/683/250	183	P/980/050	187
P/683/260	183		
P/683/300	183	R	
P/720/000	186		
P/720/010	186	RA-FA-10	122
P/720/020	186	RA-FA-6	122
P/720/030	186	RA-FI-10	122
P/720/040	186	RA-FI-15	122
P/720/050	186	RA-FI-6	122
P/720/060	186		
P/720/100	186	S	
P/720/110	186		
P/720/120	186	SJFI8/9	92
P/720/130	186	SJF35/20	92
P/720/140	186	SJF40/25	92
P/720/150	186	SJM18/9	92
P/720/160	186	SJM35/20	92
P/720/200	186	SJM40/25	92
P/720/210	186	ST-FA-10	122
P/720/220	186	ST-FA-6	122
P/720/230	186	ST-FI-10	122
P/720/240	186	ST-FI-6	122
P/720/250	186		
P/720/260	186	V	
P/720/300	186		
P/720/310	186	V0027	161
P/720/320	186	V0028	161
P/720/330	186	VSI0075	139
P/720/340	186	VSI2075	139
P/720/500	187	VSI3100	139
P/720/510	187	VSI6125	139
P/881/080	177	VSI6150	139
P/881/090	177		
P/881/100	177		
P/881/110	178		
P/881/111	177		
P/881/120	178		
P/881/130	178		
P/881/140	178		
P/881/150	178		
P/881/160	178		
P/881/170	178		
P/881/180	178		
P/881/190	178		
P/940/000	175		
P/940/010	175		
P/940/020	175		
P/940/030	175		
P/940/040	175		
P/950/020	185		
P/950/031	185		
P/950/050	185		
P/950/061	185		
P/960/010	176		

