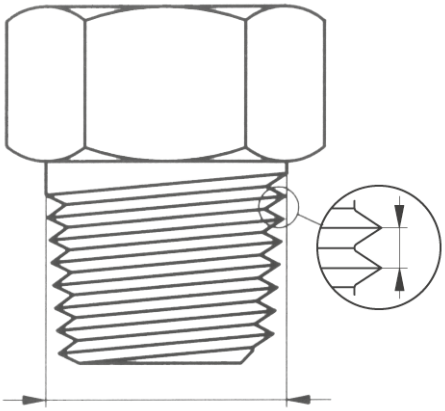
SymLine®
Chemical Waste Systems

Addendum

Further Informations.

- ✔ Thread identification
- ✔ Safety instructions
- ✔ Terms & conditions



Ø Ⓐ mm max.	Ø Ⓐ mm min.	Ø Ⓑ mm max.	Gradient Ⓒ in mm	Norm
28.00	27.50	25.98	3.00	DIN 168-1
32.00	31.30	29.30	4.00	DIN 168-1
32.00	31.50	29.00	3.00	
37.49	36.88	35.10	4.23	GPI / SPI
38.00	37.50	35.00	3.00	DIN 6063-
38.00	37.50	35.00	3.00	DIN 6063-
37.49	36.88	35.10	4.23	GPI / SPI
40.00	39.30	37.30	4.00	DIN 168-1
41.00	39.50	37.00	3.50	DIN 6063-
42.00	41.50	38.00	4.00	
45.00	44.30	42.30	4.00	DIN 168-1
45.00	44.30	41.00	4.00	DIN 6063 DIN 6063

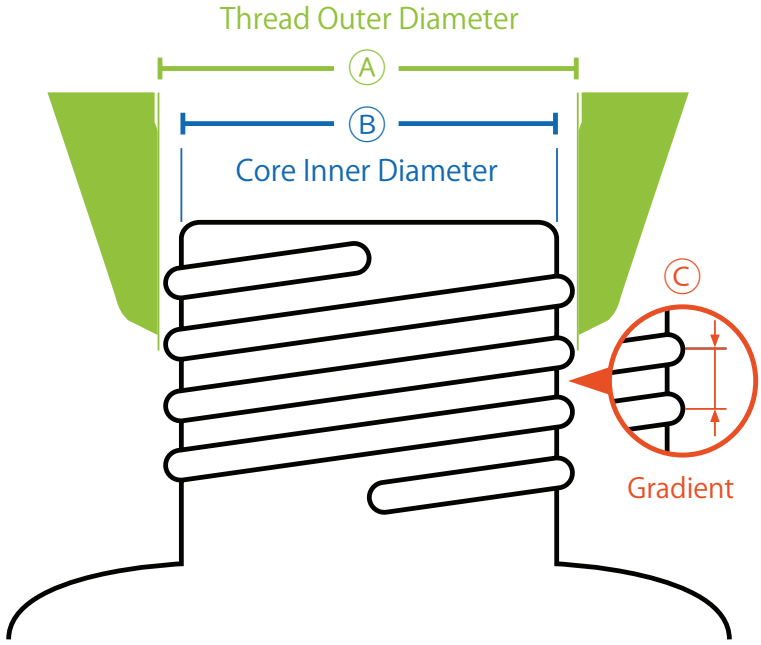
a brand of S·C·A·T®

Container threads

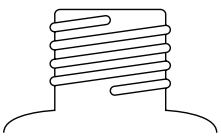
SCAT Safety Caps are available for a wide variety of differing container threads. On the following pages you will find tables for determining thread sizes, together with a helpful overview of typical thread types. It is best to use a slide gauge.

Instructions

Use the measured distances below to determine the outer diameter of the thread Ⓐ or the core inner diameter of the container opening Ⓑ.

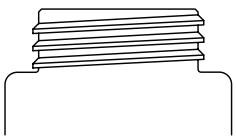


Round thread



For example:
- Bottle thread (GL or GLS)
- Common standard for laboratory bottles

Saw thread



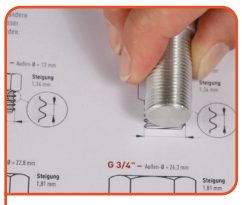
For example:
- Canisters (S-Thread)
- Nalgene containers
- Barrels (Mauser, Trisure, BCS-Threads)
- GPI Standard (Glass Packaging Institute)
- Other plastic containers

⌀ Ⓐ mm max.	⌀ Ⓐ mm min.	⌀ Ⓑ mm max.	Gradient Ⓒ in mm	Norm	Thread	Comments (also re. brand names. trademarks)
28.00	27.50	25.98	3.00	DIN 168-1	GL 28	Chromsystems®, Recipe®, 500 ml Buffer from Sigma®
32.00	31.30	29.30	4.00	DIN 168-1	GL 32 (glass)	For containers of the brand Duran®
32.00	31.50	29.00	3.00		S 32 (plastic)	-
37.49	36.88	35.10	4.23	GPI / SPI	GL 38/ GPI 38-400 (glass) (short)	For containers of the brands Wheaton® and Nalgene®
38.00	37.50	35.00	3.00	DIN 6063-2	GL 38 short (foldable canister)	4 L BDH bottle, Fulltime® Reagents
38.00	37.50	35.00	3.00	DIN 6063-1	S 38 (plastic)	2.5 L canister from Recipe®, HPLC-P Water, 1 litre Biosolve®, Fresenius Kabi® 10 L
37.49	36.88	35.10	4.23	GPI / SPI	GPI 38-430 (glass) (long)	Wheaton®, Nalgene® 4-edge 500 ml plastic bottle
40.00	39.30	37.30	4.00	DIN 168-1	GL 40 (glass)	For containers of the brand Merck®
41.00	39.50	37.00	3.50	DIN 6063-1	S 40 / S 41 (plastic)	Due to the tolerances involved, a GL 40 cap will often fit on to an S 40 container of the brand Metrohm® / Merck®
42.00	41.50	38.00	4.00		S 42	The designation DIN42 is often written on the cap, Agro Paris Tech 51, Polimoon™, Nalgene®
45.00	44.30	42.30	4.00	DIN 168-1	GL 45	The most common thread for laboratory glass bottles
45.00	44.30	41.00	4.00	DIN 6063-1 DIN 6063-2	S 45	Due to the tolerances involved, a GL 45 cap will fit on to an S 45 thread
44.30	39.70	40.80	4.00	DIN45	DIN45	-
50.00	49.30	46.00	4.00	DIN 6063-1	S 50	Space-saving canister
51.00	49.00	47.00	4.00		S 51	Almost identical to S 50, but the outer diameter of the container thread (OD=Ⓐ) is significantly different. The designation DIN50 is written on the cap.
54.00	53.50	47.50	6.35	53B	B 53	For containers of the brands Nalgene® and Polimoon™
53.80	53.20	49.50	5.00	DIN51	S 55	The designation 51 / DIN51 / HP51 is often written on the cap
60.00	59.20	54.00	6.00	DIN 6063-1	S 60 / S 61	The designation 61, Mauser® 13, RPC Containers® C59PP / DIN61 is often written on the cap
62.51	61.62	60.12	4.23	GPI / SPI	B 63 / GPI 63-415	For containers of the brand Nalgene®
65.00	64.30	59.00	6.00		S 65	For containers of the brand Kautex® (round canisters)
71.00	69.30	65.00	6.00	DIN71	S 70 / S 71	The designation 71, Rieke® 70 mm is often written on the cap
80.00	79.00	77.00	5.50	(DIN 168-1) short	GLS 80	Typical laboratory bottle with wide neck, short thread with 3 thread ends
89.18	88.29	79.00	12.70	83B	B 83	For containers of the brands Nalgene®, Kautex®, Foxx® and Carboy 80 mm
90.00	89.30	84.00	6.00		S 90	The designation D90 is often written on the cap
95.00	93.50	89.00	7.00		S 95	-
106.00	104.00	95.00	6.00		105x 6	Hünersdorff

NOTE: All the measurements and values given here can vary up to 0.5 mm, dependent upon the manufacturer involved (due to manufacturing tolerances). Brand names and trademarks are the property of the respective owners. The brand names and protected trademarks mentioned here are simply of descriptional nature.

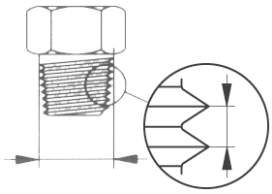
NPT (National Pipe Thread) Conical, American Tubular Thread

Very easily recognizable due to the conical outer and/or inner diameters, which are self-sealing.
NPT is therefore also described as the "sealed thread" or as having a "sealed connection within the thread".



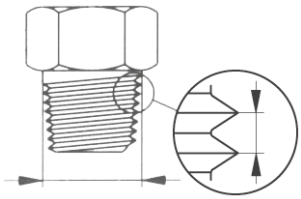
Drawings are of scale 1:1

NPT 1/8" – Outer-Ø = 9.9 mm



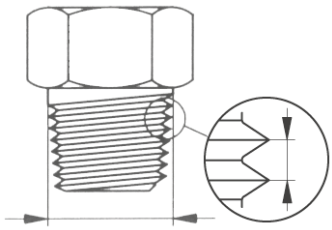
Gradient 27 on 1" = 0.94 mm

NPT 1/4" – Outer-Ø = 13.2 mm



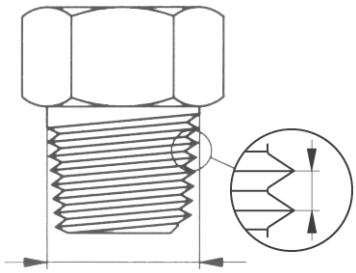
Gradient 18 on 1" = 1.41 mm

NPT 3/8" – Outer-Ø = 16.6 mm



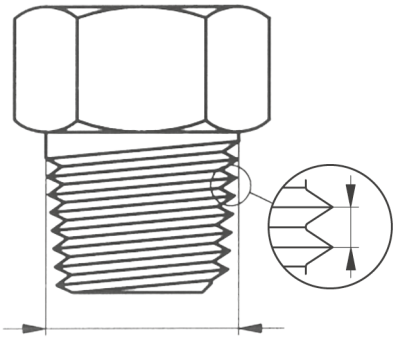
Gradient 18 on 1" = 1.41 mm

NPT 1/2" – Outer-Ø = 20.6 mm



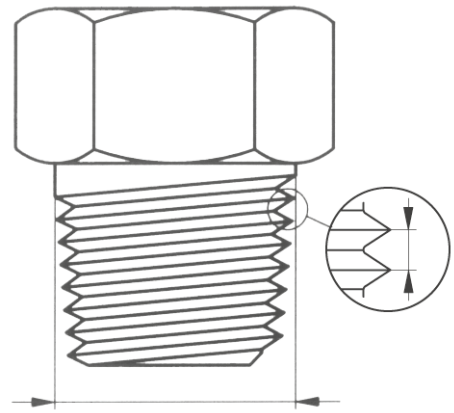
Gradient 14 on 1" = 1.81 mm

NPT 3/4" – Outer-Ø = 26 mm



Gradient 14 on 1" = 1.81 mm

NPT 1" – Outer-Ø = 32.5 mm

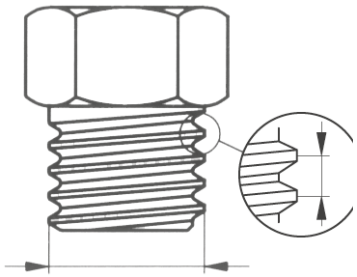


Gradient 11.5 on 1" = 2.21 mm

G or R (Whitworth Tubular Thread) and BSP (British Standard Pipe)

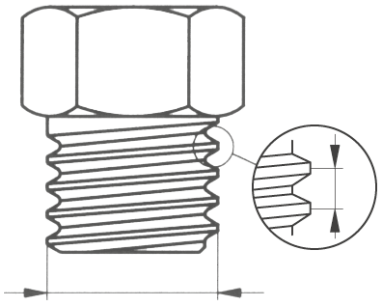
Cylindrical tubular threads are mainly used in english-speaking countries. The measurements, e.g. R 3/4", do not allow for recognition of diameters, the corresponding dimension must be obtained from tables.

G 1/2" – Outer-Ø = 20.8 mm



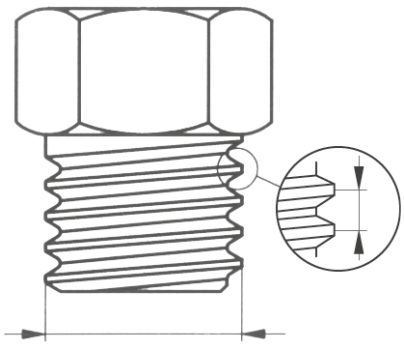
Gradient 14 on 1" = 1.81 mm

G 5/8" – Outer-Ø = 22.8 mm



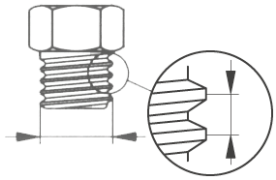
Gradient 14 on 1" = 1.81 mm

G 3/4" – Outer-Ø = 26.3 mm

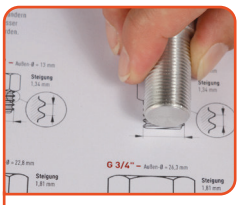


Gradient 14 on 1" = 1.81 mm

G 1/8" – Outer-Ø = 9.6 mm

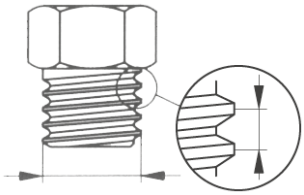


Gradient 28 on 1" = 0.91 mm



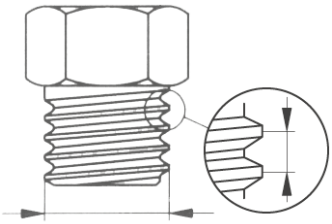
Drawings are of scale 1:1

G 1/4" – Outer-Ø = 13 mm



Gradient 19 on 1" = 1.34 mm

G 3/8" – Outer-Ø = 16.5 mm

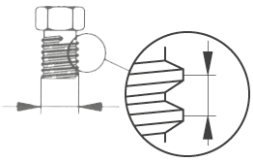


Gradient 19 on 1" = 1.34 mm

M (Metric ISO-Thread) - Standard in the european region

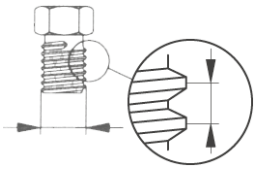
Cylindrical outer and inner diameters, accurate to the very millimetre. Forces are particularly well absorbed, due to the extremely small gradient of the metric thread. The designations begin with an „M“, followed by the nominal diameter, e.g. M 10. If there is a gradient that differs from that of the norm, this is given in an addendum, e.g. M 10 x 0.75.

M 5 – Outer-Ø = 5 mm



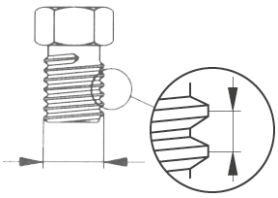
Gradient 0.80 mm

M 6 – Outer-Ø = 6 mm



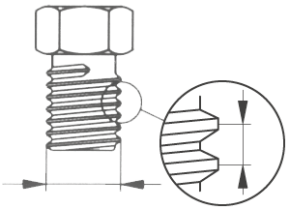
Gradient 1.00 mm

M 8 – Outer-Ø = 8 mm



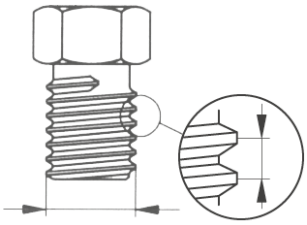
Gradient 1.25 mm

M 10 – Outer-Ø = 10 mm



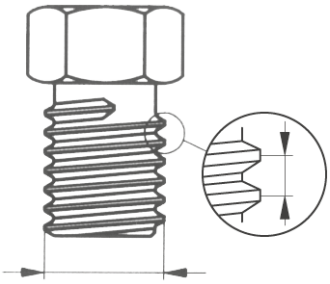
Gradient 1.50 mm

M 12 – Outer-Ø = 12 mm

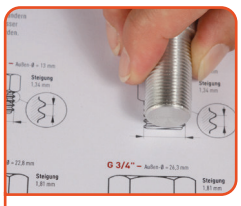


Gradient 1.75 mm

M 16 – Outer-Ø = 16 mm



Gradient 2.00 mm



Drawings are of scale 1:1

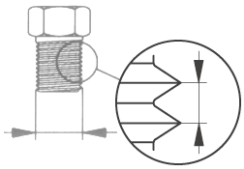
UNF 1/4"-28G

From the USA. Mainly employed in chromotography/HPLC. Standard sizes are UNF 1/4"-28G and UNF 10-32G. The numbers 28G and 32G refer to the number of thread "steps" taken, over a vertical distance of one inch (25.4 mm).

UNF 1/4"-28G kontra M 6

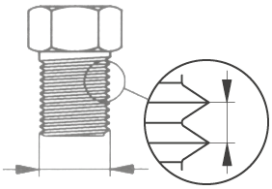
Our HPLC fittings are exclusively constructed with the most typically-used UNF 1/4"-28G HPLC-thread. There also exist fittings and dividers with the very similar thread M6. The two can only be differentiated by exact measurement of the outer diameter, or by using a special test ring or test cap. (It is e.g. therefore possible, to screw the one hollow screw type into the converse piece of the other thread type, at least for 2-3 revolutions). The UNF 1/4" thread has an outer diameter of 6.35 mm, the thread M6 has one of exactly 6.0 mm (production-related tolerances may apply). We recommend the exclusive use of the UNF thread 1/4"-28G, in order to avoid confusion, mistakes being made, or unnecessary double stocking.

UNF 1/4"-28G – Outer-Ø = 6.2 mm



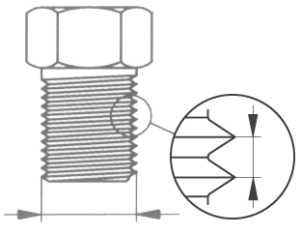
Gradient 28 on 1" = 0.91 mm

UNF 3/8"-28G – Outer-Ø = 9.4 mm



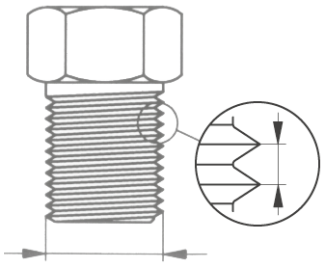
Gradient 24 on 1" = 1.06 mm

UNF 1/2"-28G – Outer-Ø = 12.6 mm



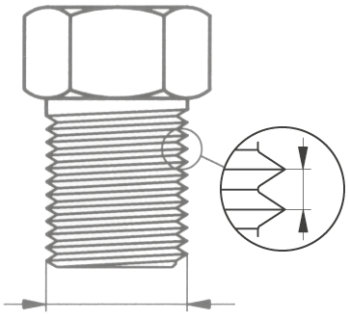
Gradient 20 on 1" = 1.27 mm

UNF 5/8"-18G – Outer-Ø = 15.7 mm



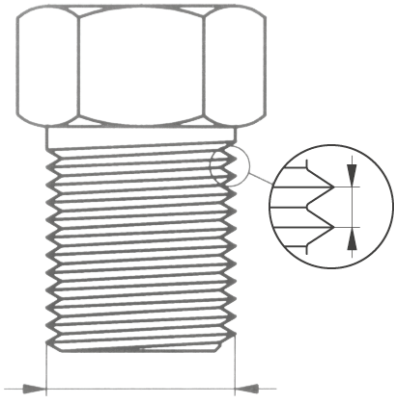
Gradient 18 on 1" = 1.41 mm

UNF 3/4"-16G – Outer-Ø = 18.9 mm

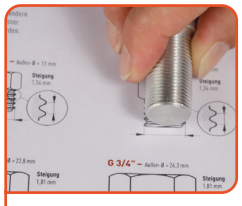


Gradient 16 on 1" = 1.59 mm

UNF 1"-12G – Outer-Ø = 25.2 mm

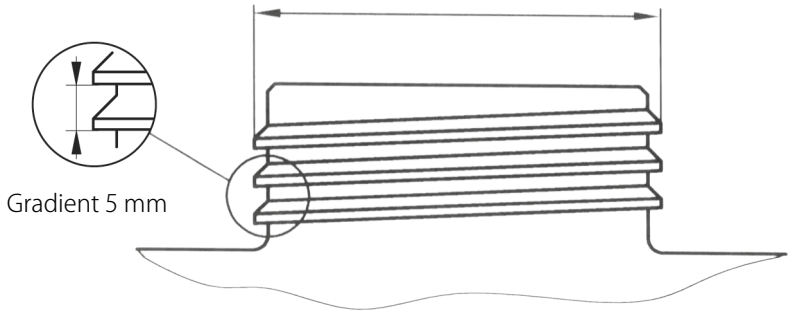


Gradient 12 on 1" = 2.12 mm

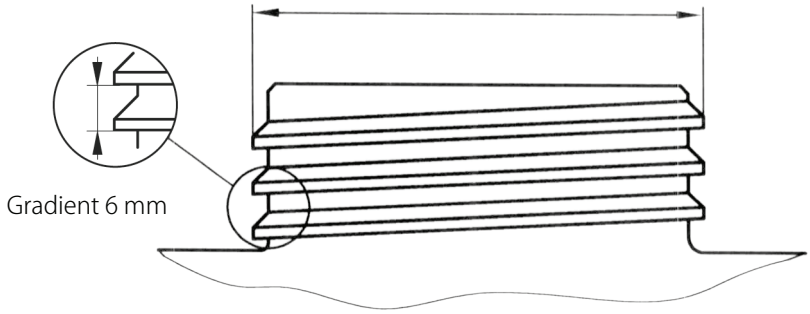


Drawings are of scale 1:1

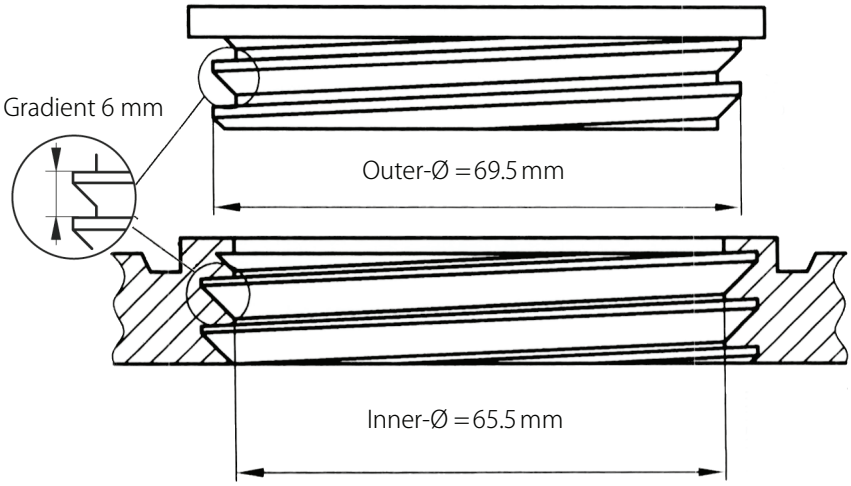
S 55 – Outer-Ø = 53.5 mm



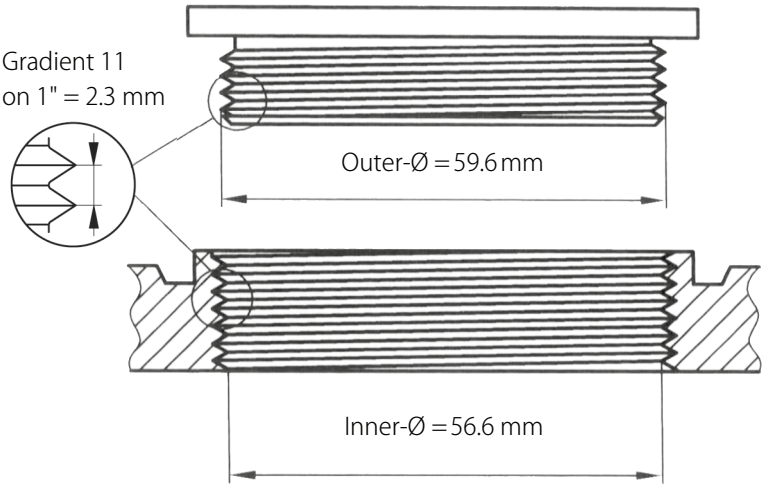
S 60 – Outer-Ø = 59.5 mm



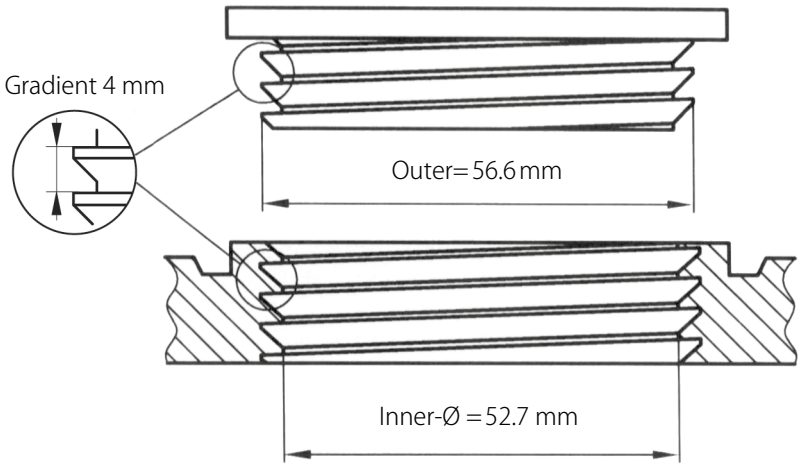
BCS 70x6 e.g. MAUSER 2" ®



G2"/ R 2"/ BSP 2"



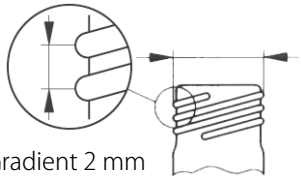
BCS 56x4 e.g. Tri Sure2" ®



GL Threads

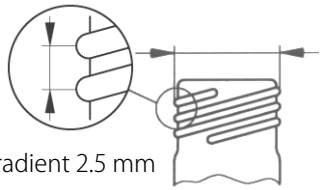
Glass threads are round threads, i.e. the surface of the thread lines is always rounded. The simple form and the rounded surface allow them to be easily constructed on glass bottle necks. The relatively large gradient and the wide edges give it great carrying capacity.

GL 12 – Outer-Ø = 12 mm



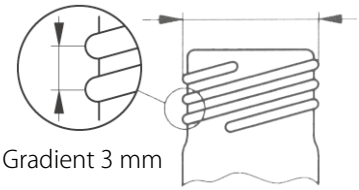
Gradient 2 mm

GL 14 – Outer-Ø = 14 mm

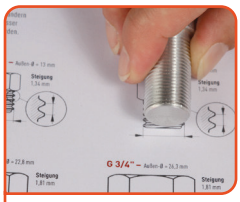


Gradient 2.5 mm

GL 18 – Outer-Ø = 18 mm

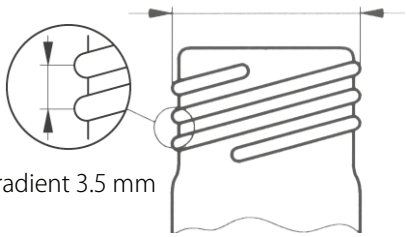


Gradient 3 mm



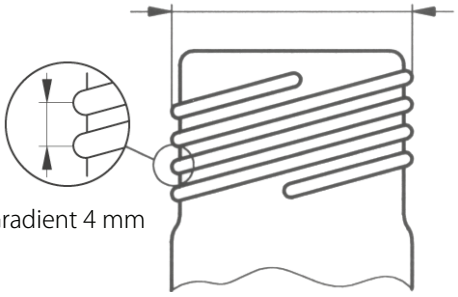
Drawings are of scale 1:1

GL 25 – Outer-Ø = 25 mm



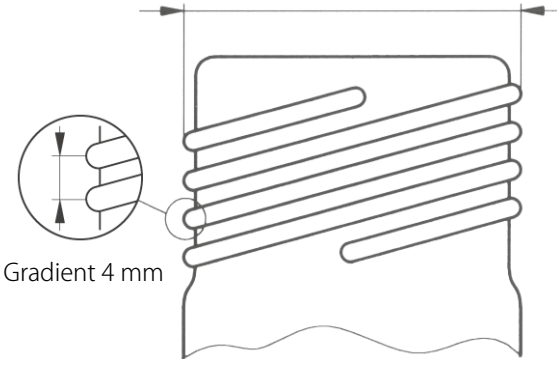
Gradient 3.5 mm

GL 32 – Outer-Ø = 32 mm

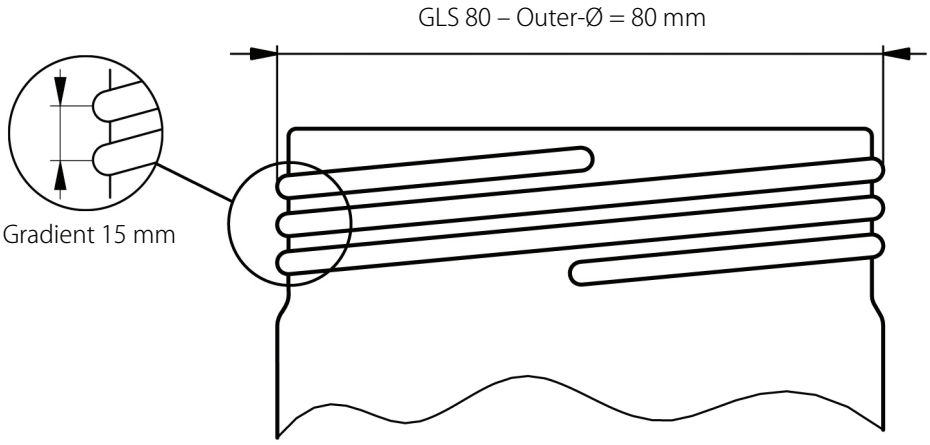


Gradient 4 mm

GL 45 – Outer-Ø = 45 mm

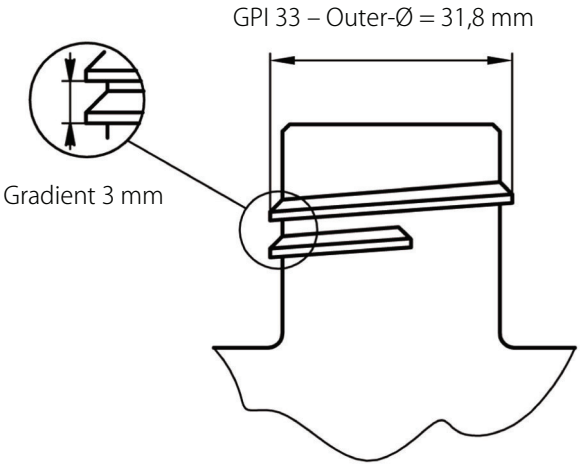


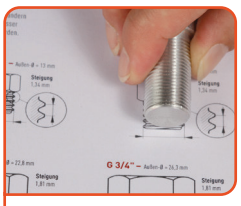
Gradient 4 mm



GPI Thread

The abbreviation GPI stands for Glass Packaging Institute, in which the North American manufacturers of glass bottles of every type are represented. The GPI norms are voluntary standards, which serve as the basis for compatibility and exchange regarding glass receptacles and their caps.





Drawings are of scale 1:1

Resistance to chemicals

Due to the wide variety and the different compositions of solvents and substances available on the market, we can assume no guarantee for chemical compatibility.

As per the most up-to-date information available, materials with best resistance have been selected for SCAT products, in particular with a view to satisfying the requirements of working with aggressive fluids.

You may obtain information regarding compatibility with specific substances from the manufacturer of your chemicals or other expert sources.

We would be pleased to offer you consultation during selection of suitable products for your application. The responsibility for the selection of the chemicals used lies with the end user.

SCAT Europe offers no guarantee for the results and assumes no obligation or liability concerning the use of these products as regards their chemical compatibility or their abrasive effects.

Resistance to other available chemicals upon request.

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Acetaldehyde	100,00 %	A	B	C	A	A
Acetamide	100,00 %	A	A	A	A	A
Acetic acid	100,00 %	A	C	B	A	A
Acetic acid	90,00 %	A	A	A	-	A
Acetic acid allyl ester	100,00 %	A	A	C	A	A
Acetic acid butyl ester	100,00 %	A	B	C	A	A
Acetic acid-2-pentyl	100,00 %	A	B	C	A	A
Acetic anhydride	100,00 %	A	C	B	A	A
Acetone	100,00 %	A	A	A	A	A
Acetonitrile	100,00 %	A	A	A	A	A
Acetophenone	100,00 %	A	C	B	A	A
Acetyl chloride	100,00 %	A	C	B	A	B
Acetyl chloride	100,00 %	A	C	C	-	A/C
Acrylonitrile	100,00 %	A	A	A	A	A
Adipic acid	100,00 %	A	A	A	A	B
Allyl acetate	100,00 %	A	A	B	-	A
Allyl chloride	100,00 %	A	B	C	A	B
Aminoacetic acid	10,00 %	A	A	A	-	B
Aminobenzene	100,00 %	A	A	A	A	A

* V4A = Stainless steel

Meaning of the evaluations

Resistance	Meaning
A	Very good resistance after 30 days' exposure, none or only mild damage.
B	Conditional resistance: damage may occur after longer periods of exposure (e.g. hair cracks, mechanical stability affected, discolouration etc.)
C	Poor resistance: can lead to destruction, severe damage, deformation of plastic etc.
A/C	There is a risk of pitting corrosion or stress cracking.
-	Currently no information about chemical resistance available.

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Aminomethane	100,00 %	A	A	A	A	A
Ammonium hydroxide	25,00 %	A	A	A	A	A
Amyl acetate	100,00 %	A	A	B	A	A
Amyl alcohol	100,00 %	A	A	A	A	A
Aniline	100,00 %	A	A	A	A	A
Anisole	100,00 %	A	B	B	A	A
Aqua regia	100,00 %	A	C	C	-	C
Aviation fuel	100,00 %	A	C	B	A	A
Benzaldehyde	100,00 %	A	B	A	A	A
Benzene	100,00 %	A	B	B	A	A
Benzenesulfonic acid	100,00 %	A	A	A	A	A
Benzoic acid	100,00 %	A	A	A	A	A
Benzoyl chloride	100,00 %	A	C	C	A	B
Benzyl alcohol	100,00 %	A	A	A	-	A
Benzyl chloride	100,00 %	A	C	C	A	B
Boric acid	100,00 %	A	A	A	A	A
Buta-1,3-diene	100,00 %	A	C	C	A	A
Butan-2-one	100,00 %	A	C	C	A	A
Butanedioic acid	100,00 %	A	A	A	-	A
Butanol	100,00 %	A	A	A	A	A
Butenedioic acid	100,00 %	A	A	A	A	A
Buthylphenol, tert.	100,00 %	A	B	B	A	A
Butyl acetate	100,00 %	A	C(B)	C	A	A

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Butyl alcohol	100,00 %	A	A	A	A	A
Butyl ether	100,00 %	A	C	C	A	A
Butyric acid	100,00 %	A	C	A	A	A
Camphor	100,00 %	A	C	B	A	A
Carbolic acid	100,00 %	A	A	A	A	A
Carbon disulfide	100,00 %	A	C	C	A	A
Carbon tetrachloride	100,00 %	A	C	C	A	B
Caustic soda	85,00 %	A	A	A	A	A/B
Chloral hydrate	100,00 %	A	B	C	-	-
Chlorine	100,00 %	A	C	C	A	C
Chloroacetic acid	100,00 %	A	A	A	A	C
Chlorobenzene	100,00 %	A	C	C	A	A
Chloroethane	100,00 %	A	B	C	A	B
Chloroethanol-2	100,00 %	A	A	A	A	B
Chloroform (trichloromethane)	100,00 %	A	C	C	A	A
Chlorosulfuric acid	100,00 %	A	C	C	A	C
Chlorotoluene	100,00 %	A	C	B	A	A
Chromic acid	50,00 %	A	C	B	A	B
Chromic acid	<50,00%	A	B	B	A	B
Chromic sulfuric acid	100,00 %	A	C	C	A	B
Citric acid	10,00 %	A	A	A	A	A
Cumene	100,00 %	A	B	C	A	A
Cyclohexane	100,00 %	A	A	A	A	A
Cyclohexanol	100,00 %	A	A	A	A	A
Cyclohexanone	100,00 %	A	B	B	A	A
Decalin	100,00 %	A	B	C	A	A
Decane	100,00 %	A	C	B	A	A
Diacetone alcohol	100,00 %	A	A	A	A	A
Diaminoethane	100,00 %	A	A	A	A	A
Dibutyl ether	100,00 %	A	C	C	A	A
Dichloroacetic acid (also monochloro-)	100,00 %	A	A	A	A	-
Dichlorobenzene	100,00 %	A	B	C	A	-
Dichloroethanes	100,00 %	A	B	C	-	B
Dichloromethane (methylene chloride)	100,00 %	A	C	C	A	B
Diesel fuel	100,00 %	A	B	B	A	A
Diethyl ether	100,00 %	A	C	C	A	A

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Diethyl ketone	100,00 %	A	B	B	A	A
Diethylamine	100,00 %	A	C	A	A	A
Diethylene glycol	100,00 %	A	A	A	-	A
Diethylene oxide	100,00 %	A	A	C	A	-
Dihydroxybenzene-1,3	50,00 %	A	C	B	A	-
Diisobutylketone	100,00 %	A	B	B	A	A
Dimethylformamide	100,00 %	A	A	A	A	A
Dimethyl ether	100,00 %	A	C	C	A	A
Dimethyl sulfoxide (DMSO)	100,00 %	A	A	A	-	A
Dimethylamine	100,00 %	A	B	B	A	A
Dimethylbenzenes	100,00 %	A	C	C	A	A
Dioxane	100,00 %	A	A	B	A	A
Diphenyl ether	100,00 %	A	C	C	A	A
Dipropylene glycol	100,00 %	A	A	A	-	A
Disodium tetraborate	100,00 %	A	A	A	-	-
Ethanol (ethyl alcohol)	96,00 %	A	A	A	A	A
Ethereal oils	100,00 %	A	C	C	-	A
Ethyl acetate	100,00 %	A	B/C	B/C	A	A
Ethyl acrylate	100,00 %	A	C	C	A	A
Ethyl chloride	100,00 %	A	C	C	A	A/C
Ethylbenzene	100,00 %	A	B	C	A	A
Ethylene glycol	100,00 %	A	A	A	A	A
Ethylene oxide	100,00 %	A	B	B	A	A
Ethylene chlorohydrin	100,00 %	A	A	A	A	A/C
Ethylenediamine	100,00 %	A	A	A	A	A
Ethylmethylketone	100,00 %	A	C	C	A	A
Formaldehyde, Formalin	40,00 %	A	A	A	A	A
Formamide (Methanamide)	100,00 %	A	A	A	A	A
Formic acid	100,00 %	A	A	B	A	B
Fuel oils	100,00 %	A	B	B	A	A
Furfural	100,00 %	A	B	C	A	A
Gasoline, aromatic	100,00 %	A	B	B	A	B
Glycerine	100,00 %	A	A	A	-	A
Glycine	10,00 %	A	A	A	-	A
Glycol	100,00 %	A	A	A	A	A
Glycolic acid	100,00 %	A	A	A	A	A/B

* V4A = Stainless steel

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Heptane	100,00 %	A	B	B	A	A
Hexadecanol	100,00 %	A	A	A	A	A
Hexaflourosilicic acid	100,00 %	A	A	A	A	A
Hexan-1,2,6-triol	100,00 %	A	A	A	A	A
Hexane	100,00 %	A	B	B	A	A
Hexanedioic acid (Adipic acid)	100,00 %	A	A	A	A	A
Hexanol	100,00 %	A	A	A	A	A
Hydrazine hydrate	64,00 %	A	A	A	A	A/B
Hydrochloric acid	37,00 %	A	A	A	A	C
Hydrofluoric acid	45,00 %	A	A	A	A	C
Hydrogen peroxide	90,00 %	A	B	B	A	A
Hydrogen sulfide	100,00 %	A	A	A	A	A
Hydroxyacetic acid (Glycolic acid)	100,00 %	A	A	A	A	B
Isobutanol	100,00 %	A	A	A	A	A
Isooctane	100,00 %	A	B	B	A	A
Isopropanol	100,00 %	A	A	A	A	A
Isopropenyl acetate	100,00 %	A	A	A	A	-
Isopropyl acetate	100,00 %	A	A	B	-	A
Isopropyl ether	100,00 %	A	C	C	A	A
Isopropylbenzene	100,00 %	A	C	C	A	-
Kerosene	100,00 %	A	A	A	A	A
Lactic acid	90,00 %	A	A	A	A	A/B
Menthol	100,00 %	A	A	A	-	A
Methanol	100,00 %	A	A	A	A	A
Methoxybenzene	100,00 %	A	C	C	A	A
Methoxyethanol	100,00 %	A	A	C	A	A
Methyl acetate	100,00 %	A	A	A	A	A
Methyl bromide	100,00 %	A	C	C	A	A/C
Methyl ethyl ketone	100,00 %	A	B	B	A	A
Methyl isobutyl ketone	100,00 %	A	C	C	A	A
Methyl methacrylate	100,00 %	A	A	A	A	A
Methyl phenyl ether	100,00 %	A	C	C	A	A
Methylamine	100,00 %	A	A	A	A	A
Methylbenzene	100,00 %	A	C	C	A	A

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Methylcyanide	100,00 %	A	A	A	A	A
Methylene chloride	100,00 %	A	C	C	A	A/C
Methyloxirane	100,00 %	A	A	A	A	A
Methylpentanone	100,00 %	A	C	C	A	A
Methylphenylketone	100,00 %	A	C	C	A	A
Mineral oil	100,00 %	A	A	B	-	A
Nitric acid	65,00 %	A	B	C	A	B
Nitrobenzene	100,00 %	A	C	B	A	A
Octane	100,00 %	A	B	B	A	A
Oleic acid	100,00 %	A	C(B)	C(B)	A	A
Oleum	100,00 %	A	C	C	A	A
Oxalic acid	100,00 %	A	A	A	A	A/B
Pentan-1-ol	100,00 %	A	A	A	A	-
Pentan-3-on	100,00 %	A	A	A	A	A
Pentylacetate	100,00 %	A	A	C	A	A
Perchlorethylene	100,00 %	A	C	C	A	-
Perchloric acid	100,00 %	A	B	C	A	-
Petroleum	100,00 %	A	B	B	A	A
Phenol	100,00 %	A	A	A	A	A
Phenylamine	100,00 %	A	A	A	A	A
Phosphoric acid	85,00 %	A	B	A	A	A/B
Phosphorus trichloride	100,00 %	A	B	B	A	-
Potassium hydroxide	100,00 %	A	A	A	A	A
Potassium hypochlorite	20,00 %	A	B	B	A	B
Potassium perchlorate	25,00 %	A	A	A	A	A
Propan-2-ol	100,00 %	A	A	A	A	A
Propane-1,2-diol	100,00 %	A	A	A	A	A
Propionic acid	100,00 %	A	A	A	A	A
Propylene oxide	100,00 %	A	A	A	A	A
Pyridine	100,00 %	A	B	B	A	A
Resorcinol	50,00 %	A	B	A	A	-
Salicylic acid	100,00 %	A	A	A	A	A
Silicone oils	100,00 %	A	A	A	-	A
Silver acetate	100,00 %	A	A	A	-	-
Sodium hydroxide	85,00 %	A	A	A	A	A/B

* V4A = Stainless steel

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Sodium persulfate	25,00 %	A	A	B	A	A
Sodium persulfate	100,00 %	A	A	A	A	A
Styrene	100,00 %	A	C	C	A	A
Succinic acid	100,00 %	A	A	A	A	A
Sulfuric acid	80,00 %	A	A	A	A	B/C
Sulfuric acid, fuming	100,00 %	A	C	C	A	A
Tartaric acid	100,00 %	A	A	A	A	A
Tetrachlorethylene	100,00 %	A	C	C	A	-
Tetrachloroethane	100,00 %	A	B	C	A	-
Tetrahydrofuran (THF)	100,00 %	A	C	C	A	A
Tetrahydronaphthalene	100,00 %	A	C	C	A	A
Tetralin	100,00 %	A	C	C	A	A
Thionyl chloride	100,00 %	A	C	C	A	-
Toluene	100,00 %	A	C	C	A	A
Trichloroacetic acid	100,00 %	A	B	A	A	B
Trichlorobenzenes	100,00 %	A	C	C	A	-
Trichloroethylene	100,00 %	A	C	C	A	B
Triethanolamine	100,00 %	A	A	A	-	A
Triethylene glycol	100,00 %	A	A	A	A	A
Turpentine	100,00 %	A	B	C	A	A
Urea	100,00 %	A	A	A	A	A
Uric acid	100,00 %	A	A	A	-	A

Substances (20°C/68°F)	Conc.	PTFE	PEHD	PP	PFA	V4A*
Vinyl acetate	100,00 %	A	A	B	A	A
Vinyl chloride	100,00 %	A	A	C	A	-
Vinyl cyanide	100,00 %	A	A	A	A	A
Vinylbenzene, Styrene	100,00 %	A	C	C	A	A
Vinylidene chloride	100,00 %	A	C	C	A	-
Waterglass	100,00 %	A	A	A	-	A
Xylenes	100,00 %	A	C	C	A	A

* V4A = Stainless steel

Warranty/Safety of our products

Strict quality control ensures you receive faultless, high-quality products from us. However, if a product is defective, we will, of course, replace it free of charge. Since these are technically sophisticated components, we cannot provide warranty for any articles which have been technically modified or damaged by the user.

Customised products

The same applies to customised products which have been manufactured according to the specifications made by our customers. It is the responsibility of the user to check whether these products meet their technical requirements. We accept no liability for events or accidents caused by incorrect handling or technical modifications to our products by the user.

Health & safety

Pay special attention to hazard pictograms (including H and P statements) on Safety Data Sheets (SDS) in your company and on the packaging of your chemicals. When handling substances labelled as hazardous, always wear personal protective equipment (PPE) as specified.

Chemical compatibility

Due to the variety and different composition of solvents and substances available on the market, we cannot provide warranty for chemical compatibility. State-of-the-art resistant materials have been used for SymLine® products, with special focus on requirements relating to work with aggressive liquids. You can obtain information on compatibility with specific substances from your chemical manufacturers or other specialist sources. We can provide support in selecting the appropriate for your application. However, the end user is responsible for the selection of chemicals used. SymLine® does neither provide warranty for results nor does it assume any obligation or liability in connection with the use of such products as far as their chemical compatibility or abrasive effects are regarded.

Grounding and antistatics

Our products for safe grounding of containers and vessels are suitable for connection to current-free and zero potential installations. Connection to power-driven installations or live components must be executed by qualified electricians only!

Please observe the internal safety instructions of your company. A wide range of information is available for you to download from the SymLine® online site. For example, the continuously updated table: 'Plastics – Chemical Resistance to Chemicals' or safety instructions relating to SymLine® products. Visit us at: www.SymLine.de

GHS 01
Explosive

GHS 02
Flammable

GHS 03
Oxidising

GHS 04
Gas under pressure

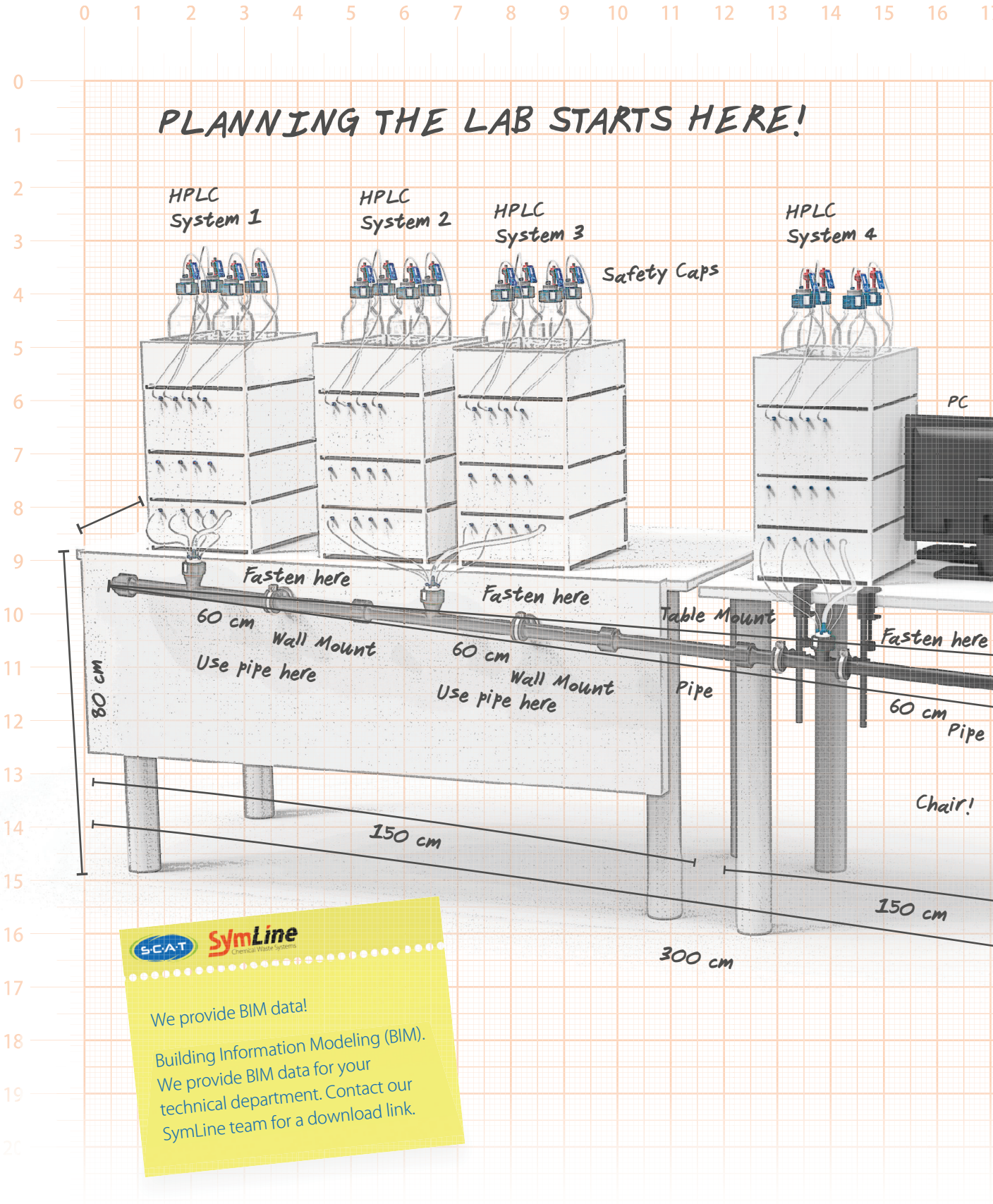
GHS 05
Corrosive

GHS 06
Acute toxicity

GHS 07
Health hazard/Hazardous
to the ozone layer

GHS 08
Serious health hazard

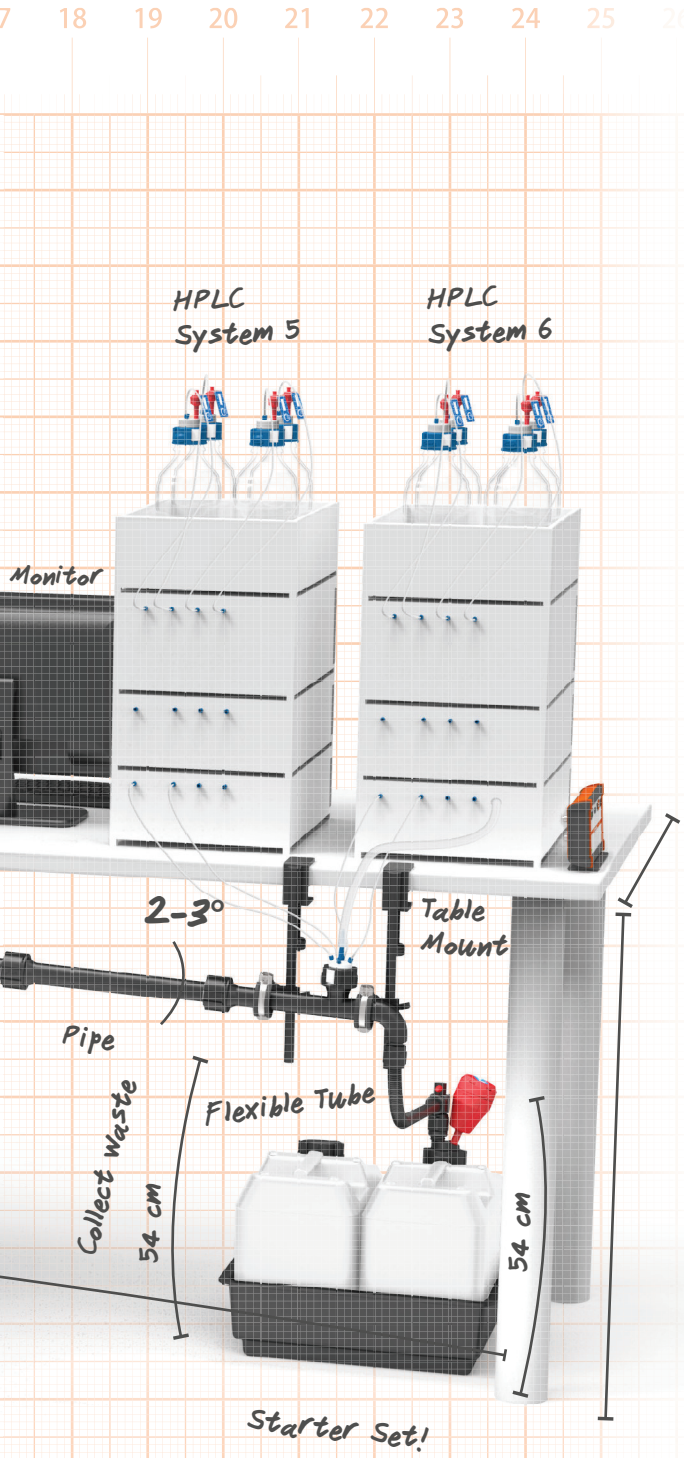
GHS 09
Hazardous to
the environment



SymLine
Chemical Waste Systems

We provide BIM data!

Building Information Modeling (BIM). We provide BIM data for your technical department. Contact our SymLine team for a download link.



You are in the planning phase? We are ready to assist you!

Ask your lab furniture manufacturer, lab planner or the SymLine planning team.

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