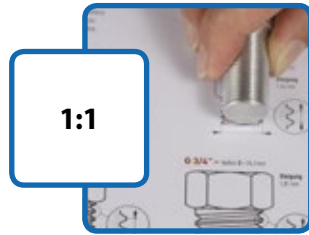
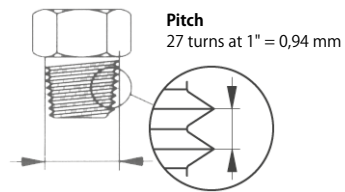


# Thread Types Determination

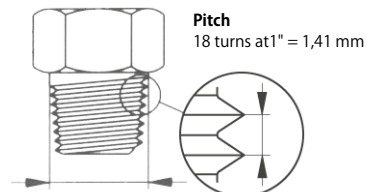


**NPT (National Pipe Thread) tapered, american pipe thread**  
 Easy recognisable by its tapered outer and inner diameter which is selfsealing. Therefore, NPT threads are also known as "sealing thread" or "tightly threaded connection".

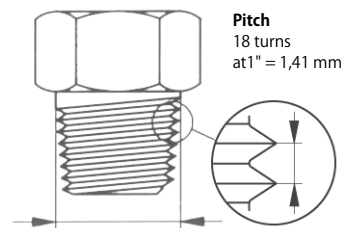
**NPT 1/8"** – outer-Ø = 9,9 mm



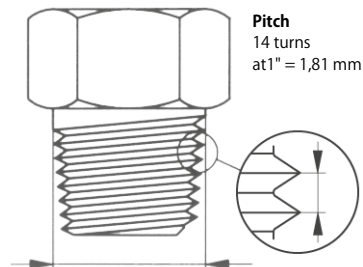
**NPT 1/4"** – outer-Ø = 13,2 mm



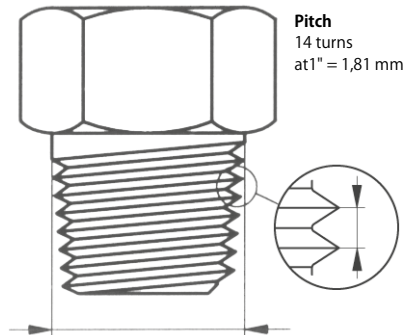
**NPT 3/8"** – outer-Ø = 16,6 mm



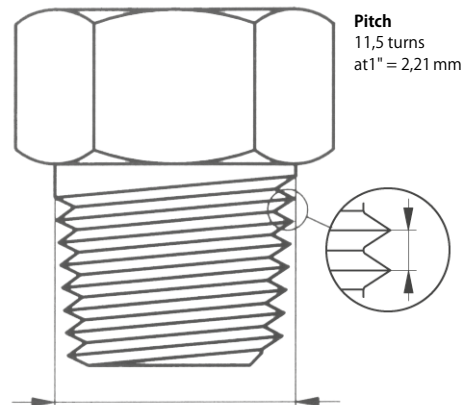
**NPT 1/2"** – outer-Ø = 20,6 mm



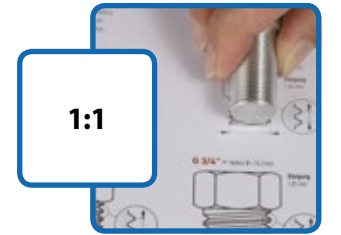
**NPT 3/4"** – outer-Ø = 26 mm



**NPT 1"** – outer-Ø = 32,5 mm

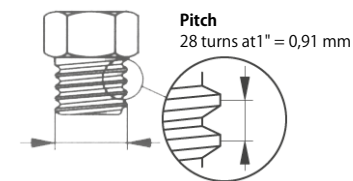


# Thread Types Determination

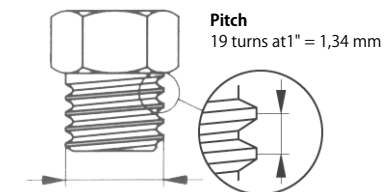


**G or R (Whitworth thread) and BSP (British Standard Pipe)**  
 Cylindrical threads which are mainly used in countries with imperial system. The size of e.g. R 3/4" does not stand for a diameter. Thus the corresponding size has to be determined according to charts.

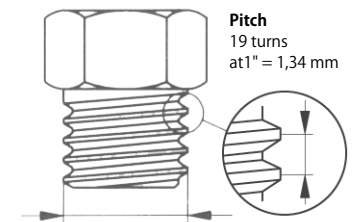
**G 1/8"** – outer-Ø = 9,6 mm



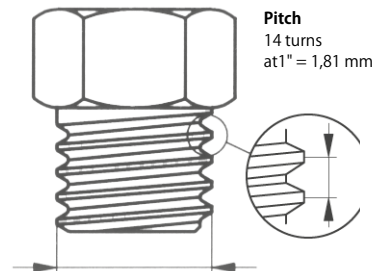
**G 1/4"** – outer-Ø = 13 mm



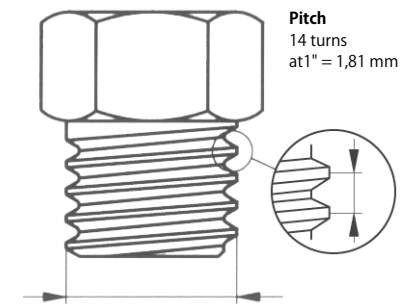
**G 3/8"** – outer-Ø = 16,5 mm



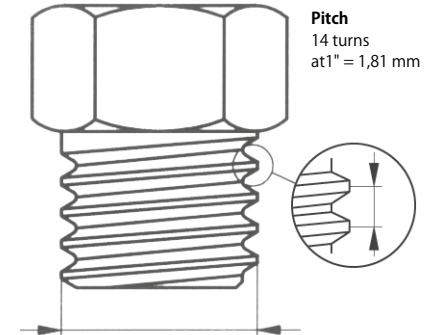
**G 1/2"** – outer-Ø = 20,8 mm



**G 5/8"** – outer-Ø = 22,8 mm



**G 3/4"** – outer-Ø = 26,3 mm



S.C.A.T. Europe GmbH  
 Opelstraße 3  
 D-64546 Mörfelden

**SCAT**  
 europe

Tel: +49 - (0) 6105 - 30 55 86 - 0  
 Fax: +49 - (0) 6105 - 30 55 86 - 99  
 e-Mail: info@scat-europe.com  
 Web: www.scat-europe.com



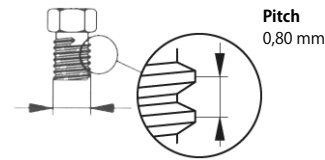
1:1

# Thread Types Determination

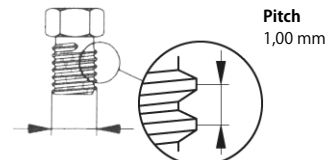
## M (metric ISO-thread) – standard in Europe

Cylindrical inner and outer diameter which is precise in millimetres. The extremely fine taper of this thread allows the best possible force transmission. Metric threads are designated by a capital M plus an indication of their nominal outer diameter, for instance M 10. A taper deviating from the standard is marked with an appendix like for instance M 10 x 0.75.

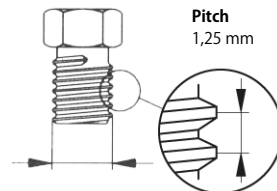
M5 – outer-Ø = 5 mm



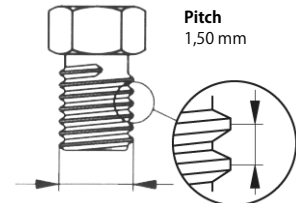
M6 – outer-Ø = 6 mm



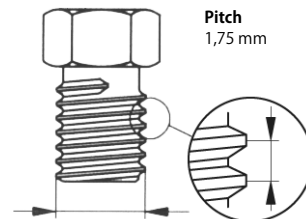
M8 – outer-Ø = 8 mm



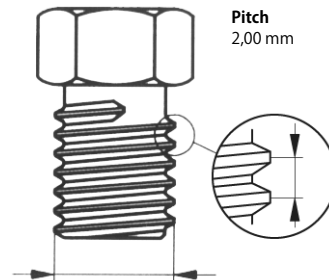
M10 – outer-Ø = 10 mm



M12 – outer-Ø = 12 mm



M16 – outer-Ø = 16 mm



1:1

# Thread Types Determination

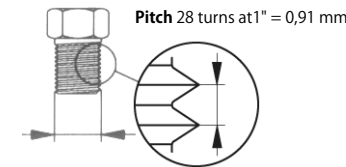
## UNF 1/4"-28G

It has its origin in the USA. Mainly used in chromatography/HPLC applications. Most common sizes are UNF 1/4"-28G and UNF 10-32G. The digits 28 G and 32 G stand for the number of thread pitches at a length of one inch (25.4 mm).

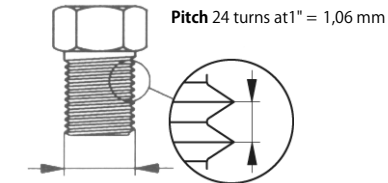
## UNF 1/4"-28G versus M6

Without exception all of our HPLC fittings come with the most common HPLC thread UNF 1/4"-28G. In addition, fittings and distributors with the very similar thread M 6 are used. These threads can only be distinguished by exact determination of their outer diameter or by using a test mandrel (it is possible to screw in a tube end fitting in the counterpart of the other thread for at least 2-3 rotations). The UNF 1/4" thread has an outer diameter of 6.35 mm, the M 6 thread has precisely 6 mm (work tolerances are possible). We recommend to use only the UNF 1/4"-28G thread to avoid confusion and double inventory.

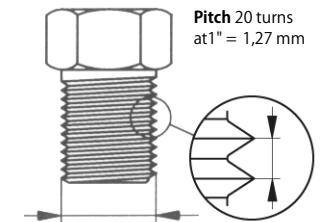
UNF 1/4"-28G – outer-Ø = 6,2 mm



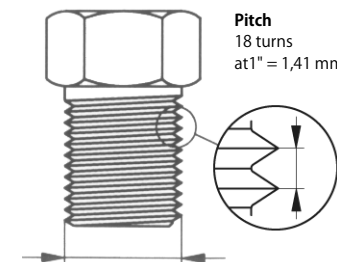
UNF 3/8"-28G – outer-Ø = 9,4 mm



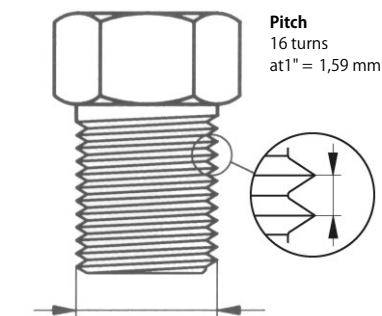
UNF 1/2"-28G – outer-Ø = 12,6 mm



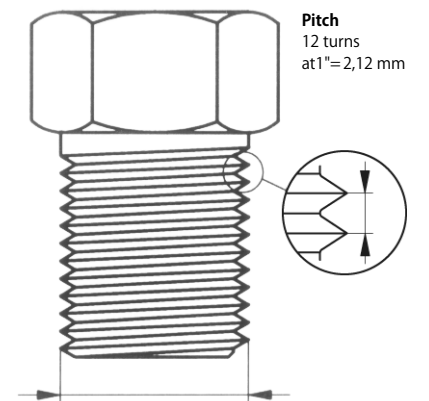
UNF 5/8"-18G – outer-Ø = 15,7 mm



UNF 3/4"-16G – outer-Ø = 18,9 mm



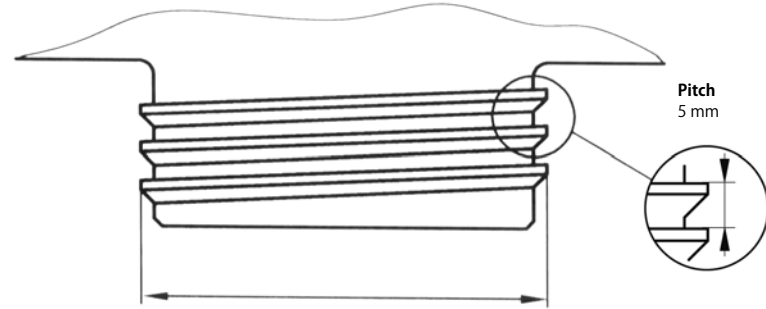
UNF 1"-12G – outer-Ø = 25,2 mm



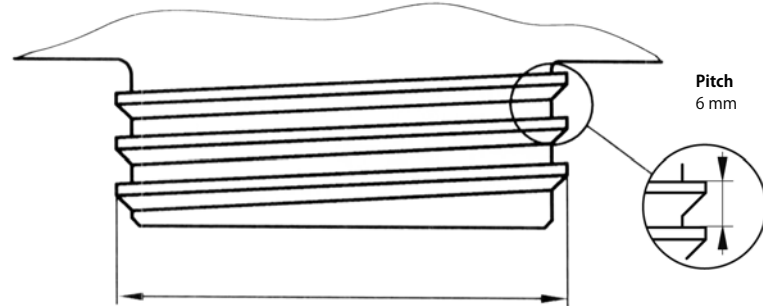
# Thread Types Canisters

1:1

S 55 – outer-Ø = 53,5 mm



S 60 – outer-Ø = 59,5 mm



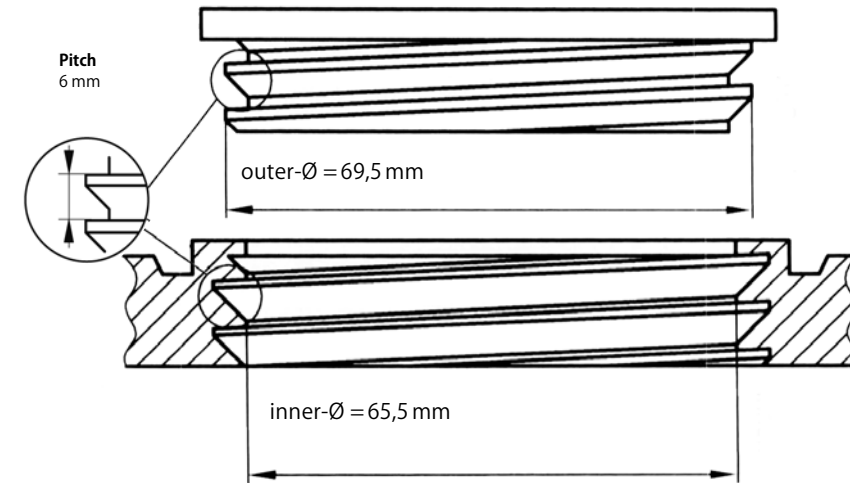
## WASTE SYSTEMS

All thread types for canisters are listed in the chapter of **WASTE SYSTEMS**

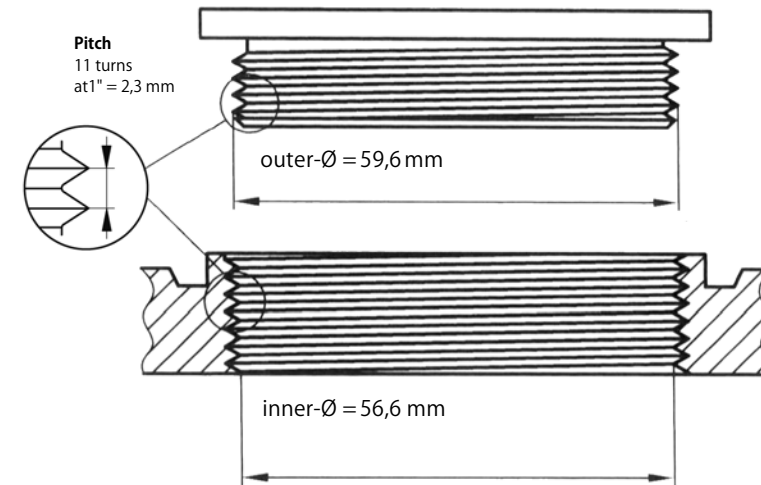
# Thread Types Barrels

1:1

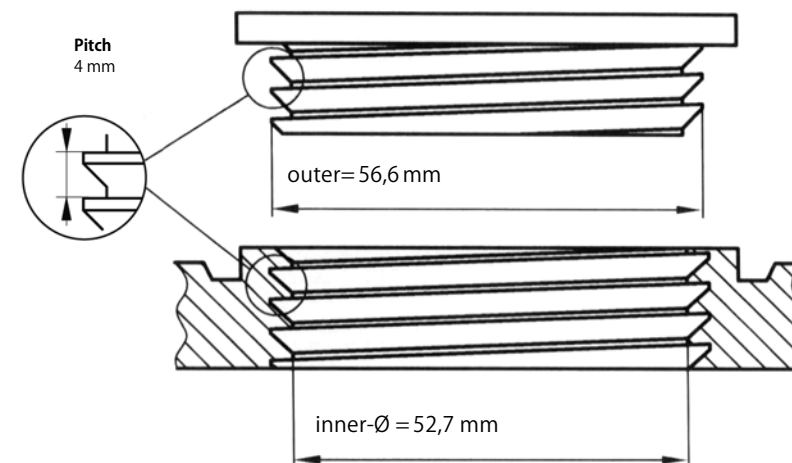
BCS 70 x 6 MAUSER 2"®



G2"/ R 2"/ BSP 2"



BCS 56 x 4 Tri Sure2"®



# Thread Types

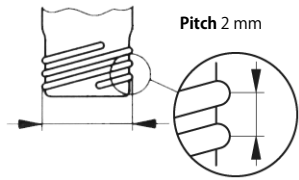
## Glas threads

1:1

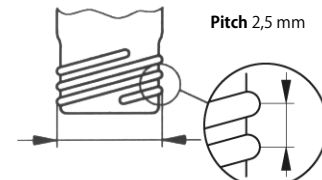
### GL-threads

GL threads are round threads, i.e. there are only round and no sharp ends at the flanks of the screw thread. Due to its simple shape and the round ends of the flanks, this thread can easily be formed on glass pipes. The extremely high pitch and the large flanks give this thread an important carrying power.

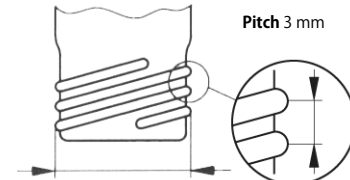
GL 12 – outer-Ø = 12 mm



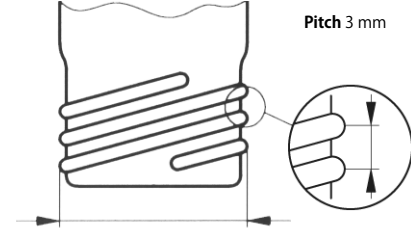
GL 14 – outer-Ø = 14 mm



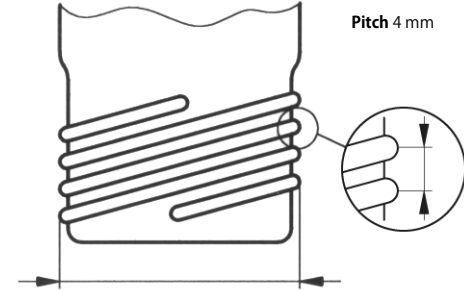
GL 18 – outer-Ø = 18 mm



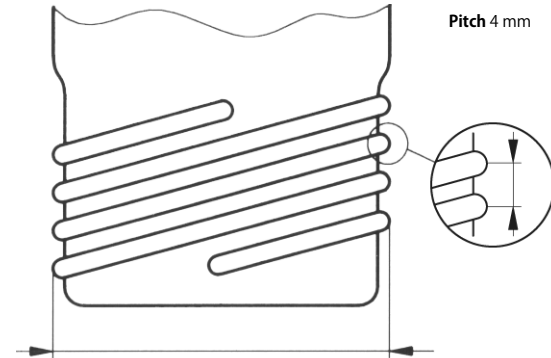
GL 25 – outer-Ø = 25 mm



GL 32 – outer-Ø = 32 mm

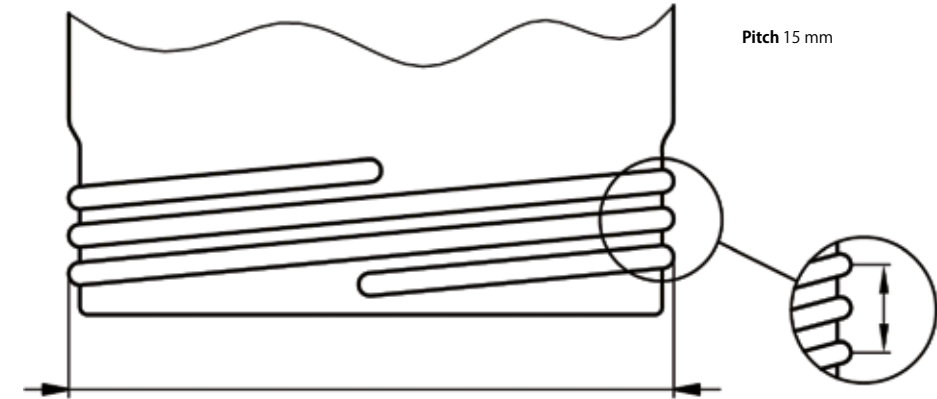


GL 45 – outer-Ø = 45 mm



1:1

GLS 80 – outer-Ø = 80 mm



## Conversions

### Inches in Millimeters

Inch Fractional notation "	Inch Decimal notation "	Millimeters Decimal notation mm
1/16	0.062	1,57
1/8	0.125	3,18
3/16	0.188	4,78
1/4	0.250	6,35
5/16	0.313	7,95
3/8	0.375	9,53
7/16	0.438	11,13
1/2	0.500	12,70
9/16	0.563	14,30
5/8	0.625	15,88
11/16	0.688	17,48
3/4	0.750	19,05
13/16	0.813	20,65
7/8	0.875	22,23
15/16	0.938	23,83
1	1	25,40
2	2	50,80
3	3	76,20
4	4	101,60
5	5	127,00
6	6	152,40
7	7	177,80
10	10	254,00

### Millimeters to Inches

Millimeters mm	Decimal Inches in "
1,0	0.039
1,8	0.071
2,0	0.079
3,0	0.118
3,2	0.126
4,0	0.157
4,3	0.169
4,6	0.181
5,0	0.197
6,0	0.236
7,0	0.276
8,0	0.315
9,0	0.354
10,0	0.394
20,0	0.787
30,0	1.181
40,0	1.575
50,0	1.969
60,0	2.362
70,0	2.756
80,0	3.150
90,0	3.543
100,0	3.937