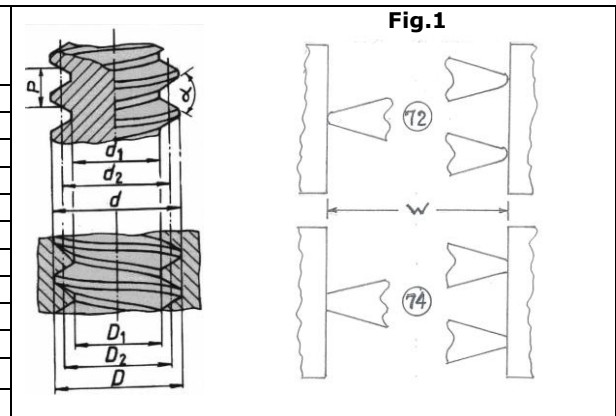


**The following FMS thread inserts can be made for measuring diameter D
(major diameter on an internal thread)
and d_1 (minor diameter on an external thread)**

Thread inserts for measuring these two diameters for specific thread types and pitches can also be made on request. As with all FMS standard pitch diameter inserts they can be used for both RH and LH threads.

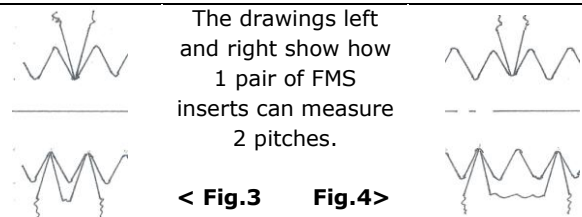
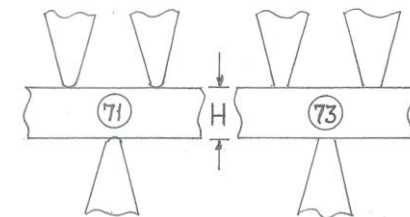
WWW.F-M-S.DK

| PITCH (MM) | | Nose Radius (R) Flat (F) | FMS No. | PITCH (TPI) | | Nose Radius (R) Flat (F) | FMS No. |
|--|-------------|-----------------------------|---------|---|-------------|-----------------------------|---------|
| For | Flank angle | | | For | Flank angle | | |
| 1 and 2 | 50° to 80° | R 0.12 | 01 | 28 and 14 | 50° to 80° | R 0.1 | 01 |
| 1.25 and 2.5 | 50° to 80° | R 0.15 | 02 | 24 and 12 | 50° to 80° | R 0.12 | 02 |
| 1.5 and 3 | 50° to 80° | R 0.18 | 03 | 22 and 11 | 50° to 80° | R 0.13 | 03 |
| 1.75 and 3.5 | 50° to 80° | R 0.2 | 04 | 20 and 10 | 50° to 80° | R 0.15 | 04 |
| 2 and 4 | 50° to 80° | R 0.25 | 05 | 19 | 50° to 80° | R 0.16 | 05 |
| 2.5 and 5 | 50° to 80° | R 0.3 | 06 | 18 and 9 | 50° to 80° | R 0.16 | 06 |
| 3 and 6 | 50° to 80° | R 0.35 | 07 | 16 and 8 | 50° to 80° | R 0.19 | 07 |
| 4 and 8 | 50° to 80° | R 0.5 | 08 | 14 and 7 | 50° to 80° | R 0.2 | 08 |
| 4.5 | 50° to 80° | R 0.55 | 09 | 12 and 6 | 50° to 80° | R 0.25 | 09 |
| 5.5 | 50° to 80° | R 0.65 | 10 | 10 and 5 | 50° to 80° | R 0.3 | 10 |
| | | | | 8 and 4 | 50° to 80° | R 0.38 | 11 |
| | | | | 6 and 3 | 50° to 80° | R 0.5 | 12 |
| <i>The above are for metric threads</i> | | | | <i>The above are for Unified Inch threads and straight pipe threads</i> | | | |
| 1.5 and 3 | 30° | F 0.45 | 20 | 16 and 8 | 29° | F 0.45 | 20 |
| 2 and 4 | 30° | F 0.6 | 21 | 14 and 7 | 29° | F 0.5 | 21 |
| 3 and 6 | 30° | F 0.9 | 22 | 12 and 6 | 29° | F 0.6 | 22 |
| 4 and 8 | 30° | F 1.2 | 23 | 10 and 5 | 29° | F 0.75 | 23 |
| 5 and 10 | 30° | F 1.5 | 24 | 8 and 4 | 29° | F 0.95 | 24 |
| 6 and 12 | 30° | 1.8 | 25 | 6 and 3 | 29° | F 1.25 | 25 |
| 7 and 14 | 30° | F 2.1 | 26 | 5 and 2½ | 29° | F 1.5 | 26 |
| 8 and 16 | 30° | F 2.4 | 27 | 4 and 2 | 29° | F 1.9 | 27 |
| 9 and 18 | 30° | F 2.7 | 28 | 3 and 1½ | 29° | F 2.5 | 28 |
| 10 and 20 | 30° | F 3 | 29 | 1½ | 29° | F 5.6 | 29 |
| 12 and 24 | 30° | F 3.6 | 30 | 1 | 29° | F 7.6 | 30 |
| 14 and 28 | 30° | F 4.2 | 31 | | | | |
| <i>The above are for Tr threads</i> | | | | <i>The above are for ACME and Stub Acme threads</i> | | | |
| For mm pitches start FMS No. with 71- for external threads and 72- for internal | | | | For TPI pitches start FMS No. with 73- for external threads and 74- for internal | | | |



72 and 74 are for internal threads and 71 and 73 are for external threads

Fig.2



< Fig.3 Fig.4 >

Fig.1 shows one way of calibrating FMS inserts for measuring diameter D on an internal thread. Simply set a digital caliper to the nominal thread diameter and zero (0.00) at this size. Measurement for diameter D must be greater than 0.00 when measured.

Fig.2 shows the same except a parallel bar (i.e. block gauge) can be used to set zero for external threads. Remember and add on the bar's height to get the correct measurement result for diameter d_1 .

Fig.3 and 4 show the contact made by the FMS inserts on diameters D and d_1 . For threads with a radius a slightly smaller radius is used than that normally specified and for threads with flats then a flat on the nose of the insert gives the most reliable measurement.

N.B. Setting (calibration) plate **FMS No. 75A** with outside and inside lengths of **50.00mm** is available.