

THREAD MEASUREMENT INSTRUCTIONS

Find the nominal thread pitch diameter and the tolerance.

Holder Assembly



1. Hold the caliper and the insert holder.



2. Place caliper jaws in the holder slots



3. Fasten the four (4) grub screws carefully.



4. Remove the alignment cylinder.



Holder assembly is not necessary when caliper YTMT203 is used

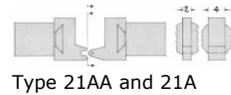


Caliper with holders 10A, pressure device 40A & centre-stop 55A measuring a M16x2-6g screw thread.

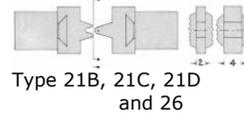
External Thread Measurement Assembly and use of FMS thread insert types 21 and 26



Type 21 and 26



Type 21AA and 21A



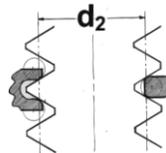
Type 21B, 21C, 21D and 26

5. Push the relevant thread inserts into the holder's Ø8 mm hole and zero the caliper after pushing the inserts together.

6. Use a FMS pressure device to ensure correct contact of the insert profile. i.e. when zeroed the caliper will show 0,00 ± 0,01 after three to four movements of the pressure device.

7. Measure the approximate pitch diameter of the thread.

Correct contact with the thread flanks with FMS thread external inserts



Important:

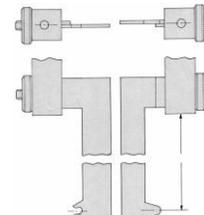
A correct, accurate measurement result depends on the use of the correct thread inserts and the care taken to ensure a correct contact of the insert profile when zeroing. A FMS calibration plate (or any suitable threaded component with a known pitch diameter) can be used to verify calibration accuracy.

Tip: When measuring a large number of identical components over a longer period of time, note the measured dimension on one of the first components produced and use this as the reference. This should eliminate the need to move anything when verifying calibration.

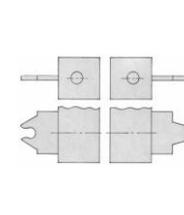
Internal Thread Measurement Assembly and use of FMS thread insert types 22 and 27



8. Push the relevant thread inserts into the holder's Ø8 mm hole. Use and tighten the M3 thumb nuts on types 22 and 27.

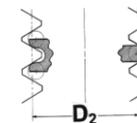


Type 22 and 27



Type 23 and 28

Assembly and use of FMS thread insert types 23 and 28



Correct contact of thread flanks with FMS internal inserts

9. Use a FMS pressure device to ensure correct contact of the insert profile with the calibration plate. When zeroed the caliper will show 0,00 ± 0,01 after three to four movements of the pressure device.

10. Measure the approximate pitch diameter of the thread.

11. Use a FMS calibration plate (or any other suitable threaded component with a known pitch diameter) to zero (or PRESET) to the known pitch diameter. The standard internal FMS calibration plate dimension for D_2 is 50.00mm (unless otherwise specified or ordered)

12. Push the sliding caliper jaw to approximately 3–5 mm above the approximate thread pitch diameter and fasten the pressure device. Measurements on the thread can then be carried out with a uniform pressure and allowing a movement of the pressure device of at least ± 2 mm when measuring.

If steps 1, 2, 3, 4, 8, 9, 10, 11 & 12 are followed, the measurement obtained will be the internal thread pitch diameter. The caliper display will be the thread pitch diameter when 50,00 mm is added to the result.

e.g. if the caliper display is -18,60 then $-18,60 + 50,00 = 31,40$

FMS pressure device types

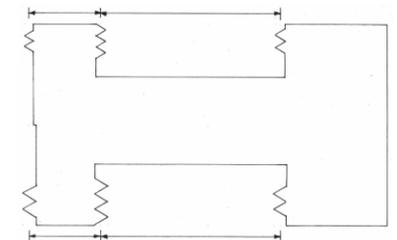


FMS 40A

FMS 42A



YT216 with FMS42A



Calibration plate type 30AB for pitches from 0.5 – 8 mm and/or 48 – 3 TPI with a flank angle between 50 and 80°