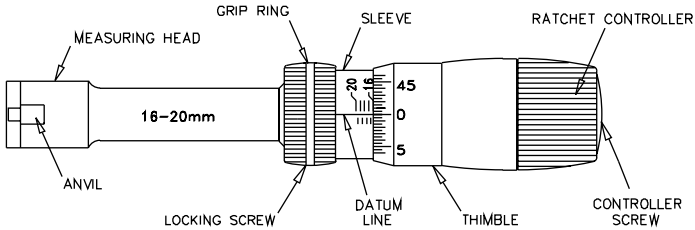
BOWERS METROLOGY

XTA Analogue Internal Micrometer Operating Instructions

XTA Micromètres d'intérieur Notice d'Utilisation

XTA Mechanische Innenmessschrauben Bedienungsanleitung

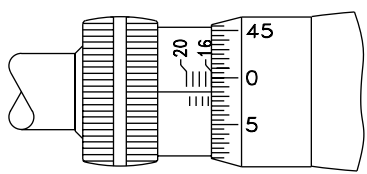
NOMENCLATURE & SETTING INSTRUCTIONS (METRIC)



HOW TO READ...

All metric micrometers are graduated in 0.005mm divisions. The sleeve has a datum line, and the thimble is graduated as illustrated below. The sleeve is graduated in 0.5mm divisions and one complete revolution of the thimble is equal to 0.5mm. To read the instrument, read the size on the sleeve to obtain the nearest half millimetre and to obtain hundredths and microns read the number on the thimble which lines up with the datum line on the sleeve.

An example is illustrated below.



In the illustration above the micrometer reading would be 16.015mm.

EXTENSIONS: When extensions are used for deep hole measurement it will be necessary to reset the instrument as per the resetting instructions below.

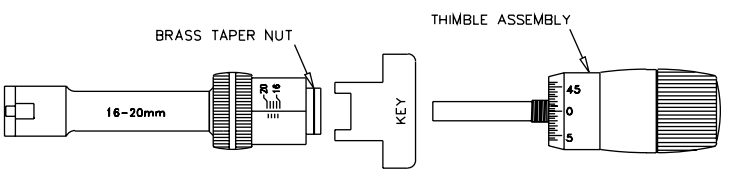
RESETTING PROCEDURE...

Should the gauge start to lose accuracy due to wear etc., it may be reset as follows :-

1) Insert the instrument into the setting ring gauge and set at the correct tightness using the ratchet controller.
2) Lock the spindle with the locking screw located through the hole in the grip-ring.
3) Loosen the ratchet controller by inserting the allen-key provided into the screw located in the end of the controller and unlock the screw.
4) The thimble will now be free and can be rotated and set to the size on the setting ring.
5) Re-tighten the controller screw and slacken off the spindle locking screw. The micrometer is now reset.
6) Recheck the gauge in the setting ring. Gauge reading should be the same as the setting ring calibrated value.

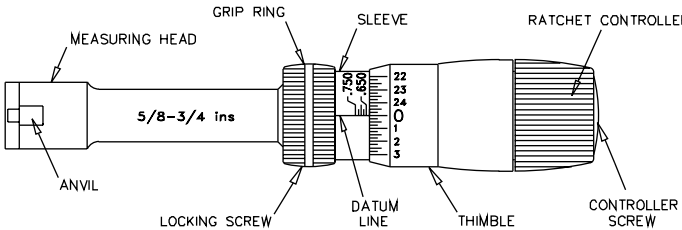
A KEY IS PROVIDED TO MAKE ADJUSTMENTS OF THE MICROMETER NUT IN THE EVENT OF WEAR.
PROCEDURE:

1) Remove the thimble and spindle assembly from the micrometer by completely winding the thimble off the sleeve.
2) Locate the key in the slots of the brass nut.
3) Make adjustments in very small increments. A clockwise rotation of the brass nut will close the nut to compensate for wear.
4) Replace the thimble assembly and recalibrate the gauge as per resetting procedure above.



IMPORTANT NOTE : The anvils have a fixed amount of travel. DO NOT remove anvils from the measuring head.

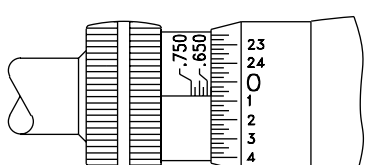
NOMENCLATURE & SETTING INSTRUCTIONS (INCH)



HOW TO READ...

All inch micrometers are graduated in 0.00025 divisions. The sleeve has a datum line, and the thimble is graduated as illustrated below. The sleeve is graduated in 0.025 divisions and one complete revolution of the thimble is equal to 0.025 . To read the instrument, read the size on the sleeve to obtain the tenths and hundredths and to obtain thous and tenths of thous read the number on the thimble which lines up with the datum line on the sleeve.

An example is illustrated below.



In the illustration above the micrometer reading would be 0.62575

EXTENSIONS: When extensions are used for deep hole measurement it will be necessary to reset the instrument as per the resetting instructions below.

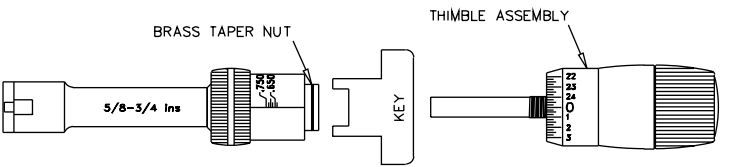
RESETTING PROCEDURE...

Should the gauge start to lose accuracy due to wear etc., it may be reset as follows :-

1) Insert the instrument into the setting ring gauge and set at the correct tightness using the ratchet controller.
2) Lock the spindle with the locking screw located through the hole in the grip-ring.
3) Loosen the ratchet controller by inserting the allen-key provided into the screw located in the end of the controller and unlock the screw.
4) The thimble will now be free and can be rotated and set to the size on the setting ring.
5) Re-tighten the controller screw and slacken off the spindle locking screw. The micrometer is now reset.
6) Recheck the gauge in the setting ring. Gauge reading should be the same as the setting ring calibrated value.

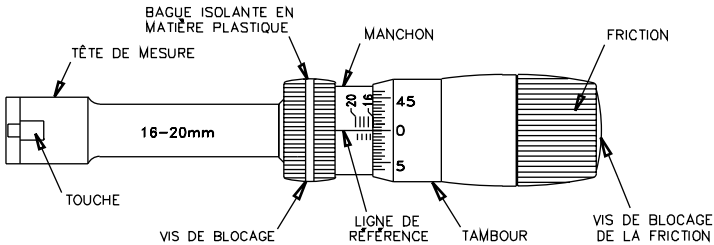
A KEY IS PROVIDED TO MAKE ADJUSTMENTS OF THE MICROMETER NUT IN THE EVENT OF WEAR.
PROCEDURE:

1) Remove the thimble and spindle assembly from the micrometer by completely winding the thimble off the sleeve.
2) Locate the key in the slots of the brass nut.
3) Make adjustments in very small increments. A clockwise rotation of the brass nut will close the nut to compensate for wear.
4) Replace the thimble assembly and recalibrate the gauge as per resetting procedure above.



IMPORTANT NOTE : The anvils have a fixed amount of travel. DO NOT remove anvils from the measuring head.

NOMENCLATURE ET NOTICE D UTILISATION POUR MICROMETRES D INT RIEUR



LECTURE...

Tous les micromètres en unité métrique ont une résolution de 0.005mm. Un tour du tambour correspond à 0.5 mm. La lecture des centièmes et demi-centièmes s effectue sur le tambour à laide de la ligne de référence placée sur le manchon. La lectures des millimètres et demi-millimètres seffectue sur le manchon. Voir dessin ci-dessous.

Sur le dessin la lecture est 16.015mm

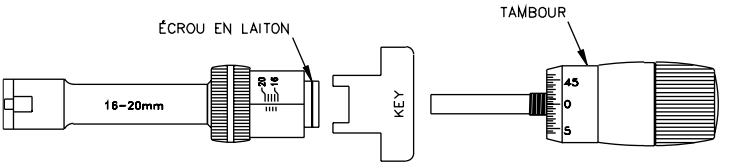
RALLONGE: Il est important de reétalonner le micromètre lorsque l on utilise une ou plusieurs rallonges pour la mesure de trous de grande profondeur.

ETALONNAGE

1) InsØrer le micromŁtre dans la bague Øtalon jusqu a ce que le micromŁtre soit immobilisØ dans la bague..
2) Serrer avec la clØ hexagonale la vis situØe au niveau de la bague isolante en plastique.
3) Deserrer d un tour avec cette mŒme clØ la vis situØe au centre de la friction.
4) Le tambour peut Œtre tournØ pour la remise la valeur indiquØe sur la bague Øtalon.
5) Rebloquer la vis de la friction.
6) Desserrer la vis situØe au niveau de la bague isolante en plastique.
7) Le micromŁtre est maintenant rØØtalonnØ.
8) VØrifier l Øtalonnage du micromŁtre dans la bague Øtalon.

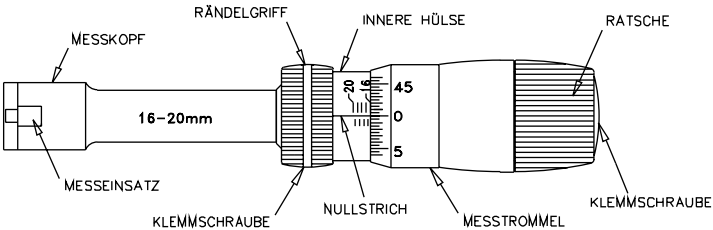
UNE CL SP CIALE EST PR VUE POUR PERMETTRE DE RATTRAPER LE JEU DE LA VIS MICROM TRIQUE (consØcutif une longue utilisation):

1) Enlever complŁtement le tambour
2) Introduire la clØ spØciale dans les rainures de l Øcrou en laiton.
3) Serrer lØgŁrement et vØrifier que le micromŁtre n a plus de jeu. Renouveler l opØration jusqu ce que le jeu de la vis micromØtrique soit rattrapØ.
4) Remonter le tambour et rØØtalloner le micromŁtre.



IMPORTANT : Les tŒtes de mesure sont Øquippées avec des touches fixes. Ne pas dØmonter les touches

BEDIENUNGSANLEITUNG ZUR MECHANISCHEN INNENME SCHRAUBE



Alle Innenme schrauben haben einen Skalenwert von 0.005 mm. Die innere H lse ist mit einem waagerechten Nullstrich sowie mit den 0.5mm Teilstrichen und die Messtrommel mit den Teilstrichen der Feinteilung, wie unten angezeigt, beschriftet. Eine Umdrehung der Messtrommel entspricht einer Messbereichs nderung von 0.5 mm.

Ablesung der Messwerte

Der waagerechte Nullstrich (0.5 mm) kommt zur Deckung mit einem Teilstrich der Feinteilung der Messtrommel: siehe nachstehendes Beispiel:

In diesem Beispiel betr gt der Messwert 16.015 mm

VERL˜NGERUNGEN: W enn Verl ngerungen zur Messung von tiefen Bohrungen eingesetzt werden, mu eine Neueinstellung (wie unten beschrieben) durchgef hrt werden.

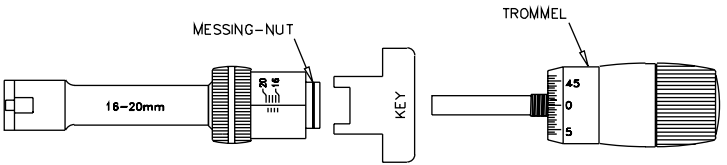
NEUEINSTELLUNG

Sollte die Ablesung aufgrund h ufigen Gebrauchs etc. ungenau werden, kann diese wie folgt neu eingestellt werden :

1) Innenmessschraube in den Einstellring stellen und mit der Ratsche einige Rasten durchdrehen.
2) Spindel anhand der Innensechskantschraube durch festziehen der Feststellschraube im ger ndelten Kunststoffring klemmen.
3) Ratsche durch l sen der stirnseitigen Innensechskantschraube lockern.
4) Die Messtrommel wird hierdurch gel st und die Innenmessschraube kann auf das Ma des Einstellringes eingestellt werden.
5) Schraube an der Ratsche festdrehen, Feststellschraube der Spindel l sen.
6) Einstellung im Einstellring pr fen.

SOLLTE DURCH H˜UFIGEN GEBRAUCH DIE MESSSCHRAUBENSPINDEL SPIEL AUFZEIGEN, KANN DIES MIT DEM MITGELIEFERTEN SPEZIALSCHL SSEL NACHGESTELLT WERDEN:

1) Messtrommel mit Spindel komplett herausschrauben.
2) Spezialschl ssel in die Messing-Nut stecken.
3) Im Uhrzeigersinn vorsichtig drehen (geschlitzte Gewindemutter wird geklemmt).
4) Spindel mit Messtrommel wieder einsetzen, eine Neueinstellung durchf hren (wie oben beschrieben).



WICHTIG: Die Messk pfe sind mit fixen Messeins tzen ausgestattet, d.h. die Messeins tze sind NICHT wechselbar.

Sales, spares and repairs, please contact:
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