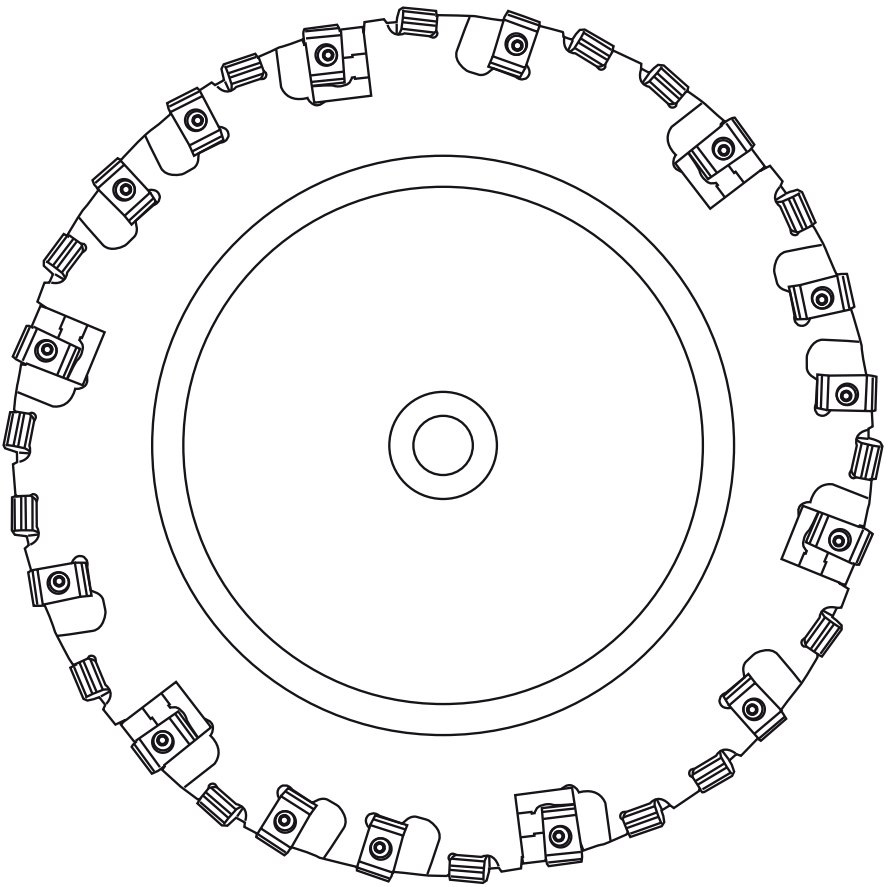
CoroMill® 425



SANDVIK
coromant

92023

ENG	Handling instructions, CoroMill® 425	**4 – 11**
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DEU	Bedienungsanleitung, CoroMill® 425	**20 – 27**
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CHI	装配指南 CoroMill® 425	**60 – 67**

ENG

Setting instruction

1. Load cutter with inserts

Tighten insert screws to 3Nm (26 in/lbs) torque.





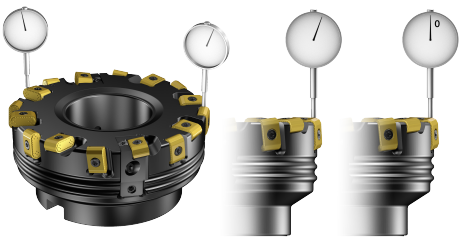
All inserts have the same design.

— Working inserts are mounted on fixed pockets.

— Wiper (finishing) inserts are mounted on cassettes.

Push the wiper insert towards the adjusting screw when clamping.

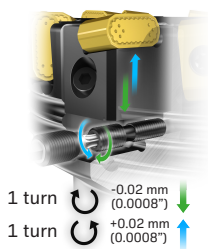
2. Check horizontal and vertical working inserts Run-Out



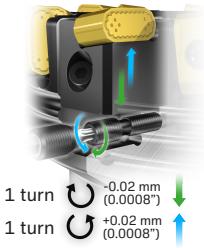
Identify the highest working insert at outside edge and set it as reference "0".

3. How to adjust Wiper insert

1 turn clockwise moves the cassette 0.02 mm (0.0008") DOWN.

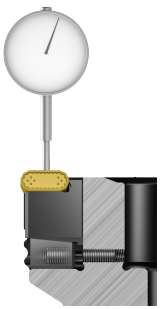


1 turn counter clockwise moves the cassette 0.02 mm (0.0008") UP.



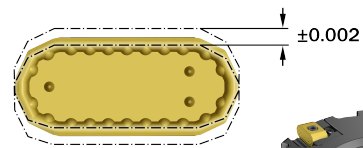
When changing direction you need around 1.5 turn of adjustment screw to take up the slack before the cassette starts to move on the opposite direction.
No need to loosen cassette clamping screw to adjust.
Always finalize the axial setting by moving the cassette upward.
The first turn of screwdriver could require extra effort to release the wedge from the cassette.

4. Adjust one of the Wiper inserts



Select a finishing insert and adjust it between +0.03 mm (0.0012") and +0.04 mm (0.0016") from reference "0".
For CBN inserts adjust, between +0.05 mm (0.002") and +0.06 mm (0.0024").

5. Adjust other Wiper inserts Run-Out



±0.002 mm (0.00008")
Between wipers

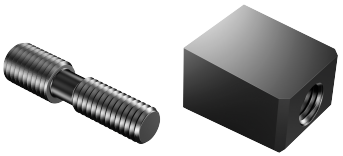


Adjust the position of the other wiper inserts so that run-out is within ±2µm (0.00008").

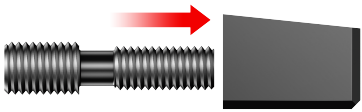
ENG

Handling instruction

1.



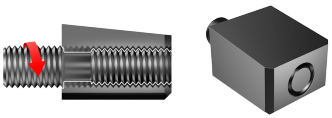
2.



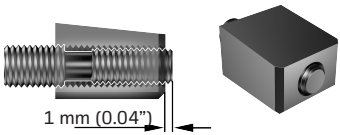
5516 035-09

5332 010-09

3.

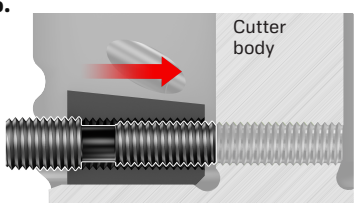


4.



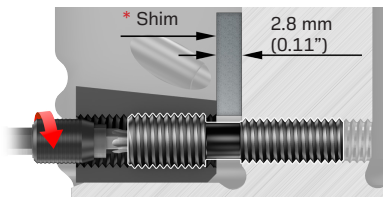
If you need to dismantle the tool we recommend to assemble the cassette in the original cassette seat to maintain the wiper tolerance.

5.

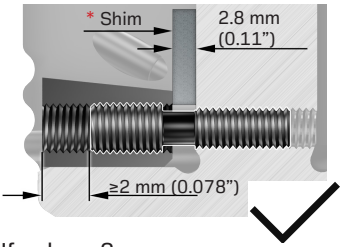


6.

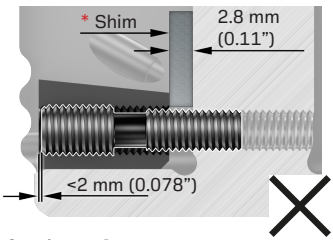
* Shim 5654 017-01 included

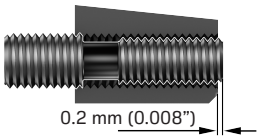


7. Check the position of the screw



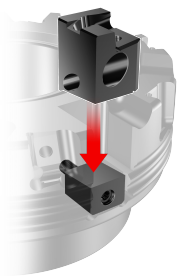
If value ≥2 mm
Go to step 8.





If value <2 mm
Perform the previous steps again but position the screw at 0.2 mm (0.008") instead of 1 mm (0.039") as shown.

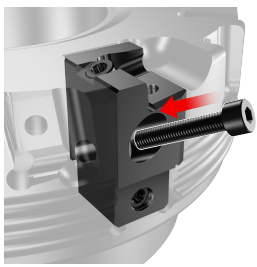
8.



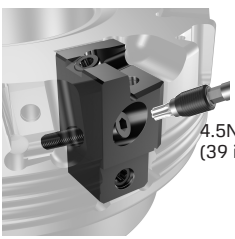
9.



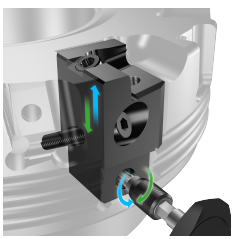
10.



11.



12.



Turn the screwdriver ~4 turns clockwise then ~4 turns counter clockwise before adjusting the wiper cassette. This procedure needs to be done every time the cassette has been assembled.

13.



Push the insert towards the adjusting screw when clamping.

ENG

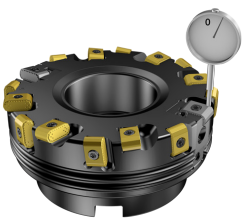
Wiper insert tilt information

Each CAP Design cutter is delivered with a wiper insert tilt already pre-set to compensate a spindle inclination of 0.1 mm/1000 mm (0.004”/40”) and then doesn’t need to be adjusted before machining.
That’s why a plastic plug is placed inside the top of the setting screw to avoid accidental adjustment.
In case of absolute necessity of adjusting the wiper tilt (e.g. change of cassette or change of spindle tilt compensation) please **contact your local specialist** or follow the wiper tilt setting instruction in the next chapter of this notice.
A gauge insert is delivered with each cutter in order to eventually check the wiper tilt but be aware, this is not a cutting insert.

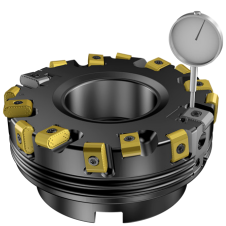


Wiper tilt setting instruction

1. **Check the wiper tilt**



Check outside edge.



Check inside edge.

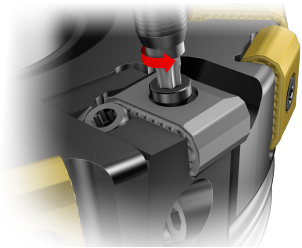
Use gauge insert
GA-N425-1707-W

Check gauge insert outside edge and set it as reference “0” then check gauge insert inside edge.

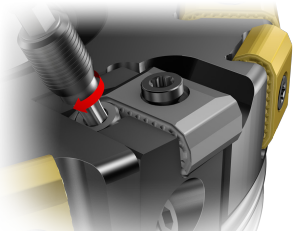
2. Adjust the tilt



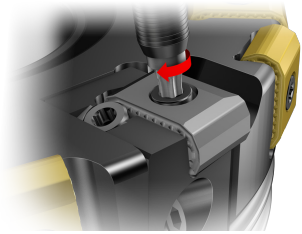
Remove the plug from the screw.



Loosen insert screw around 2 turns.



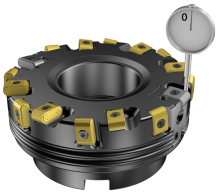
Turn adjusting screw of few degrees clockwise to increase the tilt at inside edge.
½ turn is around ± 0.01 mm (0.0004") from outside edge.
Always loosen insert screw before adjusting.



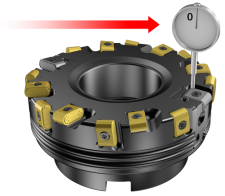
Tighten insert screw to 3Nm (26 in/lbs) torque.

ENG

3. Re-check the wiper tilt



Check outside edge.

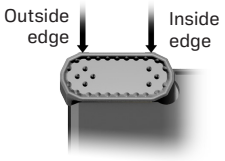


Check inside edge.

If machine spindle has “0” tilt then set insert tilt to “0” measured at inside edge. If spindle has tilt 0.1 mm/1000 mm (0.004”/40”), set insert inside edge at +0.005 mm (0.0002”). For other spindle tilt values, please check the graphic page 11.

4. Re-do previous steps until the wiper tilt is well set



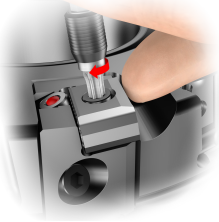


½ turn is around ± 0.01 mm (0.0004”) from outside edge.
¼ turn is around ± 0.005 mm (0.0002’) from outside edge.

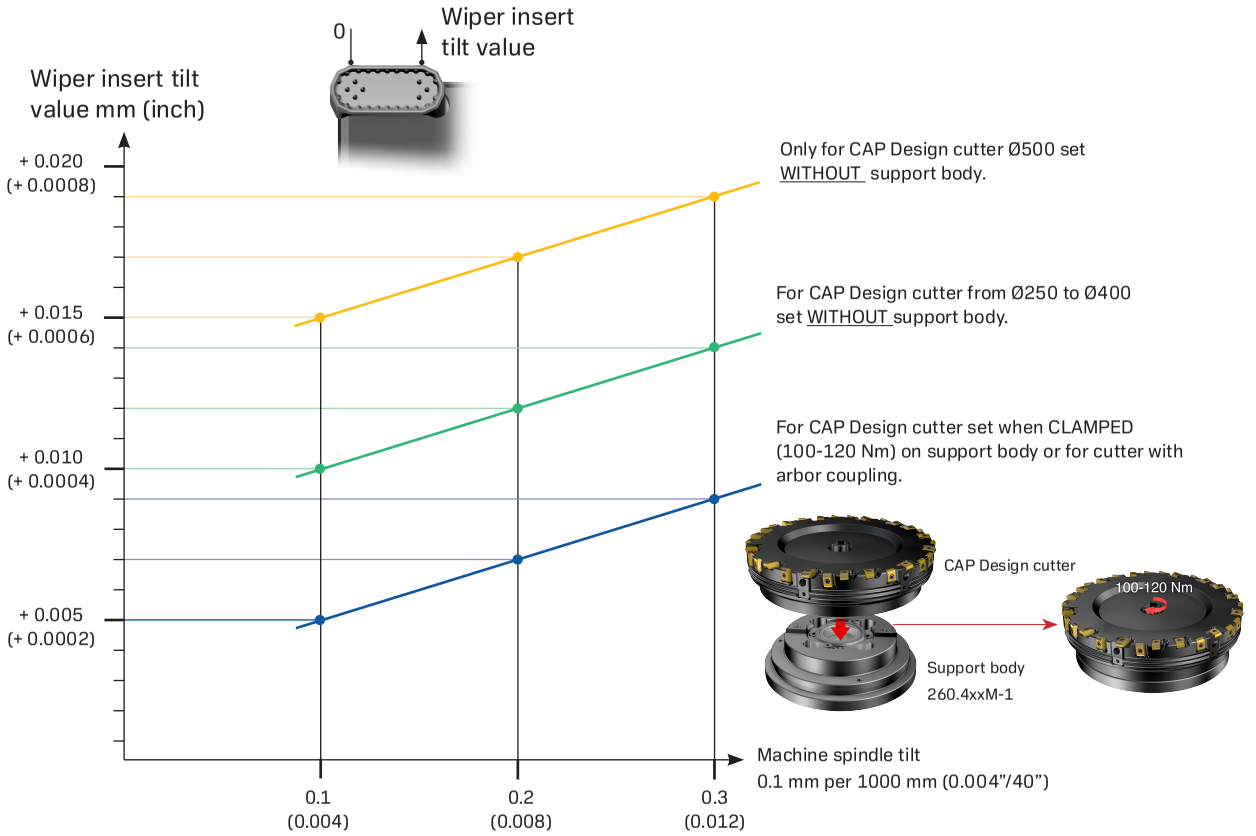
5. Other information



Return plug to original position inside top of screw to avoid accidental adjustment.



It’s better to push the insert towards the adjusting screw when clamping.


0
Wiper insert tilt value
Wiper insert tilt value mm (inch)
+ 0.020 (+ 0.0008)
+ 0.015 (+ 0.0006)
+ 0.010 (+ 0.0004)
+ 0.005 (+ 0.0002)
0.1 (0.004)
0.2 (0.008)
0.3 (0.012)
Machine spindle tilt
0.1 mm per 1000 mm (0.004”/40”)
Only for CAP Design cutter Ø500 set WITHOUT support body.
For CAP Design cutter from Ø250 to Ø400 set WITHOUT support body.
For CAP Design cutter set when CLAMPED (100-120 Nm) on support body or for cutter with arbor coupling.
CAP Design cutter
100-120 Nm
Support body
260.4xxM-1

ENG

ESP

Instrucciones de reglaje

1. Monte las plaquitas en la fresa

Apriete los tornillos de las plaquitas a un par de 3 Nm (26 pulg./lbs).

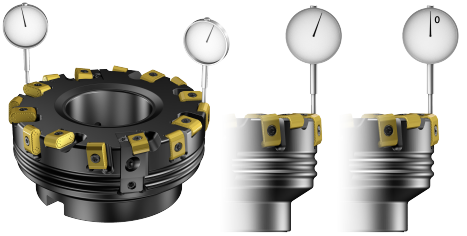




Todas las plaquitas presentan el mismo diseño.
- Las plaquitas de mecanizado se montan en alojamientos fijos.
- Las plaquitas wiper (acabado) se montan en cartuchos.

Presione la plaquita wiper contra el tornillo de ajuste al ir a fijarla.

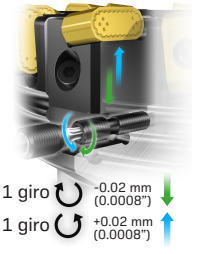
2. Compruebe la excentricidad de las plaquitas de mecanizado horizontales y verticales



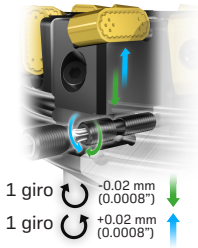
Identifique la plaquita de mecanizado más alta con respecto al filo exterior y fíjela como referencia “0”.

3. Cómo ajustar la plaquita wiper

1 giro en sentido horario desplaza el cartucho 0.02 mm (0.0008”) HACIA ABAJO.

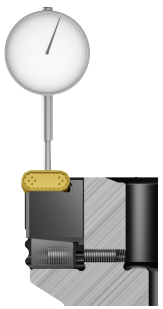


1 giro en sentido antihorario desplaza el cartucho 0.02 mm (0.0008”) HACIA ARRIBA.



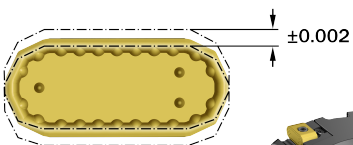
Al cambiar la dirección, se requiere un giro de en torno a 1.5 vueltas del tornillo para eliminar la holgura antes de que empiece a moverse el cartucho en dirección opuesta.
No es necesario aflojar el tornillo de fijación del cartucho para realizar el ajuste.
Termine siempre el reglaje axial desplazando el cartucho hacia arriba.
El primer giro del destornillador podría requerir una fuerza adicional para separar la cuña del cartucho.

4. Ajustar una de las plaquitas wiper



Seleccione una plaquita de acabado y ajústela a entre +0.03 mm (0.0012") y +0.04 mm (0.0016") de la referencia "0".
Las plaquitas de CBN deben ajustarse a entre +0.05 mm (0.002") y +0.06 mm (0.0024").

5. Ajustar la excentricidad de las otras plaquitas wiper



±0.002 mm (0.00008")
Entre las plaquitas wiper

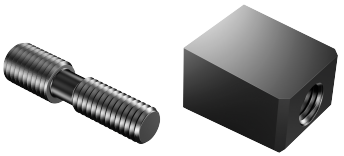


Ajuste la posición del resto de las plaquitas wiper para que
la excentricidad esté en el margen de ±2µm (0.00008").

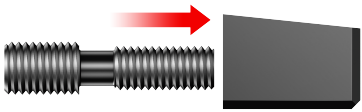
ESP

Instrucciones de uso

1.



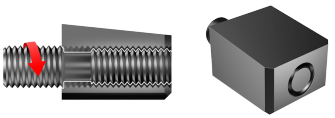
2.



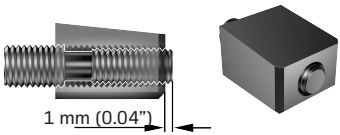
5516 035-09

5332 010-09

3.

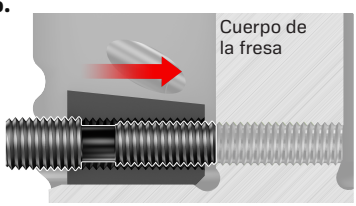


4.



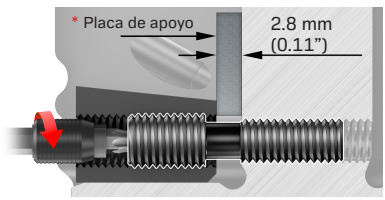
Si tiene que desmontar la herramienta, le recomendamos montar el cartucho en su alojamiento original para conservar la tolerancia wiper.

5.

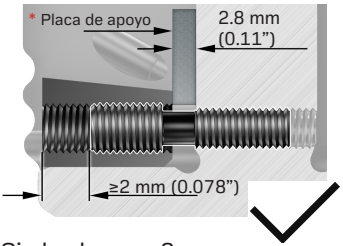


* Placa de apoyo 5654 017-01 incluida

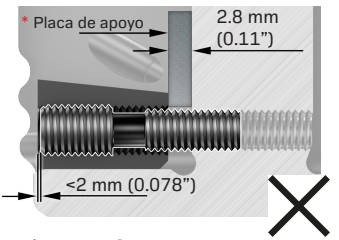
6.



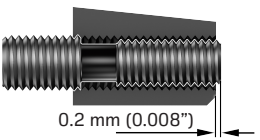
7. Compruebe la posición del tornillo



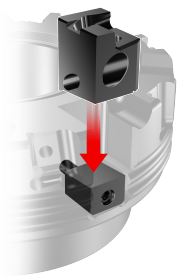
Si el valor es ≥2 mm
Diríjase al paso 8.



Si el valor es <2 mm
Vuelva a aplicar los pasos anteriores, pero coloque los tornillos a 0.2 mm (0.008”) en lugar de a 1 mm (0.039”), como se muestra.



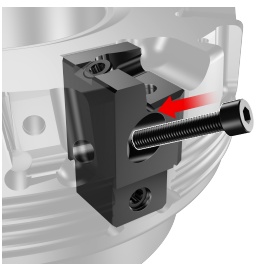
8.



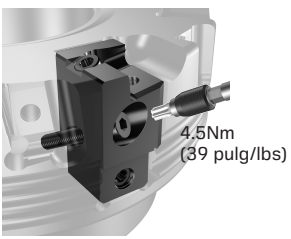
9.



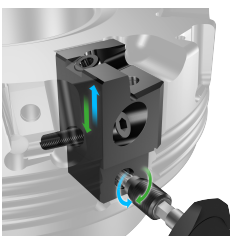
10.



11.

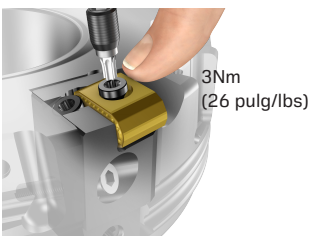


12.



Gire el destornillador ~4 vueltas en sentido horario y, a continuación, ~4 vueltas en sentido antihorario antes de ajustar el cartucho wiper. Este procedimiento debe repetirse cada vez que se monte el cartucho.

13.



Presione la plaquita contra el tornillo de ajuste al ir a fijarla.

ESP

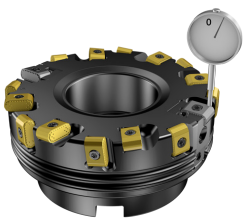
Información de la inclinación de la plaquita wiper

Todas las fresas de diseño CAP se suministran con una inclinación predefinida de la plaquita wiper para compensar una inclinación del husillo de 0.1 mm/1000 mm (0.004”/40”) y no requieren un ajuste antes del mecanizado.
Esta es la razón por la que la parte superior del tornillo de reglaje presenta un tapón de plástico para evitar ajustes accidentales.
Si el ajuste de la inclinación de la plaquita wiper es indispensable (p. ej. cambio del cartucho o modificación de la compensación de la inclinación del husillo), póngase en contacto con su especialista local o siga las instrucciones de reglaje de la inclinación de la plaquita wiper expuestas en el siguiente capítulo de este documento.
Todas las fresas se suministran con una plaquita calibradora para comprobar, si fuera necesario, la inclinación de la plaquita wiper.
Tenga en cuenta que esta no es una plaquita de mecanizado.



Instrucciones de reglaje de la inclinación de la plaquita wiper

1. Compruebe la inclinación de la plaquita wiper



Compruebe el filo exterior.



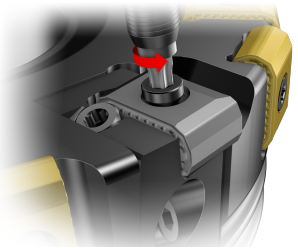
Compruebe el filo interior.

Use la plaquita calibradora GA-N425-1707-W
Compruebe el filo exterior de la plaquita calibradora y fíjelo como referencia “0”, luego compruebe el filo interior de la plaquita calibradora.

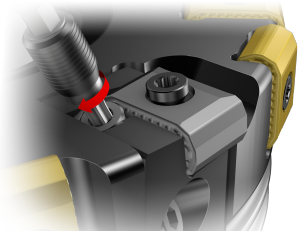
2. Ajuste de la inclinación



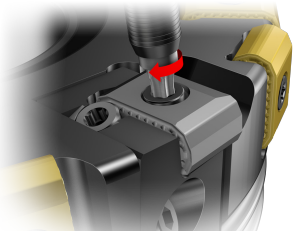
Retire el tapón del tornillo.



Afloje el tornillo de la plaquita en torno a 2 vueltas.

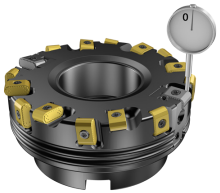


Gire el tornillo de ajuste unos grados en sentido horario para aumentar la inclinación del filo interior.
½ giro equivale a en torno a ± 0.01 mm (0.0004”) del filo exterior.
Afloje siempre el tornillo de la plaquita antes del ajuste.

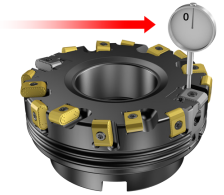


Apriete los tornillos de las plaquitas a un par de 3 Nm (26 pulg./lbs).

3. Vuelva a comprobar la inclinación de la plaquita wiper



Compruebe el filo exterior.

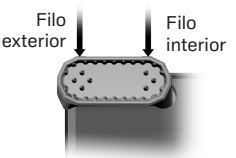


Compruebe el filo interior.

Si el husillo de la máquina presenta una inclinación de “0”, regle la inclinación de la plaquita a “0” desde el filo interior. Si el husillo presenta una inclinación de 0.1 mm/1000 mm (0.004”/40”), regle el filo interior de la plaquita a +0.005 mm (0.0002”).
Para otras inclinaciones de husillo, consulte el gráfico de la página 19.

4. Vuelva a repetir los pasos anteriores hasta que la inclinación de la plaquita wiper esté bien reglada





½ giro equivale a en torno a ± 0.01 mm (0.0004”) del filo exterior.
¼ de giro equivale a en torno a ± 0.005 mm (0.0002”) del filo exterior.

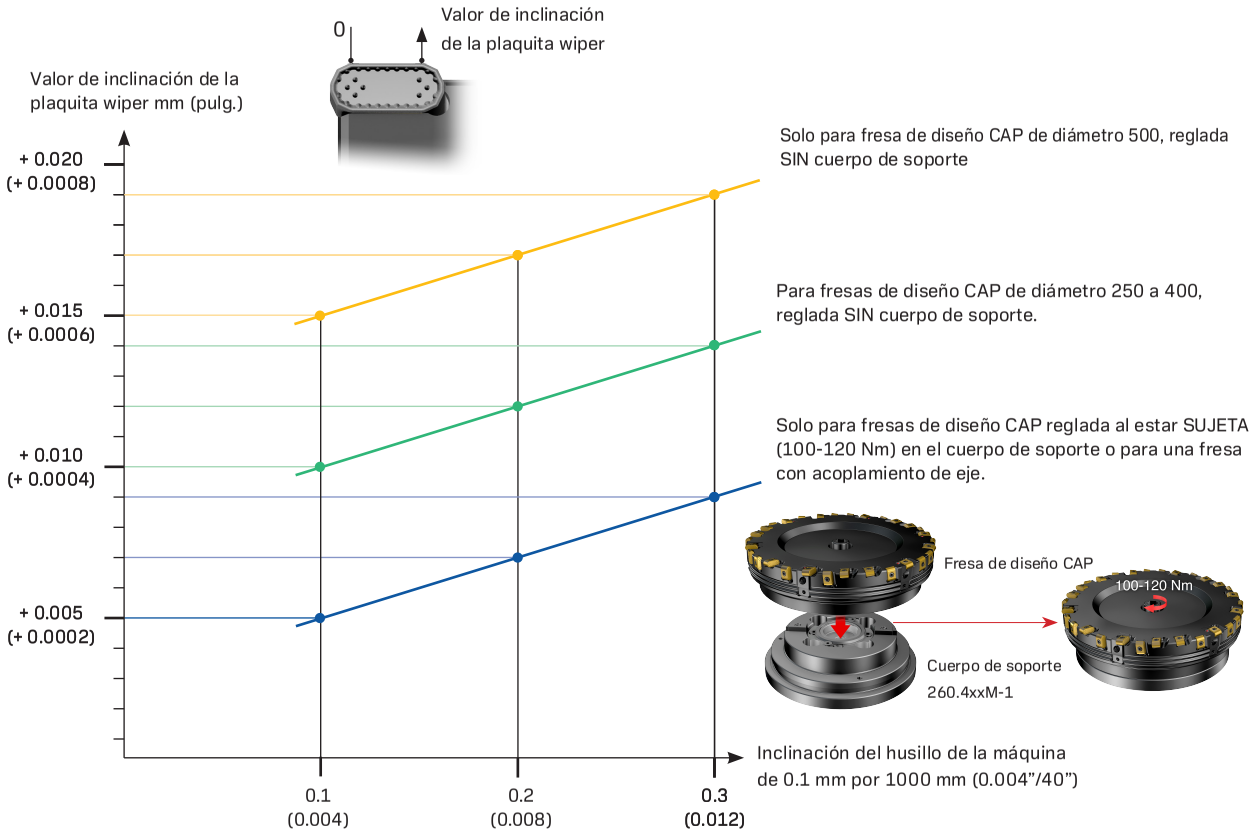
5. Información adicional



Vuelva a colocar el tapón en su posición original (en la parte superior del tornillo) para evitar ajustes accidentales.



Es más aconsejable empujar la plaquita hacia el tornillo de ajuste durante la fijación.


0
Valor de inclinación
de la plaquita wiper
Valor de inclinación de la
plaquita wiper mm (pulg.)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)
Inclinación del husillo de la máquina
de 0.1 mm por 1000 mm (0.004”/40”)
Solo para fresa de diseño CAP de diámetro 500, reglada
SIN cuerpo de soporte
Para fresas de diseño CAP de diámetro 250 a 400,
reglada SIN cuerpo de soporte.
Solo para fresas de diseño CAP reglada al estar SUJETA
(100-120 Nm) en el cuerpo de soporte o para una fresa
con acoplamiento de eje.
Fresa de diseño CAP
100-120 Nm
Cuerpo de soporte
260.4xxM-1

ESP

DEU

Einstellhinweise

1. Wendeschneidplatten in den Fräser einsetzen

Wendeplattenschraube mit einem Drehmoment von 3 Nm (26 in/lbs) anziehen.



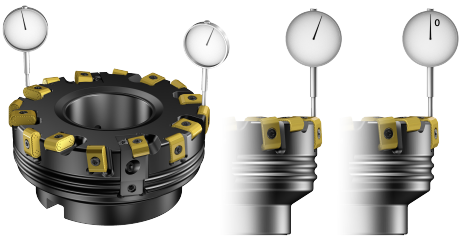


Alle Wendeschneidplatten haben die gleiche Ausführung und können sowohl als Standard- als auch als Wiper-Wendeschneidplatten genutzt werden.

— Standard-Wendeschneidplatten werden in festen Plattensitzen eingesetzt.
— Wiper-Wendeschneidplatten (Schlichtoperation) werden in Kassetten eingesetzt.

Beim Einsetzen der Wiper-Wendeschneidplatte ist diese gegen die Einstellschraube drücken.

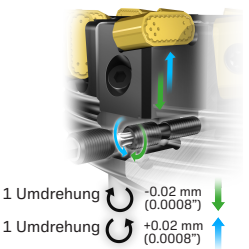
2. Planlauf der horizontalen und vertikalen Wendeschneidplatten überprüfen



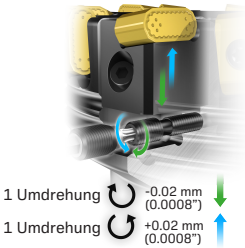
Höchste Standard-Wendeschneidplattenposition an der äußeren Schneide bestimmen und als Bezugspunkt ”0” einstellen.

3. Einstellen der Wiper-Wendeschneidplatten

Mit 1 Umdrehung im Uhrzeigersinn wird die Kassette um 0.02 mm (0.0008”) NACH UNTEN bewegt.

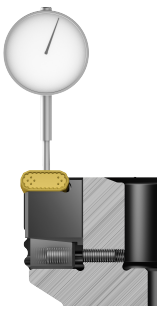


Mit 1 Umdrehung gegen den Uhrzeigersinn wird die Kassette um 0.02 mm (0.0008”) NACH OBEN bewegt.



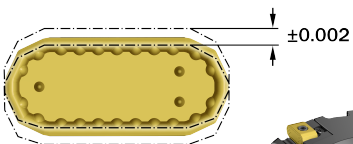
Beim Wechsel der Drehrichtung werden ca. 1.5 Umdrehungen für den Ausgleich der Einstellschraube benötigt, bevor die Kassette sich in die entgegengesetzte Richtung bewegt.
Zur Einstellung ist kein Lösen der Spannschraube der Kassette notwendig.
Die Axialeinstellung stets durch Bewegen der Kassette nach oben abschließen.
Die erste Umdrehung des Schraubendrehers kann erhöhte Kraft erfordern, da der Spannkeil von der Kassette gelöst werden muss.

4. Einstellen der ersten Wiper-Wendeschneidplatte



Eine Wiper-Wendeschneidplatte zum Schlichten auswählen und zwischen +0.03 mm (0.0012") und +0.04 mm (0.0016") vom Bezugspunkt "0" einstellen.
CBN-Wendeschneidplatten sind zwischen +0.05 mm (0.002") und +0.06 mm (0.0024") einzustellen.

5. Einstellen der weiteren Wiper-Wendeschneidplatten für Planlauf



±0.002 mm (0.00008")
Zwischen Wiper-Wendeschneidplatten

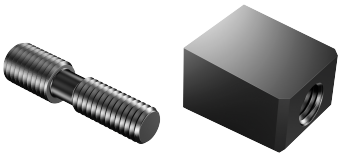


Weitere Wiper-Wendeschneidplatten so einstellen, dass der Rundlauf innerhalb ±2 µm (0.00008") liegt.

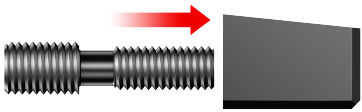
DEU

Montageanweisung

1.



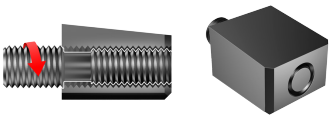
2.



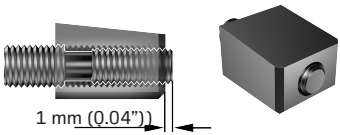
5516 035-09

5332 010-09

3.



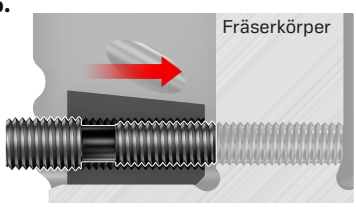
4.



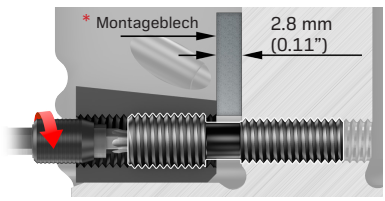
Falls eine Demontage des Werkzeugs erforderlich ist, empfehlen wir, die Kassette im ursprünglichen Kassettensitz zu montieren, um die Toleranz der Wiperplatte beizubehalten.

* Montageblech 5654 017-01 ist enthalten

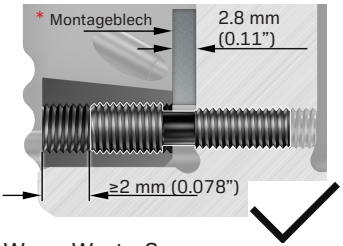
5.



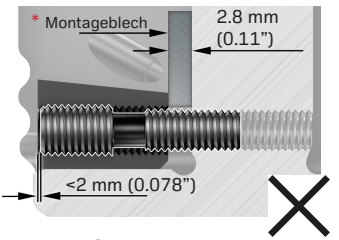
6.



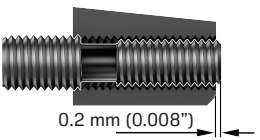
7. Position der Schraube überprüfen



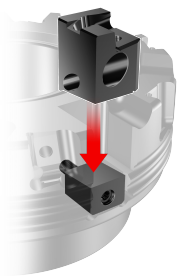
Wenn Wert ≥2 mm
Gehen Sie zu Schritt 8.



Wenn Wert <2 mm
Vorherige Schritte wiederholen, jedoch die Schraube bei 0.2 mm (0.008”), anstatt 1 mm (0.039”), wie gezeigt, positionieren.



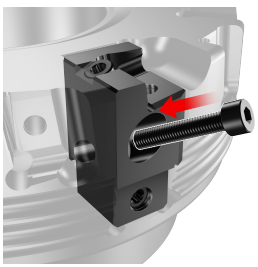
8.



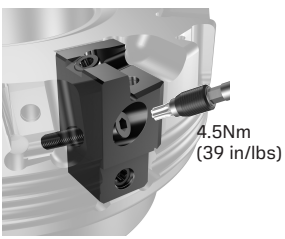
9.



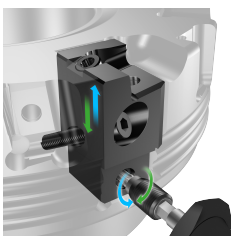
10.



11.

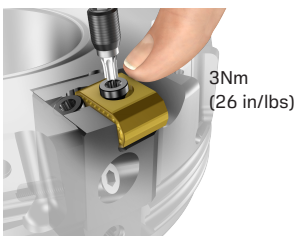


12.



Vor Einstellung der Wiperkassette Schraubendreher um ca. 4 Umdrehungen im Uhrzeigersinn und anschließend ca. 4 Umdrehungen gegen den Uhrzeiger drehen. Dieser Vorgang ist nach jeder Kassettenmontage durchzuführen.

13.



Wendeschneidplatte beim Aufspannen gegen die Einstellschraube drücken.

DEU

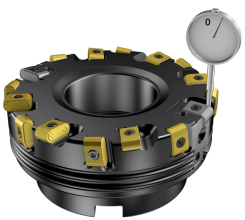
Informationen zur Wiper-Wendeschneidplattenneigung

Jeder CAP- Fräser wird mit einer voreingestellten Wiper-Wendeschneidplattenneigung zur Kompensation einer Spindelneigung von 0.1 mm/1000 mm (0.004”/40”) ausgeliefert und muss daher nicht vor der Bearbeitung eingestellt werden. Aus diesem Grund ist der Schraubenkopf innen mit einer Kunststoffabdeckung versehen, um ein unbeabsichtigtes Verstellen zu vermeiden.
Falls ein Verstellen der Wiperneigung unbedingt erforderlich ist (z. B. durch Kassettenwechsel oder Kompensation der Spindelneigung), wenden Sie sich bitte an Ihren Ansprechpartner oder folgen Sie den Einstellhinweisen zur Wiperneigung im nächsten Abschnitt dieser Anleitung.
Jeder Fräser wird mit einer Messplatte geliefert, um die Wiperneigung zu überprüfen. Denken Sie jedoch daran, dass dies keine “schneidende” Wendeplatte ist.



Hinweise zur Einstellung der Wiper-Wendeschneidplattenneigung

1. Wiper-Neigung prüfen



Äußere Schneidkante prüfen.



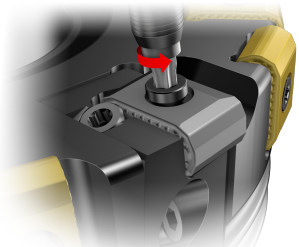
Innere Schneidkante prüfen.

Messplatte verwenden
GA-N425-1707-W
Äußere Schneidkante der Messplatte prüfen und als Bezugspunkt “0” einstellen, anschließend innere Schneidkante der Messplatte prüfen.

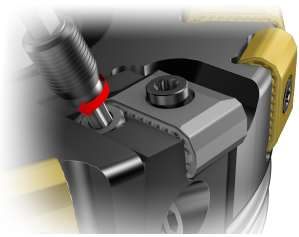
2. Neigung einstellen



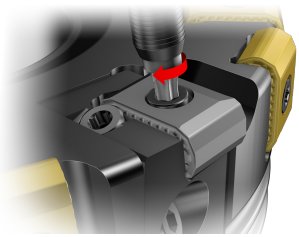
Die Abdeckung der Schraube entfernen.



Wendeschneidplattenschraube mit 2 Umdrehungen lösen.

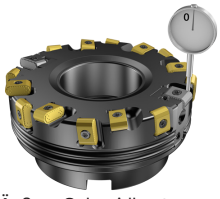


Einstellschraube um einige Grad im Uhrzeigersinn verstellen, um die Neigung der inneren Schneidkante zu erhöhen.
½ Umdrehung entspricht einer Verstellung von ± 0.01mm (0.0004") der inneren Schneidkante.
Stets Wendeschneidplattenschraube vor dem Einstellen lösen.

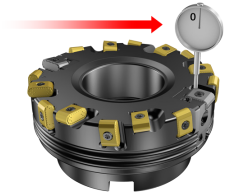


Wendeplattenschraube mit einem Drehmoment von 3 Nm (26 in/lbs) anziehen.

3. Wiper-Neigung prüfen



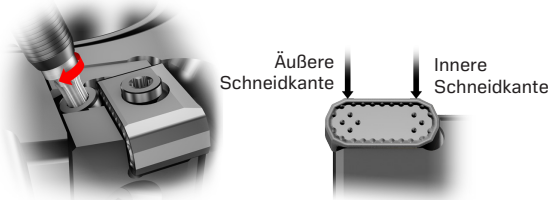
Äußere Schneidkante prüfen.



Innere Schneidkante prüfen.

Bei einer Spindelneigung von “0” ist die Wiper-Wendeschneidplattenneigung, gemessen an der inneren Schneidkante, auf “0” einzustellen. Bei einer Spindelneigung von 0.1 mm/1000 mm (0.004”/40”) ist die innere Schneidkante auf +0.005 mm (0.0002”) einzustellen.
Für andere Neigungswerte, siehe Grafik Seite 27.

4. Vorherige Schritte wiederholen, bis die Neigung der Wiper-Wendeschneidplatte korrekt eingestellt ist

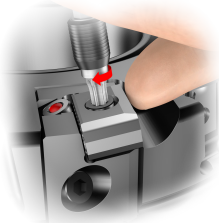


½ Umdrehung entspricht einer Verstellung von ± 0.01 mm (0.0004”) der inneren Schneidkante.
¼ Umdrehung entspricht einer Verstellung von ± 0.005 mm (0.0002”) der inneren Schneidkante.

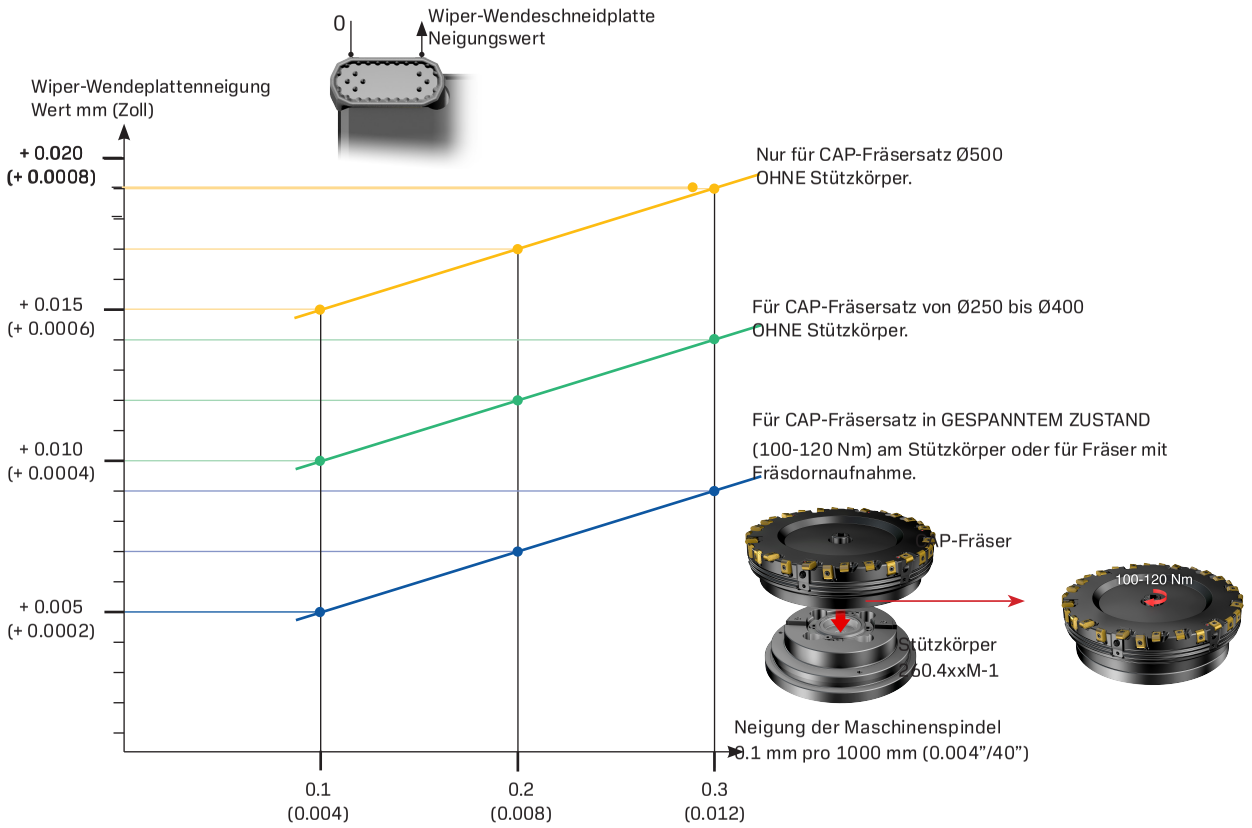
5. Weitere Informationen



Verschlussabdeckung zur Vermeidung von unbeabsichtigtem Verstellen wieder in den Schraubenkopf einsetzen.



Beim Einsetzen der Wiper-Wendeschneidplatte ist diese gegen die Einstellschraube zu drücken.


0
Wiper-Wendeschneidplatte
Neigungswert
Wiper-Wendeplattenneigung
Wert mm (Zoll)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
Nur für CAP-Fräsersatz Ø500
OHNE Stützkörper.
Für CAP-Fräsersatz von Ø250 bis Ø400
OHNE Stützkörper.
Für CAP-Fräsersatz in GESPANNTEM ZUSTAND
(100-120 Nm) am Stützkörper oder für Fräser mit
Fräsdornaufnahme.
AP-Fräser
100-120 Nm
Stützkörper
60.4xxM-1
Neigung der Maschinenspindel
0.1 mm pro 1000 mm (0.004”/40”)
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)

DEU

FRA

Instructions de montage

1. Monter les plaquettes sur la réglage

Serrer les vis de plaquettes à un couple de 3Nm (26 in/lbs).



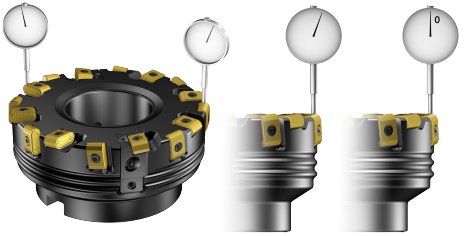


Toutes les plaquettes sont identiques.

— Les plaquettes ‘‘standards’’ se montent dans les logements fixes.
— Les plaquettes de planage (finition) se montent dans les cassettes.

Pousser la plaquette de planage en direction de la vis de réglage lors du serrage.

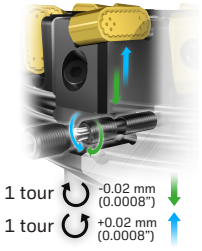
2. Vérifier le saut des plaquettes ‘‘standards‘‘ horizontales et verticales



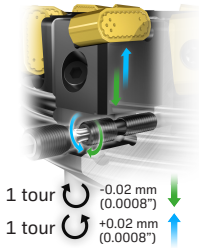
Chercher la plaquette la plus haute sur le bord extérieur et s’en servir comme référence 0.

3. Réglage des plaquettes de planage

1 tour dans le sens des aiguilles d’une montre FAIT BAISSER la cassette de 0.02 mm (0.0008”).

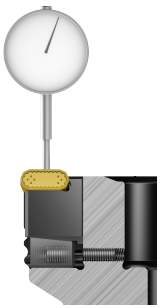


1 tour dans le sens contraire des aiguilles d’une montre FAIT MONTER la cassette de 0.02 mm (0.0008”).



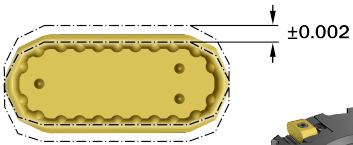
En cas de changement de direction, il faut environ 1,5 tour de la vis de réglage pour rattraper le jeu avant que la cassette ne commence à bouger dans la direction opposée.
Il n'est pas nécessaire de desserrer la vis de fixation des cassettes pour effectuer le réglage.
Toujours terminer le réglage axial par un ajustement des cassettes vers le haut.
Le premier tour de vis de réglage peut parfois être dur car il faut "décoller" le coin de la cassette.

4. Régler une des plaquettes de planage



Choisir une plaquette de finition et la régler entre +0.03 mm (0.0012") et +0.04 mm (0.0016") par rapport à la référence 0.
Pour les plaquettes CBN, régler entre +0.05 mm (0.002") et +0.06 mm (0.0024").

5. Régler le saut des autres plaquettes de planage



±0.002 mm (0.00008")
Entre les plaquettes de planage

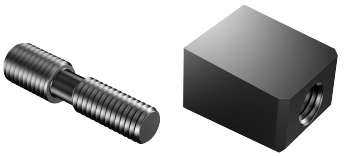


Régler la position des autres plaquettes de planage de manière à ce que le saut soit à ±2µm (0.00008").

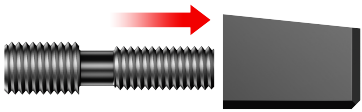
FRA

Instructions de montage

1.



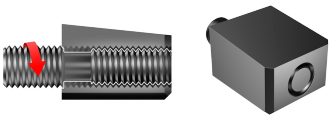
2.



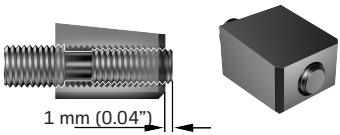
5516 035-09

5332 010-09

3.

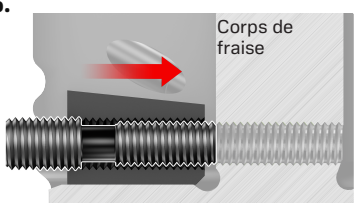


4.



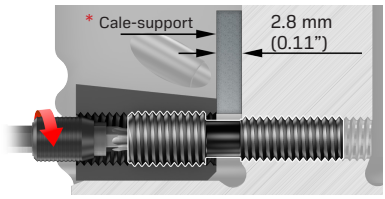
En cas de démontage des éléments, il est recommandé de remonter les cassettes dans leurs logements d'origine pour conserver les mêmes tolérances.

5.

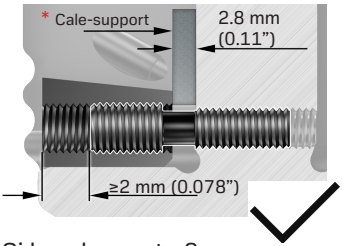


* Cale-support 5654 017-01 inclue

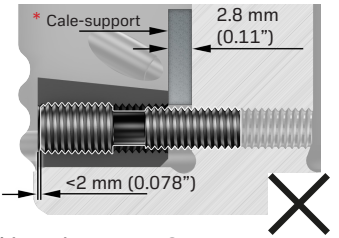
6.

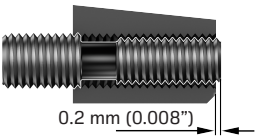


7. Vérifier la position de la vis



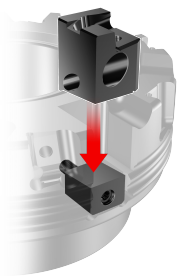
Si la valeur est ≥2 mm
Passer à l'étape 8.





Si la valeur est <2 mm
Recommencer l'étape précédente en veillant à positionner la vis à 0.2 mm (0.008") au lieu de 1 mm (0.039"), comme illustré.

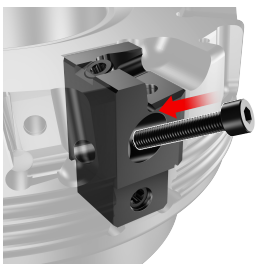
8.



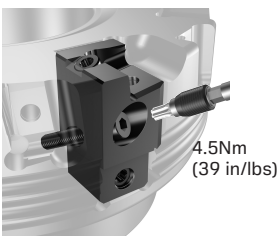
9.



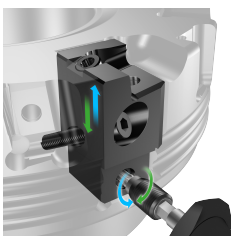
10.



11.

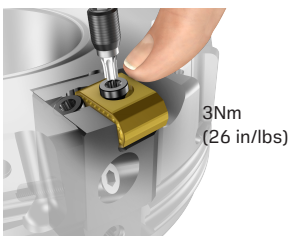


12.



Faire ~4 tours de tournevis dans le sens des aiguilles d'une montre puis ~4 tours dans l'autre sens avant de régler la cassette. Recommencer cette opération à chaque nouveau montage des cassettes.

13.



Pousser la plaquette en direction de la vis de réglage lors du serrage.

FRA

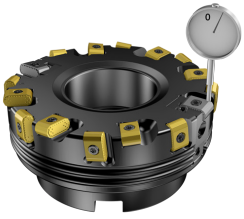
Informations sur l'inclinaison des plaquettes de planage



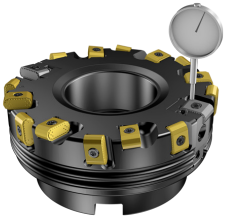
Les fraises en version CAP sont livrées avec une inclinaison des plaquettes de planage préréglée pour compenser une inclinaison de broche de 0.1 mm/1000 mm (0.004"/40") et il n'est pas nécessaire de les régler avant l'utilisation. C'est pour cette raison que la tête de la vis de réglage est condamnée par un bouchon en plastique, afin d'éviter la modification accidentelle du réglage.
S'il est absolument nécessaire de régler l'inclinaison des plaquettes de planage (par ex. en cas de changement des cassettes ou de modification de la compensation de l'inclinaison de la broche), veuillez contacter votre spécialiste local ou suivre les instructions de réglage de l'inclinaison des plaquettes de planage données dans le chapitre suivant des présentes instructions.
Une plaquette étalon est livrée avec la fraise pour vérifier, le cas échéant, l'inclinaison des plaquettes de planage, mais attention, il ne s'agit pas d'une plaquette destinée à la coupe.

Instructions pour le réglage de l'inclinaison des plaquettes de planage

1. Vérifier l'angle d'inclinaison des plaquettes de planage



Vérifier le bord extérieur.



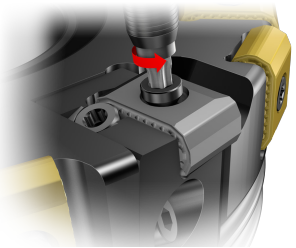
Vérifier le bord intérieur.

Utiliser la plaquette étalon GA-N425-1707-W
Vérifier le bord extérieur de la plaquette étalon et le définir comme référence 0, ensuite vérifier le bord intérieur de la plaquette étalon.

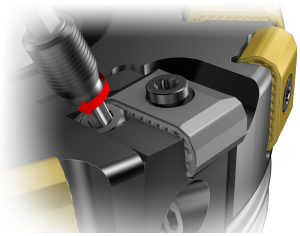
2. Régler l’inclinaison



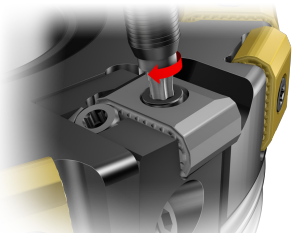
Retirer le bouchon de la vis



Desserrer la vis de la plaquette de deux tours environ.

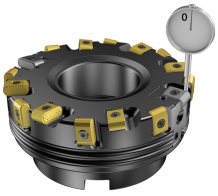


Tourner la vis de réglage de quelques degrés dans le sens des aiguilles d’une montre pour augmenter l’inclinaison du bord intérieur.
½ tour correspond à ± 0.01 mm (0.0004”) environ par rapport au bord extérieur.
Toujours desserrer la vis de plaquette avant le réglage.

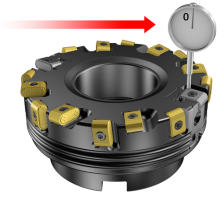


Serrer la vis de la plaquette à un couple de 3Nm (26 in/lbs).

3. Revérifier l'angle d'inclinaison de la plaquette de planage



Vérifier le bord extérieur.

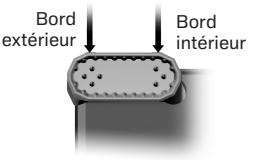


Vérifier le bord intérieur.

Si l'inclinaison de la broche machine est de 0, régler l'inclinaison de la plaquette à 0 au niveau du bord intérieur. Si la broche est inclinée de 0.1 mm/1000 mm (0.004"/40"), régler le bord intérieur à +0.005 mm (0.0002").
Pour les autres valeurs d'inclinaison de la broche, reportez-vous au graphique page 35.

4. Répéter les étapes précédentes jusqu'à ce que l'inclinaison des plaquettes de planage soit correcte





½ tour correspond à ± 0.01 mm (0.0004") environ par rapport au bord extérieur.
¼ tour correspond à ± 0.005 mm (0.0002") environ par rapport au bord extérieur.

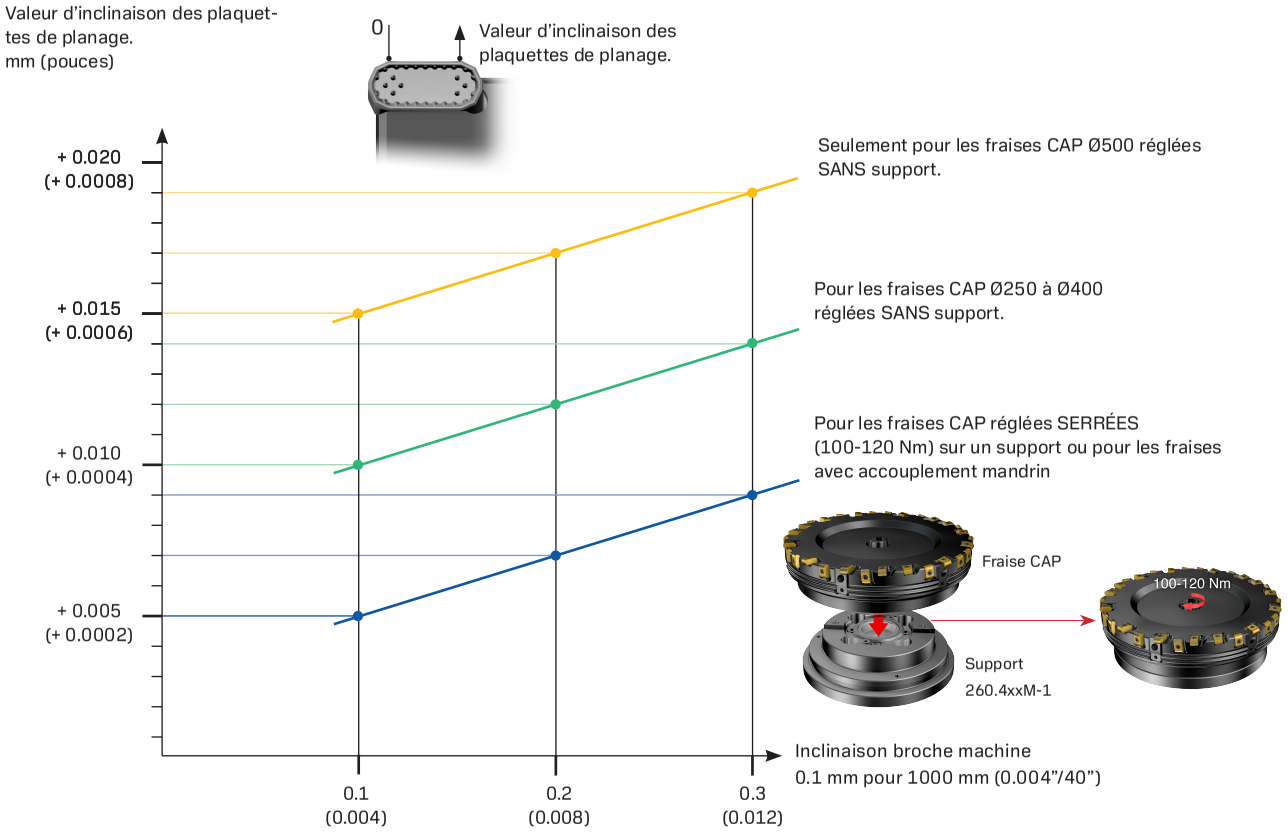
5. Autres informations



Remettre le bouchon en place sur la tête de la vis pour éviter un déréglage accidentel.



Il est préférable de pousser la plaquette en direction de la vis de réglage lors du serrage.


Valeur d'inclinaison des plaquettes de planage. mm (pouces)
0
Valeur d'inclinaison des plaquettes de planage.
+ 0.020 (+ 0.0008)
+ 0.015 (+ 0.0006)
+ 0.010 (+ 0.0004)
+ 0.005 (+ 0.0002)
0.1 (0.004)
0.2 (0.008)
0.3 (0.012)
Inclinaison broche machine 0.1 mm pour 1000 mm (0.004"/40")
Seulement pour les fraises CAP Ø500 réglées SANS support.
Pour les fraises CAP Ø250 à Ø400 réglées SANS support.
Pour les fraises CAP réglées SERRÉES (100-120 Nm) sur un support ou pour les fraises avec accouplement mandrin
Fraise CAP
Support 260.4xxM-1
100-120 Nm

FRA

ITA

Istruzioni di regolazione

1. Montare gli inserti nella fresa

Serrare le viti degli inserti con un momento torcente di 3 Nm (26 poll./lbs).



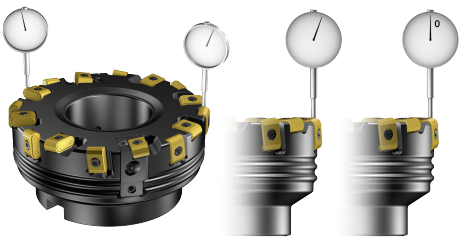


Tutti gli inserti hanno lo stesso design.

— Gli inserti di lavoro sono montati in sedi fisse.
— Gli inserti raschianti (finitura) sono montati all'interno di cassette.

Durante il bloccaggio, spingere gli inserti raschianti verso la vite di regolazione.

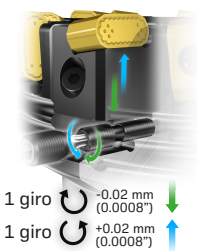
2. Controllare il runout orizzontale e verticale degli inserti di lavoro



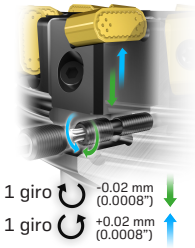
Individuare l'inserto di lavoro più alto sul tagliente esterno ed impostarlo come riferimento "0".

3. Regolare l'inserto raschiante

1 giro in senso orario sposta la cassetta di 0.02 mm (0.0008") in BASSO.



1 giro in senso antiorario sposta la cassetta di 0.02 mm (0.0008") in ALTO.



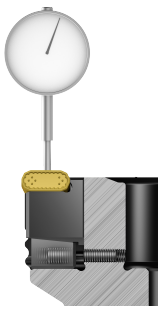
Quando si cambia direzione, è necessario circa un giro e mezzo della vite di regolazione per recuperare il gioco prima che la cassetta inizi a muoversi nella direzione opposta.

Non è necessario allentare la vite di bloccaggio della cassetta per eseguire la regolazione.

Terminare sempre la regolazione assiale muovendo la cassetta verso l'alto.

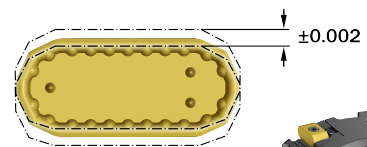
Il primo giro del cacciavite per permettere l'uscita del cuneo della cassetta talvolta potrebbe essere particolarmente difficoltoso.

4. Regolare uno degli inserti raschianti



Selezionare un inserto per finitura e regolarlo tra +0.03 mm (0.0012") e +0.04 mm (0.0016") dal riferimento "0".
Per gli inserti in CBN, regolare tra +0.05 mm (0.002") e +0.06 mm (0.0024").

5. Regolare il runout degli altri inserti raschianti



±0.002 mm (0.00008")
Tra raschianti

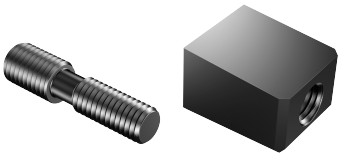


Regolare la posizione degli altri inserti raschianti in modo che il runout sia entro ±2 µm (0.00008").

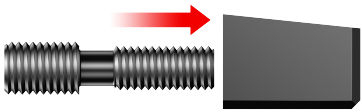
ITA

Istruzioni per l’assemblaggio

1.



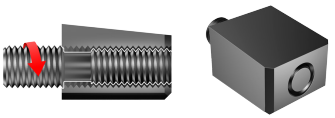
2.



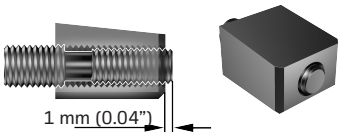
5516 035-09

5332 010-09

3.

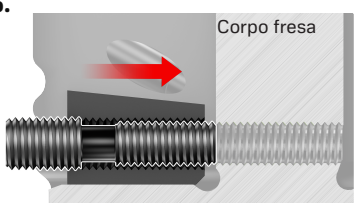


4.



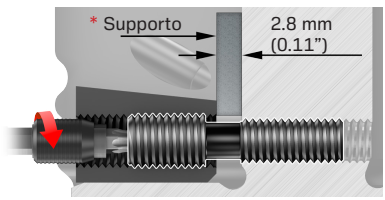
Se occorre smontare l’utensile, è consigliabile lasciare la cassetta nella sede originale in modo da mantenere la tolleranza degli inserti raschianti.

5.

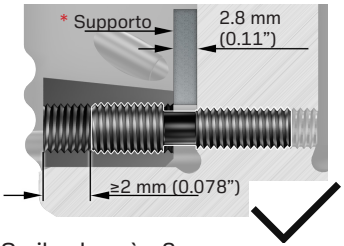


6.

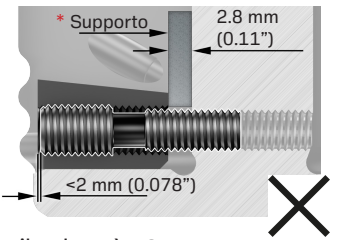
* Supporto 5654 017-01 incluso

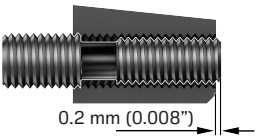


7. Controllare la posizione della vite



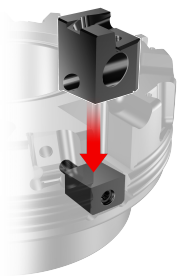
Se il valore è ≥2 mm
Andare al passo 8.





Se il valore è <2 mm
Ripetere i passi precedenti ma posizionare la vite a 0.2 mm (0.008”) anziché a 1 mm (0.039”), come illustrato.

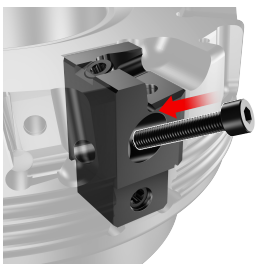
8.



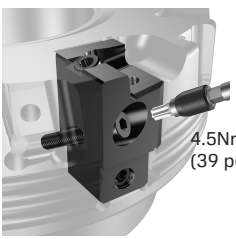
9.



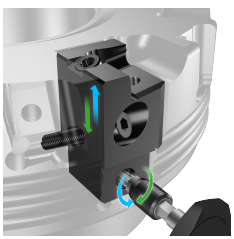
10.



11.

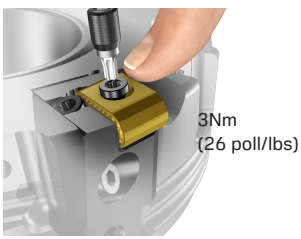


12.



Prima di regolare la cassetta dell’inserto raschiante, ruotare il cacciavite di ~4 giri in senso orario e di ~4 giri in senso antiorario. Questa operazione deve essere effettuata ogni volta che viene montata la cassetta.

13.



Durante il bloccaggio, spingere l’inserto verso la vite di regolazione.

ITA

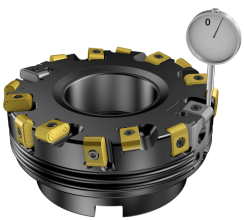
Informazioni sull’inclinazione degli inserti raschianti

Nelle frese in versione CAP, l’inclinazione degli inserti raschianti è preregolata per compensare un’inclinazione del mandrino di 0.1 mm/1000 mm (0.004”/40”) e non deve quindi essere modificata prima della lavorazione. Per evitarne la regolazione accidentale, nella parte superiore della vite di regolazione è inserito un tappo di plastica.
Se fosse indispensabile regolare l’inclinazione degli inserti (ad es. in caso di sostituzione di una cassetta o di modifica della compensazione dell’inclinazione del mandrino), contattare lo specialista locale o seguire le istruzioni riportate nel prossimo capitolo di questo documento.
Con ogni fresa, viene fornito un inserto campione che serve proprio a controllare l’inclinazione ma va ricordato che non si tratta di un inserto da taglio.



Istruzioni per la regolazione dell’inclinazione del raschiante

1. Controllare l’inclinazione del raschiante



Controllare il tagliente esterno.



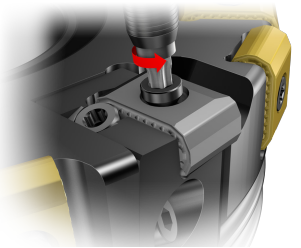
Controllare il tagliente interno.

Utilizzare l’inserto campione GA-N425-1707-W
Controllare il tagliente esterno dell’inserto campione ed impostarlo come riferimento “0”; quindi controllare il tagliente interno.

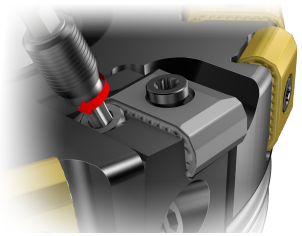
2. Regolare l’inclinazione



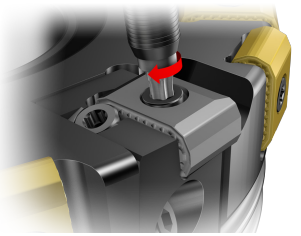
Rimuovere il tappo dalla vite.



Svitare la vite dell’inserto di 2 giri.

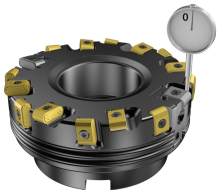


Girare la vite di qualche grado in senso orario per aumentare l’inclinazione sul tagliente interno.
½ giro equivale a circa ±0.01 mm (0.0004”) dal tagliente esterno.
Allentare sempre la vite dell’inserto prima di eseguire la regolazione.

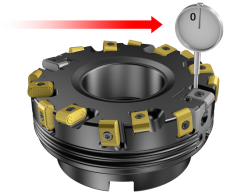


Serrare la vite dell’inserto con un momento torcente di 3 Nm (26 poll./lbs).

3. Ricontrollare l'inclinazione del raschiante



Controllare il tagliente esterno.

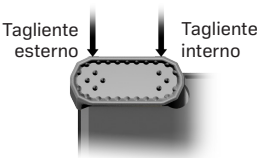


Controllare il tagliente interno.

Se l'inclinazione del mandrino della macchina è "0", impostare a "0" l'inclinazione dell'inserto misurata sul tagliente interno. Se l'inclinazione del mandrino è 0.1 mm/1000 mm (0.004"/40"), impostare a +0.005 mm (0.0002") il tagliente interno dell'inserto.
Per altri valori di inclinazione del mandrino, fare riferimento al grafico riportato a pagina 43.

4. Ripetere la procedura precedente finché l'inclinazione del raschiante non sarà impostata correttamente





½ giro equivale a circa ±0.01 mm (0.0004") dal tagliente esterno.
¼ giro equivale a circa ±0.005 mm (0.0002") dal tagliente esterno.

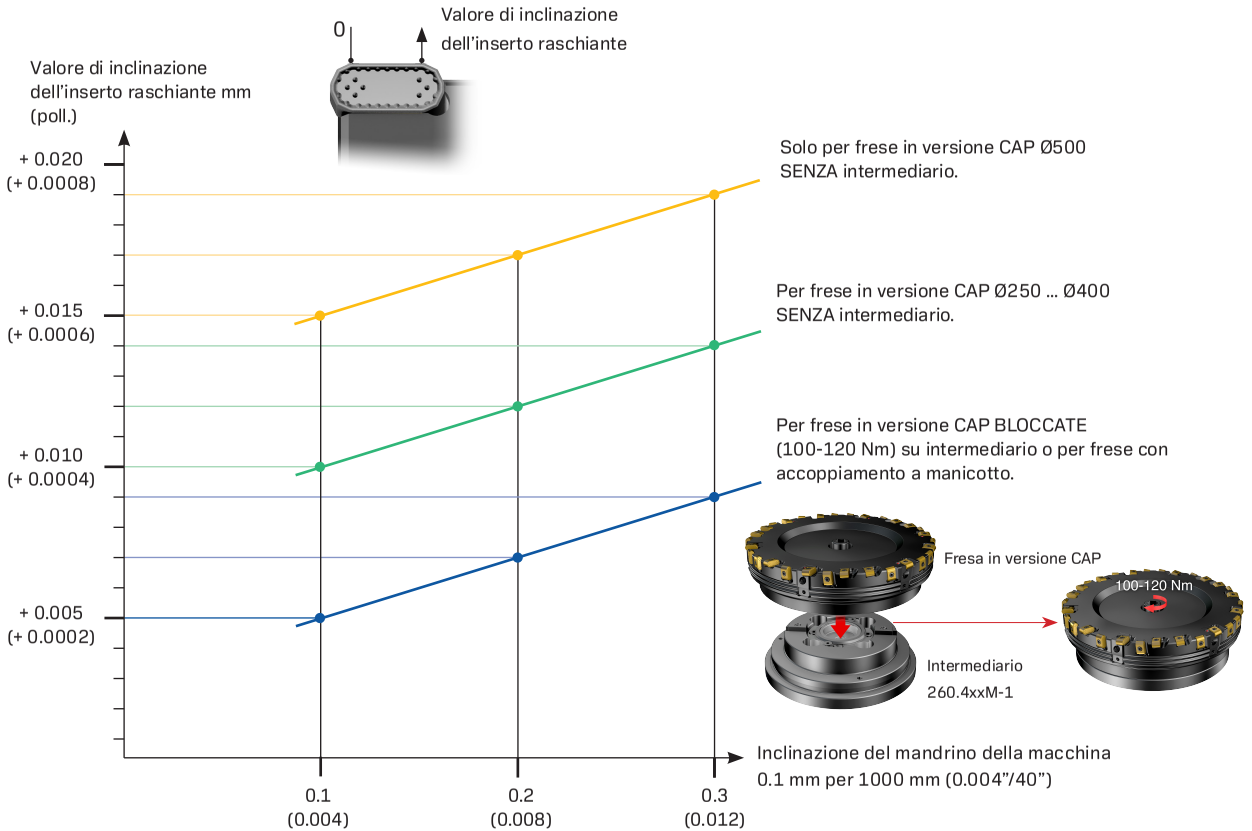
5. Altre informazioni



Reintrodurre il tappo nella vite per evitarne la regolazione accidentale.



Durante il bloccaggio, è consigliabile spingere l'inserto verso la vite di regolazione.


0
Valore di inclinazione
dell'inserto raschiante
Valore di inclinazione
dell'inserto raschiante mm
(poll.)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)
Inclinazione del mandrino della macchina
0.1 mm per 1000 mm (0.004"/40")
Solo per frese in versione CAP Ø500
SENZA intermediario.
Per frese in versione CAP Ø250 ... Ø400
SENZA intermediario.
Per frese in versione CAP BLOCCATE
(100-120 Nm) su intermediario o per frese con
accoppiamento a manicotto.
Fresa in versione CAP
100-120 Nm
Intermediario
260.4xxM-1

ITA

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設定要領

1. カッターへのチップの取付

チップスクリューを締め付けます(締付けトルク:3Nm (26 in/lbs))。



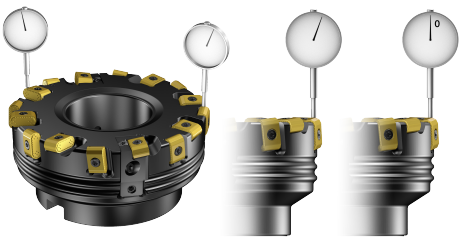


チップはすべて同じ設計です。

- 加工チップは固定ポケットに取り付けます。
- ワイパー(仕上げ)チップはカセットに取り付けます。

クランプする際は、ワイパーチップを
調整スクリューの方に押します。

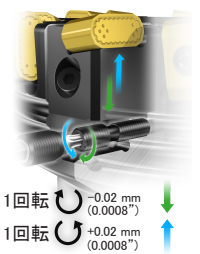
2. 水平および垂直の加工チップの振れをチェック



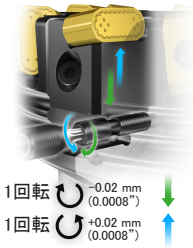
刃先が最も高い位置にある加工チップを
特定し、これを基準 “0” に設定します。

3. ワイパーチップの調整方法

時計方向に1回転させると、カセット
が 0.02 mm 下に移動します。

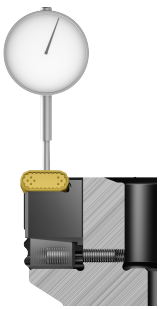


反時計方向に1回転させると、カセッ
トが 0.02 mm 上に移動します。



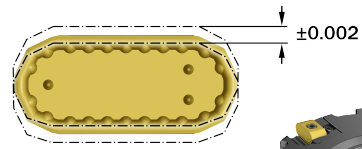
方向を変える場合は、カセットが反対方向に移動し始める前に調整スクリューを約1.5回転させて緩みをなくす必要があります。
調整のためにカセットのクランプスクリューを緩める必要はありません。
最後に必ずカセットを上に動かして、軸方向の調整を行ってください。
スクリュードライバーを最初に回すときは、場合によってはカセットから
ウェッジを外すために余分な手間がかかることがあります。

4. ワイパーチップ1個を調整



仕上げ加工チップを選択し、基準 “0” +0.03 mm ~ +0.04 mm に調整します。
CBNチップの場合は、+0.05mm ~ +0.06 mm に調整します。

5. その他のワイパーチップの振れを調整



±0.002 mm (0.00008")
ワイパーの振れ

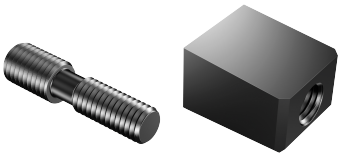


振れが± 2µm 以内になるよう、他のワイパーチップの
位置を調整します。

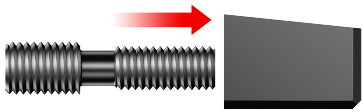
JPN

取扱要領

1.



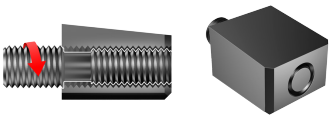
2.



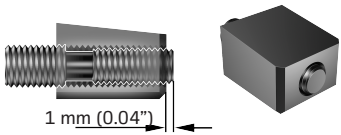
5516 035-09

5332 010-09

3.

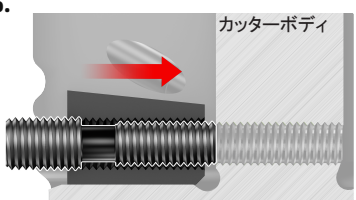


4.



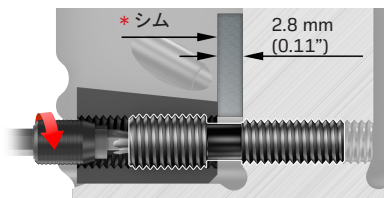
工具の分解が必要な場合は、ワイパーの公差が維持できるよう、カセットを元のカセットシート内で組み立てることを推奨します。

5.

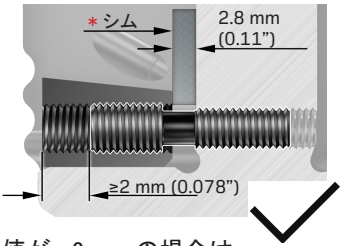


6.

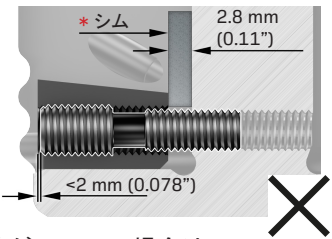
＊シム 5654 017-01 を含む

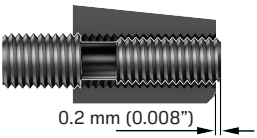


7. スクリューの位置をチェック



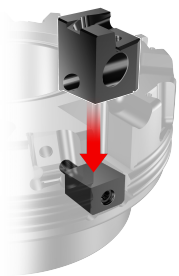
値が ≥2 mm の場合は
ステップ8に進みます。



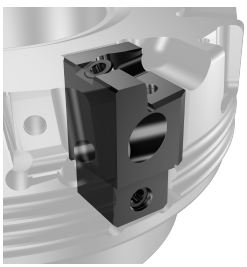


値が <2mm の場合は
1～6のステップの作業を再度行い、図のように、
スクリューが1mmでな0.2 mm 出る位置に調整します。

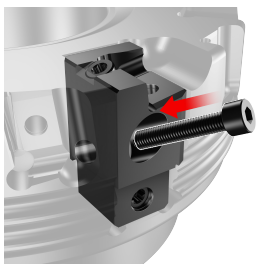
8.



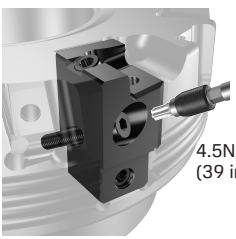
9.



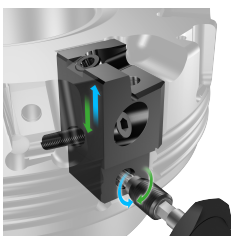
10.



11.

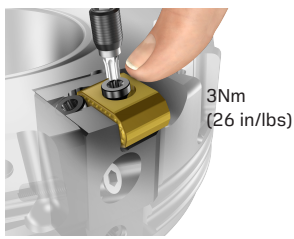


12.



ワイパーカセットを調整する前に、ドライバーを時計方向に4回ほど回し、その後反時計方向に4回ほど回します。カセットを組み立てた後は、必ずこの作業を行ってください。

13.



クランプする際は、チップを調整スクリューの方に押します。

JPN

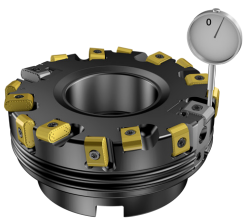
ワイパーチップの傾斜について

すべてのCAP設計カッターでは、スピンドルの傾き（0.1 mm/1000 mm）を補正するよう、ワイパーチップがあらかじめ傾斜しているため、加工前に調整する必要はありません。このため、誤調整の防止用として調整スクリュー上面に樹脂製プラグが入っています。
ワイパーの傾斜をどうしても調整する必要がある場合は（例：カセットの交換、またはスピンドルの傾き補正の変更など）、最寄りの当社スペシャリストに問い合わせるか、次章にあるワイパー傾斜の調整方法に従ってください。
すべてのカッターには、ワイパー傾斜の必要に応じたチェック用にゲージチップが装備されていますが、これは切削チップではないので注意してください。



ワイパー傾斜の調整方法

1. ワイパーの傾斜をチェック



外側刃先をチェックします。



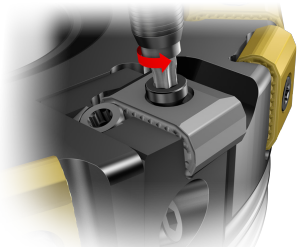
内側刃先をチェックします。

使用ゲージチップ
GA-N425-1707-W
ゲージチップの外側刃先をチェックし、基準“0”に設定した後、ゲージチップの内側刃先をチェックします。

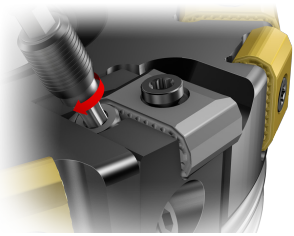
2. 傾斜を調整



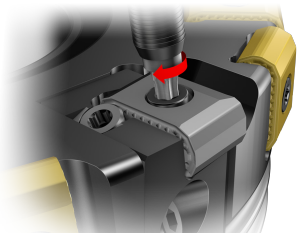
スクリューからプラグを外します。



チップスクリューを約2回転させて緩めます。



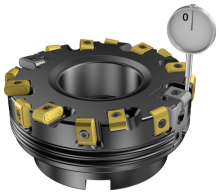
調整スクリューを少し時計方向に回して、内側刃先をさらに傾斜させます。
½ 回転で外側刃先から± 0.01mm 傾斜します。
必ず調整前にチップスクリューを緩めてください。



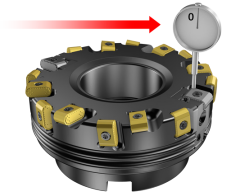
チップスクリューを締め付けます（締付けトルク：3Nm（26 in/lbs））。

JPN

3. ワイパーの傾斜を再チェック



外側刃先をチェックします。

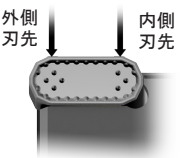


内側刃先をチェックします。

マシンスピンドルの傾きが“0”の場合は、チップの傾斜を内側刃先の測定で“0”に設定します。スピンドルの傾きが0.1 mm/1000 mm 場合は、内側刃先の傾斜を+0.005 mm に設定します。
スピンドルの傾きが上記以外の場合は、51ページのグラフを参照してください。

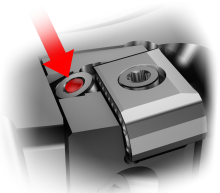
4. ワイパーの傾斜が正しく設定されるまで、前の手順を繰り返す





½ 回転で外側刃先から± 0.01mm 傾斜します。
¼ 回転で外側刃先から± 0.005mm 傾斜します。

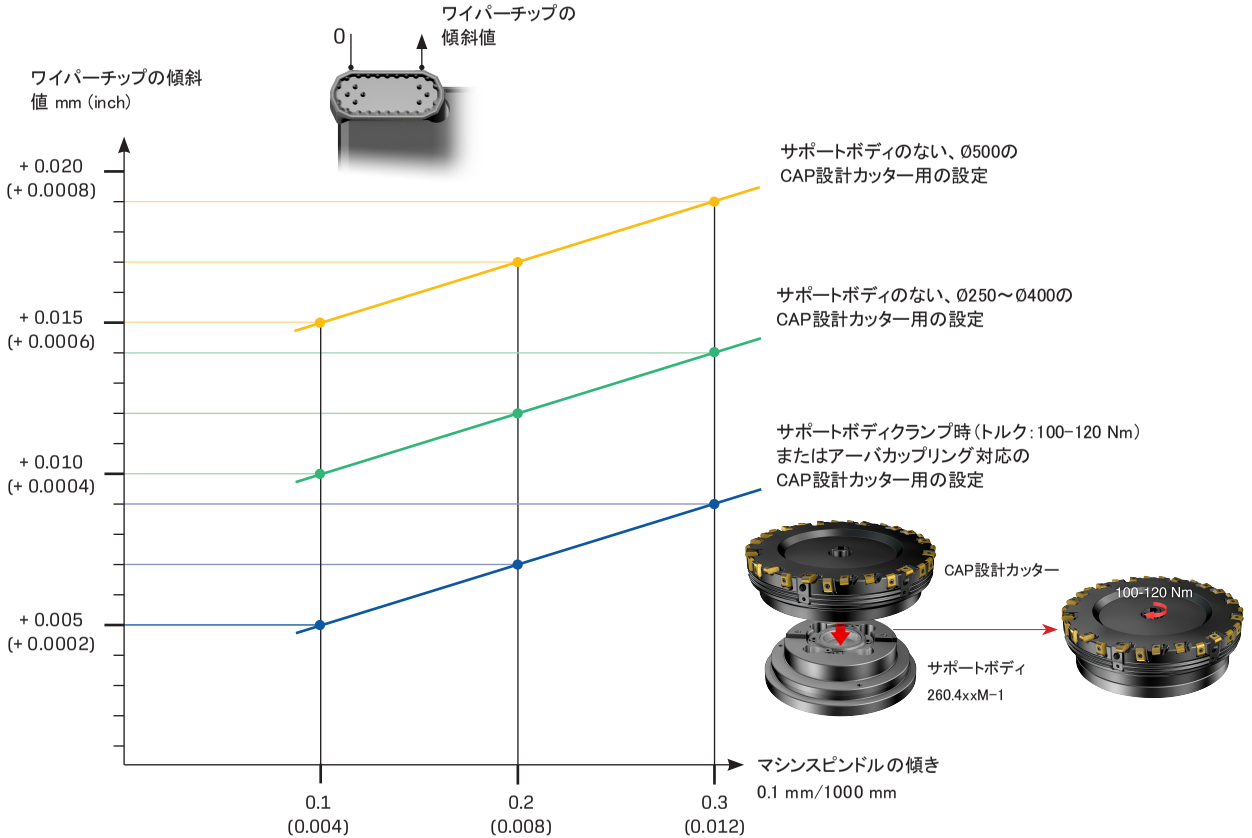
5. その他の情報



誤調整を防ぐために、プラグをスクリュー上面の元の位置に戻します。



クランプする際は、チップを調整スクリューの方に押押します。


ワイパーチップの
傾斜値
0
ワイパーチップの傾斜
値 mm (inch)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
サポートボディのない、Ø500の
CAP設計カッター用の設定
サポートボディのない、Ø250～Ø400の
CAP設計カッター用の設定
サポートボディクランプ時（トルク：100-120 Nm）
またはアーバカップリング対応の
CAP設計カッター用の設定
CAP設計カッター
100-120 Nm
サポートボディ
260.4xxM-1
マシンスピンドルの傾き
0.1 mm/1000 mm
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)

JPN

POR

Instruções de ajuste

1. Montagem de pastilhas na fresa

Aperte os parafusos das pastilhas com torque de 3 Nm (26 pol.-lbs).

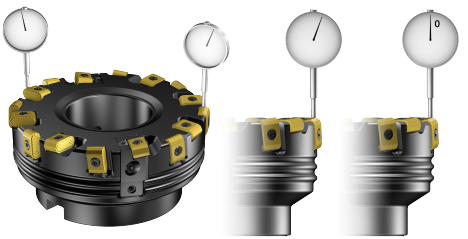




Todas as pastilhas têm o mesmo desenho.
- As pastilhas de trabalho são montadas em bolsões fixos.
- Pastilhas Wiper (acabamento) são montadas em cassetes.

Empurre a pastilha Wiper na direção do parafuso de ajuste quando estiver fixando.

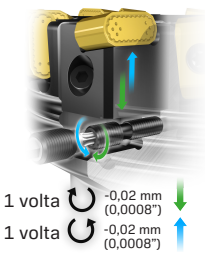
2. Verifique o batimento das pastilhas de trabalho horizontais e verticais



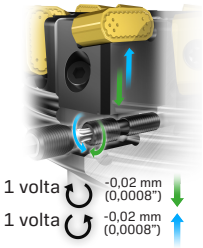
Identifique a pastilha de trabalho mais alta na aresta externa e marque como referência “0”.

3. Como ajustar a pastilha Wiper

1 volta no sentido horário move o cassete 0,02 mm (0,0008”) PARA BAIXO.

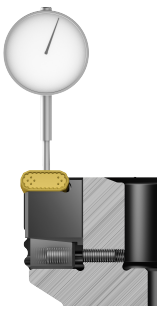


1 volta no sentido anti-horário move o cassete 0,02 mm (0,0008”) PARA CIMA.



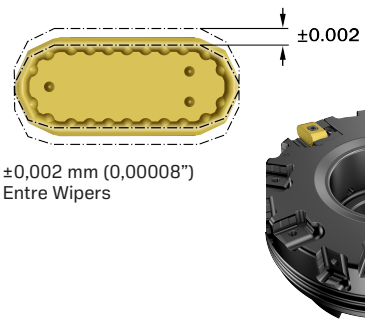
Quando estiver mudando a direção você precisa de aproximadamente 1,5 volta do parafuso de ajuste para compensar a folga antes do cassete começar a se mover na direção oposta.
Não é preciso soltar o parafuso de fixação do cassete para ajustar.
Sempre finalize o ajuste axial movendo o cassete para cima.
A primeira volta da chave de fendas pode precisar de um esforço extra para liberar o calço do cassete.

4. Ajuste uma das pastilhas Wiper



Selecione uma pastilha de acabamento e ajuste-a entre +0,03 mm (0,0012") e +0,04 mm (0,0016") da referência "0".
Ajuste pastilhas CBN entre +0,05 mm (0,002") e +0,06 mm (0,0024").

5. Ajuste o batimento de outras pastilhas Wiper

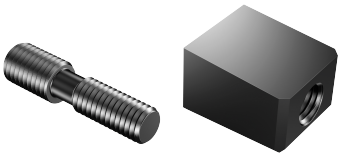


Ajuste a posição das outras pastilhas Wiper para que o batimento fique
dentro de ±2 µm (0,00008").

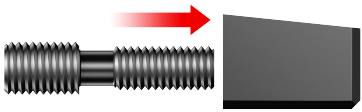
POR

Instruções de manuseio

1.



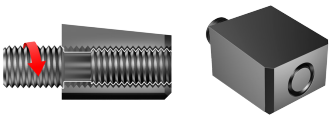
2.



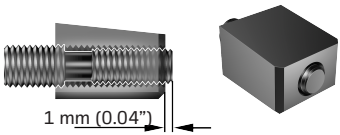
5516 035-09

5332 010-09

3.

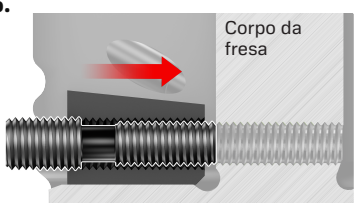


4.



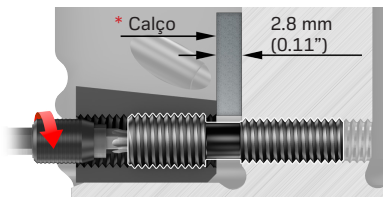
Se você precisar desmontar a ferramenta, recomendamos montar o cassete no assento original do cassete para manter a tolerância Wiper.

5.

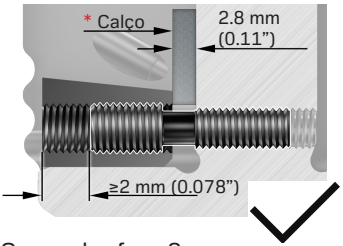


6.

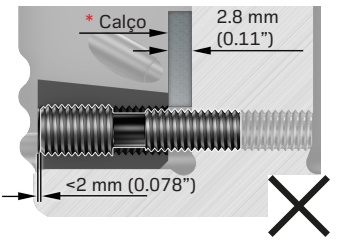
* Calço 5654 017-01 incluído

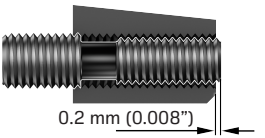


7. Verifique a posição do parafuso



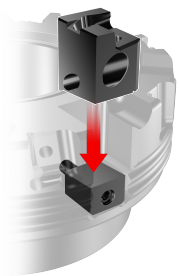
Se o valor for ≥2 mm
Vá para a etapa 8.



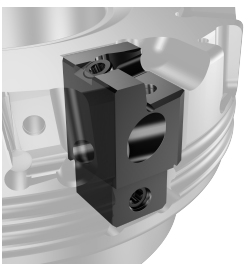


Se o valor for <2 mm
Execute as etapas anteriores novamente, mas posicione o parafuso com 0,2 mm (0,008”) em vez de 1 mm (0,039”) como mostrado.

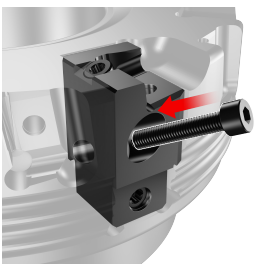
8.



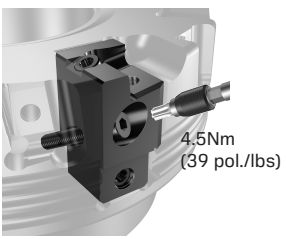
9.



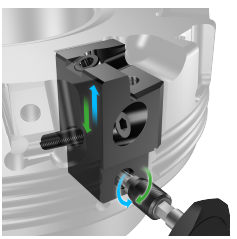
10.



11.

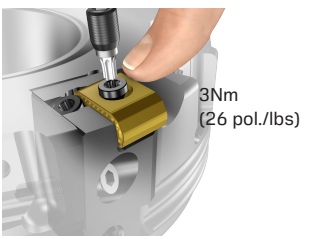


12.



Gire a chave ~4 voltas no sentido horário e ~4 voltas no sentido anti-horário antes de ajustar o cassete Wiper. Esse procedimento precisa ser feito sempre que o cassete for montado.

13.



Empurre a pastilha na direção do parafuso de ajuste quando estiver fixando.

POR

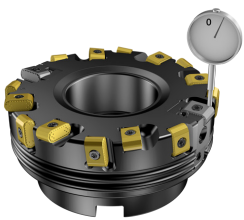
Informações de inclinação da pastilha Wiper

Cada fresa com desenho CAP é fornecida com uma inclinação de pastilha Wiper já pré-ajustada para compensar a inclinação do fuso de 0,1 mm/1000 mm (0,004”/40”) e não precisa ser ajustada antes da usinagem. Por isso um plugue de plástico é colocado na parte superior do parafuso de ajuste para evitar ajustes acidentais.
No caso de total necessidade de ajuste da inclinação Wiper (ex.: troca do cassete ou mudança na inclinação do fuso), entre em contato com seu especialista local ou siga a instrução de ajuste de inclinação da Wiper no próximo capítulo dessa nota.
Uma pastilha padrão é fornecida com cada fresa para eventual verificação da inclinação da Wiper, mas saiba que... ela não é uma pastilha de corte.



Instruções de ajuste da inclinação da Wiper

1. **Verifique a inclinação da Wiper**



Verifique a aresta externa.



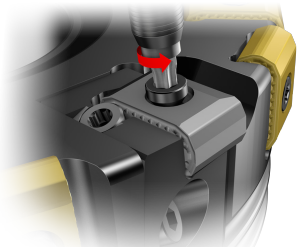
Verifique a aresta interna.

Use a pastilha padrão GA-N425-1707-W
Verifique a aresta externa da pastilha padrão e ajuste-a como referência “0”. Depois, verifique a aresta interna da pastilha padrão.

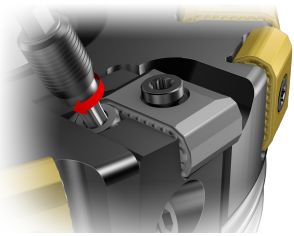
2. Ajuste a inclinação



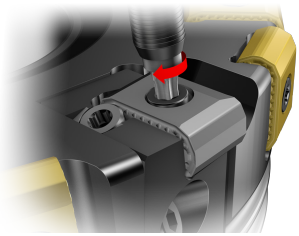
Remova o plugue do parafuso.



Solte duas voltas o parafuso da pastilha.

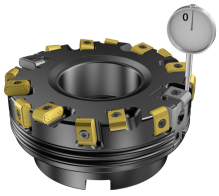


Gire o parafuso de ajuste em poucos graus no sentido horário para aumentar a inclinação na aresta interna.
½ volta é aproximadamente ± 0,01 mm (0,0004 pol.) da aresta externa.
Sempre solte o parafuso da pastilha antes do ajuste.

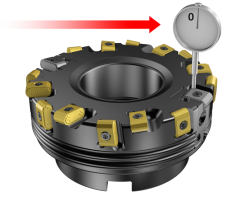


Aperte o parafuso da pastilha com torque de 3 Nm (26 pol.-lbs).

3. Verifique novamente a inclinação da Wiper



Verifique a aresta externa.

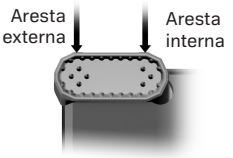


Verifique a aresta interna.

Se o fuso da máquina tiver inclinação “0”, ajuste a inclinação da pastilha para “0” medido na aresta interna. Se o fuso tiver inclinação 0,1 mm/1000 mm (0,004”/40”), ajuste a aresta interna da pastilha em +0,005 mm (0,0002”).
Para outros valores de inclinação de fuso, verifique a página de gráficos 59.

4. Execute novamente os passos anteriores até que a inclinação da Wiper esteja bem ajustada





½ volta é aproximadamente ± 0,01 mm (0,0004 pol.) da aresta externa.
¼ volta é aproximadamente ± 0,005 mm (0,0002 pol.) da aresta externa.

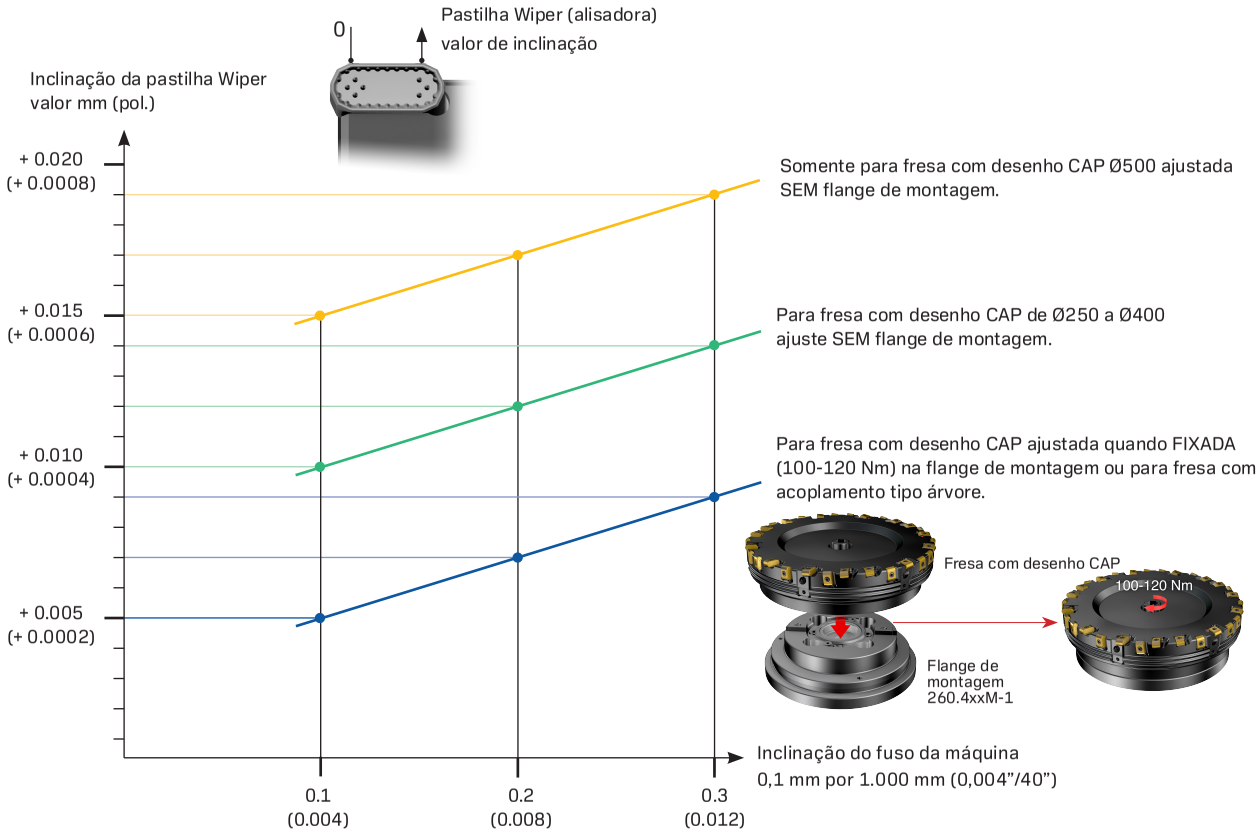
5. Outras informações



Recoloque o plugue na posição original dentro do alojamento para a chave do parafuso para evitar ajustes acidentais.



É melhor empurrar a pastilha na direção do parafuso de ajuste quando estiver fixando.


0
Pastilha Wiper (alisadora)
valor de inclinação
Inclinação da pastilha Wiper
valor mm (pol.)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)
Inclinação do fuso da máquina
0,1 mm por 1.000 mm (0,004”/40”)
Somente para fresa com desenho CAP Ø500 ajustada
SEM flange de montagem.
Para fresa com desenho CAP de Ø250 a Ø400
ajuste SEM flange de montagem.
Para fresa com desenho CAP ajustada quando FIXADA
(100-120 Nm) na flange de montagem ou para fresa com
acoplamento tipo árvore.
Fresa com desenho CAP
100-120 Nm
Flange de
montagem
260.4xxM-1

POR

CHI

安装说明

1. 为铣刀装载刀片

将刀片螺钉拧紧至3 Nm (26英寸磅)。





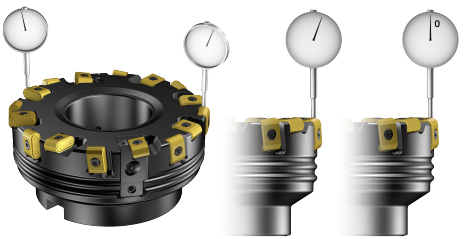
工作刀片和修光刀片通用。

– 工作刀片安装在固定刀片槽上

– Wiper (修光刃) (精加工) 刀片安装在可调刀座盒上。

夹紧刀片时，确保Wiper (修光刃) 刀片接触调节螺钉。

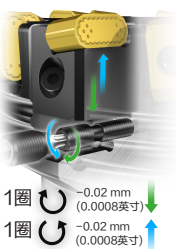
2. 检查水平和垂直工作刀片跳动量



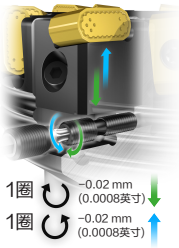
设定最高的工作刀片并将其设为参考“0”点。

3. 如何调节Wiper (修光刃) 刀片

顺时针转1圈可将刀座盒向下移动0.02 mm (0.0008英寸)。

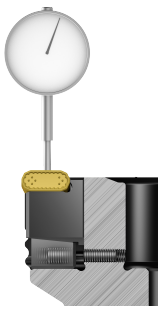


逆时针转1圈可将刀座盒向上移动0.02 mm (0.0008英寸)。



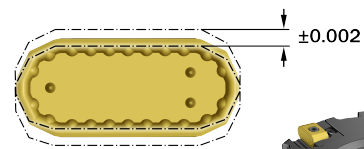
改变方向时，您需要将调节螺钉转动约1.5圈以消除螺纹间隙以及刀座盒变形，然后，刀座盒才会开始沿相反的方向运动。
调节时，无需松开刀座盒夹紧螺钉。
请务必通过向上移动刀座盒来完成轴向调节。
将螺丝刀转动第一圈时可能要额外用力才能使楔块螺钉释放。

4. 调节其中一个Wiper (修光刃) 刀片



选择一个精加工刀片，将其调节至比参考“0”点高+0.03 mm (0.0012英寸) 或者+0.04 mm (0.0016英寸)。
对于CBN刀片，请联系可乐满产品专家。

5. 调节其他Wiper (修光刃) 刀片跳动量



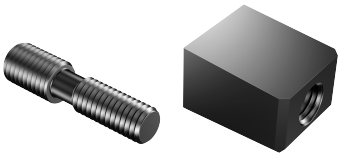


调节其他Wiper (修光刃) 刀片的位置，以使所有wiper刀片跳动量处于 ±2 μm (0.00008英寸) 的范围内。

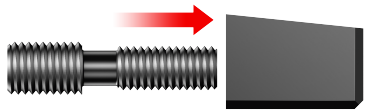
CHI

操作说明

1.



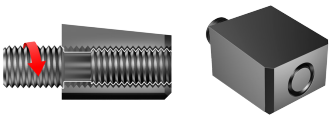
2.



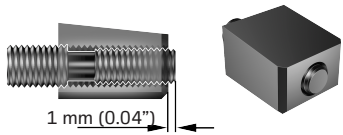
5516 035-09

5332 010-09

3.



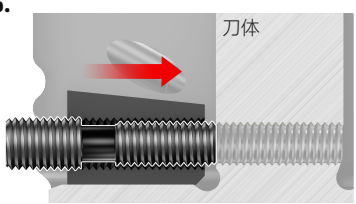
4.



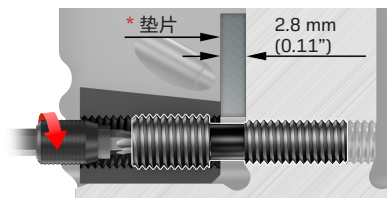
如需重新安装刀具，建议将刀座盒装配到原来的位置中，以保持Wiper (修光刃)的尺寸精度。

* 刀盘包装盒中包括垫片5654 017–01

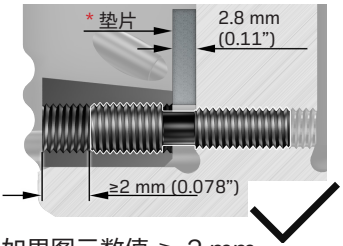
5.



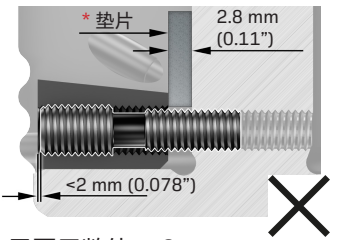
6.

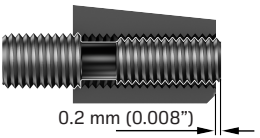


7. 检查螺钉的位置



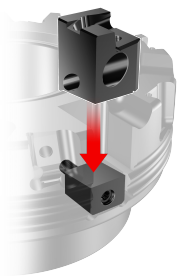
如果图示数值 ⩾ 2 mm
转到步骤8。



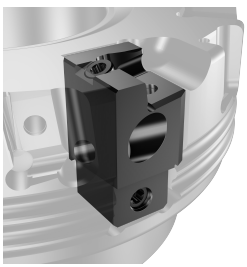


如果图示数值 < 2 mm
再次执行之前的步骤，但是，如图所示，将螺钉定位在0.2 mm (0.008英寸) 而不是1 mm (0.039英寸) 处。

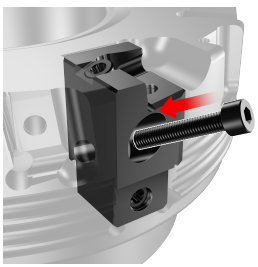
8.



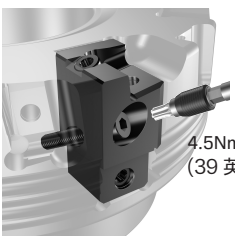
9.



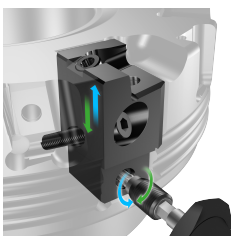
10.



11.

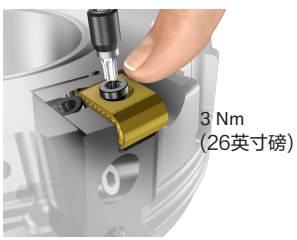


12.



调节Wiper (修光刃) 刀座盒之前，先将螺丝刀顺时针转动约4圈，然后逆时针转动约4圈。每次装配刀座盒后，都必须执行该步骤。

13.



夹紧时，朝向调节螺钉推动刀片，保证刀片与调节螺钉贴合。

CHI

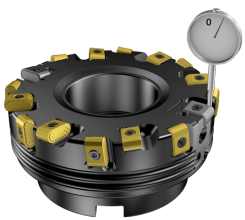
Wiper (修光刃) 刀片倾斜度信息

每把帽盖式铣刀在交货时都已经预设好Wiper (修光刃) 刀片倾斜度，以补偿0.1 mm/1000 mm (0.004英寸/40英寸) 的主轴倾斜度，因此在加工前无需调节。这也是在调节螺钉的头部凹窝处放置一个堵头以免意外调节的原因。
如果绝对需要调节Wiper (修光刃) 倾斜度 (例如更换刀座盒或改变主轴倾斜度补偿)，请与您当地的可乐满专家联系，或按照本通知下一章中的Wiper (修光刃) 倾斜度调节说明进行操作。
每把铣刀在交货时都随附了一个标准刀片，用于最终检查Wiper (修光刃) 倾斜度，但请注意，这不是切削刀片，不能用于加工。

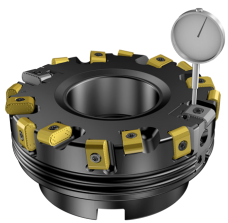


Wiper (修光刃) 倾斜度调节说明

1. 检查Wiper (修光刃) 倾斜度



检查外刃。



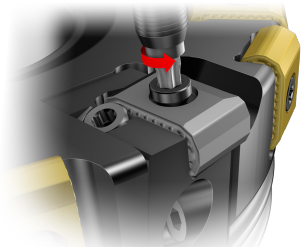
检查内刃。

使用标准刀片
GA-N425-1707-W
检查标准刀片外刃并将其设为参考“0”，然后检查标准刀片内刃。

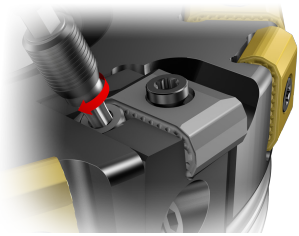
2. 调节倾斜度



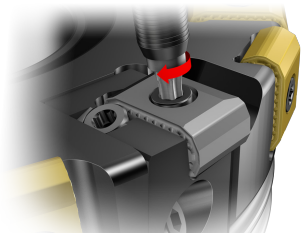
从螺钉上拆下堵头。



将刀片螺钉松开约两圈。



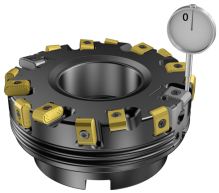
将调节螺钉顺时针转动几度，以增加内刃倾斜度。
½圈会使内刃比外刃产生约 ± 0.01 mm (0.0004英寸)的倾斜。
调节之前，务必先松开刀片螺钉。



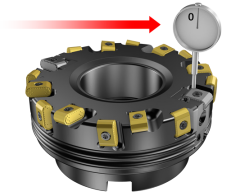
将刀片螺钉拧紧至3 Nm (26英寸磅)。

CHI

3. 再次检查Wiper (修光刃) 倾斜度



检查外刃。

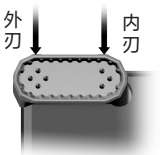


检查内刃。

如果机床主轴倾斜度为“0”，则在内刃处将刀片
倾斜度设为测得的“0”。如果主轴倾斜度为0.1 mm/1000 mm (0.004英寸/40英寸)，则将刀片内刃设
为+0.005 mm (0.0002英寸)。
如需其他主轴倾斜度值，请查阅图页75。

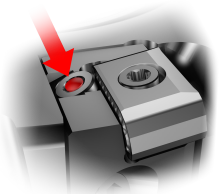
4. 重复执行之前的步骤，直到设置正确的Wiper (修光刃) 倾斜度





½圈会使内刃比外刃产生约±0.01 mm (0.0004英寸)的倾斜
¼圈会使内刃比外刃产生约±0.005 mm (0.0002英寸)的倾斜

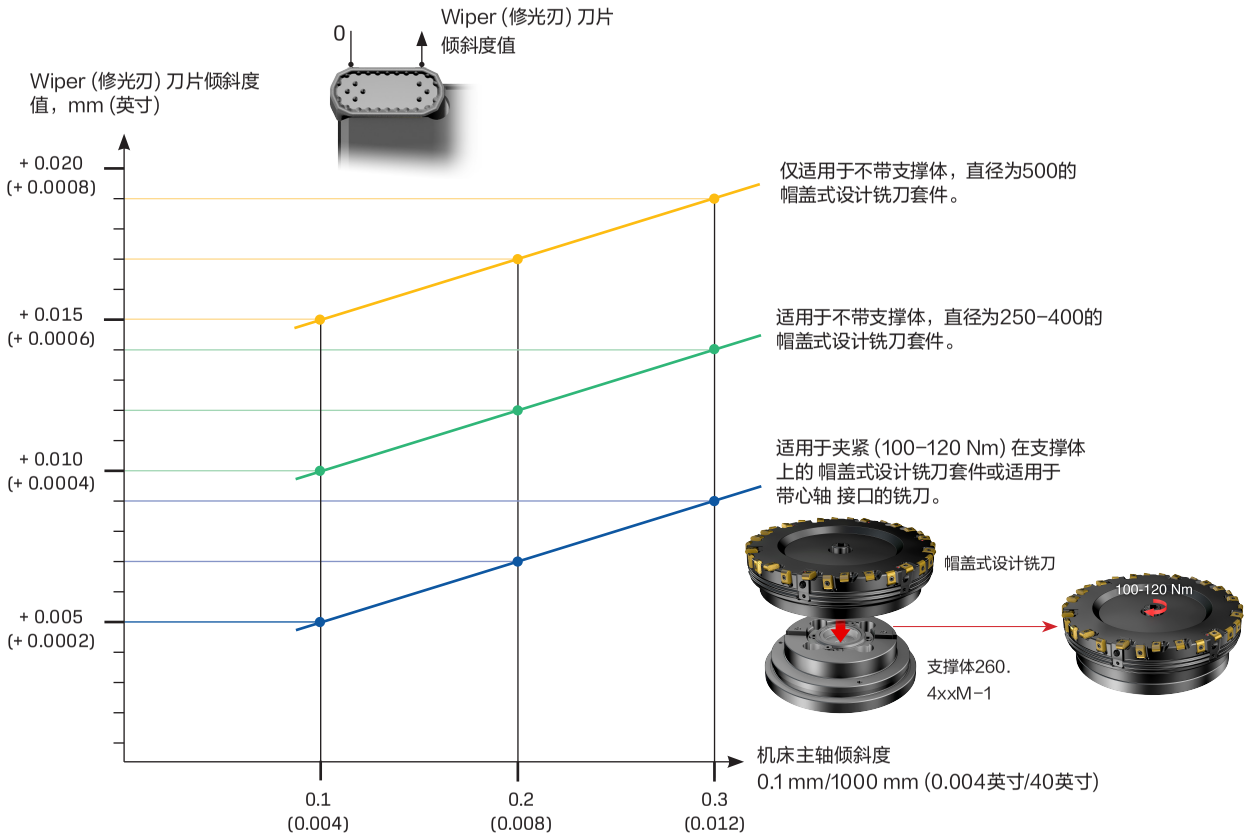
5. 其他信息



将堵头放回螺钉头部凹窝的原位，以免意外调节。



夹紧时，朝向调节螺钉推动刀片。


0
Wiper (修光刃) 刀片
倾斜度值
Wiper (修光刃) 刀片倾斜度
值，mm (英寸)
+ 0.020
(+ 0.0008)
+ 0.015
(+ 0.0006)
+ 0.010
(+ 0.0004)
+ 0.005
(+ 0.0002)
0.1
(0.004)
0.2
(0.008)
0.3
(0.012)
机床主轴倾斜度
0.1 mm/1000 mm (0.004英寸/40英寸)
仅适用于不带支撑体，直径为500的
帽盖式设计铣刀套件。
适用于不带支撑体，直径为250–400的
帽盖式设计铣刀套件。
适用于夹紧 (100–120 Nm) 在支撑体
上的 帽盖式设计铣刀套件或适用于
带心轴 接口的铣刀。
帽盖式设计铣刀
支撑体260.
4xxM–1
100-120 Nm

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