

# Equator™ cleaning kit

Čisticí souprava Equator, Equator Reinigungskit, Equator Equipo de limpieza, Equator Kit de nettoyage, Kit di pulizia per Equator, Equator クリーニングキット, Equator 청소 키트, Zestaw do czyszczenia komparatora Equator, Equator kit de limpeza, Набор для чистки системы Equator, Equator temizleme kiti, Equator 比对仪清洁组件

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# Introduction

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- The Equator cleaning kit provides everything needed to ensure the clean and reliable running of an Equator machine. The cleaning kit includes replacement dust filters and cleaning products which have been tested and proven as non-abrasive and non-corrosive.
- Following the simple maintenance procedures given below will prolong the operational life and provide continued high performance of the system. The user should determine the frequency of inspection and maintenance actions according to the conditions of use.
- The Equator machine has no user-serviceable parts.
- The Equator Controller has no internal serviceable parts.
- Repair and replacement of parts should only be carried out by a Renishaw representative. Renishaw offers a maintenance contract which provides overnight Repair-By-Exchange (RBE) and the option to have a consignment unit on site.

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**CAUTION:** Cleaning should only be carried out whilst the Equator machine and controller have no power.

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**NOTE:** Remove any fixture plates and probe systems from the Equator machine before cleaning.

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# Safety

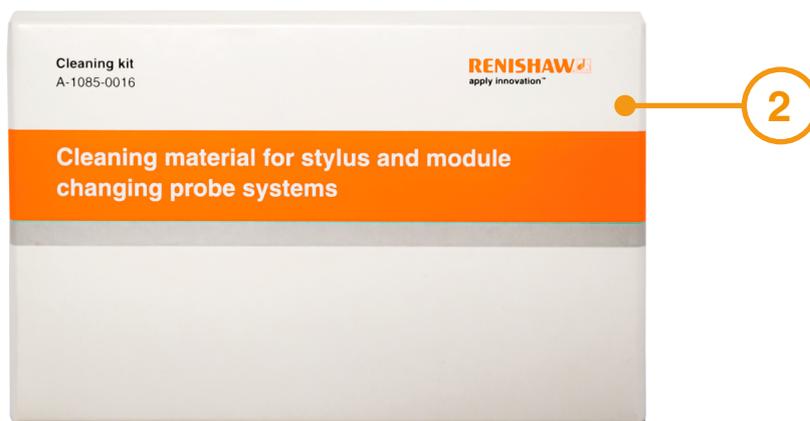
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- EN • Cleaning wipes contain Isopropanol and demineralised water. Store below 25°C. Keep away from sources of ignition - no smoking. Irritating to eyes - avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Vapours may cause drowsiness and dizziness. Use only in well-ventilated areas. Consult safety information at [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Caution - Isopropanol may damage the belts. When cleaning the strut surfaces care must be taken to avoid contact with the belts.
- CS • Čisticí utěrky jsou napuštěny izopropylalkoholem a demineralizovanou vodou. Skladujte při teplotě pod 25 °C. Skladujte mimo zápalné zdroje – nekuřte. Dráždí oči – vyhněte se kontaktu s očima. V případě kontaktu s očima ihned oči vypláchněte velkým množstvím vody a vyhledejte lékařskou pomoc. Výpary mohou způsobit malátnost a závratě. Používejte pouze v dobře větraných prostorech. Bezpečnostní informace si přečtěte na webových stránkách [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Upozornění - Izopropylalkohol může poškodit řemeny. Při čištění povrchu vzpěr postupujte opatrně a dávejte pozor, aby nedošlo ke kontaktu s řemeny.
- DE • Die Reinigungstücher enthalten Isopropanol und demineralisiertes Wasser. Lagerung unter 25°C. Von Zündquellen fernhalten – Rauchen verboten. Reizt die Augen – Berührung mit den Augen vermeiden. Bei Berührung mit den Augen sofort mit viel Wasser ausspülen und einen Arzt aufsuchen. Dämpfe können Benommenheit und Schwindel verursachen. Nur in gut belüfteten Räumen verwenden. Beachten Sie bitte die Sicherheitshinweise auf unserer Website [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Achtung - Isopropanol kann den Riemen schädigen. Bei der Reinigung der Strebenoberflächen ist darauf zu achten, den Kontakt zu den Bändern zu vermeiden.
- ES • Los paños de limpieza contienen alcohol isopropílico y agua desmineralizada. Almacenar a menos de 25°C. Mantener alejados de posibles focos de incendio - no fumar. Irrita los ojos – evítase el contacto con los ojos. En caso de contacto con los ojos, aclarar inmediatamente con abundante agua y solicitar asistencia médica. Los vapores pueden provocar somnolencia y mareos. Utilizar solo en zonas bien ventiladas. Para obtener más información sobre seguridad, visite [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Precaución - El Isopropanol puede dañar las correas. Durante la limpieza de las guías debe tener cuidado para evitar el contacto con las correas.
- FR • Les essuyettes de nettoyage contiennent de l'isopropanol et de l'eau déminéralisée. Conserver à moins de 25 °C. Tenir à l'écart des sources d'inflammation - ne pas fumer. Irritant pour les yeux - éviter le contact avec les yeux. En cas de contact avec les yeux, rincer immédiatement à grande eau et consulter un médecin. Les vapeurs peuvent occasionner une somnolence et des étourdissements. Utiliser uniquement dans un endroit bien ventilé. Consulter les informations de sécurité sur [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Attention - L' isopropanol peut endommager les courroies. Des précautions doivent être prises pour nettoyer les supports de règles afin d'éviter tout contact avec les courroies.
- IT • Le salviettine contengono isopropanolo e acqua demineralizzata. Conservare a temperature inferiori a 25°C. Tenere lontano da fonti che possono scatenare una combustione – non fumare. Irritante per gli occhi – non portare a contatto degli occhi. In caso di contatto, sciacquare immediatamente con molta acqua e recarsi da un medico. I vapori possono causare stordimento e sonnolenza. Usare solo in aree ben ventilate. Consultare le informazioni sulla sicurezza nel sito [www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide). Attenzione - l'isopropanolo può danneggiare le cinghie. Durante la pulizia delle superfici dell'asta, evitare qualsiasi contatto con le cinghie.

- JA** • クリーニングワイブには、イソプロパノールとミネラル分を除去した水分が含まれています。25°C未満で保管してください。火の元から離して保管してください。喫煙しないでください。目の炎症 - 目に入らないようにしてください。目にかかった場合は、すぐに大量の水で洗い流して、医師へご相談ください。液体が蒸発すると、眠気やめまいを引き起こすことがあります。よく換気した環境でのみ使用してください。www.renishaw.com/gaugingsupport/equator-user-guide で安全に関する情報を確認してください。注意 - イソプロパノールはベルトを傷めることがあります。軸の表面をクリーニングする際には、ベルトに触れないよう注意してください。
- KO** • 청소 와이프에는 이소프로판올과 탈염수가 포함되어 있습니다. 25°C 미만의 온도에서 보관하십시오. 점화원에서 멀리 떨어뜨려 두십시오 - 금연! 눈에 자극을 주므로 눈과의 접촉을 피하십시오. 눈과 접촉한 경우, 곧바로 다량의 물로 헹구고 병원을 찾아가십시오. 증기는 졸음과 어지러움을 유발할 수 있습니다. 통풍이 잘 되는 곳에서만 사용하십시오. 안전 정보는 www.renishaw.co.kr/gaugingsupport/equator-user-guide를 참조하십시오. 주의 - 이소프로판올은 벨트를 손상시킬 수 있습니다. 버팀대 표면을 청소할 때는 벨트와 접촉하지 않도록 각별히 주의해야 합니다.
- PL** • Ściereczki do czyszczenia zawierają Izopropanol i wodę dejonizowaną. Przechowywać w temperaturze poniżej 25°C. Trzymać z dala od źródeł zapłonu – zakaz palenia. Drażniący dla oczu – unikać kontaktu z oczami. W przypadku kontaktu z oczami, bezzwłocznie przepłukać dużą ilością wody i zgłosić się do lekarza. Opary mogą wywoływać senność i zawroty głowy. Używać tylko w dobrze wentylowanych pomieszczeniach. Więcej informacji na temat bezpieczeństwa można znaleźć na stronie www.renishaw.com/gaugingsupport/equator-user-guide. Uwaga - Isopropanol może powodować uszkodzenie paska zębatego. Podczas czyszczenia przewodnicy należy zadbać, aby nie doszło do kontaktu z paskiem zębatym.
- PT** • Os lenços de limpeza contém isopropanol e água desmineralizada. Armazene abaixo de 25°C. Mantenha longe de fontes de ignição – não fumar. Irritante para os olhos – evite contato com os olhos. Em caso de contato com os olhos, lave imediatamente com muita água e procure orientação médica. Os vapores podem causar sonolência e tontura. Utilize somente em áreas ventiladas. Consulte as informações de segurança em www.renishaw.com/gaugingsupport/equator-user-guide. Cuidado - O isopropanol pode danificar as correias. Quando limpar as superfícies do suporte, evite que entre em contato com as correias.
- RU** • Салфетки для чистки пропитаны изопропанолом и деминерализованной водой. Хранить при температуре ниже 25 °С. Держать вдали от источников воспламенения. Не курить. Используемые средства оказывают раздражающее действие на глаза; необходимо избегать их контакта с глазами. Если средство попало в глаза, необходимо сразу же промыть глаза обильным количеством воды и обратиться к врачу. Пары могут вызывать сонливость и головокружение. Пользоваться только в хорошо проветриваемых помещениях. Сведения по технике безопасности см. на сайте www.renishaw.com/gaugingsupport/equator-user-guide. Внимание - Изопропиловый спирт может повредить ремни и резиновые элементы. При очистке стоек нужно обратить особое внимание на ремни и резиновые элементы.
- TR** • Temizleme mendilleri İsoopropanol ve demineralize su içermektedir. 25°C'nin altında saklayınız. Tutuşturma kaynaklarından uzak tutunuz – yakınında sigara içmeyiniz. Gözleri tahriş eder – göz ile temastan kaçınınız. Göz ile temas etmesi durumunda, hemen bol su ile yıkayınız ve bir doktora başvurunuz. Buharı sersemlik ve baş dönmesine neden olabilir. Sadece iyi-havalandırılan alanlarda kullanınız. Güvenlik bilgisi için www.renishaw.com/gaugingsupport/equator-user-guide adresine danışınız. Dikkat - İzopropanol kayışlara hasar verebilir. Kol yüzeylerini temizlerken kayışlarla temas edilmemesi için özen gösterilmelidir.
- ZH** 清洁湿巾含有异丙醇和去离子水。存储温度低于25 °C。远离火源 — 禁止烟火。对眼睛有刺激 — 避免与眼睛接触。如不慎与眼睛接触，请立即用大量清水冲洗并就医。挥发性气味可能会引起困倦和头晕。只能在通风良好的区域使用。如需了解安全信息，请访问：[www.renishaw.com/gaugingsupport/equator-user-guide](http://www.renishaw.com/gaugingsupport/equator-user-guide)。注意 — 异丙醇可能会损坏皮带。当清洁拉杆表面时，必须注意避免与皮带接触。

# Kit list

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| Item No. | Description                | Qty |
|----------|----------------------------|-----|
| 1        | IPA cleaning wipe          | 36  |
| 2        | Cleaning material          | 1   |
| 3        | Controller filter assembly | 4   |

# Equator™ 300

- Power off the Equator Controller before cleaning is started.

## Cleaning the Struts and Scales

- The 3 Struts and Scales need to be cleaned with IPA wipes to remove any light debris and dirt.



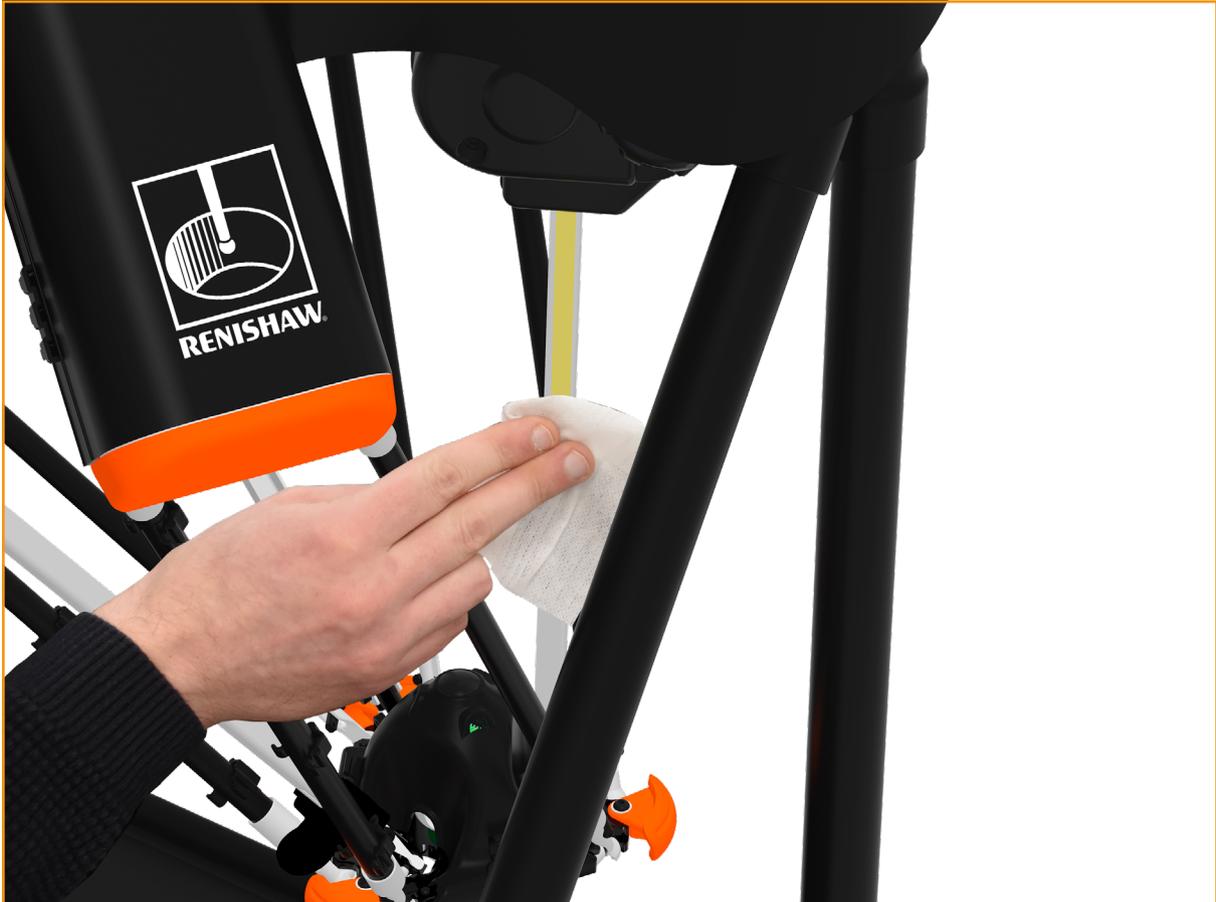
- The Floating Platform will need to be moved into the following locations so that you can gain access to all of the surfaces of the Struts and Scales.

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- Firstly clean the encoder Scale and then clean the outer running surfaces of the Strut with the IPA cleaning wipes provided (use 1 wipe per Strut). After cleaning, visually inspect the encoder Scale for damage. If debris is still present on the scale do not attempt to polish the Strut clean. Aggressive cleaning of the encoder Scale may lead to premature failure.





### Cleaning the Kinematics

- The Kinematics on the base casting need to be cleaned with the cleaning material to remove any light debris and dirt.
- Tear off a piece of cleaning material and roll into a ball.
- Clean the Kinematics as shown below, using a new piece of material when necessary.



# Equator™ 500

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To allow the cleaning of the machine, the Equator 500 brakes need to be disabled to allow the movement of the Floating Platform. To do this:

- Power up the EQ500.
- Open Manager.



- Open Diagnostics.



- Click on the EQ500 Transport Utility application and follow the on-screen instructions.



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**CAUTION:** When the brakes have been disabled, the Floating Platform will suddenly drop. Care must be taken to ensure that the Floating Platform is supported before disabling the brakes.

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- Power off the Equator Controller before cleaning is started.

### Cleaning the Struts and Scales

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- The 3 Struts and Scales need to be cleaned with IPA wipes to remove any light debris and dirt.



- The Floating Platform will need to be moved into the following locations so that you can gain access to all of the surfaces of the Struts and Scales.

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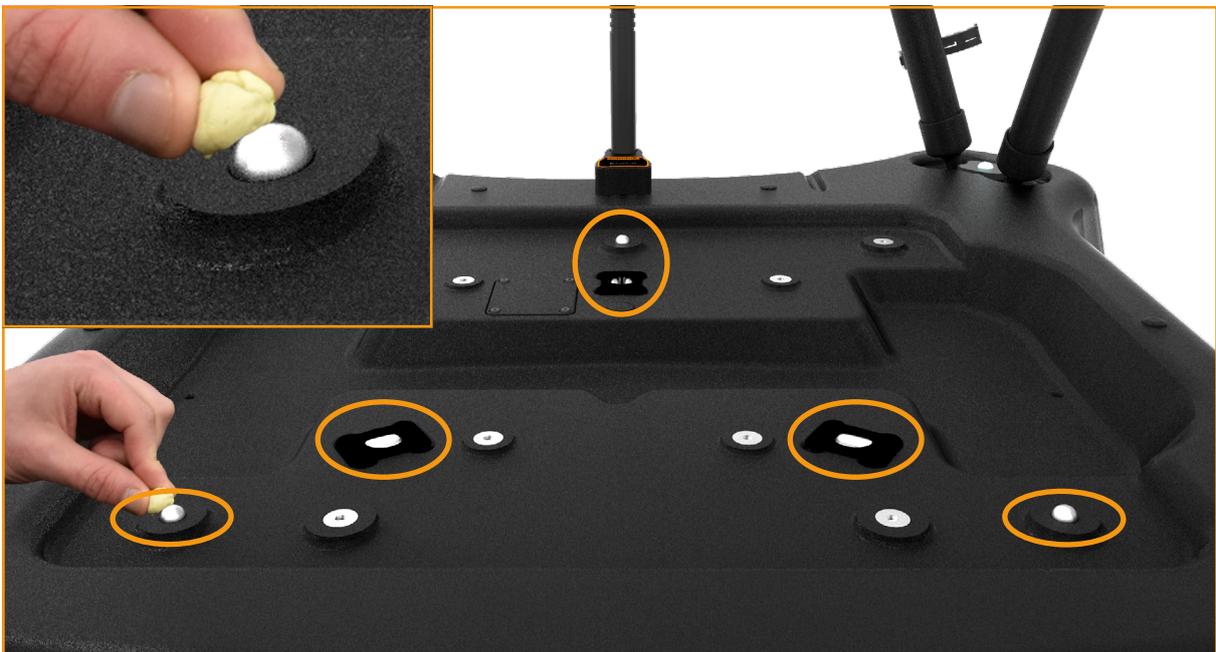
- Firstly clean the encoder Scale and then clean the outer running surfaces of the Strut with the IPA cleaning wipes provided (use 1 wipe per Strut). After cleaning, visually inspect the encoder Scale for damage. If debris is still present on the scale do not attempt to polish the Strut clean. Aggressive cleaning of the encoder Scale may lead to premature failure.





### Cleaning the Kinematics

- The Kinematics on the base casting need to be cleaned with the cleaning material to remove any light debris and dirt.
- Tear off a piece of cleaning material and roll into a ball.
- Clean the Kinematics as shown below, using a new piece of material when necessary.



- Once cleaning has been completed, power up the Equator Controller and re-run the EQ500 Transport Utility application to re-enable the brakes.

# Equator™ Controller

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- The fan intakes on the front of the Equator Controller have filters to prevent dust and other particles from entering. These filters should be replaced regularly to prevent overheating of the controller.
- When replacing the filters, ensure that the controller is powered down and unplug the power supply from the mains.
- Carefully release the snap fit clips on the covers to reveal the filters. Once the filters are replaced, locate the covers and clip back into position. A slight click may be audible when the covers locate.



# Probes and Styli

- Stylus balls, threads and mating faces should be cleaned using a proprietary cleaning cloth or solvent. Stylus balls should be regularly inspected for damage or 'pick-up' of component material (a problem sometimes encountered with continuous scanning).
- The kinematic coupling mechanisms located on the probe systems should be cleaned using the cleaning material.



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- Medical devices for neurosurgical applications
- Probe systems and software for job set-up, tool setting and inspection on CNC machine tools
- Raman spectroscopy systems for non-destructive material analysis
- Sensor systems and software for measurement on CMMs
- Styli for CMM and machine tool probe applications

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