

Advanced calibration sphere (ACS-1)



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Intended use

The ACS-1 is used to accurately calibrate a Renishaw spindle probe, within a CNC machine tool. The stylus offset, size and probe length can be established. It is recommended that the ACS-1 is removed after use and before machining is commenced.

Safety

Information to the user

In all applications involving the use of machine tools, eye protection is recommended.

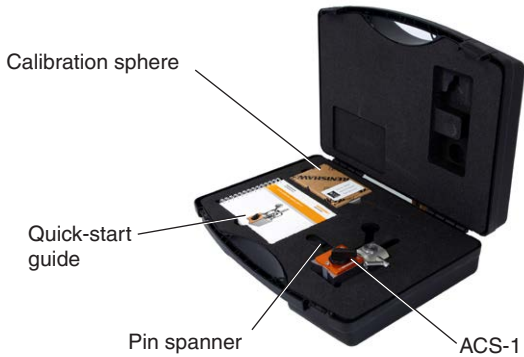
Information to the machine supplier/installer

It is the machine supplier's responsibility to ensure that the user is made aware of any hazards involved during operation, including those mentioned in Renishaw product literature, and to ensure that adequate guards and safety interlocks are provided.

Equipment operation

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

ACS-1 components



Recommended parts for use with ACS-1 (images are examples only):



Typical spindle probe
(Renishaw strongly recommends a
RENGAGE™ strain gauge probe)



Test bar (of known length)

Mounting the ACS-1

Fit the calibration sphere into the desired position on the ACS-1 using the pin spanner supplied.

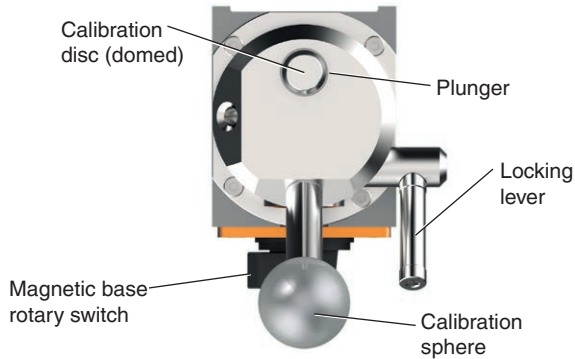


CAUTION: Ensure the working area is clear from swarf and debris when mounting the unit.

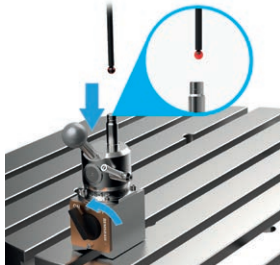
Mount the ACS-1 to the CNC machine table or chuck and hold in place by moving the magnetic base rotary switch from OFF to ON.

The following pages are an overview of the calibration process, this may differ based on the CNC control or the calibration cycles used, refer to your software programming guide for a detailed explanation.

Mounting the ACS-1



Mount the ACS-1 on
the machine table

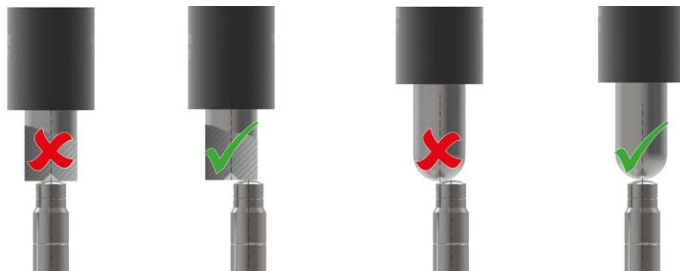
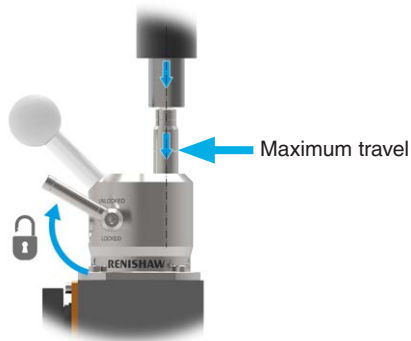


Mount the ACS-1 on the
multi-tasking lathe



How to calibrate the probe using the ACS-1

1. With the ACS-1 in the unlocked state, position the test bar in X and Y and then depress the plunger (whilst considering the guidance below for different test bar types). Ensure not to exceed the maximum travel mark.



2. The lever can now be locked and a machine datum set in Z.

If the test bar is positioned accurately on centre, the X,Y datum can be set, otherwise refer to step 3.5.



CAUTION: Once the plunger has been set in position using the locking lever, do not depress the plunger again until calibration has been completed and the locking lever has been released. The plunger provides 10 mm of travel. Damage to the unit can occur beyond this point.

NOTE: Because the calibration disc is domed the Z length calibration must be performed on centre.

3. Using the calibration sphere, set a datum and calibrate in X,Y.



- 3.5. Probe the calibration disc to accurately update X,Y datum. (optional)



4. Calibrate in Z



Maintenance

CAUTION: Keep the ACS-1 swarf free by brushing away any swarf residue that has accumulated.

The ACS-1 unit requires minimal maintenance and it has been designed to operate on all sizes of vertical and horizontal machining centres, multi-tasking machines and gantry machining centres.

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用户须知

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如果测头测量失败，则有误发测头已复位状态信号的可能。切勿单凭测头信号来停止机床运动。

设备操作

如果设备使用方式与制造商要求的方式不符，设备提供的保护功能可能会减弱。

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