

Universal datum sphere

The Renishaw universal datum sphere enhances the performance of manual and fully automated co-ordinate measuring machines.

Features

- Hard wearing tungsten carbide sphere (ball) available in five sizes:
Metric Ø12 mm, Ø19 mm and Ø25 mm
Inch Ø3/4 in and Ø1 in
Sphericity to within 0.1 µm (0.000004 in)
Diametric tolerance ±1 µm (00004 in)
- Adaptor available for twin ball applications (optional)
- Quick and easy adjustment to set ball stem over a wide range of probe datuming angles. This enables datuming above, centrally and below the ball. The hand adjustable pivot joint enables stem rotation through 360° in the horizontal plane, and ±45° in the vertical plane.
- Each datum sphere is supplied with its own certificate, traceable to UK (NPL) standards, giving ball diameter and sphericity.
- The actual diameter of each ball is engraved on the ball stem. Metric or inch dimensions are given, dependant on type.
- A vertical positioning feature provides positive feel when the stem arrives in vertical position.
- Vertical height from table to centre of all ball sizes is approximately 173 mm (6.82 in). An optional pillar extension increases height to 248 mm (9.76 in).

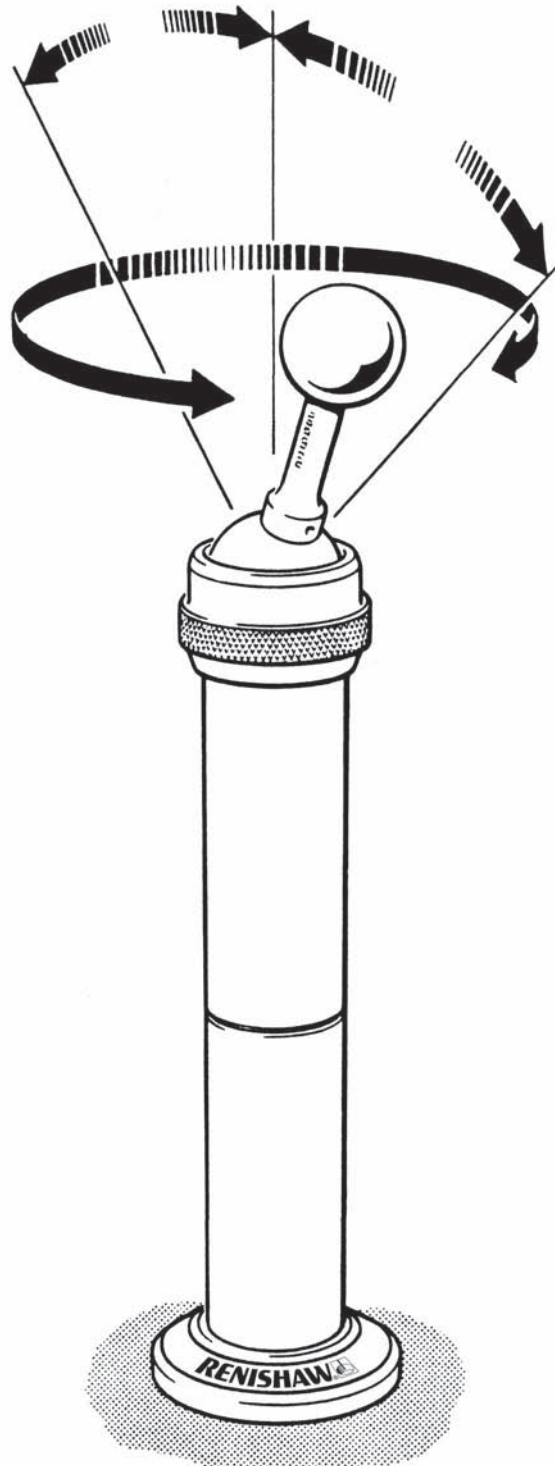


Figure 1 - Universal datum sphere

Data sheet
Universal datum sphere

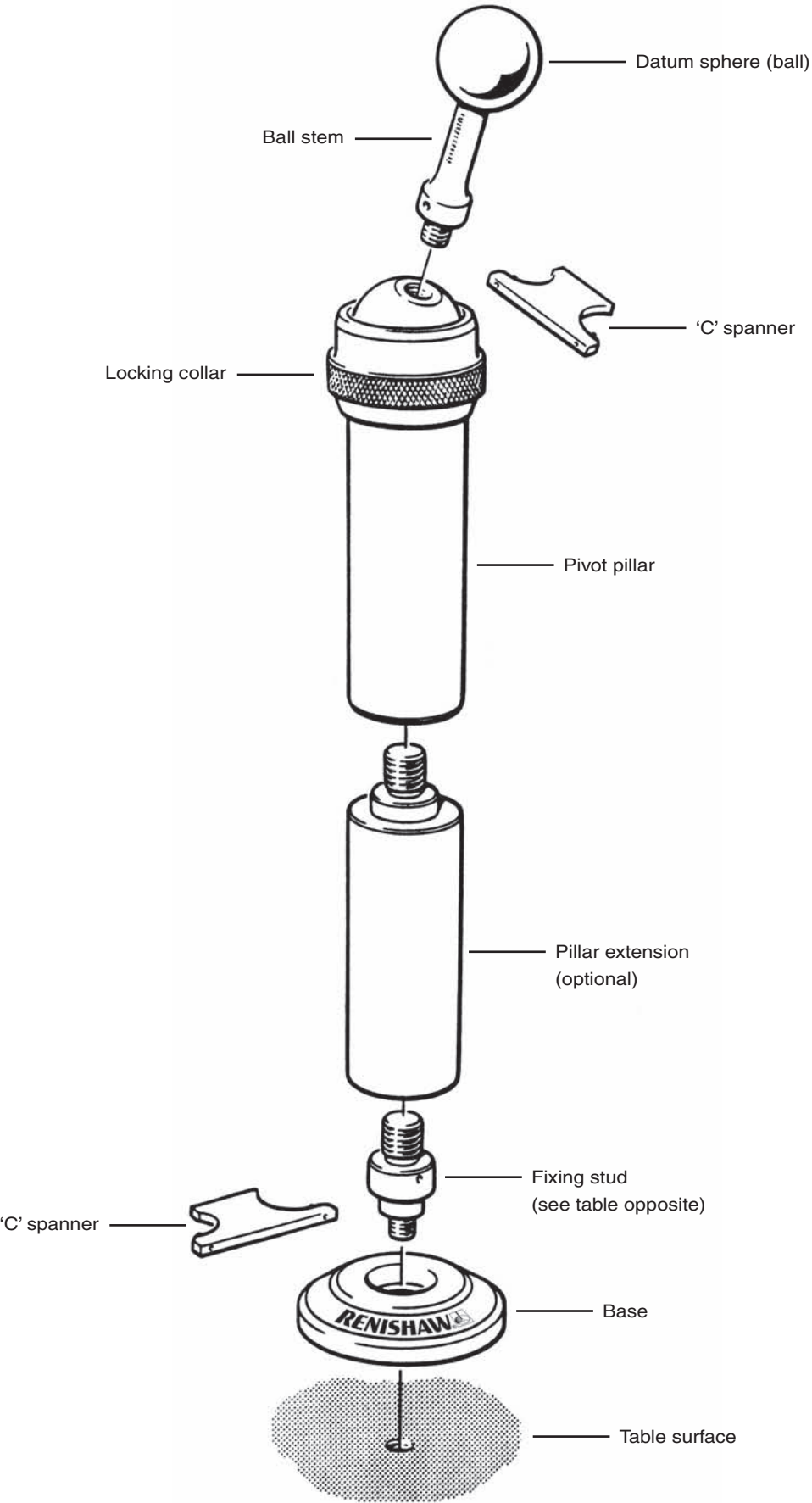


Figure 2 - Description of components

NOTE: Please quote the part number when ordering equipment

Universal datum sphere kit

Comprising:

- One datum ball (selected by size)
- Pivot pillar
- Base
- 'C' spanner
- Ball certificate
- Storage box

Datum sphere kit	Part number
Ø12 mm datum ball	A-1034-0028
Ø19 mm datum ball	A-1034-0027
Ø25 mm datum ball	A-1034-0026
Ø3/4 in datum ball	A-1034-0031
Ø1 in datum ball	A-1034-0035

Fixing stud

A fixing stud is required with each kit.

Thread size	Part number
M6 × 1	M-1034-0016
M8 × 1.25	M-1034-0015
M10 × 1.5	M-1034-0014
5/16 in UNC	M-1034-0018
3/8 in UNC	M-1034-0017

Optional extras

Datum ball	Kit part number
Ø12 mm datum ball	A-1034-0005
Ø19 mm datum ball	A-1034-0023
Ø25 mm datum ball	A-1034-0002
Ø3/4 in datum ball	A-1034-0032
Ø1 in datum ball	A-1034-0036

Adaptors / extension	Kit part number
2 way adaptor	M-1034-0042
3 way adaptor	M-1034-0052
Pillar extension 75 mm (2.96 in) long	M-1034-0019

Mounting the universal datum sphere on the CMM

1. Position the base of the datum sphere over a tapped hole on the CMM table
2. Pass the fixing stud through the base centre hole and screw firmly into the CMM table, using the 'C' spanner.
3. Screw the pivot pillar assembly firmly onto stud/base.
4. Finally screw the datum sphere into the pivot ball at the top of the pillar, and tighten with the 'C' spanner.

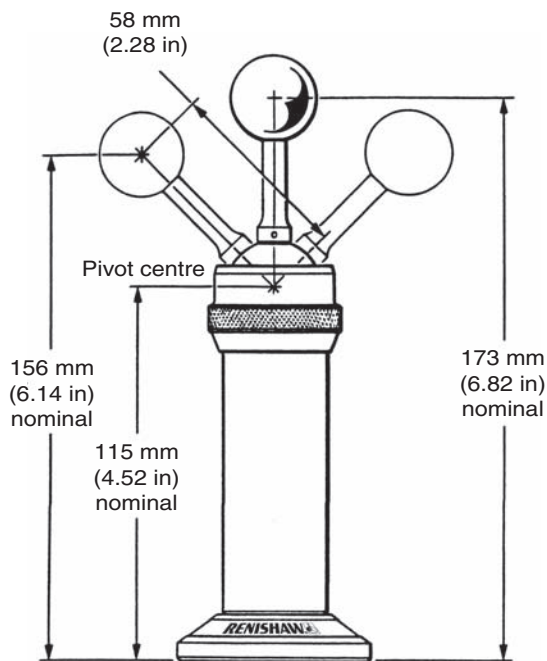


Figure 3 - Datum sphere

Positioning the sphere

1. Slacken off the locking collar and move to the required position by gripping the ball stem.
2. Hold the ball in position and tighten the locking collar firmly by hand, taking care not to overtighten.

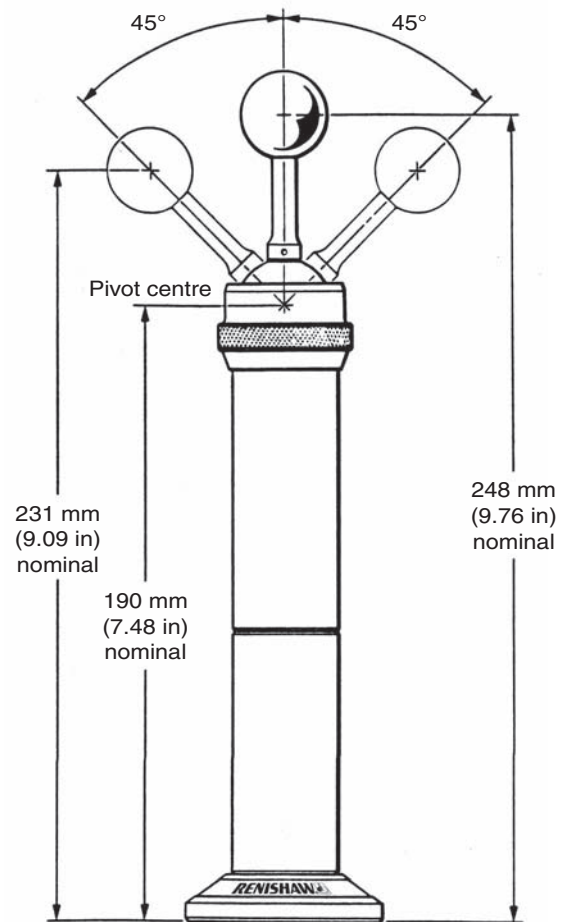


Figure 4 - Datum sphere with optional pillar extension

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