

Coordinate measuring machines —

Part 1: Glossary of terms

Committees responsible for this British Standard

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- Advanced Manufacturing Technology Research Institute
- British Telecommunications plc
- Cranfield Institute of Technology
- Department of Trade and Industry (National Engineering Laboratory)
- Department of Trade and Industry (National Physical Laboratory)
- Gauge and Tool Makers' Association
- Institution of Production Engineers
- Ministry of Defence
- Society of British Aerospace Companies Limited
- University of Manchester Institute of Science and Technology

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Foreword

This Part of BS 6808 has been prepared under the direction of the General Mechanical Engineering Standards Committee at the request of manufacturers and users of coordinate measuring machines (CMMs).

This Part of BS 6808 defines the terms used in Part 2¹⁾, whilst Part 3¹⁾ is a code of practice and gives guidance on the implementation of Part 2.

The terms which are defined relate to CMMs themselves, but further terms are to be added which will cover the associated computer software.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ In preparation.

This Part of BS 6808 defines terms relating to coordinate measuring machines.

NOTE The titles of the publications referred to in this Part of BS 6808 are listed on the inside back cover.

1 General

No.	Term	Definition
101	coordinate measuring machine (CMM)	A machine having a series of movable members, a sensing probe and a workpiece support member, which can be operated in such a way that the probe can be brought into a fixed and known relationship with points on the workpiece surface, and the coordinates of these points can be displayed or otherwise determined with respect to the origin of the coordinate system. NOTE In most cases the coordinate system is a rectangular or Cartesian one, but a polar or cylindrical system may be used.
102	computer controlled coordinate measuring machine	A <i>coordinate measuring machine</i> that has the capability of performing a pre-programmed measurement sequence automatically under the control of a computer.
103	manually operated coordinate measuring machine	A <i>coordinate measuring machine</i> where the measurement procedures are under direct human control and where operations are performed by hand.

2 Types of coordinate measuring machine

NOTE There are a very large number of possible machine configurations and those types listed in 2.01 to 2.08 are by no means exhaustive. However, the configurations described are a sample of those in common usage.

No.	Term	Definition
201	cantilever coordinate measuring machine	<i>A coordinate measuring machine employing three movable components moving along mutually perpendicular guideways in which the probe is attached to the first component which is carried on, and moves vertically relative to, the second; the combined assembly of the first and second components moves horizontally relative to the third; the third component is supported at one end only, cantilever fashion, and moves horizontally relative to the machine base, and the workpiece is supported on the base.</i>

NOTE See Figure 1.

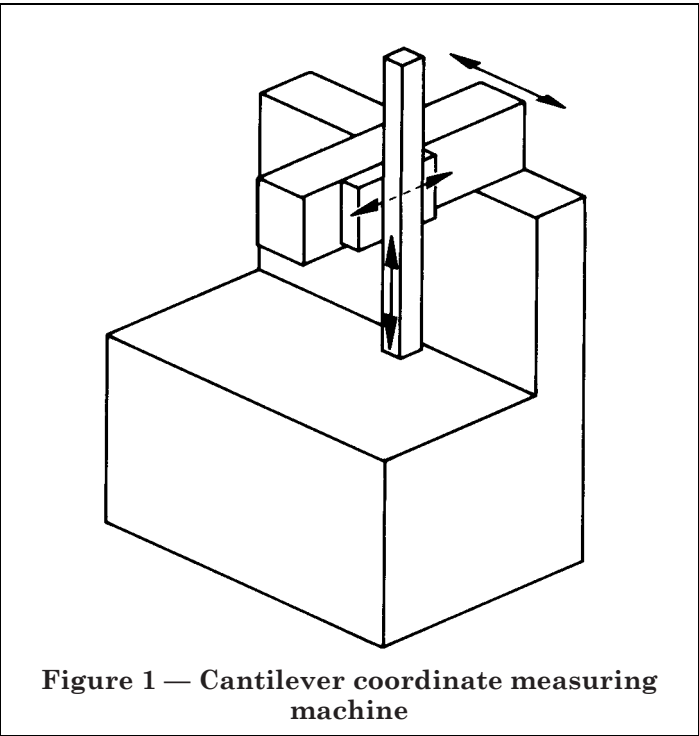


Figure 1 — Cantilever coordinate measuring machine