

Machine tool ball screws —

Part 6: Specification for ball nuts and principal dimensions of ball screws

Confirmed
January 2011

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machine, Engineers and Hand Tools Standards Policy Committee (MTE/-) to Technical Committee MTE/1 upon which the following bodies were represented:

- Advanced Manufacturing Technology Research Institute
- Cranfield Institute of Technology
- Department of Trade and Industry [Mechanical Engineering and Manufacturing Technology Division (Mmt)]
- Federation of British Engineers' Tool Manufacturers
- Health and Safety Executive
- Ministry of Defence
- Society of British Aerospace Companies Ltd.

This British Standard, having been prepared under the direction of the Machine, Engineers and Hand Tools Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 30 November 1990

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The following BSI references relate to the work on this standard:
Committee reference MTE/1
Draft for comment 88/78339 DC

ISBN 0 580 18332 7

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 General	1
4 Marking	1
Appendix A Ordering instructions for ball screws	8
Figure 1 — Double ball nut (preloaded) with internal return system and end flange	2
Figure 2 — Double ball nut (preloaded) with external return system and end flange	4
Figure 3 — Single ball nut (preloaded) with internal return system and end flange, and ball screw	6
Table 1 — Dimensions of double ball nut (preloaded) with internal return system and end flange	3
Table 2 — Load and life ratings for double ball nut (preloaded) with internal return system and end flange	3
Table 3 — Dimensions of double ball nut (preloaded) with external return system and end flange	5
Table 4 — Load and life ratings for double ball nut (preloaded) with external return system and end flange	5
Table 5 — Dimensions of single ball nut (preloaded) with internal return system and end flange, and ball screw	7
Table 6 — Load and life ratings for single ball nut (preloaded) with internal return system and end flange	7
Publications referred to	Inside back cover

Foreword

This Part of BS 6101 has been prepared under the direction of the Machine, Engineers and Hand Tools Standards Policy Committee. It has been produced in advance of related work being prepared by the International Organization for Standardization (ISO) in order to facilitate discussion between manufacturers and purchasers of machine tool ball screws.

There are many types of ball nut. However, this standard only includes the most popularly used types and sizes. Other types and sizes can be added if a demand becomes apparent. A selected range of load and life ratings is also included.

Principal dimensions are given for a range of ball screws having single ball nuts. This range is not intended to be exhaustive but reflects a popular range currently in use in the UK market.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, 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 Scope

This Part of BS 6101 specifies principal dimensions and load and life ratings for ball nuts for use in machine tool ball screws and principal dimensions of a selected range of ball screws.

This Part of BS 6101 applies to ball nuts with both internal and external return systems.

Marking requirements are given.

Ordering instructions for ball screws are given in Appendix A.

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

2 Definitions

For the purposes of this Part of BS 6101, the definitions given in BS 6101-3 apply.

3 General

3.1 Nominal diameters and nominal leads

Nominal diameters and nominal leads shall be selected from BS 6101-5.

3.2 Dimensions

Dimensions shall be as given in Table 1, Table 3 and Table 5.

3.3 Load and life ratings

Load and life ratings shall be as given in Table 2, Table 4 and Table 6.

4 Marking

Ball nuts shall be marked with the following:

- a) the number and date of this British Standard, i.e. BS 6101-6:1990¹⁾;
- b) the name or trademark of the manufacturer;
- c) the manufacturer's serial number or part number;
- d) the ball size;
- e) the pitch and lead.

¹⁾ Marking BS 6101-6:1990 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.