

**Dividers for mathematical set—
Specification**

PUBLIC REVIEW DRAFT, FEBRUARY 2016

DKS 1734:2016

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Enova Industries Kenya Ltd.
Text Book Centre Ltd
Lino Stationers
Sai office Suppliers Ltd
Pelikan Group
Kenyatta University
Flair Kenya Ltd.
Numerical Machines Complex
Polucon Services (K) Ltd.
Kenya Industrial Research and Development Institute (KIRDI)
Consumer Information Network
Micro and Small Enterprises Authority
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

© Kenya Bureau of Standards, 2016

Copyright. Users are reminded that by virtue of Section 25 of the Copyright Act, Cap. 12 of 2001 of the Laws of Kenya, copyright subsists in all Kenya Standards and except as provided under Section 26 of this Act, no Kenya Standard produced by Kenya Bureau of Standards may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from the Managing Director.

Dividers for mathematical set — Specification

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web: <http://www.kebs.org>

Coast Region

P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Lake Region

P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region

P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

DKS 1734:2016

Foreword

This Kenya Standard was prepared by the Basic Engineering Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

Dividers are drawing instruments used by students and pupils for measurements and marking of equal distances.

They normally form part of the instruments of mathematical sets although some are imported into the country separately for use as replacements.

This standard addresses both the safety and performance of dividers, among other parameters.

During the preparation of this standard, reference was made to the following documents:

IS 3206, Engineers drawing instruments, rotating compasses.

Acknowledgement is hereby made for the assistance derived from these sources.

PUBLIC REVIEW DRAFT, FEBRUARY 2016

Dividers for mathematical set — Specification

1 Scope

This Kenya Standard covers the requirements of dividers for mathematical sets.

2 Normative reference

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

KS 1733,

3 Material

The material for manufacture of dividers shall be rolled, drawn or cast brass (B), nickel silver (Ns) or stainless steel (Ss) or solid die-cast metal legs, with a bright nickel plate, corrosion-proof finish, which, under reasonable conditions of use, shall be free from flexural distortion and of sufficient strength to prevent breakage.

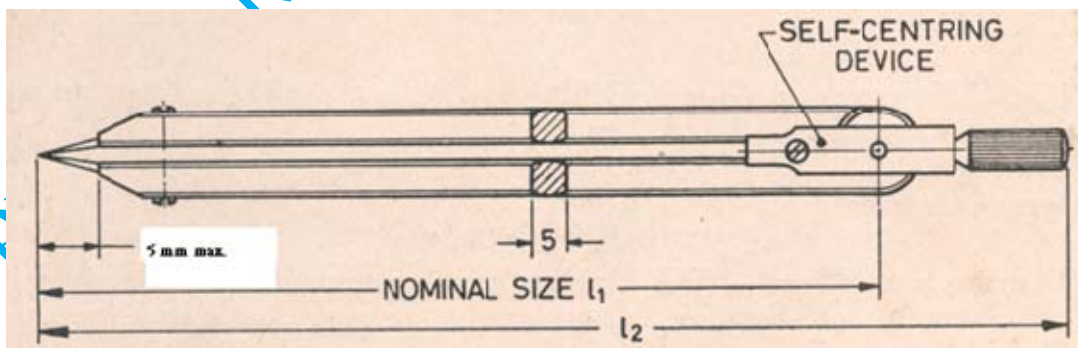
3.1 Safety

The divider points shall be designed to minimize the risk of injury to the end-user. This relates to both the length and sharpness of the points. The points shall be securely fixed within the body of the divider and shall protrude no more than 5 mm from the base of the individual retaining legs. The divider points shall not be unduly sharp.

4 Dimensions

The dimensions of dividers shall be as given in Figure 1. The figure is intended only to illustrate the dimensions and the design details are left to the discretion of the manufacturer so long as the specified dimensions are maintained.

All dimensions are in millimetres



| NOMINAL SIZE | |
|--------------|-----------|
| I1 | I2 |
| ± 3 | (Approx.) |
| 65 | 100 |
| 90 | 125 |

Figure 1 — Dimensions for dividers

5 Designation

Dividers shall be designated by the commonly used name, nominal size, number of this standard and material.

6 General requirements

6.1 Dividers shall have needles to both the legs.

6.2 Dividers shall be provided with suitable arrangements for tightening the joints when they become loose.

6.3 Dividers shall have preferably a self-centering arrangement.

6.4 In use, both legs of the divider should maintain a constant and equal angle from the centre line of the retaining nut at the top of the divider. The top of each individual leg shall be securely attached at the head co-junction by a nut and bolt mechanism.

7 Workmanship and finish

7.1 The dividers shall be finished dull or bright.

7.2 When dividers are made from brass, they shall be chromium plated.

7.3 When dividers are made from nickel silver or stainless steel, they shall be polished and buffed.

8 Tests

8.1 Dimensional test

The dividers shall be tested for conformity with the requirements of dimensions and minimum range of fine adjustment specified in Clause 5 and 7.3.

8.2 Performance test

Dividers shall be tested for smooth functioning. They shall open and close smoothly without jerk. A suitable apparatus may be used to close and open the two legs around the main joint and the force required for this purpose shall be 3 N to 4 N. The divider shall be opened and closed for 1 000 operations. The reduction in force for opening and closing the divider shall not exceed the limit given below:

After 500 operations 50 per cent, max.

After 1 000 operations 75 per cent, max.

After 1 000 operations, the main joints shall be reset and tested for a further 1 000 operations. In the retest, the reduction in force shall not exceed the limits specified for the original setting.

9 Sampling

The sampling plan in KS 1733¹⁾ shall be used.

10 Marking

The dividers shall be marked with the manufacturer's name and/or registered trademark at a suitable place, except where they are components of the mathematical set.

11 Packing

11.1 Dividers shall be first wrapped in paper and then packed in a suitable carton.

11.2 Dividers may also be supplied as a part of instruments set, in which case, the complete set may be supplied in a suitable box.

PUBLIC REVIEW DRAFT, FEBRUARY 2016