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**Optics and optical instruments — Screw  
threads for microscope objectives and  
related nosepieces —**

Part 2:  
**Screw thread type M25 × 0,75 mm**

*Optique et instruments d'optique — Filetages de fixation des objectifs pour  
microscopes et des porte-objectifs correspondants —*

*Partie 2: Filetage de type M25 × 0,75 mm*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 8038 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8038-2 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 5, *Microscopes and endoscopes*.

ISO 8038 consists of the following parts, under the general title *Optics and optical instruments — Screw threads for microscope objectives and related nosepieces*:

- Part 1: *Screw thread type RMS (4/5 in × 1/36 in)*
- Part 2: *Screw thread type M25 × 0,75 mm*



# Optics and optical instruments — Screw threads for microscope objectives and related nosepieces —

## Part 2:

### Screw thread type M25 × 0,75 mm

## 1 Scope

This part of ISO 8038 specifies the dimensions of screw thread type M25 as one type of thread other than the thread type RMS for connecting a microscope objective to the nosepiece.

NOTE A specific combination of eyepiece, objective and tube lens (if provided, e.g. in an infinity-corrected optical system) is frequently used to correct aberrations. Therefore the combination of an objective from one manufacturer and the tube lens or eyepiece from another manufacturer, although conforming to this part of ISO 8038, may cause error in magnification and/or loss of image quality.

## 2 Dimensions and tolerances

The definitions, basic dimensions and tolerances of the screw thread type M25 shall be as given in Tables 1 and 2 and illustrated in Figure 1.

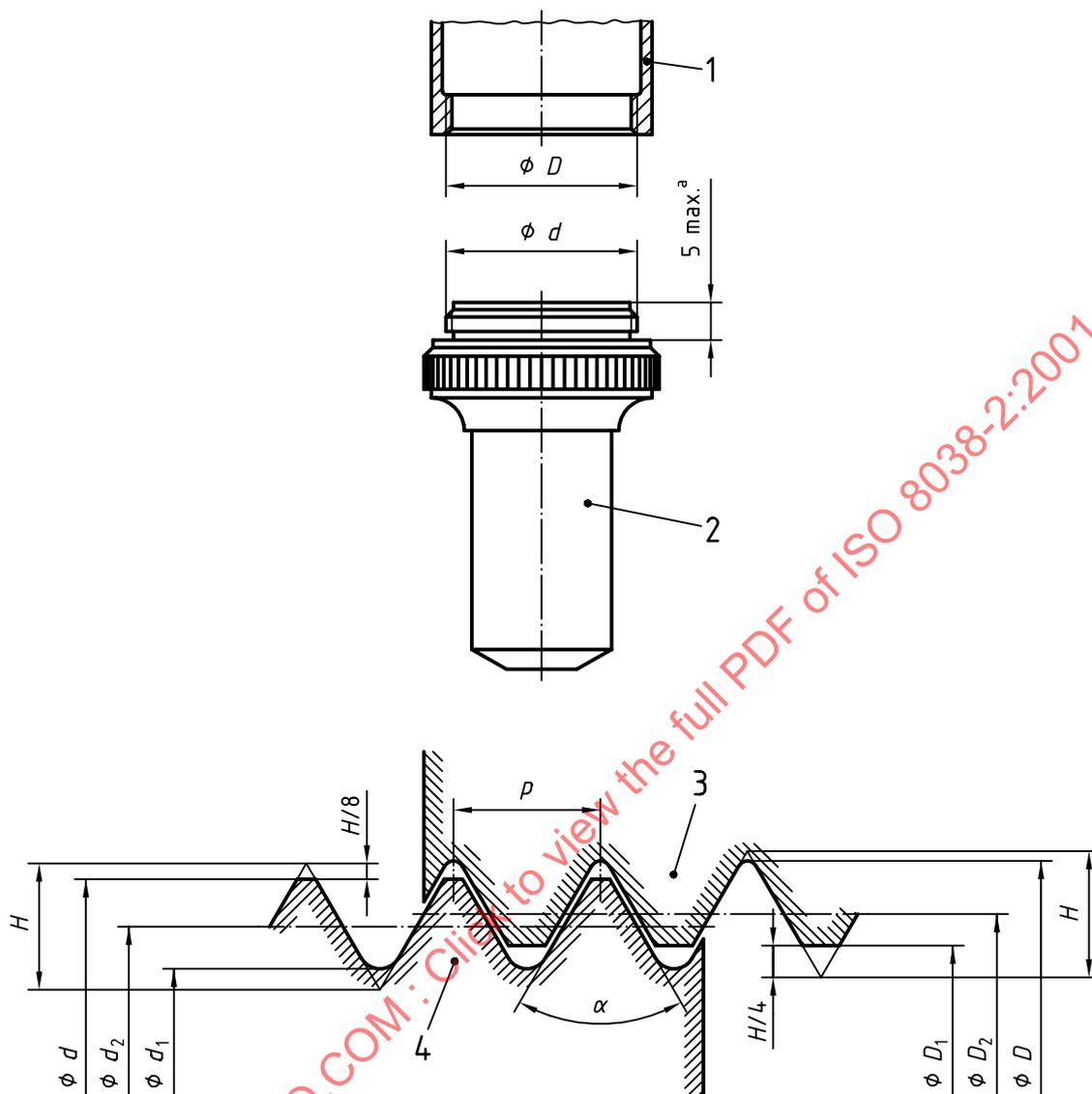
Table 1 — Basic dimensions of the screw thread

Dimension	Symbol	Value
Angle of thread	$\alpha$	60°
Pitch	$p$	0,75 mm
Height of fundamental triangle	$H$	0,65 mm
Nominal diameter	$D$	25 mm

Table 2 — Limit of size and tolerances

Dimensions in millimetres

Dimension for		Major diameter		Pitch diameter		Minor diameter		Calculated play between internal and external threads		Allowances	Tolerance	Thread lug
Internal thread	max.	$D$	—	$D_2$	24,663	$D_1$	24,378	Minimum play 0,022	Maximum play 0,284	+ 0,150	0,150	—
	min.		—		24,513		24,188			0		5,0
External thread	max.	$d$	24,978	$d_2$	24,491	$d_1$	—			− 0,022	0,112	5,0
	min.		24,838		24,379		—			− 0,134		—



**Key**

- 1 Tube objective changer, etc.
- 2 Objective
- 3 Internal thread
- 4 External thread
- a Thread lug

**Figure 1 — Definitions and basic dimensions**