International Standard 8429

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Optics and optical instruments — Ophthalmology — Graduated dial scale

Optique et instruments d'optique — Ophtalmologie — Échelle graduée

First edition — 1986-09-15

UDC 681.2.085 : 681.7 **Ref. No. ISO 8429-1986 (E)**

Descriptors : optical equipment, ophthalmic optics, measuring scales, specifications.

Price based on 1 page

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8429 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Printed in Switzerland

Optics and optical instruments — Ophthalmology — Graduated dial scale

1 Scope and field of application

This International Standard gives specifications for the angular coordinate system to be used in the design of scales, reticles or other display means incorporated in instruments for determining optical data on human eyes or corrective lenses for human eyes.

2 Description of the system

The coordinate system, specified in this International Standard and sometimes called the TABO system, describes

a) the angular orientation of the cylinder axis, when used to describe the refractive error of the eye or the refractive effect of a contact or spectacle lens;

b) the angular orientation of the prism base, when used to describe the prismatic effect of a contact or spectacle lens in polar coordinates;

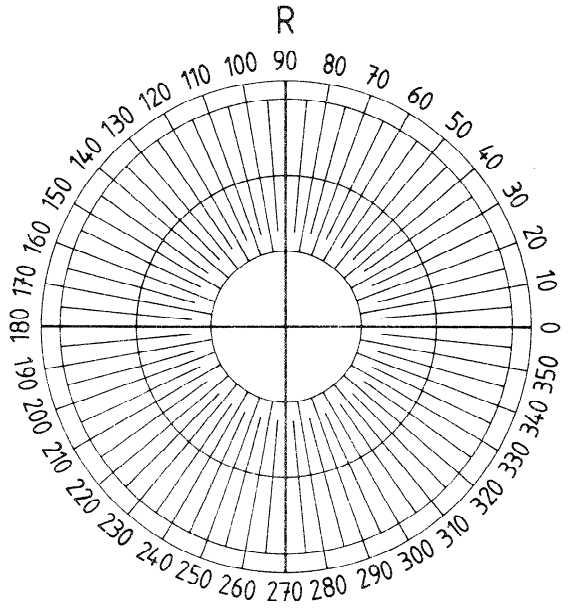
c) the angular orientation of the principal curvature meridians, when used to describe the curvature of a surface such as the cornea or a lens.

The coordinate system is the same whether it refers to the right eye or to the left eye. When used, the coordinate system is described as it appears to a person viewing the eyes and the spectacle lenses — correctly placed in front of the eyes — from outside.

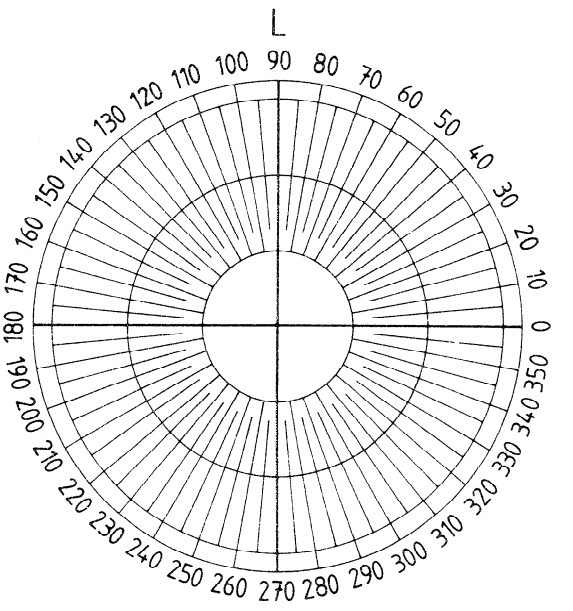
The zero axis of the coordinate system is horizontal and, in the case where the numbering is from 0° to 360°, it is the right-hand portion of the horizontal axis. The angular value increases in the counter-clockwise direction with 90° corresponding to the vertical axis. When used to define cylinder axis or orientation of principal curvature meridians, the angular value shall be expressed as a number between 0° and 180°. When used to define prism base orientation, the angular value shall be expressed as a number between 0° and 360°, marked by the point where the base of the prism touches the TABO circle.

3 Example

An example of a scale designed using the coordinate system, as described in clause 2, is shown in the figure. Although it is shown with a specific angular scale design, this is by no means meant to imply that other designs cannot be used and still be considered as within the scope and intent of this International Standard.



Right eye



Left eye

Figure

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