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First edition  
2009-11-15

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# Machine tools — Ball splines —

## Part 1: General characteristics and requirements

*Machines-outils — Guidages cannelés à billes —  
Partie 1: Exigences et caractéristiques générales*



Reference number  
ISO 23848-1:2009(E)

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Published in Switzerland

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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.

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The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 23848-1 was prepared by Technical Committee ISO/TC 39, *Machine tools*.

ISO 23848 consists of the following parts, under the general title *Machine tools — Ball splines*:

- *Part 1: General characteristics and requirements*
- *Part 2: Dynamic and static load ratings and rating life*

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## Introduction

The ball spline is a power transmission component based on recirculating balls, which is designed to translate axially while transmitting torque by an anti-friction means. The ball spline is selected for its smooth operation, high speed capability, low friction and high-radial and high-torsional load capacity.

This part of ISO 23848 specifies and standardizes the following characteristics of ball splines:

- the shapes and dimensions;
- the test methods;
- the inspection;
- the designation;
- the marking.

ISO 23848-2 specifies and standardizes the following properties of ball splines:

- the basic static and dynamic load ratings;
- the basic static and dynamic torque ratings;
- the rating life.