INTERNATIONAL STANDARD

ISO 13050

Second edition
2014-12-01

Synchronous belt drives — Metric pitch, curvilinear profile systems G, H, R and S, belts and pulleys

Transmissions synchrones — Pas métrique, systèmes à denture curviligne G, H, R et S, courroies et poulies

Reference number
ISO 13050:2014(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 41, *Belts and pulleys (including veebelts)*, Subcommittee SC 4, *Synchronous belt drives*.

This second edition cancels and replaces the first edition (ISO 13050:1999), which has been technically revised.

Synchronous belt drives — Metric pitch, curvilinear profile systems G, H, R and S, belts and pulleys

1 Scope

This International Standard specifies the principal characteristics of metric pitch curvilinear synchronous endless belts and pulleys in G, H, R, and S profile systems for use in synchronous belt drives (also known in the past as timing belt drives, positive belt drives, gear belt drives) for mechanical power transmission and where positive indexing or synchronization might be required.

The principal belt and pulley characteristics include the following:

a) nominal belt tooth dimensions;

b) belt tooth pitch spacing;

c) belt length and width dimensions and tolerances;

d) belt length measurement specifications;

e) pulley groove dimensions and tolerances;

f) pulley diameter and width dimensions and tolerances;

g) pulley quality specification.

2 Normative references

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

ISO 254, *Belt drives — Pulleys — Quality, finish and balance*

3 Synchronous belt drive system types

Four profile systems and 14 profiles for curvilinear synchronous drives are standardized.

Profile system G

Profile G8M
(Tooth/groove pitch 8mm)

Profile G14M
(Tooth/groove pitch 14mm)

Profile system R

Profile R3M
(Tooth/groove pitch 3mm)

Profile R5M
(Tooth/groove pitch 5mm)

Profile R8M
(Tooth/groove pitch 8mm)

Profile R14M
(Tooth/groove pitch 14mm)

Profile R20M
(Tooth/groove pitch 20mm)