BS ISO 17396:2014

BSI Standards Publication

Synchronous belt drives — Metric pitch, trapezoidal profile systems T and AT, belts and pulleys

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National foreword

This British Standard is the UK implementation of ISO 17396:2014.

The UK participation in its preparation was entrusted to Technical Committee MCE/10, Belts & Pulley Drive.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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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, *Pulleys and belts (including veebelts)*, Subcommittee SC 4, *Synchronous belt drives*.

INTERNATIONAL STANDARD ISO 17396:2014(E)

Synchronous belt drives — Metric pitch, trapezoidal profile systems T and AT, belts and pulleys

1 Scope

This International Standard specifies the principal characteristics of synchronous endless and open belts and pulleys of the profile systems T and AT for use in synchronous belt drives[1)] for mechanical power transmission and where positive indexing or synchronization can be required.

The principal belt and pulley characteristics include

a) nominal belt tooth dimensions,

b) belt tooth pitch spacing,

c) belt length and width dimensions,

d) belt length measurement specifications,

e) pulley groove dimensions and tolerances,

f) pulley diameter and width dimensions and tolerances, and

g) pulley quality specification.

The belts of the profile systems T and AT are made of polyurethane with high-tension fine steel cord tension members in most cases. As far as certain forces are given in this International Standard, these values are only valid for this kinds of belt. For polyurethane belts with different tensile cords, i.e. aramid or rubber belts reinforced with glass fibre, the values can be different. It is intended that the user and the manufacturer agree about suitable values. Open belts made of thermoplastic polyurethane can be spliced to work as endless belts in conveyor applications. In this case, the tolerances are not valid for the splicing area of the endless spliced belt.

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 Belt profile systems

Eight belt profiles for synchronous drives are standardized.

Profile system T:

— profile T2,5

— profile T5

— profile T10

Profile system AT:

— profile AT3

— profile AT5

— profile AT10

1) Synchronous belt drives have been known by various titles in the past: for example, timing belt drives, positive belt drives, gear belt drives.