

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

*transformation*

## ISO RECOMMENDATION R 2109

CONTINUOUS MECHANICAL HANDLING EQUIPMENT

LIGHT DUTY BELT CONVEYORS  
FOR LOOSE BULK MATERIALS

1st EDITION

October 1971

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## BRIEF HISTORY

The ISO Recommendation R 2109, *Continuous mechanical handling equipment – Light duty belt conveyors for loose bulk materials*, was drawn up by Technical Committee ISO/TC 101, *Continuous mechanical handling equipment*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question led to the adoption of Draft ISO Recommendation No. 2109, which was circulated to all the ISO Member Bodies for enquiry in October 1970.

The Draft was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	Ireland	Thailand
Belgium	Japan	Turkey
Czechoslovakia	Netherlands	U.A.R.
France	South Africa, Rep. of	United Kingdom
Germany	Spain	U.S.A.
India	Sweden	U.S.S.R.

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

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## FOREWORD

Troughed belt conveyors (other than portable conveyors) for loose bulk materials form the subject of the three following ISO Recommendations :

ISO/R 1535, *Belts*

ISO/R 1536, *Belt pulleys*

ISO/R 1537, *Idlers*

Conveyors which are the concern of this ISO Recommendation differ from the above-mentioned conveyors by their light idlers, simplified bearings, lighter spindles, etc.

Other reference :

ISO Recommendation R 251, *Widths and lengths of conveyor belts*.

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CONTINUOUS MECHANICAL HANDLING EQUIPMENT

LIGHT DUTY BELT CONVEYORS  
FOR LOOSE BULK MATERIALS

1. SCOPE

This ISO Recommendation lays down the main dimensions of belts, idlers and pulleys used for the various types of light duty belt conveyors for loose bulk materials.

2. FIELD OF APPLICATION

This ISO Recommendation applies to light duty belt conveyors for loose bulk materials. It does not apply to either portable and mobile conveyors, or mining conveyors.

3. SPECIFICATIONS

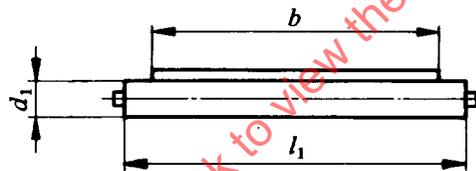


FIGURE 1 - Flat belt (one idler)

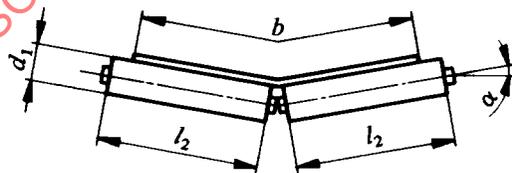


FIGURE 2 - Troughed belt (with two roller idlers)

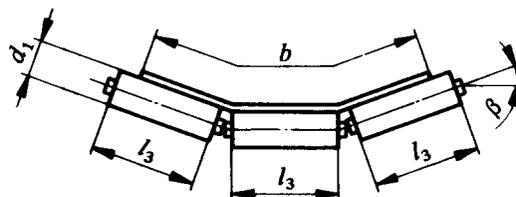


FIGURE 3 - Troughed belt (with three roller idlers)

### 3.1 Carrying idlers

#### 3.1.1 Length for given belt widths

Dimensions in millimetres						
$b$	300	400	500	650	800	1000
$l_1$	380	480/500	600	750	950	1150
$l_2$	200	250	315	380	480/465	600
$l_3$	-	-	200	250	315	380

#### 3.1.2 Nominal diameter

Dimensions in millimetres					
$d_1^*$	63.5	(76.1)	88.9	(101.6)	108

\* Preferred dimensions are shown without parentheses.

#### 3.1.3 Angle of inclination of side idlers

Values in degrees						
$\alpha$	15	20	-	-	-	-
$\beta$	-	20	25	30	35	45

3.1.4 Gap between idlers. Where there is a chance of the belt being pinched between the idler rollers, the gap between the rollers should not exceed 10 mm.

### 3.2 Pulleys

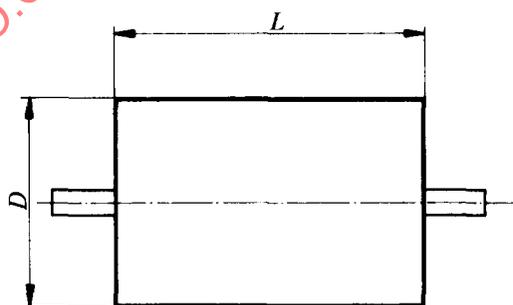


FIGURE 4 - Pulley

#### 3.2.1 Nominal diameter

Dimensions in millimetres									
$D^*$	160	200	(215)	250	315	400	500	630	800

\* Preferred dimensions are shown without parentheses.

This table does not apply to motorized pulleys or geared pulleys.