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# INTERNATIONAL STANDARD



# 2109

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

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## Continuous mechanical handling equipment — Light duty belt conveyors for loose bulk materials

*Engins de manutention continue — Transporteurs à courroie pour produits en vrac pour service modéré*

First edition — 1975-10-15

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**Descriptors :** handling equipment, continuous handling, bulk products, conveyors, belt conveyors, dimensions, specifications.

Price based on 2 pages

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 101 has reviewed ISO Recommendation R 2109 and found it technically suitable for transformation. International Standard ISO 2109 therefore replaces ISO Recommendation R 2109-1971 to which it is technically identical.

ISO Recommendation R 2109 was approved by the Member Bodies of the following countries :

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

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 2109 into an International Standard.

# Continuous mechanical handling equipment — Light duty belt conveyors for loose bulk materials

## 1 SCOPE

This International Standard 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 International Standard 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

### 3.1 Carrying idlers

#### 3.1.1 Length for given belt widths

Dimensions in millimetres

| $b$   | 300 | 400     | 500 | 650 | 800     | 1 000 |
|-------|-----|---------|-----|-----|---------|-------|
| $l_1$ | 380 | 480/500 | 600 | 750 | 950     | 1 150 |
| $l_2$ | 200 | 250     | 315 | 380 | 480/465 | 600   |
| $l_3$ | —   | —       | 200 | 250 | 315     | 380   |

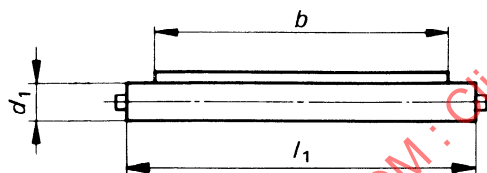


FIGURE 1 — Flat belt (one idler)

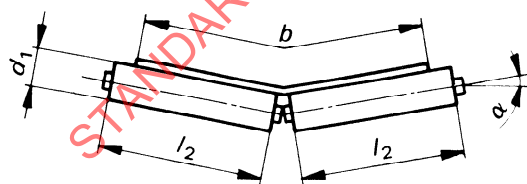


FIGURE 2 — Troughed belt (with two roller idlers)

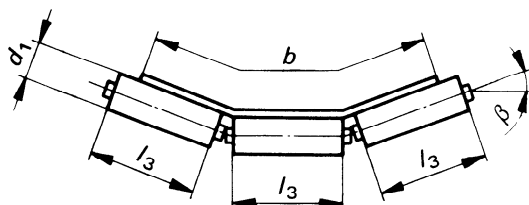


FIGURE 3 — Troughed belt (with three roller idlers)

#### 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 shall not exceed 10 mm.