INTERNATIONAL STANDARD 2109

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

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

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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.

Printed in Switzerland

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

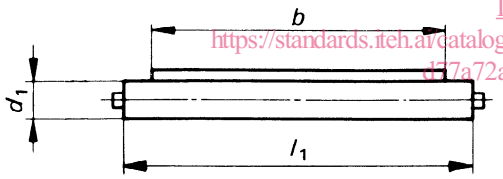

FIGURE 1 — **Flat belt (one idler)**

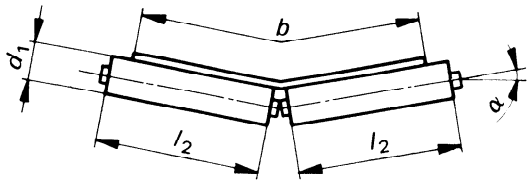

FIGURE 2 — **Troughed belt (with two roller idlers)**

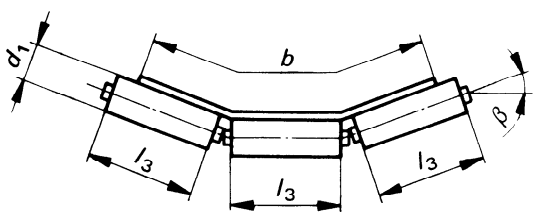

FIGURE 3 — **Troughed belt (with three roller idlers)**

3.1 Carrying idlers

3.1.1 *Length for given belt widths*

Dimensions in millimetres

b	300	400	500	650	800	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

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

α	15	20	—	—	—	—
β	—	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.

3.2 Pulleys

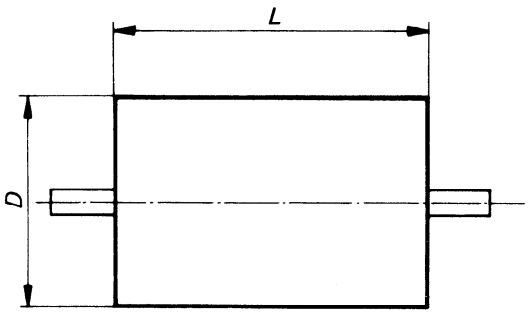

FIGURE 4 — **Pulley**

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.

3.2.2 *Manufacture*

The thickness of any lagging is to be excluded when determining nominal diameters.

The pulley surface in contact with the belt should preferably be flat, but may be crowned.

In the case of crowned pulleys, the nominal diameter is the maximum diameter.

The amount of crowning shall be agreed in consultation with the belt manufacturer.

The pulleys may be made from the standard sizes of available tubes which are nearest to the nominal diameters.

3.2.3 *Length*

The length L of the pulleys is the same as the length l_1.