International Standard

ISO 1275

Extended pitch precision roller chains and chain wheels for transmission and conveyors

Chaînes de précision à rouleaux à pas long et roues dentées correspondantes, pour transmission et convoyeurs

Second edition — 1984-03-15

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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.

International Standard ISO 1275 was developed by Technical Committee ISO/TC 100, *Chain and chain wheels for power transmission and conveyors*.

This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 1275-1972), which had been approved by the member bodies of the following countries :

Austria	Greece	South Africa, Rep. of
Belgium	India	Spain
Brazil	Iran	Sweden
Chile	Israel	Turkey
Czechoslovakia	Italy	United Kingdom
Egypt, Arab Rep. of	Japan	USA
Finland	Korea, Dem. P. Rep. of	Yugoslavia
France	Portugal	
Germany, F. R.	Romania	

The member body of the following country had expressed disapproval of the document on technical grounds :

USSR

It also cancels and replaces Amendment 1-1982, which had been approved by the member bodies of the following countries :

Austria	India	Poland
Belgium	Ireland	Romania
Brazil	Italy	South Africa, Rep. of
Czechoslovakia	Japan	Spain
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
France	Mexico	USA
Germany, F. R.	Netherlands	USSR

No member body had expressed disapproval of the document.

Contents

Extended pitch precision roller chains and chain wheels for transmission and conveyors

0 Introduction

The provisions of this International Standard have been established by including sizes of chains used by the majority of countries in the world, and by unifying dimensions, strength and other data in respect of which current national standards differ. At the same time certain side ranges listed in some national standards, for which it was considered a universal usage had not been established, have been eliminated.

The whole field of application open to this medium of transmission has been covered by the ranges of chains already established. To achieve this the sizes of 25,4 mm (1.0 in) to 76,2 mm (3.0 in) pitch inclusive have been duplicated by the inclusion of chains derived from standards originating in the western hemisphere (suffix A) and, on the other hand, by chains representing the unification of the principal standards originating in Europe (suffix B), the two being complementary for the coverage of the widest possible field of application.

Clause 4 covering chain wheels represents the unification of all the relevant national standards in the world and includes, in particular, complete tolerances relating to tooth shape which are absent from most current national standards.

The specified dimensions of chain ensure complete interchangeability of any given size, and provide interchangeability of individual links of chains for repair purposes.

1 Scope and field of application

This International Standard specifies the characteristics of extended pitch precision roller chains suitable for the mechanical transmission of power and for conveyors, together with those of their associated chain wheels. It specifies dimensions, tolerances, measuring loads and minimum ultimate tensile strengths.

These extended pitch chains have been derived from some of the short pitch transmission precision roller chains covered by ISO 606 having certain common dimensions but of twice the pitch.

These chains are intended for use under less onerous conditions in respect of speed and power transmitted than are the base chains from which they are derived.

2 References

ISO 286/1, *ISO system of limits and fits — Part 1 : General, tolerances and deviations.*[1]

ISO 606, *Short pitch transmission precision roller chains and chain wheels.*

3 Transmission chains

3.1 Nomenclature

Figures 1, 2 and 3 do not define the actual form of the chain plates.
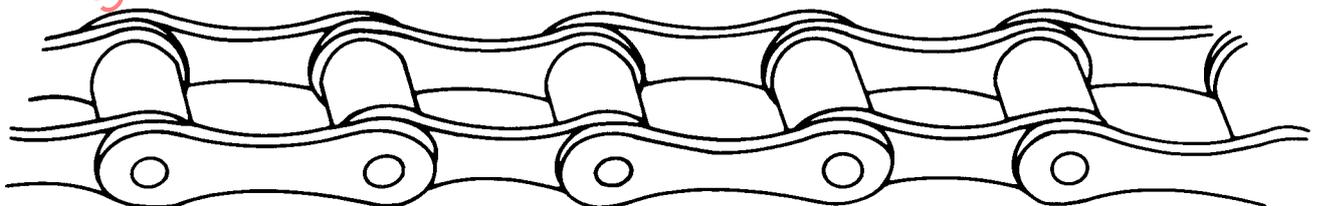
Figure 1 — Transmission chain

---

1) At present at the stage of draft. (Revision of ISO/R 286-1962.)

Inner link

Inner plate

Roller

Roller

Inner plate

Bush

Bush

Outer link

Outer plate

Bearing pin

Bearing pin

Outer plate

Detachable connecting links

(Fasteners may be of various designs.
Drawings indicate only their position.)

Outer plate

Fastener (schematic)

Fixed connecting pin

Detachable plate

Fastener (schematic)

Fastener (schematic)

Plate with riveted connecting pin

Plate with riveted connecting pin

Fastener (schematic)

Single cranked link

Roller

Cranked plate

Detachable connecting pin

Bush

Cranked plate

Fastener (schematic)

Double cranked link

Inner plate

Roller

Bush

Bearing pin (riveted)

Cranked plate

Figure 2 — Types of links

3.2 Designation

Extended pitch transmission precision roller chains shall be designated by the standard ISO chain numbers given in tables 1 to 4, first column. These chain numbers have been obtained by taking the ISO chain number for the base chain in ISO 606, and adding the prefix 2.

3.3 Dimensions

Chains shall conform to the dimensions given in tables 1 to 4. The maximum and minimum dimensions are specified to ensure interchangeability of links as produced by different makers of chain. They represent limits for interchangeability, but are not the manufacturing tolerances.
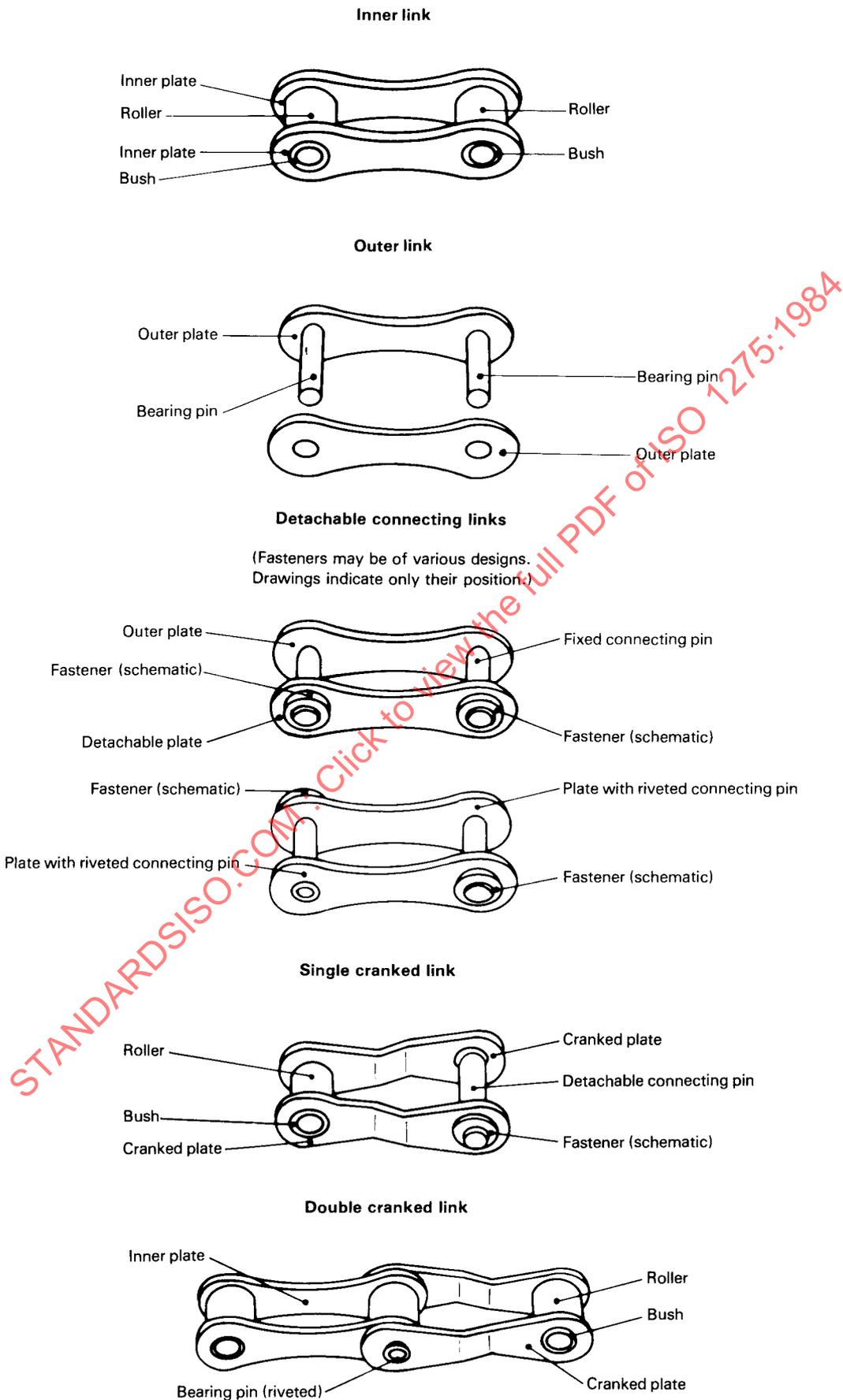
For the purposes of this International Standard, dimensions for the simple (single strand) extended pitch chains only are shown.

3.4 Minimum ultimate tensile strength

3.4.1 The minimum tensile strength is the minimum strength of samples tested to destruction in tensile loading, as defined in 3.4.2. This strength is not a working load. It is intended primarily as a comparative figure between chains of various constructions. For application information, the manufacturers or their published data should be consulted.

3.4.2 A tensile load, not less than that specified in tables 1 to 4 is applied slowly to the ends of a chain length, containing at least five free pitches, by means of shackles permitting free movement on both sides of the chain centre line, in the normal plane of articulation.

Tests in which failures occur adjacent to the shackles shall be disregarded.

Failure shall be considered to have occurred at the first point where increasing extension is no longer accompanied by increasing load, i.e. the summit of the load/extension diagram.

3.4.3 The tensile test shall be considered a destructive test. Even though a chain may not visibly fail when subjected to the minimum breaking load it will have been stressed beyond the yield point and will be unfit for service.

3.5 Proof loading

It is recommended that all chains should be proof loaded to one-third of the minimum ultimate tensile load given in tables 1 to 4.

3.6 Length accuracy

Finished chains shall be measured after proof loading (where applicable) but before lubricating.

The standard length for measurement shall be a minimum of :

a) 610 mm (24 in) for ISO chain numbers 208A to 210B inclusive;

b) 1 220 mm (48 in) for ISO chain numbers 212A to 232B inclusive;

and shall terminate with an inner link at each end.

The chain shall be supported throughout its entire length, and the measuring load given in tables 1 to 4 shall be applied.

To comply with this International Standard, the length shall be the nominal length subject to the limits of tolerance : $^{+\ 0,15}_{\ \ \ 0}$ %.

The length accuracy of chains which have to work in parallel shall be within the above limits but matched by agreement with the manufacturer.

3.7 Marking

The chains shall be marked with :

a) the manufacturer's name or trade mark;

b) the ISO chain number (see column 1 of tables 1 to 4).

3

Figure 3 — Symbols for tables 1 to 4
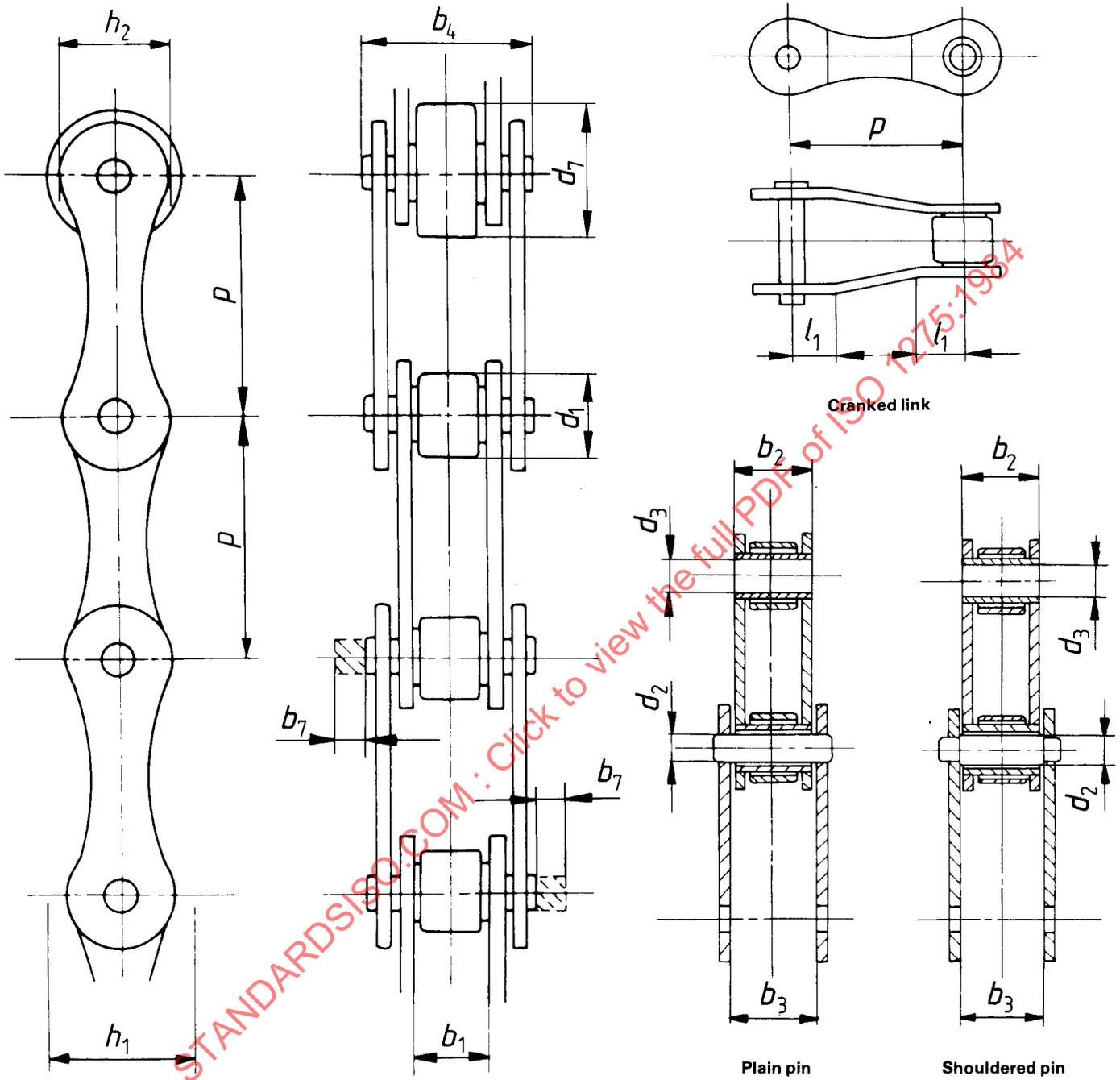
The chain path depth h_1 is the minimum depth of channel through which the assembled chain will pass.

The overall width of a chain with a joint fastener is :

$b_4 + b_7$ for riveted pin end and fastener on one side;

$b_4 + 1.6\ b_7$ for headed pin end and fastener on one side;

$b_4 + 2\ b_7$ for fasteners on both sides.

Table 1 — Chain dimensions, measuring loads and tensile loads of exended pitch transmission chains (metric units)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ISO chain number	Pitch p	Roller diameter d_1 max.	Width between inner plates b_1 min.	Bearing pin body diameter d_2 max.	Bush bore d_3 min.	Chain path depth h_1 min.	Plate depth h_2 max.	Cranked link l_1 min.	Width over inner link b_2 max.	Width between outer plates b_3 min.	Width over bearing pin b_4 max.	Additional width for joint fastener[1] b_7 max.	Measuring load	Ultimate tensile load min.
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN
208A	25,40	7,95	7,85	3,96	4,01	12,33	12,07	6,9	11,18	11,31	17,8	3,9	12	1 380
208B	25,40	8,51	7,75	4,45	4,50	12,07	11,81	6,9	11,30	11,43	17,0	3,9	12	1 780
210A	31,75	10,16	9,40	5,08	5,13	15,35	15,09	8,4	13,84	13,97	21,8	4,1	20	2 180
210B	31,75	10,16	9,65	5,08	5,13	14,99	14,73	8,4	13,28	13,41	19,6	4,1	20	2 220
212A	38,10	11,91	12,57	5,94	5,99	18,34	18,08	9,9	17,75	17,88	26,9	4,6	28	3 110
212B	38,10	12,07	11,68	5,72	5,77	16,39	16,13	9,9	15,62	15,75	22,7	4,6	28	2 890
216A	50,80	15,88	15,75	7,92	7,97	24,39	24,13	13,0	22,61	22,74	33,5	5,4	50	5 560
216B	50,80	15,88	17,02	8,28	8,33	21,34	21,08	13,0	25,45	25,58	36,1	5,4	50	4 230
220A	63,50	19,05	18,90	9,53	9,58	30,48	30,18	16,0	27,46	27,59	41,1	6,1	78	8 670
220B	63,50	19,05	19,56	10,19	10,24	26,68	26,42	16,0	29,01	29,14	43,2	6,1	78	6 450
224A	76,20	22,23	25,22	11,10	11,15	36,55	36,20	19,1	35,46	35,59	50,8	6,6	111	12 460
224B	76,20	25,40	25,40	14,63	14,68	33,73	33,40	19,1	37,92	38,05	53,4	6,6	111	9 790
228B	88,90	27,94	30,99	15,90	15,95	37,46	37,08	21,3	46,58	46,71	65,1	7,4	151	12 900
232B	101,60	29,21	30,99	17,81	17,86	42,72	42,29	24,4	45,57	45,70	67,4	7,9	200	16 900

1) The actual dimensions will depend on the type of fastener used but they should not exceed the dimensions in this column, and should be obtained by the purchaser from the manufacturer.

5

Table 2 — Chain dimensions, measuring loads and tensile loads of extended pitch transmission chains (inch-pound units)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ISO chain number	Pitch p	Roller diameter d_1 max.	Width between inner plates b_1 min.	Bearing pin body diameter d_2 max.	Bush bore d_3 min.	Chain path depth h_1 min.	Plate depth h_2 max.	Cranked link l_1 min.	Width over inner link b_2 max.	Width between outer plates b_3 min.	Width over bearing pin b_4 max.	Additional width for joint fastener[1] b_7 max.	Measuring load	Ultimate tensile load min.
	in	in	in	in	in	in	in	in	in	in	in	in	lbf	lbf
208A	1.00	0.313	0.309	0.156	0.158	0.485	0.475	0.27	0.440	0.445	0.70	0.15	28	3 100
208B	1.00	0.335	0.305	0.175	0.177	0.475	0.465	0.27	0.445	0.450	0.67	0.15	28	4 000
210A	1.25	0.400	0.370	0.200	0.202	0.604	0.594	0.33	0.545	0.550	0.86	0.16	44	4 900
210B	1.25	0.400	0.380	0.200	0.202	0.590	0.580	0.33	0.523	0.528	0.77	0.16	44	5 000
212A	1.50	0.469	0.495	0.234	0.236	0.722	0.712	0.39	0.699	0.704	1.06	0.18	63	7 000
212B	1.50	0.475	0.460	0.225	0.227	0.645	0.635	0.39	0.615	0.620	0.89	0.18	63	6 500
216A	2.00	0.625	0.620	0.312	0.314	0.960	0.950	0.51	0.890	0.895	1.32	0.21	112	12 500
216B	2.00	0.625	0.670	0.326	0.328	0.840	0.830	0.51	1.002	1.007	1.42	0.21	112	9 500
220A	2.50	0.750	0.744	0.375	0.377	1.200	1.188	0.63	1.081	1.086	1.62	0.24	175	19 500
220B	2.50	0.750	0.770	0.401	0.403	1.050	1.040	0.63	1.142	1.147	1.70	0.24	175	14 500
224A	3.00	0.875	0.993	0.437	0.439	1.439	1.425	0.75	1.396	1.401	2.00	0.26	250	28 000
224B	3.00	1.000	1.000	0.576	0.578	1.328	1.315	0.75	1.493	1.498	2.10	0.26	250	22 000
228B	3.50	1.100	1.220	0.626	0.628	1.475	1.460	0.84	1.834	1.839	2.56	0.29	340	29 000
232B	4.00	1.150	1.220	0.701	0.703	1.682	1.665	0.96	1.794	1.799	2.65	0.31	450	38 000

1) The actual dimensions will depend on the type of fastener used but they should not exceed the dimensions in this column, and should be obtained by the purchaser from the manufacturer.

4 Chain wheels (sprockets)
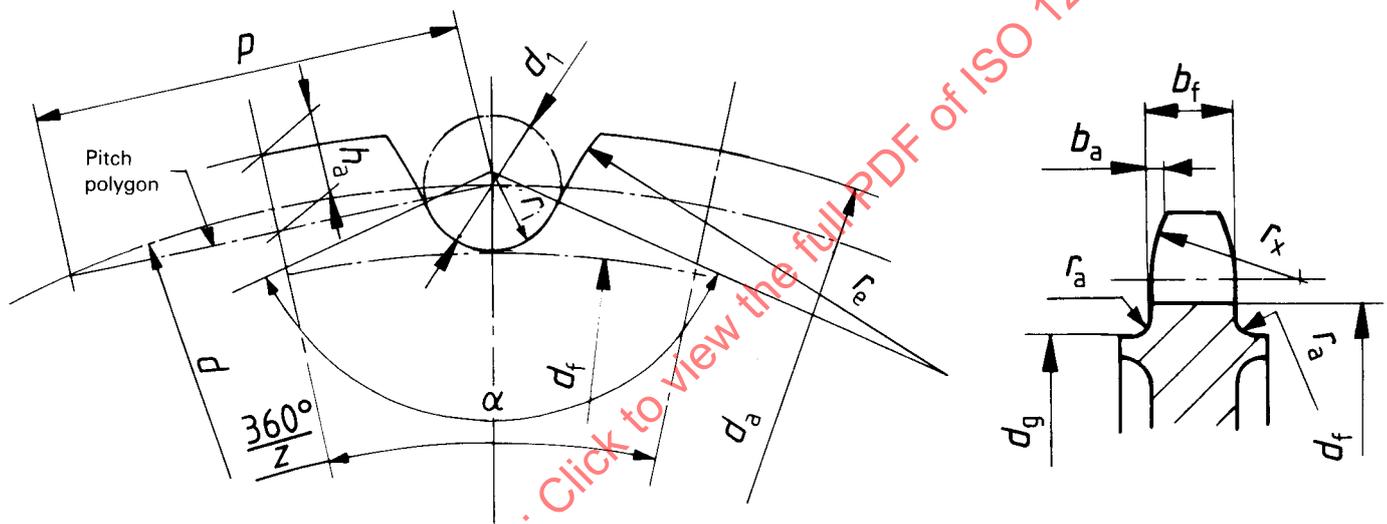
4.1 Nomenclature

The nomenclature for basic chain dimensions on which all wheel data are based is given in figure 3 and tables 1 to 4.

Chain wheel dimensions are explained below.

4.2 Diametral dimensions and tooth shape

4.2.1 Nomenclature

Nomenclature for diametral dimensions and tooth shape is given in figure 4.

b_a = tooth side relief
b_f = tooth width
b_1 = minimum width between inner plates
d = pitch circle diameter
d_a = tip diameter
d_f = root diameter
d_g = absolute maximum shroud diameter
d_1 = maximum roller diameter
h_a = height of tooth above pitch polygon
h_2 = maximum plate depth

p = chordal pitch, equal to chain pitch
r_a = shroud fillet radius
r_e = tooth flank radius
r_i = roller seating radius
r_x = tooth side radius
z = number of teeth corresponding to the number of links that can be wrapped around the wheel
z_1 = number of teeth for double-cut wheels = $2z$
α = roller seating angle

Figure 4 — Diametral dimensions and tooth shape

7

4.2.2 Diametral dimensions

4.2.2.1 Pitch circle diameter

$$d = \frac{p}{\sin \dfrac{180°}{z}}$$

(see the table in the annex for the pitch circle diameters according to the number of teeth)

4.2.2.2 Measuring pin diameter

$$d_R = d_1$$

4.2.2.3 Root diameter

$d_f = d - d_1$ subject to the following tolerance limits :

Root diameter	Upper deviation	Lower deviation
$d_f < 127$ mm (5 in)	0	0,25 mm (0.010 in)
127 mm (5 in) $< d_f <$ 250 mm (9.85 in)	0	0,30 mm (0.012 in)
$d_f > 250$ mm (9.85 in)	0	h11*

* See ISO 286/1.

4.2.2.4 Measurement over pins (see figure 5)

M_R for EVEN numbers of teeth $= d + d_R$ min.

M_R for ODD numbers of teeth and single-cut wheels

$$= d \cos \frac{90°}{z} + d_R \text{ min.}$$

M_R for ODD numbers of teeth and double-cut wheels

$$= d \cos \frac{90°}{z_1} + d_R \text{ min.}$$

The measurement over pins of wheels with EVEN numbers of teeth shall be carried out over pins inserted in opposite tooth gaps.

The measurement over pins of wheels with ODD numbers of teeth shall be carried out over pins in the tooth gaps most nearly opposite.

The limits of tolerance for the measurement over pins are identical to those for the corresponding root diameters.

NOTE — Chain wheels for extended pitch chains may be provided with either one set of teeth having a number of teeth equal to z or with two sets of teeth, the location of the tooth spaces of the second set being midway between those of the first. In this case the total number of teeth of the wheels will be $z_1 = 2 z$.

In the case of a single set of teeth, z will be an integer. In the case of double-cut wheels, z_1 will be an integer, but z will be fractional if z_1 is an odd number.

Short pitch base chains should not be used with double-cut wheels made for extended pitch chains and vice versa.
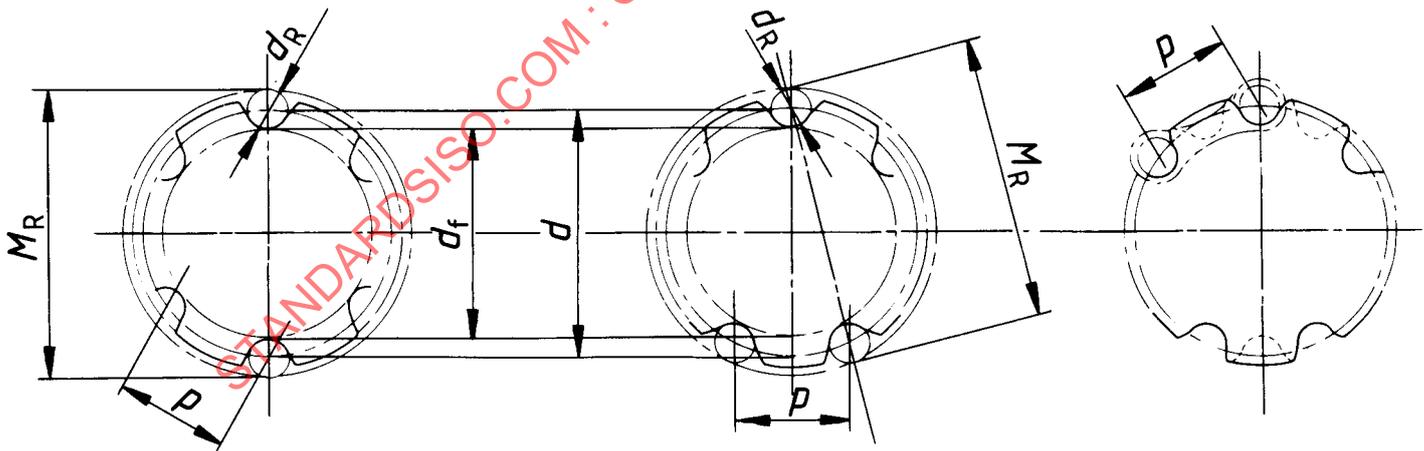
Even numbers of teeth	Odd numbers of teeth	Single and double-cut teeth Full line $= z$ Dash-dotted line $= 2 z$

d = pitch circle diameter
d_f = root diameter
d_R = measuring pin diameter
M_R = measurement over pins
p = chordal pitch, equal to chain pitch

Figure 5 — Measuring pin size

4.2.2.5 Tip diameter

$$d_a \text{ max.} = d + 0.625\, p - d_1$$

$$d_a \text{ min.} = d + p\left(0.5 - \frac{0.4}{z}\right) - d_1$$

It should be noted that d_a max. and d_a min. can be applied arbitrarily both to the minimum and maximum tooth gap forms, subject to the limitations imposed by the cutter on the maximum diameter.

To facilitate the construction of the tooth gap form to a large scale on a drawing board, the tooth height above the pitch polygon can be obtained from the following formulae :

$$h_a \text{ max.} = p\left(0.312\,5 + \frac{0.8}{z}\right) - 0.5\, d_1$$

$$h_a \text{ min.} = p\left(0.25 + \frac{0.6}{z}\right) - 0.5\, d_1$$

NOTE — h_a max. is related to d_a max. and h_a min. to d_a min.

4.2.3 Tooth gap form

The actual tooth gap form which is provided by cutting or by an equivalent method shall have tooth flanks of a form lying within the minimum and maximum flank radii and blending smoothly with the roller seating curve subtending the respective angles.

4.2.3.1 Minimum form

$$r_e \text{ max.} = 0.12\, d_1\,(z + 2)$$

$$r_i \text{ min.} = 0.505\, d_1$$

$$\alpha \text{ max.} = 140° - \frac{90°}{z}$$

4.2.3.2 Maximum form

$$r_e \text{ min.} = 0.008\, d_1\,(z^2 + 180)$$

$$r_i \text{ max.} = (0.505\, d_1 + 0.069\, \sqrt[3]{d_1})\ \text{mm} \quad \text{(where } d_1 \text{ is expressed in millimetres)}$$

$$\text{or} \quad = (0.505\, d_1 + 0.008\, \sqrt[3]{d_1})\ \text{in} \quad \text{(where } d_1 \text{ is expressed in inches)}$$

$$\alpha \text{ min.} = 120° - \frac{90°}{z}$$

4.2.3.3 Tooth width

$$b_f = 0.95\, b_1; \text{ with tolerance h14[1].}$$

NOTE — $b_f = 0.93\, b_1$, h14, may be used by agreement between user and manufacturer.

---

[1] See ISO 286/1.

4.2.3.4 Tooth side relief

$$b_{a \text{ nom}} = 0,065\, p$$

4.2.3.5 Absolute maximum shroud diameter

$$d_g = p \cot \frac{180°}{z} - 1,05\, h_2 - 1,00 - 2\, r_a \text{ mm (where } p, h_2 \text{ and } r_a \text{ are expressed in millimetres)}$$

$$\text{or} = p \cot \frac{180°}{z} - 1.05\, h_2 - 0.040 - 2\, r_a \text{ in (where } p, h_2 \text{ and } r_a \text{ are expressed in inches)}$$

4.2.3.6 Tooth side radius

$$r_{x \text{ nom}} = 0,5\, p$$

4.3 Radial run-out

Radial run-out, measured on one complete turn of the wheel, with reference to the bore and root diameter shall not exceed a value for total indicator reading derived from :

$0,000\,8\, d_f + 0,08$ mm, or $0,15$ mm, whichever is the greater up to a maximum of $0,76$ mm, where d_f is expressed in millimetres;

or

$0.000\,8\, d_f + 0.003$ in, or 0.006 in, whichever is the greater up to a maximum of 0.030 in, where d_f is expressed in inches.

4.4 Axial run-out (wobble)

Axial run-out, measured on one complete turn of the wheel with reference to the bore and the flat part of the side face of the teeth, shall not exceed a value for total indicator reading derived from :

$0,000\,9\, d_f + 0,08$ mm, up to a maximum of $1,14$ mm, where d_f is expressed in millimetres;

or

$0.000\,9\, d_f + 0.003$ in, up to a maximum of 0.045 in, where d_f is expressed in inches.

For fabricated (welded) wheels, $0,25$ mm (0.010 in) may be accepted if the above formulae give smaller values.

4.5 Pitch accuracy of wheel teeth

Pitch accuracy of wheel teeth is important and chain manufacturers shall be consulted for details.

4.6 Range of teeth

This International Standard applies primarily to a range of teeth from 5 to 75 inclusive (with intermediate numbers of teeth 5 1/2 to 74 1/2 inclusive).

The preferred range of numbers of teeth is 7, 9, 10, 11, 13, 19, 27, 38 and 57.

4.7 Bore tolerance

Unless otherwise agreed between the manufacturer and the purchaser, bores shall be to H8 limits[1].

4.8 Marking

Chain wheels shall be marked with :

a)   the maker's name or trade mark;

b)   the number of teeth;

c)   the chain designation (the ISO chain number or maker's equivalent).

5   Conveyor chains

5.1   General

Except where otherwise stated, the shapes, dimensions and test details for the chain and chain wheels shall conform to clauses 3 and 4, respectively, of this International Standard.

It is usual for chains used for conveyor purposes to have straight-edged (not waisted) side plates. Additionally, an alternative large roller diameter (d_7) may be adopted. These features are illustrated in figure 6.

5.2   Nomenclature

The nomenclature of figure 2 is also applicable here. Figures 2 and 6 do not define the actual form of the chain plates.
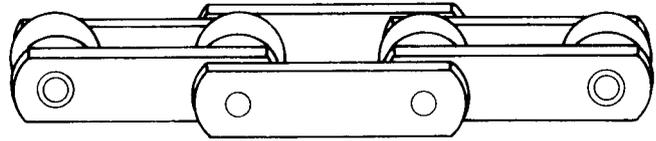
Figure 6 — Conveyor chain

5.3   Designation

Extended pitch precision roller chains suitable for conveyor purposes are designated additionally with the prefix C when the straight-edged chain plates (figure 6) are used, and with a suffix L when the alternative large size roller (d_7) is adopted. When necessary for the purpose of distinguishing between the chain roller sizes adopted, a suffix S may be applied to chains with the small roller.

5.4   Dimensions

When the large roller size is adopted the dimension d_1 shall be replaced by d_7 in wheel formulae. Dimensions shall be in accordance with tables 3 and 4.

5.5   Marking

The chains shall be marked with :

a)   the manufacturer's name or trade mark;

b)   the ISO chain number (see column 1 of tables 3 or 4).

---

1)   See ISO 286/1.

Table 3 — Dimensions, measuring loads and tensile loads of extended pitch chains suitable for conveyor work[1] (metric units)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ISO chain number[2]	Pitch p	Roller diameter d_1 max.	Roller diameter (large) d_1 max.	Width between inner plates b_1 min.	Bearing pin body diameter d_2 max.	Bush bore d_3 min.	Chain path depth h_1 min.	Plate depth h_2 max.	Cranked link l_1 min.	Width over inner link b_2 max.	Width between outer link b_3 min.	Width over bearing pin b_4 max.	Additional width for joint fastener[3] b_7 max.	Measuring load	Ultimate tensile load min.
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN
C 208A	25,40	7,95	15,88	7,85	3,96	4,01	12,33	12,07	6,9	11,18	11,31	17,8	3,9	12	1 380
C 208B	25,40	8,51	15,88	7,75	4,45	4,50	12,07	11,81	6,9	11,30	11,43	17,0	3,9	12	1 780
C 210A	31,75	10,16	19,05	9,40	5,08	5,13	15,35	14,73	8,4	13,84	13,97	21,8	4,1	20	2 180
C 210B	31,75	10,16	19,05	9,65	5,08	5,13	14,99		8,4	13,28	13,41	19,6	4,1	20	2 220
C 212A	38,10	11,91	22,23	12,57	5,94	5,99	18,34	18,08	9,9	17,75	17,88	26,9	4,6	28	3 110
C 212B	38,10	12,07	22,23	11,68	5,72	5,77	16,39	16,13	9,9	15,62	15,75	22,7	4,6	28	2 890
C 216A	50,80	15,88	28,58	15,75	7,92	7,97	24,39	24,13	13,0	22,61	22,74	33,5	5,4	50	5 560
C 216B	50,80	15,88	28,58	17,02	8,28	8,33	21,34	21,08	13,0	25,45	25,58	36,1	5,4	50	4 230
C 220A	63,50	19,05	39,67	18,90	9,53	9,58	30,48	30,18	16,0	27,46	27,59	41,1	6,1	78	8 670
C 220B	63,50	19,05	39,67	19,56	10,19	10,24	26,68	26,42	16,0	29,01	29,14	43,2	6,1	78	6 450
C 224A	76,20	22,23	44,45	25,22	11,10	11,15	36,55	36,20	19,1	35,46	35,59	50,8	6,6	111	12 460
C 224B	76,20	25,40	44,45	25,40	14,63	14,68	33,73	33,40	19,1	37,92	38,05	53,4	6,6	111	9 790

1) The basic chain dimensions are identical with those of table 1 with the addition of the large roller diameters. Normally, the side plates are straight (not waisted).

2) The chain numbers are derived from the basic ISO chain numbers of table 1 with the prefix C (for conveyor) and adding, as appropriate, a suffix S (for small roller) or L (for large roller).

3) The actual dimensions will depend on the type of fastener used but they should not exceed the dimensions in this column and should be obtained by the purchaser from the manufacturer.

Table 4 — Dimensions, measuring loads and tensile loads of extended pitch chains suitable for conveyor work [1] (inch-pound units)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ISO chain number [2]	Pitch p	Roller diameter d_1 max.	Roller diameter (large) d_1 max.	Width between inner plates b_1 min.	Bearing pin body diameter d_2 max.	Bush bore d_3 min.	Chain path depth h_1 min.	Plate depth h_2 max.	Cranked link l_1 min.	Width over inner link t_2 max.	Width between outer link t_3 min.	Width over bearing pin t_4 max.	Additional width for joint fastener [3] t_7 max.	Measuring load	Ultimate tensile load min.
	in	in	in	in	in	in	in	in	in	in	in	in	in	lbf	lbf
C 208A	1.00	0.313	0.625	0.309	0.156	0.158	0.485	0.475	0.27	0.440	0.445	0.70	0.15	28	3 100
C 208B	1.00	0.335	0.625	0.305	0.175	0.177	0.475	0.465	0.27	0.445	0.450	0.67	0.15	28	4 000
C 210A	1.25	0.400	0.750	0.370	0.200	0.202	0.604	0.594	0.33	0.545	0.550	0.86	0.16	44	4 900
C 210B	1.25	0.400	0.750	0.380	0.200	0.202	0.590	0.580	0.33	0.523	0.528	0.77	0.16	44	5 000
C 212A	1.50	0.469	0.875	0.495	0.234	0.236	0.722	0.712	0.39	0.699	0.704	1.06	0.18	63	7 000
C 212B	1.50	0.475	0.875	0.460	0.225	0.227	0.645	0.635	0.39	0.615	0.620	0.89	0.18	63	6 500
C 216A	2.00	0.625	1.125	0.620	0.312	0.314	0.960	0.950	0.51	0.890	0.895	1.32	0.21	112	12 500
C 216B	2.00	0.625	1.125	0.670	0.326	0.328	0.840	0.830	0.51	1.002	1.007	1.42	0.21	112	9 500
C 220A	2.50	0.750	1.562	0.744	0.375	0.377	1.200	1.188	0.63	1.081	1.086	1.62	0.24	175	19 500
C 220B	2.50	0.750	1.562	0.770	0.401	0.403	1.050	1.040	0.63	1.142	1.147	1.70	0.24	175	14 500
C 224A	3.00	0.875	1.750	0.993	0.437	0.439	1.439	1.425	0.75	1.396	1.401	2.00	0.26	250	28 000
C 224B	3.00	1.000	1.750	1.000	0.576	0.578	1.328	1.315	0.75	1.493	1.498	2.10	0.26	250	22 000

1) The basic chain dimensions are identical with those of table 2 with the addition of the large roller diameters. Normally, the side plates are straight (not waisted).

2) The chain numbers are derived from the basic ISO chain numbers of table 2 with the prefix C (for conveyor) and adding, as appropriate, a suffix S (for small roller) or L (for large roller).

3) The actual dimensions will depend on the type of fastener used but they should not exceed the dimensions in this column and should be obtained by the purchaser from the manufacturer.