Basics of roller chains with attachments

Preliminary remark: The chain tool and this description deal with roller chains with straight or bent attachments (fixing plates) on the outer link.

Configuration:

1. **Chain types and sizes available at short notice.**
2. **Types of attachments.**
3. **Dimensions of the attachments.**
4. **Pitch p.**
5. **Length of an open chain, without connecting link.**
6. **Length including connecting link.**
7. **Use of a cranked link.**
8. **Configuration of the attachments.**
9. **Attachment distances with an uneven number of links.**
10. **Connecting links with and without attachments.**
11. **Endless riveted chains.**

1. Chain types and sizes available at short notice

The following roller chains with attachments at the outer link are usually available within 1 or 2 days:
Single-strand roller chains made from standard steel, according to DIN 8187.
Double-strand roller chains made from standard steel, according to DIN 8187.
Single-strand roller chains made from stainless steel, main dimensions according to DIN 8187.
Sizes of chains: 06B, 08B, 10B, 12B and 16B (other sizes on request).

2. Types of attachments

Attachments at outer links are available in the following versions:
M1: straight attachment, 1 hole, one-sided, two-sided and both ways.
M2: straight attachment, 2 holes, one-sided, two-sided and both ways.
K1: bent attachment, 1 hole, one-sided, two-sided and both ways.
K2: bent attachment, 2 holes, one-sided, two-sided and both ways.

3. Dimensions of the attachments

Dimensions of the attachments are according to DIN 8187-2.
The dimensions and drawings can be found on the webshop and in the printed catalogue for chains on stock with link plate configurations 2 x p, 4 x p and 6 x p.

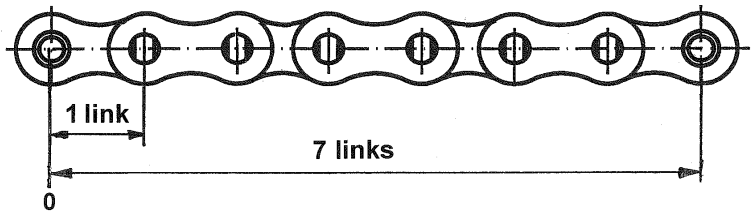
4. Pitch p

The pitch p is a measure of the distance from link to link (from pin to pin).
Size 06B = 3/8x7/32“: p = 9.525 mm.
Size 08B = 1/2x5/16“: p = 12.7 mm.
Size 10B = 5/8x3/8“: p = 15.875 mm.
Size 12B = 3/4x7/16“: p = 19.05 mm.
Size 16B = 1“x17.02mm: p = 25.4mm.

5. Length of an open chain, without connecting link

All inner and outer links are counted.
The normal delivery state is “open without connecting link“, at an uneven number of links. The connecting link has to be ordered separately.

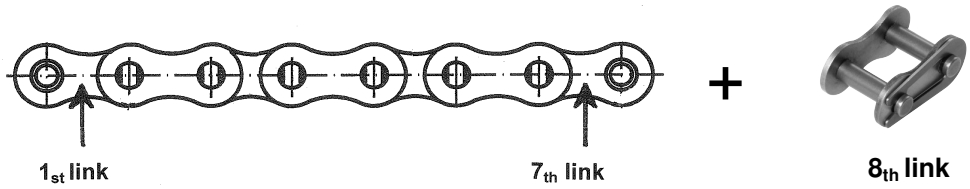
Sample chain with 7 links, open without connecting link:



6. Length including connecting link

The connecting link (closing link) is counted as an extra link. The total number of links is thus an even number.
An even number of links is recommended for the total chain length.
In addition a spring clip connecting link can be supplied as a separate item or an endless chain can be supplied with a rivet link.

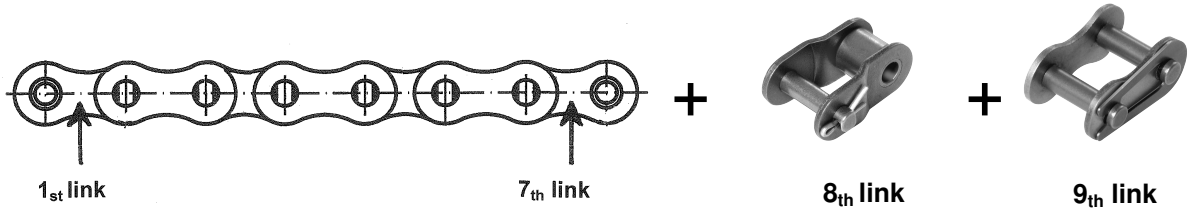
Sample chain total length is 8 links incl. connecting link
(the connecting link has to be ordered separately):



7. Use of a cranked connecting link

A cranked link is needed to obtain a total chain length with an uneven number of links. However this reduces the breaking load by 20%.
If a no. 12/L cranked connecting link is used then an additional no. 11/E straight connecting link is required. The total number of links is thus an uneven number.

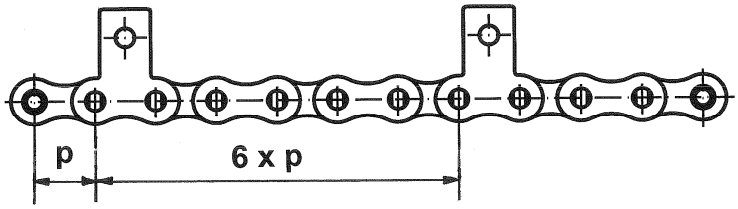
Sample chain total length is 9 links (incl. connecting links):



8. Configuration of the attachments

The attachment configuration is given as a multiple of the pitch **p**.
Here the distance from one attachment to another is measured.
Usually the same attachment spacing is used:
Configuration 2 x p = every outer link as an attachment.
Configuration 4 x p = every second outer link as an attachment.
Configuration 6 x p = every third outer link as an attachment.
etc.

Sample chain with attachment configuration 6 x p:



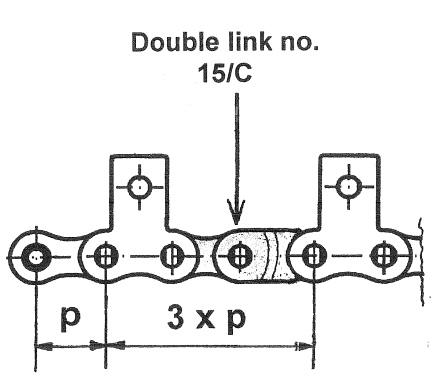
Note:
Since the chains are made-up by us in-house, the ones with uneven attachment spacings are also available at short notice.
Please send us your request. We will send you an offer as soon as possible.

Note: The chains always begin with an inner link. Then comes an attachment as the first outer link. If the total chain length is a multiple of the configuration, then it matches perfectly. Hence all attachment plate spacings are equal. For configurations from 4 x p, a normal spring clip connecting link no. 11/E can be used as a closing link.

9. Attachments spacings with an uneven number of links

Attachment spacings with an uneven number of links are possible **from 3 x p** through the use of cranked links. However this reduces the breaking load by 20%.
Either cranked double links (no. 15/C) or cranked cotter pin connecting links (no. 12/L) can be used.

Sample configuration 3 x p:



Double link no. 15/C

alternative connecting link no. 12/L

10. Connecting links with and without attachments

Connecting links with attachments are needed for attachment configuration **2 x p** . These are on stock for single strand roller chains made from standard steel.

A cranked connecting link **no. 15/C** is needed for uneven attachment configuration **3 x p**. **From 5 x p** its possible to use a straight connecting link no. 11/E.

A straight connecting link **no. 11/E** is needed for even attachment configurations **from 4 x p**.

Note:
Alternatively chains can be riveted together as endless ones.

11. Endless riveted chains

All chains can also be endlessly riveted in all configurations (without spring clip connecting link). This is always recommended in case strong vibrations or impacts may occur during operation and / or if increased operational safety is required. For this the customer needs to check if an endless chain can be installed. It may also be possible for the customer to rivet the chain during its mounting on the machine.