

Inland navigation vessels — Studless anchor chain — Accessories

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British Standard

ICS 47.020.50; 47.060

National foreword

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This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 24, an inside back cover and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 26 October 2004

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ISBN 0 580 44648 4

English version

Inland navigation vessels - Studless anchor chain - Accessories

Bateaux de navigation intérieure - Chaîne d'ancre sans
pignon - Accessoires

Fahrzeuge der Binnenschifffahrt - Steglose Ankerkette -
Zubehör

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Foreword

This document EN 14606:2004 has been prepared by Technical Committee CEN/TC 15 “Inland navigation vessels”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2005, and conflicting national standards shall be withdrawn at the latest by March 2005

This document contains a bibliography.

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1 Scope

This document applies to accessories used with round steel chains as specified in EN 14330 as studless anchor chains for inland navigation vessels.

It specifies the construction, dimensions and testing of accessories such as joining links and end links, chain swivels, end shackles, swivel shackles and Kenter-type joining shackles.

It does not apply to anchor equipment consisting of cable stoppers, cable lockers or end fastenings, for example.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10243-1, *Steel die forgings — Tolerances on dimensions — Part 1: Drop and vertical press forgings*.

EN 14330, *Inland navigation vessels — Studless anchor chain — Round steel chain*.

EN 22339, *Taper pins, unhardened (ISO 2339:1986)*.

EN ISO 7046-2, *Cross-recessed countersunk flat head screws (common head style) — Product grade A — Part 2: Steel of property class 8.8, stainless steel and non-ferrous metal (ISO 7046-2:1990)*.

ISO 1704, *Shipbuilding — Stud-link anchor chains*.

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1
joining link**
single link for joining the round steel chain to anchor swivel (3.10) or swivel shackle (3.7) or swivel outboard shot (3.9)

**3.2
common link**
single link for joining the swivel outboard shot (3.9) to connecting link (3.1) or Kenter-type joining shackle (3.8)

**3.3.
enlarged link**
single link for joining a chain swivel (3.5) to common link (3.2) or end link (3.4)

**3.4
end link**
single link for joining an enlarged link (3.3) to end shackle (3.6)

3.5**chain swivel**

rotatable connection in the swivel outboard shot (3.9) of a studless anchor chain

3.6**end shackle**

bracket with oval bolt in the swivel outboard shot (3.9) of a studless anchor chain

3.7**swivel shackle**

rotatable connection between round steel chain and anchor

3.8**Kenter-type joining shackle**

connecting element for making a detachable connection between round steel chain and swivel outboard shot (3.9)

NOTE

Kenter was the inventor of this shackle.

3.9**swivel outboard shot**

component of the studless anchor chain joining the round steel chain and anchor to the twist compensator

3.10**anchor swivel**

rotatable non-detachable element on the anchor shaft

3.11**anchor shackle**

rotatable, but non-detachable, element on the anchor shaft for connecting to the round steel chain through swivel outboard shot (3.9)

4 Requirements**4.1 Components****4.1.1 Joining link**

For dimensions of joining links (3.1), see Figure 1 and Table 1.

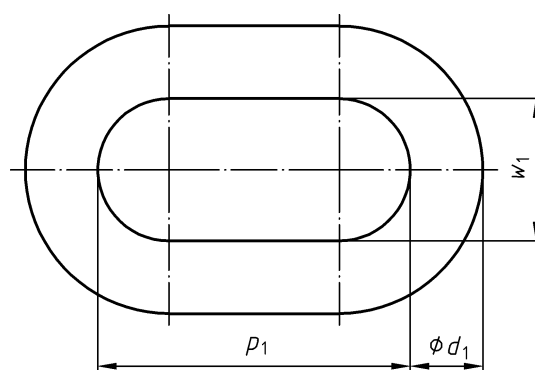


Figure 1 — Joining link

Table 1 — Nominal dimensions and masses of joining links

Nominal size ^a $d \times p$ mm	Diameter d_1 mm	Pitch p_1 mm	Internal width w_1 Mm	Mass ^b G kg
10 × 28 13 × 36	13 16	55 70	25 30	0,19 0,36
16 × 45 18 × 50	20 23	90 100	40 45	0,7 1,1
20 × 56 23 × 64	26 28	115 125	50 55	1,5 1,9
26 × 73 28 × 78	32 36	140 160	65 70	2,9 4,1
30 × 84 33 × 92	38 40	165 175	75 80	4,8 5,6
36 × 101 39 × 109 42 × 118	45 48 50	200 210 220	90 95 100	8 9,7 11
^a Nominal size $d \times p$ according to EN 14330. ^b Nominal dimensions in millimetres (mm) and masses, in kilograms (kg), are calculated as follows: $p_1 = 4,4 \times d_1$; $G = 87,7 \times d_1^3 \times 10^{-6}$; $w_1 = 6,8 \times WF^{0,5}$, $WF = 0,141 \times d^2$ according to EN 14330.				

4.1.2 Common link

For dimensions of the common link (3.2) as shown in Figure 1 and Table 1 of ISO 1704:1991, see Figure 2 and Table 2.

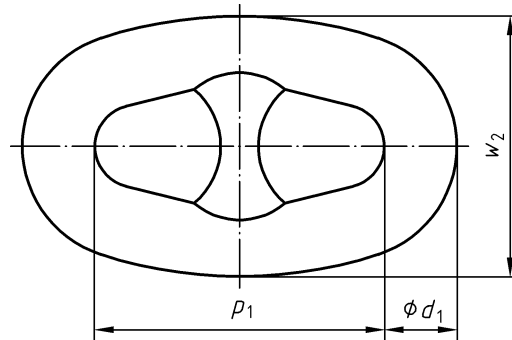


Figure 2 — Common link

Table 2 — Nominal dimensions and masses of common links

Nominal size ^a	Diameter	Pitch	External width	Mass ^b	Nominal diameter to ISO 1704 ^c
$d \times p$ mm	d_1 mm	p_1 mm	w_2 mm	G kg	D mm
13 × 36	12,5	50	45	0,17	12,5
16 × 45	16	64	58	0,36	16
18 × 50	17,5	70	63	0,47	17,5
20 × 56	20,5	82	74	0,75	20,5
23 × 64	22	88	79	0,93	22
26 × 73	26	104	94	1,5	26
28 × 78	28	112	101	1,9	28
30 × 84	30	120	108	2,4	30
33 × 92	32	128	115	2,9	32
36 × 101	36	144	130	4,1	36
39 × 109	38	152	137	4,8	38
42 × 118	42	168	151	6,5	42

^a Nominal size $d \times p$ according to EN 14330.

^b Nominal dimensions in millimetres (mm) and masses, in kilograms (kg), are calculated as follows:

$$p_1 = 4 \times d_1; \quad w_2 = 3,6 \times d_1; \quad G = 87,6 \times 10^{-6} \times d_1^3$$

^c Nominal diameter assigned to the nominal size according to ISO 1704:1991, Table 1.