
**Ships and marine technology — Stud-link
anchor chains**

*Navires et technologie maritime — Chaînes d'ancre à mailles
étançonnées*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 1704 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 4, *Outfitting and deck machinery*.

This third edition cancels and replaces the second edition (ISO 1704:1991) which has been technically revised as follows.

- Tolerances on the nominal diameter of the links remain the same, but tolerances on other parts of the links have been appropriately adjusted.
- Lengths and tolerances of the combined links have been increased.
- The allowable manufacturing tolerance of all other dimensions has been increased.
- The nominal diameter of a common stud link is shown by d and the diameter of other links, shackles and swivels given as multiples of d .
- The swivel type and a series of its dimensions have been added for the convenience of the user. The patented swivel or the swivel with a particular function can be used as a substitute if this is possible in harmony with this International Standard.

Ships and marine technology — Stud-link anchor chains

1 Scope

This International Standard specifies the shape, proportions, dimensions and tolerances of the component parts of stud-link anchor chains.

Any statutory requirements, rules and regulations applicable to the individual ship concerned also apply.

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.

ISO 2093:1986, *Electroplated coatings of tin — Specification and test methods*

ISO 2339:1986, *Taper pins, unhardened*

ISO 3828:1984, *Shipbuilding and marine structures — Deck machinery — Vocabulary*

3 Terms and definitions

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

3.1

chain-shot

component of an anchor chain consisting of common stud links and joining shackles with a given nominal length (27,5 m or 25 m) in accordance with ISO 3828

3.2

common stud link

basic link of which chain-shot consists

3.3

enlarged stud link

strengthened link that connects a common stud link and the end link, in the case of connecting chain-shots, with a “D” type joining shackle, or connects a common stud link and swivel

3.4

end link

strengthened link that is attached to the ends of chain-shots, in the case of connecting chain-shots, with “D” type joining shackles or the outboard chain-shot with an end shackle

3.5

joining shackle

“D” type joining shackle or Kenter type joining shackle used for connecting chain-shots

3.6
end shackle

enlarged shackle used for connecting the outboard chain-shot to the anchor

3.7
swivel

movable component of the outboard chain-shot which prevents excessive twisting of the chain cable

3.8
outboard chain-shot

additional short chain-shot fastened to the anchor shackle

3.9
nominal size

nominal diameter of the common stud link

4 Shape and dimensions

4.1 Shape

The stud links, shackles and component parts shall be of the shapes and proportions shown in Figures 1 to 9.

4.2 Dimensions

4.2.1 General

The dimensions of stud links, shackles and component parts shall be in accordance with the values given in Tables 1 to 7.

The nominal diameter, d , is a design diameter measured at the crown of a common stud link as an average value of two measurements perpendicular to each other. See Figure 1 and Table 1.

All dimensions, based on the nominal diameters, d , of the common stud links, shall be measured after the chain and shackles have been subjected to the statutory proof loads.

4.2.2 Enlarged stud links

The proportions of the enlarged stud links are the same as those of the common stud links. The nominal diameter of the enlarged stud link is 10 % larger than the nominal diameter of the common stud link: $d_1 = 1,1 d$, the calculated values are rounded to the nearest nominal diameter of the common link.

4.2.3 Common stud links and enlarged stud links

The inside diameter of common stud links and enlarged stud links shall be sufficient to allow each link to bed properly and work freely. See Figures 1 and 2.

4.2.4 End links

The inside diameter of end links shall be sufficient to allow the shackle link to bed properly and work freely. See Figure 3. The nominal diameter of the end link is 20 % larger than the nominal diameter of the common stud link: $d_2 = 1,2 d$, the calculated values are rounded to the nearest nominal diameter of the common link.

4.2.5 Shackle retaining pin

The retaining pin used in "D" type joining shackles and end shackles shall be a taper pin having a taper of not less than 1:50 and not more than 1:16 on the diameter.

The retaining pin used in Kenter type shackles shall be a taper pin having a taper of not less than 1:50 and not more than 1:32 on the diameter. The nominal diameter of the taper pin shall be $0,37 \times d$, the calculated values are rounded to the nearest standardized nominal diameter in accordance with ISO 2339. The nominal length of the taper pin shall be $(w_4 - 2) \times$ nominal diameter to taper pin (see Figure 5), the calculated values are rounded to the nearest standardized nominal length in accordance with ISO 2339.

Nominal sizes and lengths required are given in Tables 4, 5 and 6. Other details of the taper pins, e.g. end radius, cone tolerance and surface finish, shall be in accordance with ISO 2339.

Taper pins shall be either of stainless steel or tin-coated carbon steel. If tin-coated, this shall be either by a hot-dip process or electroplating in accordance with ISO 2093:1986, 7.1, service condition 4.

5 Tolerances

5.1 Nominal diameter of common stud links

The allowable manufacturing tolerances on the nominal diameter d of the common stud links, measured at the crown, are

- -0 mm for $d \leq 40$ mm;
- -2 mm for $40 \text{ mm} < d \leq 84$ mm;
- -3 mm for $84 \text{ mm} < d \leq 122$ mm;
- -4 mm for $d > 122$ mm.

The cross-sectional area at the crown of the link shall be not less than the area of a circle of the nominal diameter.

The allowable manufacturing tolerance on the nominal diameter measured elsewhere on the link is $+5$ %.

The tolerance on the stud-link welded parts is +15 %.

The allowable manufacturing tolerance of the link except for the requirements specified above is $\pm 2,5$ %, taking into account the fact that all components of the anchor chain shall fit in with each other.

5.2 Length of five links

The length of five links is defined as $5 \times p + 2 d = 22 d$. The measurement is taken from the outside.

The allowable manufacturing tolerance on a length of five links is $+2,5$ %.

5.3 All other dimensions

The tolerances of the diameter: $+5$ %

The tolerances other than diameter: $\pm 2,5$ %.

6 Range of sizes of links and shackles

The range of nominal diameter, d , is that specified by the classification societies associated in the International Association of Classification Societies (IACS).

7 Designation of size

The nominal size of a common stud link is designated its nominal diameter, d .

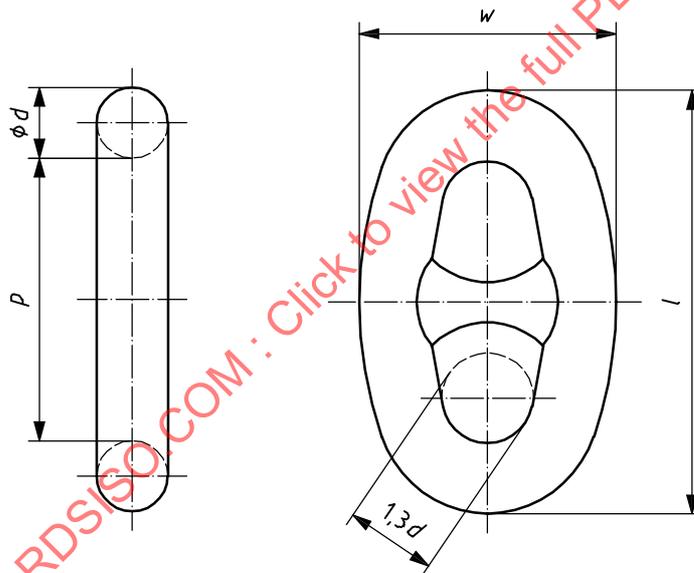
The nominal size of other links, shackles and swivels is designated by the nominal diameter, d , of the common stud link.

The nominal size of a stud-link anchor chain is designated by the nominal diameter of the common stud link.

8 Connections

Examples in the use of connecting chain-shots with joining shackle are shown in Figure 8.

Examples in the use of connecting chain outboard shot to anchor is shown in Figure 9.



Key

d = nominal diameter of common stud link

$l = 6 d$

$p = 4 d$

$w = 3,6 d$

NOTE For nominal dimensions, see Table 1.

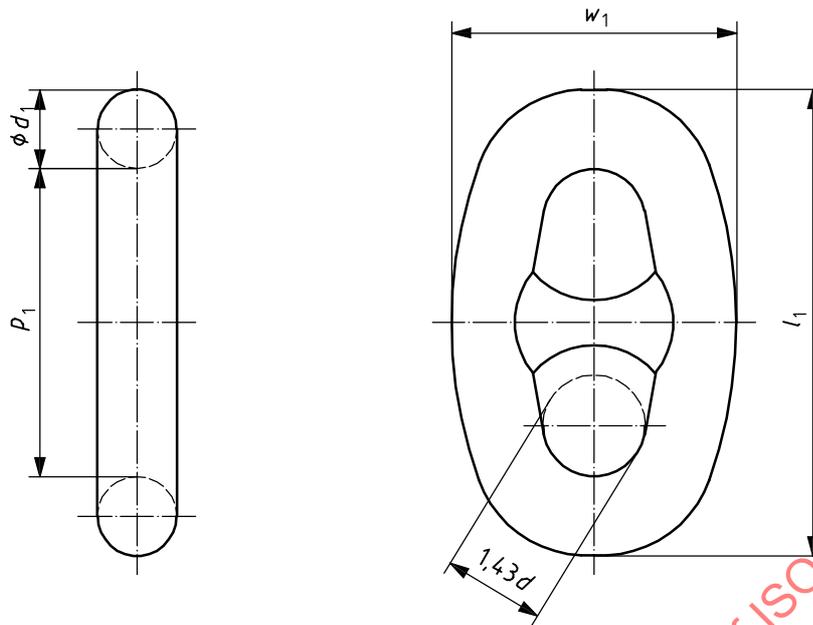
Figure 1 — Common stud link

Table 1 — Nominal dimensions of common stud link

Dimensions in millimetres

Nominal size <i>d</i>	<i>l</i>	<i>p</i>	<i>w</i>
12,5	75	50	45
14	84	56	50
16	96	64	58
17,5	105	70	63
19	114	76	68
20,5	123	82	74
22	132	88	79
24	144	96	86
26	156	104	94
28	168	112	101
30	180	120	108
32	192	128	115
34	204	136	122
36	216	144	130
38	228	152	137
40	240	160	144
42	252	168	151
44	264	176	158
46	276	184	166
48	288	192	173
50	300	200	180
52	312	208	187
54	324	216	194
56	336	224	202
58	348	232	209
60	360	240	216
62	372	248	223
64	384	256	230
66	396	264	238
68	408	272	245

Nominal size <i>d</i>	<i>l</i>	<i>p</i>	<i>w</i>
70	420	280	252
73	438	292	263
76	456	304	274
78	468	312	281
81	486	324	292
84	504	336	302
87	522	348	313
90	540	360	324
92	552	368	331
95	570	380	342
97	582	388	349
100	600	400	360
102	612	408	367
105	630	420	378
107	642	428	385
111	666	444	400
114	684	456	410
117	702	468	421
120	720	480	432
122	732	488	439
124	744	496	446
127	762	508	457
130	780	520	468
132	792	528	475
137	822	548	493
142	852	568	511
147	882	588	529
152	912	608	547
157	942	628	565
162	972	648	583



Key

d = nominal diameter of common stud link

d_1 = nominal diameter of enlarged stud link = $1,1 d$

$l_1 = 6 d_1 \approx 6,6 d$

$p_1 = 4 d_1 \approx 4,4 d$

$w_1 = 3,6 d_1 \approx 3,96 d$

NOTE For nominal dimensions, see Table 2.

Figure 2 — Enlarged stud link

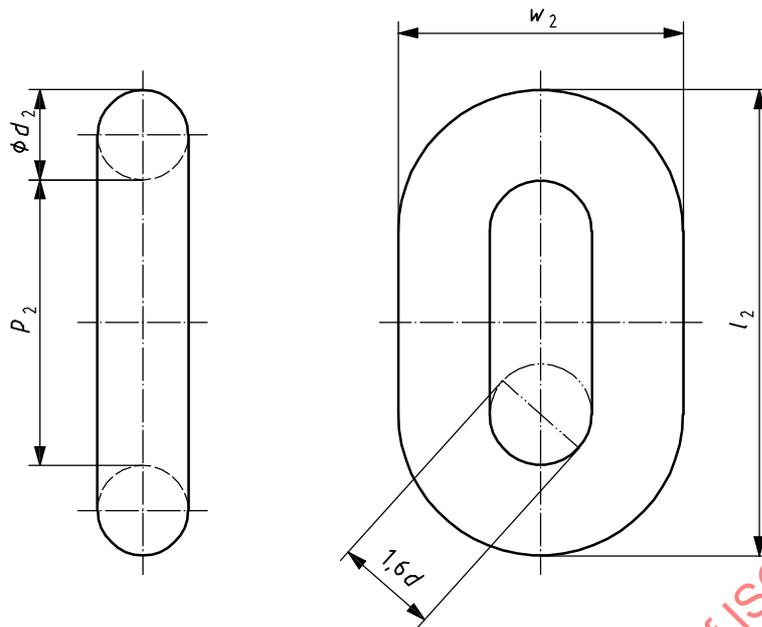
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Table 2 — Nominal dimensions of enlarged stud link

Dimensions in millimetres

Nominal size (d , common stud link)	d_1	l_1	p_1	w_1
12,5	14	84	56	50
14	16	96	64	58
16	17,5	105	70	63
17,5	19	114	76	68
19	20,5	123	82	74
20,5	22	132	88	79
22	24	144	96	86
24	26	156	104	94
26	28	168	112	101
28	30	180	120	108
30	34	204	136	122
32	36	216	144	130
34	38	228	152	137
36	40	240	160	144
38	42	252	168	151
40	44	264	176	158
42	46	276	184	166
44	48	288	192	173
46	50	300	200	180
48	54	324	216	194
50	56	336	224	202
52	58	348	232	209
54	60	360	240	216
56	62	372	248	223
58	64	384	256	230
60	66	396	264	238
62	68	408	272	245
64	70	420	280	252
66	73	438	292	263
68	76	456	304	274

Nominal size (d , common stud link)	d_1	l_1	p_1	w_1
70	78	468	312	281
73	81	486	324	292
76	84	504	336	302
78	87	510	340	306
81	90	540	360	324
84	92	552	368	331
87	97	582	388	349
90	100	600	400	360
92	102	612	408	367
95	105	630	420	378
97	107	642	428	385
100	111	666	444	400
102	111	672	448	403
105	114	684	456	410
107	117	702	468	421
111	122	732	488	439
114	124	744	496	446
117	130	780	520	468
120	132	792	528	475
122	137	822	548	493
124	137	822	548	493
127	142	852	568	511
130	142	852	568	511
132	147	882	588	529
137	152	912	608	547
142	157	942	628	565
147	162	972	648	583
152	167	1 002	668	601
157	173	1 038	692	623
162	178	1 068	712	641



Key

d = nominal diameter of common stud link

d_2 = nominal diameter of end link = $1,2 d$ ($d_2 = 1,2 d$)

$l_2 = p_2 + 2 d_2 = 6,75 d$

$p_2 = 3,65 d_2 \approx 4,35 d$

$w_2 = 3,3 d_2 \approx 4 d$

NOTE For nominal dimensions, see Table 3.

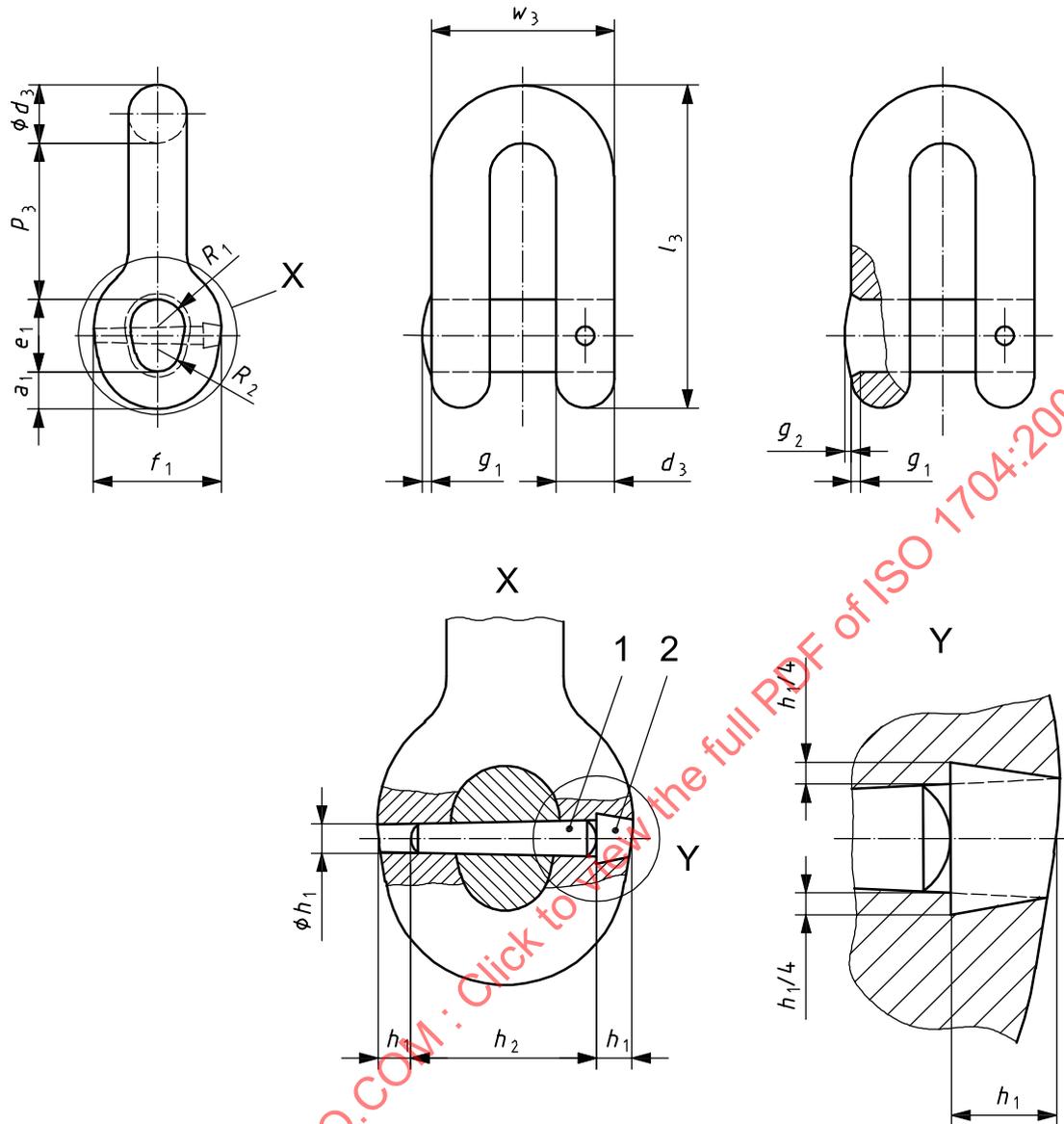
Figure 3 — End link

Table 3 — Nominal dimensions of end link

Dimensions in millimetres

Nominal size (d , common stud link)	d_2	l_2	p_2	w_2
12,5	15	84	54	50
14	17	95	61	56
16	19	108	70	64
17,5	21	117	76	70
19	23	128	83	76
20,5	25	138	89	82
22	26	149	96	88
24	29	162	104	96
26	31	176	113	104
28	34	189	122	112
30	36	203	131	120
32	38	216	139	128
34	41	230	148	136
36	43	243	157	144
38	46	257	165	152
40	48	270	174	160
42	50	284	183	168
44	53	297	191	176
46	55	311	200	184
48	58	324	209	192
50	60	338	218	200
52	62	351	226	208
54	65	365	235	216
56	67	378	244	224
58	70	392	252	232
60	72	405	261	240
62	74	419	270	248
64	77	432	278	256
66	79	446	287	264
68	82	459	296	272

Nominal size (d , common stud link)	d_2	l_2	p_2	w_2
70	84	473	305	280
73	88	493	318	292
76	91	513	331	304
78	94	527	339	312
81	97	547	352	324
84	101	567	365	336
87	104	587	378	348
90	108	608	392	360
92	110	621	400	368
95	114	641	413	380
97	116	655	422	388
100	120	675	435	400
102	122	689	444	408
105	126	709	457	420
107	128	722	465	428
111	133	749	483	444
114	137	770	496	456
117	140	790	509	468
120	144	810	522	480
122	146	824	531	488
124	149	837	539	496
127	152	857	552	508
130	156	878	566	520
132	158	891	574	528
137	164	925	596	548
142	170	959	618	568
147	176	992	639	588
152	182	1 026	661	608
157	188	1 060	683	628
162	194	1 094	705	648



Key

- 1 retaining pin
- 2 dovetail chamber

d = nominal diameter of common stud link

d_3 = nominal diameter of joining shackle = $1,3 d$

$l_3 = 7,1d$

$p_3 = l_3 - (d_3 + a_1 + e_1) = 3,4 d$

$w_3 = 4 d$

$a_1 = 0,8 d$

$e_1 = 1,6 d$

$f_1 = 2,8 d$

$g_1 = 0,2 d$

$g_2 = 0,1 d$

h_1 = nominal diameter of taper pin

h_2 = nominal length of taper pin

$R_1 = 0,6 d$

$R_2 = 0,5 d$

NOTE 1 For nominal dimensions, see Table 4.

NOTE 2 For taper of retaining pin, see 4.2.5.

Figure 4 — “D” type joining shackle

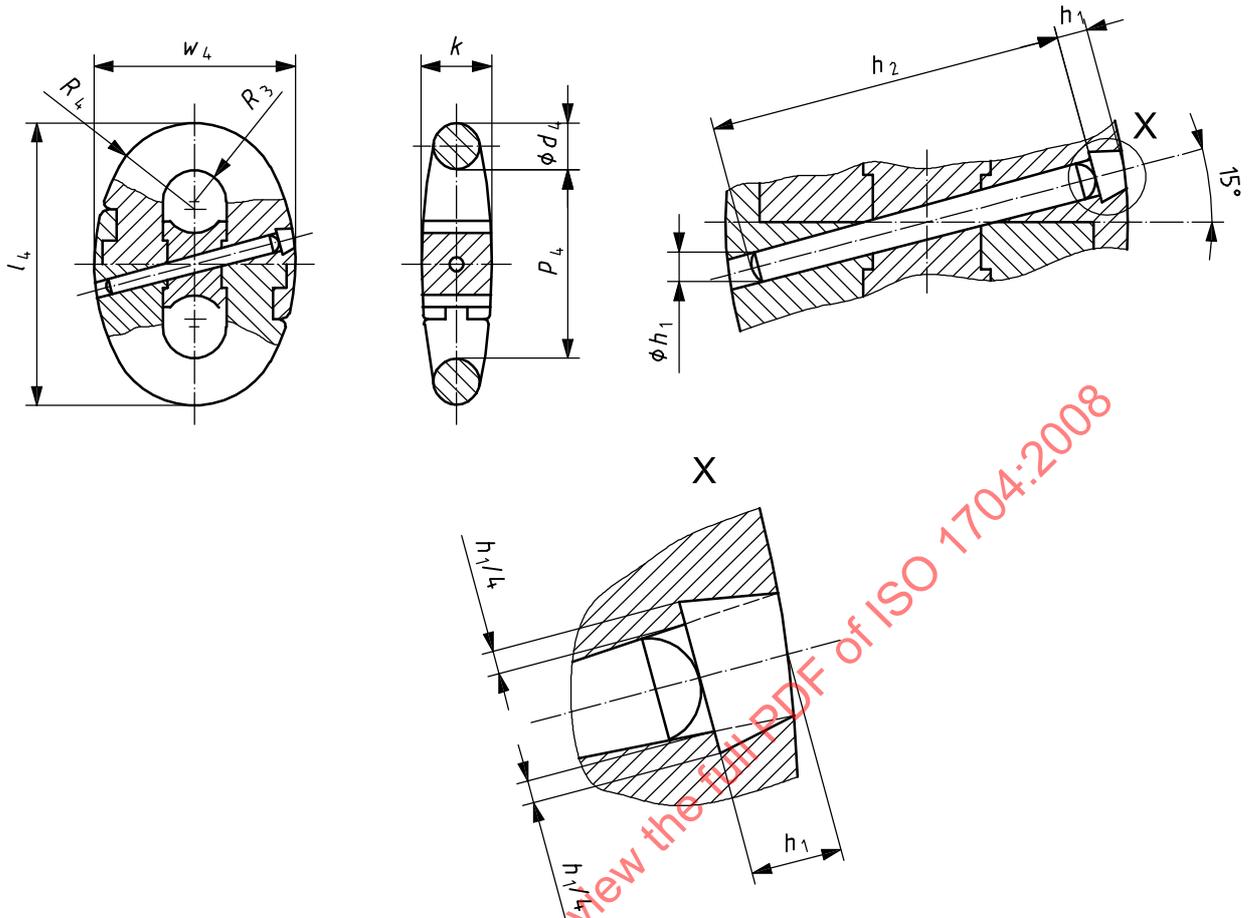
Table 4 — Nominal dimensions of “D” type joining shackle

Dimensions in millimetres

Nominal size (<i>d</i> , common stud link)	<i>d</i> ₃	<i>l</i> ₃	<i>p</i> ₃	<i>w</i> ₃	<i>a</i> ₁	<i>e</i> ₁	<i>f</i> ₁	<i>g</i> ₁	<i>g</i> ₂	<i>h</i> ₁	<i>h</i> ₂	2 <i>R</i> ₁	2 <i>R</i> ₂	
12,5	16	89	43	50	10	20	35	2,5	1,3	4	25	15	12,5	
14	18	99	48	56	11	22	39	3	1,4	6	28	17	14	
16	21	114	54	64	13	26	45	3	1,6		32	19	16	
17,5	23	124	60	70	14	28	49	3,5	1,8		38	21	17,5	
19	25	135	65	76	15	30	53	4	2		40	23	19	
20,5	27	146	70	82	16	33	57	4	2		45	25	20,5	
22	29	156	75	88	18	35	62	4,4	2,2		50	26	22	
24	31	170	82	96	19	38	67	5	2,4		55	29	24	
26	34	185	88	104	21	42	73	5	2,6		60	31	26	
28	36	199	95	112	22	45	78	5,6	2,8		65	34	28	
30	39	213	102	120	24	48	84	6	3		70	36	30	
32	42	227	109	128	26	51	90	6,4	3,2		80	38	32	
34	44	241	116	136	27	54	95	7	3,4		85	41	34	
36	47	256	122	144	29	58	101	7	3,6		10	80	43	36
38	49	270	129	152	30	61	106	7,6	3,8			85	46	38
40	52	284	136	160	32	64	112	8	4			90	48	40
42	55	298	143	168	34	67	118	8,4	4,2			100	50	42
44	57	312	150	176	35	70	123	9	4,4	100		53	44	
46	60	327	156	184	37	74	129	9	4,6	110		55	46	
48	62	341	163	192	38,5	77	134	9,5	4,8	110		58	48	
50	65	355	170	200	40	80	140	10	5	115		60	50	
52	68	369	177	208	42	83	146	10,4	5,2	120	62	52		
54	70	383	184	216	43	86	151	11	5,4	125	65	54		
56	73	398	190	224	45	90	157	11	5,6	12	130	67	56	
58	75	412	197	232	46	93	162	11,6	5,8		140	70	58	
60	78	426	204	240	48	96	168	12	6		140	72	60	
62	81	440	211	248	50	99	174	12,4	6,2		150	74	62	
64	83	454	218	256	51	102	179	13	6,4		150	77	64	
66	86	469	224	264	53	106	185	13	6,6		16	150	79	66
68	88	483	231	272	54	109	190	13,6	6,8			160	82	68

Table 4 (continued)

Nominal size (<i>d</i> , common stud link)	<i>d</i> ₃	<i>l</i> ₃	<i>p</i> ₃	<i>w</i> ₃	<i>a</i> ₁	<i>e</i> ₁	<i>f</i> ₁	<i>g</i> ₁	<i>g</i> ₂	<i>h</i> ₁	<i>h</i> ₂	2 <i>R</i> ₁	2 <i>R</i> ₂
70	91	497	238	280	56	112	196	14	7	16	160	84	70
73	95	518	248	292	58	117	204	14,6	7,3		170	88	73
76	99	540	258	304	61	122	213	15	7,6		180	91	76
78	101	554	265	312	62	125	218	15,6	7,8		190	94	78
81	105	575	275	324	65	130	227	16	8		190	97	81
84	109	596	286	336	67	134	235	17	8,4		200	101	84
87	113	618	296	348	70	139	244	17,4	8,7		200	104	87
90	117	639	306	360	72	144	252	18	9		220	108	90
92	120	653	313	368	74	147	258	18,4	9,2		220	110	92
95	124	675	323	380	76	152	266	19	9,5		220	114	95
97	126	689	330	388	78	155	272	19,4	9,7		240	116	97
100	130	710	340	400	80	160	280	20	10		240	120	100
102	133	724	347	408	82	163	286	20,4	10,2	240	122	102	
105	137	746	357	420	84	168	294	21	10,5	260	126	105	
107	139	760	364	428	86	171	300	21,4	10,7	260	128	107	
111	144	788	377	444	89	178	311	22	11	20	260	133	111
114	148	809	388	456	91	182	319	23	11,4		280	137	114
117	152	831	398	468	94	187	328	23,4	11,7		280	140	117
120	156	852	408	480	96	192	336	24	12		300	144	120
122	159	866	415	488	98	195	342	24,5	12,3		300	146	122
124	161	880	422	496	99	198	347	25	12,4		300	149	124
127	165	902	432	508	102	203	356	25,4	12,7		300	152	127
130	169	923	442	520	104	208	364	26	13		320	156	130
132	172	937	449	528	106	211	370	26,4	13,2		320	158	132
137	178	973	466	548	110	219	384	27,5	13,7		25	320	164
142	185	1008	483	568	114	227	398	28,4	14,2	350		170	142
147	191	1044	500	588	118	235	412	29,4	14,7	350		176	147
152	198	1079	517	608	122	243	426	30,4	15,2	350		182	152
157	204	1115	534	628	126	251	440	31,4	15,7	400		188	157
162	211	1150	551	648	130	259	454	32,4	16,2	400		194	162



Key

X = detail of dovetail chamber for retaining pellet

d = nominal diameter of common stud link

d_4 = nominal diameter of Kenter type joining shackle = d

$l_4 = 6 d$

$p_4 = 4 d$

$w_4 = 4,2 d$

h_1 = nominal diameter of taper pin

h_2 = nominal length of taper pin

$k = 1,52 d$

$R_3 = 0,67 d$

$R_4 = 1,83 d$

NOTE 1 For nominal dimensions, see Table 5.

NOTE 2 For taper of retaining pin, see 4.2.5.

Figure 5 — Kenter type joining shackle

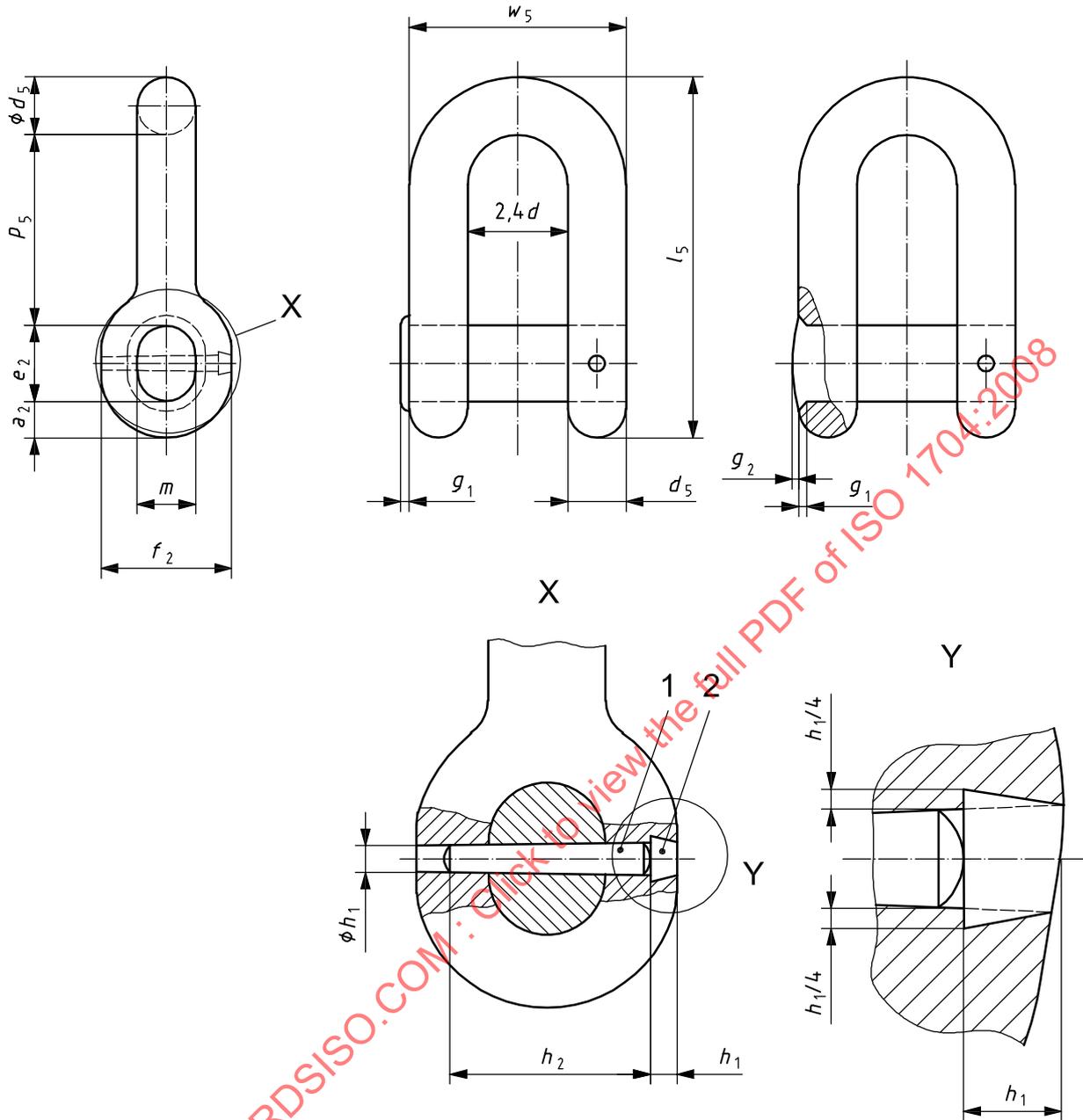
Table 5 — Nominal dimensions of Kenter type joining shackle

Dimensions in millimetres

Nominal size (<i>d</i> , common stud link = <i>d</i> ₄)	<i>l</i> ₄	<i>p</i> ₄	<i>w</i> ₄	<i>h</i> ₁	<i>h</i> ₂	<i>k</i>	<i>R</i> ₃	<i>R</i> ₄	
12,5	75	50	53	4	45	19	8,5	23	
14	84	56	59	6	45	21	9,5	26	
16	96	64	67		55	24	10,5	29	
17,5	105	70	74		60	27	12	32	
19	114	76	80		65	29	13	35	
20,5	123	82	86		70	31	14	38	
22	132	88	92		75	33	15	40	
24	144	96	101	10	80	36	16	44	
26	156	104	109		85	40	17,5	48	
28	168	112	118		95	43	19	51	
30	180	120	126		100	46	20	55	
32	192	128	134		110	49	21,5	59	
34	204	136	143		115	52	23	62	
36	216	144	151	12	120	55	24	66	
38	228	152	160		130	58	25	70	
40	240	160	168		140	61	27	73	
42	252	168	176		140	64	28	77	
44	264	176	185		150	67	29	81	
46	276	184	193		160	70	31	84	
48	288	192	202	16	160	73	32	88	
50	300	200	210		170	76	34	92	
52	312	208	218		180	79	35	95	
54	324	216	227		180	82	36	99	
56	336	224	235		190	85	38	102	
58	348	232	244		200	88	39	106	
60	360	240	252	20	200	91	40	110	
62	372	248	260		220	94	42	113	
64	384	256	269		220	97	43	117	
66	396	264	277		220	100	44	121	
68	408	272	286		25	220	103	46	124

Table 5 (continued)

Nominal size (d , common stud link = d_4)	l_4	p_4	w_4	h_1	h_2	k	R_3	R_4	
70	420	280	294	25	240	106	47	128	
73	438	292	307		260	111	49	134	
76	456	304	319		260	115	51	139	
78	468	312	328		260	119	52	143	
81	486	324	340	30	280	123	54	148	
84	504	336	353		280	128	57	154	
87	522	348	365		300	132	58	159	
90	540	360	378		300	137	60	165	
92	552	368	386		320	140	62	168	
95	570	380	399		320	144	64	174	
				35					
97	582	388	407		340	147	65	178	
100	600	400	420		340	152	67	183	
102	612	408	428		360	155	68	187	
105	630	420	441		360	160	70	192	
107	642	428	449		360	163	72	196	
111	666	444	466	40	380	169	74	203	
114	684	456	479		380	173	76	207	
117	702	468	491		400	178	78	214	
120	720	480	504		400	182	80	220	
122	732	488	512		420	185	82	223	
124	744	496	521		420	188	83	227	
127	762	508	533	440	193	85	232		
130	780	520	546	50	440	198	87	238	
132	792	528	554		460	201	88	242	
137	822	548	757		460	208	92	251	
142	852	568	596		480	216	95	260	
147	882	588	617		500	223	98	269	
152	912	608	638		520	231	102	278	
157	942	628	659	540	239	105	287		
162	972	648	680	560	246	109	296		



Key

- 1 retaining pin
- 2 dovetail chamber

d = nominal diameter of common stud link

d_5 = nominal diameter of end shackle = $1,4 d$

$l_5 = 8,7 d$

$p_5 = l_5 - (d_5 + a_2 + e_2) = 4,6 d$

$w_5 = 5,2 d$

$a_2 = 0,9 d$

$e_2 = 1,8 d$

$f_2 = 3,1 d$

$g_1 = 0,2 d$

$g_2 = 0,1 d$

$m = 1,4 d$

h_1 = nominal diameter of taper pin

h_2 = nominal length of taper pin

NOTE 1 For nominal dimensions, see Table 6.

NOTE 2 For taper of retaining pin, see 4.2.5.

Figure 6 — End shackle

Table 6 — Nominal dimensions of end shackle

Dimensions in millimetres

Nominal size (<i>d</i> , common stud link)	<i>d</i> ₅	<i>l</i> ₅	<i>p</i> ₅	<i>w</i> ₅	<i>a</i> ₂	<i>e</i> ₂	<i>f</i> ₂	<i>g</i> ₁	<i>g</i> ₂	<i>h</i> ₁	<i>h</i> ₂	<i>m</i>
12,5	18	109	58	65	11	23	39	2,5	1,3	4	28	18
14	20	122	64	73	13	25	43	3	1,4	6	30	20
16	22	139	74	83	14	29	50	3	1,6		35	22
17,5	25	152	81	91	16	32	54	3,5	1,8		40	25
19	27	165	87	99	17	34	59	4	1,9		45	27
20,5	29	178	94	107	19	37	64	4	2		45	29
22	31	191	101	114	20	40	68	4,4	2,2		50	31
24	34	209	110	125	22	43	74	5	2,4		55	34
26	36	226	120	135	23	46	81	5	2,6		60	37
28	39	244	129	146	25	50	87	5,6	2,8		70	39
30	42	261	138	156	27	54	93	6	3		75	42
32	45	278	147	166	29	58	99	6,4	3,2		80	45
34	48	296	156	177	31	61	105	7	3,4		85	48
36	50	313	166	187	32	65	112	7	3,6		85	50
38	53	331	175	198	34	69	118	7,6	3,8		90	53
40	56	348	184	208	36	72	124	8	4		95	56
42	59	365	193	218	38	76	130	8,4	4,2		100	59
44	62	383	202	229	40	79	136	9	4,4	110	62	
46	64	400	212	239	41	83	143	9	4,6	115	64	
48	67	418	221	250	43	86	149	9,6	4,8	115	67	
50	70	435	230	260	45	90	155	10	5	120	70	
52	73	452	239	270	47	93	161	10,4	5,2	125	73	
54	76	470	248	281	49	97	167	11	5,4	130	76	
56	78	487	258	291	50	101	174	11	5,6	140	78	
58	81	505	267	302	52	104	180	11,6	5,8	140	81	
60	84	522	276	312	54	108	186	12	6	150	84	
62	87	539	285	322	56	112	192	12,4	6,2	160	87	
64	90	557	294	333	58	115	198	13	6,4	160	90	
66	92	574	304	343	59	119	205	13	6,6	160	92	

Table 6 (continued)

Nominal size (<i>d</i> , common stud link)	<i>d</i> ₅	<i>l</i> ₅	<i>p</i> ₅	<i>w</i> ₅	<i>a</i> ₂	<i>e</i> ₂	<i>f</i> ₂	<i>g</i> ₁	<i>g</i> ₂	<i>h</i> ₁	<i>h</i> ₂	<i>m</i>	
68	95	592	313	354	61	122	211	13,6	6,8	16	160	95	
70	98	609	322	364	63	126	217	14	7		170	98	
73	102	635	336	380	66	131	226	14,6	7,3		180	102	
76	106	661	350	395	68	137	236	15	7,6		190	106	
78	109	679	359	406	70	140	242	15,6	7,8		190	109	
81	113	705	373	421	73	146	251	16	8		200	113	
84	118	731	386	437	76	151	260	17	8,4		200	118	
87	122	757	400	452	78	157	270	17,4	8,7		220	122	
90	126	783	414	468	81	162	279	18	9		220	126	
92	129	800	423	478	83	166	285	18,4	9,2		240	129	
95	133	827	437	494	86	171	295	19	9,5		240	133	
97	136	844	446	504	87	175	301	19,4	9,7		240	136	
100	140	870	460	520	90	180	310	20	10	240	140		
102	143	887	469	530	92	184	316	20,4	10,2	260	143		
105	147	914	483	546	95	189	326	21	10,5	260	147		
107	150	931	492	556	96	193	332	21,4	10,7	260	150		
111	155	966	511	577	100	199	344	22	11	20	280	155	
114	160	992	524	593	103	205	353	23	11,4		280	160	
117	164	1018	538	608	105	211	363	23,4	11,7		300	164	
120	168	1044	552	624	108	216	372	24	12		300	168	
122	171	1061	560	634	110	220	378	24,4	12,2		320	171	
124	174	1079	570	645	112	223	384	25	12,4		320	174	
127	178	1105	584	660	114	229	394	25,4	12,7		320	178	
130	182	1131	598	676	117	234	403	26	13		320	182	
132	185	1148	607	686	119	238	409	26,4	13,2		320	185	
137	192	1192	630	712	123	247	425	27,4	13,7	25	350	192	
142	199	1235	653	738	128	256	440	28,4	14,2		350	199	
147	206	1279	676	764	132	265	456	29,4	14,7		350	206	
152	213	1322	699	790	137	274	471	30,4	15,2		400	213	
157	220	1366	722	816	141	283	487	31,4	15,7		400	220	
162	227	1409	745	842	146	292	502	32,4	16,2		400	227	