



**SLOVENSKI STANDARD**  
**SIST EN 1123-2:2000**

**01-november-2000**

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**Vzdolžno varjene jeklene cevi in spojniki, vroče galvanizirani, z obojko, za sisteme za odpadno vodo - 2. del: Mere**

Pipes and fittings of longitudinally welded hot-dip galvanized steel pipes with spigot and socket for waste water systems - Part 2: Dimensions

Rohre und Formstücke aus längsnahtgeschweißtem, feuerverzinktem Stahlrohr mit Steckmuffe für Abwasserleitungen - Teil 2: Maße

Tubes et raccords de tube soudés longitudinalement en acier galvanisé a chaud, a manchon enfichable pour réseaux d'assainissement - Partie 2: Dimensions

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**Ta slovenski standard je istoveten z: EN 1123-2:1999**

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**ICS:**

77.140.75	Jeklene cevi in cevni profili za posebne namene	Steel pipes and tubes for specific use
93.030	Zunanji sistemi za odpadno vodo	External sewage systems

**SIST EN 1123-2:2000**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
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**EN 1123-2**

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Descriptors: water removal, sewage, water pipelines, non-pressure pipes, steel pipes, welded tubes, pipe fittings, pipe sockets, steels, hot dip galvanizing, dimensions, dimensional tolerances, dimensional deviations

English version

**Pipes and fittings of longitudinally welded hot-dip galvanized steel pipes with spigot and socket for waste water systems - Part 2: Dimensions**

Tubes et raccords de tube soudés longitudinalement en acier galvanisé à chaud, à manchon enfichable pour réseaux d'assainissement - Partie 2: Dimensions

Rohre und Formstücke aus längsnahtgeschweißtem, feuerverzinktem Stahlrohr mit Steckmuffe für Abwasserleitungen - Teil 2: Maße

This European Standard was approved by CEN on 16 December 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165 "Waste water engineering", 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 July 1999, and conflicting national standards shall be withdrawn at the latest by July 1999.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

Part 1 of the European Standard for longitudinally welded, hot-dip galvanized steel pipes contains requirements, testing and quality control of components covered by all parts of EN 1123.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This standard applies to pipes and fittings of longitudinally welded, hot-dip galvanized steel pipes with spigot and socket for waste water systems.

It specifies dimensions and tolerances for pipes, fittings, pipe connectors and seals and establishes a system of designations for the different pipe and fitting types that conform to the stated requirements.

This standard is only valid in connection with EN 1123-1.

This standard does not apply to the marking of products. EN 1123-1 applies to the marking.

## 2 Normative references [standards.iteh.ai](http://standards.iteh.ai)

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 295

Vitrified clay pipes and fittings and pipe joints for drains and sewers

prEN 877

Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings - Requirements, test methods and quality assurance

EN 1123-1:1999

Pipes and fittings of longitudinally welded, hot-dip galvanized steel pipes with spigot and socket for waste water systems - Part 1: Requirements, testing, quality control

prEN 1329

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Unplasticized poly(vinylchloride) (PVC-U)

prEN 1451

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP)

prEN 1453

Plastics piping systems with structured-wall pipes for soil and waste discharge (low and high temperature) inside buildings - Unplasticized poly(vinyl chloride) (PVC-U)

prEN 1455

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Acrylonitrile-butadiene-styrene (ABS)

prEN 1519

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure -

Polyethylene (PE)

prEN 1565

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Styrene-Copolymer-Blends (SAN + PVC)

prEN 1566

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Chlorinated poly(vinyl chloride) (PVC-C)

### 3 Definitions

For application of this standard, the definitions of EN 1123-1 apply.

### 4 Symbols

DN/ID Nominal size with regard to the inside diameter

DN/OD Nominal size with regard to the outside diameter

$d$  Diameter

$t$  Socket depth

$s$  Wall thickness

$l$  Effective length

$r$  Radius

$\alpha$  Angle

$e$  Off-set dimension (shift)

$t_s$  Least insertion depth

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### 5 Dimensions

SIST EN 1123-2:2000

#### 5.1 General and tolerances

The figures in this standard are simplified drawings. The dimensions given shall be followed.

Where no dimensions are given in this standard, tolerances for linear dimensions shall be followed according to table 1, tolerances for radii shall be followed according to table 2, tolerances for angular dimensions referring to the smaller side length shall be followed according to table 3 and tolerances for elastomer parts shall be followed according to table 4.

Table 1

Dimensions in millimetres

Dimensional range	Tolerances for linear dimensions
from 0 up to 300	$\pm 5$
more than 300	$\pm 8$

Table 2

Dimensions in millimetres

Dimensional range	Tolerances for radii
more than 26 up to 181	$\pm 3$
more than 181 up to 378	$\pm 4$
more than 378 up to 457	$\pm 5$

Table 3

Side length (referring to the smaller side length) millimetres	Tolerances for angles degrees
more than 10 up to 120	$\pm 3$
more than 120 up to 400	$\pm 2$
above 400	$\pm 1,5$

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Table 4

Dimensions in millimetres

Range of nominal size	Tolerances for elastomer parts	
	form bound (F) in %	form fitting bound (C)
more than 25 up to 40	$\pm 0,6$	$\pm 1,0$
more than 40 up to 63	$\pm 0,8$	$\pm 1,3$
more than 63 up to 100	$\pm 1,0$	$\pm 1,6$
more than 100 up to 160	$\pm 1,3$	$\pm 2,0$
above 160	$\pm 0,8$	by agreement with the manufacturer of the components.

## 5.2 Sockets

The socket dimensions according to figure 1 shall conform to table 5. Fittings are generally fabricated with socket type 1 A if the designation of the fitting does not specify the socket type.

Dimensions not specified shall be chosen appropriately.

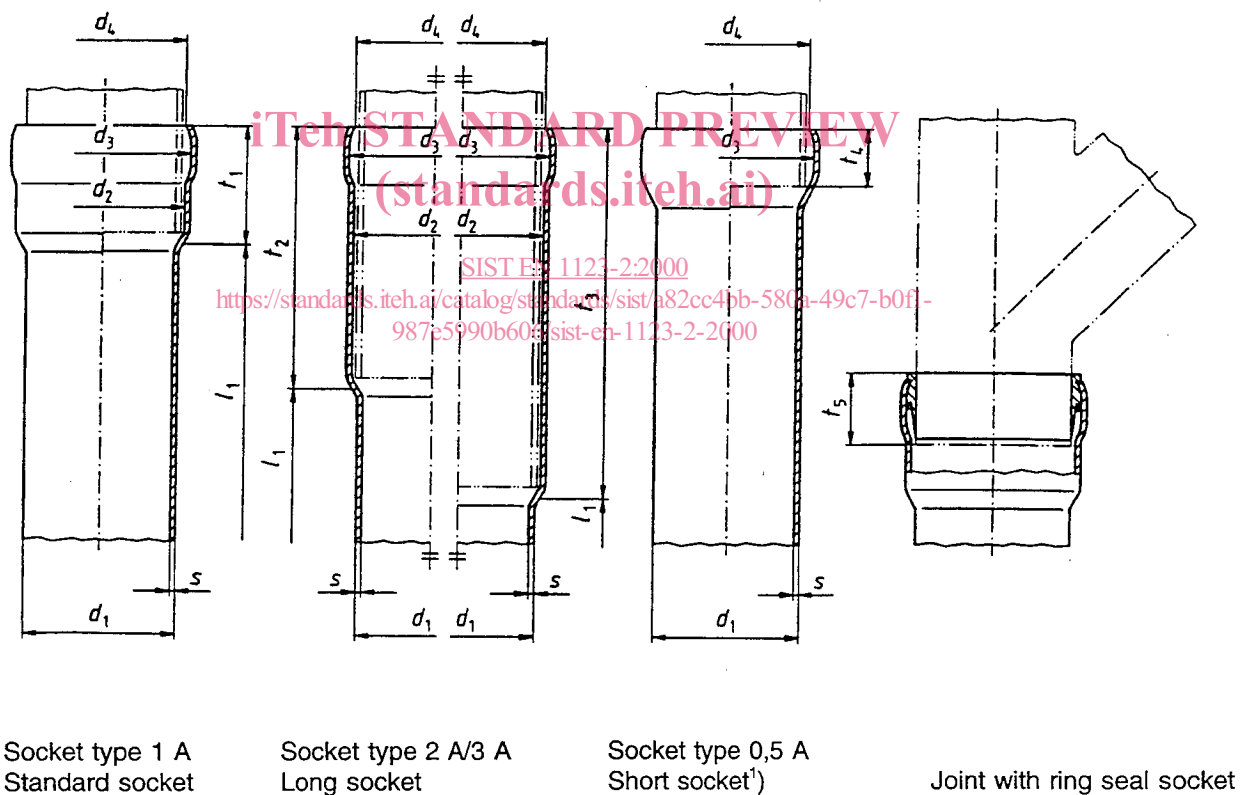


Figure 1: Socket types

<sup>1)</sup> For use of the short socket, national regulations should be taken into account.

Table 5

Dimensions in millimetres

Nominal size DN/ID	Type	$d_1^{2)}$	$s^{3)}$	Socket dimensions									
				$d_2$	$d_3$	$d_4$	Tolerances for $d_1$ to $d_4$	$t_1$	$t_2$	$t_3$	$t_4$ min.	$t_5^{1)}$	Tolerances for $t_1$ to $t_4$
40		42	$1,5 \pm 0,15$	45	48	45	$\pm 0,6$	30	70	100	16	20	$+4$ $-2$
50		53	$1,5 \pm 0,15$	56	60	56	$\pm 0,6$	38	90	130	19	28	$+4$ $-2$
70		73	$1,6 \pm 0,16$	76	81	76	$\pm 0,7$	55	120	175	27	35	$+4$ $-2$
80	A	89	$1,6 \pm 0,16$	92	99	92	$\pm 0,9$	60	130	190	31	40	$+4$ $-2$
80	B	89	$1,8 \pm 0,18$	92	99	92	$\pm 0,9$	60	130	190	31	40	$+4$ $-2$
100		102	$2,0 \pm 0,20$	106	114	107	$\pm 1,0$	70	150	220	38	45	$+4$ $-2$
125		133	$2,5 \pm 0,25$	138	147	140	$\pm 1,3$	75	160	235	41	50	$+4$ $-2$
150		159	$2,5 \pm 0,25$	164	176	168	$\pm 1,6$	80	170	250	46	55	$+4$ $-2$
200		219	$3,0 \pm 0,35$	224	241	227	$\pm 2,2$	120	250	370	76	85	$+4$ $-2$
250	A	273	$3,0 \pm 0,36$	280	298	284	$\pm 2,7$	130	270	400	90	100	$+5$ $-3$
250	B	273	$4,0 \pm 0,45$	280	298	284	$\pm 2,7$	130	270	400	90	100	$+5$ $-3$
300	A	324	$3,0 \pm 0,36$	331	350	336	$\pm 3,2$	130	270	400	90	100	$+5$ $-3$
300	B	324	$4,0 \pm 0,45$	331	350	336	$\pm 3,2$	130	270	400	90	100	$+5$ $-3$

<sup>1)</sup> installation instructions only (necessary least insertion depth for tightness of connection), – except short socket.  
<sup>2)</sup> Pipe ends slightly retracted  
<sup>3)</sup> The indications on wall thickness refer to the ungalvanized pipe.



## 5.3.2 Pipe with two sockets – Shape B 2

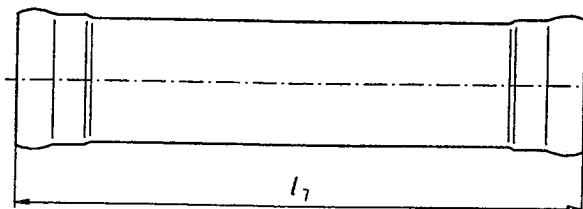


Figure 3: Shape B 2

Designation of a drainage steel pipe (B 2) with standard socket (1 A) of nominal size DN/ID 100 and an effective length  $l_7 = 1000$  mm

Pipe EN 1123-2 – B 2 – 1A – 100 – 1000

Table 7

Dimensions in millimetres

Nominal size DN/ID	Effective length $l_7 \pm 5$						
	250	500	750	1 000	1 500	2 000	3 000
40	250	500	750	1 000	1 500	2 000	3 000
50							
70							
80							
100	-	-	-	-	-	-	-
125							
150							
200							

## 5.4 Bends

If required, type (A) or (B) and the additional corrosion protection (P) according to EN 1123-1 shall be added to the designation (see 5.3).

### 5.4.1 Bend with large radius – Shape C 1

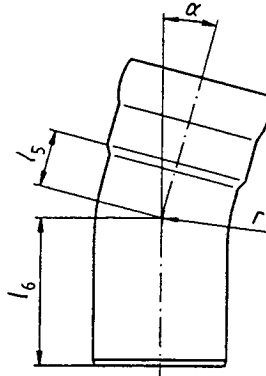


Figure 4: Shape C 1

Designation of a bend (C 1) of nominal size DN/ID 100 and  $\alpha = 45^\circ$  of type A:

Bend EN 1123-2 - C 1 - 100 - 45 A  
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Table 8

Dimensions in millimetres

Nominal size DN/ID	Type	$\alpha = 15^\circ$			$\alpha = 30^\circ$			$\alpha = 45^\circ$			$\alpha = 70^\circ$			$\alpha = 87^\circ$		
		$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$
40	-	67,5	37	67	67,5	46	76	67,5	56	86	67,5	75	105	67,5	92	122
50	-	82,5	53	81	82,5	64	92	82,5	76	104	82,5	100	128	82,5	120	148
70	-	117,5	50	89	117,5	66	105	117,5	83	122	117,5	118	157	117,5	146	185
80	A	133,5	68	98	133,5	86	116	133,5	104	135	133,5	144	173	133,5	177	207
	B	-	25	85	114,5	56	116	114,5	72,5	132,5	114,5	105	165	114,5	134	194
100	A	70	34	104	70	44	114	70	54	124	70	74	144	70	91	161
	B	150	45	115	150	65	135	150	87	157	150	130	200	150	167	237
125	-	200	51	126	200	79	154	200	108	183	200	165	240	200	215	290
150	A	225	55	135	225	85	165	225	118	198	225	183	263	225	239	319
	B	225	55	135	225	60	140	225	83	162	225	125	205	225	170	250
200	A	305	45	165	305	122	227	305	166	270	305	254	360	305	345	450
	B	-	45	165	-	45	165	305	166	270	305	254	360	305	330	435
250	A	-	100	230	-	153	283	381	209	339	381	318	448	381	413	543
	B	-	102	232	-	153	283	381	209	339	381	318	448	381	413	543
300	A	-	110	240	-	173	303	457	240	370	457	371	501	457	485	615
	B	457	112	242	457	173	303	457	239	369	457	370	500	457	484	614

## 5.4.2 Bend with small radius – Shape C 2

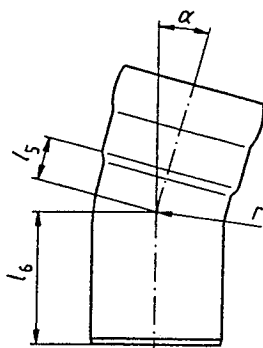


Figure 5: Shape C 2

Designation of a bend (C 2) of nominal size DN/ID 125 and  $\alpha = 45^\circ$  of type B:

Bend EN 1123-2 – C 2 – 125 – 45 B

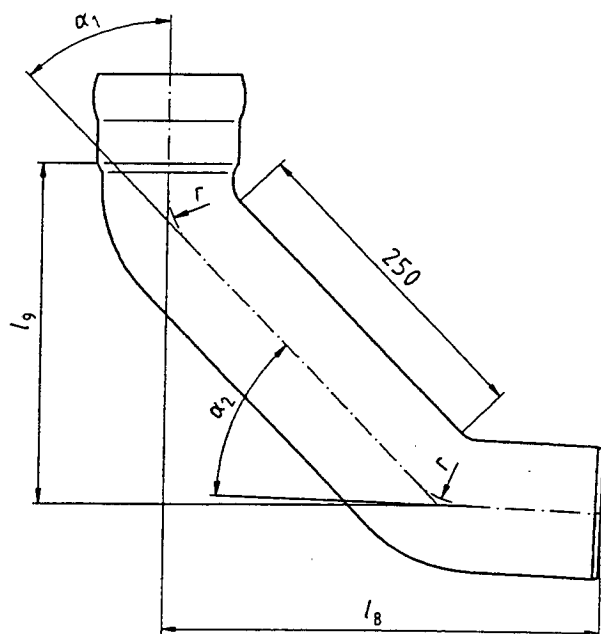
Table 9

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Dimensions in millimetres

Nominal size DN/ID	Type	$\alpha = 15^\circ$			$\alpha = 30^\circ$			$\alpha = 45^\circ$			$\alpha = 70^\circ$			$\alpha = 87^\circ$		
		$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$	$r$	$l_5$	$l_6$
40	-	-	-	-	-	-	-	27	19	65	27	26	72	27	33	79
50	-	-	-	-	-	-	-	35,5	24	79	35,5	35	89	35,5	44	98
70	-	-	-	-	-	-	-	50	32	91	50	47,5	105	50	59	117
80	-	-	-	-	82,5	47	107	82,5	59	119	82,5	83	143	82,5	103	163
100	-	70	34	104	70	44	114	70	54	124	70	74	144	70	91	161
125	A	-	37	112	125	54	129	125	72	147	125	108	183	125	139	214
	B	-	35	110	90	47	122	90	58	135	90	84	161	90	107	184
150	A	-	40	120	150	60	140	150	82	162	150	125	205	150	163	243
	B	-	45	125	150	65	145	150	87	167	150	130	210	150	167	247

## 5.4.3 Bend with stilling section – Shape C 3



**Figure 6: Shape C 3**  
(standards.iteh.ai)

Designation of a bend with stilling section (C 3) of nominal size DN/ID 100 of type A:

Bend EN 1123-2-C3 – 100 A

<https://standards.iteh.ai/catalog/standards/sist/a82cc4bb-580a-49c7-b0f1-987e5990b606/sist-en-1123-2-2000>

**Table 10**

Dimensions in millimetres

Nominal size DN/ID	Type	$\alpha_1$	$\alpha_2$	$r$	$l_8$	$l_9$
80	–	44°	44°	114,5	370	320
100	A			70	331	269
	B			70	335	275
125	A			125	389	323
	B	90	355	290		