INTERNATIONAL STANDARD

ISO 19407

First edition
2023-06

Footwear — Sizing — Conversion of sizing systems

Chaussures — Pointures — Conversion des systèmes de pointures

SIST Preview
(https://ecommerce.sist.si)

ISO 19407:2023
https://ecommerce.sist.si/catalog/standards/sist/ac8767eb-dc46-4cec-bd13-a041c0268a09/iso-19407-2023

Reference number
ISO 19407:2023(E)

© ISO 2023

SIST Preview
(https://ecommerce.sist.si)

ISO 19407:2023
https://ecommerce.sist.si/catalog/standards/sist/ac8767eb-dc46-4cec-bd13-a041c0268a09/iso-19407-2023



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2023 – All rights reserved

Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Size marking **1**
4.1 General 1
4.2 Adults' technical shoe size conversion 1
4.3 Adults' recommended shoe size marking 3
4.4 Children's recommended shoe size marking 3
5 Conversion tables **3**
Bibliography **8**

SIST Preview
(https://ecommerce.sist.si)
ISO 19407:2023
https://ecommerce.sist.si/catalog/standards/sist/ac8767eb-dc46-4cec-bd13-a041c0268a09/iso-19407-2023

© ISO 2023 – All rights reserved

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

SIST Preview
(standards.iteh.ai)

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

ISO 19407:2023
https://standards.iteh.ai/catalog/standards/sist/dc87b7e0-dc46-4cec-bd13-a041c0268a09/iso-19407-2023

This document was prepared by Technical Committee ISO/TC 137, *Footwear sizing designations and marking systems*.

This first edition of ISO 19407 cancels and replaces ISO/TS 19407:2015, which has been technically revised.

The main changes are as follows:

— Subclause 4.3 update.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

© ISO 2023 – All rights reserved

Footwear — Sizing — Conversion of sizing systems

1 Scope

This document provides three shoe size conversion tables covering the major shoe sizing systems (Mondopoint, European and United Kingdom), as well as China, Japan, the Republic of Korea and United States. The tables are based on measurement of foot length, this being the logical starting point for any shoe size marking system. The tables contain the following information:

Table 1 — Adults' technical shoe size conversion;

Table 2 — Adults' recommended shoe size marking (simplified);

Table 3 — Children's size conversion.

NOTE Due to the different ways in which each system has been developed and interpreted over many years without being formalized and the absence of solution to the problem of shoe size conversions, Tables 1 and 2 provide a guideline which can benefit the consumer.

2 Normative references

There are no normative references in this document.

SIST Preview
(https://ecommerce.sist.si)

3 Terms and definitions

No terms and definitions are listed in this document.

ISO 19407:2023
https://standards.iteh.ai/catalog/standards/sist/dc46-4cec-bd13-e041e0268a09/iso-19407-2023

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Size marking

4.1 General

There are three main sizing systems (Mondopoint, European and UK). As there are fundamental differences between them, they have been aligned to a common denominator: foot length. Foot length is deemed to be the key reference point when fitting footwear. Customers' foot length can be readily measured and shoes marked with a designation that indicates the appropriate shoe size that will accommodate their foot length. Customers expect to buy the same size of footwear irrespective of the footwear type or style.

NOTE To check that size marking is correct requires a practical fit assessment of footwear whereby subjects having appropriate foot lengths for the marked size on the footwear and the available toe allowance and foot width allowance is assessed for satisfactory fit. This document, however, does not assess the overall fitting properties of footwear, i.e. it does not cover width, volume, toe depth, etc.

4.2 Adults' technical shoe size conversion

a) The Mondopoint system is defined in ISO 9407 and is based on foot length. The size grading intervals used with Mondopoint are given in DIN 66074-2:1975 as 5 mm (Range 1) or 7,5 mm (Range 2), both starting at zero. In practice, 10 mm intervals are commonly referred to as whole

© ISO 2023 – All rights reserved

sizes and 5 mm intervals as half sizes. Intervals of 7,5 mm are used mainly for specialized footwear. China, Japan and the Republic of Korea use the Mondopoint system for length designation; Japan sometimes expresses size in centimetres rather than millimetres.

NOTE 1 Some footwear is marked with a 'CM' or CMS' size marking; this usually indicates a Mondopoint size in centimetres rather than millimetres though it is sometimes used to indicate last length.

b) The European system (EUR) (previously known as Paris Points, French or Continental) is based on a size grading interval of 6,67 mm, starting at zero. This system can be interpreted as being based on last length or foot length depending on the country of origin, resulting in differences in shoe size markings.

c) The United Kingdom system (UK) is based on a size grading interval of 8,47 mm, starting at 101,6 mm (4 inches or equivalent to 12 size grading intervals). The first 13 sizes are referred to as children's sizes; the scale then re-starts at size 1 for larger sizes. This system was originally developed with regard to shoe or last length but subsequently redefined in terms of foot length.

d) The United States system (US) is based on a size grading interval of 8,47 mm, starting at 99,5 mm ($3\frac{11}{12}$ inches). The first 13 sizes are referred to as children's sizes; the scale then re-starts at size 1 for larger sizes. In practice, however, the US system corresponds directly to the UK system but with the addition of an arbitrary off-set of one size difference for men's footwear and usually two sizes difference for women's footwear.

Table 1 gives precise conversion data utilizing mathematical relationships between the different scales based on an understanding of how the systems are generally implemented in practice.

SIST Preview
(https://ecommerce.sist.si)

A UK adult size is calculated from the foot length as:

$$\frac{l_f + (2 \times 8{,}47)}{8{,}47} - 25$$

ISO 19407:2023
https://ecommerce.sist.si/catalog/standards/sist/ac8767eb-dc46-4cec-bd13-a041c0268a09/iso-19407-2023

where

l_f is foot length;

25 ≡ 12 sizes plus 13 children sizes, and 12 sizes ≡ 101,6 mm or 4 inches.

An EUR size is calculated from foot length as:

$$\frac{l_f + (2 \times 6{,}67)}{6{,}67}$$

In both cases the difference between foot length and shoe or last length is taken as being empirically equivalent to two sizes (two UK sizes or two EUR sizes respectively).

NOTE 2 An alternative approach to the European system, which is in use but not adopted here, is based on a 5 % difference between foot length and last length as opposed to a two-grade interval difference. The two approaches give very similar size conversions to the Mondopoint and UK systems for sizes 38 to 46 but differ by approximately half a European size at the smallest and largest sizes.

Column 1 gives the exact foot length values for EUR and UK whole and half sizes, plus Mondopoint standard values (Ranges 1 and 2) where no EUR or UK foot length value lies within ± 0,5 mm. Columns 6 and 7 indicate the effective last lengths that can be associated with each foot length. The actual last length will usually be greater than the effective last length due to toe shape/fashion design (see ISO 19408).

NOTE 3 Some customers can be surprised to see the EUR/UK size conversions given here and believe that the EUR size markings could be increased by half a size against the UK scale. For example, Table 2 shows 4 UK ≡ 36,5 EUR and 8 UK ≡ 41,5 EUR, while footwear is often labelled 4 UK/37 EUR and 8 UK/42 EUR. However, Tables 1 and 2 are considered more technically correct.

© ISO 2023 – All rights reserved

4.3 Adults' recommended shoe size marking

To simplify Table 1 for the practical requirement of shoe labelling while retaining the highest degree of accuracy based on foot length requires a knowledge of which system was used to manufacture and grade the footwear.

Table 2 therefore gives the most accurate size conversions possible based on each of the three main sizing systems (Mondopoint, EUR or UK). The size conversions can differ from the sizes given in Table 1 as per specific foot size data, target market and purchasers requirements. However, even in Table 2, approximate size conversions had to be used because the fundamental difference in size grading interval means that exact size conversions cannot be given to whole or half sizes. It is suggested that shoe labels also reflect this information, for example, by use of bold font to indicate the size grading system used to manufacture the footwear, with the converted sizes following in plain font:

Women's	**Mondo**	EUR	UK	US
	240	38	5,5	7,5

Men's	**EUR**	Mondo	UK	US
	41	260	7,5	8,5

NOTE The wearer will choose whichever size suits their personal preference based more specifically on the foot comfort and health.

SIST Preview
(https://ecommerce.sist.si)

4.4 Children's recommended shoe size marking

Shoe size and effective last length are based on foot length plus a toe allowance of 8 % of foot length.

The US system is based on the UK system but with the addition of an arbitrary offset of usually half a size difference for children's footwear.

ISO 19407:2023
https://ecommerce.sist.si/catalog/standards/sist/ac8767eb-de46-4cec-bd13-a041c0268a09/iso-19407-2023

5 Conversion tables

Table 1 — Adults' technical shoe size conversion

Foot length mm [a]	**Mondopoint, China, the Republic of Korea and Japan**		**EUR**	**UK**	**Effective last length** mm [b c]	
	Range 1 (5 mm)	**Range 2** (7,5 mm)	(6,67 mm) [d]	(8,47 mm) [d]	**Min.**	**Max.**
210,0	210					
211,7				2	219	231
213,4			34		220	232
215,0	215				222	234
215,9				2,5	223	237
216,8			34,5		224	236
217,5		217,5			225	237

[a] Footwear is generally expected to accommodate a range of foot lengths equal to $l_f \pm \frac{i_{sg}}{2}$ where l_f is foot length and i_{sg} is size grading interval (see 4.2).

[b] Effective last length as defined in ISO 19408.

[c] Specialized footwear might fall outside this range.

[d] Size grading interval for whole sizes.

© ISO 2023 – All rights reserved

Table 1 *(continued)*

Foot length mm [a]	Mondopoint, China, the Republic of Korea and Japan		EUR	UK	Effective last length mm [b c]	
	Range 1 (5 mm)	Range 2 (7,5 mm)	(6,67 mm) [d]	(8,47 mm) [d]	Min.	Max.
220,1	220		35		227	239
220,2				3	227	239
223,4			35,5		230	242
224,4				3,5	231	243
225,0	225	225			232	244
226,8			36		234	246
228,7				4	236	248
230,1	230		36,5		237	249
232,5		232,5			240	252
232,9				4,5	240	252
233,5			37		240	252
235,0	235				242	254
236,8			37,5		244	256
237,1				5	244	256
240,1	240	240	38		247	259
241,4				5,5	248	260
243,5			38,5		250	262
245,0	245				252	264
245,6				6	253	265
246,8			39		254	266
247,5		247,5			255	267
249,8	250			6,5	257	269
250,1			39,5		257	269
253,5			40		260	272
254,1				7	261	273
255,0	255	255			262	274
256,8			40,5		264	276
258,3				7,5	265	276
260,1	260		41		267	279
262,5		262,5		8	270	282
263,5			41,5		270	282
265,0	265				272	284
266,8			42	8,5	274	286
270,1	270	270	42,5		277	289
271,0				9	278	290

[a] Footwear is generally expected to accommodate a range of foot lengths equal to $l_f \pm \frac{i_{sg}}{2}$ where l_f is foot length and i_{sg} is size grading interval (see 4.2).

[b] Effective last length as defined in ISO 19408.

[c] Specialized footwear might fall outside this range.

[d] Size grading interval for whole sizes.

SIST Preview (https://ecommerce.sist.si) ISO 19407:2023 https://ecommerce.sist.si/catalog/standards/sist/ac87...-dc46-4cec-bd13-a041c0268a09/iso-19407-2023

© ISO 2023 – All rights reserved

Table 1 *(continued)*

Foot length mm [a]	Mondopoint, China, the Republic of Korea and Japan		EUR	UK	Effective last length mm [b c]	
	Range 1 (5 mm)	Range 2 (7,5 mm)	(6,67 mm) [d]	(8,47 mm) [d]	Min.	Max.
273,5			43		280	292
275,2	275			9,5	282	294
276,8			43,5		284	296
277,5		277,5			285	297
279,5				10	286	298
280,1	280		44		287	299
283,5			44,5		290	302
283,7				10,5	291	303
285,0	285	285			292	304
286,8			45		294	306
287,9				11	295	307
290,1	290		45,5		297	309
292,2		292,5		11,5	299	311
293,5			46		300	312
295,0	295				302	314
296,4				12	303	315
296,8			46,5		304	316
300,2	300	300	47		307	319
300,6				12,5	308	320
303,5			47,5		310	322
304,9	305			13	312	324
306,8			48		314	326
307,5		307,5			315	327
309,1				13,5	316	328
310,2	310		48,5		317	329
313,4				14	320	332
313,5			49		320	332
315,0	315	315			322	334
316,8			49,5		324	336
317,6				14,5	325	337
320,2	320		50		327	339
321,8				15	329	341

[a] Footwear is generally expected to accommodate a range of foot lengths equal to $l_f \pm \frac{i_{sg}}{2}$ where l_f is foot length and i_{sg} is size grading interval (see 4.2).

[b] Effective last length as defined in ISO 19408.

[c] Specialized footwear might fall outside this range.

[d] Size grading interval for whole sizes.

SIST Preview (https://ecommerce.sist.si)
ISO 19407:2023 https://ecommerce.sist.si/catalog/standards/sist/...-19407-2023

© ISO 2023 – All rights reserved

Table 2 — Adults' recommended shoe size marking

Mondopoint grading					European grading					UK grading				
Mondo	EUR	UK	US	US	**EUR**	Mondo	UK	US	US	**UK**	Mondo	EUR	US	US
Men and women			Men	Women	Men and women			Men	Women	Men and women			Men	Women
215	34	2,5	3,5	4,5	**34**	215	2	3	4	**2**	210	34	3	4
220	35	3	4	5	**34,5**	215	2,5	3,5	4,5	**2,5**	215	34,5	3,5	4,5
225	35,5	3,5	4,5	5,5	**35**	220	3	4	5	**3**	220	35	4	5
230	36,5	4	5	6	**35,5**	225	3,5	4,5	5,5	**3,5**	225	35,5	4,5	5,5
235	37	4,5	5,5	6,5	**36**	225	4	5	6	**4**	230	36,5	5	6
240	38	5,5	6,5	7,5	**36,5**	230	4	5	6	**4,5**	235	37	5,5	6,5
245	38,5	6	7	8	**37**	235	4,5	5,5	6,5	**5**	235	37,5	6	7
250	39,5	6,5	7,5	8,5	**37,5**	235	5	6	7	**5,5**	240	38	6,5	7,5
255	40	7	8	9	**38**	240	5,5	6,5	7,5	**6**	245	39	7	8
260	41	7,5	8,5	9,5	**38,5**	245	5,5	6,5	7,5	**6,5**	250	39,5	7,5	8,5
265	41,5	8,5	9,5	10,5	**39**	245	6	7	8	**7**	255	40	8	9
270	42,5	9	10	11	**39,5**	250	6,5	7,5	8,5	**7,5**	260	40,5	8,5	9,5
275	43	9,5	10,5	11,5	**40**	255	7	8	9	**8**	260	41,5	9	10
280	44	10	11	12	**40,5**	255	7,5	8,5	9,5	**8,5**	265	42	9,5	10,5
285	44,5	10,5	11,5	12,5	**41**	260	7,5	8,5	9,5	**9**	270	42,5	10	11
290	45,5	11	12	13	**41,5**	265	8	9	10	**9,5**	275	43,5	10,5	11,5
295	46	12	13	14	**42**	265	8,5	9,5	10,5	**10**	280	44	11	12
300	47	12,5	13,5	14,5	**42,5**	270	9	10	11	**10,5**	285	44,5	11,5	12,5
305	47,5	13	14	15	**43**	275	9,5	10,5	11,5	**11**	290	45	12	13
310	48,5	13,5	14,5	15,5	**43,5**	275	9,5	10,5	11,5	**11,5**	290	46	12,5	13,5
315	49	14	15	16	**44**	280	10	11	12	**12**	295	46,5	13	14
320	50	15	16	17	**44,5**	285	10,5	11,5	12,5	**12,5**	300	47	13,5	14,5
					45	285	11	12	13	**13**	305	47,5	14	15
					45,5	290	11,5	12,5	13,5	**13,5**	310	48,5	14,5	15,5
					46	295	11,5	12,5	13,5	**14**	315	49	15	16
					46,5	295	12	13	14	**14,5**	320	49,5	15,5	16,5
					47	300	12,5	13,5	14,5	**15**	320	50	16	17
					47,5	305	13	14	15					
					48	305	13	14	15					
					48,5	310	13,5	14,5	15,5					
					49	315	14	15	16					
					49,5	315	14,5	15,5	16,5					
					50	320	15	16	17					

SIST Preview
(https://standards.iteh.ai)
ISO 19407:2023

© ISO 2023 – All rights reserved