

Specification for

Shanks for pneumatic tools and fitting dimensions of chuck bushings

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- Beama Ltd.
- British Compressed Air Society
- British Gas Corporation
- Construction Plant-hire Association
- Department of Trade and Industry (National Engineering Laboratory)
- Electricity Supply Industry in England and Wales
- Energy Industries Council
- Health and Safety Executive
- Imperial College of Science and Technology
- Institute of Marine Engineers
- Institution of Gas Engineers
- Institution of Mechanical Engineers
- Institution of Mining and Metallurgy
- Institution of Mining Engineers
- Ministry of Defence
- National Coal Board
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Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
1 Scope and field of application	1
2 Reference	1
3 Interchangeability	1
4 Designation of shanks	1
5 Coal pick shanks and corresponding chuck bushings	2
6 Chisel shanks and corresponding chuck bushings	3
7 Rivet snap shanks and corresponding chuck bushings, parallel	6
8 Rivet snap shanks and corresponding chuck bushings, tapered	7
9 Breaker and spade shanks and corresponding chuck bushings	8
10 Concrete breaker shanks and corresponding chuck bushings	9
11 Rock drill shanks (forged collared shanks for hexagonal steels) and corresponding chuck bushings	10
12 Shanks for weld flux scalers	10
13 Piston rods and butts for rammer tools	12
14 Shanks for plug hole drills	14
Annex Dimensions and tolerances in inches corresponding to dimensions and tolerances in millimetres for the relevant type and size of shank	16
Figure 1 — Coal pick shanks and corresponding chuck bushings	2
Figure 2 — Tool with hexagonal shank	3
Figure 3 — Alternative shank	4
Figure 4 — Tool with parallel shank	5
Figure 5 — Rivet snap shanks and corresponding chuck bushings, parallel	6
Figure 6 — Rivet snap shanks and corresponding chuck bushings, tapered	7
Figure 7 — Breaker and spade shanks and corresponding chuck bushings	8
Figure 8 — Concrete breaker shanks and corresponding chuck bushings	9
Figure 9 — Rock drill shanks	10
Figure 10 — Chisels	10
Figure 11 — Nozzle hole	11
Figure 12 — Piston rods — Self-holding taper	12
Figure 13 — Rammer butts — Connecting hole	13
Figure 14 — Plug hole drills, type A — Hexagonal section	14
Figure 15 — Plug hole drills, type B — Round section	15
Figure 16 — Plug hole drills — Hexagonal section	19
Figure 17 — Plug hole drills — Round section	20
Table 1	2
Table 2	3
Table 3	5
Table 4	6
Table 5	7
Table 6	8
Table 7	9
Table 8	16

	Page
Table 9	16
Table 10	16
Table 11	17
Table 12	17
Table 13	17
Table 14	17
Table 15	11
Table 16	11
Table 17	12
Table 18	13
Table 19	18
Table 20	18
Table 21	18
Table 22	18
Publication referred to	Inside back cover

National foreword

This British Standard, which has been prepared under the direction of the Mechanical Engineering Standards Committee, was first published in 1936 and subsequently revised in 1950 and 1973. This third revision is identical with ISO 1180:1983 including Addendum 1 published in 1985, "*Shanks for pneumatic tools and fitting dimensions of chuck bushings*" which was prepared by Technical Committee ISO/TC 29, Small tools, of the International Organization for Standardization (ISO) and in the development of which the United Kingdom played an active part.

As compared with the 1973 edition, in which due account was taken of the related ISO recommendations, R 1180 and R 1571 "*Shanks for pneumatic tools and fitting dimensions of chuck bushings*", Parts I and II, it should be noted that ISO 1180:1983 replaces both of these recommendations of which it constitutes a technical revision.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker for metric dimensions. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words "International Standard" appear, referring to this standard, they should be read as "British Standard".

Cross references The Technical Committee has reviewed the provisions of ISO 296:1974 and ISO 723:1974, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. A related British Standard to ISO 296:1974 is BS 1660:1972 "*Machine tapers, reduction sleeves and extension sockets*."

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 20, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope and field of application

This International Standard relates to shanks for pneumatic tools and corresponding chuck bushings and deals with the following types:

- coal pick shanks;
- chisel shanks;
- rivet snap shanks, parallel;
- rivet snap shanks, tapered;
- breaker and spade shanks;
- concrete breaker shanks;
- rock drill shanks.

The types relate to the machine for which they are mainly designed, but this does not prevent the use of the shanks for other applications.

Other types of tools will be dealt with in further International Standards when the corresponding studies are completed.

Pneumatic hammers and their chuck bushings are not covered by this International Standard but those features of chuck bushings (dimensions and tolerances) which ensure interchangeability are specified.

For each tool mentioned above, this International Standard provides tables giving dimensions in millimetres.

Dimensions in inches are given in the Annex which be valid for five years from the date when this International Standard is approved.

2 Reference

ISO 723, *Rock-drilling — Forged collared shanks and chuck bushings for hollow hexagonal drill steels*.

ISO 296, *Machine tools — Self-holding tapers for tool shanks*.

3 Interchangeability

The numerical values specified in this International Standard ensure interchangeability even if the shank and the corresponding chuck bushing are not manufactured in the same system of units.

4 Designation of shanks

The designation of shanks should be composed of

- the name of the type of shank;
- the shank size (first column in the tables);
- the length of the shank.

Example:

Breaker shank 25 × 108

5 Coal pick shanks and corresponding chuck bushings

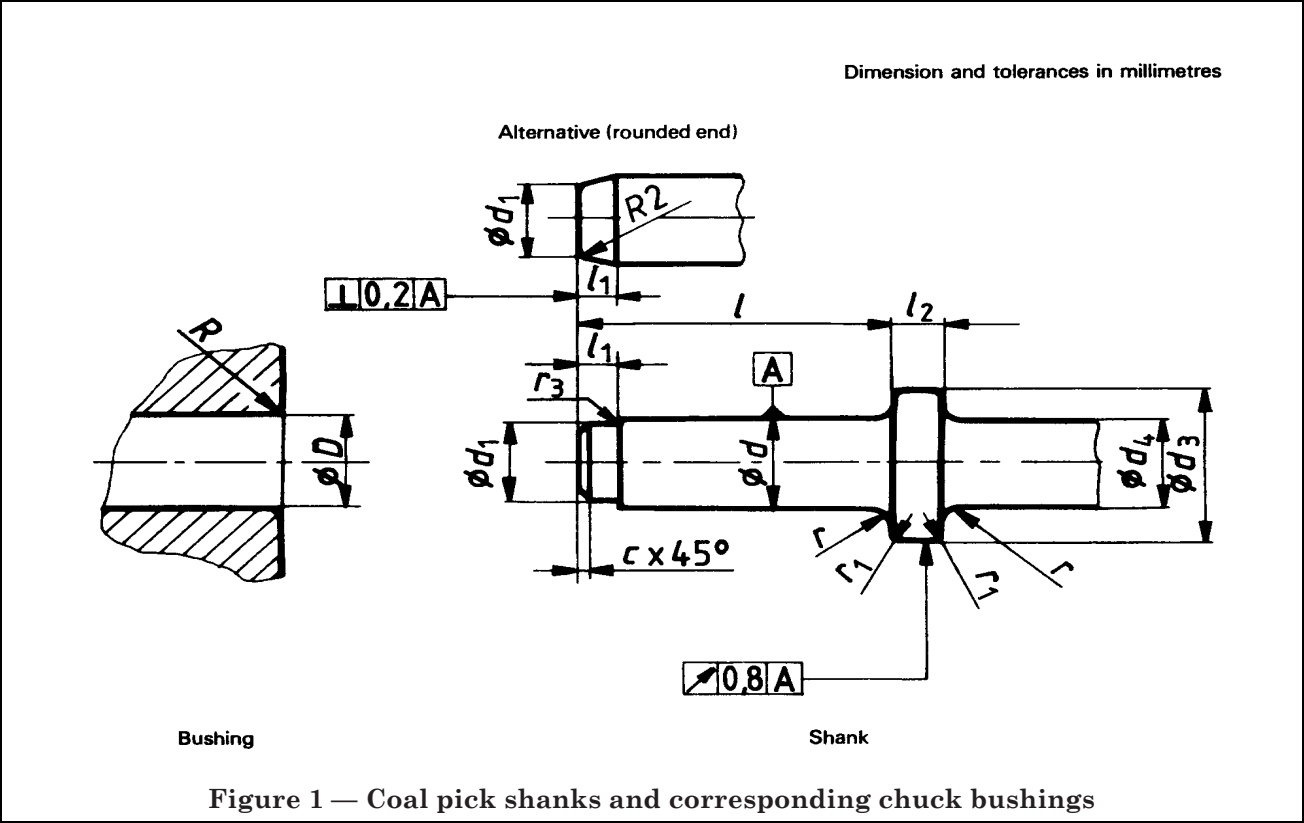


Table 1

Dimensions and tolerances in millimetres

Nominal size	Shank												Bushing		
	<i>d</i>	<i>l</i>	<i>l</i> ₁	<i>l</i> ₂		<i>d</i> ₁	<i>d</i> ₃	<i>d</i> ₄		<i>r</i>	<i>r</i> ₁	<i>r</i> ₃	<i>c</i>	<i>D</i>	<i>R</i>
	f8	h14	± 0,5	min.	max.	j _s 14	+0,3 −0,5	min.	max.	0 −0,5	0 −1	± 0,5		H8	+0,5 0
25	25	75	10	9,5	13	22	41,5	25	27	5,25	2	3	1,6	25	5,25

Example of designation
Coal pick shank 25 × 75

6 Chisel shanks and corresponding chuck bushings

6.1 Tool with hexagonal shank

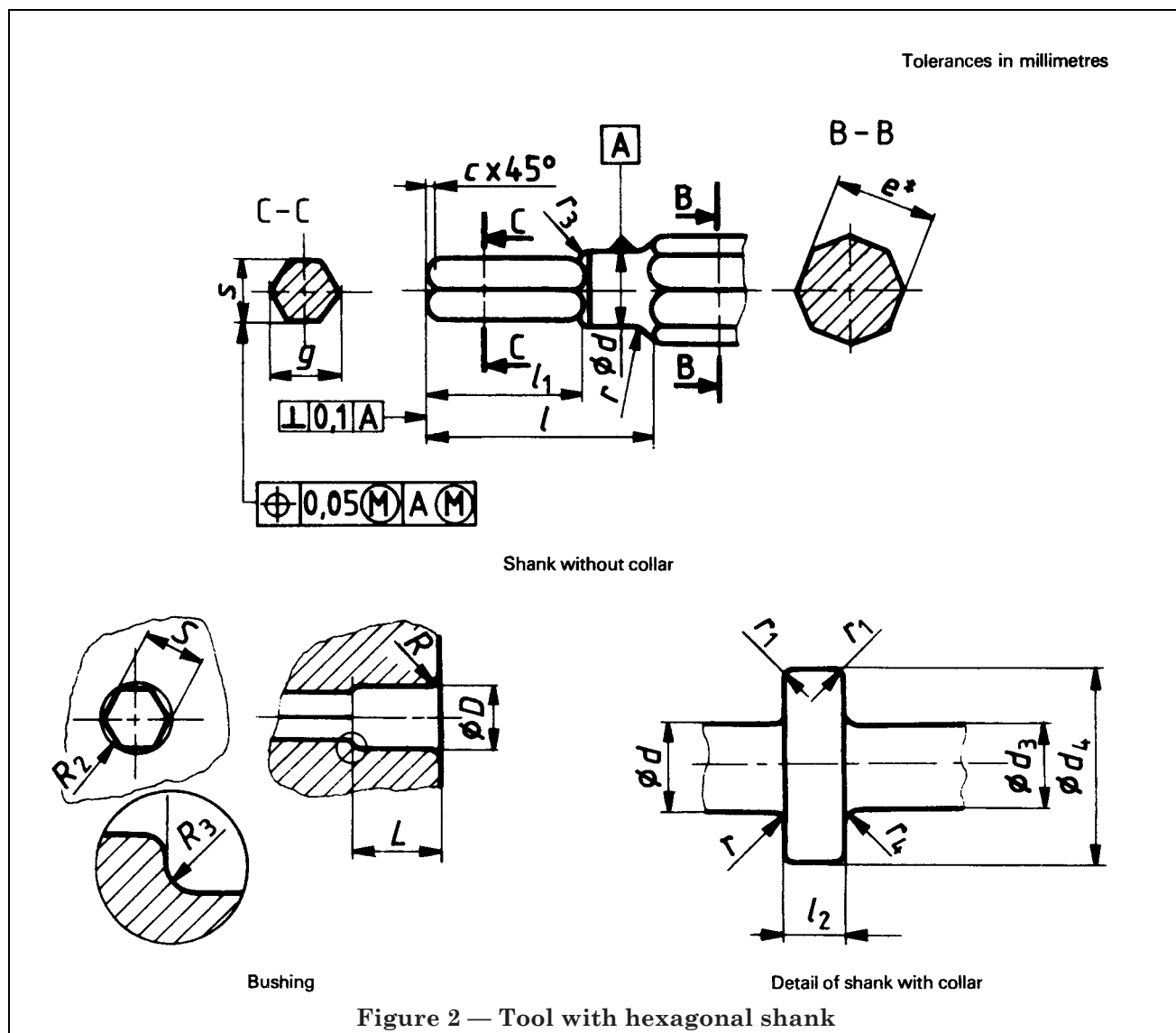


Table 2

Dimensions and tolerances in millimetres

Nominal size	Shank														Bushing					
	d	l	l_1	l_2	d_3	d_4	e^*	s	g	r	r_1	r_3	r_4	c	D	L	S	R	R_2	R_3
	d8	$\pm 0,5$	$\pm 0,5$	± 1	max.	± 1		d11	$\begin{smallmatrix} 0 \\ -0,3 \end{smallmatrix}$	max.		max.	max.		H8	± 1	H11	$\begin{smallmatrix} +0,5 \\ 0 \end{smallmatrix}$	$\pm 0,5$	$\pm 0,5$
12	12,7	45	31	6	13	21	16	11,0	12,1	4	0,8	6	3	0,8	12,7	17	11,0	4	1	1
17	17,3	60	41	9	20	30	22	14,8	16,6	4	0,8	10	3,2	1,6	17,3	22	14,8	4	1	1
20	(20,0)	60	36	9	24	34	25	17,0	19,0	6	0,8	10	3,2	1,6	(20,0)	27	17,0	6	1	1

*The octagonal shape on the tool side and dimension e are given for information only.