

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1571

SHANKS FOR PNEUMATIC TOOLS
AND FITTING DIMENSIONS OF CHUCK-BUSHINGS
(standards.iteh.ai)

PART II

[ISO/R 1571:1970](https://standards.iteh.ai/catalog/standards/sist/27c90f3b-b700-421e-b9bc-f2002be3fbb3/iso-r-1571-1970)

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ISO Recommendation

R 1571

August 1970

SHANKS FOR PNEUMATIC TOOLS AND FITTING DIMENSIONS OF CHUCK-BUSHINGS

PART II

1. SCOPE

This ISO Recommendation relates to shanks for pneumatic tools. It is a continuation and a supplement of ISO Recommendation R 1180, *Shanks for pneumatic tools and fitting dimensions of chuck-bushing – Part I*.

This ISO Recommendation deals with the following types :

- Breaker and spade shanks (see Tables 1 and 2)
- Light rivet snap shanks, tapered (see Tables 3 and 4)
- Light rivet snap shanks, parallel (see Tables 5 and 6).

Other types of tools will be dealt with in further ISO Recommendations, as the corresponding studies are completed.

Pneumatic hammers and their chuck-bushings are not covered by this ISO Recommendation, but those features of chuck-bushings (dimensions and tolerances) which ensure interchangeability are listed in this Recommendation.

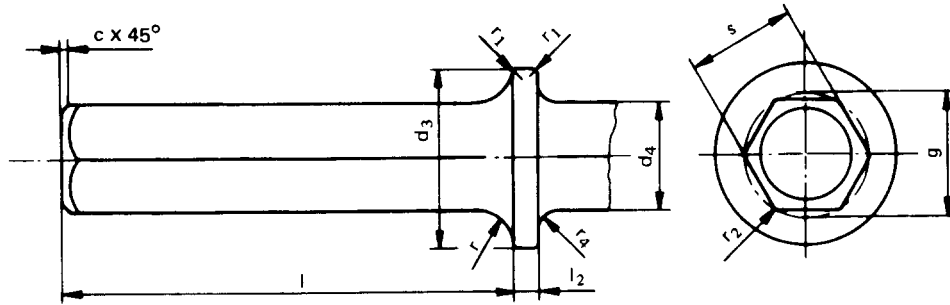
For each tool mentioned above, this ISO Recommendation provides a table giving

- (1) recommended dimensions in millimetres,
- (2) recommended dimensions in inches.

2. INTERCHANGEABILITY

The numerical values retained in this ISO Recommendation ensure interchangeability even if the shank and the corresponding chuck-bushing are not manufactured in the same system of units.

3. BREAKER AND SPADE SHANKS AND CHUCK-BUSHINGS

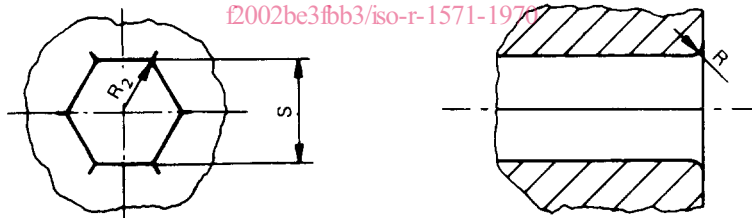


Shank

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Bushing

FIG. 1 - Breaker and spade shanks and chuck-bushings

TABLE 1 – Recommended dimensions in millimetres

Designation	Shank											Bushing		
	<i>s</i>	<i>l</i> ± 0.5	<i>l</i> ₂	<i>d</i> ₃ 0 - 1	<i>d</i> ₄ max.	<i>g</i> * 0 - 0.3	<i>r</i> max.	<i>r</i> ₁	<i>r</i> ₂ 0 - 1	<i>r</i> ₄ 0 - 1	<i>c</i>	<i>S</i> + 0.35 + 0.05	<i>R</i> + 1 0	<i>R</i> ₂ max.
22	22.4 ⁰ _{-0.4}	82.5	12	41	28**	25.2	4.5	1.6	3	4	1.6	22.4	4.5	1.2
25	25.6 ⁰ _{-0.6}	108.0	12	41	28**	29.0	4.5	1.6	3	4	1.6	25.6	4.5	1.2

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TABLE 2 Recommended dimensions in inches

Designation	Shank											Bushing		
	<i>s</i>	<i>l</i> ± 0.020	<i>l</i> ₂	<i>d</i> ₃ 0 - 0.039	<i>d</i> ₄ max.	<i>g</i> * 0 - 0.012	<i>r</i> max.	<i>r</i> ₁	<i>r</i> ₂ 0 - 0.039	<i>r</i> ₄ 0 - 0.039	<i>c</i>	<i>S</i> + 0.014 + 0.002	<i>R</i> + 0.039 0	<i>R</i> ₂ max.
$\frac{7}{8}$	0.882 ⁰ _{-0.016}	3.248	0.472	1.614	1.102**	0.992	0.177	0.063	0.118	0.157	0.063	0.882	0.177	0.047
1	1.008 ⁰ _{-0.024}	4.252	0.472	1.614	1.102**	1.142	0.177	0.063	0.118	0.157	0.063	1.008	0.177	0.047

* Diameter *g* is calculated to correspond to radius *r*₂ on the corners of the hexagon.

** Alternative : 22 or 25 mm (7/8 or 1 in) hexagon.

NOTE. – The cutting edge, if any, of the tool should be perpendicular to one of the hexagon sides.

4. LIGHT RIVET SNAP SHANKS AND CHUCK-BUSHINGS, TAPERED

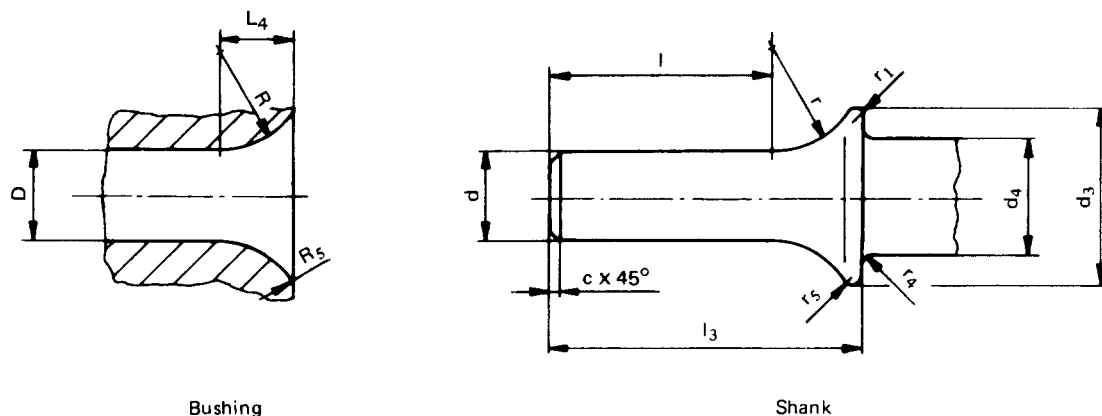


FIG. 2 - Light rivet snap shanks and chuck-bushings, tapered

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TABLE 3 - Recommended dimensions in millimetres

Shank										Bushing			
<i>d</i>	<i>l</i>	<i>l</i> ₃	<i>d</i> ₃	<i>d</i> ₄	<i>r</i>	<i>r</i> ₁	<i>r</i> ₄	<i>r</i> ₅	<i>c</i>	<i>D</i>	<i>L</i> ₄	<i>R</i>	<i>R</i> ₅
f8				max.	0 - 1	0 - 0.5	0 - 0.5			H8		+ 1 0	
10.2	29.5	42	19.0	13	13	1	1.5	1	0.8	10.2	8	13	1
12.7	28.0	42	21.5	17	19	1	1.5	1	0.8	12.7	10	19	1

TABLE 4 - Recommended dimensions in inches

Shank										Bushing			
<i>d</i>	<i>l</i>	<i>l</i> ₃	<i>d</i> ₃	<i>d</i> ₄	<i>r</i>	<i>r</i> ₁	<i>r</i> ₄	<i>r</i> ₅	<i>c</i>	<i>D</i>	<i>L</i> ₄	<i>R</i>	<i>R</i> ₅
f8				max.	0 - 0.039	0 - 0.020	0 - 0.020			H8		+ 0.039 0	
0.402	1.161	1.654	0.748	0.512	0.512	0.039	0.059	0.039	0.032	0.402	0.315	0.512	0.039
0.500	1.102	1.654	0.846	0.669	0.748	0.039	0.059	0.039	0.032	0.500	0.394	0.748	0.039

5. LIGHT RIVET SNAP SHANKS AND CHUCK-BUSHINGS, PARALLEL

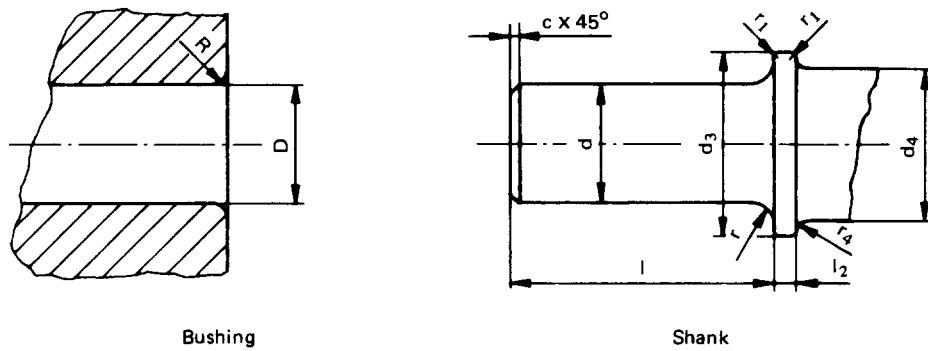


FIG. 3 - Light rivet snap shanks and chuck-bushings, parallel

TABLE 5 - Recommended dimensions in millimetres

Shank									Bushing	
<i>d</i>	<i>l</i>	<i>l</i> ₂	<i>d</i> ₃	<i>d</i> ₄	<i>r</i>	<i>r</i> ₁	<i>r</i> ₄	<i>c</i>	<i>D</i>	<i>R</i>
f8	± 0.5		max.	max.	0 - 0.5	0 - 0.5	0 - 0.5		H8	+ 0.5 0
10.2	32	4	19	13	2	1	2	0.8	10.2	2
12.7	45	6	22	15	4	4	4	0.8	12.7	4
17.3	60	8	30	20	4	1	4	1.6	17.3	4
(20)	60	8	35	24	6	1	6	1.6	(20)	6

TABLE 6 - Recommended dimensions in inches

Shank									Bushing	
<i>d</i>	<i>l</i>	<i>l</i> ₂	<i>d</i> ₃	<i>d</i> ₄	<i>r</i>	<i>r</i> ₁	<i>r</i> ₄	<i>c</i>	<i>D</i>	<i>R</i>
f8	± 0.020		max.	max.	0 - 0.020	0 - 0.020	0 - 0.020		H8	+ 0.020 0
0.402	1.260	0.157	0.748	0.512	0.079	0.039	0.079	0.032	0.402	0.079
0.500	1.772	0.236	0.866	0.591	0.157	0.039	0.157	0.032	0.500	0.157
0.681	2.362	0.315	1.181	0.788	0.157	0.039	0.157	0.063	0.681	0.157
(0.788)	2.362	0.315	1.378	0.945	0.236	0.039	0.236	0.063	(0.788)	0.236

NOTE. - The size 10.2 mm (0.402 in) can also refer to chisel shanks.

BRIEF HISTORY

The ISO Recommendation R 1571, *Shanks for pneumatic tools and fitting dimensions of chuck-bushings – Part II*, was drawn up by Technical Committee ISO/TC 29, *Small tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question led to the adoption of Draft ISO Recommendation No. 1571, which was circulated to all the ISO Member Bodies for enquiry in May 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	India	Spain
Austria	Ireland	Sweden
Belgium	Israel	Switzerland
Czechoslovakia	Italy	Thailand
France	Poland	Turkey
Hungary	Portugal	United Kingdom
Korea, Rep. of	South Africa, Rep. of	

The following Member Body opposed the approval of section 3 of the Draft :
Germany

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.