INTERNATIONAL STANDARD 1720

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Rock drilling — Extension drill-steel equipment for percussive long-hole drilling — Rope-threaded equipments 1 1/2 to 2 in (38 to 51 mm)

Forage des roches — Matériels pour forage percutant de longs trous — Équipements à filetage corde 1 1/2 à 2 in (38 à 51 mm)

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 82 has reviewed ISO Recommendation R 1720 and found it suitable for transformation. International Standard ISO 1720 therefore replaces ISO Recommendation R 1720-1970.

ISO Recommendation R 1720 was approved by the Member Bodies of the following countries :

Belgium	India	South Africa, Rep. of
Canada	Iran	Spain
Czechoslovakia	Israel	Sweden
Egypt, Arab Rep. of	Italy	Thailand
France	Japan	Turkey
Germany	Netherlands	United Kingdom
Greece	New Zealand	Yugoslavia
Hungary	Poland	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

Austria*

The Member Body of the following country disapproved the transformation of ISO/R 1720 into an International Standard :

Canada

* Subsequently, this Member Body approved the Recommendation.

Printed in Switzerland

Rock drilling — Extension drill-steel equipment for percussive long-hole drilling — Rope-threaded equipments 1 1/2 to 2 in (38 to 51 mm)

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the basic dimensions for rope-threaded extension drill-steel equipment for percussive long-hole drilling, of the following nominal sizes :

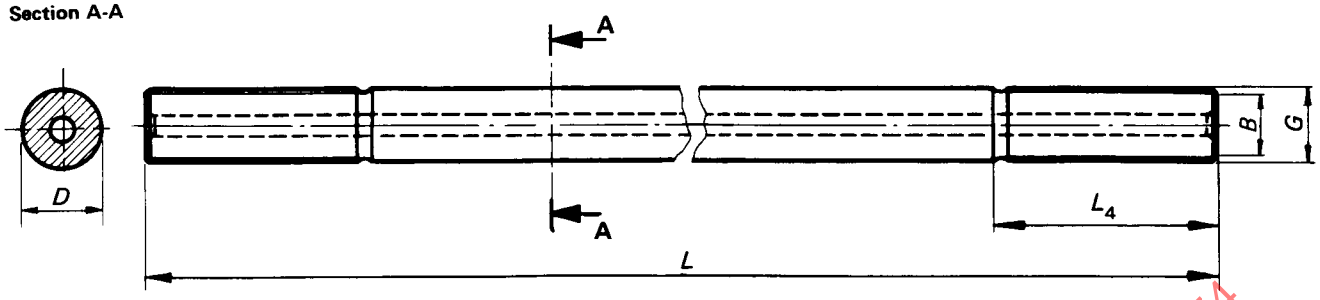
1 1/2 in (38 mm)
1 3/4 in (45 mm)
2 in (51 mm)

2 LIST OF COMPONENTS

Equipment	1 1/2 in (38 mm)		1 3/4 in (45 mm)		2 in (51 mm)	
Thread diameter	1 1/2 in		1 3/4 in		2 in	
Size of drill-steel in bar form	1 1/2 in ϕ (38 mm)		1 3/4 in ϕ (45 mm)		2 in ϕ (51 mm)	
Lengths of extension rods (clause 7)	mm	ft	mm	ft	mm	ft
	3 050	10	3 050	10	3 050	10
	3 660	12	3 660	12	–	–
	–	–	–	–	6 095	20
Wrench flats for extension rods	See clause 4					
Coupling sleeves	See clause 5					
Bit diameter (four-wing bits) (clause 6)	mm	in	mm	in	mm	in
	64	2 1/2	–	–	–	–
	70	2 3/4	–	–	–	–
	76	3	76	3	–	–
	89	3 1/2	89	3 1/2	89	3 1/2
	–	–	102	4	102	4
	–	–	–	–	115	4 1/2
Rope threads	See clause 7					
Round drill-steel in bar form	See clause 8					

3 EXTENSION RODS

Section A-A

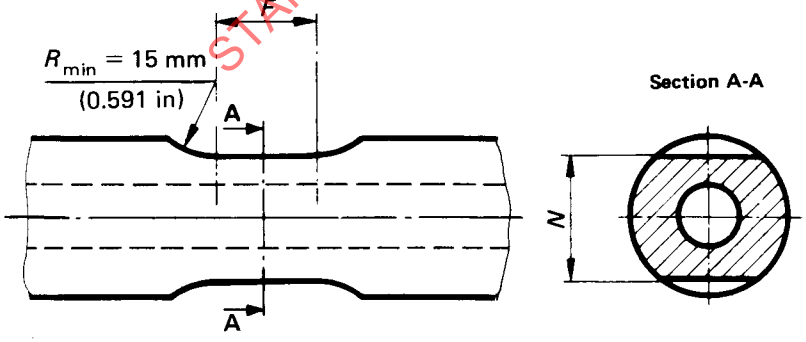


Equipment	Round drill-steel D nominal		Thread diameter G nominal	B ± 0,7 mm (± 0.027 5 in)		L				L_4* ± 1 mm (0.039 in)	
						Basic dimension	Tolerance	Basic dimension	Tolerance		
	mm	in	in	mm	in	mm	mm	ft	in	mm	in
1 1/2 in	38	1 1/2	1 1/2	31,4	1.236	3 050 3 660	± 10	10 12	± 3/8	92	3.622
1 3/4 in	45	1 3/4	1 3/4	37,4	1.472	3 050 3 660	± 10	10 12	± 3/8	102	4.016
2 in	51	2	2	41,5	1.634	3 050 6 095	± 10	10 20	± 3/8	102	4.016

* For an eccentric undercut of the thread, where the length of L_4 varies along the circumference of the bar, a tolerance of ± 2,5 mm (0.1 in) is acceptable.

4 WRENCH FLATS FOR ROUND EXTENSION RODS

NOTE — The application of wrench flats is optional.



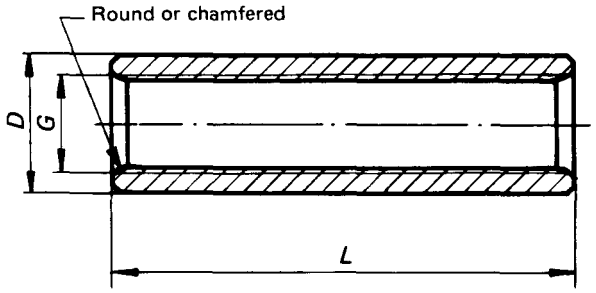
Dimensions in millimetres

Equipment	Round drill-steel Nominal size	F min.	N 0 − 0,4
1 1/2 in	38	20	32,3
1 3/4 in	45	25	38,6
2 in	51	35	45,4

Dimensions in inches

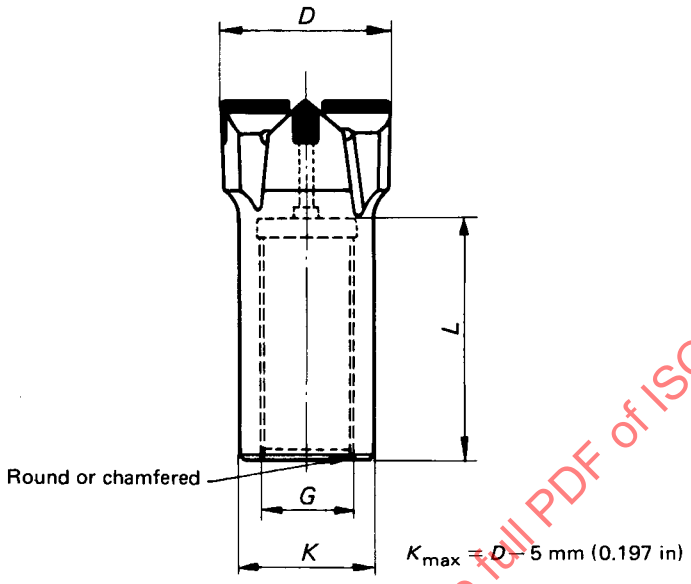
Equipment	Round drill-steel Nominal size	F min.	N 0 − 0.016
1 1/2 in	1 1/2	0.787	1.272
1 3/4 in	1 3/4	0.984	1.520
2 in	2	1.378	1.520

5 COUPLING SLEEVES



Equipment	D max.		Thread diameter G nominal	L $\left(\begin{smallmatrix}0\\-1\end{smallmatrix}\right.$ mm $\left.\begin{smallmatrix}0\\-0.039\end{smallmatrix}\right)$ in	
	mm	in	in	mm	in
1 1/2 in	56	2.205	1 1/2	180	7.1
1 3/4 in	67	2.638	1 3/4	200	7.9
2 in	78	3.071	2	200	7.9

6 FOUR-WING BITS (X-DESIGN)



X-design

Equipment	Nominal diameter		D				Thread diameter G nominal	L max.	
			Basic size		Tolerance				
	mm	in	mm	in	mm	in	in	mm	in
1 1/2 in	64 70 76 89	2 1/2 2 3/4 3 3 1/2	63,50 69,85 76,20 88,90	2.500 2.750 3.000 3.500	+ 0,6	+ 0.024	1 1/2	90	3.543
1 3/4 in	76 89 102	3 3 1/2 4	76,20 88,90 101,60	3.000 3.500 4.000	+ 0,6 + 0,6 + 1,0	+ 0.024 + 0.024 + 0.039	1 3/4	100	3.937
2 in	89 102 115	3 1/2 4 4 1/2	88,90 101,90 114,30	3.500 4.000 4.500	+ 0,6 + 1,0 + 1,0	+ 0.024 + 0.039 + 0.039	2	100	3.937