
INTERNATIONAL STANDARD



1722

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

Rock drilling — Extension drill-steel equipment for percussive long-hole drilling — Reverse-buttress-threaded equipments 1 1/2 to 2 1/2 in (38 to 64 mm)

Forage des roches — Matériels pour forage percutant de longs trous — Équipements à filetage à butée inverse 1 1/2 à 2 1/2 in (38 à 64 mm)

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Descriptors : mining, drilling equipment, percussion drilling.

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 1722 and found it suitable for transformation. International Standard ISO 1722 therefore replaces ISO Recommendation R 1722-1970.

ISO Recommendation R 1722 was approved by the Member Bodies of the following countries :

Australia	Hungary	Poland
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

No Member Body expressed disapproval of the Recommendation.

The Member Body of the following country disapproved the transformation of ISO/R 1722 into an International Standard :

Canada

Rock drilling — Extension drill-steel equipment for percussive long-hole drilling — Reverse-buttress-threaded equipments 1 1/2 to 2 1/2 in (38 to 64 mm)

1 SCOPE AND FIELD OF APPLICATION

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

- 1 1/2 in light (38 mm)
- 1 3/4 in light (45 mm)
- 2 1/4 in light (52 mm)
- 2 1/2 in light (64 mm)

2 REFERENCE

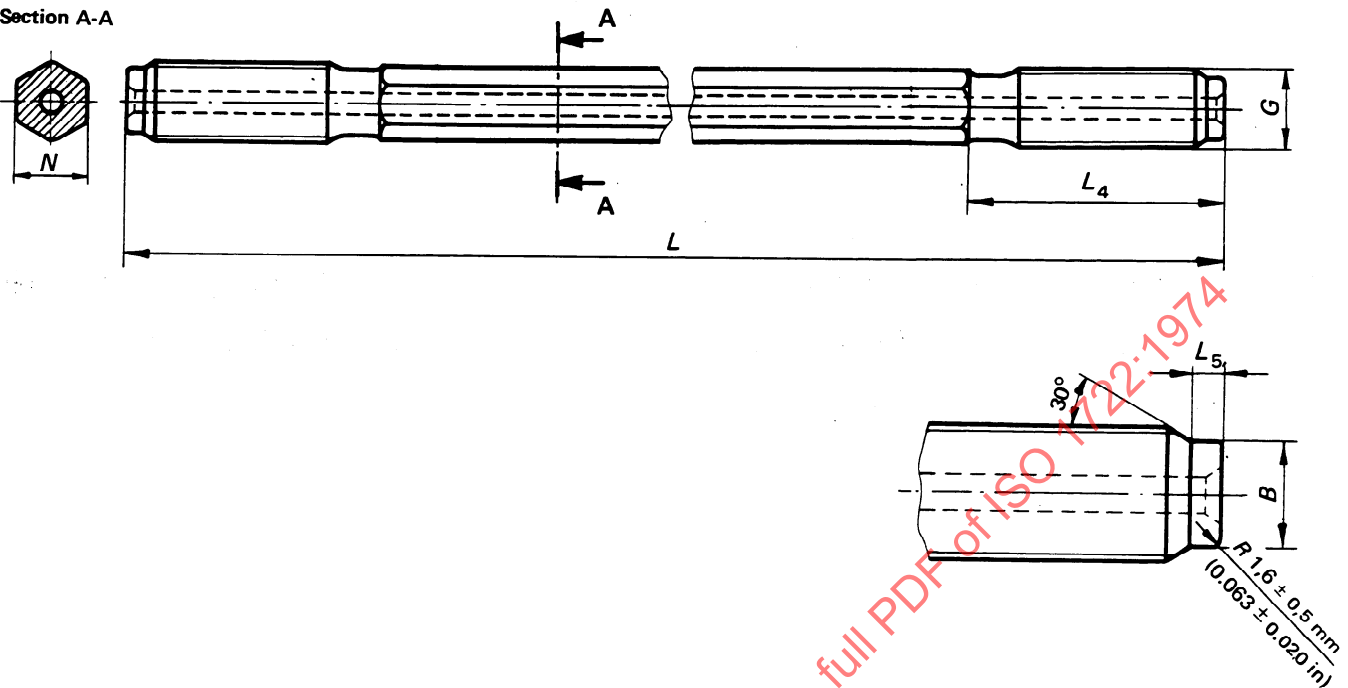
ISO 723, *Rock drilling — Forged collared shanks and chuck bushings for hollow hexagonal drill-steels.*

3 LIST OF COMPONENTS

Equipment	1 1/2 in light (38 mm)		1 3/4 in light (45 mm)		2 1/4 in light (57 mm)		2 1/2 in light (64 mm)	
Thread diameter	1 1/2 in		1 3/4 in		2 1/4 in		2 1/2 in	
Size of drill-steel in bar form	1 1/4 in hexagonal (32 mm)		1 1/2 in hexagonal (38 mm)		1 3/4 in hexagonal (45 mm)		1 7/8 in hexagonal (48 mm)	
Lengths of extension rods (clause 4)	mm	ft	mm	ft	mm	ft	mm	ft
	3 050	10	3 050	10	3 050	10	3 050	10
	3 660	12	3 660	12	3 660	12	3 660	12
	—	—	—	—	6 095	20	6 095	20
Coupling sleeves	See clause 5							
Bit diameters (four-wing bits) (clause 6)	mm	in	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	102	4
	—	—	—	—	115	4 1/2	115	4 1/2
	—	—	—	—	—	—	127	5
Reverse-buttress threads	See clause 7							
Hollow hexagonal bars for extension rods	See clause 8							

4 EXTENSION RODS

Section A-A



Dimensions in millimetres

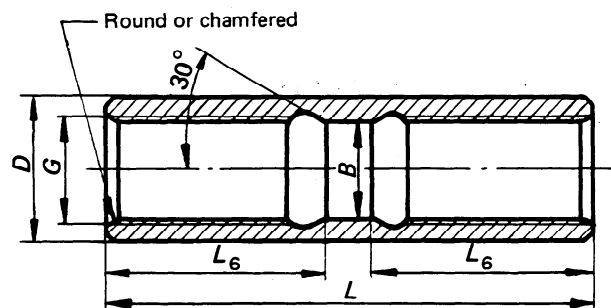
Equipment	Hexagonal drill-rod (see clause 8) <i>N</i> nominal	Thread diameter <i>G</i> nominal	<i>B</i>		<i>L</i>		<i>L</i> ₄ ± 1	<i>L</i> ₅	
			Basic size	Tolerance	Basic size	Tolerance		Basic size	Tolerance
1 1/2 in light	32	1 1/2 in	31,50	0 -0,25	3 050 3 660	± 25	123,8	6,35	± 0,5
1 3/4 in light	38	1 3/4 in	37,85	0 -0,25	3 050 3 660	± 25	133,4	6,35	± 0,5
2 1/4 in light	45	2 1/4 in	51,10	0 -0,30	3 050 3 660 6 095	± 25	122,2*	6,35	± 0,5
2 1/2 in light	48	2 1/2 in	53,90	0 -0,30	3 050 3 660 6 095	± 25	146,0*	7,14	± 0,5

Dimensions in inches

Equipment	Hexagonal drill-rod (see clause 8) <i>N</i> nominal	Thread diameter <i>G</i> nominal	<i>B</i>		<i>L</i>		<i>L</i> ₄ ± 0.039	<i>L</i> ₅	
			Basic size	Tolerance	Basic size in	Tolerance in		Basic size	Tolerance
1 1/2 in light	1 1/4	1 1/2 in	1.240	0 -0.010	10 12	± 1	4.875	0.250	± 0.020
1 3/4 in light	1 1/2	1 3/4 in	1.490	0 -0.010	10 12	± 1	5.250	0.250	± 0.020
2 1/4 in light	1 3/4	2 1/4 in	2.012	0 -0.012	10 12 20	± 1	4.813*	0.250	± 0.020
2 1/2 in light	1 7/8	2 1/2 in	2.122	0 -0.012	10 12 20	± 1	5.750*	0.281	± 0.020

* No thread undercut is required in this instance.

5 COUPLING SLEEVES



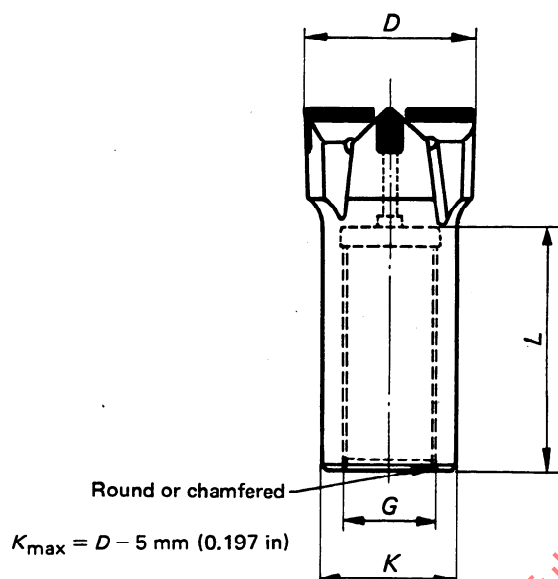
Dimensions in millimetres

Equipment	D max.	Thread diameter G nominal	B		L -0 -1	L_6	
			Basic size	Tolerance		Basic size	Tolerance
1 1/2 in light	54,4	1 1/2 in	31,75	$+0,5$ 0	203	96,3	$+1$ 0
1 3/4 in light	64,0	1 3/4 in	38,10	$+0,5$ 0	222	105,0	$+1$ 0
2 1/4 in light	80,0	2 1/4 in	51,36	$+0,5$ 0	254	120,9	$+1$ 0
2 1/2 in light	85,3	2 1/2 in	54,10	$+0,5$ 0	305	147,1	$+1$ 0

Dimensions in inches

Equipment	D max.	Thread diameter G nominal	B		L -0 -0.039	L_6	
			Basic size	Tolerance		Basic size	Tolerance
1 1/2 in light	2,14	1 1/2 in	1,250	$+0,020$ 0	8	3,790	$+0,039$ 0
1 3/4 in light	2,52	1 3/4 in	1,500	$+0,020$ 0	8,75	4,134	$+0,039$ 0
2 1/4 in light	3,14	2 1/4 in	2,022	$+0,020$ 0	10	4,759	$+0,039$ 0
2 1/2 in light	3,36	2 1/2 in	2,130	$+0,020$ 0	12	5,790	$+0,039$ 0

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 light	64	2 1/2	63,50	2.500	+ 0,6	+ 0.024	1 1/2	82,5	3.25
	70	2 3/4	69,85	2.750					
	76	3	76,20	3.000					
	89	3 1/2	88,90	3.500					
1 3/4 in light	76	3	76,20	3.000	+ 0,6	+ 0.024	1 3/4	82,5	3.25
	89	3 1/2	88,90	3.500	+ 0,6	+ 0.024		82,5	3.25
	102	4	101,60	4.000	+ 1,0	+ 0.039		108,0	4.25
2 1/4 in light	89	3 1/2	88,90	3.500	+ 0,6	+ 0.024	2 1/4	108,0	4.25
	102	4	101,60	4.000	+ 1,0	+ 0.039			
	115	4 1/2	114,30	4.500	+ 1,0	+ 0.039			
2 1/2 in light	102	4	101,60	4.000	+ 1,0	+ 0.039	2 1/2	108,0	4.25
	115	4 1/2	114,30	4.500					
	127	5	127,00	5.000					