

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION

### R 721

ROCK DRILLING  
INTEGRAL STEMS

1st EDITION

May 1968

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## BRIEF HISTORY

The ISO Recommendation R 721, *Rock drilling—Integral stems*, was drawn up by Technical Committee ISO/TC 82, *Mining*, the Secretariat of which is held by the Deutscher Normenausschuss (DNA).

Work on this question by the Technical Committee began in 1960 and led, in 1964, to the adoption of a Draft ISO Recommendation.

In April 1965, this Draft ISO Recommendation (No. 800) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

|                |                |                |
|----------------|----------------|----------------|
| Australia      | Japan          | Sweden         |
| Belgium        | Korea, Rep. of | Turkey         |
| Brazil         | Netherlands    | U.A.R.         |
| Chile          | New Zealand    | United Kingdom |
| Czechoslovakia | Poland         | U.S.S.R.       |
| France         | Portugal       | Yugoslavia     |
| Germany        | South Africa,  |                |
| Hungary        | Rep. of        |                |
| India          | Spain          |                |

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in May 1968, to accept it as an ISO RECOMMENDATION.

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## ROCK DRILLING INTEGRAL STEMS

### 1. INTEGRAL STEMS $\frac{3}{4}$ in (19 mm) HEXAGON WITH FORGED COLLARED SHANK

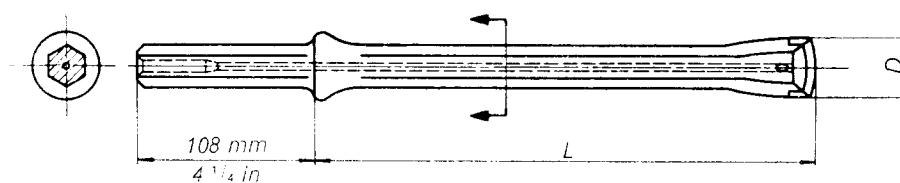


TABLE 1

| L<br>min. |    |    | D mm (in)<br>+ 0.3 mm (+ 0.012 in)<br>- 0.1 mm (- 0.004 in) |               |               |               |               |               |               |               |               |               |                 |               |
|-----------|----|----|-------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------|
|           |    |    | 35<br>(1.378)                                               | 34<br>(1.339) | 33<br>(1.299) | 32<br>(1.260) | 30<br>(1.181) | 29<br>(1.142) | 28<br>(1.102) | 27<br>(1.063) | 26<br>(1.024) | 25<br>(0.984) | 24.5<br>(0.965) | 24<br>(0.945) |
| m         | ft | in |                                                             |               |               |               |               |               |               |               |               |               |                 |               |
| 0.4       | 1  | 4  | x                                                           |               |               |               |               | X             |               |               |               |               |                 |               |
| 0.6       | 2  |    |                                                             |               |               |               |               |               |               | x             |               |               |                 |               |
| 0.8       | 2  | 7  |                                                             | x             |               |               |               |               | X             |               |               |               |                 |               |
| 1.2       | 3  | 11 |                                                             |               |               |               | x             |               |               | *             | x             |               |                 |               |
| 1.6       | 5  | 3  |                                                             |               | x             |               |               |               |               | X             |               |               |                 |               |
| 1.8       | 5  | 11 |                                                             |               |               |               |               |               |               |               |               | x             |                 |               |
| 2.4       | 7  | 10 |                                                             |               |               | x             |               | x             |               |               | X             |               |                 |               |
| 3.2       | 10 | 6  |                                                             |               |               |               |               |               |               |               |               | X             |                 |               |
| 3.6       | 11 | 10 |                                                             |               |               |               |               |               | x             |               |               |               |                 |               |
| 4         | 13 | 1  |                                                             |               |               |               |               |               |               |               |               |               |                 | X             |
| 4.8       | 15 | 9  |                                                             |               |               |               |               |               |               | x             |               |               |                 |               |
| 6         | 19 | 8  |                                                             |               |               |               |               |               |               |               | x             |               |                 |               |
| 7.2       | 23 | 7  |                                                             |               |               |               |               |               |               |               |               | x             |                 |               |
| 8.4       | 27 | 7  |                                                             |               |               |               |               |               |               |               |               |               | x               |               |
| 9.6       | 31 | 6  |                                                             |               |               |               |               |               |               |               |               |               |                 | x             |

\* Supplementary stems.

Crosses (X) within thick-lined frames indicate series of preferred combinations of bit gauge ( $D$ ) and length ( $L$ ). Small size crosses indicate further standardized series.

Hollow hexagonal drill steel in bar form, see ISO Recommendation R 722, *Rock drilling—Hollow hexagonal drill steels in bar form*. Shank and chuck bushing, see ISO Recommendation R 723, *Rock drilling—Forged collared shanks and chuck bushings for hollow hexagonal drill steels*.

NOTE. — Where a country finds it impossible to use the recommended combinations of bit gauges ( $D$ ) and lengths ( $L$ ), the country should nevertheless use the bit gauges and lengths from Table 1 even if in different combinations.

2. INTEGRAL STEMS 7/8 in (22 mm) HEXAGON

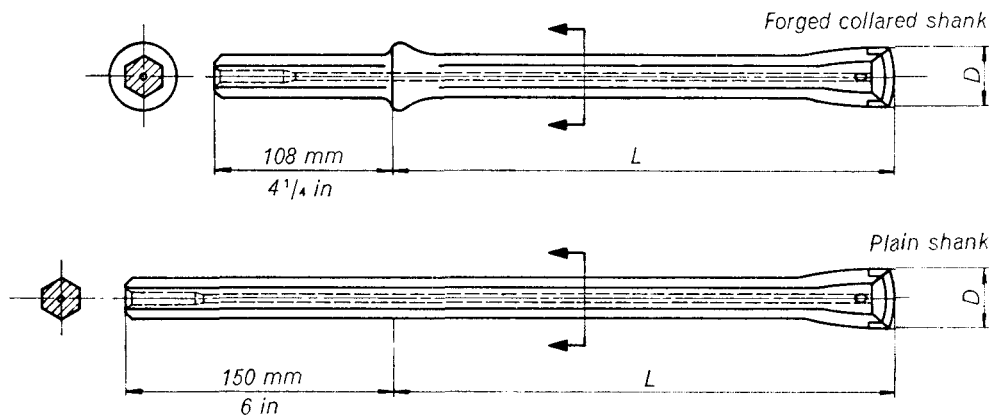


TABLE 2

| L<br>min. |    |    | D mm (in)<br>+ 0.3 mm (+ 0.012 in)<br>- 0.1 mm (- 0.004 in) |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------|----|----|-------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| m         | ft | in | 40<br>(1.575)                                               | 39<br>(1.535) | 38<br>(1.496) | 37<br>(1.457) | 36<br>(1.417) | 35<br>(1.378) | 34<br>(1.339) | 33<br>(1.299) | 32<br>(1.260) | 31<br>(1.220) | 30<br>(1.181) | 29<br>(1.142) | 28<br>(1.102) |
| 0.4       | 1  | 4  |                                                             |               |               |               |               |               | x             |               |               |               |               |               |               |
| 0.5       | 1  | 8  |                                                             |               |               |               |               |               |               |               | *             |               |               |               |               |
| 0.6       | 2  |    |                                                             |               |               |               |               | x             |               |               |               |               |               |               |               |
| 0.8       | 2  | 7  | X                                                           |               |               |               |               |               | X             | x             |               |               |               |               |               |
| 1.2       | 3  | 11 | *                                                           |               |               |               |               |               | x             |               | x             |               |               |               |               |
| 1.6       | 5  | 3  |                                                             | X             |               |               |               |               |               | X             |               | x             |               |               |               |
| 1.8       | 5  | 11 |                                                             |               |               |               |               |               |               | x             |               |               |               |               |               |
| 2         | 6  | 7  |                                                             |               |               |               |               |               |               |               |               |               | x             |               |               |
| 2.4       | 7  | 10 |                                                             | X             |               |               |               |               |               |               | X             |               |               |               |               |
| 3.2       | 10 | 6  |                                                             |               | X             |               |               |               |               |               |               | X             |               |               |               |
| 4         | 13 | 1  |                                                             |               |               | X             |               |               |               |               |               |               | X             |               |               |
| 4.8       | 15 | 9  |                                                             |               |               |               | X             |               |               |               |               |               |               | X             |               |
| 5.6       | 18 | 4  |                                                             |               |               |               |               | X             |               |               |               |               |               |               | *             |
| 6.4       | 21 |    |                                                             |               |               |               |               |               | X             |               |               |               |               |               |               |

\* Supplementary stems.

Crosses (X) within thick-lined frames indicate series of preferred combinations of bit gauge (D) and length (L). Small size crosses indicate further standardized series.

Hollow hexagonal drill steel in bar form, see ISO Recommendation R 722, *Rock drilling—Hollow hexagonal drill steels in bar form*. Shank and chuck bushing, see ISO Recommendation R 723, *Rock drilling—Forged collared shanks and chuck bushings for hollow hexagonal drill steels*.

NOTE. — Where a country finds it impossible to use the recommended combinations of bit gauges (D) and lengths (L), the country should nevertheless use the bit gauges and lengths from Table 2, even if in different combinations.