

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 867

SPINDLE NOSES AND FACE PLATES

BAYONET TYPE

SIZES FOR INTERCHANGEABILITY

METRIC SERIES

1st EDITION

November 1968

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## BRIEF HISTORY

The ISO Recommendation R 867, *Spindle noses and face plates – Bayonet type – Sizes for interchangeability – Metric series*, was drawn up by Technical Committee ISO/TC 39, *Machine tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1951 and led, in 1965, to the adoption of a Draft ISO Recommendation.

In July 1967, this Draft ISO Recommendation (No. 1327) 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 :

|                |                |                       |
|----------------|----------------|-----------------------|
| Austria        | India          | South Africa, Rep. of |
| Belgium        | Iran           | Spain                 |
| Chile          | Israel         | Sweden                |
| Czechoslovakia | Italy          | Switzerland           |
| Finland        | Japan          | Thailand              |
| France         | Korea, Rep. of | Turkey                |
| Germany        | Netherlands    | U.A.R.                |
| Greece         | Poland         | United Kingdom        |
| Hungary        | Romania        | Yugoslavia            |

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 November 1968, to accept it as an ISO RECOMMENDATION.

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## SPINDLE NOSES AND FACE PLATES

## BAYONET TYPE

## SIZES FOR INTERCHANGEABILITY

## METRIC SERIES

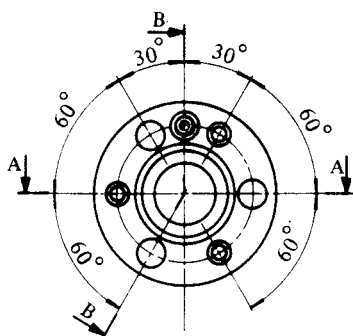
## 1. SCOPE

This ISO Recommendation is the second of a series of ISO Recommendations specifying the sizes for interchangeability for lathe spindle noses and face plates and covering the three types selected for international standardization, i.e. A and Camlock types and bayonet type.

The first two types, which are presently in use in most countries, are the subject of ISO Recommendation R 702, *Spindle noses and face plates – Types A and Camlock – Sizes for interchangeability*; the third type is the subject of this ISO Recommendation.

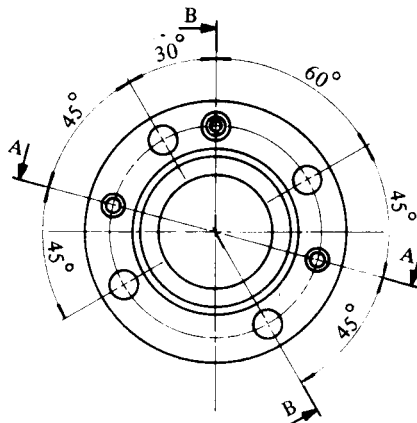
## 2. SPINDLE NOSES – BAYONET TYPE

Nos. 3 and 4

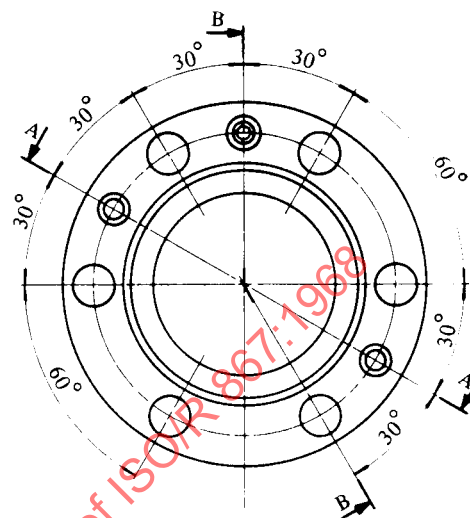


No. 3 without button

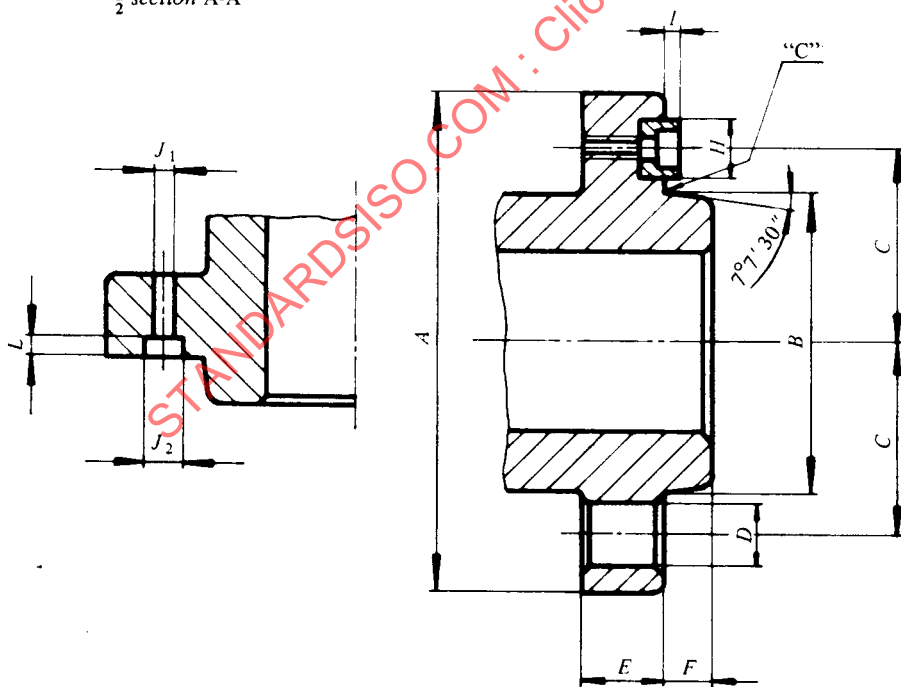
Nos. 5 to 8



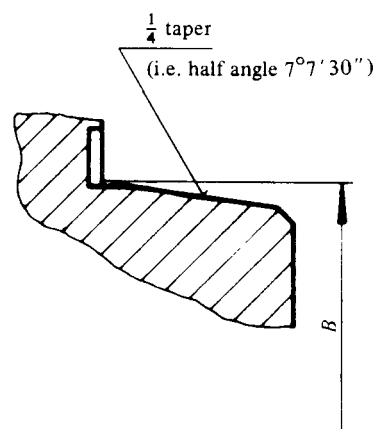
Nos. 11 to 20



Section B-B

 $\frac{1}{2}$  section A-A

Detail "C"



Dimension *B* is taken at the theoretical point of intersection between the generating line of the cone and the face of the flange.

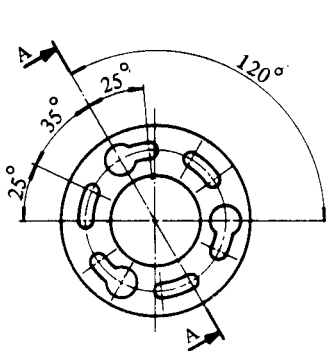
| Dimensions in millimetres |        |        |        |         |         |         |         |         |             |
|---------------------------|--------|--------|--------|---------|---------|---------|---------|---------|-------------|
| Dimension \ No.           | 3      | 4      | 5      | 6       | 8       | 11      | 15      | 20      | Tolerances  |
| <i>A</i>                  | 102    | 112    | 135    | 170     | 220     | 290     | 400     | 540     |             |
| <i>B</i>                  | 53.975 | 63.513 | 82.563 | 106.375 | 139.719 | 196.869 | 285.775 | 412.775 | + IT 4<br>0 |
| <i>C</i>                  | 37.5   | 42.5   | 52.4   | 66.7    | 85.7    | 117.5   | 165.1   | 231.8   | (1)         |
| <i>D</i>                  | 21     | 21     | 21     | 23      | 29      | 36      | 43      | 43      |             |
| <i>E</i>                  | 16     | 20     | 22     | 25      | 28      | 35      | 42      | 48      |             |
| <i>F</i>                  | 11     | 11     | 13     | 14      | 16      | 18      | 19      | 21      |             |
| <i>H</i>                  |        | 14.25  | 15.9   | 19.05   | 23.8    | 28.6    | 34.9    | 41.3    | H8 / h8     |
| <i>I</i>                  |        | 5      | 5      | 5       | 6       | 8       | 8       | 8       |             |
| <i>J<sub>1</sub></i>      | 6.4    | 6.4    | 6.4    | 8.4     | 10.5    | 10.5    | 13      | 13      |             |
| <i>J<sub>2</sub></i>      | 10.4   | 10.4   | 10.4   | 13.5    | 16.5    | 16.5    | 19      | 19      |             |
| <i>L</i>                  | 10     | 10     | 10     | 11      | 12      | 13      | 15      | 15      |             |

- (1)    0.1 mm for Nos. 3 to 11    } Tolerance of position (radial deviation  
       0.15 mm for Nos. 15 and 20 } with respect to the theoretical position)

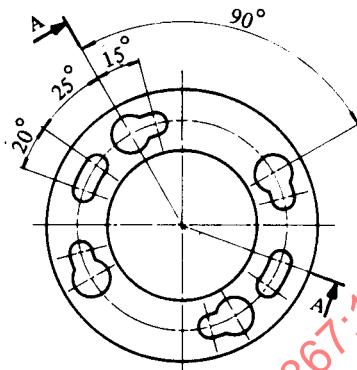
NOTE. — General tolerance for untoleranced dimensions :  $\pm 0.4$  mm.

3. BAYONET DISC

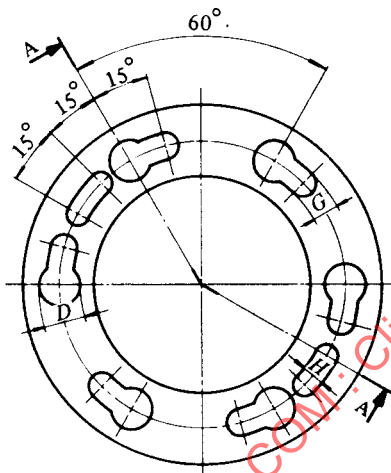
Nos. 3 and 4



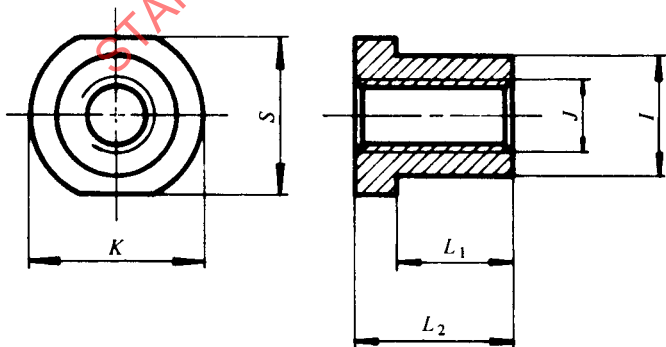
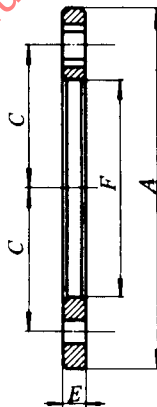
Nos. 5 to 8



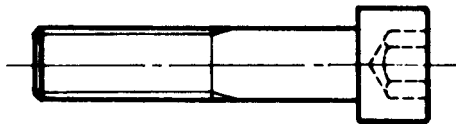
Nos. 11 to 20



Section A-A



Thrust socket



Hexagon socket head screw

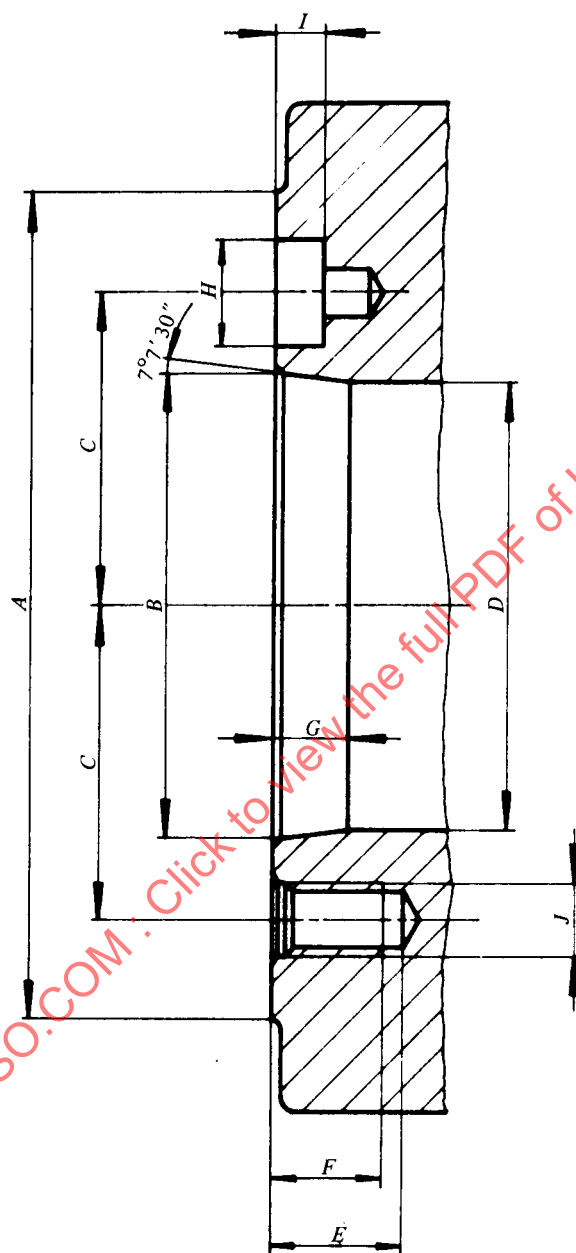
| Dimensions in millimetres       |          |          |          |          |           |           |           |           |                   |
|---------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-------------------|
| Dimension \ No.                 | 3        | 4        | 5        | 6        | 8         | 11        | 15        | 20        | Tolerances        |
| A                               | 110      | 120      | 145      | 180      | 230       | 300       | 410       | 550       |                   |
| C                               | 37.5     | 42.5     | 52.4     | 66.7     | 85.7      | 117.5     | 165.1     | 231.8     | (1)               |
| D                               | 21       | 21       | 21       | 23       | 29        | 36        | 43        | 43        |                   |
| E                               | 5        | 6        | 8        | 10       | 12        | 16        | 18        | 22        | -0.1              |
| F                               | 50       | 60       | 80       | 100      | 130       | 185       | 270       | 400       | H8 <sup>(2)</sup> |
| G                               | 11.5     | 11.5     | 11.5     | 14       | 18        | 23        | 27        | 27        |                   |
| H                               | 11.5     | 11.5     | 11.5     | 14       | 18        | 18        | 23        | 23        |                   |
| I                               | 11       | 11       | 11       | 13       | 17        | 17        | 22        | 22        |                   |
| J                               | M 6      | M 6      | M 6      | M 8      | M 10      | M 10      | M 12      | M 12      |                   |
| K                               | 16       | 16       | 16       | 19       | 25        | 25        | 32        | 32        |                   |
| L <sub>1</sub>                  | 5.2      | 6.2      | 8.2      | 10.2     | 12.2      | 16.2      | 18.3      | 22.3      | + 0.2             |
| L <sub>2</sub>                  | 8        | 9        | 12       | 15       | 18        | 22        | 26        | 30        |                   |
| S                               | 14       | 14       | 14       | 17       | 22        | 22        | 27        | 27        |                   |
| Hexagon<br>socket head<br>screw | M 6 × 15 | M 6 × 20 | M 6 × 25 | M 8 × 30 | M 10 × 35 | M 10 × 45 | M 12 × 55 | M 12 × 65 |                   |

(1) 0.1 mm for Nos. 3 to 11  
0.15 mm for Nos. 15 and 20 } Tolerance of position (radial deviation  
with respect to the theoretical position)

(2) The given boring diameters are maximum values.

The tolerance of the spindle diameter of the same dimension is f7.

## 4. FACE PLATES – BAYONET TYPE



Dimension *B* is taken at the theoretical point of intersection between the generating line of the cone and the face of the flange.

| Dimensions in millimetres |         |         |         |         |         |         |         |          |                           |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|----------|---------------------------|
| Dimension \ No.           | 3       | 4       | 5       | 6       | 8       | 11      | 15      | 20       | Tolerances                |
| A                         | 102     | 112     | 135     | 170     | 220     | 290     | 400     | 540      |                           |
| B                         | 53.975  | 63.513  | 82.563  | 106.375 | 139.719 | 196.869 | 285.775 | 412.775  | + (IT 4 – IT 3)<br>– IT 3 |
| C                         | 37.5    | 42.5    | 52.4    | 66.7    | 85.7    | 117.5   | 165.1   | 231.8    | (1)                       |
| D                         | 51.5    | 61      | 79.6    | 103.2   | 136.2   | 192.9   | 281.5   | 408      | max.                      |
| E                         | 18      | 18      | 18      | 22      | 28      | 34      | 40      | 40       |                           |
| F                         | 15      | 15      | 15      | 18      | 24      | 30      | 36      | 36       |                           |
| G                         | 10      | 10      | 12      | 13      | 14      | 16      | 17      | 19       |                           |
| H                         |         | 14.7    | 16.3    | 19.45   | 24.25   | 29.4    | 35.7    | 42.1     | + 0.1                     |
| I                         |         | 6.5     | 6.5     | 6.5     | 8       | 10      | 10      | 10       |                           |
| J                         | M 10    | M 10    | M 10    | M 12    | M 16    | M 20    | M 24    | M 24     |                           |
| Stud                      | M 10×34 | M 10×39 | M 10×43 | M 12×50 | M 16×60 | M 20×75 | M 24×90 | M 24×100 |                           |

(1)    0.1 mm for Nos. 3 to 11    }    Tolerance of position (radial deviation  
         0.15 mm for Nos. 15 and 20 }    with respect to the theoretical position)

NOTE. – General tolerance for untoleranced dimensions : ± 0.4 mm.