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**INTERNATIONAL STANDARD**



**1117**

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

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**Bonded abrasive products — Grinding-wheel dimensions  
(Part 2)**

*Produits abrasifs agglomérés — Dimensions des meules (Deuxième partie)*

First edition — 1975-05-01

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**(standards.iteh.ai)**

ISO 1117:1975

<https://standards.iteh.ai/catalog/standards/sist/960e644e-847c-41c6-ab58-b83e865b329c/iso-1117-1975>

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UDC 621.922-181

Ref. No. ISO 1117-1975 (E)

**Descriptors :** tools, abrasives, grinding wheels, dimensions.

Price based on 21 pages

## 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 29 has reviewed ISO Recommendation R 1117 and found it technically suitable for transformation. International Standard ISO 1117 therefore replaces ISO Recommendation R 1117-1969 to which it is technically identical.

ISO Recommendation R 1117 was approved by the Member Bodies of the following countries :

|                     |                       |                |
|---------------------|-----------------------|----------------|
| Australia           | Israel                | Sweden         |
| Belgium             | Italy                 | Switzerland    |
| Czechoslovakia      | Japan                 | Thailand       |
| Egypt, Arab Rep. of | Netherlands           | Turkey         |
| France              | New Zealand           | United Kingdom |
| Germany             | Peru                  | U.S.A.         |
| Greece              | Poland                | U.S.S.R.       |
| Hungary             | Portugal              | Yugoslavia     |
| India               | South Africa, Rep. of |                |
| Ireland             | Spain                 |                |

No Member Body expressed disapproval of the Recommendation.

The Member Bodies of the following countries disapproved the transformation of ISO/R 1117 into an International Standard :

Austria  
Sweden  
Switzerland

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# Bonded abrasive products – Grinding-wheel dimensions (Part 2)

## iTeh STANDARD PREVIEW (standards.iteh.ai)

### 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the dimensions of different types of grinding wheels. Outside diameters, thicknesses and hole diameters are in accordance with ISO 525, save for the exceptions indicated by a reference mark.

The dimensions are expressed in both millimetres and inches. The holes being identical, wheels of the metric series and those of the inch series can be mounted on the same machines; however, the overall dimensions possibly being slightly different, wheels of both series can only be considered as equivalent.

The symbols for dimensions used are in accordance with those of ISO 525. They may be replaced in national standards by those in conformity with the rules prevailing

in the country concerned, until international agreement regarding a single reference system is reached.

The figures accompanying the tables are only rough sketches which permit reference to the useful dimensions; particularly, for cup grinding wheels and for plain grinding wheels with a recess, the inset angles should be replaced by a fillet to avoid any initiation of rupture, but permitting, however, correct application of the pieces on the shaft.

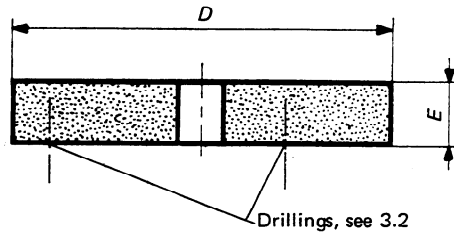
NOTE – The dimensions of other types of grinding wheels are given in ISO/R 603 and ISO 2933.

### 2 REFERENCE

ISO 525, *Bonded abrasive products – General features – Designation, ranges of dimensions, and profiles.*

3 THREADED INSERT DISKS

3.1 Dimensions



3.1.1 Workpieces held in hand

| Dimensions in millimetres |                            |                          |                    | Dimensions in inches |                              |                            |                    |
|---------------------------|----------------------------|--------------------------|--------------------|----------------------|------------------------------|----------------------------|--------------------|
| D                         | E                          |                          | Drillings, see 3.2 | D                    | E                            |                            | Drillings, see 3.2 |
|                           | Speed not exceeding 35 m/s | Speed higher than 35 m/s |                    |                      | Speed not exceeding 115 ft/s | Speed higher than 115 ft/s |                    |
| 300                       | 50                         | 50                       | Nuts M10           | 12                   | 2                            | Nuts 3/8 UNC               |                    |
| 350                       |                            |                          |                    |                      |                              |                            |                    |
| 400                       |                            |                          |                    |                      |                              |                            |                    |
| 450                       |                            |                          |                    |                      |                              |                            |                    |
| 500                       |                            |                          |                    |                      |                              |                            |                    |
| 600                       |                            |                          |                    |                      |                              |                            |                    |
| 750                       |                            |                          |                    |                      |                              |                            |                    |
| 900                       |                            |                          |                    |                      |                              |                            |                    |
| 1060                      |                            |                          |                    |                      |                              |                            |                    |
| 1346*                     |                            |                          |                    |                      |                              |                            |                    |
| 1829*                     |                            |                          |                    |                      |                              |                            |                    |
|                           |                            |                          |                    |                      |                              |                            |                    |
|                           |                            |                          |                    | 16                   |                              |                            |                    |
|                           |                            |                          |                    | 18                   |                              |                            |                    |
|                           |                            |                          |                    | 20                   |                              |                            |                    |
|                           |                            |                          |                    | 24                   |                              |                            |                    |
|                           |                            |                          |                    | 30                   |                              |                            |                    |
|                           |                            |                          |                    | 36                   |                              |                            |                    |
|                           |                            |                          |                    | 42                   |                              |                            |                    |
|                           |                            |                          |                    | 53*                  |                              |                            |                    |
|                           |                            |                          |                    | 72*                  |                              |                            |                    |

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3.1.2 Workpieces held mechanically – Speed not exceeding 35 m/s (115 ft/s)

| Dimensions in millimetres |     |                    | Dimensions in inches |        |                    |
|---------------------------|-----|--------------------|----------------------|--------|--------------------|
| D                         | E   | Drillings, see 3.2 | D                    | E      | Drillings, see 3.2 |
| 300                       | 90* | Nuts M10           | 12                   | 3 1/2* | Nuts 3/8 UNC       |
| 350                       |     |                    |                      |        |                    |
| 400                       |     |                    |                      |        |                    |
| 450                       |     |                    |                      |        |                    |
| 500                       |     |                    |                      |        |                    |
| 600                       |     |                    |                      |        |                    |
| 750                       |     |                    |                      |        |                    |
| 900                       |     |                    |                      |        |                    |
| 1060                      |     |                    |                      |        |                    |
| 1346*                     |     |                    |                      |        |                    |
| 1829*                     | 50  |                    | 42                   | 2      |                    |
|                           |     |                    | 53*                  |        |                    |
|                           |     |                    | 72*                  |        |                    |

3.2 Drillings

The following drawings correspond to the drillings and to the boring of the fixing plate seen from the face.

Some of the nuts may be omitted in the wheels but it is recommended that such as are used should correspond to one point of the drillings provided for.

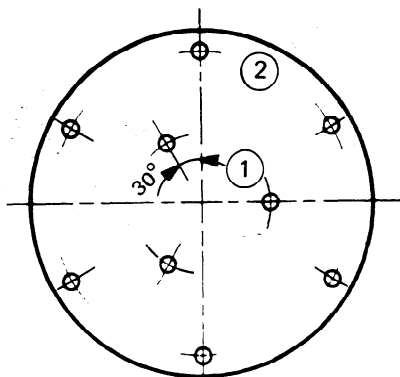
For wheels with a diameter D of 300, 350, 400, 450, 500, 600 and 750 mm, or of 12, 14, 16, 18, 20, 24 and 30 in, the nuts are equally spaced on the corresponding circle.

The dimensions of the nuts shall be indicated on the wheels.

\* Dimensions not included in ISO 525.

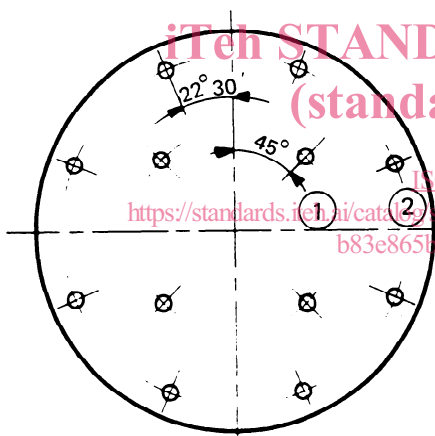
3.2.1 Drillings : metric series

Dimensions in millimetres  
 D = 300, 350 and 400 mm



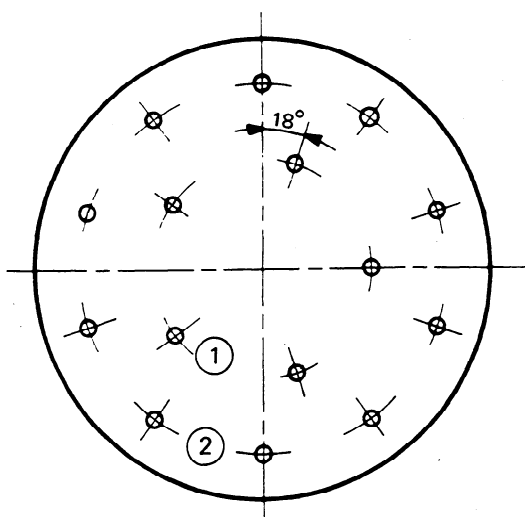
D = 300 mm

| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 120,65    | 3 at 120°       |
| ②                | 266,70    | 6 at 60°        |



D = 350 mm

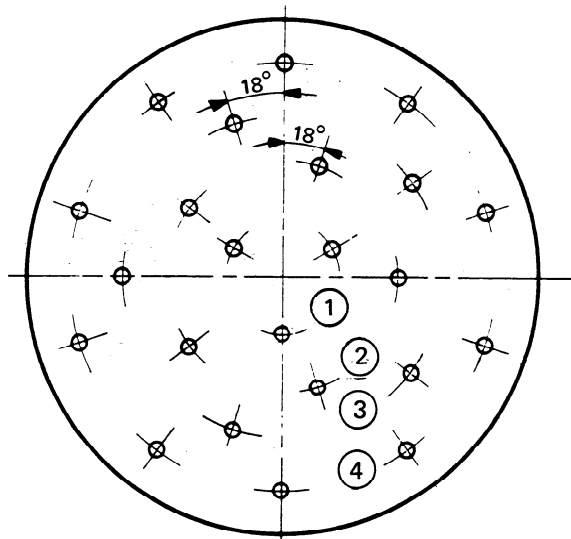
| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 177,80    | 4 at 90°        |
| ②                | 304,80    | 8 at 45°        |



D = 400 mm

| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 190,50    | 5 at 72°        |
| ②                | 323,85    | 10 at 36°       |

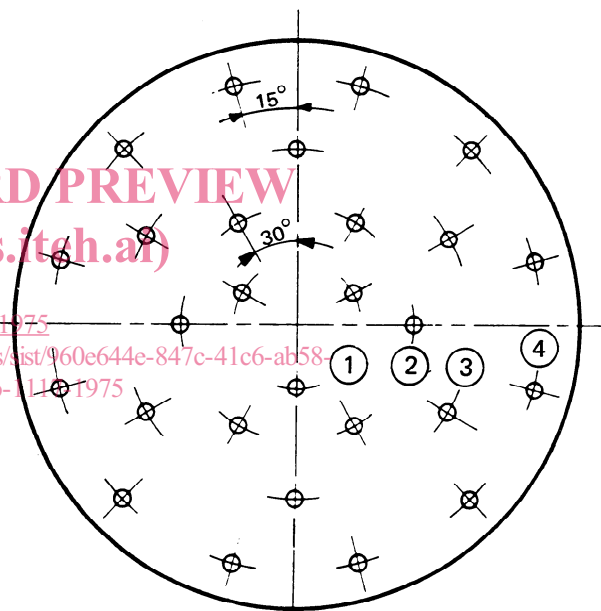
Dimensions in millimetres  
 $D = 450, 500$  and  $600$  mm



$D = 450$  mm

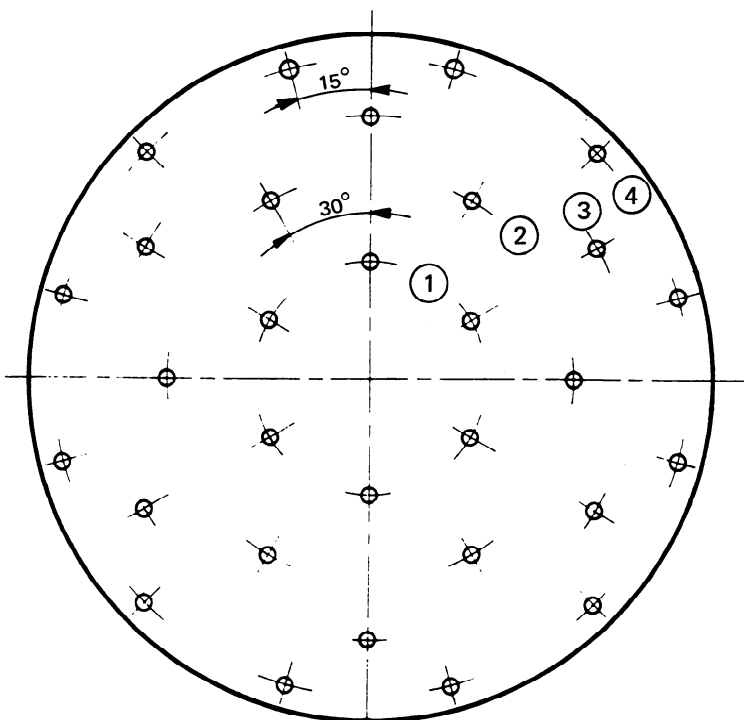
| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 101,60    | 3 at 120°       |
| ②                | 203,20    | 5 at 72°        |
| ③                | 279,40    | 5 at 72°        |
| ④                | 374,65    | 10 at 36°       |

| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 107,95    | 3 at 120°       |
| ②                | 203,20    | 6 at 60°        |
| ③                | 304,80    | 6 at 60°        |
| ④                | 431,80    | 12 at 30°       |



$D = 500$  mm

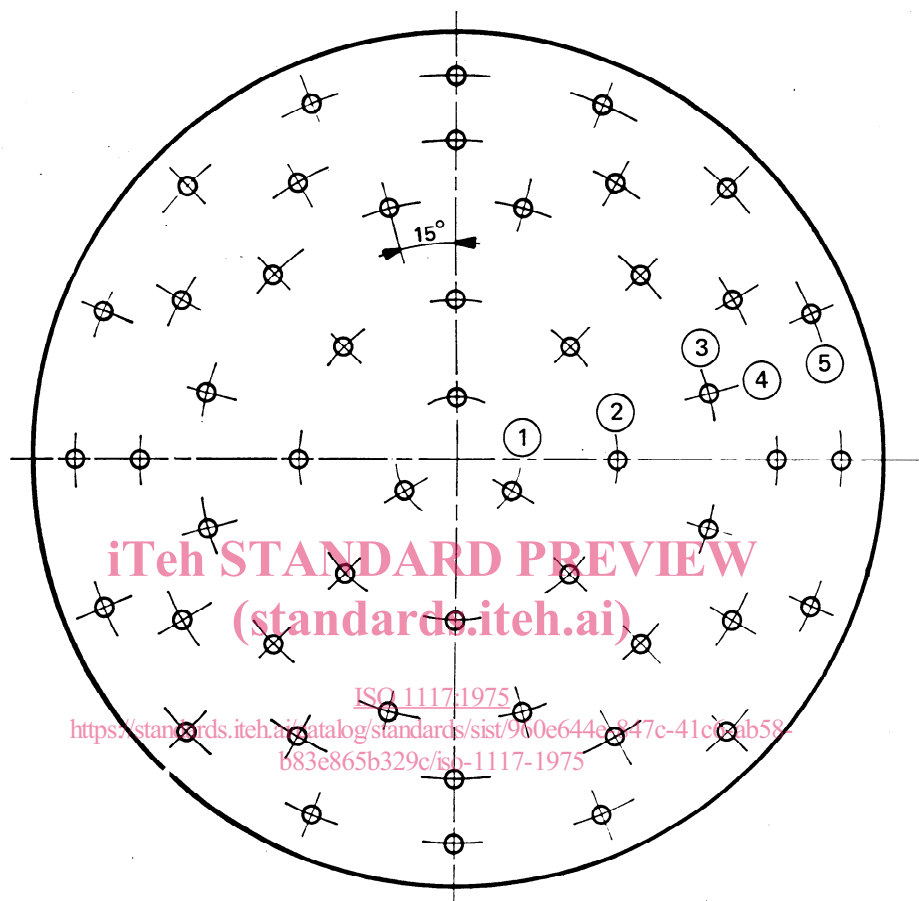
| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 203,20    | 6 at 60°        |
| ②                | 330,20    | 6 at 60°        |
| ③                | 457,20    | 6 at 60°        |
| ④                | 558,80    | 12 at 30°       |



$D = 600$  mm



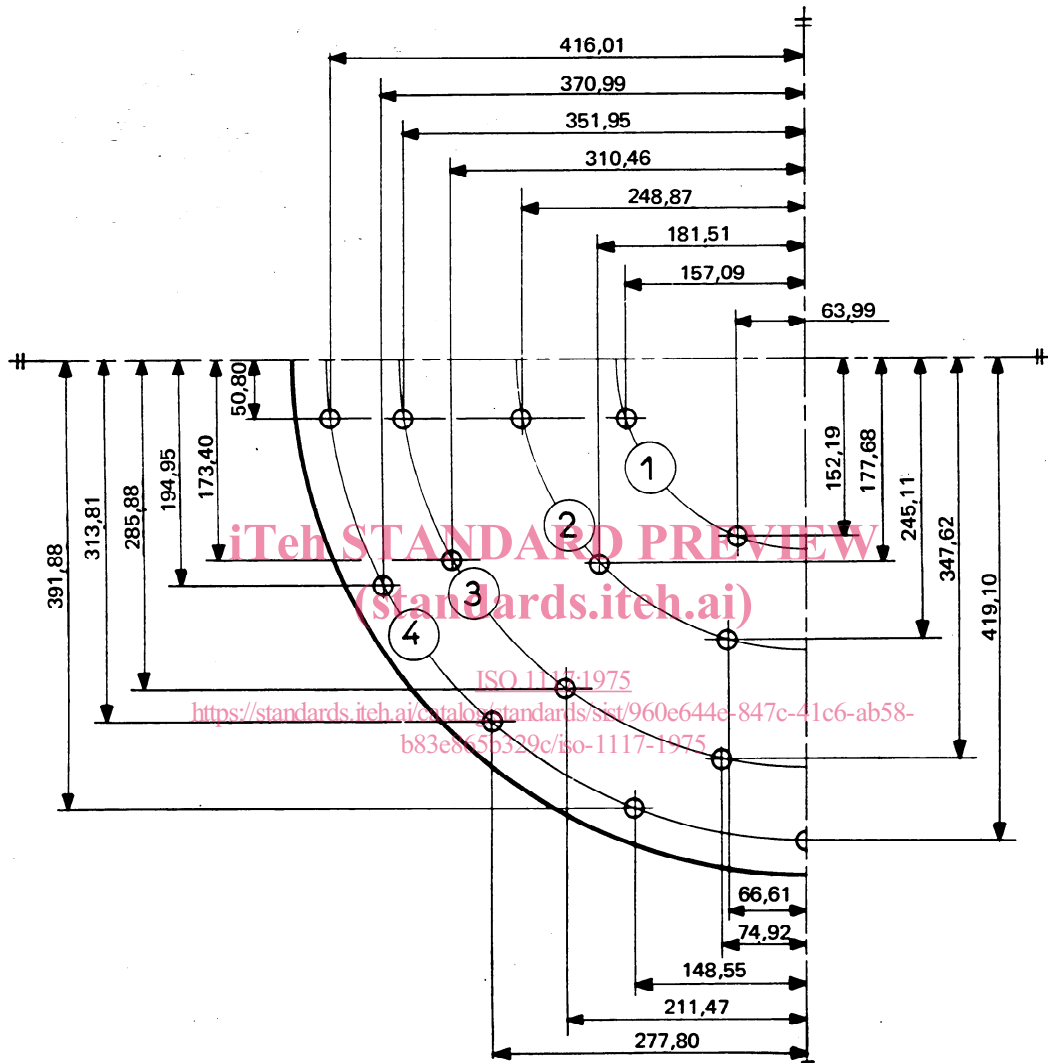
Dimensions in millimetres  
 $D = 750$  mm



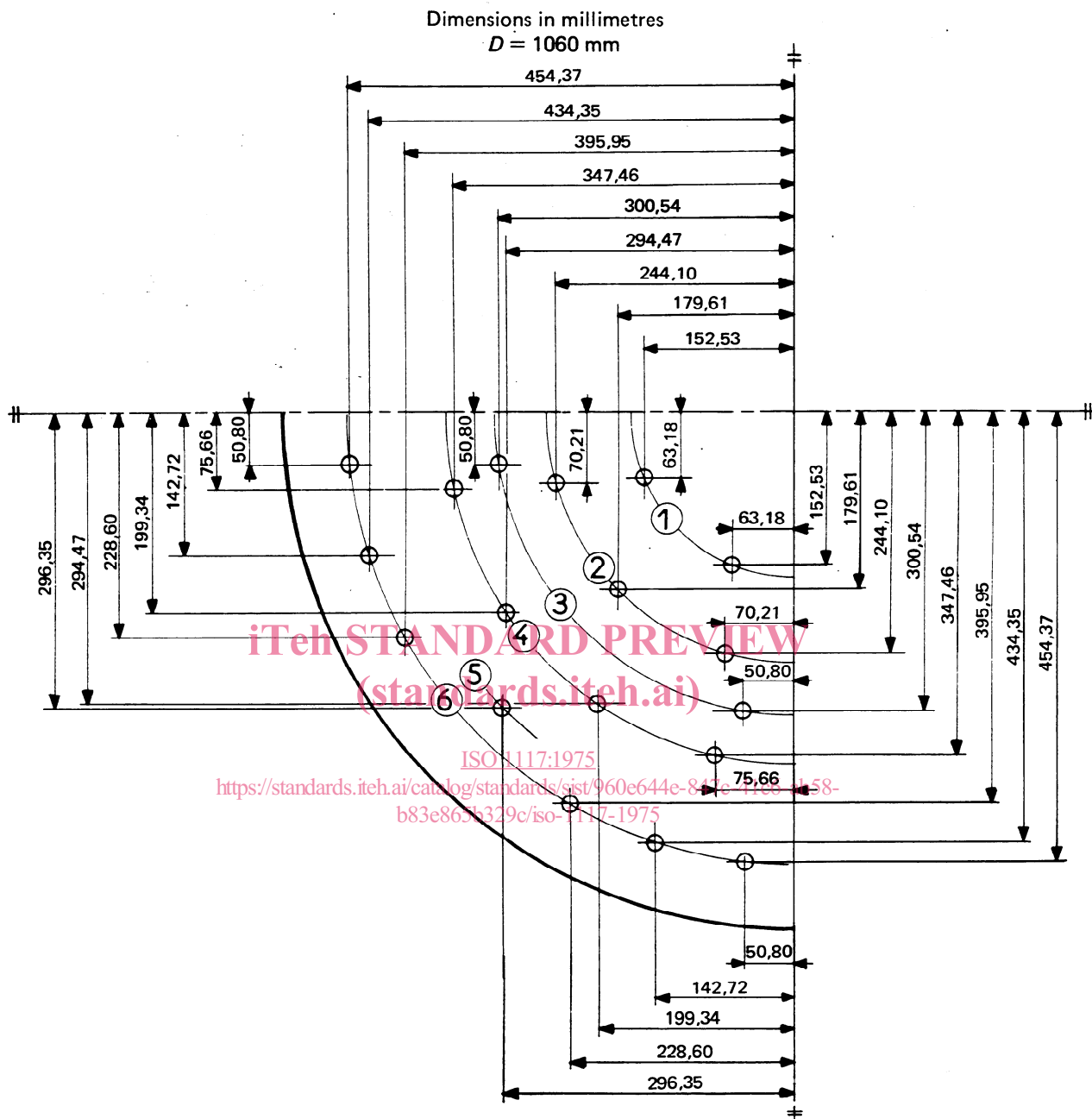
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| Drilling circles |           | Number of holes |
|------------------|-----------|-----------------|
| Indexes          | Diameters |                 |
| ①                | 107,95    | 3 at 120°       |
| ②                | 279,40    | 8 at 45°        |
| ③                | 457,20    | 12 at 30°       |
| ④                | 558,80    | 12 at 30°       |
| ⑤                | 673,10    | 16 at 22° 30'   |

Dimensions in millimetres  
 $D = 900$  mm



| Drilling circles |                       | Number of holes |
|------------------|-----------------------|-----------------|
| Indexes          | Approximate diameters |                 |
| ①                | 330,2                 | 8               |
| ②                | 508,0                 | 12              |
| ③                | 711,2                 | 16              |
| ④                | 838,2                 | 18              |



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| Drilling circles |                       | Number of holes |
|------------------|-----------------------|-----------------|
| Indexes          | Approximate diameters |                 |
| ①                | 330,2                 | 8               |
| ②                | 508,0                 | 12              |
| ③                | 609,6                 | 8               |
| ④                | 711,2                 | 16              |
| ⑤                | 838,2                 | 4               |
| ⑥                | 914,4                 | 24              |