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# International Standard



# 2905

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

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## **Modular units for machine tool construction — Spindle noses and adjustable adaptors for multi-spindle heads**

*Éléments standards pour la construction des machines-outils — Nez de broches et douilles de réglage pour têtes multibroches*

**Second edition — 1985-12-01**

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**UDC 621.9-112**

**Ref. No. ISO 2905-1985 (E)**

**Descriptors :** machine tools, modular structures, spindles, adaptors, dimensions.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2905 was prepared by Technical Committee ISO/TC 39, *Machine tools*.

ISO 2905 was first published in 1974. This second edition cancels and replaces the first edition, of which the tolerance on the adjustable adaptor outside diameter,  $d$ , has been technically revised.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Modular units for machine tool construction – Spindle noses and adjustable adaptors for multi-spindle heads

## 1 Scope and field of application

This International Standard specifies dimensions for spindle noses for use with adjustable adaptors and quick-change adaptors used in multi-spindle heads.

It specifies requirements for three types of adjustable adaptors to fit taper shank drills, reamers and spot-facing cutters, used in multi-spindle heads.

## 2 References

ISO 296, *Machine tools – Self-holding tapers for tool shanks.*

ISO 2901, *ISO metric trapezoidal screw threads – Basic profile and maximum material profiles.*

ISO 2903, *ISO metric trapezoidal screw threads – Tolerances.*

## 3 Spindle noses

### 3.1 Nominal sizes

The nominal size of the spindle nose shall be its nominal bore, which shall be identical with the nominal diameter of the adjustable adaptor with which it is to be used.

The range of nominal sizes is as follows :

8, 10, 12, 16, 20, 25, 28, 36 and 48 mm

### 3.2 Interchangeability

Spindle noses shall be capable of accepting adjustable adaptors manufactured in accordance with clause 4.

### 3.3 Dimensions

Dimensions shall comply with those given in table 1.

### 3.4 Locking screw

For reasons of safety, it is important that the locking screw when tightened does not protrude beyond the outside diameter of the spindle nose. Locking screws are therefore to be reduced in length if necessary; this correction should be carried out when the position of the adjustable adaptor in the spindle nose corresponds with the maximum wear of the tool.

## 4 Adjustable adaptors

### 4.1 Nominal sizes

The nominal size of an adaptor shall be its nominal outside diameter, which shall be identical with the nominal bore of the spindle nose with which it is to be used.

The range of nominal sizes is as follows :

8, 10, 12, 16, 20, 25, 28, 36 and 48 mm.

### 4.2 Interchangeability

Adaptors shall be capable of fitting spindle noses manufactured in accordance with clause 3.