

*Indian Standard*



**GRAPHICAL SYMBOLS FOR ELEMENTS OF  
KINEMATIC DIAGRAM, PART 4**

( ISO Title : Kinematic Diagrams —  
Graphical Symbols — Part 4 )

**National Foreword**

This Indian Standard ( Part 4 ) which is identical with ISO 3952/4-1984 'Kinematic diagrams — Graphical symbols — Part 4' issued by the International Organization for Standardization (ISO), was adopted by the Indian Standards Institution on the recommendation of the Drawings Sectional Committee and approval of the Mechanical Engineering Division Council.

Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'.

**Additional Information**

This standard is the national implementation of ISO 3952/4-1984; as such only the English text has been reproduced. If the French and Russian text are required, reference should be made to the original ISO publication.

This standard includes number of parts, each identical with the corresponding part of the International Standard ISO 3952, as follows:

IS : 10722 ISO 3952 Kinematic diagrams — Graphical symbols.

IS : 10722 ( Part 1 )	ISO 3952/1	Motion of links of mechanisms; Kinematic pairs; Links and connection of their components; Linkage of bars and their links
IS : 10722 ( Part 2 )	ISO 3952/2	Friction and gear mechanisms; Cam mechanisms
IS : 10722 ( Part 3 )	ISO 3952/3	Maltese and ratchet mechanisms; Couplings and break
IS : 10722 ( Part 4 )	ISO 3952/4	Miscellaneous mechanisms and their components

## **Introduction**

The purpose of this International Standard is the creation of a system of graphical symbols for kinematic diagrams. The creation of such a system will simplify the preparation of kinematic diagrams and will facilitate the execution and understanding of such diagrams by specialists of different countries.

## **Scope and field of application**

This International Standard establishes the graphical symbols for elements of kinematic diagrams of products in all branches of industry. The symbols established by this International Standard are to be used on diagrams in technical documentation, as well as in technical and educational literature.

This International Standard is being published in four parts, as follows:

### **Part 1**

- 1 Motion of links of mechanisms**
- 2 Kinematic pairs**
- 3 Links and connections of their components**
- 4 Linkage of bars and their links**

### **Part 2**

- 5 Friction and gear mechanisms**
- 6 Cam mechanisms**

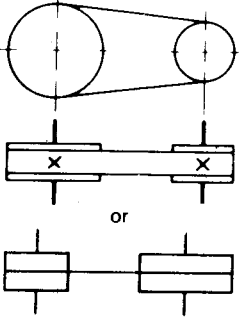




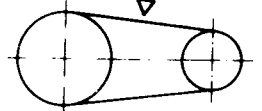
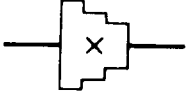
### **Part 3**

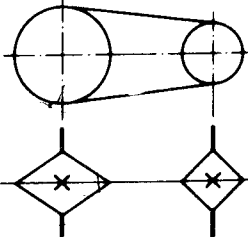

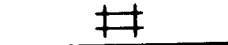

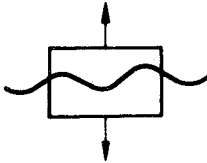



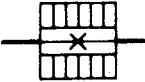
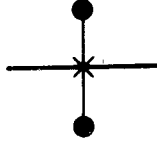
- 7 Maltese and ratchet mechanisms**
- 8 Couplings and brakes**

### **Part 4**

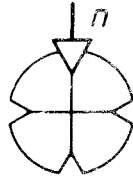
- 9 Miscellaneous mechanisms and their components**

## 9 Miscellaneous mechanisms and their components

No.	Designation	Definition	Basic symbol	Permissible symbol	Notes and examples
9.1	Belt drive, general symbol without type specification				<p>If it is necessary to specify the belt type, the following qualifying symbols may be used:</p> <p>V-belt</p>  <p>Round belt</p>  <p>Timing belt</p>  <p>Flat belt</p>  <p><i>Example:</i> V-belt drive</p> 
9.2	Stepped pulley mounted on a shaft				

No.	Designation	Definition	Basic symbol	Permissible symbol	Notes and examples
9.3	Chain drive, general symbol without type specification				<p>If it is necessary to specify the chain type, the following qualifying symbols may be used:</p> <p>Link chain</p>  <p>Roller chain</p>  <p>Inverted tooth chain</p> 
9.4	Lead screw drive with a split nut				
9.5	Flexible shaft for transmission of rotational moment				<p>A partial hatching of the symbol is also permitted</p> 
9.6	Flywheel on a shaft				

**9.7 Dividing head**



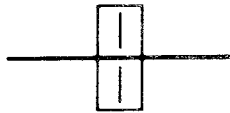
**9.8 Bearings**

**9.8.1 Radial bearing**

a) plain



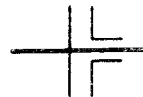
b) rolling



**9.8.2 Thrust bearing**

a) plain

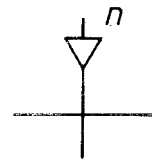
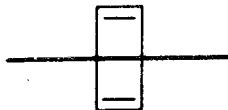
— single sided





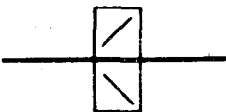
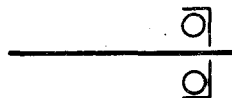
— double sided



b) rolling



$n$  = number of divisions

No.	Designation	Définition	Basic symbol	Permissible symbol	Notes and examples
9.8.3	Radial thrust bearing  a) plain  — single sided  — double sided  b) rolling		  		If it is necessary to specify the bearing type, the symbols of ISO .....* shall be used
9.9	Springs	Symbols of springs shall conform to those of ISO 2162			

\* Will be the subject of a future International Standard.