
International Standard



7506

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

Textile machinery and accessories — Numbering of harnesses for drawing-in on Jacquard machines

Matériel pour l'industrie textile — Numérotage des harnais pour le rentrage sur machines Jacquard

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Descriptors : textile machinery, cards (machines), harnesses, numbering.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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.

International Standard ISO 7506 was developed by Technical Committee ISO/TC 72, *Textile machinery and allied machinery and accessories*, and was circulated to the member bodies in January 1983.

It has been approved by the member bodies of the following countries :

Australia	India	Spain
Belgium	Japan	Switzerland
Bulgaria	Korea, Rep. of	Turkey
Czechoslovakia	Poland	United Kingdom
Egypt, Arab Rep. of	Romania	USSR
Germany, F.R.	South Africa, Rep. of	Yugoslavia

The member body of the following country expressed disapproval of the document on technical grounds :

France

Textile machinery and accessories – Numbering of harnesses for drawing-in on Jacquard machines

1 Scope and field of application

This International Standard establishes a system for the numbering of harnesses used for drawing-in on Jacquard weaving machines. It covers continuous pattern cards, banded pattern cards, Jacquard machines, comber boards and harness cord guides for the manufacture of fabrics, the face sides of which lie uppermost in the weaving machine.

This International Standard does not cover Jacquard equipment for special patterns (for example, symmetrical harnesses) where the standardized pattern holes, hooks and harness cords do not control the first warp threads but rather those determined by the particular type of equipment used.

This International Standard may also not apply fully to some types of Wilton carpet weaving, where certain full rows of cords from the Jacquard do not go straight down to the same appropriate rows in the comber board, and full rows of cords across the Jacquard must be crossed back to the front of the comber board. When reference is made to the drawing-in of harnesses, this is always to complete rows of hooks for the sake of greater clarity.

2 Basic positions

On the weaving machine, there are four different ways of orientating the Jacquard machine according to the fall of the cards which gives the following positions:

- a) axial fall position (here the axis of the card cylinder is parallel to the reed):
 - “in front” or “fall over the operator” position, where the card is in front of the weaving machine;

- “at the back” or “behind” or “fall over the warp” position, where the card is placed above the back of the weaving machine;

- b) lateral fall position (here the axis of the card cylinder is perpendicular to the reed):

- “right” or “fall on the right” position, where the card is placed above the right of the weaving machine;

- “left” or “fall on the left” position, where the card is placed above the left of the weaving machine.

The expression “interlaced” harness is used when the cards are in a lateral position, while in cases where the cards are in an axial position, the harness cord guide is described as being “open”. If the equipment operates on the basis of this “open” harness, the following two systems for the positioning of the cards are possible:

- a) system 1: Card position in front-left-right;
- b) system 2: Card position at the back-left-right.

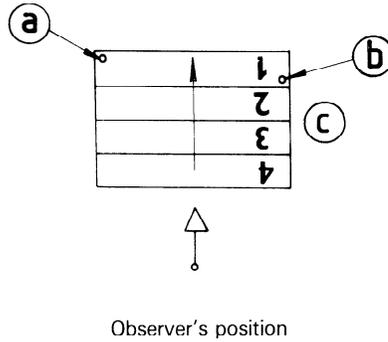
In these systems, the following elements correspond to the first warp line on the left of the design (based on one thread per warp line):

- a) the first pattern hole on the Jacquard card;
- b) the first hook with its needle;
- c) the first harness cord;
- d) the first harness cord hole in the comber board;
- e) the first warp thread in the repeat.

3 System 1: Card position in front-left-right

3.1 Numbering of Jacquard cards

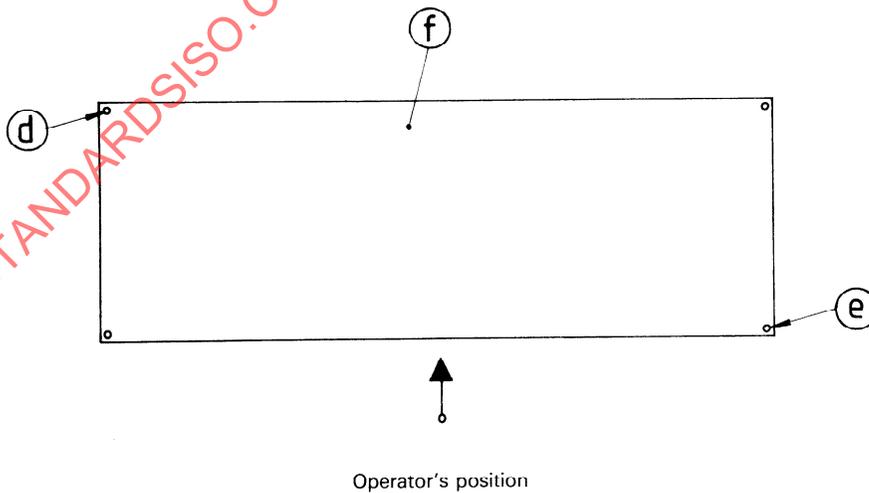
Jacquard cards are numbered close to the right-hand edge. The number of the Jacquard card corresponds to the number of the weft line on the design. If the punched card is positioned in front of the observer, such that the card number is visible on the right, the first pattern hole is on the left at the back and the last pattern hole is on the right at the front.



- (a) first pattern hole
- (b) last pattern hole
- (c) numbered side

3.2 Numbering of harness cord holes

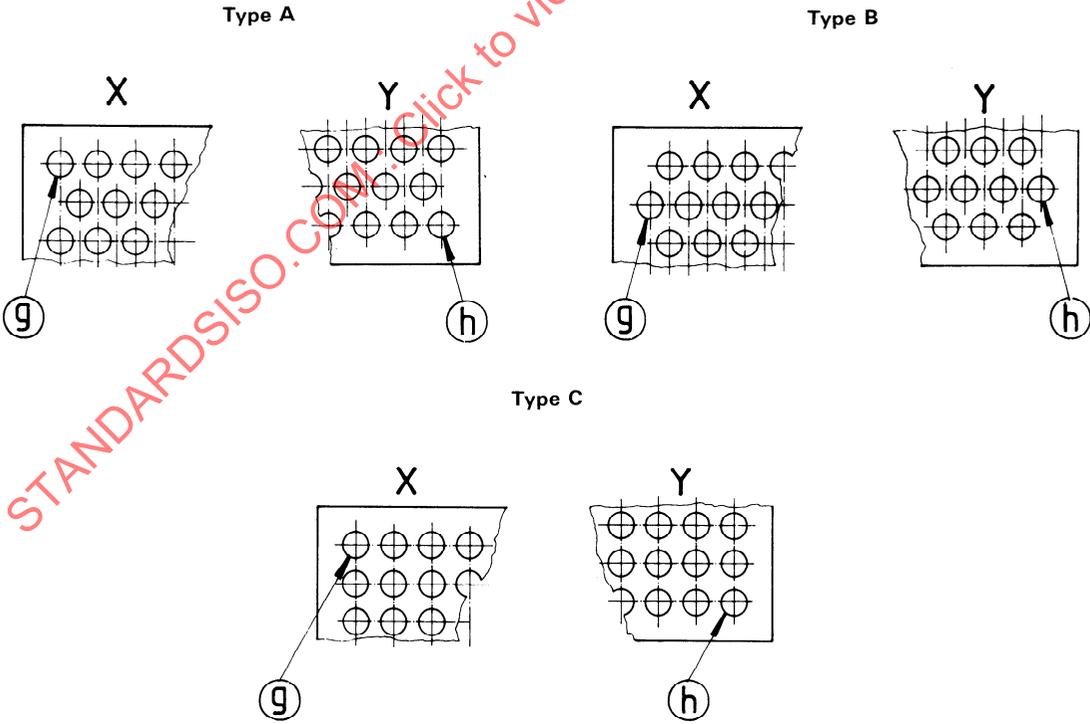
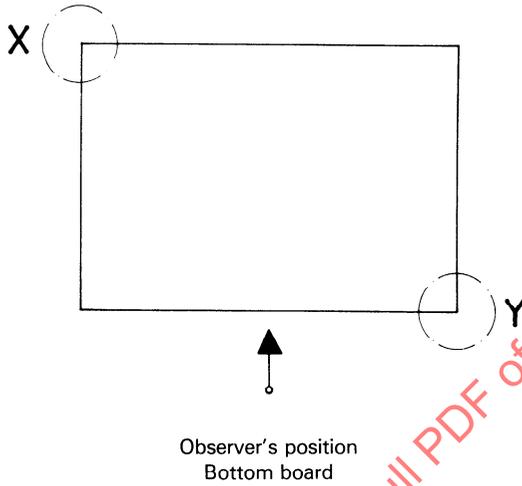
Looking down on the comber board from the point of view of the operator, the first harness cord hole is on the left at the back and the last harness cord hole is on the right at the front.



- (d) first harness cord hole
- (e) last harness cord hole
- (f) comber board

3.3 Numbering of hooks

Looking down on the bottom board from the point of view of the operator, the first hook is on the left at the back for controlling the first harness cord in the harness draft repeat, and the last hook is on the right at the front for controlling the last harness cord in the harness draft repeat.



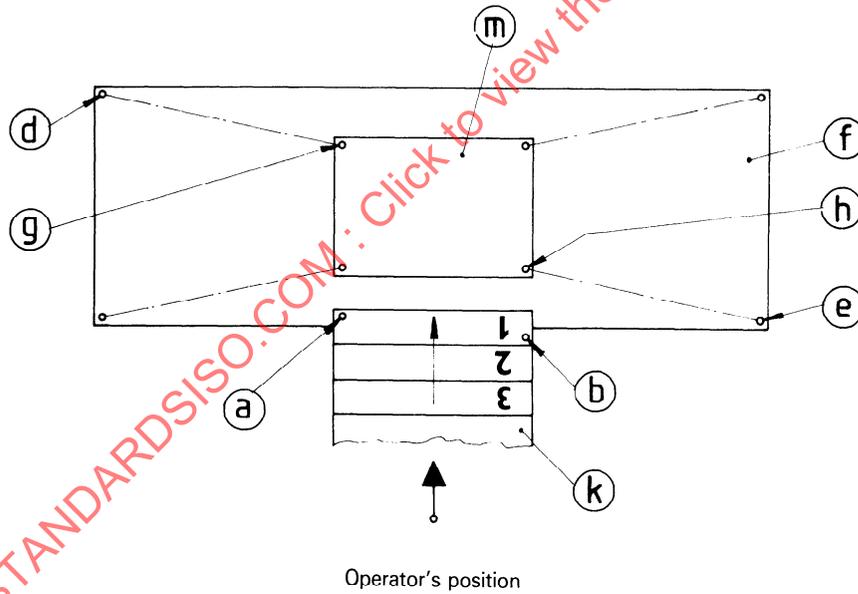
- g for the first hook
- h for the last hook

3.4 Diagram of drawing-in of harness

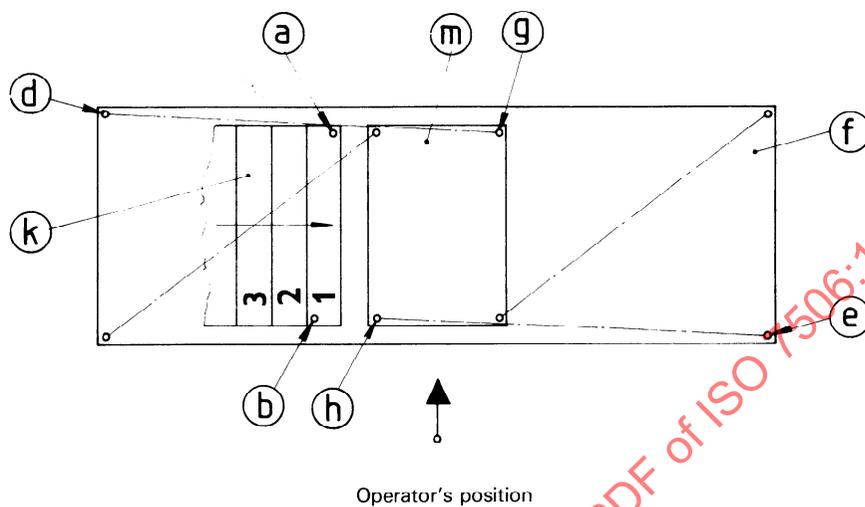
- (a) first pattern hole
- (b) last pattern hole
- (d) first harness cord hole
- (e) last harness cord hole
- (f) comber board
- (g) first hook
- (h) last hook
- (k) Jacquard cards
- (m) bottom board

NOTE — These reference points are common to the three card positions indicated in 3.4.1 to 3.4.3.

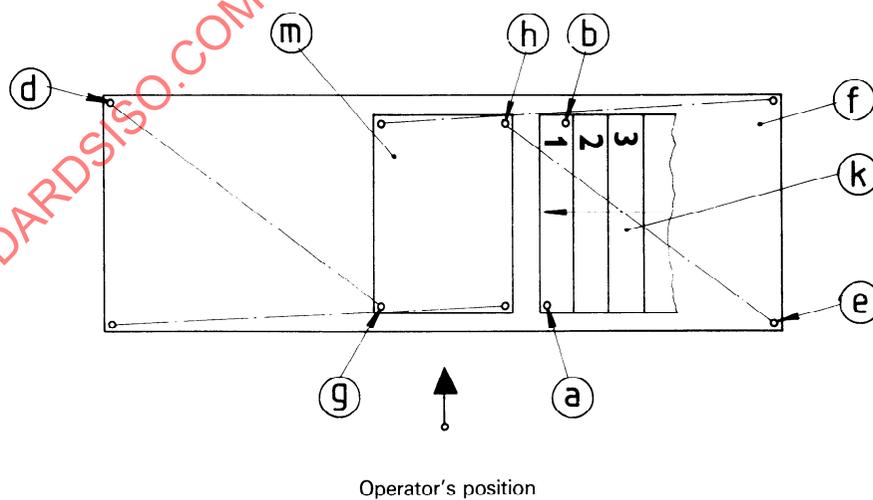
3.4.1 Card position at the front



3.4.2 Card position on the left



3.4.3 Card position on the right

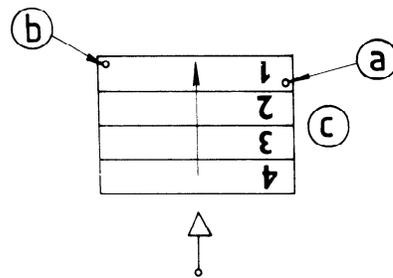


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4 System 2: Card position at the back-left-right

4.1 Numbering of Jacquard cards

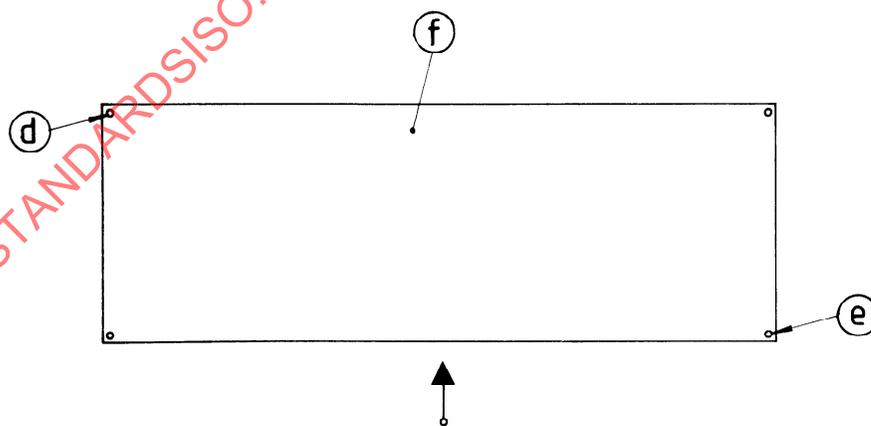
Jacquard cards are numbered close to the right-hand edge. The number of the Jacquard card corresponds to the number of the weft line on the design. If the punched card is positioned in front of the observer such that the card number is visible on the right, the first pattern hole is on the right at the front and the last pattern hole is on the left at the back.



- (a) first pattern hole
- (b) last pattern hole
- (c) numbered side

4.2 Numbering of harness cord holes

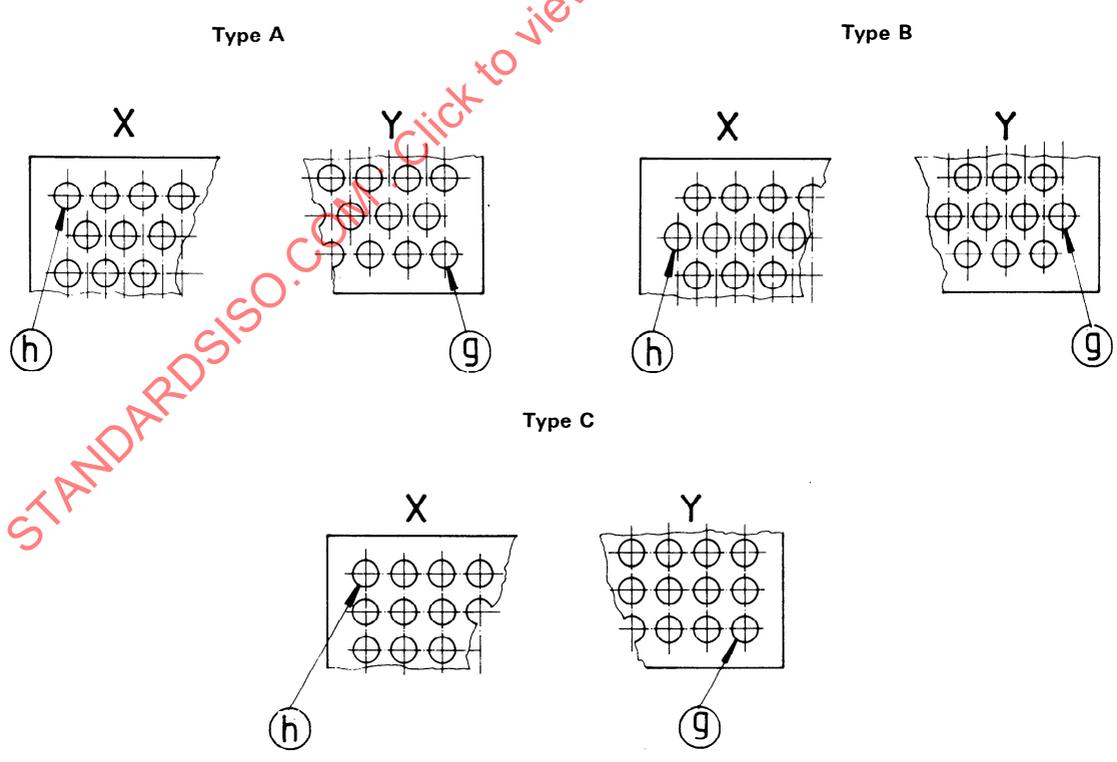
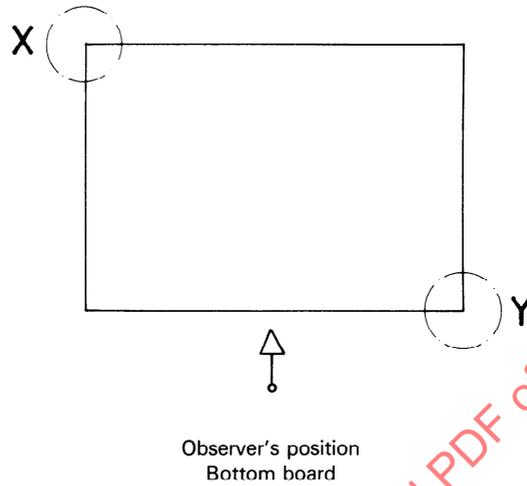
Looking down on the comber board from the point of view of the operator, the first harness cord hole is on the left at the back, and the last harness cord hole is on the right at the front.



- (d) first harness cord hole
- (e) last harness cord hole
- (f) comber board

4.3 Numbering of hooks

Looking down on the bottom board from the point of view of the operator, the first hook is on the left at the back for controlling the first harness cord in the harness draft repeat, and the last hook is on the right in front for controlling the last harness cord in the harness draft repeat.



- ⓖ for the first hook
- ⓗ for the last hook