

# **Revision of JIS Z 0150 “Packaging—Distiribution Packaging— Graphical Symbols for Handling and Storage of Packages”**

## **Introduction**

The previous JIS Z 0150:2001 “Packaging—Pictorial marking for handling of goods” was established on the basis of ISO 780:1997 with adding some items not included in the original ISO. This Japanese Industrial Standards (JIS) provided for pictorial marks, rather than words, to give to operators instructions on physical handling, transporation and storage of packaged cargo, and where to indicate them on the cargo. The intention of employing these pictorial marks was to make it possible to use common instructions in the world and convey them for the prevention of damage and accidents during transportation and cargo handling, and thus to contribute to greater transportation quality, rationalization in goods packaging and resource saving. As a result of better understanding and proper indication and handling of the cargo with these markings, it was expected that the clarification of how to handle cargo by means of these markings would contribute to substantial decrease in damage and accidents of packaged cargo being transported.

However, some pictorial symbols in ISO 780:1997 were shown with unclear definitions, resulting in different cargo handling in different countries. In order to address this confusion, a proposal was made by Japan to revise the ISO standard, and thus, the amended ISO 780:2015 was established. Then, efforts to amend the corresponding national standard, JIS Z 0150, began hurriedly based on the new ISO, and the amended JIS was finally published in March 2018.

Now, a brief introduction of the path to the revision of the previous JIS S 0150, efforts made during draft writing, structure of the new standard and other points will follow.

## **1. Outline of JIS Z 0150:2018**

JIS Z 0150:2018 “Packaging-Distribution Packaging-Graphical Symbols for Handling and Storage of Packages” has the following statement in its Introduction: Packages are often marked with handling and storage instructions in the language of the counry of origin. While this may safeguard the consignment in the areas using the same language, it is of little value for goods consigned to, or through, countries using different languages, and of no value at all if people handling the packages are illiterate. Graphical symbols offer the best possibility of conveying the consignor’s intention and their adoption will, therefore, undoubtedly reduce loss and damage through incorrect handling, as well as help ensure safety for workers.

Starting with general descriptions of graphical symbols, the new JIS Z 0150:2018 then continues to stipulate indication methods, as well as colors, sizes, number and locations of the symbols to be indicated. At the end, it shows 18 graphical symbols with the meaning, requirements, examples of application, notes, among others.

## **2. Path to Revision**

JIS Z 0150 was established in 1966, followed by revisions in 1988 and 2001 until it was revised this time in 2018.

Looking back the history, the 1988 JIS revision was based on the 1985 revision of the base international standard, ISO 780, but the number of applicable indication marks was increased from 8 to 16, on the basis of the 13 marks presented in the then current ISO standard. After that, the JIS standard was again revised in 2001, corresponding to the 1997 amendment of ISO 780, with adding two Japan specific marks, Handle with Care and No Open Fire, to the 17 indication marks shown in the then current ISO 780.

The 2018 amendment of the JIS was made based on the original draft presented by a committee set up in the Japan Packaging Institute for the preparation of amendment draft.

Since the subject encompasses a wide fields of transportation and packaging, the committee had sub-committees responsible for structural planning of a revised standard with the participation of learned personnel specializing in transportation, storage, packaging and graphical symbols, as well as representatives from related businesses, government officials and industrial organizations concerned. Then, specific draft writing was made by practical specialists in transportation, storage, cargo handling and distribution packaging for the amendment of the standard.

## **3. Points for Consideration**

At the start of the new standard preparation, the following points were discussed:

### **(1) Marks shown in JIS Z 0150:2001 but not in ISO 780:2015**

Specifically, pictorials No. 18 Handle with Care and No. 19 No Open Fire were included in JIS Z 0150:2001 but these were not in the latest ISO 780:2015.

It was supposed that, of these two, there would be a lot of concrete cases in which the use of No. 18 was needed. Continued consideration would be required as to whether to keep this mark or not in the JIS standard.

### **(2) Classification, order of presentation and numbering of pictorial marks**

In JIS Z 0150:2001, an identification number was assigned to every pictorial mark, and these numbers were very important for mark identification by JIS users. In the revised ISO 780, on the other hand, all the graphic symbols are reclassified into categories according to situations in which they are used, and identification numbers are newly put in each use situation. Thus, the numbering systems are different.

So, it was required to consider which would be more helpful for users, to continue the numbering method of the previous JIS, or to reclassify all the numbers in accordance based on application situation as in the ISO standard.

### **(3) Requirements, notes and use examples of graphic symbols in ISO 780**

ISO 780:2015 has the “meaning,” “requirements,” “notes” and “examples of application” for each graphic symbol.

In the previous JIS Z 0150:2001, on the other hand, these points were shown in a different organization; the “meaning” in the ISO being “instructions” in the JIS, and “use example” being “reference.” Furthermore, the ISO now has greater details of requirements and notes for the use of graphic symbols. So, it was necessary to consider to what extent these details should be shown in the new Japanese standard.

### **(4) Translation of ISO for JIS standard**

Straight translation of the ISO standard into Japanese would not necessarily be appropriate for good understanding. It was necessary to write a Japanese standard in an appropriate manner following the usual wording of other standards and in consideration of ease in reading by JIS users.

## **4. Efforts Made during Draft Writing**

**The new JIS standard was prepared with the following points kept in mind.**

### **Notes for translation**

Distribution packaging in the ISO standard should be translated as *hoso kamotsu* as in the previous JIS.

Packaging in the ISO should be translated into *hoso*. Distinction should be that distribution packaging denotes package and its content as a whole while packaging means only the exterior receptacles, boxes, containers, etc. excluding what they contain.

The “indication mark” used in the previous JIS was to be changed to “graphic symbol.” Together with this change the title of the standard would also be changed to include the term graphic symbol.

## **5. Major Revision Points**

As a result of deliberation, the new JIS has major changes from the previous edition, as follows:

### **1) Two graphic symbols shown in JIS Z 0150:2001 but not in corresponding international standard**

#### **(1) Handle with Care**

It has been decided to continue to show the Handle with Care mark in the new JIS.

It is because there are reports showing that this marking has frequently been used for materials in Japan and overseas, and it would not be appropriate to delete this symbol from the JIS.

This symbol is indicated in the JIS as a graphic symbol for middle and large-sized distribution packages for manual handling, because it is an especially important

notice for any type of cargo handling involving individual workers.

## **(2) No Open Fies**

It has decided not to include the mark No Open Fire in the new JIS, because there have been few cases in which this mark is actually used, and it is beyond the scope of the JIS standard.

## **2) Classification, order of presentation and numbering of pictorial marks**

It has been decided to show meanings, order of presentation and requirements of graphic symbols by reclassifying the symbols based on the use situation, just like to ISO, for better understanding.

Thus, all the graphic symbols are now classified into the six following categories depending on purposes of use:

- ① Graphic symbols used for large-sized packages
- ② Graphic symbols used for middle and small-sized packages, for all types of handling
- ③ Graphic symbols used for middle and small-sized packages, for manual handling
- ④ Graphic symbols used for middle and small-sized packages, for mechanical handling
- ⑤ Graphic symbols used for both for transport and storage
- ⑥ Graphic symbols used for storage

## **3) Indication of requirements, notes and examples of application of graphic symbols**

It has been decided to show, for each graphic symbol, the meaning, requirements, notes and examples of application in a manner to encourage readers to grasp them at a glance for greater ease and understanding, just like the ISO.

## **4) Clarification of stacking limit by number**

With reference to the limitation of piling of cargo, the previous JIS Z 0150:2001 stated that maximum number of identical transport packages/items which may be stacked on the bottom package, where “n” is the limiting number. As the meaning of “n” was not clearly defined, inquiries were often received in this regard as to whether “n” was the number of additional boxes to be put on the lowest box, or the total number of boxes to be piled (including the lowest one).

It has been decided to clarify “n” is the number of additional boxes, excluding the lowest box, in the JIS Z 0150:2018.

## **6. Structure of JIS Z 0150-2008**

JIS Z 0150:2018 “Packaging-Distribution Packaging-Graphical Symbols for Handling and Storage of Packages” has the following structure:

Introduction: Background situation and purposes of the establishment of this standard

- 1 Scope: Extent of the application of the standard
- 2 Normative references: Standards referred to or quoted in the standard
- 3 Terms and definitions: Clarification of the terms necessary for the understanding of the standard
- 4 Graphic symbols: Necessary points for consideration to ensure safe, proper and efficient handling of packaging
- 5 Meaning and requirements of graphic symbols: Necessary points to indicate a total of 18 graphic symbols for packaging

Annex JA (informative): Comparison table between JIS standard and corresponding international standard

The purport of JIS Z 0150:2018 will first be achieved when it is referred to and utilized properly in actual handling and storage of distribution packages. Also, it is expected that better adherence to the standard will contribute to the reduction of cargo damage and accidents during the transportation of distribution packages.