

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 0176-1 : 2002
(JSCTA/JSA)

Threading tools—Vocabulary
Part 1 : Taps

ICS 01.040.25; 25.100.50

Reference number : JIS B 0176-1 : 2002 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from The Japan Small Cutting Tool's Association (JSCTA)/the Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law. By this establishment, **JIS B 0176 : 1996** has been withdrawn and replaced with **JIS B 0176 : 2002** Parts 1 to 4.

This part of **JIS B 0176** has been prepared based on **ISO 5967 : 1981** *Taps and thread cutting—Nomenclature of the main types and terminology* to conform to the International Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

JIS B 0176 consists of the following four parts with the general title *Threading tools—Vocabulary*.

Part 1 : Taps

Part 2 : Thread cutting dies

Part 3 : Chaser

Part 4 : Thread rolling dies

Date of Establishment: 2002-07-20

Date of Public Notice in Official Gazette: 2002-07-22

Investigated by: Japanese Industrial Standards Committee
Standards Board

Technical Committee on Machine Elements

JIS B 0176-1:2002, First English edition published in 2003-07

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Printed in Japan

Contents

	Page
Introduction	1
1 Scope	1
2 Classification	1
3 Classification of taps	2
4 Terms and definitions	2
Annex (informative) Comparison table between JIS and corresponding International Standard	42

Threading tools—Vocabulary

Part 1 : Taps

Introduction This part of **JIS B 0176** has been prepared based on **ISO 5967** *Taps and thread cutting—Nomenclature of the main types and terminology* published in 1981, with some modification in the editing points and/or technical contents.

The portions with sidelines and underlined with dots are the matters modifying the International Standard.

1 Scope This part of **JIS B 0176** specifies terms and definitions related to the taps⁽¹⁾ to be used mainly for metal workings in general.

Note (1) The tool of external thread type to form internal threads to the prepared hole mainly by the rotation and the feed compatible with the lead of the screw threads.

Remarks : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

ISO 5967 : 1981 *Taps and thread cutting—Nomenclature of the main types and terminology* (MOD)

2 Classification The terms shall be classified as given in the following:

a) **Types of taps**

- 1) Classification according to cutting part materials and surface treatments
- 2) Classification according to structure
- 3) Classification according to feature of shank
- 4) Classification according to functions or uses
 - 4.1) Classification according to manufacturing methods
 - 4.2) Classification according to uses
 - 4.3) Classification according to types of screw threads
 - 4.4) Classification according to flutes

b) **Elements of tap**

c) **Angles of tap**

d) **Accuracy of tap**

e) **Damages on cutting parts of tap**

f) **Taps in general**

3 Classification of taps The names expressing the types of the taps shall be read combining the terms corresponding to the order of type number **2 a) 1) to 2 a) 4) 4.4)**. However, the manufacturing methods shall be omitted, and the classification according to the type of screw thread shall follow the classification of cutting part material and surface treatment. In addition, the type of screw thread may be changed to the designation of screw threads (see Table 1).

Table 1 Examples of classification of taps

Classification	Cutting part material and surface treatment	Type of screw thread	Structure	Feature of shank	Use	Feature of flute
Bottoming hand taps for metric coarse threads	(High speed tool steel)	For metric coarse screw threads	(Solid)	(Straight shank)	Hand and bottoming	(Straight flute)
M3 bottoming hand tap		M3				
Bent taps for alloy tool steel metric fine screw threads	Alloy tool steel	For metric fine screw threads	(Welding)	Bent (shank)	—	(Straight flute)
Spiral taps with oil hole for unified coarse screw threads	(High speed tool steel)	For unified coarse screw threads	(Solid)	(Straight shank)	With oil hole	Spiral
Taper shank interrupted spiral point taps for cemented carbide metric coarse screw threads	Cemented carbide (alloy)	For metric coarse screw threads	(Brazing)	Taper shank	Interruption	Spiral point
Hand taps for titanium nitride coating cemented carbide unified fine screw threads	Cemented carbide (alloy), titanium nitride coating	For unified fine screw threads	(Solid)	(Straight shank)	Hand	(Straight flute)

Remarks : Those in parentheses may be omitted.

4 Terms and definitions The terms and the definitions of taps shall be in accordance with the following:

Further, term number of the corresponding International Standard is shown in the parentheses in the definition column, and quantitative symbols, units and English equivalents are shown for information only.

Remarks 1 Those in parentheses in the term column may be omitted.

2 The terms given in bold types in the definitions are those specified in this part of **JIS B 0176**.

3 The figures shown are only examples, and are not specify the shape nor dimensions.

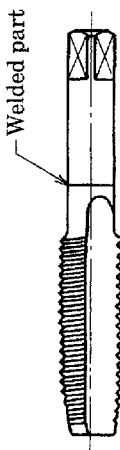
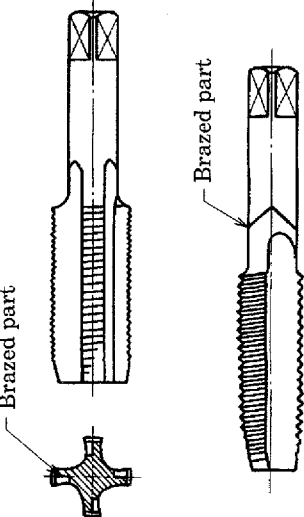
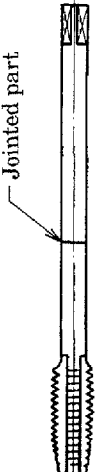
Further, the numerals in the parentheses in the figure show term number in this Standard.

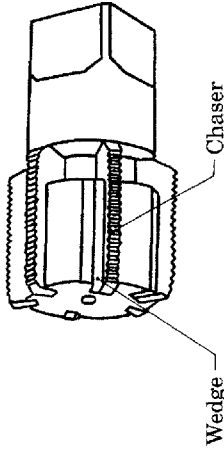
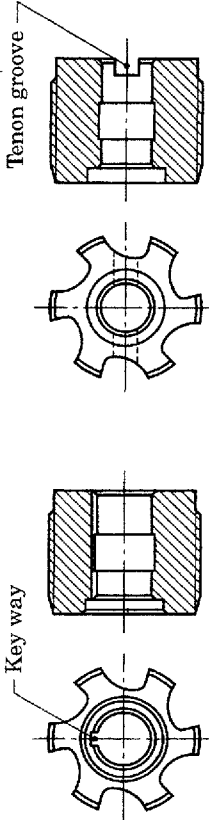
a) Types of taps

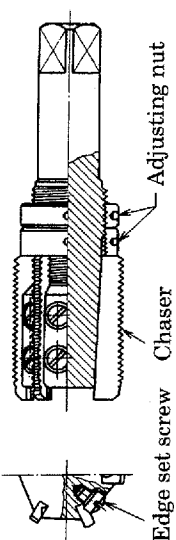
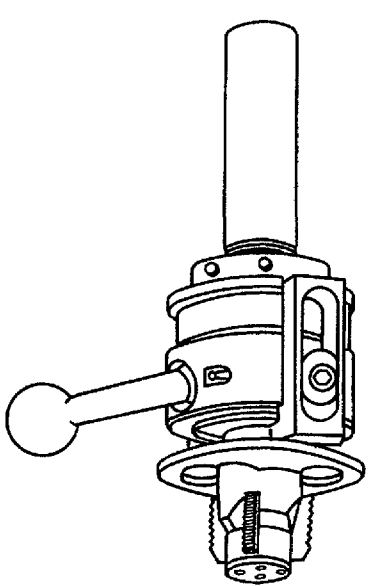
1) Classification according to cutting part materials and surface treatments

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1101	合金工具鋼タップ	GÔKIN KÔGUKÔ TAPPU	The taps using alloy tool steel for the material of cutting parts .	alloy tool steel tap
1102	高速度(工具)鋼タップ	KÔSOKUDO (KÔGU) KÔ TAPPU	The taps using high speed tool steel for the material of cutting parts .	high speed (tool) steel tap
1103	超硬(合金)タップ	TYÔKÔ (GÔKIN) TAPPU	The taps using cemented carbide alloy (sintered body mainly constituted of tungsten carbide) for the material of cutting parts .	cemented carbide tap, carbide tap
1104	コーティングタップ	KÔTINGU TAPPU	The taps using tool material being adhered chemically or physically in single layer or multi-layer on the surfaces of the material of cutting parts , such as titanium nitride, titanium carbide or the like. Remarks : There are high speed steel titanium nitride coated taps, cemented carbide titanium carbide coated taps, etc.	coated tap
1105	窒化处理タップ	TIKKA SYORI TAPPU	The taps using the nitrided tool material for the material of cutting parts .	nitrided tap
1106	酸化処理タップ	SANKA SYORI TAPPU	The taps using oxidized tool material on the surface of cutting part material.	oxidized tap
1107	窒化酸化处理タップ	TIKKA SANKA SYORI TAPPU	The taps using nitrided and oxidized tool material on the surface of cutting part material.	nitrided and oxidized tap

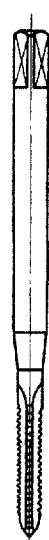
2) Classification according to structure

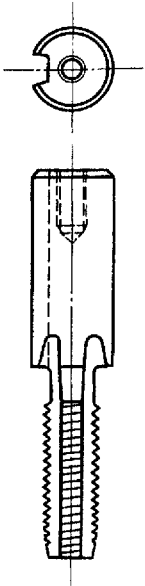
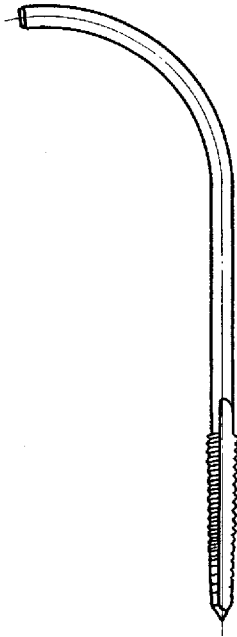
No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1201	むくタップ (Muku Tappu)	MUKU TAPPU	The tap of which thread part and shank are constituted of the same material, and being made integral. 	solid tap
1202	溶接タップ (Yōsetu Tappu)	YÔSETU TAPPU	The tap of which shank has been welded to the thread part . 	welded tap
1203	ろう付けタップ (Rōzuke Tappu)	RÔZUKE TAPPU	The tap, the material of cutting parts of which has been brazed to the body or shank . 	brazed tap
1204	抜き柄タップ (Nuki-gata Tappu)	TUGIE TAPPU	The tap of which thread part and shank are jointed with screw thread or the like mechanically. 	sectional type tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1205	植刃タップ	UEBA TAPPU	The tap in which chasers are inserted into the body mechanically.  Wedge — Chaser	inserted chaser tap
1206	シェルタップ	SYERU TAPPU	The tap of which thread part is hollow and is used by being attached to the shank. (140, 141) Remarks: There are key way type, tenon groove type, etc.  Key way — Tenon groove	shell tap
1207	エキスパンションタップ	EKISUPANSYON TAPPU	The tap having split flute, and capable of adjusting the thread diameter by screw or dowel. Remarks: It is also called “(WARIMIZO) TYÔSEISIKI TAPPU”. 	expansion tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1208	アジャスタブルタップ	AZYASUTABURU TAPPU	The tap with the inserted chaser which is capable of adjusting the thread diameter. 	adjustable tap
1209	コラプシブルタップ	KORAPUSIBURU TAPPU	The tap which is capable of being drawn out from the threaded hole without turning reversely, with the chaser being drawn inside when the tapping is completed. Remarks : Usually, this is attached with four chasers. 	collapsible tap

3) Classification according to features of shank

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1301	ストレーシャンク タップ	SUTORÊTO SYANKU TAPPU	The tap of which shank is cylindrical shape. 	straight shank tap
1302	フルダイヤメータシヤ ンクタップ	FURU-DAIYA-MÊTA SYANKU TAPPU	The tap of which shank diameter is almost equal to or larger than the thread diameter among the straight shank taps . (110, 111) 	full-diameter shank tap with plain connecting portion
1303	ネック付きタップ	NEKKU-TUKI TAPPU	The full diameter shank tap with the neck between the thread part and the shank . (112) 	full-diameter shank tap with recess
1304	レリーフシャンクタッ プ	RERÎBU SYANKU TAPPU	The tap of which shank diameter is smaller than the thread diameter among the straight shank taps . (113) 	relieved-shank tap, reduced shank tap
1305	テーパシャンクタップ	TÊPA SYANKU TAPPU	The tap of which shank is taper. 	taper shank tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1306	ペンタップ	PEAN TAPPU	The tap of which shank has a keyway and is used for special tapping machine. Remarks : There is the tap with internal threads for drawing screw threads. 	pearn tap
1307	ベント(シャンク)タップ	BENTO (SYANKU) TAPPU	The tap having bent shank, which taps nuts continuously without reversing or stopping the machine, to be used in an automatic tapping machine, and the tapped nuts are fed out automatically through the bent shank. (132, 133) 	bent shank tap
1308	ボール溝付きタップ	BÔRU MIZO-TUKI TAPPU	The tap having a groove on the shank which contains a ball, for attaching to the holder. 	ball groove shank tap

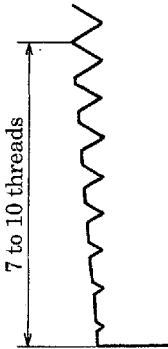
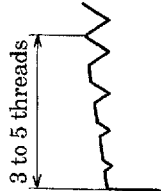
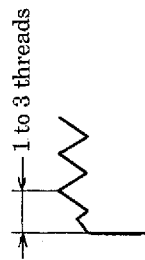
4) Classification according to functions or uses

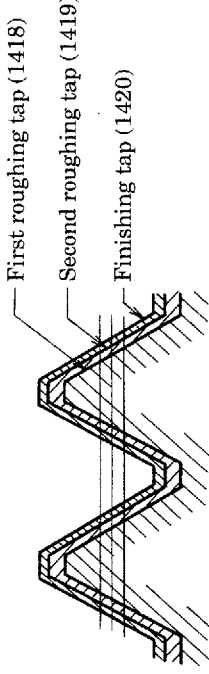
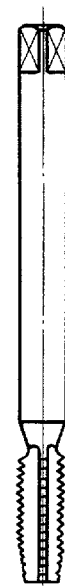
4.1) Classification according to manufacturing methods

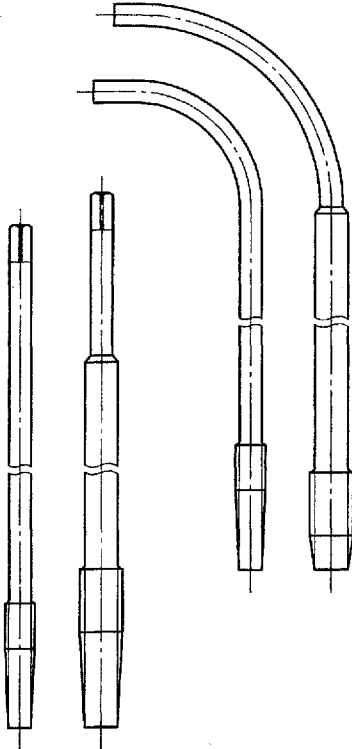
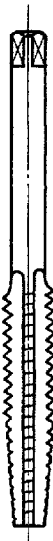
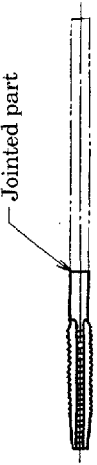
No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1401	研削(仕上げ)タップ	KENSAKU (SIAGE) TAPPU	The taps of which thread part has been finished by grinding.	ground (thread) tap
1402	切削(仕上げ)タップ	SESSAKU (SIAGE) TAPPU	The taps of which thread part has been finished by cutting.	cut (thread) tap
1403	転造(仕上げ)タップ	TENZÔ (SIAGE) TAPPU	The taps of which thread part has been finished by rolling.	rolled (thread) tap

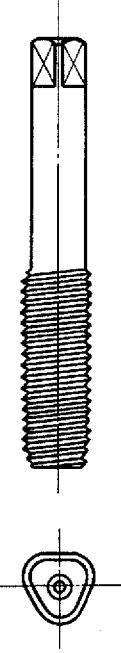
4.2) Classification according to uses

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1411	ハンドタップ	HANDO TAPPU	The tap to be used generally. The tapping is carried out mainly by machine, but, in some cases, it is used by hand working. (110, 111, 112, 113) Remarks : It is also called "short machine tap". 	hand tap, short machine and hand tap
1412	等径ハンドタップ	TÔKEI HANDO TAPPU	The regular tap among the hand taps. Remarks : Generally, the regular hand taps are classified into taper tap, plug tap and bottoming tap according to the number of chamfer threads.	regular hand tap, ordinary hand tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1413	先タップ	SAKI TAPPU	The tap of 7 to 10 threads in chamfer length, among the regular hand taps . (202) 	taper (hand) tap
1414	中タップ	NAKA TAPPU	The tap of 3 to 5 threads in chamfer length, among the regular hand taps . (201) 	plug (hand) tap
1415	上げタップ	AGE TAPPU	The tap of 1 to 3 threads in chamfer length, among the regular hand taps . (200) 	bottoming (hand) tap
1416	等径タップ	TÔKEI TAPPU	The tap which consists of two or more pieces of equal thread diameters and different chamfer lengths assembled as one set. (251, 261)	regular tap
1417	増径タップ	ZÔKEI TAPPU	The tap which has been so made as to finish to the required diameter by the finishing tap , assembling two or more pieces as one set, after increasing its diameter in the order from the first roughing tap . (250, 260)	serial tap
1418	1番タップ	ITIBAN TAPPU	The tap used in the first tapping among the serial taps .	first roughing tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1419	2番タップ	NIBAN TAPPU	The tap used after the first roughing tap has passed, among the serial taps .	second roughing tap
1420	仕上げタップ	SIAGE TAPPU	The tap used in the final finishing among the serial taps .	finishing tap
				
1421	ロング(シャンク)タップ	RONGU (SYANKU) TAPPU	The tap of which shank is longer than that of the hand tap among the straight shank taps . (120, 121, 122, 123)	long shank tap
				
1422	テーパタップ	TÊPA TAPPU	The tap of which thread part is tapered and to be used for tapping taper threads. (150)	taper thread tap
				

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1423	自動ねじ立盤用タップ (Japanese character)	ZIDÔ NEZITATEBAN-YÔ TAPPU	The tap used for automatic tapping machine (see JIS B 4433) (130, 131, 132, 133) Remarks: The shapes of shanks are different according to the specifications of the tapping machine. 	tap for automatic tapping machine
1424	ナットタップ (Japanese character)	NATTO TAPPU	The tap to be used when the nuts are manufactured mainly by the tapping machine. In comparison with the hand tap, the shank is longer, and the chamfer is also longer (see JIS B 4433). (203) 	nut tap
1425	ニブタップ (Japanese character)	NIBU TAPPU	The tap to be used by jointing with the bent shank or straight shank, when the nuts are manufactured mainly by the tapping machine (see JIS B 4433). 	nib tap

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1426	タップ タッパタップ	TAPPA TAPPU	During the tapping operation, that tap having a long shank so as to be capable of storing plural number of tapped nuts. 	tapper tap
1427	プーリタップ	PŪRI TAPPU	The tap of which shank diameter is approximately equal to the outside diameter of threads, and the shank is longer in comparison with the hand tap , and which performs tapping for attaching oil cup or set screw or the like to the boss of the pulley or the like through the hole of the rim. 	pulley tap
1428	盛上げタップ	MORIAGE TAPPU	The tap without cutting edge which forms internal threads by plastic working. (204) Remarks 1 There are those with and without oil flute. 2 Those without oil flute are called "fluteless tap". 	thread forming tap, fluteless tap
1429	油穴付きタップ	ABURAANA-TUKI TAPPU	The tap having a oil hole in the body . 	oil hole tap
1430	深穴タップ	HUKAANA TAPPU	On the occasion of the tapping in a deep hole, that tap having a hole at the core for exhausting chips. 	deep hole tap, hollow tap