
Gas cylinders — Compilation of national and international valve stem/ gas cylinder neck threads and their identification and marking system

*Bouteilles à gaz — Compilation des filetages nationaux et
internationaux des queues de robinets/goulots de
bouteilles et leurs systèmes d'identification et de marquage*



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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*.

This second edition cancels and replaces the first edition (ISO/TR 11364:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Tables 1](#) to [17](#) have been corrected;
- Tables for Denmark threads, Indian threads and USA threads have been introduced.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

There is a huge variety of valve to gas cylinder neck thread connections worldwide and cylinders are free to be equipped with any thread according to a recognized thread standard. ISO standards for cylinders and valves require the marking of an identification of the thread on valve and cylinder but there is presently no harmonized marking system.

The purpose of this document is to list all known cylinder/valve threads currently used and also threads used in the past and to specify a harmonized identification code and marking system for both cylinders and valves. The aim is to reduce the risk of mismatches when valves are fitted to gas cylinders and avoid related safety incidents.

Gas cylinders — Compilation of national and international valve stem/gas cylinder neck threads and their identification and marking system

1 Scope

This document lists the different valve stem to gas cylinder connection threads currently and historically existing worldwide and provides official coded designations for them. These coded designations will then be available for identification and marking purposes.

It also gives guidance concerning which threads are dimensionally identical and which are interchangeable.

Furthermore, this document provides guidance for valving procedures when fitting valves to gas cylinders.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Interchangeability of valve/cylinder threads

Threads of recognized standards which are dimensionally identical but have historically been named differently are fully interchangeable.

Experience has shown that the following combination of threads can be safely used in service: 25E valve with T8, T23 and T26 cylinder threads. However, for small steel (less than 5 l water capacity) and aluminium alloy cylinders, users should examine the suitability of the resulting combination for each application in order for them to be interchangeable.

5 List of threads

5.1 General

The lists of taper and parallel threads are given in [Table 1](#). The columns in the tables have the following meaning:

Column 1 — Ref. No.

Reference number of the thread starting with a “T” for taper threads and “P” for parallel threads; followed by a consecutive number in the order as they are listed.

Column 2 — Origin

Country or region of origin of the thread.

Column 3 — Nominal designation of thread

Nominal dimensional identification or designation of the thread given in its originating standard or specification.

Column 4 — Specification or standard

Specification or standard from which the thread originated and last version (see also the bibliography).

Column 5 — Identification and marking

This column indicates an identification code for the relevant thread assigned under this document which will in future be used for marking purposes.

NOTE This simplified marking code covers for parallel threads the thread size only and not the geometry of the sealing area or surface.

Column 6 — Note

This column indicates specific equivalency or interchangeability with other threads listed.

Column 7 — Recommended valving procedure

This column indicates the recommendations for fitting valves to gas cylinders, in particular the recommended torque values to be used, which normally follow the requirements of ISO 13341.

5.2 List of threads

See [Table 1](#).

Table 1 — List of national and international valve/gas cylinder threads

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Identification and marking	Note	Recommended valving procedure
T1	International	17E	ISO 11363-1	17E	T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	See ISO 13341
T2	EU	E17 con	EN 144-1	17E	T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	
T3	Germany	W19,8 × 1/14 keg 6°52' (3:25) taper	DIN 477-1	—	T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	
T4	International	25E	ISO 11363-1	25E	T4, T5, T6, T38, T59 and T61 are fully interchangeable threads While the 25E and V2 threads are similar, they are not identical, and should not be used interchangeably	See ISO 13341
T5	Germany	W28,8 × 1/14 keg	DIN 477-1	—	T4, T5, T6, T38, T59 and T61 are fully interchangeable threads	
T6	UK	W1,000" × 1,814 mm 3:25 incl. taper	BS 341-1:1991	25T	T4, T5, T6, T38, T59 and T61 are fully interchangeable threads	
T7	Australia	Special taper stem thread, 1,0 inch Nominal, 14 threads per inch, 1 in 8 taper on diameter	AS2473.2-2015	25AU	T7, T8 and T8a are fully interchangeable threads	AS 2337.1-2004
T8	UK	1 inch Nominal. 14 threads per inch. 1 in 8 taper on diameter	BS 341-1:1962	1 inch	Cylinders with this thread can accept valves with T4, T5, T6, T7 and T38	ISO 13341 may be used for guidance (torque values as for 25E)
T8a	India	Type 4, size 2	IS 3224	25AU	T7, T8 and T8a are fully interchangeable threads	
T9	Germany	W31,3 × 1/14 keg 6°52' (3:25) taper	DIN 477-1	28E	T9, T10, T11, T12, T62 and T63 are fully interchangeable threads	ISO 13341 may be used for guidance
T10	Denmark	W31,3 × 1/14" (3:25) taper	DS 729	28E	T9, T10 T11, T12, T62 and T63 are fully interchangeable threads	
T11	Italy	W28,3 × 1/14"	UNI 11144	—	T9, T10 T11, T12, T62 and T63 are fully interchangeable threads	
T12	France	28,3 × 1/14" taper angle 6°52'	NF E 29-676	28E	T9, T10, T11, T12, T62 and T63 are fully interchangeable threads	

Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Identification and marking	Note	Recommended valving procedure
T13	UK	W0,6" × 14 threads per inch 1:5,625 taper	BS 341-2:1963	15T	T13 and T14 are fully interchangeable threads	ISO 13341 may be used for guidance (torque values as for 17E)
T14	Australia	06-15AU (1/14")	AS 2473.2-2015	15AU	T13 and T14 are fully interchangeable threads	AS 2337.1-2015
T15	UK	W0,635" × 1,411 mm 8° incl. taper	BS 341-1:1962	16T		ISO 13341 may be used for guidance (torque values as for 17E)
T16	UK	SI 0,694" × 1,814 mm 6° incl. taper	UK LPG Industry Information Sheet 36 — Cylinder Valve — 17T Thread Requirements	17T	For propane	
T17	UK Ireland	W0,715" × 1,814 mm 1:8 incl. taper	BS 341-1:1991	18T	T17, T18 and T19 are fully interchangeable threads	ISO 13341 may be used for guidance (torque values as for 17E)
T18	Australia	Special taper stem thread, 0,715 inch nominal, 14 threads per inch, 1 in 8 taper on diameter	AS 2473.2-2015	18AU	T17, T18 and T19 are fully interchangeable threads	AS 2337.1-2004
T19	India	Type 4 size 1	IS 3224	18AU	T17, T18 and T19 are fully interchangeable threads	
T20	UK	W0,735" × 1,814 mm 1:8 incl. taper	BS 341-1:1991	19T		ISO 13341 may be used for guidance (torque values as for 17E)
T21	UK	W1,025" × 1,814 mm 10 degrees incl. taper angle	BS 341-1:1991	26T		ISO 13341 may be used for guidance (torque values as for 25E)
T22	UK	W1,250" × 2,309 mm 1:8 incl. taper	BS 341-1:1991	32T	T22 and T22a are fully interchangeable threads	ISO 13341 may be used for guidance

Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Identification and marking	Note	Recommended valving procedure
T22a	India	Type 4 size 3	IS 3224	32T	T22 and T22a are fully interchangeable threads	
T23	Sweden	W28, taper 3:24,5	SMS2235:1968	25S	Cylinders with this thread can accept valves with T4, T5, T6 and T38	ISO 13341 may be used for guidance (torque values as for 25E)
T24	Has been changed in P54 but the following T numbers have not yet changed			—		
T25	France	16,4 × 1/14" taper angle 8°40'	NF E 29-678	16F		
T26	France	25,8 × 1/14" taper angle 6°38'	NF E 29 680	25F	Cylinders with this thread can accept valves with T4, T5, T6, T38, T59 and T61	ISO 13341 may be used for guidance (torque values as for 25E)
T27	France	34 × 2 mm taper angle 5°	NF E 29-682	34F	T27 and T28 are fully interchangeable threads	
T28	Italy	M34 × 2	UNI 11144	34F	T27 and T28 are fully interchangeable threads	
T29	France	26 × 1/14" taper angle 3°34' (1:16)	NF E 29-684:2015	26F3	Thread similar to T42 (3/4" NGT) but not equivalent	
T30	France	RC1H" 11TPI taper 3°34' (1:16)	NF E 03-004	—	Not used	
T31	Japan	W39-12TPI, taper 3:26, profile-to-surface	JIS B 8244	39J	For acetylene	
T32	Japan	W20-14TPI, taper 3:26, profile-to-axis	JIS B 8245 V1	JV1A	For LPG	
T33	Japan	W20-14TPI taper 3:26, profile-to-surface	JIS B 8246 V1	V1		
T34	Japan	W28-14TPI taper 3:26, profile-to-axis	JIS B 8245 V2	JV2A	For LPG	

Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Identification and marking	Note	Recommended valving procedure
T35	Japan	W28-14TPI taper 3:26, profile-to-surface	JIS B 8246 V2	V2	While the 25E and V2 threads are similar, they are not identical, and should not be used interchangeably	
T36	Japan	W28-14TPI taper 3:26, profile-to-surface	JIS B 8246 V3	V3	Short length	
T37	China	W39-12TPI taper 3:25, profile-to-surface	GB 8335-1998	39C		
T38	China	W27,8-14TPI taper 3:25, profile-to-surface	GB 8335-1998	25E	T4, T5, T6, T38, T59 and T61 are fully interchangeable threads	See ISO 13341
T39	China	W19,2-14TPI taper 3:25, profile-to-surface	GB 8335-1998	17E	T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	See ISO 13341
T40	USA	3/8—18NGT	ANSI/CGA V-1	06N		See CGA V-1
T41	USA	1/2—14NGT	ANSI/CGA V-1	08N		See CGA V-1
T42	USA	3/4—14NGT	ANSI/CGA V-1	12N		See CGA V-1
T43	USA	1-11 1/2-NGT	ANSI/CGA V-1	16N		See CGA V-1
T44	USA	1-1/4-11 1/2-NGT	ANSI/CGA V-1	20N		See CGA V-1
T44a	USA	1-1/2-11 1/2-NGT	ANSI/CGA V-1	24N		See CGA V-1
T45	USA	3/4-14SGT	ANSI/CGA V-1	12S		See CGA V-1
T46	France	Ø19,3 × 1,814 10, 5 % ± 0,5 %		19F(P)	For LPG	
T47	France	Ø23,2 or 23,7 × 2,00, 10 % ± 0,5 %		23F(P)	For LPG	
T48	France	Ø28,8 × 1,814 11, 2 % ± 0,5 %		29F(P)	For LPG	
T49	Korea	W20-14 taper 3/26	KS B 6212 V1	—		
T50	Korea	W28-14 taper 3/26	KS B 6212 V2	—		
T51	Korea	W28-14 taper 3/26	KS B 6212 V1	—		
T52	Korea	W28-14 taper 3/26	KS B 6212 V2	—		
T53	Korea	W28-14 taper 3/26	KS B 6212 V3	—		
T54	Korea	W39-12 taper 3/26	KS B 6215	—	For acetylene only	
T55	Korea	W38-12 taper 3/26	KS B 6219 N3-S	—	Profile perpendicular to surface	
T56	Korea	W38-12 taper 3/26	KS B 6219 N3-A	—	Profile perpendicular to axis	