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**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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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.

ISO/TR 11364 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*.

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## Introduction

There is a huge variety of valve to gas cylinder neck thread connections worldwide and ISO 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 Technical Report 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.

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

## 1 Scope

This Technical Report 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 Technical Report provides guidance for valving procedures when fitting valves to gas cylinders.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13341, *Gas cylinders — Fitting of valves to gas cylinders*

[ISO/TR 11364:2012](https://standards.iteh.ai/catalog/standards/sist/c15959-be2e-4175-aafc-652656cd6680/iso-tr-11364-2012)

## 3 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.

## 4 Lists of threads

### 4.1 General

The lists of threads are given in Table 1 for taper threads and Table 2 for parallel threads. 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 (see also the bibliography).

**Column 5 – Official mark to standard**

If the originating standard indicates an official abbreviated identification mark or code, it is given in this column.

**Column 6 – Identification and marking**

This column indicates an identification code for the relevant thread assigned under this Technical Report which shall 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 7 – Note**

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

**Column 8 – 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.

**4.2 List of threads**

See Table 1.

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

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Official mark to standard	Identification and marking	Note	Recommended valving procedure
T1	EU	17E	ISO 11116-1	17E	17E	T1, T2, T3 and T39, T57, T58, T60 and T64 are fully interchangeable threads.	See ISO 13341
T2	EU	E17 con	EN 144-1	E17con		T1, T2, T3 and T39, T57, T58, T60 and T64 are fully interchangeable threads.	
T3	Germany	W19,8×1/14 keg6°52' (3:25) taper	DIN 477-1			T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads.	
T4	EU	25E	EN 629-1 (ISO 10920)	25E	25E	T4, T5, T6, T38, T59 and T61 are fully interchangeable threads	See ISO 13341
T5	German	W28,8×1/14 keg	DIN 477-1			T4, T5, T6, T38, T58, T59 and T61 are fully interchangeable threads	
T6	UK	W1,000" ×1/14 (3:25) taper	BS 341-1:1991	25T		T4, T5, T6, T38, T58, 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	AS2473.2-2007	25AU	25AU	T8 is a fully interchangeable thread	AS 2337.1-2004
T8	UK	1 inch Nominal. 14 threads per inch. 1 in 8 taper on diameter	BS 341-1:1962		1"BS	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)
T9	German	W31,3×1/14 keg6°52' (3:25) taper	DIN 477-1		28E	T9, 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			For acetylene only	
T11	Italy	W28,3×1/14"	UNI 11144			T9, T11, T12, T62 and T63 are fully interchangeable threads	
T12	France	28,3 ×1/14taper angle 6°52'	NFE 29-676	(28E)		T9, T11, T12, T62 and T63 are fully interchangeable threads	
T13	UK	W0,6"×1/1410° incl. angle	BS 341-2:1963	(15T)	15T	T13 and T14 are equivalent threads	ISO 13341 may be used for guidance (torque values as for 17E)
T14	Australia	06-15AU(1/14)	AS 2473.2-2007	15AU	15AU	T13 and T14 are fully interchangeable threads	AS 2337.1-2004

Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Official mark to standard	Identification and marking	Note	Recommended valving procedure
T15	UK	W0,635"×1/18. 8° incl. angle	BS 341-1:1991	(16T)	16T		ISO 13341 may be used for guidance (torque values as for 17E)
T16	UK	SI 0,694"×1/14. 6° incl. taper angle	BS 341-1:1962 (UK LPG Code of practice 15 Part 2)	(17T)	17T	For propane	
T17	UK Ireland	W0,715"×1/14. 1:8 incl. taper angle	BS 341-1:1991	18T	18T	T17 and T18 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 2473.2-2007	18AU	18AU	T17 and T18 are fully interchangeable threads	AS 2337.1-2004
T19	Has been deleted but the following T numbers have not yet changed						
T20	UK	W0,735"×1/14. 1:8 incl. taper angle	BS 341-1:1991	19T	19T		ISO 13341 may be used for guidance (torque values as for 17E)
T21	UK	W1,025"×1/14. 10° incl. taper angle	BS 341-1:1991	26T	26T		ISO 13341 may be used for guidance (torque values as for 25E)
T22	UK	W1,25"×1/14. 1:8 incl. taper angle	BS 341-1:1991	32T	32T		ISO 13341 may be used for guidance
T23	Sweden	W28, taper 3:24,5	SMS2235	(W28,0)	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'	NFE 29-678	(16F)	16F		

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Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Official mark to standard	Identification and marking	Note	Recommended valving procedure
T26	France	25,8×1/14taper angle 6°38'	NF E 29 680	(25F)	25F	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)
T27	France	34×2taper angle 5°	NF E 29 682	(34F)	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 ×1/14taper angle 3°34' (1:16)	NF E 29684	(26F3)	26F3	Thread similar to T40 (3/4"NGT) but not equivalent.	
T30	France	RC1H" 11TPI, taper 3°34' (1:16)	NF E 03004			Not used	
T31	Japan	W39-12TPI, taper 3:26, profile -, to surface	JIS B 8244	none	39J	For acetylene	
T32	Japan	W20-14TPI, taper 3:26, profile -, to axis	JIS B 8245 V1	None	JV1A	For LPG	
T33	Japan	W20-14TPI taper 3:26, profile -, to surface	JIS B 8246 V1	None	JV1S		
T34	Japan	W28-14TPI taper 3:26, profile -, to axis	JIS B 8245 V2	None	JV2A	For LPG	
T35	Japan	W28-14TPI taper 3:26, profile -, to surface	JIS B 8246 V2	None	JV2S		
T36	Japan	W28-14TPI taper 3:26, profile -, to surface	JIS B 8246 V3	None	JV3S	Short length	
T37	China	W39-12TPI taper 3:25profile -, to surface	GB 8335-1998	Pz39	39C		
T38	China	W27,8-14TPI taper 3:25profile -, To surface	GB 8335-1998	Pz27,8	25E	T4, T5, T6 and T38 are fully interchangeable threads	See ISO 13341
T39	China	W19 2-14TPI taper 3:25 profile -, To surface	GB 8335-1998	Pz19,2	17E	T1, T2 and T3 and T39 are fully interchangeable threads.	See ISO 13341
T40	USA	3/8" -18 NGT	ANSI/CGA V-1	(06N)	06N		Insert handtight then add three turns
T41	USA	1/2" -14 NGT	ANSI/CGA V-1	(08N)	08N		Insert handtight then add three turns
T42	USA	3/4" -14 NGT	ANSI/CGA V-1	(12N)	12N		Insert handtight then add three turns

Table 1 (continued)

Ref. no.	Origin	Nominal designation of thread	Specification or standard	Official mark to standard	Identification and marking	Note	Recommended valving procedure
T43	USA	1" -11 1/2 NGT	ANSI/CGA V-1	(16N)	16N		Insert handtight then add three turns
T44	USA	1 1/4" -11 1/2 NGT	ANSI/CGA V-1		20N		Insert handtight then add three turns
T45	USA	3/4" -14 SGT	ANSI/CGA V-1	12S	12S		Insert handtight then add three turns
T46	France	Ø 19,3 × 1,81410, 5 % ± 0,5 %		19F(P)		For LPG	
T47	France	Ø 23,2 ou 23,7 × 2,0010 % ± 0,5 %		23F(P)		For LPG	
T48	France	Ø 28,8 × 1,81411, 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				
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	
T57	Austria	E 17 con (W 19,8)	ÖNORM EN 144-1:1992	E 17 con	17E	Breathing apparatus T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	
T58	Austria	E 17 con (W 19,8)	ÖNORM EN 144-1:2005	E 17 con	17E	Breathing apparatus T1, T2, T3, T39, T57, T58, T60 and T64 are fully interchangeable threads	
T59	Austria	25 E (W 28,8)	ÖNORM EN 629-1:1996	25 E	25 E	T4, T5, T6, T38, T57, T58, T59 and T61 are fully interchangeable threads	

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