

IS 14138 (Part 1) : 1994

भारतीय मानक

श्वास-रक्षी युक्तियां : चेहरे के आवरण के लिए
उपकरण की चूड़ियाँ

भाग 1 मानक चूड़ी संयोजन

Indian Standard

**RESPIRATORY PROTECTIVE DEVICES :
THREADS FOR FACEPIECES — SPECIFICATION**

PART 1 STANDARD THREAD CONNECTION

UDC 614'894 : 621'882'082 : 621'643'414

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

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Price Group 4

FOREWORD

This Indian standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Industrial Safety Sectional Committee had been approved by the Chemical Division Council.

Standard thread connections are very often used in the facepieces of breathing apparatus and respiratory protective devices and therefore are matter of utmost importance so far as the reliability of the equipment is concerned. Realizing the need for its standardization, the Industrial Safety Sectional Committee CHD 008 decided to formulate this standard. While formulating this Indian standard considerable assistance has also been taken from EN 148 — 1 : 1987 'Respiratory protective devices : Threads for facepieces, Part 1, Standard thread connection' published by European Committee for Standardization and this standard is now harmonized with EN 148 (Part 1) : 1987.

The composition of the Committee responsible for formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

RESPIRATORY PROTECTIVE DEVICES : THREADS FOR FACEPIECES — SPECIFICATION

PART 1 STANDARD THREAD CONNECTION

1 SCOPE

This Indian Standard prescribes requirements for standard threads for respiratory protective devices excluding diving equipment and to positive pressure demand breathing apparatus.

2 REFERENCES

The following Indian standard is a necessary adjunct to this standard:

IS 8347 : 1977 Glossary of terms relating to respiratory protective device (Reaffirmed in February 1991)

3 TERMINOLOGY

3.1 For the purpose of this standard the definitions given in IS 8347 : 1977 shall apply.

3.2 In addition to 3.1 the following definitions shall be applied.

3.2.1 Crest

The prominent part of the thread, whether the thread be external or internal.

3.2.2 External Thread

The thread on the outside of a member.

3.2.3 Height of Thread

The radial distance between crest and root of the thread.

3.2.4 Internal Thread

The thread on outside of a member.

3.2.5 Major Diameter

The major diameter of a parallel thread is the diameter of the imaginary co-axial cylinder, which just touches the root of an internal thread or crest of an external thread.

3.2.6 Minor Diameter

The major diameter of a parallel thread is the diameter of the imaginary co-axial cylinder,

which just touches the root of an external thread or crest of an internal thread.

3.2.7 Nominal Size

The nominal size of a dimension or part is the size by which it is referred to as a matter of convenience.

3.2.8 Root of Thread

The bottom of the root between the two flanking surfaces of the thread, whether the thread be external or internal.

4 REQUIREMENTS

4.1 Standard Thread Connector (C)

4.1.1 External Thread

The dimensional requirements and other details of external threads without and with socket for filters are given in Fig. 1 and Fig. 2 respectively. However the position of slots is optional.

4.1.2 Internal Thread

The dimensional requirements and other details of internal thread and gasket are given in Fig. 3 and Fig. 4 respectively.

4.2 Threads

4.2.1 The dimensional requirements and other details of thread are given in Fig. 5 and Table 1.

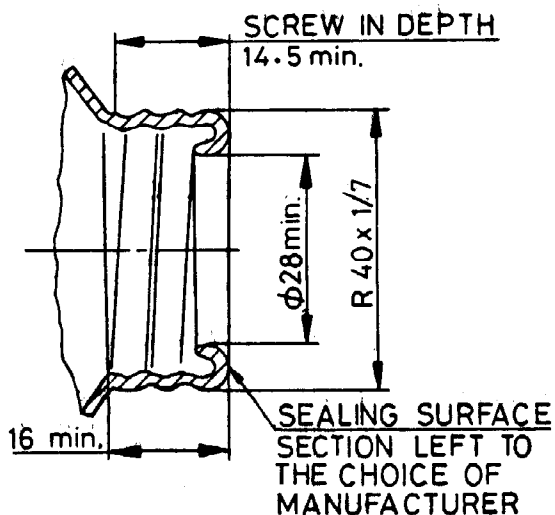
4.3 Gauges for Threads

4.3.1 Internal Gauges for External Thread

The thread RD 40 × 1/7 shall be checked with the internal gauges for checking external threads, the details of which are given in Fig. 6, Fig. 7A and 7B, and Table 2 (dimensions in millimetres).

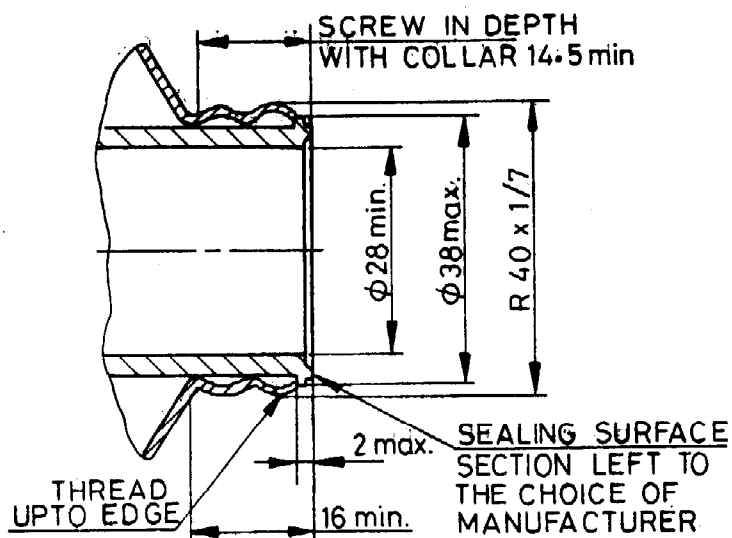
4.3.2 External Gauges for Internal Thread

The thread RD 40 × 1/7 shall be checked with the external gauges for checking internal threads, the details of which are given in Fig. 8, Fig. 9A and 9B, and Table 3 (dimensions in millimetres).



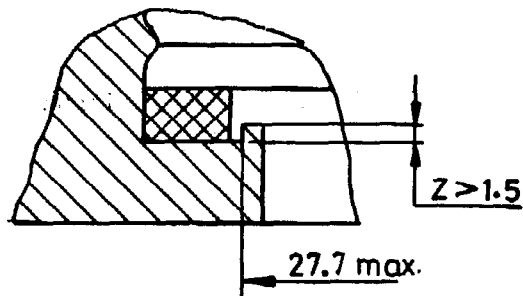
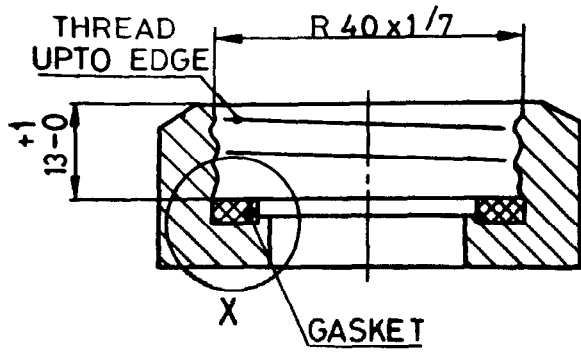
All dimensions in millimetres.

FIG. 1 EXTERNAL THREAD WITHOUT SOCKET FOR FILTERS (CA)

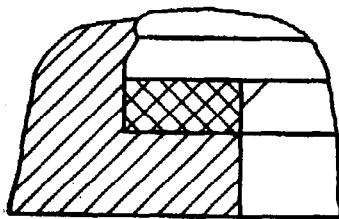


All dimensions in millimetres.

FIG. 2 EXTERNAL THREAD WITH SOCKET FOR EQUIPMENT CONNECTORS OTHER THAN FOR FILTERS (CAT)

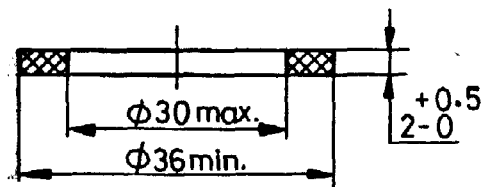


Details at X



All dimensions in millimetres.

FIG. 3 INTERNAL THREAD



All dimensions in millimetres.

FIG. 4 GASKET

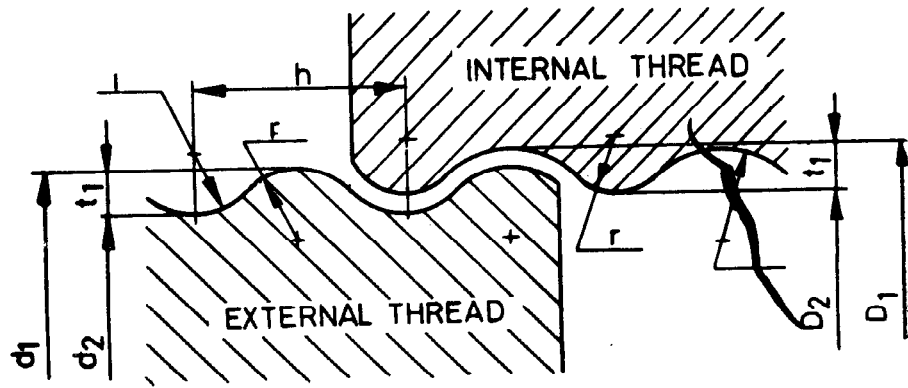


FIG. 5 DIMENSIONS OF THREAD

Table 1 Dimensions for Threads
(Clause 4.2.1)

All dimensions in millimetres.

Thread	Thread Limits						Pitch <i>h</i>	Number of Threads per 24.6 <i>t</i>	Thread Height <i>t₁</i>	Radius <i>r</i>
	External Thread			Internal Thread						
	Major diameter <i>d₁</i>		Minor diameter <i>d₂</i>	Major diameter <i>D₁</i>		Minor diameter <i>D₂</i>				
	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Min</i>	<i>Max</i>				
Rd 40 × 1/7	40.000	39.70	38.40	40.16	38.56	38.86	3.629	7	0.8	1.225

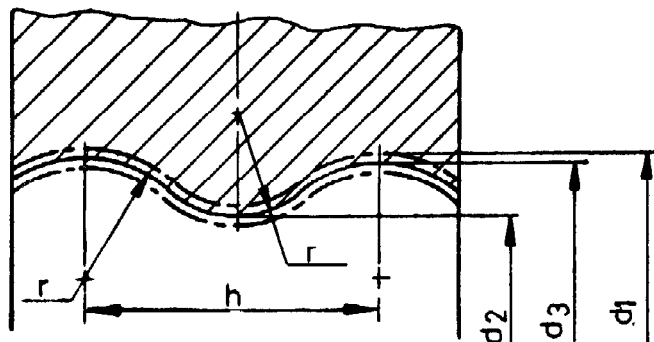


FIG. 6 INTERNAL GAUGE FOR EXTERNAL THREAD

The gauge should be capable of being threaded on smoothly

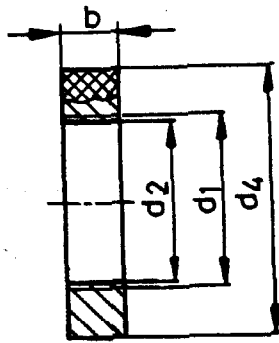


FIG. 7A Go GAUGE

It shall not be possible to pass the gauge completely over the thread; it should engage the initial thread and then bind

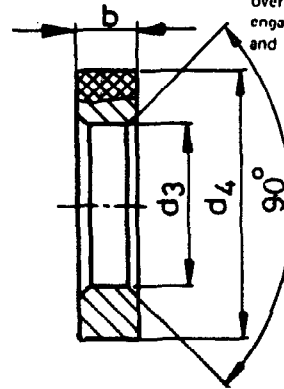


FIG. 7B NOT GO GAUGE

Table 2 Dimensions of Gauges
(Clause 4.3.1)

Thread	Go Gauge							Not Go Gauge		d_4	b
	d_1 Max	d_2 ax	Manufacturing tolerance for d_1 and d_2	Permissible wear for d_1 and d_2	h	Manufacturing tolerance for h	r	d_3	Manufacturing tolerance for d_3		
Rd 40 × 1/7	40.00	38.40	± 0.015	+ 0.050	3.629	± 0.009	1.225	39.70	± 0.006	72	15

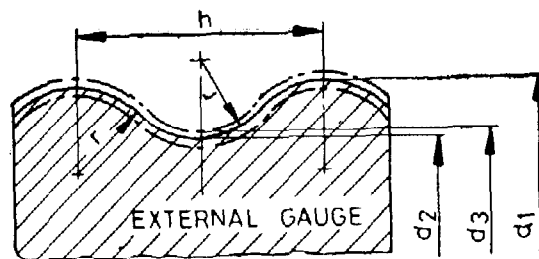


FIG. 8 EXTERNAL GAUGE FOR INTERNAL THREAD

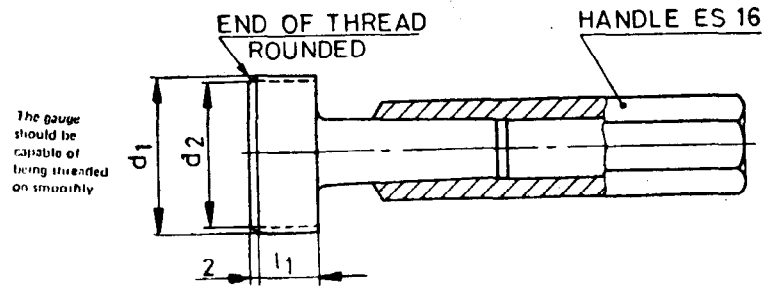


FIG. 9A Go-GAUGE

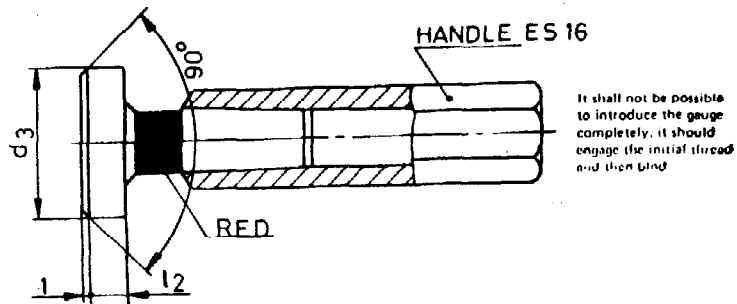


FIG. 9B NOT Go-GAUGE

Table 3 Dimensions of Gauges
(Clause 4.3.2)

Thread	Go Gauge								Not Go Gauge		
	d_1 Min	d_2 Min	Manufacturing tolerance for d_1 and d_2	Permissible wear for d_1 and d_2	h	Manufacturing tolerance for h	r	l_1	d_3	Manufacturing tolerance for d_3	l_2
Rd 40 × 1/7	40.16	38.56	± 0.015	- 0.050	3.629	± 0.009	1.225	15	38.86	± 0.006	10

ANNEX A (Foreword)

COMMITTEE COMPOSITION

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