
INTERNATIONAL STANDARD



3253

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Hose connections for equipment for welding, cutting and related processes

Raccords pour tuyaux souples pour appareils de soudage, coupage et techniques connexes

First edition — 1975-05-01

iTeh STANDARD PREVIEW
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ISO 3253:1975

<https://standards.iteh.ai/catalog/standards/sist/38a7f0a4-2bcd-4888-b033-8dea8a1cf34e/iso-3253-1975>

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Price based on 4 pages

Hose connections for equipment for welding, cutting and related processes

1 SCOPE AND FIELD OF APPLICATION

This International Standard lays down the dimensions and specifies the characteristics of the constituent parts of hose connections for equipment for welding, cutting and related processes, for example for pressure regulators according to ISO 2503 and blowpipes.

2 REFERENCES

ISO/R 7, *Pipe threads for gas list tubes and screwed fittings where pressure-tight joints are made on the threads (1/8 inch to 6 inches).*

ISO/R 228, *Pipe threads where pressure-tight joints are not made on the threads (1/8 inch to 6 inches).*

ISO 2503, *Welding — Regulators for gas cylinders used in welding, cutting and related processes.*

3 GENERALITIES

The gas pipe threads shall be in accordance with the requirements of ISO/R 228. All other dimensions are given in millimetres. Tolerances are in accordance with the requirements of ISO/R 7.

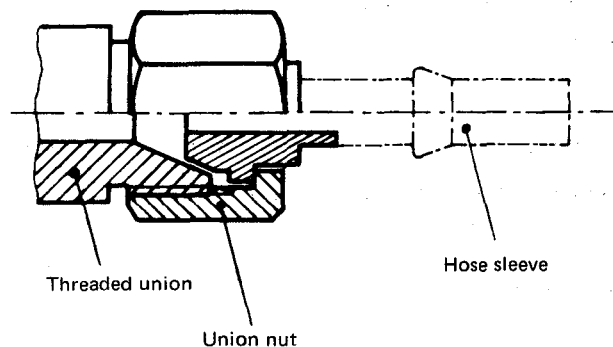
The joint is made with an olive and cone seal (see figure below).

4 MATERIAL

The choice of the material is left to the manufacturer. The material chosen should

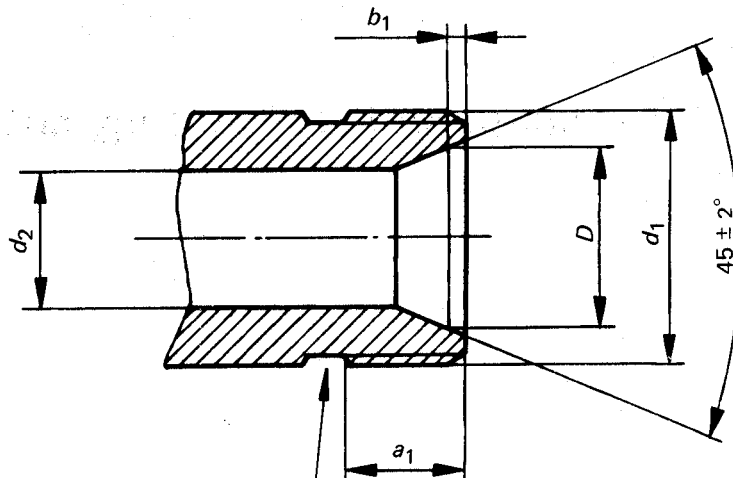
- have a suitable mechanical strength;
- for the parts in contact with the gases used, offer sufficient resistance to the chemical actions of these gases.

Most countries have regulations which impose a limit on the maximum copper content of parts directly in contact with acetylene.



5 DIMENSIONS

5.1 Threaded union



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Alternative

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d_1	D^*	a_1^{**} min.	b_1 J_s15	d_2 max.
1/8	6,5	7,5	1,2	5
1/4	8,3	9,5	1,4	7
3/8	11,5	10,5	1,8	10
1/2	13,9	12	2	12
3/4	18,5	13,5	2,2	16
1	24	14,5	2,4	22

* Datum diameter (nominal diameter of contact).

** Effective length of thread.

All values are given in millimetres except those of the " d_1 " column, which are given in inches.

The dimensions not given are left to the discretion of the manufacturer.

Type of thread to be used :

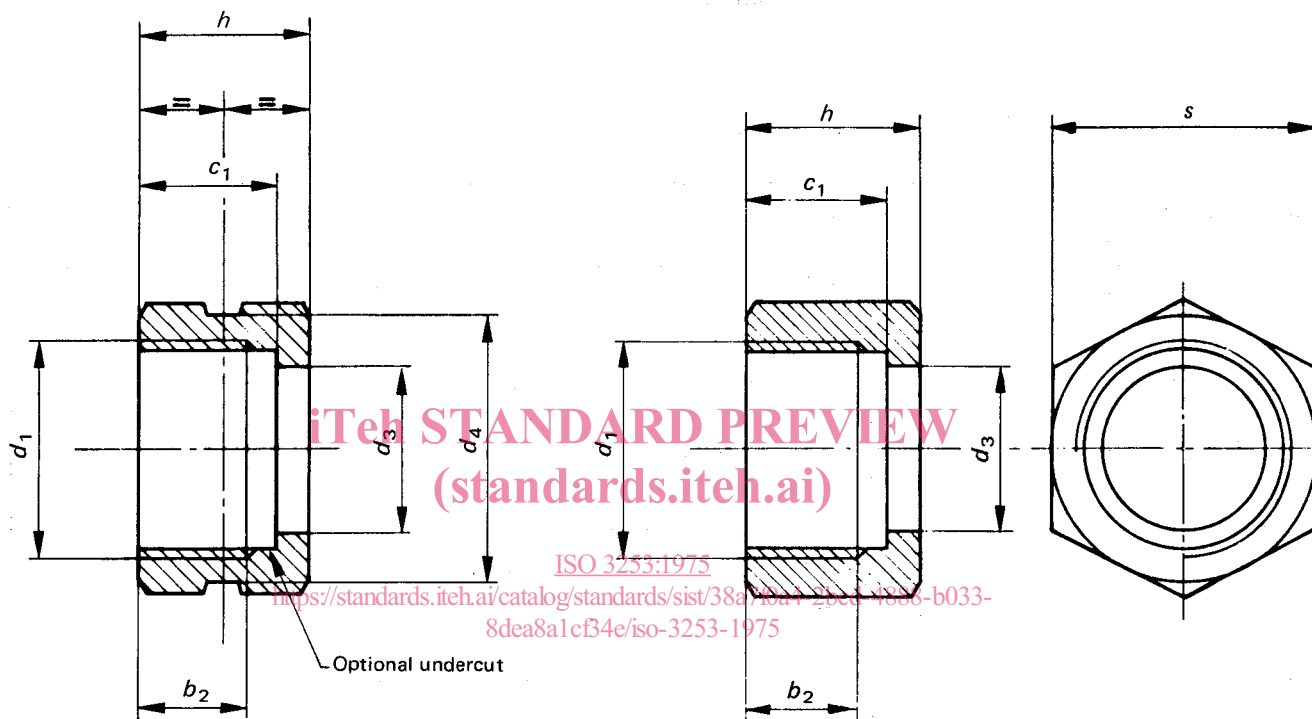
Right-hand for oxygen and non-combustible gases.

Left-hand for combustible gases.

5.2 Union nut

With left-hand thread

With right-hand thread



d_1	b_2 min.	c_1 Js15	d_3 H12	d_4 h14	h h14	s h11
1/8	8	10	6,5	11	12	11
1/4	10	12,5	9,5	17	15,5	17
3/8	10,5	13,5	12,5	19	16,5	19
1/2	13	16,5	14,5	24	20,5	24
3/4	15	18,5	19,5	30	22,5	30
1	17	21,5	25,5	41	26,5	41

All values are given in millimetres except those of the " d_1 " column, which are given in inches.

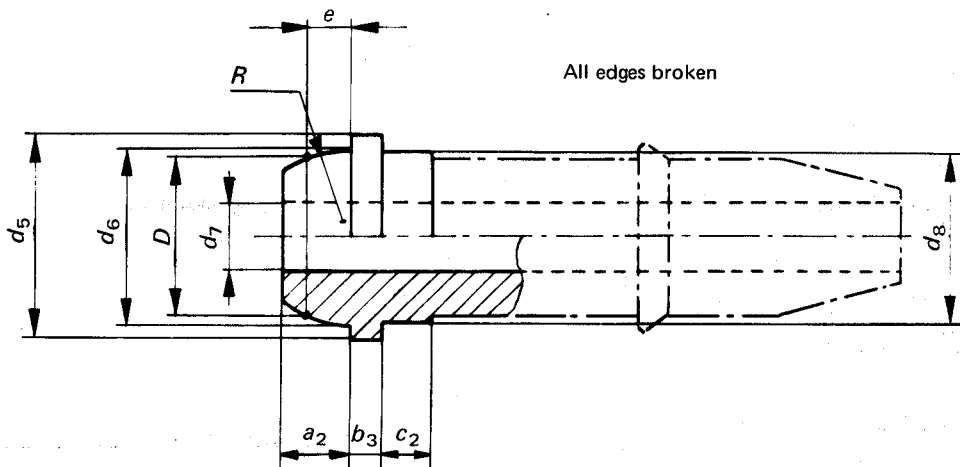
The dimensions not given are left to the discretion of the manufacturer.

Type of thread to be used :

Right-hand for oxygen and non-combustible gases.

Left-hand for combustible gases.

5.3 Hose sleeve



Internal diameter of hose*	Size of union	a_2 h14	b_3 h14	c_2 min.	D^{**}	d_5 h12	d_6 h12	d_8 h12	e h14	R h14
3,2 4 5	1/8	4,5	2	4	6,5	8	7	6	3	3,5
4 5 6,3 8	1/4	5	2,5	5	8,3	11	9	9	3,5	4,5
5 6,3 8 10	3/8	6	2,5	5	11,5	14,5	12,5	12	4	6,25
6,3 8 10	1/2	6	3,5	6	13,9	18	15	14	4,5	7,5
10 12,5 16	3/4	8	3,5	6	18,5	23,5	20	19	5,25	10
16 20	1	10	4,5	7	24	29,75	26	25	6,5	13

* These values are given as a guide. To every hose diameter correspond the appropriate dimensions of the part to be engaged in the hose.

** Datum diameter (nominal diameter of contact).

All values are given in millimetres except those corresponding to the union size, which are given in inches.

The dimensions not given and the profile of the part to be engaged in the hose are left to the discretion of the manufacturer.

The diameter d_7 shall be as large as possible to ensure maximum flow capacity.

To ensure correct seating between the hose sleeve and the threaded union, the diameter d_7 shall not exceed d_2 .

As the profile of the hose sleeve is left to the manufacturer's discretion, the wall between the bore and the smallest diameter of the profile must have adequate strength.

However, the profile and the dimensions should be chosen so as to permit the burst pressure of the hose to be reached when the hose is fixed by a suitable clamp.

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