

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1179

PIPE CONNECTIONS FOR INDUSTRIAL APPLICATION
FOR PLAIN END STEEL AND OTHER METAL TUBES

1st EDITION
February 1970

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BRIEF HISTORY

The ISO Recommendation R 1179, *Pipe connections for industrial application for plain end steel and other metal tubes*, was drawn up by Technical Committee ISO/TC 5, *Pipes and fittings*, the Secretariat of which is held by the Association Suisse de Normalisation (SNV).

Work on this question led to the adoption of a Draft ISO Recommendation.

In August 1968, this Draft ISO Recommendation (No. 1676) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Hungary	Spain
Belgium	India	Sweden
Canada	Israel	Switzerland
Czechoslovakia	Italy	Thailand
Finland	Netherlands	Turkey
France	Poland	U.A.R.
Greece	South Africa, Rep. of	

Four Member Bodies opposed the approval of the Draft : _____

Denmark
Germany
New Zealand
United Kingdom

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1970, to accept it as an ISO RECOMMENDATION.

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ISO/R 1179:1970

<https://standards.iteh.ai/catalog/standards/sist/d502dfba-e99e-491a-be1a-ab20ad3f6a89/iso-r-1179-1970>

PIPE CONNECTIONS FOR INDUSTRIAL APPLICATION *
FOR PLAIN END STEEL AND OTHER METAL TUBES

1. SCOPE

This ISO Recommendation enables the manufacturers to concentrate on a small range of tube connectors and the users to limit their choice to the same series.

It fixes a limited range of threads for connection of tubes to machines or equipment and indicates the related outside diameters of the tubes.

This ISO Recommendation does not attempt to specify the method of connecting the tube to the fitting, or the type of pipe connector.

2. TYPE AND SIZES OF THREADS

The specified thread denotes the connection between the machine and the connector. The threads should be in accordance with ISO Recommendation R 228, *Pipe threads where pressure-tight joints are not made on the threads – Class A Tolerances*.

* This ISO Recommendation is of special interest for hydraulic, pneumatic, fluid transportation, lubrication, etc. Special recommendations may exist for particular applications, for example metric threads for certain equipment of diesel engines for railway locomotives and ships.

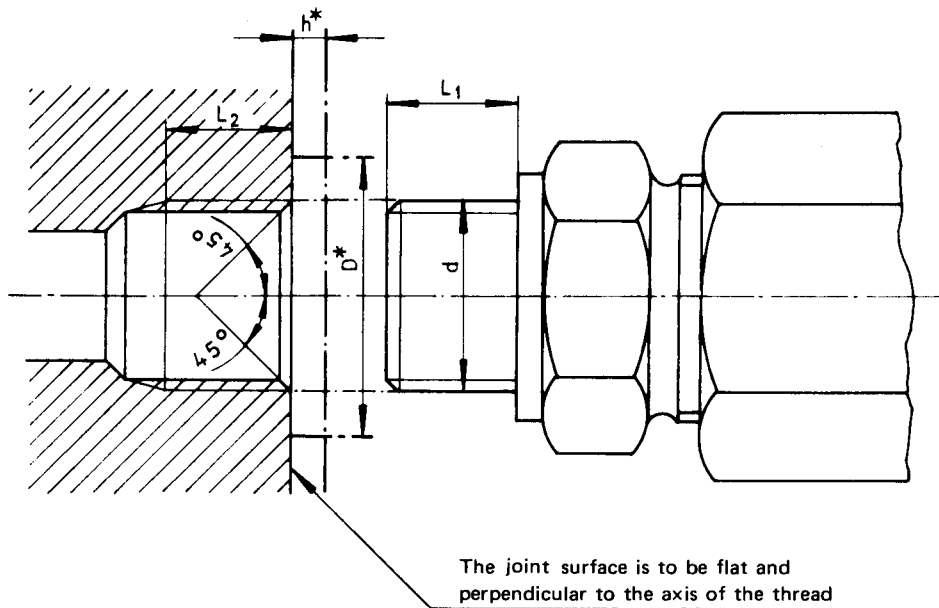


FIG. 1

TABLE 1

Nominal size of thread d	Thread length L_1 male max. L_2 female min.		Dimensions of recess *			
			D min.		h max.	
in	mm	in	mm	in	mm	in
$\frac{1}{8}$	7.4	0.2902	15	0.591	1	0.039
$\frac{1}{4}$	11.0	0.4340	19	0.748	1.5	0.059
$\frac{3}{8}$	11.4	0.4473	23	0.906	2	0.079
$\frac{1}{2}$	15.0	0.5892	27	1.063	2.5	0.098
$\frac{3}{4}$	16.3	0.6428	33	1.299	2.5	0.098
1	19.1	0.7500	40	1.575	2.5	0.098
$1\frac{1}{4}$	21.4	0.8409	50	1.969	2.5	0.098
$1\frac{1}{2}$	21.4	0.8409	56	2.205	2.5	0.098
2	25.7	1.0113	69	2.717	3	0.118

* Where a recess is provided, the dimensions should be as given in Table 1, unless otherwise specified, for example for O-rings.

The lengths of the female threads specified in Table 1 allow the insertion of all equipment (screwed pipes, fittings, cocks, etc.) which is threaded in accordance with ISO Recommendation 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)*.

3. CHOICE OF TUBES

Tube outside diameters should be chosen from Table 2 of tube outside diameters and corresponding thread sizes.

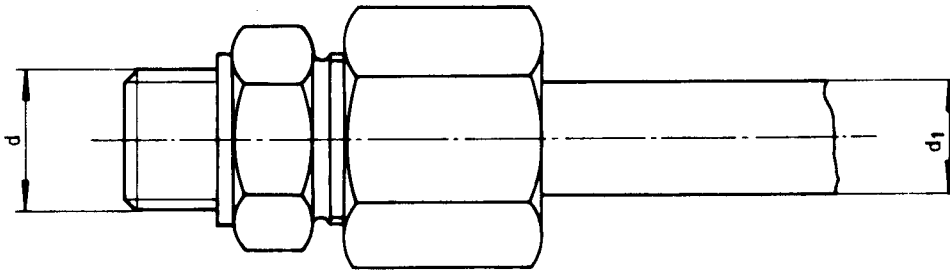


FIG. 2

TABLE 2

Tubes Metric series Outside diameters d_1	Thread Size d	Tubes Inch series Outside diameters d_1
mm	in	in
6	$\frac{1}{8}$	0.250
6 8 10	$\frac{1}{4}$	0.250 0.312 0.375
10 12	$\frac{3}{8}$	0.375
16	$\frac{1}{2}$	0.500 0.625
20	$\frac{3}{4}$	0.750 0.875
25	1	1.000
30	$1 \frac{1}{4}$	1.250
38	$1 \frac{1}{2}$	1.500
50	2	2.000

NOTE. — For special cases, for example for marine construction, the tube diameter 12 mm may be used for 1/2 inch thread size and 16 mm for 3/4 inch thread size.