

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.

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.

International Standard ISO 8445 was prepared by Technical Committee ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 11, *Flexible interlocked and convoluted metallic hoses*. [ISO 8445:1995](https://standards.iteh.ai/catalog/standards/sist/e30958a9-a3a7-40f4-b8e5-cd0e5794ef/iso-8445-1995)

This second edition cancels and replaces the first edition (ISO 8445:1985), of which clause 1 has been technically revised.

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Pipework — Double overlap flexible metal hoses (with packing, leakproof, circular section, in protected carbon steel)

1 Scope

This International Standard specifies the diameters of double overlap leakproof flexible metal hoses with packing, of circular section, in protected carbon steel in accordance with ISO 7657 and tested in accordance with ISO 7658. The packing should not be asbestos. Suitable materials include, for example, cotton, fibreglass, nylon, Kevlar, polyamide, polyester, etc.

This International Standard applies to flexible metal hoses, without external coating, as defined in ISO 7369:1983, 4.1.10, used under pressure, without leakage, at temperatures between -20 °C and a maximum of 230 °C . In cases where the full temperature range of the packing (230 °C) is not used, the manufacturer will state the maximum temperature limit.

NOTE 1 The specifications and temperature-related requirements for use are given in ISO 7657.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6708:—¹⁾, *Pipework components — Definition and selection of DN (nominal size)*.

ISO 7369:1983, *Pipework — Flexible metallic hoses — Vocabulary of general terms*.

ISO 7657:1995, *Pipework — General requirements for stripwound flexible metal hoses*.

ISO 7658:1984, *Pipework — Stripwound flexible metal hoses — Testing and verification of characteristics*.

3 Dimensions and performance

Dimensions and performance shall be as given in figure 1 and table 1.

NOTE 2 Figure 1 is not intended to specify a given manufacturing method or to define coil dimensions.

4 Test requirements

Tests shall be in accordance with ISO 7658.

5 Hydraulic pressure test

Before delivery, the hoses shall be hydrostatically tested to one and a half times the maximum permissible working pressure, as specified in ISO 7658.

1) To be published. (Revision of ISO 6708:1980)



Figure 1

Table 1

Nominal size ¹⁾	Minimum internal diameter	Maximum outside diameter	Bend radius	Tensile strength	Crush strength	Maximum permissible working pressure
	d	D	max.	min.		min.
DN	mm	mm	mm	N	N	bar
12	12	17	165	900	8 000	40
15	13	21	185	1 500	7 500	30
20	18	26	210	2 300	7 200	25
25	23	32	240	3 200	6 900	21
32	31	39	290	4 400	6 600	18
40	37	49	340	6 000	6 400	15
50	48	59	410	8 000	6 200	13
65	62	76	540	12 000	6 000	11
80	75	89	650	16 000	5 800	9,5
100	97	111	820	21 000	5 600	8
125	120	136	1 050	28 000	5 400	7
150	144	163	1 250	36 000	5 300	6
200	192	216	1 600	36 000	5 100	5
250	245	266	2 000	36 000	4 900	4,4
300	295	317	2 400	36 000	4 800	3,8
350	327	367	2 800	36 000	4 700	3,4
400	378	418	3 200	36 000	4 600	3,1
450	428	468	3 600	36 000	4 550	2,9
500	478	520	4 000	36 000	4 500	2,7

NOTES

- The relationship between the bend radius and the coiling diameter of a hose is given in ISO 7658.
- These hoses may be coated externally for special uses, in which case dimensions and performance shall be modified.

1) See ISO 6708.

6 Designation

A double overlap flexible metal hose that meets the requirements of this International Standard shall be designated as follows:

- a) the four letters: TMFA (Tuyau Métallique Flexible Agrafé — Stripwound Flexible Metal Hose);
- b) a reference to this International Standard;
- c) pressure tightness;

- d) nominal size, DN;
- e) the type of material and protective covering.

EXAMPLE

A double overlap flexible metal hose with packing, leakproof, of circular section of nominal size DN 40, in galvanized steel shall be designated as follows:

TMFA ISO 8445 - leakproof - DN 40 - galvanized steel

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ICS 23.040.70

Descriptors: piping, metal tubes, hoses, lock-seamed metal hoses, specifications, dimensions, tests, hydraulic tests, designation.

Price based on 3 pages
