INTERNATIONAL STANDARD ISO 4434

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

Unplasticized polyvinyl chloride (PVC) adaptor fittings for pipes under pressure — Laying length and size of threads — Metric series

Raccords d'adaptation en polychlorure de vinyle (PVC) non plastifié pour tubes sous pression — Cotes de montage et dimension des filetages — Série métrique

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4434 was developed by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and was circulated to the member bodies in April 1976.

It has been approved by the member bodies of the following countries :

Austria	Germany	Romania
Belgium	Ireland	Sweden
Chile	Israel	Switzerland
Czechoslovakia	Italy	Turkey
Denmark	Netherlands	U.S.A.
Egypt, Arab Rep. of	New Zealand	Yugoslavia
Finland	Norway	
France	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

Canada

Printed in Switzerland

Unplasticized polyvinyl chloride (PVC) adaptor fittings for pipes under pressure — Laying length and size of threads — Metric series

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the metric series of diameters to be used and the dimensions which are common to all types of unplasticized polyvinyl chloride (PVC) adaptor fittings[1] for pipes under pressure, to secure the connection to existing metal pipes and/or fittings with pipe threads.

Extension to new designs of adaptor fittings not specifically covered in this International Standard should nevertheless follow the principles here laid down.

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 264, *Unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure — Dimensions of laying lengths — Metric series.*

ISO 727, *Unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure — Dimensions of sockets — Metric series.*

3 DESIGNATION

Adaptor fittings are designated by

a) the nominal inside diameter of the fitting socket in accordance with ISO 727;

b) the nominal size of the threaded joint in accordance with ISO/R 7.

Examples :

Adaptor elbow 25 x 3/4

Adaptor bush 25 x 1

4 REINFORCEMENT

Unplasticized PVC adaptor fittings with female threaded sockets for jointing to threaded metal pipes or fittings shall be reinforced at the threaded outlets by any suitable method to prevent splitting of the threaded portion during assembly.

5 DIMENSIONS

5.1 Diameters

The nominal inside diameters of the plain socket(s) or the nominal outside diameters of the plain spigot(s) shall correspond to diameters given in ISO 727 and ISO 264 respectively. The threaded part of the fitting shall correspond to the nominal sizes stated in ISO/R 7.

5.2 Laying length

When assembling a pipe system, it is necessary to know the dimensions between the ends of the pipes which are to be joined. These are designated :

"pipe to pipe" : when the openings in the fitting concerned are in a single direction;

"pipe to axis" : when the openings in the fitting are not in a single direction;

and have been listed in 5.4 and 5.5.

5.3 Tolerances

5.3.1 Permissible deviations on "laying lengths" dimensions are given in the tables under the specific headings.

5.3.2 Permissible deviations for the diameters and lengths of the plain sockets shall be in accordance with ISO 727.

5.3.3 Permissible deviations for the diameters and lengths of the plain spigots shall be in accordance with ISO 264 (for example socket length = spigot length).

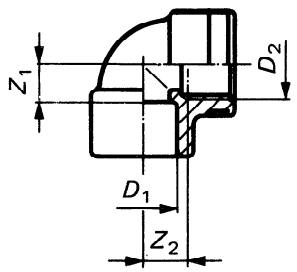
5.3.4 Permissible deviations for threaded components shall be in accordance with ISO/R 7.

The figures illustrating this International Standard have been arbitrarily chosen without prejudice to the design of the adaptor fittings or reinforcement.

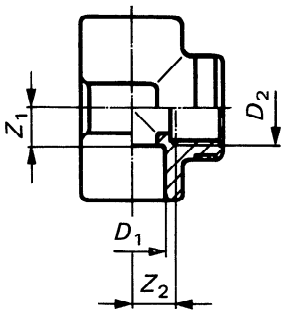
1) Fittings having one plain socket or spigot for solvent cement jointing and on the other side a pipe thread (ISO/R 7).

5.4 Adaptor fittings — Equal

90° Adaptor elbow



90° Adaptor tee



Adaptor socket

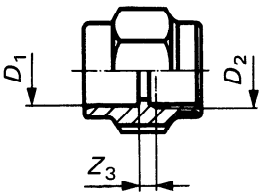


TABLE 1

Dimensions in millimetres

Diameter of socket	Size of thread	Laying length Z		
1) D_1	2) D_2	3) Z_1	4) Z_2	5) Z_3
12	R 1/4"	7	9	4
16	R 3/8"	9	13	5
20	R 1/2"	11	14	5
25	R 3/4"	13,5	17	5
32	R 1"	17	22	5
40	R 1 1/4"	21	28	5
50	R 1 1/2"	26	38	7
63	R 2"	32,5	47	7

1) Tolerances of diameters and length of sockets in accordance with ISO 727.

2) Sizes and length of pipe thread in accordance with ISO/R 7.

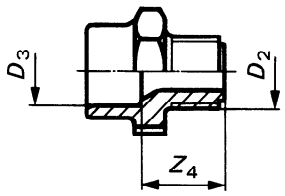
3) Laying length Z_1 and tolerances in accordance with ISO 264 (90° elbow).

4) Tolerances of laying length Z_2 equal to Z_1.

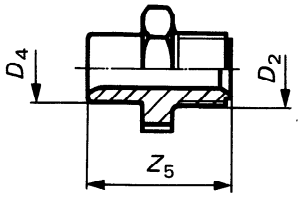
5) Tolerances of laying length Z_3 in accordance with ISO 264 (socket).

5.5 Adaptor fittings — Nipples and bushes

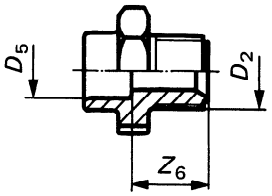
Adaptor socket/nipple



Adaptor nipple



Adaptor bush
Socket/male thread



Adaptor bush
Spigot/female thread

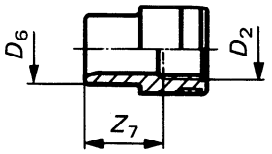


TABLE 2

Dimensions in millimetres

Adaptor socket /nipple		Adaptor nipple		Adaptor bush Socket /male thread		Adaptor bush Spigot /female thread		Size of thread
1)	2)	3)	2)	1)	2)	3)	2)	4)
D_3	Z_4	D_4	Z_5	D_5	Z_6	D_6	Z_7	D_2
–	–	12	32	–	–	–	–	R 1/4"
16	19	16	35	12	15	20	24	R 3/8"
20	23	20	42	16	22	25	27	R 1/2"
25	25	25	47	20	22	32	32	R 3/4"
32	28	32	54	25	27	40	38	R 1"
40	31	40	60	32	29	50	46	R 1 1/4"
50	32	50	66	40	29	63	57	R 1 1/2"
63	38	63	78	50	34	–	–	R 2"

1) Tolerances of diameters and length of sockets in accordance with ISO 727.

2) Tolerances of laying length Z_4, Z_5, Z_6 and Z_7 in accordance with ISO 264 (elbow).

3) Tolerances of diameters in accordance with ISO 264 (reducing bush).

4) Sizes and length of pipe thread in accordance with ISO/R 7.

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