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मानक

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IS 10124-5 (2009): Fabricated PVC-U Fittings for Potable Water Supplies - Specification, Part 5: Specific Requirements for Equal Tees [CED 50: Plastic Piping System]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
पेय जल आपूर्ति के लिए सविरंचित
पी वी सी-यू फिटिंगें — विशिष्टि
भाग 5 समान टी की विशिष्ट अपेक्षाएँ
(दूसरा पुनरीक्षण)

Indian Standard
FABRICATED PVC-U FITTINGS FOR POTABLE WATER
SUPPLIES — SPECIFICATION
PART 5 SPECIFIC REQUIREMENTS FOR EQUAL TEES
(*Second Revision*)

ICS 23.040.45; 91.140.60

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

FOREWORD

This Indian Standard (Part 5) (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Plastics Piping Systems Sectional Committee had been approved by the Civil Engineering Division Council.

This standard was first published in 1982 and revised in 1988. In this revision, sizes and classes of fittings have been aligned with IS 4985 : 2000 'Unplasticized PVC pipes for potable water supplies — Specification'.

The requirements of fabricated PVC-U fittings are covered in thirteen parts. The other parts in the series are:

- Part 1 General requirements
- Part 2 Specific requirements for sockets
- Part 3 Specific requirements for straight reducers
- Part 4 Specific requirements for caps
- Part 6 Specific requirements for flanged tail pieces with metallic flanges
- Part 7 Specific requirements for threaded adaptors
- Part 8 Specific requirements for 90° bends
- Part 9 Specific requirements for 60° bends
- Part 10 Specific requirements for 45° bends
- Part 11 Specific requirements for 30° bends
- Part 12 Specific requirements for 22 ½° bends
- Part 13 Specific requirements for 11 ¼° bends

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test or 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

FABRICATED PVC-U FITTINGS FOR POTABLE WATER SUPPLIES — SPECIFICATION

PART 5 SPECIFIC REQUIREMENTS FOR EQUAL TEES

(*Second Revision*)

1 SCOPE

This standard (Part 5) lays down the requirements of manufacture, dimensions and marking for fabricated PVC-U equal tees for potable water supplies.

2 REFERENCES

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

<i>IS No.</i>	<i>Title</i>
4985 : 2000	Unplasticized PVC pipes for potable water supplies — Specification (<i>third revision</i>)
10124 (Part 1) : 2009	Specification for fabricated PVC-U fittings for potable water supplies — Specification: Part 1 General requirements

3 REQUIREMENTS**3.1 General**

The general requirements for material, sizes, tests, sampling and criteria for conformity shall conform to IS 10124 (Part 1).

3.2 Manufacture

3.2.1 A typical illustration of equal tee is shown in Fig. 1.

3.2.2 Dimensions

The dimensions of equal tees shall comply with those given in Table 1 read with Fig. 1.

4 MARKING

4.1 Each equal tee shall be clearly and indelibly marked with the following information:

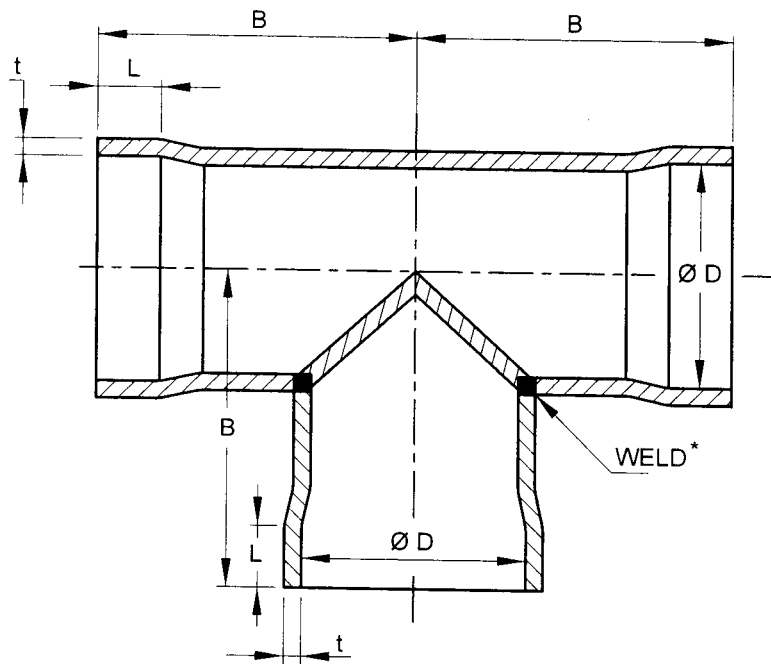
- a) Manufacturer's name or identification mark,
- b) Size of the equal tee and the appropriate class (working pressure) of IS 4985 to which the pressure rating of the fitting corresponds, and
- c) The equal tee shall be marked in colour as indicated below for different classes of fittings:

<i>Class of the Fittings</i>	<i>Colour</i>
Class 2 (0.4 MPa)	Blue
Class 3 (0.6 MPa)	Green
Class 4 (0.8 MPa)	Brown
Class 5 (1.0 MPa)	Yellow
Class 6 (1.25 MPa)	Black

4.2 BIS Certification Marking

Each equal tee may also be marked with the Standard Mark.

4.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which a licence for the use of the Standard Mark may be granted to the manufacturer or producer may be obtained from the Bureau of Indian Standards.



D = mean socket internal diameter at mid-point of socket length as specified in IS 10124 (Part 1).

L = minimum socket length in according with IS 10124 (Part 1).

B = $1.45 \times$ nominal outside diameter of the pipes +6 mm.

t = minimum wall thickness of equal tees calculated on the basis of 90 percent of the minimum wall thickness of the corresponding size and pressure class of pipe rounded of to the next higher 0.1 mm.

NOTES

1 Manufacturer can make reducing tee as per customer requirement of any combination. For dimensions use Table 1 for relevant main size and reducing size.

2 The drawing is only intended to define the terms used in Table 1 and is not intended to illustrate specific design features.

*PVC welded by solvent or welding rod and with fibre glass reinforcement of 40 mm width and 3 mm minimum thickness as per different size.

FIG. 1 EQUAL TEES

Table 1 Dimensions of Equal Tees

(Clause 3.2.2, and Fig. 1)

All dimensions in millimetres.

Sl No.	Nominal Size	B Min	Minimum Wall Thickness (t) for Working Pressure MPa				
			0.4 (Class 2)	0.6 (Class 3)	0.8 (Class 4)	1.0 (Class 5)	1.25 (Class 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	63	98	1.4	2.0	2.5	3.2	3.8
ii)	75	115	1.7	2.4	3.1	3.8	4.6
iii)	90	137	1.9	2.8	3.6	4.5	5.5
iv)	110	166	2.3	3.4	4.4	5.5	6.7
v)	125	188	2.7	3.9	5.1	6.3	7.6
vi)	140	209	2.9	4.4	5.7	7.0	8.6
vii)	160	238	3.4	4.9	6.5	8.0	9.8
viii)	180	267	3.8	5.5	7.2	9.0	10.9
ix)	200	296	4.2	6.2	8.0	10.0	12.3
x)	225	333	4.7	6.9	9.0	11.2	13.8
xi)	250	369	5.2	7.7	10.0	12.5	15.3
xii)	280	412	5.8	8.6	11.3	13.9	17.1

Table 1 (Concluded)

Sl No.	Nominal Size	<i>B</i> <i>Min</i>	Minimum Wall Thickness (<i>t</i>) for Working Pressure MPa				
			0.4 (Class 2)	0.6 (Class 3)	0.8 (Class 4)	1.0 (Class 5)	1.25 (Class 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
xiii)	315	463	6.5	9.7	12.6	15.6	19.3
xiv)	355	521	7.3	10.8	14.3	17.7	21.7
xv)	400	586	8.2	12.2	16.1	19.8	24.5
xvi)	450	659	9.3	13.7	18.0	22.4	27.5
xvii)	500	731	10.9	15.3	20.1	24.8	30.5
xviii)	550	816	12.6	17.2	22.4	27.8	34.2
xix)	630	920	13.0	19.2	25.2	31.3	38.4

NOTE — For 0.25 MPa pressure class, equal tees should not be made from 0.25 MPa pressure class pipes. For this equal tees made from 0.4 MPa pressure class should be used.

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This Indian Standard has been developed from Doc No. : CED 50 (7435).

Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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