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Unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure — Laying length — Metric series

ADDENDUM 1 : Diameters 200 mm and 225 mm

Addendum 1 to International Standard ISO 264-1976 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 January 1980.

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

Australia	Greece	Portugal
Austria	India	Romania
Belgium	Ireland	South Africa, Rep. of
Brazil	Israel	Spain
Czechoslovakia	Italy	Sweden
Denmark	Korea, Rep. of	Switzerland
Egypt, Arab Rep. of	Netherlands	United Kingdom
Finland	New Zealand	USA
France	Norway	USSR
Germany, F. R.	Poland	

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

Japan

UDC 621.643.4.06 : 678.743.22**Ref. No. ISO 264-1976/Add.1-1982 (E)**

Descriptors : piping, plastic tubes, unplasticized polyvinyl chloride, pressure pipes, pipe fittings, dimensions, metric system.

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PROBLEM HARD COPY

Price based on 2 pages

ISO 264 shall be extended with the diameters 200 and 225 mm as follows :

7.1 Elbows, tees and sockets

Table 1

Dimensions in millimetres

Diameter of the socket	Type of fitting					
	90° elbow	45° elbow	90° tee	45° tee	Socket	Union
Laying length Z						
200	101 ⁺⁹ / ₋₁	43 ⁺⁹ / ₋₁	101 ⁺⁹ / ₋₁	—	—	8 ⁺⁵ / ₋₁
225	114 ⁺¹⁰ / ₋₁	48 ⁺¹⁰ / ₋₁	114 ⁺¹⁰ / ₋₁	—	—	10 ⁺⁵ / ₋₁

NOTE — Formula for the nominal laying length for 90° elbows and 90° tee is $Z = \frac{d}{2} + 1$ mm

7.2.1 Short bends 90°

Table 2.1

Dimensions in millimetres

	Diameter of the sockets			
	140	160	200	225
	Laying length Z			
	105 ⁺⁷ / ₋₁	120 ⁺⁸ / ₋₁	150 ⁺⁹ / ₋₁	168 ⁺⁹ / ₋₁

7.5 Reducing bush¹⁾ — short

Table 5

Dimensions in millimetres

Female ends d_1	Diameters of jointing Male ends d_2	
	+ 0,4 0	
	200	225
Laying length Z ± 1		
110	45	—
125	37,5	—
140	30	—
160	20	33

1) This designation is an abbreviation of : Male end and female end nipples, reducing.

INTERNATIONAL STANDARD**264**

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

Unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure — Laying lengths — Metric series

Raccords en polychlorure de vinyle (PVC) non plastifié à emboîtements lisses pour tubes sous pression — Cotes de montage — Série métrique

First edition — 1976-02-01

UDC 621.643.4.06 : 678.743.22

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Descriptors : piping, plastic tubes, unplasticized polyvinyl chloride, pressure pipes, pipe fittings, dimensions, metric system.

Price based on 5 pages

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 264 was drawn up by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and circulated to the Member Bodies in October 1974.

It has been approved by the Member Bodies of the following countries :

Austria	Ireland	Spain
Belgium	Israel	Sweden
Chile	Italy	Switzerland
Czechoslovakia	Japan	Turkey
Denmark	Netherlands	United Kingdom
Finland	Norway	U.S.A.
France	Poland	U.S.S.R.
Germany	Portugal	Yugoslavia
India	Romania	

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 264-1972, of which it constitutes a technical revision.

Unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure — Laying lengths — Metric series

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the series of diameters to be used and the dimensions which are common to all types of unplasticized polyvinyl chloride (PVC) fittings with plain sockets for pipes under pressure, regardless of their method of manufacture (with the exception of fittings fabricated from pipes) and composition.

It contains the current types and sizes of fittings and should be used as a guide to manufacturers and users and as a basis for specific standards. It may later be extended to other types and sizes of fittings, when the development of plastics materials in the field of pipe systems makes this necessary.

Extension to other types should be made by observing the principles laid down in this International Standard.

2 REFERENCES

ISO 161/1, *Thermoplastics pipes for the transport of fluids — Nominal outside diameters and nominal pressures — Part 1 : Metric series.*

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

3 DIAMETERS OF FITTINGS (SIZES)

The inside diameters of the sockets of the fittings correspond to the outside diameters of the pipes (see ISO 161/1). Fittings are designated by the diameters of their sockets. In the case of nipples, these are designated by the diameters of the jointing surfaces, giving the male end first.

4 ANGLES

For elbows and tees, the angles should be 45° or 90°.

5 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, for example union, reducer;

“pipe to axis” : when the openings in the fitting are not in a single direction, for example elbow, tee;

and have been listed in the tables in 7.1 to 7.5.

6 TOLERANCES

Permissible deviations on “pipe to pipe” and “pipe to axis” dimensions are given in the tables in 7.1 to 7.5.

The permissible deviations for the inside diameters of the sockets are given in ISO 727.

7 DIMENSIONS OF FITTINGS

The various types of fittings are designated by the diameters of jointing and the laying length¹⁾ given in the following tables.

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

1) Laying length : dimensions “pipe to pipe” and “pipe to axis”.

7.1 Elbows, tees and sockets

TABLE 1

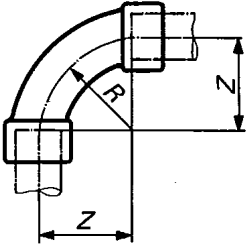
Dimensions in millimetres

Dia- meter of the socket	Type of fitting						
	90° elbow	45° elbow	90° tee	45° tee	Socket	Union	
Laying length Z							
10	6 ± 1	3 ± 1	6 ± 1	—	—	3 ± 1	13,5 ± 1
12	7 ± 1	3,5 ± 1	7 ± 1	—	—	3 ± 1	13,5 ± 1
16	9 ± 1	4,5 ± 1	9 ± 1	—	—	3 ± 1	13,5 ± 1
20	11 ± 1	5 ± 1	11 ± 1	27 ± 3	6 ⁺² ₋₁	3 ± 1	13,5 ± 1
25	13,5 ^{+1,2} ₋₁	6 ^{+1,2} ₋₁	13,5 ^{+1,2} ₋₁	33 ± 3	7 ⁺² ₋₁	3 ^{+1,2} ₋₁	13,5 ^{+1,2} ₋₁
32	17 ^{+1,6} ₋₁	7,5 ^{+1,6} ₋₁	17 ^{+1,6} ₋₁	42 ⁺⁴ ₋₃	8 ⁺² ₋₁	3 ^{+1,6} ₋₁	13,5 ^{+1,6} ₋₁
40	21 ⁺² ₋₁	9,5 ⁺² ₋₁	21 ⁺² ₋₁	51 ⁺⁵ ₋₃	10 ⁺² ₋₁	3 ⁺² ₋₁	15 ⁺² ₋₁
50	26 ^{+2,5} ₋₁	11,5 ^{+2,5} ₋₁	26 ^{+2,5} ₋₁	63 ⁺⁶ ₋₃	12 ⁺² ₋₁	3 ⁺² ₋₁	17 ^{+2,5} ₋₁
63	32,5 ^{+3,2} ₋₁	14 ^{+3,2} ₋₁	32,5 ^{+3,2} ₋₁	79 ⁺⁷ ₋₃	14 ⁺² ₋₁	3 ⁺² ₋₁	21 ^{+3,2} ₋₁
75	38,5 ⁺⁴ ₋₁	16,5 ⁺⁴ ₋₁	38,5 ⁺⁴ ₋₁	94 ⁺⁹ ₋₃	17 ⁺² ₋₁	4 ⁺² ₋₁	—
90	46 ⁺⁵ ₋₁	19,5 ⁺⁵ ₋₁	46 ⁺⁵ ₋₁	112 ⁺¹¹ ₋₃	20 ⁺³ ₋₁	5 ⁺² ₋₁	—
110	56 ⁺⁶ ₋₁	23,5 ⁺⁶ ₋₁	56 ⁺⁶ ₋₁	137 ⁺¹³ ₋₄	24 ⁺³ ₋₁	6 ⁺³ ₋₁	—
125	63,5 ⁺⁶ ₋₁	27 ⁺⁶ ₋₁	63,5 ⁺⁶ ₋₁	157 ⁺¹⁵ ₋₄	27 ⁺³ ₋₁	6 ⁺³ ₋₁	—
140	71 ⁺⁷ ₋₁	30 ⁺⁷ ₋₁	71 ⁺⁷ ₋₁	175 ⁺¹⁷ ₋₅	30 ⁺⁴ ₋₁	8 ⁺³ ₋₁	—
160	81 ⁺⁸ ₋₁	34 ⁺⁸ ₋₁	81 ⁺⁸ ₋₁	200 ⁺²⁰ ₋₆	35 ⁺⁴ ₋₁	8 ⁺⁴ ₋₁	—

7.2 Bends 90°

TABLE 2

Dimensions in millimetres




	Diameters of the sockets							
	10	12	16	20	25	32	40	50
	Laying length Z							
	20 ± 1	24 ± 1	32 ± 1	40 ± 1	$50 \begin{smallmatrix} +1,2 \\ -1 \end{smallmatrix}$	$64 \begin{smallmatrix} +1,6 \\ -1 \end{smallmatrix}$	$80 \begin{smallmatrix} +2 \\ -1 \end{smallmatrix}$	$100 \begin{smallmatrix} +2,5 \\ -1 \end{smallmatrix}$
	Diameters of the sockets							
	63	75	90	110	125	140	160	
	Laying length Z							
	$126 \begin{smallmatrix} +3,2 \\ -1 \end{smallmatrix}$	$150 \begin{smallmatrix} +4 \\ -1 \end{smallmatrix}$	$180 \begin{smallmatrix} +5 \\ -1 \end{smallmatrix}$	$220 \begin{smallmatrix} +6 \\ -1 \end{smallmatrix}$	$250 \begin{smallmatrix} +5 \\ -1 \end{smallmatrix}$	$280 \begin{smallmatrix} +7 \\ -1 \end{smallmatrix}$	$320 \begin{smallmatrix} +8 \\ -1 \end{smallmatrix}$	

7.3 Caps

TABLE 3

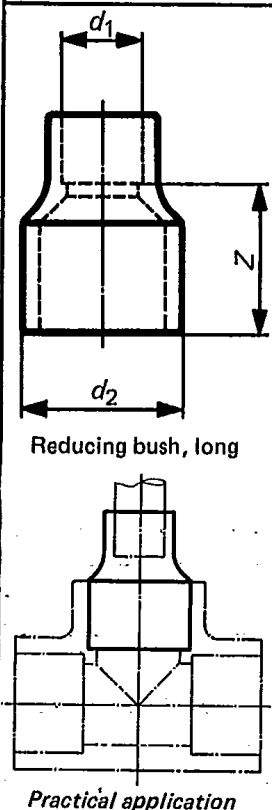
Dimensions in millimetres

Type of fitting	Diameters of the sockets															
 Cap	10	12	16	20	25	32	40	50	63	75	90	110	125	140	160	

7.4 Reducing bush¹⁾ – long

TABLE 4

Dimensions in millimetres

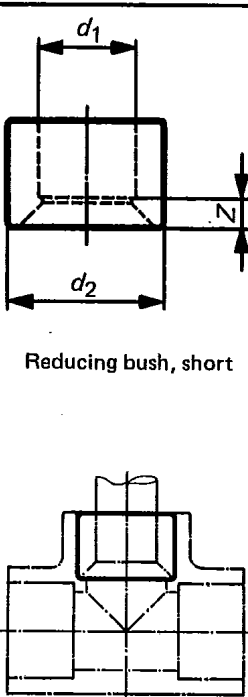
Type of fitting	Female ends d_1	Diameters of jointing Male ends d_2														
		+ 0,2 0												+ 0,3 0		
		10	12	16	20	25	32	40	50	63	75	90	110	125	140	160
Laying length Z																
± 1						± 1,5						± 2				
 <p>Reducing bush, long</p> <p>Practical application</p>	10		15	18	21	25										
	12			18	21	25	30									
	16				21	25	30	36								
	20					25	30	36	44							
	25						30	36	44	54						
	32							36	44	54	62					
	40								44	54	62	74				
	50									54	62	74	88			
	63										62	74	88	100		
	75											74	88	100	111	
	90												88	100	111	126
	110													100	111	126
	125														111	126
	140															126

1) This designation is an abbreviation of : Male end and female end nipples, reducing.

7.5 Reducing bush¹⁾ – short

TABLE 5

Dimensions in millimetres

Type of fitting	Female ends d_1	Diameters of jointing Male ends d_2														
		10	12	16	20	25	$\begin{matrix} +0,2 \\ 0 \end{matrix}$ 32	40	50	63	75	90	110	$\begin{matrix} +0,3 \\ 0 \end{matrix}$ 125	140	160
		Laying length Z ± 1														
 <p>Reducing bush, short</p> <p>Practical application</p>	10			2	4	6,5										
	12			2	4	6,5	10									
	16				2	4,5	8	12								
	20					2,5	6	10	15							
	25						3,5	7,5	12,5	19						
	32							4	9	15,5	21,5					
	40								5	11,5	17,5	25				
	50									6,5	12,5	20	30			
	63										6	13,5	23,5	31		
	75											7,5	17,5	25	32,5	
	90												10	17,5	25	35
	110													7,5	15	25
	125														7,5	17,5
	140															10

1) This designation is an abbreviation of : Male end and female end nipples, reducing.