UDC 621.643

Ref. No.: ISO/R 265 - 1962 (E)

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 265

PIPES AND FITTINGS OF PLASTICS MATERIALS
SOCKET FITTINGS WITH SPIGOT ENDS FOR DOMESTIC AND INDUSTRIAL WASTE PIPES
BASIC DIMENSIONS: METRIC SERIES

1st EDITION

July 1962

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 265, *Pipes and Fittings of Plastics Materials—Socket Fittings with Spigot Ends for Domestic and Industrial Waste Pipes—Basic Dimensions: Metric Series*, was drawn up by the 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 by the Technical Committee began in 1957 and led, in 1959, to the adoption of a Draft ISO Recommendation.

In October 1960, this Draft ISO Recommendation (No. 408) 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:

Belgium	Hungary	Portugal
Chile	India	Romania
Czechoslovakia	Iran	Spain
France	Israel	Switzerland
Germany	Italy	U.S.S.R.
Greece	Poland	Yugoslavia

Four Member Bodies opposed the approval of the Draft:

Denmark, Netherlands, Norway, Sweden

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in July 1962, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 265 July 1962

PIPES AND FITTINGS OF PLASTICS MATERIALS
SOCKET FITTINGS WITH SPIGOT ENDS FOR DOMESTIC AND INDUSTRIAL WASTE PIPES
BASIC DIMENSIONS: METRIC SERIES

1. SCOPE

This ISO Recommendation applies to plastics socket fittings with spigot ends for domestic and industrial waste pipes, regardless of their method of manufacture (except fittings fabricated from tubes) and composition. Its object is to specify the series of diameters to be used and the dimensions which are common to all types of fittings.*

It contains 46 types and sizes of fittings and should be used immediately 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 ISO Recommendation.

2. DIAMETERS OF FITTINGS (SIZES)

The diameters of jointing should be the following:

32 — 50 — 75 — 110 — 160 mm.**

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.

3. ANGLES

For elbows and tees (branches), the angles should be 45°, 67½° or 87½°.

4. LAYING LENGTH

When assembling a pipe system, the dimensions between the ends of the tubes which it is required to join are necessary. These have been designated

" tube to tube ": when the openings in the fitting concerned are in a single direction,

" tube to axis ": when the openings in the fitting are not in a single direction,

and have been listed in section 5.

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* This ISO Recommendation does not give all the dimensions which are required by the different manufacturers to produce the fittings. This aim will be achieved by adding separate ISO Recommendations covering the socket length, spigot end length, etc.

** However, if for technical reasons supplementary diameters should be necessary, these should be taken from the diameter series of ISO Recommendation R 161, *Pipes of Plastics Materials for the Transport of Fluids (Outside Diameters and Nominal Pressures). Part I : Metric Series.*

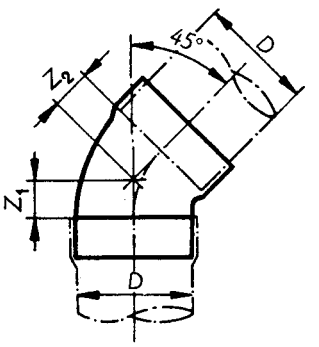
5. DIMENSIONS OF FITTINGS

The various types of fittings are designated by their diameters of jointing and the laying lengths * given in the following tables. These dimensions are expressed in millimetres.

The figures illustrating this document have been arbitrarily chosen without prejudice to the execution of the fitting.

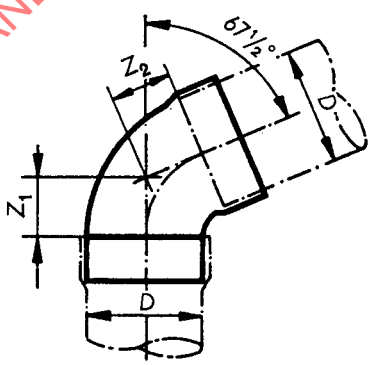
5.1 45° Elbows

Dimensions in millimetres

Type of fitting	Diameters of jointing D	Laying lengths Z_1	Laying lengths Z_2
45° Elbow 	32	11	11
	50	17	17
	75	25	25
	110	37	37
	160	53	53

5.2 67 1/2° Elbows

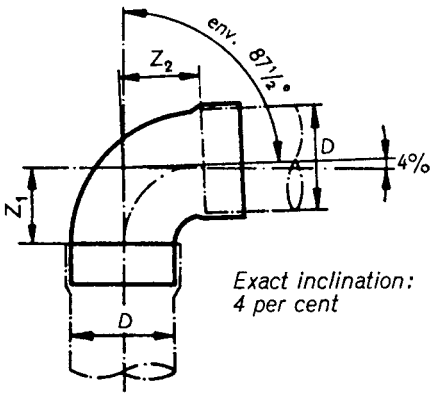
Dimensions in millimetres

Type of fitting	Diameters of jointing D	Laying lengths Z_1	Laying lengths Z_2
67 1/2° Elbow 	32	18	18
	50	27	27
	75	40	40
	110	59	59
	160	86	86

* Laying lengths: dimensions " tube to tube " and " tube to axis ".

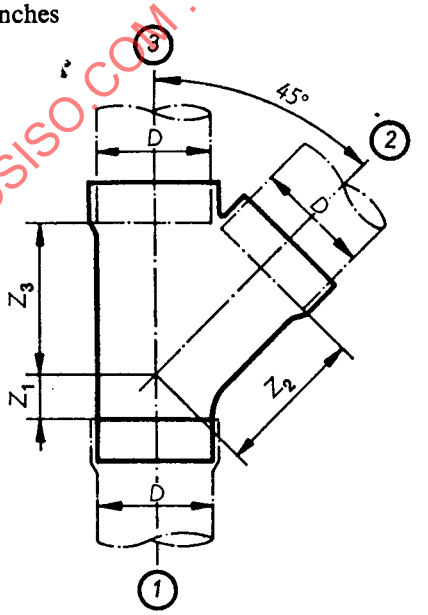
5.3 87 1/2° Elbows

Dimensions in millimetres

Type of fitting	Diameters of jointing	Laying lengths	
	D	Z_1	Z_2
87½° Elbow 	32	25	25
	50	39	39
	75	58	58
	110	85	85
	160	124	124

5.4 45° Branches

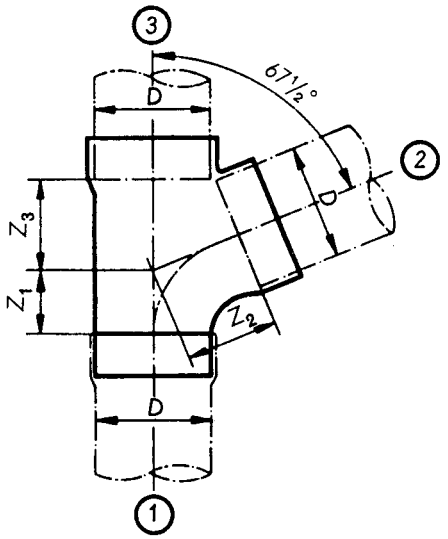
Dimensions in millimetres

Type of fitting	Diameters of jointing			Laying lengths		
	D 1	D 2	D 3	Z_1	Z_2	Z_3
45° Branches 	32	32	32	11	41	41
	50	50	50	17	63	63
	50	32	50	2	54	50
	75	75	75	25	93	93
	75	50	75	4	81	76
	110	110	110	37	136	136
	110	75	110	8	118	111
	160	160	160	53	196	196
	160	110	160	12	171	161

5.5 67 1/2° Branches

Dimensions in millimetres

Type of fitting	Diameters of jointing			Laying lengths		
	D_1	D_2	D_3	Z_1	Z_2	Z_3
67½° Branches	32	32	32	18	26	26
	50	50	50	27	40	40
	50	32	50	14	36	30
	75	75	75	40	59	59
	75	50	75	22	54	45
	110	110	110	59	85	85
	110	75	110	33	78	67
	160	160	160	86	123	123
	160	110	160	49	113	96



5.6 87 1/2° Branches

Dimensions in millimetres

Type of fitting	Diameters of jointing			Laying lengths		
	D_1	D_2	D_3	Z_1	Z_2	Z_3
87½° Branches	32	32	32	25	25	17
	50	50	50	39	39	26
	50	32	50	25	34	17
	75	75	75	58	58	39
	75	50	75	38	51	26
	110	110	110	85	85	57
	110	75	110	58	76	40
	160	160	160	124	124	83
	160	110	160	84	110	58