INTERNATIONAL STANDARD

ISO 8242

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Polypropylene (PP) valves for pipes under pressure — Basic dimensions — Metric series

Robinets en polypropylène (PP) pour tubes avec pression — Dimensions de base — Série métrique

Reference number
ISO 8242 : 1989 (E)

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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8242 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Polypropylene (PP) valves for pipes under pressure — Basic dimensions — Metric series

0 Introduction

This International Standard deals with current types of polypropylene (PP) valves; it should be used for guidance by the manufacturer and user and as a basis for specific standards. It may later be extended to include other types of valves, when the development of plastics materials in the field of pipe systems makes this necessary.

The possible connections to the various pipe systems are given in ISO 7349.

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

1 Scope

This International Standard specifies the series of diameters to be used and the basic dimensions which are common to all types of polypropylene (PP) valves for pipes under pressure for the transport of fluids, regardless of their method of manufacture and composition.

2 Field of application

This International Standard applies to

— valves for nominal outside diameters, d_e, from 16 to 160 mm with flanges from DN 10 to DN 150, given in table 1;

— valves with plain spigot ends for PP pipe diameters from 16 to 125 mm, given in table 2;

— valves with plain socket ends for PP pipe diameters from 16 to 125 mm, given in table 3;

— valves with threaded ends for PP pipe diameters from 20 to 63 mm, given in table 4.

3 References

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Designation, dimensions and tolerances.*

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

ISO 2536, *Unplasticized polyvinyl chloride (PVC-U) pressure pipes and fittings, metric series — Dimensions of flanges.*

ISO 7279, *Polypropylene (PP) fittings for pipes under pressure — Sockets for fusion using heated tools — Metric series — Dimensions of sockets.*

ISO 7349, *Thermoplastics valves — Connection references.*

4 Basic dimensions

4.1 Valves with flanges

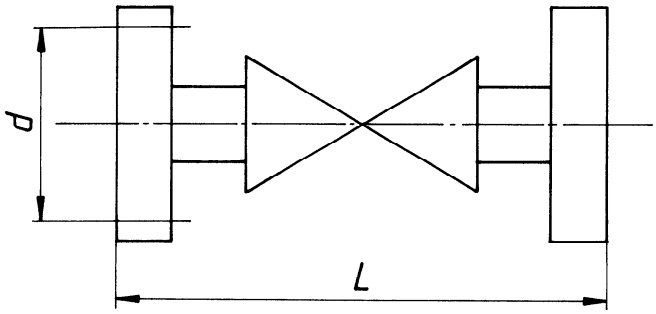

Figure 1

Table 1

Dimensions in millimetres

Nominal outside diameter of pipe d_e [1]	Dimension face-to-face L [2]	tol.	Pitch circle diameter of bolt holes d [3]	Nominal flange size DN [4]
16	120	± 2	60	10
20	130		65	15
25	150		75	20
32	160		85	25
40	180		100	32
50	200		110	40
63	230		125	50
75	290	± 3	145	65
90	310		160	80
110	350		180	100
125	350		190	110
125	400		210	125
140	400		210	125
160	480		240	150

1) Nominal outside diameter of thermoplastics pipes in accordance with ISO 161-1.

2) Face-to-face dimensions for valves with flanges.

3) Pitch circle diameter of bolt holes in accordance with ISO 2536.

4) Nominal size for flanges in accordance with ISO 2536.

NOTE — The centre-to-face dimension for three-way valves is $L/2$.

4.2 Valves with plain spigot ends

These valves may be fusion jointed to accessories.

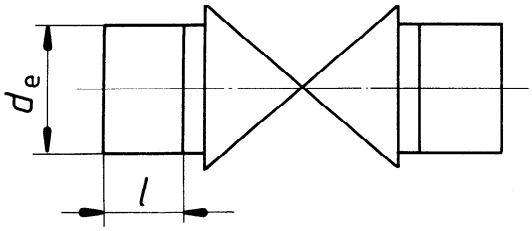

Figure 2

Table 2

Dimensions in millimetres

Spigot diameter (equal to the nominal outside diameter of pipe) d_e [1]	Spigot length (minimum) l [2]
16	13,3
20	14,5
25	16
32	18,1
40	20,5
50	23,5
63	27,4
75	31
90	35,5
110	41,5
125	46

1) Spigot diameter of valve equal to the nominal outside diameter of thermoplastics pipes in accordance with ISO 161-1.

2) Spigot length equal to the minimum socket length in accordance with ISO 7279.

4.3 Valves with plain socket ends

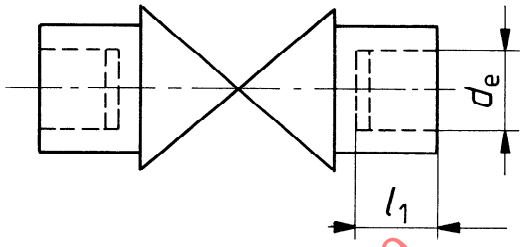

Figure 3

Table 3

Dimensions in millimetres

Inside diameter of socket [1] (equal to the nominal outside diameter of pipe) d_e [2]	Socket reference length (minimum) l_1 [3]
16	13,3
20	14,5
25	16
32	18,1
40	20,5
50	23,5
63	27,5
75	31
90	35,5
110	41,5
125	46

1) Tolerances of inside diameter of socket in accordance with ISO 7279.

2) Inside diameter of the plain socket equal to the nominal diameter of thermoplastics pipes in accordance with ISO 161-1.

3) Minimum socket length in accodance with ISO 7279.

4.4 Valves with threaded ends

These valves are supplied with male threaded ends that comply with ISO 7-1.

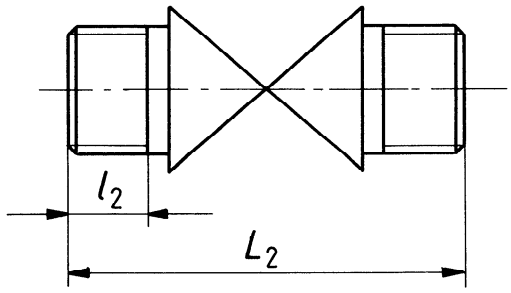

Figure 4

Table 4

Dimensions in millimetres

Nominal outside diameter of pipe d_e[1]	Thread designation[2]	Overall length L_2 ± 2	Thread length l_2 ± 2
20	1/2	134	16
25	3/4	151	17,5
32	1	170	19,5
40	1 1/4	200	22
50	1 1/2	225	22
63	2	254	26

1) Nominal outside diameter of thermoplastics pipes in accordance with ISO 161-1.

2) The complete thread designation is given in ISO 7-1.