

Prefabricated high density polyethylene (PE-HD)
manholes for use in sewerage systems
Dimensions and technical delivery conditions

DIN
19 537
Part 3

Rohre, Formstücke und Schächte aus Polyethylen hoher Dichte (PE-HD) für Abwasserkanäle und -leitungen; Fertigschächte; Maße, technische Lieferbedingungen

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

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1 Scope and field of application

This standard specifies requirements and methods of test for prefabricated circular manholes made from high density polyethylene (PE-HD) components as specified in sub-clause 2.2 of this standard and DIN 19 537 Part 2.

This standard shall apply by analogy for prefabricated manhole components of other cross-sectional shape.

2 Concepts

The general terminology used here has been taken from DIN 19 549, except for concepts and nomenclature characteristic of manholes made from PE-HD components.

2.1 Manhole

For the purposes of this standard, a manhole is a structure built on a buried drain or sewer, which is mainly intended for ventilation purposes and permits entry of a person for inspection, maintenance and cleaning. It may be designed to accommodate sewage lifting equipment and be provided at junctions of drains or sewers and at points where these change direction, gradient or cross section (quoted from DIN 19 549, February 1989 edition).

PE-HD manholes are assembled from prefabricated components, as illustrated in figure 1.

2.2 Manhole components

2.2.1 Bottom section

A bottom section is a manhole component that consists of:

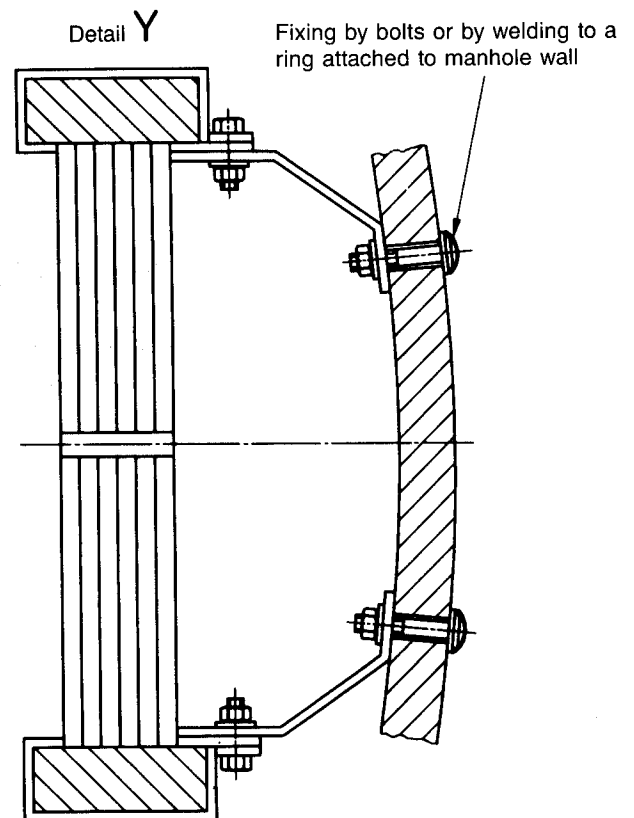
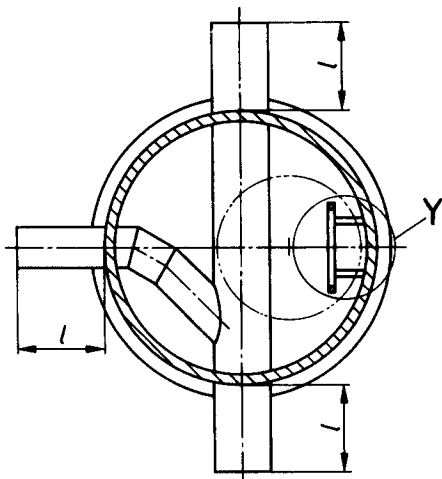
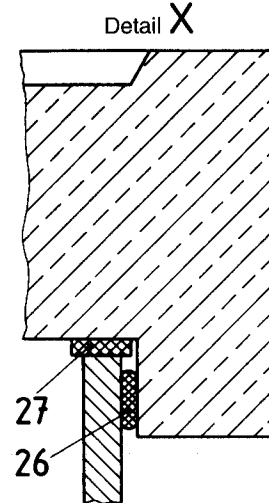
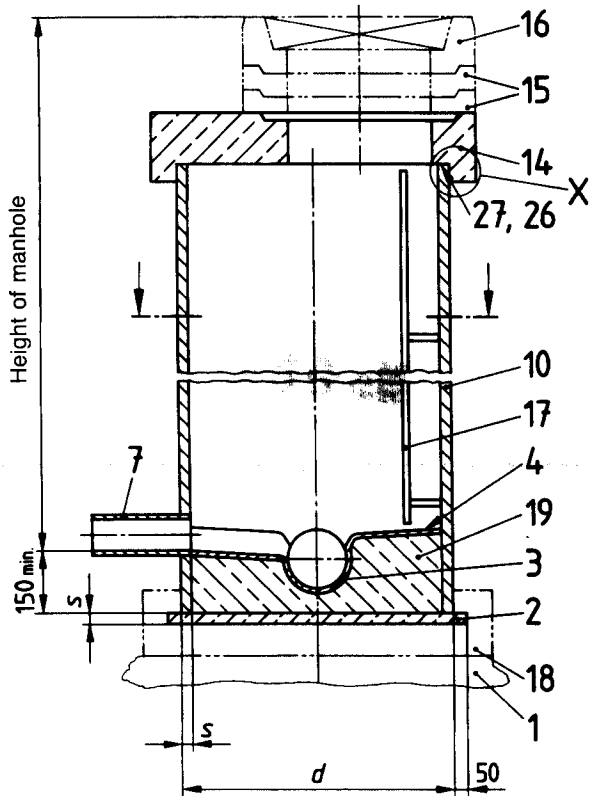
- a) base;
- b) channel;
- c) benching;
- d) connector;
- e) single-unit shaft.

Table 1. **Diameter and wall thickness of single-unit shaft**

Manhole size DN	External diameter, d	Minimum wall thickness, $s^1)$
1000	1100 $\begin{smallmatrix} +5 \\ 0 \end{smallmatrix}$	34,2
1100	1200 $\begin{smallmatrix} +6 \\ 0 \end{smallmatrix}$	37,3
1500	1600 $\begin{smallmatrix} +6 \\ 0 \end{smallmatrix}$	49,7

¹⁾ s as determined by design analysis.

Continued on pages 2 to 6



- 1 Sub-base
 - 2 Base
 - 3 Channel
 - 4 Benching
 - 7 Connector
 - 10 Single-unit shaft
 - 14 Cover slab
 - 15 Seating ring
 - 16 Manhole top
 - 17 Access facility (ladder)
 - 18 Reinforced concrete foundation
 - 19 B 15 concrete bedding
 - 26 DIN 4062 sealant
 - 27 DIN 4060 sealant
- (item numbers 1 to 17 as in DIN 19 549)

Figure 1. Prefabricated PE-HD manhole (assembly)