



The image shows technical drawings of sanitary ware layouts and a table of dimensions. The drawings include a plan view of a toilet and sink area with dimensions like V=20, T=90, B=175, and a side view of a shower room/bathtub area with dimensions like V=20, T=80, 40, 85, and min 75. The table provides dimensions for various sanitary wares.

	1	2	3	4	5	6	7
1. Average size of sanitary wares	B: 60 T: 55	B: 50 T: 40	B: 40 T: 60	B: 40 T: 40	B: 40 T: 60	B: 80 T: 80	B: 175 T: 75
2. Space for using sanitary wares	75 100	75 90	75 90	75 80	75 80	75 90	75 90
3. Minimum size of sanitary wares	80	-	70	70	75	-	-
a Axle distance of sanitary wares	75	-	65	65	70	-	-
b Shower room /bathtub	70	65	60	60	65	-	-
c side wall	70	65	60	60	65	-	-
c side wall	75	70	65	65	-	-	-
c side wall	50	45	40	40	45	-	-
c side wall	50	45	40	40	45	-	-

3. Piping layout

Principles

1. For toilet and other sanitary-wares, arrange the riser as far as possible from the wall or adjacent wall.
2. Lay the drainage pipe along the wall to connect to all kinds of sanitary-wares.
3. When the non-descending same floor drainage pipe has single connection, try not to connect together with the toilet.
4. The shower drainage, washing machine drainage and bath tube drainage should not be connected with the toilet.
5. The drainage pipe for disposal in the cushion should have the shortest distance to the riser.

Principles Of "same-floor Wall Drainage System":

1. The toilet drain pipe is usually above the decorative floor;

2. Floor drain, shower drain, bath tube drain and washing machine drain are usually installed under the floor;
3. Wash basin drain can be in the wall or under the floor.
4. The drainage slope is usually 2.6%. When laying the slope under the floor, the floor drain should level with the decorative floor;

General Requirement For Indoor Drainage.

1. Sanitary drainage should have the shortest distance with minimum turns.
2. Drainage riser should be close to the maximum discharge point.
3. Drainage pipe should not pass through smoke or air ducts.
4. Sewage risers should not pass through bedrooms or interior walls adjacent to the bedrooms.
5. Drainage pipe should not pass through cabinets.
6. Plastic pipes should avoid to be installed near heat

sources. If it cannot be avoided, heat insulation measures should be taken if the surface temperature is higher than 60°C. The distance between the plastic riser and kitchen appliances should not be less than 0.4m.

7. The outer surface of drainage pipe should be treated to prevent condensation if necessary.

8. According to the health and safety requirements, the drainage pipes should not be placed in the kitchen and the dining room. When this cannot be avoided, take protective measures.

Indoor Pipe Connections Shall Meet The Following Requirements:

1. Sanitary-ware can be connected by double branch fitting 90°.
2. Horizontal drainage pipe and riser connections should adopt Y-branch fitting 45°, branch fitting (swept entry), double branch fitting 90° and Sovent.
3. The drain riser and the pipe end should be connected with bend 45°.
4. When the branch pipe or the main riser connects to the horizontal pipe, it is recommended to connect at the top or from the side with an angle of 45°.

Expansion Socket Setup:

1. For the horizontal drainage pipe and the riser that move upwards, you must set expansion socket.
2. The expansion socket with the riser correspond to the location of the ventilator.
3. When the floor is higher than 4m, you should check the expansion socket length and determine whether you should add more expansion socket according to the pipe's length of and temperature.
4. For horizontal drainage pipe of more than two meters, it should set up a special expansion socket.
5. Buried pipes do not need expansion socket.

The drainage branch pipe connection near the bottom of the drainage riser should meet the following requirements:

1. When setting up the drainage riser only for ventilation, the vertical distance of the lowest horizontal branch drainage pipe to the connection of the risers should not be less than the date listed in the following table.

2. When the branch drainage pipe connects to the outlet or the horizontal drainage pipe, the connector node and the bottom of the riser should not be less than 3.0m

3. If the drainage pipe goes through bearing wall, a hole should be reserved for it.

Dn	50	75	110	160
Average size of sanitary wares (mm)	12	15	20	25

4. Drawing system maps and tagging

Draw the system diagram according to the plan

1. The system diagram should reflect the elevation of the drainage points;
2. The system diagram indicates the diameter and the slope of the pipe.

Diameter Design

1. Toilet is connected with the horizontal drainage pipe with 110mm diameter.
2. Branch pipes connecting with floor drain, washing machine floor drain, shower floor drain and sanitary-ware have the diameter of 50mm.
3. When using kitchen sink or other larger displacements, chose drainage pipes with diameter of 75mm.

