



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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Standard for water saving design in civil building

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Table of Contents

- 1 General
- 2 Terms and symbols
 - 2.1 Terminology
 - 2.2 Symbols
- 3 Water saving design calculation
 - 3.1 Water saving quota
- 4 Water quotas for villas include garden greening water and car mop water.
 - 4.1 General provisions
 - 4.2 Water supply system
 - 4.3 Circulating water system
 - 4.4 Watering system
- 5 Use of non-traditional water sources
 - 5.1 General provisions

1 General

1.0.1 In order to implement the relevant national laws, regulations and policies, unify the water-saving design standards for civil buildings, improve the utilization rate of water resources, and make the water-saving design meet the requirements of users for water quality, water volume, water pressure and water temperature Safe and applicable, advanced technology, economical and reasonable, guaranteed quality, convenient management, this standard is formulated.

1.0.2 This standard applies to the water-saving design of newly-built, rebuilt and expanded residential quarters, public building areas and other civil buildings, and also applies to the water-saving design of domestic water supply in industrial buildings.

1.0.3 The water-saving design of civil buildings should not only meet the use requirements, but also provide convenient conditions for construction installation, operation management, maintenance inspection and safety protection.

1.0.4 This standard specifies the basic requirements for water-saving design of civil buildings. When this standard conflicts with the provisions of national laws and administrative regulations, it shall be implemented in accordance with the provisions of national laws and administrative regulations.

1.0.5 The water-saving design of civil buildings shall not only comply with this standard, but

also comply with the current relevant national standards.

2.1.1 rated water consumption for water saving

The average daily water consumption after adopting water-saving domestic water appliances.

2.1.2 water consumption for water saving

The water consumption calculated by using the water saving quota.

2.1.3 reversed return layout on the same journey

Corresponding to the arrangement of hot water pipes where the sum of the lengths of the water supply and return water pipes corresponding to each water distribution point is basically equal.

2.1.4 Diversion of tee-union

The TY-type or the downstream tee with deflector inside guides the return water flowing into the circulating return pipe to flow in the same direction.

2.1.5 Return pipe fittings

Utilizing the principle that water has different densities at different temperatures, the water with low temperature moves to the bottom of the pipe, and the water with high temperature moves to the upper part of the pipe to reach the accessories of water circulation.

2.1.6 master circulating pump

The hot water circulation pump installed on the hot water return main pipe in the centralized hot water supply system of the community.

2.1.7 Unit circulating pump

The hot water circulation pump installed on the hot water return pipe of a single building in the centralized hot water supply system of the community.

2.1.8 water productivity

Raw water (generally tap water) is the ratio of the amount of direct drinking water produced by advanced purification treatment to the amount of raw water.

2.1.9 concentrated water rejected water

Raw water (generally tap water) is high-concentration wastewater that is removed in

advanced purification treatment.

2.1.10 Sprinkling irrigation

It is a method of using pipelines to send pressurized water to the irrigation area, and disperse it into fine water droplets through the nozzle, and spray it evenly on the green space and tree irrigation.

2.1.11 micro irrigation micro irrigation

Micro-sprinkler irrigation is the abbreviation of micro-water irrigation, which is an irrigation method that transports water and nutrients to the soil surface or soil layer near the lawn and tree roots at a small flow rate.

2.1.12 underground micro irrigation (permeate irrigation)

Underground infiltration irrigation is a form of underground micro-irrigation. Under low pressure conditions, through the sprinkler (microporous infiltration irrigation pipe) buried in the active layer of lawn and tree roots, water is supplied to the soil in a regular and quantitative manner according to the water demand for crop growth. irrigation method.

2.1.13 drip irrigation

An irrigation method that evenly transports water and nutrients dissolved in water to the soil surface or soil layer near the roots of plants at a small flow through the piping system and drippers (irrigators).

2.1.14 nontraditional water source

Water sources different from traditional surface water supply and groundwater supply, including recycled water, rainwater, seawater, etc.

2.1.15 utilization ratio of nontraditional water source

The ratio of annual water supply from non-traditional water sources to total annual water consumption.

2.1.16 water saving system in building

A building water supply system that adopts water-saving quotas, water-saving appliances and corresponding water-saving measures.

2.2.1 Flow, water volume

Q_{za}--annual water consumption for residential domestic water consumption;

Qga--annual water-saving water consumption of public buildings such as dormitories and hotels;

Qra--annual water consumption of domestic hot water;

Wjd--average daily water replenishment of landscape water body;

Wld--the average daily water volume of sprinkler irrigation for greening;

Wtd - the average daily water replenishment of the cooling tower;

Wzd--daily average evaporation of landscape water;

Wsd-infiltration of landscape water body;

Wfd--the water consumption of the computer room of the processing station, etc.;

Wja--annual water consumption of landscape water body;

Wta--annual water consumption for cooling tower replenishment;

Wca--annual flushing water consumption;

sum Qa--the total annual water consumption;

sum Wa--annual consumption of non-traditional water sources;

Wya--the annual rainwater consumption of rainwater;

Wma--annual recovery of reclaimed water;

Qhd--the average daily water consumption of the rainwater reuse system;

Qcd--the daily treatment water volume of the reclaimed water treatment facility;

Qsa--the annual collection volume of raw water in middle water;

Qxa--the annual water demand of the reclaimed water supply pipe network system;

qz--residential water saving quota;

qg--water saving quota for public buildings;

qr--water saving quota for domestic hot water;

ql--watering quota for green irrigation;

qq--cooling circulating water replenishment quota;

qc--the daily water quota for flushing toilets.

2.2.2 Time

Dz--the annual water consumption days of residential domestic water;