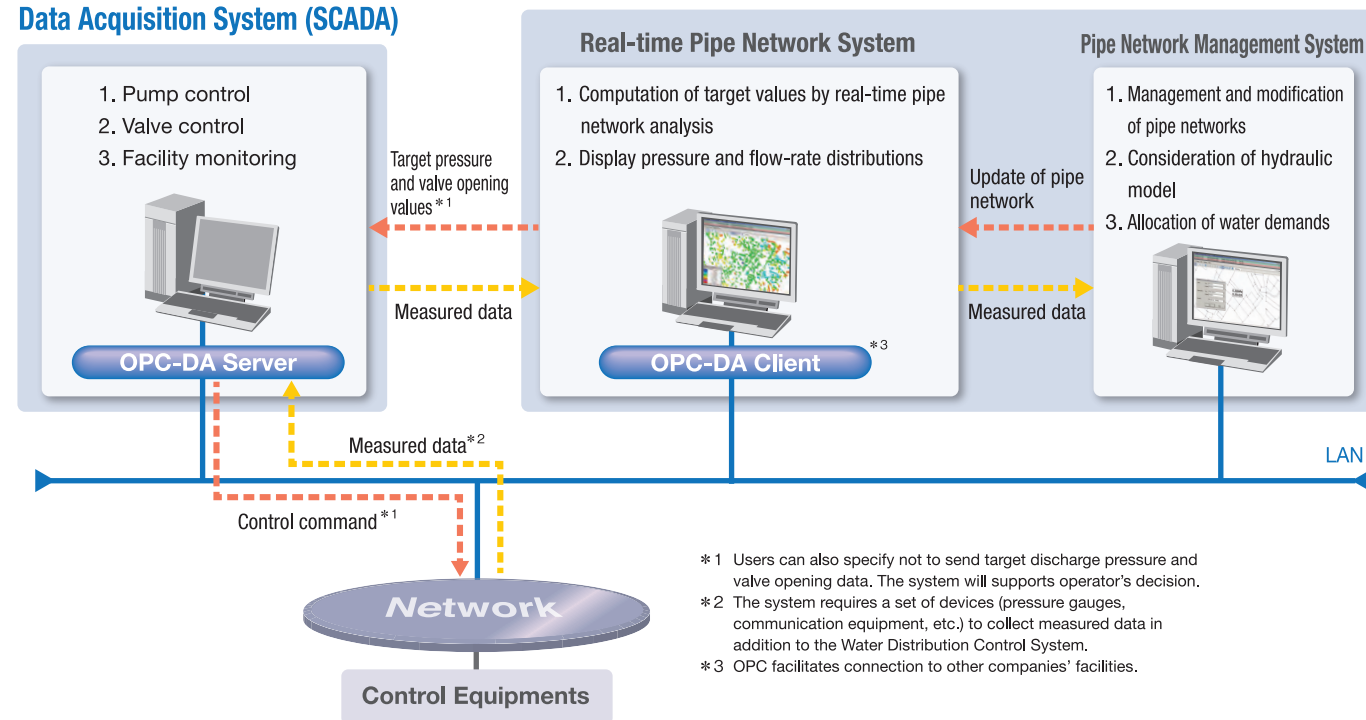


System Configuration

Supervisory Control and Data Acquisition System (SCADA)

Water Distribution Control System



System Requirements

Real-time Pipe Network System

| No. | Item | Specification |
|-----|--------------------|---------------------------------------------------|
| 1 | Operating System | Microsoft® Windows® 7 Professional 32 bit (SP1) |
| 2 | CPU Clock | Intel® Core 2 Duo 2.0 GHz or higher |
| 3 | Main Memory | 1.0 GB or more |
| 4 | HDD Capacity | 8.0 GB free space or more |
| 5 | Display Resolution | 1,280 x 1,024 (approx. 16,700,000 colors) or more |
| 6 | DBMS | Microsoft® SQL Server® 2008 R2 |
| 7 | .NET Framework | 3.5 (SP1) |
| 8 | OPC SDK | OPC Core Components SDK 3.00.105.1 |
| 9 | Languages | English, Chinese, Japanese |

Pipe Network Management System

| No. | Item | Specification |
|-----|--------------------|---------------------------------------------------|
| 1 | Operating System | Microsoft® Windows® 7 Professional 32 bit (SP1) |
| 2 | CPU Clock | Intel® Core 2 Duo 2.0 GHz or higher |
| 3 | Main Memory | 1.0 GB or more |
| 4 | HDD Capacity | 8.0 GB free space or more |
| 5 | Display Resolution | 1,280 x 1,024 (approx. 16,700,000 colors) or more |
| 6 | DBMS | Microsoft® SQL Server® 2008 R2 |
| 7 | .NET Framework | 3.5 (SP1) |
| 8 | Languages | English, Chinese, Japanese |

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The specifications of the product described in this brochure are subject to change for improvement.
For inquiry, contact our sales representative.

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For smart water supply
Water Distribution Control System

**Smart
&
Ecology**



Do you suffer from these problems?

Share your water distribution problems.



Problem

1 Energy wastage at facilities.

Problem

2 Excessive leakages.

Problem

3 Water is not distributed under adequate pressure.

When installed, the Water Distribution Control System enables:

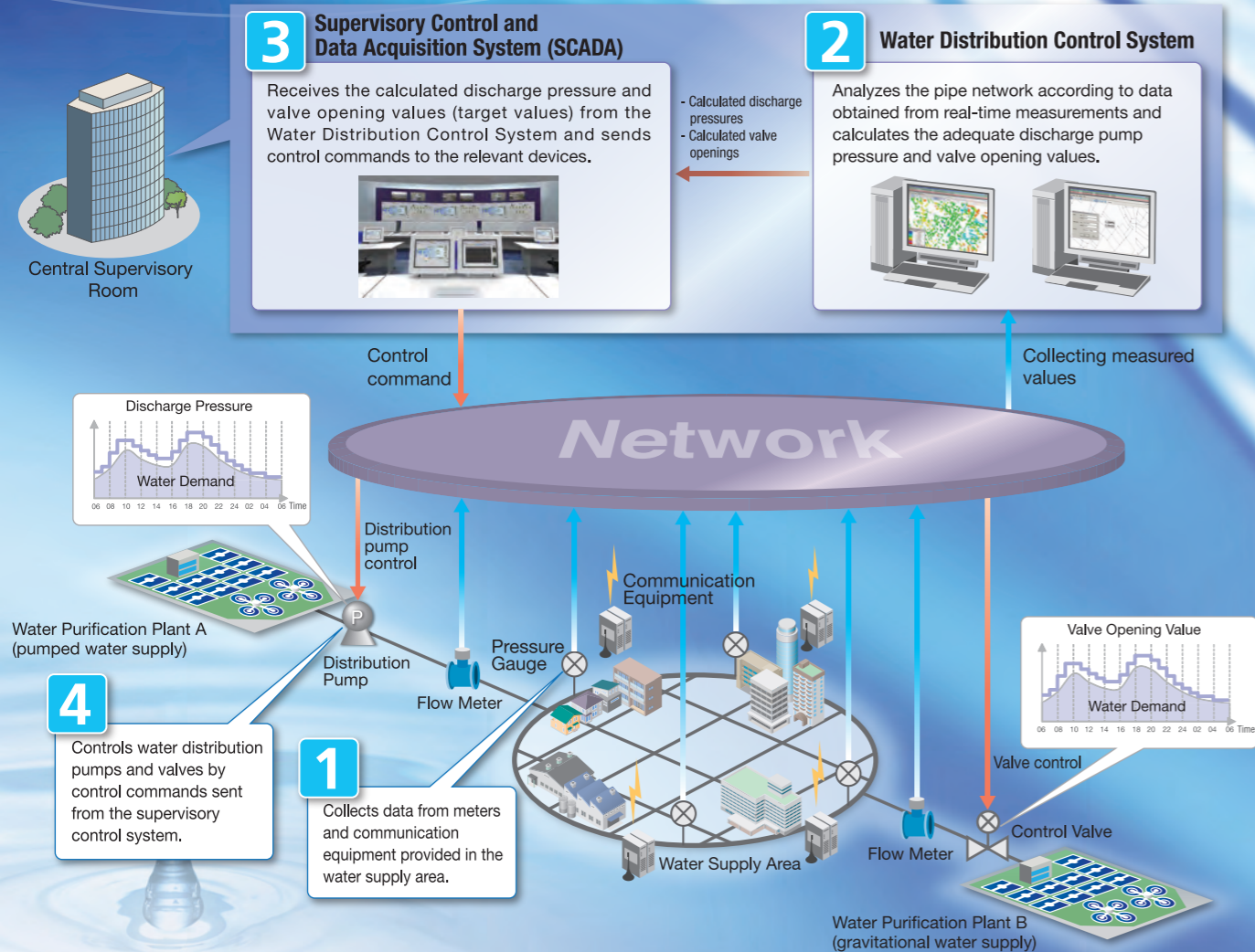
1 Energy saving of water supply pumps by controlling changes in water demand

2 Reduced leakage by limiting excessive pressure increases

3 Adequate water distribution pressure maintained by real-time pressure control

What is the Water Distribution Control System?

The Water Distribution Control System calculates target values for distribution pumps and control valves under optimum conditions using real-time pipe network analysis.



Main Functions

The Water Distribution Control System consists of two systems.

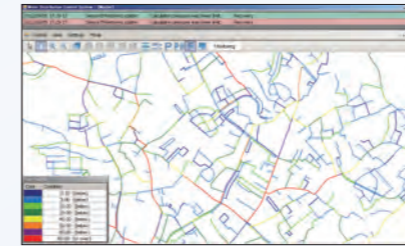
Real-time Monitoring and Control System



- Always-active system
- Calculates adequate pump discharge pressure.
- Displays pressure and flow-rate distributions.

Real-time pipe network analyzing function

Estimates pressure and flow-rate distributions from the real-time measured data and by real-time pipe network analysis, and graphically displaying the results, enabling swift monitoring of the water distribution status.



Target control value computing function

Performs pipe network analysis and optimized computation of real-time-acquired measured data, calculates adequate distribution pump pressures and valve openings, and sends the results to the supervisory control system as set values.



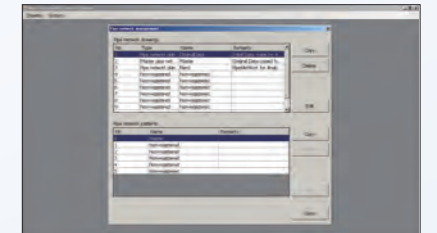
Pipe Network Management System



- Management and editing of pipe network information
- Allocation of demands to pipe networks
- Examination and management of the planned pipe network

Planned pipe network managing function

Capable of managing a planned pipe network in addition to pipe network data created by the pipe network processing device. Users can examine future construction plays by entering the data and running to simulation.



Pipe network analyzing result displaying function

Capable of confirming pipe network analysis data such as the flow rate, pressure, and flow direction of a node, piping, or water distribution plant on the pipe network simply by positioning the mouse cursor on the desired location.



System Introduction Flow



Creation of pipe network data

STEP 1

- Create pipe network data from paper drawing or GIS data.
- Allocate meter-read data held by the fare system (as water demand data) to the pipe network data.



Examination by a pipe network simulation

STEP 2

- Simulate the pipe network using pipe network data created in STEP 1.
- Enhance the accuracy of pipe network data through dialog with customers and field surveys.



Determination of pressure measuring points

STEP 3

- Simulate the pipe network using pipe network data obtained in STEP 2 and determine the locations of pressure measuring points.
- Determine the locations of power receiving points and outdoor power distribution boards by field surveys.
- Install pressure gauges and communication equipment at the determined locations.



System installation

STEP 4

- Install the Water Distribution Control System.
- Connect and adjust the SCADA System and the Water Distribution Control System.