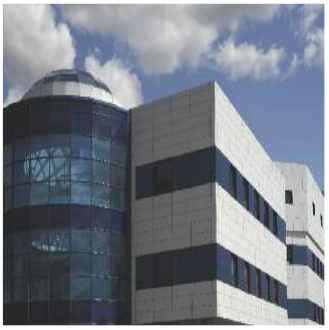
SYSTEM'O®



Global domestic water temperature control...

GIRPI

safety for your pipeworks

Regulations

GIRPI
safety for your pipeworks

The prevention of health and safety hazards is a priority for all dutyholders in buildings, even more so when they receive the public. However new or old the installation is, monitoring the sanitary quality of Domestic Hot and Cold Water Services (DHCWS) is an essential requirement. That global monitoring approach helps to prevent potential risks (bacterial colonisation, deterioration of the water quality, etc...).

In order to efficiently limit the development of bacteria in water networks, international experts recommend the following:

- Avoid stagnation of the water and keep it circulating at all times.
- Fight against scaling and corrosion by designing and maintaining the networks according to each installation's specific requirements, in order to keep good water quality standards.
- Keep hot water networks at a constantly high temperature, from points of production to points of use, all along the distribution route.
- Mix hot and cold waters as close to the point of use as possible, which also helps reduce scalding risks.
- Select piping network materials whose biofilm promotion potentials are as low as possible.

International regulations and reference guides

WORLD HEALTH ORGANISATION

- Health Aspects of Plumbing - 2006
- Legionella and the control of Legionellosis - 2007
- Water Safety in Buildings - 2011

EUROPE

- EWGLI Technical Guidelines for the Investigation, Control and Prevention of Travel Associated Legionnaire's Disease - 2011

UNITED KINGDOM

- HSE L8 Approved Code of Practice: Legionnaires' Disease - The control of legionella bacteria in water systems - 2013
- HSE HSG274 Interim guidance - 2013 - Part 2 - Hot and cold water systems - updated version to be published in 2014
- HTM 04-01 part A and B - 2006, plus Addendum concerning Pseudomonas Aeruginosa - 2013

BELGIUM

- Best practice recommendations for the control of Legionnella in new plumbing systems (BBT) - 2007/IMS/R/090

SPAIN

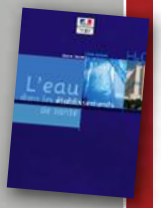
- Department of Agriculture, fishing and food. Royal Decree 865/2003
- Autonomous Community of Catalonia Decree 352/2004

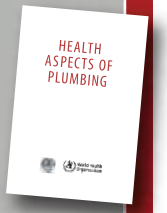
RUSSIA

- SNiP N°31269 - Preventing Legionella - Sanitary Regulation SP 3.1.2.2626-10 - 2010

ITALY

- Permanent Conference for relations between the State, the Regions and the Autonomous Provinces of Trento and Bolzano
  1. *Guideline document for the prevention and the control of legionellosis - 2000*
  2. *Guidelines with instructions for legionellosis infections for managers of hotels and spas - 2005*
- Regional guidelines for the survey and the control of legionellosis - Emilia Romagna - 2008
- Regional guidelines Prevention and control of legionellosis in Lombardia - 2009
- Recommendations for the survey, the prevention and the control of legionellosis infections in public and private healthcare buildings in Piemonte - 2008





GERMANY

- Cleaning and disinfection of drinking water installations DVGW W 557 - 2012

FRANCE

- Department of Health & Sports ; decree relative to the survey of legionella in hot water production, storage and distribution installations. 2010
- Department of Health's State Agencies: DGS-DHOS Technical Guideline for water in healthcare buildings institutions - 2005

Monitoring domestic hot water networks

GIRPI
safety for your pipeworks

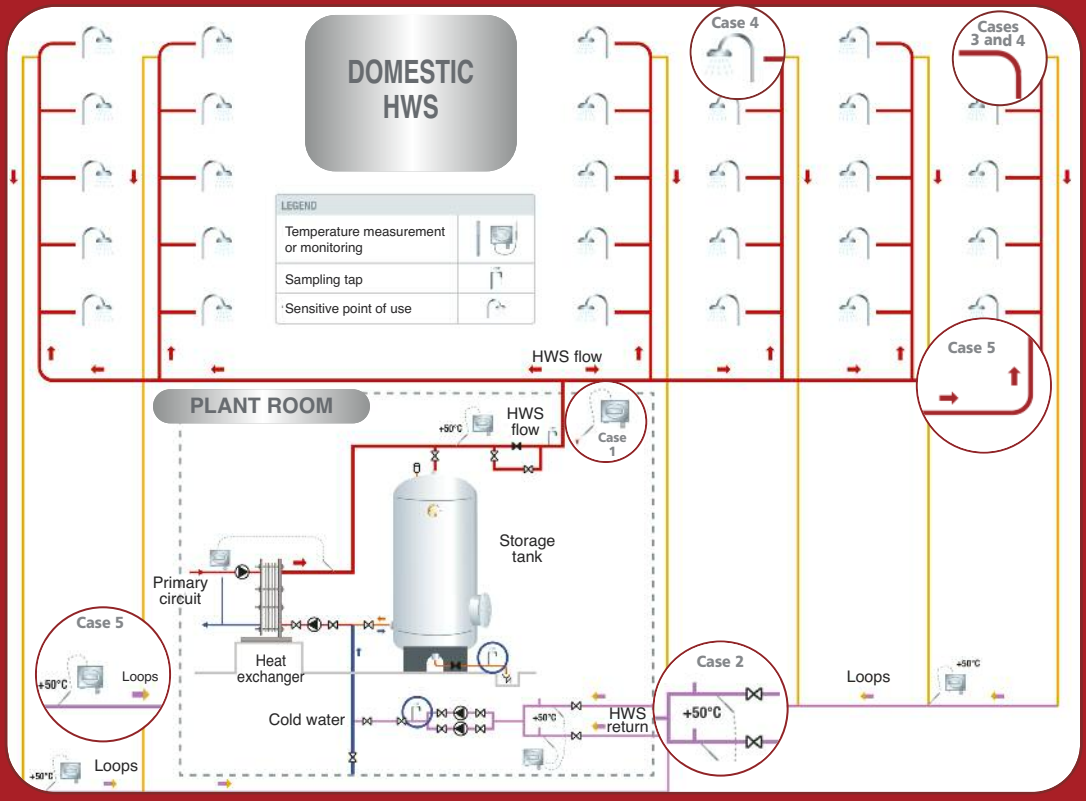
Why control DHWS network temperatures?

- To identify network sections where service conditions (flow velocity, temperature), are not adequate.
- To prevent and fight against bacterial development.
- To limit scalding risks (skin burns).

Good engineering practices imply the installation of control points at the following strategic locations:

- **HWS production (case n°1)**
- **Loop and general main ring returns (case n°2)**
- **Sensitive points of use (case n°3)**
- **Reference points of use (case n°4)**
- **Most remote points of use (case n°5)**

For more details, please refer to applicable reference texts / codes of practice in each country.



Examples of temperature control points on a HWS network

Cases n° 1 and 2

Cases n° 3, 4 and 5

Case n° 5

Going forward...

The monitoring strategy and the quantity of control points must account for:

- The number of identified sensitive points of use,
- The number of potentially exposed persons during one year.

Please note: the more sensitive your building is, the more intensive the controls should be.

Which control frequencies need to be respected in sensitive points of use?

EXAMPLE: FRENCH REGULATIONS	HEALTHCARE PREMISES	OTHER BUILDINGS RECEIVING THE PUBLIC
Watch points	Compulsory measurement frequencies for each HWS network	
HWS production outlet(s)	Daily (or continuous)	Monthly
Loops and general main ring returns	Daily (or continuous)	Monthly
Most remote points of use from HWS production, and most sensitive points of use on the network	Weekly (or continuous)	Monthly
Points of use located on premises used by patients potentially more vulnerable to the legionellosis risk	Weekly (or continuous)	

What is a reference point of use?

- a point of use which is used daily,
- a point of use which has been recently renovated,
- a point of use which is located on premises used by vulnerable persons (e.g. healthcare buildings),
- a point of use with a well known history and foreseeable characteristics.

Dutyholders may choose to add control points in potentially high risk areas:

- points of use with low frequency of use,
- points of use where service conditions are known to be unsatisfactory,
- points of use where Legionella has been detected before.

GIRPI

safety for your pipeworks

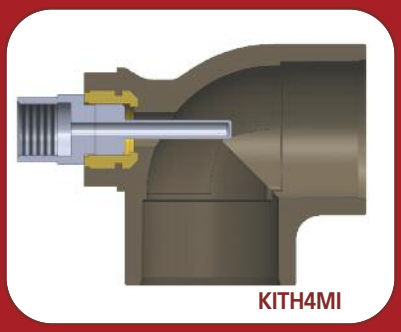
GIRPI solutions

3 new solutions to control water temperatures all along your SYSTEM'O® networks

From ø 16 mm to ø 32 mm

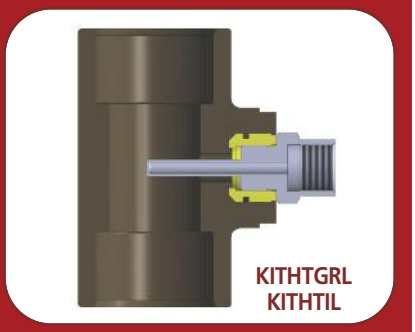
Mixed CPVC/brass straight couplings with contact probe and clip kit

From ø 32 mm to ø 63 mm



CPVC elbows with female threaded brass inserts and probe + probe holder kit

From ø 25 mm to ø 160 mm



CPVC tees with female threaded brass inserts and probe + probe holder kit

INSTALLATION RECOMMENDATIONS

- From **ø 16 to ø 32 mm**, use contact probes and CPVC/brass mixed straight couplings:
  → **ensures continuous flow**
- From **ø 32 to ø 63 mm**, use temperature probes with elbows fitted with threaded brass inserts:
  → **temperature measurements are made facing the water flow**
- From **ø 25 to ø 160 mm**, use temperature probes with tees fitted with threaded brass inserts:
  → **temperature measurements are made at the very heart of the water flow**

GIRPI

safety for your pipeworks

GIRPI SOLUTIONS BRING THE FOLLOWING ADVANTAGES:

- Optimised "probe and fitting" combinations help reduce pressure losses and maintain the network's hydraulic balance.
- Measurement accuracy tolerance <1°C from actual water temperature.
- Fully compatible with the complete SYSTEM'O® range.
- Available in all SYSTEM'O® sizes (16 to 160 mm diameter).
- Installation time under control.
- The range brings a solution for each and every network configuration.

SYSTEM'O®

A complete system for distribution of domestic hot and cold water

GIRPI
Rue Robert Ancel - CS 90133 - 76700 Harfleur - France
Tel: +33 232 796 000 - Fax: +33 232 796 027
contact@girpi.fr - www.girpi.com

an Aliaxis company

Réf. : 6VOLSOGB - RCS LE HAVRE B 719 803 249 - 03/2014 - 3 000 ex. - Crédits photographiques : ©Girpi - ©iStock