



Honeywell Water Controls Guide

Contents

Pressure Reducing Valves	3
Thermostatic Mixing Valves	7
Balancing Valves	11
BA Backflow Devices – Reduced Pressure Zone Valves	13
Water Filters	15
Series 300 Control Valves	17
Strainers	19



Pressure Reducing Valves

Pressure reducing valves protect pipework, valves and appliances from damage caused by excessive water pressure. The set pressure is maintained at a constant, even when the inlet pressure fluctuates, therefore minimizing flow noises. Reducing the pressure also reduces consumption which conserves natural resources and saves you money. You can save 27 litres simply by reducing the pressure from 6.0 to 4.0 bar. (Efficient Water Consumption table.)

Our compact pressure reducing valves, D04FS, D05F and D06F have all been awarded the Waterwise Marque which is awarded annually to products which reduce water wastage or raise the awareness of water efficiency. For more information on Waterwise please visit their website www.waterwise.org.uk

Efficient Water Consumption

Water pressure	Water consumption per person per day	Water consumption per year for a four person household	Water consumption as a percentage
6.0 bar	140 litres	200 m ³	100%
4.0 bar	113 litres	162 m ³	81%
3.0 bar	99 litres	142 m ³	71%

D04FS



The D04FS is designed to protect household appliances against excessive supply pressures. A small compact valve that will maintain a constant water pressure irrespective of the supply pressure, which is often much higher.

Features and Benefits

- Spring loaded, balanced seat means a constant outlet pressure regardless of fluctuating inlet pressure
- Light weight
- Simple, compact construction
- Available with pressure gauge
- 16 bar inlet pressure
- 1.5 bar to 6 bar outlet pressure
- Maximum operating temperature 70°C

Sizes 15mm and 22mm compression connections, 3/8", 1/2" and 3/4" BSP connections



D05F



The D05F is designed to protect household water installations against excessive pressure from the supply and it can also be used for industrial and commercial applications.

Features and Benefits

- Spring loaded, balanced seat means a constant outlet pressure regardless of fluctuating inlet pressure
- Set pressure indicated on the set point scale
- Valve insert can be replaced
- Integral fine filter with 1mm mesh
- Light weight
- Available with pressure gauge
- Up to 25 bar inlet pressure
- 1.5 bar to 6 bar outlet pressure
- Maximum operating temperature 70°C

Sizes 15mm and 22mm compression connections, 1/2", 3/4" and 1" BSP connections



Designed to protect domestic, commercial and industrial applications from excessive pressure, the D06F range enables excellent product performance, reliability and servicing capabilities.

D06F



Features and Benefits

- Spring loaded, balanced seat means a constant outlet pressure regardless of fluctuating inlet pressure
- Set pressure indicated on the set point scale
- Integral fine filter with 0.16mm mesh
- Available with pressure gauge
- Up to 25 bar inlet pressure
- 1.5 bar to 6 bar outlet pressure
- Class 1 acoustic valve ensures quiet operation
- High quality synthetic valve insert ensures resistance to scaling and cavitation
- Maximum operating temperature 70°C

Sizes 15mm and 22mm compression connections, ½", ¾", 1", 1¼", 1½", 2" BSP connections



D06FH (High pressure applications)



D06FN (Low pressure applications)



Features and Benefits

- Spring loaded, balanced seat means a constant outlet pressure regardless of fluctuating inlet pressure
- Integral fine filter with 0.16mm mesh
- Available with pressure gauge
- Up to 25 bar inlet pressure
- Outlet pressure:
 - D06FH – 1.5 bar to 12 bar
 - D06FN – 0.5 bar to 2 bar
- Maximum operating temperature 70°C

Sizes ½", ¾", 1", 1¼", 1½", 2" BSP connections



The MTA06 and MTA06-H multi tenant assembly combines a shut off valve, pressure reducing valve and a double check valve all in one unit. The double check valve protects the supply system and the isolating valve provides a quick and easy isolation point. The combination of three valves in one unit makes this device compact and perfect for residential apartments, commercial units and offices.

MTA06



MTA06-H



Features and Benefits

- Spring loaded, balanced seat means a constant outlet pressure regardless of fluctuating inlet pressure
- Inlet pressure:
MTA06 – Max 16 bar
MTA06-H – Max 25 bar
- Outlet pressure:
MTA06 – 1.5 bar to 6 bar (preset at 3 bar)
MTA06-H – 1.5 bar to 12 bar (preset at 3 bar)
- Operating temperatures:
MTA06 – maximum 40°C
MTA06-H – maximum 70°C
- WRAS approved (pressure reducing valve and double check valve)

Sizes ¾", 1" with threaded connections, (inlet male, outlet female)



The D15P flanged direct acting pressure reducing valve (PRV) and D15NP direct acting PRV can be used to protect large domestic, commercial and industrial applications against excessive pressure, giving accurate pressure control for a variety of applications including water, compressed air and nitrogen.

D15P



D15NP



Features and Benefits

- Inlet pressure balancing; the set outlet pressure is unaffected by inlet fluctuations
- Inlet pressure up to 16 bar
- Outlet pressure:
D15P – DN50 – DN150 – 1.5 to 8 bar,
DN200 – 1.5 to 6 bar
D15NP – 0.2 to 2 bar
- Epoxy coated cast iron body
- Maximum operating temperature 70°C

Sizes DN50 – DN200



Thermostatic Mixing Valves



Thermostatic Mixing Valves (TMVs) are designed to control water temperatures at a safe level for showering, bathing and hand washing.

The valves work by blending hot and cold water to preset temperatures by means of a thermally sensitive element. The mechanism can automatically compensate for variations in supply pressures or temperatures and in the event of cold water failure the TMV will automatically shut down the flow to prevent discharge of dangerously hot water.

TMV2 and TMV3 explained

TMV2 and TMV3 approval is administered by Buildcert which is an independent third party that certifies thermostatic mixing valves against the requirements of the NHS Estates Model Engineering Specification D 08 (TMV3 approval), and the requirements of BS EN 1111 and 1287 (TMV2 approval).

TMV2



Within the domestic market there is a similar risk to all members of a household from scalding especially for the younger and older residents. Buildcert developed the TMV2 approval that uses BS EN 1111 and 1287 to set the minimum performance levels of the valves.

TMV3



The NHS Estates document D 08 is primarily for thermostatic mixing valves installed within healthcare properties that supply hot water to a point of use that is used by vulnerable members of the NHS facility. The performance requirements of D 08 mean that the thermostatic mixing valve must be maintained and monitored on a regular basis. TMV3 valves are considered to provide a higher level of protection against scalding.

Building Regulations

Legislation has been in place in Scotland since May 2006 with a requirement to fit thermostatic mixing valves as standard to baths and bidets in all new build domestic properties.

In England and Wales Building Regulations have now recognised the need for thermostatically controlled mixing valves and in 2010 Part G was revised to include a section on prevention of scalding. This new revision applies to baths in all new build, extensions of buildings or buildings with a material change of use. The local authority or approved building inspector can provide further advice.

Part G

Building Regulation Part G3 considers hot water supply and systems. In particular section 3.65 covers prevention of scalding:

The hot water supply temperature to a bath should be limited to a maximum of 48°C by use of an in-line blending valve or other appropriate temperature control device, with a maximum temperature stop and a suitable arrangement of pipework.

Duty of Care

It is the responsibility of the person in charge of the property to ensure all necessary steps are taken to prevent people being injured. On all domestic, commercial or institutional properties a risk assessment should be carried out to establish how susceptible people are to the dangers of scalding. If a person has taken all reasonable steps to ensure safety of those people living and working in the environment, they will have discharged their duty of care.

The Honeywell TM200VP is a TMV3 scheme approved thermostatic mixing valve, suitable for controlling point of use hot water temperatures in high risk applications such as hospitals, healthcare premises and nurseries.

TM200VP



Features and Benefits

- Proven thermal element for accurate hot water temperature control
- Calibrated setting dial for easy hot water temperature setting
- Scald protection, automatically shuts off if cold water fails
- Inner components are made of scale resistant materials

Sizes 15mm and 22mm compression connections



TM200VP (4 in 1 version)



Features and Benefits

- Proven thermal element for accurate hot water temperature control
- Calibrated setting dial for easy hot water temperature setting
- Scald protection, automatically shuts off if cold water fails
- '4 in 1' variant includes check valves, strainers, isolating valves and test points
- Inner components are made of scale resistant materials

Sizes 15mm and 22mm compression connections



The Honeywell TM300 is a TMV2 scheme approved thermostatic mixing valve, suitable for controlling point of use hot water temperatures in medium risk applications such as domestic homes, schools and housing association dwellings.

TM300



Features and Benefits

- Proven thermal element for accurate hot water temperature control
- Calibrated setting dial for easy hot water temperature setting
- Scald protection, automatically shuts off if cold water fails
- Inner components are made of scale resistant materials

Sizes 15mm and 22mm compression connections



TM300 (4 in 1 version)



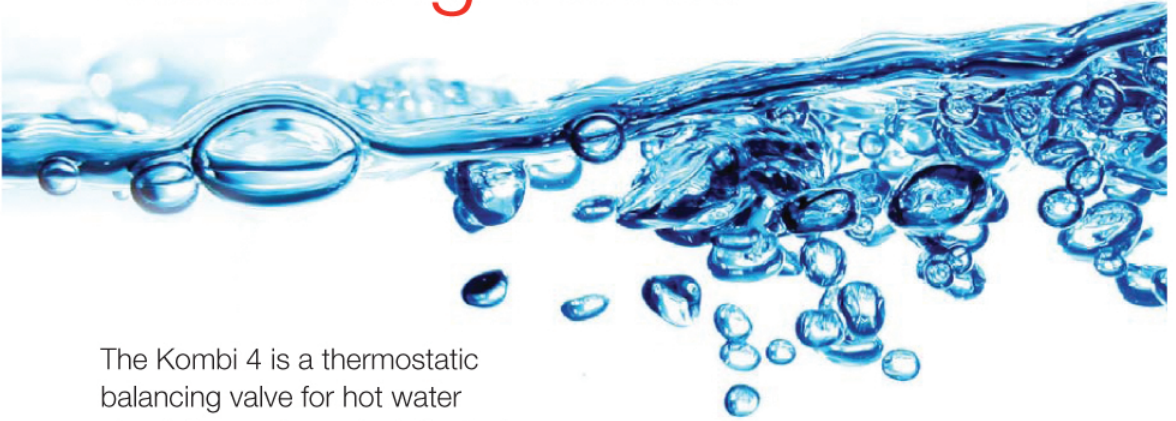
Features and Benefits

- Proven thermal element for accurate hot water temperature control
- Calibrated setting dial for easy hot water temperature setting
- Scald protection, automatically shuts off if cold water fails
- '4 in 1' variant includes check valves, strainers, isolating valves and test points
- Inner components are made of scale resistant materials

Sizes 15mm and 22mm compression connections

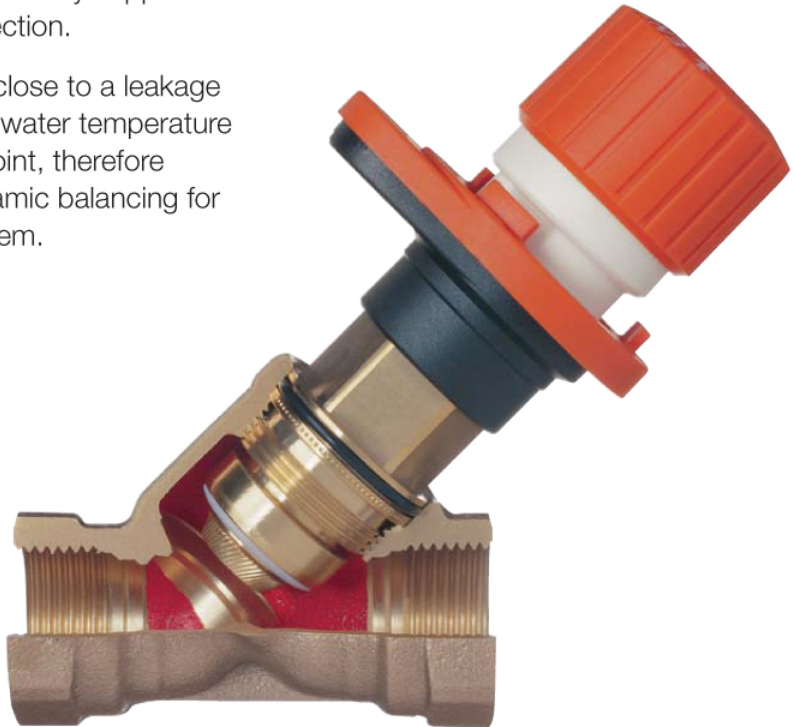


Balancing Valves



The Kombi 4 is a thermostatic balancing valve for hot water circulation systems. Installed in the return pipework and equipped with a thermal actuator the Kombi 4 will control return water temperatures and will automatically support thermal disinfection.

The valve will close to a leakage rate when the water temperature reaches set point, therefore providing dynamic balancing for the water system.





Handwheel
with display of
selected setting



Thermostatic
actuator
keeps the circulation
temperature constant
to the exact degree.
Retrofittable without
interruption



Draining adaptor
is mounted
retrospectively and can
be unscrewed after
the draining process



Optional thermometer
can be used with
or without the
thermostatic control
attachment

Kombi 4



Features and Benefits

- Thermostatic actuator controls the return water temperature and allows a thermal disinfection cycle
- A combined throttle and shut off facility means no need for additional isolation valves
- A separate drain adapter can be used as a drain off point
- The additional thermometer can clearly display the circulation temperature

Sizes ½" – 1½" BSP connections with various fittings options



BA Backflow Devices - Reduced Pressure Zone Valves



The Reduced Pressure Zone valve (RPZ) is a valve which prevents contaminated fluid flowing back into the water supply line. Fluids are risk categorised from Fluid Category 1 to 5 with the following definitions provided:

Fluid Category 1

Wholesome water supplied by a water undertaker and complying with the requirements of regulations made under section 67 of the Water Industry Act 1991

Fluid Category 2

Water in fluid category 1 whose aesthetic quality is impaired owing to:

- a) A change in its temperature, or
- b) The presence of substances or organisms causing a change in its taste, odour or appearance, including water in a hot water distribution system

Fluid Category 3

Fluid which represents a slight health hazard because of the concentration of substances of low toxicity, including any fluid which contains:

- a) Ethylene glycol, copper sulphate solution or similar chemical additives, or
- b) Sodium hypochlorite (common disinfectants)

Fluid Category 4

Fluid which represents a significant health hazard because of the concentration of toxic substances, including any fluid which contains:

- a) Chemical, carcinogenic substances or pesticides (including insecticides and herbicides), or
- b) Environmental organisms of potential health significance

Fluid Category 5

Fluid representing a serious health hazard because of the concentration of pathogenic organisms, radioactive or very toxic substances, including any fluid which contains:

- a) Faecal material or other human waste,
- b) Butchery or other animal waste, or
- c) Pathogens from any other source

RPZ valves may be used for all fluid categories except category 5 and there are many applications for RPZ valves including breweries, car washing and degreasing plants, dairies, commercial laundries and commercial dishwashers. All proposed installations of backflow prevention devices must be submitted to the local Water Supplier for approval.

The BA295 and BA195 are backflow preventers suitable for protection against back pressure, backflow and back siphonage for fluids up to category 4.

BA295



Features and Benefits

- Compact construction
- Combined check valve and discharge valve cartridge assembly – easier servicing and maintenance
- Maximum operating temperature 65°C
- DZR brass housing
- Integral inlet strainer
- Triple security – two check valves and a discharge valve separate the backflow into three pressure zones
- Noise tested to class 2
- BA295i variant – stainless steel body

Sizes ½" – 2" BSP connections



BA195



Features and Benefits

- Compact construction – suitable for areas where space is limited
- Combined check valve and discharge valve cartridge assembly – easier servicing and maintenance
- Maximum operating temperature 65°C
- DZR brass housing
- Integral inlet strainer
- Triple security – two check valves and a discharge valve separate the backflow into three pressure zones

Sizes ¾" BSP connection

BA298



The BA298 is a backflow preventer suitable for protection against back pressure, backflow and back siphonage for fluids up to category 4. It is particularly suitable for industrial and commercial applications.

Features and Benefits

- Light weight stainless steel construction
- Maximum operating temperature 60°C
- In-line service – all components serviceable without removal from pipework
- BA298i F variant – fully stainless steel version offers maximum corrosion protection

Sizes DN65 – DN150



Water Filters

Honeywell water filters use a patented reverse rinsing system to ensure clean water is supplied at all times to an appliance or process. Dirt particles or foreign bodies are filtered out by a fine stainless steel mesh filter which prevents pitting corrosion of pipework and ensures performance of the system.

Water filter combinations which combine water filtration with pressure control are available along with accessories which can automate the filters.

The F76S fine filter and F76S-F flanged fine filters are used to prevent the ingress of dirt particles for industrial and commercial applications. The patented reverse rinse mechanism ensures that flow is available at all times, even during the back wash process.

F76S



F76S-F



Features and Benefits

- F76S – Double spin technology for connection sizes ½" – 1¼"
- F76S – Filter and filter bowl can be replaced
- Available with a pressure gauge
- Filtered water even during back wash cycle
- Construction:
 - F76S – Brass construction PN16
 - F76S-F – Red bronze construction PN16 means corrosion protection
- Mesh sizes:
 - F76S – 20µm to 500µm
 - F76S-F – 50µm to 500µm
- Automatic actuator can be fitted for timed back wash:
 - F76S – Z11S
 - F76S-F – Z11AS
- DDS76 differential pressure switch can be fitted for fully automated operation

Sizes

F76S – ½" – 2" screwed BSP connections
 F76S-F – DN65 – DN100



HS10



The HS10 combines a non return valve, reverse rinsing fine filter, pressure reducing valve and shut off valve all in one. The non return valve protects the mains water supply and the pressure reducing valve prevents over pressure damage. The patented reverse rinse mechanism ensures that flow is available at all times.

Features and Benefits

- Double spin technology for connection sizes ½" – 1¼"
- Housing incorporates an inlet and outlet pressure gauge
- Filtered water even during the back wash cycle
- Filter and filter bowl can be replaced
- Mesh sizes 20µm to 100µm
- Z11S automatic actuator can be fitted for timed back wash

Sizes ½" – 2" screwed BSP connections

DDS76



DDS76 differential pressure switch

Z11S / Z11AS



Z11S/Z11AS automatic actuator

Series 300 Control Valves

DR300



The Honeywell Series 300 is an extensive range of pilot operated diaphragm valves for use with wholesome water, heating and chilled water applications.

Many control options are available, all derived from a common, compact body design. The soft seal with stainless steel seat ensures drip free shut off.

The valve range offers excellent regulation from full flow capacity down to near zero flow conditions, eliminating the need for a low flow bypass and making valve selection easier and faster.

Valves may be operated hydraulically, or may be solenoid operated and managed by a Building Management System controller.

A pressure regulating valve which maintains a constant outlet pressure regardless of inlet pressure fluctuations.

Features and Benefits

- High flow capacity
- Outlet pressure up to 12 bar
- Pilot control circuit with integral rinsable filter insert
- PN 16 standard. PN 25 on request
- Maximum operating temperature 80°C

Sizes DN 40 – DN 450



FV300



A filling valve which uses a float to control levels in a tank.

Features and Benefits

- High flow capacity
- Pilot float valve to enable 'delayed fill' for water tanks

- Float valve switching differentials up to 160mm
- Hydraulic or solenoid valve operated
- PN 16 standard. PN 25 on request
- Maximum operating temperature 80°C

Sizes DN 40 – DN 250



DH300



The set pressure of this pressure sustaining valve is held constant on the inlet side.

Features and Benefits

- May be used in-line or on a branch with excess pressure
- Pilot control circuit with integral rinsable filter insert
- PN 16 standard. PN 25 on request
- Maximum operating temperature 80°C

Sizes DN 40 – DN 450



SV300



Protects downstream parts of a system from excessive pressure with a quick relief safety valve.

Features and Benefits

- Very fast opening at set point
- High flow capacity
- Relief pressure setting up to 12 bar
- Pilot control circuit with integral rinsable filter insert
- PN 16 standard. PN 25 on request
- Maximum operating temperature 80°C

Sizes DN 40 – DN 450



MV300



A magnetic remote controlled solenoid valve that opens or shuts off a system.

Features and Benefits

- High flow capacity
- Pilot control circuit with integral rinsable filter insert
- 24V / 230V versions
- PN 16 standard. PN 25 on request
- Maximum operating temperature 80°C

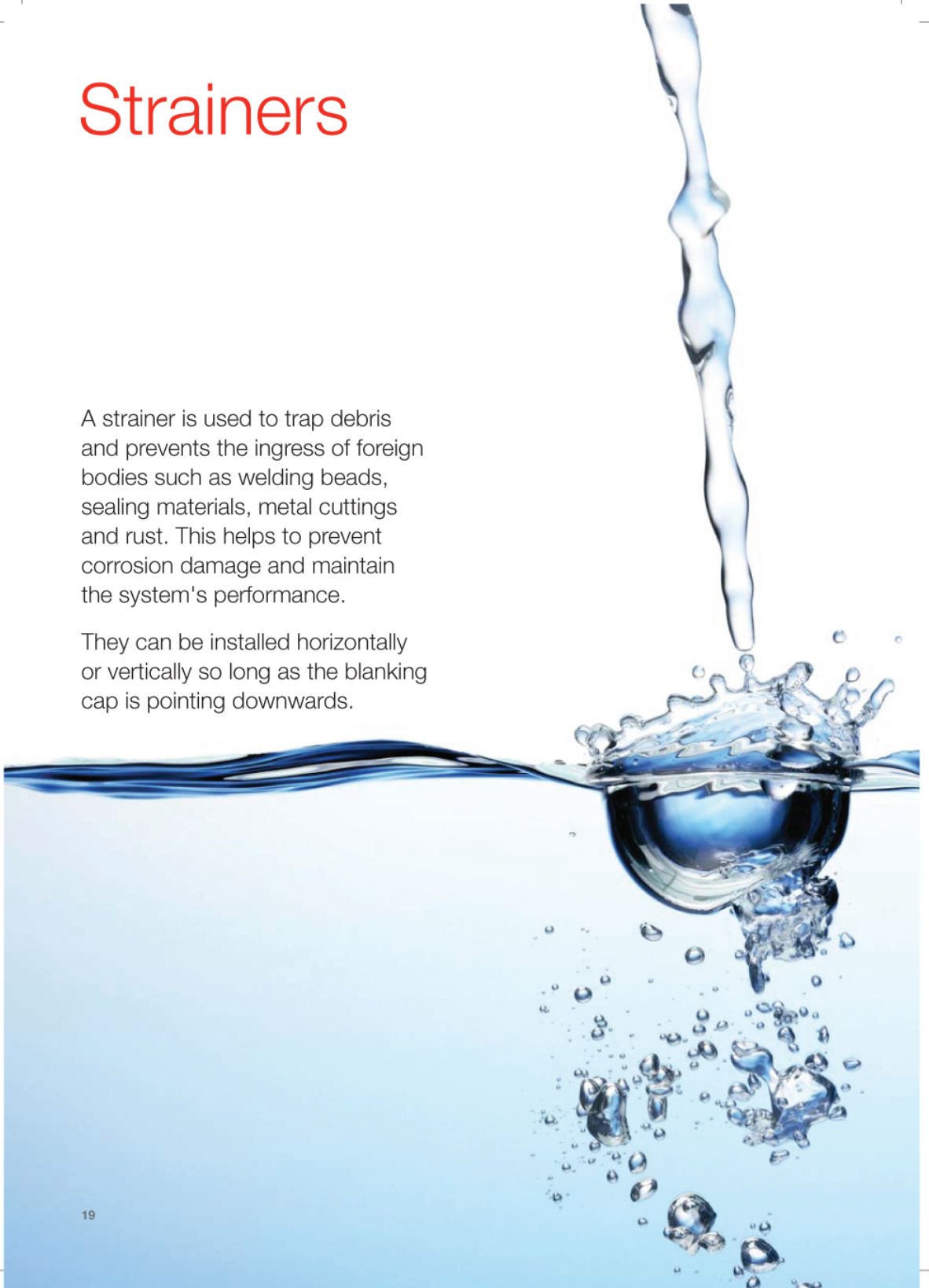
Sizes DN 40 – DN 450



Strainers

A strainer is used to trap debris and prevents the ingress of foreign bodies such as welding beads, sealing materials, metal cuttings and rust. This helps to prevent corrosion damage and maintain the system's performance.

They can be installed horizontally or vertically so long as the blanking cap is pointing downwards.



FY30



The FY30 is suitable for use in commercial and industrial applications.

Features and Benefits

- Low flow resistance
- Brass and stainless steel construction provides corrosion resistance
- Sieves are easily removed and replaced
- Operating pressure maximum 16 bar
- Maximum operating temperature 160°C

Sizes 3/8" – 2" BSP connections

FY69P



The FY69P is a flanged strainer and is used in commercial and industrial applications.

Features and Benefits

- Low flow resistance
- Cast iron body and stainless steel construction provides corrosion resistance
- Sieves are easily removed and replaced
- Operating pressure maximum 16 bar
- Maximum operating temperature 150°C

Sizes DN 15 – DN 200

Accreditations and Trade Bodies



WRAS Approval

When installing a product which will carry or receive water from the public mains water supply in the UK, it is a criminal offence if it does not comply with the Water Supply (Water Fittings) Regulations or Scottish Byelaws. These require that a water fitting should not cause waste, misuse, undue consumption or contamination of the water supply and must be 'of an appropriate quality and standard'.

WRAS Approval is the best way to demonstrate compliance as it is granted directly by representatives of the water suppliers and is therefore accepted by every water supplier in the UK.



Waterwise Marque

The Marque is awarded annually to products which reduce water wastage or raise the awareness of water efficiency.

We are members of the following:

