

# Brass Valves

Quality valving solutions **you can trust.**

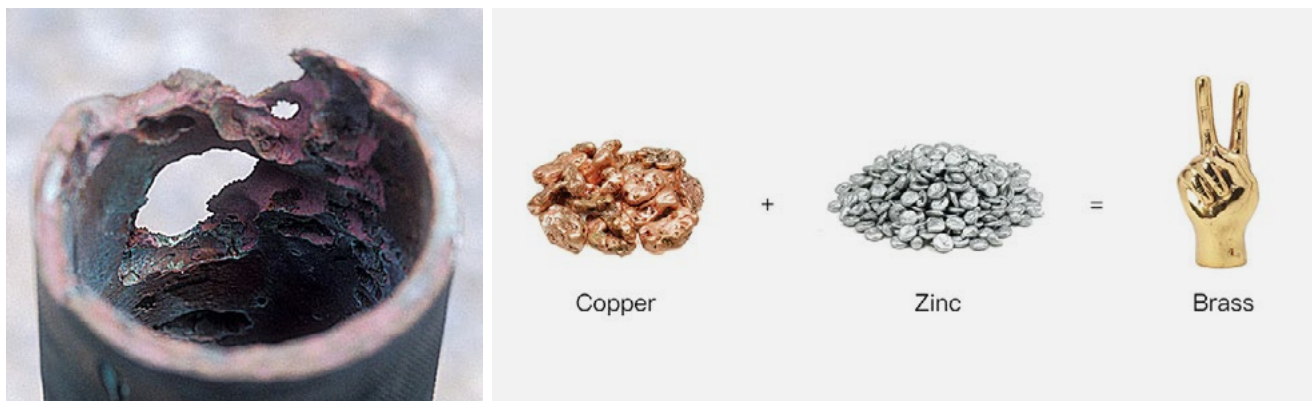


Smarter pipeline solutions.



# Beware of the Brass

Not all copper alloys are created equal - so it's important to verify their composition when using them in raw water applications.



Brass is an alloy of copper and zinc. The proportions of each give brass different mechanical properties. In short, the reason for the copper is that it is unreactive, however it is very malleable and easily shaped and on the other hand, zinc is reactive but very strong and durable. By combining the two and creating brass, we have the "best of both worlds" with a product that is unreactive and strong - perfect for plumbing fittings and valves.

Typically, most common brasses used for plumbing and valves are in the proportions of approximately 57-63% Cu and 35-39% Zn as the two main components. Cu - Zn alloys containing more than 15% Zn are susceptible to a dealloying process called Dezincification, where the selective removal of Zn in the presence of oxygen and moisture, leaves a relatively porous and weak layer of Cu and Cu Oxide that has little mechanical strength. A common sign that brass has been subject to Dezincification is that it will have a red/pink coloured appearance. More seriously however, due to the porous condition it creates, water can seep through the brass, resulting in the fitting no longer being watertight - not ideal with plumbing fittings and valves. In fact, dezincification can cause so much damage that in the First World War, it was claimed that more Royal Navy boats were put out of action due to dezincification than by the German Navy!

Some common water conditions that will contribute to Dezincification of brass are:

- Water hardness and the acidity or alkalinity of water away from a pH of 7
- Temperature - the higher the temperature the greater the risk

- Water flow - less flow equals greater risk
- Polluted atmosphere
- Sea or brackish water
- Corrosive soils such as acid peat, salt marsh, waterlogged clay, etc.
- High concentration of chlorides
- High chlorine levels
- Etc.

The solution to this problem is - DZR (Dezincification Resistant) Brass. DZR Brass material has been developed for use with pipe, fittings and valves in potable water, and also other aggressive water situations.

The composition of DZR Brass, along with the DZR production process, means that not only is it resistant to dezincification or dealloying, but it is easier to form and machine than standard brass, and also has increased strength. In broad terms, DZR Brass has a higher copper content, lower Zinc and Lead content, with addition of other trace elements, and also a different heat treatment process, giving it these superior qualities.

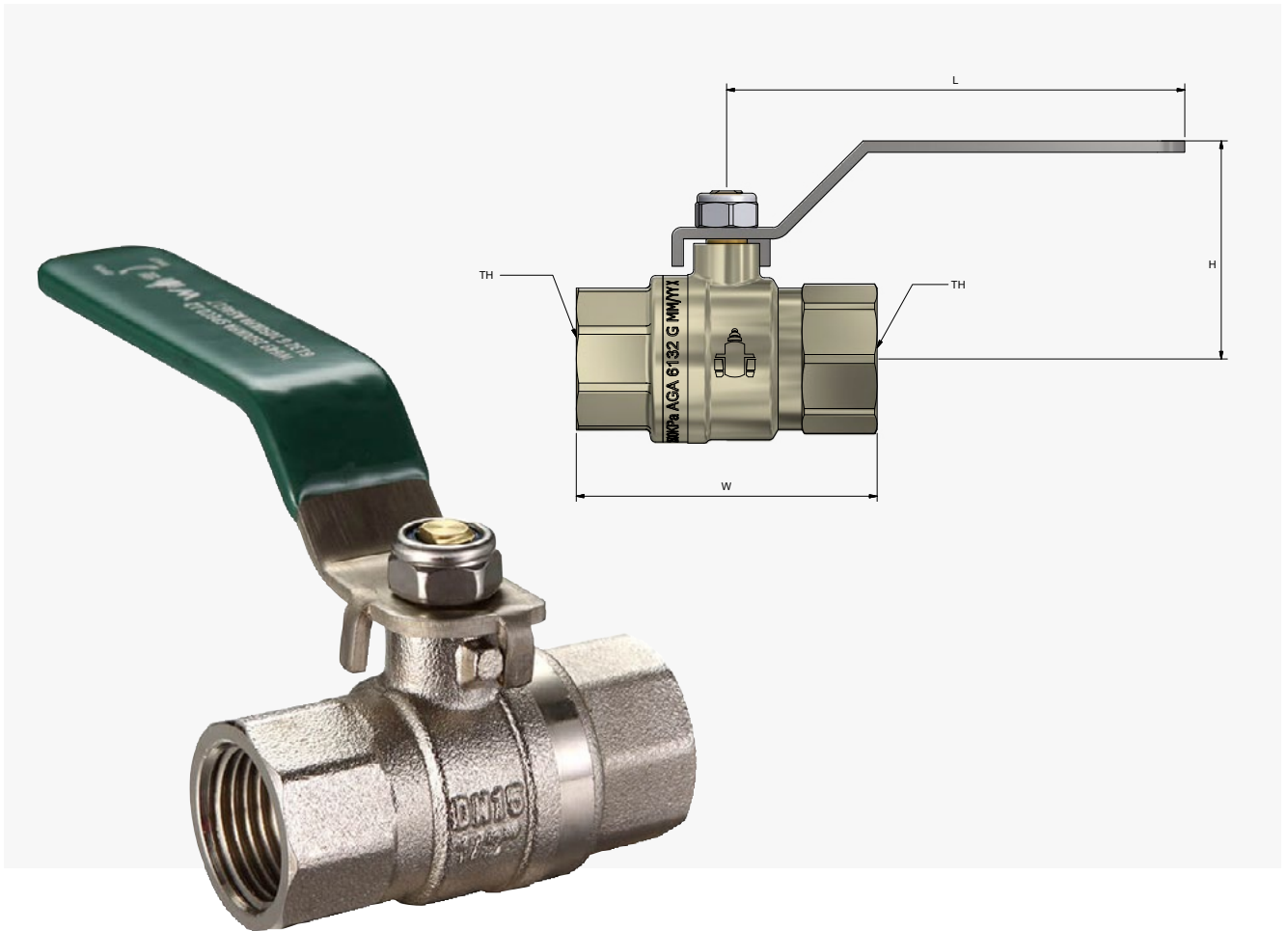
The one disadvantage with DZR Brass is that fact that it does have higher production cost. Any copper alloy with higher copper (Cu) content, and less Lead (Pb), Iron (Fe), and other impurities, is more expensive to produce, making DZR Brass higher cost. But remember the saying, "Quality does not cost... it pays!"

**All Watermark Approved brass valves by Waterworks are DZR brass.**



## Dual Approved Ball Valve

# Lever Handle F/F



### Specifications

Working temperature -20°C to 120°C  
 Maximum pressure rating  
 WATER 2500kPa GAS 2100kPa

### Features

Watermark and AGA approved  
 Full bore  
 100% pressure tested  
 Available in sizes\* 15mm (1/2") to 100mm (4")  
 Blow proof spindle  
 Stainless Steel handle  
 Tested and certified to WMTS012

### Material Chart

Part	Material
Body	DZR Brass
Seat	PTFE
Ball	DZR Brass
Bonnet	DZR Brass
Spindle	DZR Brass
O Ring	FKM
Handle	Stainless Steel
Lock Nut	Stainless Steel

### Sizing Chart (mm)

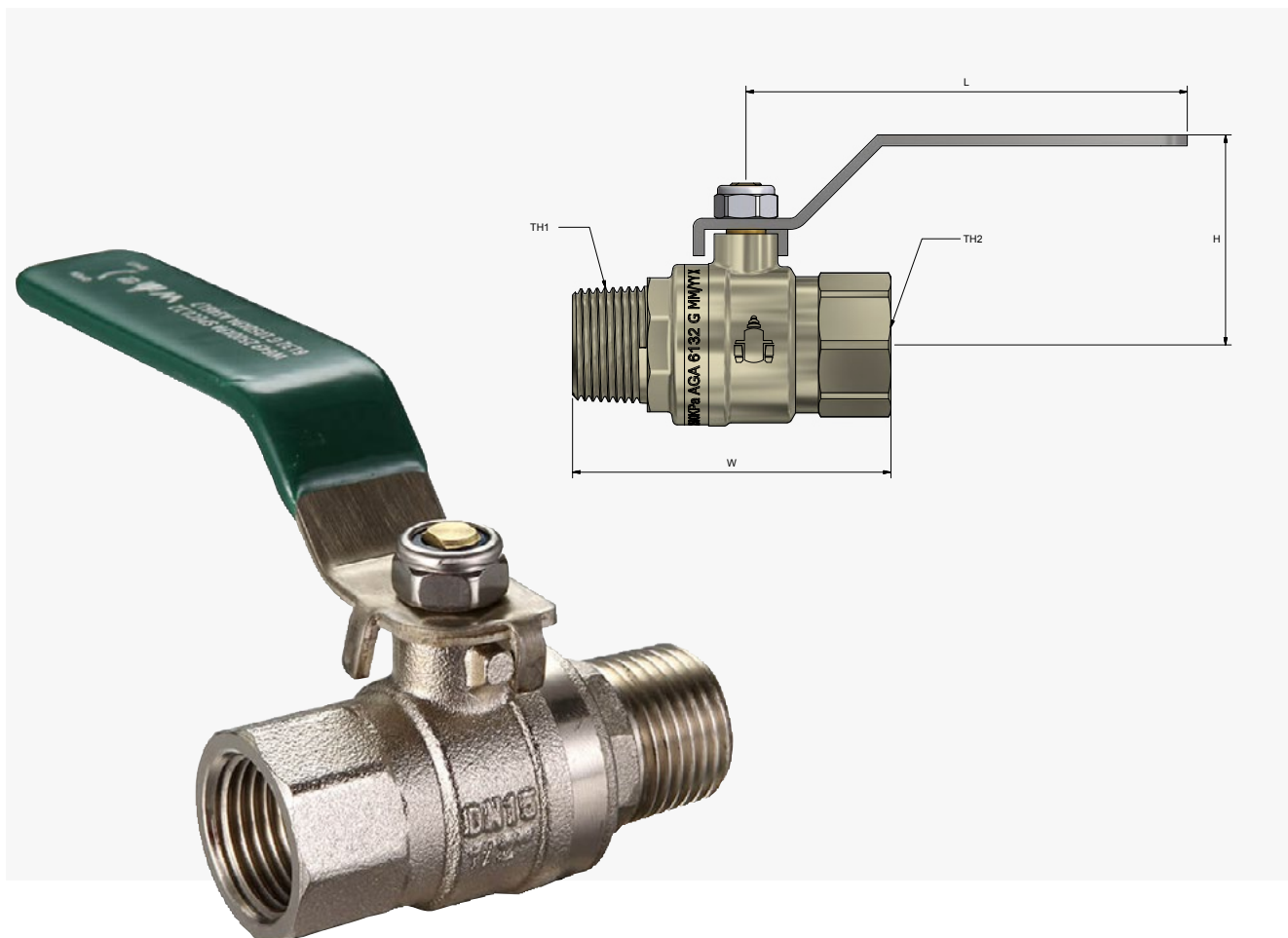
	L	H	W	TH
<b>WBV15</b>	101	44	58	Rp 1/2"
<b>WBV20</b>	101	48	66	Rp 3/4"
<b>WBV25</b>	101	52	81	Rp 1"
<b>WBV32</b>	140	71	92	Rp 1 1/4"
<b>WBV40</b>	140	77	102	Rp 1 1/2"
<b>WBV50</b>	140	85	121	Rp 2"
<b>WBV65</b>	232	110	150	Rp 2 1/2"
<b>WBV80</b>	232	122	177	Rp 3"
<b>WBV100</b>	232	136	212	Rp 4"

\* Sizes 6mm is available on request.



## Dual Approved Ball Valve

# Lever Handle m/f



### Specifications

Working temperature -20°C to 120°C  
 Maximum pressure rating  
 WATER 2500kPa GAS 2100kPa

### Features

Watermark and AGA approved  
 Full bore  
 100% pressure tested  
 Available in sizes 15mm (1/2") to 50mm (2")  
 Blow proof spindle  
 Stainless Steel handle  
 Tested and certified to WMTS012

### Material Chart

Part	Material
Body	DZR Brass
Seat	PTFE
Ball	DZR Brass
Bonnet	DZR Brass
Spindle	DZR Brass
O Ring	FKM
Handle	Stainless Steel
Lock Nut	Stainless Steel

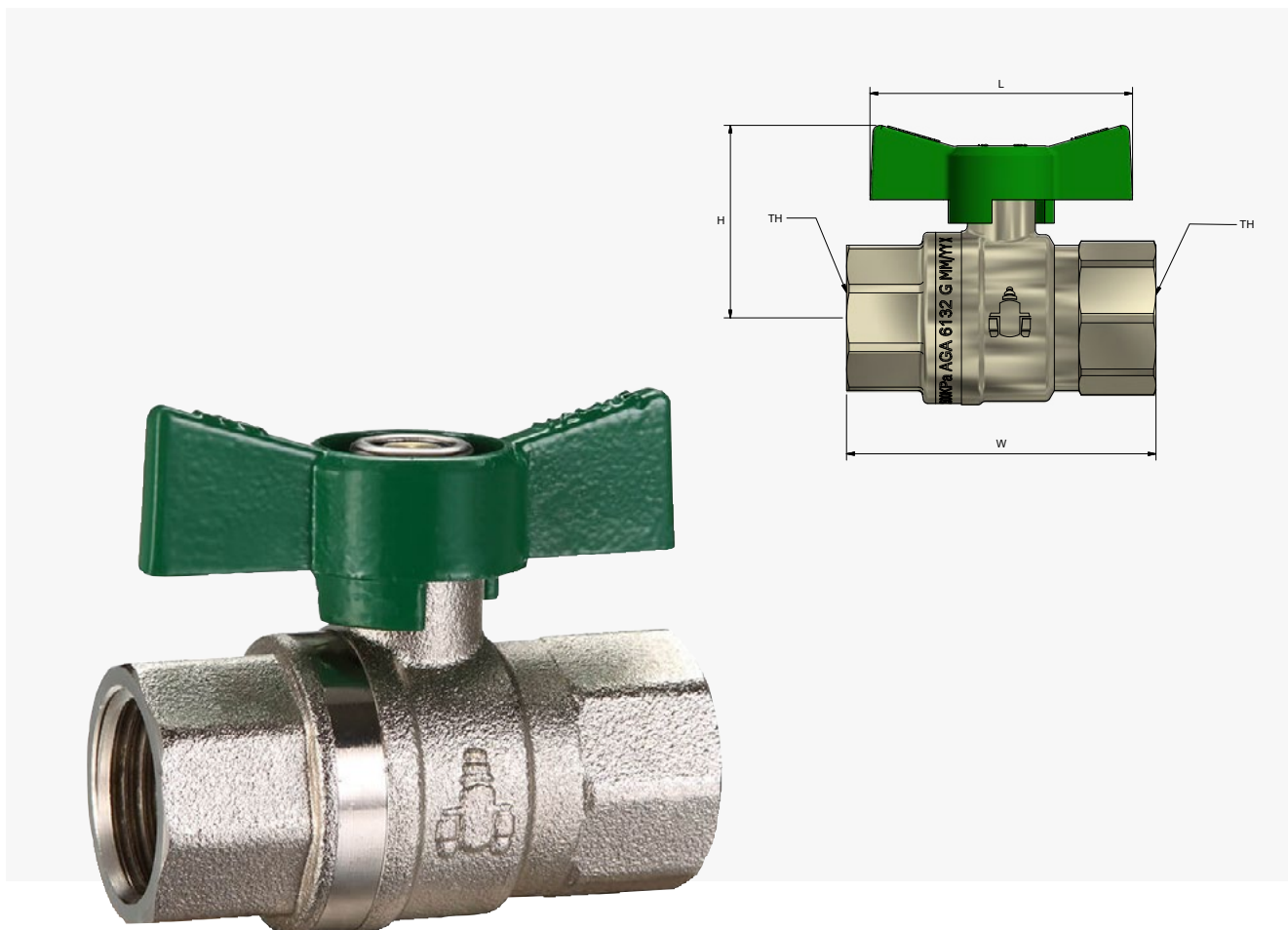
### Sizing Chart (mm)

	L	H	W	TH1	TH2
WBV15MF	101	44	64	R 1/2"	Rp 1/2"
WBV20MF	101	48	73	R 3/4"	Rp 3/4"
WBV25MF	101	52	87	R 1"	Rp 1"
WBV32MF	140	71	101	R 1 1/4"	Rp 1 1/4"
WBV40MF	140	77	113	R 1 1/2"	Rp 1 1/2"
WBV50MF	140	85	130	R 2"	Rp 2"



## Dual Approved Ball Valve

# Butterfly Handle F/F



### Specifications

Working temperature -20°C to 120°C

Max. pressure rating

WATER 2500kPa GAS 2100kPa

### Features

Watermark and AGA approved

Full bore

100% pressure tested

Available in sizes 15mm (1/2") to 25mm (1")

Blow proof spindle

Aluminium handle

Tested and certified to WMTS012

### Material Chart

Part	Material
Body	DZR Brass
Bonnet	DZR Brass
Spindle	DZR Brass
Ball	DZR Brass
Gland Nut	Brass
Seat	PTFE
Packing Gland	PTFE
Handle	Aluminium
Handle Nut	Stainless Steel

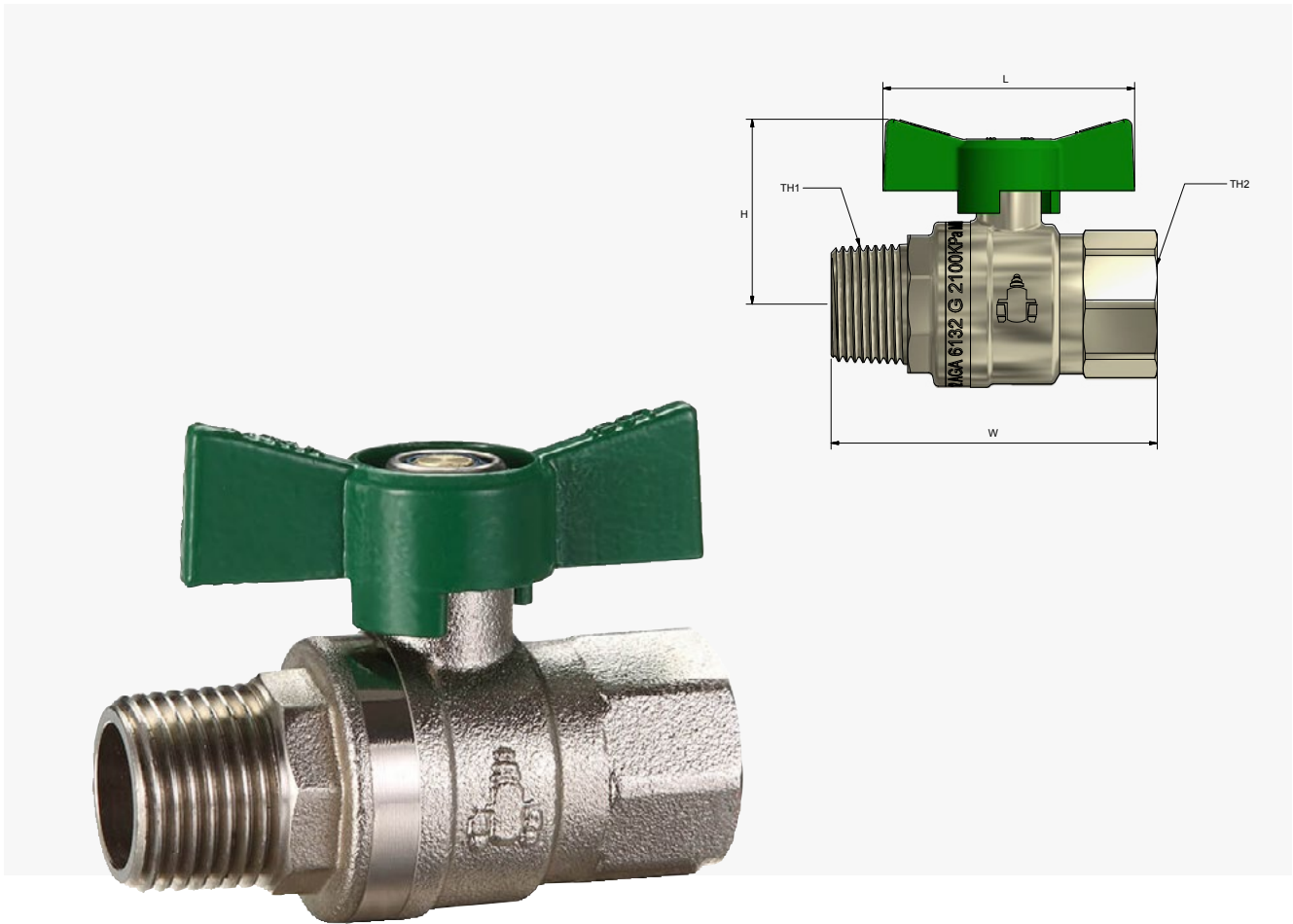
### Sizing Chart (mm)

	L	H	W	TH
WBVT15	56	37	58	Rp 1/2"
WBVT20	56	41	66	Rp 3/4"
WBVT25	81	45	81	Rp 1"



## Dual Approved Ball Valve

# Butterfly Handle m/f



### Specifications

Working temperature -20°C to 120°C  
Max. pressure rating  
WATER 2500kPa GAS 2100kPa

### Features

Watermarked and AGA approved  
Full bore  
100% pressure tested  
Available in sizes 15mm (1/2") to 25mm (1")  
Blow proof spindle  
Aluminium handle  
Tested and certified to WMTS012

### Material Chart

Part	Material
Body	DZR Brass
Seat	PTFE
Ball	DZR Brass
Bonnet	DZR Brass
Spindle	DZR Brass
O Ring	FKM
Handle	Aluminium
Lock Nut	Stainless Steel

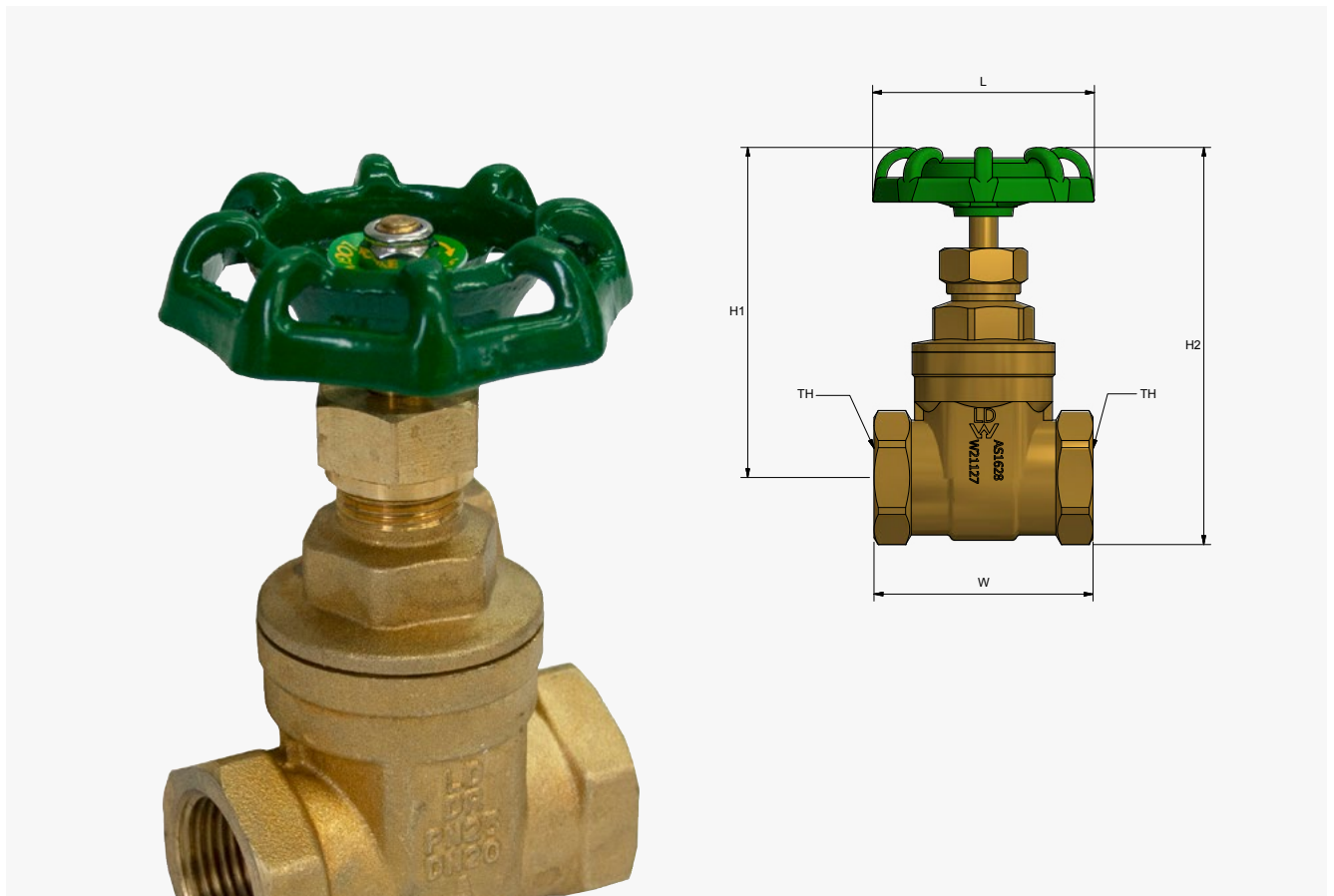
### Sizing Chart (mm)

	L	H	W	TH1	TH2
WBVT15MF	56	38	64	R 1/2"	Rp 1/2"
WBVT20MF	56	41	73	R 3/4"	Rp 3/4"
WBVT25MF	56	45	87	R 1"	Rp 1"



Watermark Approved

# Gate Valve



## Specifications

Working temperature -20°C to 120°C  
Max. pressure rating 2500kPa

## Features

Watermark approved  
Full bore  
100% pressure tested  
Available in sizes\* 15mm (1/2") to 50mm (2")  
Tested and certified to AS 1628

## Material Chart

Part	Material
Body	DZR Brass
Cover	DZR Brass
Gate	DZR Brass
Stem	DZR Brass
Lock Nut	DZR Brass
Packing Gland	PTFE
Gasket	PTFE
Hex Cap	Brass
Indication Cap	Stainless Steel
Nut	Brass
Handle	Cast Iron

## Sizing Chart (mm)

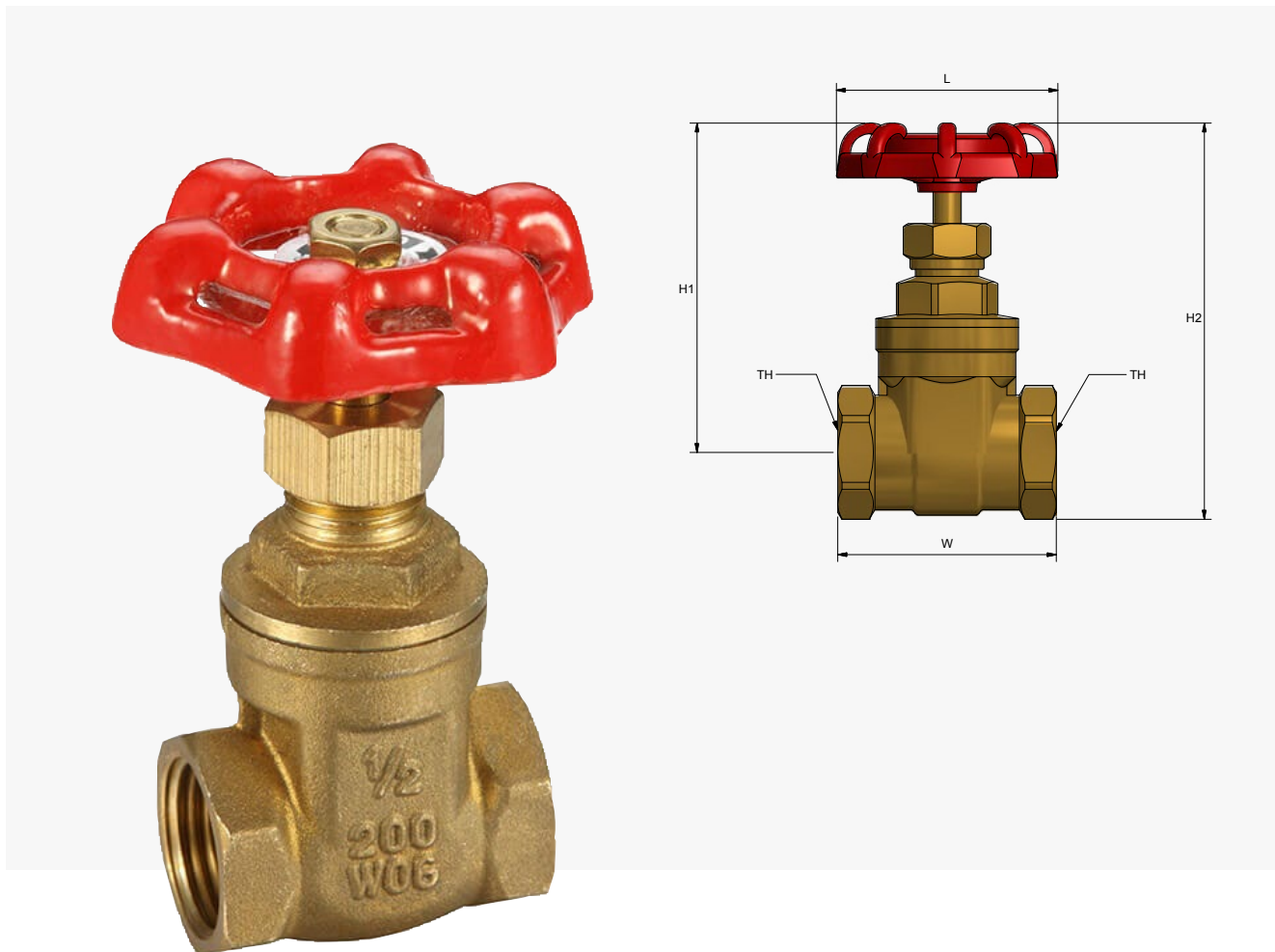
	L	H1	H2	W	TH
WGV15	54	83	99	57	Rp 1/2"
WGV20	64	95	114	62	Rp 3/4"
WGV25	64	108	130	70	Rp 1"
WGV32	78	123	150	80	Rp 1 1/4"
WGV40	91	140	170	88	Rp 1 1/2"
WGV50	96	154	191	96	Rp 2"

\* Sizes up to 100mm available on request.



## General Purpose

# Gate Valve



### Specifications

Working temperature -20°C to 120°C  
Max. pressure rating 1600kPa

### Features

Full bore  
100% pressure tested  
Available in sizes 15mm (1/2") to 100mm (4")

### Material Chart

Part	Material
Body	Brass
Cover	Brass
Gate	Brass
Stem	Brass
Lock Nut	Brass
Packing Gland	PTFE
Gasket	PTFE
Hex Cap	Brass
Indication Cap	Stainless Steel
Nut	Stainless Steel
Handle	Cast Iron

### Sizing Chart (mm)

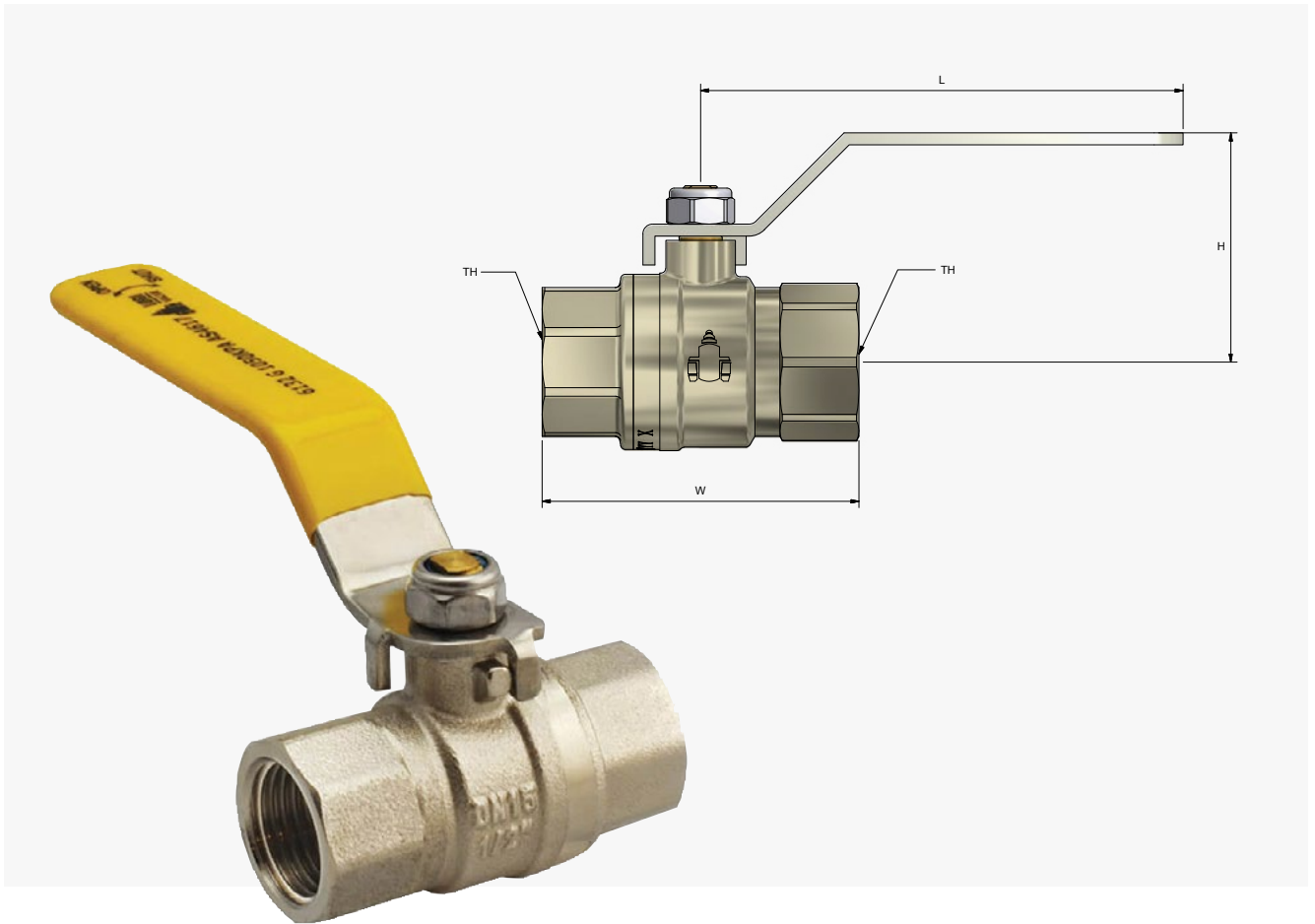
	L	H1	H2	W	TH
BGV15	54	76	90	41	Rp 1/2"
BGV20	54	78	96	51	Rp 3/4"
BGV25	62	94	116	55	Rp 1"
BGV32	72	112	139	55	Rp 1 1/4"
BGV40	78	122	153	60	Rp 1 1/2"
BGV50	96	148	185	65	Rp 2"
BGV65	107	176	224	93	Rp 2 1/2"
BGV80	107	193	249	95	Rp 3"
BGV100	125	251	321	103	Rp 4"





## Gas Approved Ball Valves

# Lever Handle F/F



### Specifications

Working temperature -20°C to 120°C  
Maximum pressure rating 2100kPa

### Features

AGA approved  
Full bore  
100% pressure tested  
Available in sizes\* 15mm (1/2") to 50mm (2")  
Blow proof spindle  
Stainless Steel handle  
Tested and certified to AS 4617

### Material Chart

Part	Material
Body	Brass
Seat	PTFE
Ball	Brass
Bonnet	Brass
Spindle	Brass
O Ring	HNBR
Handle	Stainless Steel
Lock Nut	Stainless Steel

### Sizing Chart (mm)

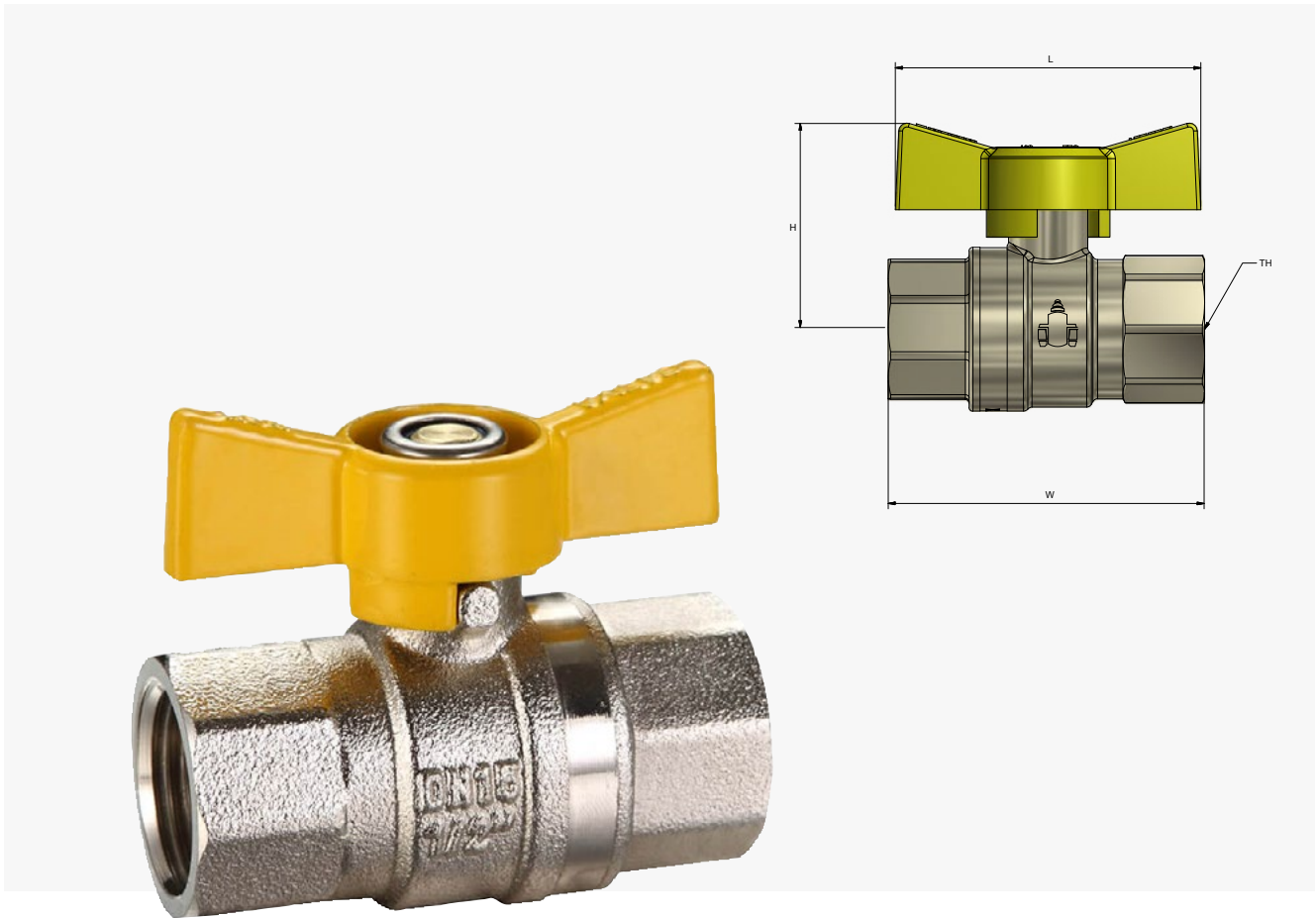
	L	H	W	TH
<b>GBV15</b>	101	44	58	Rp 1/2"
<b>GBV20</b>	101	48	81	Rp 3/4"
<b>GBV25</b>	101	52	81	Rp 1"
<b>GBV32</b>	140	71	92	Rp 1 1/4"
<b>GBV40</b>	140	77	102	Rp 1 1/2"
<b>GBV50</b>	140	85	121	Rp 2"

\* Sizes 4mm, 6mm, 10mm, 65mm, 80mm, 100mm are available on request.



## Gas Approved Ball Valves

# Butterfly Handle F/F



### Specifications

Working temperature -20°C to 120°C  
Max. pressure rating 2100kPa

### Features

AGA approved  
Full bore  
100% pressure tested  
Available in sizes 15mm (1/2") to 25mm (1")  
Blow proof spindle  
Aluminium handle  
Tested and certified to AS 4617

### Material Chart

Part	Material
Body	Brass
Bonnet	Brass
Spindle	Brass
Ball	Brass
Gland Nut	Brass
Seat	PTFE
O-ring	HNBR
Handle	Aluminium
Handle Nut	Brass

### Sizing Chart (mm)

	L	H	W	TH
GBVT15	56	37	58	Rp 1/2"
GBVT20	56	41	66	Rp 3/4"
GBVT25	56	45	81	Rp 1"



# Valves - Available on request

## Watermarked Ball Valves



HVAC with Mini Ball Valve



HVAC with Test Point



Lever Handle FI X FI  
Extended Spindle



Lever Handle FI X FI  
Lockable



Mini Ball Valve MI x FI

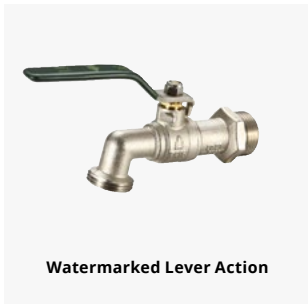


Underground FI x FI

## Bib Cock



General Purpose Lever Action



Watermarked Lever Action

## Swivel Nut Ball Valves



FI Gas



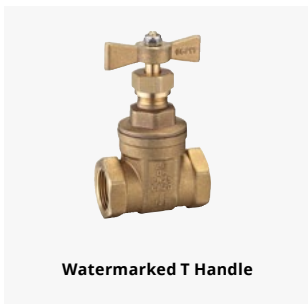
FI Water

## Non Return Valve

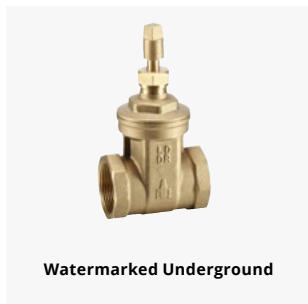


Swing Check Valve  
General Purpose

## Gate Valves



Watermarked T Handle



Watermarked Underground

## Dual Check Valves



FI

## Gas Approved Ball Valves



Butterfly Handle MI x FI



Lever Handle FI x FI  
Extended Spindle



Lever Handle FI x FI  
Lockable



Lever Handle MI X FI

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about your piping projects  
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