



BALL VALVES SENA Ni-Free

Manually operated ball valves for plumbing installations.

- More than 80 references.
- Stainless Steel handle and nut, better resistance to corrosion.
- Nickel-free water way for greater health.
- Robust construction for safe installations.
- 100% leak tested.
- Reversible lever (M-H models, with filter, manifolds, and drain): allows the lever to rotate 180° so the normal operation of the valve can be maintained without modifying the installation.
- European Brass, DW quality for use in drinking water installations.



TECHNICAL DATA SHEET BALL VALVES SENA Ni-Free

PRODUCT SCOPE

Manually operated ball valves. They are connected to the pipeline mainly by thread, in some cases by compression system to multilayer pipe or by a three-piece coupling system.

PRODUCT USES

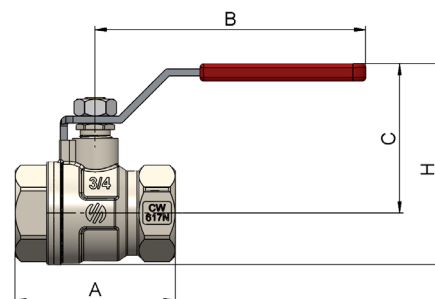
Specially designed for drinking water, heating, DHW or mixed installations, as well as distribution networks and drinking water connections.

And in general, all those applications that require a valve capable of cutting off the supply of a fluid, guaranteeing tightness in accordance with the specified service conditions.

GENERAL DIMENSIONS, PRESSURE & TEMPERATURE

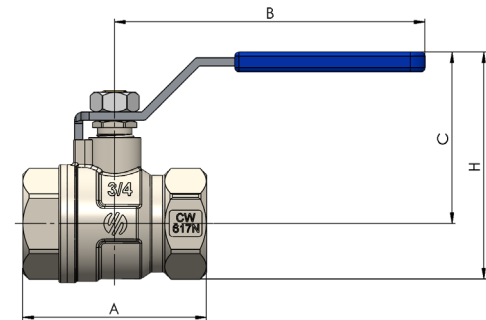
FEMALE – FEMALE LEVER HANDLE & RED COVER

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
750101	1/4 F-F	41	70	37	49	30	-20 to 120
750102	3/8 F-F	41	70	37	49	30	-20 to 120
750103	1/2 F-F	48	95	48	63	30	-20 to 120
750104	3/4 F-F	56	95	53	70	30	-20 to 120
750105	1 F-F	64	113	61	81	30	-20 to 120
750106	1 1/4 F-F	75	113	64	91	30	-20 to 120
750107	1 1/2 F-F	87	153	72	103	30	-20 to 120
750108	2 F-F	103	153	78	118	30	-20 to 120
750109	2 1/2 F-F	133	173	90	142	30	-20 to 120
750110	3 F-F	152	236	110	167	30	-20 to 120
750111	4 F-F	176	236	121	190	30	-20 to 120

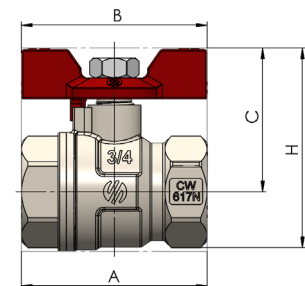



FEMALE – FEMALE LEVER HANDLE & BLUE COVER

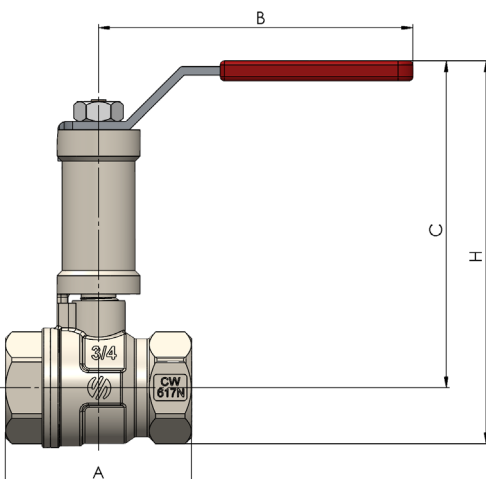
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
750403	1/2 F-F	48	95	48	63	30	-20 to 120
750404	3/4 F-F	56	95	53	70	30	-20 to 120
750405	1 F-F	64	113	61	81	30	-20 to 120
750406	1 1/4 F-F	75	113	64	91	30	-20 to 120
750407	1 1/2 F-F	87	153	72	103	30	-20 to 120
750408	2 F-F	103	153	78	118	30	-20 to 120
750409	2 1/2 F-F	133	173	90	142	30	-20 to 120


FEMALE – FEMALE BUTTERFLY HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
753102	3/8 F-F	41	49	34	47	30	-20 to 120
753103	1/2 F-F	48	56	40	55	30	-20 to 120
753104	3/4 F-F	56	56	43	62	30	-20 to 120
753105	1 F-F	64	80	50	71	30	-20 to 120


FEMALE – FEMALE LEVER HANDLE WITH EXTENSION

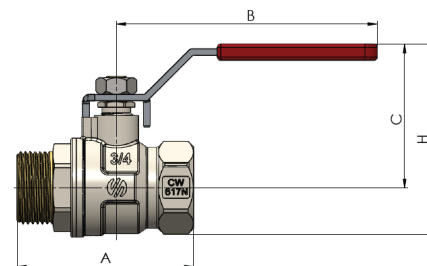
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
750103EX	1/2 F-F	48	95	95	110	30	-20 to 120
750104EX	3/4 F-F	56	95	99	117	30	-20 to 120
750105EX	1 F-F	64	113	109	131	30	-20 to 120
750106EX	1 1/4 F-F	75	113	114	141	30	-20 to 120
750107EX	1 1/2 F-F	87	153	128	160	30	-20 to 120
750108EX	2 F-F	103	153	135	175	30	-20 to 120





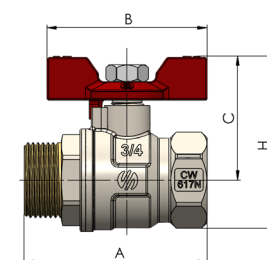
MALE – FEMALE REVERSIBLE LEVER

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
750602	3/8 M-F	49	70	37	49	30	-20 to 120
750603	1/2 M-F	55	95	48	63	30	-20 to 120
750604	3/4 M-F	64	95	53	70	30	-20 to 120
750605	1 M-F	73	113	61	81	30	-20 to 120
750606	1 1/4 M-F	86	113	64	91	30	-20 to 120
750607	1 1/2 M-F	98	153	72	103	30	-20 to 120
750608	2 M-F	119	153	78	118	30	-20 to 120



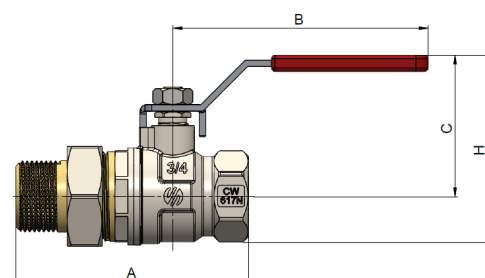
MALE – FEMALE BUTTERFLY HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
753602	3/8 M-F	49	49	34	47	30	-20 to 120
753603	1/2 M-F	55	56	40	55	30	-20 to 120
753604	3/4 M-F	64	56	43	62	30	-20 to 120
753605	1 M-F	73	80	49	71	30	-20 to 120



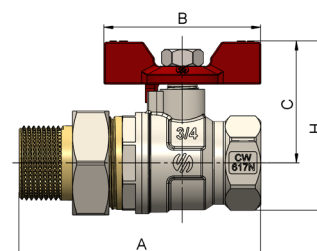
STRAIGHT MANIFOLD REVERSIBLE LEVER

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
754203	1/2 F-M	77	95	51	67	30	-20 to 120
754204	3/4 F-M	86	95	52	71	30	-20 to 120
754205	1 F-M	96	113	59	85	30	-20 to 120
754206	1 1/4 F-M	118	113	64	93	30	-20 to 120
754207	1 1/2 F-M	132	153	71	103	30	-20 to 120
754208	2 F-M	155	153	78	122	30	-20 to 120



STRAIGHT MANIFOLD BUTTERFLY HANDLE

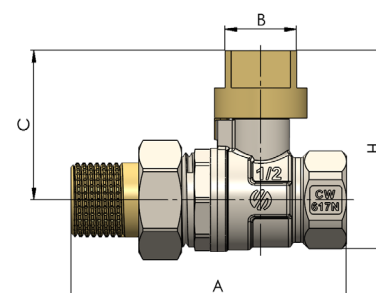
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
754103	1/2 F-M	77	56	40	59	30	-20 to 120
754104	3/4 F-M	86	56	43	62	30	-20 to 120
754105	1 F-M	100	80	50	75	30	-20 to 120
754106	1 1/4 F-M	118	80	54	84	30	-20 to 120



STRAIGHT MANIFOLD SQUARE HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
754103C	1/2 F-M	77	20	42	59	30	-20 to 120

Square handle 20x20 mm



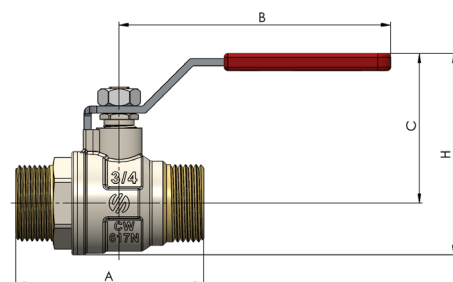
Thread according to ISO228

* Freezing excluded.



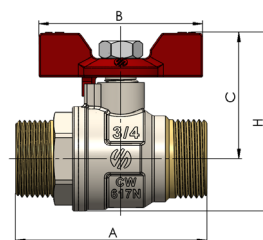
MALE – MALE LEVER HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
751102	3/8 M-M	49	70	37	49	30	-20 to 120
751103	1/2 M-M	57	95	48	63	30	-20 to 120
751104	3/4 M-M	66	95	53	70	30	-20 to 120
751105	1 M-M	73	113	61	81	30	-20 to 120
751106	1 1/4 M-M	86	113	64	91	30	-20 to 120
751107	1 1/2 M-M	99	153	72	103	30	-20 to 120
751108	2 M-M	120	153	78	118	30	-20 to 120



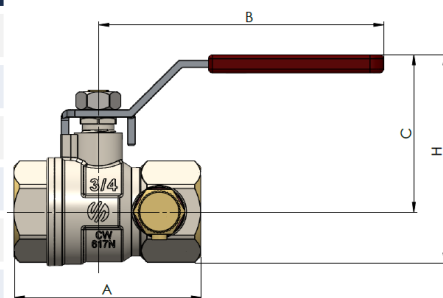
MALE – MALE BUTTERFLY HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
753902	3/8 M-M	49	49	34	47	30	-20 to 120
753903	1/2 M-M	57	56	40	55	30	-20 to 120
753904	3/4 M-M	66	56	43	62	30	-20 to 120
753905	1 M-M	73	80	50	71	30	-20 to 120



FEMALE – FEMALE WITH PURGER REVERSIBLE LEVER

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
752103	1/2 F-F	56	95	48	63	30	-20 to 120
752104	3/4 F-F	62	95	53	70	30	-20 to 120
752105	1 F-F	71	113	61	81	30	-20 to 120
752106	1 1/4 F-F	90	113	64	91	30	-20 to 120
752107	1 1/2 F-F	99	153	72	103	30	-20 to 120
752108	2 F-F	114	153	78	118	30	-20 to 120



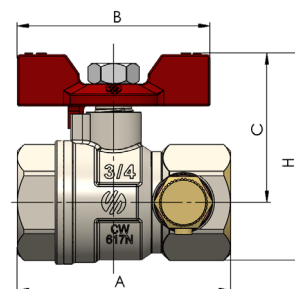
Sizes from 1/2" to 1", with 1/4 connection plug and air vent.

Sizes from 1 1/4" to 2", with 3/8 connection plug and air vent.

FEMALE – FEMALE WITH PURGER BUTTERFLY HANDLE

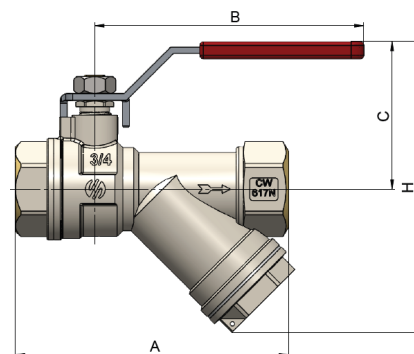
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
752203	1/2 F-F	56	56	40	55	30	-20 to 120
752204	3/4 F-F	62	56	43	62	30	-20 to 120
752205	1 F-F	71	80	49	71	30	-20 to 120

Connection plug of 1/4 air vent

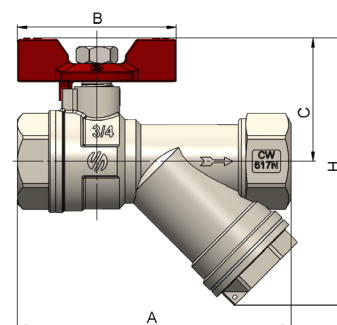



FEMALE – FEMALE WITH FILTER REVERSIBLE LEVER

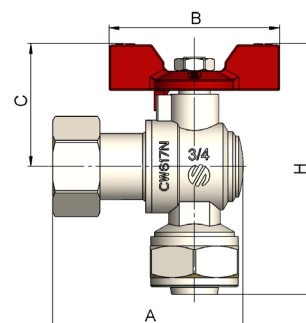
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
752303	1/2 F-F	78	95	49	90	30	-20 to 120
752304	3/4 F-F	97	95	53	103	30	-20 to 120
752305	1 F-F	109	113	59	119	30	-20 to 120


FEMALE – FEMALE BUTTERFLY HANDLE WITH FILTER

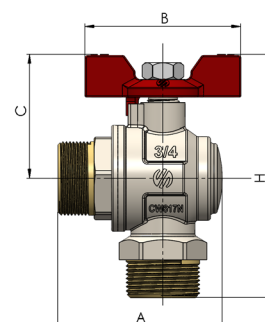
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
752503	1/2 F-F	78	56	40	81	30	-20 to 120
752504	3/4 F-F	97	56	43	94	30	-20 to 120
752505	1 F-F	109	80	49	108	30	-20 to 120


ANGLE LOOSE NUT – MULTILAYER BUTTERFLY HANDLE

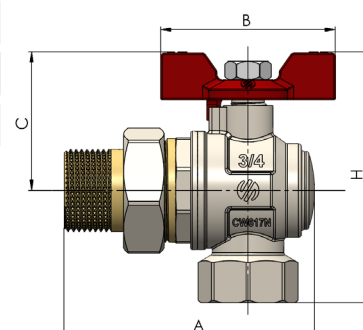
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
758220	3/4 LN 20X2	76	56	40	83	16	-20 to 120
758230	1 LN 26X3	92	80	45	95	16	-20 to 120


ANGLE MALE – MALE BUTTERFLY HANDLE

Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
754503	1/2 M-M	50	56	43	76	30	-20 to 120
754504	3/4 M-M	59	56	46	87	30	-20 to 120
754506	1 M-M	67	80	51	97	30	-20 to 120


ANGLE MANIFOLD BUTTERFLY HANDLE

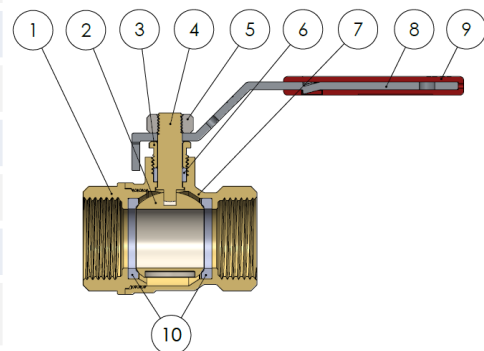
Code	Size	A (mm)	B (mm)	C (mm)	H (mm)	PN (BAR)	Temp. range (°C)(*)
754303	1/2 M-F	72	56	41	72	30	-20 to 120
754304	3/4 M-F	80	56	45	81	30	-20 to 120
754305	1 M-F	111	80	50	93	30	-20 to 120



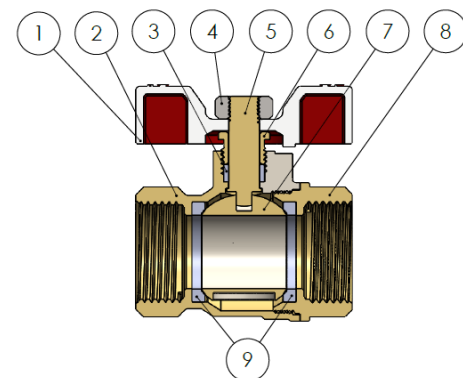


MATERIALS

Item	Components	Material	Finishing
1	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
2	Ball	CW617N Brass	Chrome plated
3	Gland nut	CW617N Brass	Nickel plated
4	Stem	CW617N Brass	Brass colour
5	Nut	Stainless Steel	-
6	Gland	PTFE	-
7	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
8	Handle	Stainless Steel	-
9	Cover	LDPE	Red or Blue
10	Seat	PTFE	-

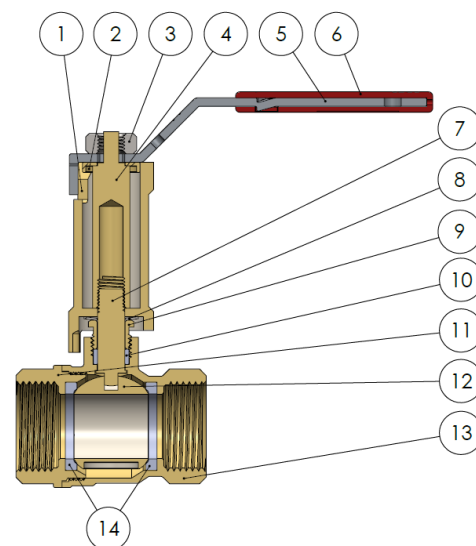


Item	Components	Material	Finishing
1	Butterfly handle	ZAMAK	Epoxy Red
2	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
3	Gland	PTFE	-
4	Nut	Stainless Steel	-
5	Stem	CW617N Brass	Brass colour
6	Gland nut	CW617N Brass	Nickel plated
7	Ball	CW617N Brass	Chrome plated
8	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
9	Seat	PTFE	-

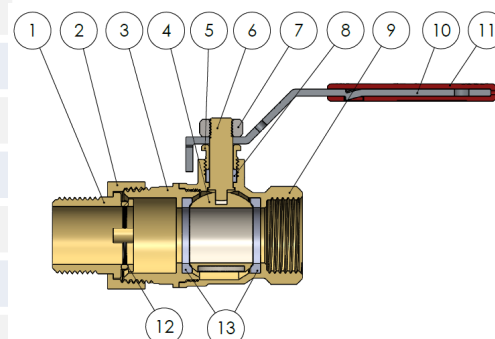




Item	Components	Material	Finishing
1	Extension cylinder	CW617N Brass	Nickel plated
2	Extension washer	CW617N Brass	Brass colour
3	Nut	Stainless Steel	-
4	Extension stem	CW617N Brass	Brass colour
5	Handle	Stainless Steel	-
6	Cover	LPDE	Epoxy Red
7	Stem	CW617N Brass	Chrome plated
8	Washer	Stainless Steel	-
9	Gland nut	CW617N Brass	Nickel plated
10	Gland	PTFE	-
11	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
12	Ball	CW617N Brass	Chrome plated
13	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
14	Seat	PTFE	-

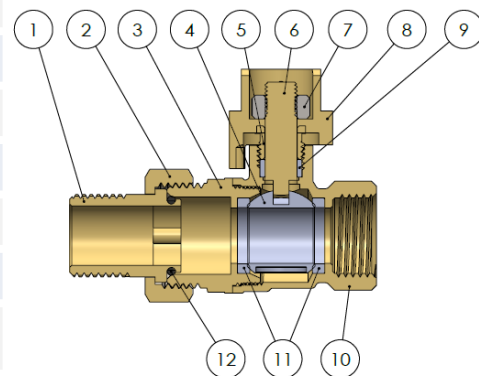


Item	Components	Material	Finishing
1	Coupling	CW617N Brass	Brass colour
2	Nut	CW617N Brass	Nickel plated
3	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
4	Ball	CW617N Brass	Chrome plated
5	Gland nut	CW617N Brass	Nickel plated
6	Stem	CW617N Brass	Brass colour
7	Nut	Stainless Steel	-
8	Gland	PTFE	-
9	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
10	Handle	Stainless Steel	-
11	Cover	LDPE	Epoxy Red
12	O-ring	NBR	-
13	Seat	PTFE	-

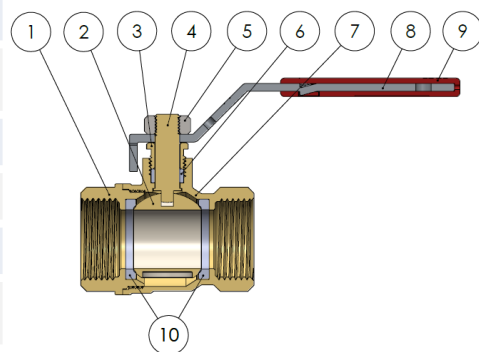
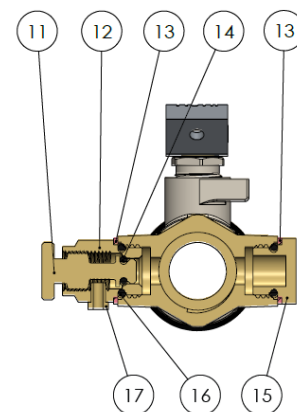




Item	Components	Material	Finishing
1	Coupling	CW617N Brass	Brass colour
2	Nut	Stainless Steel	-
3	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
4	Ball	CW617N Brass	Chrome plated
5	Gland nut	CW617N Brass	Nickel plated
6	Stem	CW617N Brass	Brass colour
7	Nut	CW617N Brass	Nickel plated
8	Square	CW617N Brass	Brass
9	Gland	PTFE	-
10	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
11	Seat	PTFE	-
12	O-ring	NBR	-

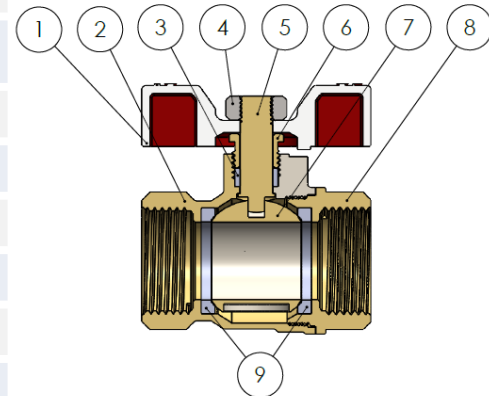
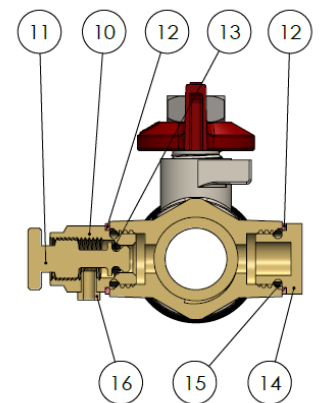


Item	Components	Material	Finishing
1	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
2	Ball	CW617N Brass	Chrome plated
3	Gland nut	CW617N Brass	Nickel plated
4	Stem	CW617N Brass	Brass colour
5	Nut	Stainless Steel	-
6	Gland	PTFE	-
7	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
8	Cover	LDPE	Red
9	Handle	Stainless Steel	-
10	Seat	PTFE	-
11	Manual air vent	CW617N Brass	Brass colour
12	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
13	Seal	NBR	-
14	Flat seal	Fibre	-
15	Cap	CW617N Brass	Brass colour
16	Seal	NBR	-
17	Pin	CW617N Brass	Brass colour

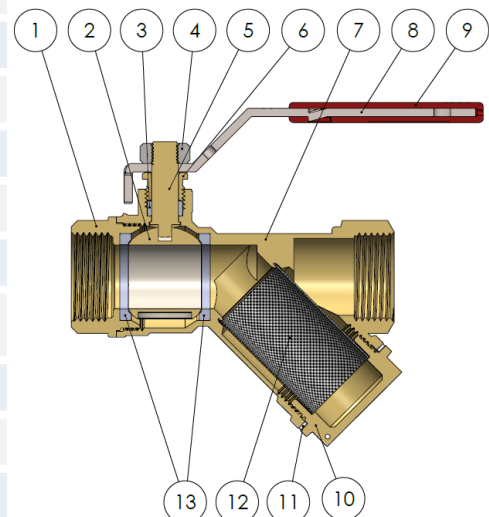




Item	Components	Material	Finishing
1	Butterfly handle	ZAMAK	Epoxy Red
2	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
3	Gland	PTFE	-
4	Nut	Stainless Steel	-
5	Stem	CW617N Brass	Brass colour
6	Gland nut	CW617N Brass	Nickel plated
7	Ball	CW617N Brass	Chrome plated
8	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
9	Seat	PTFE	-
10	Body	CW617N Brass	Brass colour
11	Manual air vent	CW617N Brass	Brass colour
12	Flat seal	Fibre	-
13	Seal	NBR	-
14	Cap	CW617N Brass	Brass colour
15	Seal	NBR	-
16	Pin	CW617N Brass	Brass colour

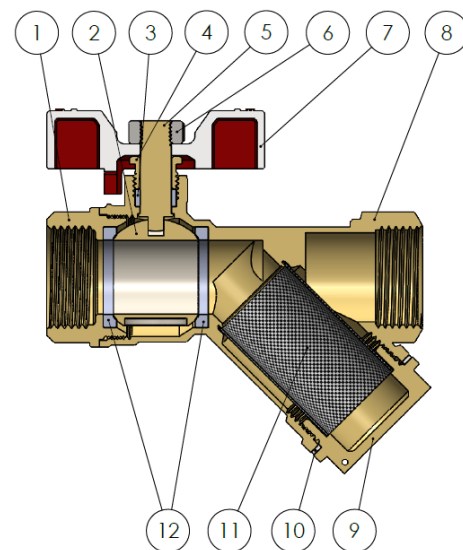


Item	Components	Material	Finishing
1	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
2	Ball	CW617N Brass	Chrome plated
3	Gland	PTFE	-
4	Nut	Stainless Steel	-
5	Stem	CW617N Brass	Brass colour
6	Gland nut	CW617N Brass	Nickel plated
7	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
8	Handle	Stainless Steel	-
9	Cover	LDPE	Red
10	Plug	CW617N Brass	Outer nickel-plated Nickel-free inner
11	Flat seal	Fibre	-
12	Filter	Stainless Steel	-
13	Seat	PTFE	-

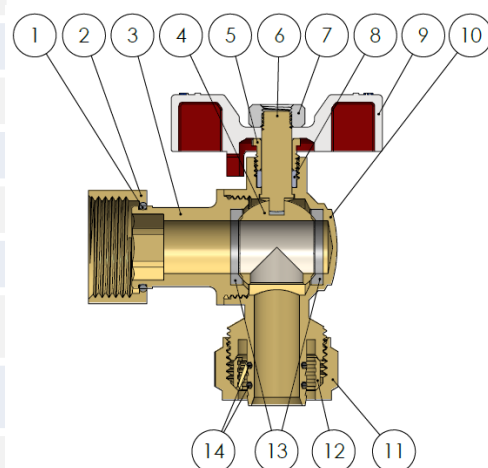




Item	Components	Material	Finishing
1	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
2	Ball	CW617N Brass	Chrome plated
3	Gland	PTFE	-
4	Gland nut	CW617N Brass	Nickel plated
5	Stem	CW617N Brass	Brass colour
6	Nut	Stainless Steel	-
7	Butterfly handle	ZAMAK	Red Epoxy
8	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
9	Plug	CW617N Brass	Outer nickel-plated Nickel-free inner
10	Flat seal	Fibre	-
11	Filter	Stainless Steel	-
12	Seat	PTFE	-



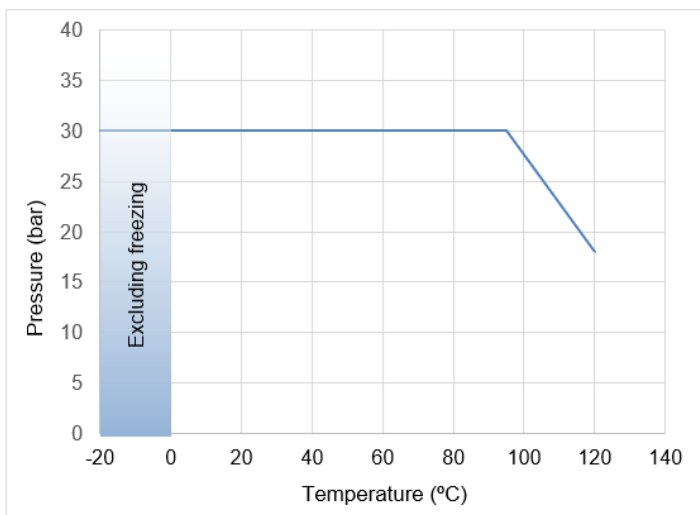
Item	Components	Material	Finishing
1	Seal	Stainless Steel	-
2	Nut	CW617N Brass	Outer nickel-plated Nickel-free inner
3	Lateral	CW617N Brass	Outer nickel-plated Nickel-free inner
4	Ball	CW617N Brass	Chrome plated
5	Gland nut	CW617N Brass	Nickel plated
6	Stem	CW617N Brass	Brass colour
7	Nut	Stainless Steel	-
8	Gland	PTFE	-
9	Butterfly handle	ZAMAK	Red Epoxy
10	Body	CW617N Brass	Outer nickel-plated Nickel-free inner
11	Nut	CW614N Brass	Nickel plated
12	Sleeve	CW614N Brass	Brass colour
13	Seat	PTFE	-
14	O-ring	EPDM	-



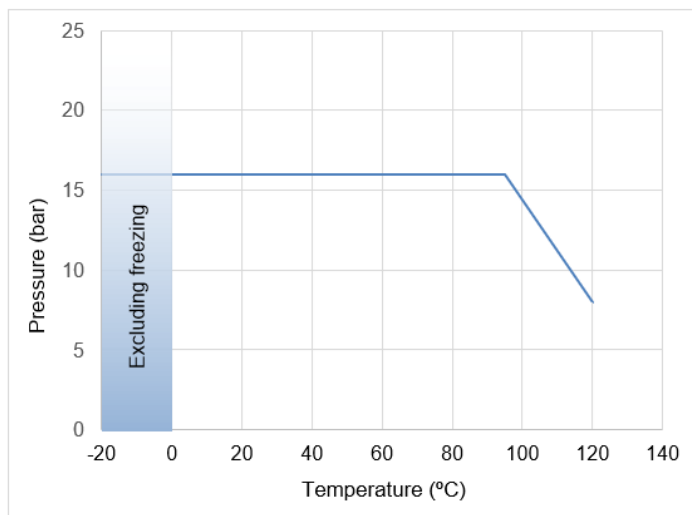


TECHNICAL DATA

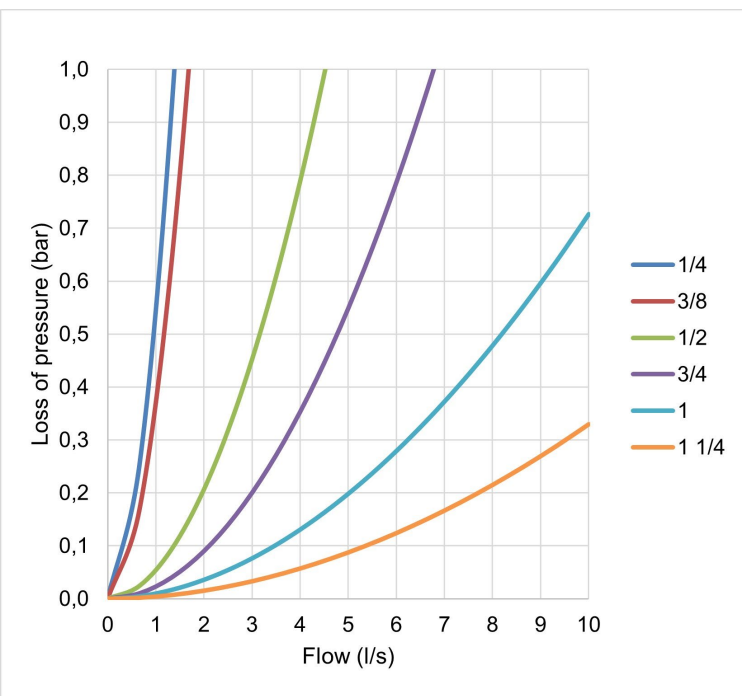
Pressure vs temperature. All models, except PEX/MLY



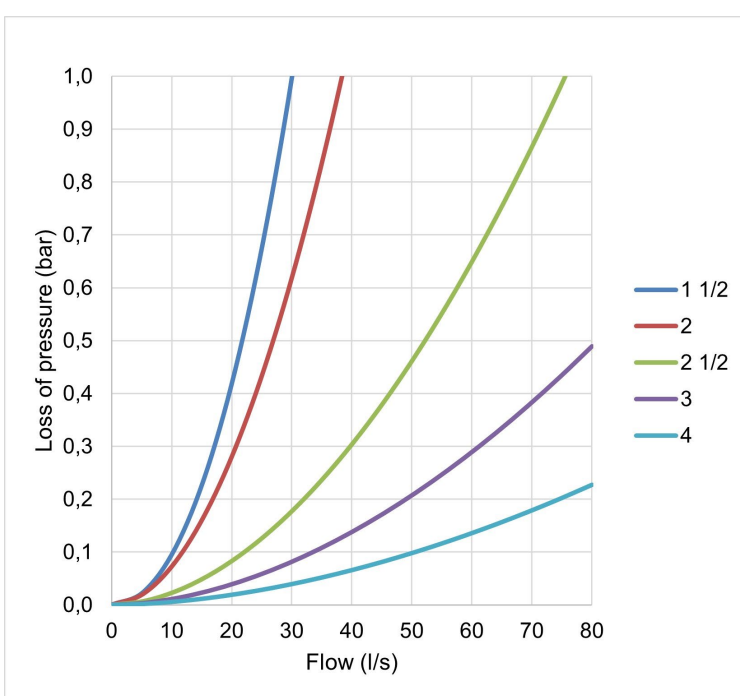
Pressure vs temperature. PEX/MLY



Hydraulic features. Flow vs Loss of pressure.
Straight models of 1/4 to 1 1/4



Hydraulic features. Flow vs Loss of pressure.
Straight models of 1 1/2 to 4



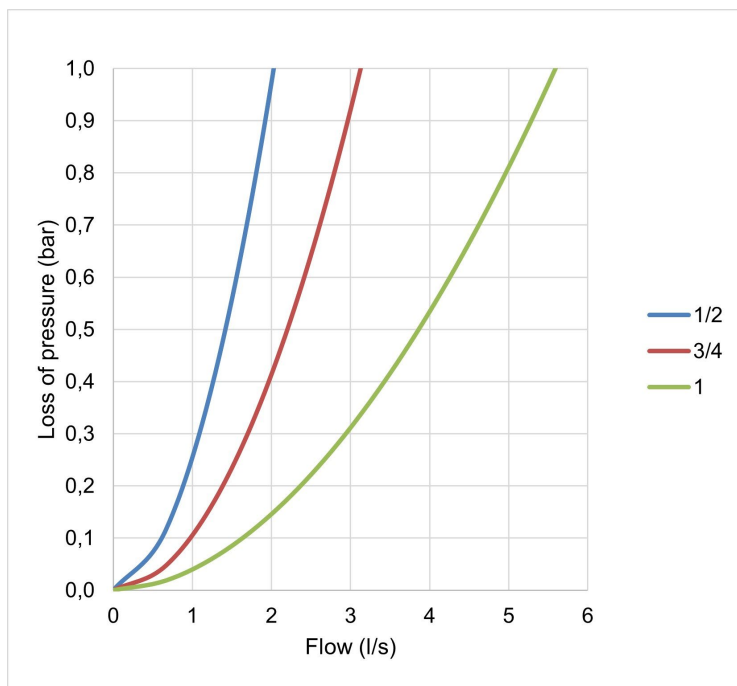
Size	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Kv	5,0	6,1	16,3	24,4	42,7	64,3	108,3	138,2	272,0	425,7	659,5

Kv (m3/h), cubic meters per hour that flow through the valve generating a loss of pressure of 1 bar.



TECHNICAL DATA

Hydraulic features. Flow vs Loss of pressure.
Angle models of 1/2 to 1



Size	1/2	3/4	1
Kv	7,3	11,3	20,1

Kv (m³/h), cubic meters per hour that flow through the valve generating a loss of pressure of 1 bar.

Filter specifications

Nominal diameter.	1/2 a 2
Filtration capacity	700 µm
Equivalent hydraulic diameter	0,75 mm
% open area	60%

Fluid Compatibility

Fluid	Compatibility
Drinking water	Excellent
Water + 50% Glycol (máximum)	Good

For any other fluid, please contact Arco technical Service.

For use with **COMPRESSED AIR**, the service conditions are as follows:

- From DN 8 to DN25: maximum 20 bar and 60°C
- From DN32 to DN 100: maximum 7 bar and 60°C

These service conditions are covered by article 4.3. of Directive 2014/68/EU, and the essential safety requirements set out in Annex I shall not apply. Without prejudice to applicable harmonisation legislation providing for their placement, such equipment shall not bear the "CE" marking referred to in article 18.

INSTALATION INSTRUCTIONS

Before any action is taken, the water supply to the system must be shut off. Make sure that there is no dirt or foreign objects in the connection to the network. Apply suitable sealing material to the threads. The valve installation should be carried out using a suitable tool, preferably a fixed or adjustable wrench; hold it by the ends, applying force to the flat surfaces to avoid deforming these areas due to excessive pressure from the tool. Restore the water supply and verify the tightness of all connections before leaving the valve in service.

Do not disassemble or modify the internal components of the valve assembly, as this may cause external leaks. The maximum service life of ball valves is achieved when they are fully open or closed; it is recommended to avoid using the valve in intermediate positions continuously.



All products have an environmental impact during its life cycle, even once retired. All the components of this product can be recycled. Once the use is over, leave the valve in any recycling green point. Válvulas Arco reserves the right to change the product or any of its technical specifications without prior notice.

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