

TECHNICAL CATALOGUE

ACCESSORIES FOR SOLAR HEATING SYSTEMS





ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of valves, fittings and brass distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 63 tooling machines and 25 assembly lines, we are able to produce 150,000 pieces per day. Our innate pursuit for innovation and observance of the technical regulations in force is supported by the ISO 9001:2008 certified company structure. The company has always considered its focus on quality as the main tool to obtaining significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.

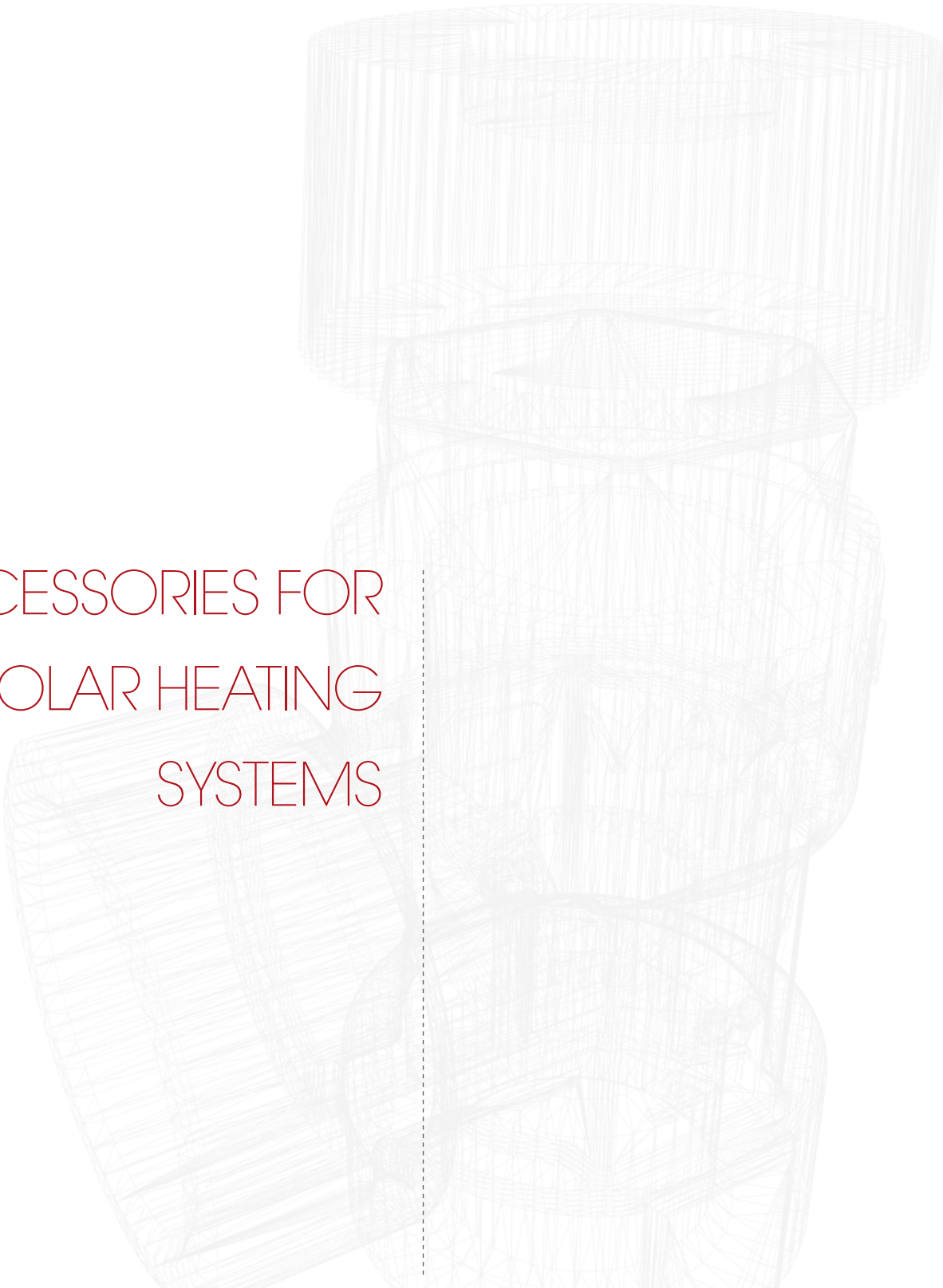
SOLAR

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ACCESSORIES FOR SOLAR HEATING SYSTEMS

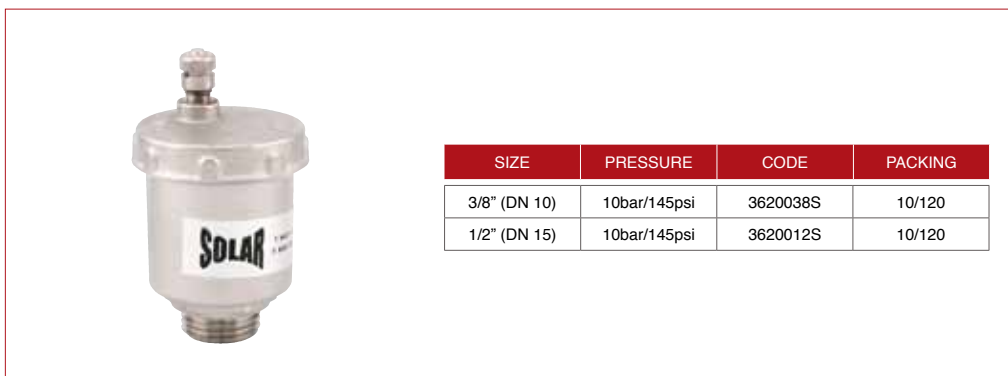




ACCESSORIES FOR
SOLAR HEATING
SYSTEMS

362S

AUTOMATIC AIR VENT VALVE FOR SOLAR HEATING SYSTEMS

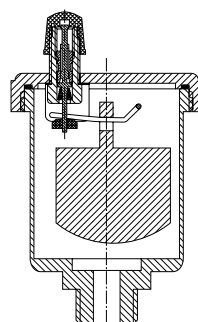


SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3620038S	10/120
1/2" (DN 15)	10bar/145psi	3620012S	10/120

TECHNICAL SPECIFICATIONS

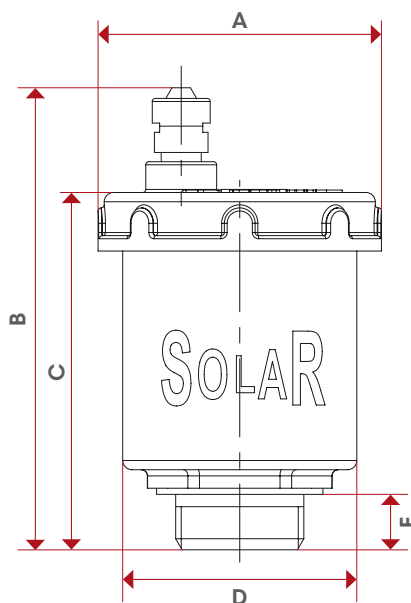
Body in nickel-plated brass.
 Minimum and maximum working temperatures: -20°C, 180°C.
 Nominal pressure: 10 bar.
 Thread ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
-	Cap	-	Brass
-	Components	-	Brass
-	Float	-	HOPLEN HP 523 YEXT50G

OVERALL DIMENSIONS



	3/8"	1/2"
A	55	46
B	78,5	75
C	65	58
D	40	38
E	8,5	9
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS



475

THERMOSTATIC MIXING VALVE FOR SOLAR HEATING SYSTEMS

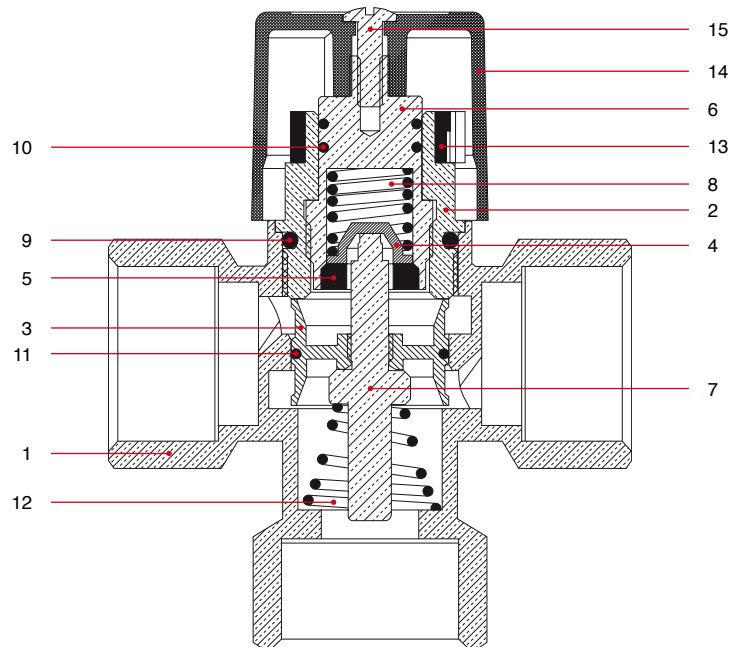


SIZE	PRESSURE	CODE	PACKING
3/4" (DN 20)	10bar/145psi	4570034	1/24
1" (DN 25)	10bar/145psi	4750100	1/24

TECHNICAL SPECIFICATIONS

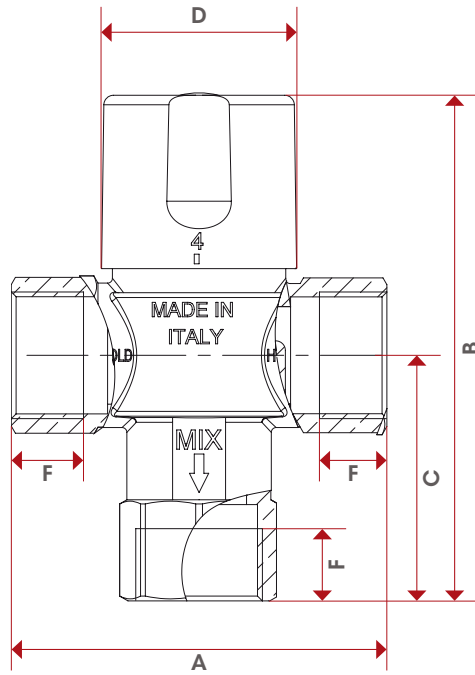
Body in nickel-plated brass. Female threads.
 Nominal pressure: 10 bar.
 Maximum working temperature: 110°C.
 Setting range: from 35°C to 55°C.
 KV= 1,7 m3/h (3/4"); 3,0 m3/h (1").
 Thread ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW617N
2	Head screw	1	Brass CW614N
3	Piston	1	Brass CW614N
4	Small piston	1	Brass CW614N
5	Ring	1	Brass CW614N
6	Stem	1	Brass CW614N
7	Bulb	1	WAX
8	Spring	1	ANSI 302 UNI ISO 6931
9	O-ring	1	EPDM
10	O-ring	2	EPDM
11	O-ring	1	EPDM
12	Conical spring	1	ANSI 302 UNI ISO 6931
13	Ring	1	Plastic
14	Handle	1	ABS
15	Screw	1	Steel

OVERALL DIMENSIONS



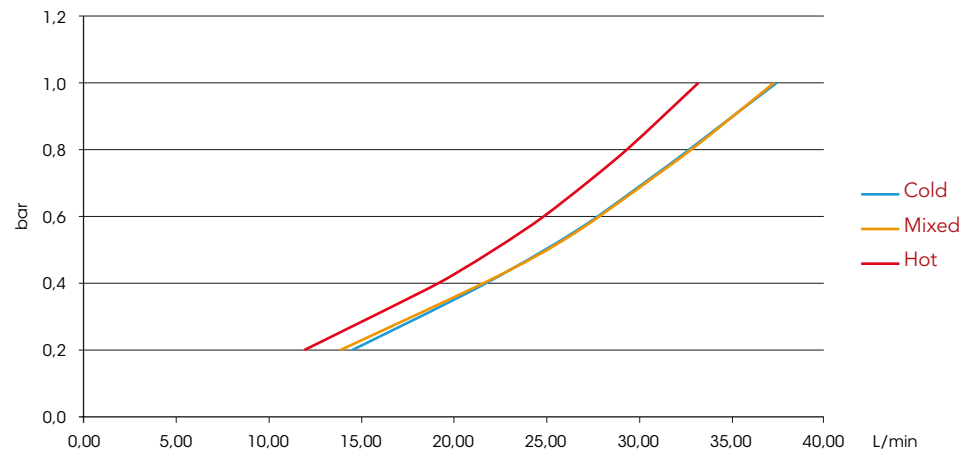
	3/4"	1"
DN	20	25
A	78	88,5
B	105	103
C	50,5	49
D	40,5	40,5
F	15	16,5
Kg/cm ² bar	10	10
LBS - psi	145	145

CERTIFICATIONS

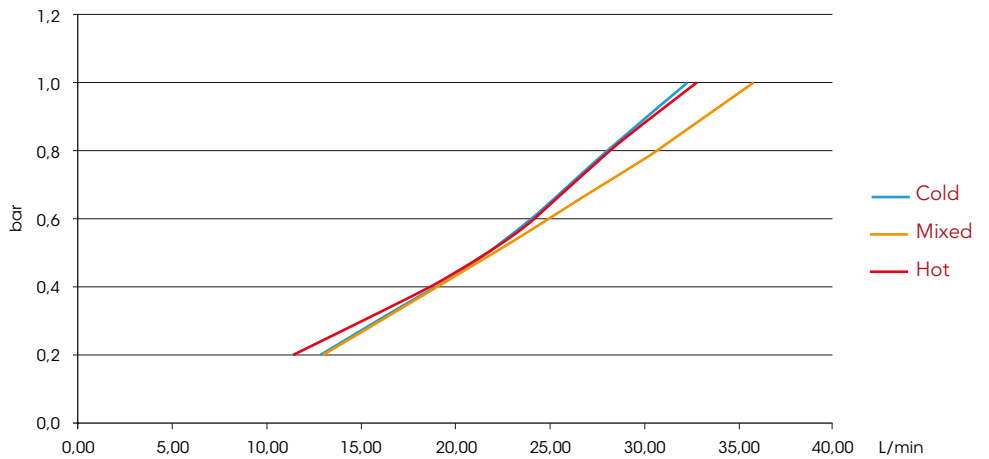


PRESSURE DROPS DIAGRAM

Art.475 3/4"

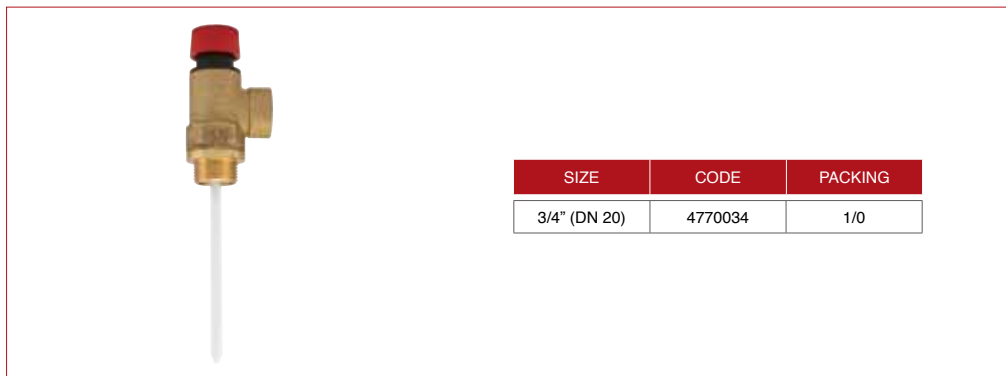


Art.475 1"



477

TEMPERATURE AND PRESSURE RELIEF VALVE FOR SOLAR HEATING SYSTEMS



SIZE	CODE	PACKING
3/4" (DN 20)	4770034	1/0

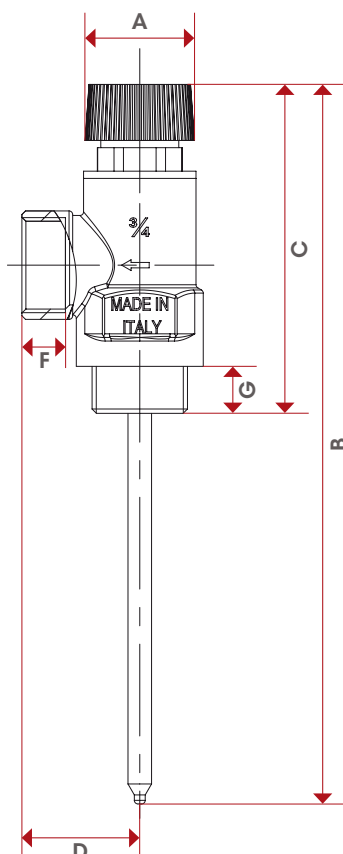
TECHNICAL SPECIFICATIONS

It provides automatic temperature and pressure relief protection for hot water and storage tank.
 It is equipped with a manually operating lever.
 The valve lever must be manually operated at least once a year to insure that water-ways are clear.
 Body in brass.
 105 mm extension thermostat.
 Setting temperature: 90°C.
 Power rating: 25Kw.
 Setting pressure: 7 bar.
 Thread ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
-	Body	1	Brass DZR
-	Spring	1	Steel
-	Control	1	Nylon
-	Diaphragm	1	EPDM

OVERALL DIMENSIONS



	3/4"
DN	20
A	30
B	180
C	90
D	35
F	11
G	13
Kg/cm ² bar	10
LBS - psi	145

CERTIFICATIONS



478

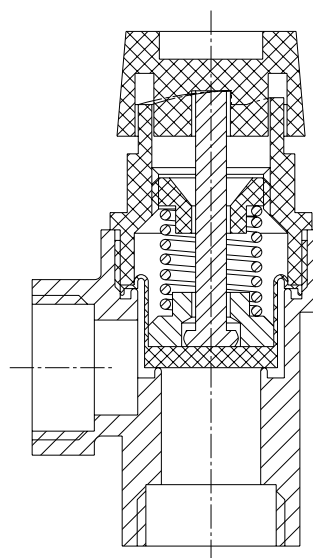
DIAPHRAGM SAFETY
RELIEF VALVE - F/F
THREADS - FOR SOLAR
HEATING SYSTEMS



TECHNICAL SPECIFICATIONS

It provides automatic pressure relief protection for hot water and storage tank. It is equipped with a manually operating lever. The valve lever must be manually operated at least once a year to insure that the water-ways are clear. Body in nickel-plated brass. Maximum working pressure: 10bar. Available setting: 6 bar. Minimum and maximum working temperatures: -20°C, 160°C. Opening overpressure: 20%. Closing differential: 20%. Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS



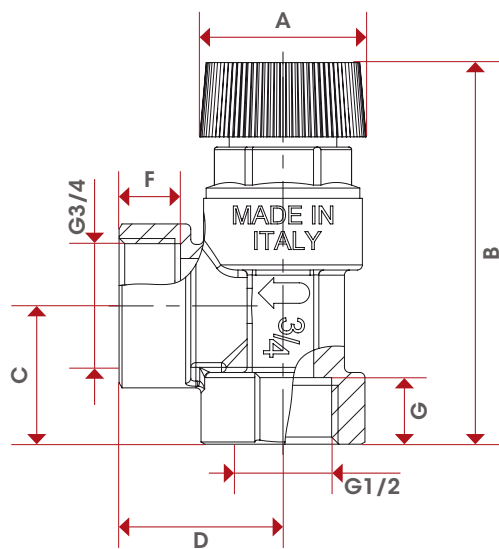
POS.	DESCRIPTION	N.	MATERIAL
-	Body	-	Brass CW617W
-	Seal	-	Brass CW617W
-	Plate	-	Brass CW617W
-	Spring stop	-	Brass CW617W
-	Spring	-	Stainless steel
-	Cylinder	-	EPDM
-	Washer	-	Fiber
-	Handle	-	MOPLÉN®





TEC

OVERALL DIMENSIONS



	3/4"
DN	20
A	31,5
B	75
C	26
D	32
F	12
G	13
Kg/cm ² bar	10
LBS - psi	145

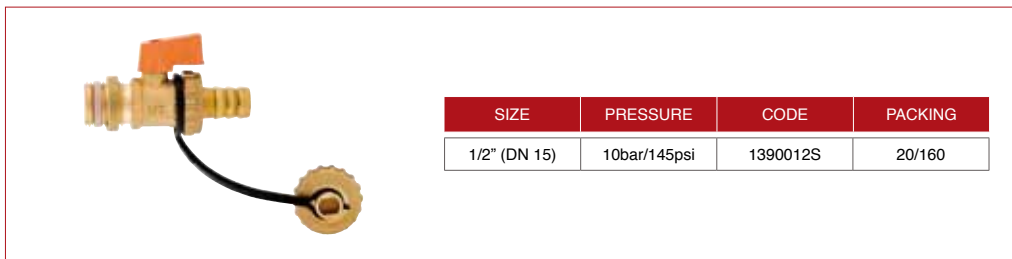
CERTIFICATIONS



RANGE

139S

DRAIN BALL VALVE
WITH BRASS HOSE
CONNECTION FOR
SOLAR HEATING
SYSTEMS



SIZE	PRESSURE	CODE	PACKING
1/2" (DN 15)	10bar/145psi	1390012S	20/160

TECHNICAL SPECIFICATIONS

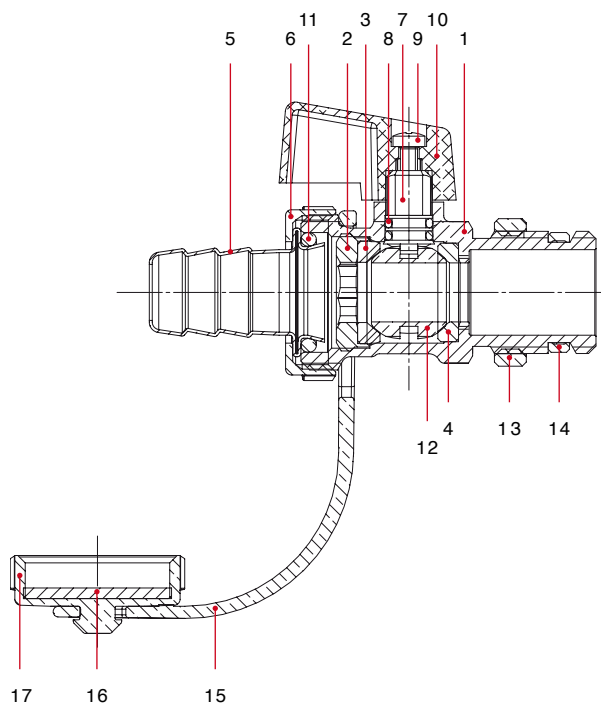
Body in brass.

Hose connection in brass.

Minimum and maximum working temperature: -10°C, 140°C.

Thread: ISO 228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

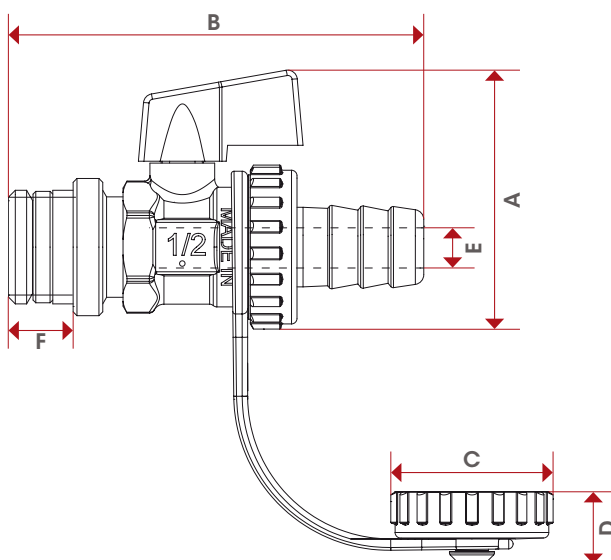
MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW617N
2	Washer	1	Brass CW614N
3	Seat for solar	1	P.T.F.E.
4	Seat	1	P.T.F.E.
5	Hose connection	1	Brass CW508L
6	Nut	1	Brass CW617N
7	Stem	1	Brass CW614N
8	O-Ring	2	VITON®
9	Screw	1	Steel C4C
10	Handle	1	Stainless steel AISI 12Cu2Fe UNI 5076/74
11	O-Ring	1	VITON®
12	Ball	1	Chrome-plated brass CW614N
13	Ring	1	Brass CW614N
14	Ring	1	P.T.F.E.
15	Strap	1	PIBIFLEX®
16	Washer	1	E.P.D.M.
17	Cap	1	Brass CW617N



OVERALL DIMENSIONS



	1/2"
DN	15
A	46,5
B	75,7
C	30
D	13
E	10
F	12
Kg/cm ² bar	10
LBS - psi	145

CERTIFICATIONS



982

3-WAY DIVERTER ZONE BALL VALVE



SIZE	PRESSURE	CODE	PACKING
3/4" (DN 20)	16bar/232psi	9820034	1/30
1" (DN 25)	16bar/232psi	9820100	1/18

TECHNICAL SPECIFICATIONS

Body in nickel-plated brass.

Full flow ball.

Maximum working pressure: 16bar.

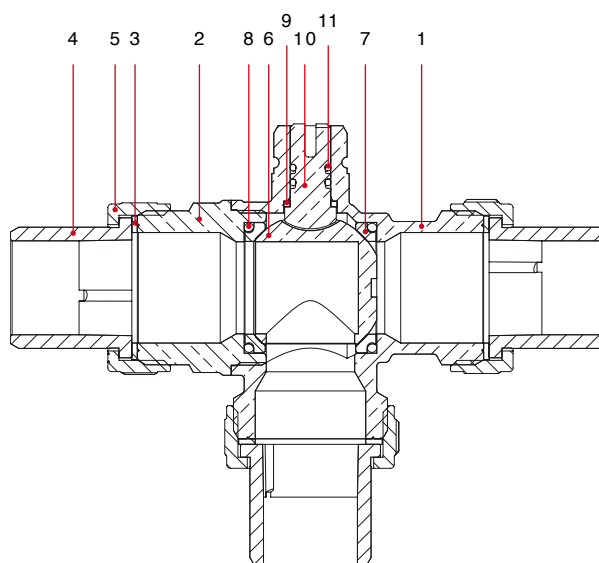
Maximum differential pressure: 10bar.

Minimum and maximum working temperatures: -10°C (with antifreeze solution), 100°C.

Threads ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Suitable for the electric actuators art. 990 and 991.

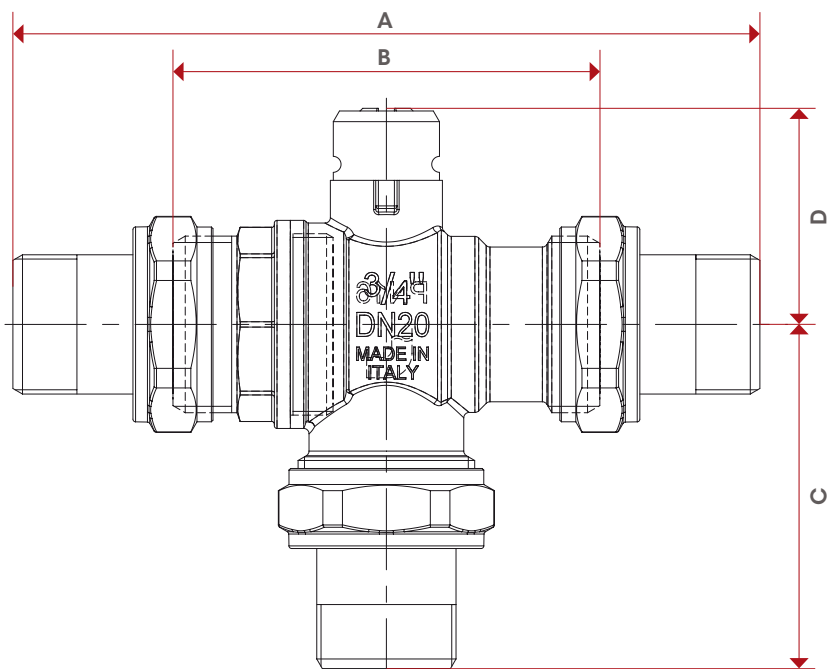
MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Nickel-plated brass CW617N
2	End adapter	1	Nickel-plated brass CW617N
3	Washer	3	Fibre
4	Union	3	Nickel-plated brass CW617N
5	Nut	3	Nickel-plated brass CW617N
6	Ball	1	Chrome-plated brass CW617N
7	Seat	2	P.T.F.E.
8	O-ring	2	EPDM
9	Ring	1	P.T.F.E.
10	Stem	1	Brass
11	O-Ring	2	EPDM

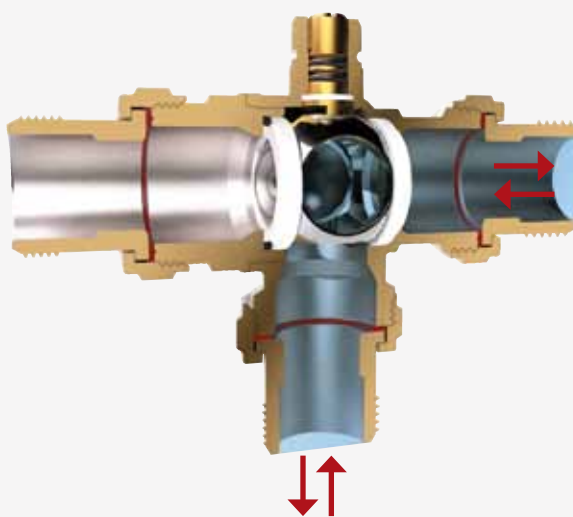
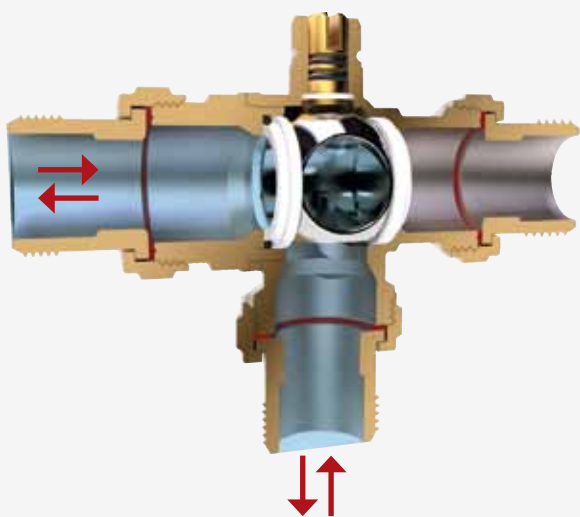


OVERALL
DIMENSIONS



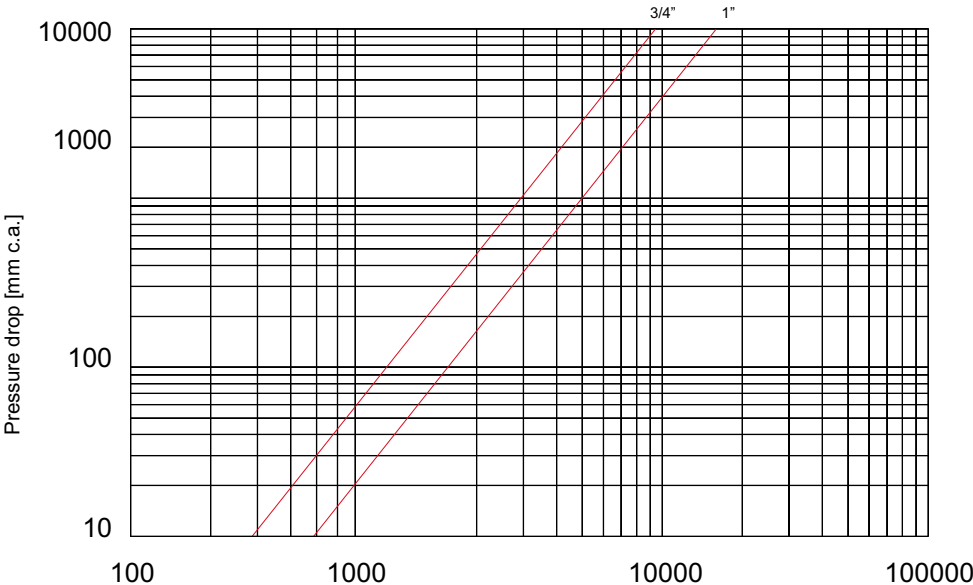
	3/4"	1"
DN	20	25
A	140	163
B	80	94
C	64,5	75,5
D	40,5	44,5
Kg/cm ² bar	16	16
LBS - psi	232	232

CERTIFICATIONS



PRESSURE DROP CHART

Art. 982 - 3/4" - 1"



Flow rate [l/h]

Art. 982	3/4"	1"
Kv [m3/h]	9,44	16,07



990

ELECTRIC ACTUATOR FOR ZONE BALL VALVES



SIZE	CODE	PACKING
230V x 25sec	99023025	1/18
230V x 50sec	99023050	1/18

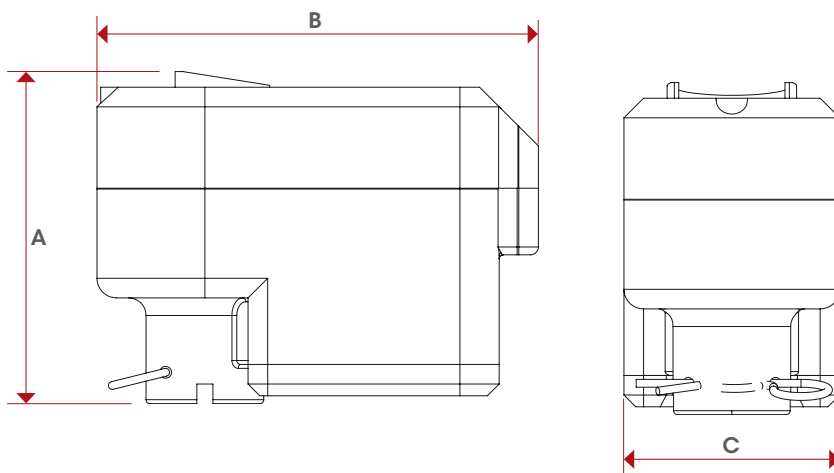
TECHNICAL SPECIFICATIONS

Bidirectional electric actuator. Supplied with an auxiliary microswitch.
 Case in nylon.
 Power supply voltage: 230V.
 Power consumption: 4VA.
 Minimum and maximum working ambient temperature: -5°C, 70°C.
 Class of protection: IP54.
 Capacity of the auxiliary connection: 2A.
 Operating time: 25 or 50 seconds.
 Angle of rotation: 90°.
 Starting torque: -50" model: 10Nm; -25" model: 5Nm.

MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
1	Base	1	Nylon
2	Up cover	1	Polycarbonate
3	Down cover	1	Nylon
4	Split pin	1	EN 10270-3

OVERALL DIMENSIONS



	<i>l</i>
A	85
B	112,5
C	55

CERTIFICATIONS



991

ELECTRIC ACTUATOR
FOR ZONE BALL
VALVES WITH MANUAL
UNLOCKING DEVICE



SIZE	CODE	PACKING
230V x 25sec	99123025	1/18
230V x 50sec	99123050	1/18
24V x 50sec	99102450	1/18

24V X 50sec:
Available for minimum order of 100 pieces.

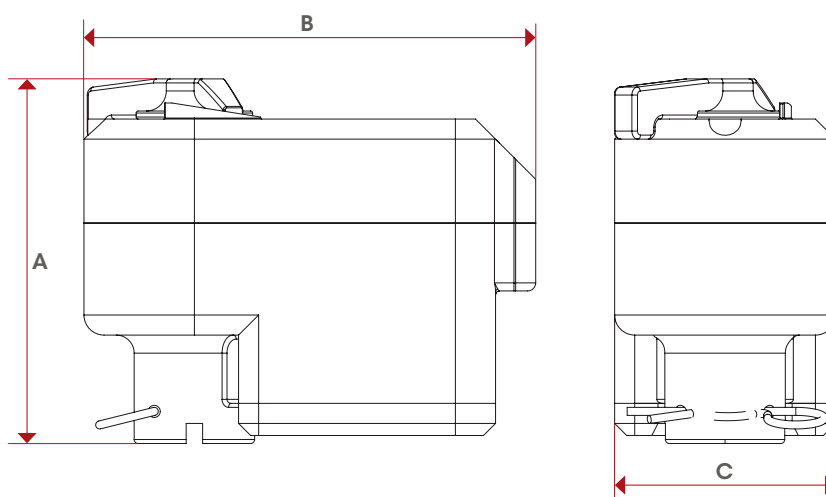
TECHNICAL SPECIFICATIONS

Bidirectional electric actuator.
Supplied with an auxiliary microswitch.
Case in nylon.
Power supply voltage: 230V or 24V.
Power consumption: 4VA.
Minimum and maximum working ambient temperature: -5°C, 70°C.
Class of protection: IP54.
Capacity of the auxiliary connection: 2A.
Operating time: 25 or 50 seconds.
Angle of rotation: 90°.
Starting torque: -50" model: 10Nm; -25" model: 5Nm.

MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
1	Base	1	Nylon
2	Up cover	1	Polycarbonate
3	Down cover	1	Nylon
4	Handle	1	ABS
5	Split pin	1	EN 10270-3

OVERALL DIMENSIONS



	l
A	91
B	120
C	55

CERTIFICATIONS

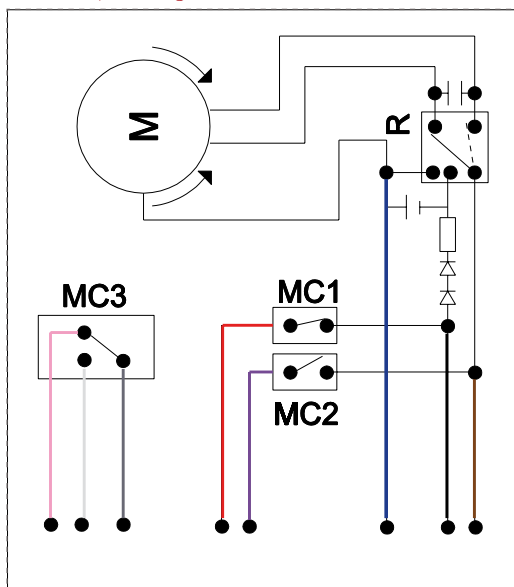


INTERNAL DIAGRAM

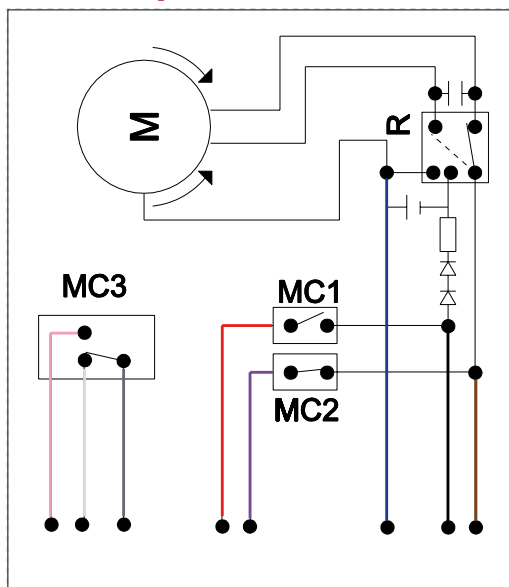
- R relay
- MC1 opening limit microswitch
- MC2 closing limit microswitch
- MC3 auxiliary free microswitch with normally closed and normally open contact

- 1) Brown wire always connected to phase
- 2) Blue wire always connected to neutral
- 3) Black wire for command connection
- 4) Purple wire closed valve phase output
- 5) Red wire open valve phase output
- 6) Grey wire common auxiliary microswitch
- 7) White wire N.C. auxiliary microswitch
- 8) Pink wire N.A. auxiliary microswitch

Valve opening

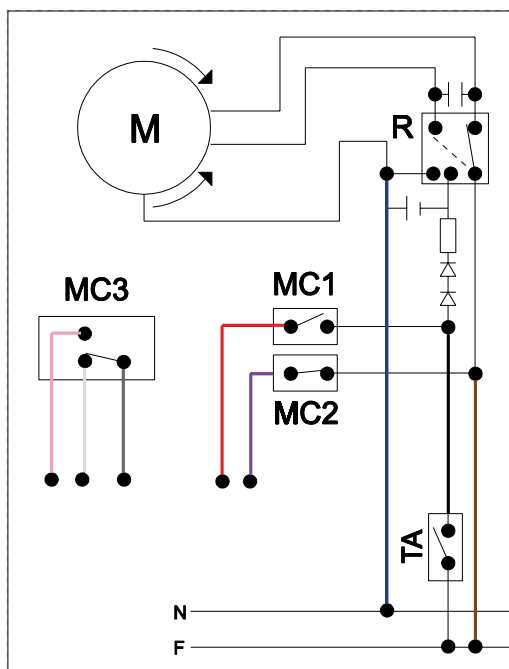


Valve closing



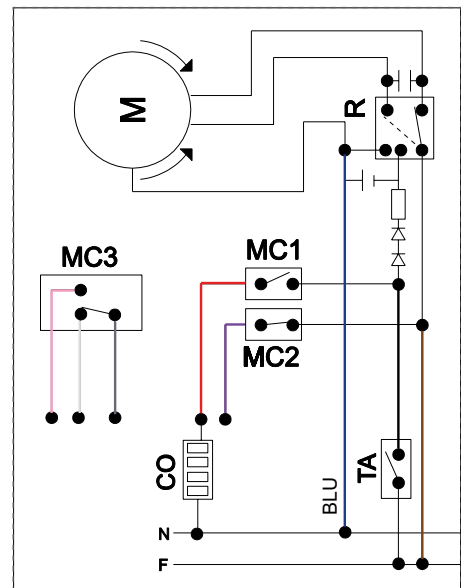
ENVIRONMENT THERMOSTAT (TA - ET) CONNECTION AND ELECTRICAL POWER SUPPLY DIAGRAM

The thermostat works by means of the zone valve, which opens or closes the distribution circuit of the interested zone based on environment needs. The Figure illustrates the electrical connection of the actuator with the environment thermostat.



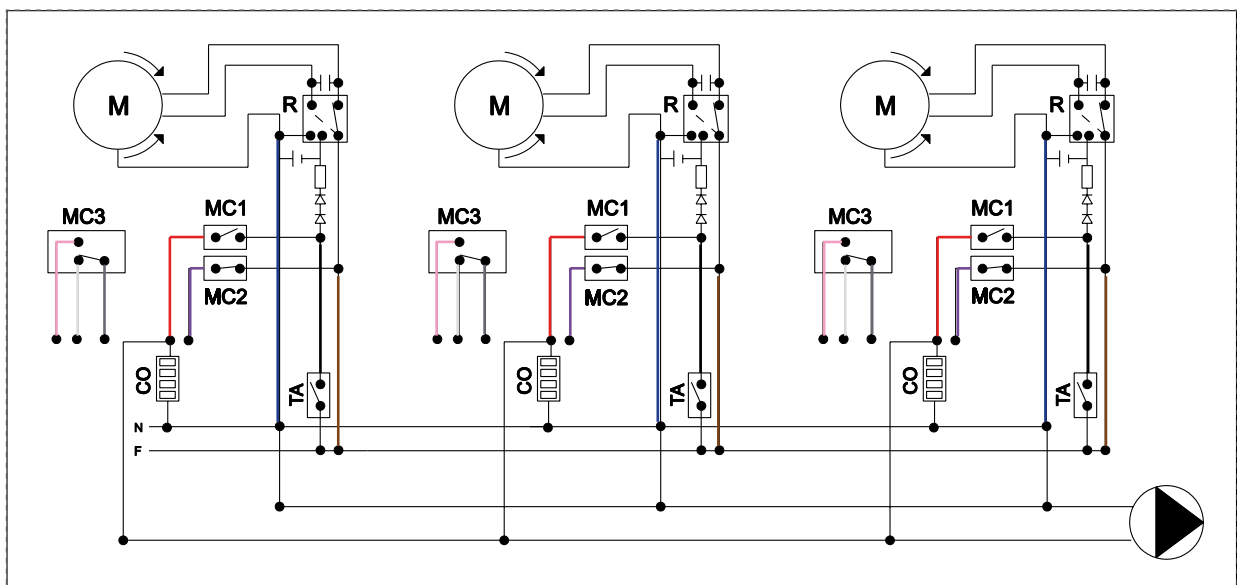
HOUR COUNTER (CO - HC) ENVIRONMENT THERMOSTAT (TA - ET) AND ELECTRICAL POWER CONNECTION DIAGRAM

The count is carried out by means of an hour counter, totalling the valve opening times. The Figure illustrated the electrical connection of the actuator with the hour counter.



PUMP MANAGEMENT DIAGRAM

The figure illustrates the connection of different actuators with the environment thermostat, the hour counter and the pump. In this diagram, the pump is fed by the phase available on the red wire. The special flexibility of the internal actuator wiring model allows you to have different plant solutions.





NOTES

A series of horizontal dashed lines for taking notes, starting from the top right of the 'NOTES' header and extending down the page.



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