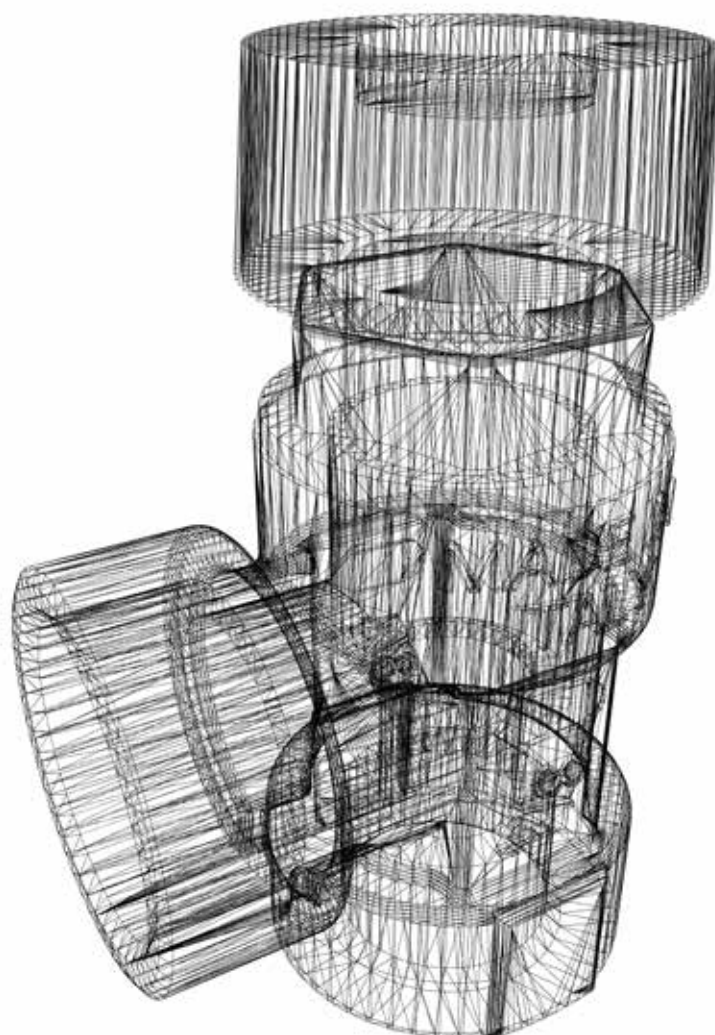




TECHNICAL CATALOGUE

ACCESSORIES FOR SOLAR HEATING SYSTEMS



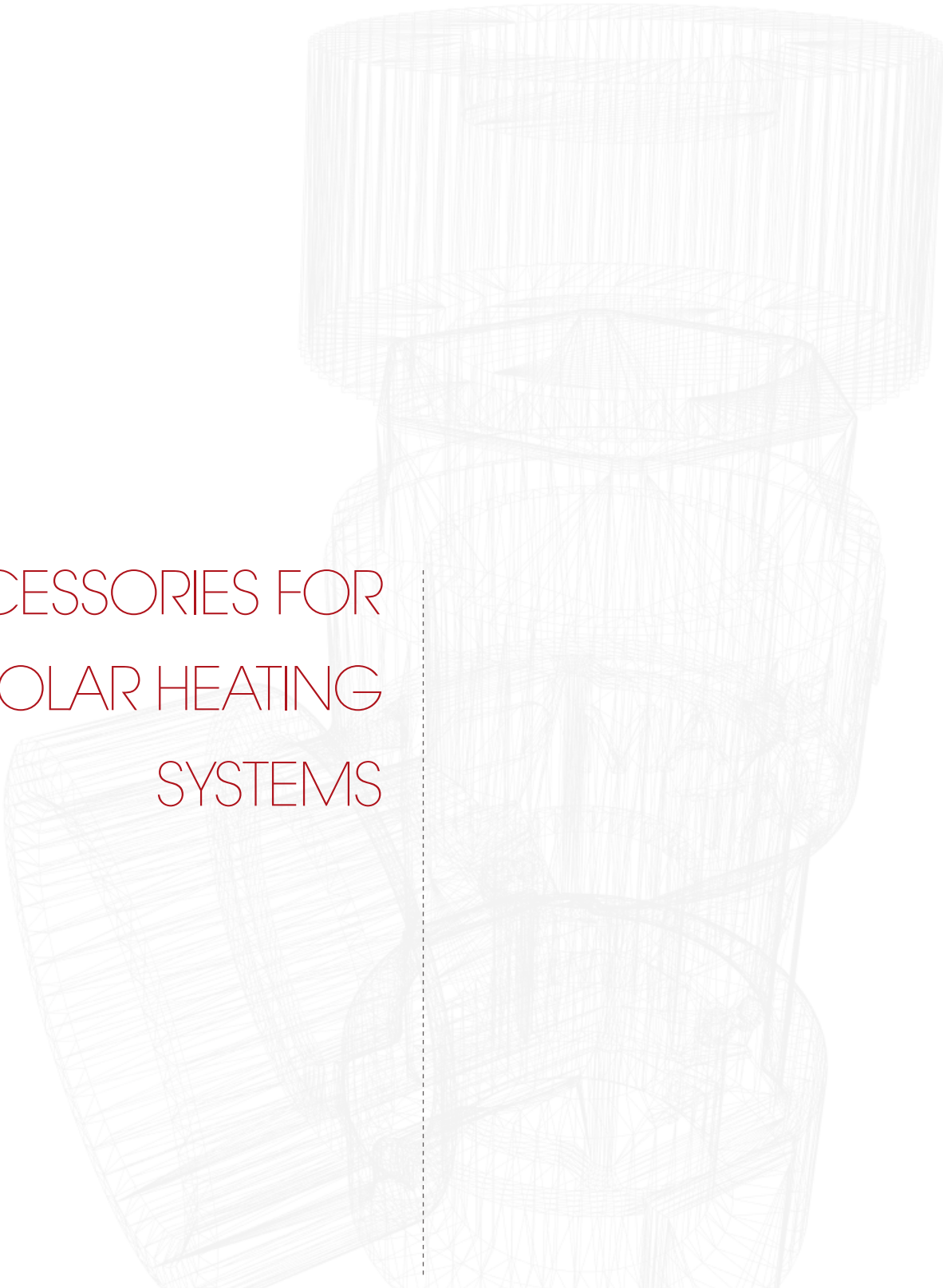


ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of valves, fittings and distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 72 tooling machines and 51 assembly lines, we are able to produce 200,000 pieces per day. Our innate pursuit for innovation and observance of technical regulations is supported by the company certification ISO 9001: 2008. The company has always considered its focus on quality as the main tool to obtain significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.





TEC

A large, light gray wireframe image of a solar heating system, showing a cylindrical tank at the top and a complex manifold with multiple collectors below it.

ACCESSORIES FOR SOLAR HEATING SYSTEMS

SOLAR HEATING

362S

AUTOMATIC AIR VENT
VALVE FOR SOLAR
HEATING SYSTEMS

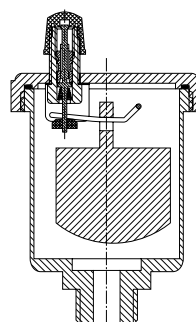


SIZE	PRESSURE	CODE	PACKING
3/8" (DN 10)	10bar/145psi	3620038S	10/120
1/2" (DN 15)	10bar/145psi	3620012S	10/120

TECHNICAL SPECIFICATIONS

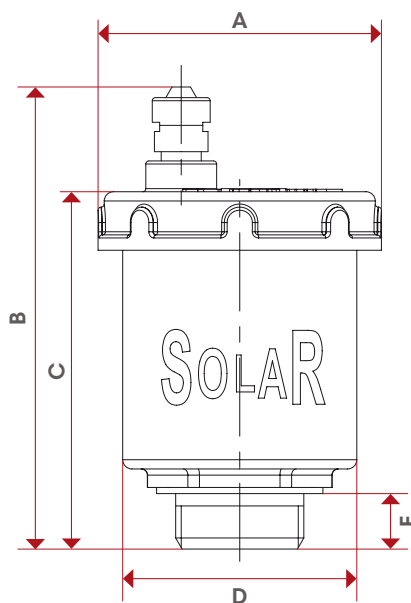
Body in nickel-plated brass.
Minimum and maximum working temperatures: -20°C, 180°C.
Nominal pressure: 10 bar.
Thread ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
-	Body	-	Brass UNI EN 1982
-	Cap	-	Brass UNI EN 1982
-	Float	-	HADSTIF 840 K
-	Cap	-	Brass CW614N
-	O-Ring	-	Red Silicone
-	Mechanism	-	Brass CW614N

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

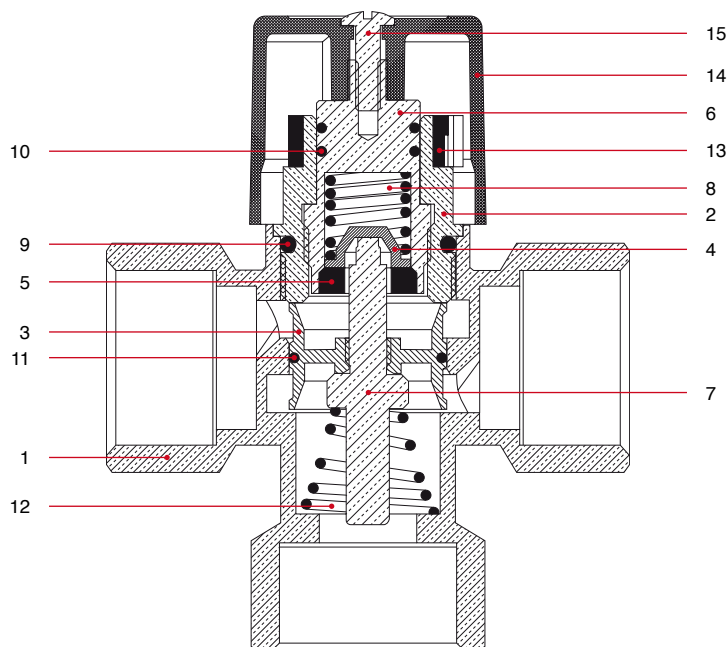


SIZE	PRESSURE	CODE	PACKING
3/4" (DN 20)	10bar/145psi	4570034	1/24
1" (DN 25)	10bar/145psi	4750100	1/24

TECHNICAL SPECIFICATIONS

Body in yellow brass (3/4"); nickel-plated brass (1"). Female threads.
Maximum operating pressure: 10 bar. Minimum operating pressure: 2bar.
Maximum ratio between input pressures= 2:1.
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).

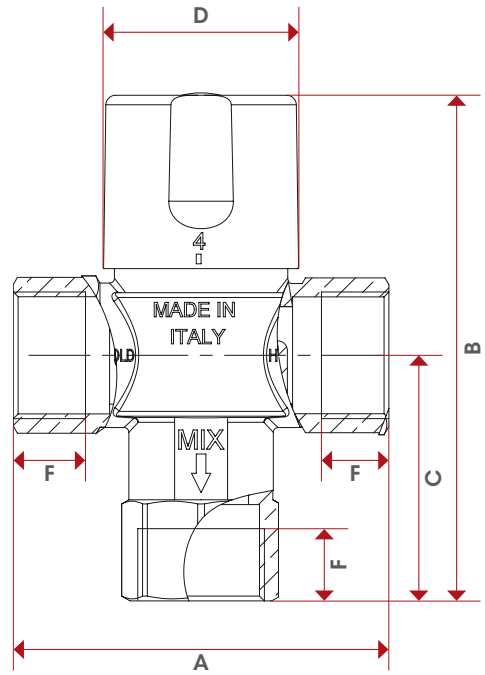
MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW510L
2	Head screw	1	Brass CW510L
3	Piston	1	Brass CW510L
4	Small piston	1	Brass CW510L
5	Ring	1	Brass CW510L
6	Stem	1	Brass CW510L
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



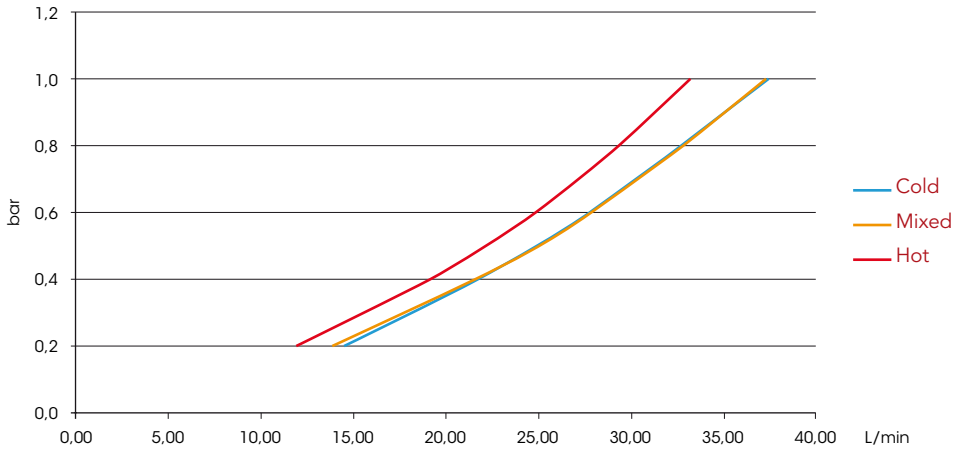
	3/4"	1"
DN	20	25
A	78	88,5
B	105	103
C	50,5	49
D	40,5	40,5
F	15	16,5
Kg/cm² bar	10	10
LBS - psi	145	145

CERTIFICATIONS

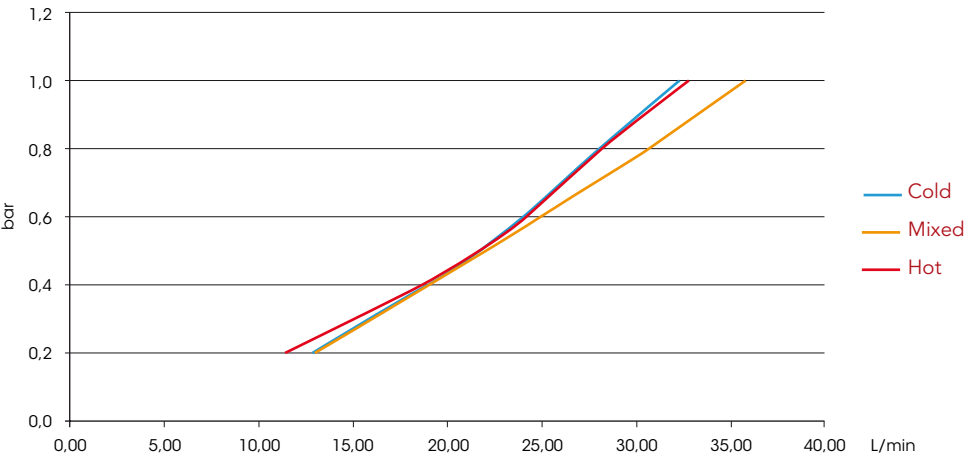


PRESSURE
DROPS
DIAGRAM

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	1/60

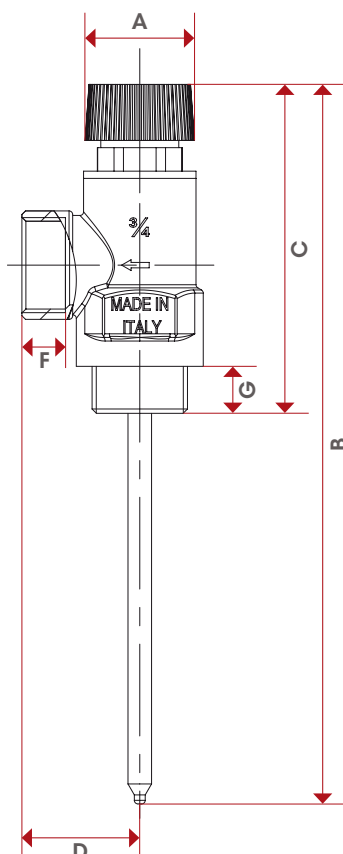
TECHNICAL SPECIFICATIONS

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 antidezincification 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/cm² bar	10
LBS - psi	145

CERTIFICATIONS



478

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



SIZE	PRESSURE	CODE	PACKING
1/2"x3/4"	10bar/145psi	4780012	10/100

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.

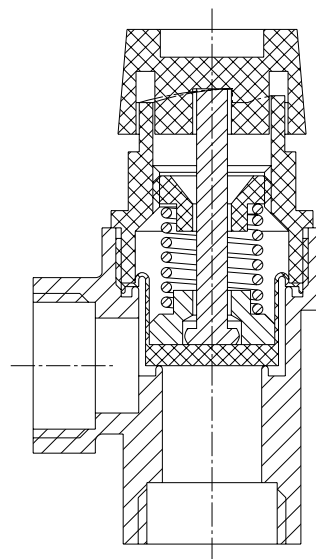
Minimum and maximum working temperatures: -20°C, 160°C.

Opening overpressure: 20%.

Closing differential: 20%.

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

MATERIALS



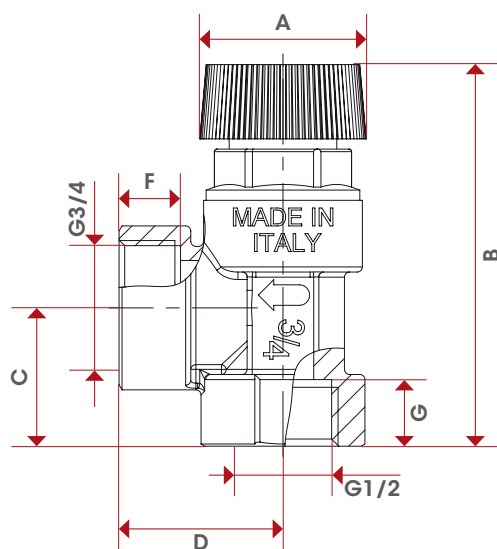
POS.	DESCRIPTION	N.	MATERIAL
-	Body	-	Brass CW617W
-	Seal	-	Brass CW617W
-	Plate	-	Brass CW617W
-	Spring stop	-	Brass CW617W
-	Spring	-	Stainless steel
-	Cylinder	-	EPDM
-	Washer	-	Fiber
-	Handle	-	MOPLen®





TEC

OVERALL DIMENSIONS



CERTIFICATIONS



	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

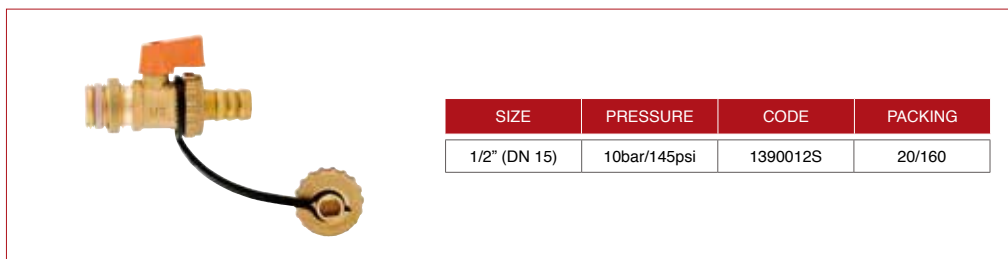
RANGE

139S

DRAIN BALL VALVE
WITH BRASS HOSE
CONNECTION FOR
SOLAR HEATING
SYSTEMS

TECHNICAL SPECIFICATIONS

MATERIALS

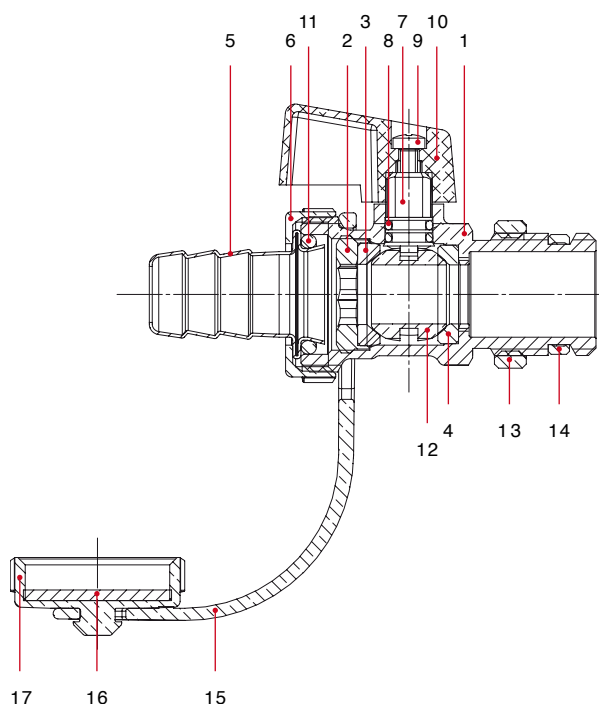


Body in brass.

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).



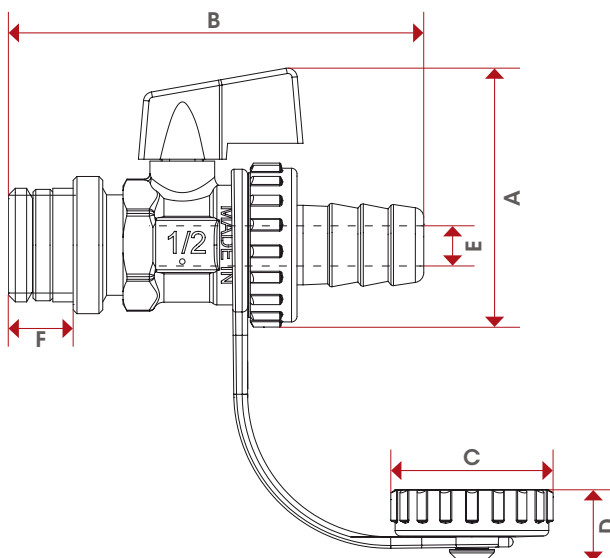
POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW617N
2	Washer	1	Brass CW614N
3	Seat for solar	1	P.T.F.E.
4	Seat	1	P.T.F.E.
5	Hose connection	1	Brass CW508L
6	Nut	1	Brass CW617N
7	Stem	1	Brass CW614N
8	O-Ring	2	VITON®
9	Screw	1	Steel C4C
10	Handle	1	Stainless steel AISI 12Cu2Fe UNI 5076/74
11	O-Ring	1	VITON®
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





TEC

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

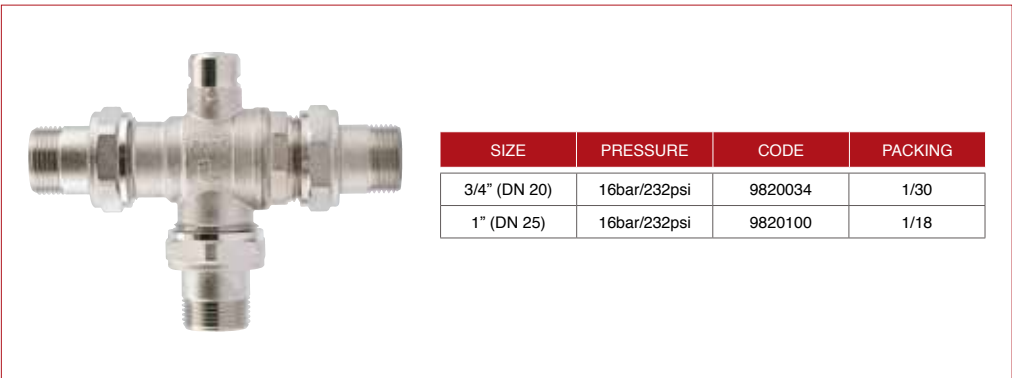
CERTIFICATIONS



RANGE

982

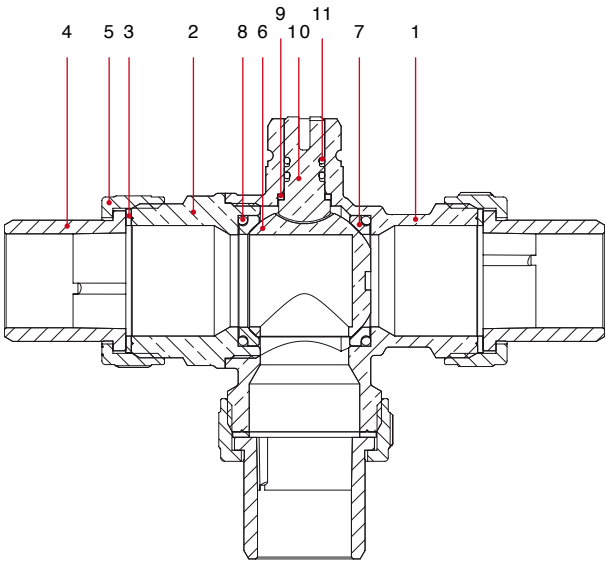
3-WAY DIVERTER
ZONE BALL VALVE



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

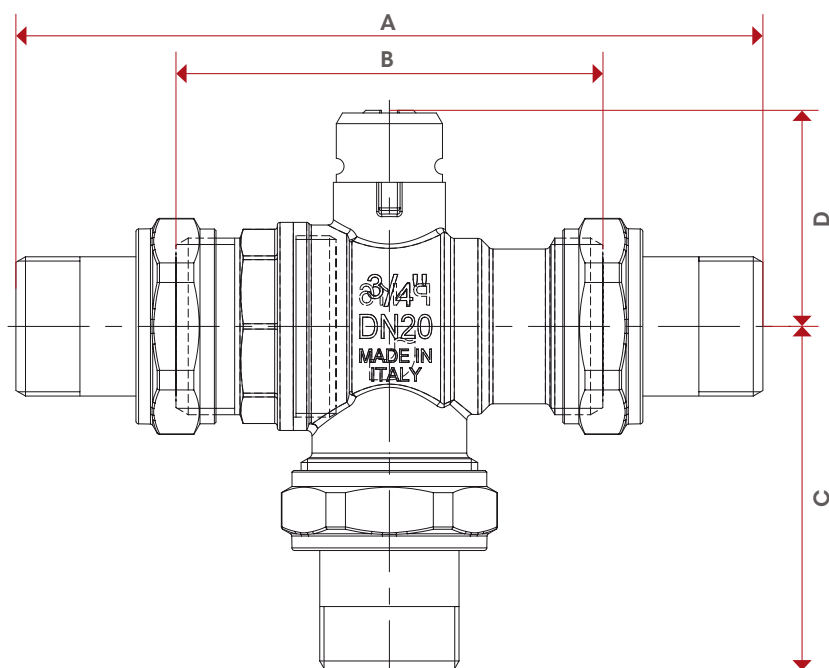


POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Nickel-plated brass CW617N
2	End adapter	1	Nickel-plated brass CW617N
3	Washer	3	Fibre
4	Union	3	Nickel-plated brass CW617N
5	Nut	3	Nickel-plated brass CW617N
6	Ball	1	Chrome-plated brass CW617N
7	Seat	2	P.T.F.E.
8	O-ring	2	EPDM
9	Ring	1	P.T.F.E.
10	Stem	1	Brass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



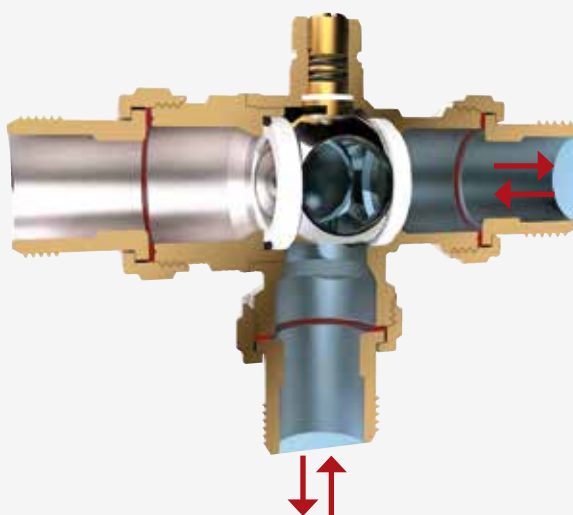
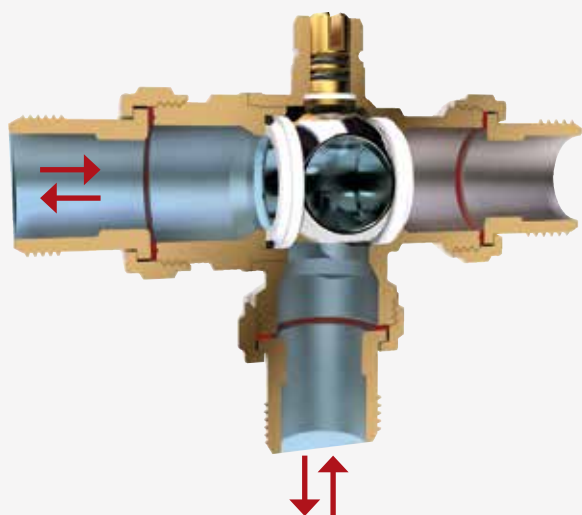
TEC

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

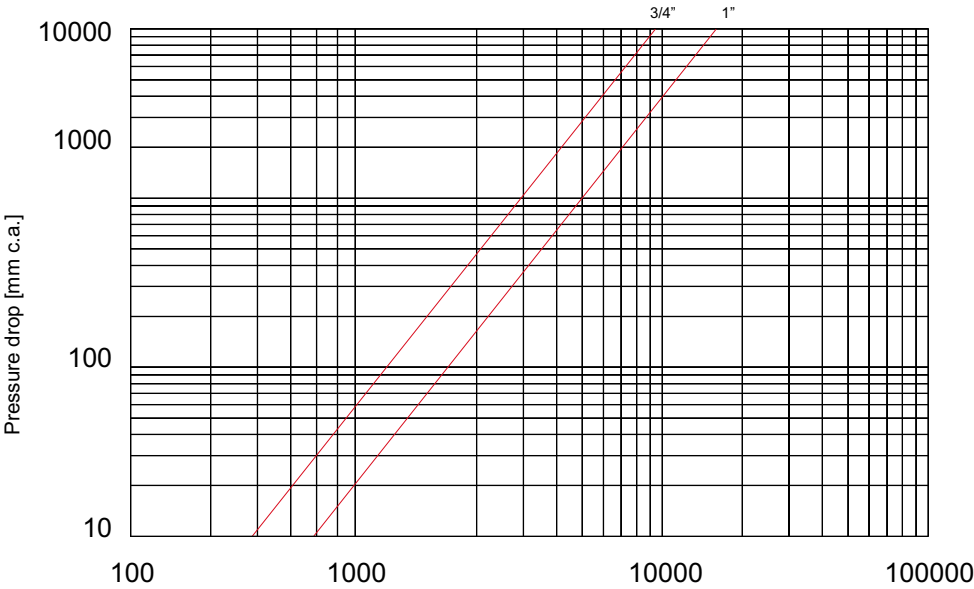
CERTIFICATIONS



RANGE

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.

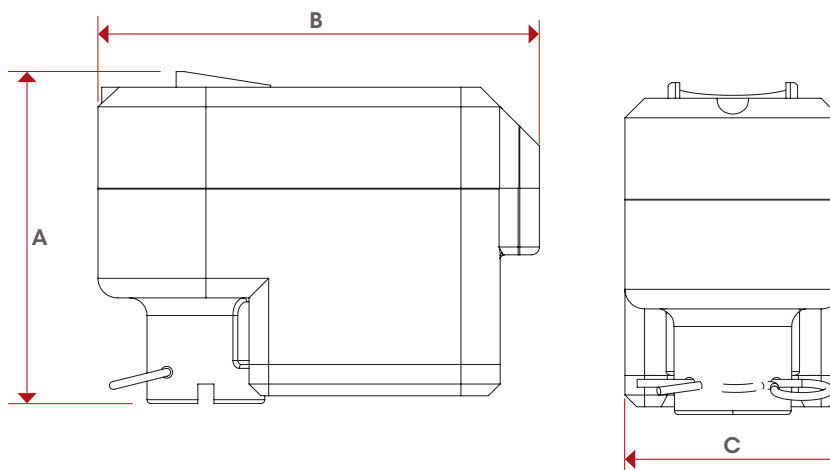
Angle of rotation: 90°.

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



	/
A	85
B	112,5
C	55

CERTIFICATIONS



991

ELECTRIC ACTUATOR
FOR ZONE BALL
VALVES WITH MANUAL
UNLOCKING DEVICE

TECHNICAL
SPECIFICATIONS



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

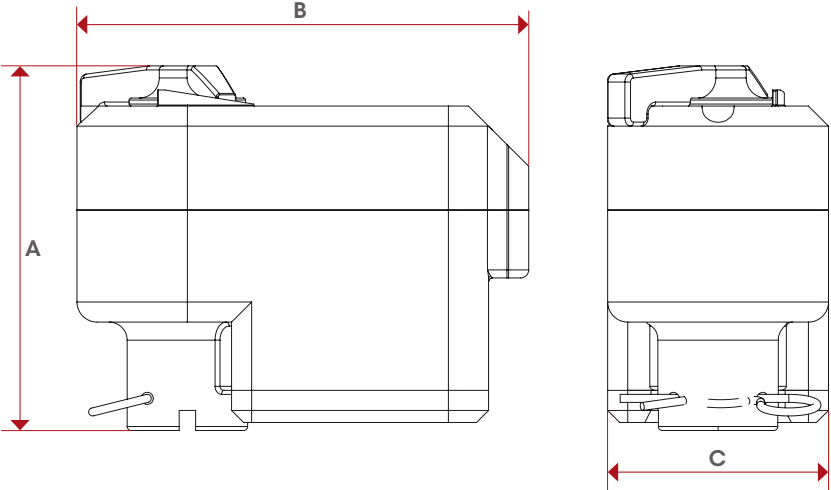
24V X 50sec:
Available for minimum order of 100 pieces.

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



	/
A	91
B	120
C	55

CERTIFICATIONS

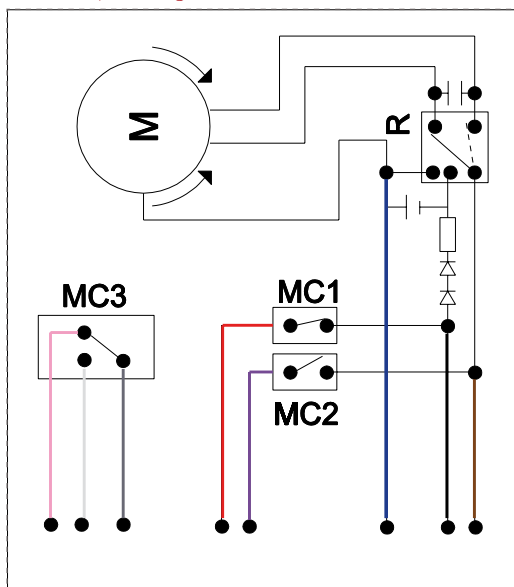


INTERNAL DIAGRAM

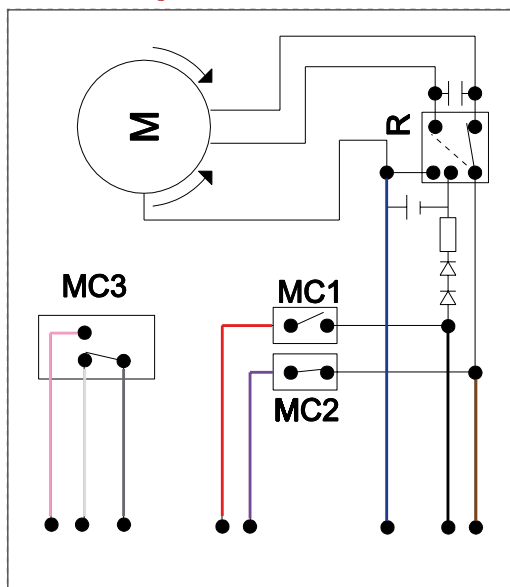
- R relay
- MC1 opening limit microswitch
- MC2 closing limit microswitch
- MC3 auxiliary free microswitch with normally closed and normally open contact

- 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

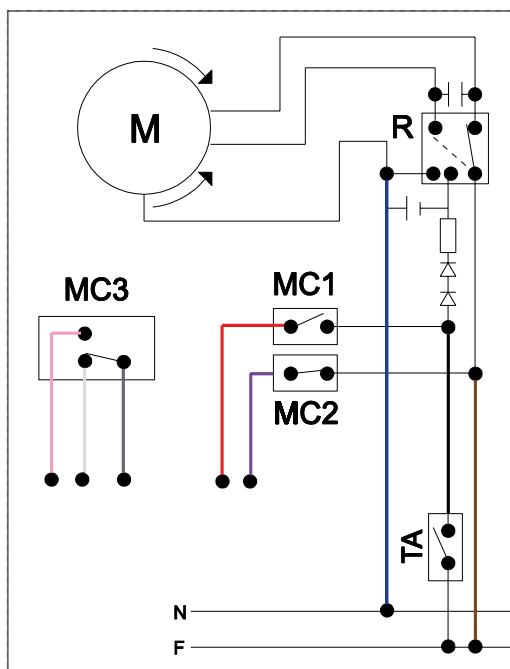


Valve closing



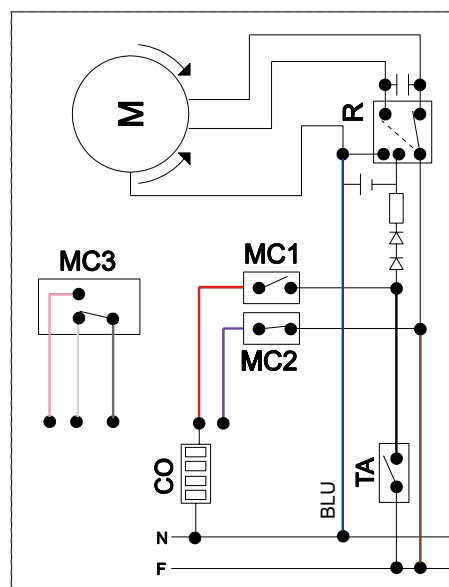
ENVIRONMENT THERMOSTAT (TA - ET) CONNECTION AND ELECTRICAL POWER SUPPLY DIAGRAM

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.

