

TECHNICAL CATALOGUE

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DISTRIBUTION MANIFOLD  
MADE OUT OF BRASS BAR  
AND STAINLESS STEEL





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 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 technical regulations in force is supported by the company certification ISO 9001: 2008. 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.



DISTRIBUTION MANIFOLDS





DISTRIBUTION  
MANIFOLD  
MADE OUT OF  
BRASS BAR AND  
STAINLESS STEEL

**ITAP MANIFOLDS ARE  
USED TO DISTRIBUTE  
HEAT-TRANSFER FLUID  
INSIDE A SYSTEM.**

# 852

DISTRIBUTION MANIFOLD  
IN STAINLESS STEEL,  
CENTRES DISTANCE  
MM.50



SIZE	PRESSURE	CODE	PACKING
1" x 2	10bar/145psi	85201000250	6/96
1" x 3	10bar/145psi	85201000350	6/72
1" x 4	10bar/145psi	85201000450	6/24
1" x 5	10bar/145psi	85201000550	6/24
1" x 6	10bar/145psi	85201000650	6/24
1" x 7	10bar/145psi	85201000750	3/36
1" x 8	10bar/145psi	85201000850	3/12
1" x 9	10bar/145psi	85201000950	3/12
1" x 10	10bar/145psi	85201001050	3/12
1" x 11	10bar/145psi	85201001150	3/12
1" x 12	10bar/145psi	85201001250	3/12
1" x 13	10bar/145psi	85201001350	3/12

## TECHNICAL SPECIFICATIONS

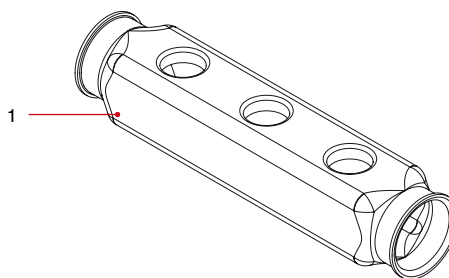
Manifolds in stainless steel AISI 304L with female outlets, suitable for fittings for copper, PEX, polybutylene or multilayer piping.

Maximum working temperature: 110°C.

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

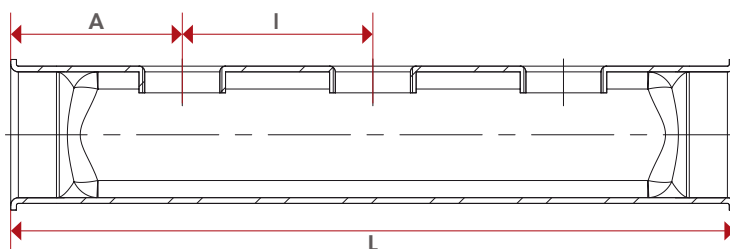
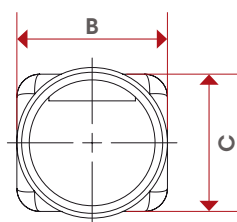
Size of the outlets: 1/2" F.

## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Stainless steel AISI 304 L

## OVERALL DIMENSIONS



L=50	1"
L-2	143
L-3	193
L-4	243
L-5	293
L-6	343
L-7	393
L-8	443
L-9	493
L-10	543
L-11	593
L-12	643
L-13	693
A	45
B	39,5
C	36
Kg/cm <sup>2</sup> bar	10
LBS - psi	145

## CERTIFICATIONS



# 862

DISTRIBUTION MANIFOLD  
IN STAINLESS STEEL,  
BILATERAL OUTLETS,  
CENTRES DISTANCE  
MM.50



SIZE	PRESSURE	CODE	PACKING
1" x 2	10bar/145psi	86201000250	6/96
1" x 3	10bar/145psi	86201000350	6/72
1" x 4	10bar/145psi	86201000450	6/24
1" x 5	10bar/145psi	86201000550	6/24
1" x 6	10bar/145psi	86201000650	6/24
1" x 7	10bar/145psi	86201000750	3/36
1" x 8	10bar/145psi	86201000850	3/12
1" x 9	10bar/145psi	86201000950	3/12
1" x 10	10bar/145psi	86201001050	3/12
1" x 11	10bar/145psi	86201001150	3/12
1" x 12	10bar/145psi	86201001250	3/12
1" x 13	10bar/145psi	86201001350	3/12

## TECHNICAL SPECIFICATIONS

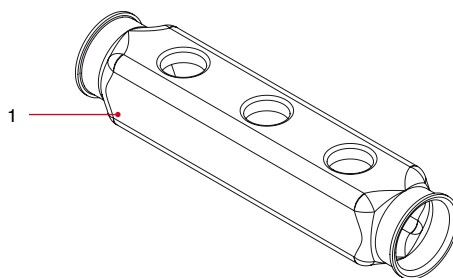
Manifolds in stainless steel AISI 304L with female outlets, suitable for fittings for copper, PEX, polybutylene or multilayer piping.

Maximum working temperature: 110°C.

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

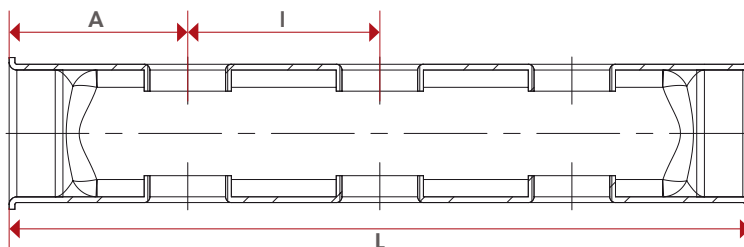
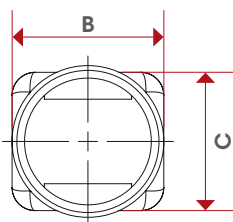
Size of the outlets: 1/2" F.

## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Stainless steel AISI 304 L

## OVERALL DIMENSIONS



I=50	1"
L-2+2	143
L-3+3	193
L-4+4	243
L-5+5	293
L-6+6	343
L-7+7	393
L-8+8	443
L-9+9	493
L-10+10	543
L-11+11	593
L-12+12	643
L-13+13	693
A	45
B	39,5
C	36
Kg/cm <sup>2</sup> bar	10
LBS - psi	145

## CERTIFICATIONS





# 850/38

DISTRIBUTION  
MANIFOLD  
MADE OUT OF  
BRASS BAR



SIZE	PRESSURE	CODE	PACKING
3/4" x 2	10bar/145psi	85000340238	6/90
3/4" x 3	10bar/145psi	85000340338	6/60
3/4" x 4	10bar/145psi	85000340438	6/42
3/4" x 5	10bar/145psi	85000340538	6/36
3/4" x 6	10bar/145psi	85000340638	6/30
3/4" x 7	10bar/145psi	85000340738	3/27
3/4" x 8	10bar/145psi	85000340838	3/21
3/4" x 9	10bar/145psi	85000340938	3/21
3/4" x 10	10bar/145psi	85000341038	3/21

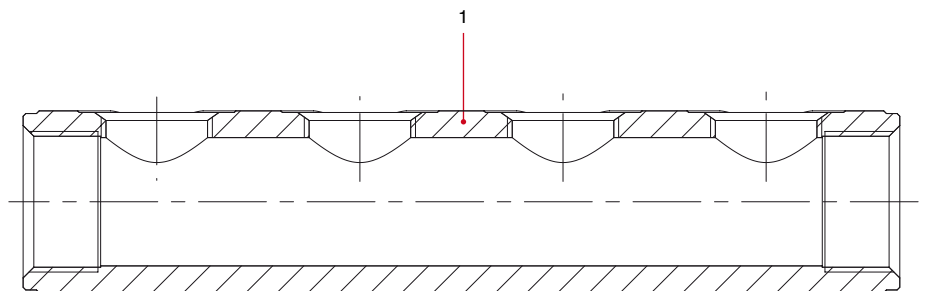
SIZE	PRESSURE	CODE	PACKING
1" x 2	10bar/145psi	85001000238	6/60
1" x 3	10bar/145psi	85001000338	6/48
1" x 4	10bar/145psi	85001000438	6/30
1" x 5	10bar/145psi	85001000538	6/30
1" x 6	10bar/145psi	85001000638	6/30
1" x 7	10bar/145psi	85001000738	6/24
1" x 8	10bar/145psi	85001000838	3/15
1" x 9	10bar/145psi	85001000938	3/15
1" x 10	10bar/145psi	85001001038	3/15
1" x 11	10bar/145psi	85001001138	3/15
1" x 12	10bar/145psi	85001001238	3/15

## TECHNICAL SPECIFICATIONS

Distribution manifold made out of profiled brass bars with female outlets, suitable for fittings for copper, PEX, polybutylene or multilayer piping. Maximum working temperature: 110°C. Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228). Size of the outlets: 1/2" F.

**Centres distance mm.38.**

## MATERIALS

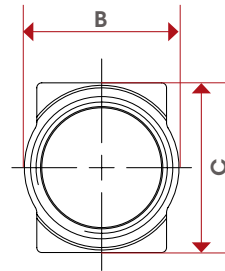
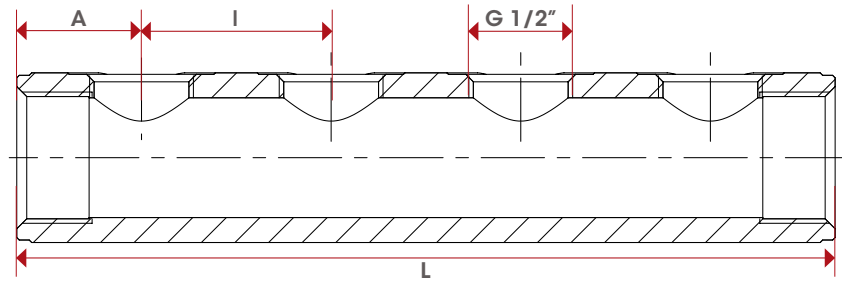


POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW603N M-S





OVERALL DIMENSIONS



	3/4"	1"
	l=38	l=38
L-2	88	98
L-3	126	136
L-4	164	174
L-5	202	212
L-6	240	250
L-7	278	288
L-8	316	326
L-9	354	364
L-10	392	402
L-11		440
L-12		478
A	25	30
B	31	37,5
C	34	37
Kg/cm <sup>2</sup> bar	10	10
LBS - psi	145	145

CERTIFICATIONS



# 850/50

DISTRIBUTION  
MANIFOLD  
MADE OUT OF  
BRASS BAR



SIZE	PRESSURE	CODE	PACKING
3/4" x 2	10bar/145psi	85000340250	6/78
3/4" x 3	10bar/145psi	85000340350	6/42
3/4" x 4	10bar/145psi	85000340450	6/36
3/4" x 5	10bar/145psi	85000340550	6/30
3/4" x 6	10bar/145psi	85000340650	6/24
3/4" x 7	10bar/145psi	85000340750	3/21
3/4" x 8	10bar/145psi	85000340850	3/18
3/4" x 9	10bar/145psi	85000340950	3/18
3/4" x 10	10bar/145psi	85000341050	3/15

SIZE	PRESSURE	CODE	PACKING
1" x 2	10bar/145psi	85001000250	6/60
1" x 3	10bar/145psi	85001000350	6/30
1" x 4	10bar/145psi	85001000450	6/30
1" x 5	10bar/145psi	85001000550	6/30
1" x 6	10bar/145psi	85001000650	6/24
1" x 7	10bar/145psi	85001000750	3/15
1" x 8	10bar/145psi	85001000850	3/15
1" x 9	10bar/145psi	85001000950	3/15
1" x 10	10bar/145psi	85001001050	3/15
1" x 11	10bar/145psi	85001001150	3/12
1" x 12	10bar/145psi	85001001250	3/12

SIZE	PRESSURE	CODE	PACKING
1"1/4 x 2	10bar/145psi	85001140250	6/48
1"1/4 x 3	10bar/145psi	85001140350	6/24
1"1/4 x 4	10bar/145psi	85001140450	6/24
1"1/4 x 5	10bar/145psi	85001140550	6/18
1"1/4 x 6	10bar/145psi	85001140650	6/18
1"1/4 x 7	10bar/145psi	85001140750	3/12
1"1/4 x 8	10bar/145psi	85001140850	3/12
1"1/4 x 9	10bar/145psi	85001140950	3/9
1"1/4 x 10	10bar/145psi	85001141050	3/9
1"1/4 x 11	10bar/145psi	85001141150	3/9
1"1/4 x 12	10bar/145psi	85001141250	3/9

## TECHNICAL SPECIFICATIONS

Distribution manifold made out of profiled brass bars with female outlets, suitable for fittings for copper, PEX, polybutylene or multilayer piping.

Maximum working temperature: 110°C.

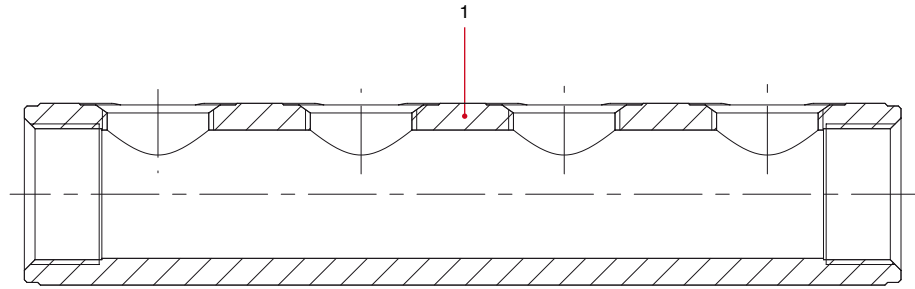
Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Size of the outlets: 1/2" F.

**Centres distance mm. 50.**

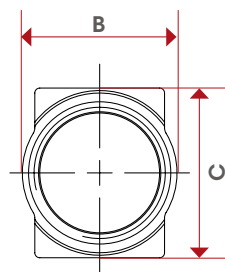
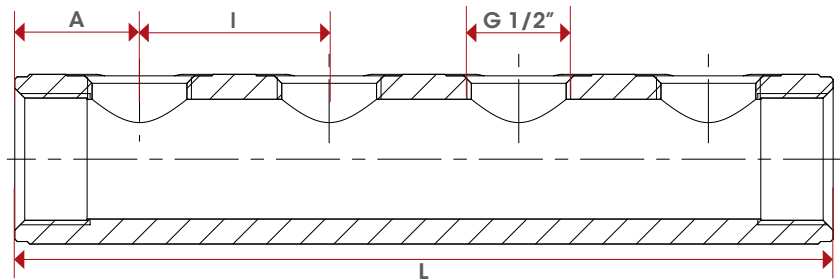


## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW603N M-S

## OVERALL DIMENSIONS



	3/4"	1"	1 1/4"
	l=50	l=50	l=50
L-2	100	110	110
L-3	150	160	160
L-4	200	210	210
L-5	250	260	260
L-6	300	310	310
L-7	350	360	360
L-8	400	410	410
L-9	450	460	460
L-10	500	510	510
L-11		560	560
L-12		610	610
A	25	30	30
B	31	37,5	47
C	34	37	50
Kg/cm <sup>2</sup> bar	10	10	10
LBS - psi	145	145	145

BRASS BAR

## CERTIFICATIONS



# 860

DISTRIBUTION  
MANIFOLD  
MADE OUT  
OF BRASS BAR,  
BILATERAL OUTLETS



SIZE	PRESSURE	CODE	PACKING
1" x 2	10bar/145psi	86001000250	6/60
1" x 3	10bar/145psi	86001000350	6/30
1" x 4	10bar/145psi	86001000450	6/30
1" x 5	10bar/145psi	86001000550	6/30
1" x 6	10bar/145psi	86001000650	6/24
1" x 7	10bar/145psi	86001000750	3/15
1" x 8	10bar/145psi	86001000850	3/15
1" x 9	10bar/145psi	86001000950	3/15
1" x 10	10bar/145psi	86001001050	3/15
1" x 11	10bar/145psi	86001001150	3/15
1" x 12	10bar/145psi	86001001250	3/12

SIZE	PRESSURE	CODE	PACKING
1"1/4 x 2	10bar/145psi	86001140250	6/48
1"1/4 x 3	10bar/145psi	86001140350	6/30
1"1/4 x 4	10bar/145psi	86001140450	6/30
1"1/4 x 5	10bar/145psi	86001140550	6/18
1"1/4 x 6	10bar/145psi	86001140650	6/18
1"1/4 x 7	10bar/145psi	86001140750	3/12
1"1/4 x 8	10bar/145psi	86001140850	3/12
1"1/4 x 9	10bar/145psi	86001140950	3/12
1"1/4 x 10	10bar/145psi	86001141050	3/9
1"1/4 x 11	10bar/145psi	86001141150	3/9
1"1/4 x 12	10bar/145psi	86001141250	3/9

## TECHNICAL SPECIFICATIONS

Distribution manifold made out of profiled brass bars with female outlets, suitable for fittings for copper, PEX, polybutylene or multilayer piping. Maximum working temperature: 110°C.

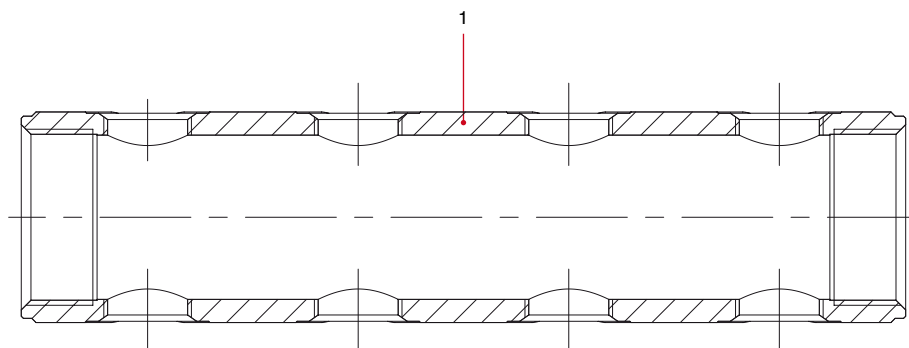
Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Size of the outlets: 1/2" F.

**Bilateral outlets.**

**Centres distance mm. 50.**

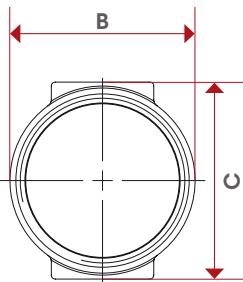
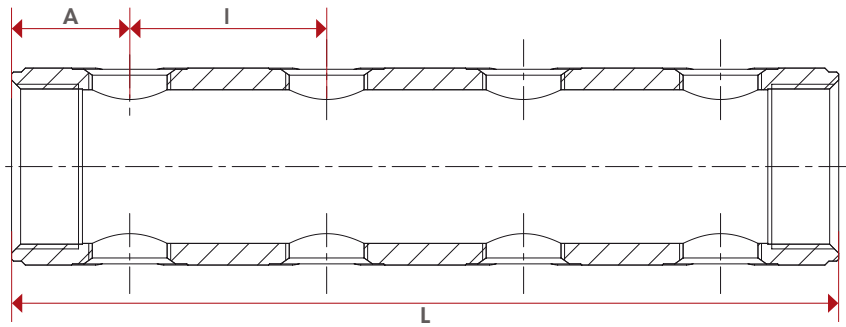
## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Body	1	Brass CW603N M-S



OVERALL DIMENSIONS



	1"	1 1/4"
	<b>l=50</b>	<b>l=50</b>
L-2+2	110	110
L-3+3	160	160
L-4+4	210	210
L-5+5	260	260
L-6+6	310	310
L-7+7	360	360
L-8+8	410	410
L-9+9	460	460
L-10+10	510	510
L-11+11	560	560
L-12+12	610	610
A	30	30
B	37,5	47
C	37	50
Kg/cm <sup>2</sup> bar	10	10
LBS - psi	145	145

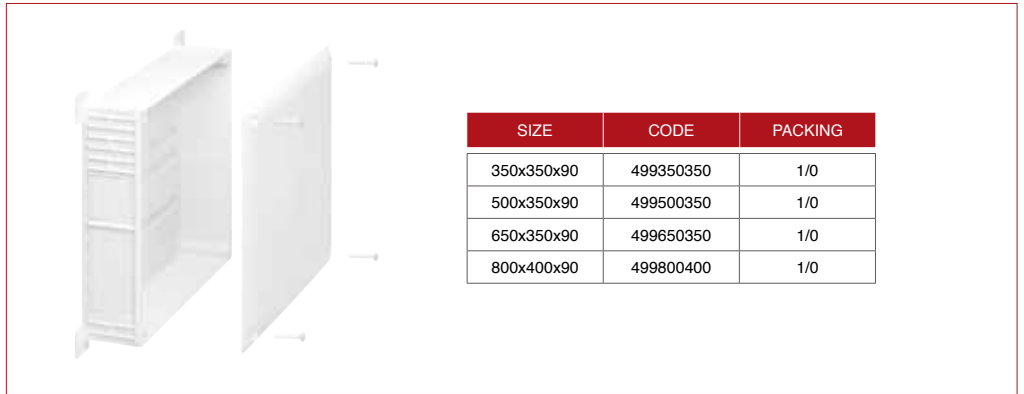
CERTIFICATIONS



BRASS BAR

# 499

UNIVERSAL  
PLASTIC BOX  
FOR MANIFOLDS



## TECHNICAL SPECIFICATIONS

ITAP plastic box with the kit art. 499CS and 499CC is suitable for the use with manifolds of any manufacturer.

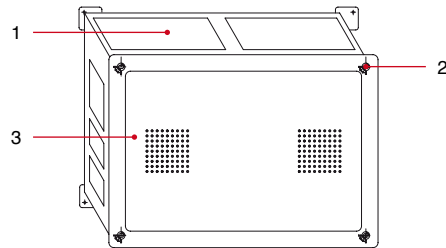
The cover is equipped with ventilation holes. Supplied with a removable shield to protect the manifolds from the plastering holes.

Available sizes:

mm.350xmm.350, mm.500xmm.350,  
mm.650xmm.350, mm.800xmm.400.

Usable depth: mm.90, mm.95.

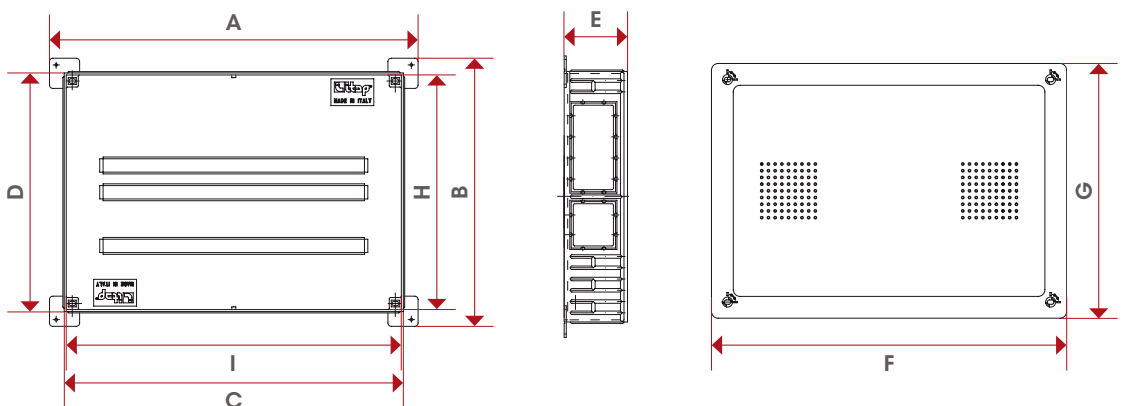
## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Box	1	Polystyrene PS
2	Screw	4	Nylon
3	Cover	1	Polystyrene PS

## OVERALL DIMENSIONS

	350 x 350 x 90	500 x 350 x 90	650 x 350 x 90	800 x 400 x 95
A	400	550	700	850
B	400	400	400	450
C	360	510	660	810
D	360	360	360	410
E	90	90	90	95
F	380	530	680	830
G	380	380	380	430
H	350	500	650	800
I	350	350	350	400



# 499CS

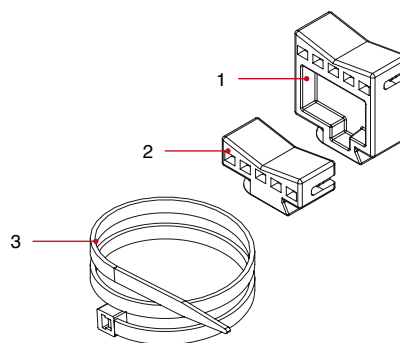
SET TO FIX SIMPLE  
MANIFOLDS TO  
THE PLASTIC BOX



## TECHNICAL SPECIFICATIONS

Consisting of: 2 long brackets, 2 short brackets, 4 plastic strips.  
**Suitable for simple forged or cast manifolds.**

## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Bracket	2	Polypropylene
2	Bracket	2	Polypropylene
3	Plastic strip	2	Nylon

# 499CC

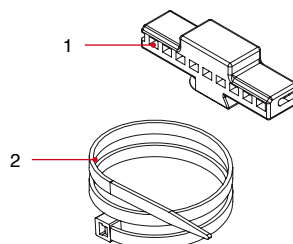
SET TO FIX DUAL  
MANIFOLDS TO  
THE PLASTIC BOX



## TECHNICAL SPECIFICATIONS

Consisting of: 2 brackets for dual manifolds, 2 plastic strips.  
**Suitable for dual manifolds.**

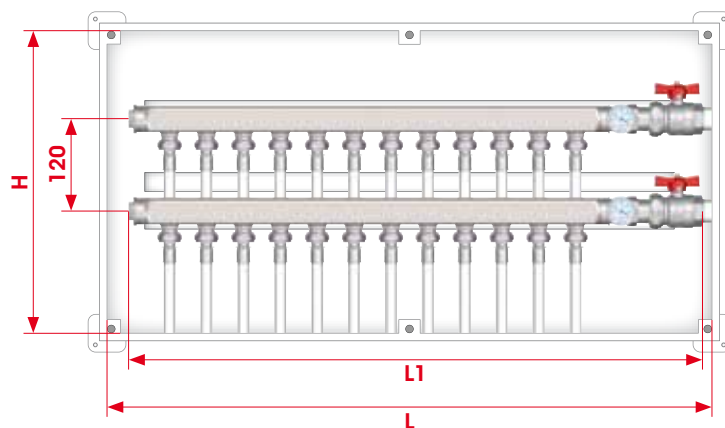
## MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Bracket	2	Polypropylene
2	Plastic strip	2	Nylon

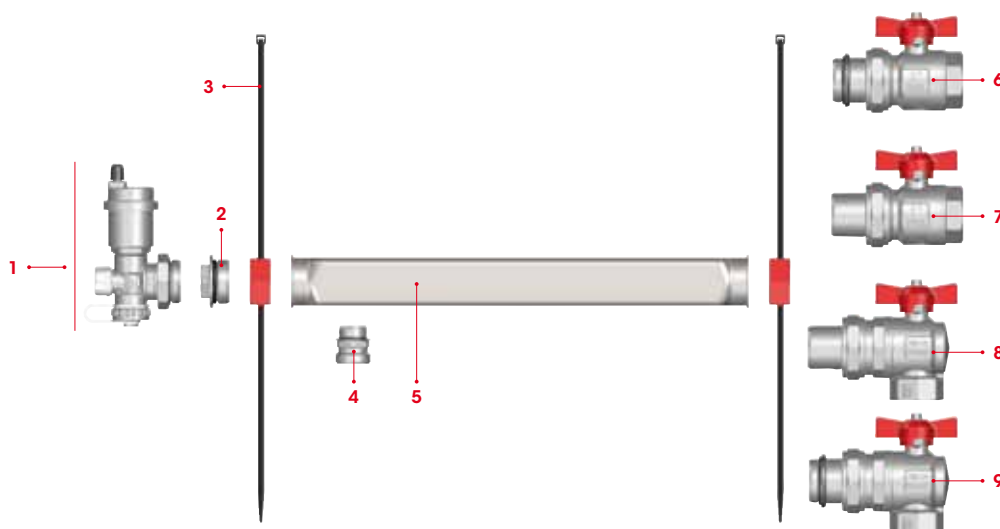


## POSITIONING THE MANIFOLD ART. 852 INTO PLASTIC BOXES



CODE	499.350.350	499.500.350	499.650.350	499.800.400
LxH (mm)	350x350	500x350	650x350	800x400
Outlets	3	6	9	12
MANIFOLD	1"			
L1	315	465	615	765

## ACCESSORIES CHART ART. 852 FOR PLASTIC BOXES



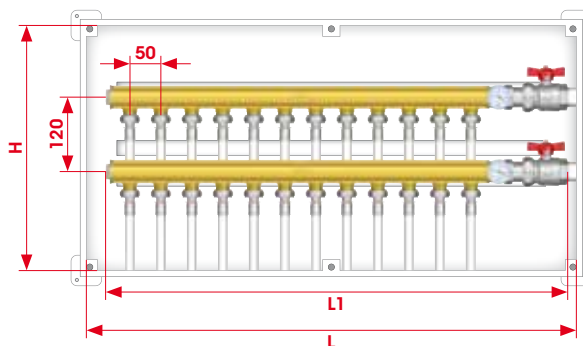
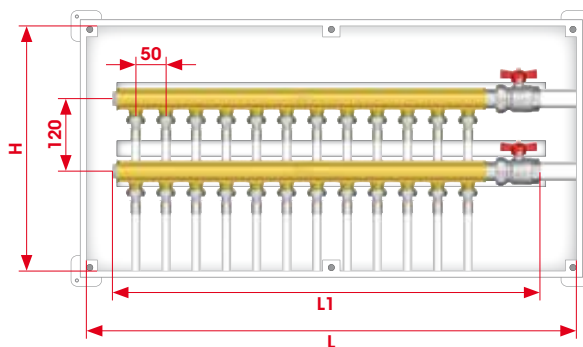
POS	ART	DESCRIPTION
1	489AR	Adjustable end piece with drain valve and automatic air vent valve
2	494	Male end cap with o-ring
3	499CS	Plastic strip to fix the manifold
4	518	Male/male adapter
5	852	Distribution manifold in stainless steel
6	098S	Ball valve for manifolds with o-ring on the union
7	098	Ball valve for manifolds
8	298	Angle ball valve for manifolds
9	298S	Angle ball valve for manifolds with o-ring on the union

## POSITIONING THE MANIFOLD ART. 850 INTO PLASTIC BOXES

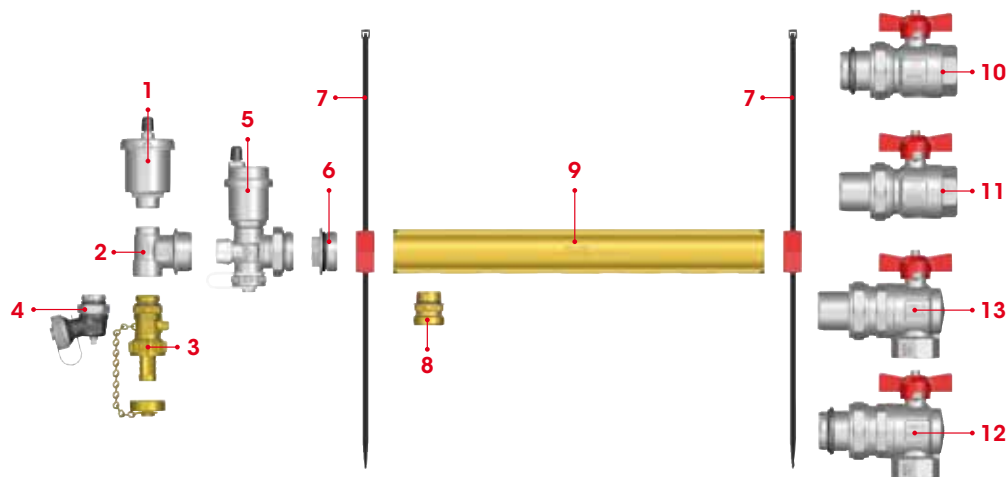
CODE	499.350.350	499.500.350	499.650.350	499.800.400
LxH (mm)	350x350	500x350	650x350	800x400
Outlets	5	8	10	
MANIFOLD	3/4"			
L1	330	480	580	

CODE	499.350.350	499.500.350	499.650.350	499.800.400
LxH (mm)	350x350	500x350	650x350	800x400
Outlets	4	7	10	12
MANIFOLD	1"			
L1	335	485	635	735

CODE	499.350.350	499.500.350	499.650.350	499.800.400
LxH (mm)	350x350	500x350	650x350	800x400
Outlets	3	6	9	12
MANIFOLD	1 1/4"			
L1	300	450	600	750



## ACCESSORIES CHART ART. 850 FOR PLASTIC BOX



POS	ART	DESCRIPTION
1	362/362R	Automatic air vent valve
2	490	Male 3-way end fitting for manifold
3	139	Drain ball valve with brass hose connection
4	489SO	Adjustable drain cock
5	489AR	Adjustable end piece with drain valve and automatic air vent valve
6	494	Male end cap with o-ring
7	499CS	Set to fix simple manifolds to box
8	518	Male/male adapter
9	850	Distribution manifold made out of brass bar
10	098S	Ball valve for manifolds with o-ring on the union
11	098	Ball valve for manifolds
12	298S	Angle ball valve for manifolds with o-ring on the union
13	298	Angle ball valve for manifolds

# 498

## METAL BOX FOR MANIFOLDS



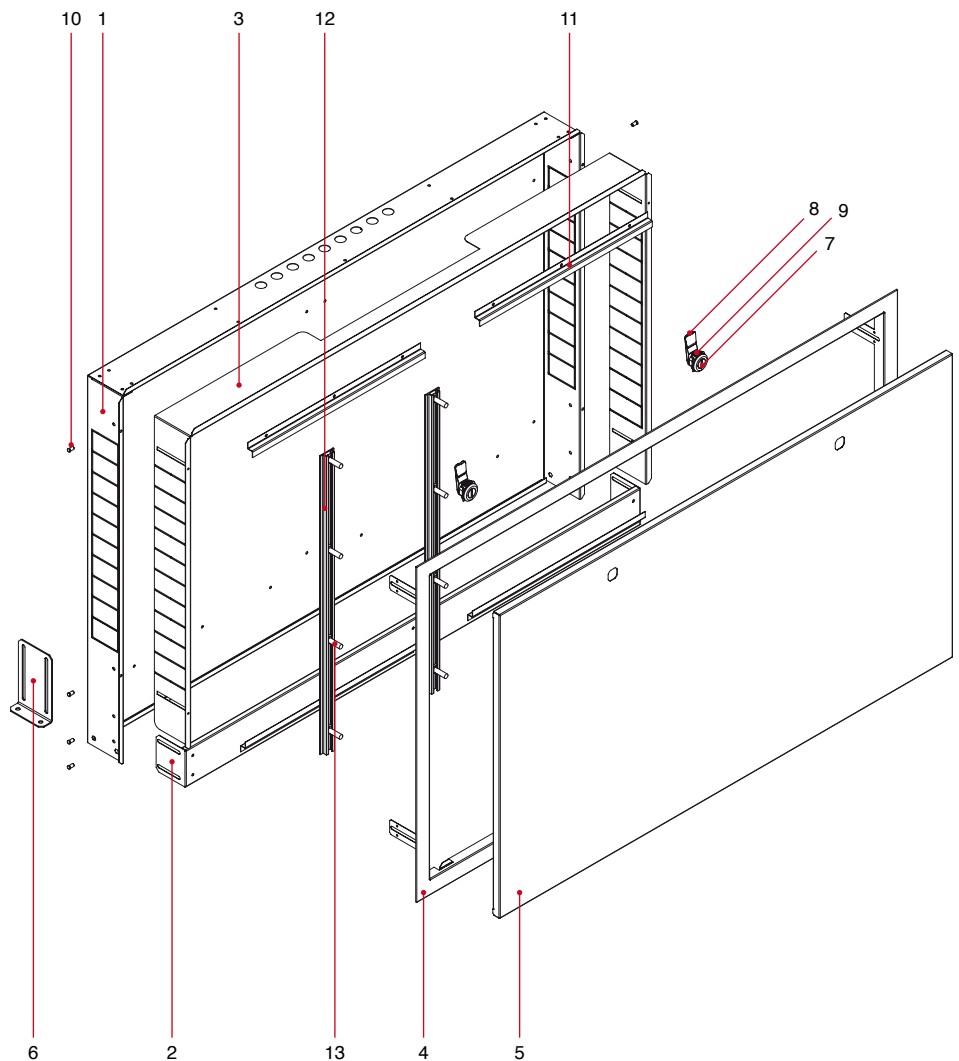
SIZE	CODE	PACKING
500x600x(80-130)	498500600	1/1
600x600x(80-130)	498600600	1/1
700x600x(80-130)	498700600	1/1
800x600x(80-130)	498800600	1/1
1000x600x(80-130)	4981000600	1/1
1100x600x(80-130)	4981100600	1/1

### TECHNICAL SPECIFICATIONS

Complete with basement and support for floor installation. Equipped with plaster protection.

Enclosure, telescopic door frame and door in zincplated steel. The telescopic door frame and the door are painted. Adjustable depth: from mm. 80 to mm. 130. Minimum depth for Itap manifolds installation: mm. 90. Adjustable height: from mm. 700 to mm. 800.

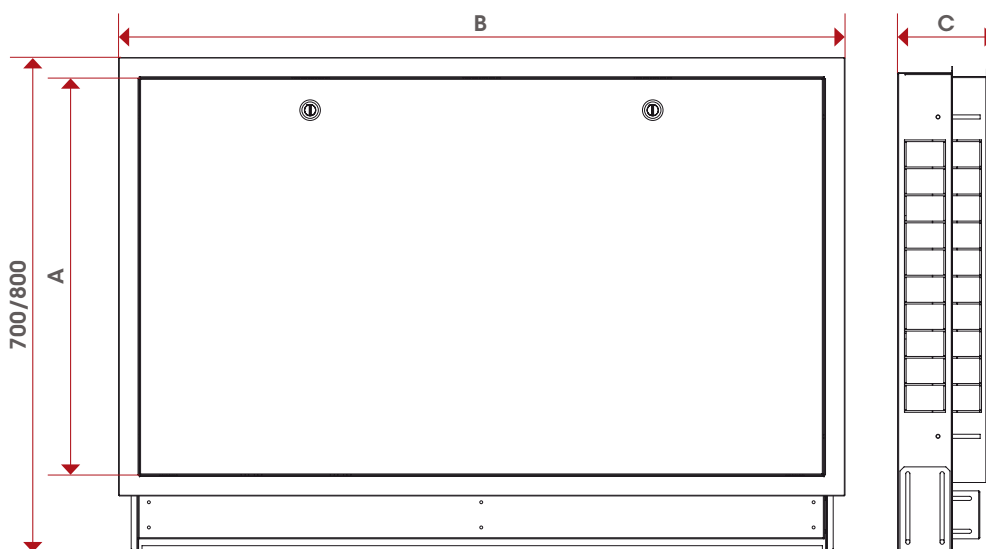
### MATERIALS



## MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
1	Outside framework	1	Zinc-plated steel EN 10346 DX51+Z140
2	Bottom framework	1	Zinc-plated steel EN 10346 DX51+Z140
3	Inside framework	1	Zinc-plated steel EN 10346 DX51+Z140
4	Frame	1	Zinc-plated steel EN 10346 DX51+Z140
5	Cover	1	Zinc-plated steel EN 10346 DX51+Z140
6	Bracket	2	Zinc-plated steel EN 10346 DX51+Z140
7	Sleeve	2	Polymer
8	Lever	2	Polymer
9	Lever locker	2	Polymer
10	Pin	8	Steel 8.8
11	Guide	4	Zinc-plated steel EN 10346 DX51+Z140
12	Stick	2	EN AW-6061
13	Screw	8	Steel 8.8
-	Daubing mesh	1	Polypropylene

## OVERALL DIMENSIONS



	500 x 600 x (80 - 130)	600 x 600 x (80 - 130)	700 x 600 x (80 - 130)	800 x 600 x (80 - 130)	1000 x 600 x (80 - 130)	1100 x 600 x (80 - 130)
<b>A</b>	600	600	600	600	600	600
<b>B</b>	500	600	700	800	1000	1100
<b>C</b>	80 - 130	80 - 130	80 - 130	80 - 130	80 - 130	80 - 130

# 498ST

MOUNTING BRACKETS  
IN STEEL FOR METAL  
BOXES ART. 498



Centres distance mm. 200.  
Offset mm. 12.

SIZE	CODE	PACKING
3/4"	498ST034K	1/40
1"	498ST100K	1/40
1 1/4"	498ST114K	1/40



Centres distance mm. 200.  
Offset mm. 30.

SIZE	CODE	PACKING
1"	498ST100KM	1/40
1 1/4"	498ST114KM	1/40



Centres distance mm. 211.  
Offset mm. 30.

SIZE	CODE	PACKING
1"	498ST100KMB	1/40

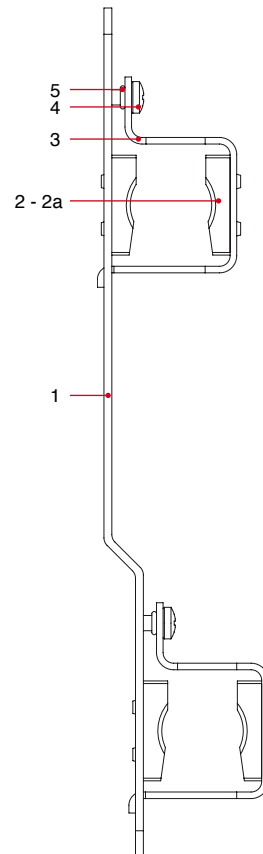
## TECHNICAL SPECIFICATIONS

The set includes a pair of brackets with screws and fixings.

For installation in box art. 498:

- 498STK: standard version. Offset: 12 mm. Suitable for outlets pipe up to 20mm.
- 498STKM: deeper version. Offset: 30 mm. Suitable for outlets pipe up to 25mm.
- 498STKMB: deeper version. Offset: 30 mm. Suitable for outlets pipe up to 25mm.

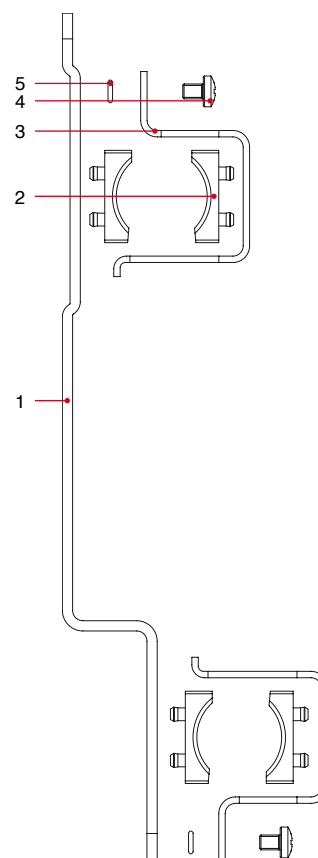
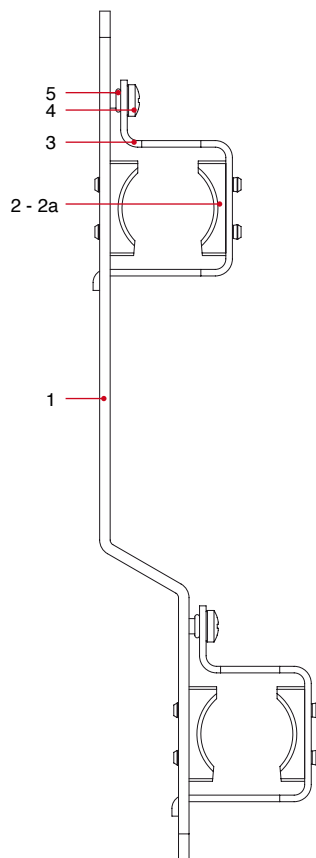
## MATERIALS 498STK



POS.	DESCRIPTION	N.	MATERIAL
1	Bracket	1	Steel P11
2	Dowel	1	EPDM
2a	Dowel ( only for 498STK 1" )	1	MARFRAN E FG3 75A
3	Collar	1	Steel P11
4	Screw	1	Zinc-plated steel Fe
5	O-Ring	1	NBR

MATERIALS  
498STKM

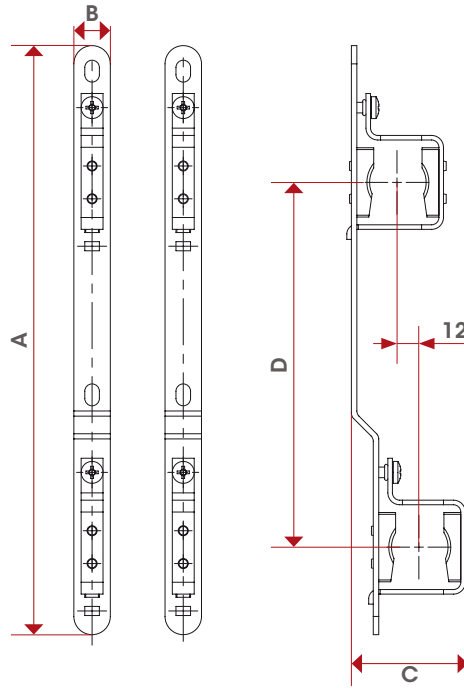
POS.	DESCRIPTION	N.	MATERIAL
1	Bracket	1	Steel P11
2	Dowel	1	EPDM
2a	Dowel ( only for 498STKM 1" )	1	Polyethylene PE
3	Collar	1	Steel P11
4	Screw	1	Zinc-plated steel Fe
5	O-Ring	1	NBR



MATERIALS  
498STKMB

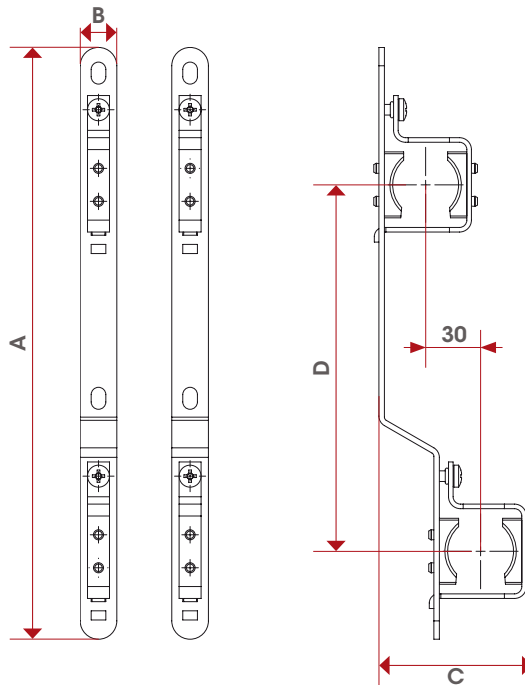
POS.	DESCRIPTION	N.	MATERIAL
1	Bracket	1	Steel P11
2	Dowel	1	Polyethylene PE
3	Collar	1	Steel P11
4	Screw	1	Zinc-plated steel Fe
5	O-Ring	1	NBR

OVERALL  
DIMENSIONS  
498STK



	3/4"	1"	1 1/4"
A	323	323	323
B	20	20	20
C	64	66	73
D	200	200	200

OVERALL  
DIMENSIONS  
498STKM

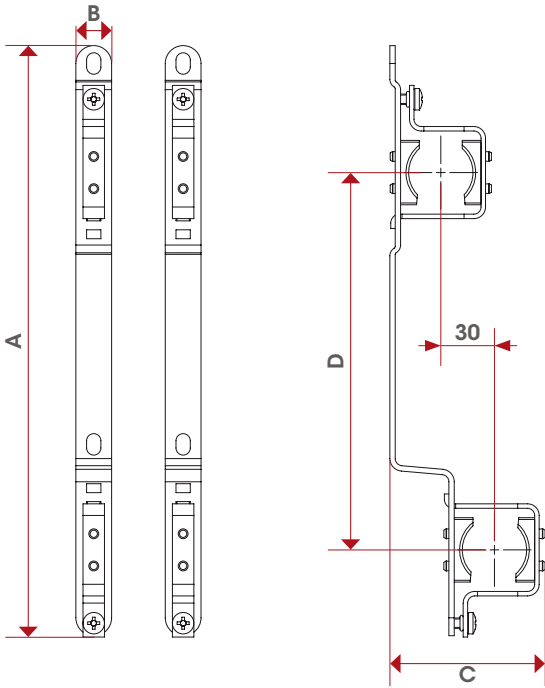


	1"	1 1/4"
A	323	323
B	20	20
C	84	91
D	200	200





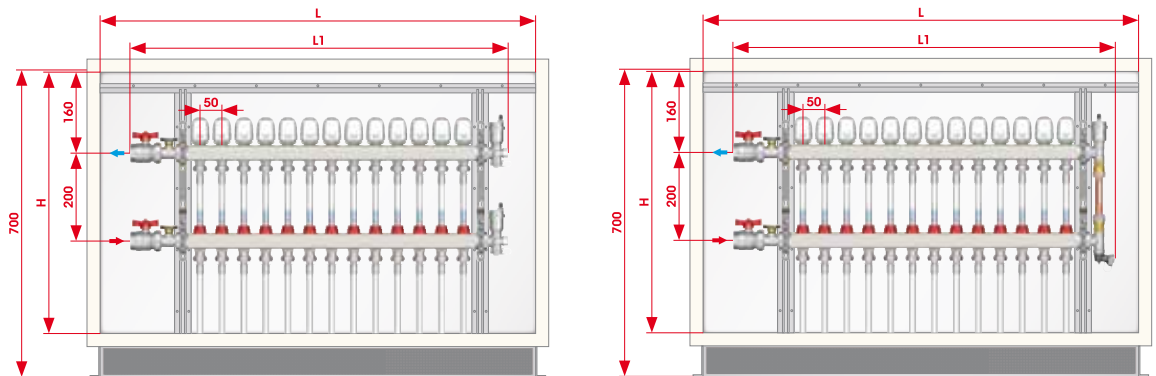
OVERALL  
DIMENSIONS  
498STKMB



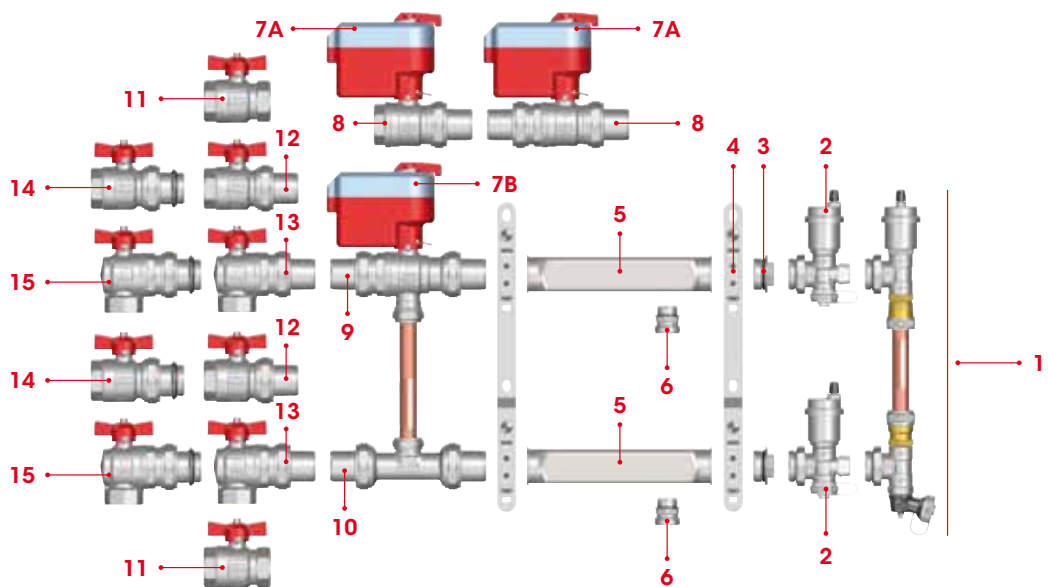
	1"
A	330
B	20
C	87
D	211

# POSITIONING THE MANIFOLD ART. 862 INTO METAL BOXES

CODE	498.500.600	498.600.600	498.700.600	498.800.600	498.1000.600
LxH (mm)	500x600	600x600	700x600	800x600	1000x600
Outlets	3-4	5-6	7-8	9-10	11-12-13
MANIFOLD	1"				
L1	422	522	622	722	872



# ACCESSORIES CHART ART. 852 FOR METAL BOXES



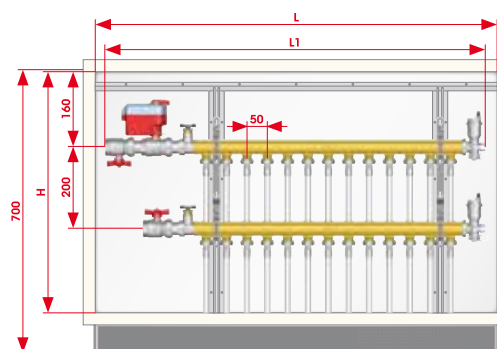
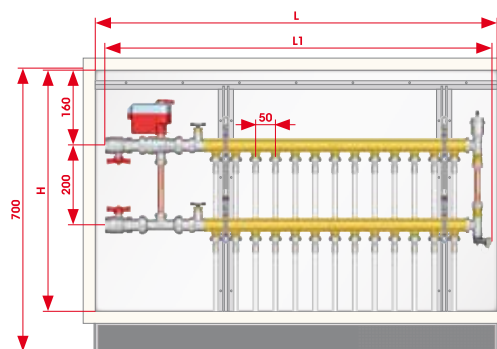
POS	ART	DESCRIPTION
1	860BY	Off-centre by-pass kit
2	489AR	Adjustable end piece with drain valve and automatic air vent valve
3	494	Male end cap with o-ring
4	498ST	Mounting brackets in steel for metal boxes
5	852	Stainless steel manifold
6	518	Male/male adapter
7A	990-991-989	Electric actuator for zone ball valves - Electric actuator for 2-way zone ball valves
7B	990-991	Electric actuator for zone ball valves
8	980-981	2-way zone ball valve - 2-way zone ball valve MM
9	984	3-way zone ball valve
10	988	By-pass kit for zone valves
11	092	Ball valve, T handle
12	098	Ball valve for manifold
13	298	Angle ball valve for manifold
14	098S	Ball valve for manifold with o-ring on the union
15	298S	Angle ball valve for manifold with o-ring on the union



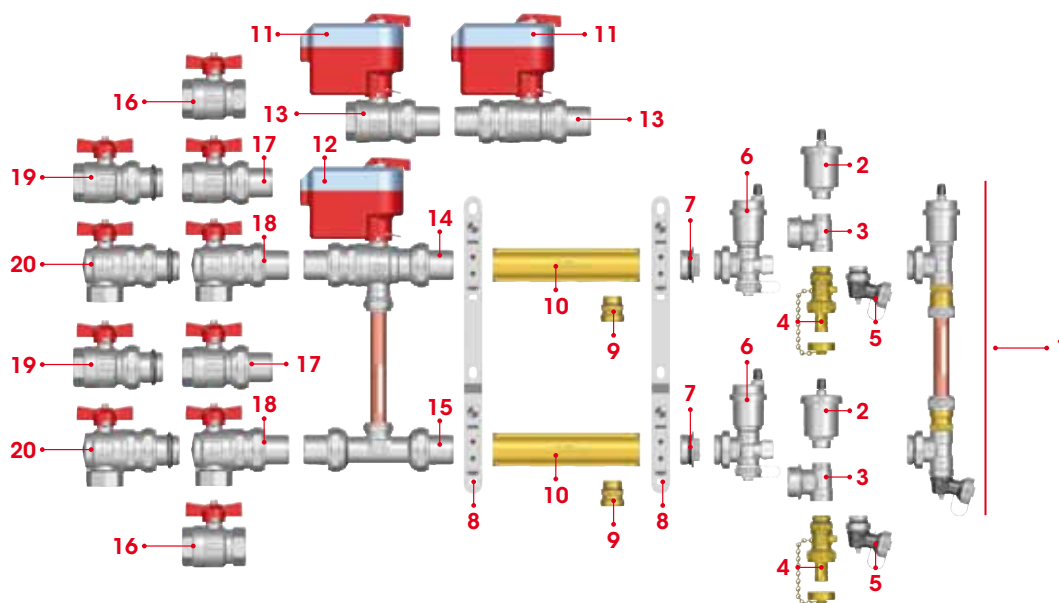
# POSITIONING MANIFOLD ART. 850 INTO METAL BOXES

CODE	498.500.600	498.600.600	498.700.600	498.800.600
LxH (mm)	500x600	600x600	700x600	800x600
Outlets	3-4	5-6	7-8	9-10
MANIFOLD	3/4"			
L1	435	535	635	735

CODE	498.600.600	498.700.600	498.800.600	498.1000.600	498.1100.600
LxH (mm)	600x500	700x500	800x500	1000x600	1100x600
Outlets	3-4	5-6	7-8	9-10	11-12-13
MANIFOLD	1" - 1 1/4"				
L1	530	630	730	830	980



# ACCESSORIES CHART ART. 850 FOR METAL BOX



POS	ART	DESCRIPTION
1	860BY	Off-centre by-pass kit
2	362-362R	Automatic air vent valve
3	490	Male 3-way end fitting for manifolds
4	139	Drain ball valve with brass hose connection
5	489SO	Adjustable drain cock
6	489AR	Adjustable end piece with drain valve and automatic air vent valve
7	494	Male end cap with o-ring
8	498ST	Mounting brackets in steel for metal boxes
9	518	Male/male adapter
10	850	Distribution manifold in brass bar
11	990 - 991 989	Electric actuator for zone ball valves Electric actuator for 2-way zone ball valves
12	990 - 991	Electric actuator for zone ball valves
13	980 - 981	2-way zone ball valve - 2-way zone ball valve M/M
14	984	3-way zone ball valve
15	988	By-pass kit for zone ball valves
16	092	Ball valve, T handle
17	098	Ball valve for manifolds
18	298	Angle ball valve for manifolds
19	098S	Ball valve for manifolds with o-ring on the union
20	298S	Angle ball valve for manifolds with o-ring on the union



# NOTES

A series of horizontal dashed lines for taking notes.



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