



### STAINLESS STEEL DISTRIBUTION MANIFOLD

## **Application**

The 220ATT2-D te-sa pre-assembled distribution manifolds are designed for the distribution and regulation of heat transfer fluid in heating and conditioning systems.

Made of Stainless Steel material, they are ideally suited to radiant panel heating systems, but also for traditional radiator heating systems with condensing boilers. The manifold when completed with its preformed insulation is usable for conditioning systems.

The particular design of the manifold features a great flow section with reduced pressure drops and consequently lower energy consumption in the circulator pumps. The big flow section of these manifolds permits to the water to reduce its speed, with the result to have very low noises produced. Beautiful to see is strong, reliable and corrosion resistant in the ordinary applications.



## Configuration and available sizes

Pre-assembled on brackets, it is a distribution manifold with 3/4" M Eurocone loop connections with centre distance 50 mm, and it is composed by delivery manifold with flow regulators, return manifold with built-in interception valves, with maneuver handles, that are predisposed for assembly of electrothermal actuators. The barrels are completed with end plugs, orientable fill and drain valves, and orientable manual air vents. It is packaged in carton box with labels included to identify the circuits connected.

| 1" inlet connection |          | 1-1/4" inlet connec | tion     | Î         |            |
|---------------------|----------|---------------------|----------|-----------|------------|
| 220ATT2-06-02D      | 2 Loops  | 220ATT2-07-02D      | 2 Loops  |           |            |
| 220ATT2-06-03D      | 3 Loops  | 220ATT2-07-03D      | 3 Loops  |           |            |
| 220ATT2-06-04D      | 4 Loops  | 220ATT2-07-04D      | 4 Loops  | te-sa1638 |            |
| 220ATT2-06-05D      | 5 Loops  | 220ATT2-07-05D      | 5 Loops  | The Later |            |
| 220ATT2-06-06D      | 6 Loops  | 220ATT2-07-06D      | 6 Loops  |           | O le sa 1. |
| 220ATT2-06-07D      | 7 Loops  | 220ATT2-07-07D      | 7 Loops  |           |            |
| 220ATT2-06-08D      | 8 Loops  | 220ATT2-07-08D      | 8 Loops  |           | 翻          |
| 220ATT2-06-09D      | 9 Loops  | 220ATT2-07-09D      | 9 Loops  |           |            |
| 220ATT2-06-10D      | 10 Loops | 220ATT2-07-10D      | 10 Loops |           |            |
| 220ATT2-06-11D      | 11 Loops | 220ATT2-07-11D      | 11 Loops |           |            |
| 220ATT2-06-12D      | 12 Loops | 220ATT2-07-12D      | 12 Loops |           |            |

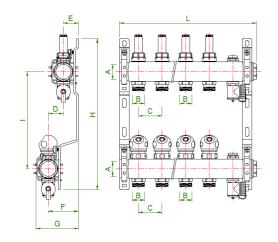
### **Technical data**

- Manifold barrel made of Stainless Steel EN 1.4301 AISI304 UNI-EN 10088
- Manifold components made of Brass Alloy UNI-EN 12164 CW614N and UNI-EN 12165 CW617N
- Flow meters with brass body
- Manifold body size: 1" and 1-1/4"
- Supply manifold with adjustable flow meters setting range from 0 to 5 l/min, accuracy 10%
- Return manifold with interception valves equipped with ABS handles, suitable for installation of electrothermal actuators with M30x1,5 swivel nut connection
- Maximum Operating Pressure 6 bar
- Operating Temperature 0 ÷ 70°C
- Maximum Test Pressure 10 bar
- Maximum glycol percentage 30%
- KV factors in wide open conditions: Supply manifold 1" and 1-1/4" KV=1,2; Return manifold 1" KV=2,8; Return manifold 1-1/4" KV=3,55; Supply + Return 1" KV=1,10; Supply + Return 1-1/4" KV=1,14





# **Dimensions**



| Art.             | Α  | В    | С  | D  | Е  | F  | G  | Н   | - 1 | L   |
|------------------|----|------|----|----|----|----|----|-----|-----|-----|
| 220ATT2 -06- 02D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 185 |
| 220ATT2 -06- 03D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 235 |
| 220ATT2 -06- 04D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 285 |
| 220ATT2 -06- 05D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 335 |
| 220ATT2 -06- 06D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 385 |
| 220ATT2 -06- 07D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 435 |
| 220ATT2 -06- 08D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 485 |
| 220ATT2 -06- 09D | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 535 |
| 220ATT2 -06-10D  | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 585 |
| 220ATT2 -06-11D  | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 635 |
| 220ATT2 -06-12D  | 1" | 3/4" | 50 | 32 | 32 | 64 | 95 | 320 | 206 | 685 |

| Art.             | Α     | В    | С  | D  | E  | F  | G   | Н   | - 1 | L   |
|------------------|-------|------|----|----|----|----|-----|-----|-----|-----|
| 220ATT2 -07- 02D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 185 |
| 220ATT2 -07- 03D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 235 |
| 220ATT2 -07- 04D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 285 |
| 220ATT2 -07- 05D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 335 |
| 220ATT2-07-06D   | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 385 |
| 220ATT2 -07- 07D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 435 |
| 220ATT2 -07- 08D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 485 |
| 220ATT2 -07- 09D | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 535 |
| 220ATT2 -07-10D  | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 585 |
| 220ATT2 -07-11D  | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 635 |
| 220ATT2 -07-12D  | 11/4" | 3/4" | 50 | 32 | 36 | 69 | 104 | 320 | 206 | 685 |

## Installation of the electrothermal actuators 116T

The installation of the electrothermal actuators 116T is very easy and quickly. After removing the maneuver handle, screw completely by hand the plastic adapter at the thread M30x1,5 of the bonnet. The actuator is connected to the adapter with slight pressure, and can be oriented a little by turning it. The electrothermal actuators are supplied with the stem in middle position. At starting, to totally close the interception valve of the manifold, it is necessary connect the actuator at the electrical power supply for some minutes to open it completely. When the electrical power is removed, the actuator totally closes. The actuators 116T series are Normally Closed type, then with electrical supply they open, while without electrical supply they close.









### **Accessories**



**305NTK/1** Pair of straight full port ball valves, with union connection with O-Ring seal, completed with thermometer scale 0÷80°C. Available sizes 1" and 1-1/4".



**350TK/1** Pair of angle full port ball valves, with union connection with O-Ring seal, completed with thermometer scale 0÷80°C. Available size 1".



208 – 216T – 217T Compression fittings with nut threaded 3/4" Eurocone, to connect copper pipes, polyethylene pipes and multilayer pipes at the manifolds. Available for the main commercial sizes of pipes.



**650A** Pre-formed insulation shells for manifolds, consisting of two half-shells (front and back). Material: PE-X closed-cell foam. Available sizes 1" and 1-1/4".



**116T** Electrothermal actuator normally closed with easy and fast connection. For bonnets M30x1,5. Available with and without end switch (two or four wires) in the voltages 230V and 24V.



**211N11** Full painted metal cabinet with key on door for embedded installation.

Dimensions: 45 cm Height, 11÷15 cm Depth, 40-60-80-100-120 cm Width.