

## STAINLESS STEEL DISTRIBUTION MANIFOLD WITH DYNAMIC FLOWMETERS

### Application

The 220ATD2-D te-sa pre-assembled distribution manifolds are designed for the distribution and regulation of heat transfer fluid in heating and conditioning systems. Equipped with dynamic adjustment insert valves, they allow the designed flow rates to be kept constant in the various connected circuits as the system load conditions vary. The dynamic insert valve, through an internal automatic mechanism, modifies its flow section in order to reduce it when the water flow tends to increase and increase it when the water flow tends to fall below the value set in the adjustment phase.

The careful management of the flow rates in the circuit allows for a distribution of energy with high energy efficiency and optimal environmental comfort.

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 the eye, it is strong, reliable and corrosion resistant in the ordinary applications.



### Configurations 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 intercepting and balancing flow regulators made of technopolymer, 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.

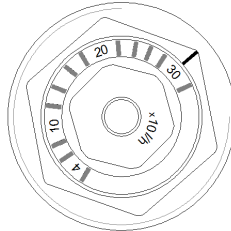
220ATD2-06-02D	2 Loops
220ATD2-06-03D	3 Loops
220ATD2-06-04D	4 Loops
220ATD2-06-05D	5 Loops
220ATD2-06-06D	6 Loops
220ATD2-06-07D	7 Loops
220ATD2-06-08D	8 Loops
220ATD2-06-09D	9 Loops
220ATD2-06-10D	10 Loops
220ATD2-06-11D	11 Loops
220ATD2-06-12D	12 Loops



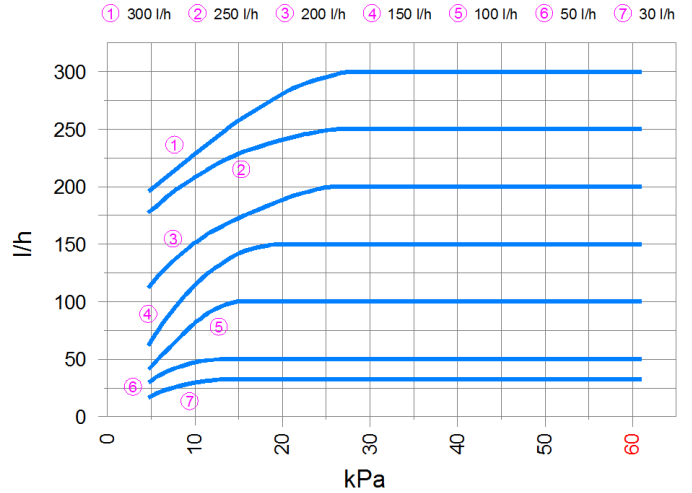
### Technical data

- 1" Manifold barrel made of Stainless Steel AISI304 1.4301 EN10217-7
- Manifold components made of Brass Alloy UNI-EN12164 CW614N ed UNI-EN12165 CW617N
- Supply manifold with flow meters in technopolymer PPA setting range from 0 to 5 l/min.
- Return manifold with interception valves equipped with dynamic insert valves, setting range 30÷300 l/h. Handles in ABS, removable in order to install 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 KV=1,2
- Minimum differential pressure on the dynamic insert valve 17 kPa for flow rate range 30÷150 l/h
- Minimum differential pressure on the dynamic insert valve 25 kPa for flow rate range 150÷300 l/h
- Maximum differential pressure on the dynamic insert valve 60 kPa (600 mbar). Higher pressure differences might damage the mechanism

The adjustment of the dynamic insert valve is carried out with an 11 mm hexagonal tool, inserted on the head of the insert valve, allows the numbered end to rotate. The required calibration position is obtained by identifying the flow rate on the scale and matching it with the notch marked on the mounting hexagon. The numbering shown on the head screw is equal to one tenth of the flow rate in liters/hour that will be set (eg 20 is 200 l/h). Before adjusting the insert valve, completely open the flow meter located on the supply manifold. After adjustment, with the circulator on, check the flow meter to verify whether the flow rate flowing in the circuit corresponds to the desired one. If necessary, proceed with small adjustments of the flow by acting directly on the insert valve or by slightly closing the corresponding flow meter.



POS.	l/h
4	40
10	100
20	200
30	300

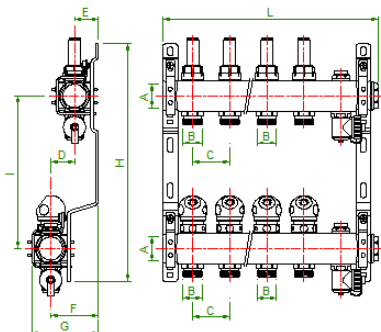


### Installation of the electrothermal actuators 116T

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.



### Dimensions



Art.	A	B	C	D	E	F	G	H	I	L
220ATD2-06-02D	1"	3/4"	50	32	32	64	95	320	206	185
220ATD2-06-03D	1"	3/4"	50	32	32	64	95	320	206	235
220ATD2-06-04D	1"	3/4"	50	32	32	64	95	320	206	285
220ATD2-06-05D	1"	3/4"	50	32	32	64	95	320	206	335
220ATD2-06-06D	1"	3/4"	50	32	32	64	95	320	206	385
220ATD2-06-07D	1"	3/4"	50	32	32	64	95	320	206	435
220ATD2-06-08D	1"	3/4"	50	32	32	64	95	320	206	485
220ATD2-06-09D	1"	3/4"	50	32	32	64	95	320	206	535
220ATD2-06-10D	1"	3/4"	50	32	32	64	95	320	206	585
220ATD2-06-11D	1"	3/4"	50	32	32	64	95	320	206	635
220ATD2-06-12D	1"	3/4"	50	32	32	64	95	320	206	685