Rev. 03/2016

MINILUFT CP

Small size automatic air vent valve, in polymer, for small systems.

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Small size automatic air vent valve, in polymer, for small systems.

- Limited overall dimensions
- Air discharge automatic operation
- Supply includes check valve

MAXIMUM DISCHARGE PRESSURE 4 bar

PRODUCTION RANGE

AUTOMATIC AIR VENT VALVE COMPLETE WITH MANUAL CLOSING PAWL AND CHECK VALVE			
Code	**Size**	**Connection**	**Type**
791.03.40	3/8"	M UNI-EN-ISO 228	Miniluft CP
791.04.40	1/2"	M UNI-EN-ISO 228	Miniluft CP

DESCRIPTION

THE PURPOSE::

Miniluft CP valves are automatic, float-operated air vent valves whose function is removing air and gases from heating or cooling systems.

Their small size makes them ideal for applications in various types of manifolds to be installed in distribution kits housed in containment boxes.

Despite their small size, they are very effective in removing air during both loading and emptying, and have a high venting capacity keeping the various system areas in which they are installed free of air.

By removing air from the system, unnecessary breakdowns and malfunctions can be reduced, helping to:

- Increase heating and cooling efficiency
- Reduce the formation of corrosion in all points of the system
- Reduce extraordinary maintenance work
- Reduce the effects causing system noise
- Lower the cost of system management

USE:

Miniluft CP valves are used in areas where the formation of air bubbles is likely; they are particularly suitable for direct mounting on manifolds as well as in horizontal pillars (horizontal risers).

CAUTIONS:

To be always installed in a vertical position.

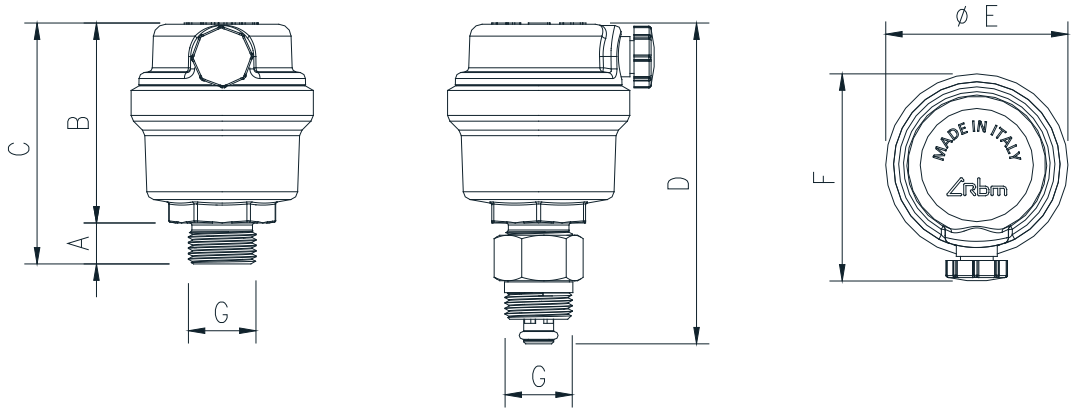
CONSTRUCTION FEATURES Q

Body / cap	Polymer PA66 + 30% FV
Elastomers used	EPDM and NBR
Float	With levers, made of polypropylene resin
Spring	AISI 302 stainless steel
Connection	M UNI-EN-ISO-228

TECHNICAL FEATURES

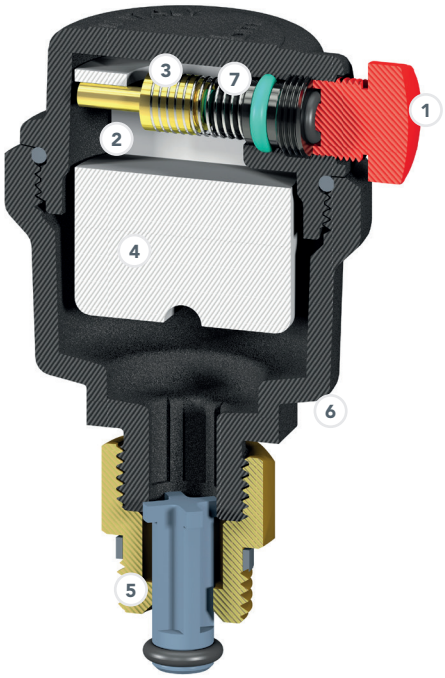
Usable fluid	Water, Water + Glycol 30%
Maximum fluid temperature	100 °C (with pressure at 4 Bar) 70 °C (with pressure at 7 Bar) 40 °C (with pressure at 10 Bar)
Maximum operating pressure	6 Bar (600 kPa)
Maximum bearable pressure	10 Bar (1000 kPa)
Maximum discharge pressure	4 Bar (400 kPa)

DIMENSIONAL FEATURES



Code	G	A [mm]	B [mm]	C [mm]	D [mm]	Ø E [mm]	F [mm]
781.03.40	3/8"	10	48,8	58,8	78,3	44,5	50,6
791.04.40	1/2"	10	48,8	58,8	78,3	44,5	50,6

STRENGTHS / COMPONENT DESCRIPTION

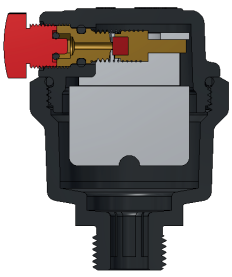


1. **Closure cap**
2. **Air accumulation pressostatic chamber:** The pressostatic chamber is designed to prevent contact between the impurities present on the fluid free surface and the sealing device, especially when the circulation pump is started.
3. **Gas ejection device:** The ejection of gases (such as oxygen, hydrogen, carbon dioxide) prevents the latter, if retained, from forming corrosive acid solutions or activating galvanic drilling processes in the presence of stray currents. The gas ejection device can be closed by completely screwing the end pawl. Said component must be regarded as a system safety device thanks to its high functional properties.
4. **Float:** Technopolymer float, fitted inside the body in such a way that its functionality cannot be influenced by external movements, including rotation and vibration.
5. **Check valve:** For automatic fluid shut-off.
6. **Structure completely made of polymer**
7. **Spring**

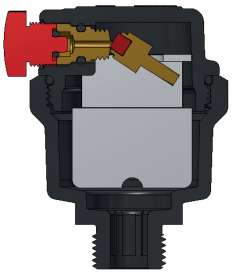
OPERATING PRINCIPLE

The accumulation of air bubbles in the upper part of the valve body (air accumulation pressostatic chamber) causes the float descent and, consequently, the gas ejection device opening.

For the valve to properly operate, make sure that the water pressure remains lower than the maximum discharge pressure value (4 bar for Series 791).



Valve position **CLOSED**



Valve position **OPEN**

USE / INSTALLATION AND AUXILIARY COMPONENTS

MINILUFT CP valves are used in areas where the formation of air bubbles is likely; they are particularly suitable for direct mounting on manifolds, in horizontal pillars.

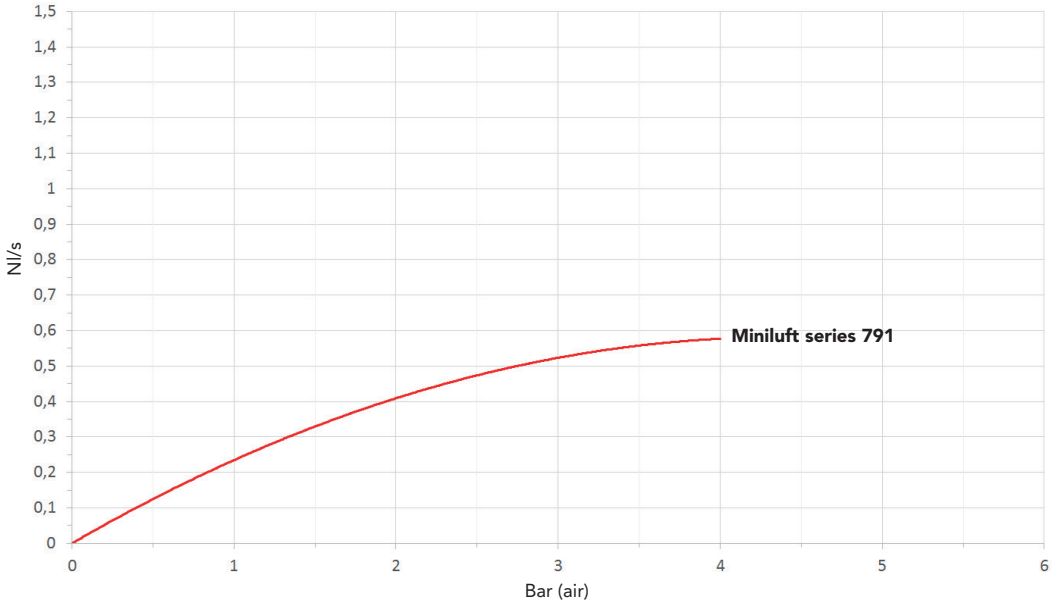
To be always installed in a vertical position.

Precautions:

- Use the air vent valve with an open pawl during the system loading/ unloading.
- If it is installed on manifolds close to bypasses, make sure that the pawl is fully screwed, so as to avoid any air suction when the by-pass assembly is used the most (closed distribution ways).
- To be installed on circuits with positive pumping pressures. For circuits with negative pumping pressures, always provide for the component manual shut-off by interposing a suitable ball valve.
- To facilitate any maintenance work and inspection of the air vent device without stopping the system, the valve is supplied in a kit provided with a check valve.

FLUID DYNAMICS FEATURES

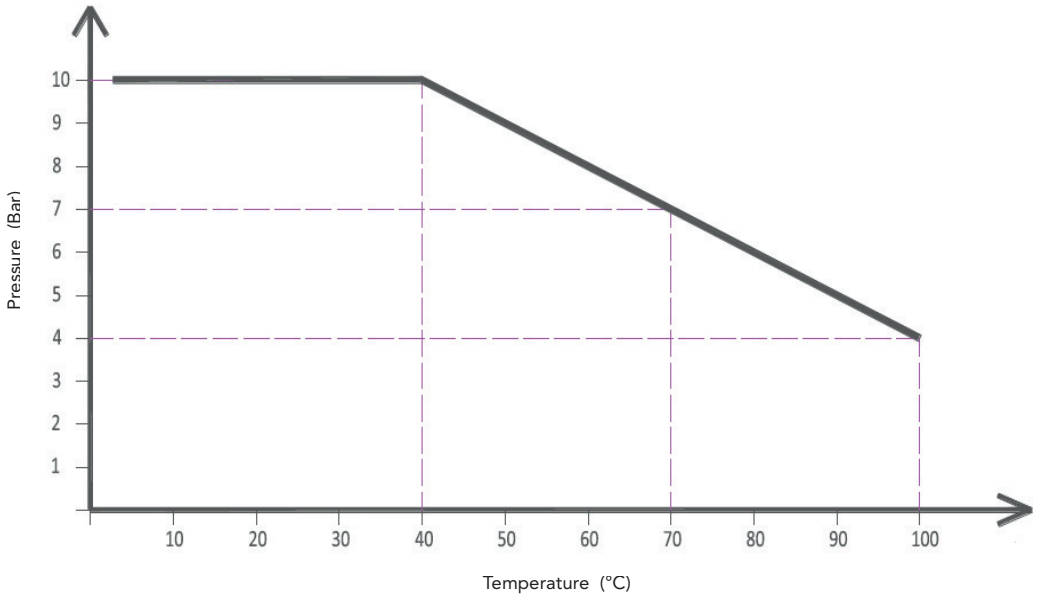
DISCHARGE CAPACITY DIAGRAM



TEMPERATURE/PRESSURE DIAGRAM

Pressure and temperature are closely related for this valve completely built-in techno-polymer.

The following graph shows the maximum allowed pressures in the circuit depending on fluid temperature.



SPECIFICATION ITEMS

SERIES 791

Automatic air vent valve complete with manual closing pawl model and check valve for automatic shut-off model Miniluft CP. 3/8" M (or 1/2" M) threaded connection. Polymer body and cap. PP float. AISI 302 stainless steel spring Nitrile elastomer and ethylene-propylene elastomer seals. Usable fluid water - water+glycol 30%. Fluid maximum operating temperature 100 °C. Maximum operating pressure 6 bar. Maximum bearable pressure 10 Bar. Maximum discharge pressure 4 Bar. Lateral discharge.

RBM spa reserves the right to improve and change the described products and related technical data at any moment and without prior notice: always refer to the instructions attached with the supplied components; this sheet is an aid, should the instructions be extremely schematic. Our technical office is always at your disposal for any doubt, problem or explanation.

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