



The ROLSI™ Sampler

A PERFECT SAMPLING SYSTEM :

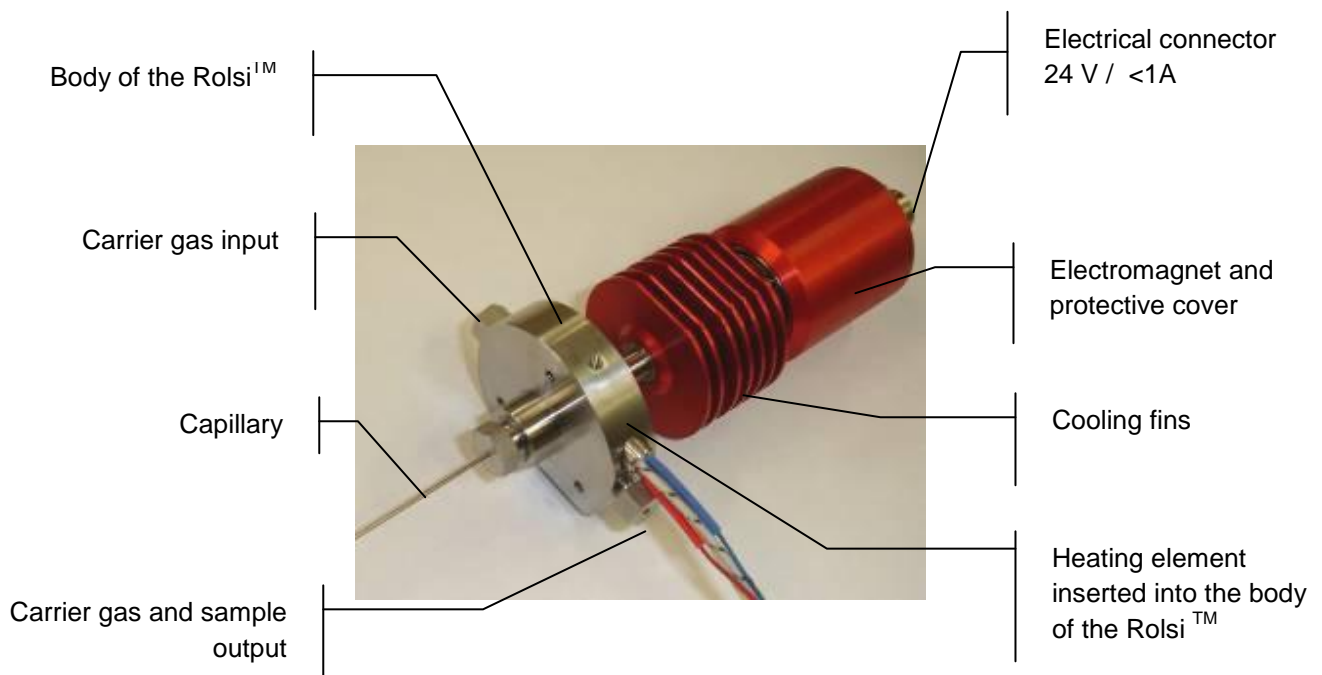
The ROLSI™ sampler has been especially designed to sample fluids, liquids or gases, under pressure and to analyze them using gas chromatography. It can be directly connected into a reactor or a process line. It provides a fully repeatable analysis of the media without any risk of pollution of such media. It can be heated to vaporize instantaneously a liquid sample or to maintain in the vapor phase a gas sample.

The ROLSI™ is reliable and easy to maintain.

The ROLSI™ is an invention from CEP-TEP (Armines – Mines Paristech).

MAIN CHARACTERISTICS :

- No dead volume
- Compact and easy to automatically pilot
- Adjustable volume between 1 μl to 100 μl
- Repeatable sampling procedure
- Integrated heating to vaporize instantaneously liquids
- Temperature range from cryogenic applications to 250 °C
- Pressure range from a few bar to 600 bar
- Material stainless steel, hastelloy or titanium
- Capillary tube in stainless steel – inside diameter 0.1 mm
- 24 volt / <1A supply linked to timer





OPERATIONS :

The ROLSI™ sampler is continuously fed with a flow of neutral gas vector coming from the Gas phase chromatograph (GC).

The power supply (24V) is linked to a timer. Closing the two-pole switch starts the timer cycle, activates the electromagnet and sends a pulse to the GC, instructing it to start analysing the sample (“Start GC”).

When the system is in thermodynamic equilibrium (constant pressure and temperature), it is vital to take 3 to 4 successive samples (one after the other) to purge the dead space in the capillaries. Once the internal volumes of the capillaries of the Rolsi™ sampler have been fully purged, the next samples taken will be perfectly representative of the liquid and vapour phases to be analysed. For a new set of conditions (a different temperature or even the addition of a compound that modified the internal pressure in the measuring cell) purging must once again be repeated.

Tracing the lines between the ROLSI™ sampler and the GC is usually necessary.

In case of variations of the level of the liquid phase, the ROLSI™ sampler can easily be mounted on a movable support.

