

# OLIS

## ONLINE LIQUID INJECTION SYSTEM FOR GAS CHROMATOGRAPHY

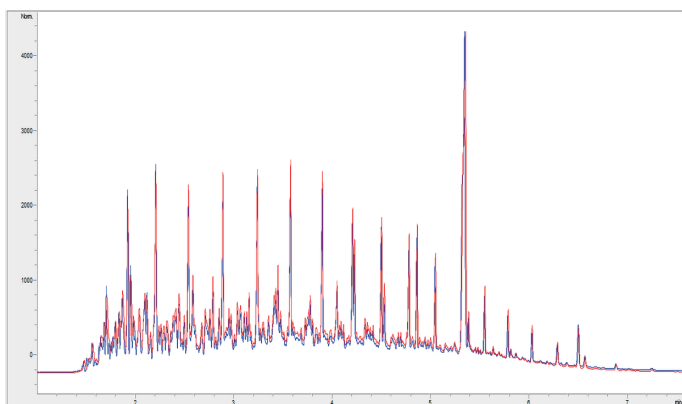
### A non-discriminatory online injection of compounds

The OLIS injection system is intended for the introduction, in chromatography, of pressurized liquid samples which may contain very polar, high boiling point or high viscosity analytes.

The OLIS valve can accept samples up to 80 bar and can be installed on all GC models, on-line or laboratory, equipped with split/splitless injectors.

This valve, very easy to use, can be installed on a new or existing GC and requires little maintenance (change of seals), easily achievable by the operator.

Its technical features make it possible to obtain performances identical and even better than those of the conventional automatic injector with syringe.



*Chromatograms overlay of hydrocarbon sample C<sub>5</sub> to C<sub>25</sub> obtained with ALS and OLIS valve - same performances online as in the laboratory*

### Innovation to get more reliability

OLIS valve integrates embedded electronic with several checks and diagnostics to ensure high efficiency and the best performances : STEM temperature control, STEM injection position control, number of injections to plan maintenance ...



OLIS - Intuvo 9000 GC

The OLIS valve is composed of a "STEM", the lower end of which is machined to allow sample circulation. The sample can circulate continuously or be pushed by a syringe for calibrations. The STEM is lowered to the spray chamber by means of a micro-electric motor. At the same time, its tip is heated to high temperature very quickly allowing the "flash" vaporization of the liquid fraction trapped in the calibrated volume.

This very simple mode of operation provides surprising analytical results, with very little discrimination between compounds and better repeatability than automatic injection with a syringe.

**OLIS**  
Pressurized liquid injection  
without compromise on  
safety and results



#### Application fields :



- LPG, LNG, naphta, condensates
- ASTM D-2887
- Alcohols in hydrocarbons
- Aromatics
- Dissolved CO<sub>2</sub>
- Impurities in amina matrix
- Etc...



▶ *Up to 80 bar*



▶ *Autonomous*



▶ *No discrimination*



▶ *Safety for users*



## OLIS VALVE TECHNICAL FEATURES

### General specifications :

Dimensions (mm) : H 290 ; D 150 ; W 150  
Weight (valve) : 2 kg  
Dimensions (controller) (mm) : H 370 ; D 300 ; W 140  
Weight (controller) : 10 kg

### Environmental conditions :

Temperature : 0 °C to 40 °C  
Relative humidity : 5 to 95 % non-condensing  
Altitude : up to 2000 m max.  
Use : indoor or enclosed

### Controller specifications :

Power and consumption : 220 VAC, 1000 W max  
Communication : Ethernet  
Input/Output :  
Ready In/Ready Out  
Start In/Start Out  
4 programmable auxiliary controls  
3 regulation zones

### Valve specifications :

Sample : up to 1200 psig at 30 °C  
Sample circulation chamber : can be cooled or heated (optional)  
STEM volume : 0,3 $\mu$ L in standard version  
STEM temperature : 350 °C max  
Injection speed : < 500 ms  
STEM actuation : micro-electric  
Vaporization chamber temperature : 200°C max (standard version)  
Sample transfer to injector : without any cold point  
Repeatability : RSD <1%

### Diagnostics and tools :

Temperature control  
Injection control : STEM position  
STEM control : measurement of the current during flash  
Maintenance tools : injection number counter to manage maintenance.

### Installation kit :

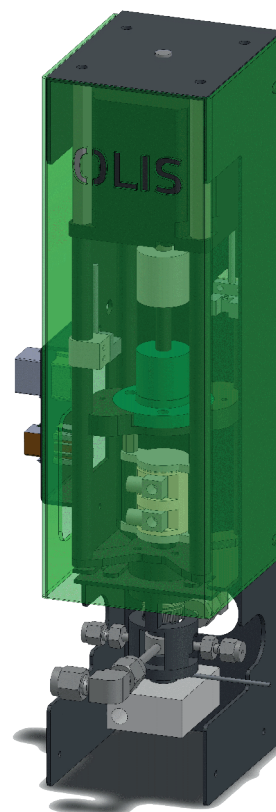
Installation kit dedicated to the GC model

### Requirements :

OLIS valve is installed on top of a GC split/splitless injector  
GC requirements: carrier gas flow control module available  
Remote or auxiliary valve control available.

### Applications :

LPG, LNG online analysis, ASTM D-2887, alcohols in hydrocarbon streams, impurities in benzene, in amina matrix, dissolved CO<sub>2</sub> in organic matrix, ...  
CMR compounds analysis in the lab without sample handling.



3D-view of the OLIS valve

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