

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.

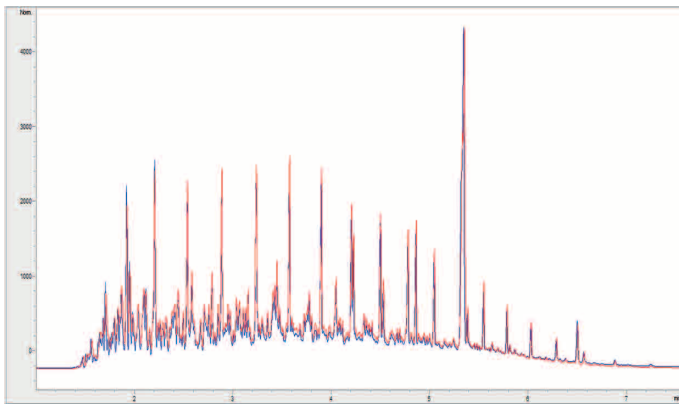
The OLIS valve can accept samples up to 60 bar and can be installed on all GC models, on-line or laboratory, equipped with split/splitless injectors.

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.



OLIS - 8890 GC




Chromatograms overlay of hydrocarbon sample C₅ to C₂₅ obtained with ALS and OLIS valve - same performances online as in the laboratory

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.

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
Pressurized liquid injection
without compromise on safety
and results 

Application fields :



- LPG, LNG, naphta, condensates
- ASTM D-2887
- Alcohols in hydrocarbons
- Aromatics
- Dissolved CO₂
- Impurities in amina matrix
- Etc...



▶ Up to 60 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 870 psig at 30 °C

Sample circulation chamber : can be cooled or heated (optional)

STEM volume : 0,3µL 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

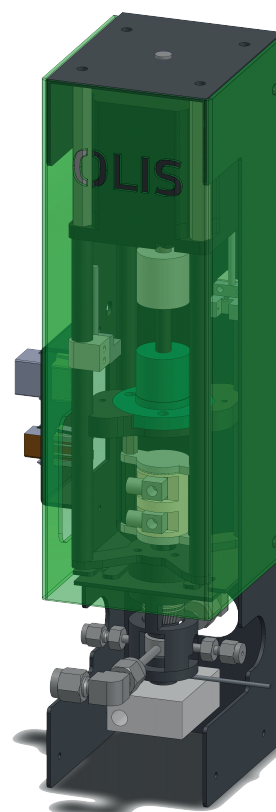
Remote or auxiliary valve control available.

Applications :

LPG, LNG online analysis, ASTM D-2887, alcohols in hydrocarbon streams, impurities in benzene, in amina matrix, dissolved CO₂ in organic matrix,

...

CMR compounds analysis in the lab without sample handling.



3D-view of the OLIS valve

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