

## TSHR introduces the new generation of Total Halogens analysers for today's and tomorrow requirements

# TX 7000

The best solution for environmental and petrochemical application challenges. Analyse the most extensive range of sample matrix (Gas, LPG and Liquid) with respect to international standards. Exceptional accuracy and precision by using special coulometric titration electrodes. All in combination with the new user friendly and intuitive Athena software.



### TX 7000

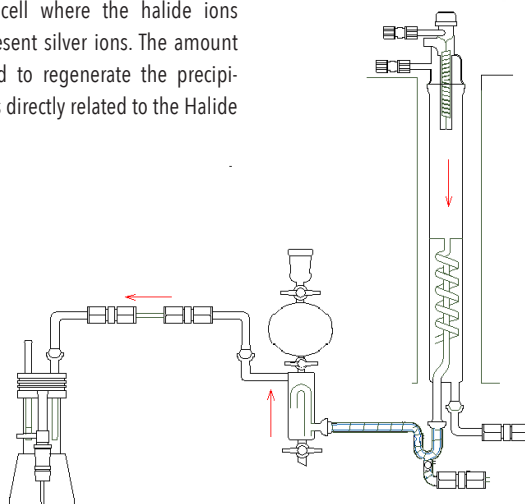
The TSHR TX 7000 is especially designed for the more demanding customer with high sample throughput. The special design gives easy and save access to all serviceable parts. Running 24/7 with minimum downtime and superb reliability. The new combustion design will eliminate any soot formation. The TX 7000 is designed to analyse all low and high boiling liquids, including gas samples.

#### TSHR automated liquid sample injector

The automated sampler is engineered for maximum performance and reliability. This sampler is the most compact automated sampler while offering high sample capacity. The sample rack can be removed for preparation or to store elsewhere. Using a 100  $\mu$ L syringe with programmable injection speed and washing options, memory effects are reduced to a minimum.

The TX 7000 is built on the foundations of proven principles. The sample is introduced in an heated oxygen free zone where the sample is vaporised, after the vaporisation the gasses flow into the combustion area where the sample will be oxidized in a controlled two staged furnace. After the combustion, the gasses go through a conditioning step where all moisture and other interferences are removed.

The clean combustion gas will flow towards the coulometric cell where the halide ions react with the present silver ions. The amount of charge needed to regenerate the precipitated silver ions is directly related to the Halide concentration.



\* Flowpath TX 7000

#### KEY ADVANTAGES: TX 7000

- Easy to use and minimum maintenance.
- Robust and compact design
- Accurate, fast and reliable measurements
- Maintenance and service friendly design
- Automated sampling injection with 121 positions for 2 ml vials
- Ultra low detection limit up 100 ppb
- Analyse width range of matrix in liquid and gas samples
- CEN, DIN, ISO, NEN and ASTM standard compliance



**ANALYTICAL SPECIFICATIONS**

<b>Parameter</b>	<b>TX 7000</b>
<i>Working ranges</i>	
<i>TX liquids</i>	0.1 – 5000 mg/kg
<i>Quantity of sample</i>	
<i>Liquids</i>	1 – 100 µL
<i>Analysis time</i>	< 10 minutes
<i>Relative standard deviation</i>	< 5%
<i>Sample matrix</i>	High and low boiling liquids up to 450 °C (842 °F)

**TECHNICAL SPECIFICATIONS:**

<b>Parameter</b>	<b>TX 7000</b>
<i>Furnace Voltage</i>	2 x 24 V, 50/60 Hz
<i>Furnace Power</i>	2 x 300 W
<i>Furnace Temperature Sensor</i>	2 x Ni-Cr/Ni
<i>Furnace configuration</i>	Dual temperature controlled
<i>Furnace Temperature</i>	1250 °C Max
<i>Type of Analyses</i>	Total Halogens and Total Sulphur
<i>Detection Principle</i>	Micro Coulometric Titration
<i>PC operating system</i>	Windows 7 or higher
<i>Computer</i>	Intel Core i3 / AMD Phenom or better
<i>Compliance</i>	ASTM D4929, D5194, D5808, D3120 UOP 779
<i>Software</i>	Athena
<i>Optional accessories</i>	Gas Injection Module

**Facility Requirments**

<i>Voltage</i>	115/230 V, 50/60 Hz
<i>Power</i>	1200W
<i>Gas connector</i>	1/8" swagelok
<i>Gasses</i>	O <sub>2</sub> (99,6%) medical grade 2.6 Ar or He (99,998%) technical grade 4.8
<i>Gas pressure</i>	2 – 3 Bar (30-45 psi)
<i>Ambient temperature</i>	5 – 35 °C (41 – 95 °F)

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