

# Sensitive and precise Total Chlorine analysis with modular ease-of-use Analyzer model

# TX

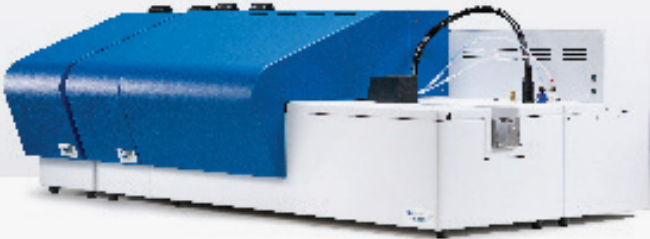
6000

The TSHR Total Chlorine Analyzer, model TX 6000, is able to measure fast and precise low level chlorine concentrations in an extensive range of liquid hydrocarbon samples. The modularity of the analyzer with large capacity combustion tube, provide users a safe and ease-of-use total chlorine analysis solution for small and high sample throughput labs.

The sample is introduced by a fully integrated automatic boat/syringe driver, into a heated oxygen free environment to ensure a complete vaporization of the sample. The carrier gas ensures that the vaporized sample will carry into the combustion zone where oxygen will be added to complete the oxidation of the sample. After the dual zone combustion stage, the gasses go through an acid scrubber where all moisture and other potential interferences are removed.

The conditioned combustion gasses will flow towards the temperature controlled coulometric cell where the halide ions reacts with silver ions. The amount charge needed to regenerate the precipitated silver ions is directly related to the total chlorine/halide concentration. The compact cooled coulometric titration cell can handle up to at least 60 samples without refreshing of the electrolyte solution.

The TX 6000 Total Chlorine analyzer can be converted into a total sulfur micro-coulometric analyzer solution to meet typical ASTM methods.



## Key advantages

Accurate, Fast and Reliable Total Chlorine Data

Easy to use coulometric titration cell

Boat cooling option for challenging sample matrices

Enhanced application range for solids, liquids and LPG/Gasses

## Analytical specifications

	TX Liquids	TX Solids
Sample introduction	Syringe Liquid module	Boat Solids module
Working range	0,1 – 10000 mg/kg	0,2 – 5000 mg/kg
Sample matrix	Light hydrocarbons	Heavy hydrocarbons, solids
Quantity of Sample	1 – 100 uL	0,1 – 100 mg
Analysis time	3 - 6 minutes	4 – 10 minutes
Relative Standard Deviation*	< 3% (> 1 ppm)	< 5% (> 1 ppm)
Regulatory Compliance	ASTM D4929, ASTM D5134, ASTM 5194, ASTM D5808, ASTM D7457, UOP 779	

\*Depend on typical application and sample matrix

## Technical specifications

Furnace Voltage	2 x 24 V , 50/60 Hz
Furnace Power	2 x 300 W
Furnace Temperature Sensor	2 x Ni-Cr/Ni
Furnace configuration	Dual temperature controlled
Furnace Temperature	1250 °C Max
Type of Analysis	Total Chlorine (optional Total Sulfur micro-coulometry)
Detection Principle	Micro Coulometric Titration (temperature controlled)
Dimensions	1017 x 390 x 590 mm (WxHxD)
PC operating system	Windows 7 or higher
Computer	Intel Core i3 / AMD Phenom or better
Software	Athena
Optional Supply	HR 7000 Liquid Autosampler for 2 mL vials, GM 7000 LPG / Gas Module Total Sulfur (UV-Fluorescence) detection

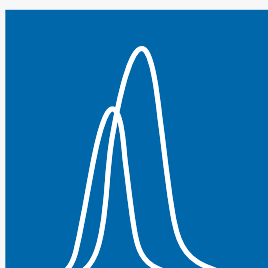
## Facility requirements

Voltage	115/230 V , 50/60 Hz
Power	1200 W
Gas connector	1/8" swagelok
Gasses	O <sub>2</sub> (99,6%) medical grade 2.6 or O <sub>2</sub> (99,995%) 4.5 Ar (99,998%) technical grade 4.8
Gas pressure	2 – 3 Bar (30-45 psi)
Ambient temperature	5 – 35 °C (41 – 95 °F)

## Contact info

<b>For Technical support:</b>	<a href="mailto:technicalsupport@tshrinternational.com">technicalsupport@tshrinternational.com</a>
<b>For Sales:</b>	<a href="mailto:sales@tshrinternational.com">sales@tshrinternational.com</a>
<b>For all other queries:</b>	<a href="mailto:info@tshrinternational.com">info@tshrinternational.com</a>
<b>TSHR website:</b>	<a href="http://www.tshrinternational.com">www.tshrinternational.com</a>
<b>For more information contact your local dealer:</b>	

000\_TSHR\_PS\_TX002.5



your partner  
in combustion  
elemental analysis

