

## Maxum Ed. II. Explosive Protection Safety System (SC-S-MAEX)

### Short Description

This course provides an overview and general description of the primary safety systems used in the Maxum II. This course also provides guidelines and procedures that should be followed to properly operate the safety systems in the Maxum II.

[Also available as online-training](#)

### Objectives

Upon completion of this course, the student shall be able to:

- Identify the Explosion Protection safety principles used in the Maxum II
- Know the two types belonging purge systems used in the Electronics Enclosure and the parts of these two systems
- Have an understanding of the Temperature Control Safety features for Airbath, Airless and Modular oven configurations
- Know the explosion protection hardware used in the detectors and other hardware with the Maxum II
- Know the steps to safely start the Maxum II

### Target Group

This course is intended for individuals responsible for maintaining the Maxum Gas Chromatograph.

### Content

#### Safety Protection Principles

- Intrinsically Safe Devices
- Purged Enclosures
- Flameproof and Explosion Proof Enclosures
- Temperature Classifications
- Temperature Control

#### Maxum II Safety Systems – Purged Enclosure

- Electronics Purging System without APU, Fast Purge Switch, Pressure Sensor, Purge Alarm LED
- Electronics Purging System with APU, Proportional Valve, Automatic Purge Unit, Maintenance Switch
- Power Disconnect Relay, Signal Disconnect Relay
- Maintenance Panel Safety Features
- Maintenance Considerations for Purged System

#### Maxum II Safety System – Oven

- Heater Circuit Identification Tags
- Isothermal Airbath Oven Heater System: Heater Assembly, Temperature Limiting, Temperature Control
- Program Temperature Airbath Heater System, IS Barrier and Probe
- Isothermal Airless Oven Heater System
- Maintenance Considerations Airbath & Airless
- Modular Oven Heater System
- Maintenance Considerations Modular Oven

#### Maxum II Safety System – Valves, Detectors and External Systems

- Siemens Liquid Injection Valve (SLIV) Heater
- Detectors, Overview, Thermal Conductivity Detector, FID/FPD Heater Assembly, Flame Ionization Detector
- Flame Photometric Detector, Air Treater, Methanators, Detector Maintenance Considerations

#### Safe Operation

- Read Safety Information
- Leak Testing
- Monitoring Analyzer Status
- Steps for Safe Startup of Maxum II

### Prerequisites

Basic computer skills

Basic process chromatography skills

Basic Understanding of the Maxum Process Gas Chromatograph System

Maxum Operation Level 1 Course (SC-C-MAX1)

### Note

Please notice: The Ex-Protection training does not supersede the reading of the Product Manuals. Please consult the "MAXUM edition II: Explosion Protection Safety Standards" at [Industry Online Support](#) for the latest information on product safety.

### Type

Face-to-face training

**Duration**

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1 day

**Language**

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