



Product Data Sheet

Automatic Gas Dosing System for the Kesternich Test – AKES (EN ISO 6988)



Order Information

Model Test Chamber with AKES:

CON 400-FL AIR CWC AWRF AKES

Article number: V.751.262.221

CON 1000-FL AIR CWC AWRF AKES

Article number: V.755.262.221

CON 3000-FL AIR CWC AWRF AKES

Article number: V.758.262.221

CON 3500-FL AIR CWC AWRF AKES

Article number: V.759.262.221

CCT 400-FL AKES

Article number: V.751.162.221

CCT 1000-FL AKES

Article number: V.755.162.221

CCT 3000-FL AKES

Article number: V.758.162.221

CCT 3500-FL AKES

Article number: V.759.162.221

CC 400-FL AKES

Article number: V.745.672.430

CC 1000-FL AKES

Article number: V.745.672.430

CC 3000-FL AKES

Article number: V.748.672.430

CC 3500-FL AKES

Article number: V.749.672.430

Sales & Support:

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Monday to Friday
8:00 am – 17:00 pm

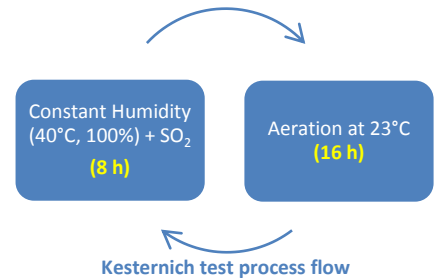
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Specification subject to changes
Pictures might differ from original

Applicable Test Standards

- ✚ EN ISO 6988
- ✚ DIN 50018
- ✚ ASTM G 85



Product Description

The automatic gas dosing system for the Kesternich test (AKES) in the SO₂ environment is an option for high-end VLM test chambers featuring Beckhoff PLC controller. These test chambers (typically MultiCORR and CCT type of chambers) are equipped with a separate safety cabinet located in the bench underneath the test chamber with cradles for placing 1 or 2 bottles with SO₂.

The control of the AKES gas dosing system is fully integrated into the high performance Beckhoff PLC controller.

Customer Benefits

- ✚ Fully automatic Kesternich test procedure controlled by the high performance PLC controller
- ✚ Fully automatic features include gas dosing, switching from one to another bottle when the first one gets empty and safety procedures
- ✚ Highly sensitive electronic mass flow meter allows accurate gas dosing and the indication of the remaining mass of the gas in the bottle on the display
- ✚ Modular design of VLM test chambers allows adding Kesternich test option long after the chamber has been commissioned
- ✚ Data logging



Casket with cradles for two bottles with SO₂

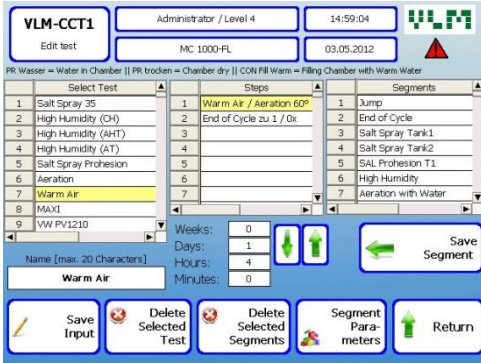


Electronic mass flow meter

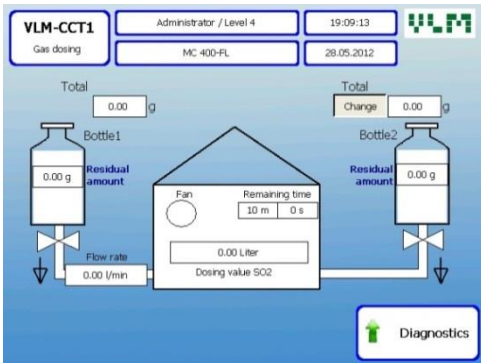


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AKES test management screen



Control screen for setting up new gas bottles

Safety

SO₂ is a poisonous gas and for this reason was the safety of the operating personnel one of the main AKES design parameters. For this reason this system meets the highest safety standards. Some of the features are:

- ✚ Accidental contact of the personnel with SO₂ is prevented even in the case of unexpected power failures
- ✚ After each AKES test the aeration fan in the test chamber will automatically start and operate for 10 min in order to evacuate the last remnants of the poisonous SO₂ out of the test chamber
- ✚ The door of the test chamber will be locked during these 10 minutes
- ✚ The dedicated ventilation system in the casket with SO₂ bottles is continuously operating during the AKES test
- ✚ The casket with SO₂ bottles is made of a special, fire-resistant material specially designed for this purpose

Process Control

The operation of the AKES test is fully integrated in the process control of the high-end VLM test chambers. All functions and parameters of the Kesternich test are accessible through the touch screen of the Beckhoff PLC controller.

- ✚ A standard AKES test consists of two phases within one day cycle from which the first phase features the introduction of the gas (SO₂) into the test chamber and the second phase features aeration. The volume of the gas per cycle (in litres) is configured on the dedicated screen which is a part of the overall control software for the management of the test chamber. AKES is a part of the High Humidity Condensation (CH) test and for this reason this segment has to be selected as a part of the test
- ✚ The standard gas dosing volume for Kesternich test is 2 L per test cycle (one test cycle takes typically 24 h).



Fully automatic dosing system for SO₂ in combination with the ClimaCORR® CC 400-FL test cabinet