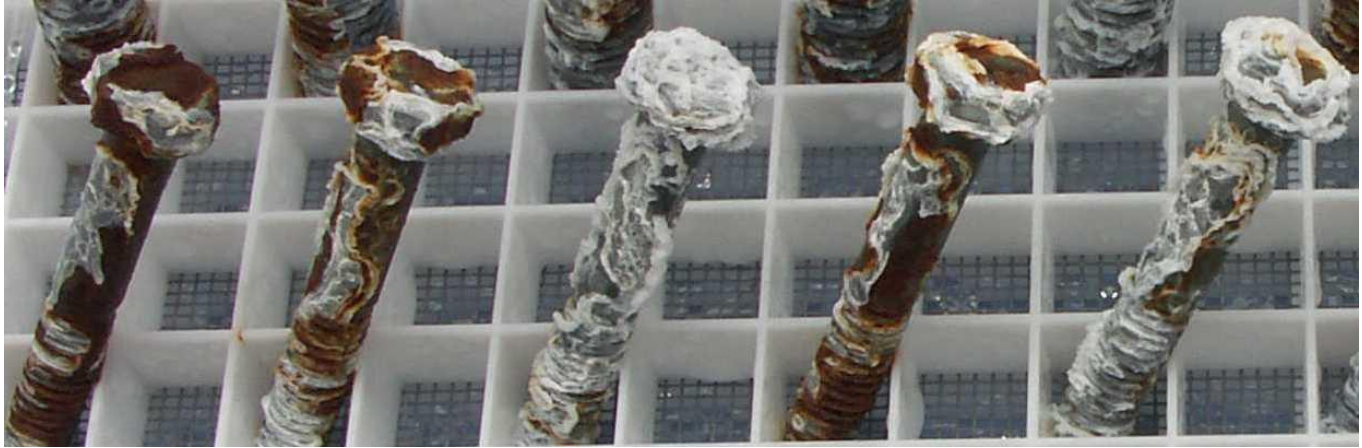




Product Data Sheet

Automatic Gas Dosing Unit for the Kesternich Test – DosiCORR® AD



Order Information

The AKES option is available for the following test chambers:

CON 400-FL AIR CWC AWRP* AKES
Article number: V.751.262.221

CON 1000-FL AIR CWC AWRP* AKES
Article number: V.755.262.221

CON 3000-FL AIR CWC AWRP* AKES
Article number: V.758.262.221

CON 3500-FL AIR CWC AWRP* AKES
Article number: V.759.262.221

*AWRF option requires a permanent source of Demi water under pressure

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

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Specification subject to changes
Pictures might differ from original

Applicable Test Standards

- EN ISO 6988
- ASTM G87
- IEC 62716
- DIN 50018
- ASTM G85 (A4)



Product Description

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

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

Customer Benefits

- Fully automatic Kesternich test and ASTM G85 (A4) procedure controlled by high performance PLC controller
- The PLC control features fully automatic gas dosing (both specified volume and continuous flow) and switching from one to another bottle when one gets empty
- Highly sensitive electronic mass flow meter/controller 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 the cradles for two bottles with SO₂

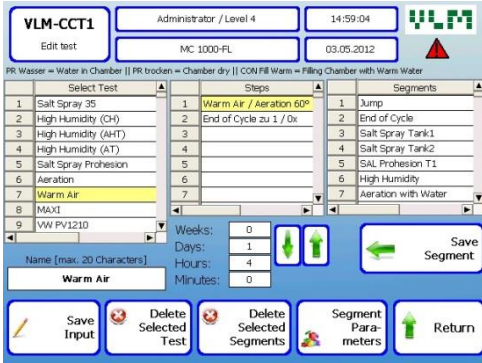


Electronic mass flow meter/controller (shown type might differ)



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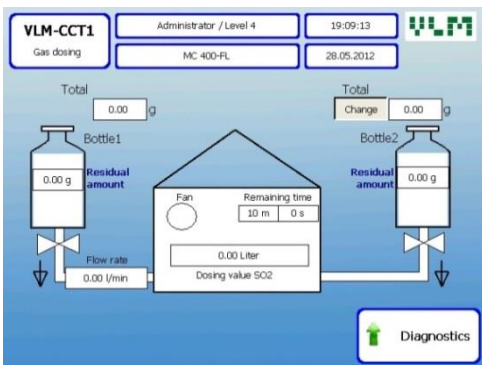


Interactive screen for managing corrosion tests that require gas dosing

Safety

SO₂ is a poisonous gas implying that the safety of the operating personnel was one of the main design requirements of the DosiCORR® AD dosing unit. 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 Kesternich test the aeration fan inside the test chamber will automatically start and operate for 10 min in order to evacuate the last remnants of 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 Kesternich test
- The casket with SO₂ bottles is made of a fire-resistant material specially designed for this purpose



Interactive screen for setting up new gas bottles

Process Control

- The operation of the DosiCORR® AD gas dosing unit is fully integrated in the process control of the ClimaCORR® test chambers. All functions and parameters of the Kesternich test are controlled via the user interface of the Beckhoff PLC controller (touch screen).
- A standard Kesternich test consists of two phases within 24 h cycle from which the first phase (8 h) features the introduction of the gas (SO₂) into the test chamber and the second phase (16 h) features ventilation. The volume of the gas per cycle (in litres) is specified via user interface (touch screen) of the Beckhoff controller and is a part of the overall control software for the management of the test cabinet. The Kesternich test is a part of the High Humidity Condensation (AHT) test
- ASTM G85 (A4) test standard requires different control mechanism than the standard Kesternich test. In this case Salt Spray has to be combined with a continuous dosing of SO₂ gas. A special mass-flow controller is used to control the continuous flow of the gas.
- The standard gas dosing volume for Kesternich test is 2 L per test cycle (one test cycle takes typically 24 h).
- **NOTE:** All test chambers with AWRF option require a permanent source of demineralized water under pressure and a supply of compressed air.



Fully automatic SO₂ gas dosing system DosiCORR® AD is an option for the ClimaCORR® range of VLM test cabinets (the image above shows CC 400-FL AKES)



Electronic mass-flow meter/controller for gas dosing