CA 12L / CA 20L / CA 20L CRYO

EXPLOSION CHAMBER FOR GASES, VAPORS AND DUSTS

Explosion chambers are used for measurement of explosion characteristics of flammable dusts, gases, vapors and hybrid mixtures, such as maximum explosion pressure, maximum rate of pressure rise, lower and upper explosibility limits and limiting oxygen concentration. There are two standardized sizes of the explosion chambers for testing dust explosions – 12 liters (our CA 12L™) and 20 liters (our CA 20L™ and CA 20L CRYO). The explosion chamber for gases and vapors has to be larger than 5 liters, so our CA 20L is recommended for this purpose.

APPLICATIONS

Testing methods using the explosion chambers are an essential part of a standard set of tests used by certified bodies, universities and other research organizations to characterize the hazard properties of dusts, gases and vapors. The information received from these tests is critical for design of mitigating and protective measures, such as explosion venting devices, automatic suppression or partial inertization.

ADVANTAGES & FEATURES

- Manual or fully automatic operation
- Robust design with working pressure up to 30 bar, test proofed up to 40 bar
- Three types of ignition systems: chemical igniter, adjustable capacitive spark up to 10 J and adjustable permanent spark
- Automatic procedure for dosage of gas samples
- Large opening for easy cleaning of the chambers
- K-type thermocouple embedded in the chamber
- Optical probe for flame light intensity measurement
- Optionally equipped for operation with elevated initial temperatures up to 200 °C
- Instrumentation suitable for measurements of hybrid mixture explosions

COMPLIANCE (CA 20L, CA 20L CRYO)

- **EN 14034 (1-3)**
- **ISO/IEC 80079–20–2**
- **ASTM E1226**
- **ASTM E1515**
- **VDI 2263**

Optionally equipped also to comply with:

- **EN 14034–4**
- **EN 15967**
- **EN 14756**
- **EN 1839**

COMPLIANCE (CA 12L)

- **EN 15967**
- **EN 14756**
- **EN 1839**

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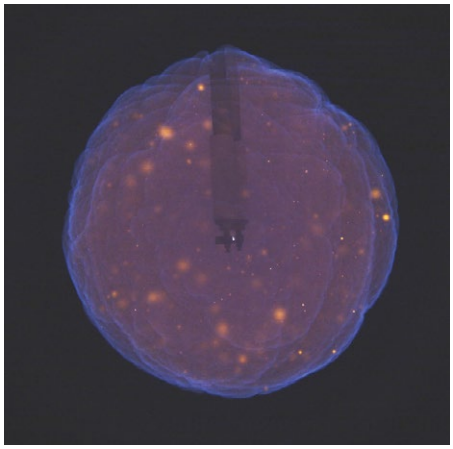
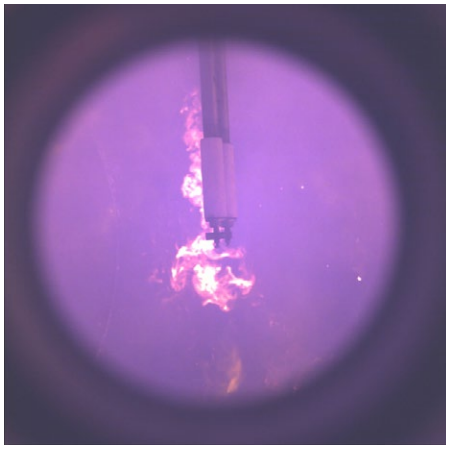
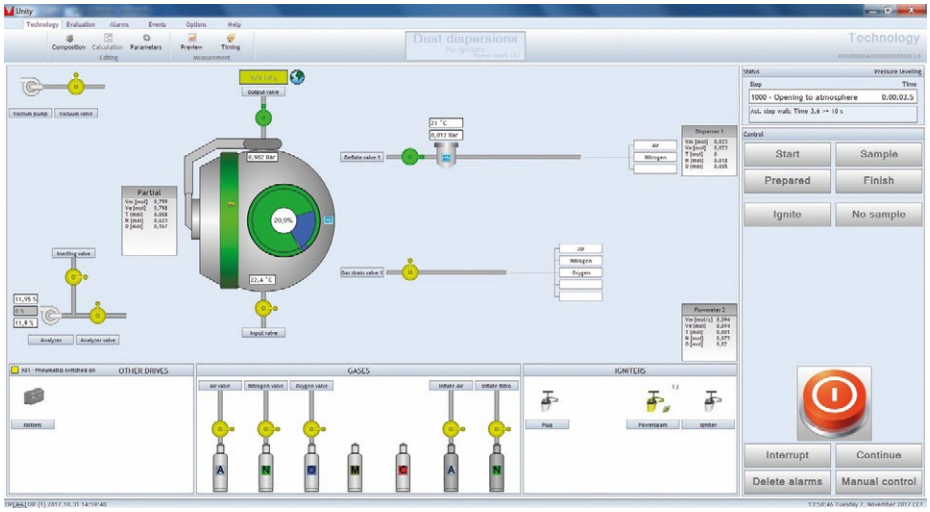
VER 2025



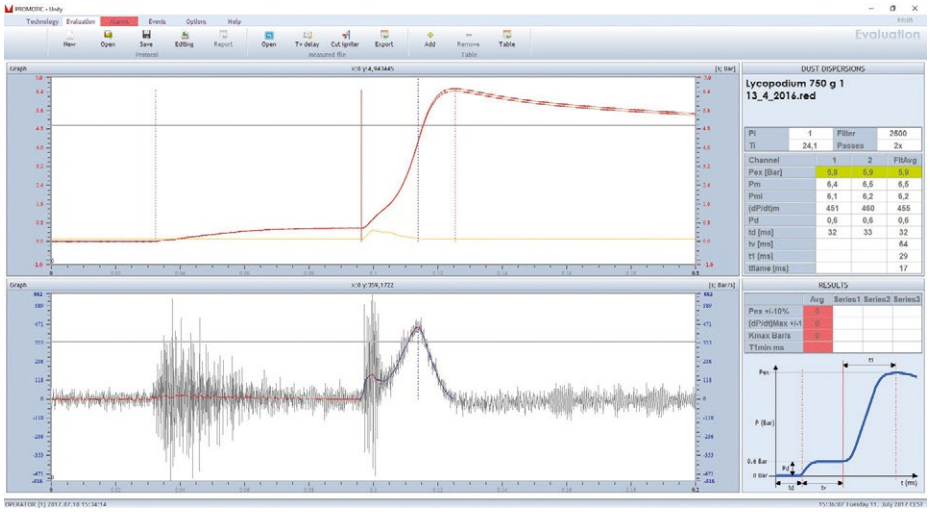
Downward spreading of the flame for 9.5 % by vol. of methane in air



Afterburning of 9.5 % by vol. of methane in air



Technological window used for monitoring and/or control of test setup



Evaluation of measured pressure-time curve (upper window) and dp/dt-time plot (lower window)

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