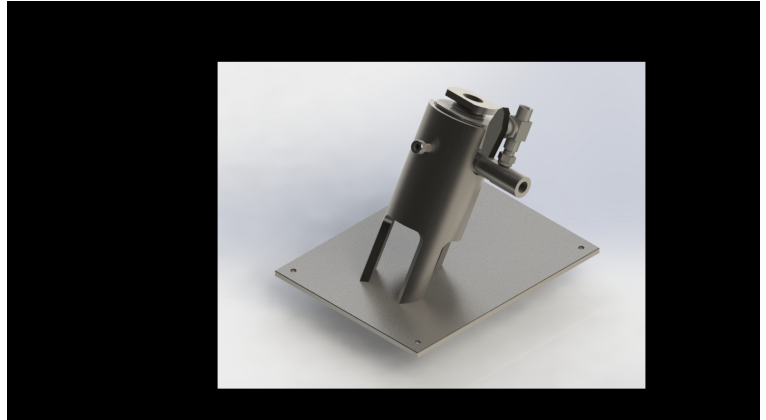


# CTL 025 – Combined Time- Pressure/ Oxidising Liquids Apparatus Data Sheet



Time / Pressure Test Apparatus

**Examines the ability of a substance to propagate a deflagration, as well as the oxidising potential of a liquid to increase the burning rate of a combustible substance when the two are mixed. For UN and EMTAP classification of explosives.**

The Time/Pressure apparatus is designed to examine the effect of an ignition on substances under confinement and, in particular, the possibility that ignition might lead to a deflagration with explosive violence at pressures which can be attained with substances in normal commercial packages. The testing is conducted according to the UN Transport of Dangerous Goods Recommendations Tests and Criteria Test 1 (c) (i), Test 2 (c) (i) or Test C.1


The apparatus may also be used for conducting Oxidising liquids testing and is used to determine the potential of a liquid sample to increase the burning rate of a combustible substance when the two are thoroughly mixed or to form a mixture which spontaneously ignites.

Oxidising liquids testing is conducted according to the UN Transport of Dangerous Goods Recommendations Tests and Criteria, Test O.2 and also to Test A21 of the Classification, Packaging and Labelling of dangerous substances in the European Union.

## Benefits


- Determines ignition effects present when a substance ignites and deflagrates with explosive violence at pressures similar to those that can be attained in normal commercial packages.
- Determines potential of liquid samples to increase the burning rate of a combustible substance when mixed to provide crucial transport and packaging/labelling data.
- Simple to use USB connectivity
- Automated ignition/monitoring set up (Remote control unit, mini Windows 11 PC and data acquisition supplied together with vessel and all interconnecting cables)
- Test software/hardware: Graphical display showing time vs pressure trace
- Graphical Cursor information of pressure rate of rise result between 100 and 300 psi
- ASCII file logging of data which can be imported to Excel (not supplied) for later data analysis  
Historical data program – permits the user to call up any previously saved ASCII file and to view the time pressure trace of those tests

## Functional specification and deliverables

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- Combined Time Pressure / Oxidising liquids Control Unit 100 - 240V /12V-10A output with control and data acquisition card, real time pressure display, remote handset for initiating the ignition, selectable test switch between Time pressure test OR oxidising liquids testing  
Time Pressure Vessel and Stand
  - Pressure Transducer (0-25 barg/0-362.5 psig)
  - Igniter output cable
  - USB Data communication cable
  - Torque wrench and spanner set for vessel end cap maintenance / sample preparation
  - 1 set aluminium burst disks (100 pieces - additionally priced)
  - 1 set lead washers (200 pieces - additionally priced)
  - Time pressure/Oxidising liquids test program and driver software on Mini Windows 11 PC
  - For Oxidising liquids test customers - a 100m roll of Nickel Chromium wire will also be supplied as standard

\*primed cambric and fuse heads not supplied overseas due to logistical issues. Primed cambric is classified as UN class 1G dangerous goods. If time pressure testing, the test must be conducted within a blast enclosure

## Optional (Extra cos items):



Spare burst disks / Spare lead washers / pressure transducer.



# DEKRA Organisational & Process Safety

## Contact

DEKRA Organisational and Process Safety are a behavioural change and process safety consultancy company. Working in collaboration with our clients, our approach is to assess the process safety and influence the safety culture with the aim of making a difference.

In terms of behavioural change, we deliver the skills, methods, and motivation to change leadership attitudes, behaviours, and decision-making among employees. Supporting our clients in creating a culture of care and measurable sustainable improvement of safety outcomes is our goal. The breadth and depth of expertise in process safety makes us globally recognised specialists and trusted advisors. We help our clients understand and evaluate their risks, and we work together to develop pragmatic solutions. Our value-adding and practical approach integrate specialist process safety management, engineering, and testing. We seek to educate and grow client competence in order to provide sustainable performance improvement. Partnering with our clients, we combine technical expertise with a passion for life preservation, harm reduction and asset protection.

We are a service unit of DEKRA SE, a global leader in safety since 1925 with over 48,000 employees in 60 countries and five continents. As a part of the world's leading expert organisation DEKRA, we are the global partner for a safe world.

We have offices throughout North America, Europe, and Asia.

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Would you like more information?

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