

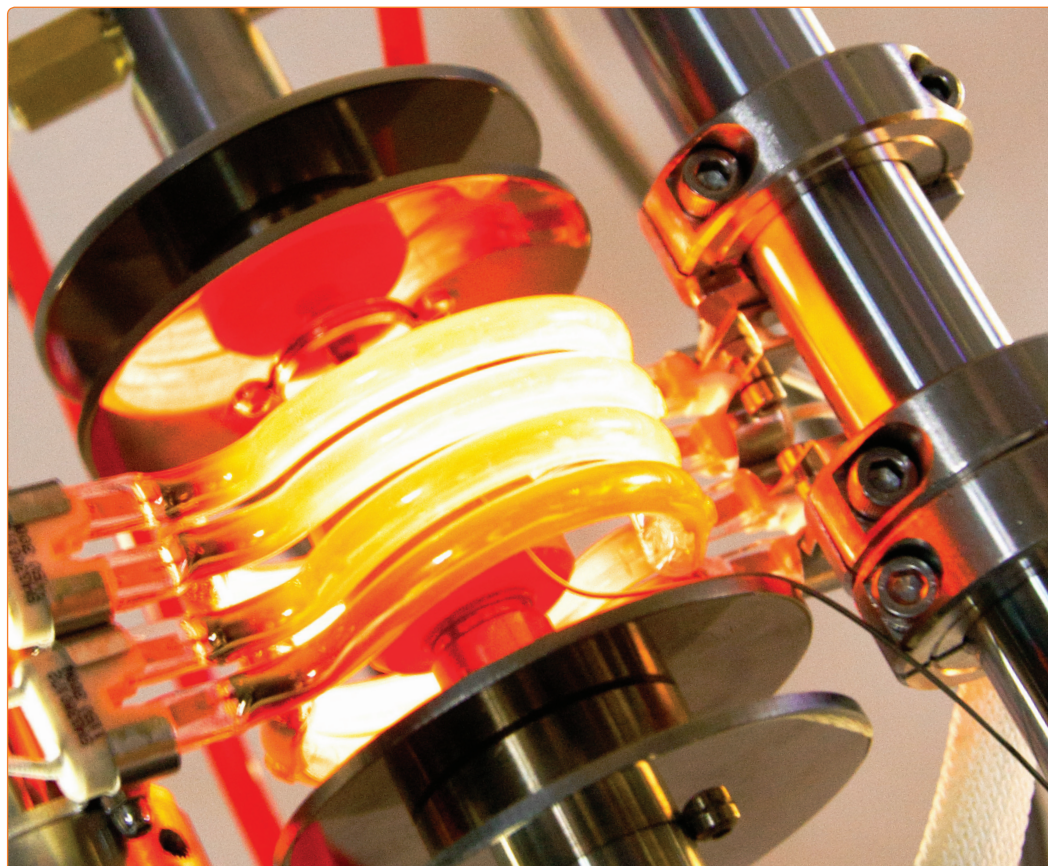


Phoenix

MATERIALS TESTING

Your **specialist** testing partners

Materials Testing



Introduction

Do you have a non-standard, complex or extreme testing requirement? Whatever your testing need, Phoenix will work with you to deliver a solution that fits your specification.

Phoenix is part of the Rubery Owen Holdings Ltd Materials Testing Division, along with Merlin Powder Characterisation, Rotech Laboratories Ltd, and Rotronics Battery Management Solutions Ltd.

With decades of experience supplying specialist testing machines, across a wide range of sectors and customers, Phoenix identified a gap in the sub-contract testing market for flexible, low volume, mechanical testing to support product research and development.

In 2014 Phoenix launched their own, UKAS accredited, flexible scope, sub-contract testing service.

The remit of the lab is to ensure we have the versatility, expertise and capability to accurately test materials, components or assemblies made from the latest materials including super-alloys, composites, ceramics or additive layer manufactured.

The lab is designed to support our customers in getting the data they need to achieve their own product or material objective as quickly, and efficiently as possible.

Phoenix supports customers from a range of sectors including Aerospace, Nuclear, Automotive, Defence, Oil & Gas and Pharmaceutical.



Machines

The Phoenix test lab is equipped with a wide range of machine capacities and the latest instrumentation.

Machine reference	Calibrated Force	Stroke	Dimensions (mm)		
			Width	Depth	Height
Stockholm	40kN - 1500kN	± 50mm	550	750	1750
Vienna	5kN - 250kN	± 50mm	450	600	1350
London	1kN - 160kN	± 25mm	600	2 column	2200
Lisbon	1kN - 160kN	± 25mm	600	2 column	2200
Budapest	1kN - 160kN	± 25mm	600	2 column	2200
Rome	1kN - 160kN	± 25mm	600	2 column	2200
Prague	1kN - 160kN	± 25mm	600	2 column	2200
Madrid	0.5kN - 50kN	± 50mm	500	2 column	850
Dublin	0.12kN - 2kN	± 20mm	95	2 column	220
Minsk	1kN - 100kN	± 50mm	500	2 column	1000

Equipment	Min °C	Max °C
Environmental chamber 280mm (w) x 280mm (d) 315mm (h)	-15	2000
Furnace 380mm (h) x 150mm (bore)	ambient	1200
Thermal camera	-20	1200
Pyrometer	200	1600
Emissivity correcting pyrometer	200	1600
Induction heaters	200	2000
Infrared emitters	ambient	1000
High temperature extensometers	ambient	1600
Extensometers	ambient	200
LVDTs	ambient	120
Three and four point bend rigs	ambient	ambient

Additional Services



Merlin offers a unique sub-contract testing service for powders, providing compression science on demand, giving access to cutting edge materials science and compression knowledge on a sample by sample basis.

Merlin can help identify potential manufacturing compression issues at the product formulation stage, simulating real production presses while there is still time to make changes, making costly scale-up disasters a thing of the past.



ROTECH

Where Phoenix offers bespoke testing, including elevated temperatures, fatigue and TMF, Rotech offers a range of standard tests that enable the combined ROH Materials Testing Division to support testing and analysis that meets the complete customer need.



Rotronics is the UK partner for CTEK, Powervamp and Midtronics battery management technology and specialises in battery management solutions. Working with our customers, we deliver simple, effective battery and electrical system testing processes that integrate into every-day workshop practices.

Control System and Software

The key deliverable of any testing service is data, when you are testing a sample or product where there are limited quantities available, or they are expensive, getting the most accurate and repeatable data is critical.

The Phoenix Alpha Digital Control System

The Phoenix Alpha Digital Control System is equipped with National Instruments™ processing, giving a control loop rate of up to 40kHz, ensuring that the Phoenix system offers the most accurate control and best data acquisition rate possible.

The Phoenix software suite is fully written and supported in-house, and includes programmes written to meet international standards (Tensile, TMF), to allow simple manual control (Virtual Control Panel) or the ability to write unique and complex test programmes for R&D testing (Macro Language).



TMF

Phoenix offers sub contract TMF testing using the Phoenix Thermo Mechanical Fatigue software, which is written to the latest international TMF standard, plus additional features to allow tailored TMF research.

The Phoenix TMF system includes a dedicated 160kN hydraulic test machine, induction heating, forced air cooling, an emissivity compensating pyrometer, thermal imaging, high temperature extensometry, and environmental control.

The heating and cooling profiles can be phased in sync or out of sync with other modes of control (load, strain) as required.

Test Specification Consultancy

Phoenix engineers work with the customer to ensure that any test or test programme is as close to service conditions as possible, to avoid generating inaccurate or misleading data.

Where a customer does not have a detailed test specification Phoenix will offer expert advice and guidance on defining the test, in order to achieve the most appropriate and accurate data from any test carried out, including designing fixtures and instrumentation.

UKAS Flexible Scope

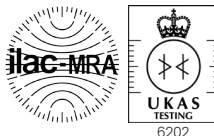
The Phoenix test laboratory has UKAS accreditation (flexible scope), this means that where results fall within the scope, regardless of whether the test has been defined by the customer, by an international standard, or agreed with by Phoenix, the results will be issued on a UKAS test certificate.

Any results which are traceable, but are not covered by the UKAS scope will be included in the report, but will be identified as not coming under the UKAS flexible scope accreditation.



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