



**Test and inspection
instruments for the
aerospace industry**

ip

ip INDUSTRIAL
PHYSICS

Protecting
Product Integrity

Who are we

We've been manufacturing lab test instruments for the aerospace industry since Concorde took her maiden flight. That's almost 60 years ago.

In fact, one of the first models of testing equipment ever developed in the Industrial Physics family – the LCH Speedy Tester – was designed specifically for the sector. And its timeless design means that it's still produced and sold throughout the world, across a variety of industries.

Our machines will help you to prepare your samples, to test impact and hardness, or assess heat-treating effects. They can give you accurate readings on surface tension or surface energy.

From basic tensile tests – pulling welds apart – to highly sophisticated testing on composite materials, we have a variety of test instruments, fixtures and accessories available. We even make state-of-the-art environmental chambers to show you how your products will fare over time when exposed to the elements.

Our aerospace testing equipment can be used on a variety of parts and components adhering to most popular ASTM and ISO related quality standards.

At Industrial Physics, we've combined the strength of 12+ of the world's leading inspection brands. When you choose us as your test and inspection partner, you'll get access to an unrivalled product portfolio that you won't find anywhere else.

No matter the size or location of your business – we're here to safeguard your reputation.

Our brands

Across our portfolio of specialist brands, we've been protecting the integrity of businesses all over the world, for more than a century.

OUR AEROSPACE TESTING BRANDS:



About Industrial Physics

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**Innovative
Technology**

Testing & Inspection
in...



20,000+
Customers



**15 Industries
40 Applications
22 Materials**



Over
300
People

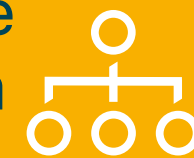


Customers
in **75**
Countries

12+
Brands



**Global Service
& Distribution
Network**



Proud partner to the aerospace and defense industries

Rigorous testing of materials used in aerospace manufacturing and defense is a mission critical application

Our test instruments make makes sure your products will withstand high temperatures, high impact and the scrutiny of stringent industry standards.

Whether you are an OEM at tier one, two or three of the aerospace supply chain. We will help you with both processing and structural property testing.

Here are some of the types of testing our machines support:

- Appearance testing
- Corrosion testing
- Degreasing
- Hardness testing
- Impact testing
- Tension, Compression, and Materials Testing
- Leak detection
- Flow testing
- Occlusion
- Coated film thickness.



Non-contact strain measurement systems on our Universal Test Machines

Meet our aerospace product range

Leak detection

We make highly accurate and reliable air leak and flow detection solutions that help you to fly through most international testing standards.

TME Integra Solution

A high-resolution leak or leak/flow tester featuring one-to-four channel, concurrent or sequential, leak and flow testing. You can rely on this machine for the testing of multi, or single channel:

- Pressure / vacuum decay
- Occlusion
- Flow



TME Integra Flex

A compact tester for inline production leak detection, or bench-top testing. It's ideal for the testing of single channel:

- Pressure / vacuum decay
- Occlusion



TME Worker Integra

An innovative leak detection instrument, with repeatable and quantitative results. Our happy aerospace customers use it for multi, or single channel:

- Pressure / vacuum decay
- Occlusion
- Flow testing
- IP 67 equivalency



Custom fixtures

Not all leak tests need custom fixtures, but we've got you covered if yours do!

We bring 50 years' experience in helping our aerospace customers overcome even the most challenging of fixturing applications.

From concept to validation, our skilled engineers will listen to and collaborate with you throughout the design, build and test validation process.



Hardness testing

Our aerospace industry hardness testing machines are hard to beat! We've been making them for over 3 decades and they're renowned for quality, reliability, and ease-of-use.

Whatever parts or components you need to test, we've got the instrument for you. Think of us as a one-stop-shop: we also offer a complete line of accessories from test blocks to sample preparation equipment. Essential for microhardness testing applications.

UTS Tru-Blue II Rockwell

The TB-II uses innovative digital controls and a high-precision load cell to give you highly accurate penetration measurement data. It meets or exceeds ASTM E-18 and ISO 6508 standards and is available in a variety of sizes.



UTS Tru-Blue mVT (MicroVT)

A semi-automated microhardness testing system. It measures hardness values on the 'vickers' (HV) and 'knoop' (HK) scales from 10g up to 1000g (1kg). Our state-of-the-art electronics and high-quality optical displays make running tests quick and easy. And our instruments give you accurate and repeatable results.



UTS Tru-Blue Sample Cutter

The instrument offers a corrosion resistant cover and comes with a powerful 3 kW motor and 57-liter recirculation tank. You can choose to use it alongside the brand-new United Testing System Tru-Blue MicroVT.



UTS Tru-Blue Sample Mounting Press

The Tru-Blue sample mounting press is an effective sample mounting press tool to assist your microhardness testing needs.



UTS Tru-Blue Grinder Polisher

A perfect tool to prepare the surface of your chosen samples in order to achieve accurate and repeatable results when conducting microhardness tests on critical parts and components.



Corrosion chambers

C&W Salt Spray Chamber

Effective corrosion testing of components and coated test panels requires close operational control and total accuracy. And our mobile machines offer both. They feature salt solution reservoirs with integral filter systems and an ample 114-liter capacity, giving you up to two weeks of continuous operation.



C&W Cyclical Corrosion Cabinet

Specially formulated retardant glass reinforced polyester (GRP) cabinets with high chemical and temperature tolerance. We have wet or dry seal options that come with an ergonomically designed control panel.



Appearance testing

Aerospace parts and components are often produced and painted in different plants using multiple processes and substrates. Inevitably, the overall appearance of your products can suffer. Our machines harmonize the sum of the parts, so you can optimize the appearance and performance standards of your vehicles.

TQC Coatmaster Flex

Our popular coatmaster flex machine measures coating thickness immediately after application. It can be used on both wet and cured / dried powders and paints.



TQC Gloss Meter

Get fast and accurate gloss level measurements on any flat surface, including paper, paint, plastic or wood.



TQC Testing Ultrasonic Positector 200

Our popular corrosion probe measures the effects of corrosion and erosion on tanks, pipes or other structures.



Universal test machines (UTMs)

Since 1964, our industry-leading UTMs have provided unparalleled control over your tension (pull testing), compression and bend/flex testing on a variety of parts, components and test samples.

These popular, software-controlled devices come in a variety of models – from our 5 kN (550 lbf) table model system, up to our 2,000 kN (450,000 lbf) servo-hydraulic system. We will help you to meet and exceed international standard requirements for a wide range of products and test scenarios.

United Testing Table Model Frames

Our convenient table model frames are surprisingly powerful – generating force from 5 kN up to 100 kN. They're ideal for many material types and we can modify heights and widths to suit the needs of your operation.



United Testing Floor Model Frames

If you have large parts and components to test, or just stronger materials, our floor frames are the right choice. They can measure forces from 100kN to 600kN, while our servo-hydraulic frames take things to a whopping 2,000 kN and are up to 14FT tall or more.



UTS LCH "Speedy" tester

Built for the aerospace industry. Our popular 'Speedy' machine is a bench-top, hydraulic-controlled system for testing spot welds and fasteners. It makes light work of similar destructive tests on a variety of samples and is rated to test up to 150 kN (33,000 Lbf).



Impact testing

A single point test that measures your material's resistance to impact using a controlled weight dropped from a set height. It can be defined as the kinetic energy needed to initiate and continue fracture until the specimen is broken.

Ray Ran Pendulum Impact Tester

This clever device uses inbuilt microprocessor technology to determine the energy required to break or rupture specimens. It works wonders on plastics, composites, ceramics and non-ferrous metals to international testing standards for izod, charpy and tension impact testing.



Ray-Ran Notching Cutter

Our notching cutter produces precise stress-concentrated profiles in izod and charpy specimen bars. They meet or exceed the requirements of international standards including ISO 179, ISO 180 and ASTM D256 and D6110.



Ray Ran Instrumented Falling Weight Impact Tester

Gives you a more insightful vision of events occurring during impact loading of specimens including pipe, sheet, laminates, composites, ceramics and non-ferrous metals. And it complies with D3763-02.

While our non-instrumented falling weight impact tester is great for gross failure analysis of specimens to international standards such as ISO 6603.



Test sample preparation

Test the mechanical properties of your plastics and you'll know if they are fit for purpose and meet, or hopefully exceed, the national and international standards you're aiming at.

Ray-Ran Pneumatic Cutting Press And Cutting Dies

Effortlessly generates forces up to 50kN, cutting through plastics, paper and boards up to a maximum of 8mm thickness using our bespoke cutting dies.



Ray-Ran CNC 3 Axis Profile Cutter

The best device for simple sample preparation and 3D prototyping. We recommend it for use with thicker sheet materials, or pipe sections, up to 100mm thick.



Ray-Ran test Sample Injection Molding Apparatus

Produces consistently reliable colour plaques, tensile and impact test specimens for mechanical testing.



Melt Flow

Ray-Ran Melt Flow Tester

Melt Flow Rate (MFR) is a measure of a given polymer's flow characteristics. And we have several great models for testing all three methods conforms to ASTM D1238, ASTM D3364, ISO 1133, DIN 53735 and others.



MFR 100. Filling and cleaning tools included as standard.



MFR 200. Available in 220-240V 50hz and 110-120V 60 hz, 10amp.



MFR 300. Features the latest Techni-Test software.

Additional Industrial Physics Solutions

TQC Comprehensive Abrasion Tester

Need to check the wear resistance of coatings? Look no further!

Built around the tried-and-tested scratching resistance method to evaluate the hardness of your coatings.



TQC Curvex 3 Standard Oven Logger

Gives you high quality temperature data logging for paint curing ovens...and it's super easy to use.



TQC Pocket Goniometer PGX

Checks surface properties for contamination, adhesion and the printability of metals, polymers, glass, paper, board...and much more.



Support & services

We believe that supplying you with high quality testing instruments is only part of our job. Being fast, efficient, and truly reliable is critical when it comes to servicing the technology that keeps your business running.

Wherever you are in the world, our experts are on hand to support your needs. From installation, through to calibration, repair, and preventative maintenance, we've got you covered. That's because at Industrial Physics, we're not just suppliers, we are here for you as trusted partners.

Whatever your requirement may be, if you're looking for the highest quality of test and inspection solutions to ensure the quality of your products, the team at Industrial Physics are here to support you.



A photograph of a space shuttle in orbit, showing the orbiter and external tank. The image is overlaid with a semi-transparent orange and blue gradient. The orbiter is on the right, and the external tank is on the left. The background is the dark void of space with some stars visible.

“Excellent technical contact, perfect customer service and fast order processing time are undoubtedly additional advantages that determine the choice as our permanent supplier of laboratory equipment today and in the future.”

**Artur Palasz PHD, R&D Director
Spektrochem Paint Laboratory**

Get in touch

So, if you have an important aerospace project and you need to ensure mission success, find out more about how we can support your unique needs and get in touch today.

Email: info@industrialphysics.com

industrialphysics.com

