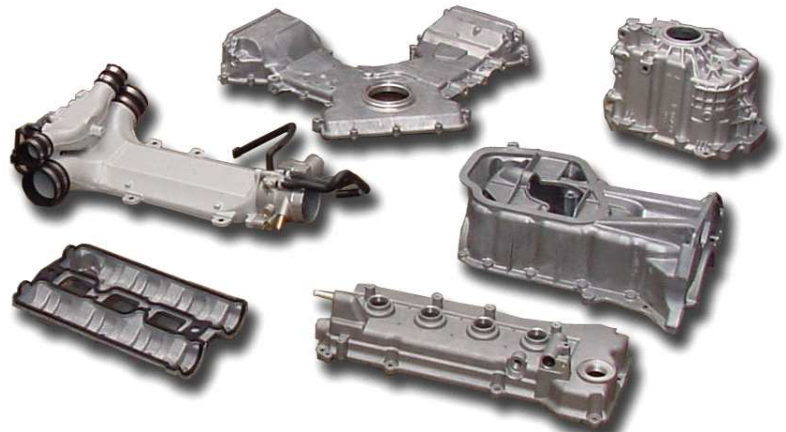


TQC has specialised in the automated leak testing of components for over 25 years and has supplied a wide range of leak test machines to the casting industry. Combining our experience in production test equipment and process automation, TQC is able to offer complete leak test systems tailored to the specific needs of its customers.

TQC integrate off-the-shelf leak test instruments into their standard range of leak test machines and fixtures or have the ability to design and manufacture a bespoke solution for your application.

TQC's range of leak test machines and fixtures are designed to detect defects, porosity, cracks and leaks in products using leak test instrumentation to provide quick, dry, quantifiable and traceable testing.



### ***Types of Product***

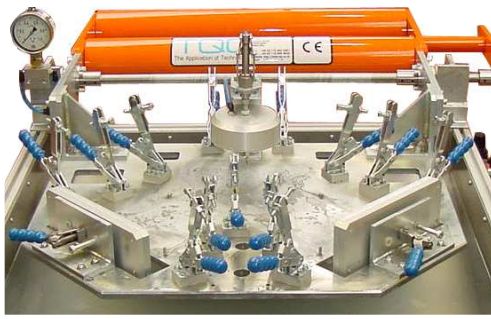
- Ferrous & Non-Ferrous
- Die Castings & Sand Castings
- As Cast and Machined Castings

### ***Types of Leak Test***

- Pressure Decay
- Vacuum Decay
- Multi-Cavity Testing
- Dunk Tanks

### ***More than just a leak test .....***

- Blockage and Flow Tests
- Process Fault Detection eg. Core & Flash
- Part Present Checks
- Measurement & Gauging
- Integrated Sub-Assembly Operations
- Leak Location
- Part Marking
- Data Logging & Traceability



The key to successful leak testing is in the design and manufacture of the fixture and sealing system. TQC has many years experience of seal and fixture design and our expertise in this area enables us to engineer representative, reliable and repeatable leak test equipment.

### *Range of Standard Machines*

#### **Series 10**

- Manually applied sealing connections
- No guarding
- Suitable for low cost, low volume applications and prototype castings

#### **Series 20**

- Self guarding sliding draw test fixture
- Manual or automatic seal application
- Suitable for low cost, low to medium volume applications

#### **Series 30**

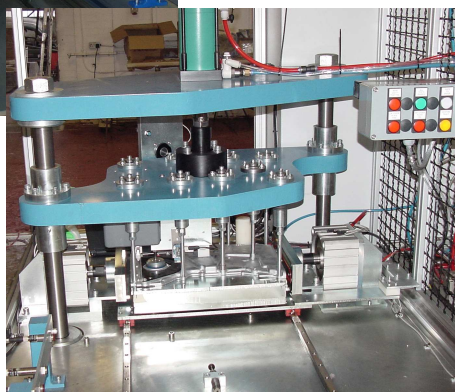
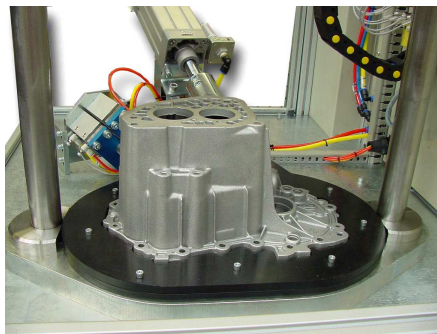
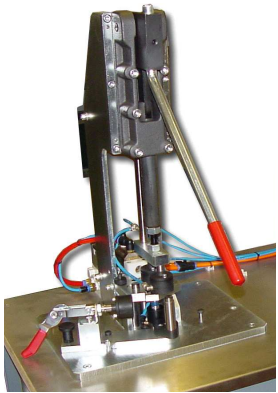
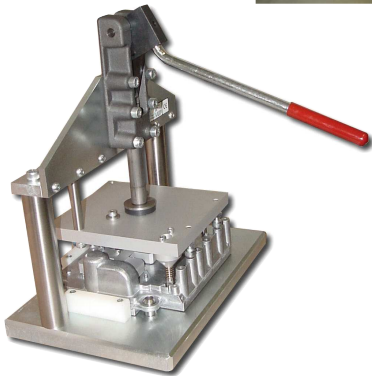
- As per Series 20 with the addition of fixture control by the leak test instrument which provides integrated control of the test fixture and sequence without the need for a PLC

#### **Series 40**

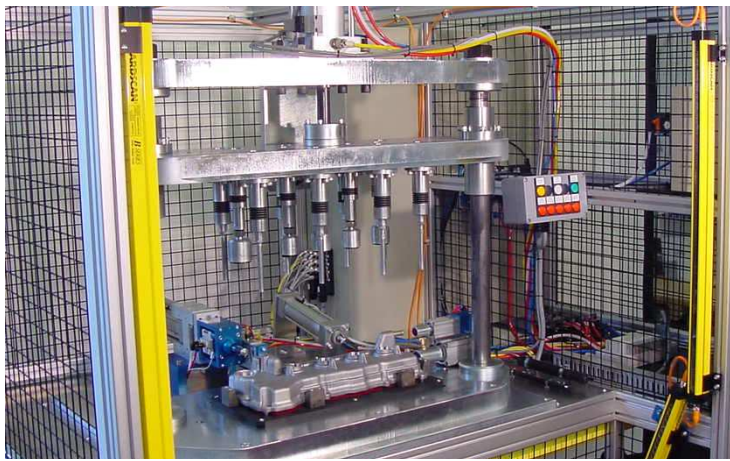
- Manual load / unload
- Light guard, sliding guards, or self guarding
- Fully automatic sealing fixture
- PLC control system
- Suitable for medium to high volume applications

#### **Series 50**

- As per Series 40 with PC control and data logging



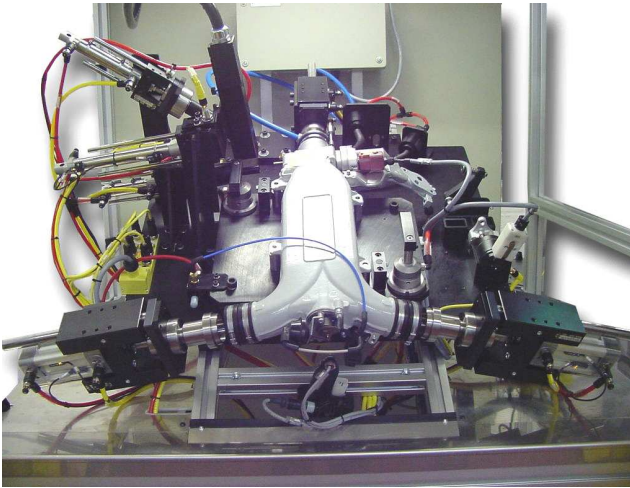




### **Additional Features**

The standard series of TQC leak test machines can be enhanced with the following features:

- Leak location – water dunk or trace gas sniffing.
- Component marking – impact character, dot matrix, inkjet or adhesive labels.
- Blockage and flow tests.
- Process fault detection, eg. core sand debris and excess flash.
- Parts present check, eg. Integral seals, brackets and screws etc.
- Measurement and gauging
- Integrated sub-assembly operation, eg. Seal insertion, core plug insertion, automatic screw driving etc.
- Sub-assembly component performance and function tests, eg. Electrical testing of sensors, switches and devices.
- Multi-cavity testing, eg. Combined vacuum and positive pressure testing , internal leakage testing, low and high pressure testing.
- Serial numbering and data logging for product traceability, SPC and quality control requirements.



### **Automotive Castings**

- |                                      |                     |
|--------------------------------------|---------------------|
| • Cylinder Blocks & Heads            | • Oil Sumps         |
| • Timing & Cam Covers                | • Oil & Water Pumps |
| • Manifolds                          | • Heat Exchangers   |
| • Gearbox Castings & Clutch Housings | • Radiators         |
|                                      | • Turbo Chargers    |

### **Other Castings**

- Valves
- Hydraulic & Air Cylinders
- Electronics Enclosures
- Pumps
- Motors
- Domestic Appliances

TQC is a well established private British company based in Nottingham. We have an integrated team of professional mechanical, electrical and control engineers capable of handling a wide range of bespoke engineering projects. We employ 40 qualified personnel and have a turnover of £2m per year.

TQC's aim is to provide a reliable and technically competent service to the food, beverage, pharmaceutical, toiletries, electronic, white goods, automotive, plastics, rubber, medium and light engineering industries. Our goal is to build on the loyal customer base secured over the 25 years of our existence by identifying similar applications to those already satisfied by our innovative engineering concepts.

TQC's capabilities include expertise in the following areas:

- **Leak testing**
- **Automated manufacture**
- **Handling and transfer systems**
- **Integrated systems engineering**
- **Electro-mechanical test equipment**
- **Product development**

We are successful in these fields because we have complete inhouse facilities for mechanical, electrical and software design, manufacture, assembly and electrical control system build, along with skilled project management. These facilities will ensure a successful execution of your project in a timely and cost effective manner

So, if you are currently considering an integrated engineering project which requires a professional or novel approach, and you would like a British company, TQC have the solution.

For further information available on the internet, check our websites at:

[www.tqc.co.uk](http://www.tqc.co.uk)  
[www.leaktesting.co.uk](http://www.leaktesting.co.uk)

TQC Ltd  
Hooton Street  
Nottingham  
NG3 2NJ  
U.K.

Tel. +44 (0) 115 950 3561  
Fax. +44 (0) 115 948 4642  
[sales@tqc.co.uk](mailto:sales@tqc.co.uk)  
[www.tqc.co.uk](http://www.tqc.co.uk)

