

Plastic Pipe Testing Equipment



Hydrostatic Pressure Tester

www.WorldofTest.com/hydrostatic-pressure-tester

ASTM D-1598, ASTM D-1599, ISO 1167

QT-HPT Series is designed to determine the resistance of thermoplastics pipes and short-time hydraulic burst to constant internal water pressure at constant temperature. It is applicable to thermoplastic pipes intended for the conveyance of fluids. It confirms to ASTM D1598-2004, ASTM D1599 and ISO 1167-2006.

ASTM D1598-2004 Standard Test Method for Time-to-Failure of Plastic Pipe under Constant Internal Pressure. This test method covers the determination of the time-to-failure of both thermoplastic and reinforced thermosetting/ resin pipe under constant internal pressure. It provides a method of characterizing plastics in the form of pipe under the conditions prescribed.



Pressure Control Unit

- Pressure control unit comes with touch screen or PC for test parameter settings. Testing results are easy to be converted to excel for further processing.
- Supply up to 50 different pressure on the area less than 1m².
- Specimen size and material intelligent identification comes with optimized pressure rising solution and algorithm.
- High accuracy pressure control. Selectively adjustable input pressure in each individual module to reduce the wearing of solenoid valves.
- All metal components that come into contact with the medium are made of high-quality stainless steel.



Thermal Tank

- Optimal material selection. Inner container, outer protection plate as well as the lid are made of high quality stainless steel. Further, all the components that come in contact with medium are also made of high-quality stainless steel.
- Thermal Tank is constructed with the heavy section steel frame providing an extremely rigid performance.
- Unique steam collection device keeps steam and heat in the test tank and protect against injury.
- Automatic water filling design ensures full tank capacity during the whole time.



Endcaps

By using the advanced structure, QT-HPT-EC Endcaps are particularly rapid to assemble and disassemble without any special tools even on chamfered and oval pipes. Hollow-out design has reduced the weight drastically compared to the standard endcaps. Further, it is easier for observation and operation. QT-HPT-EC are manufactured with anti-corrosive materials and fit regardless of the pipe wall thickness.



Rapid Crack Propagation Tester (RCP)

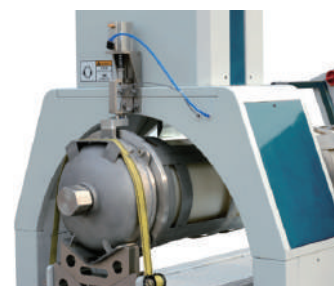
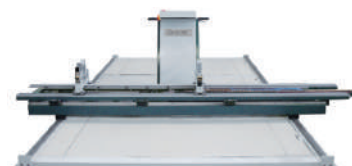
www.WorldofTest.com/rapid-crack-propagation-rcp

ISO 13477

Applications

QT-RCP Series is designed to determine the critical pressure or critical temperature for rapid crack propagation of plastic pipe, PVC or other relevant materials. QT-RCP Series is a full set of testing machine consist of RCP Test Unit, RCP Low Temperature Conditioning Cabinet, RCP Sample Delivery Unit and RCP End Caps.

ISO 13477 Thermoplastics pipes for the conveyance of fluids -- Determination of resistance to rapid crack propagation (RCP) -- Small-scale steady-state test (S4 test), is applicable to the assessment of the performance of thermoplastics pipes intended for the supply of gases or liquids. In the latter case, air can also be present in the pipe.



RCP Test Unit

Rational structure and accurate impact speed. There is an energy storage device in the unit, it convert elastic potential energy into kinetic energy, than the impact speed range can be controlled between 1m/s and 20m/s.

RCP Low Temperature Conditioning Cabinet

Automatically-activated doors are provided. For time-saving reasons, the assembly goes into and out of the conditioning cabinet through the pneumatic opening door.

Ultralow temperature and high efficiency. Temperature can drop to -30 within 10min and multiple groups of samples can be treated simultaneously. Temperature can be monitored and regulated automatically.

RCP Sample Delivery Unit

According to the standard laying down "crack initiation shall follow within 3 minutes of removal of the test pipe from the conditioning". Limited time is available to position test sample and to increase the internal pressure. For this reason we offer a complete electric sample delivery unit.

RCP End Caps

RCP End Caps consists of front & rear sealing part, limiting ring, baffles, O-rings, etc. A variety of specifications are selected, including $\Phi 63\text{mm}$, $\Phi 110\text{mm}$, $\Phi 160\text{mm}$, $\Phi 250\text{mm}$, $\Phi 315\text{mm}$, $\Phi 400\text{mm}$ and $\Phi 500\text{mm}$.

Technical Specifications

Model		QT-RCP Series
Test Pipe Sizes		$\leq \Phi 315\text{mm}$ or $\leq \Phi 250\text{mm}$ (or other sizes on request)
Speed Range		1m/s ~ 20m/s
Speed Accuracy		$\pm 0.5\text{m/s}$
Pressure	Pressure Medium	Nitrogen(equipped by user)
	Range	$\leq 2.5\text{MPa}$
	Accuracy class	Grade:0.5
Control Mode		PLC control and touch screen display
Striker Blade Release		Pneumatic
Pneumatic Energy Storage		Motor-driven
Speed measurement		Independent measurement, serial communication interface

Drop Weight Impact Tester for Plastic Pipes

www.WorldofTest.com/drop-weight-impact-tester

300C (ISO 3127, EN744, EN1411) & 300D (ASTM D2444)

The Falling Weight Impact Tester is used to perform impact tests on plastic pipes, conforming to ISO 3127, EN744 and EN1411. Test pieces are subjected to blows from a falling striker, of specified mass and shape, dropped from a known height onto specified positions around the circumference of the test piece. The true impact rate of the batch, or production run from an extruder, is estimated.

- Catching rate of anti-rebound device is 100%.
- AC servo system guarantees the high locating precision and fast rising speed.
- Impact height may be set between 50 and 2000mm, also impact height may be
- Calibrated automatically.
- Automatic security devices are provided in this instrument (specimen
- Anti-rebound door and striker window safeguard etc.



Piping System Joints Leak Tightness Tester

www.WorldofTest.com/piping-system-joints-leak-tightness-tester

ISO 4422-2:1996, ISO 13844:2000 and the equivalent

QT-JLT Piping System Joints Leak Tightness Tester is designed to determine the leak tightness of elastomeric sealing ring type of joints for buried thermoplastic non-pressure piping systems.

ISO 4422-2:1996 Pipes and fittings made of unplasticized poly (vinyl chloride) (PVC-U) for water supply - Specifications - Part 2: Pipes (with or without integral sockets). It specifies the characteristics and properties of extruded pipes made of unplasticized poly (vinyl chloride) (PVC-U), with or without socket(s) (integral or not), and intended to be used for buried water mains and services and for water suppliers above ground, both inside and outside buildings.



Environmental Stress Cracking Tester

www.WorldofTest.com/environmental-stress-cracking-tester

ASTM D1693

QT-ESC Environmental Stress Cracking Tester is used to determine of the susceptibility of ethylene plastics, as defined in terminology D883, to environmental stress-cracking when subjected to the conditions specified in ASTM D1693-01, under certain conditions of stress and in the presence of environments such as soaps, wetting agents, oils, or detergents, ethylene plastics may exhibit mechanical failure by cracking.

Bent specimens of the plastic, each having a controlled imperfection on one surface, are exposed to the action of a surface-active agent. The proportion of the total number of specimens that crack in a given time is observed.



Pipe Notch Milling Machine

www.WorldofTest.com/pipe-notch-milling-machine

SO 13479:1997

QT-NMM Pipe Notch Milling Machine is used to determine resistance to the slow crack expansion. It is widely used in pipe manufacturing, water supply and drainage projects or Industrial field.

ISO 13479:1997 Polyolefin pipes for the conveyance of fluids -- Determination of resistance to crack propagation -- Test method for slow crack growth on notched pipes (notch test). This International Standard specifies a method of test for determining the resistance to slow crack growth of polyolefin pipes, expressed in terms of time to failure in a hydrostatic pressure test on a pipe with machined longitudinal notches in the outside surface. The test is applicable to pipes of wall thickness greater than 5 mm.



Pipe Cutting and Chamfering Machine

www.WorldofTest.com/pipe-cutting-and-chamfering-machine

QT-PCM pipe cutting and chamfering machine is mainly used for cutting and chamfering big pipes. Cooperating with pipe extrusion production line, makes it an ideal machine for pipe manufacturer, as well as for quality inspection and research institution mainly used for cutting and chamfering big pipes. Cooperating with pipe extrusion production line, makes it an ideal machine for pipe manufacturer, as well as for quality inspection and research institutions.

- Filling in the domestic blank. With the advantages of well performance, high automation, humanized protective devices, easy operation and fine appearance.
- Wide pipe application range, modular design, high rigidity, pneumatic clamp, planetary cutting method.
- Easy assembly and good seals thank to the smooth and even cutting surface.
- Cutting and chamfering are completed synchronously, largely increasing work efficiency and reducing working strength.



Elongational Stress Tester

www.WorldofTest.com/elongational-stress-tester

ISO11542-2:1998

Elongational Stress Tester is designed to determine the elongational stress of ultra-high molecular weight Polyethylene (PE-UHMW) molding and extrusion material. The elongational stress is a characterization of the melt viscosity of PE-UHMW moulding powder, whose melt flow rate cannot be determined by the method specified in ISO1133 because of its extremely high molecular weight.



Ring Stiffness Tester

www.WorldofTest.com/ring-stiffness-tester

ISO 9969-2007, ISO9967

The Ring Stiffness Tester RST30 is designed to measure the ring stiffness, ring softness and creep rate for plastic pipe. The unique design makes this tester especially suitable for large diameter pipe. The RST30 features built in measurement of the inner diameter of the pipe and the compression plate load-cell interface is designed to reduce the risk of damaging the load cell during testing. The rigid compression plates ensure the results will be free of machine deflection and increases the accuracy of the test results.



Manhole Mechanical Properties Tester

www.WorldofTest.com/manhole-mechanical-properties-tester

ASTM D 2412-2002, BS EN 13598-1

Manhole Mechanical Properties Tester is designed to determine the performance of inspection chamber, manhole frame as well as manhole wall. It can be used to test shear strength and the axial loading performance of manhole base; it can also be used to test Ring stiffness, flatness and ring flexibility.



Static Constant Loading Tester for Thermoplastic Manhole

www.WorldofTest.com/static-constant-loading-tester-thermoplastic-manhole

BS EN 13598-1:2003

QT-SCL Static Constant Loading Tester is mainly used to determine the resistance to the axial static constant load of plastic manhole. A constant force is steadily loaded on the axial direction of the manhole for the specified time, when the test is finished, observing the sample appearance (deformation, collapse, crack or crazing), determine the deformation in axial direction and calculate the deformation ratio of manhole. The machine is also suitable for ring stiffness test, flattening test, ring softness test of thermoplastic pipes.



Buckling Resistance Tester for Thermoplastic Drainage Cover

www.WorldofTest.com/buckling-resistance-tester-thermoplastic-drainage-cover

BS EN 14830:2006, BS EN 13598-2:2009

Buckling Resistance Tester is used to simulate the conditions when manhole is buried underground and for checking its resistance to the force from underground water.



Pipe Opacity Tester

www.WorldofTest.com/pipe-opacity-tester

ISO 7686:2005

QT-POT Pipe Opacity Tester is used to determine the opacity of pipes and fittings. It is an ideal device for pipe manufacturers, research and inspection institutions. It consists of optical source, Luminous flux collection system and automatic specimen going in/out controlling system, specimen automatic moving device and specimen support.

ISO 7686:2005 Plastics pipes and fittings -- Determination of opacity. The standard specifies a method for the determination of the opacity of plastics pipes and fittings.



Manhole Impact Tester

www.WorldofTest.com/manhole-impact-tester

BS EN 13598-2:2009

QT-MIT manhole impact tester is used to test the impact performance of manhole base and manhole wall.

BS EN 13598-2:2009 Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly (vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE). Specifications for manholes and inspection chambers in traffic areas and deep underground installations. It is the standard to test the mechanical performance or physical properties of pipework systems, Pipes, Drainpipes, Plastics, Unplasticized polyvinyl chloride, Polypropylene, Polyethylene, Underground, Water supply and waste systems that could be used in building, drainage, sewers and sewage engineering.



Pipe Wall Thickness Tester

www.WorldofTest.com/pipe-wall-thickness-measurement

ISO3126:2005

QT-WTM Pipe Wall Thickness Tester is used to determine wall thickness for pipes (PE, PB, PEX-Al-PEX, etc.) at the maximum axial depth of 400mm. Pipe Wall Thickness Tester is widely used in pipe manufacturing, water supply and drainage projects or Industrial field.



Thermal Recycling Testers

www.WorldofTest.com/thermal-recycling-testers

ASTM F 1335-98, ISO 10508

QT-TCT Thermal Recycling Testers for Plastic Pipes is used to evaluate the function of hot and cold water-pipes (PP, PE-X, PVC-C, PB), under a certain pressure for 5000 cycles. A test assembly of pipes and fittings is subjected to temperature cycling by the passage of water under pressure using hot and cold water alternately for a specified number of cycles. While being subjected to temperature cycling parts of the assembly of pipes and fittings are maintained under tensile stress and/or flexural strain by the use of static clamps.



Key QualiBenefits

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