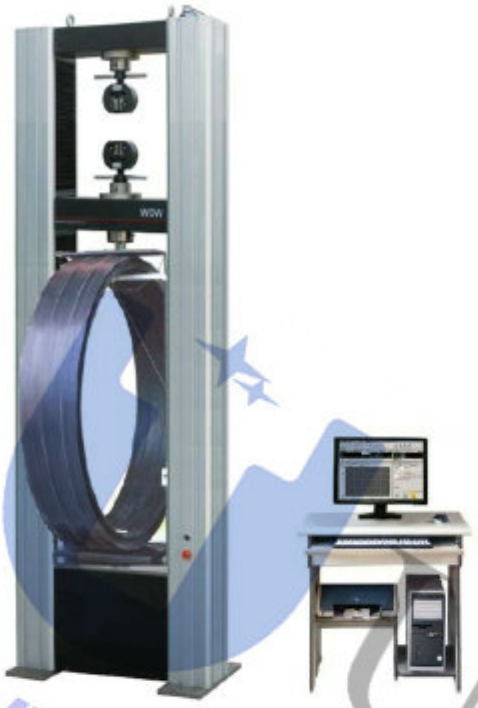
Pipe Ring Stiffness Test



RST-2 series

RST-1 series

1, General introduction

RST series ring stiffness tester is used to determine the ring stiffness of circular cross-section thermoplastic pipes, according customer's request, it can also execute compression, ring stiffness, ring softness and creep ratio test. This tester meet the requirement of all kinds of plastic pipes, structured-wall pipes, PVC, HDPE, LDPE, PE corrugated pipes, helically wound pipes etc.,

Conform with Standard ISO 9969, ISO 9967

Key Features

1, Two column design ensures high rigidity;
2, Advanced closed loop AC servo control system increases the accuracy and control of the test sequence.
3, For big pipe like 2m diameter, Three / Four load cells are connected in bridge, this strengthens the deflection resistance and improves the accuracy for tests on big diameter pipe.
4, Our unique inner diameter measuring system makes mounting of even the largest pipe easy.
5, The software is designed in-house and is very easy to use and runs on most modern computers.

Three load cells for strengthens the deflection resistance and improves the accuracy.

2, Principle

ISO 9969: *Thermoplastics pipes -- Determination of ring stiffness;*

The ring stiffness is determined by measuring the force and the deflection while deflecting the pipe at a constant deflection speed.
A cut length of pipe supported horizontally is compressed vertically between two parallel flat platens moved at a constant speed that is dependent upon the diameter of the pipe.
A plot of force versus deflection is generated. The ring stiffness is calculated as a function of the force necessary to produce a 3% diametric deflection of pipe.

ISO 9967: *Thermoplastics pipes -- Determination of creep ratio;*

A cut length of pipe is placed between two parallel flat horizontal plates and a constant compressive force is applied for 1008 h (42 days). The deflection of the pipe is recorded at specified intervals so as to prepare a plot of pipe deflection against time. The linearity of the data is analysed and the creep ratio is calculated as the ratio between the two years' extrapolated deflection value and the measured 6 min (0.1 h) deflection.

RST-3 series

3, Main technical specification

Model: RST-1 series	Suitable for small size pipe test (630mm dia.);
Model: RST-2 series	Suitable for small or middle size pipe test (1000mm dia.)
Model: RST-3 series	Suitable for large size pipe test (over 1000mm dia.)
Max. load	10KN, 20Kn, 30Kn, 50Kn, 100Kn
Load resolution	0.01N
Load cell quantity	1 to 3 pcs
Load accuracy	±1% of reading value
Crosshead travel	100mm-3500mm
Pipe Diameter range	16mm to 3200mm
Speed range of crossbeam	0.1 mm/min~500 mm/min, stepless, adjustable freely
Width of test space	420mm to 1000mm
Displacement accuracy	0.001mm
Power	220V/380V, 50Hz
Pipe inner diameter measuring device	YES
Creep Ratio Test(option)	ISO 9967
Time range	1~9999h59min59s
Timing resolution	1s

4, Main accessories

Item	Quantity
Frame (include load cell, servo motor etc.,)	1 set
Compression platen (400*400mm)	1 set
Pipe inner diameter measuring device	1 set
Computer (English Win7)	1 set
Professional ring stiffness test software (English)	1 set
Documents (Manual, packing list, certificate)	