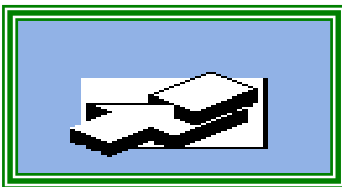


## Ring stiffness Testing Machine

RST Series                      30kN-100kN

### Introduction:

RST Series (Fig1) Ring Stiffness Testing Machine equipped with inner diameter measurement device that specially designed to perform stiffness test of special pipe materials, for instance GRP, PE, CORRUGATED pipe according to relative test standards such as EN13476, ASTM D2412, BS5480 and so on. Also this tester can perform tension, compression and bending tests of metal and nonmetal by changing various grips.



### Common Features:

RST304 Ring stiffness testing machine apply extremely rigid guide profile with concentric guide axis. The play-free guide and the ball lead screw ensure low wear and operating comfortably in ring stiffness testing. Additionally the profile of these CE-conformity machines enables other tests such as tensile, compression and bending of metal and nonmetal are available by changing different grips. The inner diameter measurement device mounted on the crosshead and lower

### Ring Stiffness



Fig1 RST304 Ring Stiffness Testing Machine

platform determine the diameter of annular pipe intelligently. The high precise digital technology servo motor drive system features a high control range. Super robust, industrial drives are used with a negligible thermal development (thus increasing the lifespan of the system), making them highly dynamic through position, velocity, and acceleration control. These drives are extremely low noise even at nominal speed at rapid crosshead return. DCS-300 full digital controller

based on DSP platform carries out three closed loop control which can be shift evenly. This SANS patented control system is more excellent than any others by permits resolution of 1/300000.

Operate with standard PCs and the test software PowerTest® offers you the comfortable operation, efficient data analysis and statistics, and preferment networking functionality.

## Key Features:

- Marvelous appearance with humanization design makes testing simply and conveniently.
- DCS-300 full digital three closed loop control system based on the advanced DSP platform permits high resolution up to 1/300000. The exchange of different closed loop control can be shift evenly.
- Constant load, displacement and extension control are available with high accuracy.
- Advanced servomotor drive system assure high precision and low noise.
- Ideal effective testing width and height can be customized for customer according to real needs.
- Intelligent inner diameter measurement device (Fig3) with high accuracy and large measurement range determine the needed data on real time during the test.
- Super high working space and rigid guide profile with concentric guide axis allow other tests as compression, tension and bending are available.



Fig2. RST304 used in ring stiffness testing

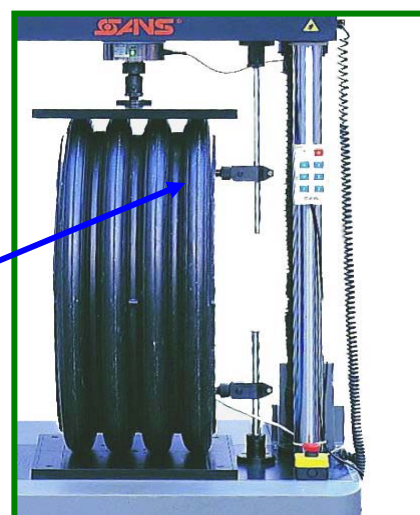


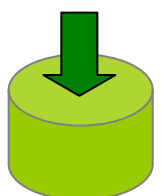
Fig3. Inner Diameter measurement device

RST304

RST105

Capacity	30kN	50kN	100kN
Accuracy	Grade 1		
Loading measurement range	0.2% – 100%FS		
Load indicating accuracy	within $\pm 1\%$		
Load indicating resolution	1/300000 of Max. load capacity		
Pipe ID measurement range	600-2000mm		
Pipe ID measurement range accuracy	0.01mm		
Pipe OD measurement range	630-2400mm		
Crosshead travel range	600-2500mm		
Deformation measurement range	2~100%FS		
Deformation indicating accuracy	within $\pm 0.50\%$ of indicating		
Deformation resolution	1/300000		
Displacement indicating accuracy	within $\pm 0.50\%$ of indicating		
Displacement resolution	0.06 $\mu$ m		
Deformation speed range	0.005~5%FS/S		
Deformation speed control accuracy	Within $\pm 2\%$ of setting when velocity $< 0.05\%$ FS, Within $\pm 0.5\%$ of setting when velocity $\geq 0.05\%$ FS;		
Testing speed range	0.001~500mm/min		
Displacement speed control accuracy	Within $\pm 1\%$ of setting when velocity $< 0.01$ mm/min, Within $\pm 0.2\%$ of setting when velocity $\geq 0.01$ mm/min		
Constant load, displacement and deformation control range	0.5%~100%FS		
Constant load, displacement and deformation control accuracy	Within $\pm 1\%$ of setting when setting $< 10\%$ FS, Within $\pm 0.1\%$ of setting when setting $\geq 10\%$ FS;		
Effective testing width	600mm		
Effective testing height	2500mm		
Load frame dimension	920×830×3225		
Weight	1100kg		

### Technique specifications:



## Specifications:

**Load measurement accuracy:** +/- 1% of indicated load from 0.2% to 100% capacity

**Load measurement resolution:** 1/300000 of capacity, no steps in full loading range and keeping unchanged

**Position measurement accuracy:** +/- 0.5% of indicating

**Strain measurement accuracy:** +/- 0.5% of indicated load from 0.2% to 100% capacity FS

**Displacement speed accuracy:** +/-1% of setting when speed less than 0.01mm/min, +/-0.2% of setting when speed (equip to)/more than 0.01mm/min

**Operating temperature range:** 10 to 35 degrees C with temperature fluctuation less than 2°C/ hour

**Storage temperature range:** -10 to 45 degrees C

**Humidity range:** 10% to 80% non-condensing, web bulb method

**Power:** standard optional voltages 220/240VAC, 50-60 Hz, ; power must be free of spikes and surges exceeding 10% of the nominal voltage(CMT5000 needs voltage in 380V+/-10%)

*Notes: 1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN10002-2, BS 1610, DIN 51221, ISO 7500-1. SANS recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001. 2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513*

