

RAIL BEND TEST MACHINE

Model: ***RT-300***

CHARACTERISTICS AND ADVANTAGES

Test Frame

- Rigid 4-column load frame providing superior axial and lateral stiffness and minimum maintenance, low reaction at specimen failure.
- Load frame weight is approximately 5 tons and load capacity is up to 3000 Kn.
- Top mounted actuator with unchanged height of lower platform making it easy to operate and install the specimen and test fixtures.
- Fully covered testing chamber to ensure the safety of the operator.
- Compact design including the standard bending device (3 points) and an integral protection system, with side doors for the introduction of the sample (rail). The doors are equipped with electric safety locks.

Hydraulic System and Actuator

- It incorporates the new Hydraulic system, which provides major improvements over traditional hydraulic control systems in terms of efficiency, adaptive flow, and pressure control depending on the instantaneous test load, giving it a longer life, less maintenance, and lower oil consumption.
- Closed-loop test control of force and displacement.
- Thanks to its integration with the testing software, it is possible to automatically perform safe shutdown operations, check the operating time of the hydraulic plant for scheduled maintenance and digitalize all the alarms of the hydraulic system.
- Double-acting hydraulic cylinder (single rod) with internal seals and low friction guides to absorb the lateral forces that may occur during the test.

Control Electronics

- The system incorporates the new Servo control electronics with 24-bit resolution and 2.5 kHz closing loop frequency for fast and accurate control of test parameters. This means, among other advantages, that minimal variations in force or deformation can be observed during the test.



Force Transducer (Load Cell)

- High rigidity strain gauge force transducer for static tests.
- High tensile grade special steel suitable for harsh industrial applications.
- Sealed for IP65 protection class.
- Accuracy Class -1

Stroke Transducer

- Digital stroke transducer with a resolution of 0.010 mm (10 microns) mounted on the outside of the actuator.

Safety

- Protective housing by means of Front doors with electric safety locks to protect users against projections.
- Tower lamp for machine operating status.

MODELS AND FEATURES

MODEL	RT-200	RT-250	RT-300
Maximum traction-compression force	2000kN	2500 kN	3000 kN
Force measurement	High-stiffness strain gauge force transducer		
Calibrated measuring range	2% to 100% of the nominal capacity of the load cell		
Class	1 according to IS 1828 standard		
Load Resolution	0.1 kN		
Frame	High-stiffness Rigid 4-column load frame		
Vertical distance on the 3-point bending device 1	0 -1250 mm	0 -1250 mm	0 -1250 mm
Measurement of the piston position.	0-220 mm	0-220 mm	0-220 mm
Position transducer	Digital displacement sensor. Resolution: 10 microns		
Roller (Mandrel) Dia	50 mm & 70 mm		
Machine operating panel	Push button, IPC – 10”, Windows-10, 64-bit, 120 GB, Ram- 6GB		
Software	FIE-RT-VER 1.2		
Piston stroke	220 mm	220 mm	220 mm
Power supply	3 ph 440 V + N + Earth, 50/60 Hz,5 KVA		
Test frame dimensions 4 (Width x Depth x Height)	1500x 650 x 1450 MM	1550x 650 x 1450 MM	1600x 650 x 1450 MM
Approx. weight without testing devices	4000 Kg	4500 Kg	5000 Kg