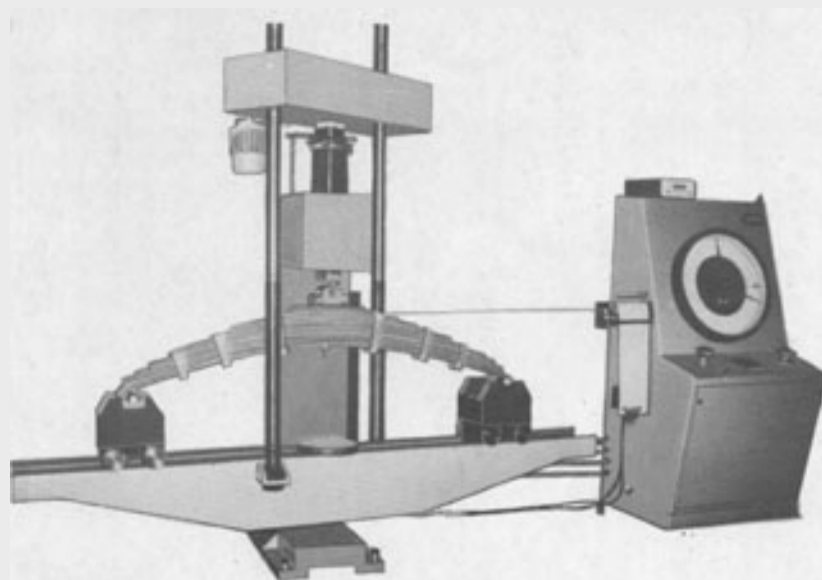


SPRING TESTING MACHINE



SALIENT FEATURES

- Accuracy conforming to IS 1828 Gr. 1.
- Three standard measuring ranges with auto load selection facility.
- Simple design, robust construction, smooth operation and easy maintenance.
- Easy stepless adjustment of straining rate.
- Deflection on Digital, Readout with unique least count of mm.
- Large size table for wide range of springs with motorised rapid adjustment of test height.
- Standard autographic recorder.
- over load/over travel safety provisions.
- Facility of compression, shear and bending test with extra accessories.
- Calibration in Kgs available on request.

APPLICATION

The FSA make Spring Testing Machine comes in two models, STM for Helical Coil Springs and FST for Leaf Springs. The machines can also conduct compression, shear, bending and hardness tests.

LEAF SPRING TESTING MACHINE MODEL FST:

This machine is used to test wide range of Leaf/ Laminated Springs for load rate as per IS 1.155-1984. Construction

Loading Frame:

It consists of a base frame with cylinder and ram housed in it. The ball holder resting over ball seat in ram holds the crosshead, which contains two main nuts mounted in bearings and driven by a gear & motor through chain and sprockets. Two main screws pass through the main nuts and are rigidly connected to the table to get the rapid adjustment of table for test height. A pair of trolleys roll over the table smoothly.

Control Panel:

It is an assembly of following systems.

Hydraulic - System:

The radial plunger pump, completely immersed in oil, is directly driven by a motor. All necessary accessories like oil filter, oil level indicator, air breather etc. are provided to this power pack unit. A pressure compensated, needle type flow control valve controls the oil to the main cylinder giving a non-pulsating delivery of oil and the straining rate adjustable infinitely up to the maximum.

Load, Measuring System

The oil pressure in the main cylinder is transferred to the small

dynamometer cylinder, the piston in which is kept rotating at a slow speed to ensure dynamic friction conditions. The piston exerts a force proportionate to the pressure on the hanger, which is transferred to the pendulum lever shaft through the auto load lever causing the pendulum lever to deflect. By auto lever, the selection of range can be done by an external knob. An effective, damping arrangement ensures slow return of pendulum if the specimen fails.

Load indicating System

The deflected pendulum lever pushes a rack, which rotates a pinion engaging with it which causes movement of pointer fixed to its shaft. The pointer moves with a dummy pointer over a large dial indicating the load and the dummy pointer retains the maximum reading after main pointer returns.

Autographic Recording System :

A continuous roll type load deflection recorder is provided with the machines. The load is plotted on horizontal axis by rack and the deflection is plotted on vertical axis. Deflection ratio of 1:2 and 1:5 can be selected.

HELICAL COMPRESSION SPRING TESTING MACHINE MODEL STM.

This machine is used to test wide range of helical compressions, spring and disc springs. The loading consists of a base which houses the cylinder. The lower table is directly connected to ram ball holder. The crosshead houses two main screws driven by motor for its rapid adjustment. The all other units have construction and operation similar to those of the Leaf Spring Testing Machine FST.

Load Stabilizes :

The load stabilizes is an extra attachment used to maintain a desired load constant. This unit helps in holding the load constant at specified deflection enabling, measuring it easily and accurately. Hence it is always recommended that the load stabilizes be purchased along with both the machines.

OTHER SPECIAL ACCESSORIES

- Load stabilizes.*,
- Shear test attachment
- Brinell hardness test attachment
- 180- bend test attachment

Note : Load stabiliser if required should be ordered along with the machine only.

TECHNICAL SPECIFICATION

MODEL

	STM-60	STM-100'	FST-100	FST-200	FST-5W
Maximum Capacity KN	60	100	100	200	500
1 Range KN	0-60	0-100	0-100	0-1200	0-500
Least Count KN	0.1	0.2	0.2	0.4	1.0
2nd Range KN	0-30	0-50	0-50	0-100	0-250
Least Count KN	0.05	0.1	0.1	0.2	0.5
3rd Range KN	0-18	0-25	0-25	0-40	0-100
Least count KN	0.03	0.05	0.05	0.08	0.2
Table Size mm	-	-	250x2400	400x2400	460x2650
Clearance for compression test mm	-	-	400	0-650	0-750
Distance between trolleys (adjustable) mm	0-1250	0-1250	500-2150	650-2150	850-2300
Ram stroke mm	-	-	-	-	-
Straining speed at no load mm / min	200	200	250	250	300
Pair of compression plates dia mm	0-200	0-125	0-250	0-150	0-100
Least count of deflection measurement With DRO mm	350	350	250	400	450
Clearance between columns mm	0.1	0.1	0.1	0.1	0.1
Width of recorder chart mm	150	150	150	150	150
Connected load, HP	1.33	1.33	1.5	2.0	3.0
V	440	440	440	440	440
Ph	-	-	-	-	-