

**SD
SERIES**

Disc Brake Apparatus – SD-1.59

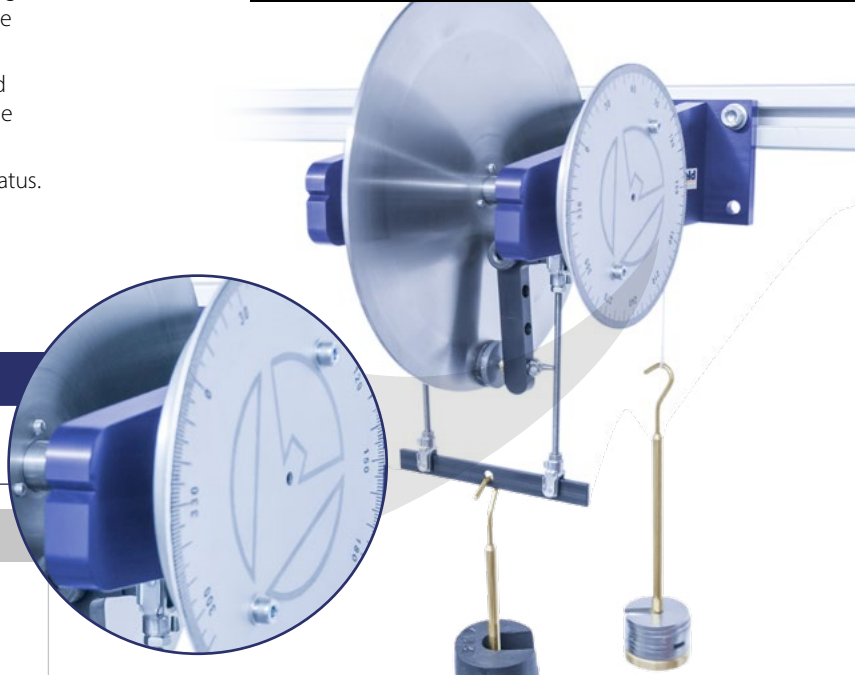
A brake disc is mounted vertically into a sturdy frame. A single shaft runs through the brake disc and the wall bracket supports. A cord pulley mounts to the shaft onto which is mounted a cord terminating in a load hanger. Two bell crank levers are mounted either side of the brake disc.

Through the load hanger and calibrated weights the force is applied to the brake disc and the parameters of braking force, braking torque and normal force can be assessed.

All load hangers, and calibrated weights are supplied with the apparatus. The rotational angle of movement of the disc wheel can be viewed using the external protractor.

Different brake pad materials can be tested as well as their radial position on the brake disc.

**TO DETERMINE THE MOST EFFECTIVE BRAKE PAD MATERIAL
TO DETERMINE THE MOST EFFICIENT RADIAL PLACING OF
THE BRAKE PAD**



Experimental content

- ▶ To determine the most effective brake pad material
- ▶ To determine the most efficient radial placing of the brake pad

Related laws

- ▶ Braking Force
- ▶ Braking Torque
- ▶ Friction Coefficient
- ▶ Automotive
- ▶ Disc Brakes
- ▶ Levers

Requirements

Scale

SV
100



Sturdy vertical support

Essential accessories/equipment

- ▶ SV100: Bench Mounted Frame

Features / benefits

- ▶ Wall mounted apparatus
- ▶ Can be mounted to SV100 Bench Mounted Frame
- ▶ One stainless steel disc; four brake pad materials
- ▶ Three pad radii
- ▶ 360° Protractor for angle recording
- ▶ Full set of weights and hangers provided

Overall dimensions

Length	0.45m
Width	0.20m
Height	0.26m

Packed and crated shipping specifications

Volume	0.06m ³
Gross weight	15kg

Technical specification

- ▶ Brake pad: Ø25mm x 6mm max
- ▶ Brake pad: Brake material, aluminium, brass and nylon
- ▶ Stainless steel disc wheel: Ø210mm x 3mm
- ▶ Radial positions for brake pad: 20mm intervals
- ▶ Protractor: 360°, 1° increments
- ▶ Weights set: 3 x 0.1N, 8 x 0.2N, 3 x 1N, 3 x 2N, 1 x 5N
- ▶ 2 x Load hanger

Ordering specification

- ▶ 1 x SD-1.59 assembly
- ▶ 2 x Brake pad specimen
- ▶ 2 x Aluminium pad specimen
- ▶ 2 x Brass pad specimen
- ▶ 2 x Nylon pad specimen
- ▶ 1 x Hanger
- ▶ 3 x 0.1N, 8 x 0.2N, 3 x 1N, 3 x 2N, 1 x 5N weights
- ▶ Spare cord
- ▶ Instruction manual
- ▶ Packing list
- ▶ Test sheet

Ordering codes

- ▶ **SD-1.59:** Disc Brake Apparatus
- ▶ **SV100:** Bench Mounted Frame