armfield

Theory of Machines - SV series



Friction

Brake Drum Friction Apparatus – SV907

BENCH TOP MOUNTED APPARATUS FOR THE SIMULATION OF A BRAKING SYSTEM

An aluminium brake drum is secured to one end of a sturdy bench top mounted base. The drum has an external cord grooved and its inside face is machined to plain aluminium. A cord is wrapped around the perimeter of the brake drum and the free end of the cord runs over a pulley at the other end of the base and terminates with a load hanger. Torque is applied to the brake drum by using the calibrated weights set

provided and the load hanger. Mounted inside the brake drum is a single brake shoe with its own pivot. A second cord connects to the brake shoe and again runs over a pulley and terminates at the load hanger. As the load is applied to the brake shoe the friction force increases. The student must then add load to the torgue hanger to try and rotate the brake drum at near constant speed. The sense of rotation of the torque determines whether the single brake shoe acts as a leading or trailing shoe. Direct comparison of tangential force and braking load is obtained and the coefficient of friction determined.

Experimental content

- ► To determine experimentally the variation of tangential force with braking load
- To obtain the coefficient of friction between the aluminium ► drum and the brake shoe
- To compare leading and trailing shoes

Related laws

- Automotive
- Friction

- Slip
- Machines
- Wear

- Toraue
- Brakes
 - Leading/Trailing

Technical specification

- Aluminium brake drum
- Industry standard brake shoes

Features / benefits

- Compact bench top apparatus
- Simulation of real braking system ►
- Industry available brake shoes
- Leading and trailing configuration easily arranged
- Full set of weights and hangers supplied

Overall dimensions

Length	0.400m	
Width	0.200m	
Height	0.200m	
Packed and crated shipping specifications		
Volume	0.02m ³	
Gross weight	40kg	

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Scale

► Rigid vertical support

Technical specification

- Aluminium brake drum
- Industry standard brake shoes

Ordering specification

- SV907 Brake Drum Friction Apparatus ►
- 2 x Load hanger
- 1 x 5m Spare cord
- 1 x 1N; 2 x 2N; 1 x 5N; 2 x 10N; 4 x 20N; 2 x 50N
- Instruction manual

Ordering codes

SV907 Brake Drum Friction Apparatus

Issue: 1		Applications		
URL: http://www.armfield.co.uk/structures		CE	IP	
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