

# Strength of Materials (HSM)



# SPRING TESTING SET HSM58i



# **Features**

- Characteristic curves of springs with various spring stiffness's
- Mounted within compression area of apparatus
- 3 x Compression springs
- 2 x sets of disc springs
- · Customer springs could be used
- Ability to change spring rate (disc springs)

#### **Description**

All parts of this experiment sit between the compression area of the HSM58 apparatus (not supplied). The selected springs are compressed using the HSM58 apparatus, and the force and deflection of the springs are displayed using the HSM58 interface, to allow their spring rate to be calculated and compared with actual data. There are three types of compression springs, each with differing spring rates. Two sets of disc springs are supplied. These can be stacked in different orientations (series or parallel) to adjust their spring rate.

#### **Related Laws/Applications**

- Autmotive
- Compression
- Hooke's Law
- Stacked Springs
- Energy storage

# Learning capabilities

- To measure the stiffness of a spring and compare it with the theoretical value and manufactured tabulated values.
- To note how the stiffness is affected by the physical dimensions of the springs.
- To see how different spring arrangements can affect forces required for the same amount of movement.

## **Technical Specification**

- Compression spring: ALL 76.2(L) x Ø35.5mm Spring rates: 24.2N/mm; 29.8N/mm; 21.0N/mm Material: Music wire
- Disc spring: ALL Ø34mm 1mm thick 1.5mm thick Material: High quality spring steel

## **Essential Ancillaries**

HSM58

#### What's in the Box?

- 1 x Spring locator
- 1 x Disc spring compressor
- 3 x Compression springs
- 2 x Disc spring set (10 per set)
- Instruction manual
- · Packing list
- · Test sheet

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#### **Essential Services**

• HSM58

#### **Ordering information**

To order this product, please call PA Hilton quoting the following code: HSM58I

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