

The dual diameter wheel has an axle supported on simple pivots in a sturdy wall mounting bracket. Each wheel has a cord wrapped around its periphery.

The cords can be wrapped in either direction around each wheel. A load hanger is added to each cord allowing loading of the wheels using the calibrated weights set provided.

PROVIDES STUDENTS WITH AN INTRODUCTION TO MECHANICS OF WHEEL AND AXLE



Experimental content

- ▶ Experimental determination of velocity ratio and comparison with calculated value
- ▶ Determination of variation with load of effort
- ▶ Determination of variation with load of efficiency

Related laws

- ▶ Velocity Ratio
- ▶ Mechanical Advantage
- ▶ Effort
- ▶ Effort of Friction
- ▶ Efficiency
- ▶ Simple Machines

Requirements

Scale

SV
100



Recommended suspension height not to exceed 1.5metres

Essential accessories/equipment

- ▶ SV100: Bench Mounted Frame

Features / benefits

- ▶ Wall mounted apparatus
- ▶ Can be mounted to SV100 Bench Mounted Frame
- ▶ Introduction to mechanics of wheel and axle
- ▶ 'Effort' and 'Efficiency' investigated
- ▶ One assembly; two wheels; two diameters
- ▶ Full set of weights and hangers supplied

Overall dimensions

| | |
|--------|-------|
| Length | 0.17m |
| Width | 0.11m |
| Height | 0.15m |

Packed and crated shipping specifications

| | |
|--------------|--------------------|
| Volume | 0.02m ³ |
| Gross weight | 5kg |

Technical specification

- ▶ Large wheel diameter: Ø150mm
- ▶ Small wheel diameter: Ø75mm
- ▶ Maximum recommended load: 200N
- ▶ Weights set:
1 x 0.1N, 2 x 0.2N, 1 x 0.5N, 1 x 1N,
2 x 2N, 2 x 5N, 2 x 10N, 2 x 20N



Ordering specification

- ▶ 1 x SD-1.50 assembled
- ▶ 1 x Load hanger
- ▶ 1 x 0.1N, 2 x 0.2N, 1 x 0.5N, 1 x 1N weights
- ▶ 2 x 2N, 2 x 5N, 2 x 10N, 2 x 20N weights
- ▶ 1 x Tape measure
- ▶ Spare cord
- ▶ Instruction manual
- ▶ Test sheet

Ordering codes

- ▶ **SD-1.50** Wheel and Axle
- ▶ **SV100** Bench Mounted Frame

UK office - email: sales@armfield.co.uk tel: +44 (0) 1425 478781 (for ROW)
USA office - email: info@armfield.inc tel: +1 (609) 208-2800 (USA only)

Issue: 1

URL: <http://www.armfield.co.uk/structures>

Applications

ME CE IP

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