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PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Winch Apparatus | ProDynami - 1220

Category: Theory Of Machines · **Country of Origin:** India

Product Overview

The Winch Apparatus ProDynami - 1220 studies winch lifting velocity, load transmission, and efficiency using ball-bearing mounted rope drums. This Winch Apparatus features aluminum drums and driving wheel, POM gear wheels, and a safety catch that prevents reversal of rotation. It demonstrates back-run safety device functioning with a total transmission ratio of 10. Two sets of weights and a wall-mountable design are included.

View this product online: https://scienticoindia.com/product/winch-apparatus-prodynami-1220/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Winch Apparatus ProDynami - 1220, Technical Specifications

Specification	Detail
Study Focus	Study of a winch
Drum and Driving Wheel Material	Aluminum
Gear Wheel Material	POM
Weight Sets	2 sets of weights
Safety Feature	Safety catch prevents reversal of direction of rotation
Base Plate	Anodised aluminum

Technical Data

Drum Diameters

Parameter	Value
Driving	220mm
Driven	115mm

Gear Wheels

Parameter	Value
Small	12 teeth
Large	60 teeth
Module	2mm each
Total transmission ratio	10

Driving Wheel Weights

Parameter	Value
Set	1x5N, 4x2N, 2x1N, 2x0.5N, 1x0.5N (Guide Rod)

Drum Weights

Parameter	Value
Set	1x50N, 2x20N, 1x10N

Key Features

Key Features

- **Drum Diameters:** driving 220mm, driven 115mm
- **Gear Wheels:** small 12 teeth, large 60 teeth, 2mm module each
- **Transmission Ratio:** total ratio of 10
- **Drum and Driving Wheel:** made of aluminum
- **Gear Wheels:** made of POM
- **Safety Catch:** prevents reversal of direction of rotation
- **Base Plate:** anodised aluminum
- **Bearing Mounting:** both rope drums are ball-bearing mounted
- **Weight Sets:** 2 sets, for driving wheel and drum, central to force generation on this Winch Apparatus

Experiments

- Determination of: velocity ratio, unwinding speed, angular speed, efficiency
- Behaviour under load

Construction and Design

The Winch Apparatus ProDynami - 1220 is built around a drum and driving wheel made of aluminum, with gear wheels made of POM. The driving drum has a diameter of 220mm, and the driven drum has a diameter of 115mm. Gear wheels consist of a small gear with 12 teeth and a large gear with 60 teeth, each with a 2mm module, giving a total transmission ratio of 10. Both rope drums are ball-bearing mounted. A safety catch prevents reversal of the direction of rotation. The base plate is made of anodised aluminum. The model is intended for wall mounting. Forces are generated by sets of weights on the driving wheel (1x5N, 4x2N, 2x1N, 2x0.5N, 1x0.5N guide rod) and the drum (1x50N, 2x20N, 1x10N).

Scope of Delivery

- 1 experimental unit
- 1 instruction manual
- 1 thread
- Sets of weights

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q: What is the Winch Apparatus ProDynami - 1220 used for?
A: It is used to study a winch's lifting velocity, load transmission, and efficiency, as well as demonstrate the functioning of a back-run safety device.

Q: What are the drum diameters on this apparatus?
A: The driving drum has a diameter of 220mm, and the driven drum has a diameter of 115mm.

Q: What is the total transmission ratio?
A: The total transmission ratio is 10, based on a small gear with 12 teeth and a large gear with 60 teeth.

Q: How does the safety catch function?
A: The safety catch prevents reversal of the direction of rotation, demonstrating the back-run safety device.

Q: How is the apparatus mounted?
A: The model is intended for wall mounting.

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