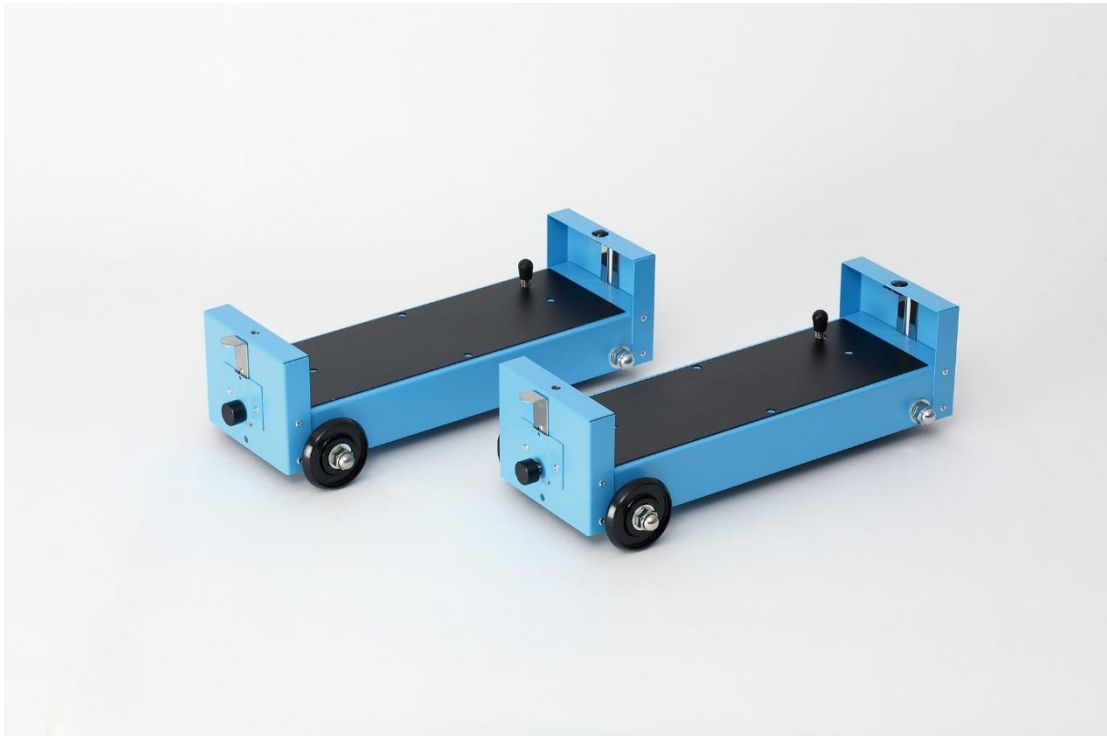


C15-1622-W0

Metallic Dynamic Cart DY-5

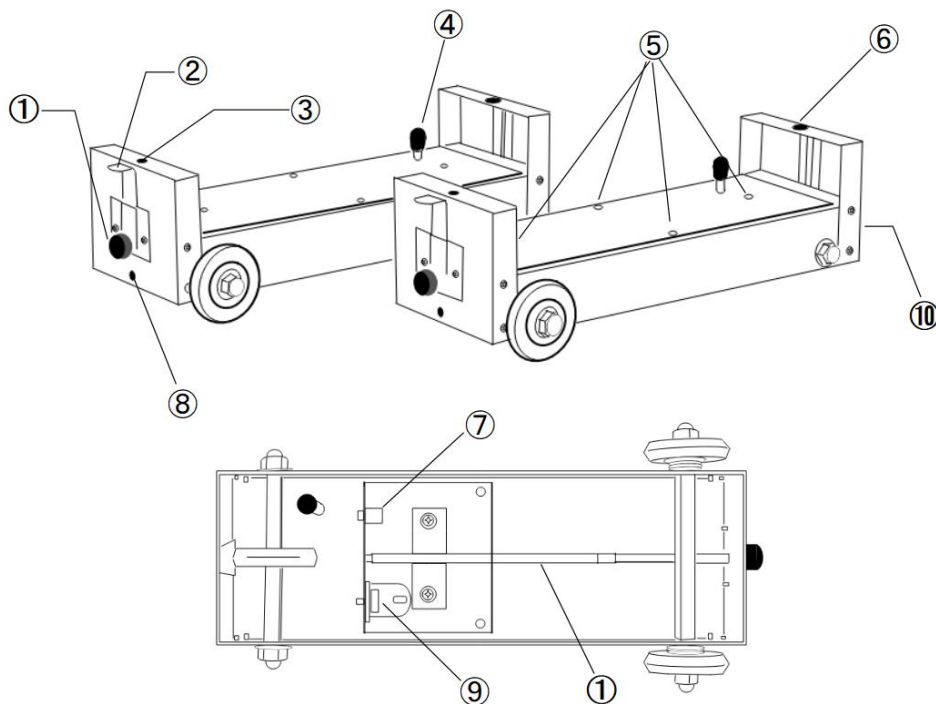
Instruction manual



! Safety Precaution

- ⊘ Do not disassemble, repair and remodel this product. This product might stop working and warranty will be void.
- ⊘ Teacher or trainer must instruct students about the safe ways of conducting experiments with this product before actually conducting experiments.
- ⊘ When you find that something is broken, please do not repair the product by yourself and contact your distributor.
- ⊘ Do not get on the product or not use the product as a skate.
- ⊘ Make sure to take measures against the product falling down from the table during experiments. It might cause damage to the product.

Name of each part



- | | |
|---|--|
| ① Plunger and its shaft | ② Plunger Launcher |
| ③ Screw hole for a force sensor anchoring rod | ④ Knob of anti-moving stopper |
| ⑤ M4 screw holes (\varnothing 4mm) | ⑥ Button for holding a recording paper |
| ⑦ Force sensor anchoring rod | ⑧ Hole for a spring balance hook |
| ⑨ Bracket for holding a spring balance | ⑩ Velcro Tape |

Specification

Size: (L) 303 x (W) 102 x (H) 95 mm

Weight: 1kg (± 0.002 kg)

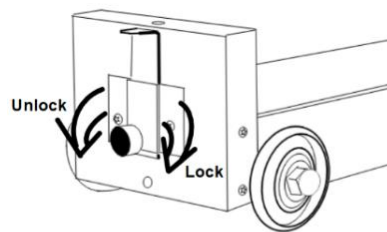
Material: Body: Steel, Wheels: ABS resin with a ball bearing

Accessories: force sensor anchoring rod x 1pc, spring balance holding metal bracket x 1pc

Description of functions

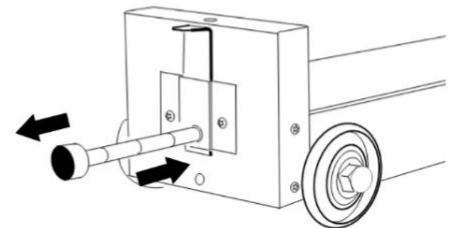
[Plunger]

Turning the head of the plunger anticlockwise unlocks it and it pops out from the body a little bit. When storing the repulsion bar, insert the repulsion bar into the body and turn it clockwise to tighten.



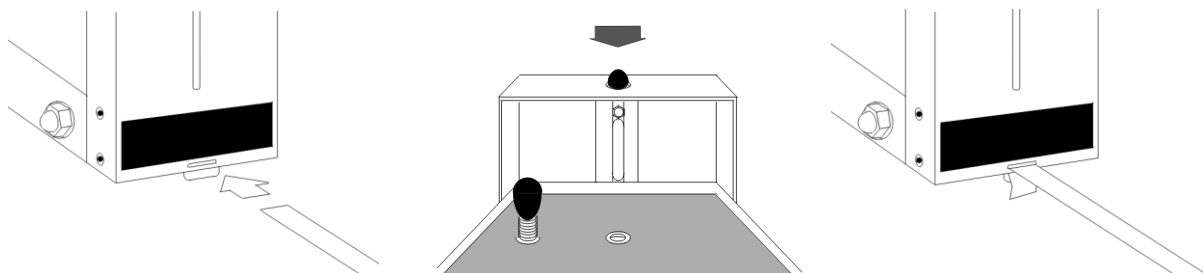
[Releasing the plunger]

The plunger has three indentation on itself. The pushing strength out depends on the position of the indentation. Pulling the plunger launcher up at an indentation position will place the plunger at the requested position. If you press the plunger launcher the plunger will be released at once.



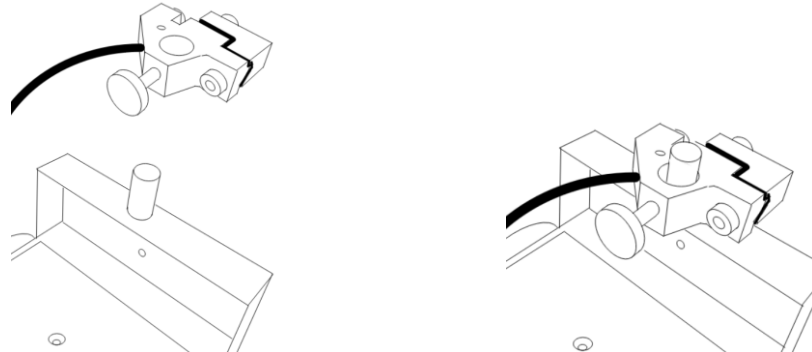
[Setting a recording paper]

When using a spark timer with the dynamic cart, set a recording paper of the timer up the body. At first, insert the recording paper into a hole at the lower part on the opposite side of the plunger side (Velcro Tape side). And pressing the button will fix the paper to the cart. The maximum width of the recording paper is 15 mm.



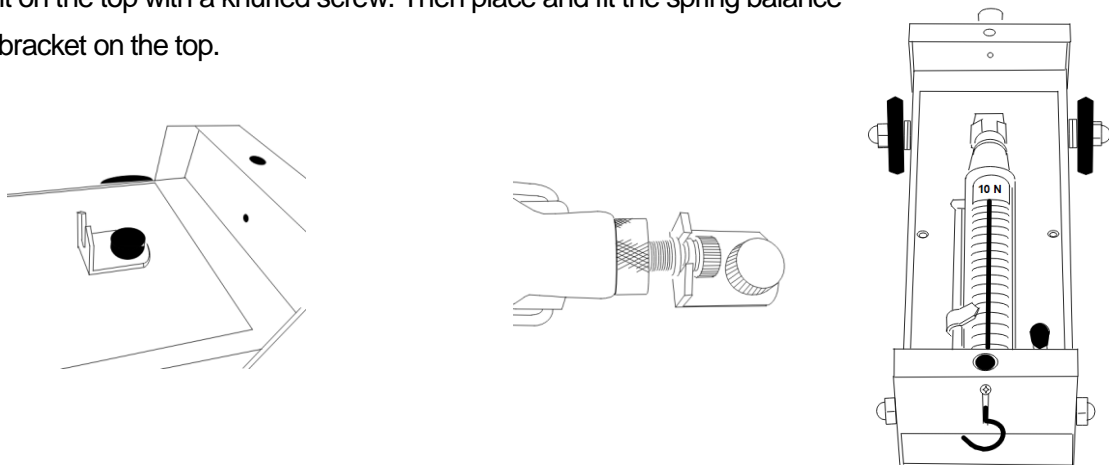
[Using a force sensor]

In the case of using a force sensor of a data logger or computer with this dynamic cart, at first, remove the force sensor anchoring rod (part No. 7) from beneath the bottom. Set it at the screw hole (part No. 3). Then set the force sensor on the rod. Narika recommends the Data Harvest force sensor.



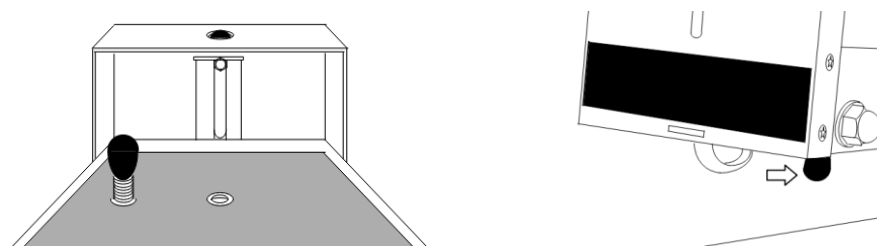
[Mounting a spring balance]

Narika's spring balance SO series (Catalog number: A05-4053-W1, W2, W3, A05-4054-W1) can be mounted on the top of the cart to measure the force strengths in experiments. A bracket (part No. 9) holding a spring balance on the top is beneath the body. Remove the bracket from beneath the body and set it on the top with a knurled screw. Then place and fit the spring balance into the bracket on the top.



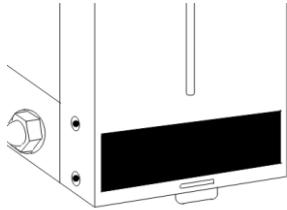
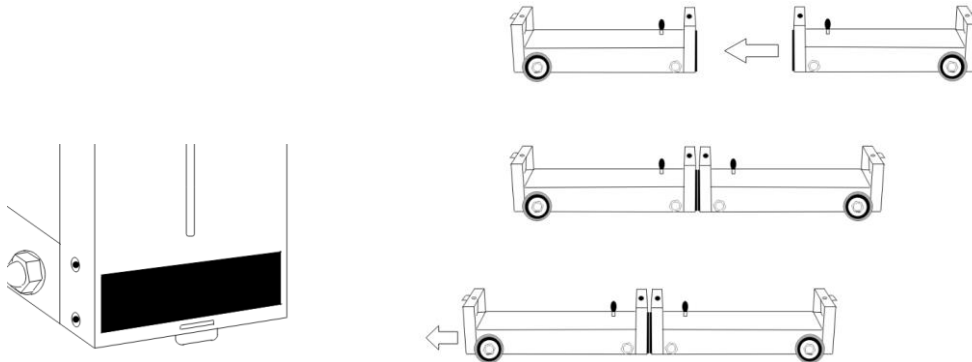
[Use of an anti-moving stopper]

The dynamic cart is equipped with an anti-moving stopper (part No. 4) to keep it from rolling down on an inclined plane or on a table during experiments. Rotating clockwise the knob on the top of the cart until the stopper touching to the surface can stop the cart on the inclined plane or the table during the preparation of experiments. If turning the knob anticlockwise, it will return to its original position and the cart will freely move.



[Velcro Tape]

This dynamic cart has a Velcro tape (part No. 10) to joint another cart. For example, when a slowly moving cart contacts a standing cart, these two carts are jointed like a train and keep moving. This Velcro tape is useful for experiments of the momentum conservation law or inelastic collision studies and others.

**[Attaching a Camera]**

If you screw the force sensor anchoring rod (part No. 7) to the screw hole (part no. 3) the other way, then when you were using it with force sensor then you can attach a camera to the body. Size of the screw is 1/4-20 UNC.