



Material

Item-no.	Qty.	Description
DM375-1G	1	Weight, 1 kg
DM373-1T	1	Handle with cord

Purpose

To demonstrate the inertia of the mass

Preparation

The cord of the handle is tied with the loose end to the hole in the cube of the metal rod on the mass body.

Experiment

The cord is not taut. First the mass body is lifted with low acceleration, then with high acceleration (as jerky as possible!).

Conclusion

In the first attempt the body is simply lifted up.

In the second attempt the pulling force rips the cord off.

Note

Für beschleunigende Kräfte gilt immer $F = m \cdot a$

The acceleration force acting from "outside" (here the pulling hand) counteracts the equally large inertia force. Both grow with mass and acceleration.