Impulse and momentum with Cobra 4

**Principle**
An impulse is described as the change in momentum by a force applied upon a body for a small interval of time. The momentum is defined here as the product of force and time and is conserved if no friction loss occurs. This means that in a closed system of different bodies the latter can transfer or receive momentum, however the total momentum of the system remains temporally and quantitatively constant.

For more details refer to www.phywe.com

Conservation of momentum during central elastic collision with Cobra 4

**Principle**
An impulse is a change in momentum caused by a force $F$ in a short amount of time. The momentum $p$ is defined here as the product of force $F$ and time $t$ and is conserved if no friction loss occurs and the collision is elastic. This means that in a closed system of different bodies the latter can transfer or receive momentum, however the total momentum of the system remains temporally and quantitatively constant and the energy is therefore a conserved quantity.

For more details refer to www.phywe.com

Newton's law with Cobra 4 and Timer/Counter sensor

**Principle**
In this experiment, the distance-time law and the velocity-time law are examined in addition to Newton's second law which gives a connection between mass, acceleration and force. A roller track is hereby used on which a cart is subjected to uniformly accelerated motion.

For more details refer to www.phywe.com