

# blockwoche

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## 1 Introduction

### 1.1 Teil 1

Die Blockwoche ist **cool**.

## 2 Einstein summation convention

$$\frac{\partial \rho}{\partial t} + \frac{\partial(\rho u_i)}{\partial x_i} = 0 \quad (1)$$

$$\frac{\partial(\rho u_i)}{\partial t} + \frac{\partial(\rho u_i u_j)}{\partial x_j} = -\frac{\partial p}{\partial x_i} + \frac{\partial \tau_{ij}}{\partial x_j} + \rho f_i \quad (2)$$

$$\frac{\partial(\rho e)}{\partial t} + (\rho e + p) \frac{\partial u_i}{\partial x_i} = \frac{\partial(\tau_{ij} u_j)}{\partial x_i} + \rho f_i u_i + \frac{\partial(\dot{q}_i)}{\partial x_i} + r \quad (3)$$

Classic notation

$$\vec{\nabla} \cdot (\rho \vec{u}) = 0 \quad (4)$$

$$\frac{\partial(\rho \vec{u})}{\partial t} + \vec{\nabla} \cdot \rho \vec{u} \otimes \vec{u} = -\vec{\nabla} p + \vec{\nabla} \cdot \vec{\tau} + \rho \vec{f} \quad (5)$$

$$\frac{\partial(\rho e)}{\partial t} + \vec{\nabla} \cdot (\rho e + p) \vec{u} = \vec{\nabla} \cdot (\vec{\tau} \cdot \vec{u}) + \rho \vec{f} \cdot \vec{u} + \vec{\nabla} \cdot \vec{q} + r \quad (6)$$

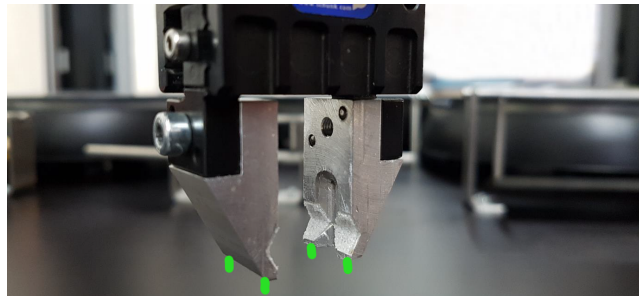


Abbildung 1: Greifer