

# G Force

## What G Force do we use for Centrifugal Casting?

**Can Exceed 120g of force**

G force required is dependent on material being cast and the size of the casting, typical G Force range 15-120g.

### How fast do we cast?

Speeds of up to **3000rpm** are used to achieve the desired G Force. The process involves using a centrifugal force (high Velocity spinning action) to exert pressure onto molten metal as its poured into a Die. The Die can be set to spinning in a Horizontal or Vertical axis dependent on the structure required.



## What G Force does a space rocket achieve on re-entry?

**Apollo 16 on re - entry g forces = 7.19g**

If a rocket is launched from the surface of the Earth, it needs to reach a speed of at least 7.9 kilometres per second (4.9 miles per second) in order to reach space. This speed of 7.9 kilometres per second is known as the orbital Velocity, it corresponds to more than 20 times the speed of sound.

### How fast does a rocket have to travel to reach space?



## What G Force does a space rocket achieve on re-entry?

**Standing on the Earth at Sea level = 1g**

### How fast is the Earth Rotating on it's Axis?

The Earth rotates on it's axis once each day. The circumference of the Earth at the Equator is 24,901.55 miles, a spot on the Equator rotates at approximately 1037.5646 miles per hour (1669.8km/h).