Composite materials are susceptible to impact damage from events such as tool drops, projectiles, bird strikes, highway/runway debris, hail, blunt objects such as rocks and stones, and high velocity bullets. The damage phenomenon is complex and occurs as a combination of surface indentation, fibre breakage, matrix cracking, fibre pull-out, perforation and delamination.

**Intermediate Velocity Impact**
- 38.1 mm diameter projectiles
- Velocity range: 15 - 150 m s\(^{-1}\)
- Projectile mass: 25 - 500 g

**High Velocity Impact**
- 5.56 - 12.7 mm diameter projectiles
- Velocity range: 100 - 460 m s\(^{-1}\)
- Projectile mass: 3.5 - 52 g

**Gas Gun: 1200 ft/ s, FSP and Blunt Object Projectiles**

**High Velocity Test Fixture with Oblique Impact Capability**

**High Velocity Impact**
- .50 caliber BMG barrel
- Velocity range: 250 - 1250 m/ s
- Projectile mass: 14 - 52 g

**Fragment Cloud Impact**
- 12 Gauge shotgun barrel
- Velocity range: 100 - 460 m/ s
- Projectile mass: 3.5 - 50 g
- Ability to fire multiple projectiles
- in a controlled pattern