

FAQs

What is an arch and brief about arch actions?

An arch is a curved structure that spans a space and may or may not support weight above it.

An arch is a pure compression form. It can span a large area by resolving forces into compressive stresses and, in turn eliminating tensile stresses. This is sometimes referred to as arch action.

List down the parts and terminology of an arch.

Crown: The highest point of the arch

Haunch: The assembly of stones from springer to the crown is called haunch

Extrados: The upper and outer surface of the arch

Intrados: The under or lower surface of the arch

Springer: The lowest voussoir or arch stone.

Voussoir: The blocks forming the arch.

Key stone: The center voussoir at the crown.

Rise: The height from the springing line to under side of the arch at the keystone.

List down the different types of arches.

- Semicircular arch
- Segmental arch
- Elliptical arch
- Stilted arch
- Round Horse shoe arch
- Pointed Horse shoe arch
- Lancet arch
- Equilateral arch
- Drop arch
- Cusped arch
- Ogee arch
- Tudor arch

What are the advantages of pointed arch over a semi circular arch?

The loading of an arch has two components, a horizontal component and a vertical component. The vertical component of the arch is transferred axially in to the column or post and the horizontal component acts laterally away from the springing point in to the piers. So when compared to a semicircular arch, the pointed arch has more of vertical component and less of horizontal component eventually reduction in the size of the pier (as the loading comes down) and enable us to build tall and massive structures.

Define buttress and flying buttress.

A buttress is an architectural structure built against or projecting from a wall which serves to support or reinforce the wall.

A flying buttress is a specific form of buttressing whose purpose is to resist the lateral forces pushing a wall outwards by redirecting them to the ground. Flying buttresses do not touch the wall from the starting point to the ground. They touch the wall only at 1 point.