

## What is the Father Of All Bombs?

- The bomb that Russia has is a **thermobaric bomb**. It comes by many names.
  - An aerosol bomb
  - A vacuum bomb
  - A fuel-air explosive
- Russia has been accused of planning to use thermobaric weapons - also known as vacuum bombs - in its invasion of Ukraine.
- It is a super-powerful non-nuclear bomb that has a blast equivalent to more than 44 tons of TNT.
- Father Of All Bombs can cause damage in a radius of 300 meters.
- The destructive weapon is dropped from a jet and detonates mid-air. It pulls oxygen out of the air and produces a similar effect to a small nuclear weapon.
- These are controversial because they are much more devastating than conventional explosives of similar size, and have a terrible impact on anyone caught in their blast radius.



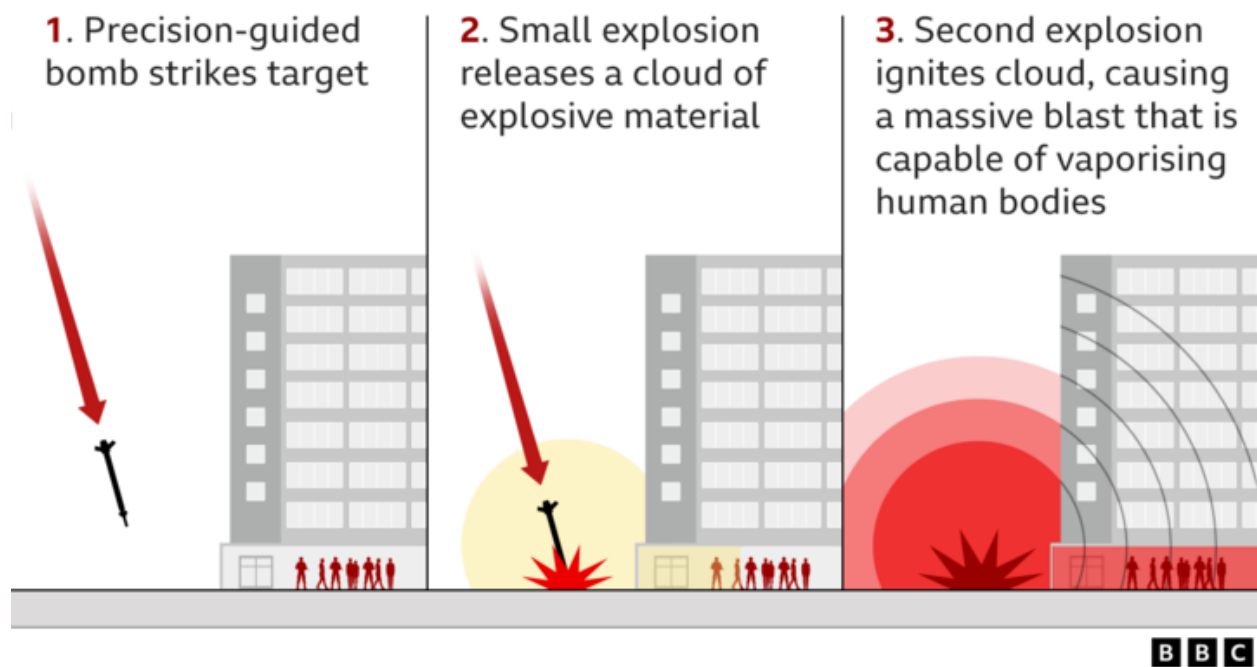
### How does a vacuum bomb work?

- A vacuum bomb also called an aerosol bomb or fuel-air explosive consists of a fuel container with two separate explosive charges.



- This can be launched as a rocket or dropped as a bomb from aircraft. When it hits its target, the first explosive charge opens the container and widely scatters fuel mixture as a cloud.
- This cloud can penetrate any building openings or defences that are not totally sealed. A second charge then detonates the cloud, resulting in a huge fireball, a massive blast wave and a vacuum that sucks up all surrounding oxygen. The weapon can destroy reinforced buildings, equipment and kill or injure people.

## How thermobaric weapons work



- They are used for a variety of purposes and come in a range of sizes - including weapons for use by individual soldiers such as grenades and hand-held rocket launchers.
- Huge air-launched versions have also been designed, specifically to kill defenders in caves and tunnel complexes - the effects of this weapon are at their most severe in enclosed spaces.
- In 2003, the US tested a 9,800kg bomb, nicknamed the "Mother of all bombs". Four years later, Russia developed a similar device, the "Father of all bombs". This created an explosion equivalent to a 44-tonne conventional bomb - making it the biggest non-nuclear explosive device in the world.





- Given their devastating impact, and their usefulness against defenders who are dug into buildings or bunkers, vacuum bombs have mainly been used in urban environments.
- This is significant given developments on the ground in Ukraine, where Russian forces are trying to take control of the capital, Kyiv, and other main cities in the east of the country.

