

# Mark 82 bomb

## Mark 82 General Purpose (GP) Bomb



Mk 82 bomb as displayed on USAF website.

<b>Type</b>	Low-drag general purpose bomb
<b>Place of origin</b>	United States

### Production history

<b>Designer</b>	General Dynamics
<b>Manufacturer</b>	General Dynamics
<b>Unit cost</b>	\$268.50 (in 2000)

### Specifications

<b>Weight</b>	500 pounds (227 kg)
<b>Length</b>	87.4 inches (2.22 m)
<b>Diameter</b>	10.75 inches (273 mm)

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<b>Filling</b>	Tritonal, Minol or H6
<b>Filling weight</b>	192 pounds (87 kg)

The **Mark 82** (Mk 82) is an unguided, low-drag general-purpose bomb, part of the U.S. Mark 80 series. The explosive filling is tritonal.

## Development and deployment

With a nominal weight of 500 lb (227 kg), it is the one of the smallest in current service, and one of the most common air-dropped weapons in the world. Although the Mk 82's *nominal*

weight is 500 lb (227 kg), its actual weight varies considerably depending on its configuration, from 510 lb (232 kg) to 570 lb (259 kg). It is a streamlined steel casing containing 192 lb (89 kg) of Tritonal high explosive. The Mk 82 is offered with a variety of fin kits, fuzes, and retarders for different purposes.

The Mk 82 is the warhead for the GBU-12 laser-guided bombs and for the GBU-38 JDAM.

Currently only the General Dynamics plant in Garland, Texas is DoD certified to manufacture bombs for the US Armed Forces.

The Mk 82 is currently undergoing a minor redesign to allow it to meet the insensitive munitions requirements set by Congress.



Mk. 82 bomb with Tail Retarding Device – this photograph shows an unfuzed, museum display Mk 82 with its usual combat paint scheme. For display purposes, the optional high-drag "Snakeye" tailfins used for low-altitude release are shown.

According to a test report conducted by the United States Navy's Weapon System Explosives Safety Review Board (WSESRB) established in the wake of the tragic 1967 USS Forrestal fire, the cooking off time for a Mk 82 is approximately 2 minutes 30 seconds.

More than 4,500 GBU-12/Mk 82 laser-guided bombs were dropped on Iraq during the Persian Gulf War.

## Low-level delivery

In low-level bombing, it is easy for the delivering aircraft to sustain damage from the blast and fragmentation effects of its own munitions because the aircraft and ordnance arrive at the target at the same time. To combat this, the standard Mk-82 General Purpose bomb can be fitted with a special high-drag tail fin unit. In this configuration, it is referred to as the Mk-82 Snakeye.

The tail unit has 4 folded fins which spring open into a cruciform shape when the bomb is released. The fins increase the drag of the bomb, slowing its forward progress and allowing the delivery aircraft to safely pass over the target before the bomb explodes.

## Variants

- **BLU-111/B** – Mk 82 loaded with PBXN-109 (vs H-6); item weighs 480 lbs. PBXN-109 is a less sensitive explosive filler. The BLU-111/B also is the warhead of the A-1 version of the Joint Stand-Off Weapon JSOW.
- **BLU-111A/B** – Used by the U.S. Navy, this is the BLU-111/B with a thermal-protective coating added to reduce cook-off in (fuel-related) fires.
- **BLU-126/B** – Designed following a U.S. Navy request to lower collateral damage in air strikes. Delivery of this type started in March of 2007. Also known as the Low Collateral Damage Bomb (LCDB), it is a BLU-111 with a smaller explosive charge. Non-explosive filler is added to retain the weight of the BLU-111 so as to give it the same trajectory when dropped.
- Mark 62 Quickstrike mine – A naval mine, which is a conversion of Mark 82 bomb.