Diamond Back® Low Cost Range Extension Wing Assembly

Diamond Back® is a low cost, high performance range expansion wing assembly, compatible with air-launched stores.

Diamond Back® features a unique joined tandem wing design that extends the wings from a compact storage position. The deployed wings provide a diamond shaped platform with excellent maneuverability and glide characteristics.

The Diamond Back® wing assembly has successfully demonstrated low cost range extension technology that can triple the stand-off of air-launched stores providing more flexible mission options.

The unique wing assembly, provides stand-off and cross-track maneuverability for a significantly expanded footprint for air-launched stores. The larger footprint not only provides additional survivability for the delivery aircraft, but also allows delivery to multiple points from a single release point. Diamond Back’s compressed carriage design meets the demanding space requirements for rotary launchers in the B-1 and B-2 bombers as well as for internal carriage on the F-35 Joint Strike Fighter and F-22 Raptor.

Diamond Back® is currently in full rate production for the US Air Force Small Diameter Bomb and has been combat proven in Operation Iraqi Freedom and Operation Enduring Freedom.
Why Diamond Back®

- Allows delivery to multiple points from a single release point
- Provides increased stand-off outside point defenses
- Provides expanded delivery envelope
- Increases launch aircraft survivability and tactical flexibility
- Shapes terminal profiles for delivery vector and velocity
- In production and successfully used in combat operations

Benefits

- Scalable size to accommodate full weapon load out
- Longer range and improved maneuverability
- Deployment mechanism is simple, robust and reliable at any launch condition

Flight Proven Extended Range

The Diamond Back® wing assembly has been extensively tested, qualified, and combat proven for the GBU-39/B Small Diameter Bomb (SDB) weapon. Diamond Back® has also been successfully demonstrated in flight on the extended range Joint Direct Attack Munition (JDAM) BLU-109 weapon and the Focused Lethality Munition.

Production Status

The integrated Diamond Back® wing assembly is in full rate production for use on the US Air Force Small Diameter Bomb. Total production of over 24,000 units is expected.