

MA-16

Martin-Baker MA-16 Reel Family

Martin-Baker have developed a family of dual-sensing inertia reels to the specification for type MA-16 of MIL-R-8236F. The High-Capacity, Crew and Gunner reels are already approved by US Army Airworthiness Release and in-service on the UH-60M Blackhawk. Martin-Baker is in the process of applying for Qualified Product List status for all reel variants with the intent to achieve this in 2025.

The Martin-Baker MA-16 Reels are designed to be a direct replacement for existing MA-16 types, accepting all cables and handles etc. Our design has the following improvements over current MA-16 reels:

- ▼ Unique spindle locking facility and open body to facilitate rapid webbing changes with the reel still fitted to the seat.
- ▼ Improved main spring to give consistent retraction force
- ▼ Reduced weight
- ▼ Reduced cost
- ▼ Rotating spool reduces wear on webbing

Each reel employs a unique non-movable control head denying access to the internal workings of the reel whilst allowing the control head to be adjusted to 12 equally spaced rotary positions. Martin-Baker supply 2 different control heads, the standard parallel cable attachment, and a unique dual operational head. The dual operated head controls the reel it is attached to and has the facility to connect a second reel via the Martin-Baker manual control, thus allowing two reels to be operated with a single reel mounted handle.

The Crew Reel has been designed with four same length installation bolt lengths as existing MA-16 designs and easy access on the top of the reel body for quick installation. The design features a unique spindle locking facility and open body. This enables a single operator using a standard tool to replace the webbing while the reel is still attached to the seat, thus saving aircraft downtime.

Martin-Baker have specifically designed the High-Capacity Crew and Gunner reels for use with a high extension harness such as used on the Martin-Baker Multi-Functional Operator Seat (MFOS). The MFOS uses a three-reel snag free stand-up harness with a large webbing capacity and a light retraction force which allows a wide range of movement around the seat.

The MFOS uses two High-Capacity Crew Reels and one Gunner Reel. The Gunner Reel is a unique design with a similar weight than the High-Capacity Crew Reel but even more webbing capacity.

Martin-Baker can also supply cables and control handles for the reels. Our cables include a range of adaptors to allow multiple reels to be controlled from a single handle.



Design Characteristics

Environmentals:	MIL-STD-810F
Dynamic Crash Test:	Based upon MIL-R-8236F
Ultimate Load:	5000lbf (22.24kN)
Proof Load:	3330lbf (14.81kN)
Temperature Range:	-65°F to +230°F
Life Cycles:	60,000 cycles
Dimension envelope conforms to envelope in:	MIL-R-8236F
Finish:	Black Anodised
Service Life:	10 Years

Crew Reel



High-Capacity Reel



Gunner Reel



Webbing Capacity	24 inches	46 inches	50 inches
Mass (without Webbing)	1.58lb	1.73lb	1.74lb
Attachment	4 bolts with lengths to match existing MA-16 Crew Reel	4 bolts	2 bolts

*Capacity with standard thickness webbing to MIL-R-8236F. Higher capacity can be achieved with Martin-Baker webbing.

