LEONARDO AIRCRAFT

Aermacchi M-345

The armed trainer

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AERMACCHI M-345 | THE ARMED TRAINER

The Aermacchi M-345 armed trainer is the latest-generation tandem-seat jet trainer from Leonardo Aircraft. Able to cover the entire training syllabus, from basic to advanced phases it is also perfectly suited to be an effective light combat solution in evolving operational scenarios for modern Air Forces.

The M-345 was developed exploiting the full consolidated experience gained by Leonardo Aircraft in designing and manufacturing its wide family of highly successful trainers and light combat aircraft over the past 60 years to include the SF.260W, MB.326, MB.326K and the MB.339, combat proven worldwide.

While maintaining its superior characteristics as a jet trainer, the M-345 is also suited for **operational roles**, including air-to-air and air-to-ground. The aircraft is equipped with advanced external stores management system with the capability to employ weapons such as IR guided air-to-air missiles, gun pods, rockets and up to 500 lb class general-purpose bombs, for a total load capacity up to 1,200 kg under 4 external pylons. Its state-of-the-art Human-Machine Interface, digital avionics and performance allow for a great accuracy in payload delivery.

The M-345 is a turbofan powered **high efficiency trainer** with combat capabilities and Life-Cycle Cost comparable to those of heavy turboprops but with higher performance. Compared with main jet competitors the more modern M-345 offers superior performance at lower LCC with higher teaching effectiveness.

No scheduled depot-level structural maintenance is required. Operators benefit from a two-level maintenance concept (Organisational and Intermediate) for aircraft, equipment and systems. An on-board Health & Usage Monitoring System (HUMS) enables collection and monitoring of data for a more efficient maintenance.

The key training feature on the M-345 is the in-flight **Leonardo Embedded Training System (L-ETS)** suite, able to generate a virtual tactical scenario with realistic threats and targets, Computer Generated Forces, simulated on-board sensors and weapons, allowing pilots to seamlessly pass from training to real missions without having to change aircraft.

The advanced **M-345 Integrated Training System (ITS)** is based on a comprehensive Ground Based Training System, which includes Full Mission Simulators (FMS), Flight Training Devices, Academics Training System and dedicated Mission Support System for planning, real-time monitoring and training management with effective Live, Virtual and Constructive (LVC) capabilities.

CHARACTERISTICS

Weights

Take-Off (Trainer)	7,936 lb	3,600 kg
Take-Off (Maximum)	9,920 lb	4,500 kg
Max External Stores	2,650 lb	1,200 kg

Powerplant

Engine, turbofan	Williams FJ44-4M-34	
Max Thrust, SLS, ISA	3,400 lb	1,540 kg
Max Internal Fuel	1,587 lb	720 kg

Performance (Clean, ISA)

Max Level Speed (SL/30,000 ft)	362 KCAS/0,7 MN	670/764 km/h
Limit Speed	400 KEAS/0.8 MN	741 km/h
Stall Speed (Landing, 20% fuel)	92 KCAS	170 km/h
Time to climb from SL to 20,000 ft	< 6 min	
Service Ceiling	40,000 ft	12190 m
Limit Load Factors	+7/-3.5 g	
Max Sustained Load Factor (50% fuel, SL)	3.6 g	
Take-off/Landing Ground Run (SL)	2,200/1,900 ft	670/580 m
Ferry Range, 10% reserve, Clean	700 nm	1,300 km
Ferry Range, 10% reserve, 2 Ext. Tanks	900 nm	1,670 km
Max endurance, 10% res. Clean/2 Ext. Tanks	150/200 min	

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