

M-345

The new M-345 is the latest solution offered by Alenia Aermacchi for the basic-advanced phase of the training syllabus.

A development of the M-311 demonstrator, the turbofan-engined M-345 is an economically competitive solution which offers acquisition and life-cycle costs comparable to heavy weight turboprop trainers.

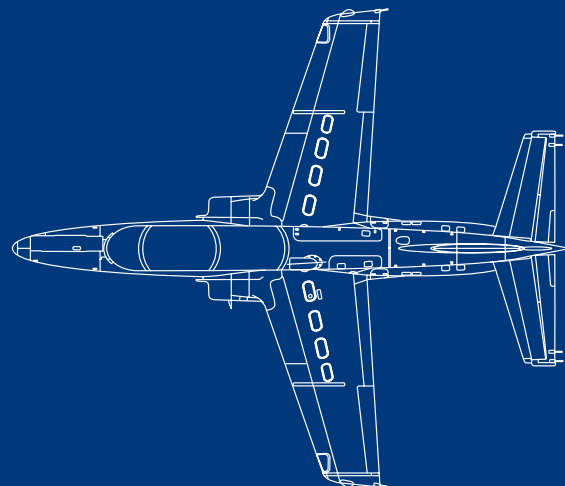
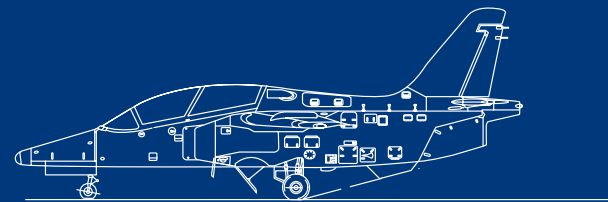
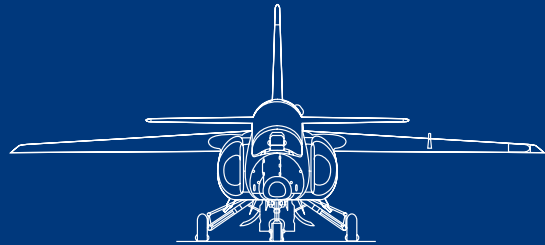
While these turboprops are in the same weight class as the M-345, are equipped with similar systems and have comparable operating costs, their performance and teaching effectiveness are limited. With a fatigue life of 15,000 flight hours and +7 / -3.5 g load factors at 3,300 kg maximum clean take-off weight, the M-345 is equipped with a 1,600 kg (3,500 lb) thrust engine.

To reduce operating costs, the M-345 is designed for a two-level maintenance approach. Maintenance is also made easier by ease of access to onboard equipment and systems and built-in Health and Usage Monitoring System (HUMS). This provides airframe, engine and systems information to enable component usage monitoring for easy maintenance. Pressure refueling and an On-Board Oxygen Generating System (OBOGS) significantly cuts aircraft ground maintenance manpower requirements. This also cuts turn-around times, potentially translating into more sorties per day and making the M-345 even more cost-effective.

The modern avionics systems installed on the M-345, together with its high external load carrying capacity, endows the M-345 with a secondary operational role. The M-345 training system also includes a complete Ground Based Training System (GBTTS) package. In line with current Alenia Aermacchi standards, the M-345 is also fitted with a full Embedded Tactical Training Simulation (ETTS) suite.

The Man-Machine Interface comprises

- Head-Up Display
- Six 5"x7" Multi Function Displays (3 for each cockpit)
- Hands On Throttle And Stick controls
- Integrated INS/GPS platform
- Two mission computers for redundancy
- Digital Moving Map
- Night Vision Goggle compatible instrumentation
- Embedded Tactical Training Simulation
- Stores Management System



TECHNICAL DATA

Dimensions

Wingspan	8.47 m	27.78 ft
Length	9.85 m	32.32 ft
Height	3.74 m	12.27 ft
Wing area	12.60 sqm	135.6 sqft

Weights

Take-off weight (trainer)	3,300 kg	7,275 lb
Maximum external load	1,400 kg	3,085 lb
Maximum take-off weight	4,500 kg	9,920 lb

Power Plant

Turbofan engine		
Maximum thrust at take-off	1,600 kg	3,500 lb class
Internal fuel	700 kg	1,545 lb

Performance (Clean, ISA)

Maximum / cruise speed	380/420 KTAS	
Limit speed	430 KEAS/0.80 Mach	
Rate of climb (SL)	5,400 ft/min	
Stall speed (landing, 20% fuel)	85 KCAS	
Service ceiling	40,000 ft	
Ferry Range (clean) / 2 external tanks (10% reserve)	840 nm / 1,100 nm	
Sustained load factor (SL, 360 KTAS)	4.0 g	
Sustained load factor (10 Kft, 0.55 Mach)	3.0 g	
Take-off ground run (SL)	460 m	1,510 ft
Landing ground roll (SL)	450 m	1,475 ft
Limit load factor	+7 / -3.5 g	



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