

## ABBREVIATIONS

**AAM** air-to-air missile **AEW** airborne early warning **AEW&C** airborne early warning and control **AGM** air-to-ground missile **ASW** anti-submarine warfare **ATM** air traffic management **AWACS** airborne warning and control system **CNS** communications, navigation, surveillance **COMINT** communications intelligence **CTOL** conventional take-off **CV** carrier capable **Dasa** DaimlerChrysler Aerospace **DoD** US Department of Defense **ECM** electronic countermeasures **ELINT** electronic intelligence **ESM** electronic-support measures **EW** electronic warfare **FADEC** full authority digital engine control **FLA** Future Large Aircraft **FLIR** forward-looking infrared **GE** General Electric **GPS** global positioning system **HOTAS** hands on throttle and stick **HUD** head-up display **IAI** Israel Aircraft Industries **IFF** identification friend or foe **INS** inertial-navigation system **IR** infrared **ISAR** inverse synthetic aperture radar **JASDF** Japan Air Self-Defence Force **JMSDF** Japan Maritime Self-Defence Force **JASSM** Joint Air-to-Surface Standoff Missile **JDAM** Joint Direct Attack Munition **JSOW** Joint Standoff Weapon **JTIDS** joint tactical information distribution system **LGB** laser guided bomb **LO** low observable

**medevac** medical evacuation **MESA** multirole electronically scanned array **MFD** multifunction display **MTI** moving target indicator **P&W** Pratt & Whitney **P&WC** Pratt & Whitney Canada **RAF UK** Royal Air Force **RAAF** Royal Australian Air Force **RFP** request for proposals **RN UK** Royal Navy **R-R** Rolls-Royce **RTIP** radar technology insertion programme **RWR** radar warning receiver **SAR** synthetic aperture radar **satcom** satellite communications **SIGINT** signals intelligence **STOL** short take-off and landing **STOVL** short take-off vertical landing **TACAMO** take-charge and move out **TCAS** traffic alert collision avoidance system **TIALD** thermal imaging airborne laser designator **TV** television **USAF** US Air Force **USMC** US Marine Corps **USN** US Navy **WCMD** Wind Corrected Munitions Dispenser

**Conversion factors**  
**1hp/shp=0.745kW**  
**1nm=1.85km**  
**1ft=0.3m**  
**1kN=221lb**  
**1kt=1.85km/h**  
**1kg=2.21lb**  
**1litre=0.264USgal**

## M346

**AERMACCHI AND** Yakovlev began development of the Yak-130 for a Russian air force trainer requirement in the 1990s, with the intention of enabling the Italian manufacturer to market a westernised version – the AEM-130. Funding difficulties in Russia and Aermacchi's desire to push forward development to meet emerging European requirements led to Aermacchi launching the Honeywell F124-powered M346. Yakovlev and Sokol will continue to develop the Yak-130 (see entry).

First flight of an M346 – as opposed to the Yak-130, which first flew in 1996 – is scheduled for 2002 with service entry in 2005. A 15-aircraft launch order from the Italian air force has been mooted.

Other M-346 suppliers include Teleavio-Marconi Italiana – which with BAE Systems, Dowty, Microtecnica is responsible for the fly-by-wire (FBW) system – while Alenia Difesa will manage the avionics integration.

## MB339

**UNLIKE EARLIER** MB339s, the MB339CD – the D stands for "digital" – has Thales Avionics (formerly Sextant) cockpit instrumentation, HUDs in both cockpits and HOTAS controls, all linked by a 1553B databus. MB339FDs are export CDs, while Eritrea's MB339CEs are of a similar standard. Aermacchi also continues to market the MB339B with conventional avionics.

The prototype MB339 flew in August 1976, the aircraft having been designed to meet an Italian air force requirement for an advanced trainer. The service has 90 MB339s, which are to receive structural and avionics mid-life upgrades to extend service life by 10 years.

Structural changes include the introduction of materials with improved corrosion resis-

Finavitec) in 1996 and shifted production to Italy. It continues to market the turboprop trainer and aims to secure about 25% of a basic trainer market for 400 or so aircraft to 2006.

As well as the side-by-side trainer, the company has developed a maritime surveillance version with a wing-mounted radar pod for the Mexican navy, and has outlined survey aircraft and target tug variants.

## AERMACCHI

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## M290TP REDIGO

**AERMACCHI PURCHASED** the Redigo programme from Finland's Valmet (now Patria

## AERMACCHI

Aircraft	SF260E/F	SF260TP	M290TP Redigo	S211A	MB339CD/FD	M346
Mission	Elementary trainer	Elementary trainer	Basic trainer	Basic trainer	Adv trainer/light attack	Adv trainer/light attack
Powerplant	1 x Textron Lycoming D-540-D4A5	1 x R-R 250-B17D	1 x R-R 250-B17F	1 x P&WC JT15D-5C	1 x R-R Viper 680-43	2 x Honeywell F124
Max power/thrust dry (lb)/thrust reheat (lb)	194	261	335	3,195	4,000	6,300
Wing span (m)	8.35	8.35	10.6	8.51	11.22	9.7
Wing area (m <sup>2</sup> )	10.1	10.1	14.78	12.6	19.3	23.5
Overall length (m)	7.1	7.4	8.53	9.53	11.24	11.5
OEW (kg)	785	820	990	2,200	3,356	4,627
MTOW (kg)	1,200	1,350	1,900	4,000	6,350	9,500
MLW (kg)	-	-	1,600	4,000	6,150	-
Max payload (kg)	-	-	-	-	-	-
Max weapon load (kg)	300	300	800	1,000	1,815	3,000
Range, max fuel (km)	1,490	950	1,400	1,450	2,200	2,590
Endurance (h)	6h 45min	3h 30min	7h	3h 10min	3h 50min	3h 10min
Hardpoints	2	4	6	5	6	9
Cruise (kt)	187	216	191	305	M0.74	-
Mmo	-	-	-	-	M0.85	M0.95
Max landing dist, sea level ISA (m)	500	671	427	415	1,244	580
Max take-off dist, sea level ISA (m)	549	460	488	440	1,686	280
Max ceiling (ft)	19,000	25,000	25,000	42,800	45,600	45,000
Crew	2	2	2-4	2	2	2
Passengers	-	-	-	-	-	-
Internal fuel (kg)	236	243litre	292	718	1,430	1,950
Fuel, opt ext (litre)	160kg	160kg	126kg	425kg	522kg	1,180
Air refuel?	No	No	No	No	No	No
Comments	-	-	-	-	MB339B/C are similar	-