Business & commercial Aviation
PILOT REPORT

Update: Enter The Galaxy

Plans call for the Galaxy–Israel Aircraft Industries' newest Astra business jet derivative–to be partially designed and built in Russia.

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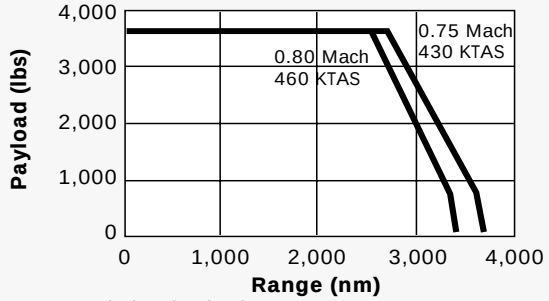
December 1993, Document No. 3101 (2 pages)

Israel Aircraft Industries (IAI) hopes to be a dominant player in the mid- to large-size corporate jet market with its Astra Galaxy (once referred to as the Astra IV), a new 33,600-pound gross weight intercontinental business jet being designed to carry up to 19 passengers. A "go" decision has been made, and plans call for the Galaxy prototype to make its first flight in late 1995, with FAA approval under a new type certificate expected in late 1996.

Officials from IAI and its U.S. subsidiary Astra Jet Corporation said the Galaxy will share most major components and systems with the Astra SP. However, it will have different engines and a larger, more rounded fuselage. Before year-end, IAI is scheduled to select either a 5,900-pounds-thrust turbofan PW-series engine from Pratt & Whitney Canada or a CFE model from General Electric/ AlliedSignal. (The Astra SP is powered by AlliedSignal's Garrett TFE731s.)

IAI GALAXY
Payload Versus Range
(NBAA IFR, ISA)



Source: Israel Aircraft Industries
All data preliminary

In what IAI officials described as one of the biggest deals between a high-tech Israeli company and a Russian company since the fall of the Soviet Union, the Yakovlev Design Bureau will design and build the fuselage for the Galaxy in Russia. Finished airframes will be sent to Israel for final assembly. Israeli and Russian officials told B/CA it is conceivable that Yakovlev eventually may perform Galaxy final assemblies in Russia as well.

The aircraft's wings will be of the same design as those of the Astra SP, but will be longer by about five feet—and will feature winglets and leading edge Kreuger flaps.

IAI says it has received "more than 10 position deposits" for the Galaxy, which is priced at $12.975 million in 1992 dollars. That price includes Collins Pro Line 4 avionics as well as interior and paint. Customers will be able to purchase the aircraft green at a lower price.

The Collins avionics package consists of four 7.25-inch-square CRTs, including dual primary flight displays and dual multifunction displays. Standard avionics include: digital autopilot, digital air data, attitude/heading reference system, radio altimeter, color radar, color CRT radio tuning units, an ARINC 429 VHF comm, VOR/ILS receiver, ADF, DME and Mode S transponder.

With Yakovlev, Collins and an engine manufacturer as risk- and revenue-sharing partners, no other major vendor partners are required, according to Moshe Keret, president and CEO of IAI.

INTERIOR DESIGN

In its marketing of the Galaxy, IAI is emphasizing size, performance and value. For example, the 7.2-foot cabin width is within about one inch of that of a Gulfstream IV-SP. The cabin length is 24.3 feet. By recessing the aisle floor, a cabin height of 6.3 feet is

achieved, which is among the highest of any business jet.

Because wind tunnel and computer tests to verify performance have been completed, IAI feels confident about the aircraft's projected performance. The aircraft is expected to carry eight passengers 3,200 nm at 0.80 Mach. At 0.75 Mach with four passengers, the Galaxy ostensibly will fly 3,650 nm (the still-air distance from Paris to New York), while the Falcon 2000 carrying four passengers will travel 3,300 nm. An aft fuselage, 150-cubic-foot/2,400-pound-capacity baggage compartment will be accessible by its own airstair door, and will be heated and pressurized. An APU will be standard and operable in flight.

Although a warranty program has not been finalized, IAI and Astra officials promise product support will get priority attention. They acknowledge that Astra and Westwind customer service has "suffered" in the past, but improvements in product support have been steadily, if slowly, increasing. Today, the company says it has more than $23 million in U.S.-based spares inventory and plans to invest more. "We are very committed to improving product support," IAI's Keret stated.

TIGHT SCHEDULE

Admittedly, IAI's representatives say, the company's schedule to introduce the Galaxy by the end of 1996 is tight and demanding, but they are convinced that the timing for entering the Galaxy is perfect.

IAI sees the arrangement with Yakovlev as not only a cost-sharing partnership, but also as a means of making it easier and quicker to obtain Russian certification and to market the aircraft throughout the Commonwealth of Independent States.

Officials at IAI firmly believe that the market is showing signs of recovery. That belief and the signing of the agreement with Yakovlev, coupled with the recent peace accord between Israel and some of its Arab neighbors, will expand the market for this aircraft even more, IAI asserts. Keret estimates the development costs for the Galaxy to be in the $150 million to $200 million range, lower than these costs would have been if a completely new wing had been designed. Other systems common to the Astra also will help to keep Galaxy development costs lower.

In 1992, Israel Aircraft Industries shipped just six Astra SPs; five Astras were shipped in the first three-quarters of this year. The company is counting on the Galaxy to help significantly in-crease its market share.

IAI says that it intends to keep the Astra SP, with ongoing improvements, in production after the Galaxy enters service in 1997. **B/CA**

Preliminary Specifications IAI Galaxy

Interior Dimensions (ft/m)	
Height	6.3/1.9
Length	24.3/7.4
Width	7.2/2.2
Weights (lbs/kgs)	
Max ramp	33,600/15,240
Max takeoff	33,450/15,173
Max landing	27,500/12,474
Max zero fuel	22,650/10,274
Max fuel	13,950/6,328
Equipped empty	17,770/8,060
Performance (MGTOW)	
Takeoff (SL, ISA)	6,030 ft/1,838 m
Landing (SL,ISA)	3,400 ft/1,036 m
Max speed	360 KCAS
MMO	0.85 Mach
Range (4 pax)	3,650 nm (0.75 Mach)
Range (8 pax)	3,200 nm (0.80 Mach)
Max altitude	45,000 ft/13,716 m