

## AS332C1e/L1e

FAA certification of the Eurocopter AS332C1e Super Puma—the “low-cost” version of the medium twin—was imminent at press time. The helicopter received EASA certification in November.

While the C1e's airframe is the same as that of the AS332C1, the C1e is a new helicopter. The cockpit features four six- by eight-inch displays and a four-axis autopilot. Two Turbomeca Makila 1A1s provide 1,877 shp each. The C1e can lift up to 9,900 pounds as a sling load, with an mtow of 20,600 pounds. Otherwise, mtow stands at 18,900 pounds.

Although it is equipped with the latest generation of engines and avionics, the C1e is cost-competitive with the Russian Helicopters Mi-171A2, Eurocopter claims. In addition, the manufacturer claims the C1e burns 30 percent less fuel than the Mi-171A2, for a higher cruise speed.

## X4

A new artist rendering of the in-development Eurocopter X4 medium twin emerged in December, showing design changes since 2011. A horizontal empennage with a two-level lifting surface is visible on the tailboom, forward of the shrouded tail rotor. The main rotor retains five blades that seem to draw from the Blue Edge research blades, a double-swept design

intended to reduce blade-vortex interaction and noise.

The X4, to replace the AS365/EC155 Dauphin series, will compete in the 9,000- to 12,000-pound category and will be released in two versions. The first, less advanced one, will enter service in 2017. In 2020 the second iteration of the X4 will feature a cockpit with advanced human-machine interface and fly-by-wire controls. Customers will have the choice between two 1,100-shp engine options: the Turbomeca TM800 and the Pratt & Whitney Canada PW210. Messier-Bugatti-Dowty will supply electric brakes.

## MARENCO SWISSHELICOPTER

### SKYe SH09

Marengo Swisshelicopter rolled out the first prototype of its SKYe SH09, a helicopter designed for the higher end of the light single segment, late in November at Mollis Airport, Switzerland. First flight, initially pegged for 2012, is now expected early this year, followed by EASA certification early next year and production.

The composite-material airframe is a primary feature of the SH09. It enables, for a given weight, greater performance and cabin volume, according to Marengo. Engineers were also able to design an open airframe, with sliding doors on

both sides, rear clamshell doors and large transparency areas. The turbo shaft is a 1,020-shp Honeywell HTS900-2.

The SH09's list price is \$3 million, which allows for a basic avionics suite and two sliding doors. It can carry up to seven passengers or 3,300 pounds as a sling load. Its mtow stands at 5,840 pounds with an internal load or 6,170 pounds with an external load. Preliminary data also indicate a cruise speed of 140 knots, 430 nm of range and five hours of endurance.

## MD HELICOPTERS

### MD540F

MD Helicopters announced plans in 2012 to offer a new six-blade variant of its MD530F single with a more powerful Fadec Rolls-Royce 250-C47E with dual-channel Fadec and an increase in available rated takeoff power to 700 shp.

The new helicopter will be available for both the commercial and military markets—to the latter as a scout/gunship—and will include a full suite of Elbit glass-panel avionics. Preliminary specifications call for the MD540F to have a maximum external gross weight of 4,100 pounds, a useful load of 2,000 pounds, hover in ground effect at 16,000 feet and out of ground effect at 14,300 feet, a Vne of 152 knots, a range of 232 nm and a service ceiling of 20,000 feet. It is being designed to



Marengo Swiss Helicopter SKYe SH09

satisfy the military's requirement for hover at 6,000 feet at 95 deg F and will incorporate the landing skids of the MD600N to accommodate the heavier weights. Civil certification is expected late next year or early 2016.

## RUSSIAN HELICOPTERS

### Redeveloped Ansat

Russian Helicopters announced last August that it received Russian certification for a variant of its Ansat light twin using conventional flight controls instead of the original fly-by-wire (FBW) controls. The Ansat fell short of being the first commercial helicopter with a FBW system. This was the initial plan but “no commercial FBW helicopter had obtained certification anywhere in the world, and there were no established requirements for such a helicopter,” the airframer said in explaining the development of the conventional version. The helicopter retains

the same takeoff weight (7,900 pounds) and technical parameters. It is powered by two Pratt & Whitney Canada PW207Ks and can carry eight passengers at a cruise speed of 119 knots.

### Joint light single with AgustaWestland

Russian Helicopters' effort with AgustaWestland toward the design of a 5,500-pound light single seems to have made some progress. A “heads of agreement” has been signed, defining the 50-50 joint design and development program. It is now at the preliminary assessment stage, when the two companies study the helicopter's “technical design and commercial opportunities.” The aircraft, smaller than the AW119, would compete with the Eurocopter EC130T2. Certification is expected in 2016, a Russian Helicopters spokesperson told **AIN**.

### Ka-226T

The 7,900-pound Ka-226T twin, which features two coaxial contra-rotating main rotors, is powered by Turbomeca Arrius 2G1s. Although it performed capability demonstrations in preparation for this month's Olympic games in Sochi, it is still waiting for its Russian certification, which has been consistently postponed. Certification is now scheduled for this year. Some production examples are ready for delivery, according to the manufacturer.

### Ka-62

The Ka-62, a medium twin powered by Turbomeca Ardiden 3Gs, was expected to fly last summer, but the milestone has been pushed out to this year. Another two prototypes were scheduled for completion by December last year. Certification of the 12- to 15-seater is slated for late this year, with first delivery following early next year.

The Ka-62 is a redevelopment of a 1980s design. In addition to the engines, the five-blade main

rotor and Zoerkler (an Austrian supplier) rotor gearboxes are new. The Transas KBO-62 avionics suite includes a health and usage monitoring system.

The Ka-62's mtow stands at 14,300 pounds, for a maximum payload of 5,290 pounds. Maximum range is said to be 405 nm and maximum cruise speed 157 knots.

### Mil Mi-38

The third prototype of the Mi-38 heavy twin, the first fitted with Klimov TV7-117V engines, made its maiden flight on November 29 at the Mil Moscow helicopter plant. The new Fadec-controlled turboshaft provides 2,800 shp at takeoff or 3,750 shp at an emergency rating. This compares favorably to the 2,500-shp Pratt & Whitney Canada PW127/Ts that were powering the previous prototypes. Production Mi-38s will be fitted with Klimov engines.

The protracted program is now eyeing certification to Russian AP-29 standards next year. Production will begin in 2015 in Kazan, where the fourth and final prototype of the helicopter is currently being assembled. The fourth prototype will be fitted with a shock-resistant fuel system by Aerazur and enlarged windows. The Mi-38 has a mtow of 34,400 pounds (with internal load) and a passenger capacity of 30.

## SCOTT'S-BELL 47

### Model 47GT-6

Scott's-Bell 47's (SB47) quest to put a revised edition of the iconic Bell 47 back into production is now a step closer. The Le Sueur, Minn.-based company announced late last year that it had received orders for 38 of its Rolls-Royce RR300-powered 47GT-6 helicopters.

Scott's acquired the type certificate from Bell for the Model 47 in 2009 and in 2013 announced its intention to restart production with a turbine-powered variant. The 47GT-6 has an initial target price of \$820,000 and deliveries are anticipated to begin in 2016. The prototype is scheduled to fly in the fourth quarter this year. The 47GT-6 is based on the legacy Bell 47G-3B-2A and features a 3,200-pound max gross weight limit: 1,400 pounds internal and 1,650 pounds external. The 47GT-6 also will feature a modern instrument panel, upgraded interior, composite main rotor blades, LED exterior lighting and newer drive train technologies.

## SIKORSKY

### S-76D

The first two S-76Ds were delivered late last year to offshore operator Bristow. FAA “baseline certification” was awarded in October 2012 and

Sikorsky had since worked on an increased mtow (to 11,875 pounds from 11,700) and areas such as cold- and hot-weather operations, VIP options and avionics functionalities.

EASA certification of the \$13- to \$15 million (list price in offshore configuration)

medium twin is expected in the second quarter.

The new version features a digital four-axis autopilot and a Thales TopDeck avionics suite. The dual-speed main rotor includes a quiet mode. Each PW210S engine provides 1,077 shp at takeoff and offers

8-percent better fuel efficiency, according to Pratt & Whitney Canada. The S-76D has a range (without reserves) of 442 nm.

The S-76D backlog is valued at \$700 million in firm orders, he added, and the production line is booked until the end of this year. □



Russian Helicopters Ka-62



Russian Helicopters Mil Mi-38



MD Helicopters MD540F



Russian Helicopters Ansat