



GEOPHYSICAL SURVEY AIRCRAFT

AIRBUS HELICOPTERS AS350 B3

Registration	C-GSGH	C-FXPL
Serial #	3748	4881

The AS350 B3 is a modern high performance light helicopter powered by a Turbomeca Arriel turboshaft engine. These engines have an unrivalled safety record. Further enhancing safety, SGL's new B3 has a dual hydraulic system and a full FADEC engine control and monitoring system. The helicopter's endurance is between two and four hours depending on the survey set up. This helicopters performance and effectiveness has been proven on numerous projects worldwide.



■ GEOPHYSICAL SURVEYING

Both SGH and XPL have been outfitted for low level airborne geophysical surveys. Sensors are carried internally, or externally in towed "birds" on a cable with either single, or dual magnetometer configuration for vertical or horizontal gradient. The helicopter is especially well suited to hot and high elevation conditions, including any operations with heavy load requirements. The B3's reliable and powerful turbine engine, long endurance and high altitude capability make it an excellent survey aircraft.

AIRBUS HELICOPTERS AS350 B3 SPECIFICATIONS

Crew Capacity:

- 1 pilot and 1 co-pilot/operator

General:

- Fuselage comprising of the cabin and 3 luggage holds, cargo tie-down net and access doors
- Tail boom with stabilizer, extended anti-torque rotor and fin
- High skid landing gear capable of taking handling wheels

Power Plant:

- Turbomeca Arriel 2B (SGH) and 2B1 (XPL) turboshaft engine rated at 847 shp for take-off and 730 shp for maximum continuous use

Systems:

SGH	XPL
Dual flight controls, 3 main rotor and 1 tail rotor hydraulic servo units	Dual flight controls, 3 main rotor and 1 tail rotor hydraulic servo units with dual hydraulics
Digital engine control with manual backup	Full authority digital engine control (FADEC)
Cargo hook with electric and manual releases	Cargo hook with electric and manual releases

Dimensions:

Length (including rotor)	42 ft 5 in	12.94 m
Width	8 ft 4 in	2.53 m
Height	10 ft 11 in	3.33 m

Weights:

Empty	SGH 3,022 lb	XPL 3,130 lb	SGH 1,371 kg	XPL 1,420 kg
Maximum gross weight	SGH 4,961 lb	XPL 5,220 lb	SGH 2,250 kg	XPL 2,370 kg
Useful load	SGH 1,939 lb	XPL 2,090 lb	SGH 879 kg	XPL 948 kg

Performance (sea level, standard day, maximum take-off weight):

Maximum speed	155 kt	287 km/h
Fast cruise speed	142 kt	262 km/h
Recommended (economical) cruise speed	124 kt	230 km/h
Maximum 'bird' towing speed	80 kt	148 km/h
Maximum speed with stinger installed	135 kt	250 km/h
Hover-out-of-ground-effect (HOGE) at 2,250 kg (ISA)	11,500 ft	3,505 m
Range at recommended cruise speed (plus 20 min reserve)	314 nm	582 km
Maximum rate of climb at 65 kt	2,100 ft/min	10.7 m/s
Maximum sustained climb gradient	2,275 ft/nm	374 m/km
Service ceiling	23,000 ft	7,010 m
Fuel capacity	143 US gal	540 l
Fuel flow	50 US gal/h	189 l/h

Maximum Endurance:

- 2 hours and 32 minutes plus 20 minutes reserve at recommended cruise speed
- 4 hours plus 20 minutes reserve at maximum endurance speed (55 kt)

GEOPHYSICAL CAPABILITIES

AIRGrav, SGL airborne gravimeter

Magnetic total field with stinger (typical FOM 1.5 nT) or towed "bird"

Dual magnetometer vertical or horizontal gradient with a towed "bird"

Gamma-ray spectrometer, up to 42 litres (2,560 in³) of detector crystals

SGMethane, methane gas sensing

Additional Features:

- VHF communication radios
- Iridium satellite telephone and satellite tracking
- GPS/VOR/ILS navigation equipment
- Video camera mount with downward looking opening
- Radar altimeter, 0-750 m
- Two instrument racks, standard 48 cm (19 in) width
- Electrical power capacity, 5.6 kW at 28 VDC; up to 2.8 kW available for equipment
- Provision to mount inertial navigation system
- GPS antenna mounted on tail fin (clear of rotor) plus data link for real-time corrections