

SIKORSKY S-300C*Bi*™ HELICOPTER TECHNICAL INFORMATION



Sikorsky S-300C*Bi*™ Helicopter
Piston-Powered Multi-Mission

Specifications

Performance

Standard day, sea level, maximum gross weight unless otherwise noted

Maximum speed (VNE)	94 kts	174 km/hr
Maximum cruise speed (VH)	80 kts	148 km/hr
Hover ceiling, In-Ground-Effect (1700 lb)	7,000 ft	2,133 m
Hover ceiling, Out-of-Ground-Effect (1700 lb)	4,800 ft	1,463 m
Range (long range cruise* speed @ 4,000 ft) (no reserve)		
- 32.5 gallon	225 nm	417 km
- 64.0 gallon	440 nm	815 km

Weights

Maximum takeoff gross weight	1,750 lb	794 kg
Empty weight, standard configuration	1,102 lb	500 kg
Useful load	648 lb	294 kg

Dimensions

Fuselage length	22.19 ft	6.76 m
Fuselage width	4.25 ft	1.30 m
Fuselage height	7.17 ft	2.18 m
Overall length (rotors turning)	30.83 ft	9.40 m
Overall height (to top of tail rotor)	8.72 ft	2.65 m
Width (canopy)	4.25 ft	1.30 m
Main rotor diameter	26.83 ft	8.18 m
Tail rotor diameter	4.25 ft	1.30 m
Main landing gear tread (fully compressed)	6.54 ft	1.99 m

Accommodation

Normal cabin seating (training)			2
Maximum certified cabin seating (utility)			3
Cabin length	4.75 ft	1.45 m	
Cabin width	4.92 ft	1.50 m	

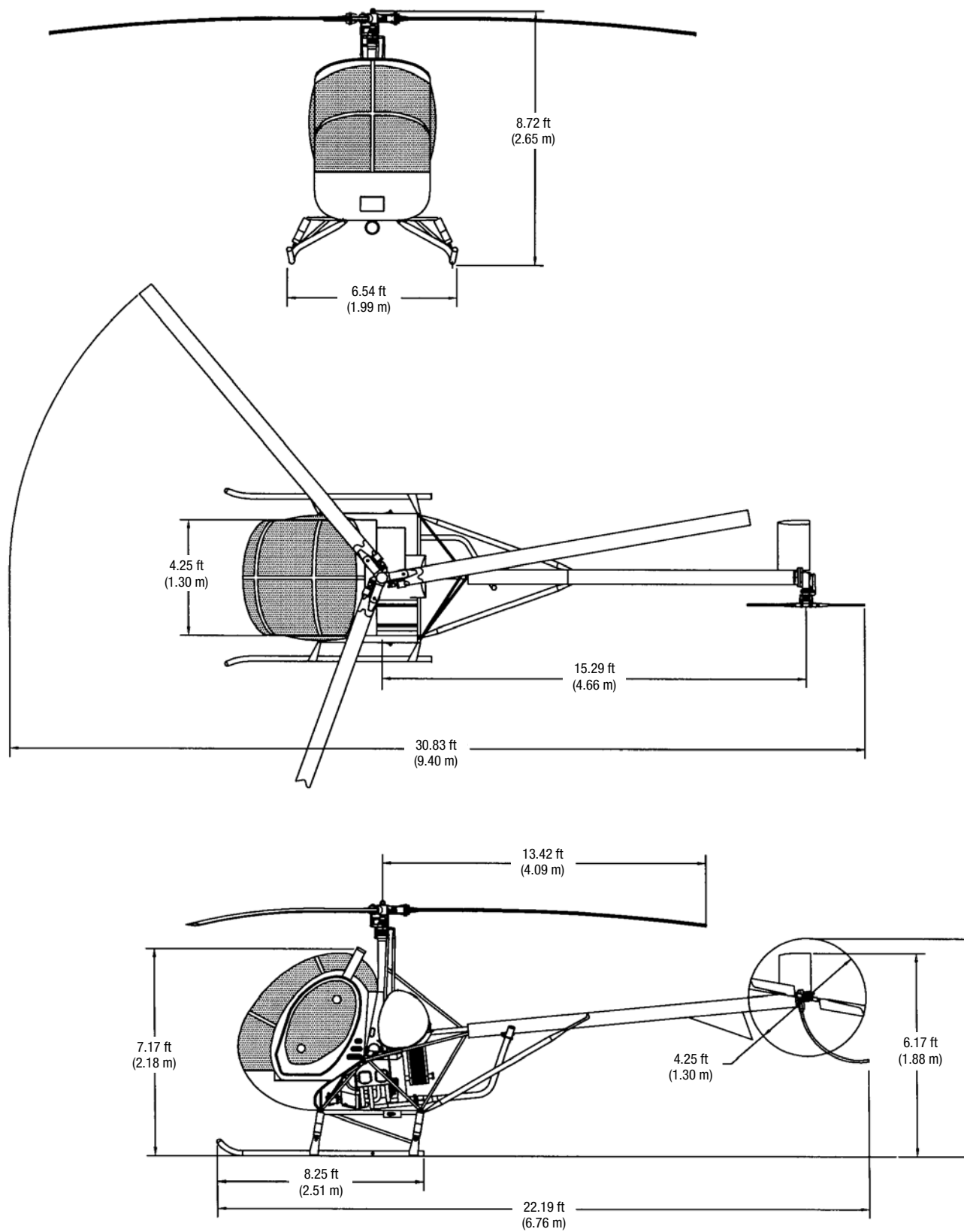
Powerplants

Type	Textron Lycoming HIO-360 engine	
Powerplant ratings (per engine, standard day, sea level)		
- Takeoff (5-minute)	180 shp	134 kw
- Maximum continuous	180 shp	134 kw

Fuel Capacity

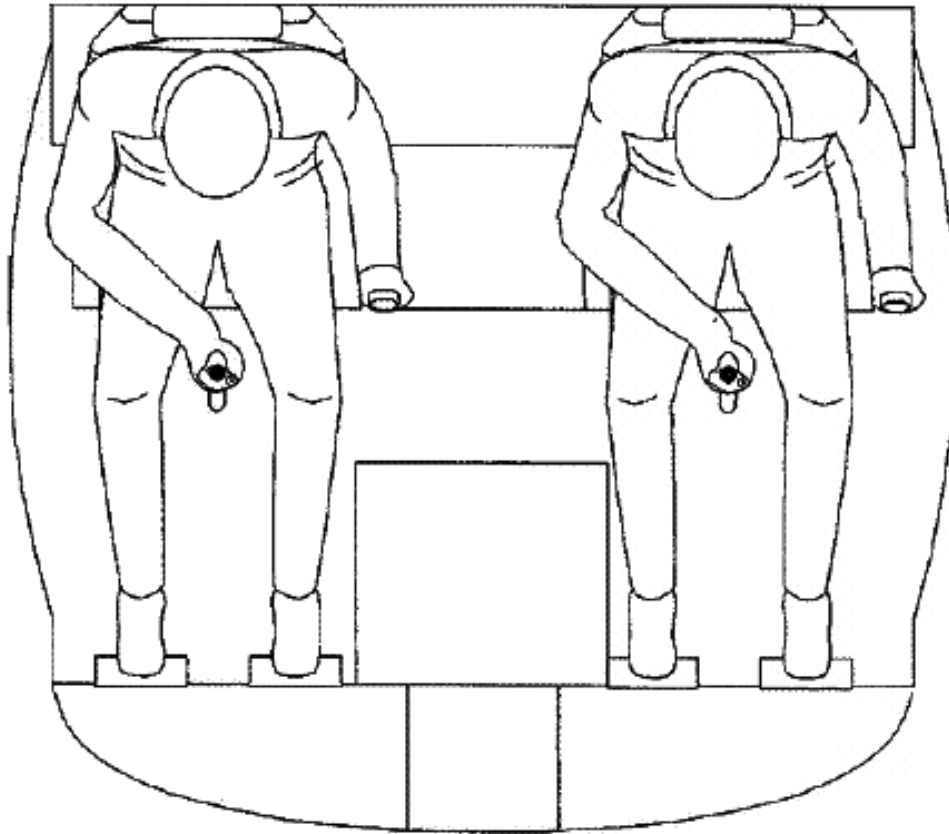
Standard fuel capacity	32.0 US gal	121.13 l
Extended range capacity	64.0 US gal	242.27 l

Aircraft Dimensions



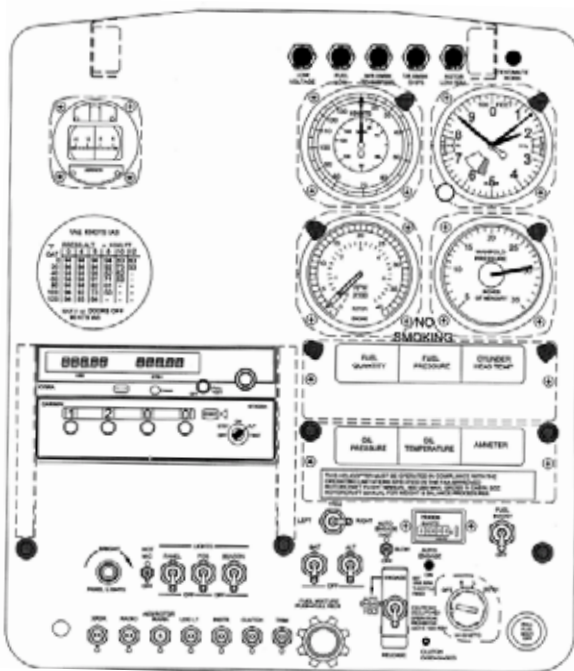
Cockpit Layout

The S-300CBi™ helicopter's cockpit offers two different configurations. The standard right-hand Pilot-in-Command (PIC) flight control configuration allows for comfortable seating of an instructor and student. With the optional left-hand PIC configuration, the right-hand controls can be removed making it possible to seat a pilot and two passengers.

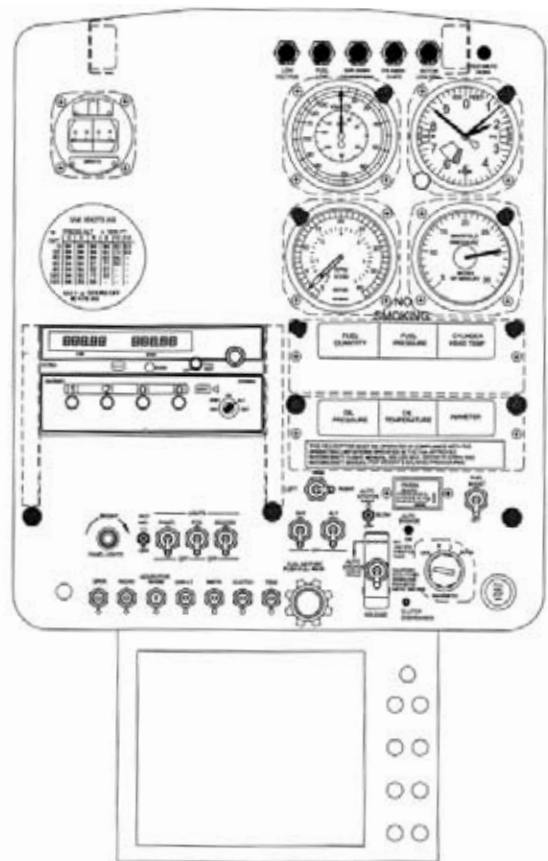


Cockpit Instrument Display Panel

Standard Panel



Intermediate Panel



Standard Equipment

Included in the aircraft basic certified empty weight.

Airframe and Control Systems

- Three-bladed, fully articulated main rotor
- Elastometric main rotor dampers
- Dual controls, right-hand PIC
- Collective friction control
- Electric cyclic trim, two axis
- Tubular skid-type landing gear
- Offset anti-torque pedals
- Booted Oleo landing gear dampers
- Heavy duty skid shoes
- Fuselage jack/lift fittings
- White Glasurit urethane paint
- Tie down kit
- Three piece chin skin with integral side fairings
- Ground handling wheel brackets
- STAR System (start-up overspeed limiter, automatic rotor engagement, low rotor RPM, warning system)

Powerplant, Systems and Instruments

- Lycoming HIO-360-G1A engine
- Engine oil pressure indicator
- Splined main rotor drive shaft with lift ring
- Engine oil temperature indicator
- 32.5 gallon fuel tank
- Cylinder head temperature indicator
- Fuel shut-off valve
- Fuel quantity indicator
- Fuel flow oil filter, remotely mounted
- Ammeter
- Upstack exhaust installation
- Low fuel warning light
- Airspeed indicator
- M/R transmission oil temp/pressure warning light
- Altimeter
- T/R transmission chip detector warning light
- Dual engine/ rotor tachometer
- Low voltage warning light
- Manifold pressure gauge
- Running time (Hobbs) meter
- Outside air temperature gauge
- Cushioned left and right magneto drives
- Magnetic wet compass
- Oil cooler winterization kit
- Fuel pressure indicator

Avionics and Electrical System

- KY96A comm transceiver
- Internal and external night lights with strobe beacons
- ACK A-30 blind encoder
- Modular electrical harness
- GTX 320 transponder
- Cyclic mounted radio frequency scrolling switch*
- Accessory plug
- Lead acid battery
- Light weight, high torque starter
- 70 amp alternator
- Circuit breaker protection
- Switchable hot mic system

*Not available with cargo hook - optional grip available.

Cabin Accessories

- Adjustable ventilation system
- Pilot map light
- Clear cabin door windows
- Two-seat cushioned interior
- Circular air scoop vents on doors
- Gray rubber floor mat
- Tinted canopy windows
- Lap belts and shoulder harnesses
- Glove box
- Single latch doors

Note: Manufacturer reserves the right to modify this configuration by substituting comparable or better equipment.

Optional Equipment

Utility and Convenience Options

- Cabin cover
- Cargo hook installation
- Cargo rack
- Cyclic grip, special
- Door openers, pneumatic
- Doors, triple latch
- Elastometric teeter bearings
- Exhaust diffuser on up-stack
- External APU receptacle
- Fire extinguisher, dry chemical
- Fire extinguisher, halon
- First aid kit
- Fuel system, auxiliary (64 gallon)
- Grease fitting, short shaft
- Heater, muff
- Hobbs meter, landing gear contact switch
- Landing lights, two or three position
- Left-hand PIC (three-seat configuration)
- Map Case
- Skid shoes, extra heavy duty
- Windows, sliding glass

Avionics Options

- ADF receiver, KR87 with K1227-00
- Attitude gyro
- Audio panel, intercom, King KMA24-H-71
- Clock, electrical
- Comm/GPS Garmin GNC 420
- Comm/GPS Garmin GNC 420A
- Comm/GPS, moving map, Garmin GNC 250XL
- Comm transceiver, Apollo SL40
- Comm transceiver, KY196A
- Compass-vertical card, overhead
- Dimmer assembly, supplemental
- Directional gyro
- ELT, EBC, 502
- Fan, avionics cooling
- Headset, David Clark H10-56
- Intercom foot switch
- Intercom, NATAA80
- Intercom, NATAA83 stereo
- Intercom, NATAA85
- Marker beacon, KR21
- Master avionics switch
- NAV/COMM, KX155-39 with KI208 CDI
- NAV/COMM/GS, KX155-43 with KI209 indicator
- Slaved compass, KCS55A with HIS, with heading XMTR
- Transponder, Garmin GTX330 (mode s)
- Transponder, Garmin GTX 327
- Transponder, KT76A-11
- Turn coordinator
- Turn and slip indicator, Electric Gyro Corp
- Vertical speed indicator, United 7000
- Vertical speed indicator, instantaneous, United 7130

Paint Options

BASF Glasurit exterior paint is used on all Sikorsky S-300CBi™ helicopters. It is one of the most technically advanced paints available and is used by numerous premium automobile companies such as BMW and Mercedes. The nine-step paint process assures superior corrosion protection and a durable, yet highly attractive appearance. The S-300CBi helicopter is offered with an all white base coat as standard. Optional paint colors and trim schemes are available upon request.

Factory Standard Trim Styles

Type A



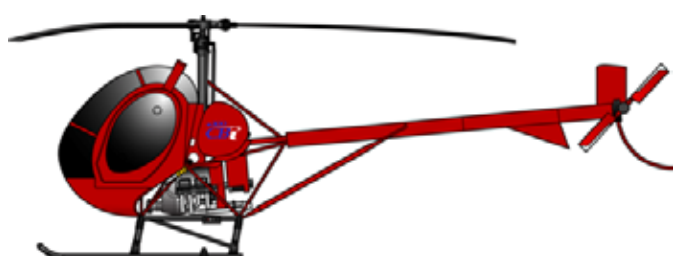
Type B



Type C



Type D

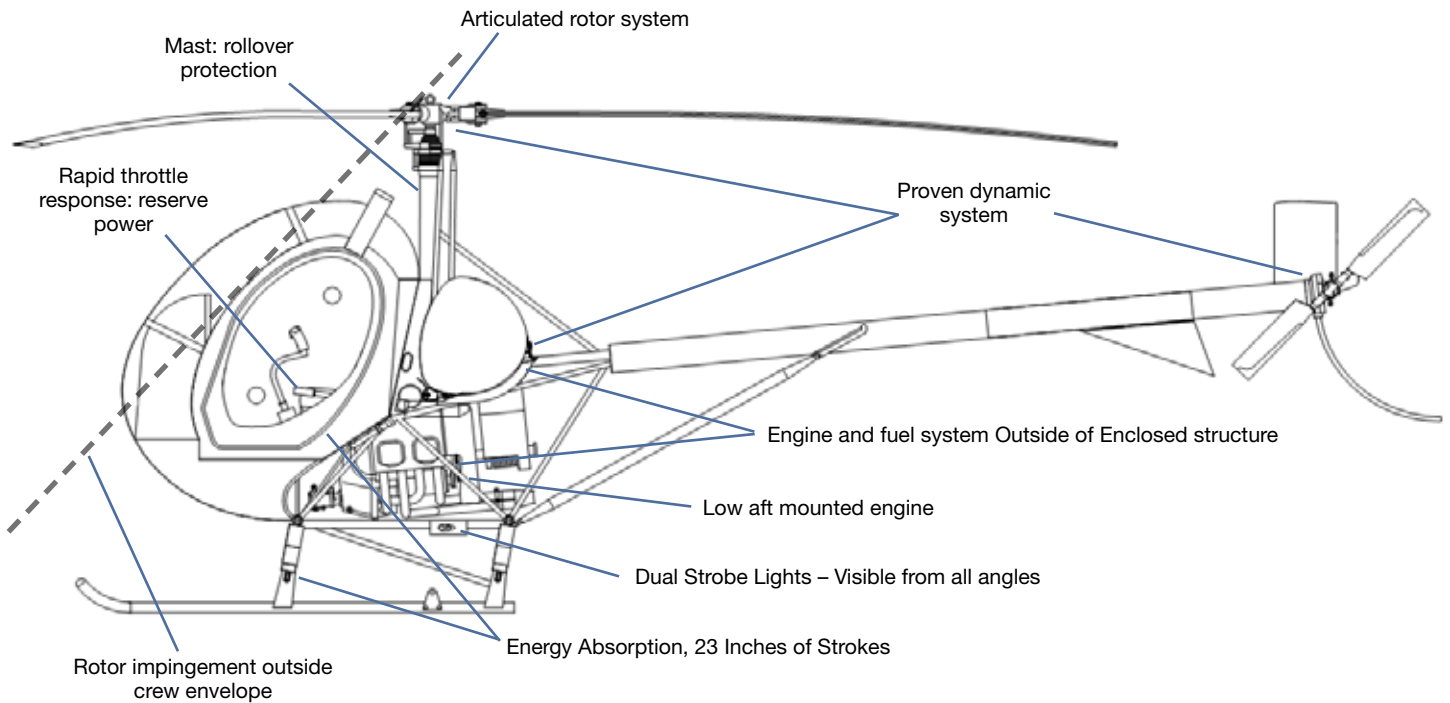


Safety and Crashworthiness

The S-300CBi™ helicopter's extraordinary safety record is the result of its exceptional flight safety and crashworthiness characteristics. It is the beneficiary of more than thirty years and 20-million flight hours of commercial and military flight experience. Like its predecessors, the S-300CBi aircraft retains high student margins that even seasoned pilots will appreciate.

Crashworthiness Features

- Energy absorption through plastic deformation
- Seating configuration places occupants far from the rotor impingement zone
- Unique geometry eliminating tailboom strikes

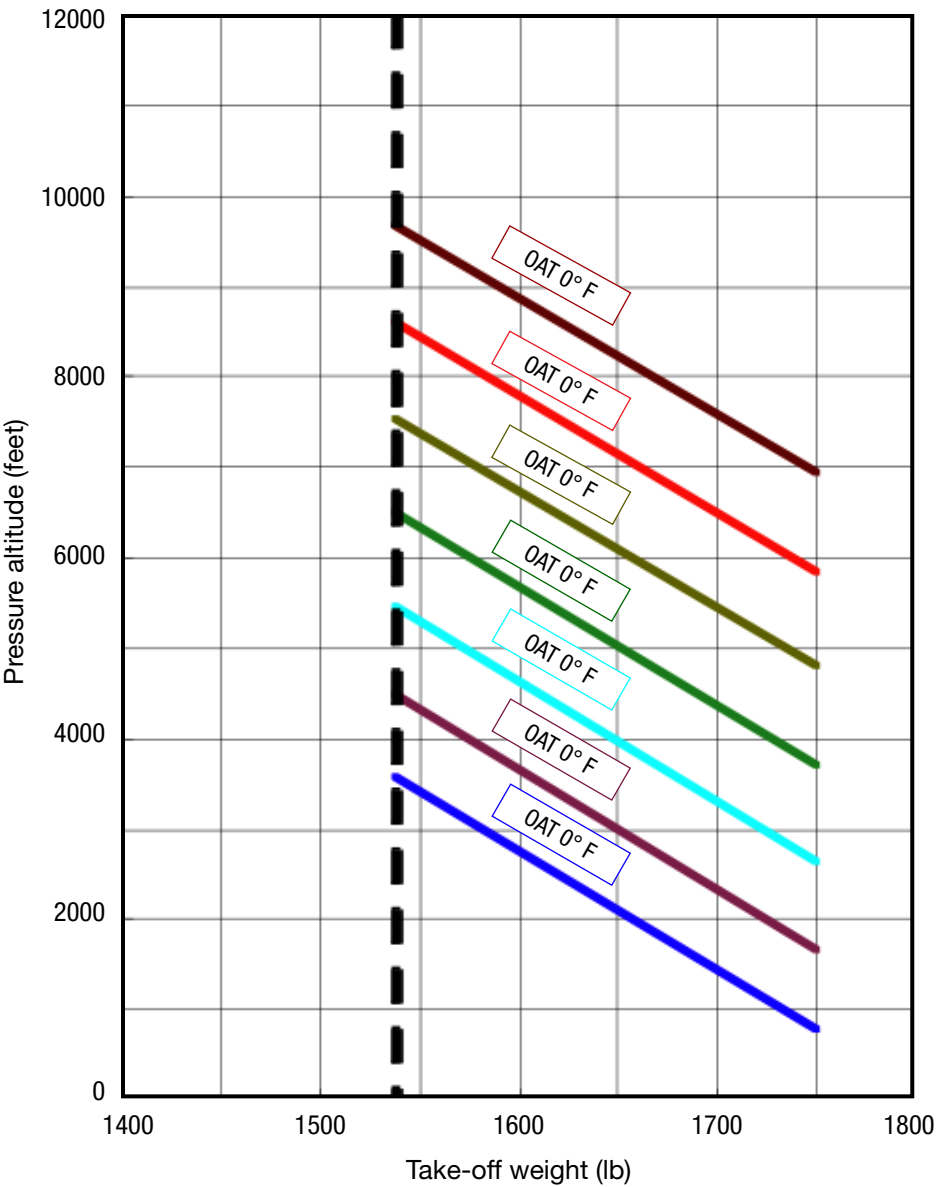


Safety Features

- Rugged, reliable component design
- Stable handling characteristics
- Excellent safety record
- Rapid throttle response

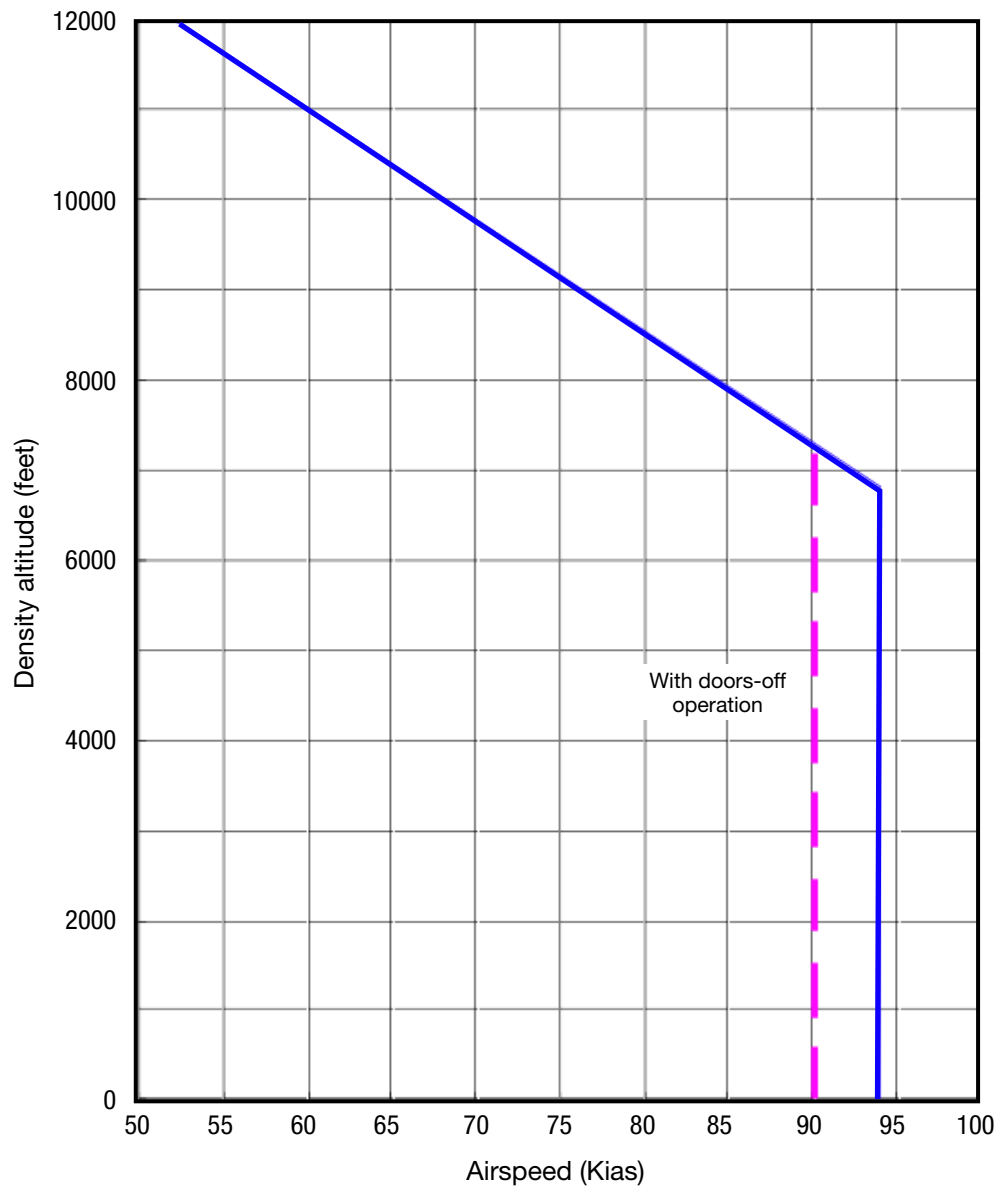
Mission Performance

Hover Ceiling In-Ground-Effect



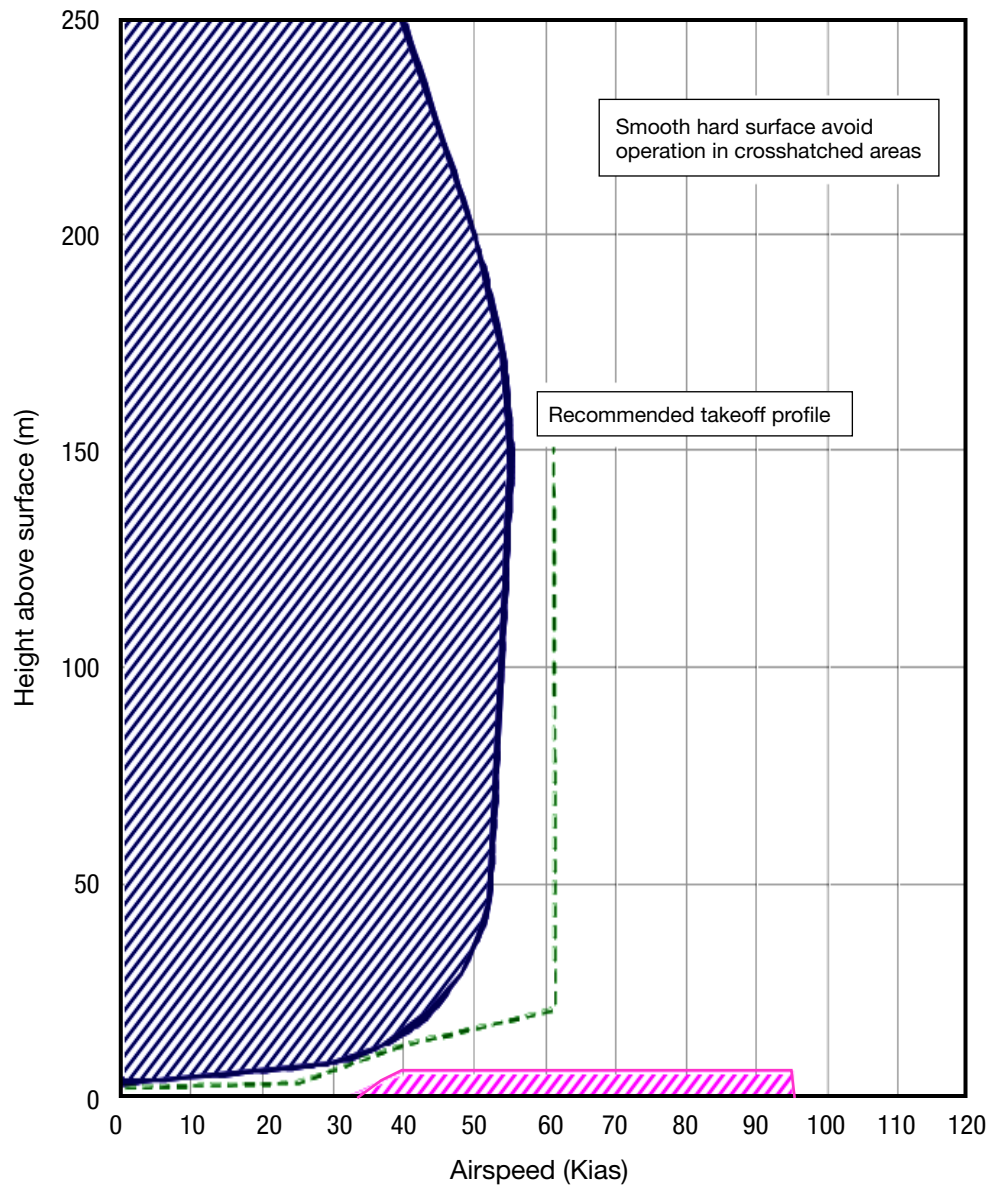
Mission Performance

VNE vs. Density Altitude



Mission Performance

Height-Velocity Diagram



Overhaul and Retirement Schedule

Components with Scheduled Overhaul Times

	Hours
Main rotor transmission	4,000
Tail rotor transmission	4,200
Engine	2,200*
Belt drive system overhaul	
- Upper ball bearings, belt drive frame assembly.	3,000
- Lower ball bearings, belt drive frame assembly.	1,800
- Idler pulley bearings, belt drive assembly.	3,000

Components with Mandatory Retirement Times

Main transmission ring gear carrier/coupling	8,000
Main transmission pinion assembly.	8,000
Main rotor drive shaft	4,000
Main rotor hub.	8,000
Main rotor mast	13,590
Main rotor thrust bearing	4,200**
Main rotor pitch bearing shaft.	4,000
Main rotor blade assembly	5,500
Tailboom assembly	4,200
Horizontal stabilizer assembly.	4,200
Tail rotor drive shaft assembly	6,000
Tail rotor gearbox input shaft	8,600
Elastomeric main rotor damper	6,000
Tail rotor blade assembly	9,000
Tail rotor blade retention straps	5,100
Lower pulley coupling shaft.	6,000
Tailboom attaching strut assembly	10,700

*Aircraft must be operated in accordance with Lycoming Service Instruction SI-1009

**Life based on 600 hours inspection and relubrication interval in accordance with the applicable Handbook of Maintenance instructions



Sikorsky Global Helicopters

A Sikorsky Company

Elmira, NY 14845, USA
+1 (607) 739-3821
www.sacusa.com