



Gulfstream III (NASA 520)

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NASA Langley Gulfstream III (NASA 520)



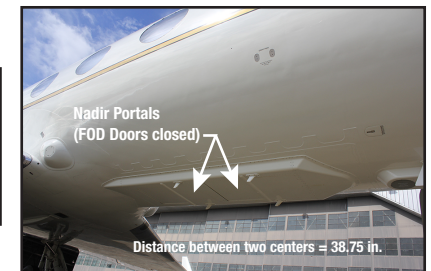
Gulfstream III (NASA 520) General Characteristics

Pilots	2
Maximum number of Qualified Non-Crewmembers	10
Length	83 ft 2 in. (25.35 m)
Wingspan	77 ft 10 in. (23.72 m)
Height	25 ft 4 in. (7.73 m)
Approximate empty weight	39,386 lbs (17,865 kg)
Maximum zero fuel weight	46,000 lbs (20,865 kg)
Max. zero fuel weight – empty weight = useful payload	6600 lbs (2994 kg)
Maximum takeoff weight	69,700 lbs (31,615 kg)
Powerplant	Two Rolls-Royce Spey MK511-8 turbofans; 11,400 lbf (50.7 kN) with hush kit for Stage III noise qualification
Passenger cabin dimensions	6 ft 1 in. H x 7 ft 3 in. W x 18.5 ft L (1.9 X 2.2 x 5.6 m)

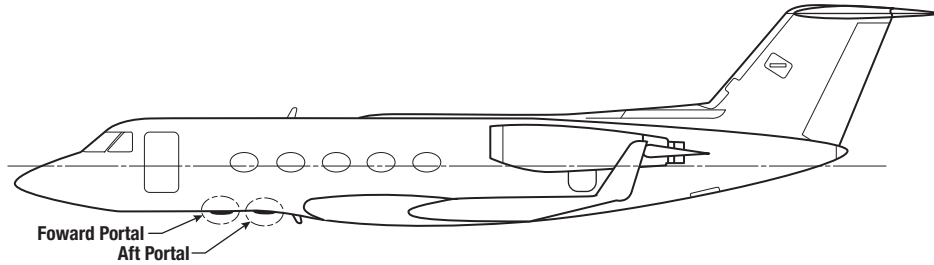
Gulfstream III (NASA 520) Performance

Maximum speed	340 KIAS/0.85M
Cruise speed	459 knots (850 km/hr)
Stall speed at sea level	105-130 KCAS (194-241km/hr)
Range	3767 n.mi. (4335 sm, 6,976 km)
Endurance	8.5 hr
Service ceiling	45,000 ft (13,716 m)

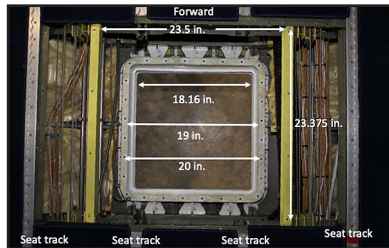
Dual Nadir Portals



Gulfstream III (NASA 520) Portal Dimensions

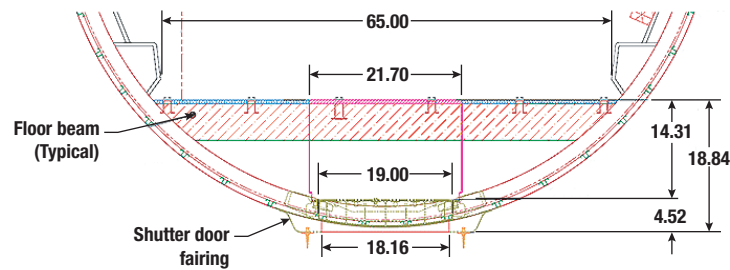


Aft Nadir Portal (Open)
(Forward nadir portal is identical)



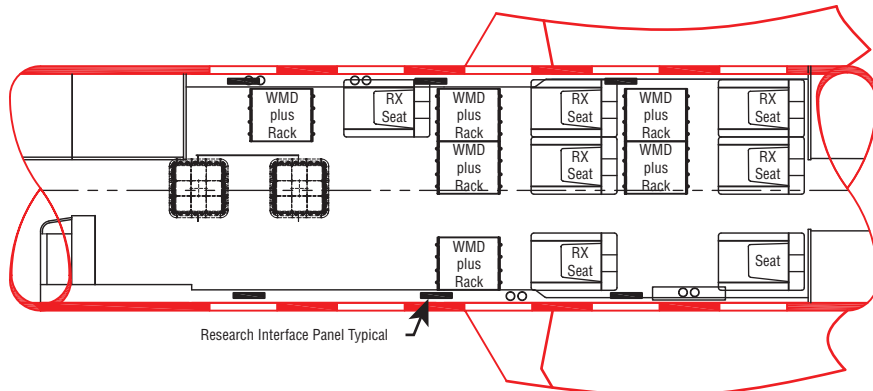
Two Identical Portals

- 18.16 x 18.16 in. portal “see through” opening
- 19.00 x 19.00 in. vertical portal flange
- 21.00 x 21 in. mounting flange
- 23.5w x 23.375L in max instrument footprint over portal and beneath floor for aft portal



Gulfstream III (NASA 520) Notional Floor Plan for Six Researchers

- Six Researcher Interface Panels will be provisioned at six cabin locations as shown below.



Gulfstream III (NASA 520) Research Power

- Research Power Distribution System will present adequate power of various denominations to six cabin research stations.
- Total Research Power Capacity
 - 80 A of 120 VAC /60 Hz power
 - 300 A of 28 VDC power
 - 15 A of 14 VDC
 - 20 A of 5 VDC
- UPS Override system will be located at each research station and controlled from the Cockpit.

Research Interface Panel (RIP)

