

Diamond DA20-C1 Eclipse Model Guide

The Diamond DA20-C1 Eclipse is a two-seat, all-composite, single-engine piston trainer and sport aircraft, built since 1998. It has a fuel-injected 125 hp Continental IO-240, a fixed-pitch propeller, a center stick and a bubble canopy. Documents give 1,764 lbs max takeoff weight and 584 lbs standard useful load. The DA20 family is listed with up to 520 nm range.

KEY TAKEAWAYS

- Two seats, 125 hp IO-240 and a 24 US gal tank. Full-fuel payload is only 440 lbs, so check weight and balance.
- Brochure figures: 138 kts cruise at 5.5 gph, 1,000 fpm climb, 1,600 ft takeoff over a 50 ft obstacle.
- Composite airframe with no defined structural life limit. Modular parts can be replaced individually.
- Current C1s have a Garmin G500 TXi glass panel. Check which avionics your airplane actually has.

WHAT IT CARRIES

Max takeoff and landing weight is 1,764 lbs (max ramp 1,770 lbs). Standard empty weight is 1,180 lbs, useful load 584 lbs, and full-fuel payload 440 lbs. Baggage is limited to 44 lbs. One example airplane's empty weight was 1,202 lbs, so always use the actual airplane's figures.

HOW IT PERFORMS

Sources quote a 1,000 fpm sea-level climb, 138 kts cruise at 5.5 gph, and about 4.7 gph typical in training. Landing over a 50 ft obstacle at max weight is about 1,360 ft, with a roll of about 661 ft. Demonstrated crosswind is 20 kts. It is spin certified.

WHAT TO CHECK WHEN BUYING

Walk around the wings, ailerons, flaps and fuel drains. Check tires, brakes, alternator belt, propeller nicks and oil (5 qt minimum, 6 maximum). Confirm winter inlet baffles are on hand. Review the AFM revision and the weight and balance record.

SPECIFICATIONS

Engine Power Hp	125
Fuel Capacity Gal	24
Max Fuel Weight Lbs	144
Max Ramp Weight Lbs	1770
Oil Capacity Max Qt	6
Oil Minimum Qt	5

PERFORMANCE

Climb Rate Fpm	1000
Cruise Speed Kts	138
Fuel Burn Gph	5.5
Takeoff Distance 50ft Ft	1600
Landing Distance 50ft Ft	1360
Landing Roll Ft	661
Stall Speed Kts	44
Max Crosswind Kts	20

V-SPEEDS

Vx Flaps To Kts	57
Vx Flaps Cruise Kts	60
Vy Flaps To Kts	68
Vy Flaps Cruise Kts	75
Va Kts	106
Vno Kts	118
Vfe To Kts	100
Vfe Ldg Kts	78

WEIGHT & BALANCE

Max Takeoff Weight Lbs	1764
Max Landing Weight Lbs	1764
Standard Empty Weight Lbs	1180
Useful Load Lbs	584
Full Fuel Payload Lbs	440
Max Baggage Lbs	44
Cg Forward Limit In	7.95
Cg Aft Limit In	12.48

SAFETY NOTES

- Use the airplane's own AFM and weight and balance: sources differ on Vx (57-60 kts) and stall speed (44-45 kts).
- Maximum demonstrated crosswind is 20 kts for takeoff and landing; brake steering lengthens the takeoff roll.
- Cylinder head temperature green range is 300-420 F. Know the cold-weather inlet baffle procedure.