



Polikarpov I153

Riferimento caratteristiche aeromobile https://en.wikipedia.org/wiki/Polikarpov_I-153

General characteristics

- **Crew:** One
- **Length:** 6.17 m (20 ft 3 in)
- **Wingspan:** 10.00 m (32 ft 9½ in)
- **Height:** 2.80 m (9 ft 2¼ in)
- **Wing area:** 22.14 m² (238.3 ft²)
- **Empty weight:** 1,452 kg (3,201 lb)
- **Loaded weight:** 1,960 kg (4,221 lb)
- **Max. takeoff weight:** 2,110 kg (6,652 lb)
- **Powerplant:** 1 × [Shvetsov M-62 radial engine](#), 597 kW (800 hp)

Performance

- **Maximum speed:** 444 km/h (243 knots, 280 mph) at 4,600 m (15,100 ft)
- **Cruise speed:** 297 km/h (160 knots, 184 mph) at 2,000 m (6,600 ft)
- **Range:** 470 km (254 nmi, 292 mi)
- **Service ceiling:** 10,700 m (35,105 ft)
- **Rate of climb:** 15 m/s (2,985 ft/min)
- **Climb to 1,000 m (3,300 ft):** 0.85 min
- **Climb to 7,000 m (23,000 ft):** 8.3 min

Armament

- **Guns:** 4 × 7.62 mm ShKAS machine guns, 2,600 rounds of ammunition total

Dati motore Shvetsov M-62

Riferimento caratteristiche motore motore Sm-62

https://en.wikipedia.org/wiki/Shvetsov_ASh-62



General characteristics

- **Type:** Nine-cylinder single-row supercharged air-cooled [radial engine](#)
- **Bore:** 156 mm (6.12 in)
- **Stroke:** 175 mm (6.87 in)
- **Displacement:** 29.8 l (1,819 in³)
- **Length:** 47.76 in (1,213 mm)
- **Diameter:** 54.25 in (1,378 mm)
- **Dry weight:** 560kg (1,235 lb)

Components

- **Valvetrain:** Overhead valves
- **Supercharger:** Two-speed centrifugal type supercharger
- **Fuel system:** Carburetor
- **Fuel type:** 92 RON, 87 (R+M)/2 (AKI) [octane rating gasoline](#)
- **Cooling system:** Air-cooled

Performance

- **Power output:** * 746 kW (1,000 hp) at 2,200 rpm for takeoff 634 kW (850 hp) at 2,100 rpm at 4,200 m (13,780 ft)
- **Specific power:** 25.03 kW/l (0.55 hp/in³)
- **Compression ratio:** 6.4:1
- **Specific fuel consumption:** 469 g/(kW·h) (0.77 lb/(hp·h))
- **Power-to-weight ratio:** 1.3 kW/kg (.81 hp/lb)

Calcolo fattore di scala Shvetsov M-62 / Airen 200ccm

Diametro motore originale: 1'378mm

Diametro motore Airen 200ccm 10 cilindri: 311mm

Fattore di scala= $1'378\text{mm} / 311\text{mm} = \underline{4.43}$

Dimensionamento riproduzione

- **Lunghezza:** $617\text{ cm} / 4.43 = 139.27\text{ cm}$ - arr: 139.0 cm
- **Apertura alare:** $1000\text{ cm} / 4.43 = 225.73\text{ cm}$ - arr: 225.5 cm
- **Altezza:** $280\text{ cm} / 4.43 = 63.20\text{ cm}$ - arr: 63.0 cm

Lugano, 14,06.2015