

TURBOFAN 400 ENGINE Engine

Specification of Engine TurboFan 400:

 Thrust of engine 400daN (400kg) · Specific fuel consumption 0,85 (kg/da N/h) · Length of engine 1100 mm · Max diameter of engine 330 mm • Weight of the engine (dry engine) 76 kg Bypass rate 0,65 · Pressure ratio for four stage compressor 3,52 • Pressure ration for two stage fan 1.71 • Max temperature in front of turbine 1150 K

· Max intake mach number 0.9 m • Starting of the engine Windmill in flight, compressed air on ground

· Electrical spurk plug

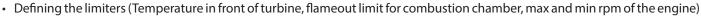
• Generator of 3kw continous and 4kw in peak

 Max rpm of engine 30400 rpm

 Lubrication Oil mist 3% oil mixed with fuel

· Max operational height 10000 m · Max starting height 5000 m · Max mass flow of air 10.6 kg/s · Max mass flow of fuel 0.11 kg/s Number of starts 100 · Working hours 50 h

• STM32 cortex m4 based control of engine (automatic control)

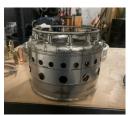


- GUI (STM32 based with 7inch monitor)
 - Manual mode
 - Automatic mode
 - Testing subsystems
 - Parameters settings
 - Procedures settings
 - Limiters and alerts settings
 - Monitoring of engine (how many starts, how many shut down, how many hours is working and etc.)
 - Data logging
 - Telemetry function
 - Error handlers
- Envelope prescribed (acceleration and decelerations procedures depending of Height and mach number)
- · All subsystems are connected on the envelope of the engine









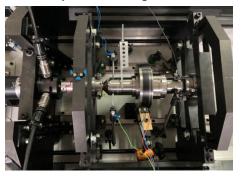




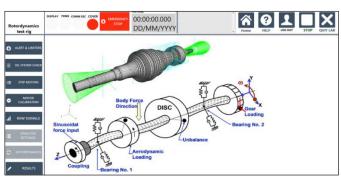
MTF400

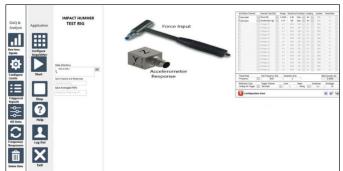


Rotordynamics test rig









Fuel System test rig





Combustion chamber test rig





Generator test rig







