



B20 THRUSTER

The B20 thruster assembly includes:

- Additively manufactured thruster body, Inconel 718
- Valves redundancy
- Thermocouple and pressure sensor
- Control electronics
- Standard data and power interfaces

The B20 is operable under ambient conditions to enable fast turnaround ground testing.

Advantages:

Flight heritage

96 in space since 2021.
Proven on 16 different spacecrafts.
Used for large maneuvers (orbit raising).

Green propellants

Nitrous oxide (N₂O) and Propylene (C₃H₆).
Self-pressurizing: no pumps or pressurants.
REACH compliant.
High performance for a low cost.

Unlimited burn time

Thermally stable.
Allows for large and repeated maneuvers.
Perfect for rendezvous and docking.

Modular and scalable

From 1 to 16+ thrusters per system.
Combine with B1 thrusters.
Ideal for 6-DOF systems.

Thruster Data Sheet



Physical		
Thruster dimensions (incl. keep-out zones)	190 x 87 x 82 mm 7.48 x 3.43 x 3.23 in	
Dry mass	695 g (1.53 lbs)	
Valves	Normally-closed solenoid Four per thruster (firing and isolation)	
Environmental		
Operational temperature	-5°C to 30°C (23°F to 86°F)	
Survival temperature	-30°C to 40°C (-22°F to 104°F)	
Performance		
Thrust, range	6.46 to 18.11 N (1.45 to 4.07 lbf)	
Specific impulse	≥ 271 s	
Minimum impulse bit	Bi-prop: 0.98 N.s (0.22 lbf.s) Cold-gas: 10 mN.s (0.002 lbf.s)	
Maximum impulse bit	Thermally stable: unlimited burn time.	
Ignition	Spark-based igniter	
Pulse frequency	4 Hz	
Restarts	10,000+ per thruster	
Control	Operable together or independently. Select your desired quantity. Pair with B1 thrusters.	
Firing modes	Bi-prop or cold-gas. Switch at will. Managed by not engaging the spark-igniter	
Cold-start capable	Yes. Highly repeatable	
Interfaces		
Mounting	3x M5 threaded holes	
Valve power	Hit: 14.67 W for 25 ms (per valve) Hold: 0.76 W (per valve)	
Igniter	4.56 W max for 120 ms	