

Progress

Russian Federal Space Agency (Roscosmos)/
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(RSC Energia)

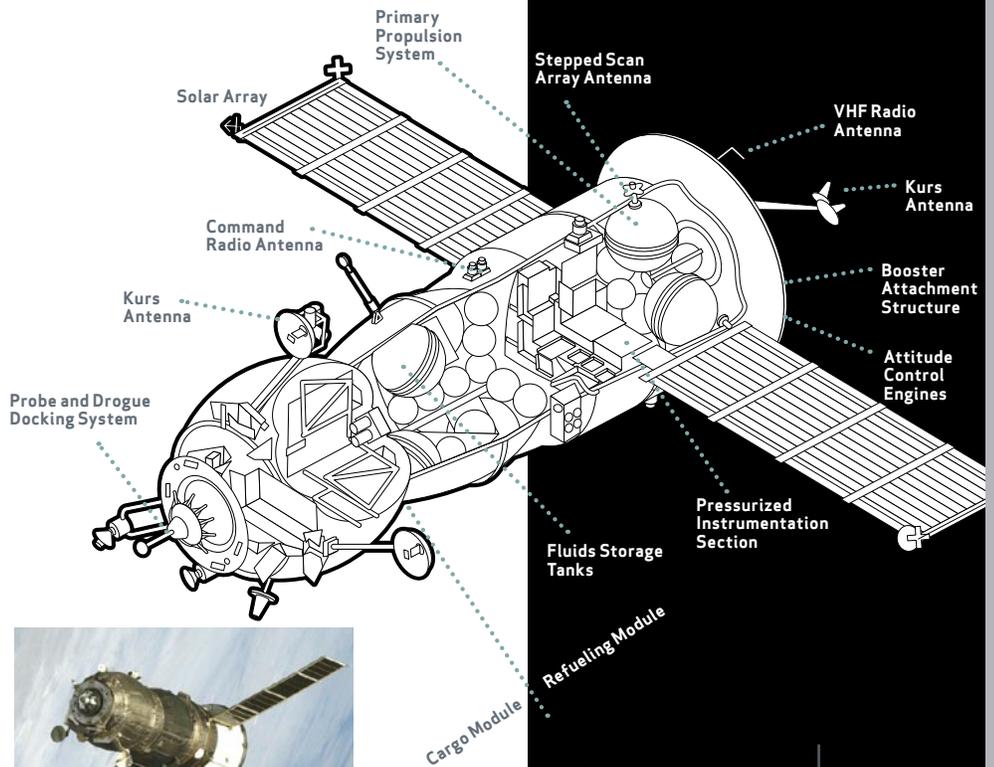
Progress is a resupply vehicle used for cargo and propellant deliveries to the ISS. Once docked to the ISS, Progress engines can boost the ISS to higher altitudes and control the orientation of the ISS in space. Typically, three Progress vehicles bring supplies to the ISS each year. Progress is based upon the Soyuz design, and it can either work autonomously or can be flown remotely by crewmembers aboard the ISS. After a Progress vehicle is filled with trash from the ISS, and after undocking and deorbit, it is incinerated in Earth's atmosphere at the end of its mission.



Progress cargo module interior.



Progress prelaunch processing.



Progress prior to reentry.



Progress approaches ISS.

Cargo Load		
	MAXIMUM	TYPICAL*
Dry cargo such as bags	1,800 kg (3,968 lb)	1,070 kg (2,360 lb)
Water	420 kg (925 lb)	300 kg (660 lb)
Air	50 kg (110 lb)	47 kg (103 lb)
Refueling propellant	1,700 kg (3,748 lb)	870 kg (1,918 lb)
Reboost propellant	250 kg (550 lb)	250 kg (550 lb)
Waste capacity	2,000 kg (4,409 lb)	2,000 kg (4,409 lb)

* Measurements are from the 21 P flight.

Length	7.4 m (24.3 ft)
Maximum diameter	2.7 m (8.9 ft)
Span with solar arrays	10.6 m (34.8 ft)
Launch mass	7,150 kg (15,800 lb)
Cargo upload capacity	2,230–3,200 kg (4,915–7,055 lb)
Pressurized habitable volume	6.6 m ³ (233 ft ³)
Engine thrust	2,942 N (661 lbf)
Orbital life	6 mo