



# RED ENTRY SYSTEM

## ON-DEMAND RE-ENTRY CAPSULE

SpaceWorks' line of re-entry devices (RED) are on-demand payload return capsules that enable low-cost, autonomous re-entry from Earth orbit. The RED product line provides high-frequency and precise downmass capabilities to support novel material development, microgravity experimentation, and on-orbit sample collection. The sphere cone devices utilize a SpaceWorks' proprietary thermal protection system, called Nova-F, which allows them to withstand the high temperatures associated with re-entry. The RED systems can return up to 50 kg of payload from space to anywhere within the contiguous United States in under 24 hours.

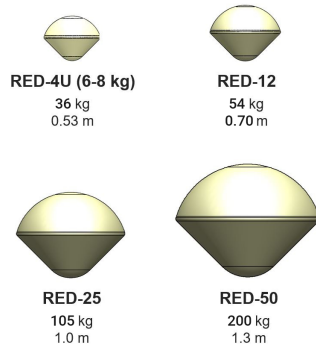
### FEATURES

- Guided Parafoil Precision Landing
- On-orbit Loading
- Precision Final Mile Delivery
- Reconfigurable Payload Bay

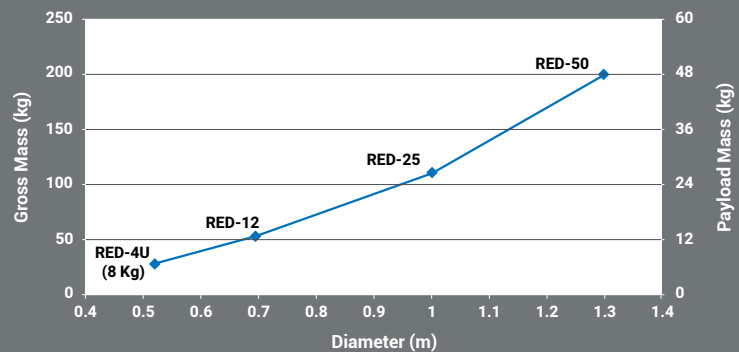
### APPLICATIONS

- In Space Manufacturing
- Sample Return
- Zero Gravity Experiments
- On-Demand Cargo Return
- Rapid Payload Delivery

### SIZE COMPARISON



### GROSS & PAYLOAD vs VEHICLE DIAMETER



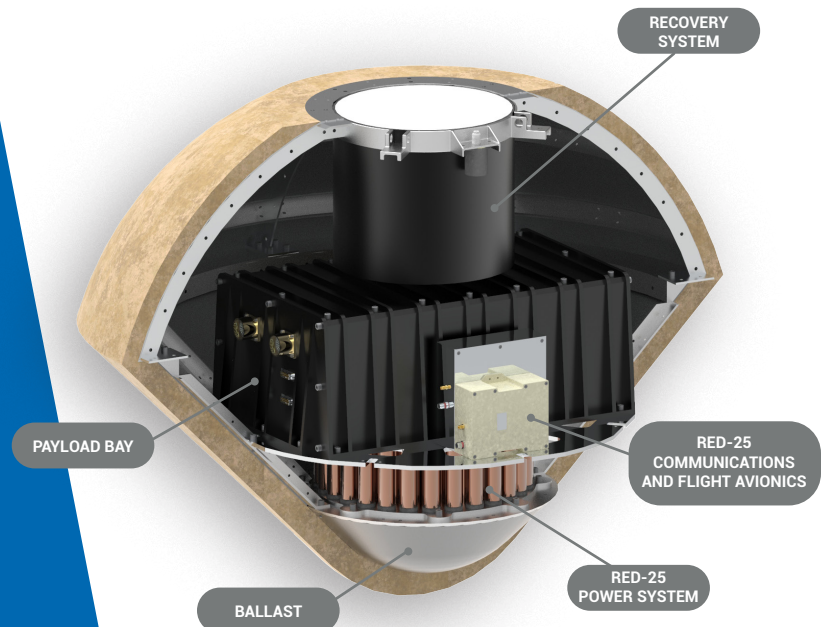
### RED-25 CONOPS

The fully-equipped payload bay will be packaged and sealed within the SpaceWorks RED-25 prelaunch. The RED-25 can support telemetry for the payload bay, provide pass-thru power, and maintain a desired internal environment for the payload bay. The backshell of the RED-25 will be equipped with a standard interface. After the completion of the mission, the RED-25 will de-orbit from elliptical orbit to a pre-specified location. The payload will be recovered in under 24 hours.

#### CHARACTERISTICS

#### VALUE

Mass	105 kg (231.5 lb)
Payload Mass	25 kg (55.1 lb)
Payload Volume	24U (40x30x20 cm)
Maximum Entry Gs	<15
Mission Duration	Up to 6 months
Communications	Iridium & ADS-B



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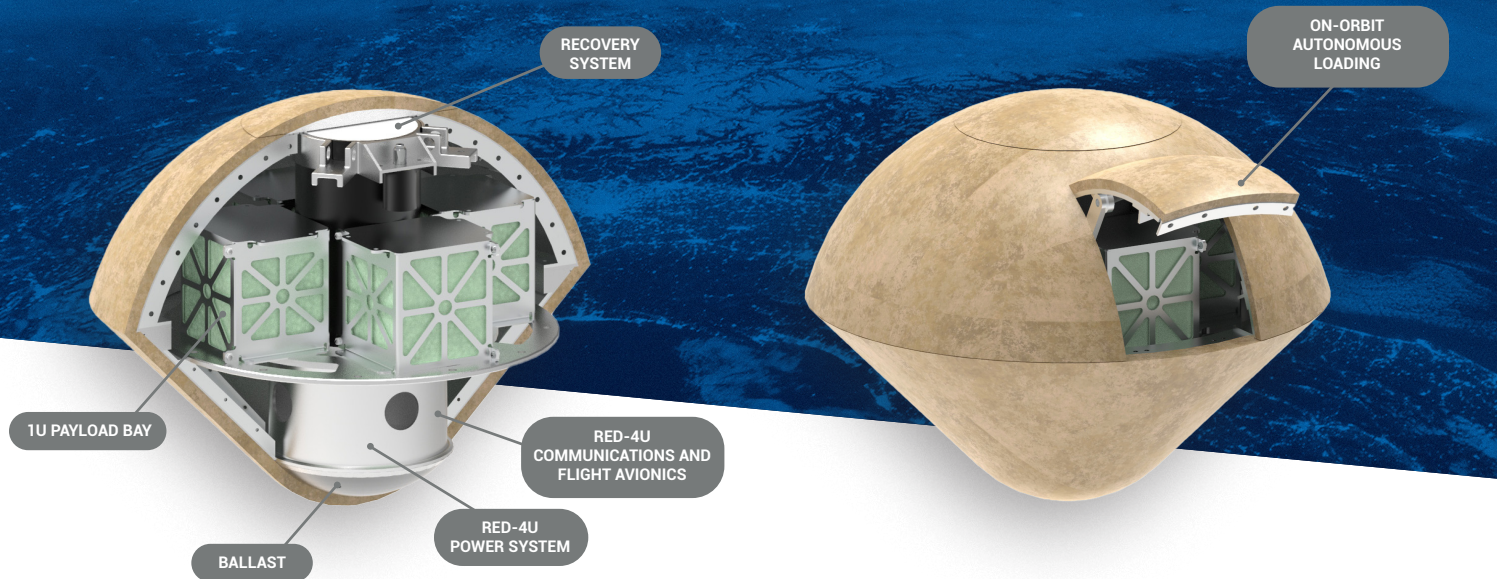
## RED-4U CONOPS

The Autonomous Loading RED-4U can rendezvous on-orbit with a space factory or space station where the RED-4U can be utilized for re-supply and payload return. The backshell of the RED-4U will be equipped with a standard interface. The RED-4U will collect on-orbit samples in quantities of 2 kgs and store them within the 1U payload bays. After collecting a total of 8 kg of samples, the RED-4U will de-orbit from elliptical orbit to a pre-specified location. The samples will be recovered in under 24 hours. Many components of the Autonomous Loading RED-4U are recoverable and reusable.

### CHARACTERISTICS

### VALUE

Mass	36 kg (79.3 lb)
Payload Mass	8 kg (17.6 lb)
Payload Volume	4U (4, 10x10x10 cm)
Maximum Entry Gs	<15
Mission Duration	Up to 6 months
Communications	Iridium & ADS-B



**VISIT [SPACEWORKS.AERO/FLIGHT/RED-25](https://spaceworks.aero/flight/red-25) TO VIEW**



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