

J1

DE VLAEMYNCK

High-altitude autonomous
strike concept

BALLOON-ASSISTED DEPLOYMENT

A stratospheric strike concept

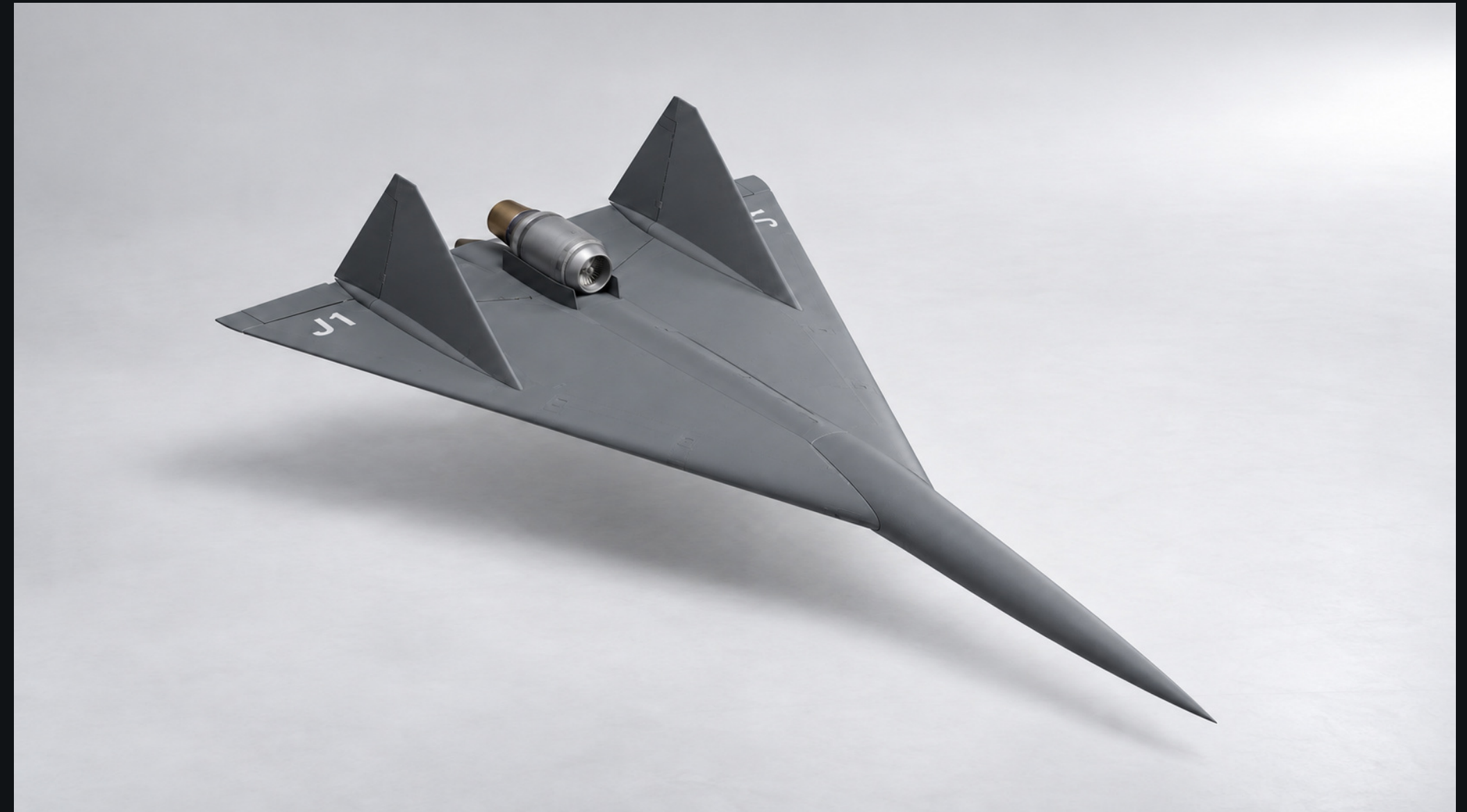
A compact, single-use aircraft that combines balloon-supported standby with a high-speed descent.

Potential energy

The balloon supplies the climb before the aircraft deploys.

A displaced starting point

The release location can differ from the original launch site.



J1 / POWERED REFERENCE CONFIGURATION

Altitude as an energy reserve

A helium balloon raises J1 while the aircraft remains in standby. The concept stores gravitational potential energy through height.

Extended airborne standby

The aircraft waits aloft before the release sequence begins.



120,000

FT / HOLD ALTITUDE

A release point beyond the launch site

320

KM OF DRIFT IN THE FILM

The balloon moves with the air mass.
J1 enters its descent from a position
displaced from the ground installation.



Compact delta geometry

4.00 m

OVERALL LENGTH

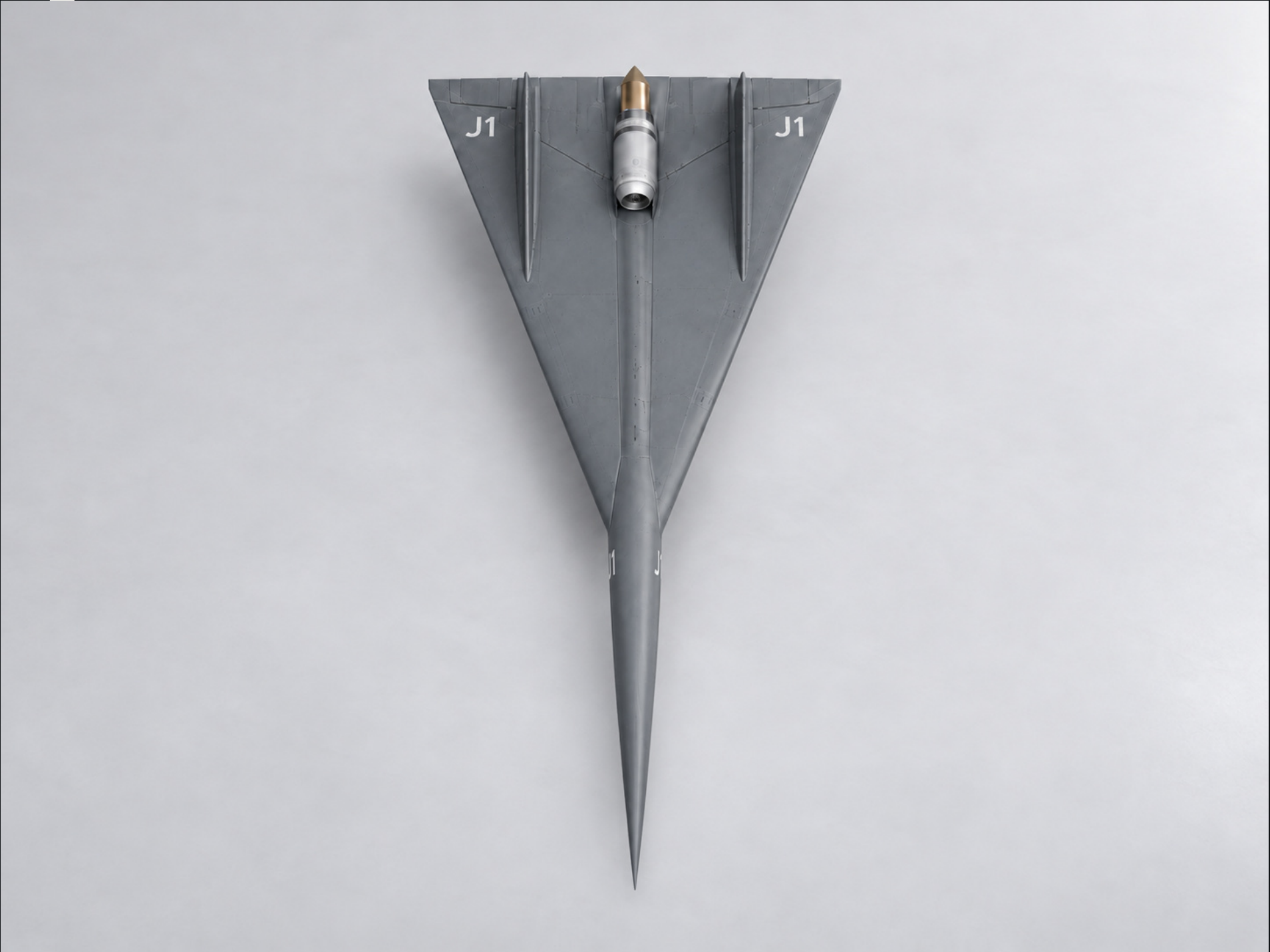
1.68 m

WINGSPAN

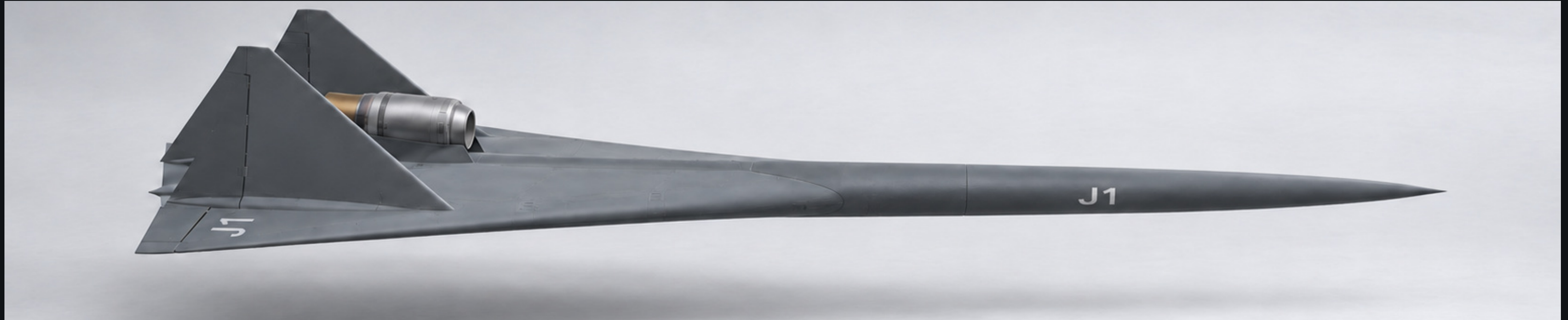
50 kg

CONCEPT FLIGHT MASS

Kevlar-reinforced composite shell.
Supercritical-profile visual reference.



Powered and glide variants



Powered

A P500-class microturbine provides the powered configuration. The programme uses established turbine hardware as its propulsion reference.

Glide

An optional airframe omits the turbine. The film portrays a rapid descending glide without an active engine heat plume.

POWERED CONFIGURATION SHOWN

Low-signature mission profile

Small radar footprint

A compact airframe with a low radar signature in the story.

Reduced propulsion emissions

The glide option removes the active turbine plume.

Weather-assisted concealment

The film presents storm cells as concealment before the final approach.



Inertial autonomy

Two control options define the fictional system architecture.

Medium-wave communication

A medium-wave radio link forms the programme's communications concept.

Autonomous inertial mode

Miniature laser gyroscopes provide the story's alternative to GPS-based navigation.



Standby, release and descent



01

Dock opening

The enclosure opens beneath the balloon.



02

Ascent

J1 leaves the ground installation.



03

Release

The tether disconnects at altitude.



04

Powered descent

The turbine sequence begins.

A single-use mission with no recovery phase.

High-speed descent

MACH 0.92

CRUISE TARGET SPEED

MACH 1.4

PEAK SPEED IN GLIDE

Altitude transitions into motion during the descent.



Weather-assisted concealment

The film depicts J1 moving beside and through thunderstorm cells, remaining concealed until its final approach.

A turbulent atmosphere becomes part of the visual identity of the system.

FICTIONAL CAPABILITY / FILM PREVIEW STILL

J1 reference specification

MODEL GEOMETRY AND FILM-WORLD TARGETS

Length	4.00 m
Wingspan	1.68 m
Concept flight mass	50 kg
Airframe	Kevlar-reinforced composite
Wing reference	NASA SC(2)-0406 profile
Control surfaces	Elevons and twin rudders
Service concept	Single use

Balloon hold altitude	120,000 ft
Powered cruise altitude	20,000 ft
Narrative cruise speed	Mach 1.0
Narrative peak speed	Mach 1.4
Propulsion reference	JetCat P500-class turbine
Unpowered option	High-speed glide variant
Assembly location	Czechia

One integrated package

J1 combines the aircraft with its dock, balloon deployment equipment and control system.

Affordable production

A composite airframe and single-use format define the cost proposition.

Training available

System familiarisation accompanies the integrated package.



ASSEMBLY

Czechia