Welcome to

Crux

aerospace

GLOBAL LAUNCH. SOUTHERN ADVANTAGE

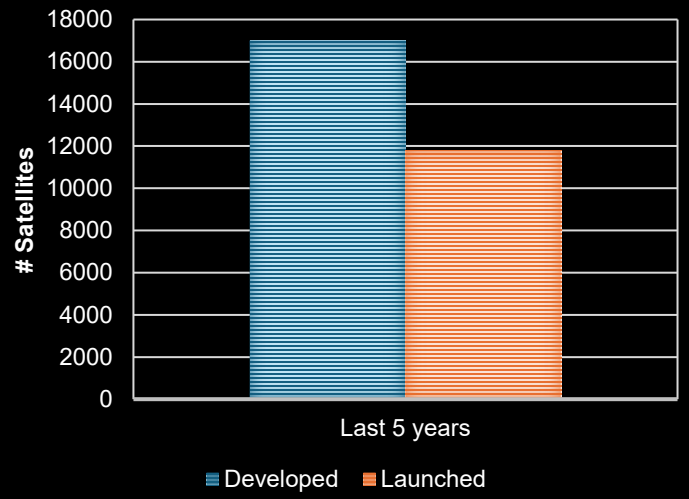
Dedicated orbital access for smallsats worldwide
South America's first commercial launch system.

Unlocking affordable, independent access to orbit for the world's smallsats

THE PROBLEM

There is a massive market mismatch between satellite production and precise launch availability.

Alternative: Global launch demand for smallsats exceeds capacity by >3× — especially in underserved regions like South America.



Most are forced to ride-share on larger missions:

- Inflexible orbits
- Long wait times
- Lack of dedicated service

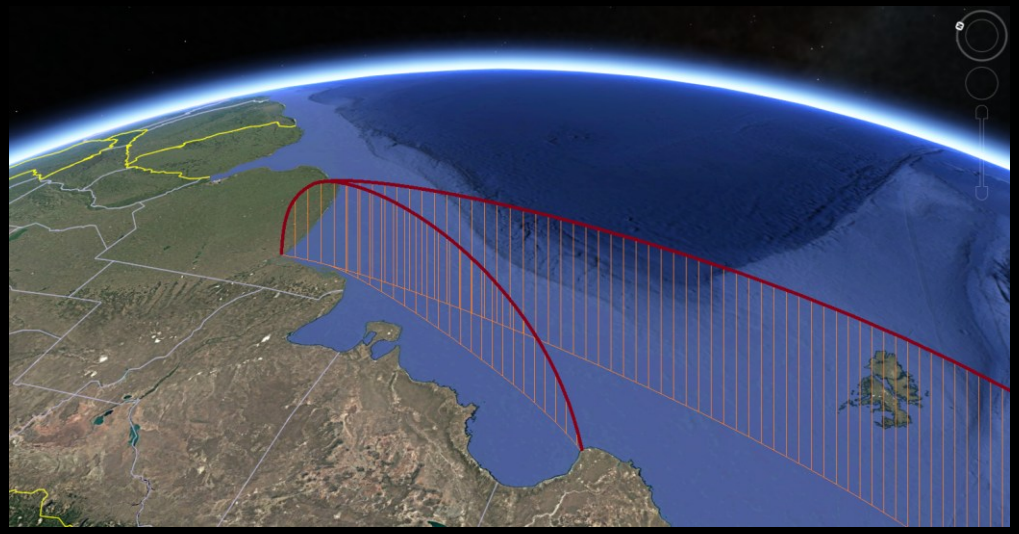
Strategic regions like Latin America and underserved geographies lack sovereign launch capacity.

The surge in smallsats (<1000 kg) has outpaced launch availability.

OUR SOLUTION: KAIKEN

Designed from the ground up to be nimble, affordable, and SSO-optimized.

Crux is developing Kaiken, the first fully reusable launch vehicle from Latin America — optimized for SSO payloads up to 1,000 kg



- Payload capacity up to 1000 kg to LEO/SSO
- Lower-cost missions (<USD 5,000/kg)
- A globally competitive solution with:
  - High-efficiency propulsion
  - Local propellants production: cost & strategic resilience
  - Launch site advantage: low-congestion, coastal trajectories: higher cadence
  - Reusable through geographical advantage

OUR TECHNOLOGY & PRODUCT

Efficiency and independence, embedded in the design KAIKEN launch vehicles (under development):

Phase 1
250 kg/500km/SSO
Recoverable rocket

Phase 2
1000kg/500km/SSO
Recoverable rocket

Phase 3
1000kg/500km/SSO
Reusable rocket

- **Patented propulsion system** delivering efficiency and reduced mass ratio
- All key **fuels and oxidizers sourced locally**, minimizing costs and risk
- Launch system optimized for **flexible payload integration** and simplified ground logistics

NOW IS THE TIME

THE CONTEXT	The global smallsat economy is booming: *from Earth Observation (EO) to defense, agriculture to IoT.*	**Geopolitical urgency** for space autonomy is driving local demand.	A new wave of launch startups is proving that **dedicated access is now technically and commercially viable.**
OUR TIMING ALIGNS WITH:	Maturing tech	Underutilized regional capabilities	Rising demand for independent, lower-cost options

MARKET OPPORTUNITY

With the right economics and flexibility, the global SSO niche is wide open

<2% of global launches originate from the Southern Hemisphere — yet 30% of satellites serve equatorial and SSO orbits

In SSO, 70% are microsats (10-200 kg) and 20% are nonosats (<10 kg)

Total Addressable Market:
$12B/yr (2025)

CARG: 15%

$24B/yr (2030)

Global small payload launch market

Serviceable Available Market:
$3,5B/yr (2025)

$6,5B/yr (2030)

SSO - specific demand across EO, IOT, climate, and defense

Serviceable Obtainable Market:
$650M/yr

addressable early-stage market with low competition and high growth (LATAM, Africa, parts of Asia) Global satellite startups

BUSINESS MODEL

We sell dedicated launches at a fraction of the cost of traditional providers.

Direct launch contracts from USD 20,000/kg (Kaiken 1) to USD 5,000/kg (Kaiken 3) per mission.

Adding value to the market segment through price and availability

TARGET CUSTOMERS

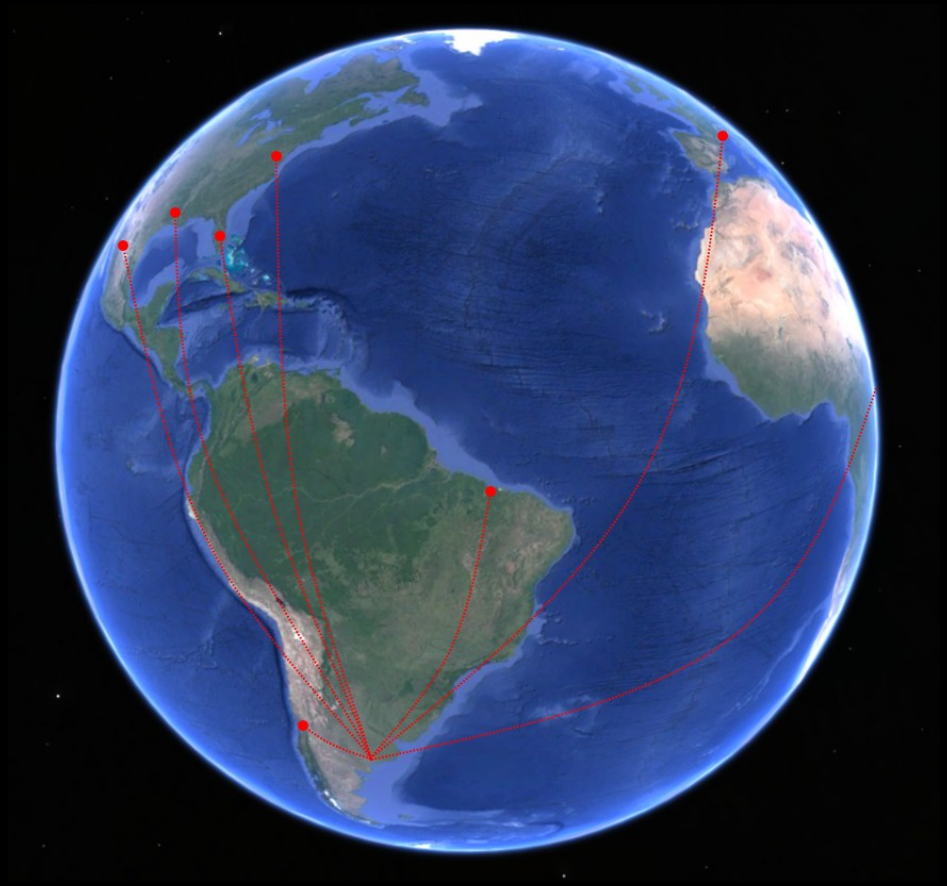
- Satellite manufacturers & integrators
- Climate and Earth observation firms
- Governments and defense customers

LATER EXPANSION INTO

- Suborbital testing
- In-orbit services
- Dedicated payload hosting
- High launch cadence

BUSINESS MODEL

Integrated Logistics: Driving Scalability



	Low Scenario	High Scenario
Specialized Air Transport & internal logistics	80,000	100,000
Customs & Documentation	5,000	7,500
Transport Insurance (0.5%-1%)	100,000	150,000
Total Estimated	**185,000**	**257,500**

Our integrated logistics chain—from global suppliers to Argentina—streamlines every step, reducing complexity and costs for satellites, GSE, and personnel.

This creates a strategic logistic advantage: predictable timelines and scalable cost efficiency. Once fully operational, logistics costs drop from $1,340/kg to $185/kg, making us the most cost-effective solutions in the region.

WHERE WE STAND TODAY

- Propulsion design being validated in relevant environment
- Partnership with strategic public (CONAE) & private (VENG) actors in Argentina's space sector
- CRUX approval & certification as "space operator" (by CONAE) in progress
- Patent portfolio under development
- Strong internal team with both technical and commercial experience
- International commercial contacts under NDA
- 5M USD provincial grant under negotiation (Misiones Province in Argentina)

GO TO MARKET ROADMAP

Business-first trajectory, tech-validated at every step. -

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Business-first trajectory, tech-validated at every step. -

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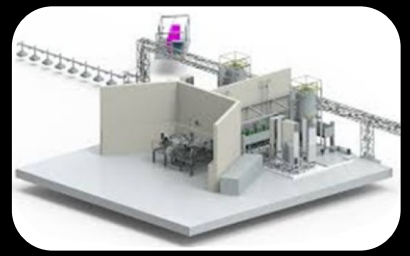
2026

Propulsion design

Test bench complete



Propulsor manufacture

Propulsion testing

2027

Integrate Kaiken 1 System and fire tests

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Re

COMPETITIVE LANDSCAPE

Our tech stack enables real savings and agility, not just a smaller rocket.

Company	Launch Price	Capacity	Orbit Focus	Key Markets	Differentiators
SPACEX	5,000 USD/kg	Share	LEO, SSO, GTO	Global	Cheapest, high cadence
ROCKETLAB	25,000 USD/kg	300 kg	LEO, SSO	US, NZ	Agile, but smaller payload
isar aerospace	11,700 USD/kg	700 kg	LEO, SSO	Europe	Vertical integration
Crux aerospace	**$5,000 USD/kg**	**Dedicated /shared 1000 kg**	**LEO, SSO**	**Global**	**IP- Protected engine, fuel independence, low cost, high cadence**

COMPETITIVE LANDSCAPE

Company	Launch Price	Capacity	Orbit Focus	Key Markets	Differentiators
Crux aerospace	$5,000 USD/kg	Dedicated /shared 1000 kg	LEO, SSO	Global	IP- Protected engine, fuel independence, low cost, high cadence

Crux combines Rocket Lab's flexibility with SpaceX's cost efficiency — from the Southern Hemisphere

WHO WE ARE: Founders with Proven Flight Heritage

Mg. Eng.
PABLO HOLLAR

Aerospace Engineer (UNLP, Argentina); M.Sc. in Space Vehicle Design and Conception (ISAE-SUPAERO, France); MBA (UADE, Argentina)

- 15+ years of experience in the space industry
- Project Manager and Systems Eng for launch vehicle at Argentina's space company.
- Expertise: structural and mechanical design.
- Leadership: managed 120+ team members across 5 locations, overseeing an average annual budget of USD 30M.

Eng.
PABLO REIMONTE

Aerospace Engineer (UNLP, Argentina)

- 17+ years of experience in liquid propulsion systems.
- Designed and tested over 30 liquid rocket engines.
- Team leadership: managed 30+ engineers and technicians, with an average annual budget of USD 10M.

Core team: average of 15 years of experience in the space industry
Advisory network: includes experts from the Argentine Space Agency and top-tier space technology research centers.

EXPERTISE

+100 accumulated years of know-how & expertise in space development

Highly skilled and seasoned staff in launch operations

Lightweight construction: CFRP, Friction stir welding and metallic 3D printing

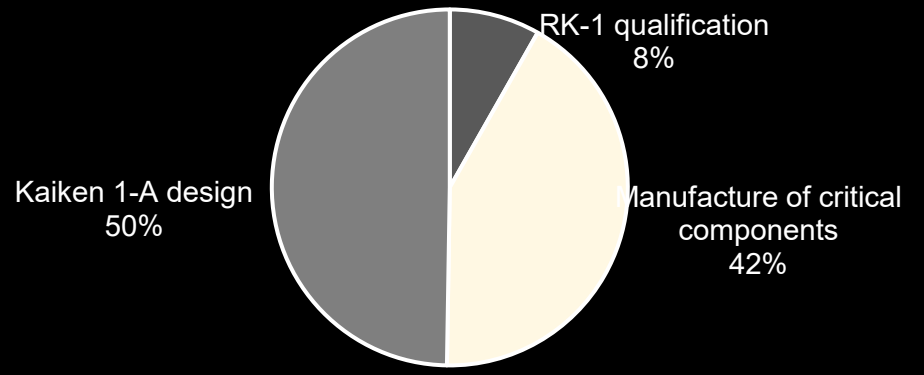
END to END solutions: from vehicle production to launch operations

CFRP and metallic materials characterization, testing and inspection (RI, DP) experience

SEEKING FINANCIAL FUEL

Raising a USD 5M Seed round

Investment allocation:
- 10% facilities
- 35% manpower
- 40% components production



We are here

RK-1 FIRST TESTS

This investment will fund the propulsion qualification and critical components manufacturing system through 2026

GROUND SEGMENT

STATIC FIRE

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Unlocking precision access to orbit globally, efficiently, and independently.

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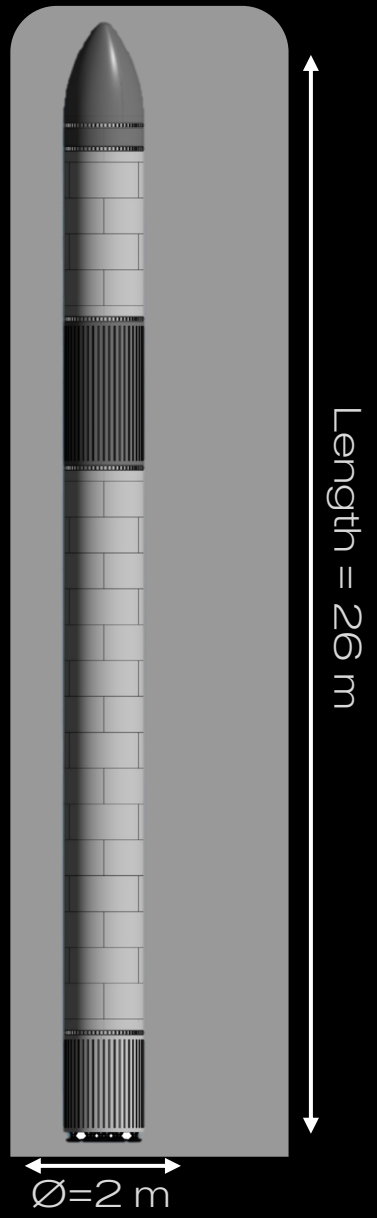
Let's build the future of launch,
where no payload has to wait in line.

Crux aerospace

THANK YOU.
MUCHAS GRACIAS.

KAIKEN 1A LAUNCHER



PERFORMANCE

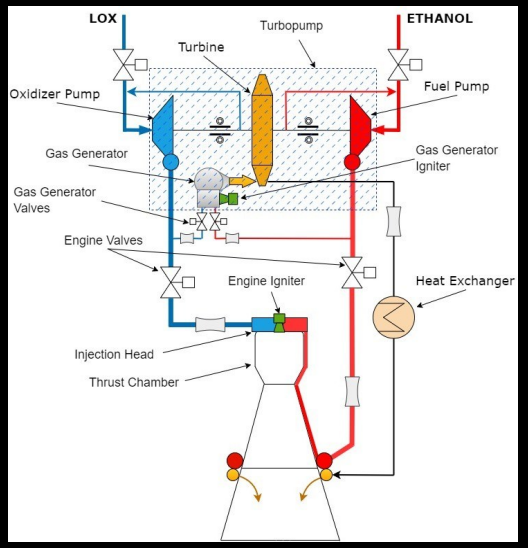
CU: 250 kg Direct Ascent
500 km ± 100 km to SSO

SPECS

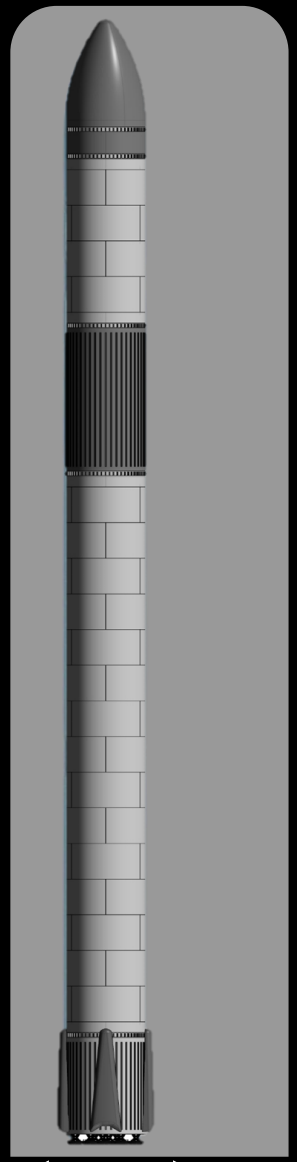
1st Stage: 12 RK-1 Engine
2nd Stage: 1 RK-1 Engine
GLOW at max payload: 46232 kg
Dry mass 1st Stage: 3534 kg
Dry mass 2nd Stage: 794 kg
Total dry mass: 4464 kg
Thrust to Weight: 1,2
DV (Velocity Increment): 9971 m/s
Burn time 1st Stage: 161 s
Burn time 2nd Stage: 395 s
Recoverable rocket

RK-1 ENGINE

Propellants	LOX & C_2H_5OH
Engine Cycle	Gas Generator Cycle
Engine Cooling	Regenerative Cooling
Injector Type	Swirl Injector
Vacuum Thrust (2nd Stage)	5945 kgf
Sea Level Thrust (1st Stage)	4606 kgf
Specific Vacuum Thrust impulse (2nd Stage)	340 s
Specific Vacuum Thrust impulse (1st Stage)	263 s
Propellant Mixture ratio	1,6
Combustion Chamber Pressure	60 bar
Expansion ratio (2nd Stage)	Ae/At = 210
Expansion ratio (1st Stage)	Ae/At = 15



KAIKEN 1B LAUNCHER



PERFORMANCE

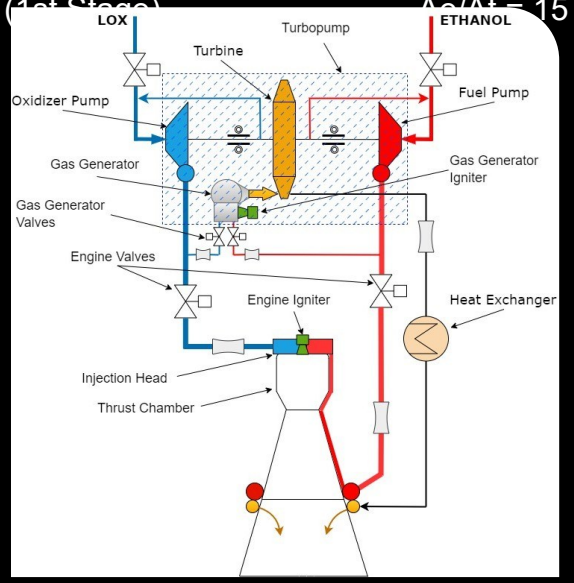
CU: 250 kg Direct Ascent
500 km ± 100 km to SSO

SPECS

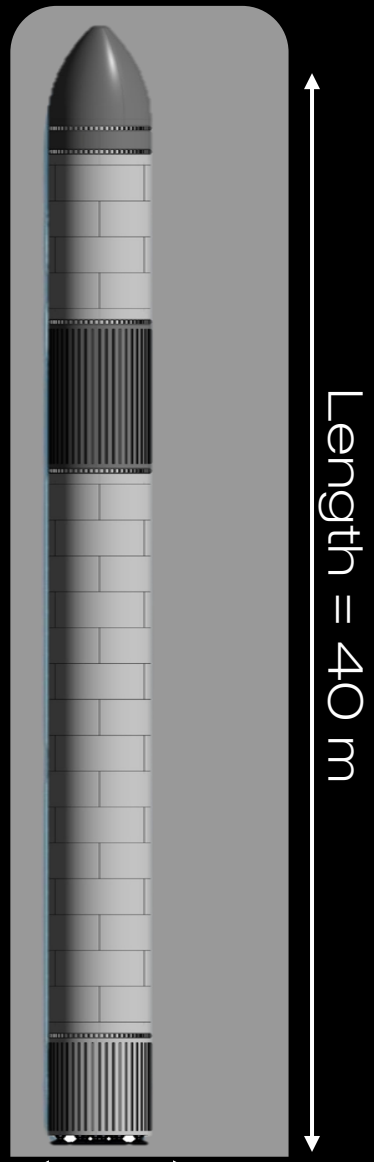
1st Stage: 10 RK-2 Engine
2nd Stage: 1 RK-1 Engine
GLOW at max payload: 70430 kg
Dry mass 1st Stage: 4534 kg
Dry mass 2nd Stage: 794 kg
Total dry mass: 5469 kg
Thrust to Weight: 1,2
DV (Velocity Increment): 10009 m/s
Burn time 1st Stage: 159 s
Burn time 2nd Stage: 405 s
Reusable rocket

RK-2 ENGINE

Propellants	LOX & C_2H_5OH
Engine Cycle	Gas Generator Cycle
Engine Cooling	Regenerative Cooling
Injector Type	Swirl Injector
Vacuum Thrust (2nd Stage)	5945 kgf
Sea Level Thrust (1st Stage)	8488 kgf
Specific Vacuum Thrust impulse (2nd Stage)	340 s
Specific Vacuum Thrust impulse (1st Stage)	263 s
Propellant Mixture ratio	1,6
Combustion Chamber Pressure	60 bar
Expansion ratio (1st Stage)	Ae/At = 15



KAIKEN 2 LAUNCHER



PERFORMANCE

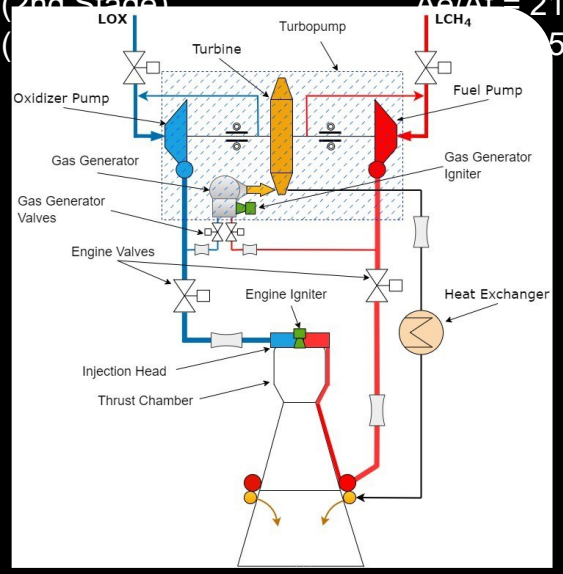
CU: 1000 kg Direct Ascent
500 km ± 100 km to SSO

SPECS

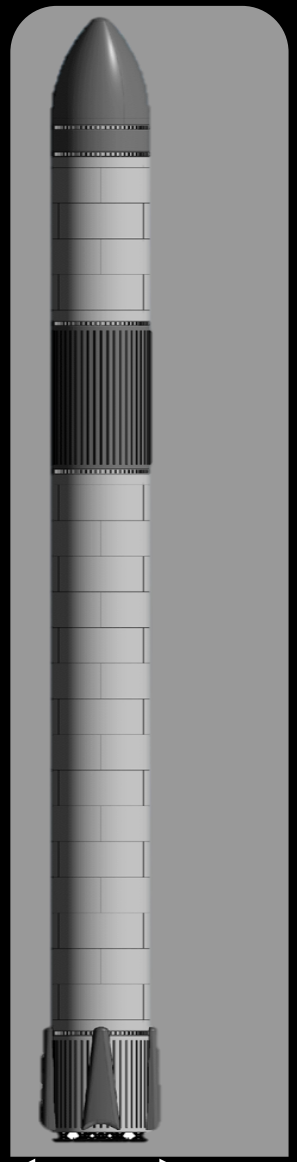
1st Stage: 9 RK-3 Engine
2nd Stage: 1 RK-3 Engine
GLOW at max payload: 83456 kg
Dry mass 1st Stage: 5325 kg
Dry mass 2nd Stage: 1568 kg
Total dry mass: 7053 kg
Thrust to Weight: 1,21
DV (Velocity Increment): 10076 m/s
Burn time 1st Stage: 162 s
Burn time 2nd Stage: 385 s
Recoverable rocket

RK-3 ENGINE

Propellants	LOX & LCH_4
Engine Cycle	Gas Generator Cycle
Engine Cooling	Regenerative Cooling
Injector Type	Swirl Injector
Vacuum Thrust (2nd Stage)	14453 kgf
Sea Level Thrust (1st Stage)	11207 kgf
Specific Vacuum Thrust impulse (2nd Stage)	362 s
Specific Vacuum Thrust impulse (1st Stage)	275 s
Propellant Mixture ratio	3,2
Combustion Chamber Pressure	60 bar
Expansion ratio (2nd Stage)	Ae/At = 210
Expansion ratio (	5



KAIKEN 3 LAUNCHER



PERFORMANCE

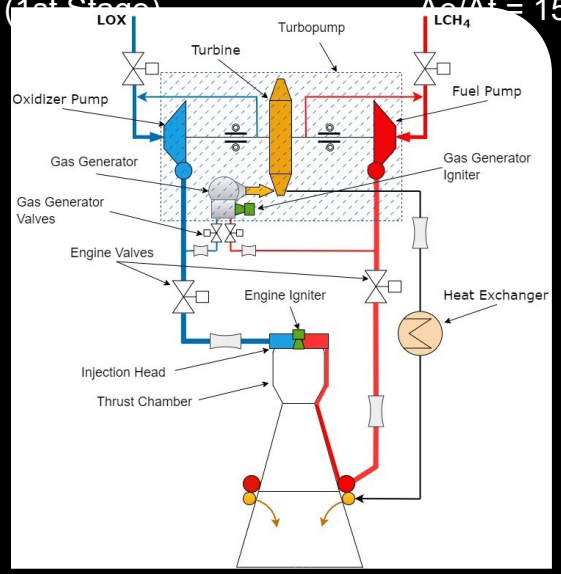
CU: 1000 kg Direct Ascent
500 km ± 100 km to SSO

SPECS

1st Stage: 10 RK-4 Engine
2nd Stage: 1 RK-3 Engine
GLOW at max payload: 94409 kg
Dry mass 1st Stage: 5569 kg
Dry mass 2nd Stage: 1568 kg
Total dry mass: 7312 kg
Thrust to Weight: 1,19
DV (Velocity Increment): 9940 m/s
Burn time 1st Stage: 156 s
Burn time 2nd Stage: 420 s
Reusable rocket

RK-4 ENGINE

Propellants	LOX & LCH_4
Engine Cycle	Gas Generator Cycle
Engine Cooling	Regenerative Cooling
Injector Type	Swirl Injector
Vacuum Thrust (2nd Stage)	14453 kgf
Sea Level Thrust (1st Stage)	11207 kgf
Specific Vacuum Thrust impulse (2nd Stage)	362 s
Specific Vacuum Thrust impulse (1st Stage)	275 s
Propellant Mixture ratio	1,6
Combustion Chamber Pressure	60 Bar
Expansion ratio (1st Stage)	Ae/At = 15



Crux aerospace

OUR MISSION

Create a future where the space is within reach for everyone, launch dreams and inspire innovation

OUR VISION

Democratize space launch industry. We believe that access to space should be a fundamental right, not a privilege. By leveraging cutting-edge technology, fostering international collaboration, and promoting sustainability, we aim to make space accessible to people from all walks of life.