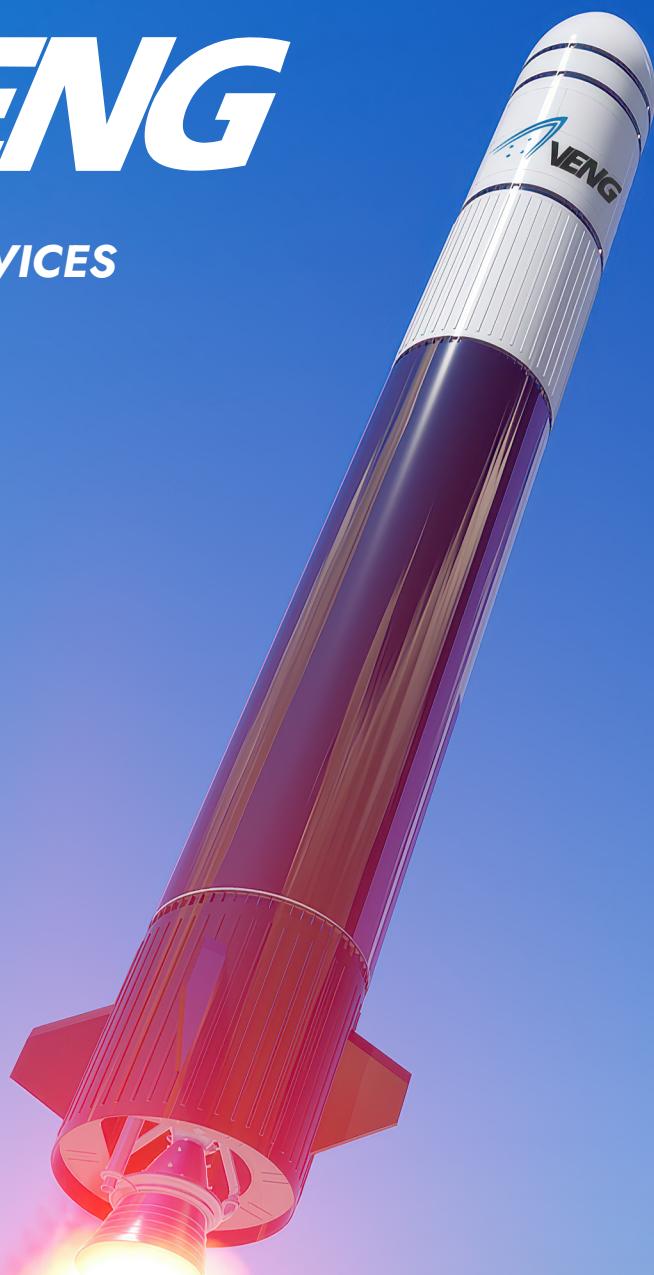




# VENG

**ACCESS TO SPACE SERVICES**



+



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YEAR 2025

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# WE ARE VENG

**VENG** is an Argentine company of services and technological developments of high added value specialized in the space activity. We offer to the space industry and the industry in general, engineering and manufacturing services for the **resolution of complex R+D+i problems**.

We are developing a satellite launcher to provide **launch services from Argentina to the world**, and thus join the small group of countries that master these capabilities and are part of the global expansion of space activity for commercial purposes.

+17

years of  
experience

+420

staff of collaborators

+15

years of  
**ground stations** operations

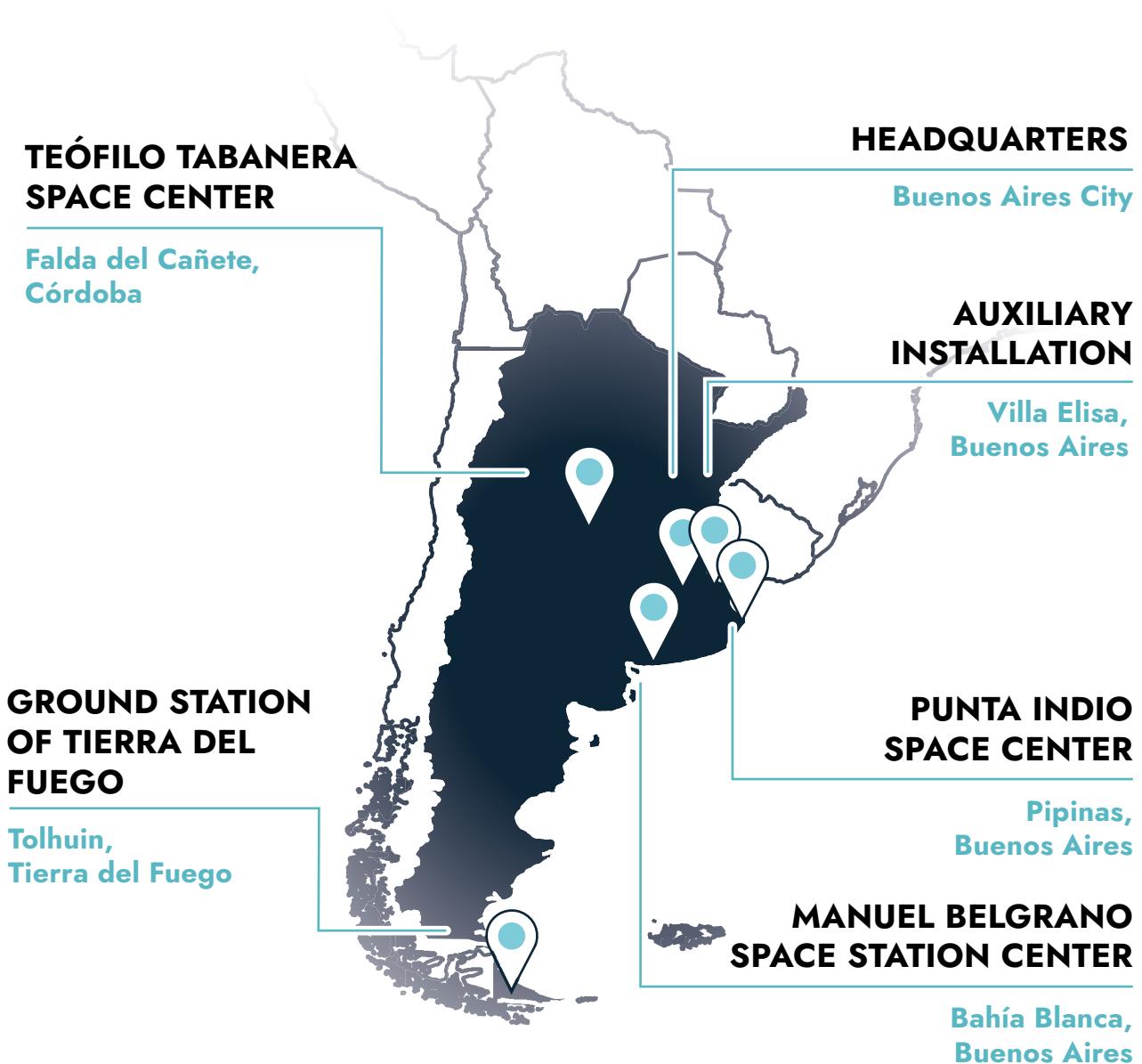
**Operation of the ground  
station in Córdoba**

2009 - - - - - TODAY

**Tierra del Fuego ground  
station operation and  
maintenance**

2018 - - - - - TODAY

# OUR LOCATIONS



## Teófilo Tabanera Space Center



- Satellite Mission Control Center
- Ground Station operation Córdoba
- Engineering
- Metal-mechanical fabrications
- Heat treatment
- Image Processing
- Manufacturing, Integration, and Testing

## Punta Indio Space Center



- Engineering
- Production of aerospace vessels
- Metal-mechanical fabrications
- Engine Testing

## Manuel Belgrano Space Station Center



- Launching Base
- Engineering

## Villa Elisa Auxiliary Installation



- Electronic engineering specialized in RF
- Electronic Laboratory

## Ground Station of Tierra del Fuego



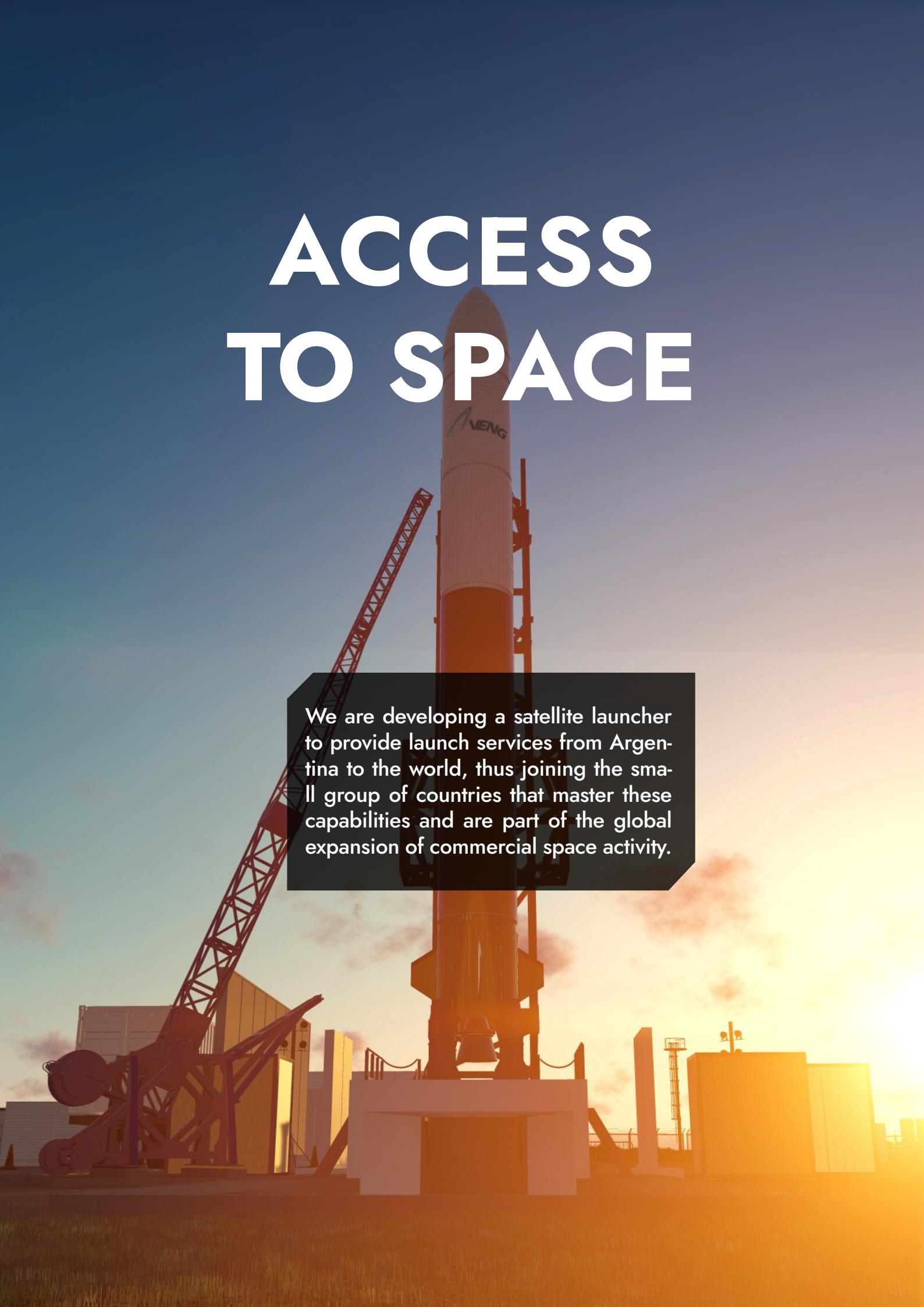
- Operation of ground stations

## Buenos Aires City Headquarters



- General Administration
- Engineering

# ACCESS TO SPACE



We are developing a satellite launcher to provide launch services from Argentina to the world, thus joining the small group of countries that master these capabilities and are part of the global expansion of commercial space activity.

# ACCESS TO SPACE TRAJECTORY

2007

PROBE ROCKET  
VS-30

2008

TRONADOR 1B

2011

TRONADOR 4000

2014

VEX1A

VEX1B

2017

VEX5A

2023

RS-2 ENGINE

1ST FRICTION-  
WELDED TANK

2024

RS-3A ENGINE

# LAUNCH SERVICES

At VENG we develop and operate reliable, accurate and affordable launch solutions. Our launch vehicle, with proprietary technology and two-stage propulsion, allows efficient injection of payloads up to 150 kg into SSO orbits. With optimized infrastructure and competitive costs, we guarantee successful missions with high availability and accuracy.



## THE LAUNCHER

**2nd stage LOX-KER propulsion**

**Friction Stir Welded aluminum core-stage**

**CFRP upper stage**

**Proprietary propulsion systems**

➤ **+ 200 kg payload to 500 km SSO @ direct injection**

➤ **High injection and deployment accuracy**

Inclination < +/- 0.15°

Apogee < 15Km

Altitude < 5°

➤ **High availability**

Launcher manufacturing and operations

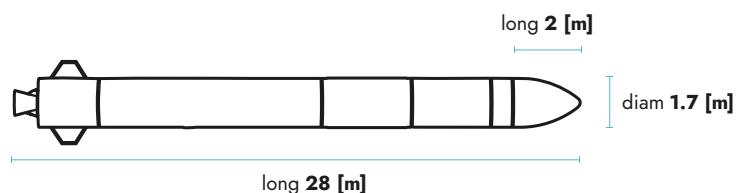
Proprietary spaceports

➤ **Competitive price: Target 8000 \$/kg**

➤ **Competitive capacities**

Ground tracking with proprietary fixed antennas

Strategically located spaceports for efficient operations to SSO



# SPACEPORT SERVICES

We have the Manuel Belgrano Space Center, strategically located to guarantee safe and efficient launch operations. Our infrastructure allows direct access to SSO orbits, optimized ground tracking and a low-risk launch environment. We provide integral solutions for space missions with high standards of reliability and performance.

## Efficient and low-risk operations

- Direct launch to SSO
- No dogleg
- Sub-orbital flight over Argentinian sea
- Polygon security

## High availability

- Proprietary launch pad and support facilities

## Low-barriers-to-entry launch operations



**Manuel Belgrano Spaceport**  
Bahía Blanca, Buenos Aires, Argentina

# PROPULSION SERVICES

Since our beginnings, one of our main areas of technological development has been the area of liquid propulsion, mainly oriented to the development of propellants for launch vehicles and also small propellants for attitude control of launchers and potential use in the satellite industry.

Regarding small thrusters, we have the heritage of having participated in the development of prototypes of the order of 1, 5 N thrust, monopropellant, at labo-

ratory level, having verified the development capacity of this type of thrusters, being able to adapt to the needs of satellite customers and the space industry in general.

The characteristics of the prototype developed in R+D+i mode are shown below.



**IN DEVELOPMENT**

## MT-B ENGINE 2ND STAGE

The MT-B is a bipropellant liquid rocket engine with a single regeneratively cooled thrust chamber, powered by an open-cycle gas generator. It was developed as the propulsion system for the second stage of the Tronador TII-250 vehicle. The thrust chamber was manufactured using a combination of additive manufacturing and electroforming technologies.



**Use** E2 of TII-250 (x1)

**Vacuum Thrust** 4280 Kgf

**Propellant** LOX/RP1

**Specific vacuum thrust** 366 S

**Feed system** Gas generator cycle

## LAUNCH VEHICLE ENGINES

Regarding higher thrust liquid propellants, we have an extensive experience of more than a decade in the development of Hydrazine/Nitric Acid and LOx/Kerosene engines for launcher prototypes, having as main milestones the design, manufacturing, testing and integration in the TI, T4000, VEx 1A, Vex1B and VEx5A launcher prototypes.

As a reference, the VEx5A first stage engine is shown, the largest propellant developed to date.

Today we are leading as prime contractor in the design of the thrusters for the Tronador II launcher series, taking care of the complete propulsion value cycle: from the definition of requirements, through design, simulation, manufacturing, testing, qualification and integration in the final vehicle.

This experience allows us to adapt to any propulsion solution required by the customer, both for launchers, satellites and spacecraft in general.

### MCA3 ENGINE 1ST STAGE **IN DEVELOPMENT**



<b>Use</b>	E1 of TII-250 (x3)
<b>Thrust to adapted nozzle</b>	35750 Kgf
<b>Propellants</b>	LOX/RP1
<b>Specific impulse at SL</b>	262 S
<b>Feed system</b>	Gas generator cycle

### MES3K ENGINE 2ND STAGE



<b>Use</b>	E1 of VEX1 (x1) E2 of VEX5A (x1) E2 of TII-250 (x1)
<b>Thrust at SL</b>	2975 Kgf
<b>Propellants</b>	MMH/NTO
<b>Specific impulse at SL</b>	317 S
<b>Feed system</b>	Pressurized

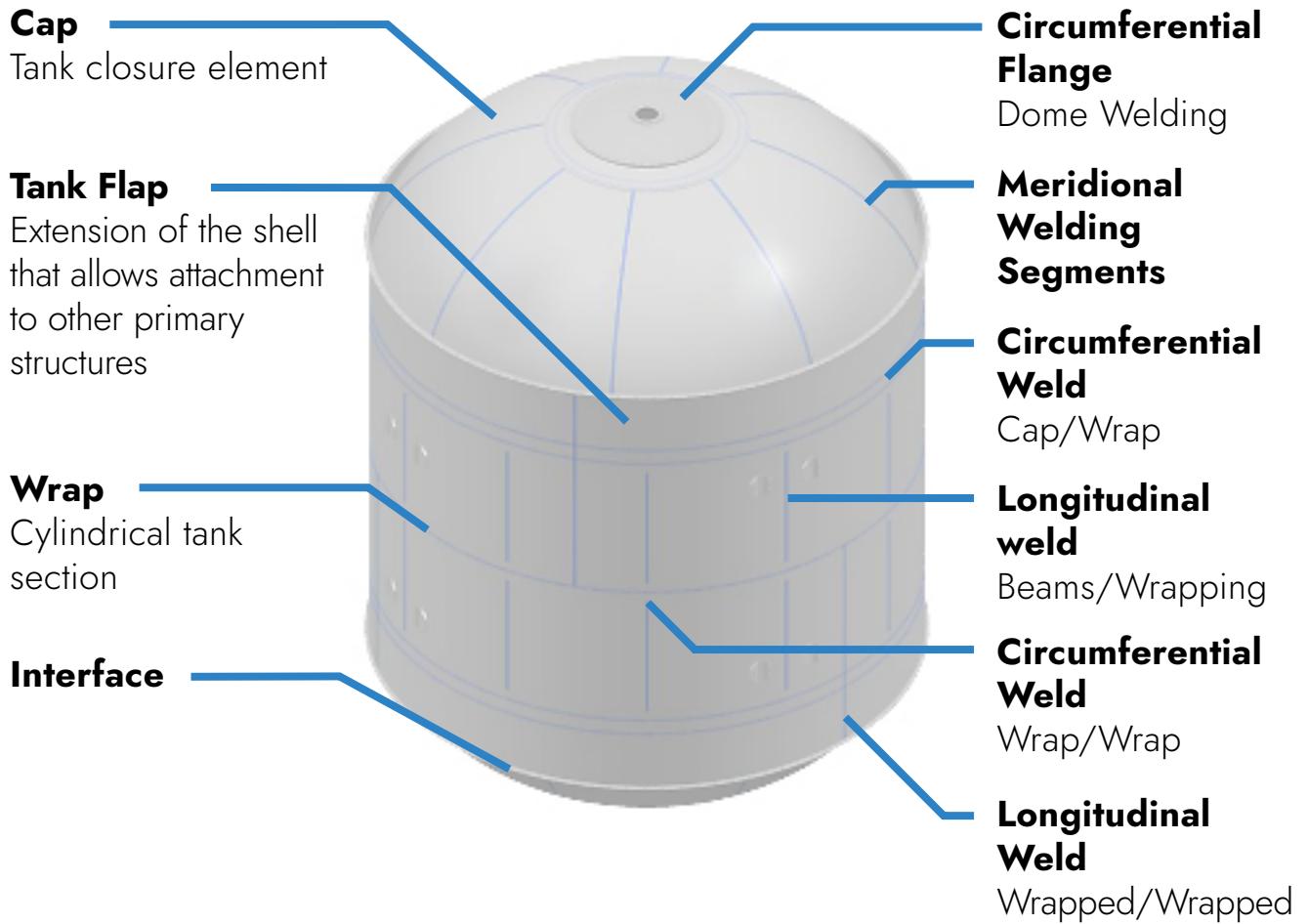
# FRICTION STIR WELDED TANKS



We have the capability to develop pressurized and non-pressurized structures through the **Friction Stir Welding** (FSW) manufacturing technique. As a last experience, we carried out the design, fabrication and integration of a prototype **first stage tank of the Tronador II-250 launcher**. It is 3.5 meters long, 2.5 meters in diameter and 3.2 millimeters thick and was welded by the **friction-stir welding method** under international standards of the American Welding Society, a technology of unprecedented use in the country. All its components are made of 2219 aluminum for space use. These tanks will simultaneously serve as **fuselage and propellant storage tanks**.

<b>MANUFACTURER</b>	Nova Tech Engineering Inc.
<b>GEOMETRY</b>	Longitudinal, Orbital, dome weldings
<b>WELDING JOINTS</b>	Butt, Lap
<b>MATERIALS</b>	Aluminum Alloys, others..
<b>THICKNESS</b>	2,4 – 13 mm (Aluminum Alloy)
<b>WELDING LENGTH</b>	2600 mm (max)
<b>TOOL RPM</b>	5 rpm – 2000 rpm
<b>MAXIMUM FORCE</b>	53400 N
<b>MAXIMUM TORQUE</b>	450 Nm







[www.veng.com.ar](http://www.veng.com.ar)

 veng-argentina

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## **Commercial Contact**

### **Services**

[sales.sp@veng.com.ar](mailto:sales.sp@veng.com.ar)