

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH Escola Superior d'Enginyeries Industrial, Aeroespacial i Audiovisual de Terrassa

## Study of the use of lunar materials to produce rocket propellants

Document: Budget

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## BUDGET

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Bachelor's Degree Thesis in Aerospace Vehicle Engineering Escola Superior d'Enginyeries Industrial, Aeroespacial i Audiovisual de Terrassa Universitat Politècnica de Catalunya September 2021

## Budget

This section provides a breakdown of the costs of the materials that had to be acquired for this project. It is necessary to comment that the material has not been used in its entirety. The remaining material can be used for future work and tests.

Rocket engine construction costs			
Component	Unit cost	Units	Total cost
Steel blocks	2.00€/kg	10	20.00€
Nuts and washers	$0.15 \in /unit$	32	4.80€
Steel tube $\varnothing70$	40.80€/m	1	40.80€
1/8" male nipple fitting	4.78€/unit	3	14.34€
TOTAL			79.94€
Test bench construction costs			
Component	Unit cost	Units	Total cost
HIWIN Lineal guide	72.21€/unit	1	72.21€
Steel blocks	2.00€/kg	2	4.00€
Clamps	2.36€/kg	2	4.72€
Nuts and washers	$0.15 \in /unit$	12	1.80€
TOTAL			82.73€
Oxygen supply costs			
Component	Unit cost	Units	Total cost
Industrial tank rental	52.30€/year	1	52.30€
Quantity of $O_2$	43.70€	1	43.70€
Pressure regulator	89.00€	1	89.00€
Polyamide tube	3.72€	1	3.72€
TOTAL			188.72€
TOTAL COST OF THE PROJECT			351.39 €

Table 1: Total project cost.