



POLITECNICO
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Modeling of a blow-down propulsion system

Course of Space Propulsion
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Lockheed Martini Group

Alessandro Pallotta	alessandro1.pallotta@mail.polimi.it	10712370
Alex Cristian Turcu	alexcrisian.turcu@mail.polimi.it	10711624
Chiara Poli	chiara3.poli@mail.polimi.it	10731504
Daniele Paternoster	daniele.paternoster@mail.polimi.it	10836125
Marcello Pareschi	marcello.pareschi@mail.polimi.it	10723712
Paolo Vanelli	paolo.vanelli@mail.polimi.it	10730510
Riccardo Vidari	riccardo.vidari@mail.polimi.it	10711828

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Notation

SYM	Description of symbol	SYM	Description of symbol
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1 Introduction and literature overview

1.1 Blow-down heritage

1.2 Additive manufacturing state of art

1.3 Analysis of losses

2 Modeling of propulsion system

Initial considerations (req + hyp / assumptions + constraints + criteria)

Flowchart

2.1 Tanks sizing

2.2 System dynamics

3 Results analysis

4 Nozzle losses

5 Additive manufacturing influences

6 Cooling analysis

Bibliography

- [1] Richard Grammier. *Overview of the Juno Mission to Jupiter*. Site: <https://www.jpl.nasa.gov/missions/juno>. 2006.