



# TRICEPS

## DEVELOPMENT OF INTEGRATED ENGINE AIR INTAKE AND PROTECTION SYSTEMS FOR TILT ROTOR

The NextGenCTR is called to safely operate in harsh environmental conditions, characterized by contaminated air-flow (dust, ash, sand, salt and moisture) and icing conditions.

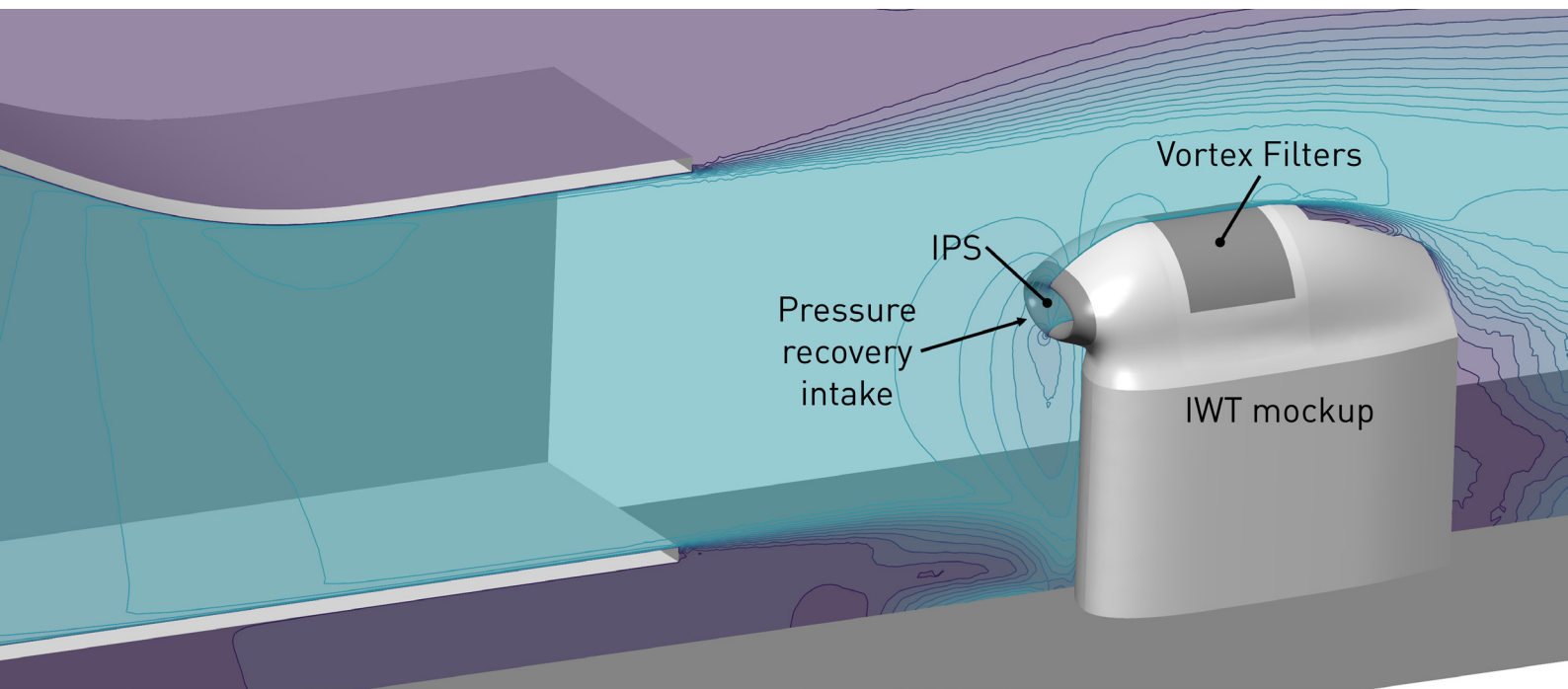
To achieve this goal, TRICEPS will develop air-intakes with integrated engine protection systems, which will be geared on two key enabling technologies:

- a removable thermoelectric ice protection system based on the heater layer technology,
- a vortex tubes filter for protecting the engine from ingestion of particles in harsh environment.

The air intake will be equipped with a bypass for operation in clean flow and a compressor washing system. The full system will be tested and qualified through extensive testing, which will include Icing wind tunnel measurements and structural tests. TRICEPS will deliver the air intake, its engine protection system and all the relevant sub-systems at TRL 7.



*IPS LIP manufacturing test*



*Icing Wind Tunnel (IWT) model configuration*

## FACTS

- TRIcePS - Tilt Rotor Integrated Air Intake and Engine Protection Systems
- Programme: H2020-EU.3.4.5.3. - IADP Fast Rotorcraft
- Funding agency: EU
- Duration of project: 05/2019 – 10/2023
- Project coordination: AIT Austrian Institute of Technology



## PROJECT PARTNERS

- Pall Europe Ltd
- CI Composite Impulse GmbH
- Villinger GmbH
- Výzkumný a zkušební letecký ústav (VZLU)
- Prime Aerostructures GmbH
- RTA Rail Tec Arsenal Fahrzeugversuchsanlage GmbH



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