



## Identification of the installation/facility :

Country: Belgium  
Location (city): Rhode-Saint-Genèse  
Name of the facility: Low Reynolds number, High Mach number Cascade facility S-1/C  
Date of construction or of acquisition or of main refurbishment: 2000  
Owner: von Karman Institute for Fluid Dynamics (VKI)  
Contact point: Tony ARTS  
Internet site: [www.vki.ac.be](http://www.vki.ac.be)

## Technical characteristics:

### 1 - Type of infrastructure

Wind tunnel	<input type="checkbox"/>
Propulsion bench	<input checked="" type="checkbox"/>
Structures facility	<input type="checkbox"/>
Material facility	<input type="checkbox"/>
Simulator (ex. Flight simulator, tower, ...)	<input type="checkbox"/>
Flight test bed (aircraft, embedded facilities, ...)	<input type="checkbox"/>
Supercomputers	<input type="checkbox"/>
Other	<input type="checkbox"/>

### 2 - Main technical characteristics

Variable Mach and Reynolds number continuous cascade wind tunnel for low pressure turbine airfoils. Test section cross-section: 225 mm x 650 mm. Aero-thermal performance determination (possibly time-resolved). Low pressure turbine aero-engine similarity conditions (low - cruise - Reynolds number, high subsonic Mach number). Periodic inlet wake simulation.

### 3 - Research domains which can be addressed (refer to ACARE taxonomy <http://www.acare4europe.com/docs/ASD-Annex-final-211004-out-asd.pdf>)

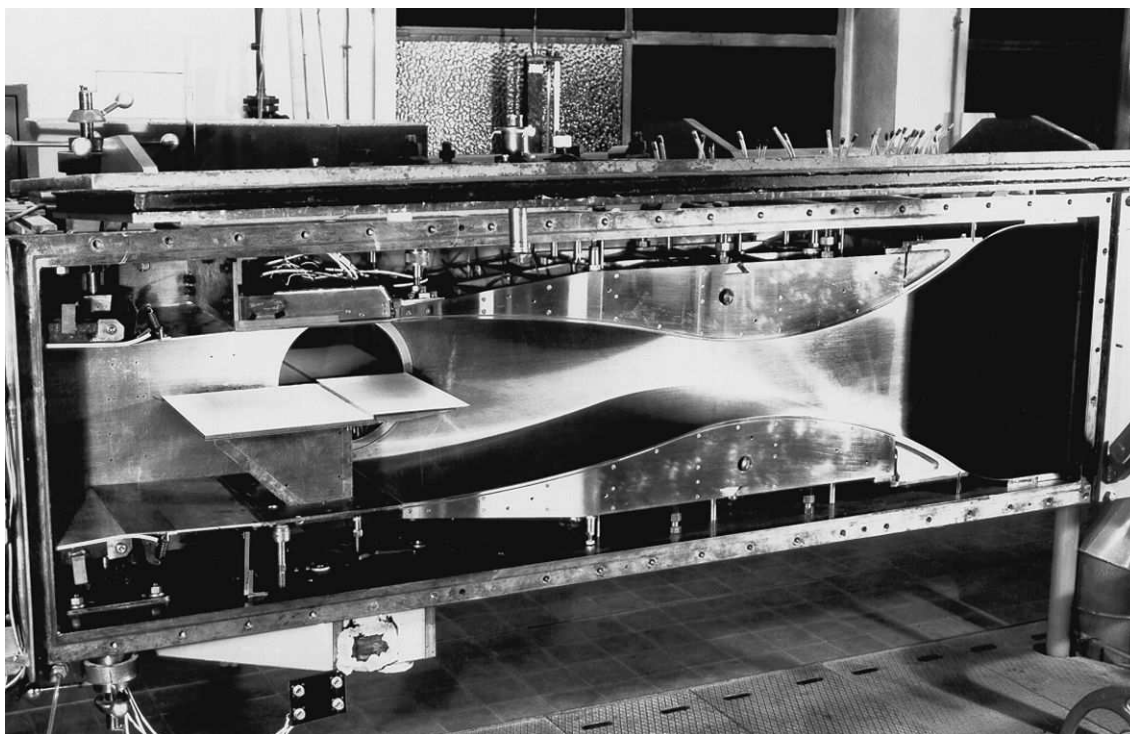
### 4 - Main (or specific) associated measurement techniques

On wall and traversing pneumatic and fast response total, static and directional pressure probes. Hot wire anemometry. Thermocouples. Hot films.

### 5 - Operational status

- Fully operational

### 6 - Picture:



**Financial elements:**

Replacement cost (M€uros)

Less than 10

10 to 30

30 to 60

60 to 100

More than 100

**Practices concerning:**

Access policy (contract, voucher, free access for research, etc...)  
contract/research

Support (regional, national, European, private, ...)  
Public

**Comments:**

**Origin of information** ('signature'): author and date Tony Arts 21/12/2012