



Identification of the installation/facility :

Country: Germany
Location (city): Cologne
Name of the facility: European Transonic Windtunnel
Date of construction or of acquisition or of main refurbishment: 1988
Owner: DEU, GBR, NED
Contact point: manager@etw.de
Internet site: www.etw.de

Technical characteristics:

1 - Type of infrastructure

Wind tunnel	<input checked="" type="checkbox"/>
Propulsion bench	<input 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

$0.15 \leq Ma_{\infty} \leq 1.35$, 2.4m x 2m test section area, $Re_{\text{chord}} < 90$ Mio, continuous $P \leq 50$ MW, pressure $1.15\text{bar} \leq p_0 \leq 4.5\text{bar}$ and temperature $110\text{K} \leq T_0 \leq 313\text{K}$ variable and fully controlled, cryogenic

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

Flight Physics, Flight Mechanics, Integrated Design & Validation,
Innovative Concepts & Scenarios

4 - Main (or specific) associated measurement techniques

Force-, pressure, and deformation measurement (steady & unsteady), TSP, PSP, PIV, microphone array, etc.

5 - Operational status

Fully operational (>900h available)

6 - Picture available ?

High-resolution pictures at <http://www.etw.de/cms/press/gallery>

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Financial elements:

Replacement cost (M€uros)

Less than 10

10 to 30

30 to 60

60 to 100

More than 100 (about 400M€ at 2014 cost level)

Practices concerning:

Access policy: Contract

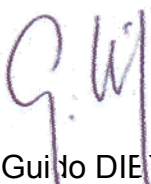
Support: In general, ETW shall operate self-supporting charging for test access; limited national & European support through research funding

Comments:

In 2012 the EC and ACARE tasked an Independent Expert Group (IEG) to identify, with the help of ERA-Net AirTN, how the EU can play a major role in establishing a European Strategic Aviation RDT&E infrastructure and in securing its sustained availability. Findings were presented in the report "Towards a European Strategic Aviation Research, Development, Testing & Evaluation Infrastructure" at <http://airtn.eu/downloads/ieg-final-report-complete-8-5-2013.pdf>. Here, ETW is classified as one of EU's three strategic and unique capabilities/facilities.

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