

1

design



parametric

Flexible Geometry Parametrisation

ARTES enables users to customise predefined designs or create geometries from scratch. Parametric settings can be tailored to the requirements of each simulation.

2

mesh



automatic

Automated Mesh Generation

ARTES integrates geometry parametrisation and automatic mesh generation, reducing meshing effort and accelerating design-space exploration.

3

simulation



built for hypersonic

Powered by NSMB

Built on a validated CFD solver, ARTES combines reliable, high fidelity simulations with automated workflow

4

processing



straightforward

Integrated Post-Processing

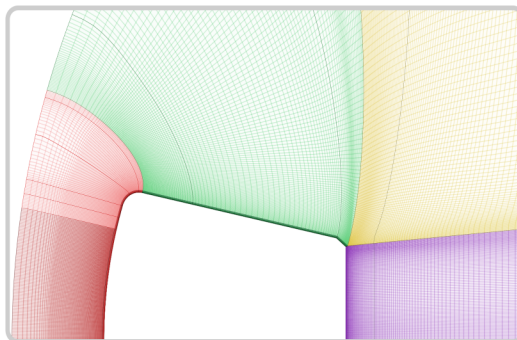
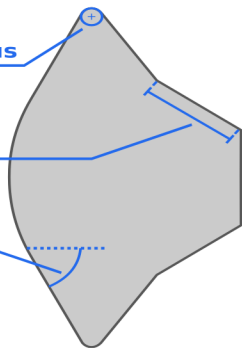
Analyse and visualise CFD results seamlessly, turning simulation data into actionable insights.

customize your geometry

shoulder radius

rear length

front angle

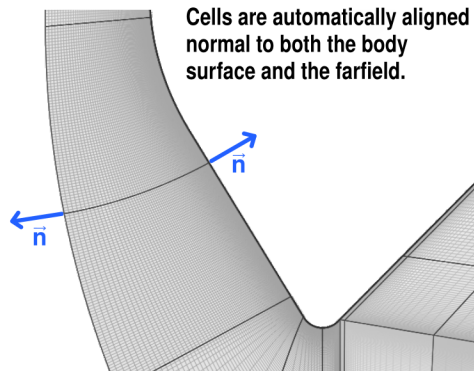


Instantaneous

Update the geometry and regenerate the mesh automatically, streamlining the design process.

Farfield + surface normal mesh

Cells are automatically aligned normal to both the body surface and the farfield.



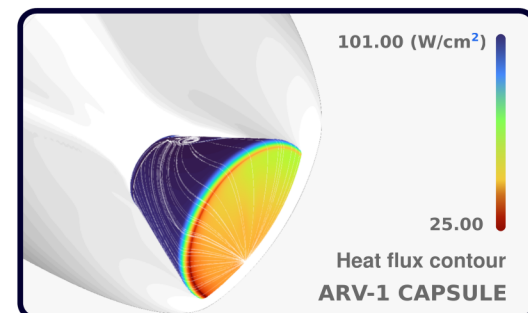
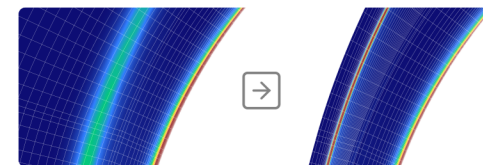
```

NN  NN  SSSS  MM  MM  BBBB
NNN NN  SSSSSS MMM MMM BBBB
NNNN NN  SS  SS  MMMMMM BB  BB
NN  NN  NN  SSS  MM  MM  BB  BB
NN  NNNN  SSS  MM  MM  BBBB
NN  NN  NN  SSS  MM  MM  BBBB
NN  NN  SS  SS  MM  MM  BB  BB
NN  NN  SSSSSS MM  MM  BBBB
NN  NN  SSSS  MM  MM  BBBB

```

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> MULTIBLOCK
> PARALLELIZED
> HIGH-FIDELITY



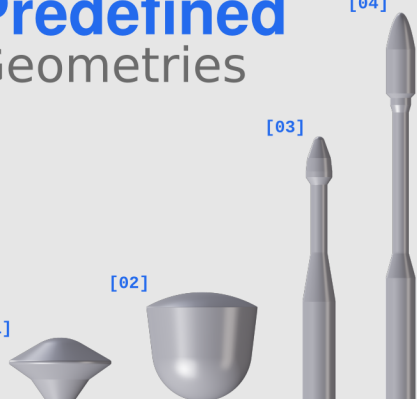
Predefined Geometries

[04]

[03]

[02]

[01]



Automatic shock adaptation

ARTES refines the mesh around the shock during the simulation, improving shock-layer resolution.

