

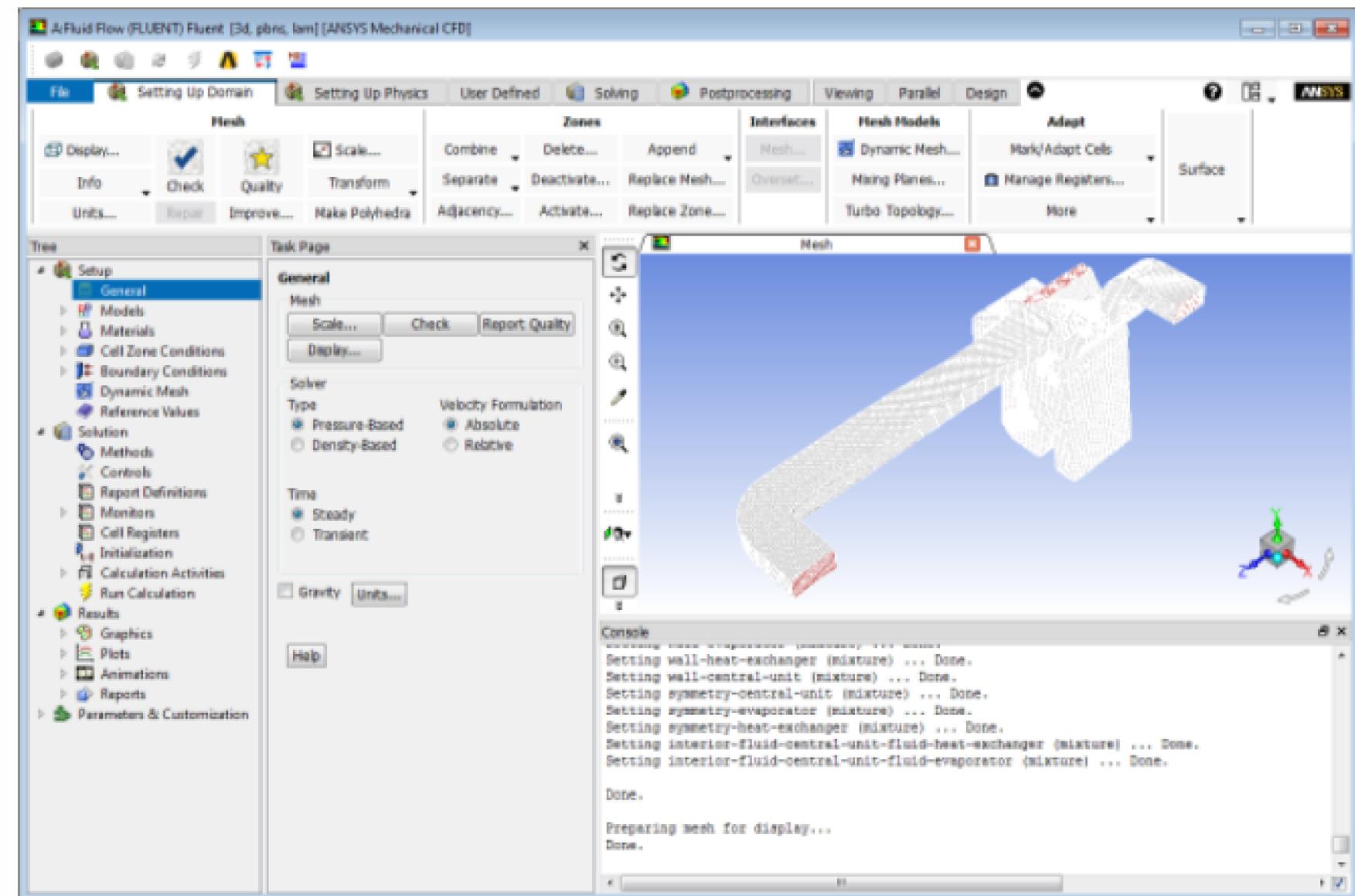
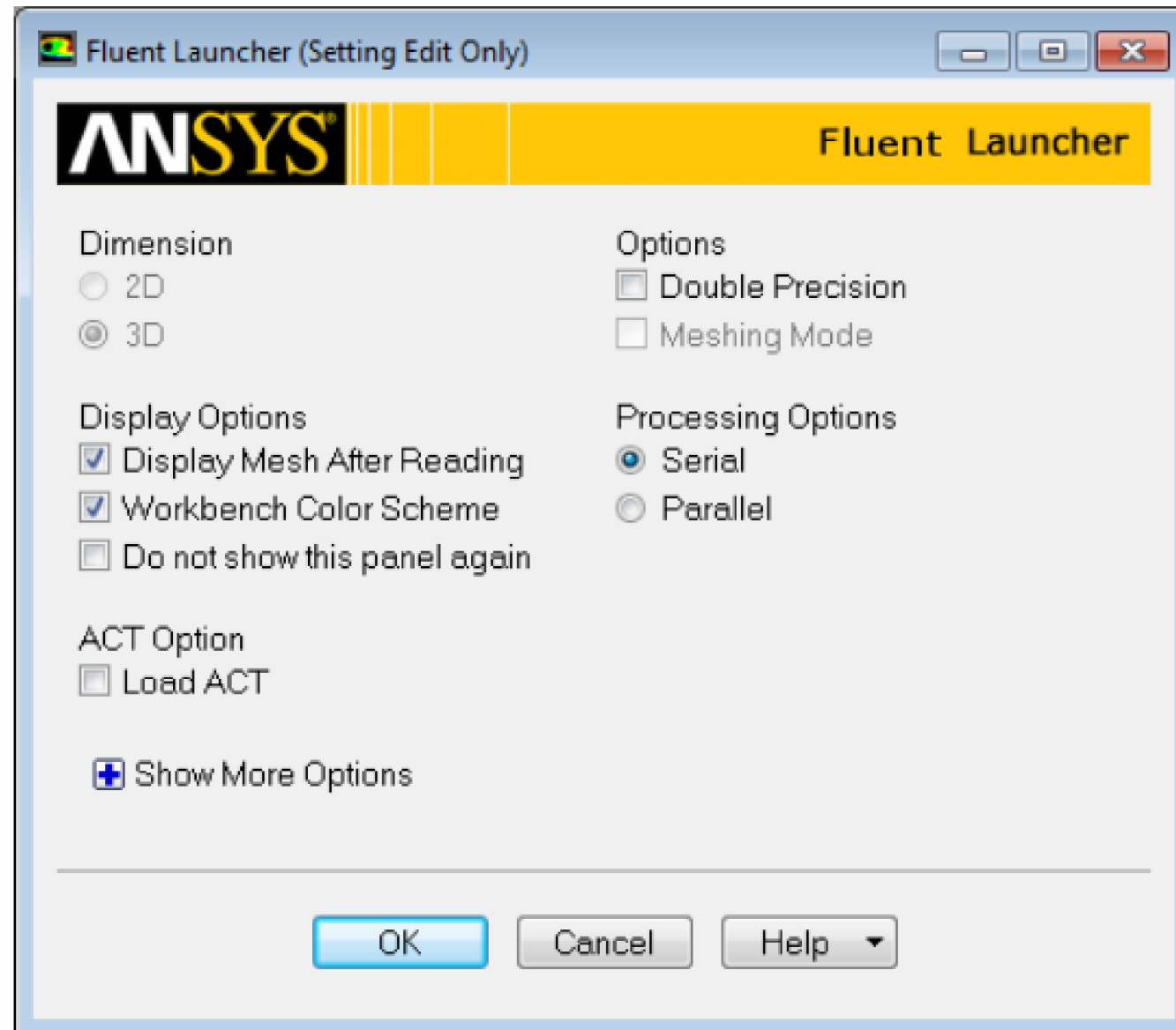
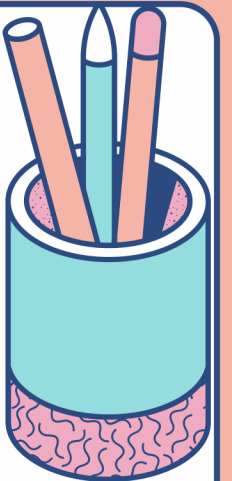
A stylized illustration of a desk setup on a dark blue background. It includes a laptop with a teal screen and orange keyboard, a stack of books, a potted plant with green leaves, and a teal pen holder with three pens. A small map or diagram is also visible in the top left corner.

8 НЕДЕЛЯ

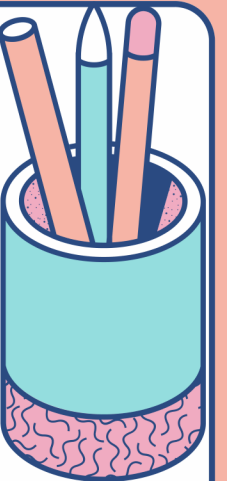
Автомобильная система отопления, вентиляции и кондиционирова ния воздуха

Компьютерная графика в вычислениях

ANSYS Fluent Launcher



Настройка физики

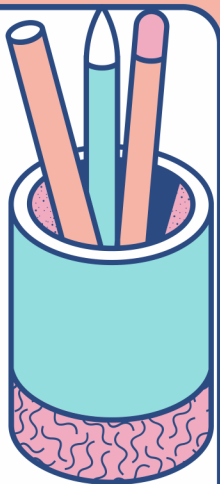


 **Setting Up Physics → Solver**

File	 Setting Up Domain	 Setting Up Physics	User Defined
Solver			
Time	Type	Velocity Formulation	
☒ Steady	☒ Pressure-Based	☒ Absolute	Operating Conditions...
☐ Transient	☐ Density-Based	☐ Relative	 Reference Values...

 Radiation...	 Multiphase...	 Solidify/Melt...
☒ Energy	 Heat Exchanger...	 Species...
 Viscous...	 Discrete Phase...	 More
Models		

Настройка физики



Setting Up Physics → Models → Viscous...

Viscous Model

Model

- ☐ Inviscid
- ☐ Laminar
- ☐ Spalart-Allmaras (1 eqn)
- ☒ k-epsilon (2 eqn)
- ☐ k-omega (2 eqn)
- ☐ Transition k-k1-omega (3 eqn)
- ☐ Transition SST (4 eqn)
- ☐ Reynolds Stress (7 eqn)
- ☐ Scale-Adaptive Simulation (SAS)
- ☐ Detached Eddy Simulation (DES)
- ☐ Large Eddy Simulation (LES)

k-epsilon Model

- ☒ Standard
- ☐ RNG
- ☐ Realizable

Near-Wall Treatment

- ☐ Standard Wall Functions
- ☐ Scalable Wall Functions
- ☐ Non-Equilibrium Wall Functions
- ☒ Enhanced Wall Treatment
- ☐ Menter-Lechner
- ☐ User-Defined Wall Functions

Enhanced Wall Treatment Options

- ☐ Pressure Gradient Effects
- ☐ Thermal Effects

Options

- ☐ Viscous Heating
- ☐ Curvature Correction
- ☐ Production Kato-Launder
- ☐ Production Limiter

Model Constants

Cmu: 0.09

C1-Epsilon: 1.44

C2-Epsilon: 1.92

TKE Prandtl Number: 1

TDR Prandtl Number: 1.3

Energy Prandtl Number: 0.85

Wall Prandtl Number:

User-Defined Functions

Turbulent Viscosity: none

Prandtl Numbers

TKE Prandtl Number: none

TDR Prandtl Number: none

Energy Prandtl Number: none

Wall Prandtl Number: none

OK Cancel Help

Fluid

Zone Name: fluid-evaporator

Material Name: air Edit...

☐ Frame Motion ☐ 3D Fan Zone ☒ Source Terms

☐ Mesh Motion ☐ Laminar Zone ☐ Fixed Values

☐ Porous Zone

Reference Frame Mesh Motion Porous Zone 3D Fan Zone Embedded LES Reaction Source Terms Fixed Values Multiphase

Mass 0 sources Edit...

X Momentum 0 sources Edit...

Y Momentum 0 sources Edit...

Z Momentum 0 sources Edit...

Turbulent Kinetic Energy 0 sources Edit...

Turbulent Dissipation Rate 0 sources Edit...

Energy 1 source Edit...

OK

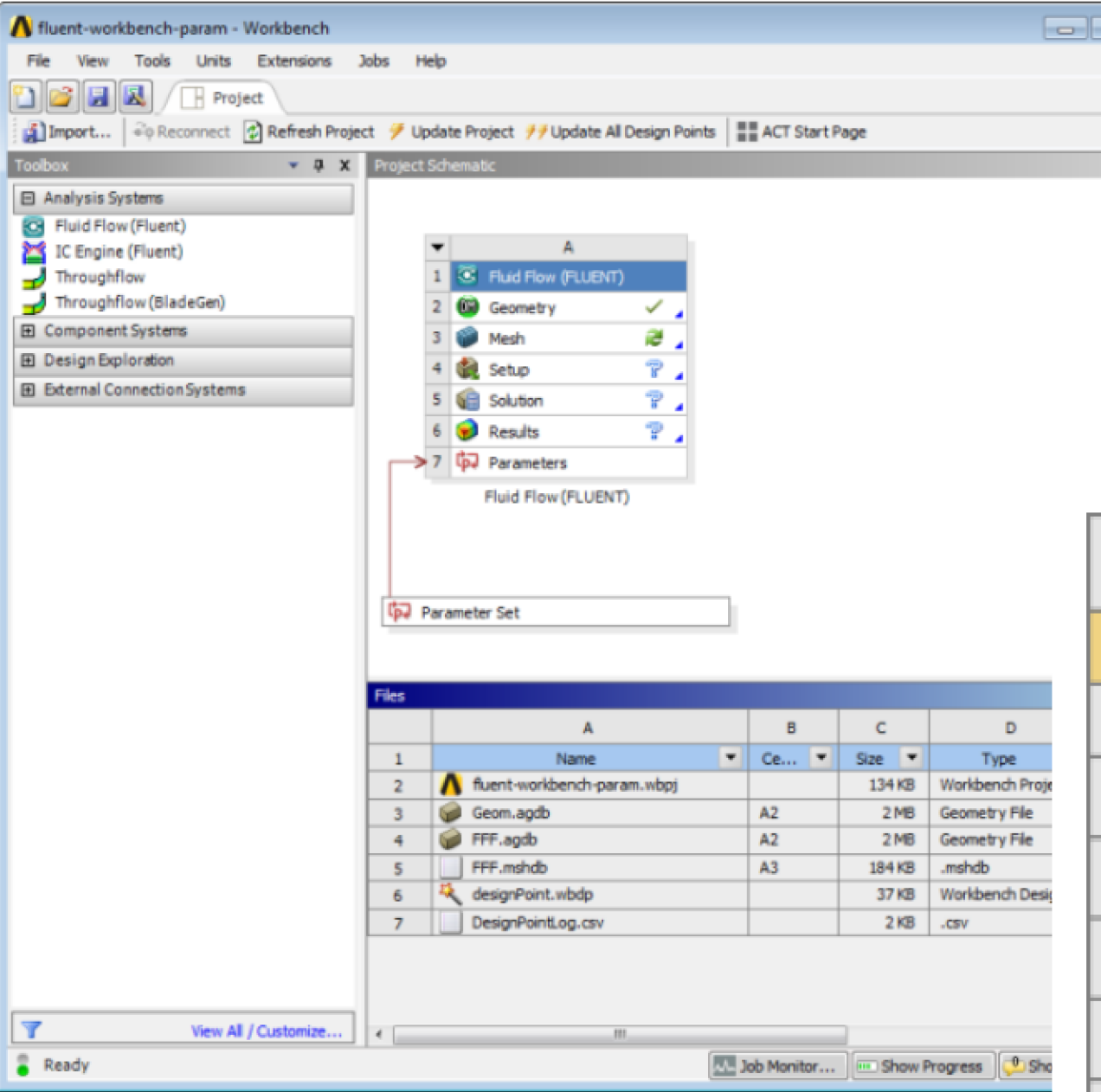
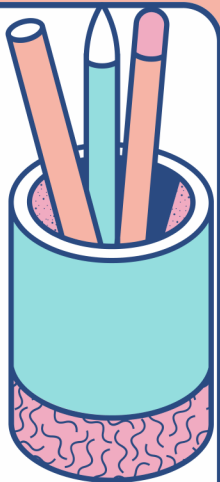
Energy sources

Number of Energy sources: 1

1. (w/m3) -787401.6 constant

OK Cancel Help

Настройка физики



	A	B	C	D
1	ID	Parameter Name	Value	Unit
2	[-] Input Parameters			
3	[-] [Icon] Fluid Flow (FLUENT) (A1)			
4	[Icon] P1	hpos	90	
5	[Icon] P2	ftpos	25	
6	[Icon] P3	wsfpos	175	
*	[Icon] New input parameter	New name	New expression	
8	[-] Output Parameters			
*	[Icon] New output parameter		New expression	
10	Charts			

Настройка физики



Velocity Inlet

Zone Name
inlet-air

Momentum Thermal Radiation Species DPM Multiphase Potential UDS

Velocity Specification Method **Magnitude, Normal to Boundary**

Reference Frame **Absolute**

Velocity Magnitude (m/s) 0.5 in_velocity

Supersonic/Initial Gauge Pressure (pascal) 0 constant

Turbulence
Specification Method **Intensity and Hydraulic Diameter**

Turbulent Intensity (%) 5

Hydraulic Diameter (m) 0.061

OK Cancel Help

Input Parameter Properties

Name
in_velocity

Current Value (m/s)
0.5

Used In:

OK Cancel Help

Velocity Inlet

Zone Name
inlet-air

Momentum **Thermal** Radiation Species DPM Multiphase Potential UDS

Temperature (k) 310 in_temp

OK Cancel Help