



Functions of Different Modules in AxSTREAM

Axial Turbine

Module	Description	Remarks
Project (database)	Project database management (Mandatory module).	<ul style="list-style-type: none"> Compulsory
Axial TURBO Design & Stage Design	Preliminary Cylinder design and optimization, Stage design and optimization. Design Space Explorer.	<ul style="list-style-type: none"> For design from scratch. no need for analyzing existing turbine
Axial TURBO Meanline Analysis	1D analysis.	<ul style="list-style-type: none"> Preliminary analysis
Axial TURBO Throughflow (1D and 2D) Analysis	Streamline 1D and 2D analysis.	<ul style="list-style-type: none"> Advanced analysis
Axial Profiler & 3D Blade Designer	Flat cascades profiling, 3D blade design (stacking).	<ul style="list-style-type: none"> Can design profile without importing outside standard 2D coordinate Can change the lean angle, lean angle type ...
AxSTRESS	3D FEA analysis.	Optional
AxFLOW	3D CFD solvers	Optional
Import Profile	Import Blade profile geometry	<ul style="list-style-type: none"> Compulsory for analysis For design, it's optional but recommended
Export	Export of blade geometry to CAD/CAE commercial packages.	Optional (but recommended)
Atlas	Database for storage of designed and legacy profiles for repeatable usage throughout different projects	Optional
AxPLAN (DoE and optimization)	Design of Experiment and optimization.	<ul style="list-style-type: none"> Strongly recommended for design Optional for analysis
AxMAP	Turbomachinery performance maps generator.	Optional (but recommended)
AxSTREAM Fluid Calculator	Calculate fluid properties.	Optional

Cascade CFD : 2-D full CFD solution built in profiling

AxCFD : 3-D CFD



Functions of Different Modules in AxSTREAM

Axial Compressor

Module/License	Description	Remarks
Project (database)	Project database management (Mandatory module).	<ul style="list-style-type: none"> Compulsory
Axial COMPRESSOR Design	Preliminary design (sizing) and optimization, design space explorer	<ul style="list-style-type: none"> For design from scratch. no need for analyzing existing turbine
Axial COMPRESSOR Meanline analysis	1D analysis	<ul style="list-style-type: none"> Preliminary analysis
Axial COMPRESSOR Throughflow (1D and 2D) Analysis	Streamline 1D and 2D analysis	<ul style="list-style-type: none"> Advanced analysis
Axial Profiler & 3D Blade Designer	Flat cascades profiling, 3D blade design (stacking).	<ul style="list-style-type: none"> Can design profile without importing outside standard 2D coordinate Can change the lean angle, lean angle type ...
AxSTRESS	3D FEA analysis.	Optional
AxFLOW	3D CFD solvers.	Optional
Import Profile	Import of Blade profile geometry.	<ul style="list-style-type: none"> Compulsory for analysis For design, it's optional but recommended
Export	Export of blade geometry to CAD/CAE commercial packages.	Optional (but recommended)
Atlas	Database for storage of designed and legacy profiles for repeatable usage throughout different projects.	Optional
AxPLAN (DoE and optimization)	Design of Experiment and optimization.	<ul style="list-style-type: none"> Strongly recommended for design Optional for analysis
AxMAP	Advanced turbomachinery maps generator.	Optional (but recommended)
AxSTREAM Fluid Calculator	Calculate fluid properties.	Optional



Functions of Different Modules in AxSTREAM

Radial Compressor

Module/License	Description	Remarks
Project (database)	Project database management (Mandatory module).	<ul style="list-style-type: none"> Compulsory
Radial Compressor MS Design	Preliminary design (sizing) and optimization of multistage radial compressor, design space explorer	<ul style="list-style-type: none"> MS design from scratch. no need for analyzing existing turbine
Radial COMPRESSOR MS Meanline	1D verifying computationa of MS radial compressor	<ul style="list-style-type: none"> Preliminary analysis for MS
Radial Compressor Design	Preliminary design (sizing) and optimization, design space explorer	<ul style="list-style-type: none"> Single Stage Design
Radial Compressor Meanline	1D verifying computation	<ul style="list-style-type: none"> Preliminary analysis for single stage
Axial Profiler & 3D Blade Designer	Flat cascades profiling, 3D blade design (stacking).	<ul style="list-style-type: none"> Can design profile without importing outside standard 2D coordinate Can change the lean angle, lean angle type ...
AxSTRESS	3D FEA analysis.	Optional
AxFLOW	3D CFD solvers.	Optional
Import Profile	Import of Blade profile geometry.	<ul style="list-style-type: none"> Compulsory for analysis For design, it's optional but recommended
Export	Export of blade geometry to CAD/CAE commercial packages.	Optional (but recommended)
Atlas	Database for storage of designed and legacy profiles for repeatable usage throughout different projects.	Optional
AxPLAN (DoE and optimization)	Design of Experiment and optimization.	<ul style="list-style-type: none"> Strongly recommended for design Optional for analysis
AxMAP	Advanced turbomachinery maps generator.	Optional (but recommended)
AxSTREAM Fluid Calculator	Calculate fluid properties.	Optional



Functions of Different Modules in AxSTREAM

Radial Turbine

Module/License	Description	Remarks
Project (database)	Project database management (Mandatory module).	<ul style="list-style-type: none"> Compulsory
Radial Turbo Design	Preliminary design (sizing) and optimization, design space explorer	<ul style="list-style-type: none"> Stage Design
Radial Turbo Meanline	1D verifying computation	<ul style="list-style-type: none"> Preliminary Stage Analysis
Radial Profiler & 3D Blade Designer	Flat cascades profiling, 3D blade design (stacking).	<ul style="list-style-type: none"> Can design profile without importing outside standard 2D coordinate Can change the lean angle, lean angle type ...
AxSTRESS	3D FEA analysis.	Optional
AxFLOW	3D CFD solvers.	Optional
Import Profile	Import of Blade profile geometry.	<ul style="list-style-type: none"> Compulsory for analysis For design, it's optional but recommended
Export	Export of blade geometry to CAD/CAE commercial packages.	Optional (but recommended)
Atlas	Database for storage of designed and legacy profiles for repeatable usage throughout different projects.	Optional
AxPLAN (DoE and optimization)	Design of Experiment and optimization.	<ul style="list-style-type: none"> Strongly recommended for design Optional for analysis
AxMAP	Advanced turbomachinery maps generator.	Optional (but recommended)
AxSTREAM Fluid Calculator	Calculate fluid properties.	Optional