

ATENA Product Composition
February 2014

Item	Modul	ATENA				GiD
		2D Egr	3D Egr	Sci	Full	
1.	Graphical user interface					
1.1.	2D GUI	x	x		x	x
1.2	3D GUI		x		x	x
1.3	ATENA Studio	x	x	x	x	
1.4	Mesh generator	x	x	x	x	x
1.5	GiD Interface			x	x	x
2.	Analysis types					
2.1	Statics	x	x	x	x	
2.2	Dynamics			x	x	
2.3	Transport (heat/moisture)			x	x	
2.4	Creep and shrinkage			x	x	
2.5	Construction process		x	x	x	
3.	Finite elements					
3.1	2D basic elements	x	x	x	x	
3.2	Axi-symmetric elements	x	x	x	x	
3.3	3D basic elements		x	x	x	
3.4	2D higher order elements			x	x	
3.5	Higher order axi-sym. elements			x	x	
3.6	3D higher order elements		x	x	x	
3.7	Shell higher order element		x	x	x	
3.8	3D beam higher order element			x	x	
3.9	2D interface element	x	x	x	x	
3.10	3D interface element		x	x	x	
3.11	2D external cable element	x	x	x	x	
3.12	3D external cable element		x	x	x	
3.13	Bond element for reinforcement	x	x	x	x	
4.	Material models					
4.1	2D basic cementitious materials	x	x	x	x	
4.2	3D basic cementitious materials	x	x	x	x	
4.3	3D variable cementitious material	x	x	x	x	
4.4	3D user cementitious material	x	x	x	x	
4.5	Bazant M4/M7 microplane mat.	x	x	x	x	
4.6	Drucker-Prager material	x	x	x	x	
4.7	Reinforcement material	x	x	x	x	
4.8	Reinforcement cyclic material	x	x	x	x	
4.9	Interface material	x	x	x	x	
4.10	Bond for reinforcement	x	x	x	x	
4.11	Temperature dependent (fire)			x	x	
4.12	Concrete hydration (CERHYD)			x	x	
4.13	Thermal-moisture model			x	x	
5.	Solution methods					
5.1	Direct Gauss LU elimination	x	x	x	x	
5.2	Sparse iterative solver		x	x	x	
5.3	Eigenvalue solution			x	x	
5.4	32bit/64bit solution core	x/-	x/-	x/x	x/x	