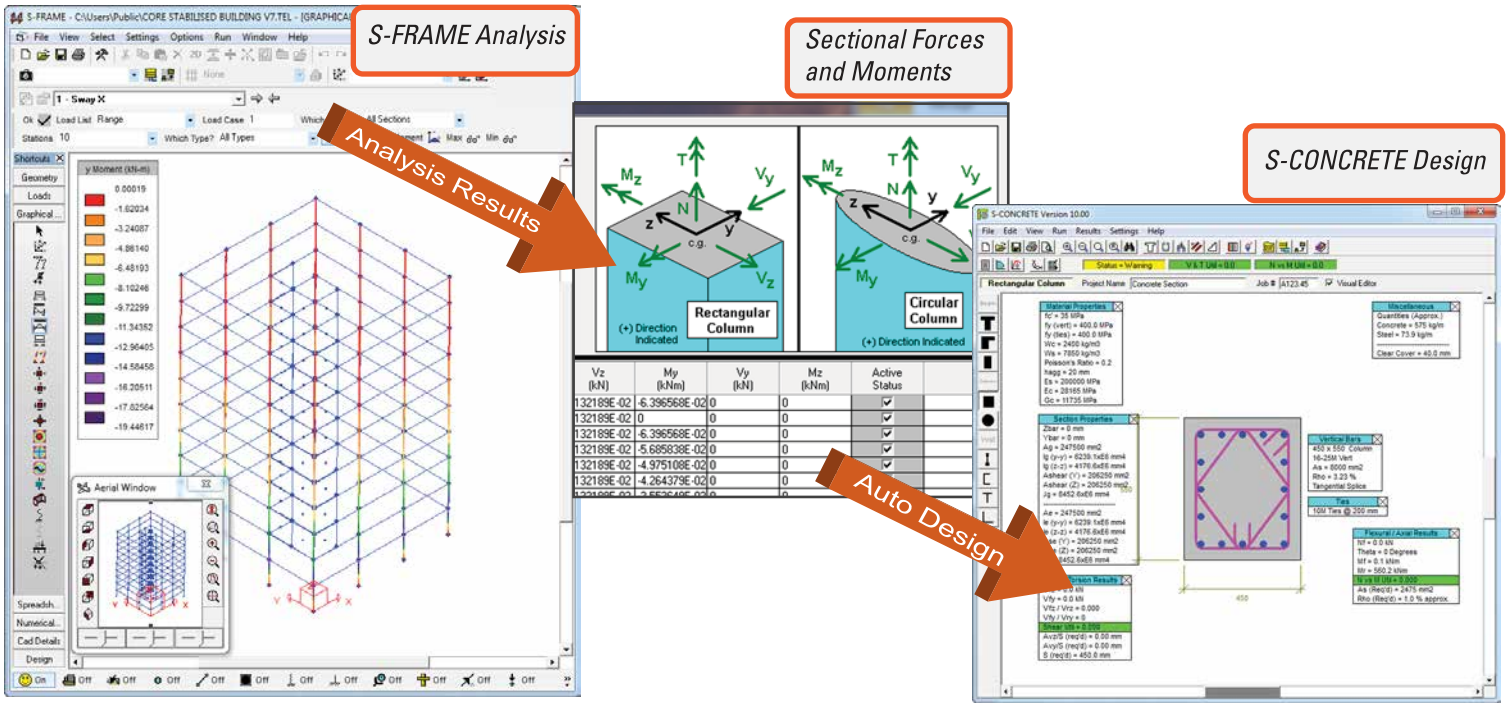
S-CONCRETE™

Analysis, Design and Detailing Tool for Reinforced Concrete Beam- Column- and Wall- Sections

- S-CONCRETE runs as a stand-alone application or fully integrated with S-FRAME®, through the Integrated Concrete Design option. New in R11.1
- Interactive and automated design in accordance with various building standards featuring a click & drag visual editor.
- Support for ACI 318-11, 08, 05, 02, 99, CSA A23.3-04, 94, BS 8110:1997. 1985, UBC 1997, CP 65:1999.
- Support for ACI 318-11. New in R11.1
- Support for EC2- EN 1992-1-1:2004 for design of beams and columns. New in R11.2
- International range of reinforcing bars.
- Axial load and moment interaction diagrams. Axial load, flexure, shear and torsion design.
- True axial force - biaxial bending interaction where the resultant moment is applied at any angle.
- Slenderness and/or imperfection effects calculations, if applicable..
- CSA shear & torsion (simplified or general method).
- Support for fiber-reinforced concrete beam sections (ACI 318-11 and 08) which has implications on minimum shear reinforcement requirements.
- Generate moment-curvature diagrams for any shape and add reinforcing bars and/or pre-stressing strands.
- Complex moment-curvature relationships can be used for more accurate deflection estimation and realistic flexural capacity evaluation which may include strain-hardening of reinforcement and tension-stiffening of concrete.
- Batch Processing Mode for automatic check of thousands of beams, columns and walls in one run. New in R11
- Batch Processing Mode support for automatic design. New in R11.1
- Generate detailed reports with pictures & numerical results.
- Export detailed drawings to AutoCAD® or export drawings and numerical results to Microsoft Word®.



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Beam Section Design and Detailing

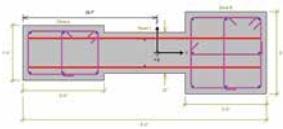
- T-beams, L-beams, slab bands, and rectangular beams.
- Bar spacing and stirrup/tie spacing checks.
- Crack control and steel area checks.
- EC2 crack width calculations and minimum reinforcement
- Beams with any number of stirrup legs.
- Multiple bar layers with different bar sizes per layer.
- Face steel checks (if applicable).

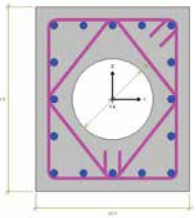
Column Section Design and Detailing

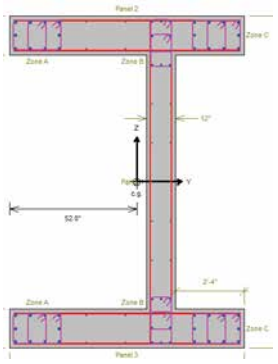
- Rectangular and circular columns.
- Columns with holes.
- Composite columns.
- Rectangular or circular ties or spiral.
- Multiple bar layers.
- Bar spacing and steel area checks.

Shear Wall Section Design and Detailing

- Rectangular shape, I-shape, C-shape, T-shape, and L-shape wall sections.
- Seismic design and detailing.
- Complex zones of reinforcing.
- Sectional and panel loading.
- Zone reinforcing checks.
- Panel reinforcing checks.
- Bar spacing checks.
- Anchorage checks.
- Interface shear or sliding shear check (CSA Only).







Seismic Provisions for shear walls ACI 318, CSA-A23.3, and UBC

- Boundary element size and detailing evaluation.
- Ductility requirements.
- Curtains of reinforcing, steel area and steel ratios.
- Anchorage and development length including hooks.
- Simplified or general method of shear design.
- Concrete confinement (zone ties & configuration).
- Displacement or stress method for boundary element design (ACI)
- Bar spacing requirements.
- Squat walls as defined in CSA-A23.3-04.