Software Main Scope and Features

Chap.	Item
2.1	Text Editor and Graphical Editor Pre-Processing and Post-Processing of Input and Output data
2.1	Six available system of units for lengths, and forces and two for temperatures
2.1	Continuous Beam. Plane Truss and Frame. Space Truss, Frame and Shell elements
2.1	Generation of Joints, Restraints, Springs, Members, and Shells
2.1	AISC or EURO Frame Member Data Base for Design. Any Used defined section for analysis only
2.2	Frame Member's local plane 1-2 oriented in 3D
2.3	Up to 32,700 joints for Static analysis and 10,000 Joints for Dynamic Analysis
2.3	Automatic Joint renumbering to minimize Global Matrices Half Band Width
2.3	Fast 32-bit In-Core and Out-Of-Core Engine solution of up to 196,200 linear equations
2.3	Restraints, Spring Supports, and Induced Displacements in any of the 6 DOF's
2.4	Up to 200,000 Frame Members and Shell Members
2.4	Up to 10 types of Frame Member End Releases at any member end (4 Moments, 4 Shears, Axial, and Torsion)
2.4/2.6	Frame and Shell members with shearing deformation effects available
2.4	Tension Only verification/design Frame Members available
2.4	Materials MTOs available
2.5	Up to 2 Master Joints per Frame Member to simulate slabs in-plane rigidity
2.7	Joint Loads (forces and moments) in any of the 5 DOF'S in Global Coordinates
2.8/2.9	Frame and Shell Member with Loads along Local Planes and Global Planes (Point Loads and Trapezoidal Loads)
2.10	Up to 100 Basic Load Conditions
2.11	Up to 1,000 Load Combinations of the Basic Load Conditions
2.12	Frame Members with P-Δ effect in Static/Dynamic Analysis by Geometric Stiffness Matrix Correction
2.13	Print a user selection of output information
2.14	Concrete design by ACI 318-19 (Frame Rect. Members, Circ. Columns, and Shells in Shear and Flexure)
2.15	Parameter Designs for Framed member Steel Structures
2.15	Steel design by AISC 360-10/16 (Tension, Compression, Shear and Flexure verification)
2.14/2.15	Frame Member's deflection verification
2.16	Automatic calculation of Self-Weight and Mass of the structural sysem
2.17	Damping of the structural system available for Dynamic analyses
2.18	Response Spectrum defined by Code (ASCE 7-16/NSR-10) or defined by the User
2.18	Static User defined loads and forces, and ELF/Response Spectrum by ASCE 7-16
2.19	Dynamic with Time History analysis for Eigen's, Modal Superposition, Step Integration, and Steady State
C	Analysis and design results cross verified with available commercial software and several published literatures