midas **Gen** Packages, Technical Specifications

Nodes (Elements)	Plus	Advanced	Full
Unlimited Nodes and Elements	√	√	√
Analysis Types	**Plus**	**Advanced**	**Full**
Static Analysis	√	√	√
Dynamic Analysis	√	√	√
- Eigen (Lanczos) and Ritz vector Analyses	√	√	√
- Response Spectrum Analysis	√	√	√
- Time History Analysis	√	√	√
- Inelastic Time History Analysis (Option)			√
· Beam Element			√
· Lumped hinge & Distributed hinge			√
· Automatic calculation of yield strength			√
· Axial load – biaxial moment interaction			√
· Fiber model Analysis			√
- Boundary Nonlinear Dynamic Analysis using Gap, Hook, Damper, Isolator, Hysteretic System		√	√
- Pushover Analysis	√	√	√
· Auto Plastic Hinge Definition	√	√	√
· Auto PM Interaction curve for hinge formation	√	√	√
· Obtain Performance point as per FEMA	√	√	√
Moving Load Analysis	√	√	√
Masonry Wall Analysis (Linear / Nonlinear)	√	√	√
Detailed Section Analysis	√	√	√
- Section Property Calculator for irregular sections	√	√	√
· Import section drawing from AutoCAD	√	√	√
· Create composite section with more than 2 parts	√	√	√
Buckling Analysis	√		√
Heat of Hyration Analysis for mass concrete (Option)			√
- Heat of Hydration Analysis for mass concrete			√
- Convection, Heat Source, Pipe cooling, etc.			√
Thermal Stress Analysis	√	√	√
Material Nonlinear Analysis (Option)			√
- Truss, Plate, Plane stress, Plane strain, Axisymmetric and Solid			√
- Tresca, von Mises, Mohr-Coulomb and Drucker-Prager			√
- Isotropic, kinematic and mixed hardening			√
Construction Stage Analysis (Time-dependent)		√	√
- Creep, Shrinkage & Modulus of Elasticity		√	√
- Tension losses in tendons		√	√
- Column Shortening		√	√
- Construction Stage Wizard		√	√
Higher Order Analysis	√	√	√
-P Delta Analysis	√	√	√
-Geometric Nonlinear Analysis		√	√

Analysis Types (Continued)	Plus	Advanced	Full
- Large Displacement (Forward / Backward) Analysis (Cable structures)		√	√
Post-tension & Prestressing		√	√
Design (Steel, Concrete & SRC)	**Plus**	**Advanced**	**Full**
AISC(LRFD & ASD), CSA S16.1, BS 5950 & Eurocode 3	√	√	√
ACI318, CSA-A23.3, BS 8119 & Eurocode 2	√	√	√
Slab & Meshed Wall Design (Eurocode 2) (Option)			√
- Flexural design (Wood-Armer moment)			√
- Punching shear check			√
- Sericeability check (Stress, Crack width, Deflection)			√
Finite Element Library	**Plus**	**Advanced**	**Full**
General Beam	√	√	√
Tapered Beam	√	√	√
Truss	√	√	√
Compression Only	√	√	√
Gap	√	√	√
Hook	√	√	√
Mass / Spring / Damper	√	√	√
Plane Stress	√	√	√
Plane Strain	√	√	√
Plate (Thick / Thin, In-plane / Out of plane Thickness & Orthotropic materials)	√	√	√
Stiffened Plate	√	√	√
Solid (Hexahedron, Pentahedron, Tetrahedron)	√	√	√
Rigid Link	√	√	√
Cable (Equivalent Truss Type)	√	√	√
Calbe (Elastic Catenary Type)		√	√
Report	**Plus**	**Advanced**	**Full**
Dynamic Report Generation	√	√	√
Others	**Plus**	**Advanced**	**Full**
GSD (General Section Design) (Option)			√
- Draw Arbitrary Cross-sections (RC, Steel, Composite)			√
- Capacity Curves (P-M, M-M, 3D) & Capacity Check Ratio (Eurocode)			√
- Moment-Curvature Curves for Different Axial Loads			√
- Stress Contours for Combined Loading			√
Automatic Mesh Generator for Plane Wall and Slabs (Option)			√
- Planar mesh generation for 2D elements (plate, plane stress, plane strain)			√
- Automesh planar area (automatic consideration of internal columns and walls)			√
- Mapped mesh generation using 4 nodes			√