

ELMT03 (2d/3d Nonlinear Truss Element)

For each element property set (ndm = dimension of problem)

MATE, ElmtID
 USER, 3
 Igeom
 Sect_type, Sect_ID, Sec_Rel
 REZOption, REZone(1), ..., REZone(2*ndm)
 ρ , Imass
 α , β
 blank line at end of each element specification

Definitions:

ElmtID	Element property ID
Igeom	1: linear geometry 2: nonlinear geometry (presently not implemented)
Sect_type	1: fiber cross section type; 2: hysteretic cross section type
Sect_ID	Section ID for truss element (sections are specified in blocks FSEC or HSEC)
Sect_Rel	0 = section force-deformation relation 1 = element force-deformation relation
A	Cross section area
REZOption	Option for rigid end zone offsets 1 : rigid end zone offsets in global reference system 2 : rigid end zone offsets in local reference system
REZone(1:2*ndm)	Rigid end zone offsets at element nodes i and j in global or local reference system REZone(1),..., REZone(ndm): X, Y, (Z) value of offset at node i REZone(ndm+1), ..., REZone(2*ndm): X, Y, (Z) value of offset at node j Note: for local reference system specification only two x-values are read, i.e. ndm=1
ρ	Mass density per unit volume
Imass	Switch for lumped or consistent mass matrix 0 = lumped 1 = consistent
α , β	Rayleigh damping factors; the element damping matrix is $C=\alpha M+\beta K_0$