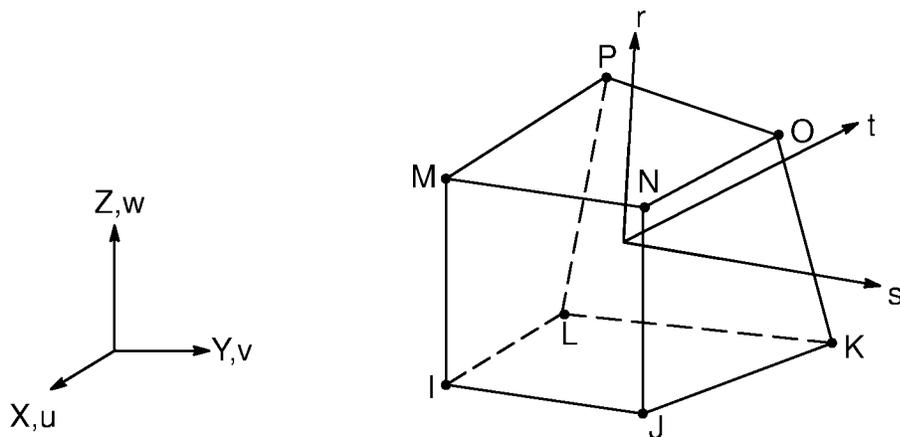


14.185 SOLID185 — 3-D Structural Solid



Matrix or Vector	Shape Functions	Integration Points
Stiffness Matrix	Equations (12.8.18-1), (12.8.18-2), and (12.8.18-3)	See Section 4.185 of the Element Reference Manual
Mass Matrix	Same as stiffness matrix	2 x 2 x 2
Stress Stiffness Matrix	Same as stiffness matrix	Same as stiffness matrix
Thermal Load Vector	Same as stiffness matrix	Same as stiffness matrix
Pressure Load Vector	Equation (12.5.8-1) and (12.5.8-2)	2 x 2

Load Type	Distribution
Element Temperature	Trilinear thru element
Nodal Temperature	Trilinear thru element
Pressure	Bilinear across each face

14.185.1 Other Applicable Sections

Chapter 2 describes the derivation of structural element matrices and load vectors as well as stress evaluations. Section 13.1 describes integration point locations.

14.185.2 Theory

This element uses \bar{B} method (selective reduced integration technique for volumetric terms) (Hughes(219), Nagtegaal et al(220)) if KEYOPT(2) = 0. If KEYOPT(2) = 1, the uniform reduced integration technique (Flanagan and Belytschko(232)) is used.