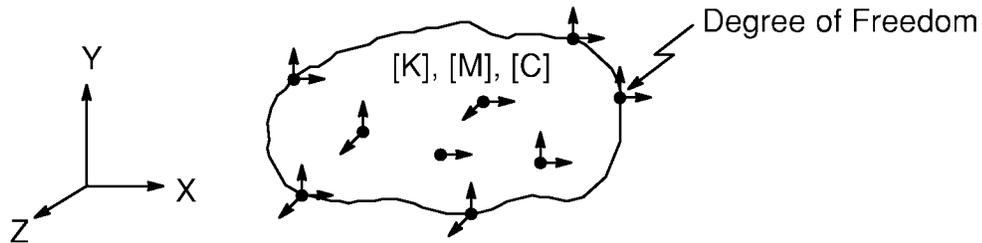


# 14.50 MATRIX50 — Superelement (or Substructure)



Matrix or Vector	Shape Functions	Integration Points
Stiffness/ Conductivity Matrix	Same as the constituent elements	Same as the constituent elements
Mass/Specific Heat Matrix	Same as the constituent elements reduced down to the master degrees of freedom	Same as the constituent elements
Damping Matrix	Same as mass/specific heat matrix	Same as the constituent elements
Stress Stiffness/ Convection Surface Matrix (used only when added to the Stiffness Matrix)	Same as constituent elements	Same as the constituent elements
Gravity, Thermal and Pressure/Heat Generation and Convection Surface Load Vectors	Same as constituent elements	Same as the constituent elements

<b>Load Type</b>	<b>Distribution</b>
Element Temperature and Heat Generation Rate	As input during generation run
Pressure/Convection Surface Distribution	As input during generation run

### 14.50.1 Other Applicable Sections

Superelements are discussed in Section 17.6.