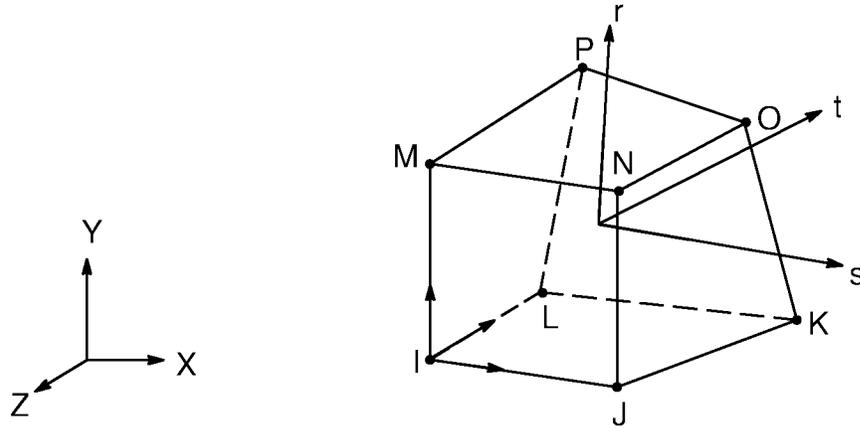


# 14.30 FLUID30 — 3-D Acoustic Fluid



Matrix or Vector	Shape Functions	Integration Points
Fluid Stiffness Matrix	Equation (12.8.18–19)	2 x 2 x 2
Coupling Stiffness Matrix (fluid–structure interface)	Equation (12.8.18–1), (12.8.18–2), (12.8.18–3), and (12.8.18–19) specialized to the interface	2 x 2
Fluid Mass Matrix	Equation (12.8.18–19)	2 x 2 x 2
Coupling Mass Matrix (fluid–structure interface)	Same as coupling stiffness matrix	2 x 2
Fluid Damping Matrix (fluid at fluid–structure interface)	No shape functions are used. Instead, the area associated with each node at the interface is computed for the damping to act upon.	None

## 14.30.1 Other Applicable Sections

Chapter 8 describes the derivation of acoustic element matrices and load vectors.