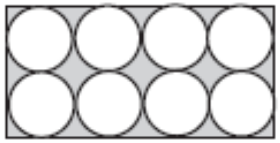
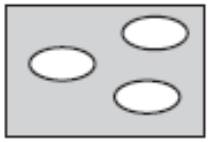
Real rock				
Bound models	**Sphere pack models**	**Inclusion models (Spherical and nonspherical inclusions)**		**Pore fluid effect models**
				
Layer model: Voigt (1910) and Reuss (1926) bounds Hashin–Shtrikman (1962, 1963) bounds	Hertz (1882) and Mindlin (1949) theory Gassmann (1951) White (1983) Digby (1981) Dvorkin and Nur (1996)	Random orientation Kuster and Toksöz (1974) Budiansky and O'Connell (1974)	Aligned orientation Hudson (1980)	Gassmann (1951) Biot (1956) Murphy (1982) Mavko and Jizba (1991)
Delivers upper and lower boundary for a given composition	Describes granular materials, gives nonlinear pressure dependence of velocities	Describes fractured and (low) porous rocks, implements inclusion shape (aspect ratio) and orientation: random orientation (isotropic) or aligned orientation (anisotropic)		Describes influence of changing pore fluid, basic for "fluid replacement techniques".

FIGURE 6.19 Classification of main types of models for elastic properties.