Chapter 6

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 - 6-1 The Linear Momentum Equation

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$$\sum ec{F} = \sum_{
m out} eta \dot{m} ec{V} - \sum_{
m in} eta \dot{m} ec{V}$$

in the scalar form

$$egin{cases} \sum F_x = \dot{m}(eta_2 \cdot V_{2,x} - eta_1 \cdot V_{1,x}) \ \ \sum F_z = \dot{m}(eta_2 \cdot V_{2,z} - eta_1 \cdot V_{1,z}) \end{cases}$$

where ${\cal F}_x$ and ${\cal F}_z$ is the net force of the ${\bf reaction},$ ${\bf pressure}$ and ${\bf body}$ force