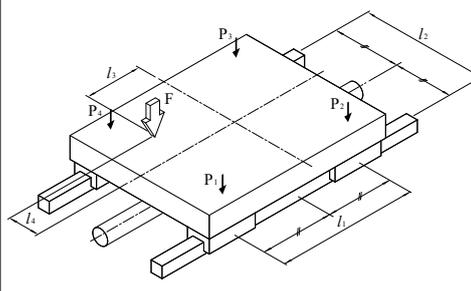
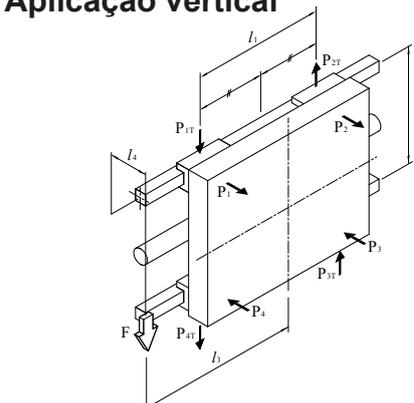
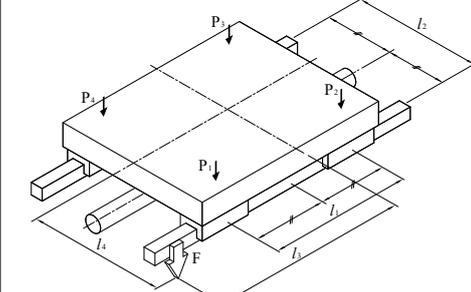
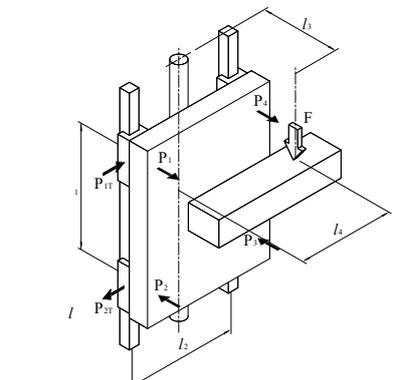
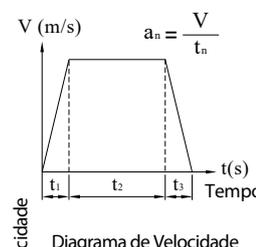
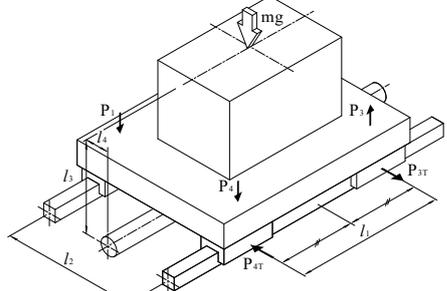
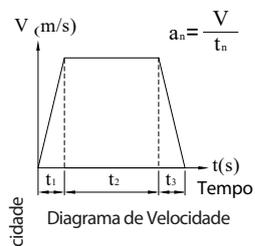
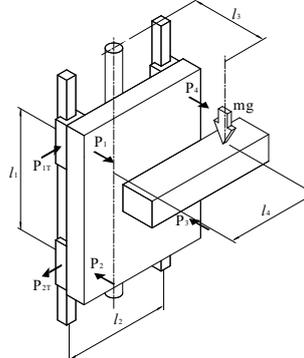


## 7 - FÓRMULAS PARA CÁLCULOS

<p><b>Aplicação horizontal</b></p>  $P_1 = \frac{F}{4} + \frac{F \cdot l_3}{2 \cdot l_1} - \frac{F \cdot l_4}{2 \cdot l_2}$ $P_2 = \frac{F}{4} - \frac{F \cdot l_3}{2 \cdot l_1} - \frac{F \cdot l_4}{2 \cdot l_2}$ $P_3 = \frac{F}{4} - \frac{F \cdot l_3}{2 \cdot l_1} + \frac{F \cdot l_4}{2 \cdot l_2}$ $P_4 = \frac{F}{4} + \frac{F \cdot l_3}{2 \cdot l_1} + \frac{F \cdot l_4}{2 \cdot l_2}$	<p><b>Aplicação vertical</b></p>  $P_1 = P_2 = P_3 = P_4 = \frac{F \cdot l_4}{2 \cdot l_2}$ $P_{1T} = P_{3T} = \frac{F}{4} + \frac{F \cdot l_3}{2 \cdot l_1}$ $P_{2T} = P_{4T} = \frac{F}{4} - \frac{F \cdot l_3}{2 \cdot l_1}$
<p><b>Aplicação horizontal</b></p>  $P_1 = \frac{F}{4} + \frac{F \cdot l_3}{2 \cdot l_1} + \frac{F \cdot l_4}{2 \cdot l_2}$ $P_2 = \frac{F}{4} - \frac{F \cdot l_3}{2 \cdot l_1} + \frac{F \cdot l_4}{2 \cdot l_2}$ $P_3 = \frac{F}{4} - \frac{F \cdot l_3}{2 \cdot l_1} - \frac{F \cdot l_4}{2 \cdot l_2}$ $P_4 = \frac{F}{4} + \frac{F \cdot l_3}{2 \cdot l_1} - \frac{F \cdot l_4}{2 \cdot l_2}$	<p><b>Aplicação vertical</b></p>  $P_1 = P_2 = P_3 = P_4 = \frac{F \cdot l_3}{2 \cdot l_1}$ $P_{1T} = P_{2T} = P_{3T} = P_{4T} = \frac{F \cdot l_4}{2 \cdot l_2}$
<p><b>Aplicação horizontal</b></p>  <p>Diagrama de Velocidade</p>  $P_1 = P_4 = \frac{mg}{4} - \frac{m \cdot a_1 \cdot l_3}{2 \cdot l_1}$ $P_2 = P_3 = \frac{mg}{4} + \frac{m \cdot a_1 \cdot l_3}{2 \cdot l_1}$ <p>Durante aceleração</p> $P_{1T} = P_{2T} = P_{3T} = P_{4T} = \frac{m \cdot a_1 \cdot l_4}{2 \cdot l_2}$ <p>Durante desaceleração</p> $P_{1T} = P_{2T} = P_{3T} = P_{4T} = \frac{m \cdot a_3 \cdot l_4}{2 \cdot l_2}$ <p>Em movimento uniforme</p> $P_{1T} = P_{2T} = P_{3T} = P_{4T} = \frac{mg}{4}$	<p><b>Aplicação vertical</b></p>  <p>Diagrama de Velocidade</p>  <p>Durante aceleração</p> $P_1 = P_2 = P_3 = P_4 = \frac{m \cdot (g + a_1) \cdot l_3}{2 \cdot l_1}$ <p>Durante desaceleração</p> $P_1 = P_2 = P_3 = P_4 = \frac{m \cdot (g - a_3) \cdot l_3}{2 \cdot l_1}$ <p>Em movimento uniforme</p> $P_1 = P_2 = P_3 = P_4 = \frac{m \cdot g \cdot l_3}{2 \cdot l_1}$ $P_{1T} = P_{2T} = P_{3T} = P_{4T} = \frac{m \cdot g \cdot l_4}{2 \cdot l_2}$

m: Massa

(kg)

g : aceleração da gravidade (g=9,8m/s<sup>2</sup>)

(m/s<sup>2</sup>)

l<sub>n</sub>: Distância

(mm)

V : velocidade

(m/s)

F<sub>n</sub>: Força externa

(N)

t<sub>n</sub>: constante de tempo

(s)

P<sub>n</sub>: carga aplicada (direção radial/radial inversa)

(N)

a<sub>n</sub>: aceleração

(m/s<sup>2</sup>)

P<sub>nT</sub>: carga aplicada (direções laterais)

(N)

(a<sub>n</sub> =  $\frac{V}{t_n}$ )