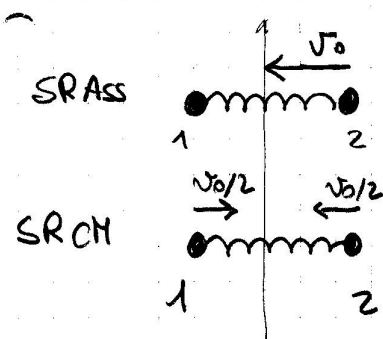


\Rightarrow armonici $m_1 = m_2 = m$



$$v_1'(0) = \frac{v_0}{2}$$

$$v_2'(0) = -\frac{v_0}{2}$$

Il moto è armonico in SRCH

$$\begin{cases} x_1'(t) = -\frac{l_0}{2} + \frac{v_0}{2\omega} \sin \omega t \\ x_2'(t) = \frac{l_0}{2} - \frac{v_0}{2\omega} \sin \omega t \end{cases}$$

Si trovi adesso la min. e max distanza a cui le due masse arrivano:

$$\text{min/max distanza} \Rightarrow v_1' = v_2' = 0$$

$$\Rightarrow \omega t = \frac{\pi}{2}, \frac{3\pi}{2}, \dots$$

$$\Rightarrow |x_1'(t) - x_2'(t)| = \left[l_0 + \frac{v_0}{2\omega} \right] = d_{\max} \quad (\text{per } \omega t = \frac{\pi}{2})$$

$$d_{\min} = \left[l_0 - \frac{v_0}{2\omega} \right]$$