$$K_{78}^2 = \begin{bmatrix} \frac{3\,U}{2\,t} & -2-\frac{U^2}{t^2} & 0 & -\left(\frac{\sqrt{3}\,U}{t}\right) & \sqrt{6} & 0 & \sqrt{6} & \frac{\sqrt{3}\,U}{2\,t} \\ -2-\frac{U^2}{t^2} & \frac{-3\,U}{2\,t} & 0 & 0 & -\left(\frac{\sqrt{6}\,U}{t}\right) & -\left(\frac{\sqrt{3}\,U}{t}\right) & \frac{\sqrt{\frac{3}{2}}\,U}{t} & -2\,\sqrt{3} \\ 0 & 0 & \frac{-2\,U}{t} & -\left(\frac{U}{t}\right) & 0 & 4 & 0 & 0 \\ -\left(\frac{\sqrt{3}\,U}{t}\right) & 0 & -\left(\frac{U}{t}\right) & \frac{-9\,U}{2\,t} & -2\,\sqrt{2} & 0 & \frac{4\,t^2-U^2}{\sqrt{2}\,t^2} & 0 \\ \sqrt{6} & -\left(\frac{\sqrt{6}\,U}{t}\right) & 0 & -2\,\sqrt{2} & \frac{-3\,U}{t} & \frac{2\,\sqrt{2}\,U}{t} & \frac{U}{t} & -\sqrt{2} \\ 0 & -\left(\frac{\sqrt{3}\,U}{t}\right) & 4 & 0 & \frac{2\,\sqrt{2}\,U}{t} & \frac{-5\,U}{t} & 0 & 0 \\ \sqrt{6} & \frac{\sqrt{\frac{3}{2}}\,U}{t} & 0 & \frac{4\,t^2-U^2}{\sqrt{2}\,t^2} & \frac{U}{t} & 0 & \frac{-2\,U}{t} & -\sqrt{2} \\ \frac{\sqrt{3}\,U}{2\,t} & -2\,\sqrt{3} & 0 & 0 & -\sqrt{2} & 0 & -\sqrt{2} & \frac{-15\,U}{2\,t} \end{bmatrix}$$