$$K_{50}^{1} = \begin{bmatrix}
\frac{-\mathbf{i}}{\sqrt{3}} & \frac{\mathbf{i}}{t}\left(\frac{1}{12}\left(11\,\mathbf{i}+\sqrt{3}\right)U\right) & 0 & \frac{-\mathbf{i}}{2}+\frac{1}{\sqrt{3}} & \frac{-2\,\mathbf{i}}{\sqrt{3}} & \frac{-\left(\left(3\,\mathbf{i}+\sqrt{3}\right)U\right)}{6\,t} & 0 & 1-\frac{\mathbf{i}}{2}\sqrt{3} & \frac{1}{\sqrt{2}}+\frac{\mathbf{i}}{\sqrt{6}} & \frac{\sqrt{2}\,U+\mathbf{i}\sqrt{6}\,U}{6\,t} & \mathbf{i}-\frac{1}{2\sqrt{3}} & \frac{\left(3\,\mathbf{i}+\sqrt{3}\right)U}{4\,t} \\
\frac{\left(11+\mathbf{i}\sqrt{3}\right)U}{12\,t} & \frac{-\mathbf{i}}{\sqrt{3}} & \frac{-\mathbf{i}}{2}+\frac{1}{\sqrt{3}} & 0 & 0 & -\mathbf{i}+\frac{1}{\sqrt{3}} & -\left(\frac{3}{2}\right) & 0 & \frac{\sqrt{2}\left(1-\mathbf{i}\sqrt{3}\right)U}{3\,t} & -\left(\frac{1}{\sqrt{2}}\right)+\frac{\mathbf{i}}{\sqrt{6}} & \frac{\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{12\,t} & \frac{-\mathbf{i}}{2}-\frac{1}{\sqrt{3}} \\
0 & \frac{-\mathbf{i}}{2}-\frac{1}{\sqrt{3}} & \frac{\mathbf{i}}{2}\sqrt{3} & \frac{U-3\,\mathbf{i}\sqrt{3}\,U}{4\,t} & 0 & -1 & \frac{-\sqrt{3}}{2} & \frac{\left(3\,\mathbf{i}+\sqrt{3}\right)U}{4\,t} & 0 & \sqrt{\frac{2}{3}}-\mathbf{i}\sqrt{2} & 0 & 1-\frac{\mathbf{i}}{2}\sqrt{3} \\
\frac{-\mathbf{i}}{2}-\frac{1}{\sqrt{3}} & 0 & \frac{-\left(U+3\,\mathbf{i}\sqrt{3}\,U\right)}{4\,t} & \frac{-\mathbf{i}}{2}\sqrt{3} & 0 & 0 & \frac{-\left(\left(-3\,\mathbf{i}+\sqrt{3}\right)U\right)}{4\,t} & \frac{3\,\mathbf{i}}{2} & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} & 0 & \frac{1}{2} & 0 \\
\frac{-2\,\mathbf{i}}{\sqrt{3}} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & -\mathbf{i}\sqrt{\frac{2}{3}} & 0 & -2\,\mathbf{i} & 0 \\
\frac{\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{6\,t} & -\mathbf{i}-\frac{1}{\sqrt{3}} & 1 & 0 & 0 & 0 & \sqrt{3} & 0 & \frac{-\left(\left(-3\,\mathbf{i}+\sqrt{3}\right)U\right)}{3\sqrt{2}\,t} & \frac{-\left(3\,\mathbf{i}+\sqrt{3}\right)}{3\sqrt{2}} & \frac{U-\mathbf{i}\sqrt{3}\,U}{2\,t} & 0 \\
0 & \frac{3}{2} & \frac{\sqrt{3}}{2} & \frac{\left(3\,\mathbf{i}+\sqrt{3}\right)U}{4\,t} & 0 & -\sqrt{3} & \frac{\mathbf{i}}{2}\sqrt{3} & \frac{\left(3-\mathbf{i}\sqrt{3}\right)U}{4\,t} & 0 & 0 & 0 & \frac{-\sqrt{3}}{2} \\
-1-\frac{\mathbf{i}}{2}\sqrt{3} & 0 & \frac{-\left(\left(-3\,\mathbf{i}+\sqrt{3}\right)U\right)}{4\,t} & \frac{3\,\mathbf{i}}{2} & 0 & 0 & \frac{\frac{-\mathbf{i}}{4}\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{\mathbf{i}}{2}\sqrt{3} & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & \frac{\sqrt{3}}{2} & 0 \\
-\left(\frac{1}{\sqrt{2}}\right)+\frac{\mathbf{i}}{\sqrt{6}} & \frac{-\left(\sqrt{2}\left(1+\mathbf{i}\sqrt{3}\right)U\right)}{3\,t} & 0 & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & -\mathbf{i}\sqrt{\frac{2}{3}} & \frac{\left(3\,\mathbf{i}+\sqrt{3}\right)U}{3\sqrt{2}\,t} & 0 & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & \frac{-\mathbf{i}}{\sqrt{3}} & \frac{\frac{\mathbf{i}}{6}\left(5\,\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & 0 \\
\frac{\frac{\mathbf{i}}{3}\left(\mathbf{i}+\sqrt{3}\right)U}{\sqrt{2}\,t} & \frac{1}{\sqrt{2}}+\frac{\mathbf{i}}{\sqrt{6}} & \frac{-\left(\sqrt{2}\left(3\,\mathbf{i}+\sqrt{3}\right)\right)}{3} & 0 & 0 & \frac{-\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & 0 & 0 & \frac{\left(5+\mathbf{i}\sqrt{3}\right)U}{6\,t} & \frac{-\mathbf{i}}{\sqrt{3}} & \frac{\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{3\sqrt{2}\,t} & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} \\
\frac{6\,\mathbf{i}+\sqrt{3}}{6} & \frac{-\left(\left(3\,\mathbf{i}+\sqrt{3}\right)U\right)}{12\,t} & 0 & -\left(\frac{1}{2}\right) & -2\,\mathbf{i} & \frac{-\left(U+\mathbf{i}\sqrt{3}\,U\right)}{2\,t} & 0 & \frac{-\sqrt{3}}{2} & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} & \frac{-\left(\left(3\,\mathbf{i}+\sqrt{3}\right)U\right)}{3\sqrt{2}\,t} & \frac{\mathbf{i}}{2}\sqrt{3} & \frac{\frac{\mathbf{i}}{4}\left(3\,\mathbf{i}+\sqrt{3}\right)U}{t} \\
\frac{-\left(\left(-3\,\mathbf{i}+\sqrt{3}\right)U\right)}{4\,t} & \frac{-\mathbf{i}}{2}+\frac{1}{\sqrt{3}} & -1-\frac{\mathbf{i}}{2}\sqrt{3} & 0 & 0 & 0 & \frac{\sqrt{3}}{2} & 0 & 0 & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & \frac{\left(3+\mathbf{i}\sqrt{3}\right)U}{4\,t} & \frac{-\mathbf{i}}{2}\sqrt{3}
\end{bmatrix}$$