$$K_{18}^{2} = \begin{bmatrix}
\frac{-13\,U}{2\,t} & \frac{-\left(8\,t^2+U^2\right)}{2\,\sqrt{3}\,t^2} & -\left(\frac{\sqrt{\frac{3}{2}}\,U}{t}\right) & \frac{4}{\sqrt{3}} & \frac{\sqrt{3}\,U}{2\,t} & -\left(\frac{U^2}{\sqrt{3}\,t^2}\right) & \frac{3\,U}{\sqrt{2}\,t} & \frac{-U}{2\,t} & \frac{\sqrt{2}\,U}{t} & \frac{5\left(2+\sqrt{6}\right)U}{2\,\sqrt{18-3\,\sqrt{6}}\,t} & \frac{5\left(3\,\sqrt{2}-2\,\sqrt{3}\right)U}{6\,\sqrt{6+\sqrt{6}}\,t} & \frac{-\left(\sqrt{3}\,U^2\right)}{2\,t^2} \\
\frac{-\left(8\,t^2+U^2\right)}{2\,\sqrt{3}\,t^2} & \frac{-5\,U}{2\,t} & 0 & \frac{U}{2\,t} & -2 & \frac{U}{t} & 0 & 2\,\sqrt{3} & \frac{\sqrt{\frac{2}{3}}\left(-4\,t^2+U^2\right)}{t^2} & 0 & 0 & \frac{-3\,U}{2\,t} \\
-\left(\frac{\sqrt{\frac{3}{2}}\,U}{t}\right) & 0 & \frac{-2\,U}{t} & -\left(\frac{U^2}{\sqrt{2}\,t^2}\right) & \frac{\sqrt{2}\,U}{t} & 2\,\sqrt{2} & 0 & 0 & 0 & 0 & 0 & 0 \\
\frac{4}{\sqrt{3}} & \frac{U}{2\,t} & -\left(\frac{U^2}{\sqrt{2}\,t^2}\right) & \frac{-15\,U}{2\,t} & 2+\frac{U^2}{2\,t^2} & 0 & -\left(\frac{\sqrt{\frac{3}{2}}\,U^2}{t^2}\right) & \frac{\sqrt{3}\left(-4\,t^2+U^2\right)}{2\,t^2} & 4\,\sqrt{\frac{2}{3}} & 0 & 0 & \frac{3\,U}{2\,t} \\
\frac{\sqrt{3}\,U}{2\,t} & -2 & \frac{\sqrt{2}\,U}{t} & 2+\frac{U^2}{2\,t^2} & \frac{-3\,U}{t} & 0 & 0 & \frac{\sqrt{3}\,U}{t} & -\left(\frac{\sqrt{6}\,U}{t}\right) & 0 & 0 & 0 \\
-\left(\frac{U^2}{\sqrt{3}\,t^2}\right) & \frac{U}{t} & 2\,\sqrt{2} & 0 & 0 & \frac{-5\,U}{t} & 2\,\sqrt{6} & 0 & -\left(\frac{\sqrt{\frac{2}{3}}\,U^2}{t^2}\right) & \frac{-4\left(-1+\sqrt{6}\right)}{\sqrt{6-\sqrt{6}}} & \frac{-4\left(1+\sqrt{6}\right)}{\sqrt{6+\sqrt{6}}} & \frac{U}{t} \\
\frac{3\,U}{\sqrt{2}\,t} & 0 & 0 & -\left(\frac{\sqrt{\frac{3}{2}}\,U^2}{t^2}\right) & 0 & 2\,\sqrt{6} & \frac{-6\,U}{t} & \frac{3\,\sqrt{2}\,U}{t} & 0 & 0 & 0 & 0 \\
\frac{-U}{2\,t} & 2\,\sqrt{3} & 0 & \frac{\sqrt{3}\left(-4\,t^2+U^2\right)}{2\,t^2} & \frac{\sqrt{3}\,U}{t} & 0 & \frac{3\,\sqrt{2}\,U}{t} & \frac{-3\,U}{t} & \frac{\sqrt{2}\,U}{t} & 0 & 0 & 0 \\
\frac{\sqrt{2}\,U}{t} & \frac{\sqrt{\frac{2}{3}}\left(-4\,t^2+U^2\right)}{t^2} & 0 & 4\,\sqrt{\frac{2}{3}} & -\left(\frac{\sqrt{6}\,U}{t}\right) & -\left(\frac{\sqrt{\frac{2}{3}}\,U^2}{t^2}\right) & 0 & \frac{\sqrt{2}\,U}{t} & \frac{-4\,U}{t} & \frac{-2\,\sqrt{6-\sqrt{6}}\,U}{3\,t} & \frac{-2\,\sqrt{6+\sqrt{6}}\,U}{3\,t} & 0 \\
\frac{5\left(2+\sqrt{6}\right)U}{2\,\sqrt{18-3\,\sqrt{6}}\,t} & 0 & 0 & 0 & 0 & \frac{-4\left(-1+\sqrt{6}\right)}{\sqrt{6-\sqrt{6}}} & 0 & 0 & \frac{-2\,\sqrt{6-\sqrt{6}}\,U}{3\,t} & \frac{25\,U}{-6\,t+\sqrt{6}\,t} & -\left(\frac{\sqrt{\frac{5}{6}}\,U}{t}\right) & 0 \\
\frac{5\left(3\,\sqrt{2}-2\,\sqrt{3}\right)U}{6\,\sqrt{6+\sqrt{6}}\,t} & 0 & 0 & 0 & 0 & \frac{-4\left(1+\sqrt{6}\right)}{\sqrt{6+\sqrt{6}}} & 0 & 0 & \frac{-2\,\sqrt{6+\sqrt{6}}\,U}{3\,t} & -\left(\frac{\sqrt{\frac{5}{6}}\,U}{t}\right) & \frac{-25\,U}{\left(6+\sqrt{6}\right)t} & 0 \\
\frac{-\left(\sqrt{3}\,U^2\right)}{2\,t^2} & \frac{-3\,U}{2\,t} & 0 & \frac{3\,U}{2\,t} & 0 & \frac{U}{t} & 0 & 0 & 0 & 0 & 0 & \frac{-9\,U}{2\,t}
\end{bmatrix}$$