$$H_{130} = \begin{bmatrix} 2\,h - 6\,\mu & 0 & 0 & -2\,\sqrt{2}\,t \\ 0 & 2\,h - 6\,\mu + U & -2\,\sqrt{2}\,t & 0 \\ 0 & -2\,\sqrt{2}\,t & 2\,h - 6\,\mu + U & -2\,t \\ -2\,\sqrt{2}\,t & 0 & -2\,t & 2\,h - 6\,\mu + U \end{bmatrix}$$