Transpiration = \[\sum_j Q[j]\]

Estimation of root conductances in soil layers from root segment conductances

\[Q_{up}[i] = C_4 H_{soil}[i] H_{collar} C_5\]

\[K_{r,up}[i] = \sum_{j \in i} K_r[j]\]

\[K_{x,up}[i] = f(K_x[j])_{j \in i}\]

\[C_4\text{ and } C_5\text{ depend on upscaled root segment conductances } K_{r,up}\text{ and } K_{x,up}, \text{ and are derived based on an a priori concept of the root architecture and the connection of the segments.}\]