We investigate the boundedness of positive solutions of the reciprocal max-type difference equation

\[ x_{n+1} = \max \left\{ \frac{A_n}{x_{n-k}}, \frac{B_n}{x_{n-\ell}} \right\} \]

with positive periodic parameters and arbitrary delays. We give sufficient conditions on parameters and their periods for every solution to be unbounded. We also introduce the idea of extended periodicity of unbounded solutions, and then give sufficient conditions on the delays such that particular patterns of the extended periodicity of unbounded solutions are obtained. (Received September 12, 2013)