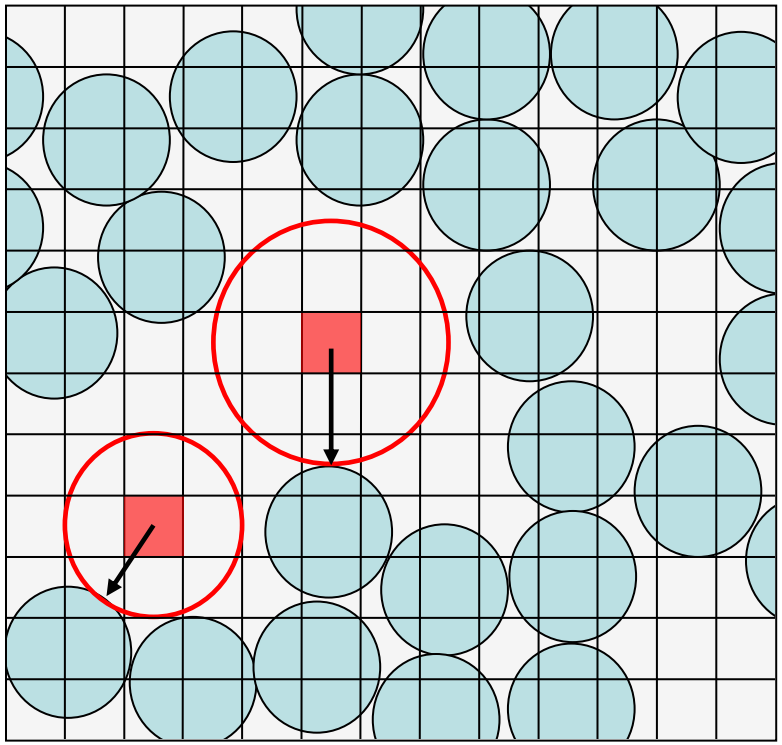
$$R_{void} = \left| \vec{r}_{dV} - \vec{r}_{sphere} \right| - R_{sphere}$$

$$V_{void} = VV = \frac{4}{3}\pi R_{void}^3$$



Unoccupied space is divided in small *dV* (red squares) and the distance to the nearest particle is calculated. The corresponding void volume *(VV)* is depicted with the red circles.

Generally:

$$dV << R_{void}^3$$