



$$\begin{aligned}h_{e,D03} &= h - a_{2,D03} - a_{1,D03} \\A_{c,eff,D03} &= m * d * (l_{a,D03} + 30) \\A_{w,D03} &= 2/3 * m * d * h_{e,D03} \\\alpha_{D03} &= (h_{e,D03} + a_{2,D03}) / h \\k_{v,90,D03} &= \text{MIN} (5 / (h^{0.5} * ((\alpha_{D03} * (1 - \alpha_{D03}))^{0.5} + 0.8 * l_{a,D03} / 2 / h * (1 / \alpha_{D03} - \alpha_{D03}^2)^{0.5}))) ; 1.0)\end{aligned}$$

$$\begin{aligned}R_{v,z,k,D03} &= \text{MIN} (A_{c,eff,D03} * k_{c,90} * f_{c,90,k} / b ; A_{w,D03} * k_{v,90,D03} * f_{v,k} / b) \\R_{v,z,d,D03} &= R_{v,z,k,D03} * k_{mod} / \gamma_M\end{aligned}$$

Mit: $k_{c,90} = 1;$ $f_{c,90,k} = 2.5 \text{ N/mm}^2;$ $f_{v,k} = 2.0 \text{ N/mm}^2$

Formeln Nachweise D03