



Little Falls Alloys

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HOW TO CALCULATE CORNER RADIUS and DIAGONAL

SQUARE WIRE

$$D_{\text{real}} = D_{\text{theoretical}} - 2x$$

$$x = d - R$$

$$x = R(\sqrt{2} - 1)$$

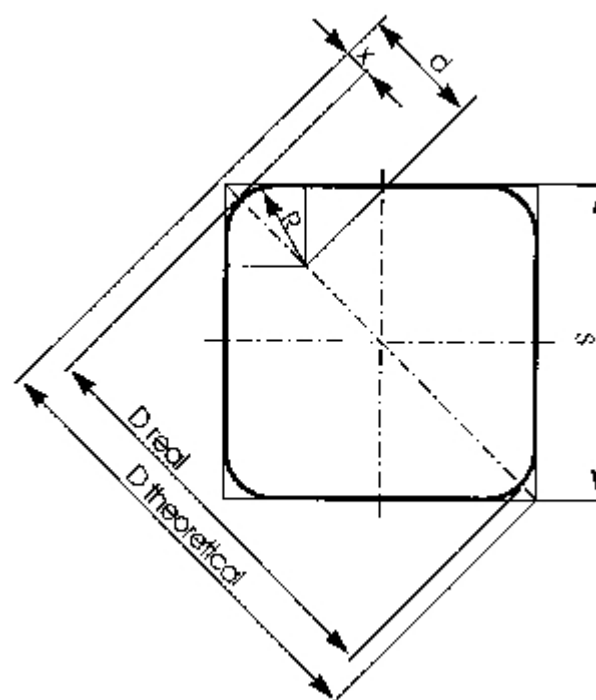
$$D_{\text{real}} = S\sqrt{2} - 2R(\sqrt{2} - 1)$$

$$D_{\text{real}} = 1.4142 S - 0.8284 R$$

This implies for determination of tolerance limits:

$$D_{\text{min}} = S_{\text{min}}\sqrt{2} - 0.8284 R_{\text{max}}$$

$$D_{\text{max}} = S_{\text{max}}\sqrt{2} - 0.8284 R_{\text{min}}$$



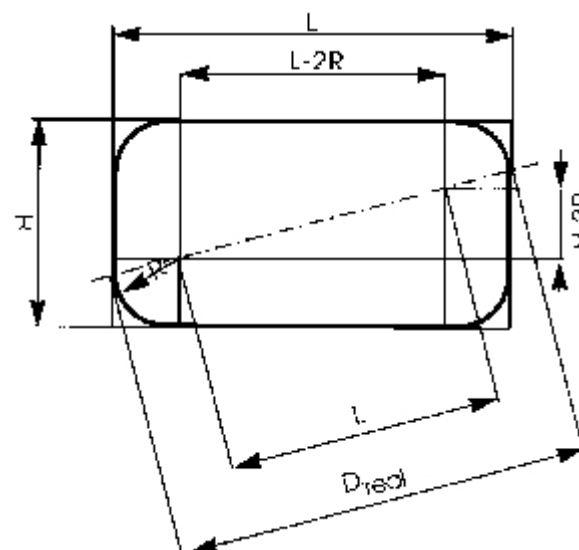
FLAT WIRE

$$D_{\text{real}} = 2R + \sqrt{(L - 2R)^2 + (H - 2R)^2}$$

This implies for determination of tolerance limits:

$$D_{\text{min}} = 2R_{\text{min}} + \sqrt{(L_{\text{max}} - 2R_{\text{min}})^2 + (H_{\text{max}} - 2R_{\text{min}})^2}$$

$$D_{\text{max}} = 2R_{\text{max}} + \sqrt{(L_{\text{min}} - 2R_{\text{max}})^2 + (H_{\text{min}} - 2R_{\text{max}})^2}$$



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