

## Fillet weld cross-sectional areas - z5 and z8

### General principle

For fillet weld with equal  $z$ ,  $A_{fw} = z^2/2$   
Comparing fillet weld areas,  $A_{fw} \propto z^2$

### For z5 and z8

$$\frac{z_8}{z_5} = \frac{8^2}{5^2} = \frac{64}{25} = 2.56$$

When welding, for welds of the same length, you have to deposit 2 1/2 times the weld metal to deposit for an 8mm leg-length weld compared to a 5mm leg-length weld.

For what it's worth, the linear ratio of 8 to 5 is 1.6