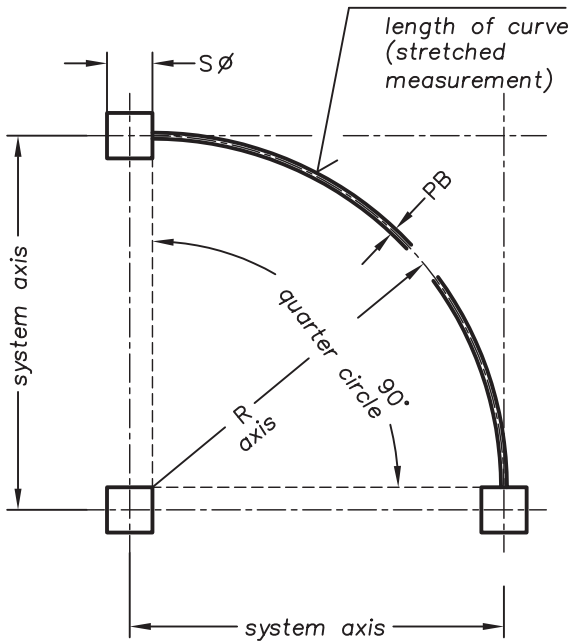


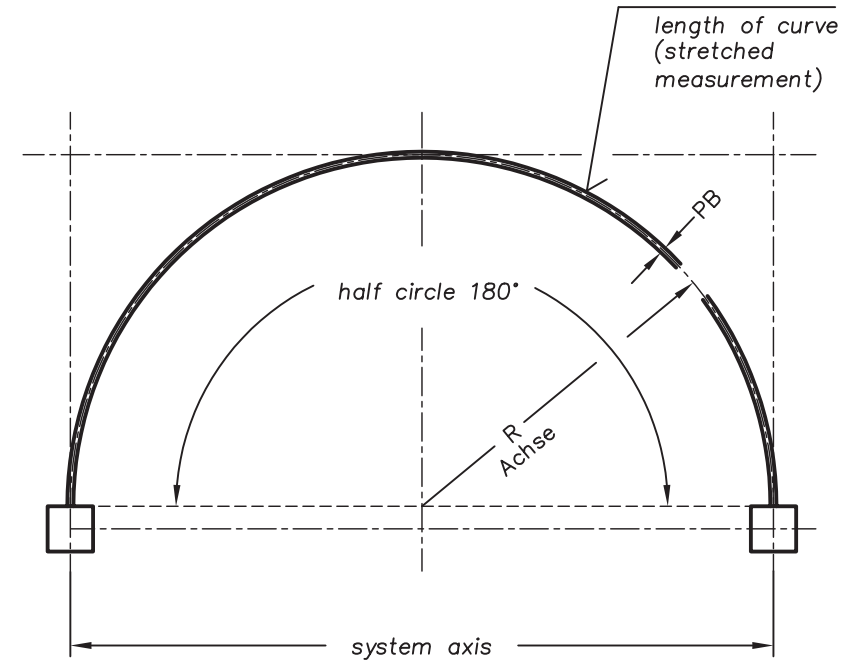
**Quarter circle**



**$R = \text{System axis} - 1/2 \text{ upright } \phi$**   
 **$\text{Length of curve} = \frac{(R + 1/2 \text{ PB}) \times 2 \times \text{Pi}}{4}$**

$S\phi = \text{diameter of upright}$   
 $\text{PB} = \text{width of profile}$   
 $\text{Pi} = 3.1416$

**Half circle**



**$R = 1/2 \text{ system axis}$**   
 **$\text{Length of curve} = \frac{(R + 1/2 \text{ PB}) \times 2 \times \text{Pi}}{2}$**