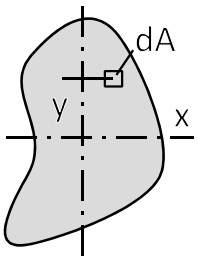
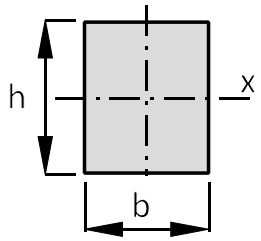
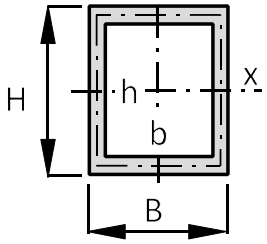
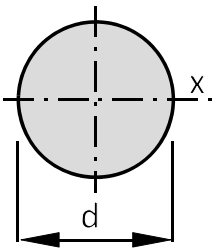
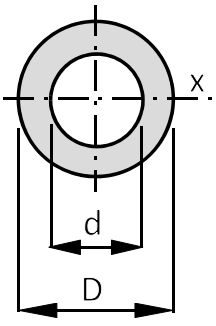
Buiging en torsie

Doorsnede	Buiging	Torsie
	$M_x = W_x \sigma_x \quad W_x = \frac{I_x}{y_{max}}$ $I_x = \int y^2 dA$ $\delta = \frac{ML^2}{2EI} \quad \varphi = \frac{ML}{EI}$	$T = W_t \tau \quad W_t = \frac{I_p}{r_{max}}$ $I_p = I_x + I_y$ $\varphi = \frac{TL}{GI_p} \quad G = \frac{E}{2(1+v)}$
	$I_x = \frac{1}{12} bh^3$ $W_x = \frac{1}{6} bh^2$	
	$I_x = \frac{1}{12}(BH^3 - bh^3)$ $W_x = \frac{1}{6}\frac{BH^3 - bh^3}{H}$	$\varphi = \frac{TL}{GJ} \quad J = \frac{4tA_m^2}{L_m}$ (1) $T = 2tA_m \tau$ $A_m = (B-t)(H-t)$ $L_m = 2(B-t+H-t)$
	$I_x = \frac{\pi}{64} d^4$ $W_x = \frac{\pi}{32} d^3$	$I_p = \frac{\pi}{32} d^4$ $W_t = \frac{\pi}{16} d^3$
	$I_x = \frac{\pi}{64}(D^4 - d^4)$ $W_x = \frac{\pi}{32}\frac{D^4 - d^4}{D}$	$I_p = \frac{\pi}{32}(D^4 - d^4)$ $W_t = \frac{\pi}{16}\frac{D^4 - d^4}{D}$

(1) Voor dunwandige doorsneden met wanddikte t

WWW.WERKTUIGBOUW.NL