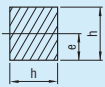
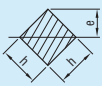
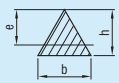
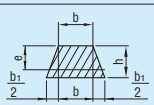
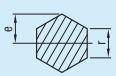
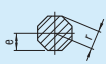
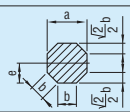
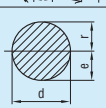
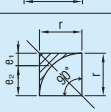
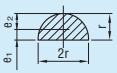
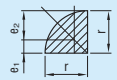
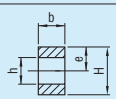
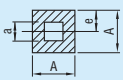
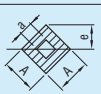
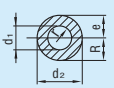
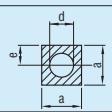
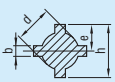
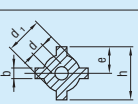
Cross section	Cross section area A	Distance of center of gravity e	Geometrical moment of inertia I	Cross section modulus Z=I/e
	bh	$\frac{h}{2}$	$\frac{bh^3}{12}$	$\frac{bh^2}{6}$
	h^2	$\frac{h}{2}$	$\frac{h^4}{12}$	$\frac{h^3}{6}$
	h^2	$\frac{h}{2}\sqrt{2}$	$\frac{h^4}{12}$	$0.1179\ h^3=\frac{\sqrt{2}}{12}h^3$
	$\frac{bh}{2}$	$\frac{2}{3}h$	$\frac{bh^3}{36}$	$\frac{bh^2}{24}$
	$(2b+b_1)\frac{h}{2}$	$\frac{1}{3}\times\frac{3b+2b_1}{2b+b_1}h$	$\frac{6b^2+6bb_1+b_1^2}{36(2b+b_1)}h^3$	$\frac{6b^2+6bb_1+b_1^2}{12(3b+2b_1)}h^2$
	$\frac{3\sqrt{3}}{2}r^2$ $=2.598\ r^2$	$\sqrt{\frac{3}{4}}r=0.866\ r$	$\frac{5\sqrt{3}}{16}r^4=0.5413\ r^4$	$\frac{5}{8}r^3$
		r		$\frac{5\sqrt{3}}{16}r^3=0.5413r^3$
	$2.828\ r^2$	$0.924\ r^2$	$\frac{1+2\sqrt{2}}{6}r^4$ $=0.6381\ r^4$	$0.6906r^3$
	$0.8284\ a^2$	$b=\frac{a}{1+\sqrt{2}}$ $=0.4142\ a$	$0.0547\ a^4$	$0.1095a^3$
	$\pi r^2=\frac{\pi d^2}{4}$	$\frac{d}{2}$	$\frac{\pi d^4}{64}=\frac{\pi r^4}{4}$ $=0.0491\ d^4$ $\fallingdotseq 0.05\ d^4$ $=0.7854\ r^4$	$\frac{\pi d^3}{32}=\frac{\pi r^3}{4}$ $=0.0982d^3$ $\fallingdotseq 0.1\ d^3$ $=0.7854\ r^3$
	$r^2\left(1-\frac{\pi}{4}\right)$ $=0.2146r^2$	e_1 $=0.2234\ r$ e_2 $=0.7766\ r$	$0.0075r^4$	$\frac{0.0075\ r^4}{e_2}$ $=0.00966r^3$ $\fallingdotseq 0.01r^3$

Cross section	Cross section area A	Distance of center of gravity e	Geometrical moment of inertia I	Cross section modulus $Z = I/e$
	πab	a	$\frac{\pi}{4}ba^3 = 0.7854\ ba^3$	$\frac{4}{\pi}ba^2 = 0.7854\ ba^2$
	$\frac{\pi}{2}r^2$	$e_1 = 0.4244\ r$ $e_2 = 0.5756\ r$	$\left(\frac{\pi}{8} - \frac{8}{9\pi}\right)r^4$ $= 0.1098\ r^4$	$Z_1 = 0.2587\ r^3$ $Z_2 = 0.1908\ r^3$
	$\frac{\pi}{4}r^2$	$e_1 = 0.4244\ r$ $e_2 = 0.5756\ r$	$0.055\ r^4$	$Z_1 = 0.1296\ r^3$ $Z_2 = 0.0956\ r^3$
	$b(H-h)$	$\frac{H}{2}$	$\frac{b}{12}(H^3 - h^3)$	$\frac{b}{6H}(H^3 - h^3)$
	$A^2 - a^2$	$\frac{A}{2}$	$\frac{A^4 - a^4}{12}$	$\frac{1}{6}\frac{A^4 - a^4}{A}$
	$A^2 - a^2$	$\frac{A}{2}\sqrt{2}$	$\frac{A^4 - a^4}{12}$	$\frac{A^4 - a^4}{12A}\sqrt{2}$ $= \frac{0.1179(A^4 - a^4)}{A}$
	$\frac{\pi}{4}(d_2^2 - d_1^2)$	$\frac{d_2}{2}$	$\frac{\pi}{64}(d_2^4 - d_1^4)$ $= \frac{\pi}{4}(R^4 - r^4)$	$\frac{\pi}{32}\left(\frac{d_2^4 - d_1^4}{d_2}\right)$ $= \frac{\pi}{4} \times \frac{R^4 - r^4}{R}$
	$a^2 - \frac{\pi d^2}{4}$	$\frac{a}{2}$	$\frac{1}{12}\left(a^4 - \frac{3\pi}{16}d^4\right)$	$\frac{1}{6a}\left(a^4 - \frac{3\pi}{16}d^4\right)$
	$2b(h-d)$ $+\frac{\pi}{4}d^2$	$\frac{h}{2}$	$\frac{1}{12}\left\{\frac{3\pi}{16}d^4 + b(h^3 - d^3) + b^3(h-d)\right\}$	$\frac{1}{6h}\left\{\frac{3\pi}{16}d^4 + b(h^3 - d^3) + b^3(h-d)\right\}$
	$2b(h-d) +$ $\frac{\pi}{4}(d_1^2 - d^2)$	$\frac{h}{2}$	$\frac{1}{12}\left\{\frac{3\pi}{16}(d_1^4 - d^4) + b(h^3 - d_1^3) + b^3(h-d_1)\right\}$	$\frac{1}{6h}\left\{\frac{3\pi}{16}(d_1^4 - d^4) + b(h^3 - d_1^3) + b^3(h-d_1)\right\}$