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Square:
$$I_{x} = \frac{1}{3}b^{4} = \frac{1}{3}(80)^{4} = 13.65(10^{6}) \text{ mm}^{4}$$

Dimen. in mm

- χ Quarter - circle: $a = \frac{4r}{3\pi} = \frac{4(60)}{3\pi}$

= 25.46 mm

$$d = 80 - 25.46 = 54.54 \text{ mm}$$

$$I_{x} = I_{x} + Ad^{2} = I_{x}, -Aa^{2} + Ad^{2}$$

$$= \frac{-1}{4} \frac{\pi r^{4}}{4} + \frac{\pi r^{2}}{4} (d^{2} - a^{2}) = -\frac{\pi r^{2}(r^{2} + d^{2} - a^{2})}{4}$$

$$= -\frac{\pi r(60)^{2}}{4} \left[\frac{60^{2}}{4} + (54.54)^{2} - (25.46)^{2} \right]$$

$$= -9.120(10^{6}) \text{ mm}^{4}$$
Total $I_{x} = (13.65 - 9.120)(10^{6}) = 4.53(10^{6}) \text{ mm}^{4}$

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