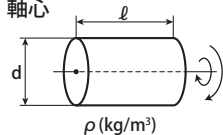
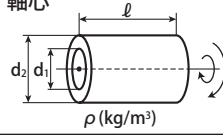
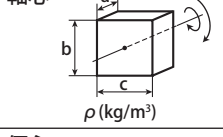
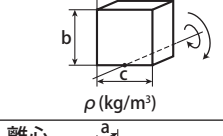
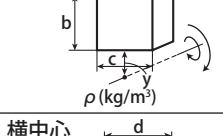
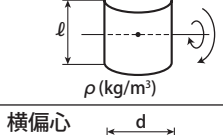
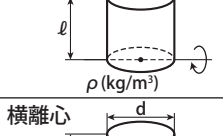
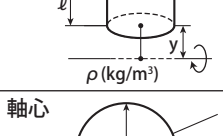
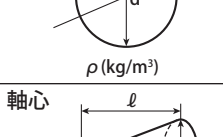
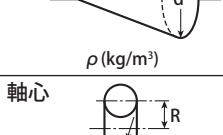
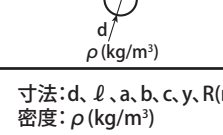


# 慣性モーメント・GD<sup>2</sup>の求め方

## ●慣性モーメント・GD<sup>2</sup>の求め方

回転軸の位置	形状	質量 M(kg)	慣性モーメント J(kg・m <sup>2</sup> )	GD <sup>2</sup> GD <sup>2</sup> (kgf・m <sup>2</sup> )
軸心 	円柱	$\frac{1}{4} \cdot \pi \cdot d^2 \cdot l \cdot \rho$	$\frac{1}{32} \cdot \pi \cdot d^4 \cdot l \cdot \rho$	$\frac{1}{8} \cdot \pi \cdot d^4 \cdot l \cdot \rho$
軸心 	円筒	$\frac{1}{4} \cdot \pi \cdot (d_1^2 - d_2^2) \cdot l \cdot \rho$	$\frac{1}{32} \cdot \pi \cdot (d_1^4 - d_2^4) \cdot l \cdot \rho$	$\frac{1}{8} \cdot \pi \cdot (d_1^4 - d_2^4) \cdot l \cdot \rho$
軸心 	四角	$a \cdot b \cdot c \cdot \rho$	$\frac{a \cdot b \cdot c}{12} \cdot (b^2 + c^2) \cdot \rho$	$\frac{a \cdot b \cdot c}{3} \cdot (b^2 + c^2) \cdot \rho$
偏心 	四角	$a \cdot b \cdot c \cdot \rho$	$\frac{a \cdot b \cdot c}{12} \cdot (4b^2 + c^2) \cdot \rho$	$\frac{a \cdot b \cdot c}{3} \cdot (4b^2 + c^2) \cdot \rho$
離心 	四角	$a \cdot b \cdot c \cdot \rho$	$\frac{a \cdot b \cdot c}{12} \cdot (4b^2 + c^2 + 12b \cdot y + 12y^2) \cdot \rho$	$\frac{a \cdot b \cdot c}{3} \cdot (4b^2 + c^2 + 12b \cdot y + 12y^2) \cdot \rho$
横中心 	円柱	$\frac{1}{4} \cdot \pi \cdot d^2 \cdot l \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{192} \cdot (4l^2 + 3d^2) \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{48} \cdot (4l^2 + 3d^2) \cdot \rho$
横偏心 	円柱	$\frac{1}{4} \cdot \pi \cdot d^2 \cdot l \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{192} \cdot (16l^2 + 3d^2) \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{48} \cdot (16l^2 + 3d^2) \cdot \rho$
横離心 	円柱	$\frac{1}{4} \cdot \pi \cdot d^2 \cdot l \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{192} \cdot (16l^2 + 3d^2 + 48y \cdot l + 48y^2) \cdot \rho$	$\frac{\pi \cdot d^2 \cdot l}{48} \cdot (16l^2 + 3d^2 + 48y \cdot l + 48y^2) \cdot \rho$
軸心 	球	$\frac{1}{6} \cdot \pi \cdot d^3 \cdot \rho$	$\frac{1}{60} \cdot \pi \cdot d^5 \cdot \rho$	$\frac{1}{15} \cdot \pi \cdot d^5 \cdot \rho$
軸心 	円錐	$\frac{1}{12} \cdot \pi \cdot d^2 \cdot l \cdot \rho$	$\frac{1}{160} \cdot \pi \cdot d^4 \cdot l \cdot \rho$	$\frac{1}{40} \cdot \pi \cdot d^4 \cdot l \cdot \rho$
軸心 	トーラス	$\frac{1}{2} \cdot \pi^2 \cdot R \cdot d^2 \cdot \rho$	$\frac{\pi^2 \cdot R \cdot d^2}{8} \cdot (4R^2 + \frac{3d^2}{4}) \cdot \rho$	$\frac{\pi^2 \cdot R \cdot d^2}{2} \cdot (4R^2 + \frac{3d^2}{4}) \cdot \rho$

寸法: d、l、a、b、c、y、R(m)  
密度: ρ(kg/m<sup>3</sup>)