2.1

1.

2.

3.

1. YMC

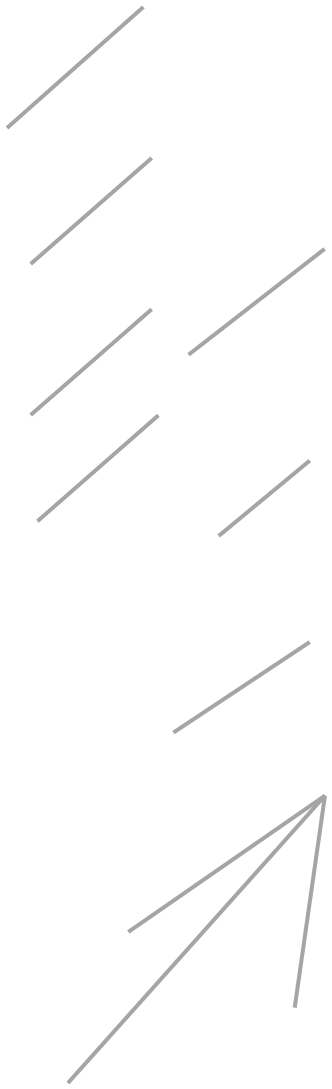
   JCW-1 1kg ;

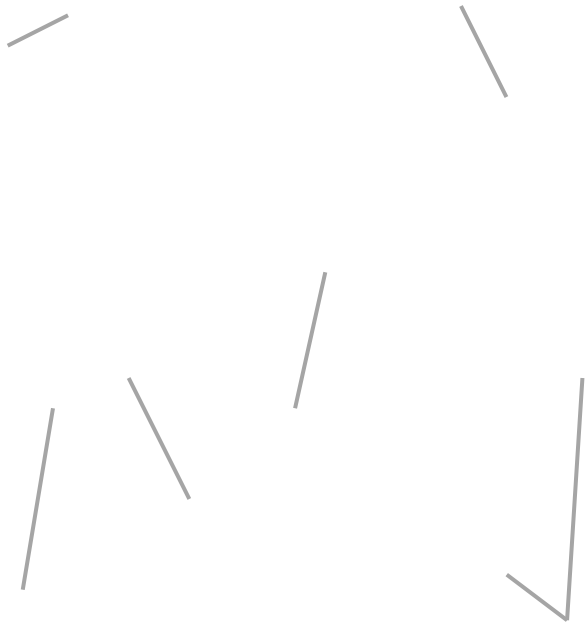
2. 0~25mm ' ¾ 0.004 mm ;

3. 0~150mm ' ¾ 0.02 mm ;

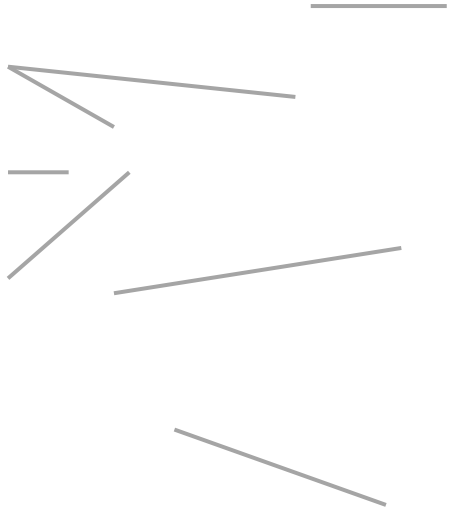
4. ' ¾ 0.5 mm

YMC





JCW-1



0~150mm

' ¾ 0.02 **mm**

0~25mm

' ¾ 0.004 **mm**

1

$$Y \quad \frac{F/A}{\Delta L/L} \quad \frac{FL}{A\Delta L} \quad \frac{4FL}{\pi D^2 \Delta L} \quad \frac{4mgL}{\pi D^2 \Delta L}$$

ΔL mg

1kg ΔL ΔL

2

$$\operatorname{tg}\alpha \approx \frac{\Delta L}{d_1} \qquad \alpha \approx 2\alpha \qquad \operatorname{tan} 2\alpha \approx \frac{l_1 - l_0}{d_2} \qquad \frac{\Delta l}{d_2} \qquad \alpha$$

$$\Delta l \quad d_2 2\alpha \quad \frac{2d_2}{d_1} \quad L \qquad '$$

$$Y \quad \frac{4mgL}{\pi D^2 \Delta L}$$

$$Y \quad \frac{8gLd_2}{\pi D^2 d_1} \quad \frac{m}{\Delta l}$$

1.

(1)

(2)

(3)

2.

(1)

7

I_i

7

I_7'

I_i'

2-2

(2) L

d_2

(3)

d_1

(4) D **6**

(2) (3) (4) **2-3**

3.

(1)

$$Y \quad \frac{8gLd_2}{\pi D^2 d_1} \frac{\sim m}{'l} \qquad 'l \quad \frac{8Ld_2 g}{\pi D^2 d_1 Y} m \quad km$$

$$k \quad \frac{8Ld_2 g}{\pi D^2 d_1 Y} \qquad 'l$$

$$k$$

$$\overline{Y} \quad \frac{8Ld_2 g}{\pi \overline{D}^2 d_1 k}$$

(2)

$$U_Y \quad \bar{Y} \sqrt{\frac{U_L}{L}^2 + \frac{U_{d_1}}{d_1}^2 + \frac{U_{d_2}}{d_2}^2 + \frac{2U_D}{\bar{D}}^2 + \frac{U_k}{k}^2}$$

(3)

$$Y \quad \bar{Y} \quad U_Y \quad \mathrm{N/m^{-2}}$$

1. $I_i \quad I_i'$

2.

3.

1.

2.

3.

L U_L 0.5 mm

d_2 U_{d_2} 0.5 mm

d_1 U_{d_1} 0.02 mm

D $U_D \sqrt{u_{AD}^2 \quad u_{BD}^2}$

$$u_{AD} \sqrt{\frac{\sum_{i\ 1}^{6} D_i \quad \bar{D}^{\ 2}}{6 \quad 1}}$$

u_{BD} 0.004 mm

k k

$$U_k \quad S_k \quad \frac{1}{\sqrt{7\ X^2 \quad \bar{x}^{\,2}}} S_{'l}$$

$$S_{'l} \qquad 'l_i$$

$$S_{'l} \quad \sqrt{\frac{1}{7 \quad 2} \sum_{i\ 1}^{7} l \quad km^{\,2}} \qquad '$$

Y

$$U_Y \quad \bar{Y} \sqrt{\frac{U_L}{L}^2 + \frac{U_{d_1}}{d_1}^2 + \frac{U_{d_2}}{d_2}^2 + \frac{2U_D}{\bar{D}}^2 + \frac{U_k}{k}^2}$$