

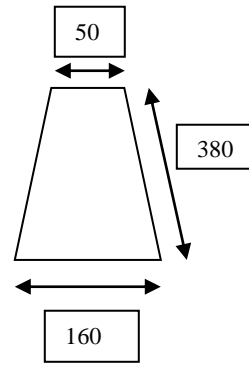


Pharma Devils

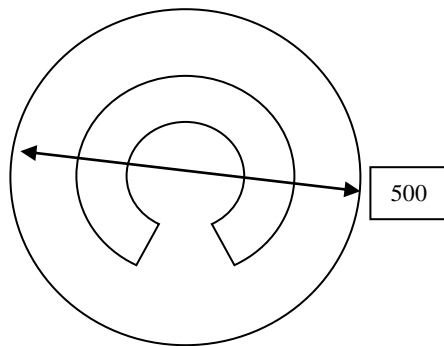
PHARMA DEVILS
QUALITY ASSURANCE DEPARTMENT

DRAWING No.:

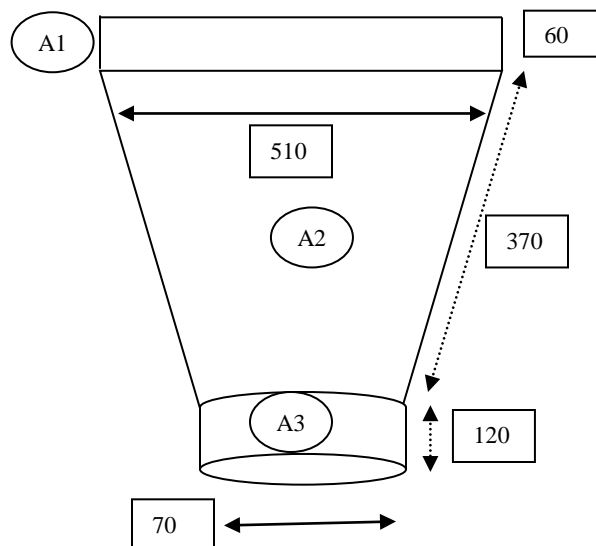
SURFACE AREA CALCULATION SHEET (VIBRO SIFTER)



Channel



Vibrating plate

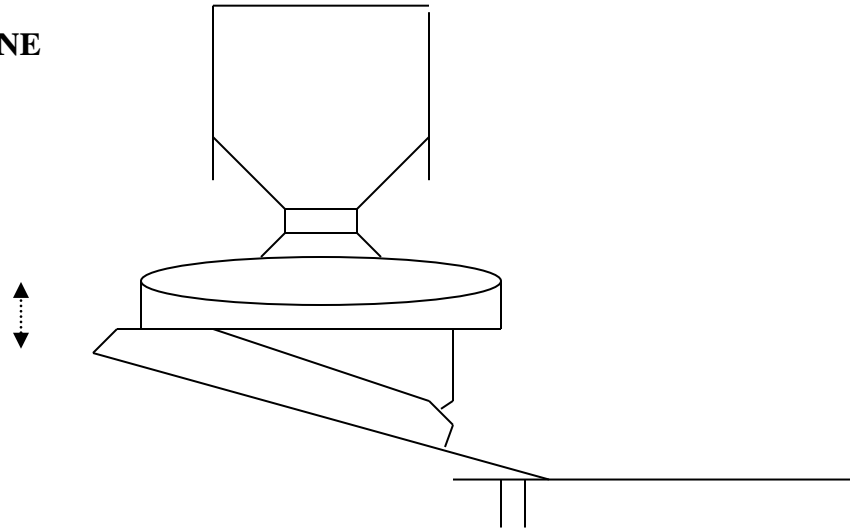


Hopper



SURFACE AREA CALCULATION SHEET (VIBRO SIFTER)

STRIP MACHINE



Surface Area of Strip Packing Machine

Surface Area of Channel

$$\frac{D1 + D2}{2} \times H$$
$$= \frac{160 + 50}{2} \times 380$$
$$= 1570.87 \text{ inch}^2$$

Surface Area of Vibrating Plate

Diameter= 500 r=250

Surface area = $\pi \times r^2$

$$= \pi \times 250^2$$
$$= 7726 \text{ inch}^2$$

Surface Area of Hopper

$$A1 = (2 \times \pi \times r \times h) + (2 \times \pi \times r^2)$$
$$= (2 \times \pi \times 255 \times 60) + (2 \times \pi \times 255^2)$$
$$= 19859.90 \text{ inch}^2$$



SURFACE AREA CALCULATION SHEET (VIBRO SIFTER)

$$\begin{aligned}A2 &= \frac{D1 + D2}{2} \times H \\ &= \frac{510 + 70}{2} \times 320 \\ &= 3653.5 \text{ inch}^2\end{aligned}$$

$$\begin{aligned}A3 &= (2 \times \pi \times r \times h) + (2 \times \pi \times r^2) \\ &= (2 \times \pi \times 35 \times 120) + (2 \times \pi \times 35^2) \\ &= 1341.40 \text{ inch}^2\end{aligned}$$

$$\begin{aligned}\text{Surface Area of Hopper} &= A1 + A2 + A3 \\ &= 19859.90 + 3653.5 + 1341.40 \\ &= 24854.8 \text{ inch}^2\end{aligned}$$

Surface area of strip packing machine

$$\begin{aligned}&= \text{Area of channel} + \text{Area of vibrating plate} + \text{Area of hopper} \\ &= 1570.87 + 7726 + 24854.8 \\ &= 34151.67 \text{ inch}^2\end{aligned}$$

Surface area of trapezium shape

Height = 43cm B1 = 45cm B2 = 15cm

$$\text{Surface Area} = \frac{B1 + B2}{2} \times H$$

$$= \frac{45 + 15}{2} \times 43 = 1290 \text{ cm}^2$$

$$= 199.95 \text{ inch}^2$$

Surface area of cylindrical shape

Length = 12cm Diameter = 15cm

$$\text{Surface area} = (2 \times \pi \times r \times h) + (2 \times \pi \times r^2)$$

$$= (2 \times 3.14 \times 7.5 \times 12) + (2 \times 3.14 \times 7.5 \times 7.5)$$

$$= 565.2 + 353.25 = 918.45 \text{ cm}^2$$

$$= 142.36 \text{ inch}^2$$



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Total surface area of Hopper= $199.95+142.36= 342.3 \text{ inch}^2$

Surface Area of Strip Packing Machine

= $49.6 +381.57 +342.3=773.47 \text{ inch}^2$