

PORT TO THROAT RATIO =2 CALCULATIONS

Port to throat ratio ≤ 2

$$\begin{aligned} \text{Port to throat ratio} &= \frac{\text{cross sectional area of port}}{\text{cross sectional area of throat}} \\ &= \frac{D_p^2}{D_t^2} \end{aligned}$$

Diameter of the throat = 12mm

Using a port to throat ratio =2

$$\begin{aligned} D_p^2 &= D_t^2 \times \text{port to throat ratio} \\ &= 2 \times 12^2 \end{aligned}$$

$$D_p = 16.97\text{mm}$$

Approximately $D_p = 17\text{mm}$