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# Bundle Diameter in Heat Exchanger Formulas

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# List of 10 Bundle Diameter in Heat Exchanger Formulas

## Bundle Diameter in Heat Exchanger

### 1) Bundle Diameter for Eight Tube Pass Square Pitch in Heat Exchanger



$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.0331} \right)^{\frac{1}{2.643}}$$

[Open Calculator !\[\]\(de95854c7ee024cfadc48187bbb781b2\_img.jpg\)](#)

$$\text{ex } 621.9093\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.0331} \right)^{\frac{1}{2.643}}$$

### 2) Bundle Diameter for Eight Tube Pass Triangular Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.0365} \right)^{\frac{1}{2.675}}$$

[Open Calculator !\[\]\(6a9b39b98eb945faa14c645ec99e4eaa\_img.jpg\)](#)

$$\text{ex } 575.1534\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.0365} \right)^{\frac{1}{2.675}}$$



### 3) Bundle Diameter for Four Tube Pass Square Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.158} \right)^{\frac{1}{2.263}}$$

[Open Calculator !\[\]\(cbe80b694ebd74fcfe136a095b608235\_img.jpg\)](#)

$$\text{ex } 558.9682\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.158} \right)^{\frac{1}{2.263}}$$

### 4) Bundle Diameter for Four Tube Pass Triangular Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.175} \right)^{\frac{1}{2.285}}$$

[Open Calculator !\[\]\(3e2231b1ad3ca8da8658228c00dd08e0\_img.jpg\)](#)

$$\text{ex } 517.4497\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.175} \right)^{\frac{1}{2.285}}$$

### 5) Bundle Diameter for One Tube Pass Square Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.215} \right)^{\frac{1}{2.207}}$$

[Open Calculator !\[\]\(0d5ec72f61334709c3fc9450209b754f\_img.jpg\)](#)

$$\text{ex } 529.5655\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.215} \right)^{\frac{1}{2.207}}$$



## 6) Bundle Diameter for One Tube Pass Triangular Pitch in Heat Exchanger



$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.319} \right)^{\frac{1}{2.142}}$$

Open Calculator

$$\text{ex } 487.124\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.319} \right)^{\frac{1}{2.142}}$$

## 7) Bundle Diameter for Six Tube Pass Square Pitch in Heat Exchanger



$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.0402} \right)^{\frac{1}{2.617}}$$

Open Calculator

$$\text{ex } 597.7\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.0402} \right)^{\frac{1}{2.617}}$$

## 8) Bundle Diameter for Six Tube Pass Triangular Pitch in Heat Exchanger



$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.0743} \right)^{\frac{1}{2.499}}$$

Open Calculator

$$\text{ex } 549.847\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.0743} \right)^{\frac{1}{2.499}}$$



## 9) Bundle Diameter for Two Tube Pass Square Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.156} \right)^{\frac{1}{2.291}}$$

Open Calculator 

$$\text{ex } 539.3967\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.156} \right)^{\frac{1}{2.291}}$$

## 10) Bundle Diameter for Two Tube Pass Triangular Pitch in Heat Exchanger

$$\text{fx } D_{\text{Bundle}} = \text{Dia}_O \cdot \left( \frac{N_T}{0.249} \right)^{\frac{1}{2.207}}$$

Open Calculator 

$$\text{ex } 495.4837\text{mm} = 19.2\text{mm} \cdot \left( \frac{325}{0.249} \right)^{\frac{1}{2.207}}$$



## Variables Used

- **$D_{\text{Bundle}}$**  Bundle Diameter (Millimeter)
- **$\text{Dia}_O$**  Pipe Outer Diameter in Bundle Diameter (Millimeter)
- **$N_T$**  Number of Tubes in Bundle Diameter



## Constants, Functions, Measurements used

- **Measurement:** **Length** in Millimeter (mm)

*Length Unit Conversion* 



## Check other formula lists

- [Basic Formulas Of Heat Exchanger Designs](#) 
- [Bundle Diameter in Heat Exchanger Formulas](#) 
- [Heat Transfer Coefficient in Heat Exchangers Formulas](#) 

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