Important Bundle Diameter in Heat Exchanger Formulas PDF



Formulas Examples with Units

List of 12

Important Bundle Diameter in Heat Exchanger **Formulas**

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

Evaluate Formula (

Formula Example with Units
$$D_{Bundle} = Dia_{0} \cdot \left(\frac{N_{T}}{0.0331}\right)^{\frac{1}{2.643}} \qquad 621.9093 \, \text{mm} = 19.2 \, \text{mm} \cdot \left(\frac{325}{0.0331}\right)^{\frac{1}{2.643}}$$

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

Evaluate Formula (

Formula

$$D_{Bundle} = Dia_{0} \cdot \left(\frac{N_{T}}{0.0365}\right)^{\frac{1}{2.675}}$$

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

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

Evaluate Formula (

Evaluate Formula [

Evaluate Formula C

Formula

$$D_{Bundle} = Dia_{0} \cdot \left(\frac{N_{T}}{0.158}\right)^{\frac{1}{2.263}}$$

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

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

 $D_{Bundle} = Dia_{O} \cdot \left(\frac{N_{T}}{0.175}\right)^{\frac{1}{2.285}} \left| \quad \left| \quad 517.4497_{mm} \right| = 19.2_{mm} \cdot \left(\frac{325}{0.175}\right)^{\frac{1}{2.285}} \right|$

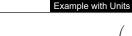
5) Bundle Diameter for One Tube Pass Square Pitch in Heat Exchanger Formula 🕝

Formula









 $D_{Bundle} = Dia_{0} \cdot \left(\frac{N_{T}}{0.319}\right)^{\frac{1}{2.142}} = 487.124_{mm} = 19.2_{mm} \cdot \left(\frac{325}{0.319}\right)^{\frac{1}{2.142}}$

7) Bundle Diameter for Six Tube Pass Square Pitch in Heat Exchanger Formula () Evaluate Formula (



Example with Units

Evaluate Formula (

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



Example with Units

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



Example with Units

Evaluate Formula (

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

Formula
$$D_{Bundle} = Dia_0 \cdot \left(\frac{N_T}{0.249}\right)^{\frac{1}{2.207}}$$

Example with Units

Evaluate Formula (

 $D_{Bundle} = Dia_{O} \cdot \left(\frac{N_{T}}{0.249}\right)^{\frac{1}{2.207}} = 495.4837 \, \text{mm} = 19.2 \, \text{mm} \cdot \left(\frac{325}{0.249}\right)^{\frac{1}{2.207}}$

11) Bundle Diameter given Number of Tubes in Centre Row and Pitch Formula 🕝

Formula $\overline{D_{Bundle} = N_r \cdot P_{Tube}} \quad \boxed{552_{mm} = 24 \cdot 23_{mm}}$

Example with Units

Evaluate Formula

12) Bundle Diameter given Shell Diameter and Shell Clearance Formula 🕝

Formula

Example with Units

Evaluate Formula

 $D_{Bundle} = D_{s} - Shell_{clearance}$

 $495 \, \text{mm} = 510 \, \text{mm} - 15 \, \text{mm}$

Variables used in list of Bundle Diameter in Heat Exchanger Formulas above

- D_{Bundle} Bundle Diameter (Millimeter)
- **D**_s Shell Diameter (Millimeter)
- Dia_O Pipe Outer Diameter in Bundle Diameter (Millimeter)
- N_r Number of Tubes in Vertical Tube Row
- N_T Number of Tubes in Bundle Diameter
- P_{Tube} Tube Pitch (Millimeter)
- Shell_{clearance} Shell Clearance (Millimeter)

Constants, Functions, Measurements used in list of Bundle Diameter in Heat Exchanger Formulas above

Measurement: Length in Millimeter (mm)
 Length Unit Conversion

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- Kalculator C

• \overline Simple fraction 🕝

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