



Bundle Diameter in Heat Exchanger Formulas

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Examples!

Conversions!

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List of 12 Bundle Diameter in Heat Exchanger Formulas

Bundle Diameter in Heat Exchanger &

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

$$D_{
m Bundle} = {
m Dia}_{
m O} \cdot \left(rac{N_{
m T}}{0.0331}
ight)^{rac{1}{2.643}}$$

Open Calculator

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

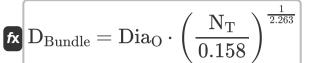
$$D_{
m Bundle} = {
m Dia}_{
m O} \cdot \left(rac{
m N}_{
m T}}{0.0365}
ight)^{rac{1}{2.675}}$$

$$ext{ex} \left[575.1534 ext{mm} = 19.2 ext{mm} \cdot \left(rac{325}{0.0365}
ight)^{rac{1}{2.675}}
ight]$$





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



Open Calculator 🛂

$$\mathbf{ex} \ 558.9682 \mathrm{mm} = 19.2 \mathrm{mm} \cdot \left(rac{325}{0.158}
ight)^{rac{1}{2.263}}$$

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

$$ag{D_{Bundle} = Dia_O \cdot \left(rac{N_T}{0.175}
ight)^{rac{1}{2.285}}}$$

Open Calculator

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

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

$$D_{
m Bundle} = {
m Dia}_{
m O} \cdot \left(rac{N_{
m T}}{0.215}
ight)^{rac{1}{2.207}}$$

Open Calculator 🗗

$$ext{ex} \left[529.5655 ext{mm} = 19.2 ext{mm} \cdot \left(rac{325}{0.215}
ight)^{rac{1}{2.207}}
ight]$$



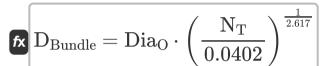
6) Bundle Diameter for One Tube Pass Triangular Pitch in Heat Exchanger

 $D_{
m Bundle} = {
m Dia}_{
m O} \cdot \left(rac{N_{
m T}}{0.319}
ight)^{rac{1}{2.142}}$

Open Calculator 🖸

$$ext{ex} ext{ } 487.124 ext{mm} = 19.2 ext{mm} \cdot \left(rac{325}{0.319}
ight)^{rac{1}{2.142}}$$

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



Open Calculator 🗗

$$ext{ex} 597.7 ext{mm} = 19.2 ext{mm} \cdot \left(rac{325}{0.0402}
ight)^{rac{1}{2.617}}$$

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

$$ag{D_{
m Bundle} = {
m Dia}_{
m O} \cdot \left(rac{N_{
m T}}{0.0743}
ight)^{rac{1}{2.499}}}$$

Open Calculator

$$ext{ex} 549.847 ext{mm} = 19.2 ext{mm} \cdot \left(rac{325}{0.0743}
ight)^{rac{1}{2.499}}$$



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

 $D_{
m Bundle} = {
m Dia_O} \cdot \left(rac{N_{
m T}}{0.156}
ight)^{rac{1}{2.291}}$

Open Calculator 🗗

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

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

 $ag{D_{Bundle} = Dia_O \cdot \left(rac{N_T}{0.249}
ight)^{rac{1}{2.207}}}$

Open Calculator

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

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

 $au ig| \mathrm{D_{Bundle}} = \mathrm{N_r} \cdot \mathrm{P_{Tube}} ig|$

Open Calculator 🗗

 $\boxed{\texttt{552mm} = 24 \cdot 23 \texttt{mm}}$

12) Bundle Diameter given Shell Diameter and Shell Clearance

fx $\overline{\mathrm{D_{Bundle}} = \mathrm{D_{s} - Shell_{clearance}}}$

Open Calculator





Variables Used

- D_{Bundle} Bundle Diameter (Millimeter)
- **D**_s Shell Diameter (Millimeter)
- Dia 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

• 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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