



# Diameter of Bushed Pin Flexible Coupling Components Formulas

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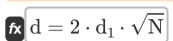




## List of 12 Diameter of Bushed Pin Flexible Coupling Components Formulas

# Diameter of Bushed Pin Flexible Coupling Components 🗗

1) Diameter of Driving Shaft of Coupling given Diameter of Pin



Open Calculator

$$= 34.29286 \mathrm{mm} = 2 \cdot 7 \mathrm{mm} \cdot \sqrt{6}$$

2) Diameter of Driving Shaft of Coupling given Length of Hub of Bushed Pin Coupling

fx 
$$d = \frac{l_h}{1.5}$$

Open Calculator 🗗

$$= 26.66667 \text{mm} = \frac{40 \text{mm}}{1.5}$$

3) Diameter of Driving Shaft of Coupling given Outside Diameter of Hub of Bushed Pin Coupling

$$\mathbf{fx} = rac{\mathrm{d_h}}{2}$$

Open Calculator 🗗

$$\boxed{27.5 \text{mm} = \frac{55 \text{mm}}{2}}$$





## 4) Diameter of Driving Shaft of Coupling given Pitch Circle Diameter of Pins

fx  $d = \frac{\mathrm{Dp_{pins}}}{3}$ 

Open Calculator

 $\boxed{\mathbf{ex}} 40 \mathrm{mm} = \frac{120 \mathrm{mm}}{3}$ 

## 5) Diameter of Driving Shaft of Coupling given Thickness of Output Flange

fx  $d=2\cdot t_{of}$ 

Open Calculator

 $27 \text{mm} = 2 \cdot 13.5 \text{mm}$ 

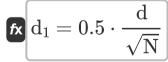
## 6) Diameter of Driving Shaft of Coupling given Thickness of Protective Rim

fx  $d=4\cdot t_1$ 

Open Calculator

 $27.2 \text{mm} = 4 \cdot 6.8 \text{mm}$ 

#### 7) Diameter of Pin of Coupling



 $= 5.511352 \mathrm{mm} = 0.5 \cdot \frac{27 \mathrm{mm}}{\sqrt{6}}$ 





## 8) Outer Diameter of Bush in Bushed Pin Coupling given Force

 $\left| \mathbf{r} \right| \mathbf{D}_{\mathrm{b}} = rac{\mathbf{P}}{\mathbf{l}_{\mathrm{b}} \cdot \mathbf{p}_{\mathrm{a}}}$ 

Open Calculator 🗗

ex  $33.98847 \mathrm{mm} = \frac{1150 \mathrm{N}}{33.5 \mathrm{mm} \cdot 1.01 \mathrm{N/mm^2}}$ 

## 9) Outer Diameter of Bush in Bushed Pin Coupling given Torque and Effective Length

 $D_{b} = 2 \cdot rac{M_{t}}{p_{a} \cdot N \cdot Dp_{pins} \cdot l_{b}}$ 

Open Calculator 🗗

 $= 2 \cdot \frac{397500 \text{N*mm}}{1.01 \text{N/mm}^2 \cdot 6 \cdot 120 \text{mm} \cdot 33.5 \text{mm}}$ 

## 10) Outside Diameter of Hub of Bushed pin Coupling given Diameter of Driving Shaft

fx  $\mathrm{d_h} = 2 \cdot \mathrm{d}$ 

Open Calculator

## 11) Pitch Circle Diameter of Bushes or Pins of Coupling

 $ext{Dp}_{ ext{pins}} = rac{2 \cdot ext{M}_{ ext{t}}}{ ext{N} \cdot ext{P}}$ 

Open Calculator 🗗

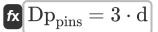
 $= 115.2174 \text{mm} = \frac{2 \cdot 397500 \text{N*mm}}{6 \cdot 1150 \text{N}}$ 







### 12) Pitch Circle Diameter of Pins of Coupling



Open Calculator 🗗

 $\texttt{ex} \ 81 \text{mm} = 3 \cdot 27 \text{mm}$ 



#### Variables Used

- d Diameter of Driving Shaft for Coupling (Millimeter)
- **d**<sub>1</sub> Diameter of Pin of Coupling (*Millimeter*)
- **D**<sub>b</sub> Outer Diameter of Bush for Coupling (Millimeter)
- d<sub>h</sub> Outside Diameter of Hub of Coupling (Millimeter)
- **Dp**pins Pitch Circle Diameter of Pins of Coupling (Millimeter)
- In Effective Length of Bush of Coupling (Millimeter)
- In Length of Hub for Coupling (Millimeter)
- M<sub>t</sub> Torque Transmitted by Coupling (Newton Millimeter)
- N Number of Pins in Coupling
- P Force on each Rubber Bush or Pin of Coupling (Newton)
- p<sub>a</sub> Intensity of Pressure bw Flange & Bush of Coupling (Newton per Square Millimeter)
- t<sub>1</sub> Thickness of Protecting Rim for Coupling (Millimeter)
- t<sub>of</sub> Thickness of Output Flange of Coupling (Millimeter)





#### Constants, Functions, Measurements used

- Function: sqrt, sqrt(Number)
   Square root function
- Measurement: Length in Millimeter (mm)

  Length Unit Conversion
- Measurement: Pressure in Newton per Square Millimeter (N/mm²)

  Pressure Unit Conversion
- Measurement: Force in Newton (N)
  Force Unit Conversion
- Measurement: Torque in Newton Millimeter (N\*mm)
   Torque Unit Conversion





#### **Check other formula lists**

- Design Parameters Formulas Formulas Formulas
- Diameter of Bushed Pin Flexible Coupling Components

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