



# 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



fx 
$$d=2\cdot d_1\cdot \sqrt{N}$$

Open Calculator

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

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

$$\mathbf{f} \mathbf{x} d = \frac{l_h}{1.5}$$

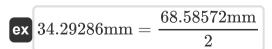
Open Calculator 2

 $= 34.26667 \text{mm} = \frac{51.4 \text{mm}}{1.5}$ 

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

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

Open Calculator 2







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

 $\mathbf{f} \mathbf{x} d = \frac{\mathrm{D_p}}{2}$ 

Open Calculator

 $= \frac{34.29287 \text{mm}}{3} = \frac{102.8786 \text{mm}}{3}$ 

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

fx  $d=2\cdot t_o$ 

Open Calculator

 $34.3 \text{mm} = 2 \cdot 17.15 \text{mm}$ 

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

fx  $d=4\cdot t_1$ 

Open Calculator 🚰

 $34.32 \text{mm} = 4 \cdot 8.58 \text{mm}$ 

### 7) Diameter of Pin of Coupling

 $extbf{d}_1 = 0.5 \cdot rac{ ext{d}}{\sqrt{ ext{N}}}$ 

Open Calculator

 $ext{ex} \boxed{7.000001 ext{mm} = 0.5 \cdot rac{34.29286 ext{mm}}{\sqrt{6}}}$ 





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

 $extbf{T} D_{ ext{b}} = rac{ ext{P}}{ ext{l}_{ ext{b}} \cdot ext{p}_{ ext{a}}} igg|_{ ext{b}}$ 

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

 $D_{
m b} = 2 \cdot rac{M_{
m t}}{{
m p}_{
m a} \cdot {
m N} \cdot {
m D}_{
m p} \cdot {
m l}_{
m b}}$ 

Open Calculator 🗗

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

fx  $d_h = 2 \cdot d$ 

Open Calculator

 $= 2 \cdot 34.29286 \text{mm}$ 

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

 $\left| \mathbf{D}_{\mathrm{p}} = rac{2 \cdot \mathbf{M}_{\mathrm{t}}}{\mathbf{N} \cdot \mathbf{P}} 
ight|$ 

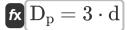
Open Calculator

 $ext{ex} 102.7536 ext{mm} = rac{2 \cdot 354500 ext{N*mm}}{6 \cdot 1150 ext{N}}$ 





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



Open Calculator

 $\mathbf{ex} \ 102.8786 \mathrm{mm} = 3 \cdot 34.29286 \mathrm{mm}$ 



#### 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)
- **D**<sub>D</sub> Pitch Circle Diameter of Pins of Coupling (Millimeter)
- I<sub>b</sub> Effective Length of Bush of Coupling (Millimeter)
- In Length of Hub For Coupling (Millimeter)
- M<sub>f</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 Flange And Bush of Coupling (Newton per Square Millimeter)
- t<sub>1</sub> Thickness of Protecting Rim For Coupling (Millimeter)
- t<sub>o</sub> Thickness of Output Flange of Coupling (Millimeter)





### Constants, Functions, Measurements used

- Function: sqrt, sqrt(Number)

  A square root function is a function that takes a non-negative number as an input and returns the square root of the given input number.
- 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
- Diameter of Bushed Pin Flexible Coupling Components

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