Important Diameter of Bushed Pin Flexible Coupling Components Formulas PDF

Formulas
Examples
with Units

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

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

Evaluate Formula

Formula

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

Example with Units

$$34.2929\,\text{mm} = 2 \cdot 7\,\text{mm} \cdot \sqrt{6}$$

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

Evaluate Formula

Formula

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

Example with Units

$$34.2667\,\text{mm} = \frac{51.4\,\text{mm}}{1.5}$$

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

Evaluate Formula

Formula

$$d = \frac{d_h}{2}$$

Example with Units

$$34.2929\,\text{mm} = \frac{68.58572\,\text{mm}}{2}$$

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

Evaluate Formula

Formula

$$d = \frac{D_p}{3}$$

Example with Units

$$34.2929\,\text{mm} = \frac{102.8786\,\text{mm}}{3}$$

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

Evaluate Formula

Formula

$$d = 2 \cdot t_o$$

Example with Units

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

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

Evaluate Formula

Formula

$$d = 4 \cdot t_1$$

Example with Units

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

7) Diameter of Pin of Coupling Formula

Evaluate Formula

Formula

$$d_1 = 0.5 \cdot \frac{d}{\sqrt{N}}$$

Example with Units

$$7\,\text{mm} = 0.5 \cdot \frac{34.29286\,\text{mm}}{\sqrt{6}}$$

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

Evaluate Formula

Formula

$$D_b = \frac{P}{l_b \cdot p_a}$$

Example with Units

$$33.9885\,\text{mm} = \frac{1150\,\text{N}}{33.5\,\text{mm} \cdot 1.01\,\text{N/mm}^2}$$

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

Evaluate Formula

Formula

$$D_b = 2 \cdot \frac{M_t}{p_a \cdot N \cdot D_p \cdot l_b}$$

Example with Units

$$33.9472\,\text{mm} = 2 \cdot \frac{354500\,\text{N*mm}}{1.01\,\text{N/mm}^2 \cdot 6 \cdot 102.8786\,\text{mm} \cdot 33.5\,\text{mm}}$$

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

Evaluate Formula

Formula

$$d_h = 2 \cdot d$$

Example with Units

$$68.5857\,\text{mm} = 2 \cdot 34.29286\,\text{mm}$$

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

Evaluate Formula

Formula

$$D_p = \frac{2 \cdot M_t}{N \cdot P}$$

Example with Units

$$102.7536\,\text{mm} = \frac{2 \cdot 354500\,\text{N*mm}}{6 \cdot 1150\,\text{N}}$$

12) Pitch Circle Diameter of Pins of Coupling Formula

Evaluate Formula

Formula

$$D_p = 3 \cdot d$$

Example with Units

$$102.8786\,\text{mm} = 3 \cdot 34.29286\,\text{mm}$$

Variables used in list of Diameter of Bushed Pin Flexible Coupling Components Formulas above

- **d** Diameter of Driving Shaft For Coupling *(Millimeter)*
- d_1 Diameter of Pin of Coupling *(Millimeter)*
- D_b Outer Diameter of Bush For Coupling *(Millimeter)*
- d_h Outside Diameter of Hub of Coupling *(Millimeter)*
- D_p Pitch Circle Diameter of Pins of Coupling *(Millimeter)*
- l_b Effective Length of Bush of Coupling *(Millimeter)*
- l_h Length of Hub For Coupling *(Millimeter)*
- M_t Torque Transmitted By Coupling *(Newton Millimeter)*
- **N** Number of Pins in Coupling
- **P** Force on Each Rubber Bush or Pin of Coupling *(Newton)*
- p_a Intensity of Pressure Flange And Bush of Coupling *(Newton per Square Millimeter)*
- t_1 Thickness of Protecting Rim For Coupling *(Millimeter)*
- t_o Thickness of Output Flange of Coupling *(Millimeter)*

Constants, Functions, Measurements used in list of Diameter of Bushed Pin Flexible Coupling Components Formulas above

- Functions: **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

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