



Design of Rigid Flange Coupling Formulas

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Examples!

Conversions!

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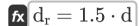


List of 14 Design of Rigid Flange Coupling Formulas

Design of Rigid Flange Coupling

Hub and Flange Dimensions &

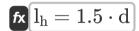
1) Diameter of Spigot and Recess of Rigid Flange Coupling



Open Calculator

 $\textbf{ex} \ 42 \text{mm} = 1.5 \cdot 28 \text{mm}$

2) Length of Hub of Rigid Flange Coupling given Diameter of Driving Shaft



Open Calculator 🗗

 $\texttt{ex} \ 42 \text{mm} = 1.5 \cdot 28 \text{mm}$

3) Outside Diameter of Flange of Rigid Flange Coupling



Open Calculator

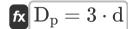


4) Outside Diameter of Hub of Rigid Flange Coupling given Diameter of Driving Shaft



Open Calculator

5) Pitch Circle Diameter of Bolts of Rigid Flange Coupling



Open Calculator

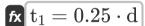
6) Thickness of flanges of Rigid Flange Coupling

fx $m t_f = 0.5 \cdot d$

Open Calculator

 $\textbf{ex} \ 14\text{mm} = 0.5 \cdot 28\text{mm}$

7) Thickness of Protecting Rim of Rigid Flange Coupling



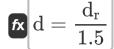
Open Calculator 🗗

 $\boxed{\mathsf{ex}} \ 7 \mathrm{mm} = 0.25 \cdot 28 \mathrm{mm}$



Shaft Dimensions

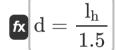
8) Diameter of Shaft of Rigid Flange Coupling given Diameter of Spigot and Recess



Open Calculator 🗗

$$28 \text{mm} = \frac{42 \text{mm}}{1.5}$$

9) Diameter of Shaft of Rigid Flange Coupling given Length of Hub



Open Calculator

$$27 \text{mm} = \frac{40.500 \text{mm}}{1.5}$$

10) Diameter of Shaft of Rigid Flange Coupling given Outside Diameter of Flange

$$\mathrm{fx} \left[\mathrm{d} = rac{\mathrm{D_o} - 2 \cdot \mathrm{t_1}}{4}
ight]$$

Open Calculator 🗗

$$\boxed{27.9 \mathrm{mm} = \frac{125.6 \mathrm{mm} - 2 \cdot 7 \mathrm{mm}}{4}}$$



11) Diameter of Shaft of Rigid Flange Coupling given Outside Diameter of Hub

 $\mathrm{fx} \left| \mathrm{d} = rac{\mathrm{d_h}}{2}
ight|$

Open Calculator 🚰

12) Diameter of Shaft of Rigid Flange Coupling given Pitch Circle Diameter of Bolts

 $d = rac{D_p}{3}$

Open Calculator

 $28\text{mm} = \frac{84\text{mm}}{3}$

13) Diameter of Shaft of Rigid Flange Coupling given Thickness of Flanges

fx $d=2\cdot t_{
m f}$

ex $28 \text{mm} = 2 \cdot 14 \text{mm}$

Open Calculator

14) Diameter of Shaft of Bigid Flange Coupling

14) Diameter of Shaft of Rigid Flange Coupling given Thickness of Protecting Rim

fx $d=4\cdot t_1$

Open Calculator





Variables Used

- d Diameter of Driving Shaft for Coupling (Millimeter)
- d_h Outside Diameter of Hub of Coupling (Millimeter)
- **D** Outside Diameter of Flange of Coupling (Millimeter)
- **D**_p Pitch Circle Diameter of Bolts of Coupling (Millimeter)
- d_r Diameter of Spigot and Recess of Coupling (Millimeter)
- **I**_h Length of Hub for Coupling (Millimeter)
- t₁ Thickness of Protecting Rim for Coupling (Millimeter)
- t_f Thickness of Flanges of Coupling (Millimeter)





Constants, Functions, Measurements used

• Measurement: Length in Millimeter (mm)

Length Unit Conversion





Check other formula lists

- Design of Cotter Joint Formulas
- Design of Knuckle Joint Formulas [7]
- Design of Rigid Flange Coupling Threaded Bolted Joints Formulas C
- Packing Formulas

- Retaining Rings and Circlips Formulas
- Riveted Joints Formulas
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