

KULKARNI TRANSPOWER PVT. LTD.

Manufacturer of Encoder Couplings, Servo Couplings

MANUFACTURER OF DFC COUPLINGS

Disc Flexible Couplings (DFC) are made with Disc Set and Aluminium Hubs for clamping. These Discs are bolted alternately to the Aluminium Hubs from both sides of Disc Sets. Disc Flexible Coupling (DFC) the three or five pieces' assembly of 2 no. Aluminium or 3 no. Aluminium hubs and 1 no. or 2 no. of Stainless Steel Disc sets. These three or five parts are assembled with bolts with precision. This assembly becomes a Backlash Free and High Torsional Stiff, precise, long life Disc Flexible Coupling (DFC). Disc Flexible Coupling (DFC) Couplings are more suitable for higher RPM, Temperature, uni-direction or bi-directions.

APPLICATIONS :

Servo Motors, Stepper Motors, Ball-screws, CNC machines, X-Y slides, Shaft Encoders, Tacho-generators, Medical Equipment's, Precise Spindles, and much more precise backlash-free motion and power transmission applications.

BENEFITS :

Flexible, Backlash-free, High Torsional Stiffness, No maintenance, No Lubrication, Uniform & Positive motion and power transmission, higher temperature, Available in Unbored, pilot bore and finish bore and key-ways.



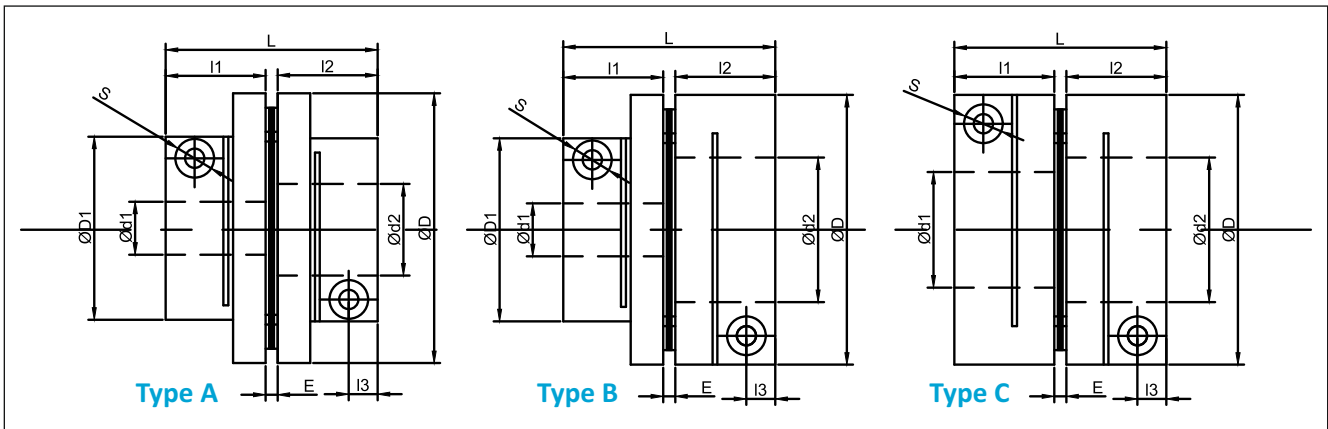
KULKARNI TRANSPOWER PVT. LTD.

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DFC Single Lamina Set (DFC SL Series)



DIMENSIONAL DETAILS :

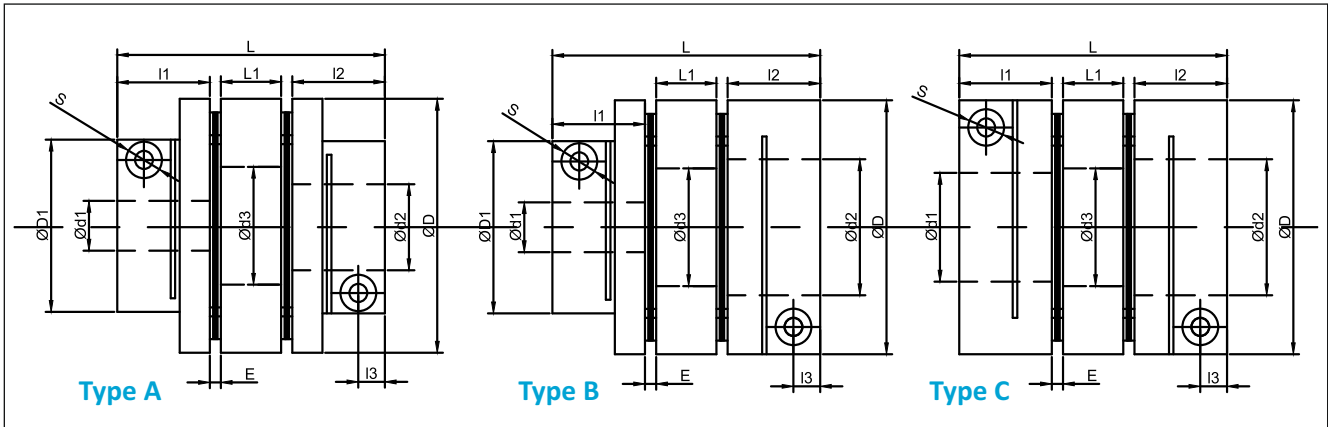
| Size | Bore sizes Step Hub | | Bore sizes Full Hub | | Overall Dimensions | | | | | | Screw Details | | Screw |
|------------|---------------------|---------|---------------------|---------|--------------------|--------|-----------|--------|------------|------------------------|---------------|-----------|------------|
| | Minimum | Maximum | Minimum | Maximum | Outer | Total | Outer | Lamina | Hub | Space Bet ⁿ | Screw | Distance | Tightening |
| DFC SL | mm | mm | mm | mm | Dia. | Length | Step Dia. | I.D. | Length | Hubs | Size | from edge | Torque |
| | d1 | d2 | d1 | d2 | D. mm | L mm | D1 mm | d3 mm | l1 & l2 mm | E mm | S | l3 | Ts Nm |
| DFC 20 SL | | | 3.00 | 12.00 | 26.00 | 24.00 | | 12.10 | 11.20 | 1.6 | M 2.5 | 3.50 | 0.8 |
| DFC 25 SL | | | 5.00 | 14.00 | 29.00 | 24.00 | | 14.50 | 11.00 | 2 | M 2.5 | 3.50 | 0.8 |
| DFC 30 SL | 5.00 | 10.00 | | | 34.00 | 27.00 | 22.00 | 14.50 | 12.40 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 30 SL | 5.00 | 10.00 | 10.00 | 16.00 | 34.00 | 27.00 | 22.00 | 14.50 | 12.40 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 30 SL | | | 10.00 | 16.00 | 34.00 | 27.00 | | 14.50 | 12.40 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 35 SL | | | 6.00 | 18.00 | 39.00 | 34.00 | | 17.00 | 15.50 | 3 | M 4 | 4.50 | 3 |
| DFC 40 SL | 8.00 | 15.00 | | | 44.00 | 34.00 | 34.00 | 20.00 | 15.50 | 3 | M 4 | 4.50 | 3 |
| DFC 40 SL | 8.00 | 15.00 | 15.00 | 22.00 | 44.00 | 34.00 | 34.00 | 20.00 | 15.50 | 3 | M 4 | 4.50 | 3 |
| DFC 40 SL | | | 15.00 | 22.00 | 44.00 | 34.00 | | 20.00 | 15.50 | 3 | M 4 | 4.50 | 3 |
| DFC 50 SL | 8.00 | 19.00 | | | 56.00 | 44.00 | 38.00 | 26.10 | 20.75 | 2.5 | M 5 | 6.00 | 8 |
| DFC 50 SL | 8.00 | 19.00 | 19.00 | 30.00 | 56.00 | 44.00 | 38.00 | 26.10 | 20.75 | 2.5 | M 5 | 6.00 | 8 |
| DFC 50 SL | | | 19.00 | 30.00 | 56.00 | 44.00 | | 26.10 | 20.75 | 2.5 | M 5 | 6.00 | 8 |
| DFC 60 SL | 11.00 | 24.00 | | | 68.00 | 54.00 | 46.00 | 31.20 | 25.35 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 60 SL | 11.00 | 24.00 | 24.00 | 35.00 | 68.00 | 54.00 | 46.00 | 31.20 | 25.35 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 60 SL | | | 24.00 | 35.00 | 68.00 | 54.00 | | 31.20 | 25.35 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 80 SL | | | 18.00 | 40.00 | 82.00 | 68.00 | | 38.10 | 30.00 | 8 | M 8 | 9.00 | 25 |
| DFC 90 SL | | | 25.00 | 45.00 | 94.00 | 68.00 | | 42.20 | 30.00 | 8 | M 8 | 9.00 | 25 |
| DFC 100 SL | | | 32.00 | 45.00 | 104.00 | 70.00 | | 48.20 | 30.00 | 10 | M 8 | 9.00 | 25 |

TECHNICAL DETAILS :

| Size | Rated | Maximum Shaft Misalignment | | | Max | Torsional | Mass Moment of Inertia |
|------------|--------|----------------------------|-------|---------|-------|-----------|------------------------|
| | Torque | Paraller | Axial | Angular | Speed | Stiffness | |
| DFC SL | Nm | mm | mm | Degree | RPM | Nm/rad | Kgcm ² |
| DFC 20 SL | 2 | 0.02 | 0.15 | 1 | 10000 | 3700 | 0.02360 |
| DFC 25 SL | 4 | 0.02 | 0.20 | 1 | 10000 | 5600 | 0.03700 |
| DFC 30 SL | 5 | 0.02 | 0.20 | 1 | 10000 | 8000 | 0.08200 |
| DFC 35 SL | 7 | 0.02 | 0.25 | 1 | 10000 | 18000 | 0.16500 |
| DFC 40 SL | 10 | 0.02 | 0.30 | 1 | 10000 | 20000 | 0.29550 |
| DFC 50 SL | 25 | 0.02 | 0.40 | 1 | 10000 | 32000 | 1.00000 |
| DFC 60 SL | 60 | 0.02 | 0.45 | 1 | 10000 | 70000 | 2.70000 |
| DFC 80 SL | 100 | 0.02 | 0.55 | 1 | 10000 | 140000 | 7.10000 |
| DFC 90 SL | 180 | 0.02 | 0.65 | 1 | 10000 | 100000 | 12.30000 |
| DFC 100 SL | 250 | 0.02 | 0.75 | 1 | 10000 | 120000 | 18.60000 |



DFC Double Lamina Set (DFC DL Series)



DIMENSIONAL DETAILS :

| Size DFC DL | Bore sizes Step Hub | | Bore sizes Full Hub | | Overall Dimensions | | | | | | | Screw Details | | Screw |
|-------------------|---------------------|---------|---------------------|---------|--------------------|--------|-----------|--------|------------|--------|------------------------|---------------|-----------|------------|
| | Minimum | Maximum | Minimum | Maximum | Outer | Total | Outer | Lamina | Hub | Spacer | Space Bet ⁿ | Screw | Distance | Tightening |
| | mm | mm | mm | mm | Dia. | Length | Step Dia. | I.D. | Length | Width | Hubs | Size | from edge | Torque |
| | d1 | d2 | d1 | d2 | D. mm | L mm | D1 mm | d3 mm | I1 & I2 mm | L1 mm | E mm | S | I3 | Ts Nm |
| DFC 20 DL | | | 3.00 | 12.00 | 26.00 | 32.00 | | 12.00 | 11.20 | 6.40 | 1.6 | M 2.5 | 3.50 | 0.8 |
| DFC 25 DL | | | 5.00 | 14.00 | 29.00 | 33.00 | | 14.50 | 11.00 | 7.00 | 2 | M 2.5 | 3.50 | 0.8 |
| DFC 30 DL | 5.00 | 10.00 | | | 34.00 | 38.00 | 22.00 | 14.50 | 12.40 | 8.80 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 30 DL | 5.00 | 10.00 | 10.00 | 16.00 | 34.00 | 38.00 | 22.00 | 14.50 | 12.40 | 8.80 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 30 DL | | | 10.00 | 16.00 | 34.00 | 38.00 | | 14.50 | 12.40 | 8.80 | 2.2 | M 3 | 3.75 | 1.5 |
| DFC 35 DL | | | 6.00 | 18.00 | 39.00 | 48.00 | | 17.00 | 15.50 | 11.00 | 3 | M 4 | 4.50 | 3 |
| DFC 40 DL | 8.00 | 15.00 | | | 44.00 | 48.00 | 30.00 | 20.00 | 15.50 | 11.00 | 3 | M 4 | 4.50 | 3 |
| DFC 40 DL | 8.00 | 15.00 | 15.00 | 22.00 | 44.00 | 48.00 | 30.00 | 20.00 | 15.50 | 11.00 | 3 | M 4 | 4.50 | 3 |
| DFC 40 DL | | | 15.00 | 22.00 | 44.00 | 48.00 | | 20.00 | 15.50 | 11.00 | 3 | M 4 | 4.50 | 3 |
| DFC 50 DL | 8.00 | 19.00 | | | 56.00 | 60.00 | 38.00 | 26.10 | 20.75 | 13.50 | 2.5 | M 5 | 6.00 | 8 |
| DFC 50 DL | 8.00 | 19.00 | 19.00 | 30.00 | 56.00 | 60.00 | 38.00 | 26.10 | 20.75 | 13.50 | 2.5 | M 5 | 6.00 | 8 |
| DFC 50 DL | | | 19.00 | 30.00 | 56.00 | 60.00 | | 26.10 | 20.75 | 13.50 | 2.5 | M 5 | 6.00 | 8 |
| DFC 60 DL | 11.00 | 24.00 | | | 68.00 | 73.00 | 46.00 | 31.20 | 25.35 | 16.00 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 60 DL | 11.00 | 24.00 | 24.00 | 35.00 | 68.00 | 73.00 | 46.00 | 31.20 | 25.35 | 16.00 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 60 DL | | | 24.00 | 35.00 | 68.00 | 73.00 | | 31.20 | 25.35 | 16.00 | 3.3 | M 6 | 7.75 | 10.5 |
| DFC 80 DL | | | 18.00 | 40.00 | 82.00 | 98.00 | | 38.10 | 30.00 | 22.00 | 8 | M 8 | 9.00 | 25 |
| DFC 90 DL | | | 25.00 | 45.00 | 94.00 | 99.00 | | 42.20 | 30.00 | 23.00 | 8 | M 8 | 9.00 | 25 |
| DFC 100 DL | | | 32.00 | 45.00 | 104.00 | 102.00 | | 48.20 | 30.00 | 22.00 | 10 | M 8 | 9.00 | 25 |

TECHNICAL DETAILS :

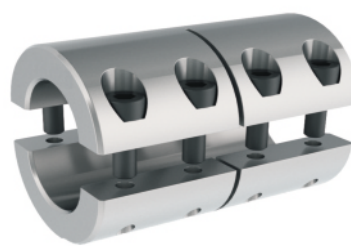


| Size DFC DL | Rated | Maximum Shaft Misalignment | | | Max | Torsional | Mass Moment of Inertia |
|-------------------|--------|----------------------------|-------|---------|-------|-----------|------------------------|
| | Torque | Paraller | Axial | Angular | Speed | Stiffness | |
| | Nm | mm | mm | Degree | RPM | Nm/rad | |
| DFC 20 DL | 2 | 0.15 | 0.35 | 1 | 10000 | 1850 | 0.03400 |
| DFC 25 DL | 4 | 0.16 | 0.40 | 1 | 10000 | 2800 | 0.05300 |
| DFC 30 DL | 5 | 0.18 | 0.40 | 1 | 10000 | 4000 | 0.11500 |
| DFC 35 DL | 8 | 0.24 | 0.50 | 1 | 10000 | 9000 | 0.26780 |
| DFC 40 DL | 10 | 0.24 | 0.60 | 1 | 10000 | 10000 | 0.42620 |
| DFC 50 DL | 25 | 0.28 | 0.80 | 1 | 10000 | 16000 | 1.42000 |
| DFC 60 DL | 60 | 0.34 | 0.90 | 1 | 10000 | 35000 | 3.78000 |
| DFC 80 DL | 100 | 0.52 | 1.10 | 1 | 10000 | 70000 | 10.34000 |
| DFC 90 DL | 180 | 0.52 | 1.30 | 1 | 10000 | 50000 | 17.76000 |
| DFC 100 DL | 250 | 0.55 | 1.50 | 1 | 10000 | 60000 | 27.10000 |



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