

FD-90-15-g ■ (Quasi-Direct Drive) ■: Gear Ratio



✓ Winding Type A

- Phase Resistance: 0.47[Ω]
- Torque Constant: (g6: 2.1[Nm/A], g7: 2.5[Nm/A], g9: 3.2[Nm/A])
- Nominal Torque: (g6: 14[Nm], g7: 17[Nm], g9: 22[Nm])
- Weight: 630[g]
- Continuous Torque Density: (g6: 22[Nm/kg], g7: 27[Nm/kg], g9: 34[Nm/kg])
- Nominal Speed: g6: 180[RPM], g7: 150[RPM], g9: 110[RPM](@48[V])
- Power: 320[W](@48[V])
- Dimension: $\phi 102 \times 37$

✓ Winding Type B

- Phase Resistance: 0.12[Ω]
- Torque Constant: (g6: 1.0[Nm/A], g7: 1.2[Nm/A], g9: 1.6[Nm/A])
- Nominal Torque: (g6: 14[Nm], g7: 17[Nm], g9: 22[Nm])
- Weight: 630[g]
- Continuous Torque Density: (g6: 22[Nm/kg], g7: 27[Nm/kg], g9: 34[Nm/kg])
- Nominal Speed: g6: 400[RPM], g7: 330[RPM], g9: 250[RPM](@48[V])
- Power: 600[W](@48[V])
- Dimension: $\phi 102 \times 37$

FD-90-07-g ■ (Quasi-Direct Drive) ■: Gear Ratio



✓ Winding Type A

- Phase Resistance: 0.29[Ω]
- Torque Constant: (g6: 0.8[Nm/A], g7: 1.1[Nm/A], g9: 1.3[Nm/A])
- Nominal Torque: (g6: 5.8[Nm], g7: 7.1[Nm], g9: 9.1[Nm])
- Weight: 450[g]
- Continuous Torque Density: (g6: 12[Nm/kg], g7: 15[Nm/kg], g9: 20[Nm/kg])
- Nominal Speed: g6: 430[RPM], g7: 350[RPM], g9: 270[RPM](@48[V])
- Power: 260[W](@48[V])
- Dimension: $\phi 102 \times 29$

✓ Winding Type B

- Phase Resistance: 0.07[Ω]
- Torque Constant: (g6: 0.40[Nm/A], g7: 0.55[Nm/A], g9: 0.65[Nm/A])
- Nominal Torque: (g6: 5.8[Nm], g7: 7.1[Nm], g9: 9.1[Nm])
- Weight: 450[g]
- Continuous Torque Density: (g6: 12[Nm/kg], g7: 15[Nm/kg], g9: 20[Nm/kg])
- Nominal Speed: g6: 860[RPM], g7: 700[RPM], g9: 540[RPM](@48[V])
- Power: 520[W](@48[V])
- Dimension: $\phi 102 \times 29$

FD-90-15



✓ Winding Type A

- Phase Resistance: 0.47[Ω]
- Torque Constant: 0.35[Nm/A]
- Nominal Torque: 2.45[Nm]
- Weight: 530[g] (Frameless: 400[g])
- Continuous Torque Density: 4.6[Nm/kg] (Frameless: 6.1[Nm/kg])
- Nominal Speed: 470[RPM](@24[V]), 1100[RPM](@48[V])
- Power: 120[W](@24[V]), 280[W](@48[V])
- Dimension: $\phi 93 \times 27$

✓ Winding Type B

- Phase Resistance: 0.12[Ω]
- Torque Constant: 0.17[Nm/A]
- Nominal Torque: 2.45[Nm]
- Weight: 530[g] (Frameless: 400[g])
- Continuous Torque Density: 4.6[Nm/kg] (Frameless: 6.1[Nm/kg])
- Nominal Speed: 1100[RPM](@24[V]), 2400[RPM](@48[V])
- Power: 280[W](@24[V]), 600[W](@48[V])
- Dimension: $\phi 93 \times 27$

FD-75-23



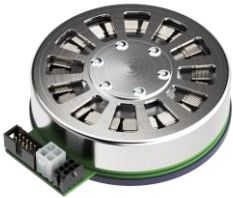
✓ Winding Type A

- Phase Resistance: 0.70[Ω]
- Torque Constant: 0.45[Nm/A]
- Nominal Torque: 2.70[Nm]
- Weight: 560[g] (Frameless: 440[g])
- Continuous Torque Density: 4.8[Nm/kg] (Frameless: 6.1[Nm/kg])
- Nominal Speed: 825[RPM](@48[V])
- Power: 230[W](@48[V])
- Dimension: $\phi 75 \times 37$

✓ Winding Type B

- Phase Resistance: 0.18[Ω]
- Torque Constant: 0.22[Nm/A]
- Nominal Torque: 2.70[Nm]
- Weight: 560[g] (Frameless: 440[g])
- Continuous Torque Density: 4.8[Nm/kg] (Frameless: 6.1[Nm/kg])
- Nominal Speed: 1820[RPM](@48[V])
- Power: 500[W](@48[V])
- Dimension: $\phi 75 \times 37$

FD-90-15-F



✓ Winding Type A

- Phase Resistance: 0.56[Ω]
- Torque Constant: 0.60[Nm/A]
- Nominal Torque: 3.50[Nm]
- Weight: 650[g] (Frameless: 540[g])
- Continuous Torque Density: 5.3[Nm/kg] (Frameless: 6.4[Nm/kg])
- Nominal Speed: 650[RPM](@48[V])
- Power: 230[W](@48[V])
- Dimension: $\phi 93 \times 27$

✓ Winding Type B

- Phase Resistance: 0.14[Ω]
- Torque Constant: 0.30[Nm/A]
- Nominal Torque: 3.50[Nm]
- Weight: 650[g] (Frameless: 540[g])
- Continuous Torque Density: 5.3[Nm/kg] (Frameless: 6.4[Nm/kg])
- Nominal Speed: 1400[RPM](@48[V])
- Power: 500[W](@48[V])
- Dimension: $\phi 93 \times 27$

FD-60-25-F



✓ Winding Type A

- Phase Resistance: 0.42[Ω]
- Torque Constant: 0.24[Nm/A]
- Nominal Torque: 1.44[Nm]
- Weight: 490[g] (Frameless: 400[g])
- Continuous Torque Density: 2.9[Nm/kg] (Frameless: 3.6[Nm/kg])
- Nominal Speed: 720[RPM](@24[V]), 1400[RPM](@48[V])
- Power: 110[W](@24[V]), 220[W](@48[V])
- Dimension: $\phi 61 \times 37$

✓ Winding Type B

- Phase Resistance: 0.11[Ω]
- Torque Constant: 0.12[Nm/A]
- Nominal Torque: 1.44[Nm]
- Weight: 490[g] (Frameless: 400[g])
- Continuous Torque Density: 2.9[Nm/kg] (Frameless: 3.6[Nm/kg])
- Nominal Speed: 1740[RPM](@24[V]), 3450[RPM](@48[V])
- Power: 260[W](@24[V]), 500[W](@48[V])
- Dimension: $\phi 61 \times 37$

FD-60-15-F



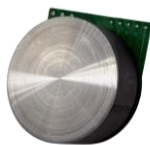
✓ Winding Type A

- Phase Resistance: 0.38[Ω]
- Torque Constant: 0.14[Nm/A]
- Nominal Torque: 0.81[Nm]
- Weight: 315[g] (Frameless: 250[g])
- Continuous Torque Density: 2.6[Nm/kg] (Frameless: 3.2[Nm/kg])
- Nominal Speed: 1250[RPM](@24[V]), 2500[RPM](@48[V])
- Power: 100[W](@24[V]), 200[W](@48[V])
- Dimension: $\phi 61 \times 27$

✓ Winding Type B

- Phase Resistance: 0.09[Ω]
- Torque Constant: 0.07[Nm/A]
- Nominal Torque: 0.81[Nm]
- Weight: 315[g] (Frameless: 250[g])
- Continuous Torque Density: 2.6[Nm/kg] (Frameless: 3.2[Nm/kg])
- Nominal Speed: 2700[RPM](@24[V]), 5400[RPM](@48[V])
- Power: 200[W](@24[V]), 400[W](@48[V])
- Dimension: $\phi 61 \times 27$

FD-42-15-F



✓ Winding Type A

- Phase Resistance: 2.0[Ω]
- Torque Constant: 0.14[Nm/A]
- Nominal Torque: 0.28[Nm]
- Weight: 120[g]
- Continuous Torque Density: 2.3[Nm/kg]
- Nominal Speed: 1050[RPM](@24[V])
- Power: 30[W](@24[V])
- Dimension: $\phi 42 \times 20$

✓ Winding Type B

- Phase Resistance: 0.5[Ω]
- Torque Constant: 0.07[Nm/A]
- Nominal Torque: 0.28[Nm]
- Weight: 120[g]
- Continuous Torque Density: 2.3[Nm/kg]
- Nominal Speed: 3000[RPM](@24[V])
- Power: 80[W](@24[V])
- Dimension: $\phi 42 \times 20$

FD-18-10-F



✓ Winding Type A

- Phase Resistance: 0.8[Ω]
- Torque Constant: 16[mNm/A]
- Nominal Torque: 32[mNm]
- Weight: 17[g]
- Continuous Torque Density: 1.9[Nm/kg]
- Nominal Speed: 5700[RPM](@12[V])
- Power: 18[W](@12[V])
- Dimension: $\phi 18 \times 17$

High Torque Density

Low Ripple Torque

Low Cogging Torque

Low Friction Torque

