

Compact Precision Ring Drive

Based on Nexen’s innovative Roller Pinion technology, the Compact Ring Drive (CRD) system comes complete with a precision grade bearing and drive mechanism in a sealed housing.

Freely programmable, the three drive design configurations allow the CRD to be optimized for high speed, high torque or both depending on the application. With a 250 or 350 mm dial plate bolt circle diameter and a large open center, users can optimize performance in a small space.



• **High Indexing Precision**

With an indexing precision up to ± 30 ArcSec and repeatability up to ± 5 ArcSec, Nexen’s CRD offers unmatched mechanical system capabilities.

• **Zero Backlash**

Unlike other mechanical drive systems, the CRD offers zero backlash options from the motor through the driven load.

• **High Output Load Capacity**

With the precision grade, high load capacity cross-roller bearing, the CRD can handle loads up to 112 kN.

• **High Speed**

The high speed bearing option allows for speeds up to 500 RPM.

• **Smooth in Motion**

Combining Nexen’s RPS technology with an integrated bearing and motor/gearhead gives a rigid, smooth system.

»»» A DRIVE STATION FOR EVERY APPLICATION

Direct Drive (DDP)



**High Speed
Mid Torque**

High Precision Planetary (PL)



**High Torque
Mid Speed**

Harmonic Gearhead (HG)

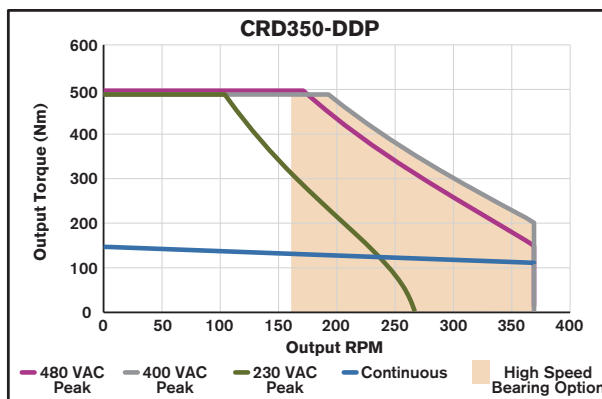
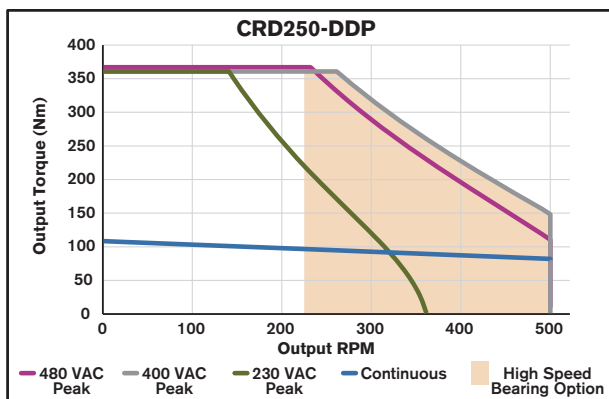


**High Torque
Low Speed**

Performance Specifications	High Speed & Mid Torque				High Torque & Mid Speed				High Torque & Low Speed	
	CRD250-DDP		CRD350-DDP		CRD250-PL		CRD350-PL		CRD250-HG	CRD350-HG
Bearing Type: High Load / High Speed	HL	HS	HL	HS	HL	HS	HL	HS	HL	HL
Maximum Velocity RPM	See Charts		See Charts		225**	329**	161**	240**	25**	18**
Max Continuous Velocity RPM	See Charts		See Charts		151**		111**		18**	13**
Positional Accuracy ±ArcSec	41		30		59*		43*		42	31
One Way Repeatability ±ArcSec	6.8		5		7		5.2		7	5.2
Max Backlash ArcSec	0		0		20.3*		14.8*		0	0
Max Acceleration Torque Nm	360		487		494		676		532	728
Continuous Stall Torque Nm	110		150		N/A		N/A		N/A	N/A
Nominal Torque Nm	N/A		N/A		323		442		380	520
Gear/Pinion Ratio	6.2:1		8.4:1		3.8:1		5.2:1		3.8:1	5.2:1
Input to Output Ratio	6.2:1		8.4:1		15.2:1**		20.8:1**		190:1**	260:1**
Max Axial Output Load kN	60	20	112	23	60	20	112	23	60	112
Max Radial Output Load kN	40	17.5	75	20	40	17.5	75	20	40	75
Max Moment Output Load Nm	3575	1450	9350	2450	3575	1450	9350	2450	3575	9350

*Includes Gearbox Backlash **Assumes Planetary Gearbox Ratio of 4:1 and Harmonic Gearhead Ratio of 50:1 (other ratio options available)

CRD-DDP (Direct Drive) System Output



Direct Drive Motor Specifications		CRD250-DDP			CRD350-DDP		
Voltage Req'd at Rated Output (Vac Input)	Vac	230	400	480	230	400	480
Peak Current (Ip)	Amps	49.5	49.5	39.2	49.5	49.5	39.2
Continuous Current (Ic)	Amps	10.9	10.9	8.7	10.9	10.9	8.7
Torque Sensitivity (Kt)*	Nm/Arms	10.2	10.2	12.7	13.7	13.7	17.2
Back EMF Constant (Kb)*	Vpk/kRPM	613	613	769	830	830	1040
Resistance (Line to Line) (Rm)	Ohms	1.14	1.14	1.80	1.14	1.14	1.80
Inductance (Lm)	mH	9.3	9.3	15	9.3	9.3	15

*System Equivalent Values