



ATLAS DIGITAL SERVO SPECIFICATIONS

Part #	weight (grams)	Gear type	upper bearing	lower bearing	holding * torque Kg/cm	speed (sec)	holding * torque Kg/cm	speed (sec)
HP-DS09-AMD	8.4	Light Metal	Ball	Ball	4.8 @5.5V	0.15	4.0 @4.8V	0.18
HP-DS09-GMD	8.4	Light Metal	Ball	Ball	2.0 @5.5V	0.05	1.6 @4.8V	0.06
HP-DS09-SCD	7.5	CarbonPoly	Ball	Ball	4.0 @5.5V	0.13	3.2 @4.8V	0.15
HP-DS09-SMD	8.4	Light Metal	Ball	Ball	4.0 @5.5V	0.13	3.2 @4.8V	0.15
HP-DS095-FMD	18.3	Metal	Ball	Ball	9.0 @6.0V	0.15	8.0 @4.8V	0.18
HP-DS11-AMB	10.5	Light Metal	Ball	Plain	5.0 @6.0V	0.15	4.2 @4.8V	0.18
HP-DS11-GCB	10.3	CarbonPoly	Ball	Plain	2.0 @6.0V	0.05	1.6 @4.8V	0.06
HP-DS11-SCB	10.0	CarbonPoly	Ball	Plain	4.0 @6.0V	0.13	3.4 @4.8V	0.15
HP-DS12-ACP	16.9	CarbonPoly	Plain	Plain	6.4 @6.0V	0.13	5.2 @4.8V	0.16
HP-DS12-GCP	17.3	CarbonPoly	Plain	Plain	3.2 @6.0V	0.06	2.6 @4.8V	0.08
HP-DS12-HCP	17.3	CarbonPoly	Plain	Plain	4.0 @6.0V	0.10	3.4 @4.8V	0.13
HP-DS12-SCP	17.3	CarbonPoly	Plain	Plain	4.8 @6.0V	0.12	4.0 @4.8V	0.15
HP-DS13-ACB	17.9	CarbonPoly	Ball	Plain	6.4 @6.0V	0.13	5.2 @4.8V	0.16
HP-DS13-TCB	17.9	CarbonPoly	Ball	Plain	8.4 @6.0V	0.16	7.2 @4.8V	0.20
HP-DS13-TMB	19.2	Metal	Ball	Plain	8.4 @6.0V	0.16	7.2 @4.8V	0.20
HP-DS13-GCB	17.7	CarbonPoly	Ball	Plain	3.2 @6.0V	0.06	2.6 @4.8V	0.07
HP-DS16-FCD	25.5	CarbonPoly	Ball	Ball	11.0 @6.0V	0.15	9.0 @4.8V	0.18
HP-DS16-FMD	28.5	Metal	Ball	Ball	11.0 @6.0V	0.15	9.0 @4.8V	0.18
HP-DS20-FMD	53.0	Metal	Ball	Ball	16.4 @6.0V	0.13	14.0 @4.8V	0.17
HP-DS20-GMD	49.0	Metal	Ball	Ball	4.0 @6.0V	0.05	3.2 @4.8V	0.07
HP-DS20-HMD	49.0	Metal	Ball	Ball	9.4 @6.0V	0.11	7.2 @4.8V	0.15
HP-DS20-SMD	49.0	Metal	Ball	Ball	12.6 @6.0V	0.15	9.8 @4.8V	0.19
HP-DS20-UMD	53.0	Metal	Ball	Ball	23.5 @6.0V	0.18	20.9 @4.8V	0.23
HP-DS20X-SMD	52.5	Metal	Ball	Ball	16.0 @6.0V	0.11	14.0 @4.8V	0.13
HP-DS20X-TMD	52.5	Metal	Ball	Ball	19.0 @6.0V	0.13	16.0 @4.8V	0.16
HP-DS20X-GCD	51.0	CarbonPoly	Ball	Ball	9.0 @6.0V	0.06	8.0 @4.8V	0.07
HP-DH13-GCB	22.0	CarbonPoly	Ball	Plain	6.4 @7.4V	0.07	5.2 @6.0V	0.08
HP-DH13-FMB	24.5	Metal	Ball	Plain	10.0 @7.4V	0.14	9.0 @6.0V	0.16
HP-DH13-FTB	24.5	Titanium	Ball	Plain	10.0 @7.4V	0.14	9.0 @6.0V	0.16
HP-DH16-SCD	26.5	CarbonPoly	Ball	Ball	8.6 @7.4V	0.10	7.4 @6.0V	0.12
HP-DH16-FMD	31.0	Metal	Ball	Ball	12.0 @7.4V	0.14	10.0 @6.0V	0.16
HP-DH16-GCD	26.5	CarbonPoly	Ball	Ball	6.0 @7.4V	0.07	5.0 @6.0V	0.08
HP-DH16-FTD	31.0	Titanium	Ball	Ball	12.0 @7.4V	0.14	10.0 @6.0V	0.16
HP-DH20-FCD	46.0	CarbonPoly	Ball	Ball	19.0 @7.4V	0.13	16.0 @6.0V	0.16
HP-DH20-UCD	46.0	CarbonPoly	Ball	Ball	24.0 @7.4V	0.16	21.0 @6.0V	0.19
HP-DH20-FTD	59.5	Titanium	Ball	Ball	19.0 @7.4V	0.13	16.0 @6.0V	0.16
HP-DH20-UTD	59.5	Titanium	Ball	Ball	24.0 @7.4V	0.16	21.0 @6.0V	0.19
HP-DH20X-SCD	51.5	CarbonPoly	Ball	Ball	15.0 @7.4V	0.11	12.0 @6.0V	0.14
HP-DH20X-GCD	52.5	CarbonPoly	Ball	Ball	9.0 @7.4V	0.06	8.0 @6.0V	0.07

* Dynamic torque is 50% of holding torque specifications