

## DC Coreless Motor

Maximum Sleeve Bearing Loads	
Axial (Dynamic)	≤1.0N
Radial (4mm From Jamming Ring)	≤2.7N
Press-Fit Force (Static)	≤80N
Axial Play (Measured Under Less Than 4N Axial Force)	0.05 - 0.15mm
Maximum Radial Play	0.02mm

Maximum Allowable Screw Depth into flange 2.5mm

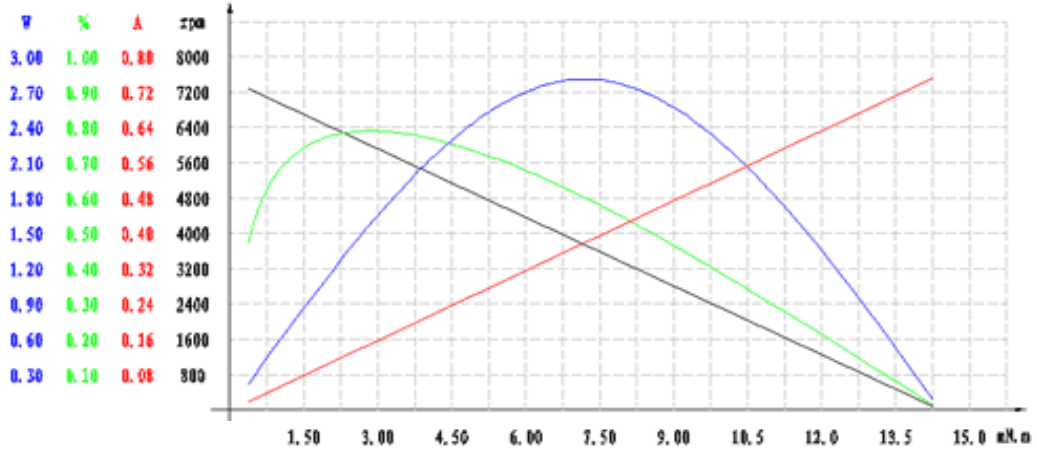
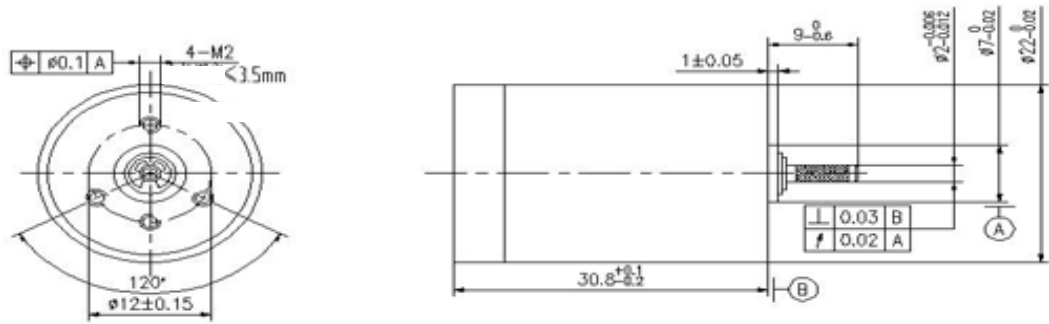
Table 1

		Motor data (at 25°C)					
		CD22-0203	CD22-0206	CD22-0309	CD22-0312	CD22-04-15	CD22-0318
Assigned power rating	W	2.0	2.0	2.8	3.4	3.6	2.6
Nominal voltage	V	3	6	9	12	15	18
Terminal resistance ±10%	Ω	0.381	1.87	4.6	6.78	9.84	19.9
No load speed ±10%	rpm	8500	8330	8200	8160	8400	8170
No load current	mA	75.0	24	15.3	14.1	12.1	9.10
Speed constant	rpm/V	2833	13898	911	680	560	454
Torque constant	mN.m/A	3.34	6.83	10.4	13.94	16.93	20.84
Starting current	mA	7874	3209	1957	1770	1524	905
Stall torque	mN.m	26.30	21.92	20.36	24.67	25.80	18.85
Max. efficiency	%	81	83	83	83	83	81
Limits for continuous operating range	Current	mA	742	381	391	354	181
	Torque	mN.m	2.48	2.6	4.07	4.93	3.77
	Speed	rpm	7699	7341	6561	6528	6535
	Output power	W	2.00	2	2.79	3.37	2.58
Max. permissible winding temperature	°C	+85	+85	+85	+85	+85	+85
Ambient temperature range	°C	-20 -- +65	-20 -- +65	-20 -- +65	-20 -- +65	-20 -- +65	-20 -- +65
Weight	g	48	48	48	48	48	48

Table 2

		Motor data (at 25°C)				
		CD22-0409	CD22-0412	CD22-0618	CD22-0624	
Assigned power rating	W	4.0	4.0	6.0	6.0	
Nominal voltage	V	9.0	12.0	18.0	24	
Terminal resistance ±10%	Ω	1.33	2.2	6.25	9.05	
No load speed ±10%	rpm	8240	8240	8120	8180	
No load current	mA	38.2	22.7	12.5	13.3	
Speed constant	rpm/V	916	687	451	341	
Torque constant	mN.m/A	10.38	13.86	21.09	27.89	
Starting current	mA	6767	5455	2880	2652	
Stall torque	mN.m	70.22	75.58	60.73	73.97	
Max. efficiency	%	86	88	87	86	
Limits for continuous operating range	Current	mA	481	358	387	394
	Torque	mN.m	4.99	4.96	8.16	10.99
	Speed	rpm	7654	7699	7029	6965
	Output power	W	4.00	4.00	6.00	8.01
Max. permissible winding temperature	°C	+85	+85	+85	+85	
Ambient temperature range	°C	-20 -- +65	-20 -- +65	-20 -- +65	-20 -- +65	
Weight	g	70	70	70	70	

**Representative drawings and performance Curve for models in table 1**



**Note**

1. Motor data tested at ambient temperature 25°C. Data varies when the temperature changes.
2. Motor service life different from operating conditions. In common condition, service life is achievable between appros. 1000 to 3000 hours.

