

Flexible Shaft Core Types

REMOTE CONTROL

To choose the right diameter Elliott core for remote control or bi-directional flexible shaft applications, you must know:

1. Torque to be transmitted by core
2. Minimum radius of bend
3. Rpm of operation (if applicable)
4. Maximum allowable torsional deflection (if applicable)

In the table below, locate a torque figure applicable to your application in the proper column under "Radius of Operation." Read across for the properties of that particular core. If the deflection listed is unacceptable, move to the next largest size.

Special consideration must be given when using bi-directional cores for power drive applications, both continuous and intermittent. For continuous power drive applications, reduce torque values listed by 70%. On intermittent power drive installations, core can be operated for a short period of time limited by heat built up.

CORE DATA									TORQUE RATING (LB.-IN.) FOR BOTH DIRECTIONS OF OPERATION AT GIVEN RADIUS (NOTE A) RADIUS OF OPERATION									
Nominal Dia.	Actual Dia.	Part No. (Note C)	Wt./100 Ft. (lbs)	Max. Torque Capacity (Lb.-In.) (Note B)	Max. RPM Intermittent Operation	Max. Torsional Deflection at Given Torque in Degrees Per Foot			3	4	6	8	10	12	15	20	25	50
						Torque	Deflection°/Ft. Wind	Unwind										
1/8"	.124 .128	10171	3.4	10	30,000	1 LB-IN	14°	17°	3.0	3.6	5.5	6.5	7.0	7.5	7.5	7.5	7.5	7.5
5/32"	.145 .150	10169	4.8	20	20,000	1 LB-IN	7°	9°	6.0	7.0	8.0	9.0	10.0	11.0	12.0	12.0	12.0	12.0
3/16"	.181 .185	8144	6.9	45	20,000	1 LB-IN	3.5°	4°		14.0	16.0	18.0	22.0	24.0	26.0	26.0	26.0	26.0
1/4"	.245 .249	8146	12.8	95	20,000	5 LB-IN	5°	6°		28.0	32.0	36.0	44.0	48.0	55.0	55.0	55.0	55.0
5/16"	.307 .311	8148	19.7	150	20,000	10 LB-IN	6°	7.5°		56.0	64.0	72.0	88.0	96.0	110.0	110.0	110.0	110.0
3/8"	.374 .378	8150	28.8	220	20,000	10 LB-IN	3.5°	5°			102.0	116.0	124.0	132.0	140.0	140.0	140.0	140.0
1/2"	.496 .499	8296	54	340	10,000	100 LB-IN	10°	13°				200.0	220.0	240.0	260.0	280.0	280.0	280.0
5/8"	.614 .618	8172	75	550	7,000	100 LB-IN	2.5°	3.5°					275	300	330	370	380	400
3/4"	.740 .747	8587	113	670	5,000	100 LB-IN	1.5°	1.6°							440.0	480.0	500.0	500.0
1"	.990 .997	8588	200	1300	5,000	960 LB-IN	7°	7°								920.0	950.0	975.0
1 1/4"	1.240 1.247	8559	310	1900	2,500	1900 LB-IN	5°	5°								1000	1200	1500
1.300"	1.292 1.299	8660	340	1920	2,500	1920 LB-IN	5°	5°								1100	1300	1600
1 5/8"	1.618 1.611	8663	600	3000	1,750	3000 LB-IN	4°	4°									2500	2700

- Notes:**
- A. Each core can transmit this torque in both directions of operation for remote control applications (less than 100 rpms) and intermittent power drive applications (no longer than it takes to raise core temp 70° above ambient with rest duration allowing for core to cool within 30° of ambient). For continuous power drive applications in both directions, use only 30% of these torques.
 - B. Each core will either break or helix under this load. For short term overloads, do not exceed 75% of this value.
 - C. Standard remote control cores are wound in the right-hand direction. Add a [-1] to part number for right hand or [-2] for left hand.