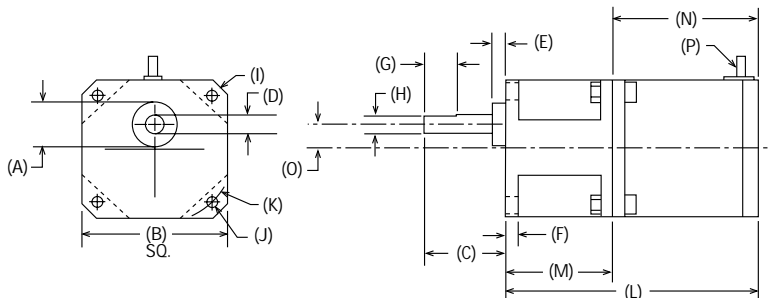


SP SERIES: LIGHT DUTY OFFSET GEARMOTORS

SIZES 017 AND 023-RATIOS 5, 10, 18:1



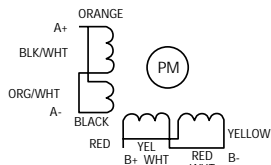
PART NUMBER	A PILOT DIAMETER (in.)	B SQUARE FLANGE (in.)	C SHAFT LENGTH (in.)	D SHAFT DIAMETER (in.)	E PILOT LENGTH (in.)	F FLANGE THICKNESS (in.)	O FLAT LENGTH (in.)	H DIMENSION OVER FLAT (in.)
017SPX 023SPX	.708 / .710 .708 / .710	1.65 2.25	0.79 1.26	.2495 / .2500 .3120 / .3125	0.12 0.20	0.19 0.19	0.470 (2X) 0.500 (1X)	0.22 (2X) 0.29 (1X)
PART NUMBER	I HOUSING DIAMETER (in.)	J BOLT HOLE THREAD / DIAMETER	K BOLT HOLE CIRCLE (in.)	L GEARMOTOR LENGTH (in.)	M GEARHEAD LENGTH (in.)	N MOTOR LENGTH (in.)	O OFFSET DIMENSION (in.)	P NUMBER OF LEAD WIRES
017SPX 023SPX	2.05 3.05	M3 x .5 0.205 (in.)	1.725 2.625	2.86 4.7	0.98 1.67	1.88 3.03	0.31 0.39	8 6
PART NUMBER	RATED PHASE CURRENT (AMPS/PHASE)	NOMINAL MOTOR STEP ANGLE	BACKLASH (ARC-MINUTES)	RADIAL SHAFT PLAY (in.)	AXIAL SHAFT PLAY (in.)	GEARHEAD WEIGHT (OZ.)	PHASE RESISTANCE (OHMS +/-10%)	WINDING INDUCTANCE (mH +/-20%)
017SPX 023SPX	1.25 4.70	1.8" STEP 1.8" STEP	45 45	0.002 0.002	0.010 0.010	13 45	3.3@25°C .37@25°C	3.0 0.6
PART NUMBER	INPUT RPM (MAX.)	EFFICIENCY (MIN.) (AMPS/PHASE)	GEARHEAD MAX. CONT. TORQUE (OZ. in.)	SPECIFICATIONS				
017SPX 023SPX	1000 1000	80% 80%	160 320	Gearhead Ambient Operating Temperature Range -60°F to +250°F. Motor is rated to 265°F. Molded Composite Housing (Max. Temp. 420°F). Gears are High-Strength Heat-Treated Steel. Composite Bushings throughout Gearhead. Input/Output shafts turn in the same direction.				

**SIZE 017
MOTOR P/N
HT17-075P**

**SIZE 023
MOTOR P/N
4023-828P**

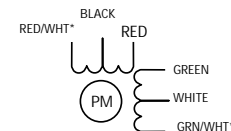
**Bipolar Chopper Drive Switching
Sequence for CW Rotation
Facing Mounting End**

Step	A+	A-	B+	B-
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-



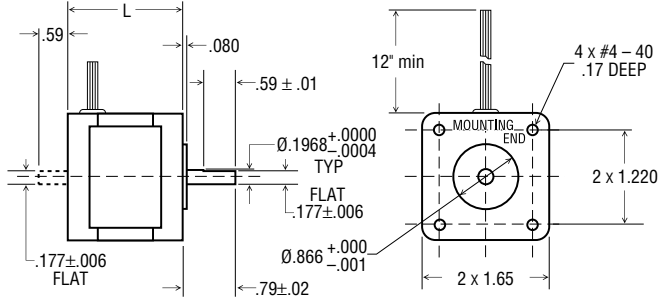
**Bipolar Chopper Drive Switching
Sequence for CW Rotation
Facing Mounting End**

Step	Red	Black	Green	White
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-



Motor Connection: Center Tap to end

* These wires are not used: do not connect them or ground them. They must be electrically isolated.



Part #	MOTOR CONNECTION 1 = series 2 = parallel 3 = unipolar	Motor Length (inches)	Minimum Holding Torque (oz-in)	Leads	Step Angle					Rotor Inertia (oz-in ² /G-CM ²)	Motor Weight (Lbs.)
						Volts	Amps	Ohms	mH		
HT17-073	1	1.54	51.0	8	1.8	17.0	0.28	60.0	120.0	.29/54.0	.57
	2	↓	51.0	↓	↓	8.5	0.57	15.0	30.0	↓	↓
	3	↓	36.1	↓	↓	12.0	0.40	30.0	30.0	↓	↓
HT17-074	1	↓	51.0	↓	↓	33.9	0.14	240.0	424.0	↓	↓
	2	↓	51.0	↓	↓	17.0	0.28	60.0	106.0	↓	↓
	3	↓	36.1	↓	↓	24.0	0.20	120.0	106.0	↓	↓
HT17-075	1	1.85	62.8	↓	↓	5.7	0.85	6.6	12.0	.37/68.0	.73
	2	↓	62.8	↓	↓	2.8	1.70	1.7	3.0	↓	↓
	3	↓	44.4	↓	↓	4.0	1.20	3.3	3.0	↓	↓
HT17-076	1	↓	62.8	↓	↓	10.2	0.57	18.0	38.0	↓	↓
	2	↓	62.8	↓	↓	5.1	1.13	4.5	9.5	↓	↓
	3	↓	44.4	↓	↓	7.2	0.80	9.0	9.5	↓	↓
HT17-077	1	↓	62.8	↓	↓	17.0	0.28	60.0	116.0	↓	↓
	2	↓	62.8	↓	↓	8.5	0.57	15.0	29.0	↓	↓
	3	↓	44.4	↓	↓	12.0	0.40	30.0	29.0	↓	↓

OTHER LENGTHS AND WINDINGS AVAILABLE UPON REQUEST

- Part numbers listed are for single shaft. To order double shaft add 'D' to the end.
- All HT17 motors are optimized for microstepping.

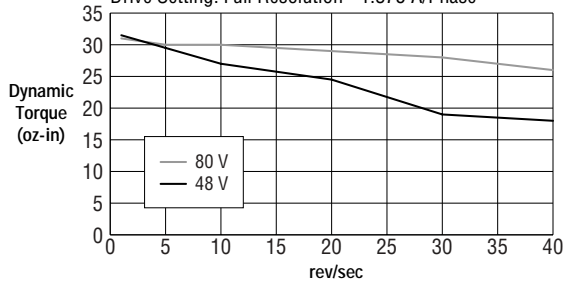
Hybrid Step Motors
 SIZE HT 17

STEP MOTORS

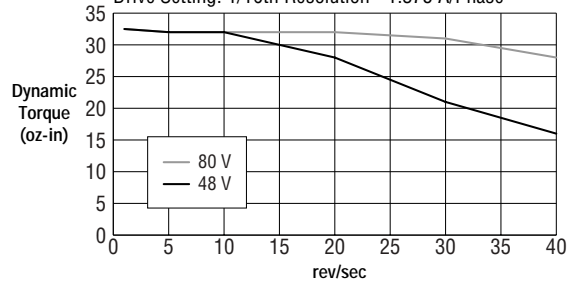
Size HT17 Motor

Typical Speed/Torque Performance*

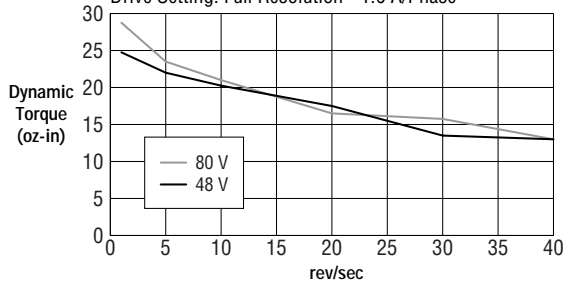
HT17-068 MOTOR
 Motor Connection: Parallel
 Drive Setting: Full Resolution • 1.375 A/Phase



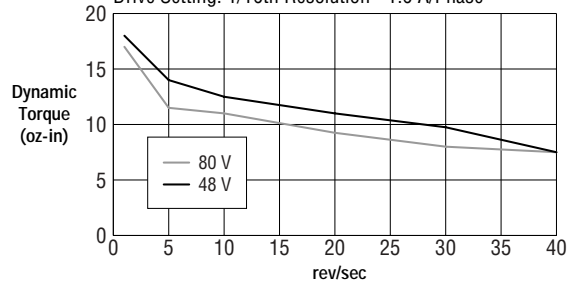
HT17-068 MOTOR
 Motor Connection: Parallel
 Drive Setting: 1/10th Resolution • 1.375 A/Phase



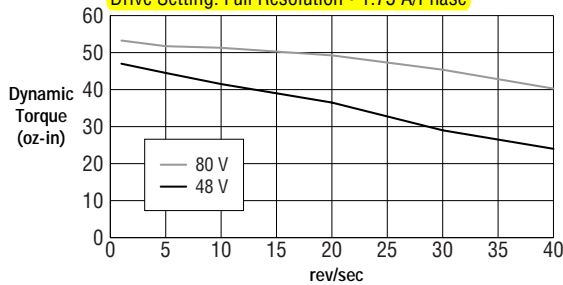
HT17-071 MOTOR
 Motor Connection: Parallel
 Drive Setting: Full Resolution • 1.0 A/Phase



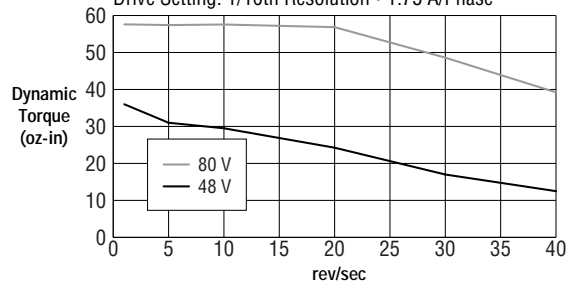
HT17-071 MOTOR
 Motor Connection: Parallel
 Drive Setting: 1/10th Resolution • 1.0 A/Phase



HT17-075 MOTOR
 Motor Connection: Parallel
 Drive Setting: Full Resolution • 1.75 A/Phase



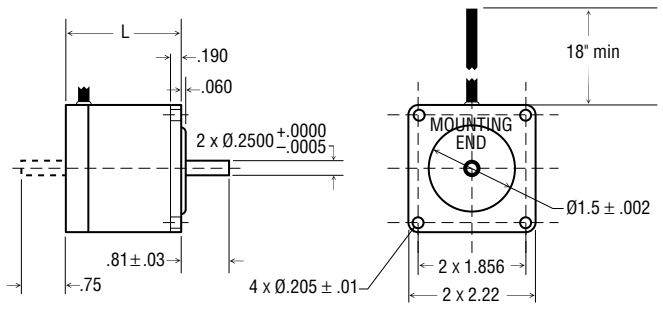
HT17-075 MOTOR
 Motor Connection: Parallel
 Drive Setting: 1/10th Resolution • 1.75 A/Phase



*Full steps/rev = Rev/sec x 200.



STEP MOTORS



Part #	MOTOR CONNECTION			Motor Length (inches)	Minimum Holding Torque (oz-in)	Leads	Step Angle	Volts		Amps		Ohms		mH		Rotor Inertia (oz-in ² /G-CM ²)	Motor Weight (Lbs.)
	1 = series	2 = parallel	3 = unipolar														
5023-499		2		2.25	110.0	4	1.8	3.3	2.00	1.7	5.0	.79/144	1.20				
4023-828	1			3.0	141.0	6		2.7	3.32	0.8	2.0	1.28/234	2.00				
	3				100.0			1.9	4.70	0.4	0.5						
4023-830	1				141.0			6.6	1.27	5.2	20.0						
	3				100.0			4.7	1.80	2.6	5.0						
5023-024	1				141.1			7.6	1.06	7.2	27.9						
	3				100.0			5.4	1.50	3.6	6.9						
* 5023-123	1				158.0	8		5.9	1.26	4.6	18.8	1.14/210					
	2				158.0			3.0	2.52	1.2	4.7						
	3				112.0			4.2	1.78	2.3	4.7						
5023-149	1			3.25	198.0			5.1	1.41	3.6	16.0	1.19/219	2.12				
	2				198.0			2.5	2.83	0.9	4.0						
	3				140.0			3.6	2.00	1.8	4.0						
4023-833	1			4.0	212.0	6		3.1	3.25	1.1	3.2	1.76/322	2.80				
	3				150.0			2.2	4.60	0.48	0.8						
4023-835	1				212.0			4.8	2.05	2.30	9.2						
	3				150.0			3.4	2.90	1.16	2.3						
* 5023-124	1				224.0	8		5.7	1.75	3.3	16.8	1.72/315					
	2				224.0			2.8	3.49	0.8	4.2						
	3				160.0			4.0	2.47	1.63	4.2						

OTHER LENGTHS AND WINDINGS AVAILABLE UPON REQUEST

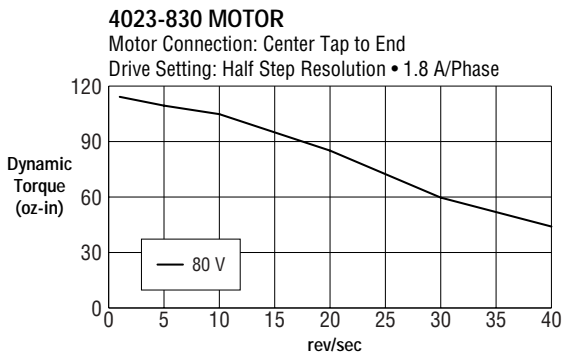
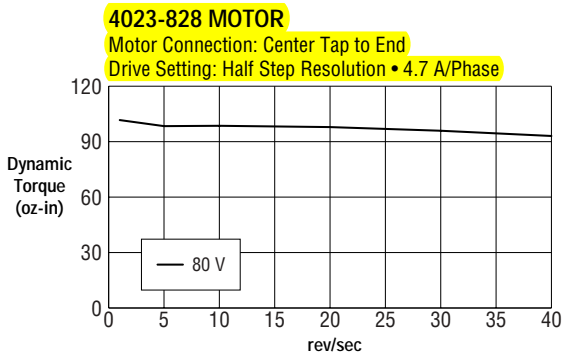
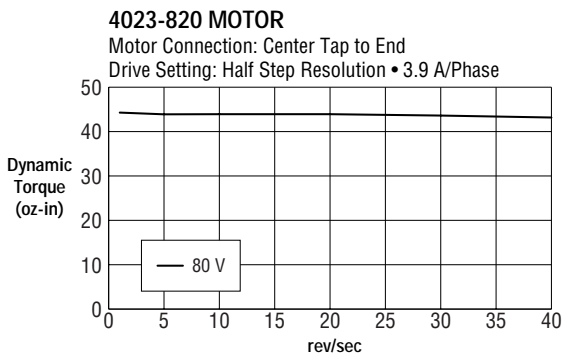
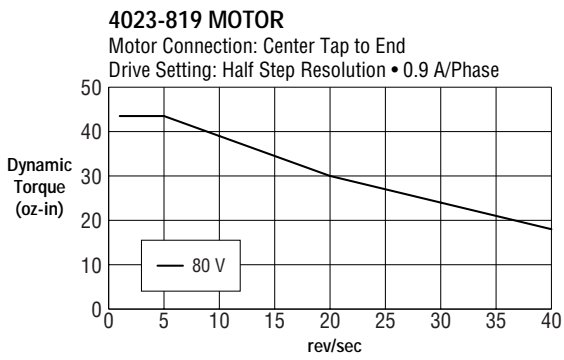
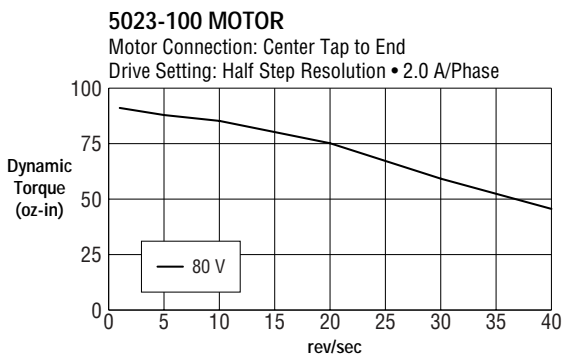
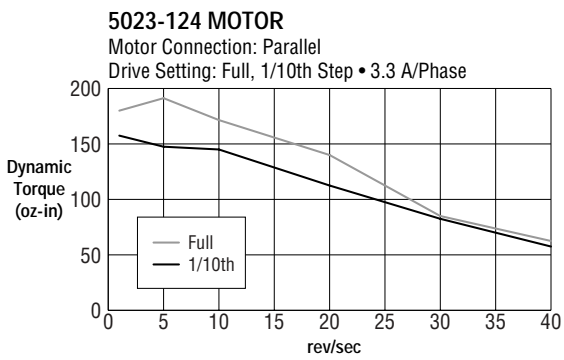
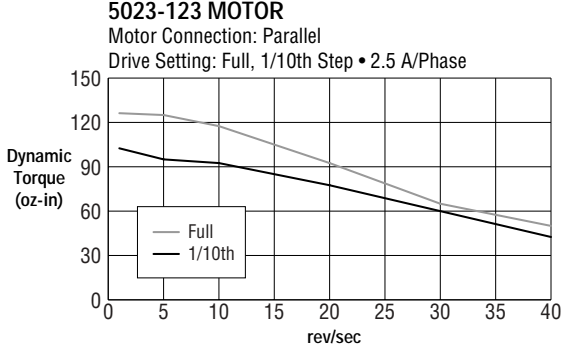
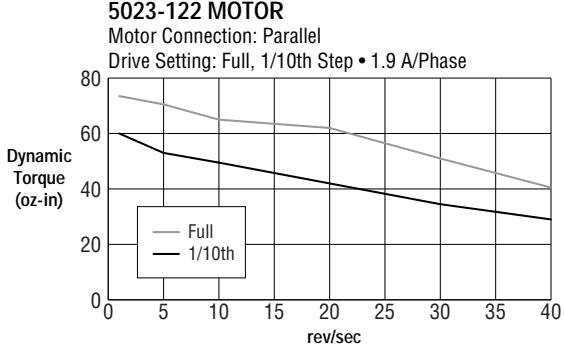
- Part numbers listed are for single shaft. To order double shaft add 'D' to the end.
- *Optimized for microstepping and use with 160 volt drives.

Hybrid Step Motors
 SIZE 23



Size 23 Motor

Typical Speed/Torque Performance*



*Full steps/sec = Rev/sec x 200. Half steps/sec = Rev/sec x 400.

Gearmotors

Part Number		1 - 24
17068-2-05S	HT17-068P 5:1 spur gearhead	
17068-2-10S	HT17-068P 10:1 spur gearhead	\$305.00
17068-2-18S	HT17-068P 18:1 spur gearhead	
17071-2-05S	HT17-071P 5:1 spur gearhead	
17071-2-10S	HT17-071P 10:1 spur gearhead	\$308.00
17071-2-18S	HT17-071P 18:1 spur gearhead	
17075-2-05S	HT17-075P 5:1 spur gearhead	
17075-2-10S	HT17-075P 10:1 spur gearhead	\$395.00
17075-2-18S	HT17-075P 18:1 spur gearhead	
23820-2-05S	4023-820P 5:1 spur gearhead	
23820-2-10S	4023-820P 10:1 spur gearhead	\$467.00
23820-2-18S	4023-820P 18:1 spur gearhead	
23828-2-05S	4023-828P 5:1 spur gearhead	
23828-2-10S	4023-828P 10:1 spur gearhead	\$534.00
23828-2-18S	4023-828P 18:1 spur gearhead	

NOTES

“S” at the end of the part number, denotes a single shaft motor. Add \$4.00 to Step Motor Gearhead price for double shaft along with a “D” to part number, in place of the “S” for double shaft. i.e. 17068-2-05D

