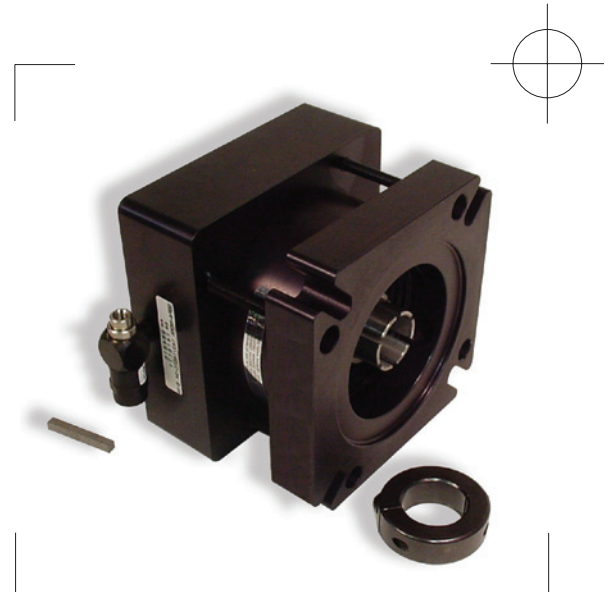


Eclipse® Servomotor Brake

The Eclipse Servomotor Brake family is a spring-engaged servomotor brakes equipped with a split hub, clamp collar for attachment to the servomotor shaft. With superior torque outputs, these brakes provide rugged durability for dynamic stopping applications. Eclipse brakes offer consistent long-lasting performance with no maintenance needed. Nexen’s servomotor brakes deliver at least 20-50% more torque than competitive brakes and provide safe, simple operation.

The easy-to-use, flange-mounted Eclipse brakes solve many of the problems associated with brake motors. Use them with standard motors for brake motor functionality and off-the-self availability. Nexen offers servomotor brakes in a variety of input and output flange/shaft combinations, all designed to increase the safety of your machines.

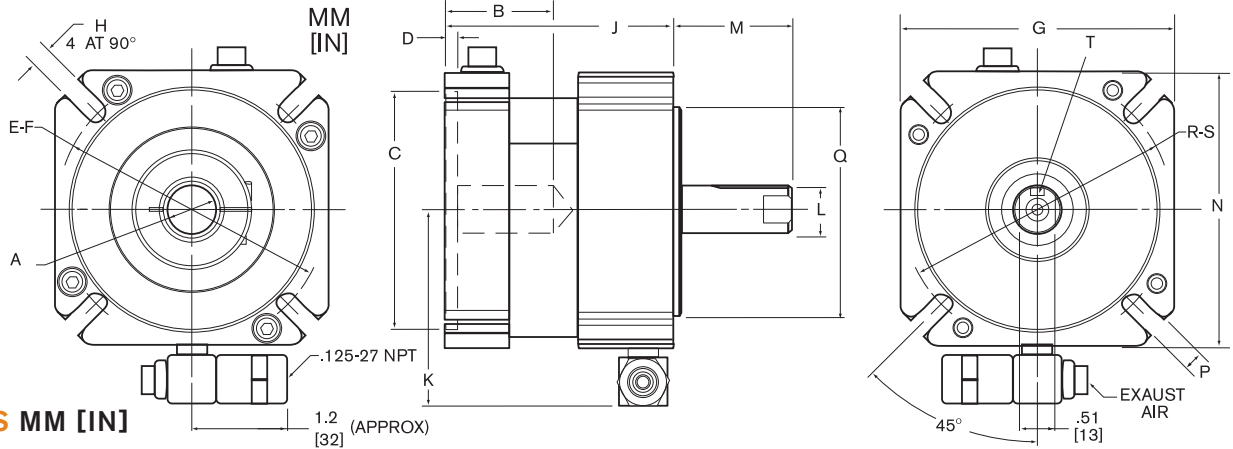


- Simple installation with split hub, shaft collar
- Spring engaged, air released
- True pilot mounting
- High torque when compared to electric brakes
- Zero backlash for precision holding
- Bidirectional braking
- Long facing life
- Cool operation, high efficiency, less energy consumption
- Designed for horizontal or vertical applications
- Strong enough to stall a servomotor
- Quick, safe emergency stopping and holding
- Remains engaged and holds load during motor change-outs
- Ideal for use with linear ball-screw stages and belt drives
- Field serviceable
- Low inertia
- Output flange replicates motor flange
- Quick exhaust valve included
- High torsional rigidity
- High overhung load capacity
- Meets IP67 dust and waterproof standards

Optional Solenoid Valve allows for:

- Visual disengagement indication
- Manual disengagement on valve
- Simple connections with 24VDC control and 80 PSIG shop air
- Specify product No. 964650

Servomotor Brake, Approximate Dimensions

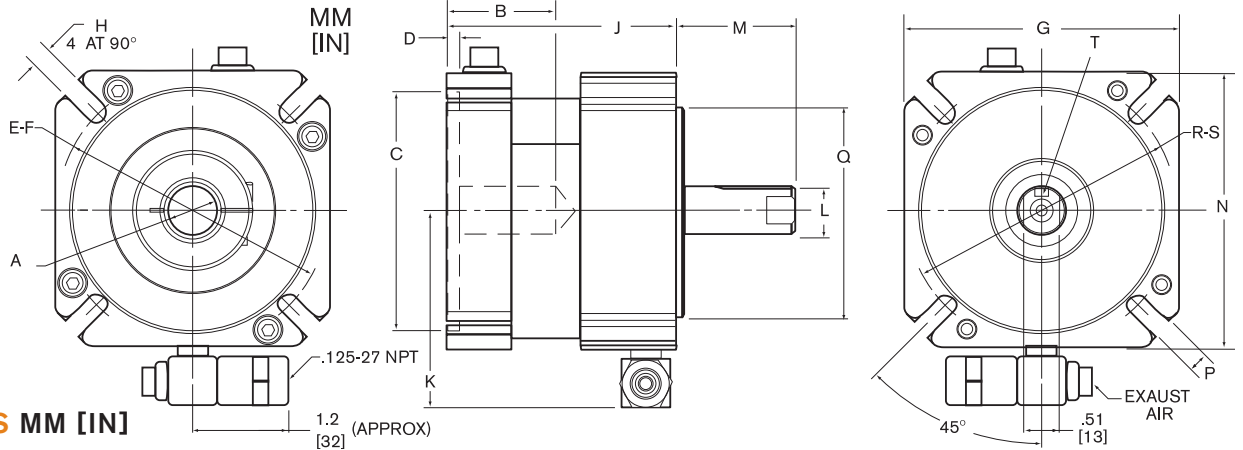


DIMENSIONS MM [IN]

Product Number	øA	B	øC	D	E-F	G	H	J	K	øL	M	P	Q	R-S	T
Size 2															
964605	9,5 [0.38]	35,9 [1.41]	38,1 [1.50]	--	66,7 [2.63]	57,2 [2.25]	#10-24	70,3 [2.77]	50,6 [1.99]	9,5 [0.38]	31,8 [1.25]	#10-24	38,1 [1.50]	66,7 [2.63]	no key
964606	6,4 [0.25]	24,8 [0.97]		--						6,35 [0.25]	20,6 [0.81]				no key
964610	9 [0.35]	35,9 [1.41]	40 [1.58]	3 [0.12]	63 [2.48]	57,2 [2.25]	#10-24	70,4 [2.77]	50,6 [1.99]	9,0 [0.35]	20,0 [0.79]	5,21 [0.205]	40,0 [1.58]	63,0 [2.48]	no key
964611	7,94 [0.313]	36,3 [1.43]	38,1 [1.50]	2,8 [0.11]	66,7 [2.63]	57,2 [2.25]	#10-24	70,4 [2.77]	50,6 [1.99]	7,94 [0.313]	20,6 [0.81]	5,0 [0.20]	38,1 [1.50]	66,7 [2.63]	no key
964612	9 [0.35]	37 [1.46]	50 [1.97]	3,5 [0.14]	70 [2.76]	57,2 [2.25]	5,0 [0.197]	70,4 [2.77]	50,6 [1.99]	9,0 [0.35]	25,0 [0.98]	5,21 [0.205]	50,0 [1.97]	63,0 [2.48]	no key
964613	14 [0.55]	33,1 [1.30]	52 [2.05]	3,51 [0.14]	63 [2.48] 91,5 [3.6]	74,2 [2.92]	6,34 [0.25]	74,5 [2.93]	56,0 [2.2]	14,0 [0.55]	30,0 [1.18]	6,0 [0.24]	50 [1.97]	70 [2.76] 91,5 [3.60]	5,0 [0.20]
Size 3															
964717	13,0 [0.51]	37,0 [1.46]	73,0 [2.88]	4,0 [0.16]	85,0-108,7 [3.35-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.60]	13,0 [0.51]	30,0 [1.18]	5,6 [0.22]	73,0 [2.88]	98,4-108,7 [3.87-4.28]	no key
964713	14,0 [0.55]	37,0 [1.46]	50,0 [1.97]	5,0 [0.20]	95,0-108,7 [3.74-4.28]	92,0 [3.62]	7,0 [0.82]	77,7 [3.06]	65,0 [2.60]	14,0 [0.55]	30,0 [1.18]	7,0 [0.28]	50,0 [1.97]	95,0-108,7 [3.74-2.28]	no key
964714	14,0 [0.55]	37,0 [1.46]	70,0 [2.76]	4,0 [0.16]	85,0-108,7 [3.35-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.60]	14,0 [0.55]	30,0 [1.18]	7,0 [0.28]	70,0 [2.76]	85,0-108,7 [3.34-4.28]	no key
964718	14,0 [0.55]	37,0 [1.46]	73,0 [2.88]	4,0 [0.16]	85,0-108,7 [3.35-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.60]	14,0 [0.55]	30,0 [1.18]	5,6 [0.22]	73,0 [2.88]	98,4-108,7 [3.88-4.28]	5,0 [0.20]
964709	14,0 [0.55]	42,3 [1.67]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	14,0 [0.55]	30,0 [1.18]	7,0 [0.28]	80,0 [3.15]	100,0-108,7 [3.94-4.28]	5,0 [0.20]
964710 ¹	14,0 [0.55]	42,3 [1.67]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	14,0 [0.55]	30,0 [1.18]	7,0 [0.28]	80,0 [3.15]	100,0-108,7 [3.94-4.28]	5,0 [0.20]
964711 ²	16,0 [0.63]	45,0 [1.77]	80,0 [3.15]	5,0 [0.20]	90,0-109,0 [3.54-4.29]	92,0 [3.62]	7,1 [0.28]	70,0 [2.76]	65,0 [2.60]	16,0 [0.63]	40,0 [1.57]	7,0 [0.28]	70,0 [2.76]	90,0-109,0 [3.54-4.28]	5,0 [0.20]
964716	15,88 [0.62]	37,0 [1.46]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	15,9 [0.63]	30,0 [1.18]	5,6 [0.22]	73,0 [2.88]	98,4-108,7 [3.88-4.28]	4,8 [0.19]
964712	16,0 [0.63]	40,0 [1.57]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	16,0 [0.63]	40,0 [1.58]	7,0 [0.28]	70,0 [2.76]	90,0-108,7 [3.54-4.28]	5,0 [0.20]
964715	16,0 [0.63]	40,0 [1.57]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	16,0 [0.63]	40,0 [1.58]	7,0 [0.28]	80,0 [3.15]	100,0-108,7 [3.94-4.28]	5,0 [0.20]
964719	19,1 [0.75]	40,7 [1.60]	73,0 [2.88]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,1 [0.28]	77,7 [3.06]	65,0 [2.60]	16,0 [0.63]	40,0 [1.58]	7,0 [0.28]	70,0 [2.76]	90,0-108,7 [3.54-4.28]	5,0 [0.20]
964720	16,0 [0.63]	40,0 [1.57]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.6]	16,0 [0.63]	40,0 [1.58]	7,0 [0.28]	80,0 [3.15]	100,0-108,7 [3.94-4.28]	5,0 [0.20]
964721	10,0 [0.394]	37,0 [1.46]	80,0 [3.15]	5,0 [0.20]	90,0-108,7 [3.54-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.6]	10,0 [0.394]	30,0 [1.18]	7,0 [0.28]	80,0 [3.15]	100,0-108,7 [3.94-4.28]	3,0 [0.12]
964722	12,7 [0.5]	37,0 [1.46]	73,0 [2.88]	4,0 [0.16]	85,0-108,7 [3.35-4.28]	92,0 [3.62]	7,0 [0.28]	77,7 [3.06]	65,0 [2.6]	12,7 [0.5]	30,5 [1.20]	5,92 [0.233]	73,0 [2.88]	98,4-108,7 [3.88-4.28]	3,2 [0.13]
964723	19,0 [0.75]	57,0 [2.24]	110 [4.33]	11,0 [0.43]	125,7-150,0 [4.95-5.90]	92,0 [3.62]	10,0 [0.39]	88,2 [3.47]	65,0 [2.6]	16,0 [0.63]	40,0 [1.57]	7,0 [0.28]	70,0 [2.76]	90,0-108,7 [3.54-4.28]	5,0 [0.20]

1. Holding Torque: 6 Nm [55in-lb], Release Pressure: 4,3 bar [62 psi] 2. Bore with 5,0 mm [0.2 in] Keyway 3. Holding Torque: 14 Nm [125in-lb], Release Pressure: 3,4 bar [50 psi]
 4. Bore with 8,0 mm [0.31 in] Keyway 5. Release pressure: 50 psi, holding torque: 28Nm (250 in-lbs)

Servomotor Brake, Approximate Dimensions (continued)

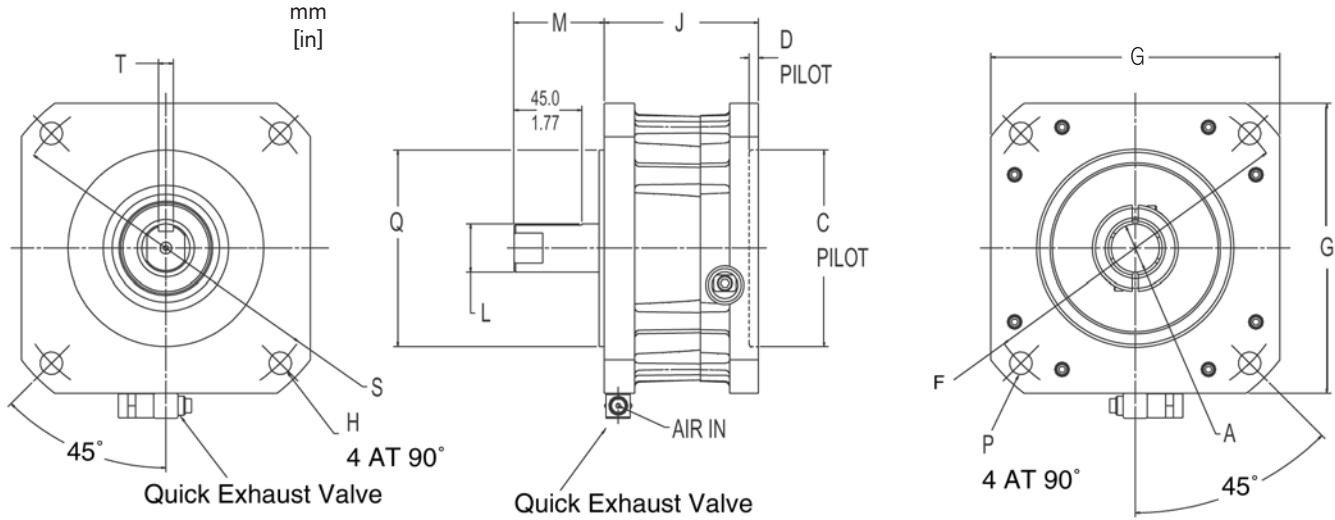


DIMENSIONS MM [IN]

Product Number	øA	B	øC	D	E-F	G	H	J	K	øL	M	P	Q	R-S	T
Size 4															
964824	14,0 [0.55]	55,5 [2.19]	80,0 [3.15]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.20]	14,0 [0.55]	30,0 [1.20]	10,0 [0.39]	80,0 [3.10]	115,0-149,9 [4.53-5.90]	5,0 [0.20]
964819 ³	19,0 [0.75]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.20]	19,0 [0.75]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964814	19,0 [0.75]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.20]	19,0 [0.75]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964823 ³	19,0 [0.75]	55,5 [2.19]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.20]	19,0 [0.75]	40,0 [1.58]	10,0 [0.39]	95,0 [3.74]	115,0-149,9 [4.53-5.90]	6,0 [0.24]
964818	19,0 [0.75]	55,5 [2.19]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.20]	19,0 [0.75]	40,0 [1.58]	10,0 [0.39]	95,0 [3.74]	115,0-149,9 [4.53-5.90]	6,0 [0.24]
964816	19,0 [0.75]	42,9 [1.69]	95,0 [3.74]	3,0 [0.12]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	104,0 [4.09]	82,0 [3.20]	22,2 [0.88]	54,0 [2.13]	3/8-16	114,3 [4.50]	149,2 [5.88]	4,8 [0.19]
964826	15,9 [0.63]	56,3 [2.22]	114,3 [4.50]	3,5 [0.14]	149,2 [5.88]	125,0 [4.92]	10,3 [0.41]	106,5 [4.19]	82,0 [3.20]	19,0 [0.75]	40,0 [1.58]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964817	24,0 [0.95]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.20]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	8,0 [0.32]
964815	24,0 [0.95]	55,9 [2.20]	110,0 [4.33]	4,0 [0.16]	150,0-186,3 [5.90-7.34]	125,0 [4.92]	12,0 [0.47]	105,0 [4.13]	82,0 [3.20]	22,2 [0.88]	53,97 [2.13]	3/8-16	114,3 [4.50]	149,2 [5.88]	4,80 [0.19]
964820	22,0 [0.87]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	105,6 [4.16]	82,0 [3.20]	15,9 [0.63]	52,4 [2.06]	3/8-16	114,3 [4.50]	149,2 [5.88]	4,80 [0.19]
964821	22,0 [0.87]	67,1 [2.64]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	99,2 [3.91]	82,0 [3.20]	22,0 [0.87]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964830	24,0 [0.95]	54,7 [2.15]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.20]	24,0 [0.95]	45,0 [1.77]	7,0 [0.28]	95,0 [3.74]	115,0-149,9 [4.53-5.90]	8,0 [0.32]
964825	24,0 [0.95]	54,7 [2.15]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.20]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	95,0 [3.74]	115,0-149,9 [4.53-5.90]	8,0 [0.32]
964829	24,0 [0.95]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.20]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	8,0 [0.32]
964828	24,0 [0.95]	55,5 [2.19]	110 [4.33]	3,5 [0.14]	125,7-150,0 [4.95 - 5.90]	125 [4.92]	10 [0.39]	106,5 [4.19]	120,0 [4.7]	24,0 [0.95]	50,0 [1.97]	10 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	8,0 [0.32]
964832	19,0 [0.75]	60,5 [2.38]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125 [4.92]	10 [0.39]	105,7 [4.16]	82 [3.2]	19,0 [0.75]	55,0 [2.17]	10 [0.39]	95,0 [3.74]	115,0-150,0 [4.53-5.90]	6,0 [0.24]
964833	15,88 [0.625]	56,1 [2.21]	110 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125 [4.92]	10 [0.39]	107,4 [4.23]	82 [3.2]	15,88 [0.625]	38,1 [1.50]	10 [0.39]	55,6 [2.19]	125,7-150,0 [4.95-5.90]	4,8 [0.19]
964834	15,88 [0.625]	56,1 [2.21]	63,5 [2.5]	3,5 [0.14]	127-150 [5.0-5.90]	125 [4.92]	10 [0.39]	107,4 [4.23]	82 [3.2]	15,88 [0.625]	50,8 [2.0]	10 [0.39]	63,5 [2.5]	127-150 [5.0-5.90]	4,8 [0.19]
964835	15,88 [0.625]	63,5 [2.50]	55,6 [2.19]	--	125,7-150,0 [4.95-5.90]	125 [4.92]	10 [0.39]	104,8 [4.13]	82 [3.2]	15,88 [0.625]	52,4 [2.06]	9,53 [0.375]	114,3 [4.5]	149,2 [5.88]	4,8 [0.19]
964836	24,0 [0.95]	56,5 [2.23]	110 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125 [4.92]	10 [0.39]	105,6 [4.16]	82 [3.2]	22,23 [0.88]	54,0 [2.13]	9,53 [0.375]	114,3 [4.5]	149,2 [5.88]	4,8 [0.19]
964837	19,0 [0.75]	56,3 [2.22]	110 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125 [4.92]	10 [0.39]	106,5 [4.19]	82 [3.2]	19,0 [0.75]	40,0 [1.58]	10 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]

1. Holding Torque: 6 Nm [55in-lb], Release Pressure: 4,3 bar [62 psi] 2. Bore with 5,0 mm [0.2 in] Keyway 3. Holding Torque: 14 Nm [125in-lb], Release Pressure: 3,4 bar [50 psi]
4. Bore with 8,0 mm [0.31 in] Keyway 5. Release pressure: 50 psi, holding torque: 28Nm (250 in-lbs)

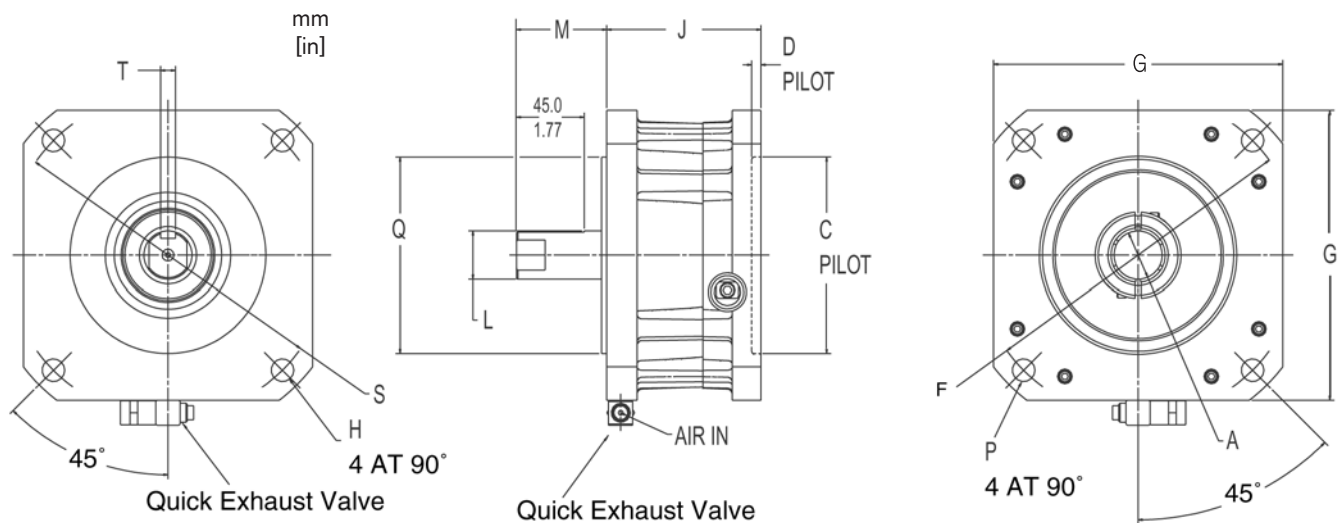
Servomotor Brake, Approximate Dimensions (continued)



Product Number	øA	B	øC	D	E-F	G	H	J	K	øL	M	P	Q	R-S	T
Size 4 (continued)															
964838	19,0 [0.75]	60,5 [2.38]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.2]	20,0 [0.79]	62,0 [2.44]	10,0 [0.39]	95,0 [3.74]	115,0-150,0 [4.53-5.90]	no key
964839	19,0 [0.75]	55,6 [2.19]	95,0 [3.74]	3,5 [0.14]	115,0-150,0 [4.53-5.90]	125,0 [4.92]	10,0 [0.39]	104,8 [4.13]	82,0 [3.2]	15,88 [0.625]	52,4 [2.06]	9,53 [0.375]	114,3 [4.5]	149,2 [5.88]	4,8 [0.19]
964842	28,0 [1.10]	67,1 [2.64]	110,0 [4.33]	7,0 [0.28]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.2]	28,0 [1.10]	60,0 [2.36]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	no key
964844	19,0 [0.75]	61,3 [2.41]	110,0 [4.33]	7,0 [0.28]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.2]	19,0 [0.75]	55,0 [2.17]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964845	24,0 [0.95]	59,0 [2.32]	110,0 [4.33]	7,0 [0.28]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.2]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	8,0 [0.32]
964849	19,0 [0.75]	55,5 [2.19]	95,0 [3.74]	3,5 [0.14]	115,0 [4.53]	150,4 [5.92]	9,53 [0.375]	105,7 [4.16]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	130,0 [5.12]	165,0-180,0 [6.50-7.1]	8,0 [0.32]
964851	19,0 [0.75]	70,3 [2.77]	110,0 [4.33]	16,0 [0.63]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	115,5 [4.55]	82,0 [3.2]	24,0 [0.95]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	8,0 [0.32]
964852	16,0 [0.63]	56,3 [2.22]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	105,7 [4.16]	82,0 [3.2]	16,0 [0.63]	40,0 [1.58]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	5,0 [0.20]
964853	24,0 [0.95]	55,5 [2.19]	110,0 [4.33]	3,5 [0.14]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	106,5 [4.19]	82,0 [3.2]	19,0 [0.75]	35,0 [1.38]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
964855	28,0 [1.10]	85,6 [3.37]	110,0 [4.33]	7,0 [0.28]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	125 [4.92]	82,0 [3.2]	28,0 [1.10]	60,0 [2.36]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	no key
964856	19,0 [0.75]	64,5 [2.54]	110,0 [4.33]	16,0 [0.63]	125,7-150,0 [4.95-5.90]	125,0 [4.92]	10,0 [0.39]	115,5 [4.55]	82,0 [3.2]	19,0 [0.75]	50,0 [1.97]	10,0 [0.39]	110,0 [4.33]	130,0-150,0 [5.12-5.90]	6,0 [0.24]
Size 5															
964907	24,0 [0.95]	58,2 [2.29]	131,0 [5.16]	6,2 [0.24]	150,0-186,3 [5.91-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	130,0 [5.12]	165,0-186,3 [6.50-7.33]	8,0 [0.32]
964906	32,0 [1.26]	65,7 [2.59]	130,0 [5.12]	4,0 [0.16]	215,0 [8.47]	150,4 [5.92]	15,0 [0.59]	140,5 [5.53]	95,0 [3.70]	22,2 [0.88]	54,0 [2.13]	3/8-16	114,3 [4.50]	149,2 [5.88]	4,8 [0.19]
964908	24,0 [0.95]	58,2 [2.29]	131,0 [5.16]	6,15 [0.24]	150,0-186,3 [5.91-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	130,0 [5.12]	165,0-186,3 [6.50-7.33]	8,0 [0.32]
964909	24,0 [0.95]	58,2 [2.29]	110,0 [4.33]	6,2 [0.24]	150,0-186,3 [5.91-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	110,0 [4.33]	165,0-186,3 [6.50-7.33]	8,0 [0.32]
964912 ⁴	24,0 [0.95]	66,7 [2.63]	131,0 [5.16]	6,2 [0.24]	150,0-186,0 [5.90-7.30]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	131,0 [5.16]	165,0-186,3 [6.50-7.33]	8,0x7,0 [0.31x0.28]
964913	24,0 [0.95]	58,2 [2.29]	110,0 [4.33]	6,15 [0.24]	150,0-186,3 [5.91-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	110,0 [4.33]	165,0-186,3 [6.50-7.33]	8,0 [0.32]
964915 ⁵	28,0 [1.10]	66,7 [2.63]	131,0 [5.16]	6,2 [0.24]	150,0-186,3 [5.91-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95,0 [3.70]	28,0 [1.10]	60,0 [2.36]	12,0 [0.47]	130,0 [5.12]	165,0-186,3 [6.50-7.33]	8,0 [0.32]

1. Holding Torque: 6 Nm [55in-lb], Release Pressure: 4,3 bar [62 psi] 2. Bore with 5,0 mm [0.2 in] Keyway 3. Holding Torque: 14 Nm [125in-lb], Release Pressure: 3,4 bar [50 psi]
 4. Bore with 8,0 mm [0.31 in] Keyway 5. Release pressure: 50 psi, holding torque: 28Nm (250 in-lbs)

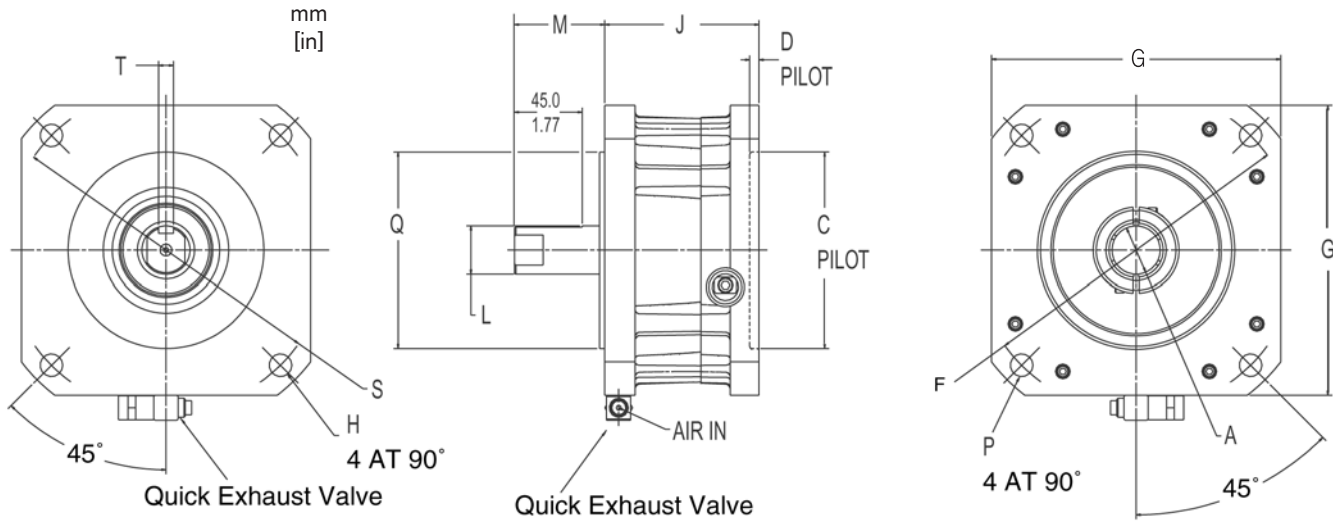
Servomotor Brake, Approximate Dimensions (continued)



Product Number	$\varnothing A$	B	$\varnothing C$	D	E-F	G	H	J	K	$\varnothing L$	M	P	Q	R-S	T
Size 5 (continued)															
964918	32,0 [1.26]	58,2 [2.29]	130,0 [5.12]	6,15 [0.24]	150,0-186,3 [5.90-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95 [3.7]	32,0 [1.26]	54,0 [2.13]	12,0 [0.47]	130,0 [5.12]	165,0-186,32 [6.50-7.33]	10,0 [0.39]
964920	28,0 [1.10]	66,7 [2.63]	130,0 [5.12]	6,2 [0.24]	150,0-186,3 [5.90-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95 [3.7]	28,0 [1.10]	60,0 [2.36]	12,0 [0.47]	130,0 [5.12]	165,0-186,32 [6.50-7.33]	8,0 [0.32]
964921	32,0 [1.26]	74,8 [2.94]	130,0 [5.12]	4,0 [0.16]	215,0 [8.47]	150,4 [5.92]	15,0 [0.59]	141,0 [5.55]	95 [3.7]	32,0 [1.26]	60,0 [2.36]	12,0 [0.47]	130,0 [5.12]	165,0-186,32 [6.50-7.33]	10,0 [0.39]
964925	32,0 [1.26]	82,0 [3.23]	130,0 [5.12]	6,2 [0.24]	150,0-186,3 [5.90-7.33]	150,4 [5.92]	12,0 [0.47]	132,5 [5.22]	95 [3.7]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	130,0 [5.12]	165,0-186,32 [6.50-7.33]	no key
Size 7															
965004 ³	32,0 [1.26]	83,2 [3.28]	130,0 [5.12]	6,1 [0.24]	215,0 [8.47]	192,0 [7.56]	15,0 [0.59]	102,3 [4.03]	113,0 [4.4]	32,0 [1.26]	60,0 [2.36]	15,0 [0.59]	130,0 [5.12]	215,0 [8.47]	10,0 [0.39]
965008	24,0 [0.95]	83,2 [3.28]	130,0 [5.12]	6,1 [0.24]	165,0 [6.50]	192,0 [7.56]	M10	102,3 [4.03]	113,0 [4.4]	24,0 [0.95]	50,0 [1.97]	12,0 [0.47]	130,0 [5.12]	80,0 [7.10]	8,0 [0.32]
965010	32,0 [1.26]	83,2 [3.28]	130,0 [5.12]	6,1 [0.24]	165,0 [6.50]	192,0 [7.56]	M10	102,3 [4.03]	113,0 [4.4]	32,0 [1.26]	60,0 [2.36]	15,0 [0.59]	130,0 [5.12]	215,0 [8.47]	10,0 [0.39]
965016	42,0 [1.65]	114,1 [4.49]	114,3 [4.50]	5,0 [0.2]	200,0 [7.87]	174,0 [6.85]	12,8 [0.50]	128,2 [5.05]	105 [4.1]	42,0 [1.65]	113,0 [4.45]	13,5 [0.53]	114,3 [4.50]	200,0 [7.87]	12,0 [0.47]
965000	32,0 [1.26]	83,2 [3.28]	130,0 [5.12]	6,1 [0.24]	215,0 [8.47]	192,0 [7.56]	15,0 [0.59]	102,3 [4.03]	113,0 [4.4]	32,0 [1.26]	60,0 [2.36]	15,0 [0.59]	130,0 [5.12]	215,0 [8.47]	10,0 [0.39]
965001	32,0 [1.26]	83,2 [3.28]	180,0 [7.09]	6,1 [0.24]	215,0 [8.47]	192,0 [7.56]	15,0 [0.59]	102,3 [4.03]	113,0 [4.4]	32,0 [1.26]	60,0 [2.36]	15,0 [0.59]	180,0 [7.09]	215,0 [8.47]	10,0 [0.39]
965006	32,0 [1.26]	83,2 [3.28]	180,0 [7.09]	6,1 [0.24]	215,0 [8.47]	192,0 [7.56]	15,0 [0.59]	102,3 [4.03]	113,0 [4.40]	32,0 [1.26]	60,0 [2.36]	15,0 [0.59]	180,0 [7.09]	215,0 [8.47]	10,0 [0.39]
965007	32,0 [1.26]	85,0 [3.35]	180,0 [7.09]	6,1 [0.24]	215,0 [8.47]	228,6 [9.00]	15,0 [0.59]	102,3 [4.03]	--	34,9 [1.38]	85,6 [3.37]	12,7 [0.50]	215,9 [8.50]	184,2 [7.25]	8,0 [0.31]
965003	35,0 [1.38]	88,2 [3.47]	114,3 [4.50]	6,1 [0.24]	200,0 [7.87]	174,0 [6.85]	M12 x1.75	102,3 [4.03]	105,0 [4.10]	35,0 [1.38]	79,0 [3.11]	13,5 [0.53]	114,3 [4.50]	200,0 [7.87]	10,0 [0.39]
965005	35,0 [1.38]	88,2 [3.47]	114,3 [4.50]	6,1 [0.24]	200,0 [7.87]	174,0 [6.85]	13,5 [0.53]	102,3 [4.03]	105,0 [4.10]	35,0 [1.38]	79,0 [3.11]	M12 x 1.75	114,3 [4.50]	200,0 [7.87]	10,0 [0.39]
965002	35,0 [1.38]	88,2 [3.47]	114,3 [4.50]	6,1 [0.24]	200,0 [7.87]	192,0 [7.56]	13,0 [0.51]	102,3 [4.03]	113,0 [4.40]	35,0 [1.38]	80,0 [3.15]	13,0 [0.51]	114,3 [4.50]	200,0 [7.87]	10,0 [0.39]
965009	42,0 [1.85]	114,1 [4.49]	114,3 [4.50]	5,0 [0.20]	200,0 [7.87]	174,0 [6.85]	12,8 [0.50]	128,2 [5.05]	105,0 [4.10]	35,0 [1.38]	79,0 [3.11]	12,5 [0.53]	114,3 [4.50]	200,0 [7.87]	10,0 [0.39]

1. Holding Torque: 6 Nm [55in-lb], Release Pressure: 4,3 bar [62 psi] 2. Bore with 5,0 mm [0.2 in] Keyway 3. Holding Torque: 14 Nm [125in-lb], Release Pressure: 3,4 bar [50 psi]
 4. Bore with 8,0 mm [0.31 in] Keyway 5. Release pressure: 50 psi, holding torque: 28Nm (250 in-lbs)

Servomotor Brake, Approximate Dimensions (continued)



Product Number	$\varnothing A$	B	$\varnothing C$	D	E-F	G	H	J	K	$\varnothing L$	M	P	Q	R-S	T
Size 9															
965102	38,0 [1.50]	83,3 [3.28]	180,0 [7.09]	4,1 [0.16]	215,0 [8.47]	214,0 [8.43]	13,0 [0.51]	102,3 [4.03]	124,0 [4.90]	38,0 [1.50]	60,0 [2.36]	13,0 [0.51]	180,0 [7.09]	215,0 [8.47]	12,0 [0.47]
965101	38,0 [1.50]	87,3 [3.44]	180,0 [7.09]	5,0 [0.20]	215,0 [8.47]	214,0 [8.43]	M12 x1.75	102,3 [4.03]	124,0 [4.90]	34,9 [1.38]	60,0 [2.36]	M12 x 1.75	180,0 [7.09]	215,0 [8.47]	no key
965100	38,0 [1.50]	83,3 [3.28]	180,0 [7.09]	4,1 [0.16]	215,0 [8.47]	214,0 [8.43]	13,0 [0.51]	102,3 [4.03]	124,0 [4.90]	38,0 [1.50]	60,0 [2.36]	13,0 [0.51]	180,0 [7.09]	215,0 [8.47]	12,0 [0.47]
965105	42,0 [1.65]	117,2 [4.62]	200,0 [7.87]	5,0 [0.20]	235,0 [9.25]	220,0 [8.66]	13,5 [0.53]	102,3 [4.03]	124,0 [4.90]	42,0 [1.65]	116,0 [4.57]	13,5 [0.53]	200,0 [7.87]	235,0 [9.25]	12,0 [0.47]
965106	55,0 [2.17]	117,1 [4.61]	200,0 [7.87]	5,0 [0.2]	235,0 [9.25]	220,0 [8.86]	13,5 [0.53]	154,5 [6.09]	125 [4.9]	42,0 [1.65]	80,9 [3.16]	14,0 [0.55]	180,0 [7.09]	214,2 [8.43]	12,0 [0.47]
Size 11															
965200	48,0 [1.89]	91,6 [3.61]	250,0 [9.84]	9,4 [0.37]	300,0 [11.81]	262,9 [10.35]	15,0 [0.59]	123,3 [4.85]	149,0 [5.90]	48,0 [1.89]	60,0 [2.36]	15,0 [0.59]	250,0 [9.84]	300,0 [11.81]	14,0 [0.55]
965201	35,0 [1.38]	92,1 [3.63]	230,0 [9.06]	9,1 [0.36]	265,0 [10.43]	262,9 [10.35]	M12 x1.75	123,3 [4.85]	149,0 [5.90]	35,0 [1.38]	92,0 [3.62]	14,0 [0.55]	230,0 [9.06]	265,0 [10.43]	no key

1. Holding Torque: 6 Nm [55in-lb], Release Pressure: 4,3 bar [62 psi] 2. Bore with 5,0 mm [0.2 in] Keyway 3. Holding Torque: 14 Nm [125in-lb], Release Pressure: 3,4 bar [50 psi]
 4. Bore with 8,0 mm [0.31 in] Keyway 5. Release pressure: 50 psi, holding torque: 28Nm (250 in-lbs)

Servomotor Brake Specifications

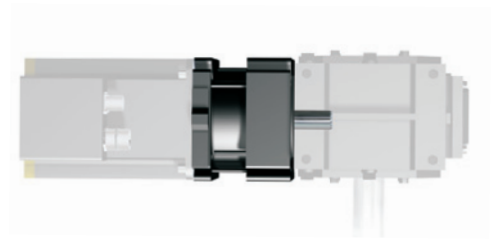
	Product Number	Static Torque Nm [in-lb]	Frame	Torsional Rigidity Nm/rad [lb-ft/rad]	Engage Time Ms	Release Time Ms	Max RPM	Overhung Load N [lb]	Shaft Inertia kg-m ² [lb-ft ²]	Release Pressure (minimum) bar [psi]
Size 2	964605	2.25 [20]	NEMA 23	6180 [4550]	8	92	10,000	833 [190]	0.00002 [0.0005]	5.5 [80]
	964606	2.25 [20]		6180 [4550]	8	92	10,000	833 [190]		5.5 [80]
Size 3	964717	8 [70]		9613 [7090]	12	75	10,000	1070 [240]	0.00005 [0.0012]	5.5 [80]
	964713	5 [44]		9613 [7090]	12	75	10,000	1070 [240]		3.5 [50]
	964714	8 [70]		9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
	964718	8 [70]		9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
	964709	8 [70]		9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
	964710	5 [44]		9613 [7090]	12	75	10,000	1070 [240]		3.5 [50]
	964712	8 [70]		9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
	964715	8 [70]		9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
	964716	8 [70]	NEMA 34	9613 [7090]	12	75	10,000	1070 [240]		5.5 [80]
964719	8 [70]		9613 [7090]	12	75	10,000	1070 [240]	5.5 [80]		
Size 4	964824	14 [125]		23,796 [17,550]	50	80	10,000	2334 [525]	0.00031 [0.0074]	3.4 [50]
	964819	14 [125]		23,796 [17,550]	50	80	10,000	2334 [525]		3.4 [50]
	964814	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964823	14 [125]		23,796 [17,550]	50	80	10,000	2334 [525]		3.4 [50]
	964818	22 [200]	NEMA 143/145 TC	23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964816	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964826	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964817	22 [200]	NEMA 143/145 TC	23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964815	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964820	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964821	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964830	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
	964825	22 [200]		23,796 [17,550]	50	80	10,000	2334 [525]		5.5 [80]
964829	14 [125]		23,796 [17,550]	50	80	10,000	2334 [525]	3.5 [50]		
Size 5	964907	45 [400]		36,184 [26,690]	60	100	10,000	2447 [550]	0.00114 [0.0371]	5.5 [80]
	961906	45 [400]		36,184 [26,690]	60	100	10,000	2447 [550]		5.5 [80]
	964908	28.3 [250]		36,184 [26,690]	60	100	10,000	2447 [550]		3.4 [50]
	964909	45 [400]		36,184 [26,690]	60	100	10,000	2447 [550]		5.5 [80]
	964912	45 [400]		36,184 [26,690]	60	100	10,000	2447 [550]		5.5 [80]
	964913	28.3 [250]		36,184 [26,690]	60	100	10,000	2447 [550]		3.4 [50]
	964915	28.3 [250]		36,184 [26,690]	60	100	10,000	2447 [550]		3.4 [50]
Size 7	965004	75 [660]		54,772 [40,390]			5000	Note: These brakes are intended for direct mounting only. Side loading is not recom- mended.	0.00344 [0.08163]	3.3 [48]
	965008	100 [880]		54,772 [40,390]			5000			4.4 [64]
	965010	99 [880]		54,772 [40,390]			5000			4.4 [64]
	965000	125 [1100]		54,772 [40,390]			5000			5.5 [80]
	965001	125 [1100]		54,772 [40,390]			5000			5.5 [80]
	965006	100 [880]		54,772 [40,390]			5000			4.4 [64]
	965007	125 [1100]	NEMA 213/215 TC	54,772 [40,390]			5000			5.5 [80]
	965003	75 [660]		54,772 [40,390]			5000			3.3 [48]
	965005	125 [1100]		54,772 [40,390]			5000			5.5 [80]
	965002	50 [440]		54,772 [40,390]			5000			2.2 [32]
965009	125 [1100]		54,772 [40,390]			5000	5.5 [80]			
Size 9	965102	75 [660]		102,733 [75,757]			5000	0.00344 [0.08163]	3.3 [48]	
	965101	100 [880]		102,733 [75,757]			5000		4.4 [64]	
	965100	125 [1100]		102,733 [75,757]			5000		5.5 [80]	
	965105	125 [1100]		102,733 [75,757]			5000		5.5 [80]	
Size 11	965200	125 [1100]		211,695 [156,108]			5000	0.00344 [0.08163]	5.5 [80]	
	965201	125 [1100]		211,695 [156,108]			5000		5.5 [80]	

Servomotor Brake Selection Example

The brake mounted between a servo motor and a 145TC-flanged gearbox is required to perform a dynamic stop of a gantry moving in the "X" axis, within (5) seconds. The 18 foot long gantry travels at 120 inches per second and carries a 3500 pound load. The driving/stopping forces are driven through a 40 tooth, 14mm pitch sprocket.

BRAKE STOP TIME CALCULATIONS

Given: Gearbox Ratio= 12.19:1
Sprocket Diameter= 7.0 inches, 3.50 inch radius
Velocity= 120 feet per second or 10 feet per minute
Weight of loaded gantry= 3500 pounds
Required Stop Time= 5 seconds
Rated Brake Torque= 200 inch pounds



(1) Energy per Stop (E) = $\frac{1}{2} MV^2$

Mass (M) = $W/32.2$
W=Weight of the load
32.2=Acceleration of gravity

$M = 3500/32.2 = 109 \text{ lbs}$
 $E = 1/2(109)10^2 = 5435 \text{ ft-lbs}$

(3) Force (F) in pounds exerted on the drive sprocket (Torque (T_{gb}) at the output side of the gearbox divided by the Sprocket Radius)

$$F = 2438/3.5 = 697 \text{ lbs}$$

(2) Torque (T_{gb}) at the output side of the gearbox (Rated Brake Torque x Gearbox Ratio)

$$T_{gb} = 200 \times 12.19 = 2438 \text{ in-lb}$$

(4) Stop Time (t) = Velocity (V) of the gantry divided by the Deceleration Rate (a) in feet per second squared

$$a = 32.2 (F)/W$$
$$V = \text{Velocity in feet per minute} = 10$$

$$a = 32.2 (697)/ 3500 = 6.4 \text{ f/s}^2$$
$$t = 10/6.4 = 1.6 \text{ seconds}$$

RECOMMENDED ECLIPSE™ SERVOMOTOR BRAKE

Size 4, 200 inch pound rated brake
Input Flange Data: Bolt Circle: 165 mm, Bore: 24mm
Output Flange and Shaft Data: NEMA 145TC

In accordance with Nexen's established policy of constant product improvement, the specifications contained in this document are subject to change without notice. Technical data listed in this document are based on the latest information available at the time of printing and are also subject to change without notice. For current information, please consult: www.nexengroup.com

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