



115V Drive Supply Motor Data (160VDC Bus)

230V Drive Supply Motor Data (320VDC Bus)

MOTOR MODEL		M422-L	M423-S	M422-L	M423-S
<b>MECHANICAL DATA (1)</b>					
Rated Torque, Cont (Stall)	Nm	0.62	0.99	0.62	0.99
	lb-in	5.49	8.81	5.49	8.81
Peak Torque (Stall)	Nm	1.86	2.97	1.86	2.97
	lb-in	16.47	26.43	16.47	26.43
Rated Current	Arms	0.85	1.59	1.7	3.18
Rated Power	kW	0.36	0.62	0.36	0.62
	hp	0.49	0.83	0.49	0.83
Rated Voltage	Vrms	230	230	230	230
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.0000831	0.000131	0.0000831	0.000131
	lb-in-s <sup>2</sup>	0.0000738	0.000116	0.0000738	0.000116
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.0000103	0.0000151	0.0000103	0.0000151
	lb-in-s <sup>2</sup>	0.0000911	0.0001333	0.0000911	0.0001333
Motor Shipping Weight	kg	1.6	1.6	1.6	1.6
	lb	3.5	3.5	3.5	3.5
Motor Shipping Weight Brake Motors	kg	1.83	1.83	1.83	1.83
	lb	4	4	4	4
Friction Torque	Nm	0.030	0.028	0.030	0.028
	lb-in	0.266	0.248	0.266	0.248
Max. Operating Speed	rpm	8000	7471	8000	7471
<b>WINDING DATA (1)</b>					
Poles		4	4	4	4
Sine Wave KT Torque Constant (2)	Nm/A	0.43	0.32	0.86	0.64
	lb-in/A	3.85	2.81	7.7	5.62
KE Voltage Constant (3)	V/krpm	27.9	20.8	27.9	20.8
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	12.5	4.2	25	8.4
Winding Inductance Phase to Phase	mH	17.9	7.6	35.8	15.2
Thermal Resistance	°C/Watt	1.45	1.20	1.45	1.20
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.			
(1) Specifications are at 25°C unless otherwise noted.		(3) Peak value of sinusoidal phase to phase Volts			
(2) Peak value of per phase sine wave Amperes					

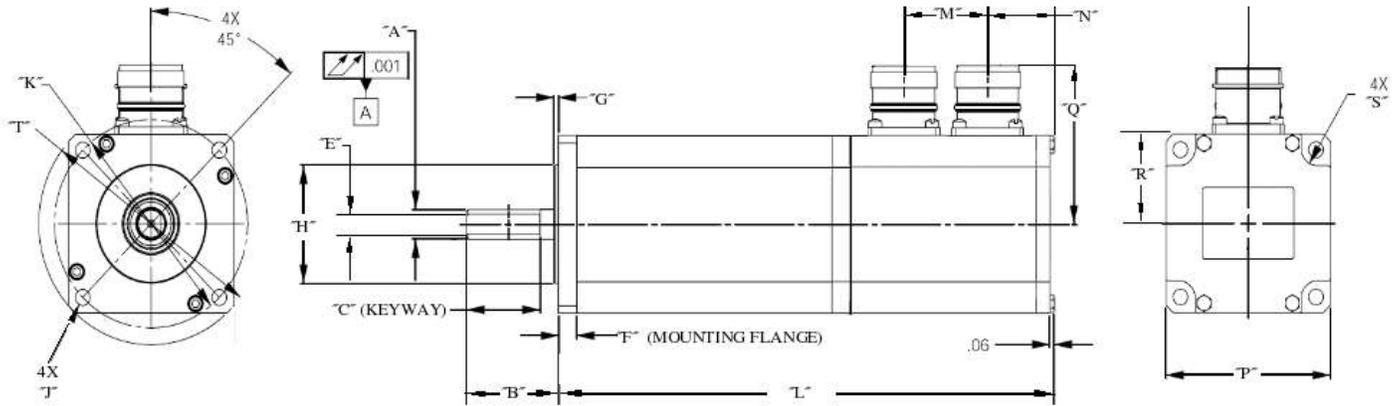
<b>STORAGE AND OPERATING CONDITIONS</b>	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

<b>THERMOSTAT RATINGS</b>	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0
	1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5° C)	140° C

\*The thermostat is normally used as a switch for a 15VDC logic signal.

**ELWOOD HIGH PERFORMANCE MOTORS**

**SW-SERIES M42X DIMENSIONAL DATA**



Motor Model	A	B	C	D	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M422	9/0.375	20/1.25	N.A.	N.A.	6/0.25	1.5/0.06	40/1.5	4.8/0.201	63/2.625	118.1/4.65	Consult Factory	23.8/0.94	14.7/0.58	57.2/2.25	N.A.	28.6/1.13	5.1/0.25	74/3.05
M423	9/0.375	20/1.25	N.A.	N.A.	6/0.25	1.5/0.06	40/1.5	4.8/0.201	63/2.625	142.8/5.62		23.8/0.94	14.7/0.58	57.2/2.25	N.A.	28.6/1.13	5.1/0.25	74/3.05



**ELWOOD HIGH PERFORMANCE MOTORS**

**SW-SERIES WASHDOWN MOTOR DATA: M43X FRAME**

230V Drive Supply Motor Data (320VDC Bus)

460V Drive Supply Motor Data, (640VDC Bus)

MOTOR MODEL		M431-N	M432-N	M433-F	M433-J	M433-M	M431-N	M432-N	M433-F	M433-J	M433-M
		MECHANICAL DATA (1)					MECHANICAL DATA (1)				
Rated Torque, Cont (Stall)	Nm	1.38	2.26	3.72	3.72	3.72	1.38	2.67	3.72	3.72	3.72
	lb-in	12.22	23.6	32.9	32.9	32.9	12.2	23.6	32.9	32.9	32.9
Peak Torque (Stall)	Nm	4.14	8.01	11.16	11.16	11.16	4.14	8.01	11.16	11.16	11.16
	lb-in	36.7	70.8	98.7	98.7	98.7	36.7	70.8	98.7	98.7	98.7
Rated Current	Arms	3.1	5.5	4.51	5.64	8.27	1.55	2.25	2.26	2.82	4.14
Rated Power	kW	0.6	1.49	0.95	1.14	1.2	0.6	1.49	0.95	1.14	1.28
	hp	0.8	2	1.28	1.52	1.6	0.8	2	1.28	1.52	1.71
Rated Voltage	Vrms	230	230	230	230	230	460	460	460	460	460
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.00007	0.00015	0.00017	0.00017	0.00017	0.00007	0.00015	0.00017	0.00017	0.00017
	lb-in-s <sup>2</sup>	0.0006	0.0013	0.0015	0.0015	0.0015	0.0006	0.0013	0.0015	0.0015	0.0015
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.000087	0.000167	0.000187	0.000187	0.000187	0.000087	0.000167	0.000187	0.000187	0.000187
	lb-in-s <sup>2</sup>	0.00077	0.00147	0.00167	0.00167	0.00167	0.00077	0.00147	0.00167	0.00167	0.00167
Motor Shipping Weight	kg	3.9	4.55	5.53	5.53	5.53	3.9	4.55	5.53	5.53	5.53
	lb	8.6	10	12.2	12.2	12.2	8.6	10	12.2	12.2	12.2
Motor Shipping Weight Brake Motors	kg	6.73	5.75	6.73	6.73	6.73	5.10	5.75	6.73	6.73	6.73
	lb	14.80	12.26	14.80	14.80	14.80	11.20	12.26	14.80	14.80	14.80
Friction Torque	Nm	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	lb-in	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Max. Operating Speed	rpm	6933	7500	3250	4602	5900	6933	7500	3250	4602	6933
		WINDING DATA (1)					WINDING DATA (1)				
Poles		6	6	6	6	6	6	6	6	6	6
Sine Wave KT Torque Constant (2)	Nm/A	0.45	0.48	0.82	0.66	0.45	0.9	0.96	1.64	1.32	0.9
	lb-in/A	3.94	4.3	7.29	5.83	3.98	7.88	8.6	14.58	11.66	7.96
KE Voltage Constant (3)	V/krpm	30	32	64	45.2	30	60	64	128	90.4	60
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	5.3	1.97	4.4	2.5	1.07	10.6	3.94	8.8	5	2.14
Winding Inductance Phase to Phase	mH	7.6	4.3	9.9	4.2	1.8	15.2	8.6	19.8	8.4	3.6
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.									
(1) Specifications are at 40°C unless otherwise noted.		(3) Peak value of sinusoidal phase to phase Volts									
(2) Peak value of per phase sine wave Amperes											

**STORAGE AND OPERATING CONDITIONS**

Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

**THERMOSTAT RATINGS**

Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0
	1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5° C)	140° C

\*The thermostat is normally used as a switch for a 15VDC logic signal.



230V Drive Supply Motor Data (320VDC Bus)

460V Drive Supply Motor Data, (640VDC Bus)

MOTOR MODEL	230V Drive Supply Motor Data (320VDC Bus)										460V Drive Supply Motor Data, (640VDC Bus)										
	M441-E	M442-E	M442-G	M442-K	M443-E	M443-K	M444-C	M444-E	M444-H	M446-B	M441-E	M442-E	M442-G	M442-K	M443-E	M443-K	M444-C	MS44-E	M444-H	M446-B	
MECHANICAL DATA (1)																					
Rated Torque, Cont (Stall)	Nm	2.17	4.14	4.14	4.14	5.52	5.52	7.75	7.75	7.75	10.98	2.17	4.14	4.14	4.14	5.52	5.52	7.75	7.75	7.75	10.98
	lb-in	19.2	36.7	36.7	36.7	48.9	48.9	68.6	68.6	68.6	97.2	19.2	36.7	36.7	36.7	48.9	48.9	68.6	68.6	68.6	97.2
Peak Torque (Stall)	Nm	6.51	12.42	12.42	12.42	16.56	16.56	23.25	23.25	23.25	32.94	6.51	12.42	12.42	12.42	16.56	16.56	23.25	23.25	23.25	32.94
	lb-in	57.6	110	110	110	146.6	146.6	205.8	205.8	205.8	291.6	57.6	110	110	110	146.6	146.6	205.8	205.8	205.8	291.6
Rated Current	Arms	2.05	3.85	5.26	6.96	5.45	10.72	4.92	7.7	10.34	5.6	1.03	1.93	2.63	3.48	2.73	5.36	2.46	3.85	5.17	2.8
Rated Power	kW	0.51	0.97	1.34	1.47	1.18	1.77	0.97	1.49	2.06	1.01	0.51	0.97	1.34	1.47	1.18	1.77	0.97	1.49	2.06	1.01
	hp	0.68	1.3	1.8	1.97	1.58	2.37	1.3	2	2.76	1.35	0.68	1.3	1.8	1.97	1.58	2.37	1.3	2	2.76	1.35
Rated Voltage	Vrms	230	230	230	230	230	230	230	230	230	230	460	460	460	460	460	460	460	460	460	460
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.00027	0.00041	0.00041	0.00051	0.00051	0.00051	0.00063	0.00063	0.00063	0.00080	0.00027	0.00041	0.00041	0.00051	0.00051	0.00063	0.00063	0.00063	0.00063	0.00080
	lb-in-s <sup>2</sup>	0.0024	0.0036	0.0036	0.0036	0.0045	0.0045	0.0056	0.0056	0.0056	0.0071	0.0024	0.0036	0.0036	0.0036	0.0045	0.0045	0.0056	0.0056	0.0056	0.0071
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.000287	0.000427	0.000427	0.000527	0.000527	0.000527	0.000647	0.000647	0.000647	0.000817	0.000287	0.000427	0.000427	0.000527	0.000527	0.000527	0.000647	0.000647	0.000647	0.000817
	lb-in-s <sup>2</sup>	0.00257	0.00377	0.00377	0.00377	0.00467	0.00467	0.00577	0.00577	0.00577	0.00727	0.00257	0.00377	0.00377	0.00377	0.00467	0.00467	0.00577	0.00577	0.00577	0.00727
Motor Shipping Weight	kg	5.71	7.30	7.30	7.30	8.90	8.90	10.50	10.50	10.50	14.00	5.71	7.30	7.30	7.30	8.90	8.90	23	23	23	30
	lb	12.6	16.1	16.1	16.1	19.6	19.6	23.0	23.0	23.0	30.0	12.6	16.1	16.1	16.1	19.6	19.6	23	23	23	30
Motor Shipping Weight Brake Motors	kg	6.91	8.50	8.50	8.50	10.10	10.10	11.70	11.70	11.70	15.20	6.91	8.50	8.50	8.50	10.10	10.10	11.70	11.70	11.70	15.20
	lb	15.2	18.7	18.7	18.7	22.2	22.2	25.6	25.6	25.6	32.6	15.2	18.7	18.7	18.7	22.2	22.2	25.6	25.6	25.6	32.6
Friction Torque	Nm	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	lb-in	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Max. Operating Speed	rpm	2953	2984	3980	5714	2942	5810	1990	3052	4200	1600	2953	2984	3980	5714	2942	5810	1990	3052	4200	1600
WINDING DATA (1)																					
Poles		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sine Wave KT Torque Constant (2)	Nm/A	1.06	1.07	0.79	0.6	1.01	0.52	1.58	1.01	0.75	1.96	2.12	2.14	1.58	1.12	2.02	1.04	3.16	2.02	1.5	3.92
	lb-in/A	9.37	9.51	6.97	5.27	8.97	4.56	13.95	8.91	6.64	17.36	18.74	19.02	13.94	10.54	17.94	9.12	27.9	17.82	13.28	34.72
KE Voltage Constant (3)	V/krpm	70.4	69.7	52.3	36.4	70.7	35.8	104.5	68.2	49.5	129.5	140.8	139.4	104.6	72.8	141.4	71.6	209	136.4	99	259
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	14.2	4.27	2.35	1.13	2.57	0.63	3.54	1.53	0.81	3.09	28.4	8.54	4.7	2.26	5.14	1.26	7.08	3.06	1.62	6.18
Winding Inductance Phase to Phase	mH	31.6	16	7.7	3.4	8.7	2	14.43	6.14	30	14.43	63.2	32	15.4	6.8	17.4	4	28.86	12.28	60	28.86
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.																			
(1) Specifications are at 40°C unless otherwise noted.	(3) Peak value of sinusoidal phase to phase Volts																				
(2) Peak value of per phase sine wave Amperes																					

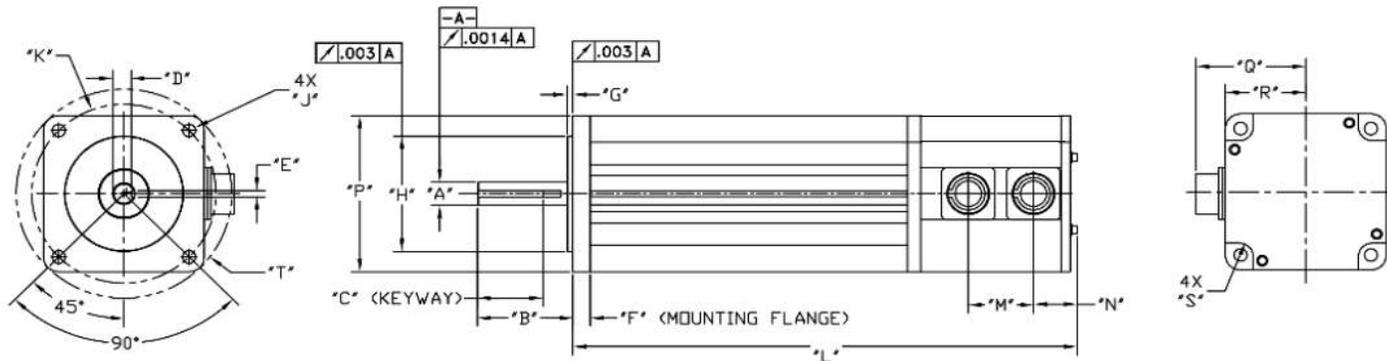
STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0
	1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5° C)	140° C

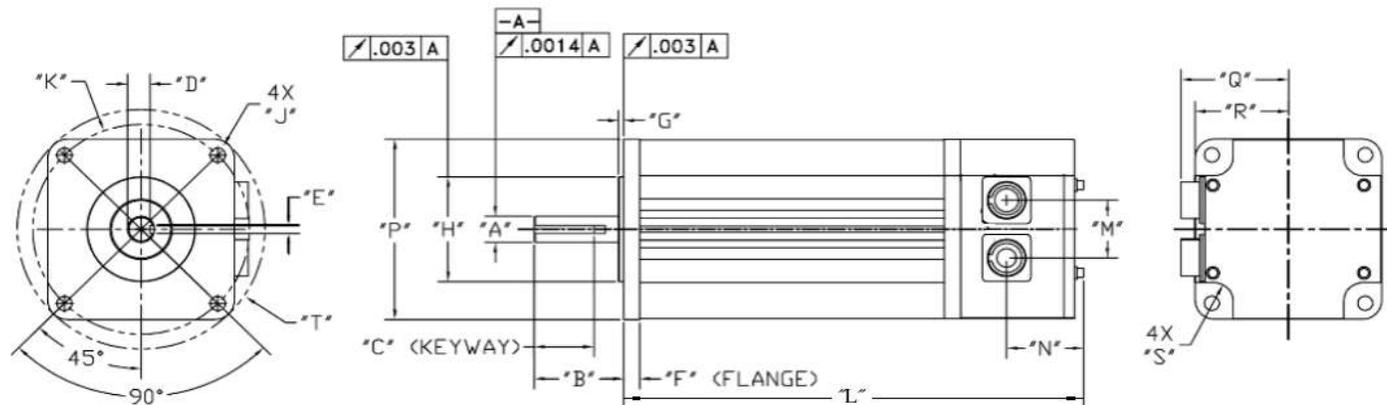
\*The thermostat is normally used as a switch for a 15VDC logic signal.

**ELWOOD HIGH PERFORMANCE MOTORS**

**SW-SERIES M43X AND M44X DIMENSIONAL DATA**



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M431	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/250	7/.28	100/.88	181/7.14	230/9.06	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53
M432	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/250	7/.28	100/.88	219/8.64	268/10.56	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53
M433	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/250	7/.28	100/.88	258/10.14	306/12.06	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M441	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	187/7.35	236/9.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M442	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	225/8.85	27/10.77	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M443	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	263/10.35	312/12.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M444	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	301/11.85	350/13.77	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M446	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	377/14.85	388/15.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71



230V Drive Supply Motor Data (230VDC Bus)

460V Drive Supply Motor Data (460VDC Bus)

MOTOR MODEL		M461-D	M461-G	M462-D	M462-E	M462-G	M463-D	M463-F	M463-K	M464-C	M464-E	M464-G	M465-C	M465-D	M465-G	M461-D	M461-G	M462-D	M462-E	M462-G	M463-D	M463-F	M463-K	M464-C	M464-E	M464-G	M465-C	M465-D	M465-G		
		MECHANICAL DATA (1)															MECHANICAL DATA (1)														
Rated Torque, Cont (Stall)	Nm	5.74	5.74	12.21	12.21	12.21	17.42	17.42	17.42	21.88	21.88	21.88	24.85	24.85	24.85	5.74	5.74	12.21	12.21	12.21	17.42	17.42	17.42	21.88	21.88	21.88	24.85	24.85	24.85		
	lb-in	50.8	50.8	108.1	108.1	108.1	154.2	154.2	154.2	193.6	193.6	193.6	220	220	220	50.8	50.8	108.1	108.1	108.1	154.2	154.2	154.2	193.6	193.6	193.6	220	220	220		
Peak Torque (Stall)	Nm	17.22	17.22	36.63	36.63	36.63	46.25	46.25	46.25	52.26	52.26	52.26	65.64	65.64	65.64	17.22	17.22	36.63	36.63	36.63	46.25	46.25	46.25	52.26	52.26	52.26	65.64	65.64	65.64		
	lb-in	158.3	158.3	324.3	324.3	324.3	422.5	422.5	422.5	462.5	462.5	462.5	580.9	580.9	580.9	158.3	158.3	324.3	324.3	324.3	422.5	422.5	422.5	522.6	522.6	522.6	65.64	65.64	65.64		
Rated Current	A rms	4.63	7.61	9.2	11.3	14.95	11.8	18.4	23.05	13.63	20.44	27.88	15.29	13.11	28.9	2.32	3.81	4.6	5.65	7.48	5.9	9.2	14.53	6.82	10.22	13.94	7.65	9.55	14.45		
	kW	0.62	1.75	1.72	2.14	2.72	2.54	2.69	3.16	2.45	2.98	3.6	2.76	3.13	4.77	0.82	1.75	1.72	2.14	2.72	2.54	2.69	3.16	2.45	2.98	3.6	2.76	3.13	4.77		
Rated Power	hp	1.1	2.35	1.7	2.87	3.65	3.4	3.6	4.23	3.29	4	4.82	3.7	4.2	6.39	1.1	2.35	2.3	2.87	3.65	3.4	3.6	4.23	3.29	4	4.82	3.7	4.2	6.39		
	Vrms	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	460	460	460	460	460	460	460	460	460	460	460	460	460		
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.00120	0.00120	0.00230	0.00230	0.00230	0.00282	0.00282	0.00282	0.00361	0.00361	0.00361	0.00440	0.00440	0.00440	0.00120	0.00120	0.00230	0.00230	0.00230	0.00282	0.00282	0.00282	0.00361	0.00361	0.00361	0.00440	0.00440	0.00440		
	lb-in-s <sup>2</sup>	0.011	0.011	0.018	0.018	0.018	0.025	0.025	0.025	0.032	0.032	0.032	0.039	0.039	0.039	0.011	0.011	0.018	0.018	0.018	0.025	0.025	0.025	0.032	0.032	0.032	0.039	0.039	0.039		
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.001217	0.001217	0.002317	0.002317	0.002317	0.002837	0.002837	0.002837	0.003627	0.003627	0.003617	0.004417	0.004417	0.004417	0.001217	0.001217	0.002317	0.002317	0.002317	0.002837	0.002837	0.002837	0.003627	0.003627	0.003617	0.004417	0.004417	0.004417		
	lb-in-s <sup>2</sup>	0.011170	0.011170	0.018170	0.018170	0.018170	0.025170	0.025170	0.025170	0.032170	0.032170	0.032017	0.039017	0.039017	0.039017	0.011170	0.011170	0.018170	0.018170	0.018170	0.025170	0.025170	0.025170	0.032170	0.032170	0.032017	0.039017	0.039017	0.039017		
Motor Shipping Weight	kg	10.9	10.9	15.4	15.4	15.4	17.2	17.2	17.2	20.4	20.4	20.4	23.6	23.6	23.6	10.9	10.9	15.4	15.4	15.4	17.2	17.2	17.2	20.4	20.4	20.4	23.6	23.6	23.6		
	lb	24	24	34	34	34	38	38	38	45	45	45	52	52	52	24	24	34	34	34	38	38	38	45	45	45	52	52	52		
Motor Shipping Weight Brake Motors	kg	13.2	13.2	17.7	17.7	17.7	19.5	19.5	19.5	22.7	22.7	22.7	25.9	25.9	25.9	13.2	13.2	17.7	17.7	17.7	19.5	19.5	19.5	22.7	22.7	22.7	25.9	25.9	25.9		
	lb	29	29	39	39	39	42	42	42	50	50	50	57	57	57	29	29	39	39	39	42	42	42	50	50	50	57	57	57		
Friction Torque	Nm	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56		
	lb-in	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Max. Operating Speed	rpm	2645	3962	2512	3141	3992	2286	3590	5389	2012	3141	4023	2010	2513	3769	2645	3962	2512	3141	3992	2286	3590	5389	2012	3141	2500	1500	1800	2500		
		WINDING DATA (1)															WINDING DATA (1)														
Poles		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Sine Wave KT Torque Constant (2)	Nm/A	1.24	0.75	1.33	1.08	0.82	1.48	0.95	0.6	1.61	1.07	0.8	1.63	1.3	0.86	2.48	1.5	2.66	2.16	1.64	2.96	1.9	1.2	3.22	2.14	1.6	3.26	2.6	1.72		
	lb-in/A	10.96	6.67	11.75	9.57	7.23	13.06	8.38	5.31	14.21	9.47	7.1	14.39	11.51	7.61	21.92	13.34	23.5	19.14	14.46	26.12	16.76	10.62	28.42	18.94	14.2	28.78	23.02	15.22		
KE Voltage Constant (3)	V/krpm	78.64	52.5	82.8	66.22	52.1	91	57.94	38.6	103.4	66.22	51.7	103.47	82.77	55.18	157.28	105	165.6	132.44	104.2	182	115.88	77.2	206.8	132.44	103.4	206.94	165.54	110.36		
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	4.71	1.87	1.61	1.05	0.6	1.21	0.46	0.18	0.92	0.39	0.23	0.76	0.45	0.2	9.42	3.74	3.22	2.1	1.2	2.42	0.92	0.36	1.84	0.78	0.46	1.52	0.9	0.4		
Winding Inductance Phase to Phase	mH	40	14.9	19.7	12.6	6.77	15.24	6.17	2.78	12.16	5.91	3.04	11.4	10.84	3.24	80	29.8	39.4	25.2	13.54	30.48	12.34	5.56	24.32	11.82	6.08	22.8	21.68	6.48		
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.																													

(1) Specifications are at 40°C unless otherwise noted.  
(2) Peak value of per phase sine wave Amperes  
(3) Peak value of sinusoidal phase to phase Volts

STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0 1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5° C)	140° C

\*The thermostat is normally used as a switch for a 15VDC logic signal.



**ELWOOD HIGH PERFORMANCE MOTORS**  
**SW-SERIES WASHDOWN MOTOR DATA: M47X FRAME**



230V Drive Supply Motor Data (320VDC Bus)

460V Drive Supply Motor Data, (640VDC Bus)

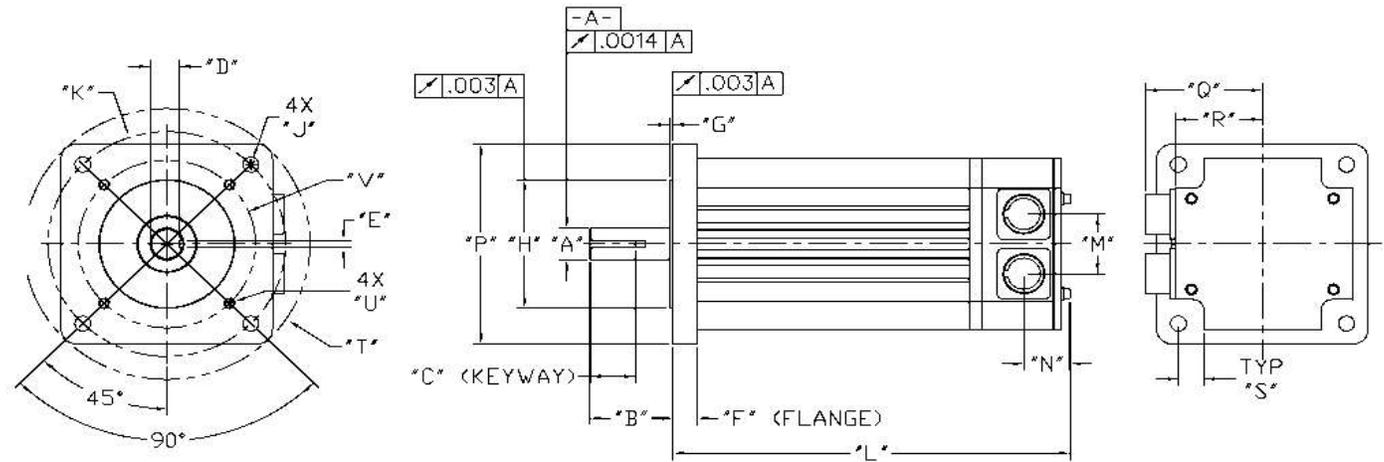
MOTOR MODEL	230V Drive Supply Motor Data (320VDC Bus)														460V Drive Supply Motor Data, (640VDC Bus)													
	M471-H	M473-B	M473-C	M474-A	M474-C	M476-A	M476-B	M476-C	M477-A	M477-B	M477-C	M479-B	M479-C	M471-H	M473-B	M473-C	M474-A	M474-C	M476-A	M476-B	M476-C	M477-A	M477-B	M477-C	M479-B	M479-C		
MECHANICAL DATA (1)																												
Rated Torque, Cont (Stall)	Nm	7.91	18.91	18.91	25.42	25.42	37.07	37.07	37.07	42.06	42.06	42.06	49.76	49.76	7.91	18.91	18.91	25.42	25.42	37.07	37.07	37.07	42.06	42.06	42.06	49.76	49.76	
	lb-in	70	167.3	167.3	225	225	328.1	328.1	328.1	372.2	372.2	372.2	440.4	440.4	70	167.3	167.3	225	225	328.1	328.1	328.1	372.2	372.2	372.2	440	440	
Peak Torque (Stall)	Nm	23.73	56.73	56.73	76.26	76.26	111.21	111.21	111.21	126.18	126.18	126.18	149.3	149.3	23.73	56.73	56.73	76.26	76.26	111.21	111.21	111.21	126.18	126.18	126.18	149.3	149.3	
	lb-in	210	501.9	501.9	675	675	984.2	984.2	984.1	1116.7	1116.7	1116.7	1321.2	1321.2	210	501.9	501.9	675	675	984.2	984.2	984.2	1116.7	1116.7	1116.7	1321.2	1321.2	
Rated Current	Arms	9.8	10	12.6	8.41	17.7	12.26	18.4	25.66	14.31	20.45	28.95	26.34	35	4.9	5	6.3	4.21	8.85	6.13	9.2	12.83	7.16	10.23	14.48	14.4	17.5	
	kW	2.16	2.24	2.8	1.64	3.72	2.16	3.17	4.56	2.76	4.29	6.03	5.97	8.01	2.16	2.24	2.8	1.64	3.72	2.16	3.17	4.56	2.76	4.29	6.03	5.97	8.01	
Rated Power	hp	2.89	3	3.76	2.2	4.98	2.9	4.25	6.11	3.7	5.75	8.08	8	10.74	2.89	3	3.76	2.2	4.98	2.9	4.25	6.11	3.7	5.75	8.08	8	10.74	
	Vrms	230	230	230	230	230	230	230	230	230	230	230	230	230	460	460	460	460	460	460	460	460	460	460	460	460	460	
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.00171	0.00513	0.00513	0.00740	0.00740	0.01000	0.01000	0.01000	0.01200	0.01200	0.01200	0.01540	0.01540	0.00171	0.00513	0.00513	0.00740	0.00740	0.01000	0.01000	0.01000	0.01200	0.01200	0.01200	0.01540	0.01540	
	lb-in-s <sup>2</sup>	0.01510	0.04540	0.04540	0.06600	0.06590	0.09090	0.09090	0.09090	0.10600	0.10600	0.10600	0.13630	0.13630	0.01510	0.04540	0.04540	0.06600	0.06590	0.09090	0.09090	0.09090	0.10600	0.10600	0.10600	0.13630	0.13630	
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.001727	0.005147	0.005147	0.007417	0.007417	0.010017	0.010017	0.010017	0.012017	0.012017	0.012017	0.015417	0.015417	0.001727	0.005147	0.005147	0.007417	0.007417	0.010017	0.010017	0.010017	0.012017	0.012017	0.012017	0.015417	0.015417	
	lb-in-s <sup>2</sup>	0.015270	0.045570	0.045570	0.066170	0.066070	0.091070	0.091070	0.091070	0.106170	0.106170	0.106017	0.136317	0.136317	0.015270	0.045570	0.045570	0.066170	0.066070	0.091070	0.091070	0.091070	0.106170	0.106170	0.106017	0.136317	0.136317	
Motor Shipping Weight	kg	11.3	22.68	22.68	27.2	27.2	36.3	36.3	36.3	40.8	40.8	40.8	49.9	49.9	11.3	22.68	22.68	27.2	27.2	36.3	36.3	36.3	40.8	40.8	40.8	49.9	49.9	
	lb	25	50	50	60	60	80	80	80	90	90	90	110	110	25	50	50	60	60	80	80	80	90	90	90	110	110	
Motor Shipping Weight Brake Motors	kg	14.6	26.0	26.0	30.5	30.5	39.6	39.6	39.6	44.1	44.1	44.1	53.2	53.2	14.6	26.0	26.0	30.5	30.5	39.6	39.6	39.6	44.1	44.1	44.1	53.2	53.2	
	lb	22.2	57.2	57.2	67.2	67.2	87.2	87.2	87.2	97.2	97.2	97.2	117.2	117.2	22.2	57.2	57.2	67.2	67.2	87.2	87.2	87.2	97.2	97.2	97.2	117.2	117.2	
Friction Torque	Nm	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	
	lb-in	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Max. Operating Speed	rpm	3539	1671	2162	1081	2201	1081	1622	2234	1112	1589	2222	1730	2162	3539	1671	2162	1081	2201	1081	1622	2234	1112	1589	2222	1730	2162	
	WINDING DATA (1)																											
Poles		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
Sine Wave KT Torque Constant (2)	Nm/A	0.81	1.89	1.5	3.02	1.43	3.02	2.01	1.44	2.94	2.06	1.45	1.89	1.57	1.94	3.78	3.18	6.04	2.86	6.04	4.02	2.88	5.88	4.12	2.9	3.8	3.14	
	lb-in/A	7.14	16.73	13.28	26.75	12.7	26.76	17.83	12.78	26.01	18.2	12.86	16.72	13.86	17.2	33.46	28.14	53.5	25.4	53.52	35.66	25.56	52.02	36.4	25.72	33.68	27.72	
KE Voltage Constant (3)	V/krpm	58.78	124.47	96.19	192.37	94.5	192.37	128.25	93.1	187.03	130.92	93.6	120.23	96.2	117.56	248.94	192.38	384.74	189	384.74	256.5	186.2	374.06	261.84	187.2	240.46	192.4	
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	1.78	1.32	0.84	2.42	0.6	1.36	0.56	0.35	1.02	0.51	0.26	0.31	0.37	3.56	2.64	1.68	4.84	1.2	2.72	1.12	0.7	2.04	1.02	0.52	0.62	0.74	
Winding Inductance Phase to Phase	mH	6.48	6.83	4.37	12.6	3.11	8.04	3.58	2.04	6.3	3.15	1.64	2.03	1.3	12.96	13.66	8.74	25.2	6.22	16.08	7.16	4.08	12.6	6.3	3.28	4.06	2.6	
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.																										
(1) Specifications are at 40°C unless otherwise noted. (3) Peak value of sinusoidal phase to phase Volts (2) Peak value of per phase sine wave Amperes																												

STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

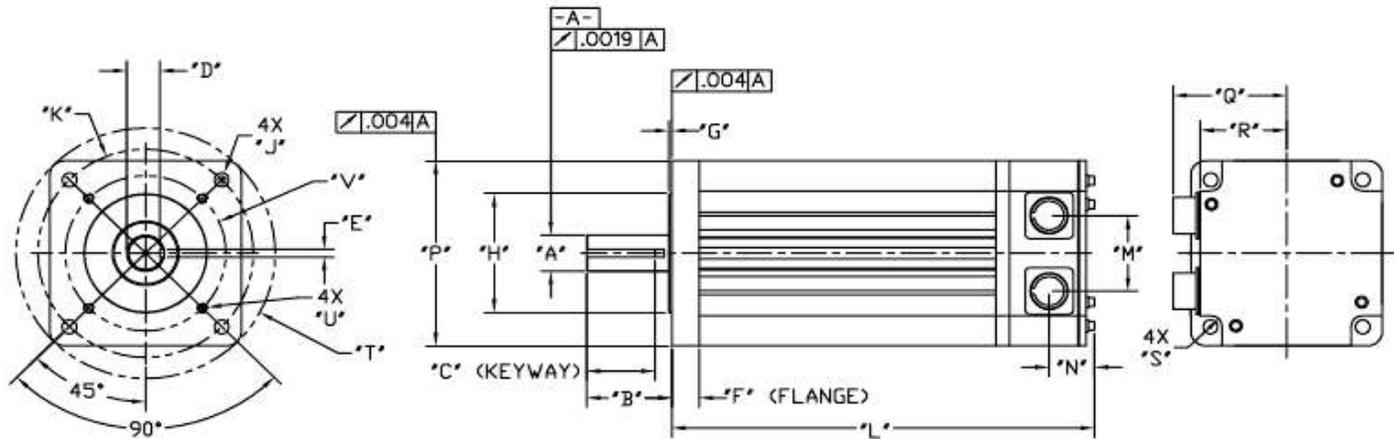
THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0 1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5° C)	140° C

\*The thermostat is normally used as a switch for a 15VDC logic signal.

**ELWOOD HIGH PERFORMANCE MOTORS**  
SW-SERIES M46X AND M47X DIMENSIONAL DATA



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T	U	V	
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	Dia in
M461	24/.63	50/2.06	40/1.50	20/.510	8/.19	20/.80	4/.13	130/4.50	12/.531	165/7.88	256/10.07	314/12.35	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	27/1.06	200/9.49	3/8-16 .56	5.88	
M462	24/.63	50/2.06	40/1.50	20/.510	8/.19	20/.80	4/.13	130/4.50	12/.531	165/7.88	294/11.57	351/13.85	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	27/1.06	200/9.49	3/8-16 .56	5.88	
M463	24/.63	50/2.06	40/1.50	20/.510	8/.19	20/.80	4/.13	130/4.50	12/.531	165/7.88	332/13.07	389/15.5	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	27/1.06	200/9.49	3/8-16 .56	5.88	
M464	24/.63	50/2.06	40/1.50	20/.510	8/.19	20/.80	4/.13	130/4.50	12/.531	165/7.88	370/14.57	428/16.85	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	27/1.06	200/9.49	3/8-16 .56	5.88	
M465	24/.63	50/2.06	40/1.50	20/.510	8/.19	20/.80	4/.13	130/4.50	12/.531	165/7.88	408/6.07	466/3.5	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	27/1.06	200/9.49	3/8-16 .56	5.88	



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T	U	V	
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	dia in
M741	32/1.38	58/3.13	50/2.5	27/1.2	10/.31	25/1.00	4/.13	180/4.5	15/.53	215/7.89	271/10.69	323/12.72	73/2.88	67/1.45	178/7.00	105/4.15	80/3.16	10/42	241/9.49	3/8-16 UNC2B .56 Deep	5.89	
M473	32/1.38	58/3.13	50/2.5	27/1.2	10/.31	25/1.00	4/.13	180/4.5	15/.53	215/7.89	348/13.69	399/15.72	73/2.88	67/1.45	178/7.00	105/4.15	80/3.16	10/42	241/9.49	3/8-16 UNC2B .56 Deep	5.89	
M474	32/1.38	58/3.13	50/2.5	27/1.2	10/.31	25/1.00	4/.13	180/4.5	15/.53	215/7.89	386/15.19	437.4/17.22	73/2.88	67/1.45	178/7.00	105/4.15	80/3.16	10/42	241/9.49	3/8-16 UNC2B .56 Deep	5.89	
M476	32/1.38	58/3.13	50/2.5	27/1.2	10/.31	25/1.00	4/.13	180/4.5	15/.53	215/7.89	462/18.19	513/20.22	73/2.88	67/1.45	178/7.00	105/4.15	80/3.16	10/42	241/9.49	3/8-16 UNC2B .56 Deep	5.89	
M477	32/1.38	58/3.13	50/2.5	27/1.2	10/.31	25/1.00	4/.13	180/4.5	15/.53	215/7.89	500/19.69	552/21.72	73/2.88	67/1.45	178/7.00	105/4.15	80/3.16	10/42	241/9.49	3/8-16 UNC2B .56 Deep	5.89	