

SW - SERIES

Wash Down Servo Motor
6" Frame

Motor Data (230V)

Performance Data (40 °C)	Symbol	Unit	M461-D	M461-G	M462-D	M462-E	M462-G
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	50.8 [5.74]	50.8 [5.74]	108.1 [12.21]	108.1 [12.21]	108.1 [12.21]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	4.63	7.61	9.20	11.30	14.95
Max. Continuous Power	P_{max}	HP [kW]	1.10 [0.82]	2.35 [1.75]	1.70 [1.72]	2.87 [2.14]	3.65 [2.72]
Torque @ Max. Power	T_p	lb-in [Nm]	34.7 [3.92]	49.4 [5.58]	53.6 [6.05]	72.4 [8.18]	76.6 [8.66]
Current @ Maximum Power	I_p	Amps (RMS)	4.17	6.85	8.20	10.17	13.45
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	2000	3000	2000	2500	3000
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	2645	3962	2512	3141	3992
Maximum Current (RMS)	I_m	Amps (RMS)	18.52	30.46	36.80	45.20	59.78
Peak Torque	T_{pk}	lb-in [Nm]	158.3 [17.22]	158.3 [17.22]	324.3 [36.63]	324.3 [36.63]	324.3 [36.63]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.011 [0.0012]	0.011 [0.0012]	0.018 [0.0023]	0.018 [0.0023]	0.018 [0.0023]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	10.96 [1.24]	6.67 [0.75]	11.75 [1.33]	9.57 [1.08]	7.23 [0.82]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/kRPM [V*Sec/Rad]	78.64 [0.75]	52.50 [0.50]	82.80 [0.79]	66.22 [0.63]	52.10 [0.50]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	4.71	1.87	1.61	1.05	0.60
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	40.00	14.90	19.70	12.60	6.77
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	18458 [16920]	18458 [10686]	24022 [16631]	24022 [22758]	24022 [16631]
Thermal Time Constant [brake]	T_{th}	minute	30 [33]	30 [33]	35 [38]	35 [38]	35 [38]
Electrical Time Constant	T_e	msec	8.49	7.97	9.75	12.00	10.26
Mechanical Time Constant [brake]	T_m	msec	6.29 [6.87]	6.15 [10.63]	3.12 [3.29]	3.12 [3.30]	3.30 [4.77]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	24 [10.9]	24 [10.9]	34 [15.4]	34 [15.4]	34 [15.4]
Line Voltage	V	VAC	230	230	230	230	230

Performance Data (40 °C)	Symbol	Unit	M463-D	M463-F	M463-K	M464-C	M464-E
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	154.2 [17.42]	154.2 [17.42]	154.2 [17.42]	193.6 [21.88]	193.6 [21.88]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	11.80	18.40	29.05	13.63	20.44
Max. Continuous Power	P_{max}	HP [kW]	3.40 [2.54]	3.60 [2.69]	4.23 [3.16]	3.29 [2.45]	4.00 [2.98]
Torque @ Max. Power	T_p	lb-in [Nm]	122.5 [13.84]	90.8 [10.25]	76.2 [8.61]	138.2 [15.62]	126.1 [14.24]
Current @ Maximum Power	I_p	Amps (RMS)	10.26	16.56	26.14	12.27	18.40
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	1750	2500	3500	1500	2000
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	2286	3590	5389	2012	3141
Maximum Current (RMS)	I_m	Amps (RMS)	47.20	73.60	116.18	54.52	81.76
Peak Torque	T_{pk}	lb-in [Nm]	462.5 [52.26]	462.5 [52.26]	462.5 [52.26]	580.9 [65.64]	580.9 [65.64]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.025 [0.00262]	0.025 [0.00262]	0.025 [0.00262]	0.032 [0.00361]	0.032 [0.00361]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	13.06 [1.48]	8.38 [0.95]	5.31 [0.60]	14.21 [1.61]	9.47 [1.07]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/kRPM [V*Sec/Rad]	91.00 [0.87]	57.94 [0.55]	38.60 [0.37]	103.40 [0.99]	66.22 [0.63]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	1.21	0.46	0.18	0.92	0.39
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	15.24	6.17	2.78	12.16	5.91
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	24666 [18686]	24666 [18686]	24666 [18686]	24205 [19364]	24205 [23472]
Thermal Time Constant [brake]	T_{th}	minute	45 [48]	45 [48]	45 [48]	47 [50]	47 [50]
Electrical Time Constant	T_e	msec	12.60	13.33	15.44	13.22	15.08
Mechanical Time Constant [brake]	T_m	msec	2.57 [3.40]	2.50 [3.30]	2.30 [3.04]	2.10 [2.62]	2.09 [2.59]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	38 [17.2]	38 [17.2]	38 [17.2]	45 [20.4]	45 [20.4]
Line Voltage	V	VAC	230	230	230	230	230

Brake Information:		Fail safe, Electric release ("B" version)	("C" version)	
Rated Holding Torque	T_s	lb-in [Nm]	100 [11.3]	175 [19.8]
Rated voltage	V	VDC	24	24
Rated current	I	Amp	0.67	0.55
Inertia	J_b	lb-in-sec ² [kg-m ²]	0.0006 [0.000067]	0.0008 [0.00009]
Weight Adder	W	lb [kg]	5 [2.3]	5 [2.3]

Motor Data (230V)

Performance Data (40 °C)	Symbol	Unit	M464-G	M465-C	M465-D	M465-G
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	193.6 [21.88]	220.0 [24.85]	220.0 [24.85]	220.0 [24.85]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	27.88	15.29	19.11	28.9
Max. Continuous Power	P_{max}	HP [kW]	4.82 [3.60]	3.70 [2.76]	4.20 [3.13]	6.39 [4.77]
Torque @ Max. Power	T_p	lb-in [Nm]	121.57 [13.74]	155.46 [17.57]	85.03 [9.61]	161.14 [18.21]
Current @ Maximum Power	I_p	Amps (RMS)	24.53	13.76	17.20	26.01
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	2500	1500	1800	2500
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	4023	2010	2513	3769
Maximum Current (RMS)	I_m	Amps (RMS)	109.04	61.16	76.44	115.58
Peak Torque	T_{pk}	lb-in [Nm]	580.9 [65.64]	659.9 [74.55]	677.8 [76.56]	659.9 [74.55]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.032 [0.0036]	0.039 [0.0044]	0.039 [0.0044]	0.039 [0.0044]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	7.10 [0.80]	14.39 [1.63]	11.51 [1.30]	7.61 [0.86]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/KRPM [V*Sec/Rad]	51.70 [0.49]	103.47 [0.99]	82.77 [0.79]	55.18 [0.53]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	0.23	0.76	0.45	0.20
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	3.04	11.40	10.84	3.24
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	24205 [19364]	22560 [21996]	22560 [21996]	22560 [18720]
Thermal Time Constant [brake]	T_{th}	minute	47 [50]	53 [56]	53 [56]	53 [56]
Electrical Time Constant	T_e	msec	13.22	15.10	15.50	16.09
Mechanical Time Constant [brake]	T_m	msec	2.10 [2.62]	2.07 [2.13]	1.78 [1.84]	1.96 [2.36]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	45 [20.4]	52 [23.6]	52 [23.6]	52 [23.6]
Line Voltage	V	VAC	230	230	230	230

Brake Information:			Fail safe, Electric release ("B" version)	("C" version)
Rated Holding Torque	T_s	lb-in [Nm]	100 [11.3]	175 [19.8]
Rated voltage	V	VDC	24	24
Rated current	I	Amp	0.67	0.55
Inertia	J_b	lb-in-sec ² [kg-m ²]	0.0006 [0.000067]	0.0008 [0.00009]
Weight Adder	W	lb [kg]	5 [2.3]	5 [2.3]

SW - SERIES

Wash Down Servo Motor
6" Frame

Motor Data (460V)

Performance Data (40 °C)	Symbol	Unit	M461-D	M461-G	M462-D	M462-E	M462-G
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	50.8 [5.74]	50.8 [5.74]	108.1 [12.21]	108.1 [12.21]	108.1 [12.21]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	2.32	3.81	4.60	5.65	7.48
Max. Continuous Power	P_{max}	HP [kW]	1.10 [0.82]	2.35 [1.75]	2.30 [1.72]	2.87 [2.14]	3.65 [2.72]
Torque @ Max. Power	T_p	lb-in [Nm]	34.7 [3.92]	49.4 [5.58]	53.6 [6.05]	72.4 [8.18]	76.6 [8.66]
Current @ Maximum Power	I_p	Amps (RMS)	2.09	3.43	4.10	5.09	6.73
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	2000	3000	2000	2500	3000
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	2645	3962	2512	3141	3992
Maximum Current (RMS)	I_m	Amps (RMS)	9.26	15.23	18.40	22.60	29.89
Peak Torque	T_{pk}	lb-in [Nm]	158.3 [17.22]	158.3 [17.22]	324.3 [36.63]	324.3 [36.63]	324.3 [36.63]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.011 [0.0012]	0.011 [0.0012]	0.018 [0.0023]	0.018 [0.0023]	0.018 [0.0023]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	21.92 [2.48]	13.34 [1.50]	23.50 [2.66]	19.14 [2.16]	14.46 [1.64]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/kRPM [V*Sec/Rad]	157.28 [1.50]	105.00 [1.00]	165.60 [1.58]	132.44 [1.26]	104.20 [1.00]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	9.42	3.74	3.22	2.10	1.20
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	80.00	29.80	39.40	25.20	13.54
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	18458 [16920]	18458 [10686]	24022 [16631]	24022 [22758]	24022 [16631]
Thermal Time Constant [brake]	T_{th}	minute	30 [33]	30 [33]	35 [38]	35 [38]	35 [38]
Electrical Time Constant	T_e	msec	8.49	7.97	9.75	12.00	10.26
Mechanical Time Constant [brake]	T_m	msec	6.29 [6.87]	6.15 [10.63]	3.12 [3.29]	3.12 [3.3]	3.30 [4.77]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	24 [10.9]	24 [10.9]	34 [15.4]	34 [15.4]	34 [15.4]
Line Voltage	V	VAC	460	460	460	460	460

Performance Data (40 °C)	Symbol	Unit	M463-D	M463-F	M463-K	M464-C	M464-E
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	154.2 [17.42]	154.2 [17.42]	154.2 [17.42]	193.6 [21.88]	193.6 [21.88]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	5.90	9.20	14.53	6.82	10.22
Max. Continuous Power	P_{max}	HP [kW]	3.40 [2.54]	3.60 [2.69]	4.23 [3.16]	3.29 [2.45]	4.00 [2.98]
Torque @ Max. Power	T_p	lb-in [Nm]	122.5 [13.84]	90.8 [10.25]	76.2 [8.61]	138.2 [15.62]	126.1 [14.24]
Current @ Maximum Power	I_p	Amps (RMS)	5.13	8.28	13.07	6.14	9.20
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	1750	2500	3500	1500	2000
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	2286	3590	5389	2012	3141
Maximum Current (RMS)	I_m	Amps (RMS)	23.60	36.80	58.09	27.26	40.88
Peak Torque	T_{pk}	lb-in [Nm]	462.5 [52.26]	462.5 [52.26]	462.5 [52.26]	580.9 [65.64]	580.9 [65.64]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.025 [0.00282]	0.025 [0.00282]	0.025 [0.00282]	0.032 [0.00361]	0.032 [0.00361]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	26.12 [2.96]	16.76 [1.90]	10.62 [1.20]	28.42 [3.22]	18.94 [2.14]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/kRPM [V*Sec/Rad]	182.00 [1.74]	115.88 [1.10]	77.20 [0.74]	206.80 [1.98]	132.44 [1.26]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	2.42	0.92	0.36	1.84	0.78
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	30.48	12.34	5.56	24.32	11.82
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	24666 [18686]	24666 [18686]	24666 [18686]	24205 [19364]	24205 [23472]
Thermal Time Constant [brake]	T_{th}	minute	45 [48]	45 [48]	45 [48]	47 [50]	47 [50]
Electrical Time Constant	T_e	msec	12.60	13.33	15.44	13.22	15.08
Mechanical Time Constant [brake]	T_m	msec	2.57 [3.40]	2.50 [3.30]	2.30 [3.04]	2.10 [2.62]	2.09 [2.59]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	38 [17.2]	38 [17.2]	38 [17.2]	45 [20.4]	45 [20.4]
Line Voltage	V	VAC	460	460	460	460	460

Brake Information:			Fail safe, Electric release ("B" version)	("C" version)
Rated Holding Torque	T_s	lb-in [Nm]	100 [11.3]	175 [19.8]
Rated voltage	V	VDC	24	24
Rated current	I	Amp	0.67	0.55
Inertia	J_b	lb-in-sec ² [kg-m ²]	0.0006 [0.000067]	0.0008 [0.00009]
Weight Adder	W	lb [kg]	5 [2.3]	5 [2.3]

SW - SERIES

Wash Down Servo Motor
6" Frame

Motor Data (460V)

Performance Data (40 °C)	Symbol	Unit	M464-G	M465-C	M465-D	M465-G
Continuous Rated Torque (Stall)	T_c	lb-in [Nm]	193.6 [21.88]	220.0 [24.85]	220.0 [24.85]	220.0 [24.85]
Continuous Rated Current (RMS)	I_c	Amps (RMS)	13.94	7.65	9.55	14.45
Max. Continuous Power	P_{max}	HP [kW]	4.82 [3.60]	3.70 [2.76]	4.20 [3.13]	6.39 [4.77]
Torque @ Max. Power	T_p	lb-in [Nm]	121.57 [13.74]	155.46 [17.57]	85.03 [9.61]	161.14 [18.21]
Current @ Maximum Power	I_p	Amps (RMS)	12.27	6.88	8.60	13.01
Speed @ Max. Power (Amp. Dependent)	N_p	RPM	2500	1500	1800	2500
Max. Continuous Speed (Amp. Dependent)	N_{max}	RPM	4023	2010	2513	3769
Maximum Current (RMS)	I_m	Amps (RMS)	54.52	30.58	38.22	57.79
Peak Torque	T_{pk}	lb-in [Nm]	580.9 [65.64]	659.9 [74.55]	677.8 [76.56]	659.9 [74.55]
Rotor Inertia	J_m	lb-in-sec ² [kg-m ²]	0.032 [0.0036]	0.039 [0.0044]	0.039 [0.0044]	0.039 [0.0044]
Torque Constant (@ Max. Winding Temp.)	K_t	lb-in/Amps [Nm/Amp]	14.2 [1.60]	28.78 [3.26]	23.02 [2.60]	15.22 [1.72]
Back EMF Constant (L-L RMS) @ 25°C (77°F)	K_e	V/KRPM [V*Sec/Rad]	103.40 [0.98]	206.94 [1.98]	165.54 [1.58]	110.36 [1.06]
Stator Resistance ±10% (L-L) @ 25°C (77°F)	R_a	Ohm	0.46	1.52	0.90	0.40
Stator Inductance ±10% (L-L) @ 25°C (77°F)	L_a	millihenry	6.08	22.80	21.68	6.48
Max. Theoretical Acceleration @ Stall [brake]	AE	Rad/sec ²	24205 [19364]	22560 [21996]	22560 [21996]	22560 [18720]
Thermal Time Constant [brake]	T_{th}	minute	47 [50]	53 [56]	53 [56]	53 [56]
Electrical Time Constant	T_e	msec	13.22	15.10	15.50	16.09
Mechanical Time Constant [brake]	T_m	msec	2.10 [2.62]	2.07 [2.13]	1.78 [1.84]	1.96 [2.36]
Static Friction	T_f	lb-in [Nm]	5 [0.56]	5 [0.56]	5 [0.56]	5 [0.56]
Weight	W	lb [kg]	45 [20.4]	52 [23.6]	52 [23.6]	52 [23.6]
Line Voltage	V	VAC	460	460	460	460

Brake Information:

			Fail safe, Electric release ("B" version)	("C" version)
Rated Holding Torque	T_s	lb-in [Nm]	100 [11.3]	175 [19.8]
Rated voltage	V	VDC	24	24
Rated current	I	Amp	0.67	0.55
Inertia	J_b	lb-in-sec ² [kg-m ²]	0.0006 [0.000067]	0.0008 [0.00009]
Weight Adder	W	lb [kg]	5 [2.3]	5 [2.3]

SW - SERIES

Wash Down Servo Motor
6" Frame

Connection Data

Motor Connector PT02E-14-5P

PIN	AWG	FUNCTION
A	12	ØA
B	12	ØB
C	12	ØC
D	12	GROUND

Inc. Encoder Connector PT02E-14-18P

PIN	AWG	FUNCTION
X	24	+VDC
X	24	COMMON
X	24	OUTPUT A
X	24	OUTPUT A'
X	24	OUTPUT B
X	24	OUTPUT B'
X	24	OUTPUT Z
X	24	OUTPUT Z'
X	24	OUTPUT U
X	24	OUTPUT U'
X	24	OUTPUT V
X	24	OUTPUT V'
X	24	OUTPUT W
X	24	OUTPUT W'
X	24	CASE GND (NOT USED)
X	24	SHIELD
X	18	BRAKE (+) Optional
X	18	BRAKE (-) Optional
X	18	OTL
X	18	OTL

Abs. Encoder Connector PT02E-14-18P

PIN	AWG	FUNCTION
X	24	+VDC
X	24	COMMON
X	24	+SIN
X	24	REFSIN
X	24	+COS
X	24	REFCOS
X	24	DATA +
X	24	DATA -
X	24	SHIELD
X	18	BRAKE (+) Optional
X	18	BRAKE (-) Optional
X	18	OTL
X	18	OTL

Resolver Connector PT02E-14-18P

PIN	AWG	FUNCTION
A	24	R1 (+REF)
B	24	R2 (-REF)
C	24	S1 (+COSINE)
D	24	S3 (-COSINE)
N	24	S2 (+SINE)
P	24	S4 (-SINE)
R	24	SHIELD
G	18	BRAKE (+) Optional
H	18	BRAKE (-) Optional
E	18	OTL
F	18	OTL

SW - SERIES

Wash Down Servo Motor
6" Frame

Motor Dimensions

Model	"A"	"B"	"C"	"D"	"E"	"F"	"G"
M461	∅ 0.6250 0.6245	2.06	1.50	0.517 0.502	0.1875 0.1855	0.80	0.13
	∅ 24.015 23.998						
M462	∅ 0.8750 0.8745	2.25	1.50	0.771 0.756	0.1875 0.1855	0.80	0.13
	∅ 24.015 23.998						
M463	∅ 0.8750 0.8745	2.25	1.50	0.771 0.756	0.1875 0.1855	0.80	0.13
	∅ 24.015 23.998						
M464	∅ 1.1250 1.1240	2.75	1.50	0.986 0.971	0.250 0.247	0.80	0.13
	∅ 24.015 23.998						
M465	∅ 1.1250 1.1240	2.75	1.50	0.986 0.971	0.250 0.247	0.80	0.13
	∅ 24.015 23.998						

Model	"H"	"J"	"K"	"L"	"L" w/BRAKE	M	N
M461	∅ 4.500 4.498	∅0.531	∅7.875	10.07	12.35	2.09	1.63
	∅ 130.013 129.991						
M462	∅ 4.500 4.498	∅0.531	∅7.875	11.57	13.85	2.09	1.63
	∅ 130.013 129.991						
M463	∅ 4.500 4.498	∅0.531	∅7.875	13.07	15.35	2.09	1.63
	∅ 130.013 129.991						
M464	∅ 4.500 4.498	∅0.531	∅7.875	14.57	16.85	2.09	1.63
	∅ 130.013 129.991						
M465	∅ 4.500 4.498	∅0.531	∅7.875	16.07	18.35	2.09	1.63
	∅ 130.013 129.991						

Model	"P"	"Q"	"R"	"S"	"T"	"U"	"V"
M461	∅7.00	3.88	2.88	R1.06	∅9.49	3/8-16 UNC-2B 0.56 DEEP	∅5.875
	∅152.4					98.5	73.2
M462	∅7.00	1.00	2.88	R1.06	∅9.49	3/8-16 UNC-2B 0.56 DEEP	∅5.875
	∅152.4					98.5	73.2
M463	∅7.00	3.88	2.88	R1.06	∅9.49	3/8-16 UNC-2B 0.56 DEEP	∅5.875
	∅152.4					98.5	73.2
M464	∅7.00	3.88	2.88	R1.06	∅9.49	3/8-16 UNC-2B 0.56 DEEP	∅5.875
	∅152.4					98.5	73.2
M465	∅7.00	3.88	2.88	R1.06	∅9.49	3/8-16 UNC-2B 0.56 DEEP	∅5.875
	∅152.4					98.5	73.2