



# *PosiDrive<sup>®</sup>*

## *Servo System Solutions*



*PosiDrive...Servos Made Simple*



*Force Control Industries, Inc.*

# A Revolutionary Approach To Complex Servo Systems.

## Servos made simple...

So simple that laptop computers are not required to make an adjustment to your motion profile. You no longer need to learn the complex, proprietary servo programming language.

An Industrial grade Touch Screen Interface (TSI) is preprogrammed and included with every *PosiDrive* servo system. Setup, motion control, and troubleshooting is greatly simplified. The TSI will record fault history, monitor motor performance, and display temperatures. It also lets you make any change to your motion profile. Even motor tuning is painless. Change your index speed, and adjust your accel/decel, all at the touch of a screen.



With the Force Control *PosiDrive* Servo System Solutions, you get a system that is complete, without hidden cost.

Don't be misled by others that will sell only individual components, and leave you to put together the pieces and struggle to get the system up and running.

With the *PosiDrive* Servo Systems, you get a package that is **plug and play**, ready to run out of the box, and is friendly to all users, not just servo factory-direct field service techs. With the optional 8.4" color TFT (Thin Film Transistor) Touch Screen Interface, you can run Multi-Axis Applications with just one display.

Take advantage of our application-engineering department. For decades, Force Control has been a leader in providing solutions for difficult indexing applications. Our engineers will meticulously review your specific application and properly select components that will perform up to your expectations. Our Goal is to provide you with a trouble free system with years of up-time performance. Our packages are pre-engineered and leave our plant ready to install with minimum start-up time. Also available from Force Control is our *PosiDrive* support team. We have experienced Programming Engineers and Controls Engineers that can be dispatched to your location for additional support.

## PosiDrive Servo System Features & Benefits

### PosiDrive Servo Motors

- ◆ Rugged industrial motors.
- ◆ Fractional through 20 HP (15kW).
- ◆ Brushless design.
- ◆ Efficient, low inertia.
- ◆ Neodymium iron boron magnets used for superior performance and low cogging.
- ◆ High frequency response.
- ◆ Motor feedback is resolver based for added ruggedness.
- ◆ Encapsulated windings for superior heat dissipation.
- ◆ Heavy duty cable connectors, rotatable, and water tight.



### PosiDrive Amplifier

- ◆ 208-480 Volt AC three phase power.
- ◆ Integrated power supply.
- ◆ 3 to 70 amps, 200% peak.
- ◆ All digital design.
- ◆ Rugged metal design, ESD.
- ◆ Protection on short circuit, under/over voltage, over current, over temperature
- ◆ Built-in line filter.
- ◆ UL and CE.



### Single-Axis TSI (Touch Screen Interface)

- ◆ Servos made simple.
- ◆ User friendly.
- ◆ Standard single axis applications preprogrammed.
- ◆ Painful proprietary software running on a PC/notebook is not necessary.
- ◆ Monitor key functions, fault history.
- ◆ Local control of servo motor.
- ◆ Motor tuning.
- ◆ Modify motion profile.
- ◆ Password protected.
- ◆ 6" Mono-color Display



### Multi-Axis TSI TFT (Thin Film Transistor)

- ◆ Servos made simple.
- ◆ User friendly.
- ◆ Can run Multi-Axis Applications (Max. of 8) with one display.
- ◆ Painful proprietary software running on a PC/notebook is not necessary.
- ◆ Monitor key functions, fault history.
- ◆ Local control of servo motor.
- ◆ Motor tuning.
- ◆ Modify motion profile.
- ◆ Password protected.
- ◆ 8.4" Color Display
- ◆ Ethernet Ready
- ◆ Reliable Linux Operating System



# PosiDrive Servo Motor and Amplifier Specifications

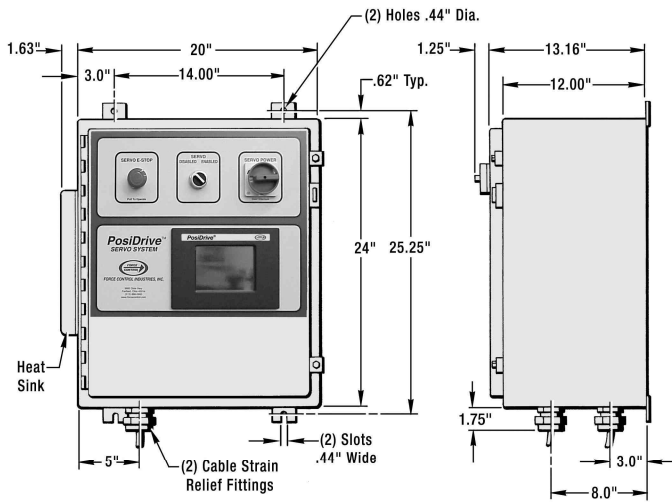
Servo Motor Model Number		3-RA-060A60	3-RA-060B60	3-RA-060C60	3-RA-090A60	3-RA-090B60	3-RA-090D50	3-RA-130A40	3-RA-130B40	3-RA-130C27	3-RA-130C36	3-RA-175A30	3-RA-175B22	3-RA-175C23
Rated Power	Watts	230	370	670	680	1230	1190	1200	2190	2400	2940	4180	5180	6890
	HP	0.31	0.50	0.90	0.91	1.65	1.60	1.61	2.94	3.22	3.94	5.61	6.95	9.24
Maximum Speed	RPM	6000	6000	6000	6000	6000	5000	4000	4000	2700	3600	3000	2250	2300
Line Voltage (3-Phase)	Volts	230	230	230	480	480	480	480	480	480	480	480	480	480
Continuous Torque (@ 105° F. Ambient Temp.)	Lb. In.	3.9	6.5	11.9	10.7	20.4	39	29.2	55.8	94.7	94.7	196	280	422
	Nm	0.44	0.74	1.35	1.21	2.31	4.41	3.3	6.3	10.7	10.7	22.1	31.6	47.7
Peak Torque (@ 105° F. Ambient Temp.)	Lb. In.	11.1	20.7	40.9	28.7	65.6	166	90	192	399	402	551	802	1275
	Nm	1.25	2.34	4.62	3.24	7.41	18.7	10.2	21.7	45.1	45.4	62.2	90.6	144
Motor Continuous Current	Amps	2.2	2.9	2.9	2.01	3.01	3.65	2.98	5.4	4.57	5.88	10.7	13	17.3
Motor Peak Current	Amps	7.2	10.6	11.4	7.9	12.7	18.7	12.1	23.2	21.7	28.2	36.7	45.6	61.1
Motor Inertia	Lb. Ft. <sup>2</sup>	.000301	.00046	.000752	.00116	.00197	.00421	.0121	.0221	.043	.043	.128	.185	.299
	Kg. m <sup>2</sup>	.000127	.000194	.000317	.000488	.000831	.001773	.00051	.00093	.00181	.00181	.0054	.0078	.0126

PosiDrive Amplifier Model Number		RS-03R	RS-06R	RS-10R	RS-14R	RS-20R	RS-40R	RS-70R
Line Voltage (3-Phase)	Volts	208V-480V	208V-480V	208V-480V	208V-480V	208V-480V	208V-480V	208V-480V
Amplifier Rating	Amps	3	6	10	14	20	40	70
Amplifier Rating-Peak	Amps	6	12	20	28	40	80	140
Internal Amplifier Regen	Watts	80	200	200	200	200	-----	-----
Max. Amplifier External Regen Capacity	Watts	250(230V) 500(480V)	750(230V) - 1500(480V)				6000(230V-480V)	
External Regen Resistor	Ohms	33	33	33	33	33	15	10

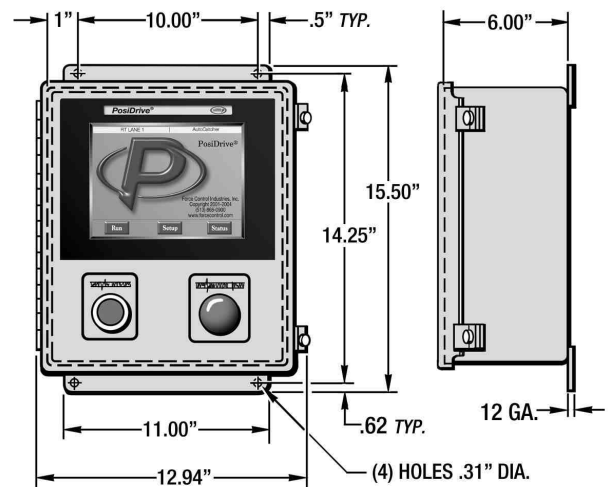
\* Regen temperature may become extreme when using Regen near maximum ratings. Please consult factory.

## PosiDrive Enclosure Dimensions

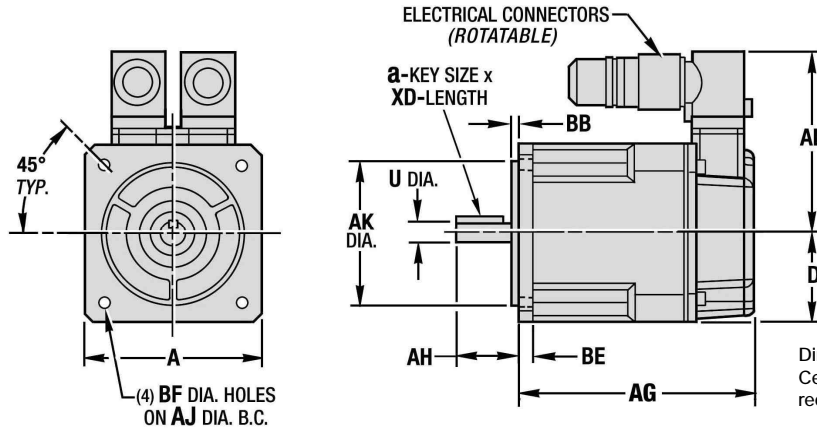
### Single Drive Control Enclosure



### Remote Multi-Axis Control Enclosure



# PosiDrive Servo Motor Dimensions



Servo Motor Model No.		3-RA-060A60	3-RA-060B60	3-RA-060C60	3-RA-090A60	3-RA-090B60	3-RA-090D50	3-RA-130A40	3-RA-130B40	3-RA-130C27	3-RA-130C36	3-RA-175A30	3-RA-175B22	3-RA-175C23
A	Inches mm	2.36 60			3.54 90			5.12 130				6.85 174		
D	Inches mm	1.18 30			1.78 45			2.56 65				3.43 87		
AB	Inches mm	3.38 85.9			3.63 92.3			4.76 120.9				5.90 149.9		
AG	Inches mm	4.5 113	5.0 129	6.3 160	4.7 120	5.4 138	7.3 186	7.2 182	8.6 219	10.4 264	10.4 264	12.1 308	14.5 369	16.9 429
AH	Inches mm	1.18 30			1.18 30			2.20 56				3.11 79		
AJ	Inches mm	2.76 70			3.94 100			5.71 145				7.87 200		
AK	Inches mm	1.968 / 1.969 49.99 / 50.01			3.149 / 3.151 79.99 / 80.03			4.3293 / 4.3307 109.965 / 110.000				4.4990 / 4.5000 114.275 / 114.300		
BB	Inches mm	.095 2.4			.118 3.0			.24 6				.14 3.5		
BE	Inches mm	.22 5.6			.29 7.4			.47 11.9				.71 18		
BF	Inches mm	.24 6			.28 7			.36 9				.54 13.7		
U	Inches mm	.5511 / .5515 13.997 / 14.006			.5511 / .5515 13.997 / 14.006			.7475 / .7480 18.987 / 19.000				1.3780 / 1.3784 35.002 / 35.011		
a	Inches mm	.197 x .197 5 x 5			.197 x .197 5 x 5			.236 x .236 6 x 6				.39 x .31 10 x 8		
XD	Inches mm	.79 20			.79 20			1.42 36				2.48 63		
Frame Size		60			90			130				175		
Weight	Lbs.	2.4	2.9	4.2	5.5	7.3	11	13	18	24	24	50	66	80
	kg	1.1	1.3	1.9	2.5	3.3	5.1	5.9	8	11	11	22.5	30	36



Force Control Industries, Inc.

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**Custom Servo Packages For High Speed Automation Systems.**