



Electropneumatics Motor Power  
Company (India) Pvt. Ltd.

Brushless  
Servo Motors  
and Drives

# Electropneumatics Motor Power Company (India) Pvt. Ltd.

Electropneumatics and Hydraulics (India) Pvt. Ltd. has partnered with Motor Power Company of Italy, an enterprise specialising in motion technology, to introduce sophisticated motion control systems for wide ranging industrial applications.

Motor Power Company leverages its vast know-how and experience to identify specific customer needs and implement solutions in motion control that are best suited to meet the customer needs. Long-term investments in the study of motion have created deep resources of knowledge in all aspects of motion technology.

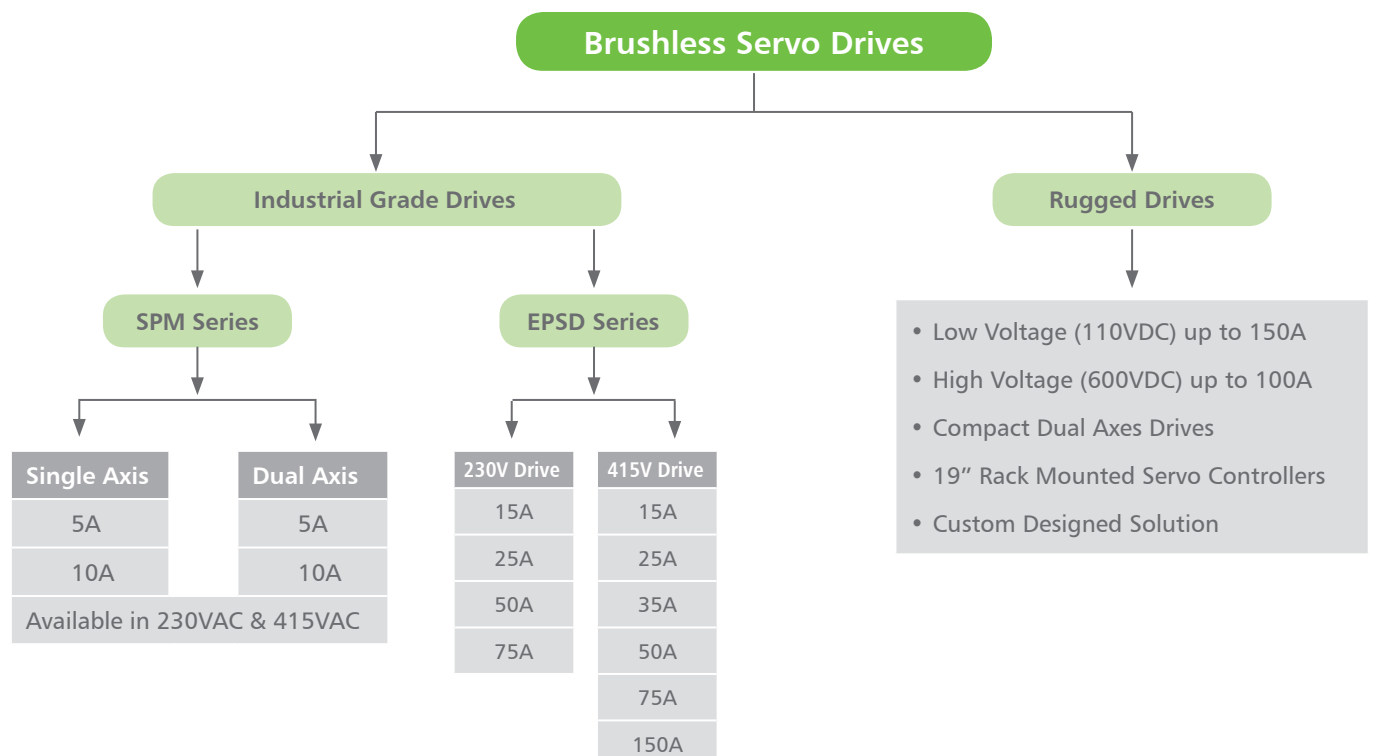
Electropneumatics, in addition to being a leader in metal forming equipment in India, has also been in the motion control field for well over a decade with the introduction of its first indigenous servo drive as early as 1997. The Electropneumatics Motor Power Company joint venture now brings the vast knowledge of both companies together to provide its customers the best in motion control products with complete solutions and strong technical support.



ELECTROPNEUMATICS MOTOR POWER COMPANY, in its continuing endeavour to bring the latest and best products to its customers, has introduced a range of brushless servo motors and drives for a variety of applications. Designed with the latest DSP and IGBT technologies, these state-of-the-art drives are perfectly matched with the servo motors to provide exceptional system performance at an unmatched price. The drives are manufactured to perfection with 100% testing under load prior to shipment, ensuring total customer satisfaction.

## Features

- High performance synchronous brushless servomotor, permanently excited
- Available in 2 series- Tetra series with rated output power from 60W to 8.4kW and high torque series up to 120kW
- Motors available with multiple feedback options- resolver, TTL encoder, absolute multiturn encoder and sin-cos encoder
- Perfectly matched servo drives for above range of motors, available in single or dual axes option
- Cost effective dual axes drive controls two motors independently and simultaneously
- Available in various voltage options of 110VAC, 220VAC and 415VAC
- Available in various current ratings up to 150A
- Uses sophisticated 32-bit DSP controller capable of creating complex profile sequences with very low tracking errors
- Performs ultra-smooth sinusoidal commutation of AC servo, torque and linear motors
- Uses Field Oriented Control with space vector PWM for maximum torque utilisation of motor
- Universal  $\pm 10V$  analog command interface
- Built-in motion controller for position control applications– Trapezoidal, S-curve and velocity profiles
- Pulse and Direction Interface
- E-gearing
- Digital CAN Bus interface
- RS-232/RS-422/RS-485 serial interface with MODBUS/Custom protocol
- User friendly PC windows software for configuration and setup
- Custom drive solutions available on request



## Drive Technical Specifications

Description	Unit	SPM SERIES				EPSD SERIES							
		230VAC Option		415VAC Option		230VAC & 415VAC Option			415VAC Option				
		5A	10A	5A	10A	15A	25A	35A	50A	75A	100A	150A	
Number of Axes		1 or 2				1							
Input Voltage Range	VAC	230V(1Ø, 3Ø)		415VAC(3Ø)		230VAC, 415VAC(3Ø)			415VAC(3Ø)				
Input Frequency	Hz	50/60±5%				50/60±5%							
Cont Output Current	Arms	5	10	5	10	15	25	35	50	75	100	150	
Peak Output Current	Arms	15	20	10	20	25	50	70	100	125	175	225	
Weight	kg	1.6	3.2	3.8		4	8.4	12.8	25		55	60	
Size (WxHxD)	mm	52x260x132 80x340x190 (2X,10A)		80x340x190		80x340x 190	122x39 5x205	154x40 7x220	165x450x364		505x795x285		
Power Supply		Requires 24VDC. Logic supply internal.											
Setup		PC windows software											
Command Input		1. ±10 VDC (Velocity Mode) 2. ±10 VDC (Torque Mode) 3. Position Control Mode (RS-232C) 4. CAN Bus (optional) 5. Pulse & Direction (in incremental feedback option only) 6. E-gearing											
Feedback System		<b>Standard Feedback</b> 1. Incremental Encoder with Hall signals (2000 PPR)  <b>Optional Feedback</b> 2. Resolver 3. Absolute Encoder– Hyperface (SKM 36 Encoder) 4. Sin-Cos 1Vpp incremental encoder (Programmable Line Count)											
Operating Temperature	°C	+0 to 50											

### Drive Ordering Code

<b>SPM</b>	<b>2</b> X	<b>5</b> A	<b>230</b> V	<b>E</b>
↓	↓	↓	↓	↓
<b>Drive Type</b>	<b>No. of Axes</b>	<b>Rated Current</b>	<b>Input Voltage</b>	<b>Options</b>
SPM	1 Single	5 5 Arms 50 50 Arms	230 230VAC	E TTL Encoder
EPSD	2 Dual	10 10 Arms 75 75 Arms	415 415VAC	PE Pulse & Dir
		15 15 Arms 100 100 Arms		R Resolver
		25 25 Arms 150 150 Arms		A Abs Enc. (Hyperface)
		35 35 Arms		S Sin Cos Encoder

### Motor Ordering Code

TC40-0.16-32	0	R 1	0	D 0	X X X
↓	↓	↓	↓	↓	↓
Motor Type		Feedback	Brake		Options
Select From Table		E1 Encoder TTL 2000ppr	0 Without brake		
		R1 resolver 2poles	1 with brake		
		A1 Absolute Multiturn Encoder			
Mechanical Arrangement			Connection		
0	Shaft with key/without oil seal	4* High inertia, shaft with key/without oil seal	D0	300mm cable length with AMP connectors	
1	Shaft with key/with oil seal	5* High inertia, shaft with key/with oil seal			
2	Shaft without key/without oil seal	6* High inertia, shaft without key/without oil seal	C2	90° M23 turnable connectors	
3	Shaft without key/with oil seal	7* High inertia, shaft without key/with oil seal			
*For T115 and above only					

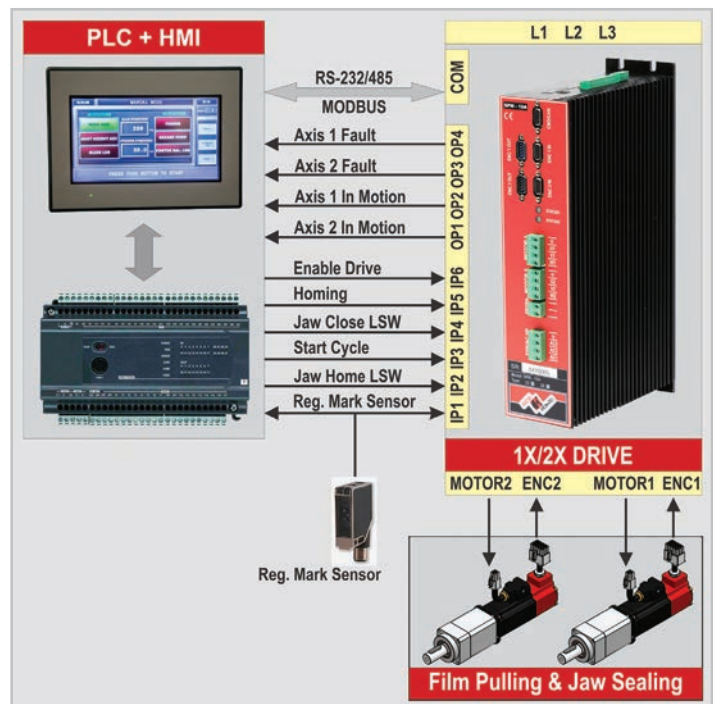


## Application Specific Servo Controllers

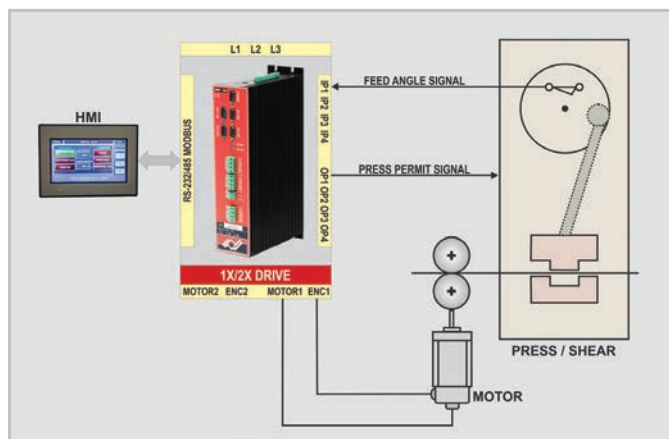
In addition to the standard modes of operation, if you have a special need, we offer you custom solutions with customised firmware built into the drive. Ideal for low-cost applications, the total package solution includes complete electrical panel and HMI configured for your application. Just connect to your machine and get going!

### Packaging Machines

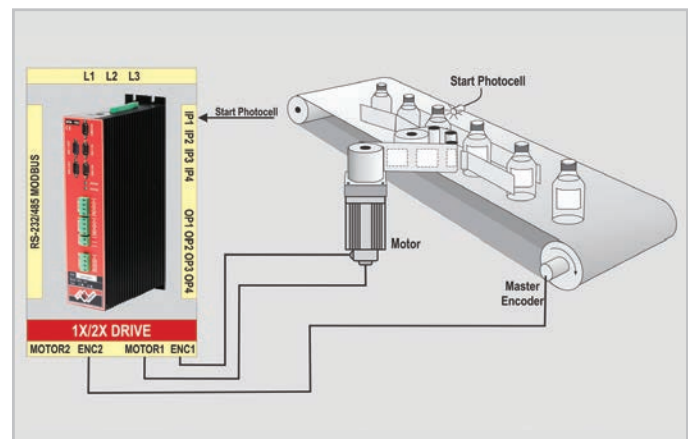
- Special firmware in the drive reduces the burden on the PLC and hence a simpler, lower cost PLC can be used
- Handles the motion profiling of two axes in one drive
- MODBUS interface for motion control and parameter settings
- IO interface to PLC for start of motion cycles
- Built-in high speed capture of "Reg. Mark" and compensation on the fly



### Roll Feed/Cut-to-Length

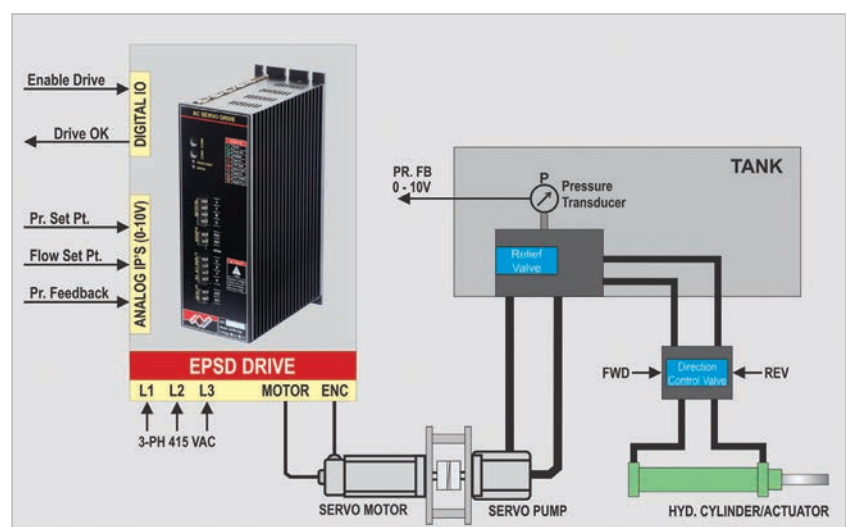


### Labelling



### Servo Pump

- Custom drive developed for servo pump application with built-in pressure and flow PID loops
- Directly replaces conventional pump, motor and proportional valves in injection moulding machines, hydraulic presses, etc.
- 40 - 70% energy savings
- Reduced noise and vibrations
- Complete solution package can be provided
  - Pump and servo motor assembly
  - Drive with electrical interface plate/panel
  - Hydraulic components like hoses, pressure transducers and manifold blocks
  - Mechanical fittings



### Also Available\*

- Rotary Tables- Direct Drive Motors
- DDR- Direct Drive Motors

- Linear Motors
- Geared AC Servo Motors

- DC Motors
- Custom Drive and Motor Solutions

\*Please request for catalog and datasheets

# Motor and Drive Quick Selection Chart

Motor Type	Rated Power W	Rated Speed RPM	Rated Torque Nm	Rated Cur Arms	Rated Volts Vac	Peak Torque Nm	Max Speed RPM 230V/400V	Drive Model
TC40-0.16-32	60	3000	0.2	3.96	24 Vdc	0.48	5000	Custom
TC40-0.16-01	60	3000	0.2	2.09	48 Vdc	0.48	5000	Custom
TC40-0.32-01	100	3000	0.32	3.48	48 Vdc	0.96	5000	Custom
TC40-0.32-21	100	3000	0.32	0.62	230	0.96	5000	SPM-1X-5A-230V
TC60-0.65-21	200	3000	0.64	1.25	230	1.95	5000	SPM-1X-5A-230V
TC60-1.3-21	370	3000	1.17	2.31	230	3.9	5000	SPM-1X-5A-230V
TC60-1.3-15	370	3000	1.17	1.33	400	3.9	3900/5000	SPM-1X-5A-415V
TC80-1.5-21	480	3000	1.53	2.99	230	4.5	5000	SPM-1X-5A-230V
TC80-1.5-15	480	3000	1.53	1.73	400	4.5	3900/5000	SPM-1X-5A-415V
TC80-2.8-21	800	3000	2.54	4.99	230	8.4	5000	SPM-1X-5A-230V
TC80-2.8-15	800	3000	2.54	2.88	400	8.4	3900/5000	SPM-1X-5A-415V
TC80-4-15	1068	3000	4	3.85	230	12	3900	SPM-1X-5A-230V
TC80-4-17	1068	3000	4	2.19	400	12	3900	SPM-1X-5A-415V
TC100-3.2-21	820	3000	2.62	5.11	230	11	5000	SPM-1X-5A-230V
TC100-3.2-15	820	3000	2.62	2.96	400	11	3900/5000	SPM-1X-5A-415V
TC100-5.6-15	1320	3000	4.2	4.76	400	22	3900/5000	SPM-1X-5A-415V
TC100-8-15	1570	3000	5	5.66	400	33	3900/5000	SPM-1X-10A-415V
T115-3-21	840	3000	2.7	5.3	230	9	5000	SPM-1X-5A-230V
T115-3-15	840	3000	2.7	3.1	400	9	3900/5000	SPM-1X-5A-415V
T115-5.2-14	1300	3000	4.1	7.3	230	15.6	5000	SPM-1X-10A-230V
T115-5.2-15	1300	3000	4.1	4.8	400	15.6	3900/5000	SPM-1X-5A-415V
T115-7-15	1650	3000	5.3	6.1	230	21	3900/4500	SPM-1X-10A-230V
T115-7-17	1650	3000	5.3	3.4	400	21	2200/3900	SPM-1X-5A-415V
T115-9.2-15	2000	3000	6.4	7.3	230	27.6	3900/4500	SPM-1X-10A-230V
T115-9.2-17	2000	3000	6.4	4.2	400	27.6	2200/3900	SPM-1X-5A-415V
T115-11-15	2300	3000	7.3	8.5	230	33	3900/4500	SPM-1X-10A-230V
T115-11-17	2300	3000	7.3	4.8	400	33	2200/3900	SPM-1X-5A-415V
T142-12-15	2700	3000	8.6	9.9	230	31	3900/4800	SPM-1X-10A-230V
T142-12-17	2700	3000	8.6	5.6	400	31	2200/3900	SPM-1X-10A-415V
T142-16.5-15	3500	3000	11.1	12.9	230	42	3900/4600	EPSD-15A-230V
T142-16.5-17	3500	3000	11.1	7.3	400	42	2200/3900	SPM-1X-10A-415V
T142-21-15	4100	3000	13.1	15.1	230	55	3900/4400	EPSD-25A-230V
T142-21-17	4100	3000	13.1	8.5	400	55	2200/3900	SPM-1X-10A-415V
T142-25.5-15	5000	3000	15.9	18.4	230	65	3900/4400	EPSD-25A-230V
T142-25.5-17	5000	3000	15.9	10.4	400	65	2200/3900	EPSD-25A-415V
T180-22.5-17	4700	3000	15	9.8	400	63	2200/3000	EPSD-25A-415V
T180-35-17	6600	3000	21	13.7	400	95	2200/3000	EPSD-25A-415V
T180-47-17	8380	2000	40	26.2	400	130	2200/3000	EPSD-35A-415V

Electropneumatics Motor Power Company (India) Pvt. Ltd.

Gat No. 257, Kharabe Wadi, Chakan-Talegaon Road,  
Chakan, Pune 410501, India.

Tel. : +91 2135 667500

Fax. : +91 2135 667502

[www.electropneumatics.com](http://www.electropneumatics.com)

To find out how we can help you,  
email us at [empcsales@electropneumatics.com](mailto:empcsales@electropneumatics.com)

[design@synergydesign.in](mailto:design@synergydesign.in)