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# STEPPER SYSTEMS



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## HOW TO USE THIS SECTION

Use the system selection overview (right) as a guide to select the level of control you require. Controllers are listed by family/series and functionality.

The table of contents below will help you easily locate the controllers and motors needed to complete your system.

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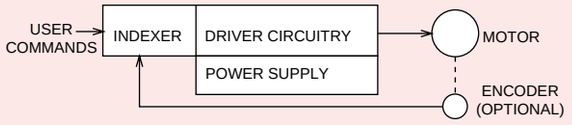
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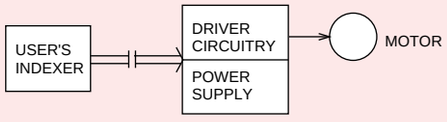
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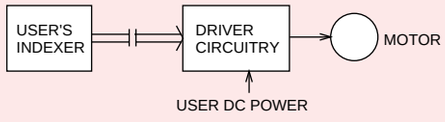
## CONTROLS



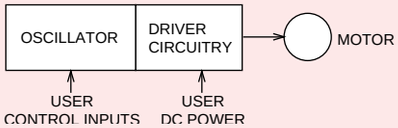

**Programmable indexer/drive system**




**Microstep drive system**




**Full/half or microstep drive module**




**Board level oscillator/drive**



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# . . . Step motion control systems

**Recommended Step Motors . . . E Series, see page C-82**

| FEATURES | Model | NEMA 42 Frame<br>Frame Size (in.)<br>4.2<br>Holding Torque Range (oz-in./Nm) | NEMA 34 Frame<br>Frame Size (in.)<br>3.4<br>Holding Torque Range (oz-in./Nm) | NEMA 23 Frame<br>Frame Size (in.)<br>2.3<br>Holding Torque Range (oz-in./Nm) | PAGE |
|---|---|---|---|---|---|
| • Programming in PacSci Stepper BASIC™<br>• Full and microstep operation to 25,000 steps/rev (except 5240)<br>• Encoder interface for closed loop operation<br>• Serial interface, intelligent I/O<br>• Single and multiaxis use<br>• Simple mnemonic instructions (5240 only)<br>• Full and half step operation (5240 only) | **5645** | 1284-4034 oz-in.<br>(9.07-28.49 Nm) | 1222 oz-in.<br>(8.63 Nm) | | **C-40** |
| | **5445** | 1284 oz-in.<br>(9.07 Nm) | 319-1222 oz-in.<br>(2.25-8.63 Nm) | | **C-44** |
| | **5345** | | 237-638 oz-in.<br>(1.67-4.51 Nm) | 158-225 oz-in.<br>(1.12-1.59 Nm) | **C-44** |
| | **5240** | | 237-638 oz-in.<br>(1.67-4.51 Nm) | 112-225 oz-in.<br>(.79-1.59 Nm) | **C-58** |
| • High efficiency bipolar chopper drives<br>• Pulse & direction input<br>• Idle current reduction<br>• Mid-range instability compensation (except 5230)<br>• Full and microstep operation (except 5230) | **5630** | 1284-4034 oz-in.<br>(9.07-28.49 Nm) | 1222 oz-in.<br>(8.63 Nm) | | **C-66** |
| | **5430** | 1284 oz-in.<br>(9.07 Nm) | 319-1222 oz-in.<br>(2.25-8.63 Nm) | | **C-69** |
| | **5330** | | 237-638 oz-in.<br>(1.67-4.51 Nm) | 158-225 oz-in.<br>(1.12-1.59 Nm) | **C-69** |
| | **5230** | | 237-638 oz-in.<br>(1.67-4.51 Nm) | 112-225 oz-in.<br>(.79-1.59 Nm) | **C-74** |
| • 4-phase bipolar chopper drive<br>• Single power supply<br>• Switch selectable current<br>• Full and microstep operation<br>• Idle current reduction<br>• Mid-range instability compensation<br>• Modular bipolar chopper drives<br>• Easy to integrate<br>• Microstep operation (except 5210)<br>• PC board mountable (5210)<br>• Modular bipolar chopper indexer/drive | **6410** | 1284 oz-in.<br>(9.07 Nm) | 319-1222 oz-in.<br>(2.25-8.63 Nm) | | **C-7** |
| | **6420** | 1284 oz-in.<br>(9.07 Nm) | 319-1222 oz-in.<br>(2.25-8.63 Nm) | | **C-28** |
| | **5210** | | 237-638 oz-in.<br>(1.67-4.51 Nm) | 112-225 oz-in.<br>(.79-1.59 Nm) | **C-78** |
| • Board level oscillator/drives<br>• Velocity control from input<br>• Adjustable accel/decel<br>• Full and microstep operation | **6415** | 1284 oz-in.<br>(9.07 Nm) | 319-1222 oz-in.<br>(2.25-8.63 Nm) | | **C-16** |



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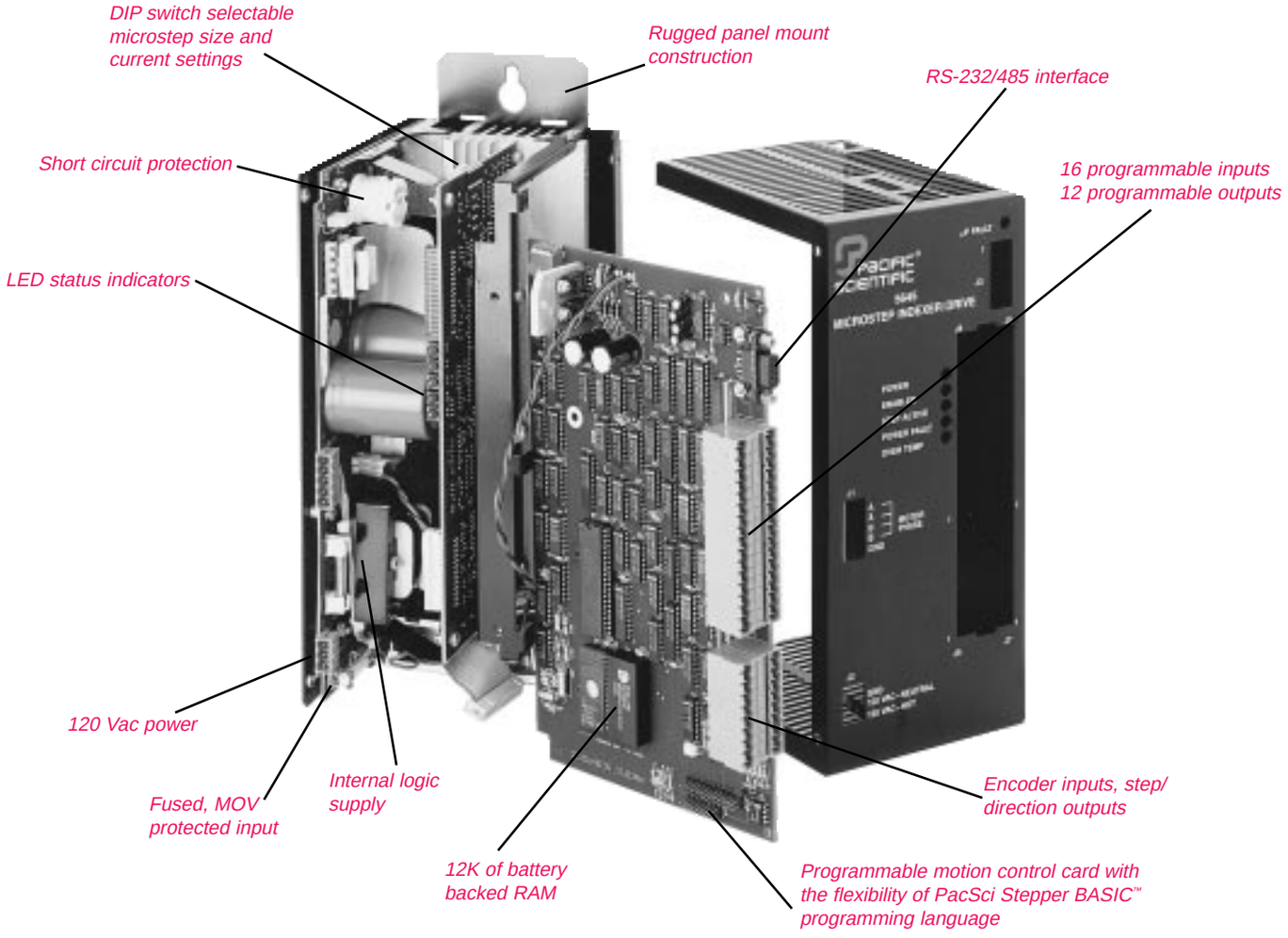
# STEP MOTION CONTROL FROM PACSCI

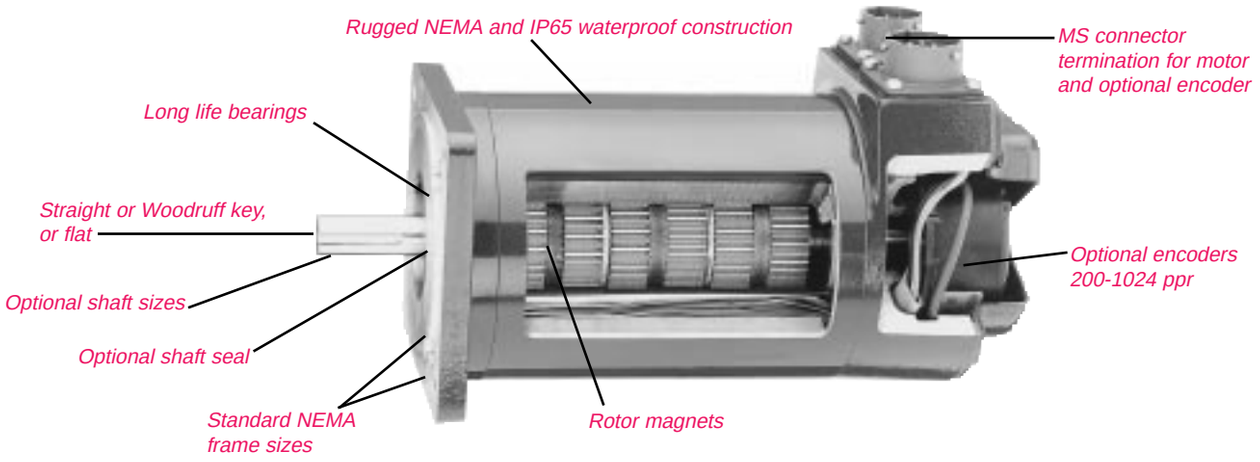
From ready to run intelligent motion systems to economical board level drivers, Pacific Scientific has what you want.

Discover the performance of our patented magnetic and electronic innovations. Find out how easy software control can be with PacSci Stepper BASIC™.

For ultimate reliability, you can count on our integrated approach to design and manufacturing.

For overall value in step motion control, see your local PacSci distributor. You'll receive all the products and technical resources to assure a troublefree startup.




*Sigmax® technology adds flux concentrating samarium cobalt stator magnets for highest torque and acceleration*



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# HOW TO ORDER...

**MODEL NUMBER CODE:** **5 6 45**

**Drive Type (family)**
- 6 - Stepper Drive (6000) ⚠
- 5 - Stepper Drive (5000)

**Power Level**
- 6 - 11.3 A peak, 8 A rms, 160 Vdc with integral power supply
- 4 - 7.1 A peak, (6000 family only), 5 A rms 65 Vdc with integral power supply
  - 18 - 75 Vdc with user provided power supply
- 3 - 2.5 A rms, 65 Vdc with integral power supply
  - 18 - 75 Vdc with user provided power supply
- 2 - 2.5 A rms, 35 Vdc with integral power supply
  - 12 - 40 Vdc with user provided power supply

**Functionality & Drive Configuration**
- 45 - Indexer with PacSci Stepper Basic™ programming language
  - Integral power supply
- 40 - Indexer with mnemonic programming language
  - Integral power supply
- 30 - Integral power supply
- 20 - Indexer with mnemonic programming language
  - User provided power supply
- 15 - Oscillator board
  - User provided power supply
- 10 - Driver only
  - User provided power supply

NOTE: Not all configurations are available with all power levels. Refer to Selection Overview on page C-3.

⚠ To order options for 6410, see detailed ordering guide on page C-11.



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