



**HMI • Controls • Drives  
Linear Motor Positioners  
Servo Motors**

Product Release  
Third Quarter 2008

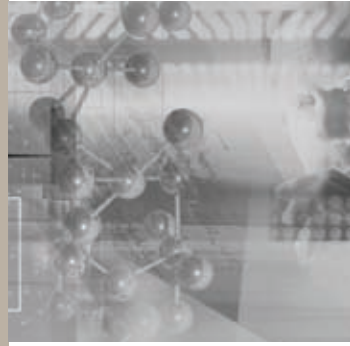
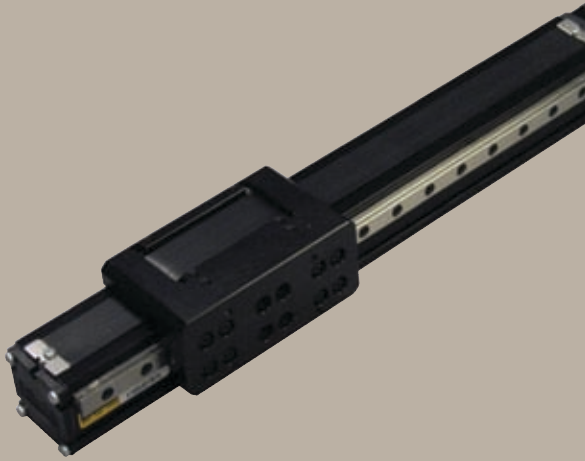


ENGINEERING **YOUR** SUCCESS.



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An optional strip seal cover provides increased protection and a longer life, reducing downtime with the PROmech™ LP28 linear positioner.



## PROmech Strip Seal

Parker has developed an optional cover seal for the PROmech™ LP28 series linear positioners. The new cover seal protects the screw from particulate matter and other debris, resulting in longer product life, a cleaner-running solution and an aesthetically appealing design. The PROmech series is now a more well-rounded solution for light-industrial OEM applications with more protection than ever.

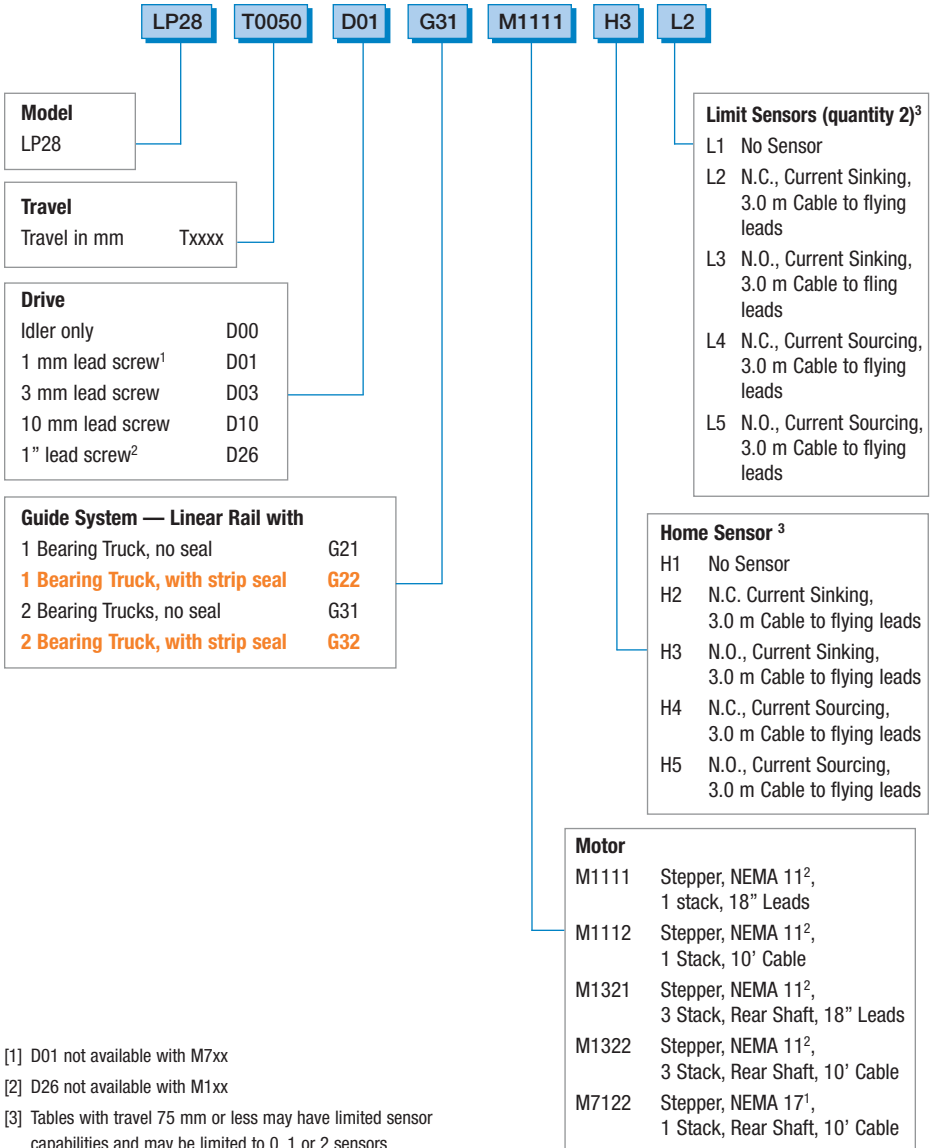
Available in two models, the LP28 and the LD28, PROmech series positioners are designed for Life Science OEM instrument manufacturers working to speed their time to market and reduce the overall installed cost for linear motion axes. The new strip seal option on the LP28 adds just 17 mm in overall length due to the carriage design, but adds no overall width or height, thus maintaining a compact footprint that allows OEMs to make the most of their machine space. In addition to the new strip seal option on the LP Series, the PROmech Series comes completely assembled and tested and includes drive screw, thrust bearings, motor mount, coupling and motor.

## **FEATURES**

- Uses fiber impregnated seal to maintain rigidity and prevent seal stretch or seal wear
- Uses UHMW polyethylene to keep seal friction to a minimum and reduce seal wear, increasing seal life
- Provides protection to an IP30 rating
- Matches the black actuator body for optically sensitive environments
- Is easy to mount with strip seal clamp
- Allows for minimum seal bend radius for low overall height



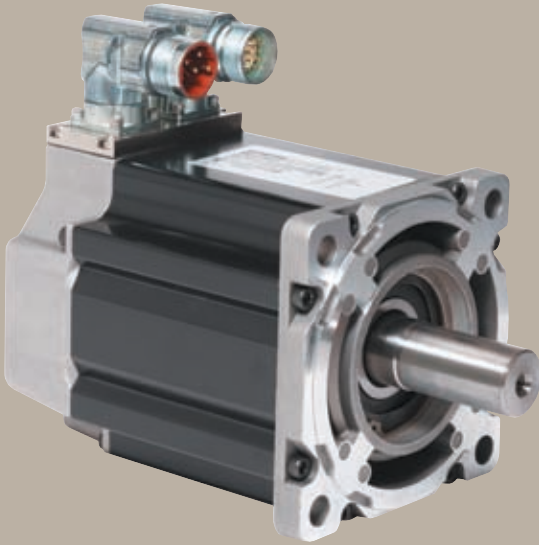
## PROmech Part Numbering System



[1] D01 not available with M7xx

[2] D26 not available with M1xx

[3] Tables with travel 75 mm or less may have limited sensor capabilities and may be limited to 0, 1 or 2 sensors



The MaxPlus-J is designed for applications with a higher load inertia that require a closer inertia ratio.



# The MaxPlus-J Series Servo Motor

## MPJ Series

Parker Hannifin has added a high inertia option to the popular MPP (MaxPlusPlus) motor family. This new motor family with higher rotor inertia is called the MaxPlus-J (MPJ). The MPJ is designed for the demanding applications found in today's high-performance servo systems and offers the same design specifications as the MPP motors, but gives users even higher inertia. Now, on many applications where customers might add a gearhead, they can simply use an MPJ motor, saving money and eliminating the speed constraints normally associated with a gearhead.

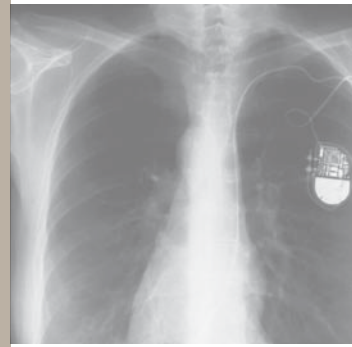
Parker's MPJ motors feature the same segmented lamination technology as the MPP motors, which yields as much as 40% higher torque per unit size than conventionally wound servo motors. "Potted" stators improve heat transfer for better thermal efficiency, resulting in increased torque at the motor shaft. High-performance neodymium magnets are employed for higher acceleration rates. The MPJ is offered as a standard option on four frame sizes from 092 to 142. It is available as a custom motor option on the MPP190, MPP230, and MPP270mm motors.

### FEATURES

- Three to ten times the inertia of the standard MPP servo motors.
- Higher inertia available in four standard frame sizes: 92mm, 100mm, 115mm, and 142mm
- Motor brake option available for all MPJ motors
- Segmented core Technology — 40% higher torque compared to standard wound servo motors.
- Exceptional torque density resulting in more torque / volume.
- Potted stator design resulting in better heat transfer and more available torque.
- Thermistor protection
- UL and CE approved
- Two-year warranty



Model	Rated Speed RPM	Rated Output kW	Rated Output HP	MPP Rotor Inertia Kg-m <sup>2</sup> (lb-in-sec <sup>2</sup> )	MPJ Rotor Inertia Kg-m <sup>2</sup> (lb-in-sec <sup>2</sup> )	Continuous Stall Torque Nm (lb-ins)	Peak Torque Nm (lb-ins)	Continuous Stall Current A mps-rms	Peak Current Amps-rms	Voltage
MPP0921B	3800	0.5	0.7	.0000441 (.00039)	.0003911 (.00346)	1.5 (14)	5.0 (50)	1.8	6	230
MPP0921C	5000	0.6	0.8	.0000441 (.00039)	.0003911 (.00346)	1.6 (14)	5.0 (45)	2.9	9	230
MPP0921R	5000	0.6	0.8	.0000441 (.00039)	.0003911 (.00346)	1.6 (14)	5.0 (45)	1.4	5	460
MPP0922C	4200	1.1	1.4	.0000780 (.00069)	.0004261 (.00377)	2.9 (26)	9.3 (83)	3.7	12	230
MPP0922D	5000	1.2	1.6	.0000780 (.00069)	.0004261 (.00377)	3.1 (28)	10.0 (88)	5.6	18	230
MPP0922R	5000	1.2	1.6	.0000780 (.00069)	.0004261 (.00377)	3.1 (28)	9.8 (88)	2.8	9	460
MPP0923D	5000	1.6	2.1	.0001130 (.0010)	-	4.0 (36)	12.8 (113)	7.2	23	230
MPP0923R	5000	1.6	2.1	.0001130 (.0010)	-	4.0 (36)	12.8 (113)	3.6	11	460
MPP1002D	4900	1.6	2.1	.0002599 (.0023)	.0008238 (.00729)	4.6 (41)	14.5 (129)	7.9	25	230
MPP1002R	4900	1.5	2.0	.0002599 (.0023)	.0008238 (.00729)	4.6 (41)	14.5 (129)	3.9	12	460
MPP1003C	4200	1.8	2.4	.0003729 (.0033)	-	6.1 (54)	19.1 (170)	7.2	23	230
MPP1003D	4200	1.8	2.4	.0003729 (.0033)	-	6.0 (53)	19.1 (170)	10.3	32	230
MPP1003Q	4200	1.9	2.5	.0003729 (.0033)	-	6.3 (56)	19.9 (176)	3.9	12	460
MPP1003R	4200	1.9	2.5	.0003729 (.0033)	-	6.3 (56)	20.1 (178)	5.4	17	460
MPP1152C	4000	1.6	2.1	.0002712 (.0024)	.0010184 (.00902)	5.7 (51)	18.1 (160)	8.5	27	230
MPP1152D	4000	1.7	2.2	.0002712 (.0024)	.0010184 (.00902)	5.8 (52)	18.5 (163)	10.4	33	230
MPP1152R	4000	1.6	2.1	.0002712 (.0024)	.0010184 (.00902)	5.5 (49)	17.4 (154)	4.9	16	460
MPP1153B	3400	2.2	2.9	.0004068 (.0036)	.0011314 (.01002)	7.9 (70)	25.1 (222)	7.7	24	230
MPP1153C	4000	2.3	3.0	.0004068 (.0036)	.0011314 (.01002)	8.1 (71)	25.5 (226)	12.1	38	230
MPP1153P	3100	2.2	2.9	.0004068 (.0036)	.0011314 (.01002)	8.4 (74)	26.6 (235)	4.1	13	460
MPP1153R	4000	2.3	3.0	.0004068 (.0036)	.0011314 (.01002)	8.1 (72)	25.5 (226)	6.0	19	460
MPP1154A	1900	1.8	2.4	.0005198 (.0046)	-	9.8 (87)	31.2 (277)	5.4	17	230
MPP1154B	3800	2.7	3.5	.0005198 (.0046)	-	9.8 (87)	31.3 (277)	10.7	34	230
MPP1154P	3700	2.7	3.5	.0005198 (.0046)	-	9.8 (87)	31.2 (277)	5.4	17	460
MPP1422C	4000	3.4	4.5	.000779 (.0069)	.007204 (.06377)	11.1 (98)	35.1 (311)	14.6	46	230
MPP1422R	3800	3.3	4.5	.000779 (.0069)	.007204 (.06377)	11.1 (98)	35.1 (311)	7.3	23	460
MPP1424B	3100	5.0	6.6	.001469 (.013)	.007882 (.06978)	19.4 (172)	61.5 (544)	19.4	61	230
MPP1424C	3800	5.2	6.8	.001469 (.013)	.007882 (.06978)	19.5 (173)	61.7 (546)	24.3	77	230
MPP1424R	3700	5.2	6.8	.001469 (.013)	.007882 (.06978)	19.5 (173)	61.6 (546)	12.1	38	460
MPP1426B	3000	6.2	8.1	.002147 (.019)	.008334 (.07378)	26.0 (230)	72.1 (726)	26.2	83	230
MPP1426P	3000	6.2	8.1	.002147 (.019)	.008334 (.07378)	26.0 (230)	82.1 (726)	13.1	41	460
MPP1428P	2900	7.0	9.2	.002599 (.023)	-	33.2 (294)	105.0 (931)	16.8	53	460
MPP1428Q	2900	7.0	9.2	.002599 (.023)	-	33.4 (295)	106.0 (935)	21.0	66	460
MPP1904P	3000	8.3	10.9	.00452 (.040)	-	35.5 (315)	113.0 (996)	18.0	57	460
MPP1906B	2500	9.7	12.7	.00627 (.055)	-	47.3 (419)	150.0 (1326)	36.2	114	230
MPP1906P	3000	9.9	13.0	.00627 (.055)	-	45.9 (407)	146.0 (1288)	23.5	74	460
MPP1908N	2100	11.1	14.5	.00774 (.068)	-	62.4 (553)	198.0 (1750)	20.6	65	460
MPP1908P	2800	11.8	15.5	.00774 (.068)	-	60.1 (532)	190.0 (1684)	30.3	96	460
MPP2306N	2000	11.6	15.2	.01690 (.150)	-	80.3 (712)	255.0 (2252)	28.5	90	460
MPP2308N	1600	13.6	17.8	.02237 (.198)	-	106.5 (943)	337.0 (2985)	28.1	89	460
MPP2308P	1900	14.1	18.5	.02237 (.198)	-	105.7 (936)	335.0 (2964)	35.7	113	460
MPP2706M	1000	12.0	15.7	.02734 (.242)	-	124.8 (1105)	395.0 (3497)	24.7	78	460
MPP2706N	1400	14.4	18.9	.02734 (.242)	-	120.1 (1064)	380.3 (3366)	32.4	102	460
MPP2706P	1600	16.5	21.6	.02734 (.242)	-	120.9 (1071)	382.7 (3388)	40.5	128	460
MPP2708L	900	13.6	18.1	.0353 (.313)	-	161.9 (1433)	512.7 (4538)	26.4	84	460
MPP2708M	1300	17.8	23.3	.0353 (.313)	-	155.8 (1379)	493.1 (4364)	38.9	123	460
MPP2708N	1600	20.3	26.6	.0353 (.313)	-	153.0 (1354)	484.0 (4287)	50.1	158	460



Combining the versatile and cost-effective Aries digital servo drive platform with the advanced control capabilities of the ACR servo controller, Parker's new Aries Controller offers users a single-axis servo drive/controller with Ethernet communication and HMI connectivity.



## **Aries Controller: Single-Axis Servo Drive Controller**

# Aries Controller

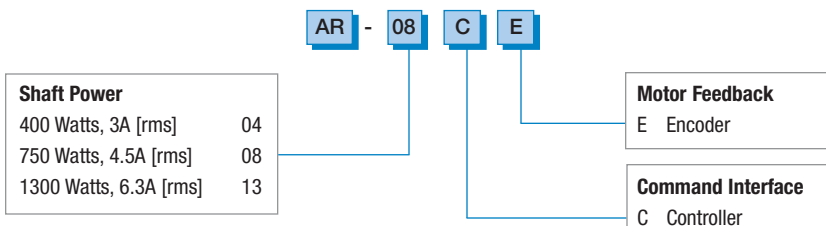
The Aries Controller single-axis servo drive delivers a wide range of standalone capabilities with Ethernet connectivity, onboard I/O, and easy-to-use project development tools, commissioning single-axis motion is simple and efficient.

Leveraging the industry-leading performance of the ACR9000 motion platform in a single-axis form factor, the Aries Controller contains motion and programming capabilities far beyond its peers. From multitasking programmability to encoder-based following with real-time phase advance, the Aries Controller is the highest-performance single-axis controller in its class.

## FEATURES

- 7 onboard inputs [4 standard, 3 high speed], 4 outputs
- Advanced multitasking of up to 16 simultaneous programs
- Integrated 2 port Ethernet hub
- ACRView Software Development Kit
- Rotary or linear servo motor control
- 3, 4.5 and 6.3 A RMS continuous current
- 120/240 VAC power input
- Multiple feedback options—  
Smart encoder, quadrature encoder, Heidenhain EnDat absolute encoder
- Auto-tuning
- CE [EMC & LVD], UL Recognized

### Aries Controller Part Numbering System



Shaft Power	
400 Watts, 3A [rms]	04
750 Watts, 4.5A [rms]	08
1300 Watts, 6.3A [rms]	13

Motor Feedback	
E	Encoder

Command Interface	
C	Controller

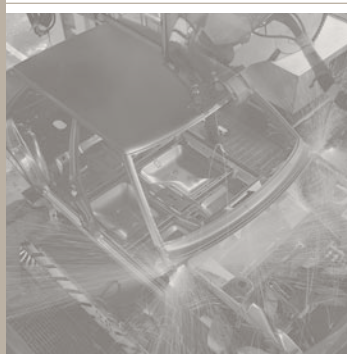
**Example: AR-08CE**

750 Watt Controller drive for encoder motors



## Aries Controller Specifications

	AR-04	AR-08	AR-13
<b>Drive Output Power</b>			
Continuous Current [RMS]	3 Amps	4.5 Amps	6.3 Amps
Peak Current [RMS]	9 Amps	13.5 Amps	14.2 Amps
Bus Voltage	170/340 VDC		
PWM	16 or 32 kHz		
<b>Drive Input Voltage</b>	120/240 VAC, 1 phase, 50/60 Hz		
<b>Performance</b>			
Torque Loop Update	31.25 $\mu$ s		
Velocity Loop Update	125 $\mu$ s		
Position Loop Update	125 $\mu$ s		
Accuracy	$\pm 1$ encoder count, encoder dependent		
Commutation	Sinusoidal		
<b>Environmental</b>			
Temperature	0-45C [32-113F]	0-45C [32-113F]	0-40C [32-104F]
Humidity	0-95%, non-condensing		
<b>Standards</b>	UL Recognized 508c, CE [LVD], CE [EMC]		
<b>Communications</b>			
Ethernet	100 Base-T, Dual RJ-45 connectors, Supports IP Protocols TCP/UDP		
<b>Inputs/Outputs</b>			
Digital Inputs	7 programmable inputs, 5-24 VDC [3 high-speed 1 $\mu$ s capture, 4 standard]		
Digital Outputs	4 programmable outputs, 5-24 VDC, 100 mA max		
Brake Relay	solid state, NO, 1A @ 24 VDC max		
Primary Encoder Input	1.6 MHz, differential, A, B, Z signals		
Secondary Encoder Input	1.6 MHz, differential, A, B signals		
<b>Feedback</b>	Incremental encoder, Parker SmartEncoder, EnDat absolute encoder		
<b>Memory</b>	512 K non-volatile user memory		
<b>Support Software</b>			
Development Software	ACRView Software Development Kit		
Language Support	Libraries for C++, VB6, C#, VB.net, Motion COMPONENTS ActiveX tools		



Compact, Intelligent and Powerful Industrial  
Servo Drives & Drive/Controllers are now ETHERNET  
Powerlink capable.



# Compax3 with Ethernet Powerlink

## Compax3 EPL

The Compax3 digital servo drives are now enabled with ETHERNET Powerlink (EPL) motionbus technology. With all 12 power levels of the Compax3 drives now EPL enabled, system performance is increased while overall system cost and installation time have been decreased. The Compax3 family joins three power levels of the Aries EPL servo drives as well as the ACR9030 and ACR9040 multi-axis EPL controllers in Parker's expanding line of EPL products.

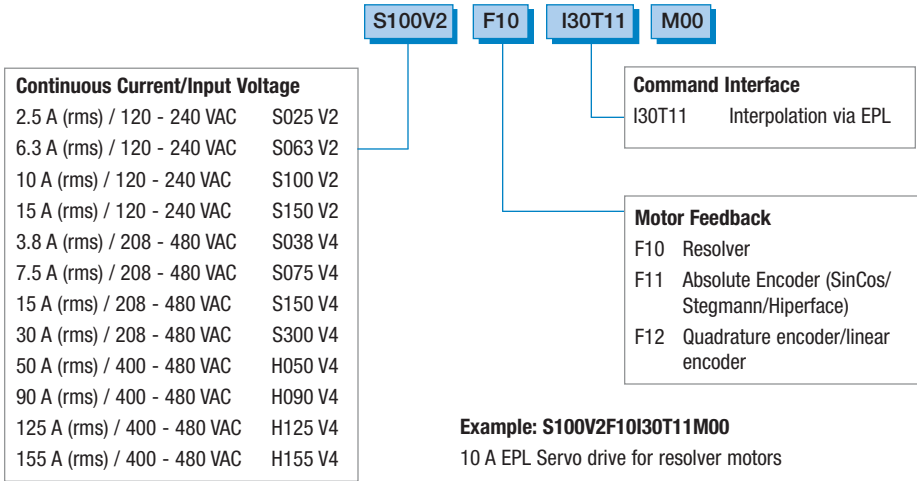
ETHERNET Powerlink is a high-speed, digital motion-bus solution connecting a motion controller to multiple drives and I/O points using standard Ethernet networking hardware. This centralized, real-time communication system for automation and motion control makes Ethernet deterministic for real-time industrial applications. ETHERNET Powerlink systems combine the high performance of centralized motion control with the lower costs of decentralized machine architectures. System design and machine installation times are greatly reduced due to the simplified, inexpensive and readily available Ethernet cables that replace traditional, expensive analog control and feedback cables.

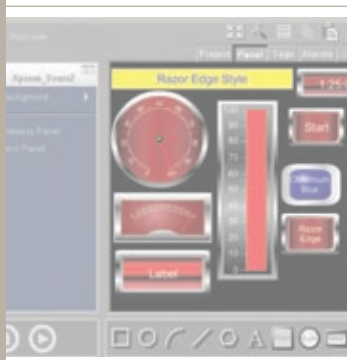
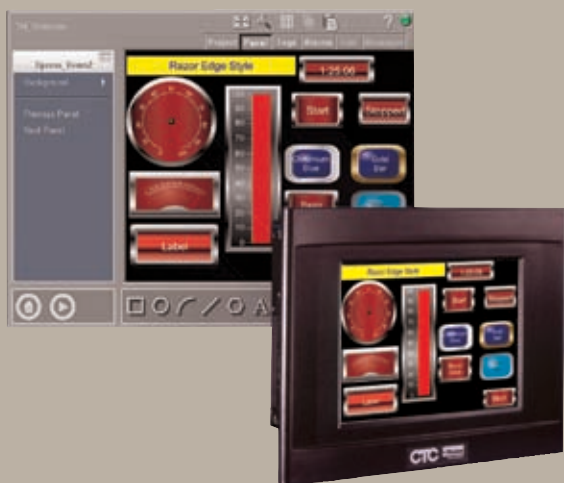
### FEATURES

- Available in both 120/240 VAC and 480 VAC input versions
- Current output from 2.5A RMS continuous to 155A RMS continuous
- 8 inputs and 4 outputs
- Available with ETHERNET Powerlink motionbus
- Certified Category 3 Safety (EN954-1 Cat. 3)
- Support for SSI or secondary encoder feedback for master signal
- Resolver, Encoder, Sine-Cosine or Stegmann feedback
- Internal regeneration circuitry with external resistor connections
- Programs with ACRView
- Easy-to-use wizards-based configuration via C3 ServoManager™
- Full diagnostic, tuning and 4-channel oscilloscope features provided in the standard C3 ServoManager™ software
- CE (EMC & LVD) without adding extra hardware



## Compax3 Part Numbering System





New 15" XPR model offers the largest display size yet for Interact Xpress.



# XPR15 PowerStation

The XPR15 brings Interact Xpress' unique distributed HMI capabilities to the largest display size ever. The XPR family now includes 6, 8, 10.4 and 15" display sizes. XPR PowerStations come with Interact Xpress runtime and online development software and are specifically designed to optimize the performance, storage and connectivity features of Xpress.

Interact Xpress HMI applications are developed, edited, published and run in an HMI that is a Web Server, allowing users and OEMs to easily publish upgrades and applications to any global location with an Internet connection and a web browser. Interact Xpress combines a rich, graphical runtime interface with HMI development tools that can be accessed from either the HMI panel or any PC running Internet Explorer®.

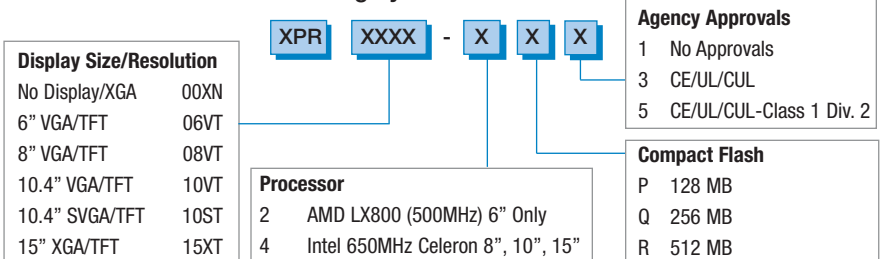
### FEATURES

- Sophisticated graphics look and feel
- Intuitive development environment
- Eliminates version control issues
- Integrated Web Publishing capability for distributed applications
- No version control issues with Web published development
- Applications can be served, created and edited online from any PC with Internet Explorer
- Available offline development software, allows work on applications when a live internet connection isn't available
- Advanced security for single or multi-user applications
- Tools for historical alarm data
- Capacity for complex graphics and animations
- Standard Ethernet port for both networking and controller communications
- More than 35 device communication drivers

### New Interact Xpress Version 1.62 Software

Parker Product Code: 757	Model #
Interact Xpress Manager Version 1.62 Development	IXM-0150

### XPR15 PowerStation Part Numbering System





## XPR PowerStations

Categories	Features	6" Display (XPR06)	8" Display (XPR08)	10" Display (XPR10)	15" Display (XPR15)
	Specification	6" Color TFT 5.7" (145mm) Diagonal VGA (640x480) Resolution 350 NIT, 262,144 Color TFT Viewing Angle: +/- 80° L/R, 80° U, 70° D 75,000 hour backlight (to half brightness)	8" Color TFT 8.0" (203mm) Diagonal VGA (640x480) Resolution 380 NIT, 262,144 Color TFT Viewing Angle: +/-65° L/R, 65° U, 55° D 20,000 hr. backlight (to half brightness)	10" Color TFT 10.4" (264mm) Diagonal VGA (600x480) Resolution SVGA (800x600) Resolution 350 NIT, 262,144 Color TFT Viewing Angle: +/-70° L/R, 40°U, 70°D 50,000 hour backlight (to half brightness)	15" Color TFT 15.1" (380mm) Diagonal XGA (1024x768) Resolution 260 NIT, 262,144 Color TFT Viewing Angle: +/-80° L/R, 55°U, 65°D 50,000 hour backlight (to half brightness)
	Interface	Analog Resistive Touchscreen			
Operating System		Windows CE version 5.0			
Processor Support	Processor	CPU 500MHz LX800 processor (XPR06)	CPU 650MHz Celeron ULV Processor (XPR08/10/15)		
	Cache	256KB (L1/L2)	256KB (L2)		
Memory	System	256MB Shared DDR Memory (1) 200-pin SODIMM socket, 256MB (std.)	256MB Shared Memory (1) 144-pin SODIMM socket, 256MB (std.)		
	Video	64MB Shared System Memory	64MB Shared System Memory		
Storage Options	CompactFlash Floppy/CD ROM	128MB* CompactFlash External Type II slot (IDE Bootable) External connection via USB			
Ports	Keyboard Mouse USB	USB 2.0 USB 2.0 (2) USB 2.0 ports Type-A, CD/Floppy USB Drive bootable with over current protection	PS/2 PS/2 (2) USB 1.1 ports Type-A, CD/Floppy USB Drive bootable with over current protection		
	Serial	(1) RS232 9-Pin D-sub (1) RS232/422/485 9-Pin D-sub	(1) RS232 9-Pin D-sub (1) RS232/422/485 9-Pin D-sub		
	Ethernet	(1) 10/100Base-T w/ RJ45	(1) 10/100Base-T w/ RJ45		
	Audio	Stereo output, 1/8" mini plug	No Audio		
Expansion Slots		N/A			
BIOS Options		Plug-n-Play Configurable Boot Devices: • CompactFlash • USB (CD/ROM, Floppy, Thumb Drive)			
Package	Temp. Range Rel. Humidity Vibration	0-50°C 5-95% (non-cond.) 10-500 Hz .5grms (random-operational-HD) 10-500 Hz 1grms (random-operational-CompactFlash)			
	Shock	10G, 11 msec (operating) 30G, 11 msec (non-operating)			
Power Requirement		24 VDC, 2A maximum, Optional AC Adaptor			

\*Actual storage volumes may be higher

~ Class 1 Div. 2 Agency Approval [optional] pending on 8", 10.4" and 15" Display Options.

For more information about XPR PowerStations visit [parkeremotion.com/Xpress](http://parkeremotion.com/Xpress).



XPR PowerStations come with Interact Xpress software pre-installed. Xpress fully leverages the wide availability of web browsers to enable Distributed HMI, remote support and application sharing on the Internet and IP Networks Xpress HMI applications are developed, edited, published and run in an HMI that is a Web Server.

## About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electromechanical motion-control solutions. Our company has the largest distribution network in its field, with over 7,500 distributors serving nearly 400,000 customers worldwide.

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### The Aerospace Group

is a leader in the development, design, manufacture and servicing of control systems and components for aerospace and related high-technology markets, while achieving growth through premier customer service.



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### The Fluid Connectors Group

designs, manufactures and markets rigid and flexible connectors, and associated products used in pneumatic and fluid systems.



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### The Hydraulics Group

designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.



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### The Automation Group

is a leading supplier of pneumatic and electromechanical components and systems to automation customers worldwide.



## Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

## Product Information

North American customers seeking product information, the location of a nearby distributor, or repair services will receive prompt attention by calling the Parker Electromechanical Automation Division at our toll-free number: 1-800-358-9070.



### The Climate & Industrial Controls Group

designs, manufactures and markets system-control and fluid-handling components and systems to refrigeration, air-conditioning and industrial customers worldwide.



### The Seal Group

designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.



### The Filtration Group

designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support, and global availability.



### The Instrumentation Group

is a global leader in the design, manufacture and distribution of high-quality critical flow components for worldwide process instrumentation, ultra-high-purity, medical and analytical applications.

## Division Contacts

### Servo and Stepper Motion Control Systems

Rohnert Park, CA

P: 707.584.7558 or 800.358.9070

F: 707.584.3715

### Human-Machine Interface and Integrated Machine Control

Milford, OH

P: 513.831.2340 or 800.233.3329

F: 513.831.5042

### Electromechanical Positioning Systems

Irwin, PA

P: 724.861.8200 or 800.245.6903

F: 724.861.3330

### Electromechanical Actuator & IPS

Wadsworth, PA

P: 330.336.3511

F: 330.334.3335

### Gearheads and Linear Systems

Port Washington, NY

P: 516.484.5353 or 800.305.4555

F: 516.629.8000

### Rotary and Linear Servo Motors

New Ulm, MN

P: 507.354.1616 or 866.506.3573

F: 507.233.2390

## Technical Support and Customer Service Contacts

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F: 707.584.3793

### Electromechanical Positioning Systems

Gearhead and Linear Systems

P: 724.861.8200 or 800.245.6903

F: 724.861.3330

### Human-Machine Interface and Integrated Machine Control

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F: 513.831.5042

### Electromechanical Actuator & IPS

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