



ELECTROMECHANICAL OVERVIEW

Motors, Drives, Controllers and Actuators

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For our complete offering and further details, please refer to our Technical Catalogue available for download at parker.com or via the attached QR code on every page of this catalogue.



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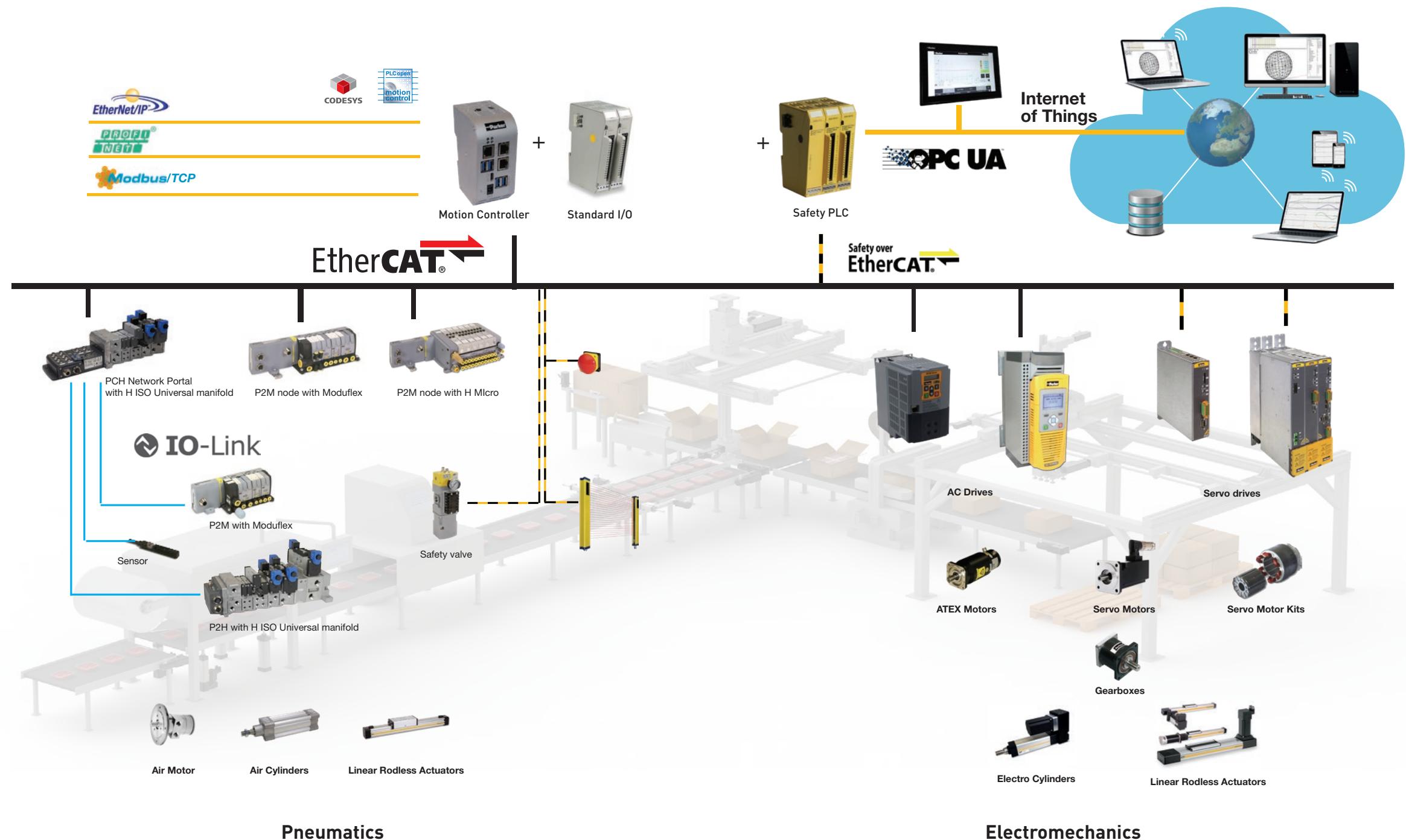
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Complete Motion Control Solutions



Industrial AC Drives

Global AC Drive Solutions to Improve Productivity and Save Energy

Parker assists its customers in improving productivity and reducing energy consumption with a comprehensive range of AC drives. Parker AC drive products are sold, supported and serviced worldwide, with solutions from simple speed control to complex coordinated process control. Parker AC drive products are easy to configure and commission, with simple but flexible function block-based configuration tools and connectivity with all major industrial fieldbus networks.

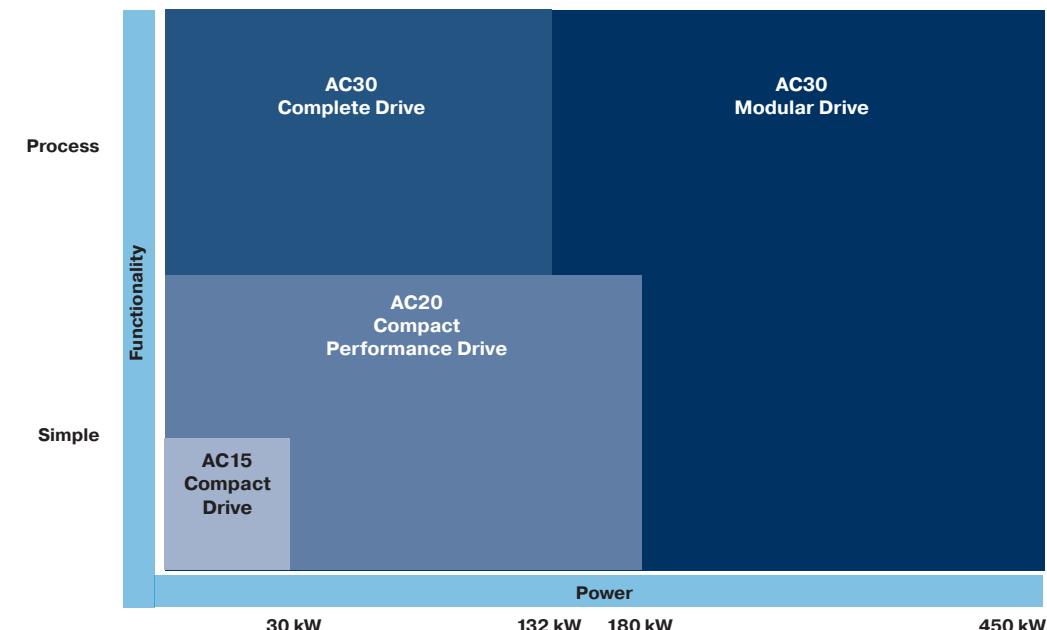
Energy Savings Using Variable Speed Drive Technology

The application of variable speed drives to traditional fixed speed applications, such as in pumps, fans and compressors, can yield up to 30 % energy savings. In fact, many power utilities and government agencies provide financial incentives to invest in VSD technology. Parker's General Purpose AC drives make these savings possible.

Improving Process Productivity and Reliability

Parker AC drive products also have the functionality, designed and refined from decades of experience, to provide the precise, coordinated speed control, often among multiple motor axes, to ensure process line success. With high speed communication, easy to use configuration tools and HMI control solutions, Parker AC drives can handle the most complex process control applications.

AC Drives Product Range Overview



AC15 - Compact Drive

The AC15 Compact Drive is a simple to use, reliable and economical solution for every-day motor control applications that require speed or torque control in the power range of 0.37 kW to 30 kW. Standard features include Safe Torque Off, Ethernet communications, sensorless vector mode for control of both Permanent Magnet (PMAC) and AC induction motors and a full 150 % overload for 1 minute. AC15 provides an optimized solution for OEM machine builders looking for a compact, cost-effective drive without compromising on performance.



AC15 Series	Compact Drive			
Single Phase 230V AC	15G-11-0025-BF 0.37kW (2.5A)	15G-11-0045-BF 0.75kW (4.5A)	15G-11-0070-BF 1.5kW (7A)	15G-12-0100-BF 2.2kW (10A)
Three Phase 230V AC	15G-31-0025-BF 0.37kW (2.5A)	15G-31-0045-BF 0.75kW (4.5A)	15G-31-0070-BF 1.5kW (7A)	15G-32-0100-BF 2.2kW (10A)
	15G-33-0170-BF 4.0kW (17A)	15G-34-0210-BF 5.5kW (21A)	15G-35-0300-BF 7.5kW (30A)	15G-35-0400-BF 11kW (40A)
Three Phase 380-480V AC	15G-41-0012-BF 0.37kW (1.5A)	15G-41-0020-BF 0.75kW (2A)	15G-41-0040-BF 1.5kW (4A)	15G-42-0065-BF 2.2kW (6.5A)
	15G-42-0090-BF 4.0kW (9A)	15G-43-0120-BF 5.5kW (12A)	15G-43-0170-BF 7.5kW (17A)	15G-44-0230-BF 11kW (23A)
	15G-44-0320-BF 15kW (32A)	15G-45-0380-BF 18.5kW (38A)	15G-45-0440-BF 22kW (44A)	15G-45-0600-BF 30kW (60A)
	15G-45-0440-BF 22kW (44A)	15G-45-0600-BF 30kW (60A)		
EMC Filter	BF Category C3 Filter Fitted			



AC20 - Compact Performance Drive

The AC20 Advanced Compact Drive builds on the performance of the AC15 and extends the power range to 180 kW. Its compact dimensions house many features normally only associated with system drives and may be enhanced with encoder feedback and I/O expansion option cards. Safe Torque Off and onboard Ethernet that supports major industrial Ethernet protocols, including Profinet and ethernet IP, are standard. Programming and commissioning is made simple through its easy-to-use integrated keypad and the DSELite programming tool.



AC20 Series	Compact Performance Drive			
Single Phase 230V AC	20G-12-0070-BF	20G-12-0100-BF		
	1.5kW (7A)	2.2kW (10A)		
Three Phase 230V AC	20G-32-0070-BF	20G-32-0100-BF	20G-33-0170-BF	20G-34-0210-BF
	1.5kW (7A)	2.2kW (10A)	4.0kW (17A)	5.5kW (21A)
	20G-35-0300-BF	20G-35-0400-BF		
	7.5kW (30A)	11kW (40A)		
Three Phase 380-480V AC	20G-42-0040-BF	20G-42-0065-BF	20G-42-0090-BF	20G-43-0120-BF
	1.5kW (4A)	2.2kW (6.5A)	4.0kW (9A)	5.5kW (12A)
	20G-43-0170-BF	20G-44-0230-BF	20G-44-0320-BF	20G-45-0380-BF
	7.5kW (17A)	11kW (23A)	15kW (32A)	18.5kW (38A)
	20G-45-0440-BF	20G-45-0600-BF	20G-46-0750-BF	20G-46-0900-BF
	22kW (44A)	30kW (60A)	37kW (75A)	45kW (90A)
	20G-47-1100-BF	20G-47-1500-BF	20G-48-1800-BF	20G-48-2200-BF
	55kW (110A)	75kW (150A)	90kW (180A)	110kW (220A)
	20G-48-2650-BF	20G-49-3200-BF	20G-410-3600-BF	
	132kW (265A)	160kW (320A)	180kW (360A)	
EMC Filter	BF			
	Category C3 Filter Fitted			



AC20 Series					Compact Performance Drive			
Options								
IO and Feedback		7004-01-00	7004-02-00	7004-04-00	7004-05-00			
		General Purpose I/O	Thermistor Input	Pulse Encoder	Resolver			
		4x Digital Input/Output	1x Thermistor Input	250kHz TTL	12-16 Bit Resolution			
		2x Analogue Input		5/12/15/24V Output	+/‐ 24V Peak Differential			
		2x Relay Output		Quadrature/Clock Inputs	4-12V 2-20kHz Carrier			
		1x Thermistor Input		1x Thermistor Input	1x Thermistor Input			
Communications		7003-PB-00	7003-CB-00	7003-PN-00	7003-IP-00			
		Profibus DP	CANopen	Profinet IO	Ethernet IP			
		32 Devices/Segment	DS301 V4.02	100 Mbits/s full duplex	10/100 Mbs full/half duplex			
		126 Max Devices	127 Max Devices	Unlimited Devices	Unlimited Devices			
		Up to 152 bytes cyclic I/O	1Mbs Max - Auto Detected	256 bytes of cyclic I/O	256 bytes of cyclic I/O			
		SDO, PDO, NMT, SYNC		CIP parameter Support				
7003-RS-00		7003-EC-00						
		RS485 Modbus RTU	EtherCAT					
		1200 to 115 200 bits/s	CANopen over EtherCAT					
		247 Max Devices	100 Mbits/s					
		256 bytes of cyclic I/O	65534 Max Devices					
		SDO, PDO, NMT, SYNC						



AC30 - High Performance Modular Drive

The AC30 is a modular product allowing users to select power stack, control module, IO and communications modules to perfectly match the requirements of the application, making it a highly customisable yet cost effective solution. The four interchangeable control modules provide the basis for the series: The versatile AC30V control module, the AC30P module with a host of advanced connectivity options, the AC30D module which adds dual encoder system capability and the AC30A module for use with EnDAT 2.1 compatible sin/cos encoders.

Four easy steps:

- 1) Select Power Module
- 2) Select Control Module
- 3) Select Comms & I/O Options
- 4) Choose Keypad



AC30 Series Power Modules 380 - 480V AC					
1	Power Module	710-4D0004-Bx-0S-0000	710-4D0006-Bx-0S-0000	710-4D0010-Bx-0S-0000	710-4D0012-Bx-0S-0000
		4A (1.1kW/0.75kW)	6A (2.2kW/1.5kW)	10A (4kW/3kW)	12A (5.5kW/4kW)
	710-4E0016-Bx-0S-0000	710-4E0023-Bx-0S-0000			
		7.5kW/5.5kW (16A)	11kW/7.5kW (23A)		
	710-4F0032-Bx-0S-0000	710-4F0038-Bx-0S-0000			
		32A (15kW/11kW)	38A (18.5kW/15kW)		
	710-4G0045-Bx-0S-0000	710-4G0060-Bx-0S-0000	710-4G0073-Bx-0S-0000		
		45A (22kW/18.5kW)	60A (30kW/22kW)	73A (37kW/30W)	
	710-4H0087-Bx-0S-0000	710-4H0105-Bx-0S-0000	710-4H0145-Bx-0S-0000		
		87A (45kW/37kW)	105A (55kW/45kW)	145A (75kW/55kW)	
	710-4J0180-Bx-0S-0000	710-4J0205-Bx-0S-0000	710-4J0260-Bx-0S-0000		
		180A (90kW/75kW)	205A (110kW/90kW)	260A (132kW/110kW)	
	710-4K0315-BE-0S-0000	710-4K0380-BE-0S-0000	710-4K0440-BE-0S-0000		
		315A (160kW/132kW)	380A (200kW/160kW)	440A (250kW/200kW)	
	710-4L0530-NE-0S-0000	710-4L0590-NE-0S-0000			
		530A (280kW/250kW)	205A (315kW/280kW)		
	710-4M0650-NE-0S-0000	710-4M0700-NE-0S-0000	710-4N0790-NE-0S-0000		
		650A (355kW/315kW)	700A (400kW/355kW)	790A (450kW/400kW)	

Options

EMC Filter	x= N	x= E	x= F
	No EMC Filter Fitted	Category C3 Filter Fitted	Category C2 Filter Fitted
	Note - C2 Filter not available on Frame J, K, L, M or N (>75kW)		
	Note - Removable C3 Filter fitted on all Frame K,L,M and N (>160kW)		
	Note - Brake switch (BE option) not available on Frames L,M and N (>250kW)		



AC30 Series		Control Modules			
2	Control Module	30V-2S-0000	30P-2S-0000	30D-2S-0000	30A-2S-0000
		Versatile	Performance	Dual Encoder	Sin/Cos Absolute
		Graphical Keypad Fitted	Graphical Keypad Fitted	Graphical Keypad Fitted	Graphical Keypad Fitted
		Codesys Programmable	As 30V Versatile:	As 30P Performance:	As 30P Performance:
		Application Macros	+Ethernet IP Onboard	+2x Encoder Fbk Onboard	+EnDat Fbk Onboard
		Modbus TCP/IP Onboard	+Profinet Onboard	+1588 peer-peer	+Speed/Phase Locking
			+Modbus RTU	+System Applications	
3	Options	7004-01-00	7004-02-00	7004-04-00	7004-05-00
	IO and Feedback	General Purpose I/O	Thermistor Input	Pulse Encoder	Resolver
		4x Digital Input/Output	1x Thermistor Input	250kHz HTTL	12-16 Bit Resolution
		2x Analogue Input		5/12/15/24V Output	+/- 24V Peak Differential
		2x Relay Output		Quadrature/Clock Inputs	4-12V 2-20kHz Carrier
		1x Thermistor Input		1x Thermistor Input	1x Thermistor Input
4	Communications	7003-PB-00	7003-CB-00	7003-PN-00	7003-IP-00
		Profibus DP	CANopen	Profinet IO	Ethernet IP
		32 Devices/Segment	DS301 V4.02	100 Mbits/s full duplex	10/100 Mbs full/half duplex
		126 Max Devices	127 Max Devices	Unlimited Devices	Unlimited Devices
		Up to 152 bytes cyclic I/O	1Mbs Max - Auto Detected	256 bytes of cyclic I/O	256 bytes of cyclic I/O
			SDO, PDO, NMT, SYNC		CIP parameter Support
	7003-RS-00	7003-EC-00			
	RS485 Modbus RTU	EtherCAT			
	1200 to 115 200 bits/s	CANopen over EtherCAT			
	247 Max Devices	100 Mbits/s			
		256 bytes of cyclic I/O	65534 Max Devices		
			SDO, PDO, NMT, SYNC		
	AC30 Keypad	7001-00-00	7001-01-00	LA501991U300-1	
		Graphical Keypad	Blanking Plate	3M Remote Mount Kit	



AC30 Series Complete Drive (31V) 380-480 V AC



AC Inverter Drive	31V-4D0004-Bx-2S-0000	31V-4D0006-Bx-2S-0000	31V-4D0010-Bx-2S-0000	31V-4D0012-Bx-2S-0000
	1.1kW/0.75kW (4A)	2.2kW/1.5kW (6A)	4kW/3kW (10A)	5.5kW/4kW (12A)
	31V-4E0016-Bx-2S-0000	31V-4E0023-Bx-2S-0000		
	7.5kW/5.5kW (16A)	11kW/7.5kW (23A)		
	31V-4F0032-Bx-2S-0000	31V-4F0038-Bx-2S-0000		
	15kW/11kW (32A)	18.5kW/15kW (38A)		
	31V-4G0045-Bx-2S-0000	31V-4G0060-Bx-2S-0000	31V-4G0073-Bx-2S-0000	
	22kW/18.5kW (45A)	30kW/22kW (60A)	37kW/30W (73A)	
	31V-4H0087-Bx-2S-0000	31V-4H0105-Bx-2S-0000	31V-4H0145-Bx-2S-0000	
	45kW/37kW (87A)	55kW/45kW (105A)	75kW/55kW (145A)	
	31V-4J0180-Bx-2S-0000	31V-4J0205-Bx-2S-0000	31V-4J0260-Bx-2S-0000	
	90kW/75kW (180A)	110kW/90kW (205A)	132kW/110kW (260A)	

Options

EMC Filter	x= N	x= E	x= F
	No EMC Filter Fitted	Category C3 Filter Fitted	Category C2 Filter Fitted
Note - C2 Filter not available on Frame J (>75kW) AC30			
IO and Feedback	7004-01-00	7004-02-00	7004-04-00
General Purpose I/O	Thermistor Input	Pulse Encoder	Resolver
4x Digital Input/Output	1x Thermistor Input	250kHz TTL	12-16 Bit Resolution
2x Analogue Input		5/12/15/24V Output	+/- 24V Peak Differential
2x Relay Output		Quadrature/Clock Inputs	4-12V 2-20kHz Carrier
1x Thermistor Input		1x Thermistor Input	1x Thermistor Input
Communications	7003-PB-00	7003-CB-00	7003-PN-00
Profibus DP	CANopen	Profinet IO	Ethernet IP
32 Devices/Segment	DS301 V4.02	100 Mbits/s full duplex	10/100 Mbs full/half duplex
126 Max Devices	127 Max Devices	Unlimited Devices	Unlimited Devices
Up to 152 bytes cyclic I/O	1Mbs Max - Auto Detected	256 bytes of cyclic I/O	256 bytes of cyclic I/O
			SDO, PDO, NMT, SYNC
	7003-RS-00	7003-EC-00	
RS485 Modbus RTU	EtherCAT		
1200 to 115 200 bits/s	CANopen over EtherCAT		
247 Max Devices	100 Mbits/s		
256 bytes of cyclic I/O	65534 Max Devices		
			SDO, PDO, NMT, SYNC

Complementary Products

AC Variable Frequency Drives - AC16 Series



- 0.4 kW to 90 kW
- IP66 / NEMA 4x
- Compact, cost-effective drive
- Simple or enhanced performance
- AC induction and sensorless Permanent Magnet (PMAC) Motor Control

DC Motor Speed Controller - DC590+ Series



- Output armature current ratings: 15 - 1950A
- Simple set-up and programming
- Compact
- Removable Key Pad
- Motor Thermistor Input
- Macro Function Blocks



PSD - Parker Servo Drive

PSD1 is the global Parker Servo Drive family, available with different current ratings from 2 to 30A and two form factors. Today the offering contains

- PSD1-S: A standalone drive which can be connected directly to the mains supply. With its compact housing, it is particularly suitable for small machines.
- PSD1-M: A multi-axis servo system which can operate up to three servo motors. The base configuration consists of a PSD1M power supply module and multiple PSD1M axis modules, connected through DC bus bars. The axis modules are available as single, twin or triple axis versions, making the system highly flexible.



PSD Series PSD1S - Standalone Servo Drive - 1x/3x 230V AC ±10% input voltage

PSD1SW...		
Power Level	1200...	1300...
2A (0.64kW) continuous output	5A (1.6kW) continuous output	7.5A (2.5kW) continuous output
Technology	Basic	Programmable
To be used as slave on various field busses communicating via state machines	- Fully programmable via IEC 61131-3 - Full set of programming languages and a complete set of function blocks incl. DS402 and Profidrive state machine - PLCopen function modules	
Interface	EtherCAT	Multi-Fieldbus CANopen
	- Profinet - Ethernet IP - EtherCAT	
Feedback	DSL Hiperface	Multi-Feedback
	- Resolver - TTL Encoder - 1 Vpp Encoder - Analog Hall - DSL Hiperface	
Options	FSoE	1x I/O option 2x I/O option No option
- Safety over EtherCAT - Extended safety functions (SLS, SOS, SS1, SS2,...)	- 8x Digital I/Os (additional) - 4x Analog Inputs - 1x Encoder Interface	- 16x Digital I/Os (additional) - 8x Analog Inputs - 2x Encoder Interfaces



PSD Series PSD1M - Multi-axis Servo System - 3x 230-480V AC ±10% input voltage

PSD1MW...

Power Supply Modules ...P01000000000 ...P02000000000



10kVA Rating / 325-680VDC output 20kVA Rating / 325-680VDC output

Single Axis Module	...1300...	...1400...	...1600...	...1800...
325-680VDC input	5A continuous output (3kW)	8A continuous output (4.8kW)	15A continuous output (9kW)	30A continuous output (18kW)



Twin Axis Module	...2220...	...2330...	...2440...	...2440...
325-680VDC input	2A+2A continuous output (1.2kW+1.2kW)	5A+5A continuous output (3kW+3kW)	8A+8A continuous output (4.8kW+4.8kW)	8A+8A continuous output (4.8kW+4.8kW)



Triple Axis Module	...3222...	...3433...
325-680VDC input	2A+2A+2A continuous output (1.2kW+1.2kW+1.2kW)	8A+5A+5A continuous output (4.8kW+3kW+3kW)

Technology	Basic	Programmable
To be used as slave on various field busses communicating via state machines	- Fully programmable via IEC 61131-3 - Full set of programming languages and a complete set of function blocks incl. DS402 and Profidrive state machine - PLCopen function modules	

Interface	EtherCAT	Multi-Fieldbus	CANopen
	- Profinet - Ethernet IP - EtherCAT		

Feedback	DSL Hiperface	Multi-Feedback
	- Resolver - TTL Encoder - 1 Vpp Encoder - Analog Hall - DSL Hiperface	

Options	FSoE	1x I/O option	2x I/O option	No option
- Safety over EtherCAT	- 8x Digital I/Os (additional)	- 16x Digital I/Os (additional)		
- Extended safety functions (SLS, SOS, SS1, SS2,...)	- 4x Analog Inputs - 1x Encoder Interface	- 8x Analog Inputs - 2x Encoder Interfaces		

PAC - Parker Motion Controller

The EtherCAT-based Parker Motion Controller is a powerful and integrated solution for the global machine market. It helps OEMs create efficient and high-performance control systems. The controller combines machine logic, signal processing, and high-speed motion control into a standardized, performance-driven, fanless, and easily mountable DIN rail solution.

Equipped with a built-in real-time EtherCAT bus, a modular interface slot, standard Ethernet and USB ports, and an SD card slot, the controller supports fieldbus options like Profinet Slave, EtherCAT, or EtherNet/IP, making it easy to integrate for various applications.

Programmed with CODESYS, efficient and powerful control systems can be designed based on IEC61131-3 and PLCopen motion standards. With the integrated OPC UA server, the controller is ideal for Industry 4.0 communication.

Motion Controller	PAC340-MWB11-3X-00-01	PAC340-CWB11-3X-00-01
	Softmotion	Softmotion + CNC
I/O Modules	PACIO-400-00	PACIO-400-02
	EtherCAT Bus coupler, 3A	Extender 2 Port
	PACIO-441-51	PACIO-441-52
	4x Analog Input	4(8)x Analog Input
	Current	Voltage
	12 Bit CoE	13 Bit CoE
	16 Bit CoE	16 Bit CoE
	PACIO-443-57	PACIO-443-58
	4x Analog Input	8x Analog Input
	Terperature Pt/Ni/Thermo	Terperature Pt/Ni/Thermo
	16 Bit CoE	16 Bit CoE
	PACIO-450-02	PACIO-450-03
	16x Digital Input	16x Digital Input
	8x Digital Output	8x Digital Output
	1ms delay / 1 A	1ms delay / 0.5 A
	PACIO-451-02	PACIO-451-03
	32x Digital Input	16x Digital Input
	1ms delay	1ms delay
	PACIO-454-01	
	Counter/Encoder	
	PACIO-412-01	PACIO-412-02
	Shield 2x8mm	Shield 14mm



Safety Modules

Safety PLC is a module intended to be integrated in EtherCAT networks with Parker motion controllers. Acting as the Functional Safety over EtherCAT master, it is able to address any FSofE slave including safety I/Os, motion controllers and other FSofE devices. The safety PLC meets the requirements of IEC 61508 SIL3 and DIN EN ISO 13849 PLe. Programming is carried out via the CODESYS environment of the main controller and the EtherCAT link.



FSofE Modules	694.330.00	694.430.00	694.430.10	694.430.20
Safety PLC	4x Safe Digital Input	8x Safe Digital Input	16x Safe Digital Input	
FSofE Master	2x Safe Digital Output (2A)	2x Safe Digital Output (0.5A)	4x Safe Digital Output (0.5A)	

Touch Panels

The PAC controller series is complemented by capacitive touchscreens available in three different sizes. The PACTLs feature an Ethernet interface and support Web Visu (web client, HTML5) and Target Visu (VNC client).



Touchpanels	PACTL-C070	PACTL-C101	PACTL-C156
	Capacitive 7"	Capacitive 10.1"	Capacitive 15.6"



SMH - Low Inertia Brushless Servo Motors

Thanks to the innovative "salient pole" technology, the SMH motor's dimensions are considerably reduced with significant advantages in terms of torque and dynamic performance. Compared to traditional-technology brushless servo motors, the specific torque is approximately 30 % higher, overall dimensions are considerably reduced and, consequently rotor inertias are extremely low. Thanks to the high quality magnets, and also the encapsulation method used to fasten them to the shaft, the SMH/B motors can achieve very high acceleration and withstand high overloads without risk of demagnetisation or detachment of the magnets.



SMH Series Servo motors							
Flange	40 mm	60 mm	82 mm	100 mm	115 mm	142 mm	170 mm
Motor Size	SMH4060...	SMH6016...	SMH8210...	SMH10016...	SMH11516...	SMH14210...	SMH17010...
	230VAC	230VAC	230VAC	230VAC	400VAC	230/400VAC	
0.16/0.27 Nm	1.4 Nm	2.9 Nm	5.8 Nm	9 Nm	16.4 Nm	30/53 Nm	
6000 rpm	1600 rpm	1000 rpm	1600 rpm	1600 rpm	1000 rpm	1000/1100 rpm	
	SMH6030...	SMH8216...	SMH10030...	SMH11520...	SMH14218...	SMH17016...	
	230/400VAC	230VAC	230/400VAC	400VAC	230/400VAC	230VAC	
1.2 Nm	2.9 Nm	5 Nm	9 Nm	13 Nm	28 Nm		
3000 rpm	1600 rpm	3000 rpm	2000 rpm	1800/2000 rpm	2200/3900 rpm		
	SMH6045...	SMH8230...	SMH10045...	SMH11530...	SMH14230...	SMH17020...	
	230/400VAC	230/400VAC	230/400VAC	230/400VAC	400VAC		
1 Nm	2.7 Nm	3.5 Nm	8 Nm	14 Nm	27/44 Nm		
4500 rpm	3000 rpm	4500 rpm	3000 rpm	3000 rpm	2200/3900 rpm		
	SMH6060...	SMH8233...	SMH10055...	SMH11540...	SMH14245...	SMH17025...	
	230/400VAC	230VAC	230/400VAC	230/400VAC	400VAC	230/400VAC	
0.8 Nm	2.4 Nm	2.6 Nm	7.6 Nm	10.9 Nm	26 Nm		
6000 rpm	3300 rpm	5500 rpm	4000 rpm	4500 rpm	2500/2700 rpm		
	SMH6075...	SMH8245...	SMH10075...	SMH11554...	SMH14256...	SMH17030...	
	230/400VAC	230/400VAC	230/400VAC	230/400VAC	400VAC		
0.15 Nm	2.2 Nm	0.6 Nm	7.1 Nm	10.6 Nm	19/30 Nm		
7500 rpm	4500 rpm	7500 rpm	5400/5600 rpm	5600 rpm	3000 rpm		
	SMH8256...						
	400VAC						
1.6 Nm							
5600 rpm							
	SMH8260...						
	230/400VAC						
1.5 Nm							
6000 rpm							
	SMH8275...						
	230/400VAC						
0.6 Nm							
7500 rpm							
Brake	0.4Nm	2.2Nm	4.5Nm	9Nm	22Nm	72Nm	
Sensor	Resolver	Hall sensors	Hiperface encoder	DSL hiperface encoder	Endat encoder		
	2 pole pairs	2000 to 5000 ppr	Single/multi turn	Single/multi turn	Multi turn		
		12 bits / 12bits rev.	18 bits / 12 bits rev.	13 - 18 bits			
Shaft End	Additional inertia						
	From 12Kgmm ² to 1600 Kgmm ²						
Conformance	CE	UL					



MH - Brushless Servo Motors

Adequate mechanical over-sizing, low inertia in an extra-strong mechanism, and a broad range of models permits the application of the MH/B servo motors in all fields where high dynamic performance and utmost reliability are crucial features. Typical applications include any type of automated machinery, especially in the product packaging and handling industry, and wherever the demand exists for axis speed and position synchronisation.



MH Series	Servo motors			
Flange	145 mm	205 mm	265 mm	
Motor Size	MH14505...	MH20505...	MH26510...	
	230VAC	230VAC	400VAC	
4.5 to 28 Nm	28 to 90 Nm	75 to 285 Nm		
550 rpm	550 rpm	1000 rpm		
MH11510...	MH20510...	MH26518...		
230-400VAC	230-400VAC	400VAC		
4.5 to 28 Nm	15 to 90 Nm	75 to 285 Nm		
1000/1100 rpm	1000/1150 rpm	1800/2000 rpm		
MH11516...	MH20517...	MH26528...		
230VAC	230-400VAC	400VAC		
4.5 to 28 Nm	14 Nm	75 to 150 Nm		
1600 rpm	1700/2000 rpm	2800 rpm		
MH11520...	MH20520...			
400VAC	400VAC			
4.5 to 28 Nm	15 to 90 Nm			
2000 rpm	2000 rpm			
MH11525...	MH20530...			
230VAC	400VAC			
4.5 to 28 Nm	15 to 90 Nm			
2500 rpm	3000 rpm			
MH11530...				
400VAC				
4.5 to 28 Nm				
3000 rpm				
MH11540...				
230VAC				
4.5 to 28 Nm				
4000 rpm				
MH11545...				
400VAC				
4.5 to 28 Nm				
4500 rpm				
Brake	4 to 28Nm	120Nm	225Nm	
Sensor	Resolver	Hall sensors	Hiperface encoder	Endat encoder
	2 pole pairs	2000 to 5000 ppr	Single/multi turn	Multi turn
			12 bits / 12bits rev.	13 - 18 bits
Shaft End	Additional inertia			
	From 790Kgmm ² to 4400 Kgmm ²			
Conformance	CE			
Fan Version	Contact Parker for forced ventilation information			



EX - Servo Motors for Explosive Atmosphere Zone 1

EX series is a range of permanent magnet servo motors designed for use in zone 1 explosive atmospheres. Featuring robust explosion-proof housings, EX motors are capable of bearing internal explosions with no risk of propagation to the neighbouring environment. EX servomotors are characterized by excellent motion quality, great acceleration /deceleration capabilities, and high torque output over a wide speed range. Various winding variants and numerous options are available to offer maximum flexibility



EX Series Servomotors for Explosive atmosphere Zone 1				
	Flange 70 mm	Flange 92 mm	Flange 120 mm	Flange 155 mm
Motor Size	EX310...	EX420...	EX620...	EX820...
230/400VAC	230/400VAC	230/400VAC	230/400VAC	230/400VAC
1.5/1.23 Nm	3.2/3.3 Nm	6.6/6 Nm	11.2/7.5 Nm	
4000/6800 rpm	4000/6000 rpm	2200/3900 rpm	2200/3600 rpm	
	EX430...	EX630...	EX840...	
	230/400VAC	230/400VAC	230/400VAC	
	4.2/3.3 Nm	9.4/7.8 Nm	15.8/2.9 Nm	
	4000 rpm	2300/4000 rpm	2200/3300 rpm	
		EX860...		
		230/400VAC		
		25.4/9 Nm		
		1450/2500 rpm		
Brake	2 Nm	5.5 Nm	12 Nm	36 Nm
Sensor	Hiperface SKS36/SKM36	Hiperface DSL EKS36/EKM36	Resolver	No feedback
Single multi/turn	Single multi/turn	2 pole pairs		
12 bits / 12bits revolution	18 bits / 12 bits revolution			
Shaft End	Key shaft	Smooth shaft		
Conformance	ATEX/IECEx	KOSHA	CCC	



EY - Servo Motors for Explosive Atmosphere Zone 2

The EY series is a range of permanent magnet explosion-proof brushless servo motors designed for use in explosive atmospheres in zone 2 for gas and dust at 40°C or 60°C ambient temperature. The EY series of servo motors are characterized by excellent motion quality, dynamic acceleration/deceleration capabilities and high torque output over a wide speed range. Various winding variants and numerous options are available to offer maximum flexibility. This range is in accordance with European (CE) and International safety standards.



EY Series Servomotors for Explosive atmosphere Zone 2				
	Flange 70 mm	Flange 92 mm	Flange 120 mm	Flange 155 mm
Motor Size	EY310...	EY420...	EY620...	EY820...
230/400VAC	230/400VAC	230/400VAC	230/400VAC	230/400VAC
1.89/1.71 Nm	3.78/3.38 Nm	7.85/7.52 Nm	14.5/12.9 Nm	
4000/6000 rpm	4000/5000 rpm	2200/3900 rpm	2200/3900 rpm	
	EY430...	EY630...	EY840...	
	230/400VAC	230/400VAC	230/400VAC	
	5/4.1 Nm	11.3/10 Nm	23.5/18.6 Nm	
	4000-5000 rpm	2300-4000 rpm	2000/3500 rpm	
		EY860...		
		230/400VAC		
		34.4/23 Nm		
		1450/2600 rpm		
Brake	2 Nm	5.5 Nm	12 Nm	36 Nm
Sensor	No feedback	Resolver		
		2 pole pairs		
		12-16 Bit Resolution		
Shaft End	Key shaft	Smooth shaft		
Conformance	ATEX	CCC		



PE - Standard Inline Planetary Gearheads

The standard PE-series inline planetary gearhead is the ideal cost-effective gearbox for all applications requiring standard backlash. They are available in 5 different frame sizes and offer high torque, low backlash, high input speeds, and a compact footprint with an excellent price/performance ratio.



PE Series Economical Planetary Gearheads											
PE Size	PE2		PE3			PE4			PE5		PE7
Ratio	1 step	2 step	1 step	2 step		1 step	2 step	1 step	2 step	1 step	2 step
	3:1 / 4:1 / 5:1 / 7:1 / 8:1 / 10:1	9:1 / 12:1 / 15:1 / 16:1 / 20:1 / 25:1 / 32:1 / 40:1 / 64:1	3:1 / 4:1 / 5:1 / 7:1 / 8:1 / 10:1	9:1 / 12:1 / 15:1 / 16:1 / 20:1 / 25:1 / 32:1 / 40:1 / 64:1		3:1 / 4:1 / 5:1 / 7:1 / 8:1 / 10:1	9:1 / 12:1 / 15:1 / 16:1 / 20:1 / 25:1 / 32:1 / 40:1 / 64:1	3:1 / 4:1 / 5:1 / 7:1 / 8:1 / 10:1	9:1 / 12:1 / 15:1 / 16:1 / 20:1 / 25:1 / 32:1 / 40:1 / 64:1	4:1 / 5:1 / 10:1 20:1 / 25:1 / 32:1 / 40:1 / 64:1	16:1 / 20:1 / 25:1 / 40:1 / 50:1
Nominal Torque	up to 15 Nm	up to 20 Nm	up to 40 Nm	up to 44 Nm		up to 115 Nm	up to 130 Nm	up to 195 Nm	up to 260 Nm	up to 460 Nm	up to 460 Nm
	ratio dependent		ratio dependent			ratio dependent		ratio dependent		ratio dependent	
Max. Acceleration Torque	up to 24 Nm	up to 32 Nm	up to 64 Nm	up to 70 Nm		up to 184 Nm	up to 208 Nm	up to 312 Nm	up to 416 Nm	up to 736 Nm	up to 736 Nm
	ratio dependent		ratio dependent			ratio dependent		ratio dependent		ratio dependent	
Nominal Speed	up to 5000 rpm		up to 4500 rpm			up to 4000 rpm		up to 3500 rpm		up to 3000 rpm	
Environmental Conditions	IP54					IP54					
Output Flange Dimensions	ø10mm/ø26mm/ø34mm/4x M4x6 Shaft Dia./Centering Dia./Bolt Circle Dia.		ø14mm/ø40mm/ø52mm/4x M5x8 Shaft Dia./Centering Dia./Bolt Circle Dia.			ø20mm/ø80mm/ø100mm/4x ø6.5mm Shaft Dia./Centering Dia./Bolt Circle Dia.		ø25mm/ø110mm/ø130mm/4x ø8.5mm Shaft Dia./Centering Dia./Bolt Circle Dia.		ø40mm/ø120mm/ø140mm/4x M10x20 Shaft Dia./Centering Dia./Bolt Circle Dia.	
Shaft	with / without keyway					with / without keyway					
Adaptable Standard Servo Motor	SMH40		SMH60			SMH60 / SMH82 / SMH100		SMH82 / SMH100 / SMH115		SMH170 / MH205	



NK - Frameless Servo Motors

K Series Servo motors are an innovative direct drive solution designed for industrial applications. NK Series brushless servomotors combine exceptionally precise, quality motion and high dynamic performance with a compact footprint, allowing complete integration into a mechanical system.

NK motors are suited to applications where constant speed is needed due to their low cogging characteristic. Support with customisation and integration is possible on request.



NK Series Kit Servo Motors			
Diameter	62 mm	80 mm	111 mm
Motor Size	NK310...	NK420...	NK620...
230/400VAC	230/400VAC	230/400VAC	230/400VAC
1.8/1.65 Nm	3.53/3.14 Nm	7.42/7.52 Nm	13.2/14.7 Nm
6000 rpm	4000 rpm	4000-5700 rpm	3600/3900 rpm
	NK430...	NK630...	NK840...
	230/400VAC	230/400VAC	230/400VAC
	4.68/4.77Nm	10.7/10.8 Nm	22.9/23.2 Nm
	4000	4000 rpm	2200/3500 rpm
		NK860...	
		230/400VAC	
		32.8/27.5 Nm	
		2600 rpm	
Sensor	Hiperface SKS36/SKM36	Hiperface DSL EKS36/EKM36	Resolver
	Single multi/turn	Single multi/turn	2 pole pairs
	12 bits / 12bits revolution	18 bits / 12 bits revolution	
Thermal Sensor	PTC	KTY	
Cooling	Natural air cooling	Water/Oil cooling	
	Please consult Parker		
Conformance	CE		

Complementary Products

Low-Cogging Servo Motors - NX Series



- High precision and motion quality
- High dynamic performance
- Low cogging torque / Smooth operation
- Compact dimensions and robustness
- Large set of options and customization possibilities
- CE and UL marking certification available

Direct-Drive Torque Motors - TM Series



- Permanent magnet synchronous motor
- High torque at low speed up to 22 000 Nm
- High torque density
- Silent operation
- Customized mechanical Interface
- Integrated thrust bearing (option)

Frameless Spindle Motors - SKW Series TK Series



- Kit solution leading to simplified mechanical designs
- Cold permanent magnet technology
- Increased internal diameter compared to other solutions
- Simple, light and compact machine design

Frameless Direct-Drive Torque Motors TK Series



- Permanent magnet synchronous servo motor kit
- Simplified mechanical designs
- High Resistance (oil proof and coating on request)
- Reduced sizes and weights
- Increased reliability and reduced maintenance
- Increased rigidity and accuracy

Frameless Spindle Motors - HKW Series



- Kit solution leading to simplified mechanical design
- Very high speed capabilities - up to 50 000 min-1
- Constant power operation up to 10 x base speed: no oversizing of the drive
- High dynamic performance and power density
- Cold permanent magnet technology

High Performance DC Servo Motor RS Series



- High performance characteristics
- Excellent low-speed functionality
- Highly compact
- Very long service life
- Rare earth magnets
- Tacho, encoder, resolver and brake in options



ETH - Electric Cylinders

The ETH high-thrust electric cylinders are ballscrew-driven, rod-style linear actuators engineered for reliable positioning across industrial applications. Their high power density provides strong thrust in a compact package, and robust construction ensures long service life and durability. A standard central lubrication port simplifies routine servicing, minimizing maintenance effort and machine downtime. Multiple rod-end configurations and mounting options give you the flexibility to integrate ETH cylinders into a wide variety of machine designs.



ETH Series															
Electric Rod style Cylinder for High Load															
ETH Size	ETH032...			ETH050...			ETH080...			ETH100...			ETH125...		
	outside square size 46,5mm x 46,5mm			outside square size 63,5mm x 63,5mm			outside square size 95mm x 95mm			outside square size 120mm x 120mm			outside square size 150mm x 150mm		
Thread Lead	[mm/rev.]	5	10	16	5	10	20			5	10	10	20	10	20
Max. Thrust Force Inline Motor Mounting		3600 N	3700 N	2400 N	9300 N	7000 N	4400 N			17 800 N	25 100 N	54 800 N	56 000 N	88 700 N	114 000 N
Max. Thrust Force Parallel Motor Mounting		3600 N	3280 N	2050 N	9300 N	4920 N	2460 N			17 800 N	11 620 N	54 800 N	50 800 N	76 300 N	81 400 N
Stroke		50mm - 1000mm in steps of 1 mm			50mm - 1200mm in steps of 1 mm					100mm - 1600mm in steps of 1 mm	200mm - 2000mm in steps of 1 mm		200mm - 2000mm in steps of 1 mm		
Velocity (depending on stroke)	[mm/s]	146 - 333	277 - 667	440 - 1067	139 - 333	270 - 667	536 - 1333			140 - 267	267 - 533	76 - 400	148 - 800	94 - 417	170 - 833
Acceleration	[m/s ²]	4	8	12	4	8	15			4	8	8	10	8	10
Motor Mounting	Inline / Parallel						Inline / Parallel								
Adaptable Standard Motors / Gearboxes		SMH60, NX3, EX3			SMH60, NX3, EX3			SMH82, NX4, EX4			SMH115, MH105, NX6		MH205, SMH170		
	SMH82			SMH82			SMH100, MH105			SMH142, MH145		MH265			
	PE3			NX4, EX4			SMH115, NX6, EX6			MH205, SMH170		PE7			
	MH105			SMH100			SMH142, MH145			PE5					
	PE3														
Environmental Conditions	IP54 (Standard) / IP65						IP54 (Standard) / IP65								
Explosive Atmosphere	ATEX						ATEX						-	-	



HLR - Rodless Actuators

The HLR is a belt driven/ linear guided drive system offering a very high load capacity within a small form factor. Its compact outer dimensions and a variety of stroke steps make it ideal for a wide range of automation applications. Combined with a wide choice of accessories it offers a very quick and easy way to build multi-axis solutions. The predefined drive trains simplify the sizing and selection process and reduce development time.



HLR Series		High Load Rodless Actuator	
Belt driven, square rail guided linear actuator			
HLR Size	HLR070...	HLR080...	
	outside square size 69mm x 64mm	outside square size 82mm x 76,5mm	
Carrier	Standard	Extended	Standard
	372 mm length	412 mm length	372 mm length
			412 mm length
Max. Load Fz	2628 N	3847 N	3847 N
Stroke	100 - 2500 mm		50 - 3500 mm
Max. Thrust Force Fx	500 N		900 N
Velocity		5 m/s	
Acceleration		50 m/s ²	
Adaptable Standard Gearbox	PE2	PE3	
	Mountable on 4 different positions	Mountable on 4 different positions	
Environmental Conditions	IP40		
	Equipped with a stainless steel cover strip		
Gantries	Prepared for assembling X-Y & X-Y-Z gantries		



OSP-E - Linear Actuators

The OSP-E rodless linear actuator family is built on a completely modular concept to cover a wide range of industrial handling applications. Engineered for reliability and high performance, the OSP-E's optimized design accommodates even the most challenging installation requirements.



Two electric belt actuator configurations for high speed, long travel and precise positioning.

- **OSP-E..BHD** : Belt actuator with integrated square rail guide – Heavy-duty configuration for demanding loads and continuous duty cycles, combining superior stiffness with long service life.

- **OSP-E..B**: Belt actuator with internal plain-bearing guide – Compact point-to-point solution optimized for space-constrained layouts while delivering smooth, repeatable motion.

OSP-E Series Modular Electric Rodless Actuator Belt-Driven							
Drive Technology	OSP-E..BHD				OSP-E..B		
	Toothed Belt - Square Rail Guidance				Toothed Belt - Plain Gearing Guidance		
OSP-E Size	OSP-E20-BHD	OSP-E25-BHD	OSP-E32-BHD	OSP-E25-BHD	OSP-E25-B	OSP-E32-B	OSP-E50-B
	73 x 49 mm	93 x 52.5 mm	116 x 66.5 mm	175 x 92.5 mm	41 x 52.5 mm	52 x 66.5 mm	87 x 92.5 mm
Max. Load Fz	1600 N	3000 N	10 000 N	15 000 N	160 N	300 N	850 N
Max. Stroke	5630 mm	5590 mm	5550 mm	5450 mm	5675 mm	5635 mm	5660 mm
Max. Thrust Force Fx	550 N	1070 N	1870 N	3120 N	50 N	150 N	425 N
Velocity	3 m/s	5 m/s	5 m/s	5 m/s	2 m/s	3 m/s	5 m/s
Acceleration	50 m/s ²				10 m/s ²		
Carrier	Tandem / Bi-parting				Tandem / Bi-parting		
External Guides	-				Proline / Powerslide		
Adaptable Standard Motor / Gearbox	SMH-Series / PS-Series				SMH-Series / PS-Series		
Environmental Conditions	IP54				IP54		
	Equipped with a stainless steel cover strip				Equipped with a stainless steel cover strip		



OSP-E - Linear Actuators

The OSP-E rodless linear actuator family is built on a complete modular concept to serve a wide range of industrial handling applications. Engineered for absolute reliability, high performance and straightforward handling, the OSP's optimized design accommodates even the most challenging installation requirements.

Two electric screw actuator configurations for applications that require higher actuator power and accurate movement, delivering robust force transmission and repeatable positioning.

- **OSP-E..SB** : Ball screw actuator with internal plain-bearing guide – High-accuracy solution for continuous or precision positioning tasks.

- **OSP-E..ST** : Trapezoidal screw actuator with internal plain-bearing guide – Cost-effective option optimized for intermittent or low-duty applications.

OSP-E Series		Modular Electric Rodless Actuator Screw-Driven										
Drive Technology		OSP-E..SB					OSP-E..ST					
OSP-E Size		OSP-E25-SB	OSP-E32-SB	OSP-E50-SB	Ball Screw - Plain Bearing Guidance			OSP-E25-ST			OSP-E50-ST	Trapezoidal Screw - Plain Bearing Guidance max. 10% duty cycle
OSP-E Size	OSP-E25-SB	41 x 52.5 mm	OSP-E32-SB	52 x 66.5 mm	OSP-E50-SB	87 x 92.5 mm		OSP-E25-ST	41 x 52.5 mm	OSP-E32-ST	52 x 66.5 mm	87 x 92.5 mm
Thread Lead	5 mm	5 mm	10 mm	5 mm	10 mm	25 mm		4 mm	4 mm	4 mm	6 mm	
Max. Load Fz	500 N	500 N	1200 N	3000 N			500 N	500 N	1000 N	1000 N	1500 N	
Max. Stroke	1100 mm	1100 mm	2000 mm	3200 mm			1100 mm	1100 mm	2000 mm	2000 mm	2500 mm	
Max. Thrust Force Fx	250 N	250 N	600 N	1500 N			600 N	600 N	1300 N	1300 N	2500 N	
Velocity	0.25 m/s	0.25 m/s	0.5 m/s	0.25 m/s	0.5 m/s	1.25 m/s		0.1 m/s	0.1 m/s	0.1 m/s	0.15 m/s	
Acceleration	2 m/s ²	2 m/s ²	4 m/s ²	2 m/s ²	4 m/s ²	10 m/s ²		-	-	-	-	
External Guides	Slideline / Proline / Powerslide / Heavy-Duty-Guide						Slideline / Proline / Powerslide / Heavy-Duty-Guide					
Adaptable Standard Motor / Gearbox	SMH-Series / PS-Series						SMH-Series / PS-Series					
Environmental Conditions	IP54						IP54					
Specials	Equipped with a stainless steel cover strip						Equipped with a stainless steel cover strip					

The OSP-E family supports highly adaptable multi-axis arrangements. A broad portfolio of adapter plates, profile mountings and intermediate drive shafts gives design engineers complete flexibility, simplifies mechanical design and speeds up the installation process.





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