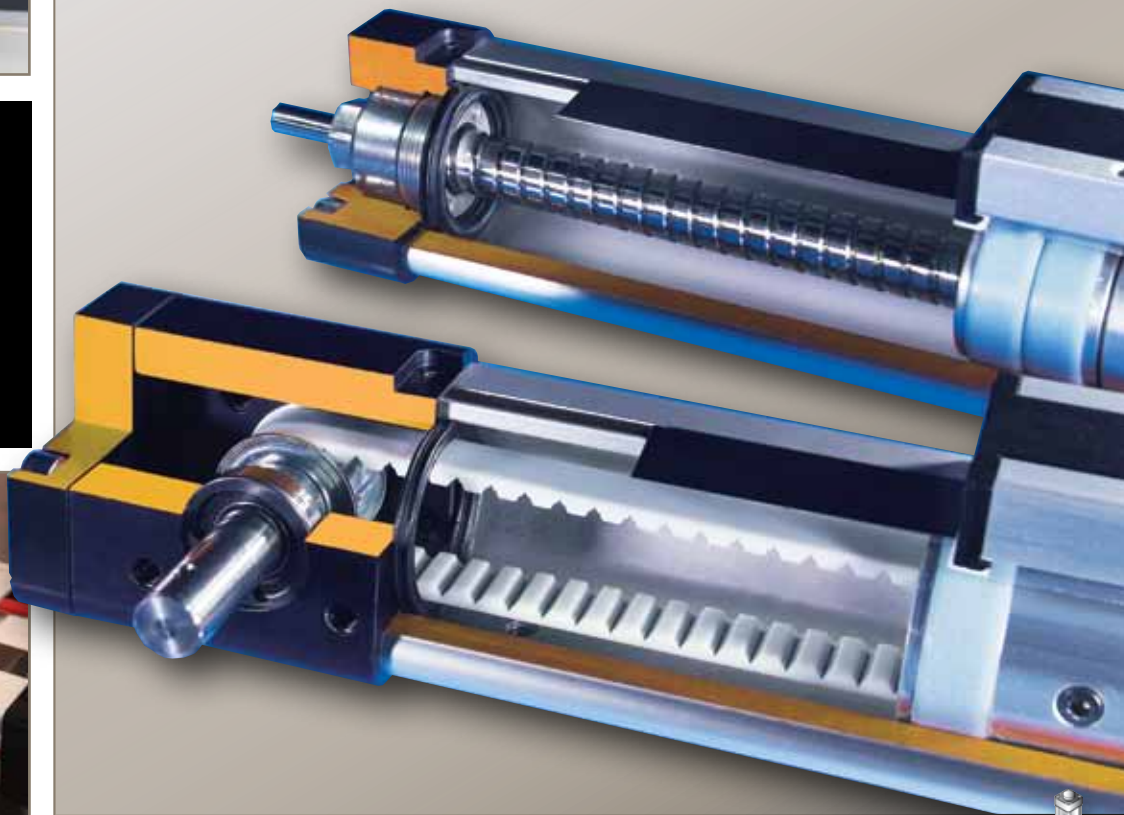
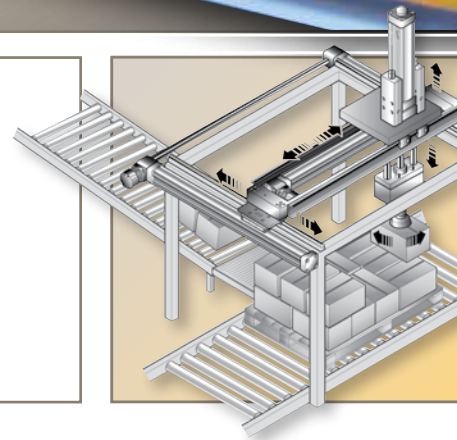


aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



OSPE Origa System Plus

Belt-Driven and Screw-Driven
Modular Electric Actuators



ENGINEERING YOUR SUCCESS.

OSPE Series Actuators

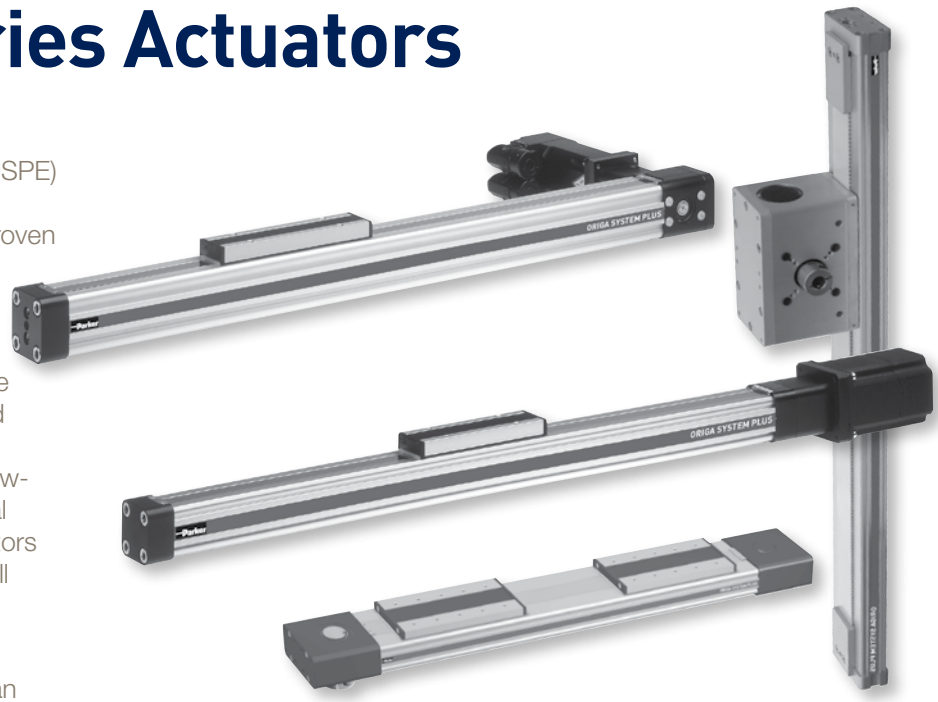
Parker Origa System Plus (OSPE) Series electric motor-driven actuator systems are field-proven worldwide.

OSPE Actuator systems are completely modular to accommodate a broad range of application installation and performance requirements. Offered in belt-driven or screw-driven, horizontal and vertical configurations, OSPE Actuators are a compact, easy to install solution for new and retrofit installations.

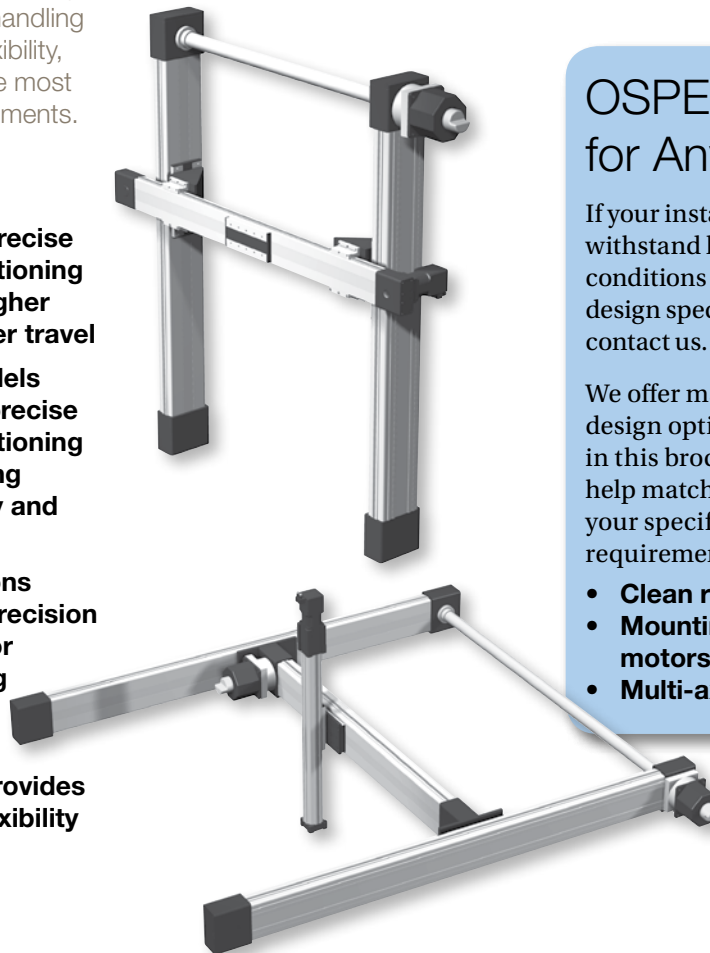
All OSPE Actuators feature an extruded aluminium profile with double dovetail slots on three sides for direct mounting of a variety of hardware options.

Developed for absolute reliability, high performance, easy handling and optimized design flexibility, OSPE Actuators meet the most critical application requirements.

- **Belt actuators are recommended for precise movement and positioning applications with higher speeds and/or longer travel**
- **Screw actuator models are best suited for precise movement and positioning applications requiring higher load capacity and positional accuracy**
- **External guide options provide additional precision and load capacity for the most demanding applications**
- **A wide range of mounting options provides great installation flexibility**



OSPE Series actuators are available in a range of belt-driven and screw-driven configurations that accommodate an extremely wide spectrum of load, speed and stroke requirements.



OSPE Solutions for Any Condition

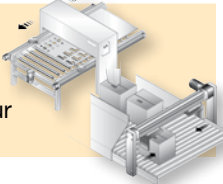
If your installation needs to withstand harsh environmental conditions or meet a critical design specification, please contact us.

We offer many non-standard design options not covered in this brochure that will help match the OSPE to your specific application requirements, including:

- **Clean room environments**
- **Mounting of customer motors**
- **Multi-axis systems**


Table of Contents

Applications and Selection Overview

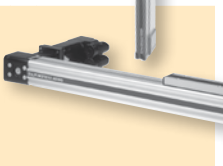
4 – 7	OSPE Actuators are used in a wide range of material handling and machine automation functions; choose the OSPE series with the features and performance best suited to your application requirements.	
-------	---	--

OSPE..BHD

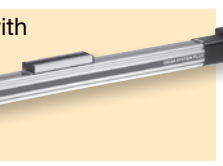
		
--	--	--

16 – 23	Vertical belt actuator with integrated ball bearing guide and drive head	
---------	--	--

OSPE..B

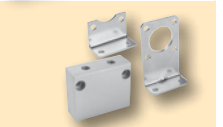
24 – 31	Belt actuator with internal guide; most versatile belt system with a wide variety of carriage and external guide rail options for extended performance capabilities	
---------	---	--

OSPE..SB/ST

32 – 39	Ball screw or trapezoidal screw actuators with Internal plain bearing guide; available with a wide variety of carriage and external guide rail options for extended performance capabilities	
---------	--	--

Options and Accessory Products

40 – 49	External Linear Guides – PowerSlide and Proline	
---------	---	--

50 – 53	Actuator Mounting Options – End Cap and Profile Mounts	
---------	--	--

If you don't find exactly what you are looking for in this brochure, please contact us for information on additional OSPE configurations, other suitable Parker products, and to discuss your requirements with an application engineer.



Need more information? Visit our Website...

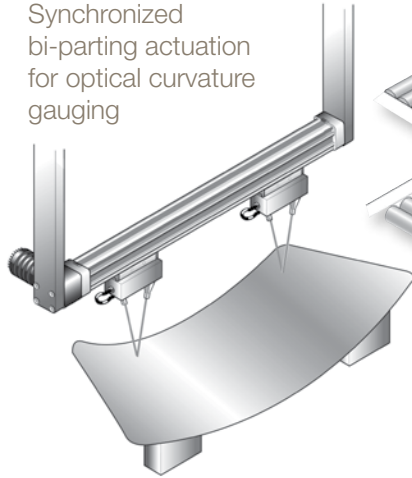
Complete up-to-date technical assistance can be found on the web at www.parkermotion.com. This includes all the latest information on current products, new product introductions, local assistance and support, plus a comprehensive "Engineering Reference Library" including: complete product catalog data, product selection Wizards, performance charts and graphs, engineering data and calculations, CAD drawings, local service and support directory, on-line purchasing, application stories and videos.

OSPE Series Actuators

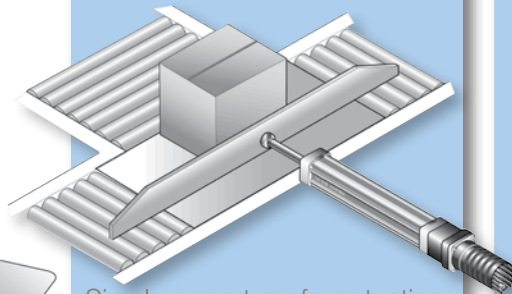
Versatile Performance for Diverse Application Capabilities

Measuring Systems

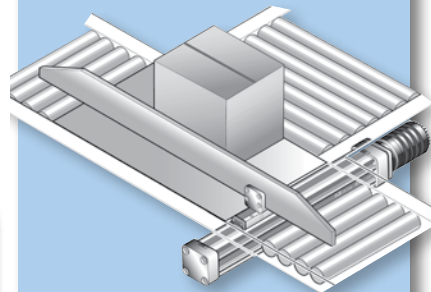
Synchronized bi-parting actuation for optical curvature gauging



Conveyors



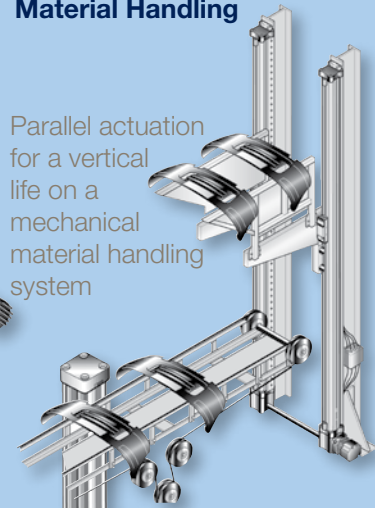
Simple cross-transfer actuation



Centering packages

Material Handling

Parallel actuation for a vertical lift on a mechanical material handling system

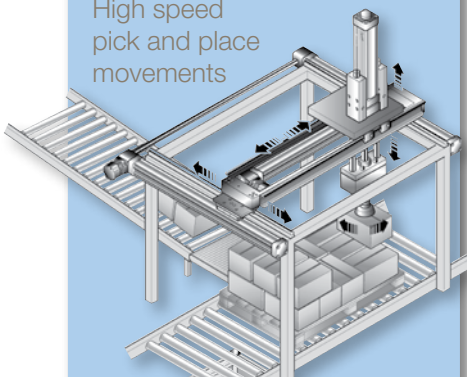


Self-contained mobile lift

Vertical and horizontal transfer movements

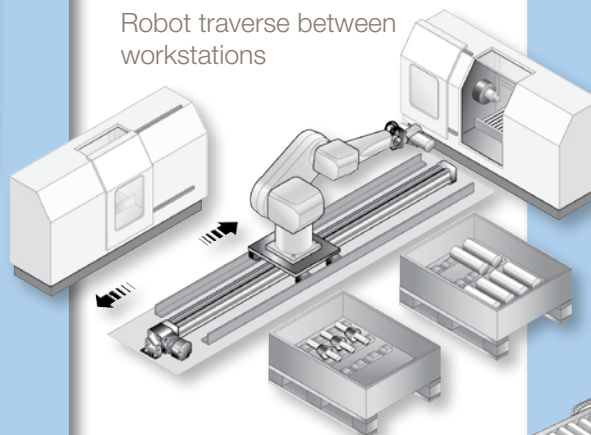
Automated Handling

High speed pick and place movements

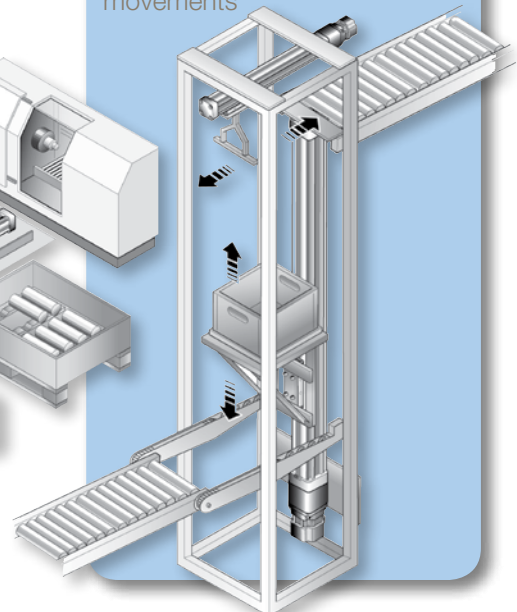


Robotics

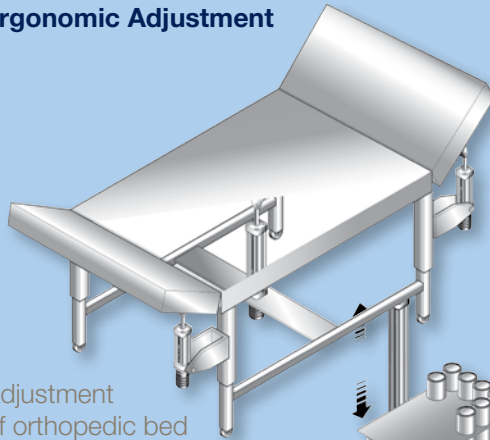
Robot traverse between workstations



Accurate 3-axis positioning for automated filling process



Ergonomic Adjustment

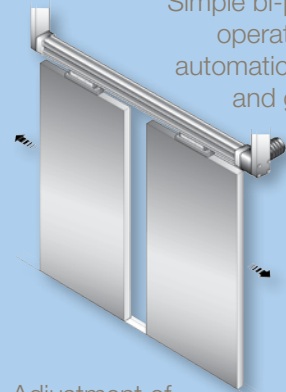


Adjustment of orthopedic bed

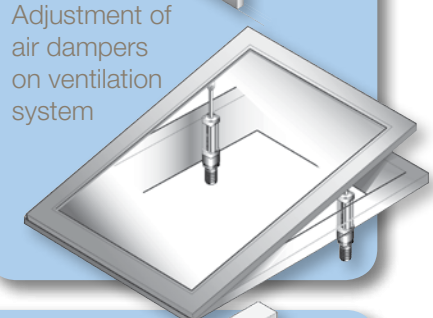


Work level adjustment of workstation

Opening and Closing Operations

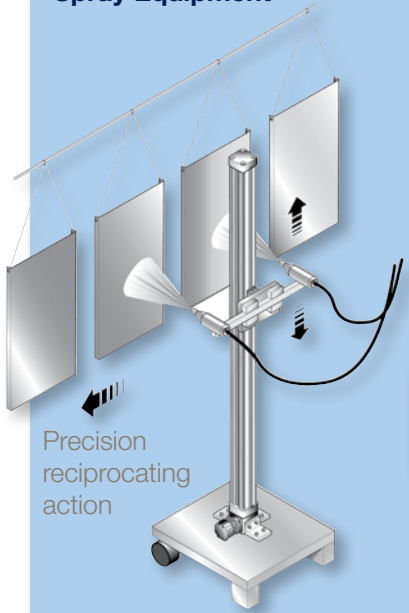


Simple bi-parting operation for automatic doors and guards

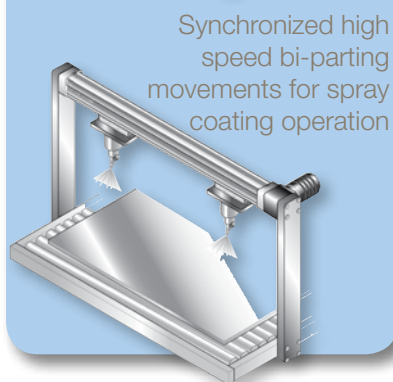


Adjustment of air dampers on ventilation system

Spray Equipment

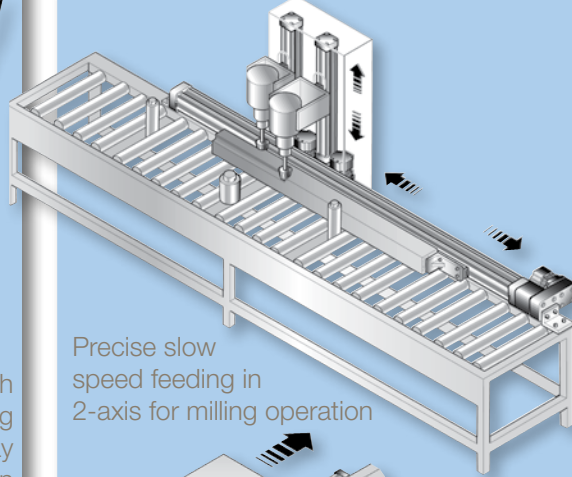


Precision reciprocating action

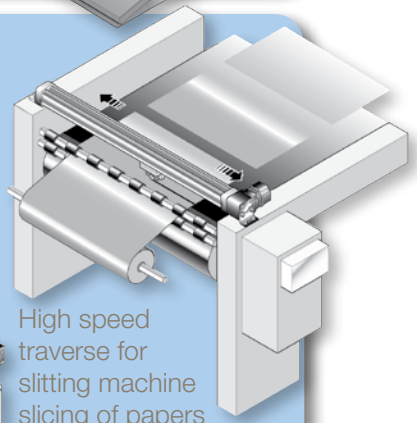


Synchronized high speed bi-parting movements for spray coating operation

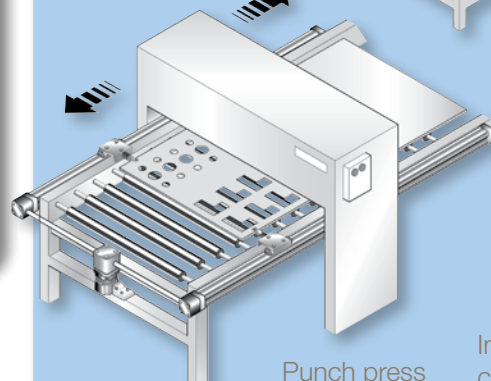
Machining Functions



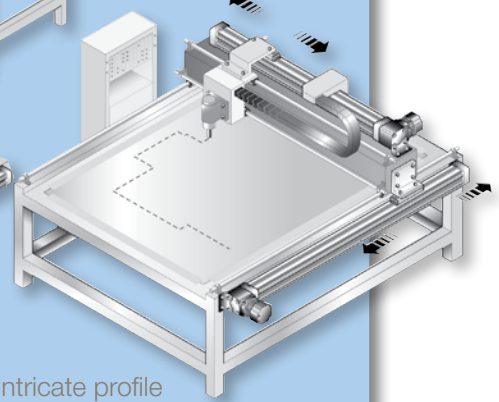
Precise slow speed feeding in 2-axis for milling operation



High speed traverse for slitting machine slicing of papers and textiles






Punch press accurate feeding and positioning



Intricate profile cutting movements of water jets and lasers

OSPE Series Actuators

Selection Overview At-a-Glance

Design Series		OSPE Belt-Driven Actuators					
		BHD (Heavy Duty) Page 8				BV (Vertical) Page 16	
		Bore Size	20	25	32	50	20
Thrust Force — N (lbs)		550 (124)	1070 (241)	1870 (420)	3120 (701)	650 (146)	1430 (321)
Maximum Linear Speed — m/s (in/s)		3 (118)	5 (197)* 10 (394)**	5 (197)* 10 (394)**	5 (197)* 10 (394)**	3 (118)	5 (197)
Maximum Acceleration — m/s ² (in/s ²)		50 (1969)	50 (1969)* 40 (1575)**	50 (1969)* 40 (1575)**	50 (1969)* 40 (1575)**	20 (787)	20 (787)
Repeatability — μm		±50	±50	±50	±50	±50	±50
Maximum Order Stroke Length ⁽¹⁾ — mm (in)		5760 (227)	5700 (225)	5600 (220)	5500 (216)	1000 (39)	1500 (59)
Ambient Temperature — °C		-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80
Protection Class		IP 54	IP 54	IP 54	IP 54	IP 20	IP 20
Maximum Load N (lbs)	Standard Carriage	1600 (360)	3000 (674)* 986 (222)**	10000 (2247)* 1348 (303)**	15000(3370)* 3704 (832)**	1600 (360)	3000 (674)
	With ProLine	—	—	—	—	—	—
	With PowerSlide	—	—	—	—	—	—
Xpress Motor and Gearbox Options ⁽²⁾	Xpress Motor Mounting Kit	—	—	—	—	—	—
	Xpress Gearbox Mounting Kit	•	•	•	•	•	•
	 Xpress Mounted Gearbox w/Motor Mount Adapter Kit	•	•	•	•	—	—
	 Xpress Mounted Motor	•	•	•	•	—	—
	 Xpress Mounted Gearbox and Motor	•	•	•	•	—	—
Standard Design Options	Standard Carriage	•	•	•	•	•	•
	Tandem Carriage	•	•	•	•	•	•
	Bi-parting Carriage	•	•	•	•	—	—
	Standard Motor Mount Kit	•	•	•	•	—	—
	ProLine and PowerSlide External Linear Guides	—	—	—	—	—	—
	End Cap Mounting	•	•	•	•	—	—
	Profile Mounting	•	•	•	•	—	—
	Clevis Mounted Carriage	—	—	—	—	—	—
	Inversion Mounted Carriage	—	—	—	—	—	—
	Magnetic Position Sensors	•	•	•	•	•	•

* Ball bearing guide models

** Roller guide models models

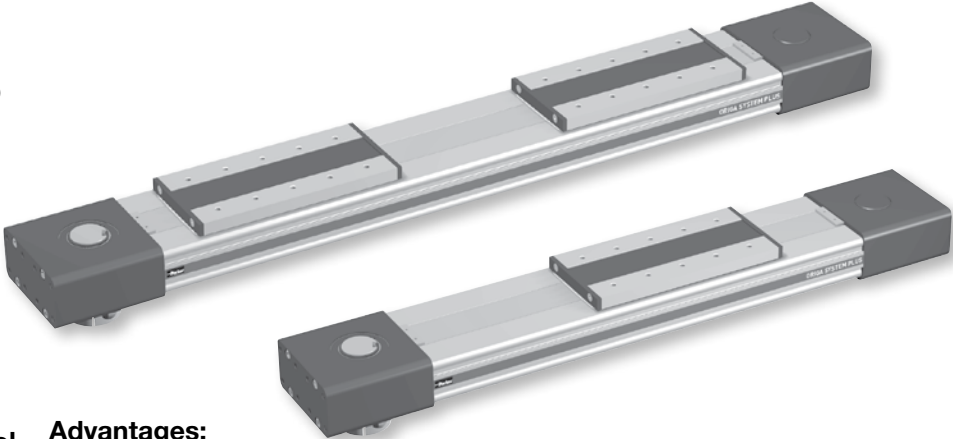
⁽¹⁾ Longer lengths available - consult factory

⁽²⁾ Xpress system options are pre-assembled configurations using performance matched Parker gearboxes and motors

OSPE..BHD Belt-Driven Actuators

OSPE..BHD Belt Actuators with Integrated Ball Bearing or Roller Guide are Ideal for High Speed, Heavy Duty Applications

The latest generation of high capacity actuators, the OSPE..BHD Series combines robustness, precision and high performance. The aesthetic design is easily integrated into any machine constructions by virtue of extremely adaptable mountings.

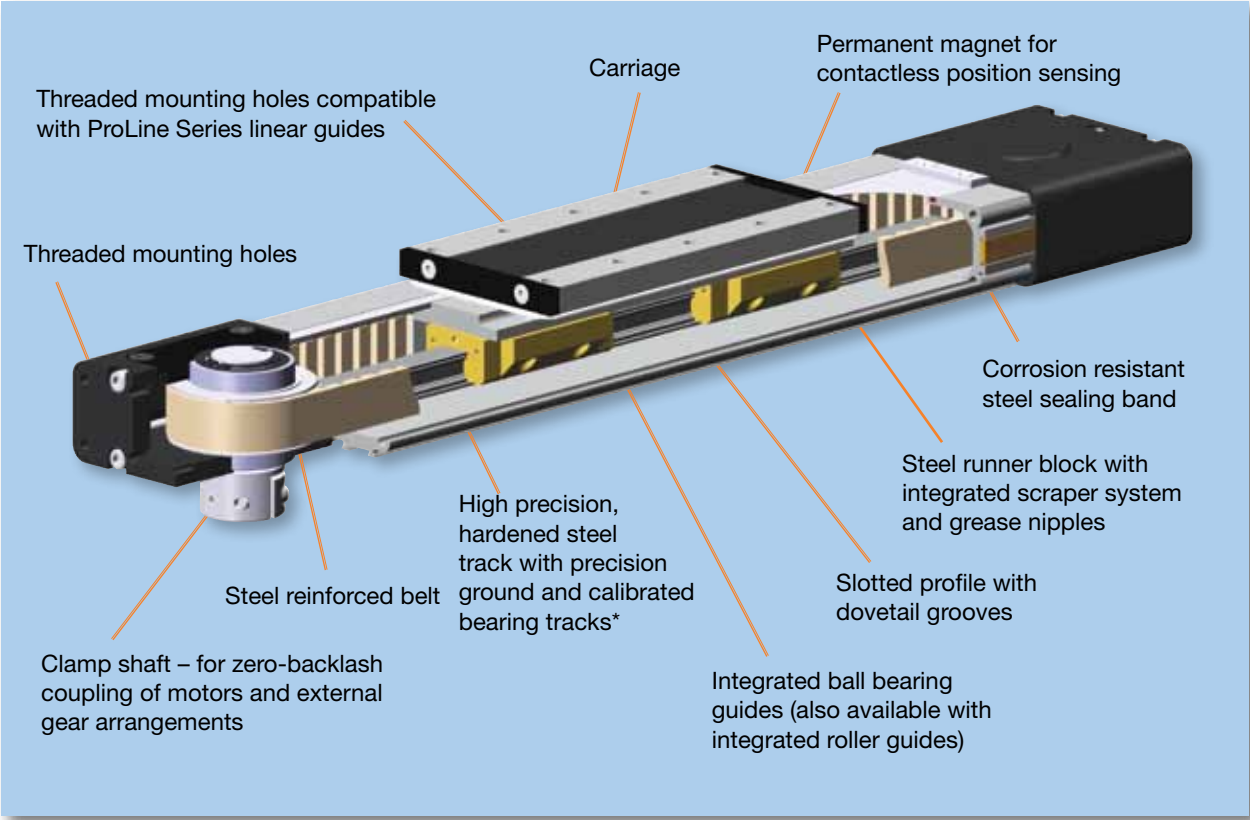


Features:

- **Integrated ball bearing guide or roller guide**
- **Complete motor and control packages**
- **Installation in any orientation**
- **Special options on request**
- **Rated IP 54**

Advantages:

- **Accurate path and position control**
- **High force output**
- **High speed operation**
- **High load capacity**
- **Easy installation**
- **Low maintenance**
- **Ideal for multi-axis applications**



Choose from a wide range of standard options for maximum design flexibility in a pre-assembled system.

Integrated Ball Bearing or Roller Bearing Guide Rail

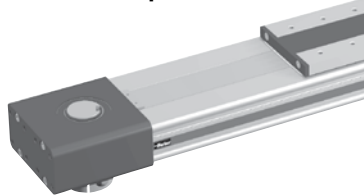


Integrated ball bearing guide actuators are equipped with high precision, hardened steel track with precision ground and calibrated bearing tracks.

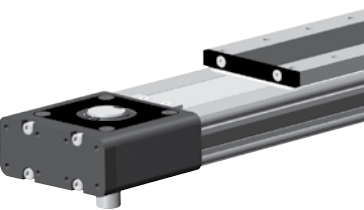


Integrated roller guide models utilize a precision ground aluminum track; roller guides on needle bearings provide smooth operation up to 10 m/s.

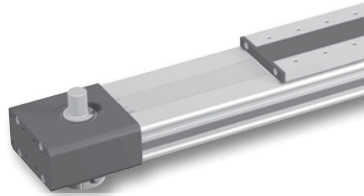
Drive Shaft Options



Drive shaft with clamp shaft

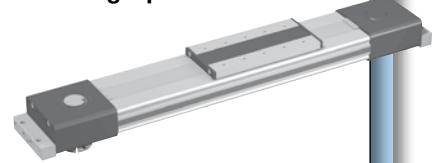


Drive shaft with plain shaft

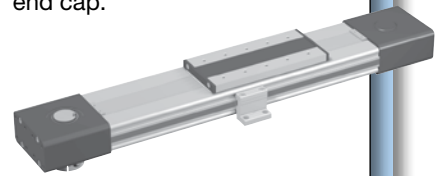


Drive shaft with both clamp and plain shaft

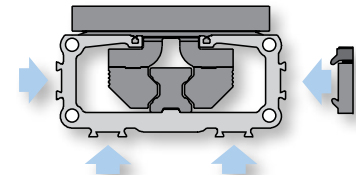
Mounting Options



End cap mounting allows the actuator to be anchored at the end cap.



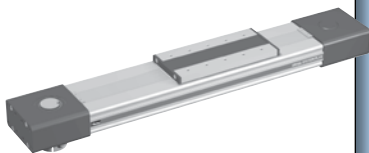
Profile mounting supporting long actuators or mounting the actuators on dovetail grooves.



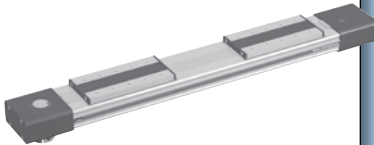
Mounting Rail Flexibility

The dovetailed mounting rails on the actuator housing expand its function into that of a universal system carrier. Modular system components are simply clamped on.

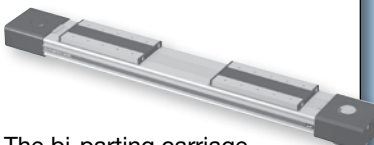
Carriage Options



Standard

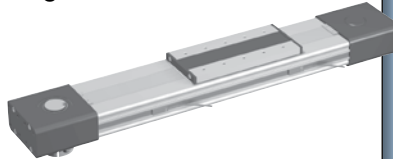


The tandem carriage is recommended for added support of high moment loads.



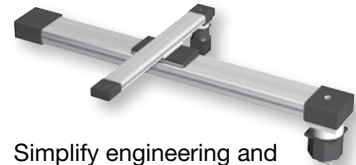
The bi-parting carriage is designed for perfectly synchronized bi-parting movements.

Magnetic Switches



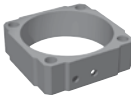
Magnetic switches contactless position sensing of end stop and intermediate carrier positions

Multi-axis Systems



Simplify engineering and installation with a wide range of adapter plates and intermediate drive shafts.

Options and Accessory Product Specifications



Refer to the Options and Accessories section for complete specifications on compatible motor mounts, couplings, mounting hardware, magnetic switches, etc.

OSPE..BHD Belt-Driven Actuators

Performance Data

Actuator Size			OSPE20BHD	OSPE25BHD	OSPE32BHD	OSPE50BHD			
Integrated Guide Rail*			B	B	R	B	R	B	R
Lead Constant	S_{lin}	mm	125	180	180	240	240	350	350
Linear Speed (Max)	v_{max}	m/s	3	5	10	5	10	5	10
Acceleration (Max)	a_{max}	m/s ²	50	50	40	50	40	50	40
Repeatability		μm	± 50	± 50	± 50	± 50	± 50	± 50	± 50
Order Stroke (Max)		mm	5,760	5,700	5,700	5,600	5,600	5,500	5,500
Thrust Force (Max)	F_{Amax}	N	550	1,070	1,070	1,870	1,870	3,120	3,120
		lbs	124	241	241	420	420	701	701
Torque on Drive Shaft (Max)	M_{Amax}	Nm	12	32	32	74	74	177	177
		in-lb	102	282	282	652	652	1,567	1,567
Torque — No Load	M_0	Nm	0.6	1.0	1.0	2.0	2.0	3.0	3.0
		in-lb	5	11	11	19	19	28	28
Load** (Max)	F_Y	N	1,600	2,000	986	5,000	1,348	12,000	3,704
		lbs	360	450	222	1,124	303	2,698	833
	F_Z	N	1,600	3,000	986	10,000	1,348	15,000	3,704
		lbs	360	674	222	2,248	303	3,372	833
Bending Moment Load** (Max)	M_X	Nm	21	50	11	120	19	180	87
		in-lb	186	443	97	1,062	168	1,593	770
	M_Y	Nm	150	500	64	1,000	115	1,800	365
		in-lb	1,328	4,425	566	8,851	1,018	15,931	3,231
	M_Z	Nm	150	500	64	1,400	115	2,500	365
		in-lb	1,328	4,425	566	12,391	1,018	22,127	3,231
Inertia									
@ Zero Stroke	J_0	kgmm ²	280	1,229	984	3,945	3,498	25,678	19,690
Per Meter of Stroke	J_{OS}	kgmm ² /m	41	227	227	496	496	1,738	1,738
Per 1 kg Moved Mass	J_m	kgmm ² /kg	413	821	821	1,459	1,459	3,103	3,103
Weight									
@ Zero Stroke	m_0	kg	2.0	2.8	2.8	6.2	5.8	18.2	17.9
Per Meter of Stroke	m_{OS}	kg/m	4.0	4.5	4.3	7.8	6.7	17.0	15.2
Moved Mass of Carriage	m_C	kg	0.8	1.5	1.0	2.6	1.9	7.8	4.7

* B = Ball Bearing Guide Rail; R = Roller Guide

** Load and bending moment based on 8000 km performance

Performance Data (cont.)

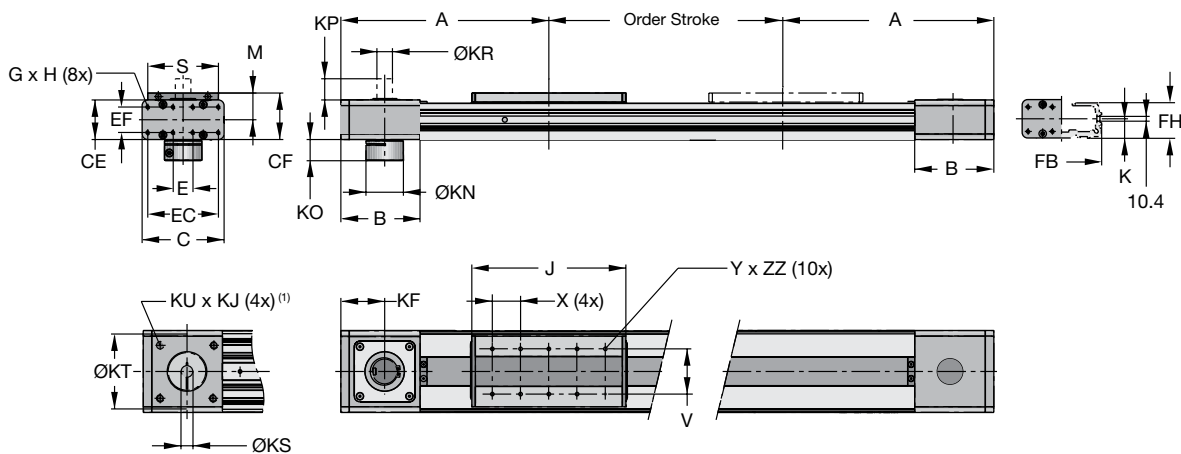
Actuator Size		OSPE20BHD	OSPE25BHD	OSPE32BHD		OSPE50BHD				
Integrated Guide Rail*		B	B	R	B	R	R			
Thrust Force (Max) FA	N @ Specified Speed	<1 m/s	550	1,070	1,070	1,870	1,870	3,120	3,120	
		<2 m/s	472	935	935	1,644	1,644	2,797	2,797	
		<3 m/s	422	831	831	1,487	1,487	2,689	2,689	
		<4 m/s	—	761	761	1,408	1,408	2,510	2,510	
		<5 m/s	—	726	726	1,304	1,304	2,366	2,366	
		<6 m/s	—	—	691	—	1,251	—	2,312	
		<7 m/s	—	—	621	—	1,173	—	2,205	
		<8 m/s	—	—	586	—	1,147	—	2,097	
		<9 m/s	—	—	552	—	1,094	—	2,025	
		<10 m/s	—	—	517	—	963	—	1,881	
	N @ Specified Stroke	<1 m	550	1,070	1,070	1,870	1,870	3,120	3,120	
		<2 m	523	1,070	1,070	1,870	1,870	3,120	3,120	
		<3 m	372	1,040	1,040	1,513	1,513	2,420	2,420	
		<4 m	322	831	831	1,173	1,173	1,881	1,881	
		<5 m	221	691	691	937	937	1,540	1,540	
		<6 m	—	—	552	—	780	—	1,307	
		<7 m	—	—	482	—	675	—	1,127	
	Torque on Drive Shaft (Max) MA	Nm @ Specified Speed	<1 m/s	12	32	32	74	74	177	177
			<2 m/s	10	28	28	65	65	159	159
<3 m/s			9	25	25	59	59	153	153	
<4 m/s			—	23	23	56	56	143	143	
<5 m/s			—	22	22	52	52	135	135	
<6 m/s			—	—	21	—	50	—	132	
<7 m/s			—	—	19	—	47	—	126	
<8 m/s			—	—	18	—	46	—	120	
<9 m/s			—	—	17	—	44	—	116	
<10 m/s			—	—	16	—	39	—	108	
Nm @ Specified Stroke		<1 m	12	32	32	74	74	177	177	
		<2 m	11	32	32	74	74	177	177	
		<3 m	8	31	31	60	60	138	138	
		<4 m	7	25	25	47	47	108	108	
	<5 m	5	21	21	38	38	89	89		
	<6 m	—	—	17	—	32	—	76		
<7 m	—	—	15	—	28	—	66			

* B = Ball Bearing Guide Rail; R = Roller Guide

OSPE..BHD Belt-Driven Actuators

Base Unit Dimensions — mm

Drive Shaft Versions: • Clamp Shaft • Plain Shaft • Clamp Shaft with Plain Shaft



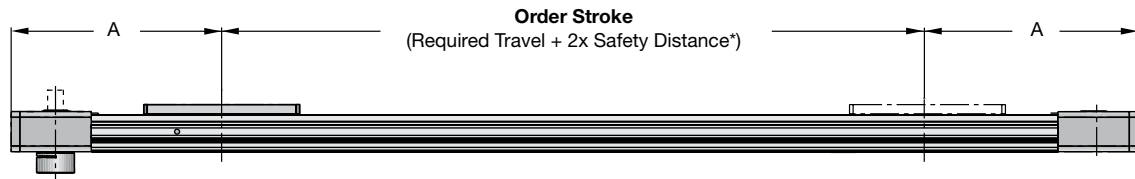
(1) Mounting holes for motor flange or external planetary gearbox. Holes are located on the opposite side to the carrier (motor mounting standard). They can also be located on the same side as the carrier (motor mounting 180° standard).

Actuator Size	OSPE20BHD	OSPE25BHD	OSPE32BHD	OSPE50BHD
A	185	218	262	347
B	77	88	112	147
C	73	93	116	175
E	18	25	28	18
G x H	M5 x 8.5	M5 x 10	M6 x 12	M6 x 12
J	155	178	218	288*
K	21	22	29	43
M	28	31	38	49
S	67	85	100	124
V	51	64	64	90
X	30	40	40	60
Y x ZZ	M5 x 8	M6 x 8	M6 x 10	M6 x 10
CE	38	42	56	87
CF	49	53	67	93
EC	60	79	100	158
EF	27	27	36	70
FB	73	92	116	164
FH	36	40	52	77
KF	43	49	62	80
KN	27	34	53	75
KO	18	22	30	41
KP	25	30	30	35
KR	12 ^{H7}	16 ^{H7}	22 ^{H7}	32 ^{H7}
KS	12 _{h7}	16 _{h7}	22 _{h7}	32 _{h7}
KT	66	82	106	144
KU x KJ	M6 x 8	M8 x 8	M10 x 12	M12 x 19
KC	14	18	25	35
KL	4	5	6	10

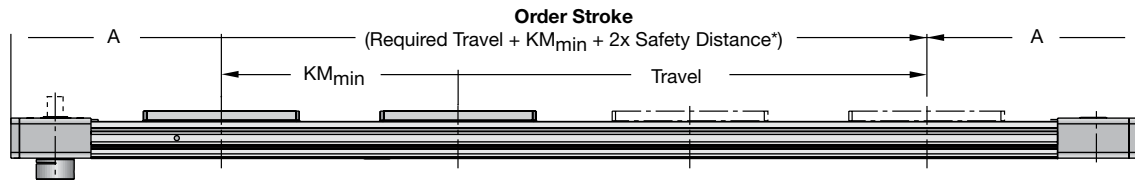
* For OSPE50BHD with roller guide: J = 263

Order Stroke Dimensions — mm

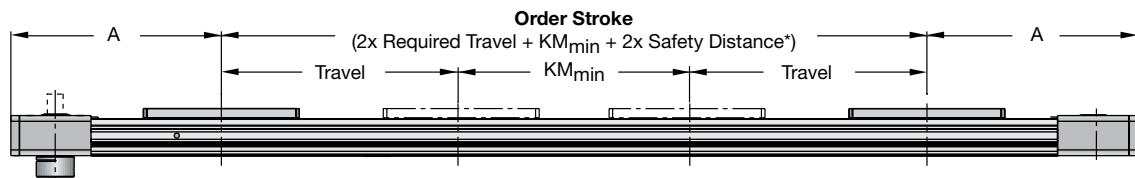
Standard Carriage



Tandem Carriage



Bi-Parting Carriage



Actuator Size	OSPE20BHD	OSPE25BHD	OSPE32BHD	OSPE50BHD
A	185	218	262	347
KM_{min}	180	210	250	354
KM_{rec}	220	250	300	400

* Note:

The mechanical end position must not be used as a mechanical end stop, thus an additional **Safety Distance** at both ends of travel must be incorporated into the Order Stroke.

The safety distance clearance should be equivalent to the linear movement of one revolution of the drive shaft, but at least 100 mm.

Also note that the use of an AC motor with a VFD normally requires a larger safety clearance than that required for servo systems. For further information and design assistance, please consult the factory.

OSPE..BHD Belt-Driven Actuators

Ordering Information

Select an order code from each of the numbered fields to create a complete OSPE..BHD model order number. Include hyphens and non-selective characters as shown in example below.

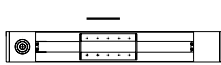
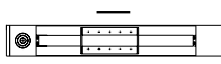
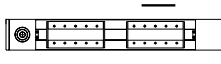
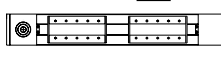
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫			
Order Number Example:	OSPE	25	-	6	0	0	02	-	00000	-	P	00	0	0	0

① Series	OSPE Origa System Plus Electromechanical
-----------------	---



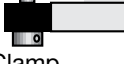



② Actuator Bore Size	
20	73 mm W x 49 mm H
25	93 mm W x 53 mm H
32	116 mm W x 67 mm H
50	175 mm W x 93 mm H

③ Drive Train	
5	Belt actuator with integrated roller guide
6	Belt actuator with integrated ball bearing guide

④ Carriage	
0	Standard
1	Tandem (two carriages for higher load capabilities)
2	Bi-Parting (two driven carriages for opposite movements)

⑤ Operating Direction	
0	 Standard & Tandem (Carriage moves away from drive end)
1	 Standard & Tandem (Carriage moves toward drive end)
2	 Bi-Parting* (Carriages move toward mid-actuator)
3	 Bi-Parting* (Carriages move away from mid-actuator)

* Requires Bi-Parting Carriage (order code 2 from ④ above)

⑥ Drive Shaft Configuration and Orientation	
02	 Clamp shaft (opposite carriage side) (see Clamp Shaft with Xpress Mounted Gearbox options below)
04	 Clamp shaft (same side as carriage) (see Clamp Shaft with Xpress Mounted Gearbox options below)
03	 Plain shaft* (opposite carriage side) with plain shaft for use with intermediate drive shaft for parallel actuator system
05	 Plain shaft* (same side as carriage) with plain shaft for use with intermediate drive shaft for parallel actuator system
0A	 Plain shaft idler unit** (opposite carriage side) for parallel actuator system
0B	 Plain shaft idler unit** (same side as carriage) for parallel actuator system

* Available with Xpress Gearbox Mounting Kit only (item ⑨ below)

** Only available with order code 00 "No gearbox mounting kit or motor option" (item ⑨)

⑥ Clamp Shaft with Xpress Mounted Gearbox*	
OSPE..HD Bore Size	25 32 50
K1 PV60TA-003 (gear ratio $i = 3$) ⁽¹⁾	•
K2 PV60TA-005 (gear ratio $i = 5$) ⁽¹⁾	•
K3 PV60TA-010 (gear ratio $i = 10$) ⁽¹⁾	•
K4 PV60TA-003 (gear ratio $i = 3$) ⁽²⁾	•
K5 PV60TA-005 (gear ratio $i = 5$) ⁽²⁾	•
K6 PV60TA-010 (gear ratio $i = 10$) ⁽²⁾	•
L1 PV90TA-003 (gear ratio $i = 3$) ⁽¹⁾	•
L2 PV90TA-005 (gear ratio $i = 5$) ⁽¹⁾	•
L3 PV90TA-010 (gear ratio $i = 10$) ⁽¹⁾	•
L4 PV90TA-003 (gear ratio $i = 3$) ⁽²⁾	•
L5 PV90TA-005 (gear ratio $i = 5$) ⁽²⁾	•
L6 PV90TA-010 (gear ratio $i = 10$) ⁽²⁾	•
M1 PV115TA-003 (gear ratio $i = 3$) ⁽¹⁾	•
M2 PV115TA-005 (gear ratio $i = 5$) ⁽²⁾	•
M3 PV115TA-010 (gear ratio $i = 10$) ⁽¹⁾	•
M4 PV115TA-003 (gear ratio $i = 3$) ⁽²⁾	•
M5 PV115TA-005 (gear ratio $i = 5$) ⁽²⁾	•
M6 PV115TA-010 (gear ratio $i = 10$) ⁽²⁾	•

* Use appropriate order code of Clamp Shaft with Xpress Mounted Gearbox in place of order code 02 or 04 above. Requires Xpress Mounted Motor, Xpress Motor Mounting Kit, or Standard Motor Mounting Kit (specified in item ⑨)

7 Stroke*

00000 5-digit input (in mm)

* Maximum standard stroke: OSPE20BHD = 05760 mm;
OSPE25HD = 05700 mm; OSPE32BHD = 05600 mm;
OSPE50BHD = 05500 mm
Longer strokes available upon request. Consult factory.

8 Hardware and Cover Strip

P Standard hardware with Parker gold (RAL 1028) cover strip

9 Gearbox/Motor Mounting Options:

Xpress Gearbox Mounting Kit*

		OSPE..BHD Bore Size		
		25	32	50
00	No gearbox mounting kit or motor option	•	•	•
C1	PV60TA	•		
C2	PV90TA		•	
C3	PV115TA			•

Size of Mounted Gearbox PV60 PV90 PV115

Xpress Mounted Motor with Mounted Gearbox**

K0	BE233FJ-KPSN	•		
K1	BE233FJ-KPSN with brake (CM233FJ-115027)	•		
K2	BE344LJ-KPSN	•	•	•
K3	BE344LJ-KPSB	•	•	•
M0	MPP0923D1E-KPSN		•	•
M1	MPP0923D1E-KPSB		•	•
M2	MPP1003D1E-KPSN		•	•
M3	MPP1003D1E-KPSB		•	•
M4	MPP1003R1E-KPSN		•	•
M5	MPP1003R1E-KPSB		•	•
M6	MPP1154B1E-KPSN			•
M7	MPP1154B1E-KPSB			•
M8	MPP1154P1E-KPSN			•
M9	MPP1154P1E-KPSB			•

Xpress Motor Mounting Kit with Mounted Gearbox**

AC	SM23xxx-N (not SM230xx-N)	•		
AD	BE23x, SM23xxx-L	•		
AE	BE34x	•	•	•
AL	MPP092, MPJ092		•	•
A4	MPP100, MPJ100		•	•
AK	MPP115, MPJ115			•

Standard Motor Mounting Kit with Mounted Gearbox**

B6		•	•	
AH		•	•	
B8		•		
AN		•	•	
AG		•	•	•
B9		•	•	
B0			•	
BB		•	•	
B4			•	•
AP			•	•
B3			•	
A3		•	•	•
AJ			•	•
BD				•

10 End Cap Mounting (see page xx)

0 No end cap mounting

A 1 pair CN

B 1 pair CO

11 Profile Mounting (see page xx)

0 No profile mounting

3 1 pair MAE

6 2 pair MAE

9 3 pair MAE

C 4 pair MAE

1 1 pair E1

4 2 pair E1

7 3 pair E1

A 4 pair E1

12 Magnetic Sensor Mounting (see page xx)

0 No sensor mounting

A 1 pc. N3NO-PUR-P: NPN, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GNSHX)

B 2 pc. N3NC-PUR-P: NPN, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GMSHX)

C 1 pc. N3NO-PUR-P (P8S-GNSHX) and 2 pc. N3NC-PUR-P (P8S-GMSHX)

D 1 pc. P3NO-PUR-P: PNP, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GPSHX)

E 2 pc. P3NC-PUR-P: PNP, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GQSHX)

F 1 pc. P3NO-PUR-P (P8S-GPSHX) and 2 pc. P3NC-PUR-P (P8S-GQSHX)

* See page xx for dimensions and additional information. Requires Clamp Drive Shaft (order code 02, 03, 04 or 05 from item 4)

** See page xx for dimensions and additional information. Requires Clamp Shaft with Xpress Mounted Gearbox (order code K1 thru M6 from item 9)

OSPE..BV Belt-Driven Actuators

OSPE..BV Vertical Belt Actuators with Integrated Ball Bearing Guide for Z-Axis Applications

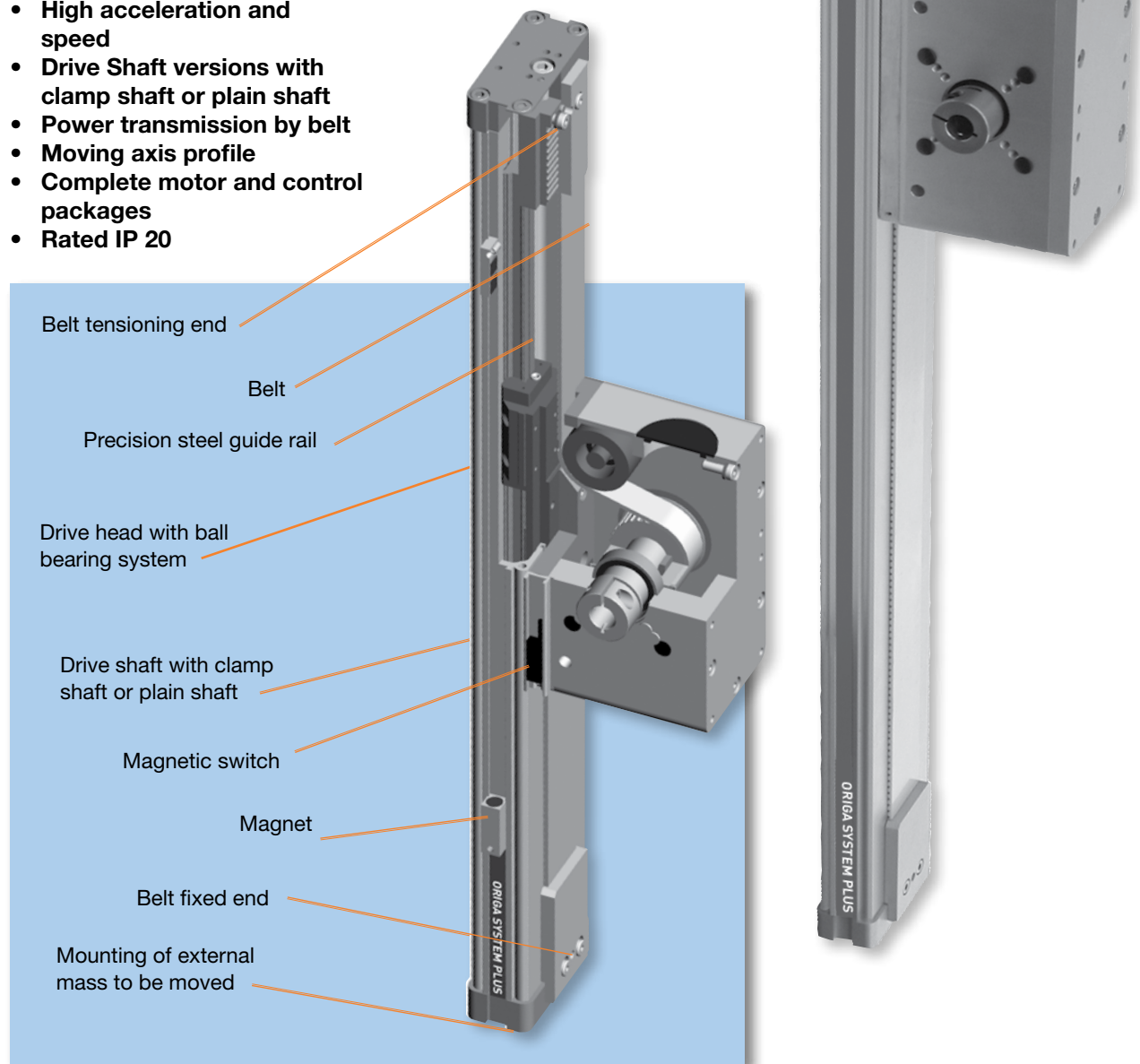
The OSPE..BV vertical belt actuator with integrated ball bearing guide is designed specifically for lifting movements in the Z-axis. The especially low vibration OSPE..BV vertical actuator in combination with the heavy duty series OSPE..BHD meets the highest demands in portal and handling applications.

Features:

- High acceleration and speed
- Drive Shaft versions with clamp shaft or plain shaft
- Power transmission by belt
- Moving axis profile
- Complete motor and control packages
- Rated IP 20

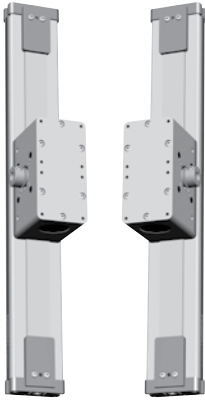
Advantages:

- Fixed actuator head for low moving mass
- Integrated ball bearing guide for high bending moments
- Magnetic switch set for contactless position sensing
- Easy to install
- Low maintenance



Choose from a wide range of standard options for maximum design flexibility in a pre-assembled system.

Actuator Head Orientation

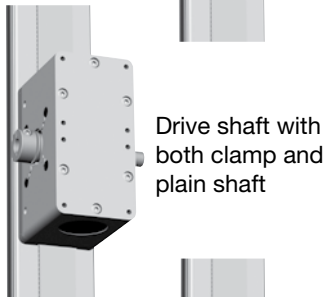


All OSPE..BV actuator heads are standard with an integrated ball bearing guide and are available with either left or right side gearbox/motor mounting.

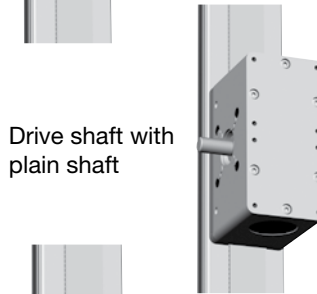
Drive Shaft Options



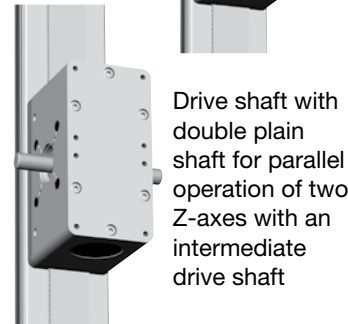
Drive shaft with clamp shaft



Drive shaft with both clamp and plain shaft

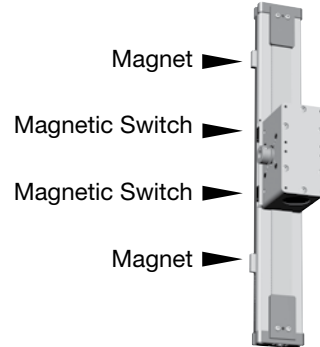


Drive shaft with plain shaft



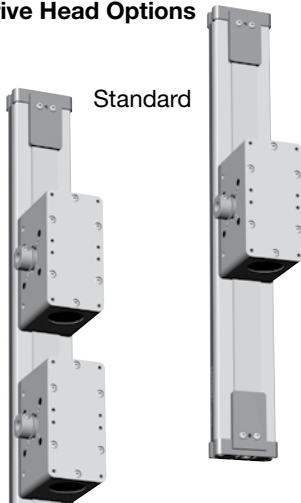
Drive shaft with double plain shaft for parallel operation of two Z-axes with an intermediate drive shaft

Magnetic Switches Set



Magnetic switches with connector, mounting rail and magnets for contactless sensing of the end positions. Cable (suitable for cable chain) can be ordered separately in 5 m, 10 m or 15 m length.

Drive Head Options



Standard

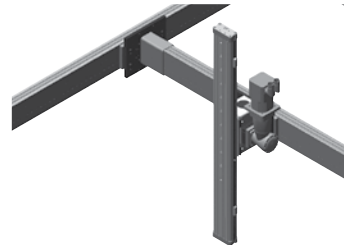
Tandem with additional actuator head and two additional carriers for higher bending moments.

Options and Accessory Product Specifications



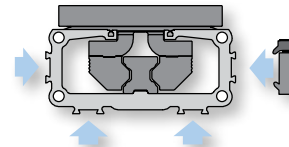
Refer to the Options and Accessories section for complete specifications on compatible motor mounts, couplings, mounting hardware, magnetic switches, etc.

Multi-axis Systems



Simplify engineering and installation with a wide range of adapter plates and intermediate drive shafts.

Mounting Rail Flexibility



The dovetailed mounting rails on the actuator housing expand its function into that of a universal system carrier. Modular system components are simply clamped on.

OSPE..BV Belt-Driven Actuators

Performance Data

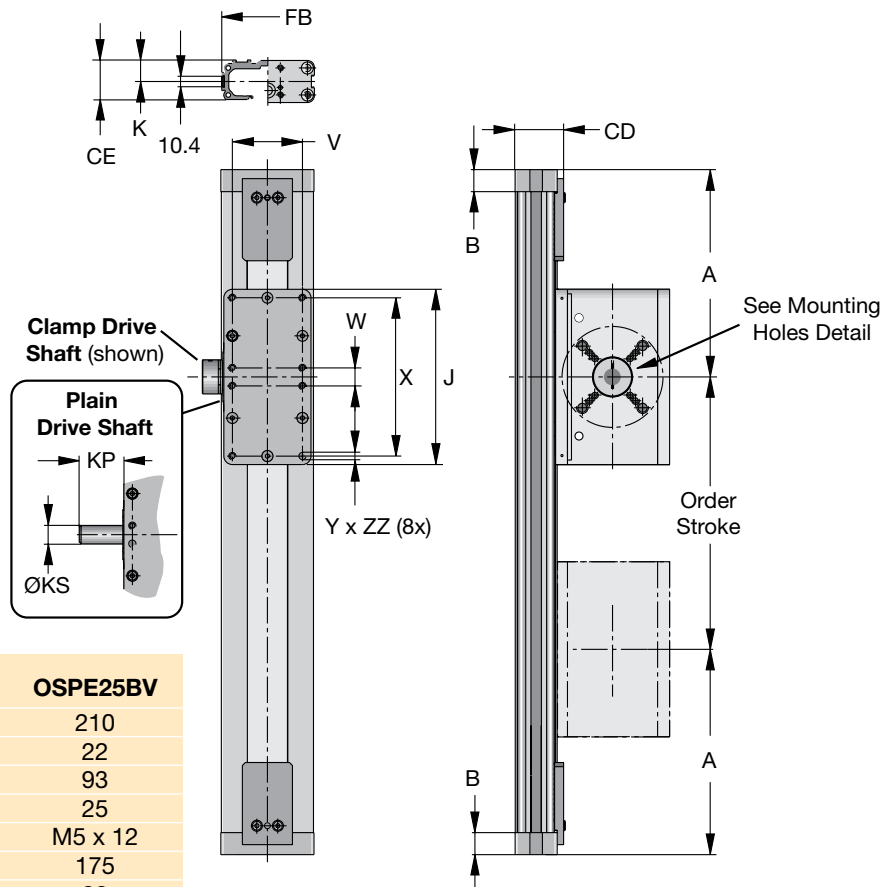
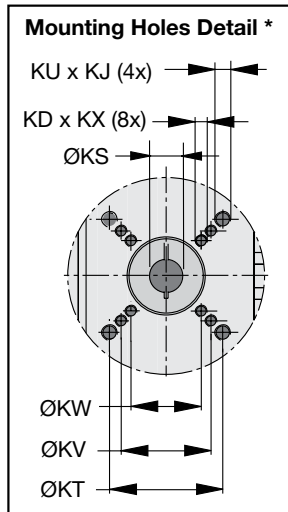
Actuator Size			OSPE20BV	OSPE25BV
Lead Constant	S_{lin}	mm	108	160
Linear Speed (Max)	V_{max}	m/s	3	5
Acceleration (Max)	a_{max}	m/s ²	20	20
Repeatability		μm	± 50	± 50
Order Stroke (Max)		mm	1,000	1,500
Recommended Permissible Mass (Max)		kg	10	20
Thrust Force (Max)	F_{Amax}	N	650	1,430
		lbs	146	321
Torque on Drive Shaft (Max)	M_{Amax}	Nm	12	38
		in-lb	104	333
Torque — No Load	M_0	Nm	0.6	1.2
		in-lb	5	11
Load* (Max)	F_Y	N	1,600	2,000
		lbs	360	450
	F_Z	N	1,600	3,000
		lbs	360	674
Bending Moment Load* (Max)	M_X	Nm	20	50
		in-lb	177	443
	M_Y	Nm	100	200
		in-lb	885	1,770
M_Z	Nm	100	200	
	in-lb	885	1,770	
Thrust Force (Max) FA	N @ Specified Speed	<1 m/s	650	1,430
		<2 m/s	605	1,288
		<3 m/s	450	1,170
		<4 m/s	—	1,052
		<5 m/s	—	1,013
	N @ Specified Stroke	<1 m	650	1,430
Torque (Max) MA	Nm @ Specified Speed	<1 m/s	12	38
		<2 m/s	11	34
		<3 m/s	8	31
		<4 m/s	—	28
		<5 m/s	—	27
	Nm @ Specified Stroke	<1 m	12	38
		<2 m	11	36
Inertia				
@ Zero Stroke	J_0	kgmm ²	486	1,695
Per Meter of Stroke	J_{OS}	kgmm ² /m	1,144	2,668
Per 1 kg Moved Mass	J_m	kgmm ² /kg	296	649
Weight				
@ Zero Stroke	m_0	kg	2.8	6.2
Per Meter of Stroke	m_{OS}	kg/m	4.5	7.8
Moved Mass of Carriage	m_C	kg	1.5	2.6

* Load and bending moment based on 8000 km performance

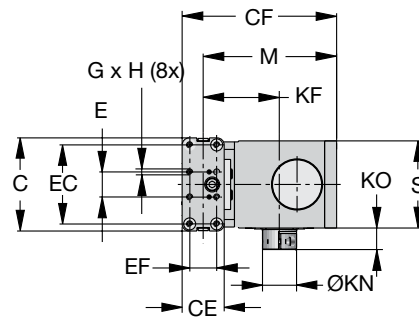
Base Unit Dimensions — mm

Drive Shaft Versions:

- Clamp shaft • Plain Shaft • Clamp Shaft with Plain Shaft • Double Plain Shaft



Actuator Size	OSPE20BV	OSPE25BV
A	148	210
B	22	22
C	93	93
E	25	25
G x H	M5 x 12	M5 x 12
J	139	175
K	21	22
M	102	134
S	68	87
V	51	70
W	40	18
X	120	158
Y x ZZ	M6 x 10	M6 x 10
CD	40	49
CE	34	42
CF	123	155
EC	59	72
EF	21	27
FB	73	92
FH	36	40
KD x KX	—	M6 x 16
KF	61	76
KN	27	34
KO	16	22
KP	29	32
KS	12 ^{H7}	16 ^{H7}
KT	47	58
KU x KJ	M6 x 10	M8 x 16
KV	36	46
KW	—	36

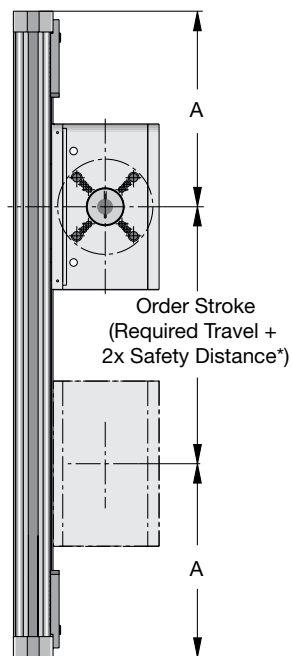


* Mounting holes for motor flange or external planetary gearbox. Drive shaft and motor mounting holes can be located on either side of carriage (see page xx for ordering information on drive shaft options).

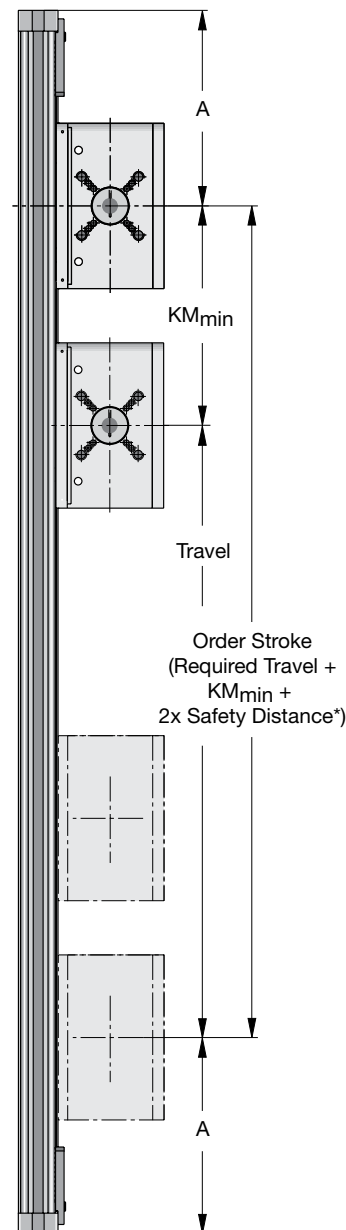
OSPE..BV Belt-Driven Actuators

Order Stroke Dimensions — mm

Standard Drive Head



Tandem Drive Head



Actuator Size	OSPE20BV	OSPE25BV
A	148	210
KM _{min}	155	225
KM _{rec}	225	275

*** Note:**

The mechanical end position must not be used as a mechanical end stop, thus an additional **Safety Distance** at both ends of travel must be incorporated into the Order Stroke.

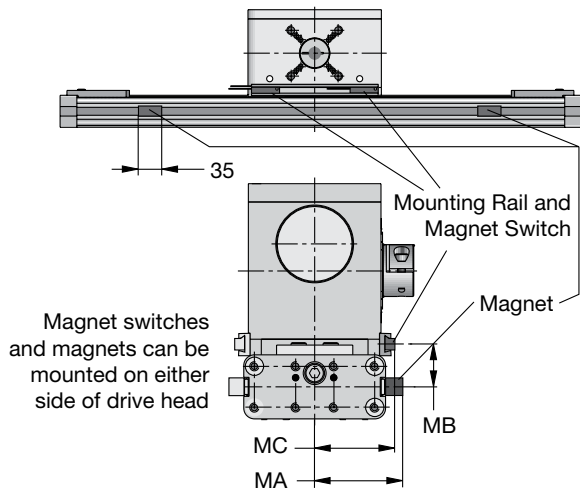
The safety distance clearance should be equivalent to the linear movement of one revolution of the drive shaft, but at least 100 mm.

Also note that the use of an AC motor with a VFD normally requires a larger safety clearance than that required for servo systems. For further information and design assistance, please consult the factory.

Magnetic Switch Dimensions — mm

The magnetic switch set provides contactless sensing of the end positions. The mounting rail and magnetic switches are mounted on the actuator drive head and the magnets are mounted in the dovetail slot on the profile.

The magnetic switches are the RST-S type (connector version). Connecting cable suitable for cable chain is recommended.



Dimension (mm)

	OSPE20BV	OSPE25BV
MA	46.0	56.0
MB	23.7	26.0
MC	42.3	51.0

OSPE..BV Belt-Driven Actuators

Ordering Information

Select an order code from each of the numbered fields to create a complete OSPE..BV model order number. Include hyphens and non-selective characters as shown in example below.

	①	②	③	④		⑤	⑥	⑦	⑧		⑨				
Order Number Example:	OSPE	20	-	7	0	0	02	-	00000	-	P	00	0	0	0

① **Series**
OSPE Origa System Plus Electromechanical

② **Bore Size**
20 73 mm W x 123.3 mm H
25 93 mm W x 154.5 mm H

③ **Drive Train**
7 Vertical Belt Actuator w/Integrated Ball Bearing Guide

④ **Carriage**
0 Standard
1 Tandem (two drive heads for higher actuator stiffness)

⑤ **Drive Shaft Configuration and Orientation ⁽¹⁾**

02 Clamp		Clamp shaft (left) (see Clamp Shaft with Xpress Mounted Gearbox options at right)
04 Clamp		Clamp shaft (right) (see Clamp Shaft with Xpress Mounted Gearbox options at right)
03 Clamp Plain		Clamp shaft (left) with plain shaft for use with intermediate drive shaft for parallel actuator system**
05 Plain Clamp		Clamp shaft (right) with plain shaft for use with intermediate drive shaft for parallel actuator system**
0A Plain		Plain shaft idler unit*** (left) for parallel actuator system
0B Plain		Plain shaft idler unit***(right) for parallel actuator system

** Available with Xpress Gearbox Mounting Kit only (item ⑤ below)
 *** Only available with order code 00 "No gearbox mounting kit or motor option" (item ⑤)

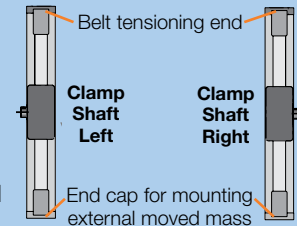
⑥ **Order Stroke***
00000 5-digit input (in mm)*

* Maximum standard stroke: OSPE20BV = 1000 mm; OSPE25BV = 1500 mm. For example, to OSPE..V with maximum order stroke, specify 01500. Longer strokes available upon request. Consult factory.

⑦ **Hardware and Cover Strip**
P Standard hardware with Parker gold (RAL 1028) cover strip

(1) Drive Shaft Orientation

Drive shaft orientation is determined by viewing the actuator facing the drive head with the belt tensioning end facing up and the end cap for mounting external moved mass facing down.



Note:
 Special drive shafts are available – consult factory.

⑤ Clamp Shaft with Xpress Mounted Gearbox *

	OSPE..V Bore Size	20	25
K1 PV60TA-003 (gear ratio i = 3) ⁽¹⁾		•	
K2 PV60TA-005 (gear ratio i = 5) ⁽¹⁾		•	
K3 PV60TA-010 (gear ratio i = 10) ⁽¹⁾		•	
K4 PV60TA-003 (gear ratio i = 3) ⁽²⁾		•	
K5 PV60TA-005 (gear ratio i = 5) ⁽²⁾		•	
K6 PV60TA-010 (gear ratio i = 10) ⁽²⁾		•	

* Use appropriate order code of Clamp Shaft with Xpress Mounted Gearbox in place of order code 02 or 04. Requires Xpress Mounted Motor, Xpress Motor Mounting Kit, or Standard Motor Mounting Kit (specified in item ⑤)

⑧ **Gearbox/Motor Mounting Options:**

Xpress Gearbox Mounting Kit*			
		OSPE..BV Bore Size	20 25
00	No gearbox mounting kit or motor option	•	•
C1	PV40TA	•	
C2	PV60TA		•
Size of Mounted Gearbox		PV40	PV60

Xpress Mounted Motor with Mounted Gearbox**

K0	BE233FJ-KPSN	•
K1	BE233FJ-KPSN with brake (CM233FJ-115027)	•
K2	BE344LJ-KPSN	•
K3	BE344LJ-KPSB	•

Xpress Motor Mounting Kit with Mounted Gearbox**

AC	SM23xxx-N (not SM230xx-N)	•
AD	BE23x, SM23xxx-L	•
AE	BE34x	•

Standard Motor Mounting Kit with Mounted Gearbox**

B6		•
AH		•
B8		•
AN		•
AG		•
B9		•
B0		
BB		•
B4		
AP		
B3		
A3		•
AJ		
BD		

* See page xx for dimensions and additional information.
Requires Clamp Drive Shaft (order code 02, 03, 04 or 05 from item ⑤)

** See page xx for dimensions and additional information.
Requires Clamp Shaft with Xpress Mounted Gearbox (order code K1 thru K6 from item ⑤)

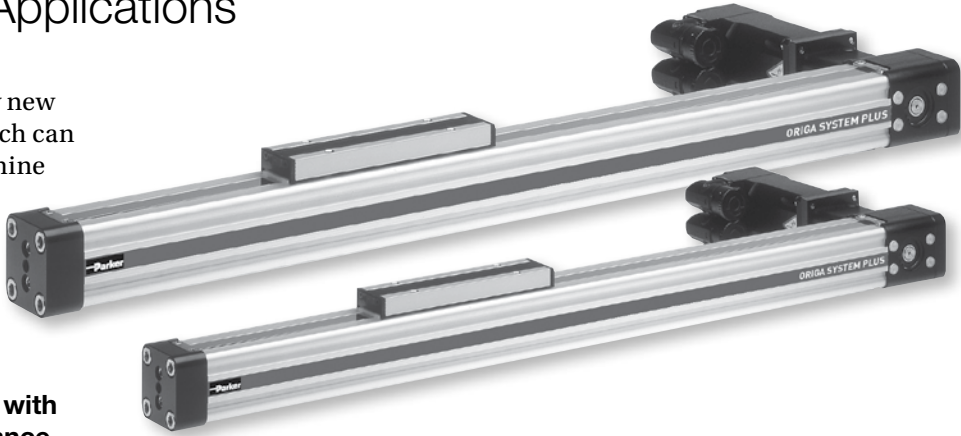
⑨ **Magnetic Sensor Mounting (see page xx)**

0	No sensor mounting
B	2 pc. N3NC-PUR-P w/mounting rail and magnet: NPN, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GMSHX)
E	2 pc. P3NC-PUR-P w/mounting rail and magnet: PNP, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GQSHX)

OSPE..B Belt-Driven Actuators

OSPE..B Belt Actuators with Internal Plain Bearing Guide for Point-to-Point Applications

The OSPE..B is a completely new generation of actuators which can be integrated into any machine layout neatly and simply.

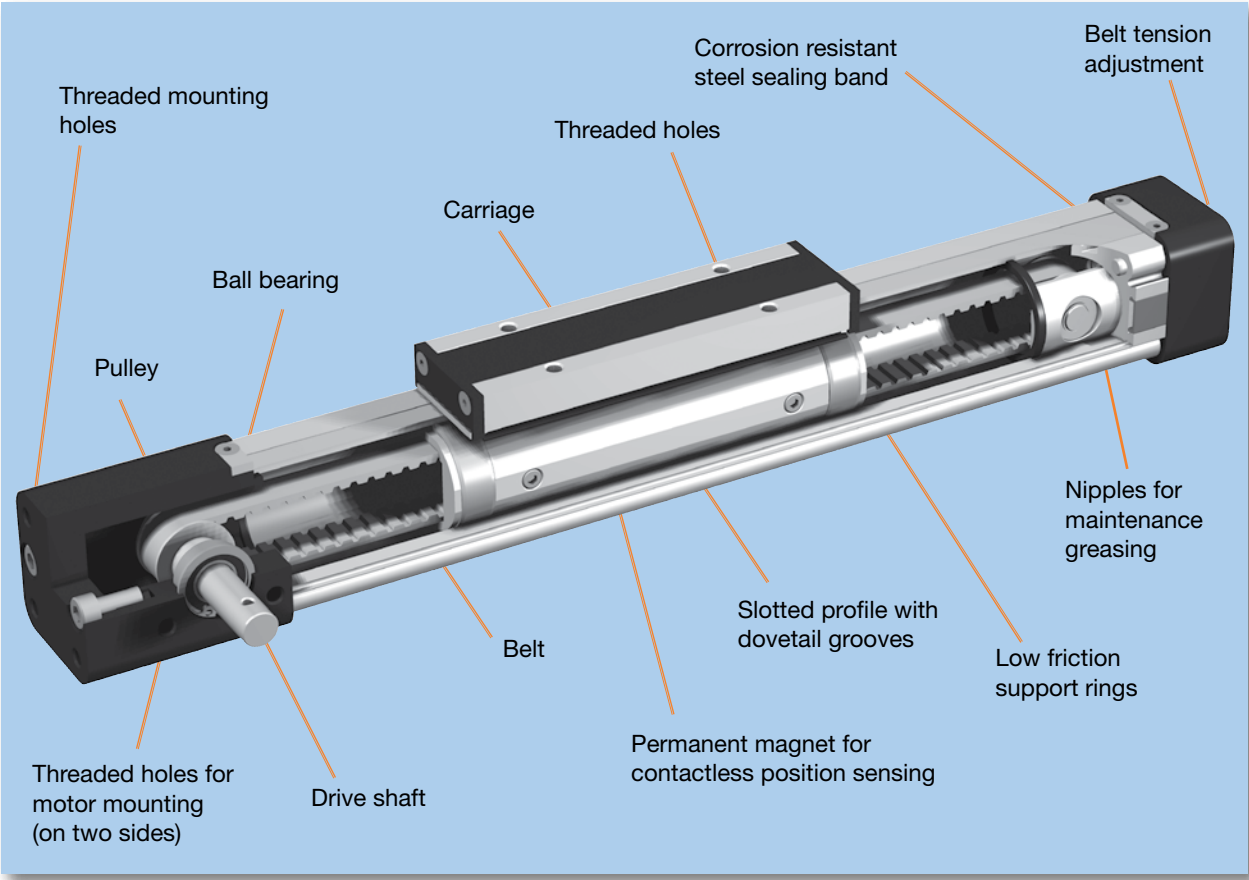


Features:

- Integrated drive and guidance system
- Tandem configuration with increased carrier distance for higher moment supports
- Long available strokes
- Complete motor and control packages
- Diverse range of accessories and mountings
- Bi-parting and special options available
- Rated IP 54

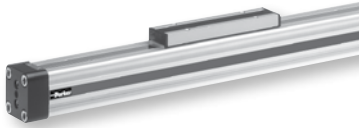
Advantages:

- Precise path and position control
- High speed operation
- Easy installation
- Low maintenance
- Ideal for precise point-to-point applications

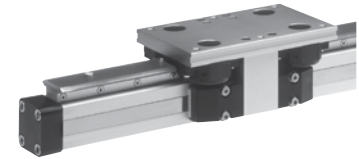


Choose from a wide range of standard options for maximum design flexibility in a pre-assembled system.

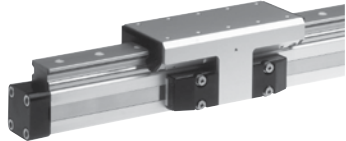
Carriage Guides



Standard

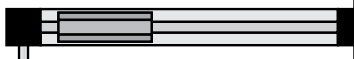


The PowerSlide linear guide roller bearings provide precision guidance for smooth travel and high dynamic or static loads. Refer to PowerSlide section, page xx for complete specifications



ProLine offers a compact aluminium roller guide for high loads and velocities. Refer to ProLine section, page xx for complete specifications

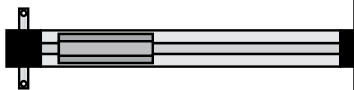
Drive Shaft Options



Plain drive shaft left



Plain drive shaft left

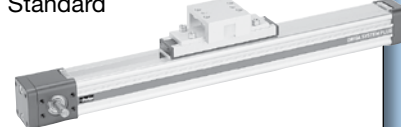


Double plain drive shafts for driving two actuators in parallel

Carriage Mounting



Standard



Clevis mounted carriage provides tolerance and parallelism compensation to drive external linear guides



Inversion mounted carriage transfers the driving force to the opposite side (e.g. for dirty environments)

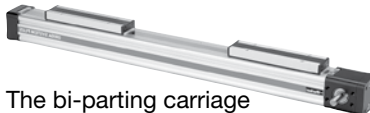
Carriage Options



Standard



The tandem carriage is recommended for added support of high moment loads.



The bi-parting carriage is designed for perfectly synchronized bi-parting movements.

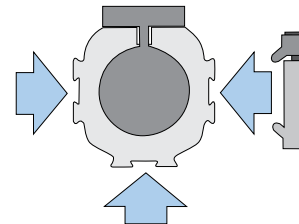
Mounting Options



End cap mounting allows the actuator to be anchored at the end cap.



Profile mounting supporting long actuators or mounting the actuators on dovetail grooves.



Mounting Rail Flexibility

The dovetailed mounting rails on the actuator housing expand its function into that of a universal system carrier. Modular system components are simply clamped on.

Multi-axis Systems

Simplify engineering and installation with a wide range of adapter plates and intermediate drive shafts.

Options and Accessory Product Specifications



Refer to the Options and Accessories section for complete specifications on compatible external linear guides, motor mounts, couplings, mounting hardware, magnetic switches.

OSPE..B Belt-Driven Actuators

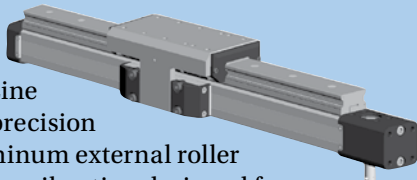
Performance Data – with Standard Carriage

Actuator Size			OSPE25B	OSPE32B	OSPE50B
Lead Constant	S_{lin}	mm	60	60	100
Linear Speed (Max)	v_{max}	m/s	2	3	5
Acceleration (Max)	a_{max}	m/s ²	10	10	10
Repeatability		μm	± 50	± 50	± 50
Order Stroke (Max)		mm	3,000	5,000	5,000
Thrust Force (Max)	F_{Amax}	N	50	150	425
		lbs	11	34	96
Torque on Drive Shaft (Max)	M_{Amax}	Nm	0.9	1.9	7.4
		in-lb	8	17	65
Torque – No Load	M_0	Nm	0.4	0.5	0.6
		in-lb	4	4	5
Load* (Max)	F_Y	N	160	300	850
		lbs	36	67	191
	F_Z	N	160	300	850
		lbs	36	67	191
Bending Moment Load* (Max)	M_X	Nm	2	8	16
		in-lb	18	71	142
	M_Y	Nm	12	25	80
		in-lb	106	221	708
	M_Z	Nm	8	16	32
		in-lb	71	142	283
Thrust Force (Max) FA	N @ Specified Speed	<1 m/s	50	150	425
		<2 m/s	50	147	425
		<3 m/s	–	136	425
		<4 m/s	–	–	425
		<5 m/s	–	–	425
	N @ Specified Stroke	<1 m	50	150	425
		<2 m	50	147	425
		<3 m	50	147	425
		<4 m	–	147	425
		<5 m	–	136	339
Torque (Max) M	Nm @ Specified Speed	<1 m/s	0.9	1.9	7.4
		<2 m/s	0.9	1.9	7.4
		<3 m/s	–	1.8	7.4
		<4 m/s	–	–	7.4
		<5 m/s	–	–	7.4
	Nm @ Specified Stroke	<1 m	0.9	1.9	7.4
		<2 m	0.9	1.9	7.4
		<3 m	0.9	1.9	7.4
		<4 m	–	1.9	7.4
		<5 m	–	1.8	6.0
Inertia					
@ Zero Stroke	J_0	kgmm ²	25	43	312
Per Meter of Stroke	J_{OS}	kgmm ² /m	6.6	10.0	45.0
Per 1 kg Moved Mass	J_m	kgmm ² /kg	91	91	253
Weight					
@ Zero Stroke	m_0	kg	0.7	1.5	4.2
Per Meter of Stroke	m_{OS}	kg/m	1.6	3.2	6.2
Moved Mass of Carriage	m_C	kg	0.2	0.4	1.0

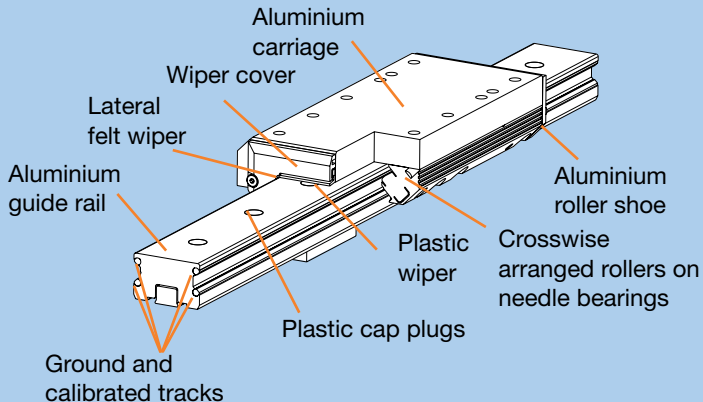
* Load and bending moment based on 8000 km performance

Enhanced Load and Speed Performance with ProLine and PowerSlide External Linear Guides

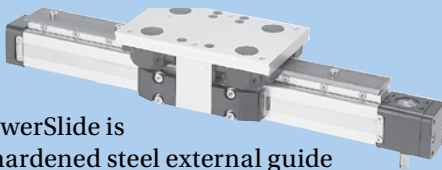
ProLine



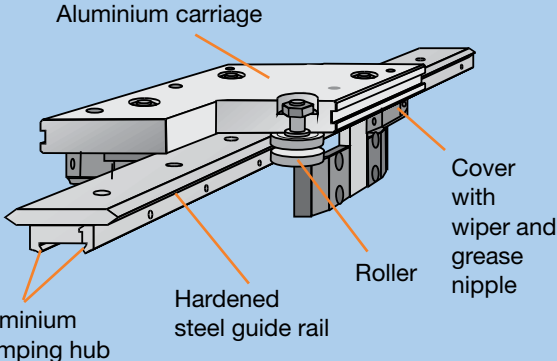
ProLine is a precision aluminum external roller guide rail option designed for smooth, high speed operation up to 10 m/s. The ProLine option is a life time lubricated system and includes an integrated wiper to keep the guide system clean.



PowerSlide



PowerSlide is a hardened steel external guide rail option designed for harsh environments. The pre-assemble actuator option includes guide rail, vee rollers, tough protective cover, wiper system and grease nipple for easy lubrication access.



Performance Data – with ProLine or PowerSlide Linear Guides

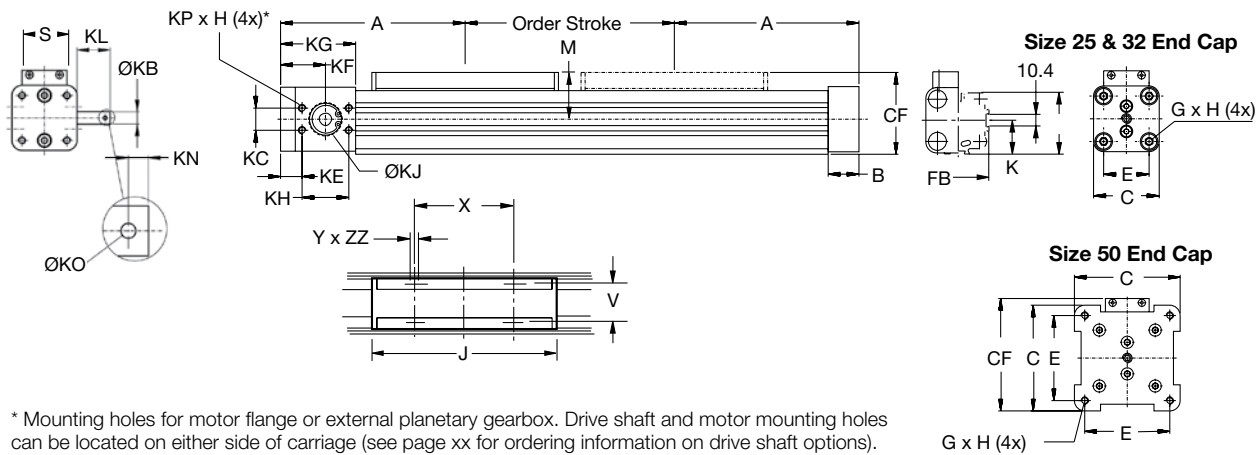
Actuator Size			OSPE25B		OSPE32B		OSPE50B	
Linear Guide Type			PL25	PS25/35	PL32	PS32/44	PL50	PS50/76
Linear Guide Order Number			20874	20305	20875	20308	20876	20310
Order Stroke (Max)								
		mm	3,000	3,000	3,750	3,500	3,750	3,500
Load* (Max)	F _Y	N	1,548	219	2,117	747	5,626	1,699
		lbs	348	49	476	168	1,265	382
	F _Z	N	1,548	219	2,117	747	5,626	1,699
		lbs	348	49	476	168	1,265	382
Bending Moment Load* (Max)	M _X	Nm	30	4	52	16	200	59
		in-lb	266	33	460	144	1,770	526
	M _Y	Nm	69	15	132	57	450	149
		in-lb	611	134	1,168	503	3,983	1,316
	M _Z	Nm	69	15	132	57	450	149
		in-lb	611	134	1,168	503	3,983	1,316
Weight								
	@ Zero Stroke	m ₀ kg	1.0	1.1	2.0	2.1	5.4	6.3
	Per Meter of Stroke	m _{OS} kg/m	3.3	3.4	5.8	5.9	10.0	12.8
	Moved Mass of Carriage	m _C kg	1.0	1.0	1.6	1.9	3.5	5.9

* Load and bending moment based on 8000 km performance

OSPE..B Belt-Driven Actuators

Base Unit Dimensions — mm

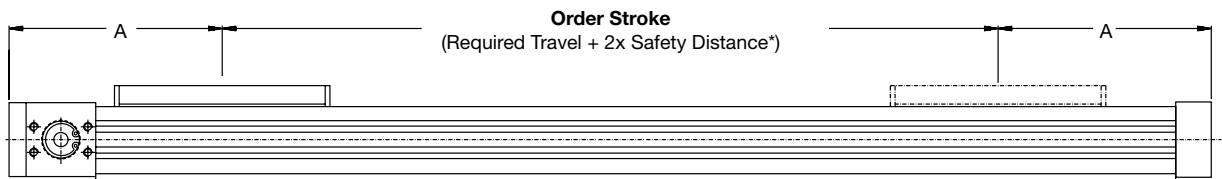
Drive Shaft Versions: • Plain Shaft • Double Plain Shaft



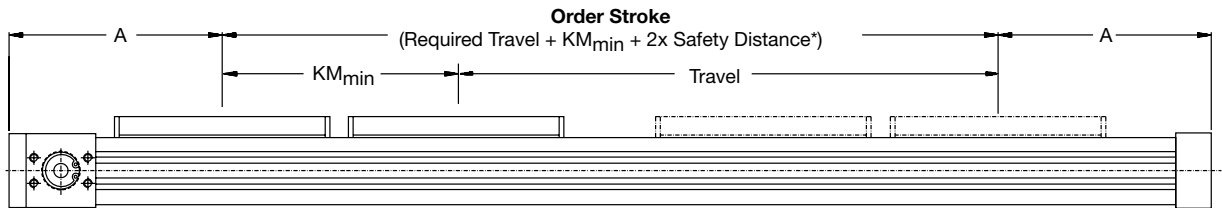
Actuator Size	OSPE25B	OSPE32B	OSPE50B
A	125	150	200
B	22	25	25
C	41	52	87
E	27	36	70
G x H	M5 x 10	M6 x 12	M6 x 12
J	117	152	200
K	21.5	28.5	43.0
M	31	38	49
S	33	36	36
V	25	27	27
X	65	90	110
Y x ZZ	M5 x 8	M6 x 10	M6 x 10
CF	52.5	66.5	92.5
FB	40	52	76
FH	39.5	51.7	77.0
KB	10 _{j6}	10 _{j6}	16 _{h8}
KC	15	18	32
KE	22.0	17.5	23.5
KF	37.0	36.5	48.5
KG	57	61	85
KH	30	38	50
KJ	19 ^{H7}	26 ^{H7}	40 ^{H7}
KL	24	26	34
KN	7	4	10
KO	3	3	4
KP x H	M5 x 10	M6 x 12	M8 x 16

Order Stroke Dimensions — mm

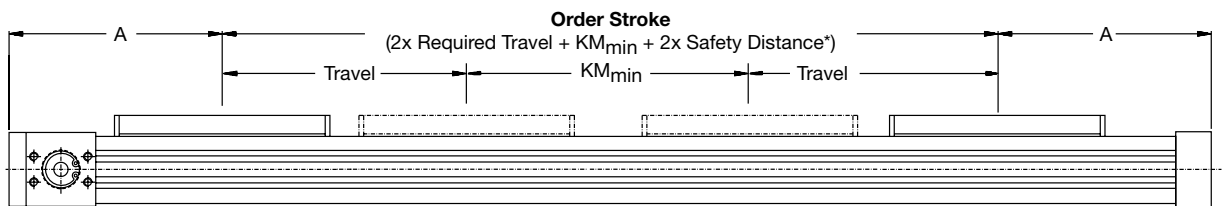
Standard Carriage



Tandem Carriage



Bi-Parting Carriage



Actuator Size	OSPE25B	OSPE32B	OSPE50B
A	125	150	200
KM_{min}	130	170	220
KM_{rec}	190	230	320

* Note:

The mechanical end position must not be used as a mechanical end stop, thus an additional **Safety Distance** at both ends of travel must be incorporated into the Order Stroke.

The safety distance clearance should be equivalent to the linear movement of one revolution of the drive shaft, but at least 100 mm.

Also note that the use of an AC motor with a VFD normally requires a larger safety clearance than that required for servo systems. For further information and design assistance, please consult the factory.

OSPE..B Belt-Driven Actuators

Ordering Information

Select an order code from each of the numbered fields to create a complete OSPE..B model order number. Include hyphens and non-selective characters as shown in example below.

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

Order Number Example: OSPE 25 - 0 0 0 0 0 - 00000 - P 0 0 0 0 0

① Series

OSPE Origa System Plus Electromechanical

② Actuator Bore Size

25 41 mm W x 53 mm H

32 52 mm W x 67 mm H

50 87 mm W x 93 mm H

③ Drive Train

0 Belt actuator with internal slider bearing

④ Carriage

0 Standard

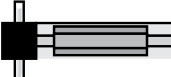
1 Tandem (two carriages for higher load capabilities)

2 Bi-Parting (two driven carriages for opposite movements)

⑤ Drive Shaft Configuration and Orientation

0  Plain shaft (left)

1  Plain shaft (right)

2  Double plain shaft* (motor input left side)

⑥ Xpress Mounted Gearbox

	OSPE..B Bore Size	25	32	50
0	No gearbox	•	•	•
A	PV40TA-003 (gear ratio i = 3)*	•	•	
B	PV40TA-005 (gear ratio i = 5)*	•	•	
C	PV60TA-003 (gear ratio i = 3)*		•	•
D	PV60TA-005 (gear ratio i = 5)*		•	•
E	PV60TA-010 (gear ratio i = 10)*		•	•

* Requires specified Mounted Motor or Mounting Kit (select order code from ⑦ below)

⑦ Gearbox/Motor Mounting Options:

Xpress Gearbox Mounting Kit*

	OSPE..B Bore Size	25	32	50
0	No gearbox mounting kit or motor option	•	•	•
C0	PV40TA	•	•	
C1	PV60TA		•	•
C2	PV90TA			•

Size of Mounted Gearbox 25 32 50 PV40 PV60

Xpress Mounted Motor (with Mounted Gearbox)*

L0	LV233-01-10	•	•	•	•
L1	HV233-01-10	•	•	•	•
L2	LV343-01-10		•	•	•
L3	HV343-01-10		•	•	•
K0	BE233FJ-KPSN	•	•		•
K1	BE233FJ-KPSN with brake (CM233FJ-115027)	•	•		•
K2	BE344LJ-KPSN		•	•	•
K3	BE344LJ-KPSB		•	•	•
M0	MPP0923D1E-KPSN			•	
M1	MPP0923D1E-KPSB			•	
M2	MPP1003D1E-KPSN			•	
M3	MPP1003D1E-KPSB			•	
M4	MPP1003R1E-KPSN			•	
M5	MPP1003R1E-KPSB			•	

Xpress Motor Mounting Kit (with Mounted Gearbox)*

AA	BE16x, SM16x		•	•	
AB	LV23x, HV23x, SM230xx-N	•	•	•	•
AC	SM23xxx-N (not SM230xx-N)	•	•		•
AF	LV34x, HV34x		•	•	•
AD	BE23x, SM23xxx-L	•	•		•
AE	BE34x		•	•	•
AL	MPP092, MPJ092			•	
A4	MPP100, MPJ100			•	

Standard Motor Mounting Kit (with Mounted Gearbox)*

	25	32	50	PV40	PV60	25	32	50	PV40	PV60
B5	•			•		B0	•	•		
AM	•			•		B1	•	•		
B6	•	•		•	•	B2	•	•		
AH	•	•		•	•	BB	•	•	•	•
A2	•	•		•	•	B4	•	•		
BJ		•				AP		•		
B7	•	•				B3	•	•		
B8	•	•		•		A1		•		
AN		•		•		A3		•		•
AG	•	•		•		AJ		•		
B9		•	•	•		BD		•		
BA		•	•			BF		•		

* See page xx for dimensions and additional information.

8 Stroke*

00000 5-digit input (in mm)

* Maximum standard stroke: OSPE25B = 03000 mm;
OSPE32B and OSPE50B = 05000 mm
Longer strokes available upon request. Consult factory.

9 Hardware and Cover Strip

P Standard hardware with Parker gold (RAL 1028) cover strip

10 External Guide Rail


	OSPE..B Bore Size	25	32	50
0	No external guide rail	•	•	•
6	ProLine PL25, PL32, PL50*	•	•	•
F	PowerSlide PS25/35*	•		
G	PowerSlide PS32/44*		•	
I	PowerSlide PS50/76*			•

* Requires standard carriage (select order code "0" from 4 above) See page xx for dimensions and additional information.


11 External Guide Rail Orientation


0  Guide Rail (right) with order code "0" from item 9 (plain shaft left)

1  Guide Rail (left) with order code "0" from item 9 (plain shaft left)

0  Guide Rail (left) with order code "1" from item 9 (plain shaft right)

1  Guide Rail (right) with order code "1" from item 9 (plain shaft right)

0  Guide Rail (right) with order code "2" from item 9 (double shaft – motor input left side)

1  Guide Rail (left) with order code "2" from item 9 (double shaft – motor input left side)

12 End Cap Mounting (see page xx)

0	No end cap mounting
1	1 pair A1 (size 25, 32) or C1 (size 50)
5	1 pair B4 (size 25, 32)
4	1 pair C4 (size 50)

13 Profile Mounting (see page xx)

0	No profile mounting
1	1 pair E1
4	2 pair E1
7	3 pair E1
3	1 pair MAE
6	2 pair MAE
9	3 pair MAE
M	1 pair E4
Q	2 pair E4
T	3 pair E4

14 Magnetic Sensor Mounting (see page xx)

0	No sensor mounting
A	1 pc. N3NO-PUR-P: NPN, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GNSHX)
B	2 pc. N3NC-PUR-P: NPN, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GMSHX)
C	1 pc. N3NO-PUR-P (P8S-GNSHX) and 2 pc. N3NC-PUR-P (P8S-GMSHX)
D	1 pc. P3NO-PUR-P: PNP, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GPSHX)
E	2 pc. P3NC-PUR-P: PNP, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GQSHX)
F	1 pc. P3NO-PUR-P (P8S-GPSHX) and 2 pc. P3NC-PUR-P (P8S-GQSHX)

OSPE..SB/ST Screw-Driven Actuators

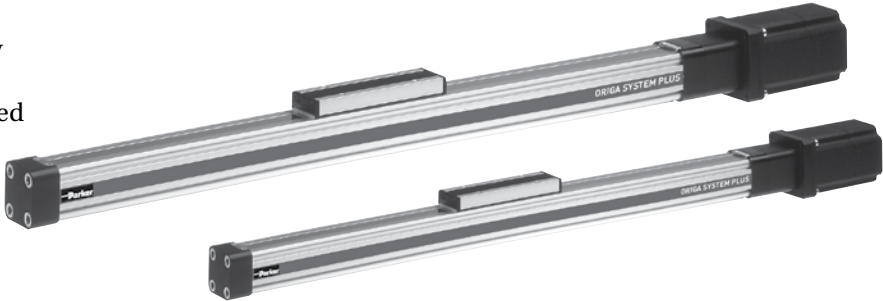
OSPE..SB Ball Screw Actuators for High Accuracy

OSPE..ST Trapezoidal Screw Actuators for Intermittent Duty

The OSPE..SB/ST is a completely new generation of screw-driven actuators which can be integrated into any machine layout neatly and simply.

The SB design features a ball screw drive available with a choice of optimal screw pitches for high accuracy and optimum speed, load performance.

The ST design utilizes a trapezoidal screw which is ideal for lower speed, intermittent duty applications. ST models are inherently a self-locking device for power off load holding capability.

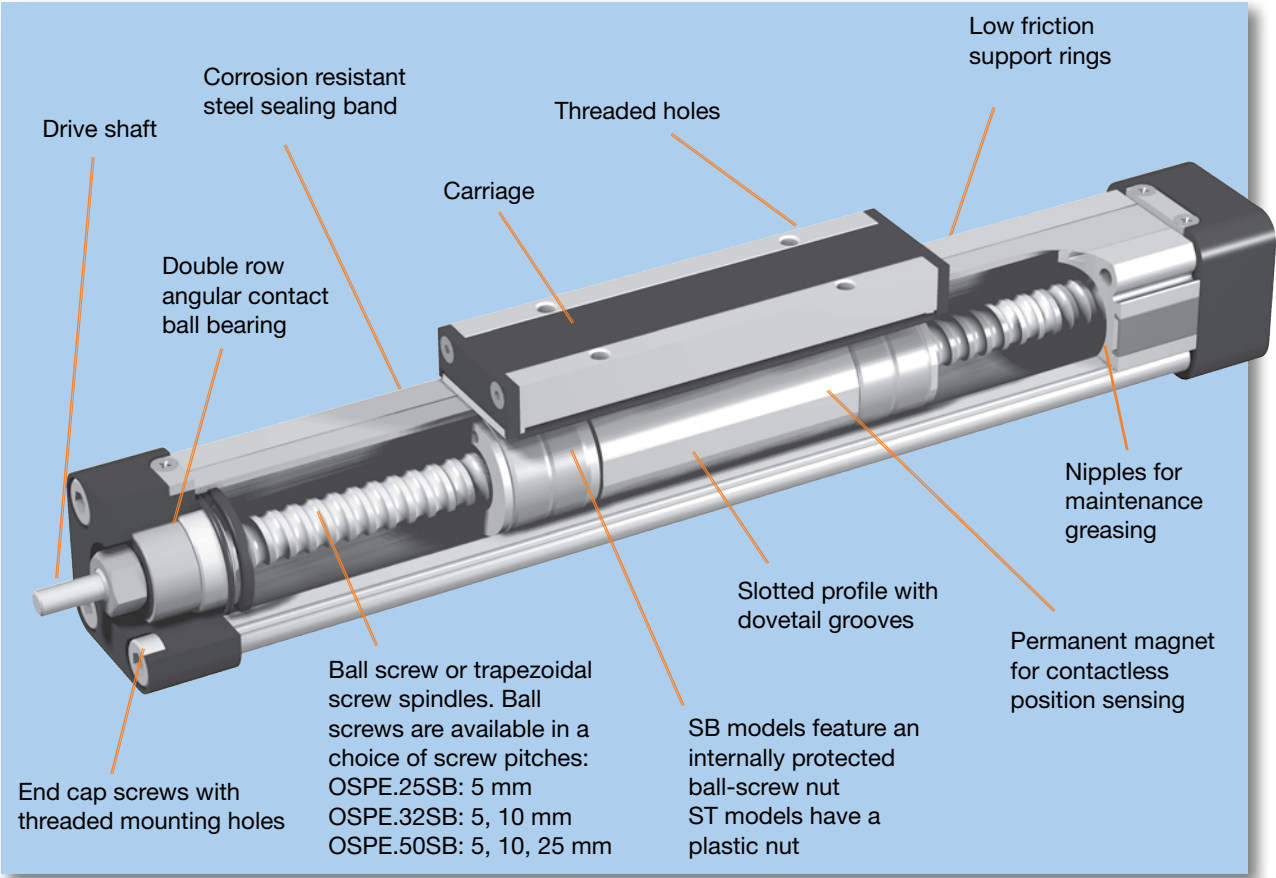


Features:

- All models feature internal plain bearing integrated drive and guidance system
- Complete motor and control packages
- Specialized optional configurations available
- Diverse range of accessories and mountings
- Rated IP 54

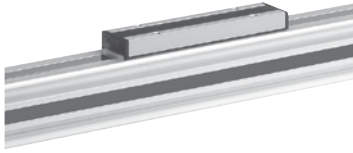
Advantages:

- Accurate path and position control
- High force output
- Easy installation
- Excellent slow speed characteristics
- Ideal for precise traverse operations such as machine feeds, and lifting applications

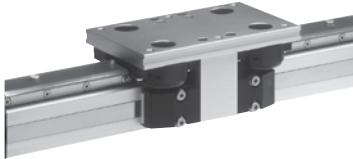


Choose from a wide range of standard options for maximum design flexibility in a pre-assembled system.

Carriage Guides



Standard



The PowerSlide linear guide roller bearings provide precision guidance for smooth travel and high dynamic or static loads. Refer to PowerSlide section, page xx for complete specifications



ProLine offers a compact aluminium roller guide for high loads and velocities. Refer to ProLine section, page xx for complete specifications

Carriage Options



Standard

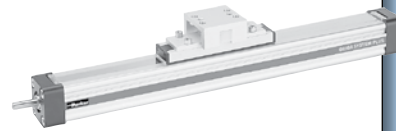


The tandem carriage (SB models only) is recommended for added support of high moment loads.

Carriage Mounting



Standard

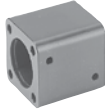


Clevis mounted carriage provides tolerance and parallelism compensation to drive external linear guides



Inversion mounted carriage transfers the driving force to the opposite side (e.g. for dirty environments)

Options and Accessory Product Specifications



Refer to the Options and Accessories section for complete specifications on compatible external linear guides, motor mounts, couplings, mounting hardware, magnetic switches.

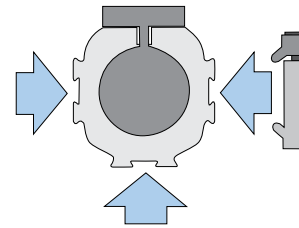
Mounting Options



End cap mounting



Profile mounting on the dovetail grooves recommended to support long actuators



Mounting Rail Flexibility

The dovetailed mounting rails on the SB actuator housing expand its function into that of a universal system carrier. Modular system components are simply clamped on.

Magnetic Switches



Magnetic switches provide contactless position sensing of end stop and intermediate carrier positions

OSPE..SB/ST Screw-Driven Actuators

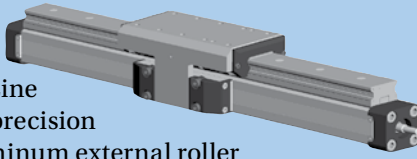
Performance Data – with Standard Carriage

Actuator Size			OSPE25		OSPE32			OSPE50			
Screw Type (SB-Ball; ST-Trapezoidal)			SB	ST	SB	SB	ST	SB	SB	SB	ST
Lead Constant	S_{lin}	mm	5	4	5	10	4	5	10	25	6
Linear Speed (Max)	V_{max}	m/s	250	3	250	500	2	250	500	1,250	5
Radial Speed (Max)		rpm	3,000	1,500	3,000	3,000	1,500	3,000	3,000	3,000	1,500
Acceleration (Max)	a_{max}	m/s ²	10	2	10	10	2	10	10	10	2
Repeatability		μm	± 50	± 500	± 50	± 50	± 500	± 50	± 50	± 50	± 500
Order Stroke (Max)		mm	1,100	1,100	2,000	2,000	2,000	3,200	3,200	3,200	2,400
Thrust Force (Max)	F_{Amax}	N	250	600	1,100	800	1,300	1,300	1,450	1,350	2,500
		lbs	56	135	247	180	292	292	326	303	562
Torque on Drive Shaft (Max)	M_{Amax}	Nm	0.4	1.3	1.2	1.7	2.5	1.4	3.0	6.5	6.5
		in-lb	4	11	10	15	22	13	26	57	57
Torque – No Load	M_0	Nm	0.2	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.5
		in-lb	2	3	2	3	4	3	4	4	4
Load* (Max)	F_Y	N	500	500	1,200	1,200	1,000	3,000	3,000	3,000	1,500
		lbs	112	112	270	270	225	674	674	674	337
	F_Z	N	500	500	1,200	1,200	1,000	3,000	3,000	3,000	1,500
		lbs	112	112	270	270	225	674	674	674	337
Bending Moment Load* (Max)	M_X	Nm	2	2	8	8	6	16	16	16	13
		in-lb	18	18	71	71	53	142	142	142	115
	M_Y	Nm	12	24	25	25	65	80	80	80	155
		in-lb	106	212	221	221	575	708	708	708	1,372
	M_Z	Nm	8	7	16	16	12	32	32	32	26
		in-lb	71	62	142	142	106	283	283	283	230
Speed (Max) V_{MAX} mm/sec @ Specified Stroke	200 mm	250	100	250	500	100	250	500	1,250	150	
	400 mm	250	100	250	500	100	250	500	1,250	150	
	600 mm	222	78	250	499	95	250	500	1,250	150	
	800 mm	140	49	161	322	61	229	458	1,144	114	
	1000 mm	96	34	113	225	43	164	329	822	82	
	1200 mm	–	–	83	166	31	124	248	619	61	
	1400 mm	–	–	64	128	24	97	193	483	48	
	1600 mm	–	–	51	101	19	77	155	387	38	
	1800 mm	–	–	41	82	16	63	127	317	32	
	2000 mm	–	–	34	68	13	53	106	265	26	
	2200 mm	–	–	–	–	–	45	90	224	22	
	2400 mm	–	–	–	–	–	39	77	193	19	
	2600 mm	–	–	–	–	–	33	67	167	–	
	2800 mm	–	–	–	–	–	29	59	146	–	
	3000 mm	–	–	–	–	–	26	52	129	–	
	3200 mm	–	–	–	–	–	23	46	115	–	
Inertia @ Zero Stroke	J_0	kgmm ²	2	6	8	8	22	84	84	84	152
Per Meter of Stroke	J_{OS}	kgmm ² /m	11.0	30.0	32.0	32.0	81.0	225.0	225.0	225.0	400.0
Per 1 kg Moved Mass	J_m	kgmm ² /kg	0.6	0.4	0.6	2.5	0.4	0.6	2.5	15.8	0.9
Weight @ Zero Stroke	m_0	kg	0.6	0.7	1.6	1.6	1.6	4.0	4.0	4.0	3.8
Per Meter of Stroke	m_{OS}	kg/m	2.3	2.8	4.4	4.4	5.0	9.4	9.4	9.4	10.6
Moved Mass of Carriage	m_C	kg	0.2	0.2	0.4	0.4	0.5	1.2	1.2	1.2	1.3

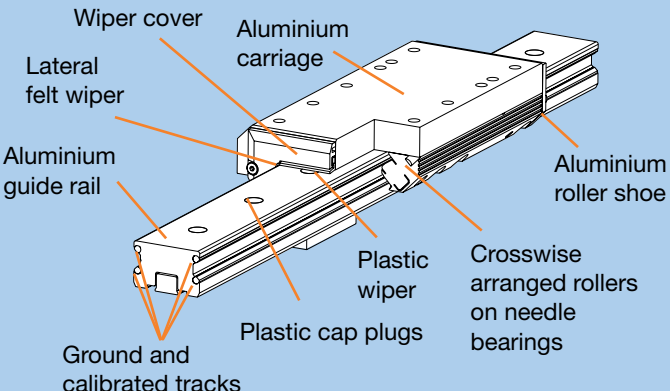
* Load and bending moment based on 8000 km performance

Enhanced Load and Speed Performance with ProLine and PowerSlide External Linear Guides

ProLine

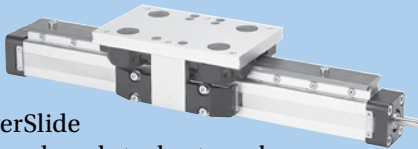


ProLine is a precision aluminum external roller guide rail option designed for smooth, high speed operation up to 10 m/s. The ProLine option is a life time lubricated system and includes an integrated wiper to keep the guide system clean.

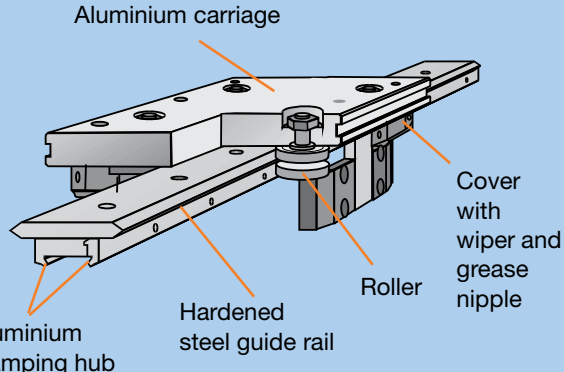


Labels in diagram: Wiper cover, Aluminium carriage, Lateral felt wiper, Aluminium guide rail, Ground and calibrated tracks, Plastic wiper, Plastic cap plugs, Aluminium roller shoe, Crosswise arranged rollers on needle bearings.

PowerSlide



PowerSlide is a hardened steel external guide rail option designed for harsh environments. The pre-assemble actuator option includes guide rail, vee rollers, tough protective cover, wiper system and grease nipple for easy lubrication access.



Labels in diagram: Aluminium carriage, Aluminium clamping hub, Hardened steel guide rail, Roller, Cover with wiper and grease nipple.

Performance Data – with ProLine or PowerSlide Linear Guides

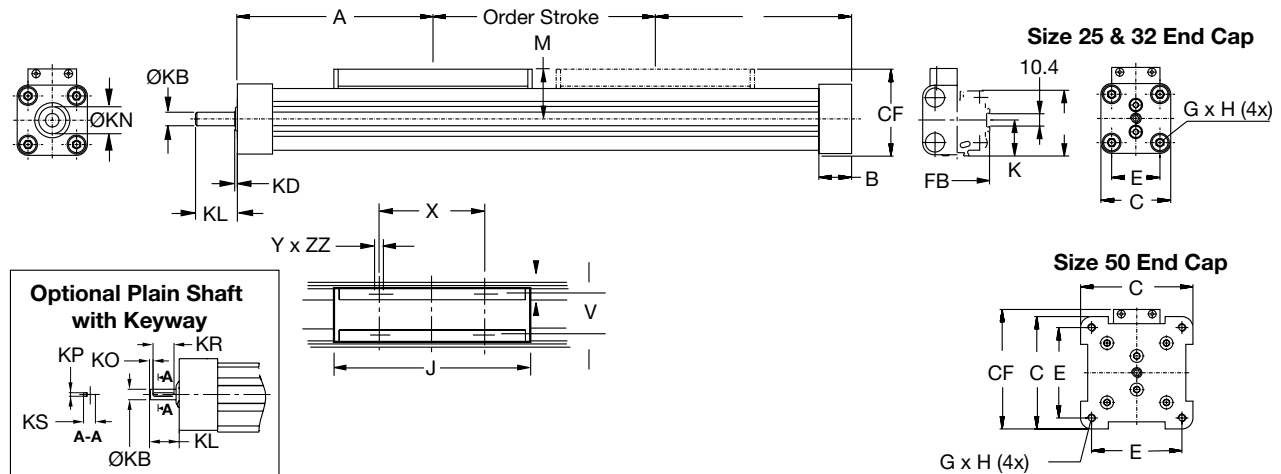
Actuator Size		OSPE25SB/ST		OSPE32SB/ST		OSPE50SB/ST		
Linear Guide Type		PL25	PS25/35	PL32	PS32/44	PL50	PS50/76	
Linear Guide Order Number		20856	20016	20857	20287	20859	20289	
Order Stroke (Max)		mm	1,000	1,000	2,000	2,000	3200*	3200*
Load** (Max)	F _Y	N	1,548	219	2,117	747	5,626	1,699
		lbs	348	49	476	168	1,265	382
	F _Z	N	1,548	219	2,117	747	5,626	1,699
		lbs	348	49	476	168	1,265	382
Bending Moment Load* (Max)	M _X	Nm	30	4	52	16	200	59
		in-lb	266	33	460	144	1,770	526
	M _Y	Nm	69	15	132	57	450	149
		in-lb	611	134	1,168	503	3,983	1,316
	M _Z	Nm	69	15	132	57	450	149
		in-lb	611	134	1,168	503	3,983	1,316
Weight								
@ Zero Stroke	m ₀	kg	1.0	1.1	2.0	2.1	5.4	6.3
Per Meter of Stroke	m _{OS}	kg/m	3.3	3.4	5.8	5.9	10.0	12.8
Moved Mass of Carriage	m _C	kg	1.0	1.0	1.6	1.9	3.5	5.9

* Max order stroke for ST models is 2400mm ** Load and bending moment based on 8000 km performance

OSPE..SB/ST Screw-Driven Actuators

Base Unit Dimensions — mm

Drive Shaft Versions: • Plain Shaft

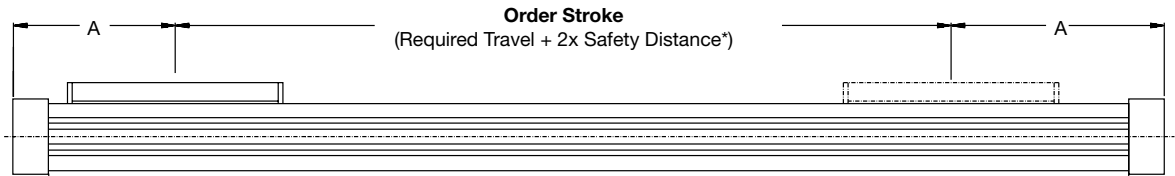


Actuator Size	OSPE25SB/ST	OSPE32SB/ST	OSPE50SB/ST
A	100	125	175
B	22.0	25.5	33.0
C	41	52	87
E	27	36	70
G x H	M5 x 10	M6 x 12	M6 x 12
J	117	152	200
K	21.5	28.5	43.0
M	31	38	49
S	33	36	36
V	25	27	27
X	65	90	110
Y x ZZ	M5 x 8	M6 x 10	M6 x 10
CF	52.5	66.5	92.5
FB	40	52	76
FH	39.5	51.7	77.0
KB	6 _{h7}	10 _{h7}	15 _{h7}
KD	2	2	3
KL*	17	31	43
KN	13	20	28
KO	2	5	6
KP	2 ^{P9}	3 ^{P9}	5 ^{P9}
KR	12	16	28
KS	6.8	11.2	17,0

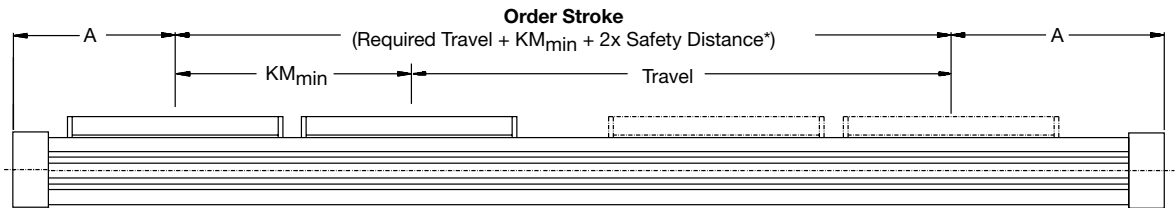
* KL dimensions with option 4 keyway:
 OSPE25SB/ST: 24 mm
 OSPE32SB/ST: 41 mm
 OSPE50SB/ST: 58 mm

Order Stroke Dimensions — mm

Standard Carriage



Tandem Carriage (SB models only)



Actuator Size	OSPE25SB/ST	OSPE32SB/ST	OSPE50SB/ST
A	100	125	175
KM _{min}	120	165	235
KM _{rec}	190	230	320

* Note:

The mechanical end position must not be used as a mechanical end stop, thus an additional **Safety Distance** at both ends of travel must be incorporated into the Order Stroke.

The safety distance clearance should be equivalent to the linear movement of one revolution of the drive shaft, but at least 100 mm.

Also note that the use of an AC motor with a VFD normally requires a larger safety clearance than that required for servo systems. For further information and design assistance, please consult the factory.

OSPE..SB/ST Screw-Driven Actuators

Ordering Information

Select an order code from each of the numbered fields to create a complete OSPE..SB or ST model order number. Include hyphens and non-selective characters as shown in example below.

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

Order Number Example: OSPE 25 - 1 0 3 0 0 - 00000 - P 0 0 0 0 0

① Series

OSPE Origa System Plus Electromechanical

② Actuator Bore Size

25 41 mm W x 53 mm H

32 52 mm W x 67 mm H

50 87 mm W x 93 mm H

③ Drive Train

1 SB – Ball screw actuator with internal slider bearing

2 ST – Trapezoidal screw actuator with internal slider bearing

④ Carriage

0 Standard

1 Tandem (two carriages for higher load capabilities (available with SB Drive train only))

⑤ Screw Lead

OSPE..SB Bore Size 25 32 50

3 Lead 5 mm • • •

4 Lead 10 mm • •

5 Lead 25 mm •

OSPE..ST Bore Size 25 32 50

4 Lead 4 mm • •

6 Lead 6 mm •

⑥ Xpress Mounted Gearbox

OSPE..SB/ST Bore Size 25 32 50

0 No gearbox • • •

A PV40TA-003 (gear ratio i = 3)* • •

B PV40TA-005 (gear ratio i = 5)* • •

C PV60TA-003 (gear ratio i = 3)* • •

D PV60TA-005 (gear ratio i = 5)* • •

E PV60TA-010 (gear ratio i = 10)* • •

* Requires specified Mounted Motor or Mounting Kit (select order code from ⑦ below)

⑦ Gearbox/Motor Mounting Options:

Xpress Gearbox Mounting Kit*

OSPE..SB/ST Bore Size 25 32 50

0 No gearbox mounting kit or motor option • • •

C0 PV40TA • •

C1 PV60TA • •

C2 PV90TA •

Size of Mounted Gearbox 25 32 50 PV40 PV60

Xpress Mounted Motor (with Mounted Gearbox)*

L0 LV233-01-10 • • • •

L1 HV233-01-10 • • • •

L2 LV343-01-10 • • • •

L3 HV343-01-10 • • • •

K0 BE233FJ-KPSN • • •

K1 BE233FJ-KPSN with brake (CM233FJ-115027) • • •

K2 BE344LJ-KPSN • • •

K3 BE344LJ-KPSB • • •

M0 MPP0923D1E-KPSN •

M1 MPP0923D1E-KPSB •

M2 MPP1003D1E-KPSN •

M3 MPP1003D1E-KPSB •

M4 MPP1003R1E-KPSN •

M5 MPP1003R1E-KPSB •

Xpress Motor Mounting Kit (with Mounted Gearbox)*

AA BE16x, SM16x • •

AB LV23x, HV23x, SM230xx-N • • • •

AC SM23xxx-N (not SM230xx-N) • • •

AF LV34x, HV34x • • •

AD BE23x, SM23xxx-L • • •

AE BE34x • • •

AL MPP092, MPJ092 •

A4 MPP100, MPJ100 •

Standard Motor Mounting Kit (with Mounted Gearbox)*

25 32 50 PV40 PV60 25 32 50 PV40 PV60

B5 • • • B0 • • •

AM • • • B1 • • •

B6 • • • B2 • • •

AH • • • BB • • •

A2 • • • B4 • • •

BJ • • • AP • • •

B7 • • • B3 • • •

B8 • • • A1 • • •

AN • • • A3 • • •

AG • • • AJ • • •

B9 • • • BD • • •

BA • • • BF • • •

* See page xx for dimensions and additional information.

8 Stroke*

00000 5-digit input (in mm)

* Maximum standard stroke: OSPE25SB/ST = 01100 mm;
OSPE32SB/ST = 02000 mm; OSPE50ST = 02000 mm;
OSPE50SB = 03200 mm
Longer strokes available upon request – consult factory

9 Hardware and Cover Strip

P Standard hardware with Parker gold (RAL 1028) cover strip

10 External Guide Rail

	OSPE..SB/ST Bore Size	25	32	50
0	No external guide rail	•	•	•
6	ProLine PL25, PL32, PL50*	•	•	•
F	PowerSlide PS25/35*	•		
G	PowerSlide PS32/44*		•	
I	PowerSlide PS50/76*			•

* Requires standard carriage (select order code "0" from 4 above) See page xx for dimensions and additional information.

11 External Guide Rail Orientation

0  Guide Rail (right) with order code "0" from item 3

1  Guide Rail (left) with order code "0" from item 3

12 End Cap Mounting (see page xx)

0	No end cap mounting
1	1 pair A1 (size 25, 32) or C1 (size 50)
5	1 pair B4 (size 25, 32)
4	1 pair C4 (size 50)

13 Profile Mounting (see page xx)

0	No profile mounting
1	1 pair E1
4	2 pair E1
7	3 pair E1
3	1 pair MAE
6	2 pair MAE
9	3 pair MAE
M	1 pair E4
Q	2 pair E4
T	3 pair E4

14 Magnetic Sensor Mounting (see page xx)

0	No sensor mounting
A	1 pc. N3NO-PUR-P: NPN, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GNSHX)
B	2 pc. N3NC-PUR-P: NPN, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GMSHX)
C	1 pc. N3NO-PUR-P (P8S-GNSHX) and 2 pc. N3NC-PUR-P (P8S-GMSHX)
D	1 pc. P3NO-PUR-P: PNP, 3 wire, normally open, M8 plug, 0.3m PUR cable (P8S-GPSHX)
E	2 pc. P3NC-PUR-P: PNP, 3 wire, normally close, M8 plug, 0.3m PUR cable (P8S-GQSHX)
F	1 pc. P3NO-PUR-P (P8S-GPSHX) and 2 pc. P3NC-PUR-P (P8S-GQSHX)

Linear Guide Options

PowerSlide Hardened Steel Roller External Guide System Designed for Harsh Environments

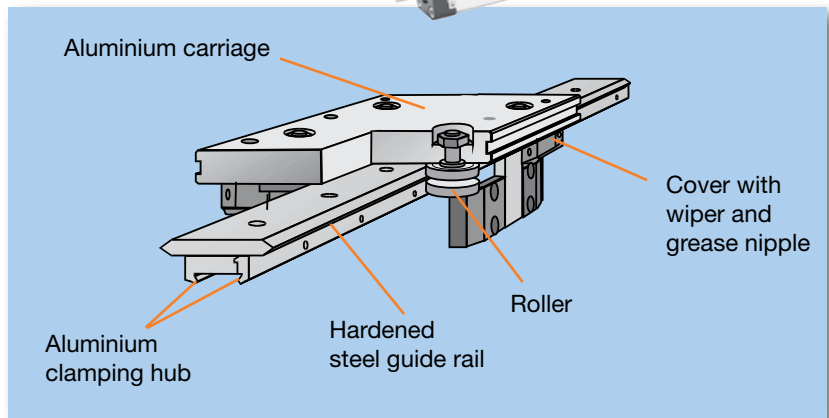
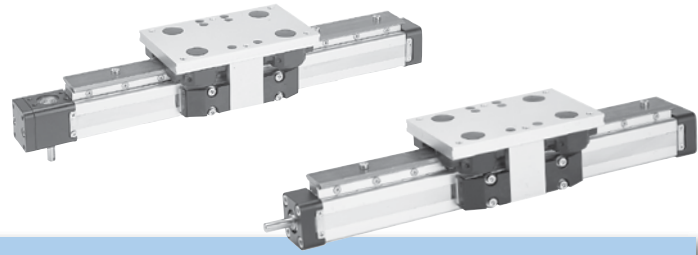
PowerSlide is a hardened steel external guide rail option designed for harsh environments.

The pre-assemble actuator option includes guide rail, vee rollers, tough protective cover, wiper system and grease nipple for easy lubrication access.

PowerSlide guides are offered in several sizes and are available on all sizes of OSPE..B and OSPE..SB/ST Series Actuators.

Features:

- **Anodized aluminium guide carriage with double row ball bearing vee rollers**
- **Hardened steel guide rail**
- **Choice of guide sizes**
- **Maximum speed of 3 m/s**
- **Tough roller cover with wiper and grease nipple**
- **Available on any actuator length**



Advantages:

- **Recommended for high loads and moments**
- **High precision, smooth operation**
- **Can be installed in any position**
- **Retrofits existing actuators**

PowerSlide Performance Data – with OSPE..B

Actuator Model		OSPE25B	OSPE32B	OSPE50B
PowerSlide Model Number		PS 25/35	PS 32/44	PS 50/76
PowerSlide Order Number		20305	20308	20310
Order Stroke (Max)	mm	3,000	3,500	3,500
Load* (Max)	F _Y	N	219	747
		lbs	49	168
	F _Z	N	219	747
		lbs	49	168
Bending Moment Load* (Max)	M _X	Nm	4	16
		in-lb	33	144
	M _Y	Nm	15	57
		in-lb	134	503
	M _Z	Nm	15	57
		in-lb	134	503
Weight (kg) @ 0 Stroke	m _O	1.1	2.1	6.3
Weight (kg) per Meter of Stroke	m _{OS}	3.4	5.9	12.8
Moved Mass of Carriage (kg)	m _C	1.0	1.9	5.9

* Load and bending moment based on 8000 km performance

PowerSlide Performance Data – with OSPE..SB/ST

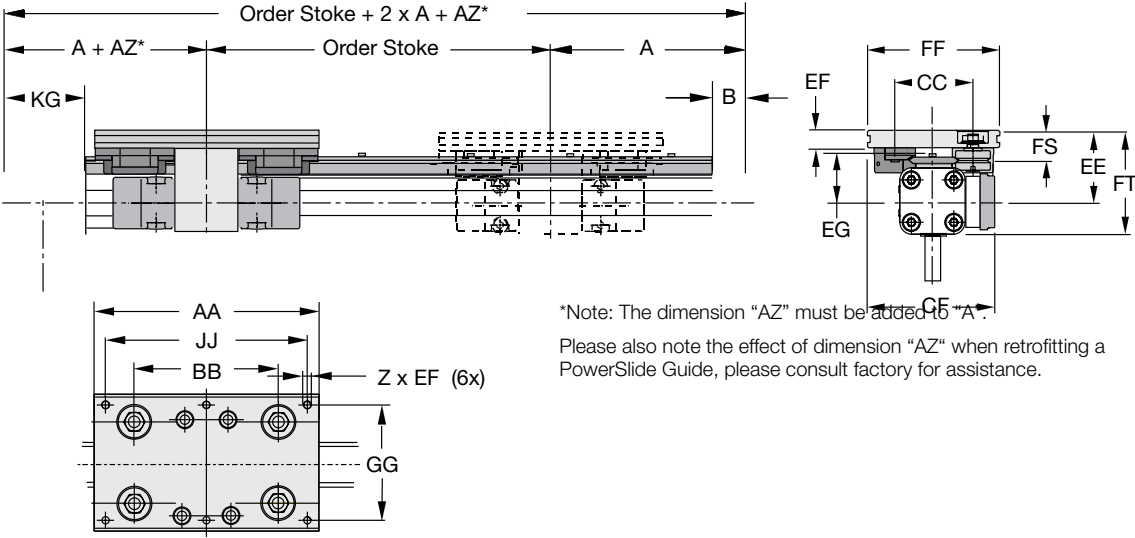
Actuator Model		OSPE25SB/ST	OSPE32SB/ST	OSPE50SB/ST
PowerSlide Model Number		PS 25/35	PS 32/44	PS 50/76
PowerSlide Order Number		20016	20287	20289
Order Stroke (Max)	mm	1,000	2,000	3200**
Load* (Max)	F _Y	N	219	747
		lbs	49	168
	F _Z	N	219	747
		lbs	49	168
Bending Moment Load* (Max)	M _X	Nm	4	16
		in-lb	33	144
	M _Y	Nm	15	57
		in-lb	134	503
	M _Z	Nm	15	57
		in-lb	134	503
Weight (kg) @ 0 Stroke	m _O	1.1	2.1	6.3
Weight (kg) per Meter of Stroke	m _{OS}	3.4	5.9	12.8
Moved Mass of Carriage (kg)	m _C	1.0	1.9	5.9

* Load and bending moment based on 8000 km performance

** Max order stroke for ST models is 2400mm

Linear Guide Options

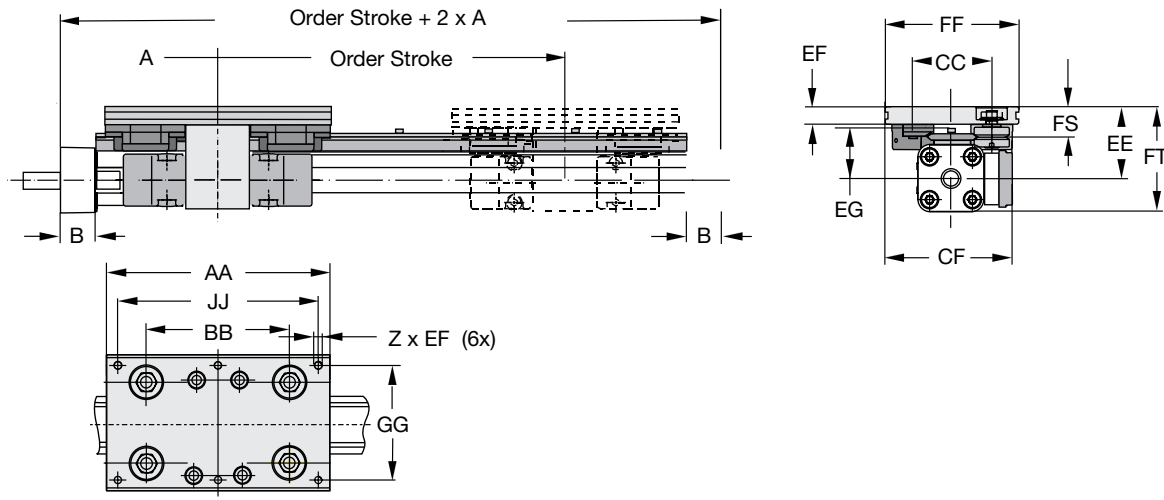
PowerSlide Dimensions — with OSPE..B (mm)



*Note: The dimension "AZ" must be added to "A".
Please also note the effect of dimension "AZ" when retrofitting a PowerSlide Guide, please consult factory for assistance.

Model #	A	B	Z	AA	AZ	BB	CC	CF	EE	EF	EG	FF	FS	FT	GG	JJ	KG
PS 25/35	125	22	M6	156	10	100	57	89.5	52.5	12.5	37.5	95	21.5	73.0	80	140	57
PS 32/44	150	25	M8	190	6	118	73	107.0	64.0	15.0	45.0	116	26.0	90.0	96	164	61
PS 50/76	200	25	M10	280	25	178	119	155.5	93.0	20.0	64.0	185	39.0	135.5	160	250	85

PowerSlide Dimensions — with OSPE..SB/ST (mm)



Model #	A	B	Z	AA	BB	CC	CF	EE	EF	EG	FF	FS	FT	GG	JJ
PS 25/35	100	22.0	M6	156	100	57	89.5	52.5	12.5	37.5	95	21.5	73.0	80	140
PS 32/44	125	25.5	M8	190	118	73	107.0	64.0	15.0	45.0	116	26.0	90.0	96	164
PS 50/76	175	33.0	M10	280	178	119	155.5	93.0	20.0	64.0	185	39.0	135.5	160	250

Linear Guide Options

ProLine External Roller Guide System for Smooth, High-Speed Operation

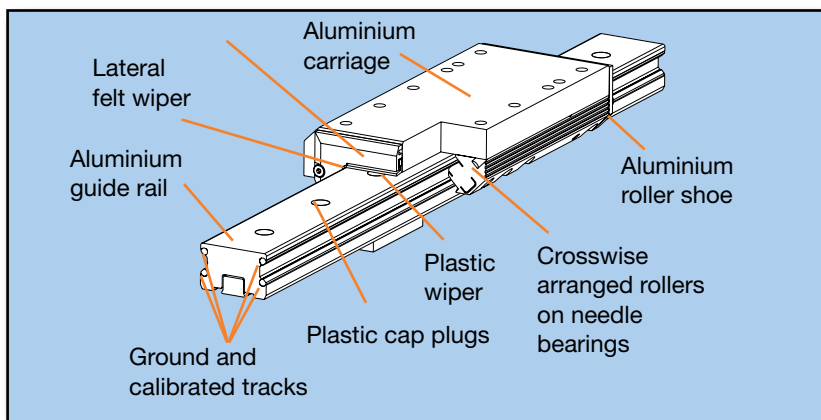
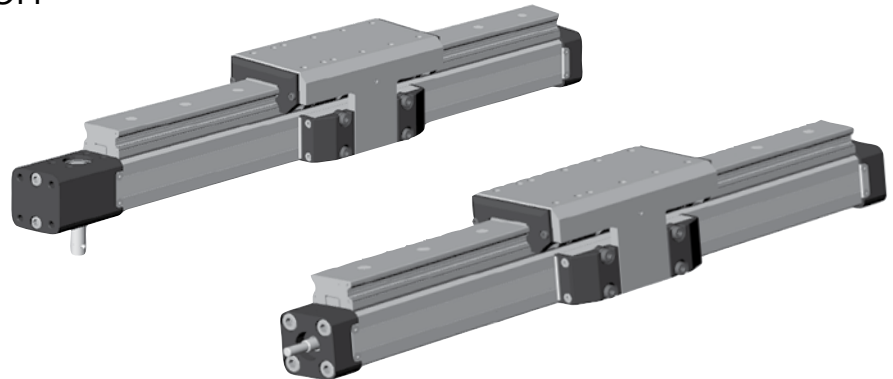
ProLine is a precision aluminum external roller guide rail option designed for smooth, high speed operation up to 10 m/s. The ProLine ball bushing guide for heavy loads and speed.

The ProLine option is a life time lubricated system and includes an integrated wiper to keep the guide system clean.

PowerSlide guides are offered in several sizes and are available on all sizes of OSPE..B and OSPE..SB/ST Series Actuators.

Features:

- **Anodized aluminium guide carriage with double row ball bearing vee rollers**
- **Hardened steel guide rail**
- **Choice of guide sizes**
- **Maximum speed of 10 m/s**
- **Tough roller cover with integrated wiper system**
- **Lifetime lubrication**
- **Available on any actuator length**



Advantages:

- **High precision**
- **High velocities (10 m/s)**
- **Smooth operation – low noise**
- **Can be installed in any position**
- **Retrofits existing actuators**

ProLine Performance Data – with OSPE..B

Actuator Series/Size		OSPE25B	OSPE32B	OSPE50B
ProLine Model Size		PL 25	PL 32	PL 50
ProLine Order Number		20874	20875	20876
Order Stroke (Max)	mm	3,000	3,750	3,750
Load* (Max)	F _Y	N	1,548	2,117
		lbs	348	476
	F _Z	N	1,548	2,117
		lbs	348	476
Bending Moment Load* (Max)	M _X	Nm	30	52
		in-lb	266	460
	M _Y	Nm	69	132
		in-lb	611	1,168
M _Z	Nm	69	132	
	in-lb	611	1,168	
Weight (kg) @ 0 Stroke		1.0	2.0	5.4
Weight (kg) per Meter of Stroke		3.3	5.8	10.0
Weight Carriage (kg)		1.0	1.6	3.5

* Max order stroke for ST models is 2400mm ** Load and bending moment based on 8000 km performance

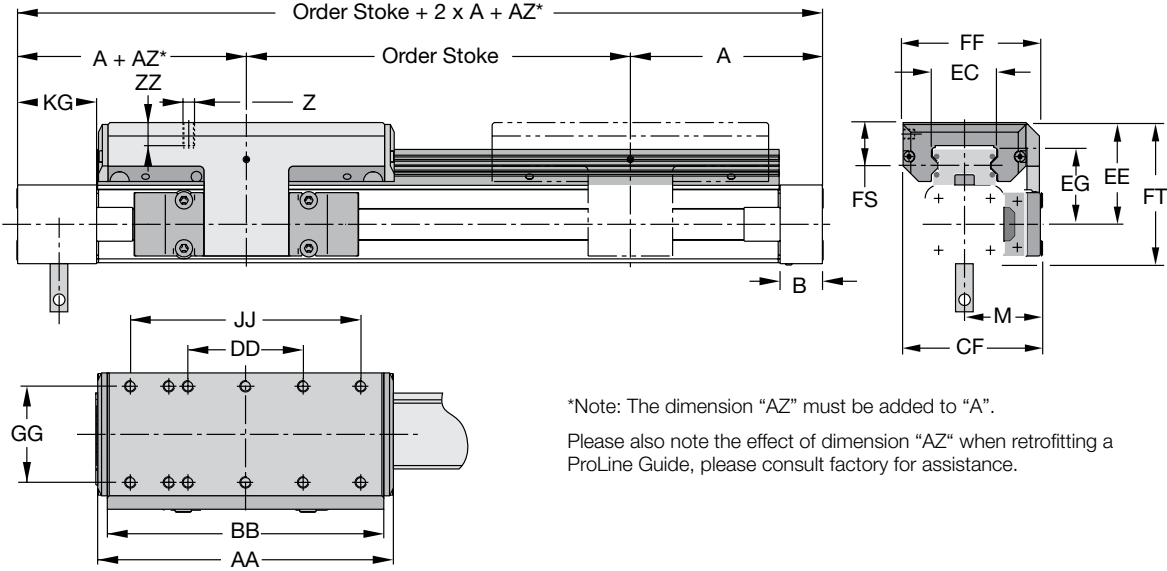
ProLine Performance Data – with OSPE..SB/ST

Actuator Series/Size		OSPE25SB/ST	OSPE32SB/ST	OSPE50SB/ST
ProLine Model Size		PL 25	PL 32	PL 50
ProLine Order Number		20856	20857	20859
Order Stroke (Max)	mm	1,000	2,000	3200*
Load* (Max)	F _Y	N	1,548	2,117
		lbs	348	476
	F _Z	N	1,548	2,117
		lbs	348	476
Bending Moment Load* (Max)	M _X	Nm	30	52
		in-lb	266	460
	M _Y	Nm	69	132
		in-lb	611	1,168
M _Z	Nm	69	132	
	in-lb	611	1,168	
Weight (kg) @ 0 Stroke		1.0	2.0	5.4
Weight (kg) per Meter of Stroke		3.3	5.8	10.0
Weight Carriage (kg)		1.0	1.6	3.5

* Max order stroke for ST models is 2400mm ** Load and bending moment based on 8000 km performance

Linear Guide Options

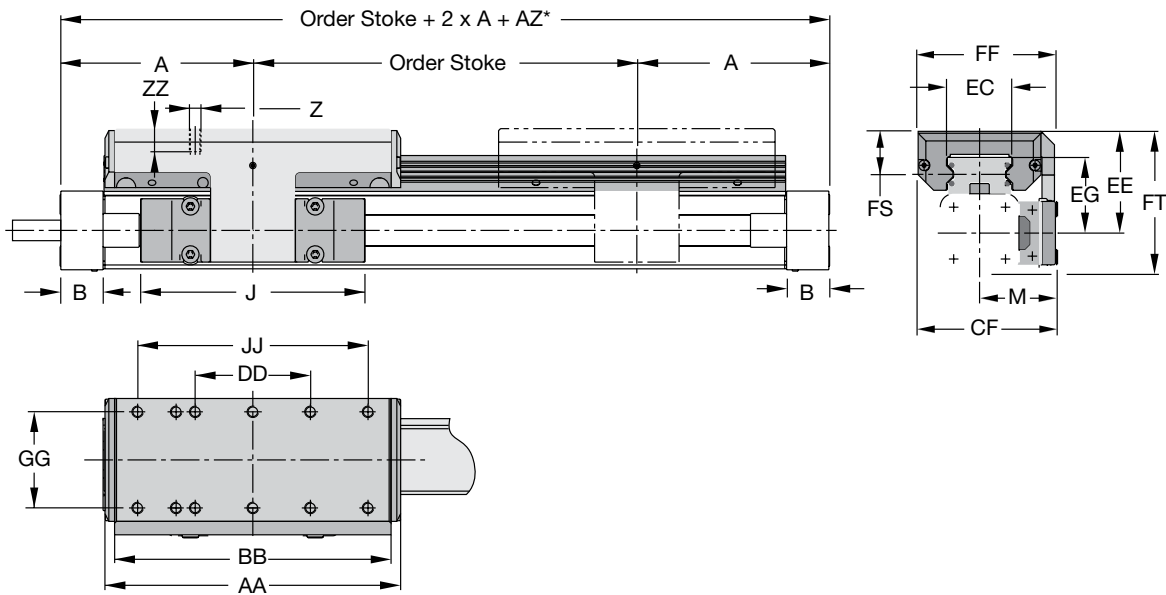
ProLine Dimensions — with OSPE..B (mm)



*Note: The dimension "AZ" must be added to "A".
Please also note the effect of dimension "AZ" when retrofitting a ProLine Guide, please consult factory for assistance.

Model #	A	B	J	M	Z	AA	AZ	BB	DD	CF	EC	EE	EG	FF	FS	FT	GG	JJ	KG	ZZ
PL 25	125	22	117	40.5	M6	154	10	144	60	72.5	32.5	53	39	64	23	74	50	120	57	12
PL 32	150	25	152	49.0	M6	197	11	187	80	91.0	42.0	62	48	84	25	88	64	160	61	12
PL 50	200	25	200	62.0	M6	276	24	266	120	117.0	63.0	75	57	110	29	118	90	240	85	16

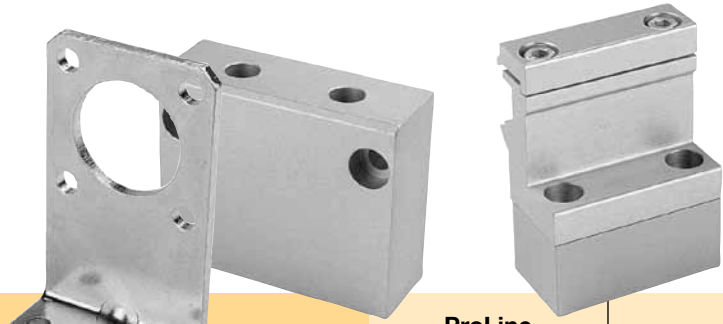
ProLine Dimensions — with OSPE..SB/ST (mm)







Model #	A	B	J	M	Z	AA	BB	DD	CF	EC	EE	EG	FF	FS	FT	GG	JJ	ZZ
PL 25	100	22.0	117	40.5	M6	154	144	60	72.5	32.5	53	39	64	23	74	50	120	12
PL 32	125	25.5	152	49.0	M6	197	187	80	91.0	42.0	62	48	84	25	88	64	160	12
PL 50	175	33.0	200	62.0	M6	276	266	120	117	63.0	75	57	110	29	118	90	240	16

Linear Guide Options

PowerSlide and ProLine End Cap and Profile Mountings



			ProLine			PowerSlide						
			25	32	50	25/25	25/35	25/44	32/35	32/44	50/60	50/76
End Cap Mounting		Standard Type A1	•	•		•	•	•	•	•		
		Reinforced Type B4	•	•		•	•	•	•	•		
		Block Type C4			•						•	•
Profile Mounting		Narrow Type D1	•	•	•	•	•	•	•	•	•	•
		Wide Type E1	•	•	•	•	•	•	•	•	•	•
		Wide Type E4	•	•	•	•	•	•	•	•	•	•

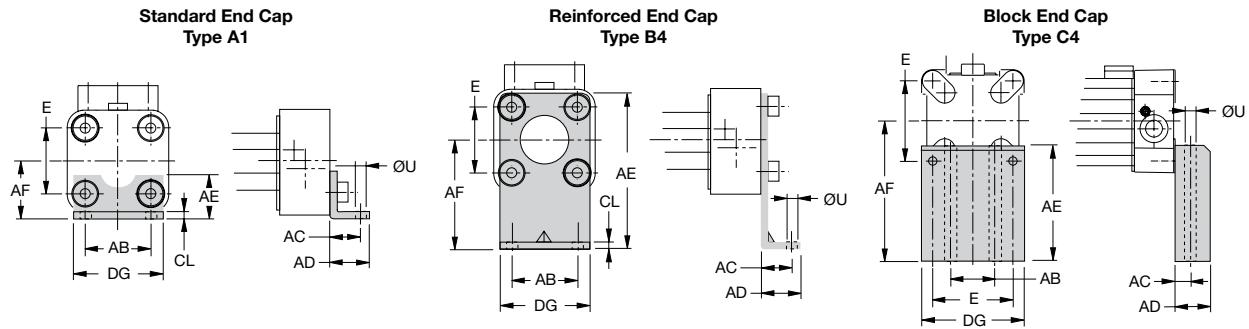
• Mounting position any side • Mounting position carriage side only (3 or 9 o'clock position) • Mounting position carriage top only (12 o'clock position)

Ordering Information

OSPE Bore Size	End Cap Mount* Order Number			Profile Mount* Order Number		
	Type A1	Type B4	Type C4	Type D1	Type E1	Type E4
25	18156FIL	18160FIL	—	20008FIL	20009FIL	20354FIL
32	18161FIL	18165FIL	—	20157FIL	20158FIL	20357FIL
50	—	—	18169FIL	20162FIL	20163FIL	20363FIL

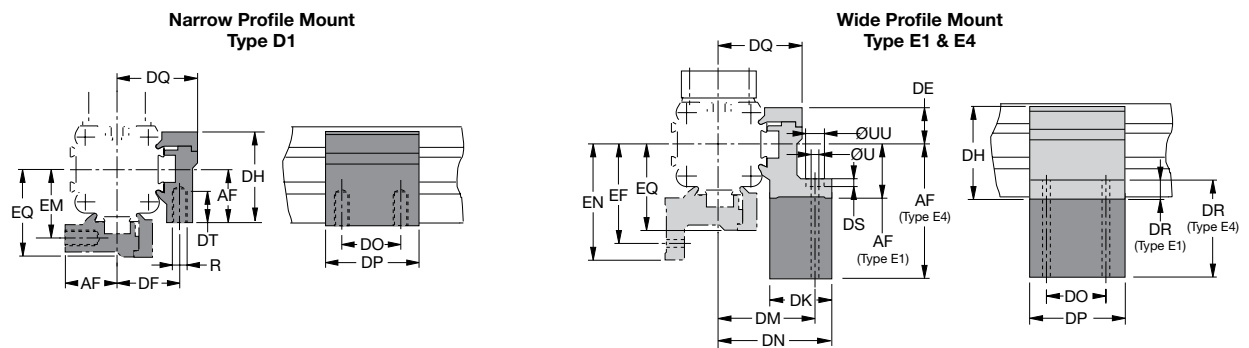
* End Cap Mounts and Profile Mounts are supplied individually

Dimensions — Linear Guide End Cap Mountings (mm)



OSPE Bore Size	AB	AC	AD	AE (by End Cap type)			AF (by End Cap type)			CL	DG	E	ØU
				A1	B4	C4	A1	B4	C4				
25	27	16.0	22	18	80	—	22	60	—	2.5	39	27	5.8
32	36	18.0	26	20	85	—	30	60	—	3.0	50	36	6.6
50	40	12.5	24	—	—	77	—	—	95	—	86	70	9.0

Dimensions — Linear Guide End Profile Mountings (mm)



OSPE Bore Size	AF (by Profile type)			DR (by Profile type)			DE	DF	DH	DK	DM	DN
	D1	E1	E4	D1	E1	E4						
25	22	22	60	—	8	46	16	27	38	26	40	47.5
32	30	30	60	—	10	40	16	33	46	27	46	54.5
50	48	48	95	—	10	57	23	40	71	34	71	67.0

OSPE Bore Size	DO	DP	DQ	DS	DT	EF	EM	EN	EQ	R	ØU	ØUU
25	36	50	34.5	5.7	10	41.5	28.5	49	36	M5	5.5	10
32	36	50	40.5	5.7	10	48.5	35.5	57	43	M5	5.5	10
50	45	60	52.0	—	11	64.0	45.0	72	57	M6	7.0	—

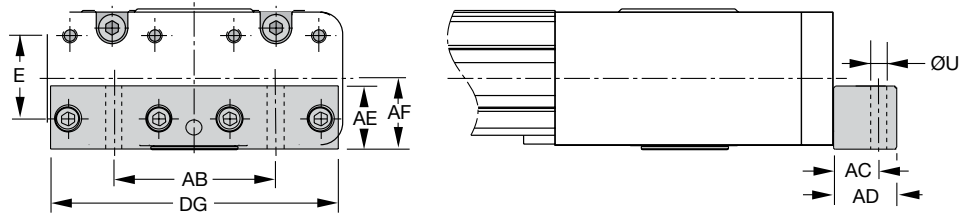
Actuator Mounting Options

Type CN End Cap Mounts (Bottom Mounted Block)



Type CN Order Instructions

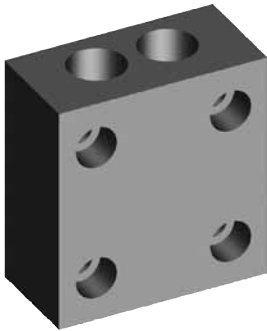
OSPE Compatible	Type CN Order No.*	Weight* (kg)
OSPE20BHD	16213FIL	
OSPE25BHD	12266FIL	
OSPE32BHD	12267FIL	
OSPE50BHD	12268FIL	



Type CN Dimensions – mm

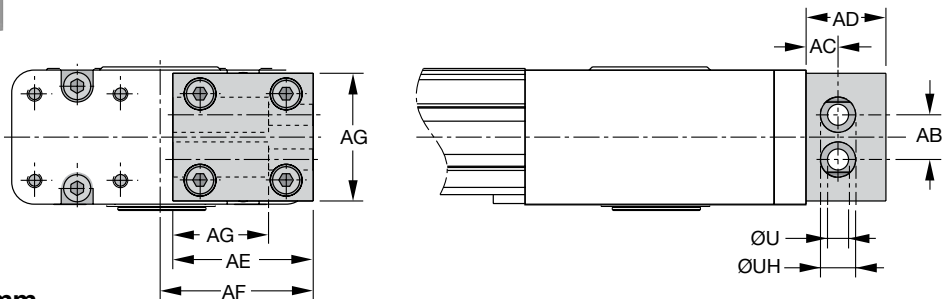
Model-Size	AB	AC	AD	AE	AF	AG	DG	E	U
OSPE20BHD	40	10.0	20	20	22	—	74	27	6.6
OSPE25BHD	52	16.0	25	25	22	—	91	27	6.6
OSPE32BHD	64	18.0	25	25	30	—	114	36	9.0
OSPE50BHD	48	12.5	30	30	48	128	174	70	9.0

Type CO End Cap Mounts (Side Mounted Block)



Type CO Order Instructions

OSPE Compatible	Type CO Order No.*	Weight* (kg)
OSPE20BHD	16241FIL	
OSPE25BHD	16245FIL	
OSPE32BHD	16246FIL	
OSPE50BHD	16247FIL	



Type CO Dimensions – mm

Model-Size	AB	AC	AD	AE	AF	AG	DG	U	UH
OSPE20BHD	18	15	22	42	45	39	40	6.6	11
OSPE25BHD	14	10	25	44	48	30	40	6.6	11
OSPE32BHD	19	12	28	60	62	42	56	9.0	15
OSPE50BHD	45	16	32	90	92	50	87	9.0	15

Type A1 End Cap Mounts (Standard)



Type CO Order Instructions

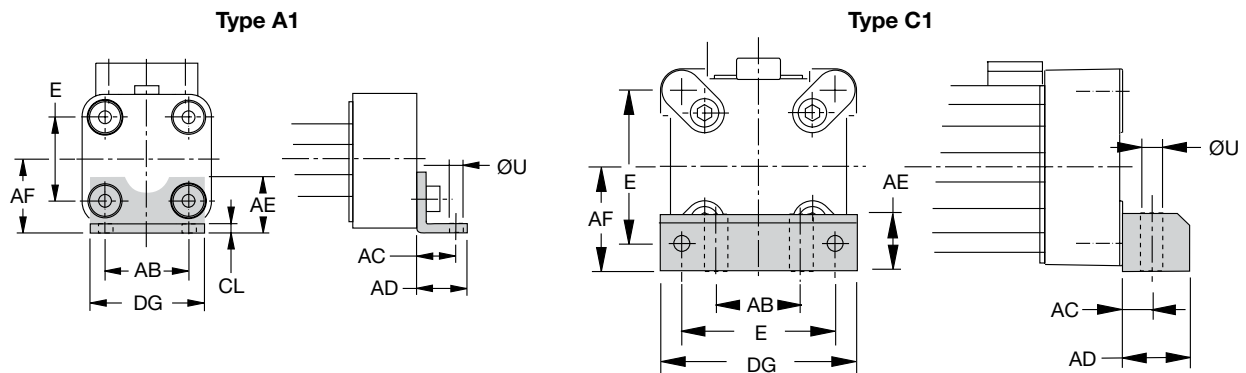
OSPE Compatible	Type A1 Order No.*	Weight* (kg)
OSPE25B/SB/ST	18156FIL	
OSPE32B/SB/ST	18161FIL	
OSPE50B/SB/ST	—	

Type C1 End Cap Mounts (Block)



Type CO Order Instructions

OSPE Compatible	Type C1 Order No.*	Weight* (kg)
OSPE25B/SB/ST	—	
OSPE32B/SB/ST	—	
OSPE50B/SB/ST	18166FIL	

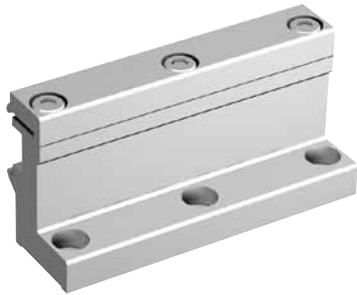


Type A1 and C1 Dimensions – mm

Model-Size	AB	AC	AD	AE	AF	CL	DG	E	U
OSPE25B/SB/ST	27	16.0	22	18	22	2.5	39	27	5.8
OSPE32B/SB/ST	36	18.0	26	20	30	3.0	50	36	6.6
OSPE50B/SB/ST	40	12.5	24	30	48	—	86	70	9.0

Actuator Mounting Options

Type MAE Profile Mounts (with 3 through holes)



Type MAE Order Instructions

OSPE Bore Size	Type MAE Order No.*			Weight* (kg)
	OSPE..BHD	OSPE..B	OSPE..SB/ST	
20	12278FIL	—	—	0.3
25	12278FIL	12278FIL	12278FIL	0.3
32	12279FIL	12279FIL	12279FIL	0.4
50	12280FIL	12280FIL	12280FIL	0.8

Type D1 Profile Mounts (with internal threads)



Type D1 Order Instructions

OSPE Bore Size	Type D1 Order No.*			Weight* (kg)
	OSPE..BHD	OSPE..B	OSPE..SB/ST	
20	20008FIL	—	—	
25	20008FIL	20008FIL	20008FIL	
32	20157FIL	20157FIL	20157FIL	
50	15534FIL	20162FIL	20162FIL	

Type E1 Profile Mounts (with 2 through holes)



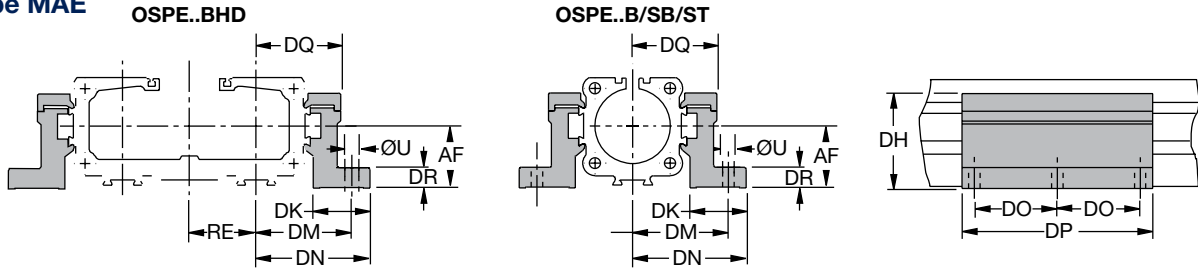
Type D1 Order Instructions

OSPE Bore Size	Type E1 Order No.*			Weight* (kg)
	OSPE..BHD	OSPE..B	OSPE..SB/ST	
20	20009FIL	—	—	
25	20009FIL	20009FIL	20009FIL	
32	20158FIL	20158FIL	20158FIL	
50	15536FIL	20163FIL	20163FIL	

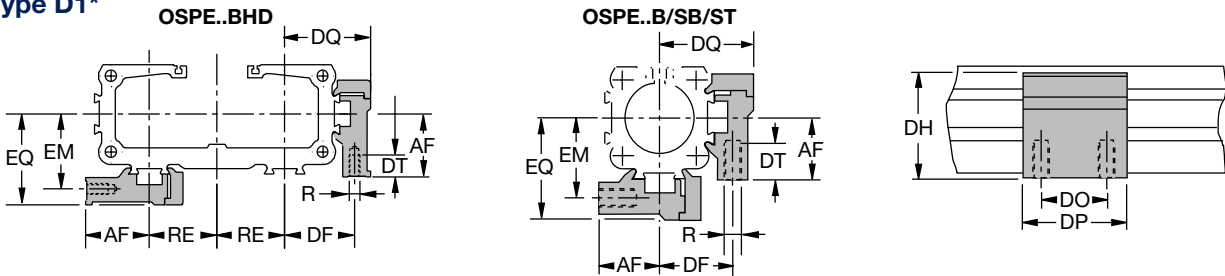
* MAE mountings are supplied as a pair, Order No. and Weight are for two MAE mountings;
D1 and E1 mountings are supplied individually, Order No. and Weight are for one D1 or E1 mounting.

Dimensions — mm

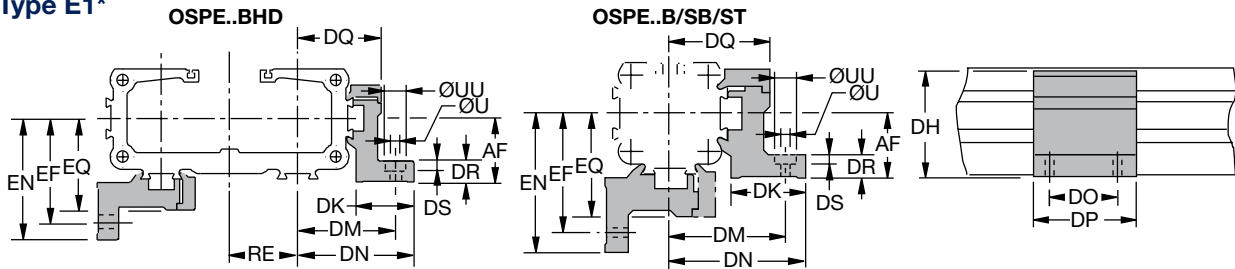
Type MAE



Type D1*



Type E1*



Type MAE, D1 and E1 Dimensions – mm

Bore Size	DF							DO		DP		DQ	DR	DS	DT
	AF	MAE	D1/E1	DH	DK	DM	DN	MAE	D1/E1	MAE	D1/E1				
20	22	27	20.5	38	26	33.5	41.0	40	36	92	50	28.0	8	5.7	10
25	22	27	27.0	38	26	40.0	47.5	40	36	92	50	34.5	8	5.7	10
32	30	33	33.0	46	27	46.0	54.5	40	36	92	50	40.5	10	5.7	10
50	48	40	40.0	71	34	59.0	67.0	45	45	112	60	52.0	10	—	11

Bore Size	EM		EN		EQ		R	RE	U	UU	
	EF	MAE	D1/E1	MAE	D1/E1	MAE					D1/E1
20	41.5	28.5	28.1	49	48.6	36	35.6	M5	23	5.5	10
25	41.5	28.5	28.5	49	49.0	36	36.0	M5	26	5.5	10
32	48.5	35.5	35.5	57	57.0	43	43.0	M5	32	5.5	10
50	64.0	45.0	45.0	72	72.0	57	57.0	M6	44	7.0	—

*Note on Types D1 and E1:

The profile mounting can also be mounted on the underside of the actuator, in which case its distance from the center of the actuator is different.

EM Sales Offices

Australia

Parker Hannifin (Australia) Pty Ltd.
9 Carrington Road
Castle Hill NSW 2154
Australia
Tel: +61 (0) 2 9634-7777
Fax: +61 (0) 2 9634 3749

Brazil

Parker Hannifin Ind. Com Ltda.
Av. Lucas Nogueira Garcez 2181
Esperança
12325-900 Jacareí, SP
Tel: 12 3954 5100
Fax: 12 3954 5262
Email: automation.brazil@parker.com

Canada

Parker Hannifin (Canada) Inc.
160 Chisholm Dr
Milton, Ontario L9T 3G9
Tel: 905-693-3000
Fax: 905-876-1958
Email: miltoncustservice@parker.com

China

Parker Hannifin Motion & Control
(Shanghai) Co., Ltd
280 Yunqiao Rd. Jin Qiao Export
Processing Zone
Shanghai 201206, China
Tel: (86-21) 50312525
Fax: (86-21) 64459717

France

Parker SSD Parvex
8 avenue du Lac
B.P. 249
F-21007 Dijon Cedex
Tel: +33 (0) 3 80 42 41 40
Fax: +33 (0) 3 80 42 41 23

Germany

Electricmechanical Europe
Parker Hannifin GmbH & Co KG
Robert-Bosch-Strasse 22
D-77656 Offenburg
Germany
Tel: +49 (0) 781 509 0
Fax: +49 (0) 781 509 98176

India

Parker Hannifin India Pvt. Ltd
Automation Group-SSD Drives Div.
133 & 151 Developed Plots Estate
Perungudi, Chennai 600 096
Tel: 044-4391-0799
Fax: 044-4391-0700

Italy

Parker Hannifin SpA
Via Gounod 1
20092 Cinsello Balsamo
Milano, Italy
Tel: +39 02 361081
Fax: +39 02 36108400

Korea

Parker Hannifin Korea
9th Floor KAMCO Yangjae Tower
949-3 Dogok 1-dong Gangnam-gu
Seoul 135-860, Korea
Tel: 82-2-559-0454
Fax: 82-2-556-8187

Mexico

Parker Hannifin de Mexico
Eje uno Norte No.100
Parque Industrial Toluca 2000
Toluca, CP 50100 México
Tel: 52-722-275-4200
Fax: 52-722-279-0316

Singapore

Parker Hannifin Singapore Pte Ltd
11, Fourth Chin Bee Road
Singapore 619702
Tel: (65) 6887 6300
Fax: (65) 6265 5125/6261 4929

Taiwan

Parker Hannifin Taiwan Co., Ltd
No. 40, Wuchiuan 3rd Road
Wuku Industrial Park
Taipei County, Taiwan 248
ROC
Tel: 886 2 2298 8987
Fax: 886 2 2298 8982

Thailand

Parker Hannifin (Thailand) Co., Ltd.
1265 Rama 9 Road
Suanluang, Bangkok 10250
Thailand
Tel: (66) 2 186 7000
Fax: (66) 2 374 1645

UK

Parker Hannifin Ltd.
Tachbrook Park Drive
Tachbrook Park
Warwick CV34 6TU
Tel: +44 (0) 1926 317970
Fax: +44 (0) 1926 317980

USA

Parker Hannifin Electricmechanical
Automation Division Main Office/
Compumotor/CTC
5500 Business Park Drive
Rohnert Park, CA 94928 USA
Tel: 707-584-7558
800-358-9070
Fax: 707-584-8015
Email: emn_support@parker.com

Parker Hannifin Electricmechanical
Automation Division/Daedal
1140 Sandy Hill Road
Irwin, PA 15642
Tel: 724-861-8200
800-245-6903
Fax: 724-861-3330
Email: ddldcat@parker.com

