

CÔNG TY CỔ PHẦN CÔNG NGHỆ HỢP LONG



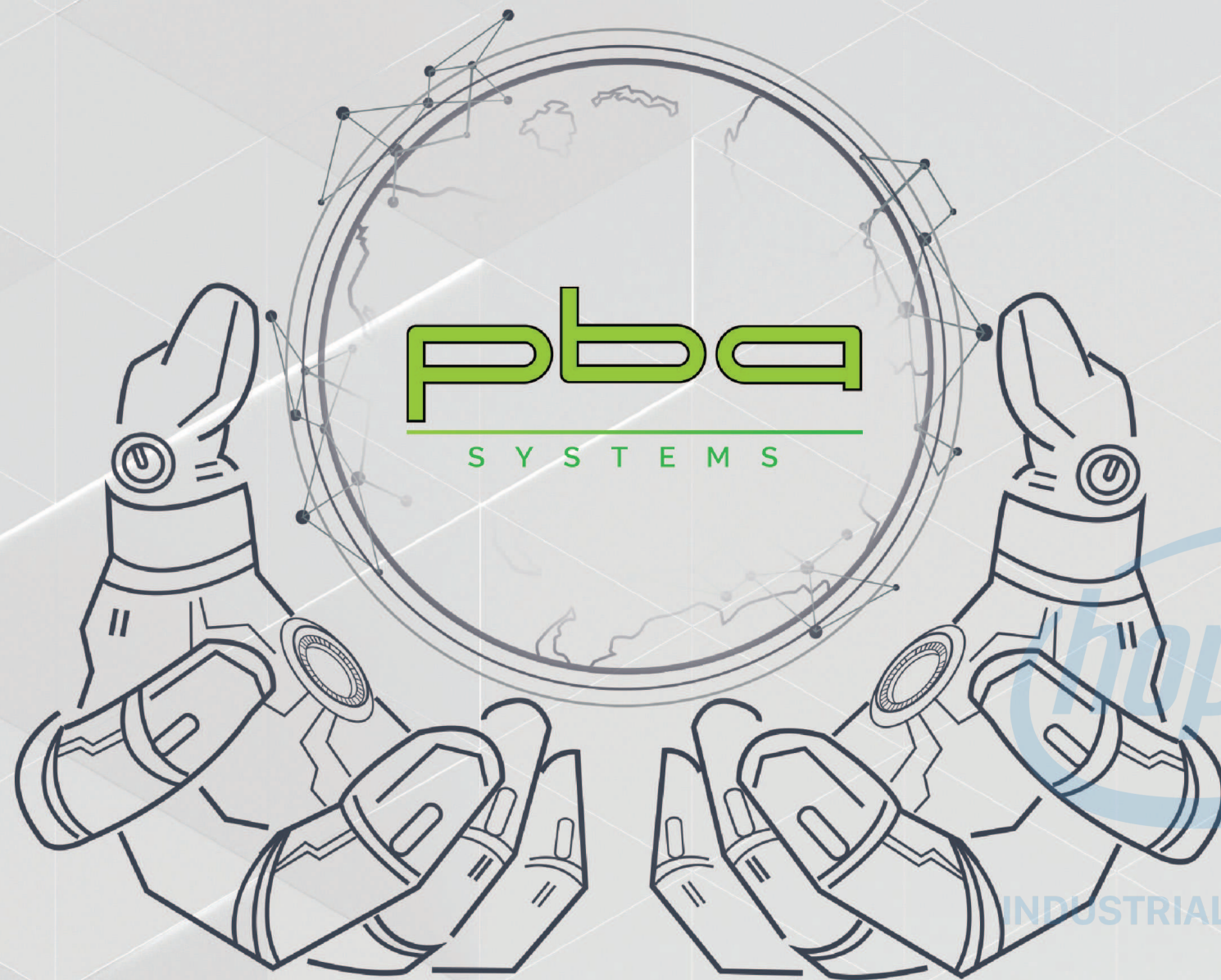
S Y S T E M S
INDUSTRIAL AUTOMATION

PLA SERIES LINEAR ACTUATOR

Product Catalogue

VERSION 1.0

Hotline: 1900.6536 - Website: HOPLONGTECH.COM



COMPANY OVERVIEW

PBA Systems constantly aims for technological breakthroughs and innovations in precision robotics. Our deep knowledge and expertise lie in design and manufacturing of proprietary direct drive motors, stages, motion control and precision systems - delivering solutions for different automation requirements.

A one-stop solution provider, PBA Systems also provides automation/motion control & mechanical components. With more than three decades of track record in the industry, PBA Systems has built a highly skilled team of sales engineers & product specialists in order to provide our customers with the best support. PBA Systems offers mechanical precision components such as bearing solutions, linear systems & other OEM equivalent parts. Our well-established global network enables us to price our products at competitive rates.

PBA Systems is an ISO 9001:2015 certified company (Cert No. 2016-1-0962), and a member of PBA Group of Companies - a Robotics and Automation enabler in Southeast Asia. PBA Group (PBA: Platform for Bots and Automation) focuses on developing our core technology - building robotics products and offering turnkey automation solutions to help businesses scale up with Industry 4.0 (I4.0) technology.

www.pbasystems.com.sg

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For enquiries, please email us at sales@pbasystems.com.sg or call us at +65 6576 6766



PLA SERIES PRECISION LINEAR ACTUATOR

PLA SERIES

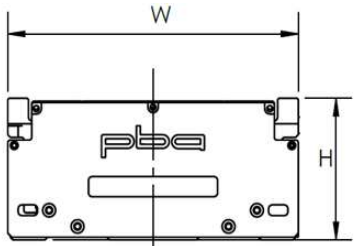
PRECISION LINEAR ACTUATOR



PLA140-PIX150B-050 Ironcore Linear Motor	05
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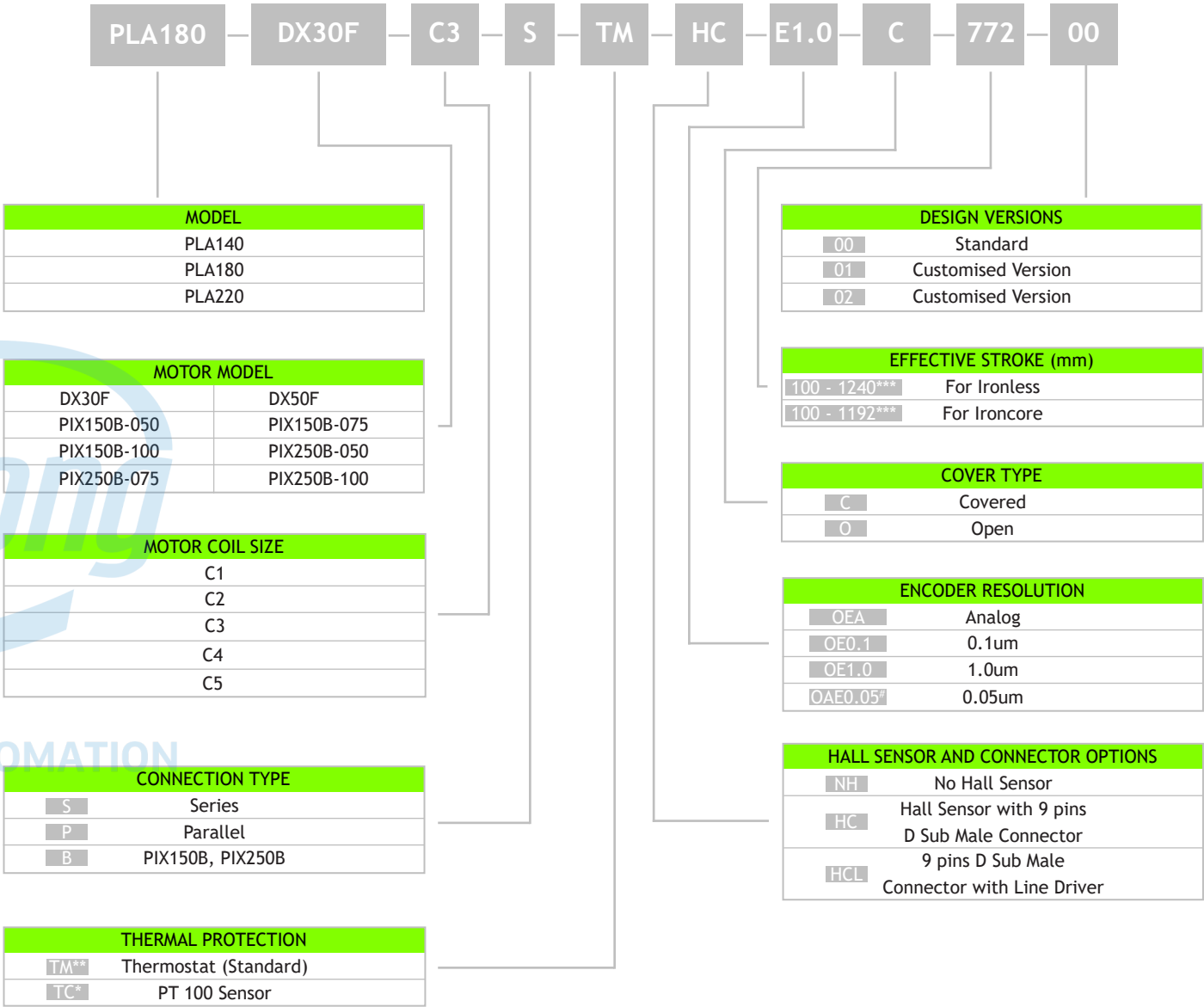
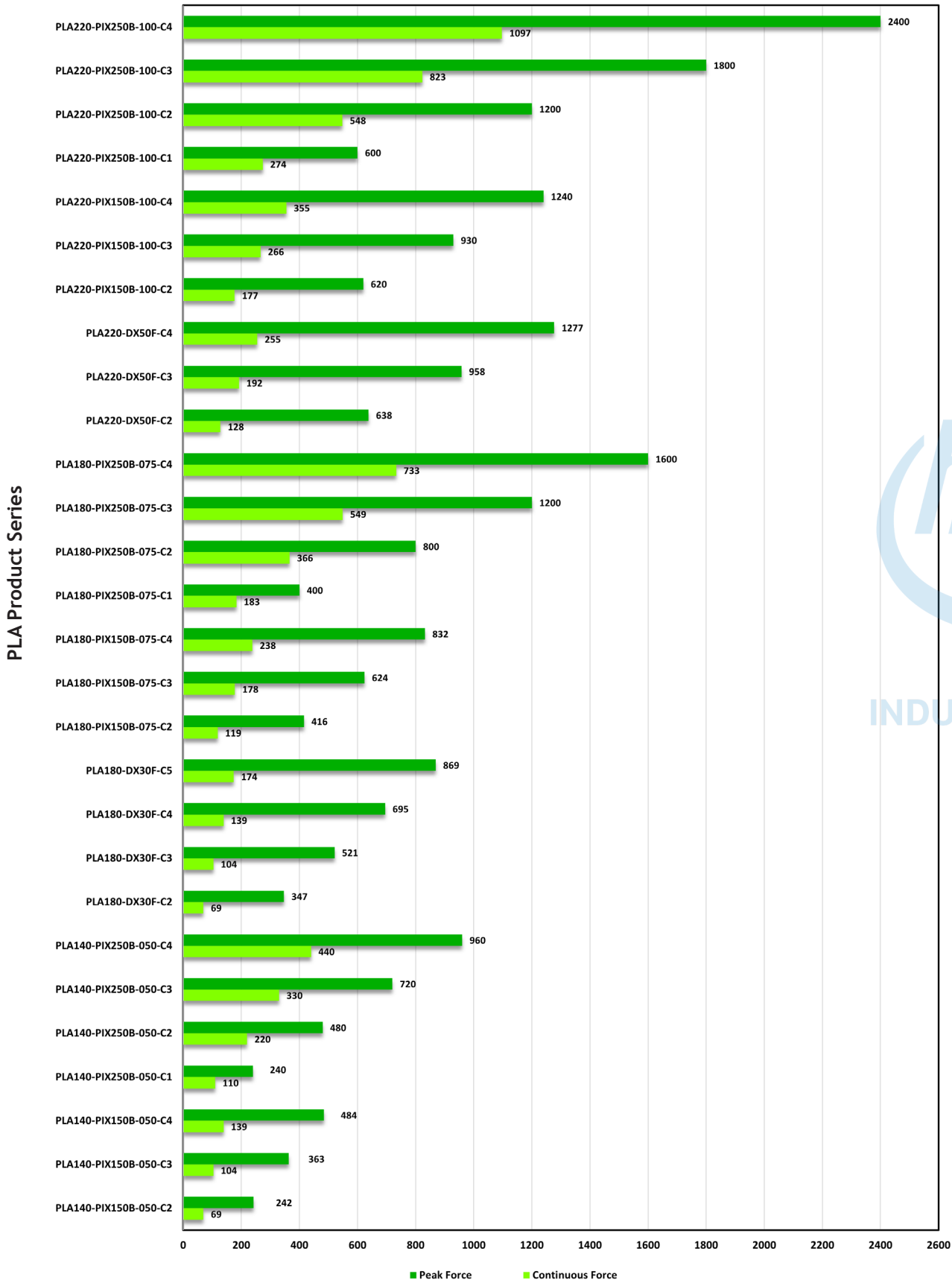
PLA Series - Specification table

Model	Motor Series	Motor Coil	Effective Stroke (mm)	Continuous Force (N)	Peak Force (N)	Actuator Dimensions W x H (mm)
PLA140	Ironcore Linear Motor PIX150B	PIX150B-050-C2	100 - 1192 (In increment of 84mm)	69	242	140 X 74
		PIX150B-050-C3		104	363	
		PIX150B-050-C4		139	484	
	Ironcore Linear Motor PIX250B	PIX250B-050-C1	100 - 1192 (In increment of 84mm)	110	240	140 X 101
		PIX250B-050-C2		220	480	
		PIX250B-050-C3		330	720	
PLA180	Ironless Linear Motor DX30F	PIX250B-050-C4	100 - 1192 (In increment of 84mm)	440	960	140 X 101
		DX30F-C2		69	347	
		DX30F-C3		104	521	
		DX30F-C4		139	695	
	Ironless Linear Motor DX30F	DX30F-C5	100 - 1240 (In increment of 60mm)	174	869	180 X 81
		PIX150B-075-C2		119	416	
		PIX150B-075-C3		178	624	
		PIX150B-075-C4		238	832	
	Ironcore Linear Motor PIX250B	PIX250B-075-C1	100 - 1192 (In increment of 84mm)	183	400	180 X 108
		PIX250B-075-C2		366	800	
		PIX250B-075-C3		549	1200	
		PIX250B-075-C4		733	1600	
PLA220	Ironless Linear Motor DX50F	DX50F-C2	100 - 1240 (In increment of 60mm)	128	638	225 X 91.7
		DX50F-C3		192	958	
		DX50F-C4		255	1277	
	Ironcore Linear Motor PIX150B	PIX150B-100-C2	100 - 1192 (In increment of 84mm)	177	620	225 X 91.7
		PIX150B-100-C3		266	930	
		PIX150B-100-C4		355	1240	
	Ironcore Linear Motor PIX250B	PIX250B-100-C1	100 - 1192 (In increment of 84mm)	274	600	225 X 105
		PIX250B-100-C2		548	1200	
		PIX250B-100-C3		823	1800	
		PIX250B-100-C4		1097	2400	



Note: Continuous force is measured under natural convection, refer to the detail parameters table for more information

Force Chart For PLA Series Actuator



* TC - Sensor output to temperature controller
** TM - ON/Off switch, Triggers at 100 C
*** Customized Max Stroke 3500mm
#BiSS (Default), please contact PBA for other option

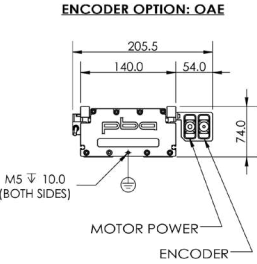
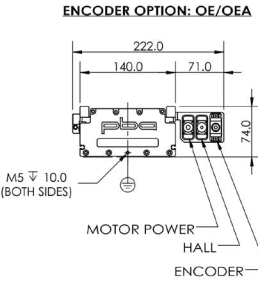
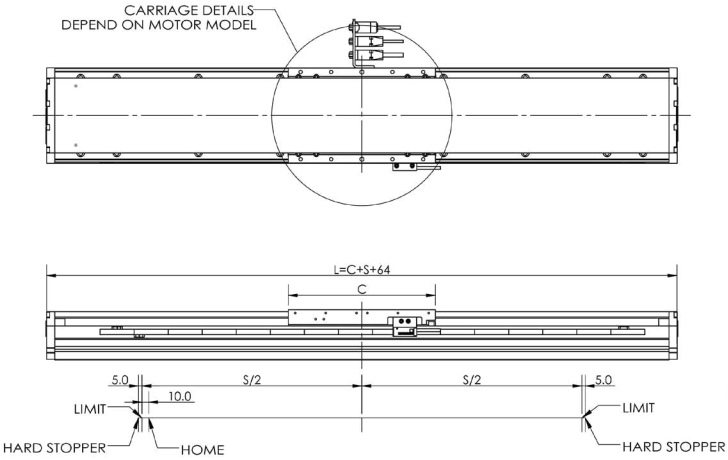
OEA - Optical Incremental Analog Encoder
OE - Optical Incremental Digital Encoder
OAE - Optical Absolute Encoder

PLA140 SERIES

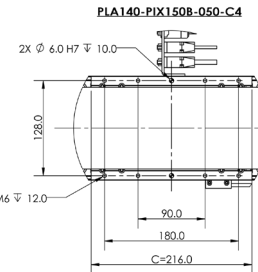
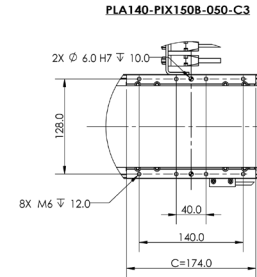
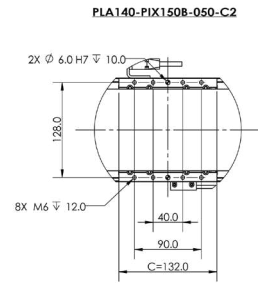
Ironcore Linear Motor

PLA140-PIX150B-050

- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 484N, Continuous force up to 139N
- Modular Hall Sensor
- Anti-Cogging Function



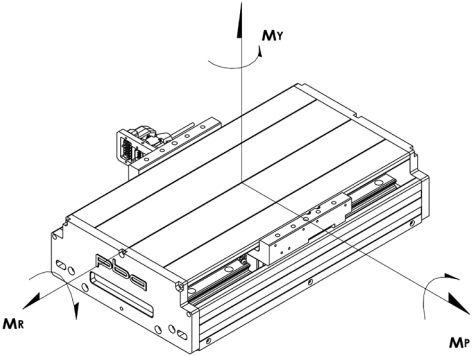
CARRIAGE DETAILS



- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

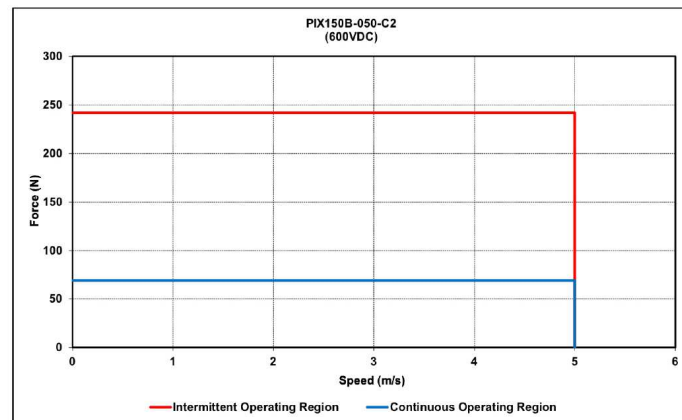
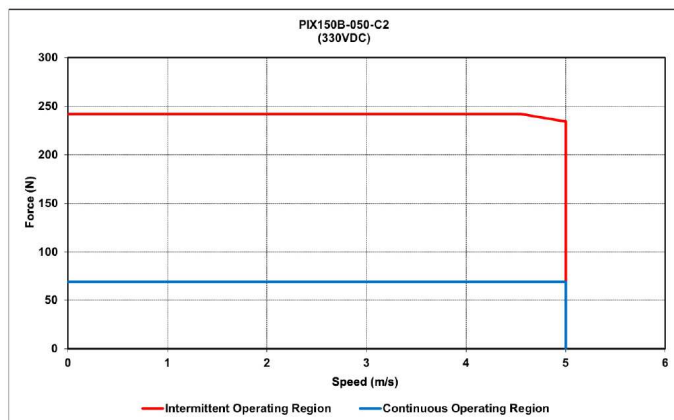
SPECIFICATION		MODEL			
Motor Series		PIX150B-050-C2	PIX150B-050-C3	PIX150B-050-C4	
Motor Specification	Unit				
Peak Force	N	242	363	484	
Continuous Force @ 100°C*	N	69	104	139	
Peak Current	A ^{pk}	12.7	12.7	25.4	
Continuous Current @ 100°C*	A ^{pk}	3.3	3.3	6.5	
Force Constant	N/A ^{pk}	21.3	32.0	21.3	
Back EMF Constant	V ^{pk} /m/s	24.6	36.9	24.6	
Mechanical Specification					
Effective Stroke**	mm	100 - 1192			
In increment of stroke	mm	84			
Bidirectional Repeatability	Encoder: 1um Resolution	+2			
	Encoder: 0.1um				
	Encoder: Analog	+1			
	Absolute Encoder 0.05um				
Straightness	um	2um/100mm			
Flatness	um	4um/100mm			
Moving Mass without Payload	kg	1.9	2.3	2.7	
Rated Payload***	kg	10.0	20.0	20.0	
Static Moments					
Max Yaw Moment M _Y	Nm	60	151	205	
Max Roll Moment M _R	Nm	120	120	120	
Max Pitch Moment M _P	Nm	60	151	205	

- Note:
1. Apk = 1.414 * Arms; Vpk = 1.414 * Vrms
 2. All values are measured based on Single Actuator mounted on a 5µm granite table.
 3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
 4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
 5. Peak Force and Current : 4% duty ratio and 1 second duration.
 6. Motor Insulation Class : Class B (130°C).
 7. IEC Protection Class : Class 1.
 8. Compliance Standards : CE, RoHS.
 9. Ambient Operating Temperature : 0 - 40°C.
 10. Ambient Operating Humidity : 10 - 90% RH .
 11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
 12. Specifications are subjected to change without prior notice.

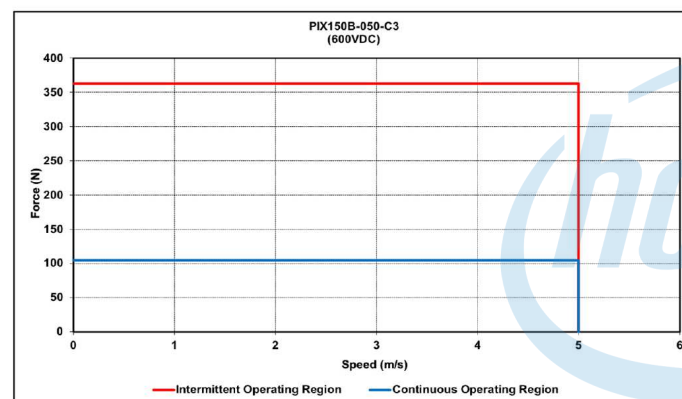
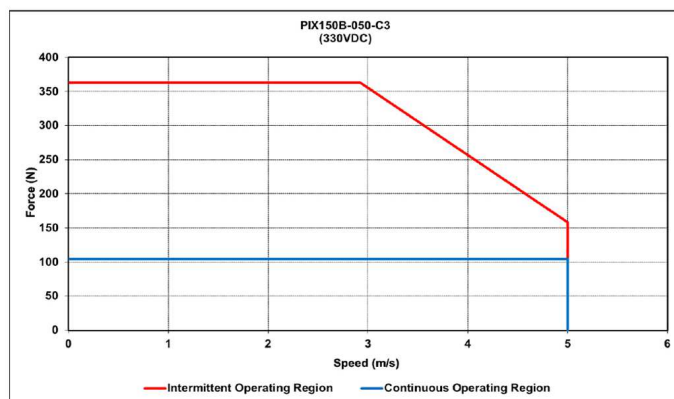


		Actuator PLA140					
Effective Stroke (S) mm		PIX150B-050-C2		PIX150B-050-C3		PIX150B-050-C4	
		Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100		296	6.0	338	6.9	380	7.9
184		380	7.0	422	7.9	464	8.9
268		464	8.0	506	8.9	548	9.9
352		548	9.0	590	9.9	632	10.8
436		632	10.0	674	10.9	716	11.8
520		716	11.0	758	11.9	800	12.8
604		800	12.0	842	12.9	884	13.8
688		884	13.0	926	13.9	968	14.8
772		968	14.0	1010	14.9	1052	15.8
856		1052	15.0	1094	15.9	1136	16.8
940		1136	15.9	1178	16.9	1220	17.8
1024		1220	16.9	1262	17.9	1304	18.8
1108		1304	17.9	1346	18.9	1388	19.8
1192		1388	18.9	1430	19.9	1472	20.8

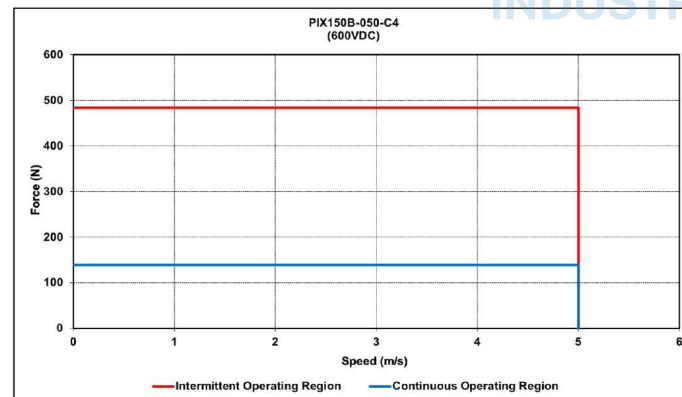
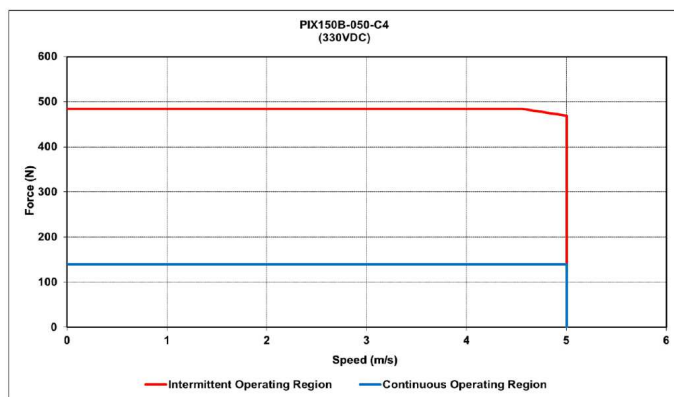
PIX150B-050-C2



PIX150B-050-C3



PIX150B-050-C4



PLA140 SERIES

Ironcore Linear Motor

PLA140-PIX250B-050

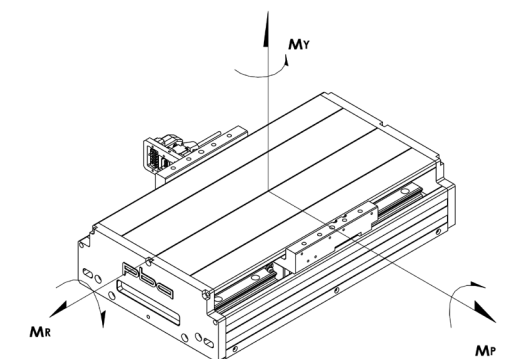
- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 960N, Continuous force up to 440N
- Modular Hall Sensor
- Anti-Cogging Function

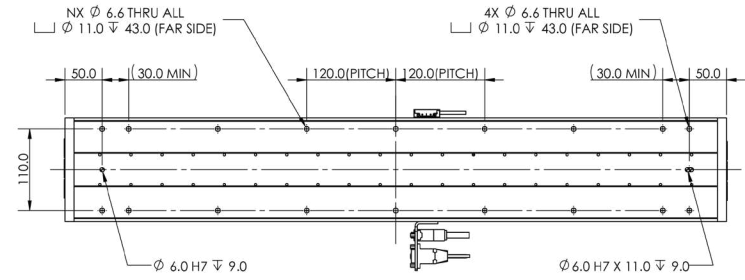
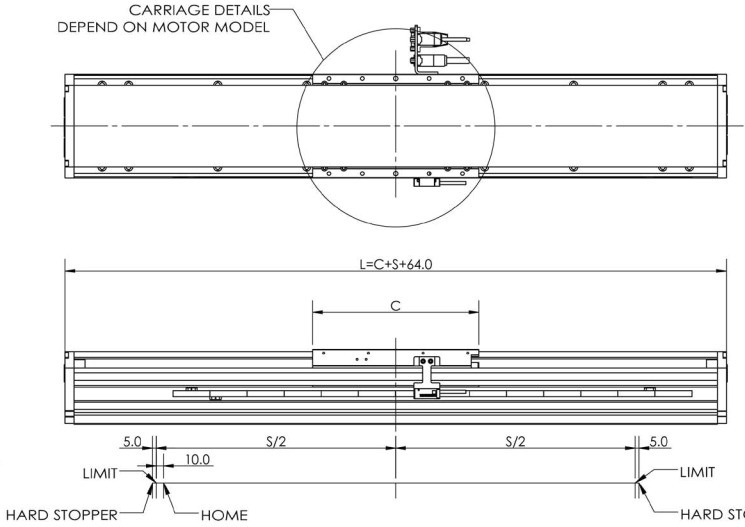


SPECIFICATION		MODEL			
		PIX250B-050-C1	PIX250B-050-C2	PIX250B-050-C3	PIX250B-050-C4
Motor Series					
Motor Specification	Unit				
Peak Force	N	240	480	720	960
Continuous Force @ 100°C*	N	110	220	330	440
Peak Current	A ^{pk}	20.4	20.4	20.4	40.7
Continuous Current @ 100°C*	A ^{pk}	6.8	6.8	6.8	13.6
Force Constant	N/A ^{pk}	16.2	32.4	48.6	32.4
Back EMF Constant	V ^{pk} /m/s	18.7	37.4	56.1	37.4
Mechanical Specification					
Effective Stroke**	mm	100 - 1192			
In increment of stroke	mm	84			
Bidirectional Repeatability	Encoder: 1um Resolution	±2			
	Encoder: 0.1um				
	Encoder: Analog				
	Absolute Encoder 0.05um	±1			
Straightness	um	2um/100mm			
Flatness	um	4um/100mm			
Moving Mass without Payload	kg	3.1	4.7	6.7	8.3
Rated Payload***	kg	10.0	20.0	20.0	30.0
Static Moments					
Max Yaw Moment M _Y	Nm	105	213	241	321
Max Roll Moment M _R	Nm	120	120	120	120
Max Pitch Moment M _P	Nm	105	213	241	321

Note:

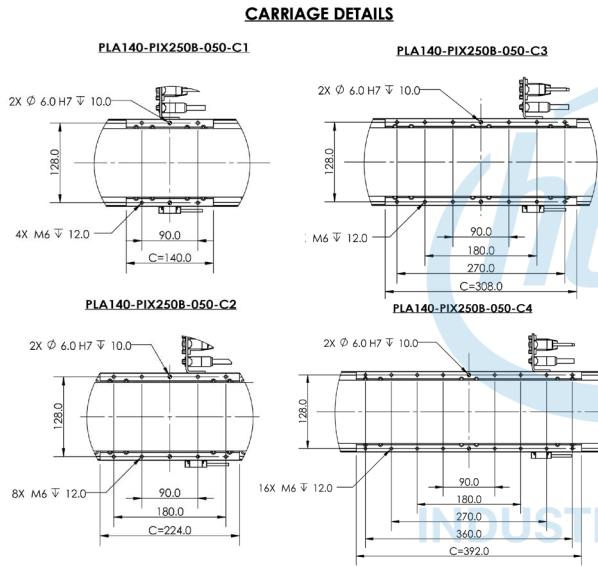
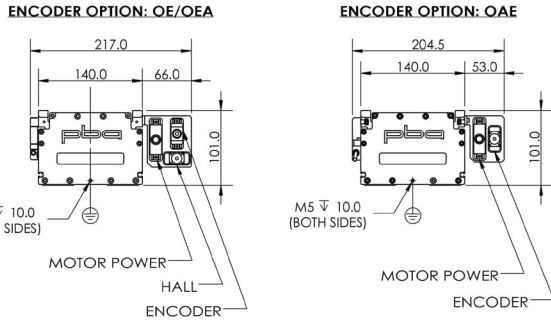
1. $A_{pk} = 1.414 \cdot Arms$; $V_{pk} = 1.414 \cdot V_{rms}$
2. All values are measured based on Single Actuator mounted on a 5μm granite table.
3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
5. Peak Force and Current : 4% duty ratio and 1 second duration.
6. Motor Insulation Class : Class B (130°C).
7. IEC Protection Class : Class 1.
8. Compliance Standards : CE, RoHS.
9. Ambient Operating Temperature : 0 - 40°C.
10. Ambient Operating Humidity : 10 - 90% RH .
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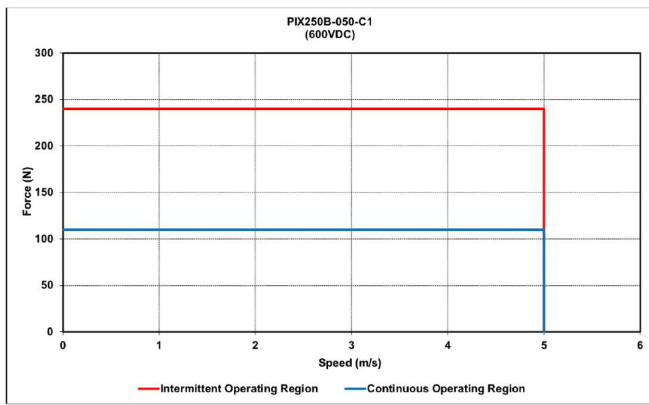
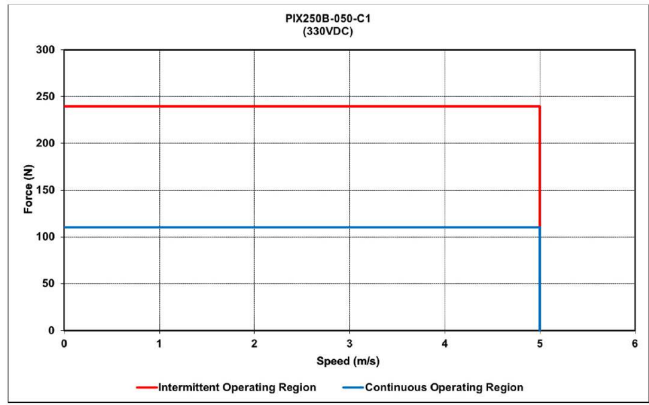


- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

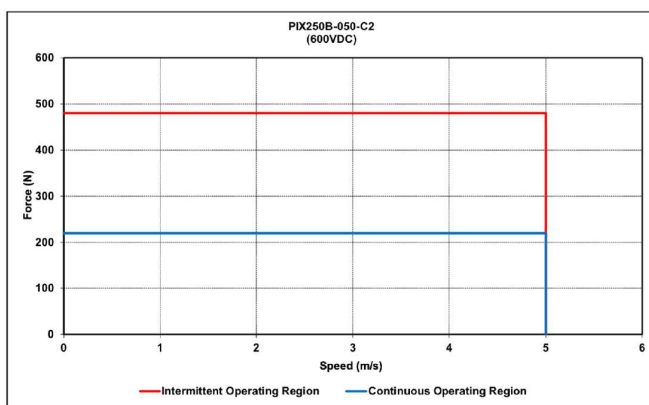
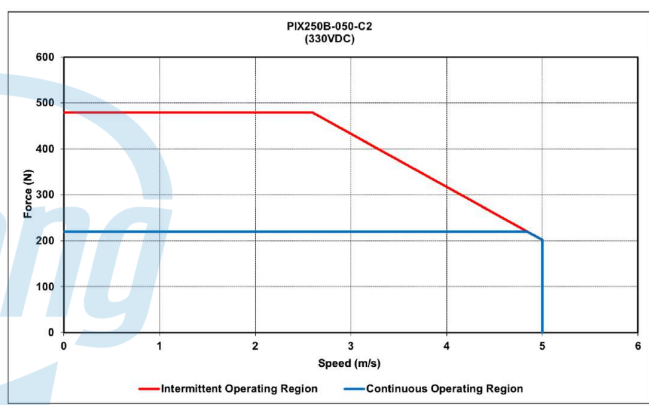
Actuator PLA140								
Effective Stroke (S) mm	PIX250B-050-C1		PIX250B-050-C2		PIX250B-050-C3		PIX250B-050-C4	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	304	7.4	388	10.1	472	13.0	556	15.6
184	388	8.4	472	11.1	556	14.0	640	16.6
268	472	9.4	556	12.0	640	14.9	724	17.6
352	556	10.4	640	13.0	724	15.9	808	18.5
436	640	11.4	724	14.0	808	16.9	892	19.5
520	724	12.4	808	15.0	892	17.9	976	20.5
604	808	13.4	892	16.0	976	18.9	1060	21.5
688	892	14.4	976	17.0	1060	19.9	1144	22.5
772	976	15.3	1060	18.0	1144	20.9	1228	23.5
856	1060	16.3	1144	19.0	1228	21.8	1312	24.5
940	1144	17.3	1228	19.9	1312	22.8	1396	25.4
1024	1228	18.3	1312	20.9	1396	23.8	1480	26.4
1108	1312	19.3	1396	21.9	1480	24.8	1564	27.4
1192	1396	20.3	1480	22.9	1564	25.8	1648	28.4



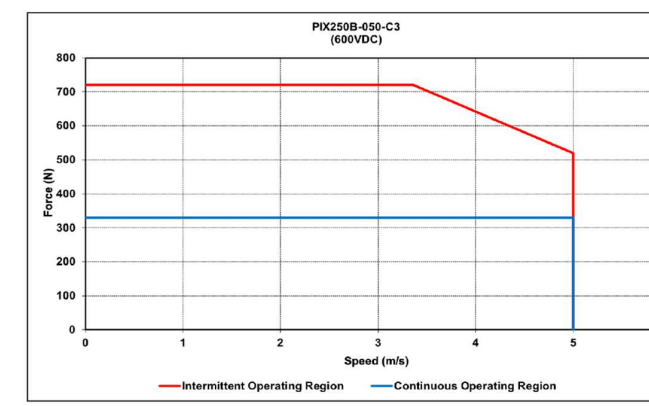
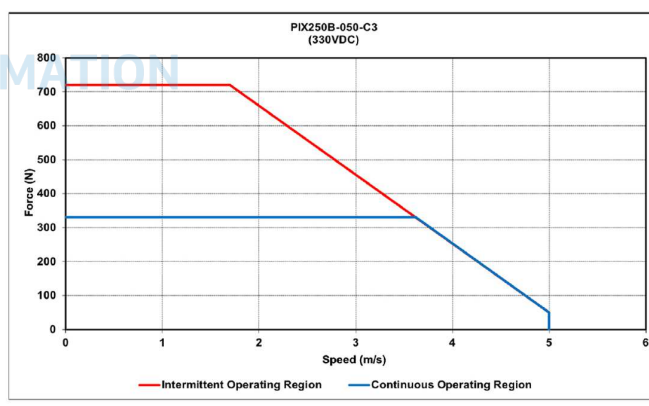
PIX250B-050-C1



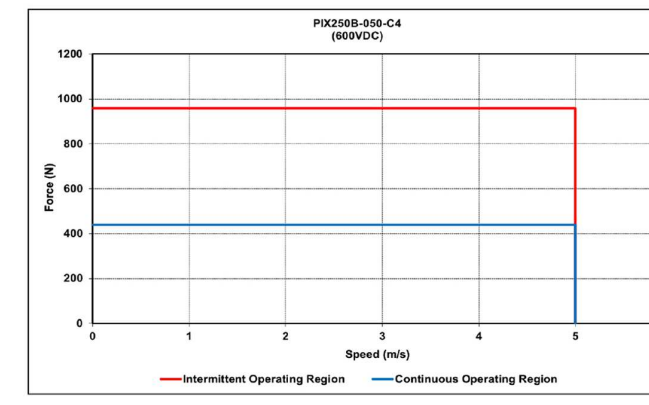
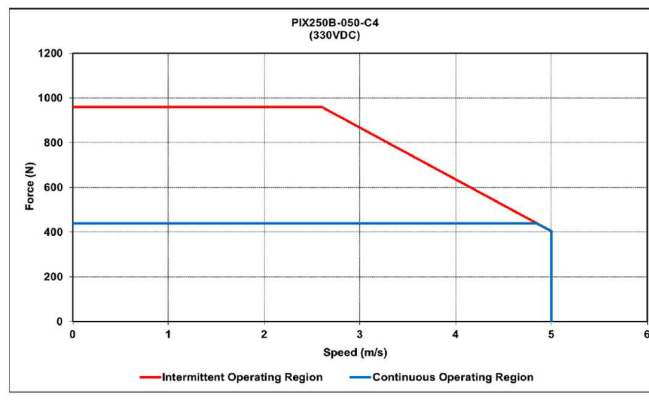
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PIX250B-050-C3



PIX250B-050-C4

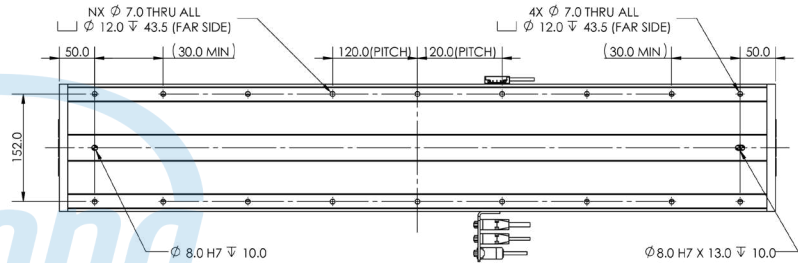
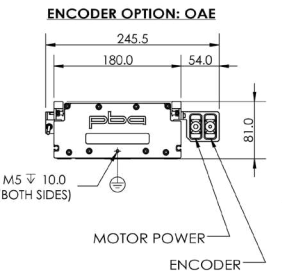
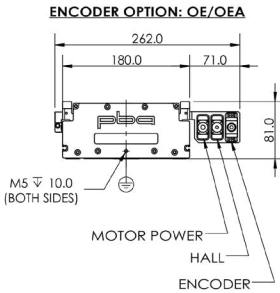
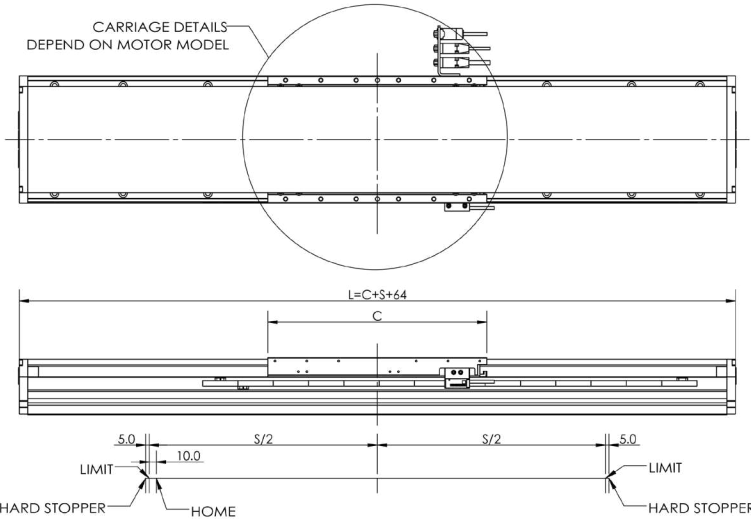


PLA180 SERIES

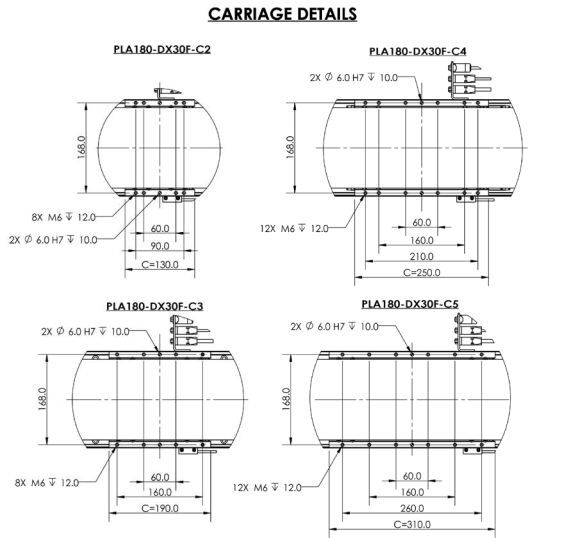
Ironless Linear Motor

PLA180-DX30F

- Max Stroke - 1240mm
- Max Speed - 5 m/s
- Peak force up to 869N, Continuous force up to 174N
- Modular Hall Sensor
- Low Velocity Ripple

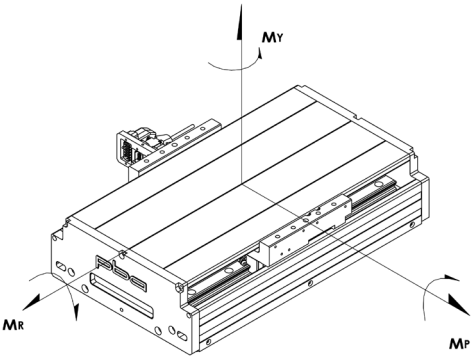


- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR



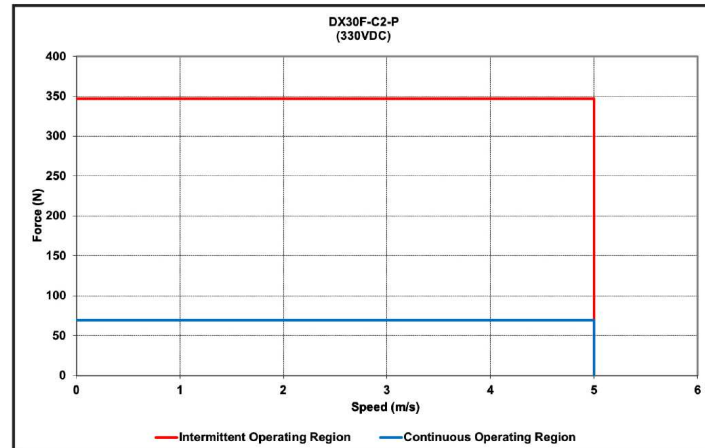
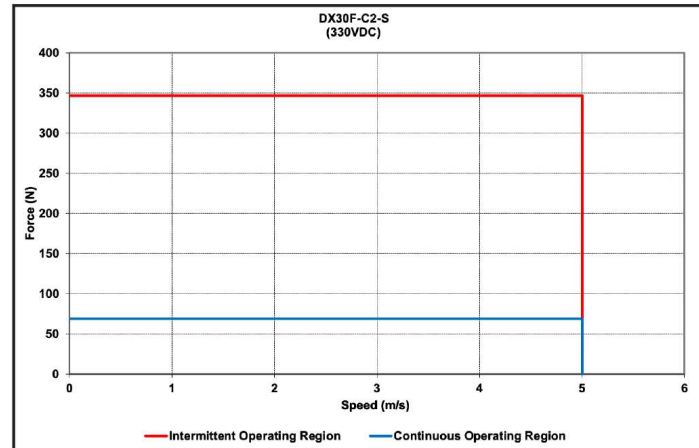
SPECIFICATION			MODEL								
Motor Series			DX30F-C2		DX30F-C3		DX30F-C4		DX30F-C5		
			S	P	S	P	S	P	S	P	
Motor Specification			Unit								
Peak Force			N	347	347	521	521	695	695	869	869
Continuous Force @ 100°C*			N	69	69	104	104	139	139	174	174
Peak Current			A _{pk}	14.13	28.25	14.13	28.25	14.13	28.25	14.13	28.25
Continuous Current @ 100°C*			A _{pk}	2.83	5.65	2.83	5.65	2.83	5.65	2.83	5.65
Force Constant			N/A _{pk}	24.6	12.3	36.9	18.5	49.2	24.6	61.5	30.8
Back EMF Constant			V _{pk} /m/s	28.3	14.1	42.4	21.2	56.6	28.3	70.7	35.4
Mechanical Specification											
Effective Stroke**			mm	100 - 1240							
In increment of stroke			mm	60							
Bidirectional Repeatability	Encoder: 1um Resolution		um	±2							
	Encoder: 0.1um			±1							
	Encoder: Analog										
	Absolute Encoder 0.05um										
Straightness			um	2um/100mm							
Flatness			um	4um/100mm							
Moving Mass without Payload			kg	2.0		2.6		3.3		3.9	
Rated Payload***			kg	10.0		15.0		20.0		30.0	
Static Moments											
Max Yaw Moment M _Y			Nm	87		164		241		318	
Max Roll Moment M _R			Nm	171		171		171		171	
Max Pitch Moment M _P			Nm	87		164		241		318	

- Note:
1. A_{pk} = 1.414 * A_{rms}; V_{pk} = 1.414 * V_{rms}
 2. All values are measured based on Single Actuator mounted on a 5µm granite table.
 3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
 4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
 5. Peak Force and Current : 4% duty ratio and 1 second duration.
 6. Motor Insulation Class : Class B (130 °C).
 7. IEC Protection Class : Class 1.
 8. Compliance Standards : CE, RoHS.
 9. Ambient Operating Temperature : 0 - 40 °C.
 10. Ambient Operating Humidity : 10 - 90% RH .
 11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
 12. Specifications are subjected to change without prior notice.

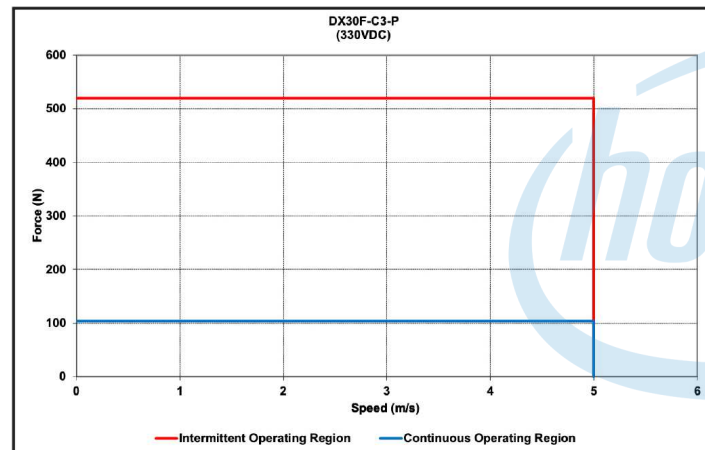
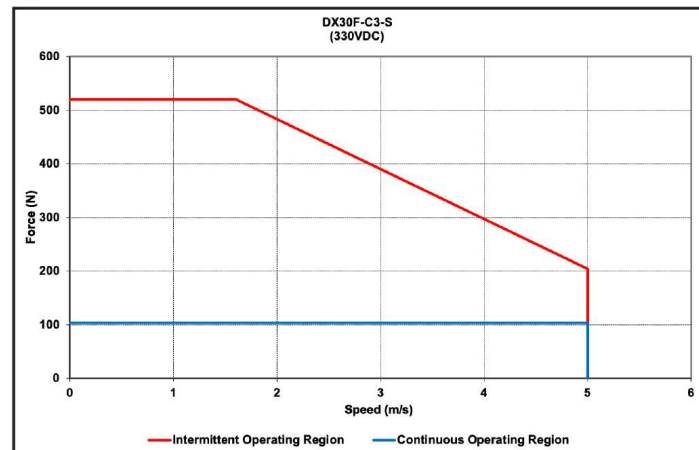


Actuator PLA180								
Effective Stroke (S) mm	DX30F-C2		DX30F-C3		DX30F-C4		DX30F-C5	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	294	8.6	354	10.4	414	12.3	474	14.2
160	354	9.8	414	11.7	474	13.6	534	15.4
220	414	11.1	474	12.9	534	14.8	594	16.7
280	474	12.3	534	14.2	594	16.0	654	17.9
340	534	13.6	594	15.4	654	17.3	714	19.2
400	594	14.8	654	16.6	714	18.5	774	20.4
460	654	16.0	714	17.9	774	19.8	834	21.6
520	714	17.3	774	19.1	834	21.0	894	22.9
580	774	18.5	834	20.4	894	22.3	954	24.1
640	834	19.8	894	21.6	954	23.5	1014	25.4
700	894	21.0	954	22.8	1014	24.7	1074	26.6
760	954	22.3	1014	24.1	1074	26.0	1134	27.8
820	1014	23.5	1074	25.3	1134	27.2	1194	29.1
880	1074	24.7	1134	26.6	1194	28.5	1254	30.3
940	1134	26.0	1194	27.8	1254	29.7	1314	31.6
1000	1194	27.2	1254	29.1	1314	31.0	1374	32.8
1060	1254	28.5	1314	30.3	1374	32.2	1434	34.1
1120	1314	29.7	1374	31.5	1434	33.4	1494	35.3
1180	1374	31.0	1434	32.8	1494	34.7	1554	36.5
1240	1434	32.2	1494	34.0	1554	35.9	1614	37.8

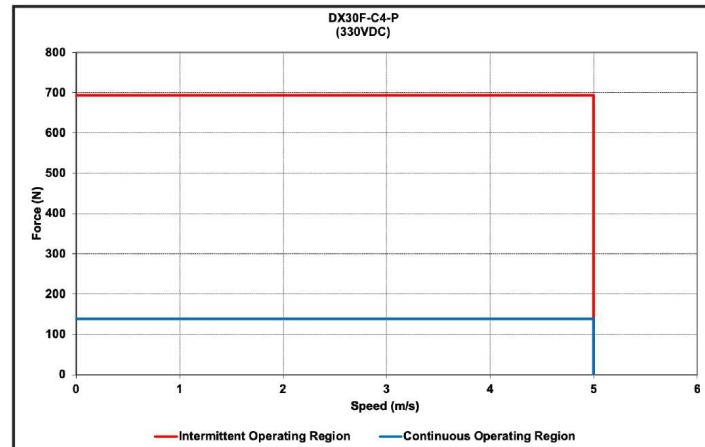
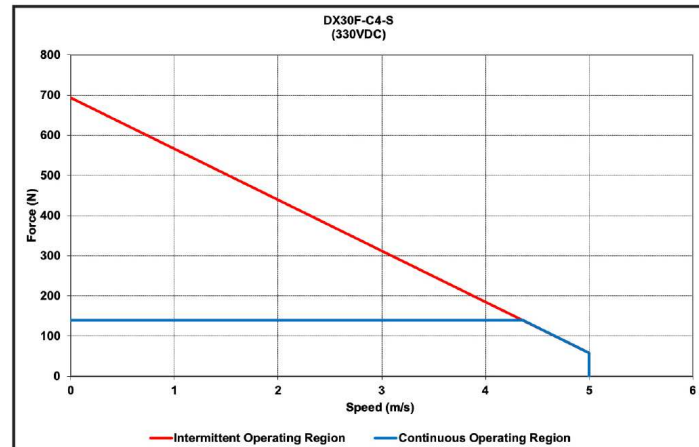
DX30F-C2



DX30F-C3



DX30F-C4



PLA180 SERIES

Ironcore Linear Motor

PLA180-PIX150B-075

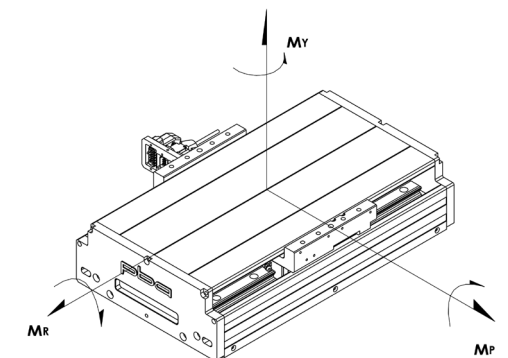
- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 832N, Continuous force up to 238N
- Modular Hall Sensor
- Anti-Cogging Function

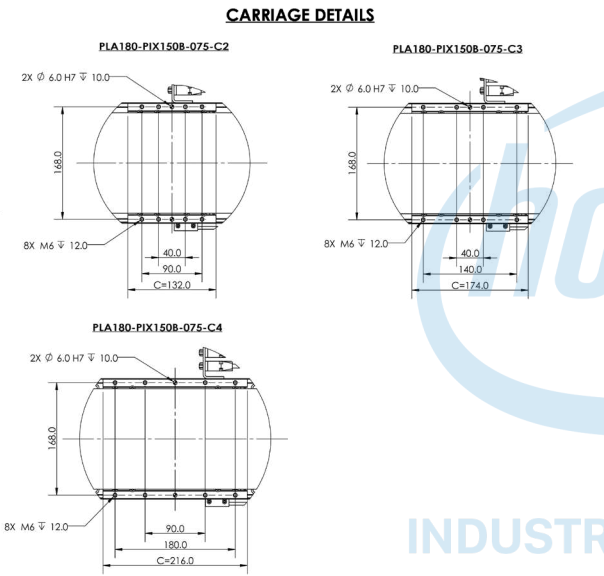
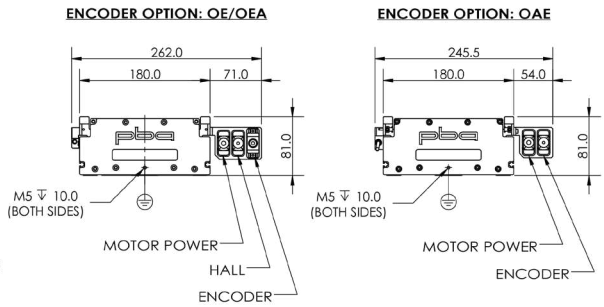
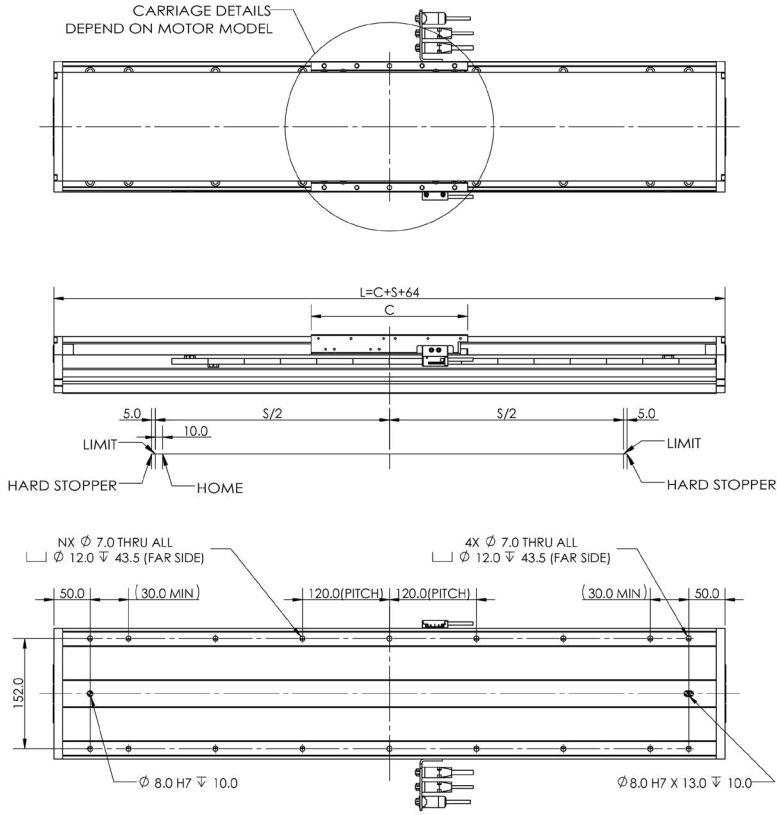


SPECIFICATION		MODEL		
		PIX150B-075-C2	PIX150B-075-C3	PIX150B-075-C4
Motor Series				
Motor Specification	Unit			
Peak Force	N	416	624	832
Continuous Force @ 100°C*	N	119	178	238
Peak Current	A ^{pk}	12.7	12.7	25.4
Continuous Current @ 100°C*	A ^{pk}	3.3	3.3	6.5
Force Constant	N/A ^{pk}	36.5	54.8	36.5
Back EMF Constant	V ^{pk} /m/s	42.2	63.3	42.2
Mechanical Specification				
Effective Stroke**	mm	100 - 1192		
In increment of stroke	mm	84		
Bidirectional Repeatability	Encoder: 1um Resolution	±1		
	Encoder: 0.1um			
	Encoder: Analog			
	Absolute Encoder 0.05um			
Straightness	um	2um/100mm		
Flatness	um	4um/100mm		
Moving Mass without Payload	kg	2.4	3.0	3.7
Rated Payload***	kg	10.0	15.0	20.0
Static Moments				
Max Yaw Moment M _Y	Nm	90	144	198
Max Roll Moment M _R	Nm	171	171	171
Max Pitch Moment M _P	Nm	90	144	198

Note:

1. $A_{pk} = 1.414 \cdot \text{Arms}$; $V_{pk} = 1.414 \cdot V_{rms}$
2. All values are measured based on Single Actuator mounted on a 5μm granite table.
3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
5. Peak Force and Current : 4% duty ratio and 1 second duration.
6. Motor Insulation Class : Class B (130°C).
7. IEC Protection Class : Class 1.
8. Compliance Standards : CE, RoHS.
9. Ambient Operating Temperature : 0 - 40°C.
10. Ambient Operating Humidity : 10 - 90% RH .
11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
12. Specifications are subjected to change without prior notice.

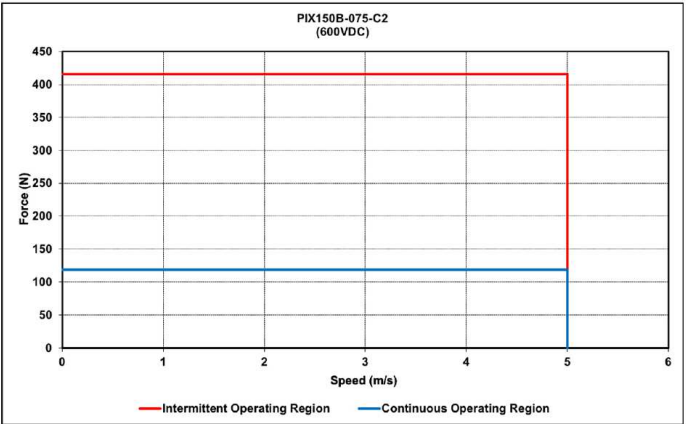
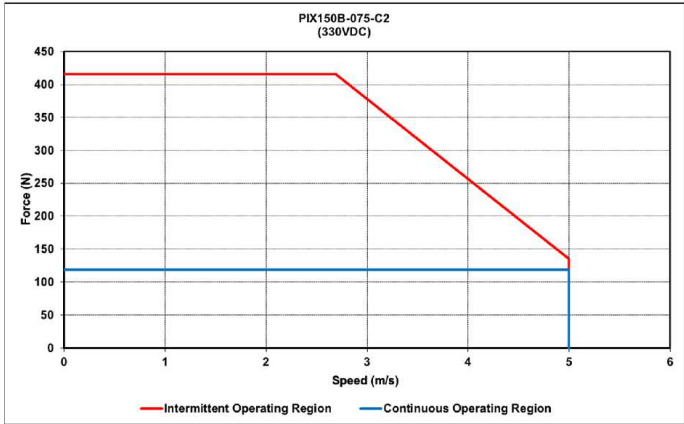




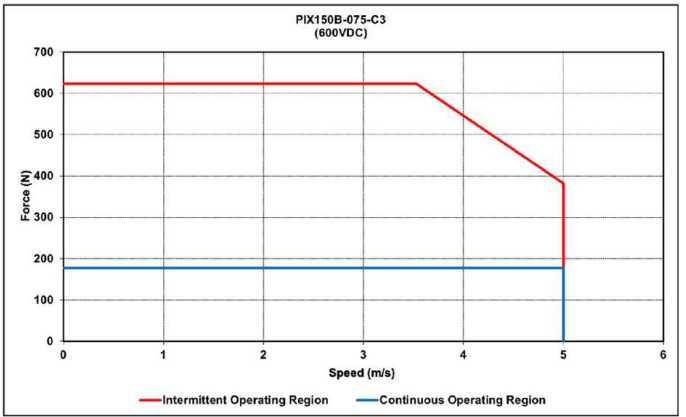
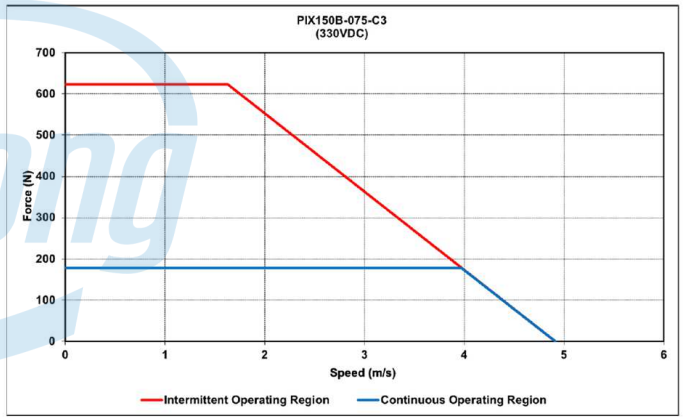
- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

Actuator PLA180						
Effective Stroke (S) mm	PIX150B-075-C2		PIX150B-075-C3		PIX150B-075-C4	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	296	8.2	338	9.6	380	10.9
184	380	9.6	422	11.0	464	12.4
268	464	11.1	506	12.5	548	13.8
352	548	12.5	590	13.9	632	15.3
436	632	14.0	674	15.3	716	16.7
520	716	15.4	758	16.8	800	18.1
604	800	16.9	842	18.2	884	19.6
688	884	18.3	926	19.7	968	21.0
772	968	19.7	1010	21.1	1052	22.5
856	1052	21.2	1094	22.6	1136	23.9
940	1136	22.6	1178	24.0	1220	25.4
1024	1220	24.1	1262	25.4	1304	26.8
1108	1304	25.5	1346	26.9	1388	28.2
1192	1388	27.0	1430	28.3	1472	29.7

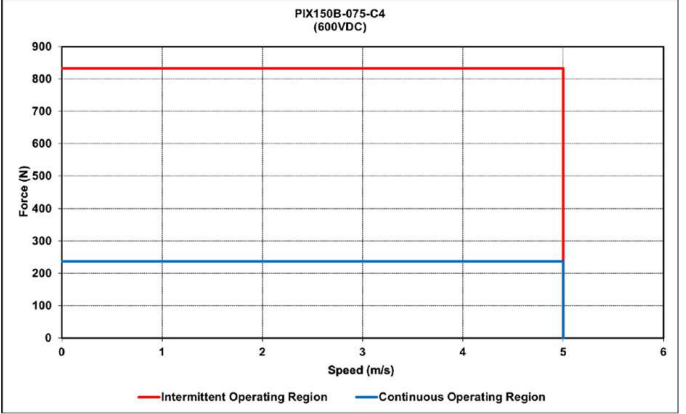
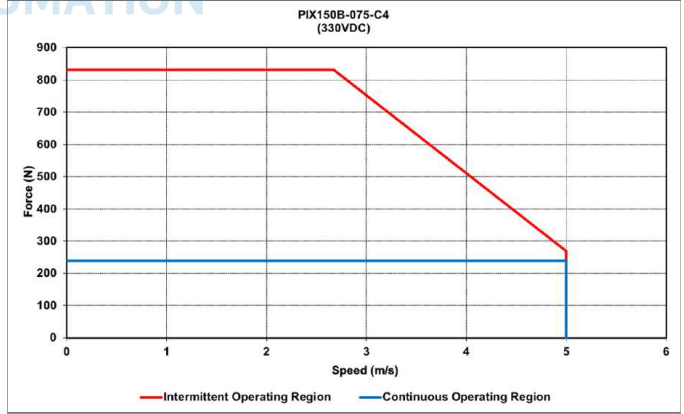
PIX150B-075-C2



PIX150B-075-C3



PIX150B-075-C4

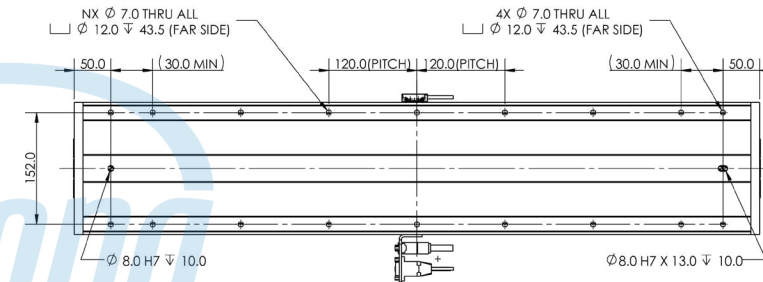
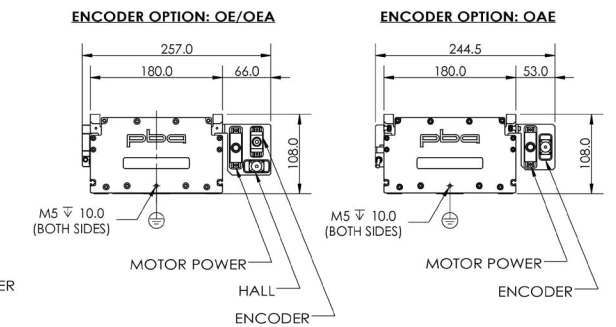
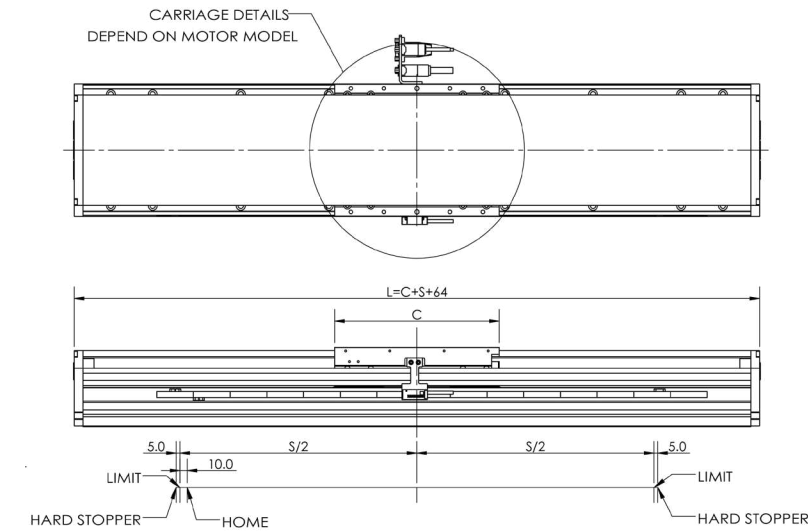


Ironcore Linear Motor



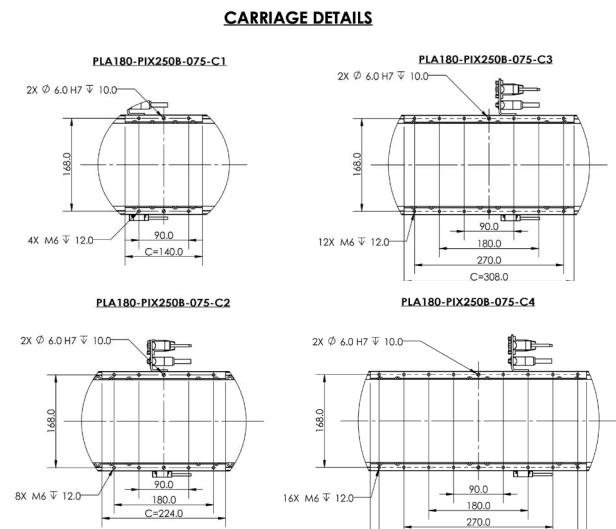
PLA180-PIX250B-075

- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 1600N, Continuous force up to 733N
- Modular Hall Sensor
- Anti-Cogging Function



Note:

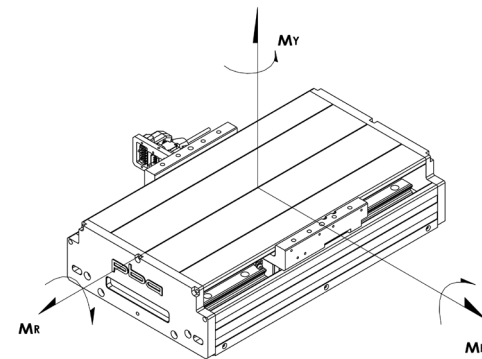
1. S = ACTUATOR STROKE
2. L = ACTUATOR LENGTH
3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR



SPECIFICATION		MODEL				
Motor Series			PIX250B-075-C1	PIX250B-075-C2	PIX250B-075-C3	PIX250B-075-C4
Motor Specification		Unit				
Peak Force		N	400	800	1200	1600
Continuous Force @ 100°C*		N	183	366	549	733
Peak Current		A ^{pk}	20.4	20.4	20.4	40.8
Continuous Current @ 100°C*		A ^{pk}	6.8	6.8	6.8	13.6
Force Constant		N/A ^{pk}	26.9	53.9	80.8	53.9
Back EMF Constant		V ^{pk} /m/s	31.1	62.2	93.3	62.2
Mechanical Specification						
Effective Stroke**		mm	100 - 1192			
In increment of stroke		mm	84			
Bidirectional Repeatability	Encoder: 1um Resolution	um	±2			
	Encoder: 0.1um		±1			
	Encoder: Analog					
	Absolute Encoder 0.05um					
Straightness		um	2um/100mm			
Flatness		um	4um/100mm			
Moving Mass without Payload		kg	4.7	7.4	10.6	13.3
Rated Payload***		kg	10.0	20.0	40.0	50.0
Static Moments						
Max Yaw Moment	M _Y	Nm	100	215	247	333
Max Roll Moment	M _R	Nm	174	174	174	174
Max Pitch Moment	M _P	Nm	100	215	247	333

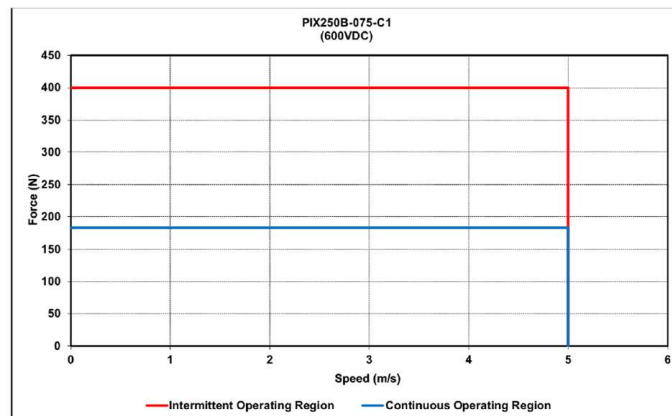
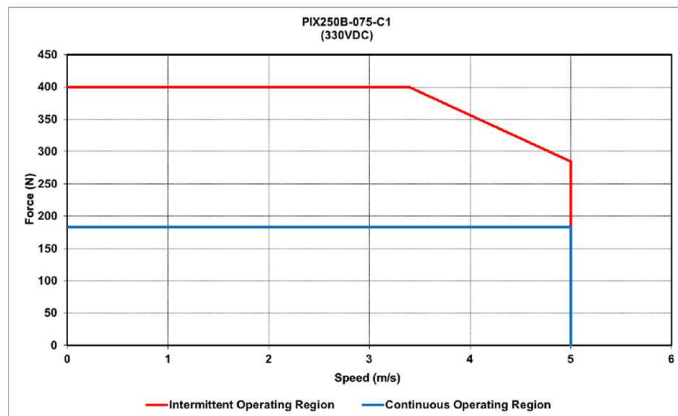
Note:

1. $A_{pk} = 1.414 \cdot A_{rms}$; $V_{pk} = 1.414 \cdot V_{rms}$
2. All values are measured based on Single Actuator mounted on a 5µm granite table.
3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
5. Peak Force and Current : 4% duty ratio and 1 second duration.
6. Motor Insulation Class : Class B (130°C).
7. IEC Protection Class : Class 1.
8. Compliance Standards : CE, RoHS.
9. Ambient Operating Temperature : 0 - 40°C.
10. Ambient Operating Humidity : 10 - 90% RH .
11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
12. Specifications are subjected to change without prior notice.

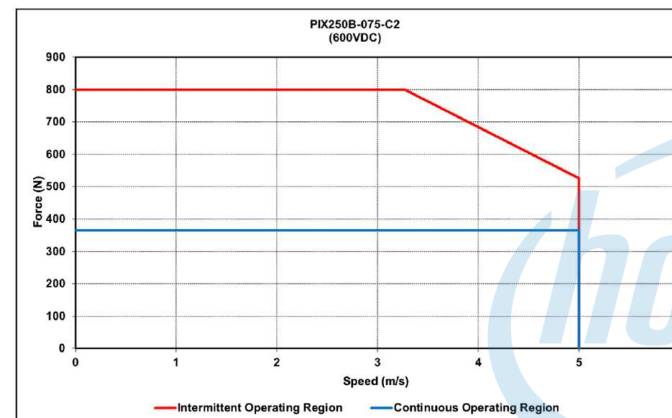
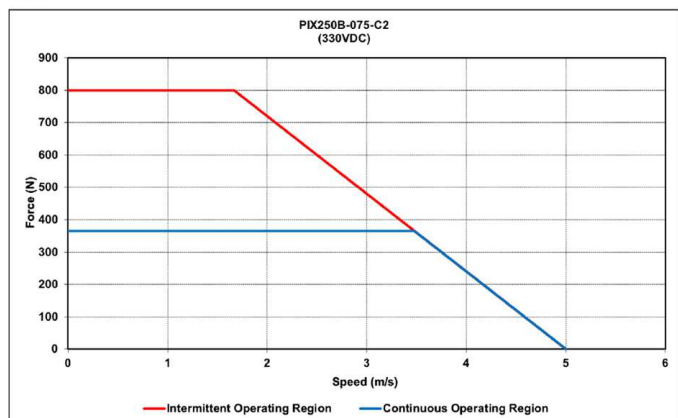


Actuator PLA180								
Effective Stroke (S) mm	PIX250B-075-C1		PIX250B-075-C2		PIX250B-075-C3		PIX250B-075-C4	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	304	11.0	388	15.3	472	20.0	556	24.2
184	388	12.5	472	16.8	556	21.5	640	25.7
268	472	14.1	556	18.3	640	23.0	724	27.3
352	556	15.6	640	19.8	724	24.5	808	28.8
436	640	17.1	724	21.4	808	26.1	892	30.3
520	724	18.6	808	22.9	892	27.6	976	31.8
604	808	20.2	892	24.4	976	29.1	1060	33.4
688	892	21.7	976	25.9	1060	30.6	1144	34.9
772	976	23.2	1060	27.4	1144	32.2	1228	36.4
856	1060	24.7	1144	29.0	1228	33.7	1312	37.9
940	1144	26.3	1228	30.5	1312	35.2	1396	39.4
1024	1228	27.8	1312	32.0	1396	36.7	1480	41.0
1108	1312	29.3	1396	33.5	1480	38.3	1564	42.5
1192	1396	30.8	1480	35.1	1564	39.8	1648	44.0

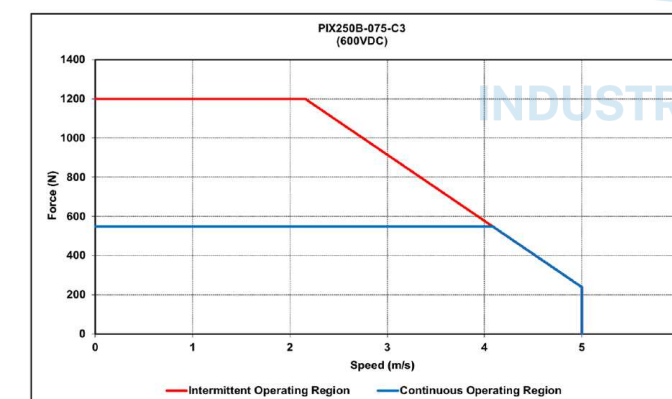
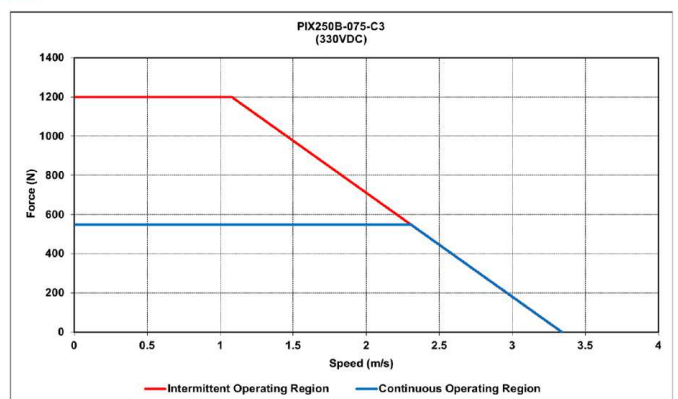
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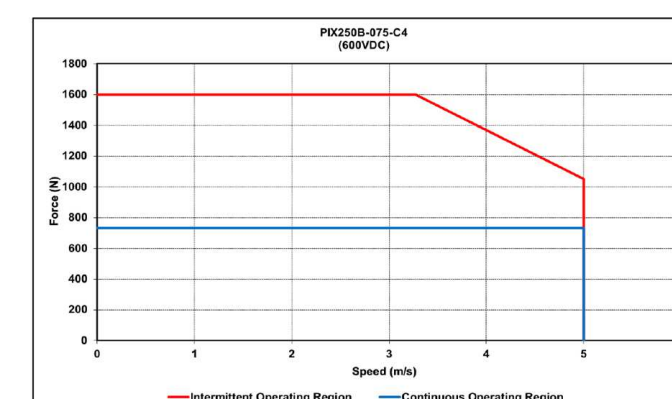
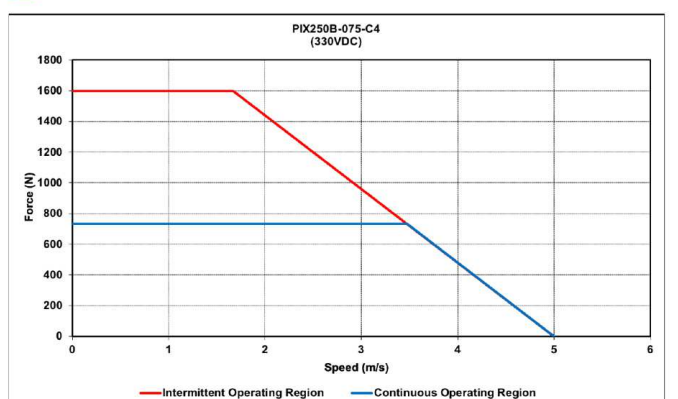
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PIX250B-075-C3



PIX250B-075-C4



PLA220 SERIES

Ironless Linear Motor



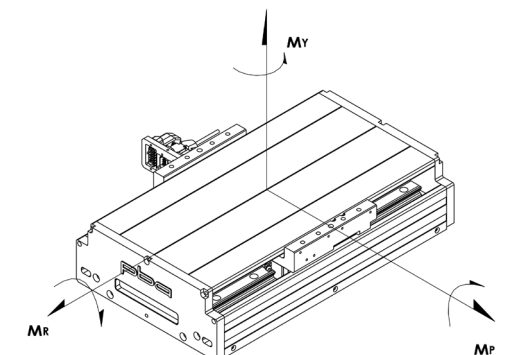
PLA220-DX50F

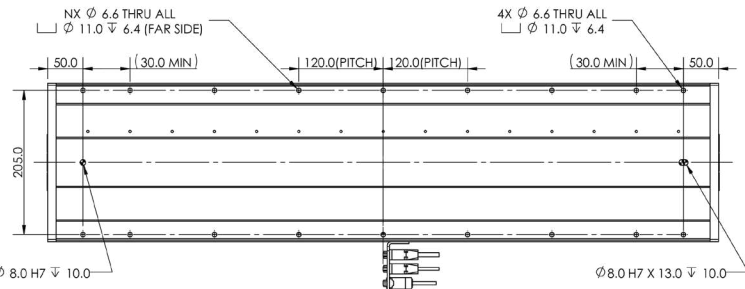
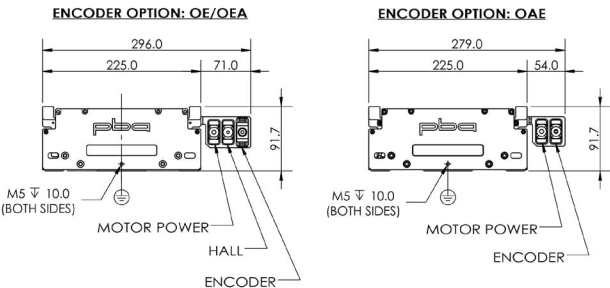
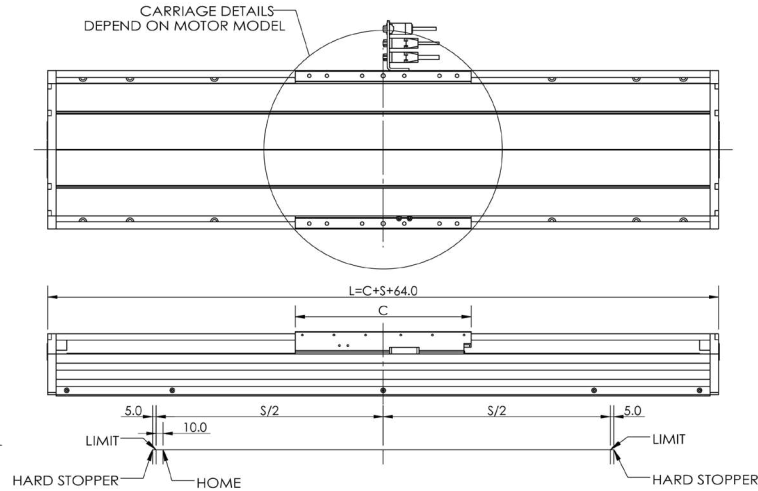
- Max Stroke - 1240mm
- Max Speed - 5 m/s
- Peak force up to 1277N, Continuous force up to 255N
- Modular Hall Sensor
- Low Velocity Ripple

SPECIFICATION		MODEL			
Motor Series		DX50F-C2	DX50F-C3	DX50F-C4	DX50FT-C4
		P	P	P	P
Motor Specification		Unit			
Peak Force	N	638	958	1277	1277
Continuous Force @ 100°C*	N	128	192	255	255
Peak Current	A ^{pk}	28.25	28.25	28.25	56.5
Continuous Current @ 100°C*	A ^{pk}	5.65	5.65	5.65	11.3
Force Constant	N/A ^{pk}	22.6	33.9	45.2	22.6
Back EMF Constant	V ^{pk} /m/s	26	39	52	26
Mechanical Specification					
Effective Stroke**	mm	100-1240			
In increment of stroke	mm	60			
Bidirectional Repeatability	Encoder: 1um Resolution	±2			
	Encoder: 0.1um				
	Encoder: Analog	±1			
	Absolute Encoder 0.05um				
Straightness	um	2um/100mm			
Flatness	um	4um/100mm			
Moving Mass without Payload	kg	2.6	3.5	4.4	4.4
Rated Payload***	kg	10.0	20.0	30.0	30.0
Static Moments					
Max Yaw Moment M _Y	Nm	94	171	183	183
Max Roll Moment M _R	Nm	198	198	198	198
Max Pitch Moment M _P	Nm	94	171	183	183

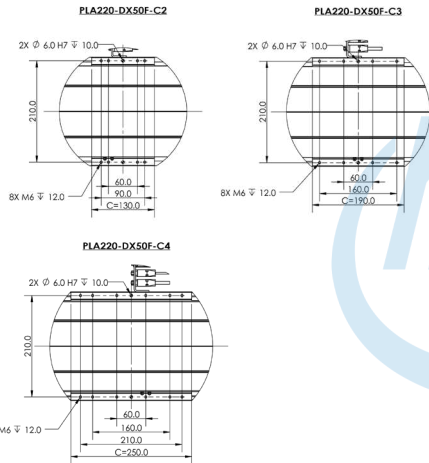
Note:

1. $A_{pk} = 1.414 \cdot Arms$; $V_{pk} = 1.414 \cdot V_{rms}$
2. All values are measured based on Single Actuator mounted on a 5μm granite table.
3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
5. Peak Force and Current : 4% duty ratio and 1 second duration.
6. Motor Insulation Class : Class B (130°C).
7. IEC Protection Class : Class 1.
8. Compliance Standards : CE, RoHS.
9. Ambient Operating Temperature : 0 - 40°C.
10. Ambient Operating Humidity : 10 - 90% RH.
11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
12. Specifications are subjected to change without prior notice.





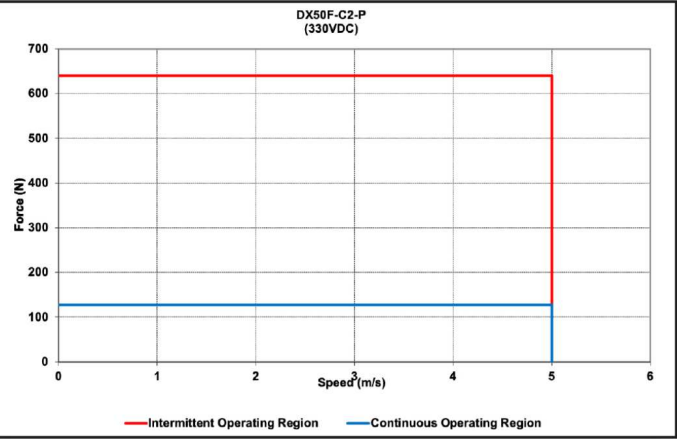
CARRIAGE DETAILS



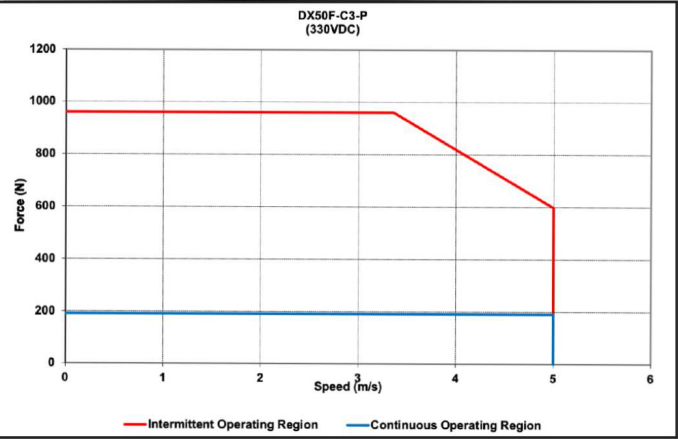
Note:
1. S = ACTUATOR STROKE
2. L = ACTUATOR LENGTH
3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

Effective Stroke (S) mm	Actuator PLA220					
	DX50F-C2		DX50F-C3		DX50F-C4	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	294	12.6	354	15.5	414	18.4
160	354	14.6	414	17.5	474	20.4
220	414	16.5	474	19.4	534	22.3
280	474	18.5	534	21.4	594	24.3
340	534	20.5	594	23.4	654	26.3
400	594	22.5	654	25.4	714	28.3
460	654	24.5	714	27.4	774	30.2
520	714	26.4	774	29.3	834	32.2
580	774	28.4	834	31.3	894	34.2
640	834	30.4	894	33.3	954	36.2
700	894	32.4	954	35.3	1014	38.2
760	954	34.3	1014	37.2	1074	40.1
820	1014	36.3	1074	39.2	1134	42.1
880	1074	38.3	1134	41.2	1194	44.1
940	1134	40.3	1194	43.2	1254	46.1
1000	1194	42.2	1254	45.1	1314	48.0
1060	1254	44.2	1314	47.1	1374	50.0
1120	1314	46.2	1374	49.1	1434	52.0
1180	1374	48.2	1434	51.1	1494	54.0
1240	1434	50.1	1494	53.0	1554	55.9

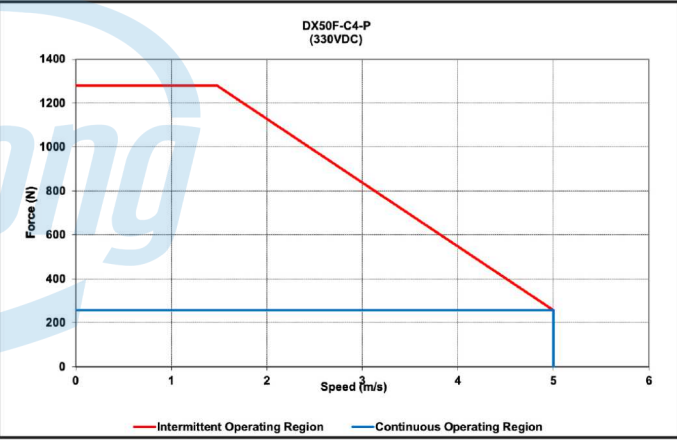
DX50F-C2



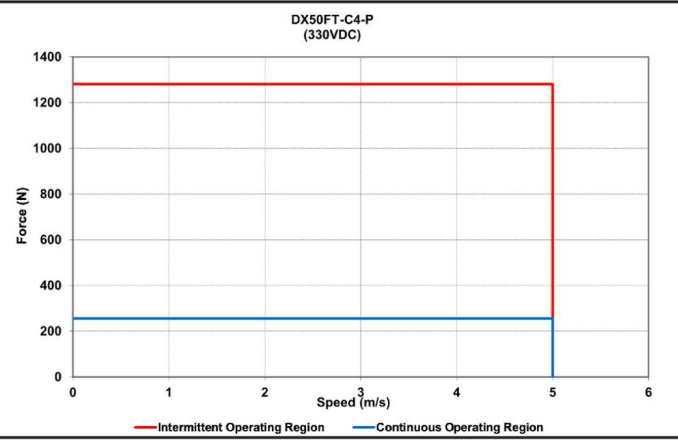
DX50F-C3



DX50F-C4



DX50FT-C4

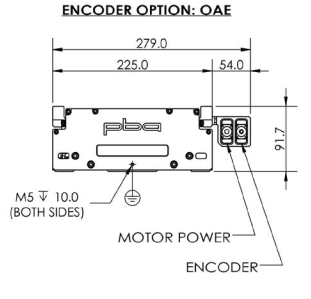
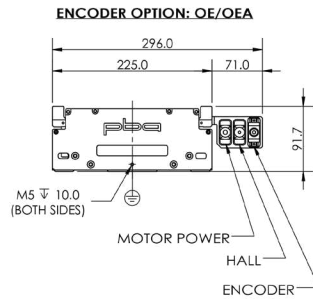
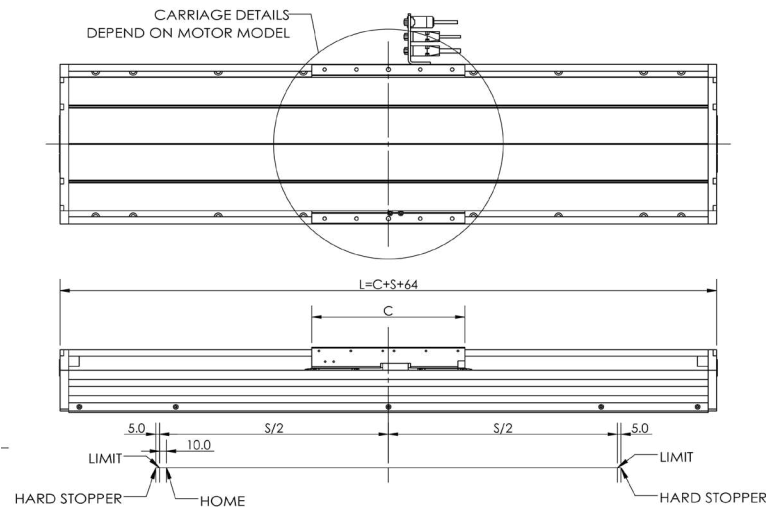


PLA220 SERIES

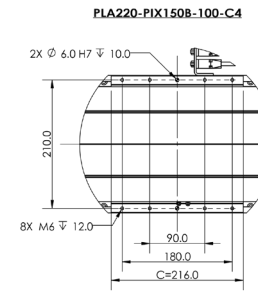
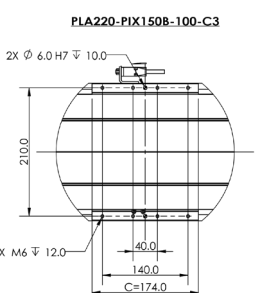
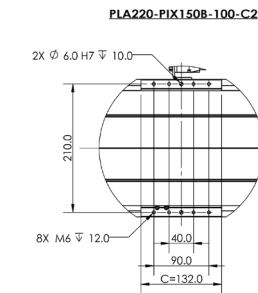
Ironcore Linear Motor

PLA220-PIX150B-100

- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 1240N, Continuous force up to 355N
- Modular Hall Sensor
- Anti-Cogging Function



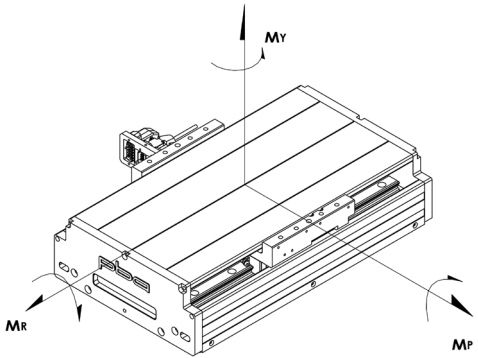
CARRIAGE DETAILS



- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

SPECIFICATION		MODEL			
Motor Series		PIX150B-100-C2	PIX150B-100-C3	PIX150B-100-C4	
Motor Specification	Unit				
Peak Force	N	620	930	1240	
Continuous Force @ 100°C*	N	177	266	355	
Peak Current	A ^{pk}	12.7	12.7	25.4	
Continuous Current @ 100°C*	A ^{pk}	3.3	3.3	6.5	
Force Constant	N/A ^{pk}	54.6	81.8	54.6	
Back EMF Constant	V ^{pk} /m/s	63.0	94.5	63.0	
Mechanical Specification					
Effective Stroke**	mm	100 -1192			
In increment of stroke	mm	84			
Bidirectional Repeatability	Encoder: 1um Resolution	±2			
	Encoder				
	Encoder: Analog	±1			
	Absolute Encoder 0.05um				
Straightness	um	2um/100mm			
Flatness	um	4um/100mm			
Moving Mass without Payload	kg	3.7	4.7	5.7	
Rated Payload***	kg	15.0	20.0	25.0	
Static Moments					
Max Yaw Moment M _Y	Nm	89	147	204	
Max Roll Moment M _R	Nm	211	211	211	
Max Pitch Moment M _P	Nm	89	147	204	

- Note:
1. Apk = 1.414 * Arms; Vpk = 1.414 * Vrms
 2. All values are measured based on Single Actuator mounted on a 5um granite table.
 3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
 4. ***Recommended payload based on 10m/s^2 acceleration. CG position 100mm above the center of carriage.
 5. Peak Force and Current : 4% duty ratio and 1 second duration.
 6. Motor Insulation Class : Class B (130°C).
 7. IEC Protection Class : Class 1.
 8. Compliance Standards : CE, RoHS.
 9. Ambient Operating Temperature : 0 - 40°C.
 10. Ambient Operating Humidity : 10 - 90% RH .
 11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
 12. Specifications are subjected to change without prior notice.



PLA220 SERIES

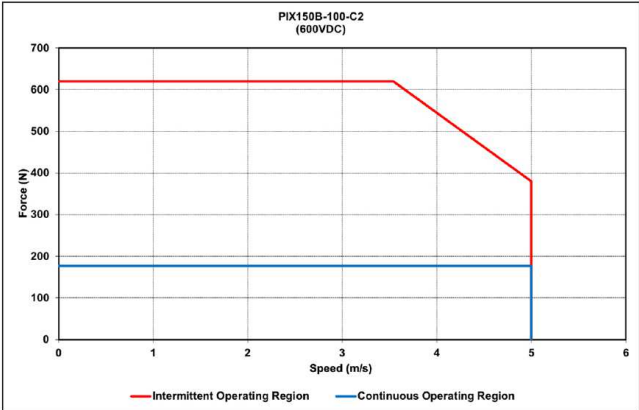
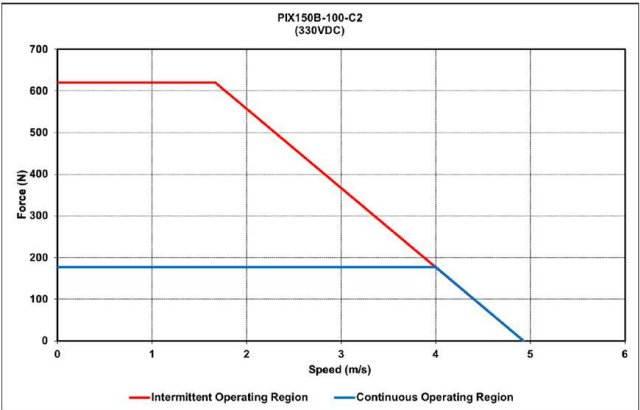
Ironcore Linear Motor

PLA220-PIX250B-100

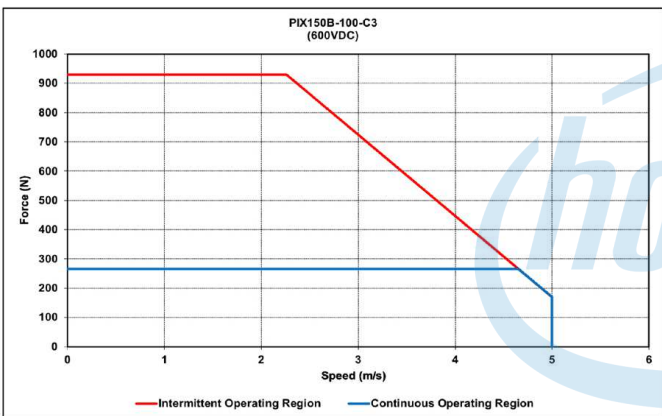
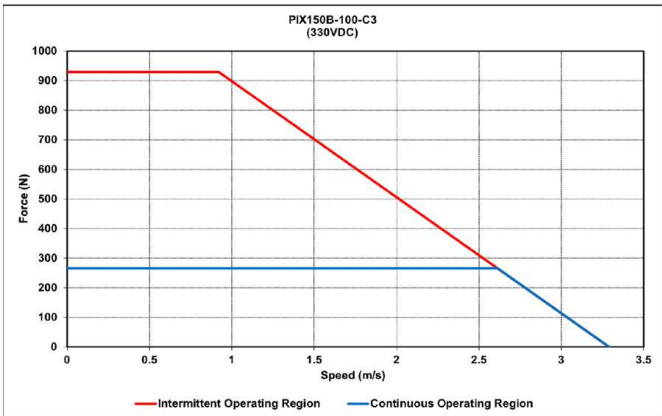
- Max Stroke - 1192mm
- Max Speed - 5 m/s
- Peak force up to 2400N, Continuous force up to 1097N
- Modular Hall Sensor
- Anti-Cogging Function



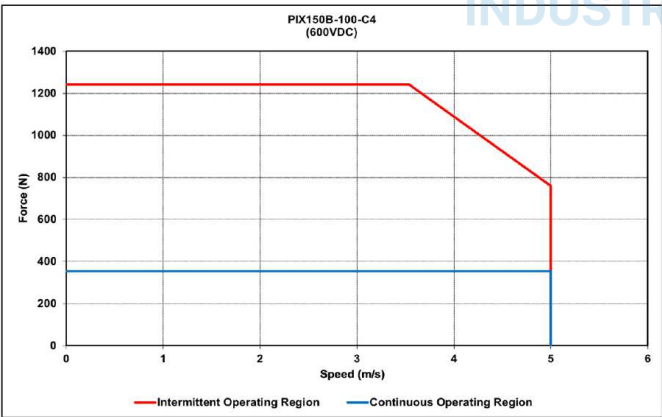
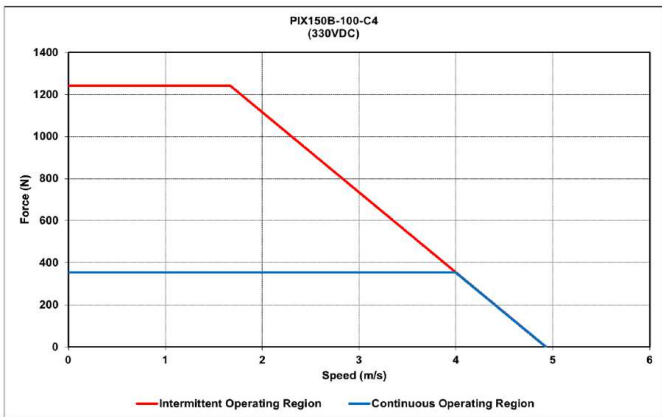
PIX150B-100-C2



PIX150B-100-C3



PIX150B-100-C4

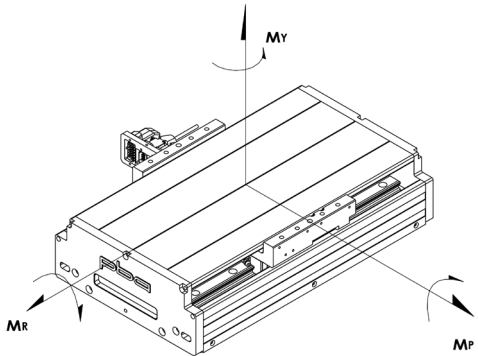


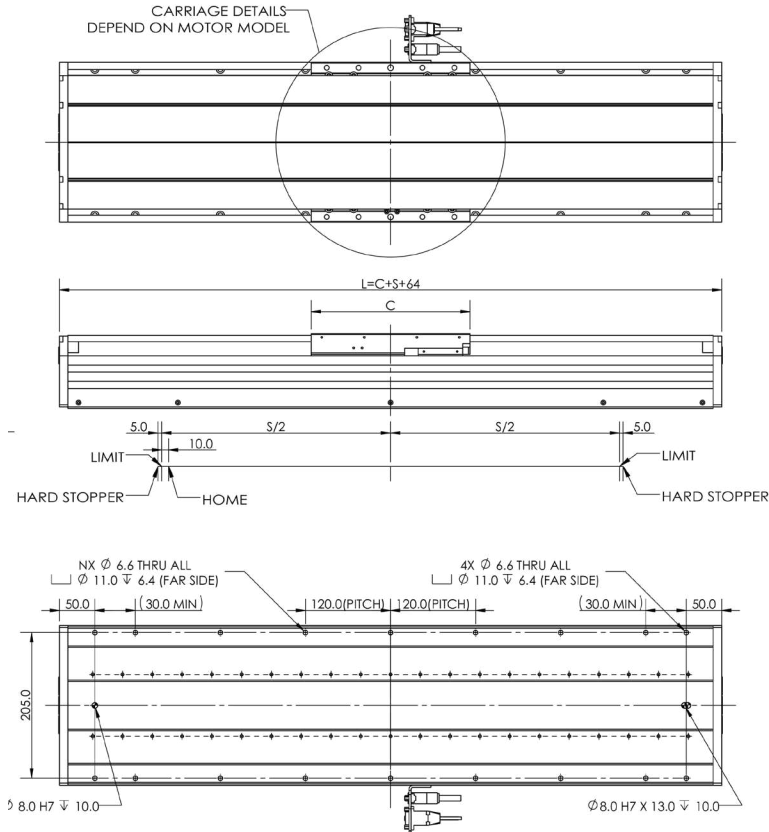
SPECIFICATION

		MODEL			
		PIX250B-100-C1	PIX250B-100-C2	PIX250B-100-C3	PIX250B-100-C4
Motor Series					
Motor Specification	Unit				
Peak Force	N	600	1200	1800	2400
Continuous Force @ 100°C*	N	274	548	823	1097
Peak Current	A ^{pk}	20.4	20.4	20.4	40.7
Continuous Current @ 100°C*	A ^{pk}	6.8	6.8	6.8	13.6
Force Constant	N/A ^{pk}	40.4	80.8	121.2	80.8
Back EMF Constant	V ^{pk} /m/s	46.7	93.3	140.0	93.3
Mechanical Specification					
Effective Stroke**	mm	100 - 1192			
In increment of stroke	mm	84			
Bidirectional Repeatability	Encoder: 1um Resolution	±2			
	Encoder: 0.1um				
	Encoder: Analog				
	Absolute Encoder 0.05um	±1			
Straightness	um	2um/100mm			
Flatness	um	4um/100mm			
Moving Mass without Payload	kg	5.2	9.0	12.1	15.9
Rated Payload***	kg	20.0	30.0	60.0	90.0
Static Moments					
Max Yaw Moment M _Y	Nm	98	197	316	326
Max Roll Moment M _R	Nm	231	231	231	231
Max Pitch Moment M _P	Nm	98	197	316	326

Note:

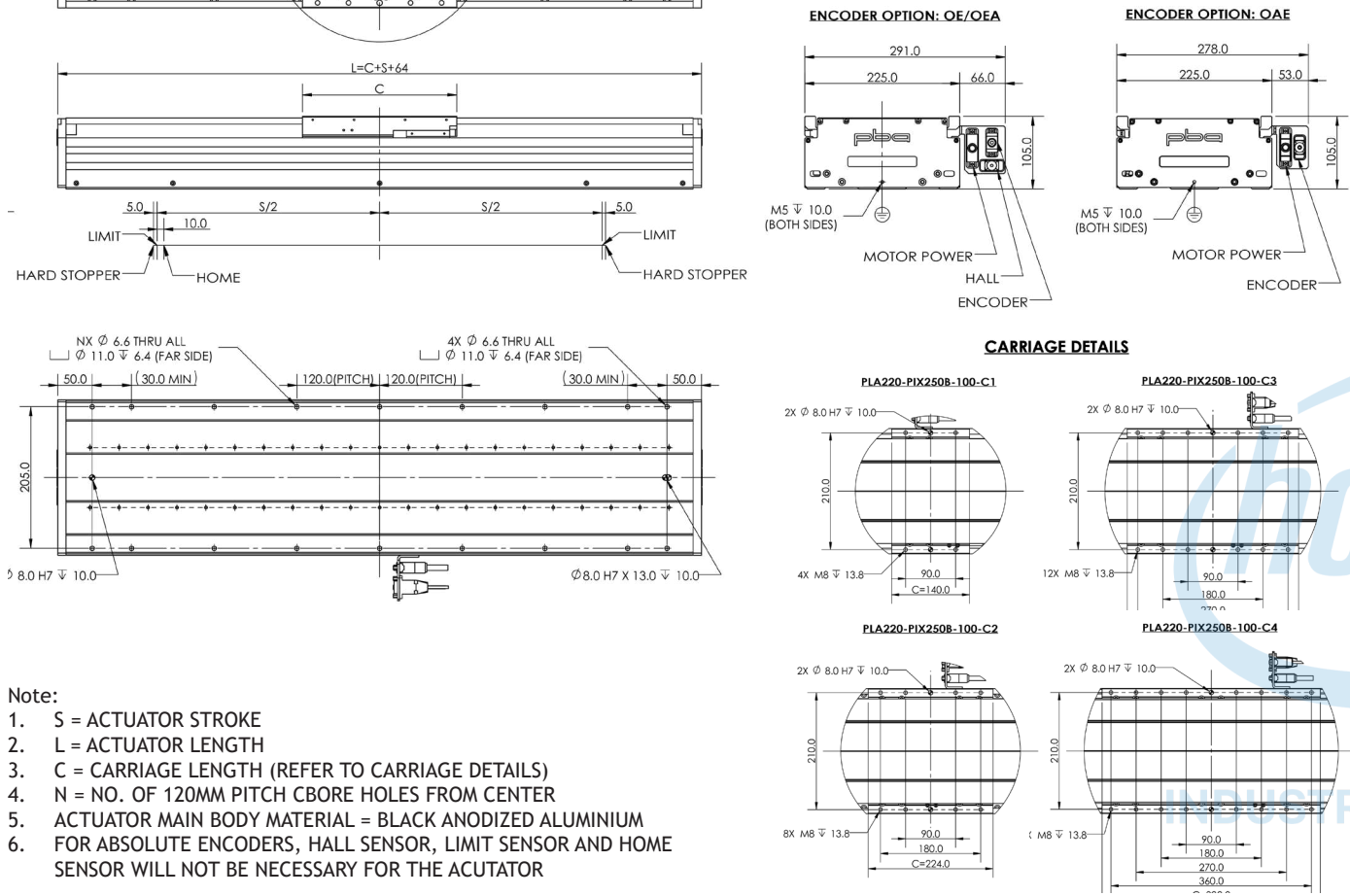
1. $A_{pk} = 1.414 \cdot Arms$; $V_{pk} = 1.414 \cdot V_{rms}$
2. All values are measured based on Single Actuator mounted on a 5μm granite table.
3. **Customized Max Stroke 3500mm. For more options, please contact PBA.
4. ***Recommended payload based on 10m/s² acceleration. CG position 100mm above the center of carriage.
5. Peak Force and Current : 4% duty ratio and 1 second duration.
6. Motor Insulation Class : Class B (130°C).
7. IEC Protection Class : Class 1.
8. Compliance Standards : CE, RoHS.
9. Ambient Operating Temperature : 0 - 40°C.
10. Ambient Operating Humidity : 10 - 90% RH .
11. Cleanroom Class 10,000. For Cleanroom Class 1000, please contact PBA.
12. Specifications are subjected to change without prior notice.



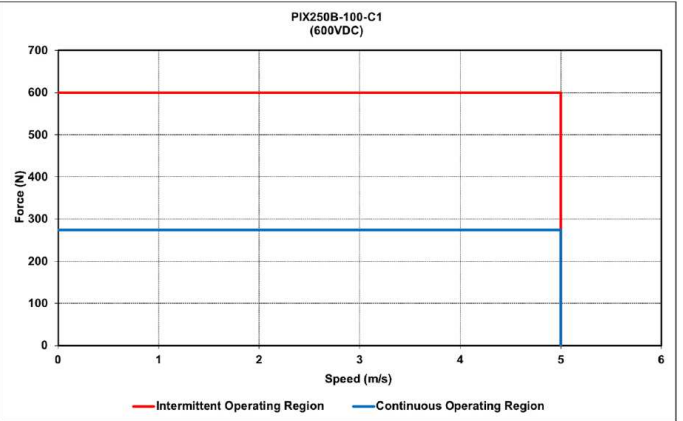
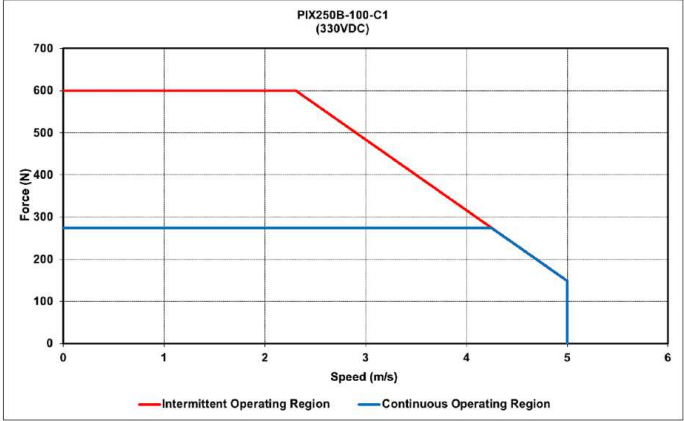


- Note:
1. S = ACTUATOR STROKE
 2. L = ACTUATOR LENGTH
 3. C = CARRIAGE LENGTH (REFER TO CARRIAGE DETAILS)
 4. N = NO. OF 120MM PITCH CBORE HOLES FROM CENTER
 5. ACTUATOR MAIN BODY MATERIAL = BLACK ANODIZED ALUMINIUM
 6. FOR ABSOLUTE ENCODERS, HALL SENSOR, LIMIT SENSOR AND HOME SENSOR WILL NOT BE NECESSARY FOR THE ACUTATOR

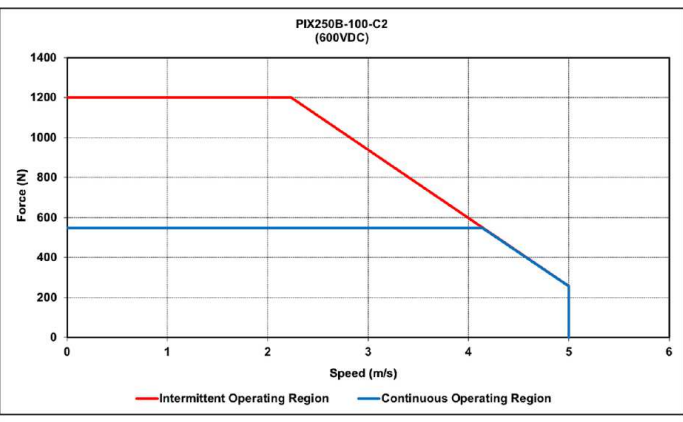
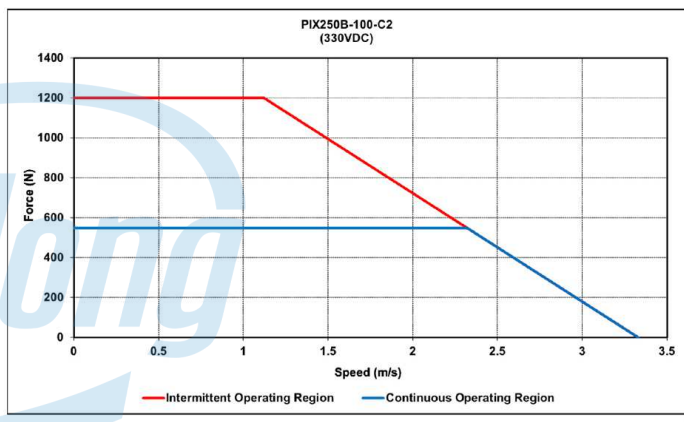
Effective Stroke(S) mm	Actuator PLA220							
	PIX250B-100-C1		PIX250B-100-C2		PIX250B-100-C3		PIX250B-100-C4	
	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg	Length (L) mm	Mass kg
100	304	14.3	388	20.4	472	25.7	556	31.8
184	388	16.6	472	22.7	556	28.0	640	34.1
268	472	18.9	556	24.9	640	30.3	724	36.3
352	556	21.1	640	27.2	724	32.5	808	38.6
436	640	23.4	724	29.5	808	34.8	892	40.9
520	724	25.7	808	31.7	892	37.1	976	43.1
604	808	28.0	892	34.0	976	39.3	1060	45.4
688	892	30.2	976	36.3	1060	41.6	1144	47.7
772	976	32.5	1060	38.6	1144	43.9	1228	50.0
856	1060	34.8	1144	40.8	1228	46.1	1312	52.2
940	1144	37.0	1228	43.1	1312	48.4	1396	54.5
1024	1228	39.3	1312	45.4	1396	50.7	1480	56.8
1108	1312	41.6	1396	47.6	1480	53.0	1564	59.0
1192	1396	43.8	1480	49.9	1564	55.2	1648	61.3



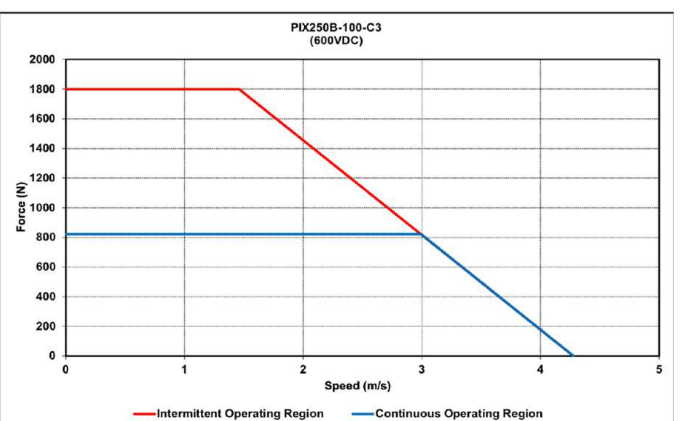
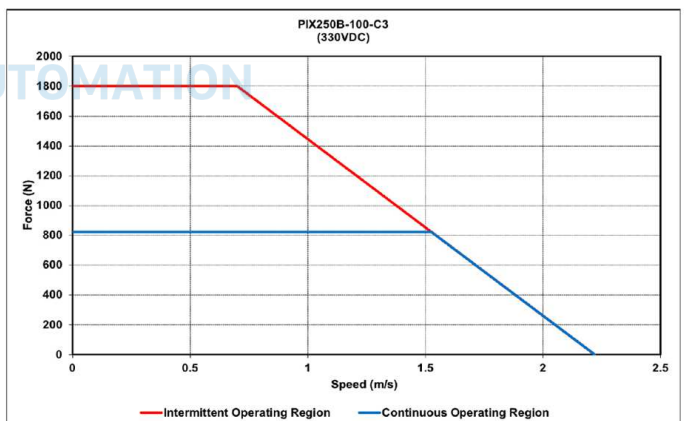
PIX250B-100-C1



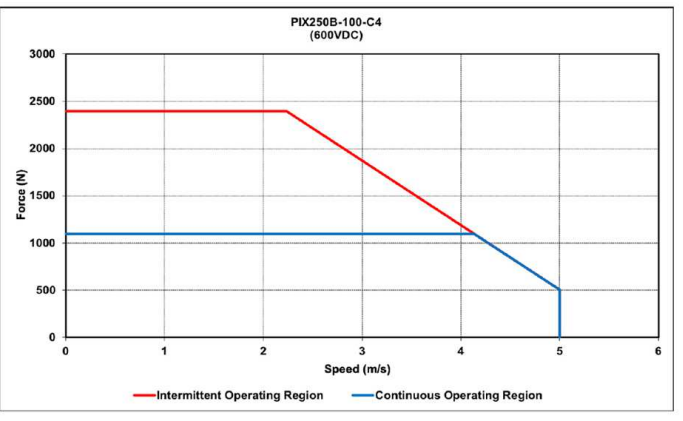
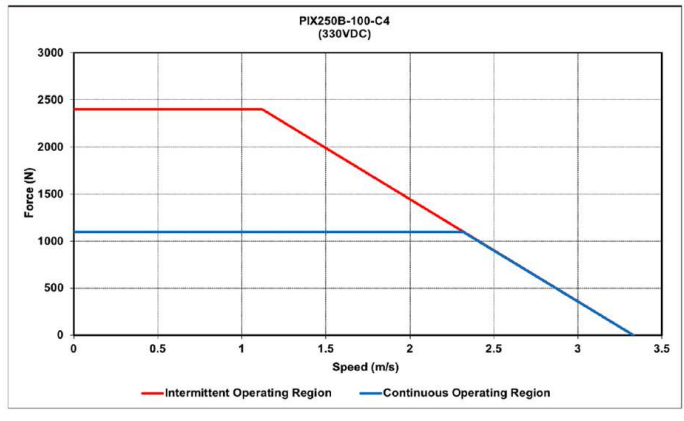
PIX250B-100-C2



PIX250B-100-C3

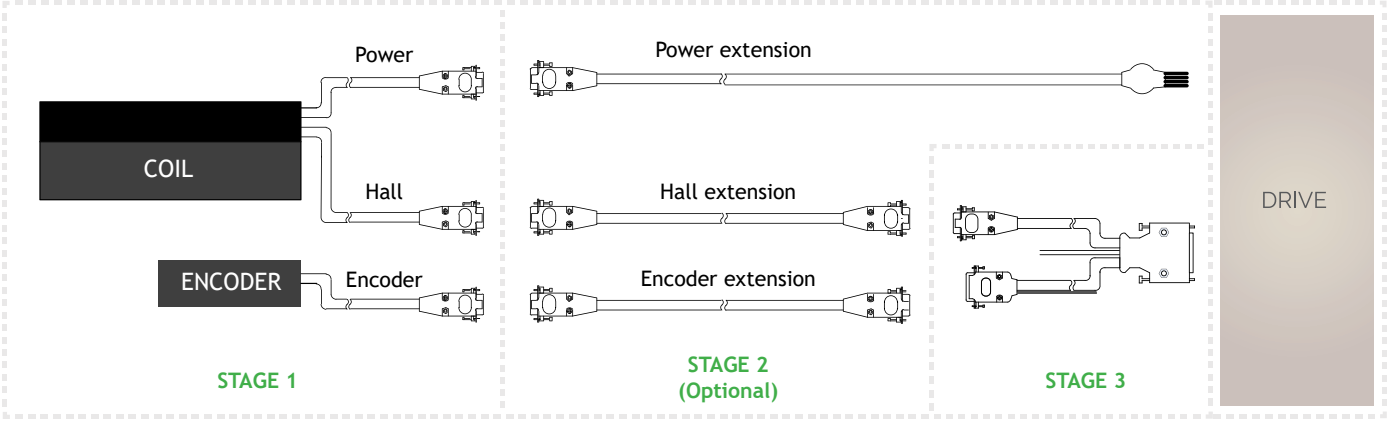


PIX250B-100-C4



CABLE OPTION

ENCODER PINOUT

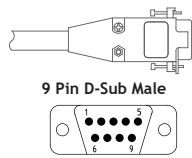
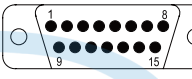


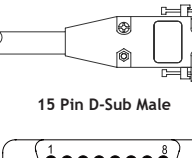
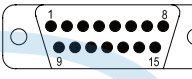
THERMAL PROTECTION

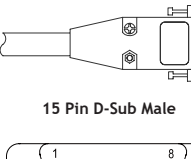
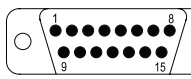
The temperature at which the thermal device is activated is shown below

MODEL	THERMAL DEVICE TYPE	
DX30F, DX50F, PIX150B, PIX250B	PT100	TC: Refer to note 1
DX30F, DX50F, PIX150B, PIX250B	THERMOSTAT	TM: (NC) Opens at 100°C

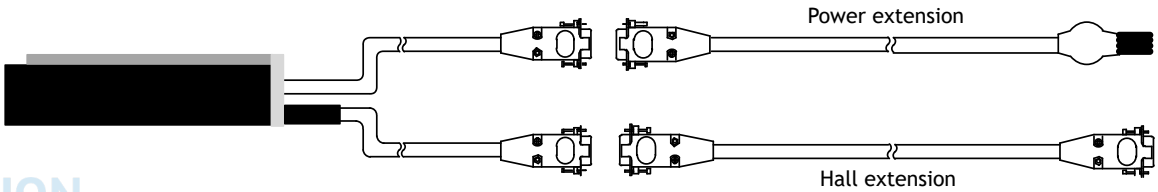
- Note 1:
- Programmable and can be used where there are temperature controllers or drivers/motion controllers with analog inputs.
 - Recommended to set cut-off temperature to 100°C (max) to prevent coil damage.
 - User has to ensure that the thermal protection devices are wired to appropriate electronics to ensure that the motor power cutoff is active when temperature reaches its allowable limit.

PAOF - PBA ABSOLUTE OPTICAL ENCODER			
	ENCODERS		
	SIGNAL	PIN	COLOURS
	+5V	4	BROWN + GREEN
	+5V SENSOR	5	BLUE + BLUE-RED(ORANGE)
	0V	8	WHITE + YELLOW
	0V SENSOR	9	RED + GREY-PINK
	CLOCK	2	BLACK
	\CLOCK	3	PURPLE
	DATA	6	GREY
	\DATA	7	PINK
	GROUND	HOUSING	SHIELD

OE - OPTICAL INCREMENTAL DIGITAL ENCODER			
	ENCODERS		
	FUNCTION	SIGNAL	15 PIN D TYPE
	POWER	5V	7
		0V	8
	INCREMENTAL SIGNALS	A+	2
		A-	9
		B+	14
		B-	6
	REFERENCE MARK	Z+	13
		Z-	5
	LIMITS	P	12
	ALARM	Q	4
	REMOTE CAL	E-	11
	SHIELD	CAL	10
		-	3
			1
			CASE

DEA - OPTICAL INCREMENTAL ANALOG ENCODER			
	ENCODERS		
	FUNCTION	SIGNAL	15 PIN D TYPE
	POWER	5V	4
		0V	5
	INCREMENTAL SIGNALS	V1+	12
		V1-	13
		V2+	9
		V2-	1
	REFERENCE MARK	V0+	10
		V0-	2
	LIMITS	VP	3
	ALARM	VQ	7
	REMOTE CAL	Vx	8
	SHIELD	CAL	6
		-	14
			CASE

STAGE 2 | EXTENSION CABLE

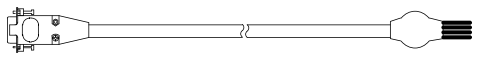
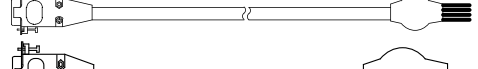
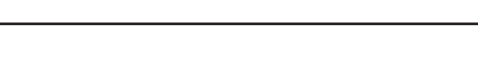
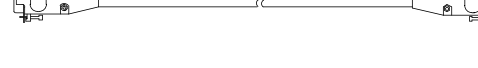


STAGE 1 | POWER, HALL AND ENCODER CABLE PIN OUT

POWER CABLE PIN OUT				
	DX F / PIX150B			
	P1	M1	Grey	
	P2	M1	Black (Jumper)	
	P3	M3	Black	
	P4	M3	Black (Jumper)	
	P5	M2	Brown	
	P6	M2	Black (Jumper)	
	P7	Temp sensor 1	Black	
	PIX250B			
	A1	M1	Red	
	A2	M2	Blue	
	A3	M3	Brown	
	P1	TS1	Red	
	P3	TS2	Black	
	A4	PE	Yellow	

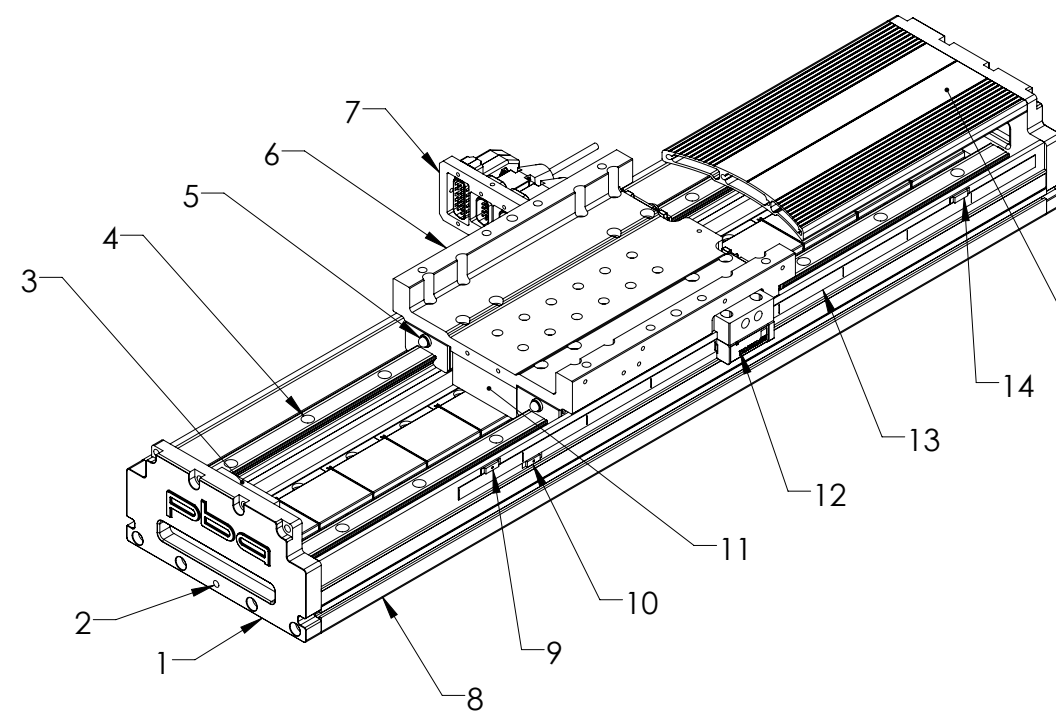
HALL CABLE PIN OUT				
	DX F & PIX150B & PIX250B			
	P1	Hall A	White	
	P2	Hall B	Green	
	P3	Hall C	Blue	
	P4	5V	Red	
	DX F & PIX150B & PIX250B			
	P1	Hall A+		
	P2	Hall A-		
	P3	Hall B+		
	P4	Hall B-		
	P5	Hall C+		
	P6	Hall C-		
	P7	5V		
	P8	0V		

Notes: All connectors shown are front view

EXTENSION CABLE		PART NUMBER
Power Extension Cable		CBL_EXT_PWR1_X.X CBL_EXT_PWR1_UL_X.X (DX F / PIX150B)
Power Extension Cable		CBL_EXT_PWR3_X.X CBL_EXT_PWR3_UL_X.X (PIX250B-XXX-C1 to C3)
Hall Sensor Extension Cable		CBL_EXT_PWR4_X.X CBL_EXT_PWR4_UL_X.X (PIX250B-XXX-C4)
Encoder Extension Cable		CBL_EXT_HALL0_X.X CBL_EXT_HALL0_UL_X.X (DX F / PIX150B / PIX250B)
		CBL_EXT_HALL0_DIF_X.X CBL_EXT_HALL0_DIF_UL_X.X (DX F / PIX150B / PIX250B)
		CBL_EXT_PAOF1_X.X CBL_EXT_PAOF1_UL_X.X PBA ABSOLUTE
		CBL_EXT_REN00_X.X CBL_EXT_REN00_UL_X.X QUANTIC Digital
		CBL_EXT_REN00A_X.X CBL_EXT_REN00A_UL_X.X QUANTIC Analog

Notes: 1. X.X is the length of the cable in meters. 2. For customized cable length, contact PBA

1. End Cover
2. Ground Connections (screw excluded)
3. Hard Stopper
4. Linear Guide Rail
5. Linear Guide Runner Block
6. Carriage
7. Connections for power cable, hall, feedback
8. Frame
9. Encoder Q limit
10. Encoder Reference Mark Selector
11. Linear Motor
12. Encoder
13. Scale
14. Encoder P limit
15. Top cover



Customer Name:	Date (DD/MM/YY):
Contact Email:	

PBA LINEAR MOTOR SELECTION QUESTIONNAIRE

1. Application Description

1a. Application Sketch With Approx Dimensions

--

2. Load Parameter

Moving mass (without motor coil)	kg				
Frictional force	N				
Opposing force	N				
Mx	N.m	My	N.m	Mz	N.m

Stage Requirements

	☐ Horizontal	☐ Vertical
	☐ Sidewall	☐ Upside-down

3. Motion Parameter

		Profile 1	Profile 2	Profile 3
Moving distance	mm			
Moving time	s			
Moving velocity	m/s			
Acceleration	m/s ²			
Dwell time	s			

4. Command/Bus (Please Circle Accordingly)

Pulse and direction / Analog / EtherCAT / IO trigger / Other :
--

5. Encoder (Please Circle Accordingly)

Resolution	um
Incremental / Absolute / Analog	

6. Motion Precision

Accuracy	um/mm
Repeatability	um

7. Mechanical Specification

Effective stroke	mm
Flatness	um/mm
Straightness	um/mm
Space constraints (L x W x H)	mm

8. Working Environment

Room temperature	°C
Clean room class	

9. Additional Requirements (Please Tick () Accordingly)

Motor cable length	Controller	Amplifier	Encoder	Other:
m				

10. Actuator

Open Frame	PARTIAL	Enclosed	BELLOW	STRIP SEAL

11. Remarks: If you have any special motion request for sizing procedure, please specify your requirement in below remarks.

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PBA Systems is a one-stop robotics provider with a focus on the development of core technology to offer a robust range of products and solutions in precision robotics and general robotics - enabling companies to thrive by making Industry 4.0 technology accessible to the market.

Our core strength is in design, development, and manufacturing of direct drive motor design and manufacturing, motion control, and precision modular assemblies.

Address:
**505 Yishun Industrial Park, A,
Singapore 768733**

Contact Us:
**Tel: +(65) 6576 6766
Fax: +(65) 6576 6768**



PBA SYSTEMS LINEAR MOTOR SIZER SOFTWARE

PBA Systems Motor Sizer Software is available to download from our website to assist in the calculation and selection.

Kindly visit us at www.pbasystems.com.sg or simply scan the QR CODE

SIMULATED PERFORMANCE CHARTS

PBA Motor Sizer

Project Details: Customer Name: PBA, Project Name: XYZ, Date: 6/1/2022, Project Data Version: 7.0.16

Axis Details: Axis Name: X, Motor Category: DXB, Safety Margin: 20

Profiles:

No	Motion Profile	Travel Distn (m)	Travel Time (s)	Max. Speed (m/s)	Max. Accel. (m/s ²)	Dwell Time (s)	Mass of Load (Kg)	Angle Of Incl. (°)	Direction	Coefficient of Friction	Opposing Force (N)	Ambient Temp. (°C)	RMS Force (N)	Peak Force (N)	Frictional Force (N)	Accel. Time (s)	Cruise Time (s)	Decel. Time (s)	Total Time (s)
1	Trapezoidal	1.000	1.000	1.500	4.500	0.100	10.000	0.000	▶	0.003	0.000	30.000	35.034	45.294	0.294	0.333	0.333	0.333	1.100
2	Trapezoidal	0.500	1.000	0.750	2.250	0.000	20.000	0.000	▶	0.003	0.000	30.000	36.747	45.589	0.589	0.333	0.333	0.333	1.000
3	Trapezoidal	0.500	1.000	0.750	2.250	0.000	30.000	0.000	▶	0.003	0.000	30.000	55.121	68.383	0.883	0.333	0.333	0.333	1.000

Final Calculations for Axis:

Required RMS Force	43.026 N	Recommended Motor	Safety (%)
Required Peak Force	68.383 N	DX308-C2-S	32
Total Travel Distance	2.000 m	DX308-C2-P	32
Total Cycle Time	3.100 s	DX508-C2-S	101
Total Dwell Time	0.100 s	DX508-C2-P	101
Max Speed	1.500 m/s	DX508-C2-P	101
Max Acceleration	4.500 m/s ²	DX508-C2-P	101
Max Ambient Temp.	30.000 °C	DX508-C4-P	294

Selected Motor: DX508-C2-S

Continuous Force	89.00 N	L To L Resistance	8.40 ohm
Peak Force	446.00 N <th>L To L Inductance</th> <th>6.22 mH</th>	L To L Inductance	6.22 mH
Continuous Current	2.63 A <th>Continuous Power</th> <th>60.00 W</th>	Continuous Power	60.00 W
Peak Current	13.13 A <th>Peak Power</th> <th>1502.00 W</th>	Peak Power	1502.00 W
Motor Constant	11.51 N/vW <th>Coil Weight</th> <th>0.520 kg</th>	Coil Weight	0.520 kg
Force Constant	34.00 N/A <th>Coil Length</th> <th>121.00 mm</th>	Coil Length	121.00 mm
Back EMF Constant	39.10 V/(m/s) <th>Attractive Force</th> <th>0.00 N</th>	Attractive Force	0.00 N

Calculated Motor Values for Application:

Reqd. RMS Force	44.21 N	Reqd. Peak Force	69.57 N
Cont. Current	1.30 A	Peak Current	2.05 A
Coil Temp	48.03 °C	DC Bus Voltage	70.42 V
Safety Factor	101.29 %		

Servo Drive Model: MT-6/25-230AP1

Cont. Current	6.30 A	Peak Current	25.40 A
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