

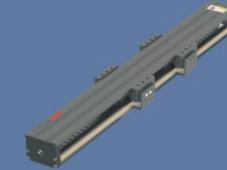
# KDR/KDH Series

## Linear Motor Module

With iron-core technology, Ultra-low cogging force, High acceleration, High speed

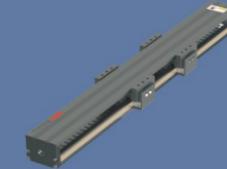
**KDR60**

Continuous Thrust: 25N-66N  
Peak Thrust: 56N-154N



**KDR86**

Continuous Thrust: 87N-120N  
Peak Thrust: 154N-260N



**KDH14**

Continuous Thrust: 81N-243N  
Peak Thrust: 234N-702N



**KDH17**

Continuous Thrust: 186N-558N  
Peak Thrust: 501N-1503N

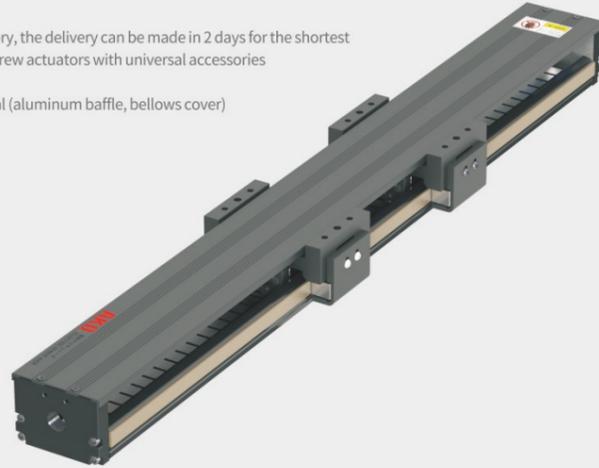


**KDH22**

Continuous Thrust: 510N-765N  
Peak Thrust: 1408N-2112N



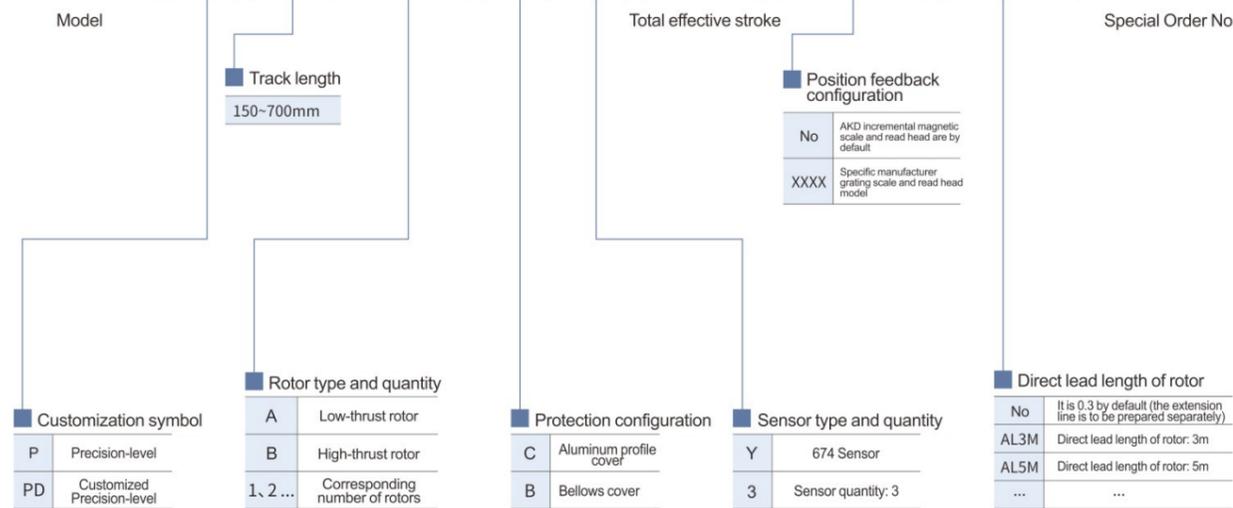
- Steel-based seat design, high rigidity
- Compact structure
- Standardized models, sufficient inventory, the delivery can be made in 2 days for the shortest
- It can seamlessly replace KKR, KK, KR screw actuators with universal accessories
- Easy maintenance
- Various protection methods are optional (aluminum baffle, bellows cover)



With bellows protection and the same installation size, the effective stroke is shortened

Ordering Method

KDR60 P-400 A1B2-C-Y3-S300-XXXX-AL3M-D123



Note

- The room temperature for motor parameter measurement is 25°C, and the specific use depends on the heat dissipation environment.
- The accuracy number is used for API laser interferometer with the measuring stroke of 500 mm.
- DC motor is adopted for resistance measurement, including a 0.3m standard cable.
- Inductance measurement frequency: 1kHz.
- The weight of actuator mass includes parts such as motor, slider, fixed platform, encoder, etc.
- Unmarked tolerance: ±0.1 mm
- Load/speed parameters, test pause time: 0.5s, stroke: 300mm, it is the theoretical value when placed horizontally, and for reference only. The actual load is affected by factors such as movement speed, acceleration, friction, installation environment and motor thrust.
- The rated load is the load data under the acceleration of 1 m/s and 0.5 g.
- The relevant parameter regulations are subject to change without prior notice.

Performance parameters	
Repeatability Accuracy	±2μm/300mm
Maximum acceleration	2 g
Rated speed	2 m/s

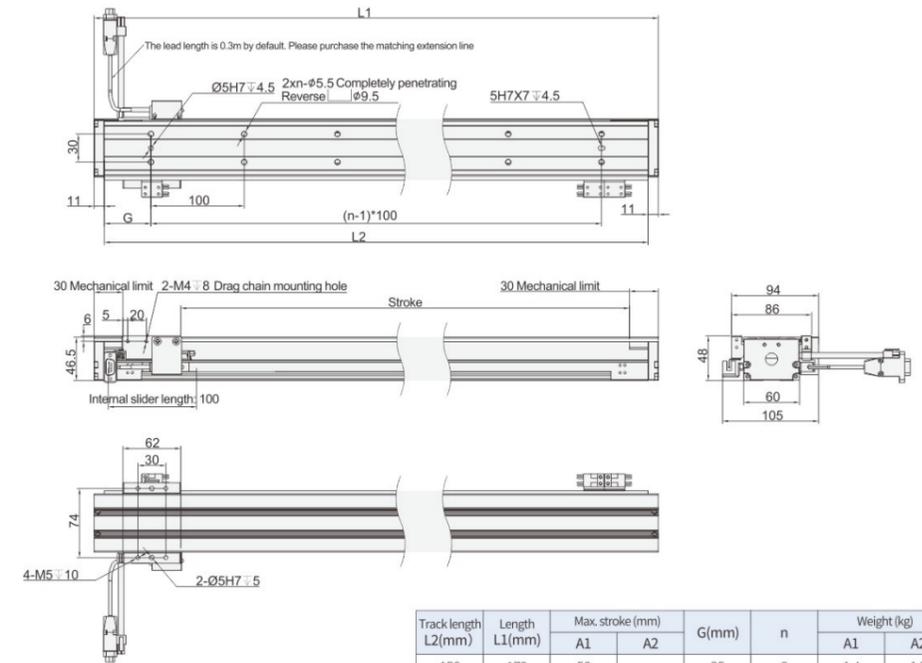
  

Motor spec.	
Peak current	11.3 Arms
Persistent current	2.8 Arms
Peak thrust	56N
Continuous thrust	25N
Motor force constant	9.6 N/Arms
Interphase resistance	1.32 Ω
Interphase inductance	2.4 mH
Pole pitch	20 mm

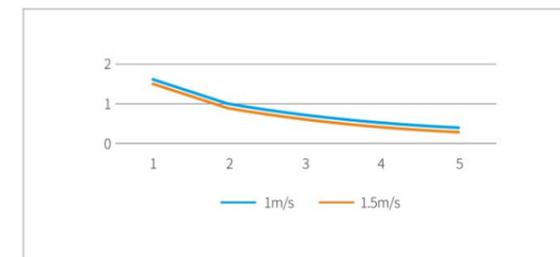
Machinery specifications	
Length of actuator mass	100 mm
Mass of actuator mass	0.3 kg
Rated Duty	4kg

The rated load value is the load data under the acceleration of 1 m/s and 0.5 g



Track length L2(mm)	Length L1(mm)	Max. stroke (mm)		G(mm)	n	Weight (kg)	
		A1	A2			A1	A2
150	172	50	-	25	2	1.4	1.7
200	222	100	-	50	2	1.6	1.9
300	322	200	100	50	3	2.1	2.4
400	422	300	200	50	4	2.6	2.9
500	522	400	300	50	5	3.1	3.4
600	622	500	400	50	6	3.6	3.9
700	722	600	500	50	7	4.2	4.5

Load acceleration curve



KDR60A Motor load quick model selection

Load	1m/s	1.5m/s
1	1.6g	1.5g
2	1g	0.9g
3	0.7g	0.6g

KDR60A motor is adapted to a 400W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ3LDO	KA1-ZX-ZJ3LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0032AAP1	CDHD2S-0032AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0032AAP1	GSLD-0032AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.



Performance parameters	
Repeatability Accuracy	±2μm/300mm
Maximum acceleration	2 g
Rated speed	2 m/s

Motor spec.	
Peak current	12Arms
Persistent current	2.5 Arms
Peak thrust	154N
Continuous thrust	87N
Motor force constant	34.6 N/Arms
Interphase resistance	4.6 Ω
Interphase inductance	18 mH
Pole pitch	20 mm

Machinery specifications	
Length of actuator mass	120mm
Mass of actuator mass	1 kg
Rated Duty	12kg

The rated load value is the load data under the acceleration of 1 m/s and 0.5 g

Track length	Length L1(mm)	Single rotor Max. stroke	Double rotor Max. stroke	n	Single rotor Weight (kg)	Double rotor Weight (kg)
340	366	210	90	3	4.9	6
440	466	310	190	4	5.9	6.8
540	566	410	290	5	6.9	8
640	666	510	390	6	8	9.2
740	766	610	490	7	9	10.1
840	866	710	590	8	10	11.1
940	966	810	690	9	11.1	12.2
1040	1066	910	790	10	12.1	13.3

Performance parameters	
Repeatability Accuracy	±2μm/300mm
Maximum acceleration	2 g
Rated speed	2 m/s

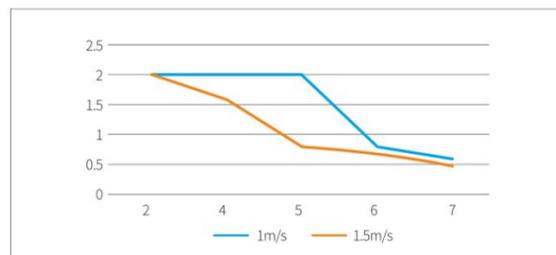
Motor spec.	
Peak current	12 Arms
Persistent current	2 Arms
Peak thrust	260N
Continuous thrust	120N
Motor force constant	51.5N/Arms
Interphase resistance	6.7 Ω
Interphase inductance	21.2 mH
Pole pitch	20 mm

Machinery specifications	
Length of actuator mass	165 mm
Mass of actuator mass	1.5kg
Rated Duty	20kg

The rated load value is the load data under the acceleration of 1 m/s and 0.5 g

Track length	Length L1(mm)	Single rotor Max. stroke	Double rotor Max. stroke	n	Single rotor Weight (kg)	Double rotor Weight (kg)
340	366	170	-	3	5.9	-
440	466	270	105	4	7	8.5
540	566	370	205	5	8	9.4
640	666	470	305	6	9	10.5
740	766	570	405	7	10.1	11.6
840	866	670	505	8	11.1	12.5
940	966	770	605	9	12.1	13.4
1040	1066	870	705	10	13.1	14.6

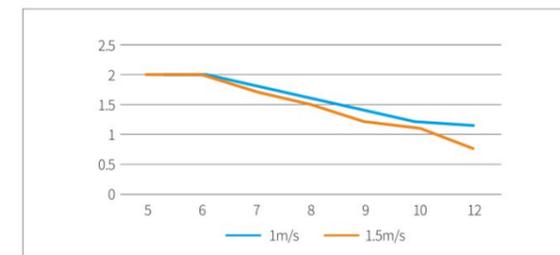
Load acceleration curve



KDR86A Motor load quick model selection

Load	1m/s	1.5m/s
3kg	2g	2g
4kg	2g	1.8g
5kg	1.6g	1.4g
6kg	1.5g	1.3g
7kg	1.3g	1g
8kg	1.1g	0.9g
9kg	0.9g	0.6g

Load acceleration curve



KDR86B Motor load quick model selection

负载	1m/s	1.5m/s
5kg	2g	2g
6kg	2g	2g
7kg	1.8g	1.7g
8kg	1.6g	1.5g
9kg	1.4g	1.2g
10kg	1.2g	1.1g
12kg	1.15	0.75

KDR86A motor is adapted to a 400W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ3LDO	KA1-ZX-ZJ3LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0032AAP1	CDHD2S-0032AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0032AAP1	GSLD-0032AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

KDR86B motor is adapted to a 400W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-4D52AAP1	CDHD2S-4D52AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

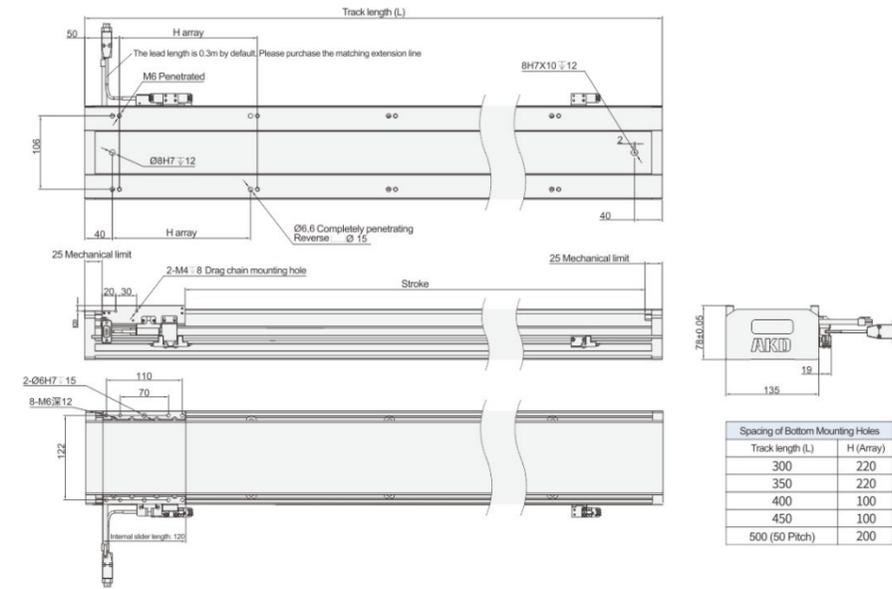
**KDH14** General purpose linear motor actuator

**KDH14A** General purpose linear motor actuator **KDH14P** - Track length **A** Number of rotors **- CY** Number of sensors **- S** Stroke

- The optional range is 60-1566 N, and covers the common industrial applications
- Aviation aluminum profile base is featured by lightweight and low deformation modulus
- Ultra-long stroke
- Replace the screw actuator without changing the design
- Various protection methods are optional



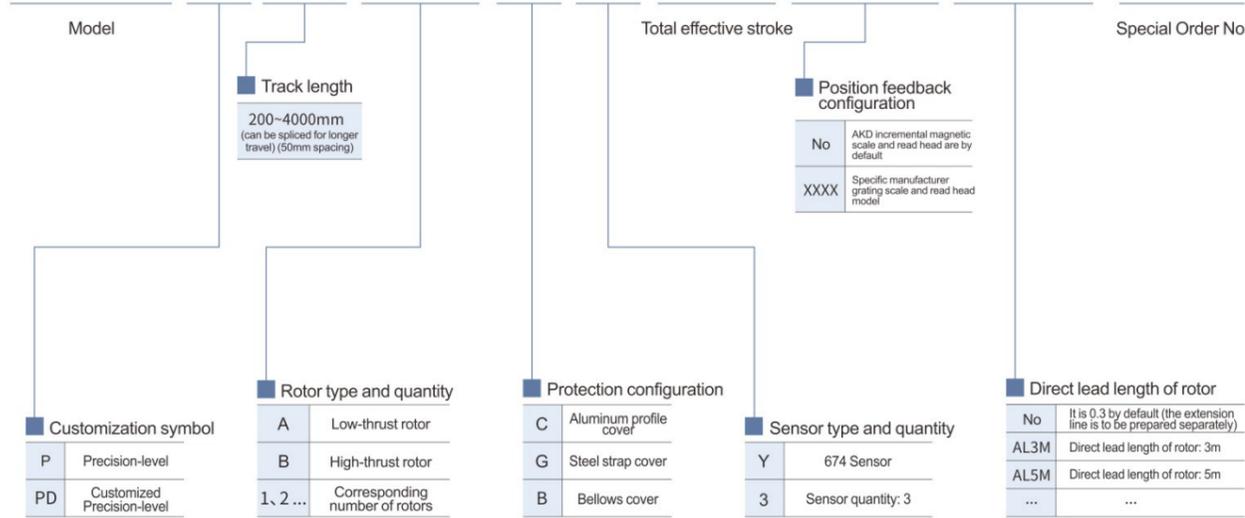
With bellows protection and the same installation size, the effective stroke is shortened for 30%



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
200	30	3.7	-	-
250	80	4.25	-	-
300	130	4.8	-	-
350	180	5.35	-	-
400	230	5.9	100	7.7
450	280	6.45	150	8.25
500	330	7	200	8.8
550	380	7.55	250	9.35
600	430	8.1	300	9.9
650	480	8.65	350	10.45
700	530	9.2	400	11
750	580	9.75	450	11.55
800	630	10.3	500	12.1
850	680	10.85	550	12.65
900	730	11.4	600	13.2
950	780	11.95	650	13.75
1000	830	12.5	700	14.3
1100	930	13.6	800	15.4
1200	1030	14.7	900	16.5
1300	1130	15.8	1000	17.6
1400	1230	16.9	1100	18.7
1500	1330	18	1200	19.8
1600	1430	19.1	1300	20.9
1700	1530	20.2	1400	22
1800	1630	21.3	1500	23.1
1900	1730	22.4	1600	24.2
2000	1830	23.5	1700	25.3
2100	1930	24.6	1800	26.4
2200	2030	25.7	1900	27.5
2300	2130	26.8	2000	28.6
2400	2230	27.9	2100	29.7
2500	2330	29	2200	30.8
2600	2430	30.1	2300	31.9
2700	2530	31.2	2400	33
2800	2630	32.3	2500	34.1
2900	2730	33.4	2600	35.2
3000	2830	34.5	2700	36.3

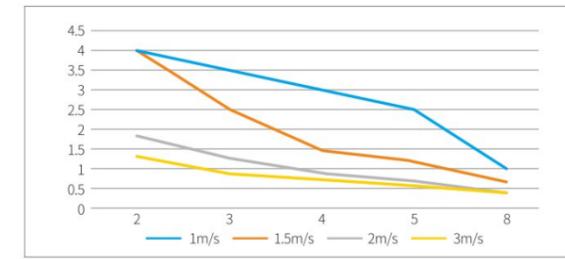
Ordering Method

**KDH14 P-400 A1B2-C-Y3-S300-XXXX-AL3M-D123**



Peak thrust	N	234.00
Continuous thrust	N	81.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	20.42
Motor force constant	N/Arms	22.85
Interphase resistance	Ω	2.50
Interphase inductance	Mh	15.53
Time Constant	ms	4.91
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	376.00
Pole pitch	mm	25

Load acceleration curve



KDH14-A Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
2kg	4g	4g	1.85g	1.3g
3kg	3.5g	2.5g	1.25g	0.9g
4kg	3g	1.5g	0.9g	0.75g
5kg	2g	1.2g	0.7g	0.6g
8kg	1g	0.7g	0.4g	0.38g

Length of actuator mass	mm	120
Number of sliders	Pcs	4
Repeatability Accuracy	Magnetic scale	±5μm/1000mm
	Optical scale	±2μm/1000mm
Mass of actuator mass	Kg	1.9

Note

1. The room temperature for motor parameter measurement is 25°C, and the specific use depends on the heat dissipation environment.
2. The accuracy number is used for API laser interferometer with the measuring stroke of 500 mm.
3. DC motor is adopted for resistance measurement, including a 0.3m standard cable.
4. Inductance measurement frequency: 1kHz.
5. The weight of actuator mass includes parts such as motor, slider, fixed platform, encoder, etc.
6. Unmarked tolerance: ±0.1 mm
7. Load/speed parameters, test pause time: 0.5s, stroke: 500mm, it is the theoretical value when placed horizontally, and for reference only. The actual load is affected by factors such as movement speed, acceleration, friction, installation environment and motor thrust.
8. The rated load is the load data under the acceleration of 1 m/s and 0.5 g.
9. The relevant parameter regulations are subject to change without prior notice.

KDH14-A motor is adapted to a 400W servo driver, and AKD provides the following models of drivers.

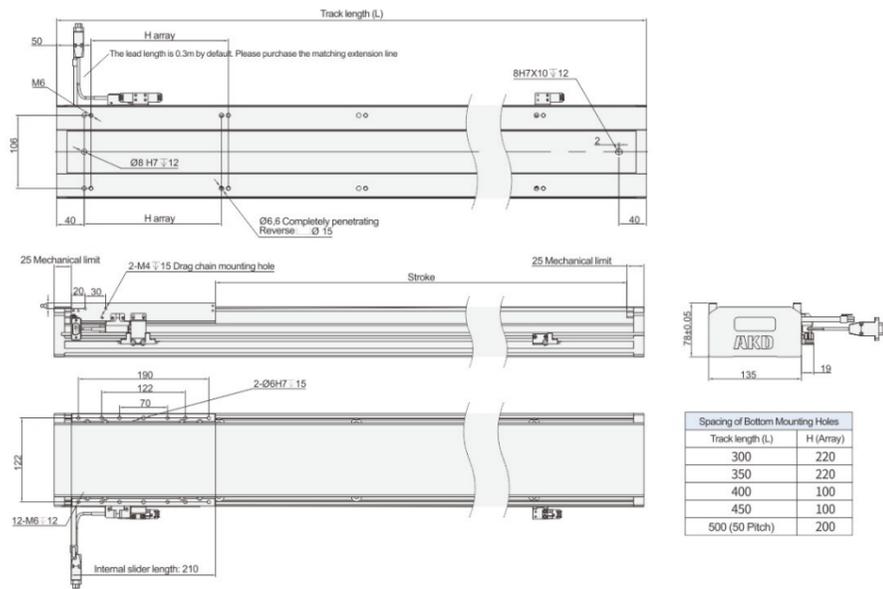
Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ3LDO	KA1-ZX-ZJ3LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0032AAP1	CDHD2S-0032AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0032AAP1	GSLD-0032AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**KDH14B**

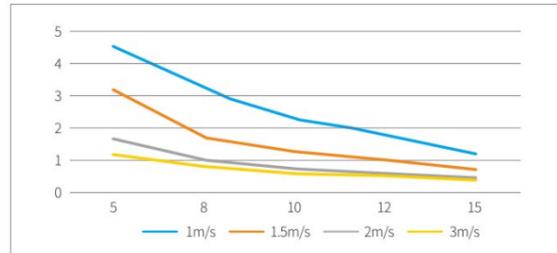
General purpose linear motor actuator

KDH14P - Track length A Number of rotors - CY Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
300	40	5.5	-	-
350	90	6.05	-	-
400	140	6.6	-	-
450	190	7.15	-	-
500	240	7.7	-	-
550	290	8.25	-	-
600	340	8.8	120	11.4
650	390	9.35	170	11.95
700	440	9.9	220	12.5
750	490	10.45	270	13.05
800	540	11	320	13.6
850	590	11.55	370	14.15
900	640	12.1	420	14.7
950	690	12.65	470	15.25
1000	740	13.2	520	15.8
1100	840	14.3	620	16.9
1200	940	15.4	720	18
1300	1040	16.5	820	19.1
1400	1140	17.6	920	20.2
1500	1240	18.7	1020	21.3
1600	1340	19.8	1120	22.4
1700	1440	20.9	1220	23.5
1800	1540	22	1320	24.6
1900	1640	23.1	1420	25.7
2000	1740	24.2	1520	26.8
2100	1840	25.3	1620	27.9
2200	1940	26.4	1720	29
2300	2040	27.5	1820	30.1
2400	2140	28.6	1920	31.2
2500	2240	29.7	2020	32.3
2600	2340	30.8	2120	33.4
2700	2440	31.9	2220	34.5
2800	2540	33	2320	35.6
2900	2640	34.1	2420	36.7
3000	2740	35.2	2520	37.8

Load acceleration curve



KDH14-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	3.2g	1.7g	1.2g
8kg	3.2g	1.7g	1g	0.8g
10kg	2.3g	1.3g	0.75g	0.6g
12kg	1.8g	1g	0.6g	0.5g
15kg	1.2g	0.75g	0.5g	0.4g

Motor spec.		
Peak thrust	N	468.00
Continuous thrust	N	162.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	42.72
Motor force constant	N/Arms	45.70
Interphase resistance	Ω	4.90
Interphase inductance	Mh	29.84
Time Constant	ms	4.94
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	758.00
Pole pitch	mm	25

Machinery specifications		
Length of actuator mass	mm	210
Number of sliders	Pcs	4
Repeatability Accuracy	Magnetic scale Optical scale	±5µm/1000mm ±2µm/1000mm
Mass of actuator mass	Kg	2.6

KDH14-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

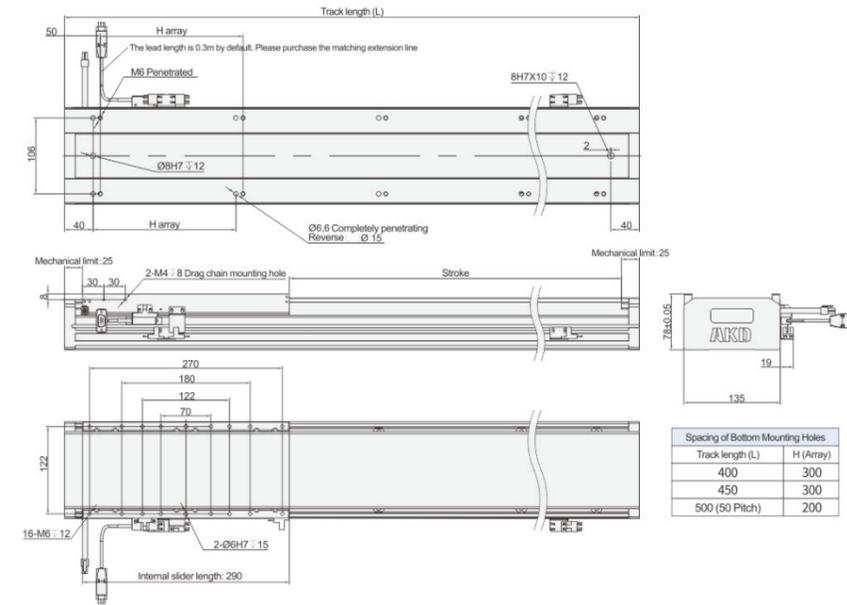
Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-4D52AAP1	CDHD2S-4D52AEC2	ALGC-B-3M/5M/8M-TY	
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**KDH14C**

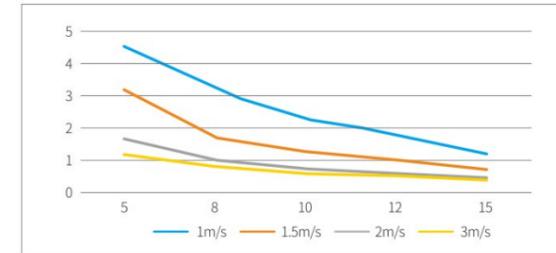
General purpose linear motor actuator

KDH14P - Track length A Number of rotors - CY Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	60	7.8	-	-
450	110	8.35	-	-
500	160	8.9	-	-
550	210	9.45	-	-
600	260	10	-	-
650	310	10.55	-	-
700	360	11.1	60	14.9
750	410	11.65	110	15.45
800	460	12.2	160	16
850	510	12.75	210	16.55
900	560	13.3	260	17.1
950	610	13.85	310	17.65
1000	660	14.4	360	18.2
1100	760	15.5	460	19.3
1200	860	16.6	560	20.4
1300	960	17.7	660	21.5
1400	1060	18.8	760	22.6
1500	1160	19.9	860	23.7
1600	1260	21	960	24.8
1700	1360	22.1	1060	25.9
1800	1460	23.2	1160	27
1900	1560	24.3	1260	28.1
2000	1660	25.4	1360	29.2
2100	1760	26.5	1460	30.3
2200	1860	27.6	1560	31.4
2300	1960	28.7	1660	32.5
2400	2060	29.8	1760	33.6
2500	2160	30.9	1860	34.7
2600	2260	32	1960	35.8
2700	2360	33.1	2060	36.9
2800	2460	34.2	2160	38
2900	2560	35.3	2260	39.1
3000	2660	36.4	2360	40.2

Load acceleration curve



KDH14-C Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.8g	2.2g
8kg	3.5g	2.8g	2g	1.2g
10kg	2.9g	2.1g	1.3g	0.9g
15kg	1.8g	1.1g	0.8g	0.6g
20kg	1g	0.6g	0.5g	0.4g
25kg	0.75g	0.48g	0.35g	0.32g
30kg	0.5g	0.40g	0.32g	0.3g

Motor spec.		
Peak thrust	N	702.00
Continuous thrust	N	243.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	66.71
Motor force constant	N/Arms	68.56
Interphase resistance	Ω	7.47
Interphase inductance	Mh	43.77
Time Constant	ms	4.99
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	1137.00
Pole pitch	mm	25

Machinery specifications		
Length of actuator mass	mm	290
Number of sliders	Pcs	6
Repeatability Accuracy	Magnetic scale Optical scale	±5µm/1000mm ±2µm/1000mm
Mass of actuator mass	Kg	3.8

KDH14-C motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-4D52AAP1	CDHD2S-4D52AEC2	ALGC-B-3M/5M/8M-TY	
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

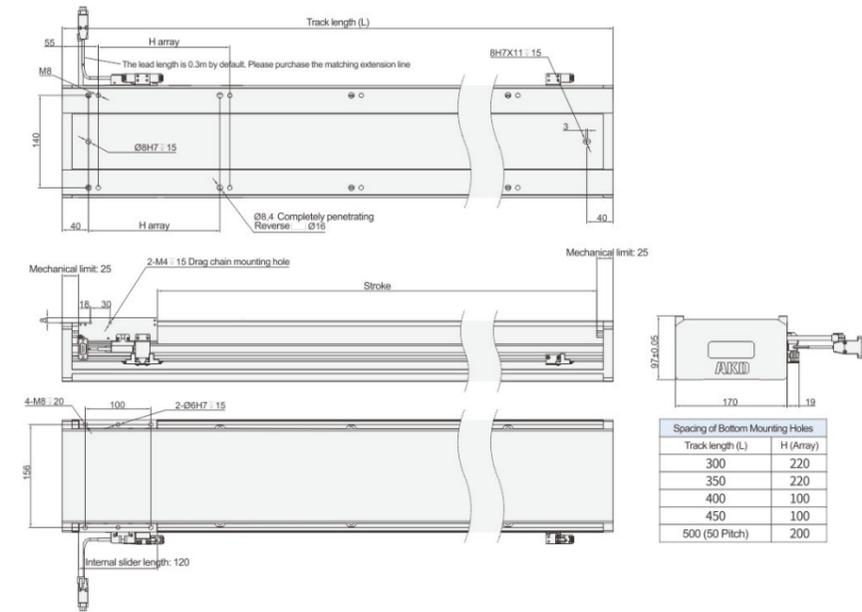
**KDH17** General purpose linear motor actuator

**KDH17A** General purpose linear motor actuator **KDH17P** - Track length A - Number of rotors - CY - Number of sensors - S - Stroke

- The optional range is 60-1566 N, and covers the common industrial applications
- Aviation aluminum profile base is featured by lightweight and low deformation modulus
- Ultra-long stroke
- Replace the screw actuator without changing the design
- Various protection methods are optional



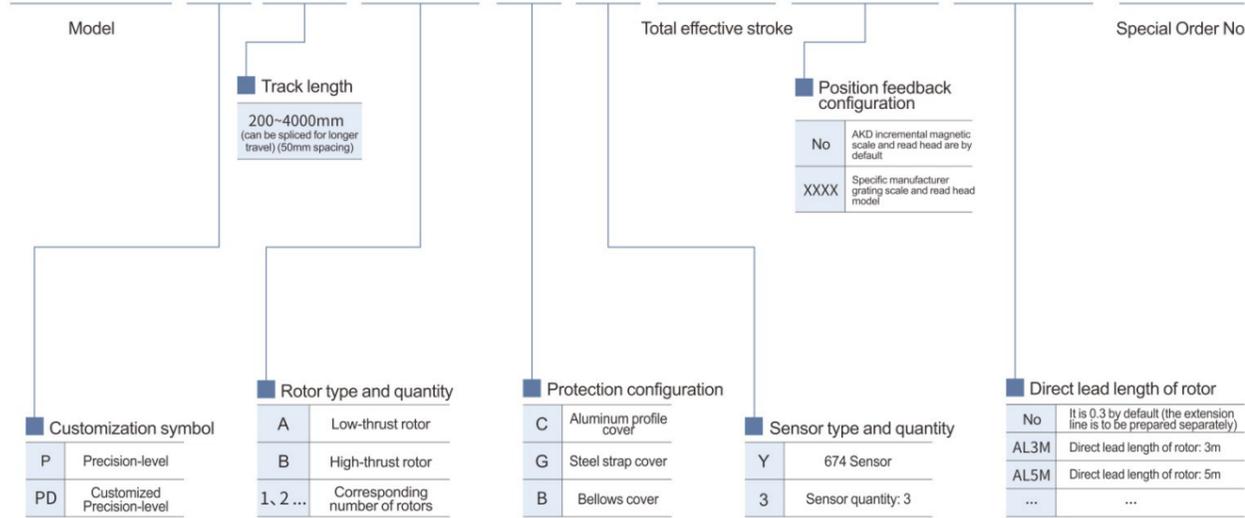
With bellows protection and the same installation size, the effective stroke is shortened for 30%



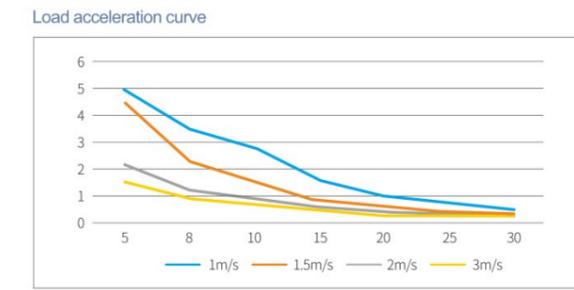
Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
200	30	4.7	-	-
250	80	5.55	-	-
300	130	6.4	-	-
350	180	7.25	-	-
400	230	8.1	100	10.9
450	280	8.95	150	11.75
500	330	9.8	200	12.6
550	380	10.65	250	13.45
600	430	11.5	300	14.3
650	480	12.35	350	15.15
700	530	13.2	400	16
750	580	14.05	450	16.85
800	630	14.9	500	17.7
850	680	15.75	550	18.55
900	730	16.6	600	19.4
950	780	17.45	650	20.25
1000	830	18.3	700	21.1
1100	930	20	800	22.8
1200	1030	21.7	900	24.5
1300	1130	23.4	1000	26.2
1400	1230	25.1	1100	27.9
1500	1330	26.8	1200	29.6
1600	1430	28.5	1300	31.3
1700	1530	30.2	1400	33
1800	1630	31.9	1500	34.7
1900	1730	33.6	1600	36.4
2000	1830	35.3	1700	38.1
2100	1930	37	1800	39.8
2200	2030	38.7	1900	41.5
2300	2130	40.4	2000	43.2
2400	2230	42.1	2100	44.9
2500	2330	43.8	2200	46.6
2600	2430	45.5	2300	48.3
2700	2530	47.2	2400	50
2800	2630	48.9	2500	51.7
2900	2730	50.6	2600	53.4
3000	2830	52.3	2700	55.1

Ordering Method

**KDH17 P-400 A1B2-C-Y3-S300-XXXX-AL3M-D123**



Motor spec.		
Peak thrust	N	501.00
Continuous thrust	N	186.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	51.23
Motor force constant	N/Arms	54.04
Interphase resistance	Ω	5.20
Interphase inductance	Mh	30.02
Time Constant	ms	5.77
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	640.00
Pole pitch	mm	25



Machinery specifications		
Length of actuator mass	mm	120
Number of sliders	Pcs	4
Repeatability Accuracy	Magnetic scale	±5μm/1000mm
	Optical scale	±2μm/1000mm
Mass of actuator mass	Kg	2.8

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.2g	1.55g
8kg	3.5g	2.3g	1.25g	0.95g
10kg	2.8g	1.5g	0.95g	0.75g
15kg	1.6g	0.85g	0.6g	0.5g
20kg	1g	0.65g	0.43g	0.35g
25kg	0.7g	0.45g	0.34g	0.3g
30kg	0.5g	0.35g	0.28g	0.25g

Note

1. The room temperature for motor parameter measurement is 25°C, and the specific use depends on the heat dissipation environment.
2. The accuracy number is used for API laser interferometer with the measuring stroke of 500 mm.
3. DC motor is adopted for resistance measurement, including a 0.3m standard cable.
4. Inductance measurement frequency: 1kHz.
5. The weight of actuator mass includes parts such as motor, slider, fixed platform, encoder, etc.
6. Unmarked tolerance: ±0.1 mm
7. Load/speed parameters, test pause time: 0.5s, stroke: 500mm, it is the theoretical value when placed horizontally, and for reference only. The actual load is affected by factors such as movement speed, acceleration, friction, installation environment and motor thrust.
8. The rated load is the load data under the acceleration of 1 m/s and 0.5 g.
9. The relevant parameter regulations are subject to change without prior notice.

KDH17-A motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

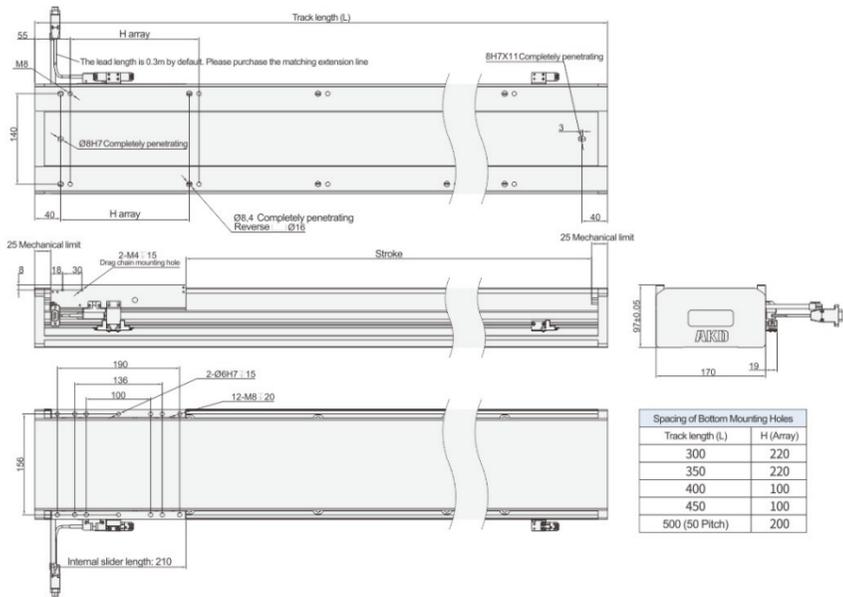
Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-4D52AAP1	CDHD2S-4D52AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**KDH17B**

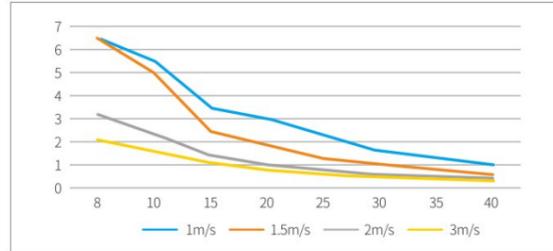
General purpose linear motor actuator

KDH17P - Track length A Number of rotors - CY Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
300	40	7.7	-	-
350	90	8.55	-	-
400	140	9.4	-	-
450	190	10.25	-	-
500	240	11.1	-	-
550	290	11.95	-	-
600	340	12.8	120	16.9
650	390	13.65	170	17.75
700	440	14.5	220	18.6
750	490	15.35	270	19.45
800	540	16.2	320	20.3
850	590	17.05	370	21.15
900	640	17.9	420	22
950	690	18.75	470	22.85
1000	740	19.6	520	23.7
1100	840	21.3	620	25.4
1200	940	23	720	27.1
1300	1040	24.7	820	28.8
1400	1140	26.4	920	30.5
1500	1240	28.1	1020	32.2
1600	1340	29.8	1120	33.9
1700	1440	31.5	1220	35.6
1800	1540	33.2	1320	37.3
1900	1640	34.9	1420	39
2000	1740	36.6	1520	40.7
2100	1840	38.3	1620	42.4
2200	1940	40	1720	44.1
2300	2040	41.7	1820	45.8
2400	2140	43.4	1920	47.5
2500	2240	45.1	2020	49.2
2600	2340	46.8	2120	50.9
2700	2440	48.5	2220	52.6
2800	2540	50.2	2320	54.3
2900	2640	51.9	2420	56
3000	2740	53.6	2520	57.7

Load acceleration curve



KDH17-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
8kg	4g	4g	3.2g	2.1g
10kg	4g	4g	2.4g	1.6g
15kg	3.5g	2.5g	1.4g	1.1g
20kg	3g	1.8g	1g	0.8g
25kg	2.3g	1.3g	0.75g	0.6g
30kg	1.6g	1g	0.6g	0.5g
35kg	1.3g	0.8g	0.5g	0.45g
40kg	1g	0.6g	0.45g	0.35g

Motor spec.		
Peak thrust	N	1002.00
Continuous thrust	N	372.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	92.88
Motor force constant	N/Arms	108.42
Interphase resistance	Ω	7.20
Interphase inductance	Mh	59.67
Time Constant	ms	5.08
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	1280.00
Pole pitch	mm	25

Machinery specifications		
Length of actuator mass	mm	210
Number of sliders	Pcs	4
Repeatability Accuracy	Magnetic scale Optical scale	±5µm/1000mm ±2µm/1000mm
Mass of actuator mass	Kg	4.1

KDH17-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

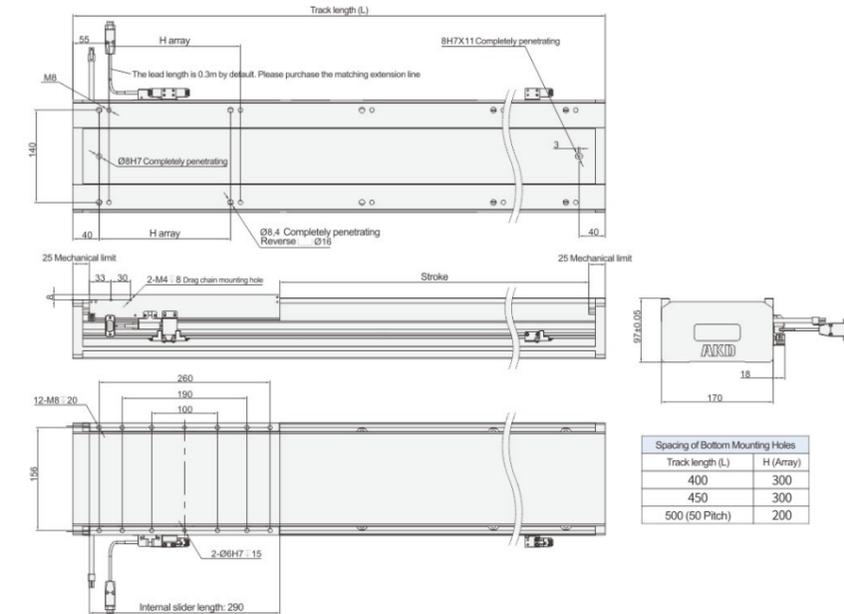
Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D05-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-4D52AAP1	CDHD2S-4D52AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**KDH17C**

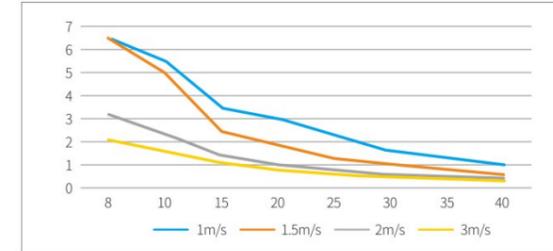
General purpose linear motor actuator

KDH17P - Track length A Number of rotors - CY Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	60	10.9	-	-
450	110	11.75	-	-
500	160	12.6	-	-
550	210	13.45	-	-
600	260	14.3	-	-
650	310	15.15	-	-
700	360	16	60	21.6
750	410	16.85	110	22.45
800	460	17.7	160	23.3
850	510	18.55	210	24.15
900	560	19.4	260	25
950	610	20.25	310	25.85
1000	660	21.1	360	26.7
1100	760	22.8	460	28.4
1200	860	24.5	560	30.1
1300	960	26.2	660	31.8
1400	1060	27.9	760	33.5
1500	1160	29.6	860	35.2
1600	1260	31.3	960	36.9
1700	1360	33	1060	38.6
1800	1460	34.7	1160	40.3
1900	1560	36.4	1260	42
2000	1660	38.1	1360	43.7
2100	1760	39.8	1460	45.4
2200	1860	41.5	1560	47.1
2300	1960	43.2	1660	48.8
2400	2060	44.9	1760	50.5
2500	2160	46.6	1860	52.2
2600	2260	48.3	1960	53.9
2700	2360	50	2060	55.6
2800	2460	51.7	2160	57.3
2900	2560	53.4	2260	59
3000	2660	55.1	2360	60.7

Load acceleration curve



KDH17-C Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
8	4g	4g	4g	3.5g
10	4g	4g	4g	3g
15	4g	3.6g	2.5g	1.8g
20	4g	1.9g	1.7g	1.3g
25	3.6g	1.5g	1.3g	1.1g
30	3.2g	1.4g	1.1g	0.9g
35	2.7g	2.2g	0.9g	0.7g
40	2.3g	2.1g	0.7g	0.6g
45	2g	1.8g	0.6g	0.5g
50	1.8g	1.3g	0.55g	0.42g

Motor spec.		
Peak thrust	N	1503.00
Continuous thrust	N	558.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	147.51
Motor force constant	N/Arms	162.12
Interphase resistance	Ω	13.13
Interphase inductance	Mh	88.72
Time Constant	ms	5.19
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	1920.00
Pole pitch	mm	25

Machinery specifications		
Length of actuator mass	mm	290
Number of sliders	Pcs	6
Repeatability Accuracy	Magnetic scale Optical scale	±5µm/1000mm ±2µm/1000mm
Mass of actuator mass	Kg	5.6

KDH17-C motor is adapted to a 1000W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0062AAP1	CDHD2S-0062AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

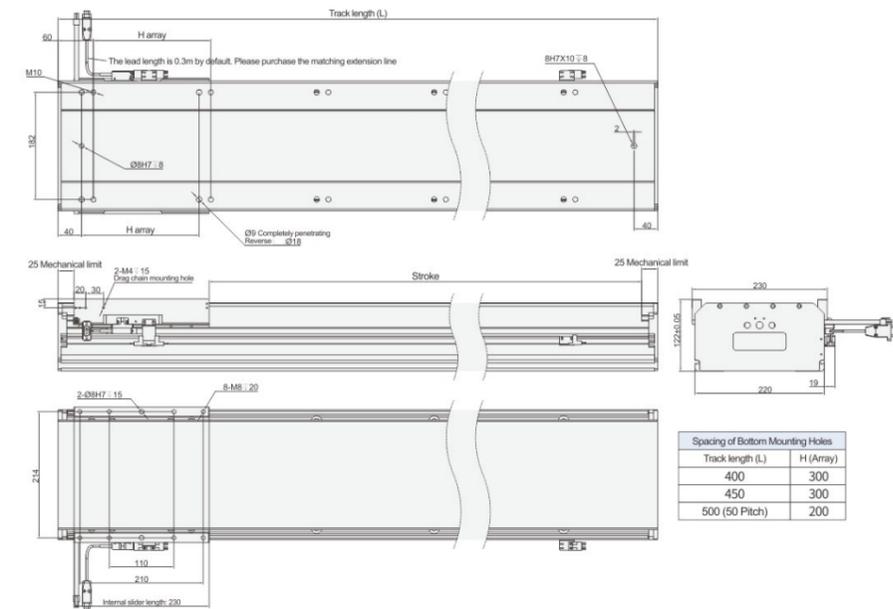
**KDH22** General purpose linear motor actuator

- The optional range is 60-1566 N, and covers the common industrial applications
- Aviation aluminum profile base is featured by lightweight and low deformation modulus
- Ultra-long stroke
- Replace the screw actuator without changing the design
- Various protection methods are optional



With bellows protection and the same installation size, the effective stroke is shortened for 30%

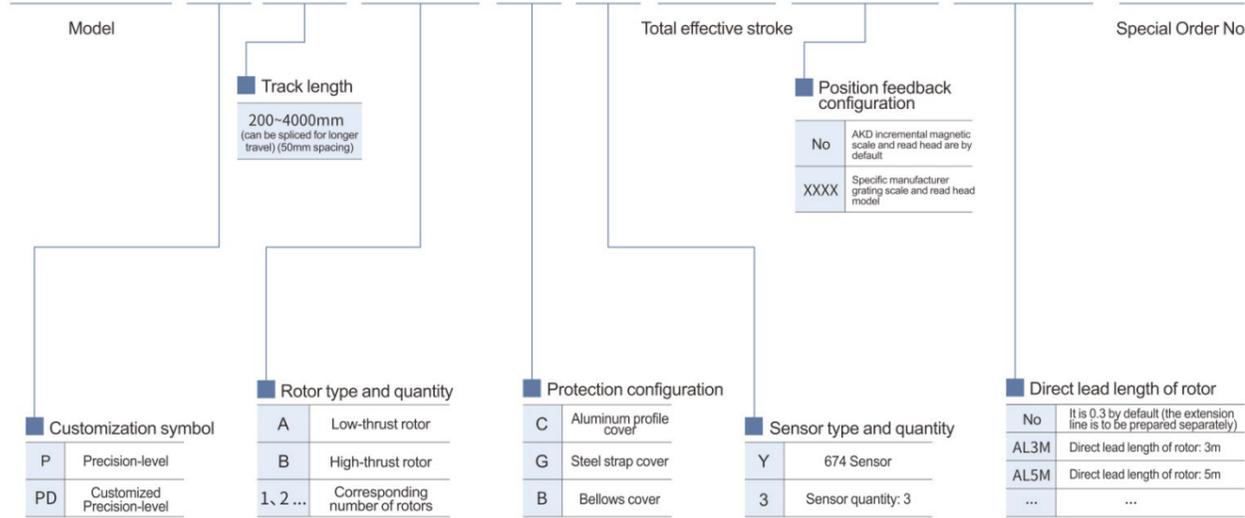
**KDH22A** General purpose linear motor actuator **KDH22P** - Track length A Number of rotors - CY Number of sensors - S Stroke



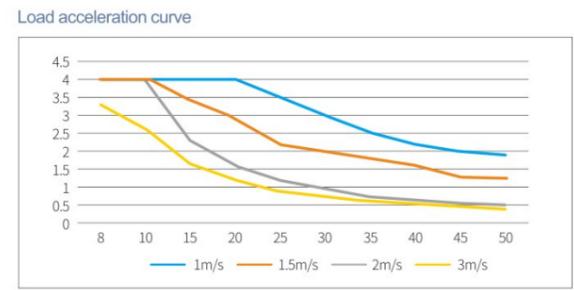
Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	120	18.5	-	-
450	170	19.75	-	-
500	220	21	-	-
550	270	22.25	-	-
600	320	23.5	80	29
650	370	24.75	130	30.25
700	420	26	180	31.5
750	470	27.25	230	32.75
800	520	28.5	280	34
850	570	29.75	330	35.25
900	620	31	380	36.5
950	670	32.25	430	37.75
1000	720	33.5	480	39
1100	820	36	580	41.5
1200	920	38.5	680	44
1300	1020	41	780	46.5
1400	1120	43.5	880	49
1500	1220	46	980	51.5
1600	1320	48.5	1080	54
1700	1420	51	1180	56.5
1800	1520	53.5	1280	59
1900	1620	56	1380	61.5
2000	1720	58.5	1480	64
2100	1820	61	1580	66.5
2200	1920	63.5	1680	69
2300	2020	66	1780	71.5
2400	2120	68.5	1880	74
2500	2220	71	1980	76.5
2600	2320	73.5	2080	79
2700	2420	76	2180	81.5
2800	2520	78.5	2280	84
2900	2620	81	2380	86.5
3000	2720	83.5	2480	89

Ordering Method

**KDH22 P-400 A1B2-C-Y3-S300-XXXX-AL3M-D123**



Peak thrust	N	1408.00
Continuous thrust	N	510.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	134.56
Motor force constant	N/Arms	147.78
Interphase resistance	Ω	10.90
Interphase inductance	Mh	77.94
Time Constant	ms	5.40
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	1746.00
Pole pitch	mm	25



Length of actuator mass	mm	230
Number of sliders	Pcs	4
Repeatability Accuracy	Magnetic scale	±5μm/1000mm
	Optical scale	±2μm/1000mm
Mass of actuator mass	Kg	5.5

Load	1m/s	1.5m/s	2m/s	3m/s
8	4g	4g	4g	3.3g
10	4g	4g	4g	2.6g
15	4g	3.4g	2.3g	1.65g
20	4g	1.6g	1.6g	1.2g
25	3.5g	1.3g	1.2g	0.9g
30	3g	1.25g	0.95g	0.75g
35	2.5g	2.9g	0.75g	0.65g
40	2.2g	2.2g	0.65g	0.55g
45	2g	2g	0.55g	0.45g
50	1.9g	1.8g	0.5g	0.4g

Note

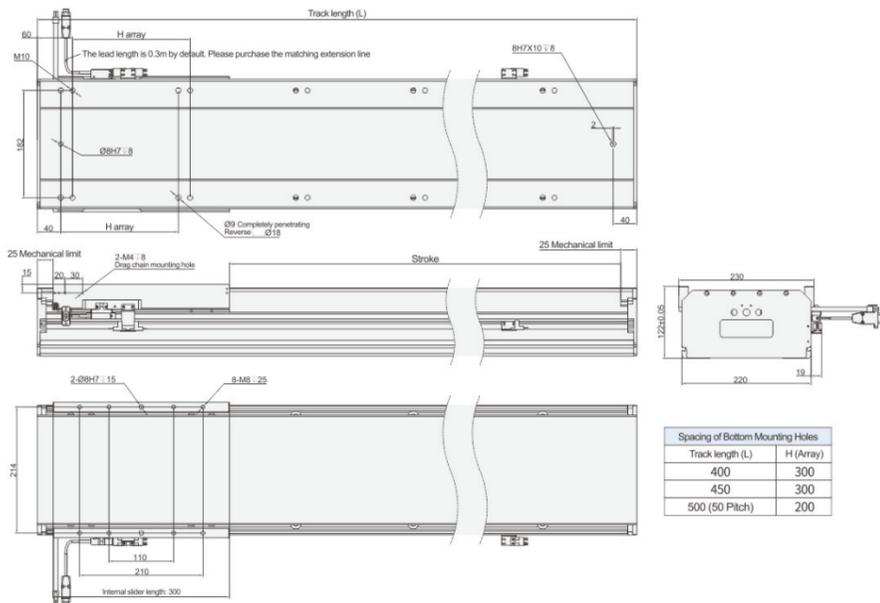
- The room temperature for motor parameter measurement is 25°C, and the specific use depends on the heat dissipation environment.
- The accuracy number is used for API laser interferometer with the measuring stroke of 500mm.
- DC motor is adopted for resistance measurement, including a 0.3m standard cable.
- Inductance measurement frequency: 1kHz.
- The weight of actuator mass includes parts such as motor, slider, fixed platform, encoder, etc.
- Unmarked tolerance: ±0.1 mm
- Load/speed parameters, test pause time: 0.5s, stroke: 500mm, it is the theoretical value when placed horizontally, and for reference only. The actual load is affected by factors such as movement speed, acceleration, friction, installation environment and motor thrust.
- The rated load is the load data under the acceleration of 1 m/s and 0.5 g.
- The relevant parameter regulations are subject to change without prior notice.

KDH22-A motor is adapted to a 1000W servo driver, and AKD provides the following models of drivers. The above are the parameters for motor series connection. For speeds exceeding 2m/s, the motor should be connected in parallel, with a current twice that of the series connection and the same thrust. The drive should be selected according to the current of 1500W

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0062AAP1	CDHD2S-0062AEC2	ALGC-B-3M/5M/8M-TY	
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**KDH22B** General purpose linear motor actuator **KDH22P-** Track length **A** Number of rotors **- CY** Number of sensors **- S** Stroke

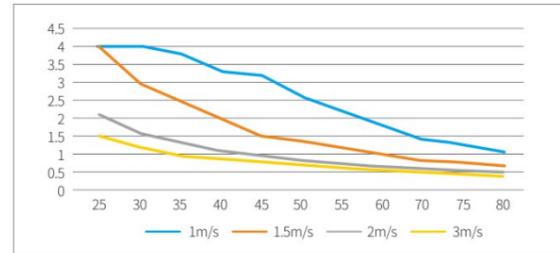


Track length (L)	H (Array)
400	300
450	300
500 (50 Pitch)	200

Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	50	20.6	-	-
450	100	21.85	-	-
500	150	23.1	-	-
550	200	24.35	-	-
600	250	25.6	-	-
650	300	26.85	-	-
700	350	28.1	40	35.7
750	400	29.35	90	36.95
800	450	30.6	140	38.2
850	500	31.85	190	39.45
900	550	33.1	240	40.7
950	600	34.35	290	41.95
1000	650	35.6	340	43.2
1100	750	38.1	440	45.7
1200	850	40.6	540	48.2
1300	950	43.1	640	50.7
1400	1050	45.6	740	53.2
1500	1150	48.1	840	55.7
1600	1250	50.6	940	58.2
1700	1350	53.1	1040	60.7
1800	1450	55.6	1140	63.2
1900	1550	58.1	1240	65.7
2000	1650	60.6	1340	68.2
2100	1750	63.1	1440	70.7
2200	1850	65.6	1540	73.2
2300	1950	68.1	1640	75.7
2400	2050	70.6	1740	78.2
2500	2150	73.1	1840	80.7
2600	2250	75.6	1940	83.2
2700	2350	78.1	2040	85.7
2800	2450	80.6	2140	88.2
2900	2550	83.1	2240	90.7
3000	2650	85.6	2340	93.2

Peak thrust	N	2112.00
Continuous thrust	N	765.00
Peak current	Arms	10.40
Persistent current	Arms	3.40
Back EMF Constant	Vpeak/(M/S)	201.69
Motor force constant	N/Arms	221.67
Interphase resistance	Ω	16.17
Interphase inductance	Mh	115.62
Time Constant	ms	5.11
Maximum Allowable Voltage	VDC	310.00
Magnetic Attraction Force	N	2619.00
Pole pitch	mm	25

Load acceleration curve



KDH22-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
25	4g	4g	2.1g	1.5g
30	4g	3g	1.6g	1.2g
35	3.8g	2.5g	1.3g	1g
40	3.3g	2g	1.1g	0.89g
45	3.2g	1.5g	0.95g	0.78g
50	2.6g	1.4g	0.85g	0.69g
55	2.2g	1.2g	0.75g	0.63g
60	1.8g	1g	0.65g	0.57g
70	1.4g	0.85g	0.55g	0.48g
75	1.3g	0.8g	0.5g	0.45g

Length of actuator mass	mm	300
Number of sliders	Pcs	6
Repeatability Accuracy	Magnetic scale Optical scale	±5μm/1000mm ±2μm/1000mm
Mass of actuator mass	Kg	7.6

KDH22-B motor is adapted to a 1000W servo driver, and AKD provides the following models of drivers.

The above are the parameters for motor series connection. For speeds exceeding 2m/s, the motor should be connected in parallel, with a current twice that of the series connection and the same thrust. The drive should be selected according to the current of 1500W

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LDO	KA1-ZX-ZJ6LDO	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
GOOGOL	CDHD2S-0062AAP1	CDHD2S-0062AEC2	ALGC-B-3M/5M/8M-TY	
Servotronix economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

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