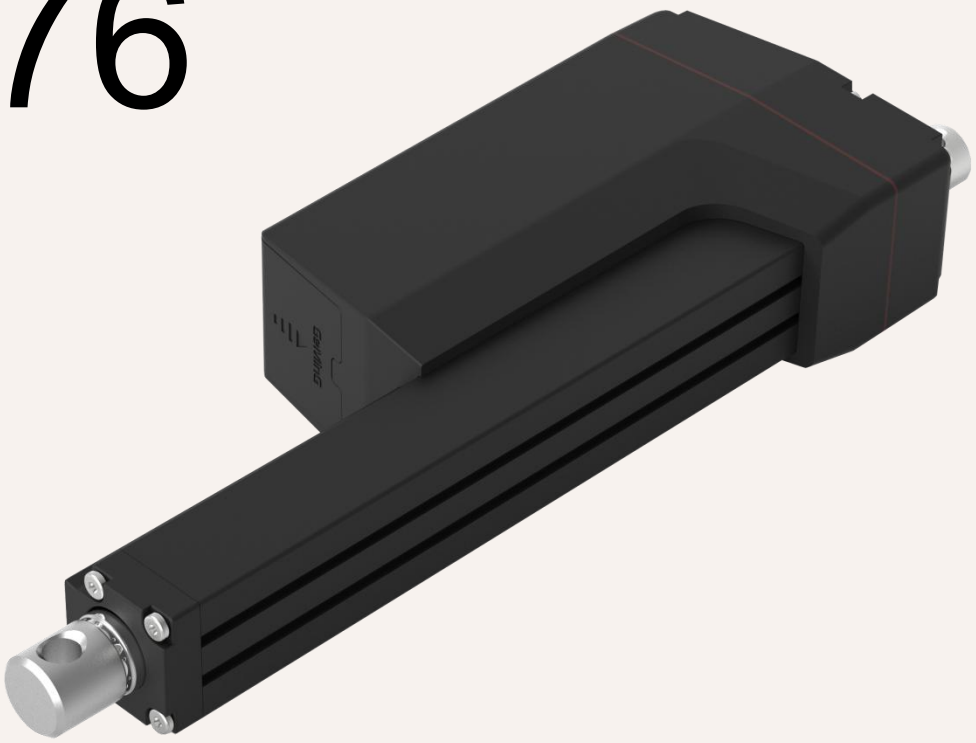
HTW76

Series model
Linear Actuator



Applications

1. Industrial
2. Agriculture
3. Automotive
4. Solar tracking
5. Military industry

HTW76 is specially designed for harsh industrial environments, especially suitable for some mechanical equipment with a large amount of consumption, such as farming machines and industrial equipment. Moreover, it can meet strict specifications and standards. The smart actuator is equipped with on-board electronic components and does not require a separate control system. With higher power up to 16 kN, it opens up more possibilities to replace the hydraulic applications, HTW76 would be a good choice!

Features

Voltage:	12V,24V,36V,48VDC
Max Push/Pull Force:	16KN
Speed @ Full load	5.mm / s (load 18KN)
Retracted Length:	Stroke + 250mm
Dynamic Torque: Static Torque:	100Nm 200Nm
Color:	Black
Quality Management:	ISO9001-2008，certified by CE and ROHS
Ambient temp. Range: Operating Temp. Range:	-40° C ~ + 75 ° C +5 ° C ~ + 45 ° C
Protection Level: Screw Type:	IP66 Trapezoidal, Ball screw(no self-locking force)
Option for Signal Output:	Hall sensor, Potentiometer
Option for Control System:	100% synchronized control, individual control, Integrated control
Material:	High-strength metal zinc alloy gear box and housing
Limit Switches:	Built-in, but not adjustable; External magnetic switch, adjustable

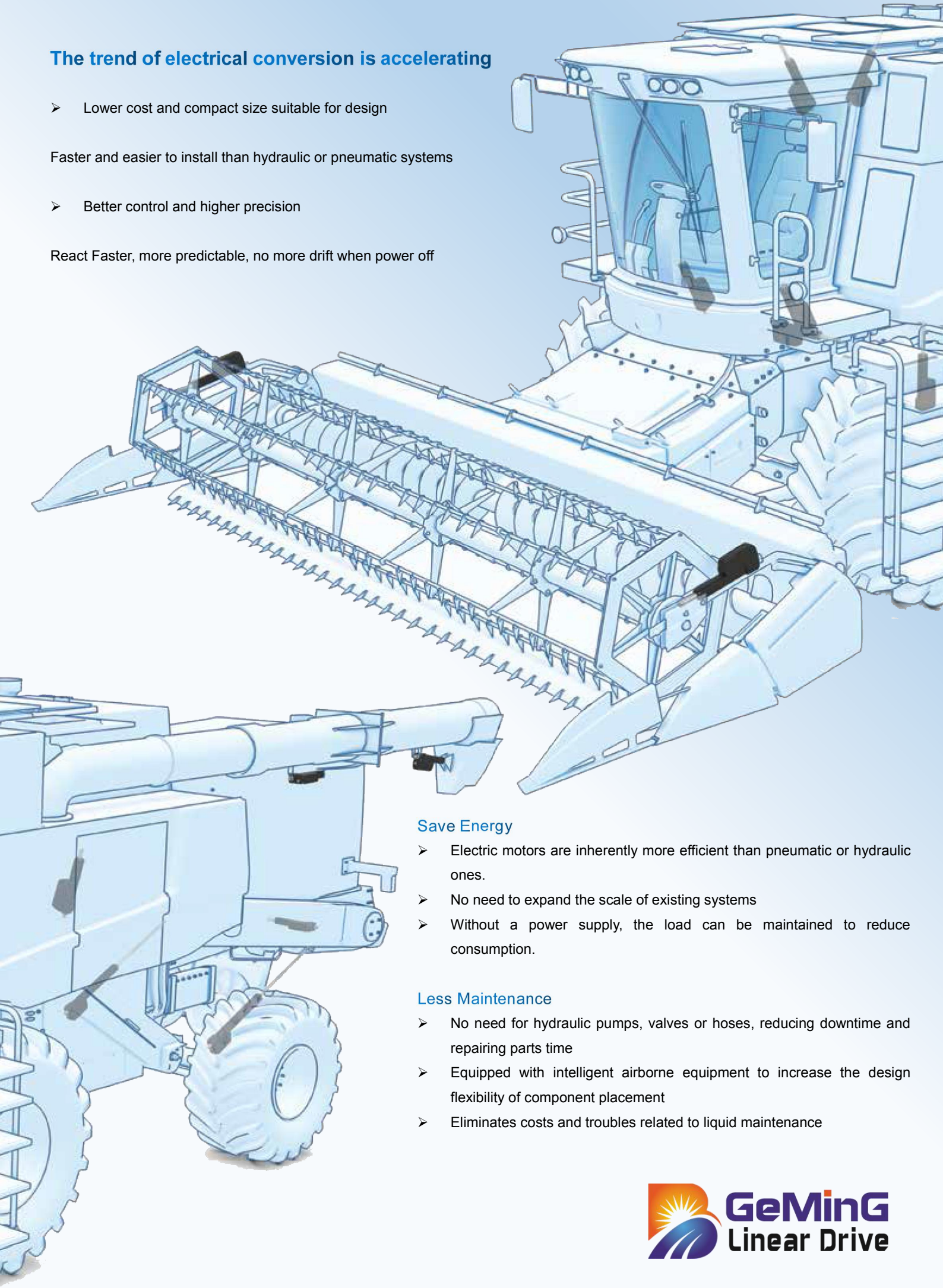
The trend of electrical conversion is accelerating

- Lower cost and compact size suitable for design

Faster and easier to install than hydraulic or pneumatic systems

- Better control and higher precision

React Faster, more predictable, no more drift when power off



Save Energy

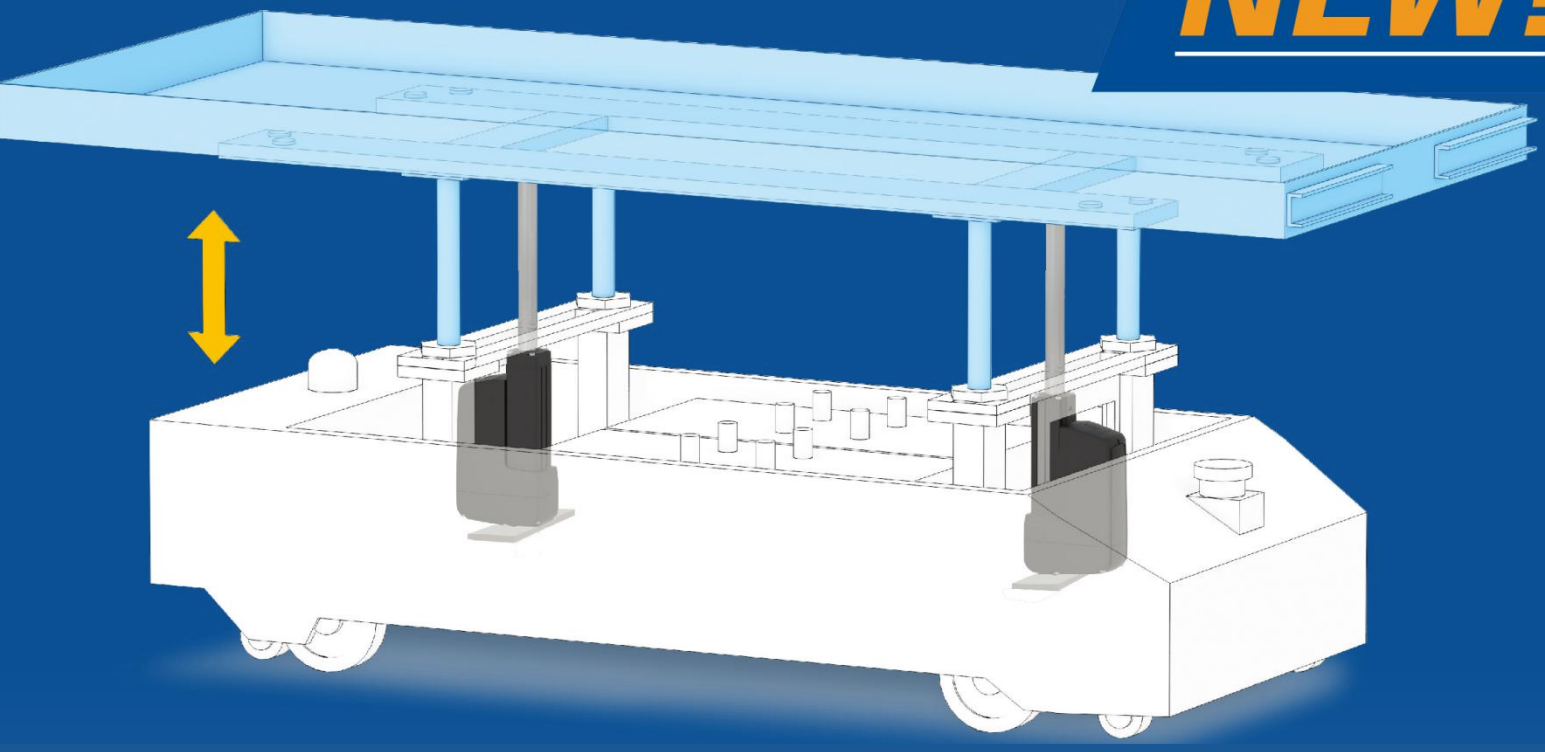
- Electric motors are inherently more efficient than pneumatic or hydraulic ones.
- No need to expand the scale of existing systems
- Without a power supply, the load can be maintained to reduce consumption.

Less Maintenance

- No need for hydraulic pumps, valves or hoses, reducing downtime and repairing parts time
- Equipped with intelligent airborne equipment to increase the design flexibility of component placement
- Eliminates costs and troubles related to liquid maintenance

GeMinG Linear Drive

NEW!



- Flange installation can be added for rear attachment.
- Suitable for driver-less vehicles, mobile equipment and industrial automation

- Height adjustment
- Positioning adjustment
- The design is more compact,

Make it easier to install in a small space,

- Very suitable for designing different types of automation equipment,

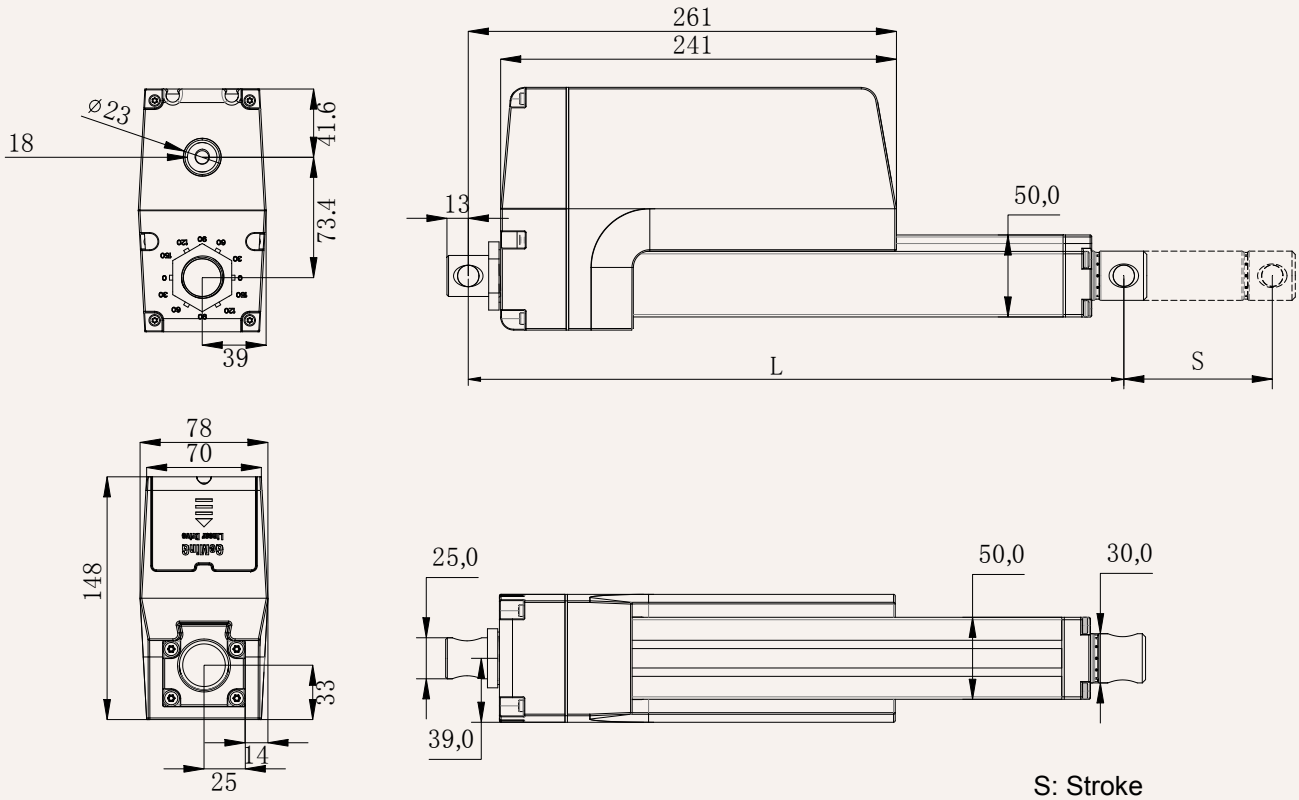
Unmanned vehicles and lifting equipment,

While retaining many popular advantages!

GeMinG Linear Drive

Drawings

Dimension
(MM)



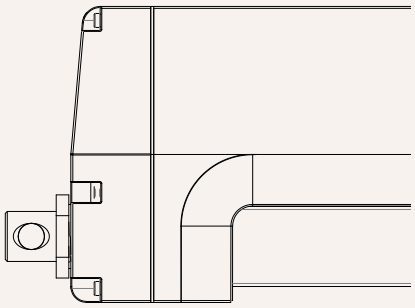
S: Stroke

L: Retracted length

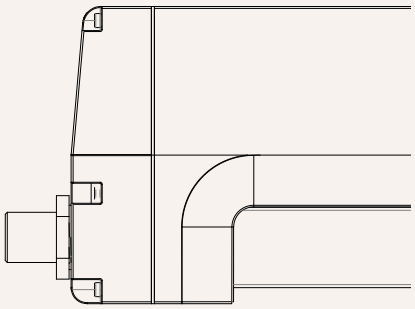
L=Stroke +250mm

Mounting Angle(rear attachment)

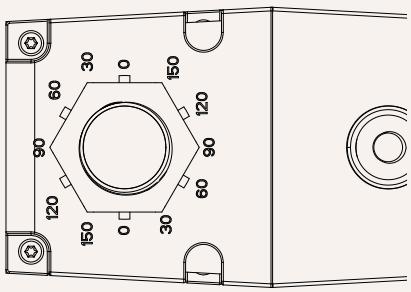
1=0˚



2=90˚



3=G Customized



LOAD & SPEED

Code	Rated Load Push N	Rated load Pull N	Self-locking Static N	Rated Current Full-load A	Rated Speed No-load mm/s	Rated Speed Full-load mm/s
Motor Voltage (24V DC)						
A	16,000	16,000	18,000	20	4.5	3.3
B	12,000	12,000	12,000	20	6.2	4.9
C	9,000	9,000	9,000	20	7.9	6.3
D	6,000	6,000	6,000	20	12	10
E	5,500	5,500	5,500	20	16	13
F	3,500	3,500	3,500	20	25	20
G	3,000	3,000	3,000	20	28	22
H	2,300	2,300	2,300	15	37	30
I	1,500	1,500	1,500	15	55	45
J	1,000	1,000	1,000	15	83	67
K	650	650	650	15	110	89

Remark

1. The current and speed in the table are the averages tested when using push force.
2. The current & speed results in the table are based on the use of a GeMinG brand control box, and there will be an error of about 10% depending on different types of the control box.
3. 29V DC @ no-load, 24V DC @ rated load

Reference Chart

24vdc

HTW76	Load±10%（N）					Speed ± 2 (mm / sec)				
Load	16,000	12,000	9,000	6,000	5,500	3,500	3,000	2,300	1,500	1000
Speed	5	6	8	12	16	25	28	37	55	83

HTW76	Stroke ± 2 (mm）					Retracted length ± 2 (mm)			
Stroke	80	100	150	200	250	300	350	400	450
L	330	350	400	450	500	550	600	650	700

Stroke VS Retracted length:

Eg. Stroke 100mm, retracted length=350mm, extended length=450mm

Load VS Stroke

Load (N)	Stroke range (mm)
16,000	50-600
10,000	50-800
2,000	50-1300

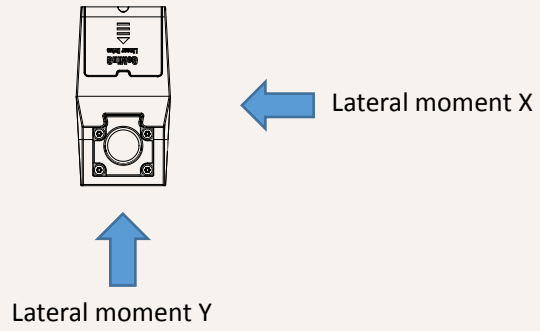
Note:

Lateral moment Y = X*0.8

Static lateral moment = dynamic*2

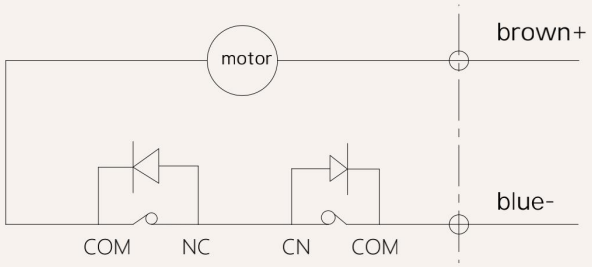
Dynamic lateral moment(Nm)-X

Stroke	S/2+180	S/2+220
100-300	500	700
300-500	450	650
500-700	300	300
700-900	200	100



Wiring Diagram

Code: N (no signal feedback)



wring instruction

1】brown: motor +

2】blue: motor -

3】when extend: brown+, blue-

4】when retract: blue+, brown-

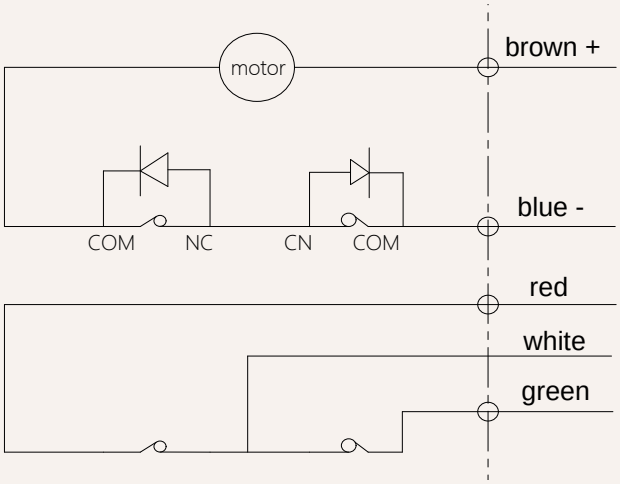
Other signal descriptions

Signal feedback	Description	Features
Active	Voltage from this motor	When the linear actuator runs to the end point, the feedback signal will continue to exist until the running state
Passive	No voltage	When the push rod runs to the end, the feedback signal will persist until the input power is turned off or during operation.

Other requirements please contact GeMinG.

Signal feedback: active or passive

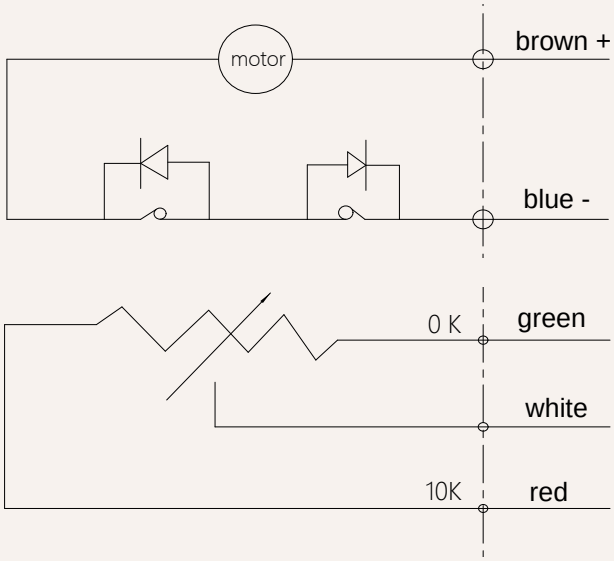
Active or passive endpoint signals wiring diagram
Code: W(passive signal), U(active signal)



1.brown: motor +
2.blue: motor -
3.when extend: brown+, blue-
4.when retract: blue+, brown-
5.white:common line
6.white and red: extend to the end signal
7.white and green:retract to the end signal

Signal feedback: Potentiometer

Potentiometer wiring diagram
Code:K



1.brown: motor +
2.blue: motor -
3.when extend: brown+, blue-
4.when retract: blue+, brown-
5.red,green: Resistance signal output
6.when extend:white and red, resistance increase,
white and green, resistance decrease
7.when retract:white and red, resistance decrease,
white and green, resistance increase.

Potentiometer Configuration Form

Code（refer to Page5）	Stroke available	Resistance Range（KΩ）	
A,C,E,G	50-350MM	Stroke 50-200: 5.0	Stroke 50-30: 7.5
B,D,F	50-550MM	Stroke 50-200: 3.17	Stroke 50-400: 6.35

Note: potentiometer 10KΩ.(The actual resistance depends on specific stroke)

Signal feedback: Hall Sensor

Code(refer to page 5)	Magnetic Ring	SIZE	Output Pulses
A	Φ32MM	4 pair,12MM	0.3528 pulse/mm
B	Φ32MM	4 pair,12MM	0.7938 pulse/mm
C	Φ32MM	4 pair,12MM	1.3122 pulse/mm
D	Φ32MM	4 pair,12MM	3.1753 pulse/mm
E	Φ32MM	4 pair,12MM	2.6245 pulse/mm
F	Φ32MM	4 pair,12MM	6.3506 pulse/mm
G	Φ32MM	4 pair,12MM	9.5259 pulse/mm
H	Φ32MM	4 pair,12MM	16.0751 pulse/mm
I	Φ32MM	4 pair,12MM	32.15 pulse/mm
J	Φ32MM	4 pair,12MM	48.225 pulse/mm
K	Φ32MM	4 pair,12MM	257.2 pulse/mm

Remark:

1）Support dual channel/single channel Hall encoder

2）Current consumption type digital output

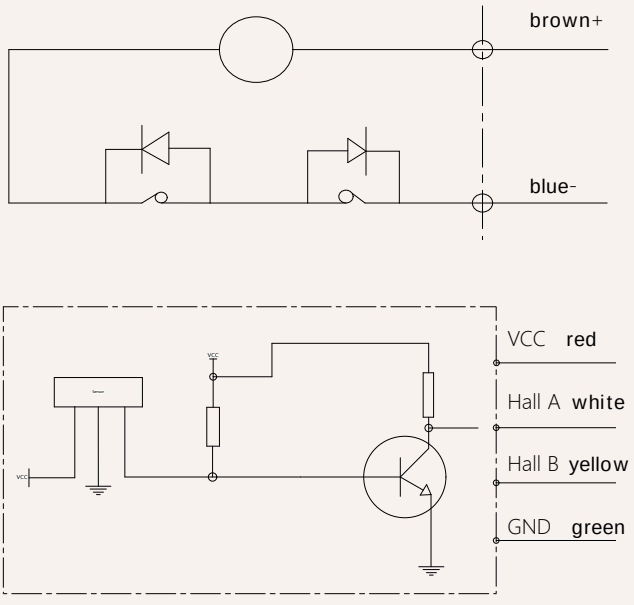
3）High-speed response frequency from: 0 KHz-100 KHz

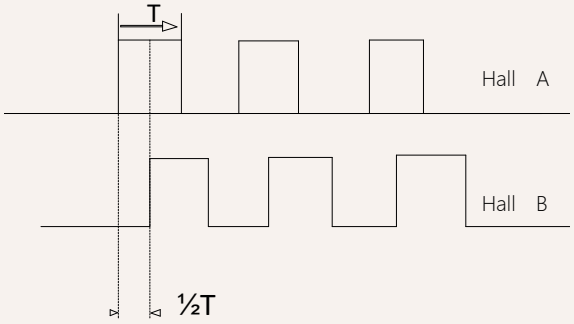
4）Applicable temperature range: -40 ℃~+125 ℃

Features	Symbol	Test conditions	MI	RE	M	Unit
Input voltage	Vcc	----	3.5	---	24	V
Output vol.	Vce/sat	Vcc=14V ; Ic=20mA	---	300	700	MV
Leakage current	1 cex	Vce=14V ; Vcc=14V	---	<0	10	UA
Input voltage	1 ce	Vcc=20V ; Output open	---	1	10	M
Falling time	R	Vcc=14V ; RL=820Ω ; CL=20pF	---	0.3	1.5	US

Hall Sensor wiring diagram

Code: H





Brown: motor+
Blue: motor-
Red: VCC 5V+
Green: GND 5V-
White: hall signal output A
Yellow:hall signal output B

HTW76

Voltage	12=12V DC，24=24V DC，36=36V DC，48=48V DC，110=110V DC，220=220V AC			
Speed(mm/s)	Refer to Page 5			
Stroke(mm)				
Retracted length (mm)	Refer to Page 5			
Load(n)	Refer to Page 5			
Front Attach. Refer to Page 8	1 = standard，dia 13mm 2 = standard，dia 14mm 3 = clevis head，slot width 8.5mm，depth 27mm，dia 13mm 4 = clevis head，slot width 8.5mm，depth 27mm，dia 14mm 5 = joint bearing，dia 12mm 6 = joint bearing，dia 16mm　7 = customized			
Rear Attach. Refer to Page 10	Same as front attachment			
Plug type	1 = stripped wire 3 = 4 pin 0° straight plug		2 = 4 pin 90° curved plug 4 = 6 pin 0° straight plug	
Screw	G= Ball screw(no self-locking)		P = Trapezoidal	
Control Method	A = NO	B = Integrated	C = synchronized	D= customized
Signal Output	N = NO	H = Hall sensor	K = Potentiometer	W = Passive U = Active
Cable Length	1 = 700mm	2 = 1000mm	3 = 1500mm	4 = customized

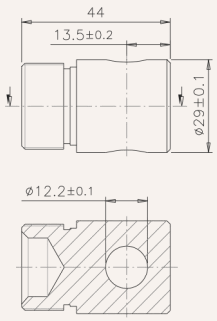
Example: voltage 12V DC, stroke 100MM, speed 4MM / S, load 16000N,
Code: HTW76-12- 05- 100-350/450-A-1-1-1-G-A-N-1

Customized requirements please contact GeMinG sales team.

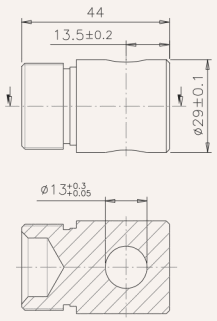
HTW76 Reference Chart for Attachment

Front Attachment

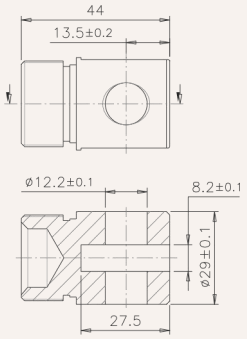
1= standard, dia 12.5mm



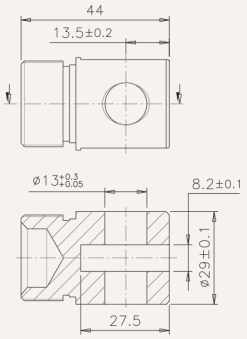
2 = standard, dia 13.5mm



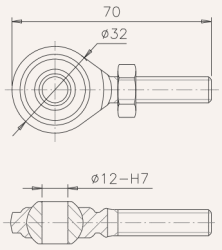
3 = clevis head, slot width 8.5mm, depth 27mm, dia 12.5mm



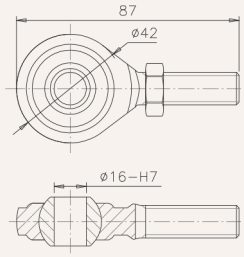
4 = clevis head, slot width 8.5mm, depth 27mm, dia13.5mm



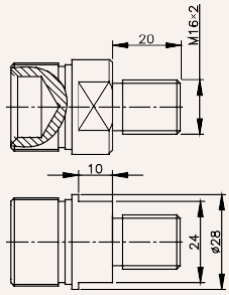
5 = joint bearing, dia12mm GS12



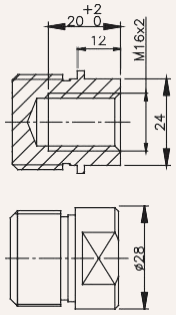
6 = joint bearing, dia16mm GS16



7= T type, M16*1.5*20

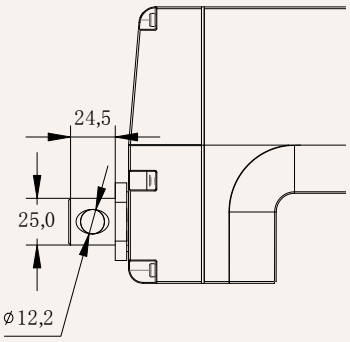


8=O type, M16*1.5*20

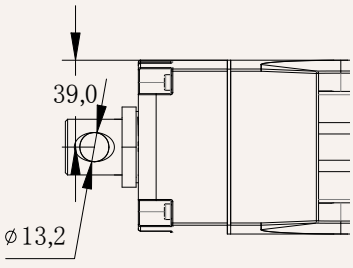


Rear Attachment

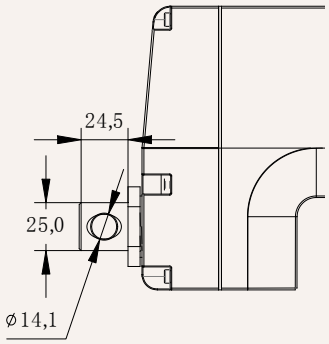
1 = 0 degree, dia 12.2mm



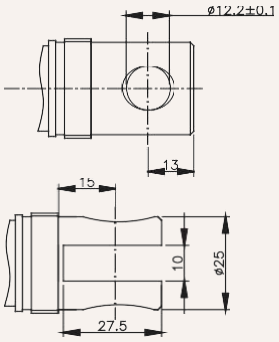
2 = 90 degree, dia13mm



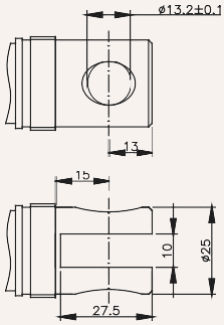
3 = 0 degree, dia 14mm



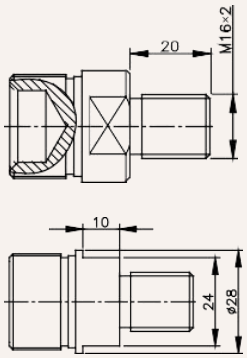
4 = clevis head, dia 12mm



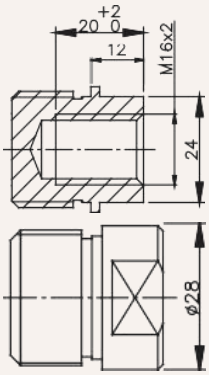
5 = clevis head, dia 13mm



6=T type, M16*1.5*20



7=O type, M16*1.5*20



8 = customized