

HTD3

Series

Embodied Robot lifting mechanism

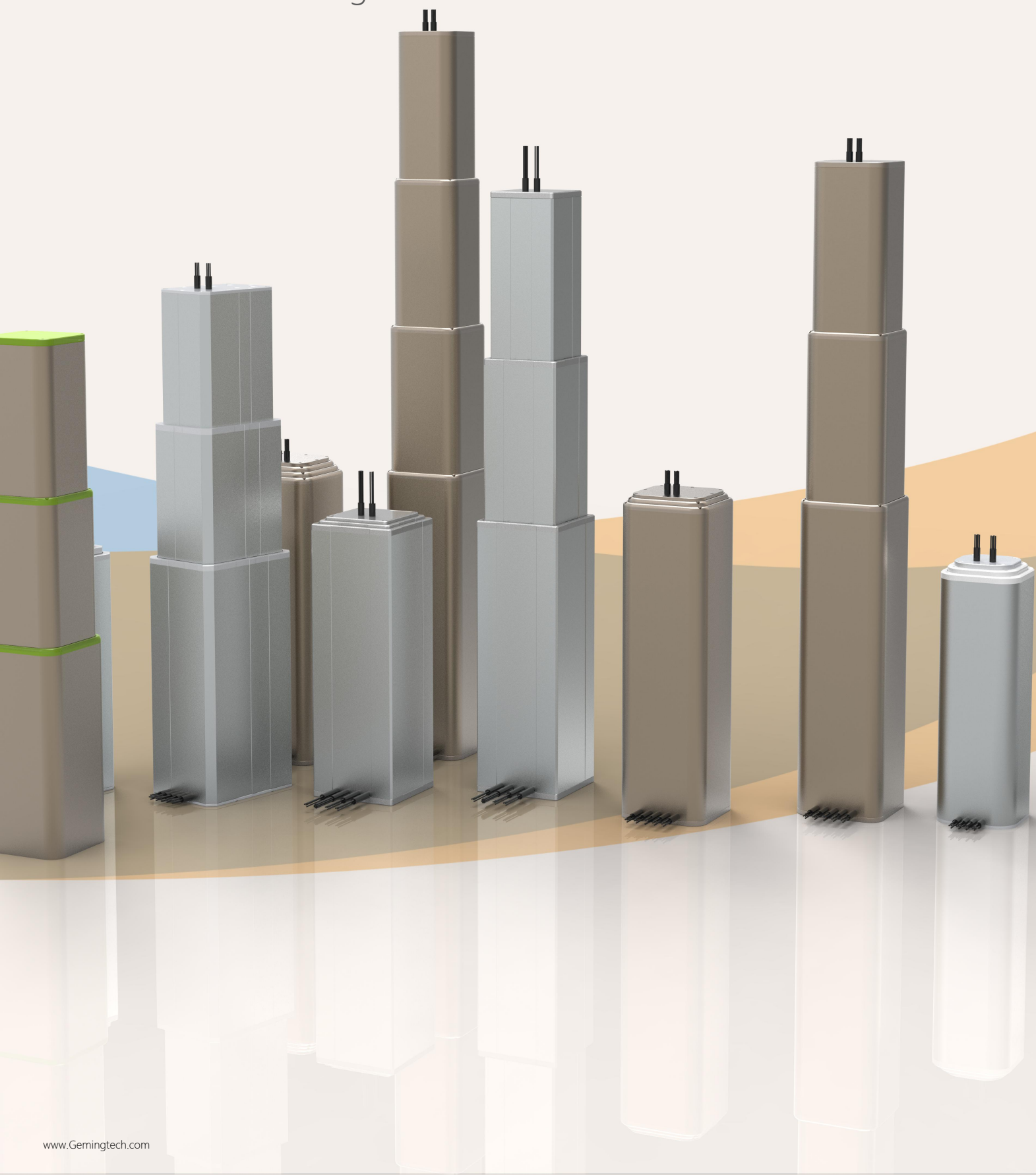
Intelligent lifting column

身高范围

HT

Series

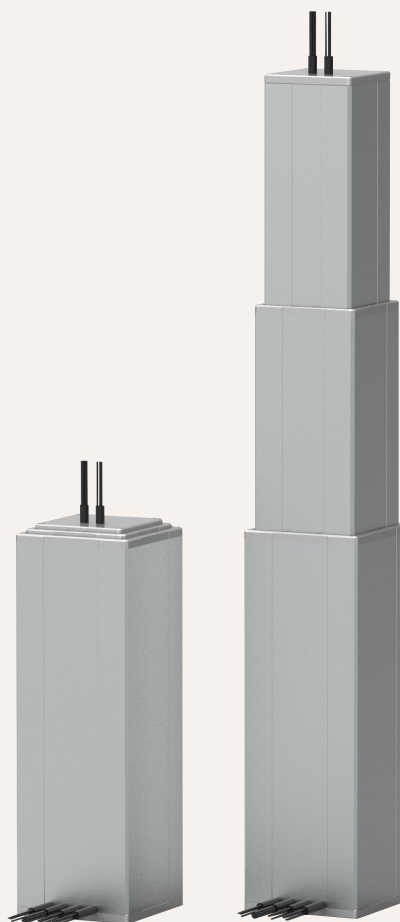
Embodied Robot lifting mechanism



HTD3-14

Series

Embodied Robot lifting mechanism



Product Category

1、Applications of embodied robots

The HTD3-14 is a 142x142 square lifting column designed by GeMinG specifically for JuSheng robots. Tailor-made for mobile robots, service robots, and AGV/AMR intelligent equipment, it integrates three core advantages: precise lifting motion, high-load stable support, and intelligent adaptive control. It perfectly adapts to the application needs of robots in all scenarios, including walking, operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant. The built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, and low noise operation. Equipped with an intelligent linkage sensing module, it can seamlessly communicate with the JuSheng robot control system, automatically matching the working height, precisely lifting at fixed points, and linkage start and stop, achieving fully automated unmanned operation.

Function Overview

Body Weight:	14.5KG (500/500)
Voltage:	48V DC
Motor Options:	DC Servo Motor
Maximum Thrust (Pull):	1500 N / 1500N
Maximum Speed Under Load:	0-150 mm / S
Minimum Initial Height:	Stroke /2 + 250mm (Standard)
Dynamic Lateral Torque:	500Nm
Static Lateral Torque:	700Nm
Color:	Silver Gray, Black (Customizable)
Noise:	48~65 DB
Temperature Range:	-35 °C ~ + 75 °C
Protection Rating:	IP54
Screw Selection:	Ball Screw Lead: 20
Reduction Ratio:	10:1
Limit Options:	Soft Limit, Mechanical Limit
Communication Options:	CANopen / EtherCAT, RS485
Wiring Method:	Internal Wiring (Custom wiring required))

Download 3D model

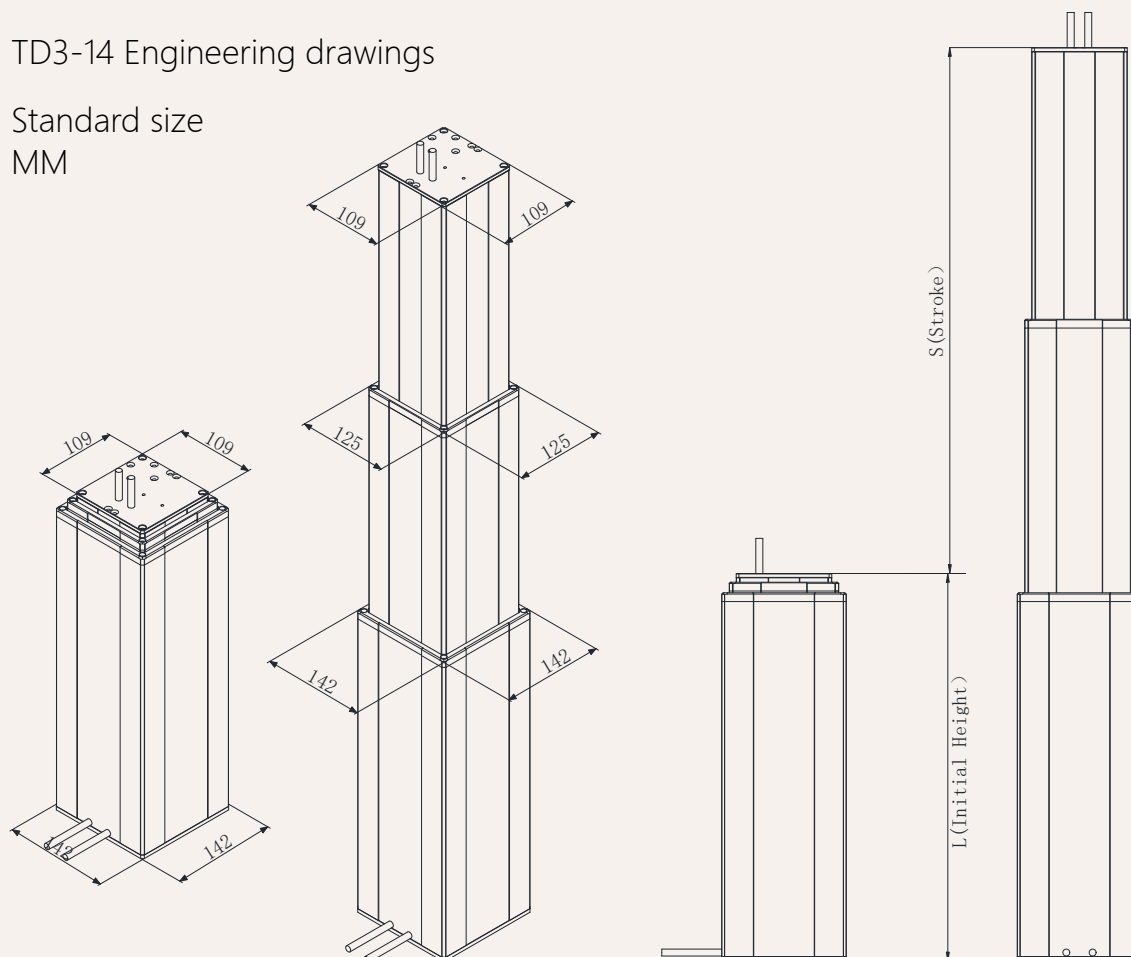


Initial height and unfolded height (non-standard can be customized)

SStroke MM	300	400	500	600	700	800
L Closed height	400	450	500	600	650	700
S+L Unfolding height	700	850	1000	1200	1350	1500

TD3-14 Engineering drawings

Standard size
MM



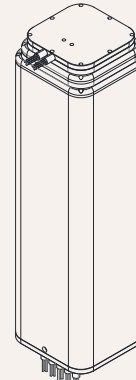
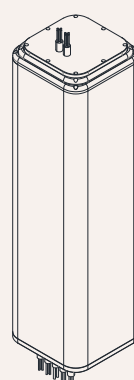
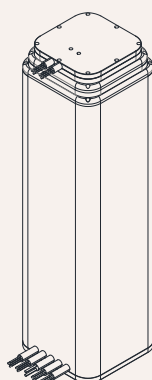
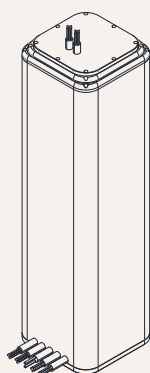
Motor cable exit point:

0 =Bottom panel, Top panel

1 = Bottom side, Top side

2=Bottom panel, Top panel

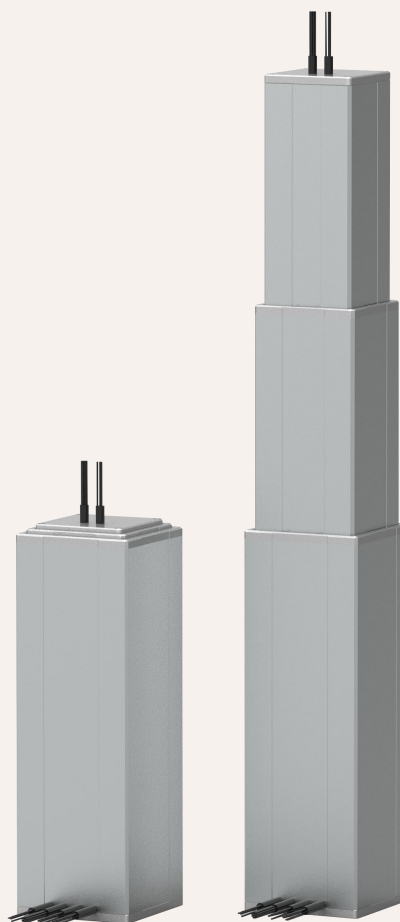
3=Bottom panel, Top side



HTD3₋₁₂

Series

Embodied Robot lifting mechanism



Product Category

1、Applications of embodied robots

The HTD3-14 is a 125x125 square lifting column designed by GeMinG specifically for JuSheng robots. Tailor-made for mobile robots, service robots, and AGV/AMR intelligent equipment, it integrates three core advantages: precise lifting motion, high-load stable support, and intelligent adaptive control. It perfectly adapts to the application needs of robots in all scenarios, including walking, operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant. The built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, and low noise operation. Equipped with an intelligent linkage sensing module, it can seamlessly communicate with the JuSheng robot control system, automatically matching the working height, precisely lifting at fixed points, and linkage start and stop, achieving fully automated unmanned operation.

Function Overview

Body Weight:	12.5KG (420/425)
Voltage:	25-48V DC
Motor Options:	DC Servo Motor
Maximum Thrust (Pull):	500 N / 500N
Maximum Speed Under Load:	0-60 mm / S
Minimum Initial Height:	Stroke /2 + 250mm (Standard)
Dynamic Lateral Torque:	500Nm
Static Lateral Torque:	700Nm
Color:	Silver Gray, Black (Customizable)
Noise:	48~65 DB
Temperature Range:	-35 ° C ~ + 75 ° C
Protection Rating:	IP54
Screw Selection:	Ball Screw Lead: 20
Reduction Ratio:	10:1
Limit Options:	Soft Limit, Mechanical Limit
Communication Options:	CANopen / EtherCAT, RS485 Internal Wiring
Wiring Method:	(Custom Wiring Required)

Download 3D model

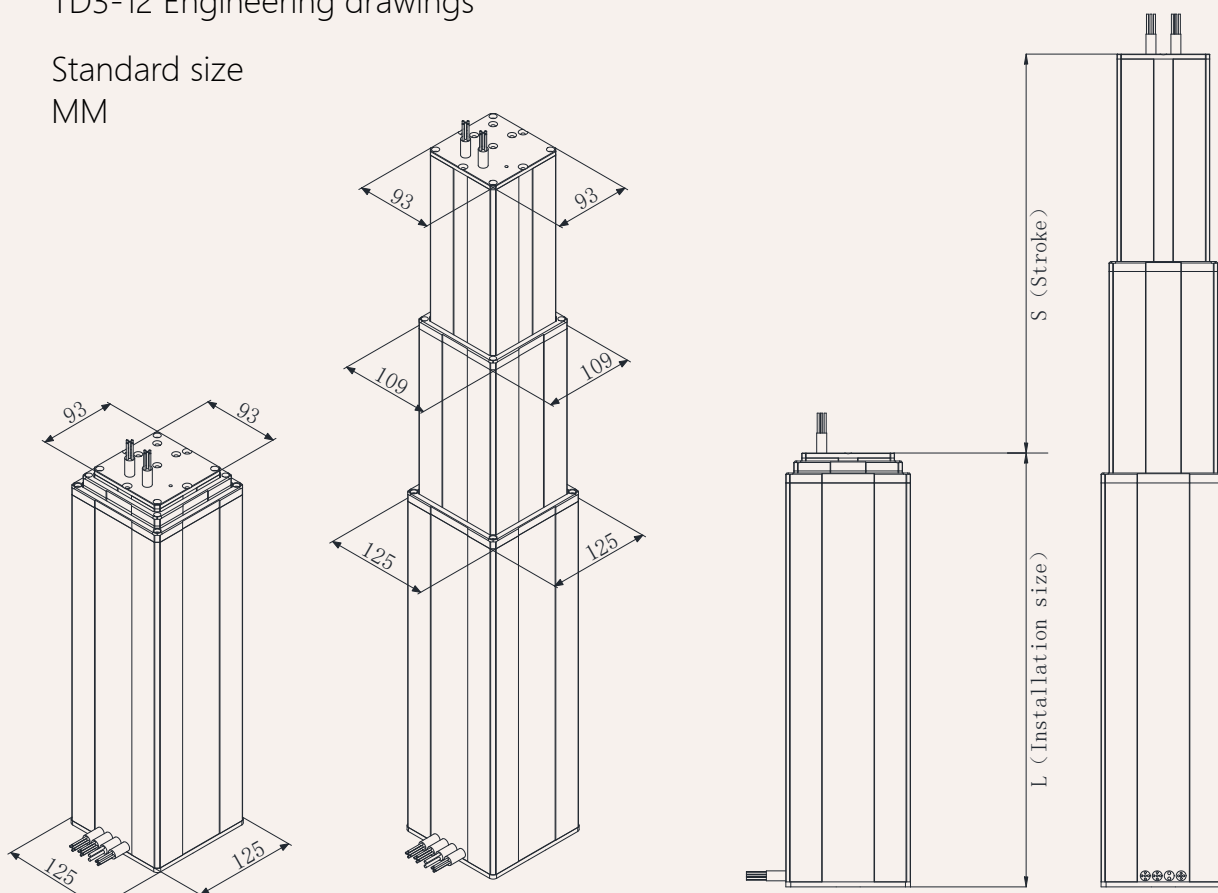


Initial height and unfolded height (non-standard can be customized)

SStroke MM	300	400	500	600	700	800
L Closed height	400	450	500	600	650	700
S+L Unfolding height	700	850	1000	1200	1350	1500

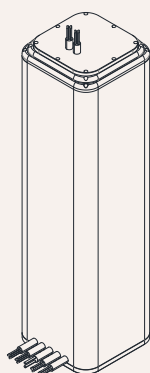
TD3-12 Engineering drawings

Standard size
MM

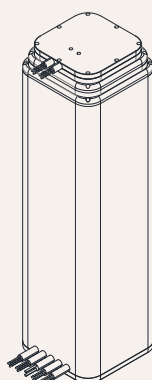


Motor cable exit point:

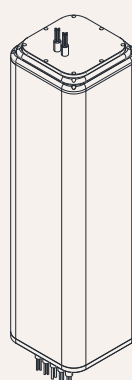
0 =Bottom panel, Top panel



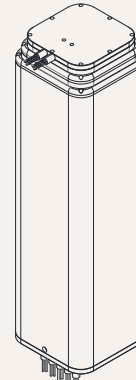
1 = Bottom side, Top side



2=Bottom panel, Top panel



3=Bottom panel, Top side



HTO3₋₁₂

Series

Embodied Robot lifting mechanism



Product Category

1、Applications of embodied robots

The HTO3 is a 128x128 square-round lifting column designed by GeMinG specifically for Embodied Robots. Tailor-made for mobile robots, service robots, and AGV/AMR intelligent equipment, it integrates three core advantages: precise lifting motion, high-load stable support, and intelligent adaptive control. It perfectly adapts to the application needs of robots in all scenarios, including walking, operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant. The built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, and low noise operation. Equipped with an intelligent linkage sensing module, it can seamlessly communicate with the robot's control system, automatically matching the working height, precisely lifting at fixed points, and 联动 start and stop, achieving fully automated unmanned operation.

Function Overview

Body Weight:	12.5KG (420/425)
Voltage:	25-48V DC
Motor Options:	DC Servo Motor
Maximum Thrust (Pull):	500 N / 500N
Maximum Speed Under Load:	0-60 mm / S
Minimum Initial Height:	Stroke /2 + 250mm (Standard)
Dynamic Lateral Torque:	500Nm
Static Lateral Torque:	700Nm
Color:	Silver Gray, Black (Customizable)
Noise:	48~65 DB
Temperature Range:	-35 ° C ~ + 75 ° C
Protection Rating:	IP54
Screw Selection:	Ball Screw Lead: 20
Reduction Ratio:	10:1
Limit Options:	Soft Limit, Mechanical Limit
Communication Options:	CANopen / EtherCAT, RS485 Internal Wiring
Wiring Method:	(Custom Wiring Required)

Download 3D model

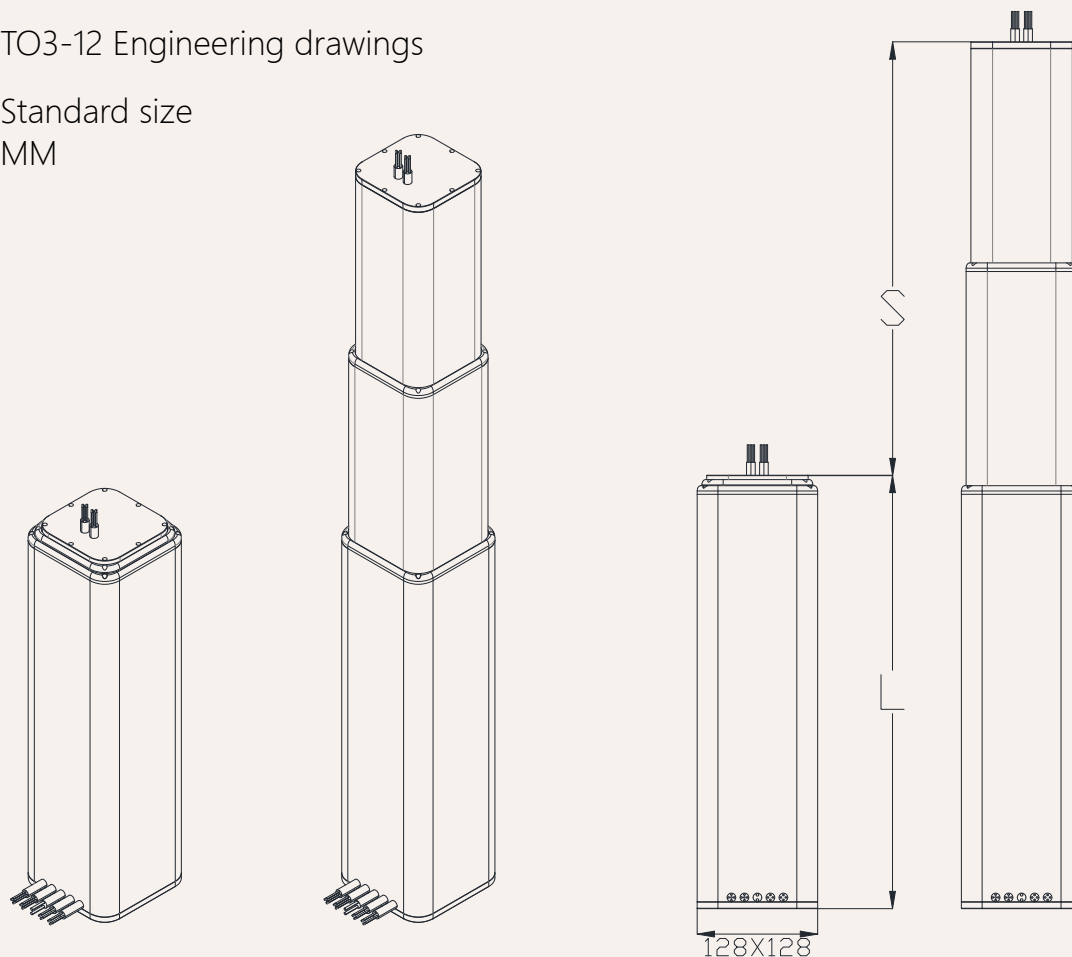


Initial height and unfolded height (non-standard can be customized)

SStroke MM	300	400	500	600	700	800
L Closed height	400	450	500	600	650	700
S+L Unfolding height	700	850	1000	1200	1350	1500

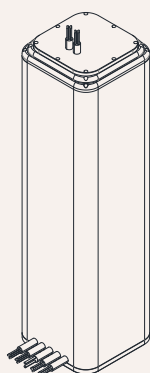
TO3-12 Engineering drawings

Standard size
MM

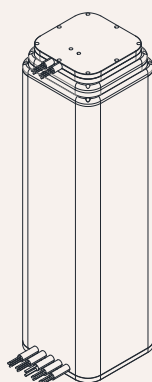


Motor cable exit point:

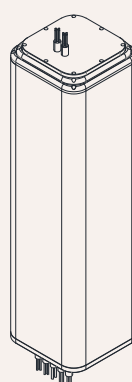
0 =Bottom panel, Top panel



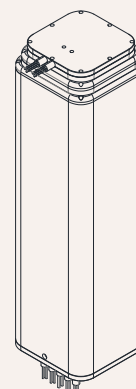
1 = Bottom side, Top side



2=Bottom panel, Top panel



3=Bottom panel, Top side



HTO3⁻¹¹

Series

Embodied Robot lifting mechanism



Product Category

1、Applications of embodied robots

The HTO3 is a 117x117 square-round lifting column designed by GeMinG specifically for Embodied Robots. Tailor-made for mobile robots, service robots, and AGV/AMR intelligent equipment, it integrates three core advantages: precise lifting motion, high-load stable support, and intelligent adaptive control. It perfectly adapts to the application needs of robots in all scenarios, including walking, operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant. The built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, and low noise operation. Equipped with an intelligent linkage sensing module, it can seamlessly communicate with the robot's control system, automatically matching the working height, precisely lifting at fixed points, and 联动 start and stop, achieving fully automated unmanned operation.

Function Overview

Body Weight:	12.5KG (420/425)
Voltage:	25-48V DC
Motor Options:	DC Servo Motor
Maximum Thrust (Pull):	500 N / 500N
Maximum Speed Under Load:	0-60 mm / S
Minimum Initial Height:	Stroke /2 + 250mm (Standard)
Dynamic Lateral Torque:	500Nm
Static Lateral Torque:	700Nm
Color:	Silver Gray, Black (Customizable)
Noise:	48~65 DB
Temperature Range:	-35 ° C ~ + 75 ° C
Protection Rating:	IP54
Screw Selection:	Ball Screw Lead: 20
Reduction Ratio:	10:1
Limit Options:	Soft Limit, Mechanical Limit
Communication Options:	CANopen / EtherCAT, RS485 Internal Wiring
Wiring Method:	(Custom Wiring Required)

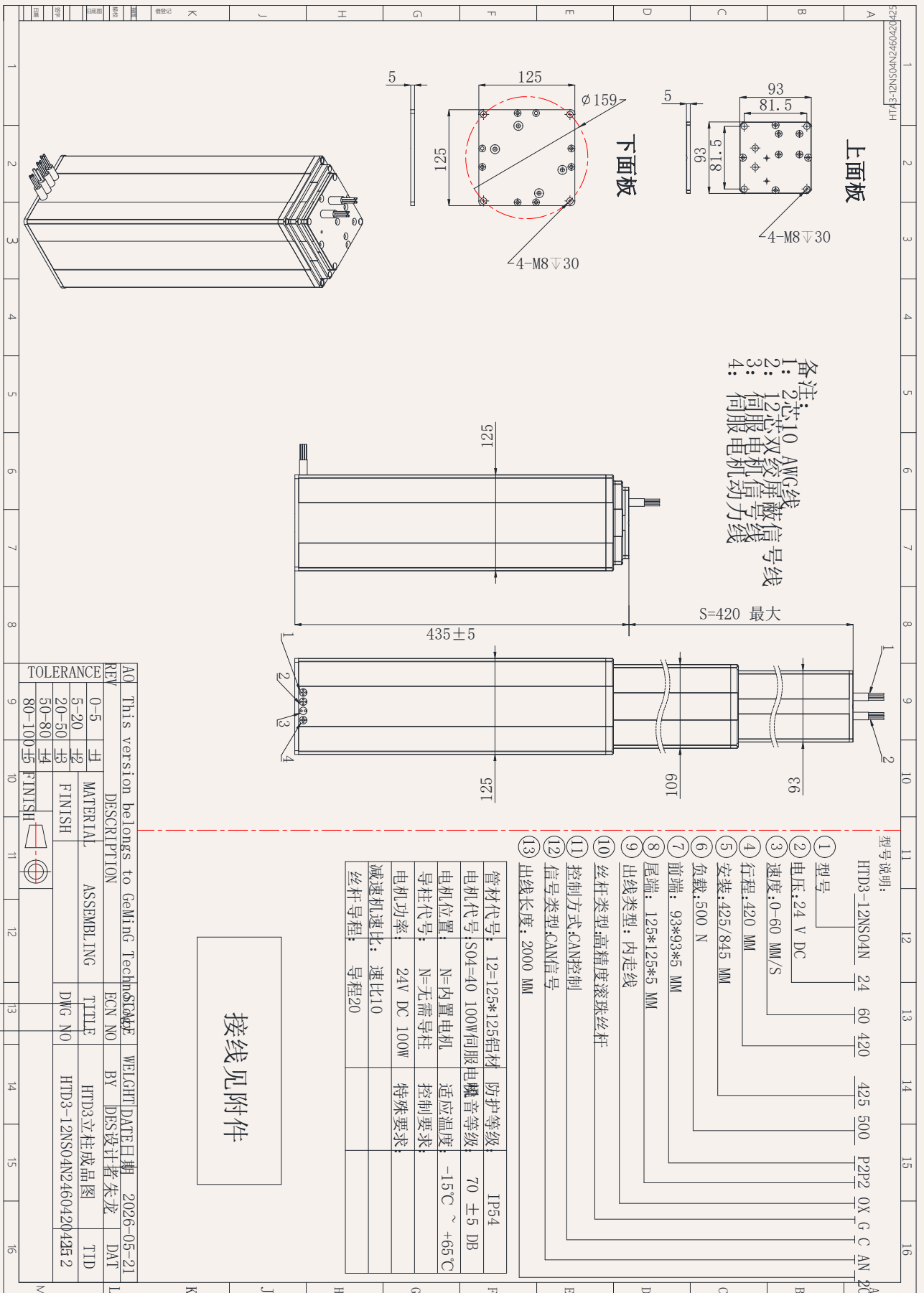
Download 3D model



HTD3-12-Customer confirms engineering drawings

Standard size

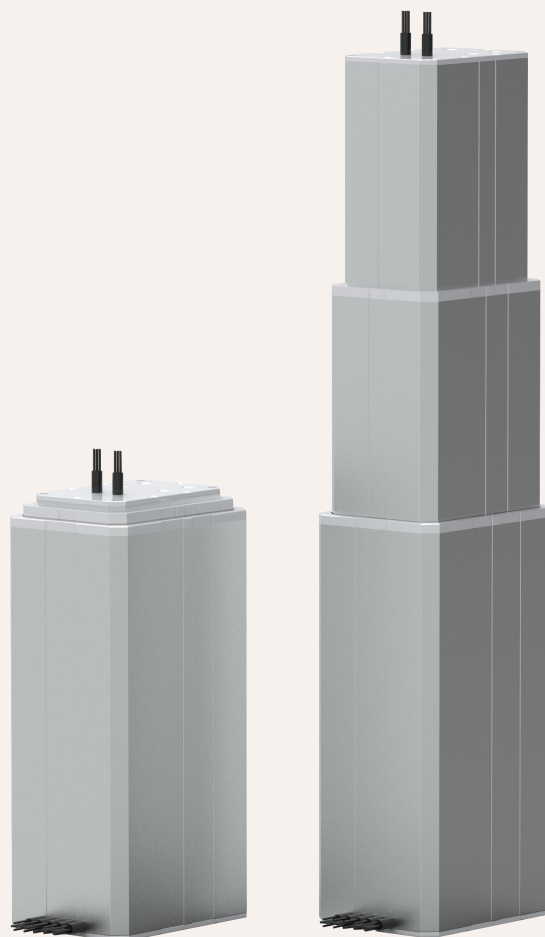
MM



HTA3

Series

Intelligent lifting column



Product Category

1、Applications of embodied robots

The HTA3 is a 193x141 rectangular lifting column designed by GeMinG specifically for Jushang robots. Tailor-made for mobile robots, service robots, and AGV/AMR intelligent equipment, it integrates three core advantages: precise lifting motion, high-load stable support, and intelligent adaptive control. It perfectly adapts to the application needs of robots in all scenarios, including walking, operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant. The built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, and low noise operation. Equipped with an intelligent linkage sensing module, it can seamlessly communicate with the Jushang robot control system, automatically matching the working height, precisely lifting at fixed points, and linkage start and stop, achieving fully automated unmanned operation.

Function Overview

Body Weight:	17KG (400/400)
Voltage:	48V DC
Motor Options:	DC Servo Motor
Maximum Thrust (Pull):	1500 N / 1500N
Maximum Speed Under Load:	0-150 mm / s (Load 800N)
Minimum Initial Height:	Stroke /2 + 250mm
Dynamic Lateral Torque:	800Nm
Static Lateral Torque:	1000Nm
Color:	Silver Gray, Black (Customizable)
Noise:	48~70 DB
Temperature Range:	-35 ° C ~ + 75 ° C
Protection Rating:	IP54
Screw Selection:	Ball Screw Lead: 20
Reduction Ratio:	10:1
Limit Options:	Soft Limit, Mechanical Limit
Communication Options:	CANopen / EtherCAT, RS485
Wiring Method:	Internal Wiring (Custom Wiring Required)

Download 3D model

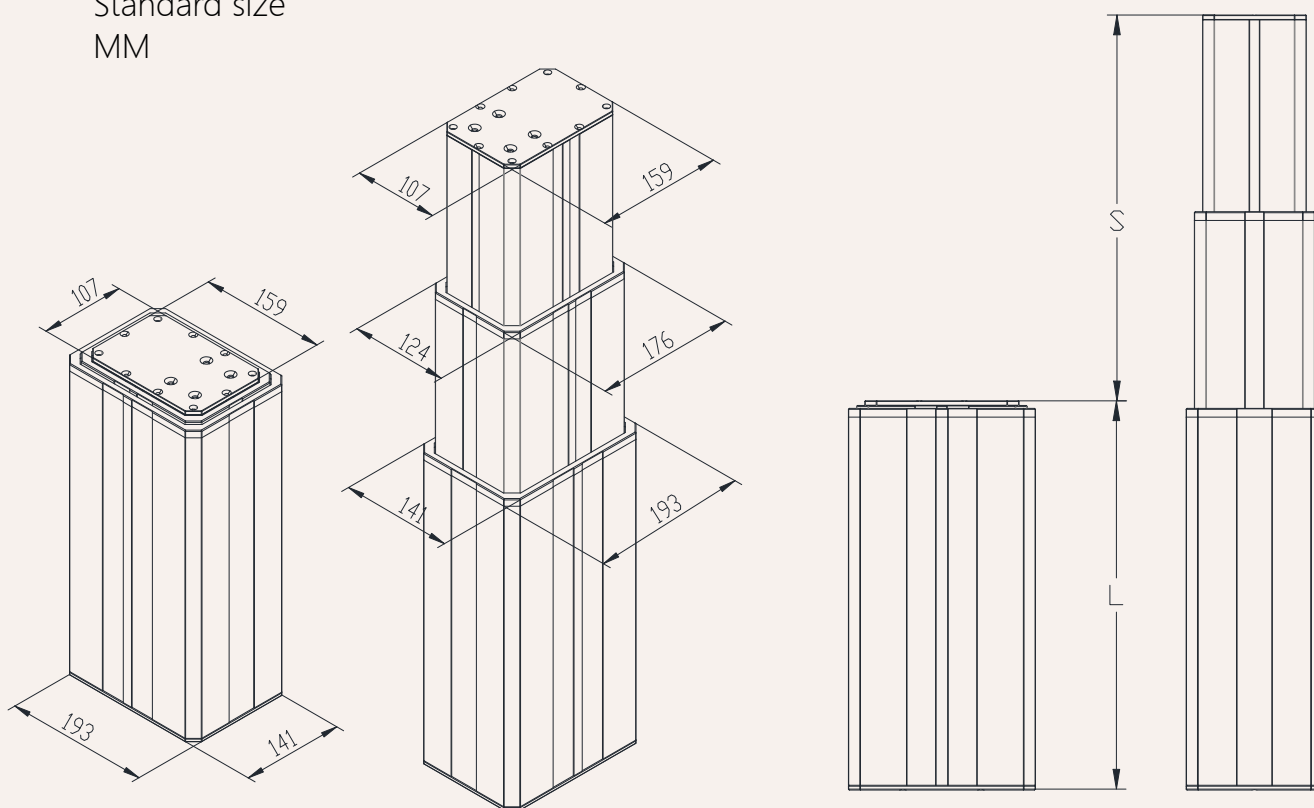


Initial height and unfolded height (non-standard can be customized)

SStroke MM	300	400	500	600	700	800
L Closed height	400	450	500	600	650	700
S+L Unfolding height	700	850	1000	1200	1350	1500

TA3-Engineering drawings

Standard size
MM

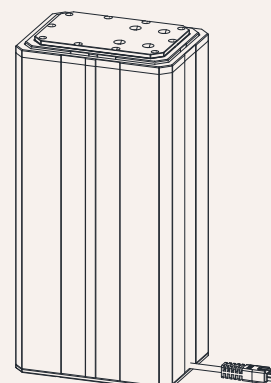
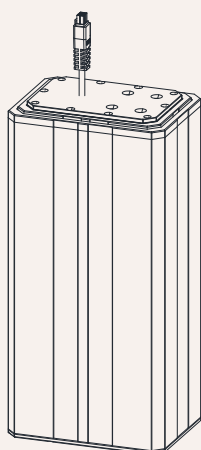


Motor cable exit point:

0 =Top panel, top exit wire

1 =Side view, cable exit at top

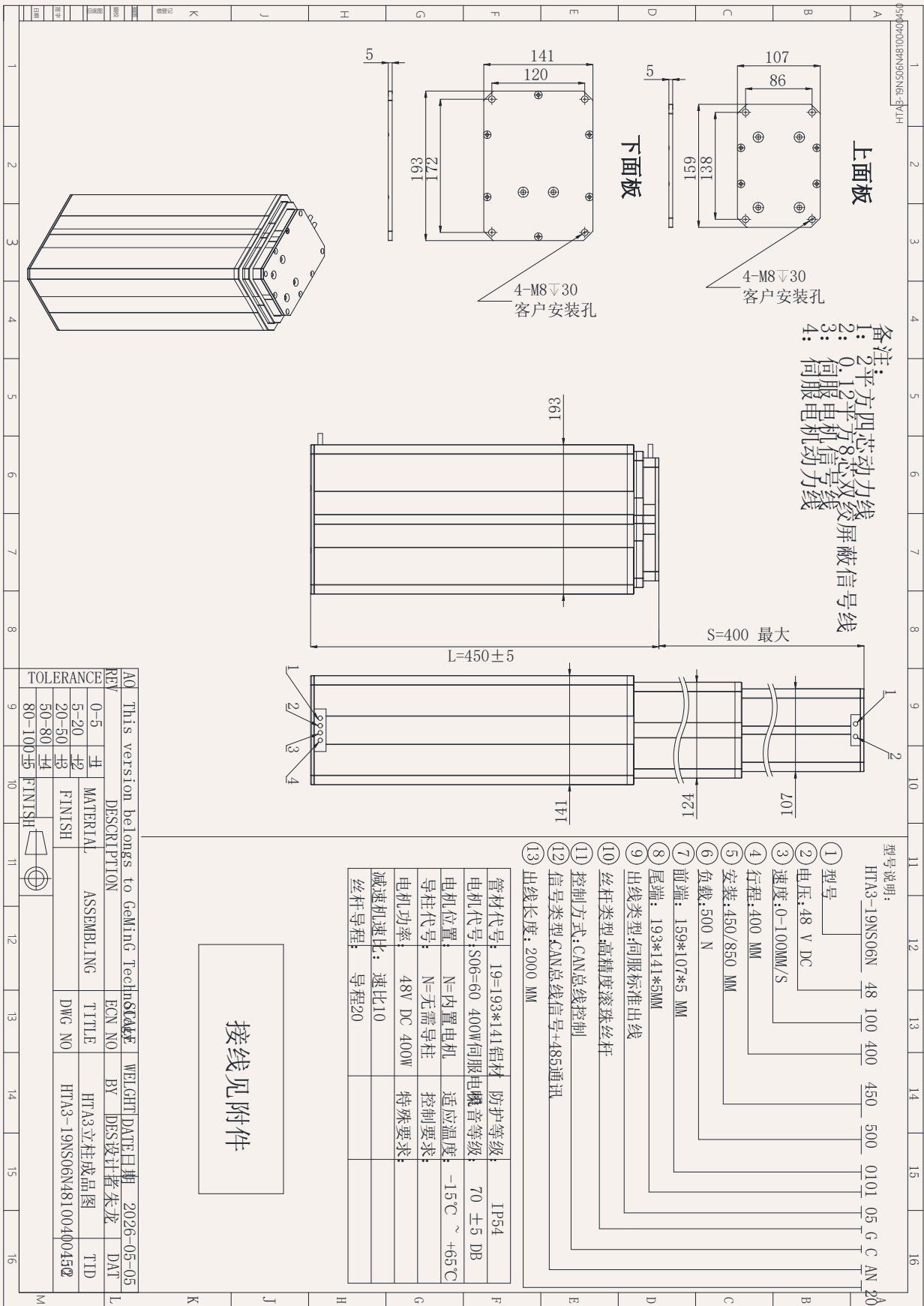
2=Side, bottom wire exit



TA3-Customer confirms engineering drawings

Standard size

MM



HTL4₋₀₆

Series

Embossed intelligent
lifting mechanism

Max height: 2m
Body weight: 4.8KG

- Height adjustment
- Positioning adjustment
- Compact design
- Ideal for types of robot dog applications,
Unmanned patrol robot vehicles, and lifting
devices.



HTL4-06

Series

Embossed intelligent lifting mechanism



Application

1. Quadruped Robot

The HTL4 is a 61mm diameter lifting mast designed specifically for Quadruped Robot, tailored for mobile robot dogs, service robot dogs, and AGV/AMR intelligent equipment. It integrates three core advantages: precision lifting motion, high-load stable support, and intelligent adaptive control, perfectly adapting to the application needs of robots in all scenarios such as walking ,operation, obstacle avoidance, and workstation docking. Made of high-strength molded aluminum alloy, it is impact-resistant and wear-resistant; the built-in silent servo lifting system ensures precise and controllable lifting stroke, smooth start and stop without shaking, achieving fully automated unmanned operation.

Features:

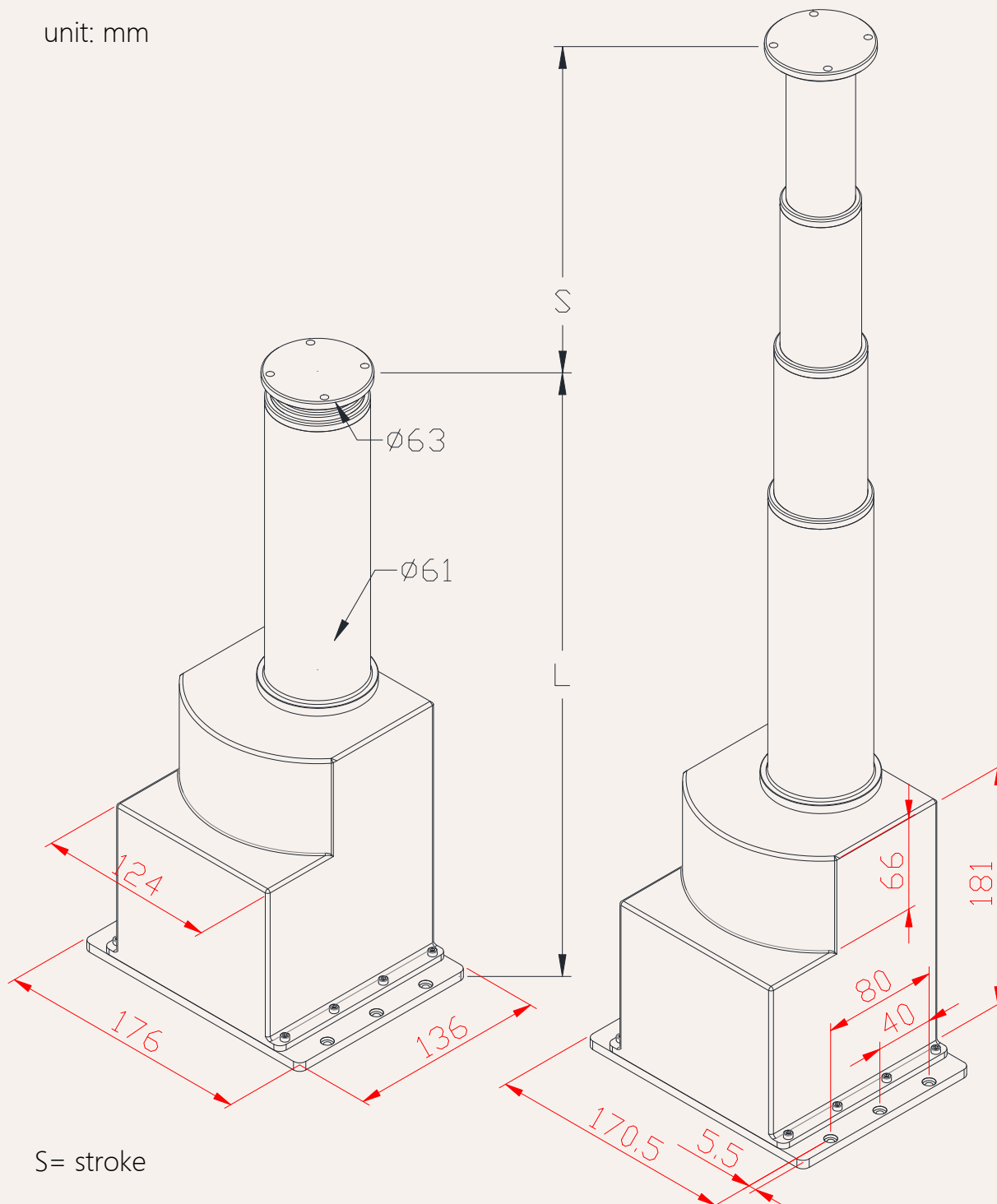
Body weight:	4.7KG (stroke 1200mm)
Voltage:	25-48V DC ,
Motor type:	DC servo motor
Max push force:	300 N
Speed:	0-150 mm / S
Closed length:	S/3 + 200mm(standard)
Dynamic lateral moment:	70Nm
Static lateral moment:	100Nm
Color:	grey, black(customized)
Noise :	48~60 DB
Temperature range:	-20 ° C ~ + 75 ° C
Protection:	IP66
Screw :	Ball screw lead: 20
Deceleration ratio:	10: 1,
Limiting options:	Soft limit, mechanical limit
Communication options:	CANopen / EtherCAT , RS485
wiring method:	(customized)

Stroke(S) vs Closed length(L) vs Extended length(S+L)

S(MM)	300	400	500	600	700	800	900	1000	1100	1200
L	300	333	366	400	433	466	500	533	566	600
S+L	600	733	866	1000	1133	1266	1400	1533	1666	1800

HTL4-06-drawing

unit: mm



S= stroke

L= closed length

$L = S/3 + 200\text{mm}$

HTA3

Series
Embodied Intelligence

Intelligent lifting column

高清双目相机

可更换多款末端

单自由端头爪
三指/五指灵巧手

可升降身高调节

身高范围约1260-1880mm

可选配移动底盘

移动速度 $\leq 1.5\text{m/s}$

HT Model Explanation Selection Code Table

HTD3 -14 48 A *** *** - O1 O1 0 1 T N N 30
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

①	Model Prefix	HTD3-12 = 125X125 Square	HTD3-14 = 142X142 Square	HTA3 = 193X141 Rectangle
②	Voltage	48= 48V DC	24= 24V DC	
③	Loading(n)@Speed (mm/s)	0-100MM/S	0-200MM/S	
④	Stroke (mm)			
⑤	Closed height (mm)	Please refer to page 4.5.8. Note: Please refer to the valid parameter table before selecting a size!		
⑥	Top panel type	O1 = Standard pipe type, M8 mounting screws, 30mm countersunk. K = Customization	O2 = Enlarged panel type, 8mm mounting holes.	
⑦	Bottom panel type	O1 = Standard pipe type, M8 mounting screws, 30mm countersunk. K = Customization	O2 = Enlarged panel type, 8mm mounting holes.	
⑧	Qualifying Position	0= Top panel 4= Side of the inner wiring	1= Upper side 5= inner side of the line	2= lower side 3=Internal wiring panel
⑨	Type of qualification	N = Internal wiring	H = External wiring	K = Customization
⑩	Screw options	G= Ball screw (default)	T= Trapezoidal Screw	
⑪	Control method	N= Uncontrolled		
⑫	Communication Protocol	C = CANopen	E =EtherCAT	R= RS485
⑬	Line length	07 =Line length 0.7 M 30 =Line length 3.0 M 70 =Line length 7.0 M	10 = Line length 1.0 M 40 =Line length 4.0M 70 =Line length 8.0 M	15 =Line length 1.5 M 50 =Line length 5.0 M 90 =Line length 9.0 M 20= Line length 2.0 M 60= Line length 6.0M 00 =Customization