

ALC Series | ARTUS Lifting Column

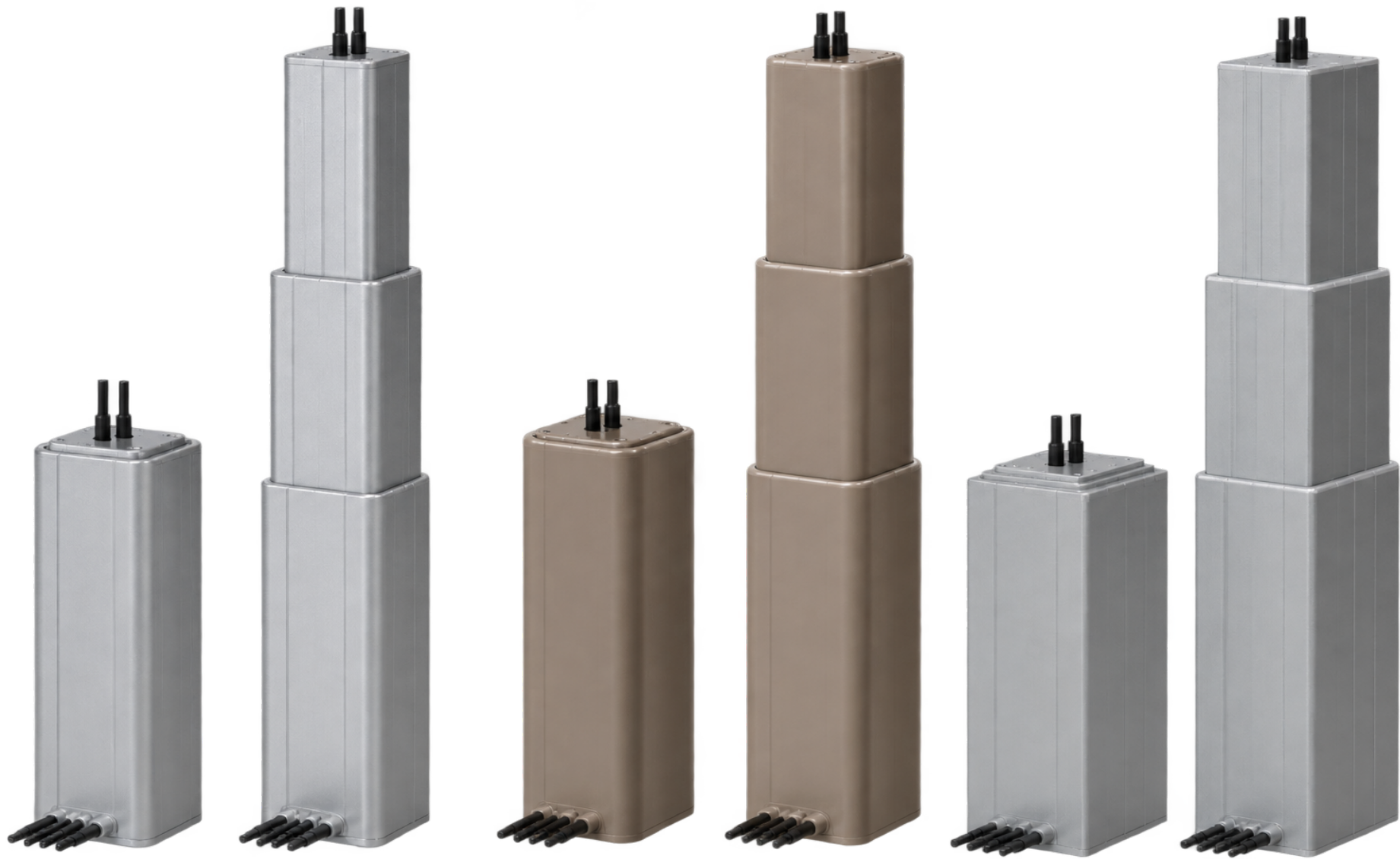
Precision lifting columns for humanoid-robot torso height adjustment, mobile-robot lift mechanisms, service robots and AGV / AMR platforms.

PLATFORM SELECTION

Platform	Cross-Section	Max Thrust (N)	Max Speed (mm/s)	Weight (kg)	Dynamic / Static Lateral Torque (Nm)	Distinguishing Feature
ALC-SQ125	125×125 Square	500	0–100	12.5	500 / 700	Compact square profile
ALC-RS125	125×125 Rounded-Square	500	0–100	12.5	500 / 700	Rounded-corner look, same size as ALC-SQ125
ALC-RS136	136×136 Rounded-Square	500	0–100	12.5	500 / 700	Larger rounded-corner profile
ALC-SQ142	142×142 Square	1500	0–150	14.5	500 / 700	High thrust & high speed
ALC-RT193	193×141 Rectangular	1500	0–150	17	800 / 1000	Maximum lateral-torque capacity

MODEL CONFIGURATION

Base model: ALC-[shape code][max cross-section]-[stroke]. Example: ALC-SQ142-500 = 142 mm square platform with 500 mm stroke. Each platform is offered with the standard stroke set 300 / 400 / 500 / 600 / 700 / 800 mm (custom strokes on request). Communication protocol, cable routing and color are not encoded in the model number — specify them separately on the quotation, e.g. "ALC-SQ142-500 / EtherCAT / Internal Wiring / Silver Gray".





LIFTING COLUMN MODULES

ALC-SQ125 | Lifting Column Module Specification

PRODUCT PLATFORM

ARTUS PLATFORM	ALC-SQ125
SQUARE FOOTPRINT	125x 125 mm 500 N Max Thrust 100 mm/s Max Speed

Parameter	Unit	Specification
Voltage	VDC	25–48
Motor Type	—	DC servo motor
Max Thrust / Pull Force	N	500 / 500
Max Speed Under Load	mm/s	0–100
Minimum Initial Height	mm	Stroke / 2 + 250 mm (standard)
Dynamic Lateral Torque	Nm	500
Static Lateral Torque	Nm	700
Body Weight	kg	12.5 (reference config: 420 mm stroke / 425 mm installed height)
Color	—	Silver gray, black (customizable)
Noise Level	dB	48–65
Operating Temperature	°C	-35°C ~ +75°C
Protection Rating	—	IP54
Screw Type	—	Ball screw, lead 20 mm
Reduction Ratio	:1	10 : 1
Limit Switch Options	—	Soft limit + mechanical limit
Communication	—	CANopen / EtherCAT / RS485
Wiring	—	Internal routing (external routing available on request)
Cross-Section (max)	mm	125 × 125 mm (square)
Stage Dimensions	mm	Top 93×93 mm / Mid 109×109 mm / Base 125×125 mm

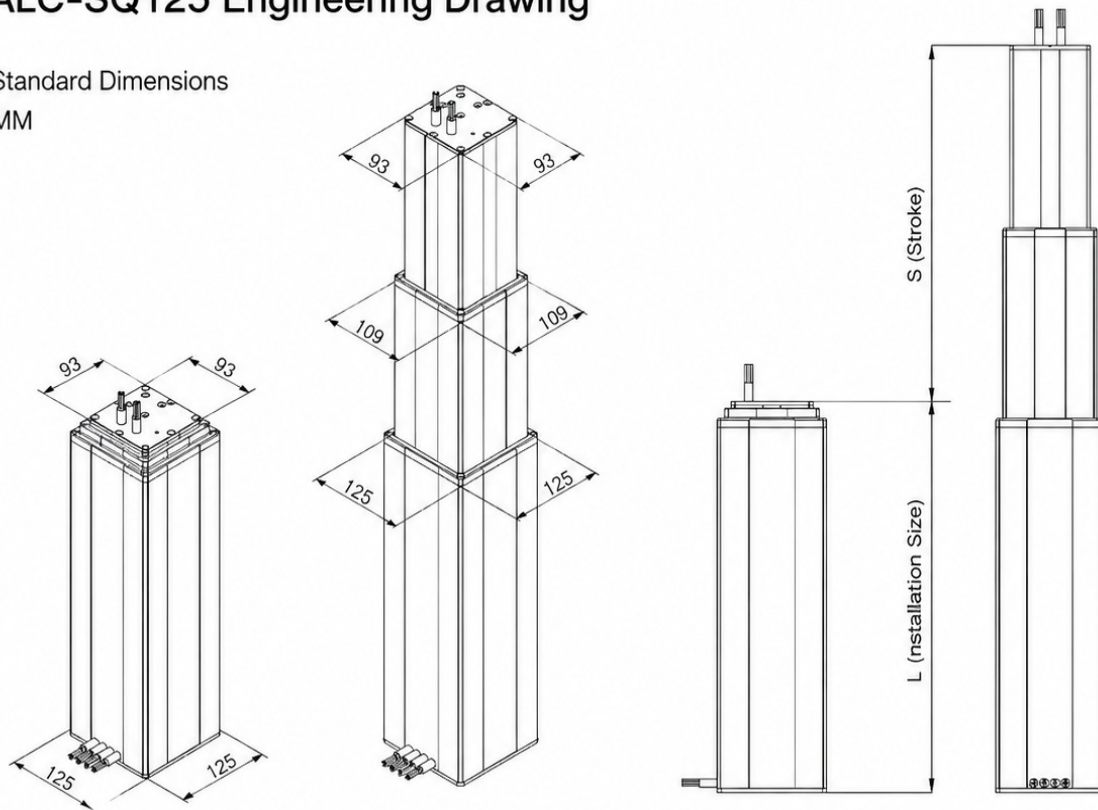
STROKE & HEIGHT OPTIONS (mm, standard set)

Stroke (S)	300	400	500	600	700	800
Installed / Closed Height (L)	400	450	500	600	650	700
Extended Height (S + L)	700	850	1000	1200	1350	1500

DIMENSIONAL DRAWING

ALC-SQ125 Engineering Drawing

Standard Dimensions
MM



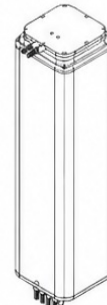
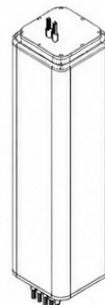
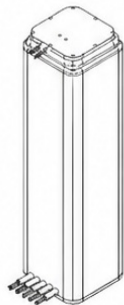
Motor cable exit point:

0 = Bottom panel, Top panel

1 = Bottom side, Top side

2 = Bottom panel, Top panel

3 = Bottom panel, Top side



Operating environment: -35°C to $+75^{\circ}\text{C}$. Indoor use recommended; avoid condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.

ALC-RS125 | Lifting Column Module Specification

PRODUCT PLATFORM

ARTUS PLATFORM	ALC-RS125
ROUNDED-CORNER FOOTPRINT	125×125 mm 500 N Max Thrust 100 mm/s Max Speed

Parameter	Unit	Specification
Voltage	VDC	25–48
Motor Type	—	DC servo motor
Max Thrust / Pull Force	N	500 / 500
Max Speed Under Load	mm/s	0–100
Minimum Initial Height	mm	Stroke / 2 + 250 mm (standard)
Dynamic Lateral Torque	Nm	500
Static Lateral Torque	Nm	700
Body Weight	kg	12.5 (reference config: 420 mm stroke / 425 mm installed height)
Color	—	Silver gray, black (customizable)
Noise Level	dB	48–65
Operating Temperature	°C	–35°C ~ +75°C
Protection Rating	—	IP54
Screw Type	—	Ball screw, lead 20 mm
Reduction Ratio	:1	10 : 1
Limit Switch Options	—	Soft limit + mechanical limit
Communication	—	CANopen / EtherCAT / RS485
Wiring	—	Internal routing (external routing available on request)
Cross-Section (max)	mm	125 × 125 mm (rounded-square)
Stage Dimensions	mm	Same envelope as ALC-SQ125 (93/109/125 mm stages); rounded-corner extrusion — request drawing for exact corner radius

STROKE & HEIGHT OPTIONS (mm, standard set)

Stroke (S)	300	400	500	600	700	800
Installed / Closed Height (L)	400	450	500	600	650	700
Extended Height (S + L)	700	850	1000	1200	1350	1500

DIMENSIONAL DRAWING

Operating environment: –35°C to +75°C. Indoor use recommended; avoid condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.

ALC-RS136 | Lifting Column Module Specification

PRODUCT PLATFORM

ARTUS PLATFORM	ALC-RS136
ROUNDED-CORNER FOOTPRINT	136×136 mm 500 N Max Thrust 100 mm/s Max Speed

Parameter	Unit	Specification
Voltage	VDC	25–48
Motor Type	—	DC servo motor
Max Thrust / Pull Force	N	500 / 500
Max Speed Under Load	mm/s	0–100
Minimum Initial Height	mm	Stroke / 2 + 250 mm (standard)
Dynamic Lateral Torque	Nm	500
Static Lateral Torque	Nm	700
Body Weight	kg	12.5 (reference config: 420 mm stroke / 425 mm installed height)
Color	—	Silver gray, black (customizable)
Noise Level	dB	48–65
Operating Temperature	°C	–35°C ~ +75°C
Protection Rating	—	IP54
Screw Type	—	Ball screw, lead 20 mm
Reduction Ratio	:1	10 : 1
Limit Switch Options	—	Soft limit + mechanical limit
Communication	—	CANopen / EtherCAT / RS485
Wiring	—	Internal routing (external routing available on request)
Cross-Section (max)	mm	136 × 136 mm (rounded-square)
Stage Dimensions	mm	Overall envelope 136×136 mm, 3-stage telescoping section

STROKE & HEIGHT OPTIONS (mm, standard set)

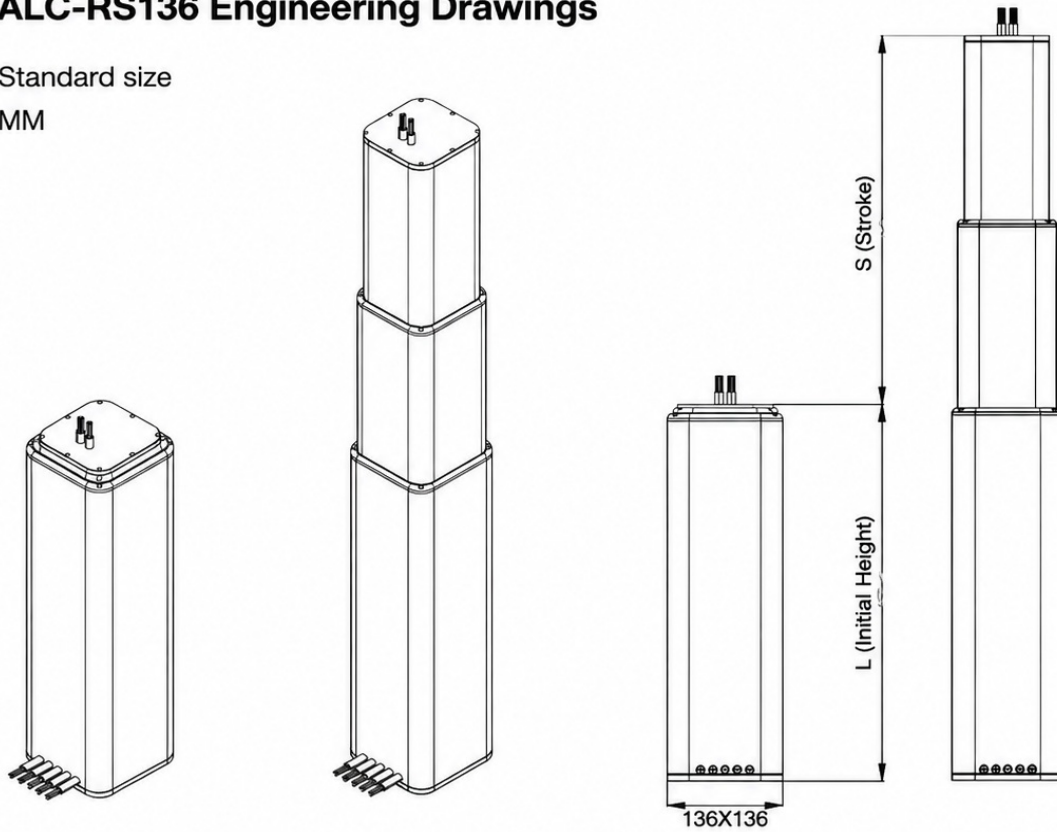
Stroke (S)	300	400	500	600	700	800
Installed / Closed Height (L)	400	450	500	600	650	700
Extended Height (S + L)	700	850	1000	1200	1350	1500

DIMENSIONAL DRAWING

ALC-RS136 Engineering Drawings

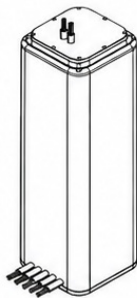
Standard size

MM

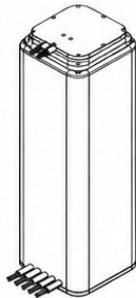


Motor cable exit point:

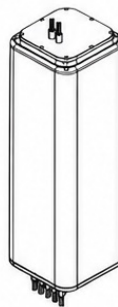
0 =Bottom panel, Top panel



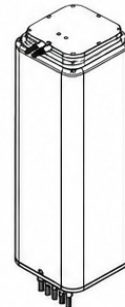
1 = Bottom side, Top side



2=Bottom panel, Top panel



3=Bottom panel, Top side



Operating environment: -35°C to $+75^{\circ}\text{C}$. Indoor use recommended; avoid condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.

ALC-SQ142 | Lifting Column Module Specification

PRODUCT PLATFORM

ARTUS PLATFORM	ALC-SQ142
HIGH THRUST / HIGH SPEED	142×142 mm 1500 N Max Thrust 150 mm/s Max Speed

Parameter	Unit	Specification
Voltage	VDC	48
Motor Type	—	DC servo motor
Max Thrust / Pull Force	N	1500 / 1500
Max Speed Under Load	mm/s	0–150
Minimum Initial Height	mm	Stroke / 2 + 250 mm (standard)
Dynamic Lateral Torque	Nm	500
Static Lateral Torque	Nm	700
Body Weight	kg	14.5 (reference config: 500 mm stroke / 500 mm installed height)
Color	—	Silver gray, black (customizable)
Noise Level	dB	48–65
Operating Temperature	°C	-35°C ~ +75°C
Protection Rating	—	IP54
Screw Type	—	Ball screw, lead 20 mm
Reduction Ratio	:1	10 : 1
Limit Switch Options	—	Soft limit + mechanical limit
Communication	—	CANopen / EtherCAT / RS485
Wiring	—	Internal routing (external routing available on request)
Cross-Section (max)	mm	142 × 142 mm (square)
Stage Dimensions	mm	Top 109×109 mm / Mid 125×125 mm / Base 142×142 mm

STROKE & HEIGHT OPTIONS (mm, standard set)

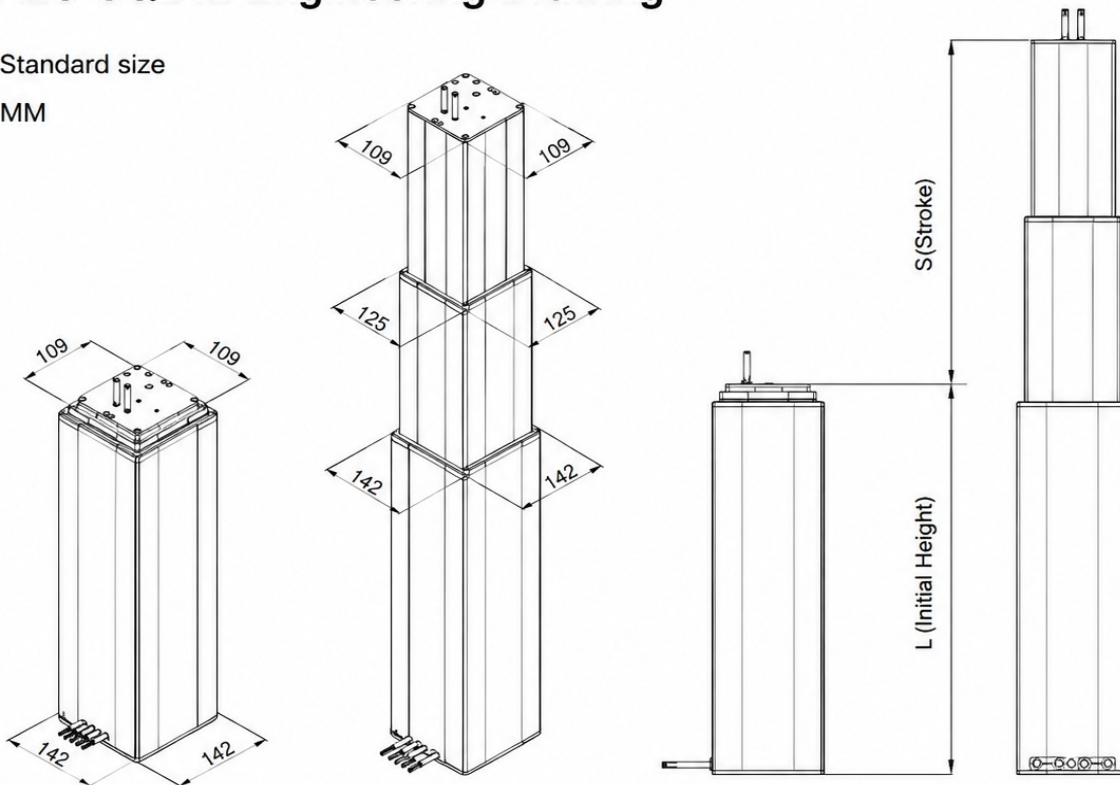
Stroke (S)	300	400	500	600	700	800
Installed / Closed Height (L)	400	450	500	600	650	700
Extended Height (S + L)	700	850	1000	1200	1350	1500

DIMENSIONAL DRAWING

ALC-SQ142 Engineering Drawing

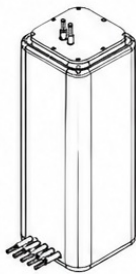
Standard size

MM

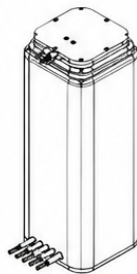


Motor cable exit point:

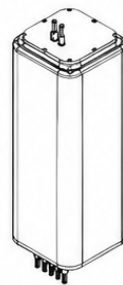
0 =Bottom panel, Top panel



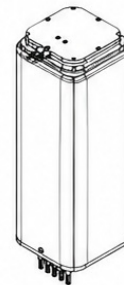
1 = Bottom side, Top side



2 =Bottom panel, Top panel



3 =Bottom panel, Top side



Operating environment: -35°C to $+75^{\circ}\text{C}$. Indoor use recommended; avoid condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.

ALC-RT193 | Lifting Column Module Specification

PRODUCT PLATFORM

ARTUS PLATFORM	ALC-RT193
MAXIMUM LATERAL TORQUE	193×141 mm 1500 N Max Thrust 150 mm/s Max Speed

Parameter	Unit	Specification
Voltage	VDC	48
Motor Type	—	DC servo motor
Max Thrust / Pull Force	N	1500 / 1500
Max Speed Under Load	mm/s	0–150 (at 800 N load)
Minimum Initial Height	mm	Stroke / 2 + 250 mm (standard)
Dynamic Lateral Torque	Nm	800
Static Lateral Torque	Nm	1000
Body Weight	kg	17 (reference config: 400 mm stroke / 400 mm installed height)
Color	—	Silver gray, black (customizable)
Noise Level	dB	48–70
Operating Temperature	°C	–35°C ~ +75°C
Protection Rating	—	IP54
Screw Type	—	Ball screw, lead 20 mm
Reduction Ratio	:1	10 : 1
Limit Switch Options	—	Soft limit + mechanical limit
Communication	—	CANopen / EtherCAT / RS485
Wiring	—	Internal routing (external routing available on request)
Cross-Section (max)	mm	193 × 141 mm (rectangular)
Stage Dimensions	mm	Top 159×107 mm / Mid 176×124 mm / Base 193×141 mm

STROKE & HEIGHT OPTIONS (mm, standard set)

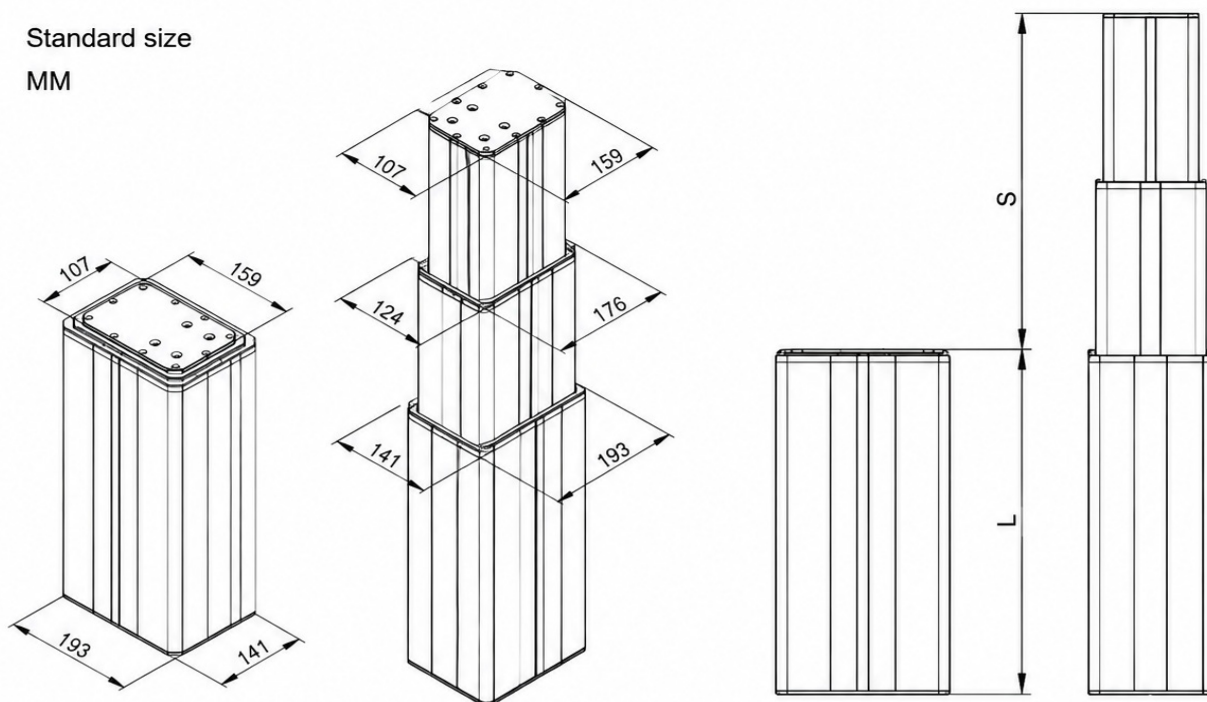
Stroke (S)	300	400	500	600	700	800
Installed / Closed Height (L)	400	450	500	600	650	700
Extended Height (S + L)	700	850	1000	1200	1350	1500

DIMENSIONAL DRAWING

ALC-RT193 Engineering Drawing

Standard size

MM



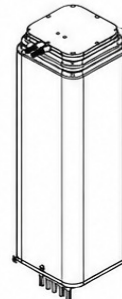
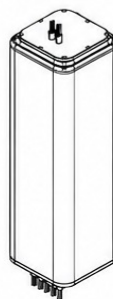
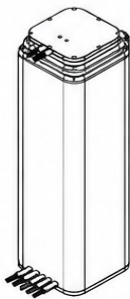
Motor cable exit point:

0 =Bottom panel, Top panel

1 = Bottom side, Top side

2 =Bottom panel, Top panel

3 =Bottom panel, Top side



Operating environment: -35°C to $+75^{\circ}\text{C}$. Indoor use recommended; avoid condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.