ENGINEERING DOCUMENTATION

Ball Screw Linear Module Engineering Configuration

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-LA-S01-P06	DRAFT-08 / 29 Aug 2026	Engineering Integration Reference

Integration Overview

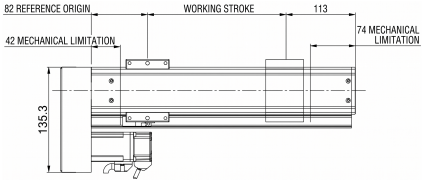
Exact ball-screw linear-module configuration for guided linear motion in automation equipment. This guide supports dimensional layout, mounting, load-path , motor and coupling integration, cable and sensor clearance, maintenance and commissioning for ES-LA-S01-P06.

Key Integration Facts

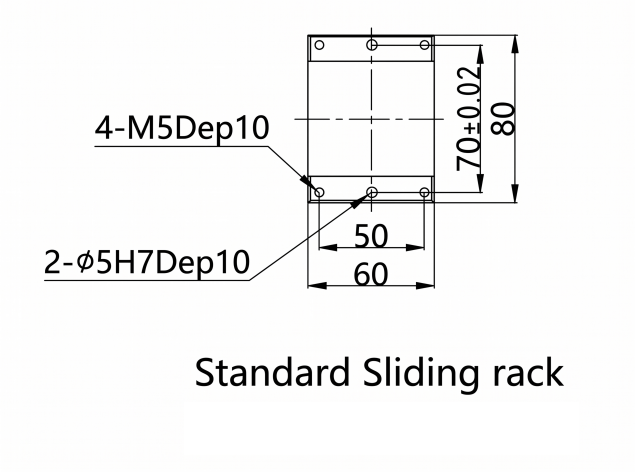
INTEGRATION ITEM	VALUE
Working Stroke	Configuration-dependent (60 records)
Overall Length	
Module Mass	
Mounting Hole Count	
Motor Mounting Style	
Configured Motor Power	400 W

Product Structure & Views

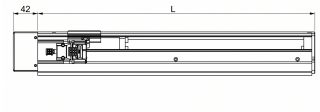
These views present the selected product structure, mounting interfaces and relevant integration geometry for this configuration.



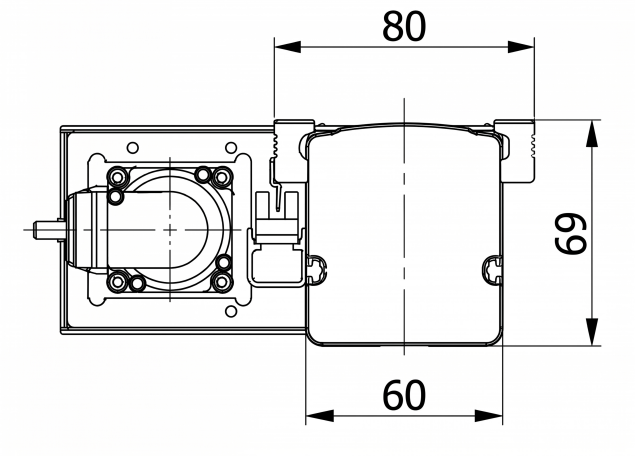
Mechanical View 1



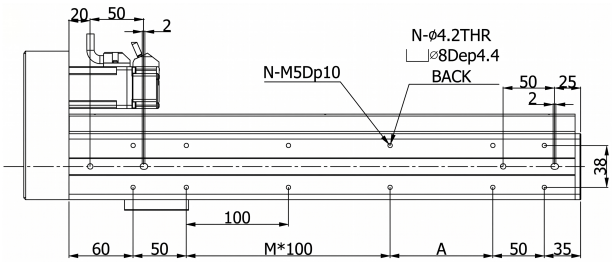
Mechanical View 2



Mechanical View 3



Mechanical View 4



Mechanical View 5

VIEW	FIELD	VALUE
Mechanical View 1	Reference Origin Position	82 mm from reference origin
	Working Stroke	Working stroke range
	Working Stroke Length	113 mm
	Left Mechanical Limitation Position	42 mm mechanical limit
	Right Mechanical Limitation Position	74 mm mechanical limit
	Overall Height	135.3 mm
Mechanical View 2	Vertical height with tolerance	70±0.02
	Overall height	80
	M5 threaded hole specification	4-M5 Depth 10
	Mounting hole spacing	50
	Dowel pin hole specification	2-ϕ5H7 Depth 10
	Overall width	60
Mechanical View 3	Mounting end width	42 mm
	Overall Length	L (variable, depends on model)
Mechanical View 4	Overall width	80
	Overall height	69
	Bottom width	60

VIEW	FIELD	VALUE
Mechanical View 5	Left protrusion width	20 mm
	Left connector zone length	50 mm
	Connector or shaft offset	2 mm
	Through hole specification	N holes, ϕ4.2 mm through
	Counterbore hole specification	ϕ8 mm, depth 4.4 mm
	Threaded hole specification	N holes, M5 threaded, depth 10 mm
	Back side designation	Back side
	Right main body length	50 mm
	Right protrusion width	25 mm
	Right connector offset	2 mm
	Overall height	38 mm
	Bottom mounting hole spacing	100 mm
	Left edge distance	60 mm
	Bottom section segment length	50 mm
	Reference or variable dimension	M × 100 mm (variable)
	Datum A	Datum A
	Right section segment length	50 mm
	Right edge distance	35 mm

Configuration Dimensions

- Each row remains bound to one aggregate source configuration. Compare values by row; do not combine cells from different rows into an assumed module configuration.

Configuration Dimensions

CONFIGURATION	WORKING STROKE	OVERALL LENGTH	MODULE MASS
Configuration 01 - Stroke: 180 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	180 mm	424 mm	5.4 kg
Configuration 02 - Stroke: 780 mm; Motor mounting: Left Side Motor; Motor power: 400 W	780 mm	1024 mm	10.1 kg
Configuration 03 - Stroke: 1080 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	1080 mm	1324 mm	11.4 kg
Configuration 04 - Stroke: 780 mm; Motor mounting: Right Side Motor; Motor power: 400 W	780 mm	1024 mm	10.1 kg
Configuration 05 - Stroke: 720 mm; Motor mounting: Left Side Motor; Motor power: 400 W	720 mm	964 mm	9.7 kg
Configuration 06 - Stroke: 1200 mm; Motor mounting: Right Side Motor; Motor power: 400 W	1200 mm	1444 mm	12.9 kg
Configuration 07 - Stroke: 900 mm; Motor mounting: Left Side Motor; Motor power: 400 W	900 mm	1144 mm	10.9 kg
Configuration 08 - Stroke: 360 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	360 mm	604 mm	6.6 kg
Configuration 09 - Stroke: 420 mm; Motor mounting: Right Side Motor; Motor power: 400 W	420 mm	664 mm	7.7 kg
Configuration 10 - Stroke: 120 mm; Motor mounting: Right Side Motor; Motor power: 400 W	120 mm	364 mm	5.7 kg
Configuration 11 - Stroke: 480 mm; Motor mounting: Right Side Motor; Motor power: 400 W	480 mm	724 mm	8.1 kg
Configuration 12 - Stroke: 840 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	840 mm	1084 mm	9.8 kg
Configuration 13 - Stroke: 1020 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	1020 mm	1264 mm	11 kg
Configuration 14 - Stroke: 480 mm; Motor mounting: Left Side Motor; Motor power: 400 W	480 mm	724 mm	8.1 kg
Configuration 15 - Stroke: 780 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	780 mm	1024 mm	9.4 kg
Configuration 16 - Stroke: 300 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	300 mm	544 mm	6.2 kg
Configuration 17 - Stroke: 60 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	60 mm	304 mm	4.6 kg
Configuration 18 - Stroke: 720 mm; Motor mounting: Right Side Motor; Motor power: 400 W	720 mm	964 mm	9.7 kg

CONFIGURATION	WORKING STROKE	OVERALL LENGTH	MODULE MASS
Configuration 19 - Stroke: 960 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	960 mm	1204 mm	10.6 kg
Configuration 20 - Stroke: 1080 mm; Motor mounting: Left Side Motor; Motor power: 400 W	1080 mm	1324 mm	12.1 kg
Configuration 21 - Stroke: 420 mm; Motor mounting: Left Side Motor; Motor power: 400 W	420 mm	664 mm	7.7 kg
Configuration 22 - Stroke: 240 mm; Motor mounting: Left Side Motor; Motor power: 400 W	240 mm	484 mm	6.5 kg
Configuration 23 - Stroke: 180 mm; Motor mounting: Left Side Motor; Motor power: 400 W	180 mm	424 mm	6.1 kg
Configuration 24 - Stroke: 540 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	540 mm	784 mm	7.8 kg
Configuration 25 - Stroke: 1140 mm; Motor mounting: Left Side Motor; Motor power: 400 W	1140 mm	1384 mm	12.5 kg
Configuration 26 - Stroke: 660 mm; Motor mounting: Left Side Motor; Motor power: 400 W	660 mm	904 mm	9.3 kg
Configuration 27 - Stroke: 600 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	600 mm	844 mm	8.2 kg
Configuration 28 - Stroke: 360 mm; Motor mounting: Left Side Motor; Motor power: 400 W	360 mm	604 mm	7.3 kg
Configuration 29 - Stroke: 360 mm; Motor mounting: Right Side Motor; Motor power: 400 W	360 mm	604 mm	7.3 kg
Configuration 30 - Stroke: 1020 mm; Motor mounting: Left Side Motor; Motor power: 400 W	1020 mm	1264 mm	11.7 kg
Configuration 31 - Stroke: 660 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	660 mm	904 mm	8.6 kg
Configuration 32 - Stroke: 1140 mm; Motor mounting: Right Side Motor; Motor power: 400 W	1140 mm	1384 mm	12.5 kg
Configuration 33 - Stroke: 540 mm; Motor mounting: Right Side Motor; Motor power: 400 W	540 mm	784 mm	8.5 kg
Configuration 34 - Stroke: 1020 mm; Motor mounting: Right Side Motor; Motor power: 400 W	1020 mm	1264 mm	11.7 kg
Configuration 35 - Stroke: 960 mm; Motor mounting: Right Side Motor; Motor power: 400 W	960 mm	1204 mm	11.3 kg
Configuration 36 - Stroke: 1200 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	1200 mm	1444 mm	12.2 kg
Configuration 37 - Stroke: 240 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	240 mm	484 mm	5.8 kg
Configuration 38 - Stroke: 1200 mm; Motor mounting: Left Side Motor; Motor power: 400 W	1200 mm	1444 mm	12.9 kg
Configuration 39 - Stroke: 300 mm; Motor mounting: Right Side Motor; Motor power: 400 W	300 mm	544 mm	6.9 kg
Configuration 40 - Stroke: 900 mm; Motor mounting: Right Side Motor; Motor power: 400 W	900 mm	1144 mm	10.9 kg
Configuration 41 - Stroke: 480 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	480 mm	724 mm	7.4 kg
Configuration 42 - Stroke: 120 mm; Motor mounting: Left Side Motor; Motor power: 400 W	120 mm	364 mm	5.7 kg

CONFIGURATION	WORKING STROKE	OVERALL LENGTH	MODULE MASS
Configuration 43 - Stroke: 300 mm; Motor mounting: Left Side Motor; Motor power: 400 W	300 mm	544 mm	6.9 kg
Configuration 44 - Stroke: 60 mm; Motor mounting: Right Side Motor; Motor power: 400 W	60 mm	304 mm	5.3 kg
Configuration 45 - Stroke: 1080 mm; Motor mounting: Right Side Motor; Motor power: 400 W	1080 mm	1324 mm	12.1 kg
Configuration 46 - Stroke: 720 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	720 mm	964 mm	9 kg
Configuration 47 - Stroke: 420 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	420 mm	664 mm	7 kg
Configuration 48 - Stroke: 840 mm; Motor mounting: Right Side Motor; Motor power: 400 W	840 mm	1084 mm	10.5 kg
Configuration 49 - Stroke: 960 mm; Motor mounting: Left Side Motor; Motor power: 400 W	960 mm	1204 mm	11.3 kg
Configuration 50 - Stroke: 660 mm; Motor mounting: Right Side Motor; Motor power: 400 W	660 mm	904 mm	9.3 kg
Configuration 51 - Stroke: 600 mm; Motor mounting: Right Side Motor; Motor power: 400 W	600 mm	844 mm	8.9 kg
Configuration 52 - Stroke: 180 mm; Motor mounting: Right Side Motor; Motor power: 400 W	180 mm	424 mm	6.1 kg
Configuration 53 - Stroke: 240 mm; Motor mounting: Right Side Motor; Motor power: 400 W	240 mm	484 mm	6.5 kg
Configuration 54 - Stroke: 60 mm; Motor mounting: Left Side Motor; Motor power: 400 W	60 mm	304 mm	5.3 kg
Configuration 55 - Stroke: 540 mm; Motor mounting: Left Side Motor; Motor power: 400 W	540 mm	784 mm	8.5 kg
Configuration 56 - Stroke: 600 mm; Motor mounting: Left Side Motor; Motor power: 400 W	600 mm	844 mm	8.9 kg
Configuration 57 - Stroke: 840 mm; Motor mounting: Left Side Motor; Motor power: 400 W	840 mm	1084 mm	10.5 kg
Configuration 58 - Stroke: 900 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	900 mm	1144 mm	10.2 kg
Configuration 59 - Stroke: 1140 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	1140 mm	1384 mm	11.8 kg
Configuration 60 - Stroke: 120 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	120 mm	364 mm	5 kg

Mounting and Drive Configuration

Mounting and Drive Configuration

CONFIGURATION	MOUNTING HOLE COUNT
Configuration 01 - Stroke: 180 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	14
Configuration 02 - Stroke: 780 mm; Motor mounting: Left Side Motor; Motor power: 400 W	34
Configuration 03 - Stroke: 1080 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	44
Configuration 04 - Stroke: 780 mm; Motor mounting: Right Side Motor; Motor power: 400 W	34
Configuration 05 - Stroke: 720 mm; Motor mounting: Left Side Motor; Motor power: 400 W	32
Configuration 06 - Stroke: 1200 mm; Motor mounting: Right Side Motor; Motor power: 400 W	48
Configuration 07 - Stroke: 900 mm; Motor mounting: Left Side Motor; Motor power: 400 W	38
Configuration 08 - Stroke: 360 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	20
Configuration 09 - Stroke: 420 mm; Motor mounting: Right Side Motor; Motor power: 400 W	22
Configuration 10 - Stroke: 120 mm; Motor mounting: Right Side Motor; Motor power: 400 W	12
Configuration 11 - Stroke: 480 mm; Motor mounting: Right Side Motor; Motor power: 400 W	24
Configuration 12 - Stroke: 840 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	36
Configuration 13 - Stroke: 1020 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	42
Configuration 14 - Stroke: 480 mm; Motor mounting: Left Side Motor; Motor power: 400 W	24
Configuration 15 - Stroke: 780 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	34
Configuration 16 - Stroke: 300 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	18
Configuration 17 - Stroke: 60 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	10
Configuration 18 - Stroke: 720 mm; Motor mounting: Right Side Motor; Motor power: 400 W	32
Configuration 19 - Stroke: 960 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	40
Configuration 20 - Stroke: 1080 mm; Motor mounting: Left Side Motor; Motor power: 400 W	44

CONFIGURATION	MOUNTING HOLE COUNT
Configuration 21 - Stroke: 420 mm; Motor mounting: Left Side Motor; Motor power: 400 W	22
Configuration 22 - Stroke: 240 mm; Motor mounting: Left Side Motor; Motor power: 400 W	16
Configuration 23 - Stroke: 180 mm; Motor mounting: Left Side Motor; Motor power: 400 W	14
Configuration 24 - Stroke: 540 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	26
Configuration 25 - Stroke: 1140 mm; Motor mounting: Left Side Motor; Motor power: 400 W	46
Configuration 26 - Stroke: 660 mm; Motor mounting: Left Side Motor; Motor power: 400 W	30
Configuration 27 - Stroke: 600 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	28
Configuration 28 - Stroke: 360 mm; Motor mounting: Left Side Motor; Motor power: 400 W	20
Configuration 29 - Stroke: 360 mm; Motor mounting: Right Side Motor; Motor power: 400 W	20
Configuration 30 - Stroke: 1020 mm; Motor mounting: Left Side Motor; Motor power: 400 W	42
Configuration 31 - Stroke: 660 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	30
Configuration 32 - Stroke: 1140 mm; Motor mounting: Right Side Motor; Motor power: 400 W	46
Configuration 33 - Stroke: 540 mm; Motor mounting: Right Side Motor; Motor power: 400 W	26
Configuration 34 - Stroke: 1020 mm; Motor mounting: Right Side Motor; Motor power: 400 W	42
Configuration 35 - Stroke: 960 mm; Motor mounting: Right Side Motor; Motor power: 400 W	40
Configuration 36 - Stroke: 1200 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	48
Configuration 37 - Stroke: 240 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	16
Configuration 38 - Stroke: 1200 mm; Motor mounting: Left Side Motor; Motor power: 400 W	48
Configuration 39 - Stroke: 300 mm; Motor mounting: Right Side Motor; Motor power: 400 W	18
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Configuration 41 - Stroke: 480 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	24
Configuration 42 - Stroke: 120 mm; Motor mounting: Left Side Motor; Motor power: 400 W	12
Configuration 43 - Stroke: 300 mm; Motor mounting: Left Side Motor; Motor power: 400 W	18
Configuration 44 - Stroke: 60 mm; Motor mounting: Right Side Motor; Motor power: 400 W	10

CONFIGURATION	MOUNTING HOLE COUNT
Configuration 45 - Stroke: 1080 mm; Motor mounting: Right Side Motor; Motor power: 400 W	44
Configuration 46 - Stroke: 720 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	32
Configuration 47 - Stroke: 420 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	22
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Configuration 52 - Stroke: 180 mm; Motor mounting: Right Side Motor; Motor power: 400 W	14
Configuration 53 - Stroke: 240 mm; Motor mounting: Right Side Motor; Motor power: 400 W	16
Configuration 54 - Stroke: 60 mm; Motor mounting: Left Side Motor; Motor power: 400 W	10
Configuration 55 - Stroke: 540 mm; Motor mounting: Left Side Motor; Motor power: 400 W	26
Configuration 56 - Stroke: 600 mm; Motor mounting: Left Side Motor; Motor power: 400 W	28
Configuration 57 - Stroke: 840 mm; Motor mounting: Left Side Motor; Motor power: 400 W	36
Configuration 58 - Stroke: 900 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	38
Configuration 59 - Stroke: 1140 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	46
Configuration 60 - Stroke: 120 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	12

Motor Interface Configuration

Motor Interface Configuration

CONFIGURATION	MOTOR MOUNTING STYLE
Configuration 01 - Stroke: 180 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 02 - Stroke: 780 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 03 - Stroke: 1080 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 04 - Stroke: 780 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 05 - Stroke: 720 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 06 - Stroke: 1200 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 07 - Stroke: 900 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
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Configuration 16 - Stroke: 300 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 17 - Stroke: 60 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 18 - Stroke: 720 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 19 - Stroke: 960 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 20 - Stroke: 1080 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor

CONFIGURATION	MOTOR MOUNTING STYLE
Configuration 21 - Stroke: 420 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
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Configuration 23 - Stroke: 180 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 24 - Stroke: 540 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 25 - Stroke: 1140 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 26 - Stroke: 660 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 27 - Stroke: 600 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 28 - Stroke: 360 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 29 - Stroke: 360 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
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Configuration 32 - Stroke: 1140 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 33 - Stroke: 540 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 34 - Stroke: 1020 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 35 - Stroke: 960 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 36 - Stroke: 1200 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 37 - Stroke: 240 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 38 - Stroke: 1200 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 39 - Stroke: 300 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 40 - Stroke: 900 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 41 - Stroke: 480 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 42 - Stroke: 120 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 43 - Stroke: 300 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 44 - Stroke: 60 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor

CONFIGURATION	MOTOR MOUNTING STYLE
Configuration 45 - Stroke: 1080 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 46 - Stroke: 720 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 47 - Stroke: 420 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 48 - Stroke: 840 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 49 - Stroke: 960 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 50 - Stroke: 660 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 51 - Stroke: 600 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 52 - Stroke: 180 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 53 - Stroke: 240 mm; Motor mounting: Right Side Motor; Motor power: 400 W	Right Side Motor
Configuration 54 - Stroke: 60 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 55 - Stroke: 540 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 56 - Stroke: 600 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 57 - Stroke: 840 mm; Motor mounting: Left Side Motor; Motor power: 400 W	Left Side Motor
Configuration 58 - Stroke: 900 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 59 - Stroke: 1140 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling
Configuration 60 - Stroke: 120 mm; Motor mounting: External Direct Coupling; Motor power: 400 W	External Direct Coupling

Overall Dimensions and Mounting Interface

PARAMETER	VALUE	UNIT
Ball Screw Diameter	16	mm

- Confirm this exact SKU, the selected motor-mounting configuration and the applicable mechanical views before using dimensions or interface geometry.
- Keep mounting faces flat, clean and free of burrs, raised holes, debris and coating buildup.
- Reserve assembly, inspection, cable, lubrication and removal access around the module and motor interface.

Load Path and Installation Orientation

- Route axial force through the carriage, supported mounting structure and host guide; include offset, side load, acceleration, shock and emergency-stop cases.
- Validate horizontal, wall and vertical installation loads with the actual payload center, guide spacing, host stiffness and duty cycle.
- Control payload center of gravity and overhung moment; verify the complete installed load path rather than inferring capacity from module mass or size.

Motion and Duty-Cycle Validation

- Validate the complete acceleration, travel, dwell, reversal and stop cycle using the stroke and selected motor configuration.
- Establish speed, acceleration, payload and moment limits from the complete selected module, motor, guide and host calculation.
- Verify temperature and resonance behavior using the installed motor, stroke, load, mounting heat path and operating cycle.

Motor, Coupling and Sensor Integration

PARAMETER	VALUE	UNIT
Configured Motor Power	400	W

- Match the motor mounting style, adapter, configured motor power and interface dimensions before assembly.
- Verify coupling bore, engagement, concentricity, axial position and tightening controls, then check smooth travel at zero energy.
- Provide cable slack, bend radius, strain relief and sensor clearance across the complete motion envelope.

Maintenance, Contamination and Service Envelope

- Prevent chips, fibers, cleaning residue and moisture from entering the ball screw, guide, sensor and coupling interfaces.
- Provide access for lubrication, inspection, sensor adjustment, fastener verification and specified removal.
- Stop and inspect after binding, impact, abnormal noise, rising temperature, unexpected friction or protection damage.

Commissioning and Safety

- Commission in stages with the host guide, limits, guards and cable routing installed; verify each boundary before increasing speed or load.
- At low energy verify travel direction, home and limit behavior, command polarity, stroke and sensor state.
- Verify emergency stop, fault response, recovery behavior and safe holding requirements for the installed orientation.

Integration Checklist

01	Confirm the exact SKU, parameters and selected mechanical-view configuration.
02	Verify working stroke, overall length, module mass, mounting-hole count and service clearance.
03	Establish the complete axial, side-load and moment load path for the host structure.
04	Validate horizontal, wall and vertical installation cases using the actual payload center and duty cycle.
05	Match motor mounting style, configured motor power, adapter and coupling dimensions.
06	Verify coupling alignment, engagement, tightening and smooth travel before applying drive power.
07	Provide cable slack, bend radius, strain relief and sensor clearance across the full motion envelope.
08	Protect the ball screw, guide, sensors and coupling from contamination and moisture.
09	At low energy verify direction, home, limits, stroke, speed and fault-stop behavior.
10	Request current 2D, STEP, motor-interface, wiring, lubrication and maintenance data before final integration.

View SKU Product Datasheet **Request controlled 2D drawing** **Request controlled STEP review** **Request a Quote**

Engineering Use and Verification Notice

01. This Dimensional & Integration Guide applies only to EmbodyStack SKU ES-LA-S01-P06 and is intended for dimensional evaluation and preliminary integration. It is not a applicable manufacturing drawing, module or motor selection approval, payload or safety approval, wiring final integration, machinery risk assessment or integration planning document and must not be used as the sole basis for machining, host-structure design, coupling manufacture, fastener selection, cable assembly or final integration. Before design freeze, assembly or commissioning, verify dimensions, interface geometry, mounting holes, travel and collision envelope, load path, orientation, payload center, speed, acceleration, motor, adapter, coupling, sensors, cable routing, limits, thermal behavior, contamination control and maintenance requirements against the applicable EmbodyStack engineering data for this exact SKU and selected configuration. Where this guide and applicable product documentation differ, the applicable product documentation governs. Validate the complete module, motor, guide, host structure, motion cycle, guarding, fault cases and applicable regulatory requirements under intended operating conditions.