

ENGINEERING DOCUMENTATION

Two-Finger Parallel Electric Gripper

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-EG-C00-S002-V001	DRAFT-08 / 28 Aug 2026	Engineering Integration Reference

Integration Overview

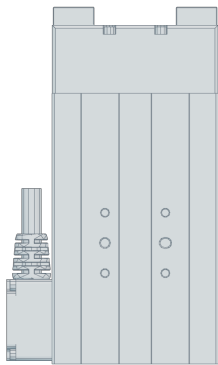
Electric end effector for automated gripping and workpiece handling. This guide supports mounting, finger interface, load-path, cable, commissioning and service planning for ES-EG-C00-S002-V001.

Key Integration Facts

INTEGRATION ITEM	VALUE
Measurement Repeatability	± 0.02 mm
Gripping Force (Per Side)	30~100 N
Maximum Recommended Payload	2 kg
Weight	0.53 kg / 0.60 kg / kg
Permissible Moment (My)	2 Nm
Allowable Static Vertical Load Fz	150 N
Driving Method	+
Permissible Moment (Mx)	2.5 Nm

3D Orientation and Interface Views

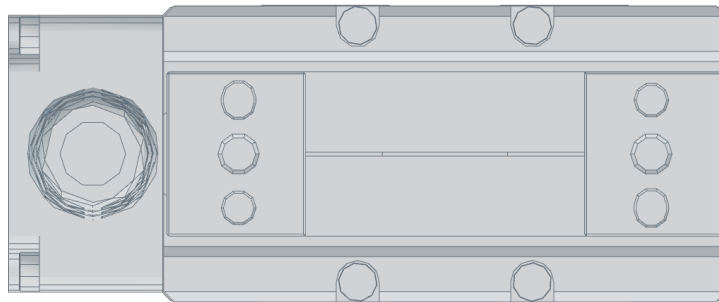
The front, right-side and top views are retained because each exposes a different integration relationship: finger geometry, cable routing direction and robot-side mounting orientation. Dimensions remain governed by the applicable 2D drawing and exact-SKU parameters.



Front View



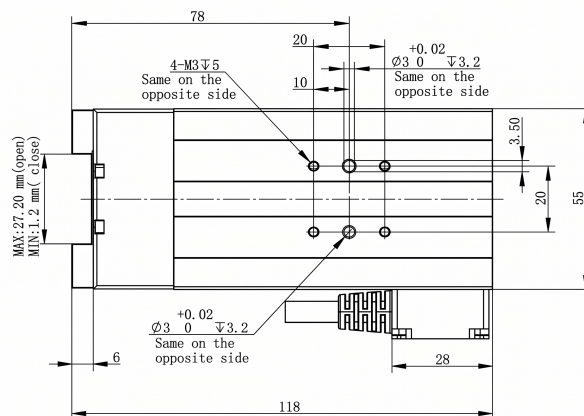
Right Side View



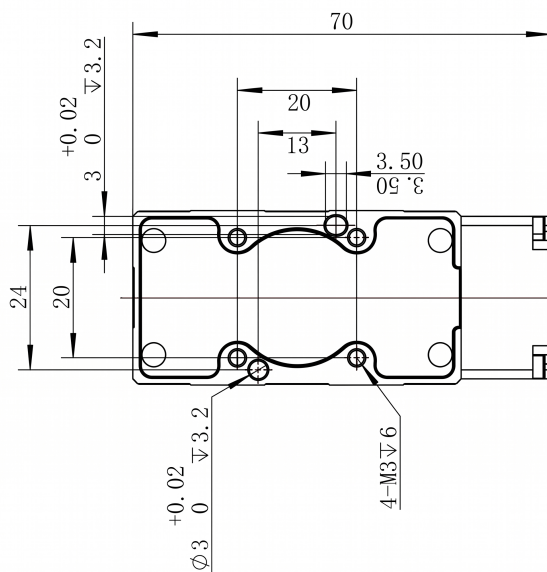
Top View

Each selected view contributes a distinct orientation or interface relationship used by the integration guidance.

These views present product structure, mounting interfaces and relevant integration geometry for this SKU.



Mechanical View 2



Mechanical View 4

VIEW	FIELD	VALUE
Mechanical View 1	Mounting hole diameter and tolerance	⌀ +0.02/0 mm
	Mounting hole pattern spacing	⌀.2 mm
	Threaded hole specification	4-M3⌀
	Mounting face dimension	10 mm
	Lower mounting hole diameter and tolerance	⌀ +0.02/0 mm
	Vertical spacing	3.50 mm
	Lower hole pattern spacing	⌀.2 mm
	Height	20 mm
	Length	78 mm

VIEW	FIELD	VALUE
Mechanical View 2	Overall length	78 mm
	Local width	20 mm
	Through hole diameter with tolerance	⌀ +0.02/0 mm
	Hole diameter	⌀.2 mm
	Threaded holes specification and pattern	4-M3 tapped holes on √5 PCD
	Local dimension	10 mm
	Height dimension	3.50 mm
	Maximum opening dimension	MAX: 27.20 mm (open)
	Minimum closed dimension	MIN: 1.2 mm (close)
	Small clearance or offset	5 mm
	Lower hole diameter with tolerance	⌀ +0.02/0 mm
	Lower hole diameter	⌀.2 mm
	Datum identifier	Datum H
	End dimension	9 mm
	Width dimension	28 mm
Mechanical View 3	Mounting hole diameter and tolerance	2- 3+0.02/0 mm
	Surface roughness	Ra 3.2 μm
	Mounting dimension and tolerance	2-3 +0.02/0 mm
	Mounting hole position dimension	2-3.50 mm
	Mounting height	10.50 mm
	Overall height	29 mm
	Mounting position dimension	16 mm
	Mounting position dimension	6.50 mm
	Mounting position dimension	13.50 mm
	Threaded hole specification	2-M4 depth 5mm
Mechanical View 4	Overall Length	70 mm
	Surface Roughness	Ra 3.2 μm
	Hole Diameter with Tolerance	Ø2 mm +0.02/0
	Center Hole Spacing	20 mm
	Inner Hole Spacing	13 mm
	Right Feature Height	3.50 mm
	Boss Width	3 mm
	Right Feature Height (Lower)	3.50 mm
	Total Height	24 mm
	Mounting Surface Height	20 mm
	Bottom Surface Roughness	Ra 3.2 μm
	Mounting Hole Specification	4x M3 threaded holes, depth/engagement 6 mm
	Bottom Hole Diameter with Tolerance	Ø3 mm +0.02/0

Technical Specifications - 1

PARAMETER	VALUE	UNIT
Measurement Repeatability	± 0.02	mm
Gripping Force (Per Side)	30~100	N
Maximum Recommended Payload	2	kg
Weight	0.53 kg / 0.60 kg /	
Permissible Moment (My)	2	N·m
Allowable Static Vertical Load Fz	150	N
Driving Method	+	
Permissible Moment (Mx)	2.5	N·m

Technical Specifications - 2

PARAMETER	VALUE	UNIT
Permissible Moment (Mz)	3	N·m
Unweighted Noise Level	< 50	dB
Communication Interface	: Modbus RTU (RS485) Digital I/O : TCP/IP (USB2.0 CAN2.0A PROFINET EtherCAT)*	
Peak Current	0.3 A () 1.2 A ()*	A
Standards Compliance	CE, FCC, RoHS	
Continuous Rated Current	0.3 A () 1.2 A ()*	A
Peak Power	30	W

Mounting, Fingertip and Workpiece Integration

- Support the complete robot mounting interface and verify locating features, fastener engagement and surrounding clearance.
- Validate fingertip mass, overhang, stiffness, retention, contact pressure and the complete finger and workpiece collision envelope.

Load, Cable and Commissioning

- Validate payload, grip contact, workpiece center of mass, acceleration, emergency stop and allowable moments as one installed load case.
- Provide suitable cable routing and strain relief, then verify supply, interface, initialization, command authority and feedback states before automatic operation.

Integration Checklist

- | | |
|----|--|
| 01 | Confirm the exact-SKU drawing and parameter set. |
| 02 | Verify mounting geometry, locating features, fasteners and body envelope. |
| 03 | Validate fingertips, workpiece contact, payload, acceleration and moments. |
| 04 | Route and strain-relieve the cable through the complete motion envelope. |
| 05 | Verify initialization, command authority, feedback and fault behavior. |

[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-EG-C00-S002-V001 and is intended for dimensional evaluation and preliminary integration. It is not a manufacturing drawing, machine-level load approval, wiring final integration, safety validation or production authorization. Before design freeze, installation or commissioning, verify all dimensions, interfaces, fits, fasteners, loads, motion limits, cable requirements, environmental boundaries and maintenance requirements against the applicable EmbodyStack engineering documentation for this exact SKU. Validate the complete installed system under intended operating and fault conditions.