



R-Series 4-DoF Arm Kit

Assembly Instructions

General Warnings and Cautions

Danger (May cause serious injury or death)

- Keep water, flammables, solvents and other liquids clear from **unsealed** actuator.
- Keep fingers away from moving parts during operation.
- Cut power immediately if actuator emits strange odors or smoke.
- Keep actuator out of reach of children.

Warning (May cause injury or damage to actuator)

- Do not expose the actuator to permanent and strong magnetic fields.
- Do not force screws into the bottom of the actuator. R8 = 8mm Tap Depth
- Use provided hardware with accessories and hand tighten as needed.
- Attempts to disassemble actuator will void the warranty and may cause permanent damage.

Sealing (R-Series Actuators are IP67 when properly used)

- Please refer to all online documentation for proper sealing techniques of the actuator.

For more information please visit: ***docs.hebi.us***

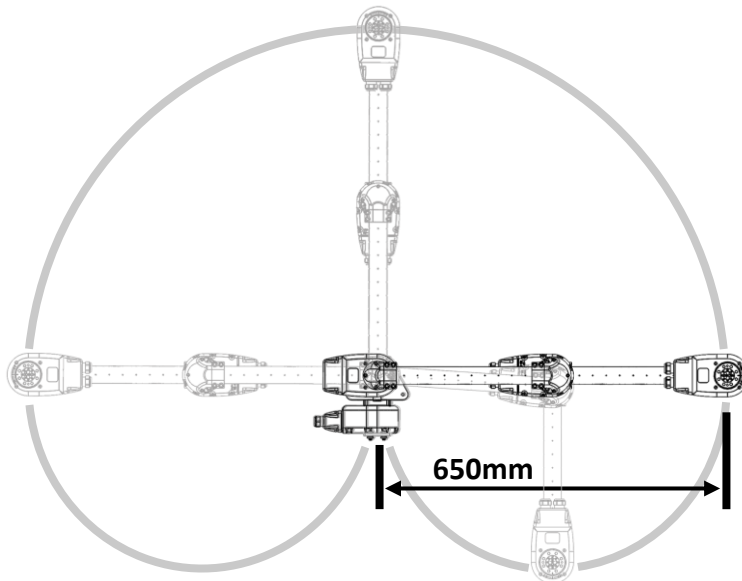
Technical Specifications

Specifications	Value
Weight	3.75 kg
Reach	650 mm
Payload at Max Reach*	1.00 kg
Payload at Half Reach*	3.50 kg

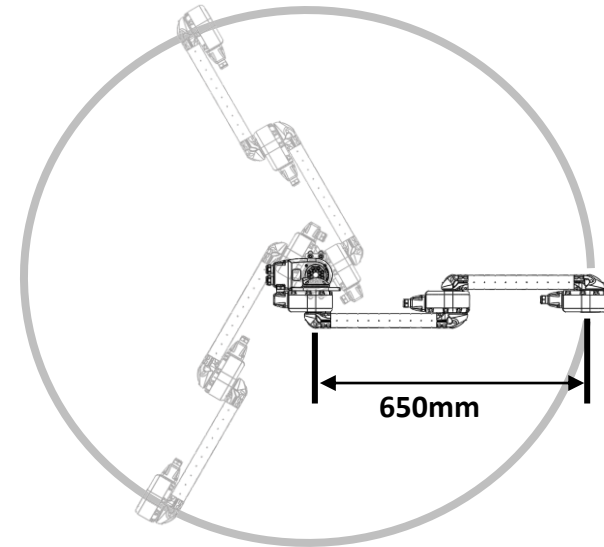
Calculated using Default Configuration with Gas Spring.
Using a different configuration of R-Series Actuators will provide different payload capacities.

Movement	Working Range	Speed
Axis 1 – Base [Default: R8-16]	Continuous (limited by wiring)	90°/s
Axis 2 – Shoulder [Default: R8-16]	0° to +180°	90°/s
Axis 3 – Elbow [Default: R8-16]	-155° to +155° (avoid end effector collisions)	90°/s
Axis 4 – Wrist 1 [Default: R8-3]	Continuous (avoid end effector collisions)	504°/s

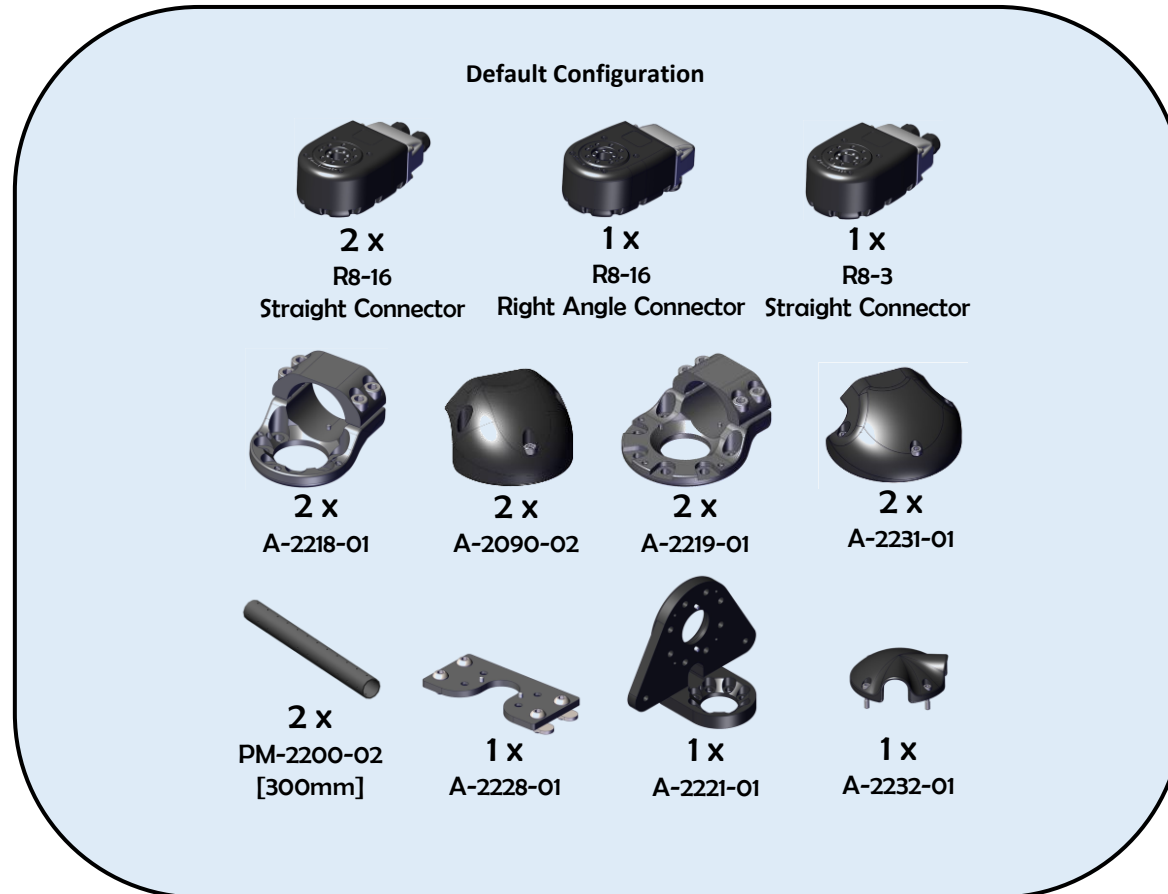
Side View



Top View



Bill of Materials – Mechanical*



fasteners included, not shown

Bill of Materials - Electrical



PP-2349-RED
18AWG Power Wire, Red



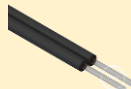
PP-2349-BLK
18AWG Power Wire, Black



PP-2358-YEL
22AWG M-Stop Cable, Yellow



PP-2358-BLU
22AWG M-Stop Cable, Blue



PP-2401-DUP
POF Duplex Cable

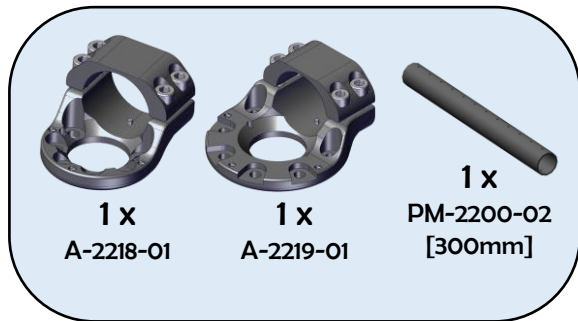
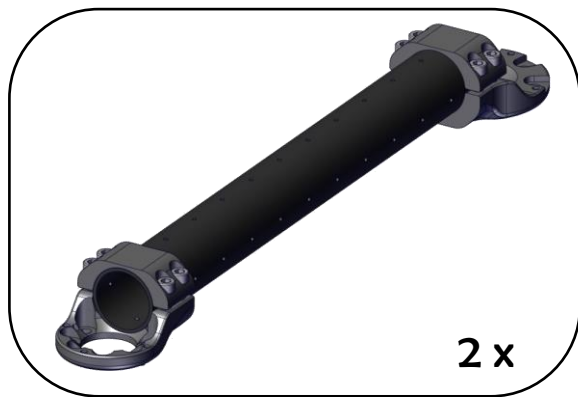


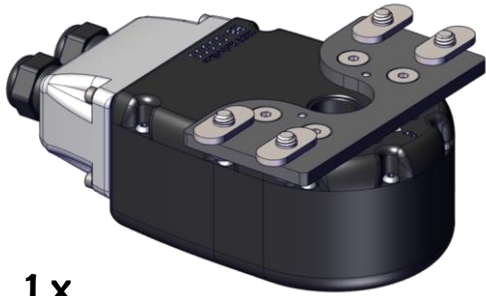
A-2256-01
POF Ethernet Media Converter

all items are included in R-Series Connection Toolbox

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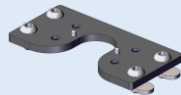
1 x



1 x

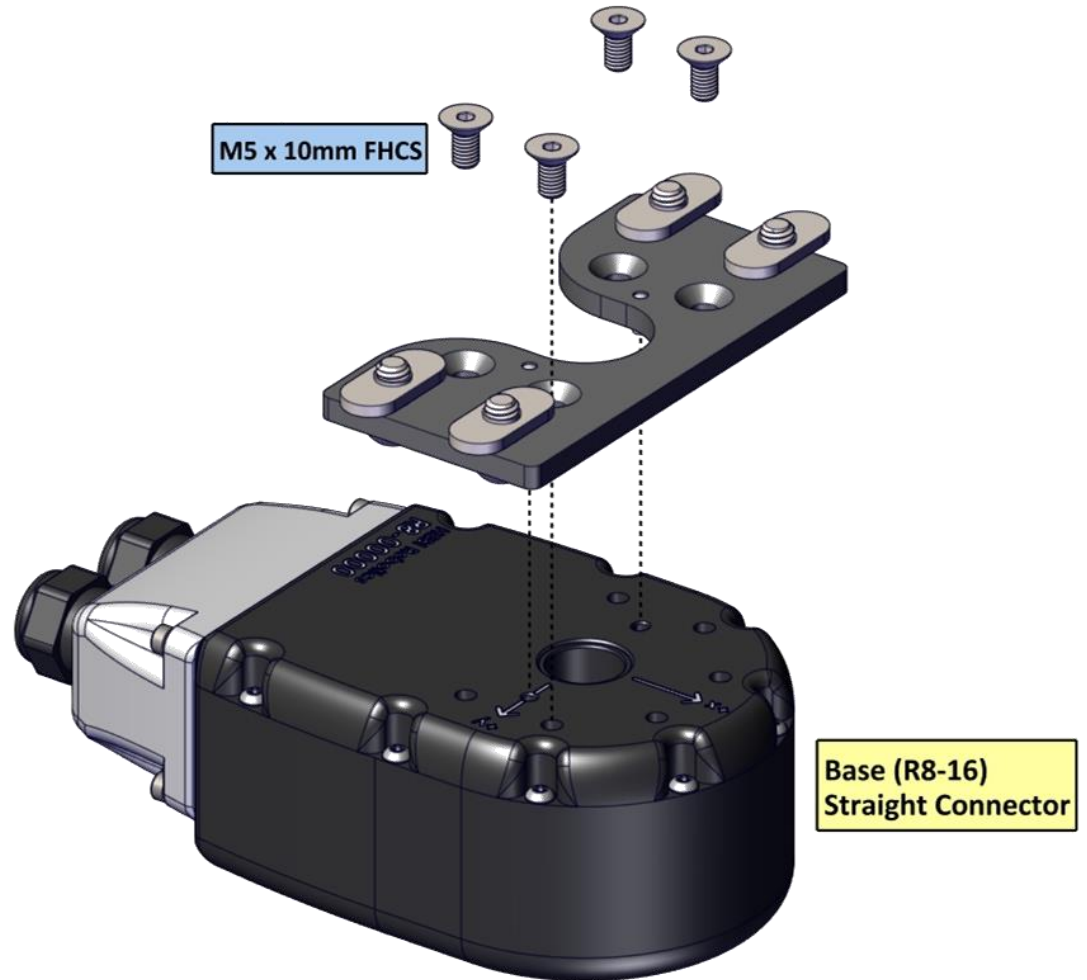
R8-16

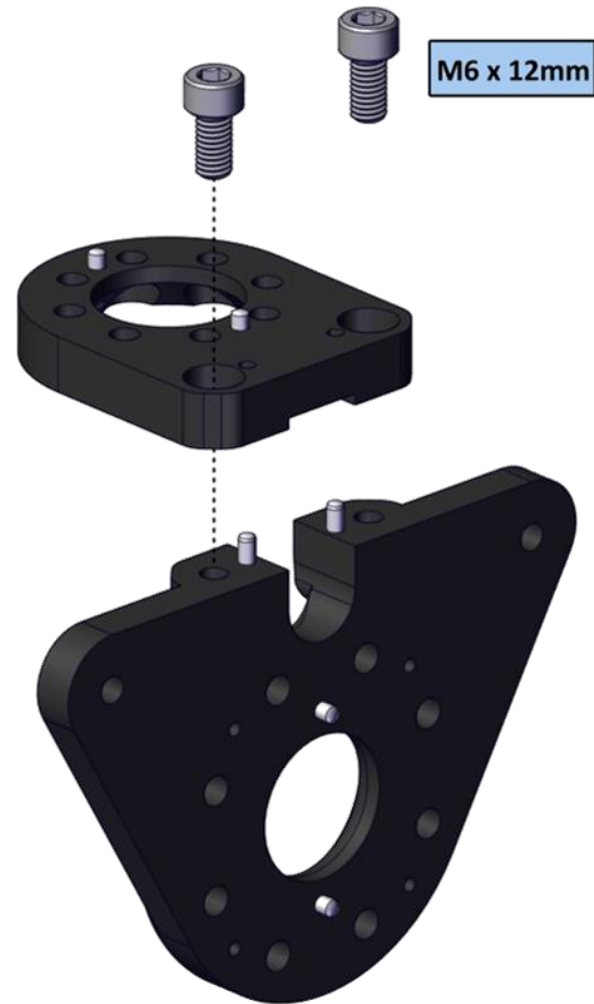
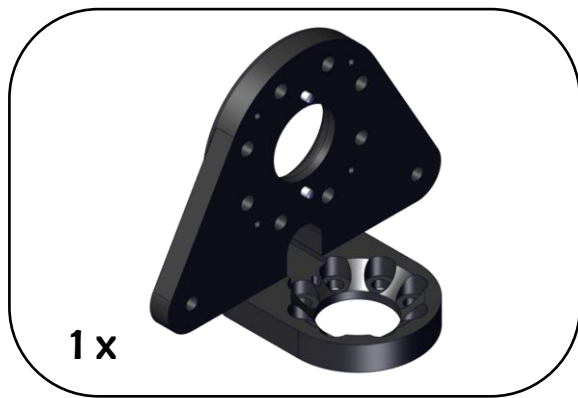
Straight Connector



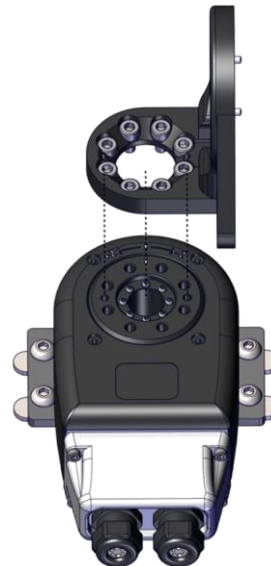
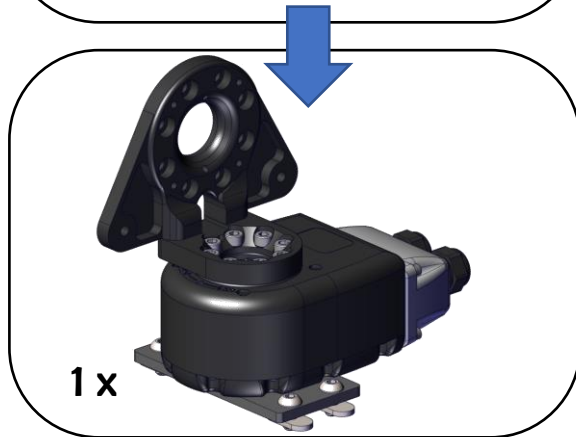
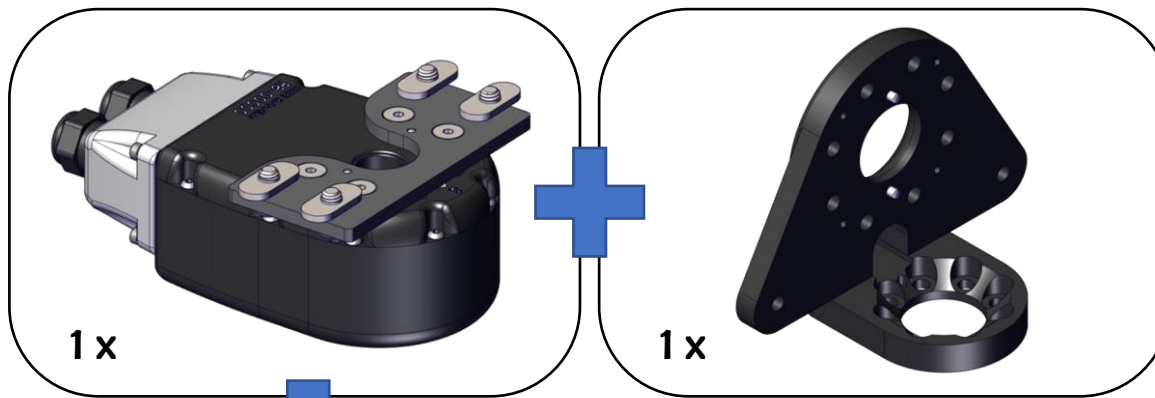
1 x

A-2228-01



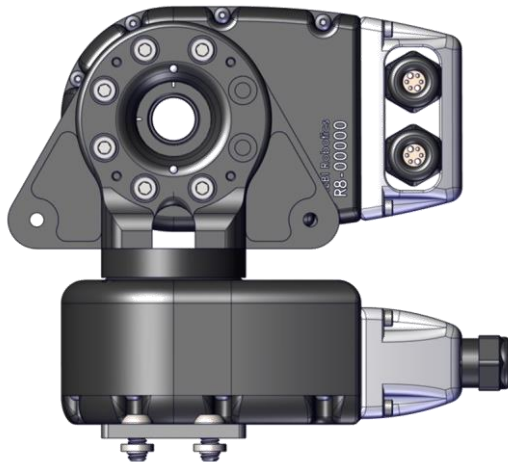
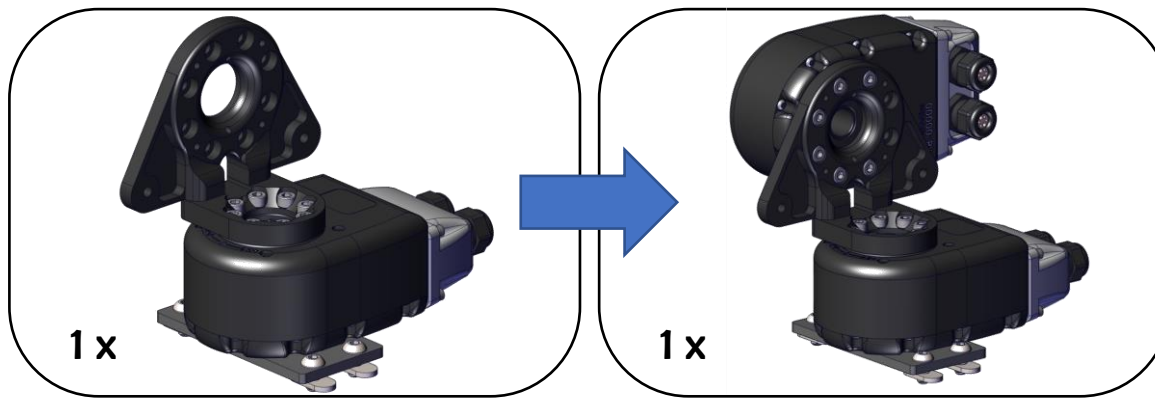


Flat face towards outside

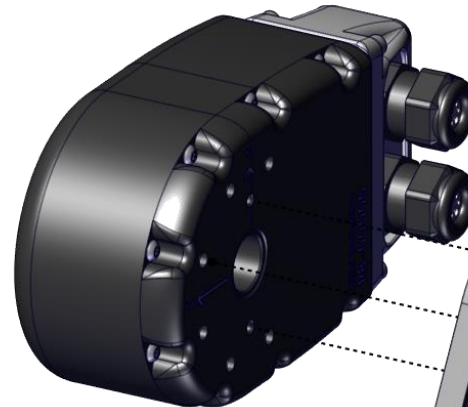


 **Align with actuator
output hub tick mark
(Flat face parallel with tick mark)**

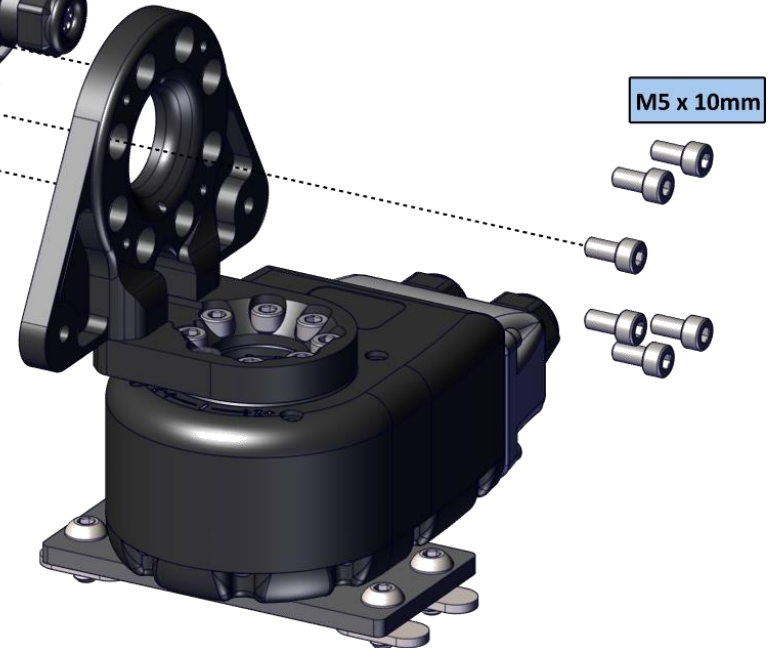


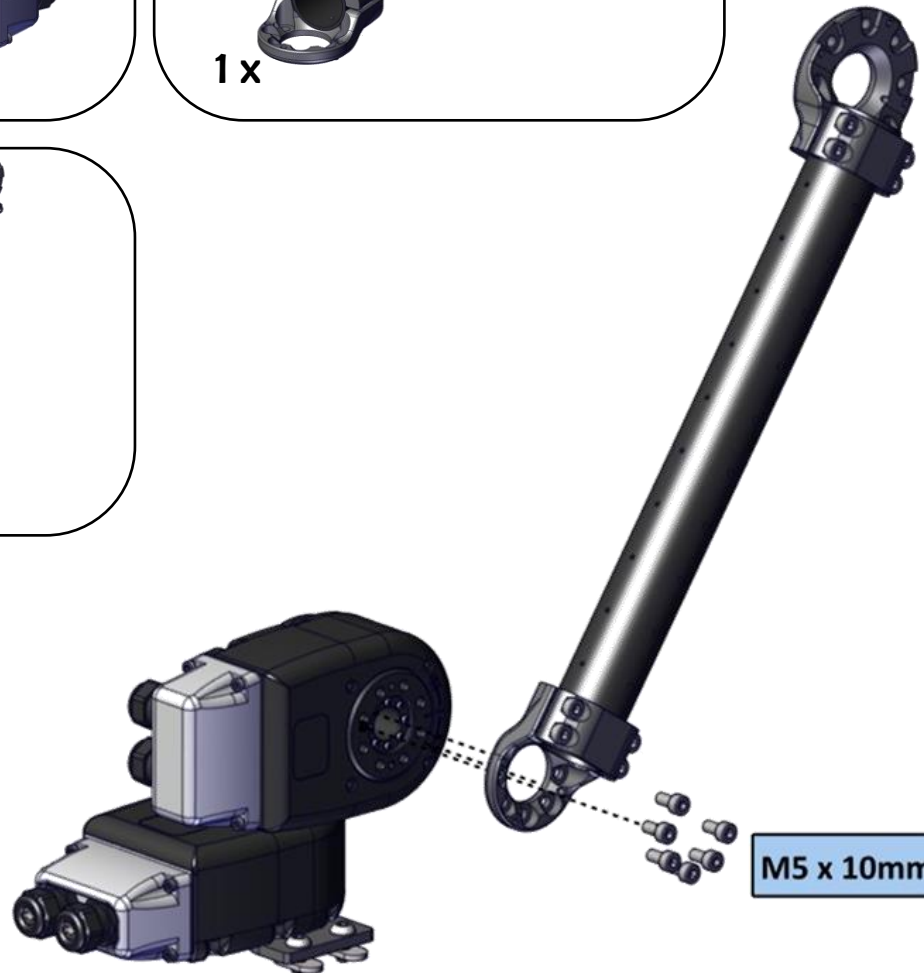
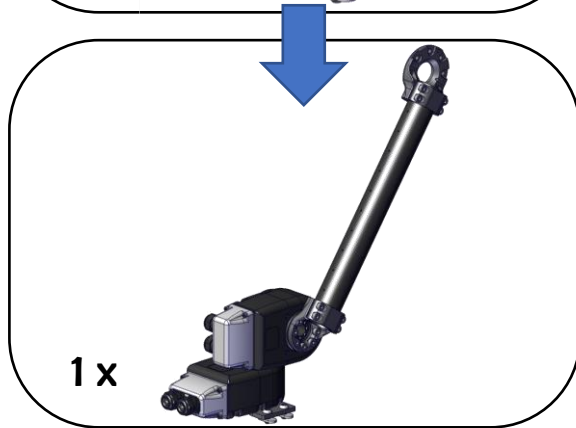
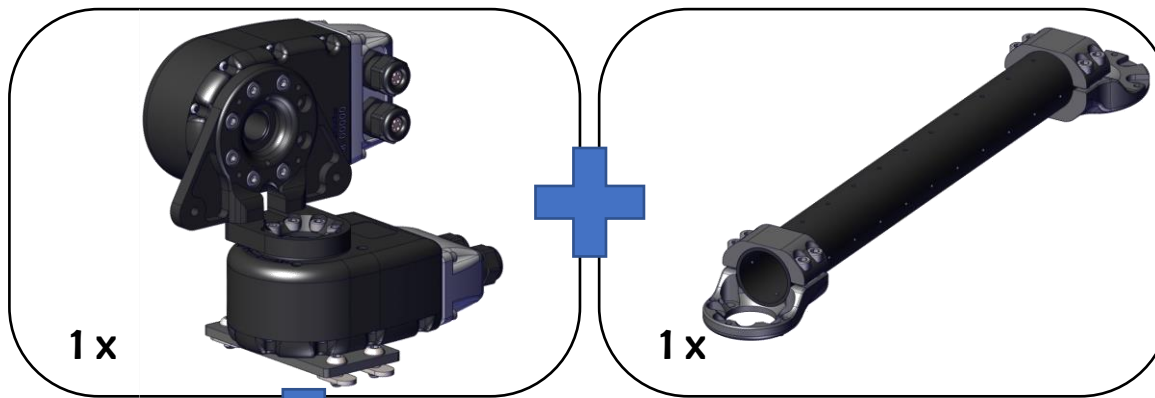


Connectors of both modules
point the same way

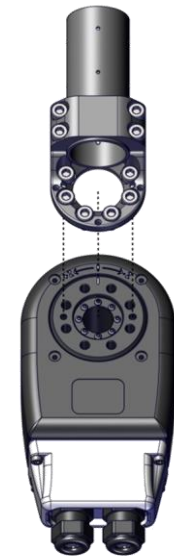


Shoulder (R8-16)
Right Angle Connector





**Align with actuator
output hub tick mark**
(Tube aligns with tick mark)



1 x



1 x

R8-16

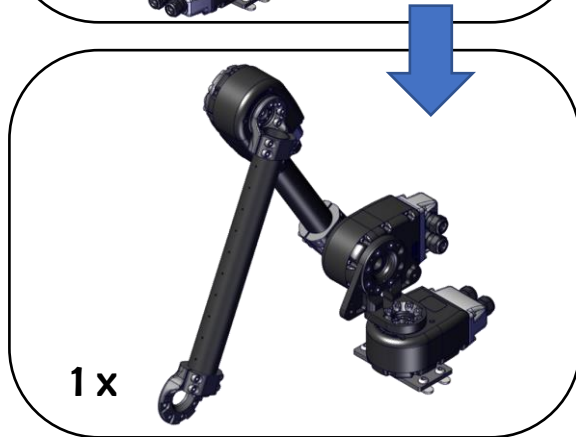
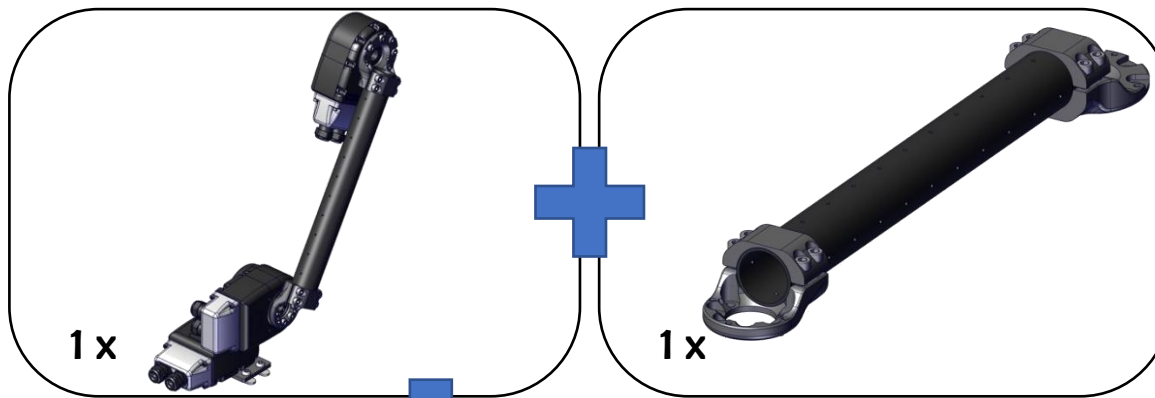
Straight Connector



Elbow (R8-16)
Straight Connector

M5 x 10mm





Align with actuator
output hub tick mark
(Tube aligns with tick mark)



1 x



1 x

R8-3

Straight Connector



Wrist1 (R8-3)
Straight Connector



M5 x 10mm

Wiring Notes

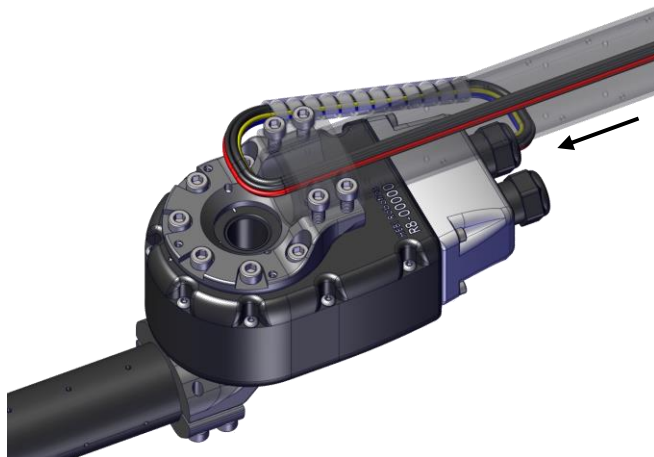
- Keeping wires organized will help prevent tangling and add a nice aesthetic.
 - Spiral sleeving is a good accessory for organizing loose wires
- Visit the following link to see detailed instruction on connecting wires to R-Series Modules.

<http://docs.hebi.us/#r-series-quickstart>

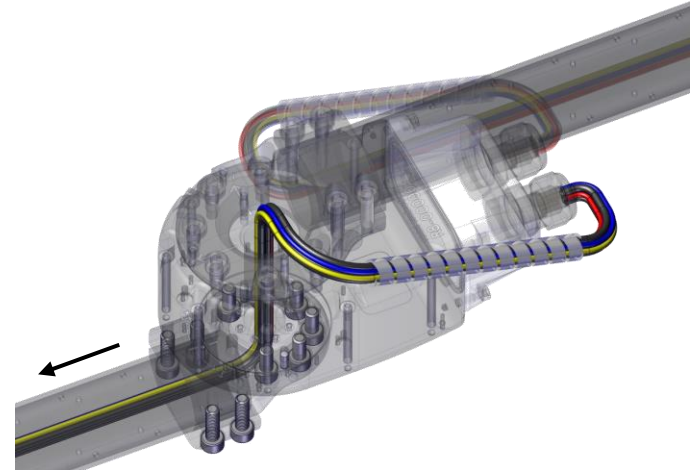
For more information visit: ***docs.hebi.us***



[Spiral sleeving]

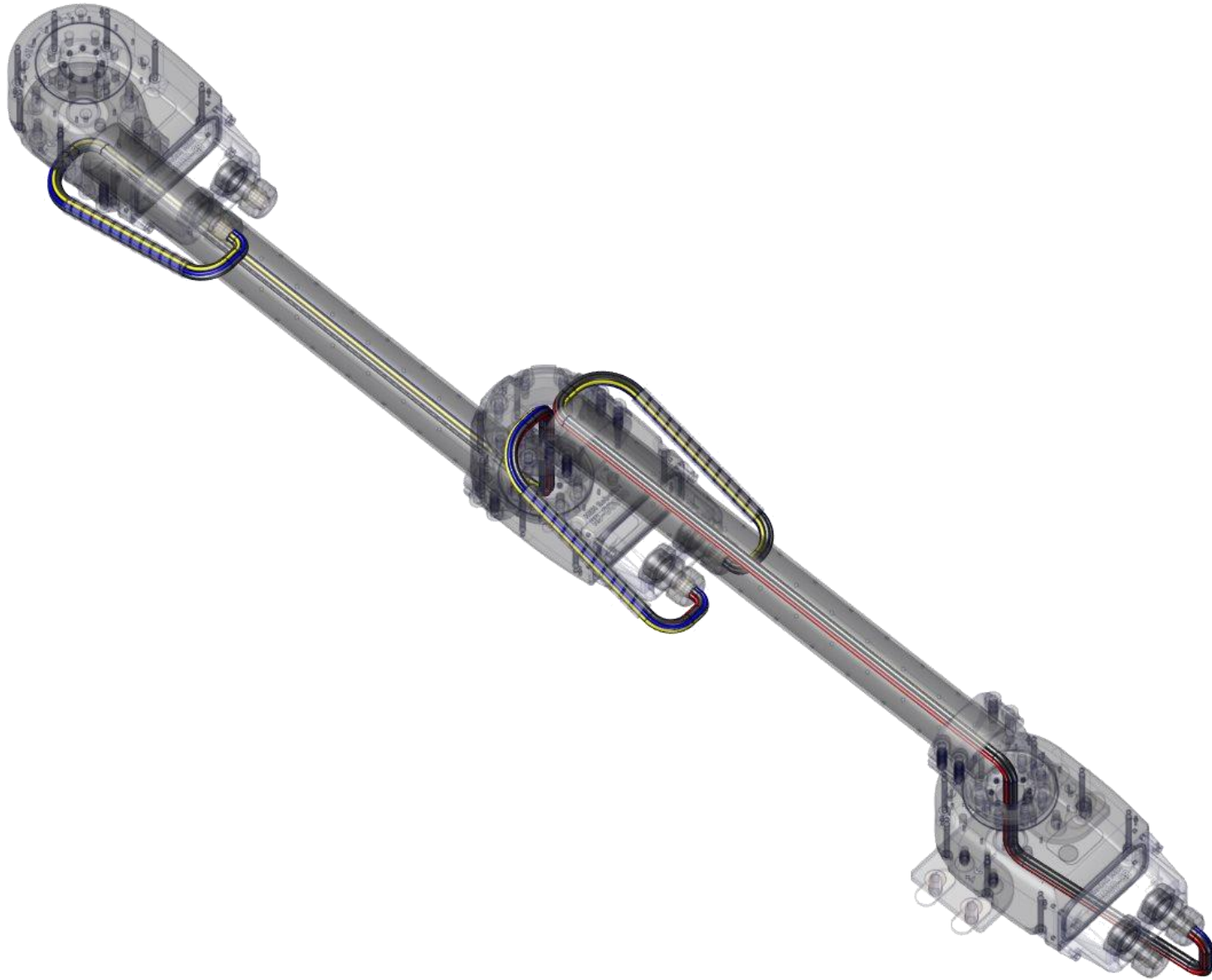


Wires that come from the previous joint should be inserted directly to actuator ports.

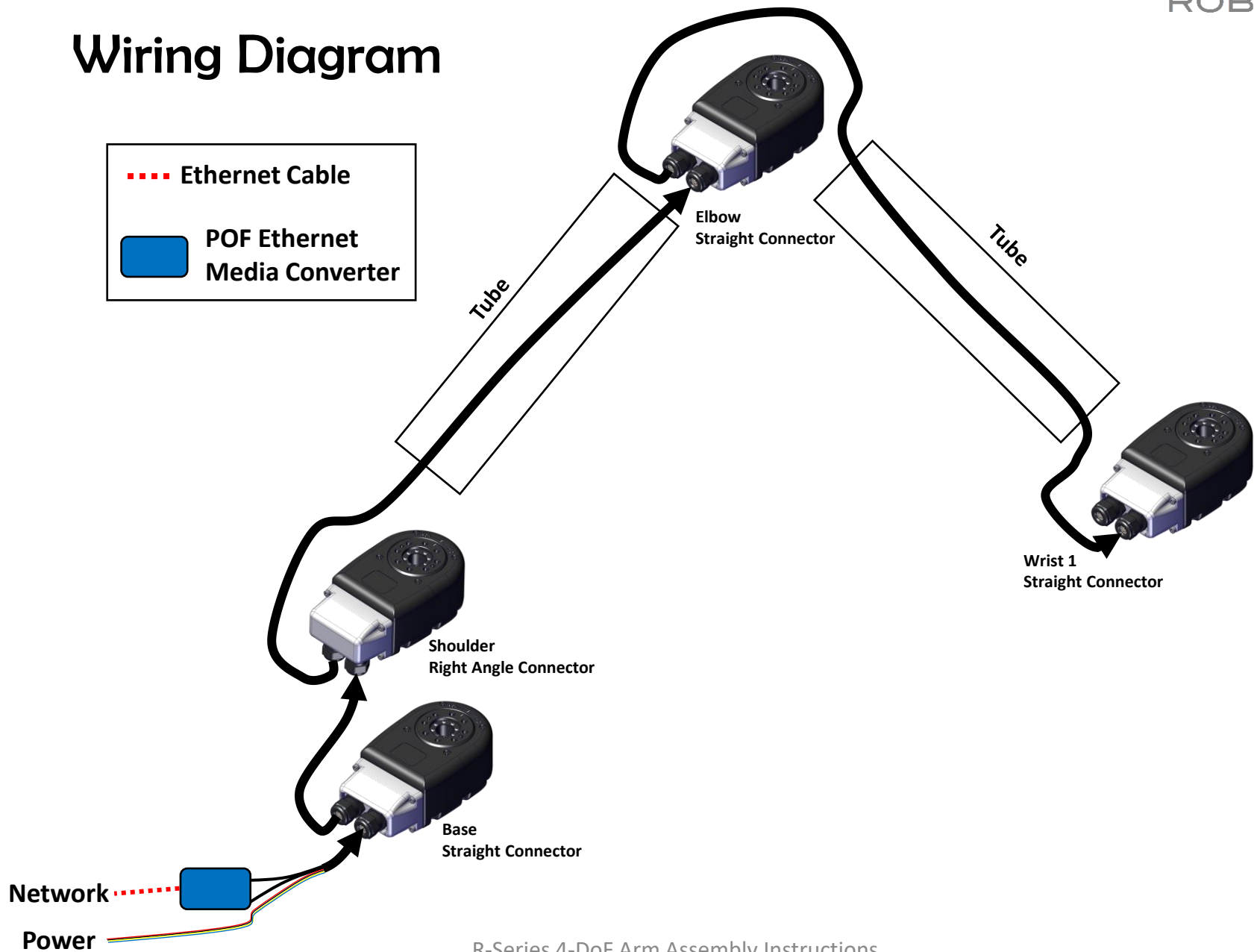


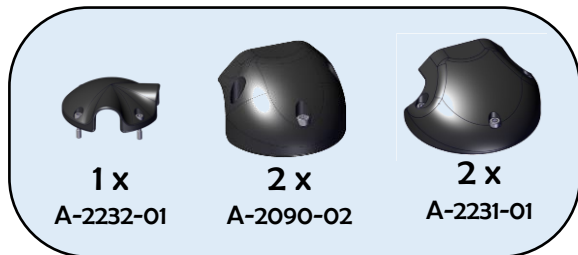
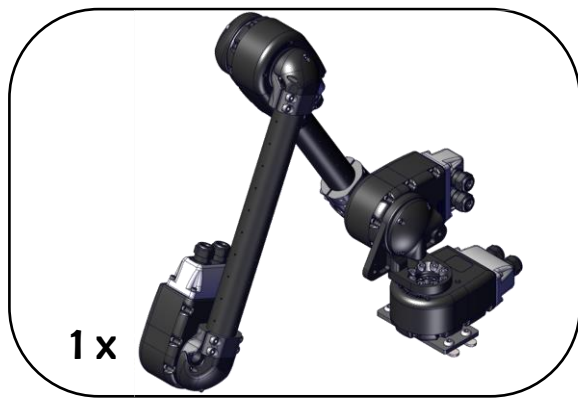
Wires that connect to the next joint should be threaded through the actuator's bore hole.

Wiring Example



Wiring Diagram





**Install cables before
adding caps**

Additional Accessories

- Power Supply, 36V 220W (A-2098-36)
 - Comes with correct Molex Minifit Jr 2 connector
- HEBI I/O Board (A-2116-01)
 - Integrate with 3rd party end effectors or tools using HEBI APIs
- HEBI Gripper
 - Cable driven gripper keeps weight away from end of arm
 - *Modules sold separately*



