



EC060TM Series

***WITH MULTI-AXIS
GANTRY BRACKET KITS***

EXPERTLY DESIGNED, DELIVERED TO PERFORM

Powered by over 70 years of relentless problem-solving and steadfast reliability, Bishop-Wisecarver delivers innovative motion solutions around the world that thrive in harsh and extreme conditions. Our linear and rotary motion solutions, custom complex assemblies, and embedded intelligence systems lead the manufacturing industry, and they are backed by The Signature Experience promise of expert guidance, confidence and customer satisfaction.

PERFECT FOR HARSH AND EXTREME ENVIRONMENTS

When you purchase from Bishop-Wisecarver, you aren't just getting a product that works; you're getting products, systems, and industry-leading expertise you can trust, especially in harsh conditions and critical environments—always exceeding our customers' reliability requirements.

Our Motion Products and Solutions Are Also Perfect For:



**HARSH
ENVIRONMENTS**



LONG LENGTH



LOW NOISE



**HIGH/LOW
TEMPERATURE**



**LOW TOTAL COST
OF OWNERSHIP**



**SMOOTH, LOW
FRICTION MOTION**



**MOIST
ENVIRONMENTS**



FOOD GRADE



CLEAN ROOM



VACUUM

PRODUCT OVERVIEW

Signature Motion ECO60™

The versatile ECO60 actuator is designed to be hassle-free, simple and straightforward. We've worked hard to make the ECO60 user-friendly and out-of-the-box ready. No longer will you have to struggle to assemble a multi-piece carriage and base because we consolidated it down to a single-piece design. Our integrated motor mount works with NEMA 17 and can be adapted to a NEMA 23 with a simple expansion flange. With our T-slot extruded base, you now have the freedom to mount the limit sensors wherever you want. The ECO60 has all the durability and compact robustness of its predecessor, but with more simplicity and the freedom to make your project work the way you need it to.

- Travel ranges from 6" to 36"
- Painless limit switch position adjustment sensor
- Stainless steel lead screws with 0.1", 0.2" or 0.5" lead
- Excellent stiffness and rigidity in a small footprint
- Easy repair and component replacement
- Adaptable mounting for NEMA 17 or NEMA 23 motors
- Optional home and travel limit sensors
- Simplified time-saving design

Streamlined Base Design

- Strong and compact single piece design
- Position limit sensors anywhere along the T-slots on either side of the base
- Durable and recyclable hard anodized aluminum

Serviceable Carriage Design

- Hassle-free preload adjustment to the linear base tube
- Fast and easy service with replaceable bearings and liners
- Simplified travel sensor flag to screw hardware
- Wide and strong mounting hole attachment points on carriage

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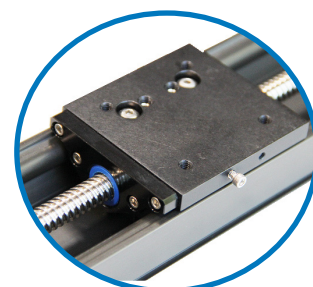
Need Help

Application + Design Assistance

925.439.8272

3D Modeling + CAD Drawing

BWC.com



PRODUCT OVERVIEW

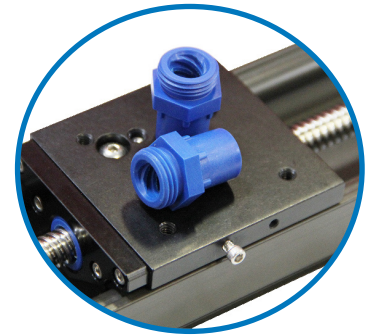
Integrated Motor Mount

- Reduced parts count and complexity with integrated motor mount design
- Easy motor attachment with support for NEMA 17 motor frames
- Increase the performance with optional NEMA 23 adapter flange
- Complete your project faster with motor ready mount



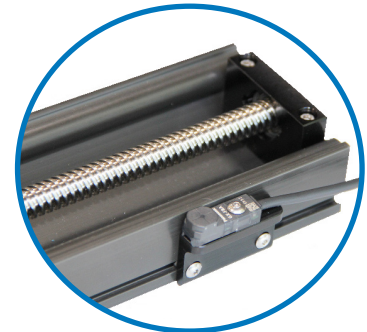
Lead Screw Drive Elements

- Fully assembled and adjusted lead screw drive elements
- Simple idler bearing on the lead screw for stability over long lengths
- Higher thrust or faster speed with your choice of lead screw pitch
- Serviceable and replaceable with low cost bearings and lead screw nuts



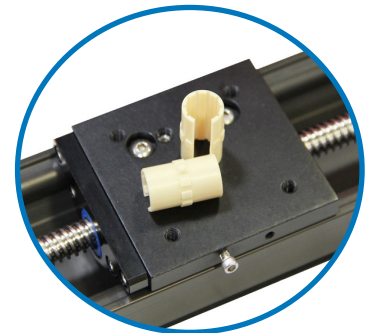
Travel Limit Sensors

- Safe and crash-free operation with optional home and travel limit sensors
- Fine-tune your travel stroke with attachment anywhere along the base t-slot
- Compact and low power non-contact sensors with LED visual indicators



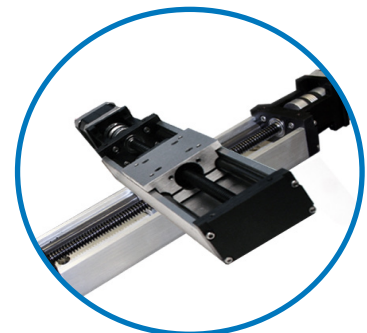
Repair Kits for Service

- Keep it running longer with easy to replace service parts
- Lower cost to repair your existing actuator than to purchase a new one
- Save time and stress with readily available replacements



Multi-Axis Gantry Attachment Kits

- Extends the working envelope of ECO60 linear actuators
- Enables multi-axis systems in X-Y and X-Z
- Kits include metal brackets or plates and all necessary hardware for assembly
- Made from aluminum with black anodize and stainless steel hardware



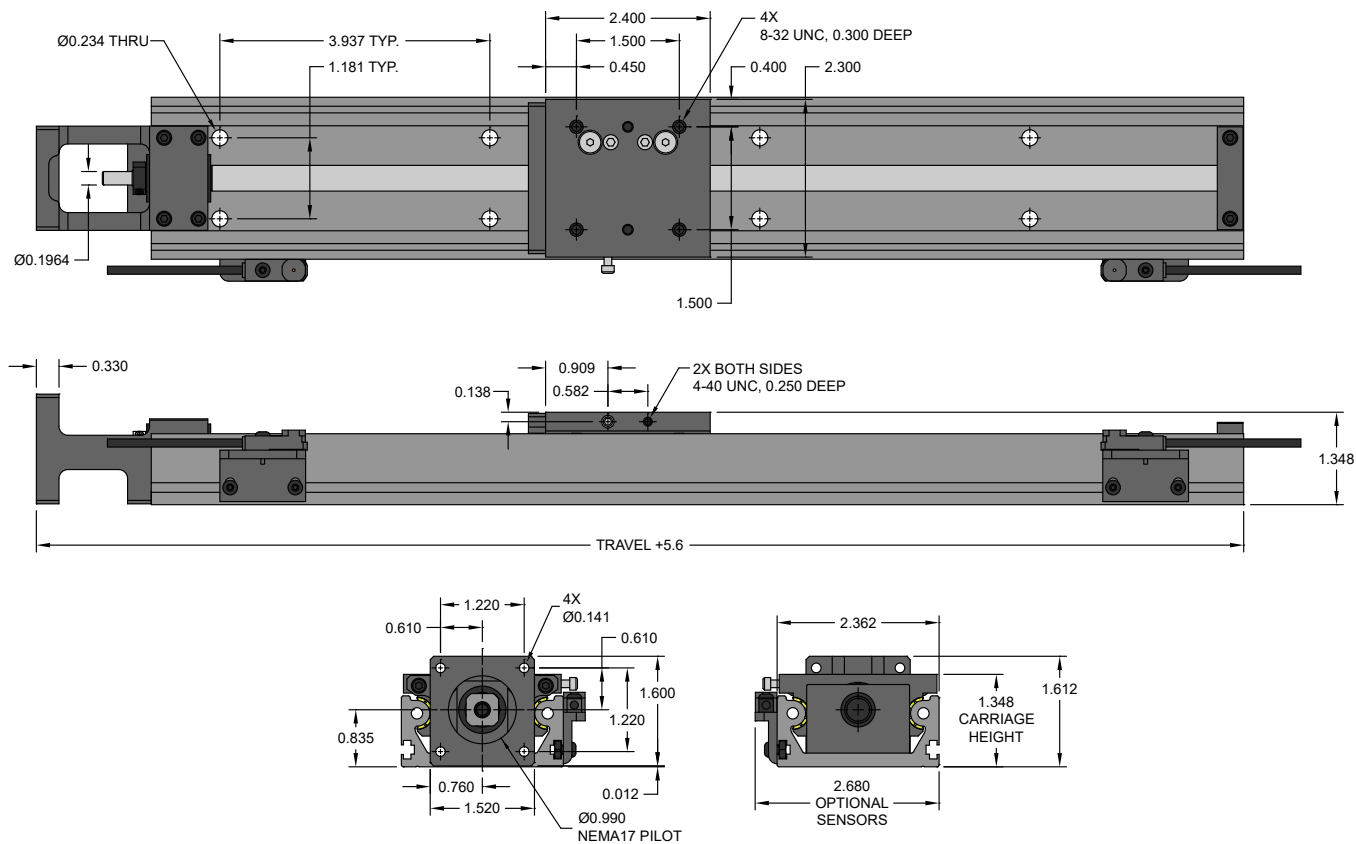
PRODUCT FEATURES

Product Numbering Scheme

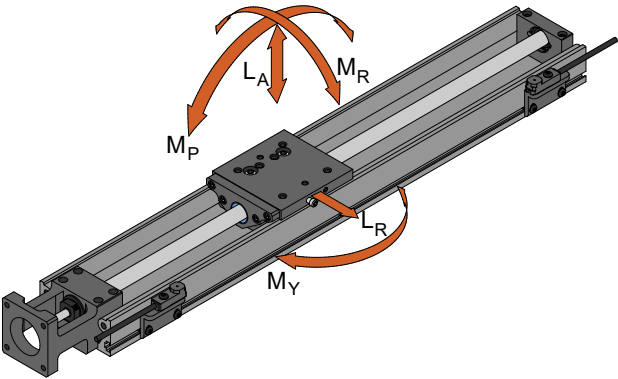
| Part Number Scheme: | | | | | | |
|---------------------|---------|---|------------|----------------|--------------------------|-------------------------------------|
| PART ID | VERSION | TRAVEL (IN INCHES) | SCREW LEAD | COVER OPTION | HOME & LIMIT SWITCHES | MOTOR ASSEMBLY |
| ECO60 | B | Txx = Travel (3" to 36" in 1" increments); Example T05 = 5" | A = None | N = None | NN = None | Blank = None |
| | | | K = 100" | C = Dust Cover | HL = Home & Limit | Mxxx = Contact us for motor choices |
| | | | P = 200" | | XY = Home & Limit Mounts | |
| | | | U = 500" | | | |

Part Number Example: ECO60BT12KNHL

Notes:
Travel Length Range: 3" min. to 36" max. in 1.0" increments
Dust cover option is currently unavailable.



| ECO60B LOAD CAPACITY | LOAD DIRECTION | | METRIC | IMPERIAL |
|----------------------|-----------------------|-----------|----------|------------|
| | Axial Load Capacity | L_A | 489 N | 110 lbf |
| | Radial Load Capacity | L_R | 489 N | 110 lbf |
| | Pitch Moment Capacity | M_P | 3.62 N-m | 32 in-lbf* |
| | Yaw Moment Capacity | M_Y | 3.62 N-m | 32 in-lbf* |
| | Roll Moment Capacity | M_R | 5.65 N-m | 50 in-lbf* |
| | Thrust Load | 0.2" Lead | 311 N | 70 lbf |
| | | 0.5" Lead | 222 N | 50 lbf |



*Offset loads should be located 5 inches or less from the center of the carriage. When loads are offset at greater distances, carriage may vibrate during motion.

ACCESSORIES

Limit Sensors

As an option, limit and home sensors are available and feature an adjustable position flag which attaches to the carriage. Sensors are 12-24VDC micro inductive proximity sensors and feature an orange status LED. Kit includes a cable with loose leads.

| SENSOR KITS | PREFIX | SENSOR KIT TYPE | CABLE LENGTH |
|-------------|------------|------------------------------|--------------|
| | ECO60BSNSR | NCK = NPN Normally Closed | 1 = 1M |
| | | NOK = NPN Normally Open | 5 = 5M |
| | | PCK = PNP Normally Closed | |
| | | POK = PNP Normally Open | |

Part Number Example:
ECO60BSNSRNCK1= Limit Sensor Kit, NPN Normally Closed, 1M Cable Length

Repair Kits

Repair kits with replacement linear bushings, lead screw nut, and bearings enable long service life without having to change the complete actuator assembly.

| REPAIR KITS | STOCK CODE # | USE WITH.. |
|-------------|--------------|---------------------------------------|
| | ECO60BREPLP | 0.2" Lead Actuators (ECO60BT_P...) |
| | ECO60BREPLU | 0.5" Lead Actuators (ECO60BT_U...) |

0.1" lead repair kits not available

MULTI-AXIS GANTRY KITS

Multi-axis linear actuator assemblies extend the working envelope of automated motion systems and provide for more complex motion.

ECO60™ Gantry Kits create reliable and easy-to-assemble connections between ECO60™ Linear Actuators.

Save design time without sacrificing design freedom.

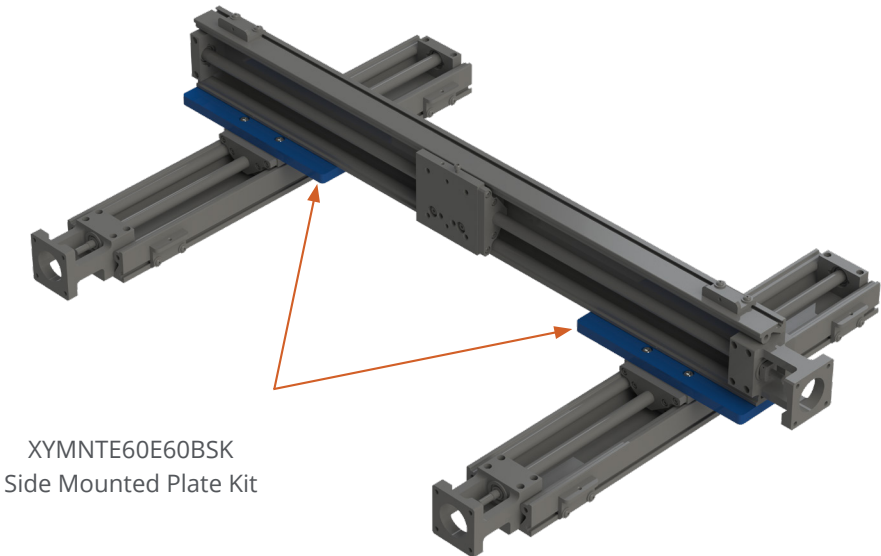
- Pre-configured connections for ECO60 actuators in any orientation
- Added flexibility when mounting along T-slot aluminum beam lengths
- All multi-axis kits are made from aluminum with black anodize and stainless-steel hardware to match the corrosion resistance of ECO60

Make ordering easy with single part number kits.

Save time and hassle during installation.

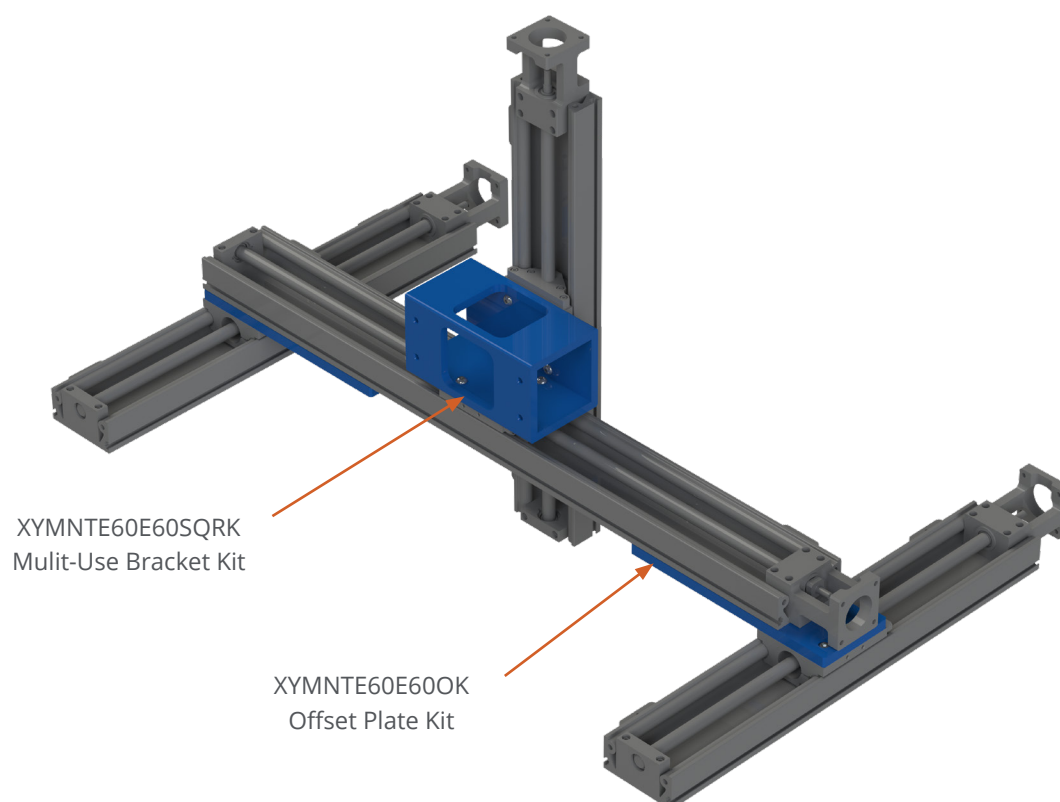
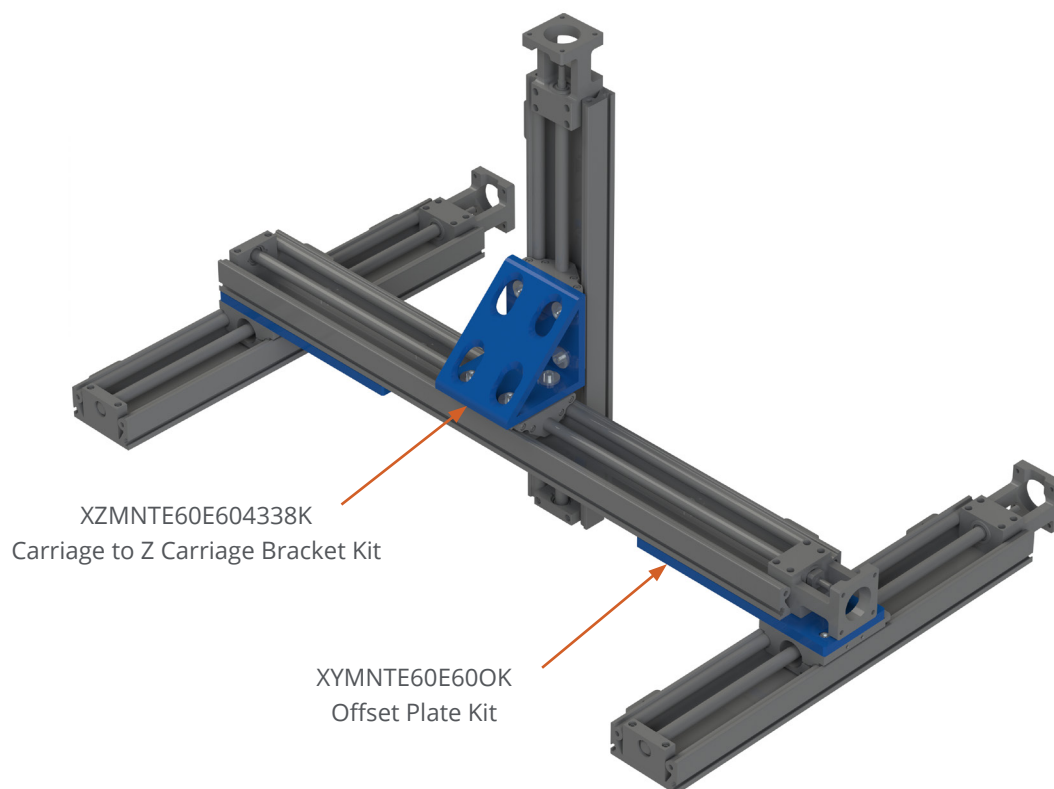
- Kit contains all the hardware needed for assembly
- Assemble with common hand tools in a matter of minutes

Configuration Examples



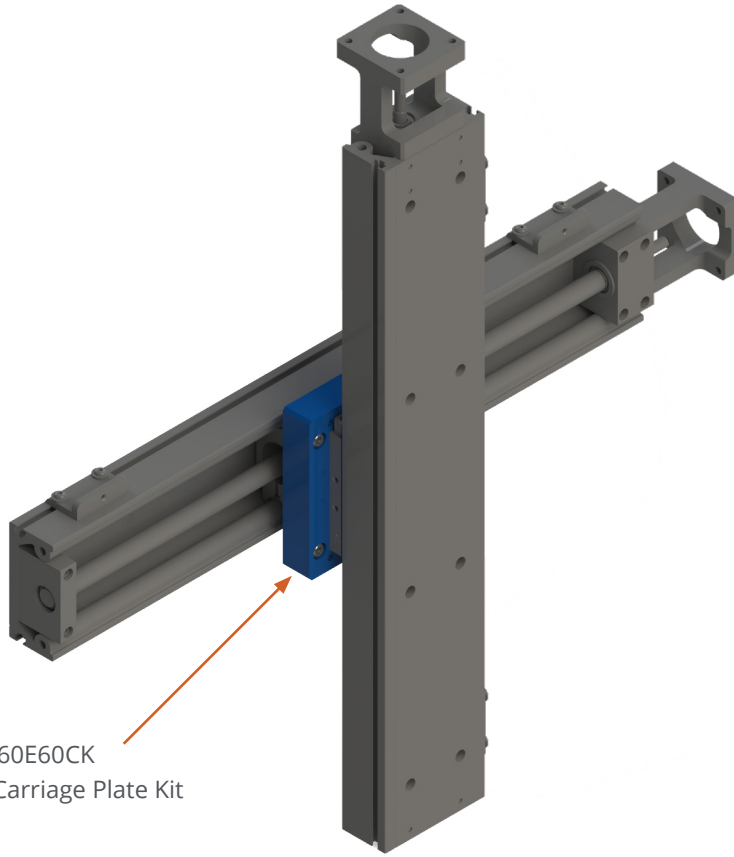
MULTI-AXIS GANTRY KITS

Configuration Examples

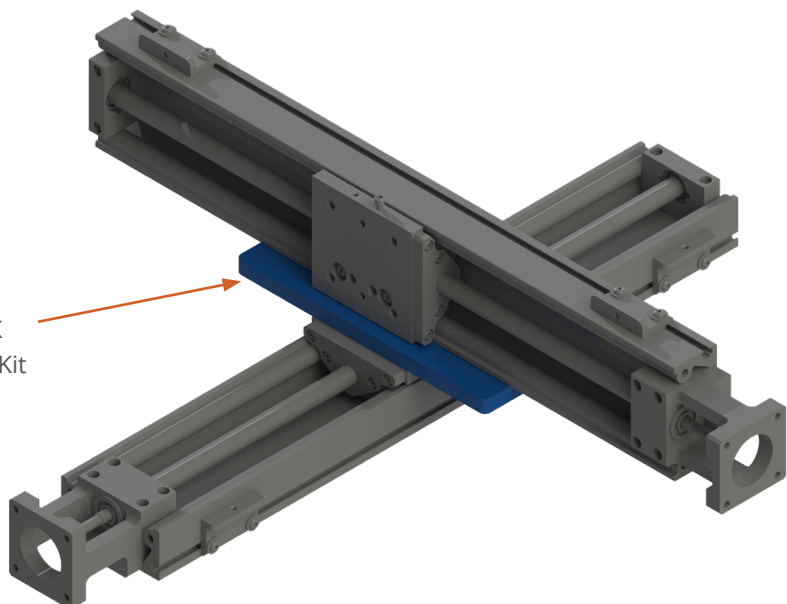


MULTI-AXIS GANTRY KITS

Configuration Examples



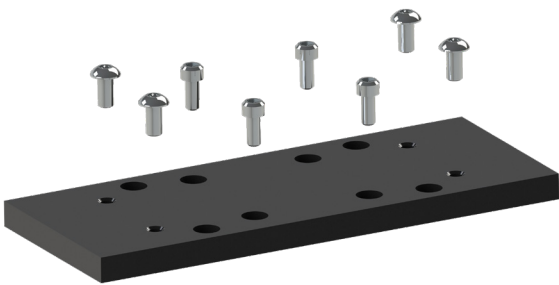
XYMNT60E60CK
Carriage Facing Carriage Plate Kit



XYMNT60E60BSK
Side Mounted Plate Kit

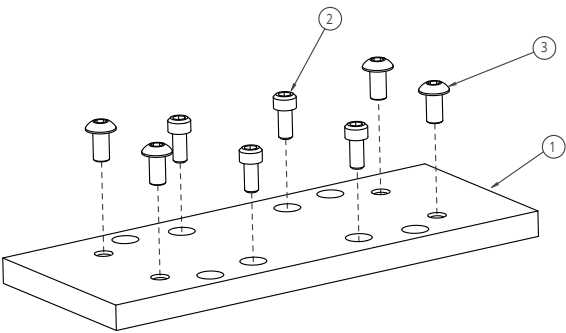
MULTI-AXIS GANTRY KITS

XYMNTÉ60E60K: Centered Plate Kit



Allows easy multi-axis configurations with 2 actuators or X-X'-Y using 3 actuators

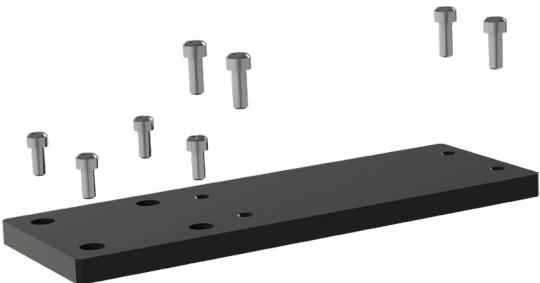
Connects Carriage to Bottom Base



Part Number Scheme:

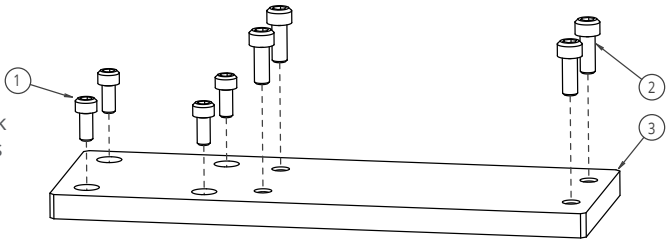
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|---------------|----------|--|
| 1 | XYMNTÉ60E60 | 1 | XY Mounting Plate Centered |
| 2 | SHCS008C038SS | 4 | Socket Head Cap Screw 8-32 UNC X 3/8" SST |
| 3 | BHCS010F038SS | 4 | Button Head Cap Screw 10-32 UNF X 3/8" SST |

XYMNTÉ60E60OK: Offset Plate Kit



Maximizes Y axis work area in X-X'-Y gantries

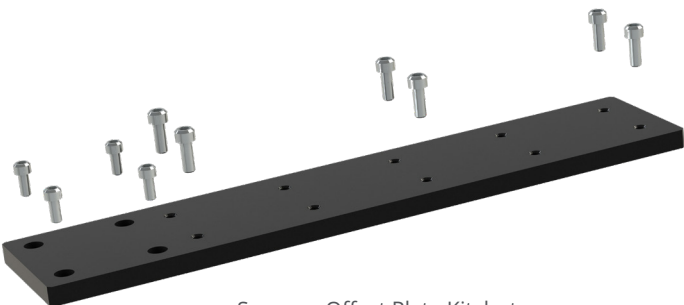
Connects Carriage to Bottom Base



Part Number Scheme:

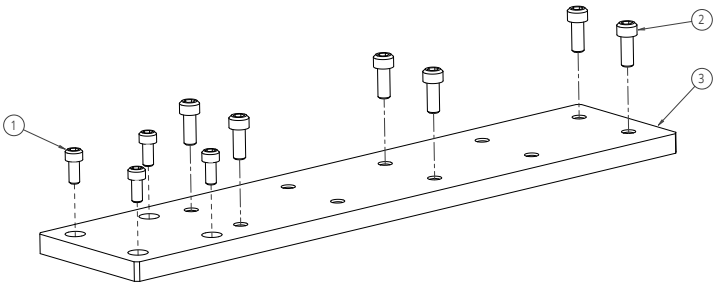
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|---------------|----------|--|
| 1 | SHCS008C038SS | 4 | Socket Head Cap Screw 8-32 UNC X 3/8" SST |
| 2 | SHCS010F050SS | 4 | Socket Head Cap Screw 10-32 UNF X 1/2" SST |
| 3 | XYMNTÉ60E60O | 1 | XY Mount ECO60 to ECO60 Offset |

XYMNTÉ60E60OLK: Long Offset Plate Kit



Same as Offset Plate Kit, but with increased stiffness and support for longer Y axes

Connects Carriage to Bottom Base

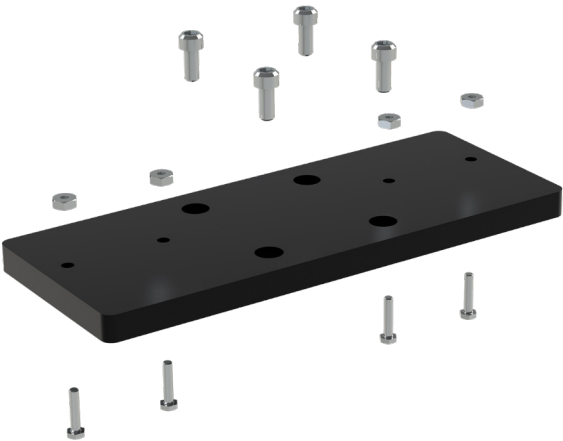


Part Number Scheme:

| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|---------------|----------|--|
| 1 | SHCS008C038SS | 4 | Socket Head Cap Screw 8-32 UNC X 3/8" SST |
| 2 | SHCS010F050SS | 6 | Socket Head Cap Screw 10-32 UNF X 1/2" SST |
| 3 | XYMNTÉ60E60OL | 1 | XY Mount ECO60 to ECO60 Long Offset |

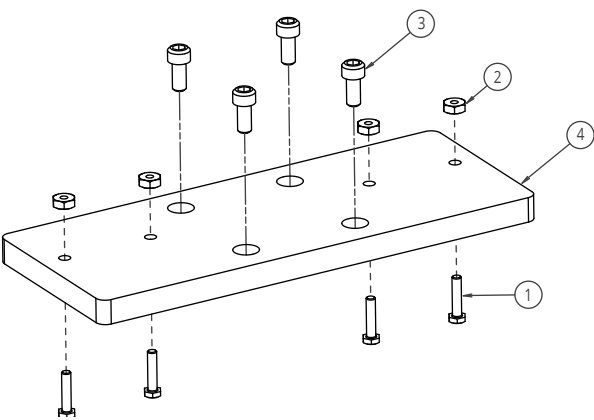
MULTI-AXIS GANTRY KITS

XYMNT60E60BSK: Side Mounted Plate Kit



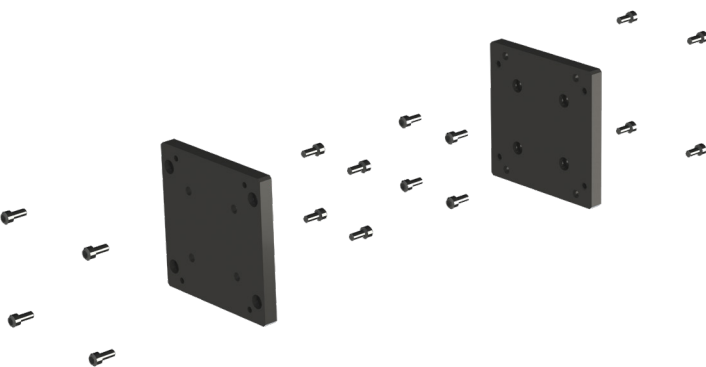
Allows mounting along any point of the T-slot for maximum design flexibility

Connects Carriage to Side Base T-Slot



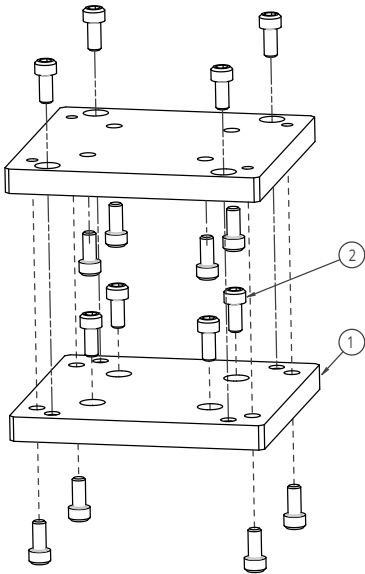
| Part Number Scheme: | | | |
|---------------------|---------------|----------|---|
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
| 1 | HXHD004C050SS | 4 | Hex Head Bolt 4-40 UNC X 1/2" Length Full Thread Class 2A SST |
| 2 | NUT04CSS | 4 | 4-40 UNC Hex Nut SST |
| 3 | SHCS008C038SS | 4 | Socket Head Cap Screw 8-32 UNC X 3/8" SST |
| 4 | XYMNT60E60BS | 1 | XY Mount ECO60 to ECO60 Base Side |

XYMNT60E60CK: Carriage Facing Carriage Plate Kit



Holds the Y-axis carriage, allowing the Y-axis base to move

Connects Carriage to Carriage (Facing)



| Part Number Scheme: | | | |
|---------------------|---------------|----------|---|
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
| 1 | XYMNT60E60C | 2 | Carriage to Carriage Mount ECO60 to ECO60 |
| 2 | SHCS008C038SS | 16 | Socket Head Cap Screw 8-32 UNC X 3/8" SST |

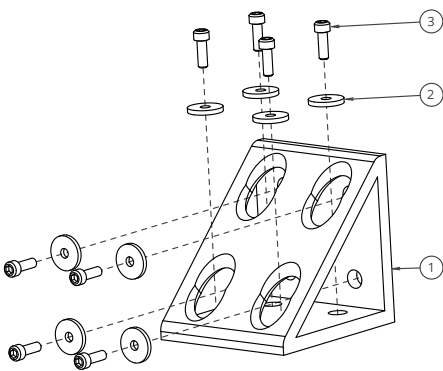
MULTI-AXIS GANTRY KITS

XZMNT60E604338K: Carriage to Z Carriage Bracket Kit



Holds the Z-axis carriage, allowing the Z-axis base to move

Connects Carriage to Carriage (90°)



Part Number Scheme:

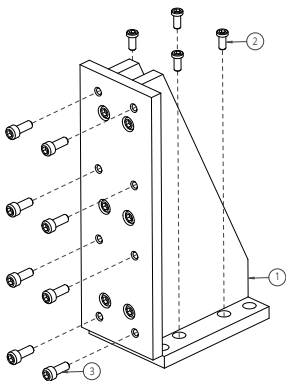
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|----------------|----------|---|
| 1 | XZMNT60E604338 | 1 | 80/20 Hole Inside Gusset Corner Bracket |
| 2 | WAFN0008SS | 8 | Fender Washer No. 8 SST 18-8 |
| 3 | SHCS008C0500SS | 8 | Socket Head Cap Screw 8-32 UNC X 1/2" |

XZMNT60E60K: Z Base Mounted Bracket Kit



Holds the Z-axis base, allowing more weight to be driven by the Z axis

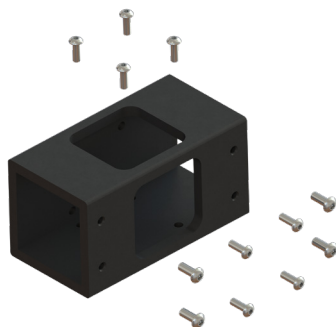
Connects Carriage to Bottom Base (90°)



Part Number Scheme:

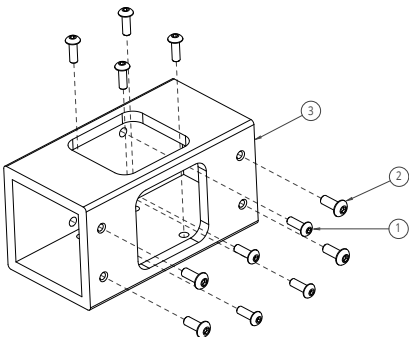
| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|-----------------|----------|--|
| 1 | XZMNT60E60ECO60 | 1 | ECO60 XZ Bracket Middle Brace |
| 2 | SHLO008C038SS | 4 | Socket Head Cap Screw 8-32 UNC X 7/16" SST |
| 3 | SHCS010F050SS | 8 | Socket Head Cap Screw 10-32 UNF X 1/2" SST |

XYMNT60E60SQRK: Multi-Use Bracket Kit



Can be used to mount a Y-axis OR Z-axis; 3 of these kits can create a full X-Y-Z gantry

Connects Carriage to Carriage (90°) OR Bottom Base



Part Number Scheme:

| ITEM # | PART NUMBER | QUANTITY | DESCRIPTION |
|--------|------------------|----------|--|
| 1 | BHCS008C050SS | 8 | Button Head Cap Screw 8-32 UNC X 1/2" SST |
| 2 | BHCS010F050SS | 4 | Button Head Cap Screw 10-32 UNF X 1/2" SST |
| 3 | XYMNT60E60ESQR_A | 1 | ECO60 Gantry Square Bracket |

Components & Accessories

DualVee®
MadeWell®
GV3
SL2
PRT2
HDS2
HDRT
MCS
Motor Mounts
Gantry Brackets
Wrenches

Manual Linear Guide Systems

DualVee®
UtiliTrak®
MinVee®
GV3
Simple Select®
SL2
HDS2
MHD
HTS

Actuated Linear Guide Systems

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XLA™
ECO60™
SlickStick™
SteadyRail™
HDLS
HDCS
PDU2
DAPDU2
SBD
PSD
SDM
DLS

Rotary Guide Systems

PRT2
DTS2
DTS
DTS+
ALR
HDRT
1-Trak
GFX

Robot Transfer Units

DualVee® RTU
LoPro® RTU

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Extruded Profile Guides
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Custom Subassemblies
Engineering Services
Large Diameter Ring Guides and Track

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- JISQ 9100:2016
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- RoHS
- International Traffic in Arms Regulations Compliant

Women's Business Enterprise



- Certified WOSB

