

MGS-HBG-12- - - X

GEARBOX MODEL
 MPG-062____
 MRG-062____
 RATIO:_____

FOR DIRECT-DRIVE OPTION WITH MMKS
 (NO GEARBOXES) CHECK HERE: ____

MOTOR INFORMATION
 MANUFACTURER:_____
 MODEL:_____

SENSOR INFORMATION X-AXIS:
 HOME-QTY___ 244-____-____-____
 EOT-QTY___ 244-____-____-____

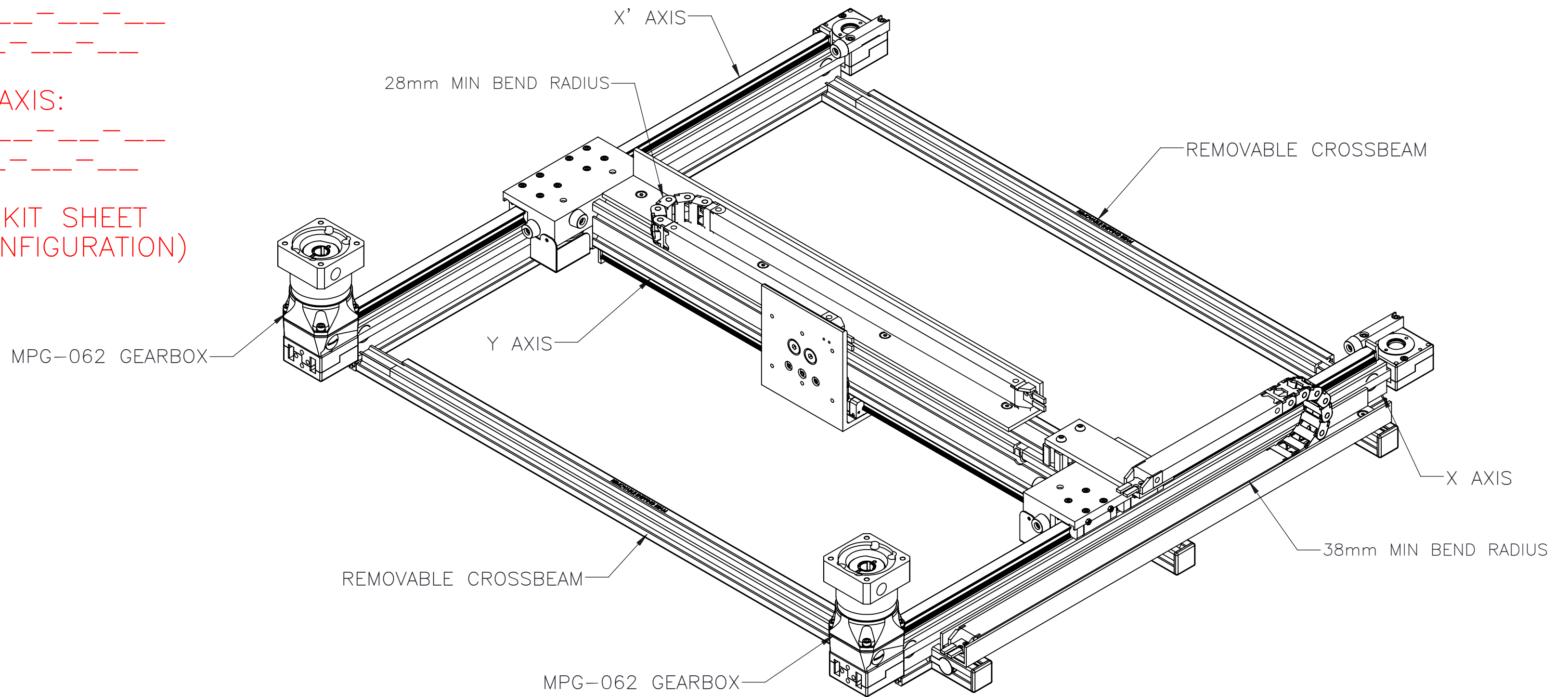
SENSOR INFORMATION Y-AXIS:
 HOME-QTY___ 244-____-____-____
 EOT-QTY___ 244-____-____-____

(SEE T-SLOT SENSOR KIT SHEET
 FOR PART NUMBER CONFIGURATION)

ENTER Y-AXIS TRAVEL
 TRAVEL IN INCREMENTS OF 250mm
 TRAVEL LIMITS: 250mm-1000mm

ENTER X-AXIS TRAVEL
 TRAVEL IN INCREMENTS OF 250mm
 TRAVEL LIMITS: 250mm-2000mm

*IF TRAVEL IS
 OUTSIDE LIMITS
 LISTED ABOVE,
 CONTACT MACRON*



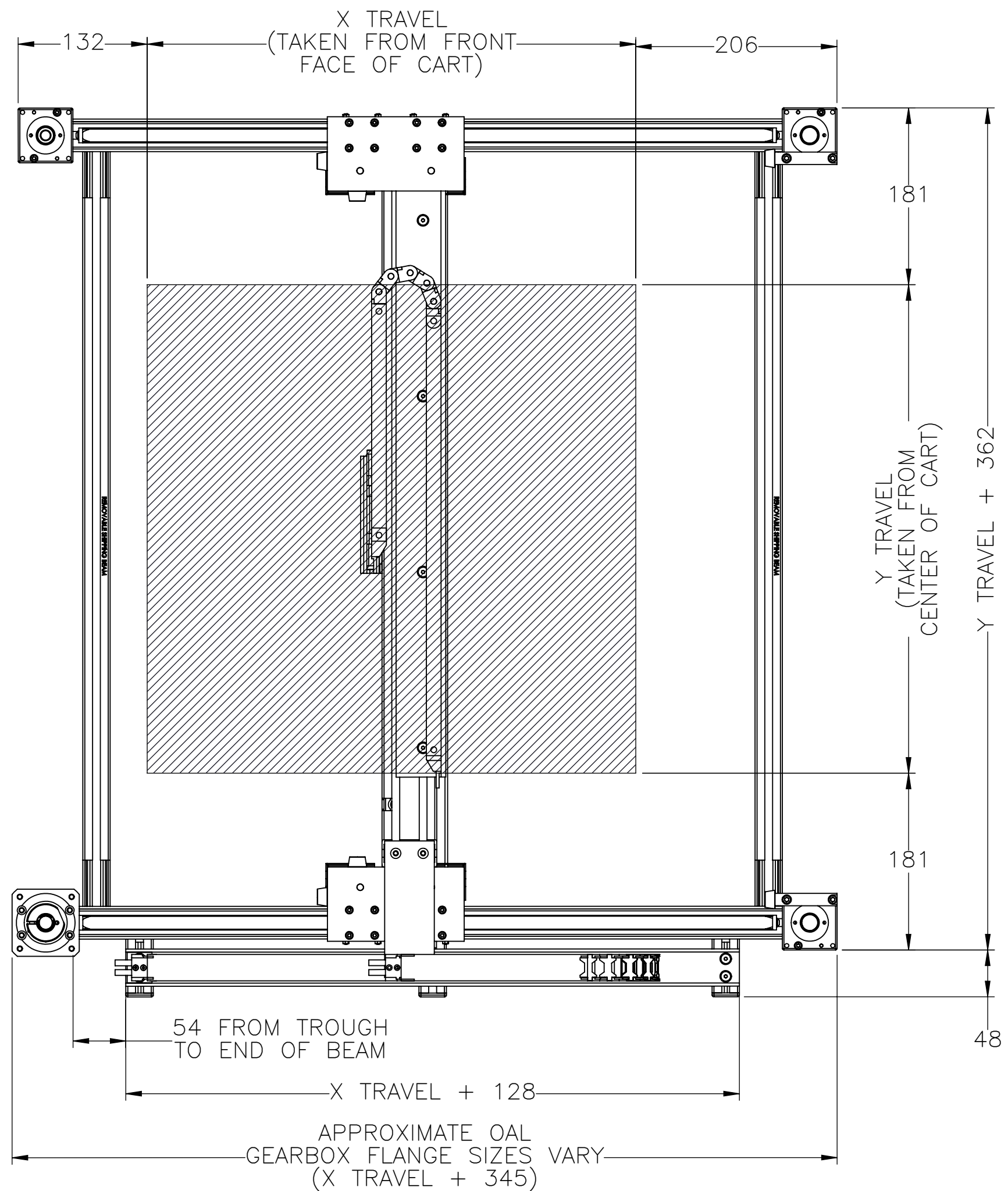
APPROVED: _____
SIGN & PRINT

DATE: _____

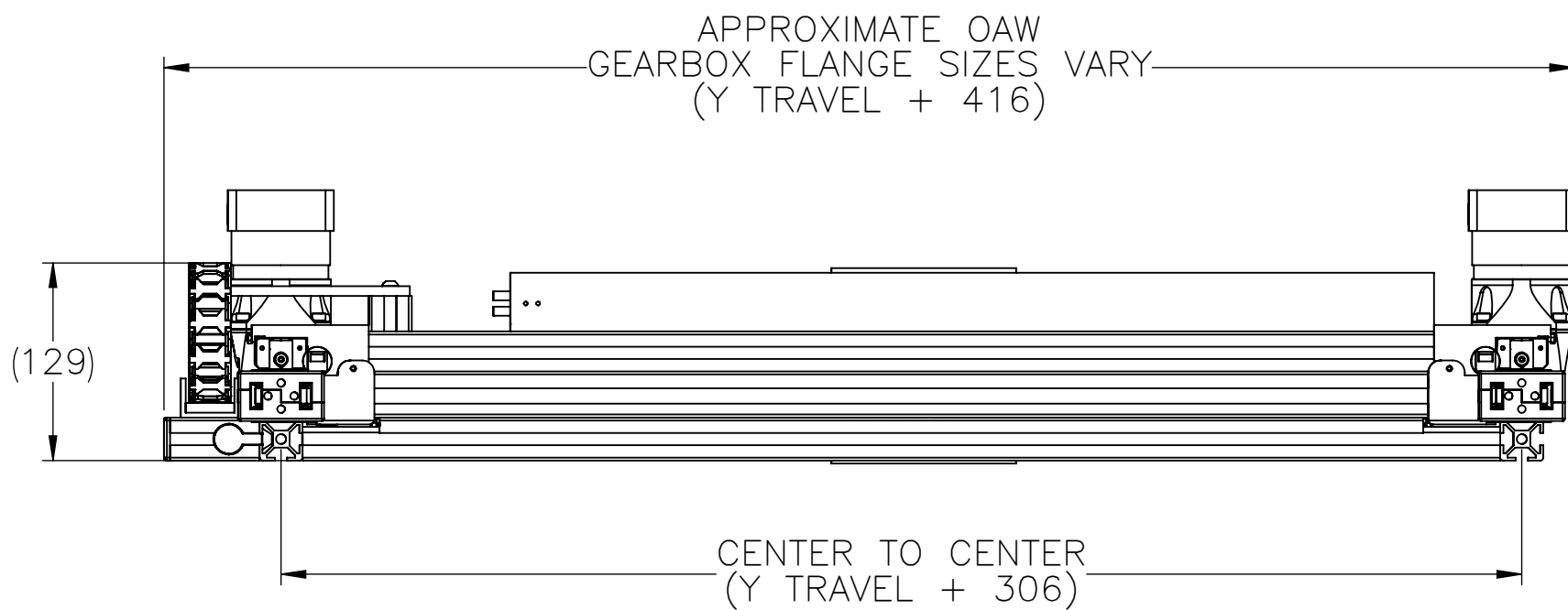
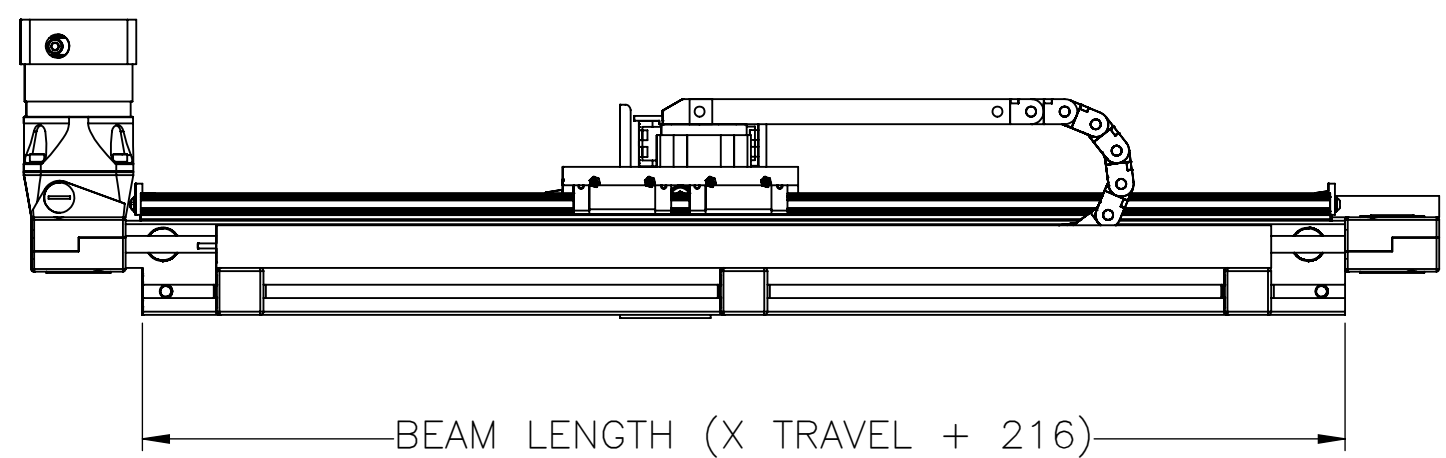
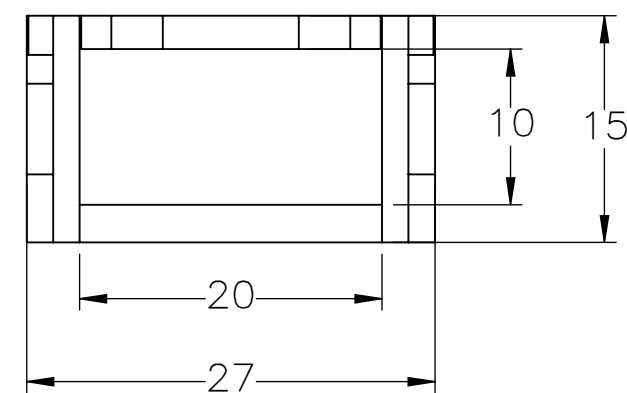
PO:REFERENCE#: _____


| | | | |
|---|--|--|---|
| MACRON DYNAMICS INC | <small>DRAWN BY:</small> TB <small>DATE:</small> 1/2/2019 | <small>MATERIAL:</small> | <small>TITLE:</small> MACRON H-BOT GANTRY |
| | <small>CHECKED BY:</small> TH <small>DATE:</small> DD/MM/YYYY | | |
| | <small>LAST SAVED BY:</small> TH <small>DATE:</small> 4/16/2021 | <small>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER. TOLERANCES UNLESS NOTED OTHERWISE:</small> .X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30' | |
| | <small>SURFACE FINISH</small> 63 | <small>SCALE</small> 1:1 <small>SHEET SIZE</small> C | |
| <small>THIS DRAWING IS THE PROPERTY OF MACRON DYNAMICS. ANY REPRODUCTIONS SHALL BE FOR QUOTATION, MANUFACTURING, OR PURCHASING PURPOSES ONLY. RELEASE OF DRAWINGS TO OTHER CONCERNS DOES NOT CONSTITUTE LICENSING IN ANY WAY. INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL.</small> | <small>BREAK ALL SHARP EDGES</small> <small>DIMENSIONAL LIMITS APPLY AFTER FINISHING</small> <small>THIRD ANGLE PROJECTION</small> | <small>SHEET</small> 1 OF 6 <small>PART NUMBER</small> MGS-HBG-12-X-X-X | <small>REV</small> 02 |

GANTRY FOOTPRINT

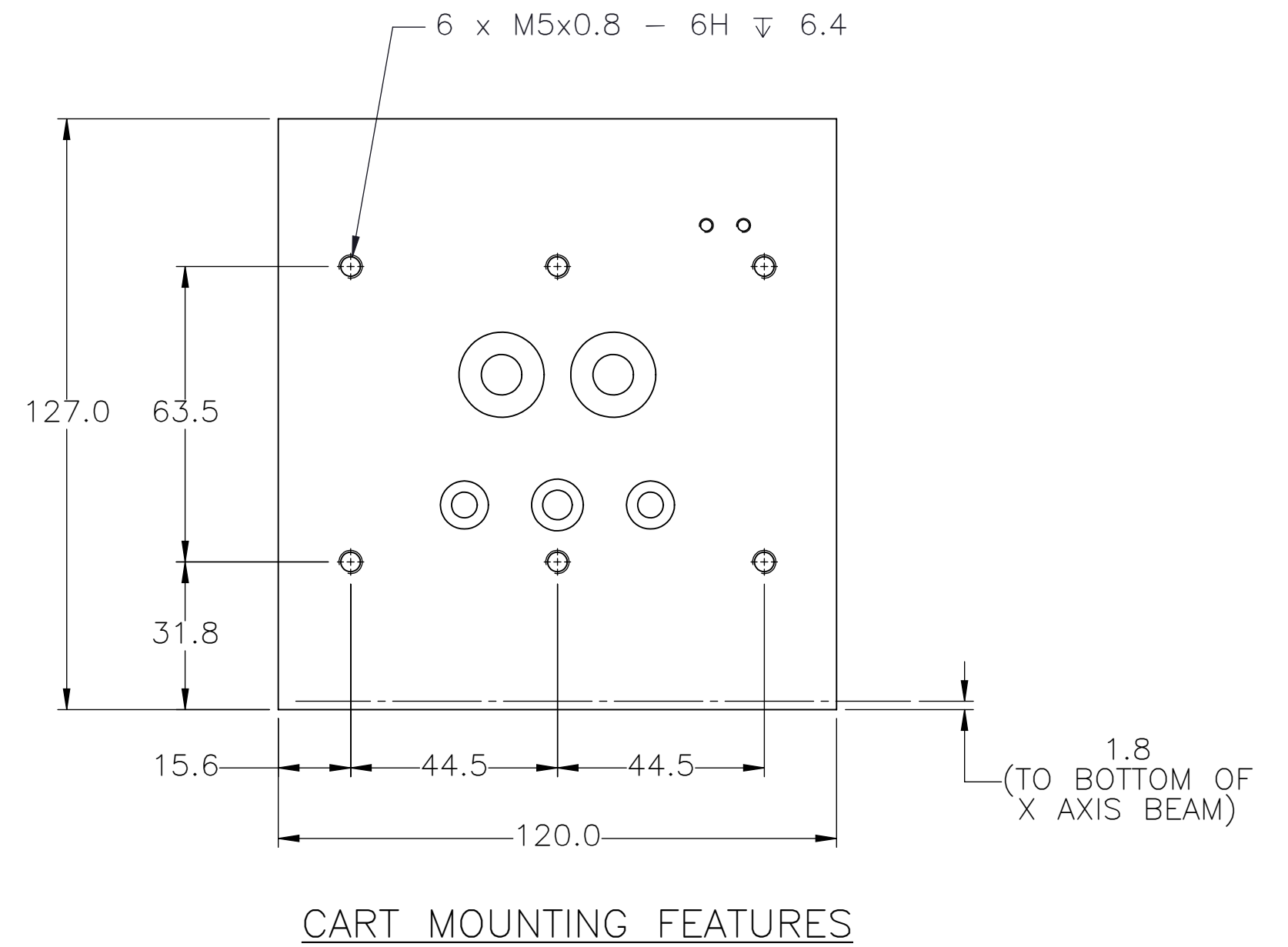
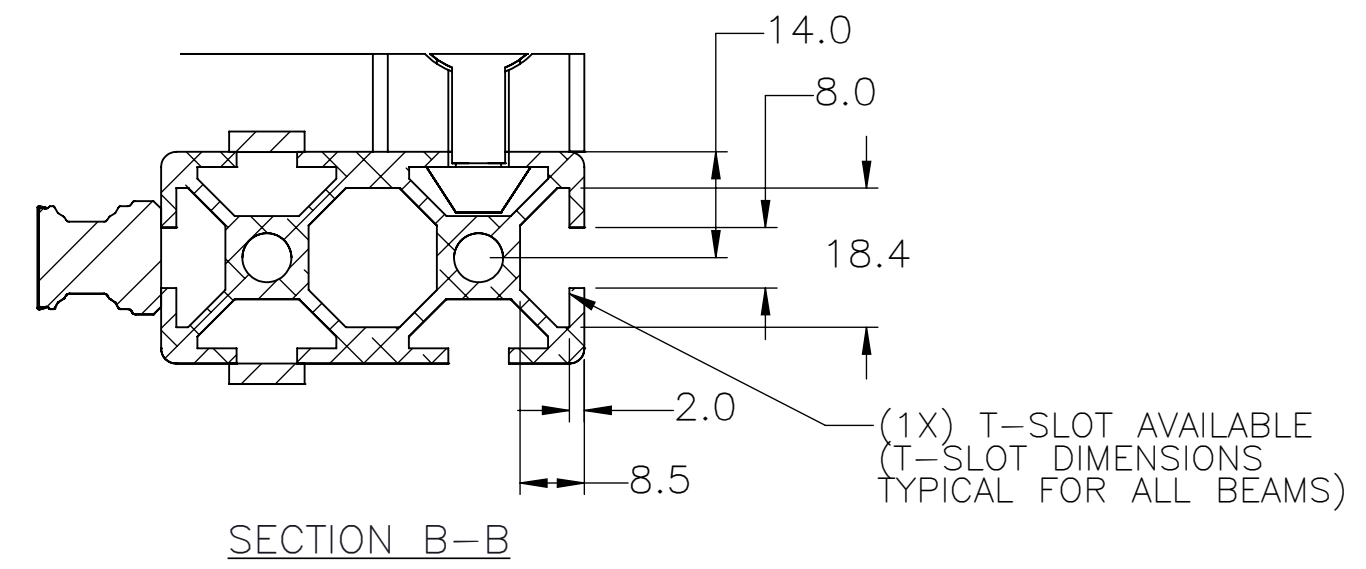
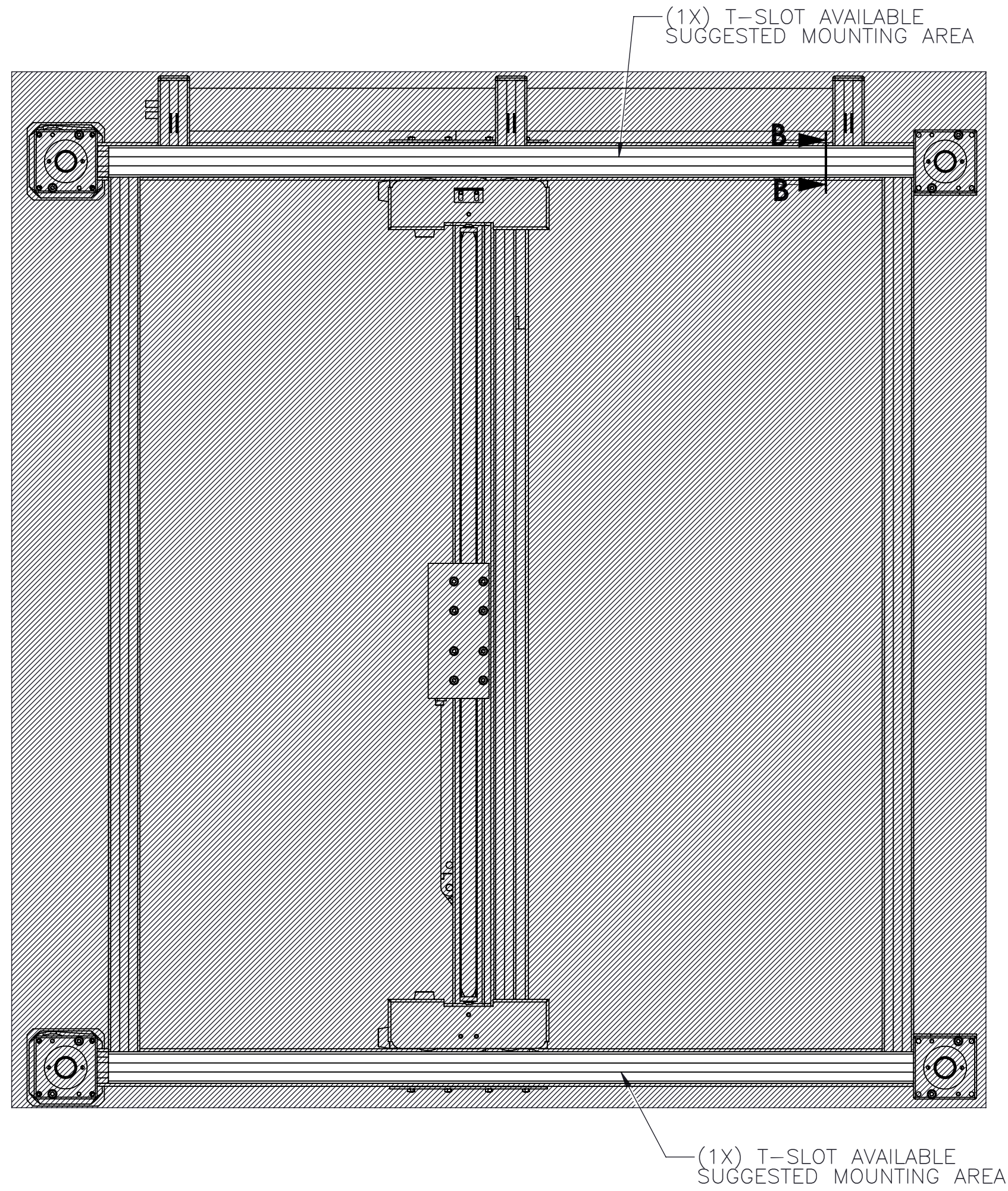



CABLE TRACK SIZE
(SAME FOR BOTH AXES)



| | | | |
|---|---|---|------------------------------|
|  MACRON DYNAMICS INC | DRAWN BY: TB DATE: 1/2/2019 | MATERIAL: | TITLE: |
| | CHECKED BY: DATE: DD/MM/YYYY | FINISH: | SCALE 1:1 SHEET SIZE C |
| | LAST SAVED BY: TH DATE: 4/16/2021 | | |
| | UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER. TOLERANCES UNLESS NOTED OTHERWISE: | .X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30' | |
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| BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION | | | |

GANTRY MOUNTING FEATURES

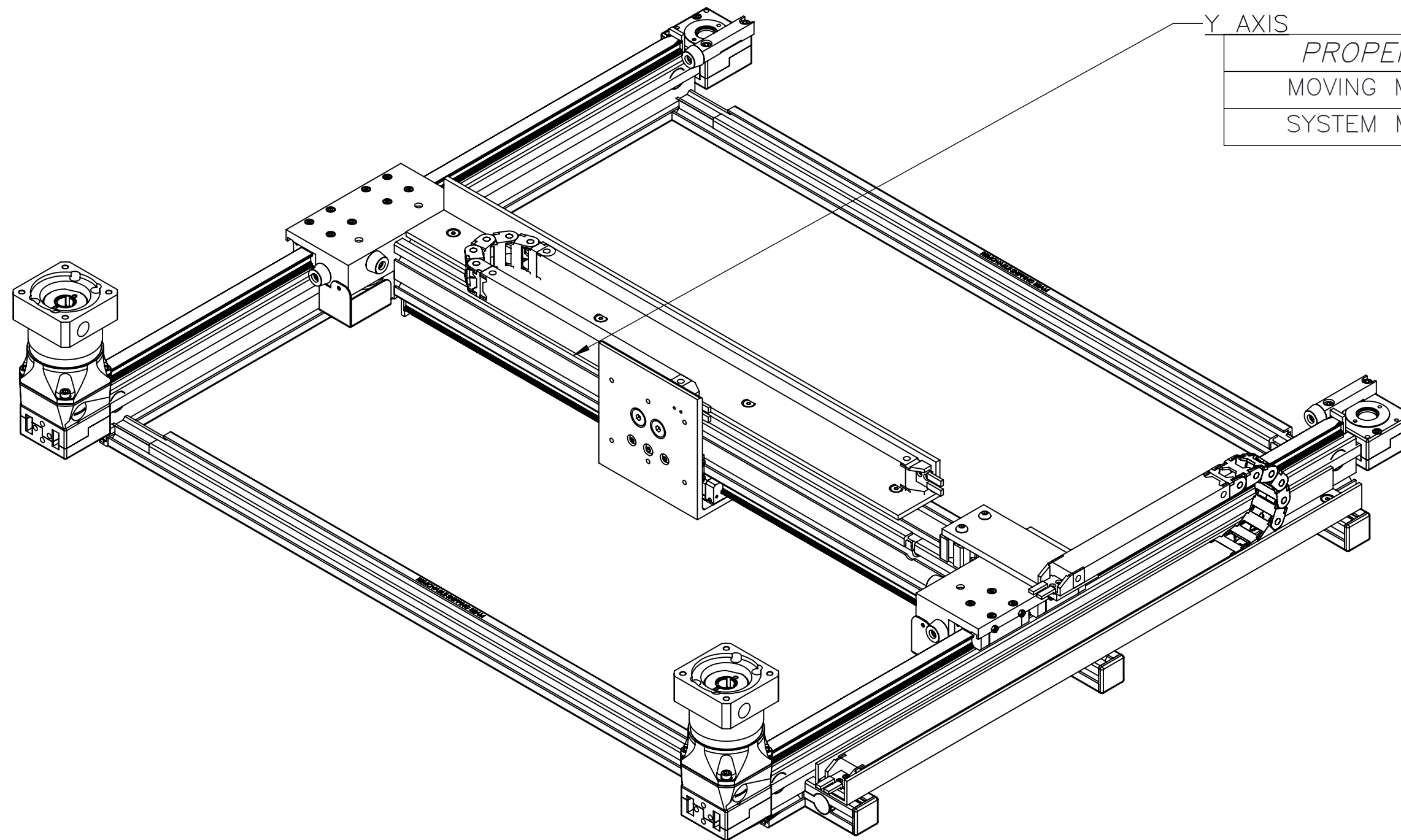


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|---|--|---|---|--|--------|
|  MACRON DYNAMICS INC | DRAWN BY: TB CHECKED BY: LAST SAVED BY: TH | DATE: 1/2/2019 DATE: DD/MM/YYYY DATE: 4/16/2021 | MATERIAL: | TITLE: MACRON H-BOT GANTRY | |
| | UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER. TOLERANCES UNLESS NOTED OTHERWISE: | | FINISH: | SCALE 1:1 SHEET SIZE C | |
| | SURFACE FINISH $\sqrt{63}$ | | BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION | SHEET 3 OF 6 PART NUMBER MGS-HBG-12-X-X-X | REV 02 |
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MOTOR SIZING WORKSHEET

(INCREMENTAL ADDERS REFER TO MASS PER TRAVEL LENGTH)

BASE TRAVELS USED:
 X TRAVEL = 250mm
 Y TRAVEL = 250mm



| PROPERTY | BASE VALUE (T=250mm) |
|-------------|-----------------------|
| MOVING MASS | .818kg(+.005kg/25mm) |
| SYSTEM MASS | 4.416kg(+.095kg/25mm) |

| PROPERTY | BASE VALUE (T=250mm) |
|---------------------|----------------------|
| *MOVING MASS | .671kg(+.005kg/25mm) |
| PULLEY PITCH ϕ | 47.75mm (1.88") |
| PULLEY WIDTH | 28.9mm (1.14") |
| PULLEY MATERIAL | STEEL |
| TRAVEL PER REV | 150mm |

*BELT MASS & Y-AXIS SYSTEM MASS NEEDS TO BE ADDED TO THIS

X-TRAVEL = _____ mm

Y-TRAVEL = _____ mm

NOTE: ALL SUPPLIED MASSES DO NOT INCLUDE CUSTOMER COMPONENTS (MOTORS, CABLES, ETC)

| | | |
|-------------------------------------|---------|-------|
| GEARBOX MASS (ADD TO SYSTEM MASSES) | MPG-062 | 1.0kg |
| | MRG-062 | 3.0kg |

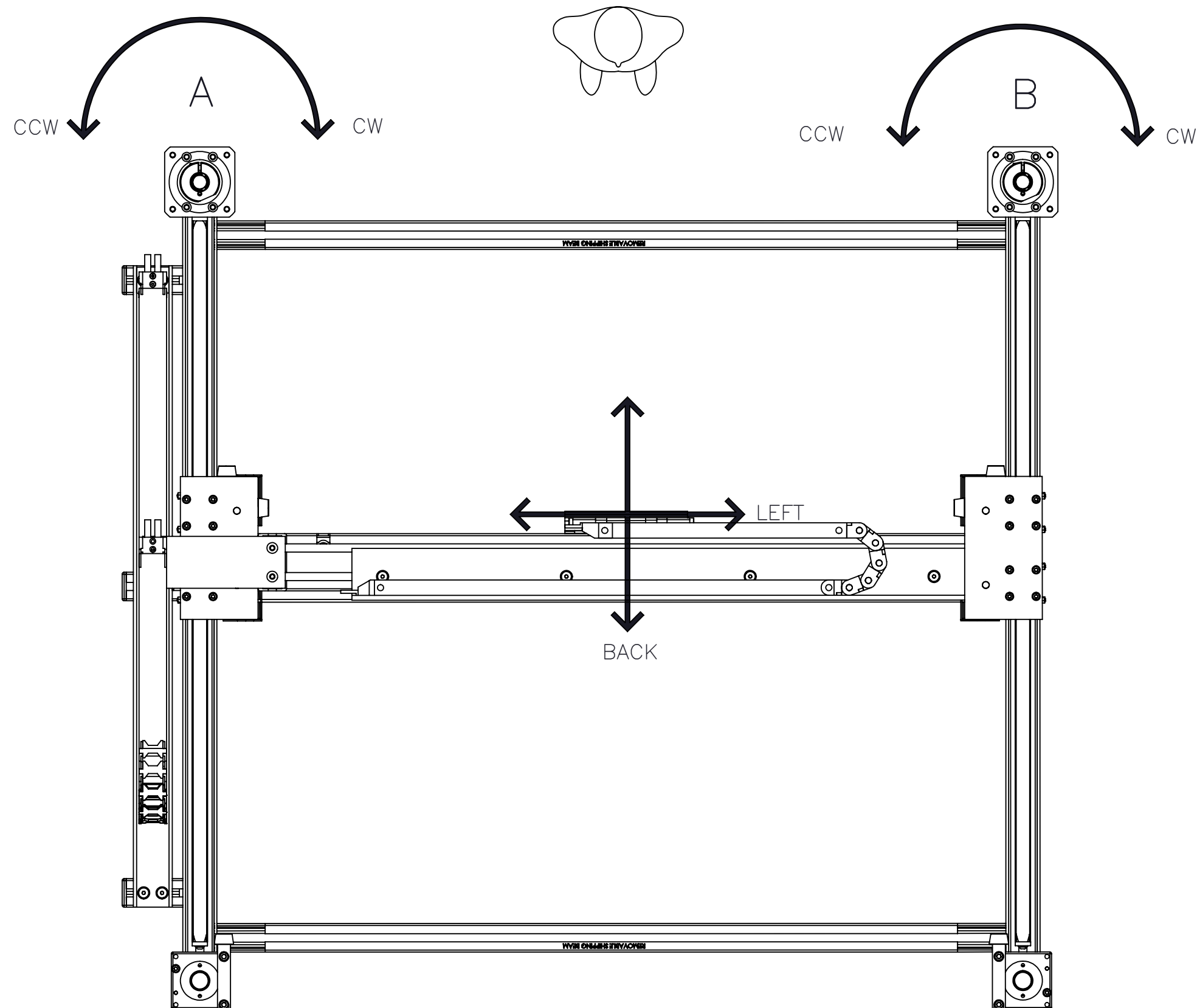
| | |
|-------------------|---|
| TOTAL BELT MASS | $(X \text{ TRAVEL} \times .00016) + (Y \text{ TRAVEL} \times .00008) + .07 = \text{kg}$ |
| TOTAL SYSTEM MASS | $(X \text{ TRAVEL} \times .0071) + (Y \text{ TRAVEL} \times .0061) + 7.68 = \text{kg}$ |

| | | | | | |
|----------------------------|--|---|---------------------------|-------------------------------|--------|
| <p>MACRON DYNAMICS INC</p> | DRAWN BY: TB CHECKED BY: LAST SAVED BY: TH | DATE: 1/2/2019 DATE: DD/MM/YYYY DATE: 4/16/2021 | MATERIAL: FINISH: | TITLE: MACRON H-BOT GANTRY | |
| | UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE: .X \pm .762 .XX \pm .254 .XXX \pm .127 ANG \pm 0°30' | | SCALE 1:1 SHEET SIZE C | | |
| | SURFACE FINISH \checkmark | | SHEET 4 OF 6 | PART NUMBER MGS-HBG-12-X-X-X | REV 02 |
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BREAK ALL SHARP EDGES
 DIMENSIONAL LIMITS APPLY AFTER FINISHING
 THIRD ANGLE PROJECTION


MOTOR DYNAMICS

(ASSUMES MOTORS ARE ROTATING AT SAME ANGULAR VELOCITY)



| ROTATIONAL DIRECTION | | Y-AXIS CART MOVEMENT |
|----------------------|----------|----------------------------|
| PULLEY A | PULLEY B | |
| CW | CW | LEFT |
| CW | CCW | BACK |
| CCW | CW | FRONT |
| CCW | CCW | RIGHT |

PULLEY ROTATION AND Y-AXIS CART MOVEMENT ARE WITH RESPECT TO THIS GANTRY VIEW

| | | | |
|---|--|---|---------------------------------|
|  MACRON DYNAMICS INC | DRAWN BY: TB DATE: 1/2/2019 | MATERIAL: | TITLE: |
| | CHECKED BY: DATE: DD/MM/YYYY | FINISH: | MACRON H-BOT GANTRY |
| | LAST SAVED BY: TH DATE: 4/16/2021 | | SCALE 1:1 SHEET SIZE C |
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SPECIFICATIONS

| | |
|---------------------------------------|---------------------------|
| Sensor Type | Inductive |
| Sensor Size | Fits all 8mm wide T-Slots |
| Operating Voltage | 10–30 VDC |
| Voltage Drop Across Conducting Sensor | ≤1.8 V at 100 mA |
| Number of Conductors (AWG) | 3x26 AWG |
| Temperature Range | -40°C to 105°C |

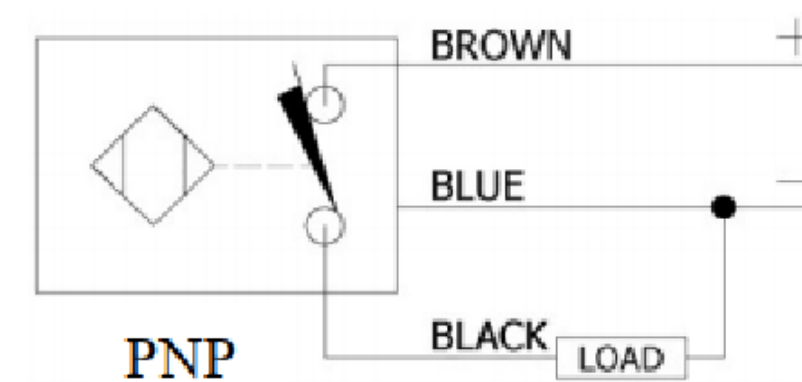
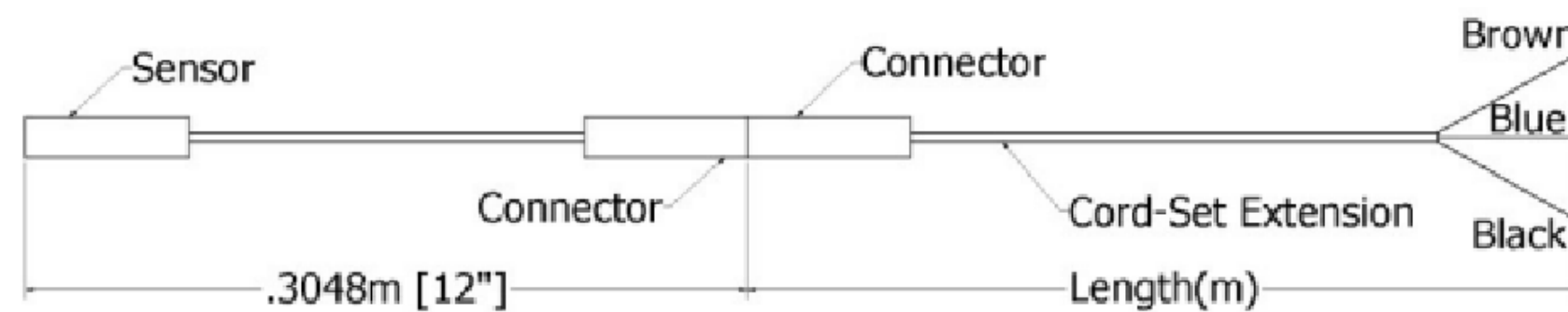
Part Number Configuration

244- _ _ _ - _ _ _

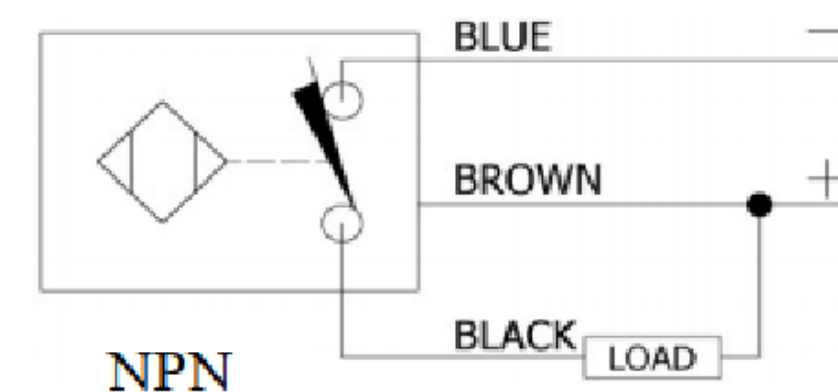
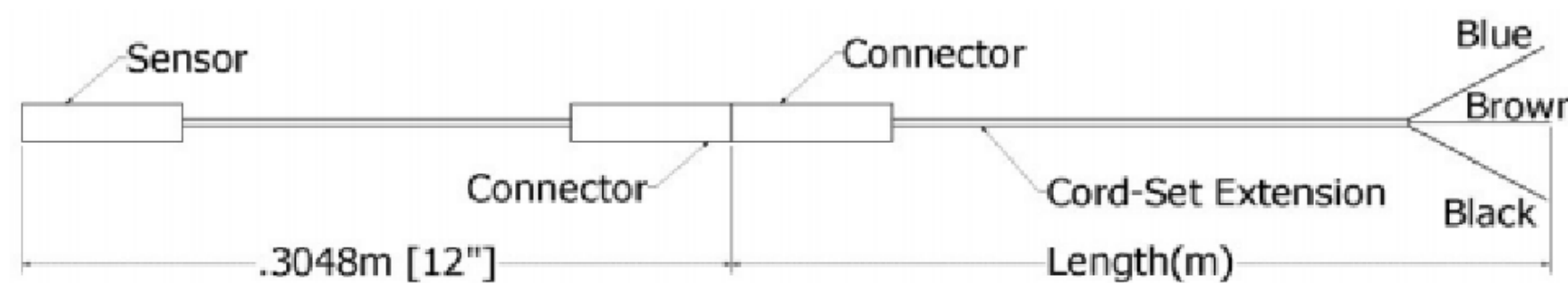
| | | | |
|------------|----------|----|--------|
| PNP or NPN | NC or NO | 02 | Meters |
| PNP or NPN | NC or NO | 06 | Meters |
| PNP or NPN | NC or NO | 12 | Meters |

Example: PNP, normally closed, cord-set extension length 6 meters = 244-PNP-NC-06

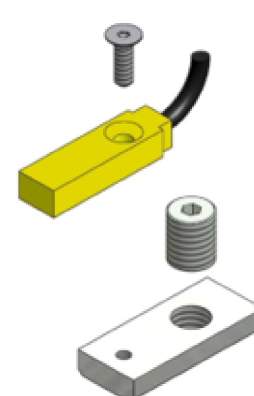
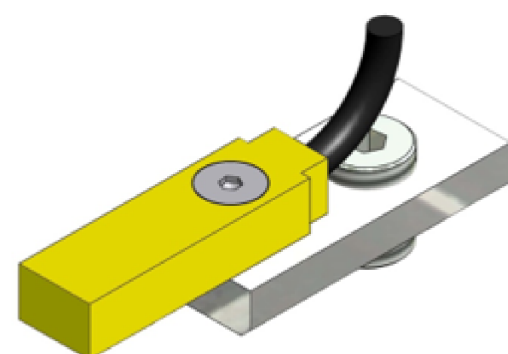
PNP Diagrams



NPN Diagrams



KIT INCLUDES – SENSOR, CORDSET EXTENSION, AND MOUNTING HARDWARE



| | | | |
|--|--|---|---|
| | DRAWN BY: JA DATE: 1/2/2019 CHECKED BY: DATE: DD/MM/YYYY LAST SAVED BY: JA DATE: 4/16/2021 | MATERIAL: | TITLE: |
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| | SURFACE FINISH | SCALE 1:1 | SHEET SIZE C |
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