

MCS-HBG-12- - -S

GEARBOX MODEL (X AND Y AXIS)

MPG-062 _____
 MRG-062 _____
 RATIO: _____

FOR DIRECT DRIVE OPTION WITH MMK
 (NO GEARBOX) CHECK HERE: _____

MOTOR INFORMATION (X AND Y AXIS)

MANUFACTURER: _____
 MODEL: _____

MOTOR INFORMATION (Z AXIS)

MANUFACTURER: _____
 MODEL: _____
 (*Z AXIS IS DIRECT DRIVEN)

SENSOR INFORMATION X-AXIS:

HOME-QTY _____ 244-_____
 EOT-QTY _____ 244-_____

SENSOR INFORMATION Y-AXIS:

HOME-QTY _____ 244-_____
 EOT-QTY _____ 244-_____

SENSOR INFORMATION Z-AXIS:

HOME-QTY _____ 244-_____
 EOT-QTY _____ 244-_____

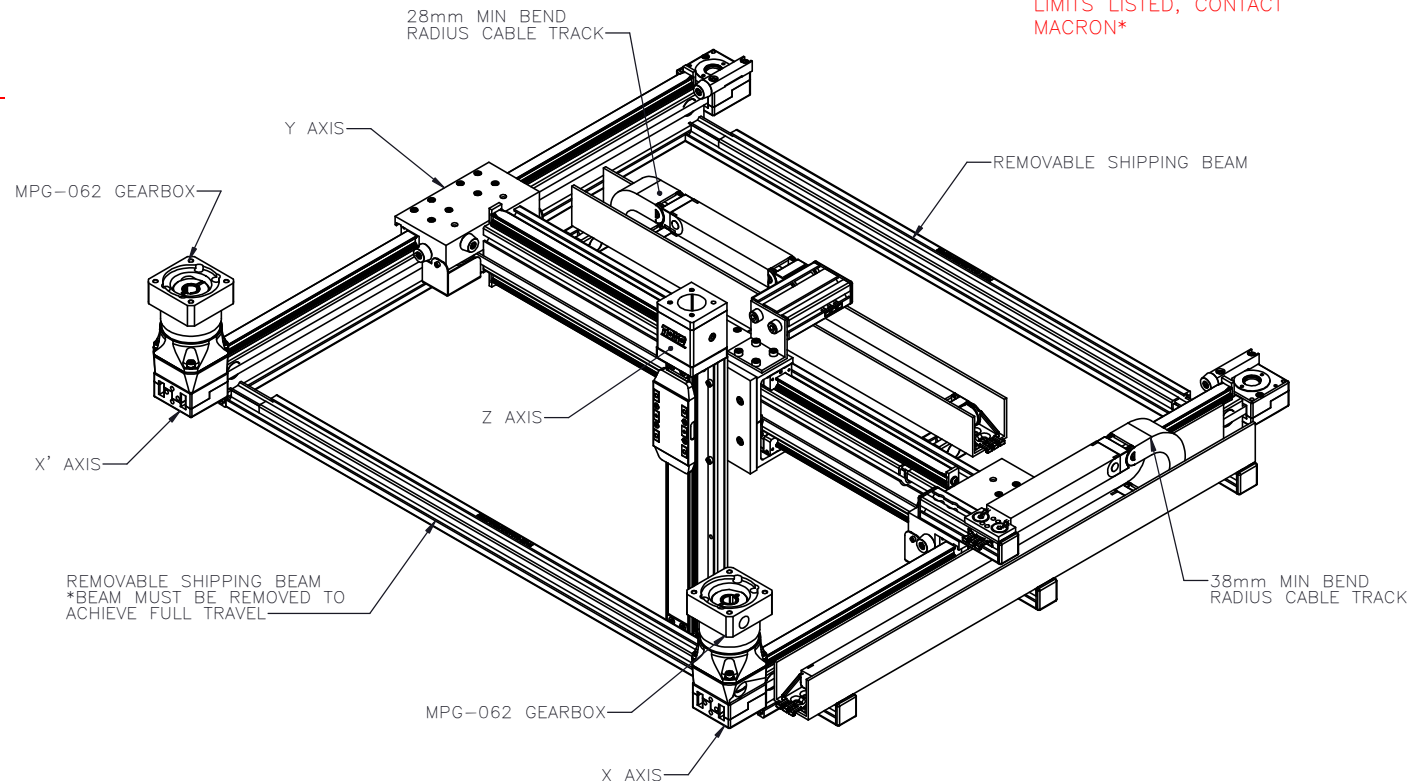
(SEE T-SLOT SENSOR KIT SHEET
 FOR PART NUMBER CONFIGURATION)

ENTER Z-AXIS TRAVEL
 TRAVEL IN INCREMENTS OF 100mm
 TRAVEL LIMITS: 100mm-400mm

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

ENTER X-AXIS TRAVEL
 TRAVEL IN INCREMENTS OF 500mm
 TRAVEL LIMITS: 1000mm-2000mm


*IF TRAVEL IS OUTSIDE
 LIMITS LISTED, CONTACT
 MACRON*



APPROVED: _____

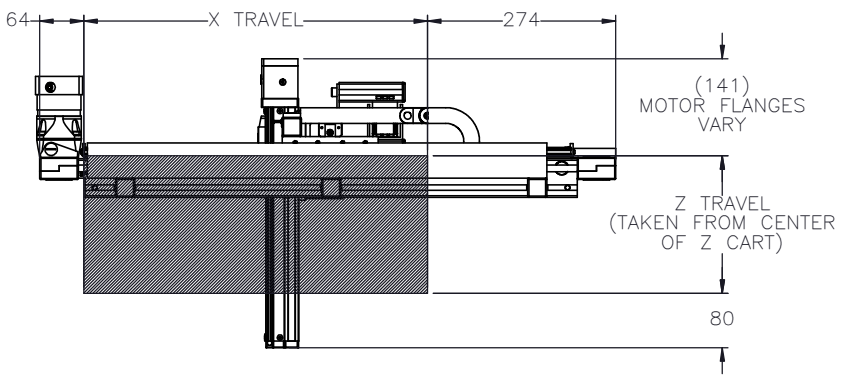
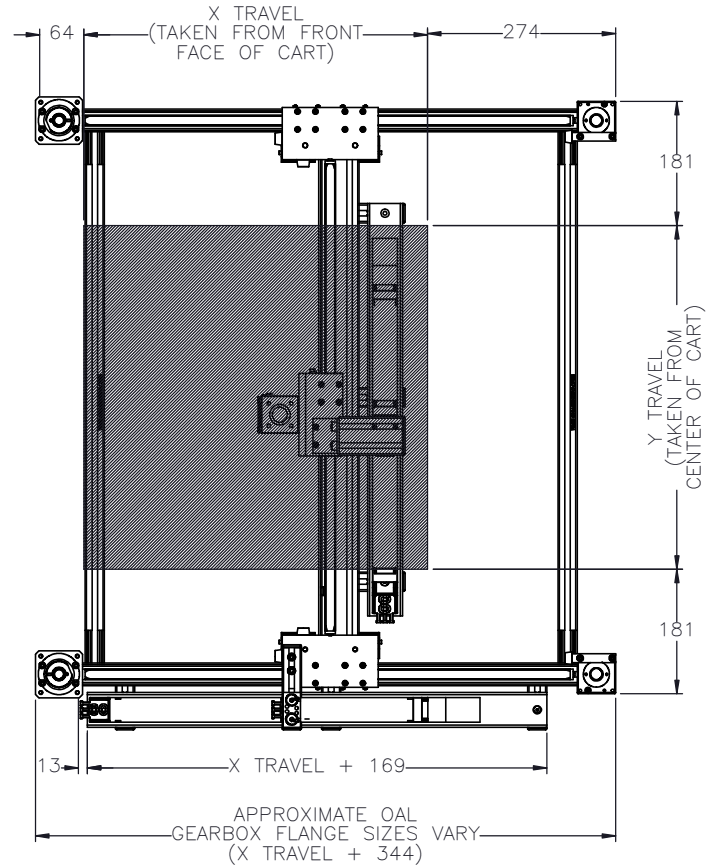
DATE: _____

PO:REFERENCE#: _____

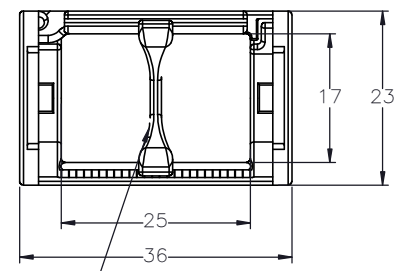
 MACRON DYNAMICS INC	DRAWN BY: AW DATE: 11/7/2023	MATERIAL:	TITLE:
	CHECKED BY: -- DATE: DD/MM/YYYY	FINISH:	SCALE: 1:1 SHEET SIZE: C
	LAST SAVED BY: awong DATE: 11/9/2023		
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES UNLESS NOTED: OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'	
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.	SURFACE FINISH: <input checked="" type="checkbox"/>	SHEET: 1 OF 7	PART NUMBER: MCS-HBG-12-X-X-X

GANTRY FOOTPRINT WORK ENVELOPE

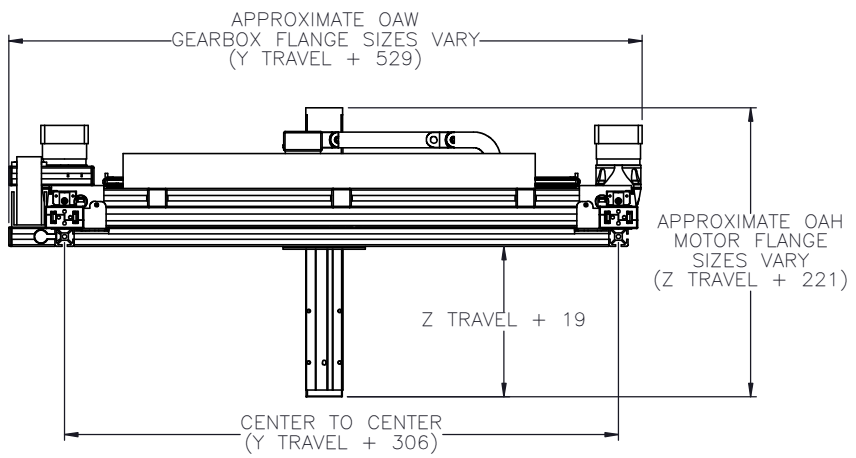
- TRAVELS ARE CALCULATED ASSUMING THAT THE CUSTOMER WILL REMOVE THE REMOVABLE SHIPPING BEAMS
- SHADED REGIONS ARE THE WORK ENVELOPE



X & Y CABLE TRACK CROSS SECTION

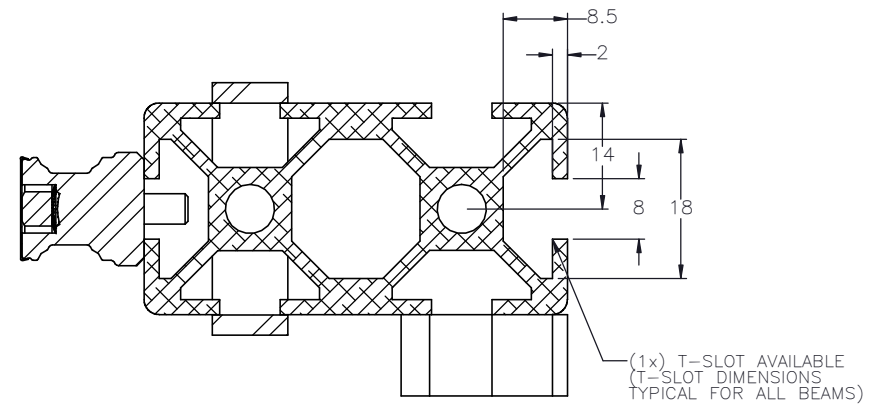
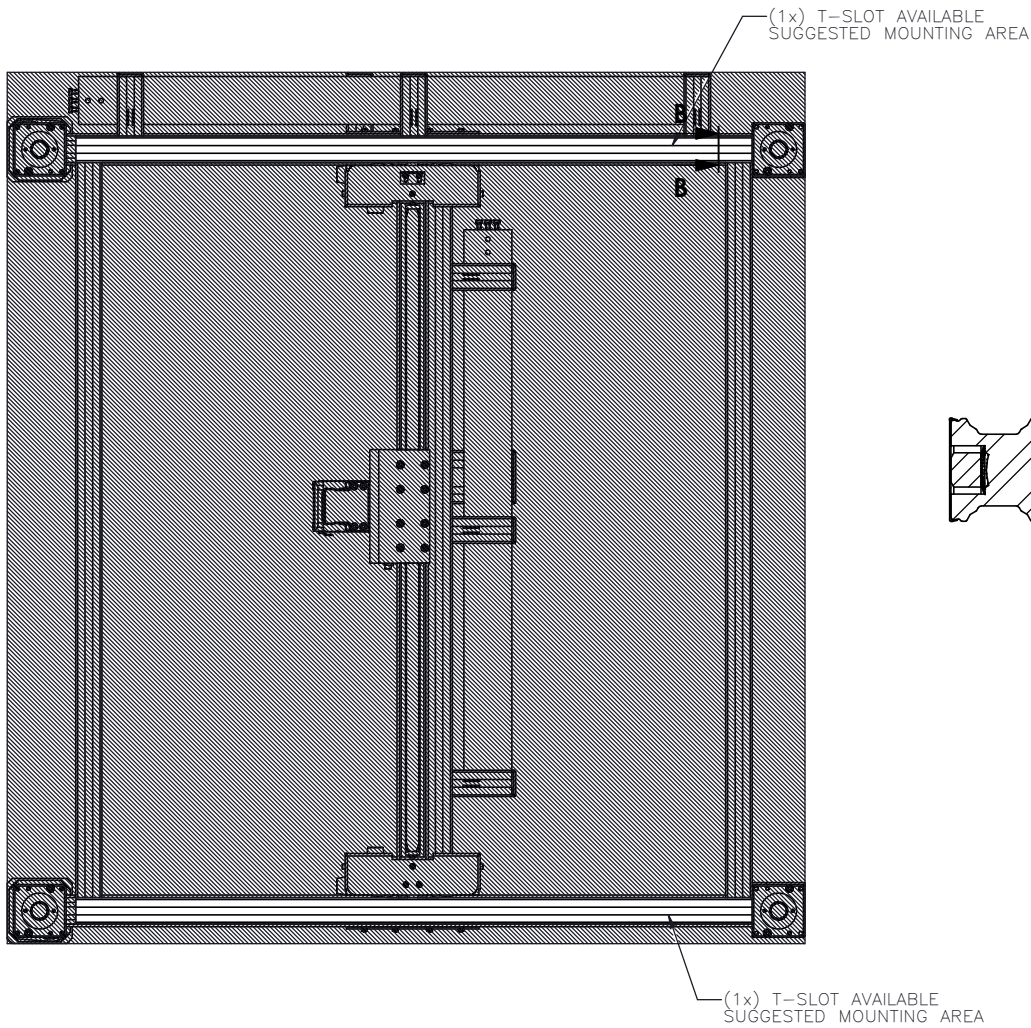


(1x) SEPARATOR EVERY OTHER LINK




	DRAWN BY: AW CHECKED BY: -- LAST SAVED BY: owong	DATE: 11/7/2023 DATE: DD/MM/YYYY DATE: 11/9/2023	MATERIAL:	TITLE:
	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE:		FINISH:	SCALE: 1:1
	.X ± .762 .XX ± .254 .XXX ± .127 OTHERWISE: ANG ± 0°30'		SURFACE FINISH: <input checked="" type="checkbox"/>	SHEET: 2 OF 7
	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.		BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	PART NUMBER: MCS-HBG-12-X-X-X SHEET SIZE: C

GANTRY MOUNTING FEATURES



SECTION B-B

 MACRON DYNAMICS INC	DRAWN BY: AW DATE: 11/7/2023	MATERIAL:	TITLE:
	CHECKED BY: -- DATE: DD/MM/YYYY	FINISH:	SCALE: 1:1 SHEET SIZE: C
	LAST SAVED BY: awong DATE: 11/9/2023		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS: TOLERANCES UNLESS NOTED: OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'		
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.	SURFACE FINISH ✓ BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET 3 OF 7	PART NUMBER MCS-HBG-12-X-X-X

Z AXIS SCREW TABLE SELECTION

GTH5-L____-____-BC-M10B-____

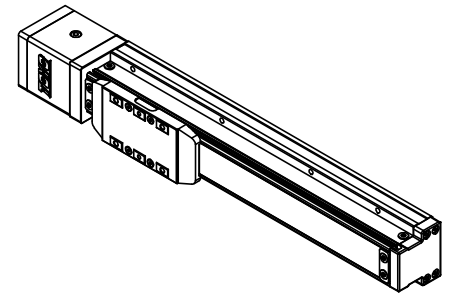
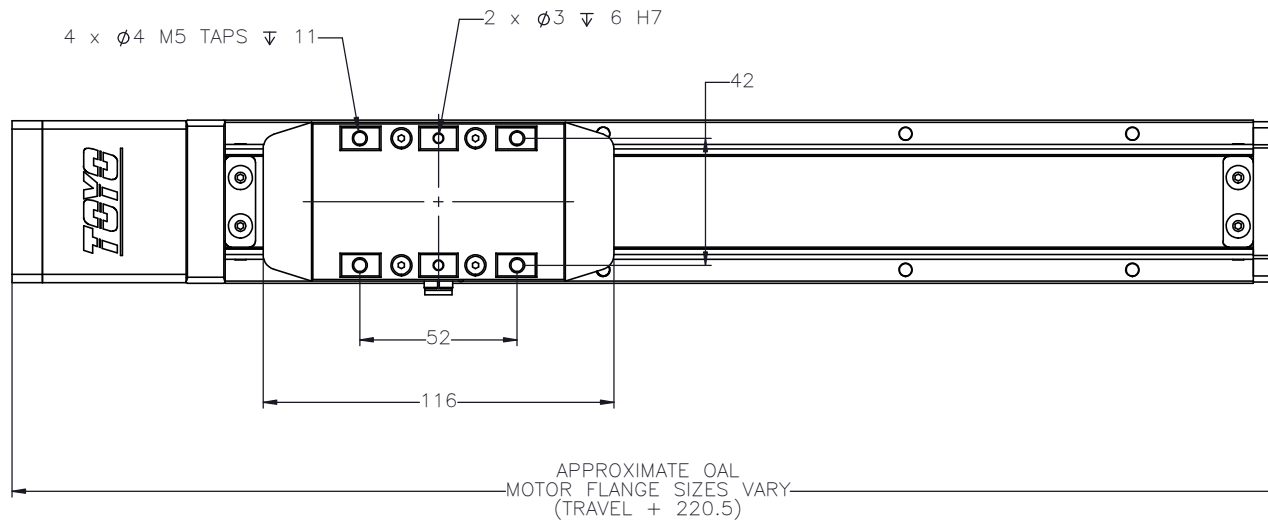
SENSOR CODE C3 = 1 HOME, 1 LIMIT SENSOR
C4 = 1 HOME, 2 LIMIT SENSOR
E5 = NO SENSORS


MOTOR CODE

MOTOR POSITION UP

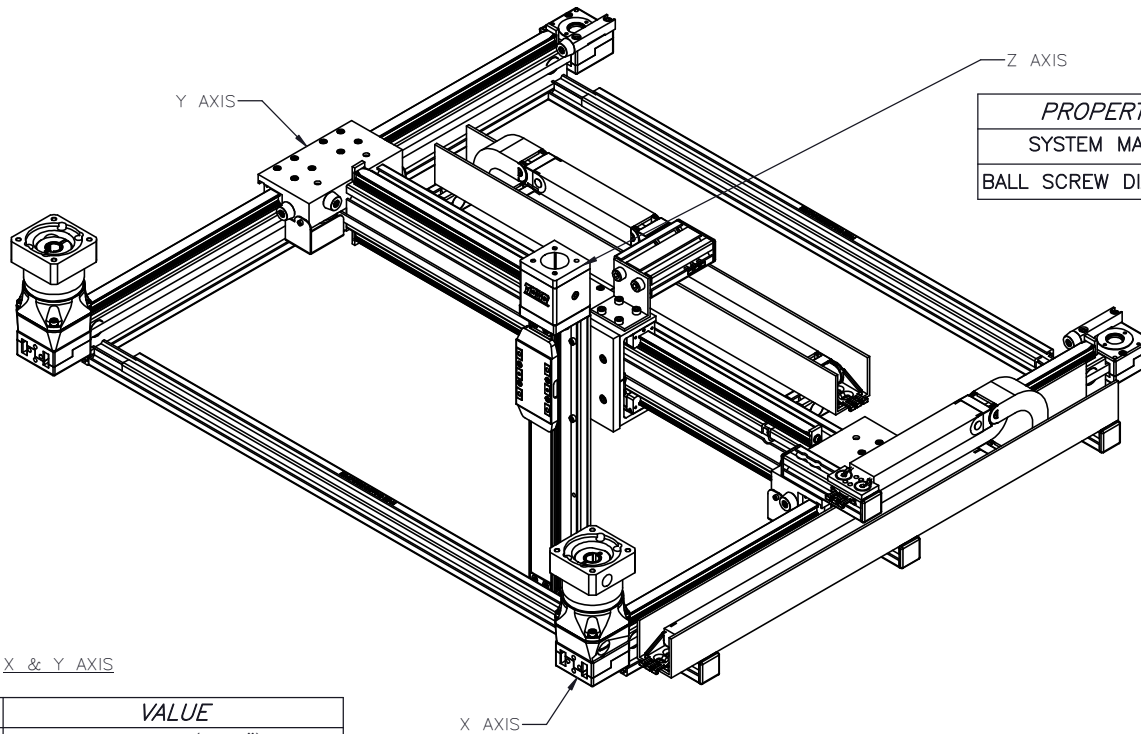
STROKE/TRAVEL (100mm, 200mm, 300mm, 400mm)

BALL SCREW LEAD (5mm, 10mm, 20mm)



 MACRON DYNAMICS INC	DRAWN BY: AW DATE: 11/7/2023 CHECKED BY: -- DATE: DD/MM/YYYY LAST SAVED BY: awong DATE: 11/9/2023	MATERIAL:	TITLE: TOYO 10mm LEAD SCREW TABLE SCALE: 1:1 SHEET SIZE: C
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS: .XX ± .254 TOLERANCES UNLESS NOTED: .XXX ± .127 OTHERWISE: ANG ± 0°30'	FINISH:	
	SURFACE FINISH: 63		
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.	BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET: 4 OF 7 PART NUMBER: MCS-HBG-25-XXXX-XXXX-SXXX	REV

MOTOR SIZING WORKSHEET



PROPERTY	BASE VALUE (T=100mm)
SYSTEM MASS	2.42kg(+0.40kg/100mm)
BALL SCREW DIAMETER	12mm (.472")

X & Y AXIS

PROPERTY	VALUE
PULLEY PITCH ϕ	33.42mm (1.32")
PULLEY WIDTH	16.3mm (.640")
PULLEY MATERIAL	STEEL
TRAVEL PER REV	105mm
BELT WIDTH	12mm (.472")
ULTIMATE TENSILE STRENGTH OF BELT	800 LBS (3559 N)
RECOMMENDED BELT RUNNING LOAD	200 LBS (889 N)

X-TRAVEL = _____ mm


Y-TRAVEL = _____ mm

Z-TRAVEL = _____ mm

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

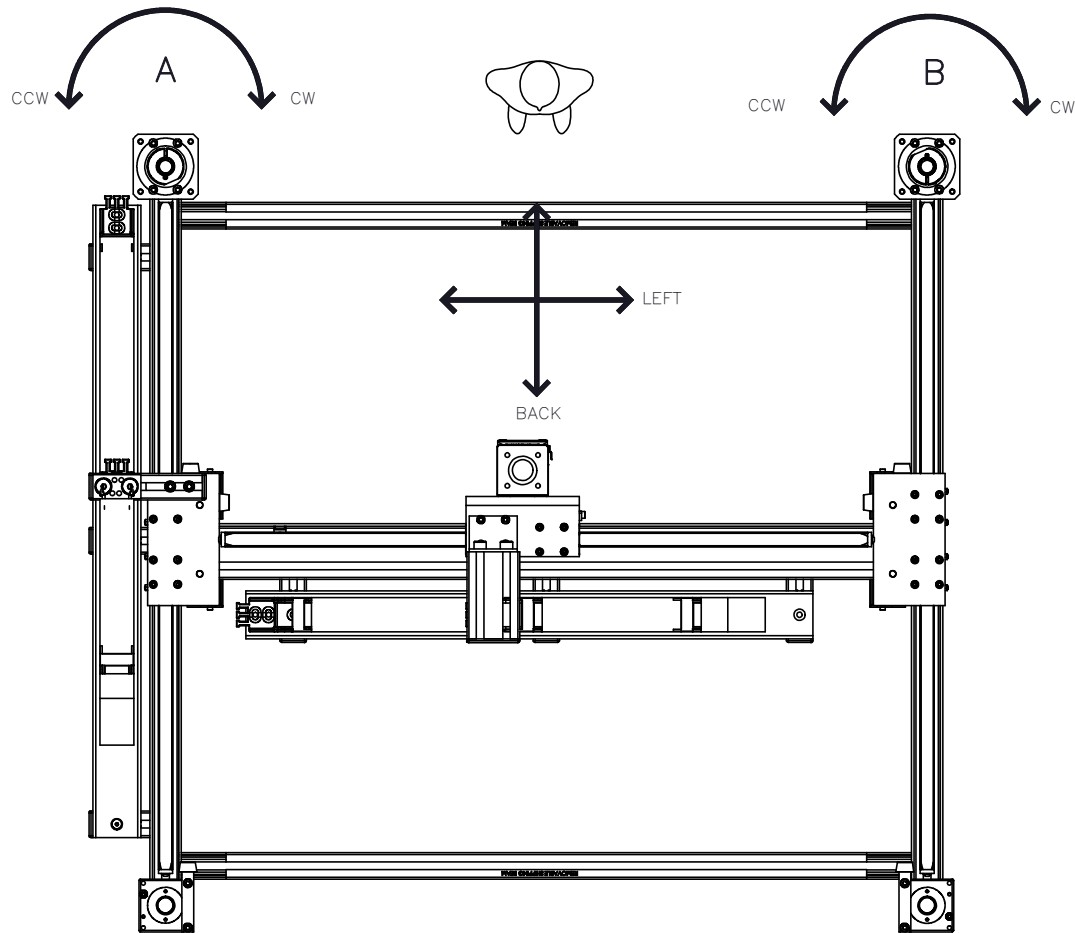
GEARBOX MASS (ADD TO SYSTEM MASS)	MPG-062	1.0kg
	MRG-062	3.0kg

TOTAL BELT MASS	$(X \text{ TRAVEL} \times .00013) + (Y \text{ TRAVEL} \times .00007) + .06 = \text{kg}$
TOTAL MOVING MASS	$(X \text{ TRAVEL} \times .0005) + (Y \text{ TRAVEL} \times .0033) + (Z \text{ TRAVEL} \times .004) + 6.98 = \text{kg}$
TOTAL SYSTEM MASS	$(X \text{ TRAVEL} \times .0086) + (Y \text{ TRAVEL} \times .0074) + (Z \text{ TRAVEL} \times .004) + 9.45 = \text{kg}$

 MACRON DYNAMICS INC	DRAWN BY: AW DATE: 11/7/2023 CHECKED BY: -- DATE: DD/MM/YYYY LAST SAVED BY: awong DATE: 11/9/2023	MATERIAL:	TITLE:	
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES UNLESS NOTED: OTHERWISE:	.X \pm .762 .XX \pm .254 .XXX \pm .127 ANG \pm 0°30'	FINISH:	
	SURFACE FINISH 63 BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION		SCALE: 1:1 SHEET SIZE: C	
	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.	SHEET: 5 OF 7 PART NUMBER: MCS-HBG-12-X-X-X	REV: C	


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: AW DATE: 11/7/2023	MATERIAL:	TITLE: MACRON H-BOT GANTRY
	CHECKED BY: -- DATE: DD/MM/YYYY	FINISH:	
	LAST SAVED BY: cwong DATE: 11/9/2023		SCALE: 1:1 SHEET SIZE: C
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES UNLESS NOTED: .XX ± .254 .XXX ± .127 ANG ± 0°30'	SURFACE FINISH: ✓ BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET: 6 OF 7 PART NUMBER: MGS-HBG-50-X-X-X

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

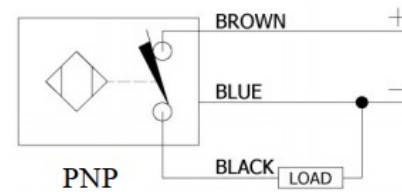
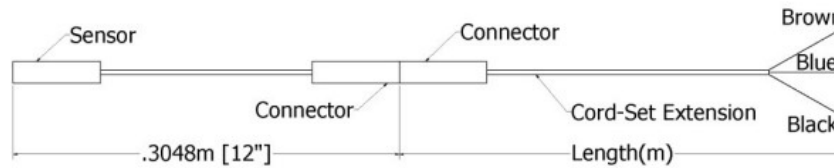
Part Number Configuration

244- - - - -

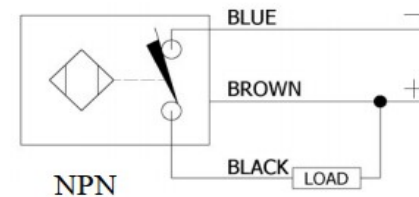
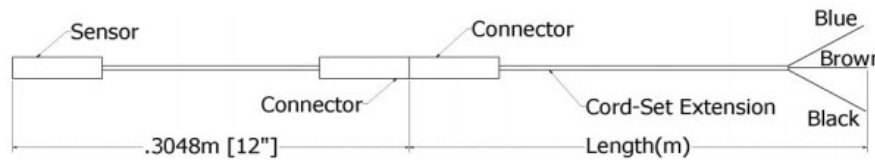
PNP or NPN	NC or NO	02	Meters
PNP or NPN	NC or NO	06	Meters
PNP or NPN	NC or NO	12	Meters

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

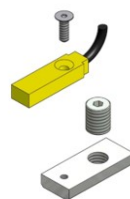
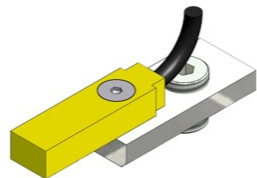
PNP Diagrams



NPN Diagrams



KIT INCLUDES – SENSOR, CORDSET EXTENSION, AND MOUNTING HARDWARE



	DRAWN BY: AW DATE: 11/7/2023 CHECKED BY: -- DATE: DD/MM/YYYY LAST SAVED BY: awong DATE: 11/9/2023	MATERIAL:	TITLE:
	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE: .XX ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'	FINISH:	T-SLOT SENSOR KIT
SURFACE FINISH ✓ BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET 7 OF 7 PART NUMBER SENSOR CALL-OUT	SCALE 1:1	SHEET SIZE C