

MCS-HBG-25- - -S

GEARBOX MODEL (X AND Y AXIS)

MPG-084- MPG-084
 MRG-064- MRG-084
 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-

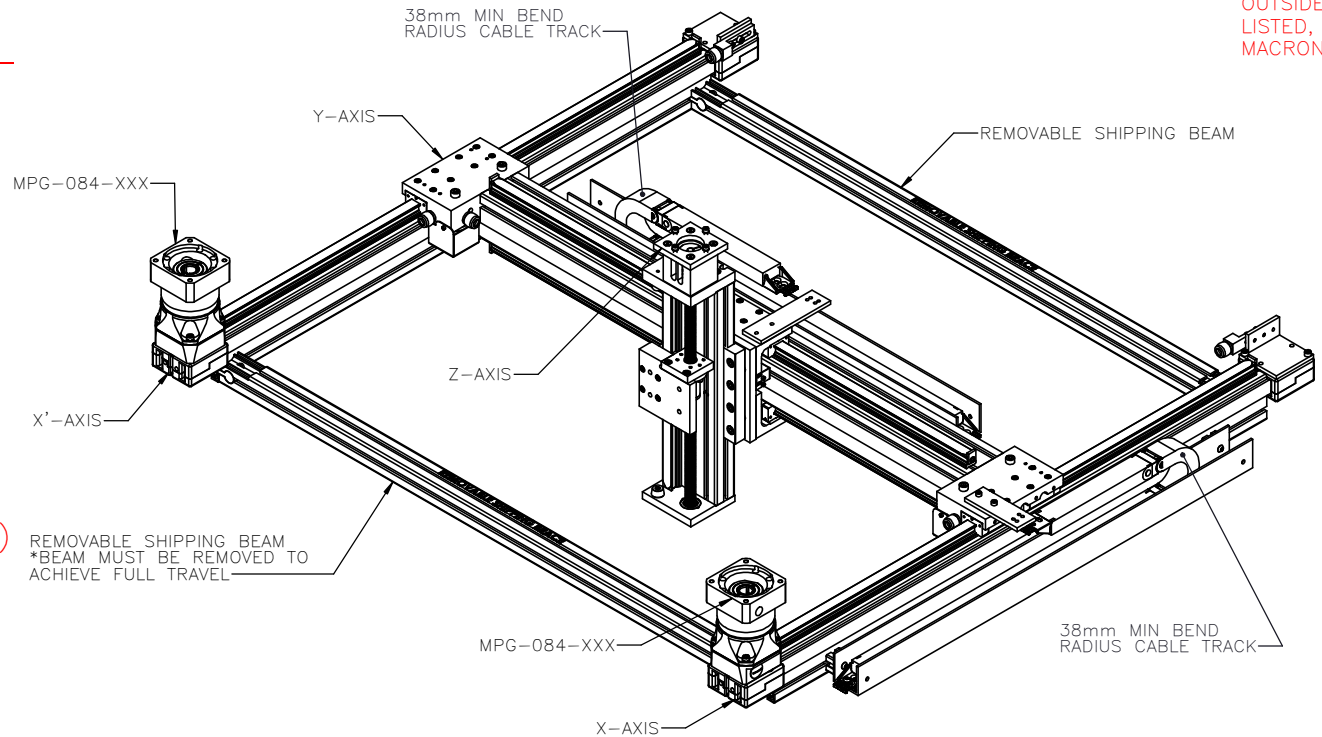
(SEE T-SLOT SENSOR KIT SHEET
 FOR PART NUMBER CONFIGURATION)

ENTER Z-AXIS TRAVEL
 TRAVEL IN INCREMENTS OF 25mm
 TRAVEL LIMITS: 100mm-500mm

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*

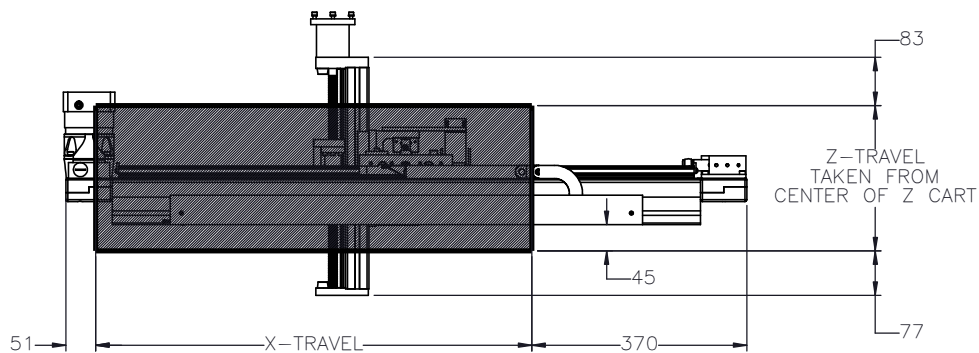
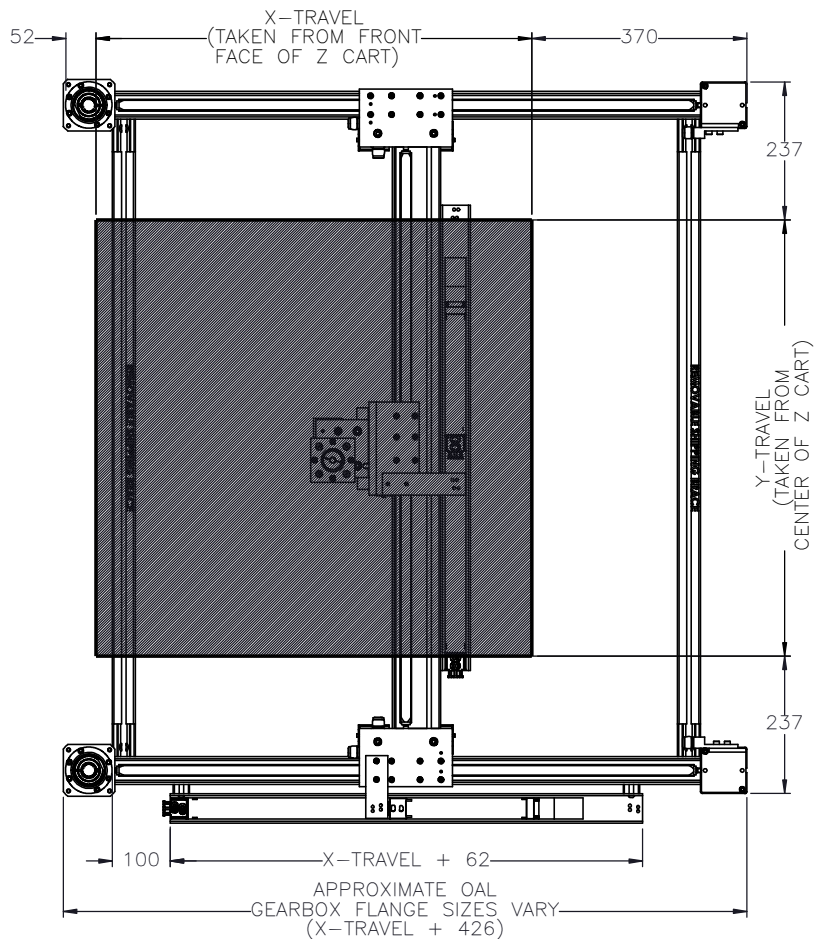


APPROVED:

DATE:

PO:REFERENCE#:

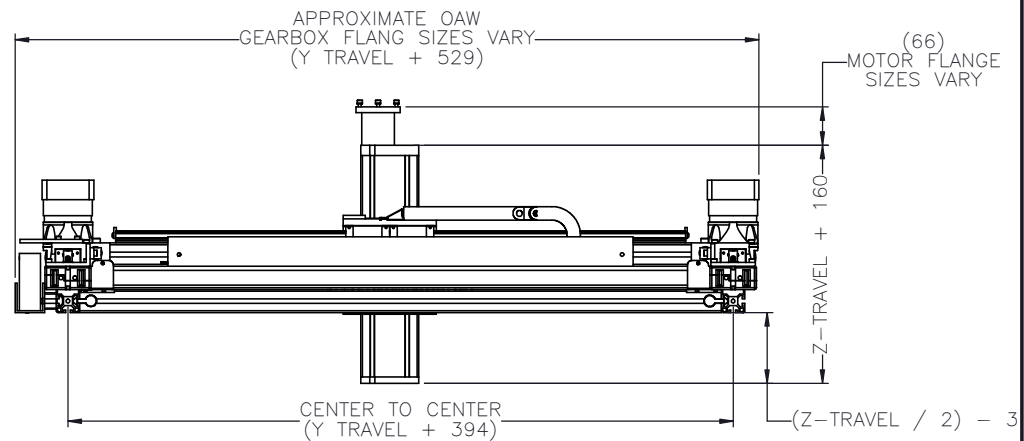
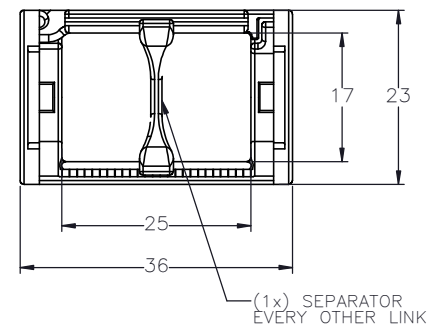
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	LAST SAVED BY: awong DATE: 11/9/2023		
	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE:	.XX ± .254 .XXX ± .127 ANG ± 0°30'	
THIS DRAWING IS THE PROPERTY OF MACRON DYNAMICS. ANY REPRODUCTIONS SHALL BE FOR 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"/> BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET: 1 OF 7	PART NUMBER: MCS-HBG-25-XXXX-SXXX




GANTRY FOOTPRINT WORK ENVELOPE

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

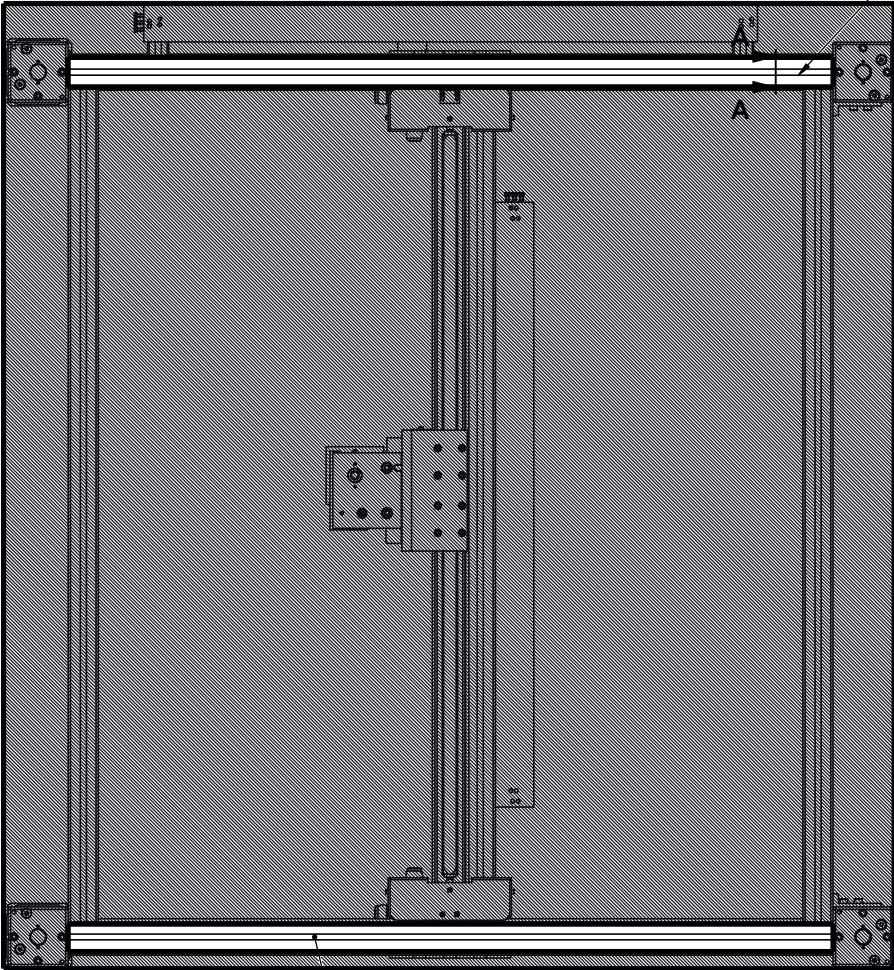
X & Y CABLE TRACK CROSS SECTION



 MACRON DYNAMICS INC	DRAWN BY: JA DATE: 12/19/2019	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'	SHEET: 2 OF 7 PART NUMBER: MCS-HBG-25-XXXX-XXXX-SXXX
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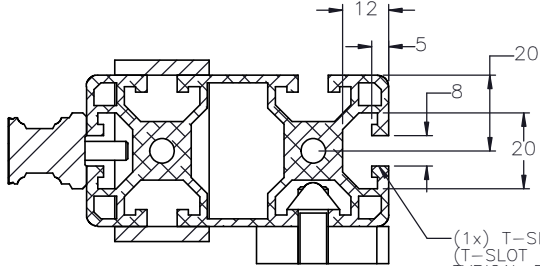
GANTRY MOUNTING FEATURES

BOTTOM VIEW




(1x) T-SLOT AVAILABLE FOR MOUNTING

(1x) T-SLOT AVAILABLE FOR MOUNTING



(1x) T-SLOT AVAILABLE
(T-SLOT DIMENSIONS
TYPICAL FOR ALL BEAMS)

SECTION A-A

 MACRON DYNAMICS INC	DRAWN BY: JA DATE: 12/19/2019	MATERIAL:	TITLE:
	CHECKED BY: -- DATE: DD/MM/YYYY	FINISH:	
	LAST SAVED BY: awong DATE: 11/9/2023	UNLESS OTHERWISE SPECIFIED: .X ± .762 DIMENSIONS ARE IN MILLIMETERS: .XX ± .254 TOLERANCES UNLESS NOTED: .XXX ± .127 OTHERWISE: ANG ± 0°30'	SCALE: 1:1 SHEET SIZE: C
	SURFACE FINISH: <input checked="" type="checkbox"/>	SHEET: 3 OF 7 PART NUMBER: MCS-HBG-25-XXXX-XXXX-SXXX	REV:
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	

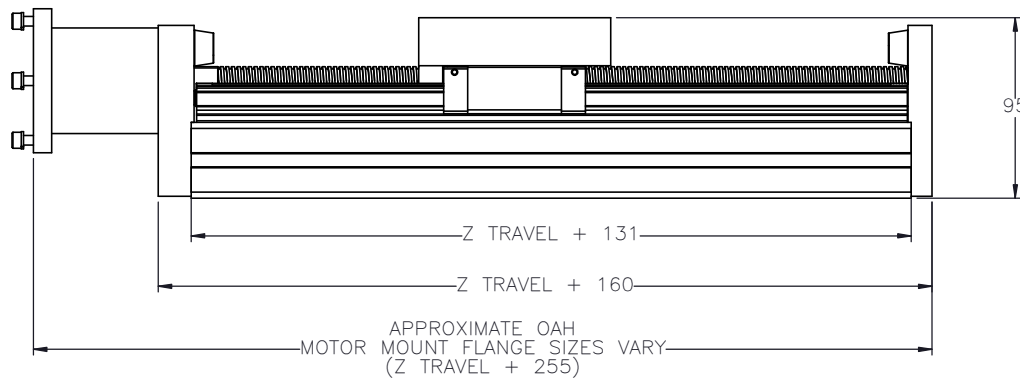
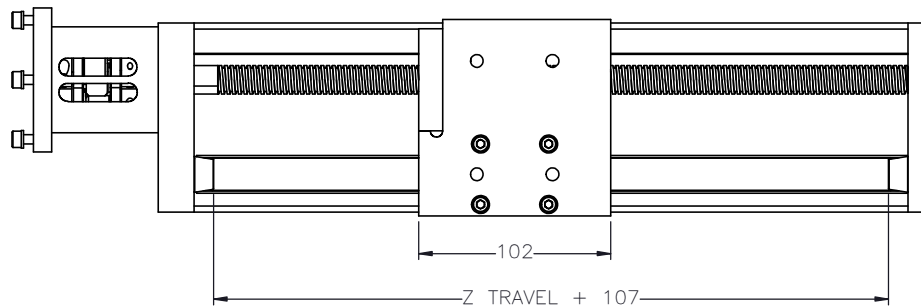
Z AXIS SCREW TABLE SELECTION

MSA-SRT-N----

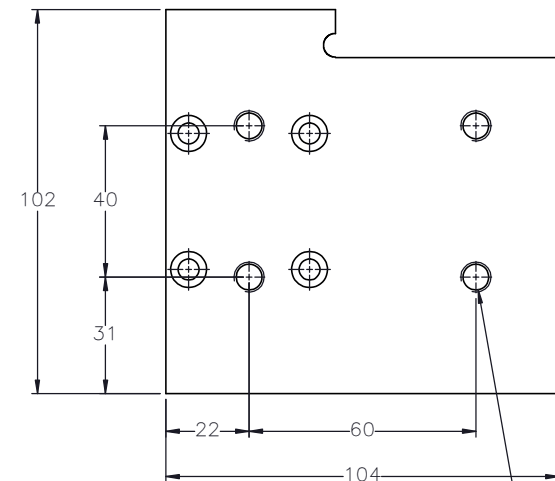
ENTER
TRAVEL IN INCREMENTS OF 25mm

SELECT MOUNTING OPTION
A01 = NO MOTOR MOUNTING KIT
AM1 = MOTOR MOUNT KIT REQUESTED


SPECIFY BALL SCREW LEAD TYPE
05 = 5mm PITCH
10 = 10mm PITCH
20 = 20mm PITCH



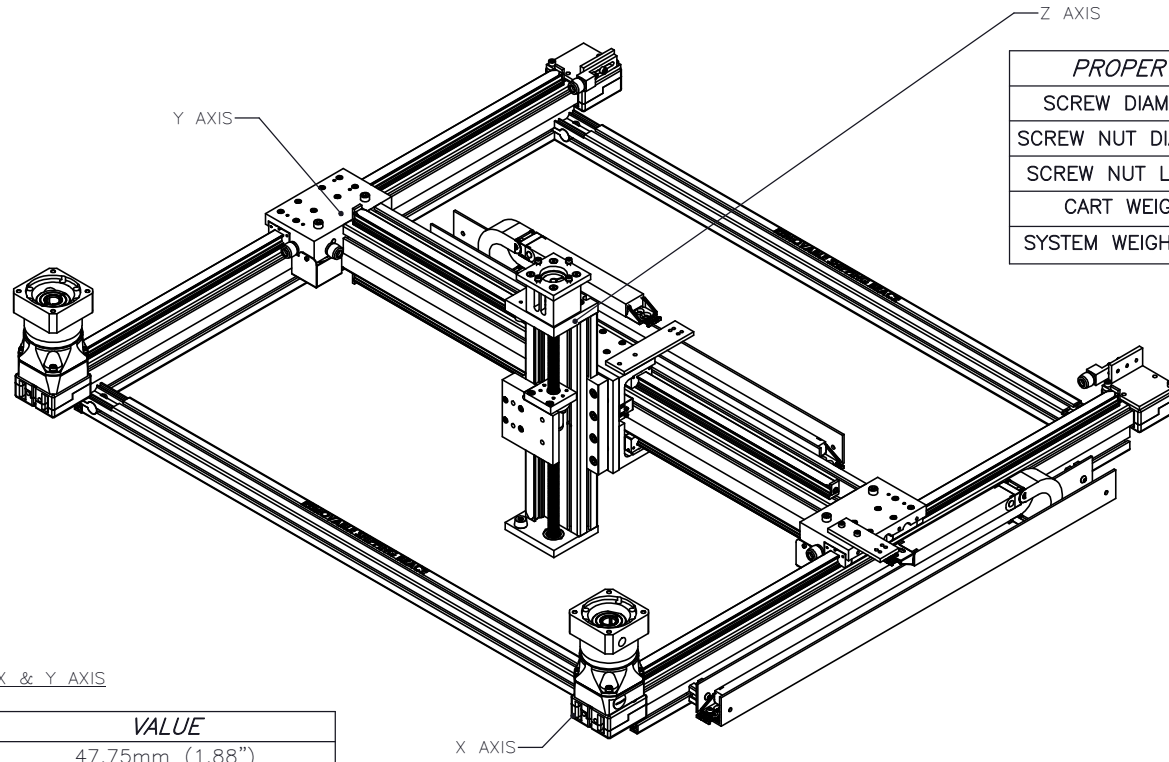
CART MOUNTING FEATURES



4 x Ø 6.80 ± 0.1625
MBx1.25 - 6H ± 0.1000

 MACRON DYNAMICS INC	DRAWN BY: JA DATE: 12/19/2019	MATERIAL:	TITLE: SRT CART TOP
	CHECKED BY: -- DATE: DD/MM/YYYY	ALUMINUM JIG PLATE	
	LAST SAVED BY: awong DATE: 11/9/2023	FINISH: BLACK ANODIZE	SCALE: 1:1 SHEET SIZE: C
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES UNLESS NOTED OTHERWISE: .X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'	SURFACE FINISH: 63 BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION	SHEET: 4 OF 7 PART NUMBER: MCS-HBG-25-XXXX-XXXX-SXXX

MOTOR SIZING WORKSHEET



PROPERTY	VALUE
SCREW DIAMETER	15mm (0.59")
SCREW NUT DIAMETER	28mm (1.10")
SCREW NUT LENGTH	58mm (2.28")
CART WEIGHT	0.91 kg
SYSTEM WEIGHT (kg)	(Z TRAVEL IN METERS x 7.4) + 2.9

X & Y AXIS

PROPERTY	VALUE
PULLEY PITCH ϕ	47.75mm (1.88")
PULLEY WIDTH	28.9mm (1.14")
PULLEY MATERIAL	STEEL
TRAVEL PER REV	150mm
BELT WIDTH	25mm (.98")
ULTIMATE TENSILE STRENGTH OF BELT	1750 LBS (7787 N)
RECOMMENDED BELT RUNNING LOAD	437 LBS (1945 N)

X-TRAVEL = _____ mm


Y-TRAVEL = _____ mm

Z-TRAVEL = _____ mm

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

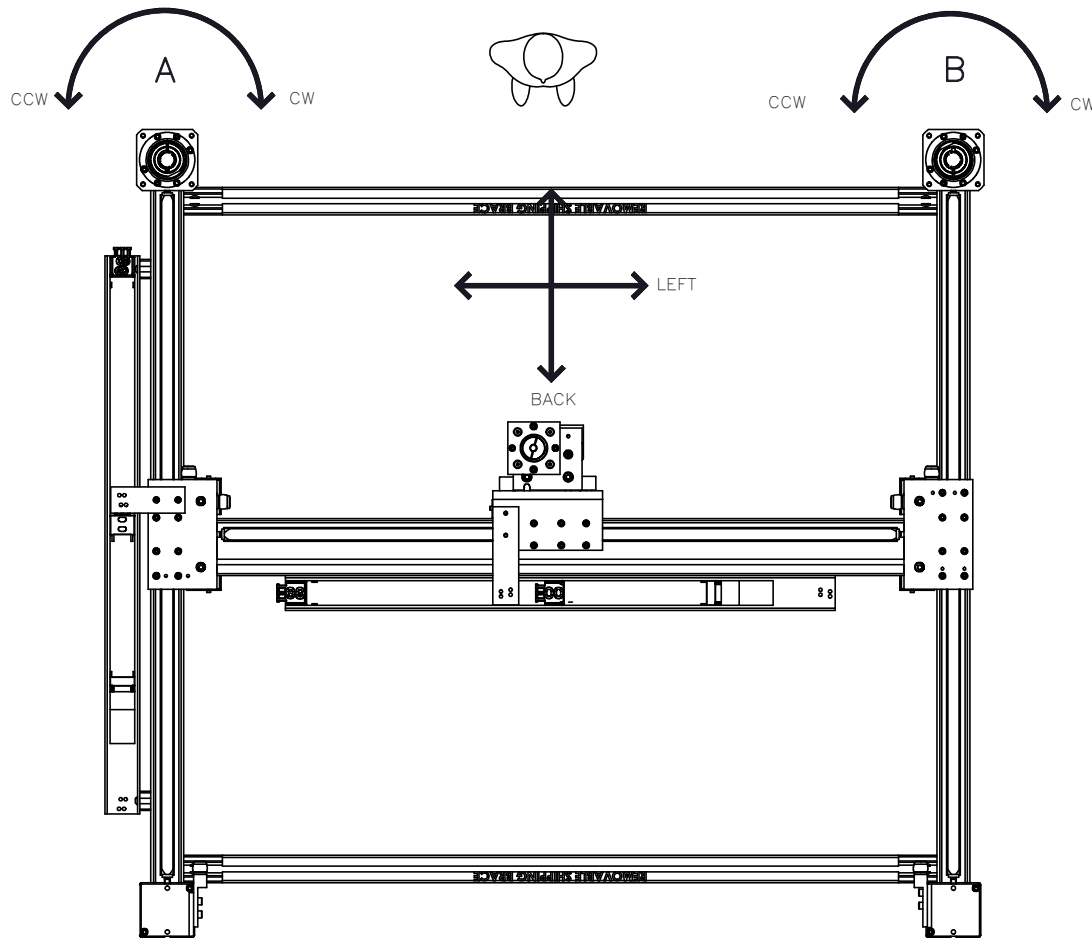
GEARBOX MASS (ADD TO SYSTEM MASS)	MPG-064	1.0kg
	MPG-084	2.3kg
	MRG-064	3.0kg
	MRG-084	5.6kg

TOTAL BELT MASS	(X TRAVEL x .0006) + (Y TRAVEL x .0003) + .38 = kg
TOTAL MOVING MASS	(X TRAVEL x .0013) + (Y TRAVEL x .0111) + (Z TRAVEL x .0073) + 16.64 = kg
TOTAL SYSTEM MASS	(X TRAVEL x .0132) + (Y TRAVEL x .0149) + (Z TRAVEL x .0073) + 32.25 = kg

 MACRON DYNAMICS INC	DRAWN BY: JA DATE: 12/19/2019 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 ± .254 .XXX ± .127 ANG ± 0°30'	FINISH:	
	SURFACE FINISH 63	SCALE 1:1	SHEET SIZE C
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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: JA DATE: 12/19/2023	MATERIAL:	TITLE: MACRON H-BOT GANTRY
	CHECKED BY: -- DATE: DD/MM/YYYY	FINISH:	
	LAST SAVED BY: awong DATE: 11/9/2023	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE:	SCALE: 1:1 SHEET SIZE: C
	SURFACE FINISH <input checked="" type="checkbox"/>	BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING	SHEET: 6 OF 7 PART NUMBER: MCS-HBG-25-XXXX-XXXX-SXXX
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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

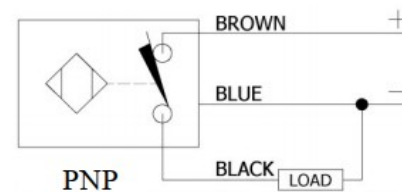
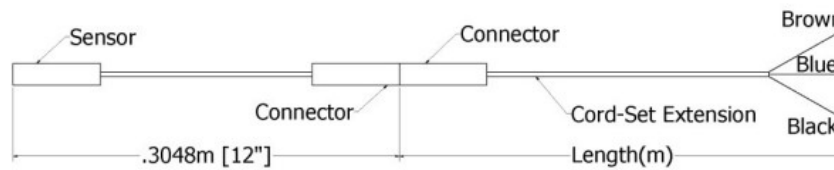
Part Number Configuration

244- _ _ _ - _ _ _

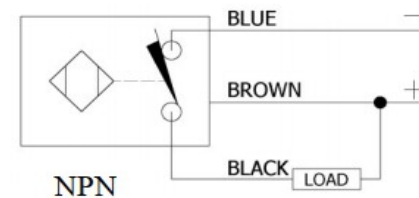
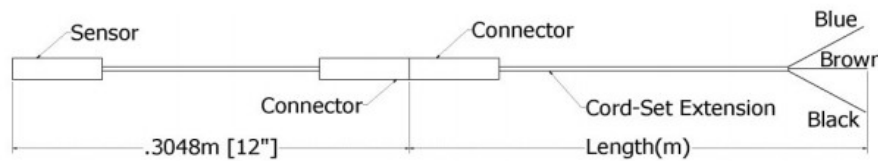
PNP or NPN	NC or NO	02	Meters
PNP or NPN	NC or NO	06	Meters
PNP or NPN	NC or NO	12	Meters

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

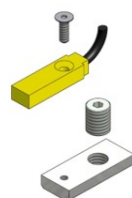
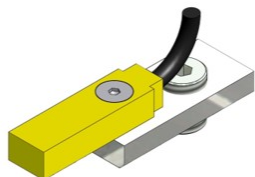
PNP Diagrams



NPN Diagrams



KIT INCLUDES – SENSOR, CORDSET EXTENSION, AND MOUNTING HARDWARE



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	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 ✓	SCALE 1:1	SHEET SIZE C
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