MGS–HBG–50– [ ] – [ ] – X

GEARBOX MODEL
MPG–084___MPG–114___
MRG–084___MRG–114___
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–___–__–__

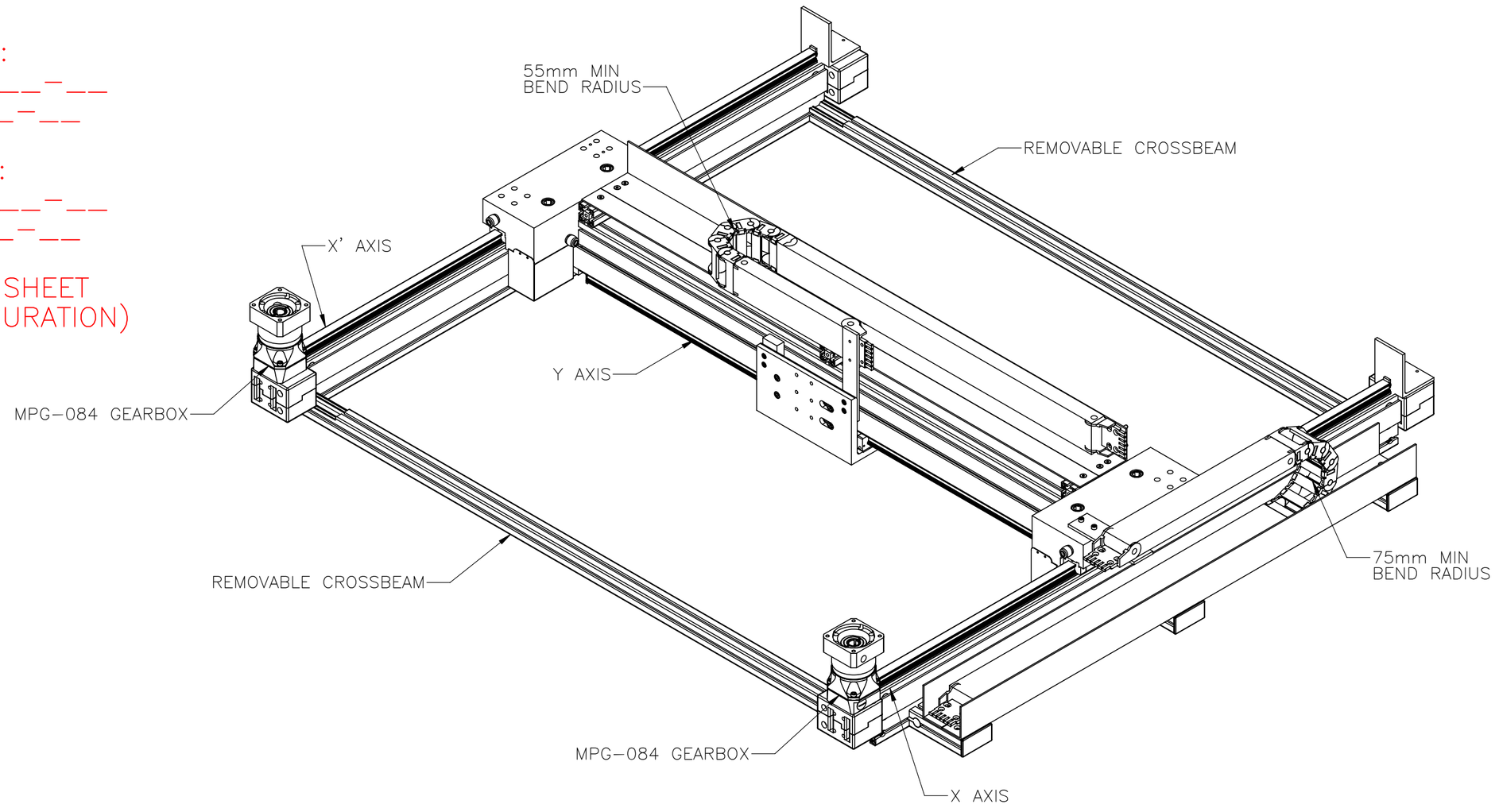
SENSOR INFORMATION Y–AXIS:
HOME–QTY___ 244–___–__–__
EOT–QTY___ 244–___–__–__

(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#: _____

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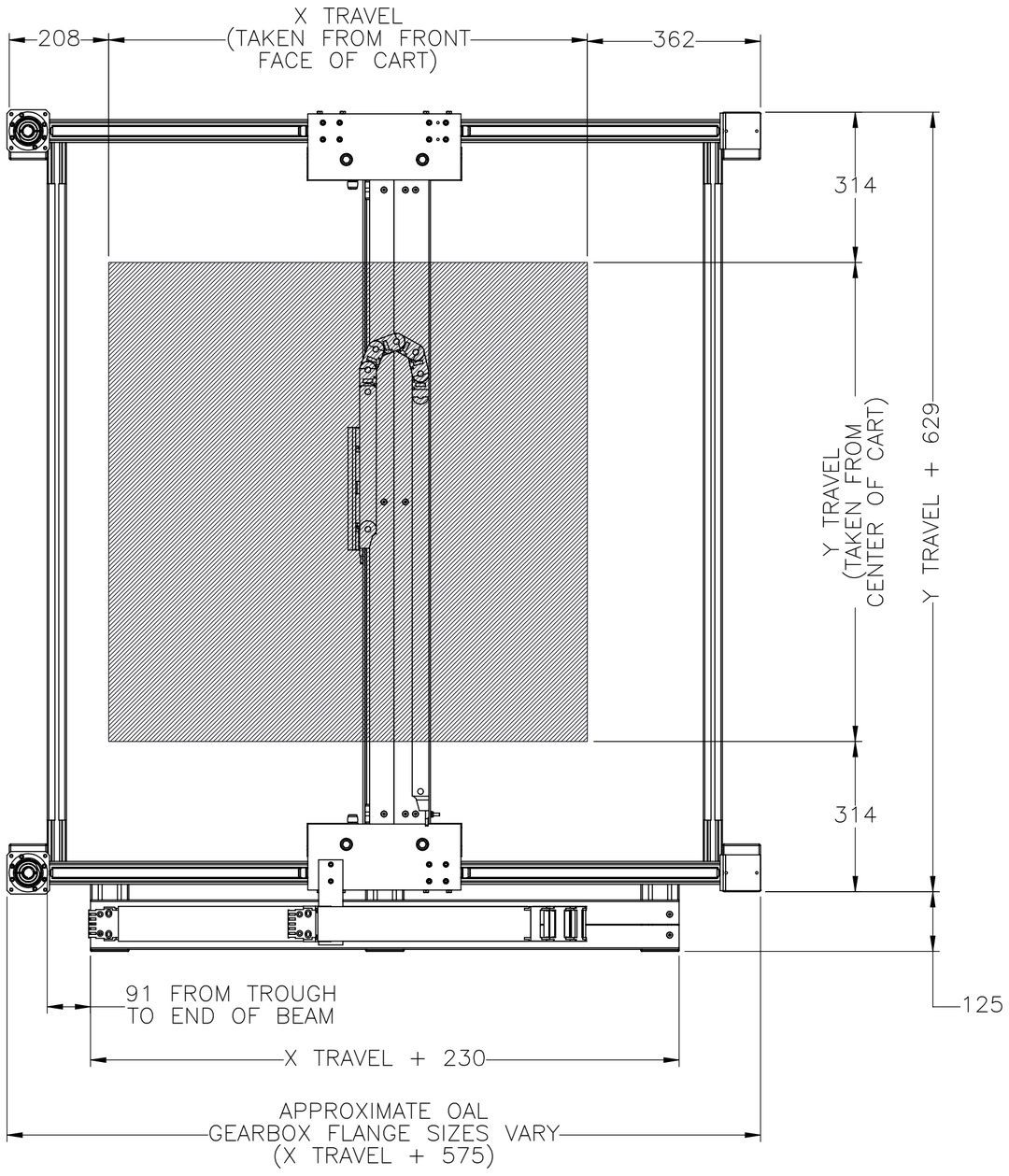
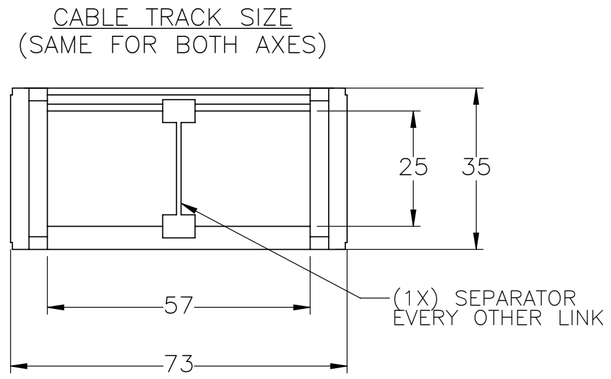
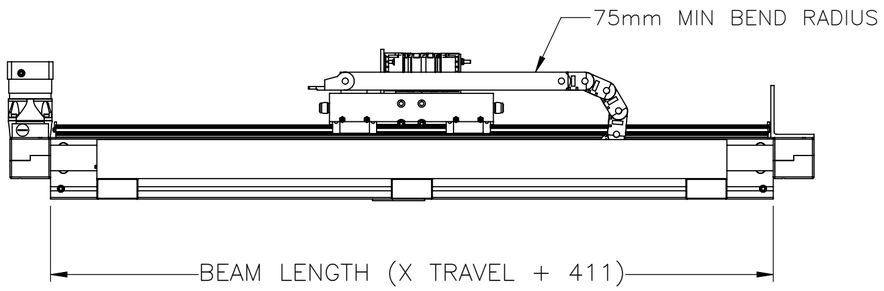
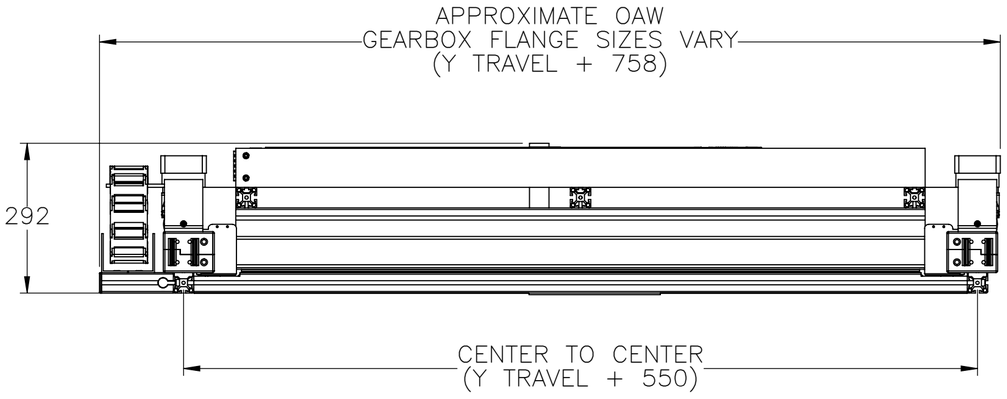
DRAWN BY: TB	DATE: 1/2/2019	MATERIAL:	TITLE:
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021	FINISH:	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER. TOLERANCES UNLESS NOTED OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'		SCALE 1:1 / SHEET SIZE C
SURFACE FINISH 63		SHEET 1 OF 6	PART NUMBER MGS–HBG–50–X–X–X / REV 00
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION			

GANTRY FOOTPRINT









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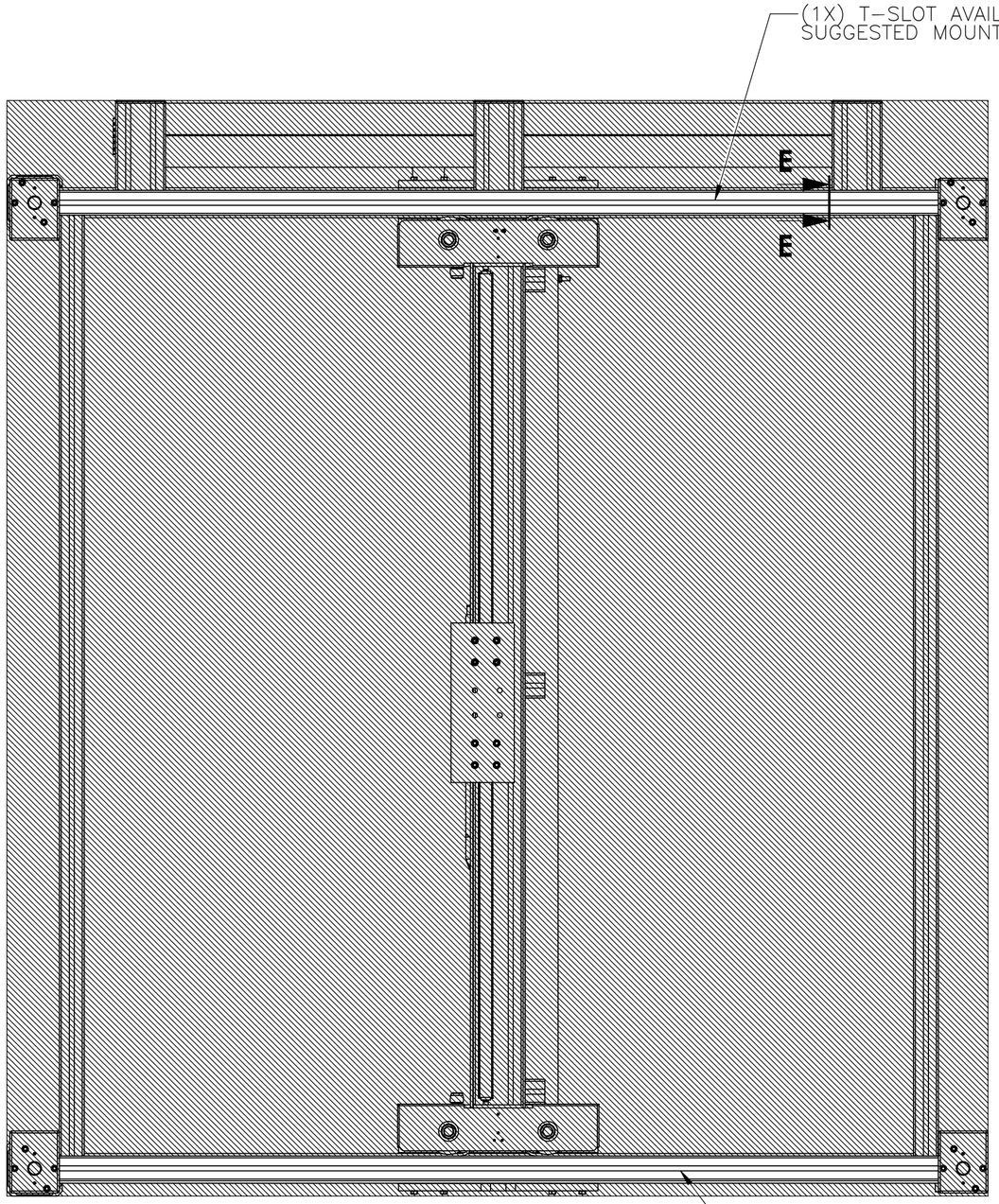
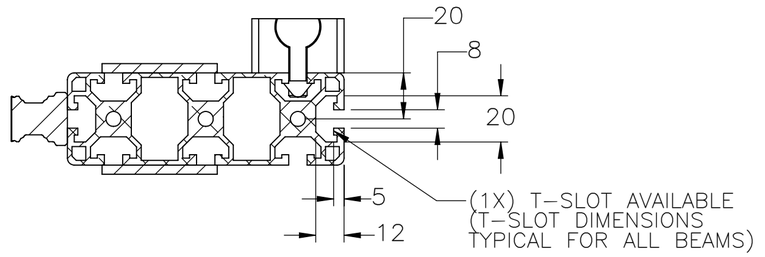
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021		
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER; TOLERANCES UNLESS NOTED OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'	FINISH:	
SURFACE FINISH 63			SCALE 1:1 / SHEET SIZE C
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING		SHEET 2 OF 6	PART NUMBER MGS-HBG-50-X-X-X / REV 00
THIRD ANGLE PROJECTION			

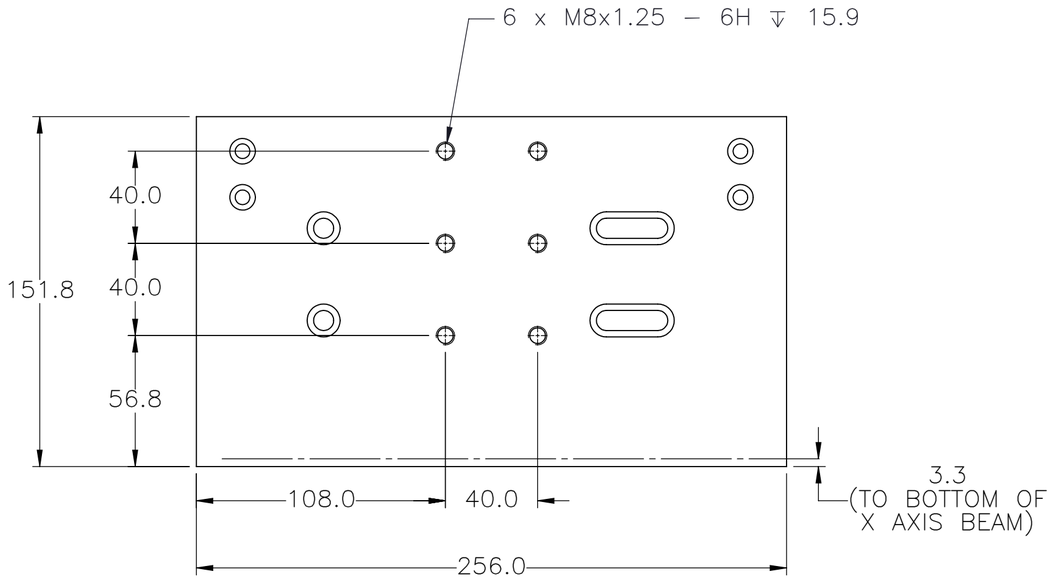
GANTRY MOUNTING FEATURES



*BOTTOM VIEW



SECTION E-E



CART MOUNTING FEATURES

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DRAWN BY: TB	DATE: 1/2/2019	MATERIAL:	TITLE:
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021	FINISH:	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETER. 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

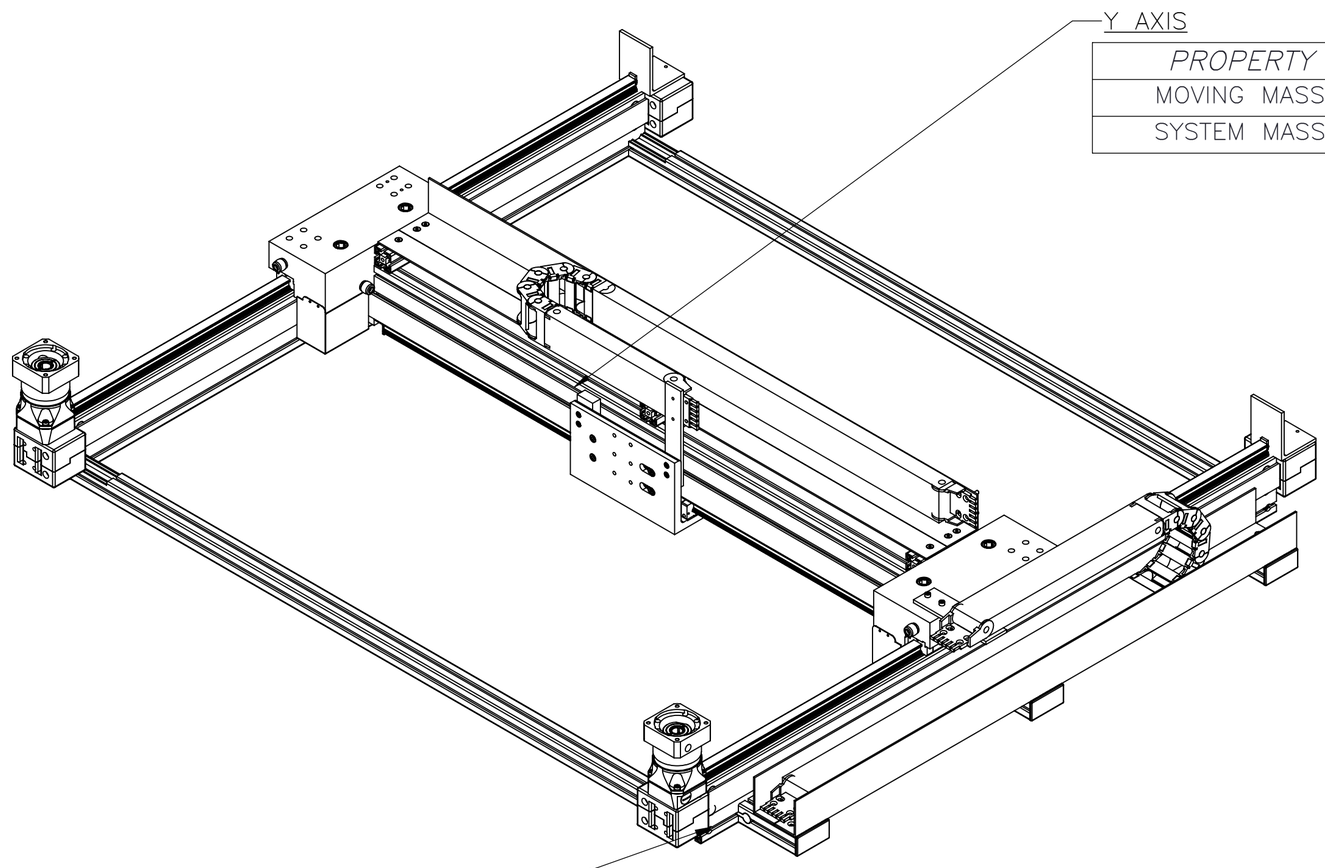
SCALE 1:1	SHEET SIZE C

SHEET	PART NUMBER	REV
3 OF 6	MGS-HBG-50-X-X-X	00

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	9.887kg(+.023kg/25mm)
SYSTEM MASS	45.101kg(+.271kg/25mm)

PROPERTY	*BASE VALUE (T=250mm)*
*MOVING MASS	2.296kg(+.023kg/25mm)
PULLEY PITCH ∅	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–084	2.3kg
	MPG–114	5.8kg
	MRG–084	5.6kg
	MRG–114	15.0kg

TOTAL BELT MASS	(X TRAVEL x .00136) + (Y TRAVEL x .00068) + 1.05 = kg
TOTAL SYSTEM MASS	(X TRAVEL x .0171) + (Y TRAVEL x .0263) + 63.43 = kg

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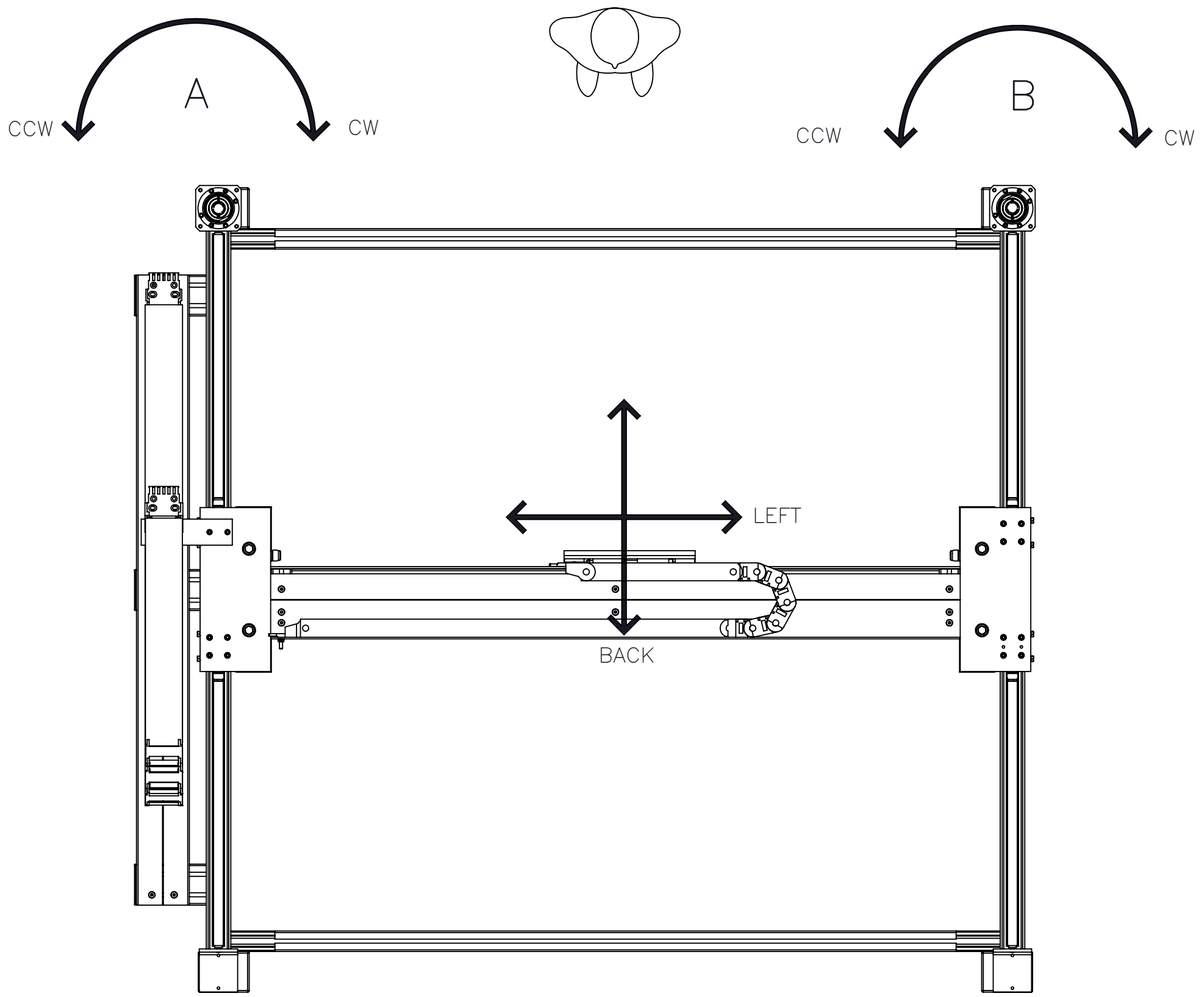
DRAWN BY: TB	DATE: 1/2/2019	MATERIAL:	TITLE:
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021	FINISH:	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILIMETERS; TOLERANCES UNLESS NOTED OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'		SCALE 1:1 / SHEET SIZE C
SURFACE FINISH 63		SHEET: 4 OF 6	PART NUMBER: MGS–HBG–50–X–X–X
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING			REV: 00
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

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DRAWN BY: TB	DATE: 1/2/2019	MATERIAL:	TITLE: MACRON H–BOT GANTRY
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021	FINISH:	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILIMETERS; TOLERANCES UNLESS NOTED OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'		SCALE 1:1 | SHEET SIZE C
SURFACE FINISH 63		SHEET 5 OF 6	PART NUMBER MGS–HBG–50–X–X–X | REV
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING			
THIRD ANGLE PROJECTION			

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

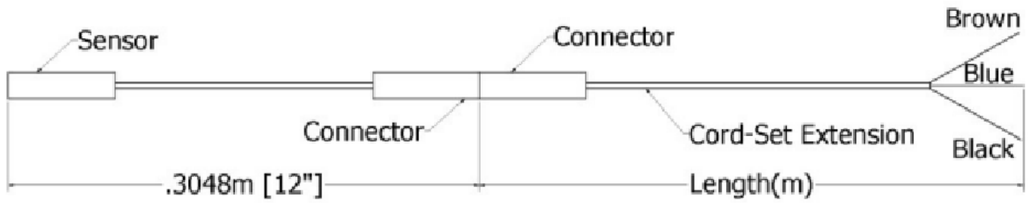
Part Number Configuration

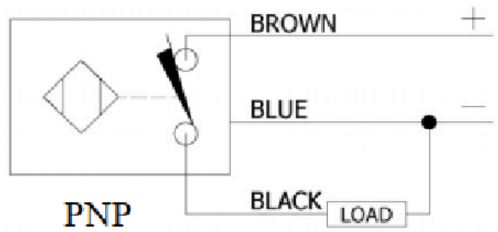
244-_ _ _-_ _-_ _

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

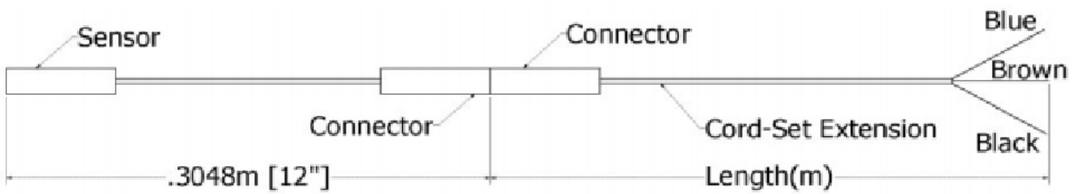
PNP Diagrams

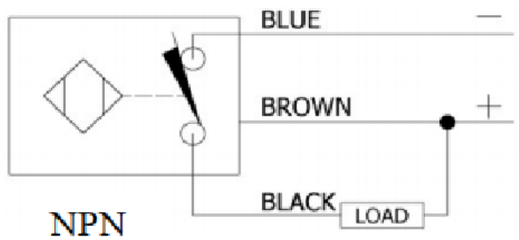




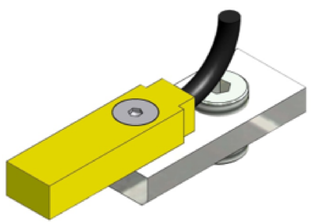
PNP

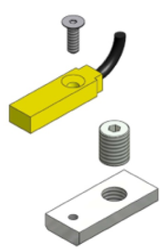
NPN Diagrams





NPN





KIT INCLUDES – SENSOR, CORDSET EXTENSION, AND MOUNTING HARDWARE

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DRAWN BY: JA	DATE: 1/2/2019	MATERIAL:	TITLE: T–SLOT SENSOR KIT
CHECKED BY:	DATE: DD/MM/YYYY		
LAST SAVED BY: TH	DATE: 4/16/2021	FINISH:	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES UNLESS NOTED OTHERWISE:	.X ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'		SCALE 1:1 / SHEET SIZE C
SURFACE FINISH 63		SHEET 6 OF 6	PART NUMBER SENSOR CALL–OUT / REV
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING			
THIRD ANGLE PROJECTION			