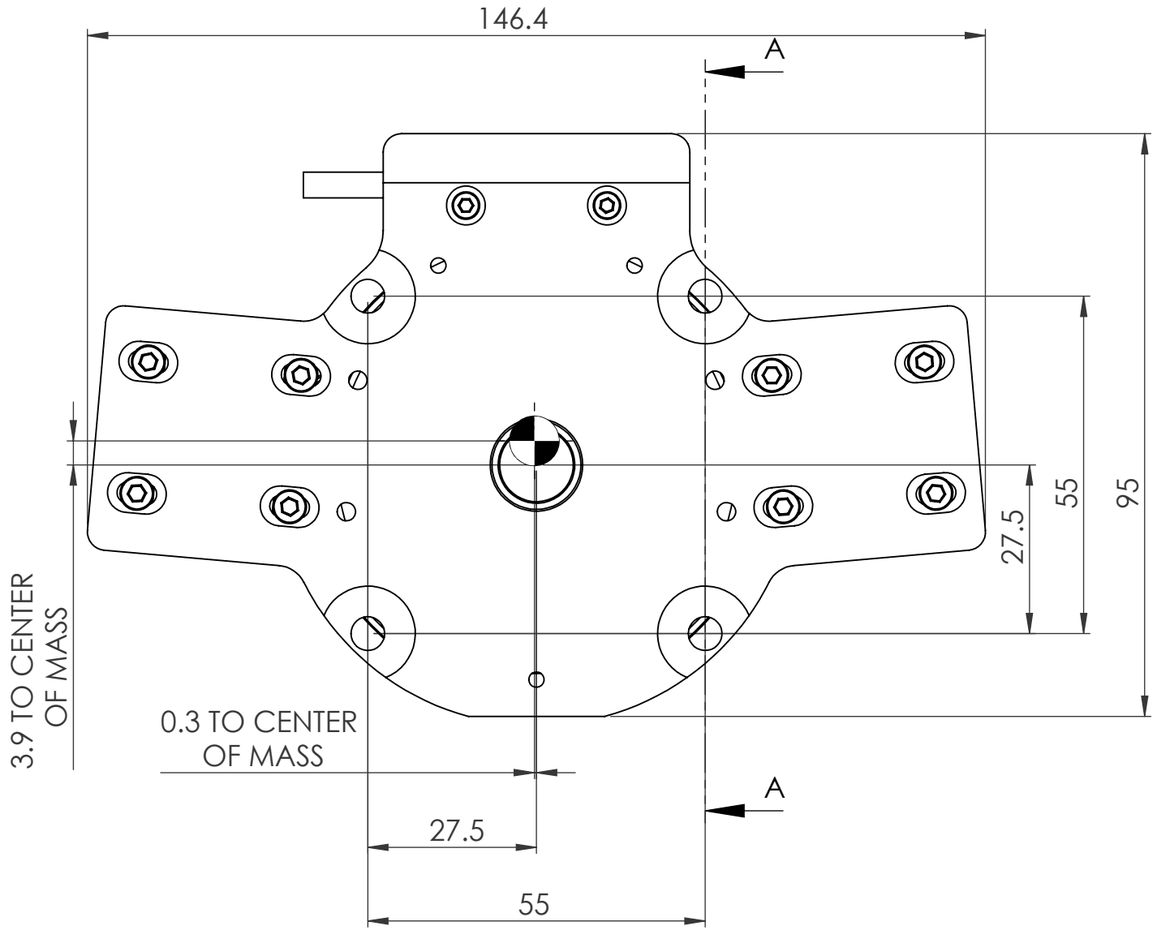
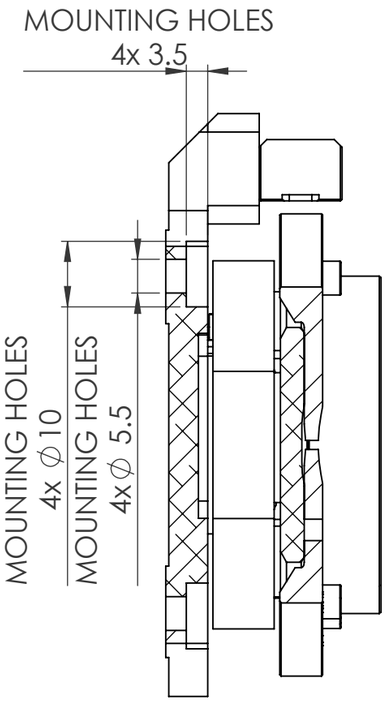
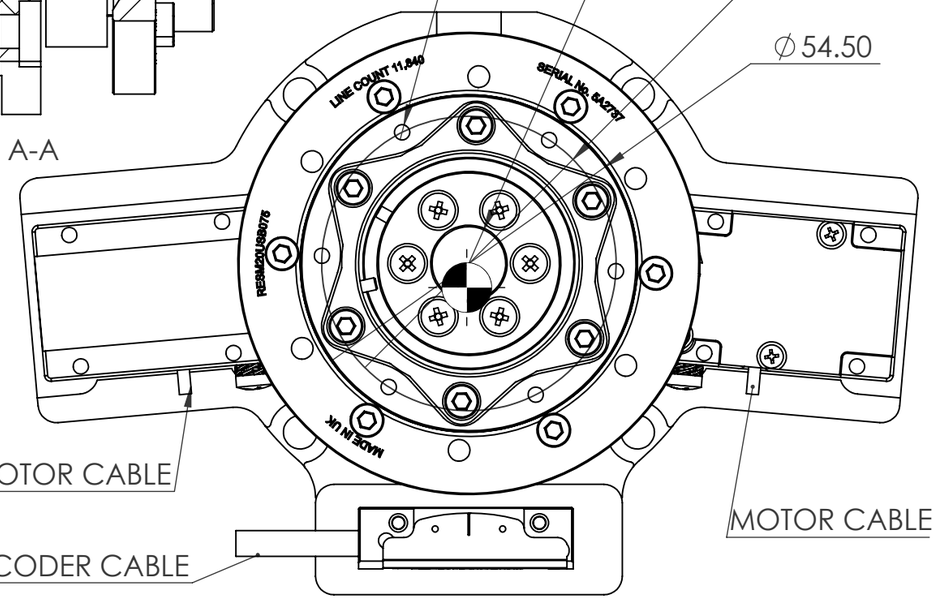
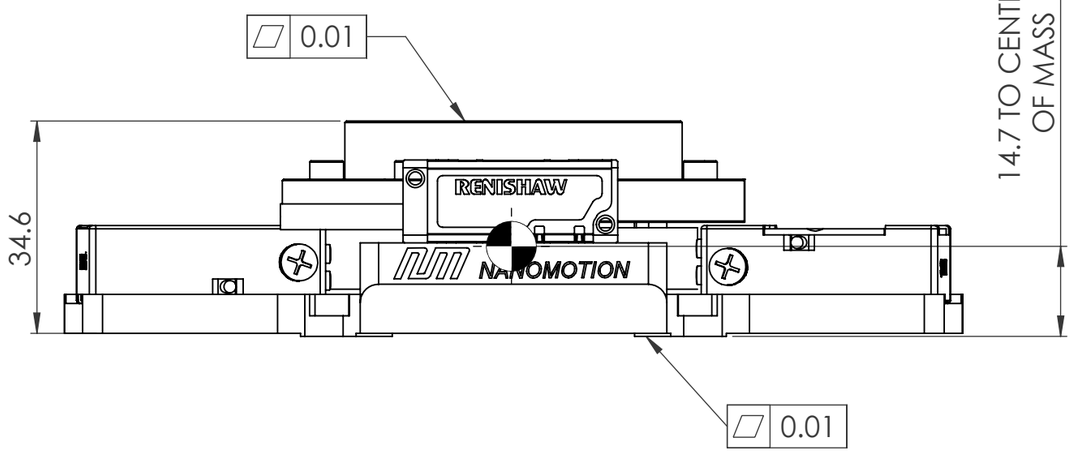
REVISIONS				
ECO	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE		





SECTION A-A





MATERIAL:

FINISH:

ALL DIMENSIONS UNIT: mm

SURFACE ROUGHNESS: N7

FIRST ANGLE PROJECTION

	NAME	SIGNATURE	DATE
DESIGNED	Andy S.		07/07/2020
CHECKED	Amos Y.		07/07/2020
APPROVED	Tuvia		07/07/2020

GENERAL TOLERANCES ACCORDING TO ISO 2768-fH REFERENCE TABLE

NOMINAL MEASURE(mm) OVER	MAX	TOLERANCE
0	6	±0.1*
6	30	±0.1
30	120	±0.15
120	400	±0.2
ANGULAR		±1° *

*TOLERANCES DIFFER FROM ISO 2768-fH

NANOMOTION
A Johnson Electric Company

PROJECT: FBR ICD

PART NAME: **ICD, FR STAGE,60MM, 360° 5.0 ARC/SEC**

PART NUMBER: **FR0060360-129**

REV. **A**

SCALE 1:1

DWG. SIZE A3

SHEET 1 OF 2

TECHNICAL SPECIFICATIONS:

Mechanical Design Characteristics	
Stage Plate Structure	Aluminum -Black Anodize
Motor	Piezo Electric, Ultrasonic Standing Wave 2xHR2
Rotary Bearings	Precision crossed roller
Encoder	Linear optical scale with 20µm signal period and 05 arc sec resolution, with home reference mark and electrical limits
Cable Lengths	3m
MTBF	30,000 hours
Stage Mass (gr)	581
Moving Mass (gr)	268
Moving Inertia (gr·m²)	0.102

Performance Specifications	
Travel Range (mm)	nx360
Encoder Resolution (arcSec)	5 standard; (0.5 optional)
Maximum Angular Velocity (rad/sec)	8.3
Flatness (µm)	+/- 5
Load Inertia Capacity (kg·m²)	0.0035
Load Capacity (Moment) (kg)	2
Dynamic Stall Moment (Nm)	0.96
Stage Stiffness (Nm/µrad)	0.0032

MOTOR CONECTOR- 9 pin D-type female

Pin	Function	Description
1	GND	System ground
2	N.C.	With AB1A Driver - Phase
3	Motor-Up	White wire - High voltage input
4	Motor-Common	Black wire - High Voltage input for AB1A, GND for AB5 AB2 and AB4 drivers as well as XCD Controller/Drivers
5	Motor-Down	Red wire - High voltage input
6	Motor-Connected Safety input	Short pin 6 to pin 1 - enables Driver. Open on pin 6 - disables the Driver.
7	GND	System ground - Connected to connector hood
8	N.C.	Not connected
9	N.C.	Not connected

ENCODER CONNECTOR- D-Type 15 pin, MALE

Pin #	Pin Name	Function
7,9	5V	Power
2,9	0V	
14	A+	Incremental signals
6	A-	
13	B+	
5	B-	
12	Z+/Q-	Reference mark / Index
4	Z-/Q+	
15	Shield	Inner shield
Case		Outer shield
1,3	N.C.	Not connected
10-11	N.C.	Not connected

NANOMOTION
A Johnson Electric Company

PART NUMBER:	REV.
FR0060360-129	A

SCALE 1:2 | DWG. SIZE A3 | SHEET 2 OF 2