

3000 SERIES SUBSEA LINEAR ACTUATOR

GENERAL SPECIFICATIONS:

- CONTINUOUS OUTPUT FORCE: 500 LB
- CONTINUOUS OUTPUT SPEED: 2.0 IN/S (AT 24 VDC)
- PEAK OUTPUT FORCE: 800 LB
- STROKE LENGTH:
 - 2, 4, 6, 8, OR 10 INCH, WITH INTERNAL COMPENSATOR
 - CUSTOM UNITS AVAILABLE WITH LONGER STROKE LENGTHS. REQUIRES EXTERNAL COMPENSATOR. CONTACT 2G FOR DETAILS.
- INTEGRATED SERVO CONTROL AND MOTOR DRIVER
- INTERNAL PRESSURE COMPENSATOR
- OPTIONAL SPRING-ENGAGED, POWER OFF BRAKE^[1]
- AVAILABLE WITH STANDARD BALL SCREW DRIVE OR OPTIONAL SELF-LOCKING ACME SCREW DRIVE^[2]
- STANDARD CONNECTOR: 9-PIN LOW-PROFILE SUBCONN LPBH9M
- COMMUNICATION PHYSICAL LAYER OPTIONS: RS-232, RS-485, CAN, ETHERNET, ANALOG VOLTAGE CONTROL, AND ANALOG CURRENT CONTROL

OPERATING ENVIRONMENT:

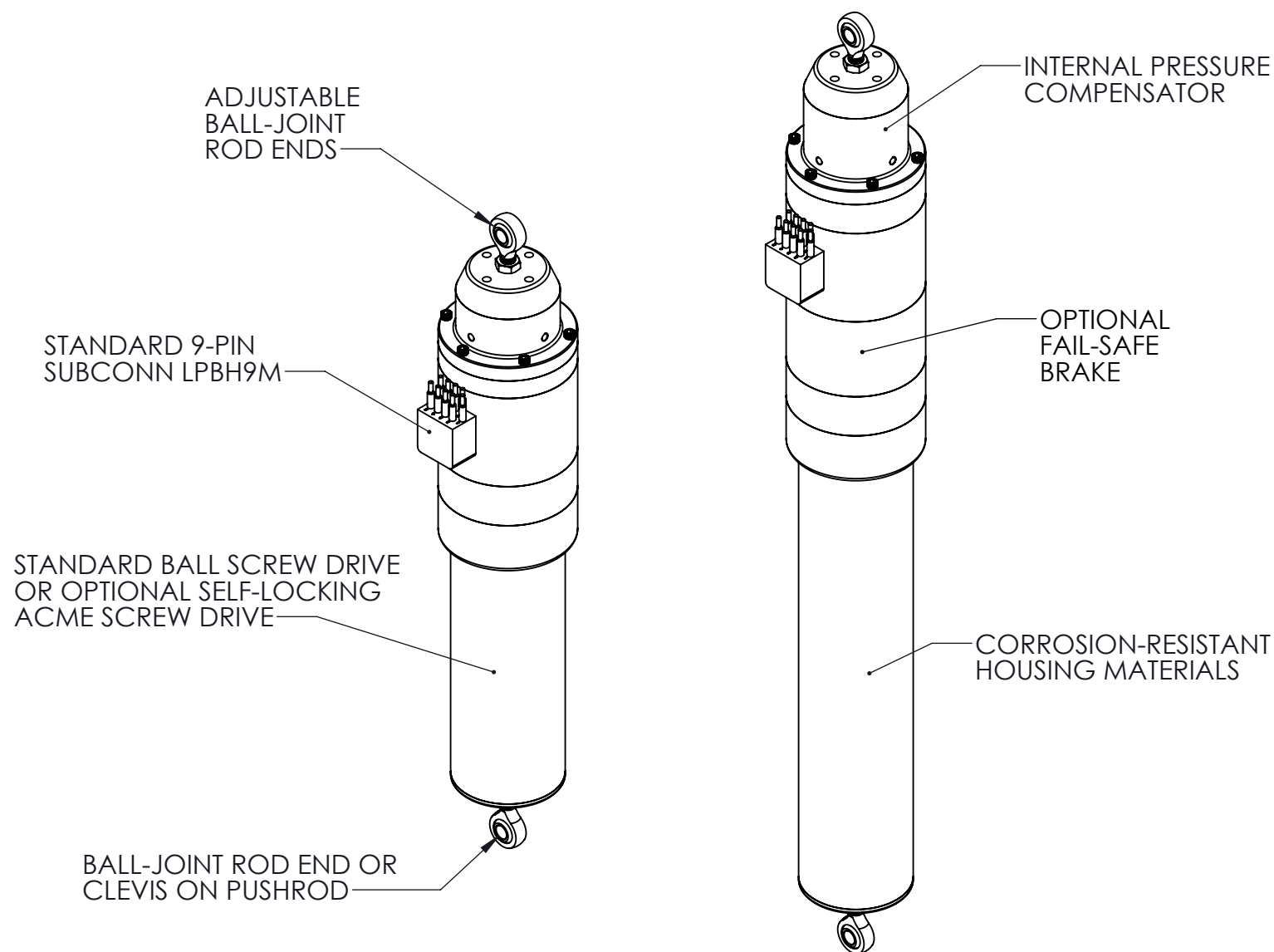
- DESIGNED FOR MISSION-CRITICAL SUBSEA USE
- PRESSURE-BALANCED OIL-FILLED HOUSING
- CORROSION RESISTANT HOUSING MATERIAL OPTIONS
 - STAINLESSS STEEL, PASSIVATED
 - ALUMINUM, HARDCOAT ANODIZED
 - TITANIUM
- OPERATIONAL DEPTH RATING: >6000 METERS SEAWATER
- DESIGN PRESSURE: 10,000 PSI
- OPERATING TEMPERATURE RANGE: -20°C TO 65°C
- STORAGE TEMPERATURE RANGE: -30°C TO 85°C
- OPERATING VOLTAGE:
 - STANDARD: 24 VDC NOMINAL (12-55 VDC RANGE)
 - CUSTOM UNITS AVAILABLE WITH OPERATING VOLTAGES UP TO 400V. DIMENSIONS MAY BE IMPACTED. CONTACT 2G FOR DETAILS.

ONBOARD MOTOR DRIVER AND SERVO SYSTEM:


- CLOSED-LOOP POSITION CONTROL WITH PID TUNING
- CONFIGURABLE LIMITS FOR CURRENT, POWER, VELOCITY, AND ACCELERATION
- CONFIGURABLE MOTION PROFILE GENERATOR
- CONTACTLESS NON-WEARING ABSOLUTE POSITION SENSOR
- DOES NOT REQUIRE HOMING
- 0.010" ACCURACY, 0.001" RESOLUTION
- COMMS PROTOCOL: MODBUS & 2G PACKETS
- DEFAULT BAUD RATE: 115200

[1] BRAKE OPTION ADDS LENGTH. CONTACT 2G FOR DIMENSIONS OF MODELS NOT SHOWN HERE.

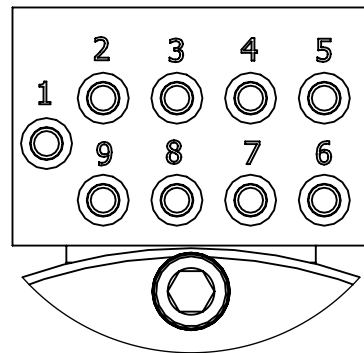
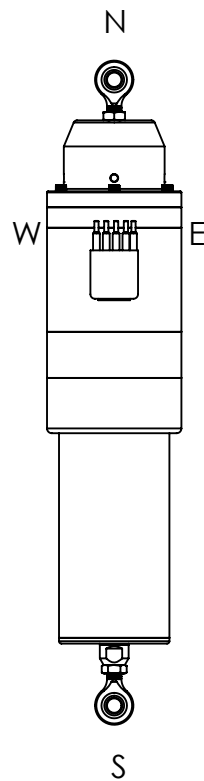
[2] ACME SCREW DRIVE REDUCES FORCE AND SPEED OUTPUT. CONTACT 2G FOR SPECIFICATIONS.



MODELS SHOWN:
3000LS-SS04DDN-9S01 (4 INCH STROKE)
3000LB-AL10DDN-9S01 (10 INCH STROKE WITH BRAKE)

MATERIAL:	UNLESS OTHERWISE SPECIFIED: - DIMENSIONS ARE IN INCHES - DIMENSIONS IN [] ARE IN mm - TOLERANCES: DECIMALS: .X ±.05 .XX ±.015 .XXX ±.005 ANGULAR: MACHINED: ±0.5° OTHER: ±2° - THREAD DEPTHS ON TAPPED HOLES ARE MINIMUMS - TAP DRILL DIAMETERS ARE REFERENCE - MAX FILLET RADIUS ON INSIDE SHARP CORNERS: 0.005 - BREAK ALL SHARP EDGES 0.010 MAX AND REMOVE BURRS - SURFACE FINISH: ≤63 Ra (µin)	INITIALS	DATE	 2G ENGINEERING WWW.2G-ENG.COM 608-825-4799	
MATERIAL COMMENTS:		DRAWN	DJF		08/24/2023
FINISH:		APPROVED	DJF		08/25/2023
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF 2G ENGINEERING. ANY DISTRIBUTION OR REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF 2G ENGINEERING IS PROHIBITED.		DESCRIPTION: 3000 SERIES LINEAR ACTUATOR	
		SIZE B	THIRD ANGLE PROJECTION	PART NUMBER: 3000L	
		INTERPRET GEOMETRIC DIMENSIONING & TOLERANCING PER ASME Y14.5-2009		PART REVISION: D	
				DOCUMENT REV. 1 SCALE: 1:4 SHEET 1 OF 7	

SERIES		BRAKE		HOUSING MATERIAL		STROKE LENGTH		PUSHROD MOUNT		FIXED END MOUNT		CONNECTOR ORIENTATION		COMMUNICATION		VOLTAGE	
3000L	SUBSEA	S	STANDARD (NO BRAKE)	SS	STAINLESS STEEL, PASSIVATED	02	2 INCH	D	Ø 3/8" ROD END	D	Ø 3/8" ROD END	N	TOWARD FIXED END	9S	RS-232 AND RS-485	01	24 VDC NOMINAL, 12-55VDC OPERATIONAL RANGE
		B	WITH FAIL-SAFE BRAKE	AL	ALUMINUM, BLACK HARDCOAT ANODIZED	04	4 INCH	N	Ø 3/8" CLEVIS	U	NOSE MOUNT	S	TOWARD PUSHROD	9V	RS-232 AND 0-10V ANALOG VOLTAGE CONTROL	HIGHER VOLTAGES AVAILABLE, DIMENSIONS MAY CHANGE. CONTACT 2G FOR DETAILS.	
			TI	TITANIUM	06	6 INCH					E	90° CW FROM FIXED END	9A	RS-232 AND 4-20mA ANALOG CURRENT CONTROL			
					08	8 INCH					W	270° CW FROM FIXED END	9K	RS-232 AND CAN			
				10	10 INCH								9E	ETHERNET			



PIN	9S	9V	9A	9K	9E
1	VIN -	VIN -	VIN -	VIN -	VIN -
2	VIN -	VIN -	VIN -	VIN -	VIN -
3	VIN +	VIN +	VIN +	VIN +	VIN +
4	VIN +	VIN +	VIN +	VIN +	VIN +
5	COMMS GND	COMMS GND	COMMS GND	COMMS GND	COMMS GND
6	RS-232 TX	RS-232 TX	RS-232 TX	RS-232 TX	ETHERNET TX+
7	RS-232 RX	RS-232 RX	RS-232 RX	RS-232 RX	ETHERNET TX-
8	RS-485 -	0-10V ANALOG INPUT	4-20 mA ANALOG INPUT	CAN LO	ETHERNET RX+
9	RS-485 +	0-10V ANALOG OUTPUT	4-20mA ANALOG OUTPUT	CAN HI	ETHERNET RX-

2G ENGINEERING CAN CUSTOMIZE ANY ACTUATOR TO SUIT YOUR APPLICATION. CERTAIN OPTIONS MAY IMPACT DIMENSIONS, PERFORMANCE, AND LEAD TIME. CONTACT 2G TO CONFIRM SPECIFICATIONS FOR YOUR APPLICATION.

CONNECTOR ORIENTATION

MODEL SHOWN: 3000LS-SS02DDN-9S01
CONNECTOR ORIENTATION: N (TOWARD FIXED END)

2G ENGINEERING, LLC
2752 CAPITOL DR., #103
SUN PRAIRIE, WI 53590

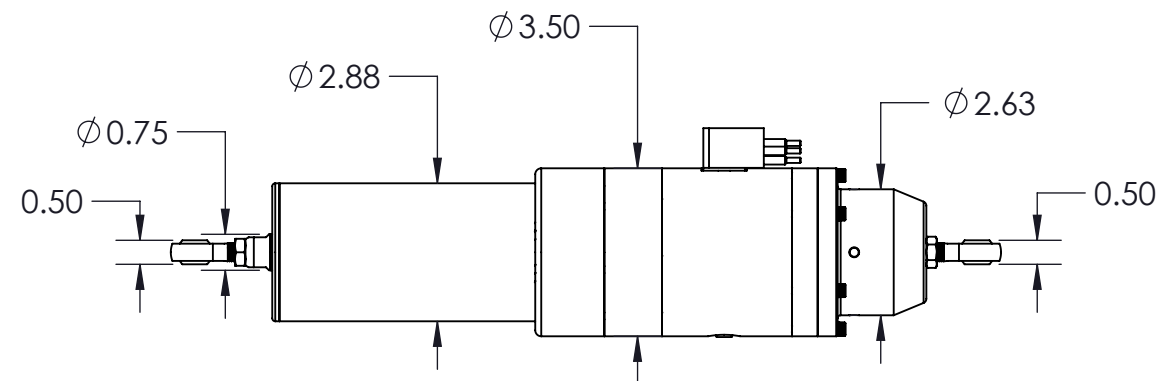
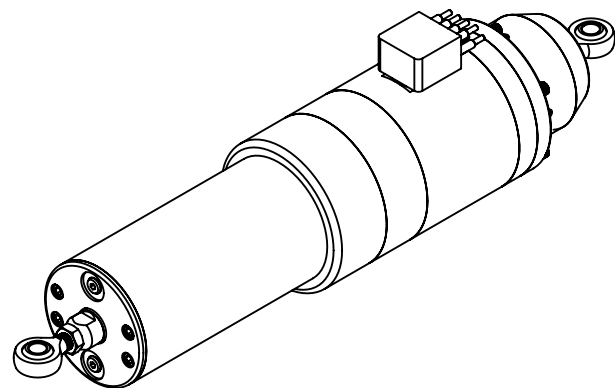
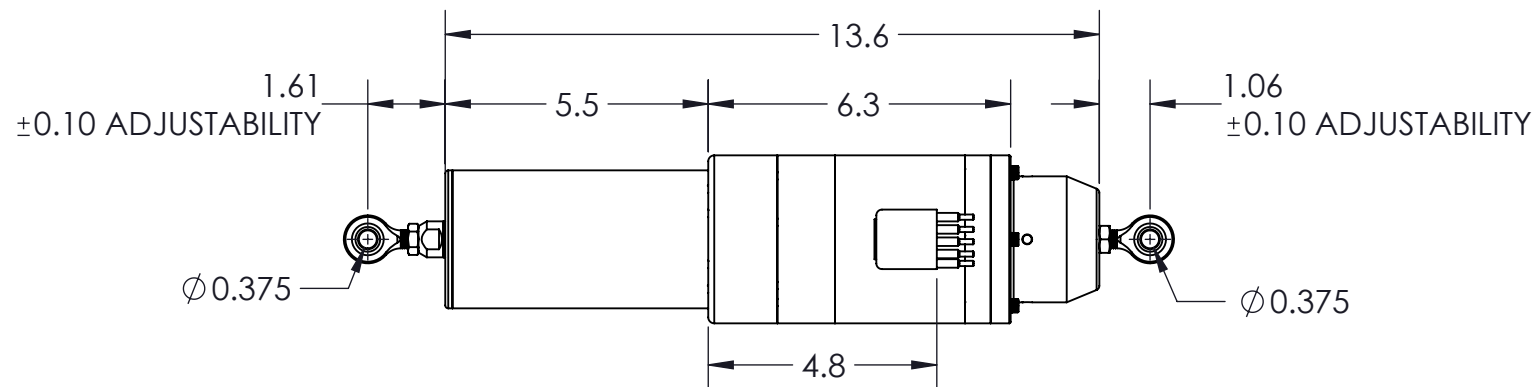
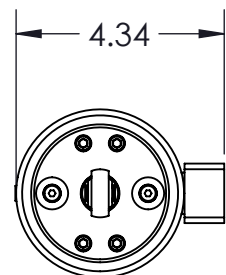
(608) 825-4799

SALES@2G-ENG.COM

WWW.2G-ENG.COM

[CLICK HERE FOR USER MANUAL AND COMMUNICATION PROTOCOL INFORMATION.](#)

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		DOCUMENT REV. 1		SCALE: 1:5 SHEET 3 OF 7	



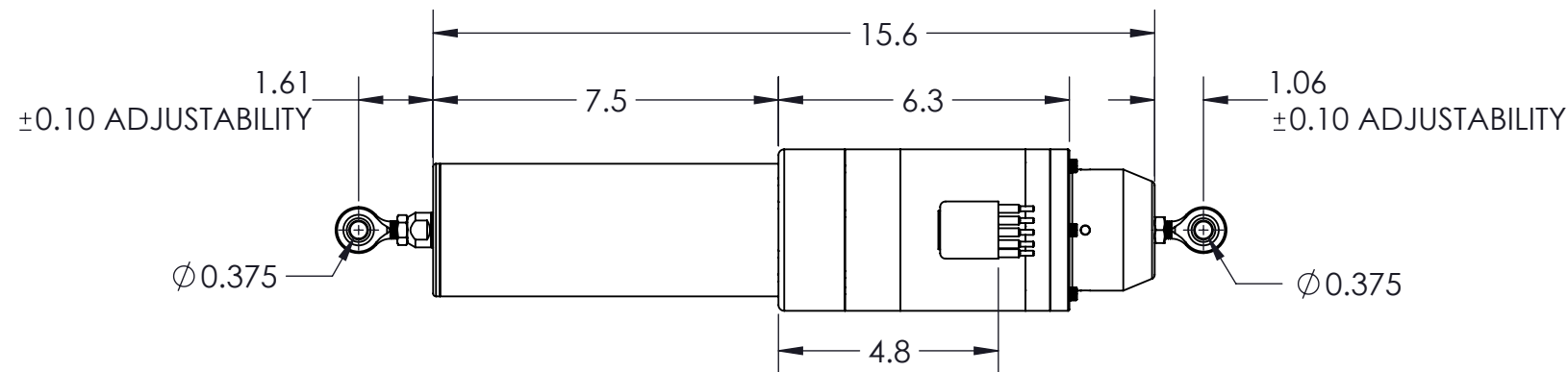
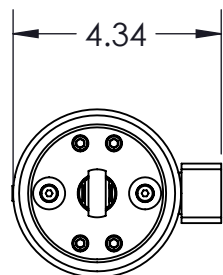
MODEL SHOWN: 3000LS-SS02DDN-9S01

- 2 INCH STROKE
- 3/8" ROD ENDS

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				DOCUMENT REV. 1 SCALE: 1:4 SHEET 4 OF 7

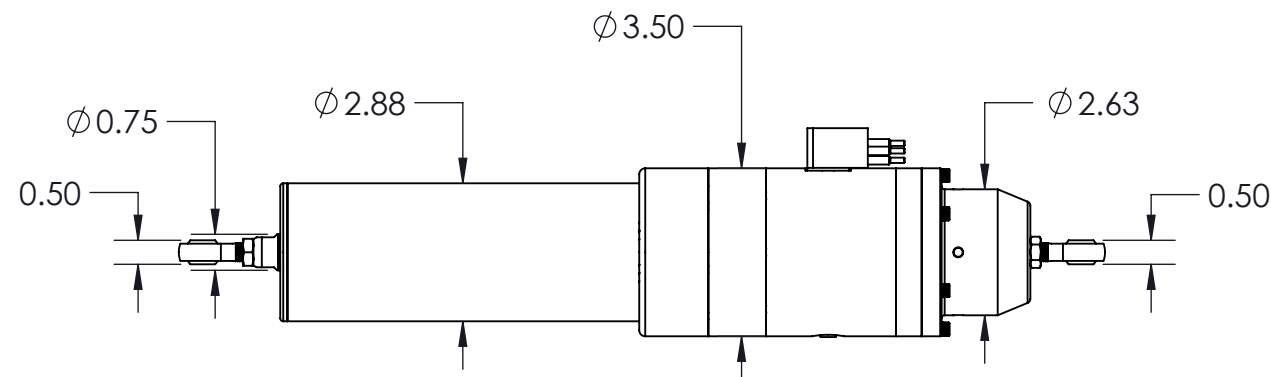
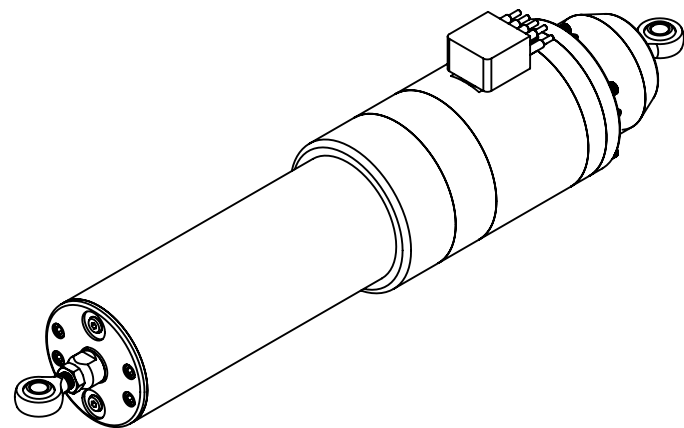
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C

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B

B

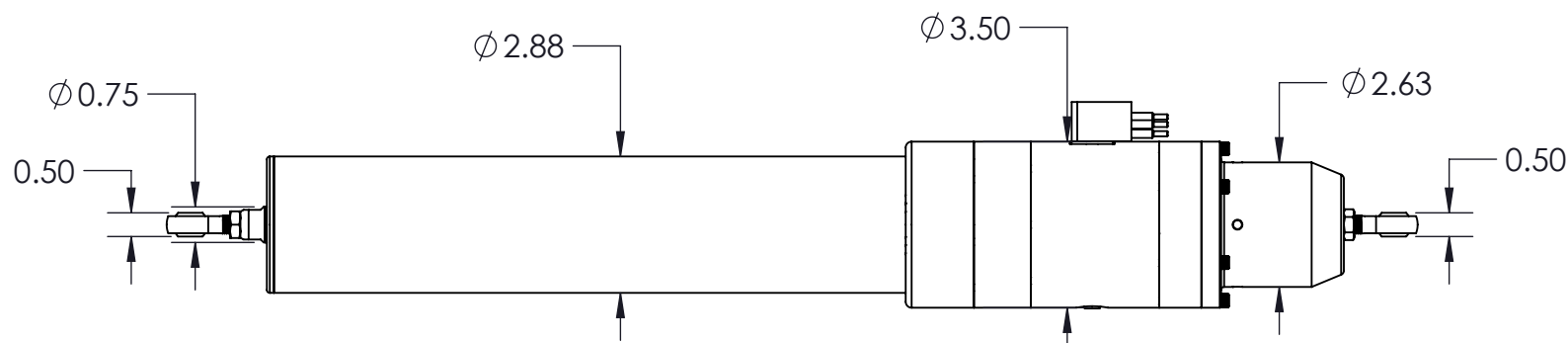
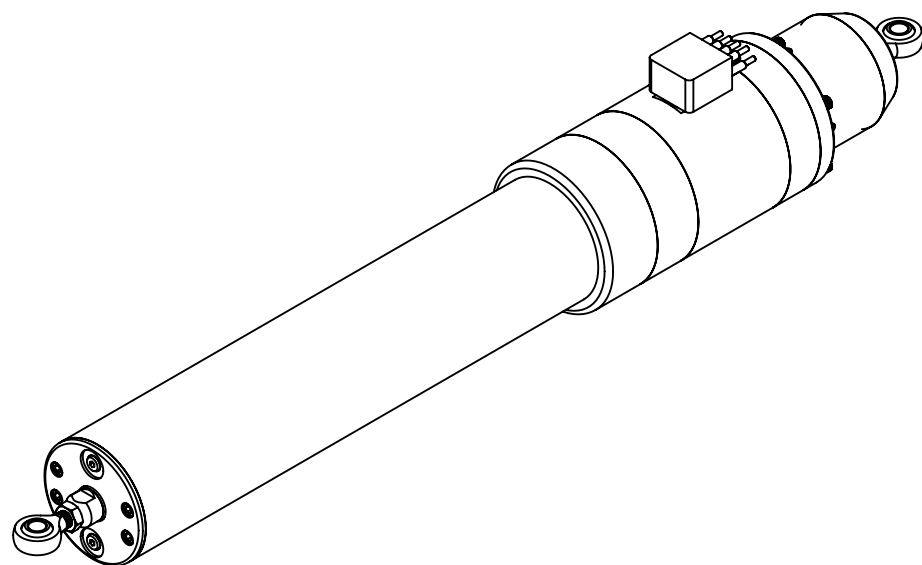
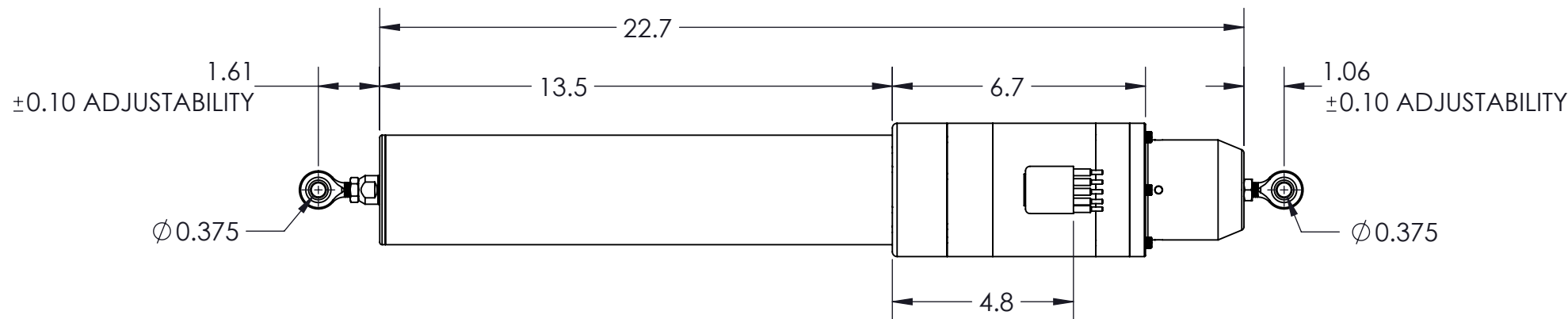
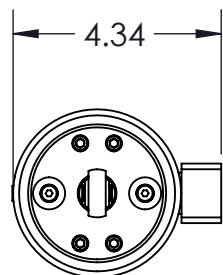
MODEL SHOWN: 3000LS-SS04DDN-9S01

- 4 INCH STROKE
- 3/8" ROD ENDS

A

A

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		DOCUMENT REV.	1	SCALE: 1:4
				SHEET 5 OF 7



MODEL SHOWN: 3000LS-AL10DDN-9S01

- 10 INCH STROKE
- 3/8" ROD ENDS

MATERIAL:

UNLESS OTHERWISE SPECIFIED:

- DIMENSIONS ARE IN INCHES
- DIMENSIONS IN [] ARE IN mm
- TOLERANCES:

- DECIMALS:
- .X ±.05
- .XX ±.015
- .XXX ±.005

- ANGULAR:
- MACHINED: ±0.5°
- OTHER: ±2°

MATERIAL COMMENTS:

FINISH:

- THREAD DEPTHS ON TAPPED HOLES ARE MINIMUMS
- TAP DRILL DIAMETERS ARE REFERENCE
- MAX FILLET RADIUS ON INSIDE
- SHARP CORNERS: 0.005
- BREAK ALL SHARP EDGES 0.010 MAX AND REMOVE BURRS
- SURFACE FINISH: ≤63 Ra (µin)

	INITIALS	DATE
DRAWN	DJF	08/24/2023
APPROVED	DJF	08/25/2023



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DESCRIPTION:
3000 SERIES LINEAR ACTUATOR

SIZE **B** THIRD ANGLE PROJECTION

PART NUMBER:
3000L

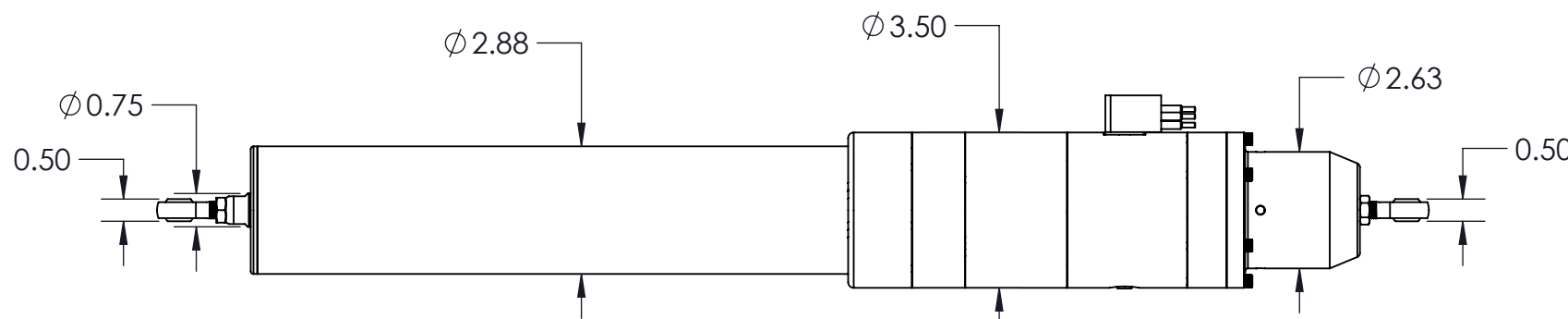
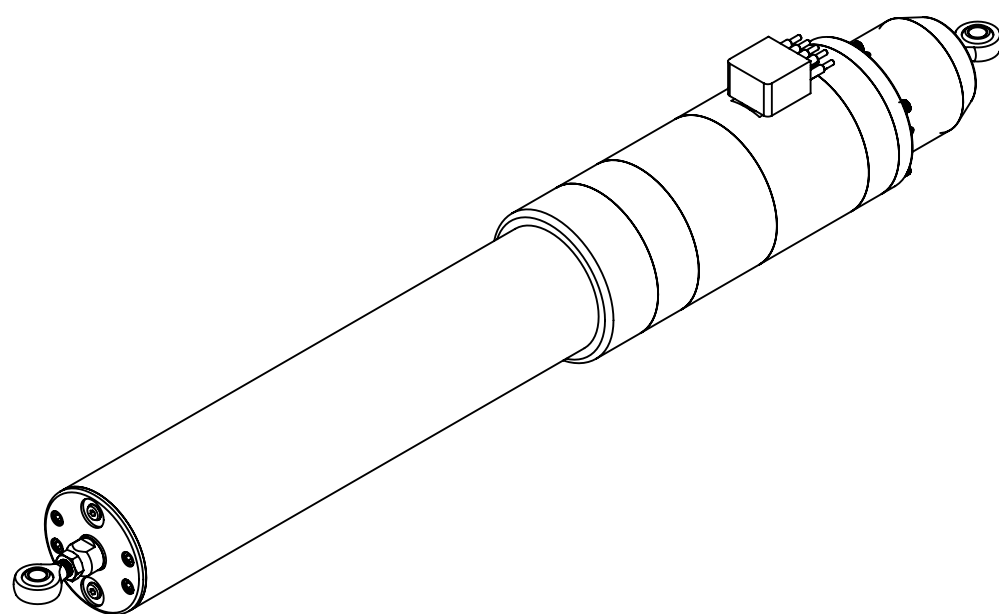
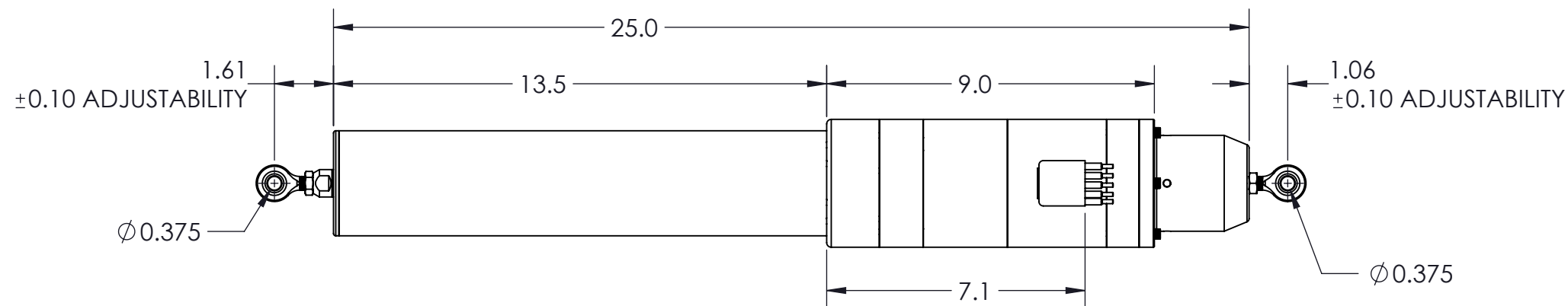
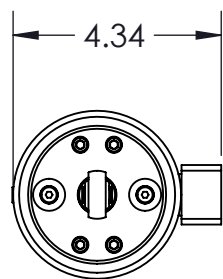
INTERPRET GEOMETRIC DIMENSIONING & TOLERANCING PER ASME Y14.5-2009

PART REVISION: **D**

DOCUMENT REV. 1

SCALE: 1:4

SHEET 6 OF 7



MODEL SHOWN: 3000LB-AL10DDN-9S01

- 10 INCH STROKE
- 3/8" ROD ENDS
- FAIL-SAFE BRAKE OPTION

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			SCALE:	1:4
				SHEET 7 OF 7