

(36.065)
OVERALL

(35.422)
OVERALL

(58.525)
OVERALL HEIGHT

Ø 12.000
PENSTOCK INLET

48.000
STOCK DRAFT TUBE
LENGTH

STAINLESS STEEL
SCROLL CASE

STANDARD FLANGE

HIGH EFFICIENCY GENERATOR

BELT GUARD

GENERATOR MOUNT PLATE

ACCESS PORTS FOR
CLEANING

MOUNTING POINTS

STAINLESS STEEL
DRAFT TUBE

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UNLESS OTHERWISE SPECIFIED:			
DIMENSIONS ARE IN INCHES	DRAWN	NAME	DATE
TOLERANCES:	CHECKED	JH	8.25.12
ANGULAR: MACH ±1	ENG APPR.		
TWO PLACE DECIMAL ±.010	MFG APPR.		
THREE PLACE DECIMAL ±.005	COMMENTS:		
DO NOT SCALE DRAWING			
MATERIAL			
FINISH			

NAUTILUS TURBINES		
TITLE:		
CMC-MH TURBINE		
SIZE	OPERATION #	REV
B	N/A	
SCALE: 1:10	WEIGHT: 400lbs	SHEET 1 OF 5

NAUTILUS CMC TYPE TURBINE

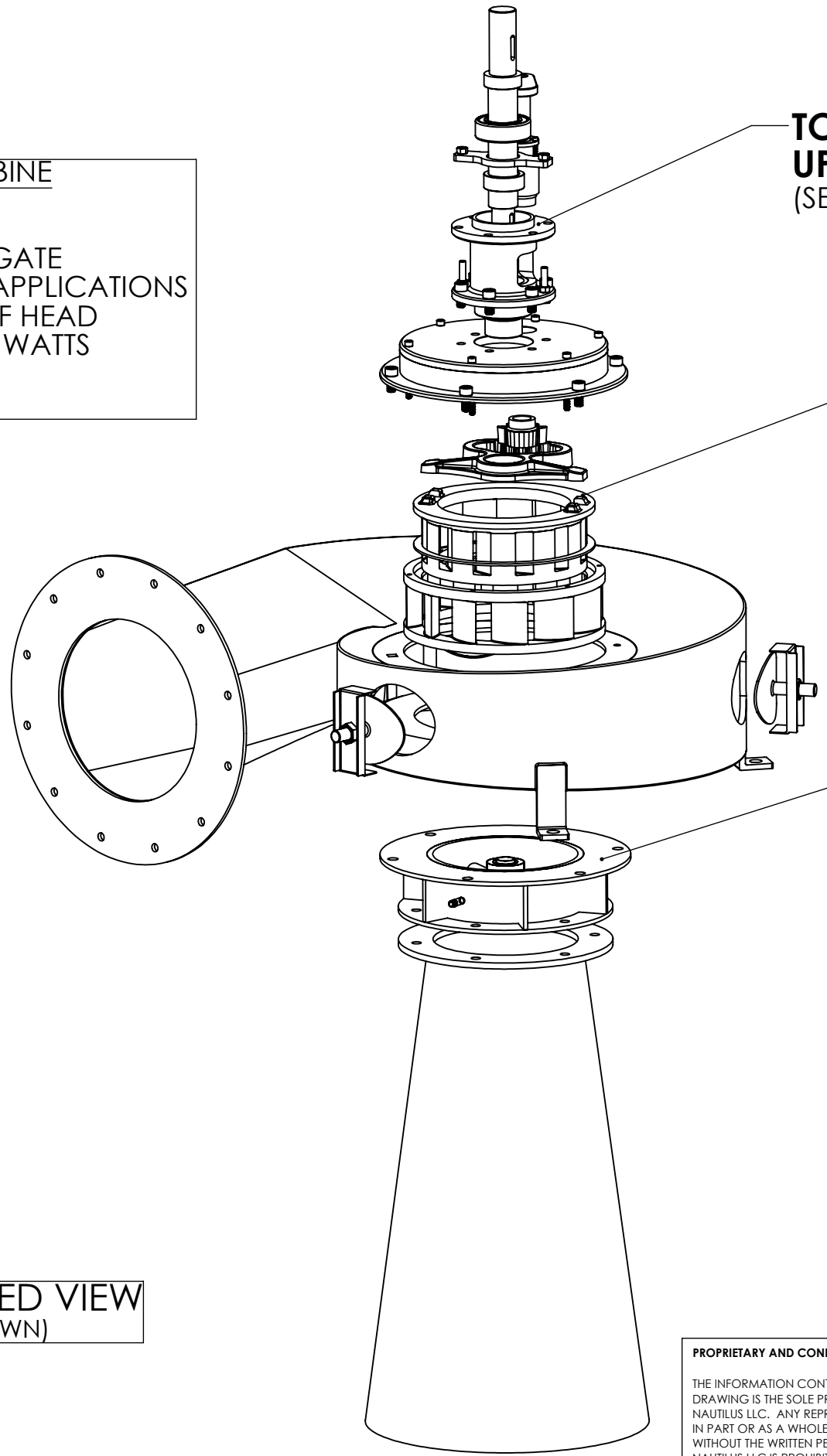
- FRANCIS STYLE RUNNER
- REGULATED CYLINDER GATE
- FOR MODERATE HEAD APPLICATIONS
 - 4 FEET TO 42 FEET OF HEAD
 - 290 WATTS TO 9900 WATTS
 - 1.2 CFS TO 3.8 CFS
 - 34 L/S TO 107 L/S

TOP COVER AND UPPER BEARING ASSEMBLY
(SEE PAGE 2)

REGISTER GATE ASSEMBLY
(SEE PAGE 3)

LOWER BEARING ASSEMBLY
(SEE PAGE 4)

CMC-MH EXPLODED VIEW
(RUNNER NOT SHOWN)



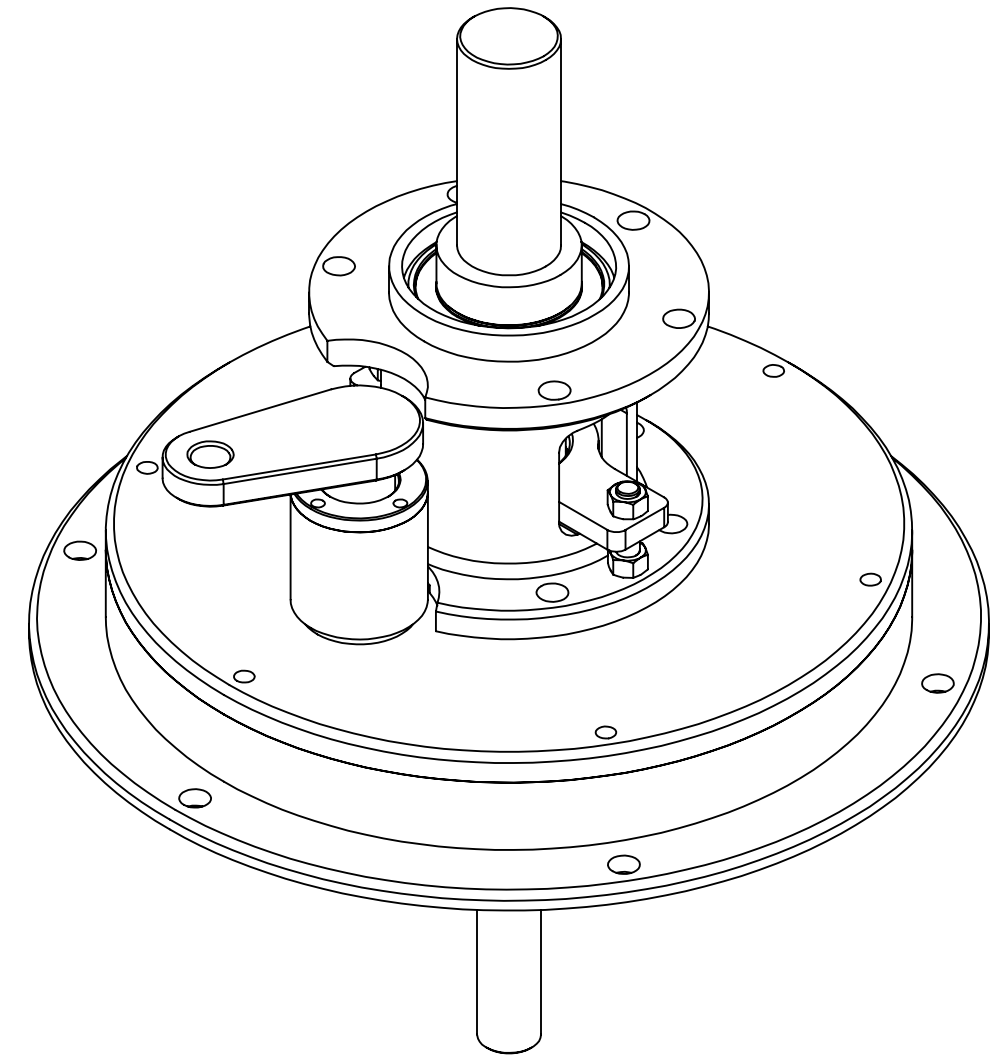
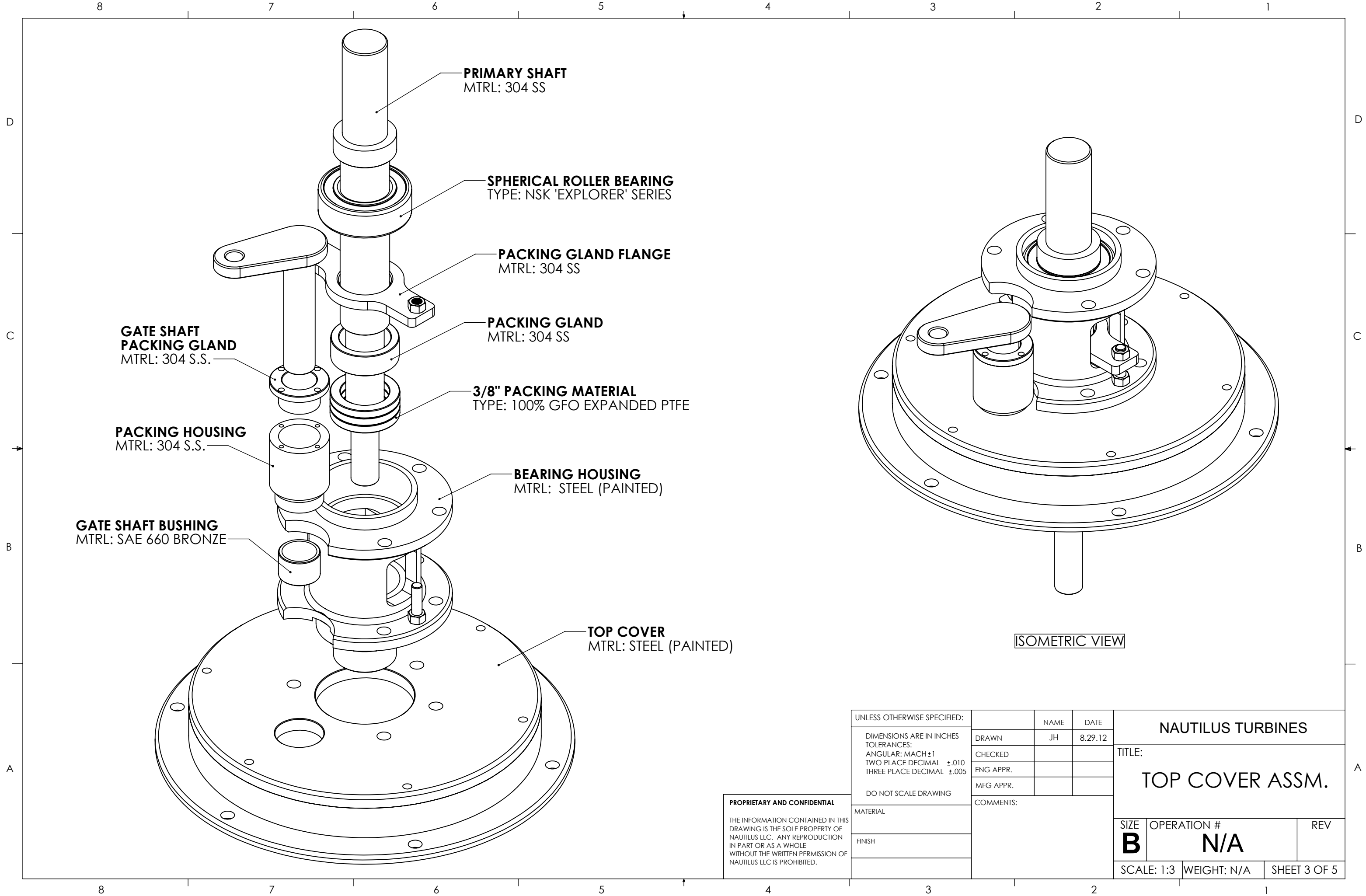
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	NAUTILUS TURBINES	
DIMENSIONS ARE IN INCHES		DRAWN	JH	TITLE:	
TOLERANCES:		CHECKED		CMC-MH TURBINE	
ANGULAR: MACH ±1		ENG APPR.		SIZE	OPERATION #
TWO PLACE DECIMAL ±.010		MFG APPR.		B	N/A
THREE PLACE DECIMAL ±.005		COMMENTS:		SCALE: 1:10	WEIGHT: N/A
DO NOT SCALE DRAWING				SHEET 2 OF 5	
MATERIAL					
FINISH					
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8 7 6 5 4 3 2 1

D
C
B
A

D
C
B
A

8 7 6 5 4 3 2 1



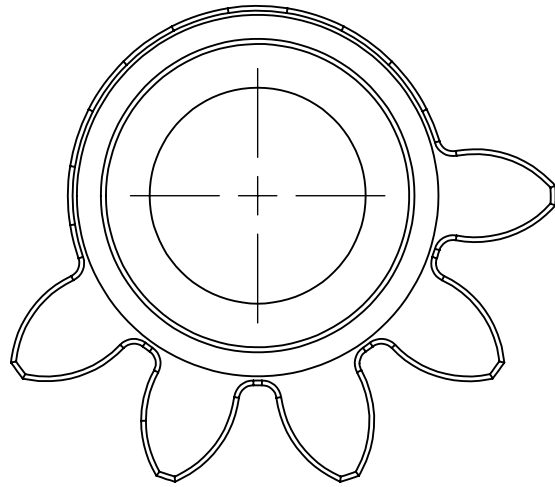
ISOMETRIC VIEW

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	NAUTILUS TURBINES TITLE: TOP COVER ASSM.	
DIMENSIONS ARE IN INCHES		DRAWN	JH		8.29.12
TOLERANCES:		CHECKED			
ANGULAR: MACH ±1		ENG APPR.			
TWO PLACE DECIMAL ±.010		MFG APPR.			
THREE PLACE DECIMAL ±.005		COMMENTS:			
DO NOT SCALE DRAWING					
MATERIAL				SIZE	
FINISH				OPERATION #	
				REV	
				B	
				N/A	
		SCALE: 1:3	WEIGHT: N/A	SHEET 3 OF 5	

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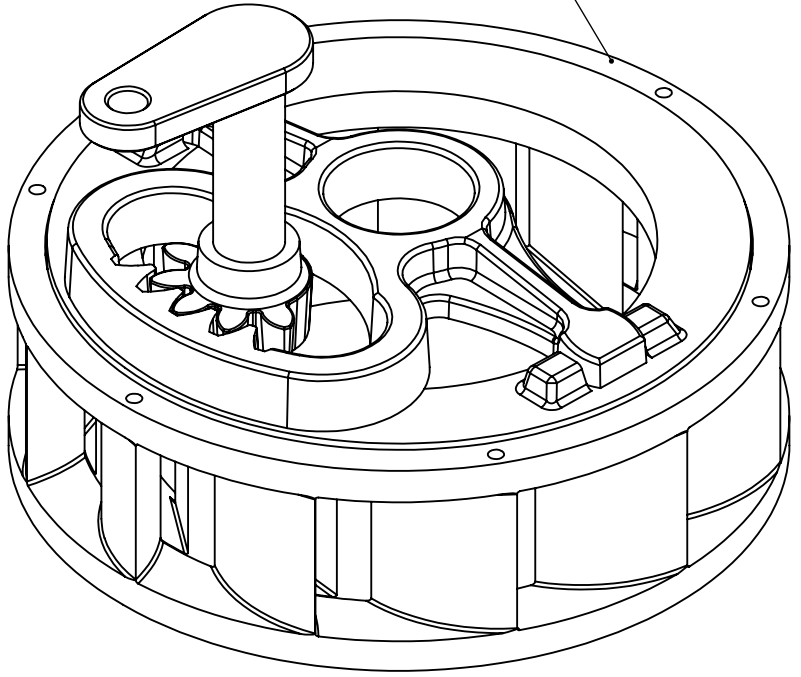
8 7 6 5 4 3 2 1



SCALE 1:1

GATE ARM COG DETAILS
 - 20° PRESSURE ANGLE
 - 4 DIAMETRAL PITCH
 - CAST BRONZE FOR STRENGTH, IMPROVED WEAR, AND CORROSION RESISTANCE

OUTER REGISTER GATE BOLTS DIRECTLY TO TOP COVER, WHICH ALLOWS FOR 'CARTRIDGE STYLE' ASSEMBLY.



ISOMETRIC VIEW

GATE ARM GEAR
 MTRL: CAST BRONZE

GATE ACTUATOR SHAFT
 MTRL: 304 S.S.

GATE ARM
 MTRL: CAST IRON

INNER REGISTER GATE
 MTRL: CAST IRON

SPACER RING
 MTRL: NAVAL BRASS

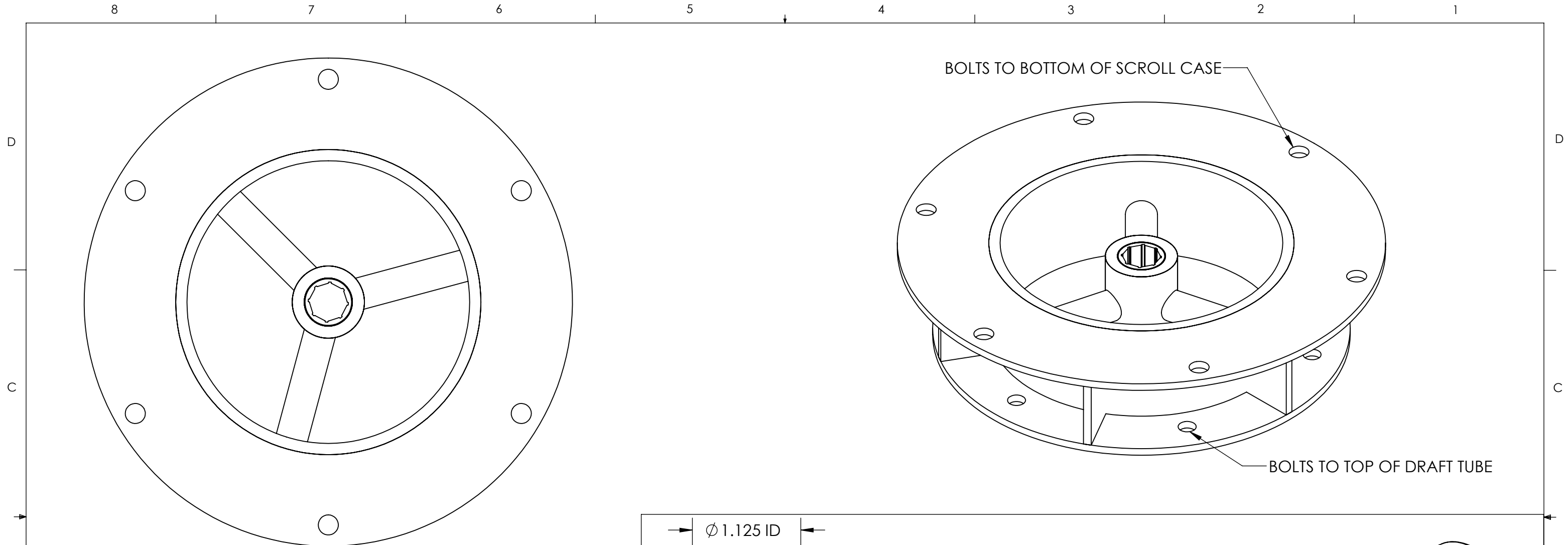
OUTER REGISTER GATE
 MTRL: CAST IRON

D
C
B
A

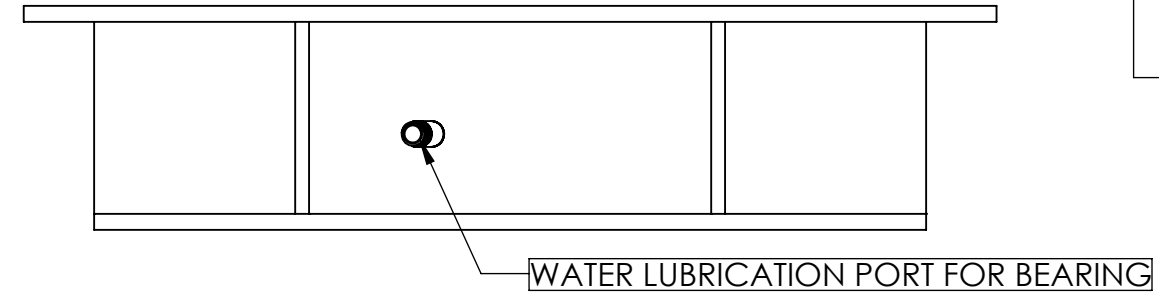
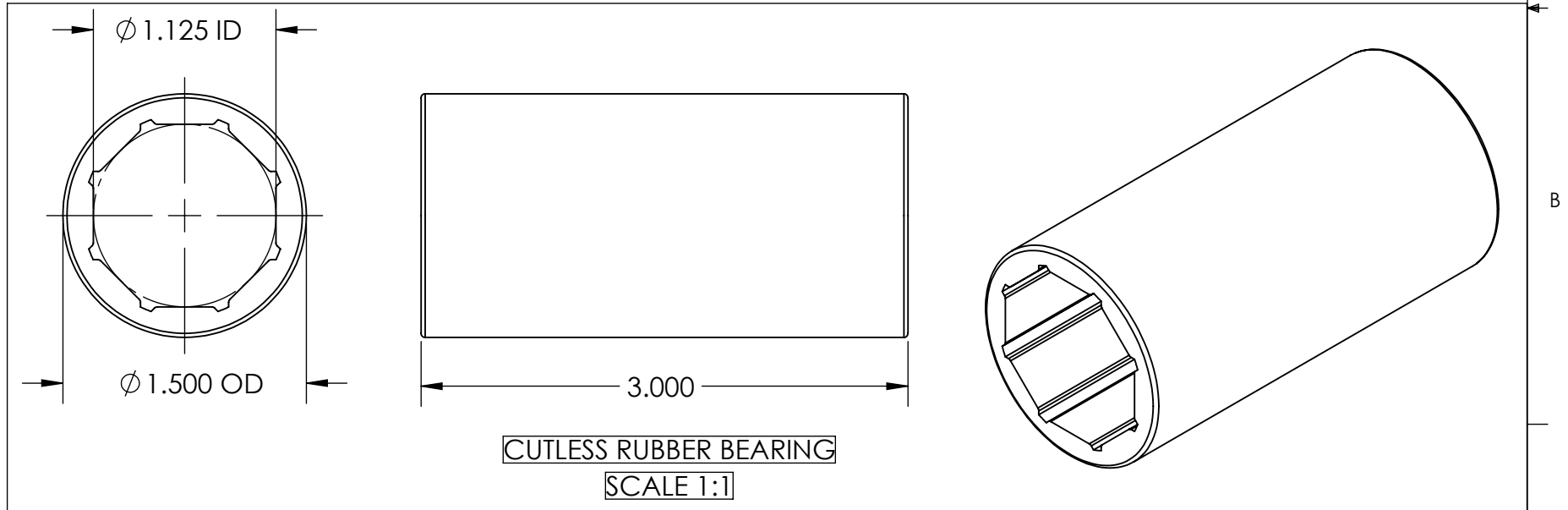
D
C
B
A

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	NAUTILUS TURBINES
DIMENSIONS ARE IN INCHES TOLERANCES: ANGULAR: MACH ±1 TWO PLACE DECIMAL ±.010 THREE PLACE DECIMAL ±.005		DRAWN	JH	
DO NOT SCALE DRAWING		CHECKED		TITLE:
MATERIAL		ENG APPR.		REGISTER GATE ASSM
FINISH		MFG APPR.		SIZE
COMMENTS:				OPERATION #
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				SCALE: 1:3
				WEIGHT: N/A
				SHEET 4 OF 5

8 7 6 5 4 3 2 1



TOTAL DISTANCE BETWEEN UPPER AND LOWER BEARING = 14.5"



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TWO PLACE DECIMAL ±.010	ENG APPR.		
THREE PLACE DECIMAL ±.005	MFG APPR.		
DO NOT SCALE DRAWING	COMMENTS:		
MATERIAL			
FINISH			

NAUTILUS TURBINES		
TITLE:		
THROAT RING ASSM		
SIZE	OPERATION #	REV
B	N/A	
SCALE: 1:3	WEIGHT: N/A	SHEET 5 OF 5