

7. USE APPROX. 300GRAMS Bismuth metal Ingot chunk 99.99% pure OR SIMILAR. REF.: <https://www.ebay.com/str/hallmarkmetals>, SUGGEST MELT POT: <https://www.amazon.com/dp/B0BCNV3NL8> OR SIMILAR. LET BISMUTH COOL VERY SLOWLY IN THE MOLD.

6. MAKE MOLD OF -1 CYLINDER USING Mold Max 60 - High Heat Resistant Silicone Rubber Compound OR SIMILAR PRODUCT. POUR 1/8TH INCH BASE 5 INCH DIA. WITH 2" CENTER HOLE. AFTER MOLD BASE IS SETUP, PLACE GRAPHITE IN CENTER AND MOLD 3/4 INCH DEEP AND 5 INCH DIA. WITH A TOTAL HEIGHT OF 3/4+1/8" REFERENCE PICTURE ON SHEET 3.


5. MAKE FROM "OTOOLWORLD 99.9% Pure Graphite Crucible", 5KG SIZE REF.: <https://www.amazon.com/dp/B07416C8S6> MACHINE CRUCIBLE LIP DOWN TO MATCH O.D. OF CRUCIBLE AND MACHINE HOLE IN BOTTOM TO I.D. OF CRUCIBLE. THEN MACHINE INTO 2 SHORT CYLINDERS OF EQUAL HEIGHT. IF O.D. OR I.D. ARE OUT OF ROUND, MACHINE UNTIL ROUND.

4. BEVEL EDGES 0.025 INCHES OR LESS TO ASSIST IN FINE TUNING MATCHING WEIGHTS BUT DO NOT BEVEL MORE THAN 0.025 INCHES.

3. MACHINE TOP AND BOTTOM SURFACES FLAT EXCEPT FOR NOTE 4 BEVEL. MACHINE BISMUTH SLOW AND COOL WITH SHARP TOOL.

2. TARGET WEIGHT IS 267.0GRAMS BUT ALL GRAPHITE AND BISMUTH CYLINDERS CAN BE SLIGHTLY LESS IF NECESSARY IN ORDER TO MAKE ALL PIECES MATCH WEIGHT EXACTLY USING A SCALE THAT READS TENTHS OF GRAMS. ONLY THE HEIGHT OF EACH PIECE CAN CHANGE TO REMOVE WEIGHT.

NOTES: 1. ALL O.D.s MUST MATCH WITHIN +/- 0.005 INCHES AND ALL I.D.s MUST MATCH WITHIN +/- 0.005 INCHES AMONG ALL CYLINDERS. THE TARGET O.D. AND I.D. WAS 3.50 INCHES AND 2.750" INCHES BUT BOTH CAN CHANGE AS REQ. SO O.D. AND I.D. OF ALL GRAPHITE AND BISMUTH CYLINDERS MATCH. ONLY HEIGHTS CAN VARY TO MAKE ALL CYLINDER WEIGHTS MATCH PER NOTE 2.

REVISIONS:	 <b>Vasant</b> Corporation.com	<b>DWG. TITLE: MASS TEST CYLINDERS AND SUPPORTS</b>
A. SH 2, CENTER HOLE M3 B. ALL MATING PARTS MUST BE SAME OD & ID EVEN IF CAN'T KEEP DIMENSIONS SHOWN.		DESIGN: GEORGE BUGH
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**UPDATE: MACHINE SHOPS SAY THIS SUPPORT IS TOO HARD TO FAB, DESIGN TBD**

QTY 4 REQ FOR NHA  
- 3 SUPPORT

MAKE FROM 4MM  
CARBON FIBER PLATE  
<https://www.amazon.com/dp/B07GCVZHL9>  
OR SIMILAR

EXAMINE CLOSELY  
AND ALIGN SPOKES  
WITH CARBON  
FIBERS' LONG  
DIRECTIONS.

—MAKE CENTER HOLE  
WITH #39 DRILL BIT,  
TAP FOR M3  
METRIC THREADS

## MATING PART

R 0.25 SPOKES'  
CORNER RADII  
4 PLACES

CENTER EACH  
CORNER RADIUS  
ON THIS CIRCLE  
1.0" DIA.  
DO NOT SCORE  
THE SURFACE

0.2  
TYP

BEVEL THIS EDGE ONLY  
R 0.025

2mm—

4mm

—DO NOT BEVEL

—DO NOT BEVEL

CHECK O.D.s AND I.D.s OF  
MATING PARTS ARE THE SAME,  
THEN FINE TUNE THE LIP DIA.OF  
THE CARBONFIBER SUPPORT  
FOR LIGHTLY SNUG FIT.

## MATING PART

2.750



REV. B

SHEET 2 OF 3

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REV. B

SHEET 3 OF 3

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