

ISCG 05

Advanced International Chainguide Mounting Standard

Background:

ISCG 05 was developed by the engineers at e.thirteen components with support and feedback from members of the ISCG 05 consortium. Its conception was the result of several years of the bicycle industry using the original ISCG standards, pioneered by a cooperative effort between Bob Barnett (Mr. Dirt) and Mountainspeed. The original ISCG was a huge success, but was originally planned to fit only standard bottom bracket types. With the widespread use of BMX type bottom brackets and the introduction of the ISIS Overdrive standard, a new chainguide mounting standard was needed.

The ISCG 05 project has been in the making for over a year at this time. While developing this new standard, we decided to start from a clean sheet of paper and incorporate everything that we had learned about chainguides and mounting since 2000. In April of 2003, the basis of the new standard was proposed. Industry wide, there was a much great feedback given. At Interbike 2003 members of the ISCG 05 consortium met in person and discussed the details of this proposed new standard. Revisions were made, and the ISCG 05 was born! Special thanks go to George Dubois of Truvativ for taking the time to spread the word about ISCG 05 to product developers around the bicycle industry.

The goals for this new ISCG 05 standard were multi-fold. This new standard improves on the original ISCG in several important ways:

- 1) The ISCG 05 is compatible with all currently available bottom bracket types that we are aware of. Drawings are provided for standard, BMX, and ISIS Overdrive designs. The new ISCG 05 is broad enough in its scope that other types may be integrated in the future. This addition offers simplified chainguide installation for shops and consumers, and aims to cut down on chainguide model variations industry wide.
- 2) The new ISCG 05 standard tab clocking is now defined in relation to an imaginary line running from the center of the bottom bracket shell to the center of the rear wheel. This clocking method is identical to that used with conventional derailleurs. This aims to eliminate the guesswork that plagued the past standard. Big thanks to James Gardner and Dan Connors at Cannondale for this well thought out addition to the standard.
- 3) A new rotated standard that allows frame designers flexibility to use low non-elevated chainstays on long travel frames. This rotated standard uses the same bolt circle and relative positioning as the ISCG 05, repositioned 14 degrees counter-clockwise.
- 4) Tab thicknesses, tab offset, and tab parallelism to the bottom bracket face are now all defined simply and completely. This aims to eliminate the guesswork that previous ISCG users faced.

5) A new larger 73mm bolt circle diameter makes for more robust mounting. ISCG 05 frame tabs can be stronger than previous incarnations, and chainguide rotation is less possible.

6) Outside vendor supplied ISCG 05 adapter plates are now governed by a 2.5mm thick mounting width. This allows simplified setup for consumers using external cup bottom brackets like the Raceface X-Type and Shimano Saint. Big thanks to Bryn Johnson from Raceface for this forward thinking addition.

Thank you for taking the time to read through the attached documents carefully, and happy trails!

Sincerely,

Dave Weagle
Technical Director
e.thirteen components

LEGAL DOCUMENT

E.thirteen Components, with the support of members of the ISCG 05 consortium (hereinafter collectively referred to as the "Companies") developed the technological knowledge with respect to the ISCG 05 chainguide mounting standard (hereinafter referred to as the "ISCG 05 Interface") in accordance with the Interface Standard (defined below) as described in the Standard Document (defined below) and is trade marking the term "ISCG 05" in the United States of America.

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The division of this Agreement into paragraphs and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

SEVERABILITY

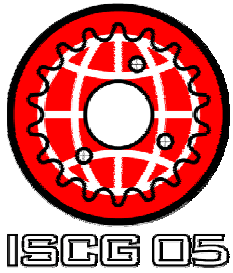
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This Agreement constitutes the entire Agreement of all the parties with respect to the subject matter hereof and, except as stated in this Agreement and in the instruments and documents to be executed and delivered pursuant to this Agreement, contains all the representations, undertakings and agreements of all parties respecting the subject matter hereof.

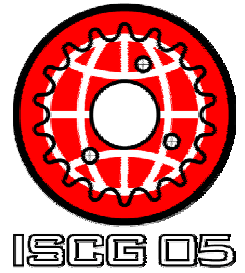
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This Agreement shall be binding on and inure to the benefit of the successors and assigns of the Companies and you and all corporations and persons succeeding to or acquiring the business now carried on by you or the Companies.



International Standard Chain Guide 2005

www.iscg05.org



The International Standard Chain Guide 2005 specification (ISCG 05) provides a robust solution for mounting Chain Guides on Standard, BMX, and ISIS Overdrive Bottom Brackets. The standard also includes specification for long travel low chainstay full suspension frames.

Drawing Number	Drawing Name
410120	ISCG 05 Flush Tabs

Description:

Specifies method for mounting chain guides flush with the outside face of the bottom bracket for Standard, BMX, and ISIS Overdrive bottom bracket designs.

410121	ISCG 05 Offset Tabs
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Description:

Specifies method for mounting chain guides with tabs offset back from the face of the bottom bracket for Standard, BMX, and ISIS Overdrive bottom bracket designs. Please note that frame manufacturers using this variation of the standard are required to provide an ISCG tab spacer to attain the flush mount as shown in drawing 410120.

410122	ISCG 05 Long Travel
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Descriptions:

Specifies method for rotating chain guide to provide clearance for long travel applications. This standard should be used for front derailleur compatible 150mm+ full suspension frame designs WITH very low drive-side chainstay designs. (non elevated chainstays)

410123	ISCG 05 Maximum Tab Envelope
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Description:

Specifies the maximum diameter of the tab mounting design. ISCG 05 tab designs should not exceed this boundary. This maximum envelope is applicable to weld-on, and bottom bracket integrated tab designs, and all bottom bracket types.

410124	ISCG 05 sandwich mount thickness
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Description:

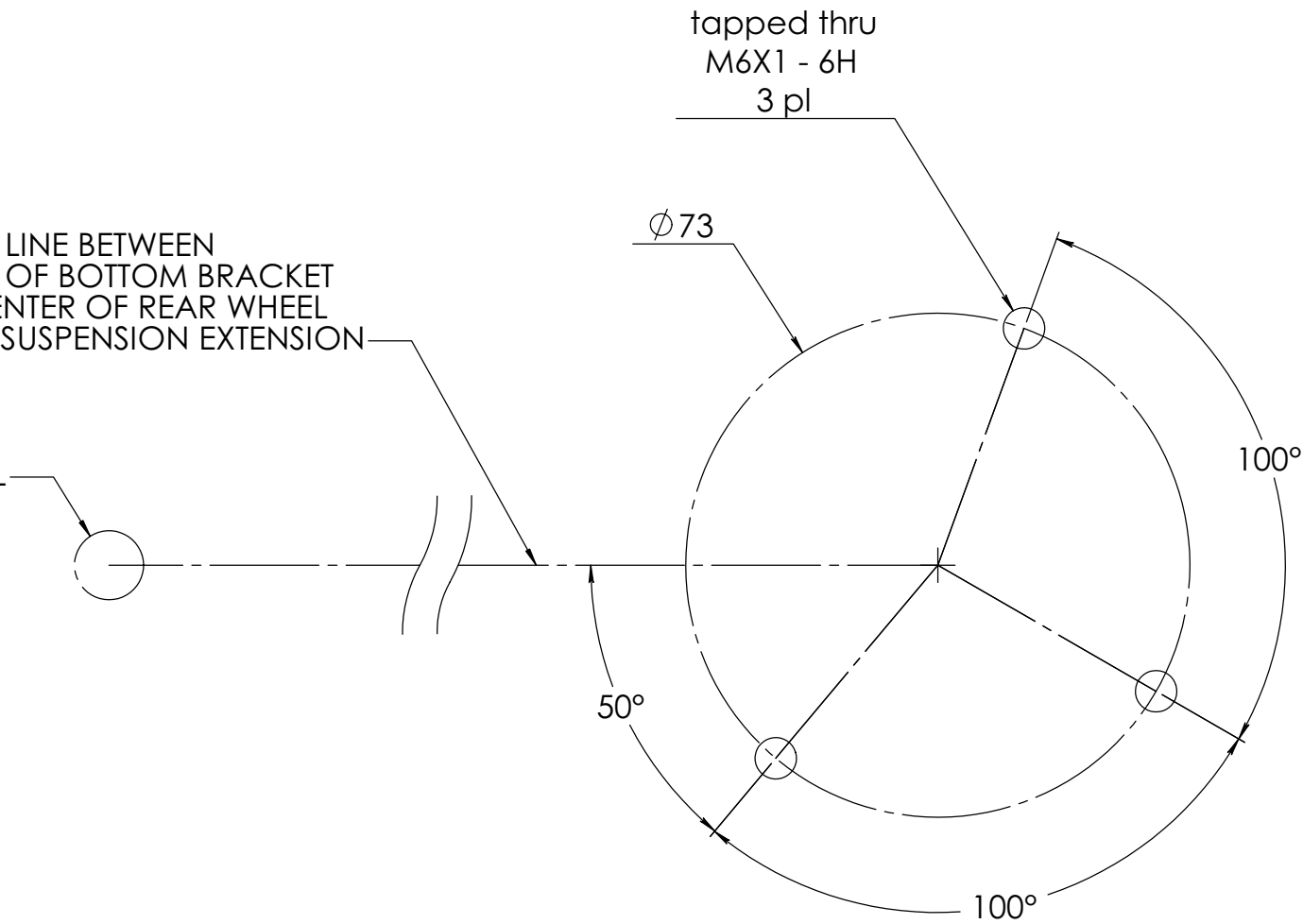
Specifies the thickness for all sandwich type mounts that are used for frames that do not implement integrated ISCG 05 frame tabs.

411125 through 410130

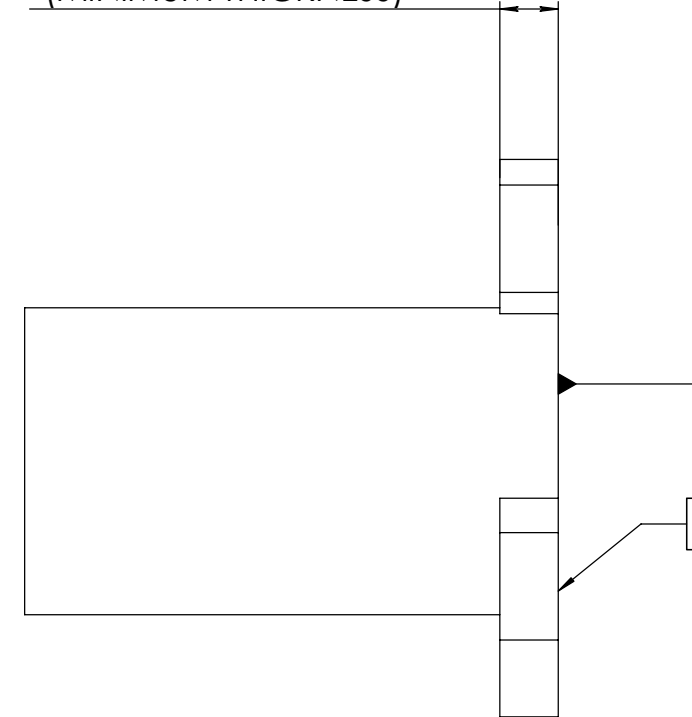
Descriptions:

Free to use ISCG 05 weld on tab designs that are already compliant to the ISCG 05 system. Tab designs are available for all type bottom bracket designs. Tab designs are also shown for Aluminum and Steel frame construction.

to envelope drawing 410123
shown at a minimum for specified material construction.
DRAWING METHOD PREFERRED
Dimensions must follow Geometric tolerance specified



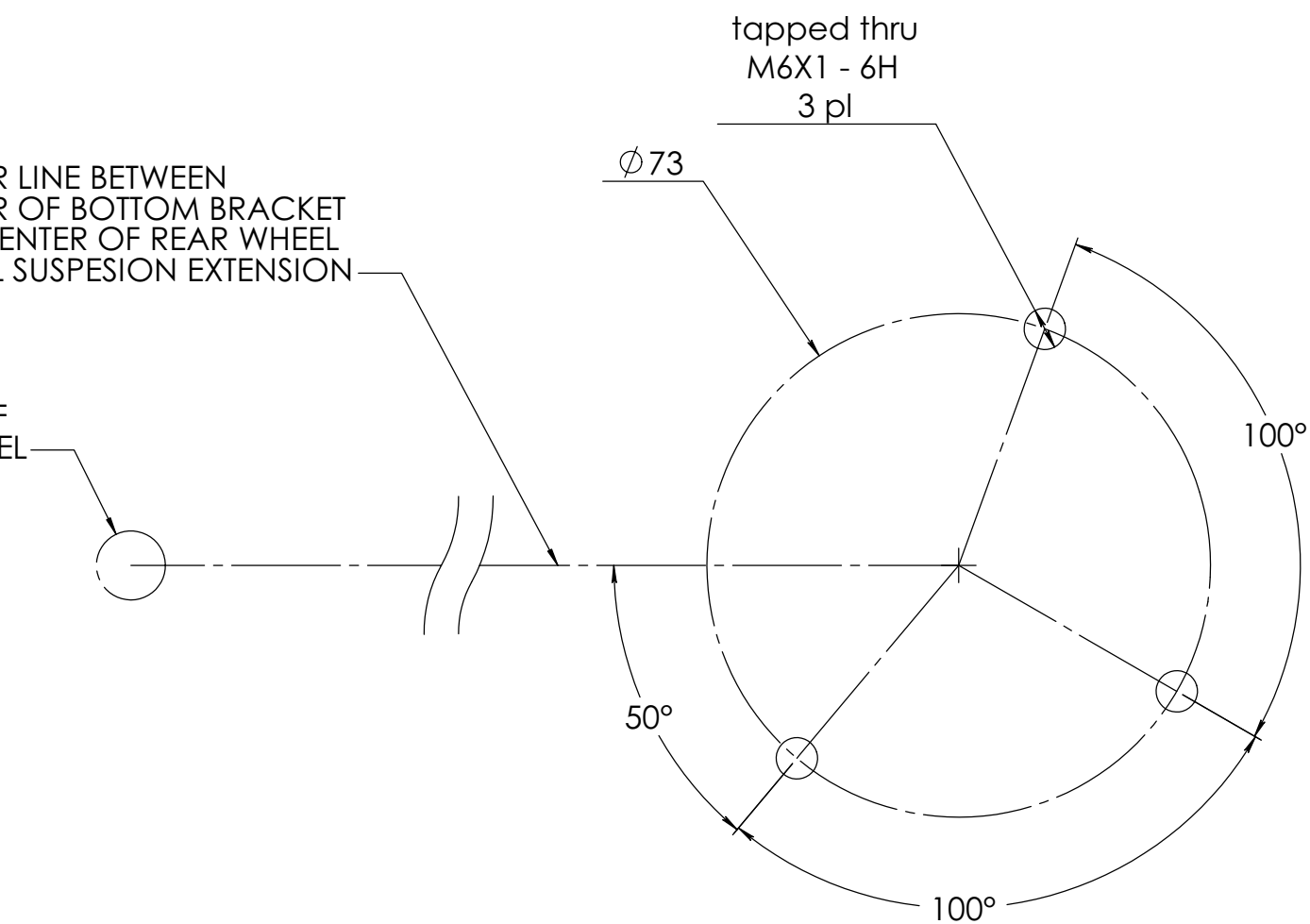
8 [aluminum]
3.5 [4130 steel]
(MINIMUM THICKNESS)



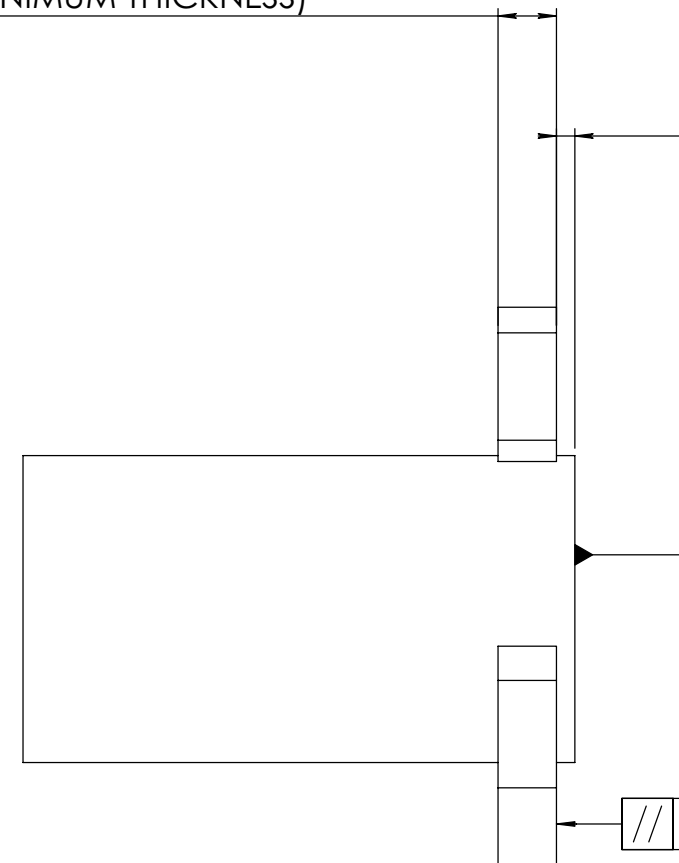
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TITLE: ISCO

to envelope drawing 410123
shown at a minimum for specified material construction.
MOUNTING METHOD DETAILED IN DRAWING 410210 PREFERRED
Locations must follow Geometric tolerance specified
in mm increments.
MANUFACTURER TO PROVIDE SPACER FOR FLUSH MOUNT

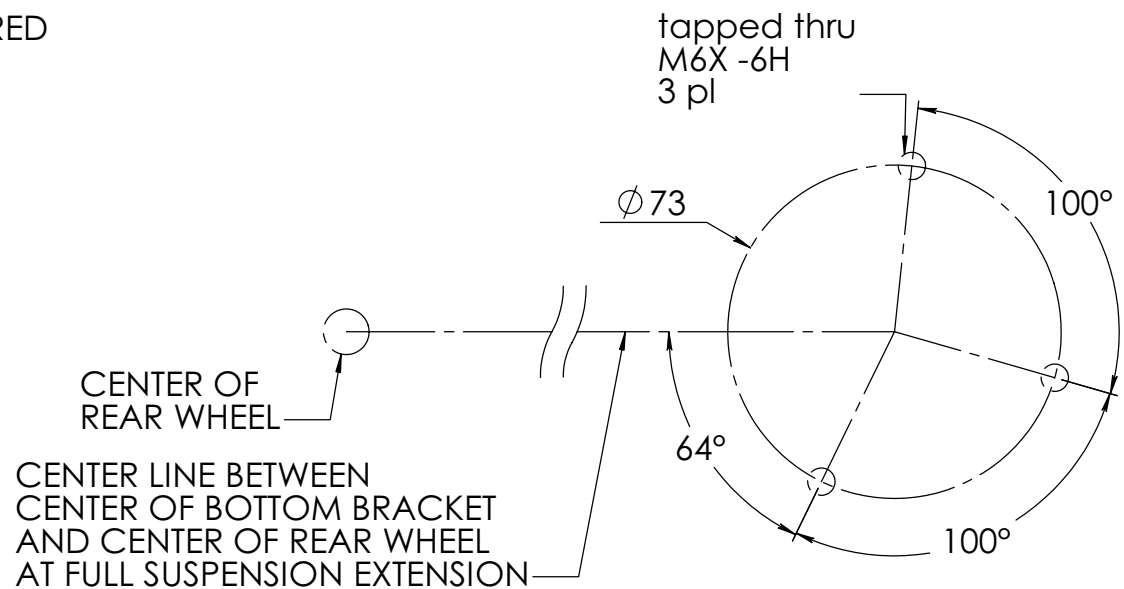


8 [aluminum]
3.5 [4130 steel]
(MINIMUM THICKNESS)

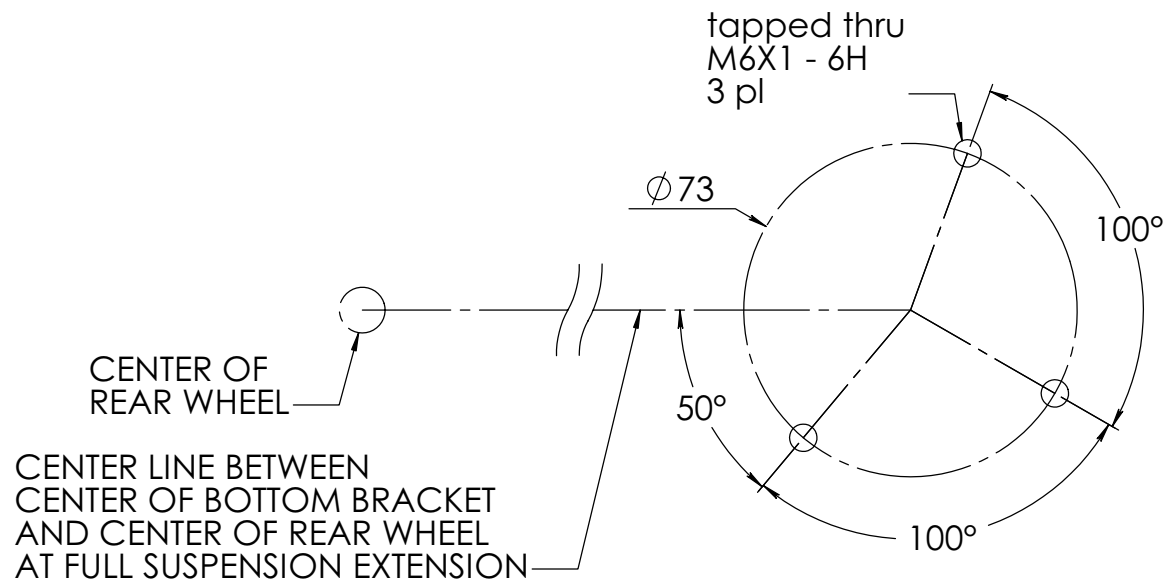


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are needed for front derailleur clearance on some Long-Travel applications.
RD ROTATION IS PREFERRED



**ISCG 05 FR
ROTATED 14° LAYOUT**

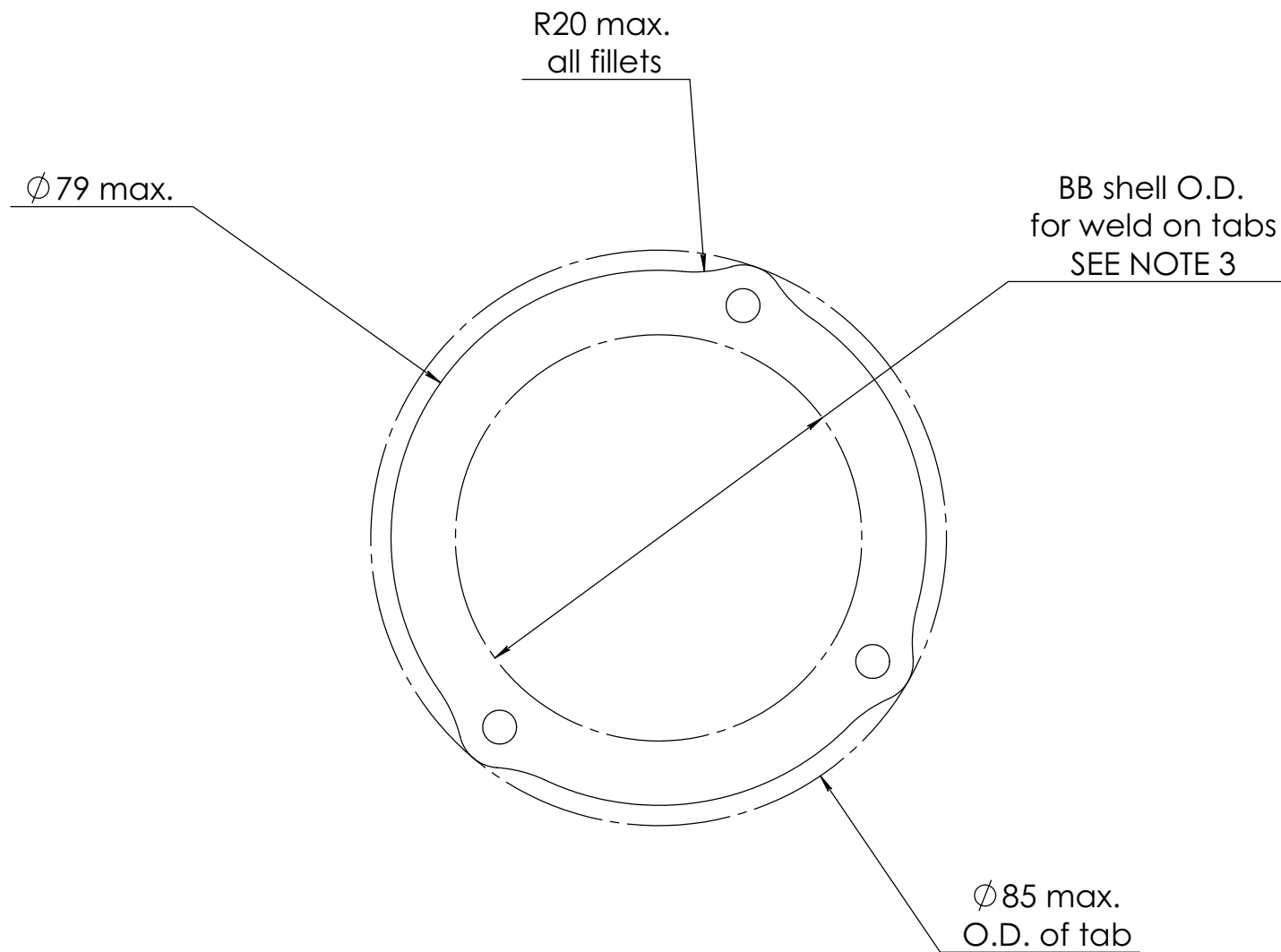



ISCG 05 STANDARD LAYOUT

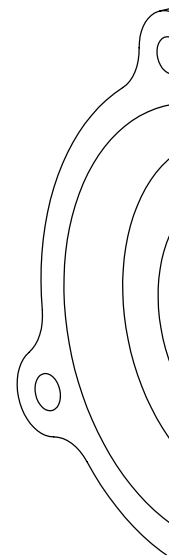
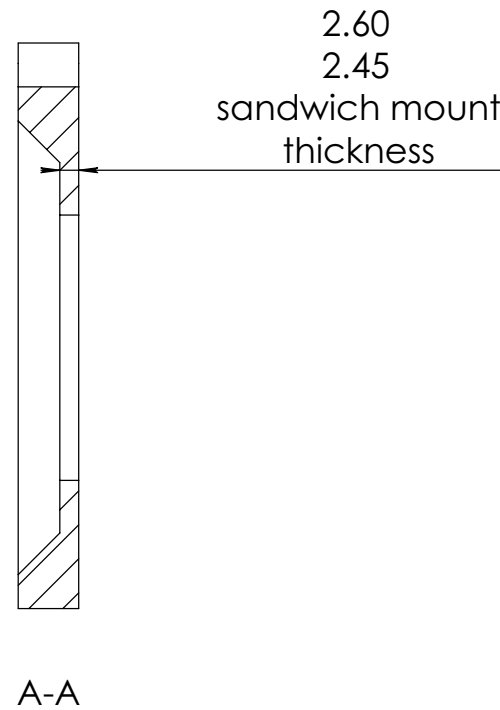
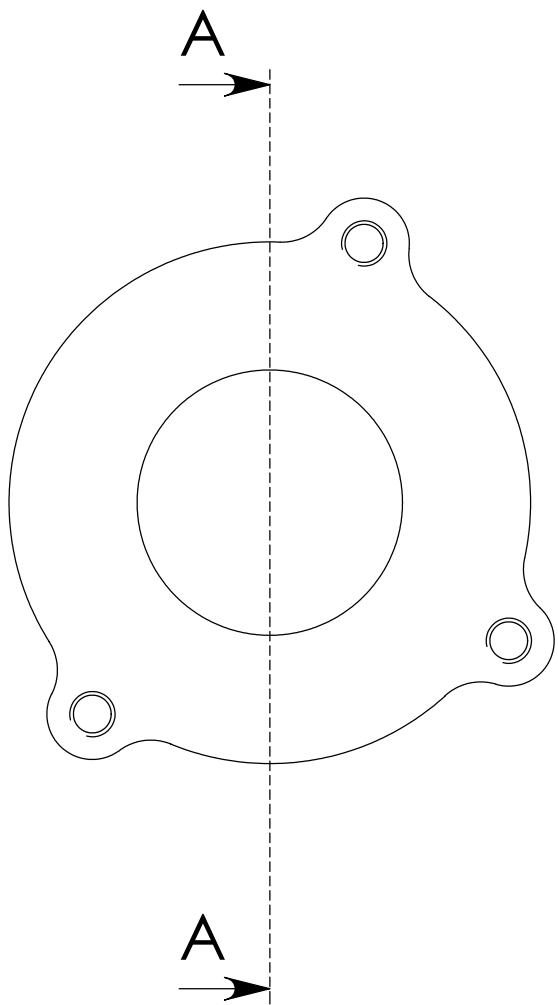
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will vary at frame manufacturers discretion

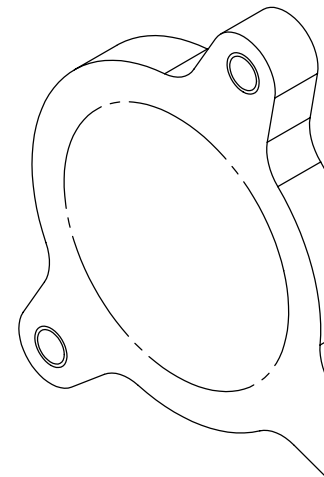
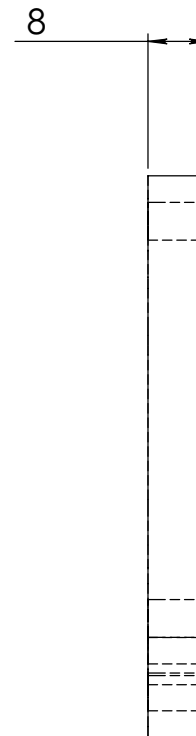
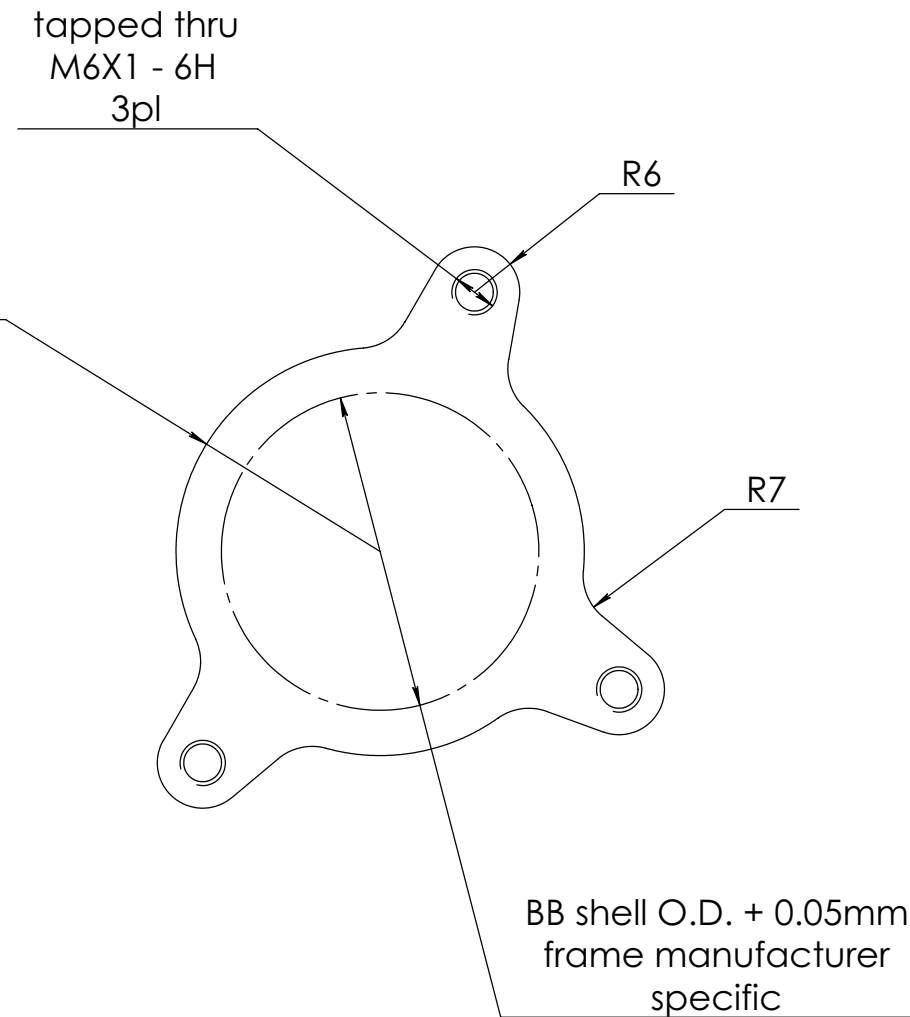


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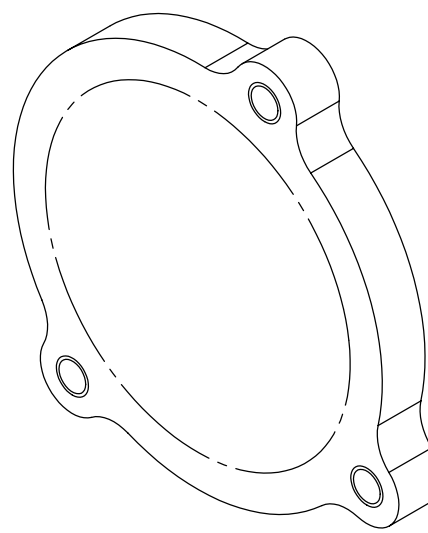
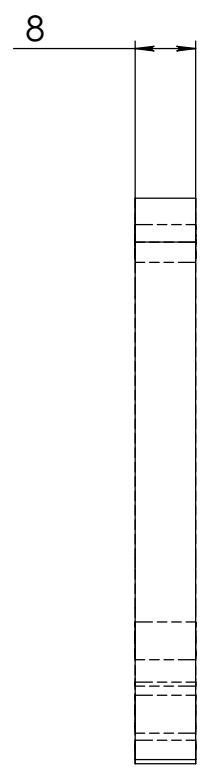
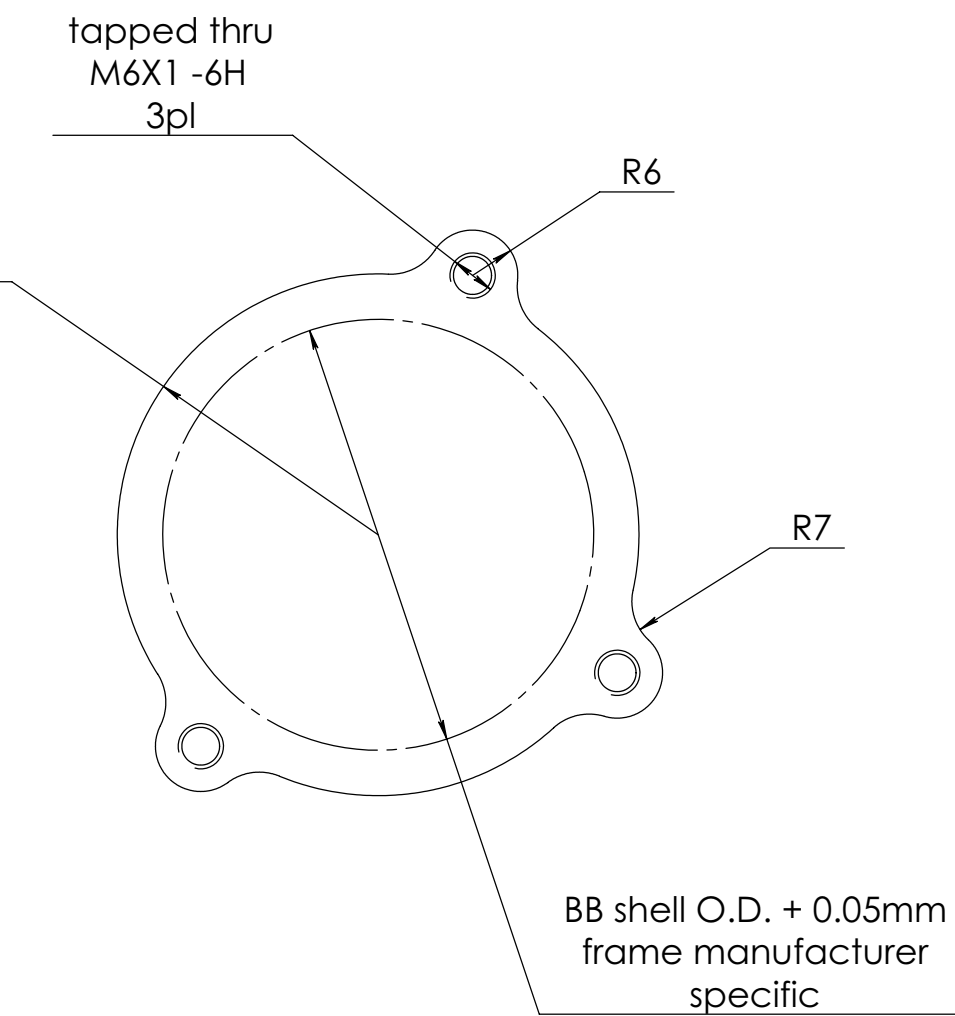
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res are strongly recommended to conduct FEA analysis on
surface to determine adequate strength



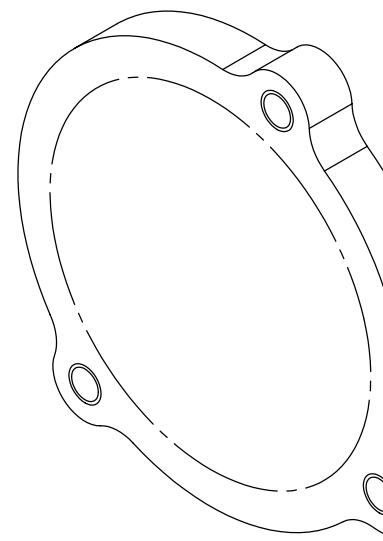
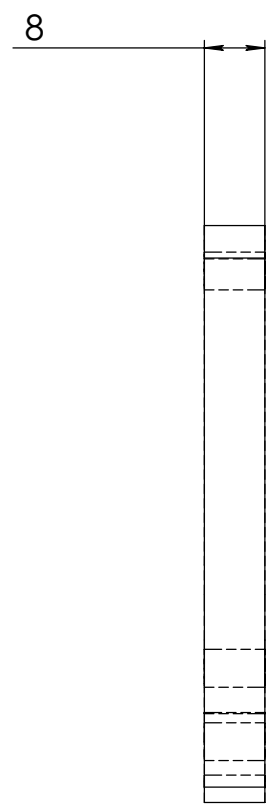
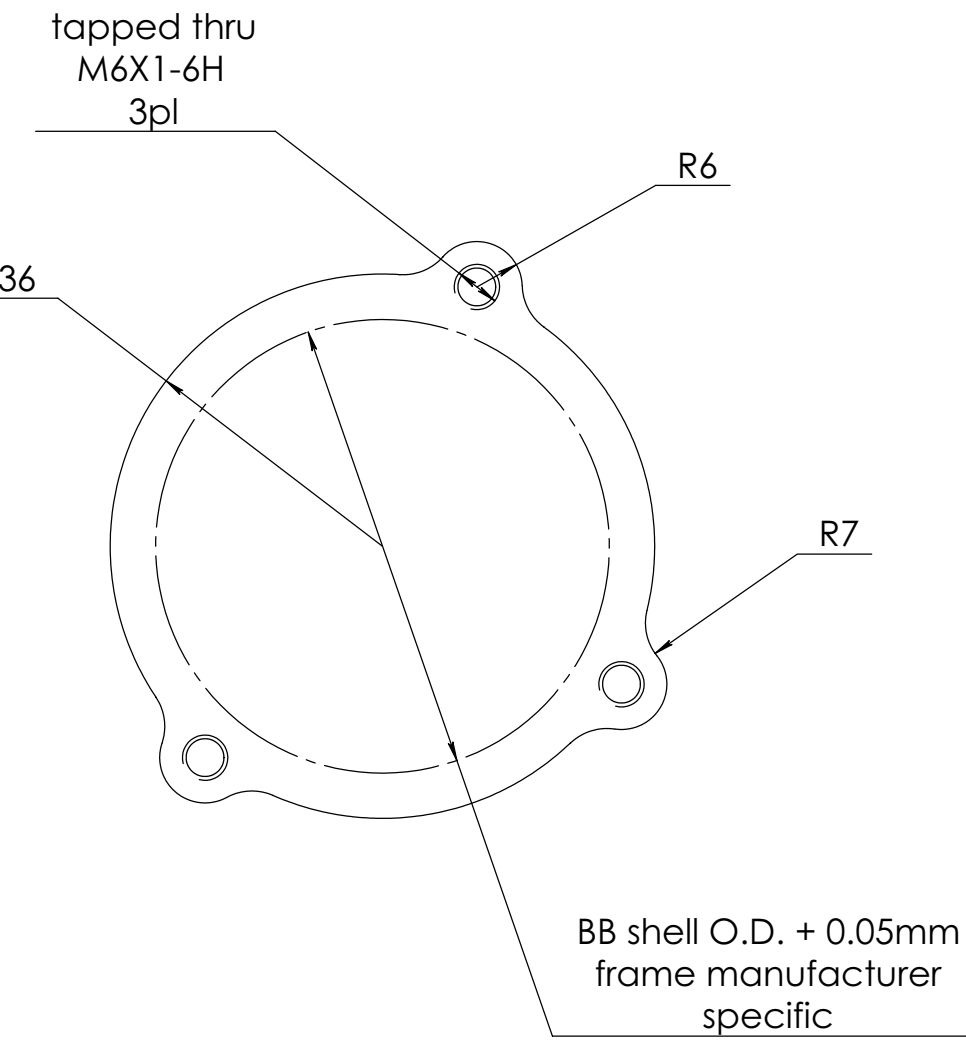
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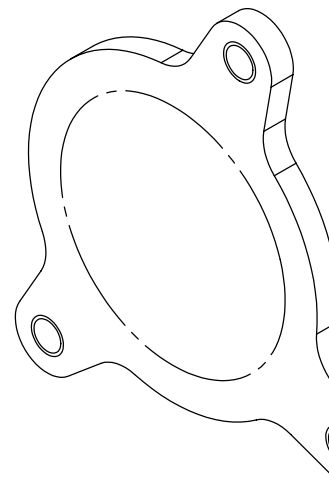
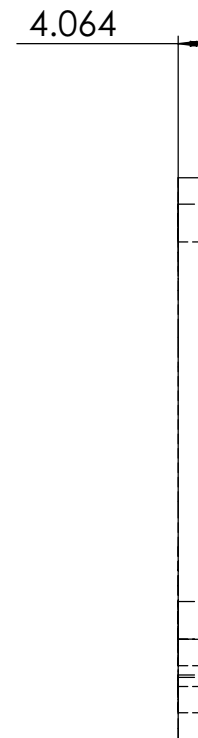
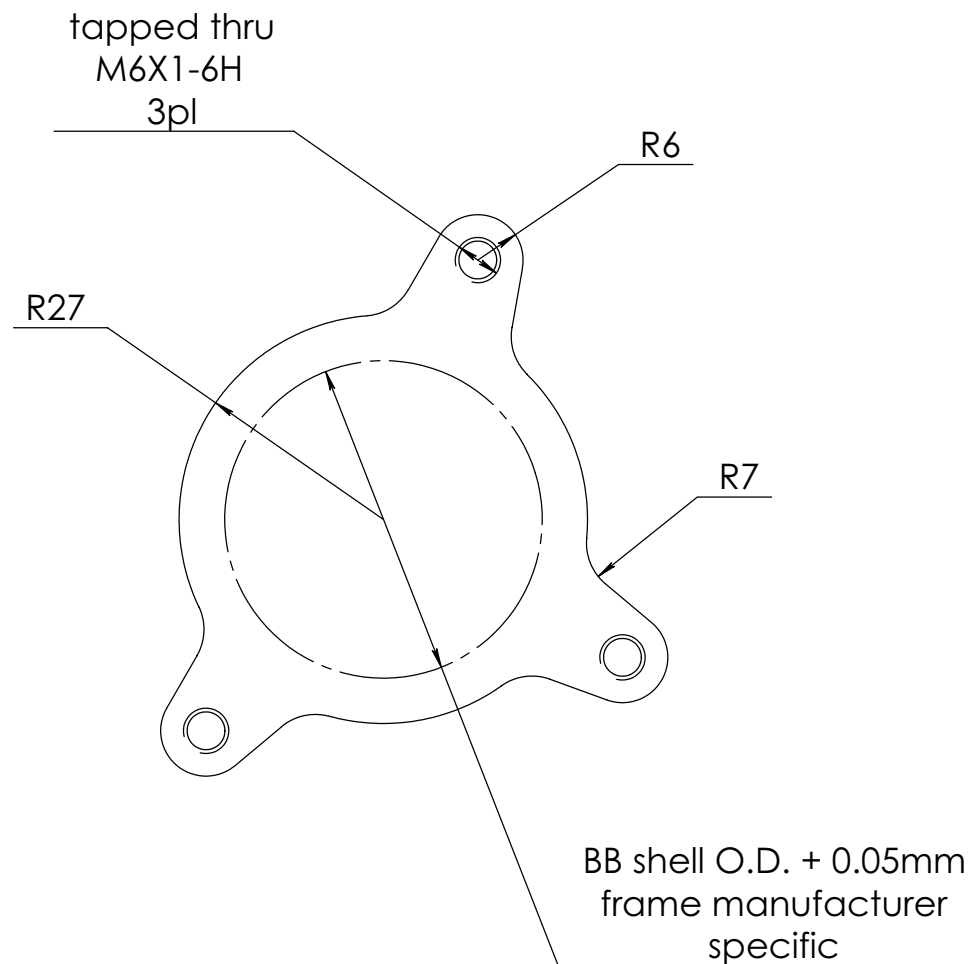
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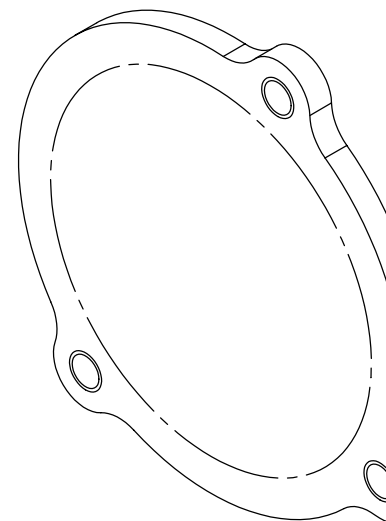
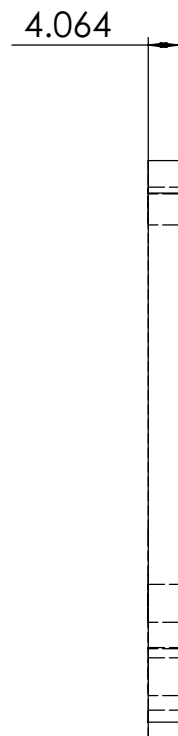
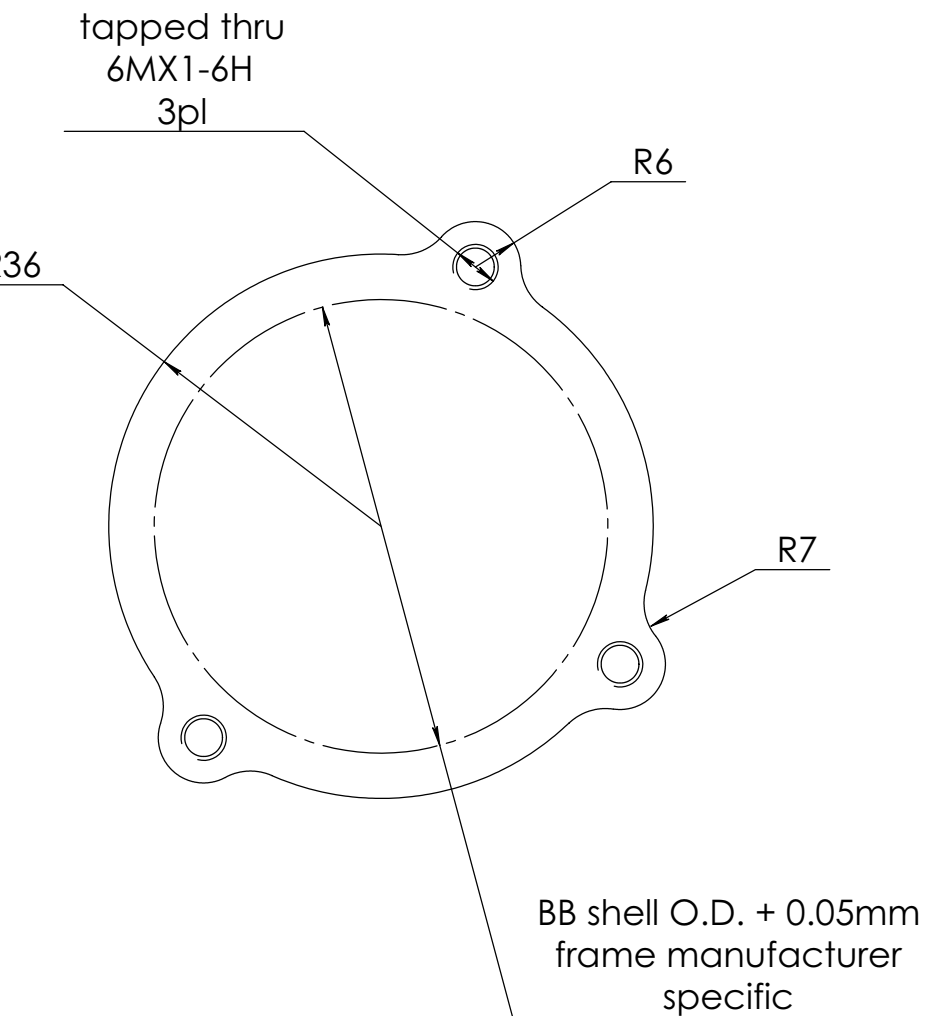
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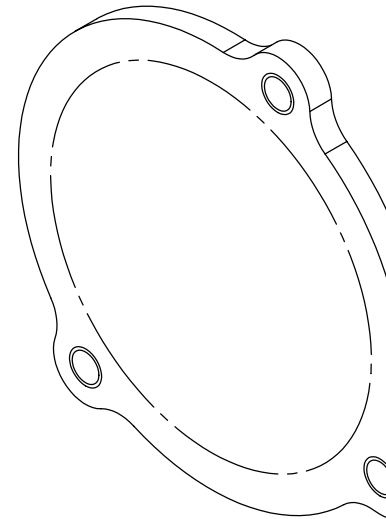
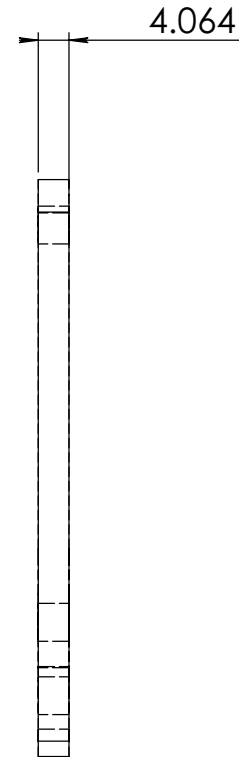
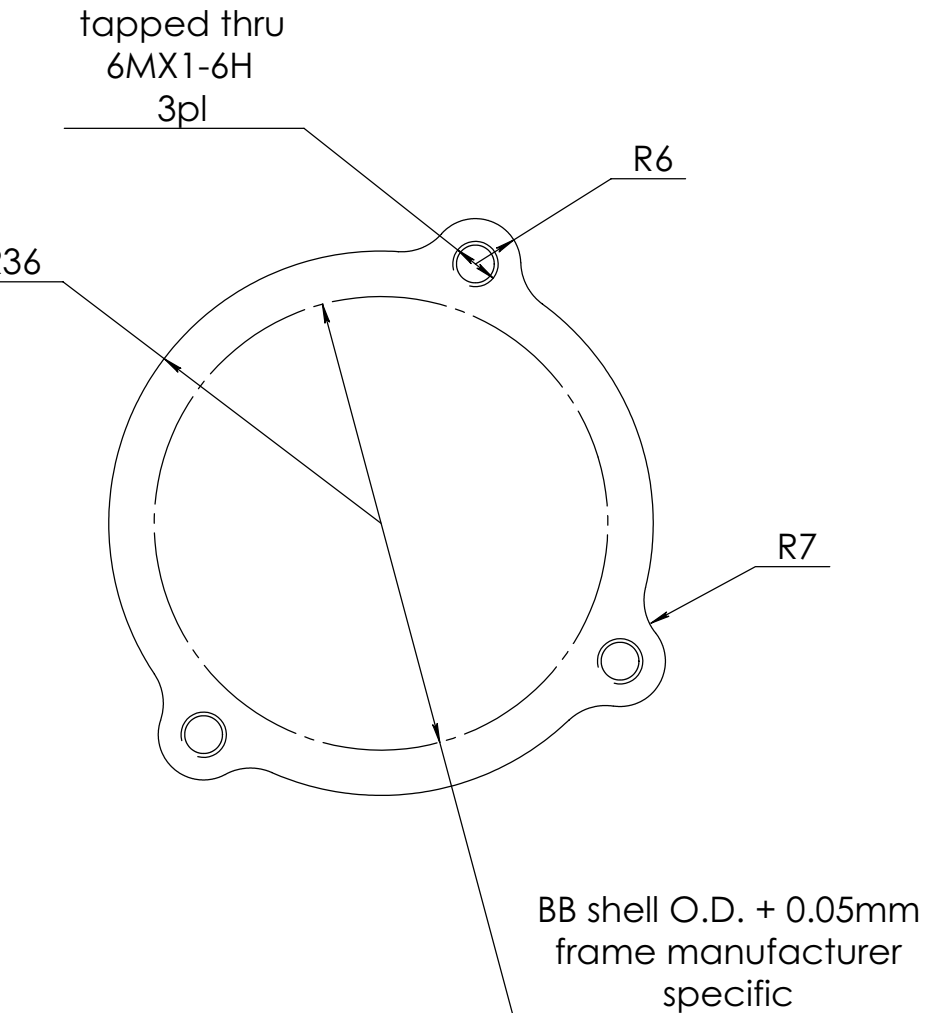
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