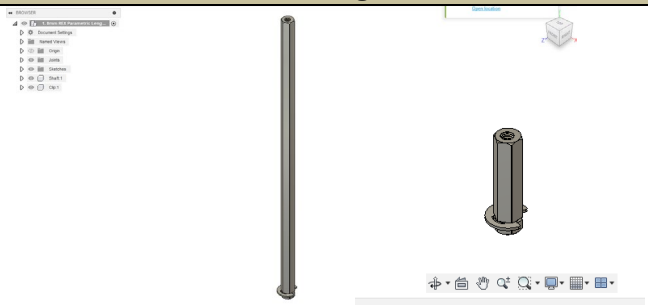
# Catalogue of Useful Resources from

# 23335 COMBAT WOMBATS' 2023-2024 Centre Stage Season

Please find attached below a list of resources compiled and created by Hugo Lawler during 23335 The COMBAT WOMBAT's centerstage season. All parametric features only work in Fusion 360, and is not supported in OnShape, Inventor, or Solidworks.

*No attribution to 23335 required, but greatly appreciated :D*

| # | File Name | Description/Important Parameters/Notes | Images!!! |
|---|---|---|---|
| 1 | Parametric GoBilda REX Shaft.f3z | You never have to import specialty GoBilda length REX shafts ever again! This file creates custom length shafts from 1 parameter.<br><br>Import into your design and right click it in browser and break link.<br>Change parameter 'lengthREXShaft' to change shaft length. |  |
| 2 | Parametric GoBilda U-Channel.f3z | You'll never have to import 1 hole, 2 hole, 3 hole etc. size channels again! This file creates custom number of holes U-Channel with 1 parameter.<br><br>Import into your design and right click it in browser and break link.<br>Change parameter 'numberHoles to change channel length.<br>Cleanup may be necessary. |  |

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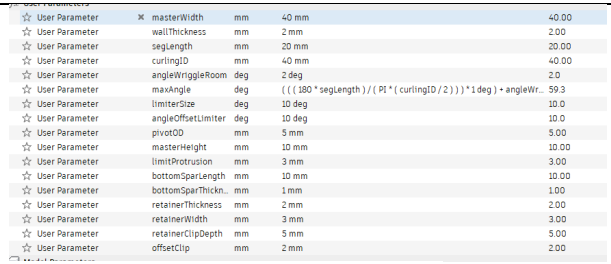
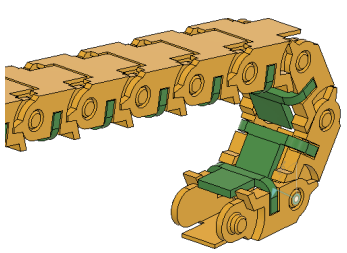
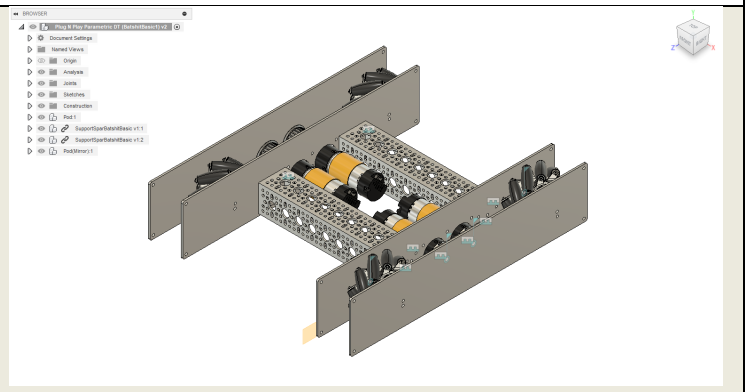
| 3 | Parametric Drag Chains.f3z | Got a 3D printer? Have some cables to manage? Use our parametric drag chain!<br><br>Many features (width, roll up diameter, thickness…) of this design are adjustable. Be careful of funky changes though since this one's a bit volatile.<br><br>We have not tested any of these designs before. |  <br>  <br>  |
| 4 | Parametric Parallel Plate Drivetrain.f3z | Just want a quick design that you can get running in next to no time? Make sure you've got some belts and pulleys printed out, and get driving in less than a week!<br><br>Interior width, length, motor placement, height, etc are all adjustable.<br><br>This design has been used 3 times in our season and has worked well.<br>Never mind the browser name… |  |
| 5 | C2C Excel File | This file is used to find the spacing between the gears and sprocket pulleys on our robot. | No images! Because maths is boring ☹ |

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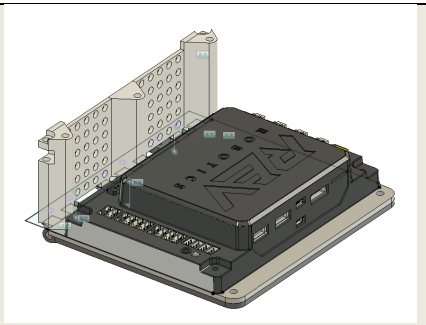
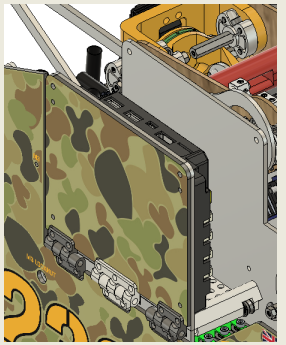
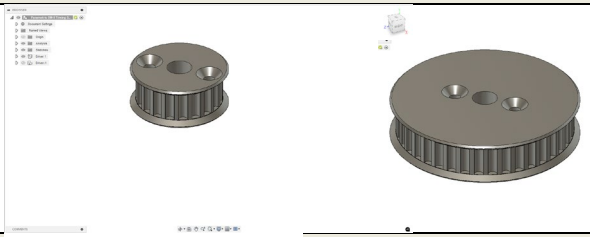
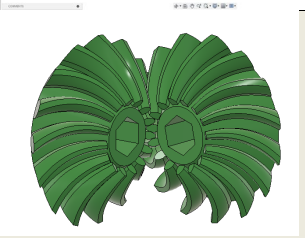
| 6 | Hinged Control Hub Mount.f3z | Ever had a robot come in and bash your robot connectors, resulting in some tears? Ever thought that you didn't have enough space to plug your fancy gear into the hubs? Well you may want to consider putting your hubs on a hinge!<br><br>We ran this during our Asia Pacific Open Championships event, and it was a breeze to use! It kept all of our electronics safe, and it allowed us to quickly fix loose connections.<br><br>This is a drag and drop implementation. Use sketch 3 to add holes on your drive train. Use 56mm standoffs to secure the top. |   |
| 7 | Parametric 5M-9 Timing Belt | We ran 5M-9 timing belts for our DT. This file will make these pulleys for you automatically.<br><br>Change 'numberTeeth' to change how many teeth there are on your pulley. |  |
| 8 | Spiral Bevel Gears | These bevel gears are a quieter and cheaper alternative to the gobilda bevel/miter gears. They run 1:1. 15 teeth.<br><br>We ran this during our regionals competition, and they worked pretty well in our drivetrain. Do not put excessive loads on it, or else they will shatter. |  |
| 9 | Sizing Box (18x18x18in) | Drag and drop and conduct an interference study to see if your robot is in bounds! | |
| 10 | Parametric Low Profile Spool.f3z | If you require a low profile spool that is adjustable, use this one! | |
| 11 | Wombat Keychain | Want to print your own combat wombat!? Use this .3mf file to print your own wombat! |  |
| | PDF How-To Guides | This folder includes some how-to guides previously found on our website. All resources are by Hugo Lawler. | |
| | Rigged Misumi Slides | Folder including rigged SAR240/230 3/4 stage slides. Imported from onshape. | |

Resources from 23335 The ‘COMBAT WOMBATS’ during 2023-2024 Season.

Did these resources help you out? Is something broken? Do you have something to suggest? Did you print out a wombat keychain? Contact combat_wombat_one on Discord for assistance!