5 - Flap and Gear Design Day 2

March 7, 2021 10:15 AM

Mar 7. 2021

START: 10:15 AM.

END: 2:00 PM.

- using 3mm pitch 3T2 timing belt (from yesterday's research :)

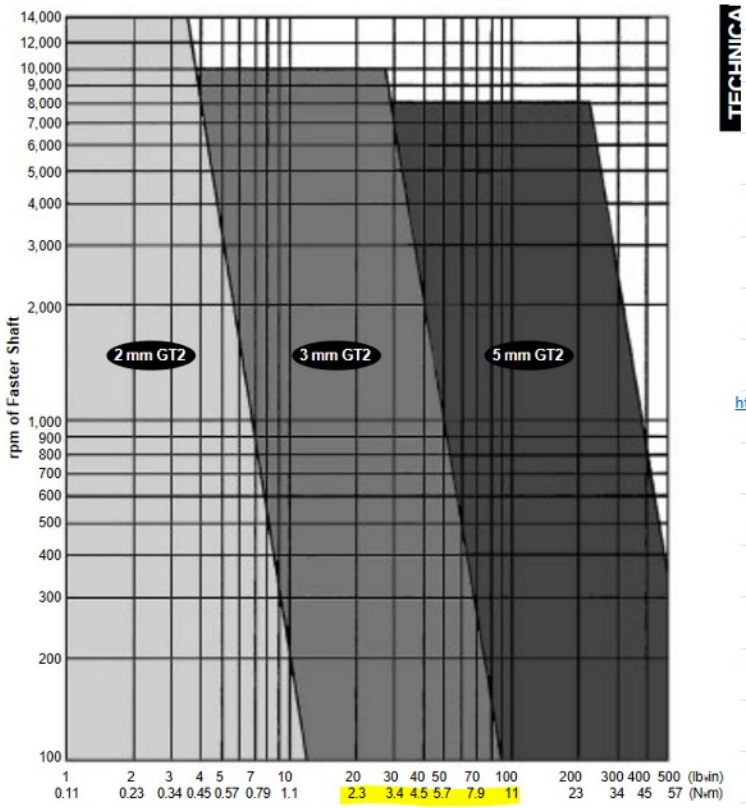


Fig. 41 GT2 Belt Selection Guide

https://www.sdp-si.com/D265/PDF/D265T146.pdf

need to be in this torque range for safety factor

Goal:

- source 3mm pitch belt pulley
  - source appropriate shafts ✓
- finish power transmission (excluding outer casing)

GT3 Pulley 20 Teeth Timing Belt

$3.00 – $15,000.00

This high quality 20 tooth GT3 5 mm/6.35 mm/8 mm aluminium Timing Pulley is perfect for V-Slot automation projects!

This Pulley size is specially designed to make Timing Belt work with a V-Slot system fitting on either side of a 20 mm extrusion profile.

Three Inner Diameter (ID) Bores are available: 5mm, 6.35mm (1/4") and 8mm.

Quantity: 1

Model: GT0003-8

Clear ×

→ $3 per piece
→ doesn't have CAD but CAD for similar part was sourced & modified to approximate

Specifications:

- 100% brand new and high quality
- Model: GT0003-5 / GT0003-635 / GT0003-8
- Colour: Sliver
- Material: Aluminium Alloy
- GT2(3mm) 20 Teeth
- Up to 6 mm/1/4" belt width
- 5mm / 6.35mm / 8mm Bore
- 2 flanges with hub
- Set screws included (1.5 mm)

https://bulkman3d.com/product/gt0003/

(CAD source: https://www.york-ind.com/product/3mm-gt2-pitch/)

Other possible source (but different bore diam.):
https://openbuildspartstore.com/3gt-gt2-3m-timing-pulley-20-tooth-250-bore-9mm-belt/

*can't find 6 mm wide closed GT3 belts

3GT (GT2-3M) Timing Pulley - 20 Tooth - 9mm Belt - 8mm Clamp Bore

(No reviews yet) Write a Review

SKU: 2130

$9.99

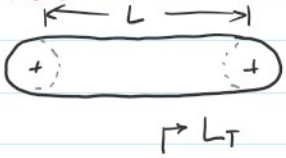
QUANTITY: 1

ADD TO CART

ADD TO WISHLIST

https://openbuildspartstore.com/3gt-gt2-3m-timing-pulley-20-tooth-9mm-belt-8mm-clamp-bore/

Required belt length:



pitch = 3 mm = p

$p = \frac{\pi d}{N}$

$\rightarrow d_p = \frac{pN}{\pi} = \frac{3(20)}{\pi} = 19.0985$ mm

↳ pitch diameter of pulley

total length required = $2L + d_p \Rightarrow L = (L_T - d_p)/2$

+ 1 hour of work

+ 1 hour of work