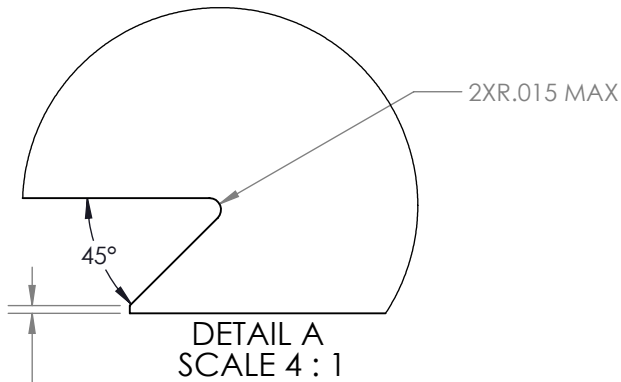


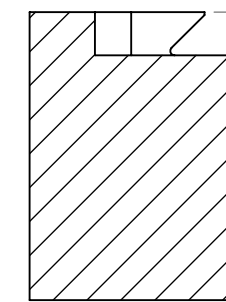
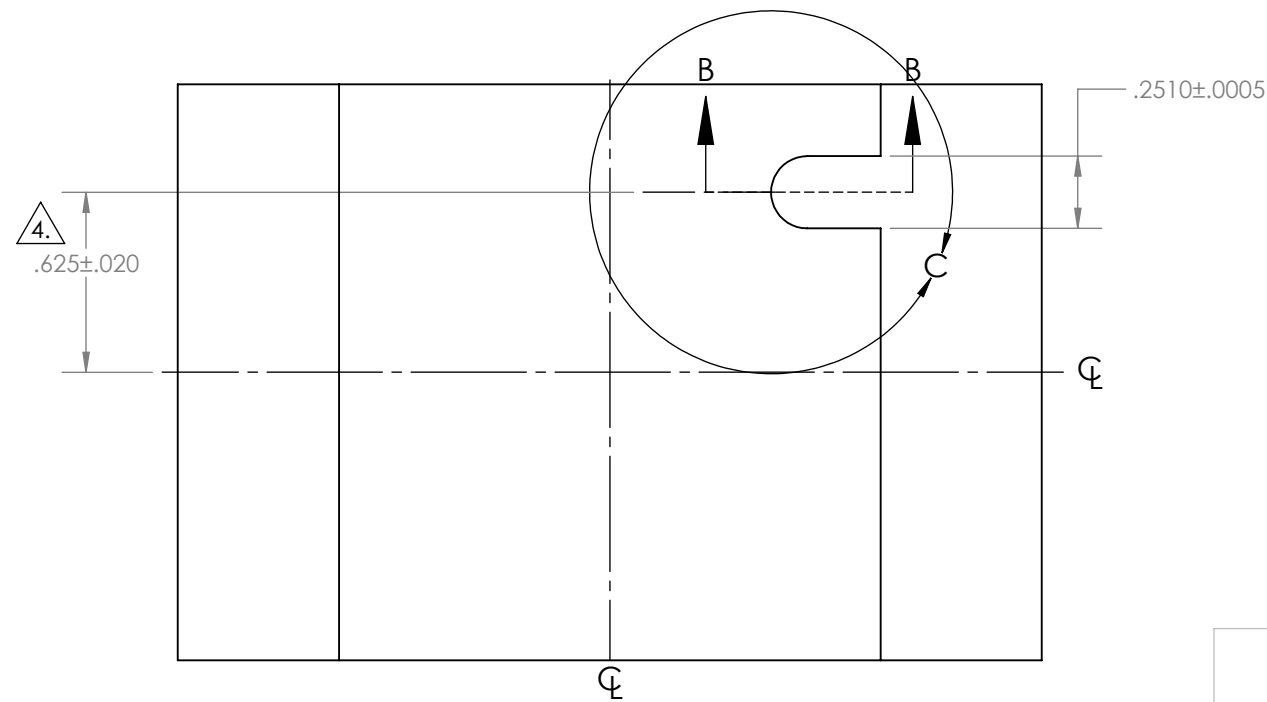
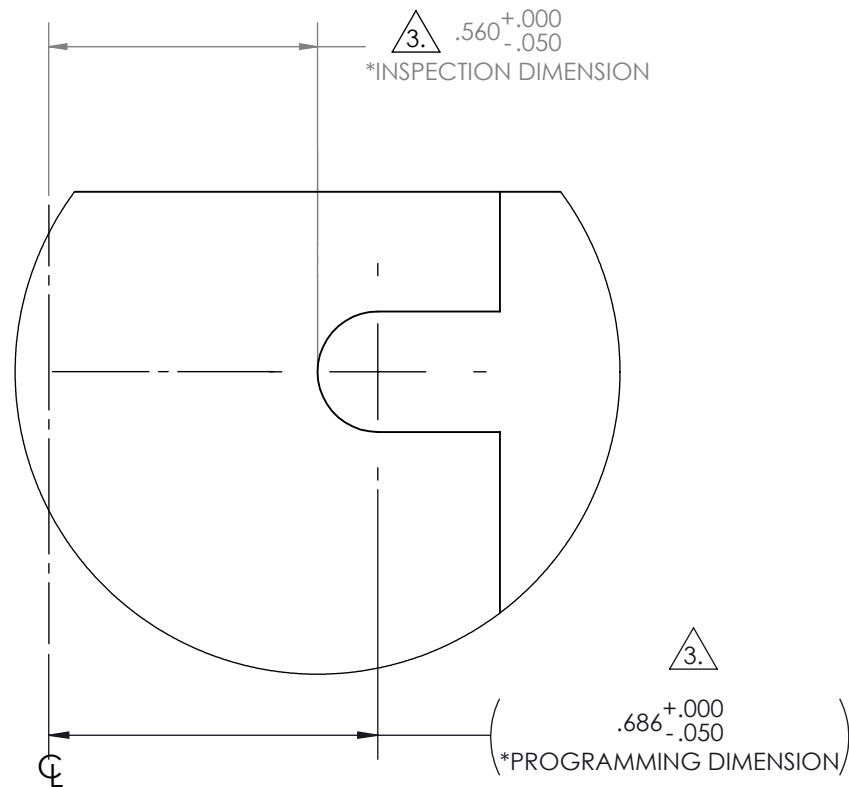
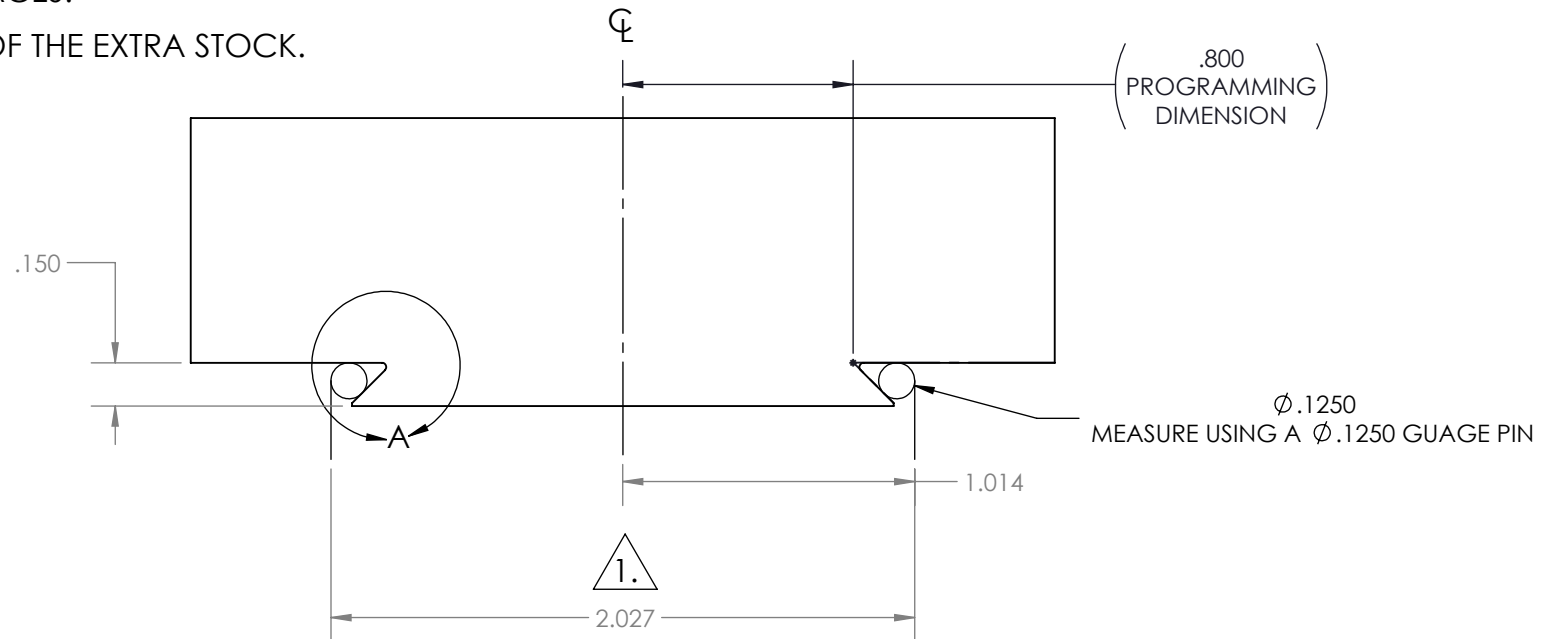
NOTES:

1. DOVETAIL WIDTH WILL NOT WILL NOT CHANGE WITH VARYING DOVETAIL DEPTH.
2. USE .010" EDGE BREAK ON DOVETAIL POINT.
3. SLOT DIMENSION TO THE CENTERLINE IS **CRITICAL**, IF DIMENSION IS TOO LARGE, STOCK MAY REST AGAINST LOCATING PIN INSTEAD OF DOVETAIL CUT SURFACES.
4. IF STOCK IS OVERSIZE, THIS TOLERANCE INCREASES BY HALF OF THE EXTRA STOCK.

D362 DOVETAIL STOCK PREPARATION



2. 2X.010 MAX



SECTION B-B
SCALE 1.5 : 1

TOLERANCES	
METRIC	INCH
X ± 1.0	X ± 0.1
.X ± 0.3	.X ± 0.05
.XX ± 0.13	.XX ± 0.01
	.XXX ± 0.005
UNLESS OTHERWISE NOTED	
ANGULAR DIMENSIONS ± 0.5°	

INCH

PROPRIETARY AND CONFIDENTIAL

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APPROVALS

DRAWN BY: C BANKS 2/1/2018

MFG. ENG.

QA ENG.

ENG. MGR.

MATERIAL:

FINISH:

WEIGHT:

THIRD ANGLE PROJECTION

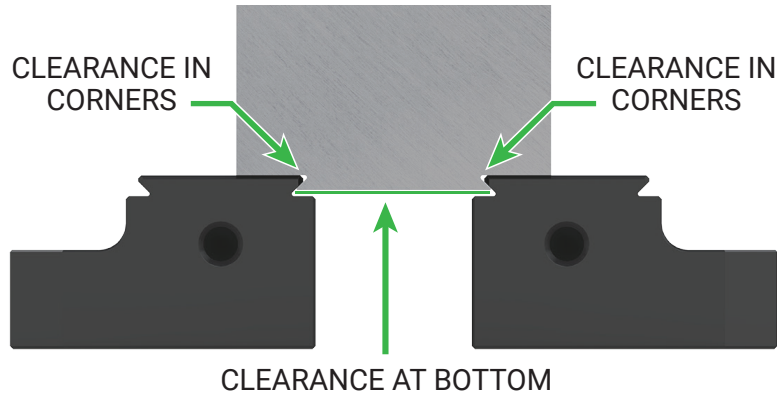


CUSTOMER		
DESCRIPTION	D362 DOVETAIL STOCK PREP	
SIZE	PART NO.	REV
B	DSP-D362	A
DO NOT SCALE DRAWING		SHEET 1 OF 1



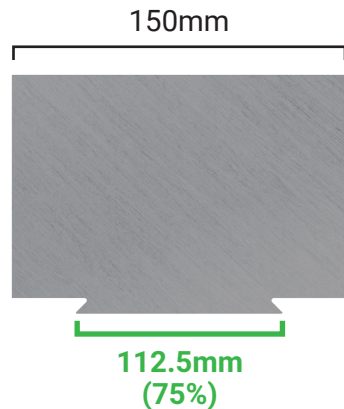
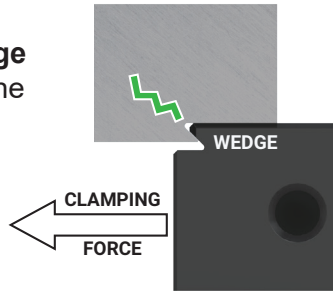
PROPER DOVETAIL

MATERIAL SHOULD REST ON TOP OF THE JAW / FIXTURE AND ON THE 45° FACE.

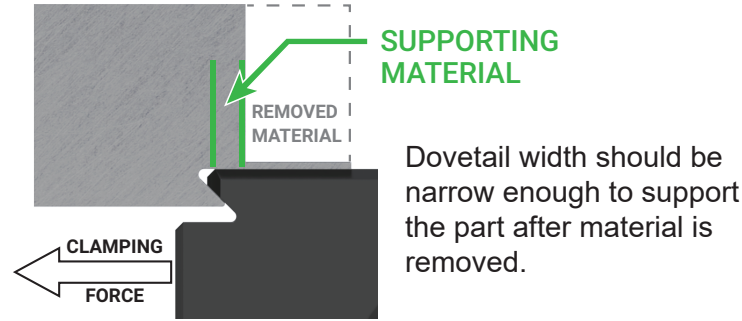


When a **proper** dovetail is used, jaw/dovetail fixture **acts as a wedge** attempting to split the material in the corner.

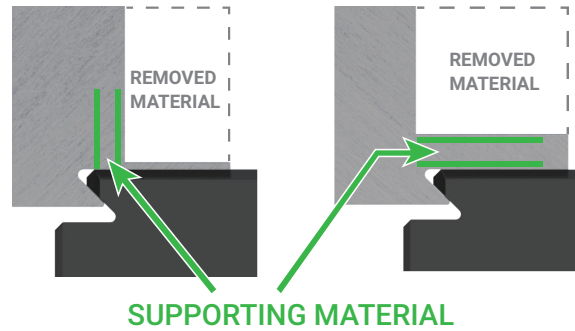
Material is clamped only once or twice and is therefore resistant to fracturing.



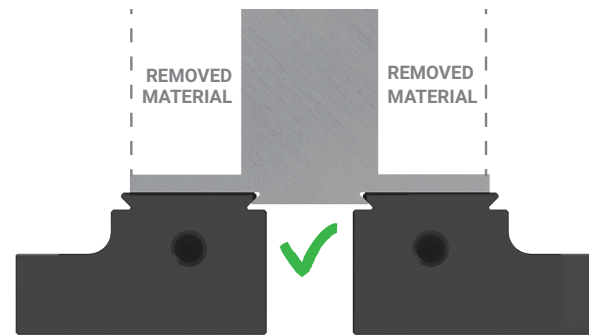
Dovetail width should not be **less than 75%** of the width of the stock.



THERE IS NO SIMPLE ANSWER TO HOW MUCH SUPPORT IS NEEDED.



If more support is needed, **decrease dovetail width** or **increase tab thickness**.



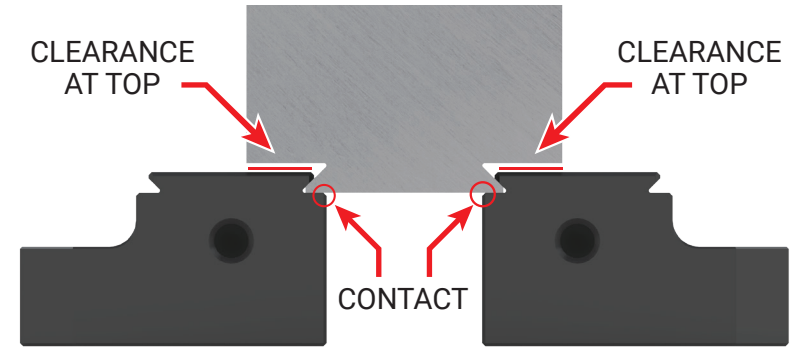
For narrow parts, position the dovetail as close as possible to the **finished part's** center of mass.



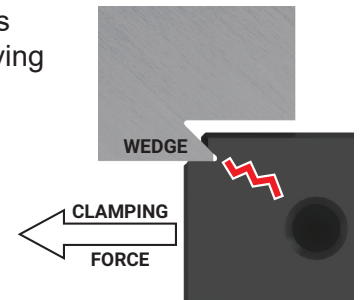
COMMON MISTAKES

❌ 1. DOVETAIL TOO DEEP

Clamping with a dovetail should **never** cause the material to locate on the bottom step of the jaw.



Locating on bottom step causes material to become a wedge trying to split the jaw. **This can break the jaw!**

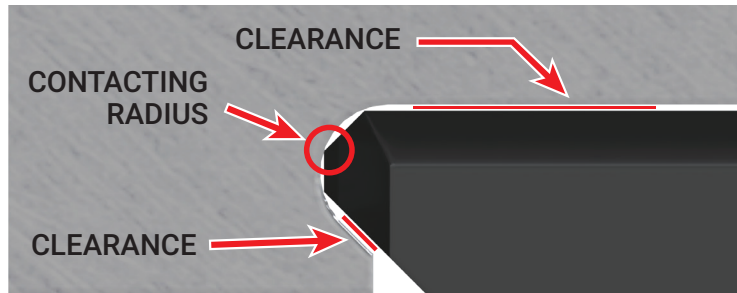


❌ 2. FINISHED PART UNSUPPORTED



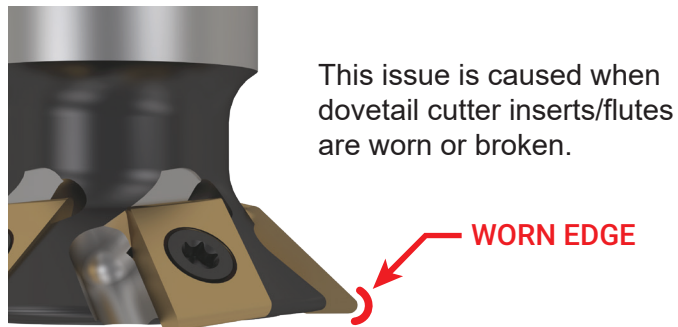
A thin tab and/or insufficient material on the top locating surface will allow the part to move during machining.

✘ 3. OVERSIZED CORNER RADIUS



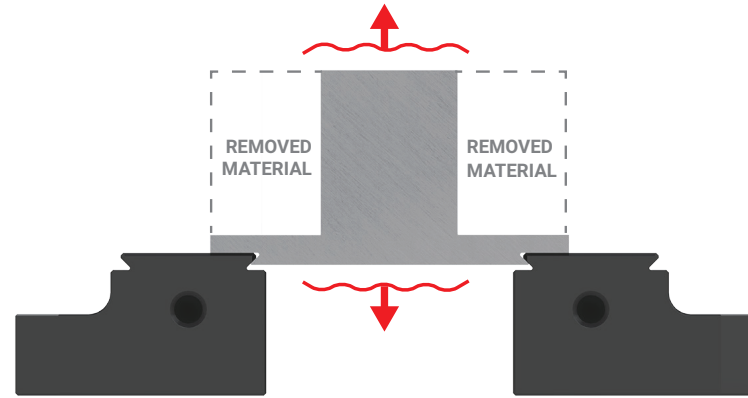
An overly wide inside corner radius allows material to contact the corner of the jaw, preventing it from locating correctly.

This will create excessive vibration during machining.



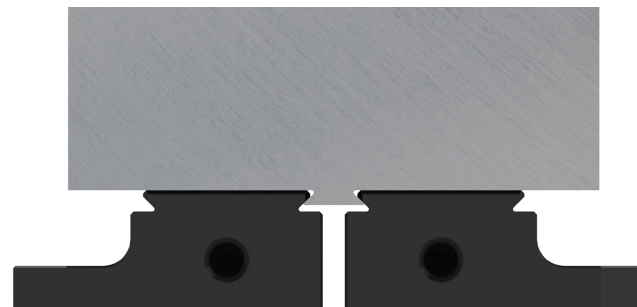
This issue is caused when dovetail cutter inserts/flutes are worn or broken.

✘ 4. EXCESSIVELY WIDE DOVETAIL



Even though this part has tabs thick enough to prevent breaking, the dovetail is not positioned correctly under the part. This may result in excessive vertical vibration.

✘ 5. EXCESSIVELY NARROW DOVETAIL



Excessively narrow dovetail will concentrate support at the center of the stock and potentially cause chatter.

Keep in mind how and where force is applied to stock during machining.



DOVETAIL TROUBLESHOOTING GUIDE



The information in this document is applicable to **ALL** 5th Axis™ products with a dovetail feature.