

Pearling Machine Plans

Main Shaft Assembly

Nigel Tudor
Weatherbury Farm



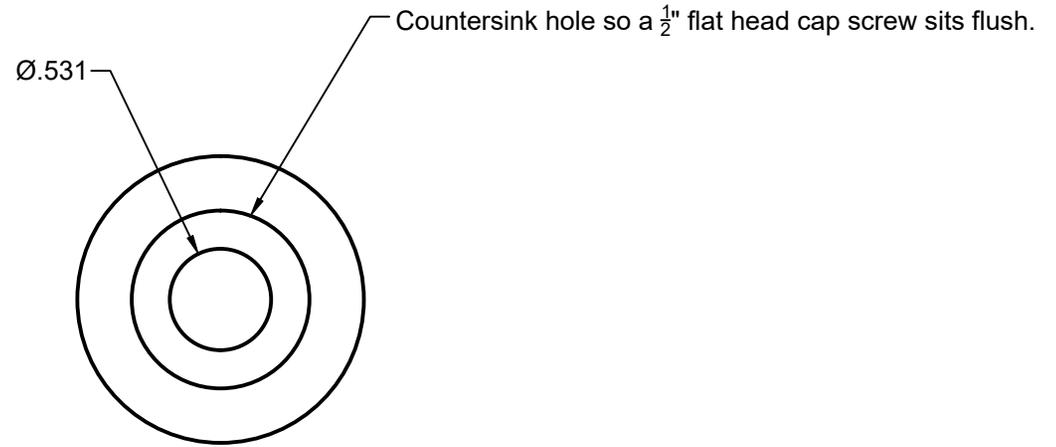
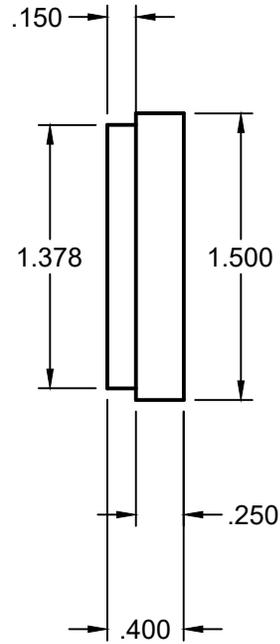
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Project details found at https://projects.sare.org/sare_project/fne19-945/

Material: 4140 PH TGP Shaft

Number Required: 1

Process Notes:

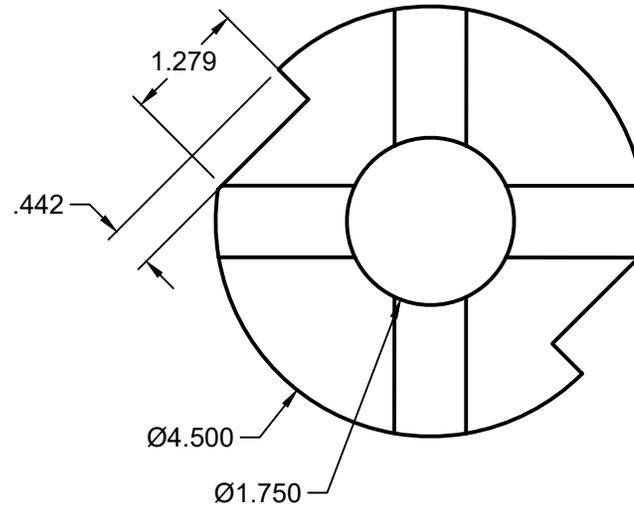
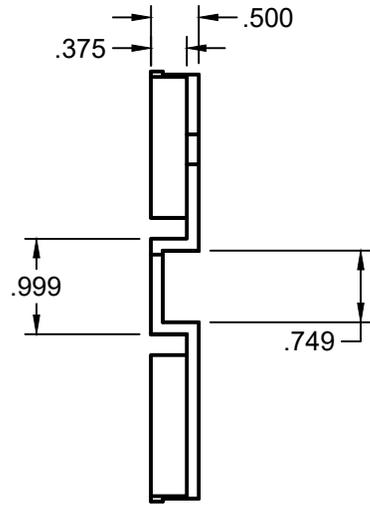


Revision Record	Date	Tolerances	Date:	Part Number:
		(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{16}$ Angular: +/- 1°	11/21/2022	MS 9
			Scale: 1:1	Title: Discharge Bearing Holder Cap
			Drawn By: NIT	Project Name: Pearling Machine

Material: 1/2" HDPE

Number Required: 1

Process Notes:



Revision Record

Date

Tolerances

Date:

10/11/2022

Part Number:

MS 6

(except as noted)
Decimals:
+/- .005 except where noted
Fractional:
+/- 1/16"
Angular:
+/- 1°

Scale:

1:2

Title:

Discharge End Plastic Cushion

Drawn By:

NIT

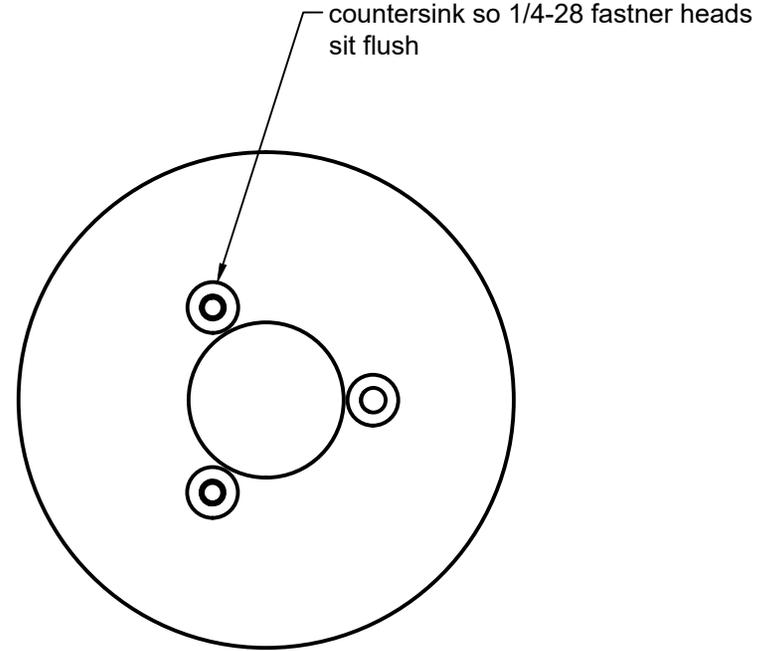
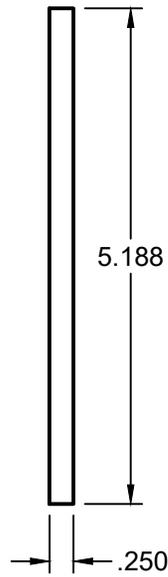
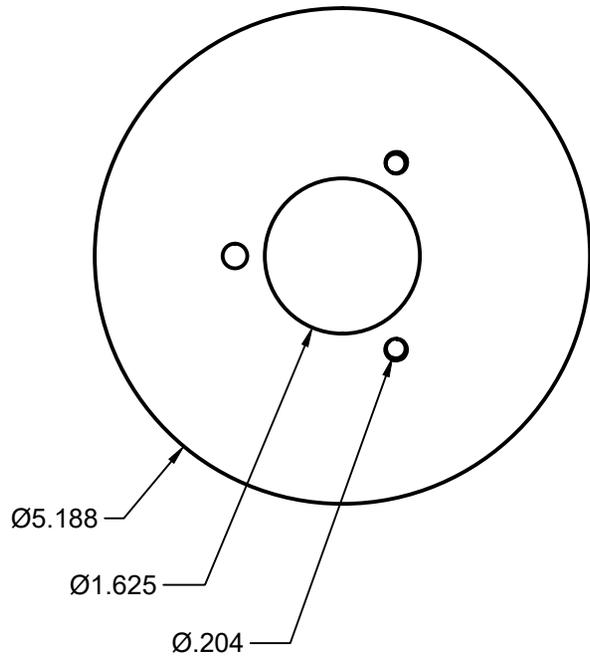
Project Name:

Pearling Machine

Material: 1/4" Steel Plate

Number Required: 1

Process Notes:



Revision Record

Date

Tolerances

Date:

9/30/2022

Part Number:

MS8

(except as noted)
Decimals:
+/- .005 except where noted
Fractional:
+/- 1/32
Angular:
+/- 1°

Scale:

1:2

Title:

Discharge End Plate

Drawn By:

NIT

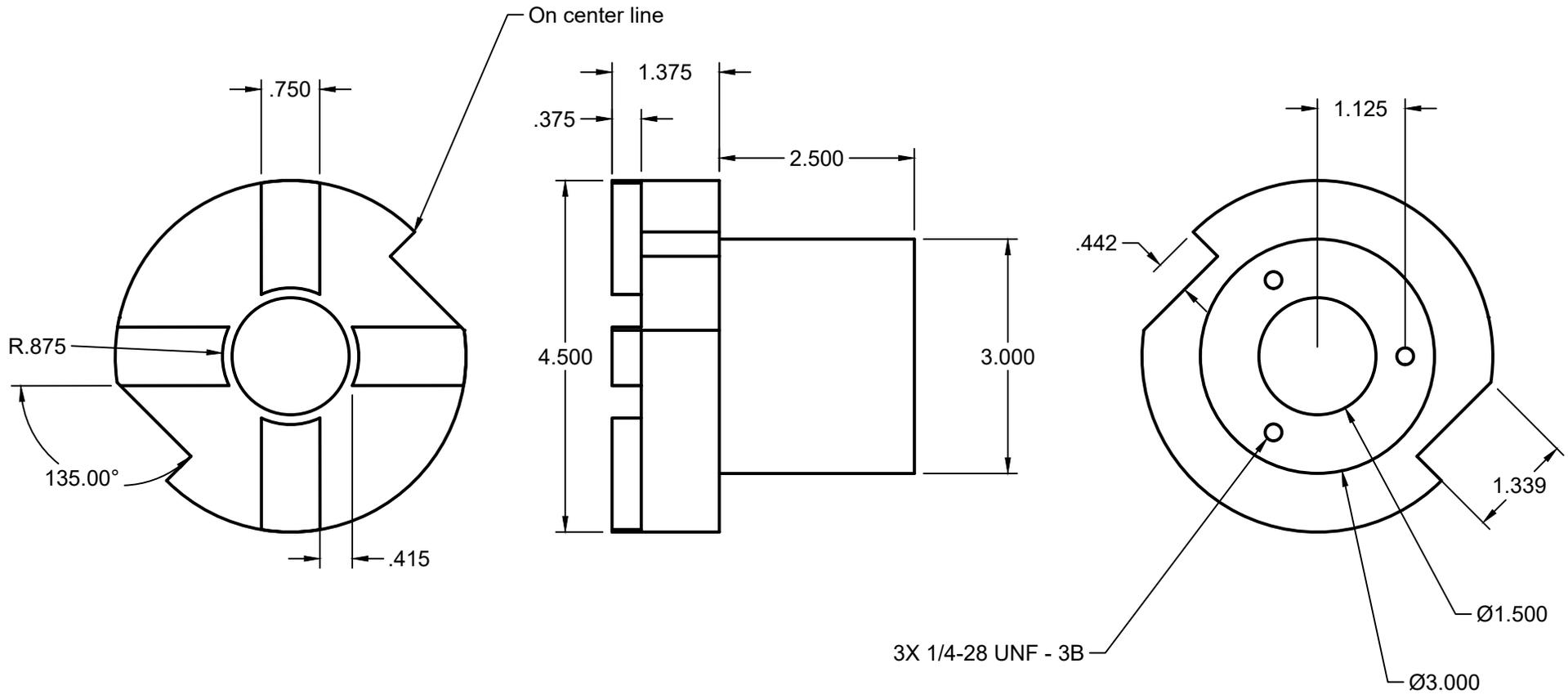
Project Name:

Pearling Machine

Material: 4140 PH 4.5" Dia

Number Required: 1

Process Notes:



The 4 drive lugs are .750"wide x .375" high 90° apart. Position and size of the lugs may change based on the granite millstone drive furrows.

Part also gets a $\frac{3}{8}$ " keyway and a $\frac{3}{8}$ "-16 tapped hole opposite the key.

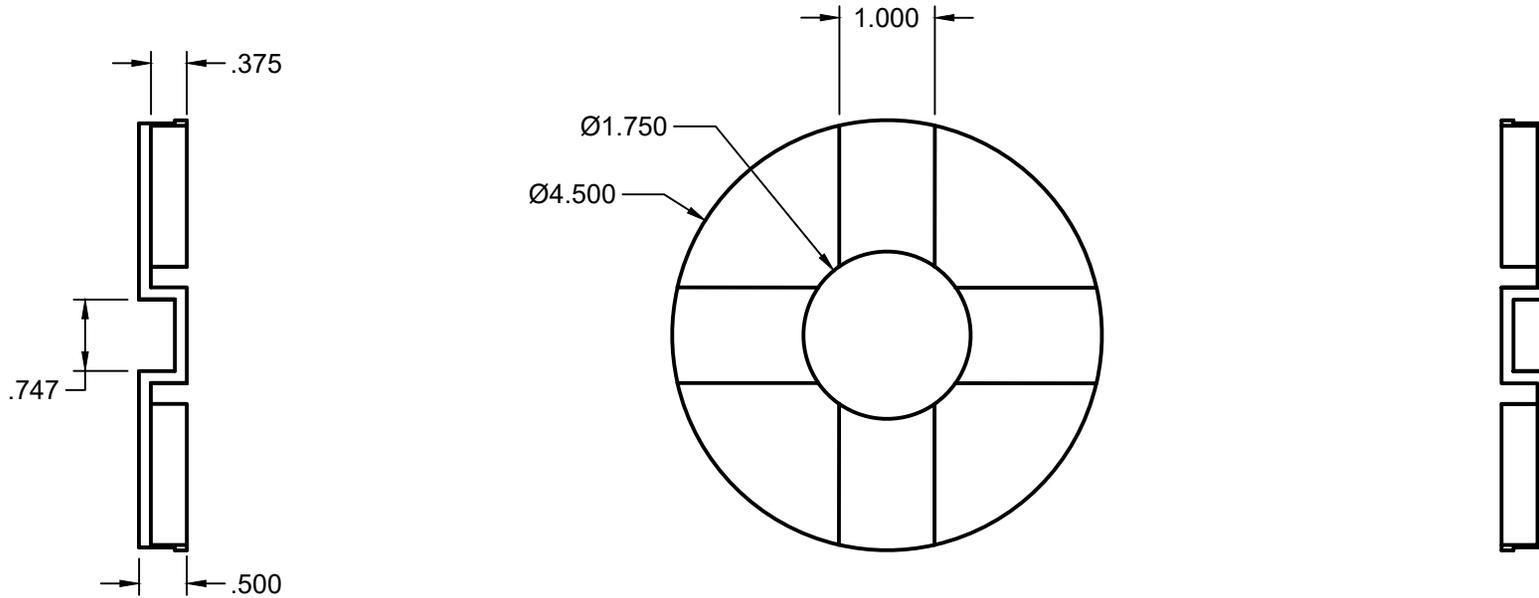
Revision Record	Date	Tolerances	Date:	Part Number:
		(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{32}$ Angular: +/- 1°	9/30/2022	MS 7
			Scale: 1:2	Title: Discharge End Support
			Drawn By: NIT	Project Name: Pearling Machine

Material: 1/2" HDPE

Number Required: 1

Process Notes:

This is the cushion between the granite millstone and the steel shaft.
Stone side may need to be altered based on the pokets in the millstone.

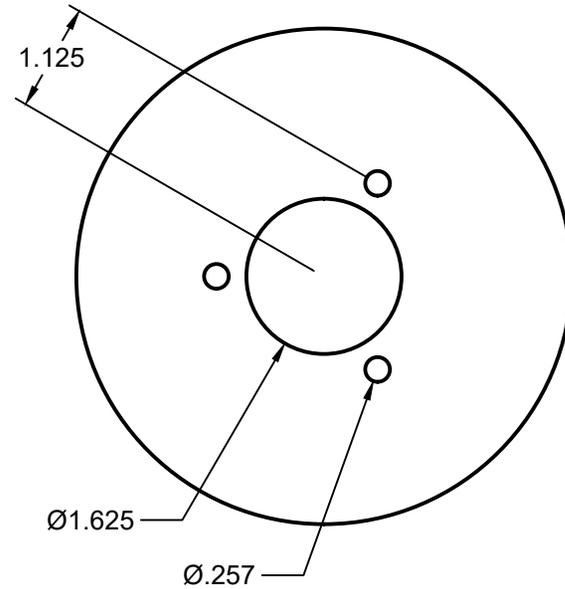
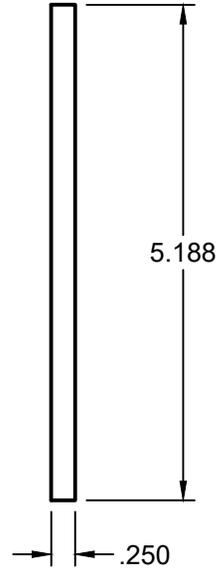
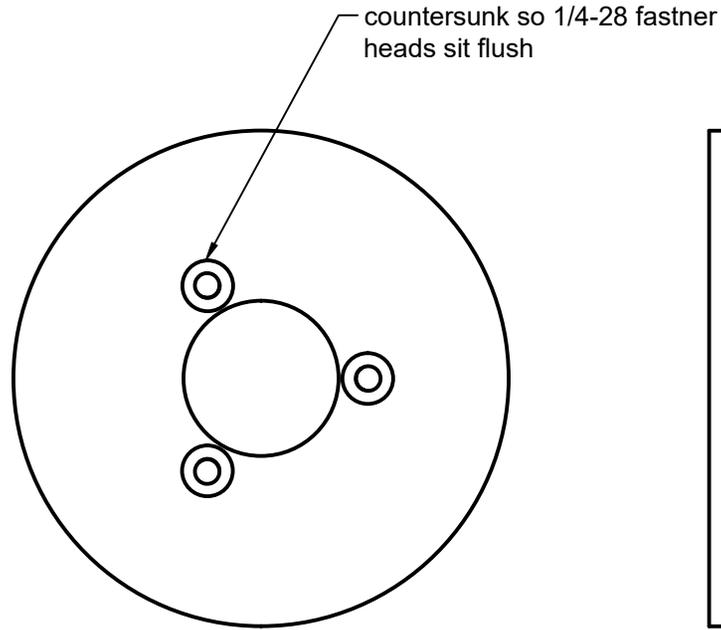


Revision Record	Date	Tolerances	Date:	Part Number:
		(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{32}$ Angular: +/- 1°	10/11/2022	MS5
			Scale: 1:2	Title: Feed End Plastic Cushion
			Drawn By: NIT	Project Name: Pearling Machine

Material: 1/4" Plate

Number Required: 1

Process Notes:



Revision Record

Date

Tolerances

Date:

9/25/2022

Part Number:

MS2

(except as noted)
Decimals:
+/- .005 except where noted
Fractional:
+/- 1/32
Angular:
+/- 1°

Scale:

1:2

Title:

Feed End Plate

Drawn By:

NIT

Project Name:

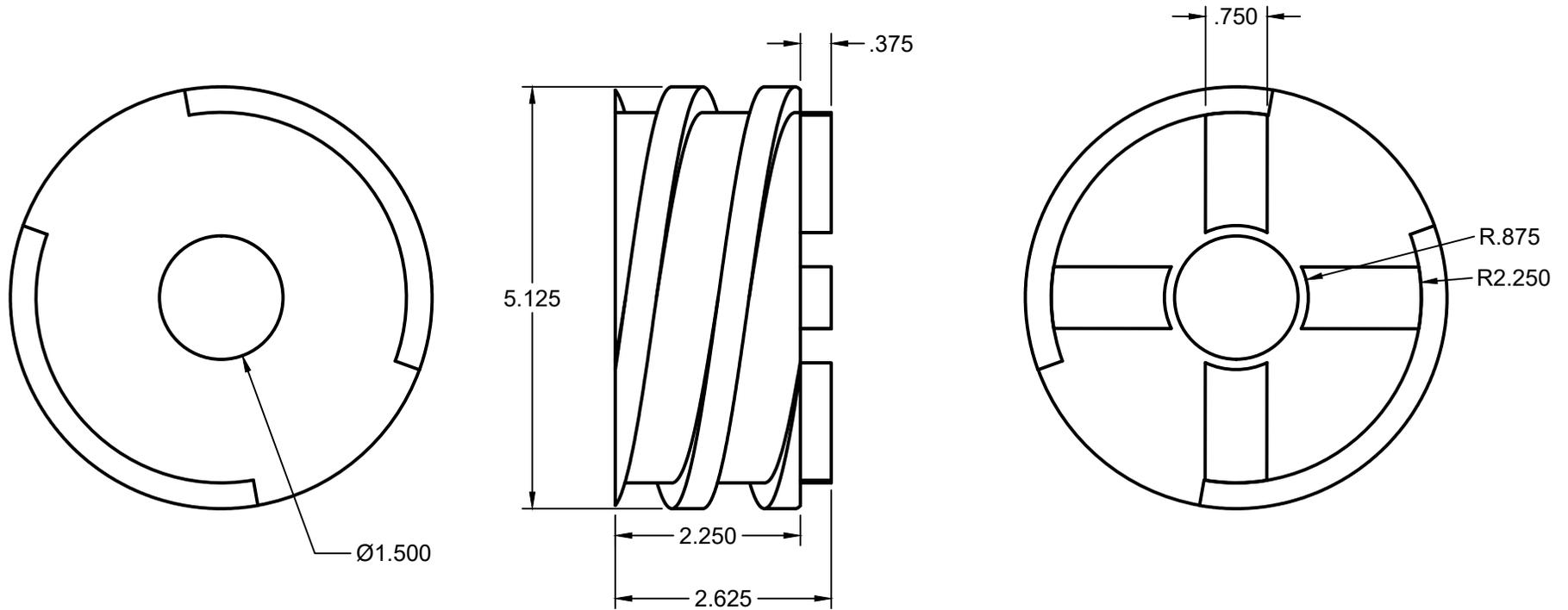
Pearling Machine

Material: 4140PH 5.25 Dia

Number Required:

Process Notes:

Note: feed auger has a twin start 2.25" lead groove, .750" wide x $\frac{5}{16}$ " deep groove. Part is helically milled in conjunction with part MS3. Part also gets a $\frac{3}{8}$ " keyway and a $\frac{3}{8}$ "-16 tapped hole opposite the key. The setscrew hole is to be positioned so that it is in the root of the groove.



The 4 drive lugs are .750"wide x .375" high 90° apart. Position and size of the lugs may change based on the granite millstone drive furrows.

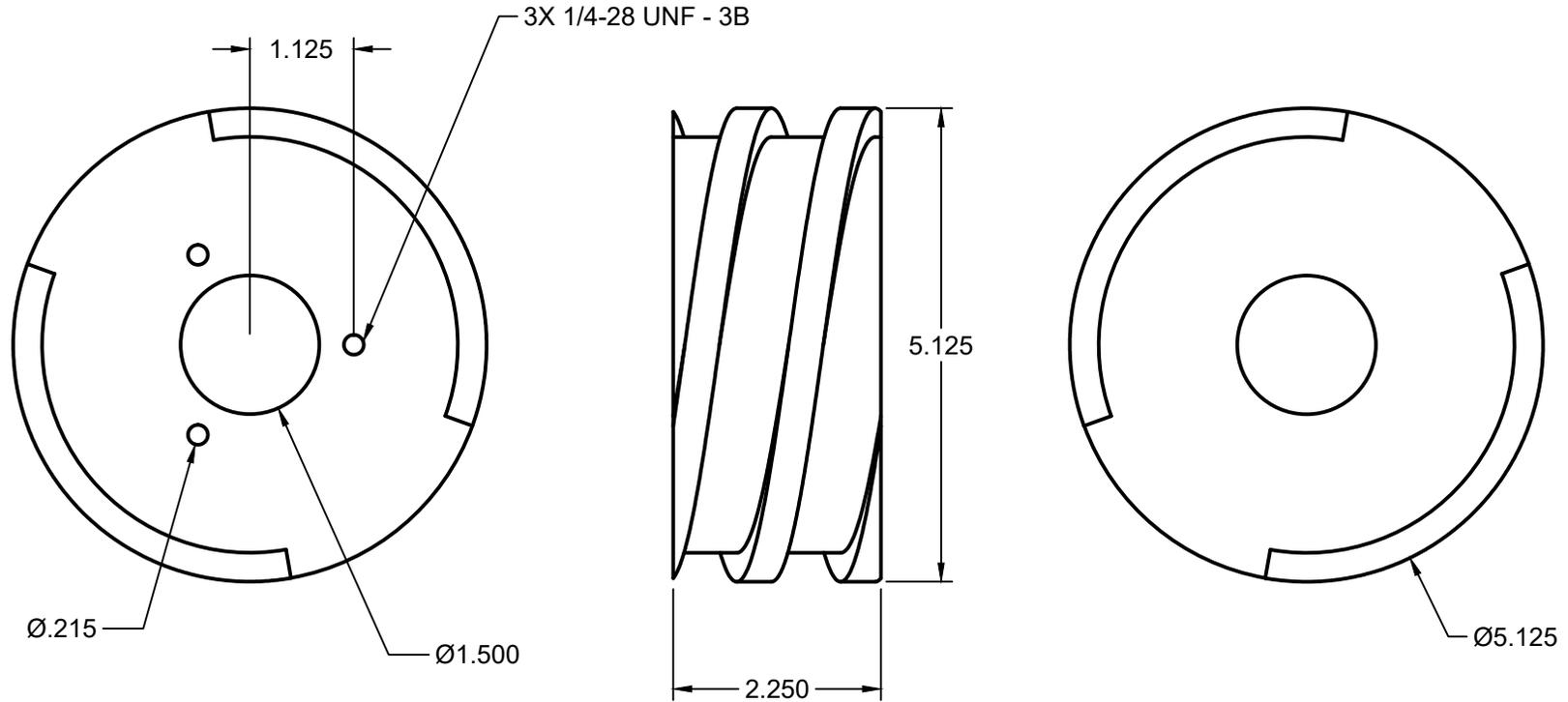
Revision Record	Date	Tolerances	Date:	Part Number:
		(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{32}$ Angular: +/- 1°	9/30/2022	MS4
			Scale:	Title:
			1:2	Front End Support and Feed Screw
			Drawn By:	Project Name:
			NIT	Pearling Machine

Material: 4140 PH 5.25 Dia

Number Required: 1

Process Notes:

Note: feed auger has a twin start 2.25" lead groove, .750" wide x $\frac{5}{16}$ " deepgroove. Part is helically milled in conjunction with part MS4. Part also gets a $\frac{3}{8}$ " keyway and a $\frac{3}{8}$ "-16 tapped hole oppisite the key. The setscrew hole is to be positioned so that it is in the root of the groove.



Revision Record

Date

Tolerances

Date:

9/30/2022

Part Number:

MS3

(except as noted)
Decimals:
+/- .005 except where noted
Fractional:
+/- $\frac{1}{32}$
Angular:
+/- 1°

Scale:

1:2

Title:

Front Feed Screw

Drawn By:

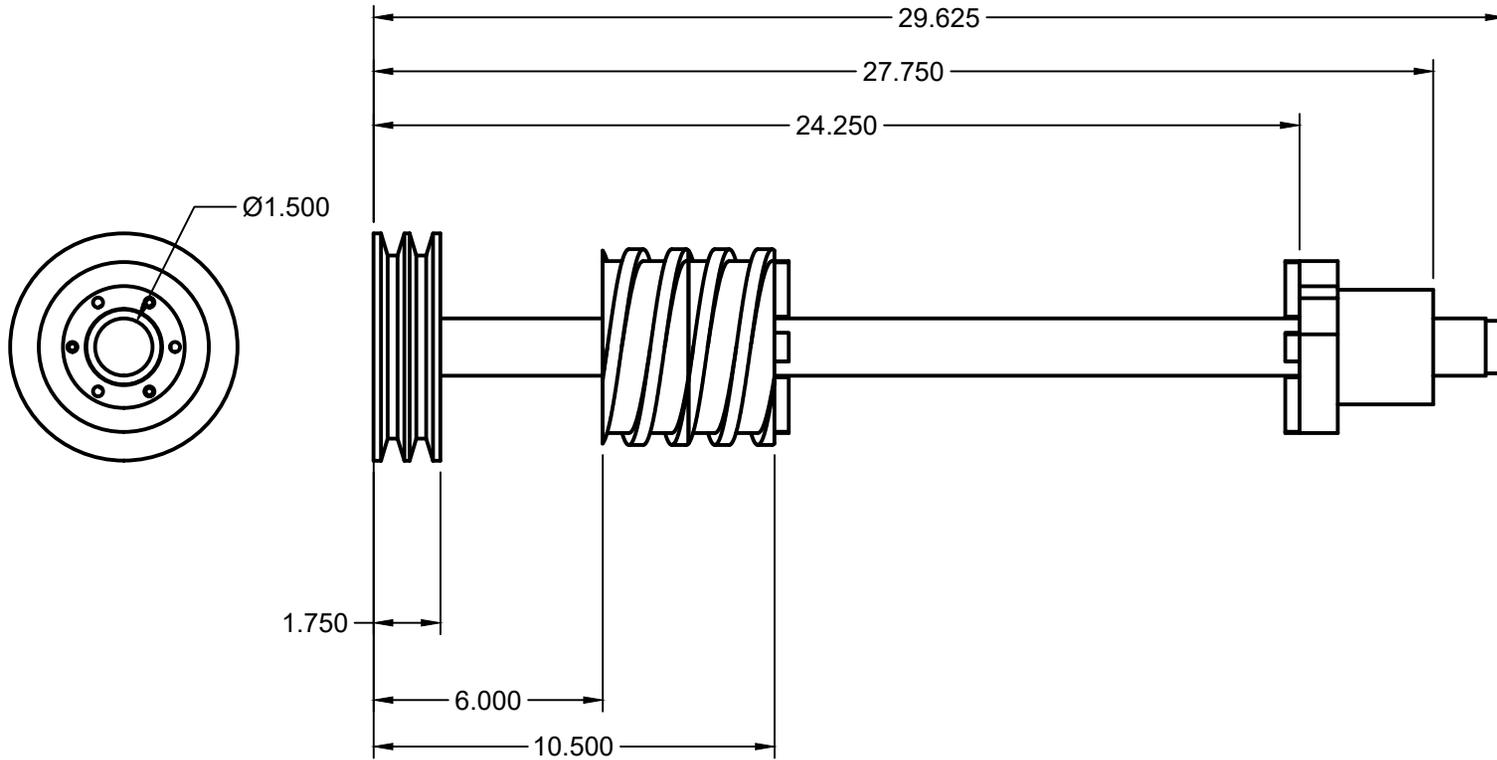
NIT

Project Name:

Pearling Machine



Material:	Number Required:	Process Notes:
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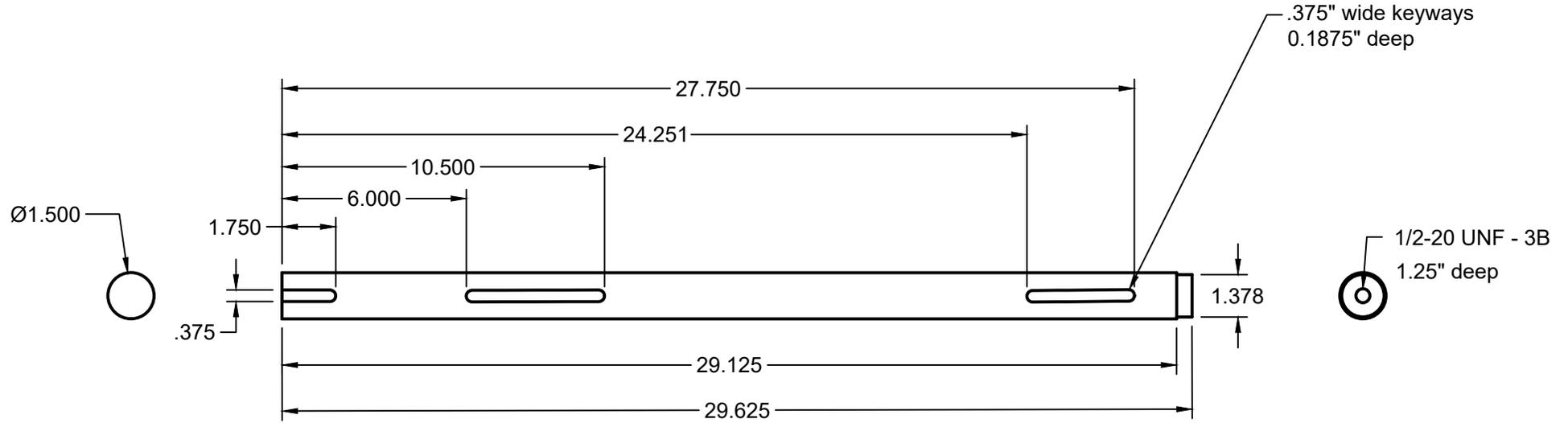
Revision Record	Date		Tolerances <small>(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{32}$ Angular: +/- 1°</small>	Date: 9/25/2022	Part Number:
				Scale: 1:5	Title: Main Shaft Element Position
				Drawn By: NIT	Project Name: Pearling Machine



Material: 1.5" Dia TGP 4140PH

Number Required: 1

Process Notes:



Revision Record	Date	Tolerances	Date:	Part Number:
		(except as noted) Decimals: +/- .005 except where noted Fractional: +/- $\frac{1}{32}$ Angular: +/- 1°	9/25/2022	MS1
			Scale: 1:5	Title: Main Shaft
			Drawn By: NIT	Project Name: Pearling Machine