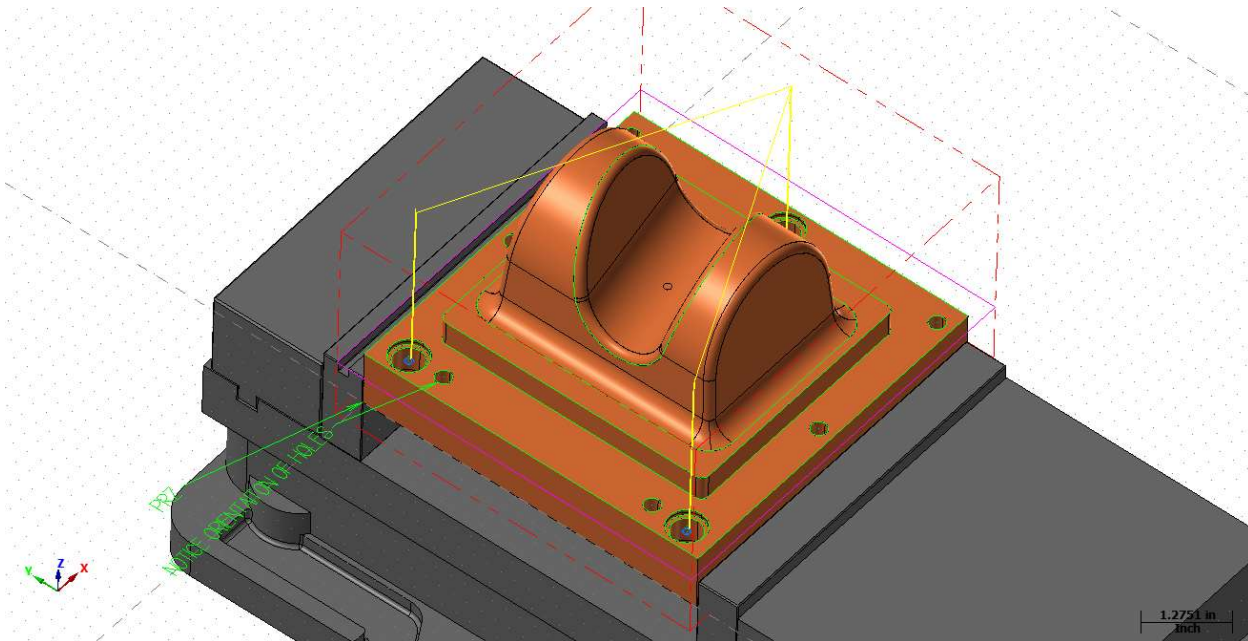


3 - AXIS VMC

GENERAL INFORMATION

| | |
|--------------|--------------|
| CLASS | PMT 280 |
| PROJECT NAME | 280-4 |
| PROGRAMMER: | Devin Watson |
| DRAWING: | PMT 280-4 |
| DATE: | 2/25/2016 |

REVISION: A

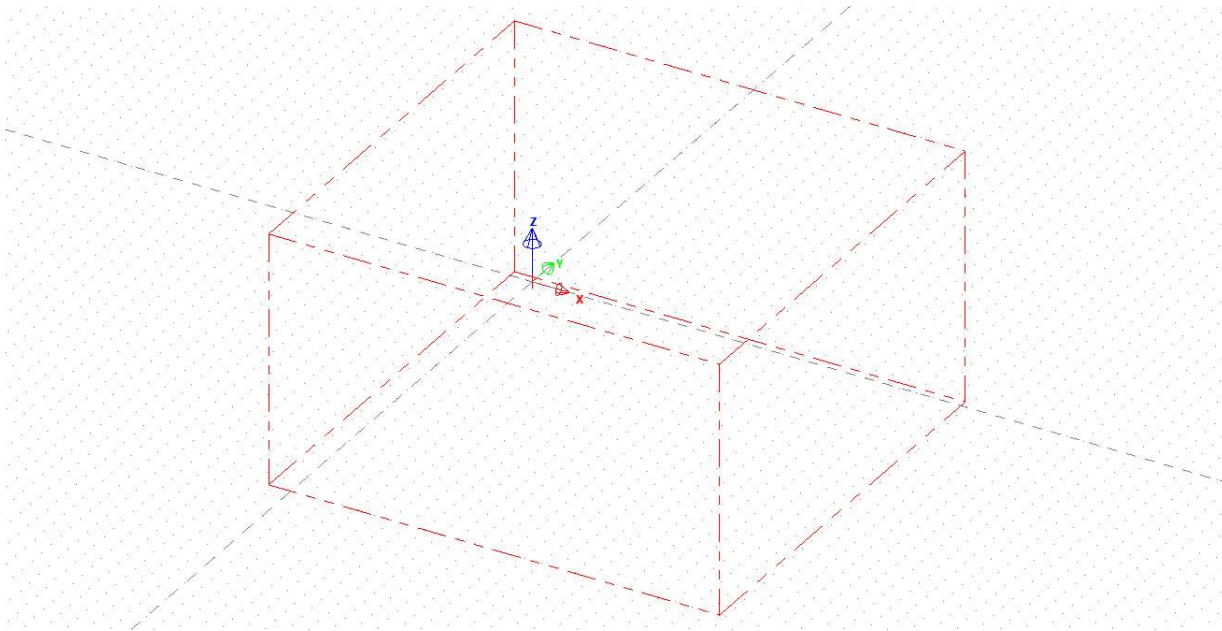


COMMENTS

| |
|--|
| |
| |
| |



DUE #1303832



| | |
|---------------|-------------------|
| STOCK: | YES |
| SHAPE: | Box |
| SIZE: | 6.75, 6.375, 3.75 |
| RADIUS: | NA |
| LENGTH: | NA |
| AXIS: | NA |
| FILE: | NA |
| IDN: | NA |

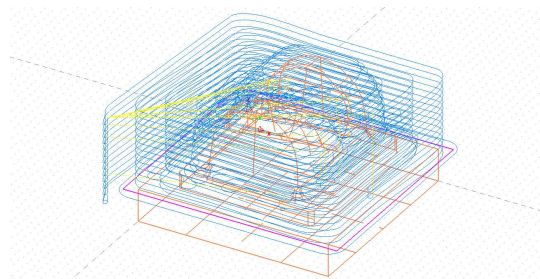
CYCLE TIME: 0 HOURS, 52 MINUTES, 43 SECONDS

OPERATION LIST

OPERATION INFO *Surface High Speed (OptiCore)*

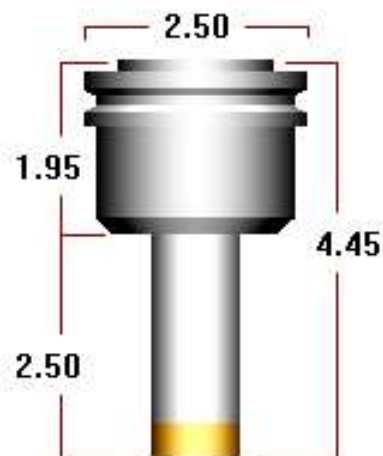
CYCLE TIME: 0 HOURS, 16 MINUTES, 42 SECONDS
COMMENT: ROUGH PART

PROGRAM NUMBER: 326
SPINDLE SPEED: 3500 RPM
FEEDRATE: 72.0 inch/min
CLEARANCE PLANE: 2.0
RETRACT PLANE: 0.15
FEED PLANE: 0.025
DEPTH: NA
STOCK TO LEAVE: 0.02
COMP TO TIP: YES
WORK OFFSET: 0



TOOL INFO *1" Insertable Endmill*

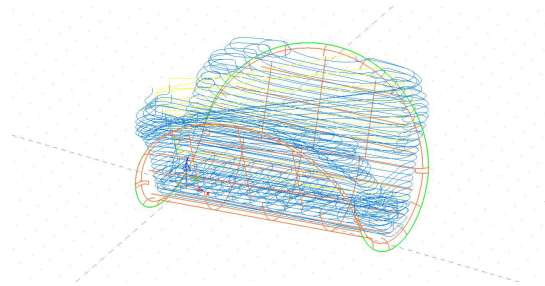
TYPE: Endmill1 Flat
NUMBER: 1
DIAMETER: 1.0
CORNER RADIUS: 0.0
LENGTH OFFSET: 1
DIAMETER OFFSET: 1
MATERIAL: Carbide
NUMBER OF FLUTES: 3
FPT: 0.0069 SFM: 916.2304
MFG CODE: R390 Shoulder Mill
ASSEMBLY: 1" INSERTABLE
HOLDER: CAT 40 - ID 1 NA
TIME: 00:16:42



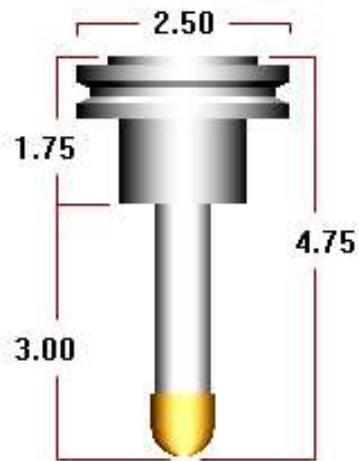
OPERATION INFO**Surface High Speed (OptiRest)**

| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 3 MINUTES, 53 SECONDS |
| COMMENT: | ROUGH TROUGH |

| | |
|------------------|----------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 5000 RPM |
| FEEDRATE: | 100.0 inch/min |
| CLEARANCE PLANE: | 2.0 |
| RETRACT PLANE: | 0.15 |
| FEED PLANE: | 0.025 |
| DEPTH: | NA |
| STOCK TO LEAVE: | 0.015 |
| COMP TO TIP: | YES |
| WORK OFFSET: | 0 |

**TOOL INFO****3/4 BALL INSERT**

| | |
|-------------------|-----------------------|
| TYPE: | Endmill2 Sphere |
| NUMBER: | 2 |
| DIAMETER: | 0.75 |
| CORNER RADIUS: | 0.375 |
| LENGTH OFFSET: | 2 |
| DIAMETER OFFSET: | 2 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.01 | SFM: 981.6754 |
| MFG CODE: | ZBS2048 |
| ASSEMBLY: | 3/4 BALL |
| HOLDER: | CAT 40 - ID 1 NA |
| TIME: | 00:03:53 |

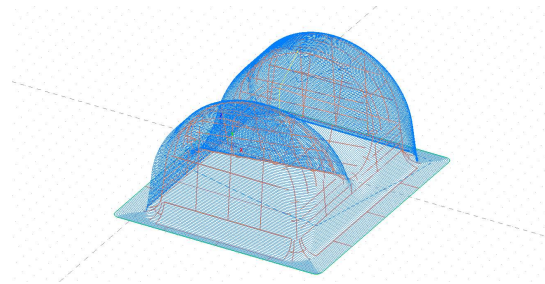


OPERATION INFO

Surface High Speed (Scallop)

CYCLE TIME: 0 HOURS, 16 MINUTES, 51 SECONDS
COMMENT:

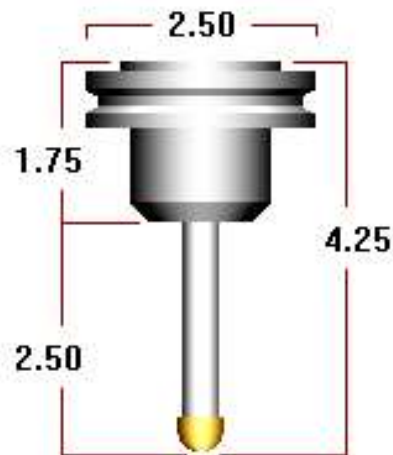
PROGRAM NUMBER: 326
SPINDLE SPEED: 5000 RPM
FEEDRATE: 100.0 inch/min
CLEARANCE PLANE: 2.0
RETRACT PLANE: 0.15
FEED PLANE: 0.025
DEPTH: NA
STOCK TO LEAVE: 0.0
COMP TO TIP: YES
WORK OFFSET: 0



TOOL INFO

1/2" BALL INSERT TOOL

TYPE: Endmill2 Sphere
NUMBER: 3
DIAMETER: 0.5
CORNER RADIUS: 0.25
LENGTH OFFSET: 3
DIAMETER OFFSET: 3
MATERIAL: Carbide
NUMBER OF FLUTES: 2
FPT: 0.01 SFM: 654.4503
MFG CODE:
ASSEMBLY: 1/2" BALL
HOLDER: CAT 40 - ID 0 NA
TIME: 00:16:51

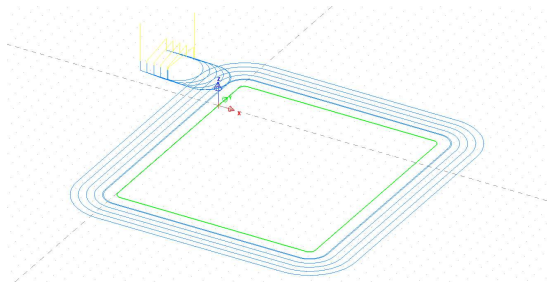


OPERATION INFO

Contour (2D)

| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 2 MINUTES, 45 SECONDS |
| COMMENT: | MILL BOSS |

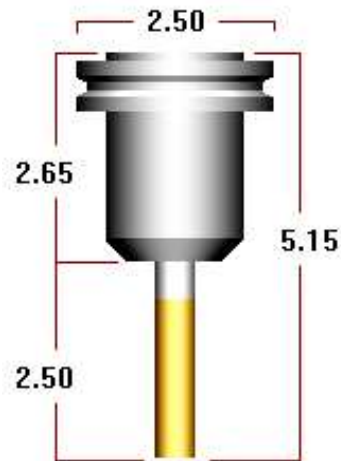
| | |
|------------------|---------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 3500 RPM |
| FEEDRATE: | 50.0 inch/min |
| CLEARANCE PLANE: | 2.0 |
| RETRACT PLANE: | 1.25 |
| FEED PLANE: | 1.2 |
| DEPTH: | 1.0 |
| STOCK TO LEAVE: | 0.0 |
| COMP TO TIP: | YES |
| WORK OFFSET: | 0 |



TOOL INFO

0.5 2 Flute Flat EM

| | |
|-------------------|---------------------|
| TYPE: | Endmill1 Flat |
| NUMBER: | 4 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 4 |
| DIAMETER OFFSET: | 4 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.0071 | SFM: 458.1152 |
| MFG CODE: | |
| ASSEMBLY: | 0.5 2 FLUTE |
| HOLDER: | CAT 40 - 1/2 ID, NA |
| TIME: | 00:02:45 |

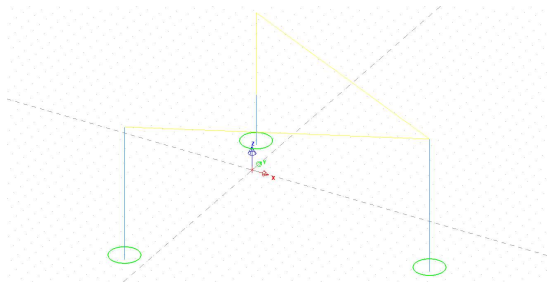


OPERATION INFO

Drill/Counterbore

| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 4 MINUTES, 22 SECONDS |
| COMMENT: | SPOT DRILL THREE HOLES |

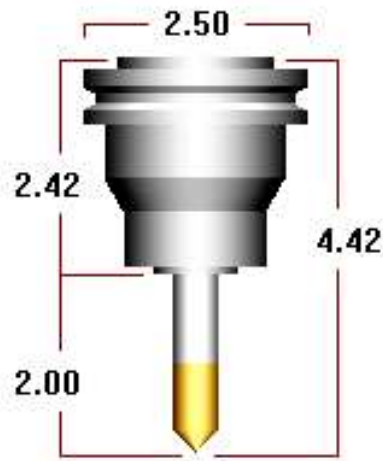
| | |
|------------------|--------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 1000 RPM |
| FEEDRATE: | 2.0 inch/min |
| CLEARANCE PLANE: | 2.0 |
| RETRACT PLANE: | 0.0 |
| FEED PLANE: | 0.1 |
| DEPTH: | -0.1 |
| STOCK TO LEAVE: | 0.0 |
| COMP TO TIP: | NO |
| WORK OFFSET: | 0 |



TOOL INFO

1/2" 90° SPOT DRILL

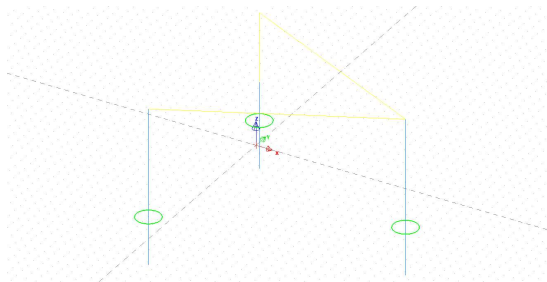
| | |
|-------------------|---------------|
| TYPE: | Drill |
| NUMBER: | 5 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 5 |
| DIAMETER OFFSET: | 5 |
| MATERIAL: | HSS |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.001 | SFM: 130.8901 |
| MFG CODE: | |
| ASSEMBLY: | 1/2" 90° SPOT |
| HOLDER: | CAT 40 - NA |
| TIME: | 00:04:22 |



OPERATION INFO *Drill/Counterbore*

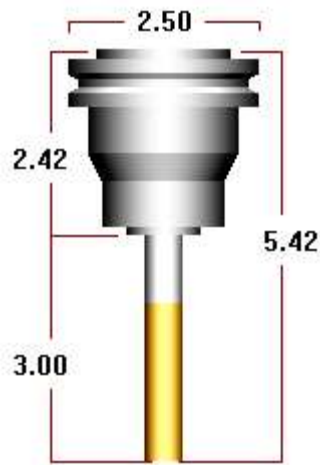
| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 4 MINUTES, 53 SECONDS |
| COMMENT: | DRILL 3 HOLES |

| | |
|------------------|--------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 1000 RPM |
| FEEDRATE: | 2.5 inch/min |
| CLEARANCE PLANE: | 2.0 |
| RETRACT PLANE: | 0.0 |
| FEED PLANE: | 0.1 |
| DEPTH: | -1.25 |
| STOCK TO LEAVE: | 0.0 |
| COMP TO TIP: | NO |
| WORK OFFSET: | 0 |



TOOL INFO *.4844 DRILL*

| | |
|-------------------|------------------------|
| TYPE: | Drill |
| NUMBER: | 6 |
| DIAMETER: | 0.4844 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 6 |
| DIAMETER OFFSET: | 6 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.0013 | SFM: 126.8063 |
| MFG CODE: | R850-1230-30-A1A |
| ASSEMBLY: | .4844 DRILL CAT |
| HOLDER: | CAT 40 - NA |
| TIME: | 00:04:53 |

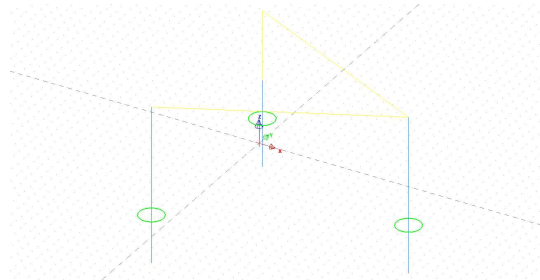


OPERATION INFO

Drill/Counterbore

| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 2 MINUTES, 27 SECONDS |
| COMMENT: | REAM 3 HOLES |

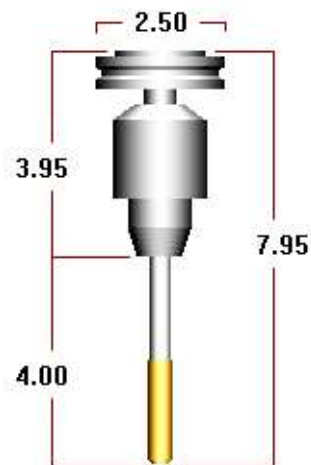
| | |
|------------------|--------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 500 RPM |
| FEEDRATE: | 5.0 inch/min |
| CLEARANCE PLANE: | 2.0 |
| RETRACT PLANE: | 0.0 |
| FEED PLANE: | 0.1 |
| DEPTH: | -1.25 |
| STOCK TO LEAVE: | 0.0 |
| COMP TO TIP: | NO |
| WORK OFFSET: | 0 |



TOOL INFO

.500 REAMER

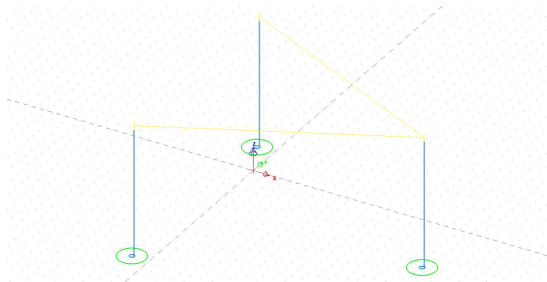
| | | |
|-------------------|-------------|--------|
| TYPE: | Reamer | |
| NUMBER: | 7 | |
| DIAMETER: | 0.5 | |
| CORNER RADIUS: | 0.0 | |
| LENGTH OFFSET: | 7 | |
| DIAMETER OFFSET: | 7 | |
| MATERIAL: | HSS | |
| NUMBER OF FLUTES: | 6 | |
| FPT: 0.0017 | SFM: | 65.445 |
| MFG CODE: | | |
| ASSEMBLY: | .500 REAMER | |
| HOLDER: | CAT 40 | NA |
| TIME: | 00:02:27 | |



OPERATION INFO **Contour (2D)**

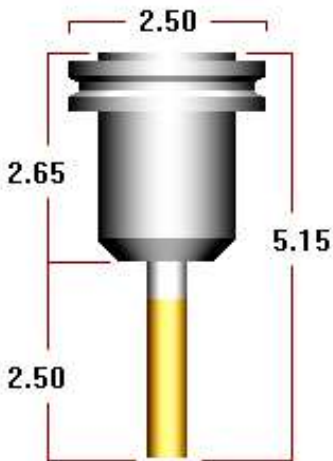
| | |
|-------------|--------------------------------|
| CYCLE TIME: | 0 HOURS, 0 MINUTES, 47 SECONDS |
| COMMENT: | MILL 3 C'BORES |

| | |
|------------------|---------------|
| PROGRAM NUMBER: | 326 |
| SPINDLE SPEED: | 3500 RPM |
| FEEDRATE: | 50.0 inch/min |
| CLEARANCE PLANE: | 4.0 |
| RETRACT PLANE: | 3.9 |
| FEED PLANE: | 3.8 |
| DEPTH: | 0.895 |
| STOCK TO LEAVE: | 0.0 |
| COMP TO TIP: | YES |
| WORK OFFSET: | 0 |



TOOL INFO **1/2" FLAT 2 FLUTE EM**

| | |
|-------------------|------------------------|
| TYPE: | Endmill1 Flat |
| NUMBER: | 4 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 4 |
| DIAMETER OFFSET: | 8 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.0071 | SFM: 458.1152 |
| MFG CODE: | |
| ASSEMBLY: | 1/2" FLAT 2 |
| HOLDER: | CAT 40 - 1/2 ID, NA |
| TIME: | 00:00:47 |

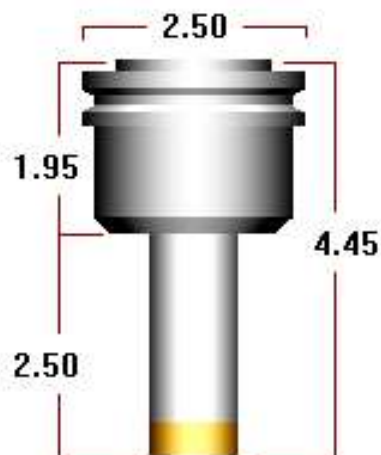


TOOL LIST

Sorted: ASC

TOOL INFO**1" Insertable Endmill**

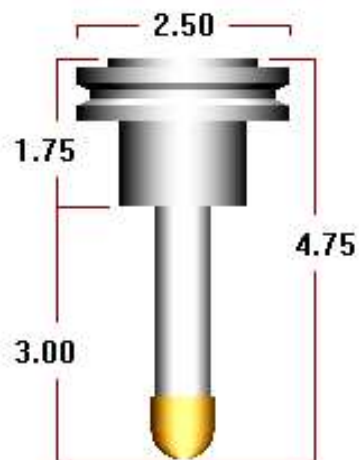
TYPE: Endmill1 Flat
NUMBER: 1
DIAMETER: 1.0
CORNER RADIUS: 0.0
LENGTH OFFSET: 1
DIAMETER OFFSET: 1
MATERIAL: Carbide
NUMBER OF FLUTES: 3
FPT: 0.0069 SFM: 916.2304
MFG CODE: R390 Shoulder Mill
ASSEMBLY: 1" INSERTABLE
HOLDER: CAT 40 - ID 1 NA
TIME: 00:16:42



USED BY OPERATION: # 1 Surface High Speed (OptiCore)

TOOL INFO**3/4 BALL INSERT**

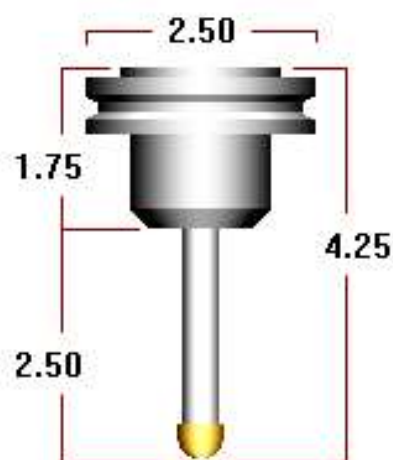
TYPE: Endmill2 Sphere
NUMBER: 2
DIAMETER: 0.75
CORNER RADIUS: 0.375
LENGTH OFFSET: 2
DIAMETER OFFSET: 2
MATERIAL: Carbide
NUMBER OF FLUTES: 2
FPT: 0.01 SFM: 981.6754
MFG CODE: ZBS2048
ASSEMBLY: 3/4 BALL
HOLDER: CAT 40 - ID 1 NA
TIME: 00:03:53



USED BY OPERATION: # 2 Surface High Speed (OptiRest)

TOOL INFO**1/2" BALL INSERT TOOL**

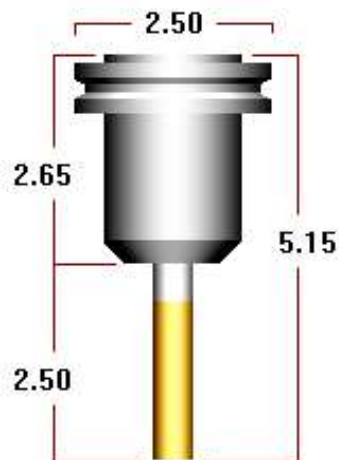
TYPE: Endmill2 Sphere
NUMBER: 3
DIAMETER: 0.5
CORNER RADIUS: 0.25
LENGTH OFFSET: 3
DIAMETER OFFSET: 3
MATERIAL: Carbide
NUMBER OF FLUTES: 2
FPT: 0.01 SFM: 654.4503
MFG CODE:
ASSEMBLY: 1/2" BALL
HOLDER: CAT 40 - ID 0 NA
TIME: 00:16:51



USED BY OPERATION: # 3 Surface High Speed (Scallop)

TOOL INFO
0.5 2 Flute Flat EM

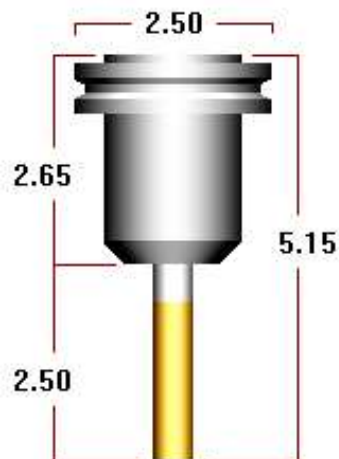
| | |
|-------------------|---------------------|
| TYPE: | Endmill1 Flat |
| NUMBER: | 4 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 4 |
| DIAMETER OFFSET: | 4 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.0071 | SFM: 458.1152 |
| MFG CODE: | |
| ASSEMBLY: | 0.5 2 FLUTE |
| HOLDER: | CAT 40 - 1/2 ID, NA |
| TIME: | 00:02:45 |



USED BY OPERATION: #4 Contour (2D)

TOOL INFO
1/2" FLAT 2 FLUTE EM

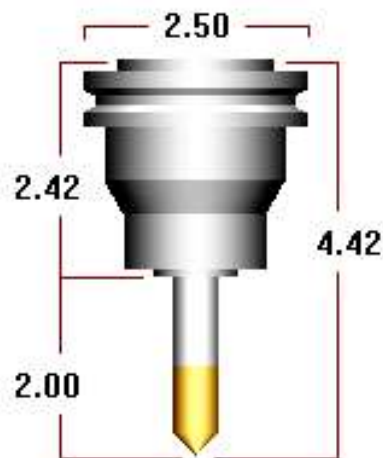
| | |
|-------------------|---------------------|
| TYPE: | Endmill1 Flat |
| NUMBER: | 4 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 4 |
| DIAMETER OFFSET: | 8 |
| MATERIAL: | Carbide |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.0071 | SFM: 458.1152 |
| MFG CODE: | |
| ASSEMBLY: | 1/2" FLAT 2 |
| HOLDER: | CAT 40 - 1/2 ID, NA |
| TIME: | 00:00:47 |



USED BY OPERATION: #8 Contour (2D)

TOOL INFO
1/2" 90° SPOT DRILL

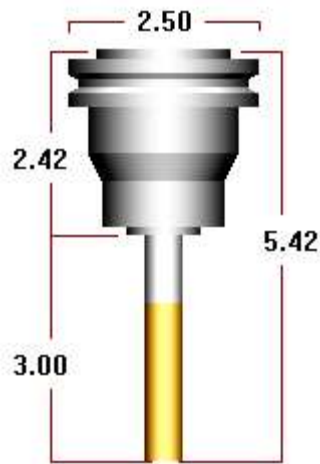
| | |
|-------------------|---------------|
| TYPE: | Drill |
| NUMBER: | 5 |
| DIAMETER: | 0.5 |
| CORNER RADIUS: | 0.0 |
| LENGTH OFFSET: | 5 |
| DIAMETER OFFSET: | 5 |
| MATERIAL: | HSS |
| NUMBER OF FLUTES: | 2 |
| FPT: 0.001 | SFM: 130.8901 |
| MFG CODE: | |
| ASSEMBLY: | 1/2" 90° SPOT |
| HOLDER: | CAT 40 - NA |
| TIME: | 00:04:22 |



USED BY OPERATION: #5 Drill/Counterbore

TOOL INFO **.4844 DRILL**

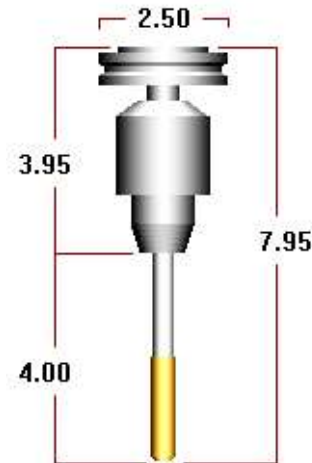
| | | | |
|-------------------|------------------|----------|--|
| TYPE: | Drill | | |
| NUMBER: | 6 | | |
| DIAMETER: | 0.4844 | | |
| CORNER RADIUS: | 0.0 | | |
| LENGTH OFFSET: | 6 | | |
| DIAMETER OFFSET: | 6 | | |
| MATERIAL: | Carbide | | |
| NUMBER OF FLUTES: | 2 | | |
| FPT: 0.0013 | SFM: | 126.8063 | |
| MFG CODE: | R850-1230-30-A1A | | |
| ASSEMBLY: | .4844 DRILL CAT | | |
| HOLDER: | CAT 40 - | NA | |
| TIME: | 00:04:53 | | |



USED BY OPERATION: # 6 Drill/Counterbore

TOOL INFO **.500 REAMER**

| | | | |
|-------------------|-------------|--------|--|
| TYPE: | Reamer | | |
| NUMBER: | 7 | | |
| DIAMETER: | 0.5 | | |
| CORNER RADIUS: | 0.0 | | |
| LENGTH OFFSET: | 7 | | |
| DIAMETER OFFSET: | 7 | | |
| MATERIAL: | HSS | | |
| NUMBER OF FLUTES: | 6 | | |
| FPT: 0.0017 | SFM: | 65.445 | |
| MFG CODE: | | | |
| ASSEMBLY: | .500 REAMER | | |
| HOLDER: | CAT 40 | NA | |
| TIME: | 00:02:27 | | |



USED BY OPERATION: # 7 Drill/Counterbore

WORK OFFSETS

OFFSET INFO

| | | |
|--------------------|------------|-------------------------------|
| NUMBER: 0 | PLANE: TOP | ORIGIN: 0.0, 0.0, 0.0 |
| USED BY OPERATION: | # 1 | Surface High Speed (OptiCore) |
| USED BY OPERATION: | # 2 | Surface High Speed (OptiRest) |
| USED BY OPERATION: | # 3 | Surface High Speed (Scallop) |
| USED BY OPERATION: | # 4 | Contour (2D) |
| USED BY OPERATION: | # 5 | Drill/Counterbore |
| USED BY OPERATION: | # 6 | Drill/Counterbore |
| USED BY OPERATION: | # 7 | Drill/Counterbore |
| USED BY OPERATION: | # 8 | Contour (2D) |