

#### BASIC GUIDELINES TO DIMENSIONING

1. PROVIDE OVERALL DIMENSIONS
2. PLACE MAJORITY OF DIM. BETWEEN VIEWS
3. DIMENSIONING WHERE FEATURES CAN BE SEEN
4. GROUP DIMENSIONS WHEN POSSIBLE
5. AVOID
  - A. REPEATING DIMENSIONS
  - B. DIMENSIONING HIDDEN LINES
6. CROSSING DIMENSIONS (SMALLER DIMENSIONS GO CLOSEST TO THE PART)
7. DO NOT CROSS DIMENSION LINES WITH EXTENSION LINES
6. HOLES = DIAMETER ( $\phi$ ), ARCS = RADIUS (R)
7. ANGLE DIMENSION: NEED 2 DIMENSIONS IF ONE OF THE CORNERS IS A RIGHT ANGLE
  - A. 2 LINEAR DIMENSIONS
  - B. 1 LINEAR AND 1 ANGLE MEASURE THAT IS NOT THE  $90^\circ$  CORNER
7. DIMENSION A HOLE OR ARC
  - NEED 3 DIMENSIONS: 2 LOCATORS AND 1 DIAMETER (NOTE LOCATORS MEASURE FROM AN EDGE TO THE CENTER OF THE HOLE)
8. DIMENSION SPACING
  - 1ST LAYER: ABOUT  $3/8"$  OR 10mm
  - 2ND+ LAYER: ABOUT  $1/4"$  OR 6mm
9. DIMENSION TEXT HEIGHT .0625-.125 DEPENDING UPON SCALE OF THE DRAWING

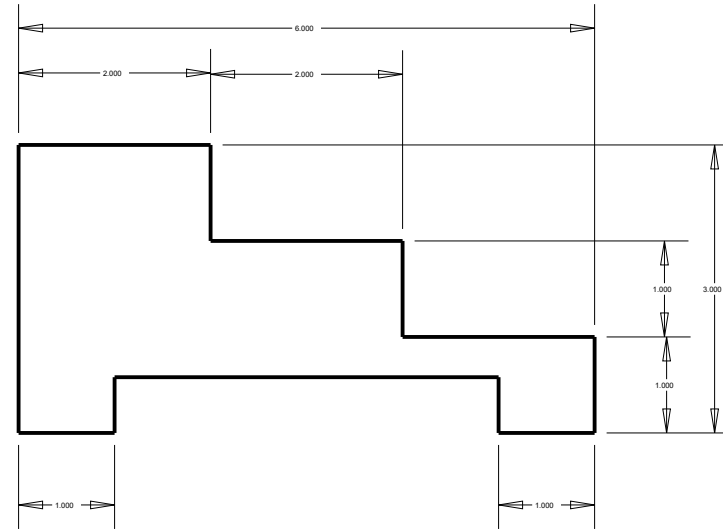
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EMU PDD 101

DIRECTIONS:

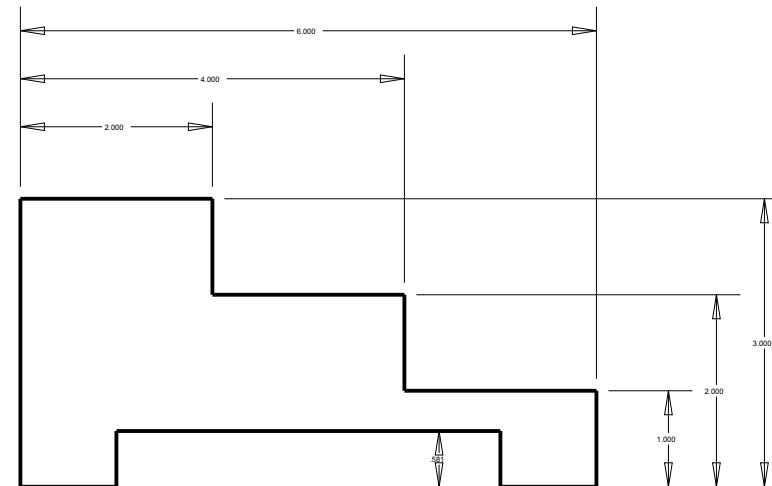
## IN-SERIES DIMENSIONING

IN-SERIES DIMENSIONING HAS THE DIMENSIONS LINE UP TO ONE ANOTHER ASSUMING THE DIMENSIONING LINES TO NOT INTERSECT AN EXTENSION LINE



## STAIR STEP (DATUM) DIMENSIONING

STAIR STEP DIMENSIONING SCHEME HAS THE USER USE A COMMON DATUM (EDGE) TO MEASURE FROM FOR EACH OF THE DIMENSIONS. THE DATUM SHOULD BE A COMMON EDGE THAT THE DESIGNER WILL USE AS A KNOWN EDGE (DATUM) THAT WILL BE SQUARE TO THE JIG OR FIXTURE OR MOLD THAT WILL HOLD THE PART DURING MANUFACTURING

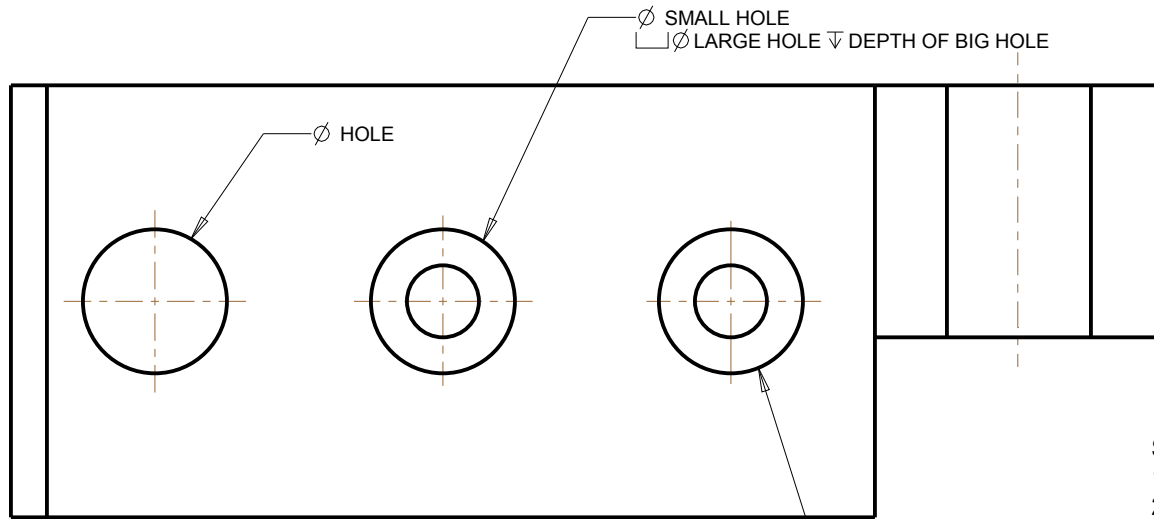


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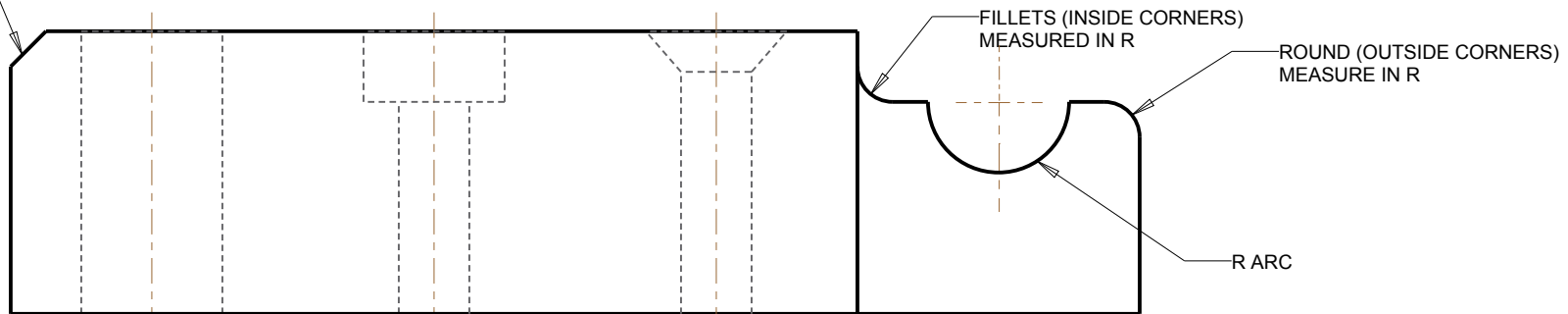
DIMENSIONING SCHEMES SAMPLE



**SYMBOLS**

1.  $\varnothing$  = DIAMETER
2. R = RADIUS
3.  $\square$  = COUNTERBORE
4.  $\sphericalangle$  = COUNTERSINK
5.  $\nabla$  = DEPTH
6.  $^{\circ}$  = DEGREES
7. TYP. = TYPICAL
8. SHOP NOTE: IS A DETACHED DIMENSION THAT DIMENSIONS COMMON FEATURES I.E FILLETS, ROUNDS, CHAMFERS, SLOTS, ETC

CHAMFER (2 ways TO DIMENSION)  
 1. LEG x LEG  
 2. LEG x DEGREE ANGLE



SIMPLE HOLE

COUNTERBORE HOLE

COUNTERSINK HOLE

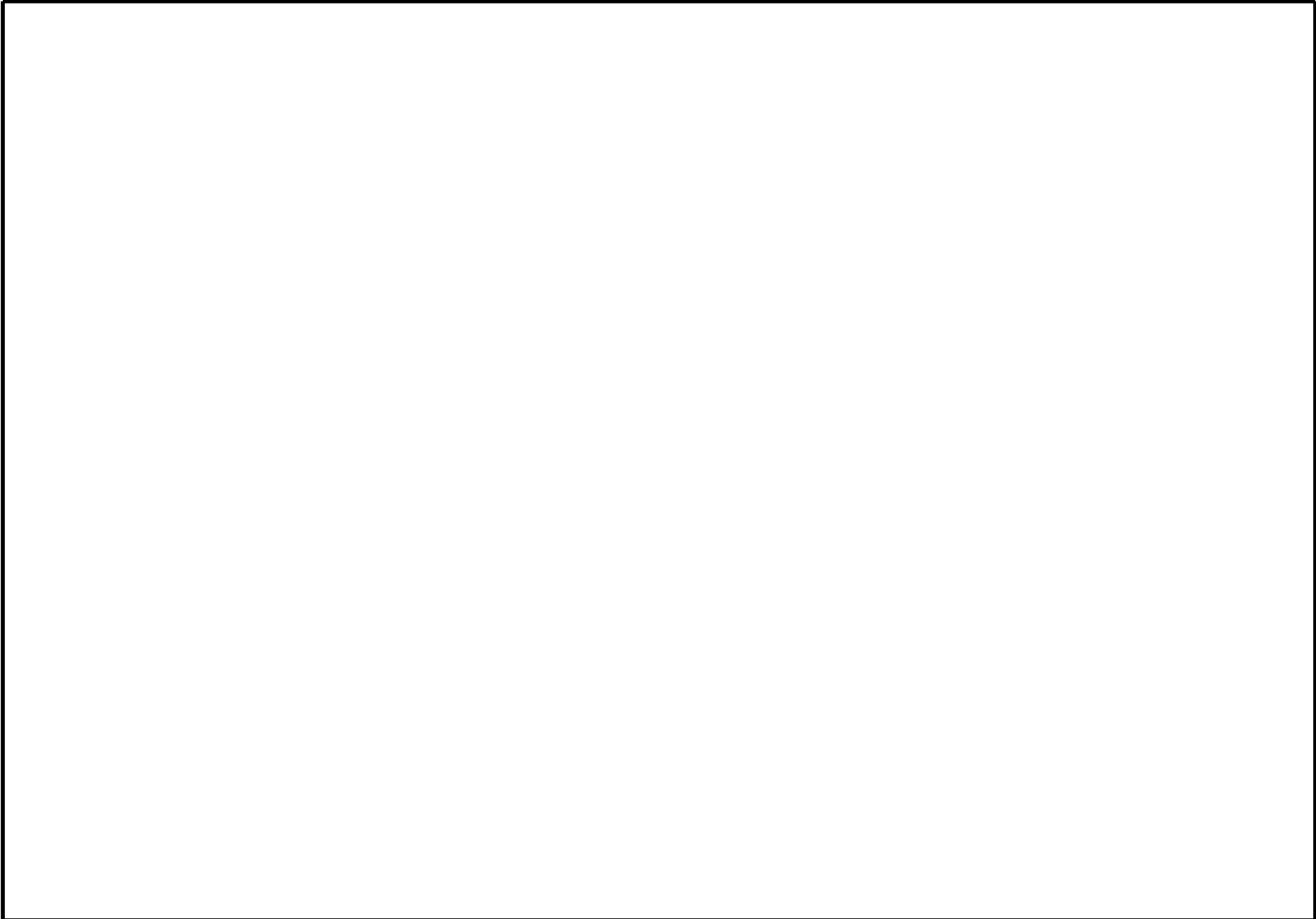
TYPES OF ARCS

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DIRECTIONS:

TYPES OF HOLES AND ARCS SAMPLE



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