

# CYLINDER AND SHOCK COMPONENTS

| PAGE                 | DATE     | NAAMS CODE    | DESCRIPTION   | DISCONTINUED |
|----------------------|----------|---------------|---|--------------|
| <a href="#">U-1</a>  | 09/05/12 |               | Cylinder and Shock Accessories                      |              |
| <a href="#">U-2</a>  | 01/10/11 | ACT101-115    | Trunnion Cylinder Mounting Bracket Assy             |              |
| <a href="#">U-3</a>  | 03/16/06 | ACT140        | Trunnion Block 32 MM Bore                           |              |
| <a href="#">U-4</a>  | 03/16/06 | ACT141        | Trunnion Block 45 MM Bore                           |              |
| <a href="#">U-5</a>  | 06/01/12 | ACT121-135    | Trunion Bushing                                     |              |
| <a href="#">U-6</a>  | 05/11/11 | ACT151-158    | Trunnion Cylinder Mounting Bracket Assy<br>Aluminum | X            |
| <a href="#">U-7</a>  | 05/11/11 | ACT160        | Trunnion Cylinder Mounting Bracket<br>Aluminum      | X            |
| <a href="#">U-8</a>  | 03/16/06 | ACT171-185    | Trunnion Mounting Bracket<br>Thrust Washer          |              |
| <a href="#">U-9</a>  | 03/30/06 | AHM080-181    | Shock Bracket                                       |              |
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| <a href="#">U-11</a> | 05/21/13 | ACL0101A-412A | Clevis Assembly Codes                               |              |
| <a href="#">U-12</a> | 05/11/11 | ACL0100       | Clevis Casting                                      |              |
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| <a href="#">U-16</a> | 05/11/11 | ACL0300       | Clevis Casting                                      |              |
| <a href="#">U-17</a> | 05/11/11 | ACL0301C-305C | Clevis  |              |
| <a href="#">U-18</a> | 05/11/11 | ACL0400       | Clevis Casting                                      |              |
| <a href="#">U-19</a> | 05/11/11 | ACL0401C-412C | Clevis  |              |
| <a href="#">U-20</a> | 02/19/15 | ACL0501-0505  | Clevis Pin  |              |
| <a href="#">U-21</a> | 05/11/11 | ACL0511-514   | Clevis Composite Bearing                            |              |
| <a href="#">U-22</a> | 09/05/12 | ACL0515-516   | Clevis Composite Bearing                            |              |

# TRUNNION CYLINDER MOUNTING BRKT ASSY™

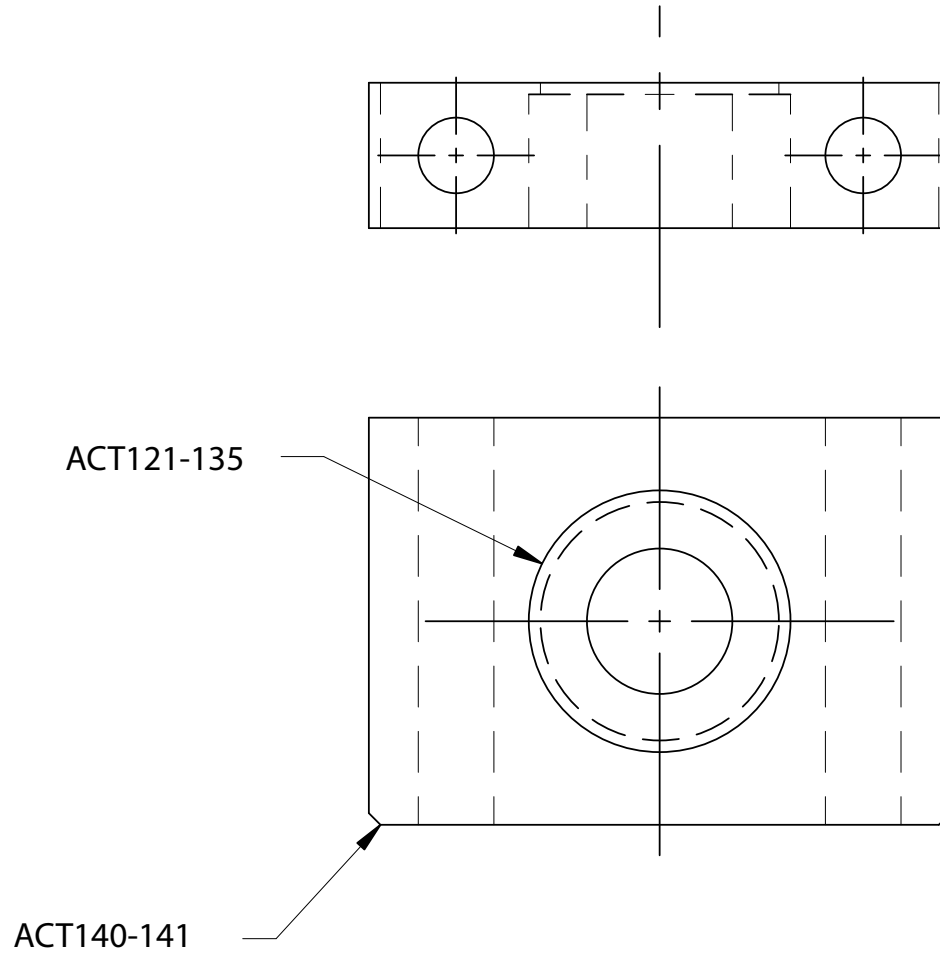
GLOBAL STANDARD COMPONENTS

# NAAMS



Assembly

01/10/11



| NAAMS CODE | TRUNNION BLOCK | TRUNNION BEARING | ID<br>+0.10/+0.13 |
|------------|----------------|------------------|-------------------|
| ACT101     | ACT140         | ACT121           | 12                |
| ACT102     |                | ACT122           | 15                |
| ACT103     |                | ACT123           | 16                |
| ACT104     |                | ACT124           | 18                |
| ACT105     |                | ACT125           | 19.05(0.75")      |
| ACT106     |                | ACT126           | 20                |
| ACT107     |                | ACT127           | 25                |
| ACT108     |                | ACT128           | 25.4(1.00")       |
| ACT111     | ACT141         | ACT131           | 32.00             |
| ACT112     |                | ACT132           | 34.93(1.375")     |
| ACT113     |                | ACT133           | 36.00             |
| ACT114     |                | ACT134           | 38.1(1.500")      |
| ACT115     |                | ACT135           | 40                |

A

# TRUNNION BLOCK 32 MM BORE ACT140



TOLERANCES UNLESS OTHERWISE SPECIFIED:

1 PLACE MACHINING  $\pm 0.3$

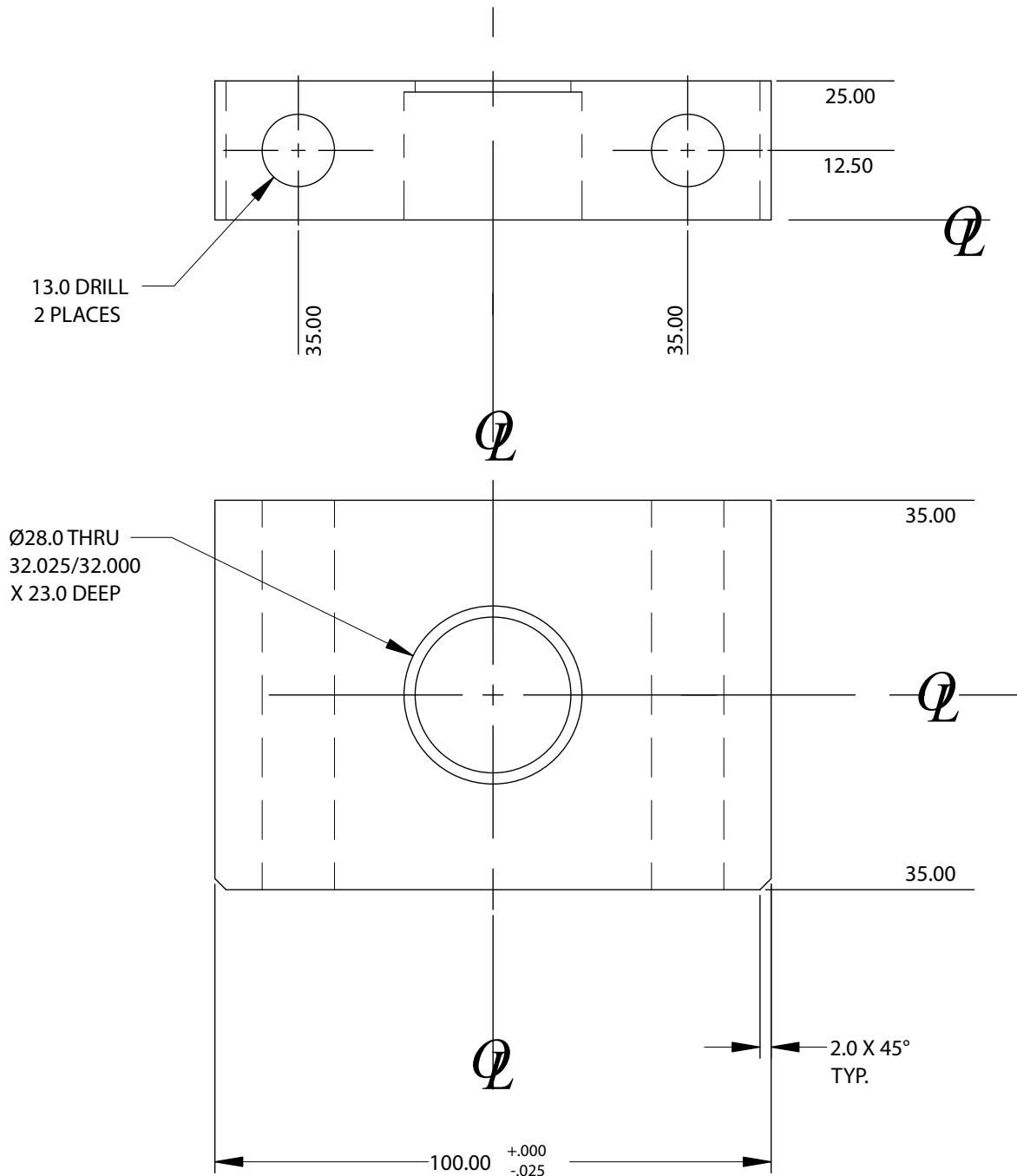
2 PLACE

$\pm 0.08$  BETWEEN MACHINED SURFACES

$\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

Weight 1.07 kg

MATERIAL: STEEL



# TRUNNION BLOCK 45MM BORE ACT141

TOLERANCES UNLESS OTHERWISE SPECIFIED:

1 PLACE MACHINING  $\pm 0.3$

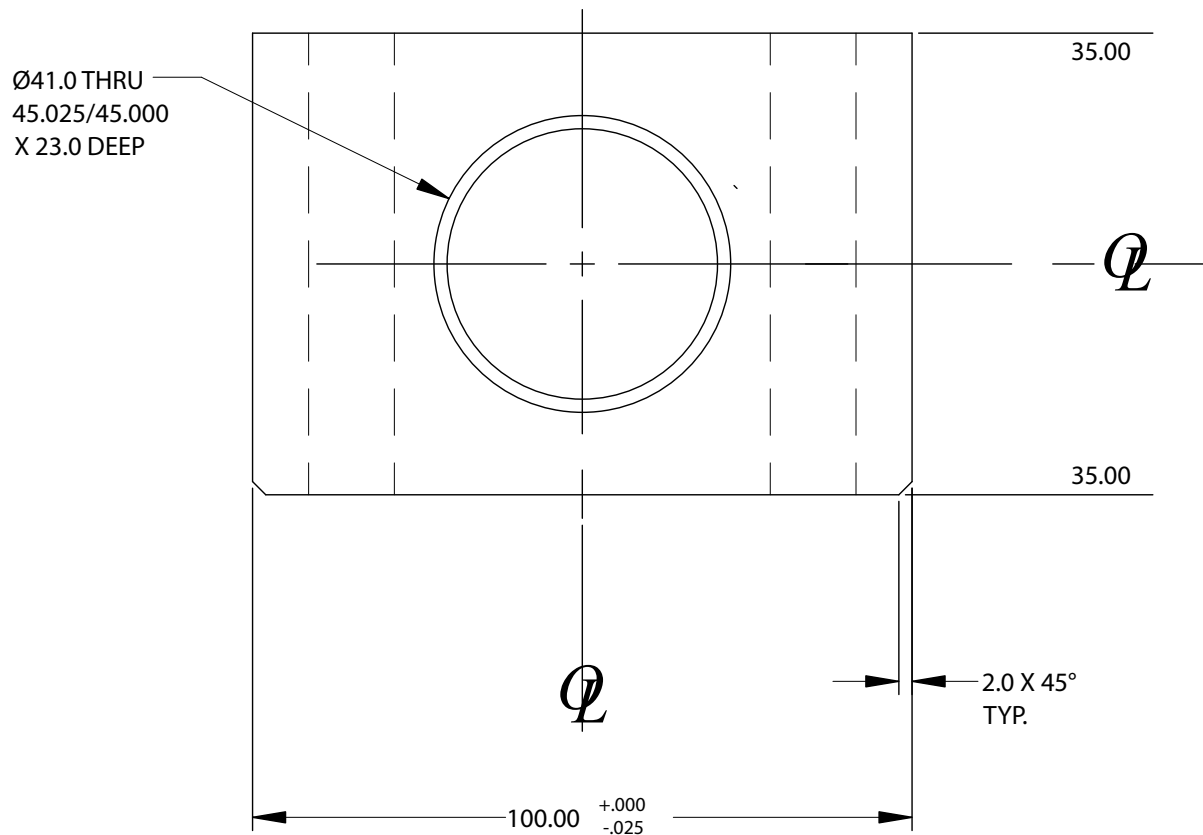
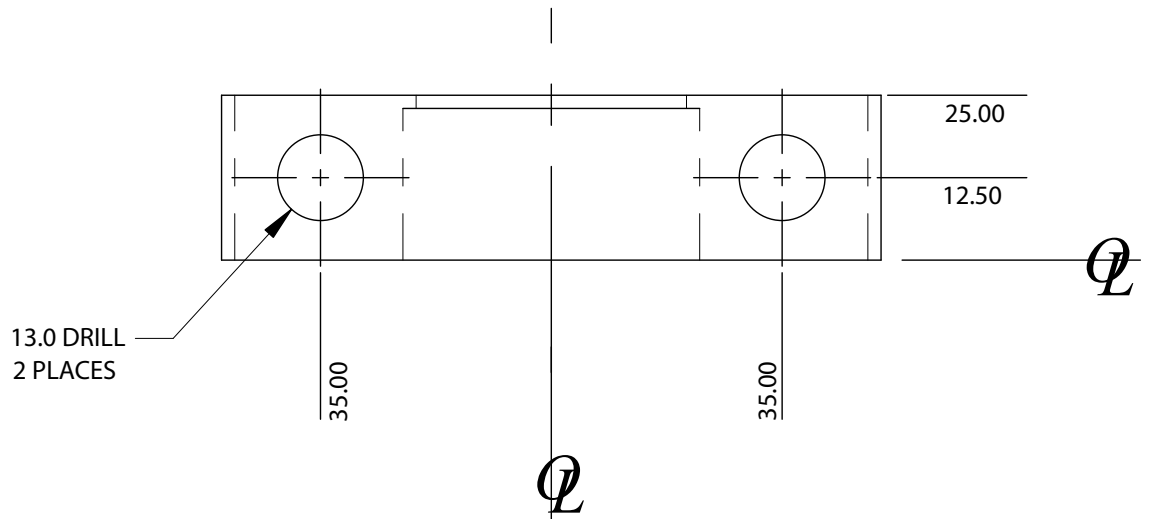
2 PLACE

$\pm 0.08$  BETWEEN MACHINED SURFACES

$\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

Weight 0.92 kg

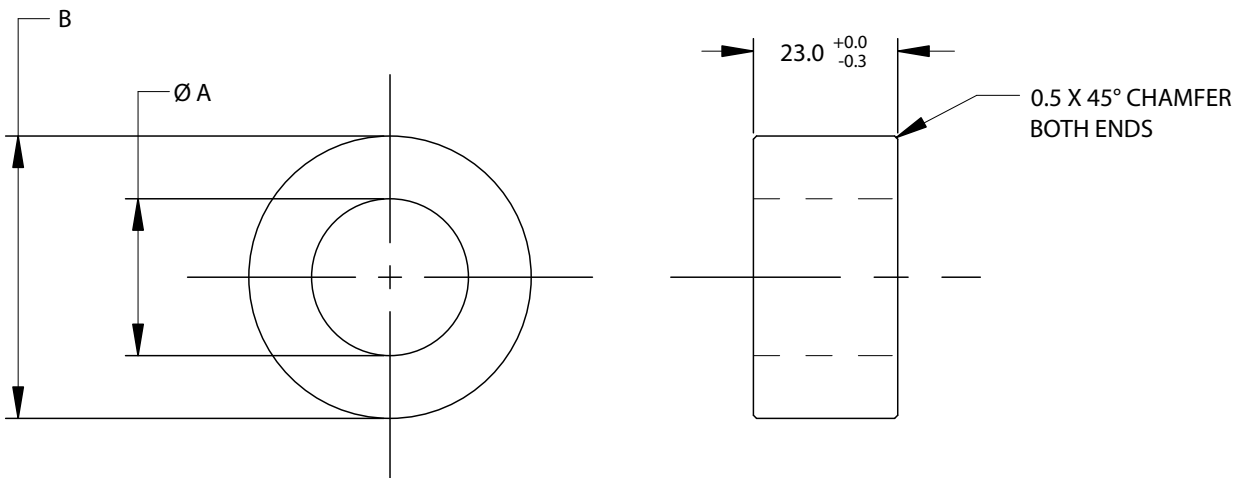
MATERIAL: STEEL



# TRUNNION BUSHING

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
 1 PLACE  $\pm 0.3$   
 Max Weight 0.02 kg

MATERIAL: POLYESTER REINFORCED EPOXY COMPOSITE WITH PTFE AND MS2 FILLERS. MINIMUM COMPRESSIVE STRENGTH NORMAL TO THE LAMINATE 240 MPa (35 ksi)

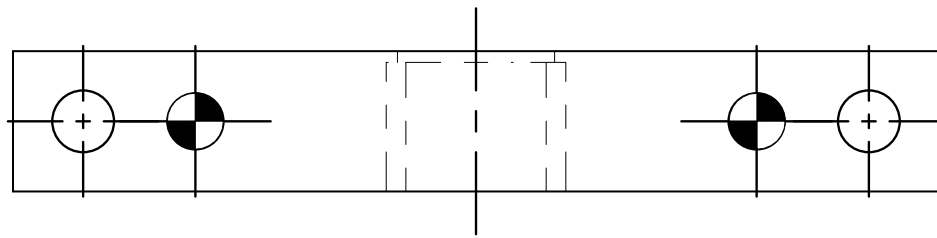


A

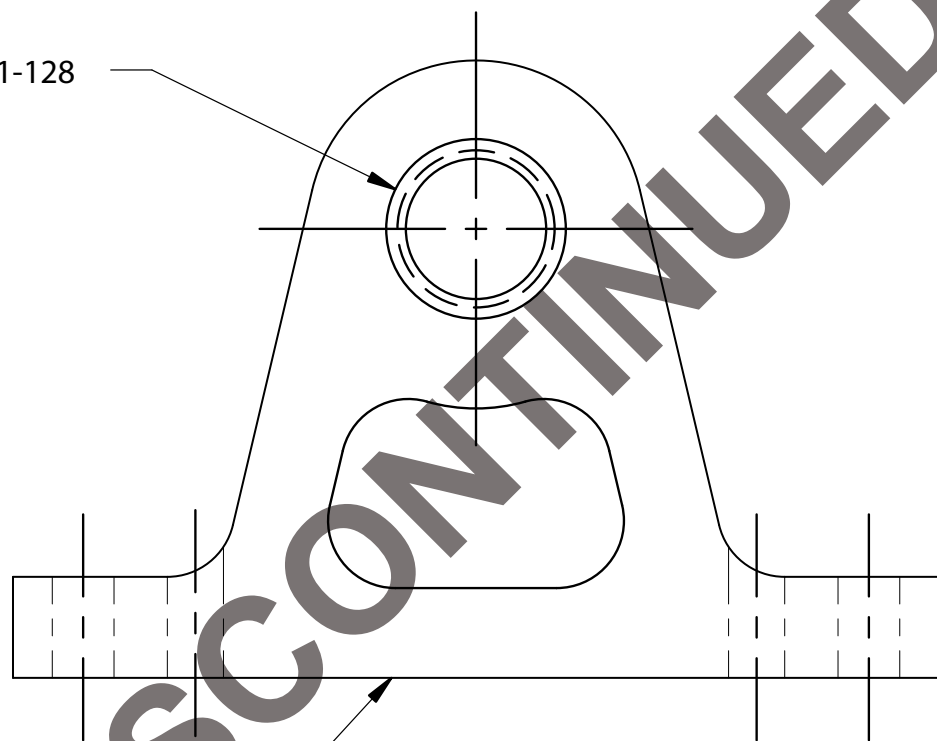
| NAAMS CODE | A<br>+0.10 / +0.13 | B<br>+0.05 / -0.00 |
|------------|--------------------|--------------------|
| ACT121     | 12                 | 32.07              |
| ACT122     | 15                 | 32.07              |
| ACT123     | 16                 | 32.07              |
| ACT124     | 18                 | 32.07              |
| ACT125     | 19.05 (0.75")      | 32.07              |
| ACT126     | 20                 | 32.07              |
| ACT127     | 25                 | 32.07              |
| ACT128     | 25.4 (1.000")      | 32.07              |
| ACT131     | 32.00              | 45.08              |
| ACT132     | 34.93 (1.375")     | 45.08              |
| ACT133     | 36.00              | 45.08              |
| ACT134     | 38.1 (1.500")      | 45.08              |
| ACT135     | 40                 | 45.08              |

A

# TRUNNION CYLINDER MOUNTING BRACKET ASSEMBLY - ALUMINUM



ACT121-128



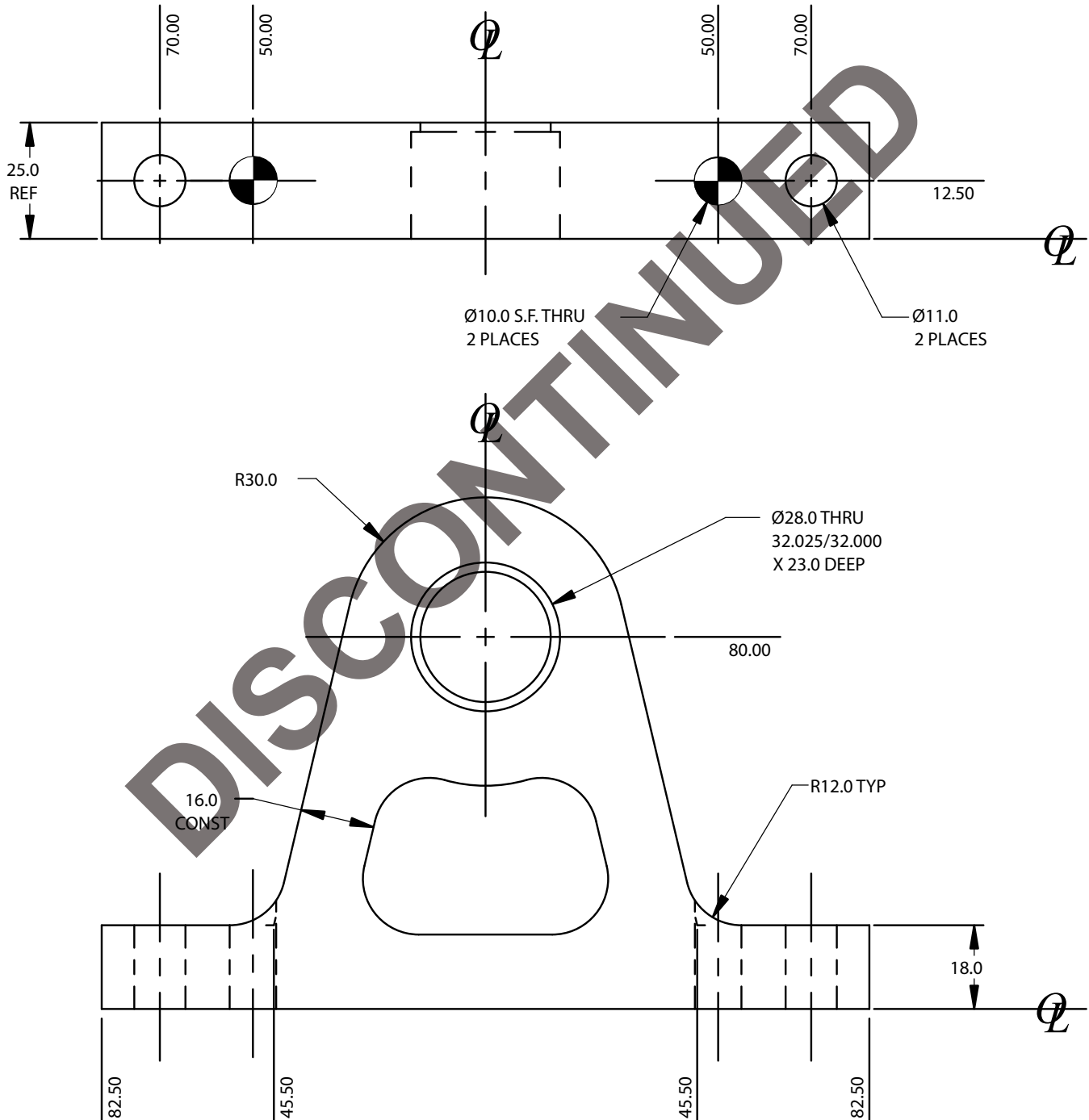
ACT160

| NAAMS CODE | TRUNNION BLOCK | TRUNNION BEARING |
|------------|----------------|------------------|
| ACT151     | ACT160         | ACT121           |
| ACT152     |                | ACT122           |
| ACT153     |                | ACT123           |
| ACT154     |                | ACT124           |
| ACT155     |                | ACT125           |
| ACT156     |                | ACT126           |
| ACT157     |                | ACT127           |
| ACT158     |                | ACT128           |

A

# TRUNNION BLOCK ALUMINUM ACT160

TOLERANCES UNLESS OTHERWISE SPECIFIED  
 1 PLACE MACHINING  $\pm 0.3$   
 2 PLACE  
 $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 Weight 0.45 kg



A

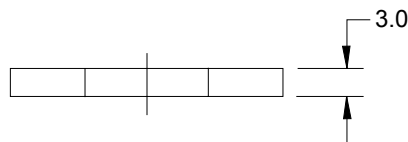
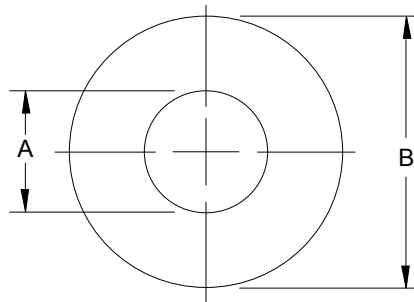
# TRUNNION MOUNTING BRACKET THRUST WASHER

METRIC TOLERANCES UNLESS OTHERWISE SPECIFIED:

1 PLACE  $\pm 0.3$

Max Weight 0.01 kg

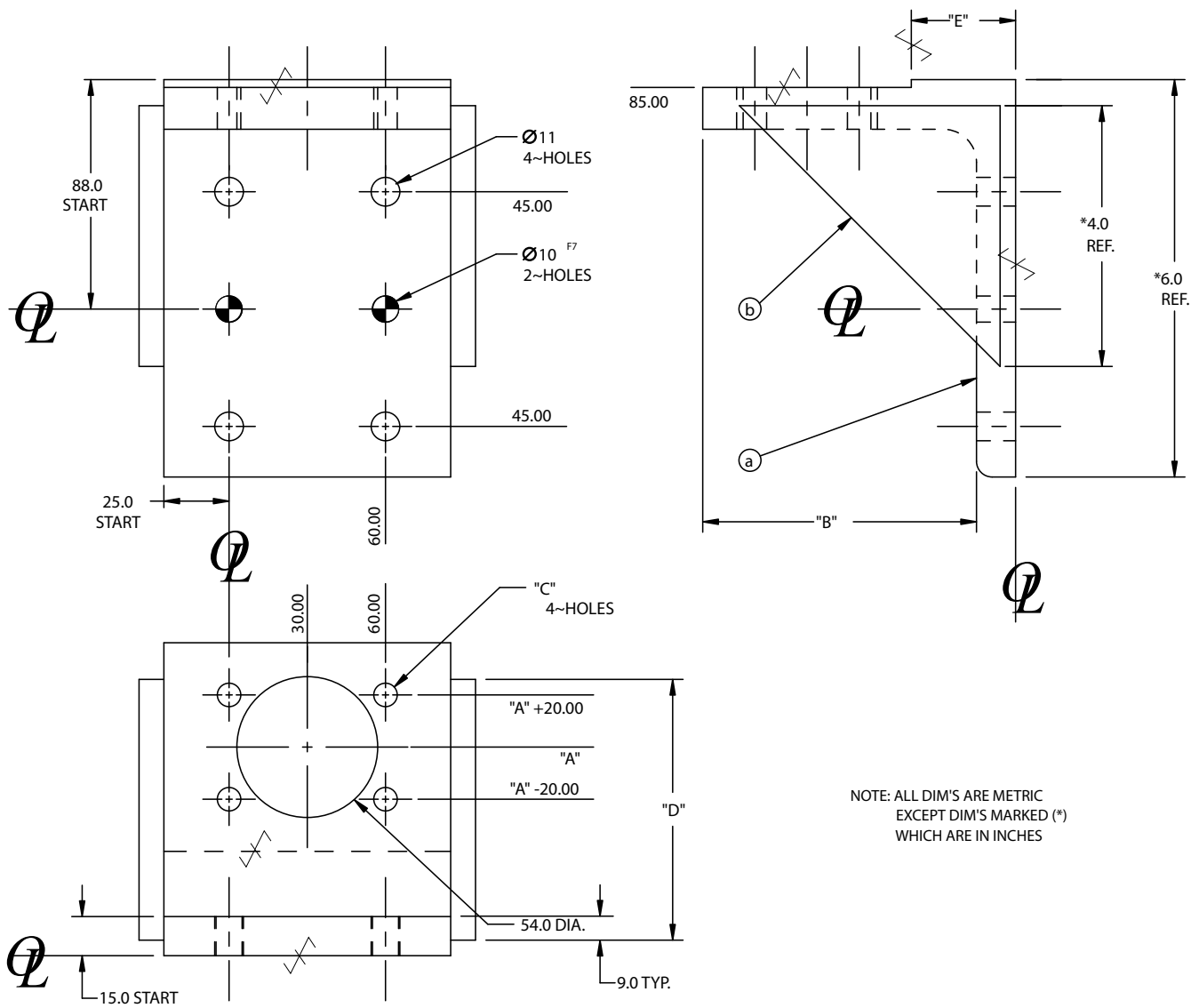
MATERIAL: POLYESTER REINFORCED EPOXY COMPOSITE WITH PTFE AND MS2 FILLERS. MINIMUM COMPRESSIVE STRENGTH NORMAL TO THE LAMINATE 240 MPa (35 ksi)



| NAAMS CODE | A<br>+0.10 / +0.50 | B    | USE WITH ASSEMBLY |
|------------|--------------------|------|-------------------|
| ACT171     | 12                 | 50.8 | ACT101 & ACT151   |
| ACT172     | 15                 | 50.8 | ACT102 & ACT152   |
| ACT173     | 16                 | 50.8 | ACT103 & ACT153   |
| ACT174     | 18                 | 50.8 | ACT104 & ACT154   |
| ACT175     | 19.05 (0.75")      | 50.8 | ACT105 & ACT155   |
| ACT176     | 20                 | 50.8 | ACT106 & ACT156   |
| ACT177     | 25                 | 50.8 | ACT107 & ACT157   |
| ACT178     | 25.4 (1.000")      | 50.8 | ACT108 & ACT158   |
| ACT181     | 32                 | 63.5 | ACT111            |
| ACT182     | 34.93 (1.375")     | 63.5 | ACT112            |
| ACT183     | 36                 | 63.5 | ACT113            |
| ACT184     | 38.1 (1.500")      | 63.5 | ACT114            |
| ACT185     | 40                 | 63.5 | ACT115            |



# SHOCK BRACKET AHM080-AHM181



STK.

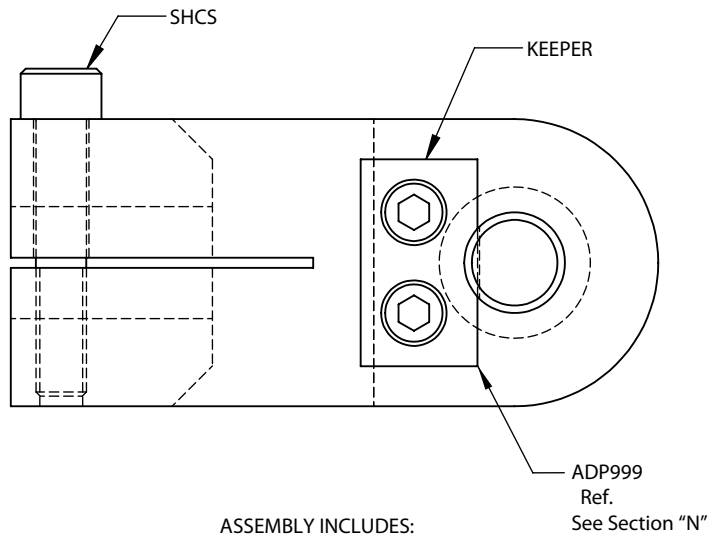
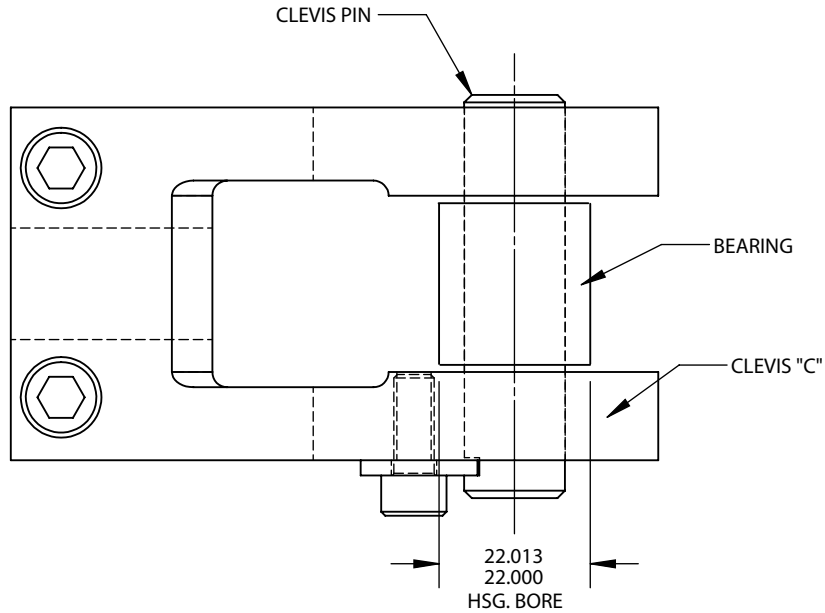
- (a) REQ'D. (1) STL. L-ANGLE ~ "F" x 6" x 3/4" wt. x 110.0mm LG.
- (b) REQ'D. (2) SAE 1020 H.R.S. ~ 3/8" x 4" x "D"mm LG. (ONE MAKES TWO)

| NAAMS CODE | A HEIGHT | B     | C       | D     | E     | F  | WT. kg. |
|------------|----------|-------|---------|-------|-------|----|---------|
| AHM080     | 80.0     | 105.0 | M8x1.25 | 100.0 | 40.0  | *6 | 3.2     |
| AHM081     | 80.0     | 105.0 | 9.0     | 100.0 | 40.0  | *6 | 3.2     |
| AHM100     | 100.0    | 125.0 | M8x1.25 | 120.0 | 60.0  | *6 | 3.6     |
| AHM101     | 100.0    | 125.0 | 9.0     | 120.0 | 60.0  | *6 | 3.6     |
| AHM120     | 120.0    | 145.0 | M8x1.25 | 140.0 | 80.0  | *6 | 4.0     |
| AHM121     | 120.0    | 145.0 | 9.0     | 140.0 | 80.0  | *6 | 4.0     |
| AHM140     | 140.0    | 165.0 | M8x1.25 | 160.0 | 100.0 | *8 | 4.4     |
| AHM141     | 140.0    | 165.0 | 9.0     | 160.0 | 100.0 | *8 | 4.4     |
| AHM160     | 160.0    | 185.0 | M8x1.25 | 180.0 | 120.0 | *8 | 4.8     |
| AHM161     | 160.0    | 185.0 | 9.0     | 180.0 | 120.0 | *8 | 4.8     |
| AHM180     | 180.0    | 205.0 | M8x1.25 | 200.0 | 140.0 | *8 | 5.2     |
| AHM181     | 180.0    | 205.0 | 9.0     | 200.0 | 140.0 | *8 | 5.2     |

# CLEVIS ASSEMBLY ACL0101A-ACL0412A



NOTE:  
WHEN CLEVIS PIN IS  
NOT HORIZONTAL IN  
APPLICATION USE  
(2) THRUST WASHER



ASSEMBLY INCLUDES:  
CLEVIS, PIN, KEEPER,  
SCREWS, AND BEARING

NOTE:  
UNLESS OTHERWISE SPECIFIED:  
EXCEPT AS NOTED TOLERANCES SHALL BE:  
2 PLACE MACHINING ±.01  
2 PLACE FABRICATION ±.06  
3 PLACE ±.003 BETWEEN MACHINED SURFACES  
±.001 BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
±.001 BETWEEN DOWELS ON THE SAME PLANE  
±.004 BETWEEN DOWELS ON DIFFERENT PLANES  
±.005 TO SCREW HOLES

NAAMS Codes are on the following page.

B

A

# CLEVIS ASSEMBLY ACL0101A-ACL0412A

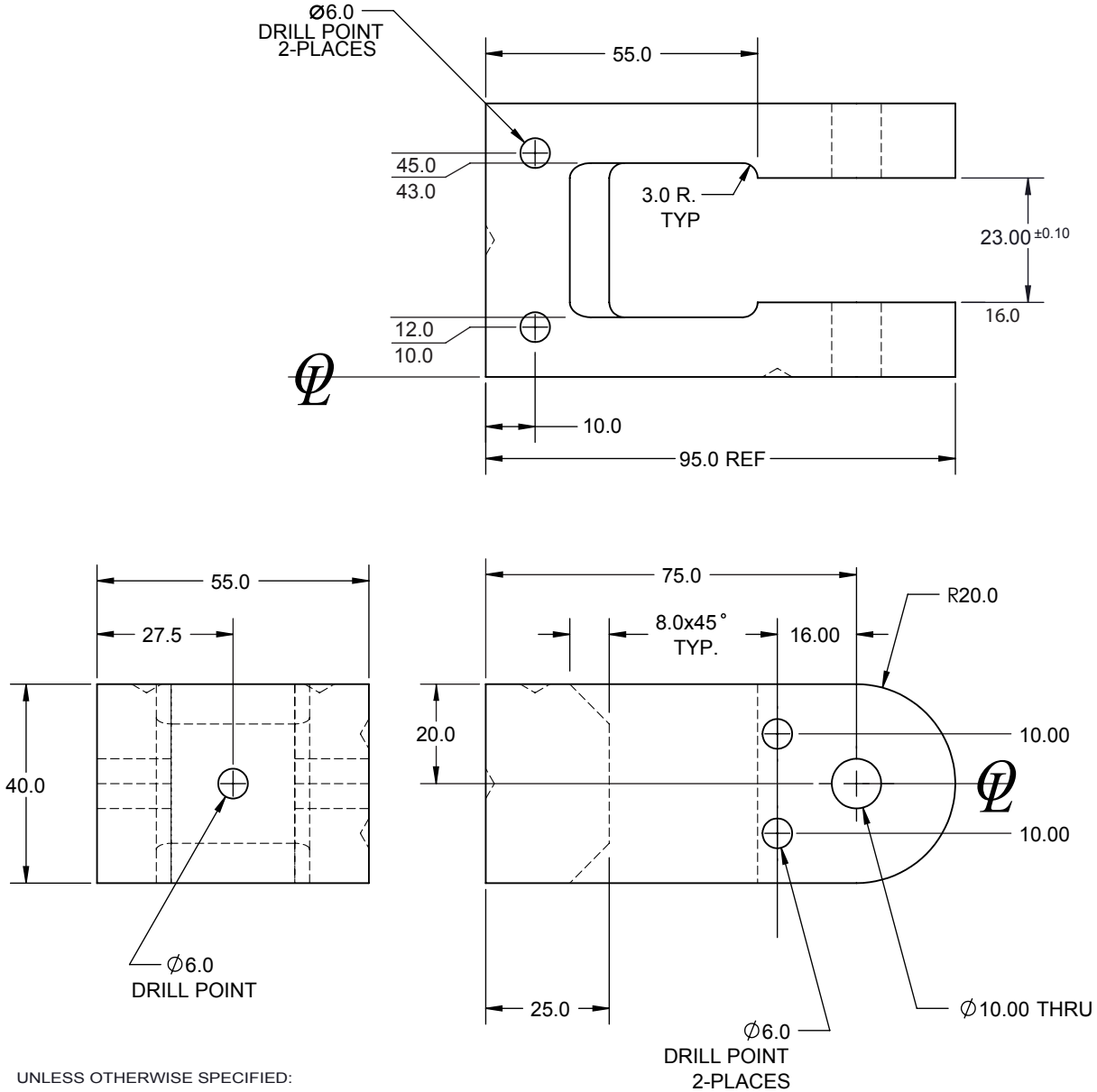
## NAAMS CODES

| Clevis Assembly | Clevis   | Pin     | Bearing | Clevis Screws |      | Keeper | Keeper Screws (2) | Tap Thru Thread |            |
|-----------------|----------|---------|---------|---------------|------|--------|-------------------|-----------------|------------|
|                 |          |         |         | Code          | Qty. |        |                   | Inch            | Metric     |
| ACL0101A        | ACL0101C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M10 x 1.25 |
| ACL0102A        | ACL0102C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M12 x 1.25 |
| ACL0103A        | ACL0103C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M14 x 1.50 |
| ACL0104A        | ACL0104C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M15 x 1.50 |
| ACL0105A        | ACL0105C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M16 x 1.50 |
| ACL0106A        | ACL0106C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | -               | M18 x 1.50 |
| ACL0107A        | ACL0107C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | 7/16-20         | -          |
| ACL0108A        | ACL0108C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | 5/8-18          | -          |
| ACL0109A        | ACL0109C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | 3/4-10          | -          |
| ACL0110A        | ACL0110C | ACL0501 | ACL0511 | F010813       | 2    | ADP999 | F010809           | 3/4-16          | -          |
| ACL0201A        | ACL0201C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | -               | M20 x 1.50 |
| ACL0202A        | ACL0202C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | -               | M22 x 1.50 |
| ACL0203A        | ACL0203C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | -               | M26 x 1.50 |
| ACL0204A        | ACL0204C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | 7/8-14          | -          |
| ACL0205A        | ACL0205C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | 1-8             | -          |
| ACL0206A        | ACL0206C | ACL0502 | ACL0512 | F011016       | 2    | ADP999 | F010809           | 1-14            | -          |
| ACL0301A        | ACL0301C | ACL0503 | ACL0513 | F011016       | 4    | ADP999 | F010809           | -               | M27 x 2.00 |
| ACL0302A        | ACL0302C | ACL0503 | ACL0513 | F011016       | 4    | ADP999 | F010809           | -               | M30 x 1.50 |
| ACL0303A        | ACL0303C | ACL0503 | ACL0513 | F011016       | 4    | ADP999 | F010809           | -               | M36 x 1.50 |
| ACL0304A        | ACL0304C | ACL0503 | ACL0513 | F011016       | 4    | ADP999 | F010809           | -               | M36 x 2.00 |
| ACL0305A        | ACL0305C | ACL0503 | ACL0513 | F011016       | 4    | ADP999 | F010809           | 1 1/4-12        | -          |
| ACL0401A        | ACL0401C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M40 x 1.50 |
| ACL0402A        | ACL0402C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M42 x 2.00 |
| ACL0403A        | ACL0403C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M45 x 1.50 |
| ACL0404A        | ACL0404C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M48 x 2.00 |
| ACL0405A        | ACL0405C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M56 x 2.00 |
| ACL0406A        | ACL0406C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | -               | M64 x 2.00 |
| ACL0407A        | ACL0407C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 1 1/2-12        | -          |
| ACL0408A        | ACL0408C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 1 3/4-12        | -          |
| ACL0409A        | ACL0409C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 1 7/8-12        | -          |
| ACL0410A        | ACL0410C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 2-12            | -          |
| ACL0411A        | ACL0411C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 2 1/4-12        | -          |
| ACL0412A        | ACL0412C | ACL0504 | ACL0514 | F011019       | 4    | ADP999 | F010809           | 2 1/2-12        | -          |

A

# CLEVIS CASTING ACL0100

**MATERIAL:4130 STEEL CASTING**  
**OPTIONAL MATERIAL:SAE 4140 BAR STOCK**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING ±0.3  
 1 PLACE FABRICATION ±1.5  
 2 PLACE ±0.08 BETWEEN MACHINED SURFACES  
 ±0.03 BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 ±0.03 BETWEEN DOWELS IN THE SAME PLANE  
 ±0.10 BETWEEN DOWELS IN DIFFERENT PLANES  
 ±0.13 TO SCREW HOLES, NON ACCUMULATIVE

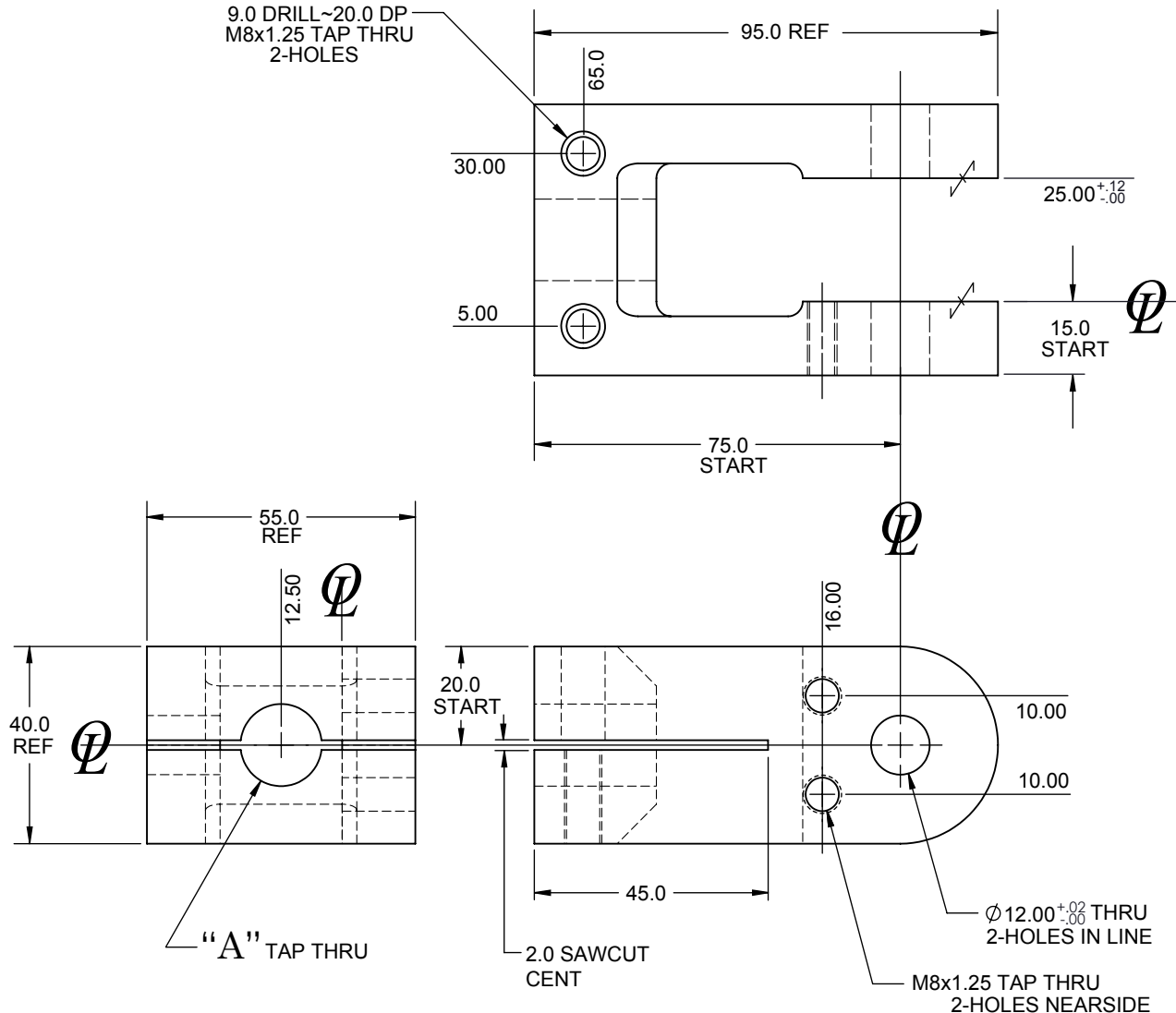
DOWEL HOLE TOLERANCES  
 FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7

DOWEL TOLERANCE  
 m6

ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

# CLEVIS ACL0101C-110C

**MATERIAL: MAKE FROM NAAMS ACL0100 CASTING  
OR OPTIONALLY MACHINE FROM 4140 STK.**



UNLESS OTHERWISE SPECIFIED:

MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:

1 PLACE MACHINING  $\pm 0.3$   
1 PLACE FABRICATION  $\pm 1.5$   
2 PLACE  $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.03$  BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 $\pm 0.10$  BETWEEN DOWELS IN DIFFERENT PLANES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

DOWEL HOLE TOLERANCES  
FOR PRESS FIT USE H6  
FOR SLIP FIT USE F7

DOWEL TOLERANCE  
m6

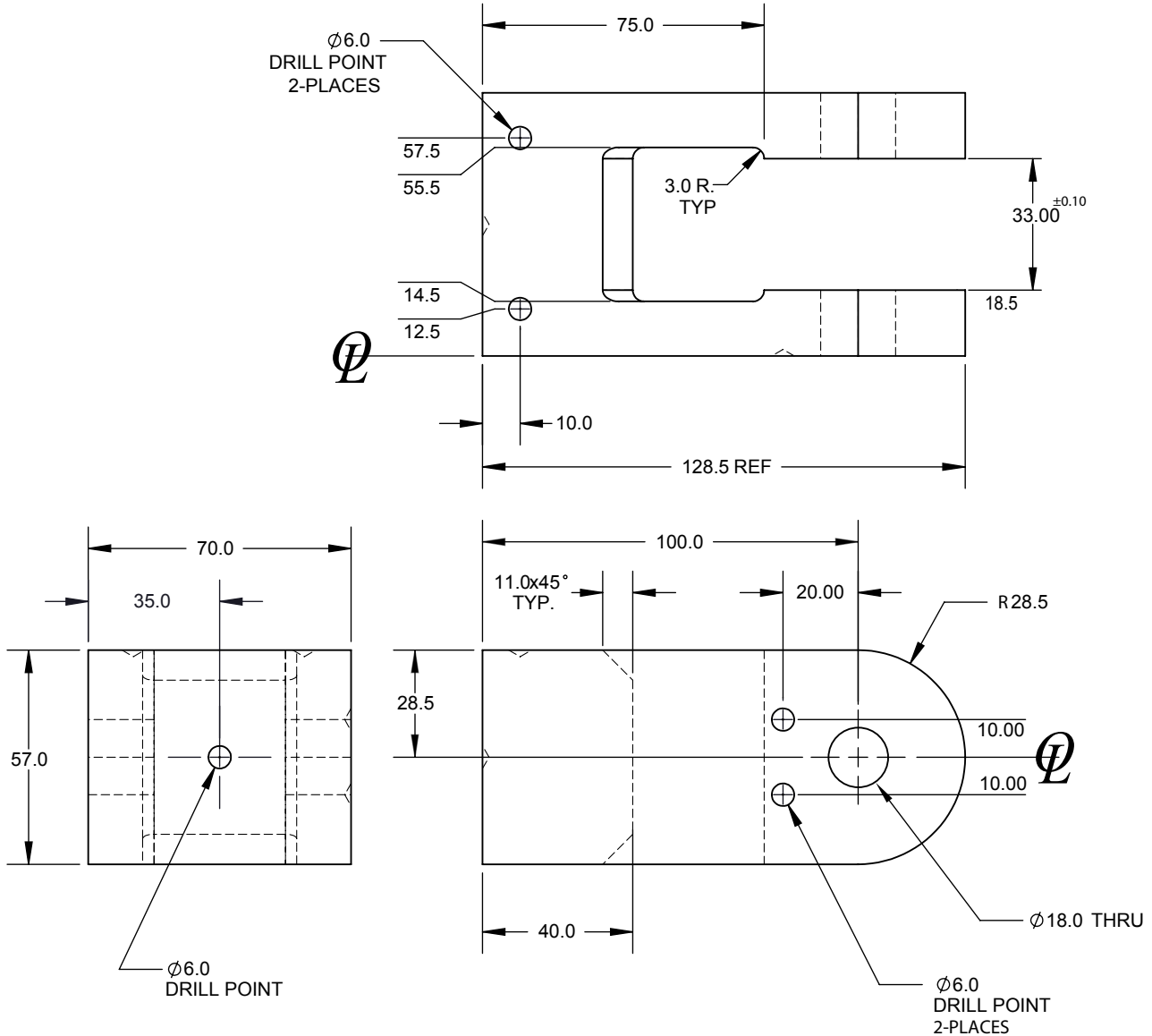
ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR  
COLD DRAWN OR COLD ROLLED SURFACES.  
ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A  
TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

| NAAMS<br>CODE | “A” DIMENSION |            |
|---------------|---------------|------------|
|               | INCH          | METRIC     |
| ACL0101C      | —             | M10 x 1.25 |
| ACL0102C      | —             | M12 x 1.25 |
| ACL0103C      | —             | M14 x 1.50 |
| ACL0104C      | —             | M15 x 1.50 |
| ACL0105C      | —             | M16 x 1.50 |
| ACL0106C      | —             | M18 x 1.50 |
| ACL0107C      | *7/16 – 20    | —          |
| ACL0108C      | *5/8 – 18     | —          |
| ACL0109C      | *3/4 – 10     | —          |
| ACL0110C      | *3/4 – 16     | —          |

Note: All dimensions are metric except  
Those marked (\*), which are in inches.

# CLEVIS CASTING ACL0200

**MATERIAL:4130 STEEL CASTING**  
**OPTIONAL MATERIAL:SAE 4140 BAR STOCK**



UNLESS OTHERWISE SPECIFIED:  
MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
1 PLACE MACHINING  $\pm 0.3$   
1 PLACE FABRICATION  $\pm 1.5$   
2 PLACE  $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.03$  BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 $\pm 0.10$  BETWEEN DOWELS IN DIFFERENT PLANES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

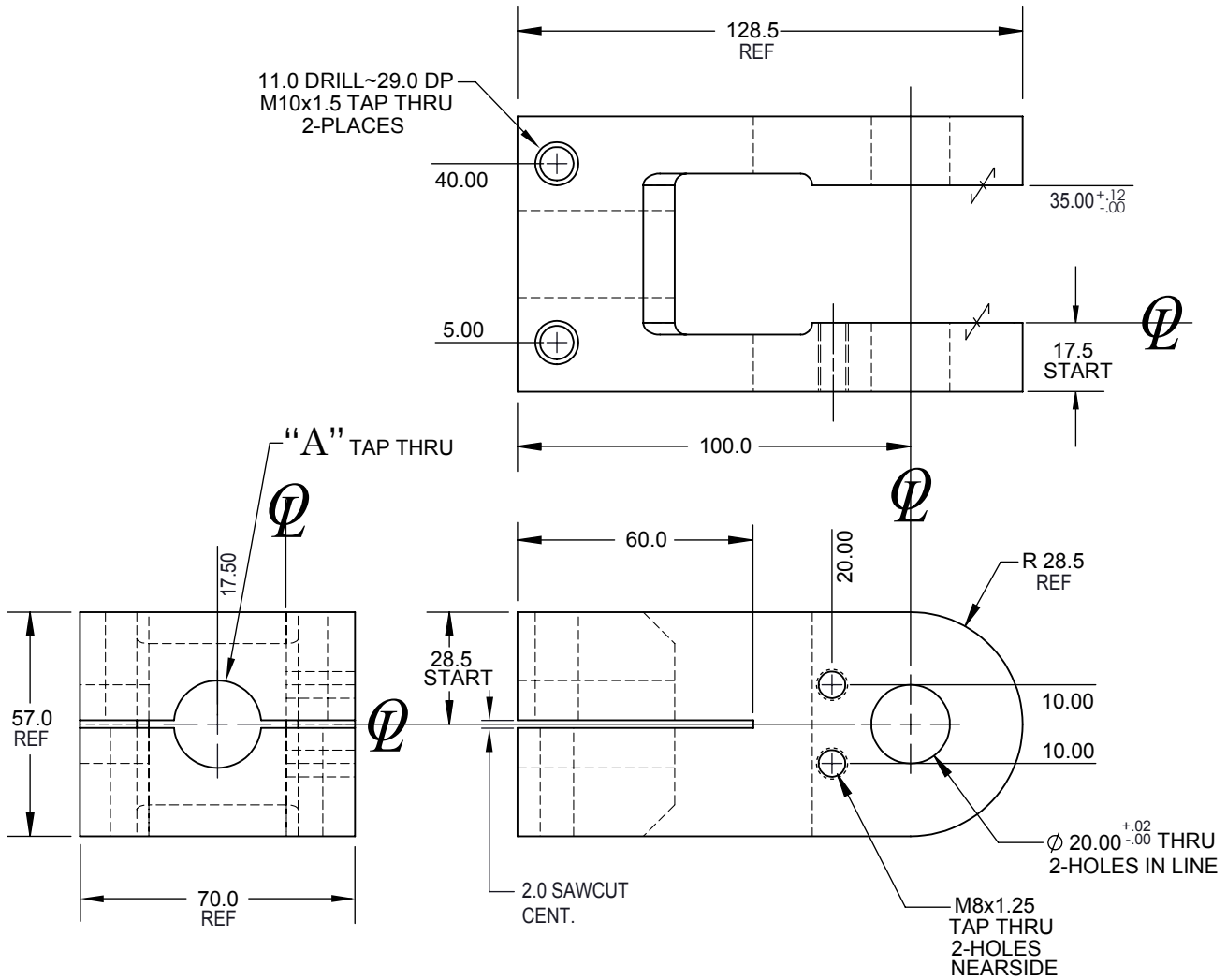
DOWEL HOLE TOLERANCES  
FOR PRESS FIT USE H6  
FOR SLIP FIT USE F7

DOWEL TOLERANCE  
m6

ALL MACHINING  $\phi$  SURFACES MUST BE FINISHED EXCEPT FOR  
COLD DRAWN OR COLD ROLLED SURFACES.  
ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A  
TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

# CLEVIS ACL0201C-206C

**MATERIAL: MAKE FROM NAAMS ACL0200 CASTING  
 OR OPTIONALLY MACHINE FROM 4140 STK.**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING ±0.3  
 1 PLACE FABRICATION ±1.5  
 2 PLACE ±0.08 BETWEEN MACHINED SURFACES  
 ±0.03 BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 ±0.03 BETWEEN DOWELS IN THE SAME PLANE  
 ±0.10 BETWEEN DOWELS IN DIFFERENT PLANES  
 ±0.13 TO SCREW HOLES, NON ACCUMULATIVE

DOWEL HOLE TOLERANCES FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7

DOWEL TOLERANCE m6

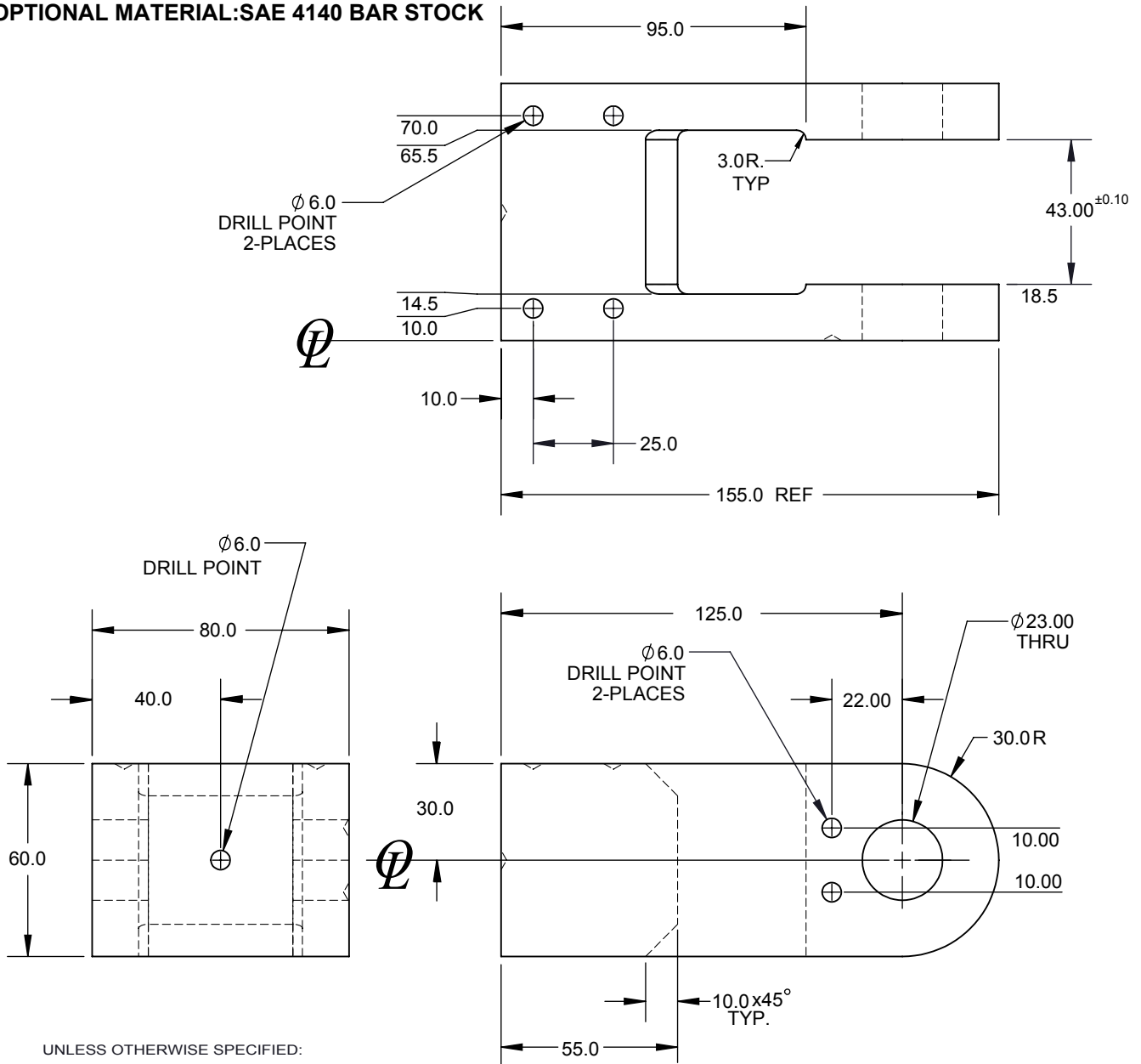
ALL MACHINING  $\phi$  SURFACES MUST BE FINISHED EXCEPT FOR COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

| NAAMS CODE | “A” DIMENSION |           |
|------------|---------------|-----------|
|            | INCH          | METRIC    |
| ACL0201C   | ---           | M20 x 1.5 |
| ACL0202C   | ---           | M22 x 1.5 |
| ACL0203C   | ---           | M26 x 1.5 |
| ACL0204C   | *7/8 – 14     | ---       |
| ACL0205C   | *1 – 8        | ---       |
| ACL0206C   | *1 – 14       | ---       |

Note: All dimensions are metric except Those marked (\*), which are in inches.

# CLEVIS CASTING ACL0300

**MATERIAL: 4130 STEEL CASTING**  
**OPTIONAL MATERIAL: SAE 4140 BAR STOCK**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING ±0.3  
 1 PLACE FABRICATION ±1.5  
 2 PLACE ±0.08 BETWEEN MACHINED SURFACES  
 ±0.03 BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 ±0.03 BETWEEN DOWELS IN THE SAME PLANE  
 ±0.10 BETWEEN DOWELS IN DIFFERENT PLANES  
 ±0.13 TO SCREW HOLES, NON ACCUMULATIVE

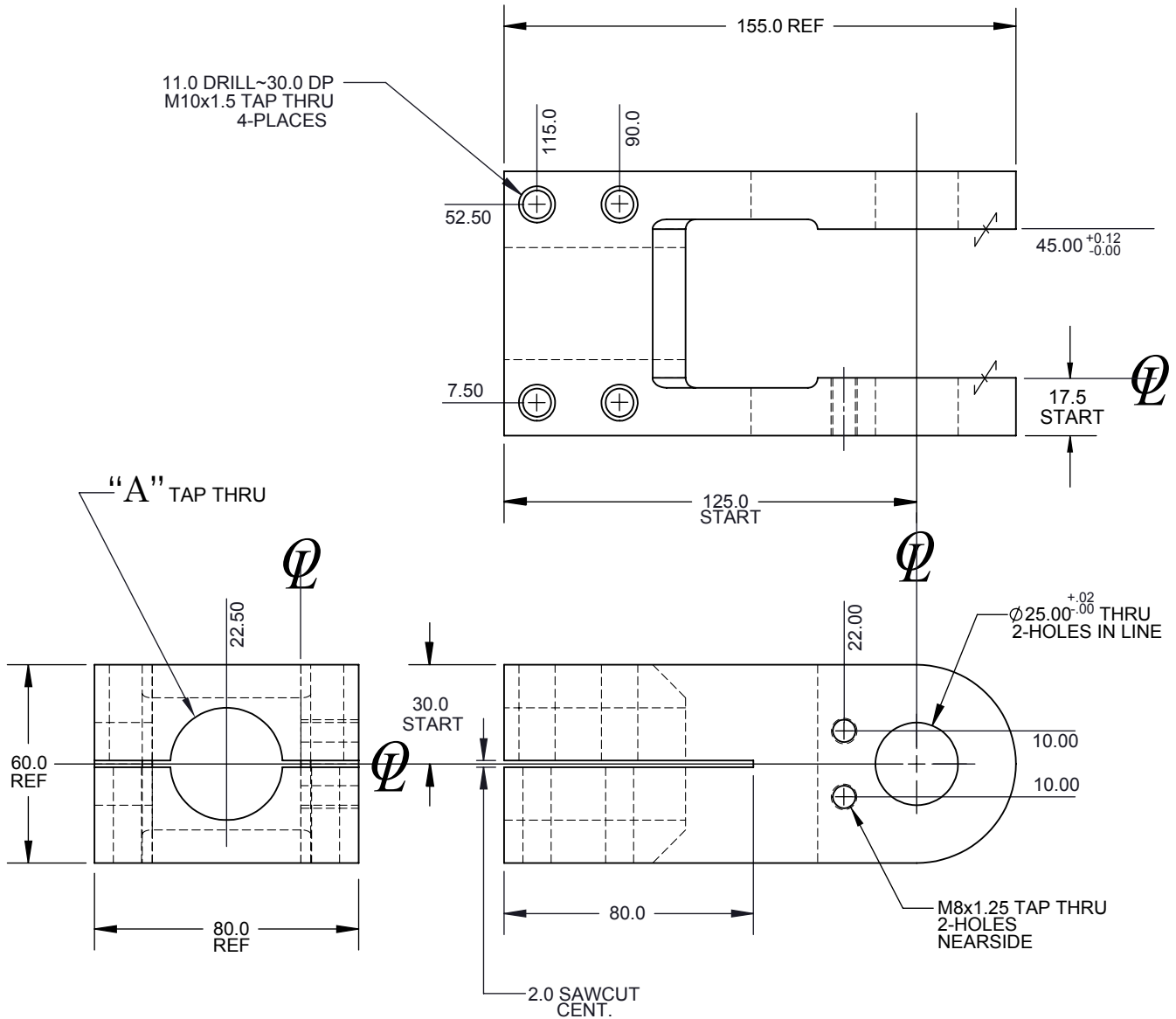
DOWEL HOLE TOLERANCES FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7  
 DOWEL TOLERANCE m6

ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION



# CLEVIS ACL0301C-305C

**MATERIAL: MAKE FROM NAAMS ACL0300 CASTING  
 OR OPTIONALLY MACHINE FROM 4140 STK.**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING ±0.3  
 1 PLACE FABRICATION ±1.5  
 2 PLACE ±0.08 BETWEEN MACHINED SURFACES  
 ±0.03 BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 ±0.03 BETWEEN DOWELS IN THE SAME PLANE  
 ±0.10 BETWEEN DOWELS IN DIFFERENT PLANES  
 ±0.13 TO SCREW HOLES, NON ACCUMULATIVE

DOWEL HOLE TOLERANCES  
 FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7

DOWEL TOLERANCE  
 m6

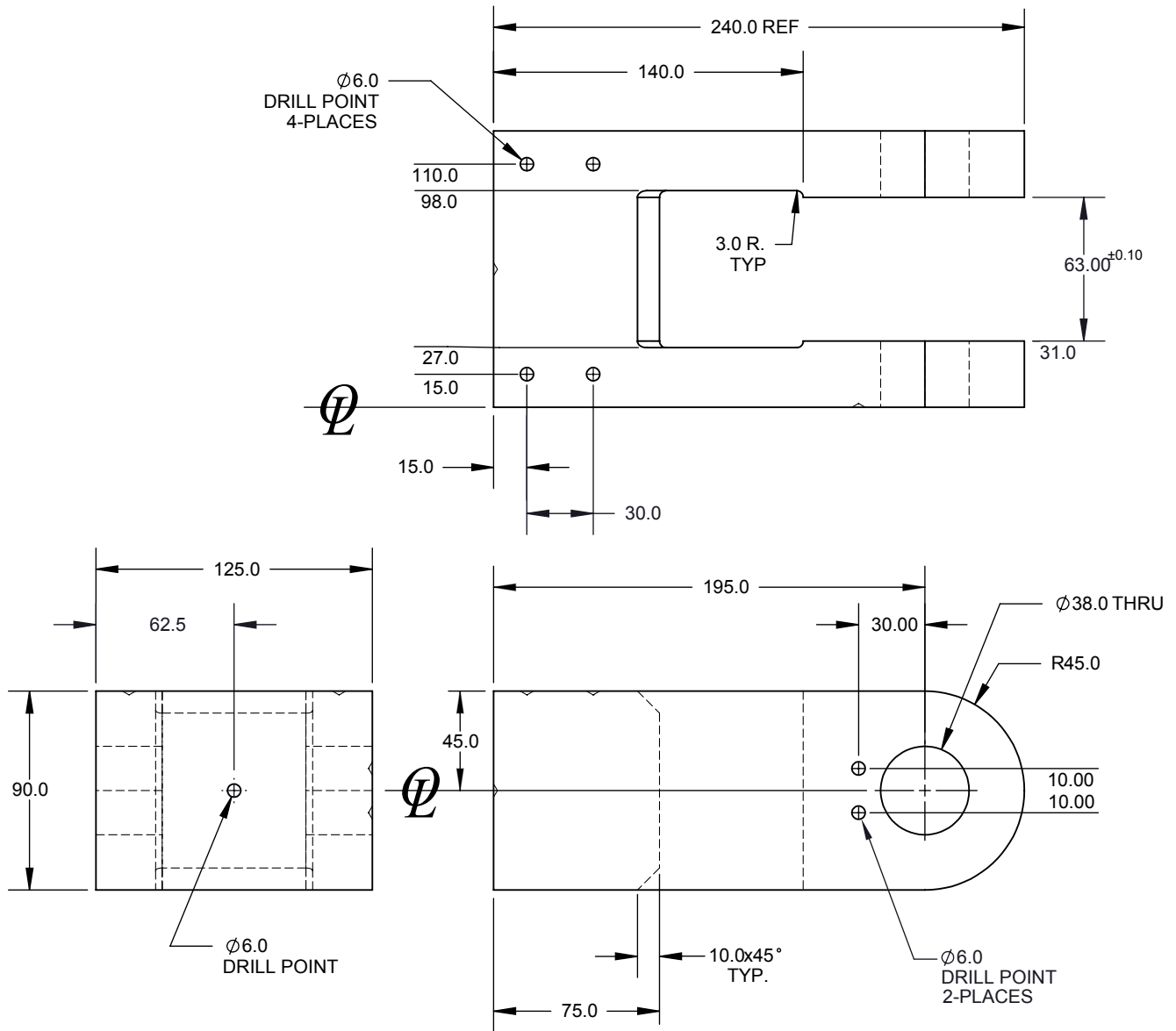
| NAAMS<br>CODE | “A DIMENSION |           |
|---------------|--------------|-----------|
|               | INCH         | METRIC    |
| ACL0301C      | ---          | M27 x 2.0 |
| ACL0302C      | ---          | M30 x 1.5 |
| ACL0303C      | ---          | M36 x 1.5 |
| ACL0304C      | ---          | M36 x 2.0 |
| ACL0305C      | *1 1/4 – 12  |           |

ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR  
 COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A  
 TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

Note: All dimensions are metric except  
 Those marked (\*), which are in inches.

# CLEVIS CASTING ACL0400

**MATERIAL:4130 STEEL CASTING**  
**OPTIONAL MATERIAL:SAE 4140 BAR STOCK**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING  $\pm 0.3$   
 1 PLACE FABRICATION  $\pm 1.5$   
 2 PLACE  $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.03$  BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 $\pm 0.10$  BETWEEN DOWELS IN DIFFERENT PLANES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

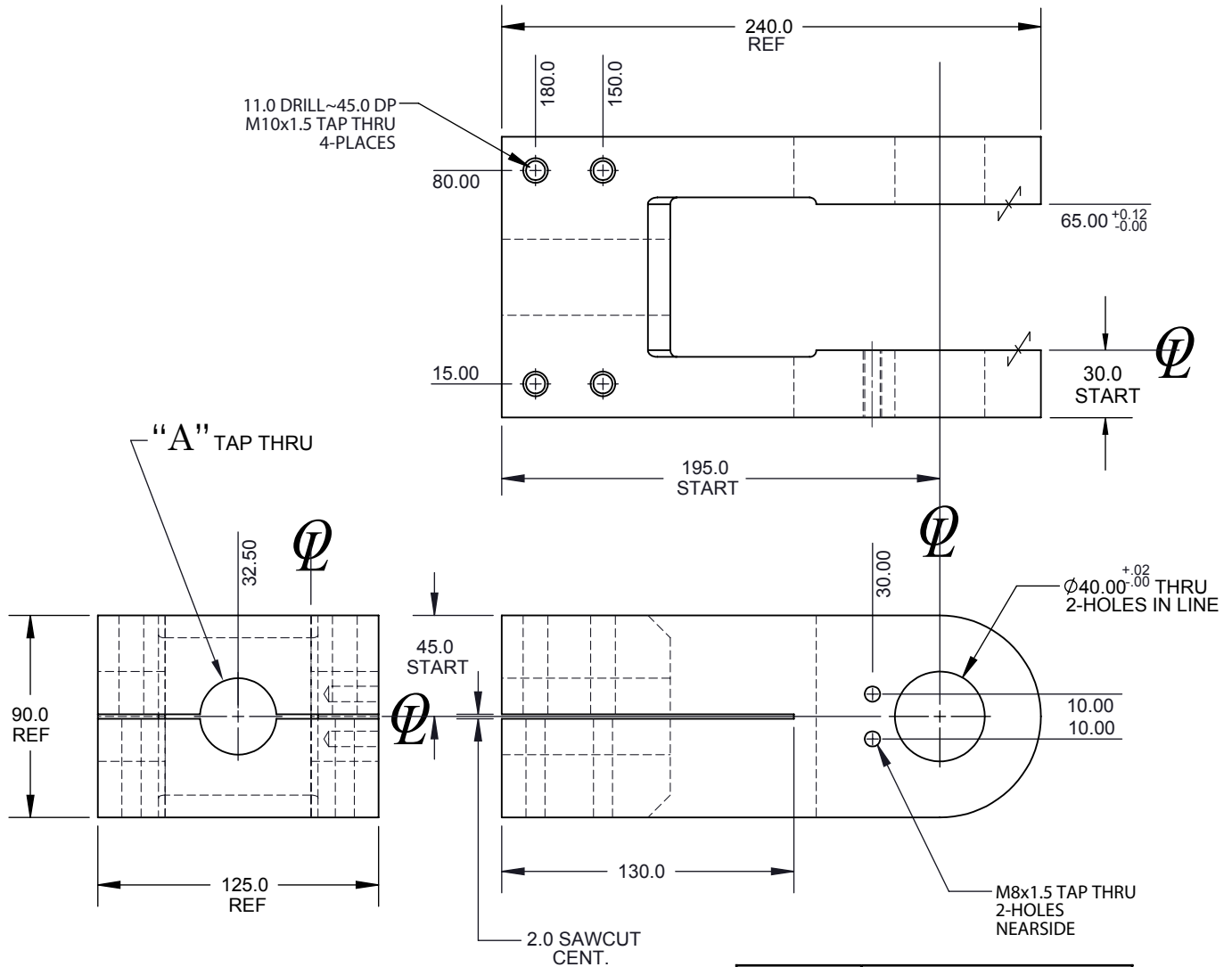
DOWEL HOLE TOLERANCES FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7

DOWEL TOLERANCE  
 m6

ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

# CLEVIS ACL0401C-412C

**MATERIAL: MAKE FROM NAAMS ACL0400 CASTING  
 OR OPTIONALLY MACHINE FROM 4140 STK.**



UNLESS OTHERWISE SPECIFIED:  
 MAXIMUM ALLOWABLE ROUGHNESS OF ALL:  
 1 PLACE FINISH DIMENSIONS TO BE 6 MICRONS  
 2 PLACE FINISH DIMENSIONS TO BE 3 MICRONS  
 3 PLACE FINISH DIMENSIONS TO BE 1.6 MICRONS

EXCEPT AS NOTED TOLERANCES SHALL BE:  
 1 PLACE MACHINING  $\pm 0.3$   
 1 PLACE FABRICATION  $\pm 1.5$   
 2 PLACE  $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.03$  BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 $\pm 0.10$  BETWEEN DOWELS IN DIFFERENT PLANES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

DOWEL HOLE TOLERANCES FOR PRESS FIT USE H6  
 FOR SLIP FIT USE F7

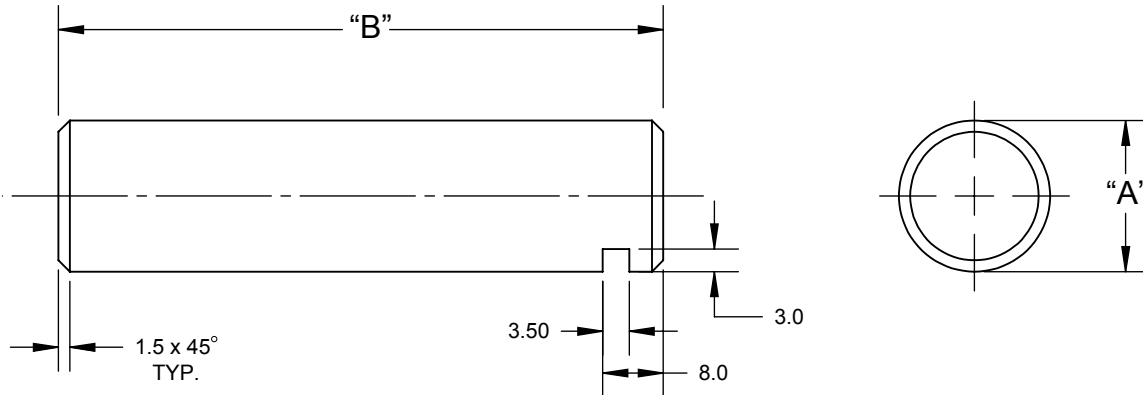
DOWEL TOLERANCE m6

ALL MACHINING  $\varnothing$  SURFACES MUST BE FINISHED EXCEPT FOR COLD DRAWN OR COLD ROLLED SURFACES.  
 ALL WELDMENTS THAT WILL BE STRESS RELIEVED AND HAVE A TRAPPED AIR CAVITY WILL BE VENTED DURING FABRICATION

| NAAMS CODE | “A” DIMENSION |           |
|------------|---------------|-----------|
|            | INCH          | METRIC    |
| ACL0401C   | ---           | M40 x 1.5 |
| ACL0402C   | ---           | M42 x 2.0 |
| ACL0403C   | ---           | M45 x 1.5 |
| ACL0404C   | ---           | M48 x 2.0 |
| ACL0405C   | ---           | M56 x 2.0 |
| ACL0406C   | ---           | M64 x 2.0 |
| ACL0407C   | *1 1/2 – 12   | ---       |
| ACL0448C   | *1 3/4 – 12   | ---       |
| ACL0409C   | *1 7/8 – 12   | ---       |
| ACL0410C   | *2 – 12       | ---       |
| ACL0411C   | *2 1/4 – 12   | ---       |
| ACL0412C   | *2 1/2 – 12   | ---       |

Note: All dimensions are metric except Those marked (\*), which are in inches.

# CLEVIS PIN



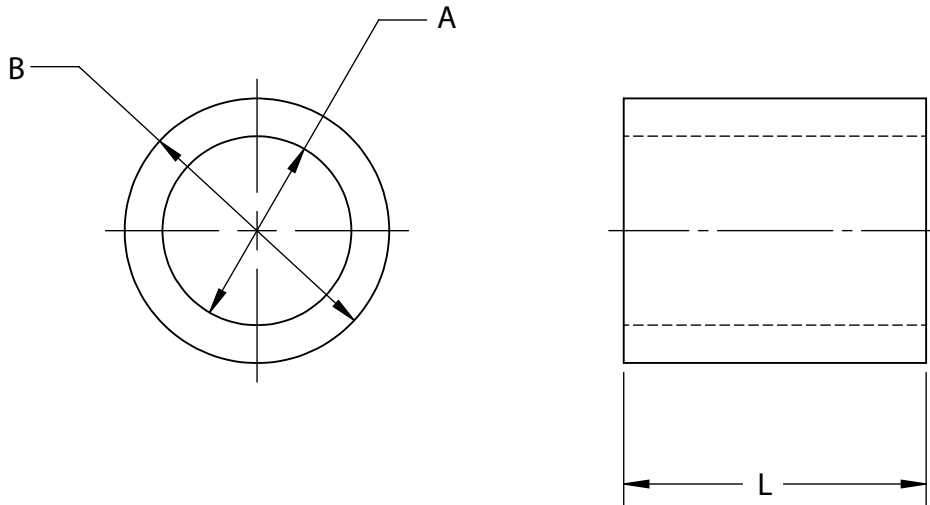
| NAAMS Code | "A" Dia                                    | "B" Length |
|------------|--|------------|
| ACL0501    | 12.00 <sup>+0.00</sup> / <sub>-0.025</sub> | 65.00      |
| ACL0502    | 20.00 <sup>+0.00</sup> / <sub>-0.025</sub> | 80.00      |
| ACL0503    | 25.00 <sup>+0.00</sup> / <sub>-0.025</sub> | 90.00      |
| ACL0504    | 40.00 <sup>+0.00</sup> / <sub>-0.025</sub> | 135.00     |
| ACL0505    | 20.00 <sup>+0.00</sup> / <sub>-0.025</sub> | 60.00      |

STK: "A" DIA x "B" LG.  
 T.G.P. & C. 1045-1050  
 28-32 Rc., .013 CHROME 64-70 Rc.  
 0.20-0.40 MICROMETER  
 (8-16 MICROINCH)

METRIC DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED:  
 1 PLACE MACHINING  $\pm 0.3$   
 1 PLACE FABRICATION  $\pm 1.5$   
 2 PLACE  $\pm 0.08$  BETWEEN MACHINED SURFACES  
 $\pm 0.03$  BETWEEN SINGLE DOWEL AND A HEEL SURFACE  
 $\pm 0.03$  BETWEEN DOWELS IN THE SAME PLANE  
 $\pm 0.10$  BETWEEN DOWELS IN DIFFERENT PLANES  
 $\pm 0.13$  TO SCREW HOLES, NON ACCUMULATIVE

A

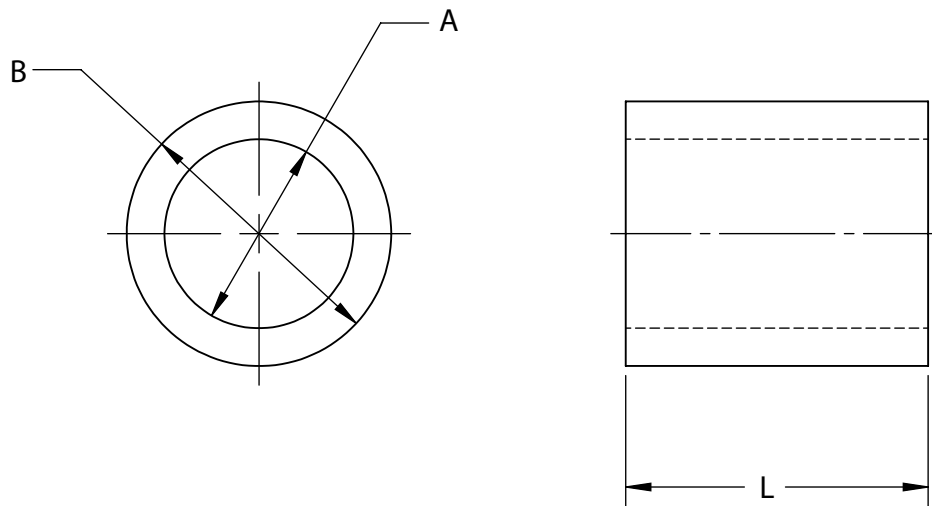
# CLEVIS COMPOSITE BEARING



| NAAMS CODE | A DIM                   | B DIM                   | L DIM.<br>±0.13 | PRESS FIT             | RECOM. HSG. BORE        | RECOM. SHAFT DIA.       |
|------------|-------------------------|-------------------------|-----------------|-----------------------|-------------------------|-------------------------|
| ACL0511    | $\frac{12.074}{12.050}$ | $\frac{22.050}{22.024}$ | 20              | $\frac{0.050}{0.013}$ | $\frac{22.013}{22.000}$ | $\frac{12.000}{11.975}$ |
| ACL0512    | $\frac{20.078}{20.052}$ | $\frac{30.050}{30.024}$ | 30              | $\frac{0.050}{0.013}$ | $\frac{30.013}{30.000}$ | $\frac{20.000}{19.975}$ |
| ACL0513    | $\frac{25.080}{25.054}$ | $\frac{35.050}{35.024}$ | 40              | $\frac{0.050}{0.013}$ | $\frac{35.013}{35.000}$ | $\frac{25.000}{24.975}$ |
| ACL0514    | $\frac{40.094}{40.068}$ | $\frac{50.064}{50.038}$ | 60              | $\frac{0.064}{0.013}$ | $\frac{50.025}{50.000}$ | $\frac{40.000}{39.975}$ |

MATERIAL: REINFORCED TEFLON COMPOSITE LINER  
 WITH FIBER REINFORCED EPOXY SHELL  
 MEETING THE FOLLOWING SPECIFICATIONS:  
 ASTM D570 (WATER ABSORPTION)  
 ASTM D635 (FLAMMABILITY)  
 Maximum P (STATIC) 138 MPa (20,000 psi)  
 Maximum V (CONTINUOUS) 2.54 m/sec (500 ft/min)  
 Maximum PV 1.22 MPa m/sec (35,000 psi ft/min)

# CLEVIS COMPOSITE BEARING



| NAAMS CODE | A DIM                   | B DIM                   | L DIM.<br>±0.13 | PRESS FIT             | RECOM. HSG. BORE        | RECOM SHAFT DIA.        | NOTE                             |
|------------|-------------------------|-------------------------|-----------------|-----------------------|-------------------------|-------------------------|----------------------------------|
| ACL0515    | $\frac{20.078}{20.052}$ | $\frac{30.050}{30.024}$ | 20.0            | $\frac{0.050}{0.013}$ | $\frac{30.013}{30.000}$ | $\frac{20.000}{19.975}$ | FOR LIGHT DUTY<br>DROP AWAY LEAF |
| ACL0516    | $\frac{25.080}{25.054}$ | $\frac{35.050}{35.024}$ | 25.0            | $\frac{0.050}{0.013}$ | $\frac{35.013}{35.000}$ | $\frac{25.000}{24.975}$ | FOR LIGHT DUTY<br>DROP AWAY LEAF |

MATERIAL: REINFORCED TEFLON COMPOSITE LINER  
 WITH FIBER REINFORCED EPOXY SHELL  
 MEETING THE FOLLOWING SPECIFICATIONS:  
 ASTM D570 (WATER ABSORPTION)  
 ASTM D635 (FLAMMABILITY)  
 Maximum P (STATIC) 138 MPa (20,000 psi)  
 Maximum V (CONTINUOUS) 2.54 m/sec (500 ft/min)  
 Maximum PV 1.22 MPa m/sec (35,000 psi ft/min)