

# LOCATING PINS AND RETAINERS COMPONENTS INDEX

PAGE	DATE	NAAMS CODE	DESCRIPTION
<a href="#">I-1</a>	02/12/14		Locating Pins and Retainers Components Index
<a href="#">I-1.1</a>	02/12/14		Locating Pins and Retainers Components Index
<a href="#">I-1.2</a>	02/12/14		Locating Pins and Retainers Components Index
<a href="#">I-2</a>	06/23/04		Typical Locating Pin Retainer Assembly
<a href="#">I-3</a>	01/17/06		Typical Locating Pin Retainer Assembly
<a href="#">I-4</a>	02/12/14	APR010M–APR013M	Locating Pin Retainers (Full Metric)
<a href="#">I-5</a>	02/12/14	APR020M–APR021M	Locating Pin Retainers (Full Metric)
<a href="#">I-6</a>	02/12/14	APR030M–APR033M	Locating Pin Retainers (Full Metric)
<a href="#">I-7</a>	02/12/14	APR040M–APR041M	Locating Pin Retainers (Full Metric)
<a href="#">I-8</a>	02/12/14	APR050M–APR051M	Locating Pin Retainers (Full Metric)
<a href="#">I-9</a>	02/12/14	APR060M–APR063M	Locating Pin Retainers (Full Metric)
<a href="#">I-10</a>	02/12/14	APR070M–APR071M	Locating Pin Retainers (Full Metric)
<a href="#">I-11</a>	03/19/21	APS061M–APS199M	Locating Pin, 6 mm Thru 19 mm Dia. (Full Metric)
<a href="#">I-12</a>	03/19/21	APS061M–APS199M	Locating Pin, 6 mm Thru 19 mm Dia. (Full Metric)
<a href="#">I-13</a>	03/19/21	APS250M–APS259M	Locating Pin, 25 mm Dia. (Full Metric)
<a href="#">I-14</a>	03/19/21	APE061M–APE199M	Locating Pin for 6 x 19 Thru 19 x 25 Slotted Holes (Full Metric)
<a href="#">I-15</a>	03/19/21	APE061M – APE199M	Locating Pin for 6 x 19 mm Thru 19 x 25 mm Slotted Holes (Full Metric)
<a href="#">I-16</a>	03/19/21	APE250M – APE259M	Locating Pin for 25 x 31 mm Slotted Holes (Full Metric)
<a href="#">I-17</a>	03/19/21	ARP061M – ARP199M	Respot Pin, 6 mm Thru 19 mm Dia. (Full Metric)
<a href="#">I-18</a>	03/19/21	ARP061M – ARP199M	Respot Pin, 6 mm Thru 19 mm Dia. (Full Metric)
<a href="#">I-19</a>	03/19/21	ARE061M – ARE199M	Respot Pin for 6 x 12 mm Thru 19 x 25 mm Slotted Holes (Full Metric)
<a href="#">I-20</a>	03/19/21	ARE061M – ARE199M	Respot Pin for 6 x 12 mm Thru 19 x 25 mm Slotted Holes (Full Metric)
<a href="#">I-21</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-22</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-23</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-24</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-25</a>	04/22/14	Discontinued	Locating Pin Retainers

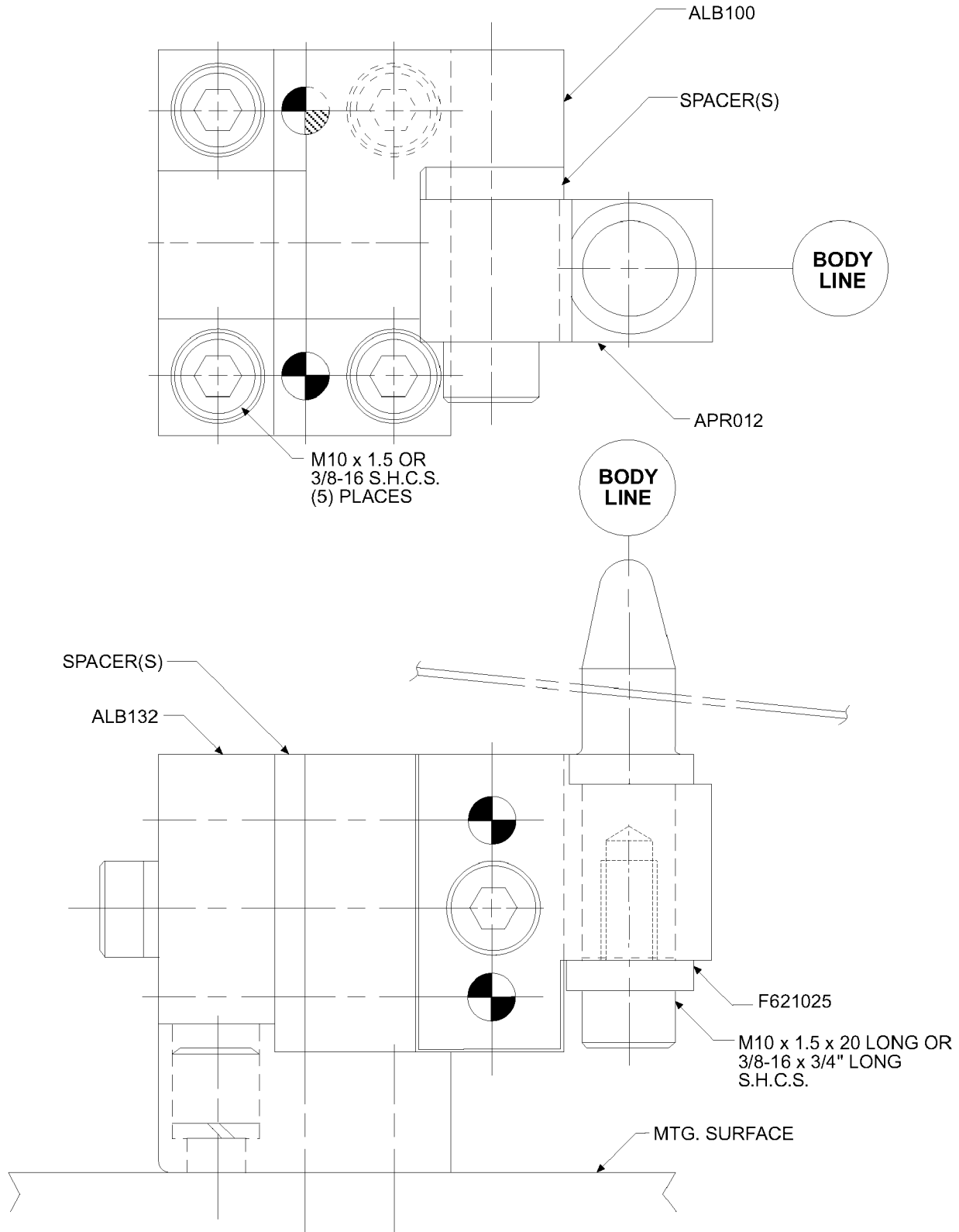
# LOCATING PINS AND RETAINERS COMPONENTS INDEX

PAGE	DATE	NAAMS CODE	DESCRIPTION
<a href="#">I-26</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-27</a>	04/22/14	Discontinued	Locating Pin Retainers
<a href="#">I-28</a>	02/12/14	Discontinued	Locating Pin 6 mm Thru 19 mm Dia.
<a href="#">I-29</a>	04/22/14	Discontinued	Locating Pin 6 mm Thru 19 mm Dia.
<a href="#">I-30</a>	02/12/14	Discontinued	Locating Pin 25 mm Dia.
<a href="#">I-31</a>	02/12/14	Discontinued	Locating Pin for 6 x 12 mm Thru 19 x 25 mm Slotted Holes
<a href="#">I-32</a>	04/22/14	Discontinued	Locating Pin for 6 x 12 mm Thru 19 x 25 mm Slotted Holes
<a href="#">I-33</a>	02/12/14	Discontinued	Locating Pin for 25 x 31 mm Slotted Holes
<a href="#">I-34</a>	03/19/21	ARP250M–ARP259M	Respot Pin 25 mm Dia. (Full Metric)
<a href="#">I-35</a>	03/19/21	APQ081–APQ208	Locating Pin 8 mm Thru 20 mm Dia. (Full Metric)
<a href="#">I-36</a>	03/19/21	APQ081–APQ208	Locating Pin 8 mm Thru 20 mm Dia. (Full Metric)
<a href="#">I-37</a>	03/19/21	APQ251–APQ408	Locating Pin 25 mm Thru 40 mm Dia. (Full Metric)
<a href="#">I-38</a>	03/19/21	APQ251–APQ408	Locating Pin 25 mm Thru 40 mm Dia. (Full Metric)
<a href="#">I-39</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-40</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-41</a>	02/12/14	APR330M–APR333M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-42</a>	02/12/14	APR045M–APR046M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-43</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-44</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-45</a>	02/12/14	APR075M–APR076M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-46</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-47</a>	02/12/14	APR336M–APR339M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-48</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-49</a>	04/22/14	Discontinued	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-50</a>	02/12/14	APR077M–APR078M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-51</a>	02/12/14	APR250M–APR253M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-52</a>	02/12/14	APR255M–APR256M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-53</a>	02/12/14	APR201M–APR204M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-54</a>	02/12/14	APR211M–APR212M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-55</a>	02/12/14	APR260M–APR261M	Locating Pin Retainer (Full Metric) 20mm Series

# LOCATING PINS AND RETAINERS COMPONENTS INDEX

PAGE	DATE	NAAMS CODE	DESCRIPTION
<a href="#">I-56</a>	02/12/14	APR265M–APR268M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-57</a>	02/12/14	APR221M–APR222M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-58</a>	02/12/14	APR271M–APR274M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-59</a>	02/12/14	APR231M–APR234M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-60</a>	02/12/14	APR276M–APR277M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-61</a>	02/12/14	APR280M–APR283M	Locating Pin Retainer (Full Metric) 20mm Series
<a href="#">I-62</a>	02/12/14	APR241M–APR242M	Locating Pin Retainer (Full Metric) 20mm Series

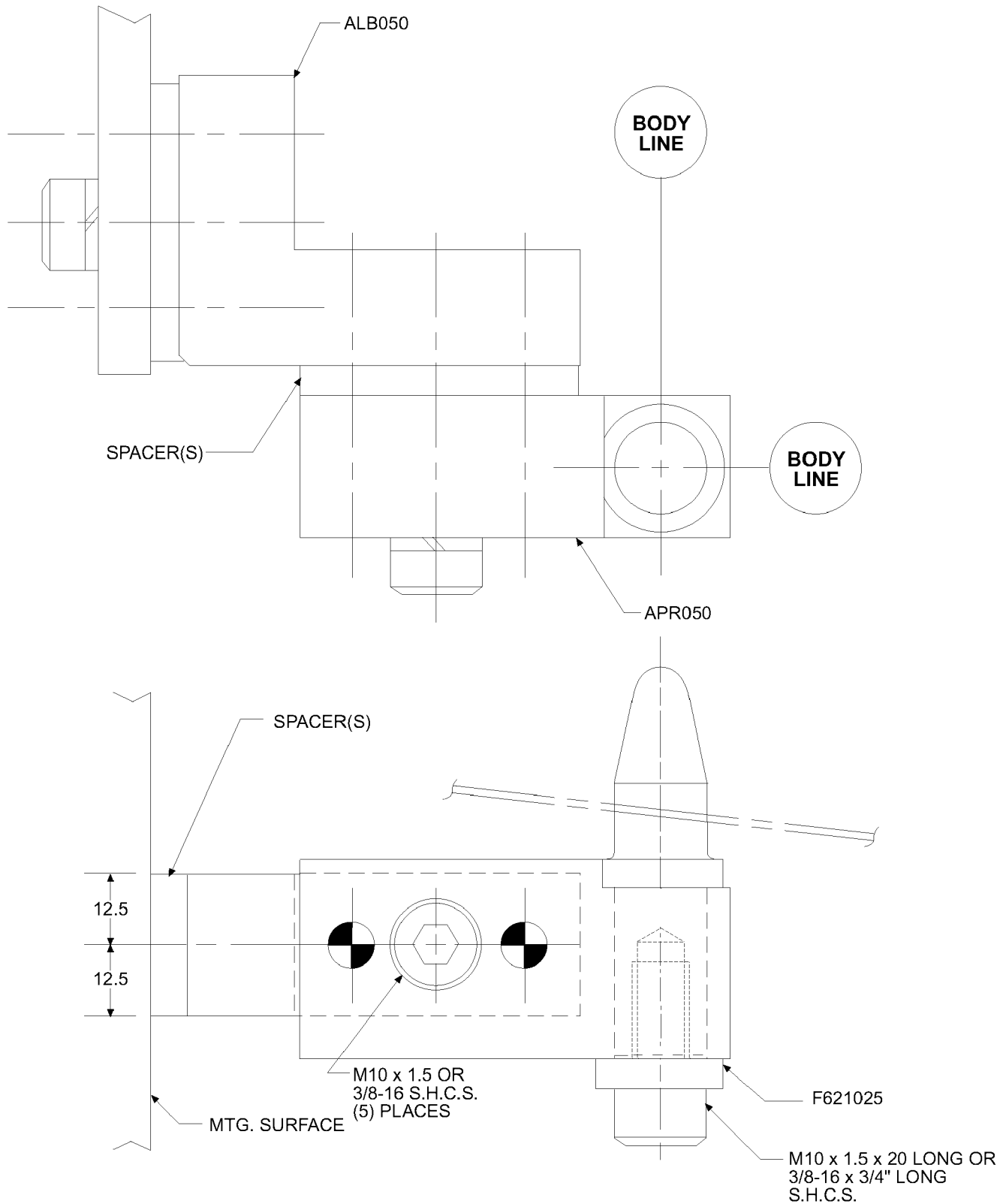
# TYPICAL LOCATING PIN RETAINER ASSEMBLY



**B**

**A**  
**C**

# TYPICAL LOCATING PIN RETAINER ASSEMBLY



**B**  
**A**

# LOCATING PIN RETAINERS (FULL METRIC)

## APR010M, 011M, 012M, 013M

GLOBAL STANDARD COMPONENTS



Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

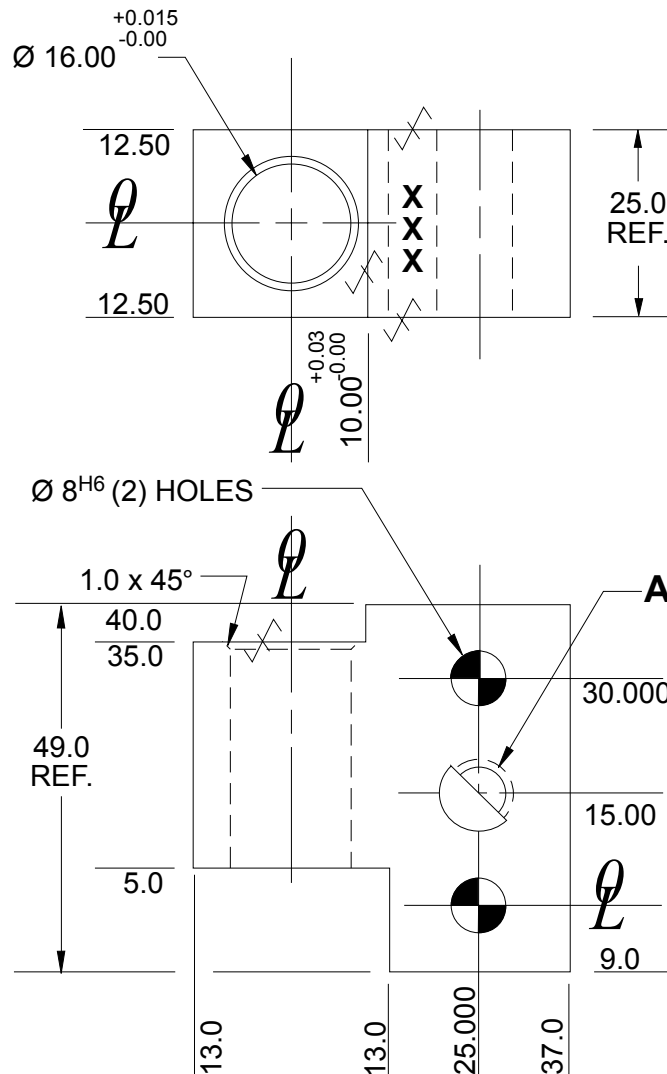
$\sqrt{\text{X}}$  SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.

BLACK OXIDE FINISH.

NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR010M	M10 x 1.5	Steel / ASTM A-36	0.32
APR011M	M10 x 1.5	SS type 303 or 304	0.32
APR012M	11.0	Steel / ASTM A-36	0.32
APR013M	11.0	SS type 303 or 304	0.32

A  
F

B

E  
C  
D

# LOCATING PIN RETAINERS (FULL METRIC) APR020M, 021M

GLOBAL STANDARD COMPONENTS



Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

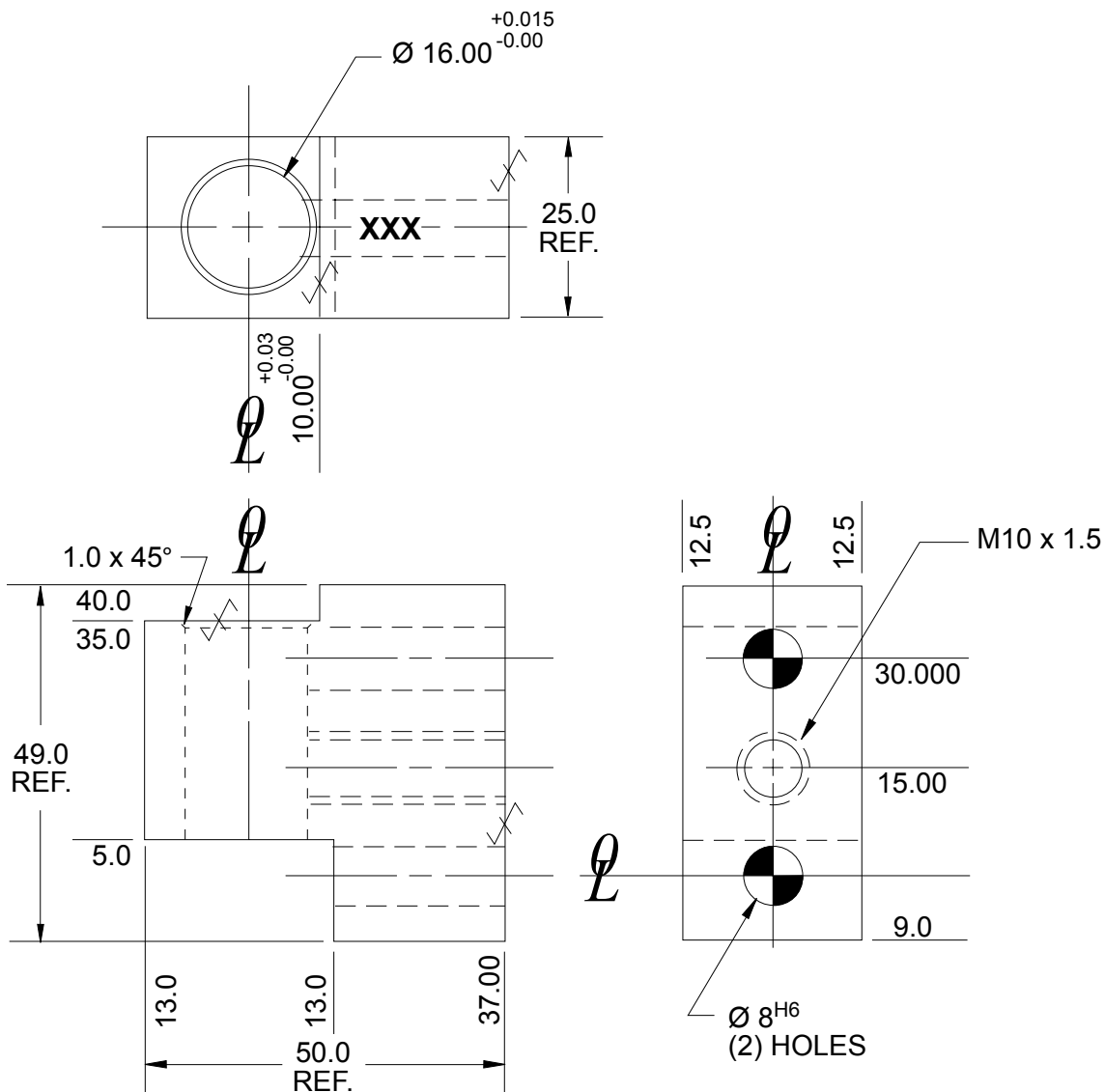
✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.

BLACK OXIDE FINISH.

NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR020M	Steel / ASTM A-36	0.32
APR021M	SS type 303 or 304	0.32

A

E

D

B

C

# LOCATING PIN RETAINERS (FULL METRIC) APR030M, 031M, 032M, 033M

GLOBAL STANDARD COMPONENTS



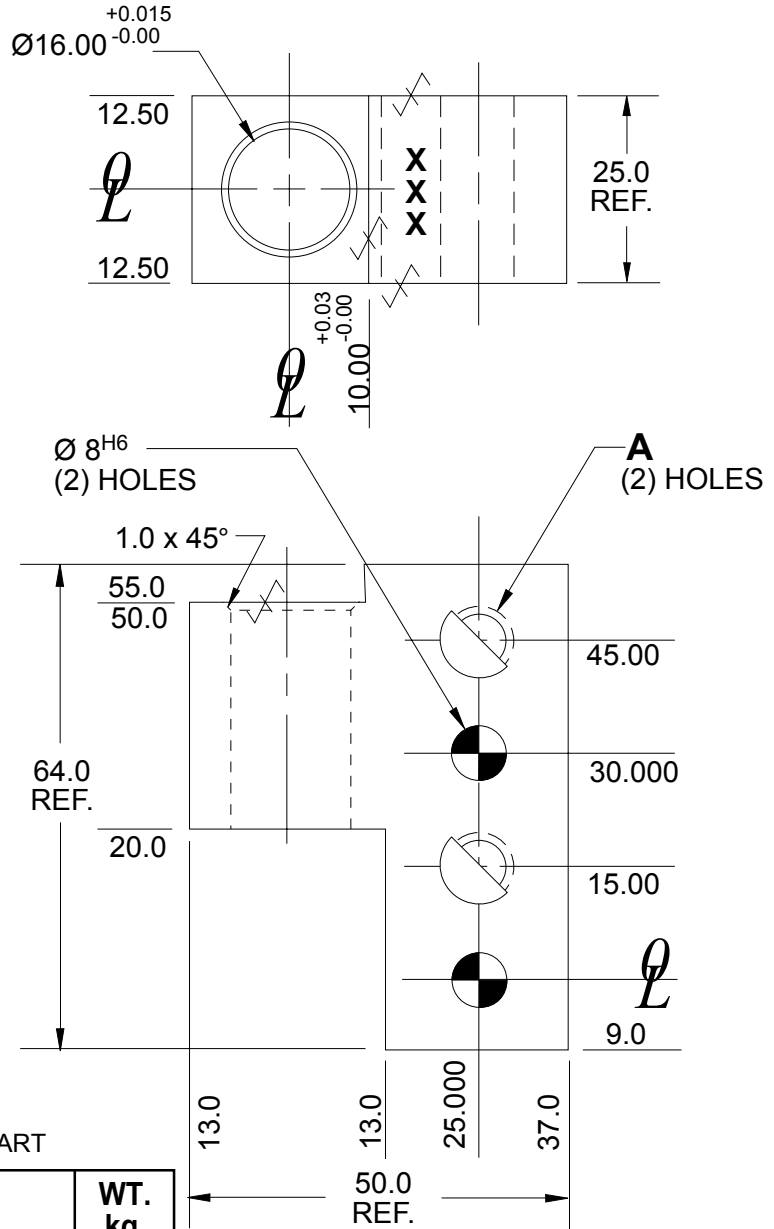
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR030M	M10 x 1.5	Steel / ASTM A-36	0.45
APR031M	M10 x 1.5	SS type 303 or 304	0.45
APR032M	11.0	Steel / ASTM A-36	0.45
APR033M	11.0	SS type 303 or 304	0.45

A  
E

D  
B  
C



# LOCATING PIN RETAINERS (FULL METRIC) APR040M, 041M

GLOBAL STANDARD COMPONENTS



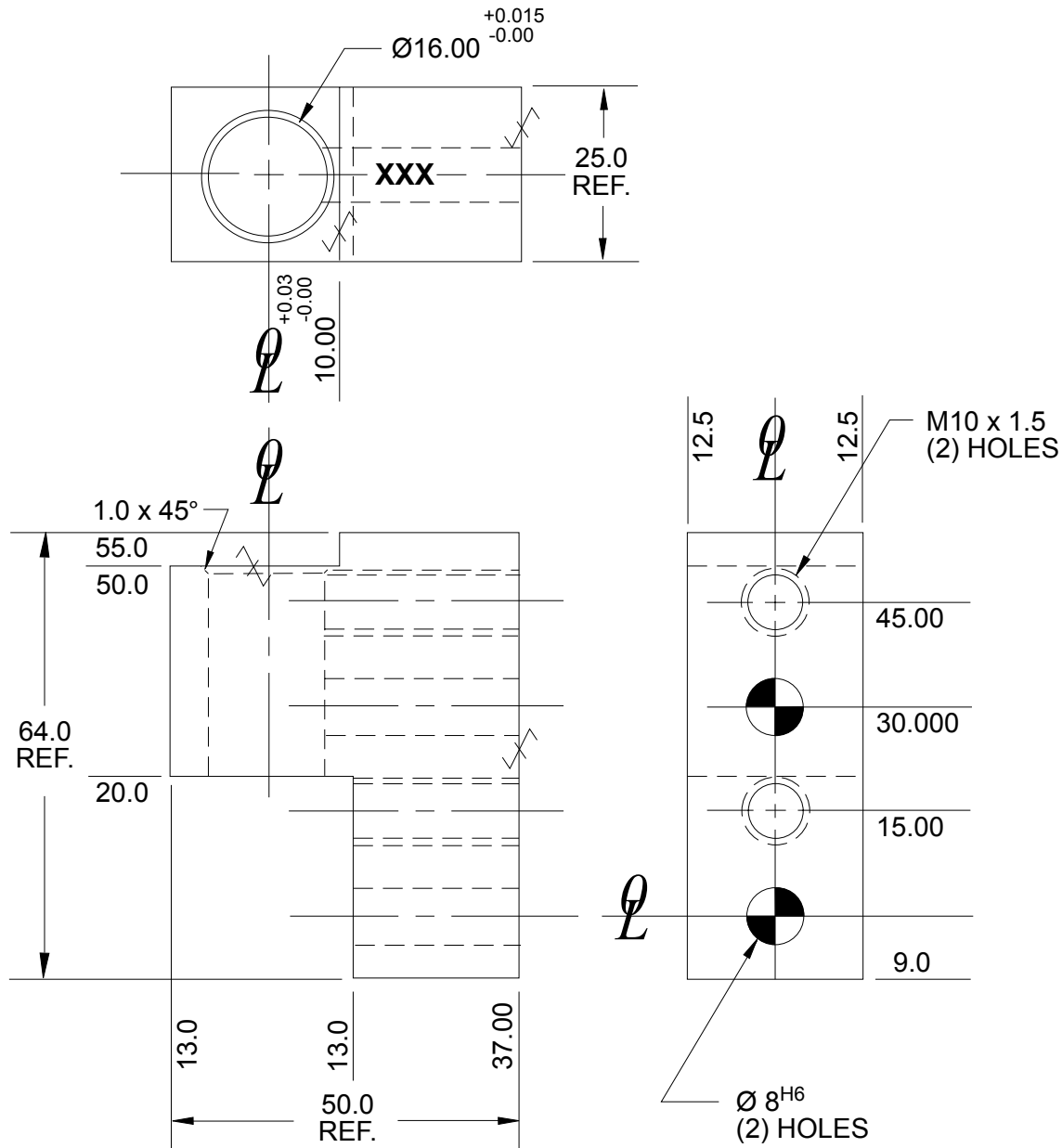
Assembly

02/12/14

- Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

$\sqrt{\text{X}}$  SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



A  
E

D  
B  
C

NAAMS CODE	MATERIAL	WT. kg
APR040M	Steel / ASTM A-36	0.45
APR041M	SS type 303 or 304	0.45

SEE PAGE B-1.1 FOR  
 GLOBAL MATERIALS CHART

# LOCATING PIN RETAINERS (FULL METRIC) APR050M, 051M

GLOBAL STANDARD COMPONENTS



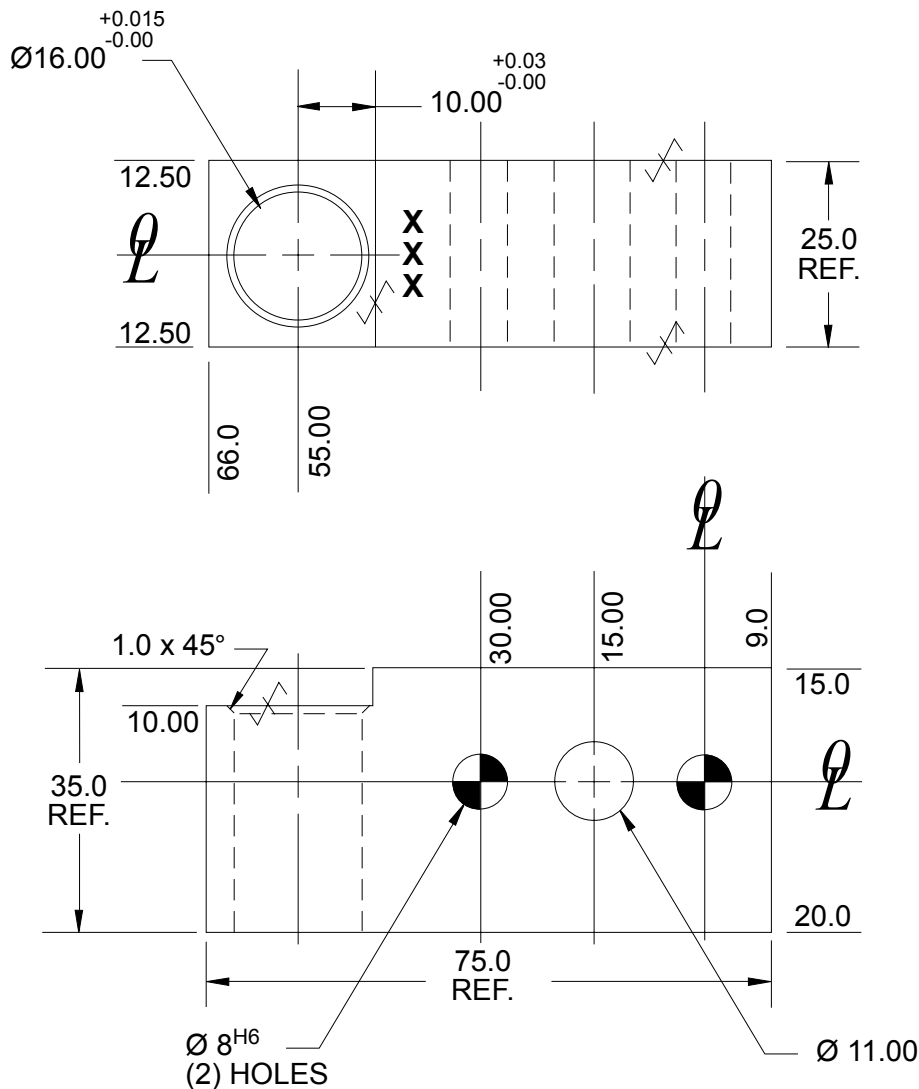
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$   
 BETWEEN DOWELS  $\pm 0.015$

✓ SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



A  
E

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR050M	Steel / ASTM A-36	0.41
APR051M	SS type 303 or 304	0.41

D  
B  
C

# LOCATING PIN RETAINERS (FULL METRIC) APR060M, 061M, 062M, 063M

GLOBAL STANDARD COMPONENTS



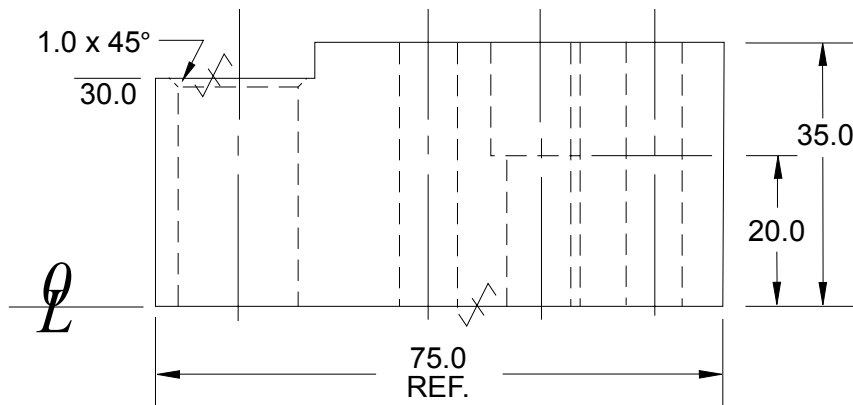
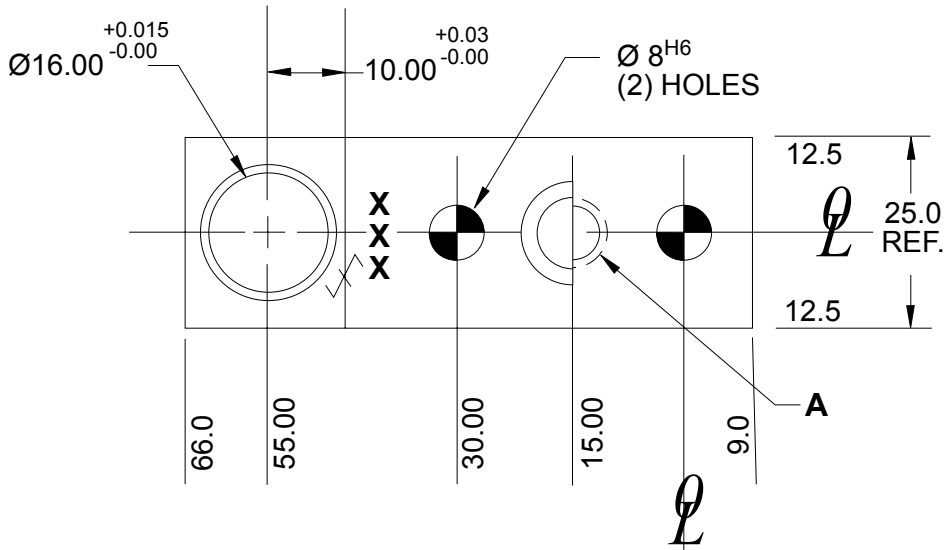
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$   
 BETWEEN DOWELS  $\pm 0.015$

$\sqrt{\text{X}}$  SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR060M	M10 x 1.5	Steel / ASTM A-36	0.41
APR061M	M10 x 1.5	SS type 303 or 304	0.41
APR062M	Drill & C/Bore for M10 SHCS	Steel / ASTM A-36	0.41
APR063M	Drill & C/Bore for M10 SHCS	SS type 303 or 304	0.41

A  
E

D  
B  
C

# LOCATING PIN RETAINERS (FULL METRIC) APR070M, 071M

GLOBAL STANDARD COMPONENTS



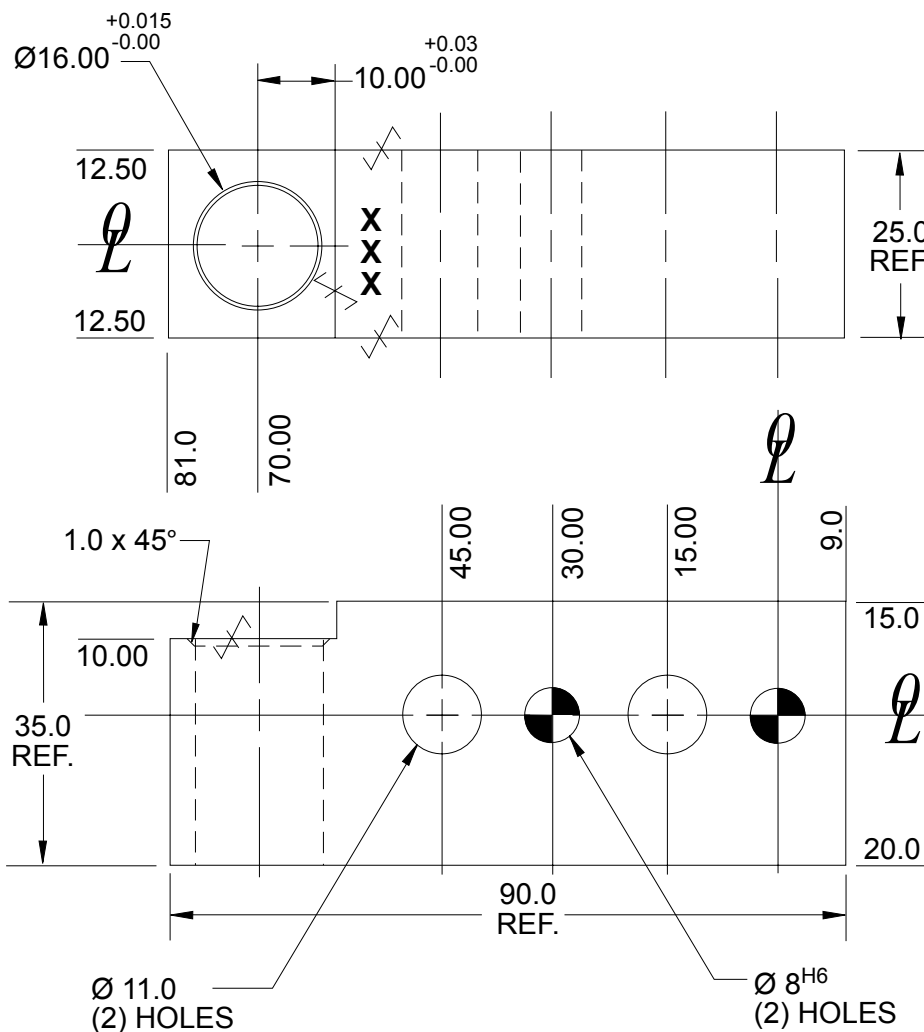
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$   
BETWEEN DOWELS  $\pm 0.015$



SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.  
NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR070M	Steel / ASTM A-36	0.45
APR071M	SS type 303 or 304	0.45

A

E

D

B

C

# LOCATING PIN 6mm THRU 19mm DIAMETER (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

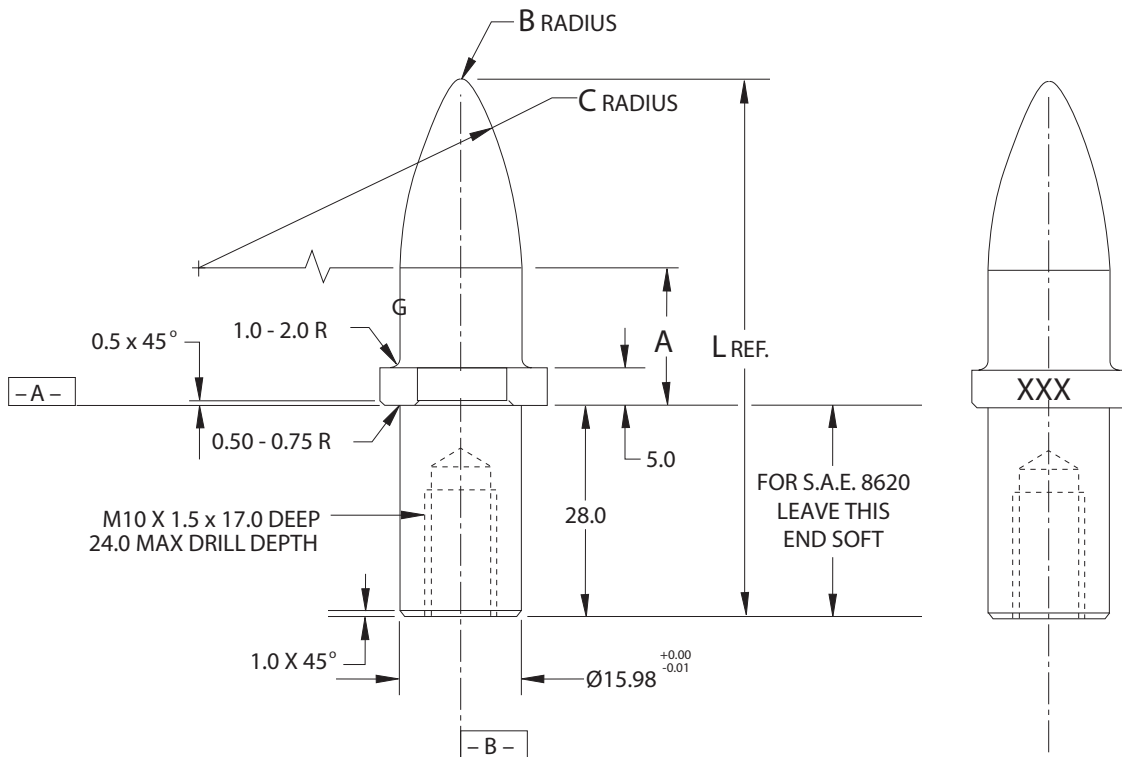
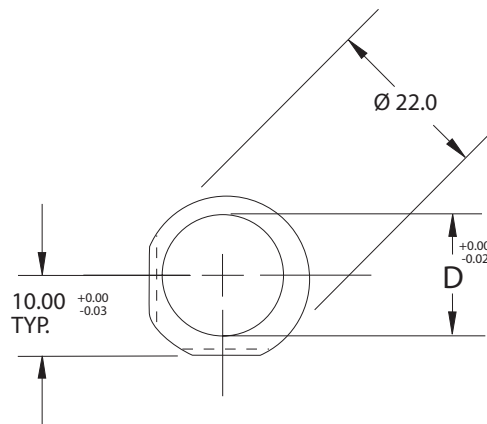
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\*: ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES B, C, AND D (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc



TABULATED INFORMATION ON FOLLOWING PAGE

J  
A  
F  
H  
I

D

D  
B  
E  
C  
G

# LOCATING PIN

## 6 mm THRU 19 mm DIAMETER (FULL METRIC)

\* : ONE OF THE SUFFIXES FROM PAGE I-11 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

6 mm Round Hole  
 B Rad = 1.0  
 C Rad = 18.0  
 D = 5.85

NAAMS CODE	A	L	WT. kg
APS061*	15.0	51.8	0.05
APS062*	20.0	56.8	0.05
APS063*	30.0	66.8	0.05
APS064*	40.0	76.8	0.05
APS065*	50.0	86.8	0.06
APS066*	60.0	96.8	0.06

8 mm Round Hole  
 B Rad = 1.0  
 C Rad = 24.0  
 D = 7.85

NAAMS CODE	A	L	WT. kg
APS081*	15.0	55.1	0.05
APS082*	20.0	60.1	0.05
APS083*	30.0	70.1	0.06
APS084*	40.0	80.1	0.06
APS085*	50.0	90.1	0.06
APS086*	60.0	100.1	0.07
APS087*	70.0	110.1	0.07
APS088*	80.0	120.1	0.08

10 mm Round Hole  
 B Rad = 2.0  
 C Rad = 30.0  
 D = 9.85

NAAMS CODE	A	L	WT. kg
APS101*	15.0	57.4	0.06
APS102*	20.0	62.4	0.06
APS103*	30.0	72.4	0.07
APS104*	40.0	82.4	0.07
APS105*	50.0	92.4	0.08
APS106*	60.0	102.4	0.08
APS107*	70.0	112.4	0.09
APS108*	80.0	122.4	0.10
APS109*	90.0	132.4	0.10
APS100*	100.0	142.4	0.11

12 mm Round Hole  
 B Rad = 2.0  
 C Rad = 36.0  
 D = 11.85

NAAMS CODE	A	L	WT. kg
APS121*	15.0	60.8	0.07
APS122*	20.0	65.8	0.07
APS123*	30.0	75.8	0.08
APS124*	40.0	85.8	0.09
APS125*	50.0	95.8	0.10
APS126*	60.0	105.8	0.11
APS127*	70.0	115.8	0.12
APS128*	80.0	125.8	0.13
APS129*	90.0	135.8	0.13
APS120*	100.0	145.8	0.14

13 mm Round Hole  
 B Rad = 2.0  
 C Rad = 39.0  
 D = 12.85

NAAMS CODE	A	L	WT. kg
APS131*	15.0	62.4	0.07
APS132*	20.0	67.4	0.07
APS133*	30.0	77.4	0.08
APS134*	40.0	87.4	0.09
APS135*	50.0	97.4	0.10
APS136*	60.0	107.4	0.11
APS137*	70.0	117.4	0.12
APS138*	80.0	127.4	0.13
APS139*	90.0	137.4	0.14
APS130*	100.0	147.4	0.15

16 mm Round Hole  
 B Rad = 2.0  
 C Rad = 48.0  
 D = 15.85

NAAMS CODE	A	L	WT. kg
APS161*	15.0	67.5	0.09
APS162*	20.0	72.5	0.09
APS163*	30.0	82.5	0.11
APS164*	40.0	92.5	0.13
APS165*	50.0	102.5	0.14
APS166*	60.0	112.5	0.16
APS167*	70.0	122.5	0.17
APS168*	80.0	132.5	0.19
APS169*	90.0	142.5	0.20
APS160*	100.0	152.5	0.22

19 mm Round Hole  
 B Rad = 2.0  
 C Rad = 38.0  
 D = 18.85

NAAMS CODE	A	L	WT. kg
APS191*	15.0	66.8	0.10
APS192*	20.0	71.8	0.12
APS193*	30.0	81.8	0.14
APS194*	40.0	91.8	0.16
APS195*	50.0	101.8	0.18
APS196*	60.0	111.8	0.20
APS197*	70.0	121.8	0.22
APS198*	80.0	131.8	0.24
APS199*	90.0	141.8	0.27
APS190*	100.0	151.8	0.29

A  
C  
B  
D

# LOCATING PIN 25mm DIAMETER (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

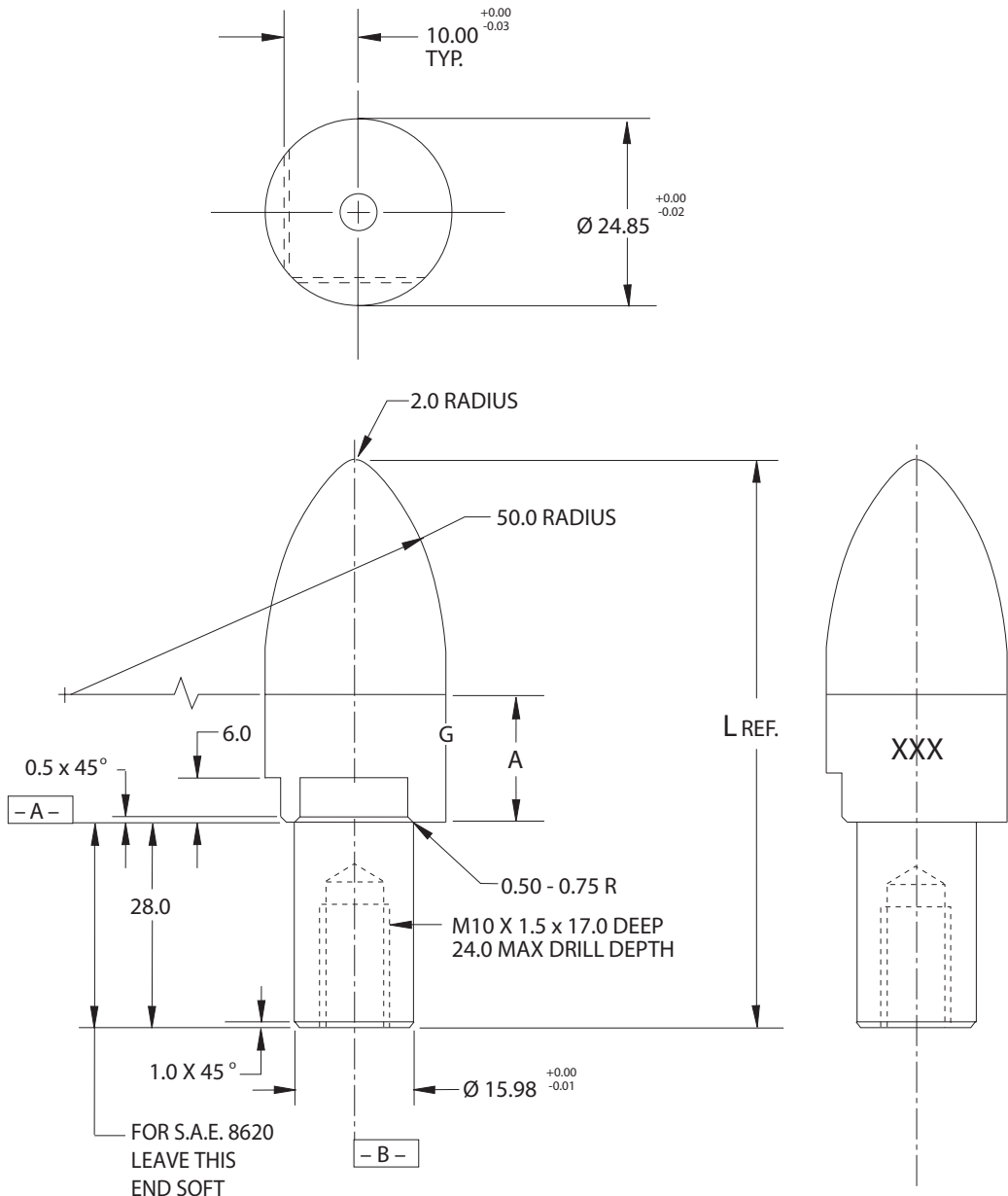
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\* : ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES ABOVE THE -A- DATUM (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc



NAAMS CODE	A	L	WT kg
APS251 *	15.0	74.8	0.15
APS252 *	20.0	79.8	0.17
APS253 *	30.0	89.8	0.21
APS254 *	40.0	99.8	0.24
APS255 *	50.0	109.8	0.28
APS256 *	60.0	119.8	0.32
APS257 *	70.0	129.8	0.36
APS258 *	80.0	139.8	0.39
APS259 *	90.0	149.8	0.43
APS250 *	100.0	159.8	0.47

M  
A  
F  
J  
L

D

D  
B  
E  
C  
H  
K

I

# LOCATING PIN FOR 6 x 12 THRU 19 x 25 mm SLOTTED HOLES (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

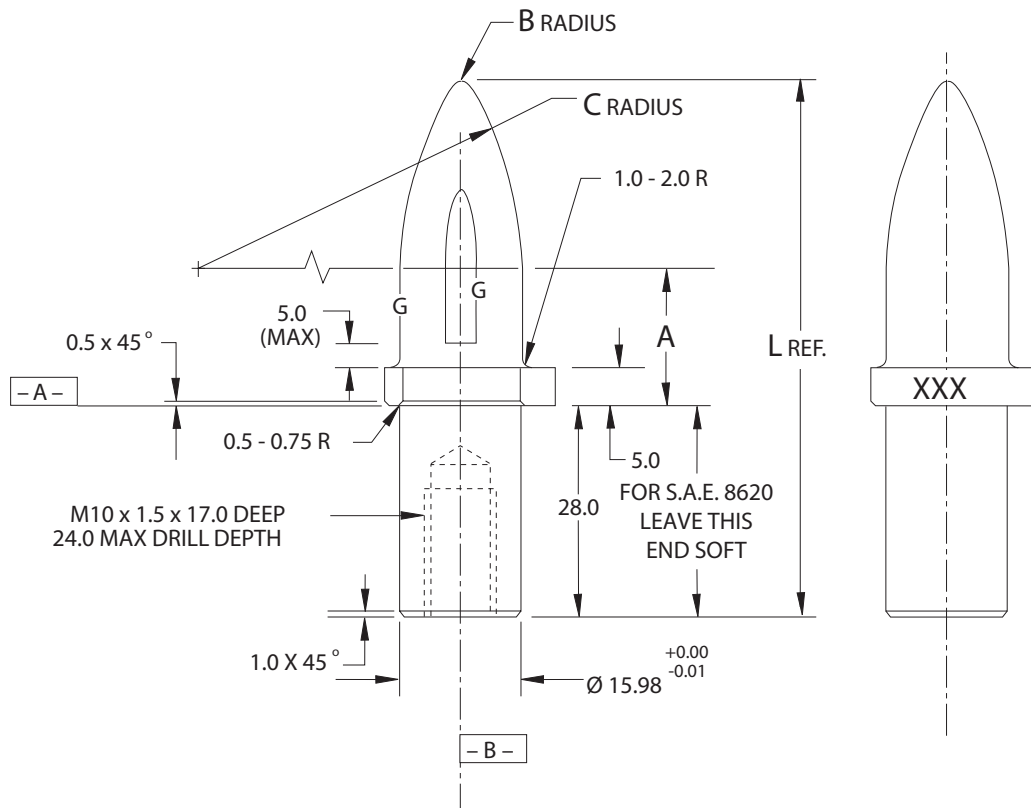
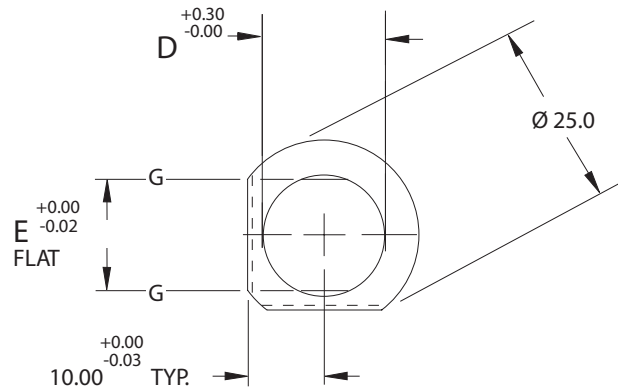
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\*: ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES B, C, D AND E (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc



I  
A  
E  
G  
H

D  
B  
C  
F

TABULATED INFORMATION ON FOLLOWING PAGE



# LOCATING PIN

## FOR 6 x 12 THRU 19 x 25 mm <sup>TM</sup>

### SLOTTED HOLES(FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

\* : ONE OF THE SUFFIXES FROM PAGE I-14 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

6 x 12 Slotted Hole  
 B Rad = 1.0  
 C Rad = 18.0  
 D = 7.09  
 E = 5.85

NAAMS CODE	A	L	WT. kg
APE061*	15.0	52.9	0.05
APE062*	20.0	57.9	0.05
APE063*	30.0	67.9	0.05
APE064*	40.0	77.9	0.06
APE065*	50.0	87.9	0.06
APE066*	60.0	97.9	0.06

8 x 14 Slotted Hole  
 B Rad = 1.0  
 C Rad = 24.0  
 D = 8.81  
 E = 7.85

NAAMS CODE	A	L	WT. kg
APE081*	15.0	56.0	0.05
APE082*	20.0	61.0	0.06
APE083*	30.0	71.0	0.06
APE084*	40.0	81.0	0.07
APE085*	50.0	91.0	0.07
APE086*	60.0	101.0	0.08
APE087*	70.0	111.0	0.08
APE088*	80.0	121.0	0.08

10 x 16 Slotted Hole  
 B Rad = 2.0  
 C Rad = 30.0  
 D = 10.63  
 E = 9.85

NAAMS CODE	A	L	WT. kg
APE101*	15.0	58.2	0.06
APE102*	20.0	63.2	0.06
APE103*	30.0	73.2	0.07
APE104*	40.0	83.2	0.08
APE105*	50.0	93.2	0.08
APE106*	60.0	103.2	0.09
APE107*	70.0	113.2	0.10
APE108*	80.0	123.2	0.10
APE109*	90.0	133.2	0.11
APE100*	100.0	143.2	0.12

12 x 18 Slotted Hole  
 B Rad = 2.0  
 C Rad = 36.0  
 D = 12.50  
 E = 11.85

NAAMS CODE	A	L	WT. kg
APE121*	15.0	62.2	0.07
APE122*	20.0	67.2	0.07
APE123*	30.0	77.2	0.08
APE124*	40.0	87.2	0.09
APE125*	50.0	97.2	0.10
APE126*	60.0	107.2	0.11
APE127*	70.0	117.2	0.12
APE128*	80.0	127.2	0.13
APE129*	90.0	137.2	0.14
APE120*	100.0	147.2	0.15

13 x 19 Slotted Hole  
 B Rad = 2.0  
 C Rad = 39.0  
 D = 13.46  
 E = 12.85

NAAMS CODE	A	L	WT. kg
APE131*	15.0	63.1	0.07
APE132*	20.0	68.1	0.08
APE133*	30.0	78.1	0.09
APE134*	40.0	88.1	0.10
APE135*	50.0	98.1	0.11
APE136*	60.0	108.1	0.12
APE137*	70.0	118.1	0.13
APE138*	80.0	128.1	0.14
APE139*	90.0	138.1	0.16
APE130*	100.0	148.1	0.17

16 x 22 Slotted Hole  
 B Rad = 2.0  
 C Rad = 48.0  
 D = 16.35  
 E = 15.85

NAAMS CODE	A	L	WT. kg
APE161*	15.0	68.0	0.09
APE162*	20.0	73.0	0.10
APE163*	30.0	83.0	0.11
APE164*	40.0	93.0	0.13
APE165*	50.0	103.0	0.15
APE166*	60.0	113.0	0.16
APE167*	70.0	123.0	0.18
APE168*	80.0	133.0	0.20
APE169*	90.0	143.0	0.21
APE160*	100.0	153.0	0.23

19 x 25 Slotted Hole  
 B Rad = 2.0  
 C Rad = 38.0  
 D = 19.27  
 E = 18.85

NAAMS CODE	A	L	WT. kg
APE191*	15.0	67.2	0.11
APE192*	20.0	72.2	0.12
APE193*	30.0	82.2	0.14
APE194*	40.0	92.2	0.16
APE195*	50.0	102.2	0.19
APE196*	60.0	112.2	0.21
APE197*	70.0	122.2	0.23
APE198*	80.0	132.2	0.25
APE199*	90.0	142.2	0.28
APE190*	100.0	152.2	0.30

A  
 B  
 D  
 C  
 E

# LOCATING PIN FOR 25 x 31 mm SLOTTED HOLES (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

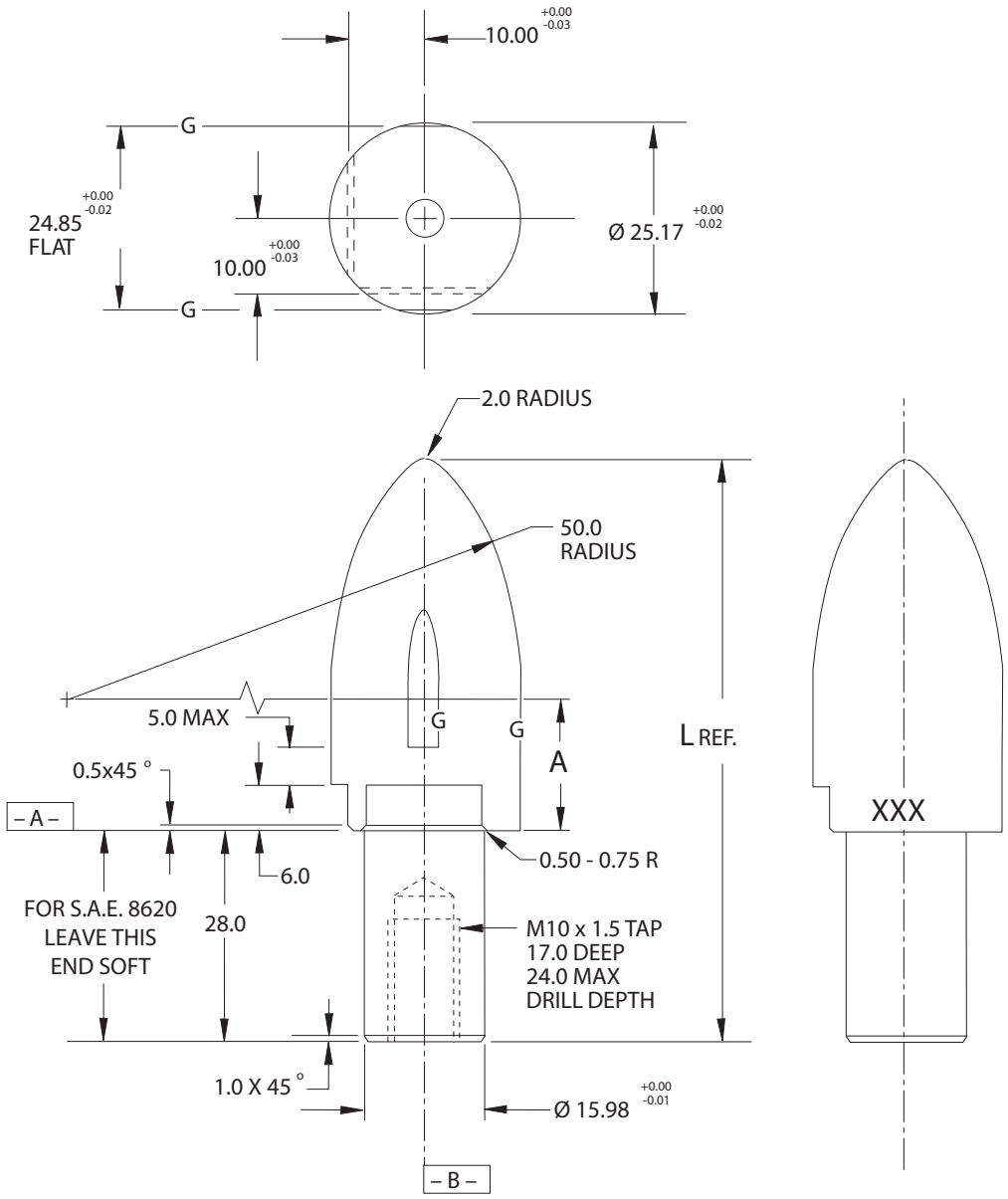
NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART.

\* : ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES ABOVE THE -A- DATUM (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc

L  
A  
F  
I  
K



D  
B  
C  
E  
G  
H  
J

NAAMS CODE	A	L	WT kg
APE251*	15.0	75.1	0.15
APE252*	20.0	80.1	0.17
APE253*	30.0	90.1	0.21
APE254*	40.0	100.1	0.25
APE255*	50.0	110.1	0.29
APE256*	60.0	120.1	0.33
APE257*	70.0	130.1	0.37
APE258*	80.0	140.1	0.40
APE259*	90.0	150.1	0.44
APE250*	100.0	160.1	0.48

# LOCATING PIN

## 6mm THRU 19mm DIAMETER

### (FULL METRIC)

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



Assembly

03/19/21

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.015$

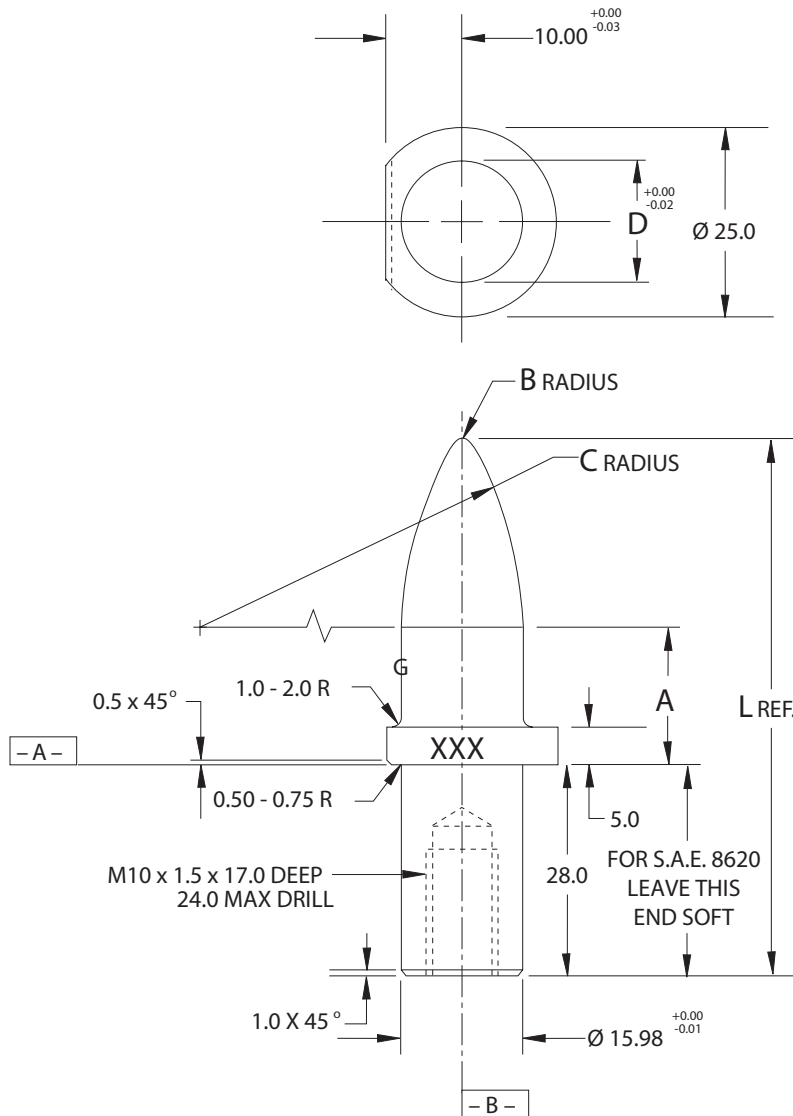
ALL MACHINED SURFACES TO FLAT.  
 PARALLEL AND PERPENDICULAR TO WITHIN  
 0.015 T.I.R. TO DATUMS A AND B AND  
 CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
 SHOWN **XXX**.

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\* : ONE OF THE FOLLOWING SUFFIXES MUST BE  
 ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES B, C, AND D (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc
MA	A2, 48-52 Rc



TABULATED INFORMATION ON THE FOLLOWING PAGE

I  
A  
E  
G  
H

B  
D  
C  
F

# RESPOT PIN

## 6 mm THRU 19 mm DIAMETER



Assembly

03/19/21

\* : ONE OF THE SUFFIXES FROM PAGE I-17 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

6 mm Round Hole  
B Rad = 1.0  
C Rad = 18.0  
D = 5.72

NAAMS CODE	A	L	WT. kg
ARP061*	15.0	51.8	0.05
ARP062*	20.0	56.8	0.05
ARP063*	30.0	66.8	0.05
ARP064*	40.0	76.8	0.05
ARP065*	50.0	86.8	0.05
ARP066*	60.0	96.8	0.06

8 mm Round Hole  
B Rad = 1.0  
C Rad = 24.0  
D = 7.72

NAAMS CODE	A	L	WT. kg
ARP081*	15.0	55.1	0.05
ARP082*	20.0	60.1	0.05
ARP083*	30.0	70.1	0.06
ARP084*	40.0	80.1	0.06
ARP085*	50.0	90.1	0.06
ARP086*	60.0	100.1	0.07
ARP087*	70.0	110.1	0.07
ARP088*	80.0	120.1	0.08

10 mm Round Hole  
B Rad = 2.0  
C Rad = 30.0  
D = 9.72

NAAMS CODE	A	L	WT. kg
ARP101*	15.0	57.4	0.06
ARP102*	20.0	62.4	0.06
ARP103*	30.0	72.4	0.07
ARP104*	40.0	82.4	0.07
ARP105*	50.0	92.4	0.08
ARP106*	60.0	102.4	0.08
ARP107*	70.0	112.4	0.09
ARP108*	80.0	122.4	0.09
ARP109*	90.0	132.4	0.10
ARP100*	100.0	142.4	0.11

12 mm Round Hole  
B Rad = 2.0  
C Rad = 36.0  
D = 11.72

NAAMS CODE	A	L	WT. kg
ARP121*	15.0	60.8	0.07
ARP122*	20.0	65.8	0.07
ARP123*	30.0	75.8	0.08
ARP124*	40.0	85.8	0.08
ARP125*	50.0	95.8	0.09
ARP126*	60.0	105.8	0.10
ARP127*	70.0	115.8	0.11
ARP128*	80.0	125.8	0.12
ARP129*	90.0	135.8	0.13
ARP120*	100.0	145.8	0.14

13 mm Round Hole  
B Rad = 2.0  
C Rad = 39.0  
D = 12.72

NAAMS CODE	A	L	WT. kg
ARP131*	15.0	62.4	0.07
ARP132*	20.0	67.4	0.07
ARP133*	30.0	77.4	0.08
ARP134*	40.0	87.4	0.09
ARP135*	50.0	97.4	0.10
ARP136*	60.0	107.4	0.11
ARP137*	70.0	117.4	0.12
ARP138*	80.0	127.4	0.13
ARP139*	90.0	137.4	0.14
ARP130*	100.0	147.4	0.15

16 mm Round Hole  
B Rad = 2.0  
C Rad = 48.0  
D = 15.72

NAAMS CODE	A	L	WT. kg
ARP161*	15.0	67.5	0.08
ARP162*	20.0	72.5	0.09
ARP163*	30.0	82.5	0.10
ARP164*	40.0	92.5	0.12
ARP165*	50.0	102.5	0.13
ARP166*	60.0	112.5	0.15
ARP167*	70.0	122.5	0.16
ARP168*	80.0	132.5	0.18
ARP169*	90.0	142.5	0.20
ARP160*	100.0	152.5	0.21

19 mm Round Hole  
B Rad = 2.0  
C Rad = 38.0  
D = 18.72

NAAMS CODE	A	L	WT. kg
ARP191*	15.0	66.8	0.10
ARP192*	20.0	71.8	0.11
ARP193*	30.0	81.8	0.14
ARP194*	40.0	91.8	0.16
ARP195*	50.0	101.8	0.18
ARP196*	60.0	111.8	0.20
ARP197*	70.0	121.8	0.22
ARP198*	80.0	131.8	0.24
ARP199*	90.0	141.8	0.26
ARP190*	100.0	151.8	0.28

A  
C

B  
D

# LOCATING PIN FOR 6 x 12 THRU 19 x 25 mm SLOTTED HOLES (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

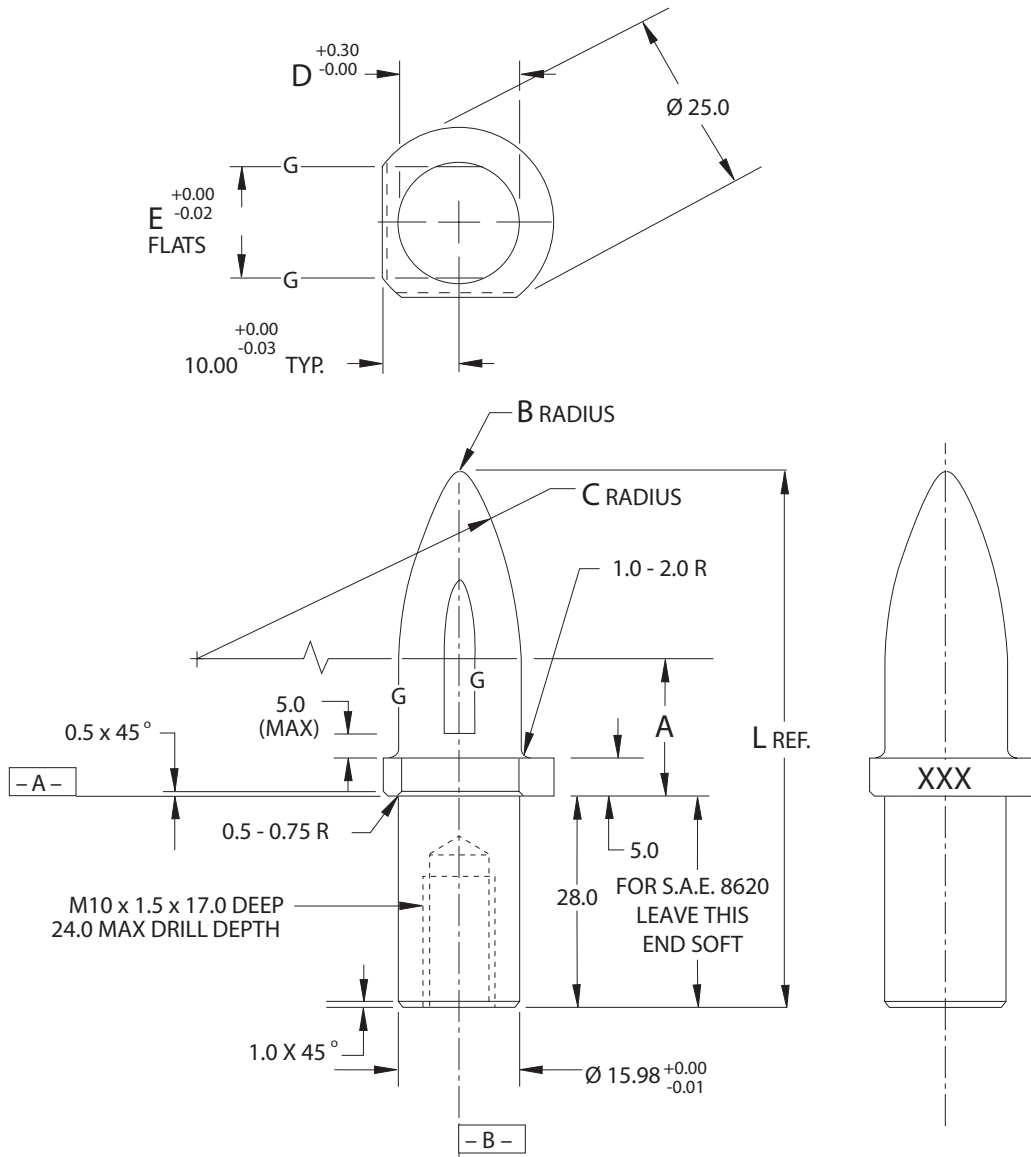
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\*: ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES B, C, D AND E (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc



I  
A  
E  
G  
H

B  
D  
C  
F

TABULATED INFORMATION ON FOLLOWING PAGE

# RESPOT PIN

## FOR 6 x 12 THRU 19 x 25 mm <sup>TM</sup>

### SLOTTED HOLES(FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

\* : ONE OF THE SUFFIXES FROM PAGE I-19 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

6 x 12 Slotted Hole  
 B Rad = 1.0  
 C Rad = 18.0  
 D = 7.09  
 E = 5.72

NAAMS CODE	A	L	WT. kg
ARE061*	15.0	52.9	0.05
ARE062*	20.0	57.9	0.05
ARE063*	30.0	67.9	0.05
ARE064*	40.0	77.9	0.06
ARE065*	50.0	87.9	0.06
ARE066*	60.0	97.9	0.06

8 x 14 Slotted Hole  
 B Rad = 1.0  
 C Rad = 24.0  
 D = 8.81  
 E = 7.72

NAAMS CODE	A	L	WT. kg
ARE081*	15.0	56.0	0.05
ARE082*	20.0	61.0	0.06
ARE083*	30.0	71.0	0.06
ARE084*	40.0	81.0	0.07
ARE085*	50.0	91.0	0.07
ARE086*	60.0	101.0	0.08
ARE087*	70.0	111.0	0.08
ARE088*	80.0	121.0	0.08

10 x 16 Slotted Hole  
 B Rad = 2.0  
 C Rad = 30.0  
 D = 10.63  
 E = 9.72

NAAMS CODE	A	L	WT. kg
ARE101*	15.0	58.2	0.06
ARE102*	20.0	63.2	0.06
ARE103*	30.0	73.2	0.07
ARE104*	40.0	83.2	0.08
ARE105*	50.0	93.2	0.08
ARE106*	60.0	103.2	0.09
ARE107*	70.0	113.2	0.10
ARE108*	80.0	123.2	0.10
ARE109*	90.0	133.2	0.11
ARE100*	100.0	143.2	0.12

12 x 18 Slotted Hole  
 B Rad = 2.0  
 C Rad = 36.0  
 D = 12.50  
 E = 11.72

NAAMS CODE	A	L	WT. kg
ARE121*	15.0	62.2	0.07
ARE122*	20.0	67.2	0.07
ARE123*	30.0	77.2	0.08
ARE124*	40.0	87.2	0.09
ARE125*	50.0	97.2	0.10
ARE126*	60.0	107.2	0.11
ARE127*	70.0	117.2	0.12
ARE128*	80.0	127.2	0.13
ARE129*	90.0	137.2	0.14
ARE120*	100.0	147.2	0.15

13 x 19 Slotted Hole  
 B Rad = 2.0  
 C Rad = 39.0  
 D = 13.46  
 E = 12.72

NAAMS CODE	A	L	WT. kg
ARE131*	15.0	63.1	0.07
ARE132*	20.0	68.1	0.08
ARE133*	30.0	78.1	0.09
ARE134*	40.0	88.1	0.10
ARE135*	50.0	98.1	0.11
ARE136*	60.0	108.1	0.12
ARE137*	70.0	118.1	0.13
ARE138*	80.0	128.1	0.14
ARE139*	90.0	138.1	0.16
ARE130*	100.0	148.1	0.17

16 x 22 Slotted Hole  
 B Rad = 2.0  
 C Rad = 48.0  
 D = 16.35  
 E = 15.72

NAAMS CODE	A	L	WT. kg
ARE161*	15.0	68.0	0.09
ARE162*	20.0	73.0	0.10
ARE163*	30.0	83.0	0.11
ARE164*	40.0	93.0	0.13
ARE165*	50.0	103.0	0.15
ARE166*	60.0	113.0	0.16
ARE167*	70.0	123.0	0.18
ARE168*	80.0	133.0	0.20
ARE169*	90.0	143.0	0.21
ARE160*	100.0	153.0	0.23

19 x 25 Slotted Hole  
 B Rad = 2.0  
 C Rad = 38.0  
 D = 19.27  
 E = 18.72

NAAMS CODE	A	L	WT. kg
ARE191*	15.0	67.2	0.11
ARE192*	20.0	72.2	0.12
ARE193*	30.0	82.2	0.14
ARE194*	40.0	92.2	0.16
ARE195*	50.0	102.2	0.19
ARE196*	60.0	112.2	0.21
ARE197*	70.0	122.2	0.23
ARE198*	80.0	132.2	0.25
ARE199*	90.0	142.2	0.28
ARE190*	100.0	152.2	0.30

A

B

D

C

E

# LOCATING PIN RETAINERS

## APR010, 011, 012, 013

GLOBAL STANDARD COMPONENTS



Assembly

04/22/14

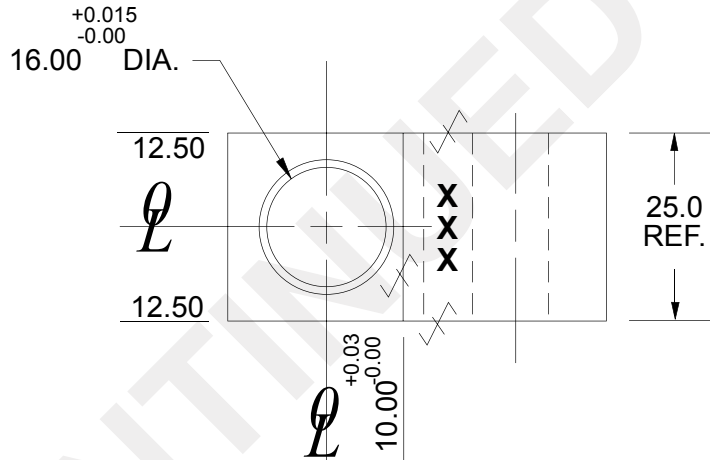
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

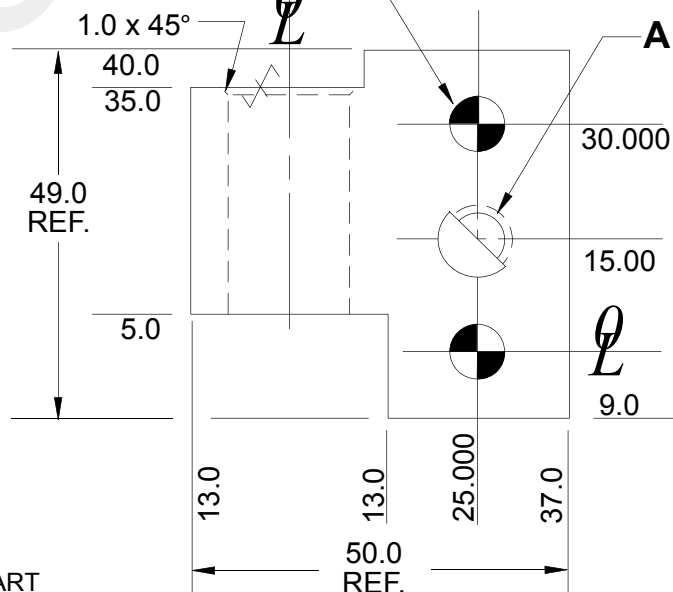
NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
BLACK OXIDE FINISH.

NO BLACK OXIDE FINISH TO  
"SS TYPE" COMPONENTS



P.F. FOR 5/16 DOWEL  
(2) HOLES



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR010	3/8-16 TAP	Steel / ASTM A-36	0.32
APR011	3/8-16 TAP	SS type 303 or 304	0.32
APR012	13/32	Steel / ASTM A-36	0.32
APR013	13/32	SS type 303 or 304	0.32

A

H

B

G

F

C

D

E

# LOCATING PIN RETAINERS APR020, 021

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



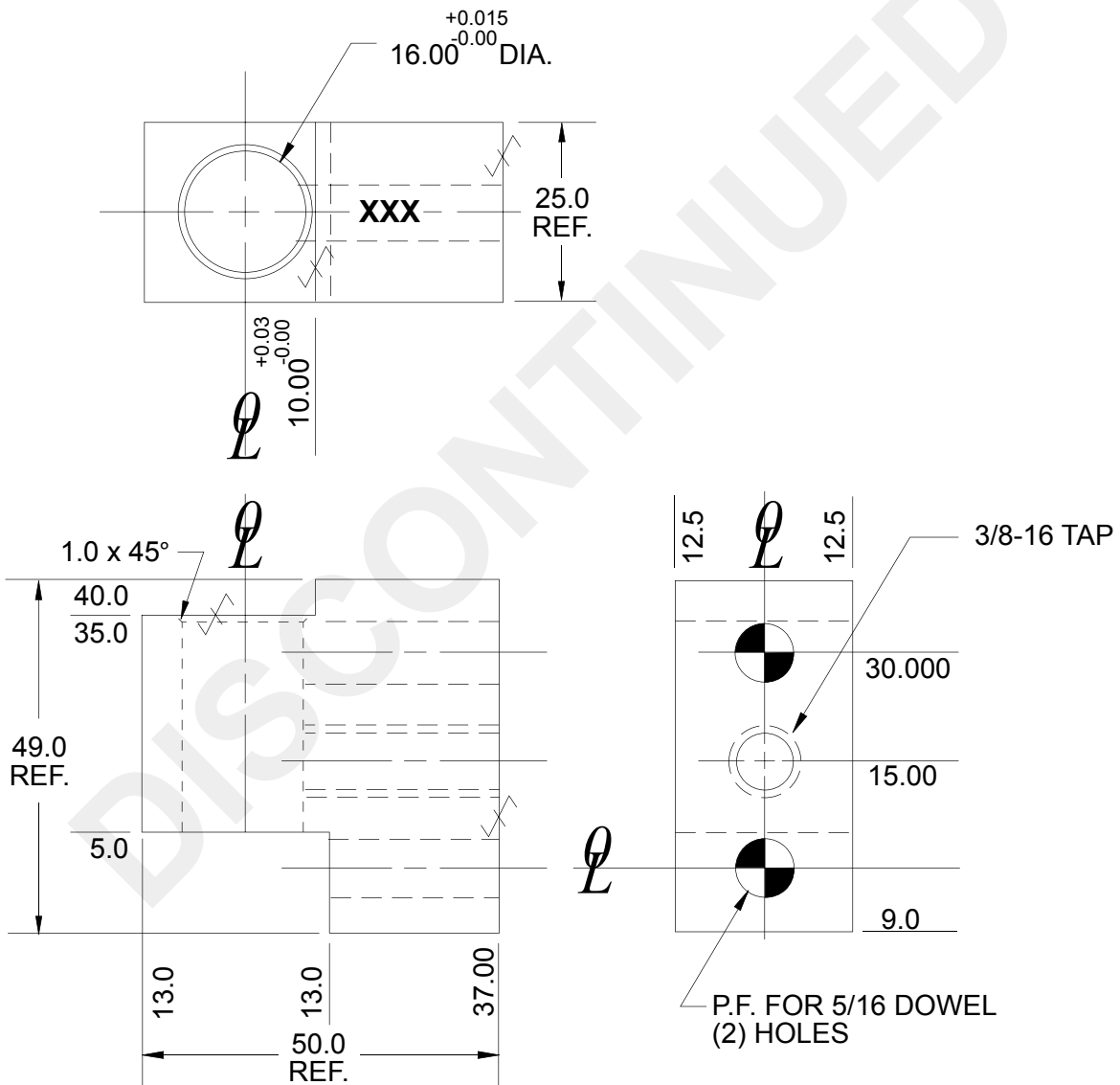
Assembly

04/22/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR020	Steel / ASTM A-36	0.32
APR021	SS type 303 or 304	0.32

A

G

F

E

B


C

D



# LOCATING PIN RETAINERS APR030, 031, 032, 033

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

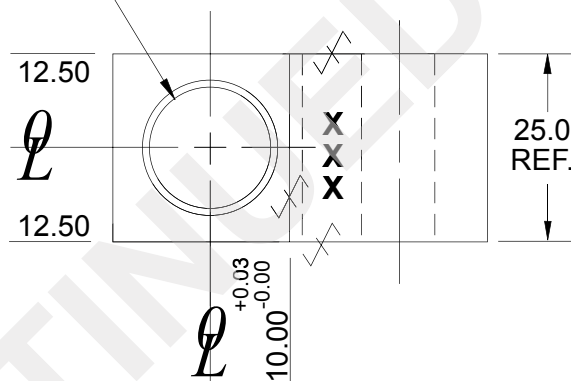
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.

BLACK OXIDE FINISH.

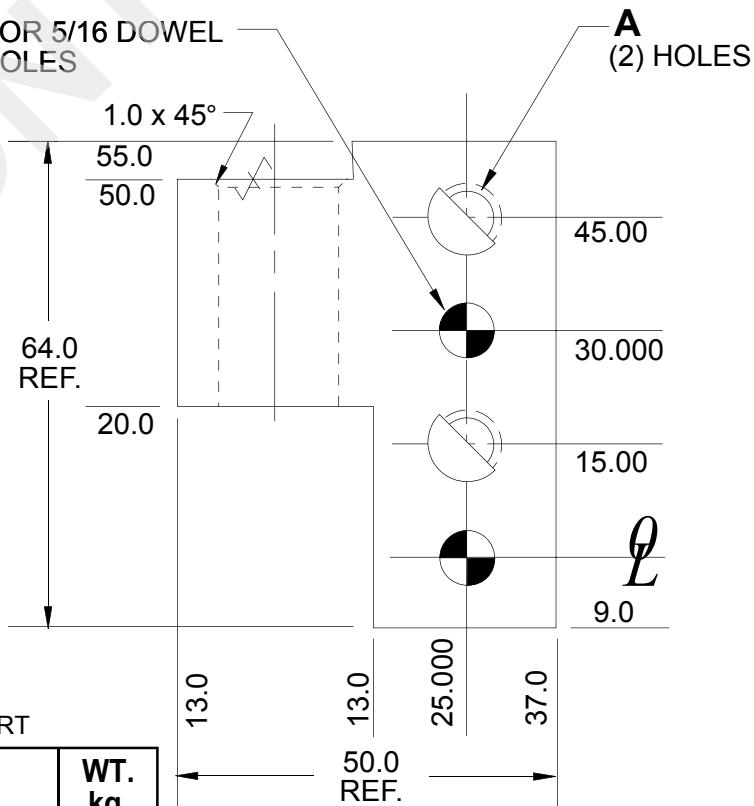
NO BLACK OXIDE FINISH

TO "SS TYPE" COMPONENTS.

$+0.015$   
 $-0.00$   
16.00 DIA.



P.F. FOR 5/16 DOWEL  
(2) HOLES




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR030	3/8-16 TAP	Steel / ASTM A-36	0.45
APR031	3/8-16 TAP	SS type 303 or 304	0.45
APR032	13/32	Steel / ASTM A-36	0.45
APR033	13/32	SS type 303 or 304	0.45

A  
G  
F  
E  
B  
C  
D

# LOCATING PIN RETAINERS APR040, 041

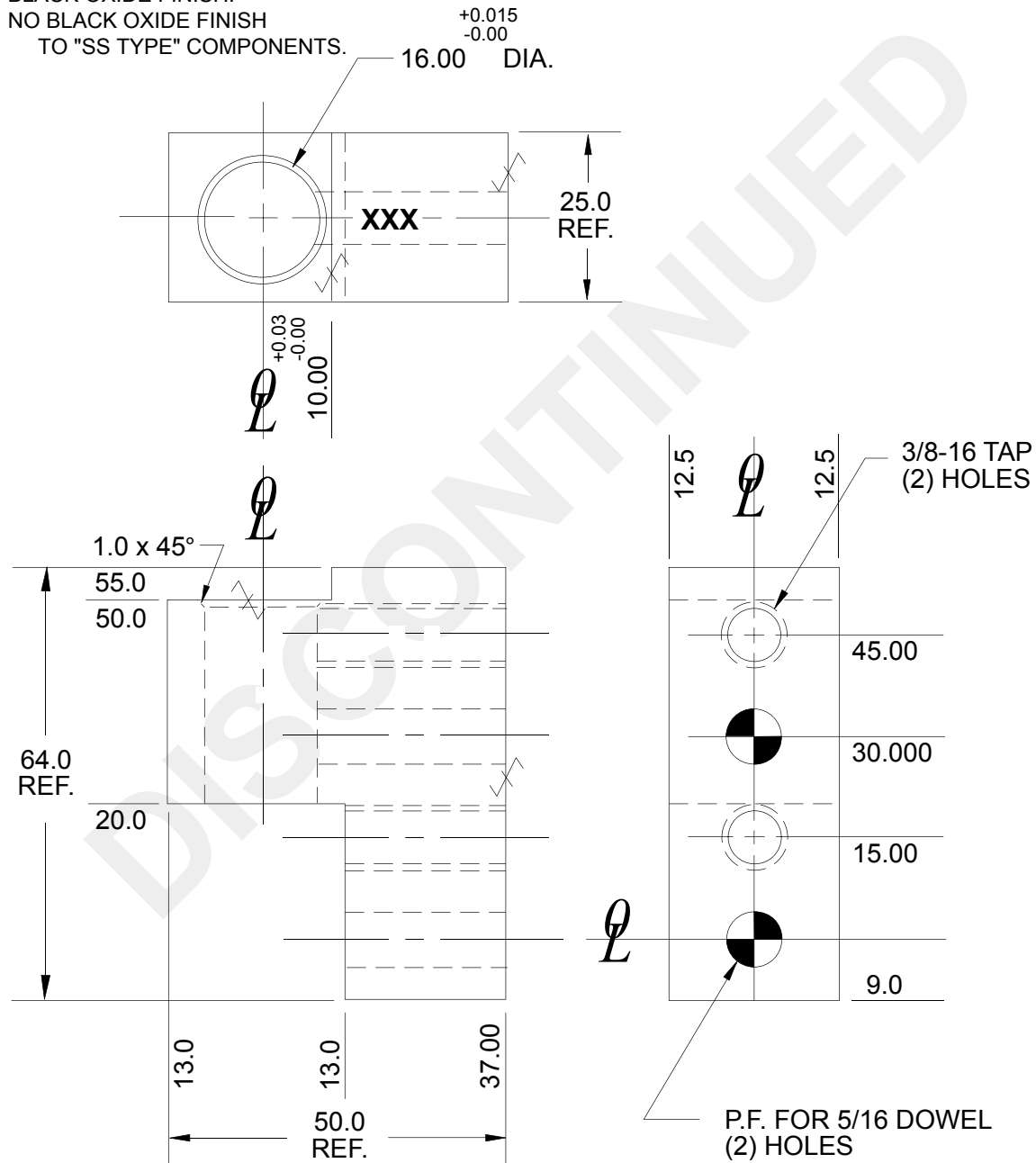
Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTE: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.

NO BLACK OXIDE FINISH  
 TO "SS TYPE" COMPONENTS.



NAAMS CODE	MATERIAL	WT. kg
APR040	Steel / ASTM A-36	0.45
APR041	SS type 303 or 304	0.45

SEE PAGE B-1.1 FOR  
 GLOBAL MATERIALS CHART

A

G

F

E

B

C

D

# LOCATING PIN RETAINERS APR050, 051

GLOBAL STANDARD COMPONENTS

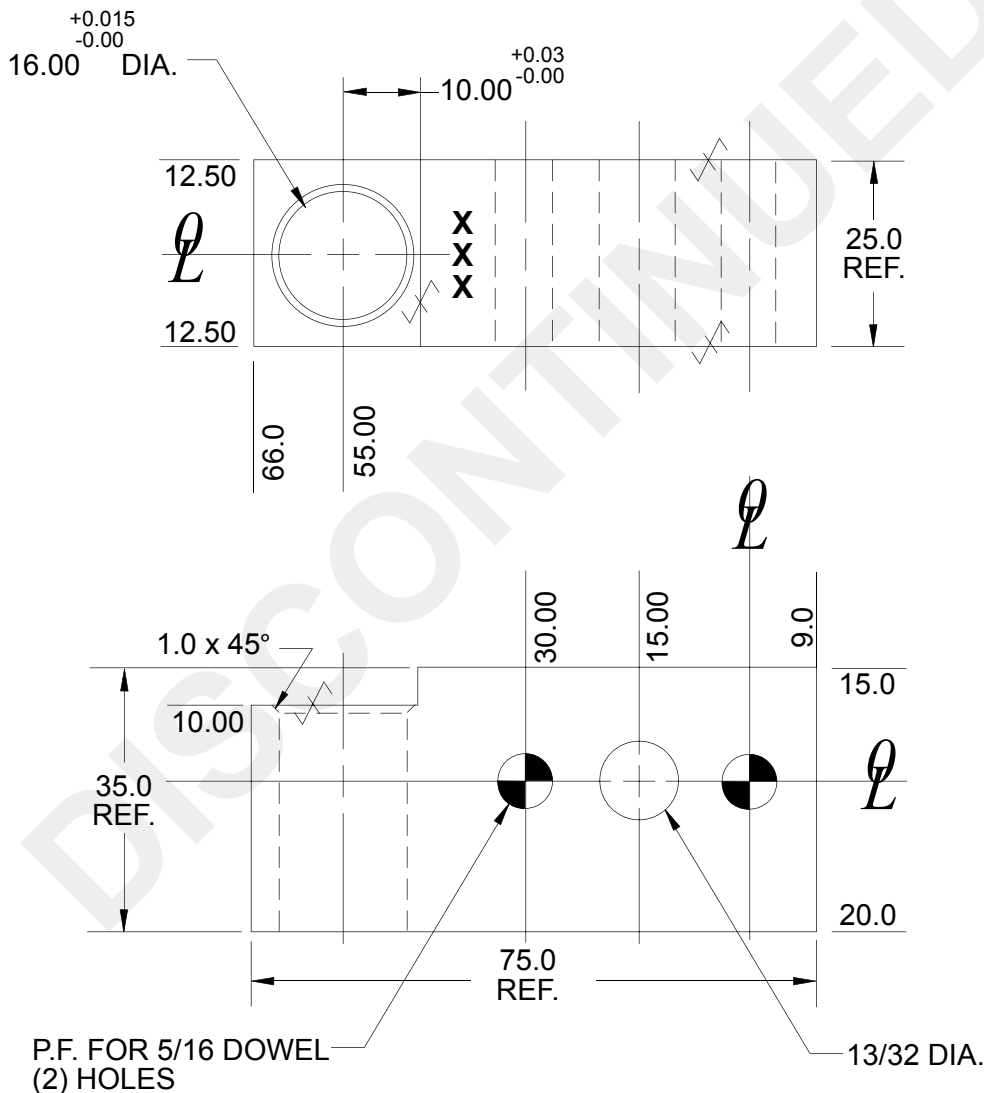


Assembly

04/22/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$   
BETWEEN DOWELS  $\pm 0.015$

✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.  
NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR050	Steel / ASTM A-36	0.41
APR051	SS type 303 or 304	0.41

A  
H

G

B

F


C

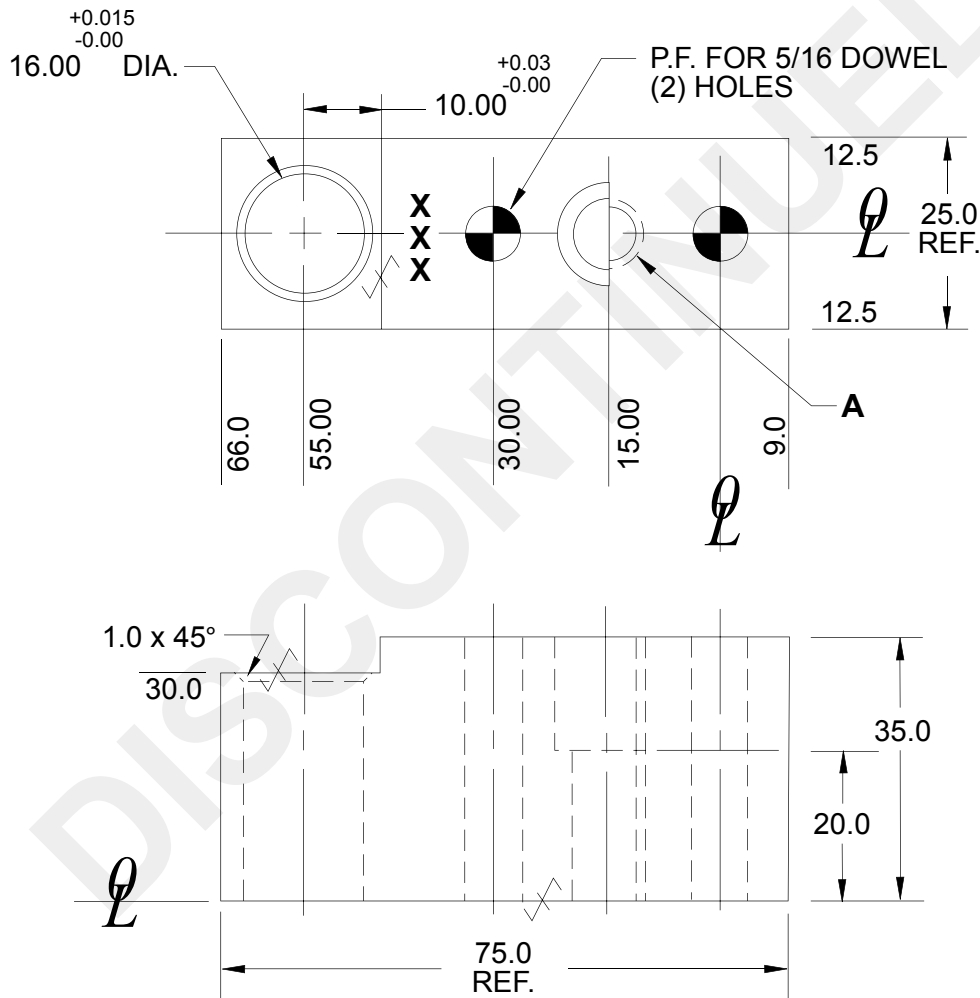
D

E

# LOCATING PIN RETAINERS APR060, 061, 062, 063

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$   
BETWEEN DOWELS  $\pm 0.015$

 SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.  
NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR060	3/8-16 TAP	Steel / ASTM A-36	0.41
APR061	3/8-16 TAP	SS type 303 or 304	0.41
APR062	Drill & C/Bore for 3/8" SHCS	Steel / ASTM A-36	0.41
APR063	Drill & C/Bore for 3/8" SHCS	SS type 303 or 304	0.41

A

H

G

B

F

C

D

E

# LOCATING PIN RETAINERS APR070, 071

GLOBAL STANDARD COMPONENTS



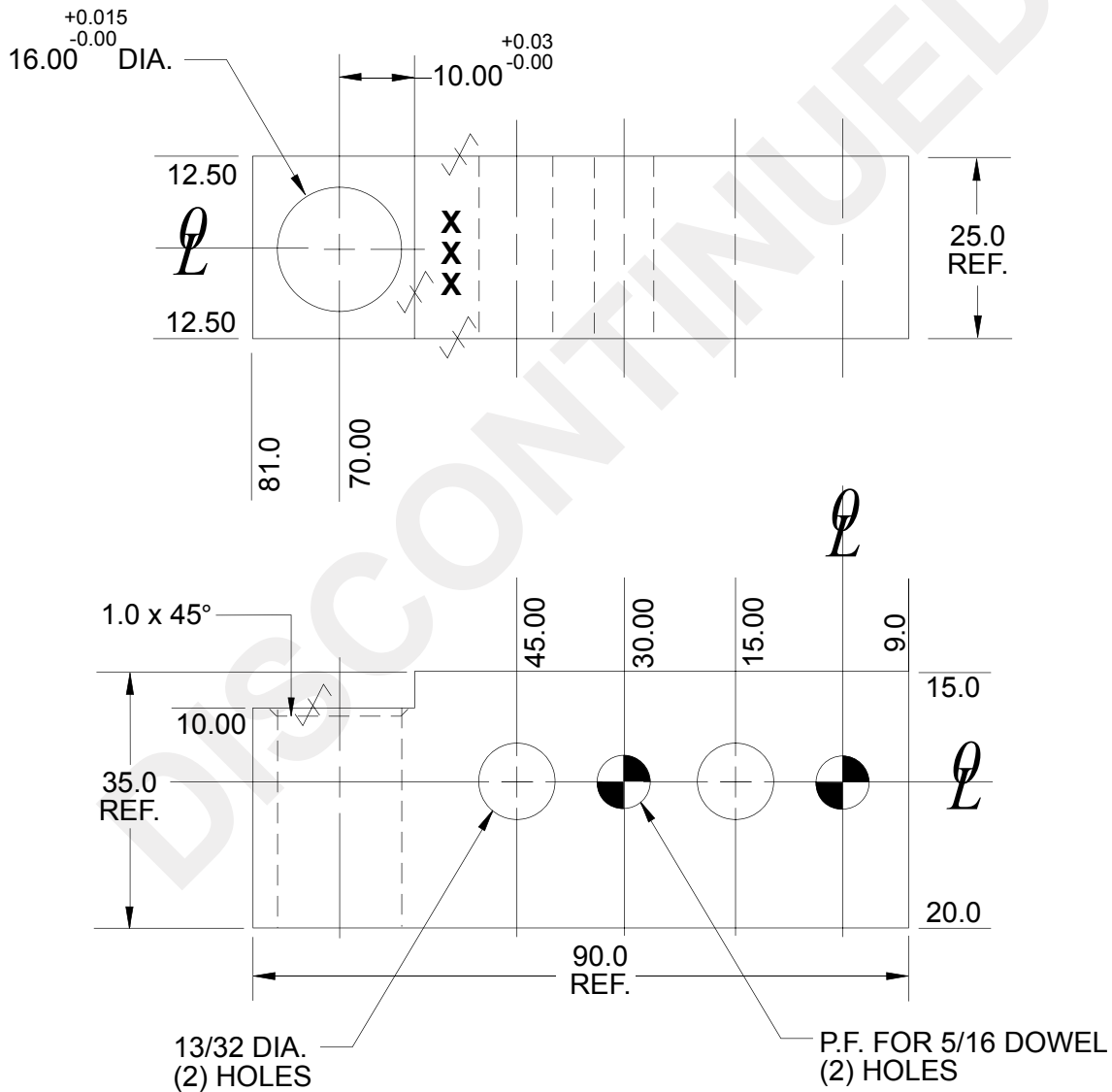
Assembly

04/22/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$   
BETWEEN DOWELS  $\pm 0.015$

SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO  $\phi$  WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.  
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



A  
H

G

B

F  
C  
D  
E

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR070	Steel / ASTM A-36	0.45
APR071	SS type 303 or 304	0.45

# LOCATING PIN 6mm THRU 19mm DIAMETER

GLOBAL STANDARD COMPONENTS



Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

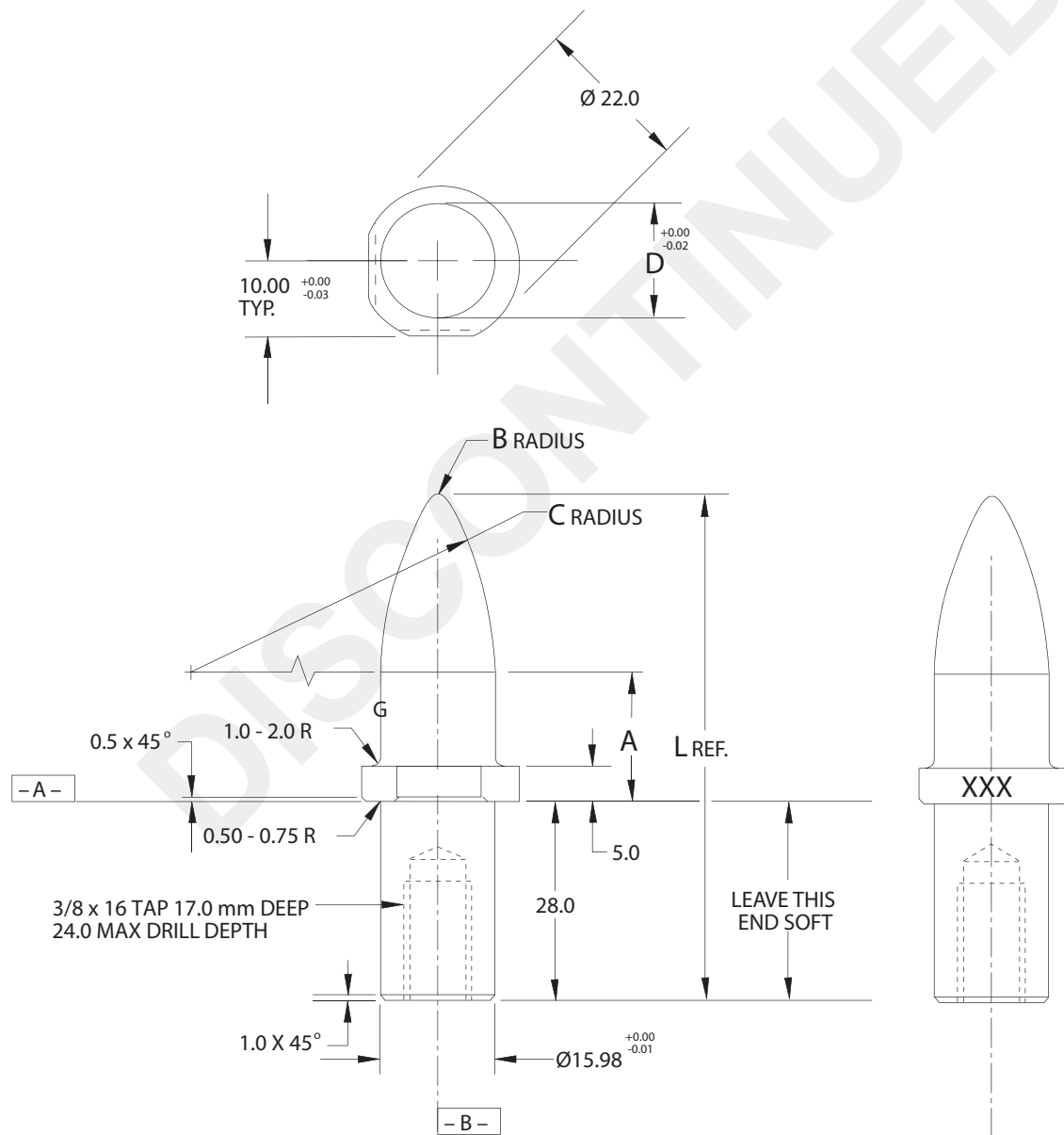
ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

MATERIAL: S.A.E. 8620 STEEL

HARDNESS: 58 - 62 Rc TO A DEPTH OF 0.5 - 0.7 mm  
AFTER GRINDING

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.

SEE PAGE B-1.1 FOR  
GLOBAL MATERIALS CHART



A  
F  
H  
I  
D  
D  
B  
E  
C  
G

TABULATED INFORMATION ON FOLLOWING PAGE

# LOCATING PIN

## 6 mm THRU 19 mm DIAMETER

A

C

B

6 mm Round Hole  
 B Rad = 1.0  
 C Rad = 18.0  
 D = 5.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS061	APS061T	15.0	51.8	0.05
APS062	APS062T	20.0	56.8	0.05
APS063	APS063T	30.0	66.8	0.05
APS064	APS064T	40.0	76.8	0.05
APS065	APS065T	50.0	86.8	0.06
APS066	APS066T	60.0	96.8	0.06

8 mm Round Hole  
 B Rad = 1.0  
 C Rad = 24.0  
 D = 7.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS081	APS081T	15.0	55.1	0.05
APS082	APS082T	20.0	60.1	0.05
APS083	APS083T	30.0	70.1	0.06
APS084	APS084T	40.0	80.1	0.06
APS085	APS085T	50.0	90.1	0.06
APS086	APS086T	60.0	100.1	0.07
APS087	APS087T	70.0	110.1	0.07
APS088	APS088T	80.0	120.1	0.08

10 mm Round Hole  
 B Rad = 2.0  
 C Rad = 30.0  
 D = 9.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS101	APS101T	15.0	57.4	0.06
APS102	APS102T	20.0	62.4	0.06
APS103	APS103T	30.0	72.4	0.07
APS104	APS104T	40.0	82.4	0.07
APS105	APS105T	50.0	92.4	0.08
APS106	APS106T	60.0	102.4	0.08
APS107	APS107T	70.0	112.4	0.09
APS108	APS108T	80.0	122.4	0.10
APS109	APS109T	90.0	132.4	0.10
APS100	APS100T	100.0	142.4	0.11

13 mm Round Hole  
 B Rad = 2.0  
 C Rad = 39.0  
 D = 12.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS131	APS131T	15.0	62.4	0.07
APS132	APS132T	20.0	67.4	0.07
APS133	APS133T	30.0	77.4	0.08
APS134	APS134T	40.0	87.4	0.09
APS135	APS135T	50.0	97.4	0.10
APS136	APS136T	60.0	107.4	0.11
APS137	APS137T	70.0	117.4	0.12
APS138	APS138T	80.0	127.4	0.13
APS139	APS139T	90.0	137.4	0.14
APS130	APS130T	100.0	147.4	0.15

16 mm Round Hole  
 B Rad = 2.0  
 C Rad = 48.0  
 D = 15.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS161	APS161T	15.0	67.5	0.09
APS162	APS162T	20.0	72.5	0.09
APS163	APS163T	30.0	82.5	0.11
APS164	APS164T	40.0	92.5	0.13
APS165	APS165T	50.0	102.5	0.14
APS166	APS166T	60.0	112.5	0.16
APS167	APS167T	70.0	122.5	0.17
APS168	APS168T	80.0	132.5	0.19
APS169	APS169T	90.0	142.5	0.20
APS160	APS160T	100.0	152.5	0.22

19 mm Round Hole  
 B Rad = 2.0  
 C Rad = 38.0  
 D = 18.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APS191	APS191T	15.0	66.8	0.10
APS192	APS192T	20.0	71.8	0.12
APS193	APS193T	30.0	81.8	0.14
APS194	APS194T	40.0	91.8	0.16
APS195	APS195T	50.0	101.8	0.18
APS196	APS196T	60.0	111.8	0.20
APS197	APS197T	70.0	121.8	0.22
APS198	APS198T	80.0	131.8	0.24
APS199	APS199T	90.0	141.8	0.27
APS190	APS190T	100.0	151.8	0.29

# LOCATING PIN 25mm DIAMETER

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



Assembly

02/12/14

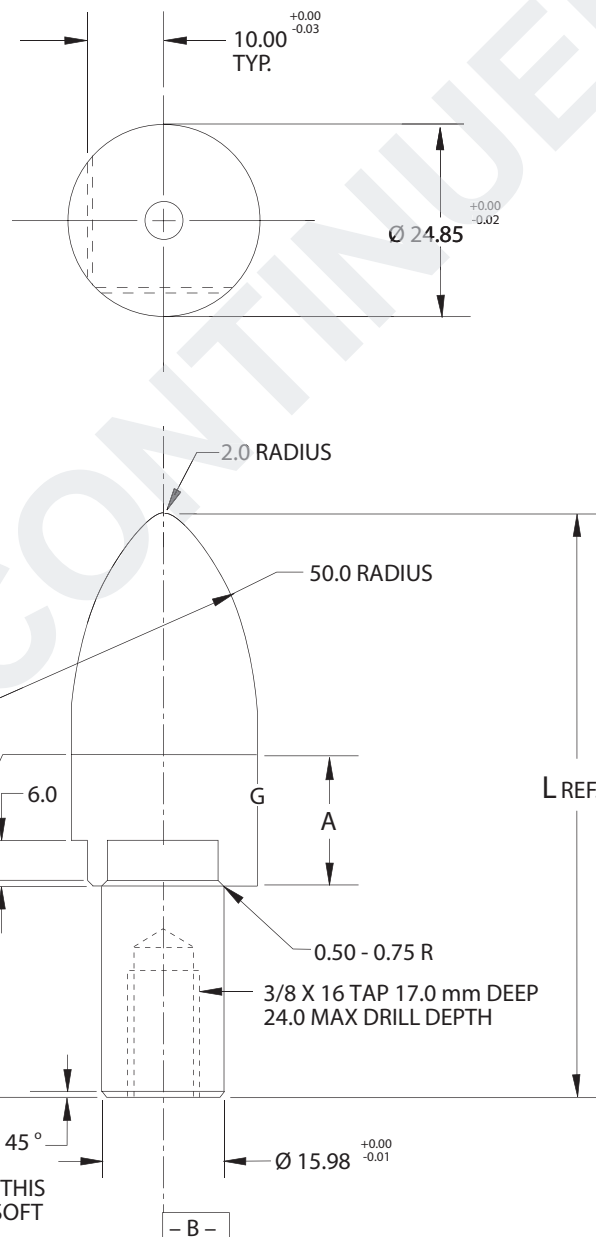
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

MATERIAL: S.A.E. 8620 STEEL  
HARDNESS: 58 - 62 Rc TO A DEPTH OF 0.5 - 0.7 mm  
AFTER GRINDING

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.

SEE PAGE B-1.1 FOR  
GLOBAL MATERIALS CHA0RT



NAAMS CODE	A	L	WT kg
APS251	15.0	74.8	0.15
APS252	20.0	79.8	0.17
APS253	30.0	89.8	0.21
APS254	40.0	99.8	0.24
APS255	50.0	109.8	0.28
APS256	60.0	119.8	0.32
APS257	70.0	129.8	0.36
APS258	80.0	139.8	0.39
APS259	90.0	149.8	0.43
APS250	100.0	159.8	0.47

A

F

I

J

D

D

E

B

C

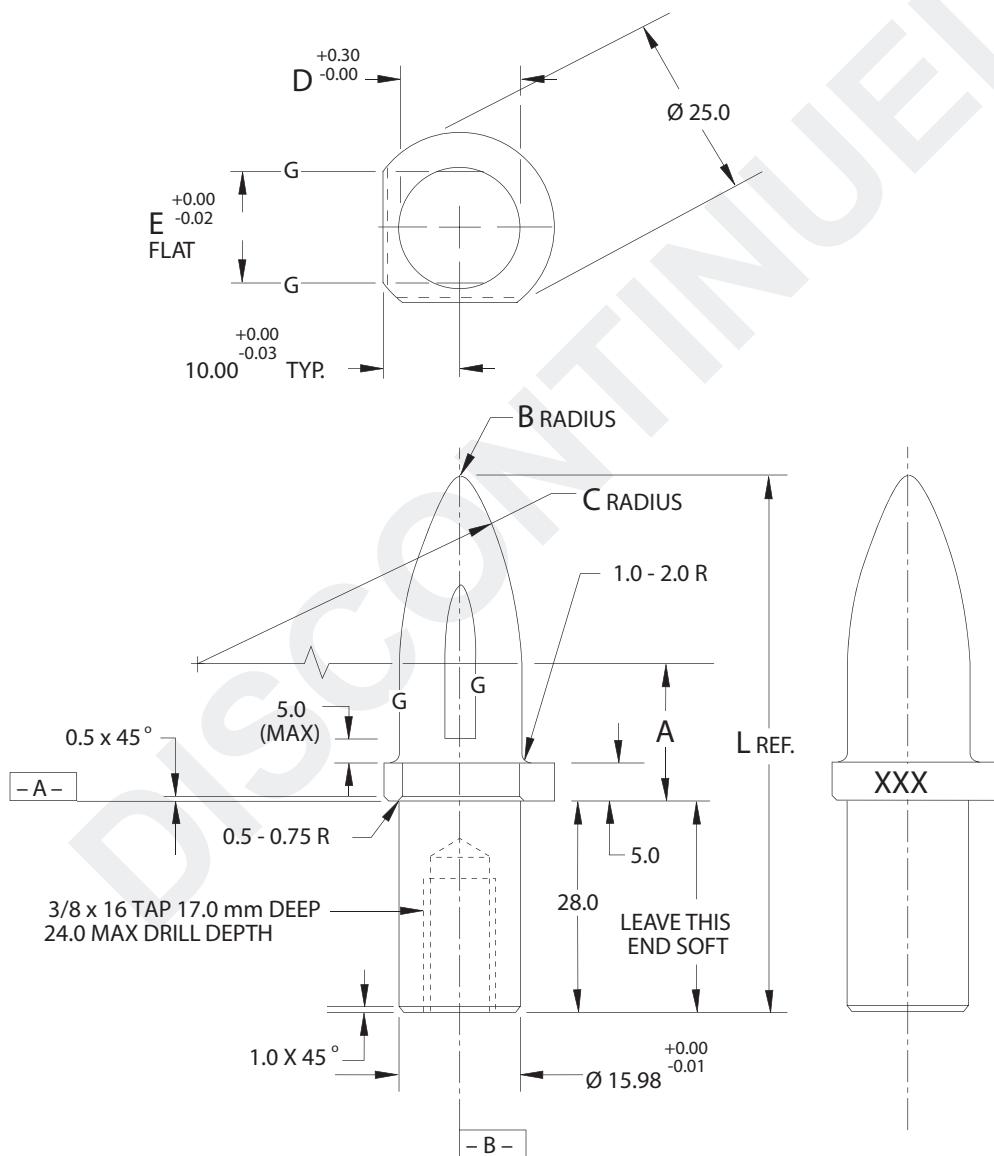
G

H



# LOCATING PIN FOR 6 x 12 THRU 19 x 25 mm SLOTTED HOLES

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$   
ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.  
MATERIAL: S.A.E. 8620 STEEL  
HARDNESS: 58 - 62 Rc TO A DEPTH OF 0.5 - 0.7 mm  
AFTER GRINDING  
NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR  
GLOBAL MATERIALS CHART



A  
E  
G  
  
H  
  
D  
B  
C  
F

TABULATED INFORMATION ON FOLLOWING PAGE

# LOCATING PIN FOR 6 x 12 THRU 19 x 25 mm SLOTTED HOLES

GLOBAL STANDARD COMPONENTS



Assembly

04/22/14

6 x 12 Slotted Hole  
B Rad = 1.0  
C Rad = 18.0  
D = 7.09  
E = 5.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE061	APE061T	15.0	52.9	0.05
APE062	APE062T	20.0	57.9	0.05
APE063	APE063T	30.0	67.9	0.05
APE064	APE064T	40.0	77.9	0.06
APE065	APE065T	50.0	87.9	0.06
APE066	APE066T	60.0	97.9	0.06

8 x 14 Slotted Hole  
B Rad = 1.0  
C Rad = 24.0  
D = 8.81  
E = 7.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE081	APE081T	15.0	56.0	0.05
APE082	APE082T	20.0	61.0	0.06
APE083	APE083T	30.0	71.0	0.06
APE084	APE084T	40.0	81.0	0.07
APE085	APE085T	50.0	91.0	0.07
APE086	APE086T	60.0	101.0	0.08
APE087	APE087T	70.0	111.0	0.08
APE088	APE088T	80.0	121.0	0.08

10 x 16 Slotted Hole  
B Rad = 2.0  
C Rad = 30.0  
D = 10.63  
E = 9.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE101	APE101T	15.0	58.2	0.06
APE102	APE102T	20.0	63.2	0.06
APE103	APE103T	30.0	73.2	0.07
APE104	APE104T	40.0	83.2	0.08
APE105	APE105T	50.0	93.2	0.08
APE106	APE106T	60.0	103.2	0.09
APE107	APE107T	70.0	113.2	0.10
APE108	APE108T	80.0	123.2	0.10
APE109	APE109T	90.0	133.2	0.11
APE100	APE100T	100.0	143.2	0.12

A  
B  
D

C

13 x 19 Slotted Hole  
B Rad = 2.0  
C Rad = 39.0  
D = 13.46  
E = 12.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE131	APE131T	15.0	63.1	0.07
APE132	APE132T	20.0	68.1	0.08
APE133	APE133T	30.0	78.1	0.09
APE134	APE134T	40.0	88.1	0.10
APE135	APE135T	50.0	98.1	0.11
APE136	APE136T	60.0	108.1	0.12
APE137	APE137T	70.0	118.1	0.13
APE138	APE138T	80.0	128.1	0.14
APE139	APE139T	90.0	138.1	0.16
APE130	APE130T	100.0	148.1	0.17

16 x 22 Slotted Hole  
B Rad = 2.0  
C Rad = 48.0  
D = 16.35  
E = 15.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE161	APE161T	15.0	68.0	0.09
APE162	APE162T	20.0	73.0	0.10
APE163	APE163T	30.0	83.0	0.11
APE164	APE164T	40.0	93.0	0.13
APE165	APE165T	50.0	103.0	0.15
APE166	APE166T	60.0	113.0	0.16
APE167	APE167T	70.0	123.0	0.18
APE168	APE168T	80.0	133.0	0.20
APE169	APE169T	90.0	143.0	0.21
APE160	APE160T	100.0	153.0	0.23

19 x 25 Slotted Hole  
B Rad = 2.0  
C Rad = 38.0  
D = 19.27  
E = 18.85

NAAMS CODE	TiN CODE	A	L	WT. kg
APE191	APE191T	15.0	67.2	0.11
APE192	APE192T	20.0	72.2	0.12
APE193	APE193T	30.0	82.2	0.14
APE194	APE194T	40.0	92.2	0.16
APE195	APE195T	50.0	102.2	0.19
APE196	APE196T	60.0	112.2	0.21
APE197	APE197T	70.0	122.2	0.23
APE198	APE198T	80.0	132.2	0.25
APE199	APE199T	90.0	142.2	0.28
APE190	APE190T	100.0	152.2	0.30

# LOCATING PIN FOR 25 x 31 mm SLOTTED HOLES

GLOBAL STANDARD COMPONENTS



Assembly

02/12/14

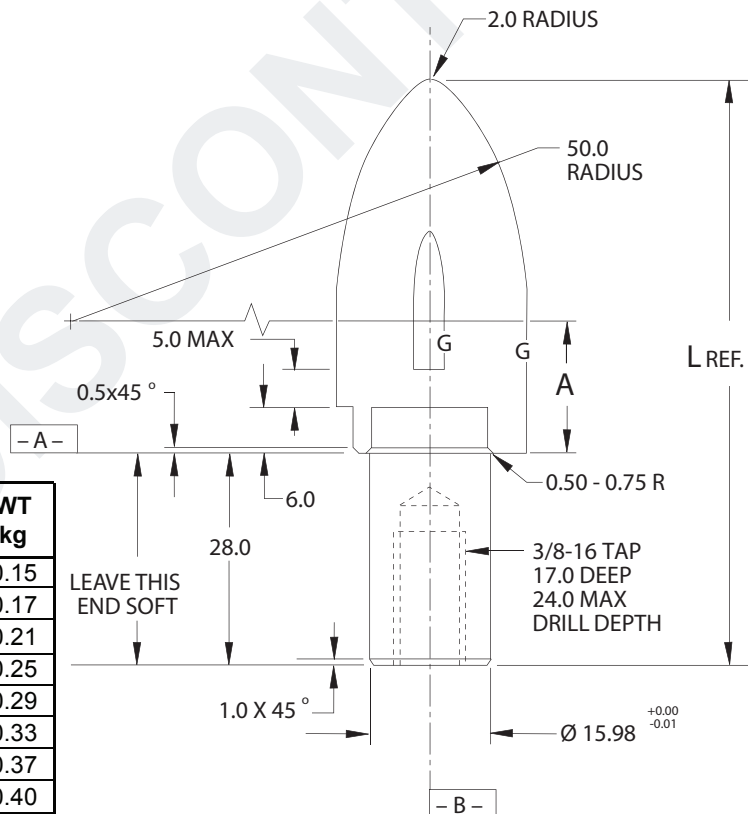
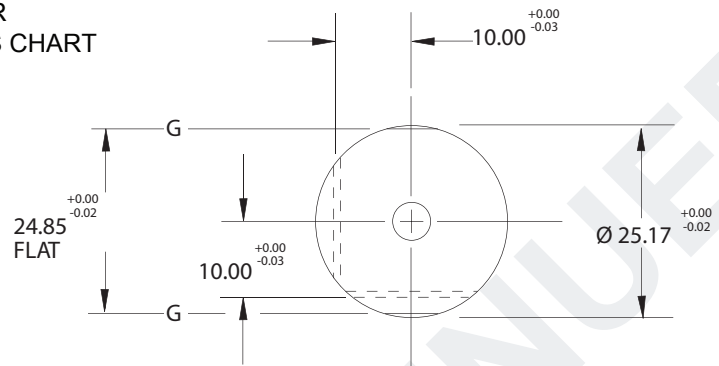
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

MATERIAL: S.A.E. 8620 STEEL  
HARDNESS: 58 - 62 Rc TO A DEPTH OF 0.5 - 0.7 mm  
AFTER GRINDING

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN XXX.

SEE PAGE B-1.1 FOR  
GLOBAL MATERIALS CHART



NAAMS CODE	A	L	WT kg
APE251	15.0	75.1	0.15
APE252	20.0	80.1	0.17
APE253	30.0	90.1	0.21
APE254	40.0	100.1	0.25
APE255	50.0	110.1	0.29
APE256	60.0	120.1	0.33
APE257	70.0	130.1	0.37
APE258	80.0	140.1	0.40
APE259	90.0	150.1	0.44
APE250	100.0	160.1	0.48

LEAVE THIS END SOFT

A

E

J

K

I

B

D

C

F

G

H

# RESPOT PIN 25mm DIAMETER (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

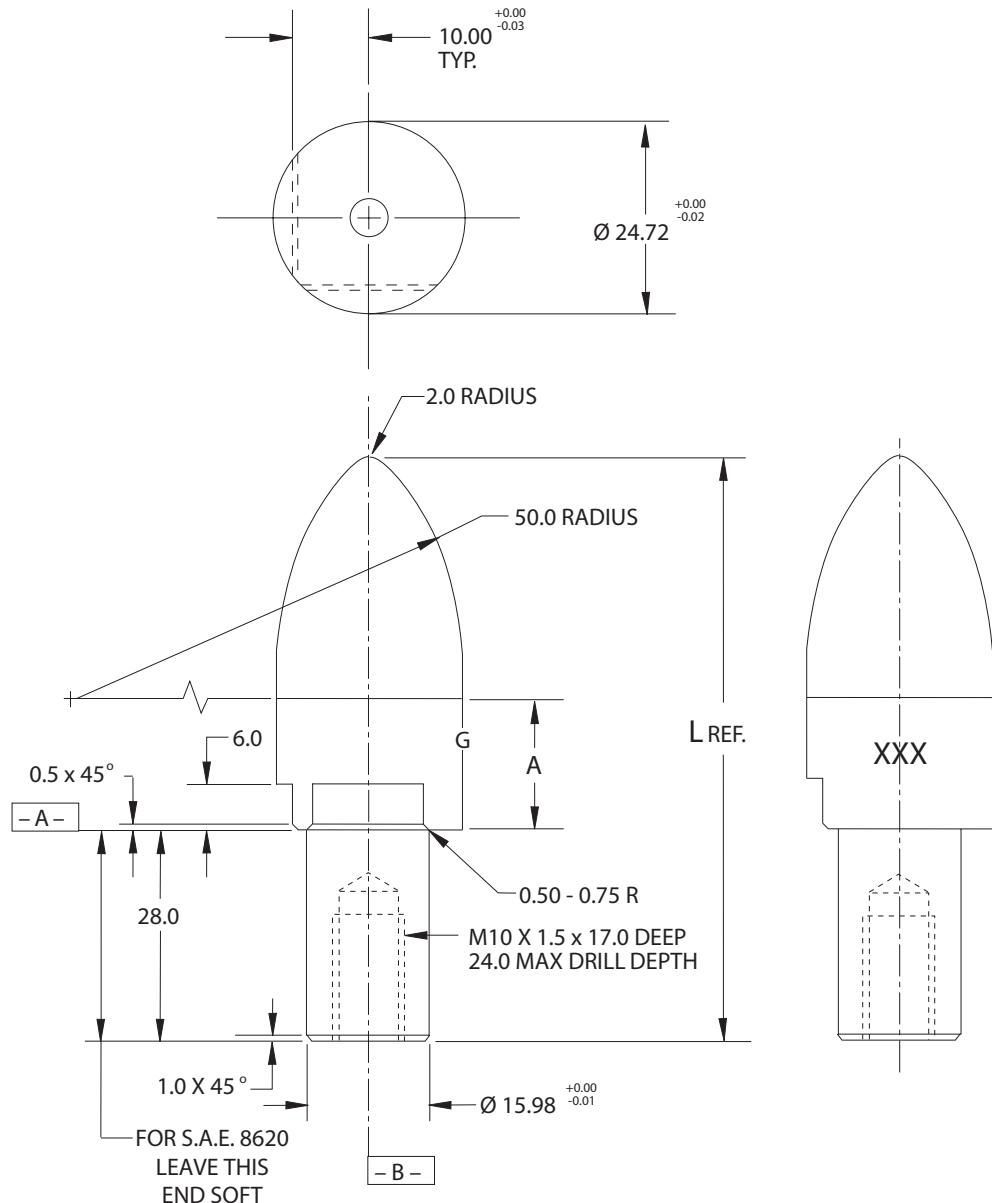
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\* : ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
M	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
MT	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES ABOVE THE -A- DATUM (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc
MA	A2, 48-52 Rc



NAAMS CODE	A	L	WT kg
ARP251*	15.0	74.8	0.15
ARP252*	20.0	79.8	0.17
ARP253*	30.0	89.8	0.21
ARP254*	40.0	99.8	0.25
ARP255*	50.0	109.8	0.29
ARP256*	60.0	119.8	0.33
ARP257*	70.0	129.8	0.37
ARP258*	80.0	139.8	0.40
ARP259*	90.0	149.8	0.44
ARP250*	100.0	159.8	0.48

I  
L  
C  
F  
K  
G  
H  
B  
A  
J  
D  
E

# LOCATING PIN 8mm THRU 20mm DIAMETER (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

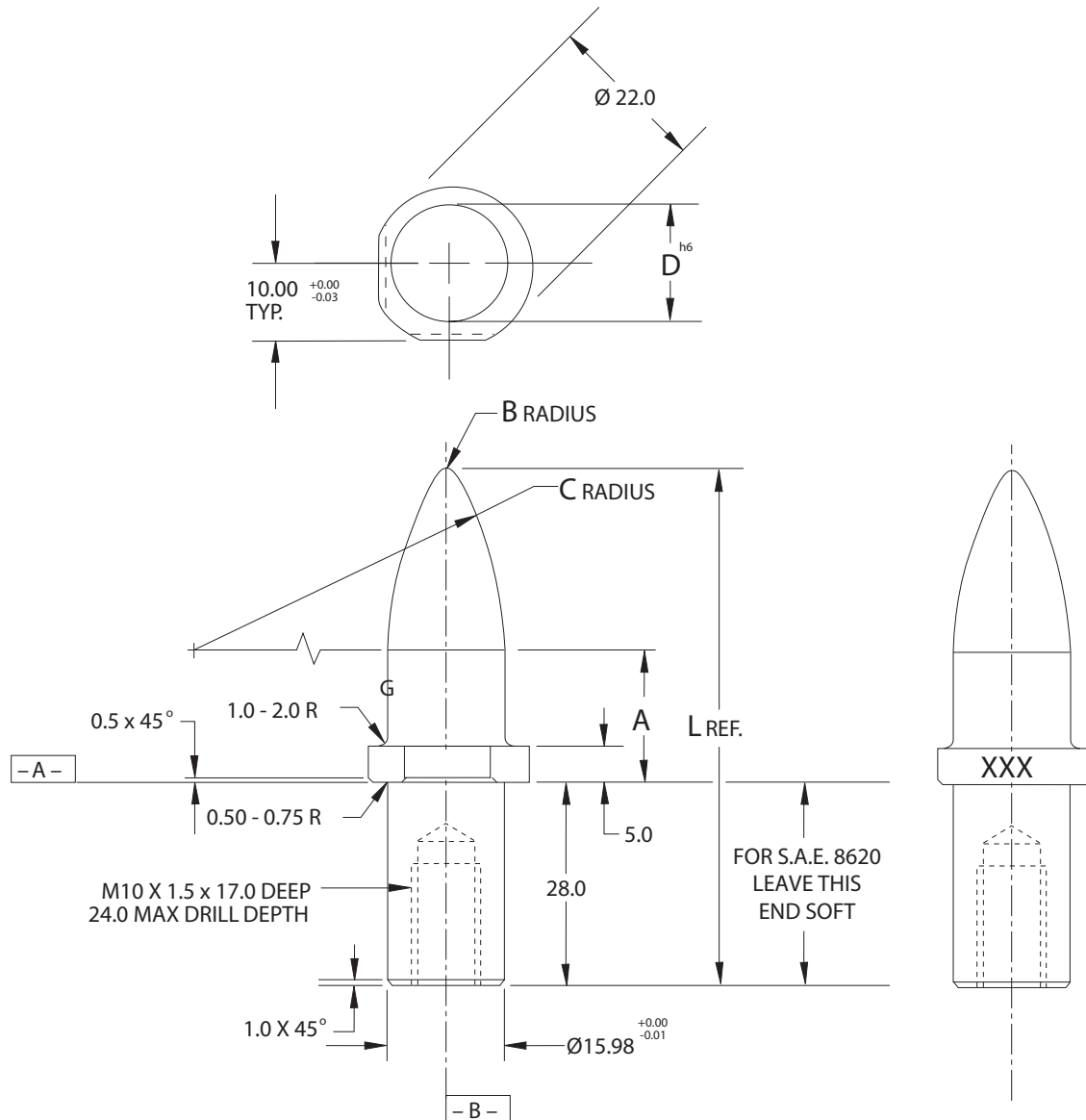
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.  
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\*: ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
(NONE)	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
T	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES B, C, AND D (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc
MA	A2, 48-52 Rc



E  
A  
C  
D

B

TABULATED INFORMATION ON FOLLOWING PAGE

# LOCATING PIN

## 8 mm THRU 20 mm DIAMETER <sup>TM</sup> (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

\*: ONE OF THE SUFFIXES FROM PAGE I-35 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

8 mm Round Hole  
B Rad = 1.0  
C Rad = 24.0  
D = 8<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ081*	15.0	55.4	0.05
APQ082*	20.0	60.4	0.05
APQ083*	30.0	70.4	0.06
APQ084*	40.0	80.4	0.06
APQ085*	50.0	90.4	0.07
APQ086*	60.0	100.4	0.07

10 mm Round Hole  
B Rad = 1.0  
C Rad = 30.0  
D = 10<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ101*	15.0	58.7	0.06
APQ102*	20.0	63.7	0.06
APQ103*	30.0	73.7	0.07
APQ104*	40.0	83.7	0.07
APQ105*	50.0	93.7	0.08
APQ106*	60.0	103.7	0.09
APQ107*	70.0	113.7	0.09
APQ108*	80.0	123.7	0.10

11 mm Round Hole  
B Rad = 2.0  
C Rad = 33.0  
D = 11<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ111*	15.0	59.31	0.07
APQ112*	20.0	64.31	0.07
APQ113*	30.0	74.31	0.08
APQ114*	40.0	84.31	0.08
APQ115*	50.0	94.31	0.09
APQ116*	60.0	104.31	0.10
APQ117*	70.0	114.31	0.10
APQ118*	80.0	124.31	0.11

13 mm Round Hole  
B Rad = 2.0  
C Rad = 3.0  
D = 13<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ131*	15.0	60.2	0.07
APQ132*	20.0	65.2	0.07
APQ133*	30.0	75.2	0.08
APQ134*	40.0	85.2	0.09
APQ135*	50.0	95.2	0.10
APQ136*	60.0	105.2	0.12
APQ137*	70.0	115.2	0.13
APQ138*	80.0	125.2	0.14

15 mm Round Hole  
B Rad = 2.0  
C Rad = 45.0  
D = 15<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ151*	15.0	66.04	0.08
APQ152*	20.0	71.04	0.08
APQ153*	30.0	81.04	0.10
APQ154*	40.0	91.04	0.11
APQ155*	50.0	101.04	0.13
APQ156*	60.0	111.04	0.14
APQ157*	70.0	121.04	0.16
APQ158*	80.0	131.04	0.18

16 mm Round Hole  
B Rad = 2.0  
C Rad = 78.0  
D = 16<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ161*	15.0	67.7	0.08
APQ162*	20.0	72.7	0.09
APQ163*	30.0	82.7	0.11
APQ164*	40.0	92.7	0.12
APQ165*	50.0	102.7	0.14
APQ166*	60.0	112.7	0.15
APQ167*	70.0	122.7	0.17
APQ168*	80.0	132.7	0.19

18 mm Round Hole  
B Rad = 2.0  
C Rad = 38.0  
D = 18<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ181*	15.0	66.3	0.10
APQ182*	20.0	71.3	0.11
APQ183*	30.0	81.3	0.13
APQ184*	40.0	91.3	0.15
APQ185*	50.0	101.3	0.17
APQ186*	60.0	111.3	0.19
APQ187*	70.0	121.3	0.21
APQ188*	80.0	131.3	0.23

20 mm Round Hole  
B Rad = 2.0  
C Rad = 38.0  
D = 20<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ201*	15.0	67.6	0.11
APQ202*	20.0	72.6	0.13
APQ203*	30.0	82.6	0.15
APQ204*	40.0	92.6	0.17
APQ205*	50.0	102.6	0.20
APQ206*	60.0	112.6	0.22
APQ207*	70.0	122.6	0.25
APQ208*	80.0	132.6	0.27

A  
B  
C  
D

# LOCATING PIN

## 25mm THRU 40mm DIAMETER

### (FULL METRIC)

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



Assembly

03/19/21

A  
F  
B  
D  
E

C

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.015$

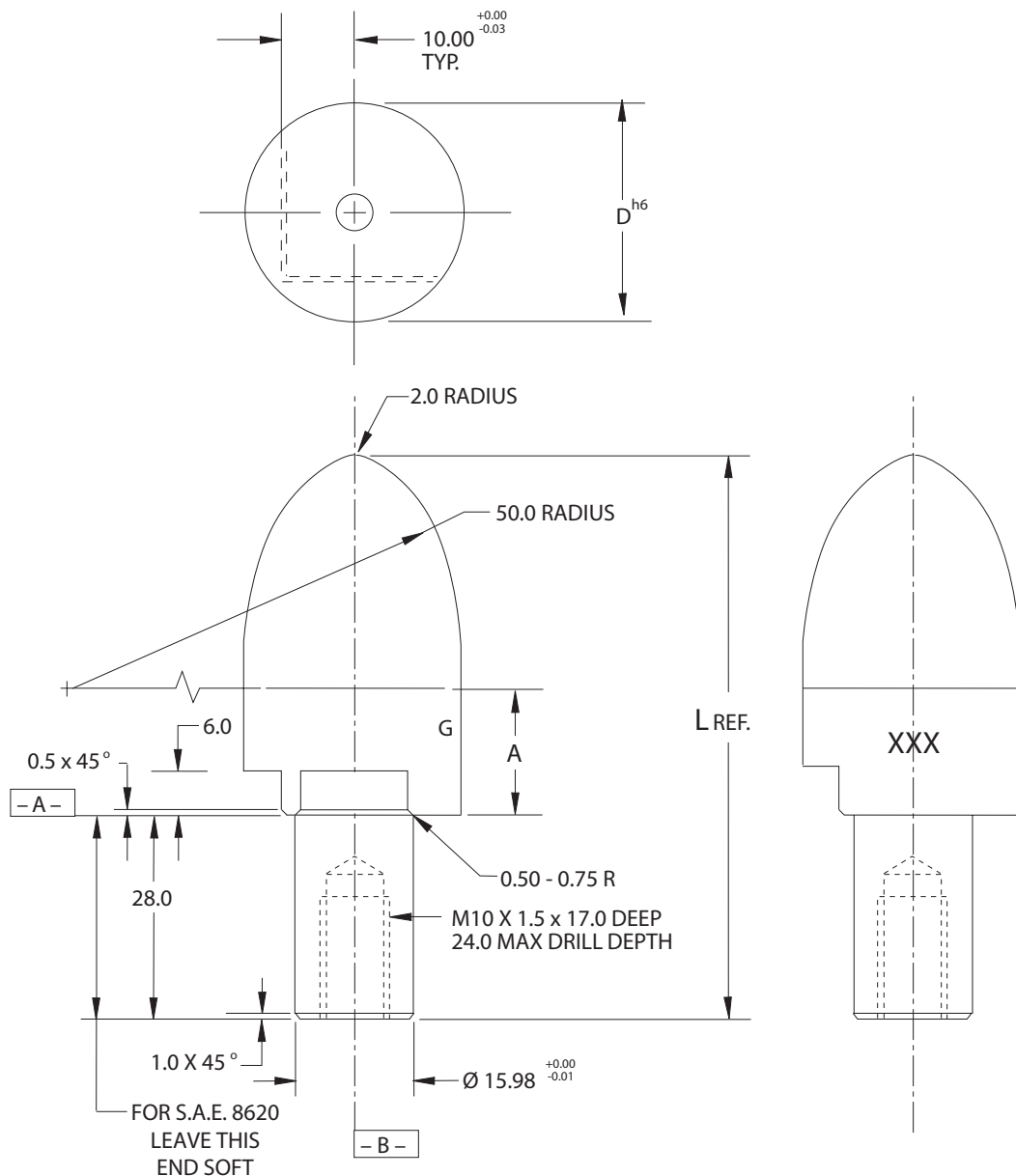
ALL MACHINED SURFACES TO FLAT.  
PARALLEL AND PERPENDICULAR TO WITHIN  
0.015 T.I.R. TO DATUMS A AND B AND  
CONCENTRIC TO WITHIN 0.03 T.I.R.

NOTE: IDENTIFY WITH NAAMS CODE NUMBER AS  
SHOWN **XXX**.

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

\* : ONE OF THE FOLLOWING SUFFIXES MUST BE  
ADDED TO THE BASE NAAMS CODE NUMBER.

SUFFIX	STEEL, HEAT TREATMENT AND COATING
(NONE)	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING
T	S.A.E. 8620, 58-62 Rc, 0.5-0.7mm DEEP AFTER GRINDING, TITANIUM NITRIDE, 1 TO 2 MICRONS THICK ON SURFACES ABOVE THE -A- DATUM (MINIMUM SURFACES). COATING PROCESS SHALL NOT NEGATIVELY IMPACT PIN HARDNESS
MH	H13, 48-52 Rc
MA	A2, 48-52 Rc



TABULATED INFORMATION ON FOLLOWING PAGE

# LOCATING PIN

## 25 mm THRU 40 mm DIAMETER <sup>TM</sup>

### (FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

03/19/21

\* : ONE OF THE SUFFIXES FROM PAGE I-37 MUST BE ADDED TO THE BASE NAAMS CODE NUMBER.

25 mm Round Hole  
 B Rad = 2.0  
 C Rad = 50.0  
 D = 25<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ251*	15.0	75.0	0.15
APQ252*	20.0	80.0	0.17
APQ253*	30.0	90.0	0.21
APQ254*	40.0	100.0	0.25
APQ255*	50.0	110.0	0.29
APQ256*	60.0	120.0	0.32
APQ257*	70.0	130.0	0.36
APQ258*	80.0	140.0	0.40

30 mm Round Hole  
 B Rad = 2.0  
 C Rad = 50.0  
 D = 30<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ301*	15.0	77.8	0.22
APQ302*	20.0	82.8	0.24
APQ303*	30.0	92.8	0.30
APQ304*	40.0	102.8	0.35
APQ305*	50.0	112.8	0.41
APQ306*	60.0	122.8	0.46
APQ307*	70.0	132.8	0.52
APQ308*	80.0	142.8	0.57

35 mm Round Hole  
 B Rad = 2.0  
 C Rad = 50.0  
 D = 35<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ351*	15.0	80.3	0.29
APQ352*	20.0	85.3	0.33
APQ353*	30.0	95.3	0.41
APQ354*	40.0	105.3	0.48
APQ355*	50.0	115.3	0.55
APQ356*	60.0	125.3	0.63
APQ357*	70.0	135.3	0.70
APQ358*	80.0	145.3	0.78

40 mm Round Hole  
 B Rad = 2.0  
 C Rad = 50.0  
 D = 40<sup>h6</sup>

NAAMS CODE	A	L	WT. kg
APQ401*	15.0	82.5	0.39
APQ402*	20.0	87.5	0.43
APQ403*	30.0	97.5	0.53
APQ404*	40.0	107.5	0.63
APQ405*	50.0	117.5	0.73
APQ406*	60.0	127.5	0.82
APQ407*	70.0	137.5	0.92
APQ408*	80.0	147.5	1.02

A  
 C  
 D  
 B  
 E

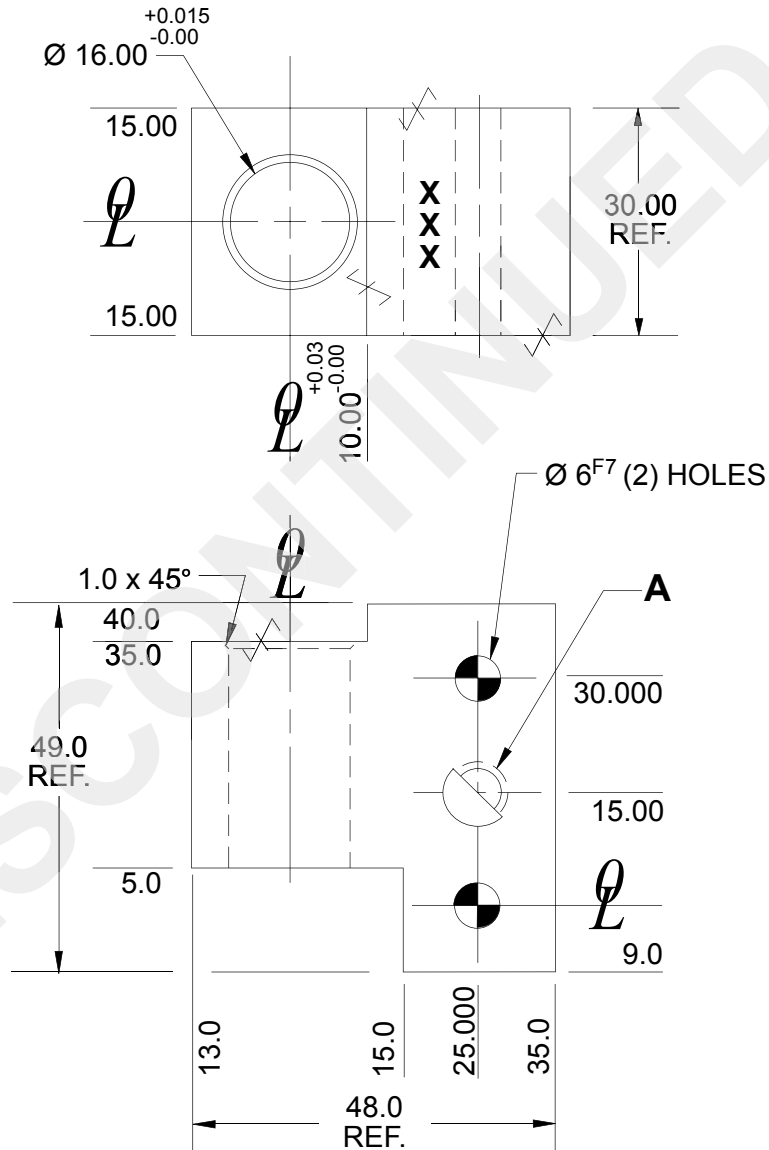


# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR310M, 311M, 312M, 313M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.




NAAMS CODE	A	MATERIAL	WT. kg
APR310M	M8 x 1.25	Steel / ASTM A-36	0.41
APR311M	M8 x 1.25	SS type 303 or 304	0.41
APR312M	9.0	Steel / ASTM A-36	0.41
APR313M	9.0	SS type 303 or 304	0.41

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

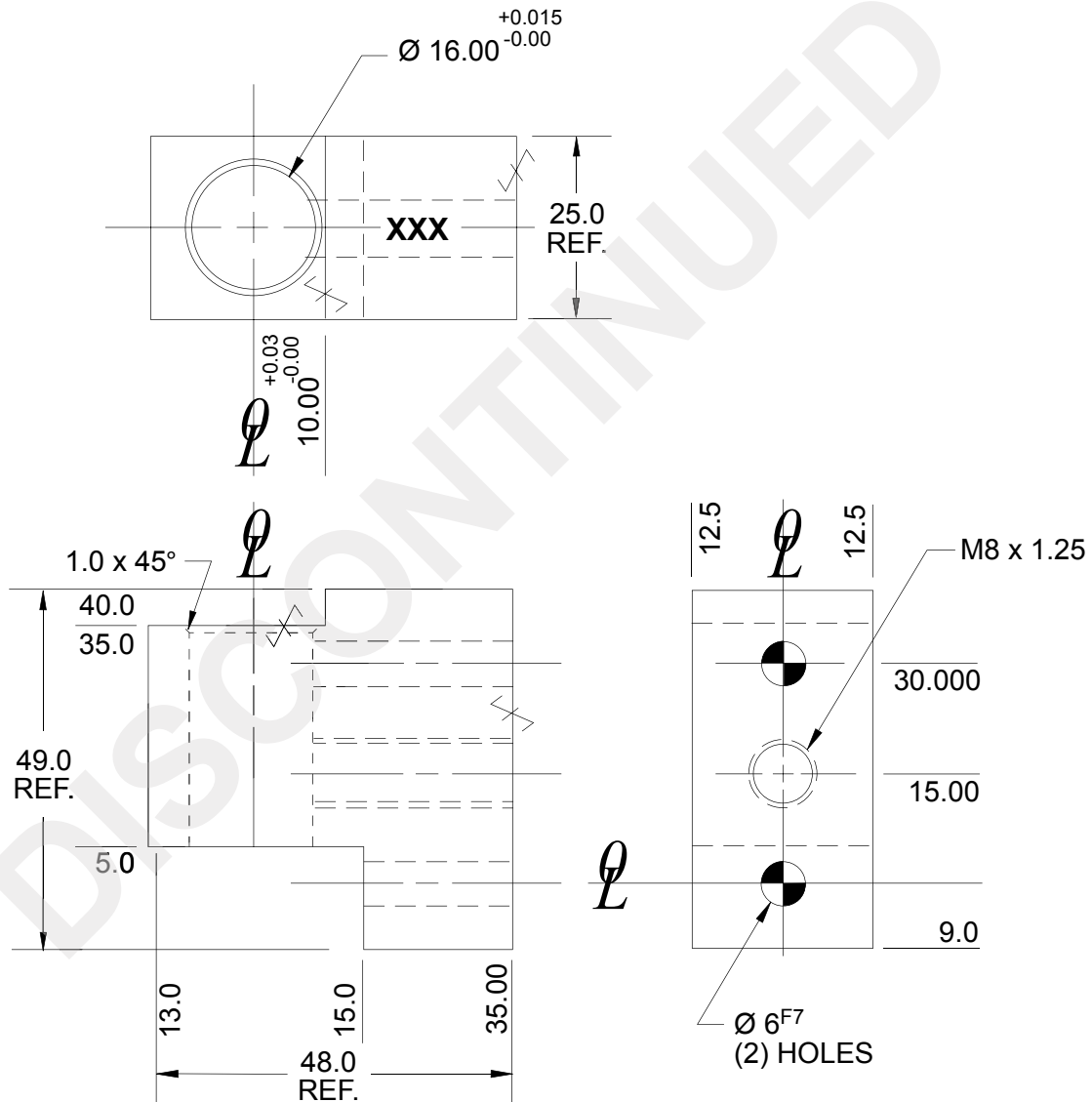
D  
E  
C  
A  
B

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR320M, 321M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR320M	Steel / ASTM A-36	0.41
APR321M	SS type 303 or 304	0.41


E

D

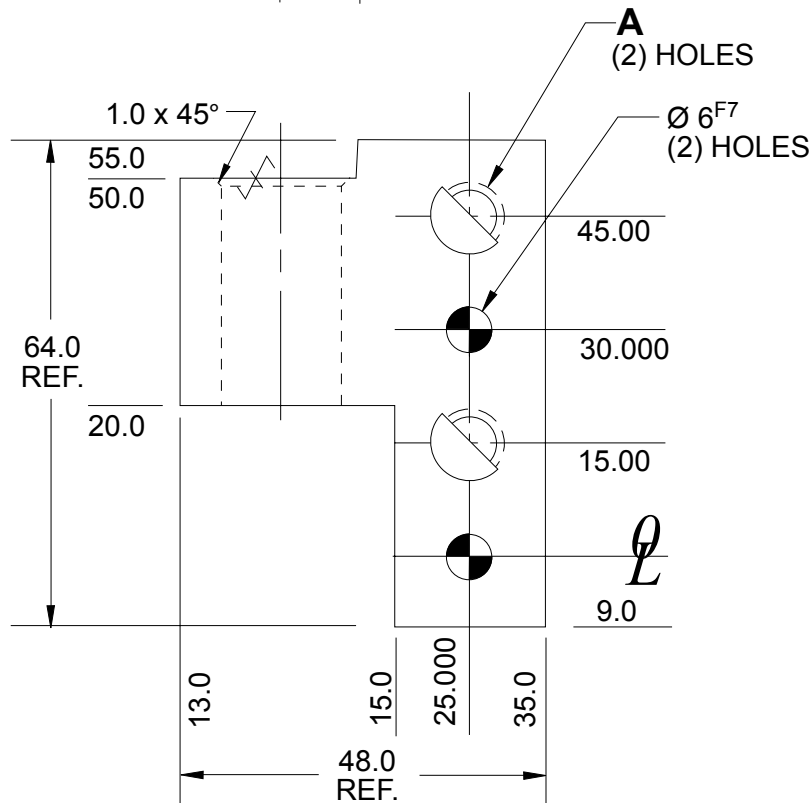
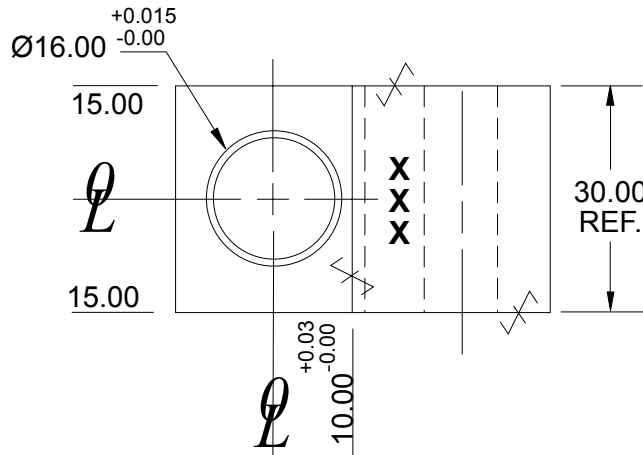
C  
A  
B

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR330M, 331M, 332M, 333M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**. BLACK OXIDE FINISH. NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



NAAMS CODE	A	MATERIAL	WT. kg
APR330M	M8 x 1.25	Steel / ASTM A-36	0.45
APR331M	M8 x 1.25	SS type 303 or 304	0.45
APR332M	9.0	Steel / ASTM A-36	0.45
APR333M	9.0	SS type 303 or 304	0.45


SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

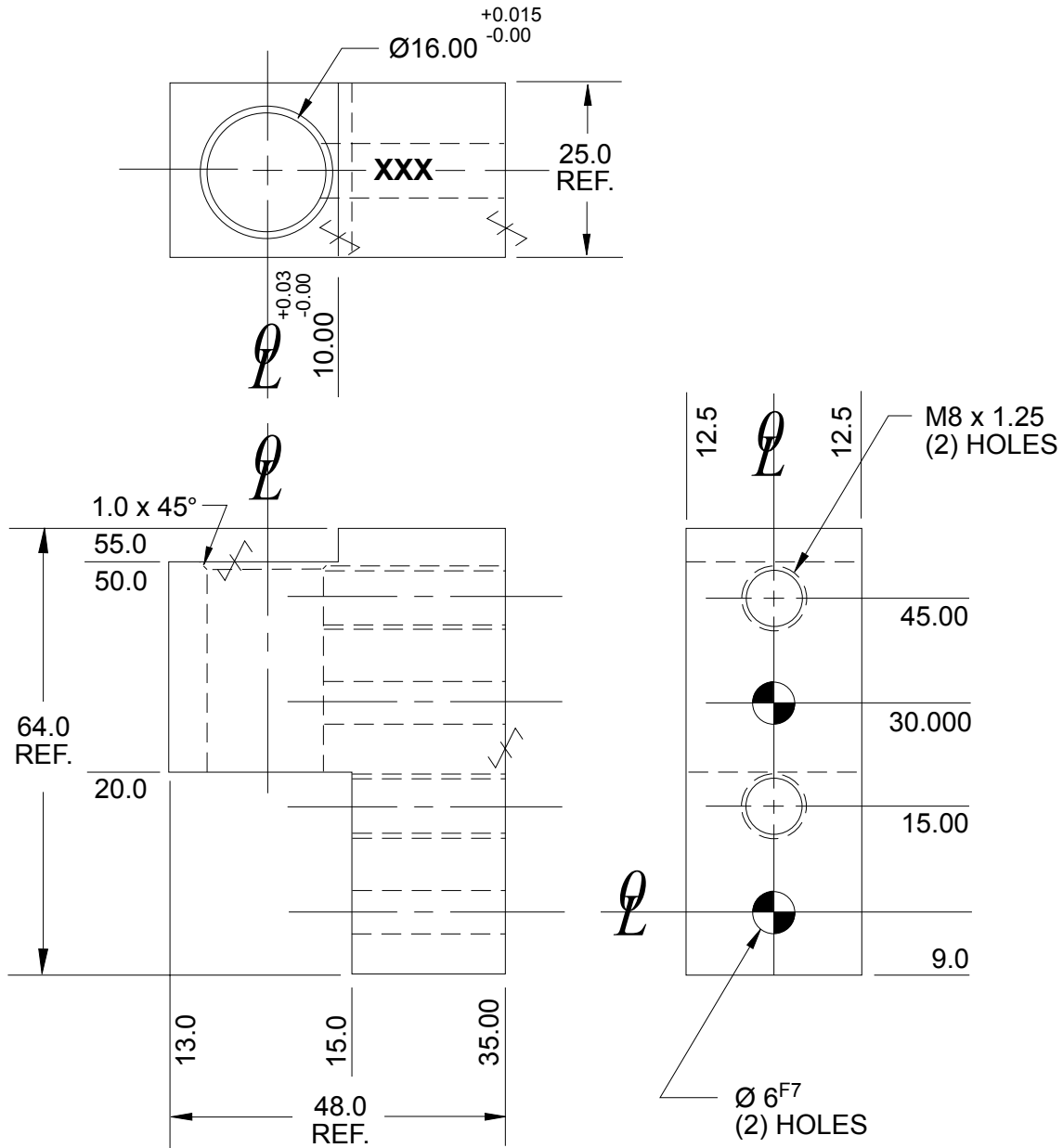
D

C  
A  
B

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR045M, 046M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.  
 NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



NAAMS CODE	MATERIAL	WT. kg
APR045M	Steel / ASTM A-36	0.32
APR046M	SS type 303 or 304	0.32

SEE PAGE B-1.1 FOR  
 GLOBAL MATERIALS CHART

D

C  
 A  
 B

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR055M, 056M

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



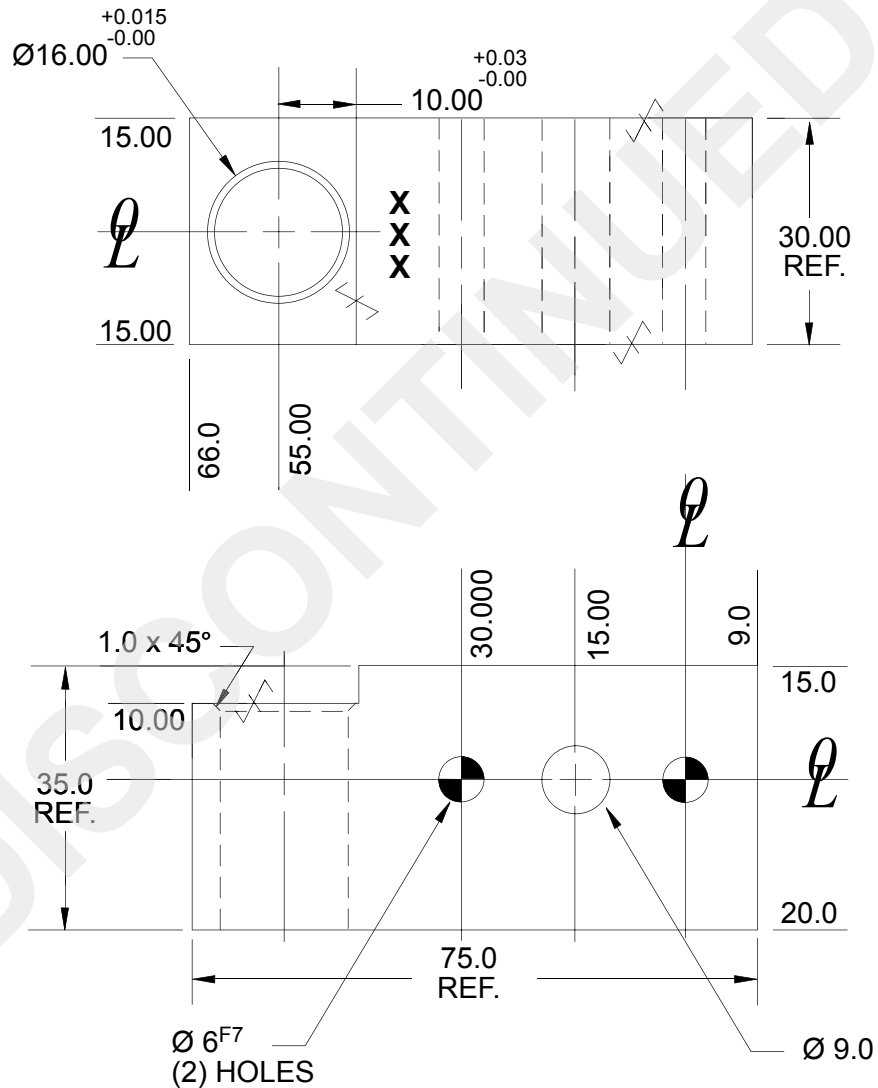
Assembly

04/22/14

Tolerances: 1 PLACE ± 0.3  
2 PLACE ± 0.03  
3 PLACE ± 0.020

✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR055M	Steel / ASTM A-36	0.50
APR056M	SS type 303 or 304	0.50

E

D

C

A

B

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR065M, 066M, 067M, 068M

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



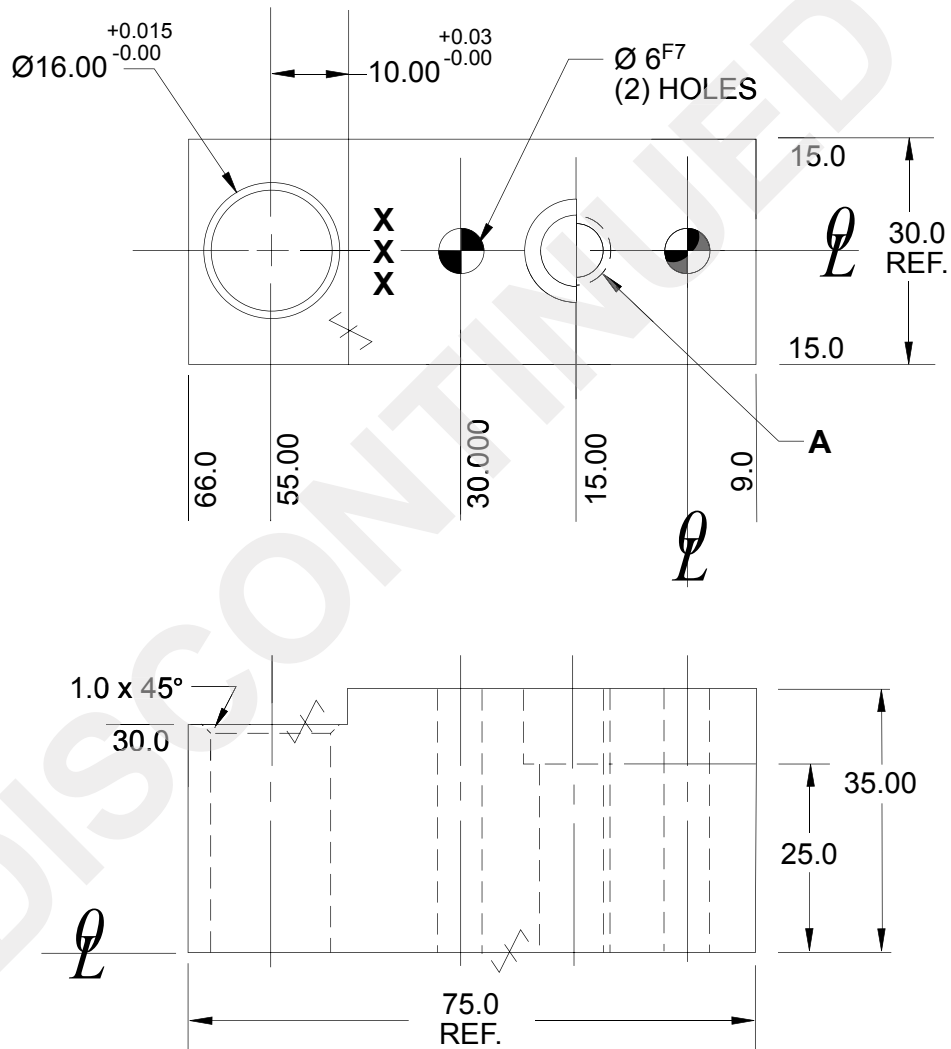
Assembly

04/22/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR065M	M8 x 1.25	Steel / ASTM A-36	0.50
APR066M	M8 x 1.25	SS type 303 or 304	0.50
APR067M	Drill & C/Bore for M8 SHCS	Steel / ASTM A-36	0.50
APR068M	Drill & C/Bore for M8 SHCS	SS type 303 or 304	0.50

E

D


C

A

B

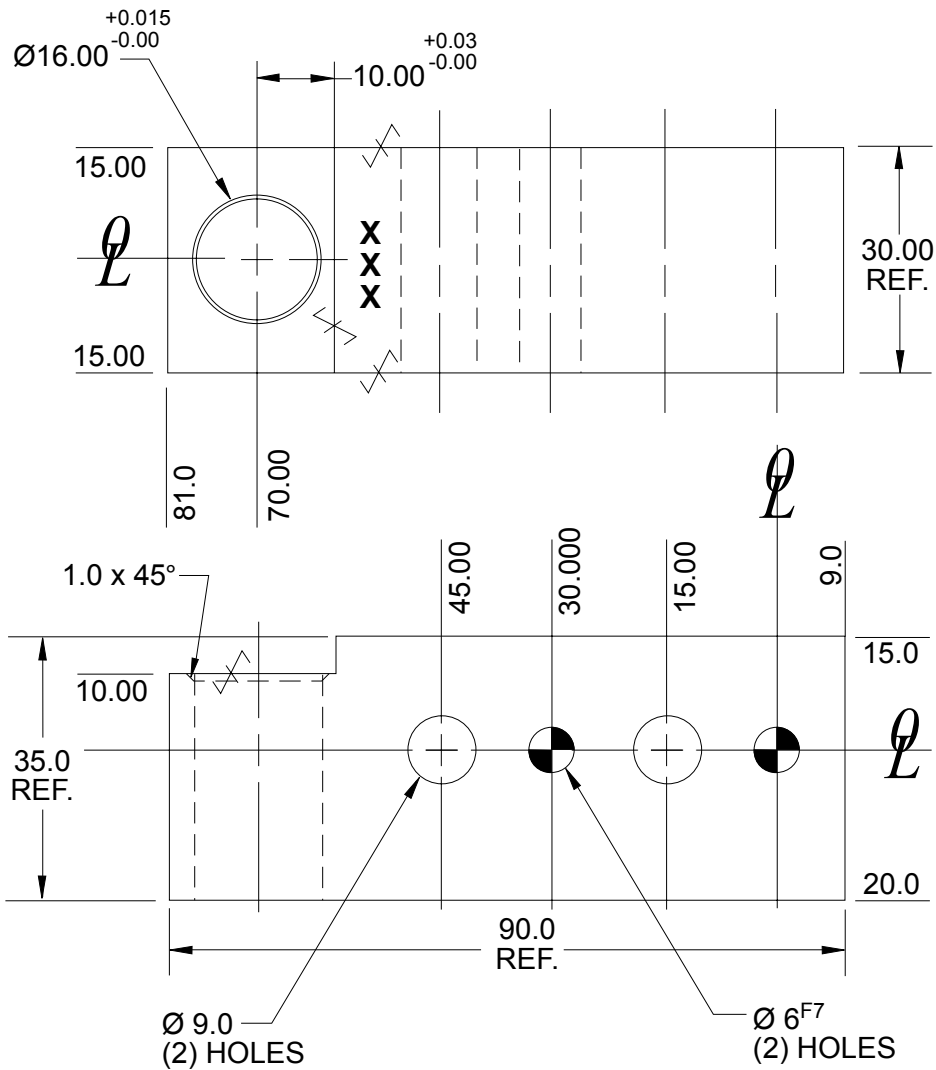
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR075M, 076M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**D**




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR075M	Steel / ASTM A-36	0.63
APR076M	SS type 303 or 304	0.63

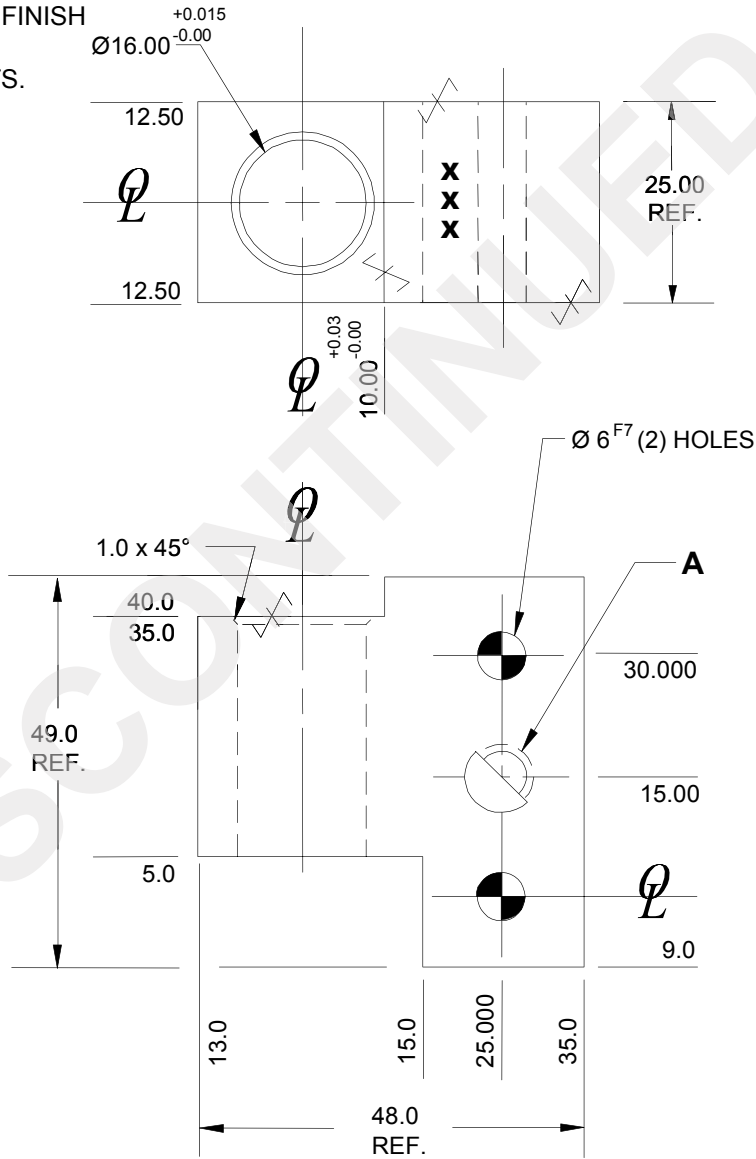
**C**  
**A**  
**B**

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR314M, 315M, 316M, 317M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



NAAMS CODE	A	MATERIAL	WT. kg
APR314M	M8 x 1.25	STEEL / ASTM A-36	0.34
APR315M	M8 x 1.25	SS type 303 or 304	0.34
APR316M	9.0	STEEL / ASTM A-36	0.34
APR317M	9.0	SS type 303 or 304	0.34

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

D

C

B

A



# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR336M, 337M, 338M, 339M

GLOBAL STANDARD COMPONENTS



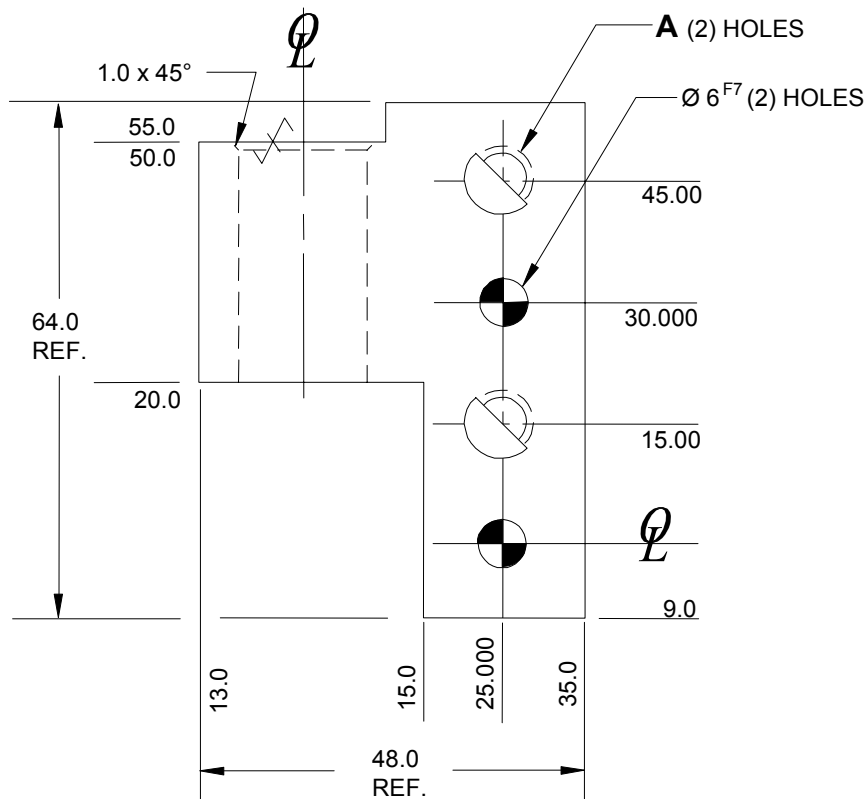
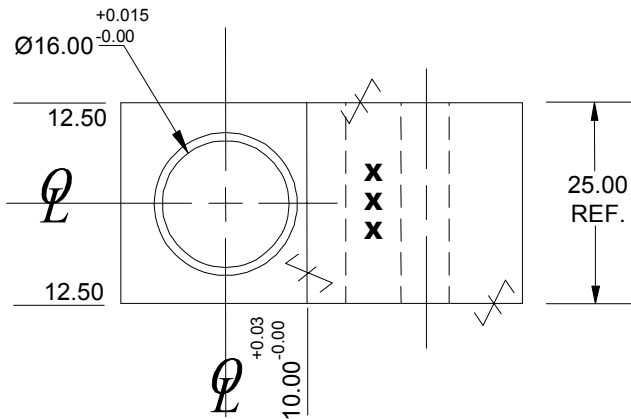
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\phi$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



NAAMS CODE	A	MATERIAL	WT. kg
APR336M	M8 x 1.25	STEEL / ASTM A-36	0.37
APR337M	M8 x 1.25	SS type 303 or 304	0.37
APR338M	9.0	STEEL / ASTM A-36	0.37
APR339M	9.0	SS type 303 or 304	0.37

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

C

B

A

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR057M, 058M

GLOBAL STANDARD COMPONENTS

# NAAMS



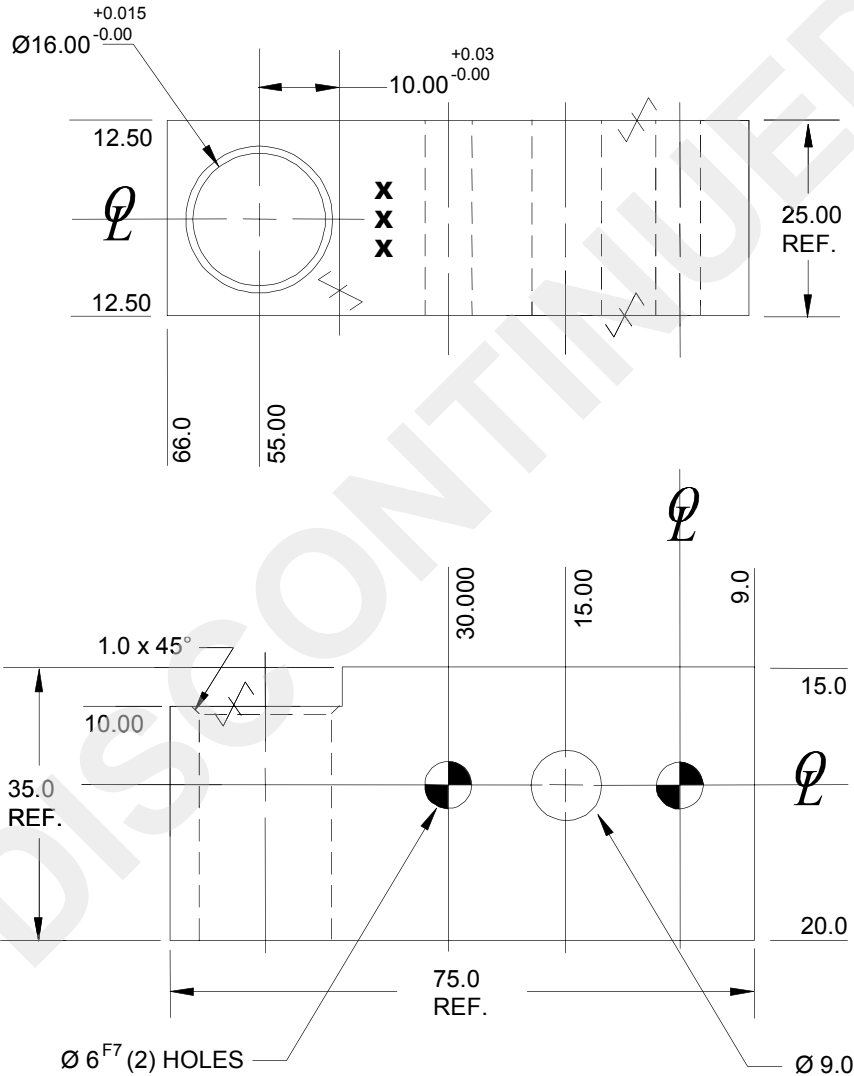
Assembly

04/22/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR057M	STEEL / ASTM A-36	0.41
APR058M	SS type 303 or 304	0.41

D

C

B

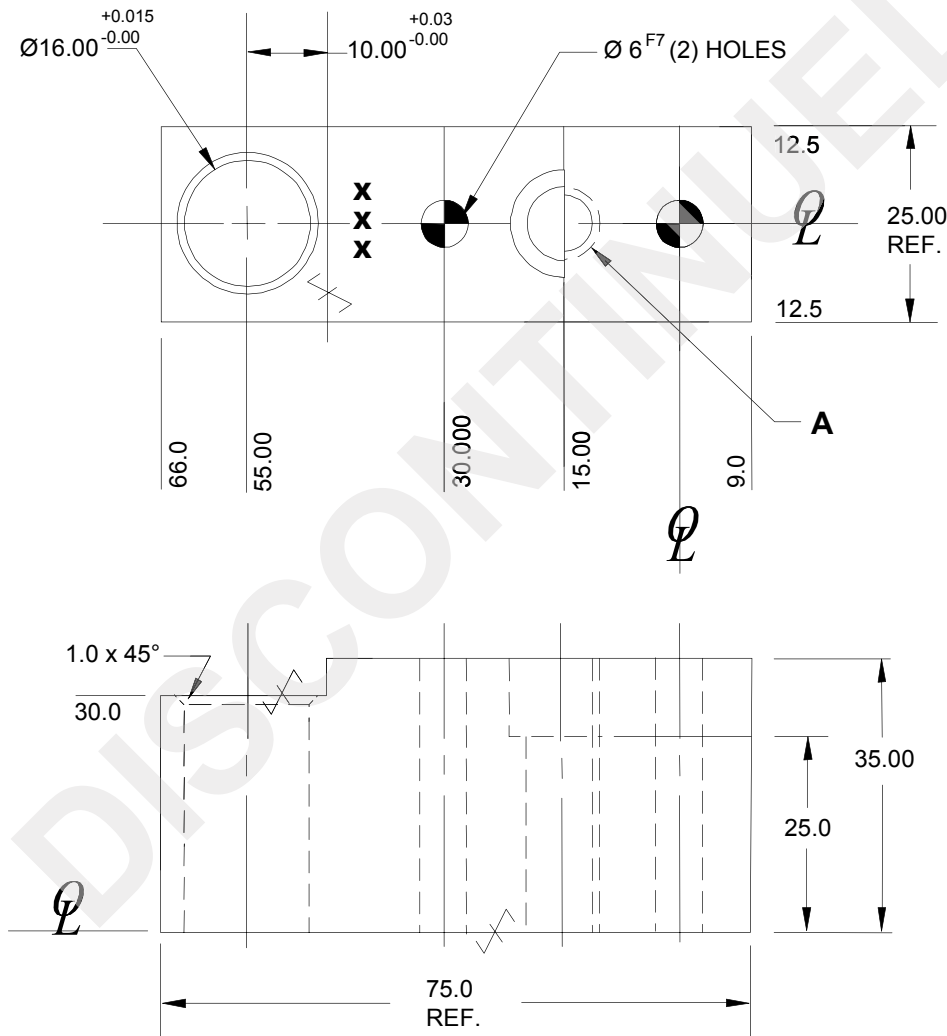
A

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR085M, 086M, 087M, 088M

Tolerances: 1 PLACE ± 0.3  
2 PLACE ± 0.03  
3 PLACE ± 0.020

✓ SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\phi$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS.



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR085M	M8 x 1.25	STEEL / ASTM A-36	0.40
APR086M	M8 x 1.25	SS type 303 or 304	0.40
APR087M	DRILL & C/BORE FOR M8 SHCS	STEEL / ASTM A-36	0.40
APR088M	DRILL & C/BORE FOR M8 SHCS	SS type 303 or 304	0.40

D

C

B

A

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR077M, 078M

GLOBAL STANDARD COMPONENTS



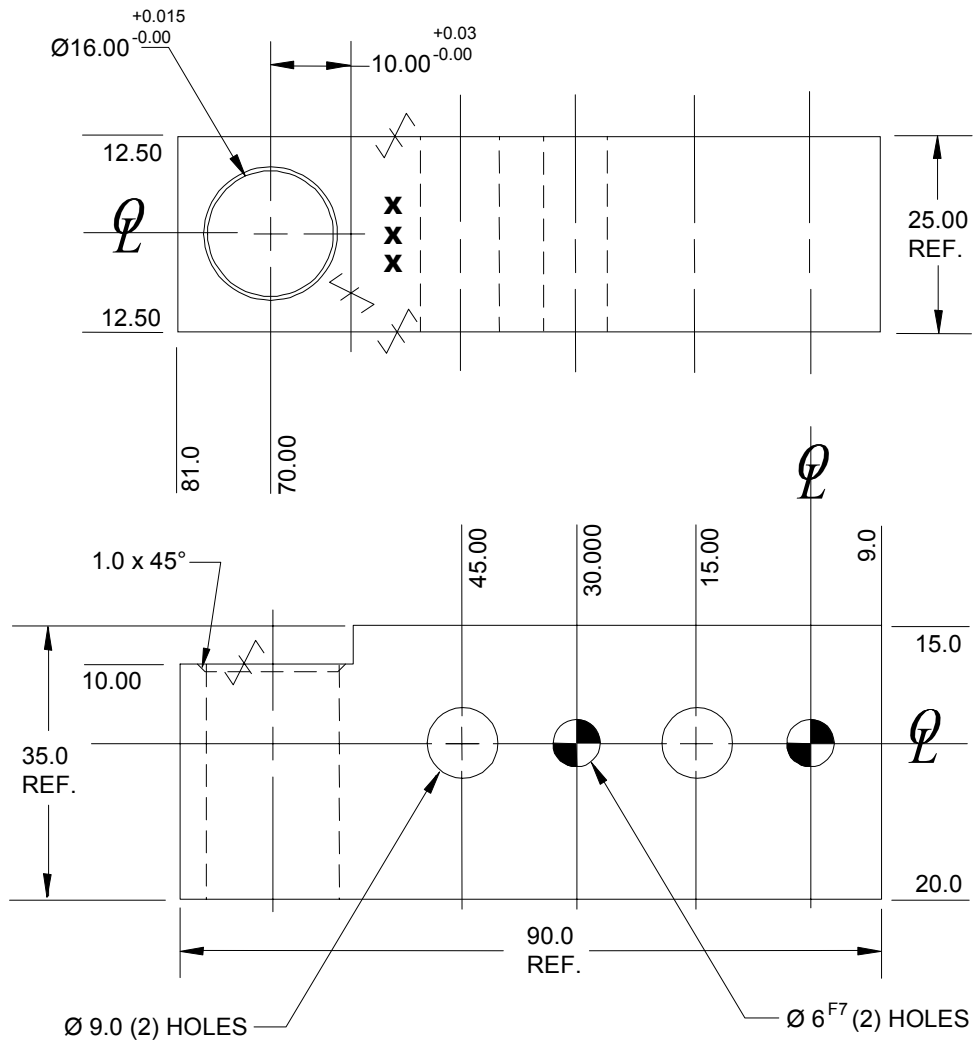
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR077M	STEEL / ASTM A-36	0.52
APR078M	SS type 303 or 304	0.52


C

B

A

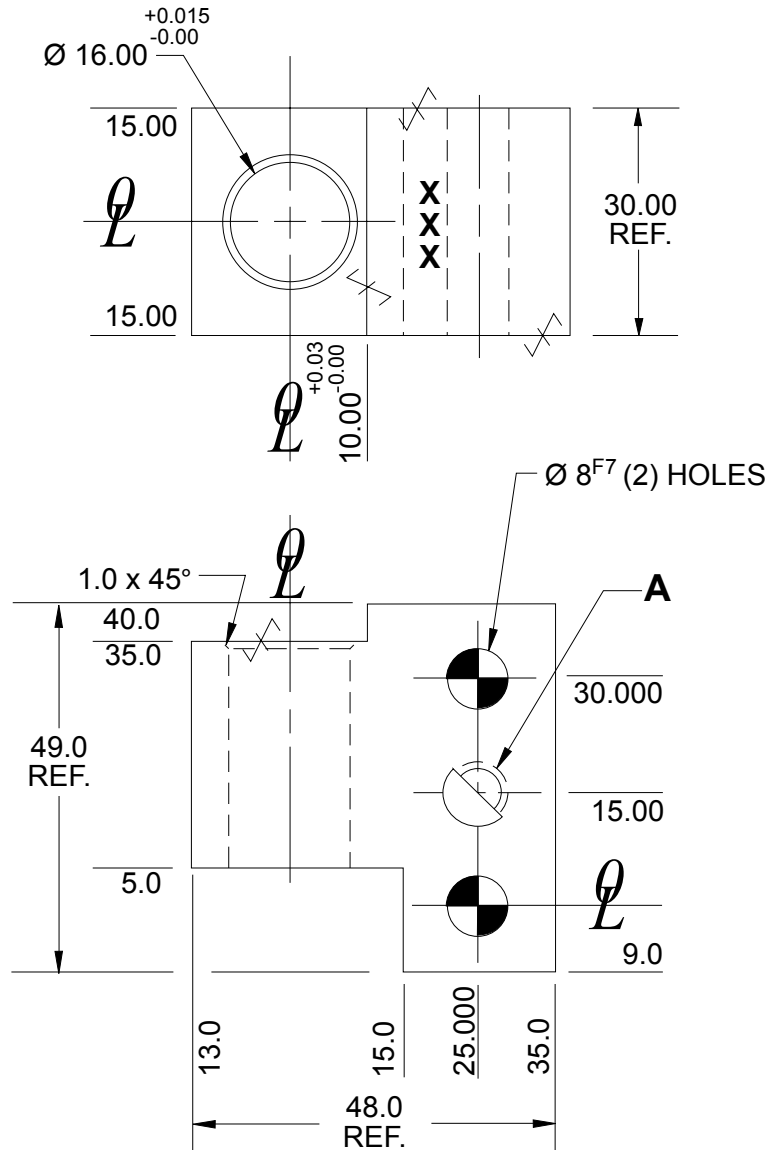
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR250M THRU APR253M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**




NAAMS CODE	A	MATERIAL	WT. kg
APR250M	M8 x 1.25	Steel / ASTM A-36	0.41
APR251M	M8 x 1.25	SS type 303 or 304	0.41
APR252M	9.0	Steel / ASTM A-36	0.41
APR253M	9.0	SS type 303 or 304	0.41

SEE PAGE B-1.1 FOR  
GLOBAL MATERIALS CHART

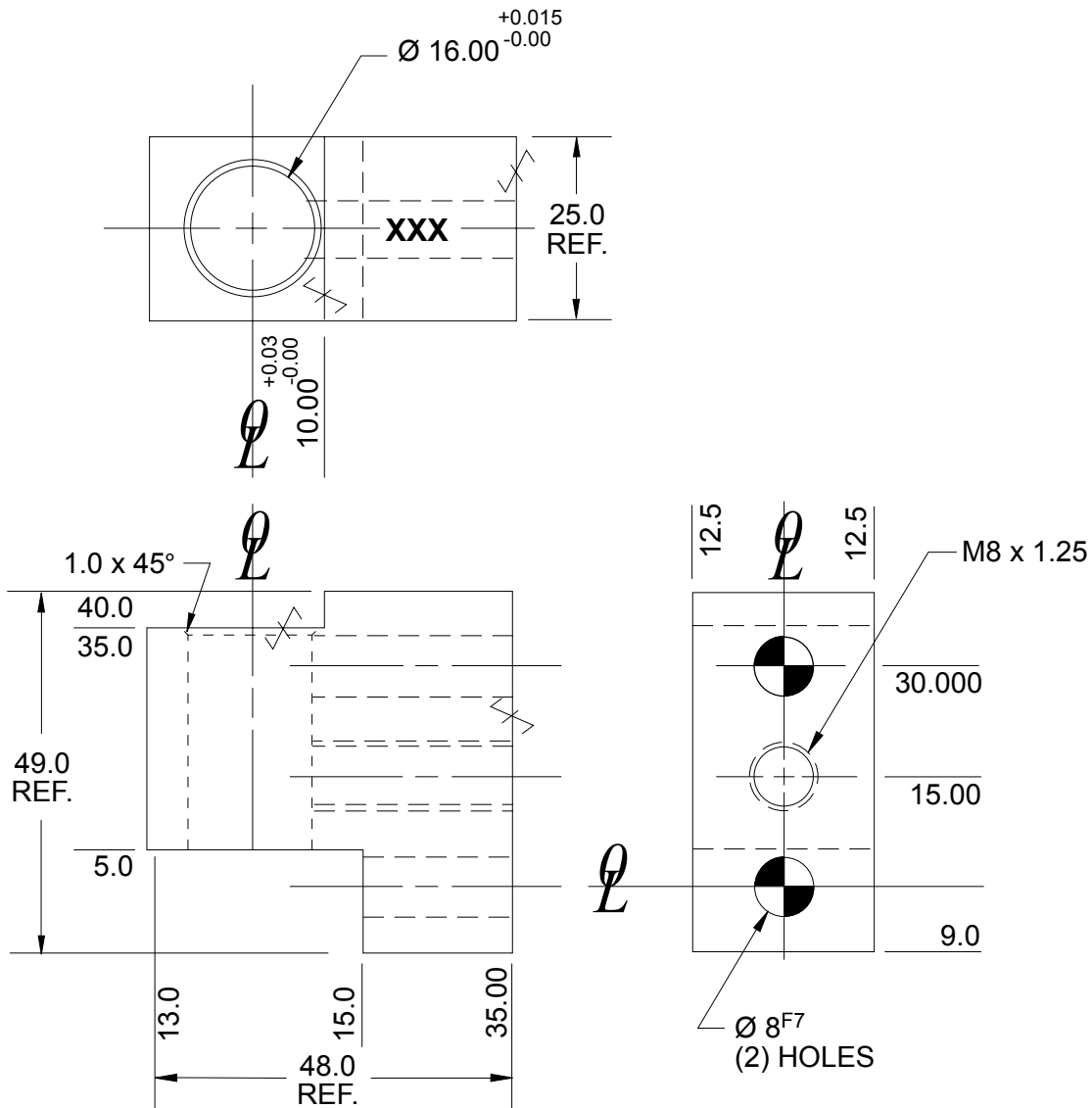
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR255M, APR256M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

A



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

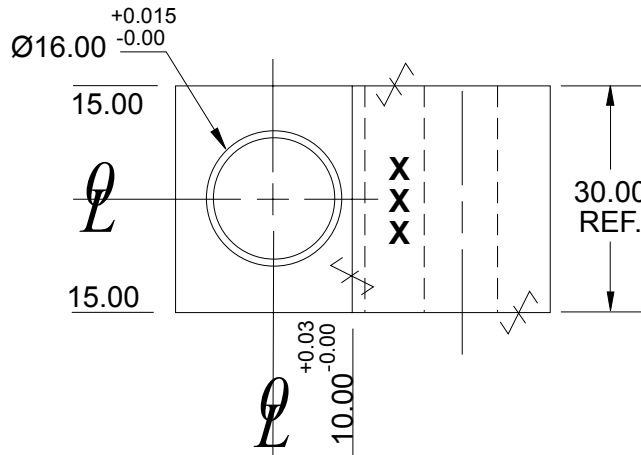
NAAMS CODE	MATERIAL	WT. kg
APR255M	Steel / ASTM A-36	0.41
APR256M	SS type 303 or 304	0.41

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR201M THRU APR204M



Assembly

02/12/14

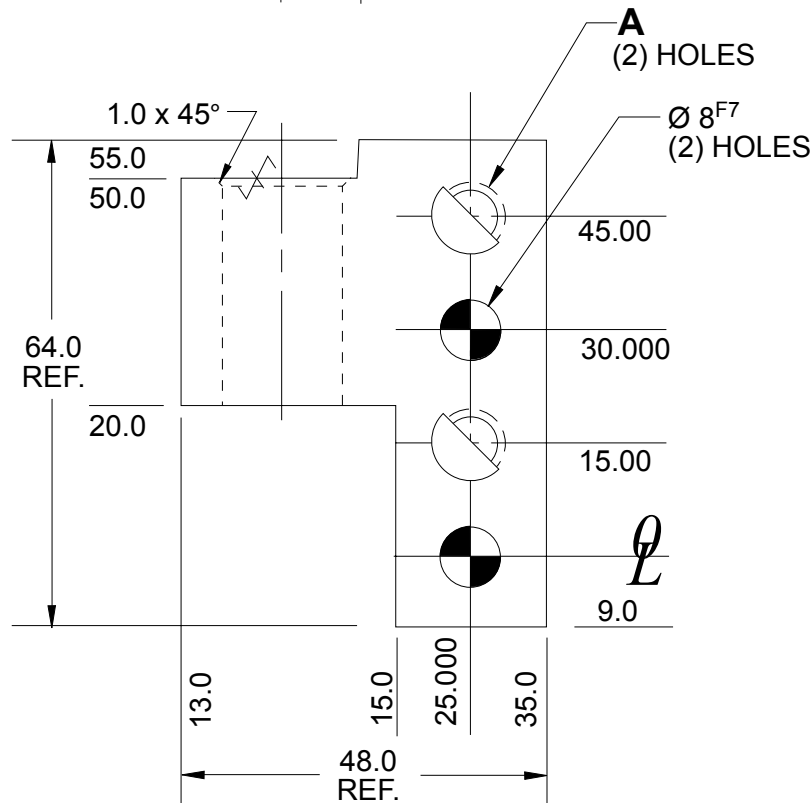


Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**. BLACK OXIDE FINISH. NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**



NAAMS CODE	A	MATERIAL	WT. kg
APR201M	M8 x 1.25	Steel / ASTM A-36	0.45
APR202M	M8 x 1.25	SS type 303 or 304	0.45
APR203M	9.0	Steel / ASTM A-36	0.45
APR204M	9.0	SS type 303 or 304	0.45

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

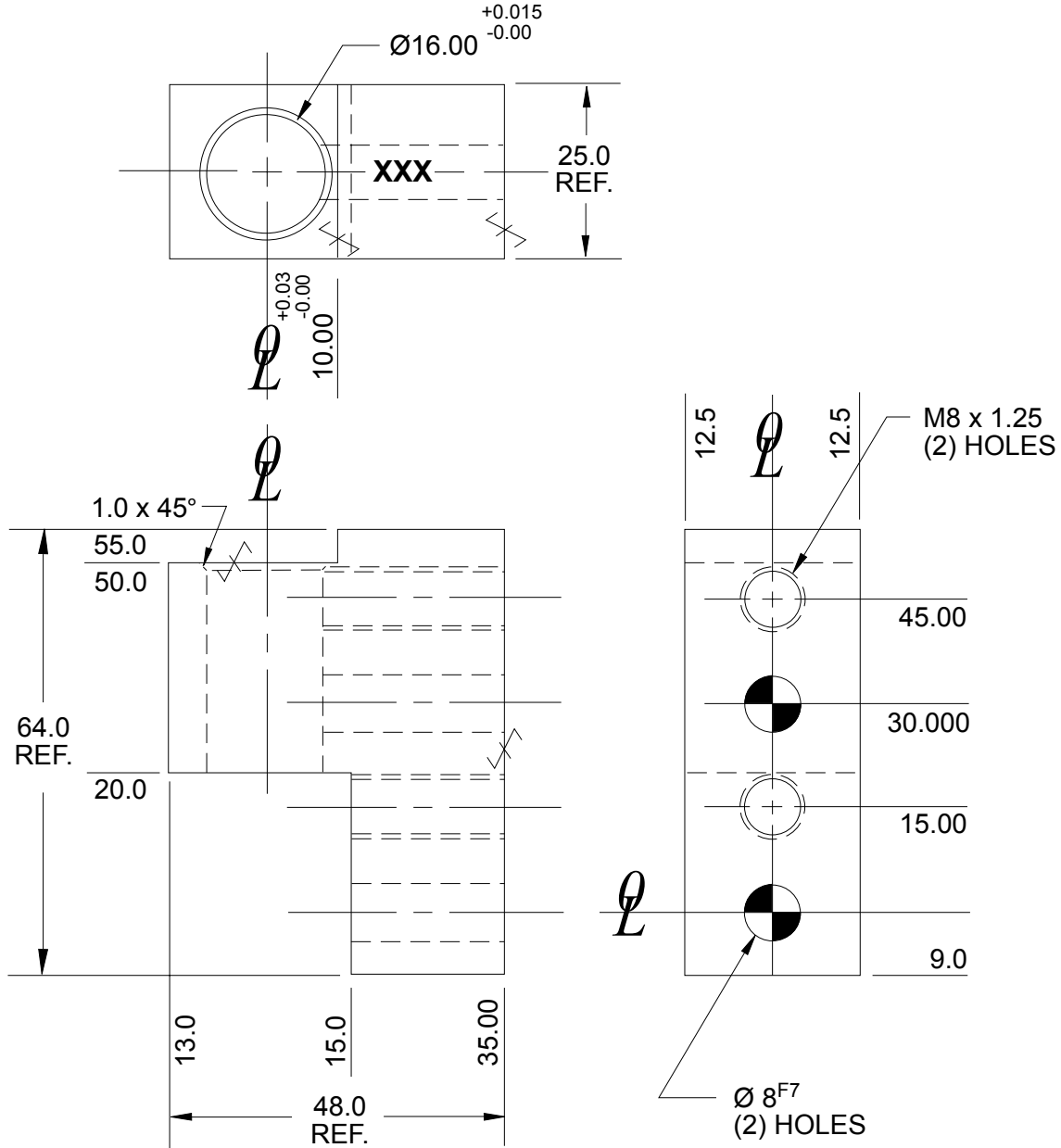
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR211M THRU APR212M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

A




NAAMS CODE	MATERIAL	WT. kg
APR211M	Steel / ASTM A-36	0.32
APR212M	SS type 303 or 304	0.32

SEE PAGE B-1.1 FOR  
 GLOBAL MATERIALS CHART



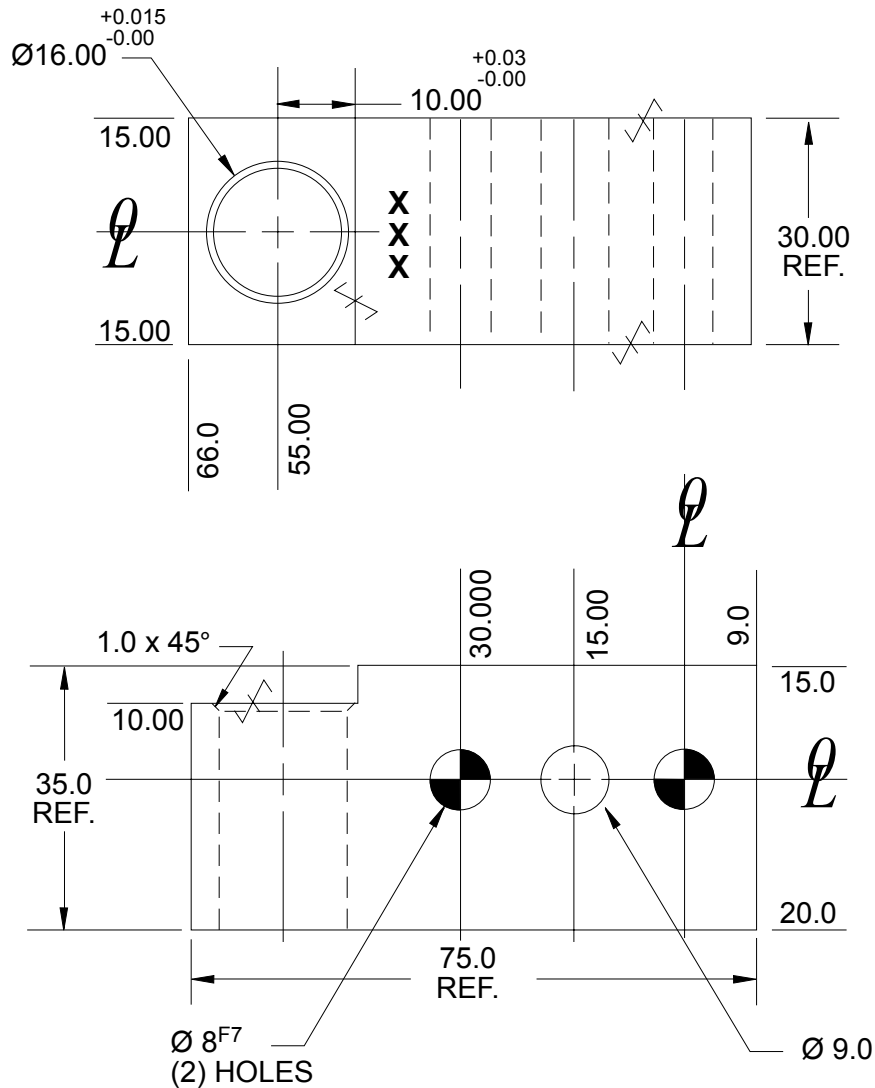
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR260M, APR261M

Tolerances: 1 PLACE  $\pm 0.3$   
 2 PLACE  $\pm 0.03$   
 3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
 PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
 BLACK OXIDE FINISH.  
 NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR260M	Steel / ASTM A-36	0.50
APR261M	SS type 303 or 304	0.50

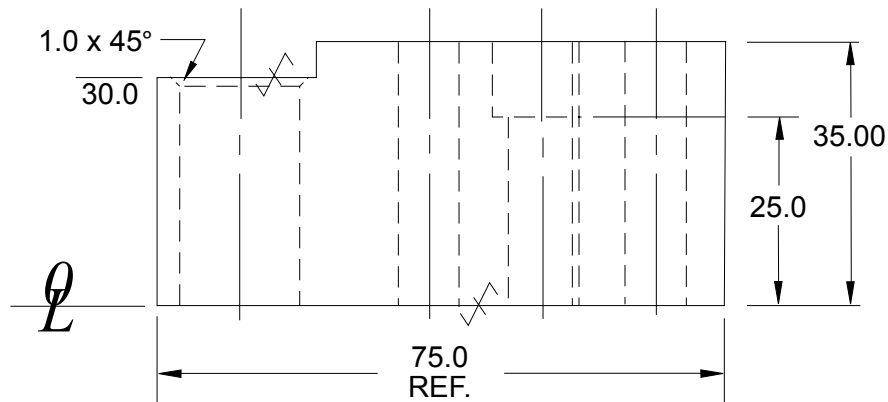
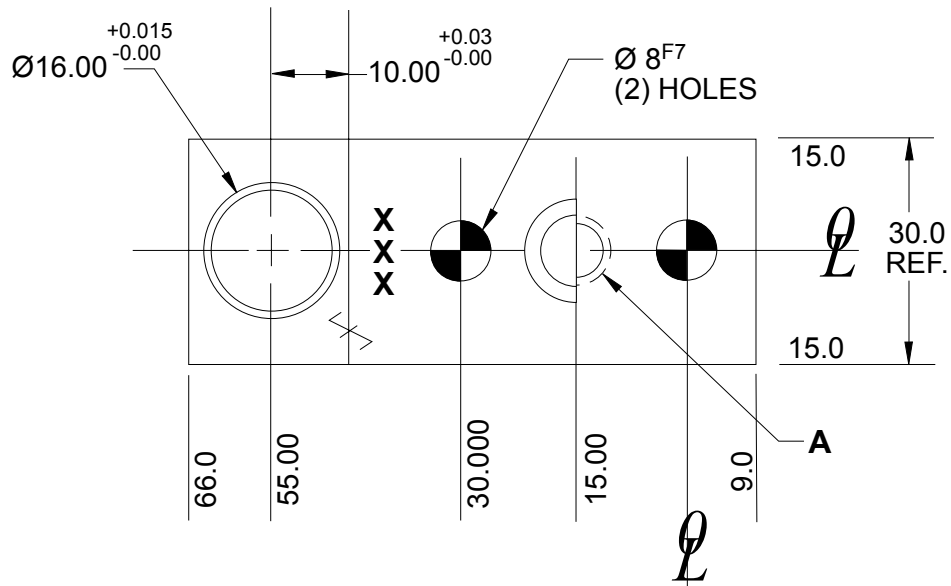
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR265M THRU APR268M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR265M	M8 x 1.25	Steel / ASTM A-36	0.50
APR266M	M8 x 1.25	SS type 303 or 304	0.50
APR267M	Drill & C/Bore for M8 SHCS	Steel / ASTM A-36	0.50
APR268M	Drill & C/Bore for M8 SHCS	SS type 303 or 304	0.50

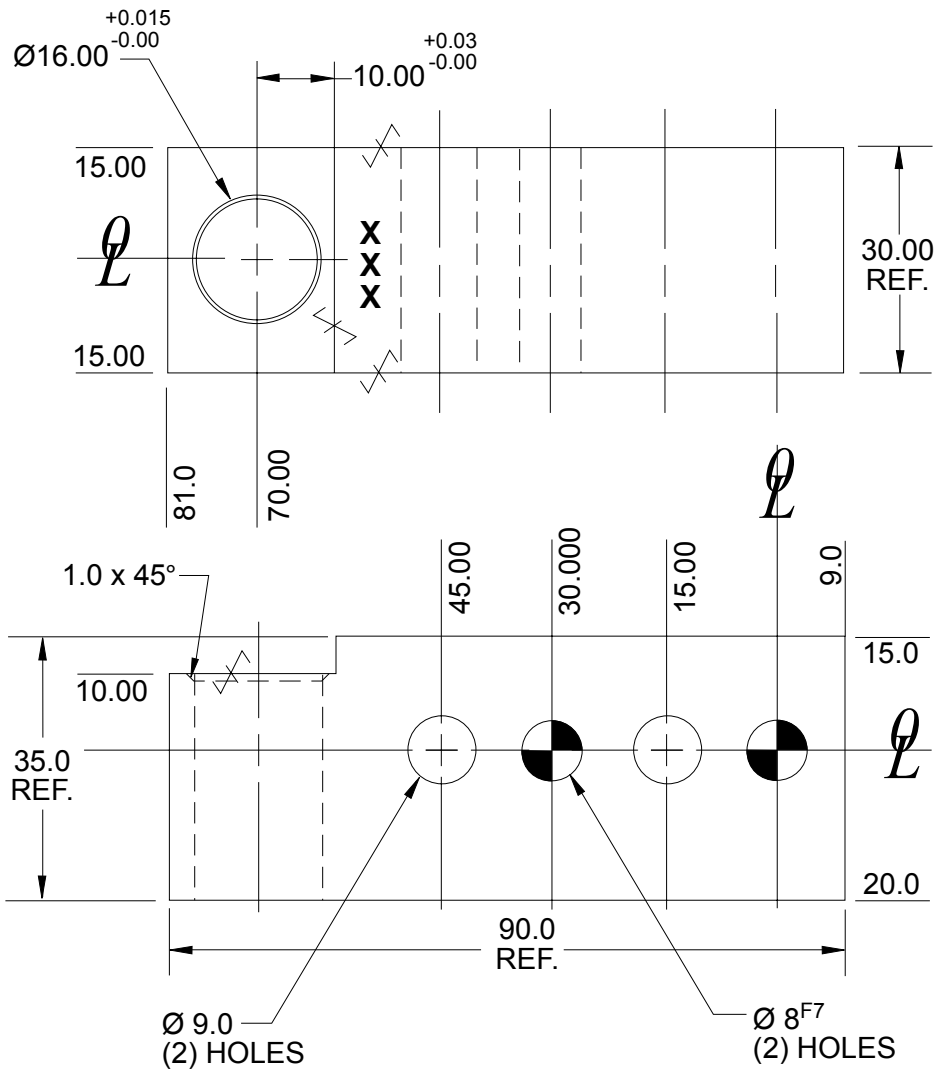
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR221M, APR222M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL &  
PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR221M	Steel / ASTM A-36	0.63
APR222M	SS type 303 or 304	0.63

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR271M THRU APR274M

GLOBAL STANDARD COMPONENTS



Assembly

02/12/14

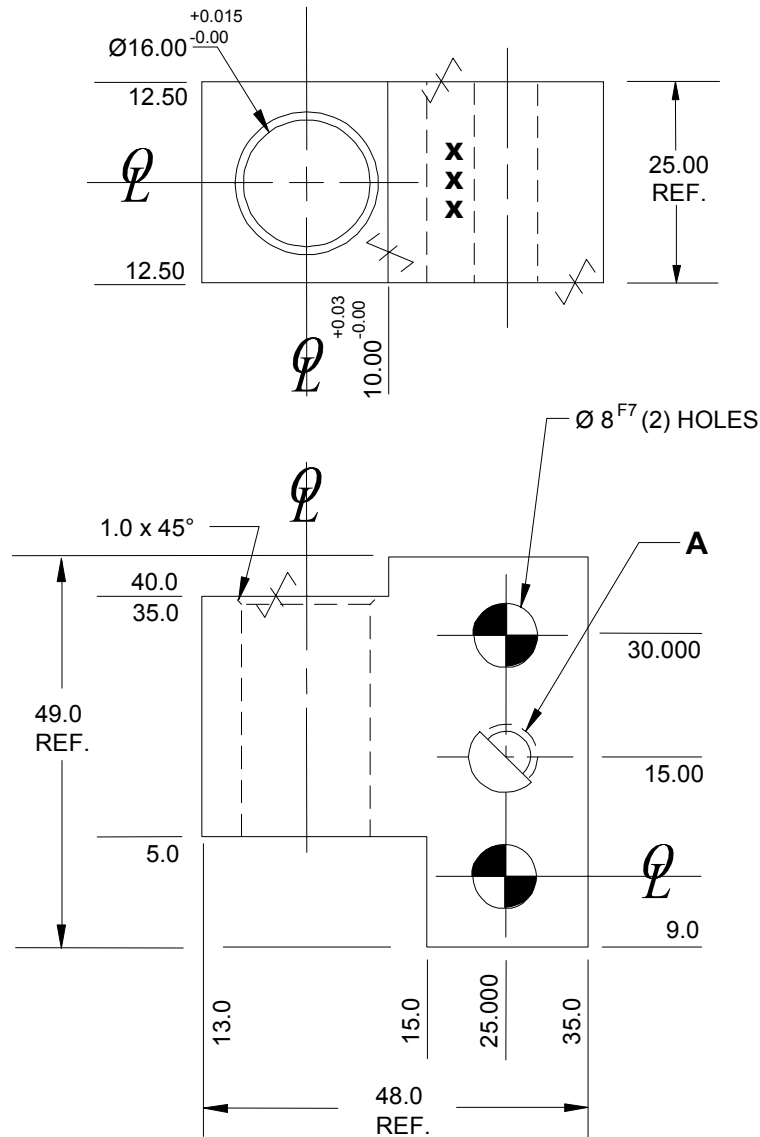
Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

$\nabla$  SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.

NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

**A**



NAAMS CODE	A	MATERIAL	WT. kg
APR271M	M8 x 1.25	STEEL / ASTM A-36	0.34
APR272M	M8 x 1.25	SS type 303 or 304	0.34
APR273M	9.0	STEEL / ASTM A-36	0.34
APR274M	9.0	SS type 303 or 304	0.34

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR231M THRU APR234M

GLOBAL STANDARD COMPONENTS

# NAAMS



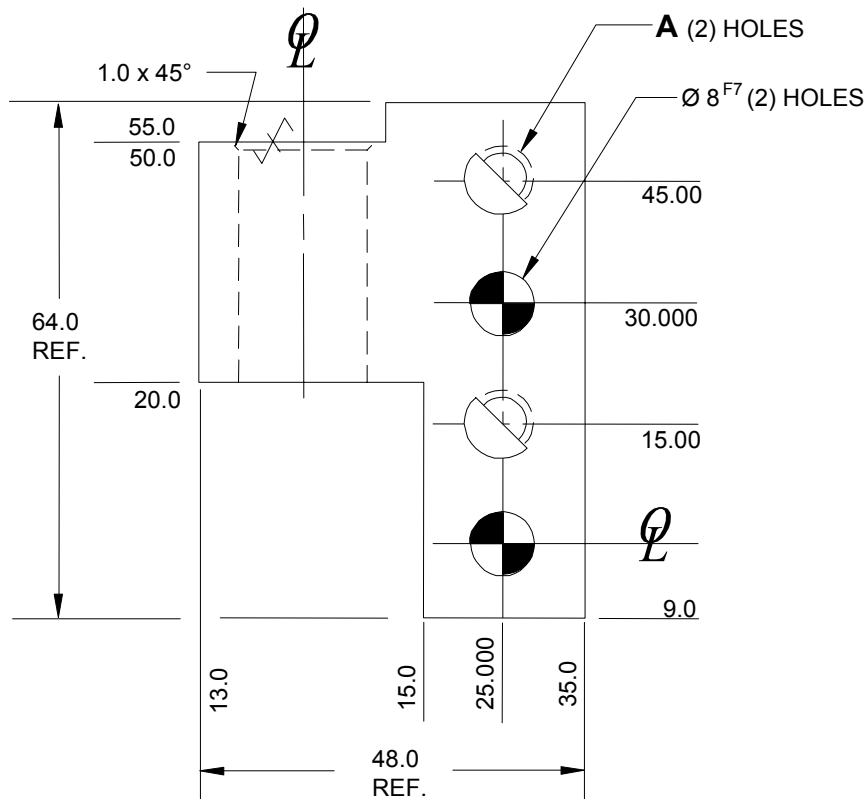
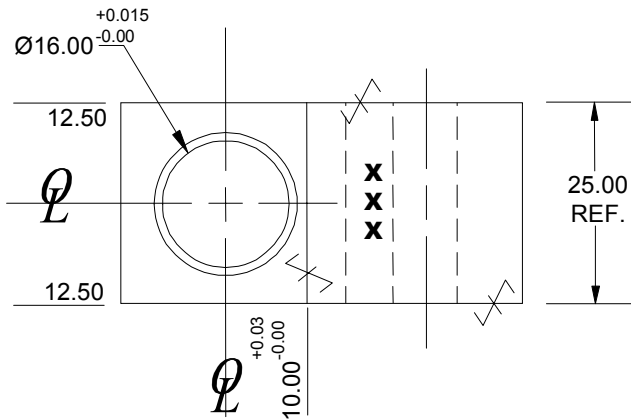
Assembly

02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

$\sqrt{\text{X}}$  SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS




NAAMS CODE	A	MATERIAL	WT. kg
APR231M	M8 x 1.25	STEEL / ASTM A-36	0.37
APR232M	M8 x 1.25	SS type 303 or 304	0.37
APR233M	9.0	STEEL / ASTM A-36	0.37
APR234M	9.0	SS type 303 or 304	0.37

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

A

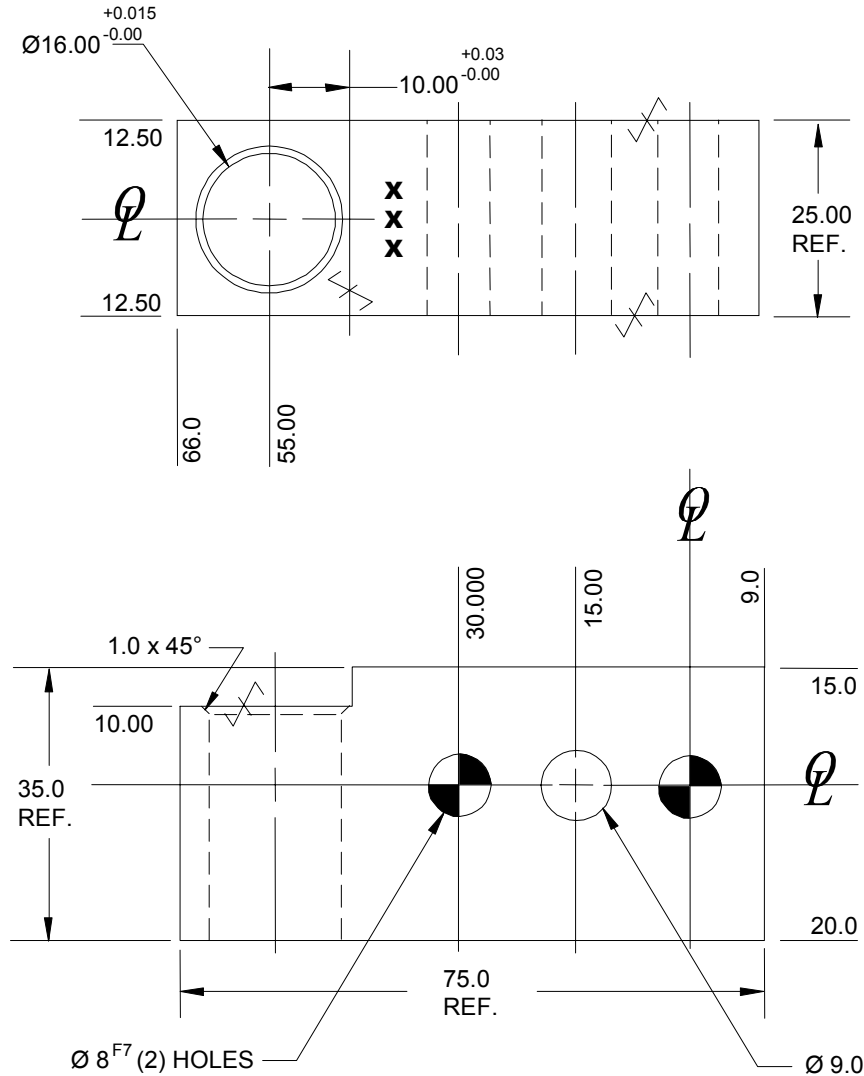
# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR276M, APR277M

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

A



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR276M	STEEL / ASTM A-36	0.41
APR277M	SS type 303 or 304	0.41

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR280M THRU APR283M

GLOBAL STANDARD COMPONENTS

# NAAMS



Assembly

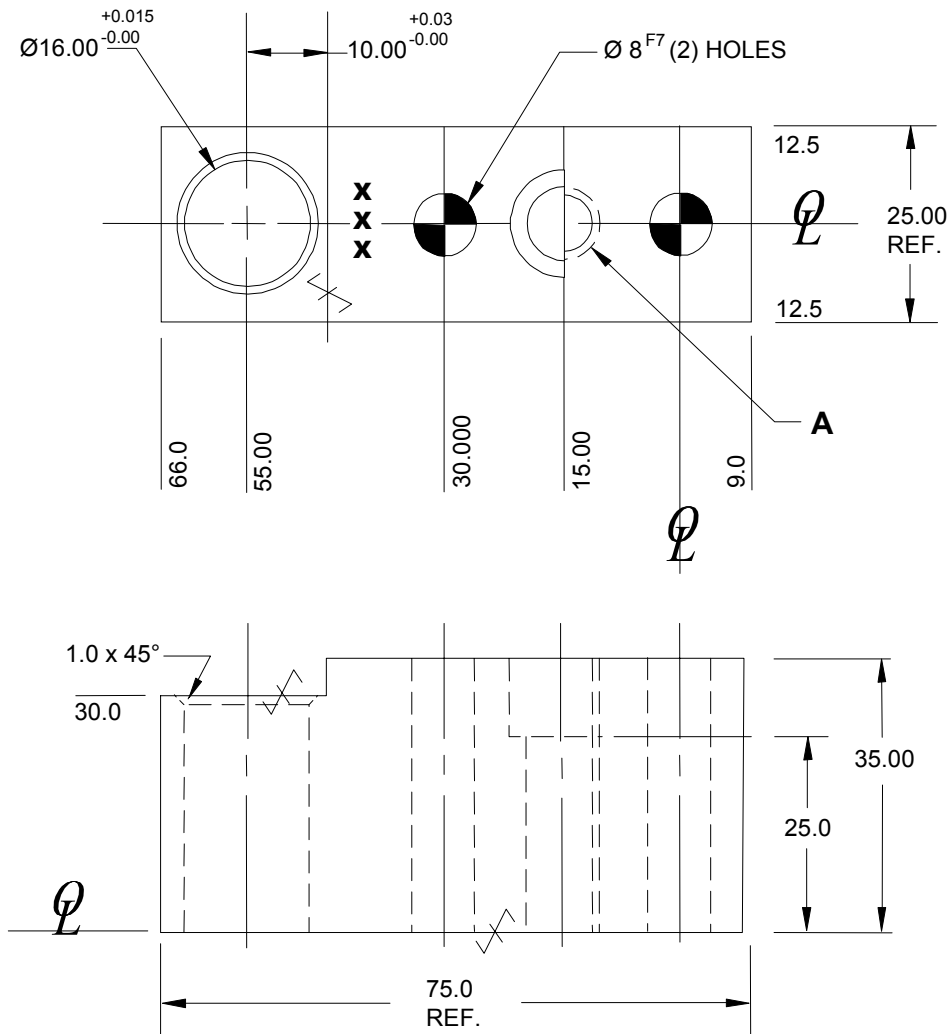
02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

A



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	A	MATERIAL	WT. kg
APR280M	M8 x 1.25	STEEL / ASTM A-36	0.40
APR281M	M8 x 1.25	SS type 303 or 304	0.40
APR282M	DRILL & C/BORE FOR M8 SHCS	STEEL / ASTM A-36	0.40
APR283M	DRILL & C/BORE FOR M8 SHCS	SS type 303 or 304	0.40

# LOCATING PIN RETAINER (FULL METRIC) 20 mm SERIES APR241M, APR242M

GLOBAL STANDARD COMPONENTS



Assembly

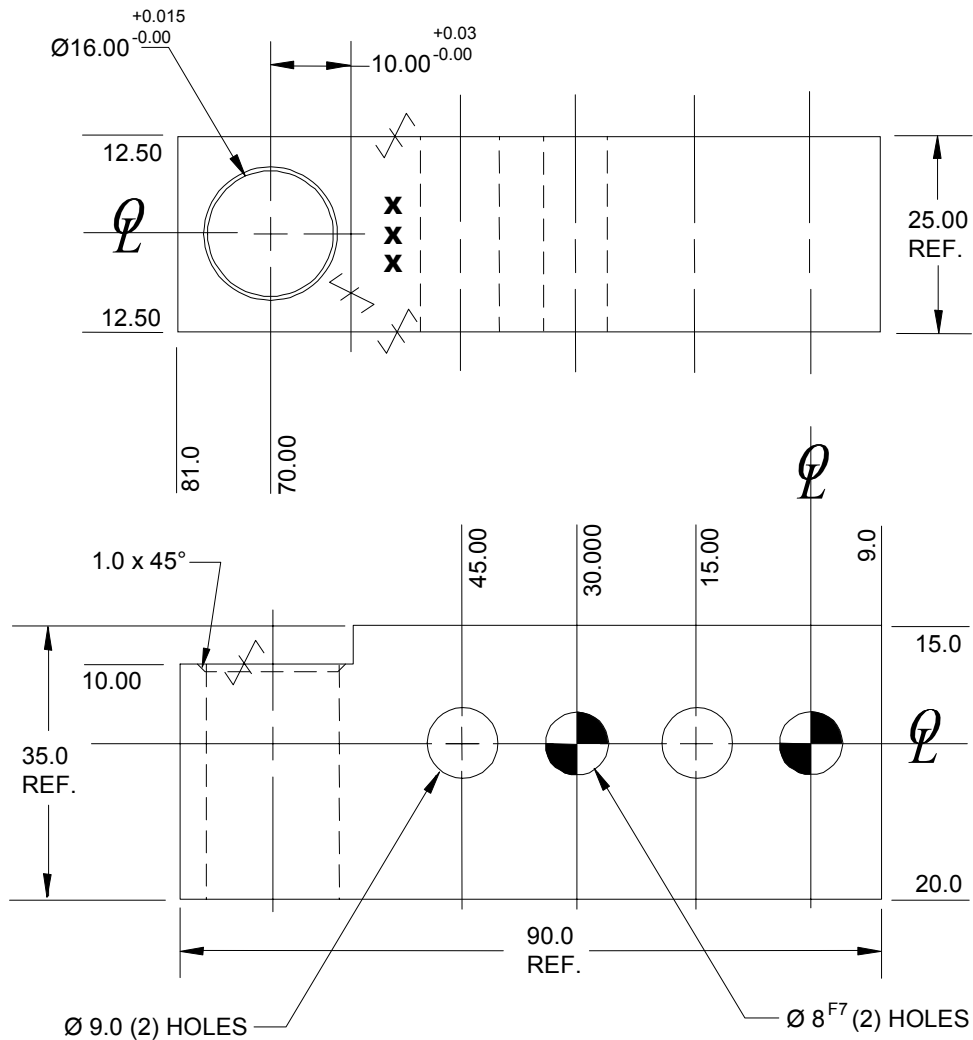
02/12/14

Tolerances: 1 PLACE  $\pm 0.3$   
2 PLACE  $\pm 0.03$   
3 PLACE  $\pm 0.020$

✓ SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO  $\varnothing$  WITHIN 0.015 T.I.R.

NOTES: IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.  
BLACK OXIDE FINISH.  
NO BLACK OXIDE FINISH TO "SS TYPE" COMPONENTS

A



SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

NAAMS CODE	MATERIAL	WT. kg
APR241M	STEEL / ASTM A-36	0.52
APR242M	SS type 303 or 304	0.52