

LOCATING PINS AND RETAINERS COMPONENTS INDEX

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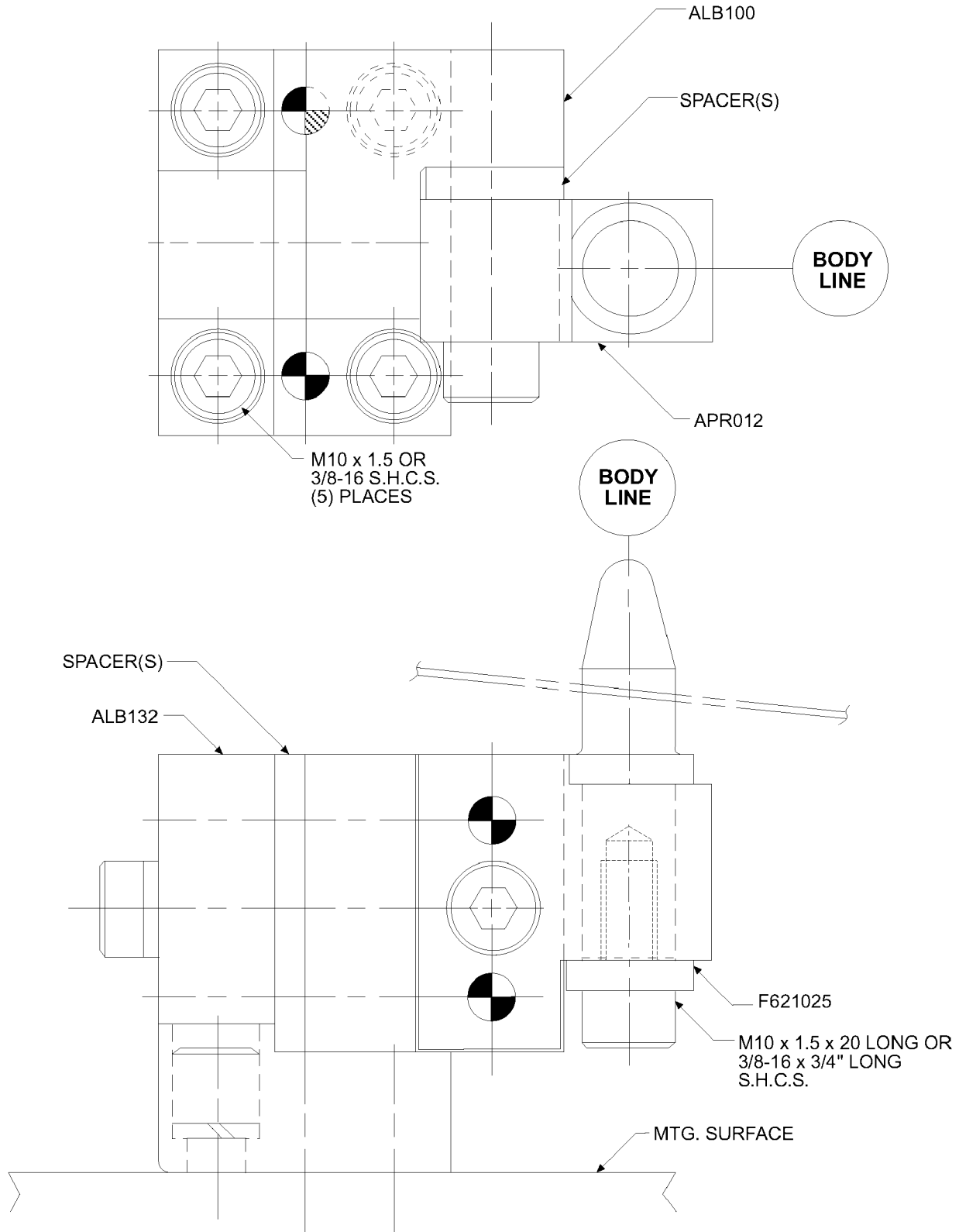
LOCATING PINS AND RETAINERS COMPONENTS INDEX

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I-31	08/29/07	APE061–APE199	Locating Pin for 6 x 12 mm Thru 19 x 25 mm Slotted Holes
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I-50	08/29/07	APR077M–APR078M	Locating Pin Retainer (Full Metric) 20mm Series
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LOCATING PINS AND RETAINERS COMPONENTS INDEX

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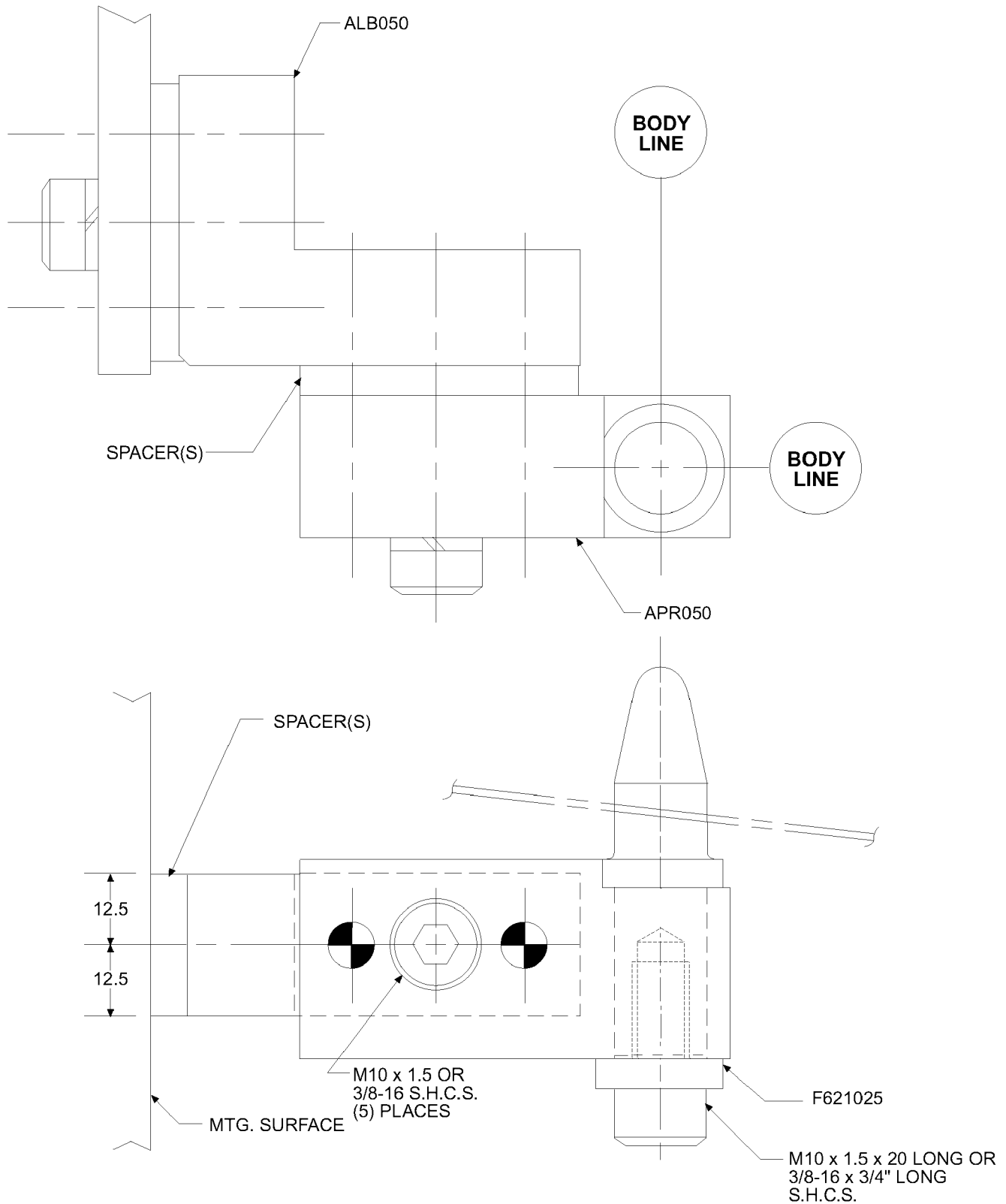
TYPICAL LOCATING PIN RETAINER ASSEMBLY



B

A
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TYPICAL LOCATING PIN RETAINER ASSEMBLY



B
A

LOCATING PIN RETAINERS (FULL METRIC)

APR010M, 011M, 012M, 013M

GLOBAL STANDARD COMPONENTS



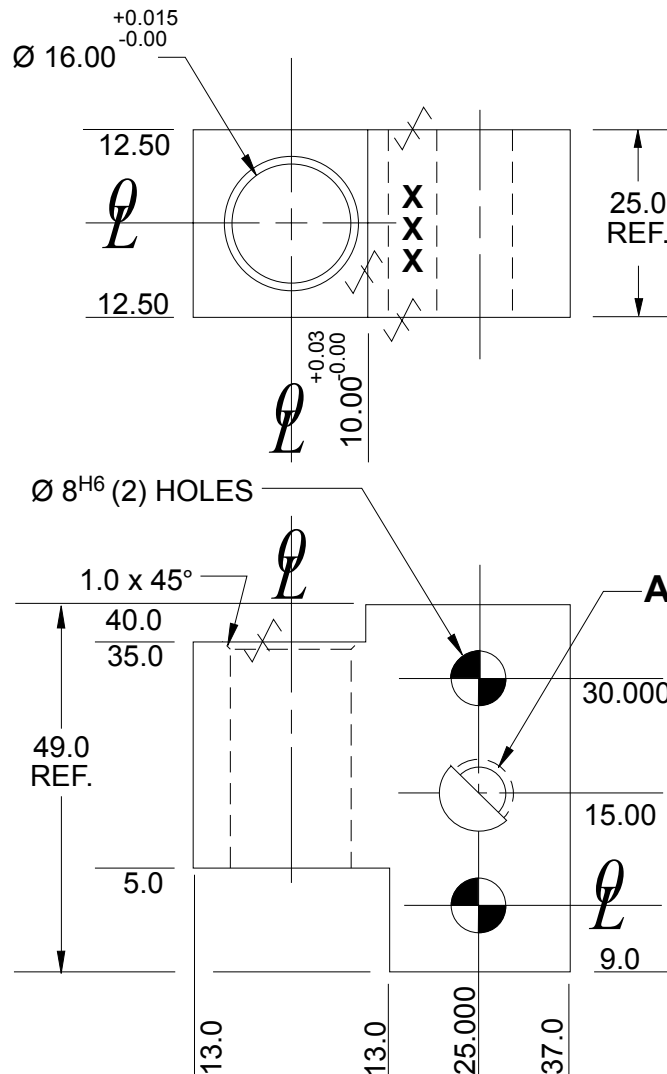
Assembly

08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.
 BLACK OXIDE FINISH.



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

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LOCATING PIN RETAINERS (FULL METRIC) APR020M, 021M

GLOBAL STANDARD COMPONENTS



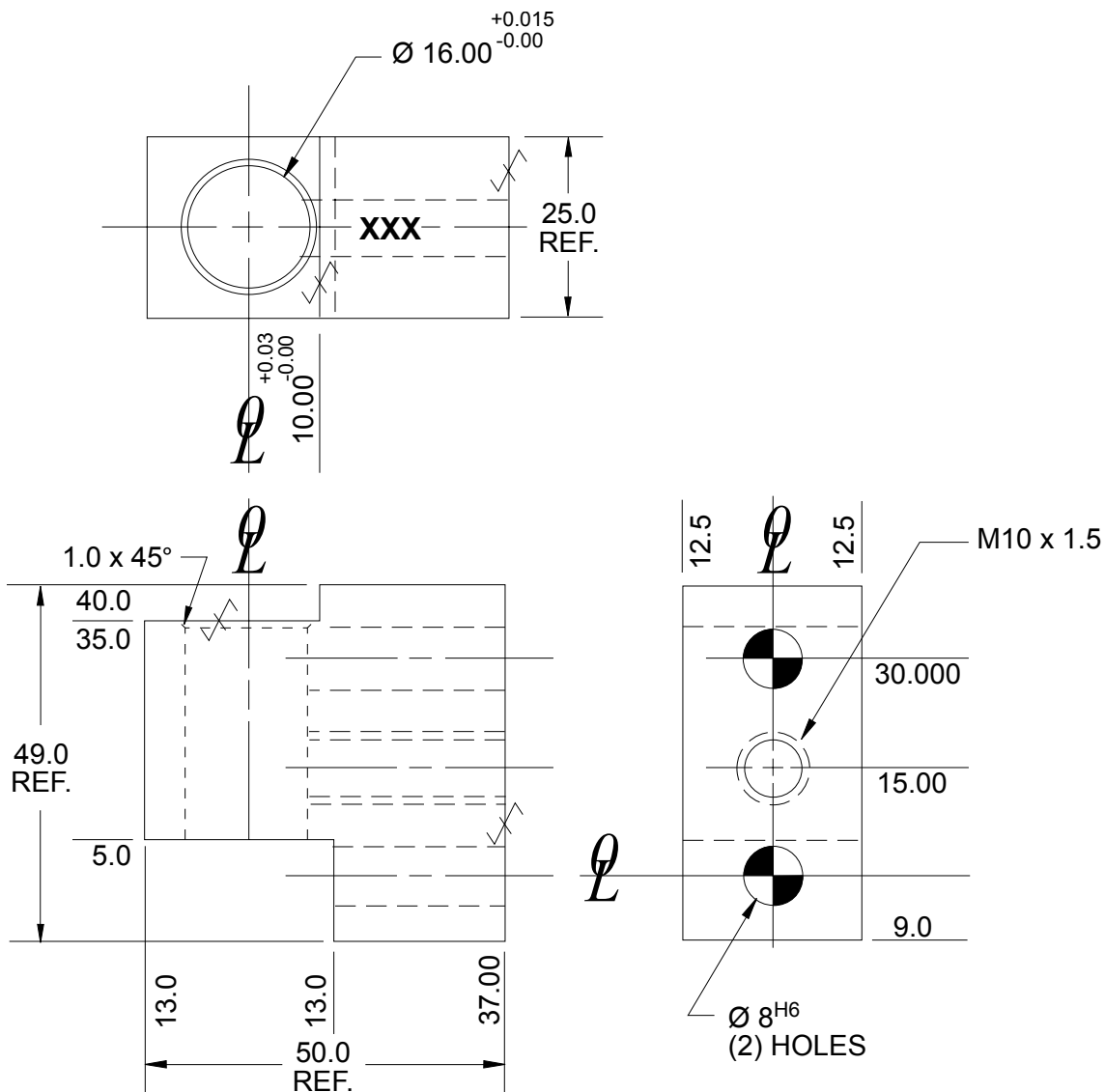
Assembly

08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.
BLACK OXIDE FINISH.



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

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

GLOBAL STANDARD COMPONENTS



Assembly

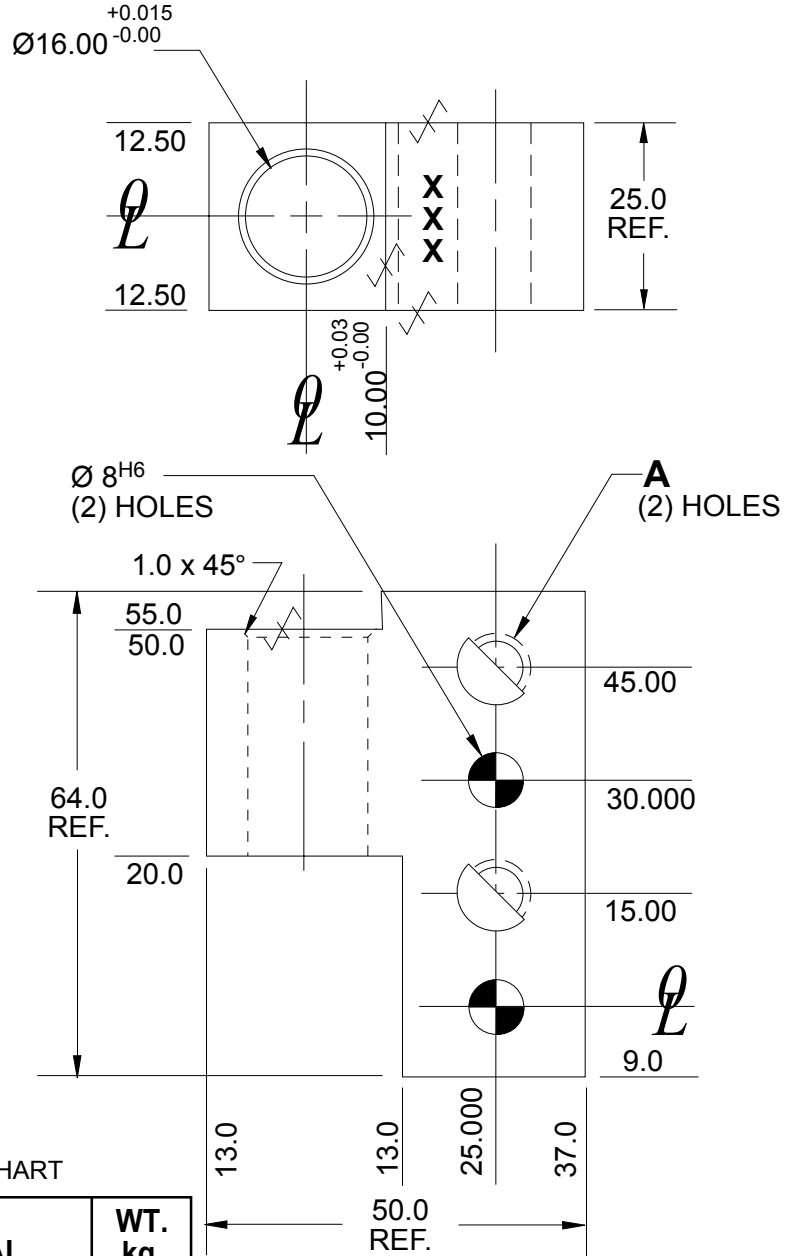
08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.
BLACK OXIDE FINISH.

A



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

D
B
C

LOCATING PIN RETAINERS (FULL METRIC) APR040M, 041M

GLOBAL STANDARD COMPONENTS



Assembly

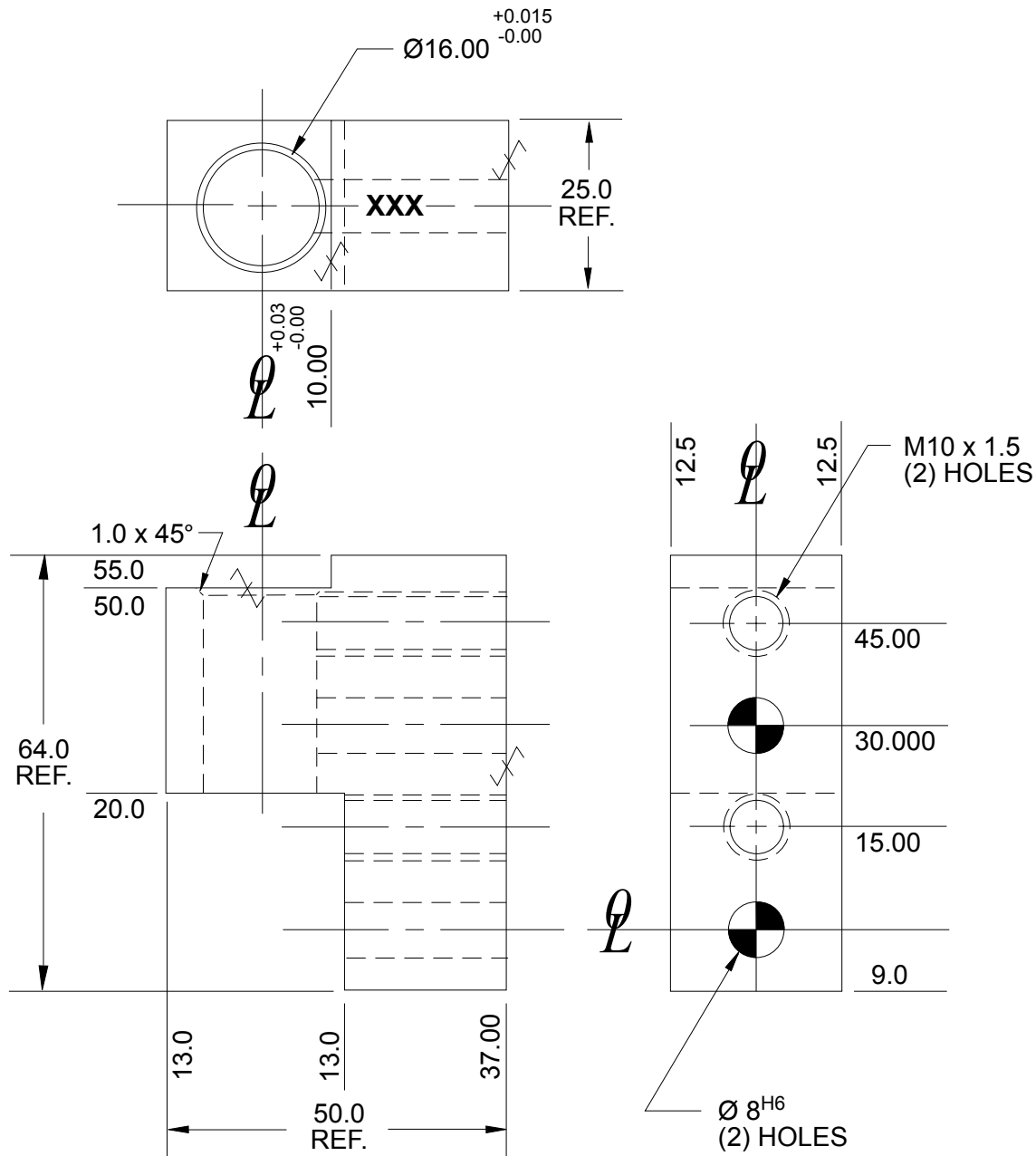
08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.

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



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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

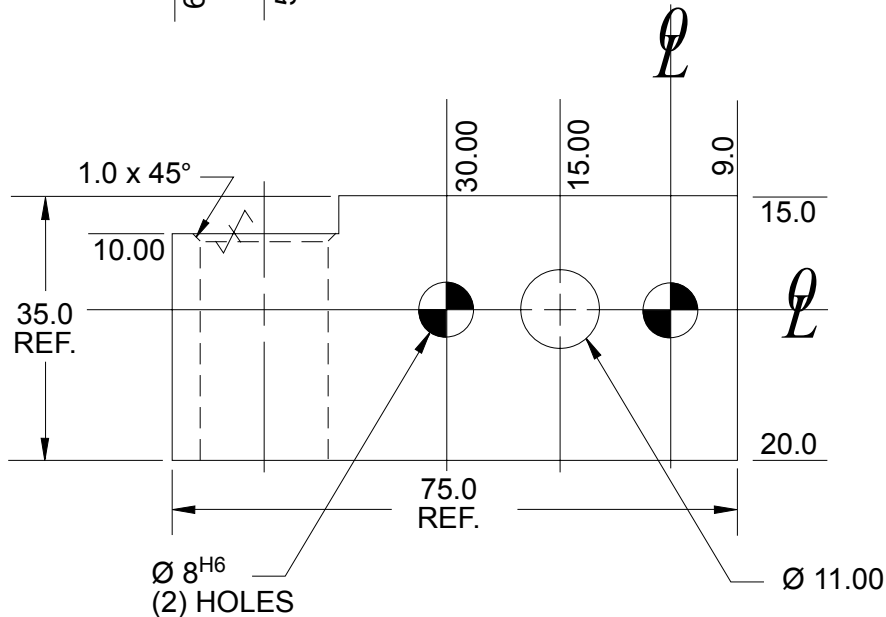
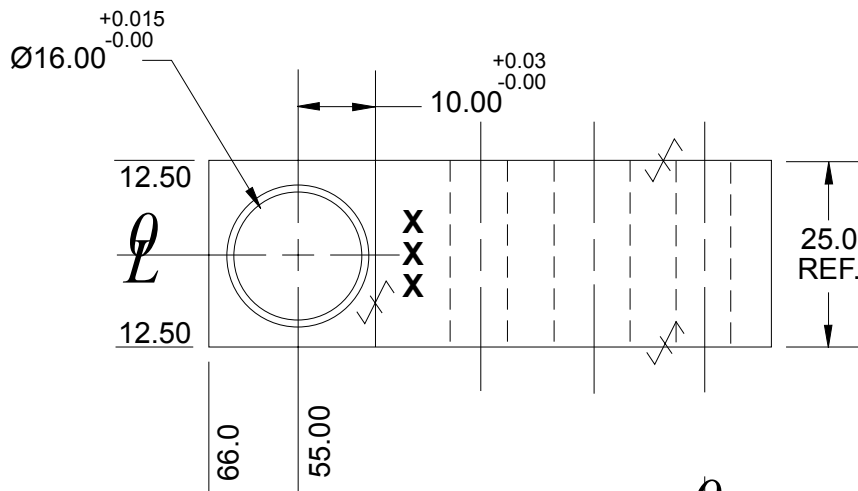
08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.020
BETWEEN DOWELS ± 0.015

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

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.
BLACK OXIDE FINISH.

A



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

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

GLOBAL STANDARD COMPONENTS



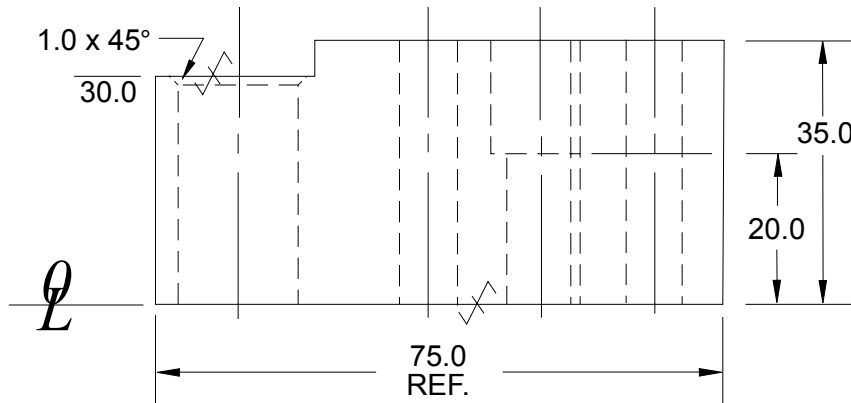
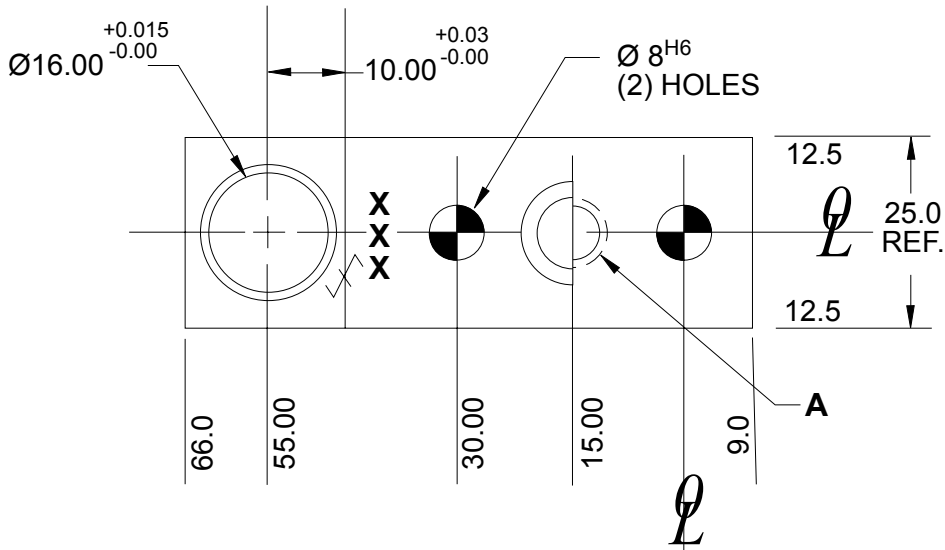
Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.020
BETWEEN DOWELS ± 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.

A



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

D
B
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LOCATING PIN RETAINERS (FULL METRIC) APR070M, 071M

GLOBAL STANDARD COMPONENTS



Assembly

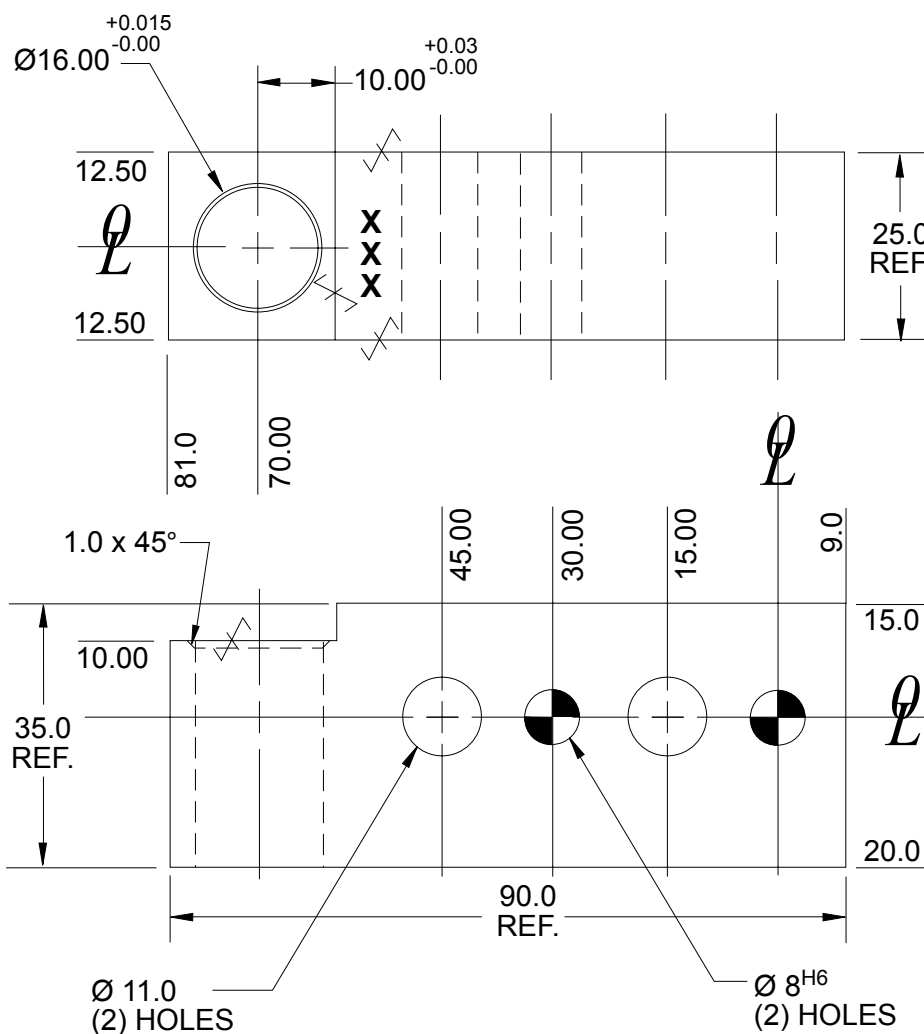
08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.020
BETWEEN DOWELS ± 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.

A



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

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

GLOBAL STANDARD COMPONENTS



Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

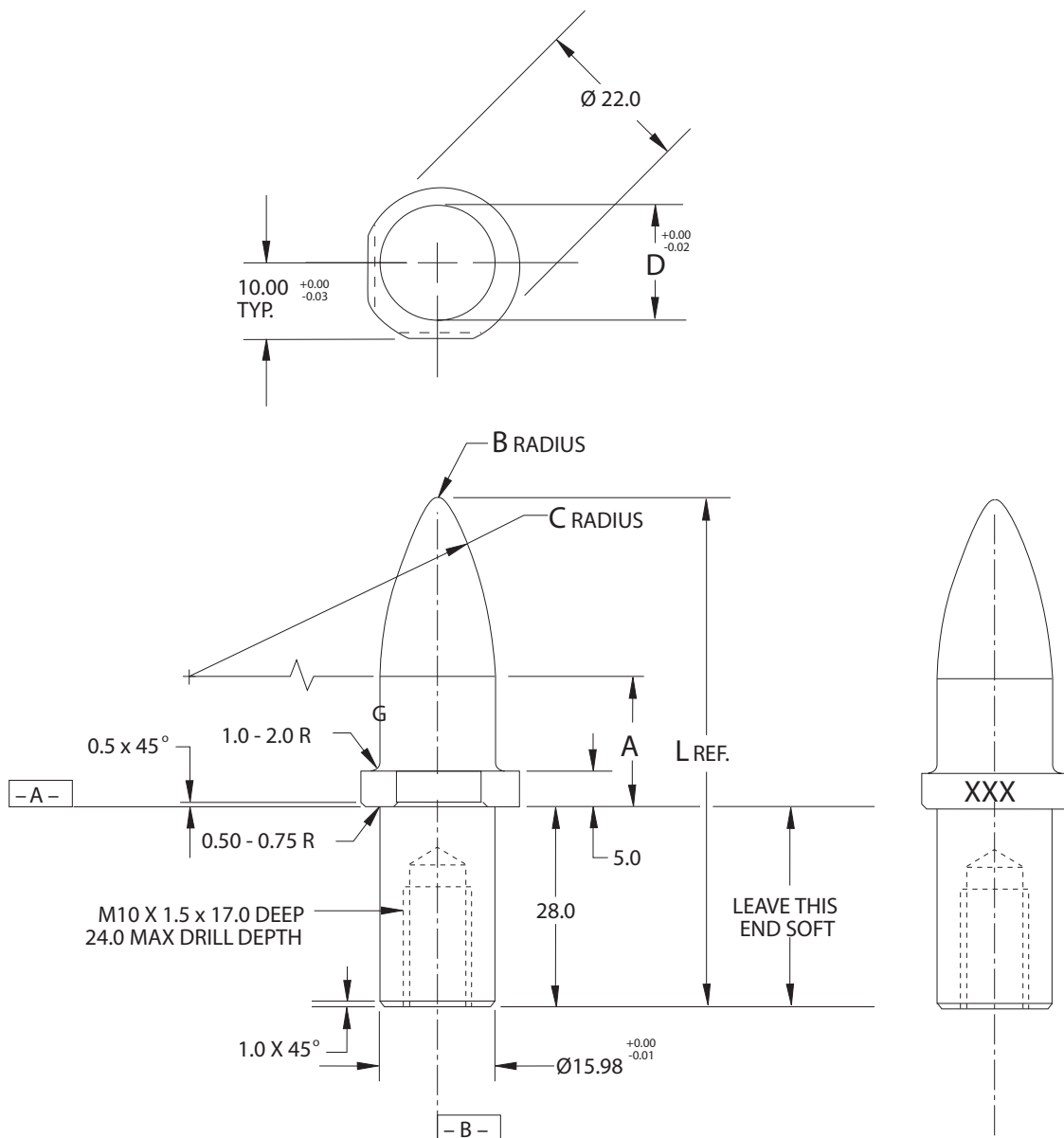
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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
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D
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TABULATED INFORMATION ON FOLLOWING PAGE

LOCATING PIN

6 mm THRU 19 mm DIAMETER

(FULL METRIC)

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

NAAMS CODE	A	L	WT. kg
APS061M	15.0	51.8	0.05
APS062M	20.0	56.8	0.05
APS063M	30.0	66.8	0.05
APS064M	40.0	76.8	0.05
APS065M	50.0	86.8	0.06
APS066M	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
APS081M	15.0	55.1	0.05
APS082M	20.0	60.1	0.05
APS083M	30.0	70.1	0.06
APS084M	40.0	80.1	0.06
APS085M	50.0	90.1	0.06
APS086M	60.0	100.1	0.07
APS087M	70.0	110.1	0.07
APS088M	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
APS101M	15.0	57.4	0.06
APS102M	20.0	62.4	0.06
APS103M	30.0	72.4	0.07
APS104M	40.0	82.4	0.07
APS105M	50.0	92.4	0.08
APS106M	60.0	102.4	0.08
APS107M	70.0	112.4	0.09
APS108M	80.0	122.4	0.10
APS109M	90.0	132.4	0.10
APS100M	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
APS121M	15.0	60.8	0.07
APS122M	20.0	65.8	0.07
APS123M	30.0	75.8	0.08
APS124M	40.0	85.8	0.09
APS125M	50.0	95.8	0.10
APS126M	60.0	105.8	0.11
APS127M	70.0	115.8	0.12
APS128M	80.0	125.8	0.13
APS129M	90.0	135.8	0.13
APS120M	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
APS131M	15.0	62.4	0.07
APS132M	20.0	67.4	0.07
APS133M	30.0	77.4	0.08
APS134M	40.0	87.4	0.09
APS135M	50.0	97.4	0.10
APS136M	60.0	107.4	0.11
APS137M	70.0	117.4	0.12
APS138M	80.0	127.4	0.13
APS139M	90.0	137.4	0.14
APS130M	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
APS161M	15.0	67.5	0.09
APS162M	20.0	72.5	0.09
APS163M	30.0	82.5	0.11
APS164M	40.0	92.5	0.13
APS165M	50.0	102.5	0.14
APS166M	60.0	112.5	0.16
APS167M	70.0	122.5	0.17
APS168M	80.0	132.5	0.19
APS169M	90.0	142.5	0.20
APS160M	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
APS191M	15.0	66.8	0.10
APS192M	20.0	71.8	0.12
APS193M	30.0	81.8	0.14
APS194M	40.0	91.8	0.16
APS195M	50.0	101.8	0.18
APS196M	60.0	111.8	0.20
APS197M	70.0	121.8	0.22
APS198M	80.0	131.8	0.24
APS199M	90.0	141.8	0.27
APS190M	100.0	151.8	0.29

A

B

LOCATING PIN 25mm DIAMETER (FULL METRIC)

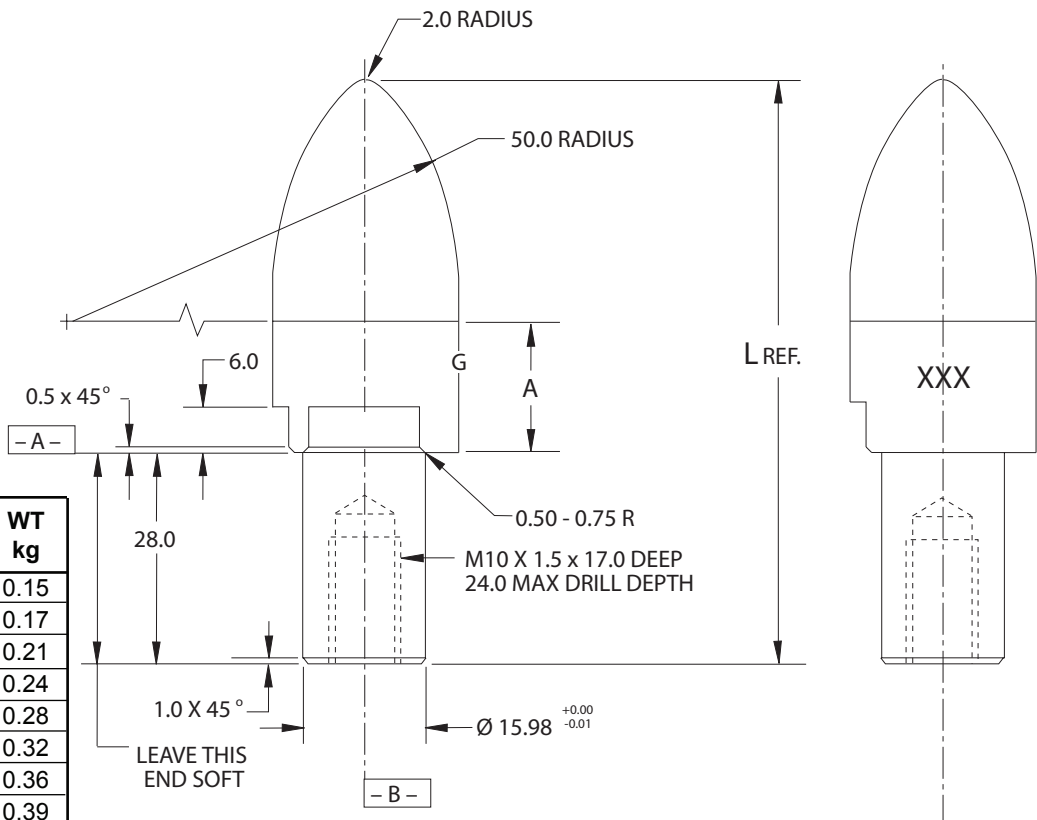
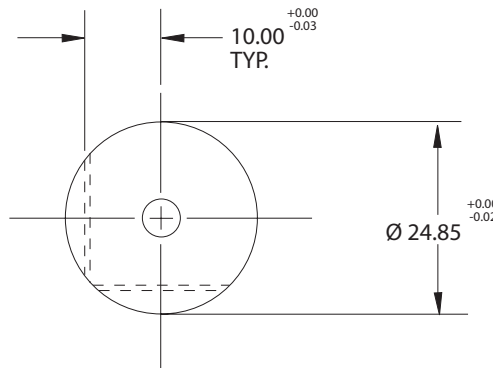
Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.015

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
APS251M	15.0	74.8	0.15
APS252M	20.0	79.8	0.17
APS253M	30.0	89.8	0.21
APS254M	40.0	99.8	0.24
APS255M	50.0	109.8	0.28
APS256M	60.0	119.8	0.32
APS257M	70.0	129.8	0.36
APS258M	80.0	139.8	0.39
APS259M	90.0	149.8	0.43
APS250M	100.0	159.8	0.47

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I

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

Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.015

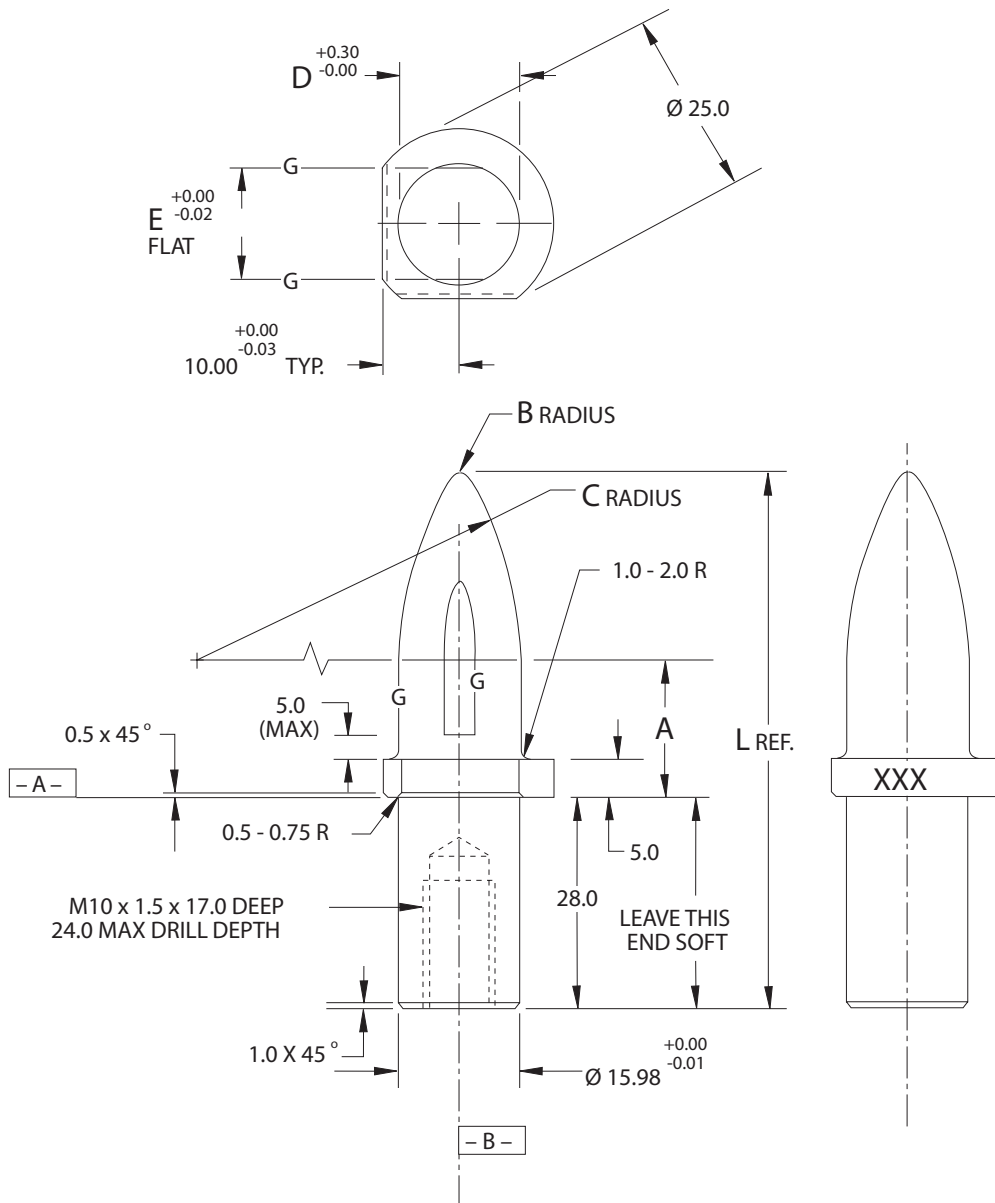
ALL MACHINED SURFACES TO FLAT.
 PARALLEL AND PERPENDICULAR TO WITHIN
 0.015 T.I.R. TO DATUMS A AND B AND
 CONCENTRIC TO WITHIN 0.03 T.I.R.

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
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 D
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 F

TABULATED INFORMATION ON FOLLOWING PAGE

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

GLOBAL STANDARD COMPONENTS



Assembly

02/13/08

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
APE061M	15.0	52.9	0.05
APE062M	20.0	57.9	0.05
APE063M	30.0	67.9	0.05
APE064M	40.0	77.9	0.06
APE065M	50.0	87.9	0.06
APE066M	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
APE081M	15.0	56.0	0.05
APE082M	20.0	61.0	0.06
APE083M	30.0	71.0	0.06
APE084M	40.0	81.0	0.07
APE085M	50.0	91.0	0.07
APE086M	60.0	101.0	0.08
APE087M	70.0	111.0	0.08
APE088M	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
APE101M	15.0	58.2	0.06
APE102M	20.0	63.2	0.06
APE103M	30.0	73.2	0.07
APE104M	40.0	83.2	0.08
APE105M	50.0	93.2	0.08
APE106M	60.0	103.2	0.09
APE107M	70.0	113.2	0.10
APE108M	80.0	123.2	0.10
APE109M	90.0	133.2	0.11
APE100M	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
APE121M	15.0	62.2	0.07
APE122M	20.0	67.2	0.07
APE123M	30.0	77.2	0.08
APE124M	40.0	87.2	0.09
APE125M	50.0	97.2	0.10
APE126M	60.0	107.2	0.11
APE127M	70.0	117.2	0.12
APE128M	80.0	127.2	0.13
APE129M	90.0	137.2	0.14
APE120M	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
APE131M	15.0	63.1	0.07
APE132M	20.0	68.1	0.08
APE133M	30.0	78.1	0.09
APE134M	40.0	88.1	0.10
APE135M	50.0	98.1	0.11
APE136M	60.0	108.1	0.12
APE137M	70.0	118.1	0.13
APE138M	80.0	128.1	0.14
APE139M	90.0	138.1	0.16
APE130M	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
APE161M	15.0	68.0	0.09
APE162M	20.0	73.0	0.10
APE163M	30.0	83.0	0.11
APE164M	40.0	93.0	0.13
APE165M	50.0	103.0	0.15
APE166M	60.0	113.0	0.16
APE167M	70.0	123.0	0.18
APE168M	80.0	133.0	0.20
APE169M	90.0	143.0	0.21
APE160M	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
APE191M	15.0	67.2	0.11
APE192M	20.0	72.2	0.12
APE193M	30.0	82.2	0.14
APE194M	40.0	92.2	0.16
APE195M	50.0	102.2	0.19
APE196M	60.0	112.2	0.21
APE197M	70.0	122.2	0.23
APE198M	80.0	132.2	0.25
APE199M	90.0	142.2	0.28
APE190M	100.0	152.2	0.30

A

B

C

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

GLOBAL STANDARD COMPONENTS



Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

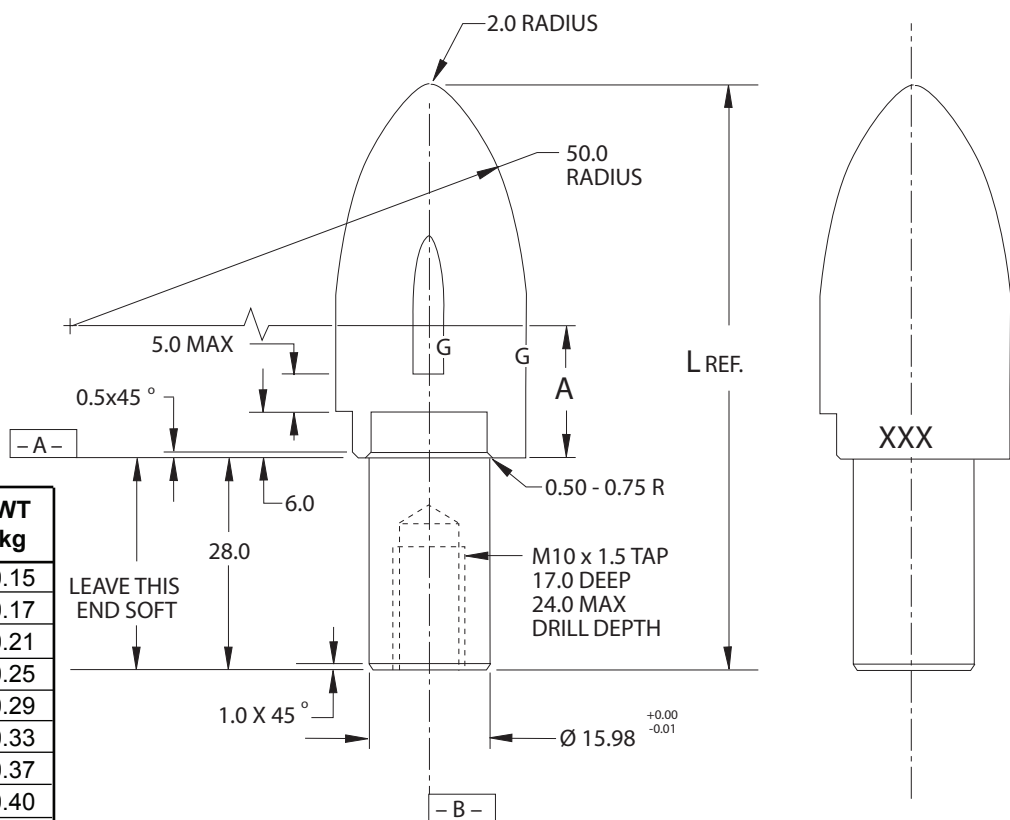
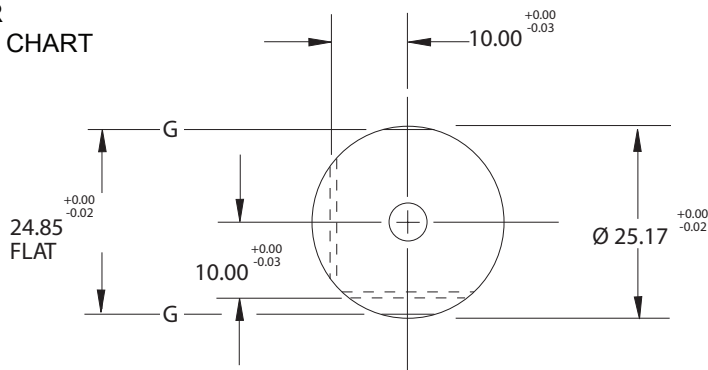
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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
APE251M	15.0	75.1	0.15
APE252M	20.0	80.1	0.17
APE253M	30.0	90.1	0.21
APE254M	40.0	100.1	0.25
APE255M	50.0	110.1	0.29
APE256M	60.0	120.1	0.33
APE257M	70.0	130.1	0.37
APE258M	80.0	140.1	0.40
APE259M	90.0	150.1	0.44
APE250M	100.0	160.1	0.48

A
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H

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

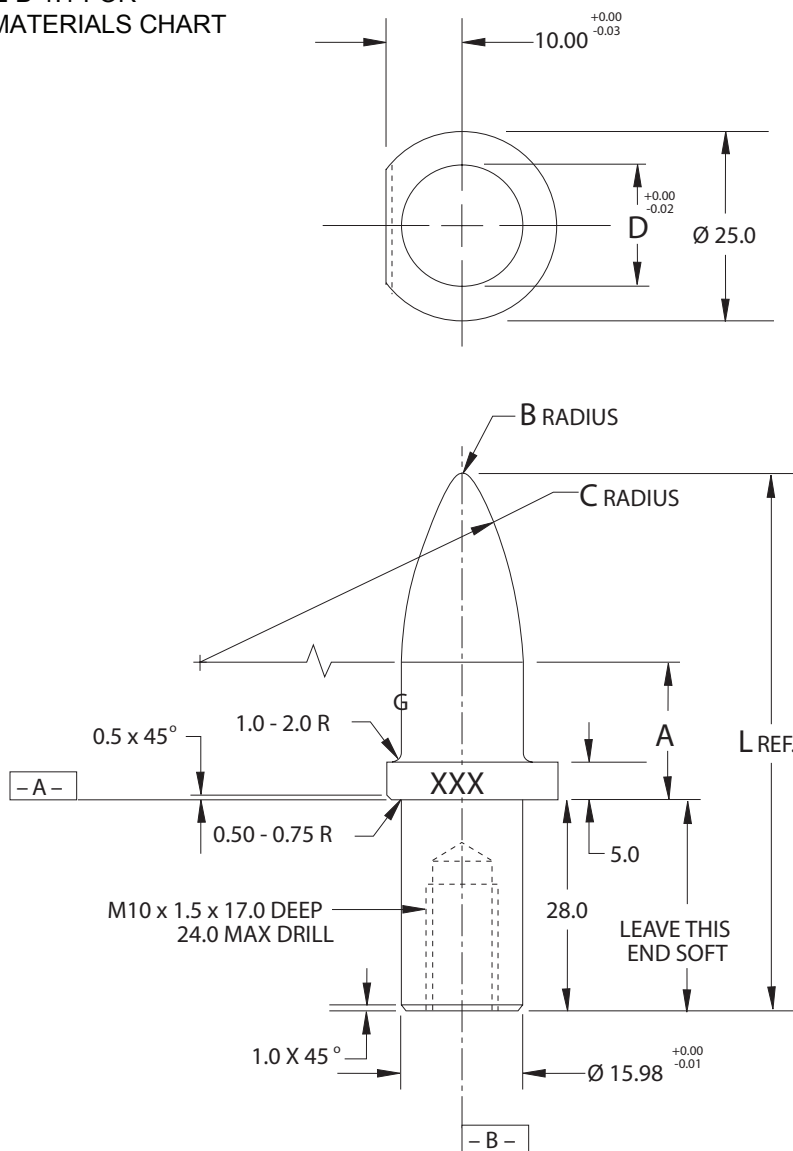
Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.015

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



NOTE: DIMENSIONS FOR THIS SERIES OF PINS ARE THE SAME AS FOR THE LOCATING PINS. 6mm THRU 19mm DIAMETER EXCEPT FOR TABULATED INFORMATION ON THE FOLLOWING PAGE

A
E
G

B
D
C
F

RESPOT PIN

6 mm THRU 19 mm DIAMETER

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

NAAMS CODE	A	L	WT. kg
ARP061M	15.0	51.8	0.05
ARP062M	20.0	56.8	0.05
ARP063M	30.0	66.8	0.05
ARP064M	40.0	76.8	0.05
ARP065M	50.0	86.8	0.05
ARP066M	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
ARP081M	15.0	55.1	0.05
ARP082M	20.0	60.1	0.05
ARP083M	30.0	70.1	0.06
ARP084M	40.0	80.1	0.06
ARP085M	50.0	90.1	0.06
ARP086M	60.0	100.1	0.07
ARP087M	70.0	110.1	0.07
ARP088M	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
ARP101M	15.0	57.4	0.06
ARP102M	20.0	62.4	0.06
ARP103M	30.0	72.4	0.07
ARP104M	40.0	82.4	0.07
ARP105M	50.0	92.4	0.08
ARP106M	60.0	102.4	0.08
ARP107M	70.0	112.4	0.09
ARP108M	80.0	122.4	0.09
ARP109M	90.0	132.4	0.10
ARP100M	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
ARP121M	15.0	60.8	0.07
ARP122M	20.0	65.8	0.07
ARP123M	30.0	75.8	0.08
ARP124M	40.0	85.8	0.08
ARP125M	50.0	95.8	0.09
ARP126M	60.0	105.8	0.10
ARP127M	70.0	115.8	0.11
ARP128M	80.0	125.8	0.12
ARP129M	90.0	135.8	0.13
ARP120M	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
ARP131M	15.0	62.4	0.07
ARP132M	20.0	67.4	0.07
ARP133M	30.0	77.4	0.08
ARP134M	40.0	87.4	0.09
ARP135M	50.0	97.4	0.10
ARP136M	60.0	107.4	0.11
ARP137M	70.0	117.4	0.12
ARP138M	80.0	127.4	0.13
ARP139M	90.0	137.4	0.14
ARP130M	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
ARP161M	15.0	67.5	0.08
ARP162M	20.0	72.5	0.09
ARP163M	30.0	82.5	0.10
ARP164M	40.0	92.5	0.12
ARP165M	50.0	102.5	0.13
ARP166M	60.0	112.5	0.15
ARP167M	70.0	122.5	0.16
ARP168M	80.0	132.5	0.18
ARP169M	90.0	142.5	0.20
ARP160M	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
ARP191M	15.0	66.8	0.10
ARP192M	20.0	71.8	0.11
ARP193M	30.0	81.8	0.14
ARP194M	40.0	91.8	0.16
ARP195M	50.0	101.8	0.18
ARP196M	60.0	111.8	0.20
ARP197M	70.0	121.8	0.22
ARP198M	80.0	131.8	0.24
ARP199M	90.0	141.8	0.26
ARP190M	100.0	151.8	0.28

A

B

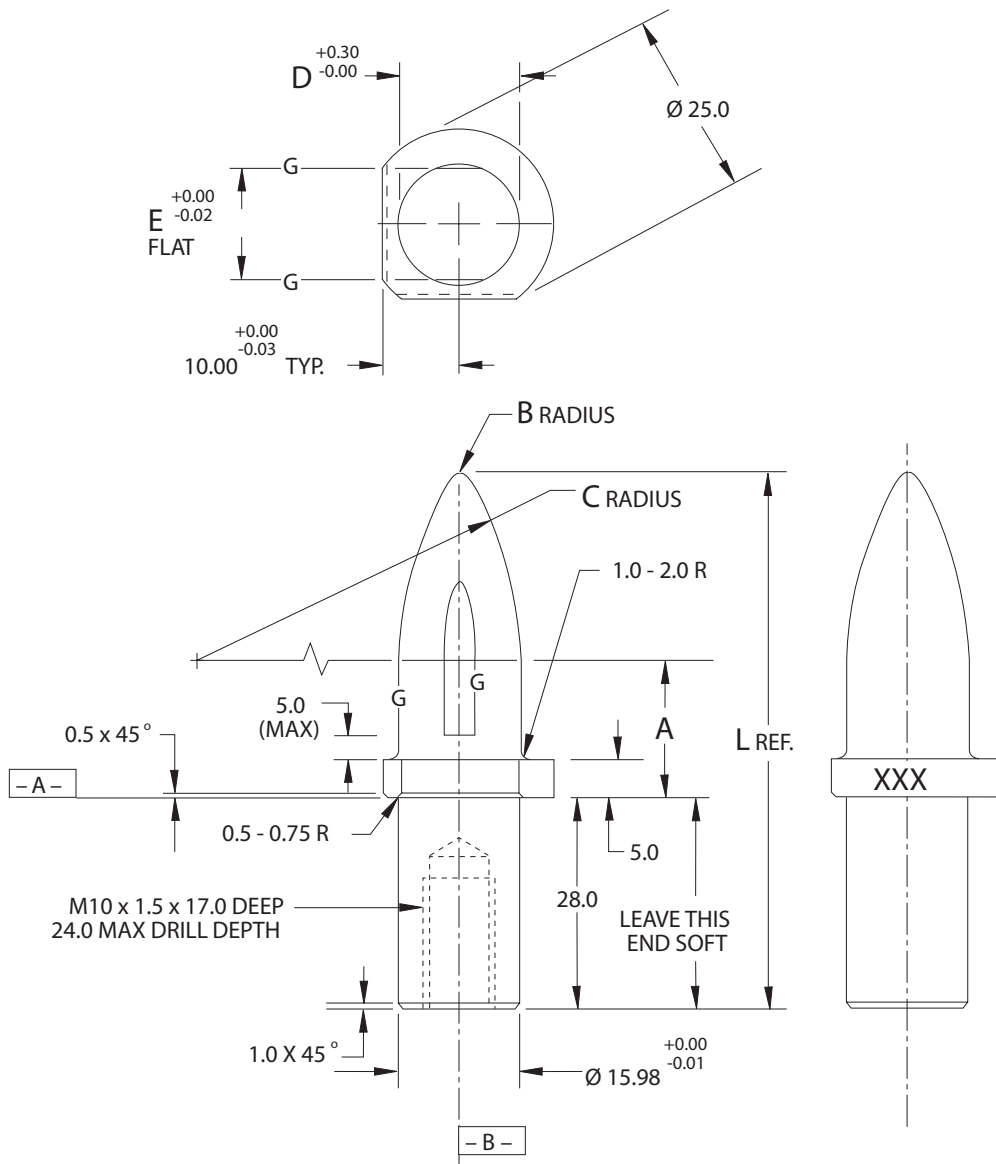
LOCATING PIN FOR 6 x 12 THRU 19 x 25 mm SLOTTED HOLES (FULL METRIC)

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

B
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F

TABULATED INFORMATION ON FOLLOWING PAGE

RESPOT PIN

FOR 6 x 12 THRU 19 x 25 mm TM

SLOTTED HOLES(FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

02/13/08

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
ARE061M	15.0	52.9	0.05
ARE062M	20.0	57.9	0.05
ARE063M	30.0	67.9	0.05
ARE064M	40.0	77.9	0.06
ARE065M	50.0	87.9	0.06
ARE066M	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
ARE081M	15.0	56.0	0.05
ARE082M	20.0	61.0	0.06
ARE083M	30.0	71.0	0.06
ARE084M	40.0	81.0	0.07
ARE085M	50.0	91.0	0.07
ARE086M	60.0	101.0	0.08
ARE087M	70.0	111.0	0.08
ARE088M	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
ARE101M	15.0	58.2	0.06
ARE102M	20.0	63.2	0.06
ARE103M	30.0	73.2	0.07
ARE104M	40.0	83.2	0.08
ARE105M	50.0	93.2	0.08
ARE106M	60.0	103.2	0.09
ARE107M	70.0	113.2	0.10
ARE108M	80.0	123.2	0.10
ARE109M	90.0	133.2	0.11
ARE100M	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
ARE121M	15.0	62.2	0.07
ARE122M	20.0	67.2	0.07
ARE123M	30.0	77.2	0.08
ARE124M	40.0	87.2	0.09
ARE125M	50.0	97.2	0.10
ARE126M	60.0	107.2	0.11
ARE127M	70.0	117.2	0.12
ARE128M	80.0	127.2	0.13
ARE129M	90.0	137.2	0.14
ARE120M	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
ARE131M	15.0	63.1	0.07
ARE132M	20.0	68.1	0.08
ARE133M	30.0	78.1	0.09
ARE134M	40.0	88.1	0.10
ARE135M	50.0	98.1	0.11
ARE136M	60.0	108.1	0.12
ARE137M	70.0	118.1	0.13
ARE138M	80.0	128.1	0.14
ARE139M	90.0	138.1	0.16
ARE130M	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
ARE161M	15.0	68.0	0.09
ARE162M	20.0	73.0	0.10
ARE163M	30.0	83.0	0.11
ARE164M	40.0	93.0	0.13
ARE165M	50.0	103.0	0.15
ARE166M	60.0	113.0	0.16
ARE167M	70.0	123.0	0.18
ARE168M	80.0	133.0	0.20
ARE169M	90.0	143.0	0.21
ARE160M	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
ARE191M	15.0	67.2	0.11
ARE192M	20.0	72.2	0.12
ARE193M	30.0	82.2	0.14
ARE194M	40.0	92.2	0.16
ARE195M	50.0	102.2	0.19
ARE196M	60.0	112.2	0.21
ARE197M	70.0	122.2	0.23
ARE198M	80.0	132.2	0.25
ARE199M	90.0	142.2	0.28
ARE190M	100.0	152.2	0.30

A

B

C

LOCATING PIN RETAINERS

APR010, 011, 012, 013

GLOBAL STANDARD COMPONENTS



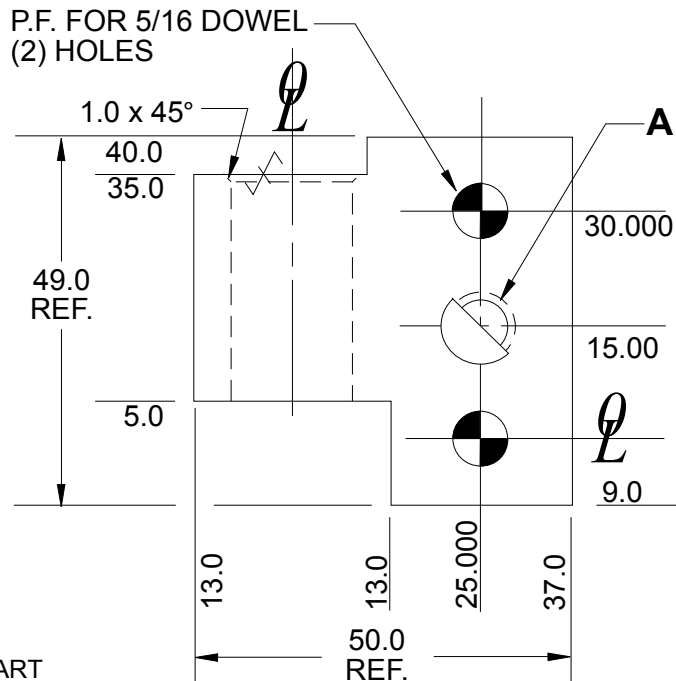
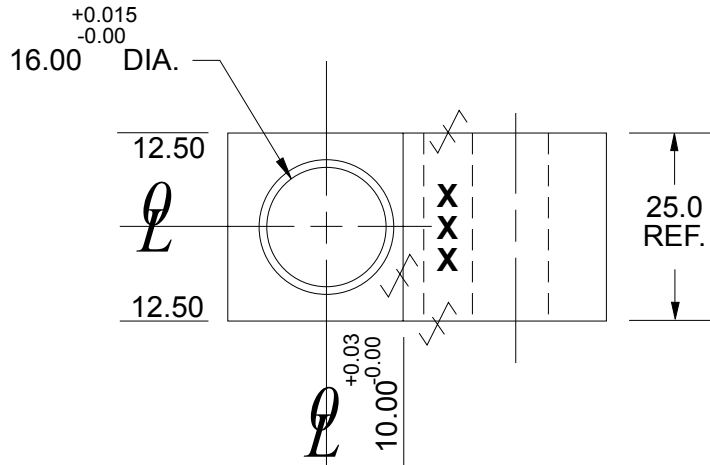
Assembly

08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.
BLACK OXIDE FINISH.



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

B

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C

D

E

LOCATING PIN RETAINERS APR020, 021

GLOBAL STANDARD COMPONENTS



Assembly

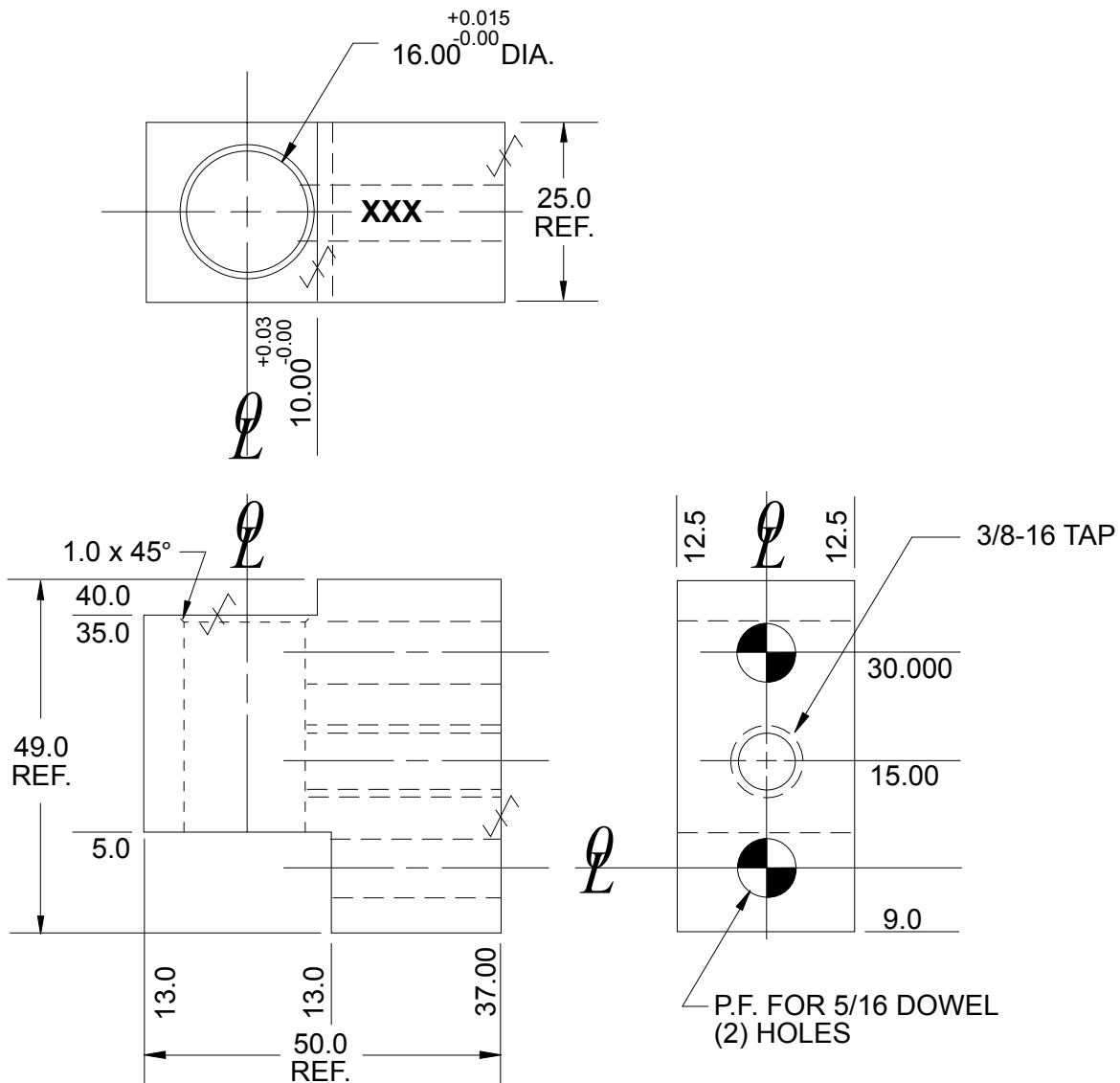
08/29/07

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: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN XXX.
BLACK OXIDE FINISH.

A



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

E


B

C

D

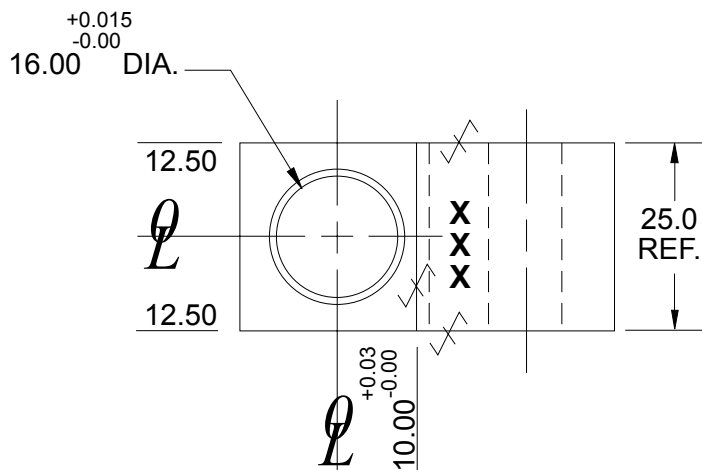
LOCATING PIN RETAINERS APR030, 031, 032, 033

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

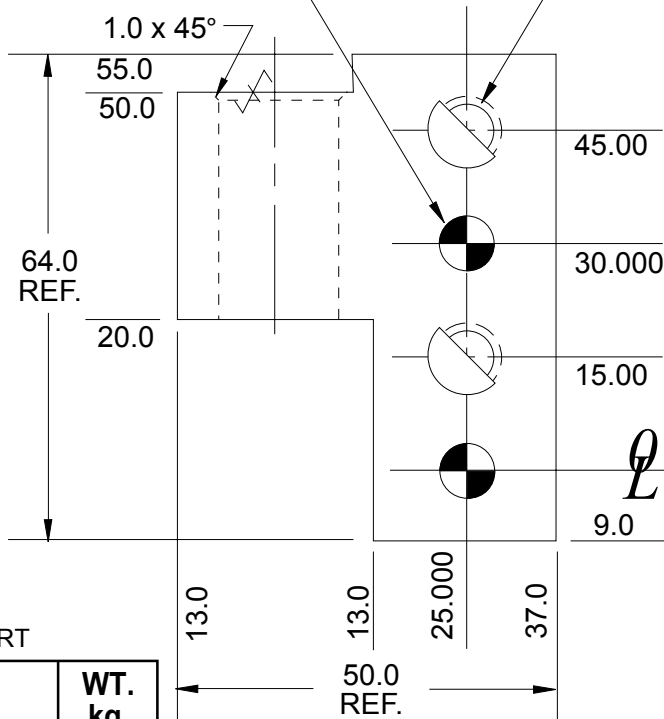
 SURFACES TO BE FLAT, PARALLEL & PERPENDICULAR TO Q WITHIN 0.015 T.I.R.

NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.
BLACK OXIDE FINISH.

A



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

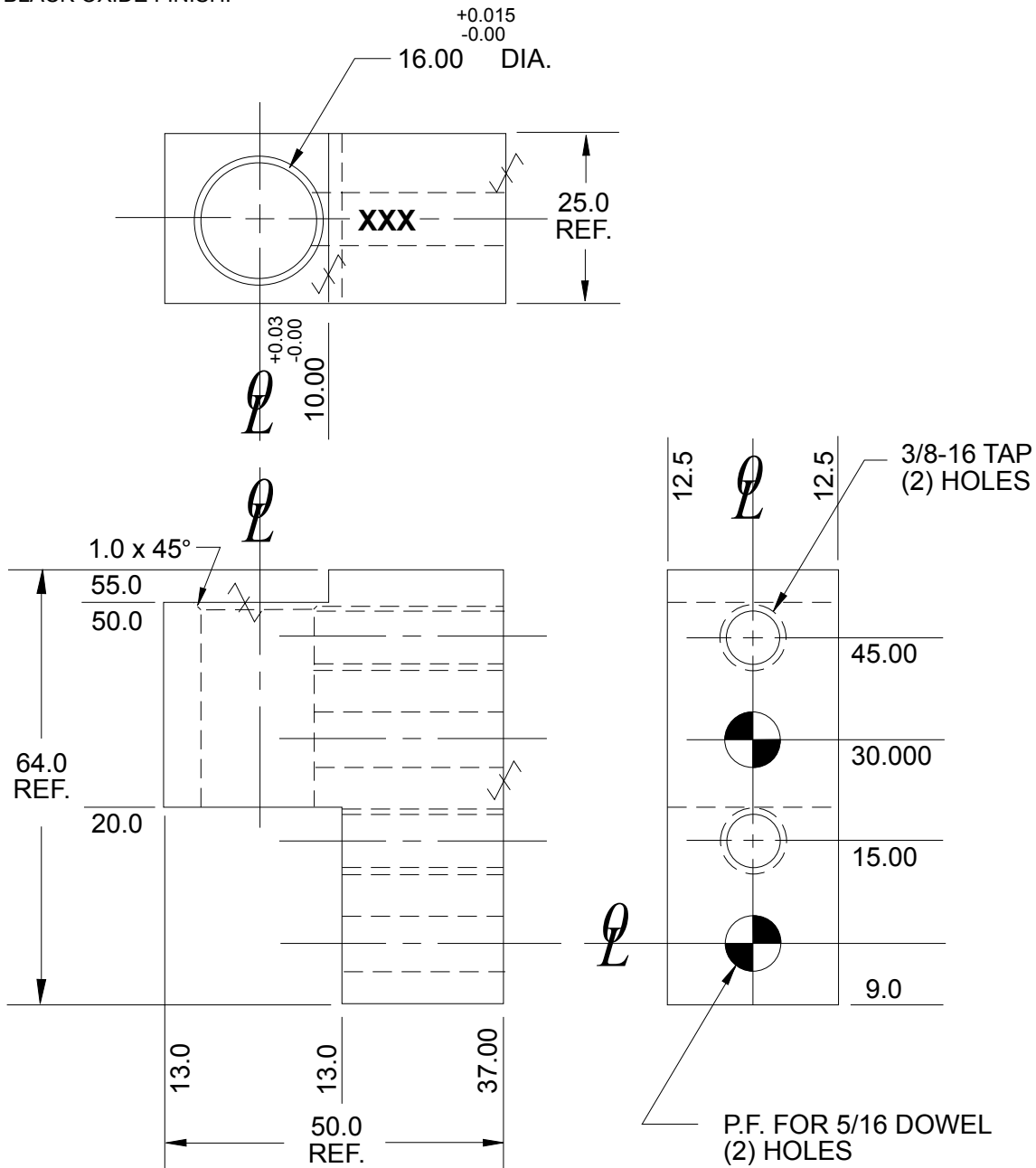
E
B
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D

LOCATING PIN RETAINERS APR040, 041

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.

NOTE: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.
 BLACK OXIDE FINISH.



A

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

E

B

C

D

LOCATING PIN RETAINERS APR050, 051

GLOBAL STANDARD COMPONENTS

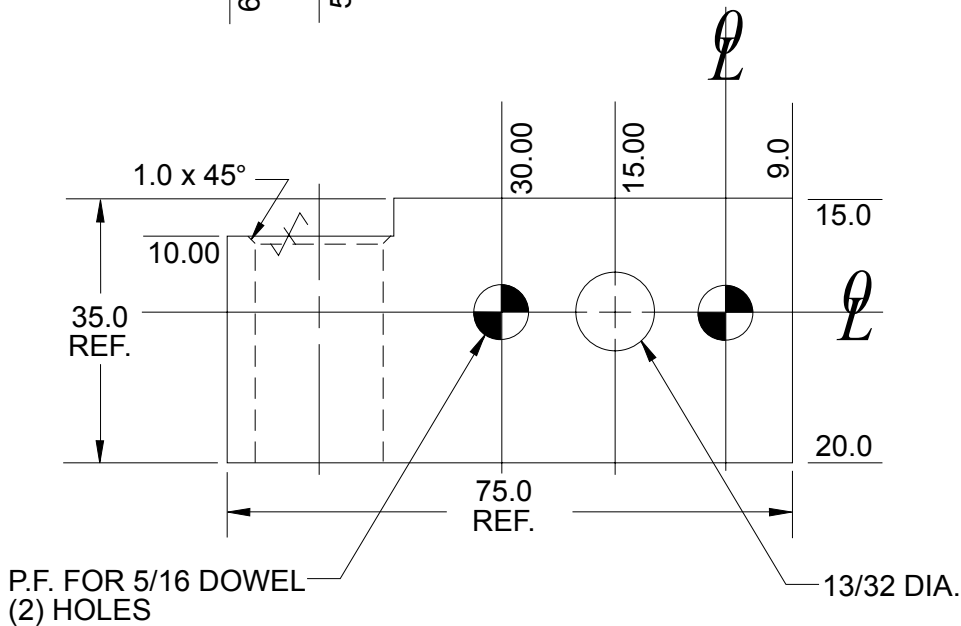
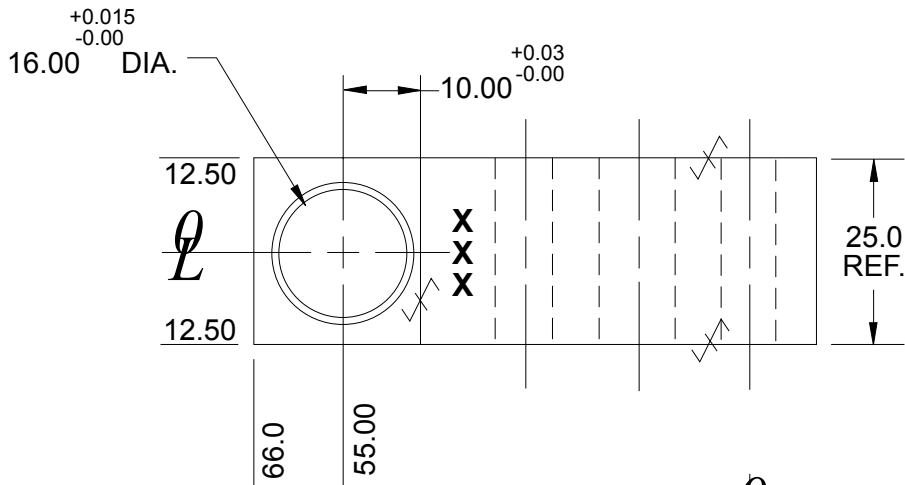


Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.020
BETWEEN DOWELS ± 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.



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

B

F

C


D

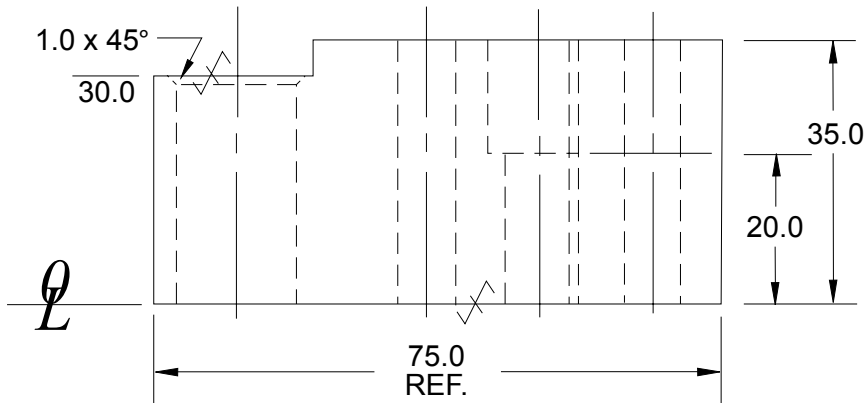
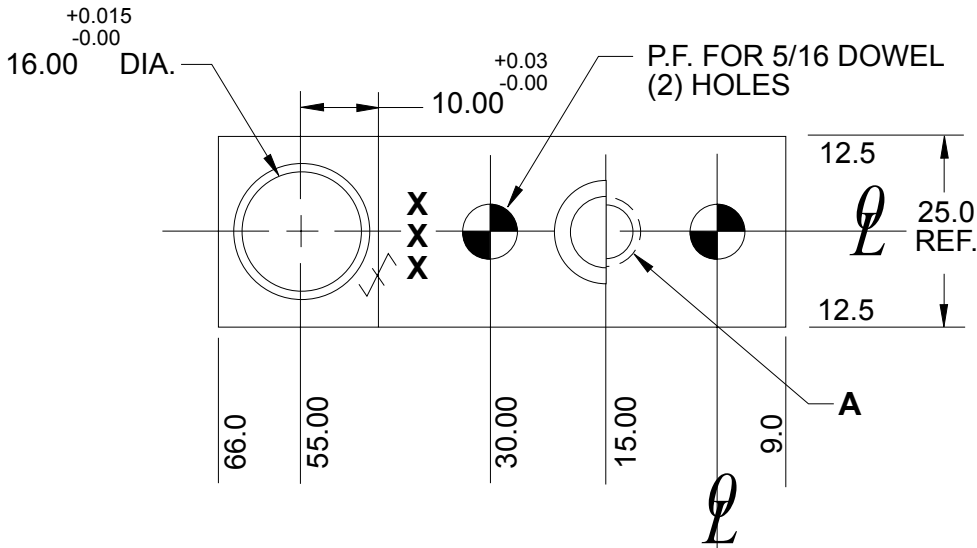
E

LOCATING PIN RETAINERS

APR060, 061, 062, 063

Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.020
 BETWEEN DOWELS ± 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.



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
B
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D
E
F

LOCATING PIN RETAINERS APR070, 071

GLOBAL STANDARD COMPONENTS



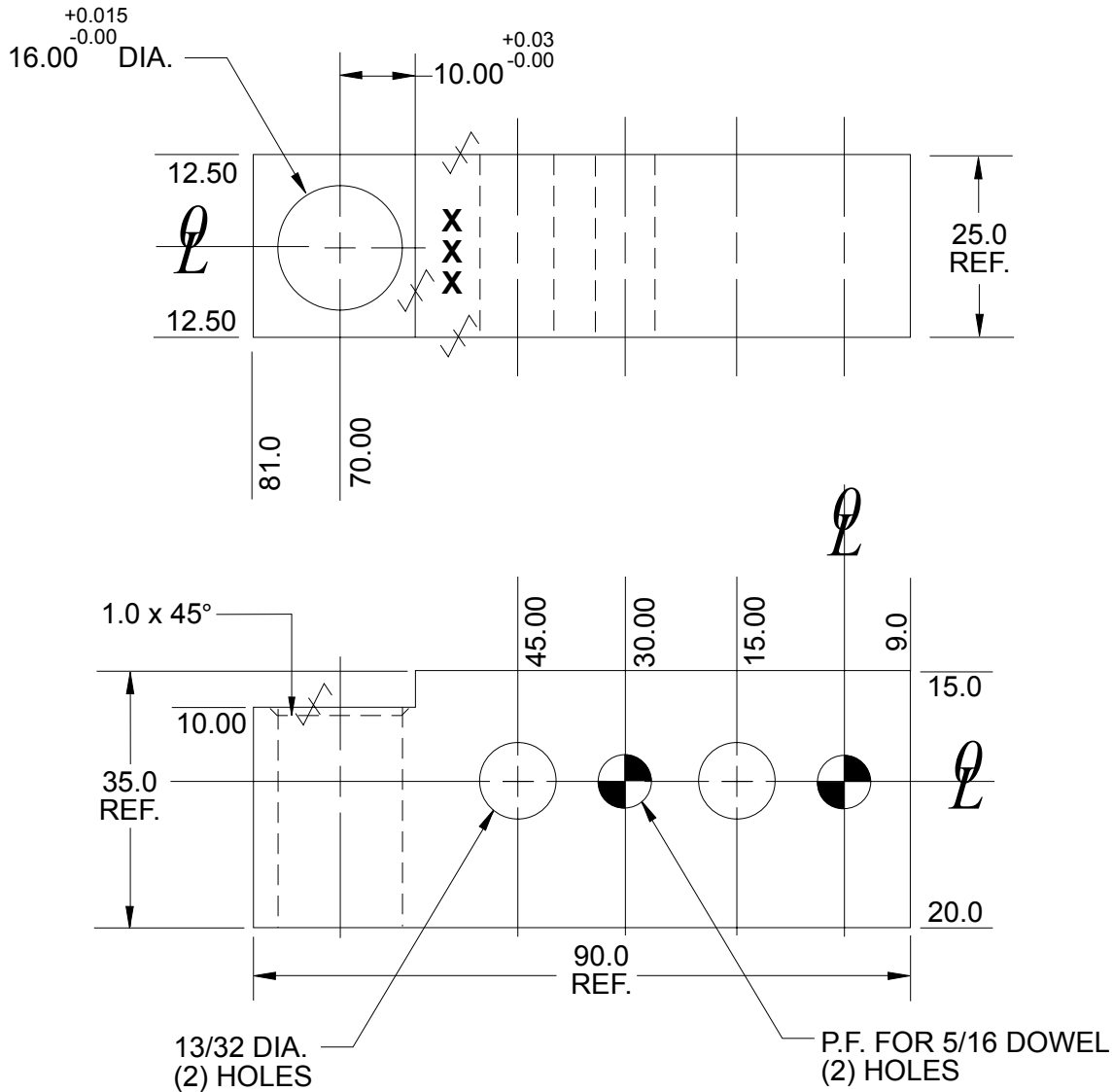
Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.020
 BETWEEN DOWELS ± 0.015



SURFACES TO BE FLAT, PARALLEL &
 PERPENDICULAR TO ϕ WITHIN 0.015 T.I.R.
 NOTES: ALL DIMENSIONS METRIC UNLESS OTHERWISE NOTED.
 IDENTIFY WITH NAAMS CODE NUMBER AS SHOWN **XXX**.
 BLACK OXIDE FINISH.



A

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

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

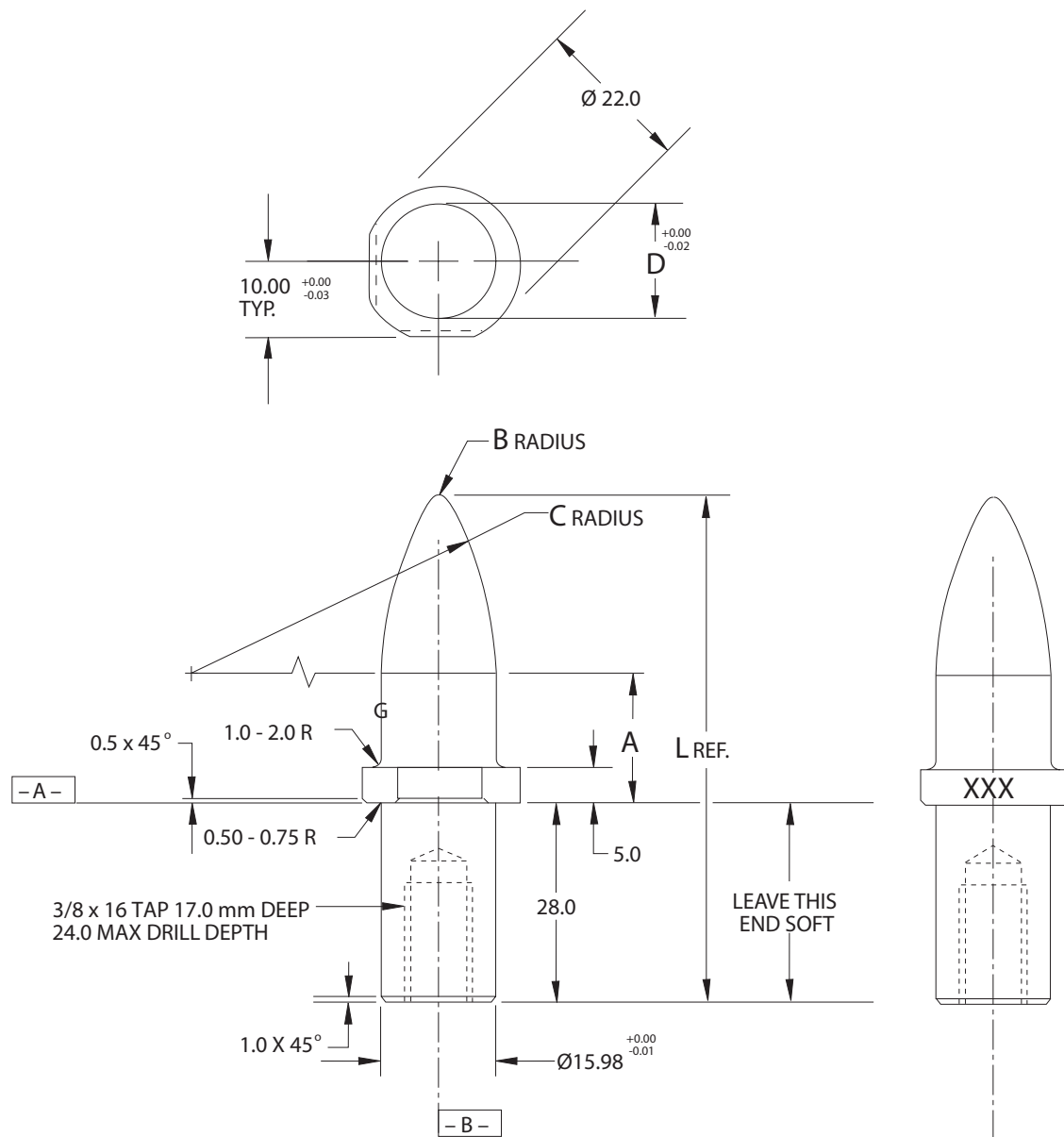
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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

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TABULATED INFORMATION ON FOLLOWING PAGE

LOCATING PIN

6 mm THRU 19 mm DIAMETER

A

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

NAAS 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

NAAS 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

NAAS 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

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

NAAS 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

NAAS 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

NAAS 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

LOCATING PIN 25mm DIAMETER

GLOBAL STANDARD COMPONENTS



Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

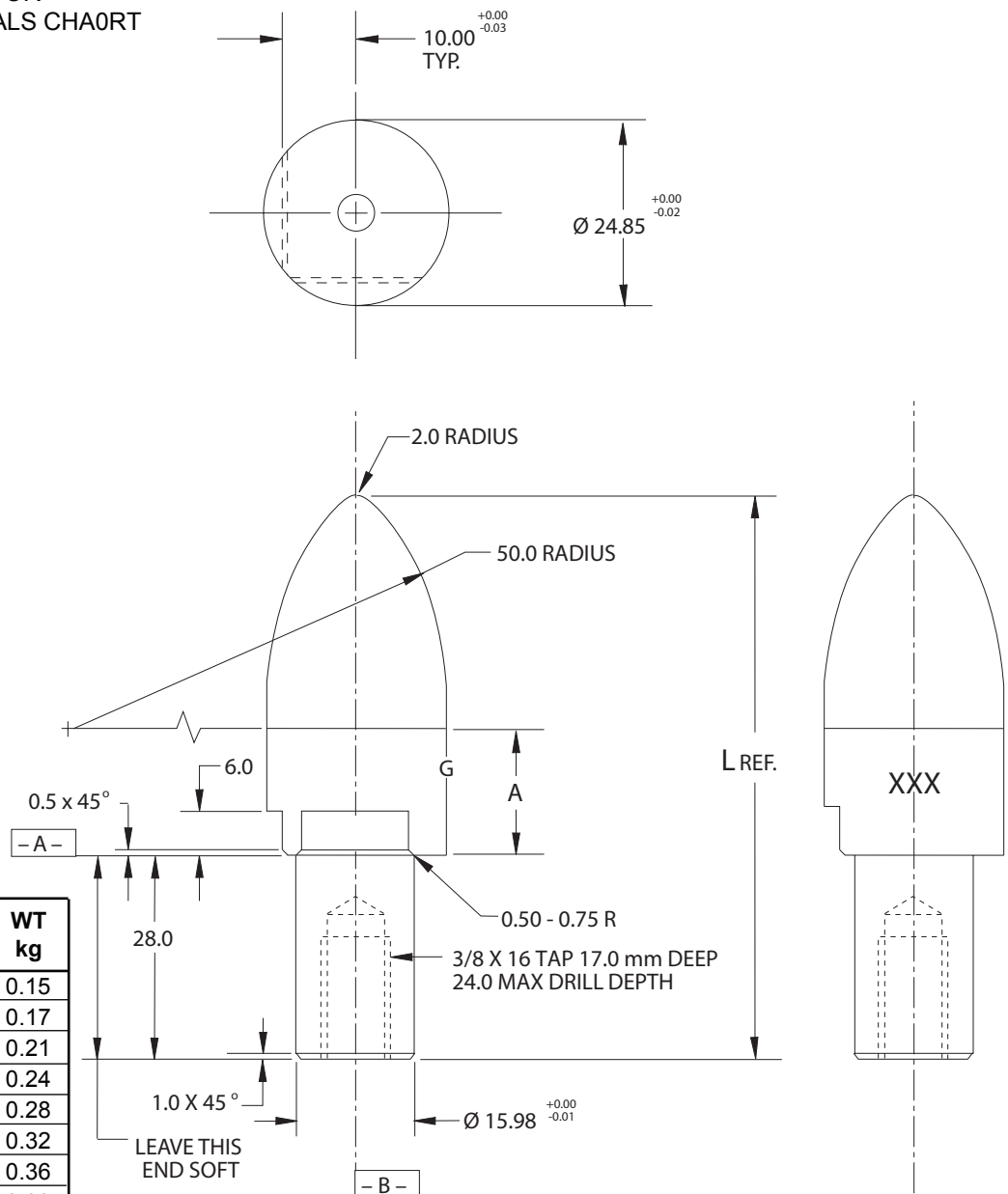
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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

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

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

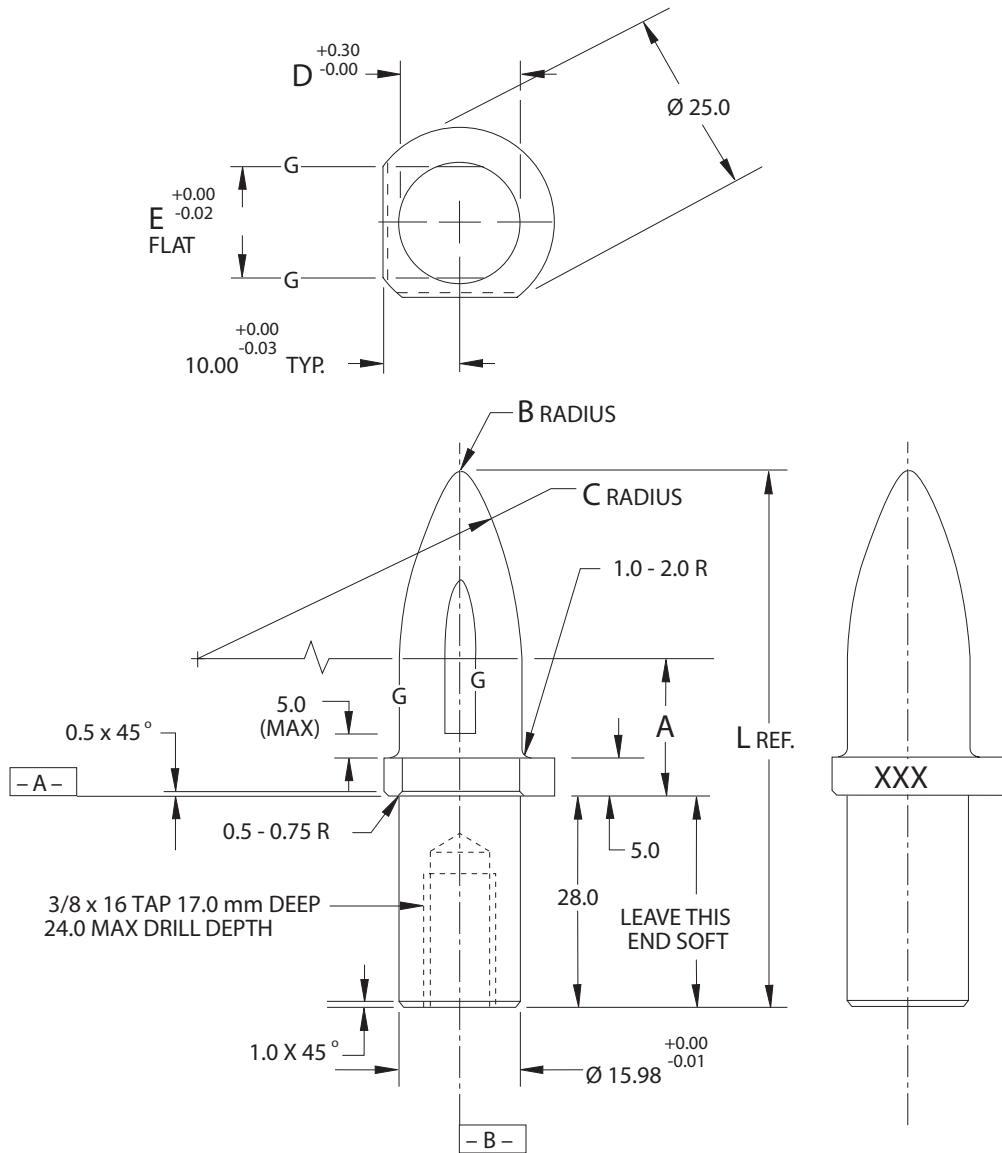
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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
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TABULATED INFORMATION ON FOLLOWING PAGE

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

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

A
B

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

LOCATING PIN FOR 25 x 31 mm SLOTTED HOLES

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



Assembly

08/29/07

Tolerances: 1 PLACE ± 0.3
2 PLACE ± 0.03
3 PLACE ± 0.015

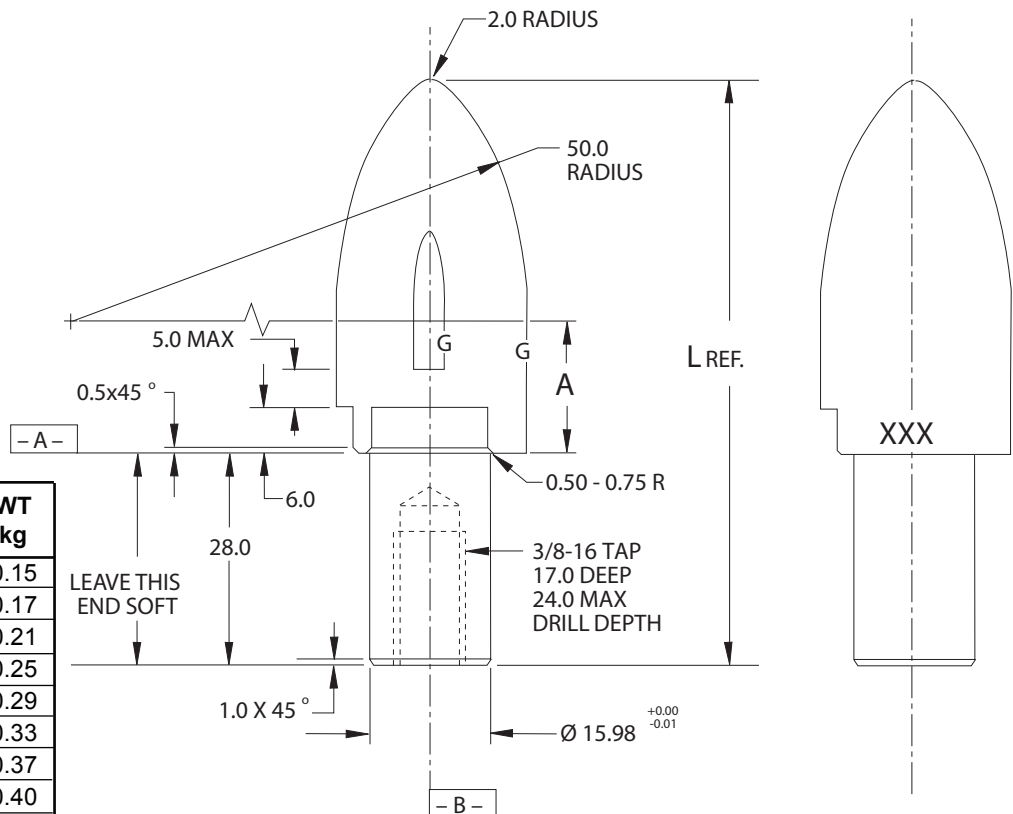
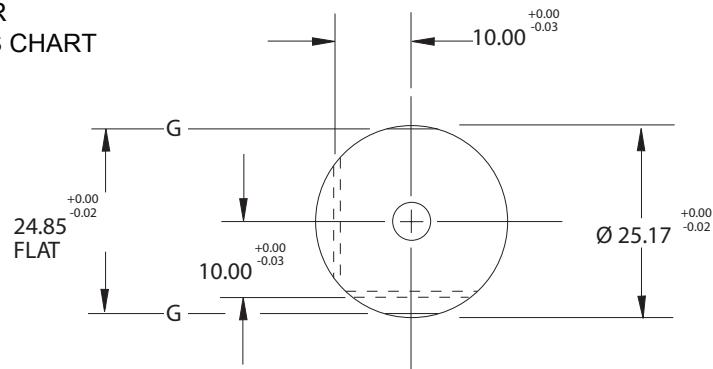
ALL MACHINED SURFACES TO FLAT.
PARALLEL AND PERPENDICULAR TO WITHIN
0.015 T.I.R. TO DATUMS A AND B AND
CONCENTRIC TO WITHIN 0.03 T.I.R.

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

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RESPOT PIN 25mm DIAMETER (FULL METRIC)

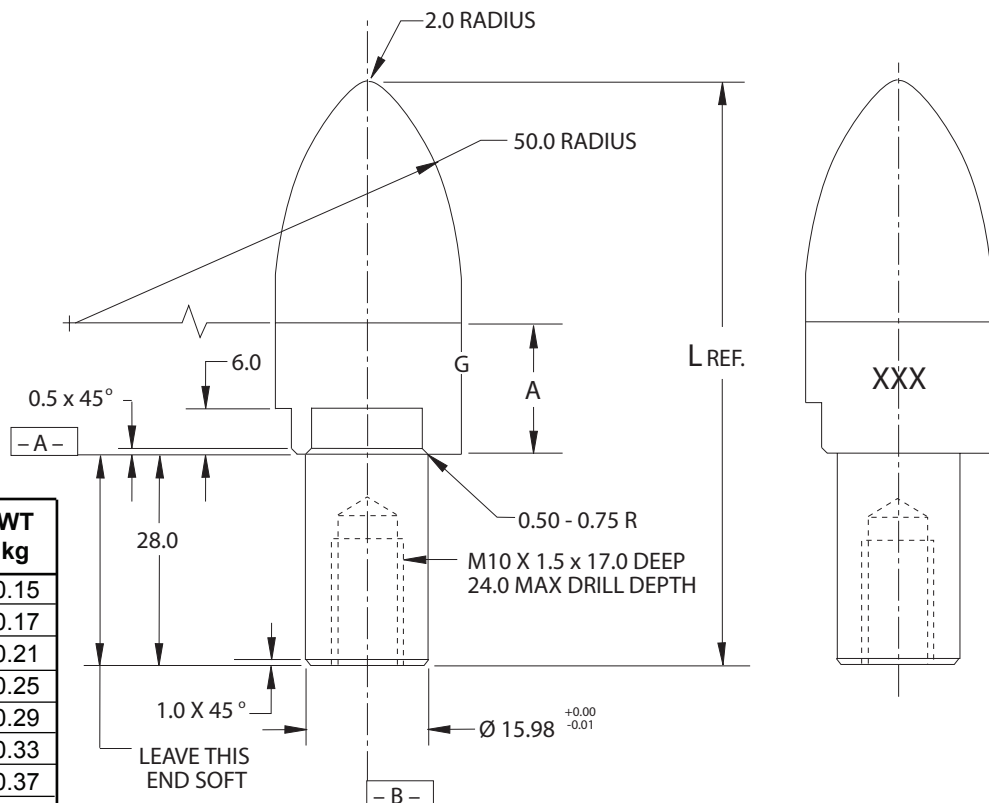
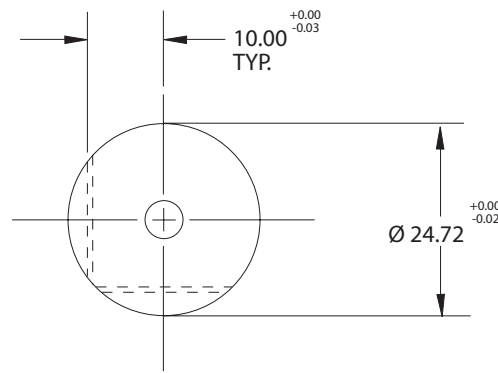
Tolerances: 1 PLACE ± 0.3
 2 PLACE ± 0.03
 3 PLACE ± 0.015

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
ARP251M	15.0	74.8	0.15
ARP252M	20.0	79.8	0.17
ARP253M	30.0	89.8	0.21
ARP254M	40.0	99.8	0.25
ARP255M	50.0	109.8	0.29
ARP256M	60.0	119.8	0.33
ARP257M	70.0	129.8	0.37
ARP258M	80.0	139.8	0.40
ARP259M	90.0	149.8	0.44
ARP250M	100.0	159.8	0.48

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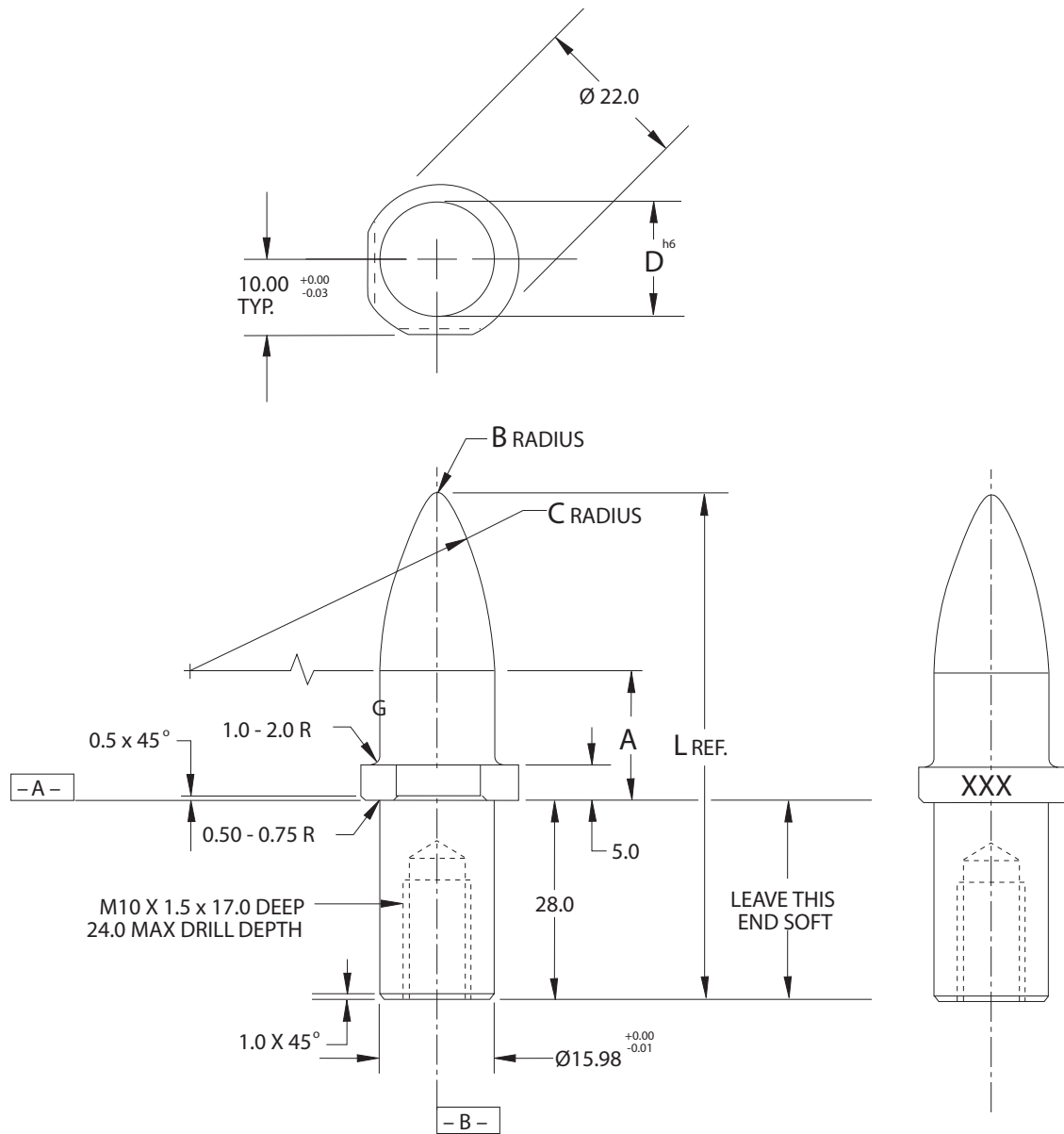
A

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E

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

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

C

B

TABULATED INFORMATION ON FOLLOWING PAGE

LOCATING PIN

8 mm THRU 20 mm DIAMETER (FULL METRIC)

8 mm Round Hole
 B Rad = 1.0
 C Rad = 24.0
 D = 8^{h6}

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^{h6}

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

13 mm Round Hole
 B Rad = 2.0
 C Rad = 30.0
 D = 13^{h6}

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

A
B

16 mm Round Hole
 B Rad = 2.0
 C Rad = 48.0
 D = 16^{h6}

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^{h6}

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^{h6}

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

LOCATING PIN

25mm THRU 40mm DIAMETER

(FULL METRIC)

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



Assembly

08/29/07

A

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

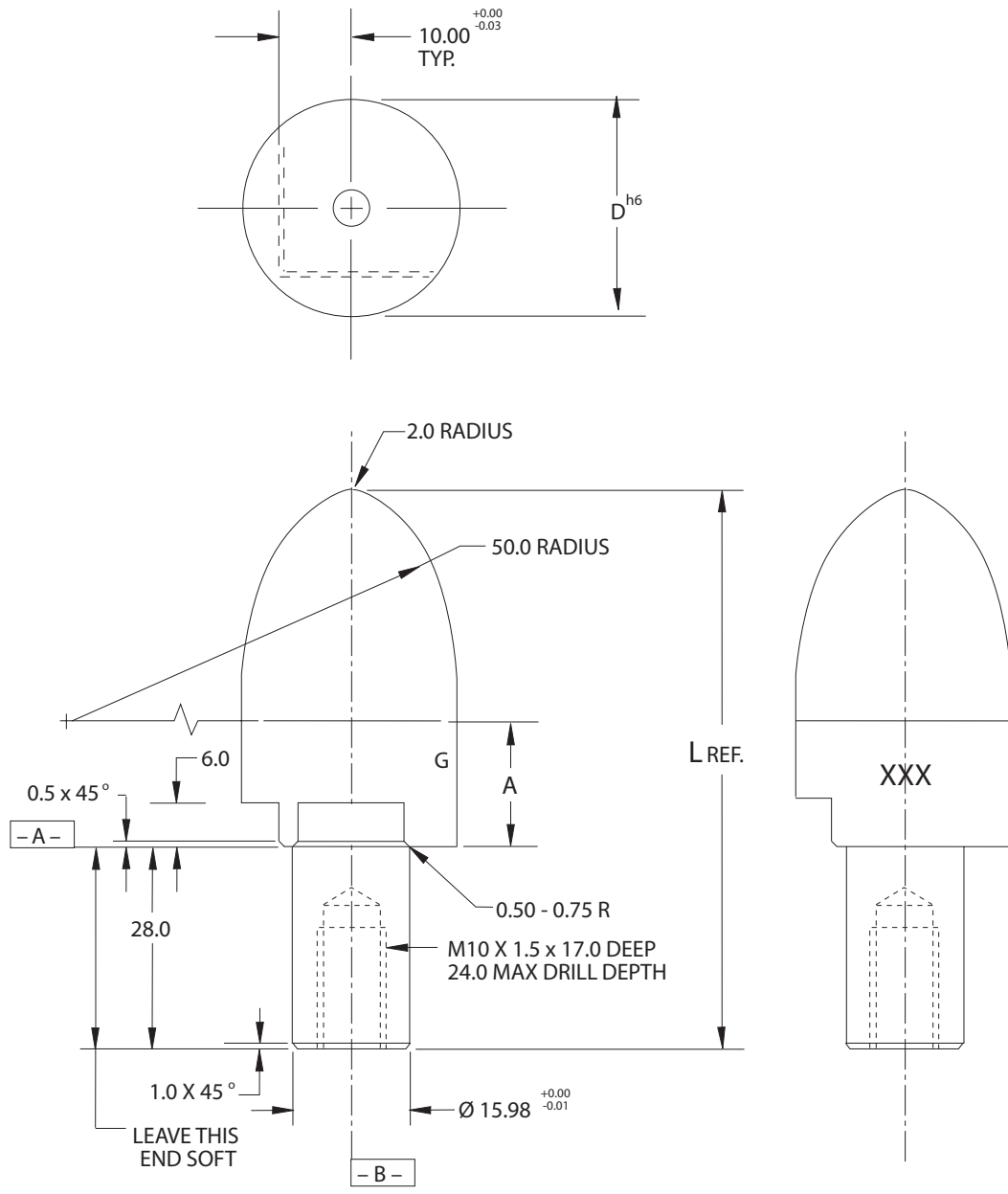
MATERIAL: S.A.E. 8620 STEEL
 HARDNESS: 58 - 62 Rc TO A DEPTH OF 0.5 - 0.7 mm
 AFTER GRINDING

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

SEE PAGE B-1.1 FOR
 GLOBAL MATERIALS CHART

B

D



C

LOCATING PIN

25 mm THRU 40 mm DIAMETER TM

(FULL METRIC)

GLOBAL STANDARD COMPONENTS



Assembly

02/25/05

A

25 mm Round Hole
 B Rad = 2.0
 C Rad = 50.0
 D = 25^{h6}

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^{h6}

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^{h6}

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

C

40 mm Round Hole
 B Rad = 2.0
 C Rad = 50.0
 D = 40^{h6}

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

B

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

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



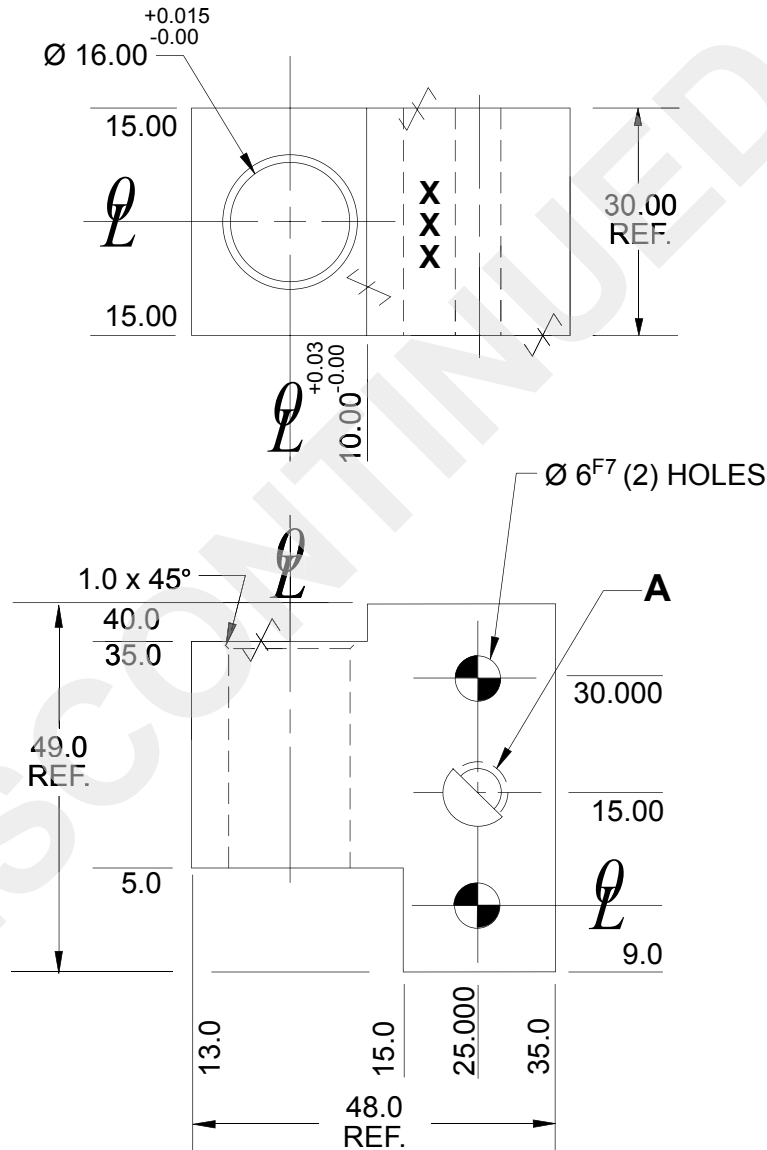
Assembly

07/25/08

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.



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

C

A

B

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

GLOBAL STANDARD COMPONENTS

TM **NAAMS**



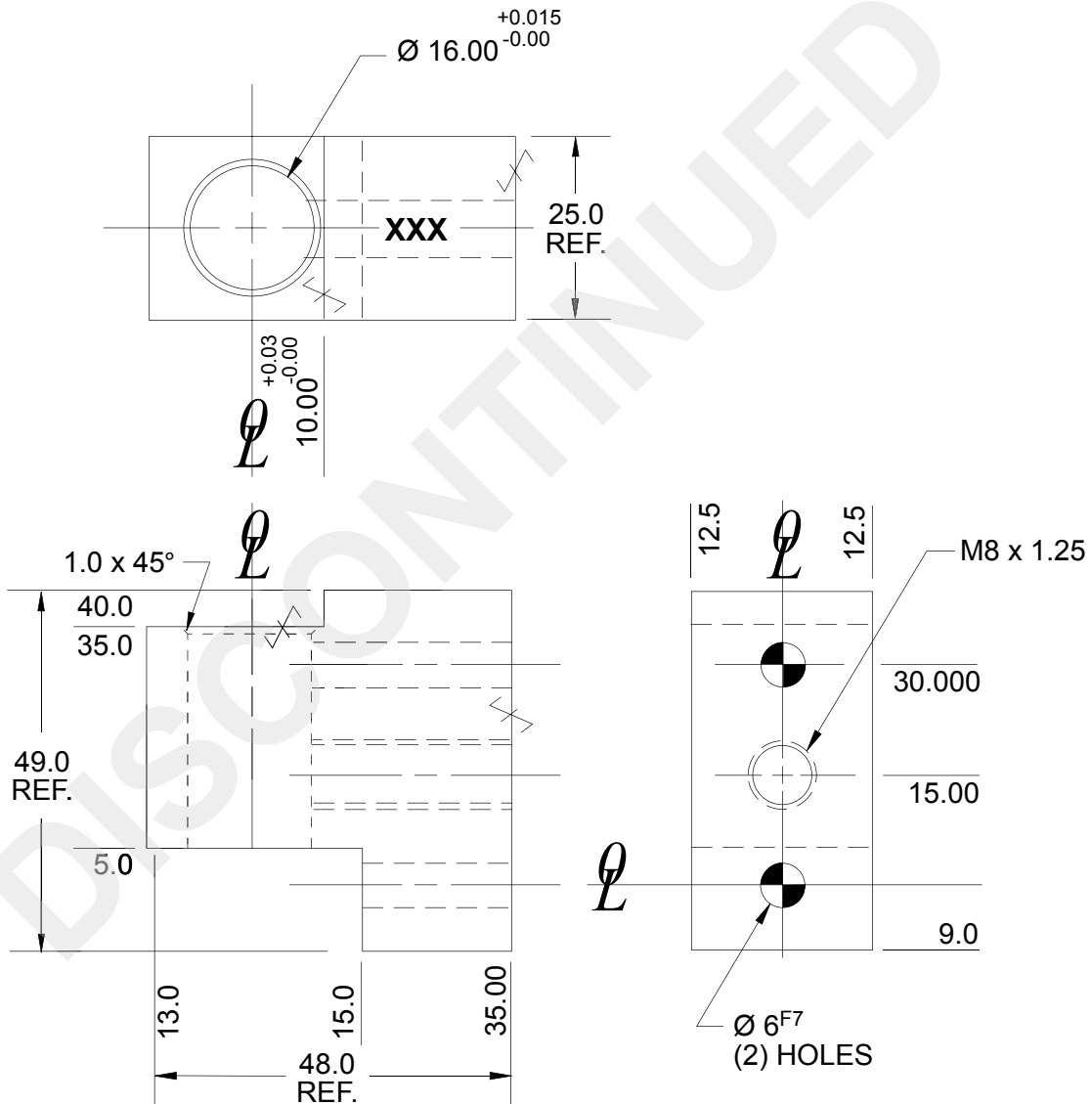
Assembly

07/25/08

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.



D


C
A
B

SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

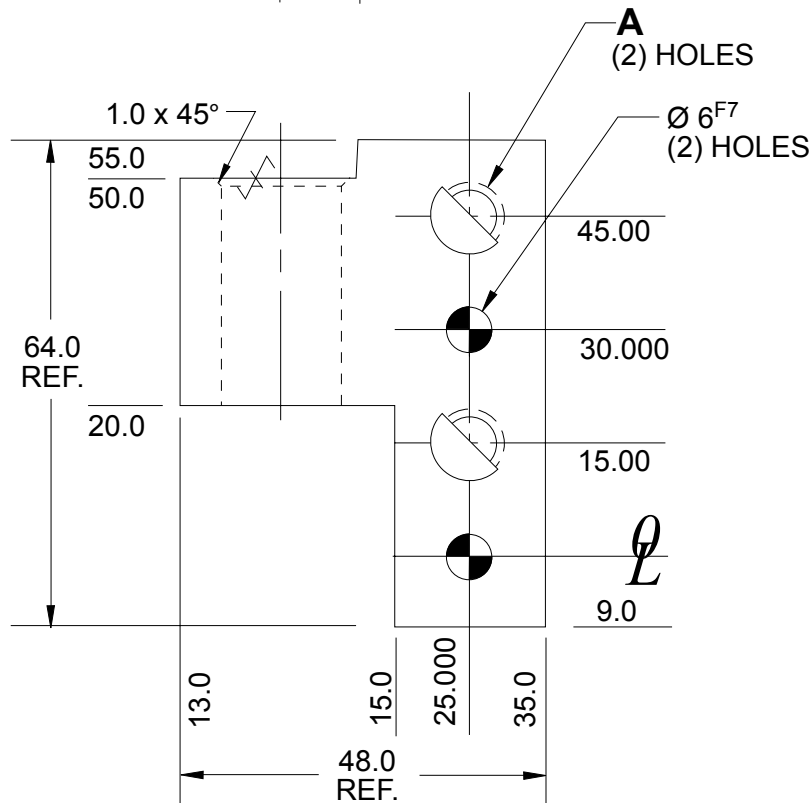
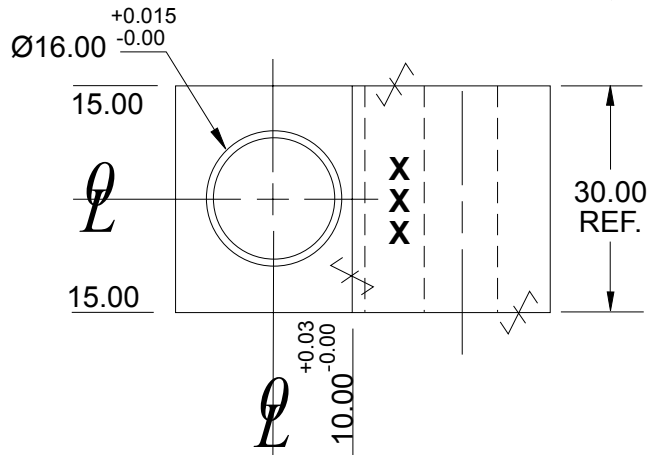
NAAMS CODE	MATERIAL	WT. kg
APR320M	Steel / ASTM A-36	0.41
APR321M	SS type 303 or 304	0.41

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

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.




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

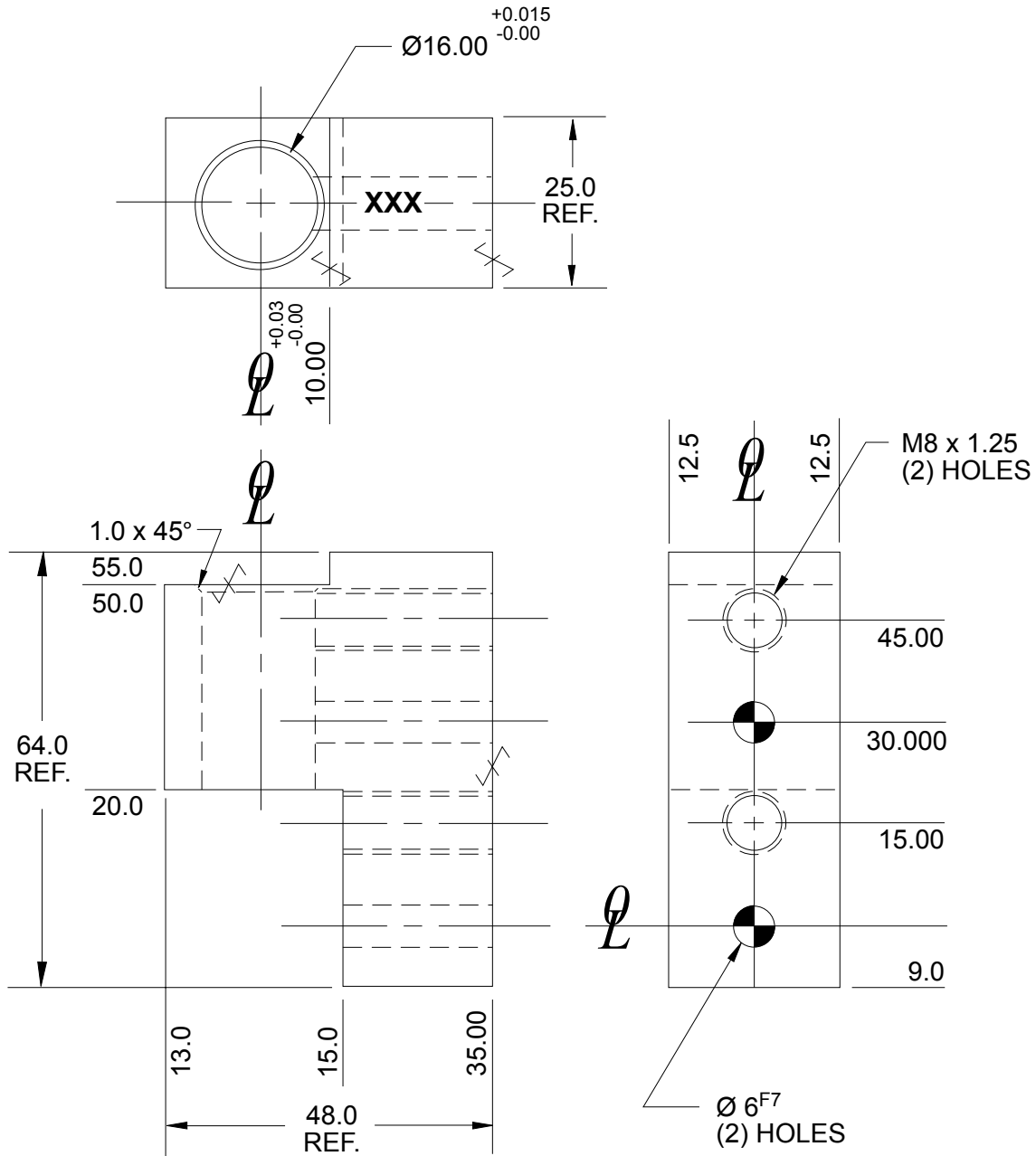
C
A
B

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

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.




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

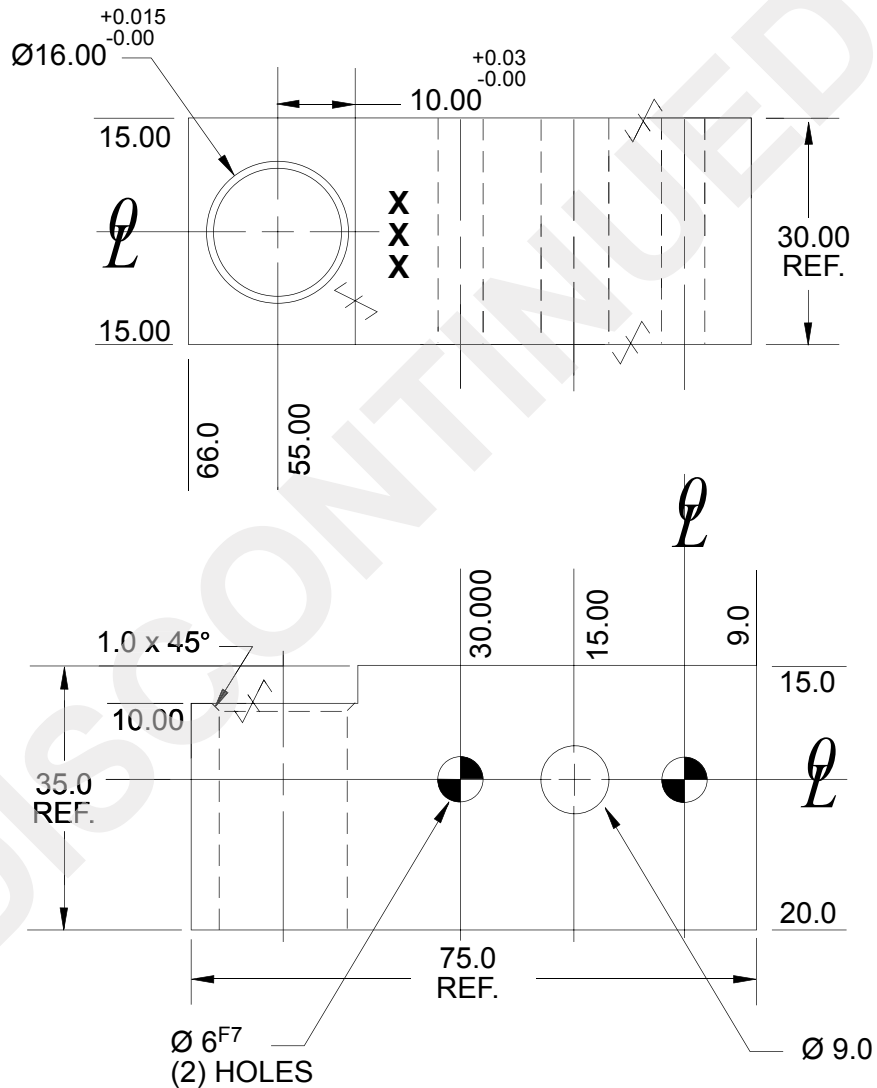
C
 A
 B

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

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.



D


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

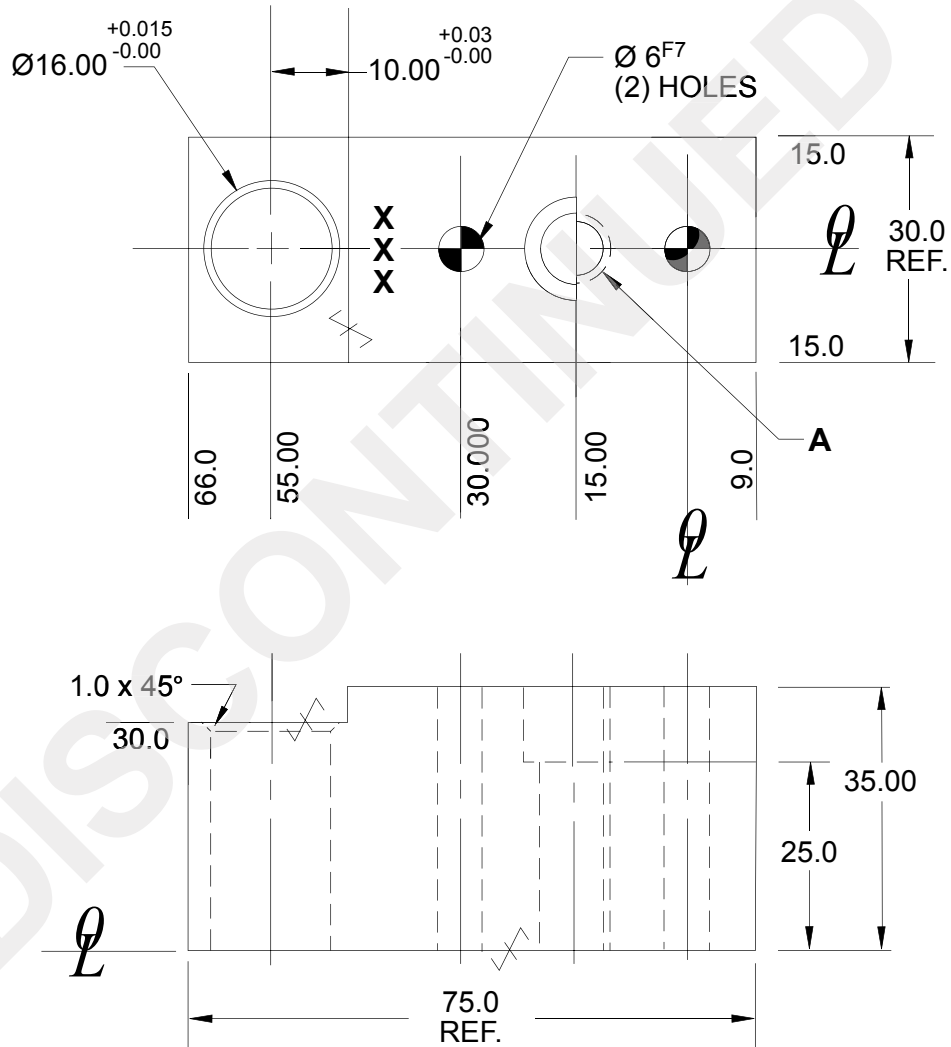
C
A
B

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

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.



D

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


C

A

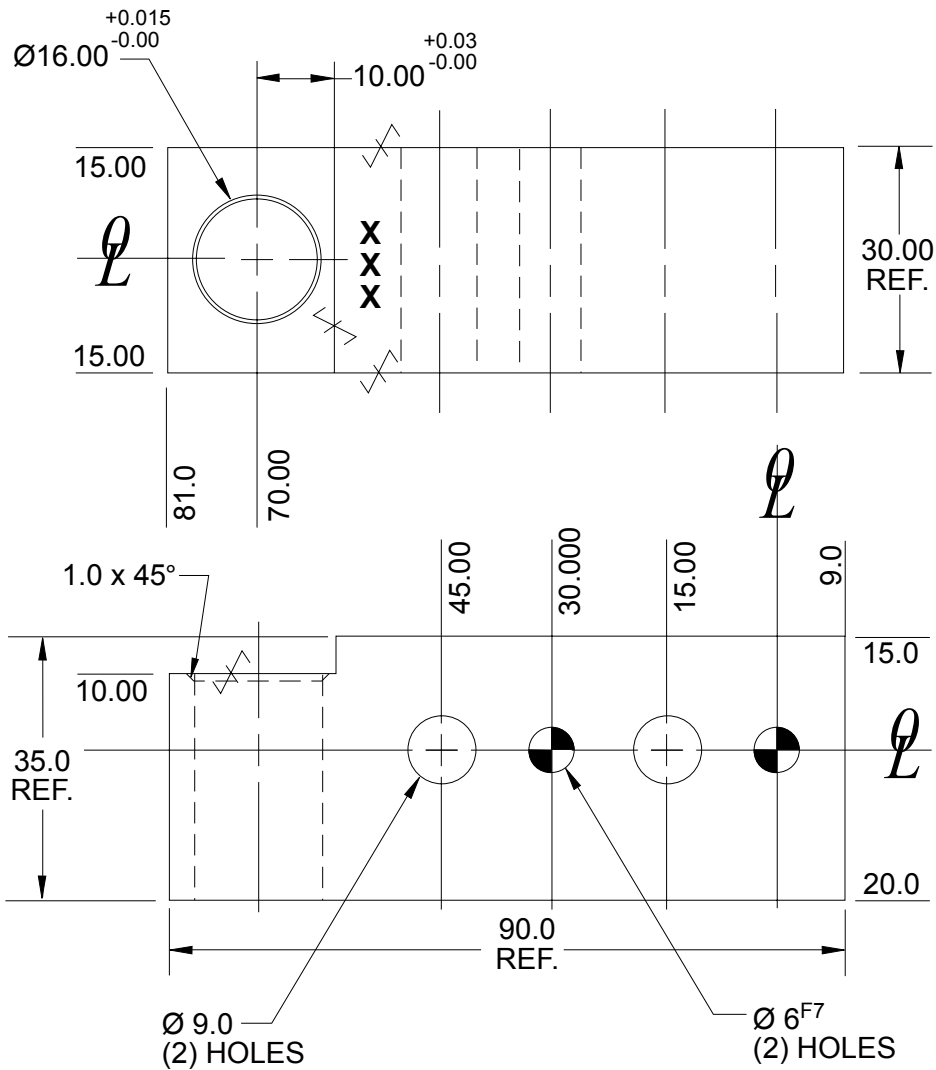
B

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

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.



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

GLOBAL STANDARD COMPONENTS

NAAMS



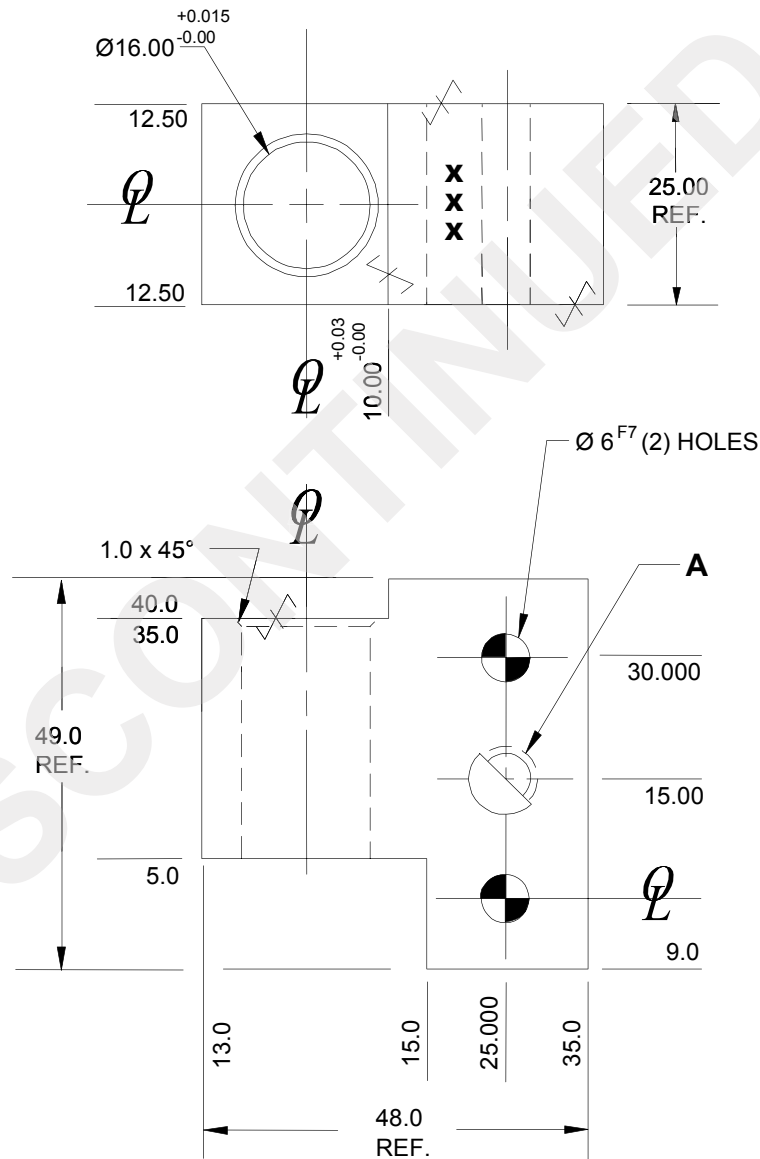
Assembly

07/25/08

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



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

C

B

A

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

GLOBAL STANDARD COMPONENTS



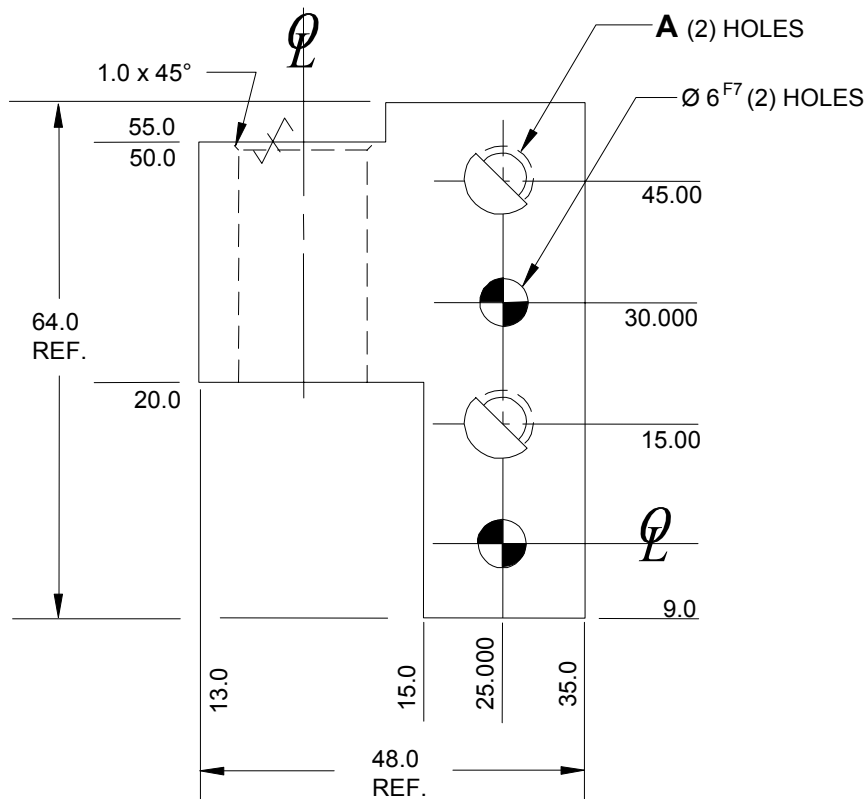
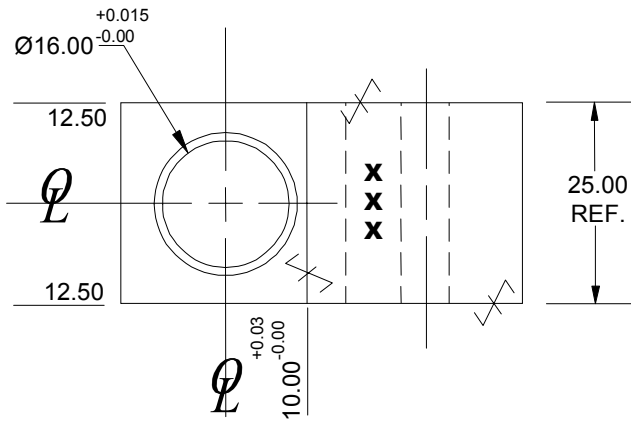
Assembly

08/29/07

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




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

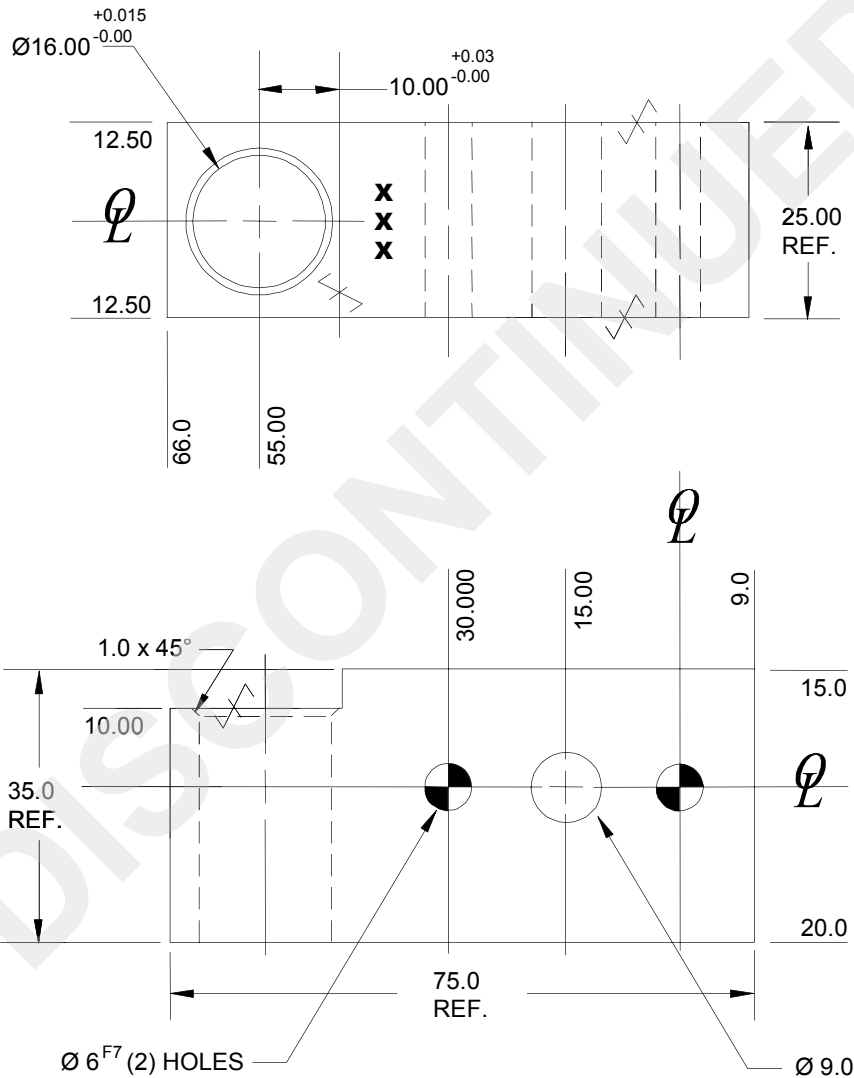
B
A

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

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



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

C

B

A

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

GLOBAL STANDARD COMPONENTS

NAAMS



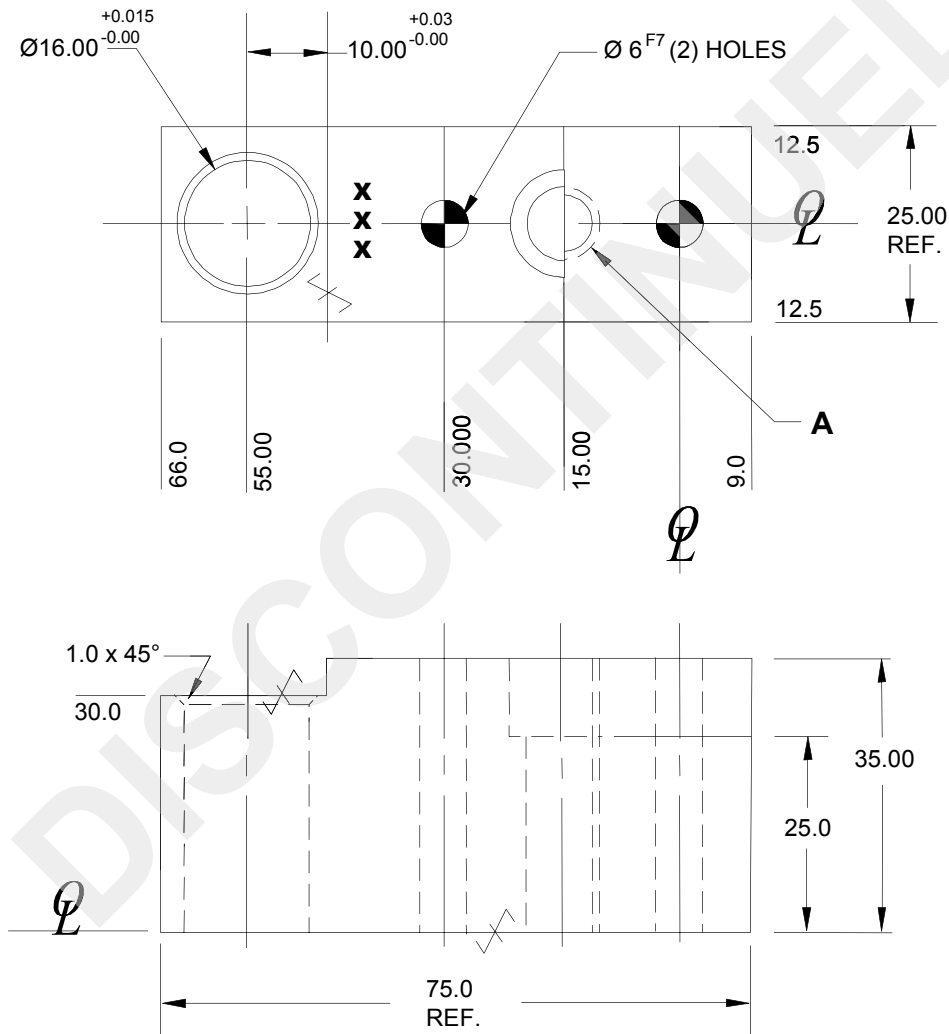
Assembly

07/25/08

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



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

C

B

A

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

GLOBAL STANDARD COMPONENTS

NAAMS



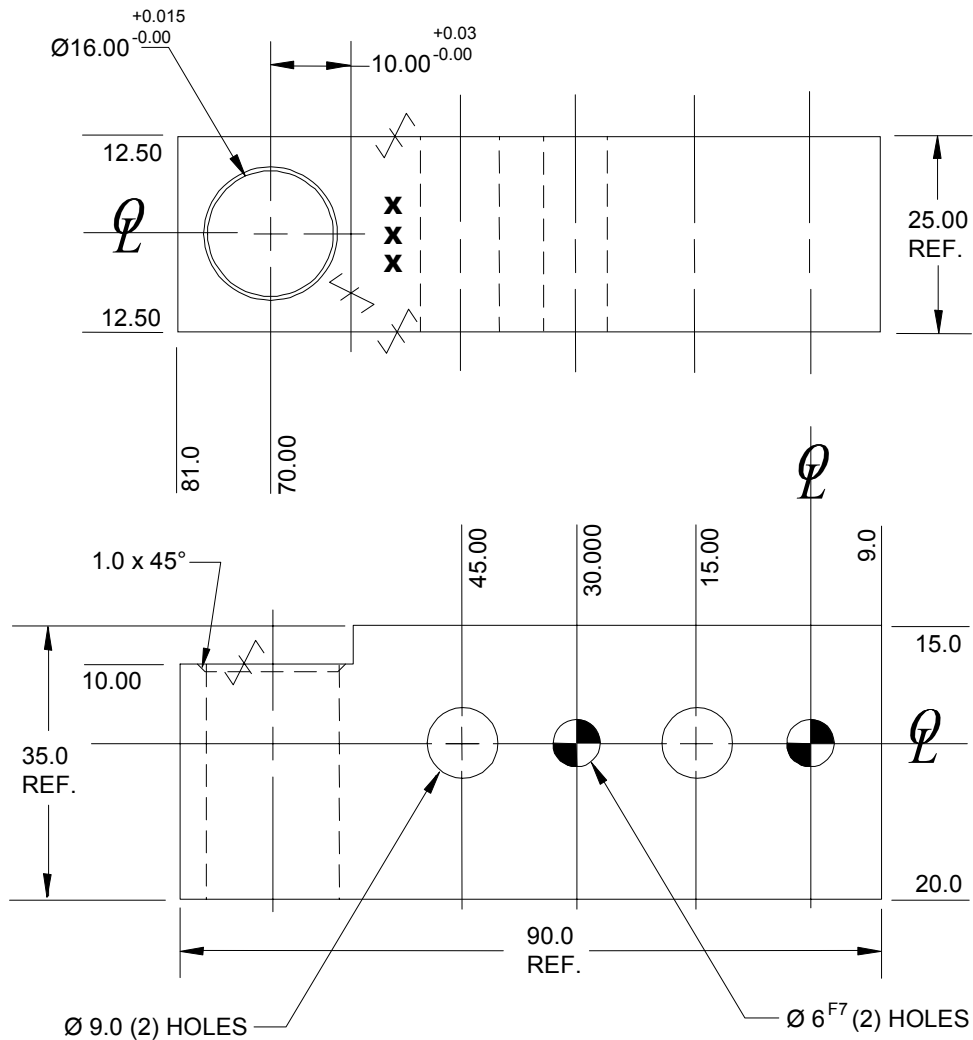
Assembly

08/29/07

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




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

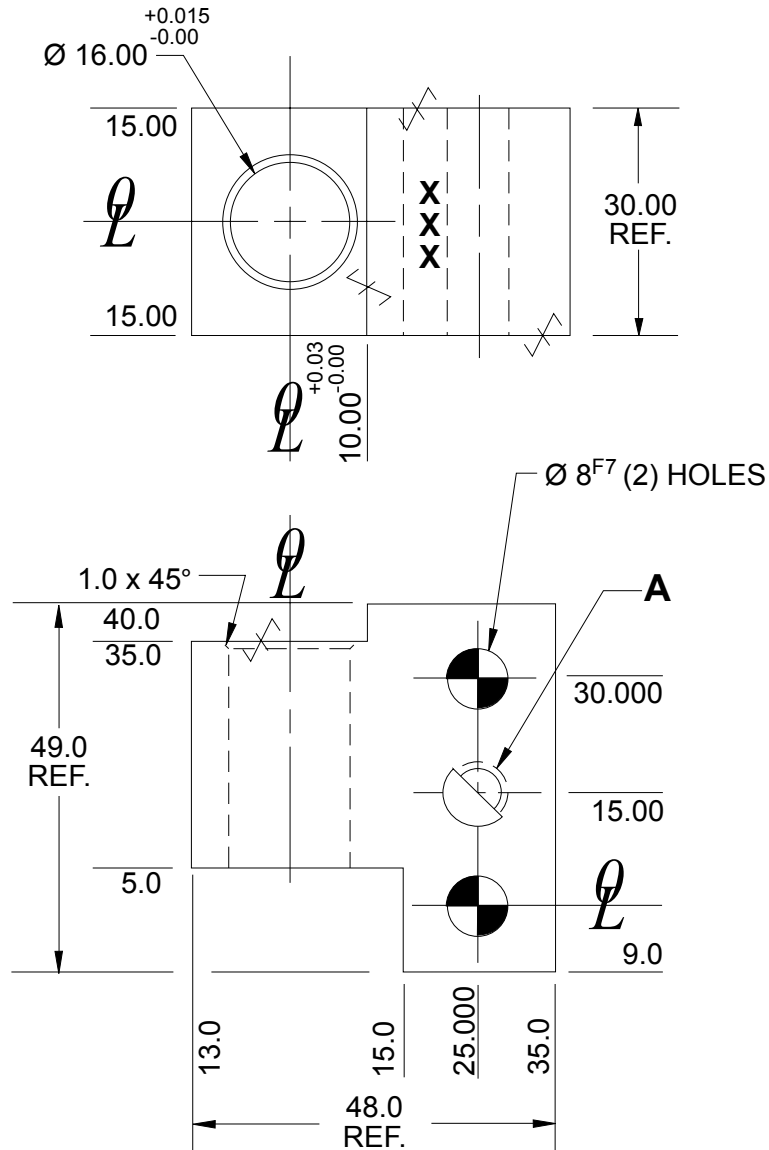
B
A

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

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.



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

GLOBAL STANDARD COMPONENTS



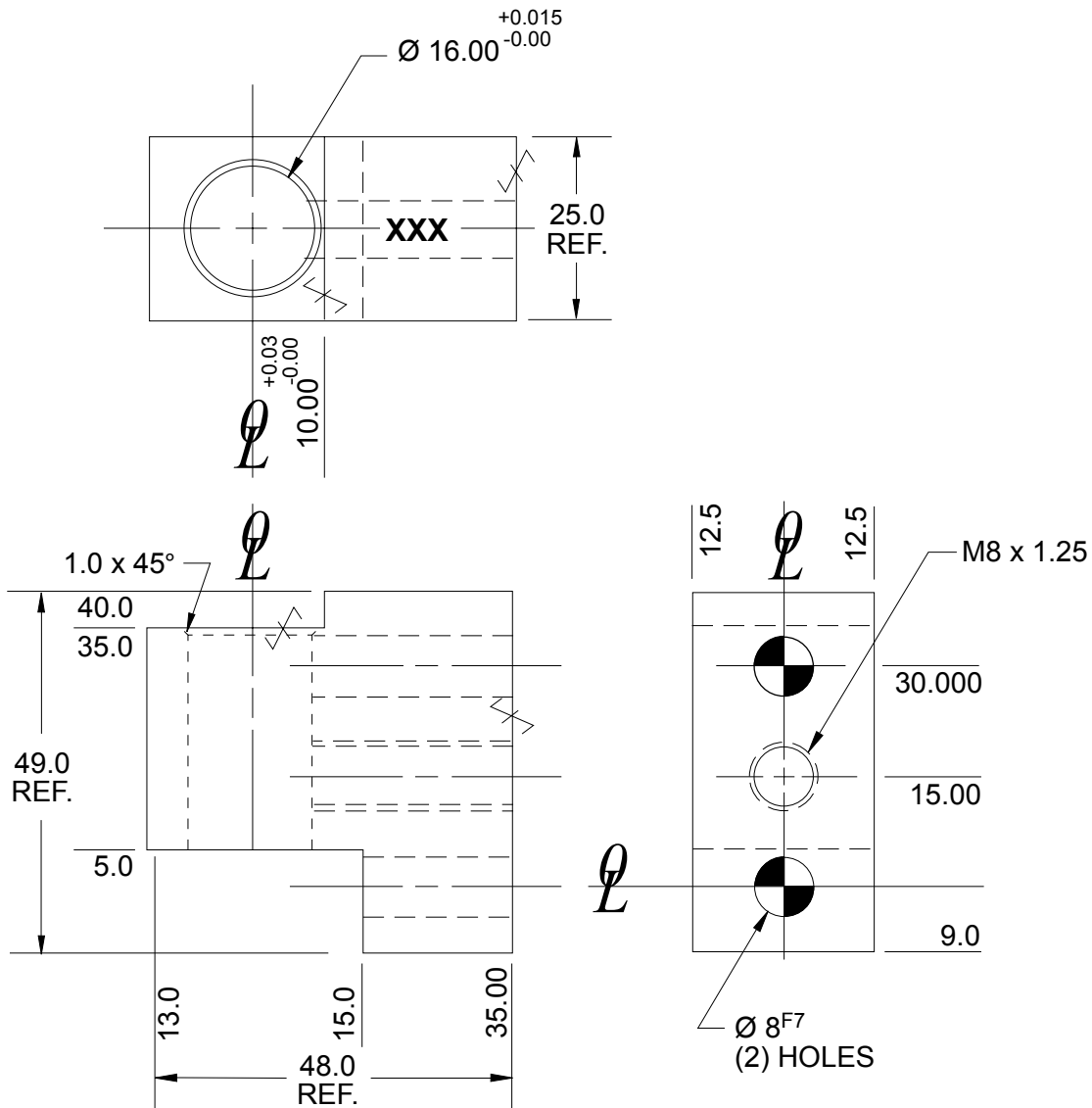
Assembly

10/10/08

- 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.




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

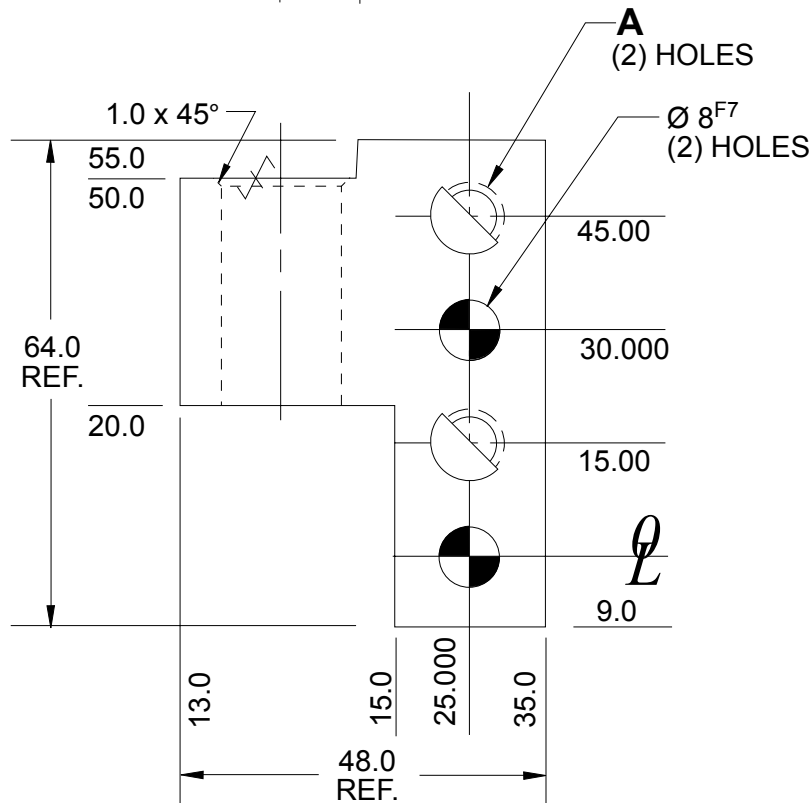
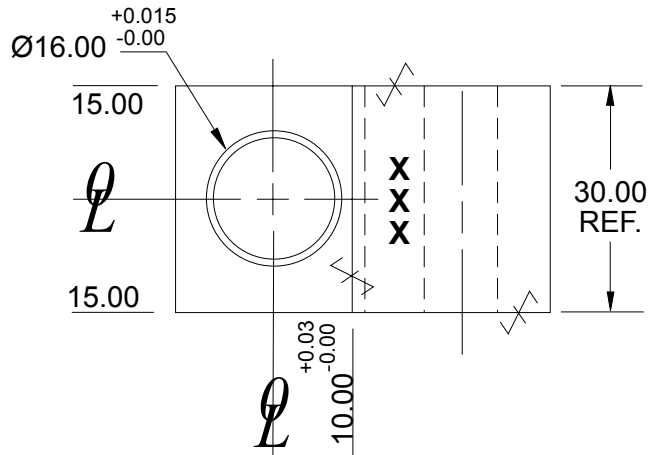
NAAMS CODE	MATERIAL	WT. kg
APR255M	Steel / ASTM A-36	0.41
APR256M	SS type 303 or 304	0.41

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

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.



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

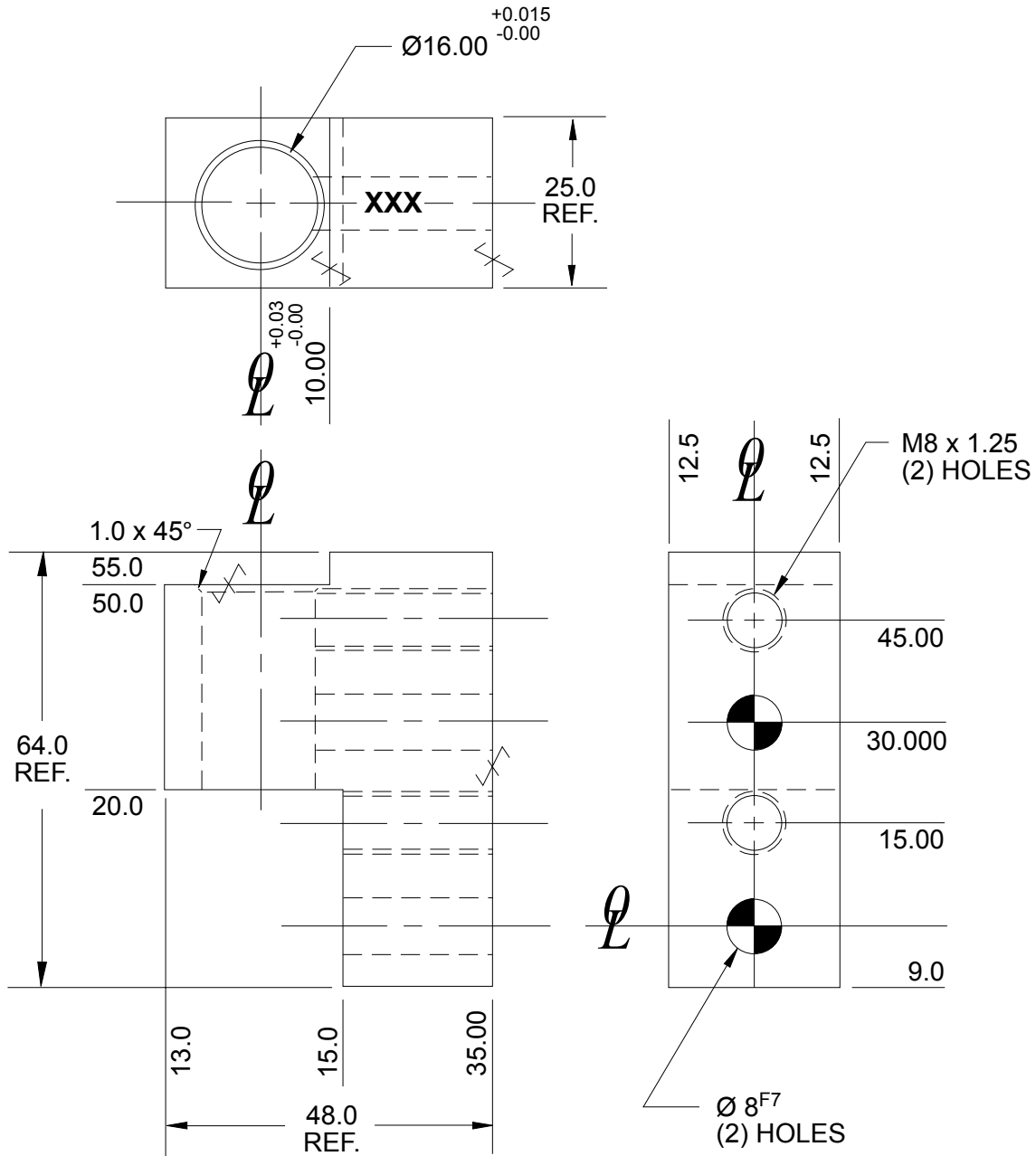
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

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

Tolerances: 1 PLACE ± 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.




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

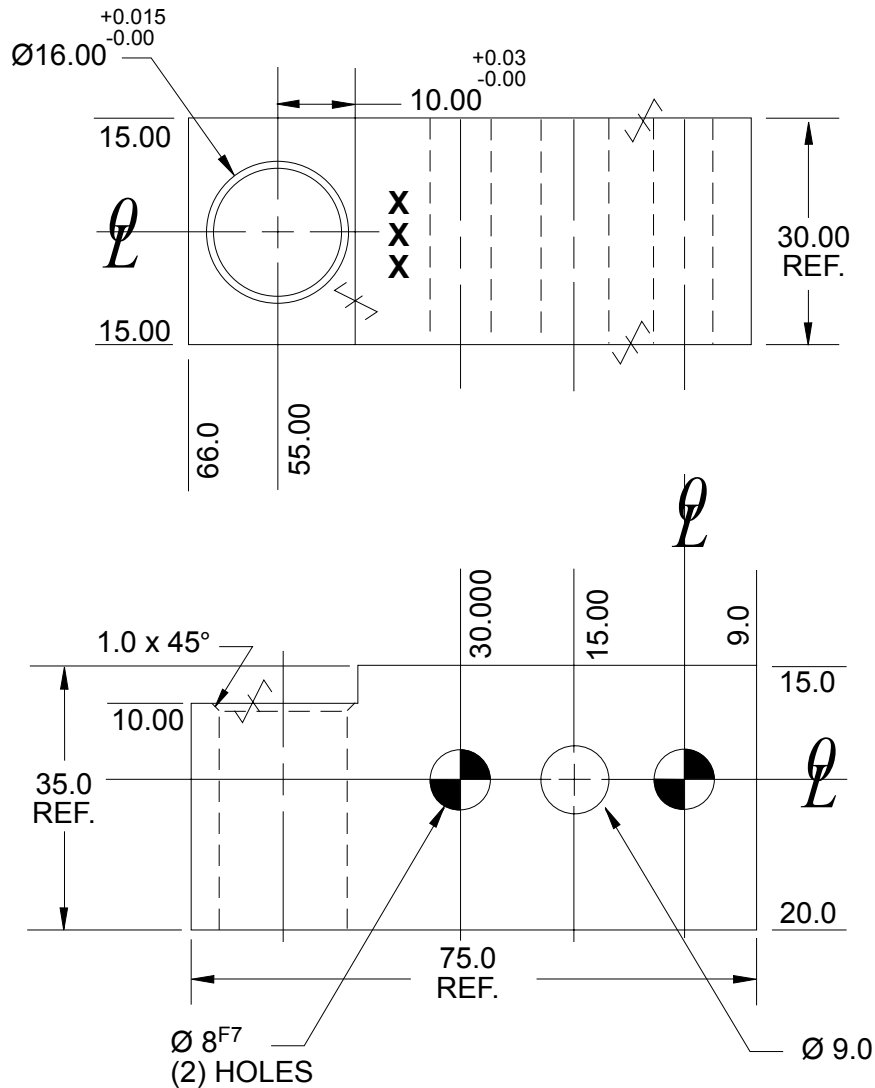
SEE PAGE B-1.1 FOR
 GLOBAL MATERIALS CHART

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

Tolerances: 1 PLACE ± 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.




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

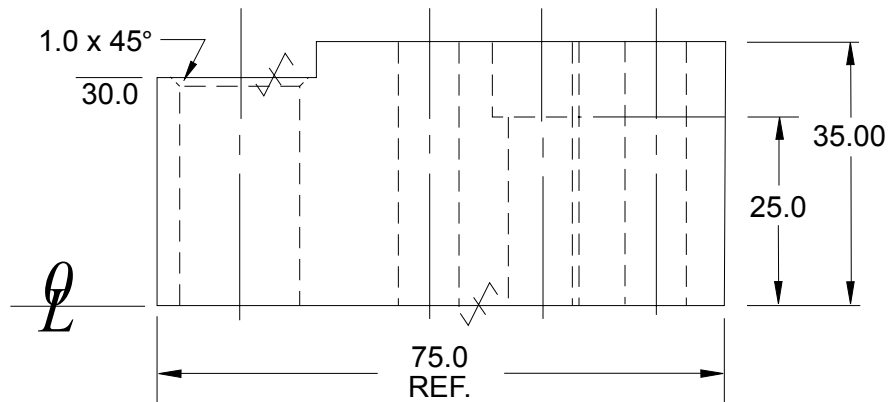
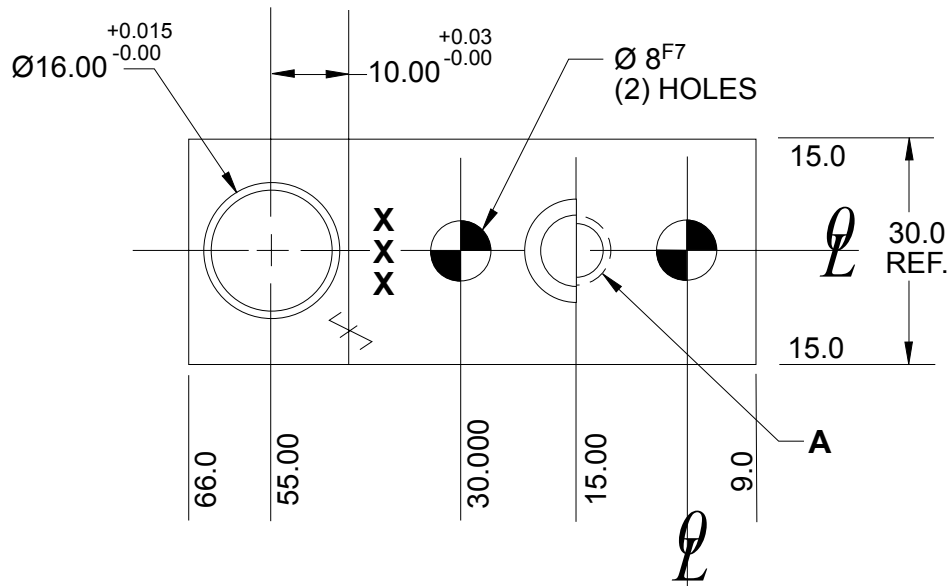
NAAMS CODE	MATERIAL	WT. kg
APR260M	Steel / ASTM A-36	0.50
APR261M	SS type 303 or 304	0.50

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

Tolerances: 1 PLACE ± 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.




SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

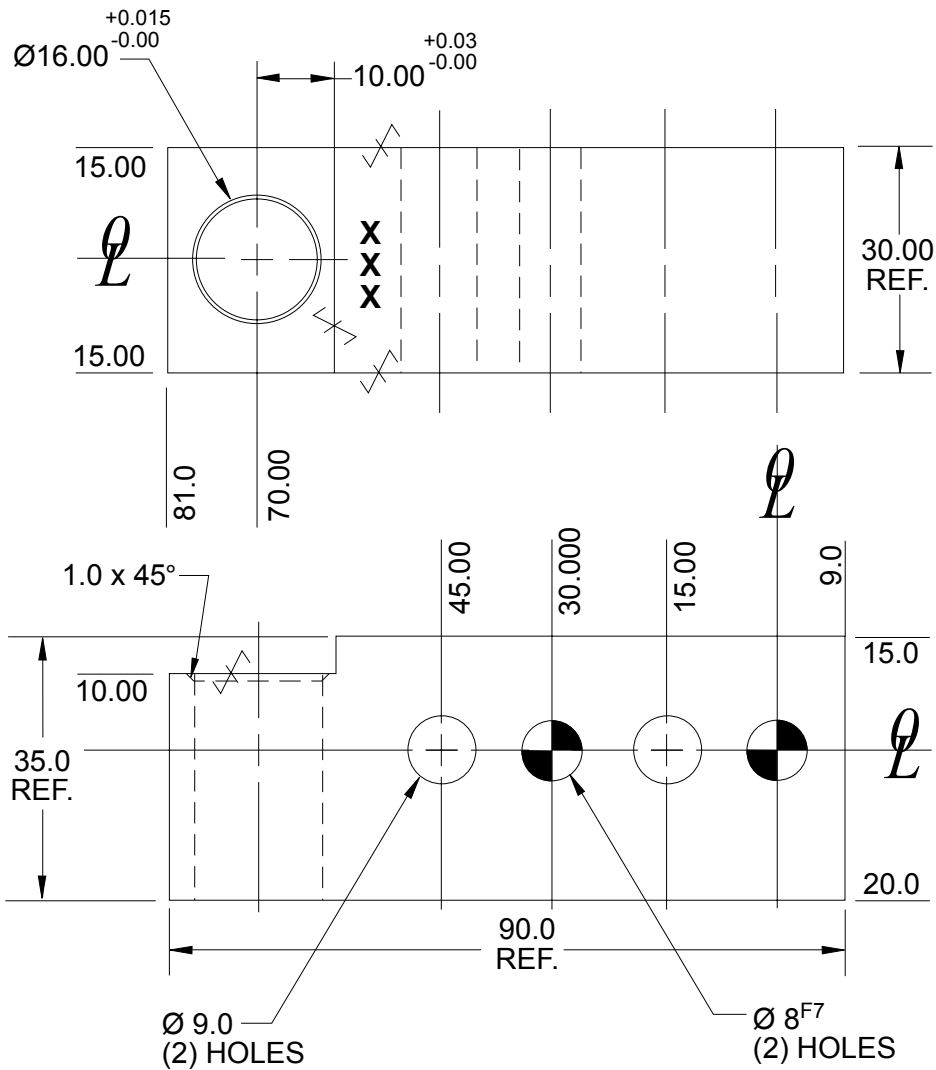
NAAMS CODE	A	MATERIAL	WT. kg
APR265M	M8 x 1.25	Steel / ASTM A-36	0.50
APR266M	M8 x 1.25	SS type 303 or 304	0.50
APR267M	Drill & C/Bore for M8 SHCS	Steel / ASTM A-36	0.50
APR268M	Drill & C/Bore for M8 SHCS	SS type 303 or 304	0.50

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

Tolerances: 1 PLACE ± 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.



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

NAAMS



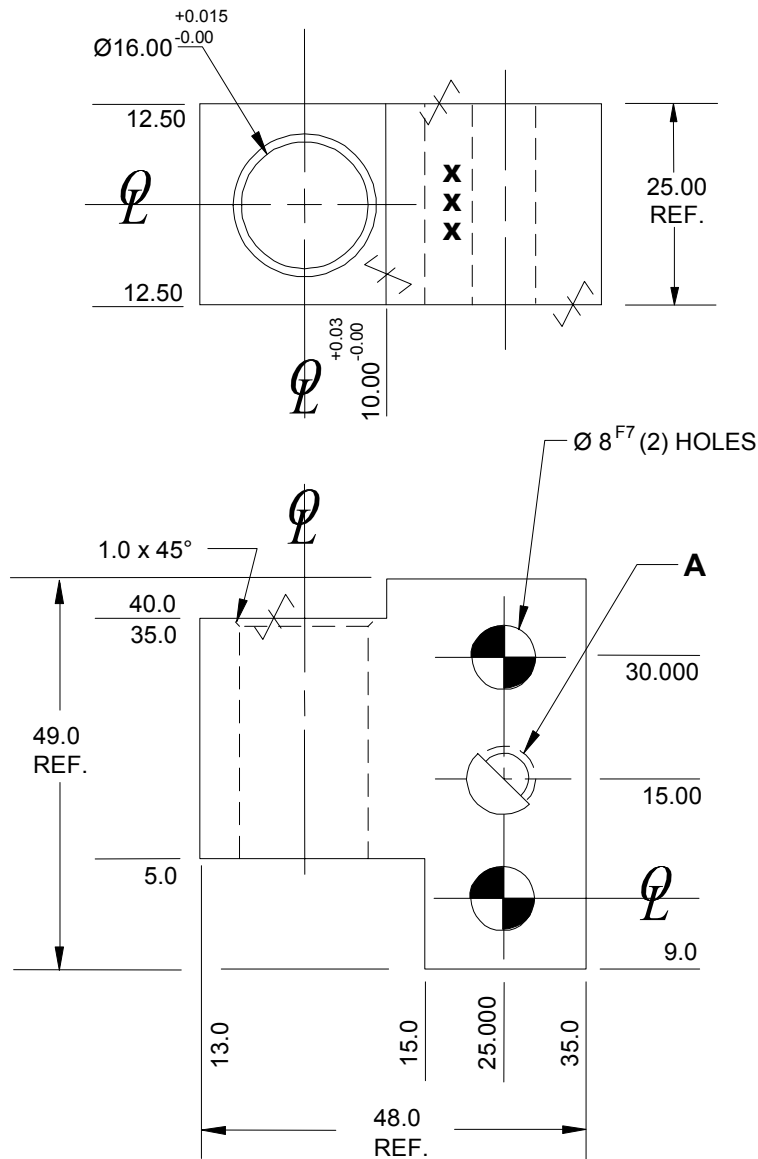
Assembly

10/10/08

- Tolerances:
- 1 PLACE ± 0.3
 - 2 PLACE ± 0.03
 - 3 PLACE ± 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.



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



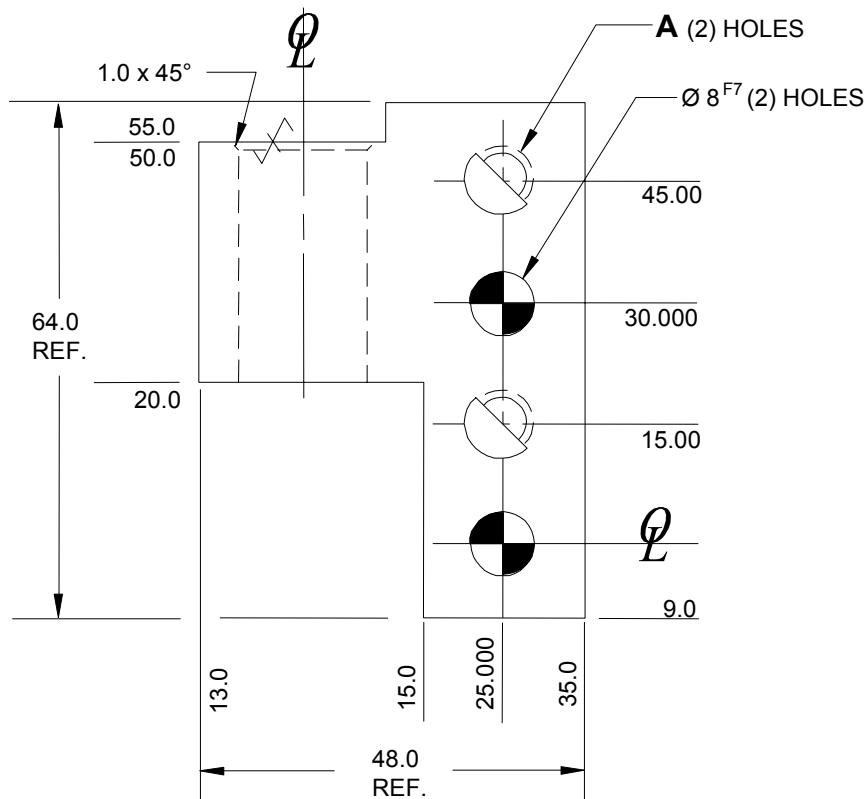
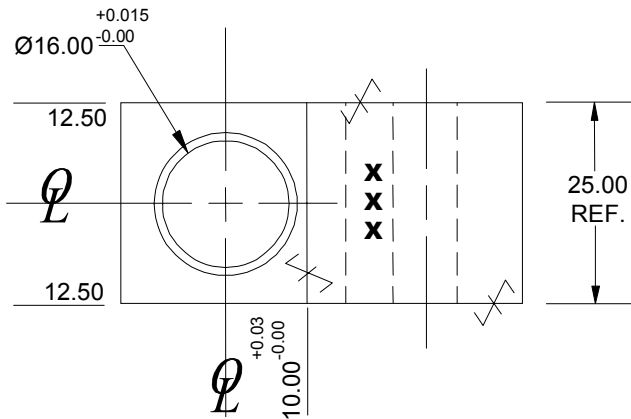
Assembly

10/10/08

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

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

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




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

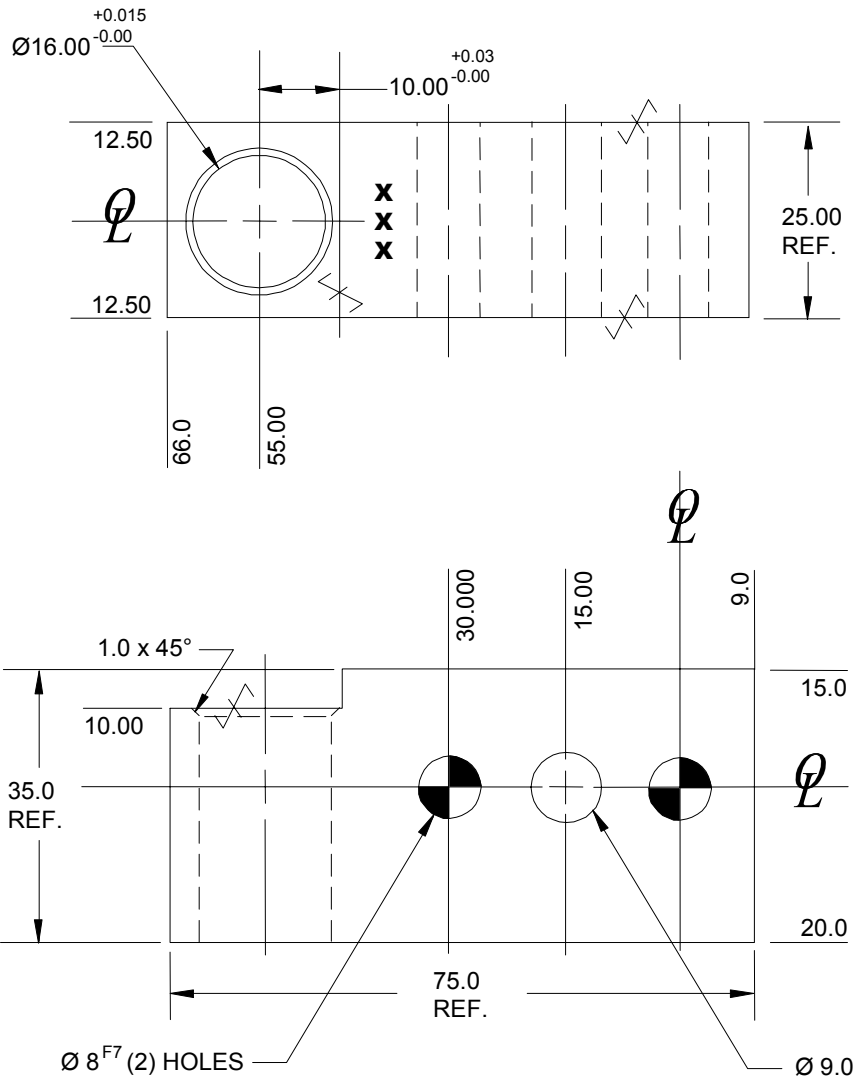
SEE PAGE B-1.1 FOR GLOBAL MATERIALS CHART

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

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



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



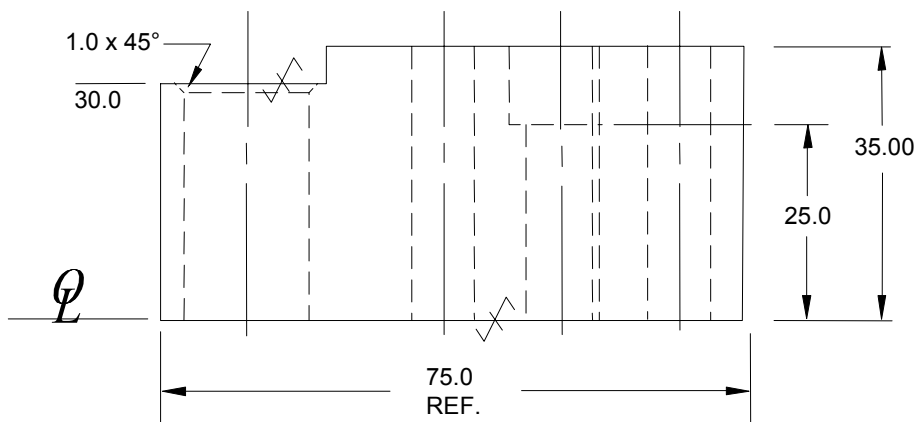
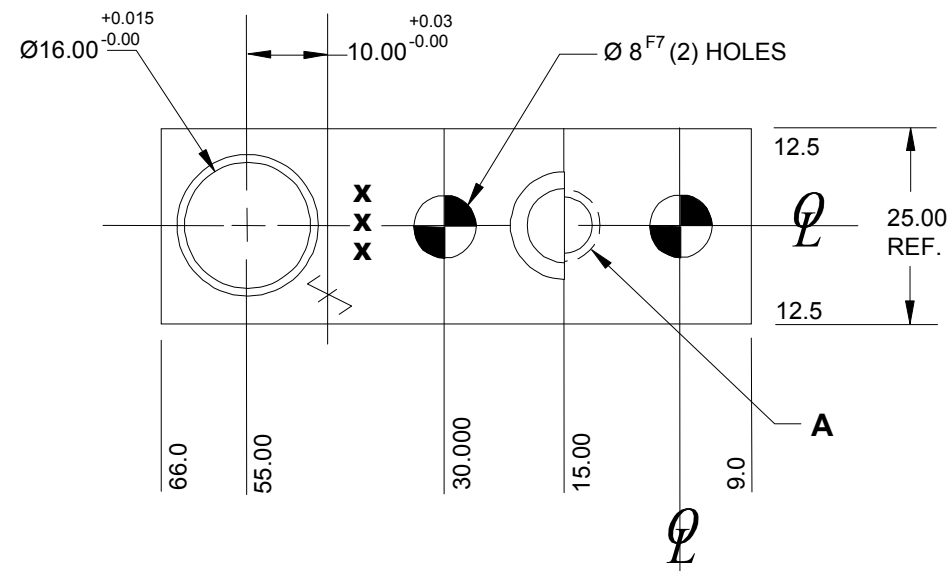
Assembly

10/10/08

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



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

NAAMS



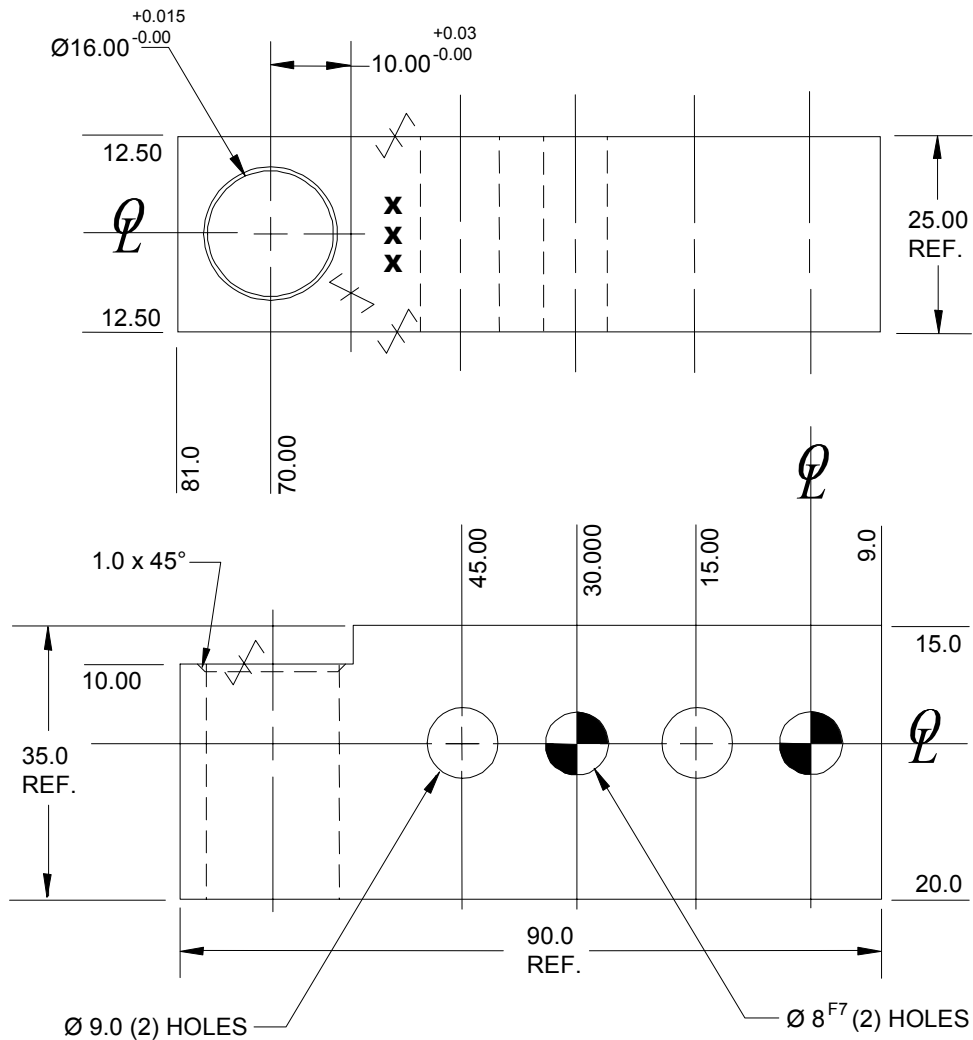
Assembly

10/10/08

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



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