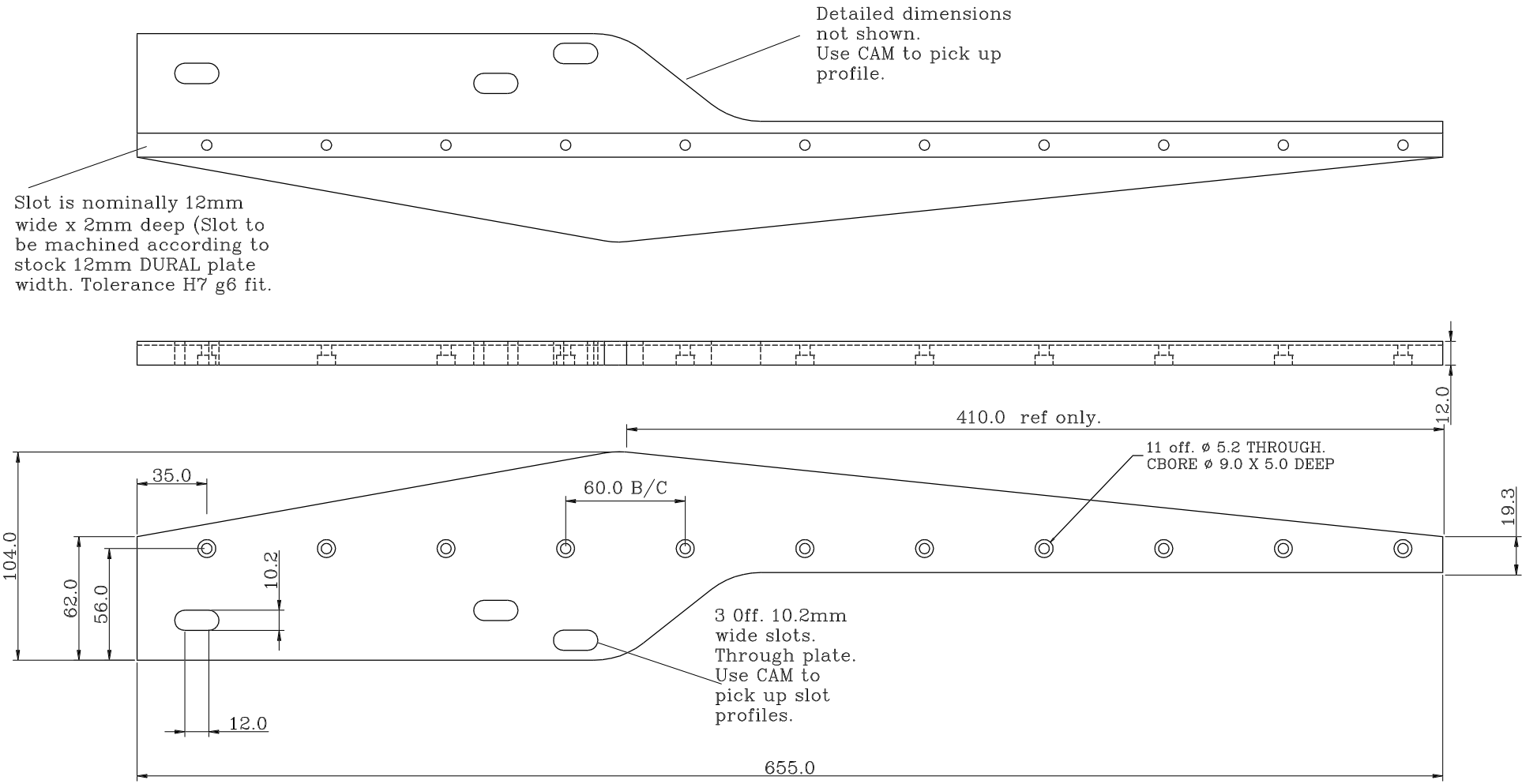
Drawing No: BObrk015

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Out rigger B side Plate

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

DRAWING NUMBER: BObrk015

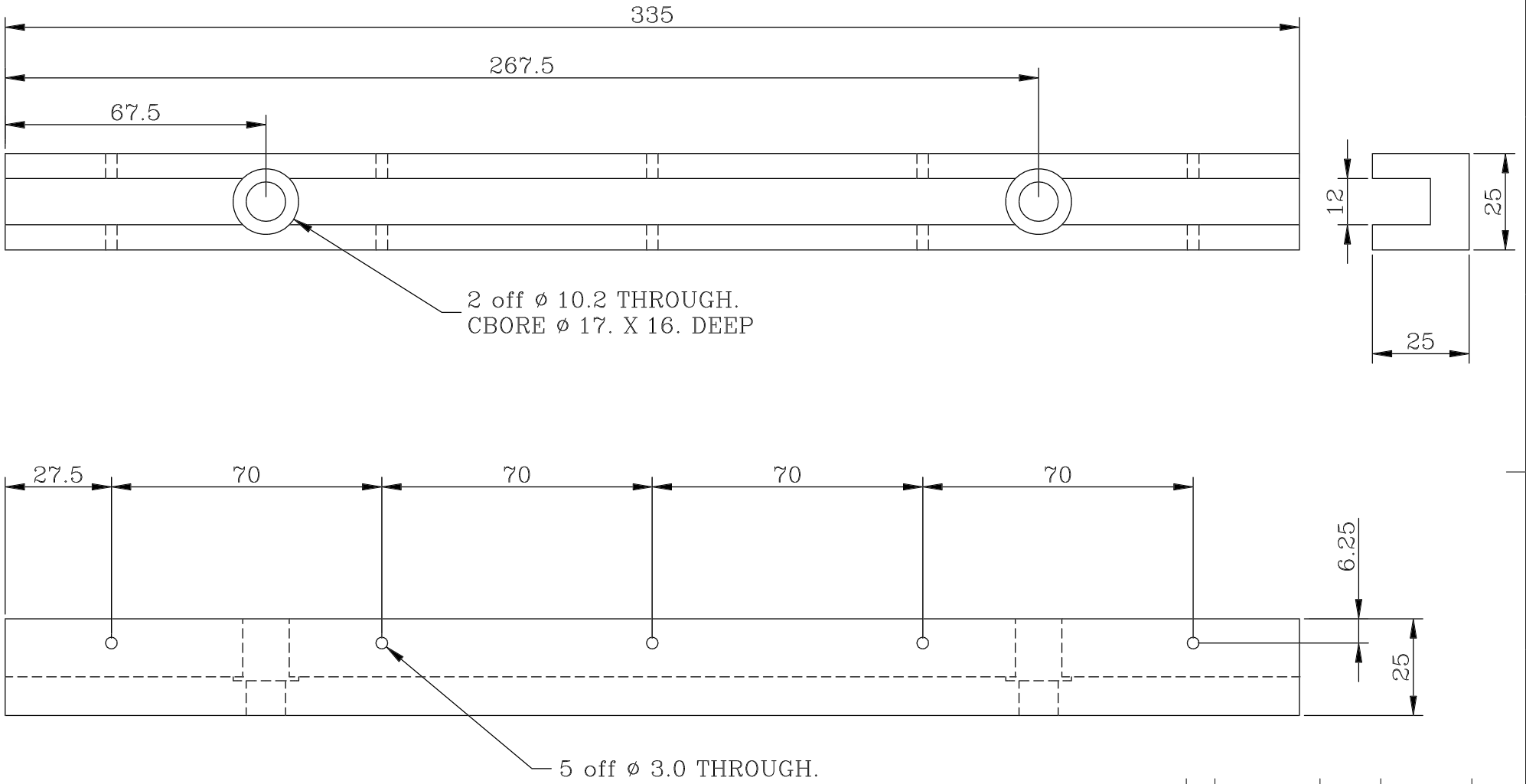
SHEET 1 OF 1

CAD FILE BObrk015.dwg

Drawing No: BObrk007.dwg

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



NB Please use dwg No. BObrk006.dwg for more detailed manufacturing information.

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	KMD	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Basechannel 3

MATERIAL: Dural

FINISH: Natural

ORIGINAL SCALE: 1:1

SHEET SIZE: A3

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Base Channel

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos, 321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

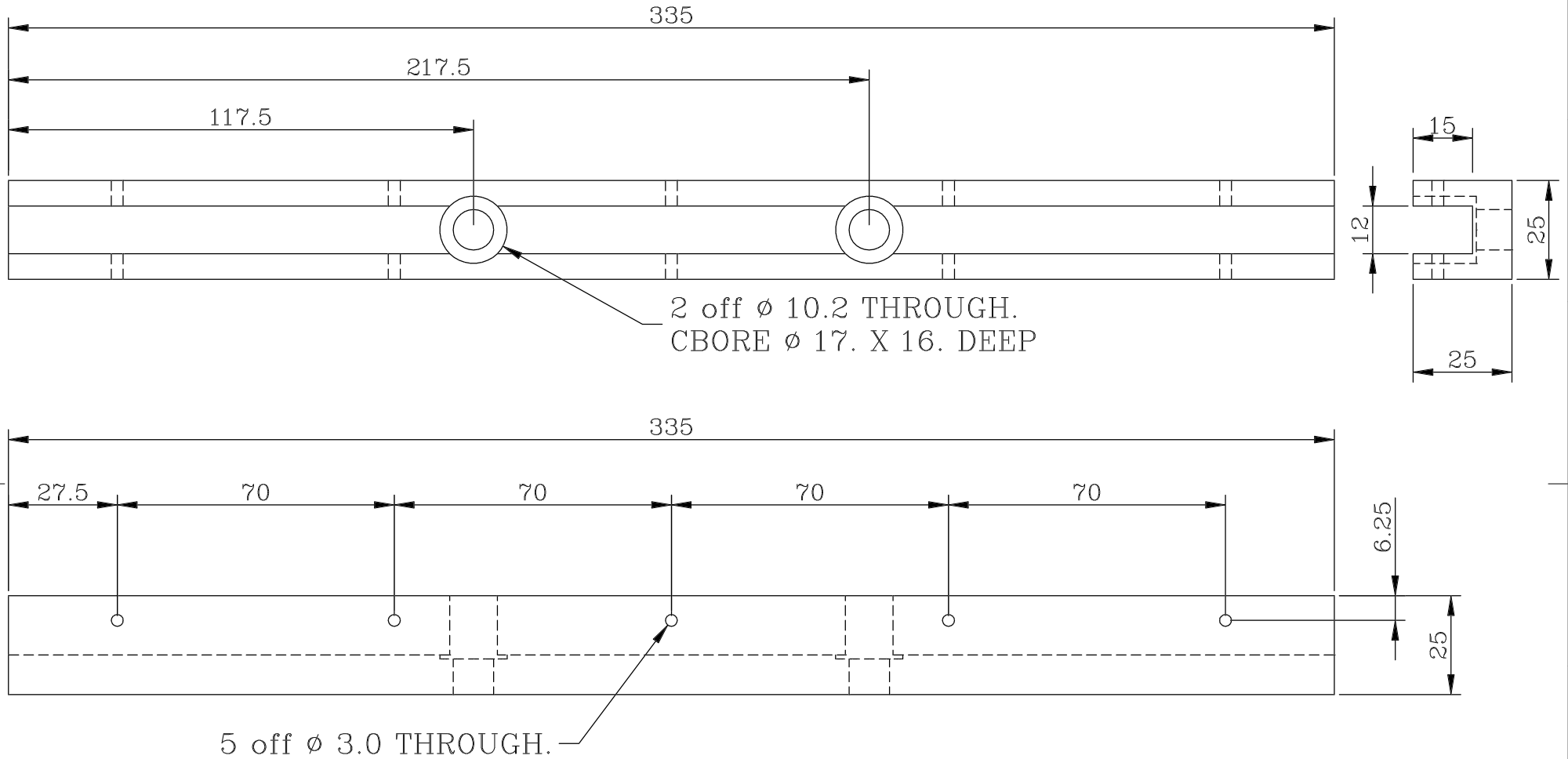
DRAWING NUMBER: BObrk007.dwg SHEET 1 OF 1

CAD FILE BObrk007.dwg

Drawing No: B0brk008

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



NB Please use dwg No. B0brk006.dwg for more detailed manufacturing information.

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	KMD	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Basechannel 4

MATERIAL: Dural

FINISH: Natural

ORIGINAL SCALE: 1:1

SHEET SIZE: A3

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Base Channel

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: B0brkGA1

ISAAC NEWTON GROUP
Apartado de Correos, 321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

DRAWING NUMBER: B0brk008

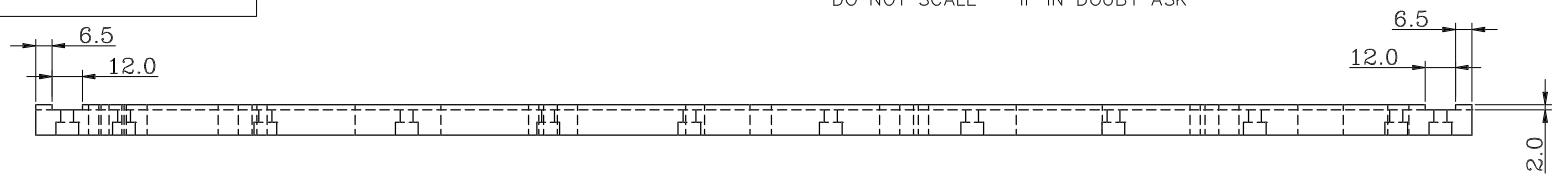
SHEET 1 OF 1

CAD FILE B0brk008.dwg

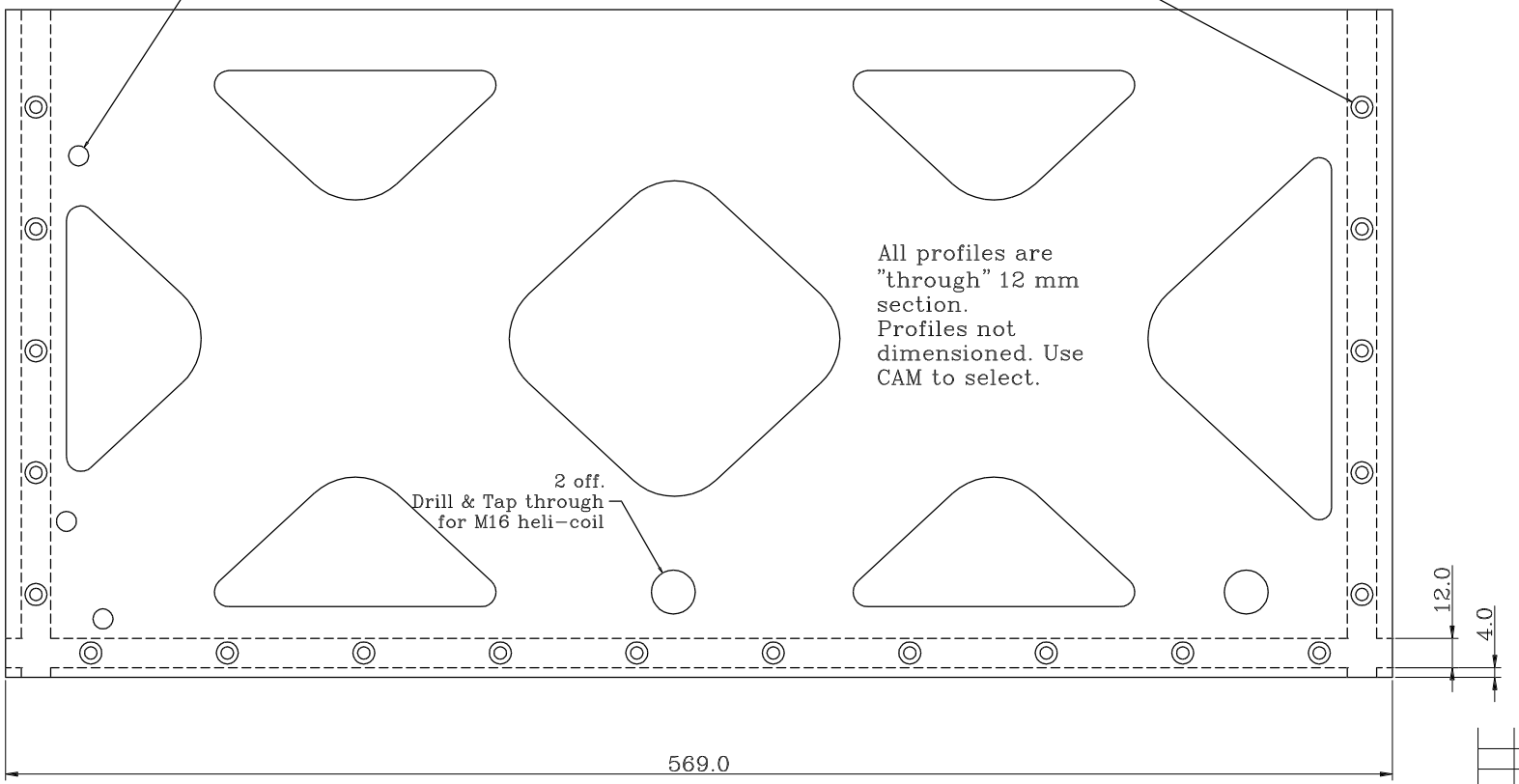
Drawing No: BObrk009

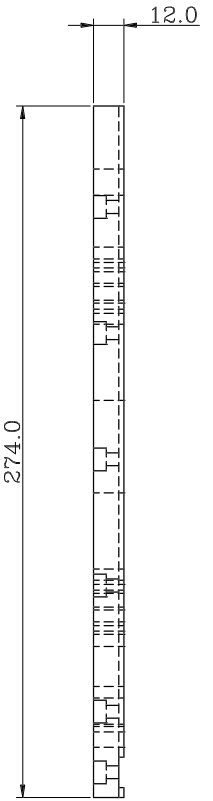
DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



Slots are all nominally 12mm wide x 2mm deep (Slot to be machined according to stock 12mm DURAL plate width. Tolerance H7 g6 fit.





ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Side Plate A

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium side plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
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DRAWING NUMBER: BObrk009

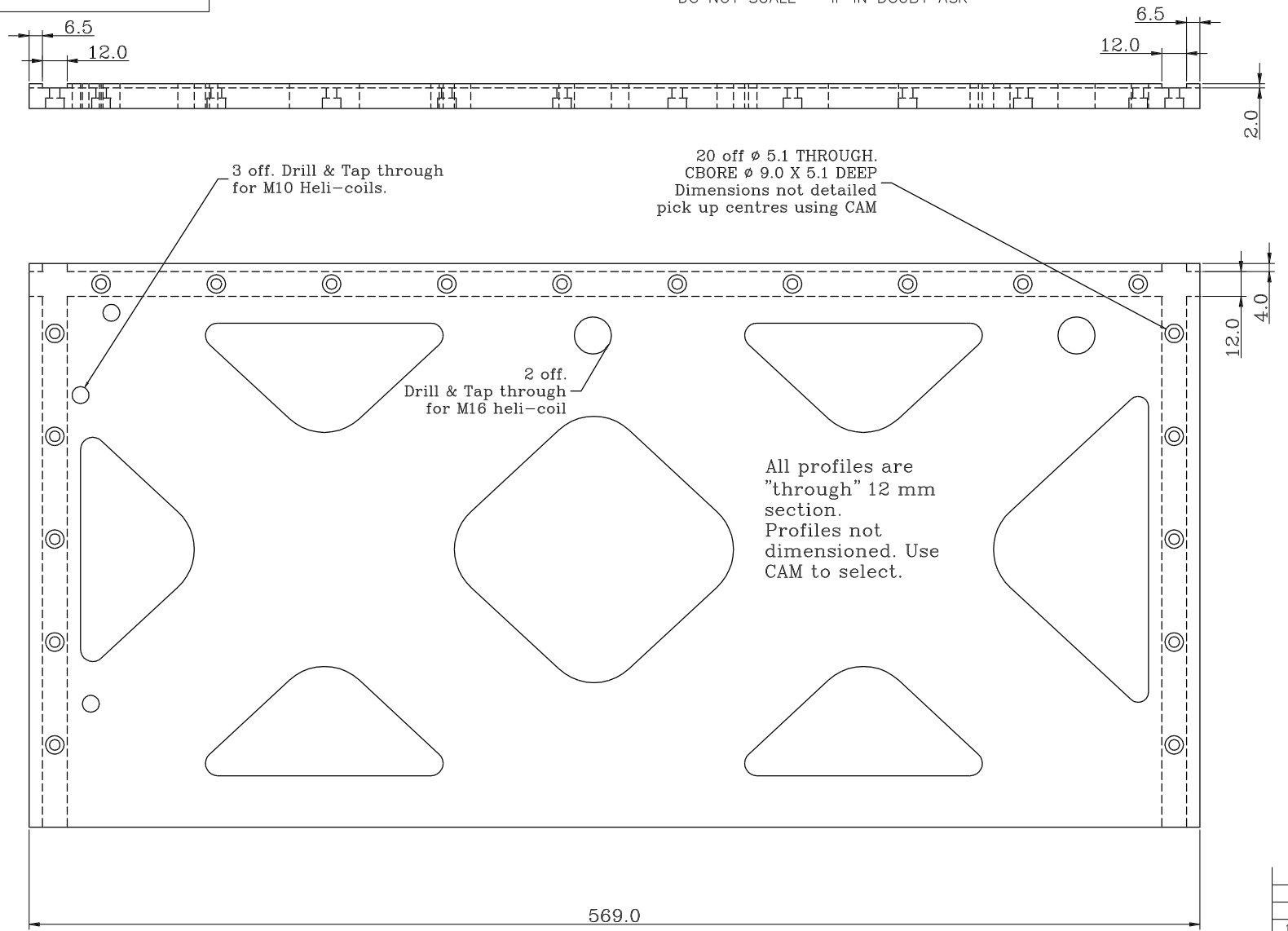
SHEET 1 OF 1

CAD FILE BObrk009.dwg

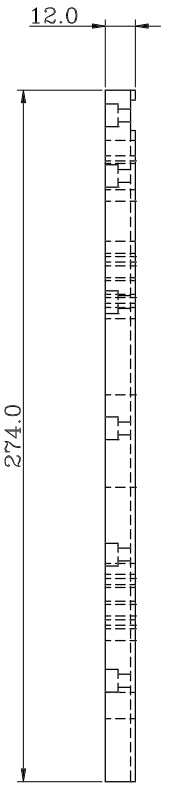
Drawing No: BObrk010

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



Slots are all nominally 12mm wide x 2mm deep (Slot to be machined according to stock 12mm DURAL plate width. Tolerance H7 g6 fit.



ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Side Plate B

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium side plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
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DRAWING NUMBER: BObrk010

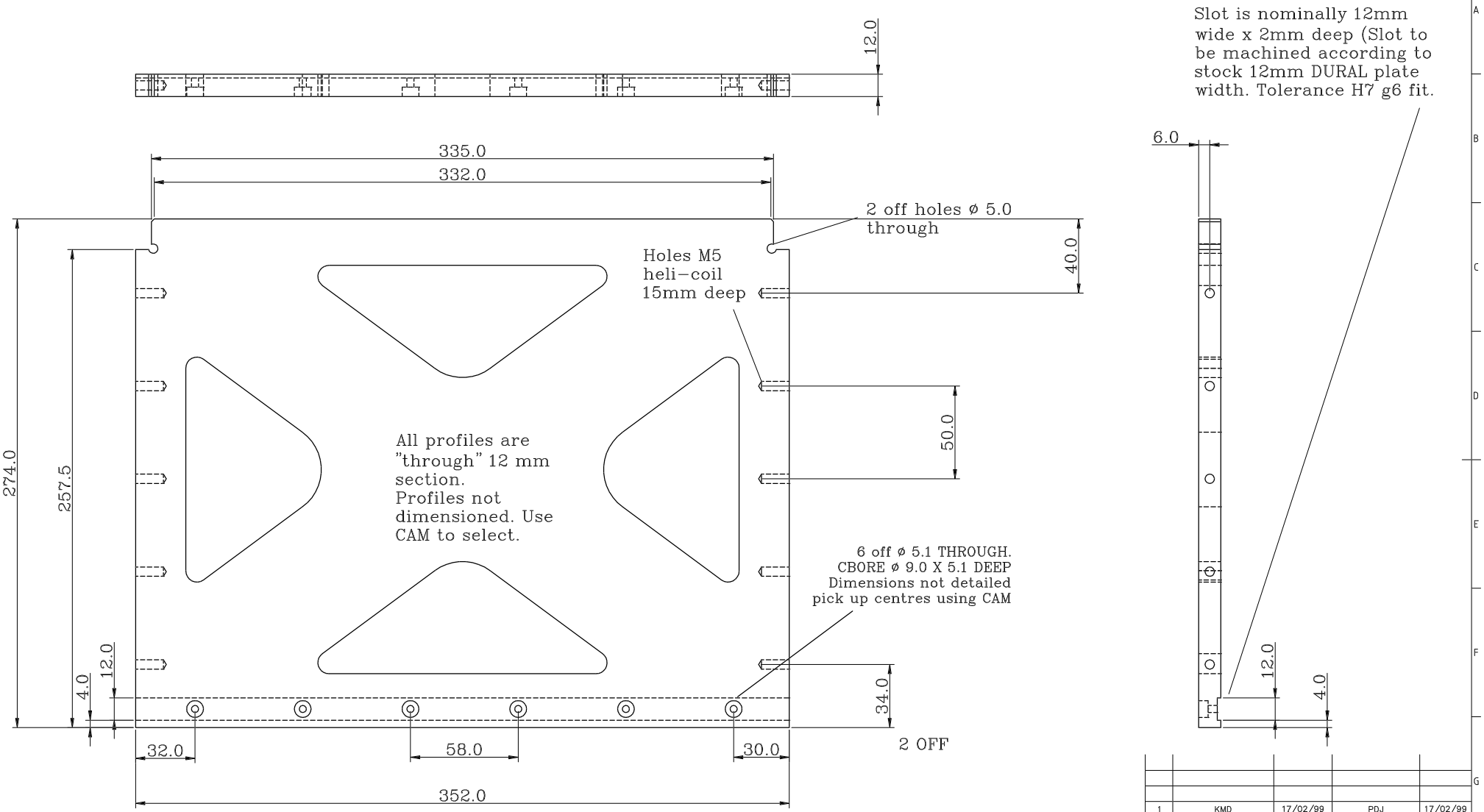
SHEET 1 OF 1

CAD FILE BObrk010.dwg

Drawing No: BObrk011

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



Slot is nominally 12mm wide x 2mm deep (Slot to be machined according to stock 12mm DURAL plate width. Tolerance H7 g6 fit.

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Top&Bottom Plates 11/12

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

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Canary Islands
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DRAWING NUMBER: BObrk011

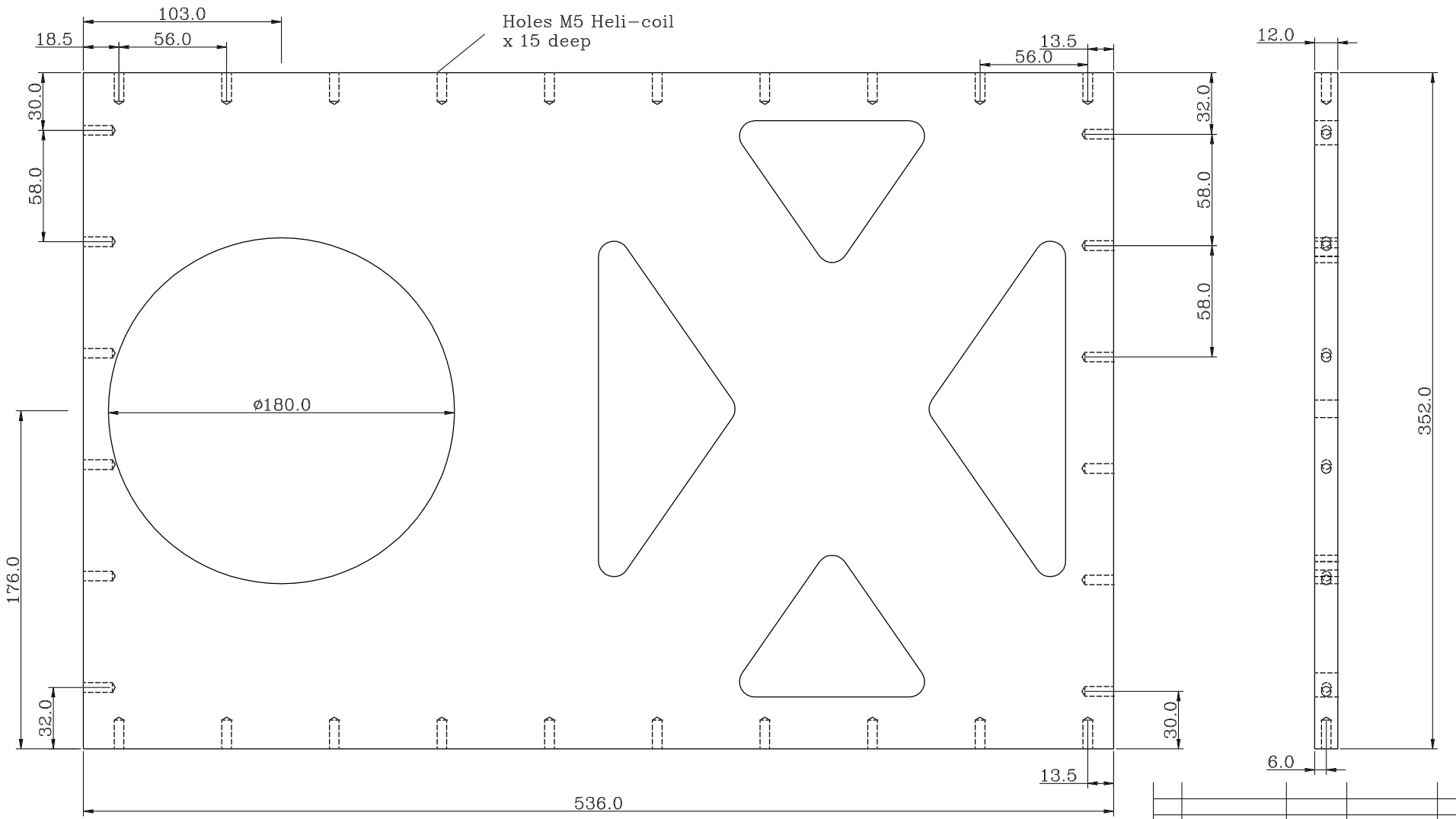
SHEET 1 OF 1

CAD FILE BObrk011.dwg

Drawing No: BObrk013

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: FrontPlate

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

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Canary Islands
SPAIN
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DRAWING NUMBER: BObrk013

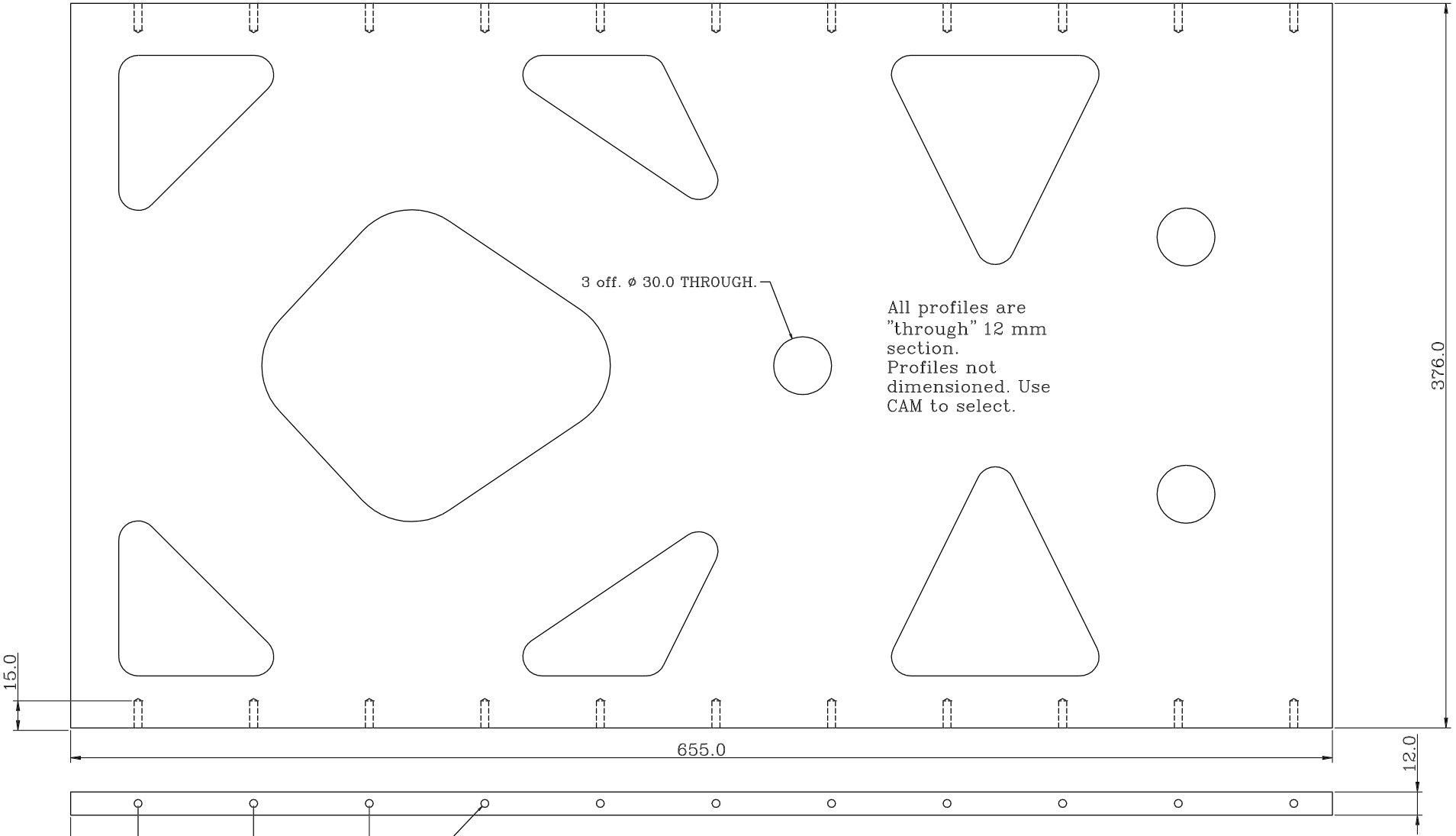
SHEET 1 OF 1

CAD FILE BObrk013.dwg

Drawing No: BObrk014

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Out rig top plate

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
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Canary Islands
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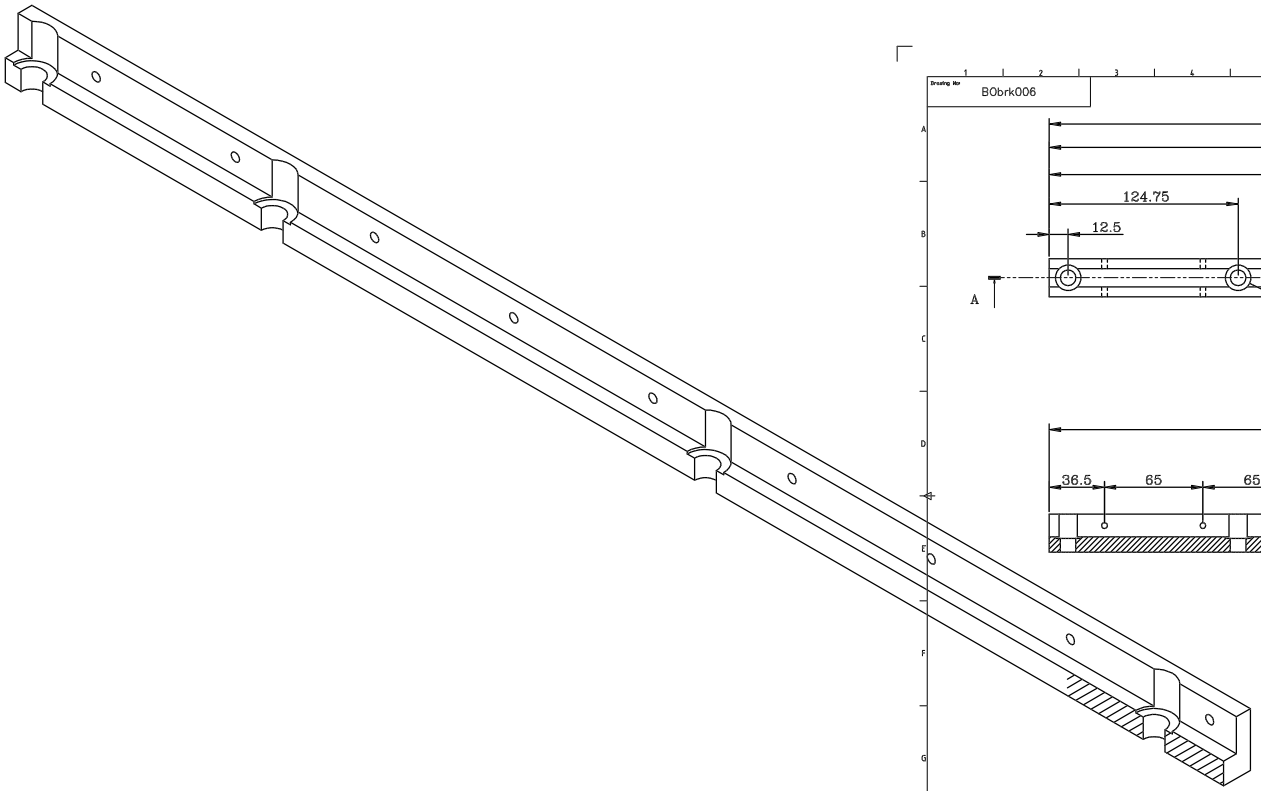
DRAWING NUMBER: BObrk014

SHEET 1 OF 1

CAD FILE BObrk014.dwg

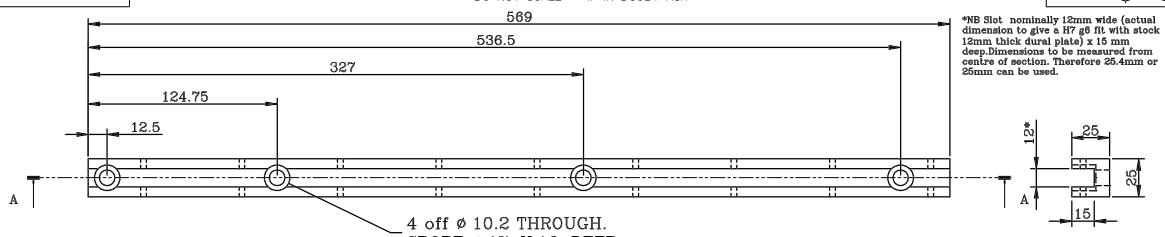


Isometric part section on A–A

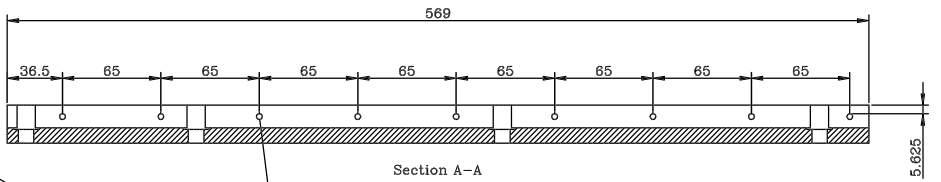
Drawing No: BObrk006

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



*NB Slot nominally 12mm wide (actual dimension to give a H7 g6 fit with stock 12mm thick dural plate) x 15 mm deep.Dimensions to be measured from centre of section. Therefore 25.4mm or 25mm can be used.



Section A–A

2 off required

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPROVD
1	KMD	17/03/99	PDJ	17/03/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Base Channel One & Two

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN ENTRY: INGRID

SUB-ENTRY: Cassegrain Support Bracket

ITEM: Aluminium base Channel

DRG DISCIPLINE: MECHANICAL

DRG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
SPAIN
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DRAWING NUMBER: BObrk006

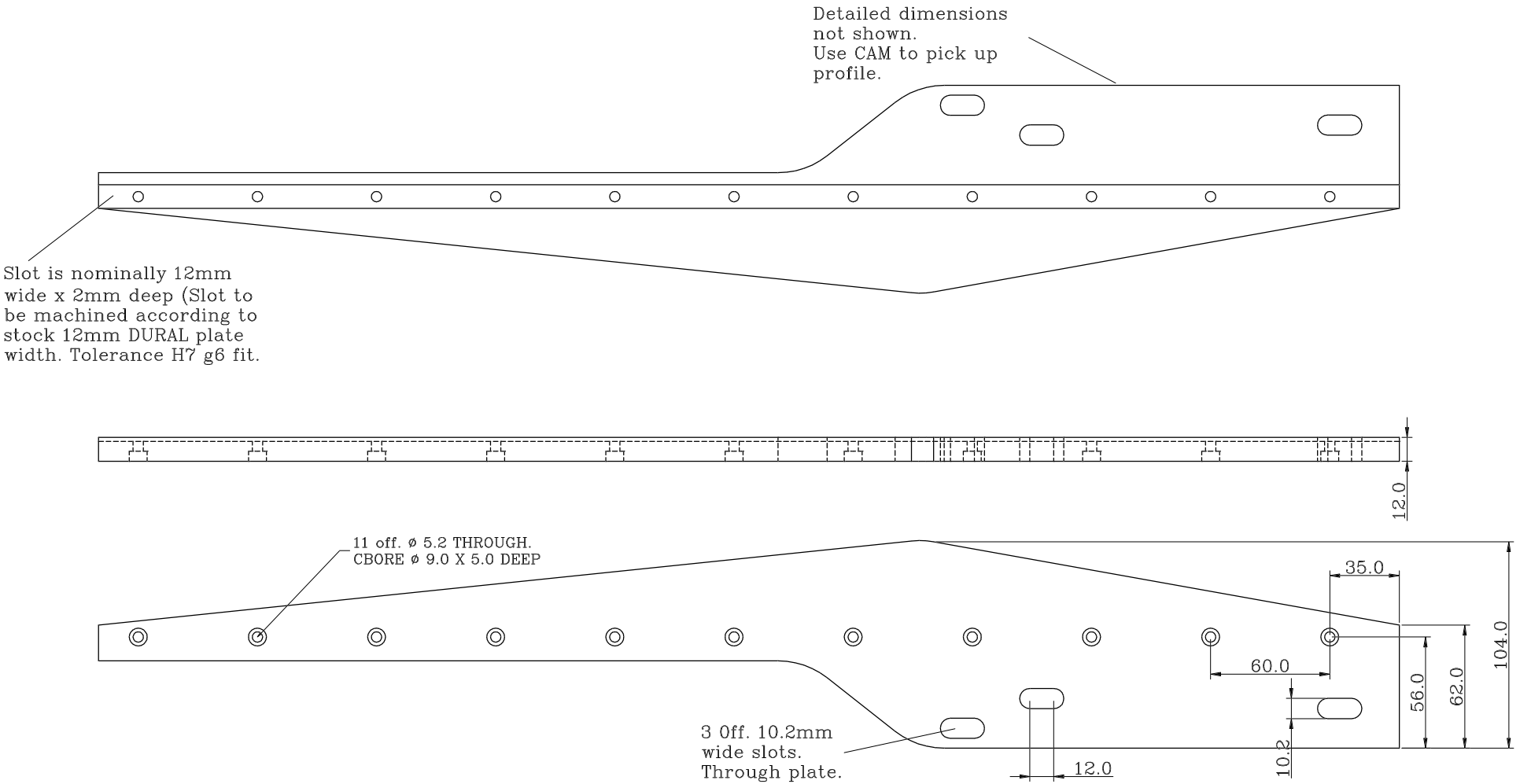
SHEET 1 or 1

CAD FILE BObrk006.dwg

Drawing No: BObrk016

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: Out rigger A side Plate

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

DRAWING NUMBER: BObrk016

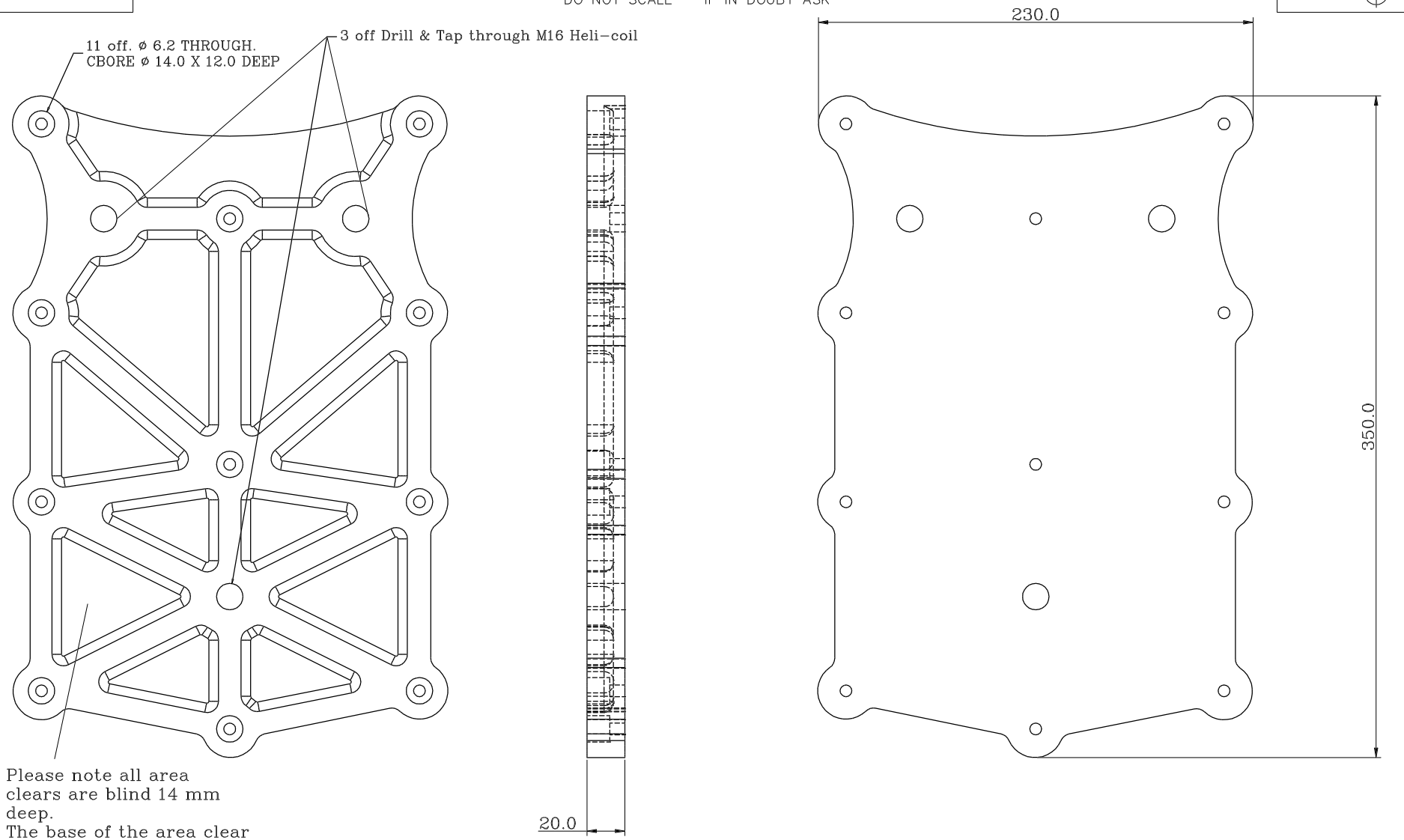
SHEET 1 OF 1

CAD FILE BObrk016.dwg

Drawing No: BObrk017

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



Please note all area clears are blind 14 mm deep.
The base of the area clear has a 5mm radius. This dimension is not important.

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: INGRID Top Plate

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
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DRAWING NUMBER: BObrk017

SHEET 1 OF 1

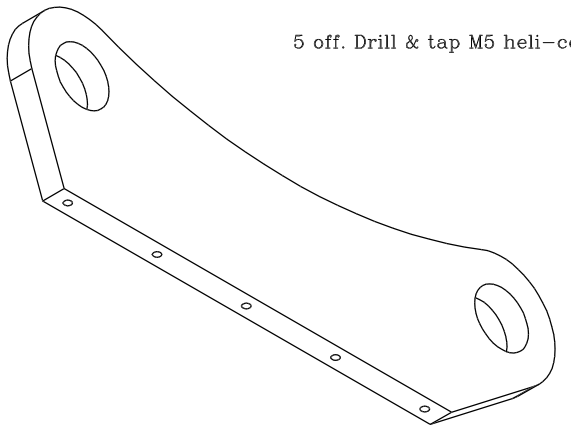
CAD FILE BObrk017.dwg

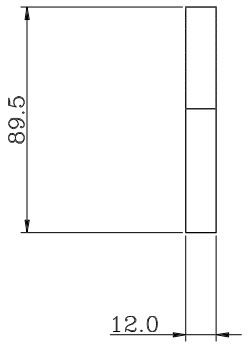
Drawing No: BObrk018

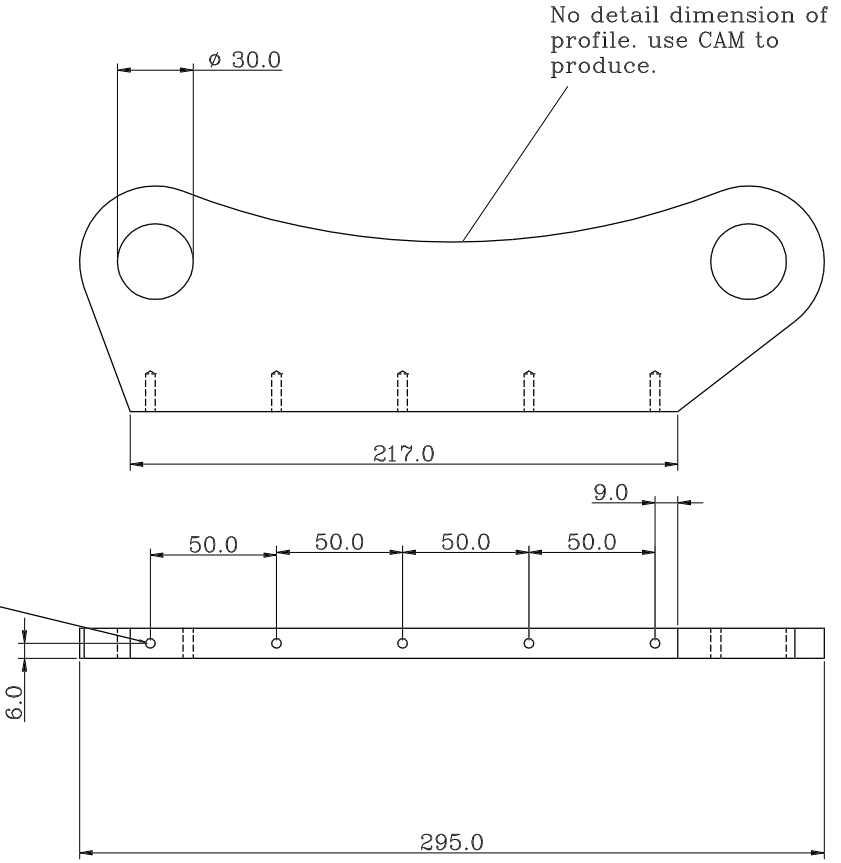
DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE

Part 18 & 19







1	KMD	17/02/99	PDJ	17/02/99
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: INGRID Support Plate A&B

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

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Canary Islands
SPAIN
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DRAWING NUMBER: BObrk018

SHEET 1 OF 1

CAD FILE BObrk018.dwg

Drawing No: BObrk024

DO NOT SCALE IF IN DOUBT ASK

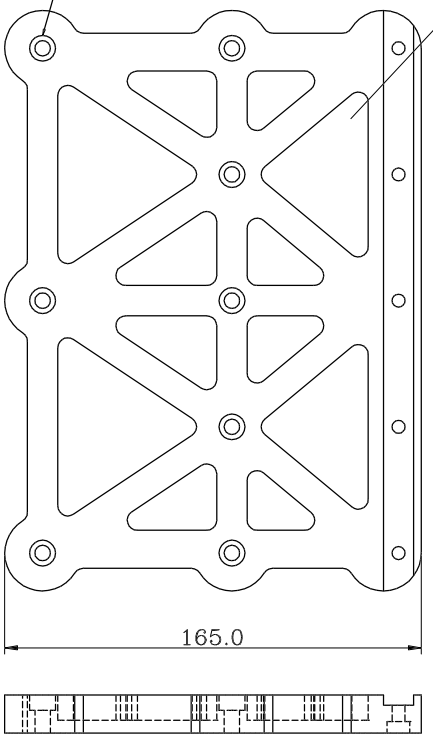
THIRD ANGLE

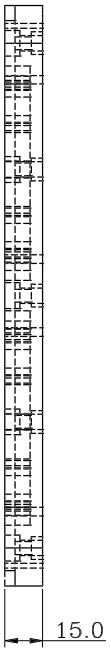
Part 24 & 25

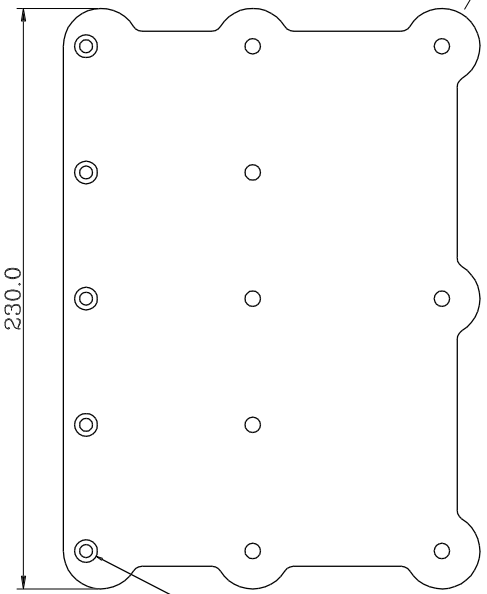
8 off. ø 6.1 THROUGH.
CBORE ø 10.2 X 6.0 DEEP

Area clears 10 mm deep.
Not dimensioned profile
using cam.

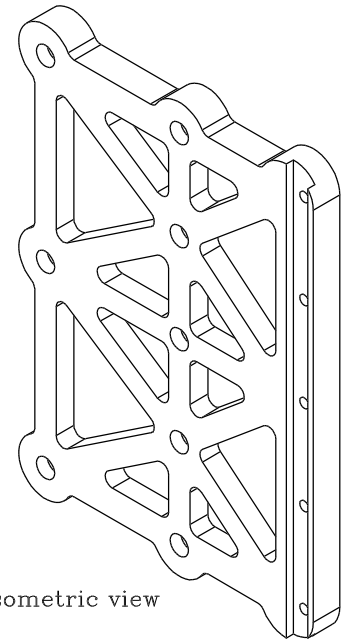
No detail dimension of
profile. use CAM to
produce.







5 off. ø 5.1 THROUGH.
CBORE ø 9.0 X 4.5 DEEP



Isometric view

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	KMD	17/02/99	PDJ	17/02/99

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± 0.1
ANGULAR TOL: ± 0.1
SURFACE FINISH (MICRONS) 3.2
REMOVE ALL SHARP EDGES

TITLE: INGRID Front plate A&B

MATERIAL: DURAL

FINISH: NATURAL

ORIGINAL SCALE: 1:1

SHEET SIZE: A1

MAIN SYSTEM: INGRID

SUB-SYSTEM: Cassegrain Support Bracket

ITEM: Aluminium Plate

ENG DISCIPLINE: MECHANICAL

DWG TYPE: Part

LOCATION: BO

USED ON: BObrkGA1

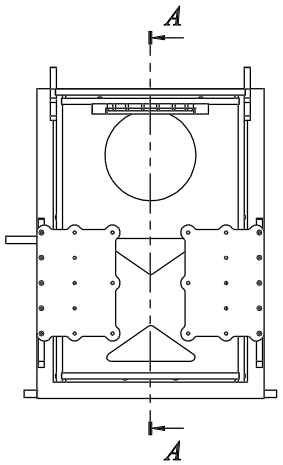
ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

DRAWING NUMBER: BObrk024

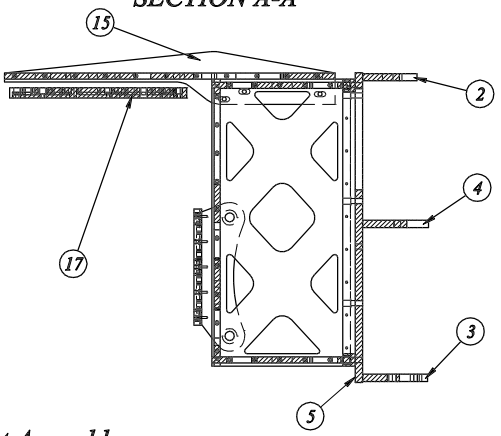
SHEET 1 OF 1

CAD FILE BObrk024.dwg

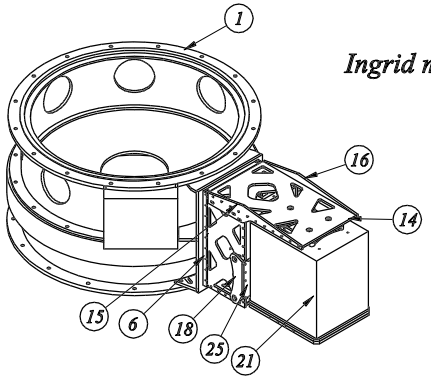
Drawing No: BO\BRK\GA1 | CAD-FILE: BOBRKGA1.DWG | DO NOT SCALE IF IN DOUBT ASK | THIRD ANGLE

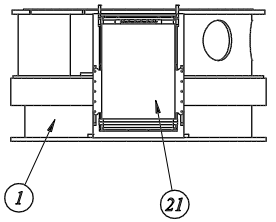


SECTION A-A

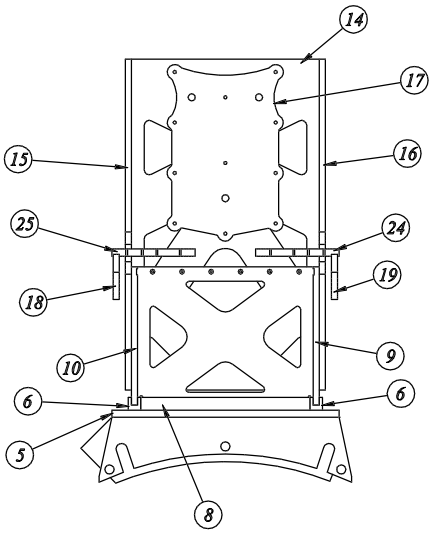


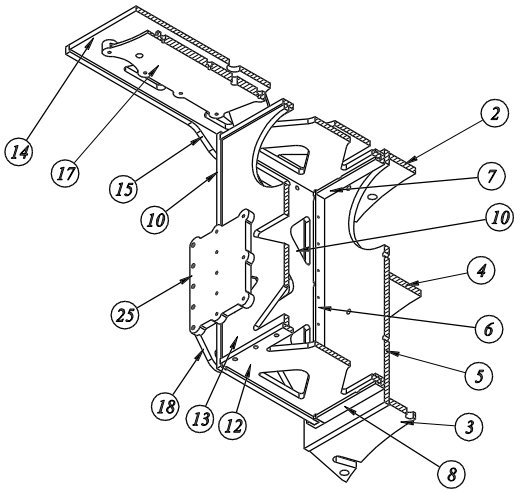
Ingrid mounted at Cassegrain





Bracket Assembly





ISOMETRIC SECTION ON A-A

ITEM	QTY	NAME	MATERIAL	DRAWING NO.
1	1	AGBOX	CARBON STEEL	SEE CAGB
2	1	TOPBRKT	CARBON STEEL	BO\BRK\002
3	1	BOTMBRKT	CARBON STEEL	BO\BRK\003
4	1	MIDBRKT	CARBON STEEL	BO\BRK\003
5	1	AGFRTPLT	DURAL	BO\BRK\005
6	2	BASCHN1	DURAL	BO\BRK\006
7	1	BASCHN3	DURAL	BO\BRK\007
8	1	BASCHN4	DURAL	BO\BRK\008
9	1	SIDPLTA	DURAL	BO\BRK\009
10	1	SIDPLTB	DURAL	BO\BRK\010
11	1	TOPPLT	DURAL	BO\BRK\011
12	1	BOTPLT	DURAL	BO\BRK\011
13	1	FRNTPLT	DURAL	BO\BRK\013
14	1	OUTRIGTP	DURAL	BO\BRK\014
15	1	OUTRIGB	DURAL	BO\BRK\015
16	1	OUTRIGA	DURAL	BO\BRK\016
17	1	INGTOPPL	DURAL	BO\BRK\017
18	1	INGSUPA	DURAL	BO\BRK\018
19	1	INGSUPB	DURAL	BO\BRK\018
20	1	INGRID	DURAL	SEE INGRID
21	1	VACJACK	DURAL	SEE INGRID
22	1	FOROPTS	DURAL	SEE INGRID
23	1	LID	DURAL	SEE INGRID
24	1	INGFRPLA	DURAL	BO\BRK\024
25	1	INGFRPLB	DURAL	B0\BRK\024

A	KMD	15/02/99	KMD	15/02/99
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD

CAD-FILE: BOBRKGA1.DWG

UNLESS OTHERWISE STATED
ALL DIMENSIONS IN mm
GENERAL TOL: ± N\A
ANGULAR TOL: ± N\A
SURFACE FINISH (MICRONS) N\A
REMOVE ALL SHARP EDGES

TITLE: INGRID-CASSEGRAIN-SUPPORT-BRACKET

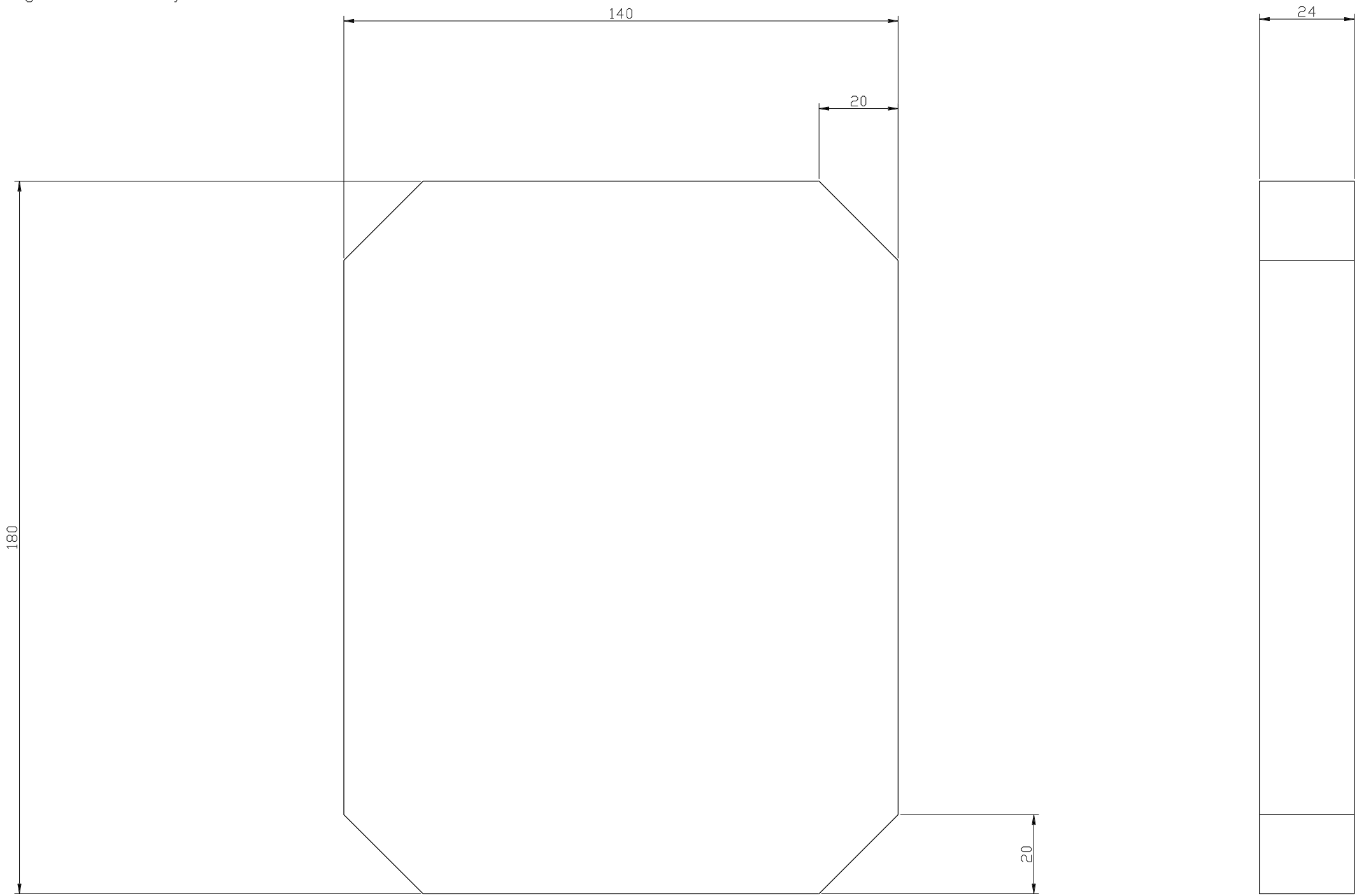
MATERIAL: N\A	ORIGINAL SCALE: 1:1	MAIN SYSTEM: WHT-INSTRUMENT	DWG TYPE: GA
		SUB-SYSTEM: INGRID	LOCATION: BO
FINISH: N\A	SHEET SIZE: A1	ITEM: CASS-BRACKET	USED ON: N/A
		ENG DISCIPLINE: MECHANICAL	

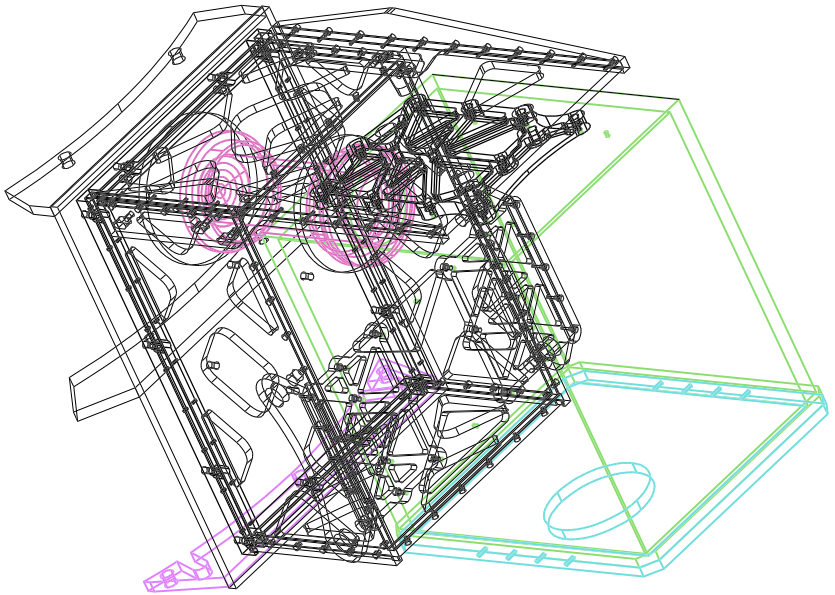
ISAAC NEWTON GROUP
Apartado de Correos,321
38780 S/C de La Palma
Canary Islands
SPAIN
Tel: +34 922 425 400

DRAWING NUMBER: BO\BRK\GA1 SHEET 1 OF 1

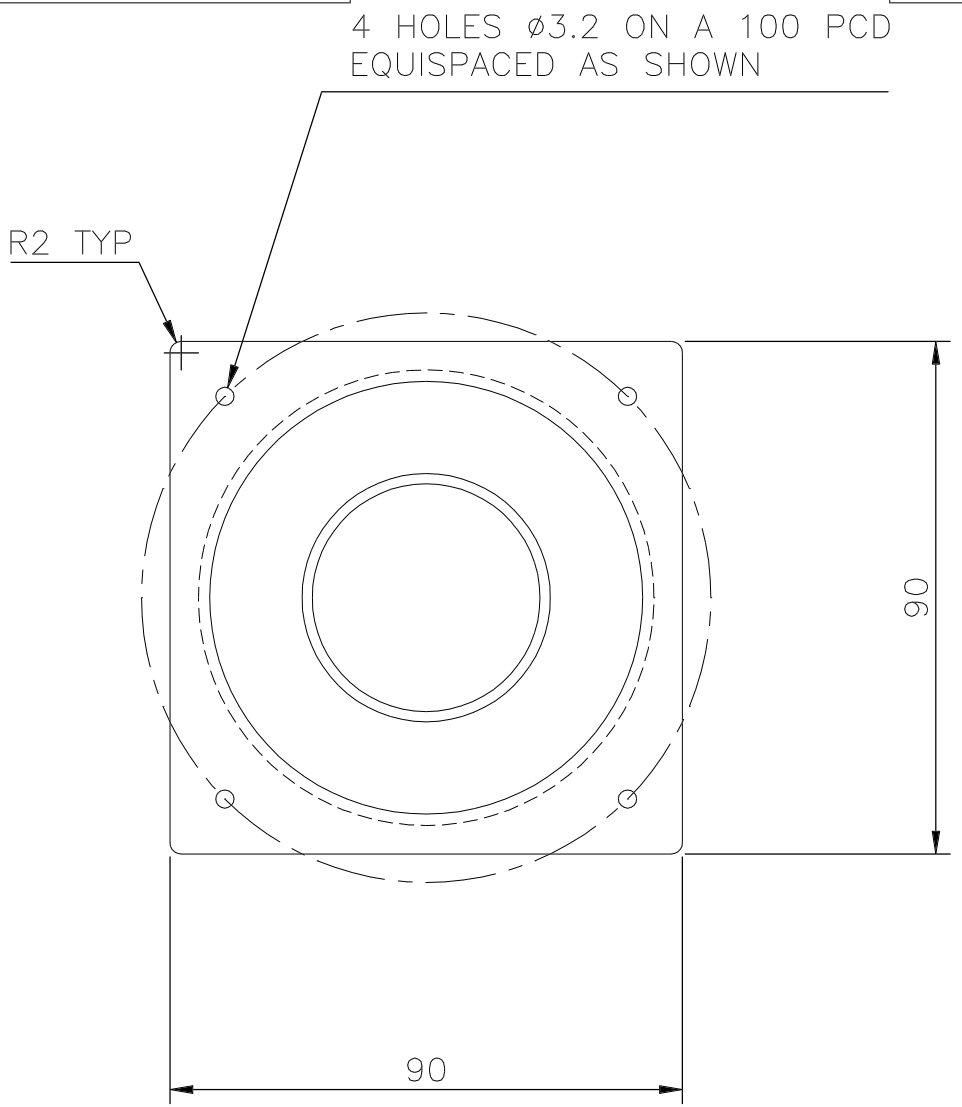
CAD FILE BOBRKGA1.DWG

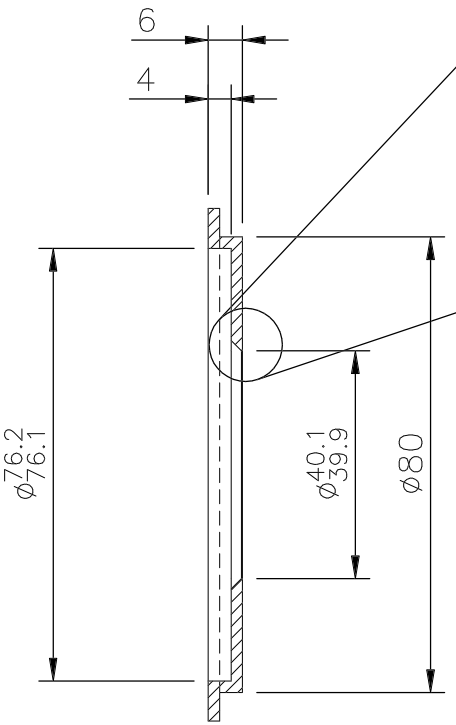
All edges chamfered by 0.5

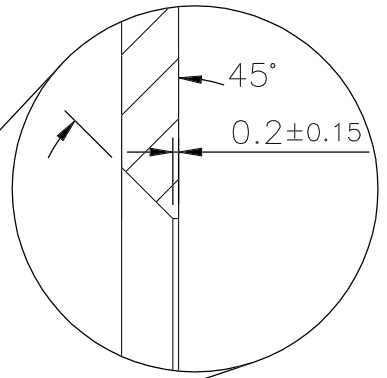




DWG. No.
B0247







SECTION SHOWING KNIFE EDGE SCALE 5:1

PRELIMINARY
FOR INFORMATION ONLY
SUBJECT TO CHANGE
03/08/98
PRELIMINARY ISSUE: 1
DO NOT USE THIS DRAWING FOR PROCUREMENT OR MANUFACTURE.

REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY DESIGN	PDJ			ST	03/08/98

ISSUE DESCRIPTION

UNLESS OTHERWISE STATED
DIMENSIONS ARE IN mm
GENERAL TOLERANCE: ± 0.2
ANGULAR TOLERANCE: ±
SURFACE FINISH: (MICRONS) √
REMOVE ALL SHARP EDGES
DO NOT SCALE THIS DRAWING

MATERIAL
ALUMINIUM ALLOY
BS 1470 6082 TF

FINISH
CLEAN

USED ON

Royal Greenwich Observatory
ROYAL GREENWICH OBSERVATORY
MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM
PPARC

TITLE
LENS BARREL END CAP 1
INGRID LENS BARREL ASSEMBLY

ORIGINAL SHEET	LOCATION	DWG. No.	REV
A3	B0	B0247	1
ORIGINAL SCALE 1:1			SHEET 1 OF 1