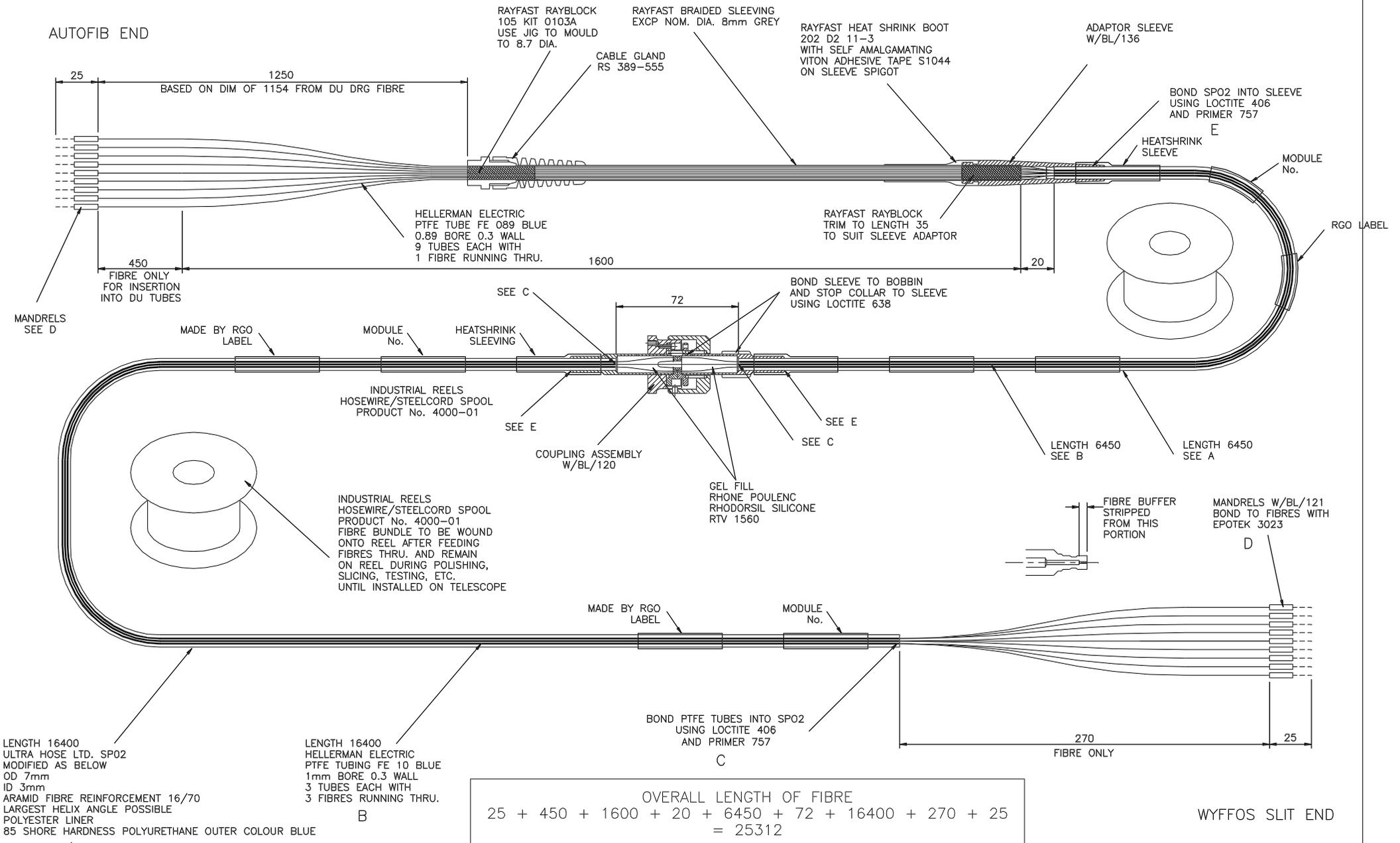


AFTER MANUFACTURE AND TESTING THIS HALF TO BE SENT TO DURHAM UNIVERSITY FOR INCORPORATION INTO AUTOFIB 2



A
LENGTH 16400
ULTRA HOSE LTD. SPO2
MODIFIED AS BELOW
OD 7mm
ID 3mm
ARAMID FIBRE REINFORCEMENT 16/70
LARGEST HELIX ANGLE POSSIBLE
POLYESTER LINER
85 SHORE HARDNESS POLYURETHANE OUTER COLOUR BLUE

B
LENGTH 16400
HELLERMAN ELECTRIC
PTFE TUBING FE 10 BLUE
1mm BORE 0.3 WALL
3 TUBES EACH WITH
3 FIBRES RUNNING THRU.

C
BOND PTFE TUBES INTO SPO2
USING LOCTITE 406
AND PRIMER 757

OVERALL LENGTH OF FIBRE
25 + 450 + 1600 + 20 + 6450 + 72 + 16400 + 270 + 25
= 25312

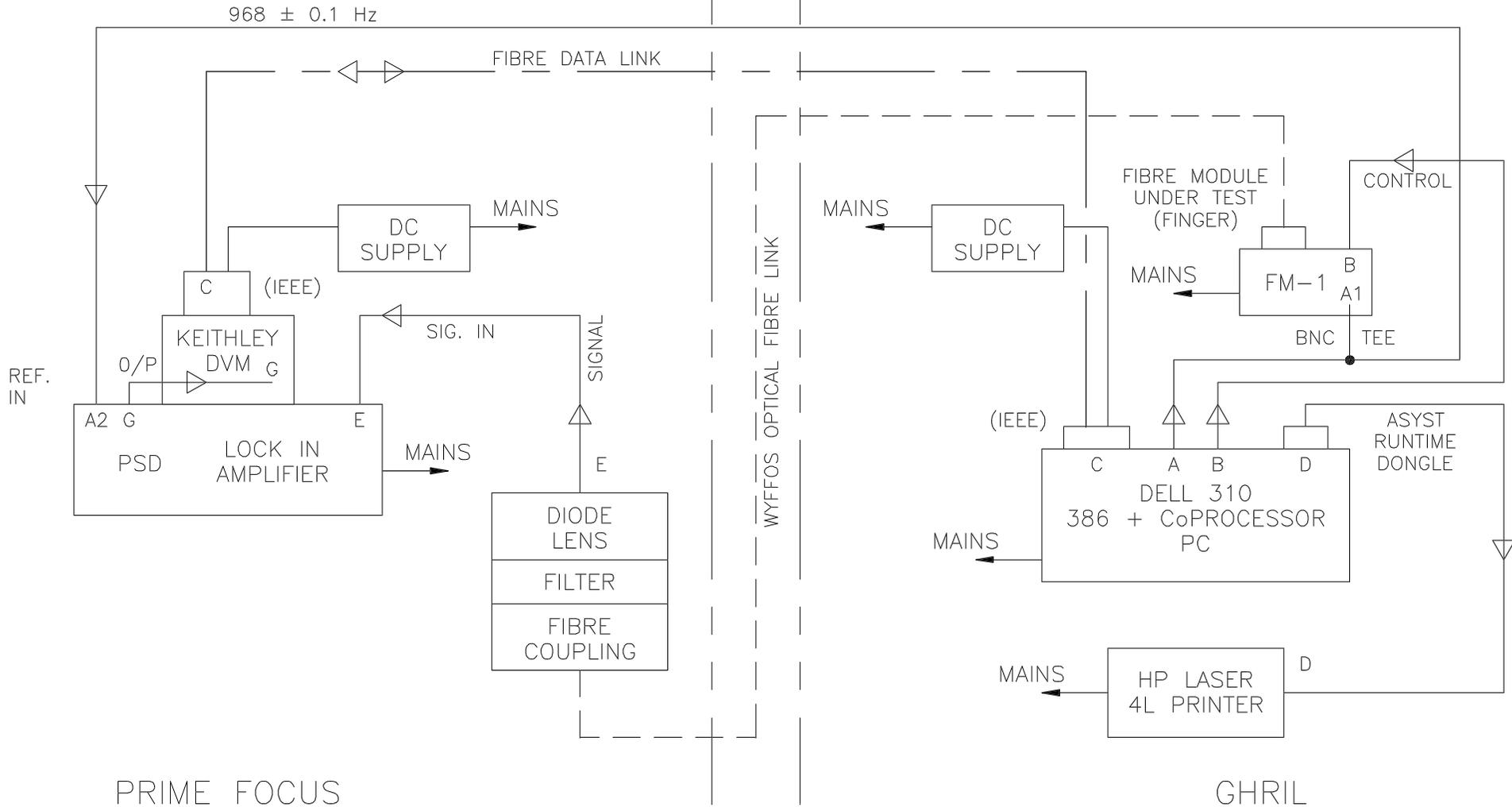
WYFFOS SLIT END

| | | | | | | | | | | | | | | | | | |
|-------|--------|------|----------|-------------------------------------|--------|--------|----------|----------|--|-----------------------------|--|-----------|--|------------------------------------|--|-------------|--|
| | | | | Tolerance (Unless otherwise stated) | | | | Material | | Dimns. in m.m. | | Scale NTS | | THIRD ANGLE PROJECTION | | GA No. | |
| | | | | X +/- | | | | Finish | | ROYAL GREENWICH OBSERVATORY | | | | Title | | Drawing No. | |
| | | | | X.X +/- | | | | | | MADINGLEY ROAD | | | | 4.2m WYFFOS/AUTOFIB - FIBRE BUNDLE | | W/BL/140 | |
| | | | | X.XX +/- | | | | | | CAMBRIDGE | | CB3 0EZ | | | | | |
| | | | | ANG. +/- | | | | | | | | | | | | | |
| Issue | Mod.No | Date | Drawn by | Issue | Mod.No | Date | Drawn by | | | | | | | | | | |
| | | | | 1 | | OCT,92 | AJW | | | | | | | | | | |

DRG NO.
BL/1102

DO NOT SCALE

- (A) COUNTER/TIMER BOARD
 - (B) PIO BOARD
 - (C) IEEE BOARD
- ▷— SIGNAL DIRECTION



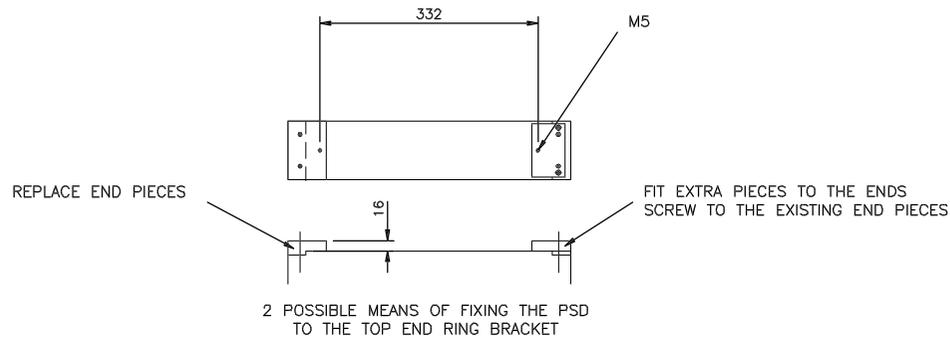
PRIME FOCUS

FIBRE MODULE MEASURING SYSTEM

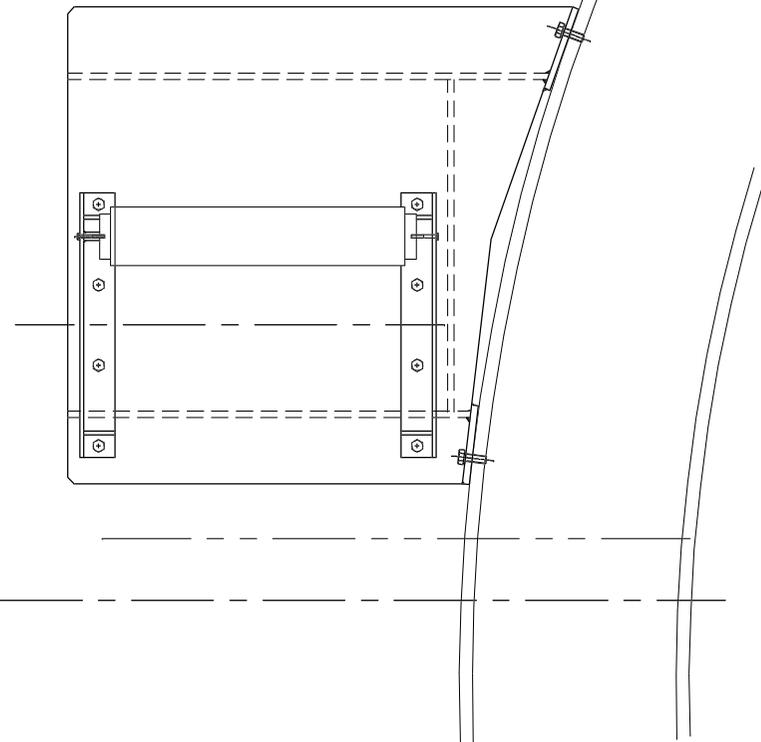
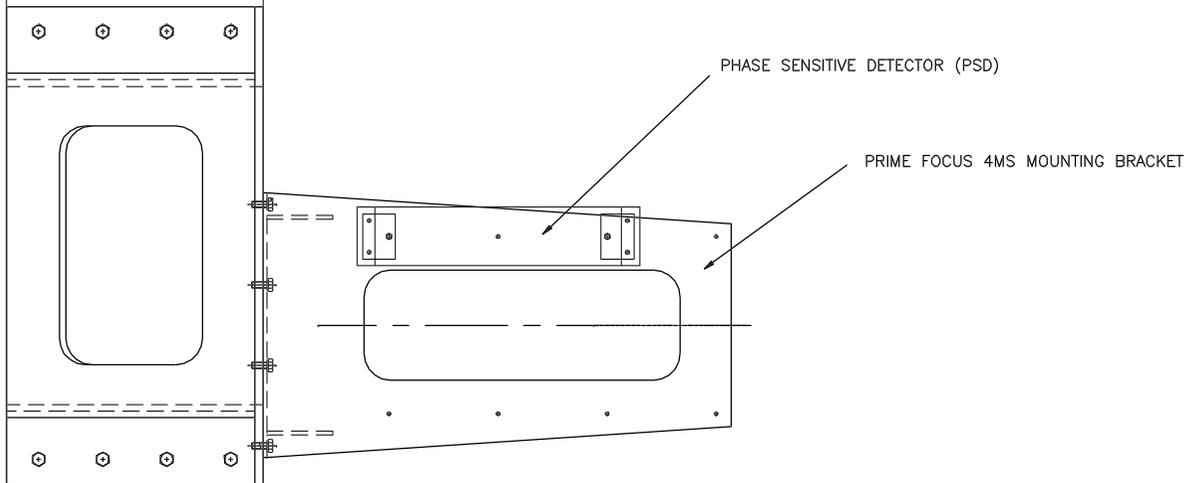
GHRIL

| | | | | | | | | | |
|-------|----------|-------|--------------------------------------|----------|------------------------|-----------------------------|----------------|-------------------------------|----------|
| | | | TOLERANCES (UNLESS OTHERWISE STATED) | MATERIAL | THIRD ANGLE PROJECTION | DIMS IN mm | ORIGINAL SCALE | ORIGINAL SHEET SIZE A3 | G.A. NO. |
| | | | X ± | | | ROYAL GREENWICH OBSERVATORY | | | DRG NO. |
| 1 | 15/09/93 | AJW | X.X ± | FINISH | No. REQ'D | MADINGLEY ROAD | | FIBRE MODULE MEASURING SYSTEM | SHT. 1 |
| ISSUE | DATE | DRAWN | X.XX ± | | | CAMBRIDGE CB3 0EZ | | BL/1102 | |
| | | | ANG. ± | | | | | | |

DO NOT SCALE



REF TOP RING
TC1 213 03

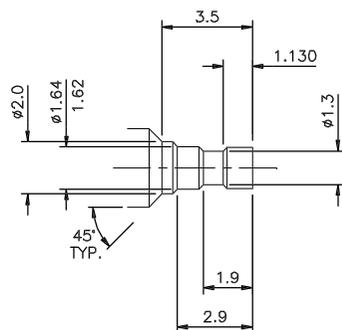
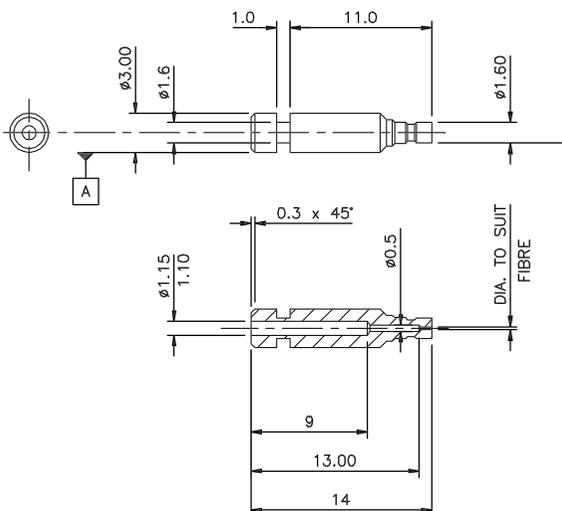


HAND RAIL

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|----------|------|----------|-------|----------|------|----------|-------|----------|------|--------------------------------------|---|----------|-----|------------------------|--|-----------------------------|--|--------------------|--|------------------------|--|-------------------------------------|--|----------|--|
| | | | | | | | | | | | TOLERANCES (UNLESS OTHERWISE STATED) | | MATERIAL | | THIRD ANGLE PROJECTION | | DIMS IN mm | | ORIGINAL SCALE 1:4 | | ORIGINAL SHEET SIZE A1 | | | | G.A. NO. | |
| | | | | | | | | | | | X ± | | | | | | | | | | | | | | DRG NO. | |
| | | | | | | | | | | | X.X ± | | | | | | | | | | | | | | SHT. 1 | |
| | | | | | | | | | | | X.XX ± | | | | | | | | | | | | | | BL/1002 | |
| | | | | | | | | | | | ANG. ± | | | | | | | | | | | | | | | |
| ISSUE | MOD. NO. | DATE | DRAWN BY | ISSUE | MOD. NO. | DATE | DRAWN BY | ISSUE | MOD. NO. | DATE | DRAWN BY | 1 | 18/08/93 | AJW | NO. REQ'D PER ASSY | | ROYAL GREENWICH OBSERVATORY | | TITLE | | | | FIXING PSD AT TOP RING - FIBRE TEST | | | |
| | | | | | | | | | | | | | | | CAMBRIDGE CB3 0EZ | | | | | | | | | | | |

Drawing No.
W/BL/121-6

REMOVE ALL SHARP EDGES



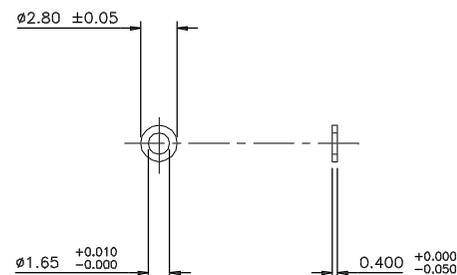
END DETAIL
SCALE 10:1

TOLERANCES
X ± 0.1
X.X ± 0.05
X.XX ± 0.000
0.010

ALL DIAMETERS \varnothing 0.010 A

| | | |
|---------------------|--------------------|-------------------------------|
| 121 | TITLE | DISC REF. |
| MANDREL - FIBRE END | | |
| MATERIAL | SCALE | TOLERANCES ± |
| CZ121 BRASS | 5:1 | X SEE X.X SEE X.XX NOTE |
| FINISH | No. REQD. PER UNIT | |
| CLEAN | SEE NOTE | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | W/BL/121 | |

REMOVE ALL SHARP EDGES



| | | |
|-------------|--------------------|-------------------------------|
| 122 | TITLE | DISC REF. |
| WASHER | | |
| MATERIAL | SCALE | TOLERANCES ± |
| CZ121 BRASS | 5:1 | X SEE X.X SEE X.XX DRG. |
| FINISH | No. REQD. PER UNIT | |
| CLEAN | SEE DRG. | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | W/BL/122 | |

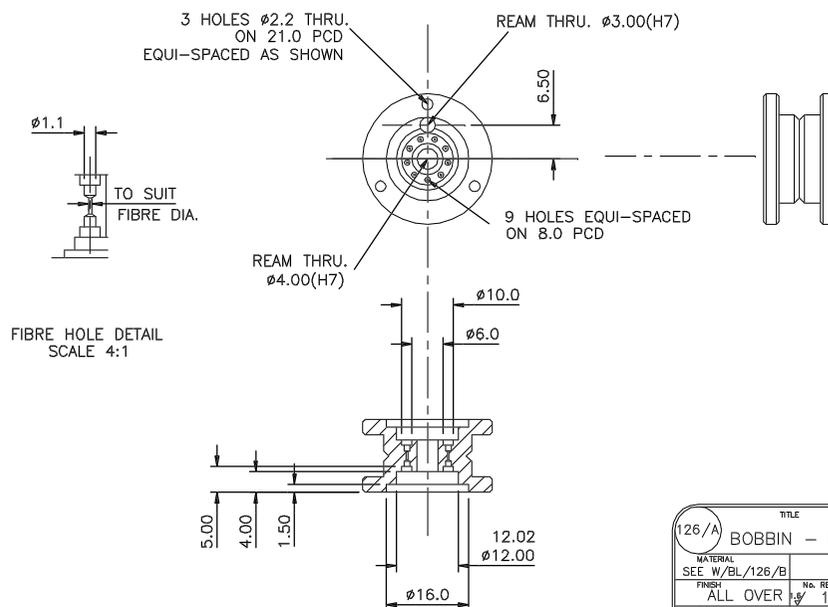
REMOVE ALL SHARP EDGES



COOPER NEEDLE WORKS
19 GAUGE ST.STL. TUBING
1.10 OD 0.685 ID

| | | |
|--------------|--------------------|------------------------------|
| 123 | TITLE | DISC REF. |
| SUPPORT TUBE | | |
| MATERIAL | SCALE | TOLERANCES ± |
| SEE NOTE | 5:1 | X 0.1 X.X +/- X.XX +/- |
| FINISH | No. REQD. PER UNIT | |
| CLEAN | SEE NOTE | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | W/BL/123 | |

REMOVE ALL SHARP EDGES

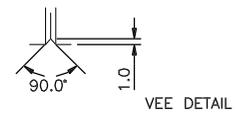
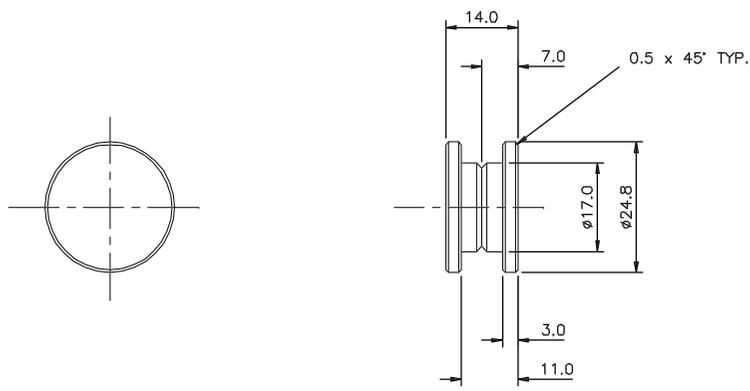


| | | |
|--------------------------|--------------------|------------------------------|
| 126/A | TITLE | DISC REF. |
| BOBBIN - FINAL MACHINING | | |
| MATERIAL | SCALE | TOLERANCES ± |
| SEE W/BL/126/B | 2:1 | X 0.1 X.X +/- X.XX +/- |
| FINISH | No. REQD. PER UNIT | |
| ALL OVER | 1 OFF | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | W/BL/126/A | |

| | | | | | | | | | | | | | |
|-------------------------------------|-----|--|--|----------|---------|----------------|-----------------------------|-------|--|------------------------|------------|-------------|--|
| Tolerance (Unless otherwise stated) | | | | Material | | Dimns. in m.m. | | Scale | | THIRD ANGLE PROJECTION | | G.A. No. | |
| X | +/- | | | | | | | | | Title | | Drawing No. | |
| X.X | +/- | | | Finish | Drg.No. | No.Req. | ROYAL GREENWICH OBSERVATORY | | WYFFOS - FIBRE END MANDRELS | | W/BL/121-6 | | |
| X.XX | +/- | | | | Used on | | MADINGLEY ROAD | | 1ST SCIENTIFIC BUNDLE 0.153 FIBRE/2.0 LENS | | | | |
| ANG. | +/- | | | | | | CAMBRIDGE CB3 0EZ | | | | | | |

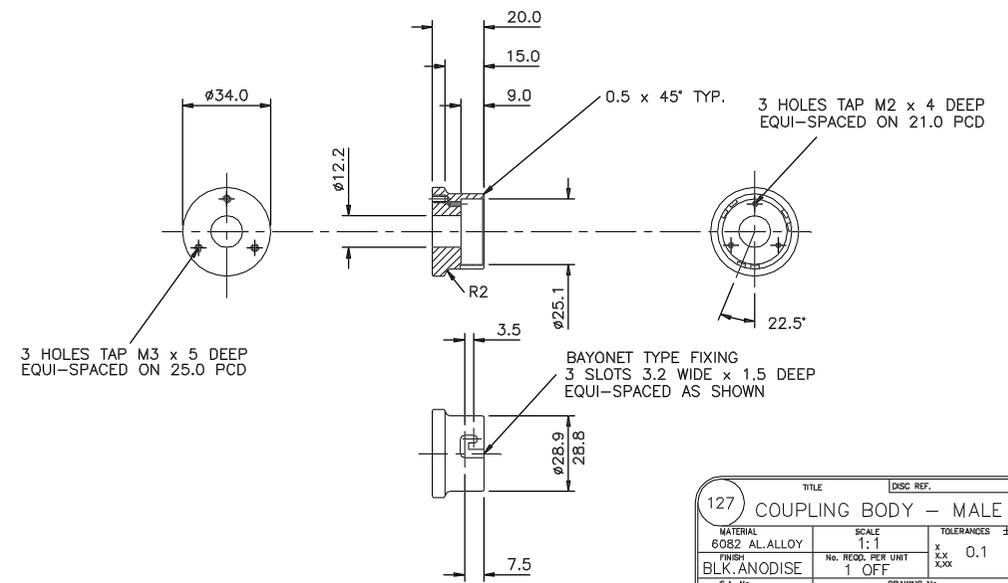
Drawing No.
W/BL/126-9

REMOVE ALL SHARP EDGES



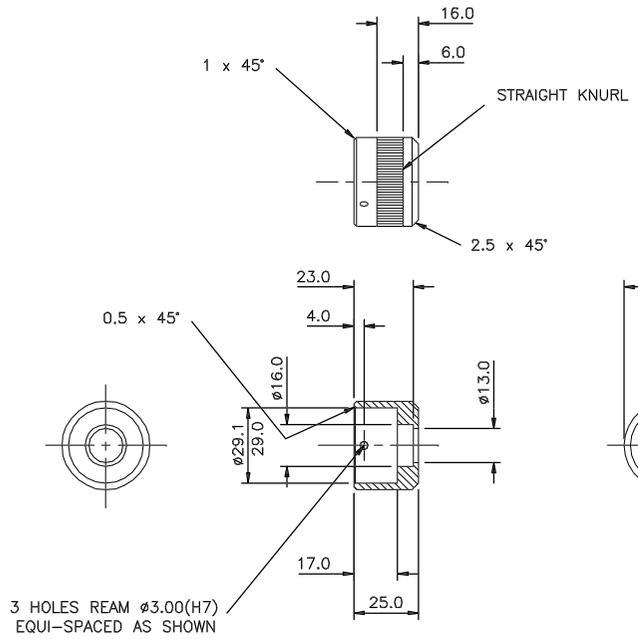
| | | | |
|------------------------|--------------------|--------------|-----------|
| 126/B | | TITLE | DISC REF. |
| BOBBIN - BLANK PROFILE | | | |
| MATERIAL | SCALE | TOLERANCES ± | |
| CZ121 BRASS | 2:1 | X | 0.1 |
| FINISH | No. REQD. PER UNIT | X.X | |
| ALL OVER | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/126/B | | |

REMOVE ALL SHARP EDGES



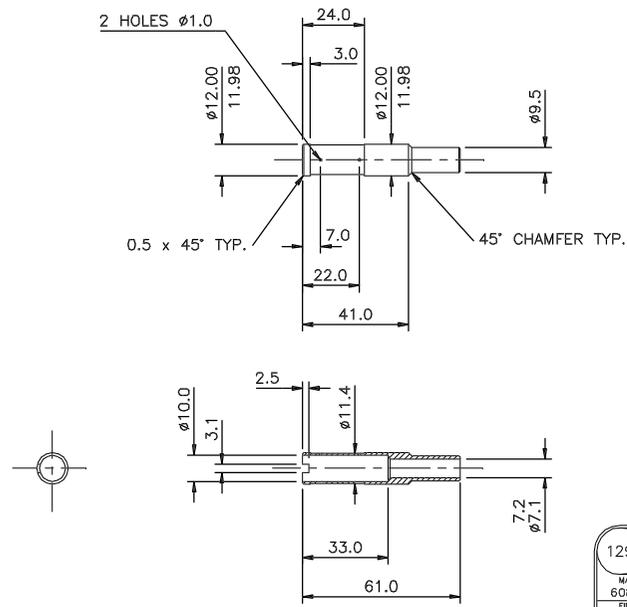
| | | | |
|----------------------|--------------------|--------------|-----------|
| 127 | | TITLE | DISC REF. |
| COUPLING BODY - MALE | | | |
| MATERIAL | SCALE | TOLERANCES ± | |
| 6062 AL.ALLOY | 1:1 | X | 0.1 |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK.ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/127 | | |

REMOVE ALL SHARP EDGES



| | | | |
|------------------------|--------------------|--------------|-----------|
| 128 | | TITLE | DISC REF. |
| COUPLING BODY - FEMALE | | | |
| MATERIAL | SCALE | TOLERANCES ± | |
| 6062 AL.ALLOY | 1:1 | X | 0.1 |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK.ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/128 | | |

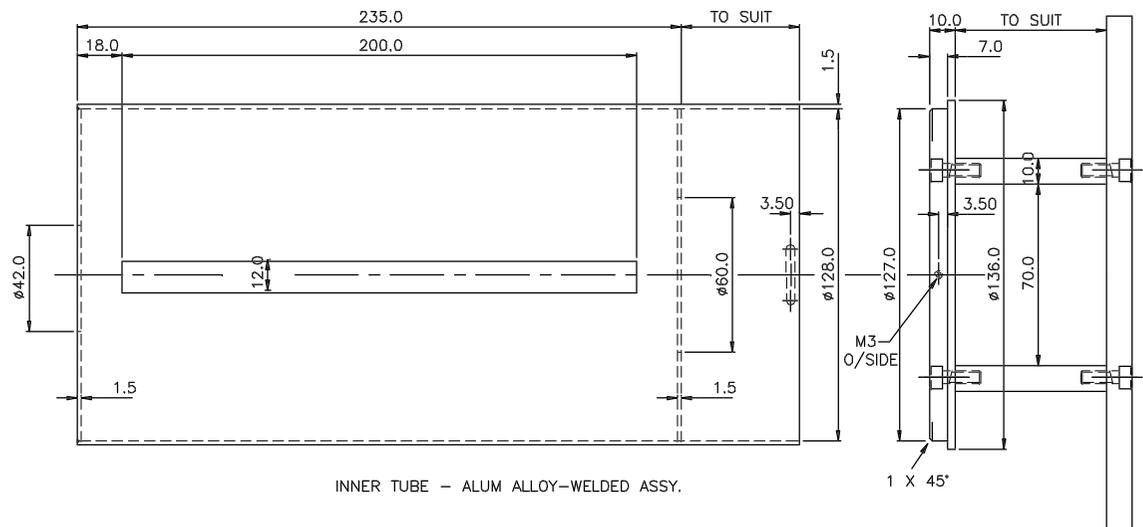
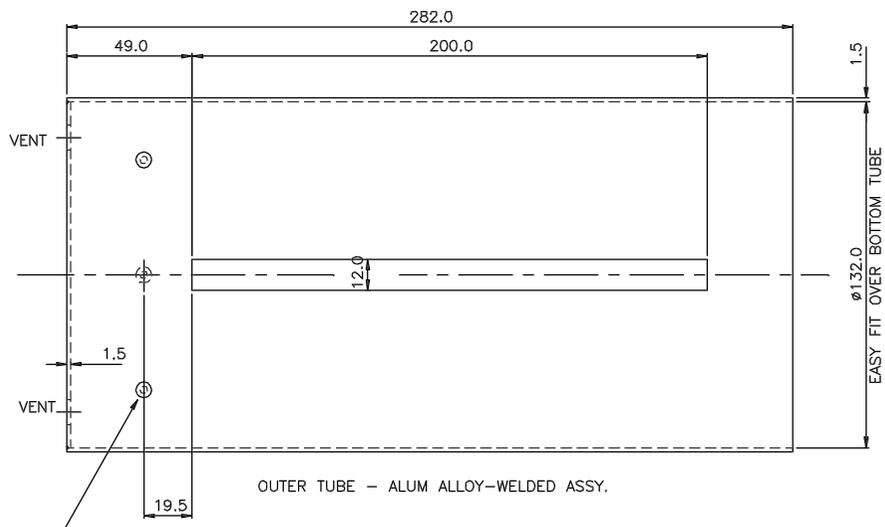
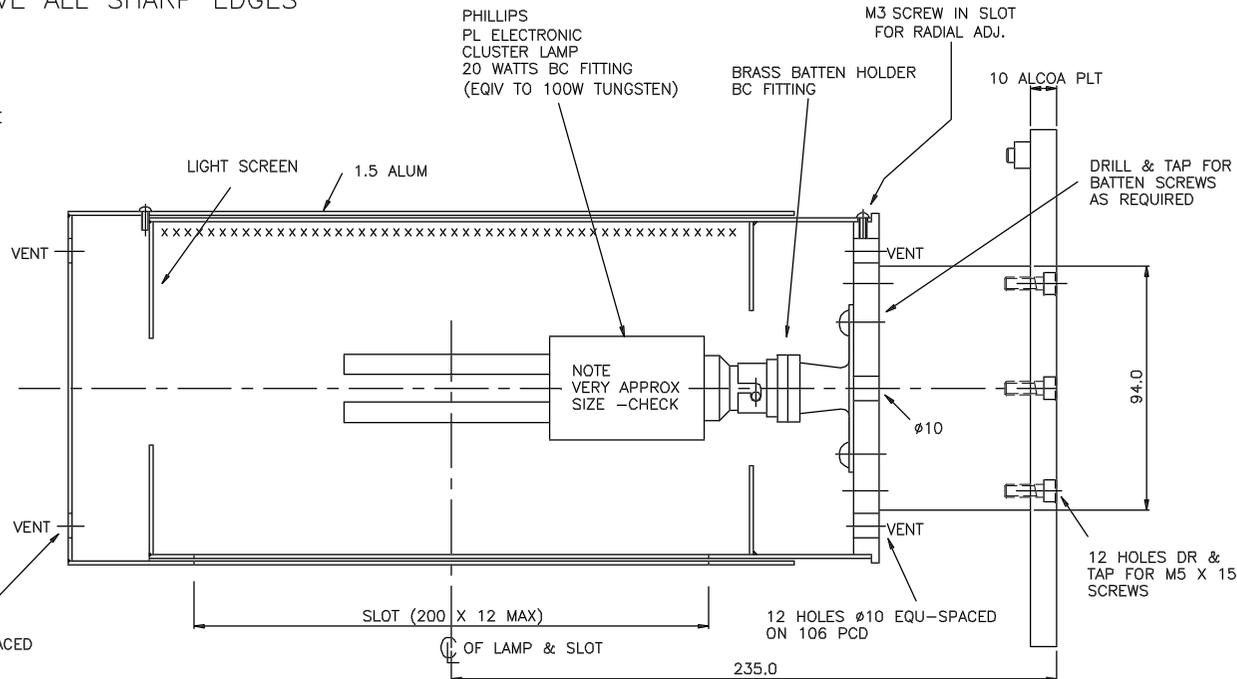
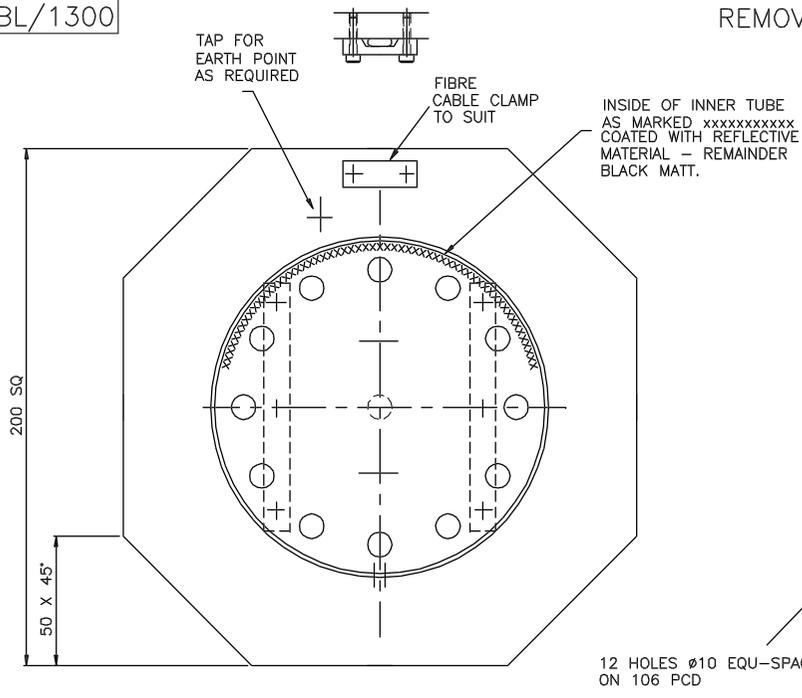
REMOVE ALL SHARP EDGES



| | | | |
|-----------------|--------------------|--------------|-----------|
| 129 | | TITLE | DISC REF. |
| COUPLING SLEEVE | | | |
| MATERIAL | SCALE | TOLERANCES ± | |
| 6062 AL.ALLOY | 1:1 | X | 0.1 |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK.ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/129 | | |

| | | | | | | | | | | | | | | | | |
|--------------|--|--|---|--------|-----|---|----------|--------|---------|----------------|--|------------------------|--------|-------|--|---------------------------|
| | | | 3 | SEP.92 | AJW | Tolerance (Unless otherwise stated) X +/- X.X +/- X.XX +/- ANG. +/- | Material | | | Dimns. in m.m. | Scale | THIRD ANGLE PROJECTION | GA No. | | | |
| | | | 2 | JUL.92 | AJW | | | Finish | Drg.No. | No.Req. | ROYAL GREENWICH OBSERVATORY MADINGLEY ROAD CAMBRIDGE CB3 0EZ | | | Title | 4.2m WYFFOS - FIBRE BUNDLE COUPLING DETAILS | Drawing No. W/BL/126-9 |
| Issue Mod.No | | | 1 | MAR.92 | AJW | | | | | | | | | | | |

REMOVE ALL SHARP EDGES

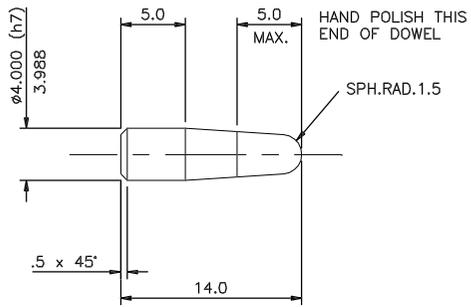


3 HOLES EQU-SPACED TAP M3 FOR SCREWS (USED TO SUPPORT UPPER TUBE ON LOWER)

| | | | | | | | | | | | | | | | | | |
|-------|--------|------|----------|-------------------------------------|--------|---------|----------|------------|--|-----------------------------|--|------------|--|--------------------------------|--|-------------|--|
| | | | | Tolerance (Unless otherwise stated) | | | | Material | | Dimns. in m.m. | | Scale FULL | | THIRD ANGLE PROJECTION | | GA No. | |
| | | | | X +/0 | | | | ALUM ALLOY | | ROYAL GREENWICH OBSERVATORY | | | | | | Drawing No. | |
| | | | | X.X +/0 | | | | Finish | | MADINGLEY ROAD | | Title | | WYFFOS-FIBRE REAR ILLUMINATION | | W/BL/1300 | |
| | | | | X.XX +/0 | | | | BLACK MATT | | CAMBRIDGE CB3 0EZ | | Used on | | | | | |
| Issue | Mod.No | Date | Drawn by | Issue | Mod.No | Date | Drawn by | | | | | | | | | | |
| | | | | | | 20/7/93 | PROMECH | | | | | | | | | | |

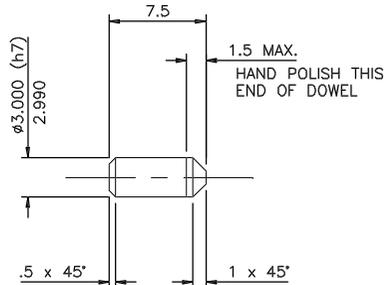
Drawing No.
W/BL/130-5

REMOVE ALL SHARP EDGES



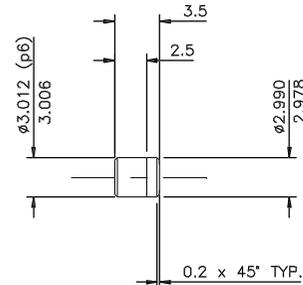
| TITLE | | DISC. REF. | |
|-------------|-------------------------|------------|---|
| 130 | DOWEL - CENTRE LOCATION | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 303 ST.STL. | 5:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| CLEAN | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/130 | | |

REMOVE ALL SHARP EDGES



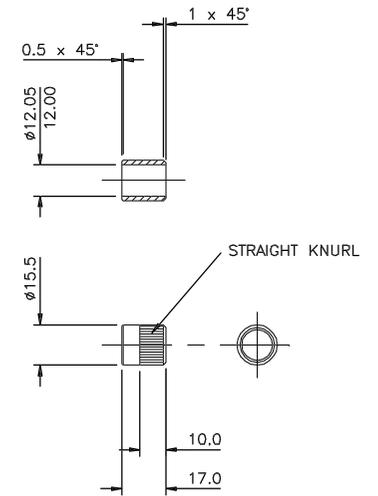
| TITLE | | DISC. REF. | |
|-------------|-------------------------|------------|---|
| 131 | DOWEL - RADIAL LOCATION | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 303 ST.STL. | 5:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| SEE DRG. | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/131 | | |

REMOVE ALL SHARP EDGES



| TITLE | | DISC. REF. | |
|-------------|-----------------------|------------|---|
| 132 | DOWEL - BAYONET CATCH | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 303 ST.STL. | 5:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| CLEAN | 3 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/132 | | |

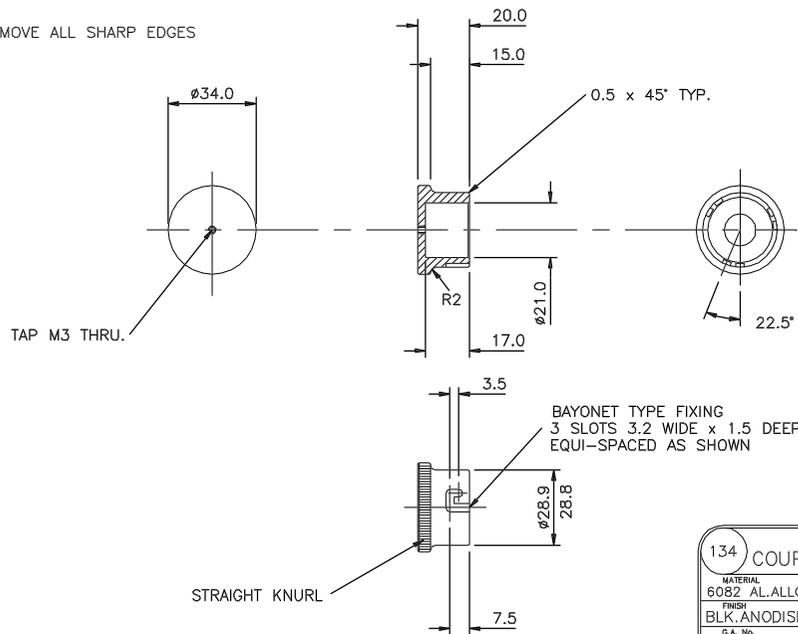
REMOVE ALL SHARP EDGES



| TITLE | | DISC. REF. | |
|---------------|--------------------|------------|---|
| 133 | STOP COLLAR | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 6082 AL.ALLOY | 1:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK. ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/133 | | |

NOTE - THE EXTERNAL DIMENSIONS ARE THE SAME AS W/BL/127

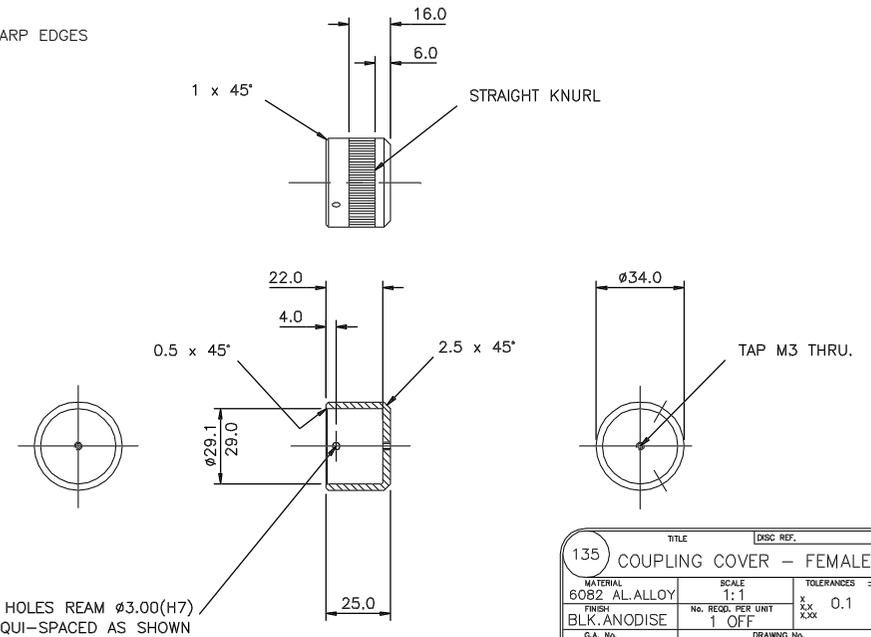
REMOVE ALL SHARP EDGES



| TITLE | | DISC. REF. | |
|---------------|-----------------------|------------|---|
| 134 | COUPLING COVER - MALE | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 6082 AL.ALLOY | 1:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK. ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/134 | | |

NOTE - THE EXTERNAL DIMENSIONS ARE THE SAME AS W/BL/128

REMOVE ALL SHARP EDGES

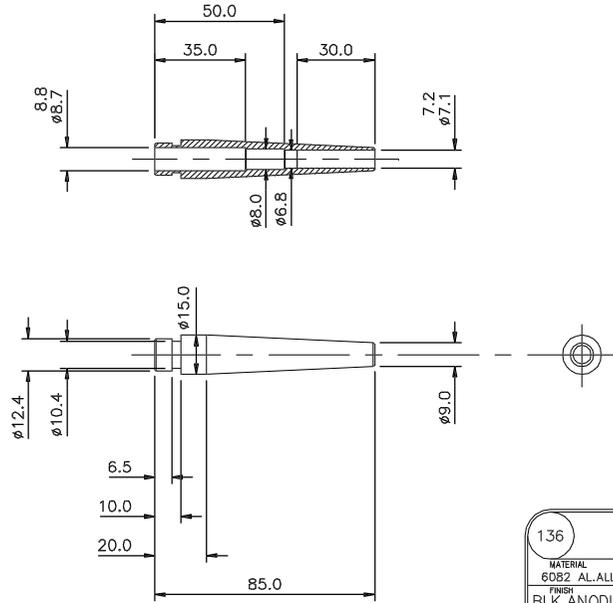


| TITLE | | DISC. REF. | |
|---------------|-------------------------|------------|---|
| 135 | COUPLING COVER - FEMALE | | |
| MATERIAL | SCALE | TOLERANCES | ± |
| 6082 AL.ALLOY | 1:1 | X 0.1 | |
| FINISH | No. REQD. PER UNIT | X.X | |
| BLK. ANODISE | 1 OFF | X.XX | |
| G.A. No. | DRAWING No. | | |
| W/BL/120 | RGD W/BL/135 | | |

| Tolerance (Unless otherwise stated) | | Material | | Dimns. in m.m. | | Scale | | THIRD ANGLE PROJECTION | | GA No. | |
|-------------------------------------|--------|----------|----------|----------------|--------|-------|----------|-----------------------------|--|-------------|--|
| X | +/- | | | | | | | Title | | Drawing No. | |
| X.X | +/- | | | | | | | 4.2 m WYFFOS - FIBRE BUNDLE | | W/BL/130-5 | |
| X.XX | +/- | | | | | | | COUPLING DETAILS | | | |
| ANG. | +/- | | | | | | | ROYAL GREENWICH OBSERVATORY | | | |
| | | | | | | | | MADINGLEY ROAD | | | |
| | | | | | | | | CAMBRIDGE CB3 0EZ | | | |
| Issue | Mod.No | Date | Drawn by | Issue | Mod.No | Date | Drawn by | | | | |
| | | | | | | | | | | | |

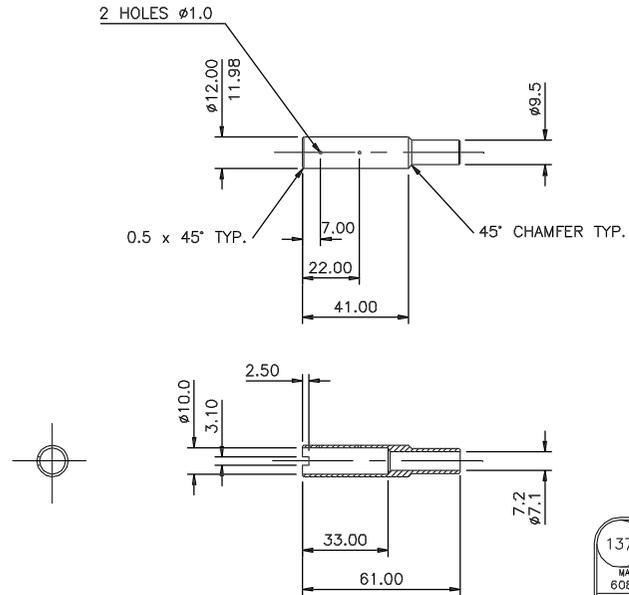
Drawing No.
W/BL/136-8

REMOVE ALL SHARP EDGES

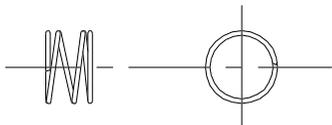


| | | |
|----------------|--------------------|----------------------|
| 136 | TITLE | DISC REF. |
| SLEEVE ADAPTOR | | |
| MATERIAL | SCALE | TOLERANCES ± |
| 6062 AL.ALLOY | 1:1 | X 0.1 X.X X.XX |
| FINISH | No. REQD. PER UNIT | |
| BLK.ANODISE | 1 OFF | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | RGD W/BL/136 | |

REMOVE ALL SHARP EDGES



| | | |
|-----------------|--------------------|----------------------|
| 137 | TITLE | DISC REF. |
| COUPLING SLEEVE | | |
| MATERIAL | SCALE | TOLERANCES ± |
| 6062 AL.ALLOY | 1:1 | X 0.1 X.X X.XX |
| FINISH | No. REQD. PER UNIT | |
| BLK.ANODISE | 1 OFF | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | RGD W/BL/137 | |



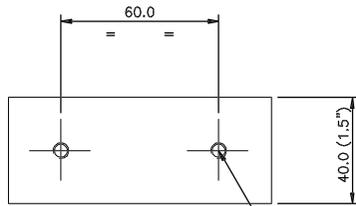
COMPRESSION SPRING
FREE LENGTH 18
TO WORK IN HOLE DIA. 29
WORKING LENGTH 15
SPRING FORCE 10N @ WORKING LENGTH
WIRE DIA. 1.8

SPECIAL ORDER FROM LEE SPRINGS
RGD ORDER No. 0000000481 29-9-92

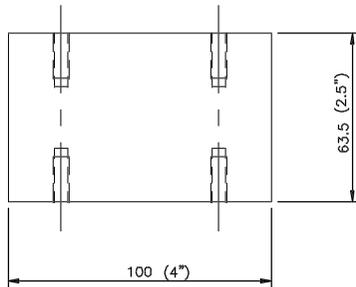
| | | |
|-------------|--------------------|----------------------|
| 138 | TITLE | DISC REF. |
| CAP SPRING | | |
| MATERIAL | SCALE | TOLERANCES ± |
| MUSIC WIRE | 1:1 | X 0.1 X.X X.XX |
| FINISH | No. REQD. PER UNIT | |
| ZINC PLATED | 1 OFF | |
| G.A. No. | DRAWING No. | |
| W/BL/120 | RGD W/BL/138 | |

| | | | | | | | | | | | | | | | |
|-------|--------|------|----------|-------------------------------------|--------|----------|----------|-----------------------------|--|---------|--|----------------------------|--|-------------|--|
| | | | | Tolerance (Unless otherwise stated) | | Material | | Dimns. in m.m. | | Scale | | THIRD ANGLE PROJECTION | | GA No. | |
| | | | | X +/- | | | | | | | | Title | | Drawing No. | |
| | | | | X.X +/- | | Finish | | Drg.No. | | No.Req. | | 4.2m WYFFOS - FIBRE BUNDLE | | W/BL/136-8 | |
| | | | | X.XX +/- | | Used on | | ROYAL GREENWICH OBSERVATORY | | | | MADINGLEY ROAD | | | |
| | | | | ANG. +/- | | | | CAMBRIDGE | | CB3 0EZ | | | | | |
| Issue | Mod.No | Date | Drawn by | Issue | Mod.No | Date | Drawn by | | | | | | | | |
| | | | | 1 | SEP.92 | AJW | | | | | | | | | |

DO NOT SCALE
REMOVE ALL SHARP EDGES

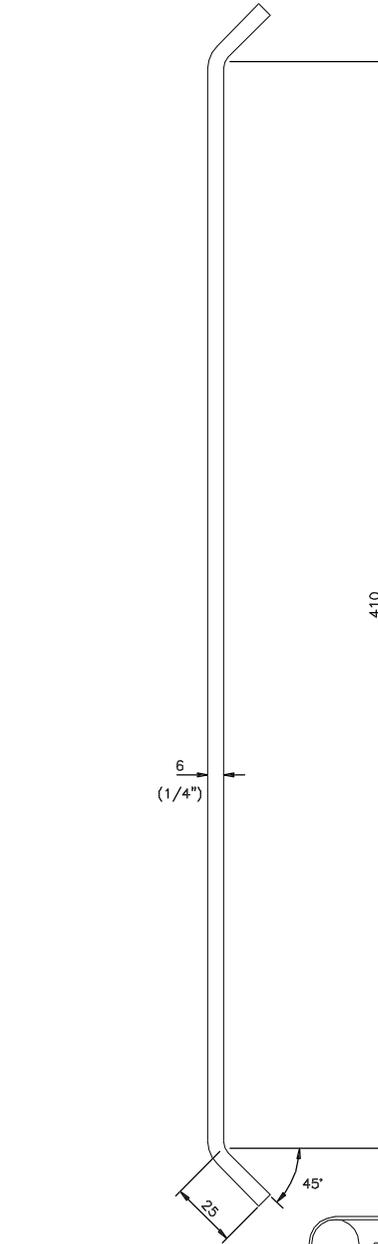
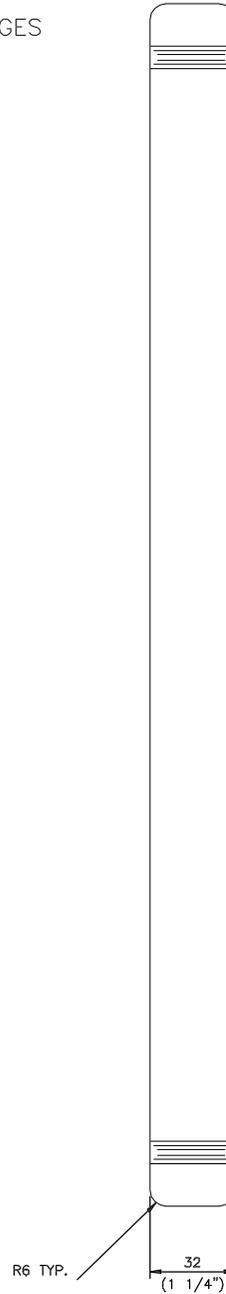


4 HOLES M6 x 15 DEEP
COULD BE TAPPED THRU.
IF PREFERRED



SURFACE FINISH
TO BE CLEAN AND DEGREASED
THEN PAINTED WITH RED OXIDE PRIMER.

| | | | |
|-----------------|----------|--------------------|---------------------------|
| TITLE | | DISC REF. | |
| TRUNKING SPACER | | | |
| MATERIAL | MS | SCALE | 1:1 |
| FINISH | SEE NOTE | No. REQ'D PER UNIT | 12 OFF |
| G.A. No. | RG0 | TOLERANCES | ± x .X X.XX X.XX |
| DRAWING No. | | 1 | |



SURFACE FINISH
TO BE CLEAN AND DEGREASED
THEN PAINTED WITH RED OXIDE PRIMER.

| | | | |
|-----------------------|----------|--------------------|---------------------------|
| TITLE | | DISC REF. | |
| CARRIER - CABLE CHAIN | | | |
| MATERIAL | MS | SCALE | 1:1 |
| FINISH | SEE NOTE | No. REQ'D PER UNIT | 10 OFF |
| G.A. No. | RG0 | TOLERANCES | ± x .X X.XX X.XX |
| DRAWING No. | | 1 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--------------------------------------|--|----------|--|------------------------|--|-----------------------------|--|--------------------------------------|--|------------------------|--|---------|--|----------|--|---------|--|
| | | | | | | | | | | TOLERANCES (UNLESS OTHERWISE STATED) | | MATERIAL | | THIRD ANGLE PROJECTION | | DIMS IN mm | | ORIGINAL SCALE | | ORIGINAL SHEET SIZE A1 | | | | G.A. NO. | | BL/1100 | |
| | | | | | | | | | | X ± | | FINISH | | NO. REQ'D PER ASSY | | ROYAL GREENWICH OBSERVATORY | | CAMBRIDGE CB3 0EZ | | TITLE | | | | DRG NO. | | SHT. 1 | |
| | | | | | | | | | | X.XX ± | | | | | | | | 4.2M WYFFOS - FIBRE TRUNKING DETAILS | | | | BL/1101 | | | | | |
| | | | | | | | | | | X.XX ± | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | ANG. ± | | | | | | | | | | | | | | | | | |