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| | | |
|---|----------------------------------|--|
| DIMENSIONS ARE IN MM GENERAL TOLERANCES: ANGULAR: ±1 ONE PLACE DECIMAL: ±0.5 | NOTE: | VELUX SKY-GPM 1418 Evans Pond Road PO Box 5001 Greenwood, South Carolina 29648-5001 |
| REVISIONS | | Residential Sun Tunnel TZRQ 014 Product Certification Basic Arrangement |
| NO. | DESCRIPTION | SIZE COMMODITY NO. REV. SCALE: OKD/DRAWN/DATE MR/DH |
| 1 | Update joint tape description | D 21.320111.000.52 01 1:1 05/28/20 |
| 2 | Update for 2018 re-certification | SHEET 1 OF 2 |

| PART/COMPONENT SCHEDULE | | | | | | | |
|---|-----|--------------------|-----------------|--|-----------------|--------------------------------------|---|
| ITEM | QTY | PART/COMPONENT | COMPONENT NO. | DESCRIPTION | DRAWING NO. | | COMMENTS |
| | | | | | Category | Commodity No. | |
| TZR-014 2A00 Lens P/N 320075 (Typical for TZR, TZRL & TZRQ) | | | | | | | |
| A | 4 | Outer Frame | 30219222 | Roll formed Aluminum – Cool Grey | 213021920000014 | | Profile drawing |
| | | | | | 213021920A03113 | | Punching drawing |
| | | | | | 213021920A03611 | | Cutting drawing |
| | | | | | 213021920A04313 | | Placement of sealant |
| | | | | | 213021920A05109 | | Danger label, Placement drawing |
| | | | 213021920A05413 | | | Placement of laser etching type sign | |
| B | 4 | Pane Spacer | 303392 | Acetal Color: white (Not visible, this view) | 213033920000005 | | Commodity drawing |
| | | | | | 213033920A05106 | | Placement drawing |
| C | 1 | Inner frame gasket | 30380008 | TPE Durometer as noted Color: Black | 213038000000004 | | Commodity drawing |
| | | | | | 213033720A04214 | | Welding drawing |
| | | | | | 213033720A05111 | | Placement drawing |
| | | | | | 213033720A05205 | | Routing and punching drawing |
| D | 4 | Corner Key | 303380 | ASA-Luran S 778 T or equivalent Color: NCS S-7500-N (grey) | 213033800000014 | | Commodity drawing |
| | | | | | 213033800A05107 | | Placement of staples, Assembly drawing |
| | | | | | 213033800A05207 | | Sealant placement drawing (Black Butyl-102011.64) |
| E | 1 | Pane | 7893271414 | IFB 1414 27 (For Item E, see below) | | | |
| F | 1 | Sealant | 303127 | Hot melt butyl (Hi-Fix) | 21267002 | --6404 | Material specification |

| Item M – ST13-G Ceiling Ring Diffuser Assembly P/N 30483614 (Typical for TZR, TZRL & TZRQ) | | | | | | | |
|--|---|--------------------------------|----------|-------------------------------------|------------------|--|-----------------------|
| M | 1 | Ceiling Ring Diffuser Assembly | 30483614 | Ceiling Diffuser Complete | 2130483600005102 | | Part assembly drawing |
| M.1 | 1 | Screw cover ring | 30088014 | .0005"(.13mm) thick White Polyester | 2130088000000001 | | Commodity drawing |
| M.2 | 1 | Screw-in diffuser | 303814 | Acrylic | 2130381401400002 | | Commodity drawing |
| M.3 | 1 | Ceiling ring | 303816 | White ABS | 2130381601400001 | | Commodity drawing |
| M.4 | 4 | Swingout | 306107 | White nylon, 10% glass | 2130610700000003 | | Commodity drawing |
| NV M.5 | 4 | Srew | 306238 | #8 Phillips, 2 1/4" PH – clear zinc | | | |

| Item Q – TZRQ Beipack P/N 320097 | | | | | | | |
|----------------------------------|----|------------------------|----------|--|------------------|--|-----------|
| Q.1 | 1 | AL tape | 30487836 | 36' Section-2.5" AL Tape w/ backing | | | |
| NV Q.2 | 24 | Flexi loc clip | 302329 | 302 spring tempered stainless steel (Ø1.4mm) | 2130223900000008 | | Pull clip |
| *NV Q.3 | 7 | Screws (for Tubes/ZTB) | 306050 | #6x3/8" Phillips, PH, Self Drill | | | |
| *NV Q.4 | 5 | Screws (for STuNG) | 306118 | #6x3/8" Phillips, PH, Sheet Metal | | | |

| Item E – IFB 1414 27 P/N 7893271414 (Typical for TZR, TZRL & TZRQ) | | | | | | | |
|--|-----|---------------|-------------|-----------------------------|--|--|--|
| * E.1 | 1 | Glazing | 6593271414S | 7DW IFB 426 x 426 mm | | | |
| * E.2 | 1 | Glazing | 6590491414 | IFB CLRTPM 3H 426 x 426 mm | | | |
| * E.3 | 1 | Spacer | 260749 | 7.5 FB spacer 1611 | | | |
| * E.4 | 1 | Connector key | 266144 | 7.5 FB connector key | | | |
| * E.5 | N/A | Oasis plug | 268330 | Oasis plug | | | |
| * E.6 | N/A | Tape | 105030 | Aluminum laminated PIB tape | | | |
| * E.7 | N/A | TECHNOMELT | 268110 | TECHNOMELT AS 3004 | | | |
| * E.8 | N/A | PIB | 267003 | PIB 8HS | | | |
| * E.9 | N/A | Silicone | 267002 | Silicone DC 3-0117 | | | |
| * E.10 | N/A | Desiccant | 268200 | Desiccant 0.7 | | | |
| * E.11 | N/A | Gas fill | 268001 | Argon | | | |

| PARTS/COMPONENTS | | | | | | | |
|------------------|---|------------------|------------|--|------------------|--|--------------------------------|
| G | 1 | Pan flashing | 320083 | Extruded aluminum, 1.7mm thickness | 2132008200000001 | | Profile |
| | | | | | 213200820A03101 | | Cutting, trimming and punching |
| | | | | | 213200830A05101 | | Assembly |
| | | | | | 213200830A05201 | | Welding |
| * G.1 | 1 | QPF Frame gasket | 303468 | Static EPDM | 2130346800000003 | | Profile |
| H | 1 | Top Collar | 30465714 | Aluminum, 4"x0.02" High Reflective | 2130465700000001 | | Profile |
| | | | | | 213046570005201 | | Punching |
| | | | | | 213046470225202 | | Finished drawing |
| I | 1 | TZR FCM adapter | 320079 | 53.5x96x.118 Black polycarb sheet | | | |
| J | 1 | Upper diffuser | 30381814 | 50.75x119.75x.080 2mm Frosted sheet | | | |
| K | 2 | Elbow | 30464914 | Aluminum, 12.19"x0.02" High Reflective | 2130464901400003 | | 14" Elbow |
| | | | | | 213046490145202 | | Punching |
| L | 1 | Tunnel | 3046461402 | Aluminum, 24" x 0.016" High Reflective | 213046460005204 | | Tube Punching |

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GENERAL NOTES:

- * Designates a PART/COMPONENT not shown on the Basic Arrangement cross-sections.
- Reference Drawings include :
21.TZRQ.0A0.63.01 for "TZRQ 014, List of parts" (PROPRIETARY)
- A copy of these drawings plus any other supplemental documentation regarding these skylight models will be maintained at the Skylight Technical Database in the following category location – Technical Data/Submittal Data/
- The TZRQ 014 is furnished with 1-Tube, however a final assembly can use additional tube lengths.
- Item Q.2 has a maximum of (24) Flexi loc clips in the cross section configuration shown – longer tube installations will require more clips and tape (Item Q.1)

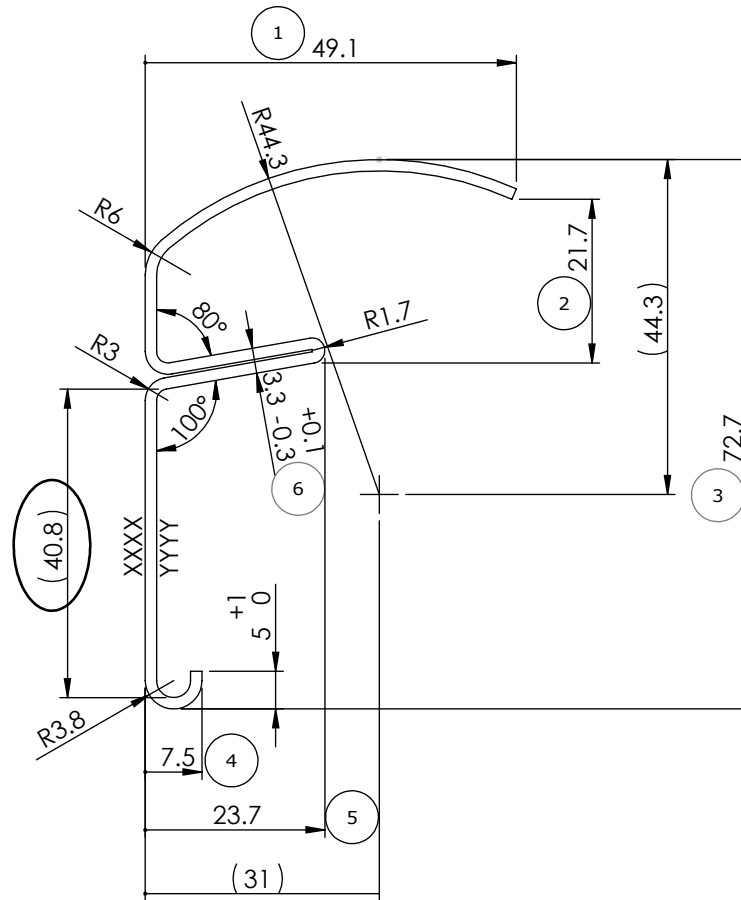
V = Visible
NV = Non-Visible

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| | | |
|--|---|--|
| DIMENSIONS ARE IN MM GENERAL TOLERANCES: ANGULAR: ±1 ONE PLACE DECIMAL : ±0.5 | NOTE: | VELUX SKY-GPM Road PO Box 5001 Greenwood, South Carolina 29648-5001 |
| MATERIAL | | Residential Sun Tunnel |
| SPECIFICATION | | TZRQ 014 |
| FINISH | | Product Certification |
| SPECIFICATION | | Product List of Parts |
| STANDARDS | SIZE COMMODITY NO. REV. SCALE: CNO/DRAWN/DATE JAD/JDH 05/28/2020 D 21.320112.0A0.61 01 1:1 | SHEET 1 OF 1 |

| REVISION |
|----------|
| |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|---------------------------|
| 12 | 8/8/17 | Changed tol. on J-hook |
| 13 | CBB/MM/9/26/18 | Added cert to approvals |
| 14 | MM/BBN/MM/10/5/19 | Added reference dimension |

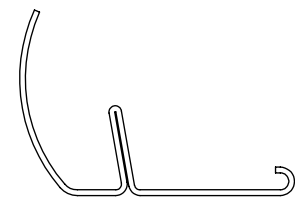
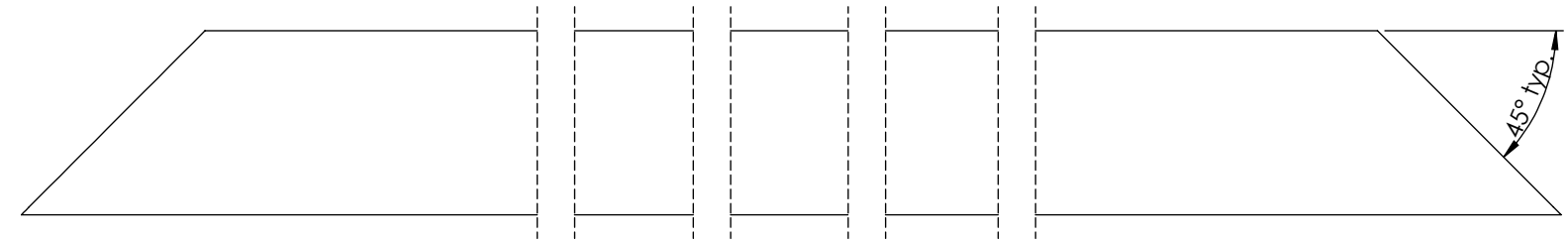


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XXXX= Finish outside
YYYY= Finish inside

| Material | | | | Specifications - generally | | | |
|--|--|--|--|---|--------|-----------|---------|
| 3105-H22; NCS S-7500 N (Cool grey) aluminum 157x1.5mm | | | | Lacquered aluminum for FCM outer frame 308521.64 | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | Aluminum/Flashing standard VG5606.68 | | | |
| Approvals TMA-A/Cert | | | | Standards - generally | | | |
| Checked by/drawn by/date /REC/09.08.2017 | | | | Symbol explanations 880006.68 FCM/VCM-E - S/QPF ISD/FGT | | | |
| Scale 1:1 Unspec. meas. mm General tolerance ±0.5 Size A | | | | Outer frame Profile drawing | | | |
| | | | | Product instructions no. | | | |
| | | | | Category | | Operation | Edition |
| | | | | 21 | 302192 | 000 | 14 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|---|
| 11 | CBB/MM/9/26/18 | Added cert to approvals |
| 12 | CBB/MM/11/6/18 | Added VCS to title block & removed note |
| 13 | MM/CBB/6/21/19 | Updated tolerance on section A-A |



VCM/S/E top punching

| Size | A | B |
|------|-----|-----|
| 22xx | 343 | -- |
| 30xx | 445 | -- |
| 34xx | 496 | -- |
| 46xx | 473 | 824 |

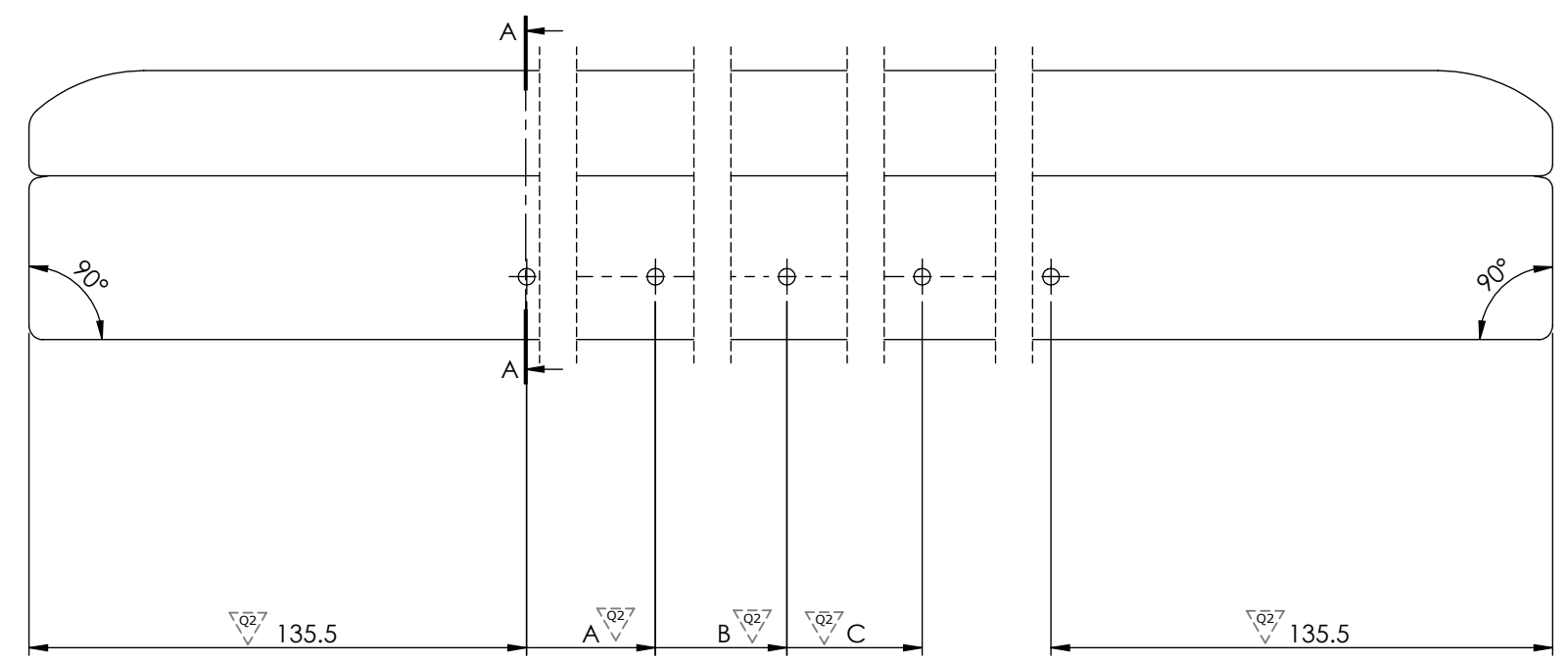
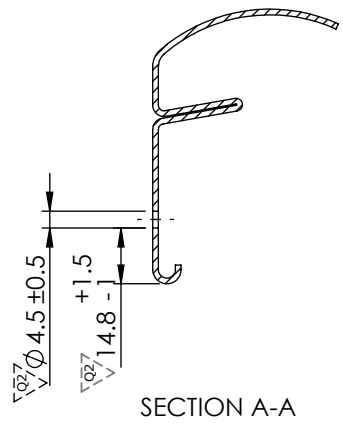
Note: No holes in bottom and sides

QPF chart

| Size | A |
|------|-----|
| Q22 | -- |
| Q30 | 407 |
| Q46 | 610 |

FCM chart

| SIZE | A | B | C |
|------|-------|-------|------|
| 14 | -- | -- | -- |
| 20 | -- | -- | -- |
| 22 | -- | -- | -- |
| 30 | 445 | -- | -- |
| 34 | 496 | -- | -- |
| 44 | 623.5 | -- | -- |
| 46 | 648 | -- | -- |
| 55 | 762.5 | -- | -- |
| 70 | 544 | 953 | 1361 |
| 72 | 557 | 978.5 | 1400 |



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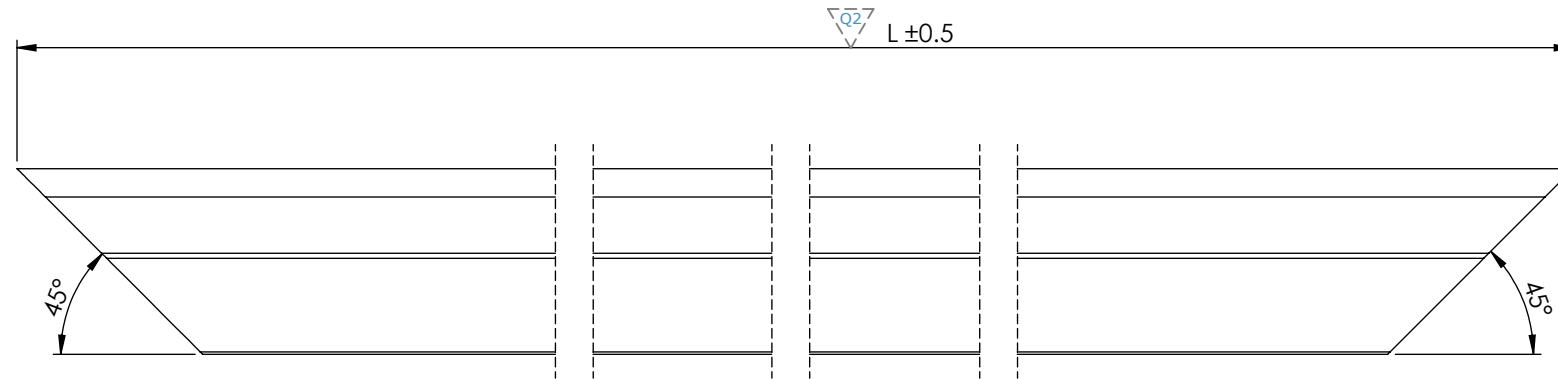
VELUX SKY-PRS
450 Old Brickyard Rd., Greenwood, South Carolina 29648

Approvals
Cert
Checked by/drawn by/date
/REC/17.05.2016

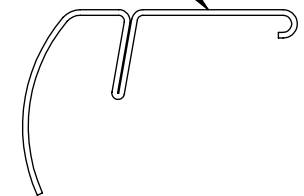
| | | | |
|-------|---------------|-------------------|------|
| Scale | Unspec. meas. | General tolerance | Size |
| 1:2 | mm | ±1 | B |

| Standards - generally | | | | |
|-------------------------------------|-----------|--------|-----|----|
| Symbol explanations | 880006.68 | | | |
| FCM/QPF/VCM/VCE/VCS | | | | |
| Outer frame | | | | |
| Punching drawing | | | | |
| Product instructions no. | | | | |
| Category | 21 | 302192 | 0A0 | 31 |
| Operation | | | | 13 |
| Edition | | | | |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-------------------------|
| 09 | 1/12/15 | Added VCS to title |
| 10 | 5/17/16 | Added sizes 55 and 72 |
| 11 | CBB/MM/11/6/18 | Added cert to approvals |



Measuring point for miter dimension



QPF

| Size | L |
|------|--------|
| Q22 | 610.5 |
| Q30 | 813.5 |
| Q46 | 1219.5 |

FCM/VCM/VCE/VCS

| Size | L |
|------|------|
| 14xx | 483 |
| 20xx | 635 |
| 22xx | 686 |
| 30xx | 889 |
| 34xx | 991 |
| 44xx | 1247 |
| 46xx | 1296 |
| 55xx | 1525 |
| 70xx | 1905 |
| 72xx | 1957 |

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Cert

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/REC/17.05.2016

| Scale | Unspec. meas. | General tolerance | Size |
|-------|---------------|-------------------|------|
| 1:1 | mm | ±0.5 | B |

Standards - generally

Symbol explanations 880006.68

FCM/VCM/VCE/VCS/QPF

Outer frame

Cutting drawing

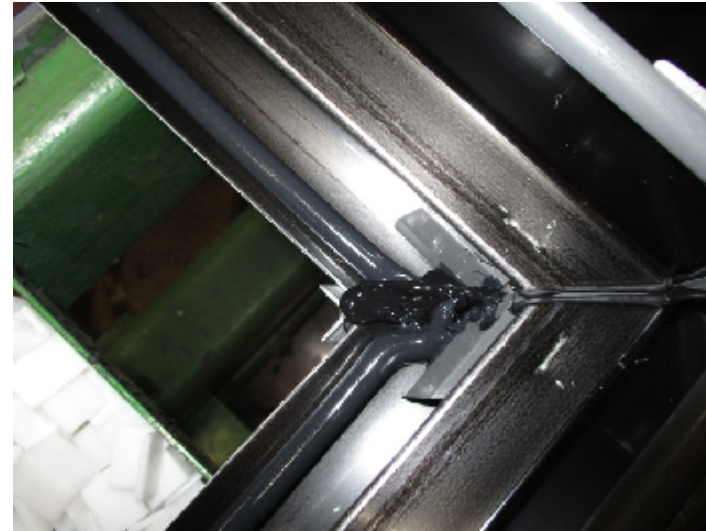
Product instructions no.

| Category | Product instructions no. | Operation | Edition |
|----------|--------------------------|-----------|---------|
| 21 | 302192 | 0A0 | 36 |
| | | | 11 |

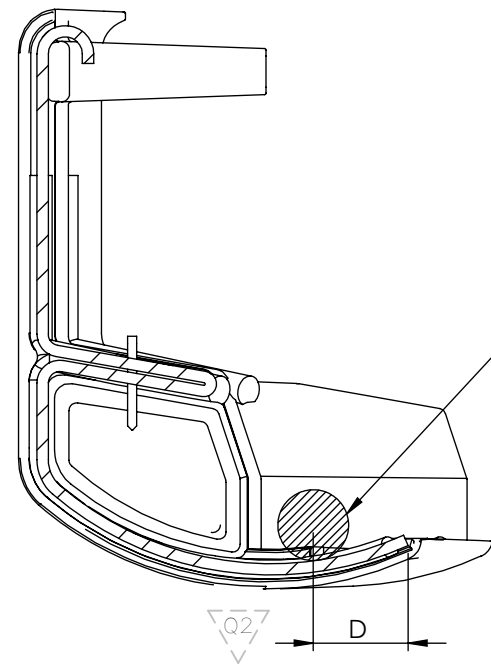
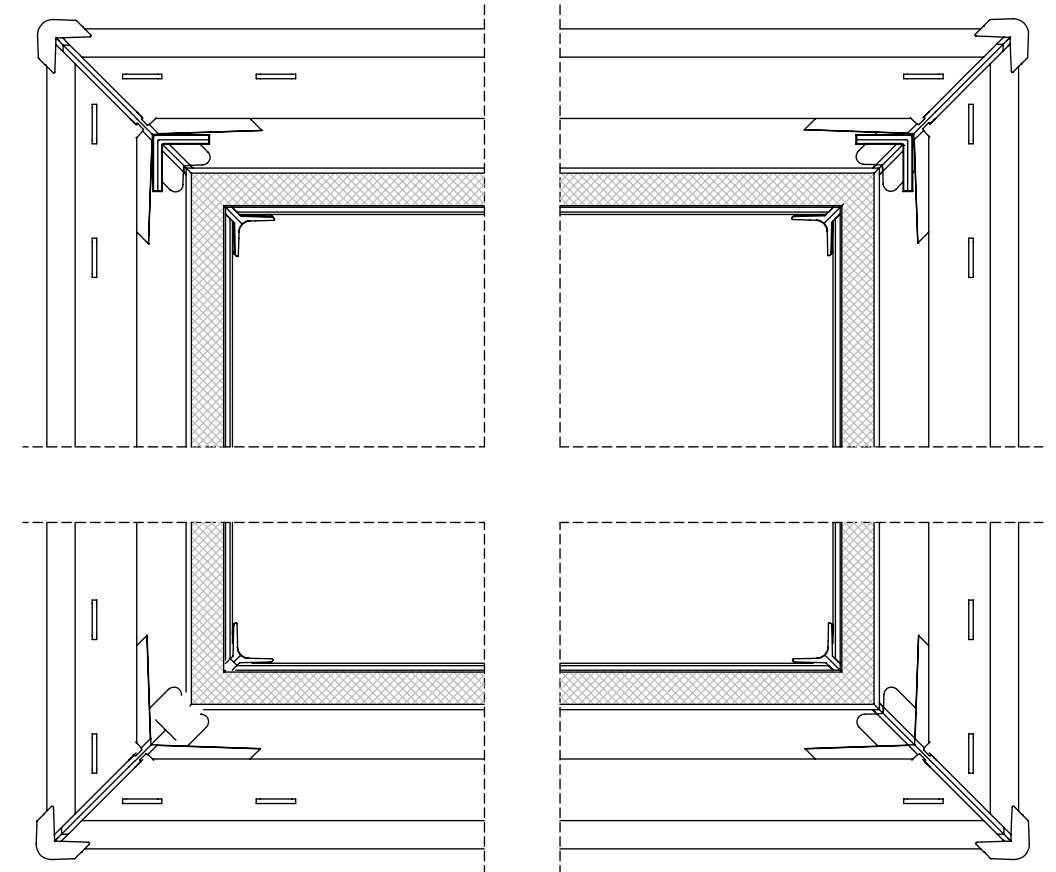
| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|---|
| 11 | MM/CBB/6/19/19 | Added Chart and D dimension for sealant |
| 12 | MM/CBB/12/5/19 | Added ISD/FGT to title |
| 13 | REC/MM/1/15/20 | Added bead of silicone under cornerkey |



Max. 5mm squeeze out allowed



Note: Japan units only place a bead of silicone in each corner between the corner key and the glass as shown. Silicone should not be visible from top side of window.



SECTION A-A
SCALE 1 : 1

Sealant
(Min. $\phi 7$ (38.5mm²) bead per measuring method)
Distance to sealant max. 15mm at corners and max. 12mm along side at final inspection (inspecting with feeler gage.)

| | D |
|--------------|------|
| 4646 & under | 11mm |
| Over 4646 | 12mm |

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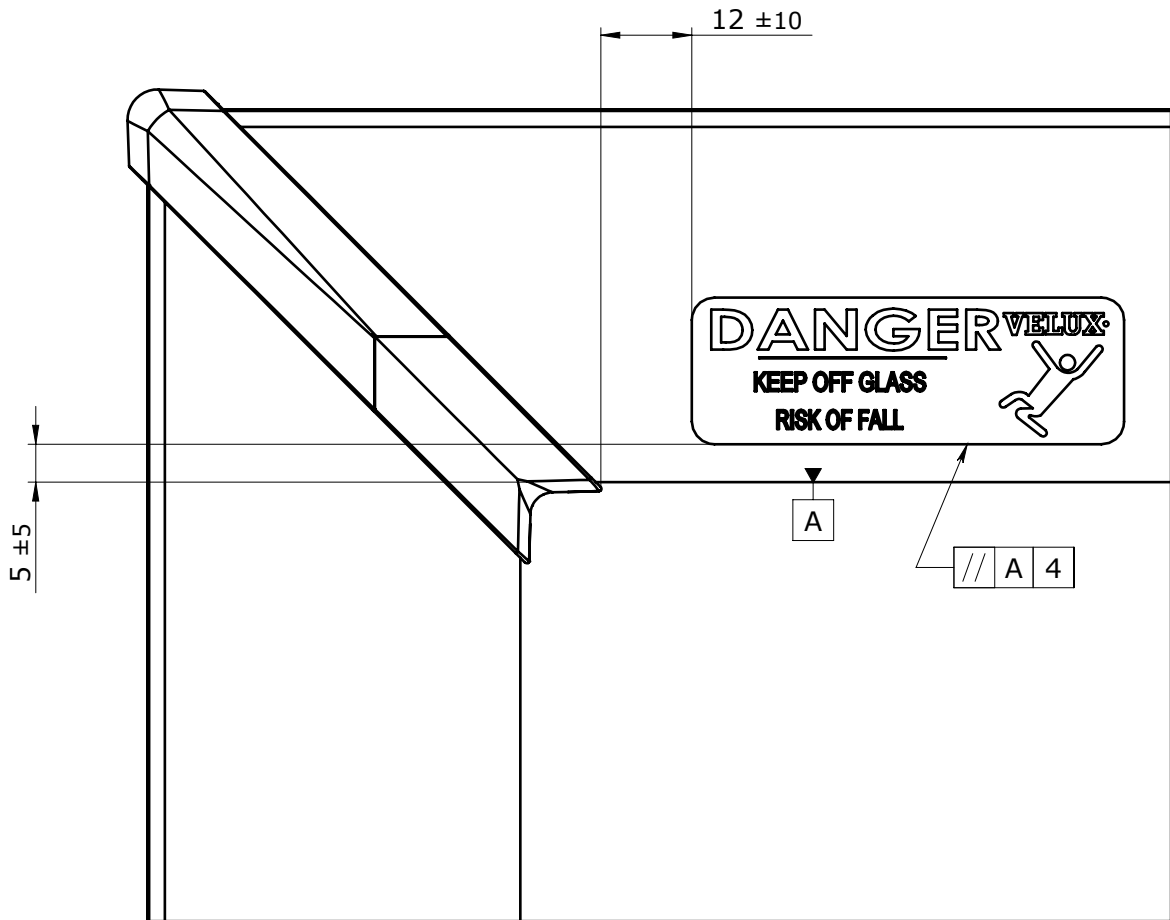
VELUX SKY-PRS
450 Old Brickyard Rd., Greenwood, South Carolina 29648

Approvals
Cert
Checked by/drawn by/date
/REC/15.01.2020

| Scale | Unspec. meas. | General tolerance | Size |
|-------|---------------|-------------------|------|
| 1:2 | mm | ±1 | B |

| Specifications - generally | |
|---|-----------|
| Glazing sealant (FCM) | 309001.64 |
| Standards - generally | |
| Symbol explanations | 880006.68 |
| FCM/VCM/QPF/VCE/VCS/ISD/FGT | |
| Outer frame | |
| Placement of sealant | |
| Product instructions no. | |
| Category | 21 |
| 302192 | 0A0 |
| Operation | 43 |
| Edition | 13 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-------------------------|
| 07 | CBB/MM/11/6/18 | Added cert to approvals |
| 08 | MM/CBB/8/8/19 | Updated note |
| 09 | MM/CBB/12/8/19 | Added FGT ISD to title |

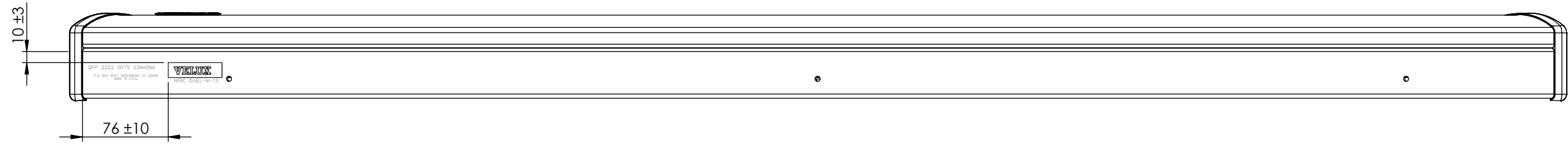


Note: place on top frame, left side viewed from outside.

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| | | | | | | | | | | | | | | | |
|--|--|---------------|--|-------------------|--|------|--|--------------------------|--|-----|--|-----------|--|---------|--|
| VELUX | | | | SKY-PRS | | | | FCM,QPF,VCM/E/S,ISD,FGT | | | | | | | |
| 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | | | | | Danger label | | | | | | | |
| Approvals | | | | | | | | Placement drawing | | | | | | | |
| Cert | | | | | | | | Product instructions no. | | | | | | | |
| Checked by/drawn by/date | | | | | | | | Category | | | | | | | |
| /REC/24.08.2017 | | | | | | | | 21 | | | | | | | |
| Scale | | Unspec. meas. | | General tolerance | | Size | | 302192 | | 0A0 | | Operation | | Edition | |
| 1:1 | | mm | | ±0.5 | | A | | | | 51 | | 09 | | | |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|------------------------------------|
| 11 | CBB/MM/11/26/18 | Added VCM/E/S/QPF/ISD/FGT to title |
| 12 | MM/CBB/8/8/19 | Updated note 2&3. |
| 12 | MM/CBB/10/4/19 | Updated note and placement. |



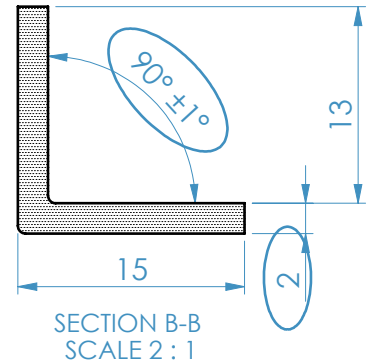
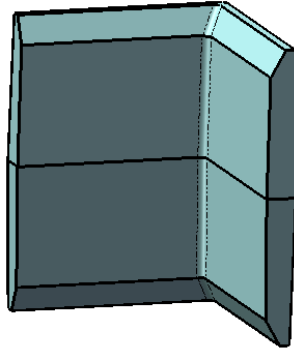
Notes:

1. Regardless of dimension, label should not cover holes.
2. Placement for all sizes except 1430, 1446 bottom (left) side frame viewed from outside.
3. Placement for sizes 1430 and 1446 top frame left side viewed from outside.

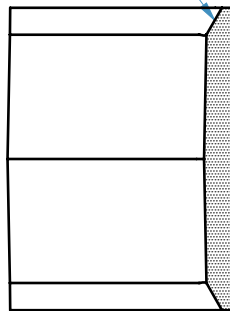
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| | | | | | | | |
|--|---------------------|---------------------------|-----------|---|--------|-----|-------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | FCM/VCM/E/S/QPF/ISD/FGT | | | |
| Approvals | | | | Outer frame | | | |
| Checked by/drawn by/date /REC/13.06.2018 | | | | Placement of laser etching type sign | | | |
| | | | | Product instructions no. | | | |
| Scale 1:3 | Unspec. meas. mm | General tolerance ±0.5 | Size B | Category 21 | 302192 | 0A0 | 54 13 |

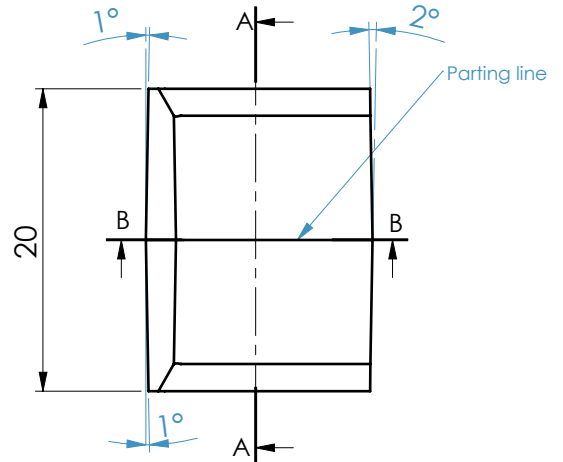
| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|--|
| 03 | CBB/MM/11/6/18 | Added VCM/E/S/QPF to title and cert approval |
| 04 | CBB/MM/9/19/19 | Corrected color of material |
| 05 | REC/MM/2/5/20 | Added angle dim & changed thk. to 2mm |



1mm x 60° chamfer typ.



SECTION A-A
SCALE 2 : 1

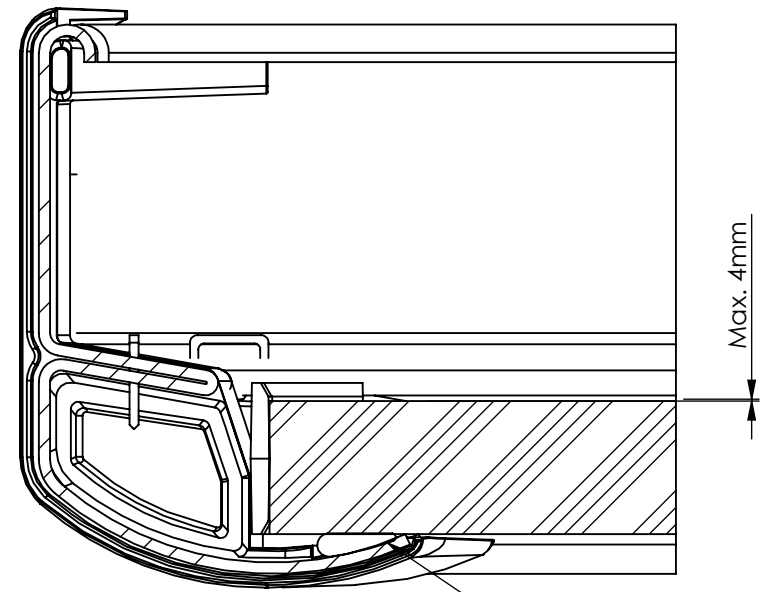
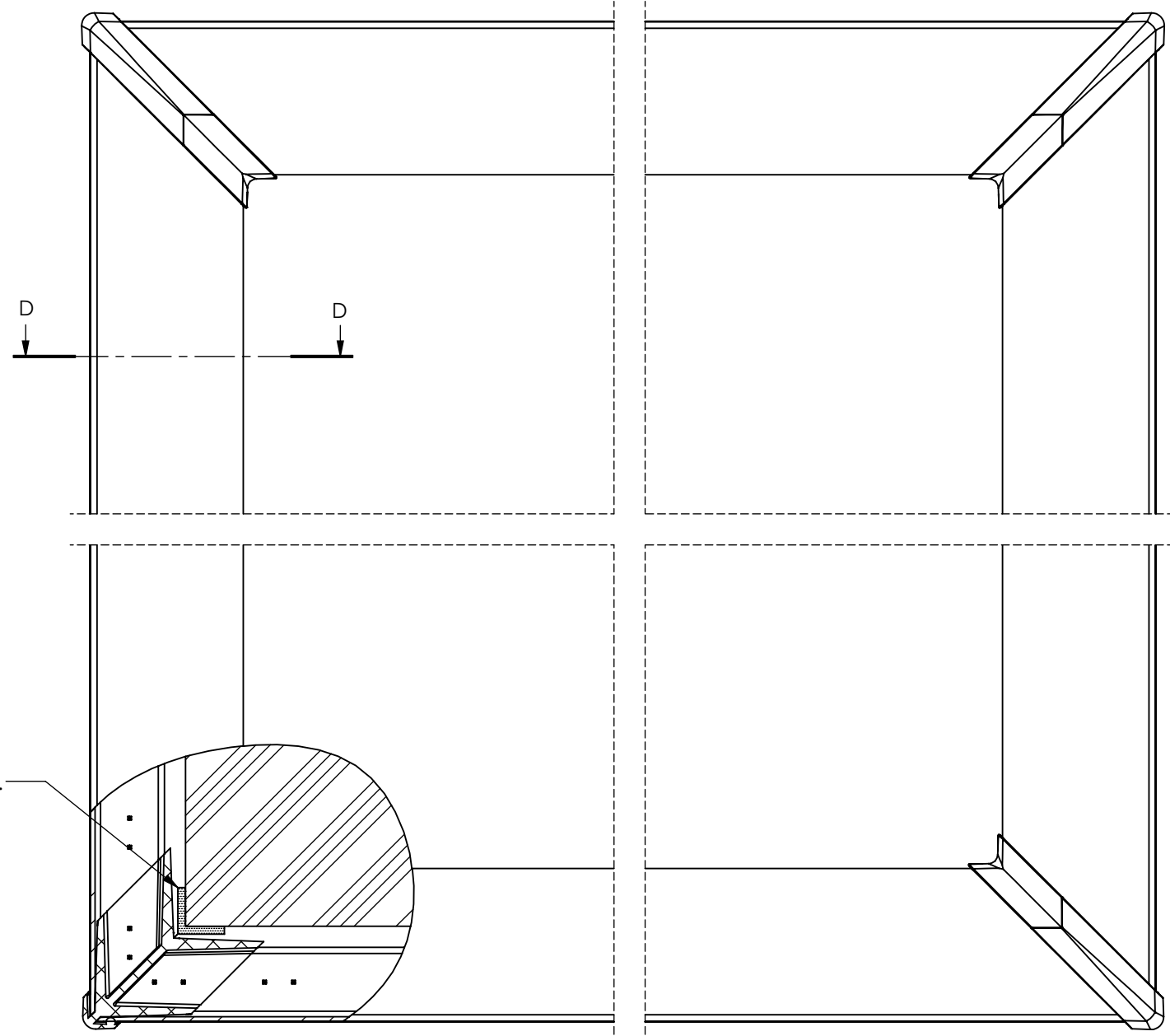


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Part Volume = 1225.18 cubic millimeters

| Material | | | | Specifications - generally | | | | | | |
|--|---------------------|---------------------------|-----------|----------------------------------|-----------|-----|----|----|-----------|---------|
| Color:Natural opaque | | | | Acetal | 309055.64 | | | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | <u>FCM/VCM/E/S/QPF</u> | | | | | | |
| Approvals Cert | | | | Pane spacer Commodity drawing | | | | | | |
| Checked by/drawn by/date /RC/05.02.2020 | | | | Product instructions no. | | | | | | |
| Scale 2:1 | Unspec. meas. mm | General tolerance ±0.5 | Size A | Category 21 | 303392 | 000 | 00 | 05 | Operation | Edition |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|--|
| 04 | 3/19/15 | Revised note to say top of window |
| 05 | 7/26/17 | Changed the max squeeze out from 3 to 5mm |
| 06 | CBB/MM/11/7/18 | Added cert, VCM/E/S,QPF to title & adjusted note |



Pane spacer seats in gap between glass and corner key.

- Notes:
1. Place two pane spacers in the top of the unit.
 2. Additional spacers can be used in other corners, if needed.
 3. ONLY if prevented by tolerance stack up can spacers be omitted.

SECTION D-D
SCALE 1 : 1
Max squeezeout of silicone after pane is placed is 5mm.

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VELUX SKY-PRS
450 Old Brickyard Rd., Greenwood, South Carolina 29648

FCM(VCM/E/S,QPF)

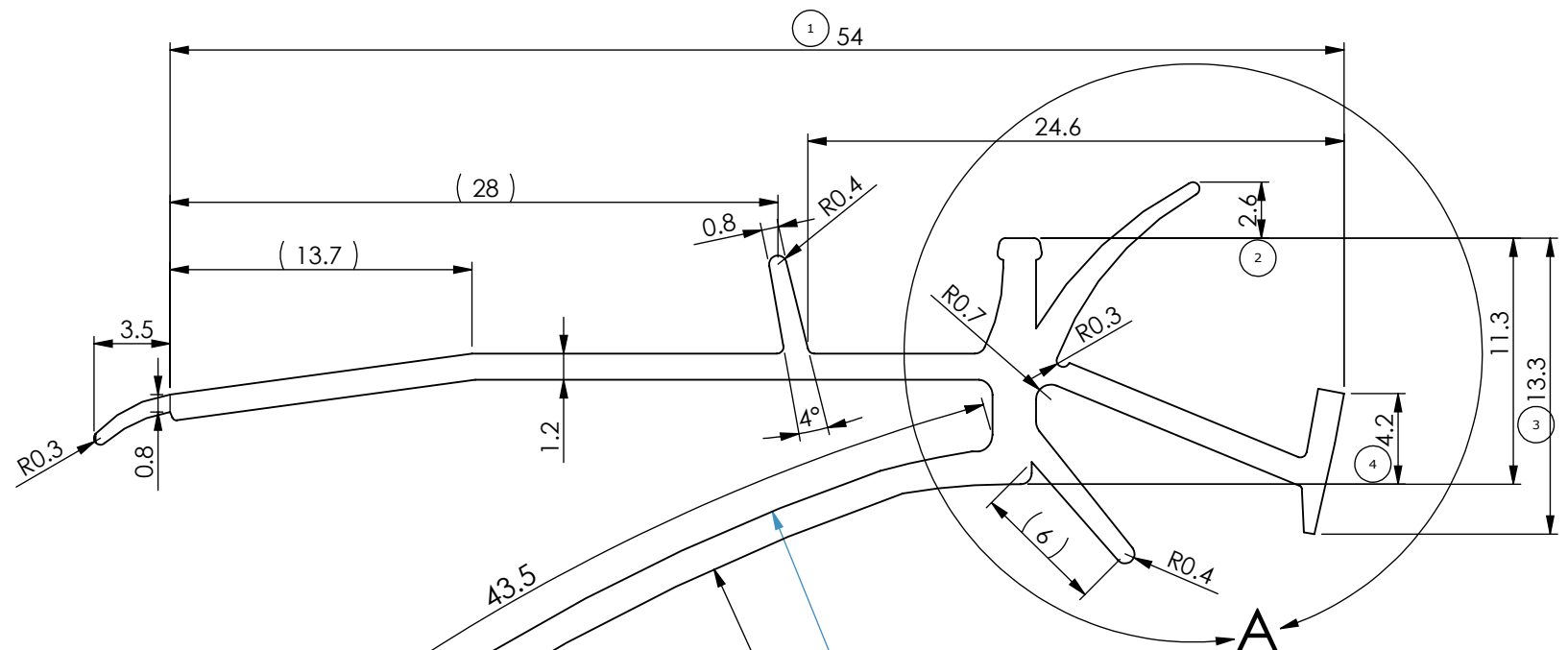
Approvals
Cert
Checked by/drawn by/date
/REC/31.07.2017

Pane spacer
Placement drawing

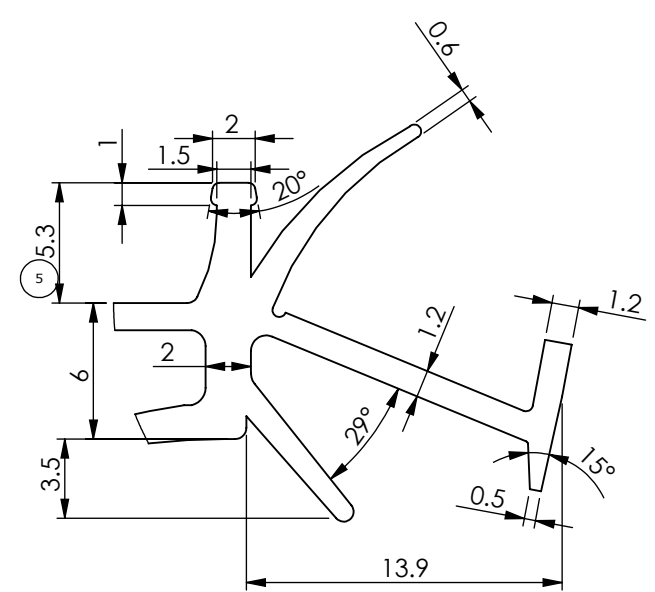
| | | | |
|-------|---------------|-------------------|------|
| Scale | Unspec. meas. | General tolerance | Size |
| 2:1 | mm | ±1 | B |

| Product instructions no. | | | | |
|--------------------------|--------|-----------|---------|----|
| Category | | Operation | Edition | |
| 21 | 303392 | 0A0 | 51 | 06 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|---------------------------------|
| 02 | 4/18/17 | Added additional sizes |
| 03 | 4/25/18 | Added 1414 size |
| 04 | MM/CBB/10/4/19 | Updated sizes 3055,3072, & 4672 |



| Measure | Tol. |
|---------|------|
| < 2.5 | 0.35 |
| 2.5-4 | 0.4 |
| 4-6.3 | 0.5 |
| 6.3-10 | 0.7 |
| 10-16 | 0.8 |
| 16-54 | 1 |



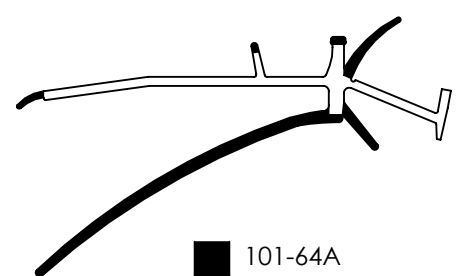
DETAIL A
SCALE 3 : 1

FCM (purchased lengths)

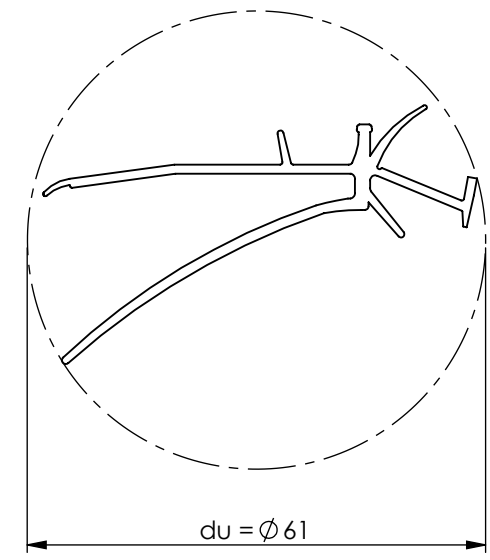
| LENS | TOTAL LENGTH (mm) +50/-0 | PART NUMBER |
|------|--------------------------|--------------|
| 1414 | 2667 | 30380008 |
| 1430 | 2895 | 30380009 |
| 1446 | 3784 | 30380012 |
| 2020 | 2895 | 30380009 |
| 2222 | 2895 | 30380009 |
| 2230 | 3784 | 30380012 |
| 2234 | 3784 | 30380012 |
| 2044 | 4115 | 30380013 |
| 2246 | 4115 | 30380013 |
| 2270 | 2667 (x2) | 3038008 (x2) |
| 3030 | 3784 | 30380012 |
| 3046 | 4572 | 30380015 |
| 3055 | 3784(x2) | 30380012(x2) |
| 3072 | 4115(2) | 30380013(x2) |
| 3434 | 4115 | 30380013 |
| 3446 | 2667(x2) | 30380008(x2) |
| 4646 | 2667(x2) | 30380008(x2) |
| 4672 | 3784(x2) | 30380012(x2) |

QPF (purchased lengths)

| LENS | TOTAL LENGTH (mm) +50/-0 | PART NUMBER |
|------|--------------------------|--------------|
| 2222 | 2667 | 30380008 |
| 2230 | 3784 | 30380012 |
| 2246 | 4115 | 30380013 |
| 3030 | 3784 | 30380012 |
| 3046 | 4572 | 30380015 |
| 4646 | 2667(x2) | 30380008(x2) |



101-64A
103-50D
Scale 1:1

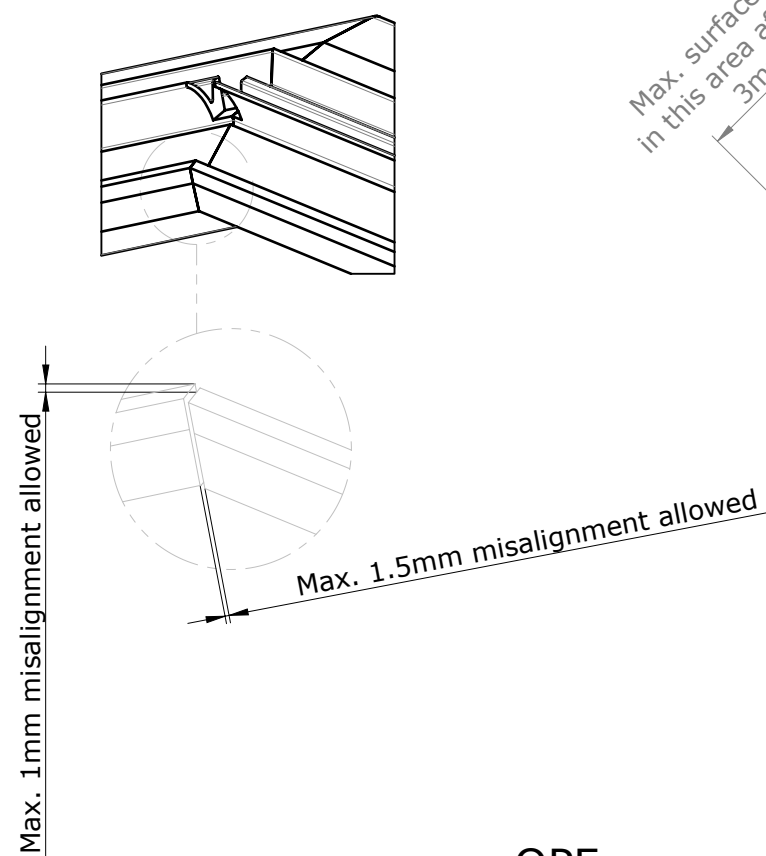
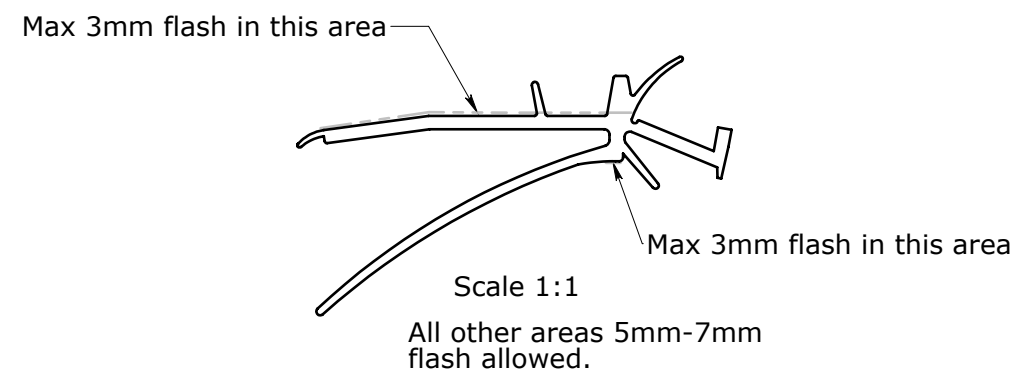
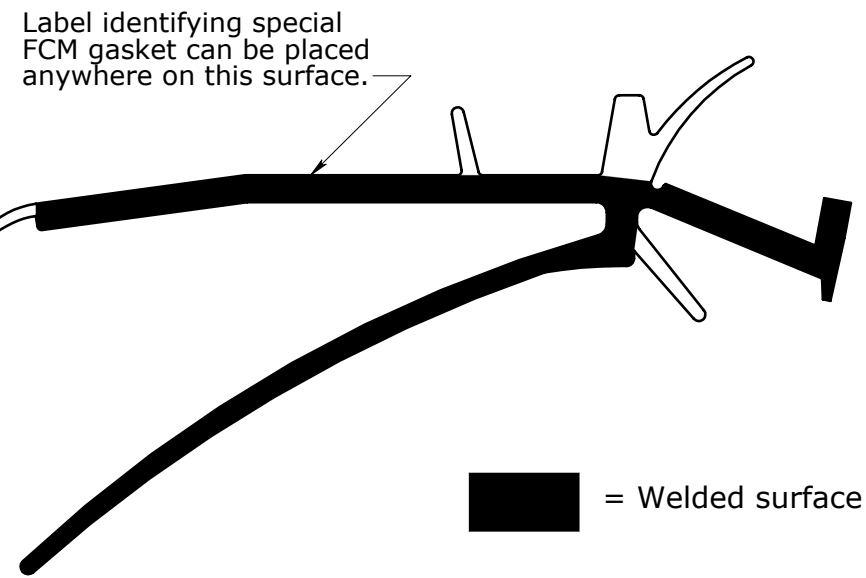


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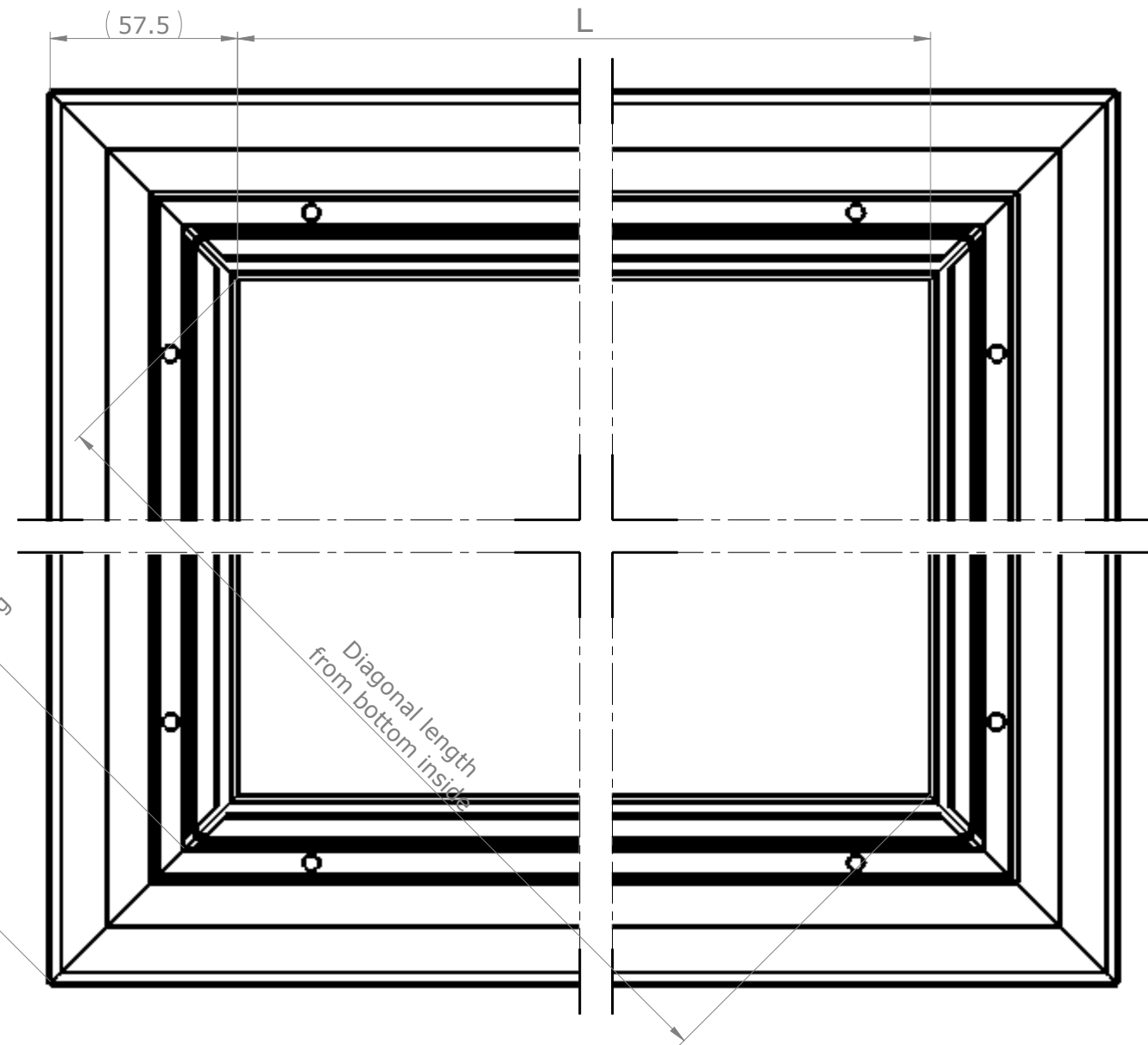
| | | | |
|--|---------------------|--------------------------------|-----------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | |
| Approvals TMA-A/Cert | | | |
| Checked by/drawn by/date /CBB/25.04.2018 | | | |
| Scale 1:1 | Unspec. meas. mm | General tolerance See Chart | Size B |

| | | | | |
|---|---------------|-----|----|----|
| FCM | | | | |
| Inner frame gasket Commodity drawing | | | | |
| Product instructions no. | | | | |
| Category 21 | 303800 | 000 | 00 | 04 |

| Edition | Description of change | Date |
|---------|-----------------------------------|---------|
| 12 | Changed max split from 2mm to 3mm | 2/16/17 |
| 13 | Changed tolerance sizes | 7/26/17 |
| 14 | Added 1414 size | 4/25/18 |



Max. surface deviation in this area after welding 3mm typ.



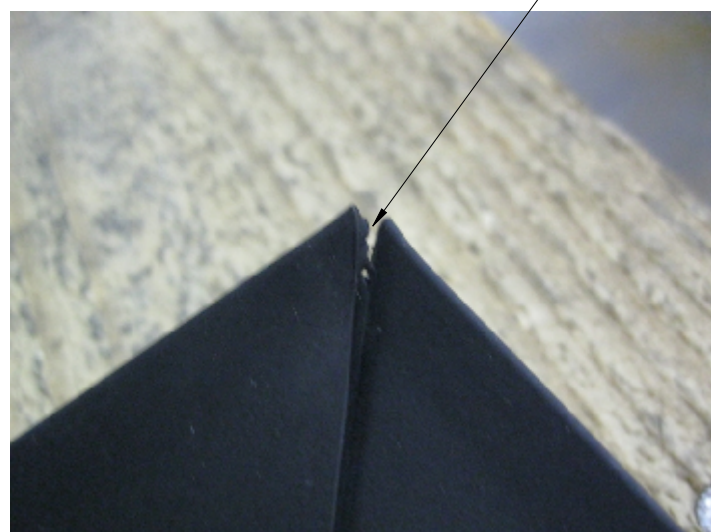
FCM

| Size | L ±2 | LENS | DIAGONAL LENGTH ±5 |
|------|-------|------|--------------------|
| 14-- | 372.5 | 1414 | 527 |
| 20-- | 524.5 | 1430 | 863.5 |
| 22-- | 575.5 | 1446 | 1242 |
| 30-- | 779 | 2020 | 742 |
| 34-- | 880.5 | 2222 | 814 |
| 44-- | 1134 | 2230 | 968.5 |
| 46-- | 1185 | 2234 | 1052 |
| 55-- | 1414 | 2044 | 1144 |
| 70-- | 1795 | 2246 | 1317.5 |
| 72-- | 1846 | 2270 | 1885 |
| | | 3030 | 1101.5 |
| | | 3046 | 1418 |
| | | 3055 | 1614 |
| | | 3072 | 2004 |
| | | 3434 | 1245 |
| | | 4646 | 1676 |
| | | 4672 | 2194 |

QPF

| Size | L ±2 | LENS | DIAGONAL LENGTH ±5 |
|----------|-------|------|--------------------|
| 19--(22) | 499.5 | 2222 | 706.5 |
| 27--(30) | 702.5 | 2230 | 862 |
| 43--(46) | 1109 | 2246 | 1216.5 |
| | | 3030 | 993.5 |
| | | 3046 | 1313 |
| | | 4646 | 1568 |

Max. 3mm split allowed from end in this area

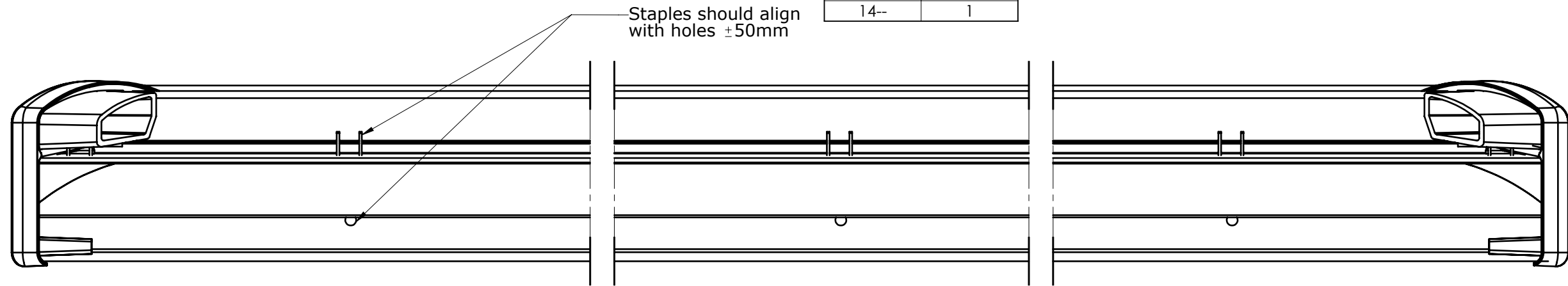


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| | | | | | | | |
|--|---------------|-------------------|------|---------------------------------------|--------|-----------|---------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | FCM/QPF | | | |
| Approvals | | | | Inner frame gasket Welding drawing | | | |
| Checked by/drawn by/date /CBB/25.04.2018 | | | | Product instructions no. | | | |
| Scale | Unspec. meas. | General tolerance | Size | Category | | Operation | Edition |
| 1:2 | mm | ±.5 | B | 21 | 303372 | 0A0 | 42 14 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|---|
| 09 | 7/26/17 | Added descriptions to staples and gaskets |
| 10 | MM/BBN/ 3/14/19 | Removed picture, added to corner key staple dwg |
| 11 | MM/CBB/ 10/9/19 | Added note for size 14-- |

| Size | Min. # of staples |
|------|-------------------|
| 72-- | 5 |
| 70-- | 5 |
| 55-- | 3 |
| 46-- | 3 |
| 44-- | 3 |
| 34-- | 3 |
| 30-- | 3 |
| 20-- | 2 |
| 22-- | 2 |
| 14-- | 1 |



Staples must be placed above crease in gasket as shown.

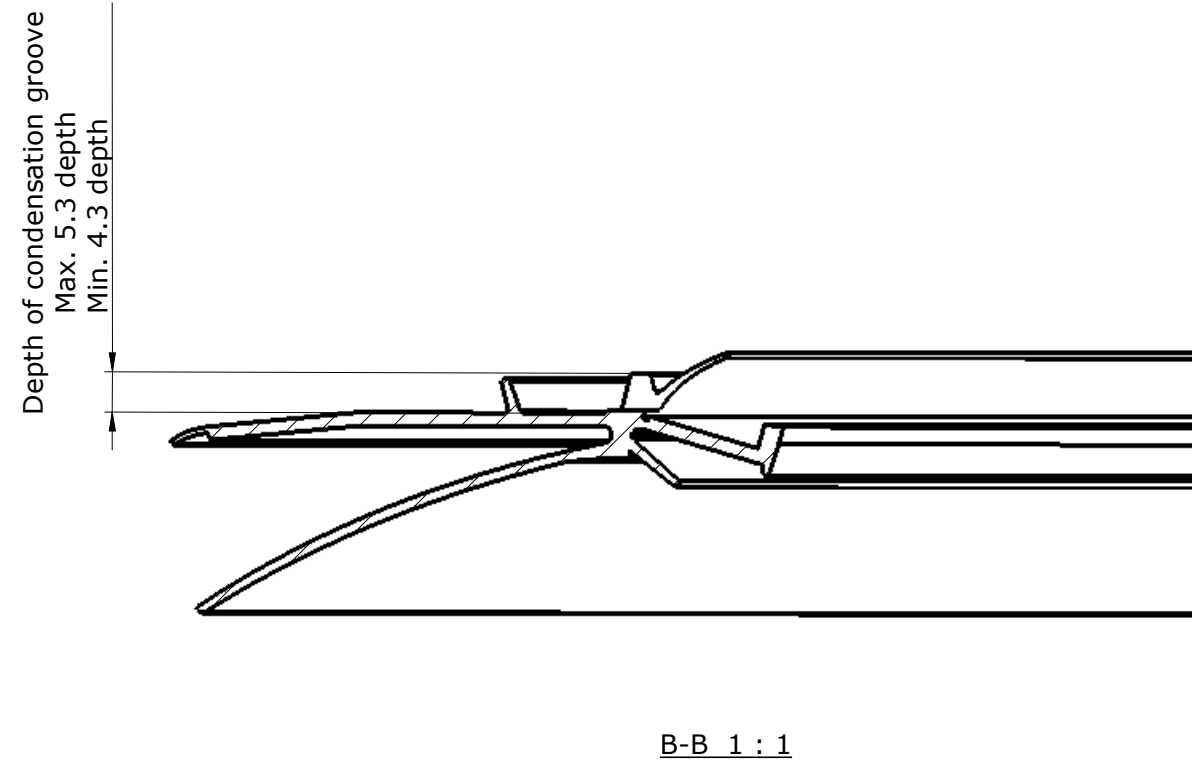
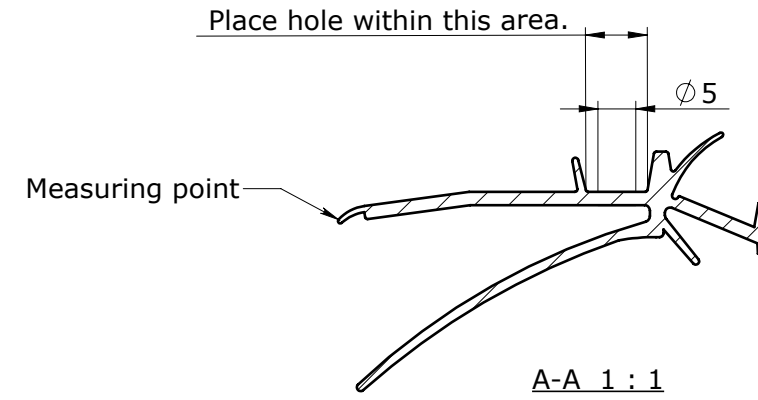
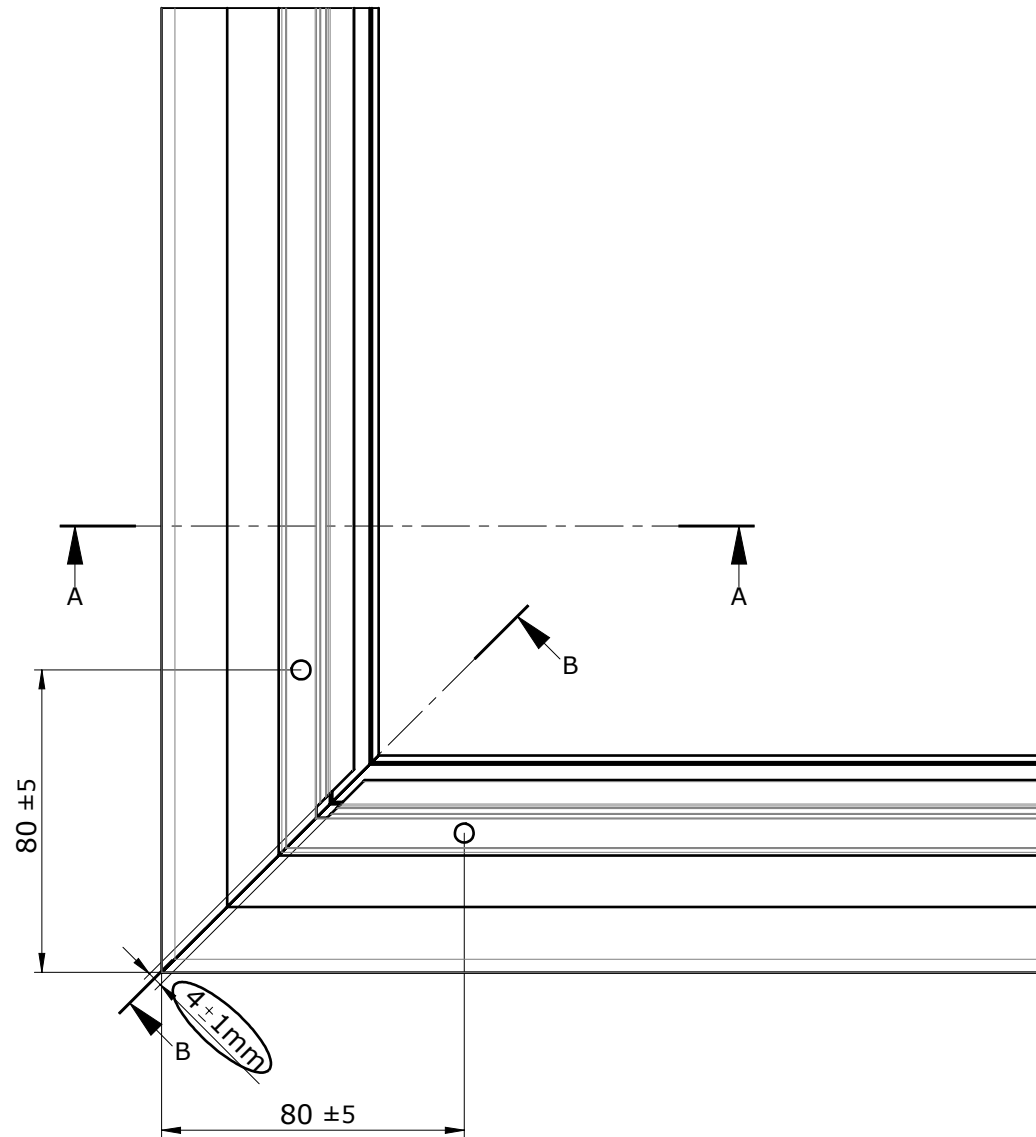
NOTES:

1. Staple head a max of 3mm above gasket
2. Max of 2 staples cut through gasket
3. On size 14-- staples should be placed in center of part.

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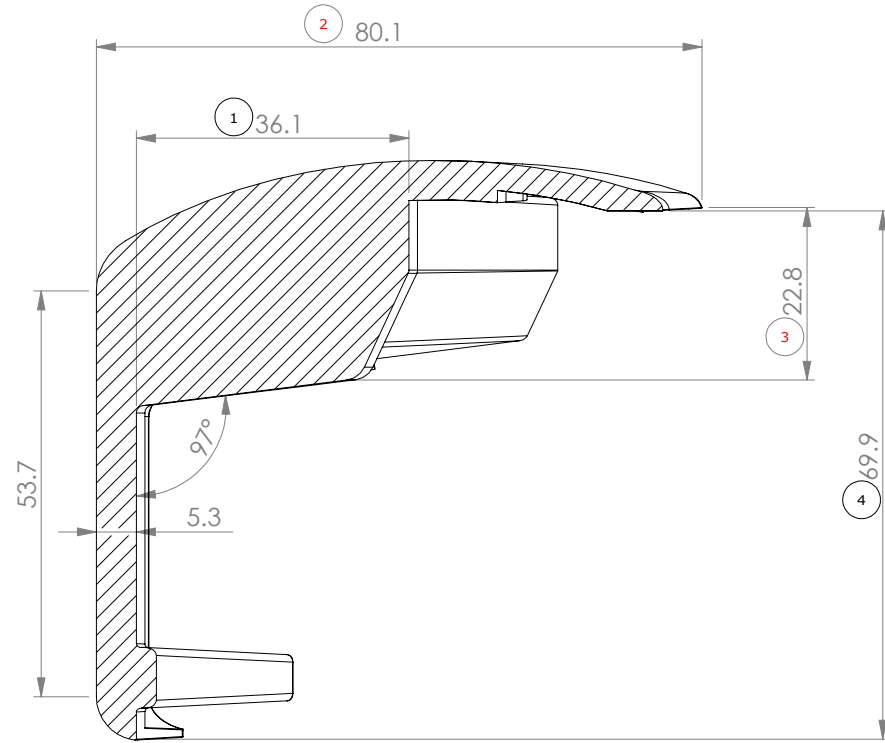
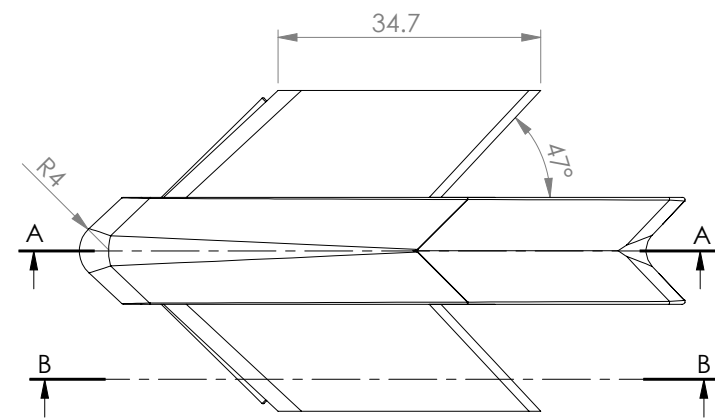
| | | | | | | | |
|--|---------------------|-------------------------------|-----------|---|--------|-----|-------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | FCM | | | |
| Approvals | | | | Inner frame gasket & staple Placement drawing | | | |
| Checked by/drawn by/date /CB/31.07.2017 | | | | Product instructions no. | | | |
| Scale 1:2 | Unspec. meas. mm | General tolerance $\pm .5$ | Size B | Category 21 | 303372 | 0A0 | 51 11 |

| Edition | Description of change | Date |
|---------|--------------------------------|---------|
| 05 | Updated tolerance on dimension | 7/31/17 |
| | | |
| | | |

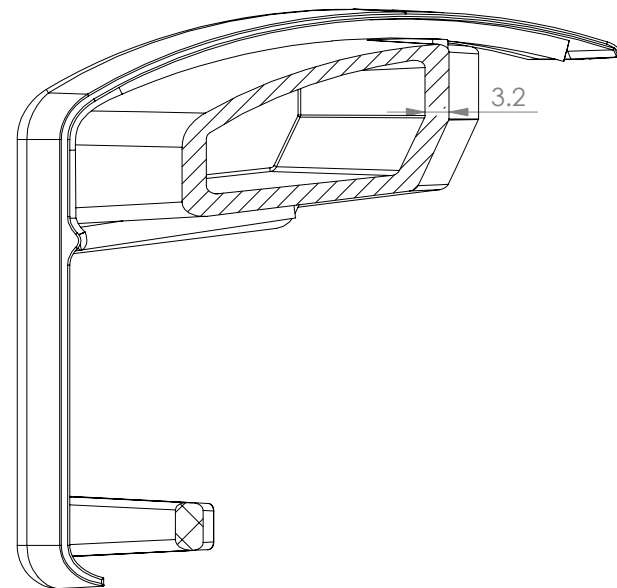


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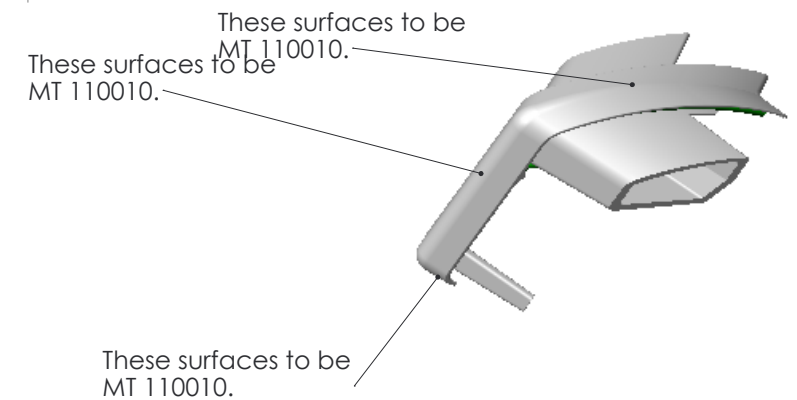
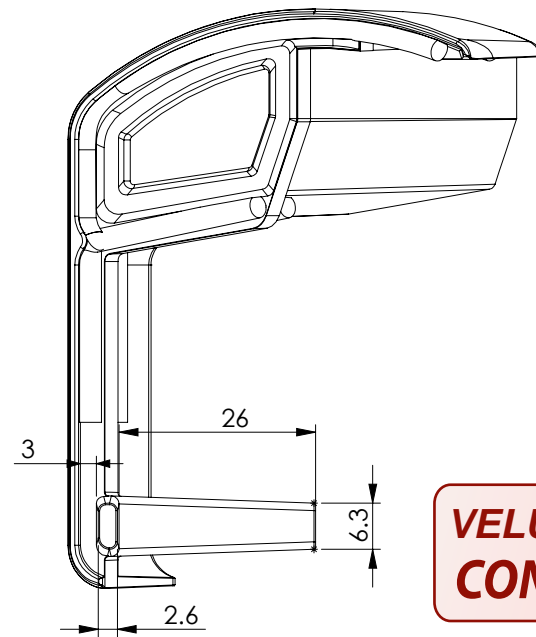
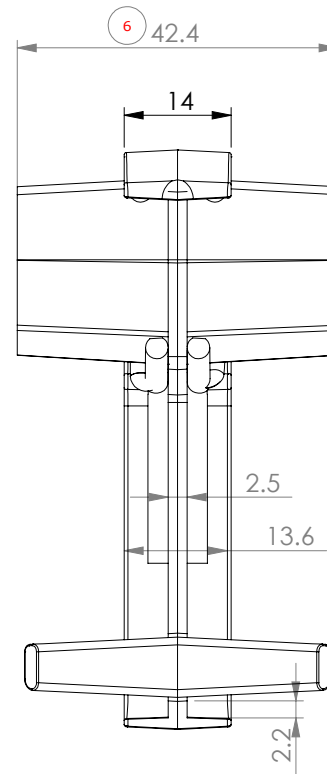
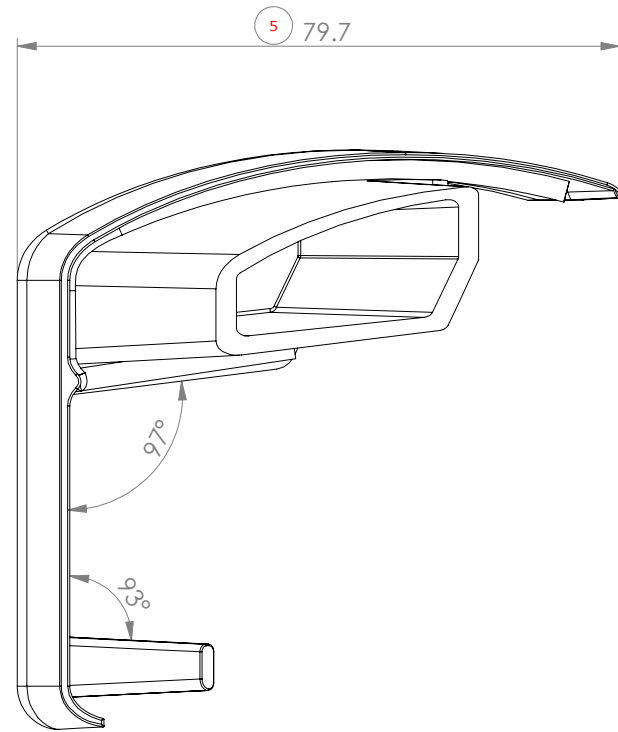
| | | | | | | | |
|--|---------------------|--------------------------|-----------|--|--------|-----|----|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | FCM | | | |
| Approvals | | | | Inner frame gasket Routing and punching drawing | | | |
| Checked by/drawn by/date /CB/31.07.2017 | | | | Product instructions no. | | | |
| Scale 1:2 | Unspec. meas. mm | General tolerance ±.5 | Size B | Category 21 | 303372 | 0A0 | 52 |
| | | | | Edition 05 | | | |



SECTION A-A



SECTION B-B



| Measure | Tol. |
|---------|------|
| 21 - 85 | .2 |
| .5 - 20 | .1 |

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NOTE:
1. Unless otherwise noted surface finish to be SPI B2 or better.
2. Equilvant color reference: RAL 7043.
3. Part volume= 18815.75 cubic millimeters

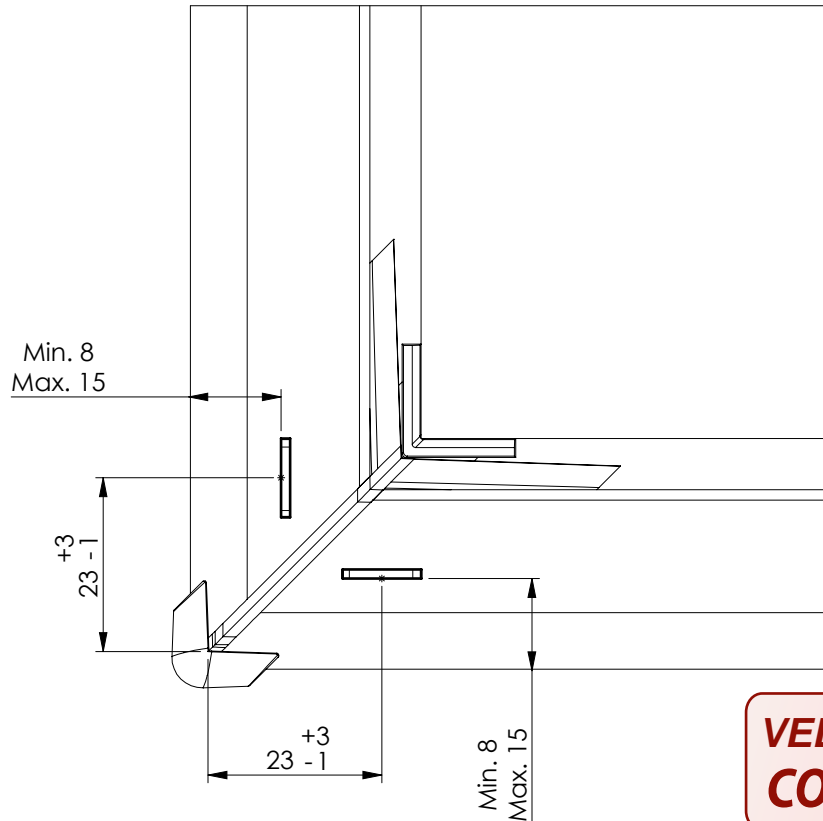
| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|----------------------------|
| 12 | CBB/MM/11/8/18 | Added VCM/E/S,QPF to title |
| 13 | MM/CBB/9/25/19 | Updated material spec |
| 14 | MM/CBB/12/5/19 | Added ISD/FGT to title |

| Material | | | | Specifications - generally | | | |
|--|--------------------------------|-----------|----------------|-------------------------------------|-----------|----|---------------|
| PC/ASA | Color:NCS S-7500-N(grey) | | | Plastic material for FCM corner key | 309239.64 | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | FCM/VCM/E/S/QPK/ISD/FGT | | | |
| Approvals TMA-A/CERT | | | | Corner key | | | |
| Checked by/drawn by/date /RC/13.09.2017 | | | | Commodity drawing | | | |
| Scale 1:1 | | | | Product instructions no. | | | |
| Unspec. meas. mm | General tolerance See Chart | Size B | Category 21 | 303380 | 000 | 00 | Edition 14 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|--|
| 05 | CBB/MM/11/8/18 | Added VCM/E/S/QPF to title & cert to approvals |
| 06 | MM/BBN/11/8/18 | Changed view and added picture for staple |
| 07 | MM/CBB/12/5/19 | Added ISD/FGT to title |



Place two staples in each corner as shown.

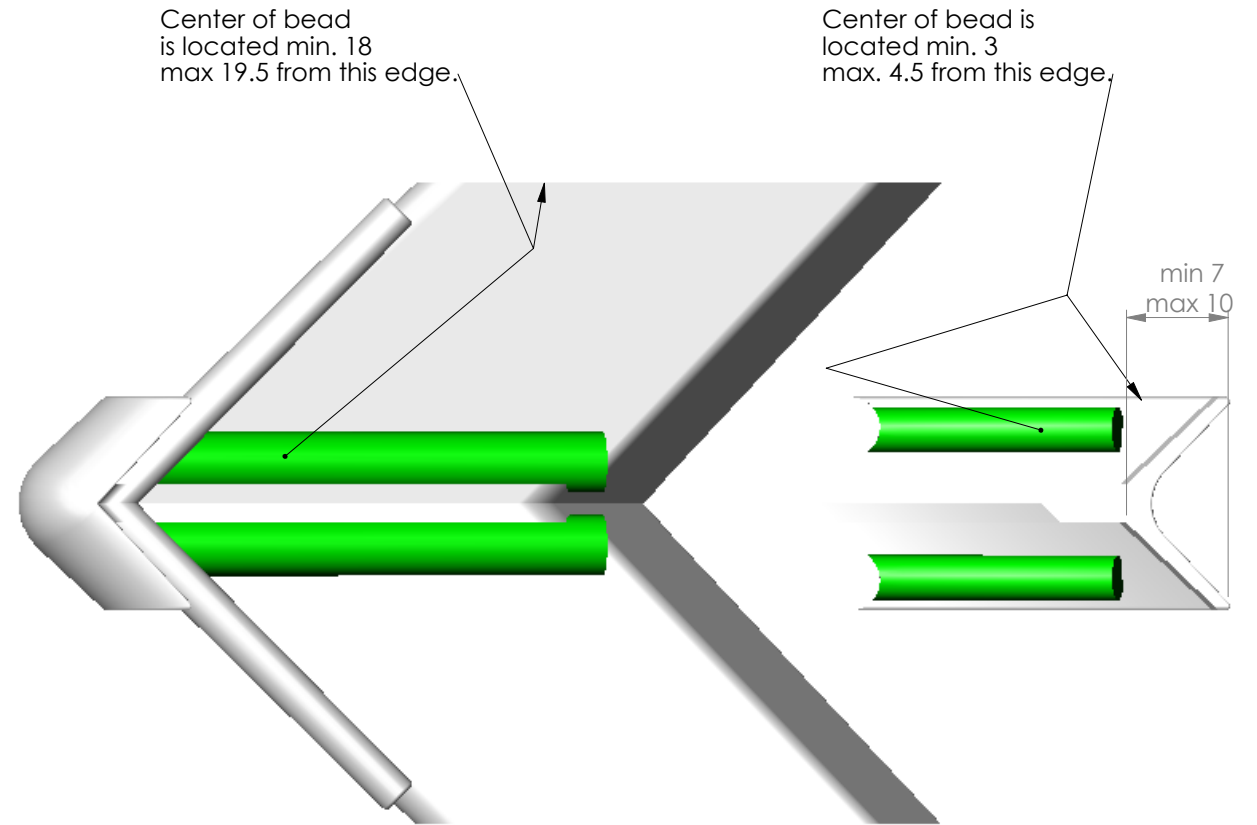
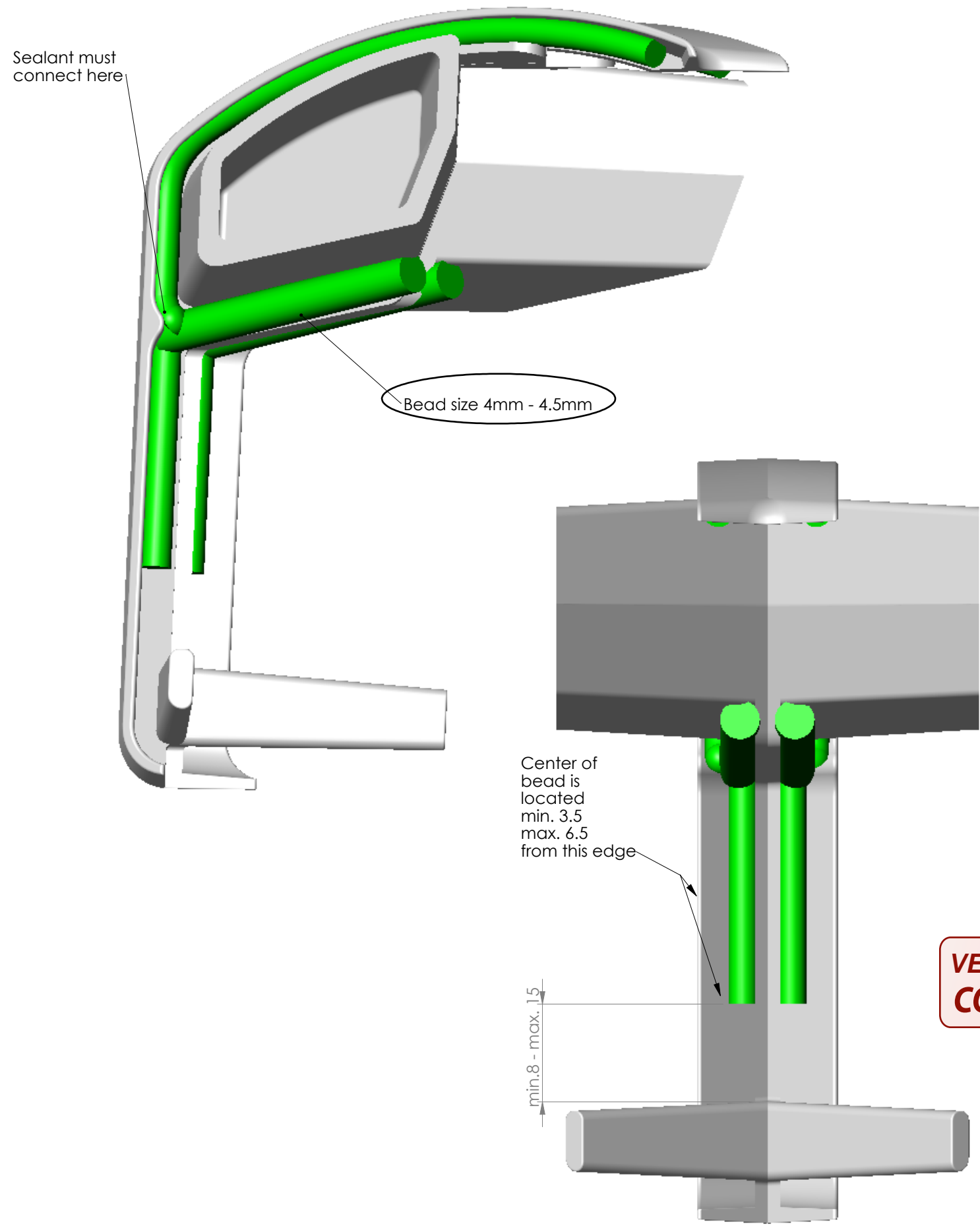


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Note: Placement is the same for all corners

| | | | | | | | |
|--|---------------------|--------------------------|-----------|--|--------|-----|-------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | <u>FCM/VCM/E/S/QPF/ISD/FGT</u> | | | |
| Approvals Cert | | | | Corner key Placement of staples Assembly drawing | | | |
| Checked by/drawn by/date /REC/27.01.2014 | | | | Product instructions no. | | | |
| Scale 1:1 | Unspec. meas. mm | General tolerance 0.5 | Size A | Category 21 | 303380 | 0A0 | 51 07 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|--|
| 05 | CBB/MM/11/8/18 | Added VCM/E/S/QPF to title & cert to approvals |
| 06 | MM/RC/03/12/19 | Added bead both beads of sealant |
| 07 | MM/CBB/12/5/19 | Added ISD/FGT to title block |



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NOTES:
 Bead size is 3.0mm - 4mm, unless noted.
 When outer frame and corner key are assembled, maximum butyl squeeze out onto outer frame is 5mm.
 Maximum putty smear is 25mm sq.
 Only one bead shown. Other side is typical.
 Corner key weight plus butyl: 25.5g + 1.1g -0.5g
 Cornery key weight: 22.4g

| | | | | | | | |
|--|---------------|-------------------|------|----------------|--|--|--|
| VELUX | | | | SKY-PRS | | | |
| 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | | | | |
| Approvals Cert | | | | | | | |
| Checked by/drawn by/date /REC/31.07.2017 | | | | | | | |
| Scale | Unspec. meas. | General tolerance | Size | | | | |
| 1:1 | mm | ±.5 | B | | | | |

| | | | | | | |
|---|--------|--|--|-----|-----------|----|
| Specifications - generally | | | | | | |
| High-Tack structural putty | | | | | 102011.64 | |
| FCM/VCM/E/S/QPF (ISD/FGT) | | | | | | |
| Corner key Sealant placement drawing | | | | | | |
| Product instructions no. | | | | | | |
| Category | 303380 | | | 0A0 | 52 | 07 |
| 21 | | | | | | |

| | | | |
|--|---------------------------------|--------------------------------|-------------------------------------|
| VELUX A/S · Panes Øskovvej 2, DK-8740 Brædstrup, Denmark | Drawn up by: KM/LFj | Date: 09.03.2006 | Page: 1/3 |
| MATERIAL SPECIFIKATION Silicone as external sealant | Classification: A | PRODUCT INSTRUCTION NO. | |
| | Part of: WE-Si/Alu-Si | Art 21 | Commodity no. 2 6 7 0 0 2 |
| | | Opr. 64 | Ed. 04 |

1 General Description

1.1 **VELUX material designation:**

One-component silicone.

1.2 **Application:**

The material is used in connection with the production of Insulating Glass Units forming part of VELUX roof windows.

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2 Properties

2.1 **Specific VELUX-requirements for the properties of the material:**

| No. | Properties | Test method | Requirements |
|-----|--|--|--|
| 1 | Shore A hardness | ASTM D 2240 | Min. 38 Shore A after 7 days at room conditions. |
| 2 | Colour | Visual test, or test by means of RAL colour chart | The colour of the cured product must be grey. |
| 3 | Tensile strength at 25% elongation | H- or C- specimen consisting of 2 pcs. of glass with a joint in-between. The supplier states test method and dimensions of the joint. To be tested after 7 days at room conditions. | 0.25 – 0.70 MPa (36.26 psi – 101.53 psi) |
| 4 | Tensile strength at breakage | | Min. 0.80 MPa (116.03 psi) |
| 5 | Cohesion failure % of the total surface area | | Min. 90% |
| 6 | Slump | ASTM D 2202 | Max. 2.0 mm (0.079 in.) after 5 min. at room conditions. |
| 7 | Tack-free time | ASTM C 679 | Max. 90 min. |
| 8 | Curing depth after 24 hours | Let cure for 24 hours at room conditions and measure the height of the cured material with a micrometer screw. | 0.15 – 0.51 cm (0.059 – 0.201 in.) |
| 9 | Specific gravity | The supplier states test method. | 1.30 – 1.37 |
| 10 | Extrusion rate | The supplier states test method. | 70 – 150 g/min. (2.47 – 5.29 oz/min.) |
| 11 | Storage life | Frost-free storage. | Min. 9 months from date of production of the silicone. Min. 3 months from receipt of the material at the customers. |

Room conditions means: 23 ±3°C **(73.4±5°F)** and 50 ±5% RH.

| | | | | | | | | |
|---|---|--|---|--|------|-----|-----------|-----------|
| <p align="center">VELUX A/S · Panes Øskovvej 2, DK-8740 Brædstrup, Denmark</p> | <p>Drawn up by: KM/LFj</p> | <p>Date: 09.03.2006</p> | <p>Page: 2/3</p> | | | | | |
| <p><u>MATERIAL SPECIFIKATION</u> Silicone as external sealant</p> | <p>Classification: A</p> | <p align="center">PRODUCT INSTRUCTION NO.</p> | | | | | | |
| | <p>Part of: WE-Si/Alu-Si</p> | <p>Art 21</p> | <p>Commodity no. 2 6 7 0 0 2</p> | <table border="1"> <tr> <td>Opr.</td> <td>Ed.</td> </tr> <tr> <td>64</td> <td>04</td> </tr> </table> | Opr. | Ed. | 64 | 04 |
| | Opr. | Ed. | | | | | | |
| 64 | 04 | | | | | | | |

2.2 General material information:

2.2.1 Climatic influences:

If any information of the resistance to climatic influences is available, these are to be stated including the standards, with which the material complies.

2.2.2 Storage conditions:

The supplier shall state if there are any special demands for storage of the material. If so the material must be stored under these conditions until delivery to the customer.

2.2.3 Further information:

Any special requirements, for example in connection with the application of the silicone to panes with coated or laminated glass, must be stated.

The supplier shall forward a description of the test methods used / mentioned in the certificate.

3 Technical Material Approval at VELUX

3.1 General information:

Along with a sample the supplier shall forward documentation for the properties mentioned in item 2, including the acceptable tolerances.

Supplier shall forward a product data sheet.

The supplier shall forward a safety data sheet if one or more of the components of the material are listed as hazardous acc. to the legislation of the recipient country. The language of the safety data sheet must comply with the legislation of the recipient country within this field, however it must as a minimum be in English.

3.2 Environmental requirements:

The material must meet the labelling requirements in force in the country where it is delivered.

The material must meet the environmental requirements in force at the time in question in the country where it is delivered.

3.3 Further information:

VELUX will internally carry out a Technical Material Approval acc. to document no. 21.267002.94.xx



4 General Requirements

4.1 Accept from the Supplier:

A supplier cannot deliver to the VELUX until all requirements of the Material Specification are certified in writing as accepted.

4.2 Change of the Product:

The supplier informs the customer in writing about any change in the composition of the material, including the effect of such changes.

Submission of information will in no way imply a limitation in the supplier's responsibility for any defect or deficiency of the material.

4.3 Quality system:

The supplier shall have an efficient quality system like f.ex. ISO 9002. The customer reserves the right to conduct audits on the supplier's premises.

| | | | |
|--|---------------------------------|--------------------------------|-------------------------------------|
| VELUX A/S · Panes Øskovvej 2, DK-8740 Brødstrup, Denmark | Drawn up by: KM/LFj | Date: 09.03.2006 | Page: 3/3 |
| MATERIAL SPECIFIKATION Silicone as external sealant | Classification: A | PRODUCT INSTRUCTION NO. | |
| | Part of: WE-Si/Alu-Si | Art 21 | Commodity no. 2 6 7 0 0 2 |
| | | Opr. 64 | Ed. 04 |

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5 Delivery

5.1 Terms of delivery:

Delivery according to agreement with the customer's purchasing department.

5.2 Certificate:

The supplier shall deliver the material with a certificate, in which as a minimum the following values for the batch in question are stated:

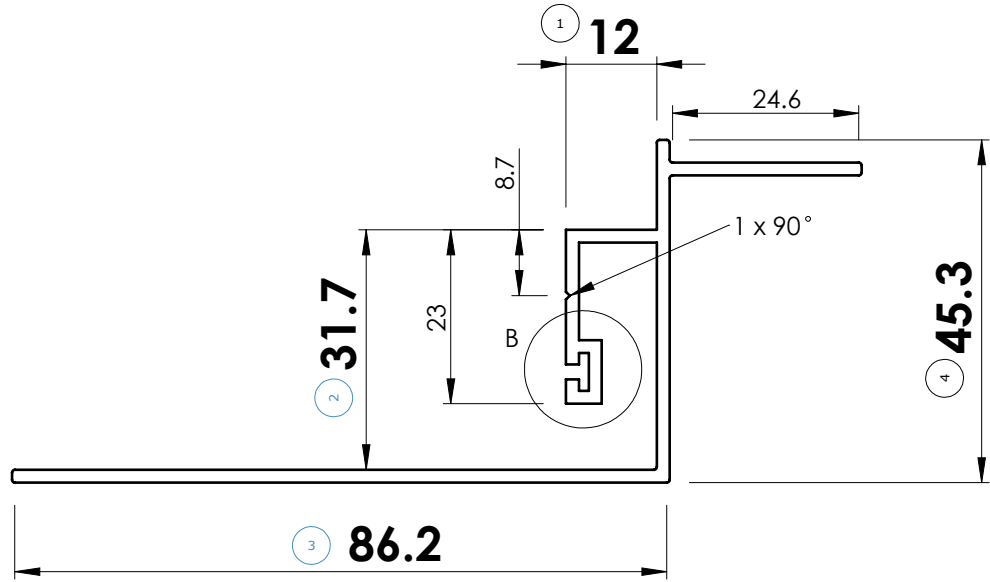
| | |
|----------------------------------|--|
| Testing: | Limit value: |
| Specific gravity | 1.30 – 1.37 |
| Appearance | Grey, homogenous, viscous mass |
| Extrusion rate | 70 – 150 g/min. (2.47 – 5.29 oz/min) |
| Tensile stress at 25% elongation | 0.25 – 0.70 MPa (36.26 psi – 101.53 psi) |
| Tensile stress at breakage | Min. 0.80 MPa (116.03 psi) |
| Cohesion failure | Min. 90% |
| Cure depth after 24 hours | 0.15 – 0.51 cm (0.059 – 0.201 in.) |

As to tensile strength at 24% elongation the supplier shall state either the value measured for each batch or guarantee that the material forwarded is within a minimum value. The minimum value stated by the supplier must meet the requirements of item 2.1.6. If the tensile strength at 25% elongation is not tested for each batch the supplier shall make such tests at least once a month.

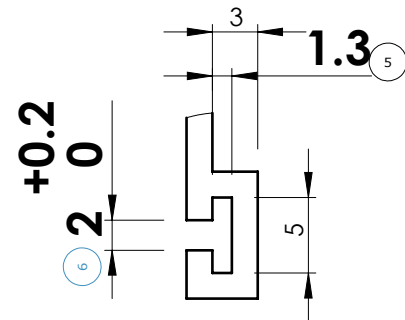
All measurements must be carried through at 23 ±3°C (73.4±5°F) and 50 ±5% RH.

Besides the batch numbers of the material, number of barrels and supplier's approval signature must appear from the certificate.

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |



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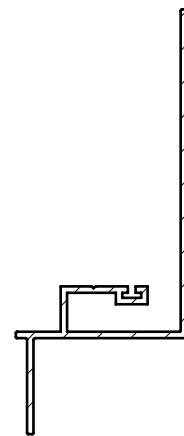
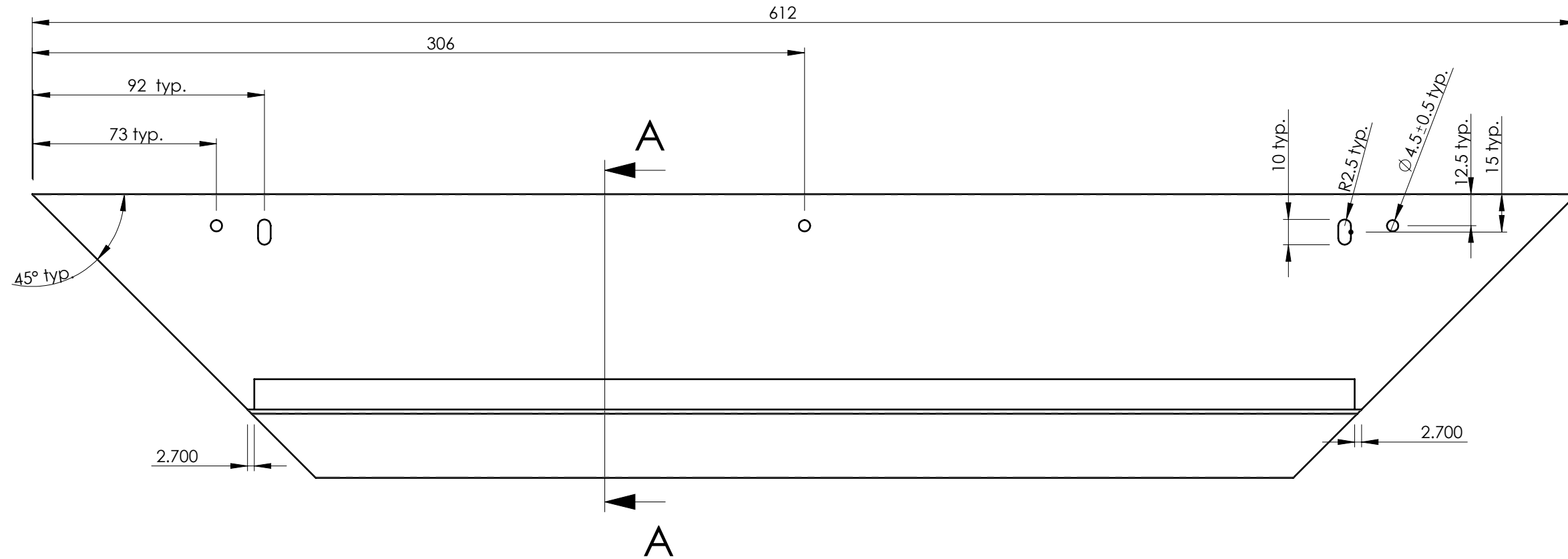
DETAIL B
SCALE 2 : 1

Notes;

1. $\pm 2^\circ$ on angles
2. Purchased lengths = 13.7'
3. Break all corners R0.5
4. Material thickness is 1.7 ± 0.15 unless otherwise specified.

| Specifications - generally | | | | | | | |
|--|---------------------|--------------------------------|-----------|--------------------------|--------|-----------|---------|
| Extruded Aluminum-Generally | | 309078.64 | | | | | |
| VELUX | | SKY-PRS | | <u>TZRQ</u> | | | |
| 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | Profile drawing | | | |
| Approvals TMA-A | | | | Product instructions no. | | | |
| Checked by/drawn by/date /MM/26.02.2020 | | | | Category | | Operation | Edition |
| Scale 1:1 | Unspec. meas. mm | General tolerance ± 0.5 | Size A | 21 | 320082 | 000 | 00 01 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |

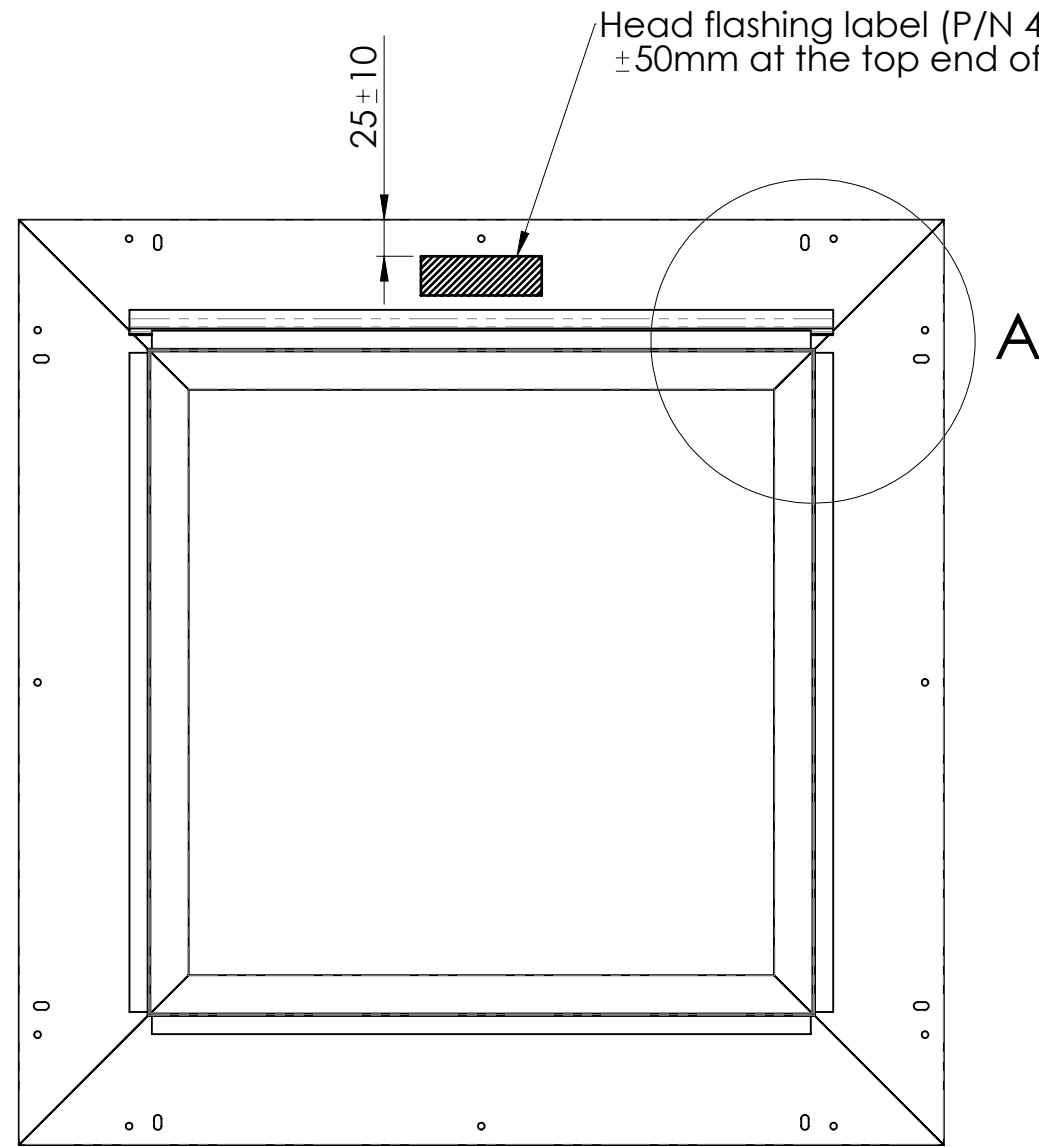


SECTION A-A

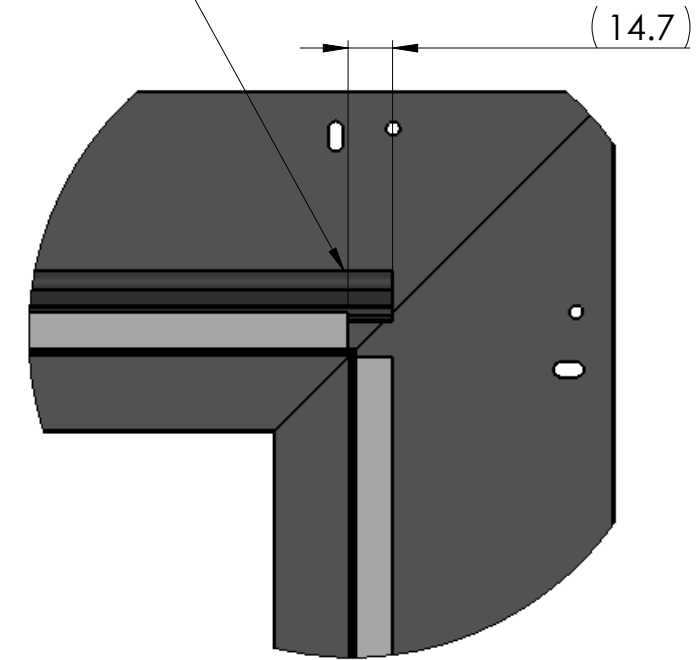
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| | | | | | | |
|--|-------------------------|-----------|----------------|--|---------|----|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | TZRQ | | |
| Approvals | | | | Flashing | | |
| Checked by/drawn by/date BBN/MM/27.02.2020 | | | | Cutting, trimming and punching drawing | | |
| Scale 1:2 | | | | Product instructions no. | | |
| Unspec. meas. mm | General tolerance ±1 | Size B | Category 21 | 320082 | 0A0 | 31 |
| | | | | Operation | Edition | |
| | | | | | 01 | |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |



Place gasket at top of TZRQ Pan Flashing.
Aligned with left and right channel.

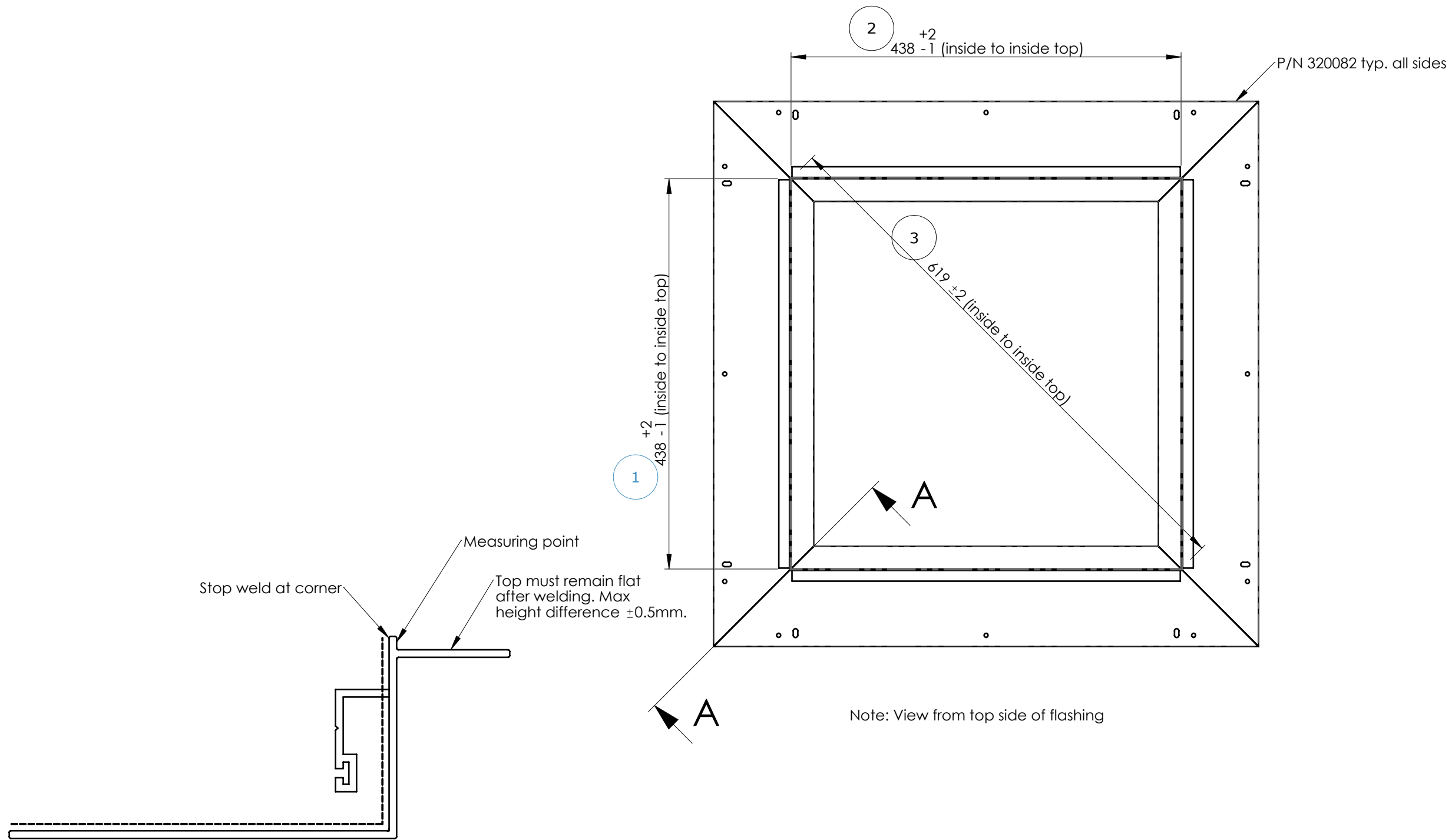


DETAIL A
SCALE 2 : 5

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| | | | | | | | |
|--|--------------------------|-----------|----------------|--------------------------|-----|----|----|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | <u>TZRQ</u> | | | |
| Approvals | | | | Pan Flashing | | | |
| Checked by/drawn by/date /MM/19.05.2020 | | | | Assembly | | | |
| Scale 1:5 | | | | Product instructions no. | | | |
| Unspec. meas. mm | General tolerance ±.5 | Size B | Category 21 | 320083 | 0A0 | 51 | 01 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |



SECTION A-A
SCALE 1 : 1

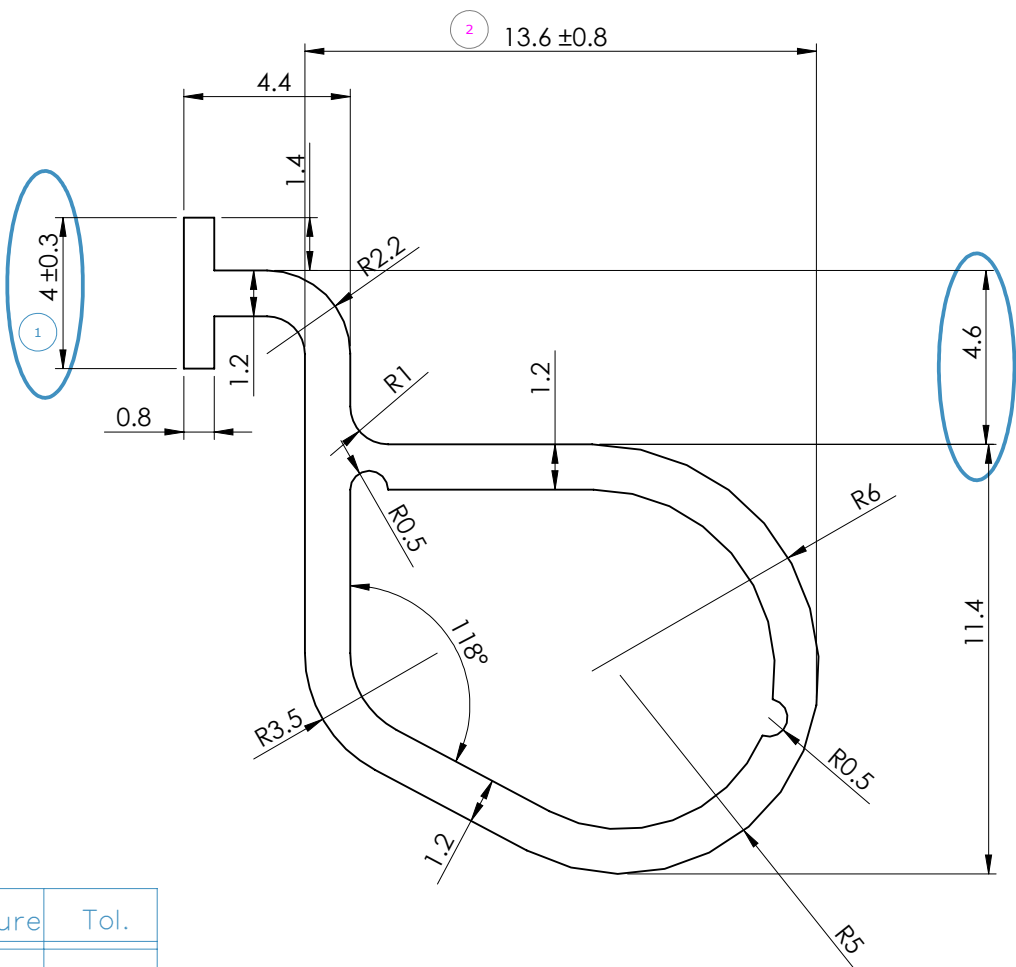
----- = Area where 100% weld is required.
typical all corners

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Note: View from top side of flashing

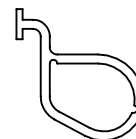
| | | | | | | | |
|--|---------------------|--------------------------|-----------|--------------------------|--------|-----|-------|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | TZRQ Flashing | | | |
| Approvals | | | | Welding | | | |
| Checked by/drawn by/date BBN/MM/27.02.2020 | | | | Product instructions no. | | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±.5 | Size B | Category 21 | 320083 | 0A0 | 52 01 |

| Edition | Description of change | Date |
|---------|--|----------|
| 03 | Changed tolerances per supplier capability | 06/17/15 |
| | | |
| | | |



| Measure | Tol. |
|---------|------|
| < 2.5 | 0.35 |
| 2.5-4 | 0.4 |
| 4-6.3 | 0.5 |
| 6.3-10 | 0.7 |
| 10-16 | 0.8 |
| 16-25 | 1 |

| Size | Length ±2 |
|------|-----------|
| 22-- | 600 |
| 30-- | 803 |
| 46-- | 1209.5 |
| --22 | 590 |
| --30 | 793 |
| --46 | 1199.5 |



Scale 1:1

Cross section area = 0.11 sq./in.

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VELUX SKY-PRS
450 Old Brickyard Rd., Greenwood, South Carolina 29648

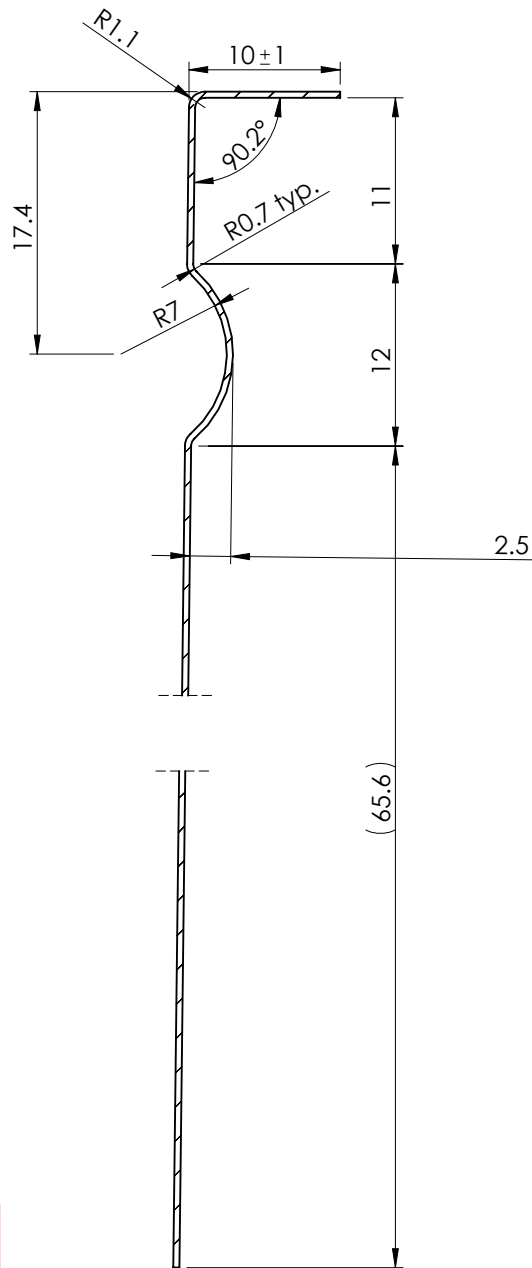
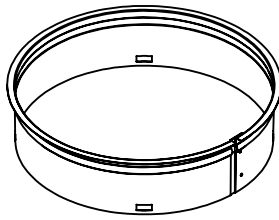
Approvals
TMA-A

Checked by/drawn by/date
/MM/17.06.2015

| Scale | Unspec. meas. | General tolerance | Size |
|-------|---------------|-------------------|------|
| 1:1 | mm | ±.5mm | |

| Specifications - generally | | | | | |
|----------------------------|----|-----------|-----|----|----|
| Static EPDM | | 309202.64 | | | |
| <u>QPF</u> | | | | | |
| Frame gasket | | | | | |
| Product instructions no. | | | | | |
| Category | 21 | 303468 | 000 | 00 | 03 |

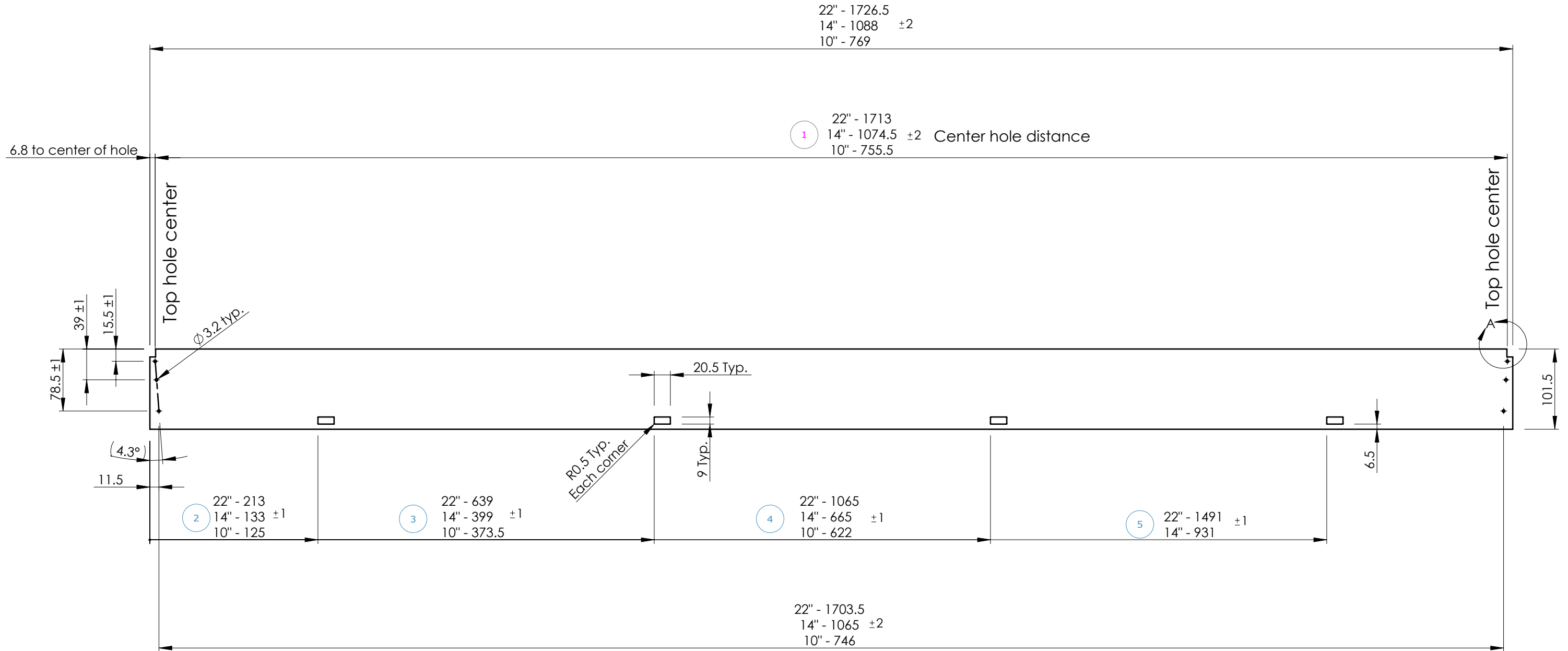
| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |



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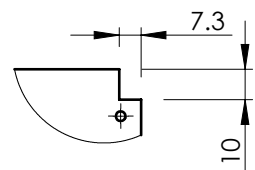
| Material | | | | Specifications - generally | | | | | |
|--|---------------------|---------------------------|-----------|---------------------------------------|--------|-----------|----|----|--|
| 0.016" (.41mm) 4270 AG mirrored silver | | | | High Reflectance Material for tubular | | 309048.64 | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | ST13 | | | | | |
| Approvals | | | | 4" Collar Profile | | | | | |
| Checked by/drawn by/date /MM/21.04.2020 | | | | Product instructions no. | | | | | |
| Scale 2:1 | Unspec. meas. mm | General tolerance ±0.5 | Size A | Category 21 | 304657 | 000 | 00 | 01 | |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|-----------------------|
| | | |
| | | |
| | | |



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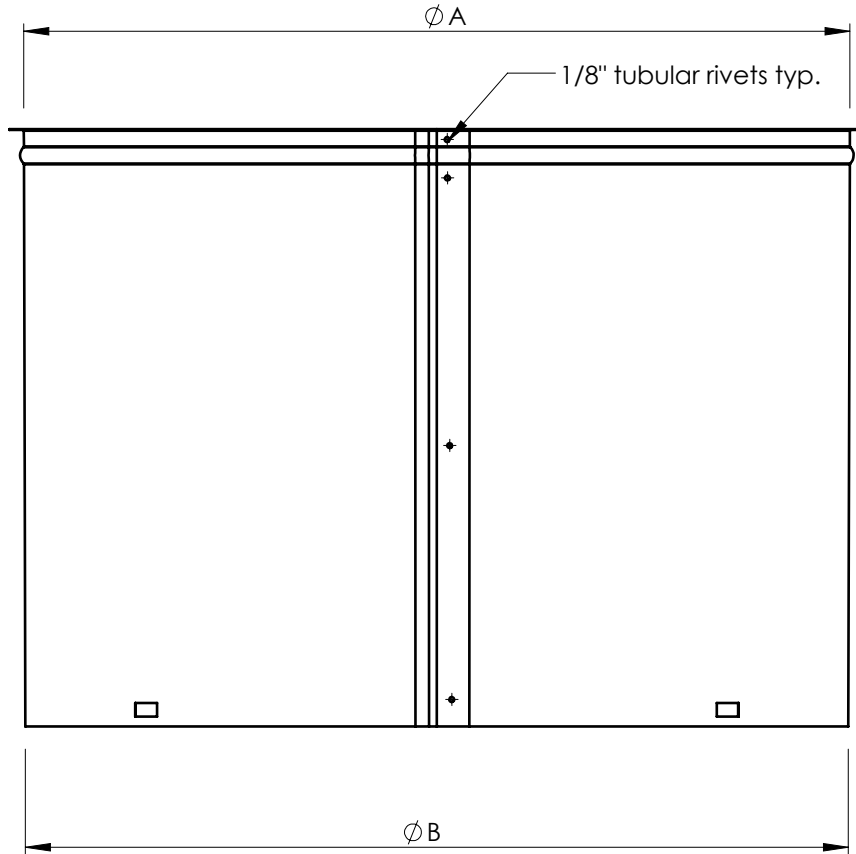
Strip width = 4"



DETAIL A
SCALE 2 : 5
Slot detail

| Material | | | | Specifications - generally | | | | |
|--|---------------------|---------------------------|-----------|---|--------|-----|-----------------|---------------|
| 0.016" (.41mm) Aluminum | | | | High Reflectance Material for tubular 309048.64 | | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | TGF, TGR, TME, TMR, TSR, ZTW, TZRQ | | | | |
| Approvals TMA-A | | | | 4" Collar Punching drawing | | | | |
| Checked by/drawn by/date /MM/21.04.2020 | | | | Product instructions no. | | | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±0.5 | Size B | Category 21 | 304657 | 000 | Operation 52 | Edition 01 |

| Edition | Description of change | Date |
|---------|---------------------------------|---------|
| 02 | Added 21" size/added P/N column | 1/20/14 |
| | | |
| | | |



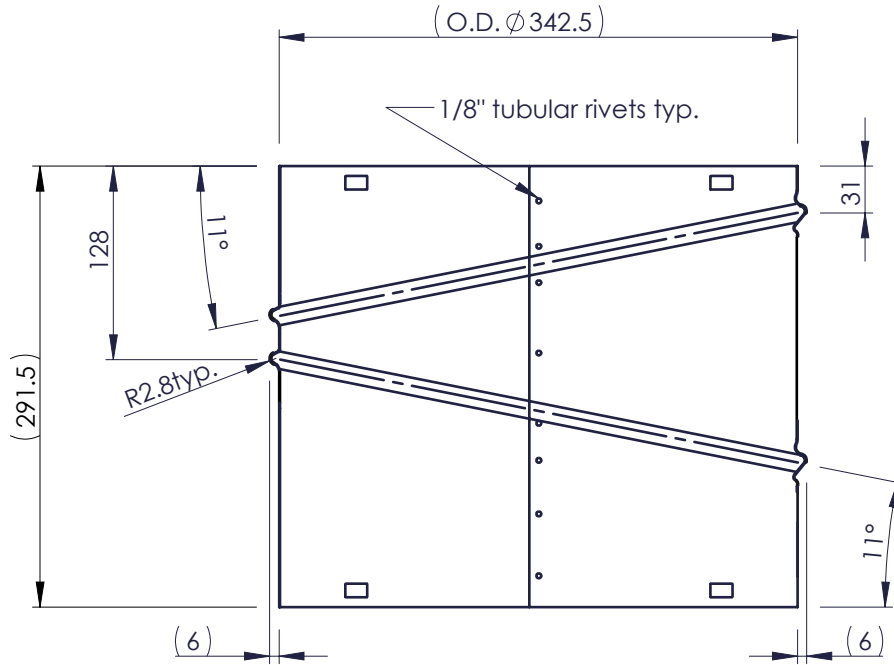
| Size | ϕA | ϕB | 16" P/N | 4" P/N |
|------|------------------------|-------------------|----------|----------|
| 10" | $\phi 240.5$ max. O.D. | $\phi 238.5$ O.D. | 30467010 | 30465710 |
| 14" | $\phi 342.5$ max. O.D. | $\phi 340.5$ O.D. | 30467014 | 30465714 |
| 21" | $\phi 515.5$ max. O.D. | $\phi 513.5$ O.D. | N/A | 30465721 |
| 22" | $\phi 545.5$ max. O.D. | $\phi 543.5$ O.D. | 30467022 | 30465722 |

Notes:

- 22" diameter X 16" tall shown
- 21" does not require notches

| | | | | | | | | | | | |
|--|---------------------|---------------------------|-----------|---|--------|-----|----|---|--|--|--|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | ST13 Collar Finished drawing | | | | VELUX America LLC CONFIDENTIAL | | | |
| Approvals | | | | Product instructions no. | | | | | | | |
| Checked by/drawn by/date /REC/20.01.2014 | | | | Category | | | | Operation Edition | | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±1.0 | Size A | 21 | 304647 | 022 | 52 | 02 | | | |

| Edition | Description of change | Date |
|---------|---------------------------------|--------|
| 02 | Made O.D. a reference dimension | 4/8/13 |
| 03 | Added TMA/SI to approvals | 8/6/13 |
| | | |



Notes:

1. Elbow must be able to rotate and not easily pull apart.
2. Gore detail is determined by tooling provided by supplier.

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VELUX SKY-PRS
450 Old Brickyard Rd., Greenwood, South Carolina 29648

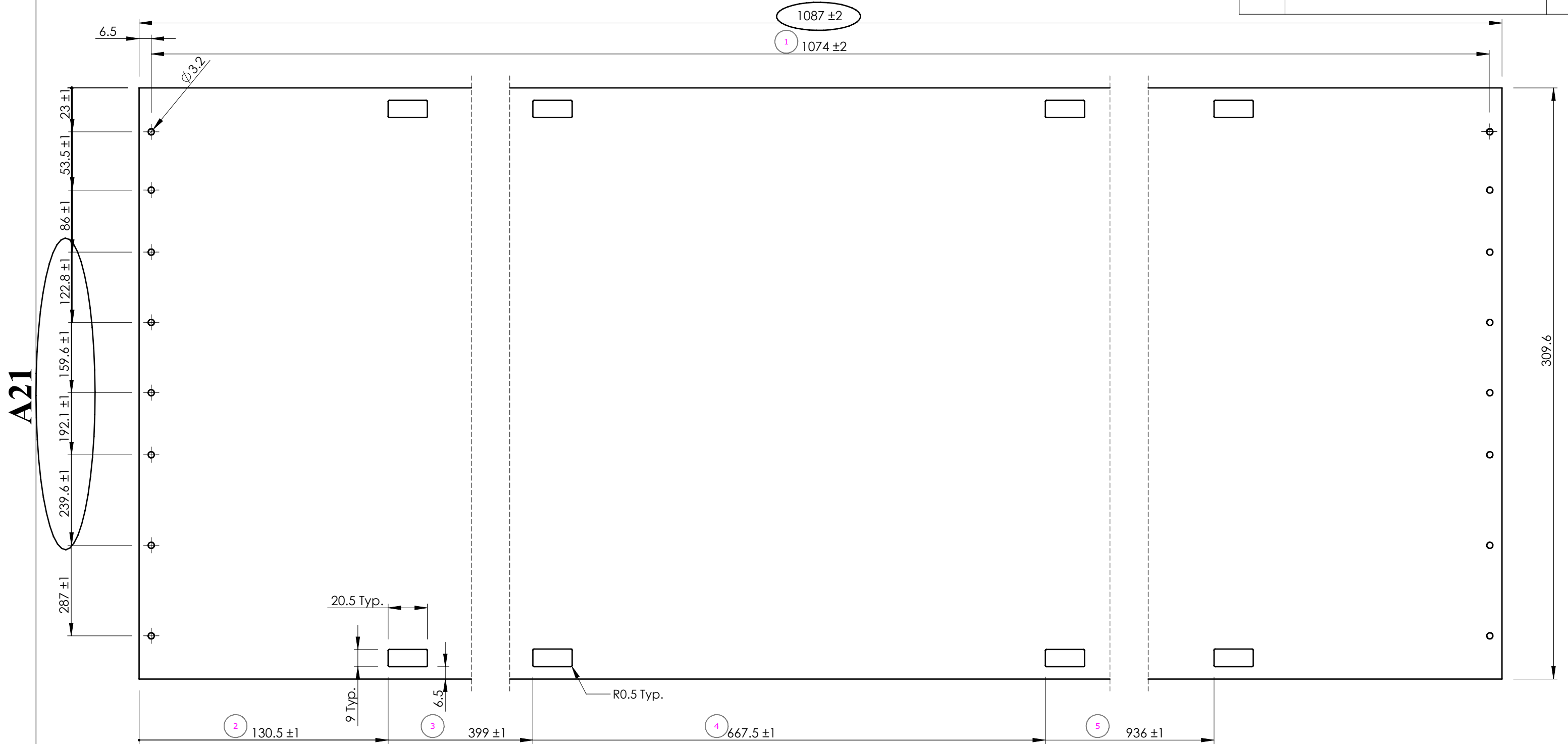
Approvals
TMA/SI

Checked by/drawn by/date
/REC/28.08.2013

| | | | |
|--------------|---------------------|---------------------------|-----------|
| Scale 1:5 | Unspec. meas. mm | General tolerance ±0.5 | Size A |
|--------------|---------------------|---------------------------|-----------|

| Specifications - generally | | | |
|---------------------------------------|-----------|-----------|---------|
| High Reflectance Material for tubular | 309048.64 | | |
| <u>TGR, TMR, TSR, TTK</u> | | | |
| 14" Elbow | | | |
| Product instructions no. | | | |
| Category | | Operation | Edition |
| 21 | 304649 | 014 00 | 03 |

| Edition | Description of change | Date |
|---------|--|---------|
| 02 | revised dimensions to match vendor supplied part | 1/21/13 |
| | | |
| | | |

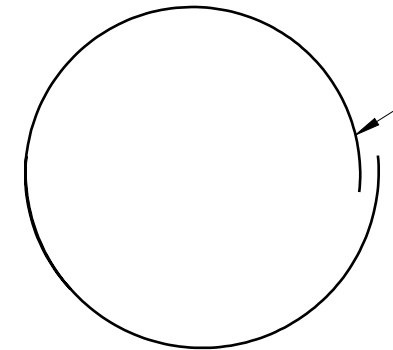
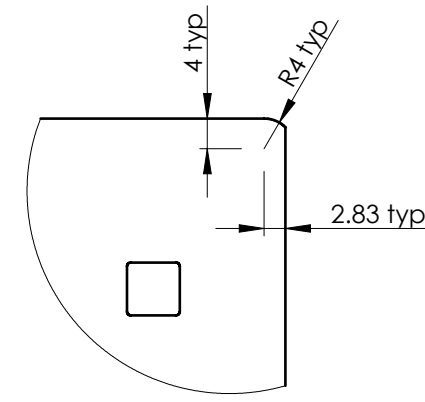
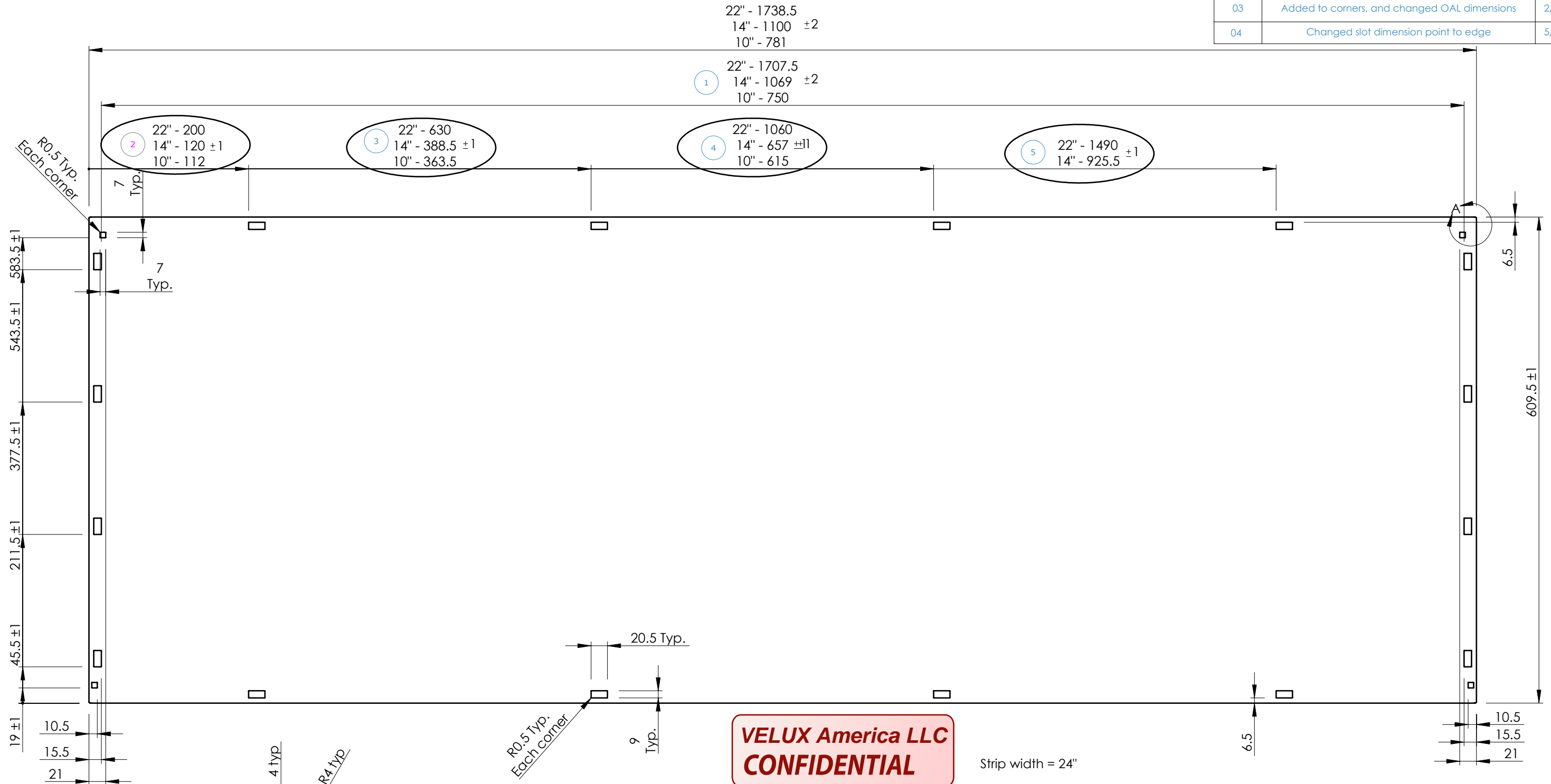


Strip width = 12.19"

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| Material | | | | Specifications - generally | | | |
|--|---------------------|---------------------------|-----------|---|--------|-----|-----------------|
| 0.020" (.51mm) Aluminum | | | | High Reflectance Material for tubular 309048.64 | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | TGR, TMR, TSR, TTK | | | |
| Approvals TMA-A | | | | 14" Elbow Punching | | | |
| Checked by/drawn by/date /REC/28.08.2013 | | | | Product instructions no. | | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±0.5 | Size B | Category 21 | 304649 | 014 | Operation 52 |
| | | | | Edition 02 | | | |

| Edition | Description of change | Date |
|---------|--|---------|
| 02 | Added rolled radius dimensions | 1/16/13 |
| 03 | Added to corners, and changed OAL dimensions | 2/4/13 |
| 04 | Changed slot dimension point to edge | 5/9/18 |



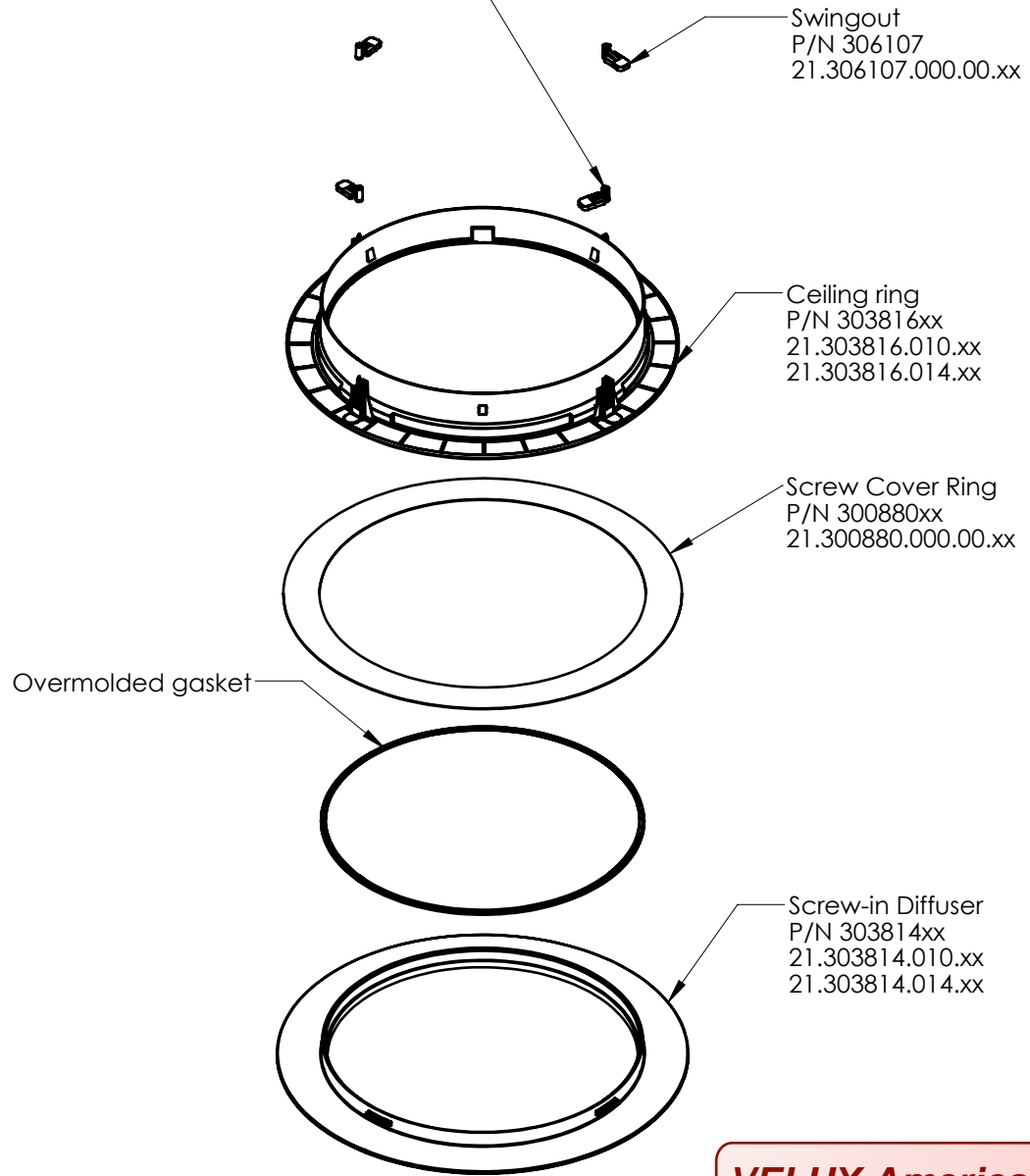
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Strip width = 24"

| Material | | Specifications - generally | | |
|--|---------------------|---------------------------------------|-----------|-----------------------|
| .016" (.41mm) Aluminum | | High Reflectance Material for tubular | 309048.64 | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | TMR, TGR, TLR, TSR | | |
| Approvals TMA-A | | Tube Punching | | |
| Checked by/drawn by/date /REC/09.05.2018 | | Product instructions no. | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±0.5 | Size B | Category 21 |
| | | 304646 | 000 | Operation 52 |
| | | | | Edition 04 |

| Edition | drawn by/checked by/date | Description of change |
|---------|--------------------------|------------------------|
| 02 | MM/CBB/6/24/19 | Added screw cover ring |
| | | |
| | | |

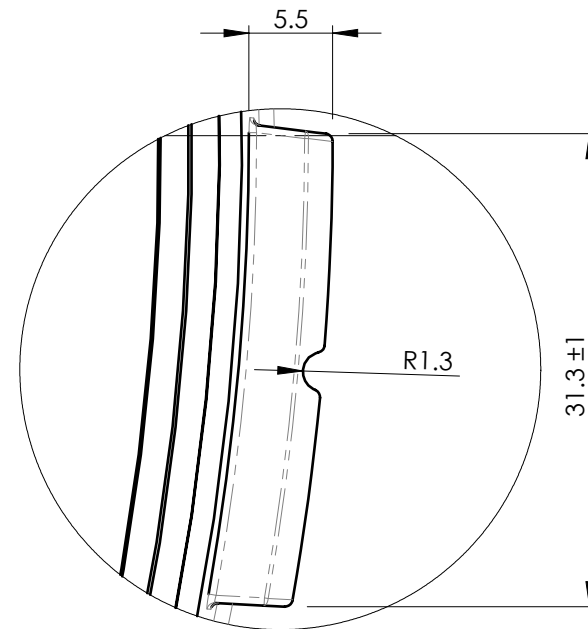
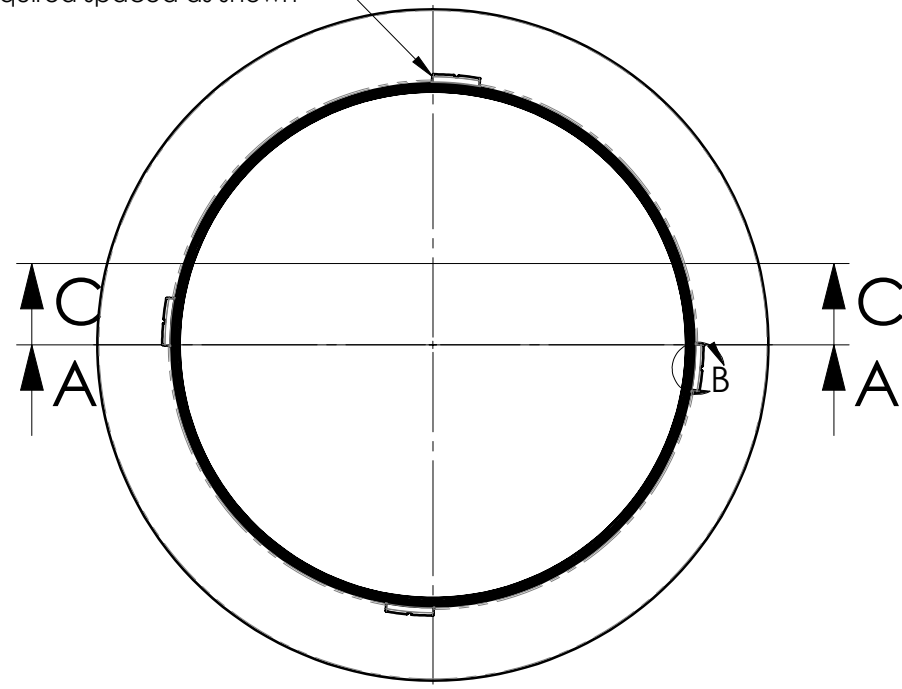
Placement of screw
P/N 306238
#8 Phillips drive screw, 2 1/4" length
pan head, mat'l - clear zinc.
Screw fastens swingout and flipper to ceiling ring



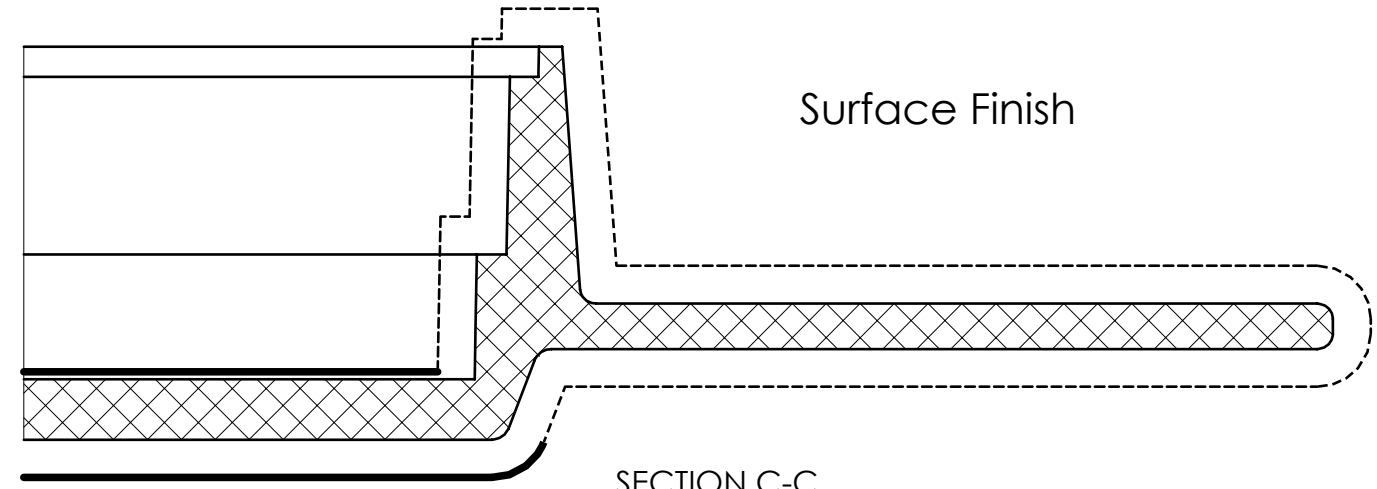
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| | | | | | | | | |
|--|---------------------|----------------------------|-----------|--|--------|-----|----|----|
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | <u>ST13-G</u> | | | | |
| Approvals | | | | Ceiling diffuser complete Part assembly drawing | | | | |
| Checked by/drawn by/date BBK/CBB/22.09.2017 | | | | Product instructions no. | | | | |
| Scale 1:8 | Unspec. meas. mm | General tolerance ± 0.5 | Size A | Category 21 | 304836 | 000 | 51 | 02 |

4 required spaced as shown



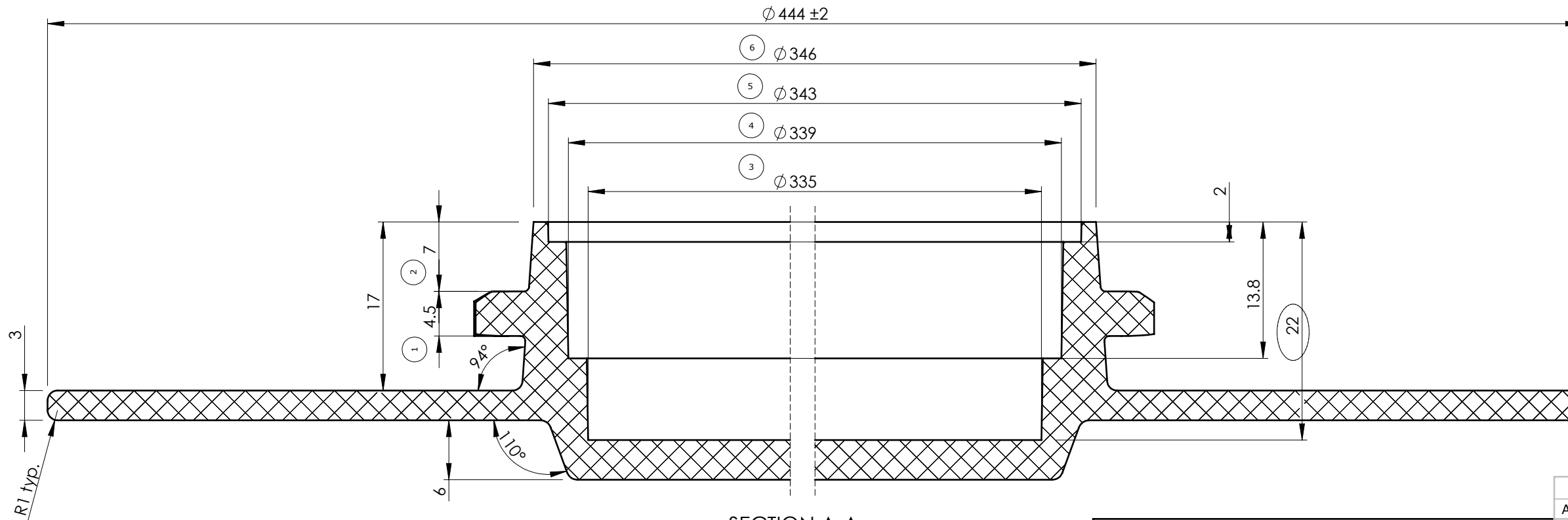
DETAIL B
SCALE 2 : 1



SECTION C-C
SCALE 2 : 1

----- = MT 11006
 ————— = SFI A-2

| Edition | Description of change | Date |
|---------|-----------------------------------|---------|
| 02 | Changed height and surface finish | 6/19/18 |
| | | |
| | | |



SECTION A-A
SCALE 2 : 1

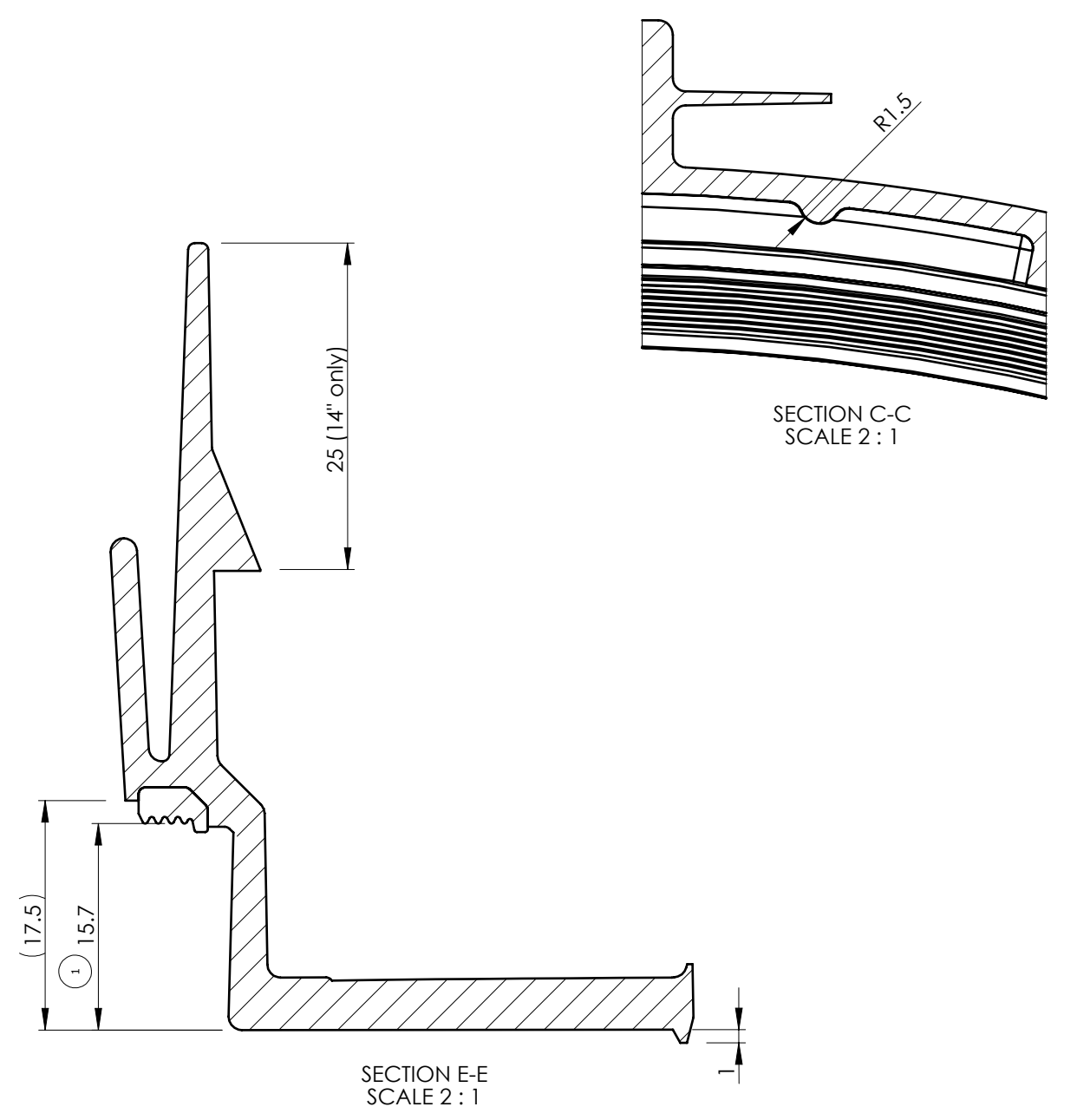
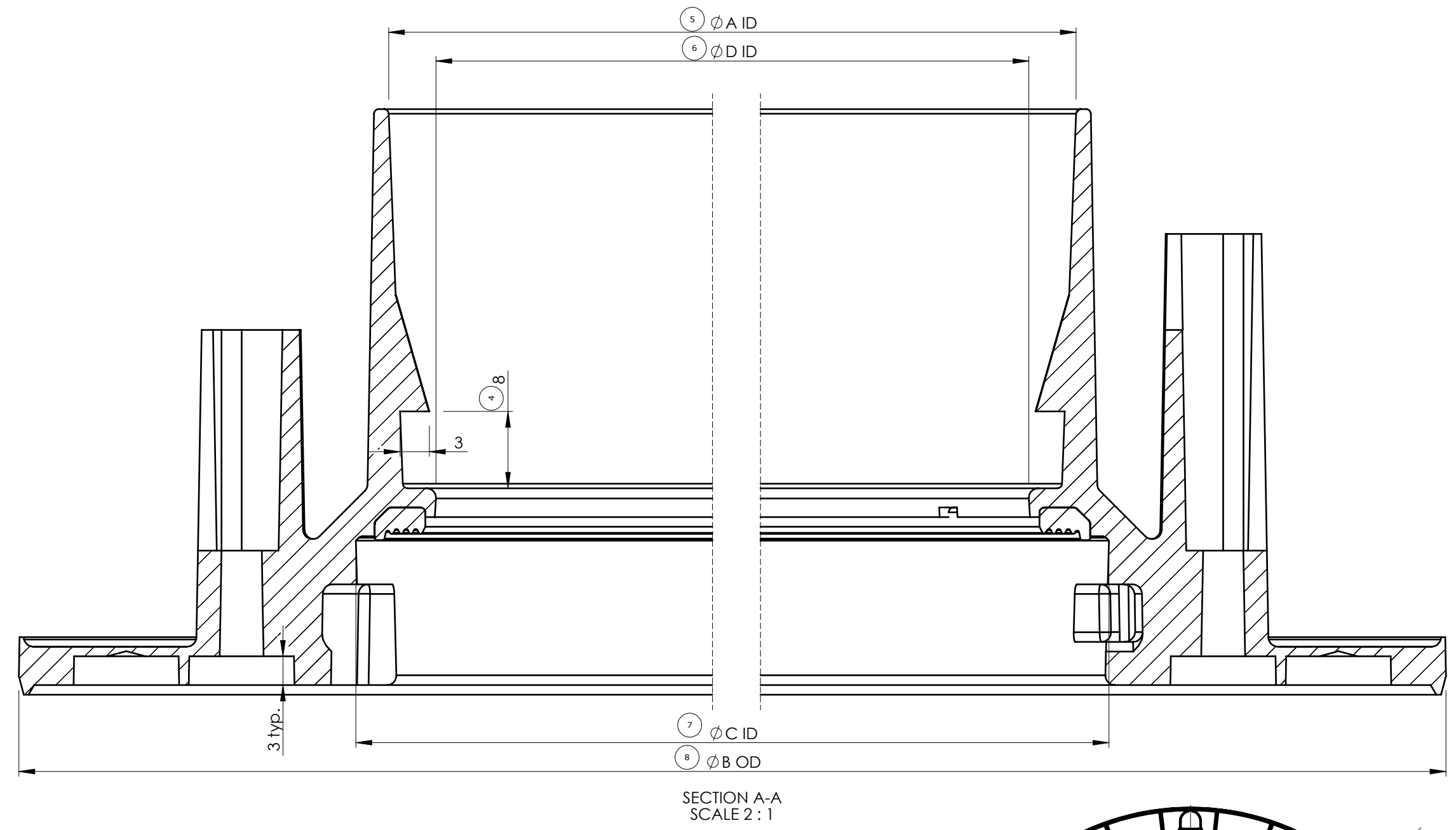
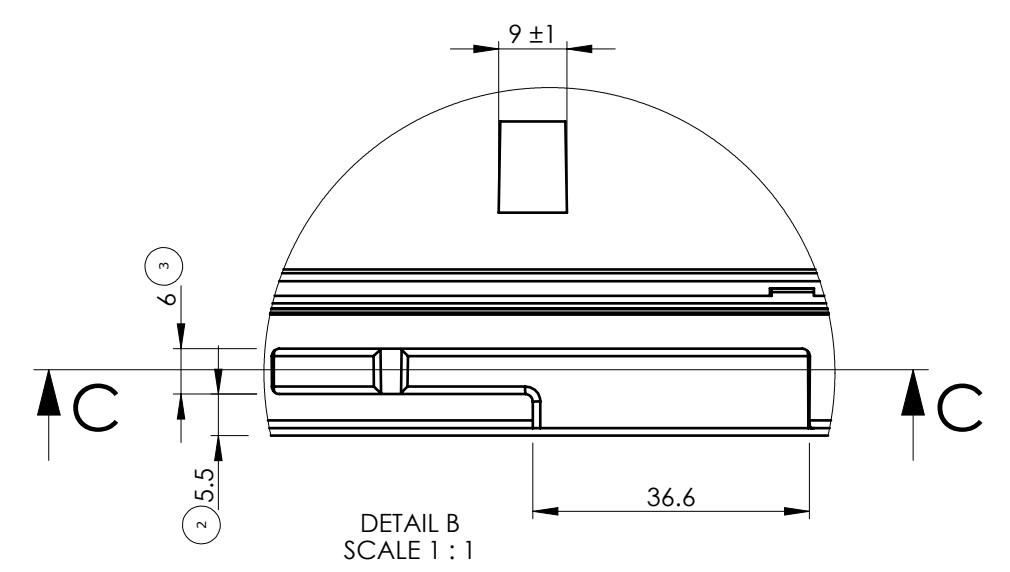
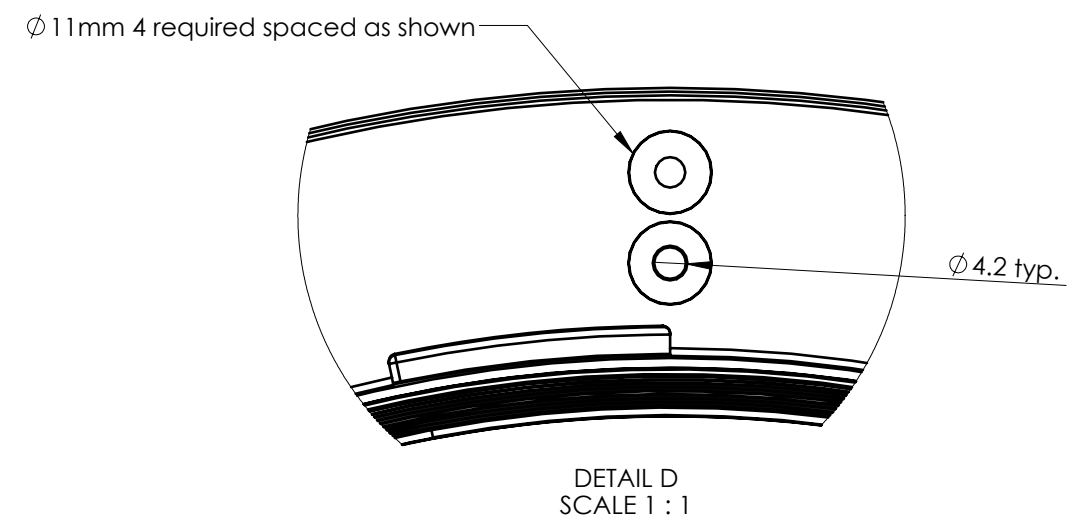
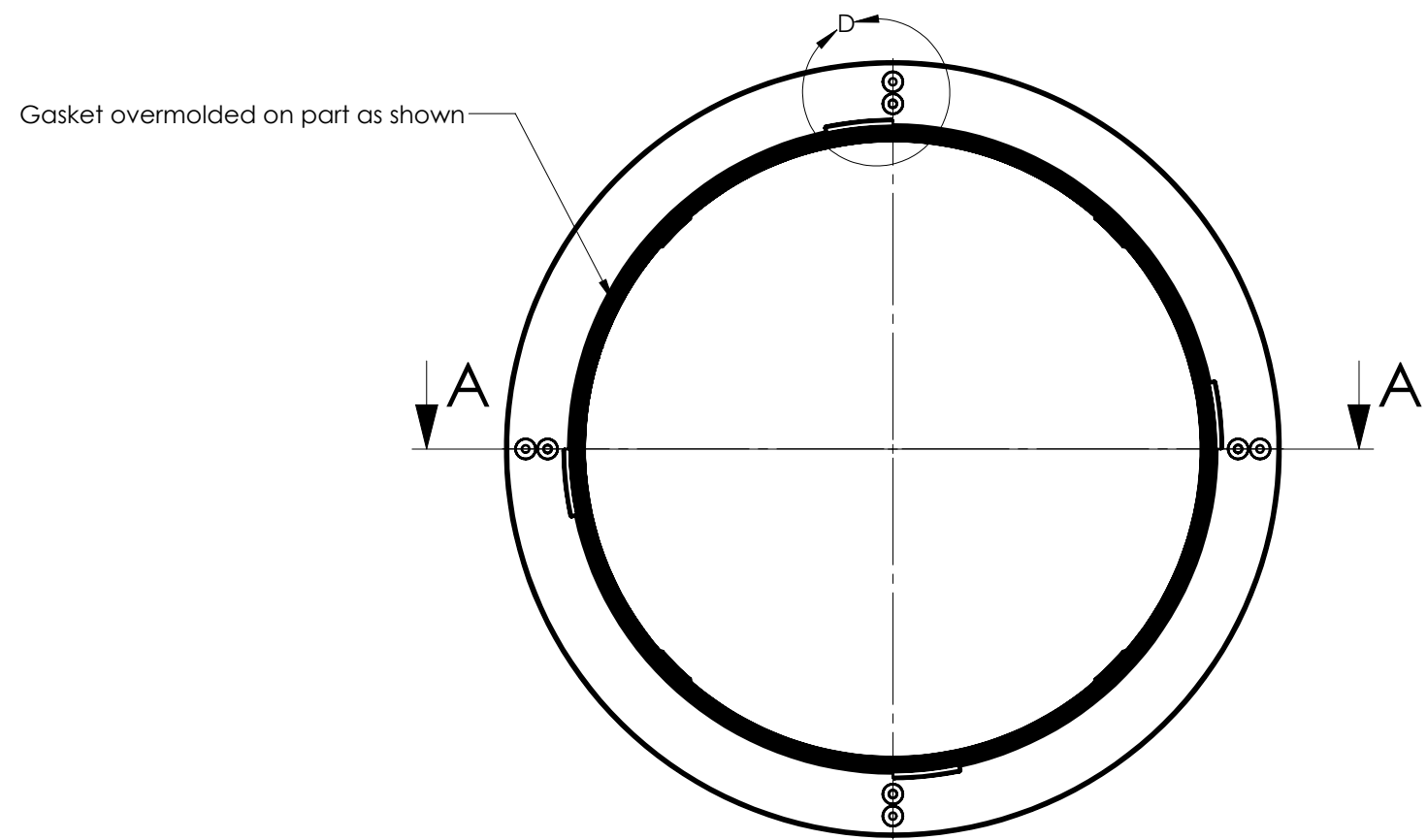
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- Notes:
1. Manufacture of tooling is by supplied digital file from VELUX greenwood inc. 30381414.01.sldprt
 2. Acceptance of part is dependant upon fit and function with ceiling ring.

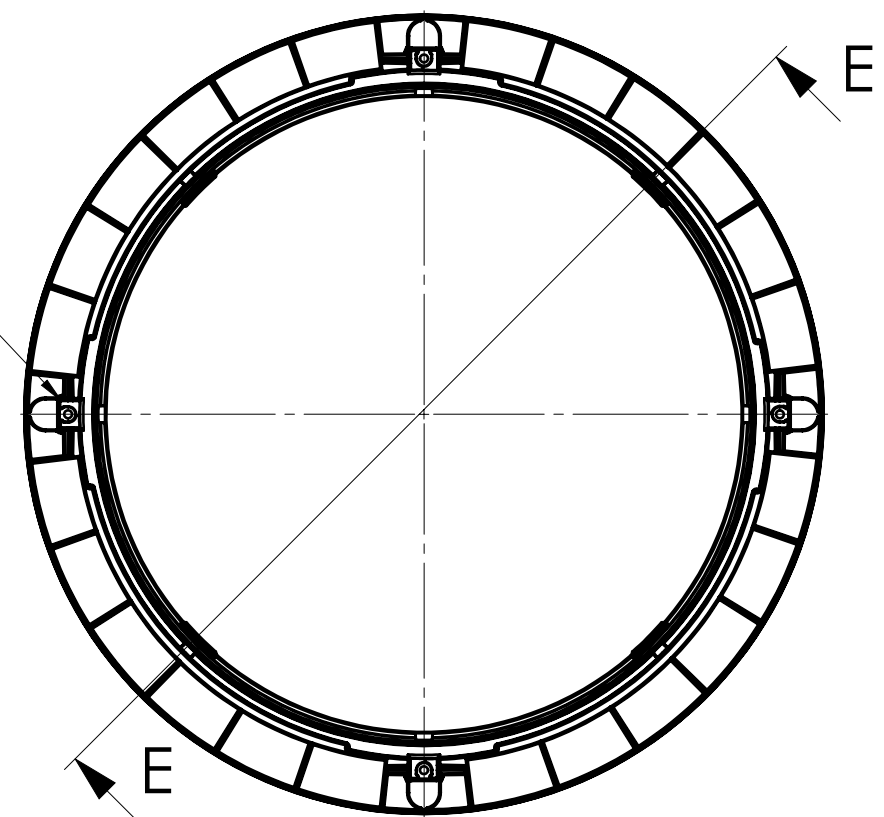
| Material | | | |
|--|---------------------|---------------------------|-----------|
| Acrylic | | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | |
| Approvals TMA-A | | | |
| Checked by/drawn by/date BBK/CBB/19.06.2018 | | | |
| Scale 1:5 | Unspec. meas. mm | General tolerance ±0.5 | Size B |

| Specifications - generally | | | | |
|--|-----------|--------|-----|----|
| Acrylic | 309038.64 | | | |
| Standards - generally | | | | |
| Symbol explanations | 880006.68 | | | |
| ST13-G | | | | |
| 14" Screw-in Diffuser Commodity drawing | | | | |
| Product instructions no. | | | | |
| Category | 21 | 303814 | 014 | 00 |
| Edition | 02 | | | |

| Edition | Description of change | Date |
|---------|-----------------------|------|
| | | |
| | | |
| | | |



| Size | Ø A ±0.5 | Ø B ±0.5 | Ø C ±0.3 | Ø D ±0.5 |
|------|----------|----------|----------|----------|
| 14" | 346 | 423 | 352.8 | 336 |

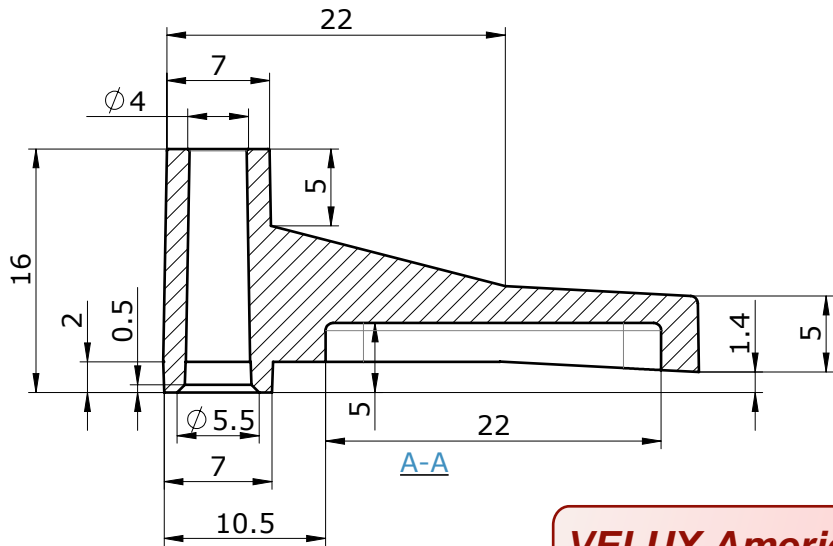
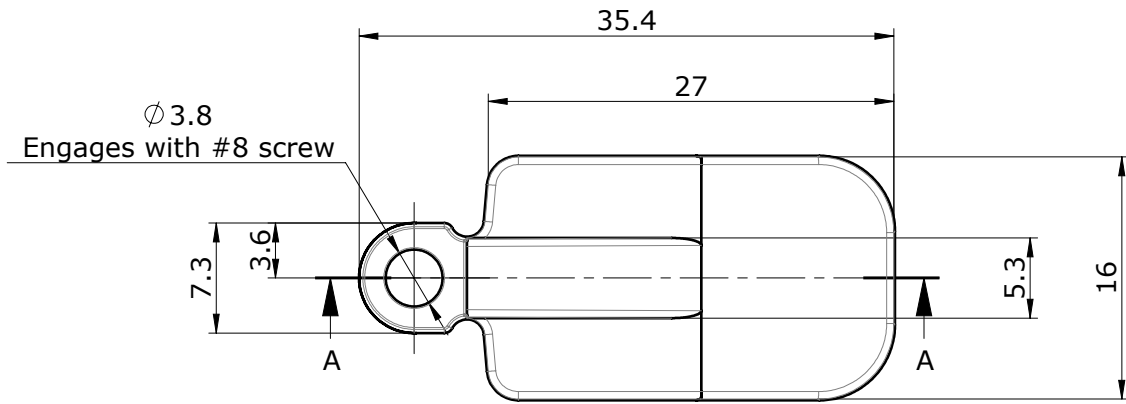


- NOTES:
1. Manufacture of tooling is by supplied digital file from VELUX greenwood inc. 30381614.01.SLDPRT.
 2. Surface finish to be SPI C-3
 3. Acceptance of part is dependent upon fit and function with the screw-in diffuser. (30381414)

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| | | | |
|--|---------------------|---------------------------|-----------|
| Material | | | |
| Ceiling Ring: White ABS | | | |
| VELUX | | SKY-PRS | |
| 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | |
| Approvals TMA-A | | | |
| Checked by/drawn by/date BBK/CBB/29.11.2017 | | | |
| Scale 1:4 | Unspec. meas. mm | General tolerance ±0.5 | Size C |

| | | | |
|---------------------------------------|-----------|-----|-------|
| Specifications - generally | | | |
| Ceiling Ring: White ABS | 309043.64 | | |
| Standards - generally | | | |
| Symbol explanations ST18 | 880006.68 | | |
| 14" Ceiling Ring Commodity drawing | | | |
| Product instructions no. | | | |
| Category 21 | 303816 | 014 | 00 01 |

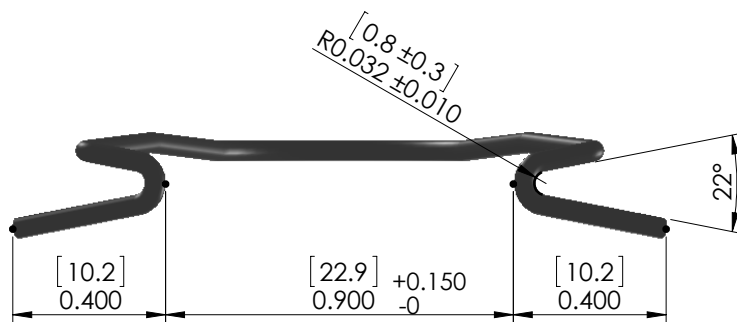
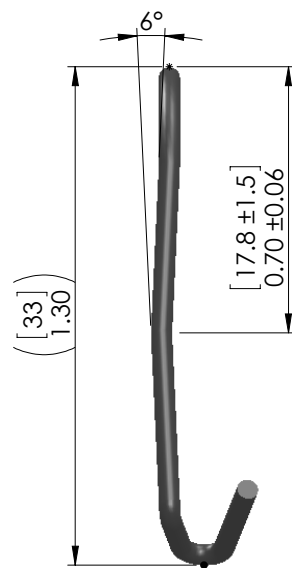
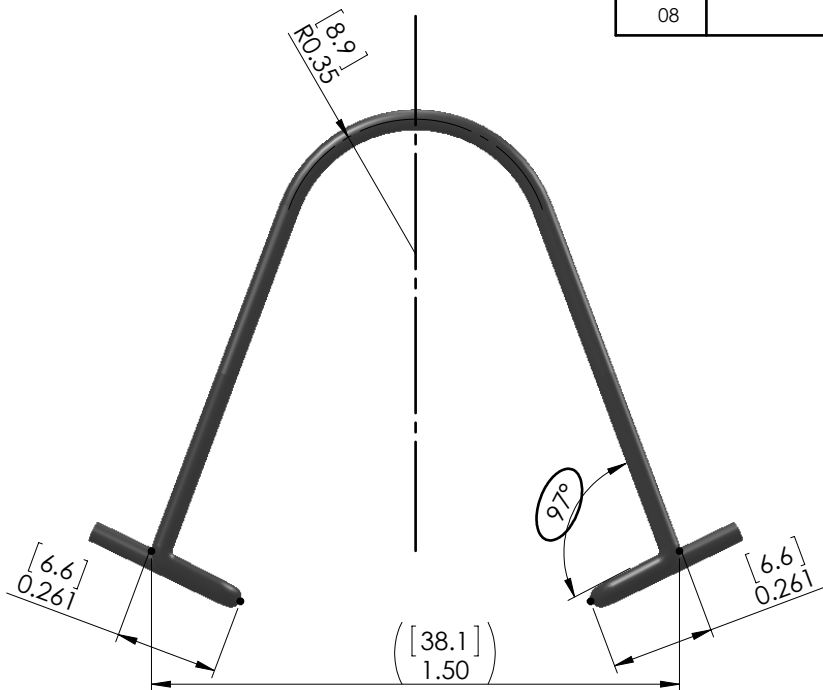


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Note:
Swingout must move freely inside ceiling ring

| | | | | | | | | |
|--|---------------------|--------------------------|-----------|---|--------|-----------|----|----|
| Material | | | | Specifications - generally | | | | |
| White - nylon 10% glass | | | | Nylon 10% glass fiber | | 309090.64 | | |
| VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | | TGR/TGF/TMR/TMF/TLR/TCR/TSR | | | | |
| Approvals | | | | Swingout Commodity drawing | | | | |
| Checked by/drawn by/date /REC/30.03.2011 | | | | Product instructions no. | | | | |
| Scale 2:1 | Unspec. meas. mm | General tolerance ±.5 | Size A | Category 21 | 306107 | 000 | 00 | 03 |

| Edition | Description of change | Date |
|---------|--|----------|
| 04 | Added SI to the approvals | 8/6/13 |
| 05 | Revised tol. for .900 dim. & changed .38 to .400 | 11/18/13 |
| 06 | Added material back to drawing | 2/27/14 |
| 07 | Added dual dimensions | 5/21/14 |
| 08 | 97° angle was 90° | 7/16/14 |



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General angle tolerance $\pm 3^\circ$



| | | | |
|--|---------------|-------------------|------|
| Material | | | |
| 302 spring tempered stainless steel (\varnothing 1.4mm) | | | |
| VELUX | | SKY-PRS | |
| 450 Old Brickyard Rd., Greenwood, South Carolina 29648 | | | |
| Approvals | | | |
| TMA-A/SI | | | |
| Checked by/drawn by/date | | | |
| /REC/16.07.2014 | | | |
| Scale | Unspec. meas. | General tolerance | Size |
| 2:1 | inches | $\pm .025"/.6mm$ | A |

| | | | |
|------------------------------|--------|-----------|---------|
| TMR, TGR, TLR, TTK, ZTE, ZTR | | | |
| Pull Clip | | | |
| Product instructions no. | | | |
| Category | | Operation | Edition |
| 21 | 302329 | 000 | 00 08 |