This sheet is used to confirm the dimensions of deburring areas and to confirm whether or not point group data (Name : XEBEC Path for Back Burr Cutter) can be generated.
If a path can be generated then the path order code and optimal cutter diameter will be notified to a customer.

1. Deburring Location

This sheet is for **edges on the outer diameter of the orthogonal crossholes**.
Make sure that the sheet type matches the locations that burrs will be removed.
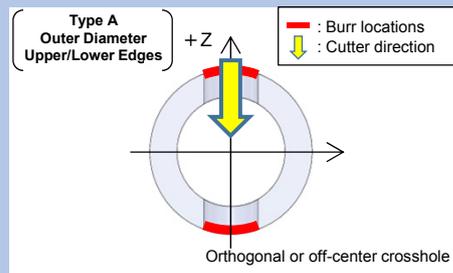
[Restrictions for generating a path]

Orthogonal Crosshole
Supports secondary hole diameter of Φ1mm or more
The primary processing hole diameter to secondary hole diameter can be up to 1:1

Off-center Crosshole
Supports secondary hole diameter of Φ1mm or more
Supports an amount of shift that does not cause the primary hole to be broken.

* This process is not applicable if either the primary or secondary hole is a female screw or the material surface.
* There is the possibility a path cannot be generated for certain hole combinations.
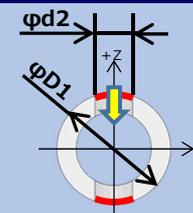
[Caution]
Make sure to enter accurate values. The XEBEC Path for Back Burr Cutter is generated based on these values and if any erroneous values are entered, an incorrect path will be generated which will cause the workpiece, cutter or machine to break.
XEBEC Technology is not responsible for any damage caused in cases such as this.

**Type A
Outer Diameter
Upper/Lower Edges**
+Z
— : Burr locations
↓ : Cutter direction

Orthogonal or off-center crosshole

▼Enter the dimensions in the boxes below.

*Fill in all spaces. For "0", enter "0".
*Enter up to the 3rd decimal. *Circle whether + or -.

2. Hole Diameters

φd2
φD1
+Z

— : Burr locations
↓ : Cutter direction

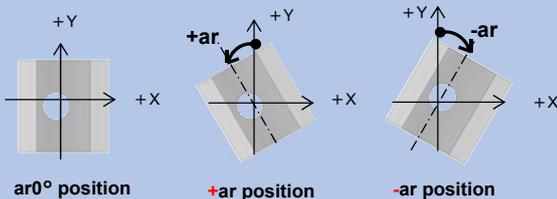➤ **Primary hole (φD1)**
[ ] . [ ] mm

➤ **Secondary hole (φd2)**
[ ] . [ ] mm

3. Primary Hole Position

Check the position of the primary hole to an XY plane in the machine.
Enter the angle of the primary hole in regards to the Y axis.
**Be careful of the +/- direction.**

+Y   +ar +Y   +Y -ar
+X   +X   +X

ar0° position   **+ar position**   **-ar position**

[Primary hole's relationship with the Y axis]
If parallel to the Y axis : ar=0°
Orientation in the CCW direction with the +Y axis as the starting point : ar=+ °
Orientation in the CW direction with the +Y as the starting point+ar=- °

➤ **Primary hole angle orientation ar**
+/− [ ] . [ ] °

4. Secondary Hole Position

Enter the position of the secondary hole in regards to the primary hole in the ar0° position.
Be careful of the +/- direction.

+Y   +Y
+X   +X
- e   **+e**

Secondary hole off-center to the left   **Secondary hole off-center to the right**
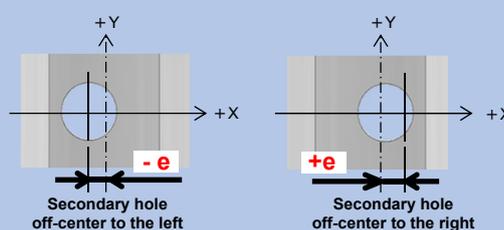
[Secondary hole's relationship with the primary hole]
If the secondary hole is on-center to the primary hole: e=0mm
If the secondary hole is off-center to the left of the primary hole: e=-□mm
If the secondary hole is off-center to the right of the primary hole: e=+□mm

➤ **Amount of shift e**
+/- [ ] . [ ] mm

Customer Information and Confirmation of Path Use Conditions

Please check the boxes. An order cannot be placed unless the following boxes are filled out.
☐ **I agree to not use any tools besides the XEBEC Back Burr Cutter when using the XEBEC Path.**
☐ **I agree that XEBEC Technology has granted the authority to use the XEBEC Path for Back Burr Cutter and that I will not hand over or distribute this data outside the company.**

Company Name _____ Dept. _____ Name _____

Country: _____ Phone: _____ E-mail _____ (FAX) _____

*Enter a fax number if you would like to receive a fax.

▼Only for XEBEC Technology.▼   Order Code Contact Sheet

XEBEC Technology will inform the order code for the XEBEC Path and tool diameter of the XEBEC Back Burr Cutter based on the workpiece dimensions filled in the Order Code Request Sheet.
Please order with the following order code after confirming the path use conditions and tool interference.

XEBEC Path Order Code No.	
△Z_Upper edge（mm）	
△Z_Lower edge（mm）	
XEBEC Back Burr Cutter Diameter	**Product Code**
φ	
Reason for disapproval (*Only if path generation is disapproved)	

Δ Z Upper   +Z
Δ Z Lower
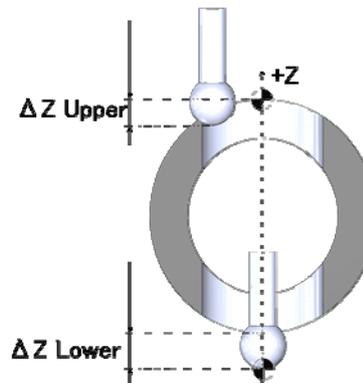
[Caution]
• The tool interference in vertical direction has not been confirmed. Check the cutter length and ΔZ (maximum amount of descent), and make sure to confirm there is no tool interference from the processing environment (jig, holder, workpiece, etc.) Then select the appropriate cutter from the catalog.
• Only the optimal tool diameter for the burr was selected according to the workpiece dimensions filled in on the Order Code Request Sheet.
• ΔZ(maximum amount of descent) is the furthest the tool will fall from the starting point until the deburring operation is complete.

No. of sheets: ___ / ___

*Enter the number of sheets if more than one sheet will be submitted.
 (e.g.) If three sheets will be submitted, mark the first as "1/3", the second "2/3" and the third "3/3".

This sheet is used to confirm the dimensions of deburring areas and to confirm whether or not point group data (Name : XEBEC Path for Back Burr Cutter) can be generated.
If a path can be generated then the path order code and optimal cutter diameter will be notified to a customer.

1. Deburring Location

This sheet is for **edges on the outer diameter of the orthogonal crossholes**.
Make sure that the sheet type matches the locations that burrs will be removed.

**Type A
Outer Diameter
Upper/Lower Edges**

+Z

— : Burr locations
↓ : Cutter direction

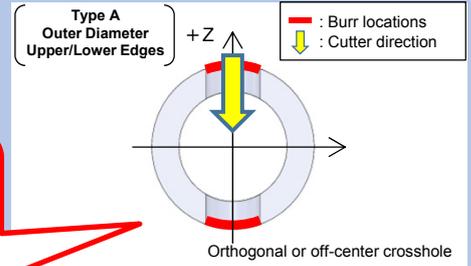Orthogonal or off-center crosshole

[Restrictions for generating a path]

Orthogonal Crosshole Supports secondary hole diameter of Φ1mm or more
The primary processing hole diameter to secondary hole diameter can be up to 1:1

Off-center Crosshole Supports secondary hole diameter of Φ...
Supports an amount of shift that does...

* This process is not applicable if either the prima...
* There is the possibility a path cannot be genera...

[Caution]
Make sure to enter accurate values. The XEBEC P...
erroneous values are entered, an incorrect path w...
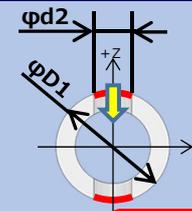XEBEC Technology is not responsible for any dam...

> Double check the deburring location and the sheet type.
> There are **3** kinds of sheet (A, B and C)

▼Enter the dimensions in the boxes below.

*Fill in all spaces. For "0", enter "0".
*Enter up to the 3rd decimal. *Circle whether + or -.

2. Hole Diameters

φd2
φD1
+Z

— : Burr
↓ : Cutte

> Enter up to the 3rd decimal

➤ **Primary h (φD1)**

20 . **000** mm

➤ **Secondary hole (φd2)**

10 . **900** mm

> Check the boxes

3. Primary Hole Position

Check the position of the primary hole to an XY plane in the machine.
Enter the angle of the primary hole in regards to the Y axis.
Be careful of the +/- direction.

+Y
+X

+ar
+Y
+X

-ar
+Y
+X

...ition
+ar position
-ar position

[Primary hole's relationship with the Y axis]
If parallel to the Y axis : ar=0°
Orientation in the CCW direction w... point : ar=+ °
Orientation in the CW direction wit... ar=- °

➤ **Primary hole angle orientation ar**

+/− **90** . **000** °

> Circle + or -

4. Secondary Hole Position

Enter the position of the secondary hole in regards to the primary hole in the ar0° position.
Be careful of the +/- direction.

+Y
+X
- e

+Y
+X
+e

**Secondary hole
off-center to the left**

Secondary hole

[Secondary hole's relationship with th...
If the sec...
If the sec... left o... y hole: e=-□mm
If the sec... right o... mary hole: e=+□mm

➤ **Amount of shift e**

+/− **0** . ___ mm

> Circle + or -

> Enter "0" for "0"

Customer ... ...tion of Path Use Conditions

Please ... check the boxes. An order cannot be placed unless the following boxes are filled out.

☑ **I agree to not use any tools besides the XEBEC Back Burr Cutter when using the XEBEC Path.**
☑ **I agree that XEBEC Technology has granted the authority to use the XEBEC Path for Back Burr Cutter and that I will not hand over or distribute this data outside the company.**

Company Name **Company Name**   Dept. **Dept**   Name **Name**

Country **Country Name**   Phone: **TEL**   E-mail **E-mail**   (FAX)

*Enter a fax number if you would like to receive a fax.

▼Only for XEBEC Technology.▼   Order Code Contact Sheet

XEBEC Technology will inform the order code for the XEBEC Path and tool diameter of the XEBEC Back Burr Cutter based on the workpiece dimensions filled in the Order Code Request Sheet.
Please order with the following order code after confirming the path use conditions and tool interference.

XEBEC Path Order Code No.	**PGC005-01-58**
△Z_Upper edge（mm）	
△Z_Lower edge（mm）	
XEBEC Back Burr Cutter Diameter	**Product Code**
φ **5.8**	**XC-58-A**
Reason for disapproval (*Only if path generation is disapproved)	
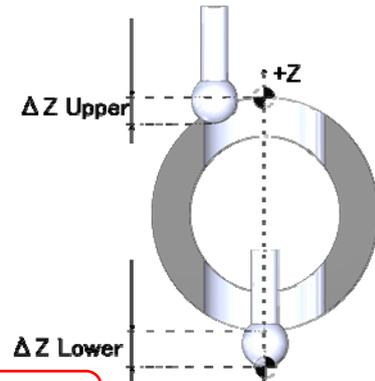
+Z
Δ Z Upper
Δ Z Lower

[Caution]
• The tool interference in vertical direction... ...sure to confirm there is no tool interference from the
processing environment (jig, holder, workp...
• Only the optimal tool diameter for the bur...
• ΔZ(maximum amount of descent) is the furthest the to... ...ting point until the deburring operation is complete.

> If submitting multiple sheets, enter the sheet number.
> e.g. 1/3, 2/3, 3/3.

No. of sheets: 1 / 3
*Enter the number of sheets if more than one sheet will be submitted.
(e.g.) If three sheets will be submitted, mark the first as "1/3", the second "2/3" and the third "3/3".

Description Example: Type A

Example 1

3.0 +Y φ8.5

φ15 +X

2. Hole Diameters

φd2
φD1

+Z
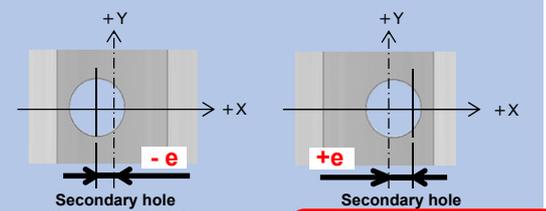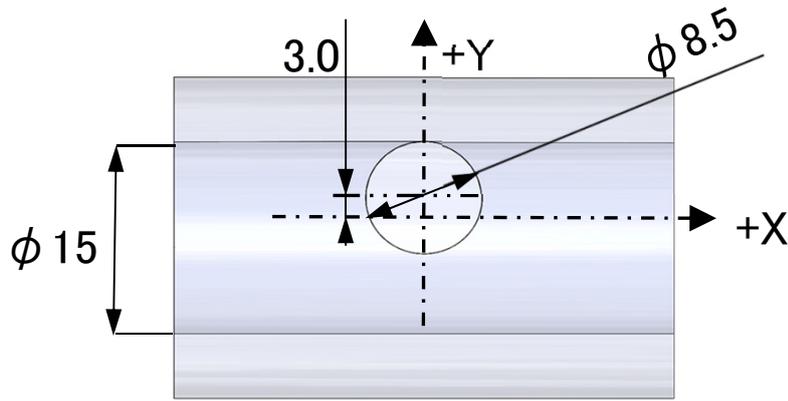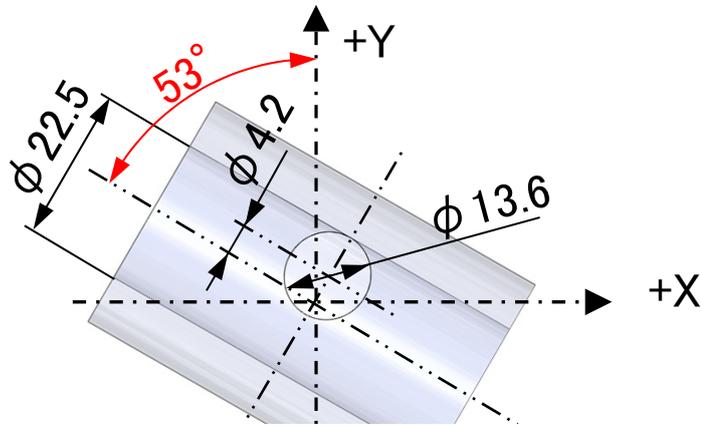
🟥 : Burr locations
⬇ : Cutter direction

➤ Primary hole (φD1)

15 . **000** mm

➤ Secondary hole (φd2)

8 . **500** mm

3. Primary Hole Position

Check the position of the primary hole to an XY plane in the machine.
Enter the angle of the primary hole in regards to the Y axis.
Be careful of the +/- direction.

+Y   +Y   +Y -ar
        +ar
+X   +X   +X

ar0° position   **+ar position**   **-ar position**

[Primary hole's relationship with the Y axis]
If parallel to the Y axis : ar=0°
Orientation in the CCW direction with the +Y axis as the starting point : ar=+ °
Orientation in the CW direction with the +Y as the starting point+ar=- °

➤ Primary hole angle
  orientation ar   +/⊖ **90** . **000** °

4. Secondary Hole Position

Enter the position of the secondary hole in regards to the primary hole in
the ar0° position.
Be careful of the +/- direction.

+Y   +Y
+X   +X
- e   +e

Secondary hole   **Secondary hole**
off-center to the left   **off-center to the right**

[Secondary hole's relationship with the primary hole]
If the secondary hole is on-center to the primary hole: e=0mm
If the secondary hole is off-center to the left of the primary hole: e=-□mm
If the secondary hole is off-center to the right of the primary hole: e=+□mm

➤Amount of shift e   +/⊖ **3** . **000** mm

Example 2

Φ22.5 53° Φ4.2 +Y φ13.6 +X

2. Hole Diameters

φd2
φD1

+Z

🟥 : Burr locations
⬇ : Cutter direction

➤ Primary hole (φD1)

22 . **500** mm

➤ Secondary hole (φd2)

13 . **600** mm

3. Primary Hole Position

Check the position of the primary hole to an XY plane in the machine.
Enter the angle of the primary hole in regards to the Y axis.
Be careful of the +/- direction.

+Y   +Y   +Y -ar
        +ar
+X   +X   +X

ar0° position   **+ar position**   **-ar position**

[Primary hole's relationship with the Y axis]
If parallel to the Y axis : ar=0°
Orientation in the CCW direction with the +Y axis as the starting point : ar=+ °
Orientation in the CW direction with the +Y as the starting point+ar=- °

➤ Primary hole angle
  orientation ar   ⊕/– **53** . **000** °

4. Secondary Hole Position

Enter the position of the secondary hole in regards to the primary hole in
the ar0° position.
Be careful of the +/- direction.

+Y   +Y
+X   +X
- e   +e

Secondary hole   **Secondary hole**
off-center to the left   **off-center to the right**

[Secondary hole's relationship with the primary hole]
If the secondary hole is on-center to the primary hole: e=0mm
If the secondary hole is off-center to the left of the primary hole: e=-□mm
If the secondary hole is off-center to the right of the primary hole: e=+□mm

➤Amount of shift e   ⊕- **4** . **200** mm