### Features
- Hard anodized aluminum barrel provides corrosion and wear resistance as well as long life.
- Compact size and space saving.
- Strict quality control ensures the product in stability and excellent performance.
- Simple maintenance and installation.
- Different bore sizes and strokes for selection.
- Various sensor switches are available.

### How to order

#### JC series

<table>
<thead>
<tr>
<th>Type</th>
<th>Bore size</th>
<th>Rod thread</th>
<th>Magnet</th>
<th>Sensor type</th>
<th>Number of sensor</th>
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<tbody>
<tr>
<td>JC</td>
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<td>Square type</td>
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*Please use stainless setting bolts for magnet type cylinder to mount.*

### Specifications

<table>
<thead>
<tr>
<th>Bore size</th>
<th>φ12</th>
<th>φ16</th>
<th>φ20</th>
<th>φ25</th>
<th>φ32</th>
<th>φ40</th>
<th>φ50</th>
<th>φ63</th>
<th>φ80</th>
<th>φ100</th>
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<tr>
<td>Port size</td>
<td>M5x0.8</td>
<td>1/8&quot;</td>
<td>3/8&quot;</td>
<td>1/4&quot;</td>
<td></td>
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<tr>
<td>Fluid</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Acting</td>
<td>Double acting or single acting</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating pressure range</td>
<td>1.0 ~ 9 kgf/cm²</td>
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<td>Option</td>
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<td>Piston speed</td>
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<tr>
<td>Double acting mm/Sec.</td>
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<tr>
<td>Single acting mm/Sec.</td>
<td>100~500</td>
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</tbody>
</table>

### Material of parts

#### Without magnet

- **No.**
- **Description**
- **Material**
- **Qty.**
- **No.**
- **Description**
- **Material**
- **Qty.**

#### With magnet

- **No.**
- **Description**
- **Material**
- **Qty.**
- **No.**
- **Description**
- **Material**
- **Qty.**
**Stoke table**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bore size</th>
<th>Standard stroke (mm)</th>
<th>Standard stroke (with magnet)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Double acting</td>
<td>φ 12</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 16</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 20</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 25</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 32</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 40</td>
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<td></td>
<td>φ 50</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 63</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>φ 80</td>
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</tr>
<tr>
<td></td>
<td>φ 100</td>
<td>●</td>
<td>●</td>
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Note: 1. The body length for the strokes marked ● is increased of 5mm as standard.

2. For Non-standard stroke, please contact our sales.

**Theoretical force**

<table>
<thead>
<tr>
<th>Bore size</th>
<th>Rod diameter</th>
<th>Acting</th>
<th>Piston area mm²</th>
<th>Operating pressure kgf/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double acting</td>
<td>φ 12 6</td>
<td>Single acting</td>
<td>85 - 0.43</td>
<td>1.28</td>
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<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>113 - 2.26</td>
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<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>113 - 3.62</td>
<td>5.43</td>
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<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>201 - 1.01</td>
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<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>173 - 0.87</td>
<td>2.6</td>
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<td></td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>201 - 4.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>173 - 3.46</td>
<td>5.19</td>
</tr>
<tr>
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<td>Double Push acting</td>
<td>Pull</td>
<td>264 - 1.57</td>
</tr>
<tr>
<td></td>
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<td>Single acting</td>
<td>314 - 1.32</td>
<td>3.96</td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>264 - 6.28</td>
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<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>490 - 2.45</td>
<td>7.35</td>
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<td>Pull</td>
<td>412 - 2.06</td>
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<tr>
<td></td>
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<td>Single acting</td>
<td>490 - 9.8</td>
<td>14.7</td>
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<td>804 - 4.02</td>
<td>12.06</td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>690 - 3.45</td>
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<td>Single acting</td>
<td>804 - 16.08</td>
<td>24.12</td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>690 - 13.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>1256 - 6.28</td>
<td>18.84</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Pull</td>
<td>1055 - 5.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single acting</td>
<td>1256 - 12.56</td>
<td>25.12</td>
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<td>Pull</td>
<td>1055 - 10.55</td>
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<tr>
<td></td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>1963 - 19.63</td>
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<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>1649 - 16.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>3117 - 31.17</td>
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<td></td>
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<td>Double Push acting</td>
<td>Pull</td>
<td>2803 - 28.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>5026 - 50.26</td>
</tr>
<tr>
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<td>Double Push acting</td>
<td>Pull</td>
<td>4536 - 45.36</td>
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<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>7853 - 78.53</td>
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<tr>
<td></td>
<td></td>
<td>Double Push acting</td>
<td>Pull</td>
<td>7049 - 70.49</td>
</tr>
</tbody>
</table>

Formula of cylinder acting force calculation

\[
F = P \times A - f
\]

- \(F\) : Cylinder acting force (N)
- \(P\) : Operating pressure (Mpa)
- \(A\) : Piston area (mm²)
- \(f\) : Friction (N)
# Dimensions

**JC Standard double acting (φ 12 ~ φ 25)**

### φ 12

![Diagram of JC Standard double acting (φ 12)](image)

- **Bore size**
  - A: 12
  - B1: 22
  - C: 5
  - φ: 12

- **W/O magnet**
  - A: 12
  - B1: 22
  - C: 5
  - φ: 12

- **W/I magnet**
  - A: 12
  - B1: 22
  - C: 5
  - φ: 12

- **Threads**
  - φ: M3xP0.5xL6
  - C: M3xP0.5xL6

- **Dimensions**
  - K1: φ 11
  - K1: 3
  - L: 6
  - M: 5
  - N1: 8

### φ 16

![Diagram of JC Standard double acting (φ 16)](image)

- **Bore size**
  - A: 16
  - B1: 24
  - C: 5
  - φ: 16

- **W/O magnet**
  - A: 16
  - B1: 24
  - C: 5
  - φ: 16

- **W/I magnet**
  - A: 16
  - B1: 24
  - C: 5
  - φ: 16

- **Threads**
  - φ: M4xP0.7xL8
  - C: M4xP0.7xL8

- **Dimensions**
  - K1: φ 15
  - K1: 3
  - L: 5
  - M: 5

### φ 20 ~ φ 25

![Diagram of JC Standard double acting (φ 20 ~ φ 25)](image)

- **Bore size**
  - A: 20
  - B1: 25
  - C: 5
  - φ: 25

- **W/O magnet**
  - A: 20
  - B1: 25
  - C: 5
  - φ: 25

- **W/I magnet**
  - A: 20
  - B1: 25
  - C: 5
  - φ: 25

- **Threads**
  - φ: M5xP0.8xL10
  - C: M5xP0.8xL10

- **Dimensions**
  - K1: φ 17
  - K1: 3

---

*Note: Please add extra 5mm into column A and C for the strokes marked ○ on page 5-52 stroke table. For more details, please refer to page 5-52.*

## Piston rod with male thread

![Diagram of Piston rod with male thread](image)

- **Bore size**
  - 32
  - 40
  - 50
  - 63
  - 80
  - 100

- **Threads**
  - φ: M5xP0.8
  - φ: M5xP0.8
  - φ: M5xP0.8
  - φ: M5xP0.8
  - φ: M5xP0.8
  - φ: M5xP0.8

- **Dimensions**
  - φ: 10
  - φ: 10
  - φ: 10
  - φ: 10

### Bore size

<table>
<thead>
<tr>
<th>Bore size</th>
<th>A</th>
<th>B1</th>
<th>C</th>
<th>φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>31.5</td>
<td>7</td>
<td>24.5</td>
<td>48.5</td>
</tr>
<tr>
<td>40</td>
<td>37.9</td>
<td>7</td>
<td>26</td>
<td>56.5</td>
</tr>
<tr>
<td>50</td>
<td>37</td>
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<td>28</td>
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<td>37</td>
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</tr>
<tr>
<td>80</td>
<td>57</td>
<td>11</td>
<td>46</td>
<td>104</td>
</tr>
<tr>
<td>100</td>
<td>68</td>
<td>12</td>
<td>56</td>
<td>12</td>
</tr>
</tbody>
</table>

### Bore size

<table>
<thead>
<tr>
<th>Bore size</th>
<th>A</th>
<th>B1</th>
<th>C</th>
<th>φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>22</td>
<td>3</td>
<td>9</td>
<td>G 1/8</td>
</tr>
<tr>
<td>40</td>
<td>33</td>
<td>7</td>
<td>14</td>
<td>G 1/16</td>
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<td>50</td>
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<td>18</td>
<td>G 1/4</td>
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<td>9</td>
<td>22</td>
<td>G 3/16</td>
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<td>57</td>
<td>11</td>
<td>46</td>
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<td>68</td>
<td>12</td>
<td>56</td>
<td>G 12/16</td>
</tr>
</tbody>
</table>

---

*Note: Please add extra 5mm into column A and C for the strokes marked ○ on page 5-52 stroke table. For more details, please refer to page 5-52.*
## Dimensions

### JCO Single acting/Spring extended (ϕ 12 ~ ϕ 25)

**ϕ 12**

- Bore size A: 5
- Bore size B1: 5
- C: 5
- A: 5
- B1: 3
- C: 3
- D: 1
- F: 1
- G: 1
- K1: 6
- L: 6
- M: 6
- N1: 6
- O: 6

### JCO Single acting/Spring extended (ϕ 20 ~ ϕ 25)

**ϕ 20 ~ ϕ 25**

- Bore size A: 6
- Bore size B1: 6
- C: 6
- A: 6
- B1: 4
- C: 4
- D: 3
- F: 3
- G: 3
- K1: 4
- L: 4
- M: 4
- N1: 4
- O: 4

### JCO Single acting/Spring extended (ϕ 32 ~ ϕ 50)

**ϕ 32 ~ ϕ 50**

- Bore size A: 7
- Bore size B1: 7
- C: 7
- A: 7
- B1: 5
- C: 5
- D: 4
- F: 4
- G: 4
- K1: 5
- L: 5
- M: 5
- N1: 5
- O: 5

### Piston rod with male thread

- Bore size A: 8
- Bore size B1: 8
- C: 8
- A: 8
- B1: 6
- C: 6
- D: 5
- F: 5
- G: 5
- K1: 6
- L: 6
- M: 6
- N1: 6
- O: 6

---

**Note:** Please add extra 5mm into column A and C for the strokes marked  on page 5-52 stroke table.

**Shako Co., Ltd. www.shako.com.tw**
**Dimensions**

**JCI Single acting/Spring return (φ 12 ~ φ 25)**

- **φ 12**
  - [Diagram of JCI Single acting/Spring return (φ 12)]

- **φ 16**
  - [Diagram of JCI Single acting/Spring return (φ 16)]

- **φ 20 ~ φ 25**
  - [Diagram of JCI Single acting/Spring return (φ 20 ~ φ 25)]

**2-P1**

**Note:** Please add extra 5mm into column A and C for the strokes marked ◎ on page 5-52 stroke table.

For more details, please refer to page 5-52.

### Stroke Table

<table>
<thead>
<tr>
<th>Bore size</th>
<th>W/O magnet</th>
<th>W/I magnet</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>K1</th>
<th>L</th>
<th>M</th>
<th>N1</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 12</td>
<td>32</td>
<td>5</td>
<td>27</td>
<td>42</td>
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<td>37</td>
<td>4</td>
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<td>φ11</td>
<td>3</td>
</tr>
<tr>
<td>φ 16</td>
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<td>5.5</td>
<td>28.5</td>
<td>44</td>
<td>5.5</td>
<td>38.5</td>
<td>4</td>
<td>1.5</td>
<td>φ11</td>
<td>3</td>
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<tr>
<td>φ 20</td>
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<td>5.5</td>
<td>29.5</td>
<td>45</td>
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<td>39.5</td>
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<td>1.5</td>
<td>φ15</td>
<td>3</td>
</tr>
<tr>
<td>φ 25</td>
<td>37</td>
<td>6</td>
<td>31</td>
<td>47</td>
<td>6</td>
<td>41</td>
<td>4</td>
<td>2</td>
<td>φ17</td>
<td>3</td>
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</table>

**Bore size**

<table>
<thead>
<tr>
<th>φ 12</th>
<th>φ 16</th>
<th>φ 20</th>
<th>φ 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>16</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

**Piston rod with male thread**

- [Diagram of Piston rod with male thread]

**Bore size**

<table>
<thead>
<tr>
<th>φ 32</th>
<th>φ 40</th>
<th>φ 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

**Note:** Please add extra 5mm into column A and C for the strokes marked ◎ on page 5-52 stroke table.

For more details, please refer to page 5-52.
**Dimensions**

**JCD Double rod/Double acting (Φ20 ~ Φ25)**

---

**Piston rod with male thread**

---

**Dimensions**

**JCD Double rod/Double acting (Φ32 ~ Φ100)**

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**PNEUMATIC CYLINDER**
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### JIG CYLINDER

#### JCA/JCB series

**JCA, JCB Stroke adjustable type (ϕ 20~25)**

(Adjustable stroke: JCA 0~25mm, JCB 0~50mm)

**Piston rod with male thread**

- **Bore size**: A1, B1, C
- **Bore size**: φ 20, 25
- **Bore size**: φ 20, 25

**Dimensions**

<table>
<thead>
<tr>
<th>Bore size</th>
<th>A1</th>
<th>B1</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>J1</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N1</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 20</td>
<td>74.5</td>
<td>20.5</td>
<td>19</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>M6xP1.0</td>
<td>8</td>
<td>6</td>
<td>5.5</td>
<td>7.5</td>
<td>M5xP0.8</td>
</tr>
<tr>
<td>φ 25</td>
<td>87.5</td>
<td>25</td>
<td>22</td>
<td>18</td>
<td>17</td>
<td>6</td>
<td>M6xP1.25</td>
<td>8</td>
<td>6</td>
<td>5.5</td>
<td>7.5</td>
<td>M5xP0.8</td>
</tr>
</tbody>
</table>

**A + Stroke x 2 + Adjustable stroke**

**N1 + Adjustable stroke**

**JCA, JCB Stroke adjustable type (ϕ 32~100)**

(Adjustable stroke: JCA 0~25mm, JCB 0~50mm)

**Dimensions**

<table>
<thead>
<tr>
<th>Bore size</th>
<th>A1</th>
<th>B1</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>J1</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N1</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 32</td>
<td>69.5</td>
<td>24.5</td>
<td>79.5</td>
<td>7</td>
<td>34.5</td>
<td>48.5</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>M6xP1.0xL25</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>φ 40</td>
<td>71</td>
<td>26</td>
<td>81</td>
<td>7</td>
<td>36</td>
<td>56.5</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>M8xP1.25xL25</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>φ 50</td>
<td>82</td>
<td>28</td>
<td>92</td>
<td>9</td>
<td>38</td>
<td>70</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>M10xP1.5xL25</td>
<td>38</td>
<td>3</td>
</tr>
<tr>
<td>φ 63</td>
<td>86</td>
<td>32</td>
<td>96</td>
<td>9</td>
<td>42</td>
<td>83</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>M10xP1.5xL25</td>
<td>40</td>
<td>3</td>
</tr>
<tr>
<td>φ 80</td>
<td>109</td>
<td>46</td>
<td>119</td>
<td>11</td>
<td>56</td>
<td>104</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>M14xP1.5xL25</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>φ 100</td>
<td>121</td>
<td>56</td>
<td>131</td>
<td>12</td>
<td>66</td>
<td>124</td>
<td>7</td>
<td>5</td>
<td>10</td>
<td>M18xP2.0xL25</td>
<td>55</td>
<td>4</td>
</tr>
</tbody>
</table>

**Note**: Please add extra 5mm into column A and C for the strokes marked ◊ on page 5-52 stroke table.

For more details, please refer to page 5-52.