Square Shape Compact Cylinder

Size 20

Now, more compact and lightweight due to the adoption of a square shape piston!

- **Weight**: 59% reduction from 170 g to 70 g
- **Overall length**: 25% reduction from 132 mm to 99.5 mm
- **Width Height**: 23% reduction from 24 mm to 18.4 mm

*Compared with the existing CM2 series model, ø20, 50 mm stroke, Boss-cut, Female rod end*

**Cylinder cross-section shape**

- **Square Shape Compact Cylinder**
- **Existing model CM2 series**

**Cover dimensions** 2.8 mm shorter (Total of both sides: 5.6 mm)

- **Overall length**: 32.5 mm shorter

**Square Shape Compact Cylinder Size 20, 50 mm stroke**

- Reduced cover dimensions (1 size smaller than the existing model) but with increased output

**Small auto switches can be mounted on 4 surfaces.**

Applicable auto switch: D-M9□

**CU-X3160**
**Specifications**

<table>
<thead>
<tr>
<th>Size</th>
<th>20 (Equiv. ø20 piston area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Double acting, Single rod</td>
</tr>
<tr>
<td>Fluid</td>
<td>Air</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>1.0 MPa</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>0.7 MPa</td>
</tr>
<tr>
<td>Min. operating pressure</td>
<td>0.05 MPa</td>
</tr>
<tr>
<td>Ambient and fluid temperatures</td>
<td>Without auto switch: 5 to 70°C (No freezing)</td>
</tr>
<tr>
<td></td>
<td>With auto switch: 5 to 60°C</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required (Non-lube)</td>
</tr>
<tr>
<td>Piston speed</td>
<td>50 to 500 mm/s</td>
</tr>
<tr>
<td>Stroke length tolerance</td>
<td>≈ ±1</td>
</tr>
<tr>
<td>Cushion</td>
<td>Rubber bumper</td>
</tr>
<tr>
<td>Allowable kinetic energy</td>
<td>0.11 J</td>
</tr>
<tr>
<td>Port size</td>
<td>M5</td>
</tr>
<tr>
<td>Mounting</td>
<td>Basic (Female threads on both covers)</td>
</tr>
</tbody>
</table>

*1 Stroke length tolerance does not include the amount of bumper change.

Depending on the system configuration selected, the specified speed may not be satisfied.

**Standard Strokes**

<table>
<thead>
<tr>
<th>Size</th>
<th>Standard stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>25, 50, 75, 100, 125, 150</td>
</tr>
</tbody>
</table>

**Theoretical Output**

<table>
<thead>
<tr>
<th>Size</th>
<th>IN</th>
<th>OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>285</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>114</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>142</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>171</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>199</td>
<td>179</td>
</tr>
</tbody>
</table>

* Theoretical output [N] = Pressure [MPa] x Piston area [mm²]

**Dimensions**

**Auto switch bracket dimensions**

<table>
<thead>
<tr>
<th>Size</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>KA</th>
<th>NN</th>
<th>MM</th>
<th>P</th>
<th>S</th>
<th>ZZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>18.4</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>1.5</td>
<td>5</td>
<td>4.5</td>
<td>5</td>
<td>M3 x 0.5 depth</td>
<td>M3 x 0.5 depth</td>
<td>M5 x 0.8</td>
<td>43.5</td>
<td>49.5</td>
</tr>
</tbody>
</table>

**Safety Instructions**

Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and the “CM2 Series Specific Product Precautions” before use.

**SMC Corporation**

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