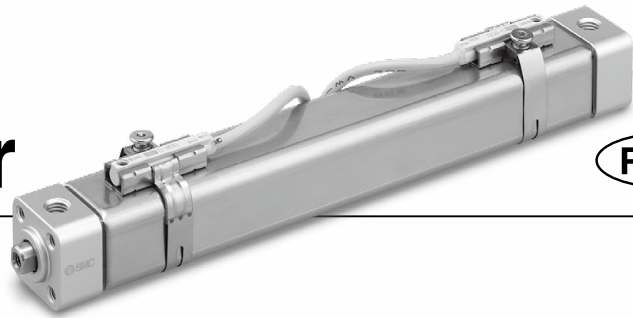# Square Shape Compact Cylinder
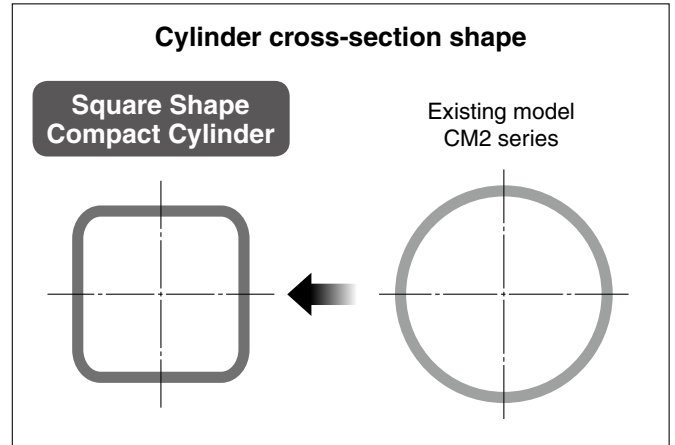
(RoHS)

## Size 20

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

| | |
|---|---|
| **Weight** | **59%** reduction<br>170 g ➡ **70 g** |
| **Overall length** | **25%** reduction<br>132 mm ➡ **99.5 mm** |
| **Width Height** | **23%** reduction<br>24 mm ➡ **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

□**24 mm**
□**18.4 mm**

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

**99.5 mm**

**Overall length 32.5 mm shorter**

Square Shape Compact Cylinder
Size 20, 50 mm stroke

Existing CM2 series model
ø20, 50 mm stroke,
Boss-cut, Female rod end
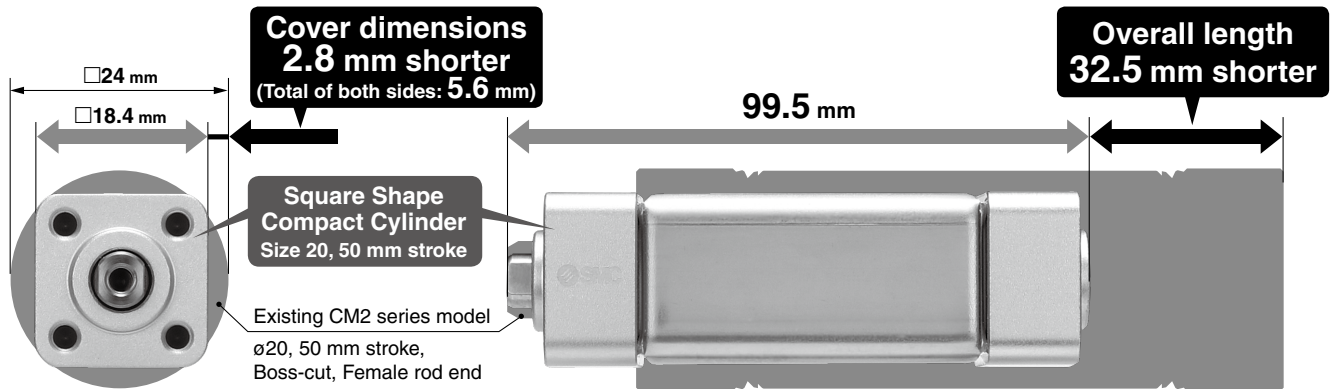
## ■ Reduced cover dimensions (1 size smaller than the existing model) but with increased output

CU-X3160
Reduced cover dimensions
Increased output
CM2B20
CJ2B16

Size [mm]
Cover dimensions [mm]
□15   □20   □25
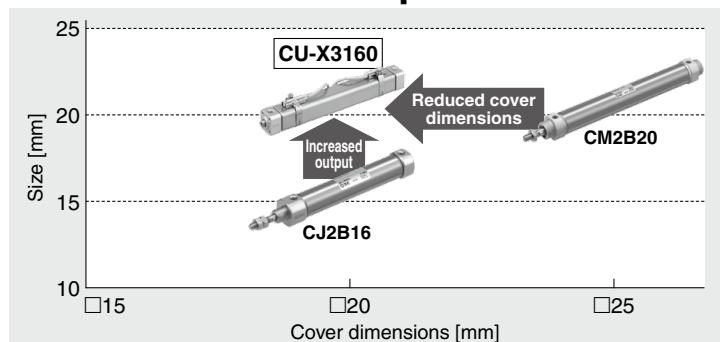
## ■ Small auto switches can be mounted on 4 surfaces.

Applicable auto switch: D-M9□

# *CU-X3160*

**SMC**
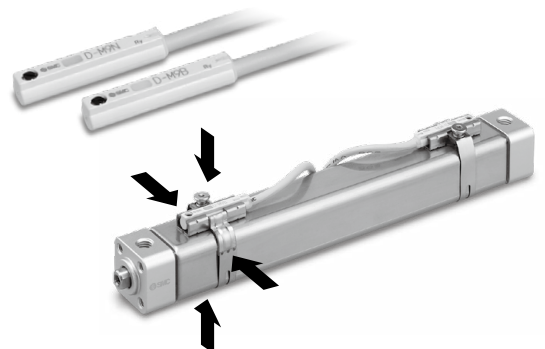
# CU-X3160

## Specifications

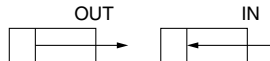| Size | 20 (Equiv. ø20 piston area) |
|---|---|
| Action | Double acting, Single rod |
| Fluid | Air |
| Proof pressure | 1.0 MPa |
| Max. operating pressure | 0.7 MPa |
| Min. operating pressure | 0.05 MPa |
| Ambient and fluid temperatures | Without auto switch: 5 to 70°C (No freezing) <br> With auto switch : 5 to 60°C |
| Lubrication | Not required (Non-lube) |
| Piston speed | 50 to 500 mm/s |
| Stroke length tolerance | $^{+2.0}_{0}$ *1 |
| Cushion | Rubber bumper |
| Allowable kinetic energy | 0.11 J |
| Port size | M5 |
| Mounting | Basic (Female threads on both covers) |

*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

[mm]

| Size | Standard stroke |
|---|---|
| 20 | 25, 50, 75, 100, 125, 150 |

## Theoretical Output

OUT → IN

[N]

| Size | Rod operating direction | Piston area [mm²] | Operating air pressure [MPa] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 |
| 20 | IN | 257 | 51 | 77 | 103 | 128 | 154 | 179 |
| | OUT | 285 | 57 | 85 | 114 | 142 | 171 | 199 |

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

## Dimensions
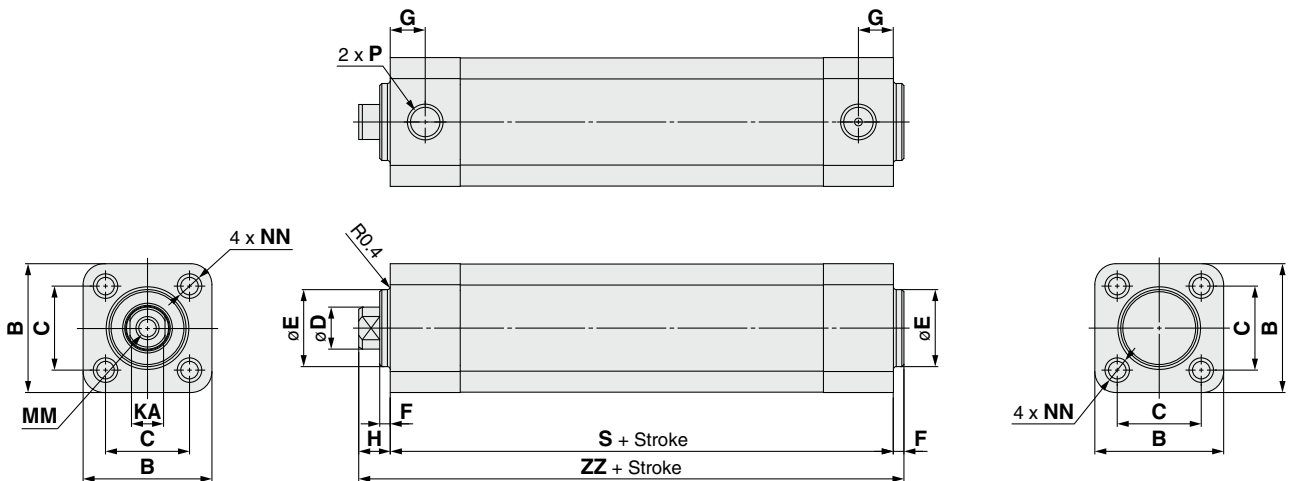


### Auto switch bracket dimensions



[mm]
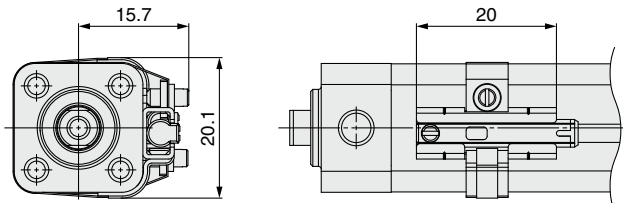
| Size | B | C | D | E | F | G | H | KA | NN | MM | P | S | ZZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 18.4 | 12 | 6 | 11 | 1.5 | 5 | 4.5 | 5 | M3 x 0.5 depth 5 | M3 x 0.5 depth 6 | M5 x 0.8 | 43.5 | 49.5 |

⚠ **Safety Instructions** | Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and the "CM2 Series Specific Product Precautions" before use.

Specifications are subject to change without prior notice
and any obligation on the part of the manufacturer.

D-G