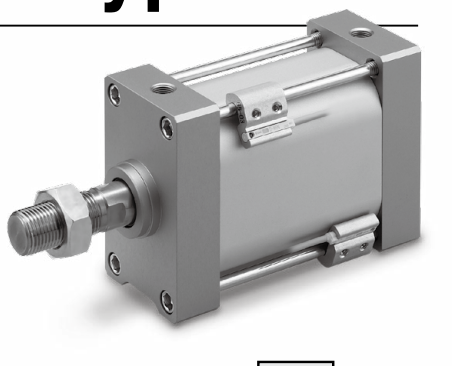
# Air Cylinder/Double Force Type

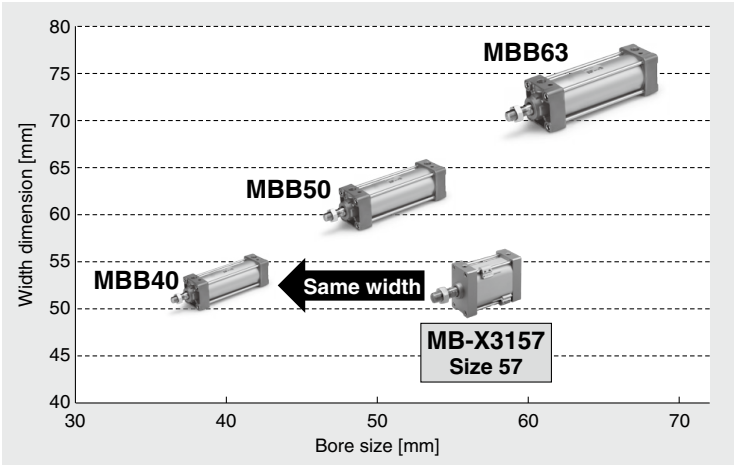
RoHS

## Size: 57



### This product is capable of providing double the force of the MB series, without changing the width, due to the adoption of a rectangular piston.

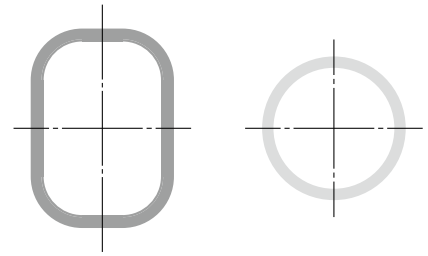
* Comparison with tandem cylinders satisfying the following conditions: a cylinder of the same width with double the theoretical output.
* The width of the MB standard model and the MB tandem cylinder are the same.




Size | ø40 | ø50 | **57** | ø63

Rectangular piston
Equiv. ø40 x 2 piston area

**Cylinder cross-section shape**



Double force type

Existing model
MB series

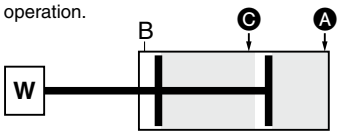
**Overall length** 47%*1 reduction
335 mm ➡ 179 mm

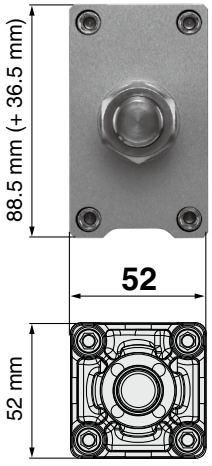
**Weight** 20%*1 reduction
1500 g ➡ 1200 g

*1 Compared with the existing tandem type cylinder -XC12 (double force), ø40, 50 mm stroke

**Tandem cylinder (-XC12)/ Double force**

When air pressure is supplied to the A and C ports at the same time, double the force can be obtained for the extending operation.




**Double force type**
Size 57 (ø40 x 2),
50 mm stroke

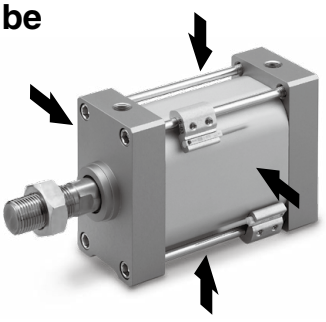
**Same width**
Existing model
Tandem cylinder
-XC12
(Double force)
ø40, 50 mm stroke




**Shortened overall length**
**156 mm**

### ■ Small auto switches can be mounted on 4 surfaces. (Tie-rod mounting)

Applicable auto switch: D-M9□



### ■ Air cushion adjustment is not required due to the non-adjustable air cushion.

The built-in rubber bumper reduces the metal noise that occurs when the piston stops.

### ■ Cover shape that prevents foreign matter accumulation

# *MB-X3157*

SMC

# MB-X3157

## Specifications

| Size | **57** (Equiv. ø40 x 2 piston area) |
|---|---|
| **Action** | Double acting, Single rod |
| **Proof pressure** | 1.0 MPa |
| **Max. operating pressure** | 0.7 MPa*1 |
| **Min. operating pressure** | 0.05 MPa |
| **Ambient and fluid temperatures** | 5 to 60°C |
| **Lubrication** | Not required (Non-lube) |
| **Piston speed** | 50 to 500 mm/s*1 |
| **Stroke length tolerance** | $^{+2.0}_{0}$ mm |
| **Cushion** | Non-adjustable air cushion + rubber bumper |
| **Port size** | Rc1/8 |
| **Stroke** | 50 to 250 mm (25 mm increments) |
| **Mounting** | None (Basic type only) |
| **Allowable kinetic energy** | 2.0 J |

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

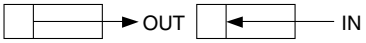
*1 Maximum operating pressure and piston speed are different from the existing product (MB series).

## Standard Strokes

[mm]

| Size | Standard stroke |
|---|---|
| **57** | 50, 75, 100, 125, 150, 175, 200, 225, 250 |

## Theoretical Output

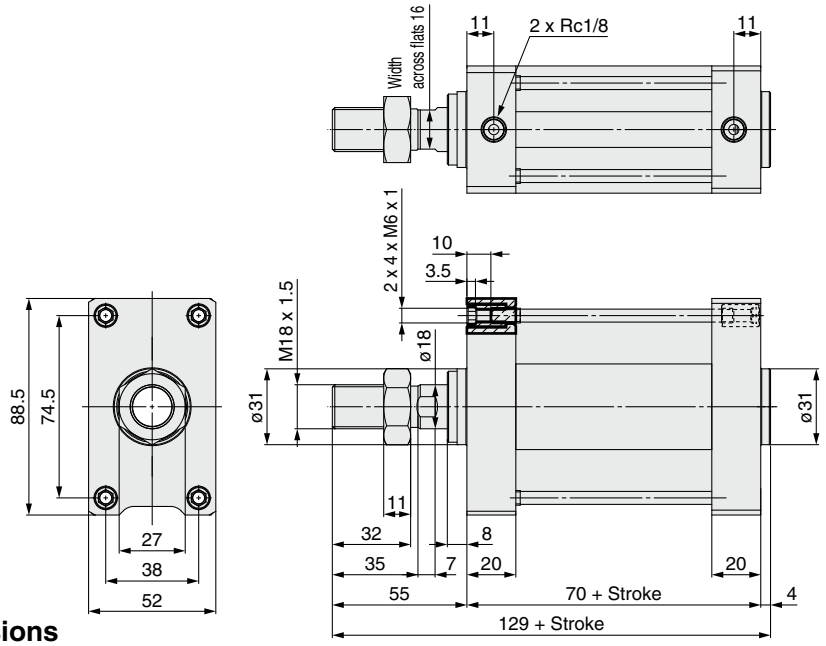



[N]

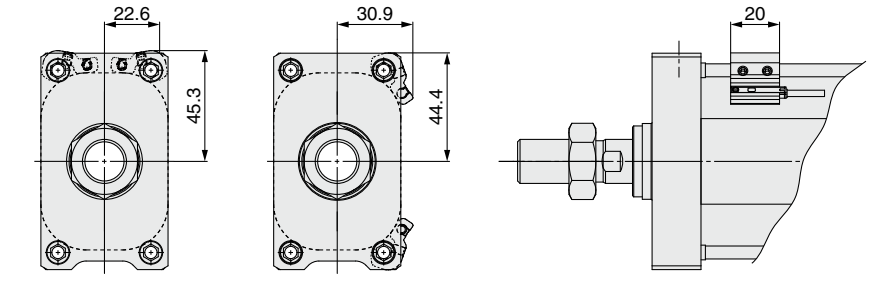
| Size | Rod operating direction | Piston area [mm²] | Operating air pressure [MPa] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 |
| **57** | IN | 2262 | 452 | 678 | 905 | 1131 | 1357 | 1583 |
| | OUT | 2516 | 503 | 755 | 1006 | 1258 | 1510 | 1761 |

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

## Dimensions




### Auto switch bracket dimensions




Auto switch mounting position: Port surface

Auto switch mounting position: Side surface

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