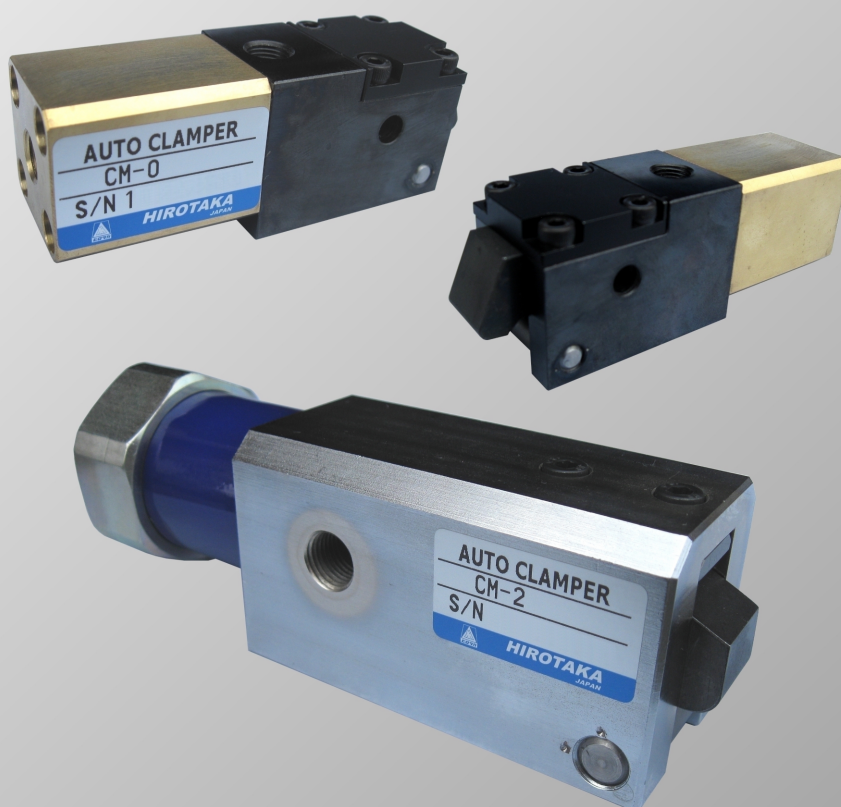




Useable both pneumatic and hydraulic

# AUTO CLAMPER

Compact clamping tool.



**HIROTA MFG. CO.,LTD.**

# AUTO CLAMPER

Compact, lightweight and easy-to-use pneumatic and hydraulic clamp.  
Use this clumper for automation and labor saving of JIG.

## Overview

The auto clumper CM series is a device that saves the trouble of designing complicated JIG and reduces the burden on workers.

The clamp arm moves forward and then descends to clamp the workpiece so that it can be clamped even in narrow working spaces.

Either pneumatic or hydraulic fluid can be used depending on the work application.

## How to order

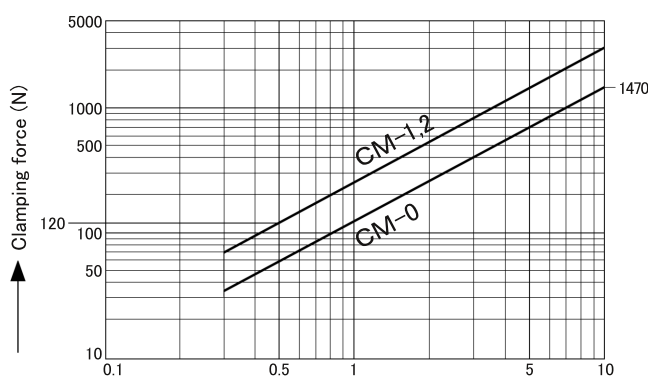
# CM W - 1 - 2

Series	Symbol	With auto switch (Built-in magnet)	Symbol	Body type	Symbol	Number of Auto switches
Auto Clumper	Nil	Without magnet	0	CM - 0	1	1 pc.
	W	Magnet sensing	1	CM - 1	2	2 pcs.
			2	CM - 2		

## Specification

Model number	CM - 0	CM - 1	CM - 2
Cylinder diameter	φ 20	φ 30	φ 30
Cylinder stroke	15 mm	20 mm	30 mm
Fluid	Air or Oil		
Operating pressure	Port 1 : 0.4 to 1.0 MPa Port 2 : 0.4 to 10.0 MPa		
Amount of oil	4.8 cm <sup>3</sup>	15 cm <sup>3</sup>	22 cm <sup>3</sup>
Clamping force	At 0.5 MPa At 10 MPa	60 N 1470 N	120 N 3000 N
Mass	0.6 kg	1.7 kg	1.8 kg

## Operating pressure and clamping force



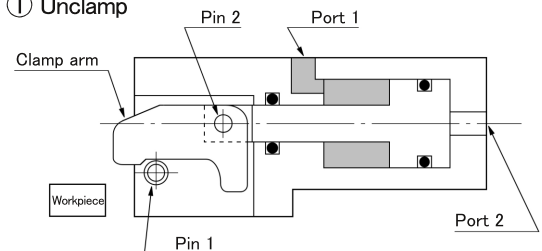
CMW-1 and 2 have the same clamping force as CM-1 and 2.

## Feature

- 1 It is a compact type that can be easily incorporated into JIG.
- 2 Clamp arm that can move forward and backward to easily mount and remove workpieces.
- 3 Zero trouble due to simple structure.
- 4 Actuation by air can be used as a clamping device for light loads.
- 5 By using our product Rush Booster, the tightening force can be greatly increased from pneumatic to hydraulic.
- 6 There is also type with switch.

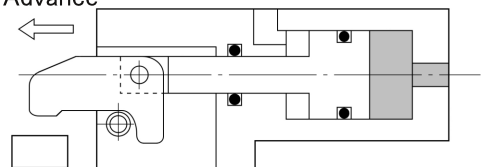
## Action description

### ① Unclamp



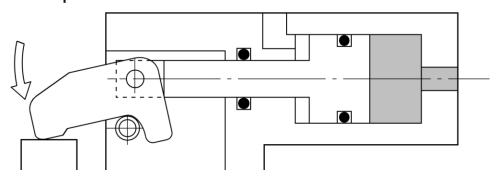
The clamp arm returns when fluid is supplied to the port 1.

### ② Advance



When fluid is supplied to port 2, the clamp arm moves forward until it hits pin 1 and reaches the top of the workpiece.

### ③ Clamp



Furthermore, when fluid flows into port 2, the clamp arm rotates around pin 2, and the tip descends to clamp the workpiece. When fluid is supplied to port 1, it advances from ② to ① and returns to the initial position.

[illegible][illegible]

Unit: mm

Symbol Model No.	A	B	C	S
CM - 1	85	45	16	11
CM - 2	95	55	6	21

Technical drawing of the 300 Series Solenoid Valve, showing three views: front, side, and top. The drawing includes dimensions and labels for various components.

**Front View Dimensions:**

- Overall diameter:  $\phi 50$
- Overall height: 51
- Height from base to top of valve body: 30
- Width of valve body: 18
- Width of mounting bracket: 28
- Overall width: 44

**Side View Dimensions:**

- Length of solenoid coil: 32
- Height of mounting bracket: 40
- Height from base to top of valve body: 12
- Height of mounting bracket from base: 3
- Width of mounting bracket: 3
- Length of mounting bracket: 27
- Length of valve body: 25
- Length of mounting bracket: 30
- Overall length: A

**Top View Dimensions:**

- Overall length: 46
- Width of mounting bracket: 29
- Width of valve body: 4
- Overall width: B

**Labels and Features:**

- Port (1) 2-Rc1/4
- Auto switch
- Air release valve
- Port (2) Rc1/4
- 4-M8  $\times$  1.25 Depth 15

**Other Dimensions:**

- 6
- (7.23)

Unit: mm

Model No. \ Symbol	A	B	C	S
CMW-1-1	85	78	16	11
CMW-2-2	95	88	6	21

Model number	SWC-1R
Color	Red
Load current range	3 to 50 mA
Internal voltage drop	2.5 V or less
Load voltage	5 to 100 VAC/VDC
Contact type	Read, LED illuminates when turned ON
Lead wire	Two-core cable, 1 m
Impact resistance	30 G (11 msec)
Vibration resistance	20 G (10 to 1000 Hz)
Working temperature range	-10 to 60 °C
Protection structure	IP67 (IEC)

Internal circuit

```

graph LR
    B[+] --- LED((LED)) --- R[Resistor] --- Z[Zener diode] --- B2[+]
    B2 --- AS[Auto switch] --- B1[-]
    AS --- B1
  
```

(+) Brown lead wire

(-) Blue lead wire

Auto switch



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