



# COVAL

vacuum managers

just plug it in  
in-line vacuum modules

# CIL



[www.coval.com](http://www.coval.com)

# CIL : "just plug it in" - COVAL

With the **CIL** series, COVAL introduces a new range of "just plug it in" vacuum modules.

The in-line CIL vacuum modules are mounted directly to the compressed air network, near the suction cup without the need of additional fixturing. Result: Faster gripping time.

Thanks to their "just plug it in" connections and their optimum performance, the CIL modules guarantee reduced mounting time, lower installation costs and energy savings.

**COVAL is an ISO 9001: V2000 certified company** which offers innovative solutions integrating reliable and optimized components with intelligent functionalities. The focus is to provide the most personalised and economic solution to a given application while assuring a significant improvement in the productivity and the security of the vacuum users around the world.



## Fields of application

Due to their light weight, from 7 to 13 g (see illustrations below), and small dimensions, the in-line vacuum modules CIL can be easily integrated into the compressed air network near the suction cups on any machine, even in tight fitting places.

COVAL vacuum managers, recommends the use of in-line vacuum modules for the handling of electronic components, removal of plastic parts from moulds, miscellaneous gripping applications and "pick and place" applications.

## Advantages

### SIMPLE AND EFFICIENT CONNECTION

The integration of the CIL in-line "just plug it in" vacuum modules to the compressed air network is available in your choice of pneumatic connections: barbed fitting, push fitting, M12 male or M14 male threading for manifold mounting or fixing of the module.

### INCREASED RELIABILITY

Thanks to the absence of moving mechanical parts, CIL modules reduce machine downtime and don't require any maintenance.

### SILENT TECHNOLOGY

The new COVAL fluidics coupled with an optimized exhaust guarantee superior silence of the CIL in-line vacuum modules compared to other solutions on the market.

### OPTIMIZED PERFORMANCES

Different models of CIL in-line vacuum modules are available.

- 2 sizes:
  - size 1 for hose 2.7x4 mm
  - size 2 for hose 4x6 mm
- 3 nozzle diameters
  - > ø 0.5 and 0.7 mm
  - > ø 0.7 and 0.9 mm

- 2 vacuum levels:
  - 60% vacuum maximum (for porous objects)
  - 90% vacuum maximum (for air-tight objects)

This large choice enables the user to configure the CIL modules precisely depending on the application in order to obtain optimum performances.



# in-line vacuum modules

## Flexibility of installation

### BARBED FITTING

In-line mounting on the compressed air hose thanks to the barbed fittings; economical and ultra-light solution.

This model is available in 2 sizes:  
 - for sized hose 2.7x4mm (size 1)  
 - for sized hose 4x6mm (size 2).



### PUSH FITTING

Simple and fast to integrate by in-line mounting directly to the compressed air hose.

This model is available in 2 sizes:  
 - for sized hose 2.7x4mm (size 1)  
 - for sized hose 4x6mm (size 2).



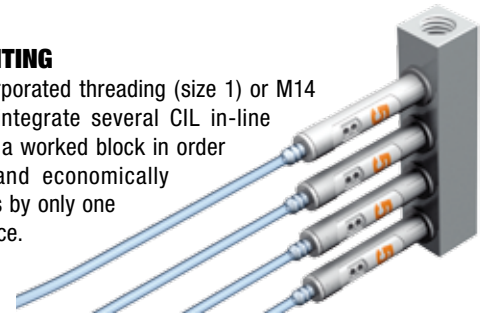
### INTEGRATED FIXING

The M12 male incorporated threading (size 1) or M14 (size 2) allows to fix securely and easily the CIL in-line vacuum modules.

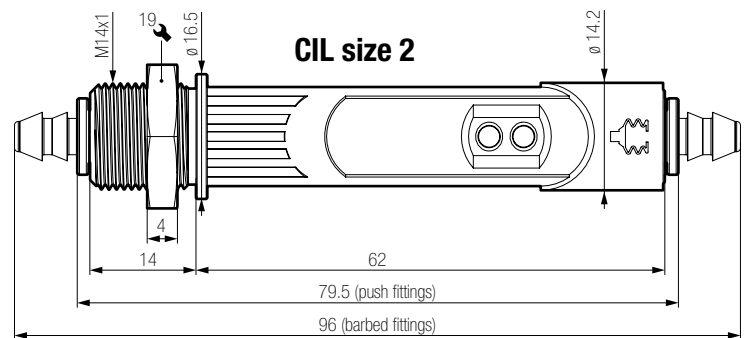
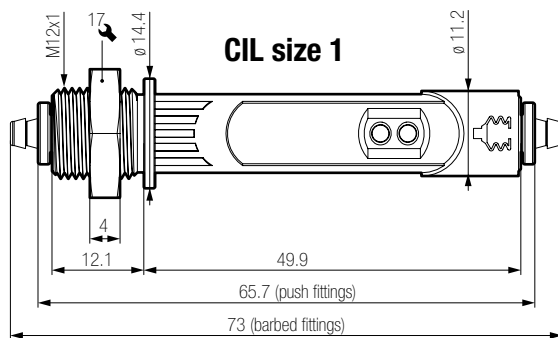


### MANIFOLD MOUNTING

The M12 male incorporated threading (size 1) or M14 (size 2) allows to integrate several CIL in-line vacuum modules in a worked block in order to supply simply and economically several suction cups by only one compressed air source.



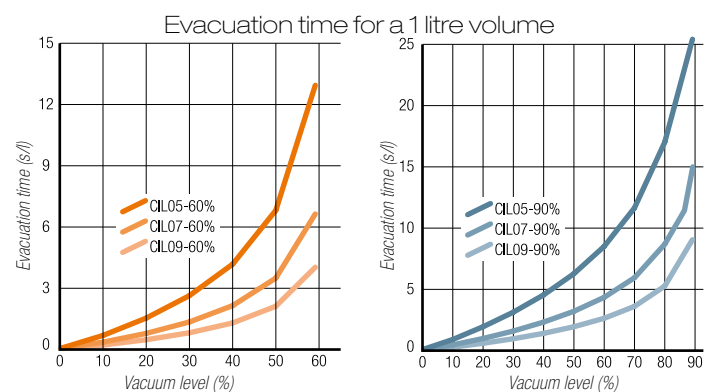
## General characteristics



All the dimensions are in mm

| size  | nozzle ø (mm) | air consumption (NI/mn) | drawn-in air (NI/mn) |        |
|-------|---------------|-------------------------|----------------------|--------|
|       |               |                         | CIL 60               | CIL 90 |
| 1     | 0.5           | 9.5                     | 9.5                  | 7      |
| 1 & 2 | 0.7           | 18.5                    | 18.5                 | 13.7   |
| 2     | 0.9           | 30.5                    | 30.5                 | 22.6   |

- C.A supply: 5µ filtered, non-lubricated air relevant to ISO 8573-1 class 4 standard
- Optimal working pressure: 5 bars
- Weight: from 47 to 13g according to the model
- Materials: PA 6-6 15% FV.
- Working temperature: from 0 to 60°C
- Delivered with 1 fixing nut made of zinc coated steel

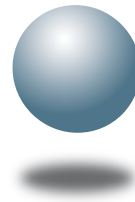


## To order

|            | SIZE     | VACUUM LEVEL | NOZZLE ø       | FITTING          |
|------------|----------|--------------|----------------|------------------|
| <b>CIL</b> | <b>1</b> | <b>90</b>    | <b>X 07</b>    | <b>C</b>         |
|            | 1        | 60           | 05 only size 1 | C barbed fitting |
|            | 2        | 90           | 07 only size 2 | R push fitting   |
|            |          |              | 09 only size 2 |                  |

### EXAMPLE OF A STANDARD MODULE:

**CIL 190X07 C** (CIL in-line vacuum module, size 1, 90% max. vacuum, nozzle diameter 0.7mm, barbed fittings).



**COVAL**  
vacuum managers

**“THE RIGHT VACUUM  
THE PLACE YOU NEED IT  
THE TIME YOU NEED IT”**

**L**ocated in the southeast region of France, COVAL conceives, manufactures and globally distributes high performance advanced vacuum automation components and systems for industrial applications in all branches.

COVAL is an ISO 9001: V2000 certified company which offers innovative solutions integrating reliable and optimized components with intelligent functionalities. The focus is to provide the most personalized and economic solution to a given application while assuring a significant improvement in the productivity and the safety for the vacuum users around the world.

COVAL has an ambition for technical excellence and innovation. As a specialist in vacuum automation, COVAL is reputed for offering reliable, personalized, cost effective and productive solutions.

The references of COVAL can be found in several industrial sectors (Packaging, Automotive Industry, Plastic, Graphic, Aeronautic...) where vacuum handling is important for high efficiency and productivity.

COVAL markets its products and services all over Europe, in the United States and South America through its subsidiaries and authorized distribution network. COVAL strives to provide customer driven solutions and gives the best possible treatment to satisfy all its clients.

*For all enquiries from Australia, Africa and Asia kindly contact COVAL head office in France.*

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