

Piab Custom-Line



Mini Cobot Gripper

Overview

Our featherweight! Probably the lightest cobot gripper in the world.

At only 270 grams [9 ounces] it lifts up to 5 kilograms [11 pounds] and can be flexibly equipped with various suction units. Its integrated COAX® vacuum ejector is extremely energy efficient, providing a safe and quick hold.

In the automated packaging of goods for example in e-commerce or when handling of goods in production in small and medium-sized businesses, the weight of the gripper is crucial. Because in addition to the objects to be moved, the weight of the gripper determines the size of the robot or cobot to be used.

As a specialist for lightweight, high-performance vacuum grippers, especially for the growing cobot market, Piab has now developed the lightest cobot gripper. With the Mini Cobot Gripper (MCG), customers can maximize the load capacity of even the smallest cobots, reducing investment costs.



Extremely light



Less energy usage



Quick-Click-Tool Changer



User friendly



Plug & Play

This is made possible by its components produced by high-quality, lightweight 3-D printing. The combination of pump unit with integrated COAX® vacuum ejector technology allows maximum flexibility.

This is further enhanced by the new Quick-Click Tool Changer (QCT), which allows customers to change from one gripper type to another in seconds without any tools.

Thanks to its round shape, the MCG is very safe.



Get in touch!

Send us an email and get to know more about product: custom-line@piab.com

Vacuum flow (NI/s) [scfm]

Pump type	Feed pressure MPa [psi]	Air consumption NI/s [scfm]	Vacuum flow (NI/s) [scfm] at different vacuum levels (-kPa) [-inHg]								Max. vacuum -kPa [-inHg]
			0 [0]	10 [3]	20 [6]	30 [9]	40 [12]	50 [15]	60 [18]	70 [21]	
Xi 10-2	0.6 [87]	0.54 [1.14]	0.74 [1.57]	0.63 [1.33]	0.53 [1.12]	0.42 [0.89]	0.30 [0.64]	0.16 [0.34]	0.11 [0.23]	0.04 [0.17]	93 [27.5]
Si 08-2	0.6 [87]	0.44 [0.93]	0.77 [1.63]	0.67 [1.42]	0.51 [1.08]	0.33 [0.70]	0.23 [0.49]	0.16 [0.34]	0.12 [0.25]	0.08 [0.17]	75 [22.1]
Di 16-2	0.6 [87]	0.75 [1.59]	0.64 [1.36]	0.57 [1.21]	0.49 [1.04]	0.41 [0.87]	0.35 [0.74]	0.29 [0.61]	0.18 [0.38]	0.04 [0.08]	73 [21.6]

All values subject to change without prior notice.

The world's lightest vacuum cobot gripper is ready to Pick & Place any of your applications.



Starter-Kit



Pump unit with integrated ejector and vacuum blow-off valve

The Starter Kit

To cater for any application, the MCG Starter-Kit consists of a pump unit, an adapter plate with 10 mm foam, an adapter plate with 13x BX10 suction cups, adapter plate 3/8" female as well as three different sized suction cups.

- **Extremely light** - full utilization of cobot capacity
- **Quick gripper change** with Quick-Click Tool Changer in Plug & Play design
- **Various gripper units** for every application



“The MCG is the essence of modular, flexible, light weight design, with a strong yet energy efficient grip on any product.”

Bernd Gries, Manager Global Strategic Accounts Head of Custom-Line-Products Vacuum Automation

Specifications of MCG

Blow-off
for optimal
product release
and fast processes

ISO adapter
for quick connection
to most robot types.
Customized adapters
upon request.

Pump unit
with integrated, energy
efficient COAX® ejector

Adapter plate
available with
different suction cups
and grippers for any
application

**3D printed
cobot gripper**

**Quick-Click-
Tool Changer**

The concept is rounded up by features like its powerful integrated air-driven COAX® vacuum ejector technology, control valve and vacuum sensors access options turning the MCG gripper into a Plug & Play system.

For easy connection to any type of cobot, customers can choose between a number of standard ISO adapters.

High performance, low input

Because COAX® ejectors are up to twice as fast as other ejectors and deliver three times more flow than a conventional ejector with identical air consumption, the pump unit can deliver high performance even with low or fluctuating supply pressure.* This makes them particularly energy efficient. Accordingly, their



Blow-off for fast processes



Less energy usage



User friendly



Plug & Play

use reduces the cost of providing compressed air and thus the total cost of production.

*Independent comparison tests at the Fraunhofer Institute for Machine Tools and Forming Technology IWU in Dresden have shown that the Piab ejectors require significantly lower compressed air to achieve the same output compared to ejectors from other manufacturers.

Further benefits

- Fast process possible by activating the integrated blow-off check valve
- Low energy usage due to integrated COAX® vacuum ejector
- Intuitive and user-friendly design



Adapter plate with 13x BX10 suction cups



Adapter plate with 10 or 20 mm foam



Adapter plate with 3/8" female

Dimensions

Description	Unit	Value
Pump unit with integrated ejector, vacuum blow-off valve, QCT, incl. robot adapter		
Weight	g [lbs]	270 [0.60]
Height	mm [inch]	28 [1.02]
Diameter	mm [inch]	76 [2.99]
Adapter plate with 10mm foam and flow reduction	g [lbs]	35 [0.08]
Adapter plate with 20 mm foam and flow reduction	g [lbs]	50 [0.11]
Adapter plate with 3/8" female	g [lbs]	40 [0.09]
Adapter plate with 13x BX10 suction cups and flow reduction	g [lbs]	70 [0.15]
Adapter plate with 7x 1/8" female	g [lbs]	97 [0.21]

All values subject to change without prior notice.

A selection of potential applications



Adapter plate with 3/8" female and piSOFTGRIP® 30-3 handling fruits



Adapter plate with 13x BX10 suction cups handling a bag with pet food



Adapter plate with 3/8" female and MX cups handling a bag with soap



Adapter plate with F-BX20FCM cups handling a package with batteries



Adapter plate with 3/8" female, extantion and MX cup handling a bag with nuts



Adapter plate with 20 mm foam handling a tube with hand cream



Product code



Product name

Code	Options
MCG	abbreviation of the product name

Flange

Code	Options
ISO40	ISO40 - ISO 9409-1-40-4-M6
ISO50	ISO50 - ISO 9409-1-50-4-M6

Switch / Sensor

Code	Options
An	Analog
Di	Digital

Cartridge

Code	Options
Di 16-2	
Si 08-2	
Xi 10-2	

Adapter plate

Code	Options
A	Adapter plate with 10 mm foam and flow reduction
B	Adapter plate with 20 mm foam and flow reduction
C	Adapter plate with 3/8" female
D	Adapter plate with 13x BX10 suction cups and flow reduction
E	Adapter plate with 7x 1/8" female
X	Without adapter plate

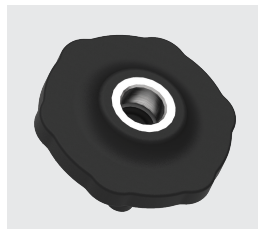
Various adapter plates



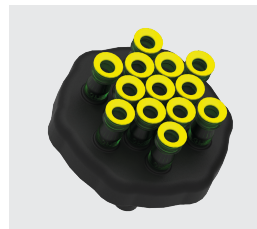
Adapter plate with 10 mm foam



Adapter plate with 20 mm foam



Adapter plate with 3/8" female



Adapter plate with 13x BX10 suction cups



Adapter plate with 7x 1/8" female

Different challenges?!
We are happy to create your application specific adapter plate!



Get in touch!

Send us an email and get to know more about product:
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