

Vacuum Pumps



The multistage Gimatic vacuum ejector has a combination of different nozzles providing both high flow and high vacuum level performance in the same ejector. This design also gives lower energy

VACUUM PUMPS:

- 150 new MULTI-STAGE ejectors
- between cartridges and complete vacuum pumps

KEY FACTORS:

- In house technology
- Holder with integrated silencer
- Modularity and new combination ejector + sensor+ manifold
- Smart design with integrated solutions
- Mechanical expertise
- Low weight
- Customized solutions
- Competitive price



Size available:

EJ-SMALL; EJ-MEDIUM; EJ-LARGE

Number of available stage:

2 stage and 3 stage cartridges

Features ejectors:

EJ-HF: High vacuum flow 

EJ-LP: Low feed pressure 

EJ-HV: Extra vacuum level 



Integrated EJ-Cartridges

GHATC



Vacuum pumps



Description vacuum pumps

EJ- BASIC

- The EJ-BA vacuum pumps consist of an anodized aluminum manifold, which guarantees high strength and while allowing compact dimensions. They can integrate the EJ-MEDIUM cartridges in the 2 and 3-stage versions with integrated silencer



EJ- LINE

- EJ-LINE pumps have superior vacuum characteristics even at low or fluctuating mains pressure. In-line design to optimize overall dimensions. The aluminum body provides high strength, the thread in the vacuum port allows direct fixing of the suction cup, avoiding the need of additional pipes or fittings.



EJ- SYS

- The EJ-SYS range of vacuum pumps allows to simplify the sizing and the installation in a vacuum circuit. Vacuum pumps suitable for both decentralized and centralized circuits, thanks to the high suction flow rate of the EJ-SYS-LARGE version.



Vacuum pumps



Description vacuum pumps

EJ- SLG

- The EJ-SLG vacuum pumps consist of a POM housing, which makes the pump extremely lightweight and compact. Both the EJ-SLG MEDIUM and the EJ-SLG LARGE solutions are available in two- and three-stage versions with integrated silencer.
- Possibility of prearrangement with pre-set Gimatec digital vacuum switch, VACSW-A-AN203-G (PNP) and VACSW-A-AM203-G (NPN) version.

EJ- ATM

- Vacuum pump developed for sealed applications where, due to the high vacuum reached, an atmospheric release is required.
- Restores the atmospheric pressure inside the gripping device to enable the quick release of the product.
- A single 3/2 valve controls the vacuum pump and the ATM release device

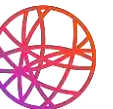
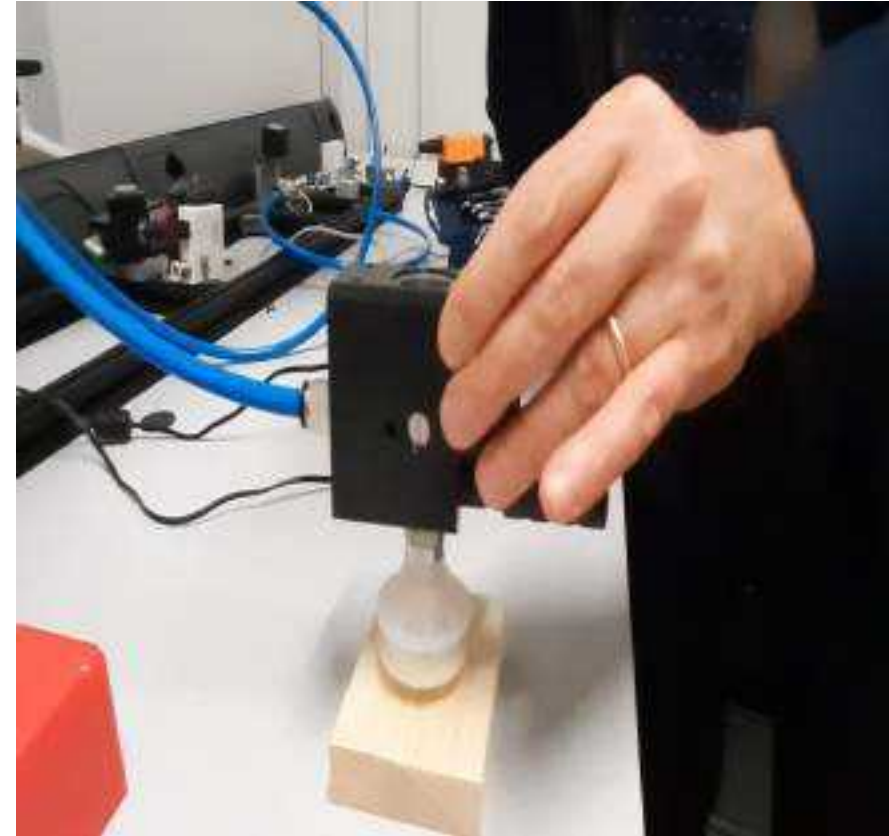
EJ- BLOWOFF

- The EJ-BLOWOFF vacuum pump is the right choice for high frequency Pick-and-Place applications. The built-in blow-off tank allows to release the handled object very quickly while keeping the EJ-MEDIUM cartridge clean, avoiding clogging in particularly dusty environments. Available in the version with 1 and 2 two-stage EJ-MEDIUM cartridges.



Movie EJ-BLOWOFF

GNATC



Vacuum pumps



Description vacuum pumps

EJ- MLG

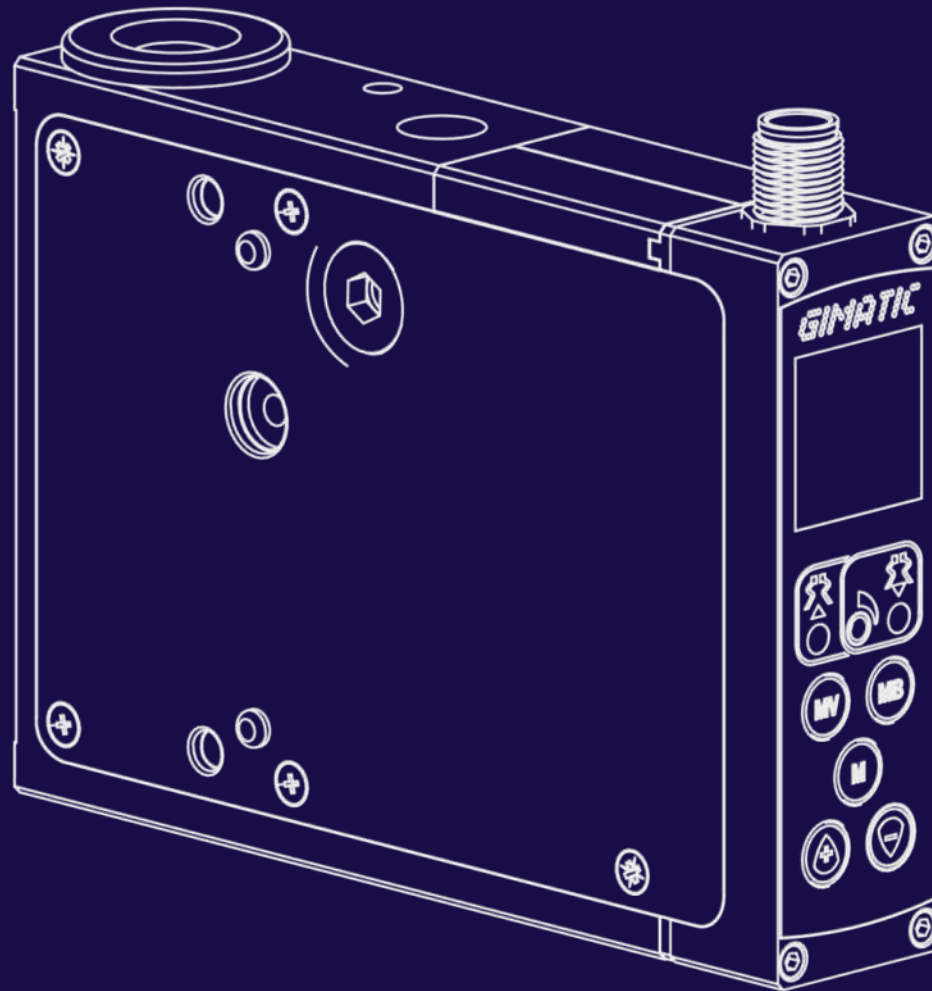
- The design of the EJ-MLG vacuum pumps (body in POM) allows the integration of up to 4 EJ-LARGE cartridges, with 2 or 3 stages, making the vacuum pump a modular and flexible solution. Developed mainly for centralized applications, to simultaneously manage several suction cups or several users of the vacuum circuit.



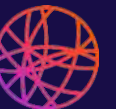
EJ- BBT

- The EJ-BBT vacuum generators are based on the Coanda principle and allow to achieve a high suction flow rate at low vacuum levels. This is particularly useful when handling porous and at the same time delicate objects. Also suitable for transporting waste materials (chips) or for cooling surfaces with high temperatures.





Vacuum pumps with integrated logic controls



Vacuum Pump EJ-XP

GIMATIC

EJ-XP

Integrated Vacuum Pump with advanced logic controls



EJ-XPRO

Handling glass panel

GHATIC



Vacuum pump EJ-CEN

EJ-CEN

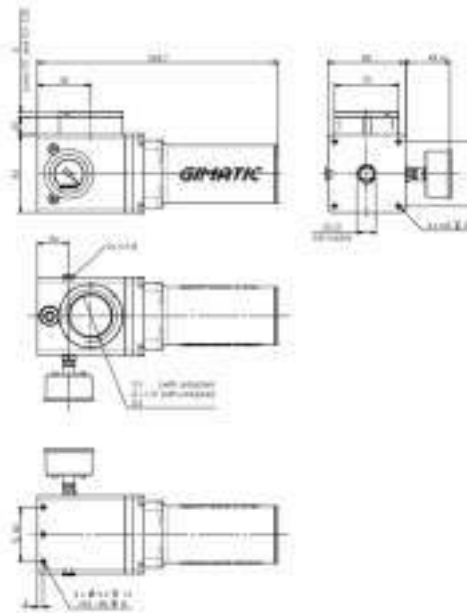
Modular and Configurable vacuum pump

- Ideal for centralized applications (metal sheet – glass)
- Configurable design from 5 to 16 cartridges EJ Large two stage
- Available with EJ cartridges two stage in the version LP-2; HF-2 and HV-2
- Aluminum body and silencer in PA12 - Inline exhaust
- Modular design with multiple possibilities of connection
- Reduced noise and reduced evacuation time

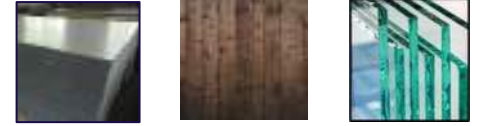


Typical applications

- Graphic sector, offset machines, pre- and post-press
- Liquid filling and emptying applications
- Handling of objects with high weights and porous surfaces



GINATTC



Plus

- Compact size and high vacuum flow
- Robust design and low weight
- Possibility of working in suction or in blowing
- Price list: 20% less compared to direct competitors; from 943 € to € 2193



Vacuum pump EJ-BSVLG

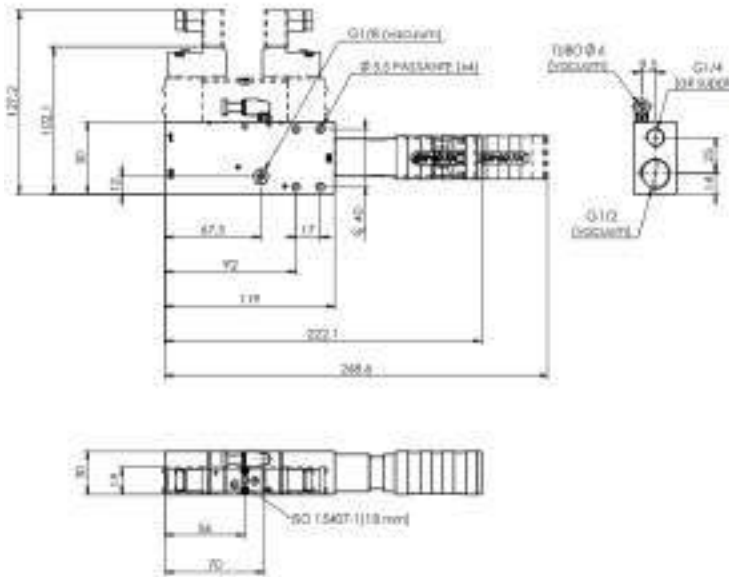
EJ-BSVLG

Blow off Solenoid Valve - ISO

GIMATIC

Technical Features:

- High ratio between vacuum flow and consumption.
- Manifold in POM material with threaded connections G1/2"
- Available with ON / OFF vacuum valve and blow-off , manual override
- Manifold designed for mounting ISO 01 valve (suggested 5/3 NC)
- Available with two and three stage large cartridges



New



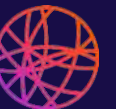
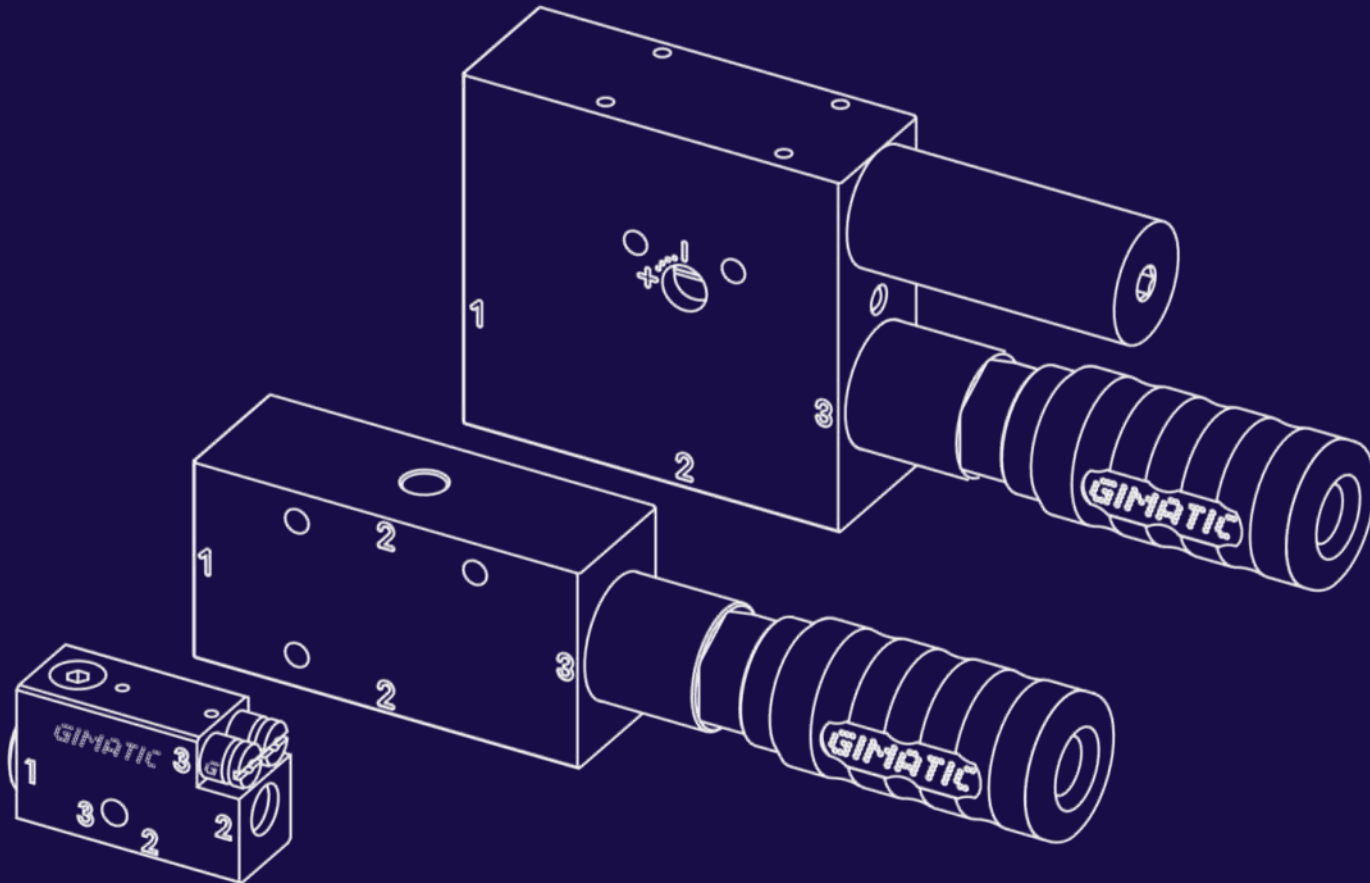
Plus

- In-line suction for greater dirt tolerance
- Low weight
- Fixing hole for mounting on Gimatic profile
- Assembly in battery
- Possibility to purchase only the pump with ISO manifold without the integrated valve



NEW GIMATIC VACUUM PUMPS

Andrea Lotito



Vacuum pump EJ-BLOW-OFF-LARGE

GIMATIC

EJ-BLOW-OFF LARGE

Technical Features:

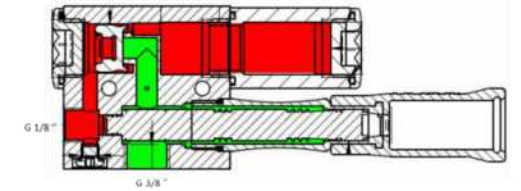
- Ideal for centralized applications
- Easy installation and positioning thanks to the various mounting options
- Ideal for applications in dusty environments
- Adjustable blow-off for quick release and cleaning of the EJ-Large cartridge
- Tank capacity 25 cm³ (low intensity)
- G1 / 2 "vacuum port
- G1/ 8" vacuum port for vacuum monitorate
- Arrangement with VACSW vacuum switches
- Manifold in POM low weight

Typical applications

- Packaging machines, for the food and pharmaceutical sector
- Marble; Ceramics (very dust applications)
- Handling of cosmetic products
- Pick-up of porous items (cardboard, wooden sheets)

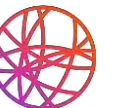


Extreme cleanliness on the second stage



Plus

- Adjustable blow-off - Useful for depositing handled products
- Low weight 300 g
- Competitive list price:



Vacuum pump EJ-BASIC-LARGE

GIMATIC

EJ-BASIC-LARGE

Technical Features:

- Ideal for centralized and decentralized applications
- Excellent ratio between sucked flow and air consumption
- Possibility of integration near the gripping point, low weight (body in POM)
- G1 / 2 "vacuum ports
- Auxiliary vacuum port, for possible blow-off or system monitoring G1 / 8 "
- Available with two and three stage EJ-LARGE cartridge (EJ-LP, EJ-HF, EJ-HV)

Typical applications

- Handling of sealed objects such as glass and metal parts (EJ-HV)
- Packaging machines (EJ-HF)
- Particularly suitable for low cost automated applications



Plus

- Easy design
- Low weight: From 150g to 190g
- High performance - low list price from **135 to 145 Euro**



Vacuum pump EJ-ATM-SMALL – Quick release



EJ-ATM-SMALL – Quick release

Technical Features:

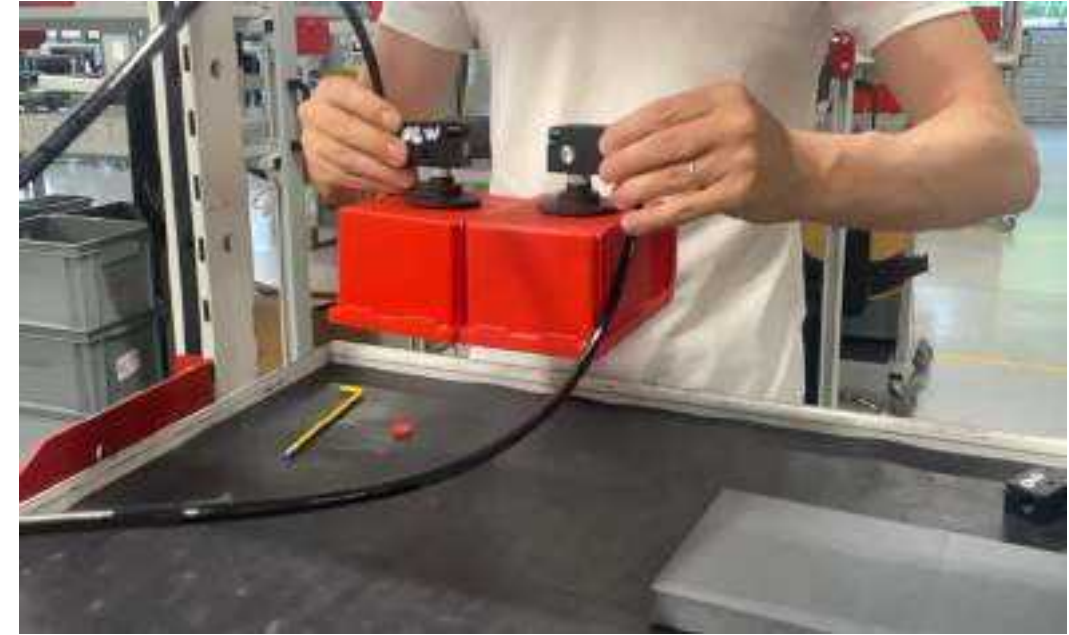
- Vacuum pump developed for sealed applications where, due to the high vacuum reached, an atmospheric release is required, in order to reduce the time of detachment of the handled item and to speed up the movement of the gripping tool.

The key features are low weight, low energy, consumption and easy installation.

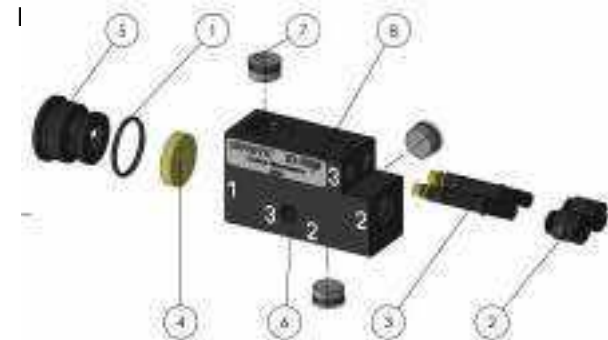
A single 3/2 valve controls the vacuum pump and the ATM release device

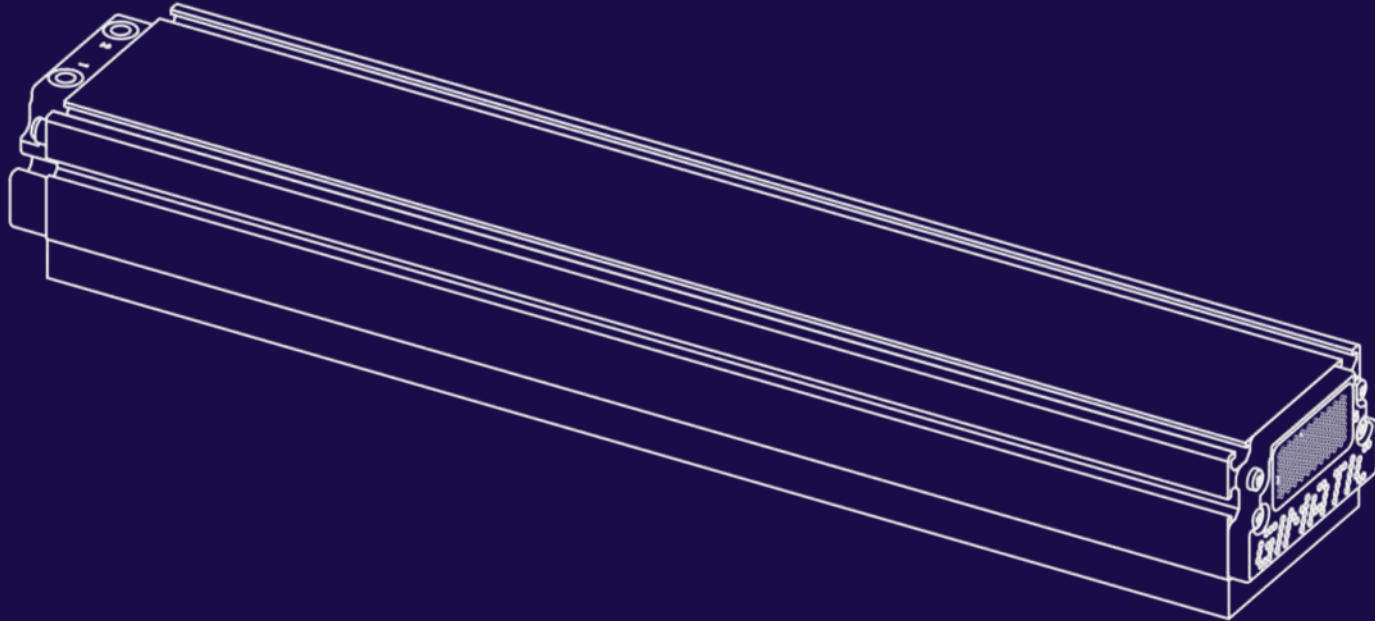
Typical applications

- Robotic cells for handling parts in transformation processes, for instance when serving bending machines, sheet metal forming presses and bending processes
- Glass handling machines



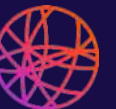
ATM with LP cartridge can fed with at minimum of 1.7 bar and therefore the membrane is soft, enough to be closed by that pressure. The ATM with EJ-HV cartridge is fed at 5 bar and the membrane can be mor harder and therefore more





FOAM GRIPPER

Andrea Lotito



FGS (FOAM GIMATIC SYSTEM)



Vacuum Foam Gripper

FOAM Gripper – FGS120

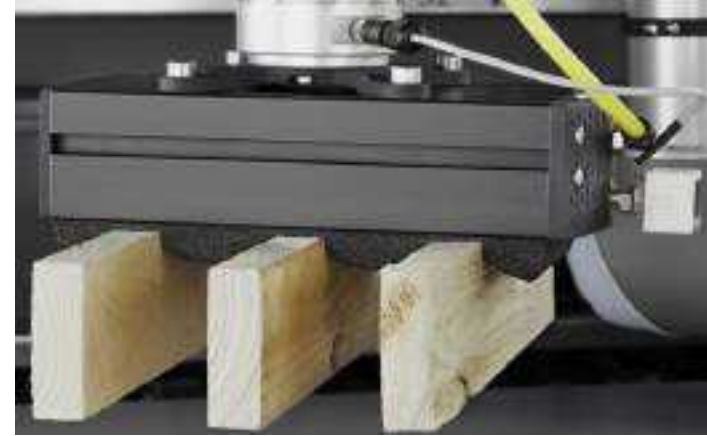
The Gimatic FGS-120 foam gripper series represent a modular a flexible solution for handling several products with uneven gripping surface, different sizes and shape.

Future features:

- The FGS gripping system are equipped with integrated EJ-HF large cartridges generation or can be designed for separate vacuum generation
- Available with foam or with suction cups

Typical applications:

- Palletizing and depalletizing (wood; boxes; glass; metal sheet)



GIMATIC

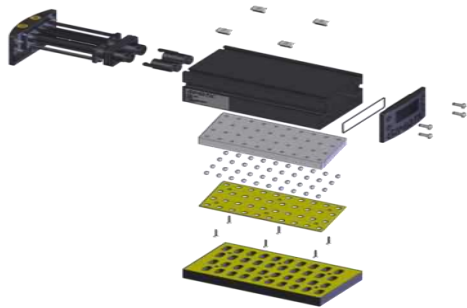


Vacuum Foam Gripper

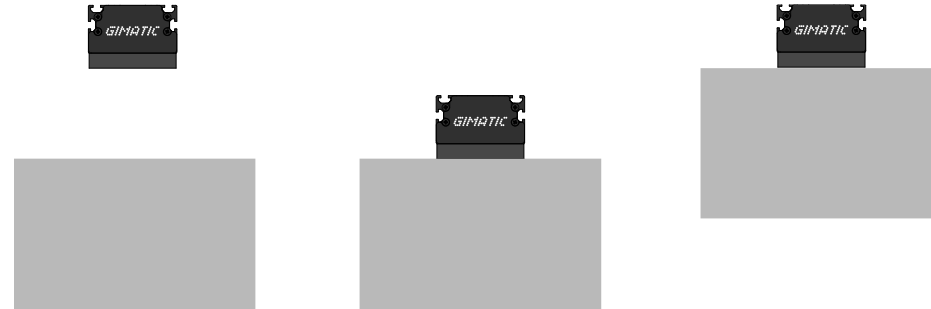
FOAM Gripper – FGS Technologies

Self-Closing Valves Technology

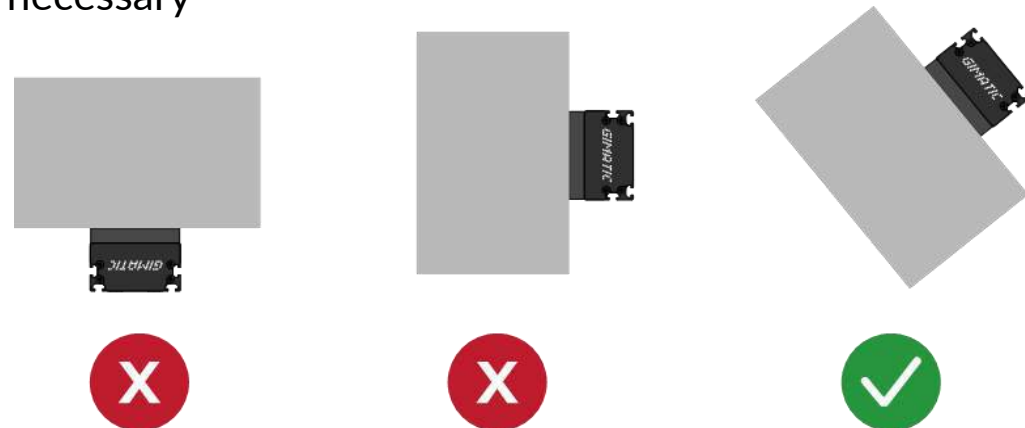
- A special designed hole with a metal sphere. The vacuum flow lifts sphere that closes the hole, making no leakage.
- Used to make the gripper more flexible: possibility to handle small and big workpieces, reducing size of vacuum generator and energy consumption
- **Advantages:** Faster, more flexible, less dust sensitive.
- **Disadvantages:** bigger weight, the gripper can't be tilted over 45°.



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1. Positioning the module at the object to handle with the grip pad parallel to the grip surface.
2. Lowering of module until contact with the grip surface
3. Vacuum activation
4. Pick-up of object to handle
5. Drop-off of object with removal of vacuum and blow-off if necessary



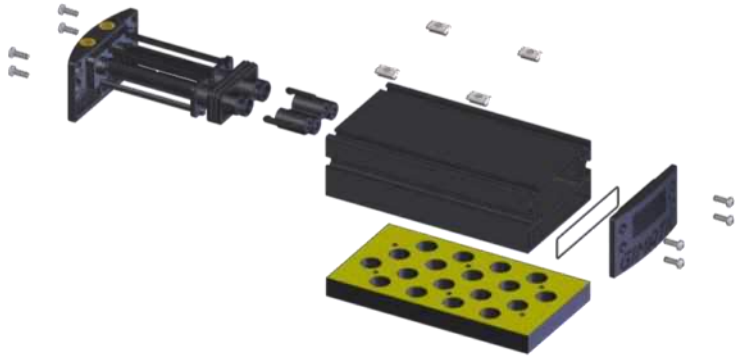
Note: If vacuum is activated before the FGS is in contact with the workpiece, the workpiece will not be gripped because the self-closing valves will be closed and not allowed the handling.

Vacuum Foam Gripper

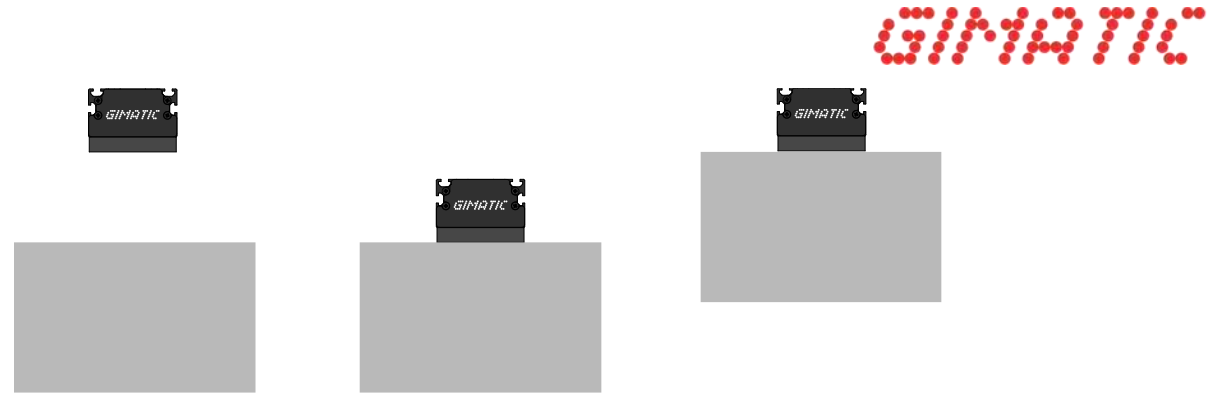
FOAM Gripper - FGS

Flow reduction technology:

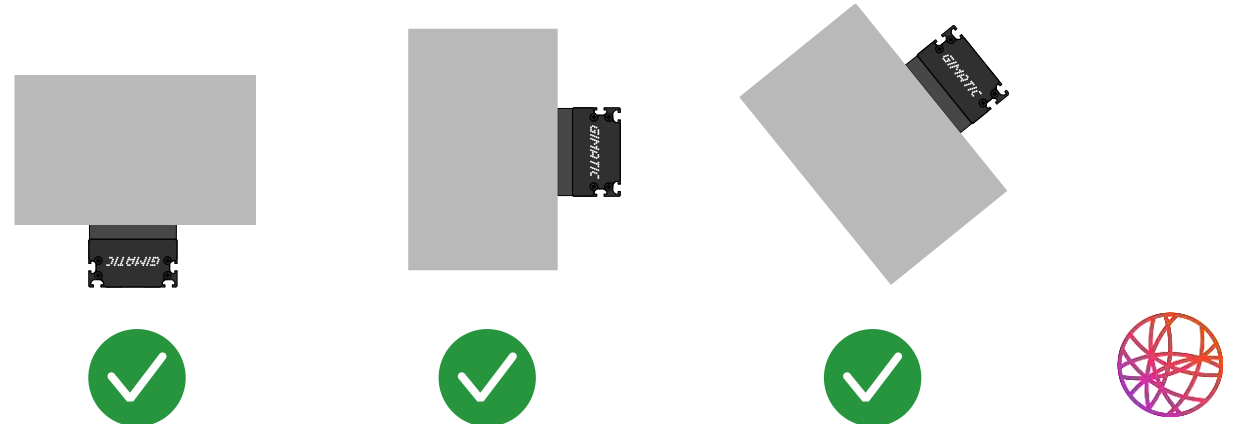
- A simple micro-hole with, a known leakage (0.6; 0.8)
- Used when Self-closing valves can't be used (i.e. vertical handling), or when the vacuum gripper is almost completely covered
- **Advantages:** Can work also upside down, the gripper is lighter
- Possible Disadvantages: less energy efficient, more sensible to the dust



Note: In this case the activation for vacuum can be done before or after the contact with the workpiece.



1. Positioning the module at the object to handle with the grip pad parallel to the grip surface.
2. Lowering of module until contact with the grip surface for fast cycle we suggest to activate vacuum before be in contact with the object.
3. Pick-up of object to handle
4. Drop-off of object with removal of vacuum and blow-off if necessary



Vacuum Foam Gripper

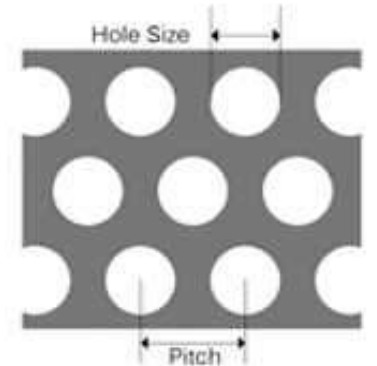
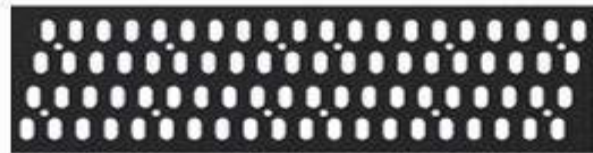
GIMATIC

FOAM Gripper – FGS FOAM

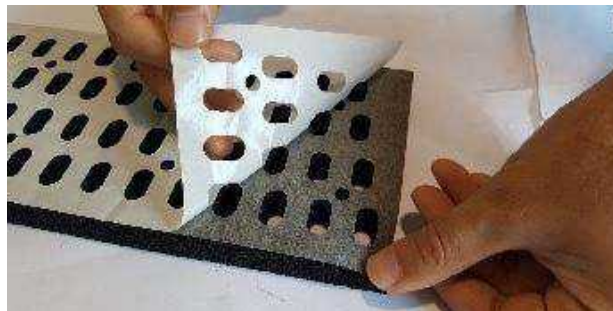


Technical foam:

- Soft EPDM material:
- Thickness available 20 mm
- Two hole pattern available
 - Standard pitches: Thin A for workpieces from 35mm width;
Medium B for workpieces from 55mm width



A



B

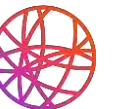
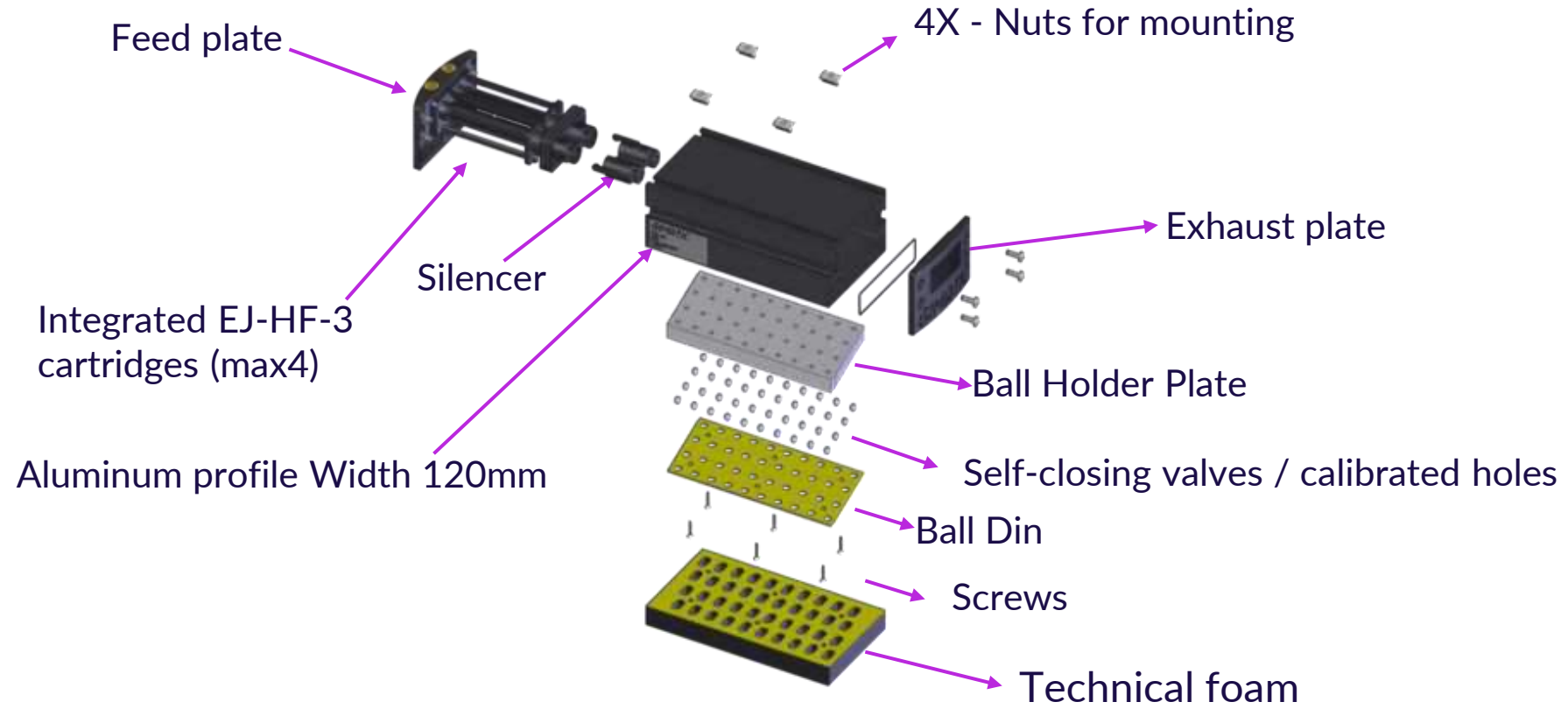
- Easy to install and easy to remove.
- Removing the foam does not involve foam residues on the extrusion



Vacuum Foam Gripper

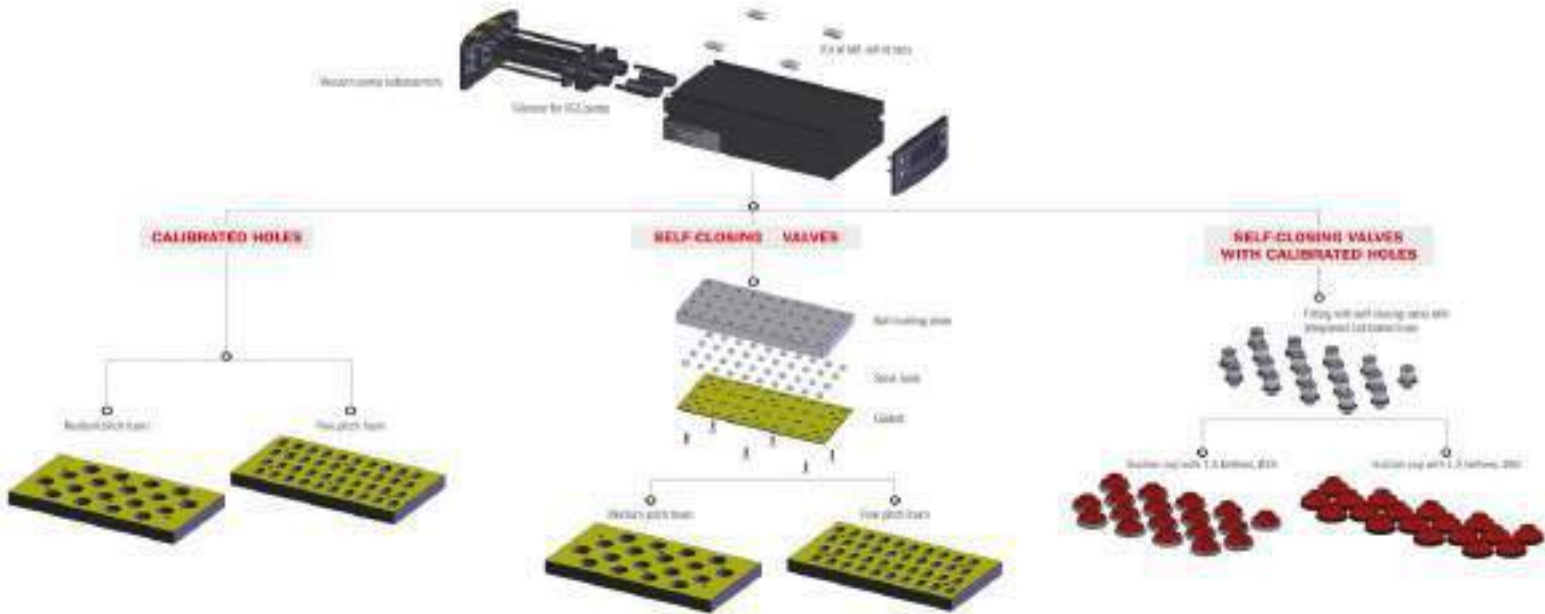


FOAM Gripper – FGS Exploded Structure



Vacuum Foam Gripper

Exploded



FGS	120	0200	F20	OT	06	EJL	2	BSV	NC
Type	Width (mm)	Length (mm)	Foam / Suction cup	Oval, Round/Pitch	Calibrated hole (mm) +/- self-closing valve*	Vacuum generation (cartridges)	Number of cartridges	Control solenoid valves	Vacuum solenoid valve logic
FGS	120	0200 ⁽¹⁾	F20 = foam, thickness 20 mm	OT = oval, fine pitch	06	EJL	2	XX = without control logic	
		0400		RM = round, medium pitch	08		3	BSV-NC = normally closed vacuum solenoid valve	
		0600			VA		4	BSV-NO = normally open vacuum solenoid valve	
		0800 ⁽¹⁾	B35-SC-VA = VQ.B35 suction cup		6	BSV-NC = normally closed vacuum solenoid valve + blow-off solenoid valve			
		1000 ⁽¹⁾	B55-SC-VA = VQ.B55 suction cup		8	BSV-NO = normally open vacuum solenoid valve + blow-off solenoid valve			
		1200 ⁽¹⁾							



Vacuum Foam Gripper FGS120-SC



The FGS120-SC foam gripper can be installed directly on the robot. It can be used flexibly to accommodate different sizes and shapes of workpieces. For the vacuum sources, we have our HF-3 type multi-stage ejectors and in the future we can think of having an external type of blower as an option. The Gimatic suction cups VG.IS are suitable for fully automated applications, especially in the packaging sector. The vacuum gripper can be used for several different sized workpieces without changing the gripper.

Technical Features:

- Lengths available with VG.IS35 suction cups: 200 – 400 - 600
- Lengths available with VG.IS35 suction cups: 400 - 600 - 800
- Special fitting with self-closing valve and micro hole 0.6 mm
- Ideal for vertical and horizontal applications
- **For handling cardboard boxes with significant differences in height, the use of multi-bellows suction cups is recommended, otherwise the internal check valve may not close**



Vacuum Foam Gripper

General information

- Released Foam gripper with foam: 2nd week of October 2022
- Released Foam gripper with suction cups: 2nd week of December 2022
- Data sheet on web: 2nd week of October 2022
- FGS-Excel configurator tool
- Release foam gripper brochure: 2nd week of February 2023

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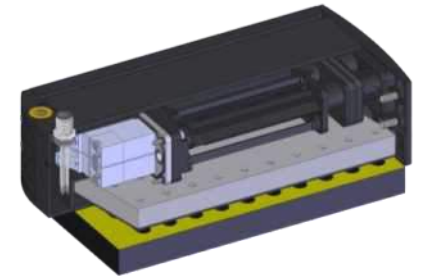
GINATIC FOAM GRIPPER SYSTEM CONFIGURATOR		
PARAMETER	VALUE	DESCRIPTION
Model	FGS	FGS-120-1200-1200
Width	120	mm
Length	0900	mm
Foam / cup	F20	20mm, 20mm
Qual. count, no	0	Qual.
Pattern	T	Map
Flow restr. or valves	VA	Check valves
Vacuum Source	E116	1.0 bar, 1.0 bar, 1.0 bar
ITEM NR	353010606	
ALIAS	FGS-120-0400-F20-0T-VA-E116XX	
LIST PRICE	2.515,59 €	



FGS120-1200



FGS120-SC



FGS120-BSV

- Released Size FGS-120-1200: 1st week of February 2023
- Released Model FGS-120-IS 600 and 800: 1st week of February 2023
- Release Model FGS120- SV or BSV: 2nd week of February 2023 (we will only generate part numbers only on request)



Foam Gripper FGS-60

FGS60

The new FGS60 are ideal for picking up objects with different shapes, sizes, and/or porous materials.

Ideal for handling long and narrow objects with different size. Integrated with our highly efficient Cartridges HF-3 stage.

The flexible soft durable foam can grip even and uneven surface objects without a hassle

Typical applications :

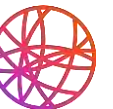
- Wood (wooden slats)
- Metal Sheet (cylindrical tubes)
- Strips of glass or marble



General note:

- Lengths available: from 200 to 1200mm
- Step: Only thin
- Technology: Check valve – Calibrate holes 0.6mm
- Medium pitch not available

GINATIC



Foam Gripper FCG-400X300

Vacuum gripping systems with foam / FCG Power&Light 400x300 medium pitch with selfclosing valves

GNATC

The FCG-400-0300 series of vacuum gripping systems, in the version with foam, is a modular and versatile solution for handling a variety of products of different sizes, shapes and porosity

- Ideal mainly for palletising cardboard boxes, interlayers and pallets
- Power&light version with light carbon body and high suction flow rate
- Integrated energy-efficient multi-stage EJ-LARGE-HF-3 cartridges
- Central vacuum port for connection to external vacuum source (blower, electric pump)

Typical applications :

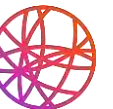
- Carton boxes (Palletizing applications)
- Interlayer
- Wood (wooden platforms)



Foam Gripper FCG-400X300

Movies

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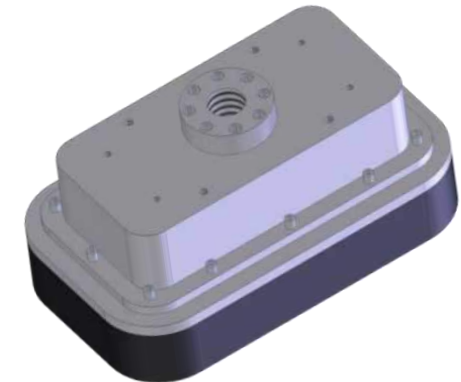


Foam Bag Gripper FBG-FBGE

FBG - FBE

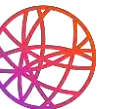
GINATIC

The FBG (Foam Bag Gripper) can be equipped with integrated EJ-HF-3 stage cartridges or connector for external vacuum source model FBGE (FOAM Bag External connection). The FBG is designed and capable to handle heavy sacks in different material, shapes and weight. Natural rubber foam ring that fits perfectly to the sack



General notes:

- One size with integrated cartridges: 350X250
- Number of cartridges: from 2 to 4
- One size with external vacuum source: 320 X190



Thank You

