



**FLEXI CARBON
FOAM GRIPPER**

Product presentation :

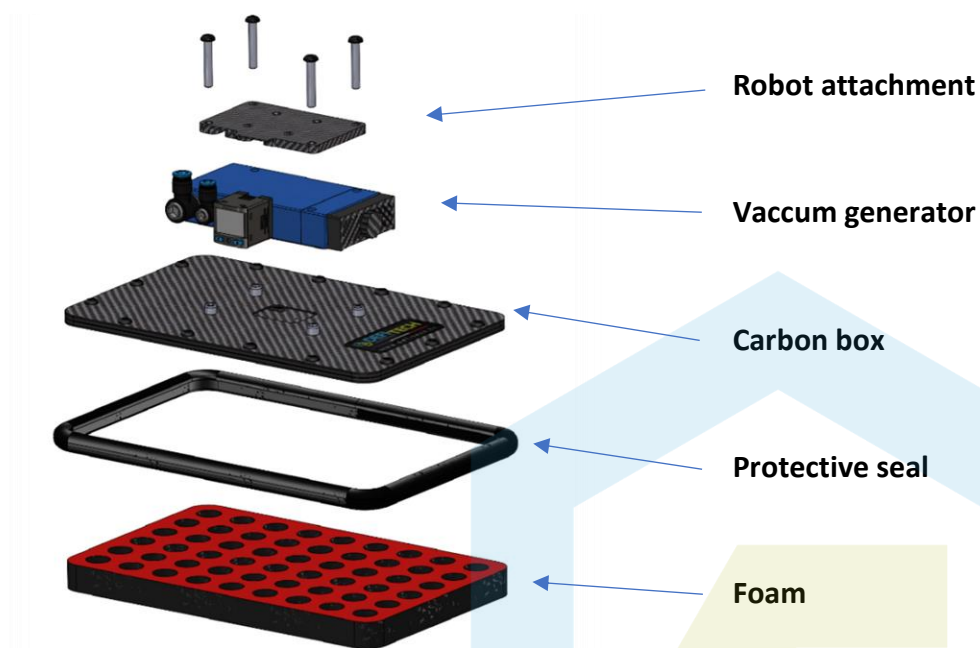
The **DEFITECH Flexi Carbon Gripper** is the lightest and most efficient suction gripper on the market thanks to its patented all-carbon design.

It is perfectly suited to integration on your robots or cobots, but also on your automated or manual manipulators

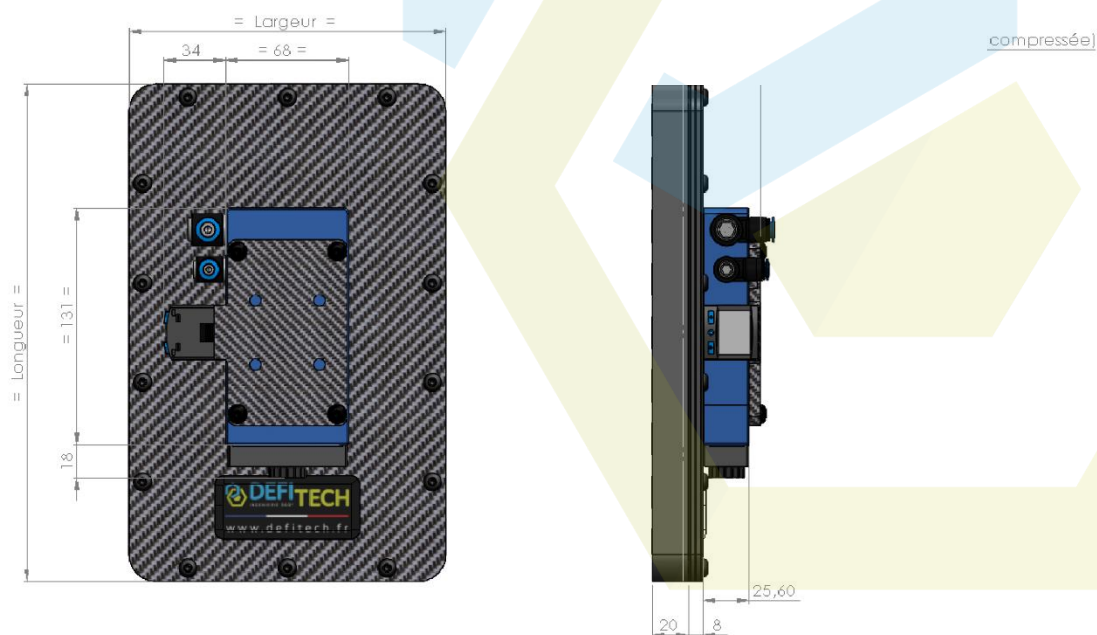
Product reference :

FCG	-	VULDM	-	SC	-	23S	-	M6	-	w x L
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Product composition :



Product size :

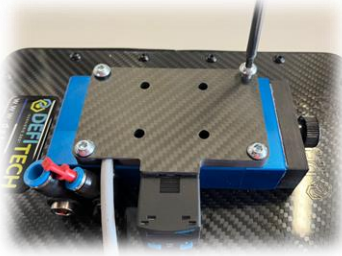


Assembly :

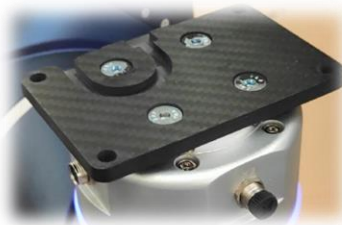
Our grippers are delivered ready to mount on your cobot or robot :

As standard carbon mounting flange for interface adapted to your robot

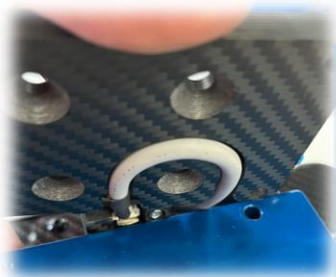
- 1) Interface disassembly : 4 screw TBHC M6x35, Allen key 4



- 2) Interface mounting on robot : 4 screw provided FHC M6x12 or M6x16 according to your robot, Allen key 4

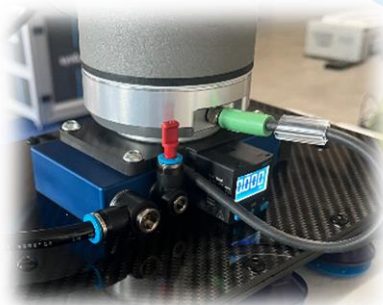


- 3) Passage of the electrical cable in the machined groove



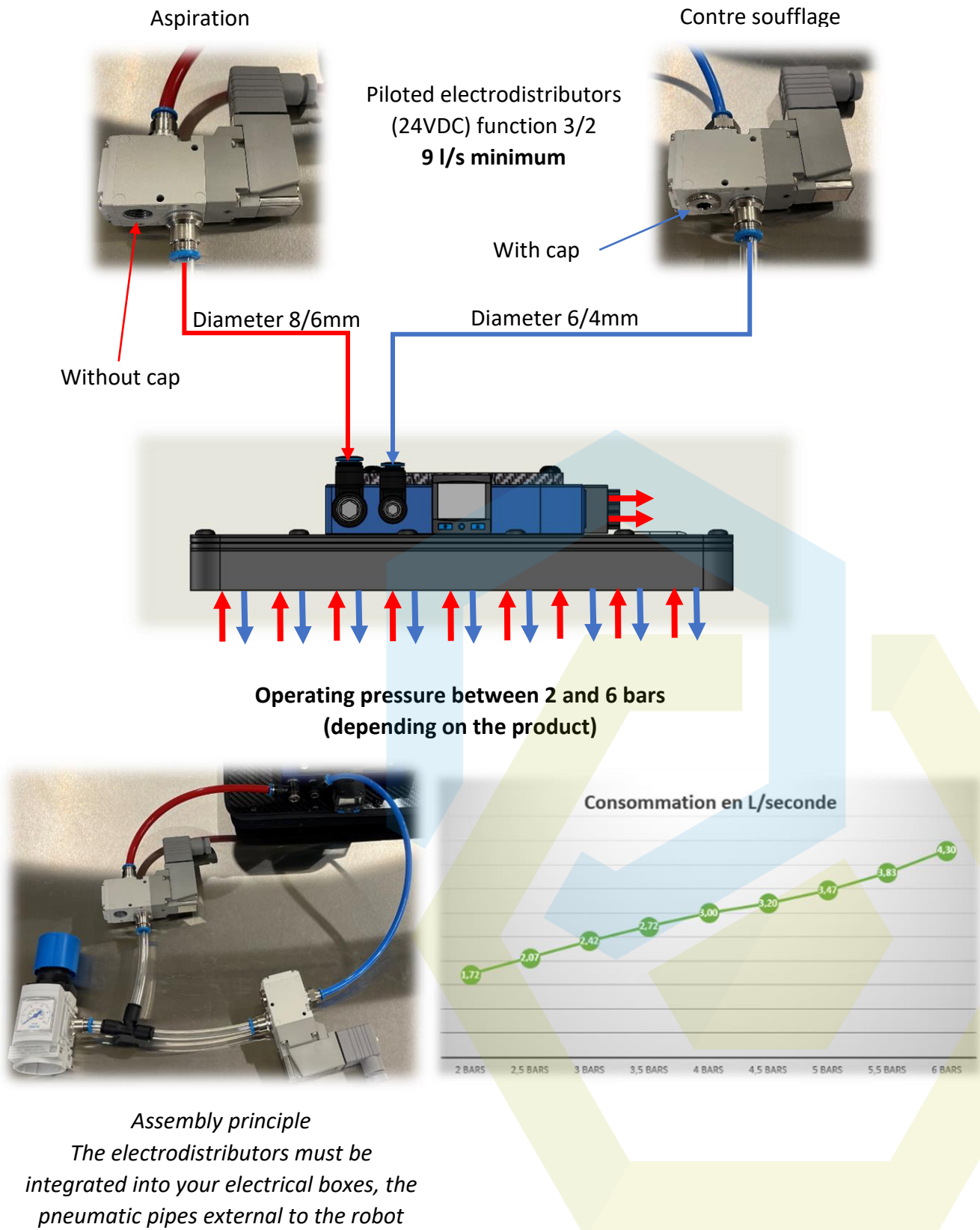
- 4) Reassembly of gripper on interface : 4 screw M6x35, Allen key 4

- 5) Electrical cable connection to robot connector or others



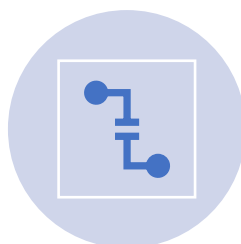
Gripper use (pneumatic part) :

Our grippers are controlled by external electro distributors (suction and counter-blowing) which can or can not be supplied by Défitech depending on your needs :



Gripper use (electrical part) :

FESTO Span pressure measuring sensor :



The sensor measures a pneumatic pressure value. It can be configured to monitor a threshold value. When the threshold value is reached, the sensor gives information to the robot that the product is being gripped by the gripper.

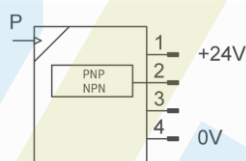
When receiving the gripper, the sensor is not adjusted. The adjustment procedure is explained in the sensor instructions. The setting depends on your needs.

The threshold adjustment value depends on the product being gripped, but to ensure quality gripping, it must be at least **between -275 and -300 mbar**.

The configuration is done directly on the sensor, refer to its instructions : [SPAN-B operating-instr 2023-04b 8185238f1.pdf \(festo.com\)](https://www.festo.com/8185238f1.pdf)

An option is possible on the gripper to have an analog version of the threshold adjustment.

Electrical connection depending on the version :



connexion vacuostat

DEFITECH (standard)	M8 connector 4 male poles		2 : Vacuum switch signal output PNP/NPN 1 : +24V 4 : GND / 0V
UR	M8 connector 8 female poles		5 : Vacuum switch signal output PNP/NPN 2 : +24V 1 : GND / 0V
DOOSAN	M8 connector 8 male poles		1 : Vacuum switch signal output PNP/NPN 5 : +24V 8 : GND / 0V
FANUC CRX	M8 connector 8 female poles		4 : Vacuum switch signal output PNP/NPN 5 : +24V 8 : GND / 0V

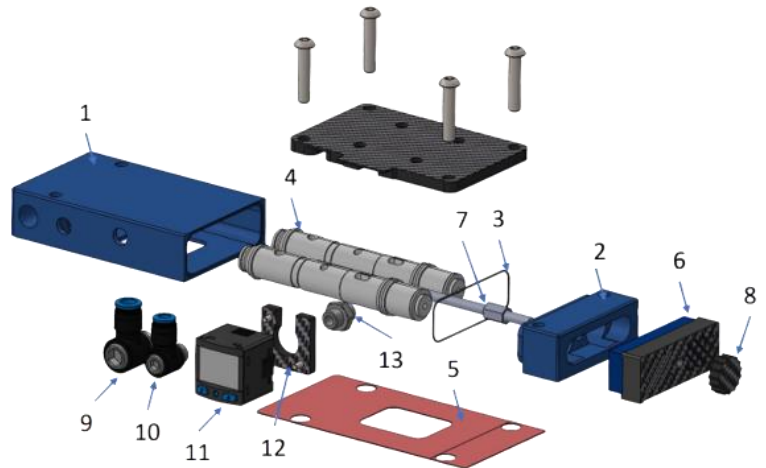
For any other connection, request the wiring plan from the Défitech office

Preventive maintenance :

In the event of loss of suction efficiency of the gripper on your products, you can check the vacuum level on the pressure sensor by vacuuming a waterproof, smooth and clean plate (sheet metal, wooden panel). **The vacuum level reached must be around -800mbar.** If this is not the case, check the silent filter (6), the wear of the foam and the air flow rate in the gripper.

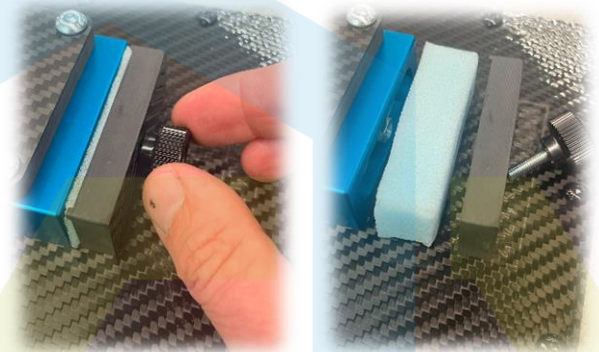
Défitech vaccum box spare parts :

- 1 : Principal box
- 2 : Output box
- 3 : Tor seal box
- 4 : Venturi cartridge DEFITECH
- 5 : Box flat seal
- 6 : Silent filter
- 7 : Clamping screw
- 8 : Scroll wheel
- 9 : Elbow air connection 1/4 - D8
- 10 : Elbow air connection 1/8 - D6
- 11 : Pressure sensor FESTO
- 12 : Pressure sensor flange
- 13 : Pressure sensor connection 1/8



Silent filter cleaning :

- Unscrew the scroll wheel (8) without tools
- Take out the filter (6) and clean it : replace it if necessary
- Manually activate the suction for a few seconds to clean the venturi cartridges (4). **Be careful to wear hearing protection for this operation.**
- Reassemble the filter and the scroll wheel without tools



Operation to be carried out as often as possible to maintain the efficiency of the system.

Changing the foam : https://youtu.be/1-XHh_-9ok4

DEFITECH has developed a specific double-sided adhesive which does not leave glue residue when removed :

- Remove foam by pulling from one corner.
- A wipe of a cloth is enough to clean the carbon plate : no need for solvents or other products.
- Remove the protection from the double side of the new foam and stick it, respecting the centering.
- Press the assembly manually onto a flat and clean surface.
- Immediate restart of the gripper possible.

