



# Bakery SoftGripper

- Hygienic Food Handling
- Packed and Unpacked Food
- High Speed Pick and Place
- Dough, Buns, Baguettes, Bread

Gripper Type	6 Finger Parallel SoftGripper
Product No.	SG.IN.P.F6.S60.A67.D15
Gripper Weight	0,6 kg
Hygienic Design	yes
Picking Rate	up to 60 picks/min
Gripping Object Size	4 cm - 10 cm
Gripping Object Weight	up to 0,6 kg

## Automation in food processing industry

Industrial automation in bakeries must be handled case by case. There are multiple factors that influence how to approach automation. The size of the company is a relevant factor. While almost all processes are automated in large factories, a lot is still done by hand in smaller bakeries. But this will change. Inexpensive collaborative robots that are easy to program allow even smaller companies to automate handling processes. SoftGrippers are particularly suitable for this, as they are just as easy to operate, safe and universally applicable. The following are just a few examples of companies that have already used SoftGrippers for handling processes.

### Frozen dough and buns

The standard mode of handling is in cold environments to not break the cooling chain. In that case, the settings of the pressure are not as important. Simply make sure that the size of the gripper more or less fits the size of produce. A slightly higher pressure is ok. Even with dough that you would consider to be soft, you would not get gripping marks. Even a slightly lower temperature makes dough a good material to handle.

### Room temperature dough

Room temperature dough starts to be more of a challenge. It is soft and must be handled with care. Our recommendation: Make use of the surface you have. A couple more fingers and a lower gripping pressure is what you need to achieve consistent results.

### Bread and buns

On to higher temperatures we go! From placing buns on trays to baked produce that needs to be taken of the tray. A question that we get is about temperature resistance of the rubbers we use and how contact with hot surfaces can affect the life expectancy of the fingers. We are testing our fingers for 10 million cycles at room temperature, but the material we use is rated for higher temperatures including those reached in cooling lines of bakeries. On top, the contact surface is thick enough

so the contact is not made with the mechanical parts of the finger itself. So go ahead and grip the hot breadcrust for fresh packaging.

### Small cakes

Cakes come where fingers touch the surface or when a wrapper is covering the cake. In both cases the grippers can be used. Icing or chocolate on top will not be a problem, we know that from handling chocolates. But make sure to adjust pressure settings to 0.7-0.6 bar and use the surface area you have.

### Sensitive products

Dough cookies and even chocolate-coated marshmallow treats, German "Schokokuss" are viable applications. Usually, it is best to analyse your product to see where the optimal gripping surface will be. In the second product for example, it will be the base made from hard waffle. But that is not always an option. 4 fingers using 0.5-0.6 bar of pressure will make sure not to leave gripper marks on them. To adjust spacing of a gripper will make sure the curvature of the closed fingers is adjusted do maximize surface area. It starts to matter more the faster your application gets.

### Packing and packaged products

Besides primary packaging of single or bulk products, there are a lot of applications where those have to be placed e.g. into cartonnage. Here you need a gripper that adjusts to the amorphous shape and what is more: adjust to the changes that occur in gripping and that are caused by the motion force. Netted products are not as common for bread. That's great because it means that suction cups can be used with plastic packaging. How can that be possible? Usually, suction cups are a sub optimal choice for not uniform bags of products: You never know when you have reached the bag and need a sophisticated process to make sure you gripped the product. But with the help of the fingers, products and packaging is centered and pushed upwards to the suction cups that can now attach for stabilization. A perfect combination!







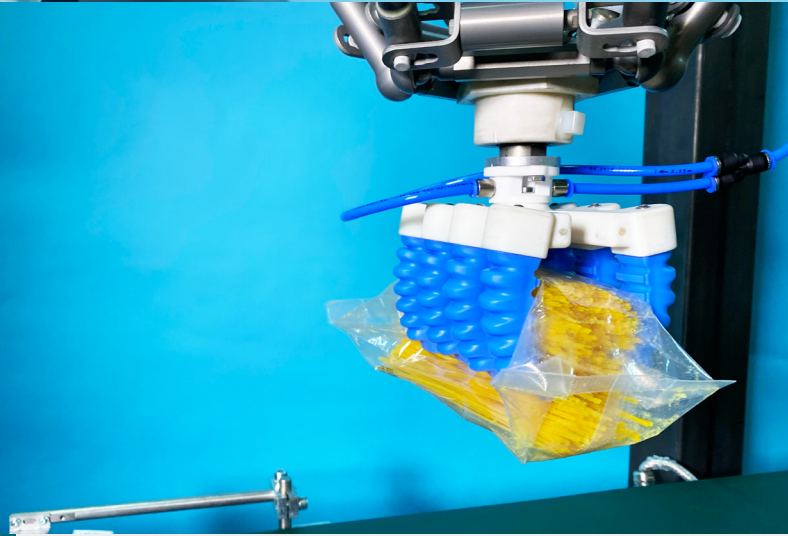
## Buns, Burger and Rolls

Gripper Type	4 Finger Centric SoftGripper
Product No.	SG.IN.C.F4.S60.A70.D15
Gripper Weight	0,2 kg
Hygienic Design	yes
Picking Rate	up to 20 picks/min
Gripping Object Size	4 cm - 10 cm
Gripping Object Weight	up to 0,4 kg
Possible Extension	Spacer
Pressure	0,6 bar



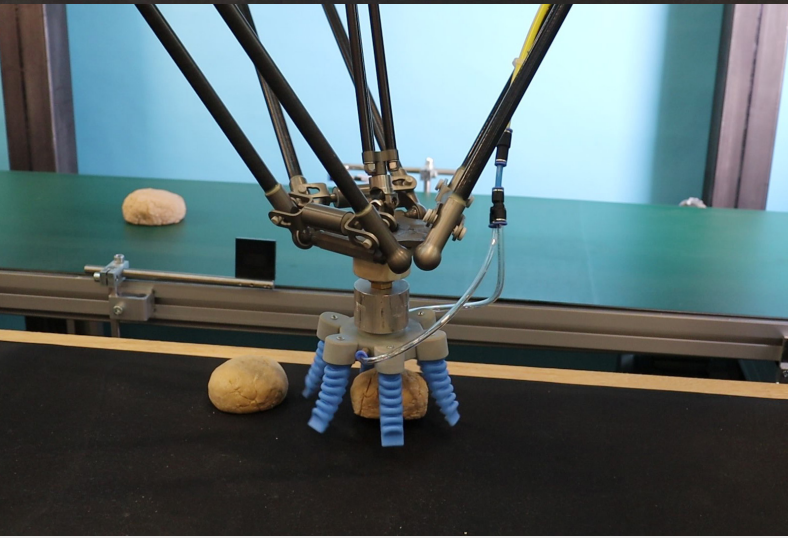
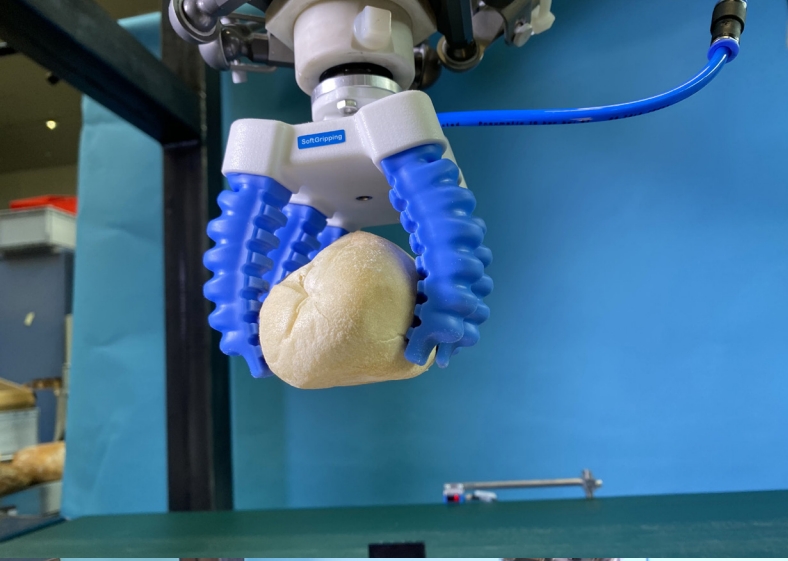
## Cookies, Biscuits and Cracker

Gripper Type	3 Finger Centric SoftGripper
Product No.	SG.IN.C.F3.S60.A30.D0
Gripper Weight	0,2 kg
Hygienic Design	yes
Picking Rate	up to 20 picks/min
Gripping Object Size	1 cm - 6 cm
Gripping Object Weight	up to 0,3 kg
Possible Extension	Spacer
Pressure	0,2 bar



## Packaged Noodles and Salt Sticks

Gripper Type	8 Finger Parallel SoftGripper
Product No.	SG.IN.P.F8.S60.A70.D10
Gripper Weight	0,6 kg
Hygienic Design	yes
Picking Rate	up to 60 picks/min
Gripping Object Size	5 cm - 20 cm
Gripping Object Weight	up to 1,0 kg
Possible Extension	Spacer, Baffle
Pressure	1,0 bar



## Rolls, Baguettes and Sandwichs

Gripper Type	6 Finger Parallel SoftGripper
Product No.	SG.IN.P.F6.S60.A67.D15
Gripper Weight	0,6 kg
Hygienic Design	yes
Picking Rate	up to 60 picks/min
Gripping Object Size	4 cm - 10 cm
Gripping Object Weight	up to 0,6 kg
Possible Extension	Spacer, Baffle
Pressure	0,8 bar

## Dough and Bread Rolls

Gripper Type	6 Finger Centric SoftGripper
Product No.	SG.IN.C.F6.S60.A100.D10
Gripper Weight	0,6 kg
Hygienic Design	yes
Picking Rate	up to 60 picks/min
Gripping Object Size	4 cm - 15 cm
Gripping Object Weight	up to 0,6 kg
Possible Extension	Spacer, Baffle
Pressure	0,9 bar