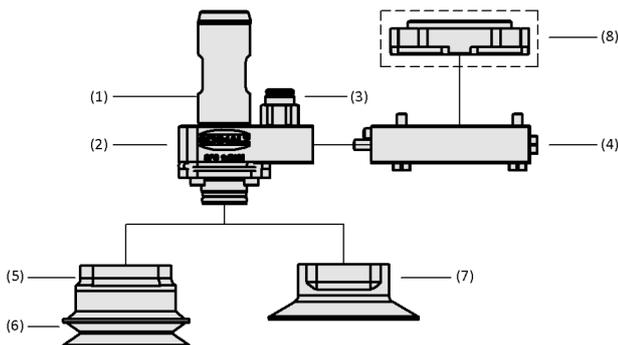


# Flow Grippers for Food SFG

Suction rate from 270 l/min to 650 l/min



Flow Grippers for Food SFG



System design Flow Grippers for Food SFG



Flow grippers SFG when handling cookies

## Suitability for industry specific applications

### Application

- Modular, compact gripper for handling dry food even with high leakage
- Contact element made of FDA compliant material for direct contact with dry food
- Handling of sensitive food products with minimal surface pressure
- Handling of e.g. waffles or cookies with highly structured surfaces
- Complete gripper in hygienic design made of food safe materials

### Design

- Basic modul (2) made of FDA compliant materials with integrated compressed air vacuum generation for lateral mounting
- Compressed air connection (suction) (3)
- Exhaust pipe (1)
- Suction cup connector made of FDA compliant plastics (5)
- Suction cup (6) made of silicone (SI-HD) with large shaft diameter for high flow rates; suction area (7)
- Adapter for mounting to horizontal surfaces (4) and robot flanges (8)

### Product highlights

- Compact and lightweight design and high suction capacity for highly dynamic processes
- Effective damping and sealing of structured workpieces when placed on surfaces thanks to soft, flexible sealing lip
- Food-safe materials enable handling of bakery goods and sweets
- Easy cleaning due to hygienic design
- High system availability thanks to suction cup removal without tools

# Flow Grippers for Food SFG

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## Designation code Flow Grippers for Food SFG

<b>SFG</b>	–	<b>1xE100</b>	–	<b>MS</b>	–	<b>AR</b>	–	<b>M4-IG</b>
1		2		3		4		5

### 1 – Abbreviated designation

Code	Version
SFG	SFG

### 2 – Performance class of ejector

Code	Performance class of ejector
1xE100	1xE100

### 3 – Possibility for mounting

Code	Possibility for mounting
MS	Mounting sideways

### 4 – Design

Code	Type
AR	Controlled exhaust air axial

### 5 – Mounting connection

Code	Connection
M4-IG	M4-IG (IG = female (F))

The flow gripper for food products SFG is delivered as a single component (without suction area/suction cup). To receive the complete gripper, the following ordering steps are required:

- Flow gripper for food products SFG
- Contact element of type SAUG-FL/SAUG-SFG – available in different sizes

## Ordering data Flow Grippers for Food SFG

Type	Part no.
SFG 1xE100 MS AR M4-IG	10.01.30.00911

## Ordering data Accessories Flow Grippers for Food SFG

Type		Part no.
Suction cup (round)	SAUG-SFG 20 SI-HD-65 B	10.01.30.01141
Suction cup (round)	SAUG-SFG 20 SI-MD-55 B	10.01.30.01142
Suction cup (round)	SAUG-SFG 30 SI-HD-65 B	10.01.30.01143
Suction cup (round)	SAUG-SFG 30 SI-MD-55 B	10.01.30.01144
Suction cup (round)	SAUG-SFG 40 SI-HD-65 B	10.01.30.01145
Suction cup (round)	SAUG-SFG 40 SI-MD-55 B	10.01.30.01146
Suction cup (round)	SAUG-SFG 50 SI-HD-65 B	10.01.30.01147
Suction cup (round)	SAUG-SFG 50 SI-MD-55 B	10.01.30.01148

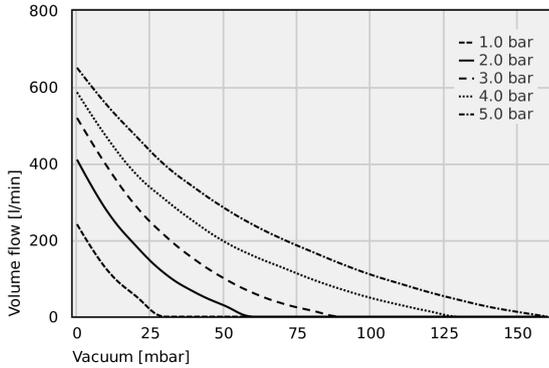
## Technical data Flow Grippers for Food SFG

Type	Operating pressure	Operating temperature	Weight [g]
SFG 1xE100 MS AR M4-IG	1.0 ... 5.0 bar	5 ... 75 °C	108

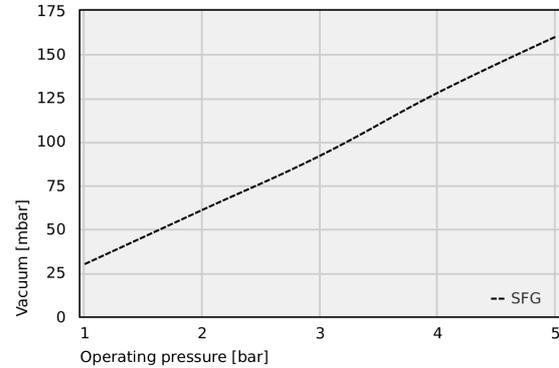
# Flow Grippers for Food SFG

Suction rate from 270 l/min to 650 l/min

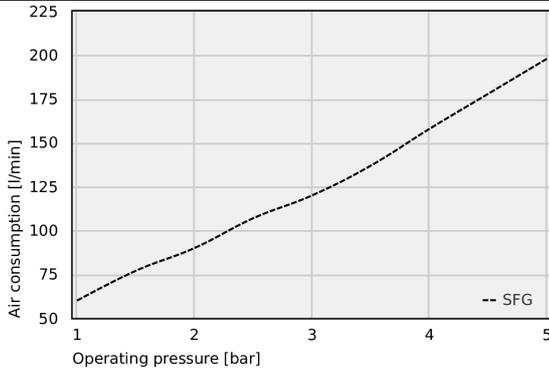
## Performance data Flow Grippers for Food SFG



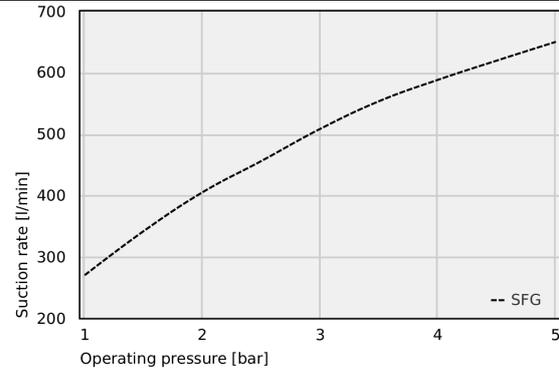
Flow rate at various degrees of evacuation



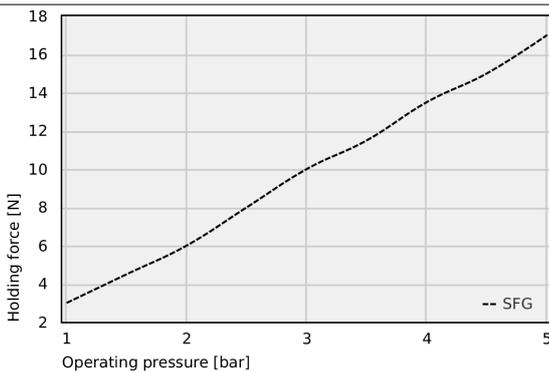
Achievable vacuum at various operating pressures



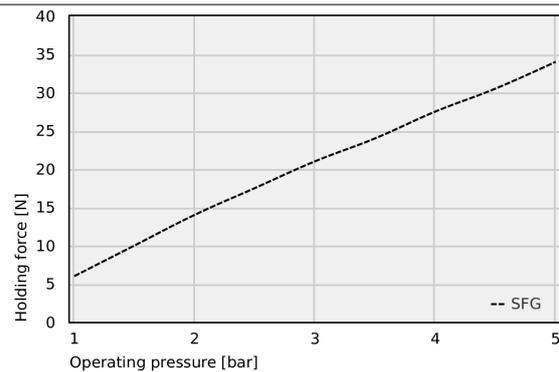
Air consumption



Suction rate at different operating pressures



Holding force with suction area 40 at various operating pressures (measured on a suction-tight workpiece)



Holding force with suction area 60 at various operating pressures (measured on a suction-tight workpiece)

## Flow Grippers for Food SFG

Suction rate from 270 l/min to 650 l/min

### Flow rate at various degrees of evacuation

Typ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
1.0 bar	241.0	124.1	53.6	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0 bar	410.0	277.9	185.1	111.7	63.8	29.2	0.0	-	-	-	-	-	-	-	-	-	-
3.0 bar	519.0	394.6	289.0	210.8	149.2	99.9	61.5	34.0	15.4	0.0	-	-	-	-	-	-	-
4.0 bar	586.0	469.7	373.0	305.5	246.9	196.4	158.6	127.8	97.3	71.2	48.7	30.3	13.6	0.0	-	-	-
5.0 bar	650.0	554.1	472.0	395.2	336.5	284.2	239.5	202.1	169.3	137.6	109.4	85.8	63.2	43.5	25.7	12.1	0.0

### Achievable vacuum at various operating pressures

Typ	1	2	3	4	5
SFG	30.0	61.0	92.0	128.0	160.0

### Air consumption

Typ	1	1.5	2	2.5	3	3.5	4	4.5	5
SFG	60.00	77.00	90.00	107.00	120.00	137.00	158.00	178.00	198.00

### Suction rate at different operating pressures

Typ	1	1.5	2	2.5	3	3.5	4	4.5	5
SFG	270.00	341.73	405.00	455.98	508.32	553.42	588.20	619.58	650.00

### Holding force with suction area 40 at various operating pressures (measured on a suction-tight workpiece)

Typ	1	1.5	2	2.5	3	3.5	4	4.5	5
SFG	3.00	4.50	6.00	8.00	10.00	11.50	13.50	15.00	17.00

### Holding force with suction area 60 at various operating pressures (measured on a suction-tight workpiece)

Typ	1	1.5	2	2.5	3	3.5	4	4.5	5
SFG	6.00	10.00	14.00	17.50	21.00	24.00	27.50	30.50	34.00

### Design data Flow Grippers for Food SFG

Type	B [mm]	D [mm]	d [mm]	D1 [mm]	G1	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
SFG 1xE100 MS AR M4-IG	25	18	6	20.5	M4-F	66.4	76.9	20.2	12.7

Type	H4 [mm]	H5 [mm]	L [mm]	L2 [mm]	L3 [mm]	L4 [mm]	SW1	X1 [mm]
SFG 1xE100 MS AR M4-IG	5.2	34.7	53	36	13	35	17	15