



DATA SHEET COLLECTION

SoftGripper, Softgripper – Developer, Control Box

Every Soft-Gripping product has a data sheet. Here we present a collection of all available data sheets, so you can pick a product that picks your product perfectly.

Introduction

Looking for grippers that perfectly fit your industrial needs? Haven't heard about SoftGripping yet? Well, it's about time!

Assemble individual grippers or multi-actuator-systems with SoftGripping. The pneumatically driven, elastic actuators allow simple, robust and lightweight designs. The soft and adaptive surfaces are ideal for robust gripping and safe collaboration with humans - an ideal basis for service-robotics and agile automation.

SoftGrippers are suitable especially for food handling and logistics applications for a diversity of products in changing conditions. They fit the requirements of ideal logistics gripper: universally applicable, simple and durable.

SoftGripping offers three product lines for your need:

SoftGripper – Built from one piece, you can switch fingers and adapter for the specific robot. Angle and base remain unchangeable – made for the selected gripping purpose.

SoftGripper Developer - For a wider range of different gripping products. Both angle adapters and connector to the robot can be rearranged. Made for experimentation or changing requirements.

SoftGripper EoAT - You can easily use SoftGripping fingers directly in your EoAT setup. Use the special adapter and fingers separately or chose a complete EoAT-Kit.

To control the grippers, you can use your accustomed setup, or our **Control Box** that can manage fingers and a suction cup separately.

We're happy to provide you with further information. Please feel free to contact us:

Mail: info@soft-gripping.com

Web: soft-gripping.com ; soft-gripping.shop

Let's find the perfect solution for your individual gripping needs.

2 Finger Parallel SoftGripper

Cone Angle 60°, 75° & 90°



Connector	60° Cone Angle	75° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.2P.60D.31	 SG.2P.75D.31	 SG.2P.90D.31
ISO 9409-1-40-4-M6	 SG.2P.60D.40	 SG.2P.75D.40	 SG.2P.90D.40
ISO 9409-1-50-4-M6	 SG.2P.60D.50	 SG.2P.75D.50	 SG.2P.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 200 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 200 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 200 g



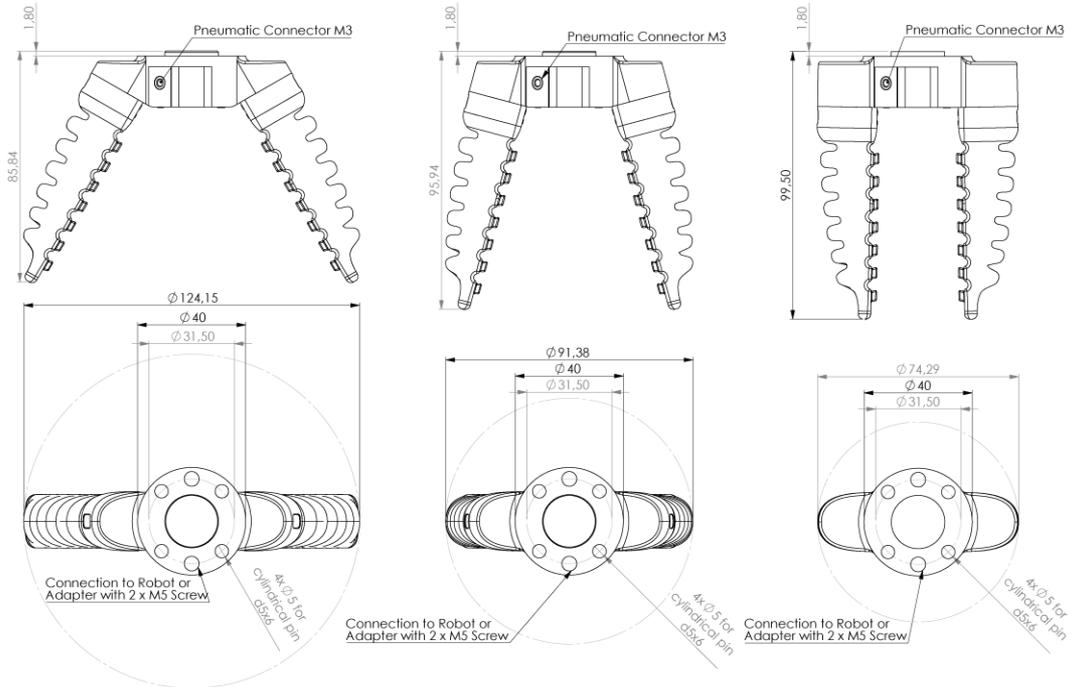
2 x Finger Shore A60
side60S



1 x Vacuum Suction Cup
(optional accessory)

2 Finger Parallel SoftGripper

Cone Angle 60°, 75° & 90°



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 60° 75° 90°	85,84 95,94 99,50 mm
Total Diameter 60° 75° 90°	124,15 91,38 74,29 mm
Mass	143 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

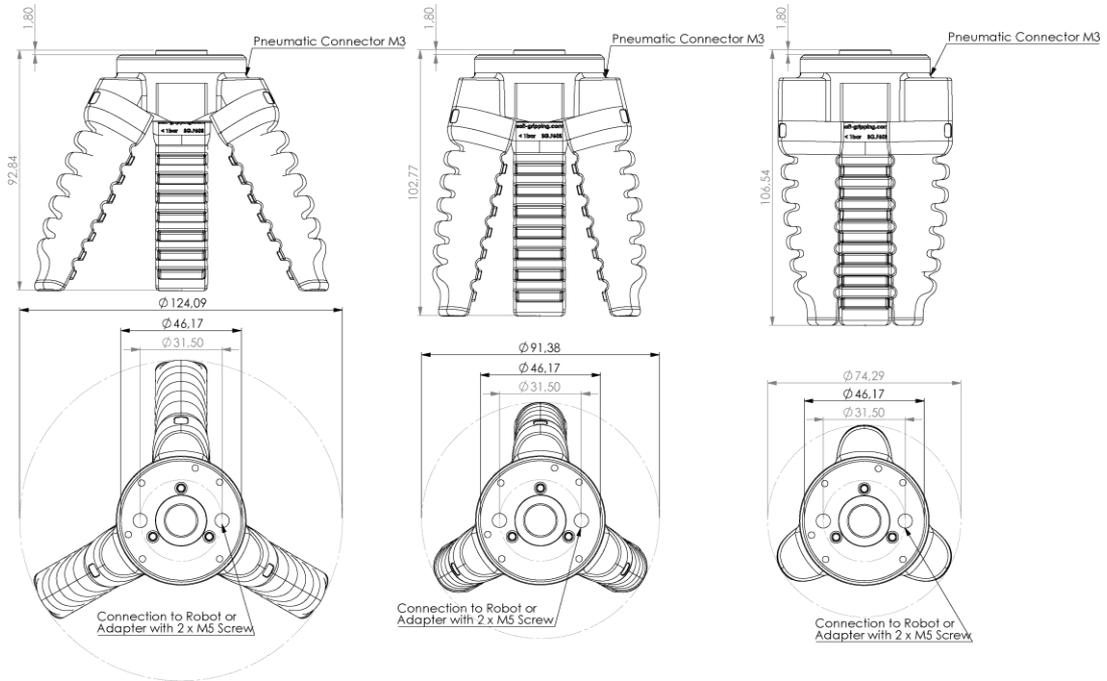
Connector	60° Cone Angle	75° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.3C.60D.31	 SG.3C.75D.31	 SG.3C.90D.31
ISO 9409-1-40-4-M6	 SG.3C.60D.40	 SG.3C.75D.40	 SG.3C.90D.40
ISO 9409-1-50-4-M6	 SG.3C.60D.50	 SG.3C.75D.50	 SG.3C.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 300 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 300 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 300 g



3 x Finger Shore A60
SG.F60S



1 x Vacuum Suction Cup
(optional accessory)



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 60° 75° 90°	92,84 102,77 106,54 mm
Total Diameter 60° 75° 90°	124,09 91,38 74,29 mm
Mass	242 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

4 Finger Centric SoftGripper

Cone Angle 60°, 75° & 90°



Connector	60° Cone Angle	75° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.4C.60D.31	 SG.4C.75D.31	 SG.4C.90D.31
ISO 9409-1-40-4-M6	 SG.4C.60D.40	 SG.4C.75D.40	 SG.4C.90D.40
ISO 9409-1-50-4-M6	 SG.4C.60D.50	 SG.4C.75D.50	 SG.4C.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 400 g



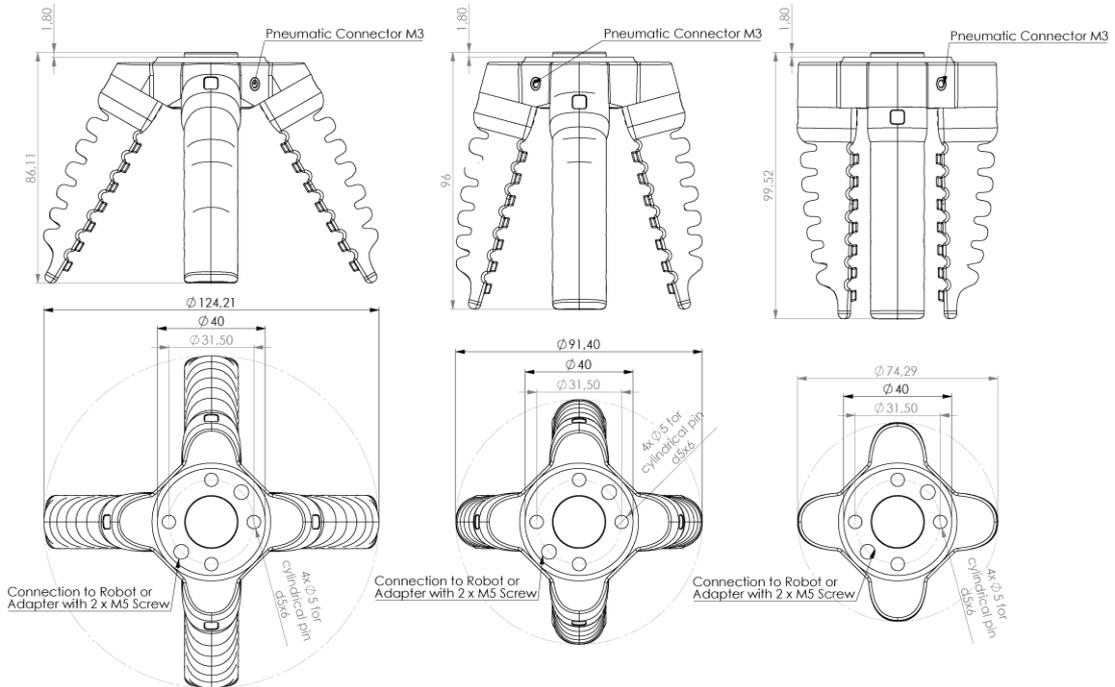
4 x Finger Shore A60
SG.F60S



1 x Vacuum Suction Cup
(optional accessory)

4 Finger Centric SoftGripper

Cone Angle 60°, 75° & 90°



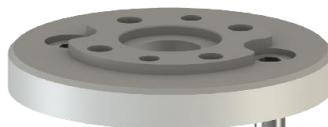
Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 60° 75° 90°	68,11 96,00 99,52 mm
Total Diameter 60° 75° 90°	124,21 91,40 74,29 mm
Mass	383 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17

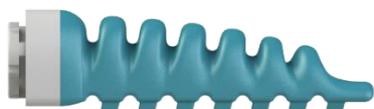


ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

Connector	75° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.4CP.75D.31
ISO 9409-1-40-4-M6	 SG.4CP.75D.40
ISO 9409-1-50-4-M6	 SG.4CP.75D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 400 g

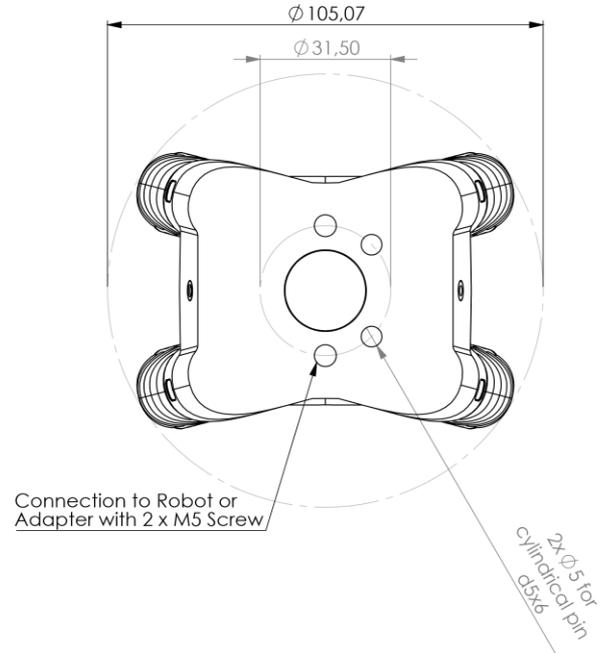
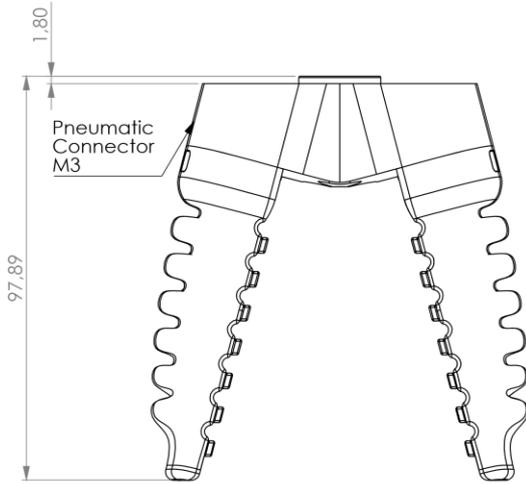


4 x Finger Shore A60
SG.F60S



1 x Vacuum Suction Cup
(optional accessory)

4 Finger Centric Parallel SoftGripper Cone Angle 75°



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height	97,89 mm
Total Diameter	105,07 mm
Mass	383 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

4 Finger Parallel SoftGripper

Cone Angle 60°, 75° & 90°



Connector	60° Cone Angle	75° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.4P.60D.31	 SG.4P.75D.31	 SG.4P.90D.31
ISO 9409-1-40-4-M6	 SG.4P.60D.40	 SG.4P.75D.40	 SG.4P.90D.40
ISO 9409-1-50-4-M6	 SG.4P.60D.50	 SG.4P.75D.50	 SG.4P.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 400 g



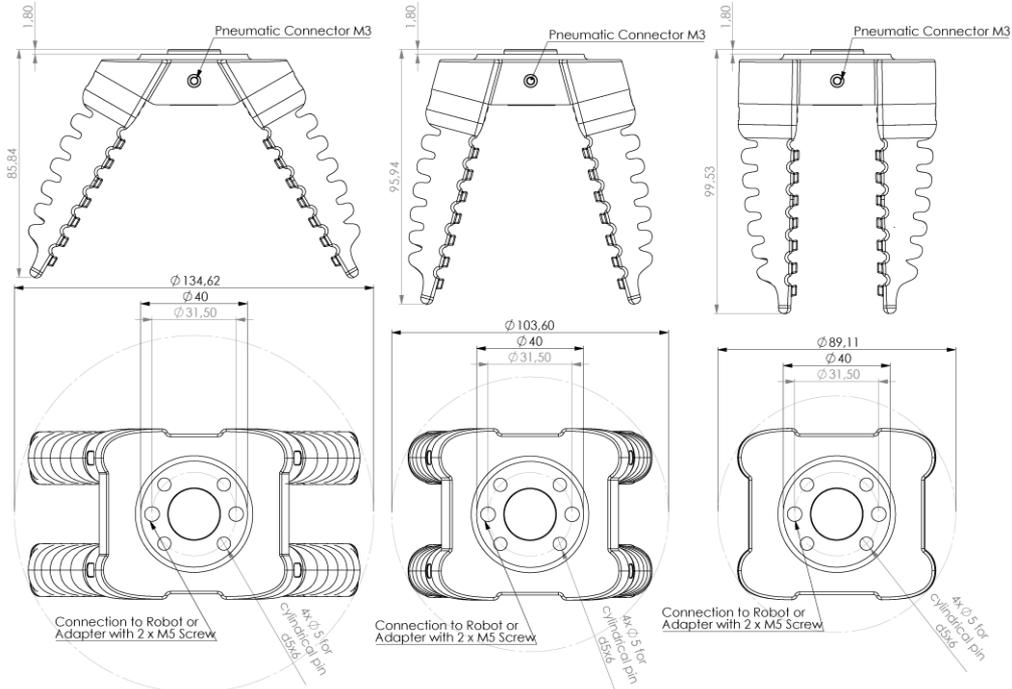
4 x Finger Shore A60
SG.F60S



1 x Vacuum Suction Cup
(optional accessory)

4 Finger Parallel SoftGripper

Cone Angle 60°, 75° & 90°



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 60° 75° 90°	85,84 95,94 99,53 mm
Total Diameter 60° 75° 90°	134,62 103,60 89,11 mm
Mass	383 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

Connector	60° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.8P.60D.31
ISO 9409-1-40-4-M6	 SG.8P.60D.40
ISO 9409-1-50-4-M6	 SG.8P.60D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 800 g



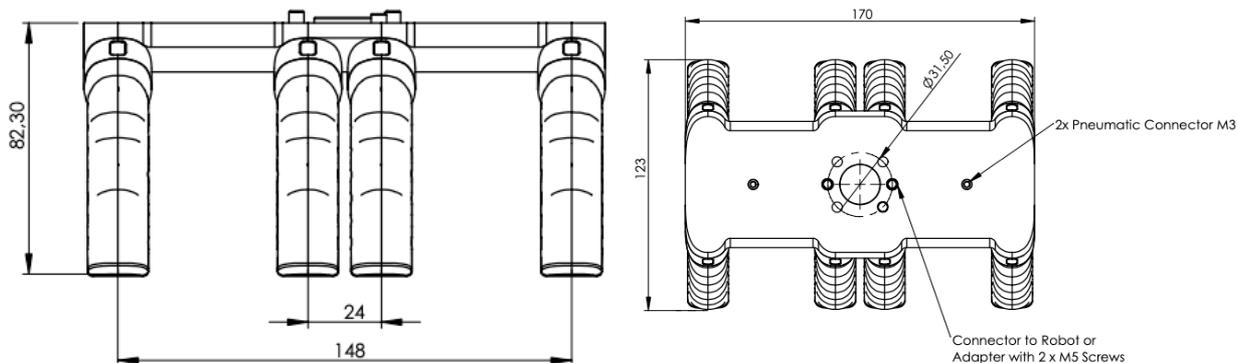
8 x Finger Shore A60
SG.F60S



1 x 8 Finger Base
SG.GB.8F.P.60D.31



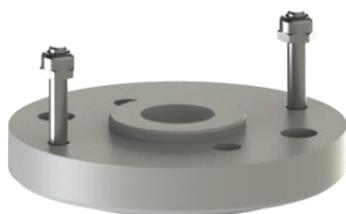
2 x Vacuum Suction Cup
(optional accessory)



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height	82,30 mm
Total Length	170 mm
Total Width	123 mm
Mass	766 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

Connector	30° Cone Angle	60° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.D.2P.30D.31	 SG.D.2P.60D.31	 SG.D.2P.90D.31
ISO 9409-1-40-4-M6	 SG.D.2P.30D.40	 SG.D.2P.60D.40	 SG.D.2P.90D.40
ISO 9409-1-50-4-M6	 SG.D.2P.30D.50	 SG.D.2P.60D.50	 SG.D.2P.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 55 mm – 140 mm • Weight < 200 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 200 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 200 g



2 x Finger Shore A60
SG.F60S



1 x 2 Finger Base
SG.GB.D.2F.30D.31



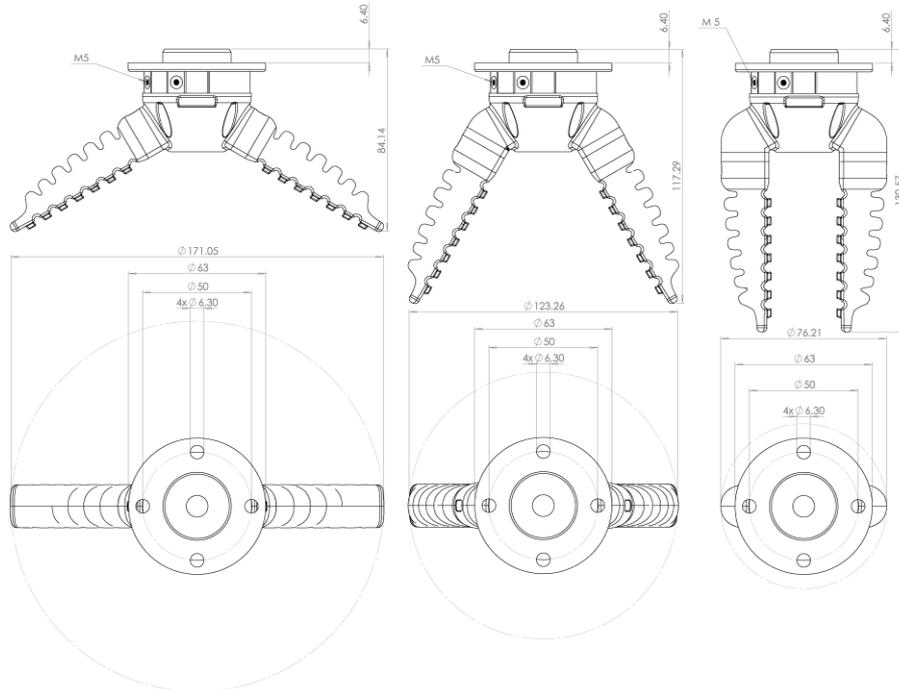
2 x 60° Adapter
(optional)
SG.WA.60D



2 x 90° Adapter
(optional)
SG.WA.90D



1 x Vacuum
Suction Cup
(optional)



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 30° 60° 90°	84,14 117,29 130,57 mm
Total Diameter 30° 60° 90°	171,05 123,26 76,21 mm
Mass	143 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

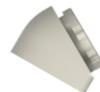
Connector	30° Cone Angle	60° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.D.3C.30D.31	 SG.D.3C.60D.31	 SG.D.3C.90D.31
ISO 9409-1-40-4-M6	 SG.D.3C.30D.40	 SG.D.3C.60D.40	 SG.D.3C.90D.40
ISO 9409-1-50-4-M6	 SG.D.3C.30D.50	 SG.D.3C.60D.50	 SG.D.3C.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 55 mm – 140 mm • Weight < 300 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 300 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 300 g



3 x Finger Shore A60
SG.F60S



1 x 3 Finger Base
SG.GB.D.3F.30D.31



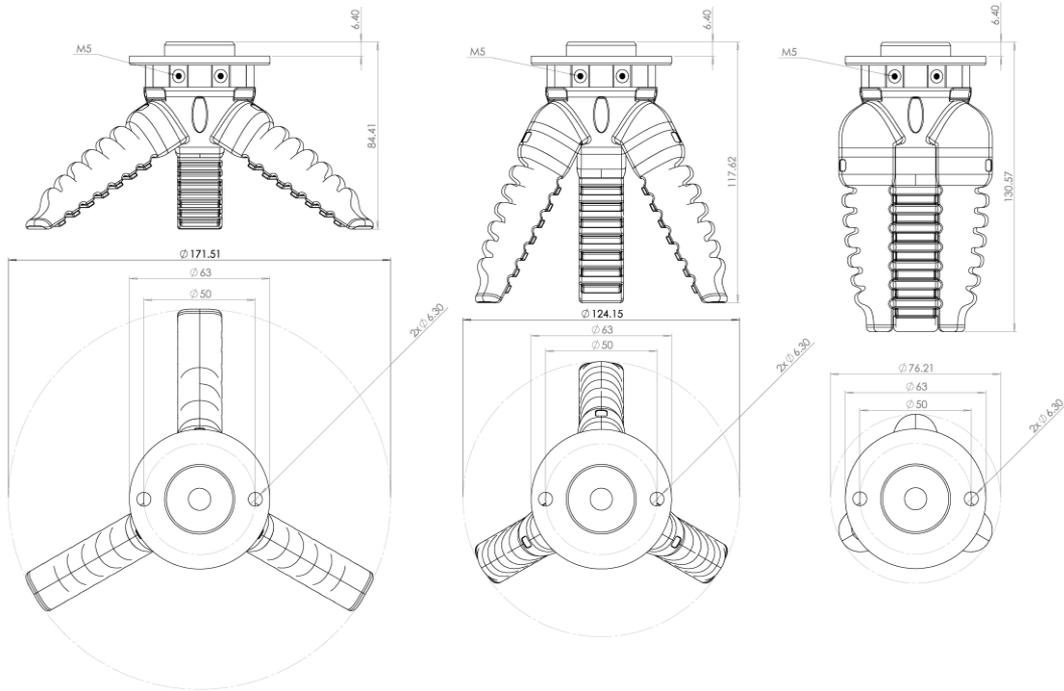
3 x 60° Adapter
(optional)
SG.WA.60D



3 x 90° Adapter
(optional)
SG.WA.90D



1 x Vacuum
Suction Cup
(optional)



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 30° 60° 90°	84,41 117,62 130,57 mm
Total Diameter 30° 60° 90°	171,51 124,15 76,21 mm
Mass	242 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

Connector	30° Cone Angle	60° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.D.4C.30D.31	 SG.D.4C.60D.31	 SG.D.4C.90D.31
ISO 9409-1-40-4-M6	 SG.D.4C.30D.40	 SG.D.4C.60D.40	 SG.D.4C.90D.40
ISO 9409-1-50-4-M6	 SG.D.4C.30D.50	 SG.D.4C.60D.50	 SG.D.4C.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 55 mm – 140 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 400 g



4 x Finger Shore A60
SG.F60S



1 x 4 Finger Base
SG.GB.D.4F.30D.31



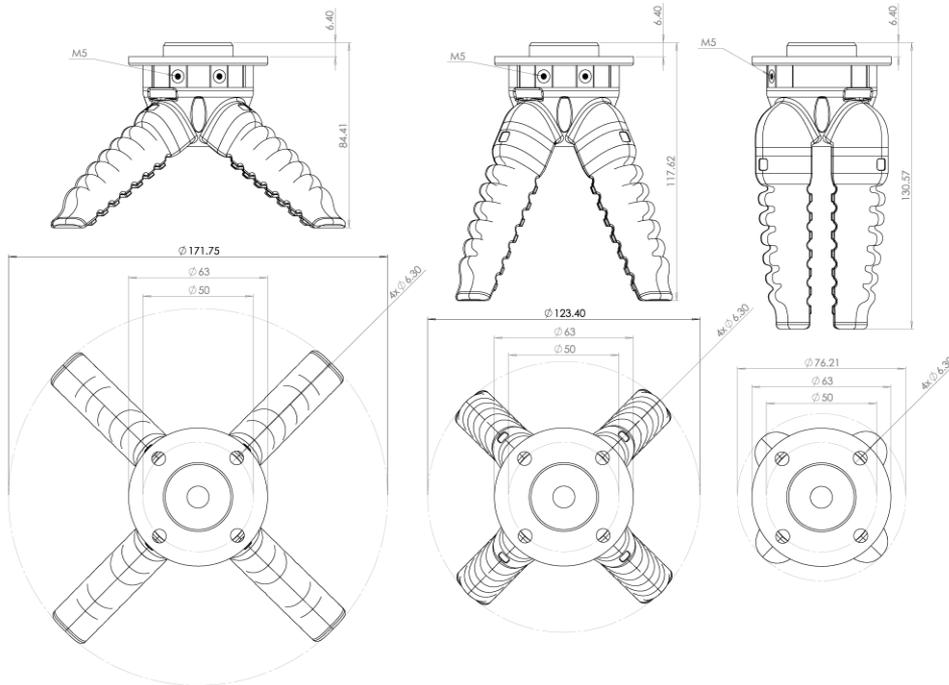
4 x 60° Adapter
(optional)
SG.WA.60D



4 x 90° Adapter
(optional)
SG.WA.90D



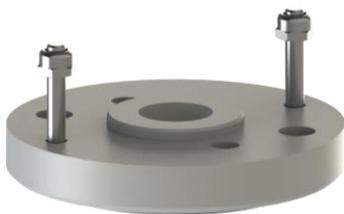
1 x Vacuum
Suction Cup
(optional)



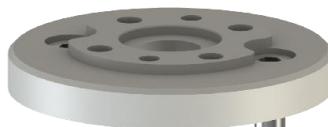
Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 30° 60° 90°	84,41 117,62 130,57 mm
Total Diameter 30° 60° 90°	171,75 123,40 76,21 mm
Mass	383 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

4 Finger Parallel SoftGripper - Developer

Cone Angle 30°, 60° & 90°



Connector	30° Cone Angle	60° Cone Angle	90° Cone Angle
ISO 9404-1-31.5-2-M5	 SG.D.4P.30D.31	 SG.D.4P.60D.31	 SG.D.4P.90D.31
ISO 9409-1-40-4-M6	 SG.D.4P.30D.40	 SG.D.4P.60D.40	 SG.D.4P.90D.40
ISO 9409-1-50-4-M6	 SG.D.4P.30D.50	 SG.D.4P.60D.50	 SG.D.4P.90D.50
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 55 mm – 140 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 15 mm – 115 mm • Weight < 400 g 	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 5 mm – 40 mm • Weight < 400 g



4 x Finger Shore A60
SG.F60S



2 x 2 Finger Base
SG.GB.D.2F.30D.31



1 x Connector
SG.C.2B.31



4 x 60° Adapter
(optional)
SG.WA.60D



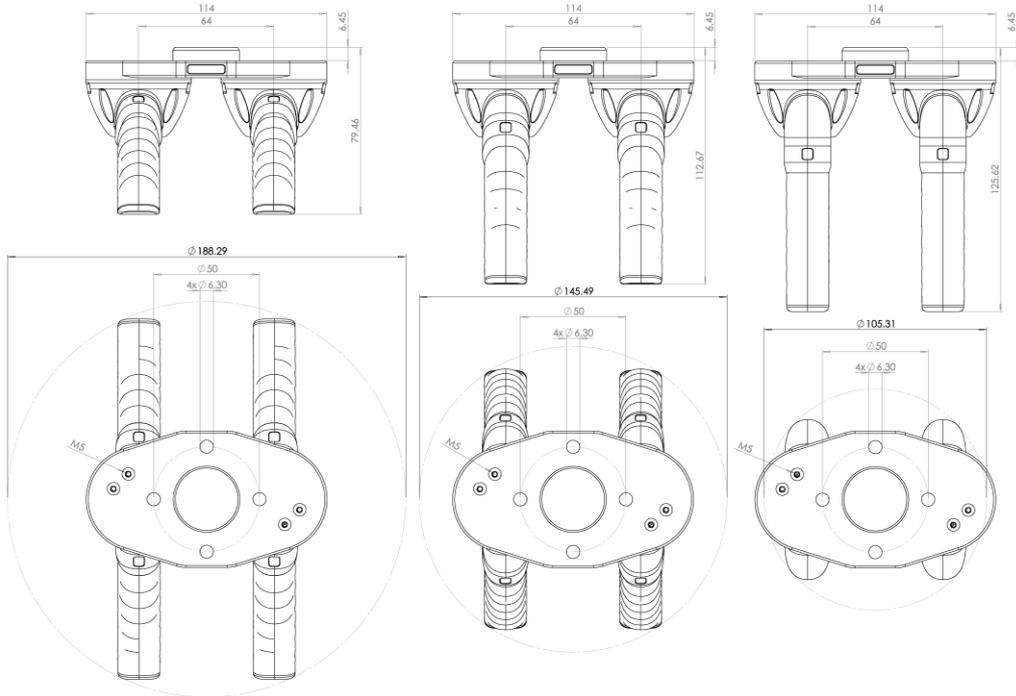
4 x 90° Adapter
(optional)
SG.WA.90D



2 x Vacuum
Suction Cup
(optional)

4 Finger Parallel SoftGripper - Developer

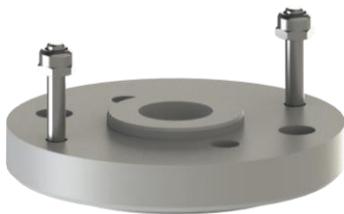
Cone Angle 30°, 60° & 90°



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector ¹	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 30° 60° 90°	79,46 112,67 125,62 mm
Total Diameter 30° 60° 90°	188,29 145,49 105,31 mm
Mass	383 g

¹ Other connectors available, e.g. ISO 9409-1-50-4-M6 for Universal Robots.

Available SoftGripper Adapters



RBTX Delta Robot Connector
SG.C.31.NE.17



ISO 9409-1-40-4-M6 Connector
SG.C.31.40



ISO 9409-1-50-4-M6 Connector
SG.C.31.50

Connector	Adapter
20mm Bosch profile	 SG.C.PR.20

Mounting of End of Arm Tooling – Connector

The adapter is installed to the profile using the bolting provided. The EoAT-Connector is locked by a M4 screw and a slot nut in the profile. The joint to the Finger is a bayonet lock as it is to all SoftGripper platforms.

To replace a Finger, turn it clockwise until you can take it out of the socket. A new one is then put in and turned counterclockwise until a click of the lock is reached.



Every EoAT-Connector is provided with its own port for pneumatics and can therefore be operated separately or in groups by using pneumatic fittings or distributors.



Available SoftGripper Finger and Angle Adapters



Finger Shore A60
SG.F60S



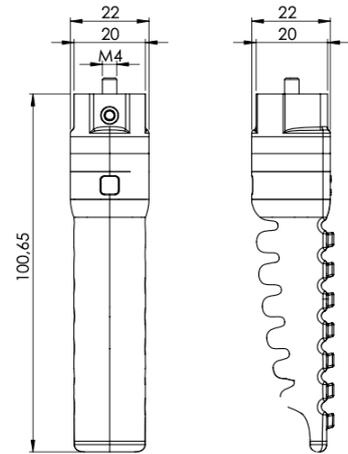
60° Adapter
(optional)
SG.WA.60D



90° Adapter
(optional)
SG.WA.90D

Characteristics of Finger and EoAT Adapters

Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Air Pressure Connection	M3



Use cases





The control box is used to operate any SoftGripper or End of Arm Tooling. On the front, the current pressure can be seen in the pressure indicator and adjusted via knob. On the backside of the device you can find the pressure input and output. The output is controlling the position of the fingers. You can switch between 3 positions: Grip, Release and Relaxed setting the according Signal Connector's pins to high. Setting both, the "Finger Release" and "Finger Grip", respectively pins 1 & 3 to low results in the Relaxed position.

SoftGripper Control Box Specifications

Input Air Pressure Connection	1 x 6 mm outside Ø
Output Pressure Connector	2 x 4 mm outside Ø
Input Pressure	4 to 7 bar
Cycles per Minute	80
Output Pressure	- 0.75 to 2.5 bar
Signal Connector	M12 connector IEC 61076-2-101 8 Pins male
Digital Signal Input	3x 21.6 - 26.4 V DC
Compatible Software	Soft-Gripping UR-Caps
Compatible Hardware	Soft-Gripping Fingers & Suction Cups

Pressure Indicator

Pressure Regulator



Input Pressure

Tubing: outside diameter 6 mm
 Pressure range: 4 to 7 bar

Finger Output

4 mm outside Ø
 - 0.75 to 2.5 bar

Signal Connector

M12 connector IEC 61076-2-101
 Coding: A
 Digital Signal input: 21.6 to 26.4 V DC



Pin Assignment

Pin	Function	Color
1	Finger Release	White
2	GND	Brown
3	Finger Grip	Green
4	NC	Yellow
5	NC	Grey
6	NC	Pink
7	NC	Blue
8	NC	Red

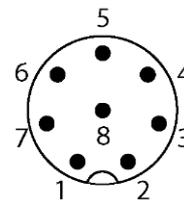


Figure 1: M12 connector male pinout.

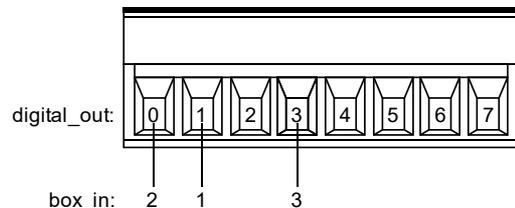


Figure 2: Phoenix connector to box standard configuration pinout.



The control box is used to operate any SoftGripper or End of Arm Tooling. On the front, the current pressure can be seen in the pressure indicator and adjusted via knob. On the backside of the device you can find the pressure input and output. The output is controlling the position of the fingers. You can switch between 2 positions: Grip and Relaxed setting the according Signal Connector's pin to high (Grip) or low (Relaxed).

SoftGripper Control Box Specifications

Input Air Pressure Connection	1 x 6 mm outside Ø
Output Pressure Connector	2 x 4 mm outside Ø
Input Pressure	4 to 7 bar
Cycles per Minute	120
Output Pressure	- 0.75 to 2.5 bar
Signal Connector	M12 connector IEC 61076-2-101 8 Pins male
Digital Signal Input	3x 21.6 - 26.4 V DC
Compatible Software	Soft-Gripping UR-Caps
Compatible Hardware	Soft-Gripping Fingers & Suction Cups

Pressure Indicator

Pressure Regulator



Input Pressure

Tubing: outside diameter 6 mm
 Pressure range: 4 to 7 bar

Finger Output

4 mm outside Ø
 - 0.75 to 2.5 bar

Signal Connector

M12 connector IEC 61076-2-101
 Coding: A
 Digital Signal input: 21.6 to 26.4 V DC



Pin Assignment

Pin	Function	Color
1	NC	White
2	GND	Brown
3	Finger Grip	Green
4	NC	Yellow
5	NC	Grey
6	NC	Pink
7	NC	Blue
8	NC	Red

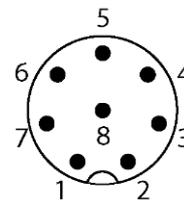


Figure 1: M12 connector male pinout.

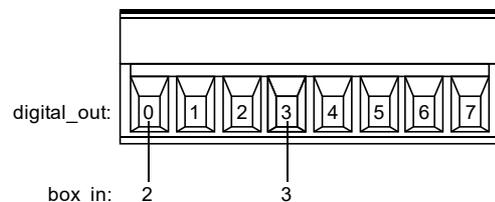


Figure 2: Phoenix connector to box standard configuration pinout.



The control box is used to operate any SoftGripper, End of Arm Tooling or Suction Cup. On the front, the current pressure can be seen in the pressure indicator and adjusted via knob. On the backside of the device you can find the pressure input and two outputs (e.g. Fingers & Suction Cup). The outputs are controlling the position of the fingers. You can switch between 3 positions: Grip, Release and Relaxed setting the according Signal Connector’s pins to high. Setting both, the “Finger Release” and “Finger Grip”, respectively pins 1 & 3 to low results in the Relaxed position. The Suction Cup has two states. When pin 5 is set to high, the Suction Cup is activated, setting pin 5 to low results in a release.

SoftGripper Control Box Specifications

Input Air Pressure Connection	1 x 6 mm outside Ø
Output Pressure Connector	2 x 4 mm outside Ø
Input Pressure	4 to 7 bar
Cycles per Minute	80
Output Pressure	- 0.75 to 2.5 bar
Signal Connector	M12 connector IEC 61076-2-101 8 Pins male
Digital Signal Input	3x 21.6 - 26.4 V DC
Compatible Software	Soft-Gripping UR-Caps
Compatible Hardware	Soft-Gripping Fingers & Suction Cups

Pressure Indicator

Pressure Regulator



Input Pressure

Tubing: outside diameter 6 mm
Pressure range: 4 to 7 bar

Finger Output

4 mm outside Ø
- 0.75 to 2.5 bar

Signal Connector

M12 connector IEC 61076-2-101
Coding: A
Digital Signal input: 21.6 to 26.4 V DC



Suction Cup Output

4 mm outside Ø
- 0.75 to 0 bar

Pin Assignment

Pin	Function	Color
1	Finger Release	White
2	GND	Brown
3	Finger Grip	Green
4	NC	Yellow
5	Suction Cup Active	Grey
6	NC	Pink
7	NC	Blue
8	NC	Red

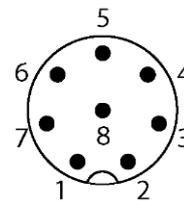


Figure 1: M12 connector male pinout.

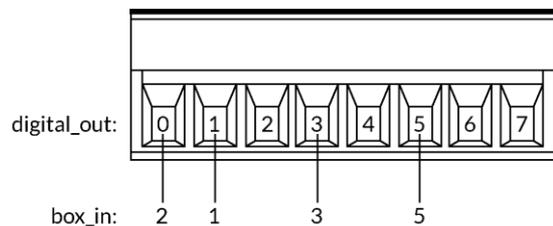
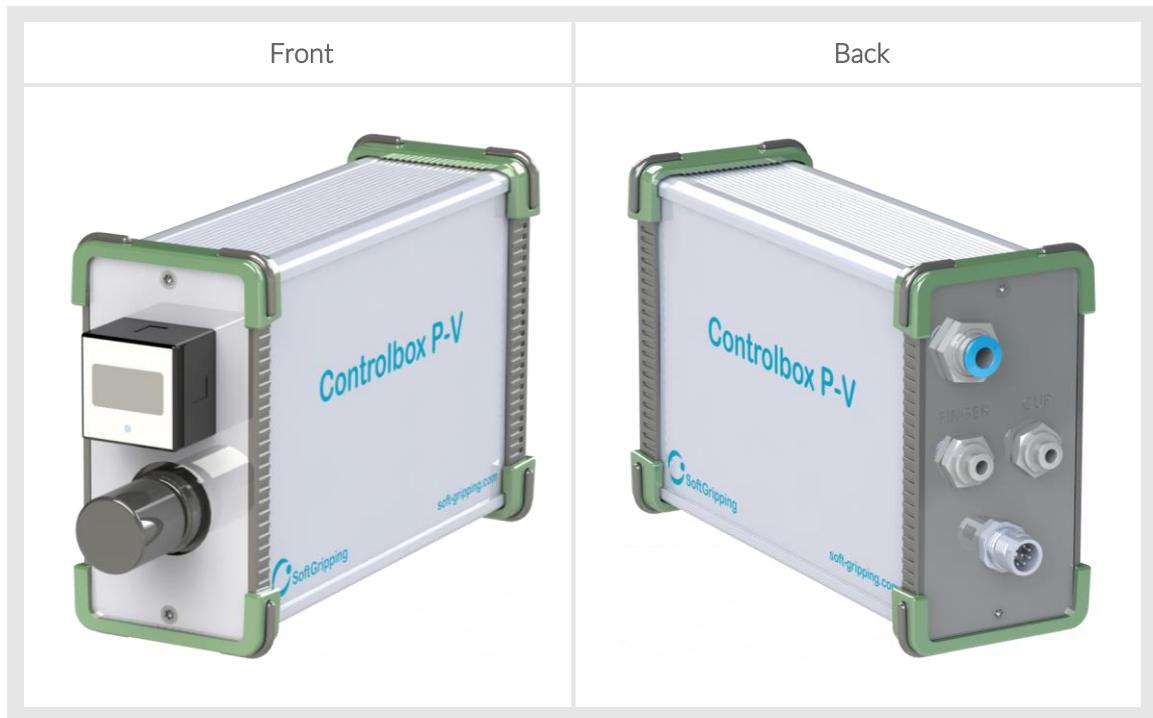


Figure 2: Phoenix connector to box standard configuration pinout.



The control box is used to operate any SoftGripper, End of Arm Tooling or Suction Cup. On the front, the current pressure can be seen in the pressure indicator and adjusted via knob. On the backside of the device you can find the pressure input and two outputs (e.g. Fingers & Suction Cup). The outputs are controlling the position of the fingers. You can switch between 2 positions: Grip and Relaxed setting the according Signal Connector's pin to high (Grip) or low (Relaxed). The Suction Cup has two states. When pin 5 is set to high, the Suction Cup is activated, setting pin 5 to low results in a release.

SoftGripper Control Box Specifications

Input Air Pressure Connection	1 x 6 mm outside Ø
Output Pressure Connector	2 x 4 mm outside Ø
Input Pressure	4 to 7 bar
Cycles per Minute	120
Output Pressure	- 0.75 to 2.5 bar
Signal Connector	M12 connector IEC 61076-2-101 8 Pins male
Digital Signal Input	3x 21.6 - 26.4 V DC
Compatible Software	Soft-Gripping UR-Caps
Compatible Hardware	Soft-Gripping Fingers & Suction Cups

Pressure Indicator

Pressure Regulator



Input Pressure

Tubing: outside diameter 6 mm
Pressure range: 4 to 7 bar

Finger Output

4 mm outside Ø
- 0.75 to 2.5 bar

Signal Connector

M12 connector IEC 61076-2-101
Coding: A
Digital Signal input: 21.6 to 26.4 V DC



Suction Cup Output

4 mm outside Ø
- 0.75 to 0 bar

Pin Assignment

Pin	Function	Color
1	NC	White
2	GND	Brown
3	Finger Grip	Green
4	NC	Yellow
5	Suction Cup Active	Grey
6	NC	Pink
7	NC	Blue
8	NC	Red

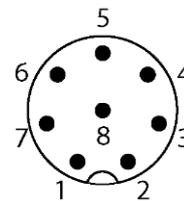


Figure 1: M12 connector male pinout.

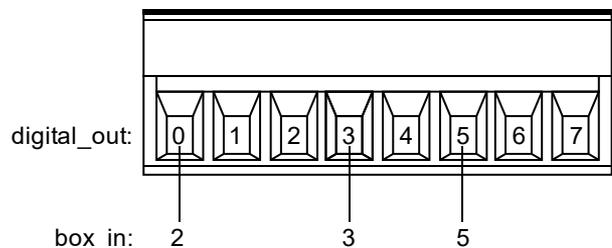
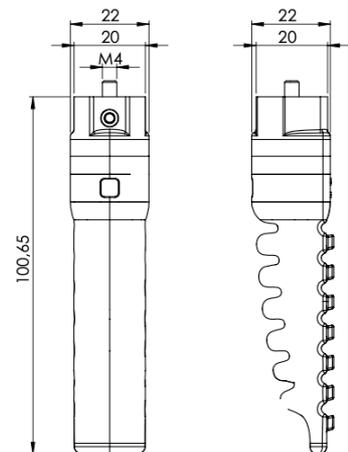


Figure 2: Phoenix connector to box standard configuration pinout.



Product Code	Part	Amount
SG.F60S	SoftGripper Finger	4
SG.C.PR.20	EoAT Adapter	4
SG.P.BP.01	20 mm Aluminium profile, L = 200 mm	2
SG.P.BP.02	20 mm Aluminium profile, L = 85 mm	2
SG.KT.B00001	Aluminium profile cover cap 20x20-6	8
SG.KT.B00002	Aluminium profile bracket 20x20	4
SG.KT.B00003	Aluminium profile cup 20x20	4
SG.KT.B00004	Aluminium profile hammer nut 6 mm M4	8
SG.KT.B00010	Cylinder head screw DIN 7984 M6x20 A2	4

Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Air Pressure Connection	M3



Mounting of End of Arm Tooling – Connector

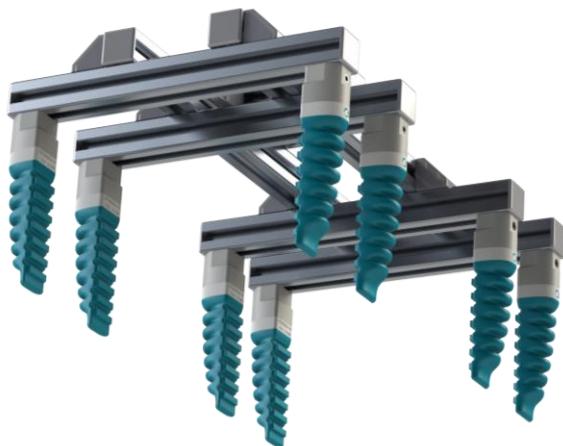
The adapter is installed to the profile using the bolting provided. The EoAT-Connector is locked by a M4 screw and a slot nut in the profile. The joint to the Finger is a bayonet lock as it is to all SoftGripper platforms.

To replace a Finger, turn it clockwise until you can take it out of the socket. A new one is then put in and turned counterclockwise until a click of the lock is reached.



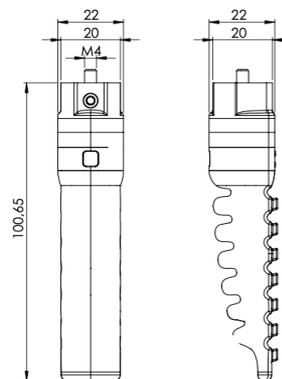
Every EoAT-Connector is provided with its own port for pneumatics and can therefore be operated separately or in groups by using pneumatic fittings or distributors.





Product Code	Part	Amount
SG.F60S	SoftGripper Finger	8
SG.C.PR.20	EoAT Adapter	8
SG.P.BP.01	20 mm Aluminium profile, L = 200 mm	4
SG.P.BP.02	20 mm Aluminium profile, L = 85 mm	2
SG.P.BP.03	20 mm Aluminium profile, L = 300 mm	2
SG.KT.B00001	Aluminium profile cover cap 20x20-6	16
SG.KT.B00002	Aluminium profile bracket 20x20	12
SG.KT.B00003	Aluminium profile cup 20x20	12
SG.KT.B00004	Aluminium profile hammer nut 6 mm M4	8
SG.KT.B00010	Cylinder Head Screw DIN 7984 M6x20 A2	4

Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Air Pressure Connection	M3



Mounting of End of Arm Tooling – Connector

The adapter is installed to the profile using the bolting provided. The EoAT-Connector is locked by a M4 screw and a slot nut in the profile. The joint to the Finger is a bayonet lock as it is to all SoftGripper platforms.

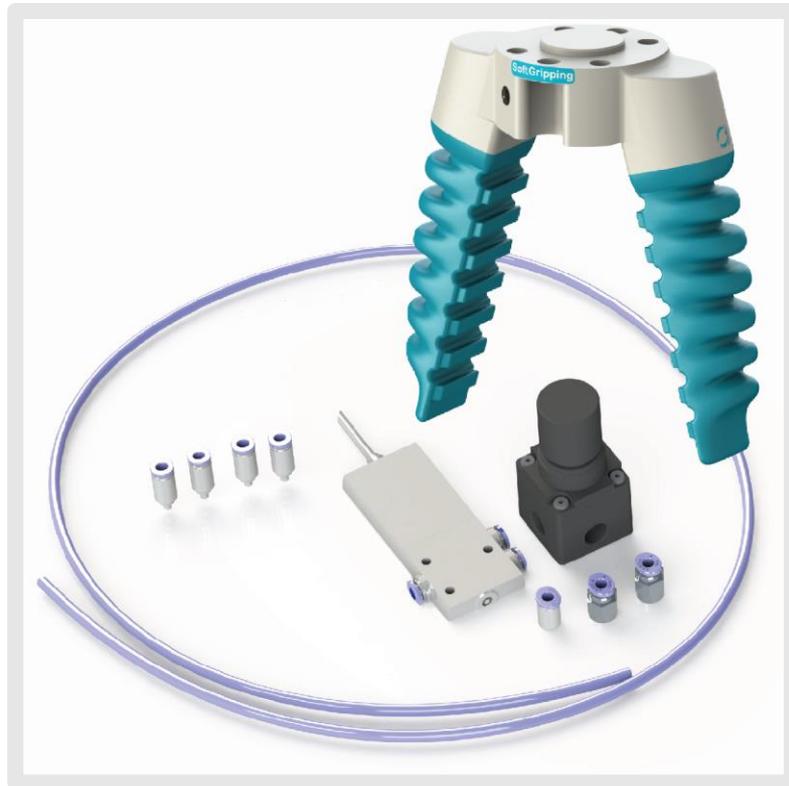
To replace a Finger, turn it clockwise until you can take it out of the socket. A new one is then put in and turned counterclockwise until a click of the lock is reached.



Every EoAT-Connector is provided with its own port for pneumatics and can therefore be operated separately or in groups by using pneumatic fittings or distributors.



Two Finger Parallel SoftGripper - 75° Cone Angle 2 Positions - Bundle SG.GB.2F.1V

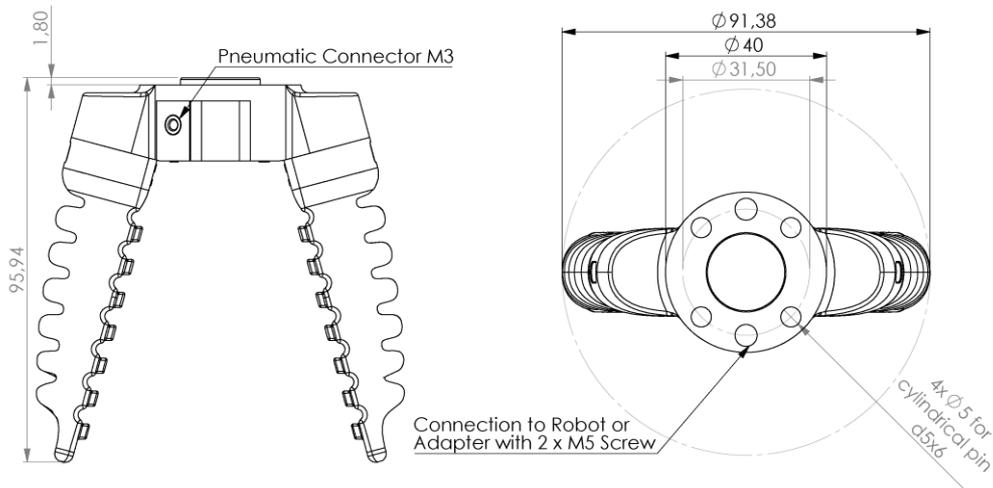


Product Code	Part	Amount
SG.2P.75D.31	Two Finger Parallel SoftGripper - 75° Cone Angle	1
SG.KT.P00001	Festo Solenoid valve MHE2-M1H-3/2G-QS-4-K	1
SG.KT.P00003	AirCom pressure regulator 0,2-2,5 bar R307-01B	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	5 m
SG.KT.P00005	Straight plug connector IQSM-M34-I	5

Two Finger Parallel SoftGripper - 75° Cone Angle 2 Positions - Bundle SG.GB.2F.1V



This package is intended to have your SoftGripper up and running in no time. It includes a pneumatic accessory kit for operating the SoftGripper with a Festo Solenoid valve and control the pressure via a pressure regulator. The solenoid valve can provide two positions: Grip and Relaxed. Of course, all necessary tubing, connectors and screws are provided as well. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	95,94 mm
Total Diameter 75°	91,38 mm
Mass	143 g
Typical Gripping Objects	<ul style="list-style-type: none">• Rectangular or Cubic• Feed size 10 mm – 90 mm• Weight < 200 g

Two Finger Parallel SoftGripper - 75° Cone Angle 3 Positions – Controlbox Bundle SG.GB.2F.C1

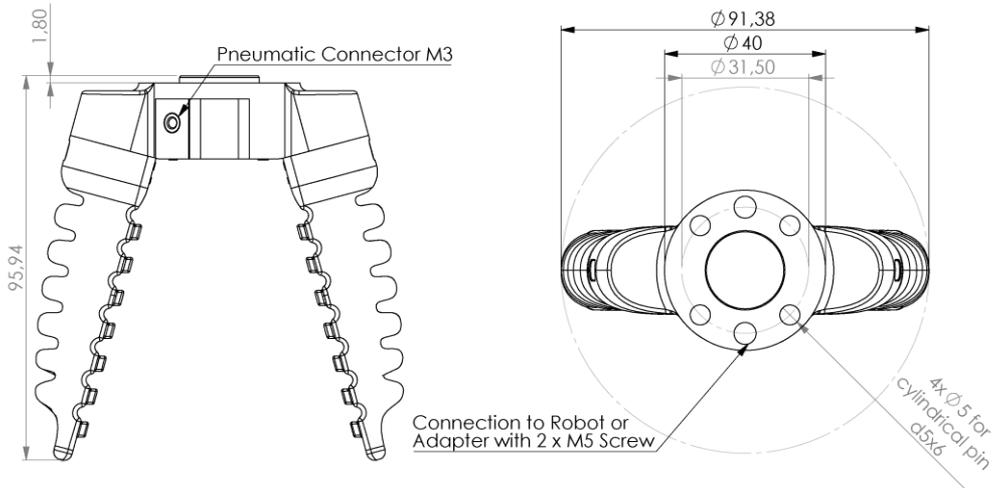


Product Code	Part	Amount
SG.2P.75D.31	Two Finger Parallel SoftGripper - 75° Cone Angle	1
SG.BP.1V.C1	SoftGripping Control Box for SoftGripper and EoAT	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	1 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	1 m

Two Finger Parallel SoftGripper - 75° Cone Angle 3 Positions – Controlbox Bundle SG.GB.2F.C1



This package is intended to have your SoftGripper up and running in no time. It includes a pneumatic accessory kit for operating the SoftGripper with a controlbox providing three positions: grip, relaxed and release. Of course, all necessary tubing, connectors and screws are provided as well. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	95,94 mm
Total Diameter 75°	91,38 mm
Mass	143 g
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 200 g

Two Finger Parallel SoftGripper - 75° Cone Angle
3 Positions – Controlbox & Compressor Bundle
 SG.GB.2F.C1.P1



Product Code	Part	Amount
SG.2P.75D.31	Two Finger Parallel SoftGripper - 75° Cone Angle	1
SG.BP.2V.C1	SoftGripping Control Box for SoftGripper, EoAT and Suction Cup	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	1 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	1 m
SG.KT.P00019	Plug connection with female thread G 1/8"-6mm	1
SG.KT.P00020	Mini compressor	1

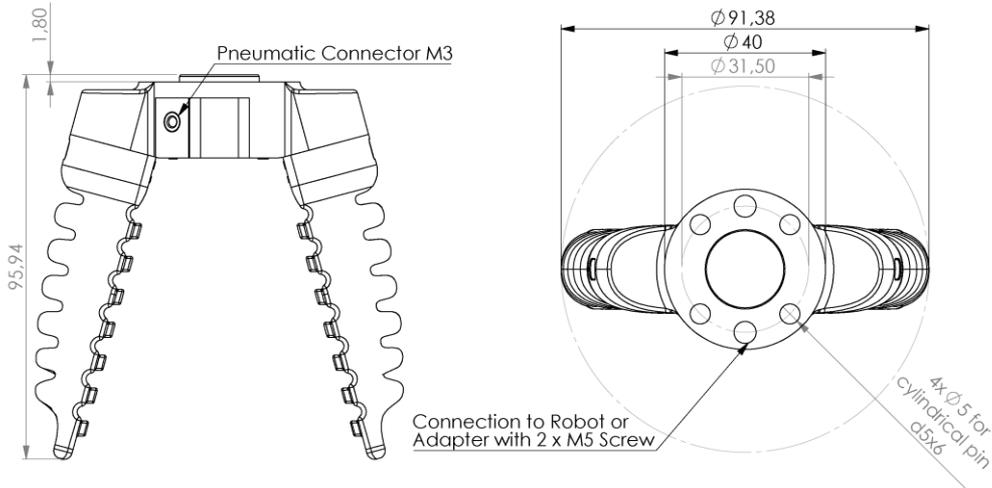
Two Finger Parallel SoftGripper - 75° Cone Angle

3 Positions – Controlbox & Compressor Bundle

SG.GB.2F.C1.P1



This research bundle is intended to have your SoftGripper up and running in no time. It includes a SoftGripping controlbox allowing for three positions of the SoftGripper: Grip, Release and Relaxed. If you decide to extend your SoftGripper with a suction cup, you can use the box to operate both the SoftGripper and the suction cup separately. Of course, all necessary tubing, connectors and screws are provided as well. Additionally, it includes a basic mini compressor to be used in simple setups. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	95,94 mm
Total Diameter 75°	91,38 mm
Mass	143 g
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 200 g

**Three Finger Centric SoftGripper -
75° Cone Angle, Controlbox PV-V - Bundle
SG.GB.3F.C1**

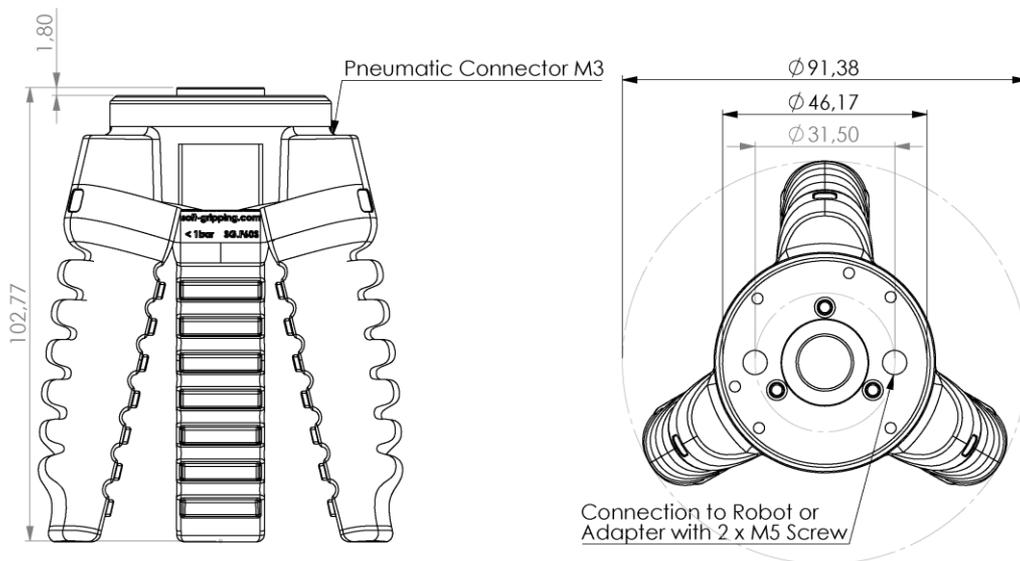


Product Code	Part	Amount
SG.3C.75D.31	Three Finger Centric SoftGripper - 75° Cone Angle	1
SG.CB.2V.C1	SoftGripping Controlbox PV-V	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00005	Straight plug connector IQSM-M34-I	4
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	4 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	1 m

Three Finger Centric SoftGripper - 75° Cone Angle, Controlbox PV-V - Bundle SG.GB.3F.C1



This package is intended to have your SoftGripper up and running in no time. It includes a SoftGripping Controlbox PV-V allowing for three positions of the SoftGripper: Grip, Release and Relaxed. If you decide to extend your SoftGripper with a suction cup, you can use the box to operate both the SoftGripper and the suction cup separately. Here, the suction cup can have two positions: Grip and Relaxed. You can operate the controlbox via your own setup or an UR-Cap. You can find the pinout as well as additional information on how to control the box in the appropriate data sheet. Of course, all necessary tubing, connectors and screws are provided as well. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	102,77 mm
Total Diameter 75°	91,38 mm
Mass	242 g
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 300 g

**Four Finger Parallel SoftGripper -
75° Cone Angle, Control Box - Bundle
SG.GB.4F.C1**

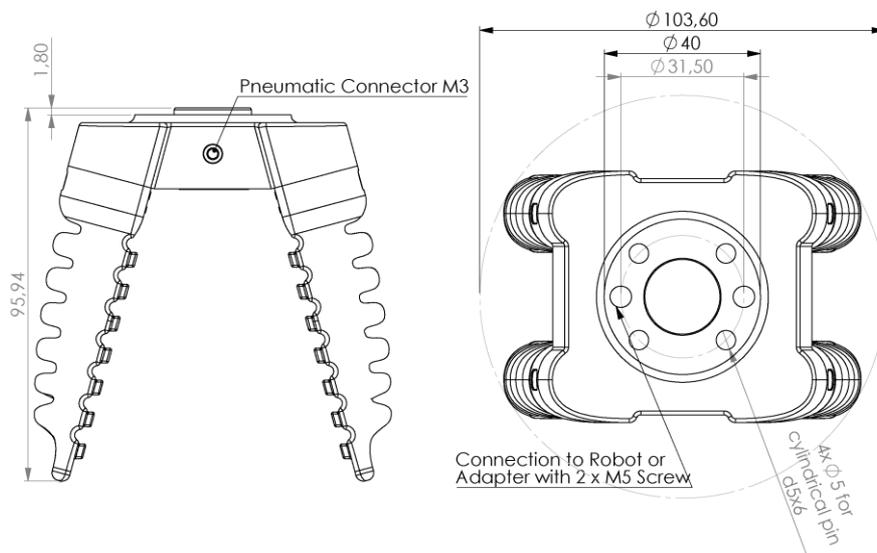


Product Code	Part	Amount
SG.4P.75D.31	Four Finger Parallel SoftGripper - 75° Cone Angle	1
SG.CB.2V	SoftGripping Control Box	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00005	Straight plug connector IQSM-M34-I	4
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	4 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	1 m

Four Finger Parallel SoftGripper - 75° Cone Angle, Control Box - Bundle SG.GB.4F.C1



This package is intended to have your SoftGripper up and running in no time. It includes a SoftGripping Control Box allowing for three positions of the SoftGripper: Grip, Release and Relaxed. If you decide to extend your SoftGripper with a suction cup, you can use the box to operate both the SoftGripper and the suction cup separately. Here, the suction cup can have two positions: Grip and Relaxed. You can operate the Control Box via your own setup or an UR-Cap. You can find the pinout as well as additional information on how to control the box in the appropriate data sheet. Of course, all necessary tubing, connectors and screws are provided as well. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	95,94 mm
Total Diameter 75°	103,60 mm
Mass	383 g
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 400 g

**Four Finger Centric SoftGripper -
75° Cone Angle, Control Box - Bundle
SG.GB.4FC.C1**

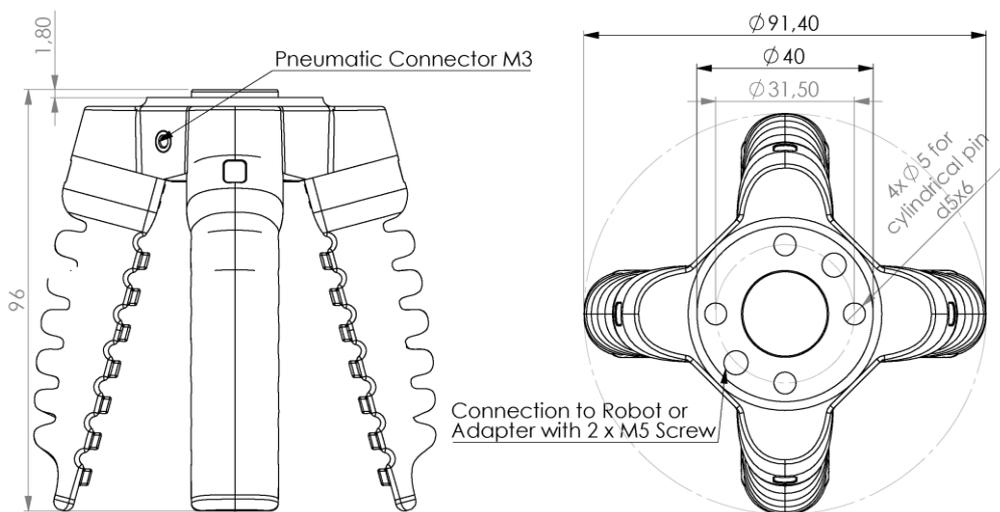


Product Code	Part	Amount
SG.4C.75D.31	Four Finger Centric SoftGripper - 75° Cone Angle	1
SG.CB.2V	SoftGripping Control Box	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00005	Straight plug connector IQSM-M34-I	4
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	4 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	1 m

Four Finger Centric SoftGripper - 75° Cone Angle, Control Box - Bundle SG.GB.4FC.C1



This package is intended to have your SoftGripper up and running in no time. It includes a SoftGripping Control Box allowing for three positions of the SoftGripper: Grip, Release and Relaxed. If you decide to extend your SoftGripper with a suction cup, you can use the box to operate both the SoftGripper and the suction cup separately. Here, the suction cup can have two positions: Grip and Relaxed. You can operate the Control Box via your own setup or an UR-Cap. You can find the pinout as well as additional information on how to control the box in the appropriate data sheet. Of course, all necessary tubing, connectors and screws are provided as well. Keep in mind that the connector on the SoftGripper is ISO 9404-1-31.5-2-M5. Other connectors are available online.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Connector	ISO 9404-1-31.5-2-M5
Air Pressure Connection	2 x M3
Total Height 75°	96 mm
Total Diameter 75°	91,4 mm
Mass	383 g
Typical Gripping Objects	<ul style="list-style-type: none"> • Rectangular or Cubic • Feed size 10 mm – 90 mm • Weight < 400 g

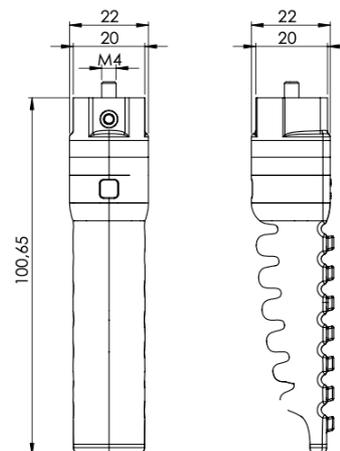


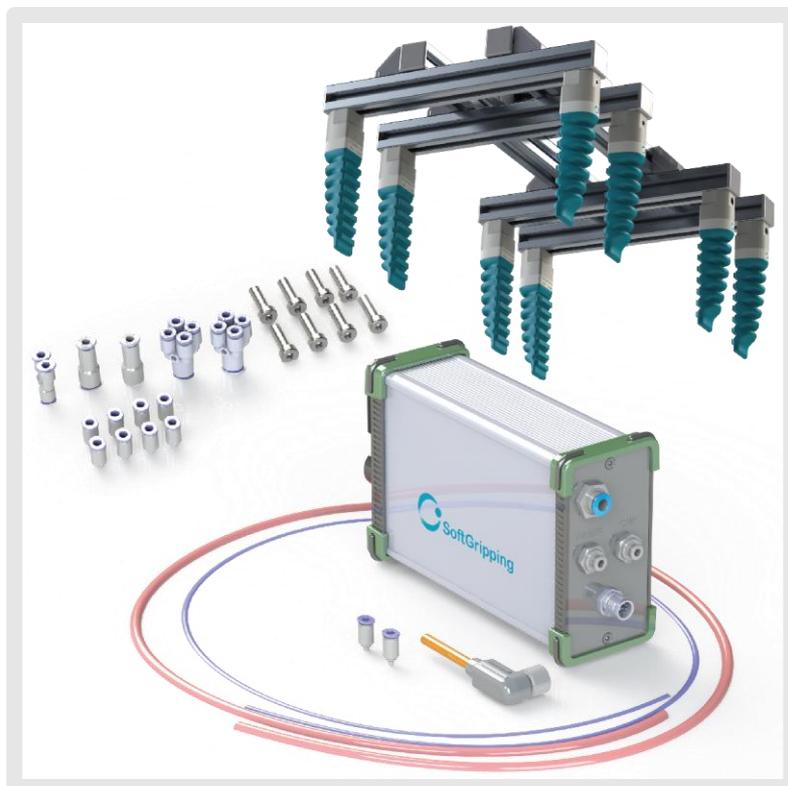
Product Code	Part	Amount
SG.BE.4F.01	EoAT Basic Kit - 4 Fingers	1
SG.CB.2V	SoftGripping Control Box	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	12 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	2 m
SG.KT.P00005	Straight plug connector IQSM-M34-I	4
SG.KT.Z00010	Cylinder head screw DIN 7984 M6x20 A2	8
SG.KT.P00010	Plug connection - multidistributor 6mm-4mm, IQSQ 6040	2
SG.KT.P00011	Straight plug connector 6mm-4mm, IQSG 6040	2
SG.KT.P00009	Y- plug connector 4mm-4mm IQSMY 40	1

This package is intended to have your End of Arm Tooling up and running in no time. It includes an EoAT Basic Kit with 4 Fingers for a large range of applications. The position of the fingers can be adjusted to your liking and controlled with the SoftGripping Control Box allowing for three positions of the Fingers: Grip, Release and Relaxed. If you decide to extend the EoAT with suction cups later, you can use the box to operate both the Fingers and the suction cup separately. Here, the suction cup can have two positions: Grip and Relaxed. You can operate the Control Box via your own setup or an UR-Cap. You can find the pinout as well as additional information on how to control the box in the appropriate data sheet. Of course, all necessary tubing, connectors and screws are provided as well.



Finger Material	Silicone
Operating Pressure	- 0.5 to 1.0 bar
Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Air Pressure Connection	M3



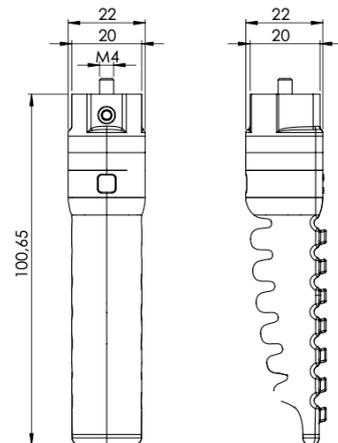


Product Code	Part	Amount
SG.BE.8F.01	EoAT Expanded Kit - 8 Fingers	1
SG.CB.2V	SoftGripping Control Box	1
SG.KT.E00003	M12 connector IEC 61076-2-101 8 Pins male with 0,5 m cable	1
SG.KT.P00008	Straight plug connector R1/8-4mm IQSG-184-I	2
SG.KT.P00006	Festo 4 mm tubing PUN-4X0,75 BL	12 m
SG.KT.P00007	Festo 6 mm tubing PUN-6X1 BL	2 m
SG.KT.P00005	Straight plug connector IQSM-M34-I	4
SG.KT.Z00010	Cylinder head screw DIN 7984 M6x20 A2	8
SG.KT.P00010	Plug connection - multidistributor 6mm-4mm, IQSQ 6040	2
SG.KT.P00011	Straight plug connector 6mm-4mm, IQSG 6040	2
SG.KT.P00009	Y- plug connector 4mm-4mm IQSMY 40	1

EoAT Expanded Kit - 8 Fingers, Control Box - Bundle SG.GB.8E.C1



This package is intended to have your End of Arm Tooling up and running in no time. It includes an EoAT Expanded Kit with 8 Fingers for a large range of applications. The position of the fingers can be adjusted to your liking and controlled with the SoftGripping Control Box allowing for three positions of the Fingers: Grip, Release and Relaxed. If you decide to extend the EoAT with suction cups later, you can use the box to operate both the Fingers and the suction cup separately. Here, the suction cup can have two positions: Grip and Relaxed. You can operate the Control Box via your own setup or an UR-Cap. You can find the pinout as well as additional information on how to control the box in the appropriate data sheet. Of course, all necessary tubing, connectors and screws are provided as well.



Finger Material	Silicone
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Grip Force per Finger	5 N
Durability	> 10 Mio. Cycles @1.0 bar, 0.5 Hz
Air Pressure Connection	M3



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by



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