

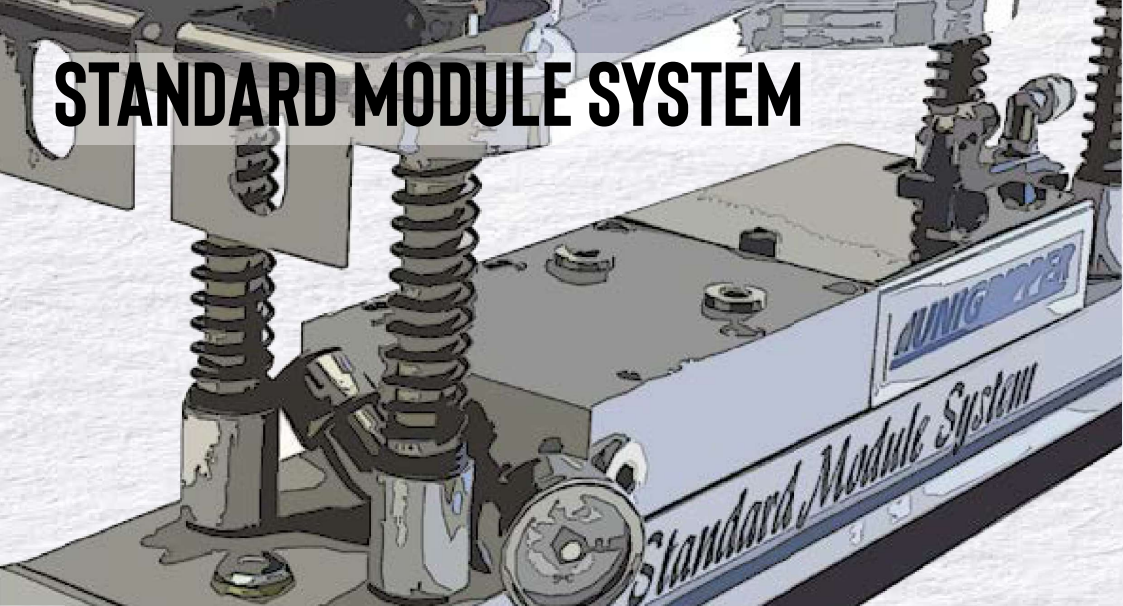
IUNIGRIPPER

INTELLIGENT VACUUM



STANDARD GRIPPERS

STANDARD MODULE SYSTEM

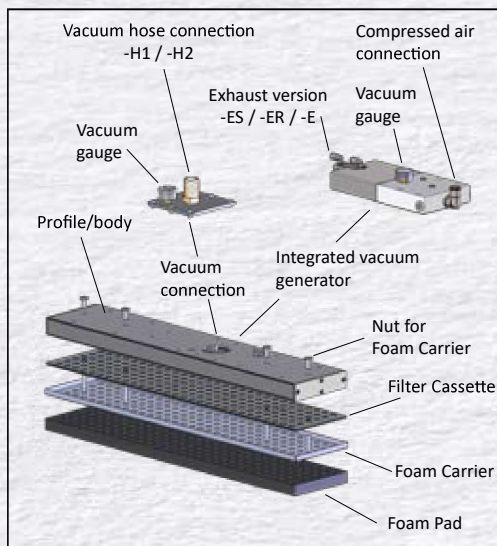


The Standard Module System (SMS) is a range of premium foam grippers with widths of 120mm and 80mm that come in standard lengths from 200 mm to 1400 mm. The core of the SMS series are the intelligent UniGripper valves, which help focusing the vacuum flow to where lifted objects are located and thus makes SMS grippers capable of very different kinds of handling.

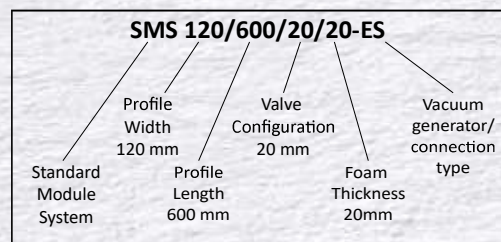
The modular design of the SMS system offers multiple options for vacuum sources and allows modules to be assembled next to each other for gripper widths of 80, 120, 160, 200, 240, 280, 320, 360 mm and so on.

The SMS series is also great from a maintenance perspective as the foam pad is attached to a foam carrier plate that can easily be removed from the gripper base. Between the foam carrier and the gripper base is a filter cassette that also gets accessible when removing the foam carrier plate and can easily be cleaned to prevent dust and debris to enter into the gripper base and the vacuum generators.

The SMS series also incorporates SMS Mini, short versions where the length of the gripper is less than or equal to the width. The SMS Mini grippers are in many cases a good alternative to a suction cup, as in UniGripper valves and the foam pad allows handling of uneven objects and objects that are not entirely solid.

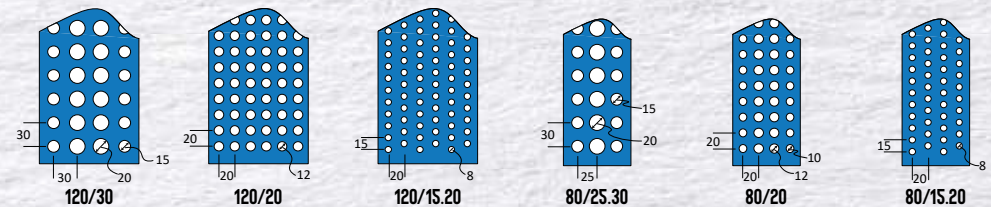


SMS TYPE NUMBER EXPLANATION



VALVE CONFIGURATIONS

Each SMS 120 series and SMS 80 series length is available in three standard valve configurations. The valve configurations are suitable for different kinds of products and the vacuum sources differ in size for the different configurations, from the 30.30 pitch for most boxes and other large object and wide stripes, through the 20.20 pitch that can handle smaller objects and more leakage to the 15.20 pitch targeted for thin stripes and other products that require a very dense distribution of valves. Each valve pitch is associated with a standard foam pad design, as detailed below.



For the SMS Mini grippers, the exact valve configuration and hole size is varying somewhat between each version and is presented on pages 22-23.

VACUUM GENERATION

Each length of the SMS unit has one or more locations where vacuum pumps can be connected. For most lengths ejectors, which are vacuum pumps that generate vacuum with compressed air and the venturi principle, can be mounted directly on the gripper unit, these vacuum pumps. Alternatively, the grippers can be equipped with hose connections for connecting an external vacuum pump to the gripper.



EJECTOR -ES

Ejector with extra silent exhaust. For clean environments where gripper is operating close to humans.



EJECTOR -ER

Ejector with integrated reverse flow function. For efficient release and cleaning.



EJECTOR -E

Cost-effective ejector without extra silencing or reverse flow functions.



HOSE CONNECTION -H1

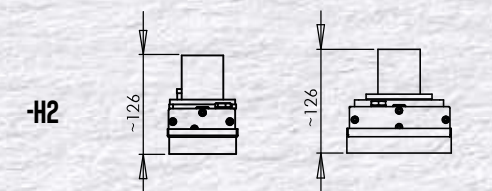
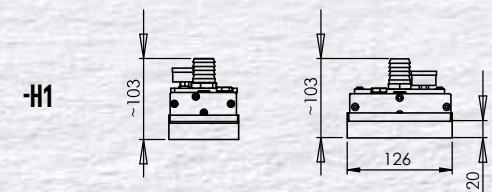
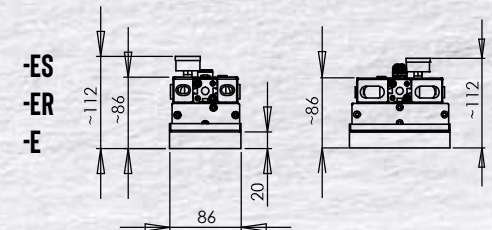
Hose connection for 1"/25mm vacuum hoses



HOSE CONNECTION -H2

Hose connection for 2"/51mm vacuum hoses

HEIGHTS AND SIDE DIMENSIONS

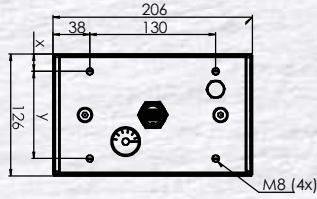


SMS 80

SMS 120

All data is subject to change without prior notification

SMS 120/200



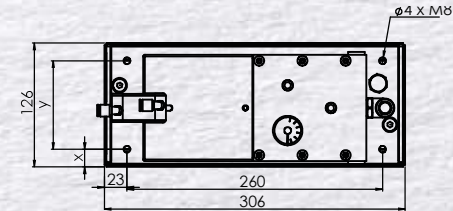
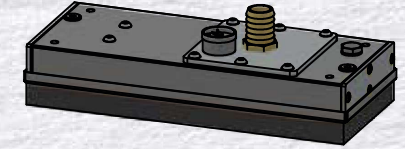
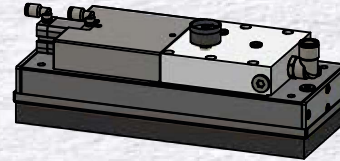
x=18mm for SMS 120/15.20 and 120/20, x=13mm for SMS 120/30 y=90mm for SMS 120/15.20 and 120/20, y=100mm for SMS 120/30

TECHNICAL DATA	SMS 120/200/15.20/20	SMS 120/200/20/20	SMS 120/200/30/20
Length (mm)	206	206	206
Width (mm)	126	126	126
Height with ejectors (mm)			
Height with hose connection (mm)	103	103	103
Weight with ejectors (kg)			
Weight with hose connection (kg)	1.3	1.3	1.3
Number of valves	69	54	24
Theoretical lifting force (N), all gripper covered			
@200mBar	69	122	117
@400mBar	138	244	235
@600mBar	208	366	353
@800mBar	277	488	471
Number of ejectors on gripper			
Air consumption (NI/min)			

ORDERING ARTICLE NUMBERS			
-H1			
-E	Only seaparatly mounted ejectors available		
-ES			
-ER			

SPARE PARTS ARTICLE NUMBERS			
Foam pad			
Filter cassette			
Foam carrier assembly, incl. Filter cassette			
Foam carrier assembly, excl. Filter cassette			

SMS 120/300



x=18mm for SMS 120/15.20 and 120/20, x=13mm for SMS 120/30 y=90mm for SMS 120/15.20 and 120/20, y=100mm for SMS 120/30

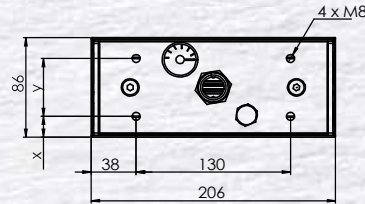
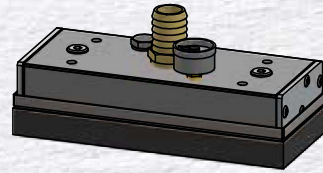
TECHNICAL DATA	SMS 120/300/15.20/20	SMS 120/300/20/20	SMS 120/300/30/20
Length (mm)	306	306	306
Width (mm)	126	126	126
Height with ejectors (mm)	112	112	112
Height with hose connection (mm)	103	103	103
Weight with ejectors (kg)	2.8	2.8	2.8
Weight with hose connection (kg)	1.9	1.9	1.9
Number of valves	108	84	40
Theoretical lifting force (N), all gripper covered			
@200mBar	108	190	196
@400mBar	217	380	392
@600mBar	325	570	589
@800mBar	434	760	785
Number of ejectors on gripper	1	1	1
Air consumption (NI/min)	420	315	210

ORDERING ARTICLE NUMBERS	SMS 120/300/15.20/20	SMS 120/300/20/20	SMS 120/300/30/20
-H1	300 300 110	300 300 210	300 300 310
-E	300 300 112	300 300 212	300 300 312
-ES	300 300 113	300 300 213	300 300 313
-ER	300 300 111	300 300 211	300 300 311

SPARE PARTS ARTICLE NUMBERS	SMS 120/300/15.20/20	SMS 120/300/20/20	SMS 120/300/30/20
Foam pad	330 300 112	330 300 212	330 300 312
Filter cassette	330 300 119	330 300 219	330 300 319
Foam carrier assembly, incl. Filter cassette	320 300 113	320 300 213	320 300 313
Foam carrier assembly, excl. Filter cassette	320 300 114	320 300 214	320 300 314

All data is subject to change without prior notification

SMS 80/200



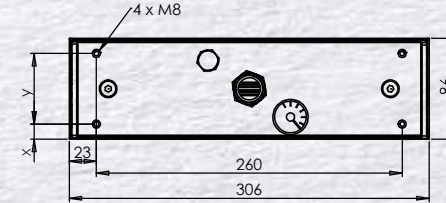
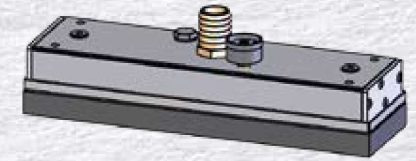
x=18mm for SMS 80/15.20 and 80/20, x=11.5mm for SMS 80/30 y=50mm for SMS 80/15.20 and 80/20, y=63mm for SMS 80/30

TECHNICAL DATA	SMS 80/200/15.20/20	SMS 80/200/20/20	SMS 80/200/30.25/20
Length (mm)	206	206	206
Width (mm)	86	86	86
Height with ejectors (mm)			
Height with hose connection (mm)	103	103	103
Weight with ejectors (kg)			
Weight with hose connection (kg)	1.0	1.0	1.0
Number of valves	44	36	18
Theoretical lifting force (N), all gripper covered			
@200mBar	44	68	80
@400mBar	88	137	160
@600mBar	132	206	240
@800mBar	176	275	320
Number of ejectors on gripper			
Air consumption (NI/min)			

ORDERING ARTICLE NUMBERS	SMS 80/200/15.20/20	SMS 80/200/20/20	SMS 80/200/30.25/20
-H1	300 200 150	300 200 250	300 200 350
-E	Only seaparately mounted ejectors available		
-ES			
-ER			

SPARE PARTS ARTICLE NUMBERS	SMS 80/200/15.20/20	SMS 80/200/20/20	SMS 80/200/30.25/20
Foam pad	330 200 152	330 200 252	330 200 352
Filter cassette	330 200 159	330 200 259	330 200 359
Foam carrier assembly, incl. Filter cassette	320 200 153	320 200 253	320 200 353
Foam carrier assembly, excl. Filter cassette	320 200 154	320 200 254	320 200 354

SMS 80/300



x=18mm for SMS 80/15.20 and 80/20, x=11.5mm for SMS 80/30 y=50mm for SMS 80/15.20 and 80/20, y=63mm for SMS 80/30

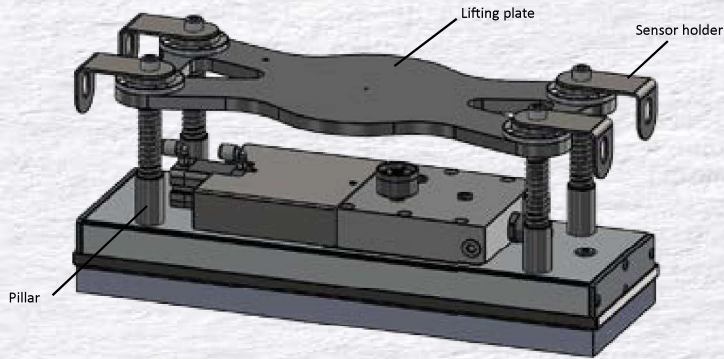
TECHNICAL DATA	SMS 80/300/15.20/20	SMS 80/300/20/20	SMS 80/300/30.25/20
Length (mm)	306	306	306
Width (mm)	86	86	86
Height with ejectors (mm)			
Height with hose connection (mm)	103	103	103
Weight with ejectors (kg)			
Weight with hose connection (kg)	1.4	1.4	1.4
Number of valves	70	56	30
Theoretical lifting force (N), all gripper covered			
@200mBar	70	107	133
@400mBar	140	214	267
@600mBar	211	321	400
@800mBar	281	429	534
Number of ejectors on gripper			
Air consumption (NI/min)			

ORDERING ARTICLE NUMBERS	SMS 80/300/15.20/20	SMS 80/300/20/20	SMS 80/300/30.25/20
-H1	300 300 150	300 300 250	300 300 350
-E	Only seaparately mounted ejectors available		
-ES			
-ER			

SPARE PARTS ARTICLE NUMBERS	SMS 80/300/15.20/20	SMS 80/300/20/20	SMS 80/300/30.25/20
Foam pad	330 300 152	330 300 252	330 300 352
Filter cassette	330 300 159	330 300 259	330 300 359
Foam carrier assembly, incl. Filter cassette	320 300 153	320 300 253	320 300 353
Foam carrier assembly, excl. Filter cassette	320 300 154	320 300 254	320 300 354

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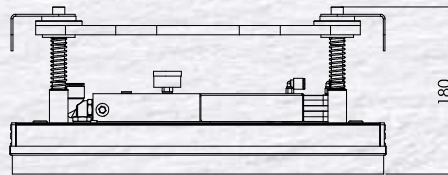
SMS FLOATING ATTACHMENT



The floating attachment is a popular accessory available for all SMS 80 and SMS 120 grippers. The floating attachment consists of four pillars, along which a lifting plate can slide up and down.

The floating attachment allows the SMS unit to move vertically relative to the robot, gantry or similar device to which it is attached. This means that the SMS unit can be aligned with the object to be lifted, even if the object is not aligned with the device. The floating attachment also helps getting a good compression of the foam pad before activating vacuum to lift an object.

The floating attachment is equipped with four sensor holders, which, if equipped with sensors give a signal when the gripper is properly placed on the object and thus provides an indication when it is time to activate the vacuum.



ORDERING ARTICLE NUMBERS	120/X/15.20, 120/20	120/X/30	80/X/15.20, 80/X/20	80/X/30.25
Length 200 mm	340 341 209	340 341 208	340 341 230	340 341 229
Length 300 mm	340 341 205	340 341 204	340 341 228	340 341 227
Lengths 400 mm, 600 mm, 1000 mm, 1200 mm and 1400 mm	340 341 201	340 341 200	340 341 226	340 341 225
Length 800 mm	340 341 203	340 341 202	340 341 232	340 341 231

ACCESSORIES				
Inductive sensor with cable, 2m				340 341 207

CUSTOMIZING THE SMS

The Standard Module System opens up for many kinds of customizations, which may be needed for getting the right function of the SMS unit. Making customizations quickly and efficiently is a core competence of the UniGripper organization and the customization possibilities range from minor changes as in foam pad design, to modifications of the SMS profile and further on to lifting systems integrating multiple SMS units. Below are the most common customizations presented and characterized in terms of degree of customization.

FOAM PAD THICKNESS

For all SMS units apart from the SMS Mini series, the default foam pad thickness is 20mm. In case the surface handled objects have a lot of height variation, a thicker foam pad might be needed. For other applications a foam pad thinner than 20mm might be the best option.

FOAM PAD HOLE DESIGN

By modifying the design of the suction holes the SMS gripper can get new abilities, like handling empty glass jars, lifting thinner or smaller objects or lifting heavier objects.

GRIPPER LENGTH

Sometimes the standard lengths of the SMS are not quite right. The length of the SMS can be customized anywhere in the interval of 30-6000 mm.

SPECIALIZED SOLUTIONS

The SMS grippers are excellent to use as components in more complex lifting devices. UniGripper have long experience in designing such specialized solutions and we can supply anything from grippers alone to turn-key solutions that just need to be installed and connected to a robot or gantry system.



FOAM PAD MATERIAL

By default, the SMS unit is equipped with a high-quality generic foam material. UniGripper offers a broad range of foam materials for different specific needs; from foam pads with extra wear resistance to foams for food applications.

FOAM CARRIER SIZE

Broadening the foam carrier plate allows wider distribution of the vacuum and can increase the lifting force on an object.

VALVE CONFIGURATION

The standard valve configuration available for the SMS gives good options for almost any scenario. Sometimes, however, other configurations may be more beneficial.

Degree of Customization



All data is subject to change without prior notification

UNIGRIPPER CO/LIGHT



UniGripper Co/Light is the next generation of UniGripper LightWeight targeted for low-payload robots in general and collaborative robots in particular.

UniGripper Co/Light is designed without sharp edges to enable gentle collaboration combined with impressive vacuum force and ultra-low weight.

UniGripper Co/Light is available in two different sizes, Regular and Mini. The standard versions come with a dense valve pitch that allows even small objects to be picked up without knowing the object's exact position.

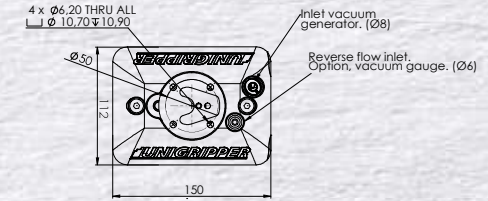
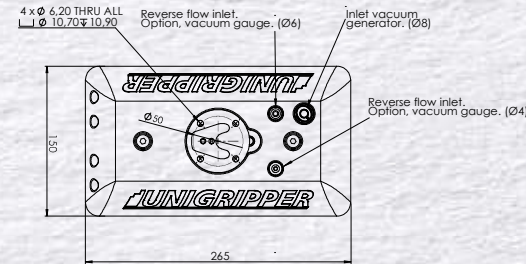
Installation on robots is very easy as UniGripper Co/Light is equipped with a sleek snap-in connection, which makes it possible to slide the Co/Light on and off from the robot.



UNIGRIPPER CONTROL BOX

UniGripper Co/Light can be ordered with a control box that includes all pneumatic functions needed for controlling the gripper- a pneumatic valve and a vacuum sensor.

For installations in a Universal Robot environment, a UR Cap is available for download at www.unigripper.com/UR which makes integration of a UniGripper Co/Light with the UniGripper Control box extra easy.



TECHNICAL DATA	REGULAR	MINI	CONTROL BOX
Length (mm)	265	150	230
Width (mm)	150	112	145
Height (mm)	101	99	27
Weight (kg)	1.8	0.9	1
Number of valves	128	54	
Theoretical lifting force (N), all gripper covered			
@200mBar	98	41	
@400mBar	197	83	
@600mBar	295	124	
@800mBar	394	166	
Air consumption (NI/min)	420	210	

ORDERING ARTICLE NUMBERS	REGULAR	MINI	CONTROL BOX
	300 000 010	300 000 020	300 000 030

SPARE PARTS ARTICLE NUMBERS	REGULAR	MINI	CONTROL BOX
Foam pad	330 000 010	330 000 020	
Gasket	330 000 011	330 000 021	
Foam Carrier	320 000 010	320 000 020	

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