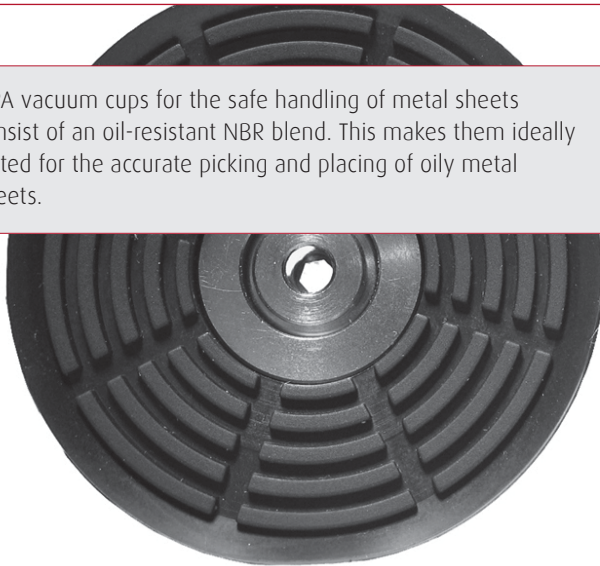




FIPA vacuum cups for sheet metal handling

- > FIPA vacuum cups for the safe handling of metal sheets consist of an oil-resistant NBR blend. This makes them ideally suited for the accurate picking and placing of oily metal sheets.



Non-slip flat vacuum cups – Series SM-P

- > Optimized design with strongly pronounced, radially extending cleats
- > Maximum holding force thanks to the largest active vacuum suction surface possible
- > Prevents deformation – the so-called "deep drawing" of metal sheets
- > Enhanced process reliability thanks to the fitting bolted from underneath (from Ø 20 mm)
- > Available with both male and female threads

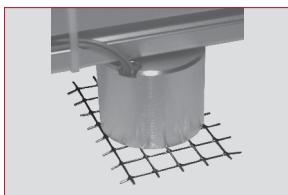
> [More information from page 175](#)



Bellows vacuum cups for use in vacuum carpets – Series SM-T

- > Bellows vacuum cups for use as a vacuum carpet for perforated sheets
- > Special fitting with built-in 0.4 mm diameter orifice to prevent the dropping of the product if the vacuum cups are not in contact with the product
- > The plastic fitting projecting deep into the cup functions as a support during vacuum, which clearly defines the stroke of the cup
- > Cleats on the underside of the vacuum cup lip ensure maximum active vacuum surface (and thus suction force)

> [More information from page 175](#)



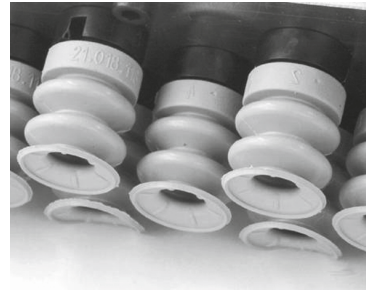
Magnetic grippers

- > Secure handling in the event of power outage thanks to permanent magnets
- > Saves energy, as no energy input is needed during operations
- > No vacuum or compressed air required
- > No hoses necessary
- > Flexible connection thanks to G1/8 and G1/4 thread sizes. Integration with FIPA gripper systems and the use of spring plungers is also made easy.

> [More information from page 178](#)



Flat and bellows vacuum cups – SM Series



Product Description

Flat and bellows vacuum cups of oil-resistant NBR for handling metal sheets.

Distinct radially extending cleats prevent “deep drawing” of the product as well as any slipping of oily sheets (Type SM-P). The firmly bolted fitting (from Ø 20 mm) provides a secure seating.

Type SM-T is usually installed as a vacuum carpet.

It has a special fitting with built-in orifice restriction. This prevents the overall loss of vacuum should some of the cups become uncovered. The deep design of the fitting results in a support that clearly defines the vacuum cup stroke.

Technical Data

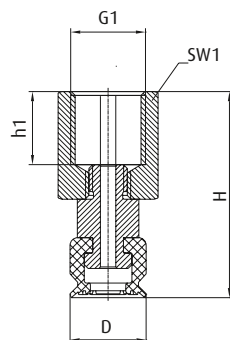
Technical Data						Accessories
Item no.	Model / Lip dimensions	Connection thread		Material / color	Number of bellows	Spare cup
Flat vacuum cups slip-resistant with female thread – Series SM-PI						
100.010.100.*	SM-PI-10	G1/8-female	0,5	NBR (sw)	--	104.010.065.* (p. 225)
100.020.101.*	SM-PI-20	G1/8-female	1,1	NBR (sw)	--	104.020.066.* (p. 245)
100.030.102.*	SM-PI-30	G1/8-female	1,8	NBR (sw)	--	104.030.067.* (p. 264)
100.040.103.*	SM-PI-40	G1/8-female	2,5	NBR (sw)	--	104.040.068.* (p. 276)
100.050.104.*	SM-PI-50	G1/4-female	3,1	NBR (sw)	--	104.050.069.* (p. 283)
Flat vacuum cups slip-resistant with male thread – Series SM-PI						
100.010.110.*	SM-PA-10	G1/8-male	0,5	NBR (sw)	--	104.010.065.* (p. 225)
100.020.111.*	SM-PA-20	G1/8-male	1,1	NBR (sw)	--	104.020.066.* (p. 245)
100.030.112.*	SM-PA-30	G1/8-male	1,8	NBR (sw)	--	104.030.067.* (p. 264)
100.040.113.*	SM-PA-40	G1/8-male	2,5	NBR (sw)	--	104.040.068.* (p. 276)
100.050.114.*	SM-PA-50	G1/4-male	3,1	NBR (sw)	--	104.050.069.* (p. 283)
Bellows vacuum cups with a special fitting for vacuum carpets – Series SM-T						
20.018.125.*	SM-T-18	M8-male	9,5	NBR (gr)	2,5	21.018.118.* (p. 347)

Continued on the next page →

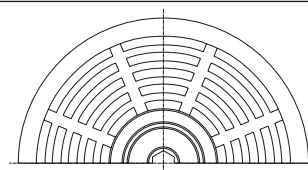
* When ordering please add the appropriate material code to the item no. You will find it in the foldout.



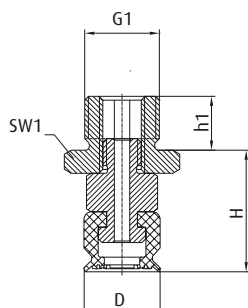
Dimensions



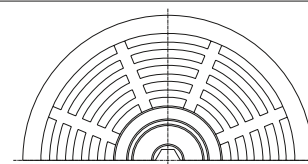
Flat vacuum cups slip-resistant with female thread – Series SM-PI
Ø 10 mm



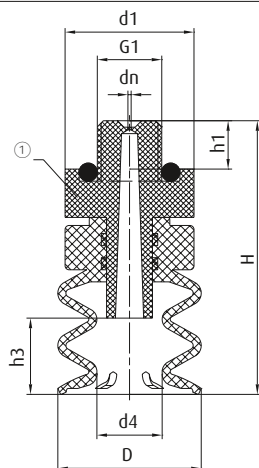
Flat vacuum cups slip-resistant with female thread – Series SM-PI
Ø 20 | 30 | 40 | 50 mm



Flat vacuum cups slip-resistant with male thread – Series SM-PI
Ø 10 mm



Flat vacuum cups slip-resistant with male thread – Series SM-PI
Ø 20 | 30 | 40 | 50 mm



Bellows vacuum cups with a special fitting for vacuum carpets – Series SM-T
Ø 18 mm

① = Special fitting with installed orifice Ø 0.4 mm. Material: PA6/ O-ring NBR

* When ordering please add the appropriate material code to the item no. You will find it in the foldout.



Item no.	Ø D [mm]	Ø d1 [mm]	Ø d4 [mm]	Ø dn [mm]	G1	H [mm]	h1 [mm]	h3 [mm]	SW1	SW2
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Flat vacuum cups slip-resistant with female thread – Series SM-PI

100.010.100.*	10	--	--	--	G1/8	27	9,5	--	13	--
100.020.101.*	20	--	--	--	G1/8	24	9,5	--	13	3
100.030.102.*	30	--	--	--	G1/8	26	9,5	--	13	3
100.040.103.*	40	--	--	--	G1/8	30	9,5	--	13	3
100.050.104.*	50	--	--	--	G1/4	35	11	--	17	3

Flat vacuum cups slip-resistant with male thread – Series SM-PI

100.010.110.*	10	--	--	--	G1/8	16	7	--	13	--
100.020.111.*	20	--	--	--	G1/8	20	7	--	13	3
100.030.112.*	30	--	--	--	G1/8	22	7	--	13	3
100.040.113.*	40	--	--	--	G1/8	26	7	--	13	3
100.050.114.*	50	--	--	--	G1/4	32	10	--	17	3

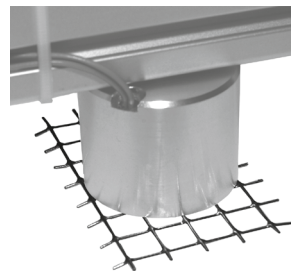
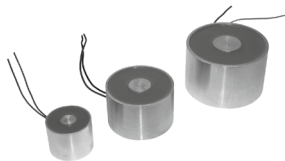
Bellows vacuum cups with a special fitting for vacuum carpets – Series SM-T

20.018.125.*	18	16	8	0,4	M8	34	6	9,5	--	--
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* When ordering please add the appropriate material code to the item no. You will find it in the foldout.



Magnetic grippers



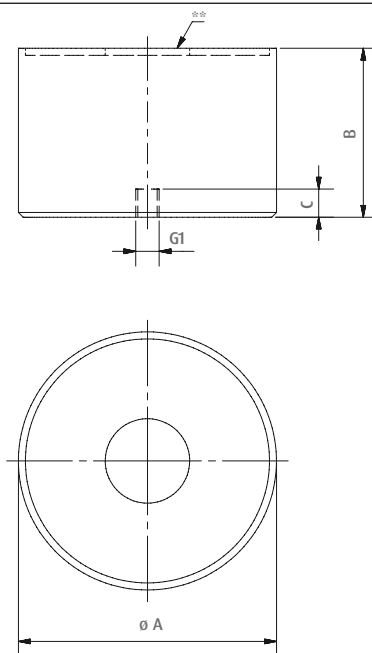
Product Description

- > Flexible connectivity thanks to G1/8 and G1/4 thread sizes. Integration with FIPA gripper systems and the use of spring plungers is also made easy.
- > No vacuum or compressed air supply required
- > Secure grip even if power should fail
- > During operation, no energy input is necessary thanks to the permanent magnet
- > No piping required

Technical Data

Item no.	Gripping force [N]	Residual gripping force [N]	Operating voltage of the switch-off coil [V]	Power-on time [ED]	Protection class	Max. operating temperature [°C]	Suitable fittings
MG35	70	<1	24	25% ED at < 2 min.	IP65	80	270.448
MG55	300	<1	24	25% ED at < 2 min.	IP65	80	270.449
MG70	750	<1	24	25% ED at < 2 min.	IP65	80	270.450

Dimensions



** = Holding surface

Item no.	Ø A [mm]	B [mm]	C [mm]	G1
MG35	35	30	5	M4
MG55	55	36	6	M5
MG70	70	45	8	M8