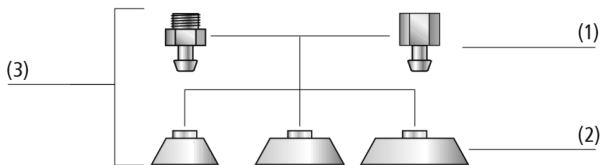


Flat Suction Cups SGPN

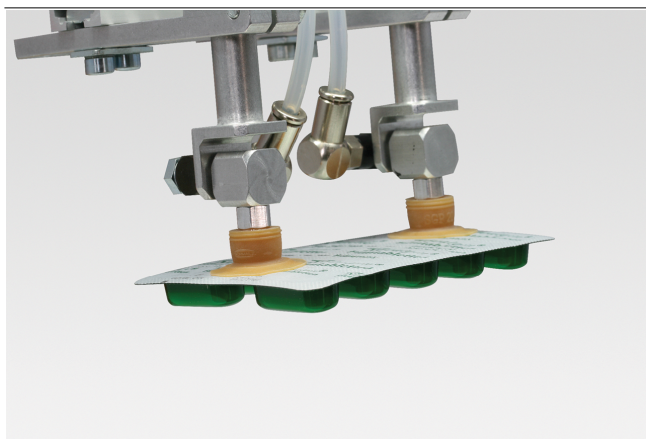
Suction area (Ø) from 15 mm to 40 mm



Flat Suction Cups SGPN



System design Flat Suction Cups SGPN



Flat suction cups SGPN being used for handling blister packagings

Suitability for industry specific applications

Applications

- Round flat suction cup for handling of wooden veneers, wafers and solar cells
- Handling of various packing material, e.g. plastic films, paper, blister packs
- Gentle handling of plastic films and paper due to flat, long-tapered sealing lip and inner support

Design

- Robust and wear-resistant suction cup SGPN (3) with single sealing lip, consisting of suction cup SGP (2) and connection nipple (1)
- Nipple plugged into cup
- With each nipple family, the replacement cups and nipples can be combined as desired

Product highlights

- Flat tapered sealing lip with support structure prevents pulling into the suction cup, for example with thin film, paper and solar cells
- Suction cup made of natural rubber NK with 40 Shore A prevents crinkling when gripping paper and film
- Suction cup made of silicone SI with 50 Shore A is ozone, UV and heat resistant
- Suction cup made of HT1 leaves no visible marks on the workpiece

Flat Suction Cups SGPN

Suction area (Ø) from 15 mm to 40 mm

Designation code Flat Suction Cups SGPN

SGPN	–	20	–	SI-50	–	M5-AG
1		2		3		4

1 – Abbreviated designation

Code	Version
SGPN	Flat

2 – Suction area

Code	Diameter in mm
15...40	ø 15 to 40

3 – Material

Code	Material
FPM-65	Fluorcaotchuc
HT1-60	High temperature material
NK-40	Natural rubber
SI-50	Silicone

4 – Connection

Code	Connection
M5-AG	M5-AG (AG = male (M))
G1/8-AG	G1/8-AG
G1/8-IG	G1/8-IG (IG = female (F))
G1/4-AG	G1/4-AG
G1/4-IG	G1/4-IG

Flat suction cup SGPN (elastomer part + connection nipple) is delivered unassembled. The delivery consists of:

- Suction cup of type SGP – elastomer part, available in various diameters and materials
- Connection nipple of type SA-NIP – available with various threads

Available spare parts: suction cup SGP, connection nipple SA-NIP

Ordering data Flat Suction Cups SGPN

Type	Suction cup material with ShA: *					
			FPM-65	HT1-60	NK-40	SI-50
SGPN	15	M5-AG	-	10.01.01.12396	10.01.01.11977	10.01.01.11980
SGPN	15	G1/8-AG	10.01.01.12921	10.01.01.12397	10.01.01.10315	10.01.01.11981
SGPN	15	G1/8-IG	10.01.01.13047	10.01.01.12398	10.01.01.10181	10.01.01.11982
SGPN	20	M5-AG	-	-	10.01.01.11978	10.01.01.11983
SGPN	20	G1/8-AG	10.01.01.12922	-	10.01.01.10316	10.01.01.11984
SGPN	20	G1/8-IG	10.01.01.13048	-	10.01.01.10180	10.01.01.11985
SGPN	24	M5-AG	-	10.01.01.12403	10.01.01.11979	10.01.01.11986
SGPN	24	G1/8-AG	-	10.01.01.12404	10.01.01.10317	10.01.01.11987
SGPN	24	G1/8-IG	-	10.01.01.12405	10.01.01.10182	10.01.01.11988
SGPN	30	G1/4-AG	-	10.01.01.12399	10.01.01.00791	10.01.01.11989
SGPN	30	G1/4-IG	-	10.01.01.12400	10.01.01.00790	10.01.01.11990
SGPN	34	G1/4-AG	10.01.01.12920	-	10.01.01.10831	-
SGPN	34	G1/4-IG	10.01.01.13046	-	10.01.01.10830	-
SGPN	35	G1/4-AG	-	10.01.01.12848	10.01.01.00793	10.01.01.12785
SGPN	35	G1/4-IG	-	10.01.01.12849	10.01.01.00792	10.01.01.12787
SGPN	40	G1/8-AG	-	10.01.01.12847	10.01.01.11739	10.01.01.12773
SGPN	40	G1/4-AG	-	10.01.01.12845	10.01.01.00795	10.01.01.12775
SGPN	40	G1/4-IG	-	10.01.01.12846	10.01.01.00794	10.01.01.12774

*Additional material specifications at beginning of the section "Vacuum Suction Cups"

Flat Suction Cups SGPN

Suction area (Ø) from 15 mm to 40 mm

Ordering data Spare parts Flat Suction Cups SGPN

Type		Suction cup material with ShA: *			
		FPM-65	HT1-60	NK-40	SI-50
SGP	15	10.01.01.12908	10.01.01.12394	10.01.01.10318	10.01.01.10574
SGP	20	10.01.01.12909	-	10.01.01.10319	10.01.01.11571
SGP	24	-	10.01.01.12402	10.01.01.10320	10.01.01.10577
SGP	30	-	10.01.01.12395	10.01.01.00787	10.01.01.01064
SGP	34	10.01.01.12919	-	10.01.01.10829	-
SGP	35	-	10.01.01.12811	10.01.01.00788	10.01.01.12784
SGP	40	-	10.01.01.12812	10.01.01.00789	10.01.01.12772

*Additional material specifications at beginning of the section "Vacuum Suction Cups"

Type	Spare parts			Part no.	
SGPN	15	M5-AG	Suction cup connection nipple	SA-NIP N016 M5-AG DN250	10.01.06.00123
SGPN	15	G1/8-AG	Suction cup connection nipple	SA-NIP N016 G1/8-AG DN350	10.01.06.05735
SGPN	15	G1/8-IG	Suction cup connection nipple	SA-NIP N016 G1/8-IG DN350	10.01.06.05731
SGPN	20	M5-AG	Suction cup connection nipple	SA-NIP N016 M5-AG DN250	10.01.06.00123
SGPN	20	G1/8-AG	Suction cup connection nipple	SA-NIP N016 G1/8-AG DN350	10.01.06.05735
SGPN	20	G1/8-IG	Suction cup connection nipple	SA-NIP N016 G1/8-IG DN350	10.01.06.05731
SGPN	24	M5-AG	Suction cup connection nipple	SA-NIP N016 M5-AG DN250	10.01.06.00123
SGPN	24	G1/8-AG	Suction cup connection nipple	SA-NIP N016 G1/8-AG DN350	10.01.06.05735
SGPN	24	G1/8-IG	Suction cup connection nipple	SA-NIP N016 G1/8-IG DN350	10.01.06.05731
SGPN	30	G1/4-AG	Suction cup connection nipple	SA-NIP N033 G1/4-AG DN550	10.01.01.00818
SGPN	30	G1/4-IG	Suction cup connection nipple	SA-NIP N033 G1/4-IG DN550	10.01.01.00817
SGPN	34	G1/4-AG	Suction cup connection nipple	SA-NIP N033 G1/4-AG DN550	10.01.01.00818
SGPN	34	G1/4-IG	Suction cup connection nipple	SA-NIP N033 G1/4-IG DN550	10.01.01.00817
SGPN	35	G1/4-AG	Suction cup connection nipple	SA-NIP N034 G1/4-AG DN550	10.01.01.00820
SGPN	35	G1/4-IG	Suction cup connection nipple	SA-NIP N034 G1/4-IG DN550	10.01.01.00819
SGPN	40	G1/8-AG	Suction cup connection nipple	SA-NIP N035 G1/8-AG DN500	10.01.01.11738
SGPN	40	G1/4-AG	Suction cup connection nipple	SA-NIP N035 G1/4-AG DN550	10.01.01.00822
SGPN	40	G1/4-IG	Suction cup connection nipple	SA-NIP N035 G1/4-IG DN550	10.01.01.00821

Technical data Flat Suction Cups SGPN

Type		Suction force (-600 mbar) [N]*	Volume [cm ³]	Hose diameter (recom.) d [mm]**	Nipple family
SGPN	15	5.5	0.28	2	N 016
SGPN	20	8.5	0.60	2	N 016
SGPN	24	11.0	0.86	4	N 016
SGPN	30	19.0	3.00	4	N 033
SGPN	34	25.0	3.70	4	N 033
SGPN	35	31.0	2.80	4	N 034
SGPN	40	33.0	3.80	4	N 035

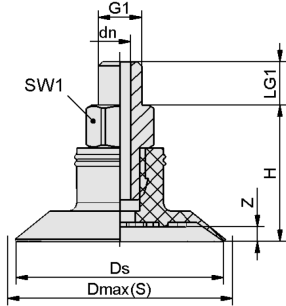
*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

**The recommended hose diameter is based on a hose length of approx. 2 m

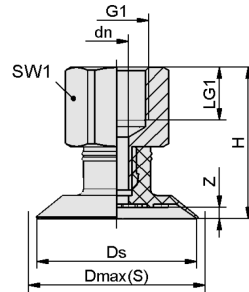
Flat Suction Cups SGPN

Suction area (\emptyset) from 15 mm to 40 mm

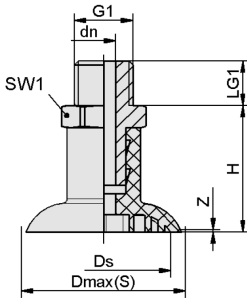
Design data Flat Suction Cups SGPN



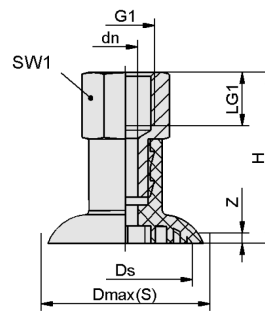
SGPN 15 - 40 AG



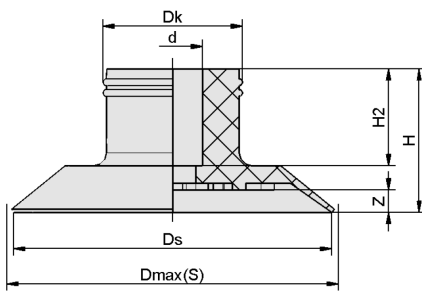
SGPN 15 - 40 IG



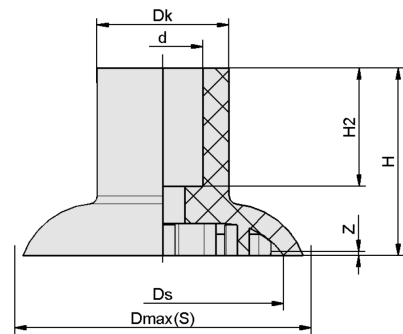
SGPN 35 AG



SGPN 35 IG



SGP 15 - 40



SGP 35

Flat Suction Cups SGPN

Suction area (\emptyset) from 15 mm to 40 mm

Design data Flat Suction Cups SGPN

Type*			dn [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	SW1 [mm]	Z (Stroke) [mm]
SGPN	15	M5-AG	2.5	15.5	14.5	M5-M	15.0	5	7	0.9
SGPN	15	G1/8-AG	3.5	15.5	14.5	G1/8"-M	16.0	8	14	0.9
SGPN	15	G1/8-IG	3.5	15.5	14.5	G1/8"-F	22.0	8	14	0.9
SGPN	20	M5-AG	2.5	22.0	20.0	M5-M	15.4	5	7	1.5
SGPN	20	G1/8-AG	3.5	22.0	20.0	G1/8"-M	16.4	8	14	1.5
SGPN	20	G1/8-IG	3.5	22.0	20.0	G1/8"-F	22.4	8	14	1.5
SGPN	24	M5-AG	2.5	25.5	24.0	M5-M	15.8	5	7	1.7
SGPN	24	G1/8-AG	3.5	25.5	24.0	G1/8"-M	16.8	8	14	1.7
SGPN	24	G1/8-IG	3.5	25.5	24.0	G1/8"-F	22.8	8	14	1.7
SGPN	30	G1/4-AG	5.5	32.0	30.0	G1/4"-M	27.2	10	17	2.0
SGPN	30	G1/4-IG	5.5	32.0	30.0	G1/4"-F	37.2	12	17	2.0
SGPN	34	G1/4-AG	5.5	37.5	34.0	G1/4"-M	28.0	10	17	2.2
SGPN	34	G1/4-IG	5.5	37.5	34.0	G1/4"-F	38.0	12	17	2.2
SGPN	35	G1/4-AG	5.5	35.0	34.0	G1/4"-M	28.5	10	17	0.5
SGPN	35	G1/4-IG	5.5	35.0	34.0	G1/4"-F	38.5	12	17	0.5
SGPN	40	G1/8-AG	5.0	42.0	40.0	G1/8"-M	25.6	10	17	2.3
SGPN	40	G1/4-AG	5.0	42.0	40.0	G1/4"-M	25.6	10	17	2.3
SGPN	40	G1/4-IG	5.0	42.0	40.0	G1/4"-F	35.6	12	17	2.3

*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

**External dimension of the suction cup when it is pressed against the workpiece by the vacuum

Type*		d [mm]	Dk [mm]	Dmax(S) [mm]**	Ds [mm]	H [mm]	H2 [mm]	Z (Stroke) [mm]
SGP	15	4.5	9.5	15.5	14.5	10.0	7.2	0.9
SGP	20	4.5	11.0	22.0	20.0	10.4	7.1	1.5
SGP	24	4.5	10.5	25.5	24.0	10.8	7.3	1.7
SGP	30	11.2	15.6	32.0	30.0	22.2	15.7	2.0
SGP	35	10.0	16.5	35.0	30.2	23.5	14.8	0.5
SGP	34	11.2	15.2	37.5	34.0	23.0	16.8	2.2
SGP	40	8.0	16.0	42.0	40.0	20.6	14.5	2.3

*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

**External dimension of the suction cup when it is pressed against the workpiece by the vacuum