

Flat Suction Pads (Round)



Suction Plates SPU

Suction area (\emptyset) from 100 mm to 400 mm



Suitability for Industry-Specific Applications

Applications

- Round suction plate for handling of smooth, flat workpieces
- Series SPU B with thicker sealing lip: handling of workpieces with a slightly rough surface, such as wood or scaly metal sheets
- Series SPU AE with integrated peeling insert: handling of thin metal sheets (approx. 1.0 - 2.5 mm); overcomes the self-adhesion between the sheets
- Series SPU TV with sensing valve: deactivation of unused suction pads to prevent the entry of unwanted air

Design

- Suction cup SPU consisting of sealing ring (3) and aluminum support plate (1)
- Sealing ring clipped securely onto support plate with positive locking
- Internal sealing edge (4) for better sealing on slightly rough surfaces
- Side vacuum connector (2) normally sealed with a plug (glued into position for extra safety)
- Series SPU TV: sensing valve already installed
- Series SPU AE: peeling insert on the bottom side already installed
- When worn, the seal can be replaced separately

Our Highlights...

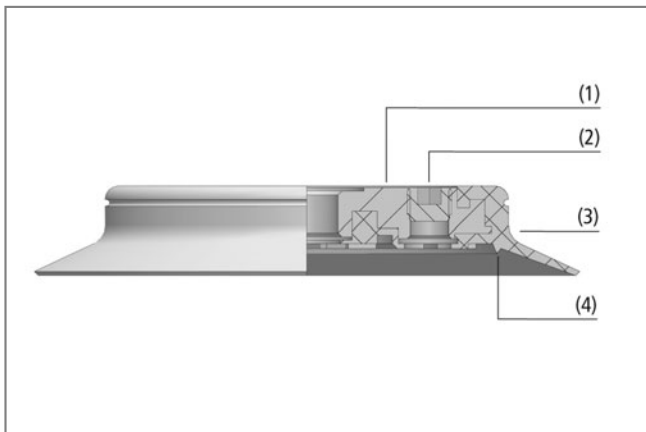
- Supports on the bottom
- Low internal volume
- Wide range of diameters
- Optimum shape

Your Benefits...

- > No permanent deformation of thin-walled workpieces
- > Very short cycle times
- > Wide range of versions for many different workpieces
- > High suction force in spite of small dimensions



Suction plates SPU



System design suction plates SPU



Suction plates SPU being used for handling coated chipboards

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Designation Code Suction Plates SPU

Abbreviated designation	Suction area Ø in mm	Material and Shore hardness	Connection thread	Product addition
Example SPU 160 NBR-55 G1/2-IG TV:				
SPU	160	NBR-55	G1/2-IG	TV
SPU	100 to 400	NBR-55 SI-60	G1/4-IG (IG = female (F)) G1/2-IG	AE peeling insert B steep sealing lip TV sensing valve

Ordering Data Suction Plates SPU

Suction plate SPU (sealing ring + support plate) is delivered assembled. The assembly consists of:

- Sealing ring of type DR-SPU – elastomer part, available in various diameters
- Aluminium support plate, available with various threads
- Optional product addition: sensing valve, steep sealing lip, peeling insert

Available spare parts: sealing ring DR-SPU, sensing valve

Suction Plates SPU

Type	Suction pad material * / hardness in Shore A	
	Perbunan NBR 55±5ShA	Silicone SI 60±5ShA
SPU 100 G1/4-IG	10.01.01.01107	10.01.01.01108
SPU 125 G1/4-IG	10.01.01.01102	10.01.01.01103
SPU 125 G1/4-IG TV	10.01.01.01157	10.01.01.01158
SPU 125 G1/4-IG AE	10.01.01.01159	10.01.01.01160
SPU 160 G1/2-IG	10.01.01.01116	10.01.01.01117
SPU 160 G1/2-IG TV	10.01.01.01153	10.01.01.01154
SPU 160 G1/2-IG AE	10.01.01.01155	10.01.01.01156
SPU 210 G1/2-IG	10.01.01.01092	10.01.01.01093
SPU 210 G1/2-IG B	10.01.01.10552	-
SPU 210 G1/2-IG TV	10.01.01.01149	10.01.01.01150
SPU 210 G1/2-IG AE	10.01.01.01151	10.01.01.01152
SPU 250 G1/2-IG	10.01.01.01097	10.01.01.01098
SPU 250 G1/2-IG B	10.01.01.10589	-
SPU 250 G1/2-IG TV	10.01.01.01209	10.01.01.01210
SPU 300 G1/2-IG	10.01.01.01134	10.01.01.01135
SPU 360 G1/2-IG B	10.01.01.10588	-
SPU 400 G1/2-IG	10.01.01.01138	-

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

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Suction Plates SPU

Suction area (Ø) from 100 mm to 400 mm

Ordering Data Spare Parts Suction Pads

Type	Suction pad material * / hardness in Shore A	
	Perbunan NBR 55±5ShA	Silicone SI 60±5ShA
DR-SPU 100	10.01.01.01104	10.01.01.01105
DR-SPU 125	10.01.01.01099	10.01.01.01100
DR-SPU 160	10.01.01.01111	10.01.01.01112
DR-SPU 210	10.01.01.01089	10.01.01.01090
DR-SPU 210 B	10.01.01.10502	-
DR-SPU 250	10.01.01.01094	10.01.01.01095
DR-SPU 250 B	10.01.01.10579	-
DR-SPU 300	10.01.01.01131	10.01.01.01132
DR-SPU 360 B	10.01.01.10584	-
DR-SPU 400	10.01.01.01136	-

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

Ordering Data Spare Parts Sensing Valve

Type	Sensing valve
SPU 125 G1/4-IG TV	10.05.10.00061
SPU 160 G1/2-IG TV	10.05.10.00061
SPU 210 G1/2-IG TV	10.05.10.00061
SPU 250 G1/2-IG TV	10.05.10.00038

Technical Data Suction Plates SPU

Type	Suction force Ds [N]*	Suction force d2 [N]**	Volume [cm ³]	Min. curve radius [mm] (convex)	Recom. internal hose diameter d [mm]***
SPU 100 G1/4-IG	425	185	40	130	9
SPU 125 G1/4-IG	660	365	70	220	9
SPU 125 G1/4-IG TV	660	365	70	220	9
SPU 125 G1/4-IG AE	660	365	60	-	9
SPU 160 G1/2-IG	1090	600	123	350	12
SPU 160 G1/2-IG TV	1090	600	123	350	9
SPU 160 G1/2-IG AE	1090	600	110	-	12
SPU 210 G1/2-IG	1870	1250	226	750	12
SPU 210 G1/2-IG B	1870	1190	301	750	12
SPU 210 G1/2-IG TV	1870	1250	226	750	9
SPU 210 G1/2-IG AE	1870	1250	205	-	12
SPU 250 G1/2-IG	2650	1940	332	2200	12
SPU 250 G1/2-IG B	2650	1940	488	1500	12
SPU 250 G1/2-IG TV	2650	1940	332	-	12
SPU 300 G1/2-IG	3810	3010	492	3500	12
SPU 360 G1/2-IG B	5500	4730	1170	3000	12
SPU 400 G1/2-IG	6780	5870	907	6500	12

*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

**Suction force referred to the sealing-edge diameter d2

***The recommended hose diameter refers to a hose length of approx. 2 m

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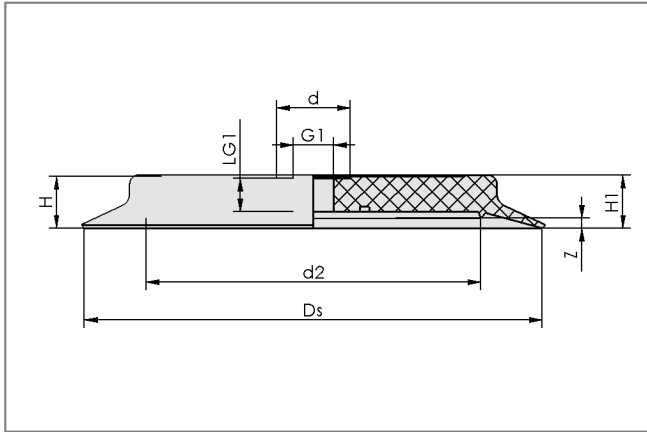


Suction Plates SPU

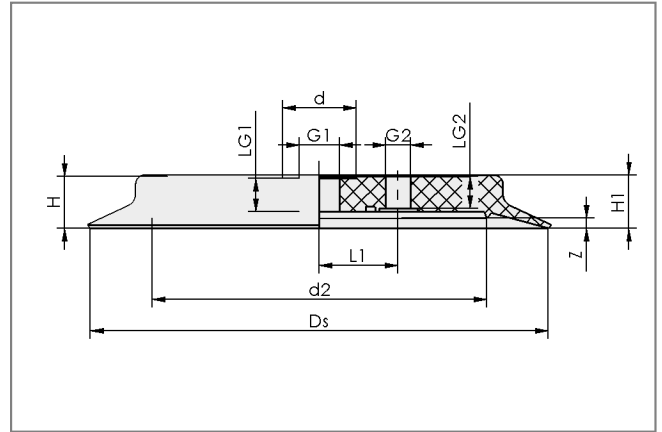
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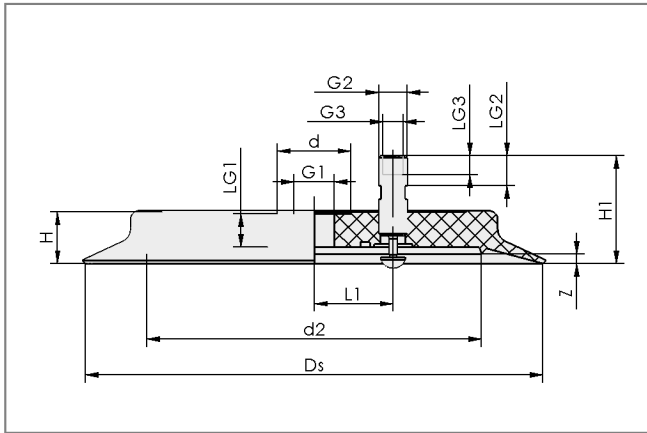
Design Data Suction Plates SPU



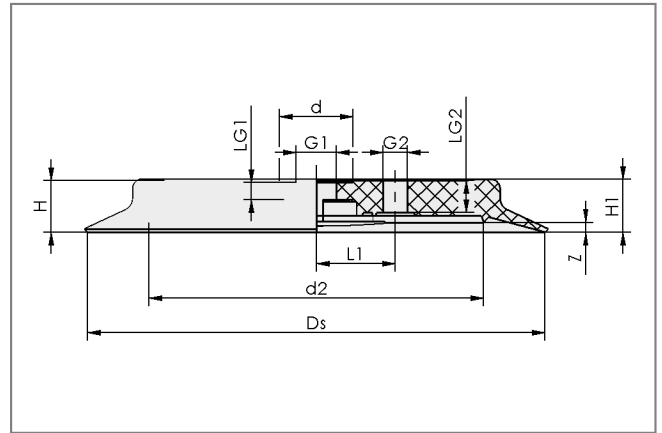
SPU 100



SPU 125 to 400



SPU 125 to 250 TV



SPU 125 to 210 AE

Type	Dimensions in mm*												
	d	d2	Ds	G1	G2	G3	H	H1	L1	LG1	LG2	LG3	Z (Stroke)
SPU 100 G1/4-IG	22	60	100	G1/4"-F	-	-	25.0	26.0	-	13.0	-	-	7
SPU 125 G1/4-IG	22	83	125	G1/4"-F	G1/4"-F	-	25.0	26.0	22.0	13.0	14	-	7
SPU 125 G1/4-IG TV	22	83	125	G1/4"-F	G1/4"-M	G1/8"-F	25.0	62.0	22.0	13.0	36	7	7
SPU 125 G1/4-IG AE	22	83	125	G1/4"-F	G1/4"-F	-	25.0	26.0	22.0	13.0	14	-	7
SPU 160 G1/2-IG	34	113	160	G1/2"-F	G1/4"-F	-	25.0	26.5	36.5	13.5	15	-	7
SPU 160 G1/2-IG TV	34	113	160	G1/2"-F	G1/4"-M	G1/8"-F	25.0	62.0	36.5	13.5	18	10	7
SPU 160 G1/2-IG AE	34	113	160	G1/2"-F	G1/4"-F	-	25.0	26.5	36.5	13.5	15	-	7
SPU 210 G1/2-IG	34	163	210	G1/2"-F	G1/4"-F	-	25.0	26.5	36.5	13.5	15	-	5
SPU 210 G1/2-IG B	34	159	210	G1/2"-F	G1/4"-F	-	29.0	29.5	36.5	13.5	15	-	10
SPU 210 G1/2-IG TV	34	163	210	G1/2"-F	G1/4"-M	G1/8"-F	25.0	62.0	36.5	13.5	38	10	5
SPU 210 G1/2-IG AE	34	163	210	G1/2"-F	G1/4"-F	-	25.0	26.5	36.5	13.5	15	-	5
SPU 250 G1/2-IG	34	203	250	G1/2"-F	G1/2"-F	-	25.0	26.5	76.0	13.5	15	-	7
SPU 250 G1/2-IG B	34	203	250	G1/2"-F	G1/2"-F	-	29.0	30.0	76.0	13.5	15	-	11
SPU 250 G1/2-IG TV	34	203	250	G1/2"-F	G1/2"-M	G3/8"-F	25.0	65.5	76.0	13.5	39	12	7
SPU 300 G1/2-IG	34	253	300	G1/2"-F	G1/2"-F	-	25.0	26.5	76.0	13.5	15	-	6
SPU 360 G1/2-IG B	-	309	360	G1/2"-F	G1/2"-F	-	35.0	35.5	86.0	17.0	17	-	12
SPU 400 G1/2-IG	-	349	400	G1/2"-F	G1/2"-F	-	28.5	29.0	86.0	15.5	17	-	6

*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 M3