

















3

SUCTION PLATES

Suct. Plates 3

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SUCTION PLATES

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Description

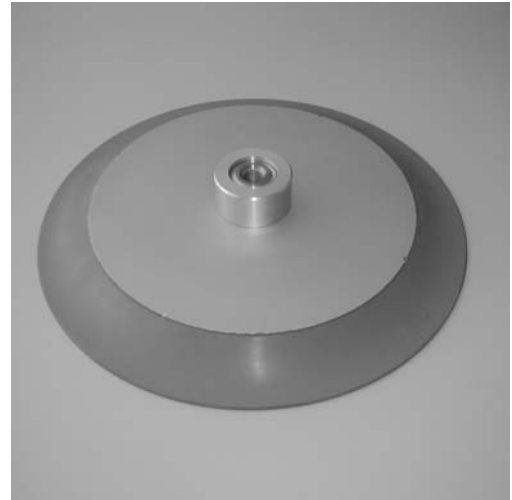
Sealing plate with vulcanised seal, a short sealing lip and grooves.
Suitable for even workpieces with a smooth surface and for thin-walled parts.
The vulcanized seal ensures a high degree of operating safety.
The sealing plates are simply screwed onto the rigid or articulated suction plate retainer SAS or SAK and can easily be exchanged in the case of wear and tear. The sealing plates are optionally available with central or lateral vacuum supply



FSRL 160



FSRL 220 with bolt connection



Suction plate DP-FSRL 400 with plate retainer SAK-M20

Suct. plates 3

Materials:

NBR-G Perbunane, grey
SI-T Silicone, transparent

Article numbers

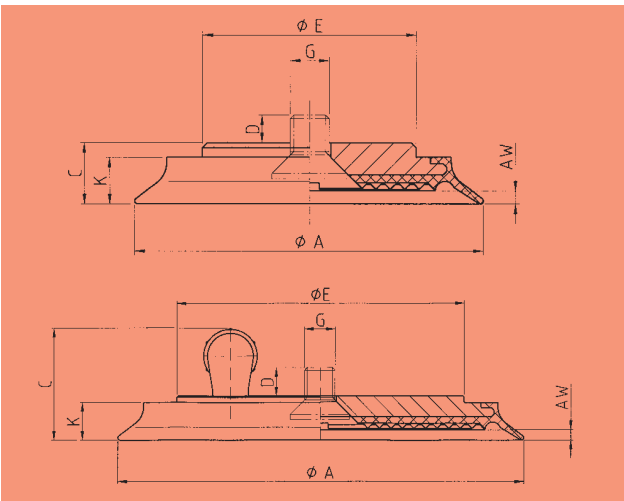
Type	Suction plate		conn. screw	
	NBR-G	SI-T	Type	Part no.
DP-FSRL 110 Z	1.11.1.0103	1.11.1.0104	ASB-M12-18	1.31.2.0003
DP-FSRL 110 S	1.11.1.0101	1.11.1.0102	AS-M12-18	1.31.2.0010
DP-FSRL 160 Z	1.11.1.0107	1.11.1.0108	ASB-M12-18	1.31.2.0003
DP-FSRL 160 S	1.11.1.0105	1.11.1.0106	AS-M12-18	1.31.2.0010
DP-FSRL 220 Z	1.11.1.0111	1.11.1.0112	ASB-M16-25	1.31.2.0007
DP-FSRL 220 S	1.11.1.0109	1.11.1.0110	AS-M16-25	1.31.2.0014
DP-FSRL 280 Z	1.11.1.0115	1.11.1.0116	ASB-M16-25	1.31.2.0007
DP-FSRL 280 S	1.11.1.0113	1.11.1.0114	AS-M16-25	1.31.2.0014
DP-FSRL 340 S	1.11.1.0141	1.11.1.0142	AS-M24-32	1.31.2.0029
DP-FSRL 400 S	1.11.1.0143	1.11.1.0144	AS-M24-32	1.31.2.0029
DP-FSRL 500 S	1.11.1.0145	1.11.1.0146	AS-M24-32	1.31.2.0029
DP-FSRL 600 S	1.11.1.0147	1.11.1.0148	AS-M24-32	1.31.2.0029

Z with central vacuum supply
S with lateral vacuum supply

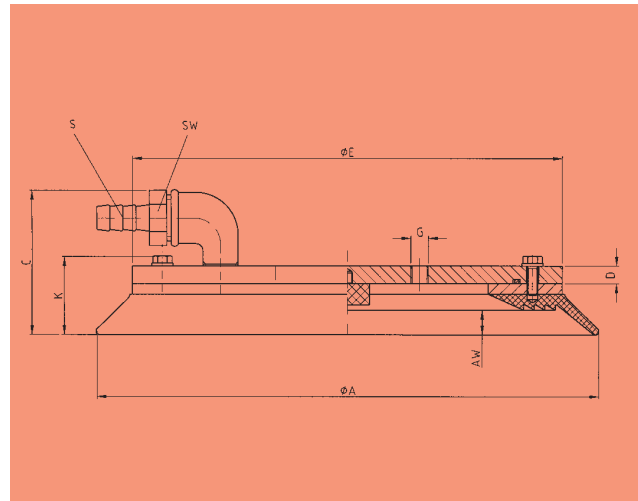
Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
DP-FSRL 110 Z	495	0,31	0,06
DP-FSRL 110 S	495	0,32	0,06
DP-FSRL 160 Z	1129	0,47	0,12
DP-FSRL 160 S	1129	0,53	0,12
DP-FSRL 220 Z	2130	1,22	0,2
DP-FSRL 220 S	2130	1,30	0,2
DP-FSRL 280 Z	3139	1,70	0,78
DP-FSRL 280 S	3139	1,78	0,78
DP-FSRL 340 S	3645	4,5	1,3
DP-FSRL 400 S	4000	6,0	2,6
DP-FSRL 500 S	6750	11,8	4,3
DP-FSRL 600 S	9000	18,4	6,8

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces
2) Volume with suction cup in released condition



FSrL 110 to 280 Z/S with central (above) and lateral (below) vacuum supply



FSRL 340 to 600 S with lateral vacuum supply

Dimensions

Type	A	AW	C	D	E	G	K	S (LW)	SW
DP-FSRL 110 Z	110	4,5	19	9,5	66	M 12	14,5	---	---
DP-FSRL 110 S	110	4,5	34	9,5	66	M 12	14,5	6*	8
DP-FSRL 160 Z	160	4,5	19	9,5	112	M 12	14,5	---	---
DP-FSRL 160 S	160	4,5	44	9,5	112	M 12	14,5	10	19
DP-FSRL 220 Z	220	5,5	26	10	74	M 16	18	---	---
DP-FSRL 220 S	220	5,5	52	10	74	M 16	18	1/2"	27
DP-FSRL 280 Z	280	5,5	25	10	74	M 16	18	---	---
DP-FSRL 280 S	280	5,5	52	10	74	M 16	18	1/2"	27
DP-FSRL 340 S									
DP-FSRL 400 S									
DP-FSRL 500 S									
DP-FSRL 600 S									

*) for pneumatic tube VS-6-B

Overview table for suitable connection elements

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valves	Touch valves	Bolt type	Hose connection
	SAS-M12	Part no:	SAK-M12	Part no:				
DP-FSRL 110 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSRL 110 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-6-B
DP-FSRL 160 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSRL 160 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-10-T
DP-FSRL 220 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSRL 220 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T
DP-FSRL 280 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSRL 280 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T
DP-FSRL 340 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS 1/2"	---	STG-20-M20	VS-1/2-T
DP-FSRL 400 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS 1/2"	---	STG-20-M20	VS-1/2-T
DP-FSRL 500 S	SAS-M30	1.31.2.0028	SAK-M30	1.31.2.0026	SVS 3/4"	---	STG-30-M30	VS-3/4-T
DP-FSRL 600 S	SAS-M30	1.31.2.0028	SAK-M30	1.31.2.0026	SVS 3/4"	---	STG-30-M30	VS-3/4-T

Description

Suction plate with vulcanized seal, a longer sealing lip, without grooves but with a support ring. Suitable for workpieces with a slightly rough or oxidized surface as well as for slack parts. The vulcanised seal guarantees a high degree of operating safety.

The sealing plates are simply screwed onto the rigid or articulated suction plate retainers SAS or SAK and can easily be exchanged if they are worn. The sealing plates are optionally available with central or lateral vacuum supply.

The connection screw is supplied with the sealing plate.



FSL 230w/o sealing



FSL 160with installation kit



Suction plates DP-FSL 110 - 290

Article numbers

Type	Suction plate		Replacement sealing		conn. screw	
	NBR-G	SI-T	NBR-G	SI-T	Type	Part no.
DP-FSL 110 Z	1.11.1.0087	1.11.1.0088	---	---	ASB-M12-18	1.31.2.0003
DP-FSL 110 S	1.11.1.0085	1.11.1.0086	---	---	AS-M12-18	1.31.2.0010
DP-FSL 160 Z	1.11.1.0091	1.11.1.0092	---	---	ASB-M12-18	1.31.2.0003
DP-FSL 160 S	1.11.1.0089	1.11.1.0090	---	---	AS-M12-18	1.31.2.0010
DP-FSL 230 Z	1.11.1.0095	1.11.1.0096	---	---	ASB-M16-25	1.31.2.0007
DP-FSL 230 S	1.11.1.0093	1.11.1.0094	---	---	AS-M16-25	1.31.2.0014
DP-FSL 290 Z	1.11.1.0099	1.11.1.0100	---	---	ASB-M16-25	1.31.2.0007
DP-FSL 290 S	1.11.1.0097	1.11.1.0098	---	---	AS-M16-25	1.31.2.0014
DP-FSL 360 S			1.13.1.0029	1.13.1.0031	AS-M24-32	1.31.2.0029
DP-FSL 400 S			1.13.1.0032	1.13.1.0034	AS-M24-32	1.31.2.0029
DP-FSL 450 S			1.13.1.0038	1.13.1.0040	AS-M24-32	1.31.2.0029
DP-FSL 540 S			1.13.1.0041	1.13.1.0043	AS-M24-32	1.31.2.0029
DP-FSL 630 S			1.13.1.0044	1.13.1.0046	---	---

Z with central vacuum supply
S with lateral vacuum supply

Materials:

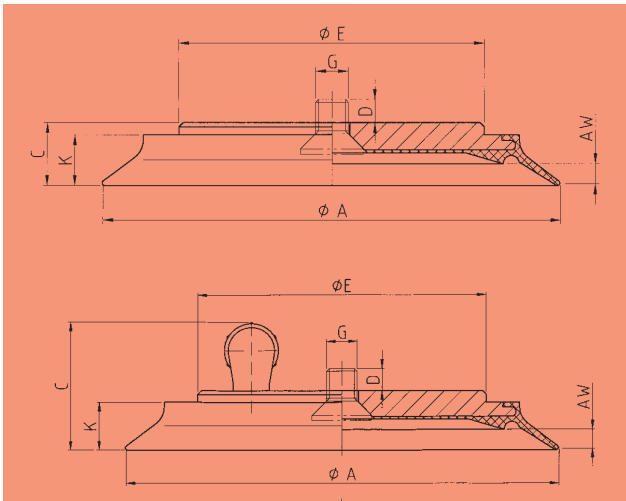
NBR-G Perbunane, grey
SI-T Silicone, transparent

Technical Data

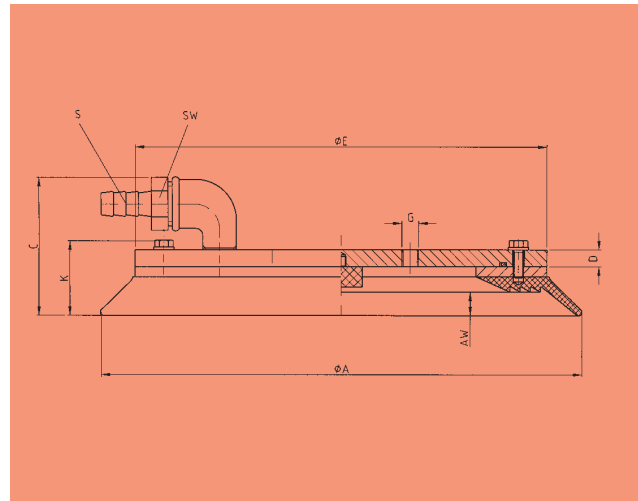
Type	Hold.force ¹⁾	Weight	Volume ²⁾
	(N)	(kg)	(l)
DP-FSL 110 Z	375	0,33	0,85
DP-FSL 110 S	375	0,34	0,85
DP-FSL 160 Z	900	0,45	0,12
DP-FSL 160 S	900	0,51	0,12
DP-FSL 230 Z	2049	1,07	0,43
DP-FSL 230 S	2049	1,15	0,43
DP-FSL 290 Z	3579	1,68	0,96
DP-FSL 290 S	3579	1,68	0,96
DP-FSL 360 S	5230	8,8	2,0
DP-FSL 400 S	6140	10	2,35
DP-FSL 450 S	7500	16,5	4,5
DP-FSL 540 S	12500	17,4	6,8
DP-FSL 630 S	16600	36	12,1

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



FSL 110 to 290 Z/S with central (above) and lateral (below) vacuum supply



FSL 360 to 540 S with lateral vacuum supply
 Suspension FSL 630 w/ suspension bracket AB 40 and bolt ST-KPT-40

Dimensions									
Type	A	AW	C	D	E	G	K	S (LW)	SW
DP-FSL 110 Z	110	7,5	23	9,5	66	M12	18,5	---	---
DP-FSL 110 S	110	7,5	38	9,5	66	M12	18,5	6*	8
DP-FSL 160 Z	160	8	23	9,5	102	M 12	18,5	---	---
DP-FSL 160 S	160	8	23	9,5	102	M 12	18,5	10	19
DP-FSL 230 Z	230	8	29	10	74	M 16	22	---	---
DP-FSL 230 S	230	8	29	10	74	M 16	22	1/2"	27
DP-FSL 290 Z	290	10	33	10	74	M 16	26	---	---
DP-FSL 290 S	290	10	33	10	74	M 16	26	1/2"	27
DP-FSL 360 S	360	6	94	12	322	R 3/4"	34	3/4"	32
DP-FSL 400 S	400	14	89	12	346	R 3/4"	29	3/4"	32
DP-FSL 450 S	450	17	111	15	375	R 3/4"	50	3/4"	32
DP-FSL 540 S	540	17	120	15	465	R 3/4"	50	3/4"	32
DP-FSL 630 S	630	17	120	15	555	R 1"	50	1"	36

*) for pneumatic tube VS-6-B

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M12	Part no:	SAK-M12	Part no:				
DP-FSL 110 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12 ^{*)}	STN-16-M12	VS-10-T
DP-FSL 110 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-6-B
DP-FSL 160 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12 ^{*)}	STN-16-M12	VS-10-T
DP-FSL 160 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-10-T
DP-FSL 230 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSL 230 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T
DP-FSL 290 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSL 290 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T
DP-FSL 360 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS 1/2"	---	STG-20-M20	VS-1/2-T
DP-FSL 400 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS 1/2"	---	STG-20-M20	VS-1/2-T
DP-FSL 450 S	SAS-M30	1.31.2.0028	SAK-M30	1.31.2.0026	SVS 3/4"	---	STG-30-M30	VS-3/4-T
DP-FSL 540 S	SAS-M30	1.31.2.0028	SAK-M30	1.31.2.0026	SVS 3/4"	---	STG-30-M30	VS-3/4-T
DP-FSL 630 S	---	---	AB-40	1.31.2.0034	---	---	ST-KPT-40	VS-1-T

Description

Sealing plate with vulcanised seal, a soft sealing lip and no bearing surface.

Suitable for workpieces with a very rough or structure surface, as well as for roughly sawn wood.

The vulcanised seal guarantees maximum operating safety.

The sealing plates are simply screwed onto the rigid or articulated suction plate retainers SAS or SAK and can easily be exchanged if they are worn. The sealing plates are optionally available with central or lateral vacuum supply.

The connection screw is supplied with the sealing plate.



FSD 250



FSD 90 with installation kit



Sealing plates DP-FSD 90 - 260 with central vacuum supply

Materials:

NRS Norsorex, grey, shore hardness 20°

SI-T Silicone, transparent, shore hardness 50°

Article numbers

Type	Suction plate		conn. screw	
	NRS-G	SI-T	Type	Part no.
DP-FSD 85 Z	1.11.1.0078	1.11.1.0079	ASB-M12-18	1.31.2.0003
DP-FSD 85 S	1.11.1.0076	1.11.1.0077	AS-M12-18	1.31.2.0010
DP-FSD 140 Z	1.11.1.0066	1.11.1.0067	ASB-M12-18	1.31.2.0003
DP-FSD 140 S	1.11.1.0064	1.11.1.0065	AS-M12-18	1.31.2.0010
DP-FSD 200 Z	1.11.1.0070	1.11.1.0071	ASB-M16-25	1.31.2.0007
DP-FSD 200 S	1.11.1.0068	1.11.1.0069	AS-M16-25	1.31.2.0014
DP-FSD 230 Z	1.11.1.0133	1.11.1.0138	ASB-M16-25	1.31.2.0007
DP-FSD 230 S	1.11.1.0139	1.11.1.0140	AS-M16-25	1.31.2.0014
DP-FSD 260 Z	1.11.1.0074	1.11.1.0075	ASB-M16-25	1.31.2.0007
DP-FSD 260 S	1.11.1.0072	1.11.1.0073	AS-M16-25	1.31.2.0014

Z with central vacuum supply

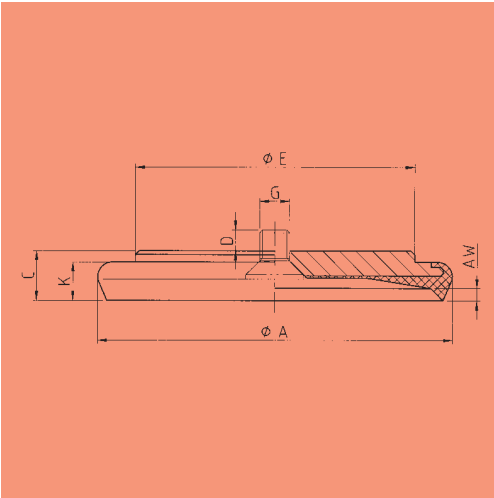
S with lateral vacuum supply

Technical Data

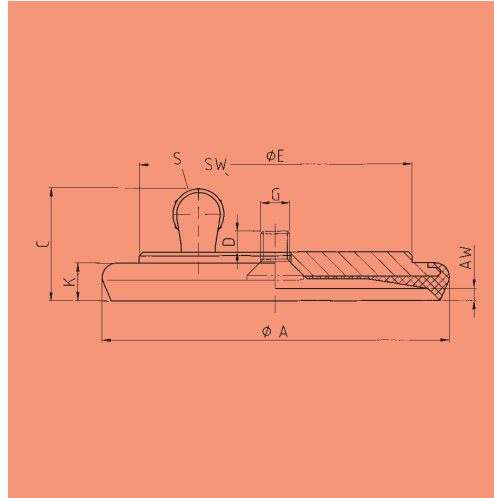
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
DP-FSD 85 Z	300	0,13	70
DP-FSD 85 S	300	0,14	70
DP-FSD 140 Z	759	0,40	130
DP-FSD 140 S	759	0,46	130
DP-FSD 200 Z	1579	1,20	240
DP-FSD 200 S	1579	1,28	240
DP-FSD 230 Z	2050	1,26	580
DP-FSD 230 S	2050	1,34	580
DP-FSD 260 Z	2600	1,32	950
DP-FSD 260 S	2600	1,40	950

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction platen DP-FSD ... Z with central vacuum supply



Suction platen DP-FSD ... S with lateral vacuum supply

Dimensions									
Type	A	AW	C	D	E	G	K	S (LW)	SW
DP-FSD 85 Z	85	5	20	9,5	66	M 12	15,5	---	---
DP-FSD 85 S	85	5	35	9,5	66	M 12	15,5	6*	8
DP-FSD 140 Z	140	5	20	9,5	112	M 12	15,5	---	---
DP-FSD 140 S	140	5	45	9,5	112	M 12	15,5	10	19
DP-FSD 200 Z	200	5	25	10	75	M 16	18	---	---
DP-FSD 200 S	200	5	52	10	75	M 16	18	1/2"	27
DP-FSD 230 Z	230	5	25	10	75	M 16	18	---	---
DP-FSD 230 S	230	5	25	10	75	M 16	18	1/2"	27
DP-FSD 260 Z	260	5	25	10	75	M 16	18	---	---
DP-FSD 260 S	260	5	52	10	75	M 16	18	1/2"	27

*) for pneumatic tube VS-6-B

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M12	Part no:	SAK-M12	Part no:				
DP-FSD 85 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSD 85 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-6-B
DP-FSD 140 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSD 140 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-10-T
DP-FSD 200 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSD 200 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	---	STN-20-M16	VS-1/2-T
DP-FSD 230 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSD 230 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T
DP-FSD 260 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSD 260 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-1/2"	---	STG-20-M16	VS-1/2-T

Description

Suction plates with sponge rubber sealing and nipple or grooves. The sponge rubber sealing is glued to the sealing groove and can be easily replaced when worn out. Suitable for the transport of materials with slightly structured or formed surface, like sawed wooden boards etc. The suction plates are simply screwed onto the rigid or articulated suction plate retainer SAS or SAK and can be easily replaced in case of wear and tear. The suction plates are optionally available with central or lateral vacuum supply.



Suction plate FSM 100



Suction plate FSM 100 - 210

Suct. plates 3

Materials:

M-S Sponge rubber
 black

Article numbers

Type	Saugplatte	Ersatzdichtung	Ersatzauflage	conn. screw	
	M-S	M-S	NBR-S	Type	Part no:
SP-FSM 100	1.11.1.0163	2.13.2.0043	2.13.2.0005	ASB-M12-18	1.31.2.0003
DP-FSM 160	1.11.1.0164	2.13.2.0047	2.13.2.0007	ASB-M12-18	1.31.2.0003
DP-FSM 210	1.11.1.0165	2.13.2.0048	2.13.2.0009	ASB-M16-25	1.31.2.0007
DP-FSM 320	1.11.1.0166	2.13.2.0050	2.13.2.0084 ³⁾	ASB-M16-25	1.31.2.0007

3) The indicated pad for suction plate DP-FSM 320 only covers half of the plate. A full pad is available as part no. 2.13.2.0085.

Materials: Sealing: Sponge rubber, black, Pad: Perbunane, black

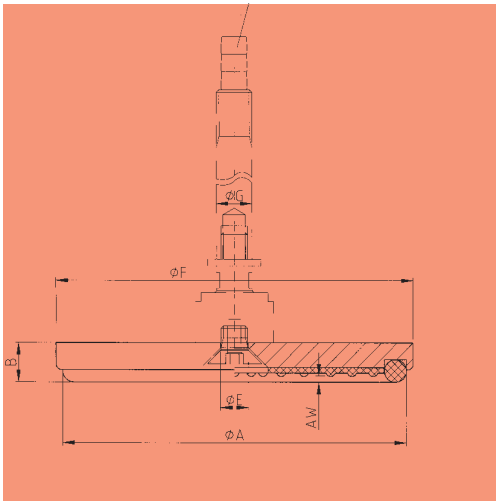
Technical Data

Type	Hold.force ¹⁾	Weight	Volume ²⁾
	(N)	(kg)	(ml)
DP-FSM 100	300	0,6	40
DP-FSM 160	900	0,8	50
DP-FSM 210	1550	1,2	130
DP-FSM 320	3580	3,4	330

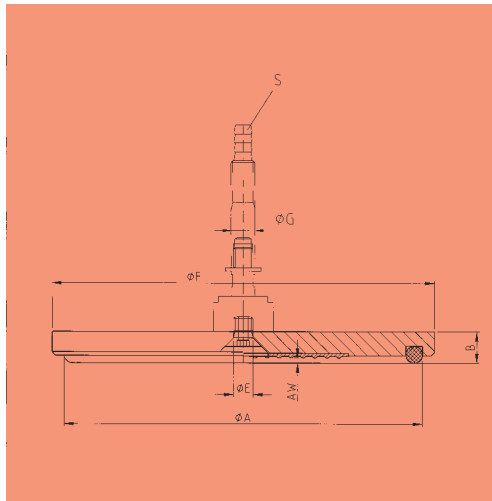
1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition

SUCTION PLATE FSM 100 - 320



Suction plate FSM 100 - 210



Suction plate FSM 320

Suct. plates **3**

Dimensions									
Type	A	B	AW	C	F	G	K	S	SW
								LW	
DP-FSM 100	84	18	3	12,2	100	16	---	10	---
DP-FSM 160	144	18	3	12,2	160	16	---	10	---
DP-FSM 210	186	18	3	16,2	200	20	---	1/2"	---
DP-FSM 320	286	26	4	16,2	308	20	--	1/2"	---

Overview table for suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M12	Part no:	SAK-M12	Part no:				
DP-FSM 100 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSM 160 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSM 210 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T
DP-FSM 320 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	TV-M16	STN-20-M16	VS-1/2-T

Description

Sealing plate with vulcanised seal, a short sealing lip and a spherical bearing surface. Suitable for lifting individual plates of a stack. The spherical bearing surface aids the separation of the individual workpiece plates. The sealing plate is simply screwed onto the rigid or articulated suction plate retainer SAS or SAK and can easily be exchanged if it is worn. The sealing plate is optionally available with a central or lateral vacuum supply. The connection screw is supplied with the sealing plate.



FSBL 110 with lateral vacuum supply



Suction platen DP-FSBL 110 with central vacuum supply

Suct. plates 3

Materials:

NBR-G Perbunane, grey
 SI-T Silicone, transparent

Article numbers

Type	Suction plate		conn. screw	
	NBR-G	SI-T	Type	Part no.
DP-FSBL 110 Z	1.11.1.0062	1.11.1.0063	ASB-M12-18	1.31.2.0003
DP-FSBL 110 S	1.11.1.0060	1.11.1.0061	AS-M12-18	1.31.2.0010

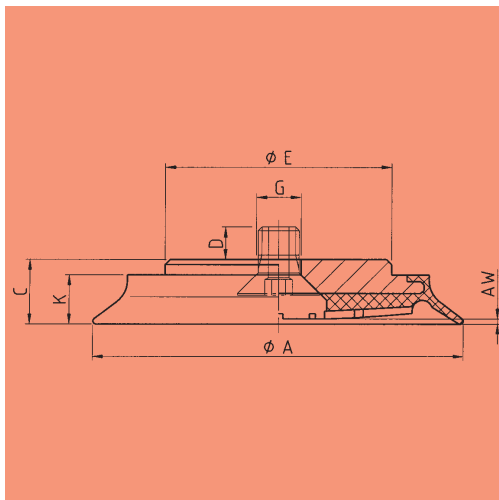
Z with central vacuum supply
 S with lateral vacuum supply

Technical Data

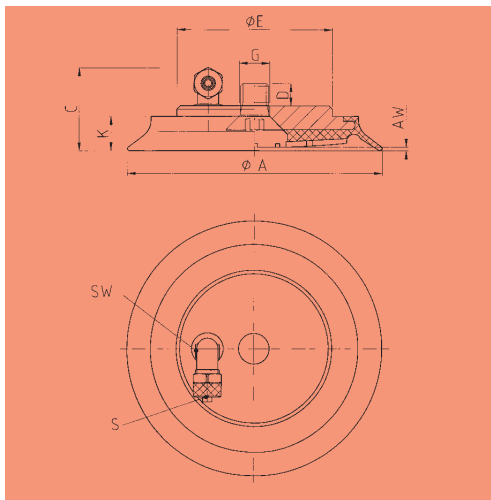
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
DP-FSBL 110 Z	459	0,33	30
DP-FSBL 110 S	459	0,33	30

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

SUCTION PLATE FSBL 110



Suction plate FSBL 110 with central vacuum supply



Suction plate FSBL 110 with lateral vacuum supply

Dimensions

Type	A	AW	C	D	E	G	K	S (LW)	SW
DP-FSBL 110 Z	110	2	19	9,5	66	M 12	14,5	---	---
DP-FSBL 110 S	110	2	34	9,5	66	M 12	14,5	6*	8

*) for pneumatic tube VS-6-B

Overview table for suitable connection elements

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M12	Part no:	SAK-M12	Part no:				
DP-FSBL 110 Z	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SV-M12	TV-M12	STN-16-M12	VS-10-T
DP-FSBL 110 S	SAS-M12	1.31.2.0020	SAK-M12	1.31.2.0018	SVS-1/4"	---	STG-16-M12	VS-6-B

Description

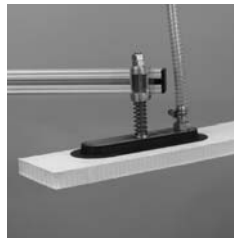
Special suction plates with long lip seal and support of the entire suction area. Suitable for the transport of particularly small or narrow work pieces and round materials. The sealing is vulcanized on the steel plate (on request aluminium possible)

DP-FL 55 x 85 to 55 x 200: The suspension is done by hexagonal bolt with suiting clamp (safety against rotation), the vacuum supply by the angle connection on the bolt.

DP-FL 55 x 250 to 80 x 370: The suction plate is suspended from two rigidly mounted bolts, separate vacuum supply.



DP-FS 80 x 200



DP-FS 55 x 250 to 80 x 370



DP-FS 55 x 85 to 55 x 200

Article numbers

Type	Suction plate BK-S	Suction plate NBR-G	Suction plate SI-T	suitable conn. screw	Part no:
DP-FS 20 x 60	1.11.1.0007	1.11.1.0008	1.11.1.0009	ASB-M5-M5	1.31.2.0030
DP-FS 30 x 80	1.11.1.0023	1.11.1.0024	1.11.1.0025	ASB-M5-M5	1.31.2.0030
DP-FS 40 x 110	1.11.1.0029	1.11.1.0030	1.11.1.0031	ASB-M5-M5	1.31.2.0030
DP-FS 35 x 200	1.11.1.0026	1.11.1.0027	1.11.1.0028	2 x AS-M5-M5	1.31.2.0032
DP-FS 55 x 85	1.11.1.0050	1.11.1.0051	1.11.1.0052	ASB-M12-M12	1.31.2.0031
DP-FS 55 x 100	1.11.1.0032	1.11.1.0033	1.11.1.0034	ASB-M12-M12	1.31.2.0031
DP-FS 55 x 125	1.11.1.0035	1.11.1.0036	1.11.1.0037	ASB-M12-M12	1.31.2.0031
DP-FS 55 x 150	1.11.1.0038	1.11.1.0039	1.11.1.0040	ASB-M12-M12	1.31.2.0031
DP-FS 55 x 200	1.11.1.0041	1.11.1.0042	1.11.1.0043	2 x AS-M12-M12	1.31.2.0033
DP-FS 55 x 250	1.11.1.0044	1.11.1.0045	1.11.1.0046	2 x AS-M12-M12	1.31.2.0033
DP-FS 55 x 300	1.11.1.0047	1.11.1.0048	1.11.1.0049	2 x AS-M12-M12	1.31.2.0033
DP-FS 80 x 250	1.11.1.0054	1.11.1.0055	1.11.1.0056	2 x AS-M12-18	1.31.2.0010
DP-FS 80 x 370	1.11.1.0057	1.11.1.0058	111.1.0059	2 x AS-M12-18	1.31.2.0010

Materials:

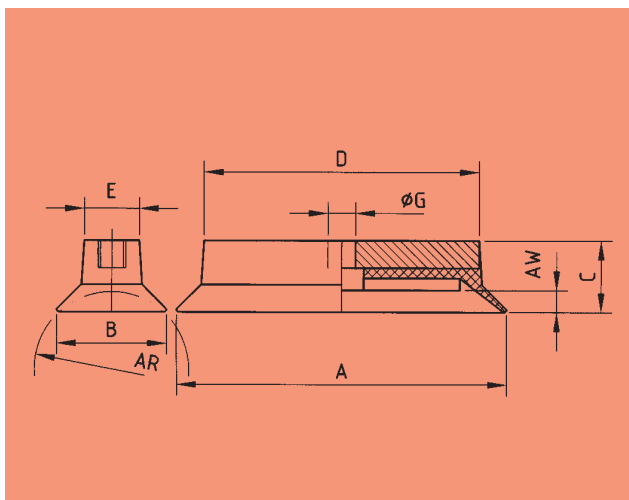
BK-S Buna rubber, black
NBR-G Perbunane, grey
SI-T Silicone, transparent

Technical Data

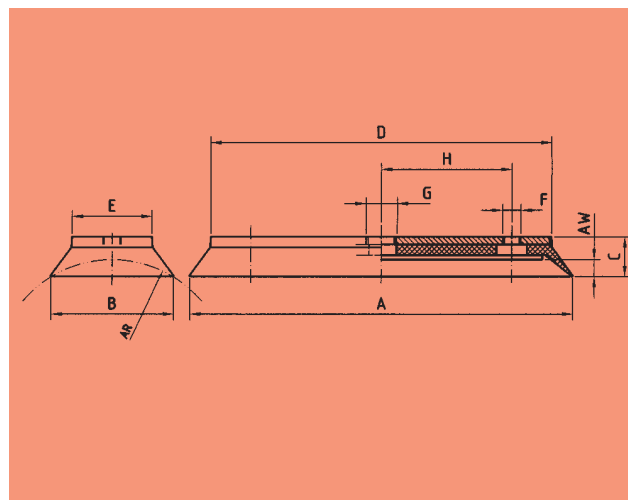
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
DP-FS 20 x 60	48	25	4
DP-FS 30 x 80	85	44	10
DP-FS 40 x 110	160	68	35
DP-FS 35 x 200	230	518	55
DP-FS 55 x 85	145	0,108	35
DP-FS 55 x 100	220	0,141	40
DP-FS 55 x 125	260	0,19	50
DP-FS 55 x 150	350	0,255	60
DP-FS 55 x 200	450	0,33	90
DP-FS 55 x 250	550	0,43	100
DP-FS 55 x 300	650	0,52	110
DP-FS 80 x 250	840	0,733	190
DP-FS 80 x 370	1 280	1,17	260

1) Holding Forces in N with operational vacuum of 60% without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plates DP-FS 520x60 to 40x110 and DP-FS 55x85 to 55x125



Suction plates DP-FS 35x200 and DP-FS 55x150 to 80x370

Dimensions										
Type	A	B	AW	AR	C	D	E	F	G	H
DP-FS 20 x 60	60	20	4	10	13	50	10	--	M5	--
DP-FS 30 x 80	80	30	5	17	14	65	15	--	M5	--
DP-FS 40 x 110	110	40	10	20	20	85	15	--	M5	--
DP-FS 35 x 200	195	35	9	20	19	173	15	M 5	M 12	75
DP-FS 55 x 85	85	55	8	46	21	62	32	--	M 12	--
DP-FS 55 x 100	100	55	9	46	21	70	32	--	M 12	--
DP-FS 55 x 125	125	55	9	46	21	100	32	--	M 12	--
DP-FS 55 x 150	150	55	9	46	21	125	32	M12	M 12	50
DP-FS 55 x 200	200	55	9	46	21	160	32	M12	M 12	75
DP-FS 55 x 250	250	55	8	46	21	220	32	M12	M 12	90
DP-FS 55 x 300	300	55	8	46	21	277	32	M12	M12	110
DP-FS 80 x 250	250	80	10	75	26	222	52	R1/2"	12,2	85
DP-FS 80 x 370	370	80	10	75	26	347	52	R1/2"	12,2	140

Overview table for suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Angle connection	Bolt type 1	Bolt type 2	Hose connection
	Part no:	Part no:	Part no:	Part no:				
DP-FS 20 x 60	---	---	---	---	WA-M5-M5	STN-12-M5	ST-6kt-M5	VS-10-T
DP-FS 30 x 80	---	---	---	---	WA-M5-M5	STN-12-M5	ST-6kt-M5	VS-10-T
DP-FS 40 x 110	---	---	---	---	WA-M5-M5	STN-12-M5	ST-6kt-M5	VS-10-T
DP-FS 35 x 200	---	---	---	---	---	STG-12-M5 ^{*)}	---	VS-10-T
DP-FS 55 x 85	---	---	---	---	WA-R1/4-M12	STN-16-M12	ST-6kt-M12	VS-10-T
DP-FS 55 x 100	---	---	---	---	WA-R1/4-M12	STN-16-M12	ST-6kt-M12	VS-10-T
DP-FS 55 x 125	---	---	---	---	WA-R1/4-M12	STN-16-M12	ST-6kt-M12	VS-10-T
DP-FS 55 x 150	---	---	---	---	WA-R1/4-M12	STN-16-M12	ST-6kt-M12	VS-10-T
DP-FS 55 x 200	---	---	---	---	---	STG-16-M12 ^{*)}	---	VS-10-T
DP-FS 55 x 250	---	---	---	---	---	STG-16-M12 ^{*)}	---	VS-10-T
DP-FS 55 x 300	---	---	---	---	---	STG-16-M12 ^{*)}	---	VS-10-T
DP-FS 80 x 250	SAS-M12 ^{*)}	1.31.2.0020	SAK-M12 ^{*)}	1.31.2.0018	---	STG-16-M12 ^{*)}	---	VS-1/2"
DP-FS 80 x 370	SAS-M12 ^{*)}	1.31.2.0020	SAK-M12 ^{*)}	1.31.2.0018	---	STG-16-M12 ^{*)}	---	VS-1/2"

^{*)} Suction plates and bolts each 2 x

Description

Suction plate with sealing vulcanized onto it and inner sealing ring. FSL series without, FSRL with grooves. Suitable for narrow goods and materials with a rough or slightly structured surface, as scaly sheet metals, slightly structured, laminated (wood-) plates, etc. Also suitable for transporting cartonnage etc. The suction plates are vulcanized onto a steel plate and guarantee a high level of safety. On request available with aluminium plate.

The suction plates are connected to two bolts and are available with articulated or rigid suspension.



FSL 100x200 und FSL100x300



FSL 100x200 mit SAK-M12



Suction plates DP-FSRL 150 x 450 to 180 x 500 with grooves

Suct. plates 3

Article numbers					
Type	Suction plate			conn. screw	
	BK-S	NBR-G	SI-T	Type	Part no:
DP-FSL 100x200	1.11.1.0157 ^{*)}	1.11.1.0158	1.11.1.0159	AS-M12-18	1.31.2.0010
DP-FSL 100x300	1.11.1.0160 ^{*)}	1.11.1.0161	1.11.1.0162	AS-M12-18	1.31.2.0010
DP-FSRL 150x450	1.11.1.0001	1.11.1.0002	1.11.1.0003	AS-M16-25	1.31.2.0014
DP-FSRL 180x500	1.11.1.0004	1.11.1.0005	1.11.1.0006	AS-M16-25	1.31.2.0014
DP-FSRL 200x750	1.11.1.0167	1.11.1.0168	1.11.1.0169	AS-M16-25	1.31.2.0014

^{*)} Design NBR-S

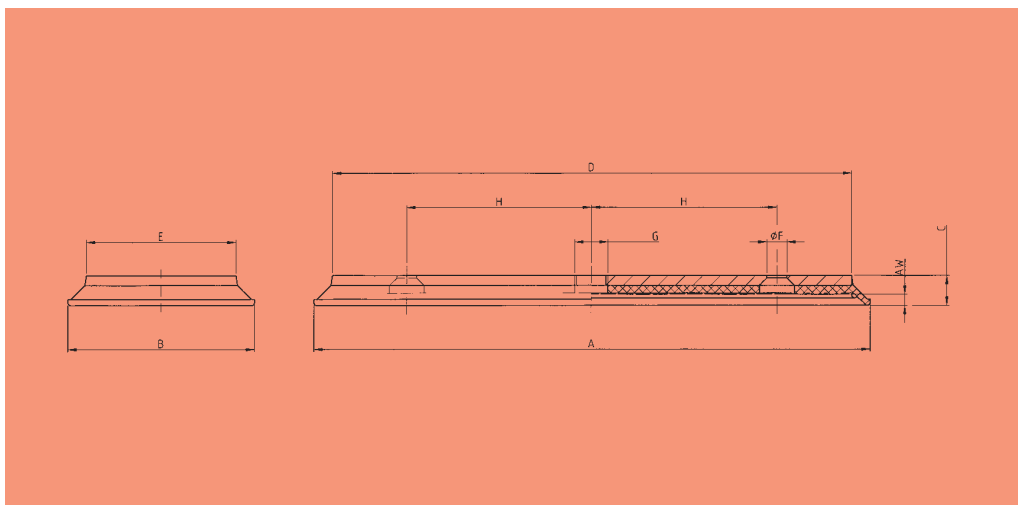
Materials:

- BK-S Buna rubber, black
- NBR-G Perbunane, black
- NBR-G Perbunane, grey
- SI-T Silicone, transparent

Technical Data			
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
DP-FSL 100 x 200	750	1,25	0,17
DP-FSL 100 x 300	1250	1,6	0,28
DP-FSRL 150x450	2780	3,4	0,48
DP-FSRL 180x500	3080	4,1	1,4
DP-FSRL 200x750	4120	6,3	4,2

1) Holding Forces in N with operational vacuum of 60% without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plates FSL 100x200 to FSRL 180x500

Suct. plates 3

Dimensions									
Typ	A	B	AW	C	D	E	F	G	H
DP-FSL 100x200	200	100	7	23	160	65	12,2	R 1/4"	50
DP-FSL 100x300	300	100	7	23	260	65	12,2	R 1/4"	100
DP-FSRL 150x450	450	150	9	24	410	120	16,2	R 1/2"	250
DP-FSRL 180x500	500	180	20	42	450	120	16,2	R 1/2"	300
DP-FSRL 200x750	750	200	29	54	550	120	16,2	R3/4"	500

Overview table for suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M12*)	Part no:	SAK-M12*)	Part no:				
DP-FSL 100x200	SAS-M12*)	1.31.2.0020	SAK-M12*)	1.31.2.0018	SV-M12	---	STG-16-M12*)	VS-10-T
DP-FSL 100x300	SAS-M12*)	1.31.2.0020	SAK-M12*)	1.31.2.0018	SV-M12	---	STG-16-M12*)	VS-10-T
DP-FSRL 150x450	SAS-M16*)	1.31.2.0021	SAK-M16*)	1.31.2.0019	SV-M16	---	STG-20-M16*)	VS-1/2-T
DP-FSRL 180x500	SAS-M16*)	1.31.2.0021	SAK-M16*)	1.31.2.0019	SV-M16	---	STG-20-M16*)	VS-1/2-T
DP-FSRL 200x750	SAS-M20*)	1.31.2.0027	SAK-M20*)	1.31.2.0025	SVS 3/4"	---	STG-20-M20*)	VS-3/4-T

*) Suction plates and bolts each 2 x

Mounting advice:

On suspension with two bolts only one bolt suspension may be tightly clamped. The other must remain mobile to avoid the bolts become stuck when using the articulated design.

Description

Suction plate with long sealing ring and several inner sealing rings as well as support on the entire sealing area. The sealing is vulcanised onto the main suction body and guarantees the highest safety standards. The suction plate is especially suitable for the transport of heavy work pieces with an even as well as a scaly surface and in connection with a blower for the handling of porous materials.

Available are versions in perbunane black and silicone transparent with a steel main body and two suspension clamps for suspension bolt ST-KPT.

The version in perbunane, grey with Aluminium-baseplate is available with suspension threads.



Suction plate KPHL 850 x 450



Suction plate KPHL 850 x 450, design perbunane grey

Article numbers

Type	Suction plate			Replacement suction plate		
	NBR-S	NBR-G	SI-T	NBR-S	NBR-G	SI-T
SP-KPHL450x850	1.13.2.0013	1.13.2.0012	1.13.2.0014	1.11.1.0119	1.11.1.0117	1.11.1.0120

*in perbunane black and perbunane grey ex stock delivery
delivery time for material silicone transparent and aluminium plate on request*

Materials:

NBR-S Perbunane, black (ca. 50 Shore A)
NBR-G Perbunane, grey (ca. 30 Shore A)
SI-T Silicone, transparent

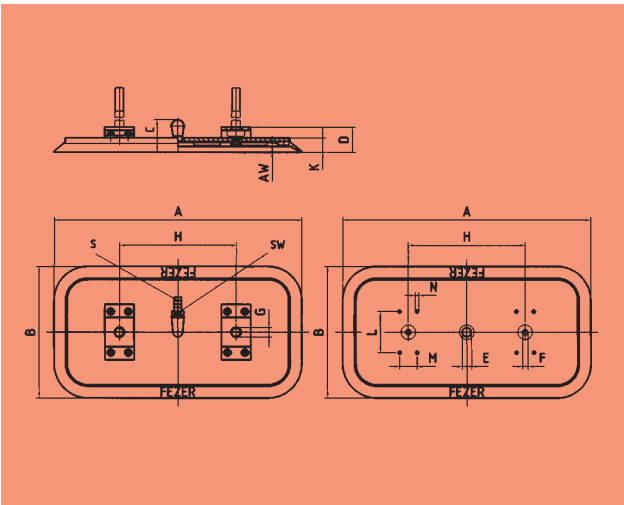
Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
SP-KPHL450x850-NBR-S	18 750	29,2	8,2
SP-KPHL450x850-SI-T	18 750	29,2	8,2
SP-KPHL450x850-NBR-G	18 750	13,0	8,2

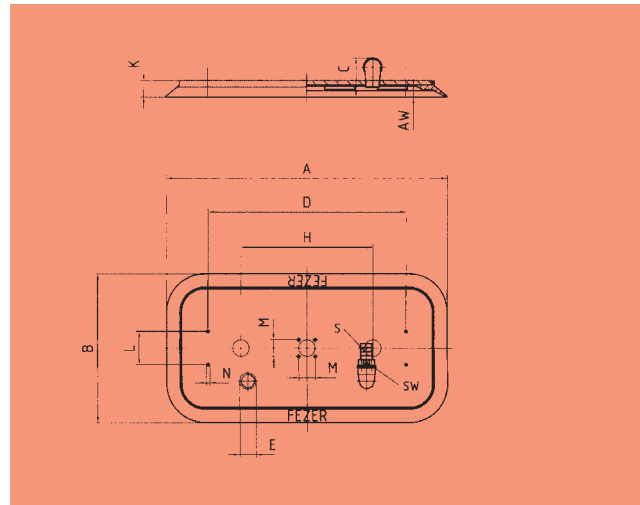
1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition

SUCTION PLATE KPHL 450 X 850



Suction plate KPHL 850 x 450 NBR-S and SI-T



Suction plate KPHL 850 x 450 NBR-G

Suct. plates **3**

Dimensions

Type	A	B	AW	C	D	E	F	G	H	K	L	M	N	S	SW
SP-KPHL450x850-NBR-S	850	450	20	111	89	R1	M 20	32	400	49	140	60	M 12	1"	36
SP-KPHL450x850-NBR-G	850	450	20	119	600	R11/4	---	---	360	49	100	50	M 10	38	46

Overview table for suitable connection elements

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M30	Part no:	SAK-M30	Part no:				
450x850-NBR-S**)	SAS-M30	1.31.2.0027*)	SAK-M30	1.31.2.0026*)	SVE-3/4	TV-11/4	STG-30	VS-1-T
450x850-NBR-G	---	---	---	---	SVE-3/4	TV-11/4	STG-30	VS-1-T

*) Suction plates and bolts 2 x each

***) Connection is done by an intermediate plate 200x100 with hole design 140x60, Part-No:2.31.2.0001

Description

Very robust sealing plate with 1.5 creases. The sealing is vulcanized onto a steel plate (aluminium possible on request). Suitable for materials with a smooth, even or formed surface. Because of the suspension of the suction cup especially suitable for sensitive transporting goods. The elasticity of the sealing plate makes it especially suitable for sensitive goods and adjusts to the work piece in every position. The creases pull together in the suction process (relatively high suction way).

Sealing plate GF 120 - 150: Central vacuum feeding, through the suspension bolt.

Sealing plate GF 200 - GF 350:

Sealing plate with separate vacuum feeding.



Suction plates GF 200 - 350



Suction plate GF 150



Suction plates GF 120 - 150

Article numbers

Type	Suction plate BK-S	Suction plate NBR-G	Suction plate SI-T	Suitable conn. screw	Part no:
DP-GF 120 Z	1.12.1.0004	1.12.1.0005	1.12.1.0006	ASB-M16-25	1.31.2.0007
DP-GF 150 Z	1.12.1.0007	1.12.1.0008	1.12.1.0009	ASB-M16-25	1.31.2.0007
DP-GF 200 S	1.12.1.0010	1.12.1.0011	1.12.1.0013	AS-M16-25	1.31.2.0014
DP-GF 250 S	1.12.1.0014	1.12.1.0015	1.12.1.0017	AS-M16-25	1.31.2.0014
DP-GF 300 S	1.12.1.0018	1.12.1.0019	1.12.1.0020	AS-M16-25	1.31.2.0014
DP-GF 350 S	1.12.1.0021	1.12.1.0022	1.12.1.0023	AS-M16-25	1.31.2.0014

Z with central vacuum supply
 S with lateral vacuum supply

Materials:

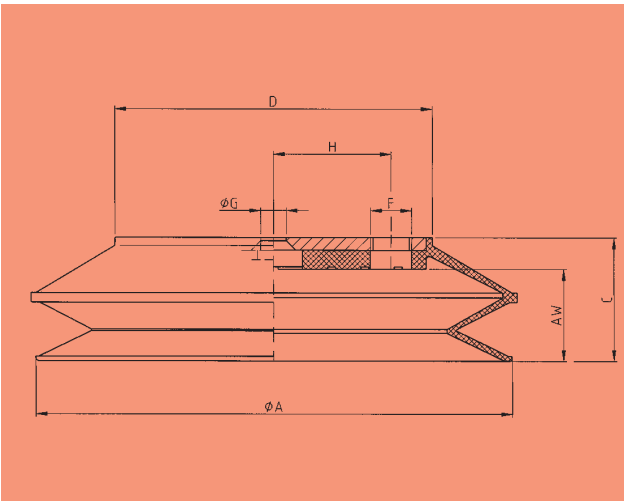
BK-S Buna rubber, black
 NBR-G Perbunane, grey
 SI-T Silicone, transparent

Technical Data

Type	Hold.force 1)	Weight	Volume 2)
	(N)	(kg)	(l)
DP-GF 120 Z	350	0,21	0,29
DP-GF 150 Z	500	0,4	0,48
DP-GF 200 S	900	0,99	0,88
DP-GF 250 S	1630	1,85	1,4
DP-GF 300 S	2390	2,95	3,15
DP-GF 350 S	3230	4,4	4,2

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plates DP-GF 120 - 350

Dimensions							
Type	A	AW	C	D	F	G	H
DP-GF 120 Z	120	35	55	82	---	16,2	---
DP-GF 150 Z	150	41	65	102	---	16,2	---
DP-GF 200 S	200	38	55	128	---	16,2	---
DP-GF 250 S	250	42	59	178	R 3/4"	16,2	65
DP-GF 300 S	300	58	78	200	R 3/4"	16,2	74
DP-GF 350 S	350	57	82	248	R 3/4"	16,2	95

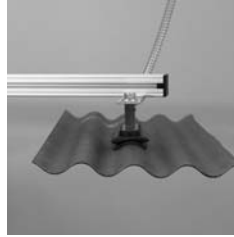
Overview table for suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt typ	Hose connection
	SAS-M16	Part no:	SAK-M16	Part no:				
DP-GF 120 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	---	STN-20-M16	VS-1/2-T
DP-GF 150 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	---	STN-20-M16	VS-1/2-T
DP-GF 200 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	---	STN-20-M16	VS-1/2-T
DP-GF 250 S	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SVS-3/4"	---	STN-20-M16	VS-3/4-T
DP-GF 300 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS-3/4"	---	STG-20-M20	VS-3/4-T
DP-GF 350 S	SAS-M20	1.31.2.0027	SAK-M20	1.31.2.0025	SVS-3/4"	---	STG-20-M20	VS-3/4-T

Description

Very robust oval sealing plate with 1.5 creases. The sealing is vulcanized onto a steel plate (aluminium possible on request). Suitable for materials with smooth, even or formed surface, as well as round materials. Because of the suspension of the suction cup especially suitable for sensitive transporting goods. The elasticity of the sealing plate makes it especially suitable for sensitive goods and it adjusts to the work piece in every situation.

DP-GF 60 x 140: Suspended with a hexagon suspension bolt, vacuum feeding over angle connection

DP-GF 100 x 200: Suspended with two suspension bolts and separate vacuum feeding.



DP-GF 60 x 140



DP-GF 60 x 140



DP-GF 60 x 140 and 100 x 200

Article numbers

Type	Suction plate BK-S	Suction plate NBR-G	Suction plate SI-T	Suitable conn. screw	Part no:
DP-GF 60x140	1.12.1.0024	1.12.1.0025	1.12.1.0026	ASB-M12-M12	1.31.2.0031
DP-GF 100x200	1.12.1.0001	1.12.1.0002	1.12.1.0003	2 x AS-M12-18	1.31.2.0010

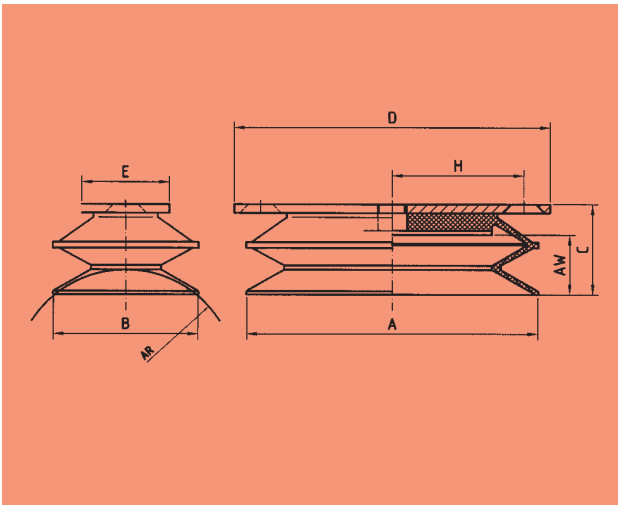
in perbunane black and perbunane grey ex stock delivery
delivery time and minimum quantity for material silicone transparent on request

Technical Data

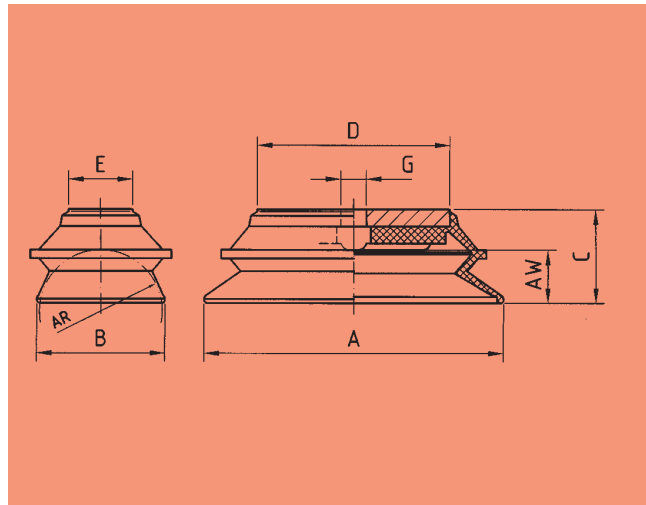
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
DP-GF 60x140	190	0,238	150
DP-GF 100x200	440	0,995	500

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plate DP-GF 100 x 200



Suction plate DP-GF 60 x 140

Saugplatten 3

Dimensions										
Type	A	B	AW	AR	C	D	E	F	G	H
DP-GF 60 x 140	140	60	25	40	44	90	30	--	12,2	--
DP-GF 100 x 200	200	100	41	40	62	216	60	12,2	R 1/2"	90

Overview table of suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Winkel connection	Bolt type 1	Bolt type 2	Hose connection
	---	Part no:	---	Part no:				
DP-GF 60 x 140	---	---	---	---	WA-M12-M12	STG-20-M12	ST-6kt-M12	VS-R1/4"
DP-GF 100x200	---	---	SAK-M12*)	1.31.2.0018	---	STG-16-M12*)	---	VS-1/2"

*) Suction plate and bolt 2 x each

Description

Very robust sealing plate with 2.5 creases. The sealing is vulcanized onto a steel plate (Aluminium possible on request). Suitable for materials with smooth, even or formed surface. Because of the suspension of the suction cup especially suitable for sensitive transporting goods and also adjusts to the work piece in every position.

Creases pull together when suspended (relatively high suction gap).



Sealing plate DP-GFD 150



Suction plate DP-GFD 150

Suct. plates 3

Article numbers

Type	Suction plate BK-S	Suction plate NBR-G	Suction plate SI-T	Suitable conn. screw	Suitable angle connection
DP-GFD 150 Z	1.12.1.0027	1.12.1.0028	1.12.1.0029	ASB-M16-25	1.31.2.0007

Z with central vacuum supply
 S with lateral vacuum supply

Materials:

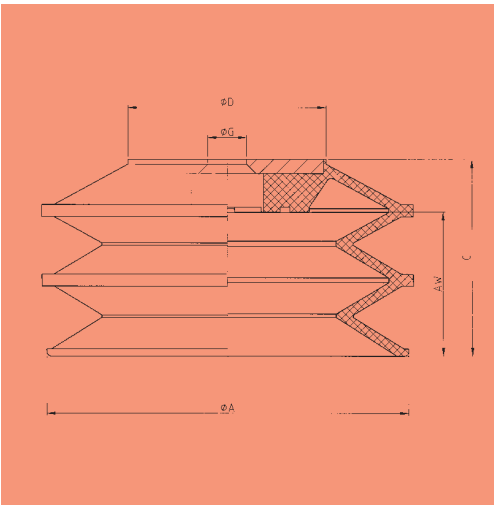
- BK-S Perbunane, black
- NBR-G Perbunane, grey
- SI-T Silicone, transparent

Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
DP-GFD 150	600	0,584	0,72

1) Holding Forces in N with operational vacuum of 60% without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plate DP-GFD 150

Dimensions					
Type	A	AW	C	D	G
DP-GFD 150 Z	150	60	82	82	16,2

Overview table of suitable connection elements								
	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	SAS-M16	Part no:	SAK-M16	Part no:				
DP-GFD-150 Z	SAS-M16	1.31.2.0021	SAK-M16	1.31.2.0019	SV-M16	---	STN-20-M16	VS-1/2-T

Description

Heat-proof suction plate with felt lining on the suction side. The sealing is on the main body and clamped with a plate. When worn out, the sealing can easily be exchanged. The suction plate is suspended on a suspension bolt, the vacuum feed is effectuated through an angle connection on the suspension bolt.



SP-FSHB 90 - 120



SP-FSHB 180 - 250



Suction plates FSHB

Materials:

VI-T Viton, black: very resistant material against oil, petrol and solvents.
 Temperatures up to 230° C, short-term even up to 400° C

Article numbers

Type	Saugplatte VI-S	Ersatzdichtung VI-S	connection- schraube	Part no:
SP-FSHB 90	1.11.1.0084	2.11.2.0004	ASB-M12-R3/8	1.31.2.0004
SP-FSHB 120	1.11.1.0080	2.11.2.0001	ASB-M12-R3/8	1.31.2.0004
SP-FSHB 180	1.11.1.0081	2.11.2.0002	ASB-M12-R3/8	1.31.2.0004
SP-FSHB 250	1.11.1.0083	2.11.2.0003	ASB-M16-R1/2	131.2.0008

Please note:

The felt lining offers no optimal sealing of the work piece, therefore the vacuum pump needs higher dimensioning to compensate for resulting leakages!

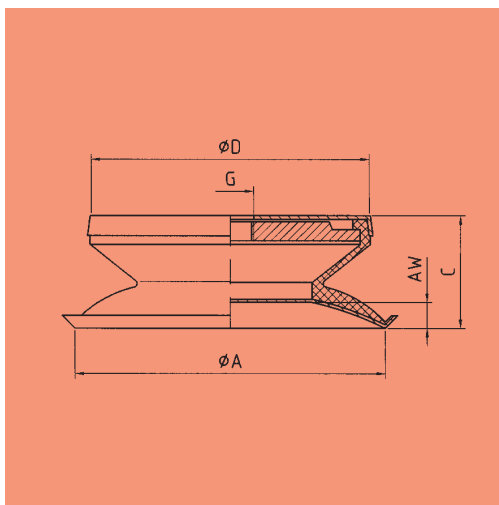
Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
SP-FSHB 90	290	0,338	125
SP-FSHB 120	500	0,56	210
SP-FSHB 180	1190	0,819	255
SP-FSHB 250	2080	1,8	686

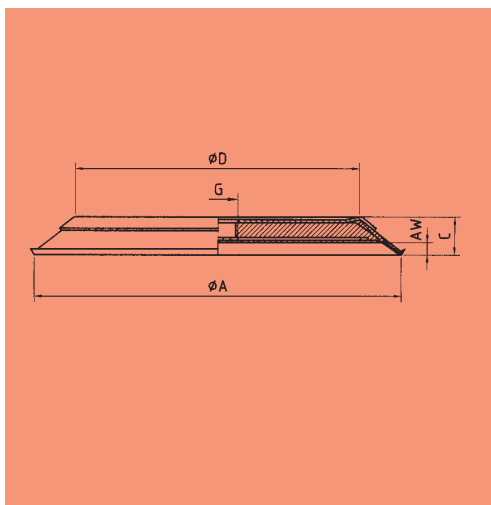
1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

SUCTION PLATES FSHB 90 - FSHB 250

heat-proof suction plates with felt lining



Plates FSHB 90 and 120



Plates FSHB 180 and 250

Dimensions

Type	A	AW	C	D	G
SP-FSHB 90	90	10	38	90	R 3/8"
SP-FSHB 120	120	14	44,5	110	R 3/8"
SP-FSHB 180	180	8,5	26	126	R 3/8"
SP-FSHB 250	250	8,5	26	194	R 1/2"

Overview table of suitable connection elements

	Suction plate retainer rigid		Suction plate retainer articulated		Flow valve	Touch valve	Bolt type	Hose connection
	Part no:	Part no:	Part no:	Part no:				
SP-FSHB 90	---	---	---	---	---	---	STN-16-M12	VS-10-T
SP-FSHB 120	---	---	---	---	---	---	STN-16-M12	VS-10-T
SP-FSHB 180	---	---	---	---	---	---	STN-16-M12	VS-10-T
SP-FSHB 250	---	---	---	---	---	---	STN-20-M16	VS-1/2-T

Description

Suction plate with long sealing ring and additional Impulse Fixture in the centre of the suction plate. The suction plate has a vacuum- and a compressed air connection. The sealing is set on the main plate and clamped with a clamping band, which makes it easily exchangeable.

Suitable for the transport of permeable materials, as chipboards. The inner sealing ring is supplied with compressed air by means of the impulse fixture (max. 1.5 bar). This guarantees that several plates of porous work pieces will not be engaged at the same time.



Suction plate KPHLI 250



Suction plate KPHLI 250

Article numbers

Type	Suction plate		Outer replacement sealing		Inner replacement sealing	
	NBR-G	SI-T	NBR-G	SI-T	NBR-G	SI-T
SP-KPHLI 250	1.13.1.0087	1.13.1.0088	2.13.2.0030	2.13.2.0031	2.13.2.0033	2.13.2.0035

in perbunane grey ex stock delivery, delivery time for material silicone transparent on request

Materials:

NBR-S Perbunan, black
NBR-G Perbunane, grey
SI-T Silikon, transparent

Technical Data

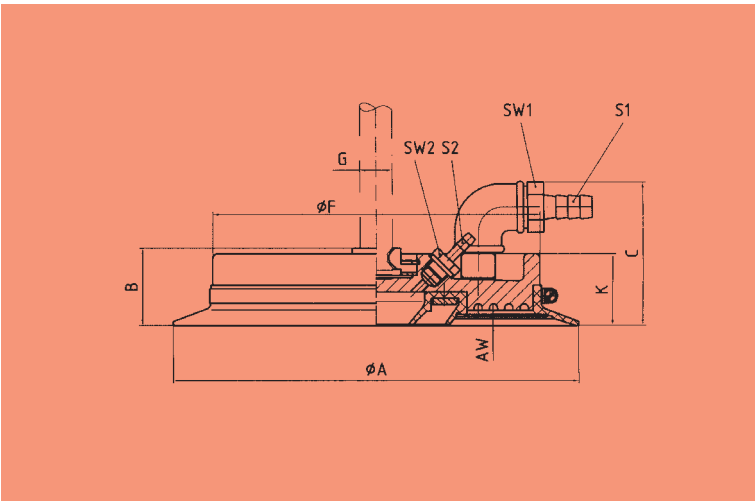
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
SP-KPHLI 250	1780	2	320

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition

Advice:

The holding force depends on the air penetrability of the transport goods. Before using this suction plate suction tests should be run.



Saugplatte KPHLI 250

Dimensions										
Type	A	B	AW	C	F	G	S 1 LW	SW 1	S 2 LW	SW 2
SP-KPHLI 250	250	45	7	89	202	20	1/2"	27	6	17

Overview table of suitable connection elements								
Type	Halte- scheibe	Part no:	Druck- pilz	Part no:	Druck- feder	Part no:	Bolt type	Hose connection
SP-KPHLI 250	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	6.21.4.0045	ST-KPL	VS-1/2-T

Sicherungsring für Haltescheibe 50x2, Part no: 6.21.3.0036
 Anschluß für Druckluft LW 6 mm

Description

Suction plates with sponge rubber sealing and nap, resp. grooved rubber lining on the suction surface. The sponge rubber sealing is glued into the sealing groove and when wearing off, can be easily exchanged. Suitable for transporting materials with heavily structure or formed surface, as chequered or beaded sheets, saw-rough wood etc. The cardanic suspension (all sides 8°) adjusts to the incline of the transported good



Suction plate KPHM



Suction plate KPHM 100 - 210

Saugplatten 3

Materials:

M-S Sponge rubber-black

Article numbers

Type	Suction plate	Replacement seal	Replacement pad
	M-S	M-S	NBR-S
SP-KPHM 100	1.13.1.0089	2.13.2.0043	2.13.2.0005
SP-KPHM 160	1.13.1.0095	2.13.2.0047	2.13.2.0007
SP-KPHM 210	1.13.1.0097	2.13.2.0048	2.13.2.0009
SP-KPHM 320	1.13.1.0100	2.13.2.0050	2.13.2.0084 ³⁾

3) The stated pad for suction plate SP-KPHM 320 covers only half of the area. A complete pad is available as part no.: 2.13.2.0085

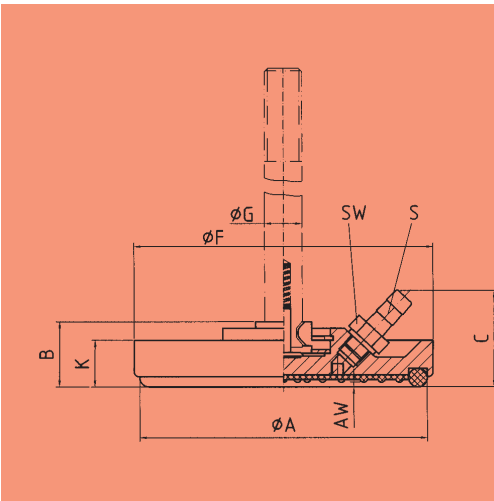
Materials: Sealing sponge rubber black, Pad: perbunane black

Technical Data

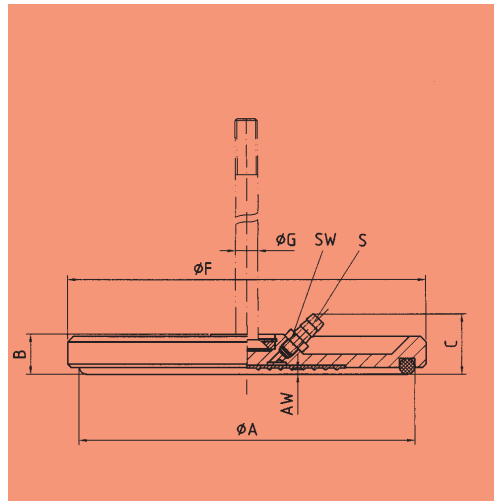
Type	Hold.force ¹⁾	Weight	Volume ²⁾
	(N)	(kg)	(ml)
SP-KPHM 100	300	0,6	40
SP-KPHM 160	900	0,8	50
SP-KPHM 210	1550	1,2	130
SP-KPHM 320	3580	3,4	330

1) Holding Forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition



Suction plates KPHM 100 - 210



Suction plate KPHM 320

Dimensions									
Type	A	B	AW	C	F	G	K	S	SW
								LW	
SP-KPHM 100	84	47	3	58	100	20	24	1/2"	19
SP-KPHM 160	144	33	1,5	41	160	20	22	1/2"	19
SP-KPHM 210	186	31	1,5	44	200	20	22	1/2"	19
SP-KPHM 320	286	33	4	51	308	20	--	1/2"	19

Overview table of suitable connection elements								
Type	Holding disk	Part no:	Pressure mushroom	Part no:	Pressure spring	Part no:	Bolt type	Hose connection
SP-KPHM 100	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	2.13.1.0025	ST-KPL-20	VS-1/2-T
SP-KPHM 160	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	2.13.1.0025	ST-KPL-20	VS-1/2-T
SP-KPHM 210	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	2.13.1.0025	ST-KPL-20	VS-1/2-T
SP-KPHM 320	HS 300	2.13.1.0021	---	---	---	---	ST-KPS-20	VS-1/2-T

Safety ring for holding disk 50x2, Part. no: 6.21.3.0036

Description

Suction plate with sealing vulcanized onto it and inner sealing ring. Suitable for narrow goods and materials with a rough or slightly structured surface, as scaly sheet metals, slightly structured, laminated (wood-) plates, etc. Also suitable for transporting cartonnage etc. The cardanic suspension (all sides 8°) adjusts to the incline of the transported good. The suction plate can also be mounted rigidly, attached directly to the threads.



Suction plates KPHL 100 x 200 and KPHL 100 x 300

Type	Suction plate			Replacement sealing plate		
	NBR-S	NBR-G	SI-T	NBR-S	NBR-G	SI-T
SP-KPHL 100x200	1.13.1.0060	1.13.1.0059	1.13.1.0061	1.13.1.0004	1.13.1.0003	1.13.1.0005
SP-KPHL 100x300	1.13.1.0063	1.13.1.0062	1.13.1.0064	1.13.1.0007	1.13.1.0006	1.13.1.0008

Materials:

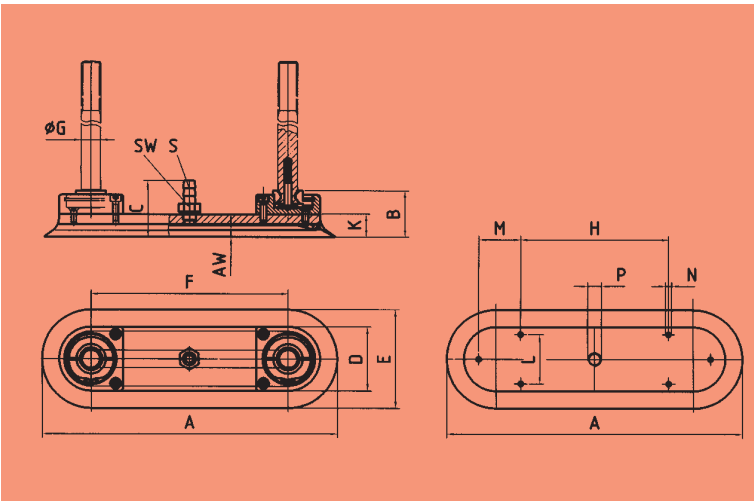
- NBR-S Perbunane, black
- NBR-G Perbunane, grey
- SI-T Silicone, transparent

Technical Data			
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
SP-KPHL 100x200	750	1,25	170
SP-KPHL 100x300	1250	1,6	280

1) Holding Forces in N with operational vacuum of 60% without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

Mounting advice:

On suspension with two bolts only one connection may be tightly clamped. The other must be mobile to avoid the bolts becoming stuck on articulated suspension.



Suction plates KPHL 100 x 200 and KPHL 100 x 300

Dimensions																
Type	A	B	AW	C	D	E	F	G	H	K	L	M	N	P	S	SW
SP-KPHL 100x200	200	44	7	57	65	100	100	20	50	23	50	42,5	M 6	R 1/4"	10	19
SP-KPHL 100x300	300	44	7	57	65	100	200	20	150	23	50	42,5	M 6	R 1/4"	10	19

Overview table of suitable connection elements									
Type	Holding disk ^{*)}	Part no:	Pressure mushroom ^{*)}	Part no:	Pressure spring ^{*)}	Part no:	Bolt type ^{*)}	Hose connection	
SP-KPHL 100x200	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	6.21.4.0045	ST-KPL-20	VS-10-T	
SP-KPHL 160x300	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	6.21.4.0045	ST-KPL-20	VS-10-T	

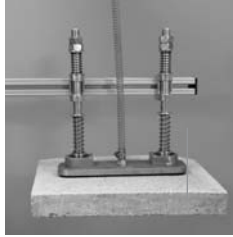
^{*)} required 2 x

2 x safety ring for holding disk 50x2, part. no: 6.21.3.0036

Description

Narrow suction plate with sponge rubber sealing. The sponge rubber sealing is glued into the sealing groove and when wearing off can be exchanged easily. Suitable for transporting materials with heavily structured or formed surface, as chequered or beaded sheets, saw-rough wood etc.

The cardanic suspension (all sides 8°) adjusts to the incline of the transported good.



SP-KPHM 100 x 300



SP-KPHM 100 x 300



Suction plate KPHM 100 x 300

Suct. plates 3

Materials:

M-G Sponge rubber-grey (PGO 10x20)

Article numbers

Type	Suction plate M-G	Replacement seal M-G
SP-KPHM 100x300	1.13.1.0090	2.13.2.0044

Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
SP-KPHM 100x300	1 180	1,25	0,26

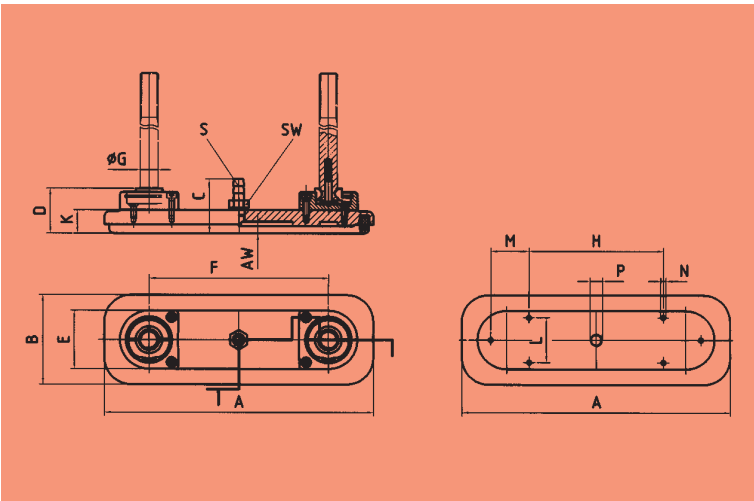
1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition

Mounting advice:

On suspension with two bolts only one connection may be tightly clamped. The other must be mobile to avoid the bolts becoming stuck on articulated suspension.

SUCTION PLATE KPHM 100 x 300



Suction plate KPHM 100 x 300

Suct. plates **3**

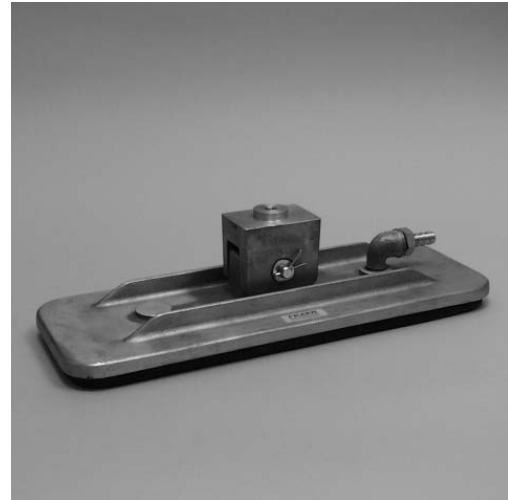
Dimensions																	
Type	A	B	AW	C	D	E	F	G	H	K	L	M	N	P	S	SW	LW
SP-KPHM 100 x 300	300	100	8	60,5	50	65	200	20	150	26	50	42,5	M 6	R 1/4	1/2"	19	

Overview table of suitable connection elements								
Type	Halte-scheibe ^{*)}	Part no:	Druck-pilz ^{*)}	Part no:	Druck-feder ^{*)}	Part no:	Bolt type ^{*)}	Hose connection
SP-KPHM100x300	HS 250	2.13.1.0025	DP 250	2.13.1.0027	DF 250	6.21.4.0045	ST-KPL-20	VS-1/2-T

^{*)} require 2 x
 2 x safety ring for holding disk 50x2, part no: 6.21.3.0036

Description

Narrow suction plates with sponge rubber sealing. The sponge rubber sealing is glued into the sealing groove, and when wearing off, can easily be replaced. Suitable for transporting materials with heavily structured or formed surface, as chequered or beaded sheets, saw-rough wood, etc. The suction plate can be mounted on a thread and is suspended in an oscillating way, so it can adjust to the bending of longer planks or woods



Suction plate KPHM 100 x 460 to 250 x 460

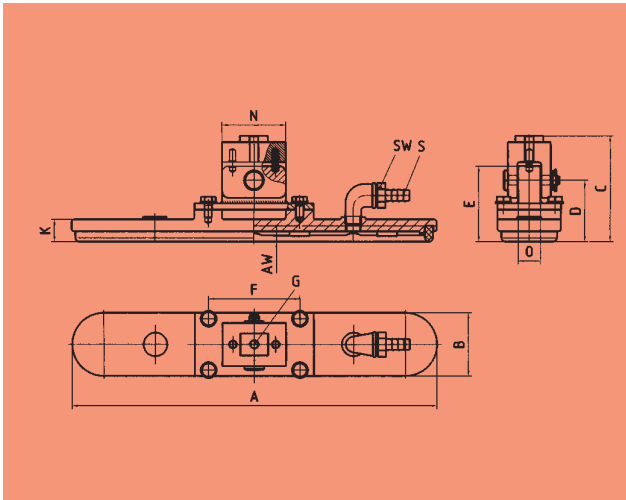
Article numbers			
Type	with yoke M-G	without yoke M-G	sealing M-G
SP-WPHM 80x460	1.13.2.0025	1.13.1.0101	2.13.2.0042
SP-WPHM 100x460	1.13.2.0021	1.13.1.0092	2.13.2.0037
SP-WPHM 120x460	1.13.2.0022	1.13.1.0094	2.13.2.0038
SP-WPHM 170x460	1.13.2.0023	1.13.1.0096	2.13.2.0040
SP-WPHM 250x460	1.13.2.0024	1.13.1.0099	2.13.2.0041

Technical Data			
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
SP-WPHM 80x460	1 130	1,55	0,2
SP-WPHM 100x460	1 719	2,55	0,39
SP-WPHM 120x460	2 199	2,7	0,58
SP-WPHM 170x460	3 399	3,5	0,88
SP-WPHM 250x460	5 420	5,6	1,2

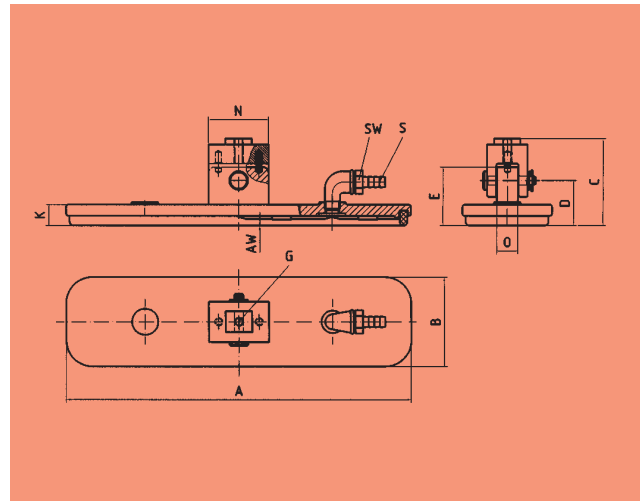
1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

Materials:

M-G Sponge rubber-grey (PGO 10x20)



Suction plate KPHM 80 x 460



Suction plate KPHM 100 x 460 up to KPHM 250 x 460

Suct. plates 3

Dimensions

Type	A	B	AW	C	D	E	F	G	K	N	O	S LW	SW
SP-WPHM 80 x 460	460	80	8	133	77	95	115	M 12	28	80	28	1/2"	27
SP-WPHM 100 x 460	460	100	8	116	60	78	--	M 12	28	80	28	1/2"	27
SP-WPHM 120 x 460	460	120	8	116	60	78	--	M 12	28	80	28	1/2"	27
SP-WPHM 170 x 460	460	170	8	116	60	78	--	M 12	28	80	28	1/2"	27
SP-WPHM 250 x 460	460	250	8	116	60	78	--	M 12	28	80	28	1/2"	27

Overview table of suitable connection elements

Type	Yoke	Part no:	Bolt	Part no:	Disk ^{*)}	Part no:	Bolt type	Hose connection
SP-WPHM 80x460	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T
SP-WPHM 100x460	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T
SP-WPHM 120x460	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T
SP-WPHM 170x460	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T
SP-WPHM 250x460	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T

*) required 2 x

Description

Narrow suction plates with sponge rubber sealing. The sealing is glued into the sealing groove and when worn out can be exchanged easily. Suitable for transporting materials with heavily structured or formed surface as chequered or beaded sheets, saw-rough woods etc.

The suction plate is suspended on two rigidly mounted suspension bolts, separate vacuum feeding.



Suction plate PHM



Suction plate PHM 75x180 and PHZ 75x180



Suction plate PHM 80 x 460

Article numbers			
Type	Suction plate M-G	Replacement seal M-G	Connection screw
SP-PHZ 35x170	1.13.1.0134 ³⁾	2.13.2.0076 ³⁾	1.31.2.0017
SP-PHM 75x180	1.13.1.0126	2.13.2.0071	1.31.2.0017
SP-PHM 80 x 460	1.13.1.0127	2.13.2.0042	1.31.2.0015
SP-PHM 100 x 460	1.13.1.0122	2.13.2.0037	1.31.2.0015
SP-PHM 120 x 460	1.13.1.0123	2.13.2.0038	1.31.2.0015
SP-PHM 170 x 460	1.13.1.0124	2.13.2.0040	1.31.2.0015
SP-PHM 250 x 460	1.13.1.0125	2.13.2.0041	1.31.2.0015

3) sealing made of froth rubber (Z-R)

Materials:

M-G Sponge rubber-grey (PGO 10x20)
Z-R Froth rubber-red (PGR)

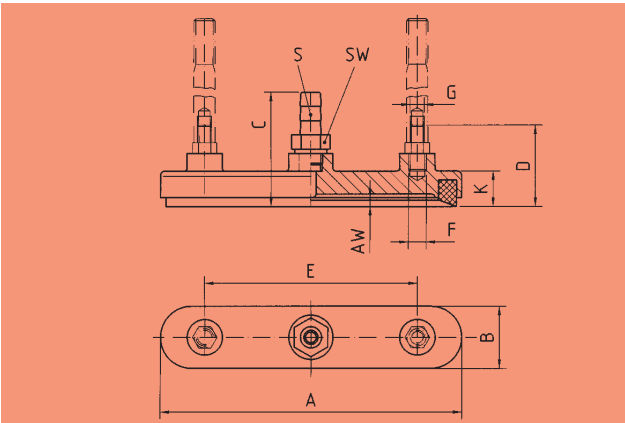
Technical Data			
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
SP-PHZ 35x170	180	0,21	0,02
SP-PHM 75x180	430	0,75	0,11
SP-PHM 80x460	1130	1,45	0,2
SP-PHM 100x460	1719	2,45	0,39
SP-PHM 120x460	2199	2,6	0,58
SP-PHM 170x460	3399	3,4	0,88
SP-PHM 250x460	5420	5,5	0,2

1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

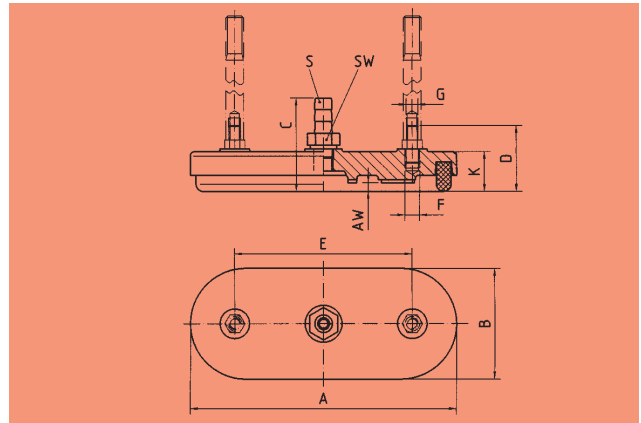
2) Volume with suction cup in released condition

Mounting advice:

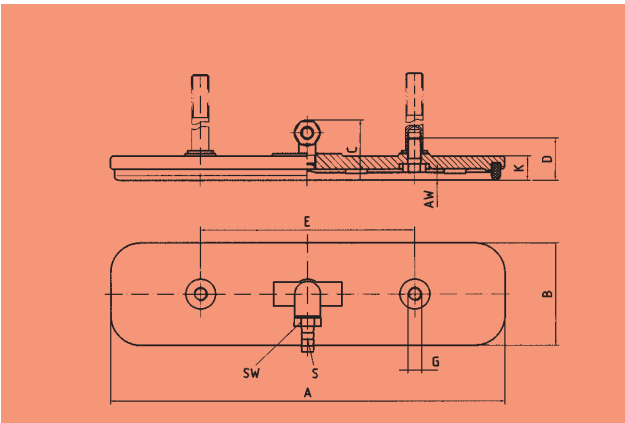
On suspension with two bolts only one connection may be tightly clamped. The other must be mobile to avoid the bolts becoming stuck on articulated suspension.



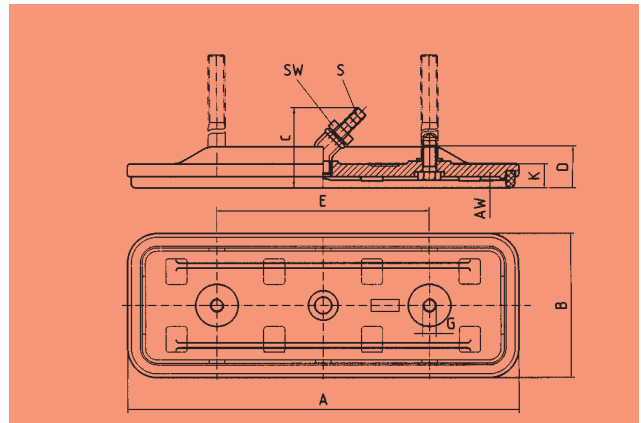
Saugplatte PHZ 35 x 170



Saugplatte PHM 75 x 180



Saugplatte PHM 80 x 460 bis 120 x 460



Saugplatte PHM 170 x 460 bis 250 x 460

Dimensions

Type	A	B	AW	C	D	E	F	G	K	S	SW
SP-PHZ 35 x 170	170	35	5	64,5	46	120	M 10	M 8	20	1/2"	19
SP-PHM 75 x 180	180	75	8	63,5	45	120	M 10	M 8	27	1/2"	19
SP-PHM 80 x 460	460	80	8	71	49	250	---	M 16	29	1/2"	27
SP-PHM 100 x 460	460	100	8	71	49	250	---	M 16	29	1/2"	27
SP-PHM 120 x 460	460	120	8	71	49	250	---	M 16	29	1/2"	27
SP-PHM 170 x 460	460	170	8	71	49	250	---	M 16	29	1/2"	27
SP-PHM 250 x 460	460	250	8	71	49	250	---	M 16	29	1/2"	27

Overview table of suitable connection elements

Type	Halte-scheibe	Part no:	Druck-pilz	Part no:	connection schraube*)	Part no:	Bolt type*)	Hose connection
SP-PHZ 35x170	---	---	---	---	AS-M8-M10	1.31.2.0017	STG-12-M8	VT-1/2-T
SP-PHM 75x180	---	---	---	---	AS-M8-M10	1.31.2.0017	STG-12-M8	VT-1/2-T
SP-PHM 80x460	---	---	---	---	AS-M16-30	1.31.2.0015	STG-20-M16	VT-1/2-T
SP-PHM 100x460	---	---	---	---	AS-M16-30	1.31.2.0015	STG-20-M16	VT-1/2-T
SP-PHM 120x460	---	---	---	---	AS-M16-30	1.31.2.0015	STG-20-M16	VT-1/2-T
SP-PHM 170x460	---	---	---	---	AS-M16-30	1.31.2.0015	STG-20-M16	VT-1/2-T
SP-PHM 250x460	---	---	---	---	AS-M16-30	1.31.2.0015	STG-20-M16	VT-1/2-T

*) required 2 x

Description

Narrow suction plates with sponge rubber sealing. The sponge rubber sealing is glued into the sealing groove, and when wearing off, can easily be replaced. Suitable for transporting materials with heavily structured or formed surface, as chequered or beaded sheets, saw-rough wood, etc.
 The suction plate will be suspended by two rigidly mounted bolts or by a hinged yoke suspension, separate vacuum feeding.



Suction plate WPHM

Article numbers					
Type	Suction plate for yoke	Yoke	Suction plate for 2 bolts	Connection screw	Replacement seal M-G
SP-WPHM 90 x 1100	1.13.1.0153	2.34.6.0002	--	--	2.13.2.0082
SP-WPHM 90 x 1570	1.13.1.0154	2.34.6.0002	--	--	2.13.2.0083
SP-PHM 90 x 1100	--	--	1.13.1.0128	1.31.2.0015	2.13.2.0082
SP-PHM 90 x 1570	--	--	1.13.1.0129	1.31.2.0015	2.13.2.0083

Materials:

M-G Sponge rubber-grey (PGO 10x20)

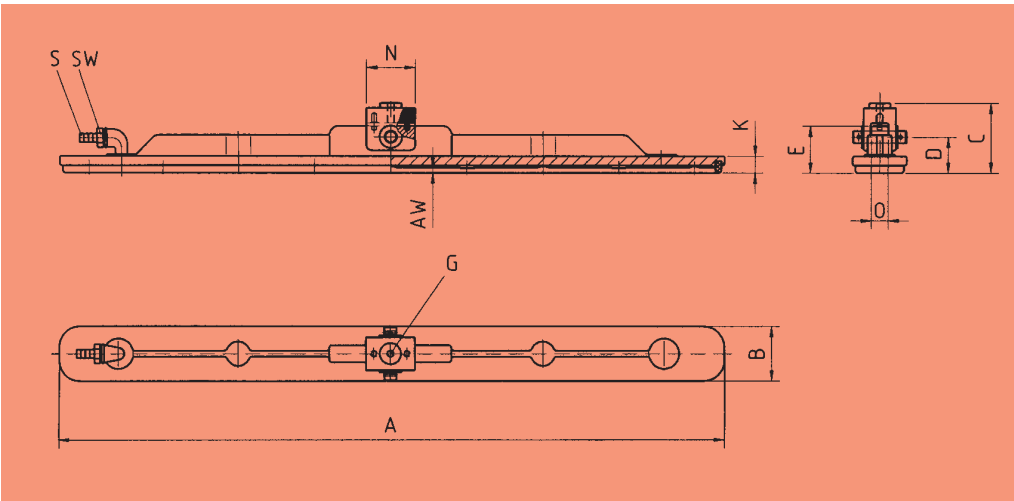
Technical Data			
Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (l)
SP-WPHM 90 x 1100	3000	6	0,9
SP-WPHM 90 x 1570	3500	8,5	0,9
SP-PHM 90 x 1100	3000	5,5	0,9
SP-PHM 90 x 1570	3500	8	0,9

1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

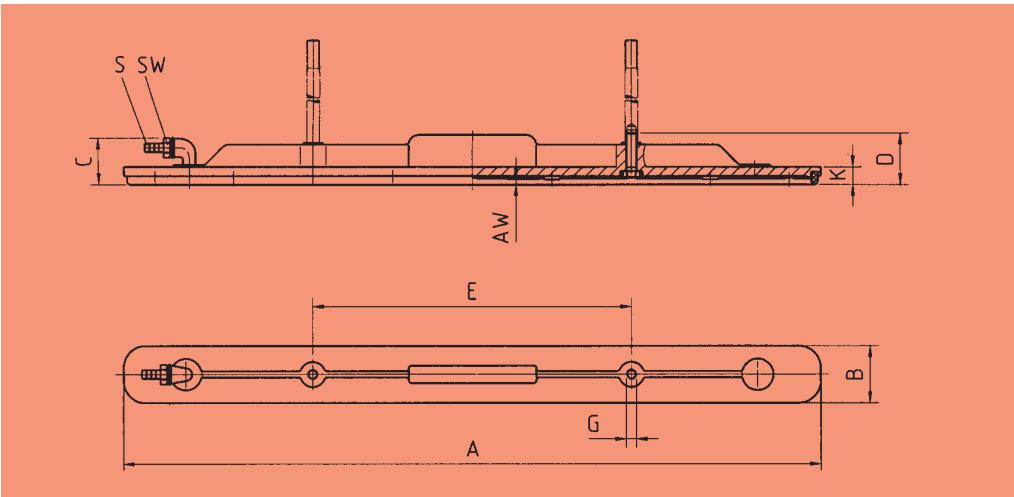
Mounting advice:

On suspension with two bolts only one connection may be tightly clamped. The other must be mobile to avoid the bolts becoming stuck on articulated suspension.

SUCTION PLATES(W)PHM 90 x 1100 AND 90 x 1570



Suction plates WPHM 90 x 1100 and WPHM 90 x 1570



Suction plates PHM 90 x 1100 and PHM 90 x 1570

Dimensions											
Type	A	B	AW	C	D	F	G	K	O	S	SW
SP-WPHM 90 x 1100	1100	90	8	116	60	78	M 12	28	28	LW 1/2"	27
SP-WPHM 90 x 1570	1570	90	8	116	60	78	M 12	28	28	1/2"	27
SP-PHM 90 x 1100	1100	90	8	71	81	500	M 16	28	--	1/2"	27
SP-PHM 90 x 1570	1570	90	8	71	81	500	M 16	28	--	1/2"	27

Overview table of suitable connection elements									
Type	Yoke	Part no:	Bolt	Part no:	Disk ^{*)}	Part no:	Bolt type	Hose connection	
SP-WPHM 90x1100	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T	
SP-WPHM 90x1570	EG 20	2.34.6.0002	B 20	2.13.1.0049	U 21	6.21.1.0005	---	VS-1/2-T	

^{*)} required 2 x

Description

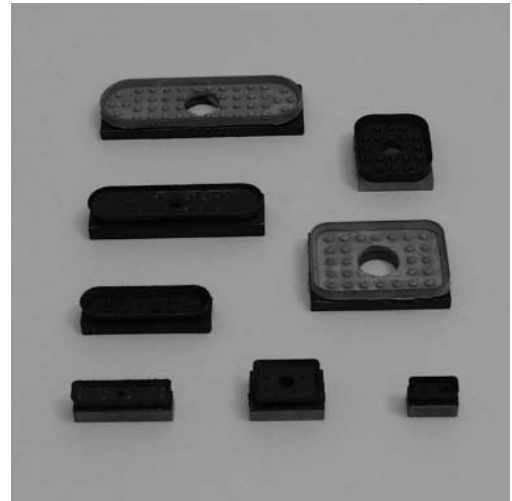
Special suction plates for holding or transporting extra small or narrow work pieces, as wood strips, small profiles, etc.
 The sealing (partly bump-rubber lining) is vulcanized onto the main plate (steel body).
 Read "Mounted holding plates" for fitting mounting plates and vacuum connections.



DP-EP 96 x 96



Sealing plate EP



Sealing plates EP

Materials:

NBR-S Perbunane, black
 NBR-G Perbunane, grey
 SI-T Silicone, transparent

Article numbers

Type	Suction plate NBR-S	Suction plate NBR-G	Suction plate SI-T
DP-EP 42 x 42	1.16.1.0008	---	1.16.1.0009
DP-EP 43 x 13	1.16.1.0010	---	1.16.1.0011
DP-EP 45 x 40	1.16.1.0012	---	1.16.1.0013
DP-EP 58 x 19	1.16.1.0015	---	1.16.1.0016
DP-EP 65 x 25	---	1.16.1.0017	1.16.2.0018
DP-EP 65 x 33	---	1.16.1.0019	1.16.2.0014
DP-EP 65 x 47	---	1.16.1.0021	1.16.2.0022
DP-EP 83 x 23	1.16.1.0023	---	1.16.1.0024
DP-EP 96 x 96	---	1.16.1.0025	1.16.1.0026
DP-EP 105 x 35	---	1.16.1.0001	1.16.1.0003

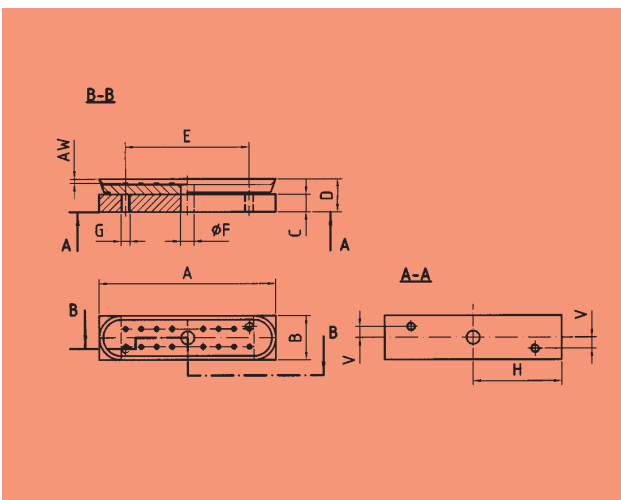
In perbunane ex stock delivery, delivery time for material silicone transparent on request.

Technical Data

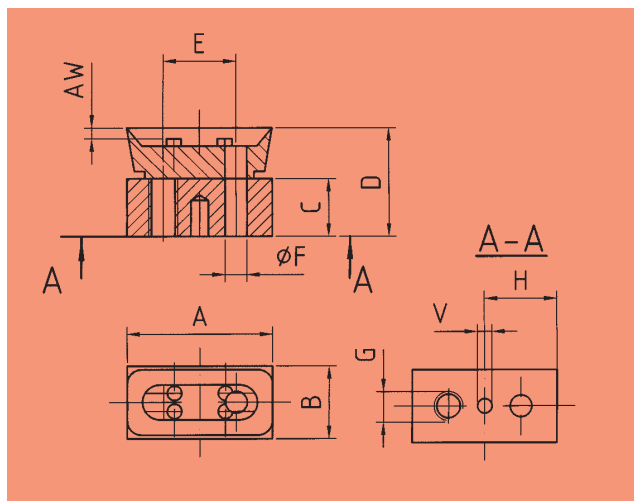
Type	Hold.force ¹⁾ (N)	Weight (g)	Volume ²⁾ (ml)
DP-EP 42 x 42	73	80	6
DP-EP 43 x 13	21	20	1,5
DP-EP 45 x 40	73	60	6
DP-EP 58 x 19	36	60	3
DP-EP 65 x 25	45	60	5
DP-EP 65 x 33	72	70	9
DP-EP 65 x 47	123	110	11
DP-EP 83 x 23	36	100	6
DP-EP 96 x 96	440	410	50
DP-EP 105 x 35	141	140	14

1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

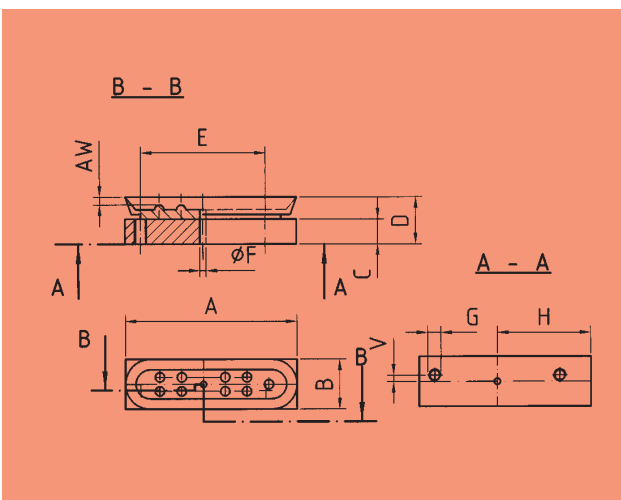
2) Volume with suction cup in released condition



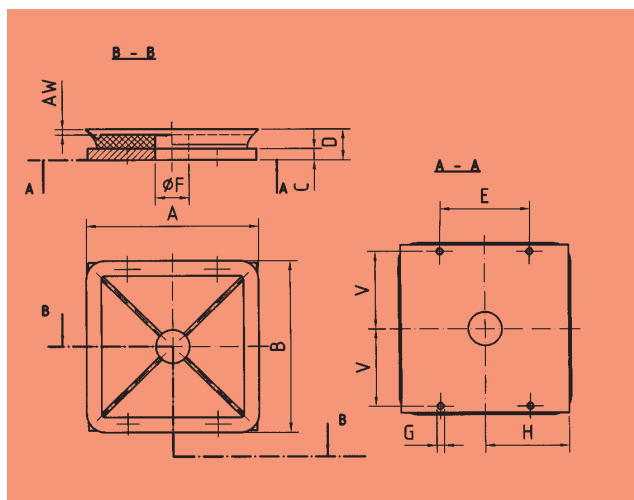
Sealing plates EP except for 23 x 13, 58 x 19, 96 x 96



Sealing plate EP 23 x 13



Sealing plate EP 58 x 19



Sealing plate EP 96 x 96

Dimensions										
Type	A	B	AW	C	D	E	F	G	H	V
DP-EP 42 x 42	42	42	2,5	6	13	33	8	M 4	21	--
DP-EP 43 x 13	40	10	2	8	15	20	3	M 4	20	--
DP-EP 45 x 40	40	35	2,5	6	13	33	10	M 4	17,5	--
DP-EP 58 x 19	55	16	2,5	8	15	40	2	M 4	30	2
DP-EP 65 x 25	60	20	2	6	13	40	6	M 4	30	--
DP-EP 65 x 33	60	28	2,5	6	13	40	10	M 4	30	--
DP-EP 65 x 47	60	42	2,5	6	13	40	18	M 4	30	--
DP-EP 83 x 23	80	20	2	8	15	56	6	M 4	40	5
DP-EP 96 x 96	92	92	3	6	16,5	48	18	M 4	45	41,5
DP-EP 105 x 35	100	32	2,5	6	13	60	18	M 4	50	--

Description

The mounted holding plates are special holding plates for holding or transporting extra small and narrow work pieces, as wood strips, small profiles, etc.

The mounted holding plates can be fixed through two drilled holes in the main plate. The sealing plate is screwed onto the main body and can be exchanged easily.

There is a choice of directly screwed in hose nipple, T-Piece and two hose nipples or angle connection with hose nipple.

Please look at "Sealing plates" for replacement sealing plates!



Holding plate EP 105 x 35



Holding plates EP

Suct. plates 3

Article numbers					
Type	Holding plate	Holding plate	Holding plate	Replacement sealing plate	
	NBR-S	NBR-G	SI-T	NBR	SI-T
SP-EP 45 x 40	1.16.2.0007	---	1.16.2.0008	1.16.1.0012	1.16.1.0013
SP-EP 65 x 25	---	1.16.2.0011	1.16.2.0012	1.16.1.0017	1.16.1.0018
SP-EP 65 x 33	---	1.16.2.0013	1.16.2.0014	1.16.1.0019	1.16.1.0020
SP-EP 65 x 47	---	1.16.2.0015	1.16.2.0016	1.16.1.0021	1.16.1.0022
SP-EP 105 x 35	---	1.16.2.0003	1.16.2.0004	1.16.1.0001	1.16.1.0003

In perbunane ex stock delivery, delivery time for material silicone transparent on request.

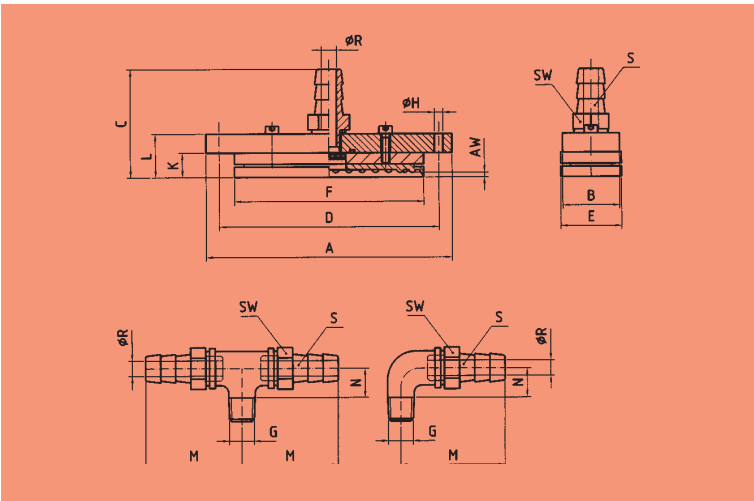
Materials:

- NBR-S Perbunane, black
- NBR-G Perbunane, grey
- SI-T Silicone, transparent

Technical Data			
Type	Hold.force ¹⁾	Weight	Volume ²⁾
	(N)		
SP-EP 45 x 40	73	250	6
SP-EP 65 x 25	45	220	5
SP-EP 65 x 33	72	310	9
SP-EP 65 x 47	123	410	11
SP-EP 105 x 35	141	470	14

1) Holding forces in N with operational vacuum of 60% without safety margin relate to even, smooth and dry surfaces
 2) Volume with suction cup in released condition

HOLDING PLATES EP 45 x 40 to 105 x 35



Holding plates EP

Dimensions								
Type	A	B	AW	C	D	E	F	G
SP-EP 45 x 40	60	35	2,5	57	50	35	40	R 1/4"
SP-EP 65 x 25	90	20	2	57	75	20	60	R 1/4"
SP-EP 65 x 33	90	30	2,5	57	75	28	60	R 1/4"
SP-EP 65 x 47	90	40	2,5	57	75	42	60	R 1/4"
SP-EP 105 x 35	130	30	2,5	57	116	32	100	R 1/4"

Dimensions									
Type	H	K	L	M	N	P	R	S LW	SW
SP-EP 45 x 40	4,5	13	23	51	15,5	55	8	1/2"	19
SP-EP 65 x 25	4,5	13	23	51	15,5	55	8	1/2"	19
SP-EP 65 x 33	4,5	13	23	51	15,5	55	8	1/2"	19
SP-EP 65 x 47	4,5	13	23	51	15,5	55	8	1/2"	19
SP-EP 105 x 35	4,5	13	23	51	15,5	55	8	1/2"	19

Description

Holding plates are special suction plates for holding or transporting extra small or narrow work pieces, as wood strips, small profiles, etc. The holding plates can be mounted on the main plate through two drilled holes. The sealing is screwed onto the main plate.



Holding plates DP-FS 30 x 100 to 30 x 300

Materials:

- BK-S Buna rubber, black
- NBR-G Perbunane, grey
- SI-T Silicone, transparent

Connection nipple:

For the vacuum supply we recommend connection nipple SN-R1/8-6. see Chapter 8.

Article numbers

Type	Holding plate	Holding plate	Holding plate
	BK-S	NBR-G	SI-T
DP-FS 30 x 100	1.11.1.0010	1.11.1.0012	1.11.1.0014
DP-FS 30 x 200	1.11.1.0015	1.11.1.0017	1.11.1.0018
DP-FS 30 x 300	1.11.1.0019	1.11.1.0021	1.11.1.0022

In perbunane black ex stock delivery

Delivery time for materials perbunane grey and silicone transparent on request

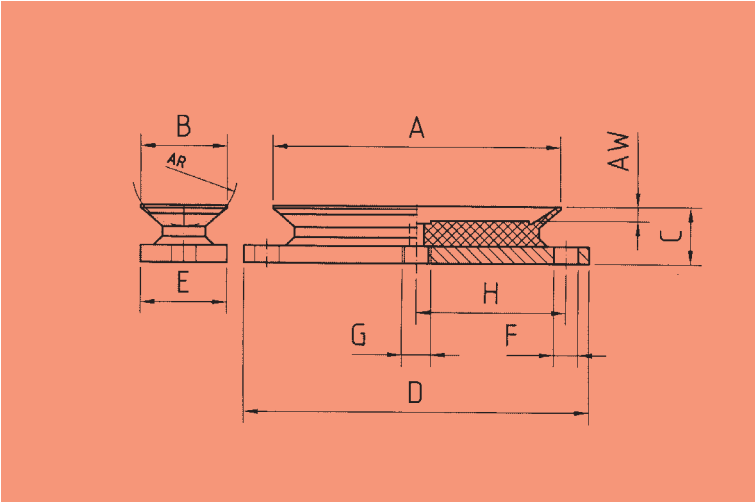
Technical Data

Type	Hold.force ¹⁾ (N)	Weight (kg)	Volume ²⁾ (ml)
DP-FS 30 x 100	115	0,18	17
DP-FS 30 x 200	230	0,33	25
DP-FS 30 x 300	365	0,52	40

1) Holding forces in N with operational vacuum of 60 % without safety margin relate to even, smooth and dry surfaces

2) Volume with suction cup in released condition

HOLDING PLATES 75 x 180 and 80 x 460, hinged



DP-FS 30 x 100 to 30 x 300

Dimensions										
Type	A	B	AW	AR	C	D	E	F	G	H
DP-FS 30 x 100	100	30	5	16	20	120	30	8,5	R 1/8"	52
DP-FS 30 x 200	200	30	5	16	20	220	30	8,5	R 1/8"	102
DP-FS 30 x 300	300	30	5	16	20	320	30	8,5	R 1/8"	152

Description

Suitable as sealing for suction and clamping plates in various forms and sizes. The sealing profiles have to be glued in the corresponding grooves with special glue.
 Look at the table below for necessary groove measures!



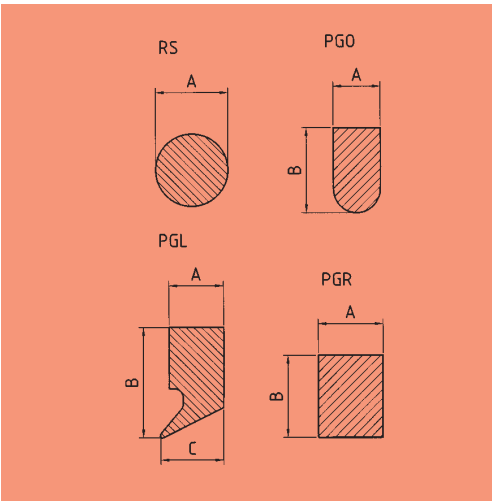
Sealing profiles

Materials:

- D-RS Sponge rubber, black
Silicone, white
- D-PGO Buna rubber, black
- D-PGL Sponge rubber, black
- D-PGR HO-rubber, grey

Article numbers		
Type	M-S (m)	M-SI-W
D-RS 5	6.14.3.0009	6.14.3.0013
D-RS 6	6.14.3.0014	6.14.3.0015
D-RS 8	6.14.3.0016	6.14.3.0017
D-RS 10	6.14.3.0001	6.14.3.0002
D-RS 12	6.14.3.0003	6.14.3.0004
D-RS 15	6.14.3.0005	6.14.3.0006
D-PGO 6x8	2.19.2.0060	---
D-PGO 10x20	2.19.2.0056	---
D-PGO 12x17	2.19.2.0057	---
D-PGL 11x23	2.19.2.0028	---
D-PGR 10x10	2.19.2.0009	---
D-PGR 10x18	2.19.2.0018	---
D-PGR 20x25	2.19.2.0038	---

Sponge rubber black ex stock delivery
 Delivery time for silicone white on request



Sealing profiles

Dimensions						
Type	Form	A	B	C	Groove width ca.	Gr. depth ¹⁾ ca.
D-RS 5	RS	5	--	--	5,5 - 6	0,7 x A
D-RS 6	RS	6	--	--	6,5 - 7	0,7 x A
D-RS 8	RS	8	--	--	8,5 - 9	0,7 x A
D-RS 10	RS	10	--	--	10,5 - 11	0,7 x A
D-RS 12	RS	12	--	--	12,5 - 13	0,7 x A
D-RS 15	RS	15	--	--	15,5 - 16	0,7 x A
D-PGO 6x8	PGO	6	8	--	6,5 - 7	0,5 - 0,7 x B
D-PGO 10x20	PGO	10	20	--	10,5 - 11	0,5 - 0,7 x B
D-PGO 12x17	PGO	12	17	--	12,5 - 13	0,5 - 0,7 x B
D-PGL 11x23	PGL	11	23	14	11,5 - 12	0,5 - 0,7 x B
D-PGR 10x10	PGR	10	10	--	10,5 - 11	0,5 - 0,7 x B
D-PGR 10x18	PGR	10	18	--	10,5 - 11	0,5 - 0,7 x B
D-PGR 20x25	PGR	20	25	--	20,5 - 21	0,5 - 0,7 x B

1) depending on surface conditions of the transport good

Description

For protection of sensitive transport good surfaces, as polished sheet metals. The textile cover is pulled over the suction plate and held with a rubber band

Please note:
 The carrying capacities of suction plates can be reduced when using textile covers, because the friction between suction plate and transport good is reduced.



Textile cover TÛ

Article numbers	
Type	Textile cover
TÛ-SP-90	1.55.2.0014
TÛ-SP-100	1.55.2.0002
TÛ-SP-110	1.55.2.0003
TÛ-SP-130	1.55.2.0004
TÛ-SP-160	1.55.2.0006
TÛ-SP-180	1.55.2.0007
TÛ-SP-210	1.55.2.0009
TÛ-SP-220	1.55.2.0010
TÛ-SP-250	1.55.2.0011
TÛ-SP-300	1.55.2.0012

Technical Data	
Textile cover	for suctionplate diameter (mm)
TÛ-SP-90	90
TÛ-SP-100	100
TÛ-SP-110	110
TÛ-SP-130	130
TÛ-SP-160	160
TÛ-SP-180	180
TÛ-SP-210	210
TÛ-SP-220	220
TÛ-SP-250	250
TÛ-SP-300	300



Thinner, Special glue

Description

A special glue should be used in order to get a safe and solid connection of the sealing profile or of the sealing on the suction plate.

Article numbers

Type	Unit (g)	Part number
Special glue for rubber- metal connections (perbunane) - can	750	1.55.9.0004
Special glue for rubber- metal connections (perbunane) - can	70	1.55.9.0003
Special glue for rubber- metal connections (silicone) - cartridge	300	1.55.9.0002
Thinner for special glue - can	750	1.55.9.0001