

# Suction Pads for Handling Wood



## Flat Suction Pads SHFN

Suction area (Ø) from 50 mm to 85 mm



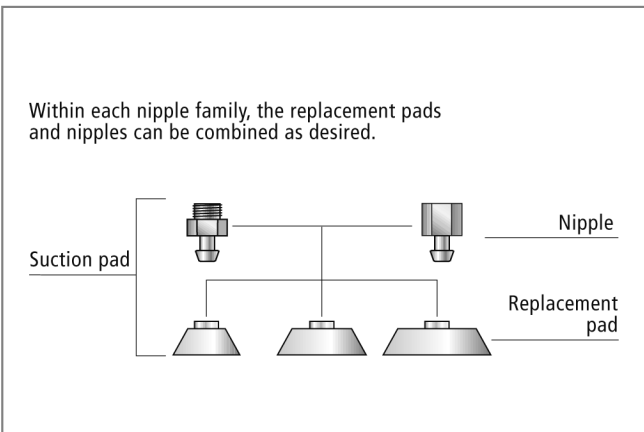
### Suitability for Industry-Specific Applications



Flat suction pads SHFN

### Applications

- Round, flat suction pad for handling of furniture parts, parquet flooring, laminated and unlaminated chipboard, etc.
- Version with vulcanized insert, for vacuum systems in rough operating conditions, where the suction pads are not always fully covered or may be placed directly on the edge of the workpiece
- Handling of objects with very rough surfaces with sealing ring made of special foam



System design flat suction pads SHFN

### Design

- Adaptable suction pad SHFN, consisting of pad SHF and connection nipple
- Nipple plugged into pad; version SHFN...E with nipple screwed into vulcanized insert
- Ribs on the upper surface of the pad for higher stability on the version without vulcanized insert
- Optionally available with sealing ring made of special foam and/or with sensing valve
- Individual deactivation of unused suction pads with optional sensing valve to prevent entry of air



Flat suction pads SHFN being used for handling chipboards

### Our Highlights...

- Soft sealing lip
- Sealing lip with inner sealing edge
- Specifically structured lower surface of pad
- Version SHFN...E with insert
- Dirt filter (optionally)
- Sealing ring made of special foam (optionally)

### Your Benefits...

- > Optimal adaptation to uneven workpiece surfaces
- > Very good sealing on rough and smooth surfaces
- > Suitable for highly dynamic operations and short cycle times
- > Increased stability in rough operating conditions
- > Usage in dusty surroundings
- > Suitable for workpieces with very rough surfaces

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# Suction Pads for Handling Wood



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### Designation Code Flat Suction Pads SHFN

Abbreviated designation	Suction area Ø in mm	Material and Shore hardness	Connection thread	Type of construction	Product addition
<b>Example SHFN 50 NK-45 G1/4-AG:</b>					
SHFN	50	NK-45	G1/4-AG		
SHFN	50	NK-45	G1/4-AG (AG = male (M))	- pluggable metal inlay	MOS sealing ring, made of special foam
	70		G1/4-IG (IG = female (F))	E vulcanized metal inlay	TV sensing valve
	85				

### Ordering Data Flat Suction Pads SHFN

Suction pad SHFN (elastomer part + connection nipple) is delivered assembled. The assembly consists of:

- Suction pad of type SHF – elastomer part, available in various diameters
- Connection nipple of type SA-NIP – available with various threads
- Optional product addition: sealing ring and sensing valve

Available spare parts: suction pad SHF, connection nipple SA-NIP, sealing ring

Available accessories: sensing valve, filter screen

### Flat Suction Pads SHFN

Type*	Connection			
	SHFN G1/4"-AG	SHFN...E G1/4"-AG	SHFN G1/4"-IG	SHFN...E G1/4"-IG
SHFN 50 NK-45	10.01.01.11693	-	10.01.01.11694	-
SHFN 50 NK-45 MOS	10.01.01.11695	-	10.01.01.11696	-
SHFN 50 NK-45 TV	10.01.01.11699	-	-	-
SHFN 50 NK-45 MOS-TV	10.01.01.11700	-	-	-
SHFN 70 NK-45	10.01.01.11689	10.01.01.12197	10.01.01.11690	10.01.01.12216
SHFN 70 NK-45 MOS	10.01.01.11691	10.01.01.12217	10.01.01.11692	10.01.01.12218
SHFN 70 NK-45 TV	10.01.01.11697	10.01.01.12221	-	-
SHFN 70 NK-45 MOS-TV	10.01.01.11698	10.01.01.12222	-	-
SHFN 85 NK-45	10.01.01.11775	10.01.01.12210	10.01.01.11776	10.01.01.12211
SHFN 85 NK-45 MOS	10.01.01.11777	10.01.01.12212	10.01.01.11778	10.01.01.12213
SHFN 85 NK-45 TV	10.01.01.11779	10.01.01.12224	-	-
SHFN 85 NK-45 MOS-TV	10.01.01.11780	10.01.01.12225	-	-

\*MOS = additional sealing ring, made of special foam material and glued into position, for optimal sealing on rough surfaces; TV = sensing valve

# Suction Pads for Handling Wood



## Flat Suction Pads SHFN

Suction area (Ø) from 50 mm to 85 mm

### Ordering Data Spare Parts And Accessories Flat Suction Pads SHFN

Type	Flat suction pad (round) SHF	Sealing ring made of special foam material	Suction pad nipples SA-NIP	Sensing valve	Filter screen (round)
SHFN 50 NK-45 G1/4-AG	10.01.01.11687	-	10.01.01.11772	-	10.07.01.00211
SHFN 50 NK-45 G1/4-IG	10.01.01.11687	-	10.01.01.11822	-	10.07.01.00211
SHFN 50 NK-45 G1/4-AG MOS	10.01.01.11688	10.01.06.01679	10.01.01.11772	-	10.07.01.00211
SHFN 50 NK-45 G1/4-IG MOS	10.01.01.11688	10.01.06.01679	10.01.01.11822	-	10.07.01.00211
SHFN 50 NK-45 G1/4-AG TV	10.01.01.11687	-	-	10.05.10.00058	-
SHFN 50 NK-45 G1/4-AG MOS-TV	10.01.01.11688	-	-	10.05.10.00058	-
SHFN 70 NK-45 G1/4-AG	10.01.01.11682	-	10.01.01.11772	-	10.07.01.00211
SHFN 70 NK-45 G1/4-IG	10.01.01.11682	-	10.01.01.11822	-	10.07.01.00211
SHFN 70 NK-45 G1/4-AG E	10.01.01.12165	-	10.01.01.12194	-	10.05.03.00023
SHFN 70 NK-45 G1/4-IG E	10.01.01.12165	-	10.01.01.12192	-	10.05.03.00023
SHFN 70 NK-45 G1/4-AG MOS	10.01.01.11686	10.01.06.01678	10.01.01.11772	-	10.07.01.00211
SHFN 70 NK-45 G1/4-IG MOS	10.01.01.11686	10.01.06.01678	10.01.01.11822	-	10.07.01.00211
SHFN 70 NK-45 G1/4-AG E MOS	10.01.01.12215	10.01.06.01678	10.01.01.12194	-	10.05.03.00023
SHFN 70 NK-45 G1/4-IG E MOS	10.01.01.12215	10.01.06.01678	10.01.01.12192	-	10.05.03.00023
SHFN 70 NK-45 G1/4-AG TV	10.01.01.11682	-	-	10.05.10.00058	-
SHFN 70 NK-45 G1/4-AG E TV	10.01.01.12165	-	-	10.05.10.00065	-
SHFN 70 NK-45 G1/4-AG MOS-TV	10.01.01.11686	-	-	10.05.10.00058	-
SHFN 70 NK-45 G1/4-AG E MOS-TV	10.01.01.12215	10.01.06.01678	-	10.05.10.00065	-
SHFN 85 NK-45 G1/4-AG	10.01.01.11773	-	10.01.01.11772	-	10.07.01.00211
SHFN 85 NK-45 G1/4-IG	10.01.01.11773	-	10.01.01.11822	-	10.07.01.00211
SHFN 85 NK-45 G1/4-AG E	10.01.01.12209	-	10.01.01.12194	-	10.05.03.00023
SHFN 85 NK-45 G1/4-IG E	10.01.01.12209	-	10.01.01.12192	-	10.05.03.00023
SHFN 85 NK-45 G1/4-AG MOS	10.01.01.11774	10.01.06.01720	10.01.01.11772	-	10.07.01.00211
SHFN 85 NK-45 G1/4-IG MOS	10.01.01.11774	10.01.06.01720	10.01.01.11822	-	10.07.01.00211
SHFN 85 NK-45 G1/4-AG E MOS	10.01.01.12223	-	10.01.01.12194	-	10.05.03.00023
SHFN 85 NK-45 G1/4-IG E MOS	10.01.01.12223	-	10.01.01.12192	-	10.05.03.00023
SHFN 85 NK-45 G1/4-AG TV	10.01.01.11773	-	-	10.05.10.00058	-
SHFN 85 NK-45 G1/4-AG E TV	10.01.01.12209	-	-	10.05.10.00065	-
SHFN 85 NK-45 G1/4-AG MOS-TV	10.01.01.11774	10.01.06.01720	-	10.05.10.00058	-
SHFN 85 NK-45 G1/4-AG E MOS-TV	10.01.01.12223	10.01.06.01720	-	10.05.10.00065	-

### Technical Data Flat Suction Pads SHFN

Type*	Suction force Ds [N]**	Suction force d2 [N]***	Lateral force [N]	Volume [cm³]	Min. curve radius [mm] (convex)	Recom. internal hose diameter d [mm]****	Nipple family
SHFN 50 NK-45	110	40	95	7.3	41	4	N 041
SHFN 50 NK-45 TV	110	40	95	7.3	41	4	N 041
SHFN 70 NK-45	200	100	145	16.0	95	6	N 041
SHFN 70 NK-45 E	200	100	145	16.0	95	6	N 009
SHFN 70 NK-45 TV	200	100	145	16.0	95	6	N 041
SHFN 70 NK-45 E TV	200	100	145	16.0	95	6	N 009
SHFN 85 NK-45	300	175	210	25.0	176	6	N 041
SHFN 85 NK-45 E	300	175	210	25.0	176	6	N 009
SHFN 85 NK-45 TV	300	175	210	25.0	176	6	N 041
SHFN 85 NK-45 E TV	300	175	210	25.0	176	6	N 009

\*Note: For technical data on the sensing valves, see Chapter "Valve Technology"

\*\*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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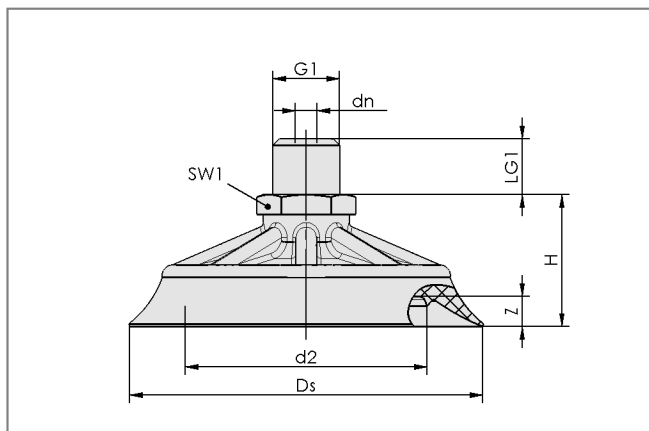


## Flat Suction Pads SHFN

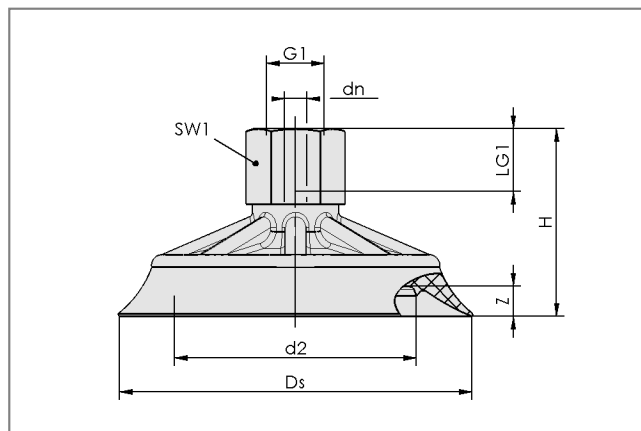
Suction area ( $\emptyset$ ) from 50 mm to 85 mm



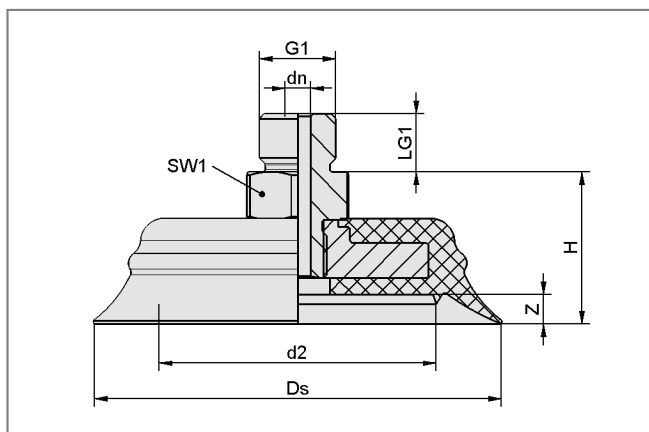
### Design Data Flat Suction Pads SHFN



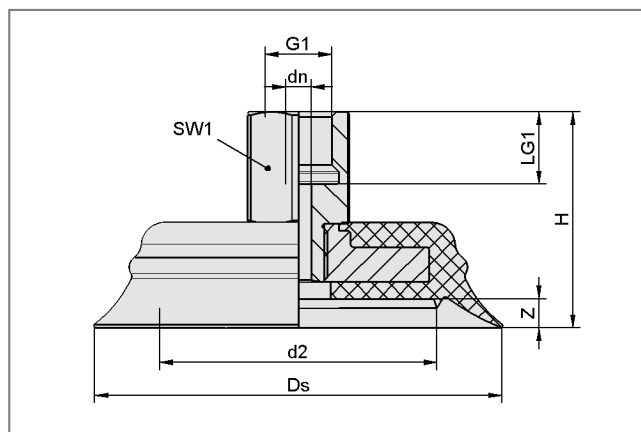
SHFN 50 to 85 NK-45 G1/4-AG (TV)



SHFN 50 to 85 NK-45 G1/4-IG



SHFN 70 to 85 NK-45 G1/4-AG E (TV)



SHFN 70 to 85 NK-45 G1/4-IG E

Type	Dimensions in mm*								
	d2	dn	Ds	G1	H	LG1	SW1	Z (Stroke)	
SHFN 50 NK-45 G1/4-AG	30	4.4	52	G1/4"-M	26.2	11	17	3	
SHFN 50 NK-45 G1/4-IG	30	4.4	52	G1/4"-F	37.2	11	17	3	
SHFN 50 NK-45 G1/4-AG TV	30	4.4	52	G1/4"-M	32.2	11	17	3	
SHFN 70 NK-45 G1/4-AG	48	4.4	70	G1/4"-M	26.2	11	17	4	
SHFN 70 NK-45 G1/4-AG E	48	4.4	70	G1/4"-M	26.2	10	17	4	
SHFN 70 NK-45 G1/4-IG	48	4.4	70	G1/4"-F	37.2	11	17	4	
SHFN 70 NK-45 G1/4-IG E	48	4.4	70	G1/4"-F	37.2	12	17	4	
SHFN 70 NK-45 G1/4-AG TV	48	4.4	70	G1/4"-M	32.2	11	17	4	
SHFN 70 NK-45 G1/4-AG E TV	48	4.4	70	G1/4"-M	33.4	10	17	4	
SHFN 85 NK-45 G1/4-AG	62	4.4	85	G1/4"-M	26.2	11	17	4	
SHFN 85 NK-45 G1/4-AG E	62	4.4	85	G1/4"-M	26.2	10	17	4	
SHFN 85 NK-45 G1/4-IG	62	4.4	85	G1/4"-F	37.2	11	17	4	
SHFN 85 NK-45 G1/4-IG E	62	4.4	85	G1/4"-F	37.2	12	17	4	
SHFN 85 NK-45 G1/4-AG TV	62	4.4	85	G1/4"-M	32.2	11	17	4	
SHFN 85 NK-45 G1/4-AG E TV	62	4.4	85	G1/4"-M	33.4	10	17	4	

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

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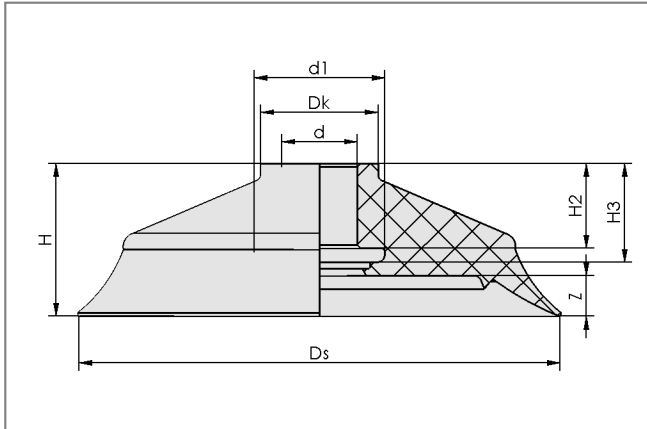


## Flat Suction Pads SHFN

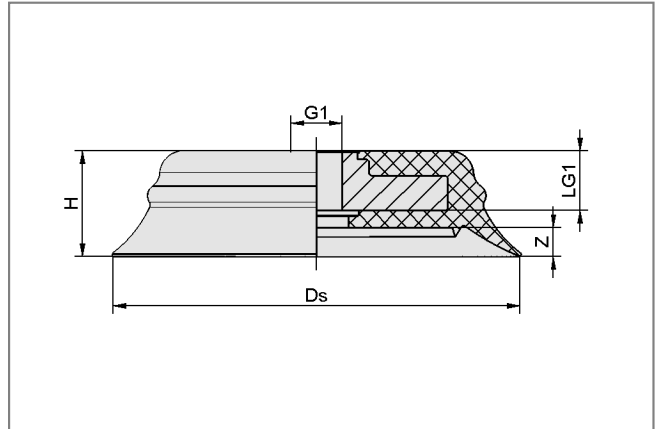
Suction area ( $\emptyset$ ) from 50 mm to 85 mm



### Design Data Flat Suction Pads SHF - Spare Parts for SHFN



SHF 50 to 85



SHF 70 E to 85 E

Type	Dimensions in mm*										
	d	d1	Dk	Ds	G1	H	H2	H3	LG1	Z (Stroke)	
SHF 50 NK-45	7.5	17	17	52	-	22.2	12.8	14.3	-	3	
SHF 70 NK-45	7.5	17	17	70	-	22.2	12.8	14.3	-	4	
SHF 70 NK-45 E	-	-	-	70	M10x1.25-F	18.1	-	-	10	4	
SHF 85 NK-45	7.5	17	17	85	-	22.2	12.8	14.3	-	4	
SHF 85 NK-45 E	-	-	-	85	M10x1.25-F	18.1	-	-	10	4	

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

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