

Suction Cups

HSA

Special flat chuck for wood industry

HANWHA



Metal



Plank



Heavy load

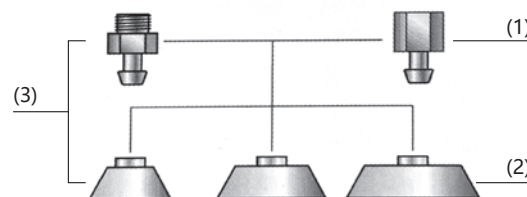
Product characteristics

- * Large area support structure at the bottom
- * Small internal volume
- * Suction cup rubber parts can be replaced separately
- * Complete size specifications
- * Handling flat workpiece with smooth or slightly rough surface
- * Handling high-temperature workpieces
- * Almost traceless and antistatic when handling pressure-sensitive workpieces



Product structure

- * Strong wear resistant flat suction cups (3) with single sealed lip, made of suction cups (2) and a connecting head (1)
 - * Diameter 50mm and below: straight insert connector
 - * Diameter 60mm and above: the mounting plate is vulcanized with the suction cup
- Together, the joint is screwed in directly through the screw



Product advantages

- * Can prevent permanent deformation of thin-walled workpieces
- * Excellent sealing, large adsorption force and short working cycle
- * Greatly reduce customer costs
- * Suitable for various sizes and shapes of workpieces



*HSA carrying wooden plank

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HSA Ordering NO

HSA	18	FG01	SI
1	2	3	4

1-Series	2-Diameter	3-Crew thread
HSA Suction Cup	18.....400 ϕ 18~ ϕ 400mm	F Internal thread
		G01-G1/8
		G02-G1/4
		G04-G1/2
		M External thread
		G01-G1/8
		G02-G1/4

4-Material ⁽¹⁾	
SI	Silicon rubber
SI-W	Anti static (white)
NBR	Nitrile rubber
NBR-B	Anti static (black)
H1	High temperature material(blue)
H2	High temperature material(black)

(1)Other materials can also be made, please contact us



HSA Selection specification

Models	F-G01-G1/8	F-G02-G1/4	F-G04-G1/2	M-G01-G1/8	M-G02-G1/4
HSA18	⊙			⊙	
HSA20	⊙			⊙	
HSA22	⊙			⊙	
HSA25	⊙			⊙	
HSA30	⊙			⊙	
HSA35	⊙			⊙	
HSA40	⊙			⊙	
HSA45	⊙			⊙	
HSA60		⊙			⊙
HSA80		⊙			⊙
HSA95		⊙			⊙
HSA100		⊙			
HSA125		⊙			
HSA160			⊙		
HSA210			⊙		
HSA250			⊙		
HSA300			⊙		
HSA360			⊙		
HSA400			⊙		



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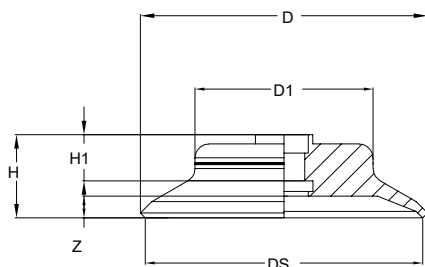
HSA Technical Data

Models	Suction[N] ⁽²⁾ -60Kpa	Inner volume [cm ³]	Curve radius [mm]	Weight [g]
HSA-18	6.3	0.6	14	1.7
HSA-20	7.8	0.8	17	8.8
HSA-22	9.5	1	20	9.7
HSA-25	12.3	1.3	25	1.8
HSA-30	17.6	2.5	40	9.3
HSA-35	24	2.7	50	9.8
HSA-40	31.4	3.8	50	2.2
HSA-45	39.8	4.9	60	9.3
HSA-60	125	10	100	33.7
HSA-80	260	25	150	48.2
HSA-95	350	35	200	51.4
HSA-100	425	36	210	100
HSA-125	660	70	220	200
HSA-160	1090	123	350	400
HSA-210	1870	226	750	800
HSA-250	2650	332	2200	1360
HSA-300	3810	492	3500	2200
HSA-360	5500	1170	3000	3660
HSA-400	6780	907	6500	3900

(2) The measured surface of the workpiece is smooth and dry, with a vacuum degree of -60KPa.

The above data does not include the safety factor. The values may vary depending on the surface condition of the workpiece.

HSA18~95 Design Data



Size[mm]⁽³⁾

Models	D	H	H1	DS	D1	Z
HSA18	18	12	9.5	18	8	2.5
HSA20	20	12	9.5	20	8	2.5
HSA22	22	13	10	22	8	3
HSA25	25	16	11.5	25	12	4.5
HSA30	30	17	12.5	30	12	4.5
HSA35	35	16	11.5	35	15	4.5
HSA40	40	18	12.5	40	15	5.5
HSA45	45	23	14.5	45	15	8.5
HSA60	62.1	18	12.3	60	38.5	4.7
HSA80	82.8	20	14	80	52	6
HSA95	97.8	20.5	14.5	95	68	6

HSA18~95 Dimension

(3) Compliant with DIN ISO 3302-1 M3 rubber parts allowable dimensional tolerances. Z is the trip

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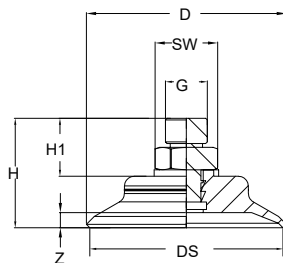
Heavy load



Size[mm]⁽³⁾

Models	D	H	H1	DS	D1	G	G1	Z
HSA100-FG02	101.2	26	15.5	100	66	G1/4"	/	8
HSA125-FG02	126.2	25	15.5	125	91	G1/4"	G1/4"	8
HSA160-FG04	161.8	26.5	16	160	120	G1/2"	G1/4"	6
HSA210-FG04	211.8	26.5	16	210	170	G1/2"	G1/4"	6
HSA250-FG04	251.8	26.5	16	250	210	G1/2"	G1/2"	8
HSA300-FG04	301.8	26.5	16	300	260	G1/2"	G1/2"	6
HSA360-FG04	361.8	35.5	24	360	323	G1/2"	G1/2"	9.5
HSA400-FG04	401.8	29	24	400	360	G1/2"	G1/2"	6

HSB100~400 Dimension

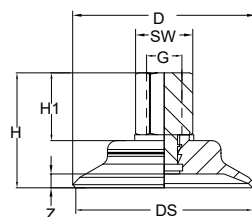


Size[mm]⁽³⁾

Models	D	H	H1	G	DS	SW	Z
HSA18-MG01	18	25	13	G1/8"	18	SW14	2.5
HSA20-MG01	20	25	13	G1/8"	20	SW14	2.5
HSA22-MG01	22	26	13	G1/8"	22	SW14	3
HSA25-MG01	25	29	13	G1/8"	25	SW14	4.5
HSA30-MG01	30	30	13	G1/8"	30	SW14	4.5
HSA35-MG01	35	38	22	G1/8"	35	SW14	4.5
HSA40-MG01	40	40	22	G1/8"	40	SW14	5.5
HSA45-MG01	45	45	22	G1/8"	45	SW14	8.5
HSA60-MG02	62.1	34	18	G1/4"	60	SW17	4.7
HSA80-MG02	82.8	36	18	G1/4"	80	SW17	6
HSA95-MG02	97.8	36.5	18	G1/4"	95	SW17	6

HSA18~95 External thread

Size[mm]⁽³⁾



Models	D	H	H1	G	DS	SW	Z
HSA18-FG01	18	25	13	G1/8"	18	SW14	2.5
HSA20-FG01	20	25	13	G1/8"	20	SW14	2.5
HSA22-FG01	22	26	13	G1/8"	22	SW14	3
HSA25-FG01	25	29	13	G1/8"	25	SW14	4.5
HSA30-FG01	30	30	13	G1/8"	30	SW14	4.5
HSA35-FG01	35	38	17	G1/8"	35	SW14	4.5
HSA40-FG01	40	40	17	G1/8"	40	SW14	5.5
HSA45-FG01	45	45	17	G1/8"	45	SW14	8.5
HSA60-FG02	62.1	34	23	G1/4"	60	SW17	4.7
HSA80-FG02	82.8	36	23	G1/4"	80	SW17	6
HSA95-FG02	97.8	36.5	23	G1/4"	95	SW17	6

HSA18~95 Internal thread

(3) Compliant with DIN ISO 3302-1 M3 rubber parts allowable dimensional tolerances. Z is the trip