

VACUUM PADS HEAVY DUTY



Ordering Code

K C - Z P	—	4 0	—	H	—	N
Model		Pad diameter Ø mm		Pad Type		Material of pad
KC-ZP : Vacuum Pad		40 : 40 50 : 50 63 : 63 80 : 80 100 : 100 125 : 125		H : Heavy Duty Flat HB : Heavy Duty Bellows		N : NBR S : Silicon

Product Features

- 1 Available in both NBR & Silicone.
- 2 Diameters 2mm to 125mm.

Pad Forms

Pad Type / Diameter	Ø 40mm	Ø 50mm	Ø 63mm	Ø 80mm	Ø 100mm	Ø 125mm
Heavy Duty Flat : H	●	●	●	●	●	●
Heavy Duty Bellows : HB	●	●	●	●	●	●

Pad Variations

Pad Diameter	Features / Applications	Material
Flat : U	For use when the surface of the work piece is flat and not deformed	NBR : Ideal for the transport of boards, in most like Wood, Paper, Metal, Plastics
Flat with Ribs : C	For use when the surface of the work piece is likely to deform slightly under vacuum	Silicone : Ideal for the transport of boards, in most like Wood, Paper, Metal, Plastics and very good with Glass and Film
Deep : D	For use when the surface of workpiece is curved	
Bellows : B	For use when the work piece has varying heights and shapes	

Pad Material Characteristics

Material	Characteristics									
	HS Durometer +/-5°	Operating Temp Range	Oil resistance gasoline	Oil resistance benzol	Base resistance	Acid resistance	Ozone / Weather resistance	Abrasion resistance	Waterproof	Solvent resistance
NBR	50°	0 to 120°C	●	X	○	○	X	●	○	X
Silicon	40°	-30 to 200°C	X	X	○	X	●	X	○	X

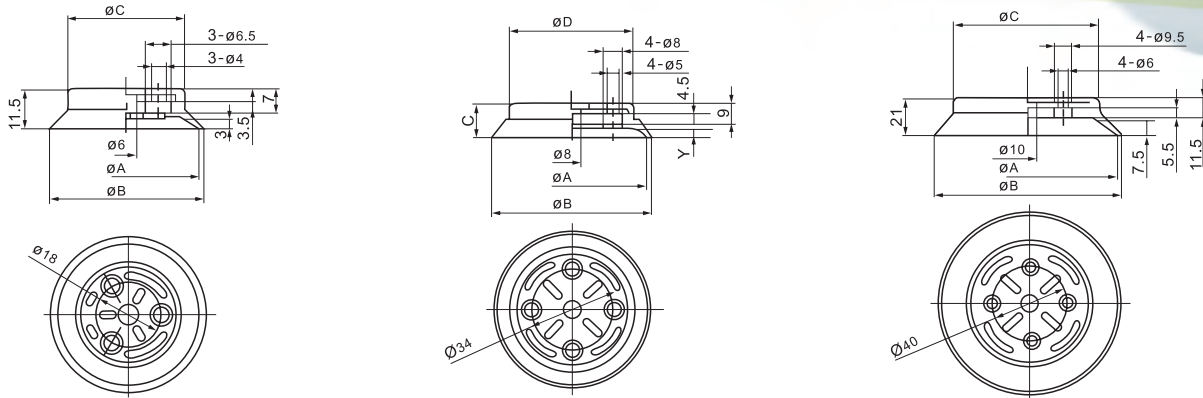
● : Little or no influence ○ : Can be used depending on conditions X : Not suitable

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Dimensions

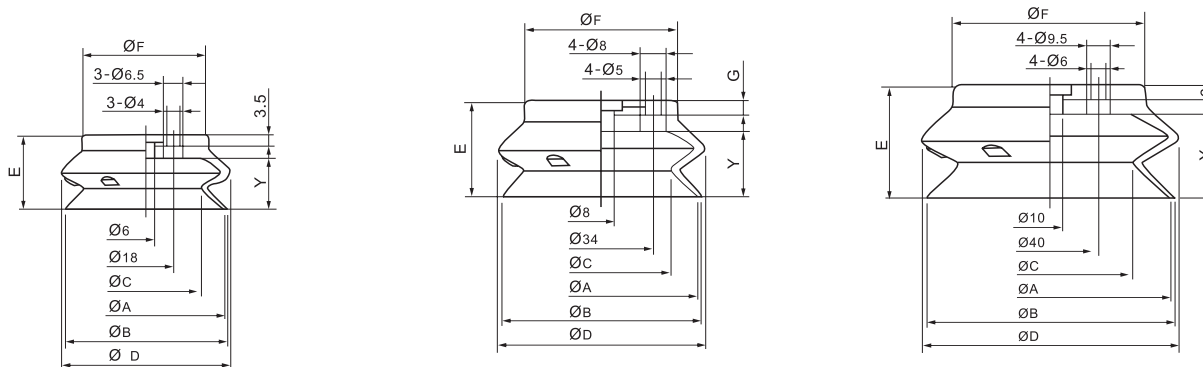
All sizes are in millimetres unless stated otherwise.

Heavy Duty Flat 'H'



Model	Ø A	Ø B	Ø C	C	D	Y
KC-ZP40H	40	42	32	-	-	-
KC-ZP50H	50	52	42	-	-	-
KC-ZP63H	63	65	-	14.5	54	3.5
KC-ZP80H	80	82	-	16.5	68	4.5
KC-ZP100H	100	103	80	-	-	-
KC-ZP125H	125	128	104	-	-	-

Heavy Duty Flat 'H'



Model	A	B	C	D	E	F	G	Y
KC-ZP40HB	40	41.4	28.4	43.2	20.5	30	3.5	13
KC-ZP50HB	50	51.9	35.7	54	24	40.5	3.5	16.5
KC-ZP63HB	63	65.1	45.5	67.6	31.5	50	4.5	21.5
KC-ZP80HB	80	83	58.4	85.1	38	64	5	27.5
KC-ZP100HB	100	103.1	68.6	106.7	74.5	80	6	35.5
KC-ZP125HB	125	128.5	88.6	135	56	105	6	44

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Lifting Force and Vacuum Pad Diameter

The theoretical lifting force of a pad can be found by calculation or from the table below.

Calculation	W	Lifting force (N)
	P	Vacuum pressure (kPa)
	S	Pad area (cm ²) (see diagram on page can we replicate please)
	T	Safety factor Horizontal lifting > 4 Vertical lifting > 8

The theoretical lifting force (not including the safety factor) is found from the pad diameter and vacuum pressure. The required force is then found by dividing the theoretical lifting force by the safety factor.

Lifting Force = Theoretical lifting force ÷ Safety factor

Pad Diameter (mm)	ø2	ø4	ø6	ø8	ø10	ø13	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	
Pad Area (cm ²)	0.031	0.126	0.283	0.503	0.875	1.330	2.010	3.140	4.910	8.04	12.60	19.60	31.20	50.20	78.50	122.70	
"Vacuum Pressure (kPa)"	-85	0.264	1.070	2.41	4.28	6.67	11.30	17.10	26.70	41.70	68.30	107.00	167.00	265.00	427.00	667.00	1043.00
	-80	0.248	1.010	2.26	4.20	6.28	10.60	16.10	25.10	39.30	64.30	101.00	157.00	250.00	402.00	628.00	982.00
	-75	0.233	0.945	2.12	3.77	5.89	9.98	15.10	23.60	36.80	60.30	94.50	147.00	234.00	377.00	589.00	920.00
	-70	0.217	0.882	1.98	3.52	5.50	9.31	14.10	22.00	34.40	56.30	88.20	137.00	218.00	351.00	550.00	859.00
	-65	0.202	0.819	1.84	3.27	5.10	8.65	13.10	20.40	31.90	52.30	81.90	127.00	203.00	326.00	510.00	798.00
	-60	0.186	0.756	1.70	3.02	4.71	7.98	12.10	18.80	29.50	48.20	75.60	118.00	187.00	301.00	471.00	736.00
	-55	0.171	0.693	1.56	2.77	4.32	7.32	11.10	17.30	27.00	44.20	69.30	108.00	172.00	276.00	432.00	675.00
	-50	0.155	0.630	1.42	2.52	3.93	6.65	10.10	15.70	24.60	40.20	63.00	98.00	156.00	251.00	393.00	614.00
	-45	0.140	0.567	1.27	2.26	3.53	5.99	9.05	14.10	22.10	36.20	56.70	88.20	140.00	226.00	353.00	552.00
-40	0.124	0.504	1.13	2.01	3.14	5.32	8.04	12.60	19.60	32.20	50.40	78.40	125.00	201.00	314.00	491.00	