KELMK Enhanced Quality Performance

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Vacuum Pads, Heavy Duty

The use of suction cups to lift/move your workpiece offers many solutions.

Handing board materials, bag opening, electronic component picking, labelling and holding objects.

Available in flat, flat ribbed, deep & bellow cup design ideal for the transportation of work pieces of different weights, shapes and surface finishes.

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

Flat Ribbed Cup, NBR

0421	Suction Area Diameter mm	OD mm	H mm	£
KC-ZP40HN	40	42	11.5	17.85
KC-ZP50HN	50	52	11.5	19.75
KC-ZP63HN	63	65	14.5	24.45
KC-ZP80HN	80	82	16.5	30.00
KC-ZP100HN	100	103	21	37.50
KC-ZP125HN	125	128	21	42.25

Flat Ribbed Cup, Silicone

0421	Suction Area Diameter mm	OD mm	H mm	£
KC-ZP50HS	50	52	11.5	19.75
KC-ZP63HS	63	65	14.5	24.45
KC-ZP125HS	125	128	21	42.25

Bellow Cup, NBR

0421	Suction Area Diameter mm	OD mm	H mm	£
KC-ZP40HBN	40	41.4	20.5	23.50
KC-ZP63HBN	63	65.1	31.5	29.10
KC-ZP100HBN	100	103.1	47.5	42.25
KC-ZP125HBN	125	128.5	56	53.95

Bellow Cup, Silicone

0421	Suction Area Diameter mm	OD mm	H mm	£
KC-ZP40HBS	40	41.4	20.5	23.50
KC-ZP50HBS	50	51.9	24	25.85
KC-ZP80HBS	80	83	38	35.70
KC-ZP100HBS	100	103.1	47.5	42.25
KC-ZP125HBS	125	128.5	56	53.95

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})
- 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

Hydraulics
Hydraulic Quick Release Couplings
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Stainless Steel
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Hose, Tubing & Couplings
Clamps & Clips
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Blow Guns, Vacuum & Nozzles
Pressure Wash, Fuelling & Lubrication
Air Tools & Compressor Equipment
Tools, Hardware & PPE