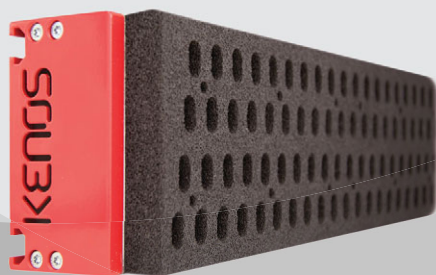




A part of the Piab group
KENOS
Vacuum gripping systems

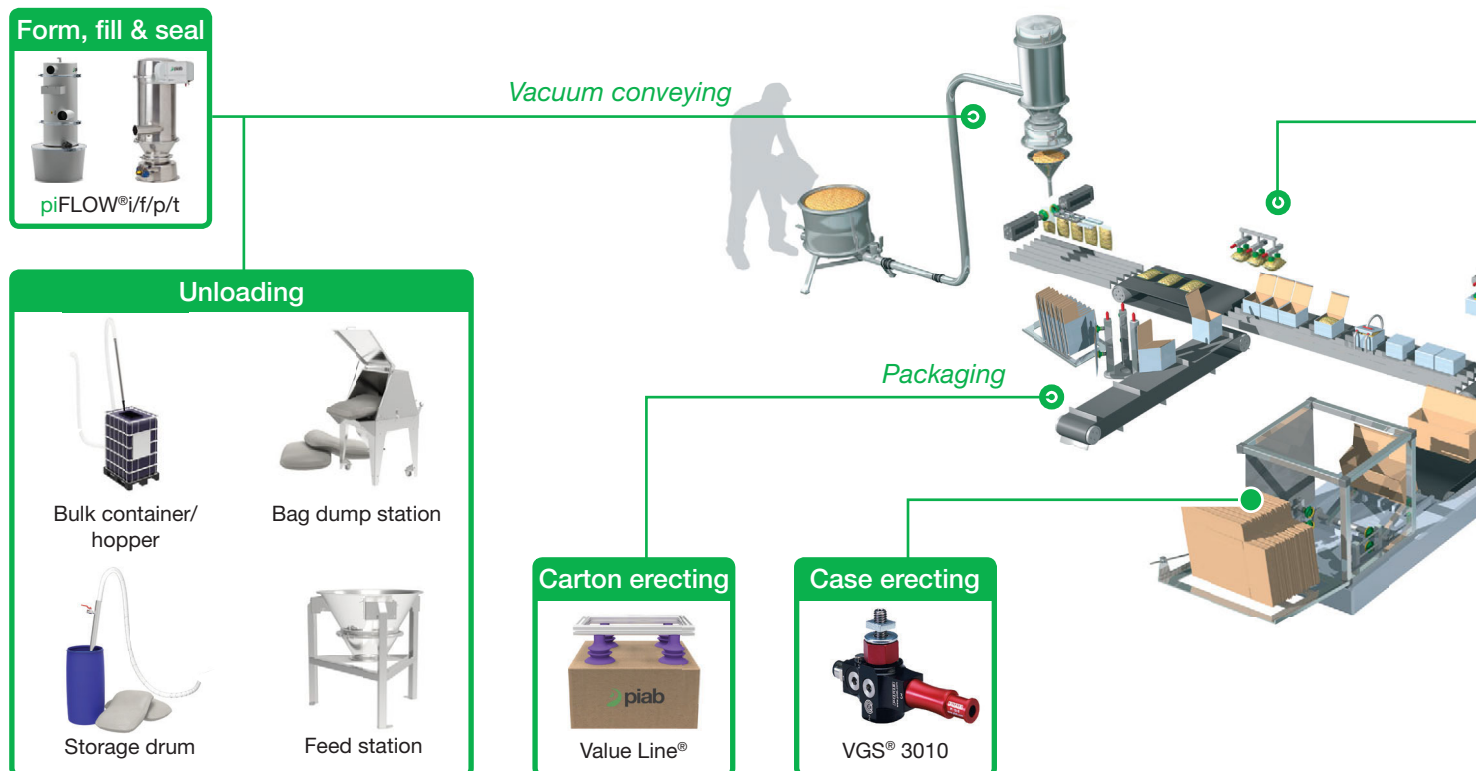
We grip to everything.



pneuvano

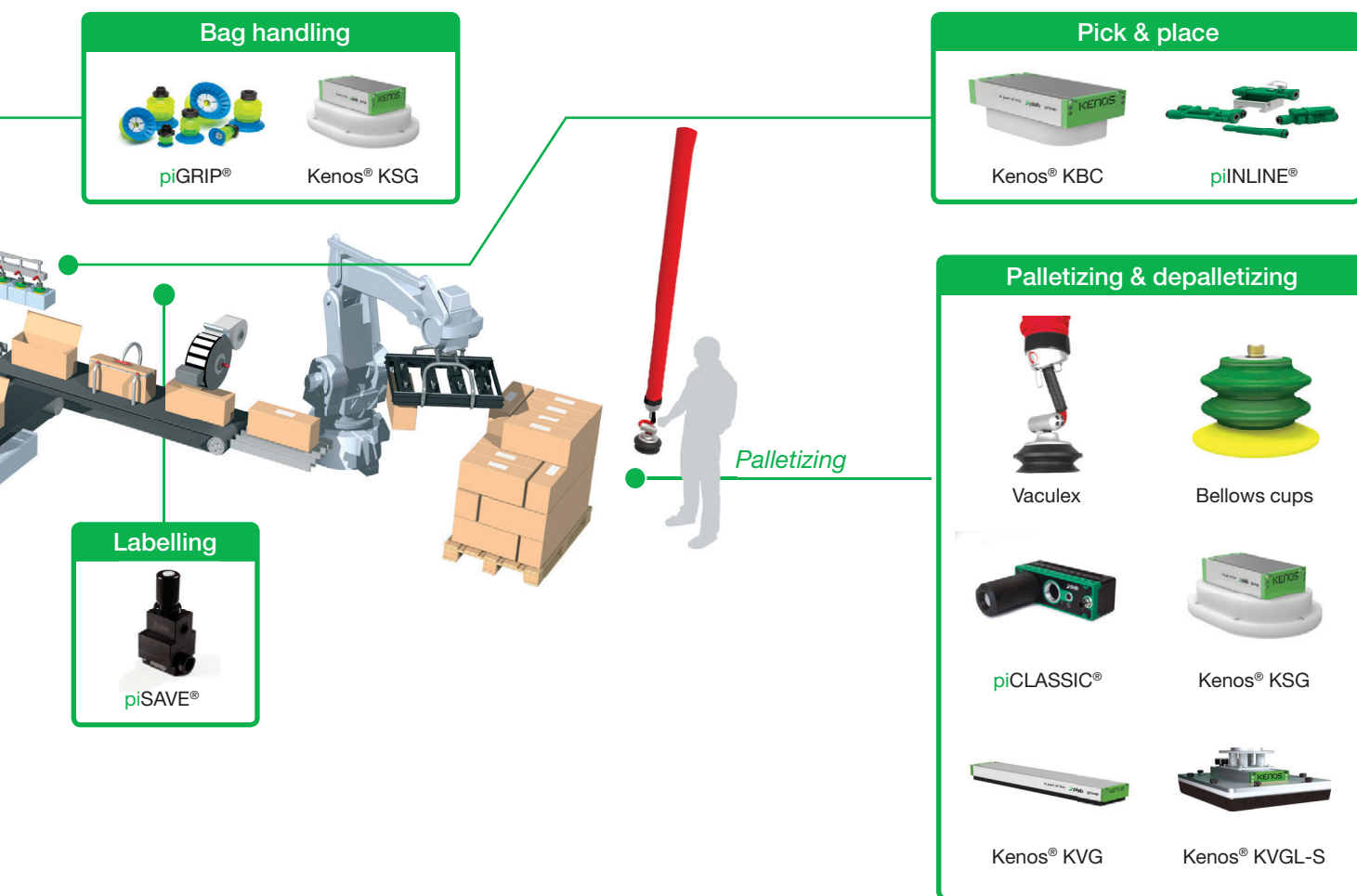
+32 3 355 32 20 | www.pneuvano.com

Optimize your production line with Piab



We offer a wide range of products to better support different products in different applications. Over the years we have built up an amazing application know-how on a global level.

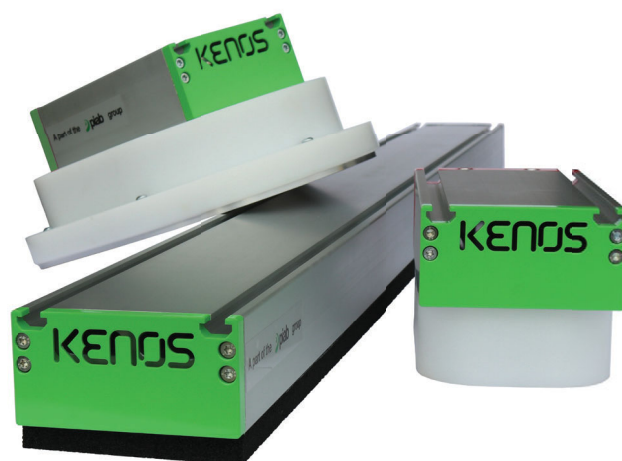
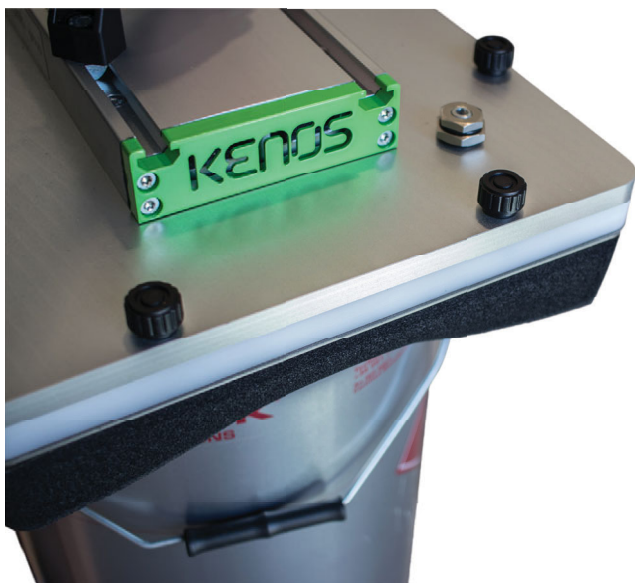
- Kenos® Vacuum grippers are available in different shapes and forms to meet the demands of different applications. They can lift packaging, wood, cans and jars and many other products. Available with FDA approved foam, different porosities and different foam materials to better meet customer demands.
- With the suction cups, you can lift everything from thin sheet paper to metal sheets. As it is proven to have significantly higher lifetime as compared to the competition, it will increase productivity in the application. Available in FDA and EU 1935/2004 approved material and as detectable food cups.



- The vacuum pumps are all based on COAX® cartridges. A vacuum system based on COAX® technology can provide you with three times more vacuum flow than conventional systems, allowing you to increase speed with high reliability while reducing energy consumption.
- The vacuum conveyors are also optimized by the application to prove the best solution within food, pharma and the chemical industries. With a small footprint, and an ability to contribute to an increase in uptime since the changeover time between different materials is kept to a minimum and the maintenance needed for the conveyor is very limited. ATEX, FDA and EU 1935/2004 certified.

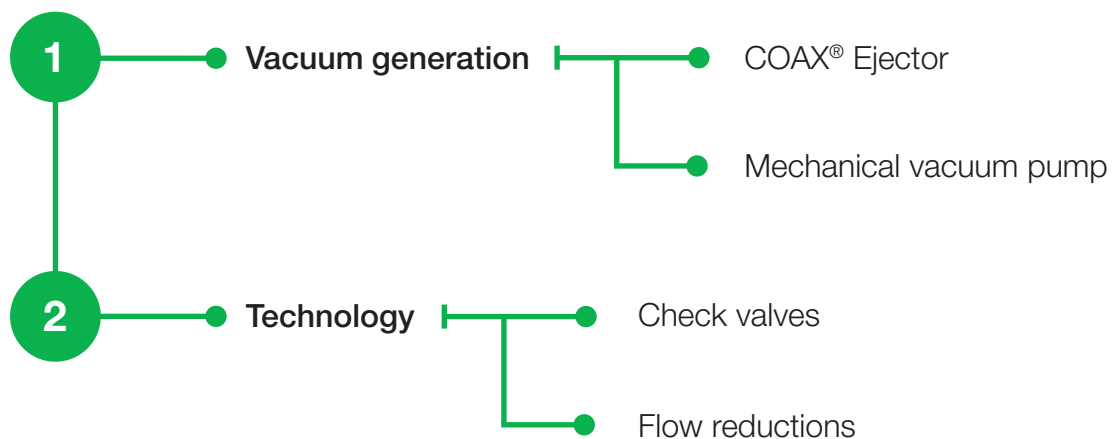
Vacuum grippers and their great benefits

Kenos® Vacuum grippers are available in different shapes and forms to meet the demands of different applications.



- Easy to obtain a vacuum gripper especially **optimized for your application**. Different product families are developed for different applications e.g. heavy duty, sack applications, packaging, cans and jars and many more.
- **Flexible solution** for handling several products with different shapes and dimensions.
- **Minimize maintenance time**, the foam only takes a few minutes to replace with new and ready to run in production again.
- Wide application span as there is **FDA approved foam** to choose on.
- **Minimize your design time** as you can, with the online configurator, build according to your own needs and receive all the documentation with a click.

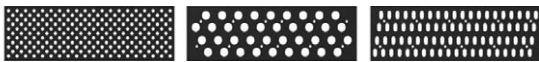
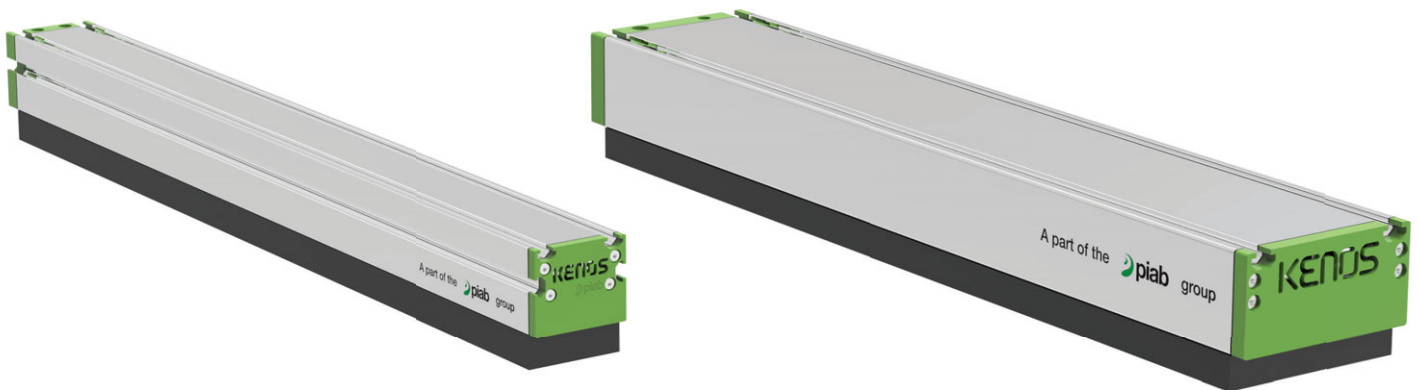
How to build a Kenos[®] Vacuum gripping system



This illustrates the flexibility with the Kenos[®] Vacuum gripping system. You can choose between using the COAX[®] ejector to generate vacuum or a mechanical vacuum pump. The COAX[®] is integrated in the gripper and is a multi-stage COAX[®] ejector of easy maintenance. The multi-stage COAX[®] ejector offers the possibility to add cartridges in a very simple way even after the installation, if necessary. Then the choice is between which technology to use, check valves or flow reductions depending on the final application.

Kenos[®] Vacuum Gripper – KVG

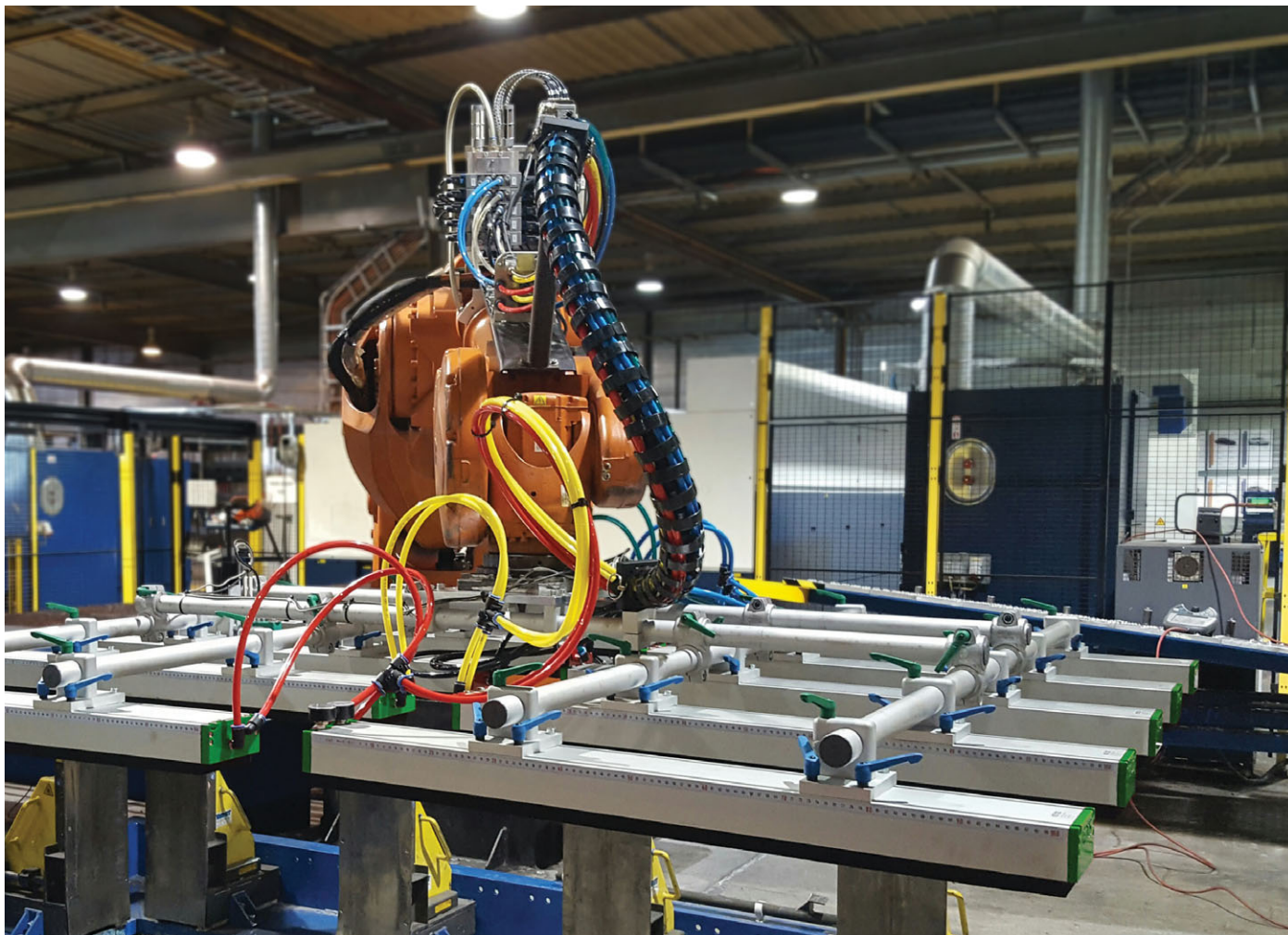
KVG series represents a flexible solution for the handling manipulation of several products with different shapes, dimensions and compactness due to the double technology available.



Different type of patterns of the foam

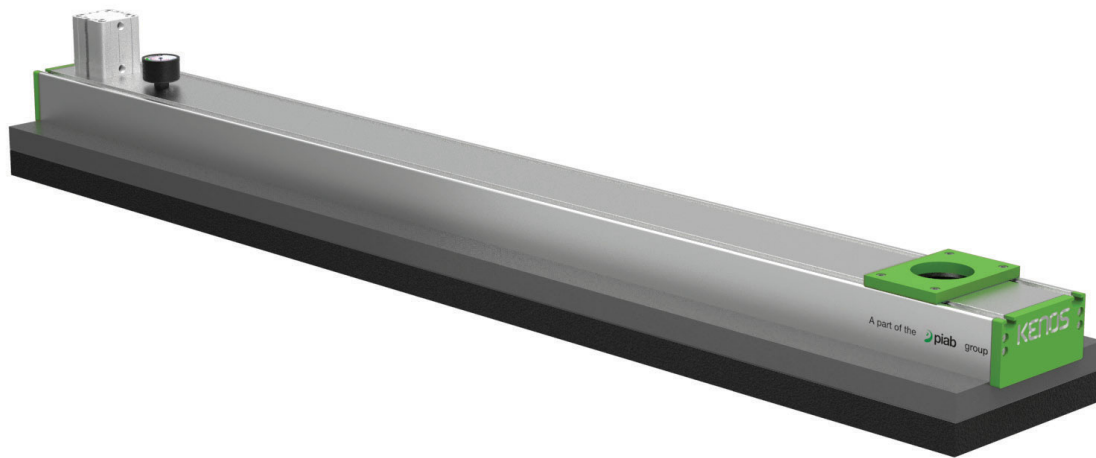
- Check valves or flow reducers can fulfil the needs of many industrial sector applications. The KVG gripping system can be equipped with integrated vacuum generation or suitable for separated vacuum generation (Pump or Side channel blower).
- The integrated vacuum generator is a multi-stage COAX[®] ejector of easy maintenance. The multi-stage COAX[®] ejector used offers the possibility to be simply increased even after the installation if necessary.
- The technical foam is made with different material, opening patterns and thicknesses. There is EPDM foam as a good closed cell sponge rubber material or Silicone foam engineered for high performance applications with high durability.
- The KVG gripping system is made of a technical foam (FDA mat approved available), with different pitch patterns, thickness or with suction cups.
- There are three different pitches available. See picture above.
- Configurable on www.piab.com with all documentation available at your hands (Datasheet, manual and CAD).

Typical applications are palletizing, wood, metal sheets and packaging with irregular surfaces.



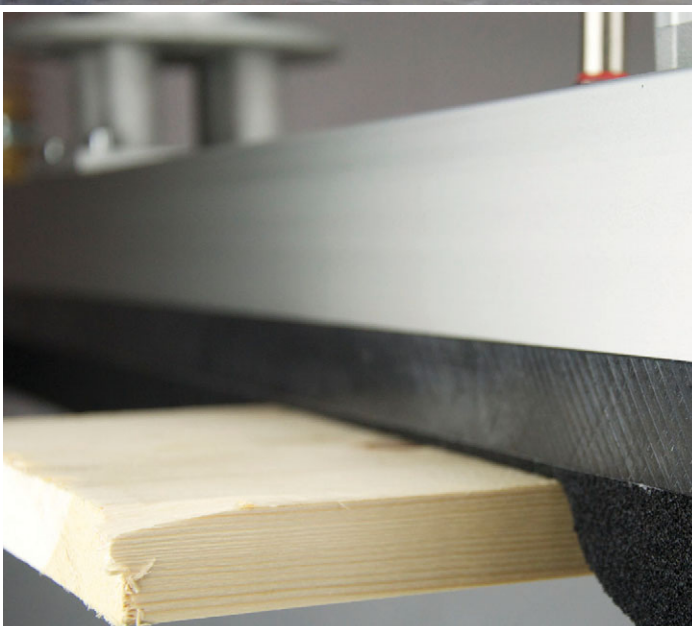
Kenos® Heavy Vacuum Gripper – KHVG

KHVG series products, Kenos® Heavy Vacuum Gripper, are designed for heavy duty applications in the wood and stone industries.



- The KHVG system can be used with side channel blowers as external vacuum generator.
- Provided with shutter check valve technology with low sensibility to the dust.
- Configurable on www.piab.com with all documentation available at your hands (Datasheet, manual and CAD).

KHVG gripping systems are suitable for handling normally complete layers of sawn timber, heavy planking, raw wood and materials for building, such as bricks. They are also useful to handle very long and arcuate workpieces.



Kenos[®] Sack Gripper – KSG

The specific know-how in this segment has led to a system dedicated to all the different applications of sack handling. Are suitable to handle sacks up to 50Kg (110 lb.)



- The integrated vacuum generator is a multi-stage COAX[®] ejector of easy maintenance. The multi-stage COAX[®] ejector used offers the possibility to be simply increased even after the installation if necessary.
- As an alternative, the KSG system can be used with external vacuum generation with side channel blower.
- Configurable on www.piab.com with all documentation available at your hands (Datasheet, manual and CAD).

Typical applications, sacks with different quality and content.



Kenos[®] Bag Cup – KBC

KBC series products, Kenos[®] Bag Cup, born from the need of handling in the food industry and handling liquid bags. KBC is also suitable with flow pack applications.



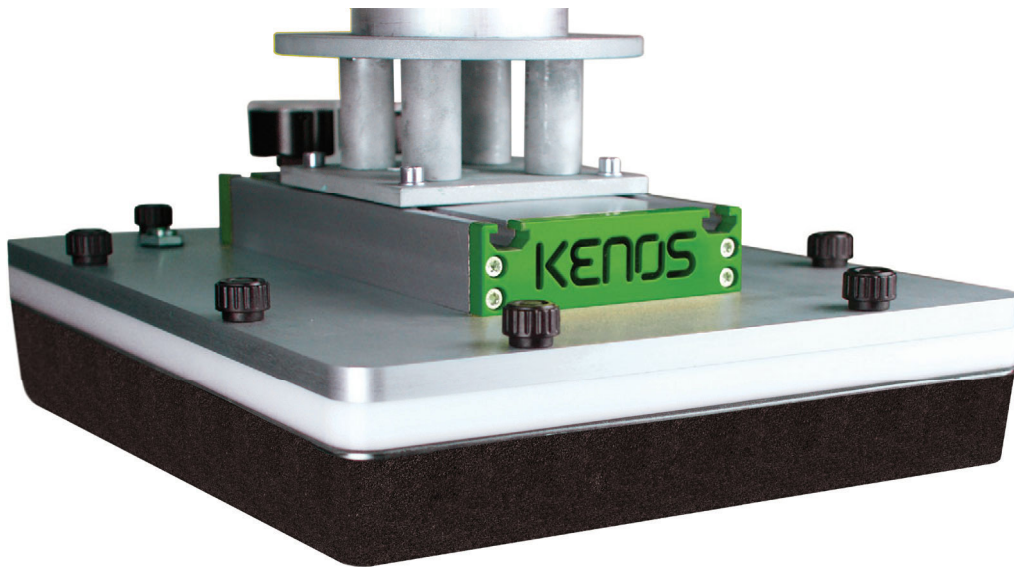
- Integrated COAX[®] vacuum cartridge gives the module flexibility.
- A version for external vacuum generation is available.
- A side channel blower is used when the application condition suggests it.
- Unique characteristic of KBC is the absence of any rubber sealing lip that offers a great advantage to customer: No spare parts needed! No machine stop for maintenance!
- Configurable on www.piab.com with all documentation available at your hands (Datasheet, manual and CAD).

Kenos® Bag Cup series is suitable for liquid bags such as infusion bags, wine, sauces and flow packs.



Kenos[®] Vacuum Gripper Layer – KVGL-S

Developed for the world of packaging and line automation.



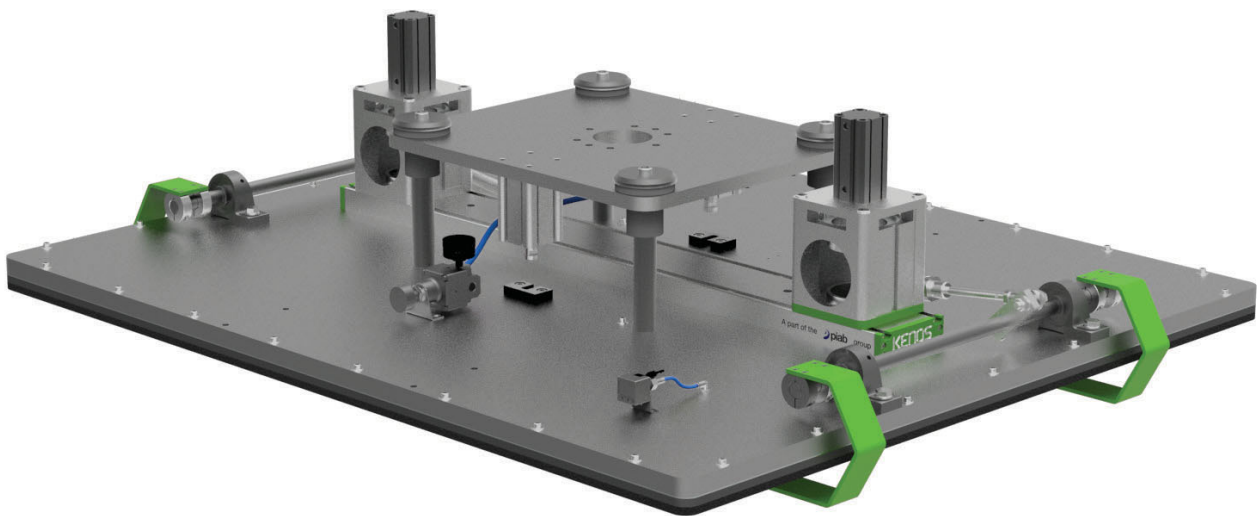
- Adjustable check valve technology and the technical foam is available in 10, 20, 30 and 40mm thickness which allows for superior gripping on different kind of boxes, wrap around packaging and primary ones.
- The large availability of standard dimensioning and the modularity, make this series highly effective.
- Configurable on www.piab.com with all documentation available at your hands (Datasheet, manual and CAD).

Kenos® Vacuum Gripper Layer – KVGL-S is suitable for different kind of boxes, wrap around packaging and primary ones.



Kenos® Vacuum Gripper Layer-Cans/Jars – KVGL-CJ

KVGL-CJ series, Kenos® Vacuum Layer – Cans Jars, born for the need to handle the complete layer of cans and jars that can be open or covered on the gripping area.

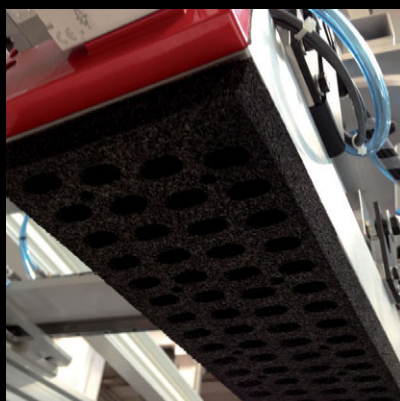
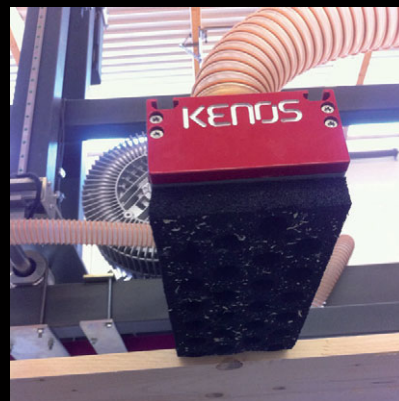


- Typical industrial segments involved are palletizing or de-palletizing in packaging, beverage and food.

Kenos® Vacuum Gripper Layer-Cans/Jars – KVGL-CJ is suitable for different kind of boxes, wrap around packaging and primary ones.



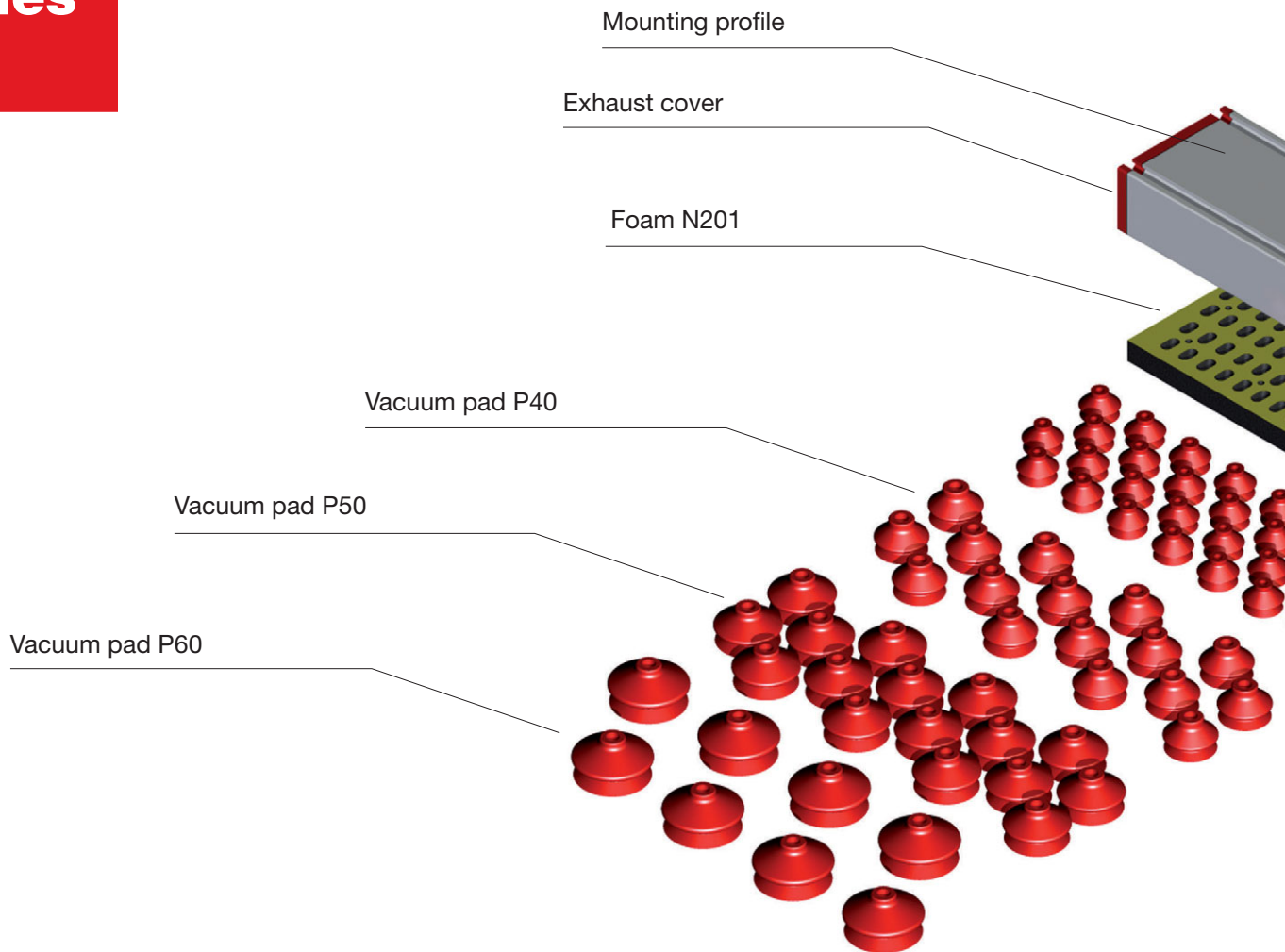
KVG
series



KVG series represents a flexible solution for the handling manipulation of several products with different shapes, dimensions and compactness due to the double technology available. Check valves or flow reducers can fulfill the needs of many industrial sector applications. The KVG gripping system can be equipped with integrated vacuum generation or suitable for separated vacuum generation(Pump or Side channel blower). The integrated vacuum generator is a modular multi-stage COAX® ejector of easy maintenance. The multi-stage COAX® ejector used offers the possibility to be simply incre-

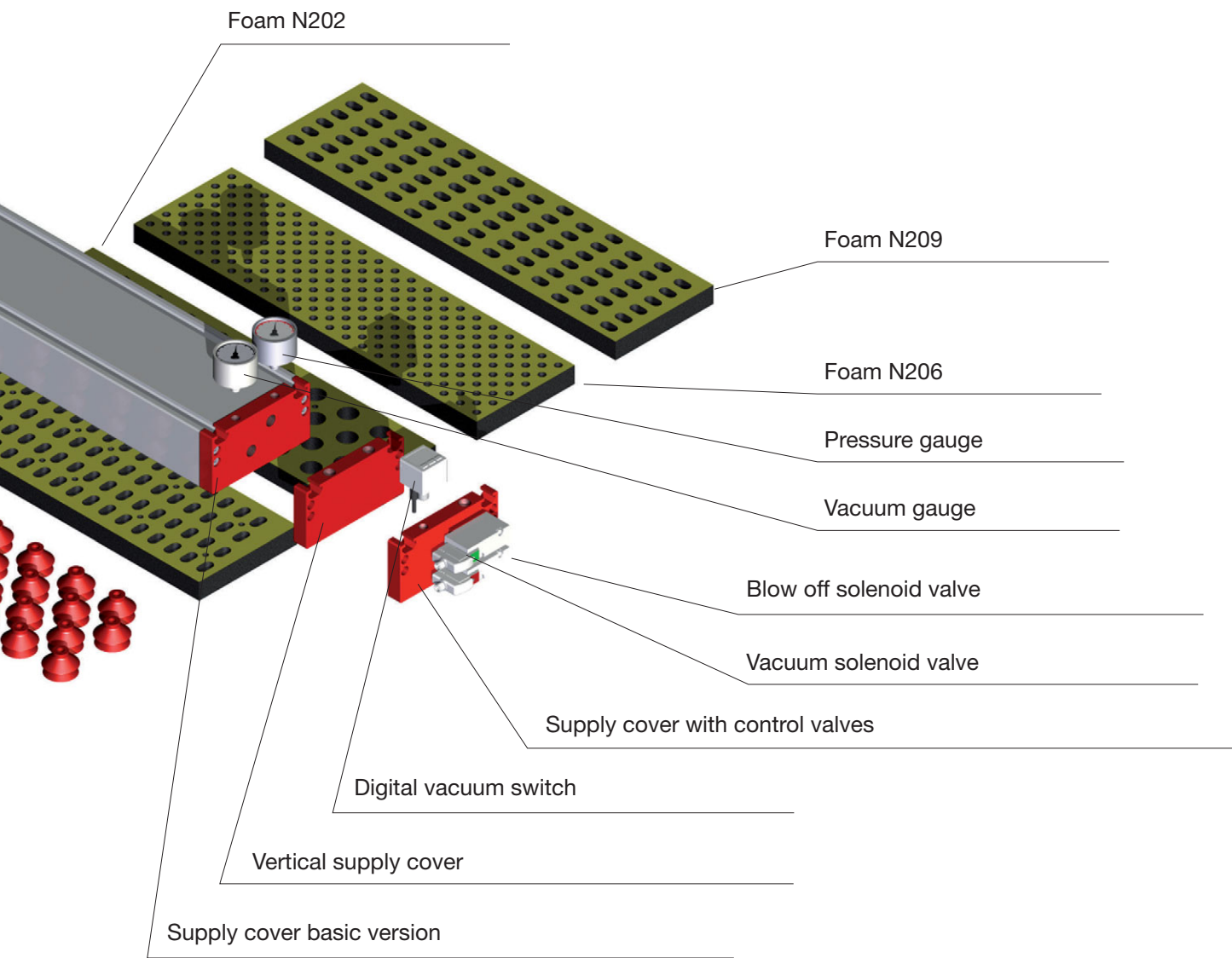
ased even after the installation if necessary. The mat of the KVG gripping system is made of a technical foam (FDA mat approved available), with different pitch holes and thickness or pads.





How to order

KVG	400	—	120	—	N	—	2	—	0	—	2	—
	length mm		width mm		type		thickness/diameter mm		filter		step	
	400		120		N = foam		4 = foam 40 mm		0 = without filter		1 = fine step	
	600						3 = foam 30 mm		1 = with filter		2 = medium step	
	800						2 = foam 20 mm				6 = extra fine step	
	1000						1 = foam 10 mm				9 = longitudinal step	
	1200											
	1400				P = pads		30 = pad d. 30 mm					
	1600						40 = pad d. 40 mm					
	1800						50 = pad d. 50 mm					
	2000						60 = pad d. 60 mm					



CV	C5	A1	M1
technology	vacuum generator	control valves	monitoring
CV = check valves	C1 = 1 COAX® cartridge	V1 = EV vacuum N.C.	M1 = vacuum and pressure gauge
FR = flow reductions	C2 = 2 COAX® cartridges	V2 = EV vacuum N.C./ EV blow off N.C.	M2 = digital vacuum switch
DM = direct mounting	C3 = 3 COAX® cartridges	V3 = EV vacuum N.A.	blank = without monitoring
	C4 = 4 COAX® cartridges	V4 = EV vacuum N.A./ EV blow off N.C.	
	C5 = 5 COAX® cartridges	A1 = PV vacuum N.C.	
	C6 = 6 COAX® cartridges	A2 = PV vacuum N.C./ PV blow off N.C.	
	C7 = 7 COAX® cartridges	A3 = PV vacuum N.O.	
	C8 = 8 COAX® cartridges	A4 = PV vacuum N.O./ PV blow off N.C.	
	PU = pump	TV = vertical supply cover	
	BL = blower	blank = without control	

Theoretic gripping force on rigid and stable surface with completely covered module, without safety factor (N).

	type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
foam N201-N202	KVG400	376		627	752	877
	KVG600	564	752	940	1128	1316
	KVG800	752	1003	1253	1504	1755
	KVG1000	940	1253	1567	1880	2193
	KVG1200	1128	1504	1880	2256	2632
	KVG1400	1316	1755	2193	2632	3071
	KVG1600	1504	2005	2507	3008	3509
	KVG1800	1692	2256	2820	3384	3948
	KVG2000	1880	2507	3133	3760	4387

foam N206	KVG400	336	448	560	672	784
	KVG600	504	672	840	1008	1176
	KVG800	672	896	1120	1344	1568
	KVG1000	840	1120	1400	1680	1960
	KVG1200	1008	1344	1680	2016	2352
	KVG1400	1176	1568	1960	2352	2744
	KVG1600	1344	1792	2240	2688	3136
	KVG1800	1512	2016	2520	3024	3528
	KVG2000	1680	2240	2800	3360	3920

	type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
pads P30	KVG400	331	441	552	662	772
	KVG600	497	662	828	993	1159
	KVG800	663	883	1104	1325	1546
	KVG1000	828	1104	1380	1656	1932
	KVG1200	994	1325	1656	1987	2318
	KVG1400	659	879	1098	1318	1538
	KVG1600	1325	1767	2208	2650	3092
	KVG1800	1491	1987	2484	2981	3478
	KVG2000	1656	2208	2760	3312	3864

pads P40	KVG400	287	383	478	574	670
	KVG600	431	575	718	862	1006
	KVG800	574	766	958	1149	1341
	KVG1000	718	957	1197	1436	1675
	KVG1200	861	1149	1436	1723	2010
	KVG1400	1005	1340	1675	2010	2345
	KVG1600	1149	1532	1915	2298	2681
	KVG1800	1292	1723	2154	2585	3016
	KVG2000	1436	1915	2393	2872	3351

Theoretic gripping force on rigid and stable surface with completely covered module, without safety factor (N).

pads
P50

type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
KVG400	437	583	729	875	1021
KVG600	656	875	1094	1313	1532
KVG800	875	1167	1458	1750	2042
KVG1000	1094	1459	1823	2188	2553
KVG1200	1313	1751	2188	2626	3064
KVG1400	1531	2042	2553	3063	3574
KVG1600	1750	2334	2918	3501	4085
KVG1800	1969	2625	3282	3938	4594
KVG2000	2188	2917	3647	4376	5105

pads
P60

KVG400	624	832	1040	1248	1456
KVG600	936	1248	1560	1872	2184
KVG800	1248	1664	2080	2496	2912
KVG1000	1560	2080	2600	3120	3640
KVG1200	1872	2496	3120	3744	4368
KVG1400	2184	2912	3640	4368	5096
KVG1600	2496	3328	4160	4992	5824
KVG1800	2808	3744	4680	5616	6552
KVG2000	3120	4160	5200	6240	7280

Replacement foams for KVG.

gripper type	foam N201	foam N211	foam N202	foam N212	foam N206
KVG400	K-90-00301	K-90-00319	K-90-00302	K-90-00320	K-90-01156
KVG600	K-90-00303	K-90-00321	K-90-00304	K-90-00322	K-90-01096
KVG800	K-90-00305	K-90-00323	K-90-00306	K-90-00324	K-90-01058
KVG1000	K-90-00307	K-90-00325	K-90-00308	K-90-00326	K-90-01070
KVG1200	K-90-00309	K-90-00327	K-90-00310	K-90-00328	K-90-01160
KVG1400	K-90-00311	K-90-00329	K-90-00312	K-90-00330	K-90-01067
KVG1600	K-90-00313	K-90-00331	K-90-00314	K-90-00332	K-90-01161
KVG1800	K-90-00315	K-90-00333	K-90-00316	K-90-00334	K-90-01162
KVG2000	K-90-00317	K-90-00335	K-90-00318	K-90-00336	K-90-01163

Replacement pads for KVG.

diameter (mm)

code

type

30	K-02-00021	1.5 bellows PU
40	K-02-00022	1.5 bellows PU
50	K-02-00023	1.5 bellows PU
60	K-02-00024	1.5 bellows PU

Air consumption/vacuum flow data related to number of COAX® ejectors.

type

air consumption at 5 bars (NI/min)

vacuum flow (NI/min)

C1

90

360

C2

180

724

C3

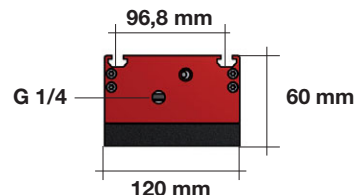
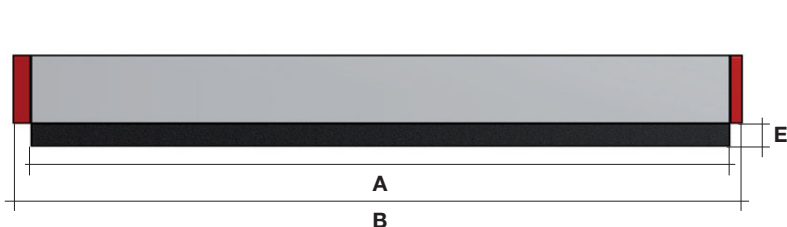
270

1086

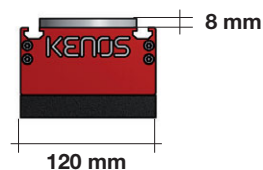
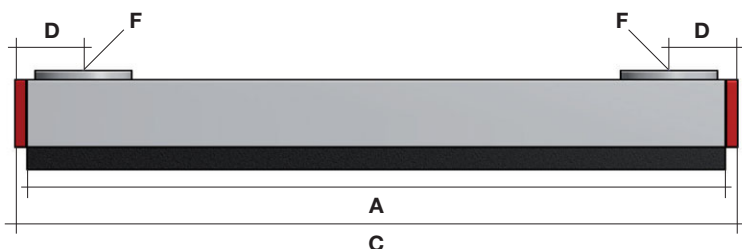
C4

360

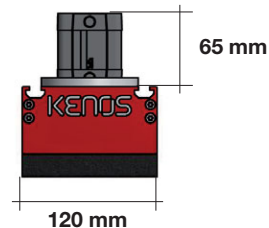
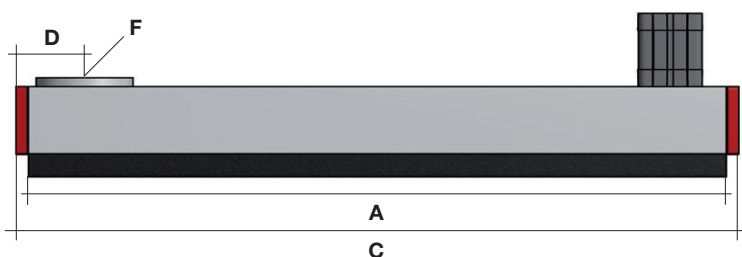
1448



With internal
COAX®
ejector



For blower



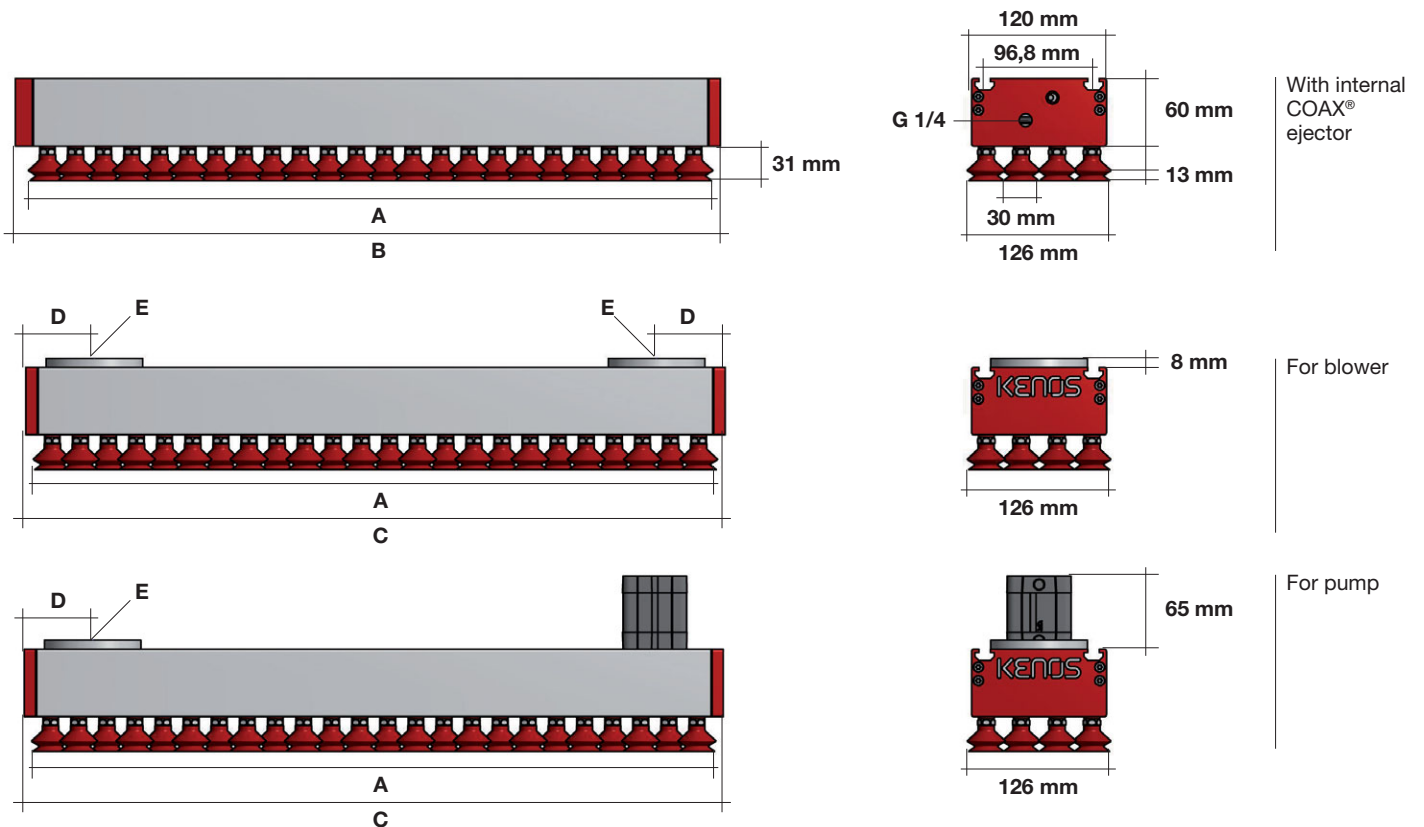
For pump

ATTENTION: for type N206, dimensions A, B and C are 10 mm shorter.

	length	A	B	C	D	E	F	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		COAX® ejector CV	COAX® ejector FR	blower CV	blower FR	pump CV	pump FR
foam	KVG400	420	447	442	61	10/20/30/40	G 1-1/4"	4.5	3.4	4.2	3.1	4.3	3.2
	KVG600	620	647	642	61	10/20/30/40	G 1-1/4"	6.2	4.8	5.9	4.5	6.0	4.6
	KVG800	820	847	842	91	10/20/30/40	G 2"	8.0	6.2	7.7	5.9	7.8	6.0
	KVG1000	1020	1047	1042	91	10/20/30/40	G 2"	9.8	7.4	9.5	7.1	9.5	7.2
	KVG1200	1220	1247	1242	91	10/20/30/40	G 2"	11.6	8.5	11.3	8.2	11.2	8.3
	KVG1400	1420	1447	1442	91	10/20/30/40	G 2"	13.2	9.6	12.6	9.0	12.9	9.1
	KVG1600	1620	1647	1642	91	10/20/30/40	G 2"	15.0	10.7	14.4	10.1	14.6	10.2
	KVG1800	1820	1847	1842	91	10/20/30/40	G 2"	16.8	11.8	16.2	11.2	16.2	11.3
	KVG2000	2020	2047	2042	91	10/20/30/40	G 2"	18.6	13.0	18.0	12.4	17.9	12.6

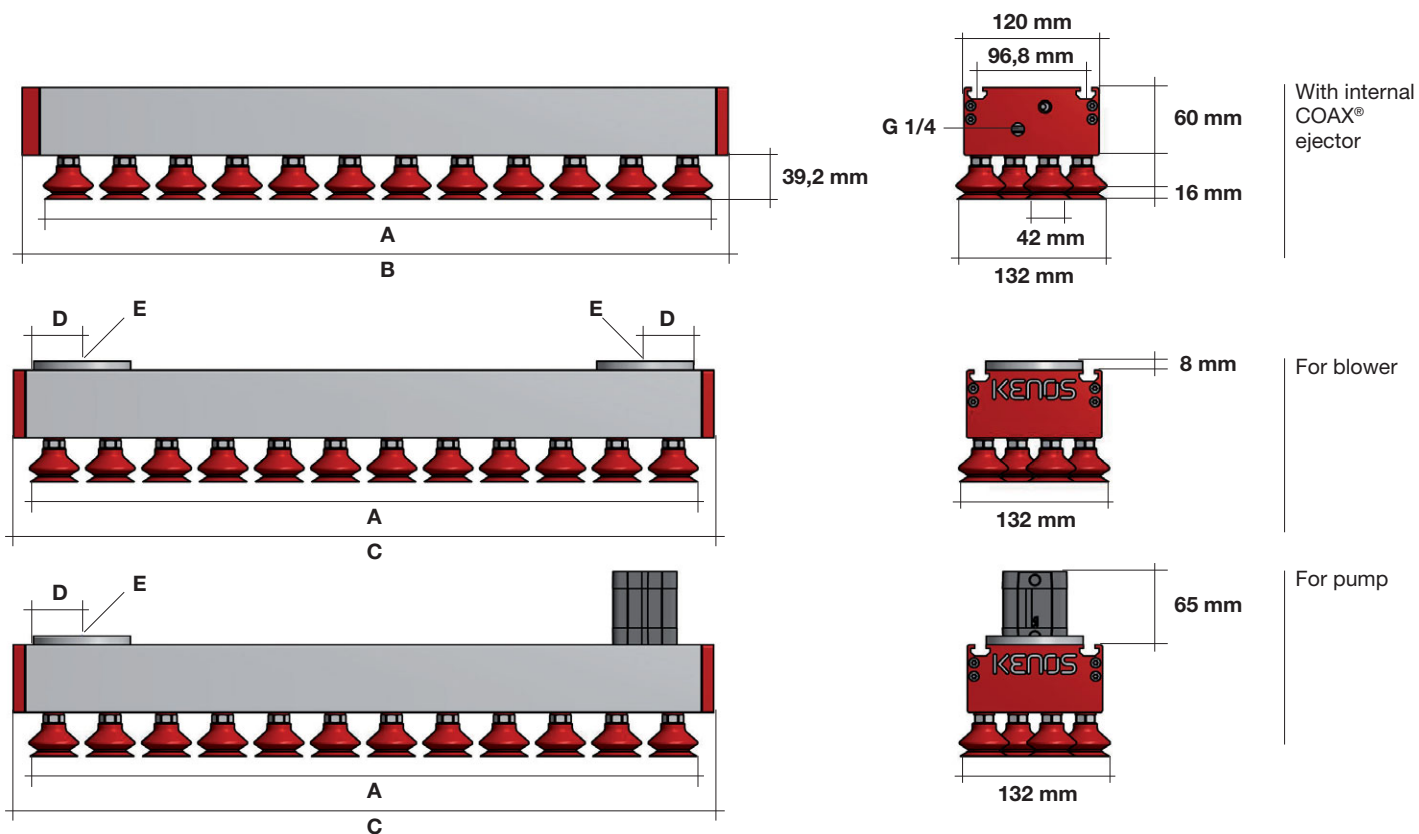
Air consumption/vacuum flow data related to number of COAX® ejectors.

type	air consumption at 5 bars (NI/min)	vacuum flow (NI/min)
C5	450	1810
C6	540	2172
C7	630	2534
C8	720	2896

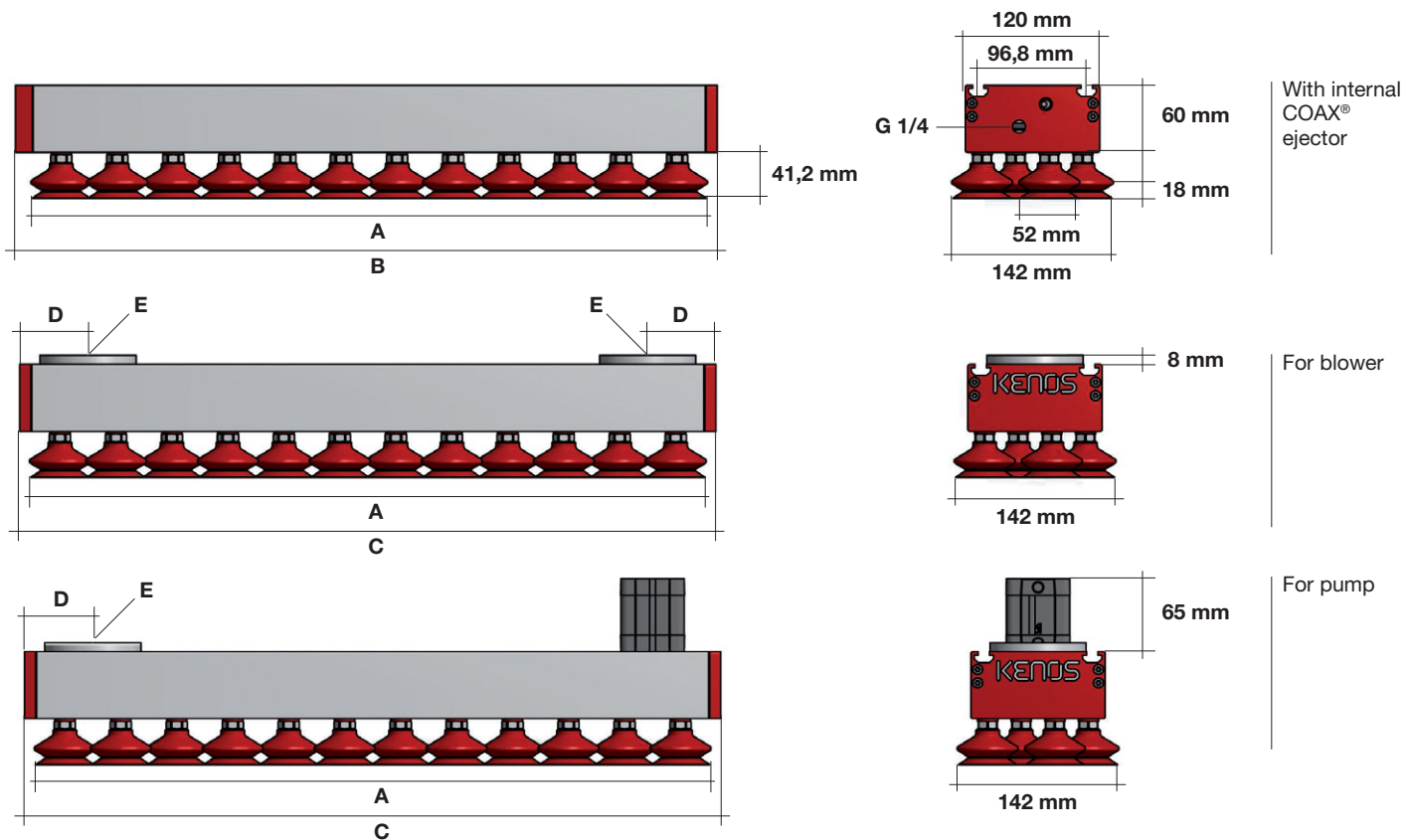


length (mm)	A	B	C	D	E	number of	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)
	(mm)	(mm)	(mm)	(mm)	(mm)	pads	COAX® ejector CV	COAX® ejector FR	blower CV	blower FR	pump CV	pump FR
KVG400	407	427	422	61	G 1-1/4"	32	4.6	3.4	4.3	3.1	4.4	3.2
KVG600	607	627	622	61	G 1-1/4"	48	6.5	5.0	6.2	4.7	6.3	4.8
KVG800	807	827	822	91	G 2"	64	8.4	6.6	8.1	6.3	8.2	6.4
KVG1000	1007	1027	1022	91	G 2"	80	10.3	8.2	10.1	7.9	10.2	8.0
KVG1200	1207	1227	1222	91	G 2"	96	12.2	9.8	11.6	9.2	11.7	9.3
KVG1400	1407	1427	1422	91	G 2"	112	14.1	11.4	13.5	10.8	13.6	10.9
KVG1600	1607	1627	1622	91	G 2"	128	16.0	13.0	15.4	12.4	15.5	12.5
KVG1800	1820	1847	1842	91	10/20/30/40	G 2"	16.8	11.8	16.2	11.2	16.2	11.3
KVG2000	2020	2047	2042	91	10/20/30/40	G 2"	18.6	13.0	18.0	12.4	17.9	12.6

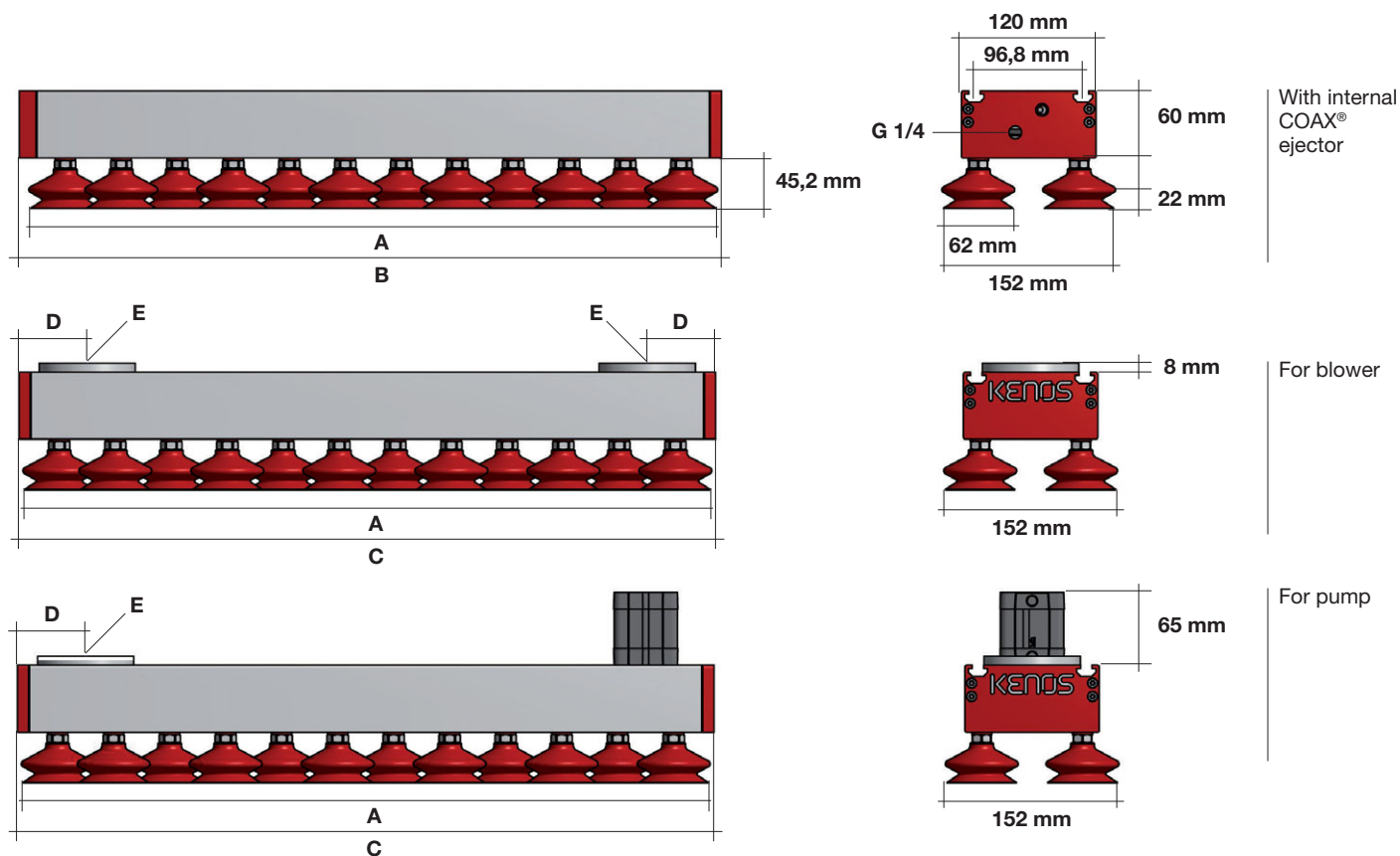
pads
P30



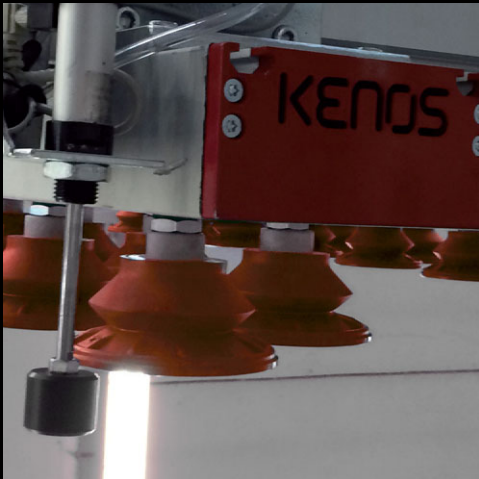
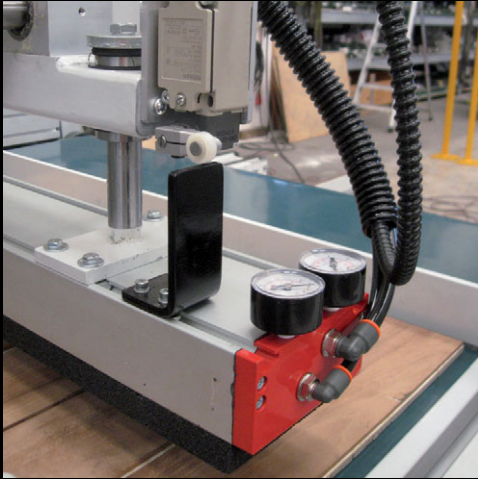
pads P40	length	A	B	C	D	E	number of	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	pads	COAX® ejector CV	COAX® ejector FR	blower CV	blower FR	pump CV	pump FR
	KVG400	392	427	422	61	G 1-1/4"	16	4.7	3.7	4.4	3.3	4.5	3.4
	KVG600	592	627	622	61	G 1-1/4"	24	6.6	5.1	6.3	4.8	6.4	4.9
	KVG800	792	827	822	91	G 2"	32	8.5	6.5	8.2	6.2	8.3	6.3
	KVG1000	992	1027	1022	91	G 2"	40	10.4	7.9	10.1	7.6	10.2	7.7
	KVG1200	1192	1227	1222	91	G 2"	48	12.3	9.3	12.0	9.0	12.1	9.1
	KVG1400	1392	1427	1422	91	G 2"	56	14.2	10.7	13.6	10.1	13.7	10.2
	KVG1600	1592	1627	1622	91	G 2"	64	16.1	12.1	15.5	11.5	15.6	11.6
	KVG1800	1792	1827	1822	91	G 2"	72	18.0	13.4	17.4	12.8	17.5	12.9
KVG2000	1992	2027	2022	91	G 2"	80	19.9	14.9	19.3	14.3	19.4	14.4	



pads P50	length	A	B	C	D	E	number of	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	pads	COAX® ejector CV	COAX® ejector FR	blower CV	blower FR	pump CV	pump FR
	KVG400	402	427	422	61	G 1-1/4"	16	4.9	4.0	4.6	3.7	4.7	3.8
	KVG600	602	627	622	61	G 1-1/4"	24	7.0	5.5	6.7	5.2	6.8	5.3
	KVG800	802	827	822	91	G 2"	32	9.1	7.0	8.8	6.7	8.9	6.8
	KVG1000	1002	1027	1022	91	G 2"	40	11.2	8.5	10.9	8.2	11.0	8.3
	KVG1200	1202	1227	1222	91	G 2"	48	13.3	10.0	13.0	9.7	13.1	9.8
	KVG1400	1402	1427	1422	91	G 2"	56	15.4	11.5	14.8	10.9	14.9	11.0
	KVG1600	1602	1627	1622	91	G 2"	64	17.5	13.0	16.9	12.4	17.0	12.5
	KVG1800	1802	1827	1822	91	G 2"	72	19.6	14.5	19.0	13.9	19.1	14.0
KVG2000	2002	2027	2022	91	G 2"	80	21.7	16.0	21.1	15.4	21.2	15.5	



pads P60	length	A	B	C	D	E	number of	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)	weight (kg)
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	pads	COAX® ejector CV	COAX® ejector FR	blower CV	blower FR	pump CV	pump FR
KVG400	412	427	422	61	G 1-1/4"		8	4.7	3.8	4.4	3.5	4.5	3.6
KVG600	612	627	622	61	G 1-1/4"		12	6.6	5.2	6.3	4.9	6.4	5.0
KVG800	812	827	822	91	G 2"		16	8.5	6.6	8.2	6.3	8.3	6.4
KVG1000	1012	1027	1022	91	G 2"		20	10.4	8.0	10.1	7.7	10.2	7.8
KVG1200	1212	1227	1222	91	G 2"		24	12.3	9.4	12.0	9.1	12.1	9.2
KVG1400	1412	1427	1422	91	G 2"		28	14.2	10.8	13.6	10.2	13.7	10.3
KVG1600	1612	1627	1622	91	G 2"		32	16.1	12.2	15.5	11.6	15.6	11.7
KVG1800	1812	1827	1822	91	G 2"		36	18.0	13.6	17.4	13.0	17.5	13.1
KVG2000	2012	2027	2022	91	G 2"		40	19.9	15.0	19.3	14.4	19.4	14.5



KHVG series

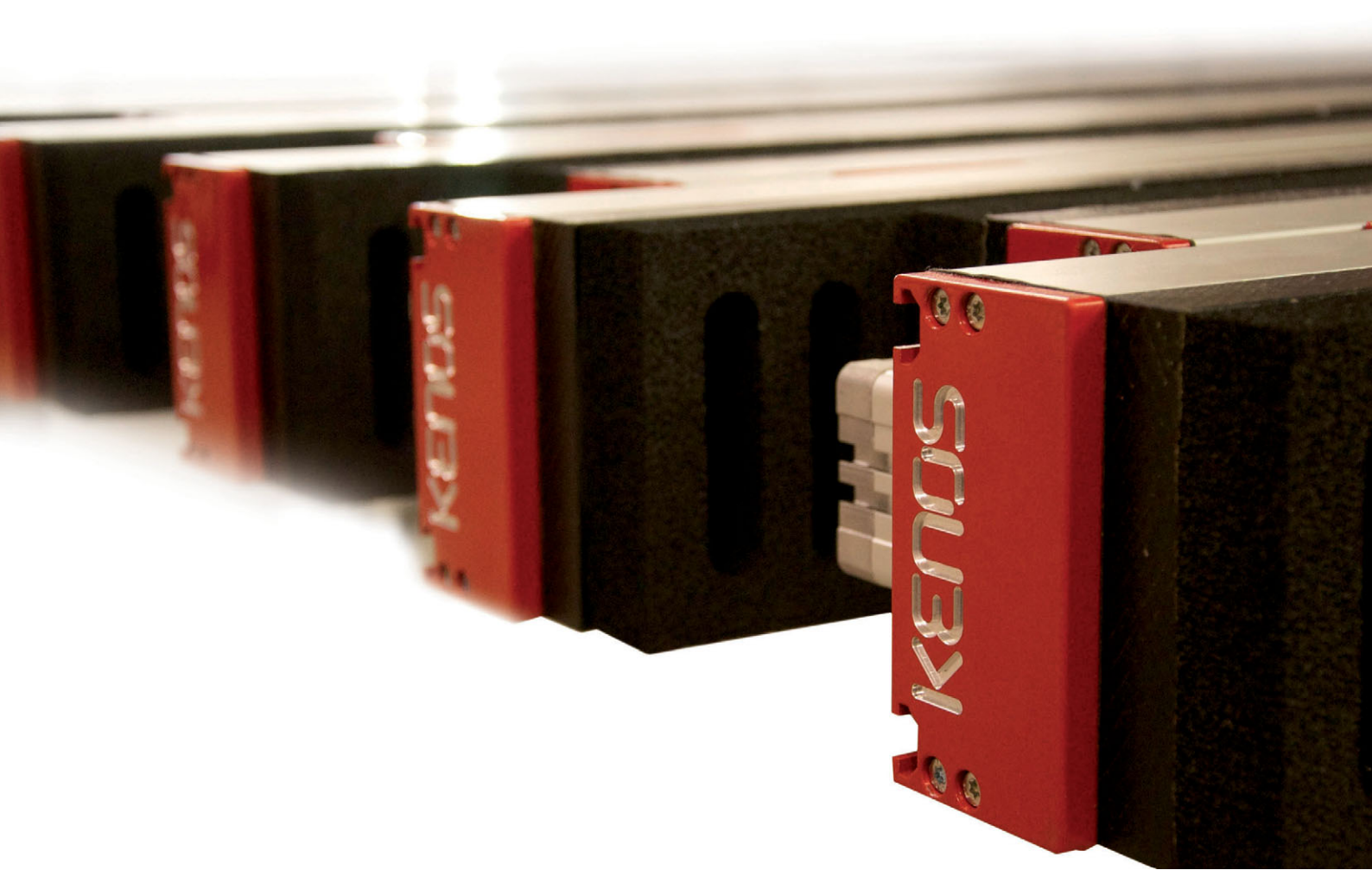


KHVG series products, Kenos Heavy Vacuum Gripper, are designed for heavy duty applications in the wood and stone industry. KHVG gripping systems are suitable for handling, normally complete layer, of sawn timber, heavy planking, raw wood and materials for building, such as bricks.

They are also useful to handle very long and arcuate workpieces.

KHVG systems are prepared for external vacuum generation with side channel blower. Endowed of shutter check valve technology with low sensibility to the dust.

- Advantages:**
- End line automation
 - Load and unload machines
 - Vacuum handling of wood
 - Handling of bricks



How to order

KHVG	800	120	N	3	35	BL
	length mm	width mm	type	thickness/diameter mm	step	vacuum generator
	800	120	N = foam	4 = foam 40 mm	35 = step 35 mm	BL = blower
	1000	210		3 = foam 30 mm	40 = step 40 mm	
	1200			2 = foam 20 mm		
	1400					

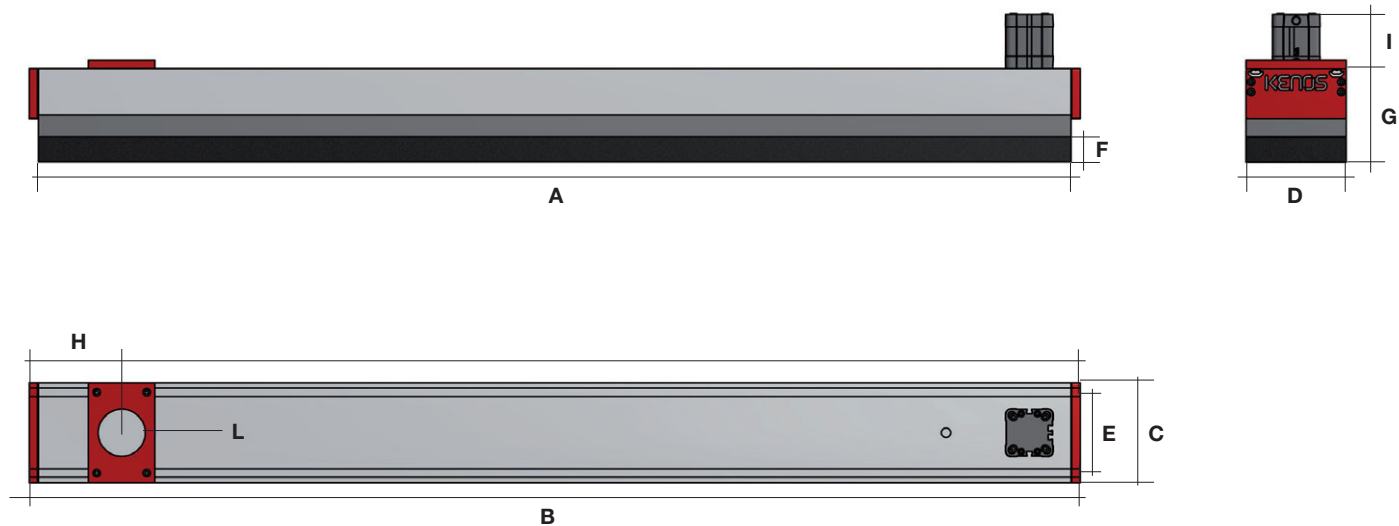
Theoretic gripping force on rigid and stable surface with completely covered module, without safety factor (N).

	type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
type 120	KHVG800	982	1309	1637	1964	2291
	KHVG1000	1238	1651	2063	2476	2889
	KHVG1200	1495	1993	2492	2990	3488
	KHVG1400	1623	2164	2705	3246	3787
type 210	KHVG800	1708	2277	2847	3416	3985
	KHVG1000	2136	2848	3560	4272	4984
	KHVG1200	2563	3417	4272	5126	5980
	KHVG1400	2820	3760	4700	5640	6580

20

Replacement foams for KHVG.

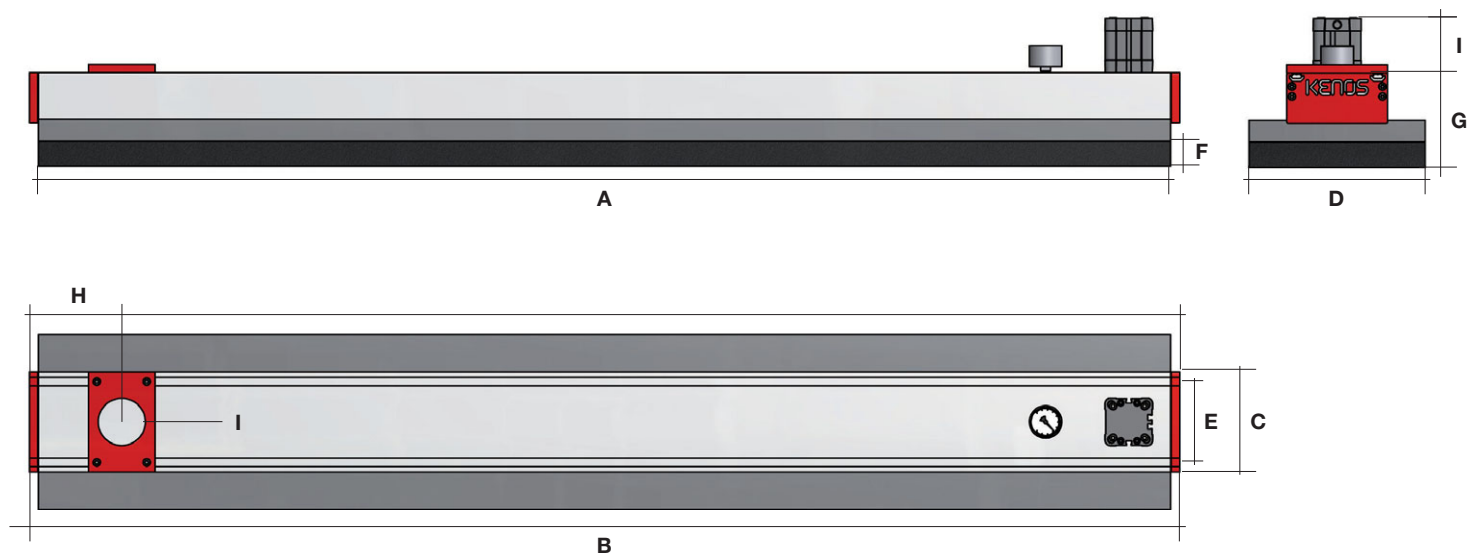
	type	code	description
type 120	KHVG800-120	K-90-01218	FOAM-KHVG800-120-N335
	KHVG1000-120	K-90-01217	FOAM-KHVG1000-120-N335
	KHVG1200-120	K-90-01212	FOAM-KHVG1200-120-N335
	KHVG1400-120	K-90-01216	FOAM-KHVG1400-120-N335
type 210	KHVG800-210	K-90-01086	FOAM-KHVG800-210-N340
	KHVG1000-210	K-90-01171	FOAM-KHVG1000-210-N340
	KHVG1200-210	K-90-01170	FOAM-KHVG1200-210-N340
	KHVG1400-210	K-90-01100	FOAM-KHVG1400-210-N340



type
120

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	weight (kg)
KHVG800-120	840	862	120	120	96.8	30	112	111	65	G 2"	8.6
KHVG1000-120	1040	1062	120	120	96.8	30	112	111	65	G 2"	11.0
KHVG1200-120	1240	1262	120	120	96.8	30	112	111	65	G 2"	13.4
KHVG1400-120	1360	1382	120	120	96.8	30	112	111	65	G 2"	16.4

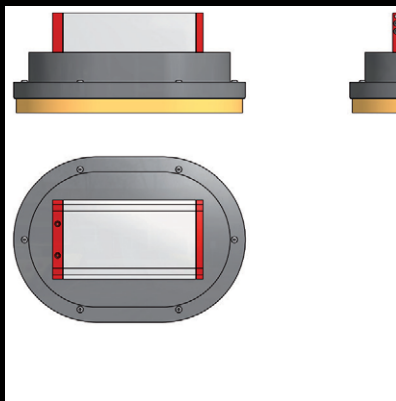
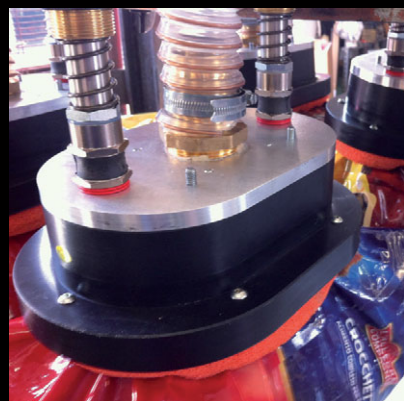
21



type
210

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	weight (kg)
KHVG800-210	840	862	120	210	96.8	30	112	111	65	G 2"	14.2
KHVG1000-210	1040	1062	120	210	96.8	30	112	111	65	G 2"	16.6
KHVG1200-210	1240	1262	120	210	96.8	30	112	111	65	G 2"	19.0
KHVG1400-210	1360	1382	120	210	96.8	30	112	111	65	G 2"	22.0

KSG
series



KSG series products, Kenos Sack Gripper, are suitable to handle sacks with different shapes, weights and materials. The specific knowhow in this segment, has driven us to develop systems dedicated to all the different applications of this industry. The integrated and modular vacuum generation makes the KSG flexible and reliable. The version for external vacuum generator is available. We have version for palletisation or de-palletization.

Characteristics:

- Vacuum detection
- Easy maintenance
- Low energy consumption
- Low weight
- Easy mounting
- Absence of consumable parts (G3 version)

Applications:

- End line handling
- Palletization systems
- De-palletization systems





EPDM sealing ring G2

Digital vacuum switch

Vacuum solenoid valve

Blow off solenoid valve

Supply cover with control valves

Vertical supply cover

Exhaust cover

Mounting profile

Supply cover basic version

Adjustable grid

NR foam sealing ring G1

Metallic ring G3

How to order

E

310-210

G3

ksg

shape

dimensions

sealing ring



E = with sealing ring

450-250

G1 = NR sealing ring



350-250

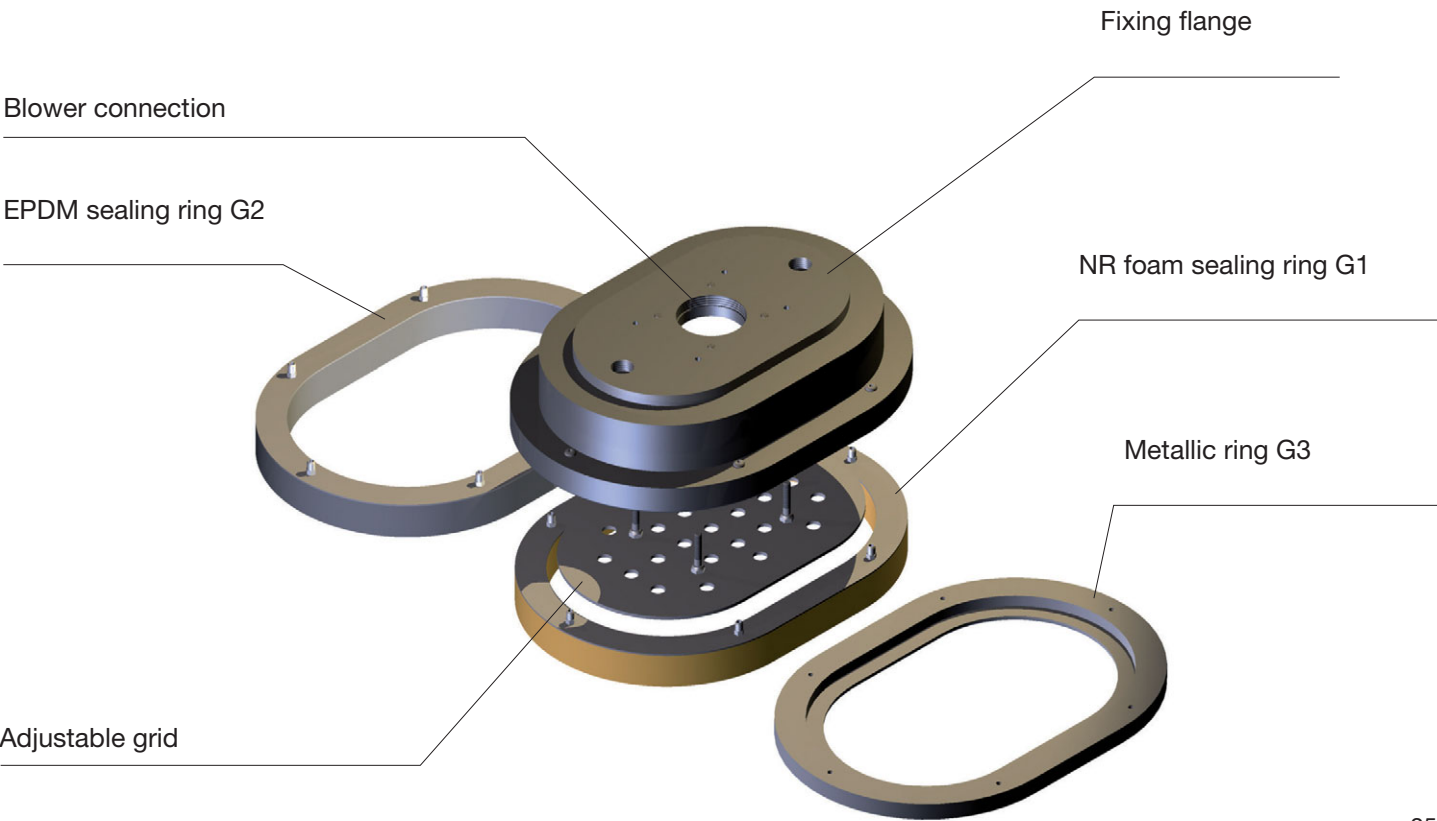
G2 = epdm sealing ring

310-210

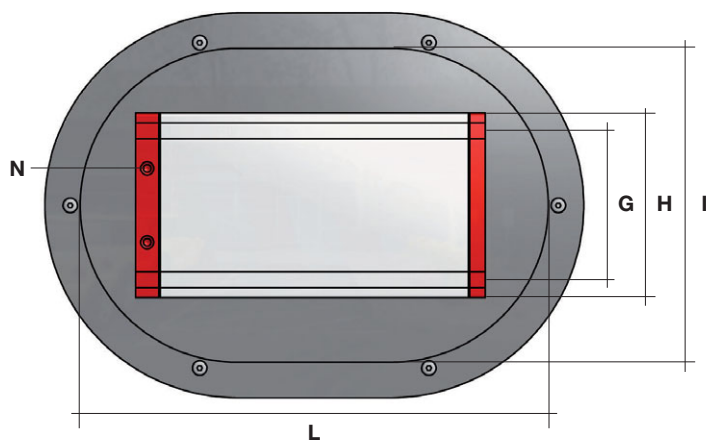
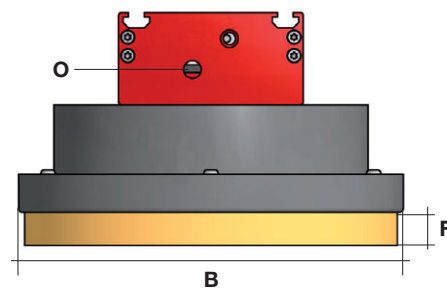
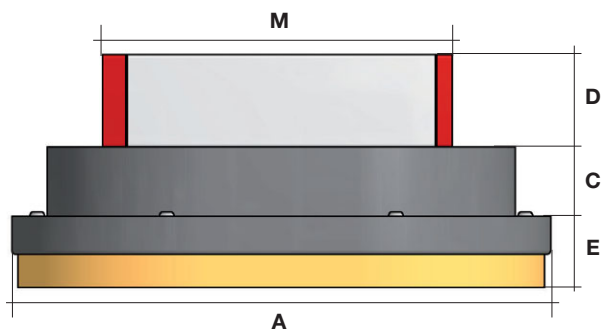
G3 = metal ring

260-180

Rendering esploso tipo BL / BL type assembled view



C3	V1	M1
vacuum generator	control valves	monitoring
C1 = 1 COAX® cartridge	V1 = EV vacuum N.C.	M1 = vacuum and pressure gauge
C2 = 2 COAX® cartridges	V2 = EV vacuum N.C./ EV blow off N.C.	M2 = digital vacuum switch
C3 = 3 COAX® cartridges	V3 = EV vacuum N.O.	blank = without monitoring
C4 = 4 COAX® cartridges	V4 = EV vacuum N.O./ EV blow off N.C.	
C5B = 5 COAX® cartridges	A1 = PV vacuum N.C.	
C6B = 6 COAX® cartridges	A2 = PV vacuum N.C./ PV blow off N.C.	
C7B = 7 COAX® cartridges	A3 = PV vacuum N.O.	
C8B = 8 COAX® cartridges	A4 = PV vacuum N.O./ PV blow off N.C.	
BL = blower	TV = vertical supply cover	
	FX = flange (only with BL type)	
	blank = without control	



26



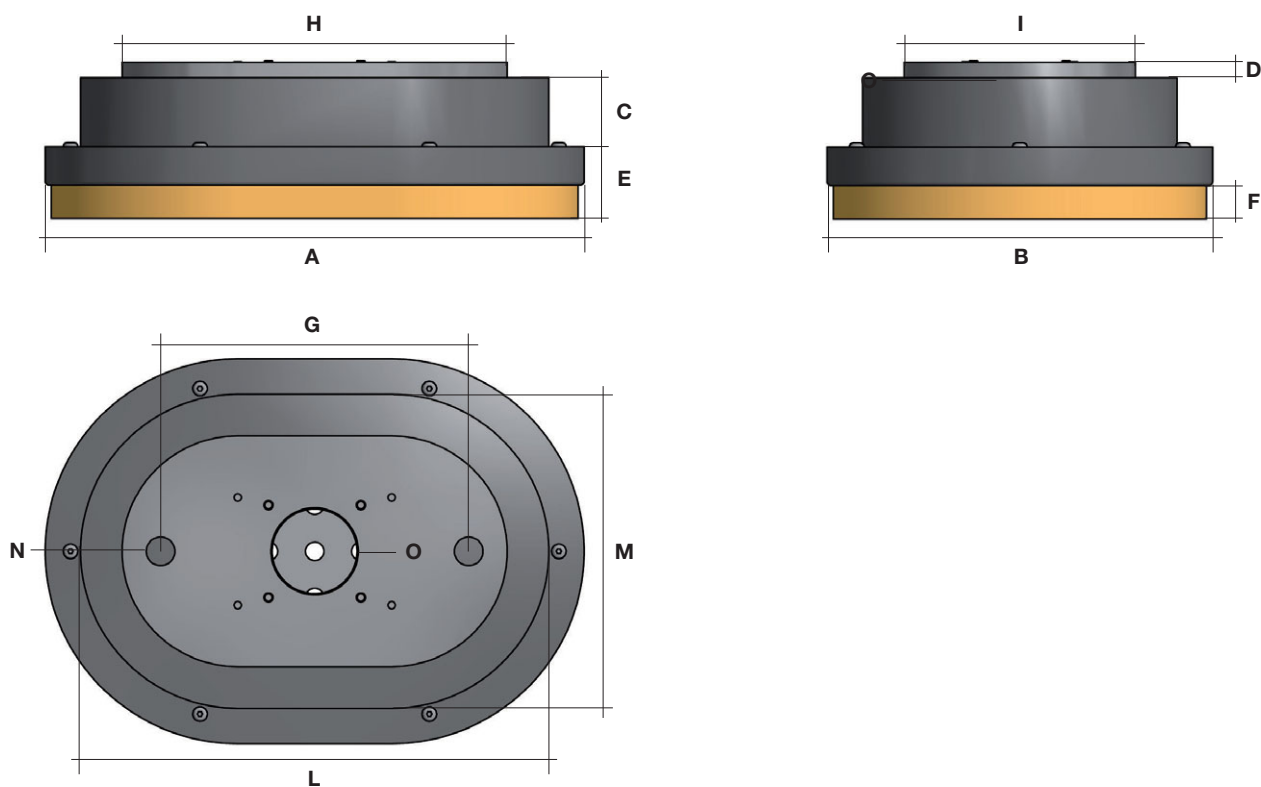
series
KSG

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	N (mm)	O (mm)	weight (kg)
KSG-E-260-180	260	180	45	60	46.5	21.5	96.8	120	134	214	227	G 1/8"	G 1/4"	3.6
KSG-E-310-210	310	210	45	60	46.5	21.5	96.8	120	164	264	227	G 1/8"	G 1/4"	4.6
KSG-E-350-250	350	250	45	60	46.5	21.5	96.8	120	204	304	227	G 1/8"	G 1/4"	5.3
KSG-E-400-250	400	250	45	60	46.5	21.5	96.8	120	204	354	227	G 1/8"	G 1/4"	6.0

Air consumption/vacuum flow data related to number of COAX® ejectors.



type	air consumption at 5 bars (NI/min)	vacuum flow (NI/min)
C1	90	360
C2	180	724
C3	270	1086
C4	360	1448
C5	450	1810
C6	540	2172
C7	630	2534
C8	720	2896



series
KSG/BL

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	N (mm)	O (mm)	weight (kg)
KSG-E-260-180	260	180	45	10	46.5	21.5	160	214	134	214	134	G 1/2"	G 1-1/2"	2.5
KSG-E-310-210	310	210	45	10	46.5	21.5	200	250	150	264	164	G 1/2"	G 2"	3.4
KSG-E-350-250	350	250	45	10	46.5	21.5	200	250	150	304	204	G 1/2"	G 2"	4.1
KSG-E-400-250	400	250	45	10	46.5	21.5	200	250	150	354	204	G 1/2"	G 2"	4.5

Replacement rings for KSG.



code	code	description
ATC-VEN-KSG-E-280-180-G1	K-30-00006	sealing ring NR foam
ATC-VEN-KSG-E-280-180-G2	K-30-00009	sealing ring in epdm
ATC-VEN-KSG-E-310-210-G1	K-30-01058	sealing ring NR foam
ATC-VEN-KSG-E-310-210-G2	K-30-01059	sealing ring in epdm
ATC-VEN-KSG-E-350-250-G1	K-30-01032	sealing ring NR foam
ATC-VEN-KSG-E-350-250-G2	K-30-01045	sealing ring in epdm
ATC-VEN-KSG-E-400-250-G1	K-30-01056	sealing ring NR foam
ATC-VEN-KSG-E-400-250-G2	K-30-01057	sealing ring in epdm

KBC
series



KBC series products, Kenos Bag Cup, born from the need of handling alimentary and not liquid bags, but are suitable also in the flowpack application. In KBC vacuum gripping systems, the integrated and modular COAX® vacuum cartridge gives the module flexibility. A version for external vacuum generation is available. A side channel blower is used when the application condition suggest it.

Characteristics:

- Vacuum detection
- Easy maintenance
- Low energy consumption
- Low weight
- Easy mounting
- Absence of consumable parts

Applications:

- Packaging systems
- Handling machines
- End line automation





Assembled view

Cup

Vacuum digital switch

Vacuum solenoid valve

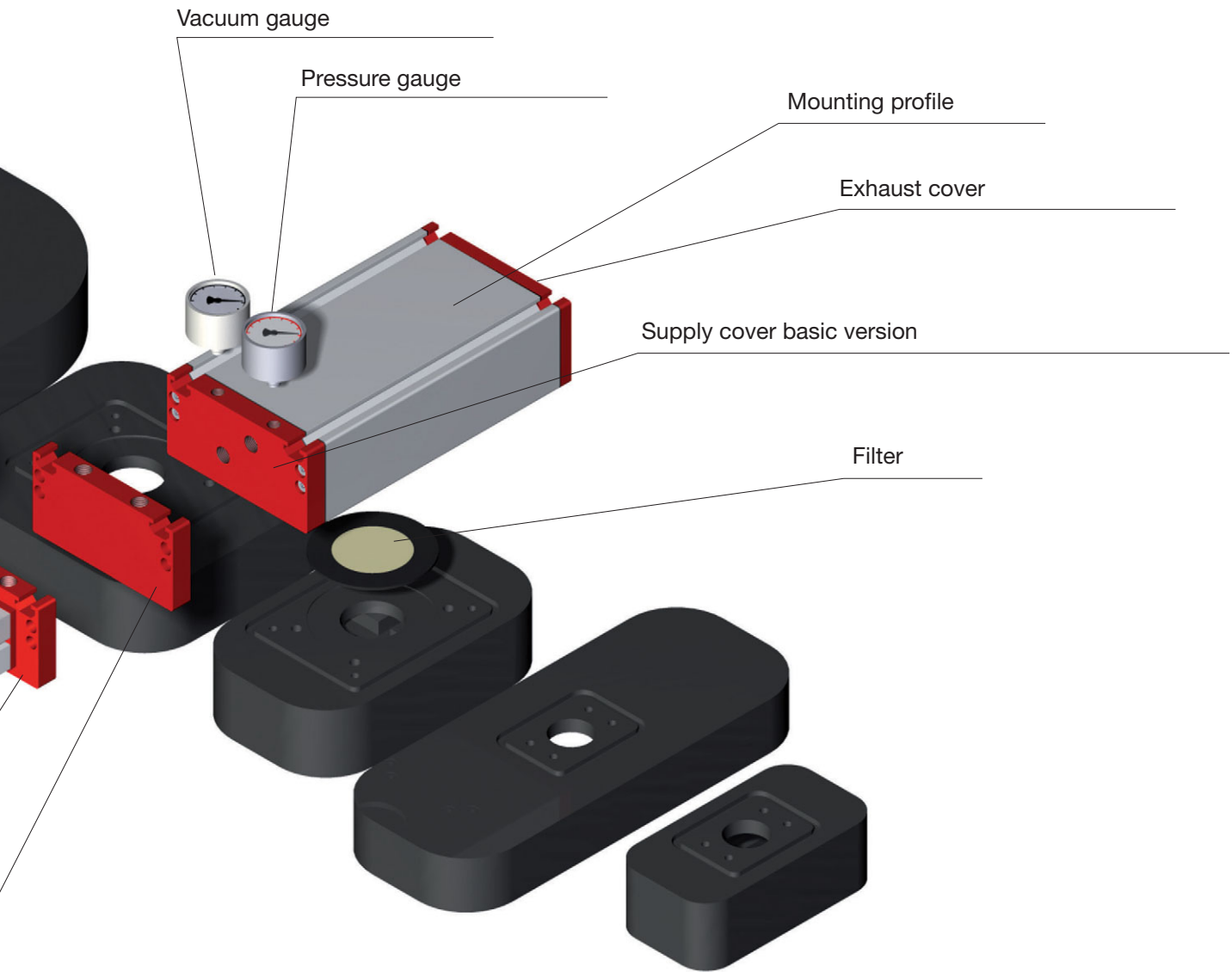
Blow off solenoid valve

Supply cover with control valves

Vertical supply cover

How to order

KBC	200	200	120
	profile length mm	cup length mm	cup width mm
			
	200	150	80
		200	100
		200	120
		200	180
		250	120
		300	120
		300	180
		350	150
		350	180
		350	250



C5	V1	M1
vacuum generator	control valves	monitoring
C1 = 1 COAX® cartridge	V1 = EV vacuum N.C.	M1 = vacuum and pressure gauge
C2 = 2 COAX® cartridges	V2 = EV vacuum N.C./ EV blow off N.C.	M2 = digital vacuum switch
C3 = 3 COAX® cartridges	V3 = EV vacuum N.O.	blank = without monitoring
C4 = 4 COAX® cartridges	V4 = EV vacuum N.O./ EV blow off N.C.	
C5B = 5 COAX® cartridges	A1 = PV vacuum N.C.	
C6B = 6 COAX® cartridges	A2 = PV vacuum N.C./ PV blow off N.C.	
C7B = 7 COAX® cartridges	A3 = PV vacuum N.O.	
C8B = 8 COAX® cartridges	A4 = PV vacuum N.O./ PV blow off N.C.	
BL = blower	TV = vertical supply cover	
	blank = without control	

Air consumption/vacuum flow data related to number of COAX® ejectors.

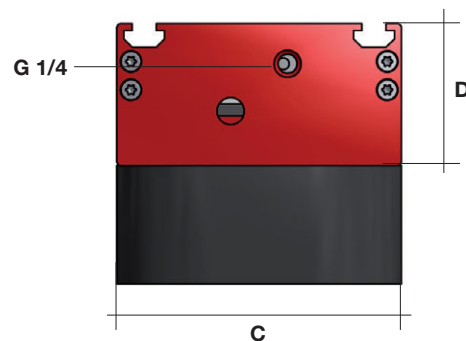
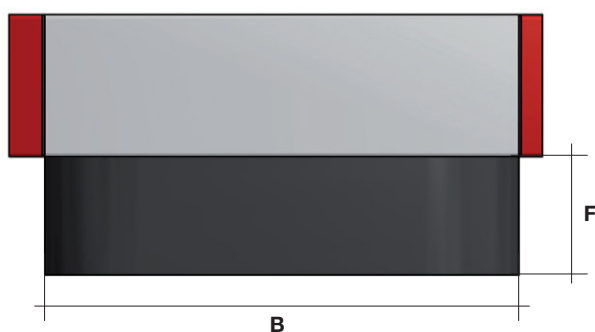
type

air consumption at 5 bars (NI/min)

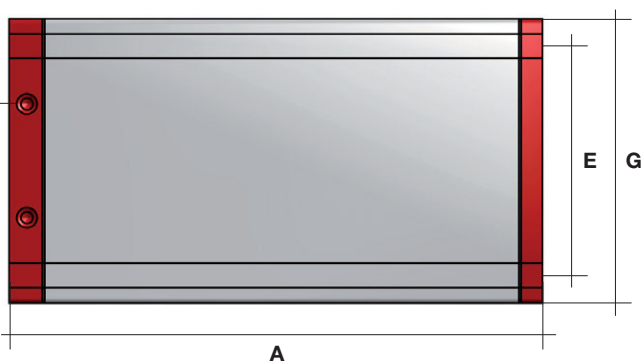
vacuum flow (NI/min)

C1	90	360
C2	180	724
C3	270	1086
C4	360	1448
C5	450	1810
C6	540	2172
C7	630	2534
C8	720	2896

32



G 1/8



type

A
(mm)

B
(mm)

C
(mm)

D
(mm)

E
(mm)

F
(mm)

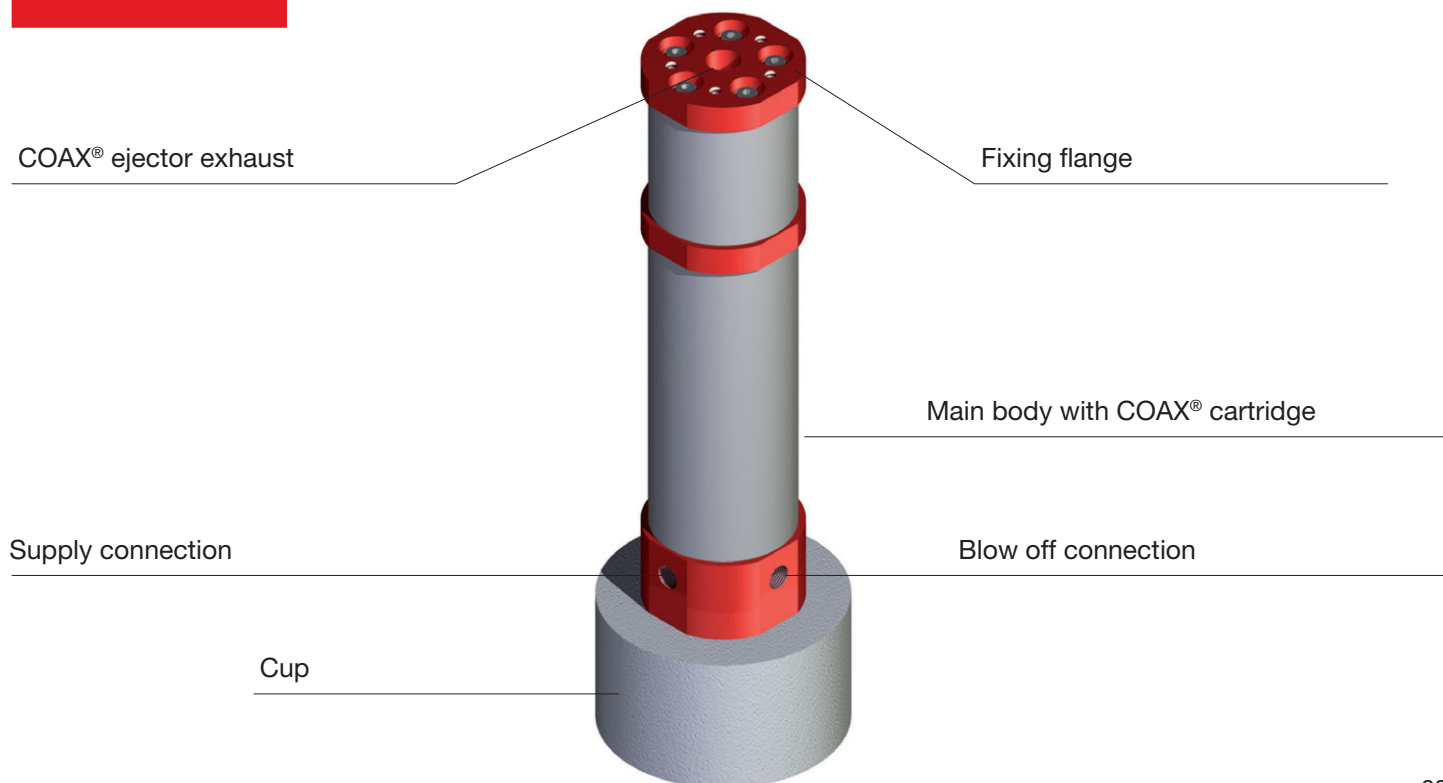
G
(mm)

H
(mm)

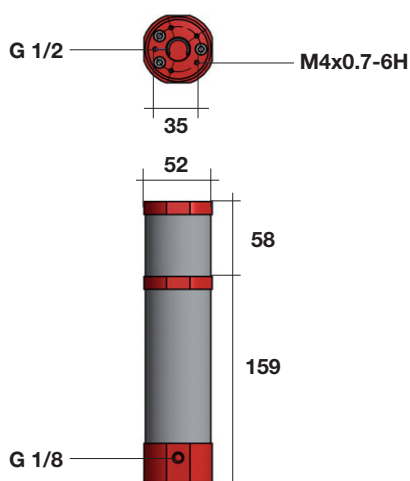
I
(mm)

weight
(kg)

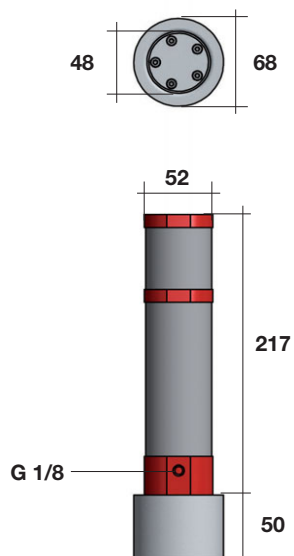
KBC200-BC150-80	225	150	80	60	96.8	50	120	G 1/8"	G 1/4"	2.3
KBC200-BC200-100	225	200	100	60	96.8	50	120	G 1/8"	G 1/4"	2.5
KBC200-BC200-120	225	200	120	60	96.8	50	120	G 1/8"	G 1/4"	2.6
KBC200-BC200-180	225	200	180	60	96.8	50	120	G 1/8"	G 1/4"	2.9
KBC200-BC250-120	225	250	250	60	96.8	50	120	G 1/8"	G 1/4"	2.7
KBC200-BC300-120	225	300	120	60	96.8	40	120	G 1/8"	G 1/4"	2.7
KBC200-BC300-180	225	300	180	60	96.8	50	120	G 1/8"	G 1/4"	3.4
KBC200-BC350-150	225	350	150	60	96.8	50	120	G 1/8"	G 1/4"	3.4
KBC200-BC350-180	225	350	180	60	96.8	50	120	G 1/8"	G 1/4"	3.8
KBC200-BC350-250	225	350	250	60	96.8	50	120	G 1/8"	G 1/4"	4.1



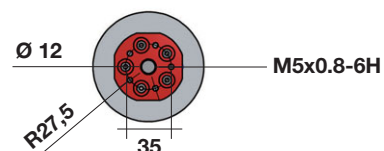
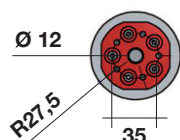
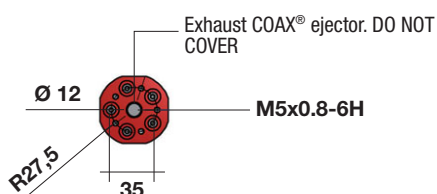
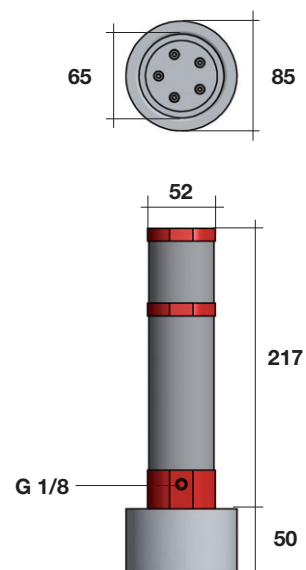
KBC50-G1/2-C1-FX



KBC50-D68-C1-FX



KBC50-D85-C1-FX



dimensions in mm

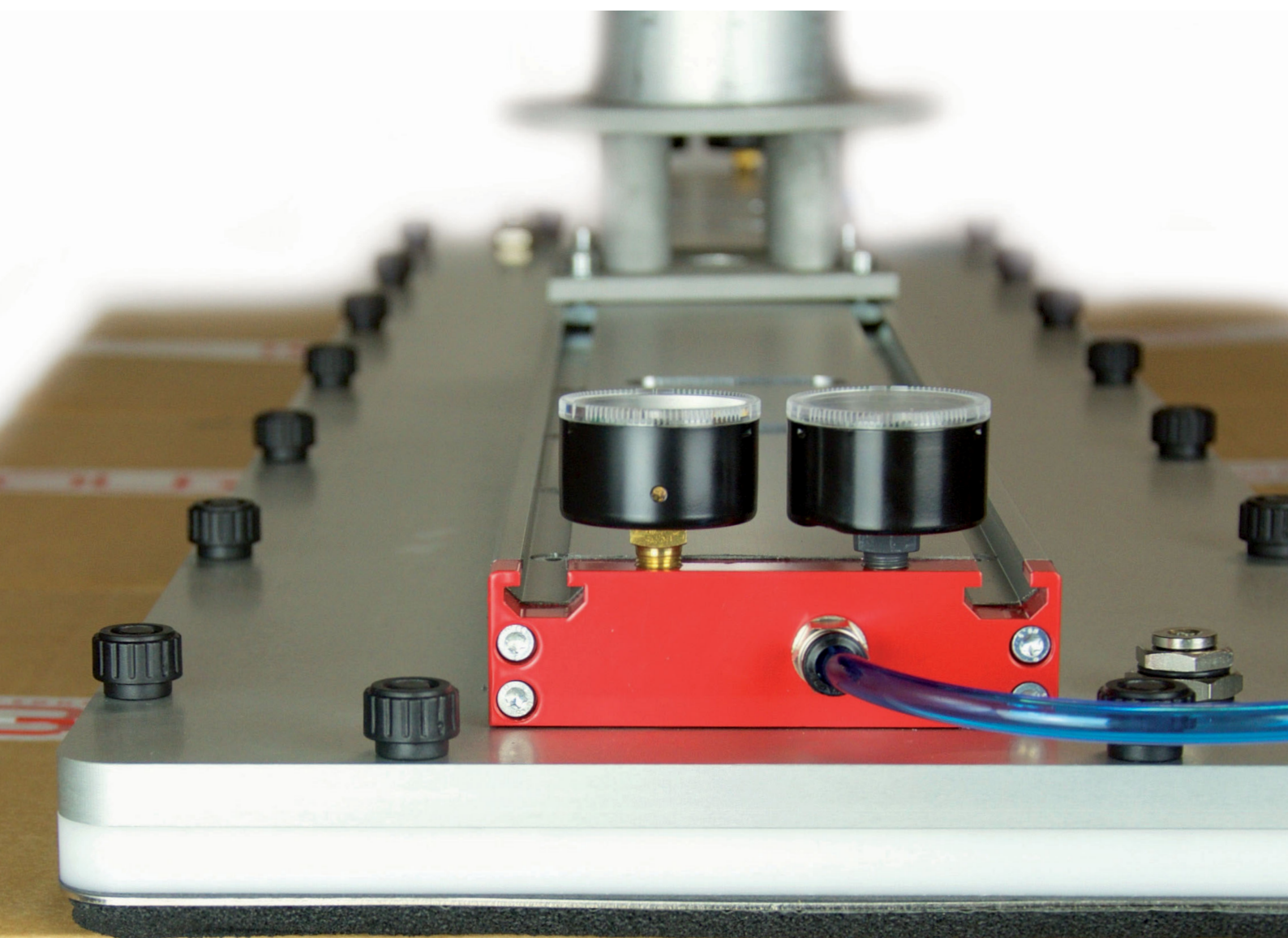
KVGL-S series

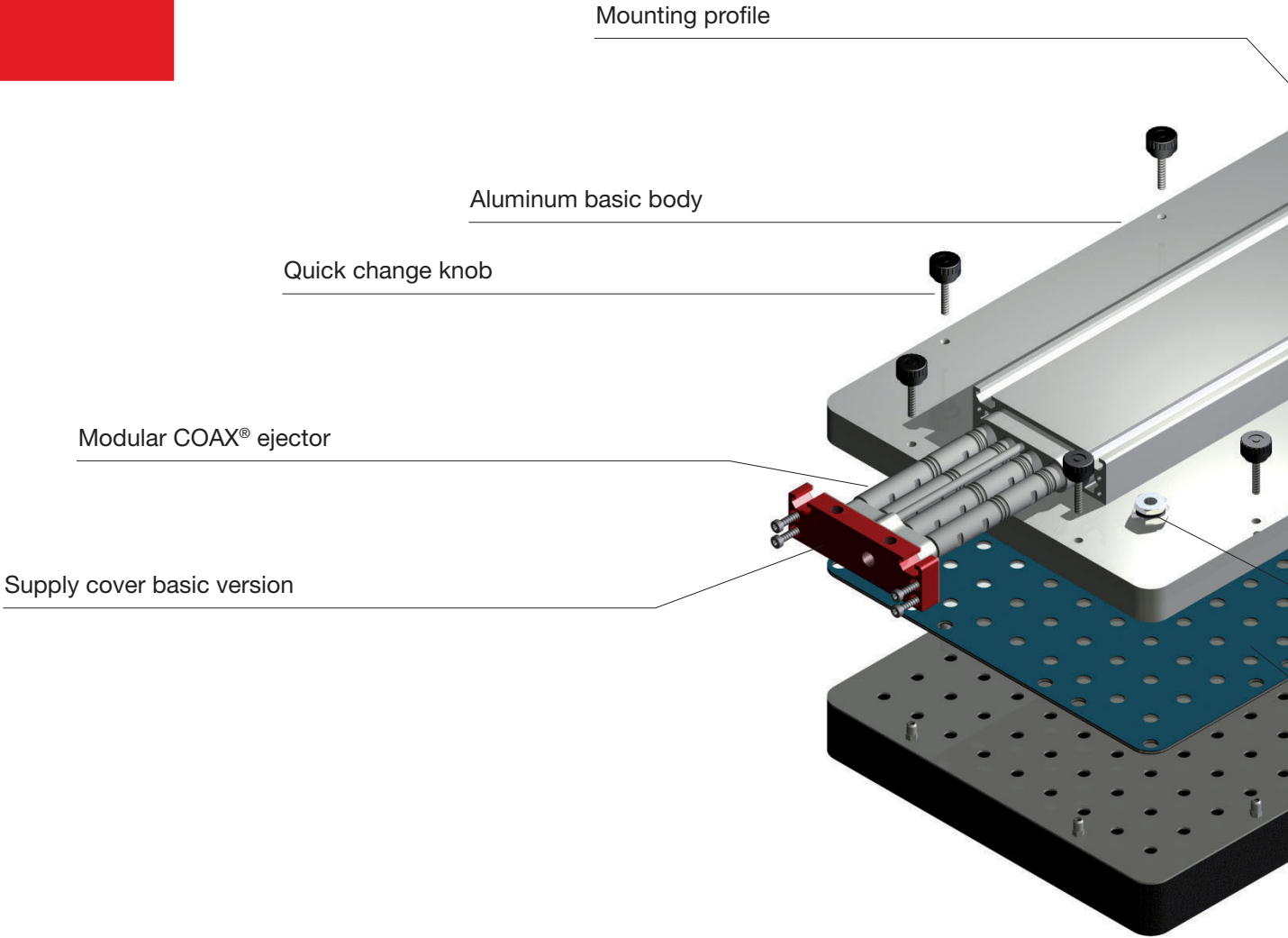


KVGL-S product series, Kenos Vacuum Gripper Layer - Standard, looks at the wide world of packaging, end line automation and other applications. Our adjustable check valve technology and the H40mm technical foam allows for superior gripping on different kind of boxes, wrap around packaging and primary ones. The large availability of standard dimensioning and the modularity, make this series highly effective.

Advantages:

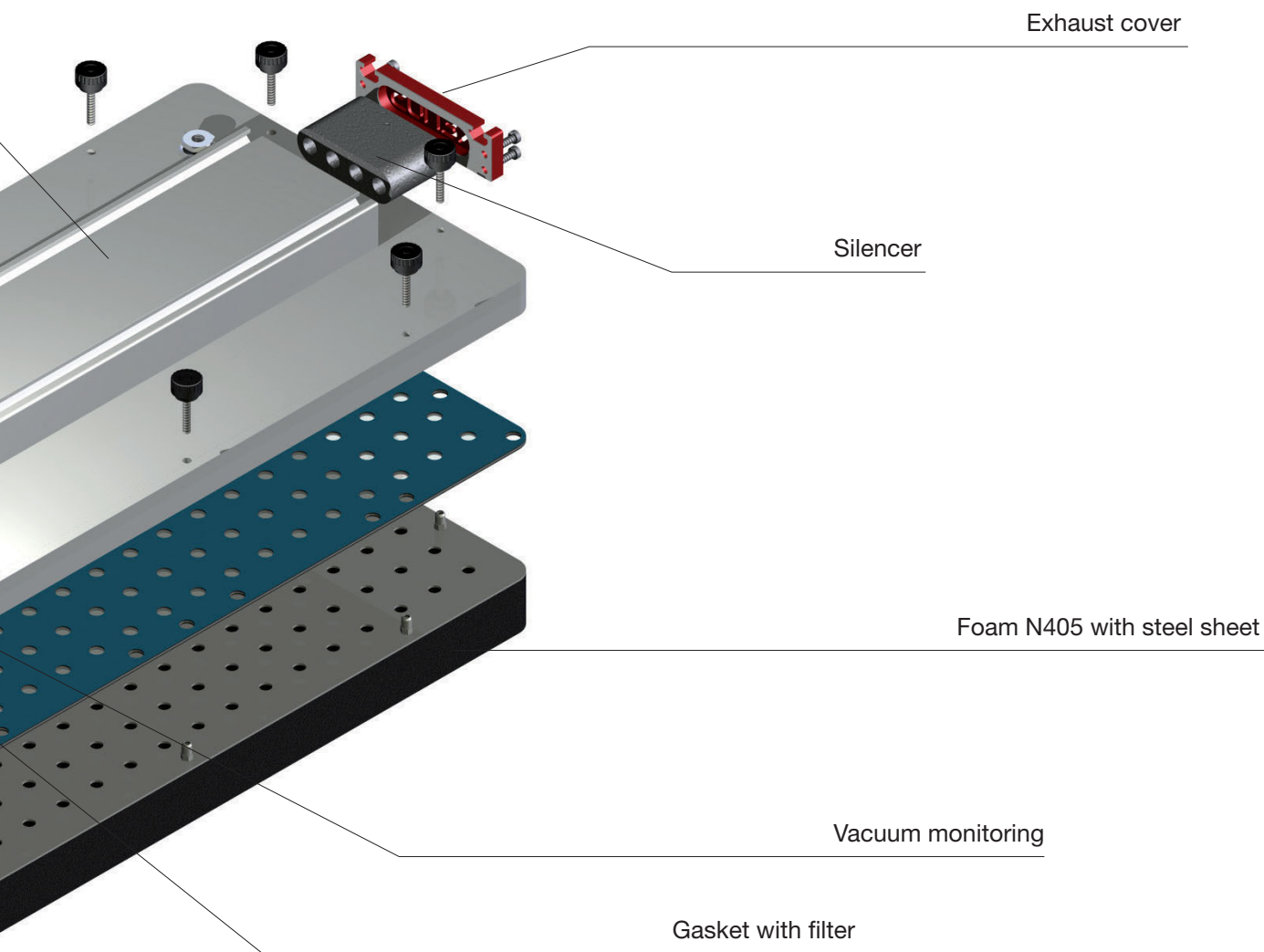
- Available with internal COAX® vacuum generation and also with external vacuum generator side channel blower
- Wide range of standard dimensions. Specials on request
- Complete with more part-presence detection work pieces
- Quick change of the technical foam
- Easy to mount and maintenance





How to order

KVGL	400	—	240	—	N	4	5
	length mm		width mm		foam type	thickness mm	step
	400		240		N = foam	4 = foam 40 mm	5 = step 30 mm
	600		300			3 = foam 30 mm	
	800		400			2 = sfoam 20 mm	
	1000					1 = foam 10 mm	
	1200						



CVM	C3	S
valves type	vacuum generator	version
CVL = check valves low flow	C2 = 2 COAX® cartridges	S = standard
CVM = check valves medium flow	C3 = 3 COAX® cartridges	X = special
CVH = check valves high flow	C4 = 4 COAX® cartridges	
	C5 = 5 COAX® cartridges	
	C6 = 6 COAX® cartridges	
	C7 = 7 COAX® cartridges	
	C8 = 8 COAX® cartridges	
	BL1 = blower connection G 1-1/4"	
	BL2 = blower connection G 2"	

KVGL-S series

Theoretic gripping force on rigid and stable surface with completely covered module, without safety factor (N).

width 240

type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
KVGL400-240	791	1055	1319	1583	1846
KVGL600-240	1253	1670	2088	2506	2923
KVGL800-240	1714	2286	2857	3429	4000
KVGL1000-240	2110	2813	3517	4020	4924
KVGL1200-240	2638	3517	4396	5275	6154

width 300

KVGL400-300	1017	1356	1696	2035	2374
KVGL600-300	1611	2148	2685	3222	3759
KVGL800-300	2204	2939	3674	4409	5143
KVGL1000-300	2713	3617	4522	5426	6330
KVGL1200-300	3391	4522	5652	6782	7913

width 400

KVGL400-400	1356	1809	2261	2713	3165
KVGL600-400	2148	2864	3580	4296	5011
KVGL800-400	2939	3919	4898	5878	6858
KVGL1000-400	3617	4823	6029	7235	8440
KVGL1200-400	4522	6029	7536	9043	10550

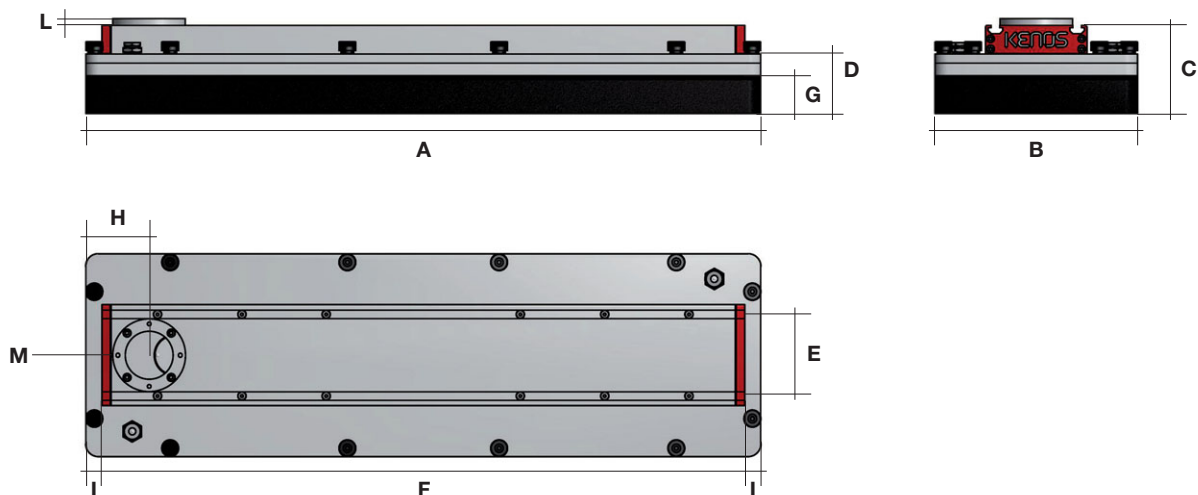
Air consumption/vacuum flow data related to number of COAX® ejectors.

type

air consumption at 5 bars (NI/min)

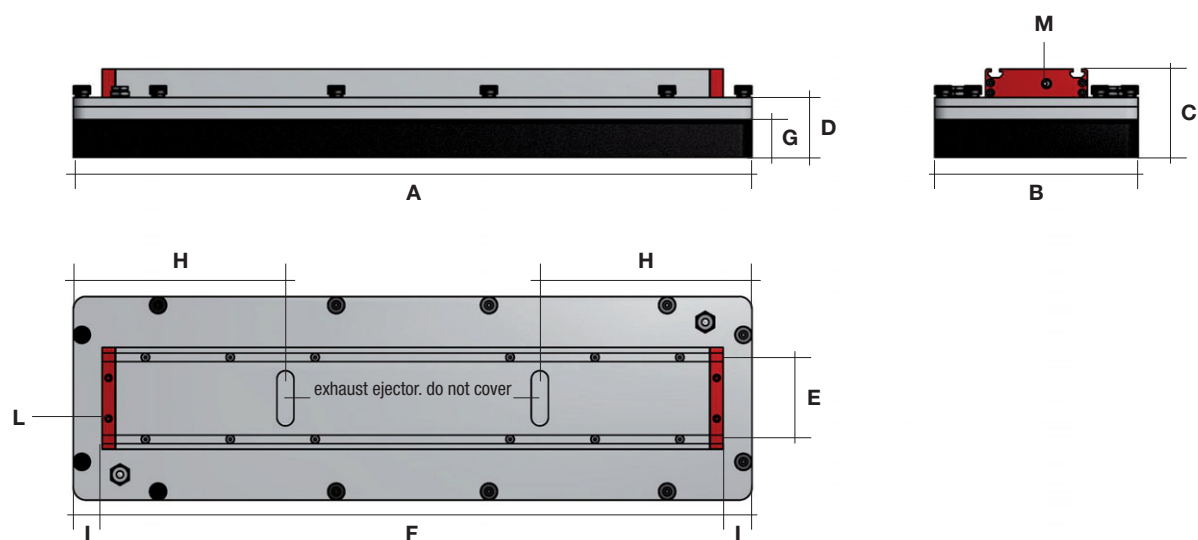
vacuum flow (NI/min)

C1	90	360
C2	180	724
C3	270	1086
C4	360	1448
C5	450	1810
C6	540	2172
C7	630	2534
C8	720	2896



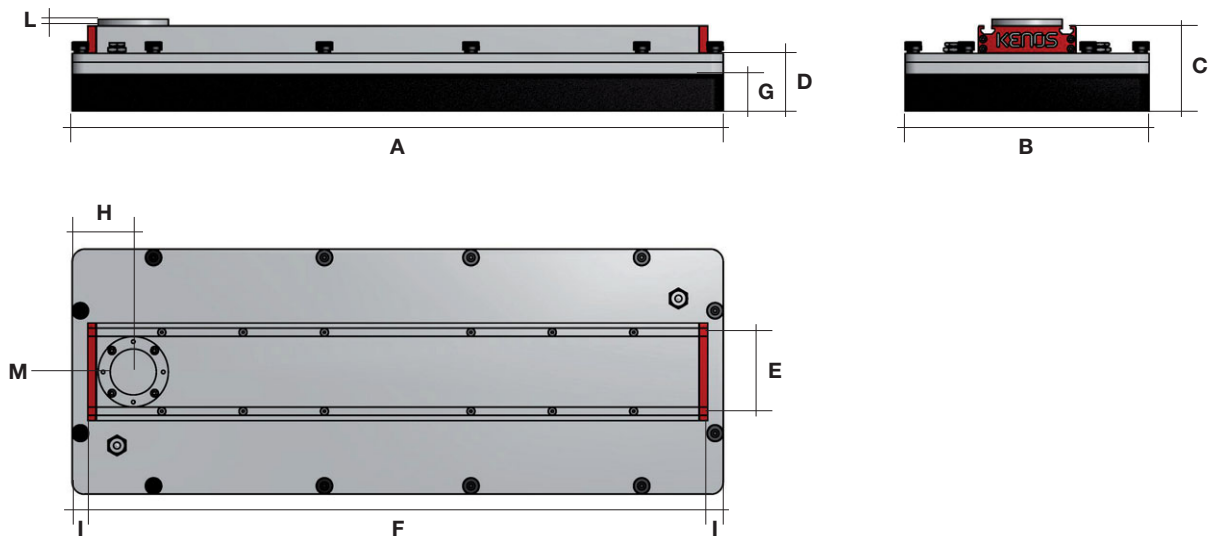
type
240 BL

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-240	400	240	104	70.5	96.8	362	10/20/30/40	65/75	19	8	G 1-1/4" / 2"	7.2
KVGL600-240	600	240	104	70.5	96.8	562	10/20/30/40	65/75	19	8	G 1-1/4" / 2"	10.2
KVGL800-240	800	240	104	70.5	96.8	762	10/20/30/40	65/75	19	8	G 1-1/4" / 2"	14.1
KVGL1000-240	1000	240	104	70.5	96.8	962	10/20/30/40	75	19	8	G 2"	17.7
KVGL1200-240	1220	240	104	70.5	96.8	1182	10/20/30/40	75	19	8	G 2"	21.5



type
240 ejector

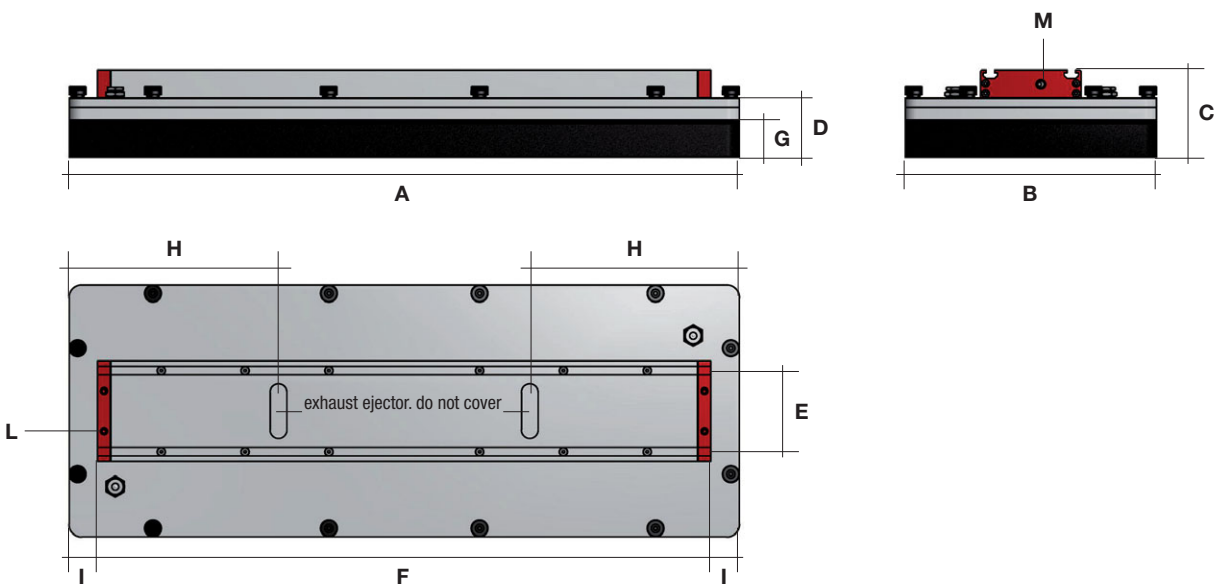
type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-240	400	240	104	70.5	96.8	332	10/20/30/40	-	34	G 1/8"	G 1/4"	7.4
KVGL600-240	600	240	104	70.5	96.8	532	10/20/30/40	-	34	G 1/8"	G 1/4"	10.9
KVGL800-240	800	240	104	70.5	96.8	732	10/20/30/40	300	34	G 1/8"	G 1/4"	14.7
KVGL1000-240	1000	240	104	70.5	96.8	932	10/20/30/40	300	34	G 1/8"	G 1/4"	18.2
KVGL1200-240	1220	240	104	70.5	96.8	1152	10/20/30/40	300	34	G 1/8"	G 1/4"	22



type
300 BL

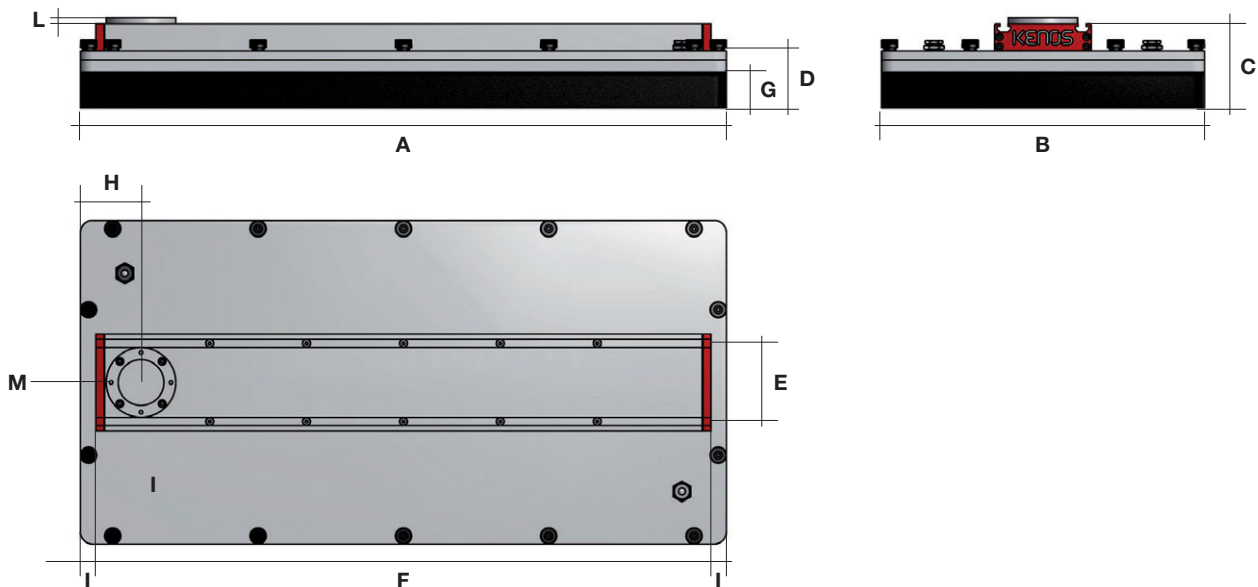
type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-300	400	300	104	70.5	96.8	362	10/20/30/40	65/75	19	8	G 1-1/4 " / 2"	8.4
KVGL600-300	600	300	104	70.5	96.8	562	10/20/30/40	65/75	19	8	G 1-1/4 " / 2"	12.5
KVGL800-300	800	300	104	70.5	96.8	762	10/20/30/40	75	19	8	G 2"	16.2
KVGL1000-300	1000	300	104	70.5	96.8	962	10/20/30/40	75	19	8	G 2"	20.2
KVGL1200-300	1220	300	104	70.5	96.8	1182	10/20/30/40	75	19	8	G 2"	24.6

40



type
300 ejector

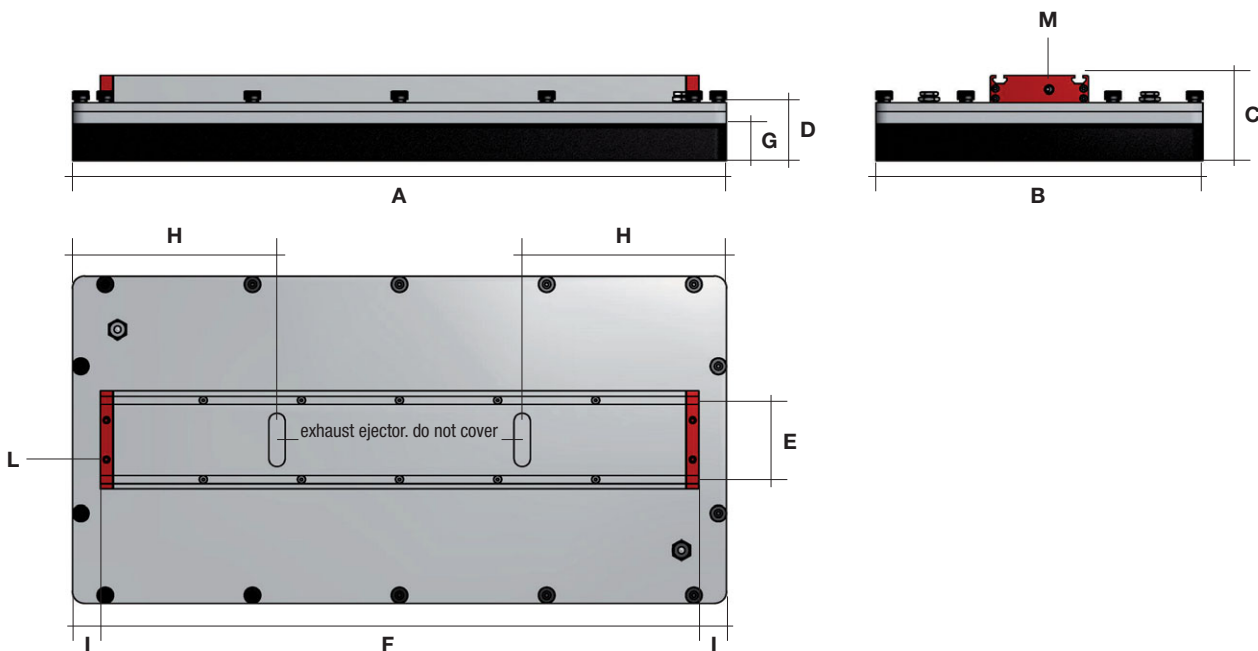
type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-300	400	300	104	70.5	96.8	332	10/20/30/40	-	34	G 1/8"	G 1/4"	8.7
KVGL600-300	600	300	104	70.5	96.8	532	10/20/30/40	300	34	G 1/8"	G 1/4"	13.1
KVGL800-300	800	300	104	70.5	96.8	732	10/20/30/40	300	34	G 1/8"	G 1/4"	16.7
KVGL1000-300	1000	300	104	70.5	96.8	932	10/20/30/40	300	34	G 1/8"	G 1/4"	20.7
KVGL1200-300	1220	300	104	70.5	96.8	1152	10/20/30/40	300	34	G 1/8"	G 1/4"	25



type
400 BL

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-400	400	400	104	70.5	96.8	362	10/20/30/40	75	19	8	G 2"	10.5
KVGL600-400	600	400	104	70.5	96.8	562	10/20/30/40	75	19	8	G 2"	15.6
KVGL800-400	800	400	104	70.5	96.8	762	10/20/30/40	75	19	8	G 2"	20.9
KVGL1000-400	1000	400	104	70.5	96.8	962	10/20/30/40	75	19	8	G 2"	26.1
KVGL1200-400	1220	400	104	70.5	96.8	1182	10/20/30/40	75	19	8	G 2"	31.8

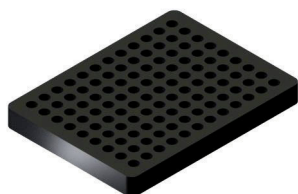
41



type
400 ejector

type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	weight (kg)
KVGL400-400	400	400	104	70.5	96.8	332	10/20/30/40	-	34	G 1/8"	G 1/4"	10.7
KVGL600-400	600	400	104	70.5	96.8	532	10/20/30/40	300	34	G 1/8"	G 1/4"	16.2
KVGL800-400	800	400	104	70.5	96.8	732	10/20/30/40	300	34	G 1/8"	G 1/4"	21.4
KVGL1000-400	1000	400	104	70.5	96.8	912	10/20/30/40	300	44	G 1/8"	G 1/4"	26.6
KVGL1200-400	1220	400	104	70.5	96.8	1152	10/20/30/40	300	34	G 1/8"	G 1/4"	32.4

Replacement foams for KVGL-s.



width 240

width 300

width 400

description

code

FOAM-KVGL400-240-N405-S

K-90-01402

FOAM-KVGL600-240-N405-S

K-90-01352

FOAM-KVGL800-240-N405-S

K-90-01369

FOAM-KVGL1000-240-N405-S

K-90-01367

FOAM-KVGL1200-240-N405-S

K-90-01405

FOAM-KVGL400-300-N405-S

K-90-01238

FOAM-KVGL600-300-N405-S

K-90-01278

FOAM-KVGL800-300-N405-S

K-90-01300

FOAM-KVGL1000-300-N405-S

K-90-01410

FOAM-KVGL1200-300-N405-S

K-90-01411

FOAM-KVGL400-400-N405-S

K-90-01351

FOAM-KVGL600-400-N405-S

K-90-01327

FOAM-KVGL800-400-N405-S

K-90-01309

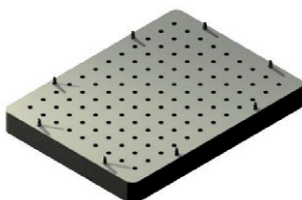
FOAM-KVGL1000-400-N405-S

K-90-01412

FOAM-KVGL1200-400-N405-S

K-90-01413

Plate with foam for KVGL-s.



width 240

width 300

width 400

description

code

LAM+FOAM-KVGL400-240-N405-S

K-90-01419

LAM+FOAM-KVGL600-240-N405-S

K-90-01490

LAM+FOAM-KVGL800-240-N405-S

K-90-01370

LAM+FOAM-KVGL1000-240-N405-S

K-90-01421

LAM+FOAM-KVGL1200-240-N405-S

K-90-01422

LAM+FOAM-KVGL400-300-N405-S

K-90-01242

LAM+FOAM-KVGL600-300-N405-S

K-90-01283

LAM+FOAM-KVGL800-300-N405-S

K-90-01423

LAM+FOAM-KVGL1000-300-N405-S

K-90-01424

LAM+FOAM-KVGL1200-300-N405-S

K-90-01425

LAM+FOAM-KVGL400-400-N405-S

K-90-01426

LAM+FOAM-KVGL600-400-N405-S

K-90-01427

LAM+FOAM-KVGL800-400-N405-S

K-90-01428

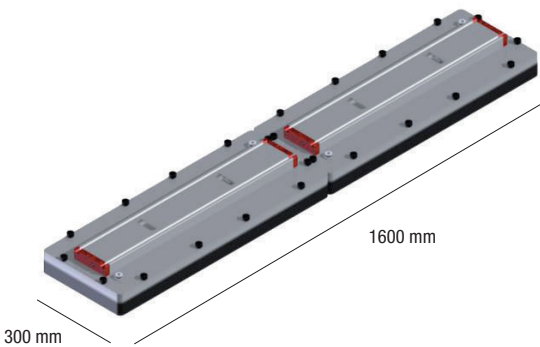
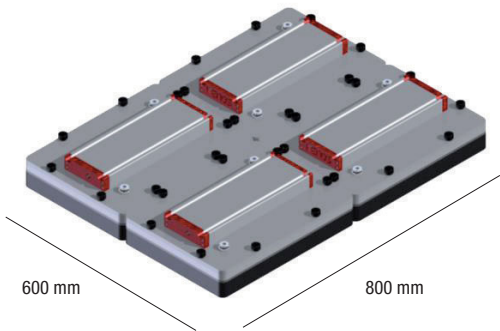
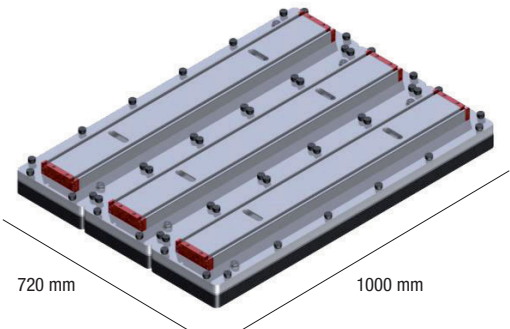
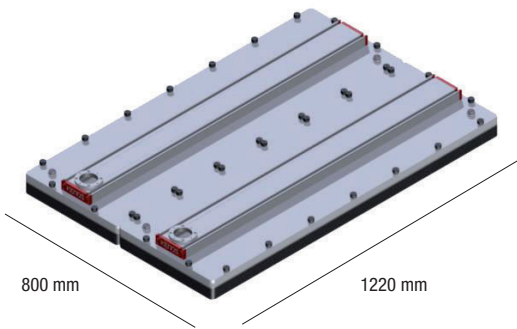
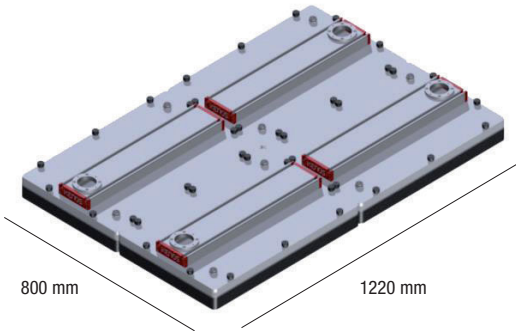
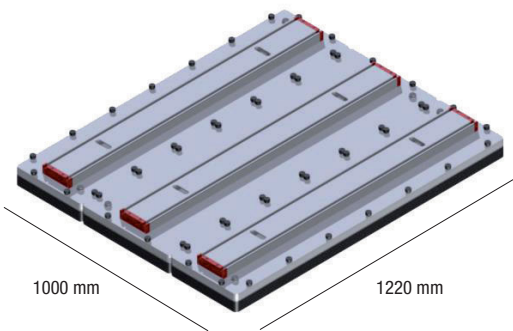
LAM+FOAM-KVGL1000-400-N405-S

K-90-01429

LAM+FOAM-KVGL1200-400-N405-S

K-90-01430

Examples of modular layers.



KVGL-CJ
series

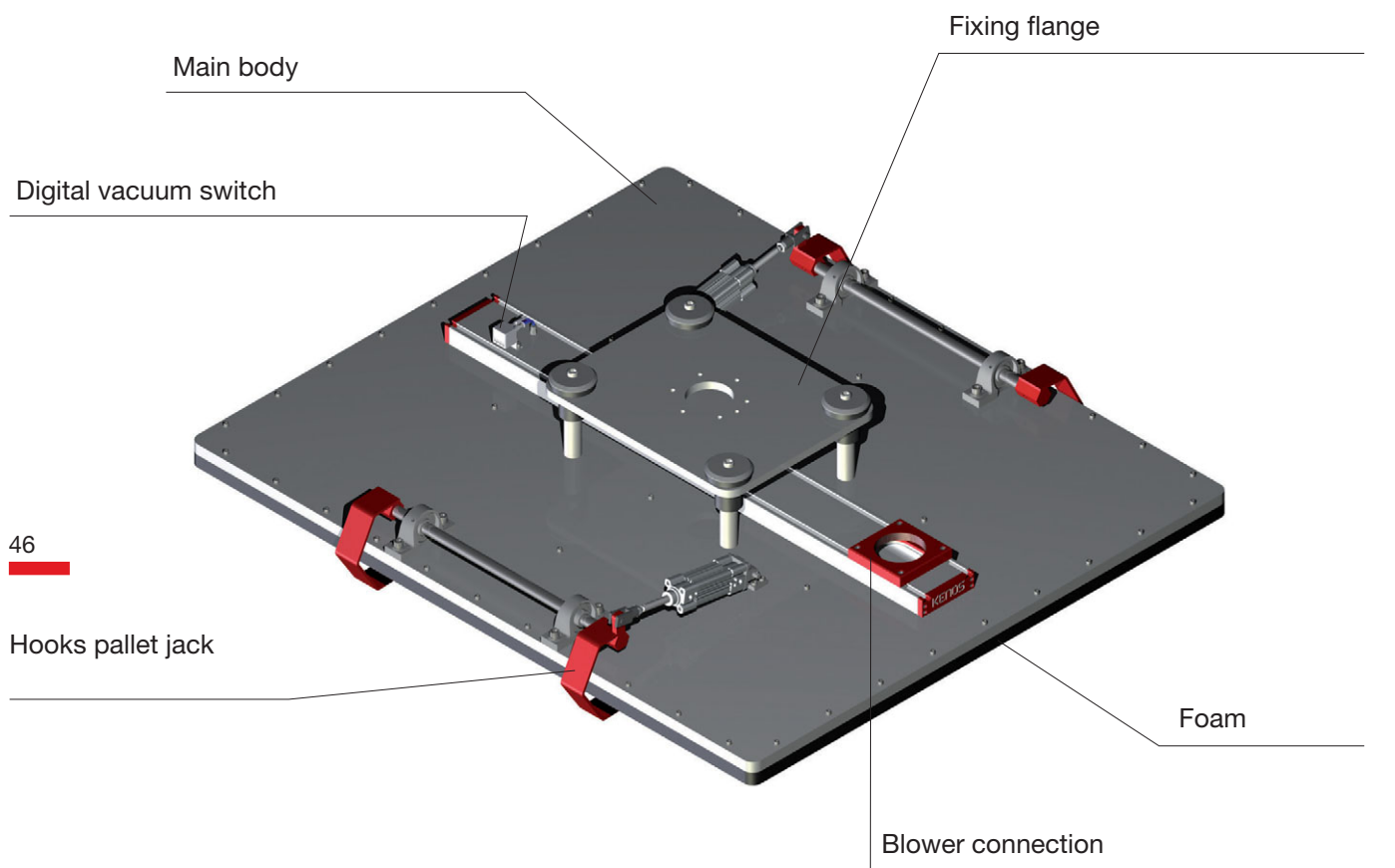


KVGL-CJ series, Kenos Vacuum Layer- Cans Jars, born for the need to handle the complete layer of cans, jars that can be open or closed on the gripping area. Typical industrial segments involved are palletizing or de-palletising in packaging, beverage, food.

Advantages:

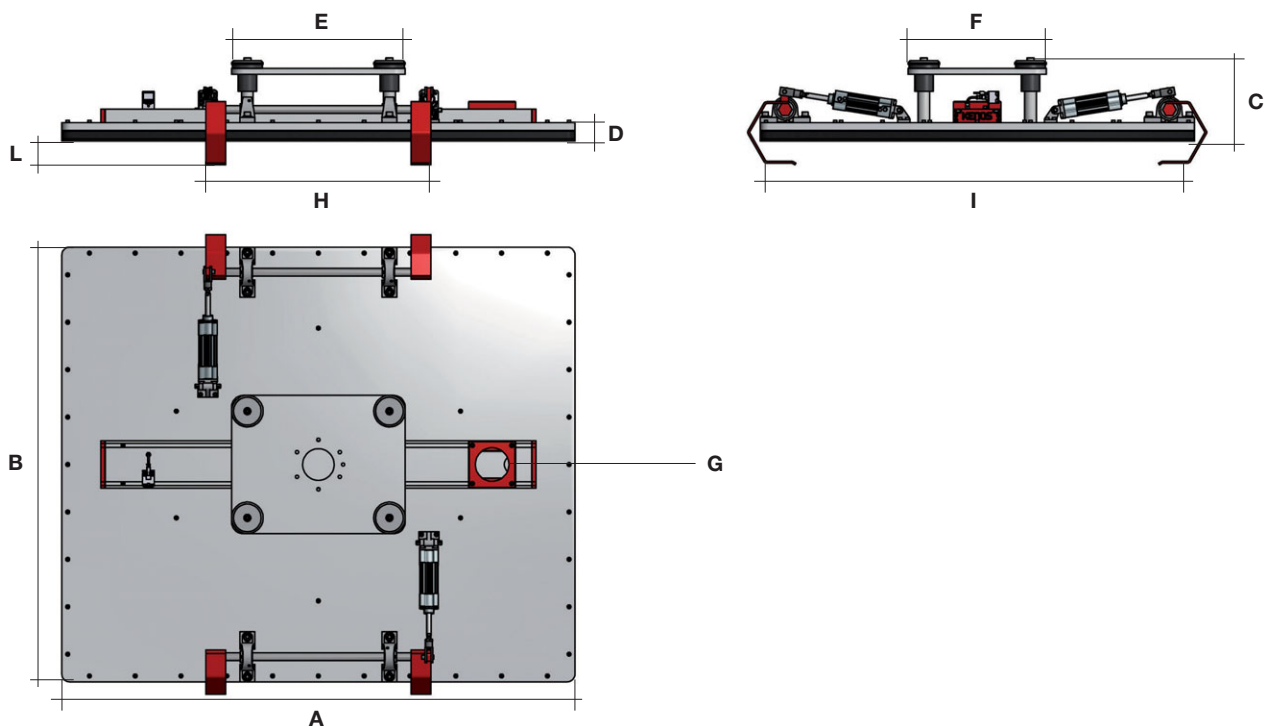
- Handling of the complete or partial layer
- Handling of pallet
- Handling of cardboard interlayer
- Flow reduction technologies
- External vacuum generation with side channel blower
- Connection flange integrated





How to order

KVGL-CJ	1300	—	700	—	CJ	—	N	—	15
	length mm		width mm				type		thickness mm
	900		700		CJ =cans jars		N = foam		25 = foam 25 mm
	1300		900						15 = foam 15 mm
	1300		1100						



type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	weight (kg)
KVGL900-700-CJ-N251-FX-BL-H	900	700	134	25	440	350	G 2"-1/2	570	850	60	46
KVGL900-700-CJ-N251-FL-BL-H	900	700	211	25	440	350	G 2"-1/2	570	850	60	51
KVGL1300-900-CJ-N251-FX-BL-H	1300	900	134	25	440	350	G 3"	570	850	60	71
KVGL1300-900-CJ-N251-FL-BL-H	1300	900	211	25	440	350	G 3"	570	850	60	76
KVGL1300-1100-CJ-N251-FX-BL-H	1300	1100	134	25	440	350	G 3"	570	1050	60	81
KVGL1300-1100-CJ-N251-FL-BL-H	1300	1100	211	25	440	350	G 3"	570	1050	60	86

2	—	FX	—	BL	—	H
step		fixing flange		vacuum generator		option

1 = fine step

FL = floating flange

BL = blower

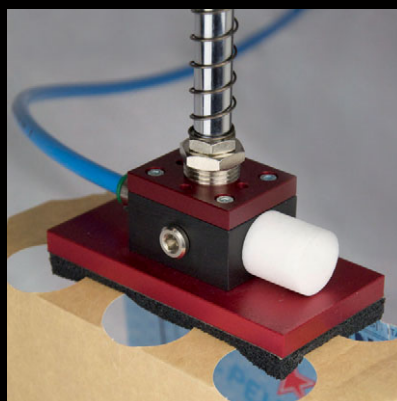
H = pallet hooks

2 = medium step

FX = fixed flange

blank = without option

KVGM series



KVGM grippers, Kenos Vacuum Gripper Mini, are multifunction and employable in many industrial segments. Anywhere you need reduced weight and dimensions, low energy use, KVGM products are the right solution. Available with technical foam or equipped with bellow

pads with different diameters, KVGM grippers are extremely versatile and have great performance.



Fixing plate

Silencer

COAX® ejector

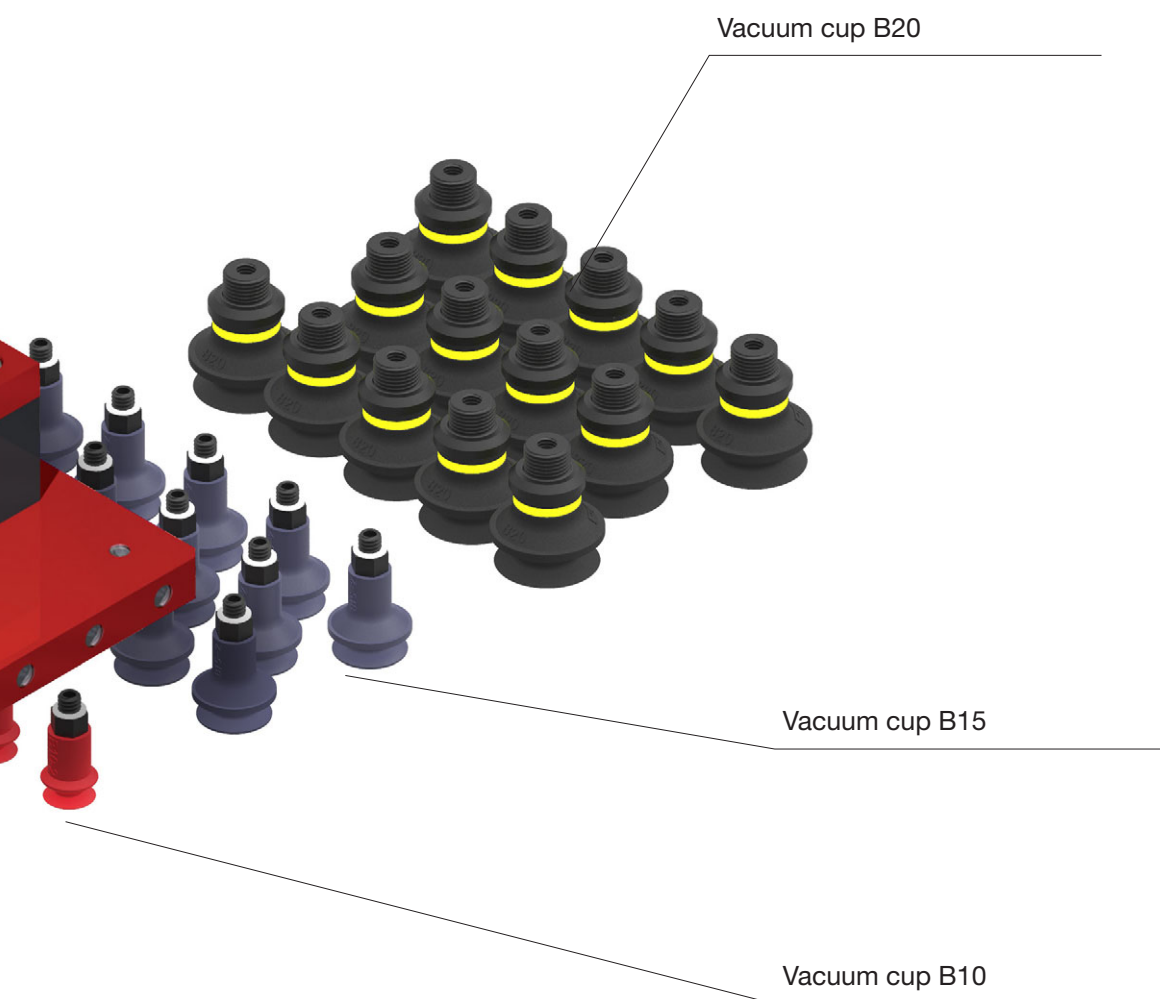
50

Foam N101



How to order

KVGM	120	—	60	—	N	1	0
	length mm		width mm		type	thickness/diameter mm	filter
	120		60		N = foam	2 = foam 20 mm	0 = without filter
	200					1 = foam 10 mm	1 = with filter
					P = pads	10 = pad d. 10 mm	
						15 = pad d. 15 mm	
						20 = pad d. 20 mm	



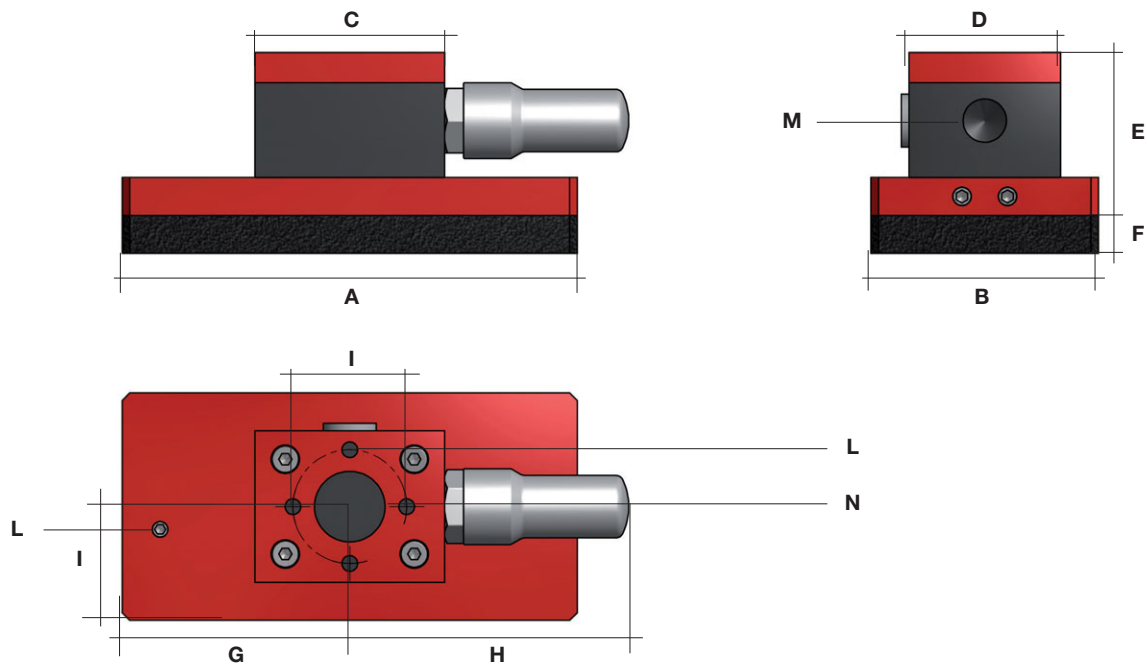
2	—	FR	—	8	—	60RR
step		technology		calibrated hole		vacuum generator
1 = fine step		FR = flow reduction		6 = 0.6 mm		60RR= air consumption
2 = medium step		DM = direct mounting		8 = 0.8 mm		120RR= air consumption
				10 = 1 mm		

Theoretic tear force on rigid and stable surface with completely covered module, without safety factor (N).

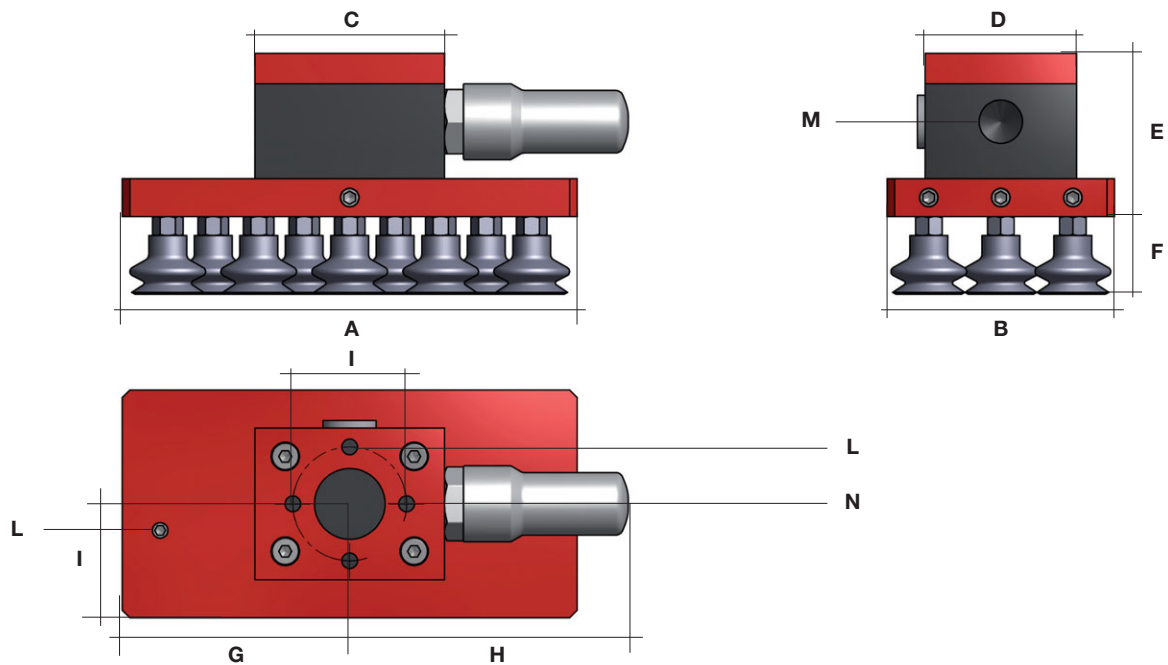
	type	force at 30% vacuum	force at 40% vacuum	force at 50% vacuum	force at 60% vacuum	force at 70% vacuum
foam N201-N202	KVG120-60	53	70	88	106	123
	KVG200-60	95	127	158	190	222
pads P10	KVG120-60	6	9	11	13	16
	KVG200-60	12	16	21	25	29
pads P15	KVG120-60	16	21	27	32	38
	KVG200-60	30	40	50	60	70
pads P20	KVG120-60	33	44	55	66	77
	KVG200-60	61	81	102	122	143

Air consumption/vacuum flow data.

type	air consumption at 4 bars (NI/min)	vacuum flow (NI/min)
60RR	60	44
120RR	120	88



type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	N (mm)	weight (kg)
KVGM120-60-N101	120	60	50	40	43	10	60	73.5	30	M5	G 1/4"	G 1/2"	0.36
KVGM120-60-N201	120	60	50	40	43	20	60	73.5	30	M5	G 1/4"	G 1/2"	0.36
KVGM200-60-N101	200	60	50	40	43	10	100	73.5	30	M5	G 1/4"	G 1/2"	0.49
KVGM200-60-N201	200	60	50	40	43	20	100	73.5	30	M5	G 1/4"	G 1/2"	0.49



type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	L (mm)	M (mm)	N (mm)	weight (kg)
KVGM120-60-P10	120	60	50	40	43	21	60	73.5	30	M5	G 1/4"	G 1/2"	0.4
KVGM120-60-P15	120	60	50	40	43	24.2	60	73.5	30	M5	G 1/4"	G 1/2"	0.4
KVGM120-60-P20	120	60	50	40	43	20.5	60	73.5	30	M5	G 1/4"	G 1/2"	0.4
KVGM200-60-P10	200	60	50	40	43	21	100	73.5	30	M5	G 1/4"	G 1/2"	0.6
KVGM200-60-P15	200	60	50	40	43	24.2	100	73.5	30	M5	G 1/4"	G 1/2"	0.6
KVGM200-60-P20	200	60	50	40	43	20.5	100	73.5	30	M5	G 1/4"	G 1/2"	0.6

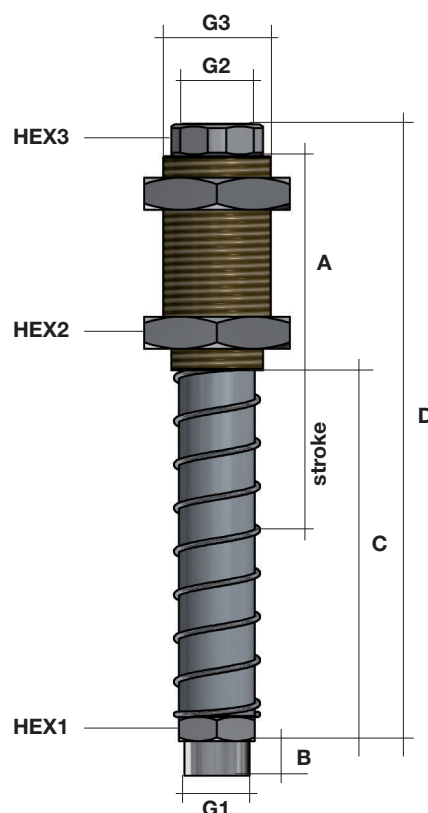
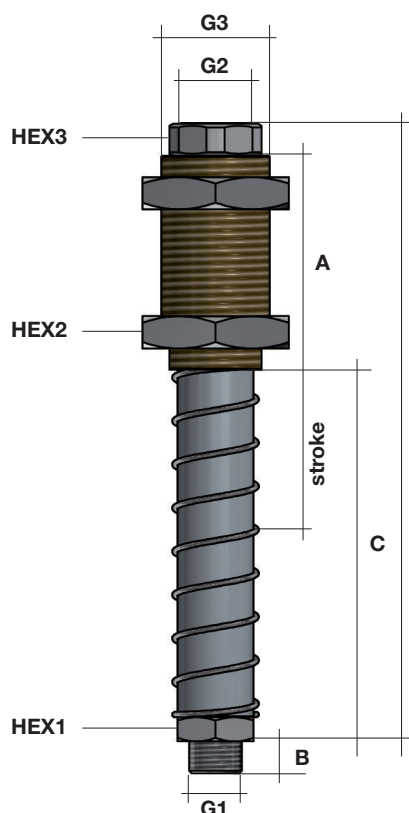
KSPH
series



Spring plungers and level compensators.

The KSPH spring plungers series allows for handling work pieces at different heights. Several availability of threads connections 1/8", 1/4" and 3/8", male or female version, with standard strokes from 25, 50, to 75mm. An non-rotating version is available, it grants precise pick and place positioning of the

workpiece during the handling and the utilisation of oval pads when required.



55

	type	A (mm)	B (mm)	C (mm)	D (mm)	G1	G2	G3	HEX1	HEX2	HEX3	stroke (mm)	weight (g)	spring rate (N/mm)	cod. N*	cod. A**
1/8"	KSPH-M20-1M-25	40	6	42.2	88.5	1/8"	1/8"	M20x1.5	14	27	17	25	180	0.70	K-25-00590	K-25-00630
	KSPH-M20-1M-50	40	6	69.4	115.5	1/8"	1/8"	M20x1.5	14	27	17	50	200	0.46	K-25-00602	K-25-00642
	KSPH-M20-1M-75	40	6	98.4	144.5	1/8"	1/8"	M20x1.5	14	27	17	75	220	1.1	K-25-00612	K-25-00652
	KSPH-M20-1F-25	40	6.5	42.2	88.5	1/8"	1/8"	M20x1.5	14	27	17	25	180	0.7	K-25-00591	K-25-00631
	KSPH-M20-1F-50	40	6.5	69.4	115.5	1/8"	1/8"	M20x1.5	14	27	17	50	200	0.46	K-25-00603	K-25-00643
	KSPH-M20-1F-75	40	6.5	98.4	144.5	1/8"	1/8"	M20x1.5	14	27	17	75	220	1.1	K-25-00613	K-25-00653
1/4"	KSPH-M20-2M-25	40	8	41.7	88	1/4"	1/8"	M20x1.5	17	27	17	25	180	0.70	K-25-00592	K-25-00632
	KSPH-M20-2M-50	40	8	68.9	115	1/4"	1/8"	M20x1.5	17	27	17	50	200	0.46	K-25-00604	K-25-00644
	KSPH-M20-2M-75	40	8	97.9	144	1/4"	1/8"	M20x1.5	17	27	17	75	220	1.10	K-25-00614	K-25-00654
	KSPH-M20-2F-25	40	8.5	43.7	90	1/4"	1/8"	M20x1.5	17	27	17	25	180	0.70	K-25-00593	K-25-00633
	KSPH-M20-2F-50	40	8.5	70.9	117	1/4"	1/8"	M20x1.5	17	27	17	50	200	0.46 N	K-25-00605	K-25-00645
	KSPH-M20-2F-75	40	8.5	99.9	146	1/4"	1/8"	M20x1.5	17	27	17	75	220	1.10	K-25-0615	K-25-00655
3/8"	KSPH-M20-3M-25	40	9	42.7	89	3/8"	1/8"	M20x1.5	19	27	17	25	188	0.70	K-25-00594	K-25-00634
	KSPH-M20-3M-50	40	9	69.9	116	3/8"	1/8"	M20x1.5	19	27	17	50	208	0.46	K-25-00606	K-25-00646
	KSPH-M20-3M-75	40	9	98.9	145	3/8"	1/8"	M20x1.5	19	27	17	75	228	1.10	K-25-00616	K-25-00656
	KSPH-M20-3F-25	40	9.5	43.7	90	3/8"	1/8"	M20x1.5	22	27	17	25	200	0.70	K-25-00595	K-25-00635
	KSPH-M20-3F-50	40	9.5	70.9	117	3/8"	1/8"	M20x1.5	22	27	17	50	220	0.46	K-25-00607	K-25-00647
	KSPH-M20-3F-75	40	9.5	99.9	146	3/8"	1/8"	M20x1.5	22	27	17	75	240	1.10	K-25-00617	K-25-00657

*N: How to order Normal

**A: How to order non-rotating

KRV
series

KRV series, Kenos Reverse Valve, are valves for vacuum with pneumatic control 2x3/2 that are used in vacuum generation machines using side channel blower. They have the function of suction or blow flow depending on the operation. They are made of anodized aluminium with POM C seals.

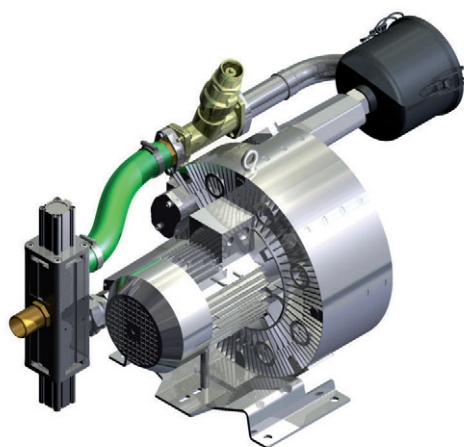


How to order

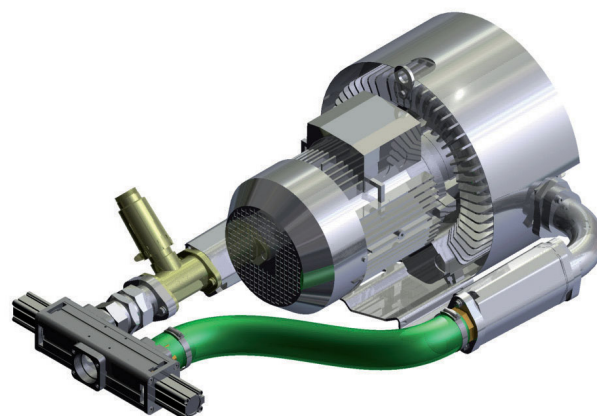
KRV	D63	F4	33	B	P
	 shape mm	 size	 function	 condition	 control
	D63 = 63	F2 = 1-1/4"	33 = 2x3/2	B = bistable	B = pneumatic
		F4 = 2"			
	D100 = 100	F5 = 2-1/2"			
		F6 = 3"			

Connection example.

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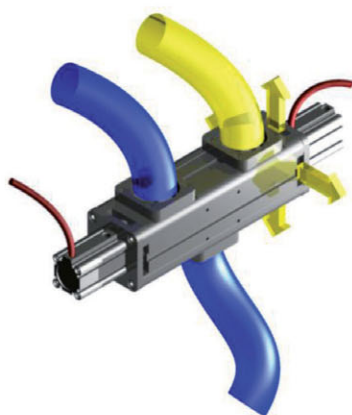


KRV-F2 with blower

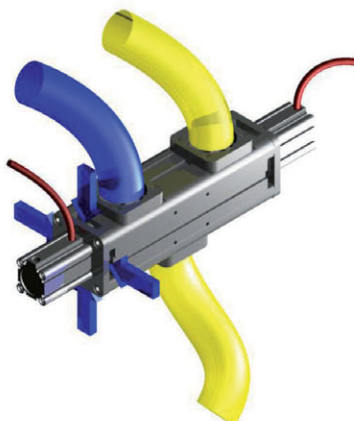


KRV-F4 with blower

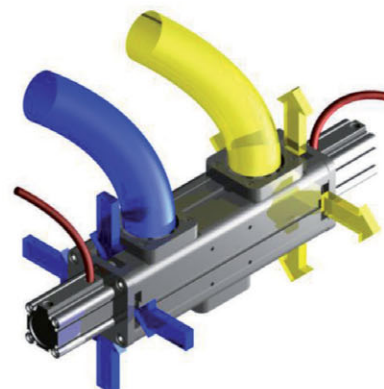
Functional diagram.



Suction position



Blowing position



Neutral position



Suction hose

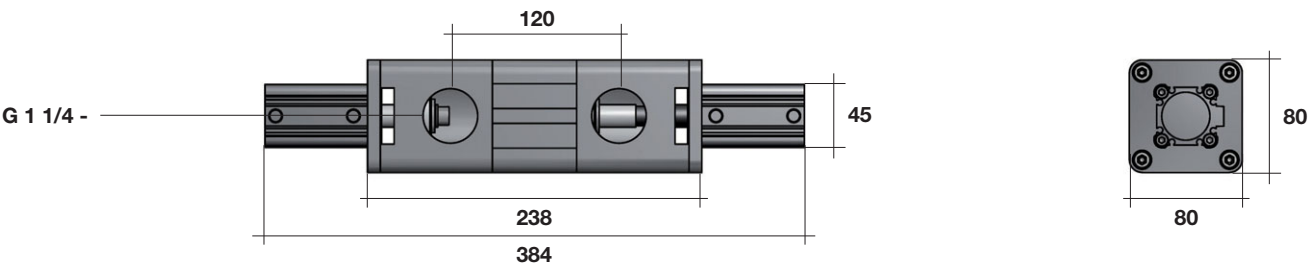


Blowing hose

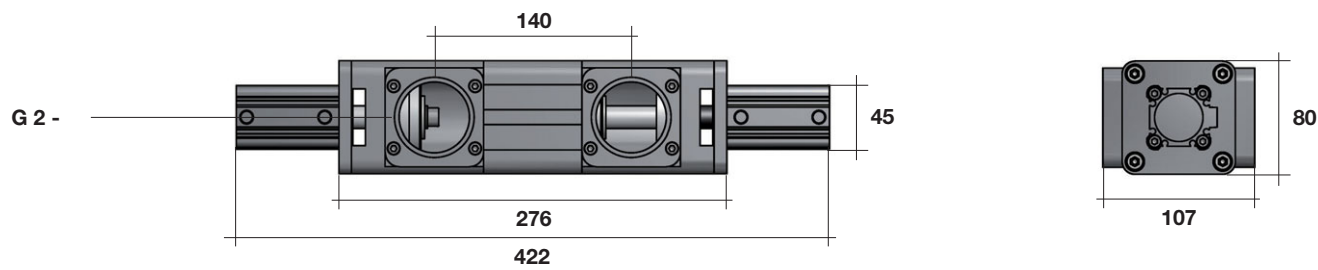


Pressurization cylinder

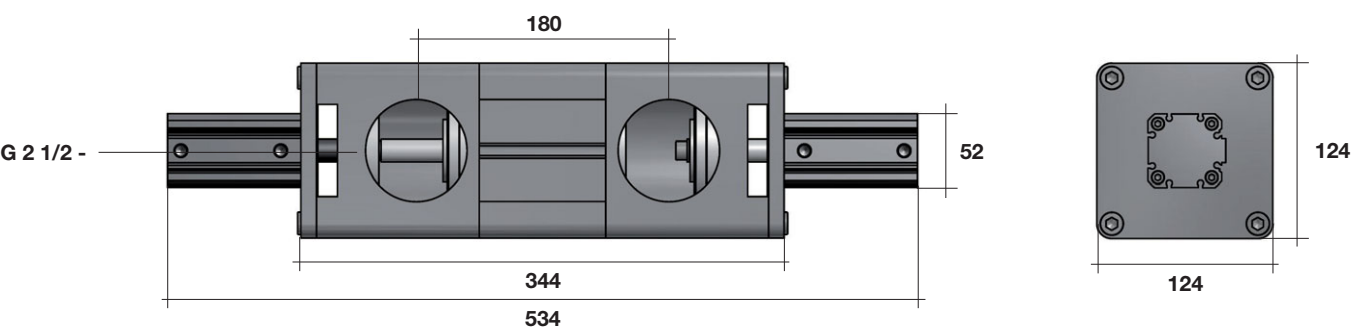
KRV-D63-F2-33B-P



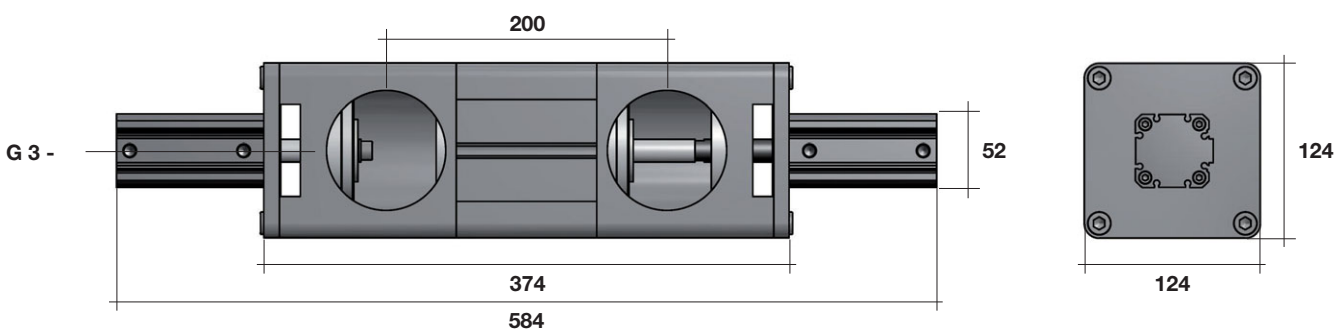
KRV-D63-F4-33B-P



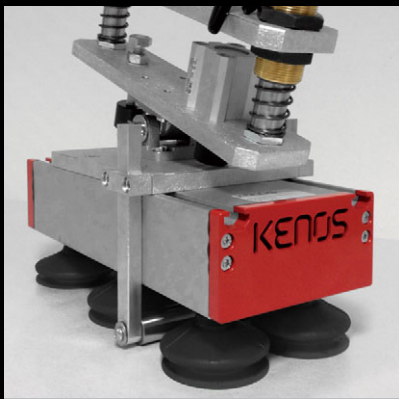
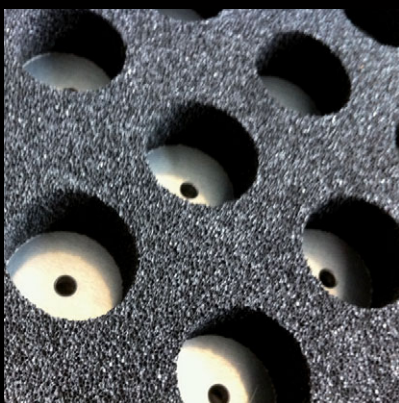
KRV-D100-F5-33B-P



KRV-D100-F6-33B-P

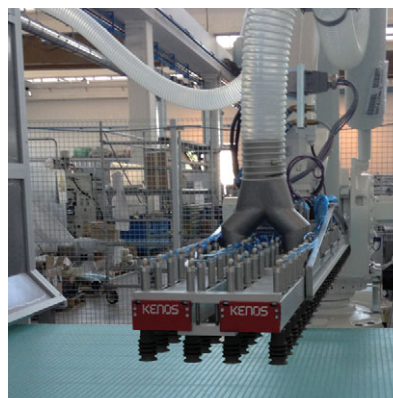
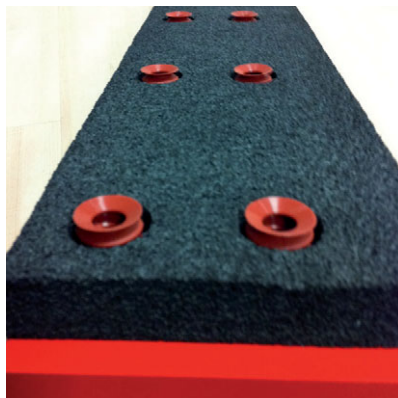


**SPE
CIALS**



Kenos is very active in developing special products. Gripping systems that are created to solve specific needs of customers. Products for the handling of particular objects, for special environmental conditions or to be able to manage complex movements. The process always starts from the study of the application, then passes to the design team who create 3D drawings of the gripping system. The prototype for testing is crucial to validate the special order. All of these steps are in close collaboration with the customer to optimize

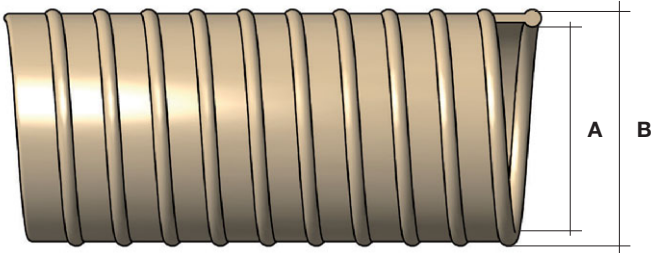
timing and the flow of information. Special products are what distinguishes Kenos on the market.



**ACCES
SORIES**

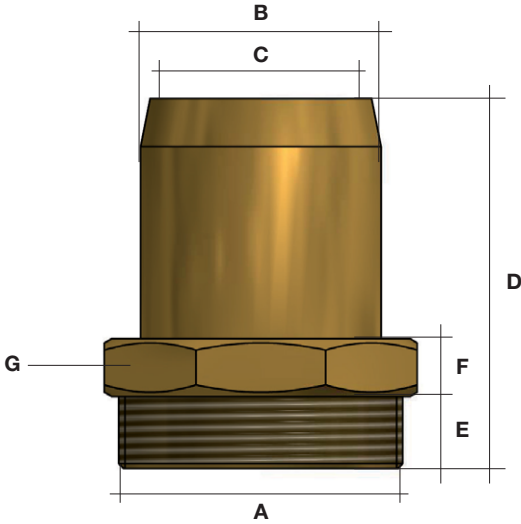
To complete and integrate our product range, we offer a series of accessories summarized in this section.

Hoses



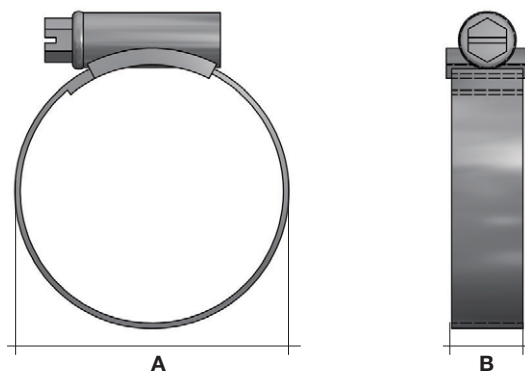
type	code	A (mm)	B (mm)	weight (g/m)	vacuum max (mbar)	radius curvature min. (mm)	temperature (C)
KTU-M-33-25-PU	K-23-00011	25	33	310	-940	47	-40/+90
KTU-M-41-32-PU	K-23-00010	32	41	450	-940	60	-40/+90
KTU-M-49-40-PU	K-23-00009	40	49	520	-830	72	-40/+90
KTU-M-61-50-PU	K-23-00008	50	61	710	-800	87	-40/+90
KTU-M-70-60-PU	K-23-00007	60	70	820	-750	102	-40/+90
KTU-M-87-75-PU	K-23-00012	75	87	1030	-600	126	-40/+90
KTU-M-101-90-PU	K-23-00013	90	101	1200	-520	149	-40/+90

Hose sleeve



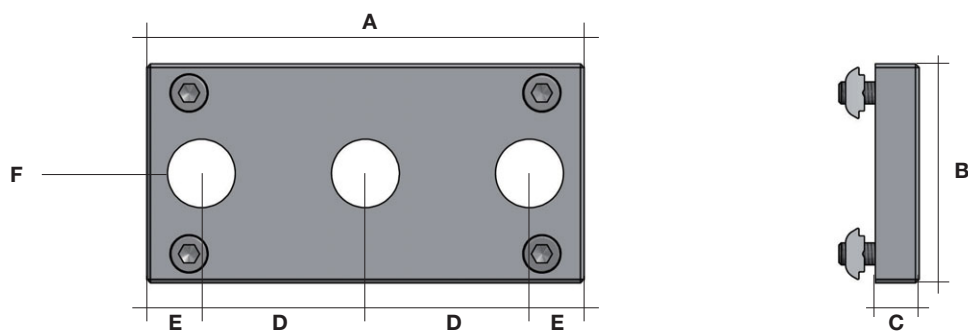
code	description	A	B (mm)	C (mm)	D (mbar)	E (mm)	F (mm)	G (mm)	weight (kg)
K-02-00129	KP-1-25	G 1"	25	20	59	13	7	36	0.120
K-02-00016	KP-1-32	G 1"	32	30	66	13	7	36	0.150
K-02-00017	KP-1-1/4-32	G 1-1/4"	32	30	62	13	7	36	0.200
K-02-00019	KP-1-1/2-40	G 1"-1/2"	40	34	68	16	9	53	0.260
K-02-00015	KP-2-50	G 2"	50	43	74	15	9	65	0.410
K-02-00018	KP-2-60	G 2"	60	52	78	15	9	65	0.450
K-02-00020	KP-2-1/2-75	G 2-1/2"	75	68	94	18	11	80	0.600
K-02-00123	KP-3-75	G 3"	75	68	91	17	12	96	0.700

Clamps



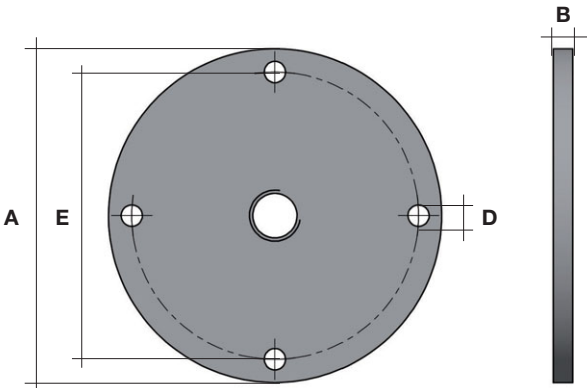
code	description	min/max (mm)	B (mm)
K-23-00201	KB-27-40	27-40	13
K-23-00202	KB-45-60	45-60	13
K-23-00203	KB-55-70	55-70	13
K-23-00204	KB-70-90	70-90	13

Mounting kit



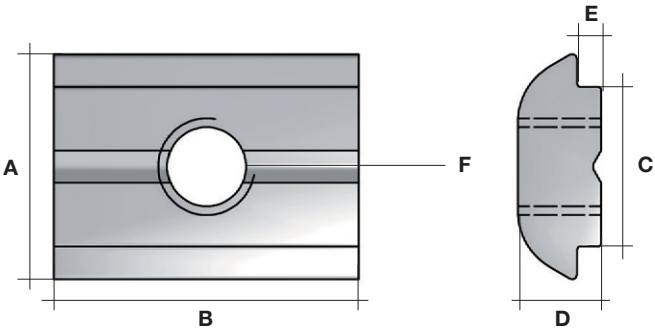
code	description	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F	weight (kg)
K-00-00117	KIT-FL-FX-KVG120-60	120	60	12	45	15	G 1/2"	0.24

Sealing flange



code	description	A (mm)	B (mm)	C	D (mm)	E (mm)	number of holes	weight (kg)
K-00-00081	CH-FL-CON-2-KVG120-60	86	5	G 1/4"	5.5	74	4 x 90°	0.1

Sliders roll-in hollow 10 mm



code	description	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
K-02-00029	11080-M5-U10	14	19	9.9	5.2	1.5	M5
K-02-00030	11081-M6-U10	14	19	9.9	5.2	1.5	M6
K-02-00031	11082-M8-U10	14	19	9.9	5.2	1.5	M8

EV connections cables



code	description
K-90-00104	CONN-M8L-3POLI-5MT-PUR

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