

Level Compensators



Level compensator LC

- Adjust differences in levels, for example on lifting devices with several suction cups.
- Less demand for exact positioning of vacuum handling device.
- Provides a certain degree of shock and vibration absorption.
- Allows for soft placement of cups on sensitive or thin objects.
- Non-rotational design, suitable for use with oval suction cups.
- Wide range of thread connections and stroke lengths.



Level compensators

- Adjust differences in levels, for example on lifting devices with several suction cups on a frame.
- A level compensator is often advantageous since it places less demand on exact vertical positioning, for example on a handling robot.
- The level compensator provides a certain degree of shock absorption.
- Level Compensator G1/2" with stiffer spring is identical to standard level compensator G1/2" except for thicker spring material. Suits e.g. robot vision systems in applications such as auto-racking.



Level compensator LC30

- Tailor made for the Vacuum Gripper System, VGS™, but can also be used together with other Piab products.
- Developed for use with standard profile systems.
- Easy installation with the option of fine adjustments and positioning of the suction cup.
- Non-rotational for use with, for example, oval suction cups. Can easily be made rotational.
- Quiet and reliable level compensation with load protection and shock absorption.

TECHNICAL DATA

Description	Load, vertical, max.	Spring force	Action range/ Stroke	Thread
Level compensator LC12-F0510 / LC12-M0510	–	1.9–4.1 N	10 mm	M5
Level compensator LC12-F0525 / LC12-M0525	–	2–5 N	25 mm	M5
Level compensator LC16-F1820 / LC16-M1820	–	3.6–9 N	20 mm	G1/8"
Level compensator LC16-F1835 / LC16-M1835	–	4.3–9.5 N	35 mm	G1/8"
Level compensator LC20-F1425 / LC20-M1425	–	4.1–11 N	25 mm	G1/4"
Level compensator LC20-F1450 / LC20-M1450	–	4.3–11.4 N	50 mm	G1/4"

Description	Load, vertical, max.	Spring force	Action range/ Stroke	Thread
Level compensator LC25-F3840 / LC25-M3840	–	5.6–16.5 N	40 mm	G3/8"
Level compensator LC25-F3880 / LC25-M3880	–	6–17 N	80 mm	G3/8"
Level compensator G1/2" with stiffer spring	490 N	90–150 N	15 mm	G1/2"
Level compensator M5	29.4 N	2–5 N	7 mm	M5
Level compensator G1/8"	245 N	3–9.4 N	20 mm	G1/8"
Level compensator G1/2"	490 N	24–37 N	15 mm	G1/2"
Level compensator LC30	700 N	5–42 N	30 mm	G3/8"

ORDERING INFORMATION

Description	Item no.
Level compensator LC12-F0510, M5 female, stroke 10	0127103
Level compensator LC12-F0525, M5 female, stroke 25	0127105
Level compensator LC12-M0510, M5 male, stroke 10	0127104
Level compensator LC12-M0525, M5 male, stroke 25	0127106
Level compensator LC16-F1820, G1/8" female, stroke 20	0124951
Level compensator LC16-F1835, G1/8" female, stroke 35	0124953
Level compensator LC16-M1820, G1/8" male, stroke 20	0124952
Level compensator LC16-M1835, G1/8" male, stroke 35	0124954
Level compensator LC20-F1425, G1/4" female, stroke 25	0124955
Level compensator LC20-F1450, G1/4" female, stroke 50	0124957
Level compensator LC20-M1425, G1/4" male, stroke 25	0124956
Level compensator LC20-M1450, G1/4" male, stroke 50	0124958

Description	Item no.
Level compensator LC25-F3840, G3/8" female, stroke 40	0124959
Level compensator LC25-F3880, G3/8" female, stroke 80	0124961
Level compensator LC25-M3840, G3/8" male, stroke 40	0124960
Level compensator LC25-M3880, G3/8" male, stroke 80	0124962
Level compensator LC30	0111552
Level compensator G1/2"	3350071
Level compensator G1/2" with stiffer spring	0114291
Level compensator G1/8"	3350069
Level compensator M5	3350068
Level compensator LC30	0111552



Level compensator LC30 EOAT

- Easy installation with the option of fine adjustments and positioning of the suction cup.
- Conical spring means very low total height in relation to stroke. For example, that can help increase cycle speed in sheet metal press-to-press stamping applications.
- Non-rotational for use with, for example, oval suction cups. Can easily be made rotational.
- Mounting interfaces for standard flexible end-of-arm-tooling (EOAT) systems.
- Developed for use with decentralized vacuum pump/generator units such as VGS™3010 and VGS™3040 or a centralized vacuum pump/generator.
- Quiet and reliable level compensation with load protection and shock absorption.



Level compensator – profile mount

- Compensates for differences in height.
- Provides certain degree of shock absorption.
- Fits on standard size extrusion.



Vactivator V18

- Actuated by vacuum only.
- Automatic extension and retraction.
- Self-adjusting stroke, the piston with a suction cup returns home as soon as it seals off the object.
- Suction cup ordered separately.
- Simple solution for high picking speed.
- Easy installation.
- Designed for millions of cycles under normal industrial conditions.

TECHNICAL DATA

Description	Load, vertical, max.	Action range/Stroke	Thread
Level compensator LC30 EOAT	700 N	30 mm	G3/8" / 1/8"NPSF
Level compensator – profile mount	700 N	50 mm	G3/8" / 3/8" NPT
Vactivator V18/20	4.9 N	20 mm	G1/8"
Vactivator V18/40	4.9 N	40 mm	G1/8"

ORDERING INFORMATION

Description	Item no.
Level compensator LC30 w ball joint LH	0124213
Level compensator LC30 w lock pin 16 LH	0124215
Level compensator LC30 w lock pin 19 LH	0124214
LCS 200 profile mounted level compensator 3/8" NPT female x 3/8" NPT male	0121219
LCS 200 profile mounted level compensator G3/8" female x G3/8" female	0121220
Vactivator V18/20	0129516
Vactivator V18/40	0129517



Kenos® level compensator – KSPH

- Adjust differences in levels, for example on lifting devices with several suction cups.



Kenos® level compensator – KSPH, non rotating

- Adjust differences in levels, for example on lifting devices with several suction cups.

TECHNICAL DATA

Description	Spring constant	Spring force	Action range/ Stroke	Volume
Level compensator KSPH, G 1/8" male, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	3,4 cm ³
Level compensator KSPH, G 1/8" male, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	4,52 cm ³
Level compensator KSPH, G 1/8" male, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	5,64 cm ³
Level compensator KSPH, G 1/8" female, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	3,7 cm ³
Level compensator KSPH, G 1/8" female, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	4,82 cm ³
Level compensator KSPH, G 1/8" female, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	5,94 cm ³
Level compensator KSPH, G 1/4" female, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	3,8 cm ³
Level compensator KSPH, G 1/4" female, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	4,92 cm ³
Level compensator KSPH, G 1/4" female, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	6,04 cm ³
Level compensator KSPH, G 1/4" male, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	4,18 cm ³
Level compensator KSPH, G 1/4" male, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	5,6 cm ³
Level compensator KSPH, G 1/4" male, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	6,72 cm ³
Level compensator KSPH, G 3/8" female, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	4,48 cm ³
Level compensator KSPH, G 3/8" female, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	5,6 cm ³

Description	Spring constant	Spring force	Action range/ Stroke	Volume
Level compensator KSPH, G 3/8" female, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	6,72 cm ³
Level compensator KSPH, G 3/8" male, stroke 25	0,7 N/mm	6,37–23,87 N	25 mm	5,59 cm ³
Level compensator KSPH, G 3/8" male, stroke 50	0,46 N/mm	2,81–25,81 N	50 mm	6,76 cm ³
Level compensator KSPH, G 3/8" male, stroke 75	0,26 N/mm	4,71–24,21 N	75 mm	7,88 cm ³
Level compensator KSPH, G 1/2" male, stroke 25	3,83 N/mm	19,14–114,83 N	25 mm	9,5 cm ³
Level compensator KSPH, G 1/2" female, stroke 25	3,83 N/mm	19,14–114,83 N	25 mm	9,5 cm ³
Level compensator KSPH, G 1/2" male, stroke 50	2,23 N/mm	11,16–122,8 N	50 mm	4,52 cm ³
Level compensator KSPH, G 1/2" female, stroke 50	2,23 N/mm	11,16–122,8 N	50 mm	4,82 cm ³
Level compensator KSPH, G 1/2" male, stroke 75	1,41 N/mm	7,05–112,82 N	75 mm	5,64 cm ³
Level compensator KSPH, G 1/2" female, stroke 75	1,41 N/mm	7,05–112,82 N	75 mm	5,94 cm ³

ORDERING INFORMATION

Description	Item no.	Item no. (non rotating)
Level compensator KSPH, G 1/8" male, stroke 25	0208900	0208901
Level compensator KSPH, G 1/8" male, stroke 50	0208902	0208903
Level compensator KSPH, G 1/8" male, stroke 75	0208904	0208905
Level compensator KSPH, G 1/8" female, stroke 25	0208906	0208907
Level compensator KSPH, G 1/8" female, stroke 50	0208908	0208909
Level compensator KSPH, G 1/8" female, stroke 75	0208910	0208911
Level compensator KSPH, G 1/4" female, stroke 25	0208912	0208913
Level compensator KSPH, G 1/4" female, stroke 50	0208914	0208915
Level compensator KSPH, G 1/4" female, stroke 75	0208916	0208917

Description	Item no.	Item no. (non rotating)
Level compensator KSPH, G 1/4" male, stroke 25	0208918	0208919
Level compensator KSPH, G 1/4" male, stroke 50	0208921	0208922
Level compensator KSPH, G 1/4" male, stroke 75	0208923	0208924
Level compensator KSPH, G 3/8" female, stroke 25	0208925	0208926
Level compensator KSPH, G 3/8" female, stroke 50	0208927	0208928
Level compensator KSPH, G 3/8" female, stroke 75	0208929	0208930
Level compensator KSPH, G 3/8" male, stroke 25	0208931	0208932
Level compensator KSPH, G 3/8" male, stroke 50	0208933	0208934
Level compensator KSPH, G 3/8" male, stroke 75	0208935	0208936
Level compensator KSPH, G 1/2" male, stroke 25	0209472	0209478
Level compensator KSPH, G 1/2" female, stroke 25	0209473	0209479
Level compensator KSPH, G 1/2" male, stroke 50	0209474	0209480
Level compensator KSPH, G 1/2" female, stroke 50	0209475	0209481
Level compensator KSPH, G 1/2" male, stroke 75	0209476	0209482
Level compensator KSPH, G 1/2" female, stroke 75	0209477	0209483