

K&F VIDA L Flying Frame



User's Manual

EN | Translation of the original instructions

Revision 1.7

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**Important Information,
Please Read Before Use!**

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1. Introduction

Thank you for purchasing a KLING & FREITAG product.

1.1 Icons Used



This icon indicates a risk of injury or death. Not following these instructions may result in serious health problems including potentially fatal injuries.



This icon indicates a possibly dangerous situation. Not following these instructions may cause minor injuries or damage.



This icon marks instructions for proper use of the described products. Not following these instructions may cause malfunctions or damage.



This icon marks information provided for simplified use of the described products.

1.2 About this user's manual

© KLING & FREITAG GMBH, all rights reserved.

All specifications regarding the features of the described products and applicable safety guidelines provided in this manual are based on information available at the time of publishing.

We assume no responsibility for technical specifications, dimensions, weights, and properties.

All information in this manual is subject to change without notice.

All persons who use this speaker accessories must have this guide and all further information for safe operations available to them during assembly, disassembly, and use. The speaker accessories must not be set up nor operated unless this manual has been read, understood and kept readily available on site.

All KLING & FREITAG manuals are originally authored in German.

KLING & FREITAG spare manuals are separately available for order or can be downloaded

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2. Product Description

The VIDA L flying frame is designed for installing and flying up to 8 ###var### speakers. Use this flying frame only for flying and tilting VIDA L speakers. When used in combination with a second VIDA L flying frame unit and a flying frame extension, tilt angles of up to 90° can be achieved, for example, for installing horizontal arrays.

2.1 Flying Frame

The VIDA L flying frame features a bore rail at the top. It allows for quickly and safely fixing the load adapter in 22 positions using 2 fixing pins. The various positions allow for achieving a down-tilt angle of the speaker or array (whichever is used). To find the appropriate position, run a simulation of the overall setup using the VIDA App to find the best load-adapter position and tilt angle.

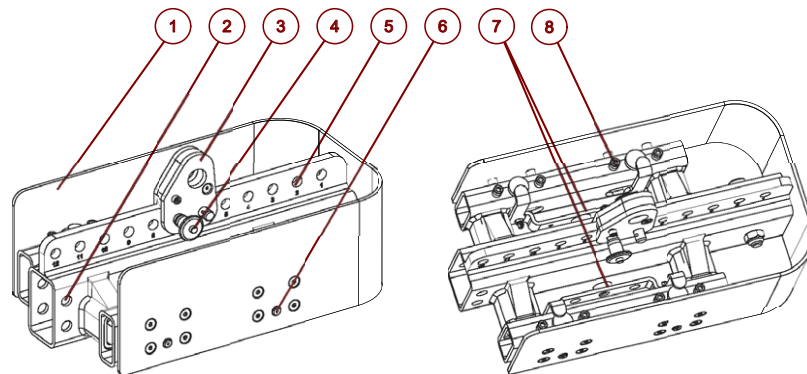
In addition, the VIDA L flying frame provides 4 parking bays for the optional connector sets plus a fixture for the VIDA L flying frame extension.

The flying frame also has 2 built-in movable clips used for locking unused connector sets in their parking bays and securing those in operation to the flying frame.

2.1.1 Items Included VIDA L Flying Frame

- (1x) flying frame for suspending VIDA L speakers
- (1x) Shiftable load adapter
- User's manual (1 item)

2.1.2 Overview of flying frame Components



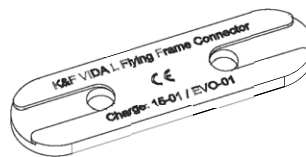
1. (1x) Flying frame
2. Bore for securing the flying frame extension
3. (1x) Shiftable load adapter
4. (2x) Fixing pin for fastening
5. Bore rail with indexes for fastening the load adapter
6. Connecting pin for fastening and securing various connecting adapters
7. Magnetic clips
8. Park slot for connector sets (optional)

2.2 Connector set

The optional connector sets are required for attaching the VIDA L flying frame to the bottom of a VIDA L speaker. Such a configuration is required when flying one or more speakers as a horizontal array.

After operation and dismounting, you can lock and store the connector sets in the flying frame parking bays.

- (4x) VIDA L connector set for attaching a VIDA L flying frame to the bottom of a VIDA L speaker
- (1x) User's Manual



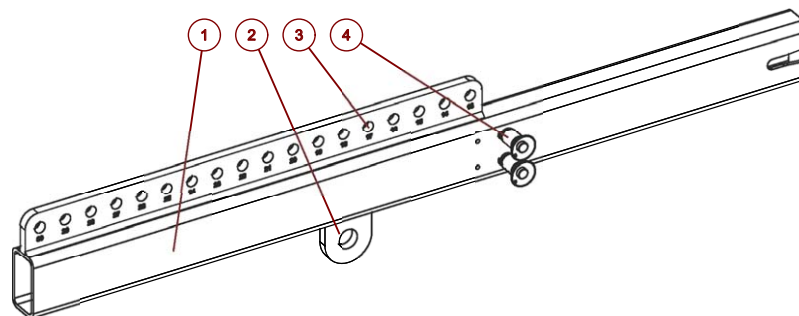
2.3 Flying Frame Extension

The VIDA L flying frame extension is used for achieving a larger down-tilt angle or for configuring double-stranded suspension.

2.3.1 Items included the VIDA L flying frame extension

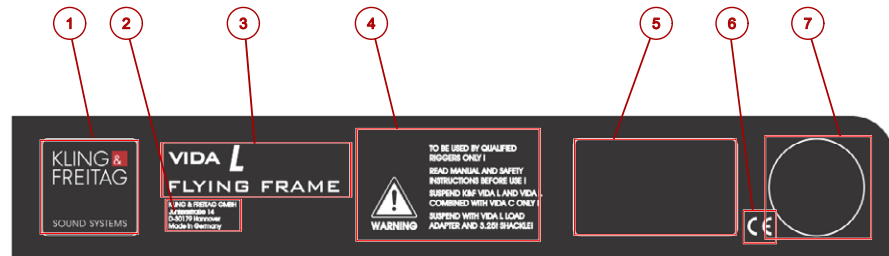
- (1x) flying frame extension for increasing the down-tilt angle and for securing flying VIDA L speakers
- (1x) User's Manual

2.3.2 Overview of VIDA L flying frame extension



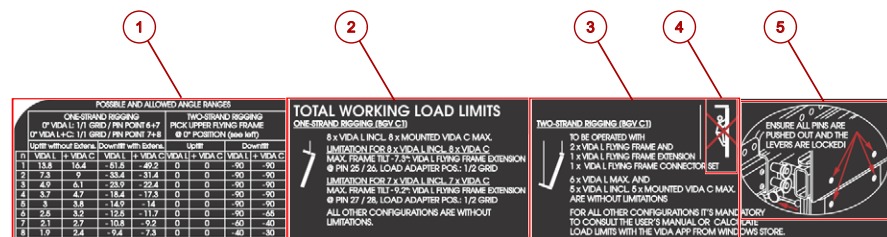
1. (1x) VIDA L Flying Frame Extension
2. Stationary suspension / bearing point
3. Extended bore rail for fastening the load adapter
4. (2x) K&F suspension pins for fastening the flying frame extension

2.4 Identification plate



1. Manufacturer logo
2. Manufacturer address
3. Product name
4. Safety Instructions
5. Serial number, weight
6. CE mark
7. TÜV certificate

2.5 Product Labels and Icons



1. Angle grid
2. Max. load (one-strand suspension)
3. Max. load (two-strand suspension)
4. Safety instructions
5. Safety instructions on operating rigged speakers (see the “Attaching a Flying Frame to a Speaker” chapter on page 17)
6. CE mark
7. TÜV certificate

3. Intended Use

The VIDA L flying frame is designed for flying a maximum of 8 VIDA L speakers at a specific tilt angle.

For commercial use in interior spaces as specified in this document only!

Unless otherwise stated, use only KLING & FREITAG original parts for mounting the speakers. Never use other parts (in particular, parts not made by KLING & FREITAG).

Any other use not described in this document is not an intended use.

4. Safety Instructions



Warning

The information described here does not relieve the user of the duty to follow the given safety requirements and legal regulations.

Only qualified technicians are permitted to perform the installation steps. Be sure to use personal protective equipment at all times.

The technicians responsible for installing the system on site are responsible for and guarantee safe setup and use.

To prevent injury and damage, be sure to securely place or suspend arrays as specified in the DGUV regulations 17 (BGV C1) or similar locally applicable accident-control standards.

Unless otherwise stated, use only KLING & FREITAG original parts for mounting the speakers. Never use other parts (in particular, parts not made by KLING & FREITAG).

In mobile and stationary installations, always use installation parts supplied by KLING & FREITAG.

Be sure to always visually inspect all components before use. In fixed installations, regularly check all array components for signs of wear. Visual inspection includes checking all speaker-system and flying components, supporting components (e.g. trusses, ceiling structures, etc.), and all screwed connections. During the inspection, check all flying-system components carefully for deformation, cracks, bolt damage, and corrosion. Remember checking the ball-lock pin and pin bolts for proper functioning. Also check slings and lifts (e.g. shackles, chains, and steel ropes) carefully for wear and deformation. If there are signs of wear, cracks, or deformation, etc., replace the affected parts immediately. See also the 'Care and

4.1 Safety Instructions for Flying Configurations



Warning

**Loudspeakers falling down impose a deadly risk for people standing near-by!
Never use the array if you have any doubt regarding its safety and reliability!**

Only qualified event technicians are permitted to suspend a VIDA L system.

Never suspend the speakers without the correct flying frame.

Maximum-load specifications refer to configurations including cabling and any fittings. Use the simulation function provided by the VIDA App software to find out whether your configuration loads the flying frame as allowable. The VIDA App software does not account for the weight of extra cabling and fittings! Remember to take any such extra weight into account—if necessary, reduce the number of speakers as required.

Ensure that all connections are secured against coming loose and that only authorized, statically tested and correctly sized supports, mounting equipment, wire ropes and chains are used. Follow the relevant specified safety factors. Be sure to follow the relevant national specifications, norms, and safety regulations.

Note that every suspension point as well as the supporting structure of the building (i.e. ceiling points, cross beams and stage or PA tower, etc.) must be capable of carrying the total load of the system (including cabling and additional fittings).

Beachten Sie, dass die Befestigungspunkte an der Hallendecke (z. B. Lastösen, Anschlagpunkte oder Kettenzüge) der Unfallverhütungsvorschrift DGUV Vorschrift 17 (BGV C1) oder den entsprechenden Sicherheitsvorschriften Ihres Landes entsprechen und die Gesamtlast von einem ermächtigten Gutachter abgenommen wurde. When in doubt, request a confirmation by local authorities.

Also follow the operating and safety instructions supplied with the product you intend to suspend the flying parts from (e.g. a truss). Never mount the flying parts to a product if there is no information on safe use and maximum load.

Even with two-fall suspension, each chain and motor must be capable of carrying the entire array mass! Make sure that the motor chains hang down vertically and are not twisted, and that the motors are located at the required positions.

During setup, installation, and dismounting, when using chain hoists that do not comply with the DGUV regulations 17 (BGV C1) or similar locally applicable accident-control standards, make sure no persons stand in the danger zone below or near the speaker system.

When using a BGV C1 motor, the VIDA L system is intrinsically safe, so no secondary safety components are required in operation;

Never use signal cables or power cords for suspending, aligning, or securing the systems. When laying the connecting cables, make sure that nobody can trip.

Ensure there is sufficient clear space for assembling and suspending the array on-site.

Remember that the array may swing out wide!

Permit only personnel directly involved with assembly or disassembly to access the working area. The person in charge must announce all flying-part lifting and lowering activities beforehand and make sure all people attending are aware. In this case, all persons present must leave the swing and lifting range immediately.

Never use the flying parts for lifting or safeguarding persons or objects other than the above speakers.

Never use an array as a climbing aid.

5. VIDA L Setup



For commercial use as specified in this document only!

To prevent personal injury and damage, be sure to securely place or suspend the speaker as specified in the locally applicable standards.

The information described here does not relieve the user of the duty to follow the given safety requirements and legal regulations.

The persons in charge with putting up the speaker are responsible for safe setup and use and must guarantee it.

In mobile and stationary installations, always use installation parts supplied by KLING & FREITAG. KLING & FREITAG

Unless otherwise stated, use genuine KLING & FREITAG parts only. KLING & FREITAG Never use other parts (in particular, parts not made by KLING & FREITAG).

Be sure to always visually inspect all safety-related speaker and accessory components before use. In stationary installations, check the speaker and accessories for signs of wear at regular intervals. If there are signs of wear, cracks, or deformation, etc., replace the affected parts immediately.

5.1 Required Tools

The following is required for mounting the VIDA C to the VIDA L speaker:

- Allen wrench (6 mm)

5.2 Preparing the flying frame

Using the VIDA App software, you can simulate both one-stranded and two-stranded configurations.

- For a **one-stranded** configuration, you require **1** flying frame plus **1** load adapter.
- For a **two-stranded** configuration, you will need to use **2** flying frames, **1** load adapter, and **1** flying frame extension.

To prepare the flying frame, perform the following steps:

- Simulate setup using the VIDA App including down-tilt angle determination.
- Identify the required location of a load adapter and install the adapter
- Mount the flying frame extension (if necessary)
- Prepare a second flying frame including connector set installation (if necessary)

5.2.1 Down-tilt Angle



Risk of injury from falling objects!

Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

With these array setups, be sure not to use the following bore combinations:

VIDA L without VIDA C:

7 x VIDA L	28/29 to 29/30 (forbidden)
8 x VIDA L	26/27 to 29/30 (forbidden)

VIDA L with VIDA C:

5 x VIDA L with VIDA C	29/30 (forbidden)
6 x K&F VIDA L with K&F VIDA C	26/27 to 29/30 (forbidden)
7 x VIDA L with VIDA C	24/25 to 29/30 (forbidden)
8 x VIDA L with VIDA C	23/24 to 29/30 (forbidden)

At least 1 flying frame and 1 flying frame extension (if necessary) are required for flying VIDA L arrays.

The load adapter can be mounted to various positions on the flying frame. In addition, you can choose between full-grid and half-grid configurations.

Use the VIDA App for simulating the intended configuration and determine the required down-tilt angle.

See the tables below for minimum and maximum values for various VIDA L speaker-array configurations with or without VIDA C and one-stranded or double-stranded suspensions.

Where a negative angle is specified, the speaker faces downwards.

Table 1: One-stranded suspension without/with VIDA C

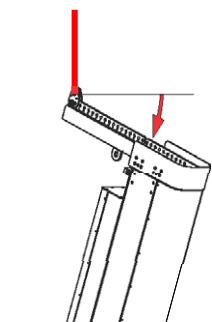
	Array size	Minimum angle	Maximum angle
	1	18.9 / 20.3	-51.5 / -49.2
	2	9.0 / 10.3	-33.4 / -31.4
	3	5.8 / 6.8	-23.9 / -22.4
	4	4.2 / 5.0	-18.4 / -17.3
	5	3.3 / 4.0	-14.9 / -13.9
	6	2.7 / 3.3	-12.5 / -9.7
	7	2.3 / 2.8	-9.8 / -7.4
	8	2.0 / 2.5	-7.9 / -6.1

Table 2: Two-stranded suspension without/with VIDA C



	Array size	Minimum angle	Maximum angle
1	0.0	0.0	-90.0
2	0.0	0.0	-90.0
3	0.0	0.0	-90.0
4	0.0	0.0	-90.0
5	0.0	0.0	-70.0 / -45.0
6	0.0	0.0	-40.0 / -30.0
7	0.0	0.0	-25.0 / -20.0
8	0.0	0.0	-20.0 / -15.0

5.2.2 Load Adapter

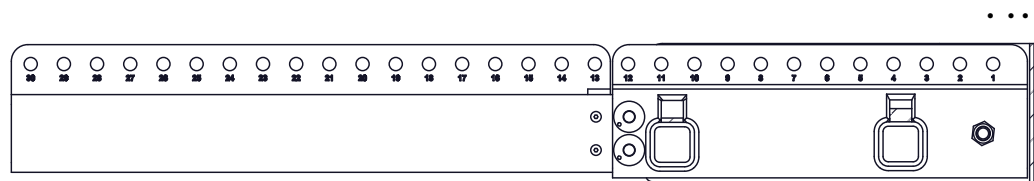


Risk of injury from falling objects!

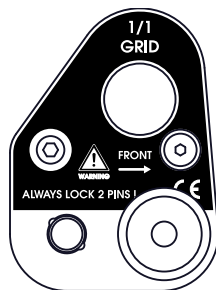
Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

In larger arrays of VIDA L or VIDA L with VIDA C some pickpoints may not be used. Please refer to chapter 'Down-tilt Angle' from page 11.

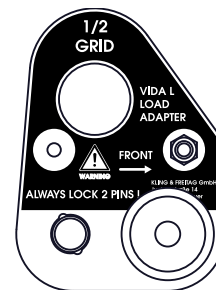
Use the VIDA App for determining the flying component bores to insert the load adapter into. Refer to VIDA App calculations for correct selections. The indicated numbers refer to the bore numbers on the flying component. With bore 13 or higher, you need to use the VIDA L flying-frame outrigger.



As either side of the load adapter can be used, you can set the position in half-steps. This doubles the flying-component frame bore grid and thus the adjustment options. Load adapters have a 1/1 Grid marking on one side and a 1/2 Grid marking on the other side. The VIDA App provides information on which load-adapter grid should be used. With the 1/1 grid **(A)**, the arrow on the 1/1 side of the load adapter points towards the front of the flying component; with the 1/2 grid **(B)**, the arrow on the 1/2 side of the load adapter points towards the front of the flying component.



A: 1/1 load-adapter grid (Full Grid)



B: 1/2 load-adapter grid



Tip for unneeded accessories

An appropriate bay exists for each accessory items such as connector sets or fixing pins. Whenever an accessory is not in use, lock it in the appropriate bay. Doing so will ensure that all accessories will be at hand when needed.

5.2.3 Moving the Load Adapter



Risk of injury from falling objects!

Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

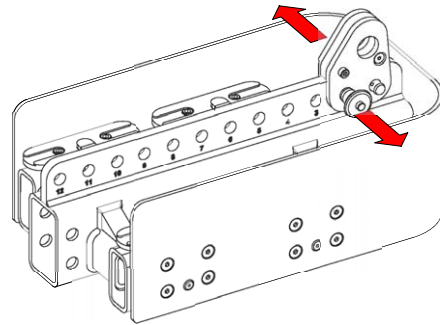
In larger arrays of VIDA L or VIDA L with VIDA C some pickpoints may not be used. Please refer to chapter 'Down-tilt Angle' from page 11.

Be sure to always secure the K&F VIDA L load adapter using two ball-lock pins.

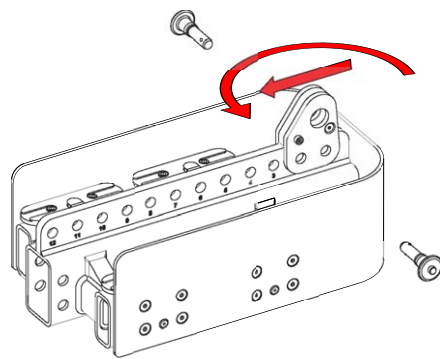
The position and grid of the load adapter determine the down-tilt angle of a flying VIDA L system with or without VIDA C.

Follow the steps below to place the load adapter to the bores identified using the VIDA L software:

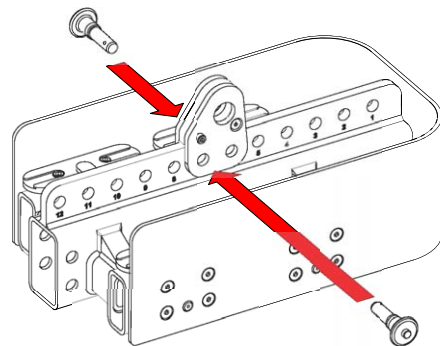
- 1) Use the VIDA App for simulating the intended configuration and determine the required down-tilt angle.
Double-check, whether you need to mount the load adapter with the 1/1-grid or 1/2-grid orientation. For more information on load adapters, refer to the 'Load Adapters' chapter on page 13.
Remove the two lock pins from the load-adapter base.



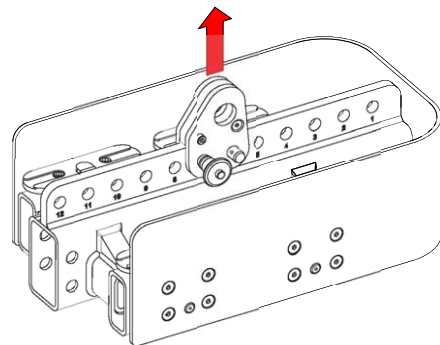
- 2) Change the orientation of the load adapter as required (1/1 or 1/2 grid), then place it at the previously identified position.



- 3) To attach and secure the load adapter, always use **both** of the two lock pins supplied.
Never fasten the K&F VIDA L load adapter using a **single** ball-lock pin only!



- 4) Double-check the load adapter and, in particular, the two fixing pins for secure fit.

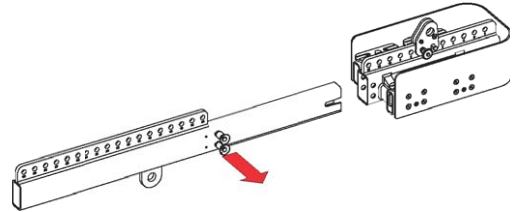


This completes the preparation stage, meaning that the flying frame can now be mounted to a VIDA L speaker.

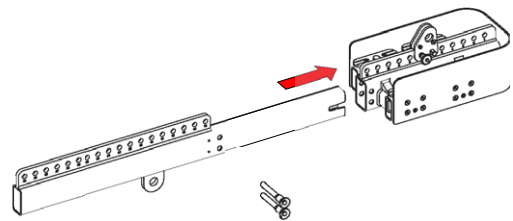
5.2.4 Mounting the flying frame extension

Follow the steps below to mount the VIDA L flying frame extension:

- 1) Remove the two lock pins securing the flying frame extension.

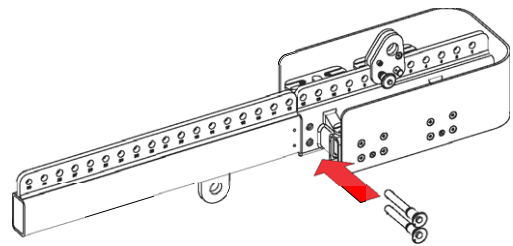


- 2) Insert the flying frame extension into the bracket provided on the VIDA L flying frame.

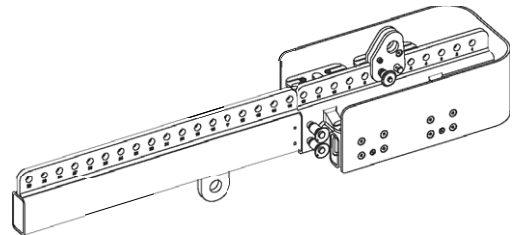


Warning

- 3) Never secure the flying frame extension using only a **single** fixing pin!
To attach and secure the flying frame extension, always use **both** of the two fixing pins supplied.



- 4) Check the fixing pins and the flying frame extension carefully for secure fit.



Unmounting the flying frame extension is performed in reverse order.



5.3 Mounting the VIDA L flying frame

Never use the system if you have any doubt regarding its safety and reliability!

Only qualified event technicians are permitted to suspend a flying frame.

To fly the VIDA L system, you need either a VIDA L flying frame or a VIDA L flying bracket.

Be sure never to fly the system without the use of either a VIDA L flying frame or a VIDA L flying bracket!

When using a BGV C1 or a D8+ motor, the VIDA L system is intrinsically safe, so no secondary safety components are required. However, suspending the VIDA L system from a different motor requires using a secondary safety component. You can attach it to the 3.25 t shackle with no drop. Refer to VPLT SR 2.0 ("Provision and Use of Electric Chain Hoists") or similar locally applicable standards for how to properly implement secondary safety components.

Make sure no persons are standing below the configuration while lifting.

When setting up, double-check **each** fixing pin for secure fit.

Be sure to use the VIDA App software for verifying the tilt angle for the intended number of speakers.

The tilt angle calculated by the software must NOT be exceeded.

To prevent injury and damage, be sure to securely place or suspend arrays as specified in the DGUV regulations 17 (BGV C1) or similar locally applicable accident-control standards.

5.3.1 Attaching a flying frame to a Speaker

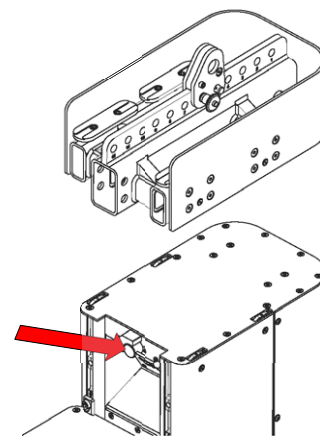


Risk of injury from falling objects!

Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

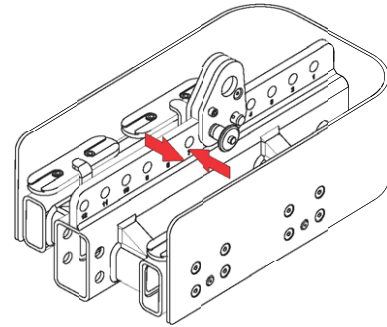
After each step, make sure that all connections between components are secure and all required components have been mounted.

- 1) To prepare the speakers for accepting a VIDA L component, use the upper lever for moving out, locking, and securing the connecting adapters as explained in the VIDA L speaker Operation Instructions.



- 2) To prepare the flying frame:
- Position the load adapter as calculated by the VIDA App
 - Mount the load adapter as calculated by the VIDA App
 - Mount the flying frame extension to the flying frame

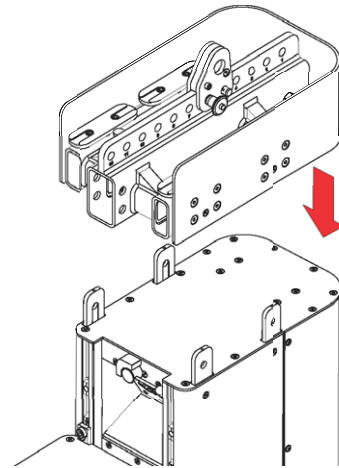
Push the flying frame clips inwards towards the support until they are held by the built-in magnets.



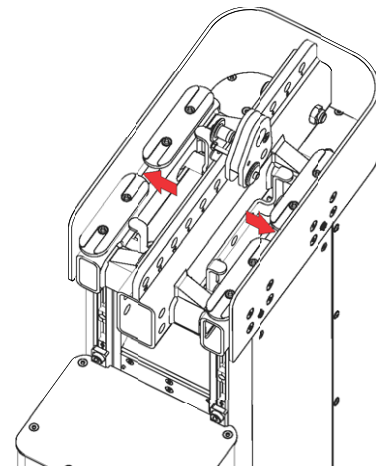
Warning

3) **Crushing hazard!**

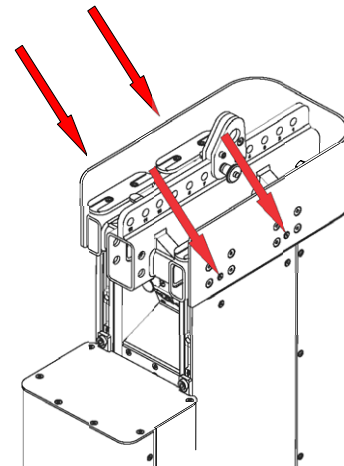
When mounting, avoid crushing your body parts between system components moving towards each other. During the process, never put your hands between connecting faces! Put the flying frame onto the speaker. When doing so, make sure that the connecting adapters slide in between the spacer sleeves of the respective pin bolt—at the front, the flying bracket must sit flush with the speaker.



- 4) Now, press the clip inside the flying frame outwards to lock and secure the connecting adapter to the connecting pin, thus firmly and securely connecting the flying frame to the speaker.

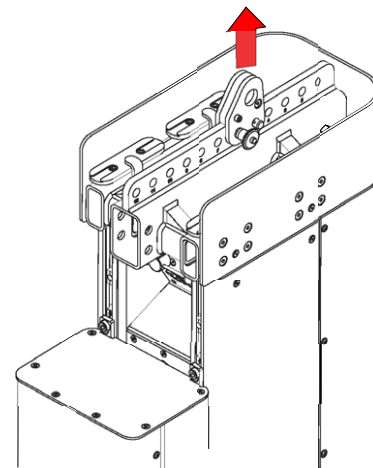


- 5) Make sure that the chamfers of the 4 connecting pins sit flush with the flying frame surface.



Warning

- 6) **Risk of injury from falling objects!**
 Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!
 Be sure to lift the speaker array using a **3.25-t shackle** only.
 Make sure that the load adapter is fastened and secured with two ball-lock pins.
 On both sides of the flying frame as well as on the speaker, make sure that you can see and feel the chamfers of the 4 connecting pins are flush with the walls from outside.
 Make sure that the lever has returned to its captive position.
 You can now wire the speaker and lift it using a suitable lift and a 3.25 t shackle mounted to the VIDA load adapter.



5.3.2 Mounting the flying frame with connector sets



Risk of injury from falling objects!

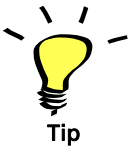
Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

Ensure that each connector set is securely fastened to the flying frame.

Make sure that the lever has returned to its captive position.

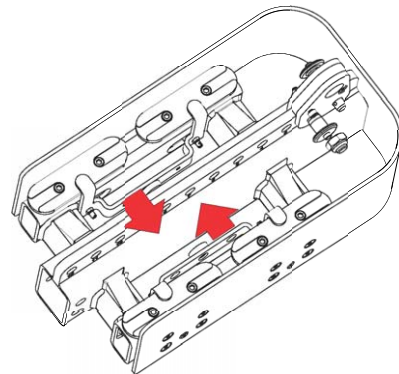
To achieve a larger down-tilt angle for the VIDA L system that the rearmost load-adaptor position on the flying frame extension would allow, you need a second flying frame, the flying frame extension, and the connector sets. Use the connector sets to attach the second flying frame to the **bottom** of the speaker array. Then, mount another suspension fall to that second flying frame for independently lifting the speaker array, thus allowing for larger down-tilt angles.

Be sure to use the special connector sets supplied by KLING & FREITAG for mounting the second VIDA L flying frame to the **bottom** of a VIDA L system.

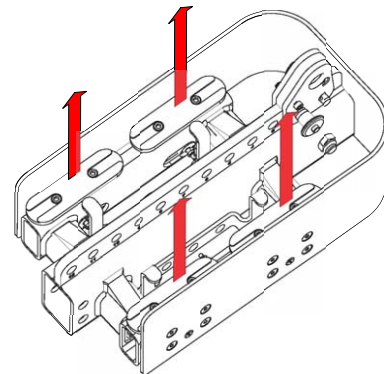


To ensure that the connector sets are available whenever needed and cannot get lost, we recommend sliding them into their respective parking bays when not in use.

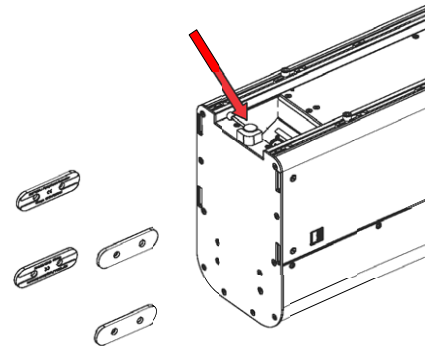
- 1) Push the flying frame clips towards the center until they are held by the built-in magnets.



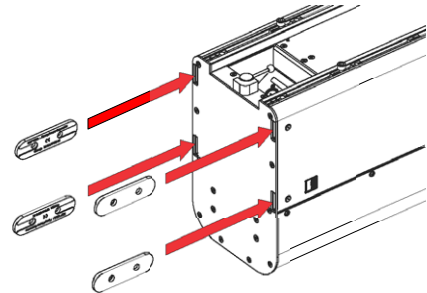
- 2) Move out the connector sets as necessary.



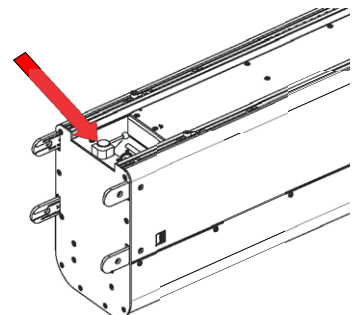
- 3) Operate the lever to prepare the bottom for accepting the connector sets. To do so, pull out the lever longitudinally, then rotate it clockwise.



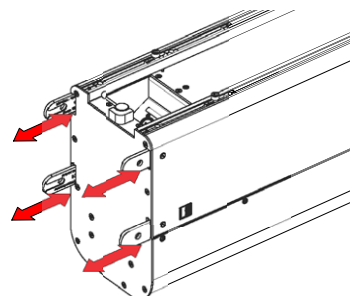
- 4) Insert the connector set into the speaker. Make sure the guide grooves inside the connector sets are aligned inwardly.



- 5) To lock the connector sets, rotate the lever anti-clockwise into its original position.

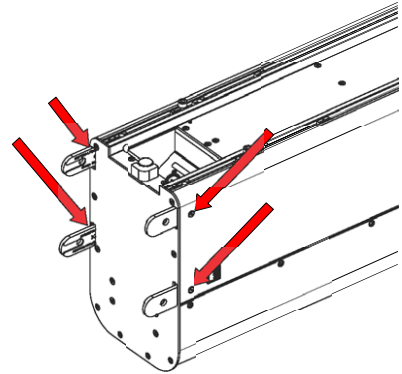


- 6) Push each connector set into the housing. Ensure all of them lock into place.

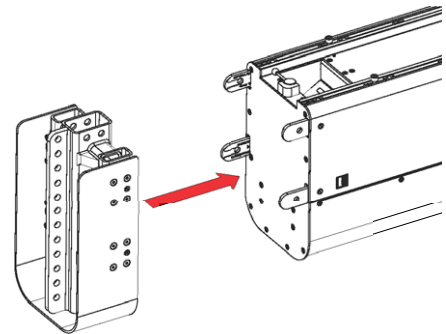




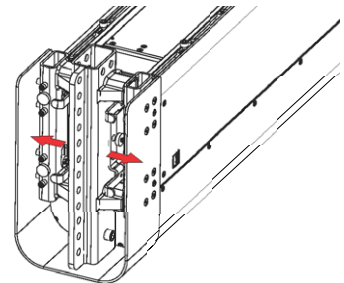
- 7) Make sure that the chamfers of the 4 connecting pins sit flush with the housing surface.



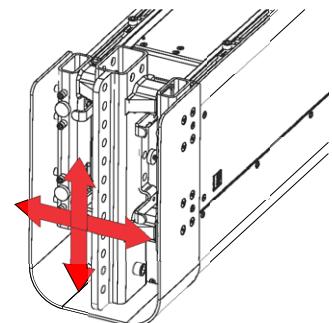
- 8) Put the flying frame onto the connector sets.



- 9) To attach the flying frame, push the flying-frame clips outwards to their initial position.

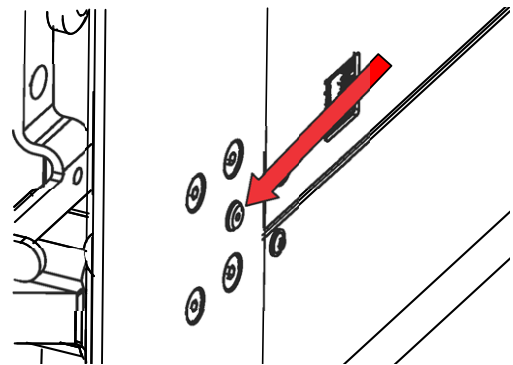
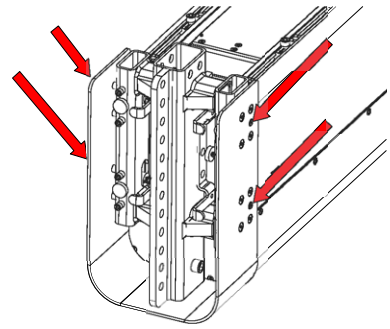


- 10) Check the flying frame for secure fit.

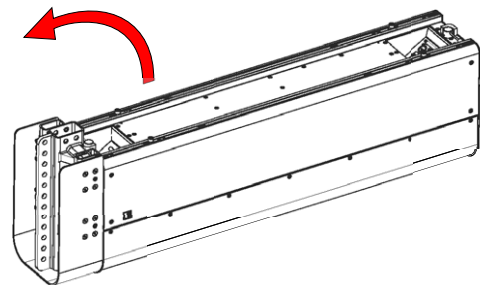




- 11) On both sides of the flying frame, make sure that the chamfers of the 4 connecting pins sit flush with the outside surface.



- 12) Erect the speakers.



Now, you can attach the flying frame extension, then mount the speaker below an already suspended speaker.

5.4 Setting up a Speaker Array



Tip

To set up a speaker array, we recommend interconnecting all speakers on the ground and then lift them using the VIDA L flying frame and a suitable lift off their transportation cases.



Warning

When doing so, be sure to lift no more than 5 VIDA L plus VIDA C or 6 VIDA L without VIDA C during the same operation.

If setting up the array on the ground is not feasible due to lack of space, you may also mount the speaker array right out of the cases. When doing so, mount the speakers from the upright case one after another as described in the 'Stacking Speakers' chapter on page 26.

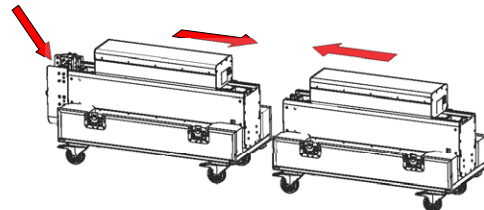


Notice

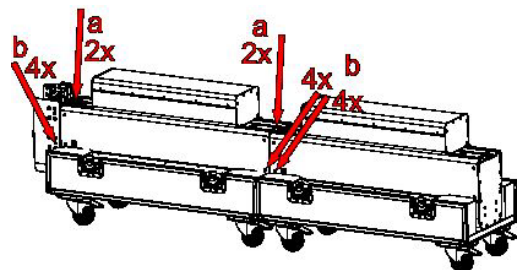
Depending on the ground condition, connecting the speakers may or may not be difficult. If you experience problems, try selecting a different place for connecting the speakers.

After doing so and mounting the required number of flying frames, connect the uppermost flying frame to the lift using a 3.25 t shackle.

- 1) To connect the speakers, prepare the end faces, then push the horizontally arranged speakers together. Afterwards, connect them as described in the VIDA L user's manual. Mount the flying frame to the speaker array.

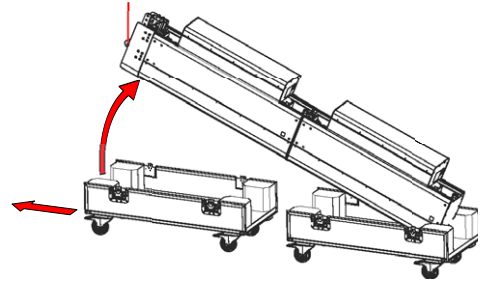


- 2) Make sure that all levers (a) have returned to their horizontal captive position. For each speaker connection, make sure that the chamfers of the 4 connecting pins (b) sit flush with the housing surfaces of each upper and lower speaker.



**Warning**

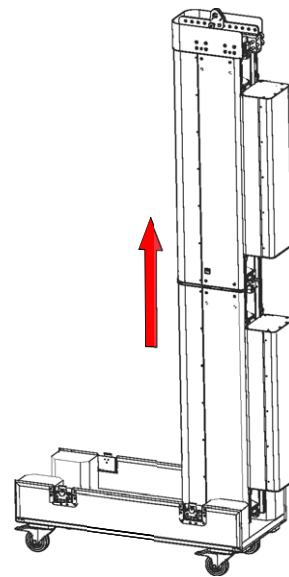
- 3) Be sure to lift the speaker array using a **3.25-t shackle** only.
Using a 3.25 t shackle, mount the lift to the VIDA flying frame load adapter.

**Caution**

Pull back the rear case below the speaker until the speaker edge is located between the case casters. Carefully lift the speaker array.

**Warning**

- 4) When lifting, the lower array part may start swinging out. Make sure that no persons are standing in the swing-out range of the speaker array.



5.5 Stacking Speakers



Risk of injury from falling objects!

Improperly mounted speakers are not safe but pose a potential hazard.

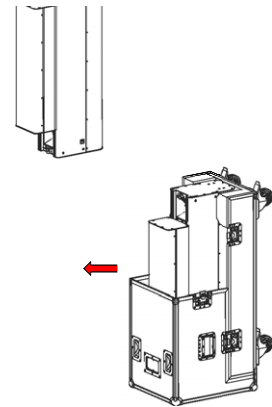
Whenever mounting the system, make sure on both sides of each speaker that the chamfers of the 4 connecting pins sit flush with the housing surface.



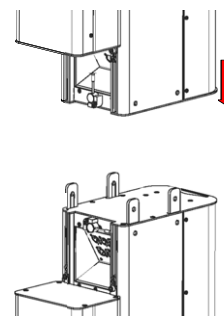
If you need to mount speakers to already suspended ones, we recommend always mounting the lower speaker out of its upright transportation case and then lifting it off the case.

This way, you don't need to remove the speaker from the case first, thus avoiding scratches on the speaker bottom that may result from placing it outside the case.

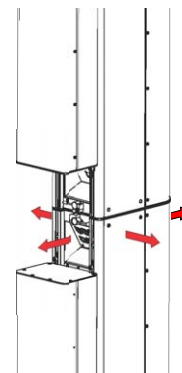
- 1) Prepare the suspended speaker for accepting the connecting adapters of another speaker.
Move out and lock the connecting adapters of another VIDA L to prepare it for mounting.
Place it below the suspended speaker(s).



- 2) **Risk of injury!**
While mounting the speakers to one another, never put your hands between the connecting faces (i.e. speaker bottom and top faces)!
Slowly and carefully lower the upper speaker onto the lower one.

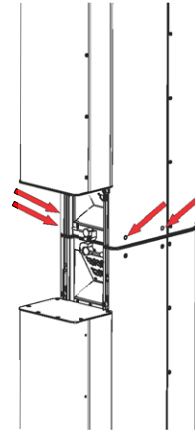


- 3) To support the adapters snapping into each other, gently push the lower speaker in every direction.

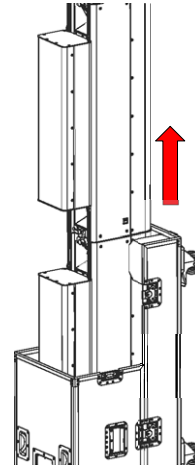




- 4) Make sure that the chamfers of the 4 connecting pins of the upper speaker sit flush with the housing surface and the speaker is firmly mounted to its lower counterpart.
- Make sure that the levers of all speakers are locked in their horizontal captive position.
- Never operate the lever on load!



- 5) Carefully lift the speakers, thus pulling the bottom speaker off the case.
- Make all cabling connections during mounting as and when appropriate.



To attach more speakers at the bottom, repeat the above procedure for each speaker.

When finished, move the array to the desired position.

5.6 Double-stranded Arrays



Risk of injury from falling objects!

Improperly mounted speakers are not safe for suspending. Objects falling down impose a deadly risk for people standing near-by!

Never suspend an array made up of more than 4 VIDA L units horizontally (i.e. in a 90° angle).

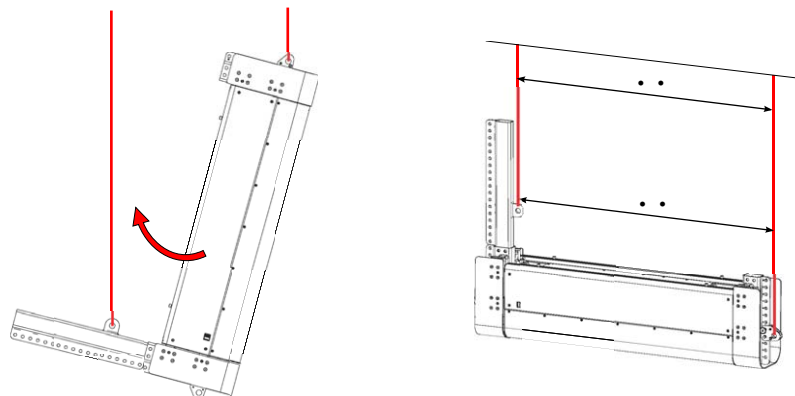
For information on maximum down-tilt angles (with or without VIDA C), refer to the Downtilt Angle section on page 11.

You can fly double-stranded arrays with larger tilt angles compared to single-stranded arrays. When using a double-stranded array, you additionally need 1 flying frame, 4 connector sets, and 1 flying frame extension. This second flying frame will be mounted on top of the connector sets and the flying frame extension below the array. Use that flying frame to attach the second fall, which allows for lifting the lower end of the array separately.

To suspend a double-stranded array:

1. Prepare a flying frame for 0° suspension. Depending on whether VIDA C is installed, you
2. Mount the flying frame onto the topmost speaker (see the 'Attaching a Flying Frame to a Speaker' chapter on page 17).
3. Lift the speaker, then mount more speakers one by one to each other as necessary (see the 'Stacking Speakers' chapter on page 26).
4. Insert the connectors sets into the lowest (still **horizontally** placed) speaker, then mount the flying frame to the speaker through the connector sets.
5. Place the speaker vertically below the array, then mount it to the lowest speaker of the array.
6. Mount the flying frame extension to the lower flying frame.
7. Attach the second fall to the flying frame extension.

For the second strand, select the upper mounting point so that both strands run in **parallel** after adjusting the down-tilt angle.



6. Dismounting a Flying Speaker Array



Risk of injury: Never disconnect speakers that are suspended or are installed by stretching!
Make sure that the connecting interface is unloaded before starting dismounting. Therefore, always lower the speaker array onto the case bases or right into the case before operating the connecting-pin lever!

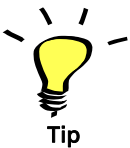
Basically, dismounting the speakers is performed in reverse order of the installation process.



Do not apply excessive force when disconnecting speakers. If you have problems disconnecting the speakers, try again at a more level place and/or shake gently.



If a second flying frame is mounted at the bottom of the speaker array, remove it before lowering the bottom speaker into a transportation case.



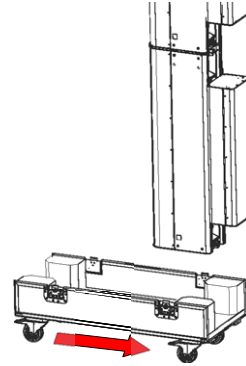
When dismounting is completed, store all speakers and accessories in the transportation case. This way, they cannot get lost and are always at hand when needed. In addition, the parts are protected at least temporarily against the effects of unfavorable weather conditions, etc.

Note that you don't need to move the connecting adapters of a VIDA L speaker back into the housing after dismounting: The speakers are designed for fitting into their cases with their adapters moved out, thus simplifying and shortening the dismounting process as well as the next mounting process.

We recommend lowering the speaker array onto lined-up case bases and afterwards disconnecting them.

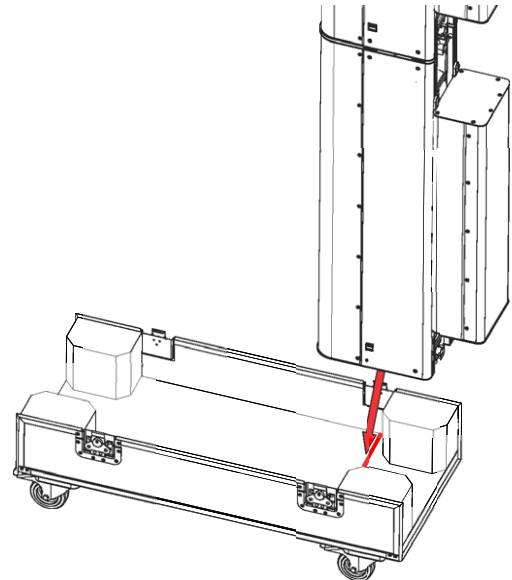
6.1 Dismounting onto Case Bases

- 1) Place the base of a fully open VIDA L case below the speaker array.

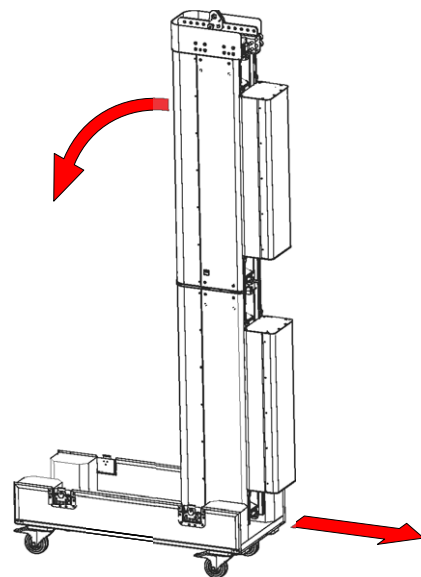


Caution

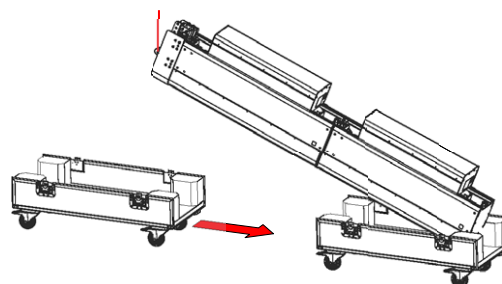
- 2) Note that when loading the case base eccentrically, it might tip over. To avoid this, move the case base from under the lowest speaker until you can fully see the red marking. Carefully place the speaker array onto the case base but do not yet unload.



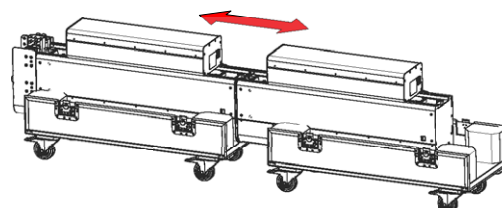
- 3) Pull the case into the direction of the arrow. Doing so will move and tilt the array to a horizontal position. Also note that you can move the array bottom sideways.



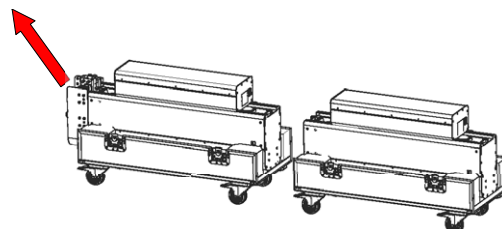
- 4) Repeat the process using more case bases until each speaker has been placed on a base.



- 5) Disconnect the speakers.
If you have problems disconnecting the speakers, try again at a more level place and/or shake gently.

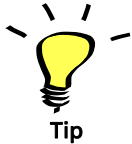


- 6) Disconnect the lift from the flying frame, then disconnect the flying frame from the speaker.

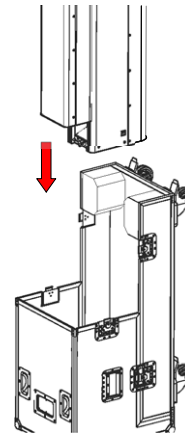


6.2 Dismounting into Upright Cases

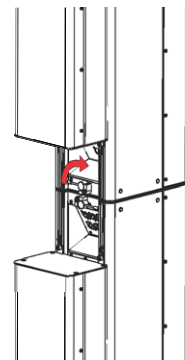
You can also dismount a VIDA L speaker array into upright transportation cases. The key benefit of this approach is the low space requirements.



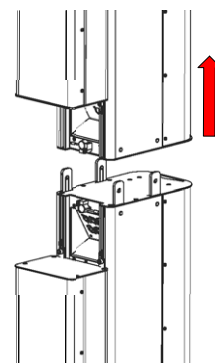
- 1) Place an upright VIDA L case below the speaker array with the top removed. Fully lower the array. Doing so will unload the connecting interfaces—you can now easily disconnect the speakers from each other.



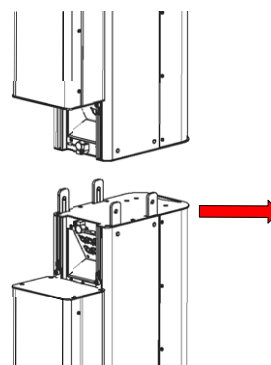
- 2) Disconnect the speakers.
If you have problems disconnecting the speakers, try again at a more level place and/or shake gently.



- 3) Carefully lift the upper part of the speaker array.
Doing so will pull the connecting adapters from the lower speaker.



- 4) After fully removing all 4 adapters from the upper speaker, pull the speaker sideways, close the case, and tip it onto its casters.

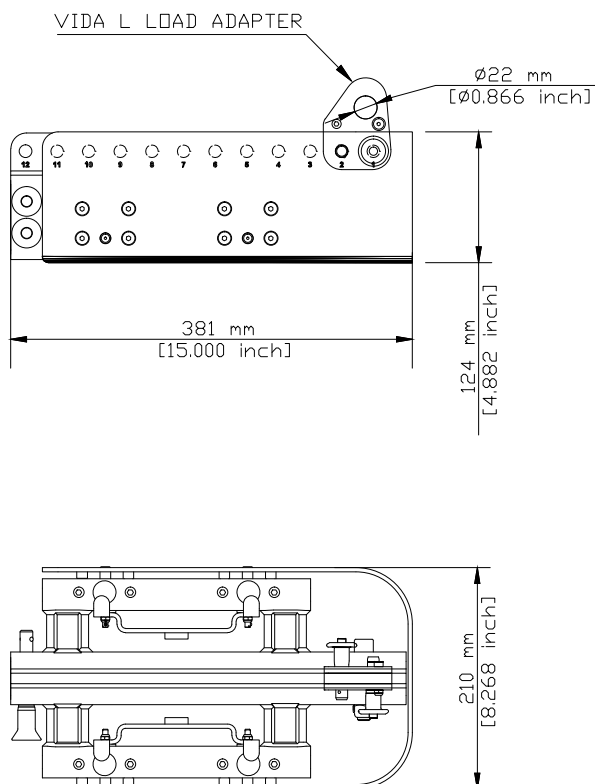


Repeat the process for the other speakers to dismount.

7. Dimensions and Weight

7.1 VIDA L Flying Frame-Dimensions and Weight

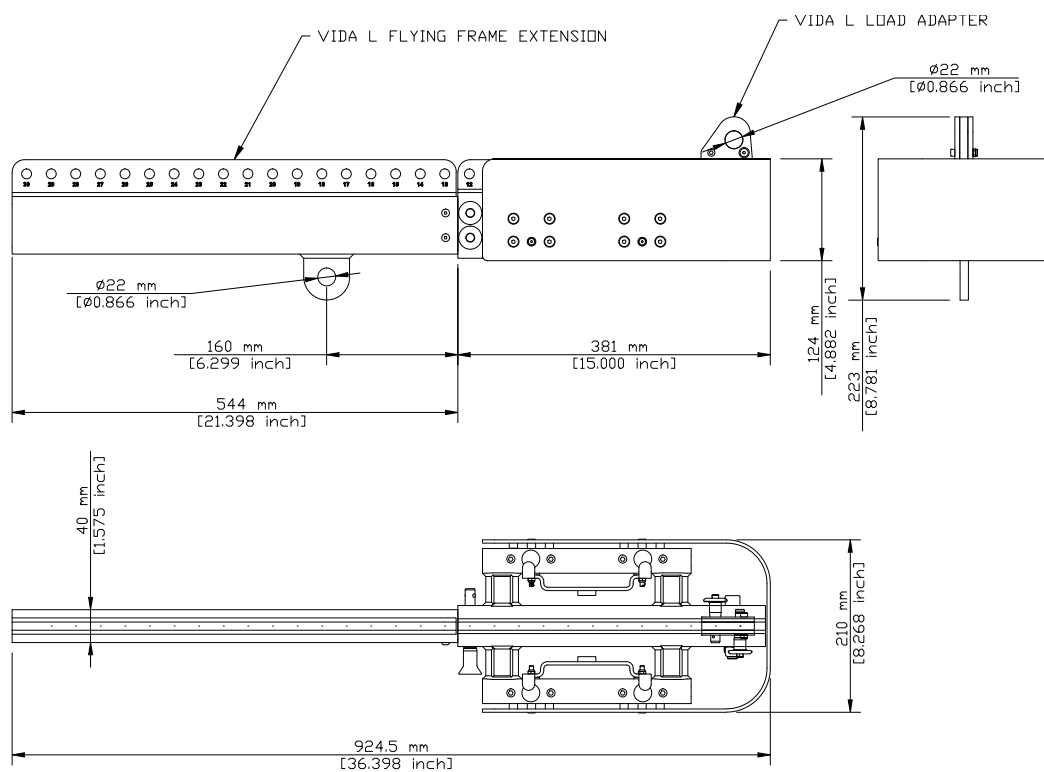
Weight: 12.0 kg



7.2 VIDA L Flying Frame with VIDA L Flying Frame Extension- Dimensions and Weight

Weight Extension: 9.5 kg

Weight flying frame with flying frame extension: 21.5 kg



8. Transportation and Storage

All metal parts are protected against the effects of unfavorable temporary weather conditions, etc.; despite, be sure to store, transport, and use the accessories in dry environments only. Speaker accessories are not designed for prolonged use in corrosive environments.

Make sure that the system is adequately ventilated during longer storage periods so any residual moisture can escape from the equipment.

In addition, protect all system parts and K&F VIDA L accessories from mechanical strains in order to prevent damage.

9. Care and Maintenance



1. For the owner and user, it is mandatory to be aware that speaker accessories used to fly or mount the speakers are fundamentally safety-relevant.

Over time, the accessories may exhibit signs of wear, for example, from mechanical strain, transport damage, corrosion, or improper handling.

As a basic principle, you must visually inspect the speaker accessory before and after you use it. For fixed installations, you must inspect it for signs of wear at regular intervals.

When performing those checks, particularly look for deformations, cracks, dents, damage to threads, and corrosion. Also check slings and lifts (e.g. shackles, chains, and steel ropes) carefully for wear and deformation.

If as a result of these checks any uncertainty should arise with regard to safety or if specific faults are found, stop using the accessories and send in the product to KLING & FREITAG GmbH for inspection and repairs, if necessary.

Inspection regulations may vary depending on application and country of use. Observe all applicable regulations; If in doubt, contact local authorities.

Many countries require regular inspection of mounting components and accessories. An additional annual inspection is typically required to be performed by a technical expert. Moreover, a legally certified or official authority must perform a detailed inspection every four years.

Therefore, be sure to maintain an inspection log. Enter the values determined for each speaker and accessory during the periodic checks into this log. This way, relevant data are always at hand in case of inspection. This inspection log book shall be updated with the inspection steps, test intervals and parts lists.

2. Clean this speaker accessory regularly using a corrosion-prevention penetrating oil (for example, WD-40).

10. Declaration of Conformity (CE)

EG-Konformitätserklärung

(Declaration of EG-Conformity)



Hersteller:

(Manufacturer)

Kling & Freitag GmbH
Junkersstraße 14
30179 Hannover
Deutschland

**Bevollmächtigter
für die Zusammenstellung der
technischen Unterlagen:**

(Authorized representative
for the compilation of technical
documents)

Kling & Freitag GmbH
Abt. Entwicklung
+49 (0)511 / 96997-50
Deutschland

Produkt:

(Product)

**Lautsprecheraufhängung
VIDA L Flugrahmen inkl. Abspannverbinder**

**Wir erklären, dass das genannte Produkt den aufgeführten Schutzanforderungen der
folgenden EG-Richtlinie entspricht:**

(We declare that the designated product is in conformity with the protection requirements imposed by
the following EU directive:)

- 2006/42/EG, Maschinenrichtlinie (Machinery Directive)

**Zur Beurteilung hinsichtlich der Einhaltung wurden folgende harmonisierte Normen
herangezogen:**

(Conformance of the products with the requirements is approved by compliance with the following
harmonized European standards:)

- Eurocode 1/DIN EN 1991-1-1 : 12/2010
- Eurocode 3/DIN EN 1993-1-1 : 12/2010

Nationale Vorschriften:

(National standards:)

- DGUV Vorschrift 17 (BGV C1)

Hannover, 20.4.2016


Jürgen Freitag, Geschäftsführung (CEO)

EG-Konformitätserklärung*(Declaration of EG-Conformity)***Hersteller:***(Manufacturer)*

Kling & Freitag GmbH
Junkersstraße 14
30179 Hannover
Deutschland

**Bevollmächtigter
für die Zusammenstellung der
technischen Unterlagen:***(Authorized representative
for the compilation of technical
documents)*

Kling & Freitag GmbH
Abt. Entwicklung
+49 (0)511 / 96997-50
Deutschland

Produkt:*(Product)*

**Lautsprecheraufhängung
VIDA L Flugrahmenausleger**

**Wir erklären, dass das genannte Produkt den aufgeführten Schutzanforderungen der
folgenden EG-Richtlinie entspricht:***(We declare that the designated product is in conformity with the protection requirements imposed by
the following EU directive:)*

- 2006/42/EG, Maschinenrichtlinie (Machinery Directive)

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- DGUV Vorschrift 17 (BGV C1)

Hannover, 20.4.2016

Jürgen Freitag, Geschäftsführung (CEO)

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