

Mounting instructions

for AirLoc Wedgmount® precision levelers

Please read these operating instructions carefully. The weights that are supported by these precision parts can be extremely heavy. Due to the extremely high gearing of the wedge construction, these loads are usually hidden and are often underestimated. Incorrect or poorly planned assembly of the Wedgmount® precision levelers can impair the performance of the machine.

The product must be in a technically flawless condition. Do not use if you notice visible damage!



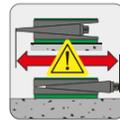
SAFETY INSTRUCTIONS



Avoid overloading

AirLoc Wedgmount® levelers are designed to support a specific load. Please consult the data sheet to find the permissible maximum load of the Wedgmount® and ensure that this load limit is not exceeded when using the Wedgmount®. Otherwise, this could damage the Wedgmount®!

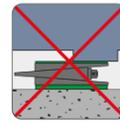
Please also note that if the machine centre of gravity is off centre, this can result in different loads on the different Wedgmount® levelers. Take the maximum load of the Wedgmount® as the reference for the maximum load.



Observe the leveling range

Every Wedgmount® has a limited leveling range. When you reach the upper or lower leveling limit, the leveling stud torque will rise significantly. Do not apply force to turn the leveling stud! Otherwise, this could damage the Wedgmount®!

Use spacer disks or AirLoc spacers on the spherical seats to enlarge the leveling range, if necessary.



Ensure an equal load on the Wedgmount®

The Wedgmount® must be equally loaded. An eccentric load can cause the wedge to break when the machine is leveled and, in the worst case, cause the machine to tip over.



Level the machine before tightening the bolt-on or bolt-through Wedgmount®

With a bolt-on and bolt-through Wedgmount®, first loosen the threaded fitting to level the machine and then tighten the threaded fitting. Never level the machine if the threaded fitting is tightened as this could damage the Wedgmount®!



Anchoring top-heavy machines to the floor

A bolt-on or freestanding Wedgmount® may not be used with top-heavy machines! Danger of tilting!

Only use a bolt-through or rigid clamp Wedgmount® to securely fix the machine to the ground.



Free-standing

VRC



Socket-mounted

VRKCS
(Jacmount® GLRN)



Bolt-on

VRC / VRKC / VRKCV
(Jacmount® GLRN)



Bolt-through

VRC / VRKC / VRKCV
(Jacmount® GLRN)



Rigid clamp

KSC / KSKC / KSKCV
(Jacmount® GLRN) (without isolation)



1. Isolation/non-skid pads

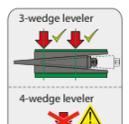
The AirLoc pads placed under the Wedgmount® vary in thickness according to the type of pad used. The thin non-skid pad must always be on the upper surface against the machine.



2. Preparations and mounting the machine

The contact surfaces of both machine and floor must be thoroughly clean. It is important that all contact surfaces have equal loading and that full area coverage is ensured. A realignment in the X- and Y-direction can only be achieved on MSC-type AirLoc Wedgmount® levelers or other mounting aids, prior to transferring the load onto the Wedgmount® (with a high coefficient of friction).

Machines that are lowered by crane must be placed on MSC-type AirLoc mounting Wedgmount® levelers, or onto suitable wooden blocks in order to avoid damaging the Wedgmount®. The machine is lowered onto mounting Wedgmount® levelers and can then be carefully placed onto the freestanding Wedgmount®. The fine adjustment can then be carried out (please refer to the information in point 4 for the settling time).



3. Machine support points

The load should be distributed over the entire Wedgmount® leveler whenever possible. Partial or one-sided loading should be strictly avoided.

If partial loading is unavoidable, the following restrictions must be observed:

- Mounts with 3 wedges, apply the load so that the weight is distributed over the three wedges even in the leveling end position.
- Mounts with 4 wedges, distribute the load over the centre wedges and do not apply the load between the centre wedges.

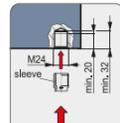
Preferably, the load should be applied to the entire longitudinal length of the Wedgmount® in the direction of the leveling stud.

CAUTION: The load on the smaller surfaces on top of the Wedgmount® may not exceed the maximum specified load of the isolation or non-skid pads!



4. Settling time of the isolation material

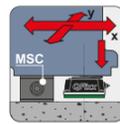
All vibration isolation pads fixed under the Wedgmount® will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year).



1. Assembly

Screw the M24 threaded sleeve completely into the machine base until only the collar, without any thread, is protruding below the machine flange (the M24 thread on the threaded sleeve has not cut through).

Insert the AirLoc Wedgmount® with socket pins into the threaded sleeve until the circlip correctly engages over the collar of the M24 threaded sleeve. Align the Wedgmount® to the machine flange.



2. Preparations and mounting the machine

The contact surfaces of both machine and floor must be thoroughly clean. It is important that all contact surfaces have equal loading and that full area coverage is ensured. A realignment in the X- and Y-direction can only be achieved on MSC-type AirLoc Wedgmount® levelers or other mounting aids, prior to transferring the load onto the Wedgmount® (with a high coefficient of friction).

Machines that are lowered by crane must be placed onto MSC-type AirLoc mounting Wedgmount® levelers, or onto suitable wooden blocks in order to avoid damaging the Wedgmount®. The machine is lowered onto mounting Wedgmount® levelers and can then be carefully placed onto the inserted Wedgmount® levelers. Fine adjustment can then be carried out (please refer to the information in point 3 on the settling time).

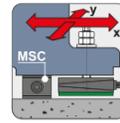


3. Settling time of the isolation material

All vibration isolation pads fixed under the Wedgmount® will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year).

4. Disassembly

- 515.6-VRKCS: Level the Wedgmount® in its lowest position. Insert Ø 5 mm steel mandrel into the M24 threaded sleeve drilled hole. 202.6/202.7-VRKCS: insert Ø 5 mm steel mandrel through the slotted upper part of the spherical washer set into the M24 threaded sleeve drilled hole. If necessary, turn the Wedgmount® until the slot and bore hole are flush.
- Unscrew the M24 threaded sleeve with the Wedgmount®.
- Unscrew the M16 stud from the spherical washer set, remove the M24 threaded sleeve.
- Re-mount the M16 stud or screw it into the Wedgmount® to re-assemble.

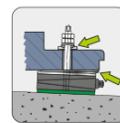


1. Preparations and mounting the machine

The contact surfaces of both machine and floor must be thoroughly clean. It is important that all contact surfaces have equal loading and that full area coverage is ensured. A realignment in the X- and Y-direction can only be achieved on MSC-type AirLoc Wedgmount® levelers or other mounting aids, prior to transferring the load onto the Wedgmount® levelers (with a high coefficient of friction).

Machines that are lowered by crane must initially be placed onto type MSC AirLoc mounting Wedgmount® levelers or onto suitable wooden blocks in order to avoid damaging the Wedgmount®. The machine is lowered onto mounting Wedgmount® levelers and can then be carefully placed onto the bolt-on Wedgmount®. Finally, the fine adjustment is carried out (please refer to the information in point 3 on the settling time).

In order to avoid any possible bending of the studs by the Wedgmount® installed on the machine when it is lowered, the Wedgmount® must be hand-tightened with the nuts on the machine base before lowering. The nuts must be loosened before the machine can be leveled (see Safety instructions).



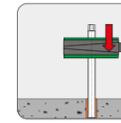
2. Avoid unbalanced load by ball head adjustment

Rough machined feet or uneven ground require Wedgmount® with spherical seats VRKC(V) with an additional spherical washer set (DIN 6319) above the machine foot on the stud.



3. Settling time of the isolation material

All vibration isolation pads fixed under the Wedgmount® will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year). Tighten the mounts after precision leveling.

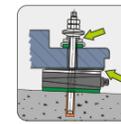


1. Preparations and mounting the machine

The contact surfaces of both the machine and floor must be thoroughly clean. It is important that all contact surfaces have a balanced and equal load and that full area coverage is ensured.

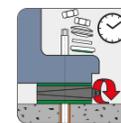
The stud assembly is fixed to the floor in accordance with the installation drawing from the machine manufacturer. The Wedgmount® levelers are inserted over the stud assembly. Insert insulating tube between the drilled hole on the Wedgmount® and stud assembly.

Machines that are lowered by crane must be placed onto MSC-type AirLoc mounting Wedgmount® levelers, or onto suitable wooden blocks in order to avoid damaging the Wedgmount®. The machine is lowered over the studs on the mounting Wedgmount® levelers and can then be carefully placed onto the Wedgmount®. The fine adjustment can then be carried out (please refer to the information in point 3 on the settling time and the attached bolting instructions with disk springs).



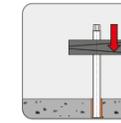
2. Avoid unbalanced load by ball head adjustment

Rough machined feet or uneven ground require Wedgmount® levelers with spherical seats VRKC(V) with an additional spherical washer set (DIN 6319) above the machine foot on the stud.



3. Settling time of the isolation material

All vibration isolation pads fixed under the Wedgmount® will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year). Bolt the machine after the fine adjustment. Please observe the bolting instructions supplied, to correctly set the pre-tension force of the disk springs.

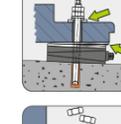


1. Preparations and mounting the machine

The contact surfaces of both the machine and floor must be thoroughly clean. It is important that all contact surfaces have a balanced and equal load and that full area coverage is ensured.

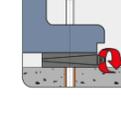
The stud assembly is fixed into the floor in accordance with the installation drawing from the machine manufacturer. The Wedgmount® levelers are inserted over the stud assembly.

Machines that are lowered by crane must be placed onto MSC-type AirLoc mounting Wedgmount® levelers, or onto suitable wooden blocks in order to avoid damaging the Wedgmount®. The machine is lowered over the studs on the mounting Wedgmount® levelers and can then be carefully placed onto the Wedgmount®. The fine adjustment is then carried out.



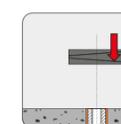
2. Avoid unbalanced load by ball head adjustment

Rough machined feet or uneven ground require Wedgmount® levelers with spherical seats KSKC(V) with an additional spherical washer set (DIN 6319) above the machine foot on the stud.



3. First complete the fine leveling then tighten

Do not level when the threaded fitting is tightened! The wedge ratio delivers extremely high forces in Z-direction and can damage the stud or the Wedgmount®.



Alternative anchoring option with resin anchors and internal thread anchor RG MI for bolt-through and rigid clamped Wedgmount® levelers

When using the studs described above that are anchored into the floor, the studs stand upright and can obstruct the positioning of the machine. To avoid this, we recommend fixing internal threaded anchors into the floor. These anchors are flush with the floor and the machine can be smoothly pushed over the anchor points. Once the machine is in the correct position, the stud can be easily inserted from above and bolted down.

Machine transport

The bolt-on AirLoc Wedgmount® precision levelers, because of their protection against falling out, can remain on the machine flange and do not need to be disassembled for transport. In this case, the Wedgmount® must be kept clear, i.e. the machine must be positioned on wooden beams.

When the machine is raised, ensure that the isolation pad is not stuck to the floor or machine. Otherwise, the Wedgmount® can be pulled apart and become damaged. Observe the Wedgmount® while slowly lifting the machine. If the isolation pads are stuck to the floor, carefully release them using a rubber mallet.

General notes on leveling the machine

Machine feet surfaces that have not been machined require Wedgmount® levelers with spherical seats VRKC(V) with an additional spherical washer set (spherical seat DIN 6319) above the isolation disc on the stud assembly/anchor bolt.

The contact surfaces of both the machine and floor must be thoroughly clean.

With AirLoc Wedgmount®, the leveling stud is turned clockwise to rise the machine.

With heavy machines, it is possible under certain circumstances to adjust the Wedgmount® to the highest position before applying the load. The machine is then leveled downwards which requires considerably less force. Make sure that there is no thread play after leveling by ensuring that the last leveling adjustment is clockwise.

Position the Wedgmount® so that the leveling stud can be easily reached. If the Wedgmount® is in the centre position under the machine, use the AirLoc leveling stud extensions.

On machines where the centre of gravity is not eccentric, all the anchor points must be equally loaded and the torques on all Wedgmount® levelers must be within the same tolerance range.

With a four-point support, always work in pairs with the support points, i.e. two right, two front, two back etc. with the same number of turns.

An equal, balanced load must be ensured on the Wedgmount® levelers to prevent the machine from „walking“. If this is not the case, level two diagonal Wedgmount® levelers until the torques are approximately equal.

Mounting instructions

for AirLoc Jacmount® adjustable levelers

Please read these operating instructions carefully. The weights that are supported by these precision parts can be extremely heavy. The loading situation cannot usually be seen and is often underestimated. An incorrect or poorly planned assembly of the Jacmount® adjustable levelers can impair the performance of the machine.

The product must be in a technically flawless condition. Do not use if you notice visible damage!

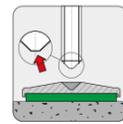
SAFETY INSTRUCTIONS



Avoid overloading

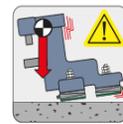
AirLoc Jacmount® adjustable levelers are designed to support a certain load. Please consult the enclosed data sheet to find the permissible maximum load of the Jacmount Adjustable Leveller and ensure that this load limit is not exceeded when using the machine. The Jacmount Adjustable Leveller can become damaged!

Please also note that if the centre of gravity of the machine is off-centre, this can result in different loads on the different Jacmount Adjustable levelers. Take the most heavily loaded Jacmount Adjustable Leveller as a reference for the maximum load.



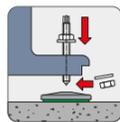
Use suitable studs

GLV and GLR Jacmount® adjustable levelers with a tapered thread may only be used with flat ended studs. The AirLoc stud S should be used as it is specially designed for this purpose.



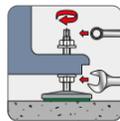
Anchoring top-heavy machines to the floor

Bolt-on Jacmount® adjustable levelers may not be used on top-heavy machines!
Danger of tilting!
Only use bolt-through Jacmount® adjustable levelers (GLRN) or bolt-through or rigid clamp Wedgmout® levelers.

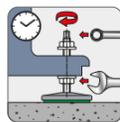


1. Preparations and mounting the machine

Lift the machine; place GLV and/or GLR Jacmount® levelers under it and insert the set screw without nut into the drilled hole on the machine foot from above. The end of the set screw must be flat and not pointed. Now screw on the washer and nut from below and turn until the set screw is in the countersink of the Jacmount®. Repeat this preparation on all of the supporting points.

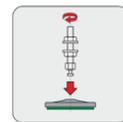


Lower the machine and level it by adjusting the hexagon head of the stud using a ring spanner or socket. Hold the carrying nut with the fork wrench. When the machine is properly leveled, tighten the counter nut with washer.



2. Settling time of the isolation material

All vibration isolation pads fixed under the Jacmount® adjustable levelers will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year).



1. Preparations

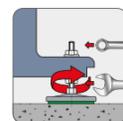
PRG/PRGI levelers:

The mounting thread at the lower end of the special stud G1/G2 has to be fully screwed into the Jacmount® so that the shoulder carrying the load is properly positioned in it. Secure connection! Then insert the stud from below into the drilled hole on the machine foot so that the machine foot lies directly on the serrated locknut and/or leveler washer.



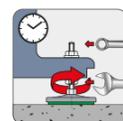
PR levelers:

With the pivoting special stud mounted, insert the stud from below into the drilled hole on the machine foot, so that the machine foot lies directly on the serrated locknut and/or leveler washer.



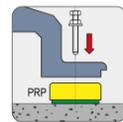
2. Mounting the machine

If all the Jacmount Adjustment Levellers are fitted, the machine can be carefully lowered and leveled over the hexagon head of the special stud. When the machine is properly leveled, tighten the counter nut with washer.



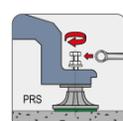
3. Settling time of the isolation material

All vibration isolation pads fixed under the Jacmount® adjustable levelers will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year).



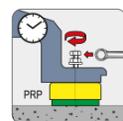
1. Preparations and mounting the machine

Position the Jacmount® adjustable leveler underneath the raised machine. Insert the leveling stud from above through the machine foot and screw into the Jacmount® leveler. Slowly lower the machine onto the Jacmount® levelers.



2. Levelling

Turn the leveling stud into the leveler. With leveling studs with small 6-hexagon (type R1 with PRP or with levelers PRS, PRSK) a ring spanner or socket must be used. Beyond a certain point, the leveler starts to lift and the machine can be leveled. When the machine is properly leveled, tighten counter nut with washer.



3. Settling time of the isolation material

All vibration isolation pads fixed under the Jacmount® adjustable levelers will be compressed under load. The compression process requires a certain amount of time. The machine alignment should be checked approximately 3 weeks after installation and, if necessary, the machine must be re-leveled. We recommend regular checks of the machine alignment (min. once per year).

Machine transport

The bolt-on AirLoc Wedgmout® precision levelers, because of their protection against falling out, can remain on the machine flange and do not need to be disassembled for transport. In this case, the Wedgmout® must be kept clear, i.e. the machine must be positioned on wooden beams.

When the machine is raised, ensure that the isolation pad is not stuck to the floor or machine. Otherwise, the Wedgmout® can be pulled apart and become damaged. Observe the Wedgmout® while slowly lifting the machine. If the isolation pads are stuck to the floor, carefully release them using a rubber mallet.

General notes on leveling the machine

Machine feet surfaces that have not been machined require Wedgmout® levelers with spherical seats VRKC(V) with an additional spherical washer set (spherical seat DIN 6319) above the isolation disc on the stud assembly/anchor bolt.

The contact surfaces of both the machine and floor must be thoroughly clean.

With AirLoc Wedgmout®, the leveling stud is turned clockwise to rise the machine.

With heavy machines, it is possible under certain circumstances to adjust the Wedgmout® to the highest position before applying the load. The machine is then leveled downwards which requires considerably less force. Make sure that there is no thread play after leveling by ensuring that the last leveling adjustment is clockwise.

Position the Wedgmout® so that the leveling stud can be easily reached. If the Wedgmout® is in the centre position under the machine, use the AirLoc leveling stud extensions.

On machines where the centre of gravity is not eccentric, all the anchor points must be equally loaded and the torques on all Wedgmout® levelers must be within the same tolerance range.

With a four-point support, always work in pairs with the support points, i.e. two right, two front, two back etc. with the same number of turns.

An equal, balanced load must be ensured on the Wedgmout® levelers to prevent the machine from „walking“. If this is not the case, level two diagonal Wedgmout® levelers until the torques are approximately equal.

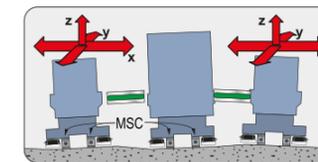
KaBloc Wedgmout® levelers

Anchoring brackets can be mounted to fix the machine to the floor with the KaBloc 203 and KaBloc 515 Wedgmout®. This technology enables machine components to be first aligned to each other and then fixed afterwards.

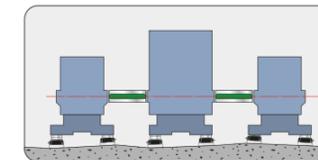


1. Preparations and mounting of the machine or its components

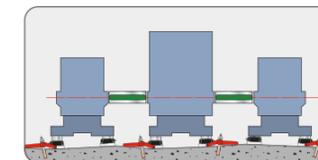
Position the machine or the components belonging to the machine assembly as described under section "mounting instructions for bolt-on Wedgmout®". The components are resting on AirLoc KaBloc Wedgmout® levelers. To precisely align the longitudinal and horizontal directions of the individual components, we recommend lifting the components slightly using the AirLoc MSC-type mounting Wedgmout® levelers. Unlike the KaBloc Wedgmout®, the MSC mounting Wedgmout® levelers are not fitted with non-skid pads, which makes it easier to slide the machine sideways. Accurately align the machine components to the main machine and lower them into the new position on the MSC mounting Wedgmout® levelers.



Proceed in the same way with the remaining components of the machine assembly. Once they are in the correct longitudinal and horizontal positions, the height of the individual components can then be adjusted with the KaBloc Wedgmout®.



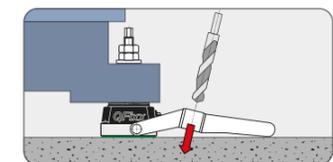
You can now test run the machine and check the alignment of all machine components. If the test run was successful, you can fix the machine components to the floor using the anchoring brackets without moving the components.



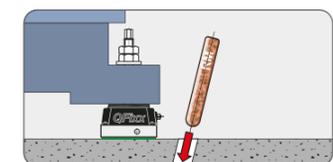
2. Mounting the anchoring brackets and fixing them to the floor

Use fastening bolts to mount the anchoring brackets on the side, using the designated fastening holes of the KaBloc Wedgmout®. Make sure that the front ends of the anchoring brackets are touching the floor.

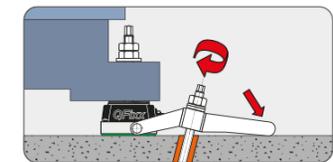
Drill holes into the floor and use the guide on the anchoring brackets to correctly maintain the tilt angle of the bore hole axis.



Then remove the anchoring brackets to drill the holes in the floor to the final size for the resin anchors. Insert the resin anchors.



Re-mount the anchoring brackets and insert the RGM studs in accordance with the instructions of the resin anchor manufacturer. As soon as the resin anchors have hardened, mount the spherical washer set and the gland nuts.



Tighten them by hand, mount the bracket stretcher and tighten it carefully. Then tighten the gland nuts to the end position (please observe the maximum pre-tension force or torque given in the data sheet).



AirLoc Ltd.

Industriestrasse 2
8618 Oetwil am See
Switzerland

Tel.: +41 44 929 77 00
Fax: +41 44 929 77 10
contact@airloc.com