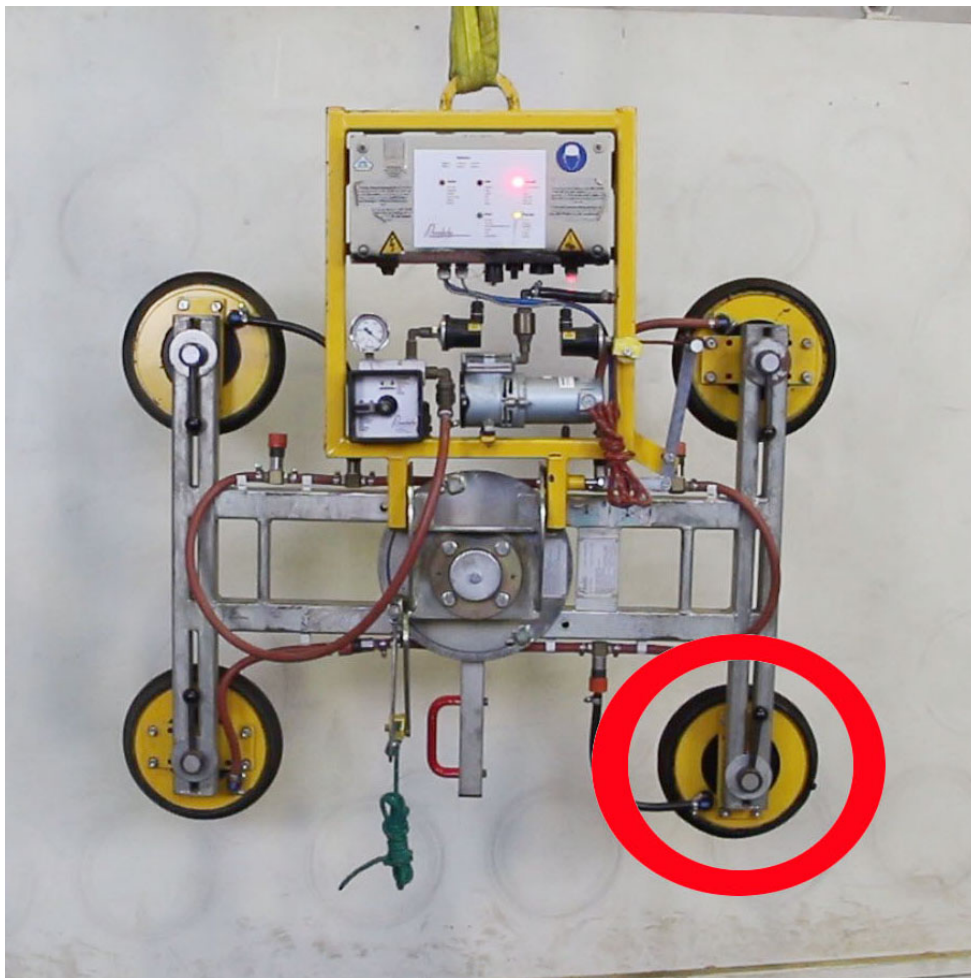


Why you should always replace all of the suction cups

As already advised in earlier tips, as time goes by, vacuum suction devices show signs of age and start to lose their vertical carrying capacity. As time goes by, their friction coefficient declines, causing their carrying capacity to diminish. Carrying capacity can drop by as much as half. This is improved by cleaning the suction cups on a regular basis, which improves the situation but cannot be avoided.

As a general rule, a new suction cup will have better carrying capacity than an old one. And that is what can lead to the kind of problem that no-one wishes to have. The suction cup you replaced, perhaps because its sealing lip was torn, will grip better than the other suction cups. Surely that is nothing to worry about, or do you have your own thoughts on that?

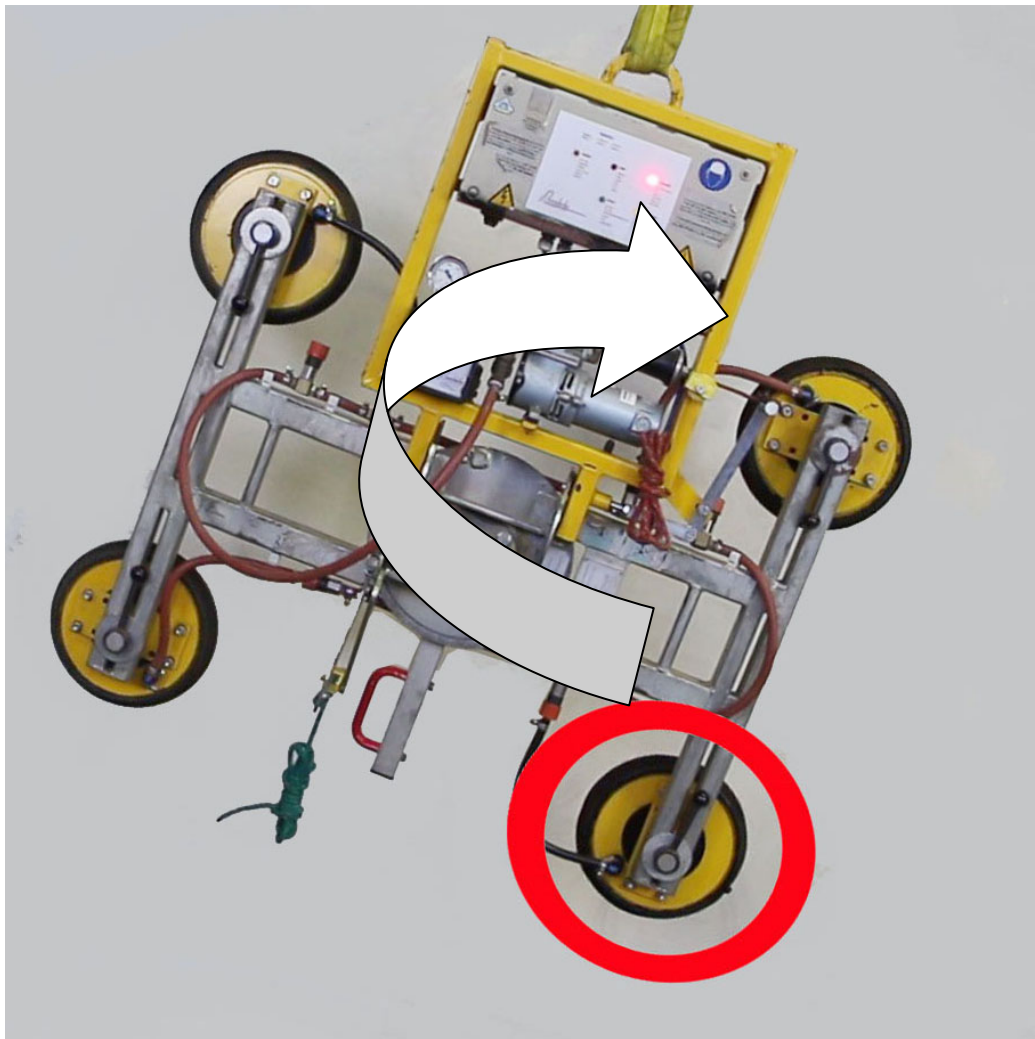
Here is an example of a vacuum lifter with four vacuum suction devices. The suction cup circled in red has been replaced. The other suction cups are older and have a lower carrying capacity.



What could happen?

Can anything at all happen?

The new suction cup will try to keep a grip on anything it is attached to. If the remaining suction cups have a lower level of carrying capacity, this will apply more load to the new suction cup. This could cause the device to rotate around this new suction cup because the other suction cups are already starting to slip. It does not have to be quite as extreme as this photograph illustrates. Nonetheless, when the other suction cups start to slip, this applies more load to the new suction cup. This can culminate in the new suction cup becoming overloaded, causing it to release, which would in turn cause the materials being transported to drop down. At low levels of load, this is not going to be serious, but when operating in the nominal rating range, problems of this kind can occur.



To enable you to rely fully on the vacuum lifting device, and to work with a sufficient margin of safety, you should always replace all of the suction cups if they are more than six months old.





The attachment point always seeks to be perpendicular below the load point, and this can cause the suction frame to rotate. This unintended use can cause damage to the vacuum lifting device. As a general rule, vacuum lifting devices are not designed to cope with load scenarios of this nature.

Maintenance of vacuum lifters

We have also documented this technical content in a short video. Admittedly, the vacuum lifter does not normally rotate as much as shown on this photo, but the tendency is clear to see.

Find this on YouTube:

Why can it prove hazardous to replace just one individual suction cup?





		<p>https://youtu.be/3CbxcLLDcgA</p>
		<p>https://youtu.be/s_WhFXqETq8</p>

By the way, the same thing can happen to you if you use suction cups sourced from different manufacturers on the vacuum lifting device. To prevent this, you should always only ever use suction cups from the company that made the vacuum lifting device. In that way, you can avoid unforeseen situations, and the manufacturer remains responsible for the device, rather than suddenly finding that it is you who is liable.





Maintenance of vacuum lifters

Here you can also see tests conducted on suction cups of different ages, which may help you better to understand why it is so important for **your own health and that of the people around you** to replace the suction cups from time to time.





Find this on YouTube:
Tensile test with a new 388 suction cup

		https://youtu.be/77jR_M7hYxQ
		https://youtu.be/GC43_Intrwc

Find this on YouTube:
Tensile test with a 388 suction cup that is 5 years old





		https://youtu.be/65RbdHEBRS4
		https://youtu.be/4WlzxUoJrsw

Find this on YouTube:
Tensile test with a 388 suction cup that is 10 years old

		https://youtu.be/MMHpvI2LFtc
		https://youtu.be/CbinMa_HwUA

Here you can also view individual tests with different new and unused suction cups, which may perhaps help you to understand why it is so important for **your safety and that of the people around you** only ever to use genuine suction cups.

Find this on YouTube:
Tensile test with a new 388 suction cup

		https://youtu.be/77jR_M7hYxQ
		https://youtu.be/GC43_Intrwc

Find this on YouTube:
Tensile test with a 388-4N/TR suction cup that is 6 months old

		https://youtu.be/iOOkTbqGvqc
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Maintenance of vacuum lifters




Find this on YouTube:

Tensile test with a new Eurotech BLSP.280.111.001 suction cup

		https://youtu.be/O1exV64Zolo
		https://youtu.be/tzWdssR-X7E





Find this on YouTube:

Tensile test with a Eurotech BLSP.280.111.016 suction cup that is 10 months old

		https://youtu.be/mznP5BQIC-4
		https://youtu.be/Nv_1bweF1BM

Find this on YouTube:

Tensile test with a new Eurotech BLSP.200.111.007 suction cup

		https://youtu.be/O-X5hzbXHWA
		https://youtu.be/mt7Q9XttqdI

Find this on YouTube:
Tensile test with a new Eurotech BLSP.200.111.012 suction cup

		https://youtu.be/ehsdvK3r8cE
		https://youtu.be/tjvh3B3GriU

Find this on YouTube:
Tensile test with a new Wood's PowrGrip G3370 suction cup

		https://youtu.be/hoT6A9cWmfY
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