

The very first vacuum lifter of Industry 4.0

piLIFT® SMART



Smart solutions for the automated world™



The piLIFT® SMART

The next step in vacuum lifting

The piLIFT® SMART is really something else – in every sense. Combining the best of vacuum lifting technology with low energy consumption, minimal sound levels and smart data features, the quick and intuitive piLIFT® SMART is truly a leap forward. Piab's R&D Manager Anders Lundin tells the story of how the piLIFT® SMART came to be.



ANDERS LUNDIN
Research and Development
Manager, Ergonomic
Handling Division, Piab

“OUR VACUUM LIFTERS have improved over the years, but there have been lingering pain points for our customers that we’ve never quite solved. The sound level is one, the comparably high energy consumption another. But vacuum lifting is a great concept, with features no other ergonomic lifting solution can ever have. Could we improve upon it even more?

We wanted to start with the desired user experience, and work our way up from there. Go back to the roots, in a way.

SO WE THOUGHT: what if we used electronics to regulate the pump and valves, to generate air flow only when needed? That would solve two issues at once. Also, with movement feedback going through an algorithm to adjust the pump and valves, we could greatly enhance the responsiveness.

The first few prototypes were promising, and the technology was patented in 2014. We really

saw the potential and ramped up the R&D efforts, expanding the team. Gradually, we spent more and more time on the project.

There were challenges, but we overcame them one by one. The control system put up a bit of a struggle, but when we straightened out the last kink and I saw the fully functional lifter in action, it fulfilled all my expectations. It worked like a charm, just like I’ve always dreamed. Every single person we’ve shown it to during the process has been equally amazed.

IT’S TAKEN TIME to get here, but I believe all great things require that. To compromise on user experience, functionality and features was never an option.

The piLIFT® SMART is a quantum leap in vacuum lifter technology. We’ve solved every single issue we set out to conquer, in a single swipe. I’m extremely happy with it, and very, very proud.”

SAFE, EASY AND PRODUCTIVE

The piLIFT® SMART – like our Vaculex® range of vacuum lifters – uses vacuum to both grip and lift the load in a single movement. The control handle is easy for the operator to use and the load feels weightless. The bottom swivel and angle adaptor allow the user to rotate or turn the lifted object as required. The power source is a frequency controlled electric pump, activated only to the extent needed, resulting in low energy use and minimal sound levels.

Piab vacuum lifters reduce the risk of injury associated with manual handling significantly; the load on the operator's body can be reduced by more than 80 percent. Long lasting and safe, our solutions provide many benefits including reduced sick leave, lower staff turnover and better staff utilization — most often combined with higher productivity. Products are developed using the latest technology to meet industry and user demands. The piLIFT® SMART being no better example of this.



Key features



LOW ENERGY – LOW SOUND

In the piLIFT® SMART, the system controls the pump and valves, feeding power only when needed. This results in an energy consumption that is 76 percent lower than other comparable vacuum lifters. Vacuum is generated only when the user needs to grip or lift, keeping the air flow minimal at other times. This makes the piLIFT® SMART operate at a mere whisper.



ERGONOMIC

Using lifting equipment greatly lowers the strain on the body. Every aspect of the piLIFT® SMART is designed with ergonomics and natural movement in mind. The design of the control unit, the shape of the handle with interactivity, handguard and the placement of the control buttons are prime examples of ergonomic features. Ergonomics is key.



USER FRIENDLY

The piLIFT® SMART interface is intuitive, logical and easy to learn. With its variable speed buttons you press the upper button and it lifts; press the lower and it descends. The piLIFT® SMART senses its movements, responding quickly to user intentions. Add minimal sound levels and smart functions and you have a great user experience.



SMARTER

The piLIFT® SMART constantly collects data that can be displayed on the built-in display or by logging in to a web platform. Online you access data on the number of lifted units, the weight of the objects, maintenance and service messages and much more. This will help you ensure the wellbeing of the user, streamline your everyday processes and maximize performance.



DO YOU WANT TO KNOW MORE?

Take a look at the online product page: www.piab.com

Smarter, faster, stronger

THE piLIFT® SMART makes use of the same principle of physics as all vacuum lifters, utilizing the same single vacuum source to both grip and lift. This has the added benefit of an inherent safety feature no other lifting solution provides: if the object cannot be gripped, neither will it lift. Hence, there is no risk of dropping it unintentionally. The piLIFT® SMART has a capacity of 40 kg (90 lb).

Features:

- ① Up/Down variable speed controls.
- ② Quick release buttons, for right- or left-handed use. Press briefly for automated pickup or release, enabling you to lift from hard to reach spaces without undue strain.
- ③ Swivel (360°) and angle adapter (0° – 90°), enabling you to rotate the lifting object and to lift packages from the side.
- ④ Enter button. For example press to memorize unloaded and loaded balance level.
- ⑤ Standby button
- ⑥ Display, showing for example the weight of the load.
- ⑦ Ergonomic grip and protective hand guard.
- ⑧ Suction cup, 150 mm [6.10"].
- ⑨ Lift tube with cover sock.

Smart features and connectivity

THE piLIFT® SMART brings the latest technology to enable both operator and operation to obtain live information on performance and status. Maintenance will benefit from service indicators that will enable peak operating performance. The weight of the lifted object displayed on the piLIFT® SMART screen can help the operator to distinguish and identify loads as well as quality assure incoming or outgoing products. The piLIFT® SMART is the first vacuum lifter

ever that meets the needs of Industry 4.0. Via a web based platform usage data can be viewed either live or obtained as defined reports, e.g. total weight and number of units handled. The unique technology enables this information to be integrated into customer systems, that for example sends a signal when pallets are completed or if an individual package is under or over target weight.





“We’re just seeing the beginning of what the piLIFT® SMART can do”

The piLIFT® SMART is not just another vacuum lifter. The usability, flexibility and data management capability puts it in a category of its own. The piLIFT® SMART will appeal to a wide range of customers with needs that include low sound, low energy levels and performance data. David Collins, Vice President and Head of the Ergonomic Handling Division, tells more.

“WE AT PIAB specialize in moving and gripping solutions with vacuum providing smart solutions for the automated world. With our Vaculex® range of vacuum lifters we are experts in ergonomic handling, minimizing strain and health risks for users of our solutions. Our Vaculex® TP lifters, for example, have contributed to the wellbeing of thousands of workers across a spectrum of industries. There is a huge focus on both physical and mental wellbeing in the workplace. Protecting the workforce has never been higher priority.

I AM DELIGHTED that our solutions have contributed to this and now the piLIFT® SMART will take it even further.

No handling device has been more ergonomic, intuitive and easy to learn. Not only have we considered the operator, the piLIFT® SMART offers increased benefits for the operation. An improvement that will benefit users, operations and environments.

The startlingly low sound levels and energy consumption will, I’m sure, be appreciated in



DAVID COLLINS
Vice President and
Head of the Ergonomic
Handling Division, Piab

many places. I also like the fact that it’s easily customizable. It takes no more than the press of a button to set a preferred unloaded or loaded working height.

AND LET’S NOT FORGET
the smart solutions

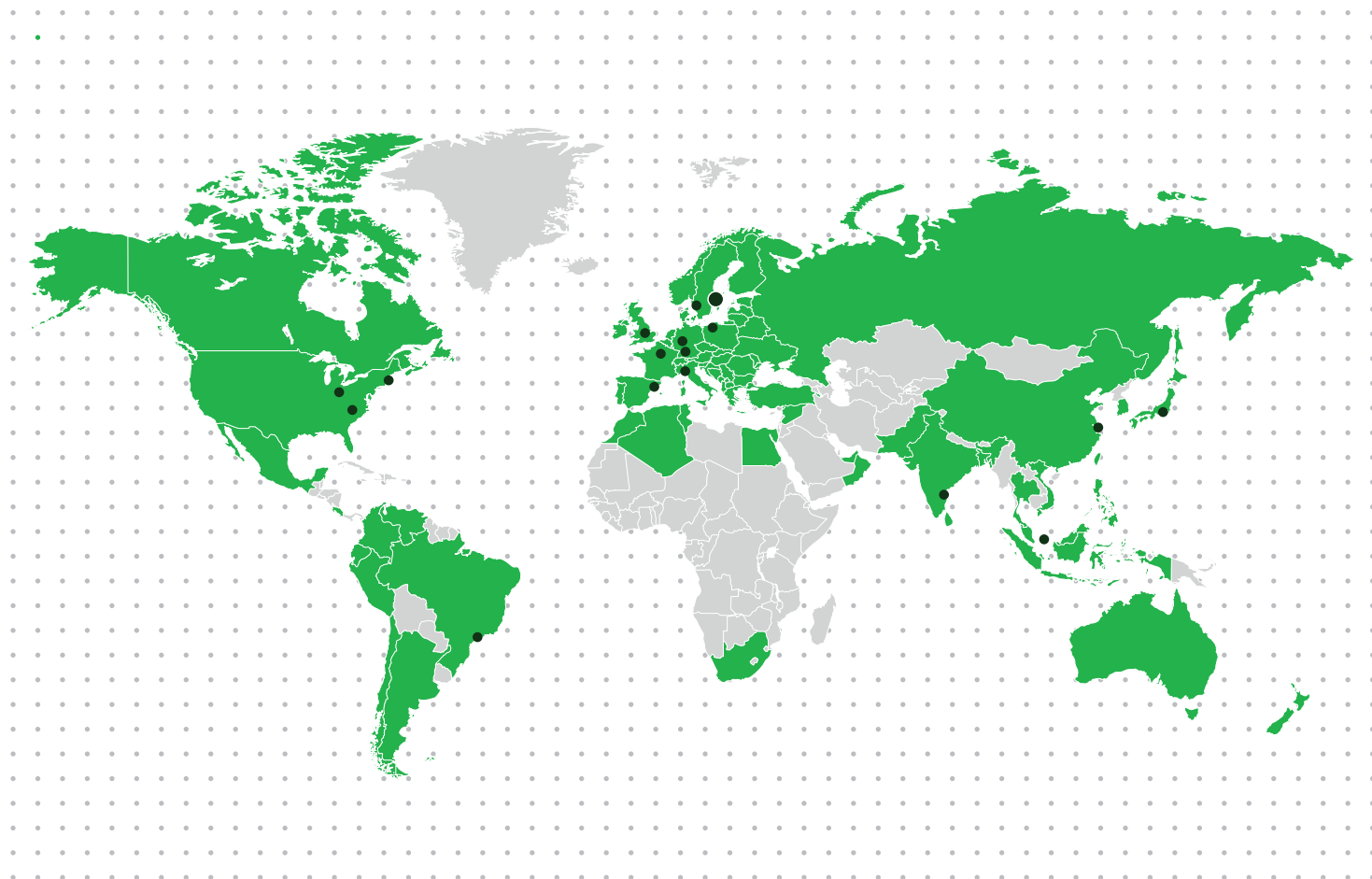
we’ve built into the piLIFT® SMART. Getting signals when service is required is just the beginning. The capability for collecting and analyzing data to use for the optimization of flows and processes is tremendous. I see great benefits for our customers in avoiding operation downtime, optimizing lifting techniques, ensuring the health of employees and keeping the equipment in top shape. I am very proud to be part of the piLIFT® SMART, the very first vacuum lifter of Industry 4.0.

We’re just seeing the beginning of what the piLIFT® SMART can do.”



GET IN TOUCH!

Send us a mail and get to know more about the piLIFT® SMART: ehsupport@piab.com



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